The AME2020 atomic mass evaluation **

(II). Tables, graphs and references

Meng Wang (王猛)[1,2,*] W.J. Huang(黄文嘉)[1,3,4,5] F.G. Kondev[6] G. Audi (欧乔治)[5] S. Naimi[7]

[1] Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou 730000, China
[2] University of Chinese Academy of Sciences, Beijing 100084, China
[3] Advanced Energy Science and Technology Guangdong Laboratory, Huizhou 516003, China
[4] Max-Planck-Institut für Kernphysik, Saupfercheckweg 1, 69117 Heidelberg, Germany
[5] Université Paris-Saclay, CNRS/IN2P3, IJCLab, 91405 Orsay, France
[6] Physics Division, Argonne National Laboratory, Lemont, IL 60439, USA
[7] RIKEN Nishina Center, Wako, Saitama 351-0198, Japan

Abstract This is the second part of the new evaluation of atomic masses, AME2020. Using least-squares adjustments to all evaluated and accepted experimental data, described in Part I, we derived tables with numerical values and graphs which supersede those given in AME2016. The first table presents the recommended atomic mass values and their uncertainties. It is followed by a table of the influences of data on primary nuclides, a table of various reaction and decay energies, and finally, a series of graphs of separation and decay energies. The last section of this paper provides all input data references that were used in the AME2020 and the NUBASE2020 evaluations.

Keywords: atomic mass evaluation, atomic mass table, separation and reaction energies, trends from the mass surface

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1 Introduction

In this paper, tables with numerical values and graphs derived from the evaluation of the input data given in Part I [1] are presented.

Firstly, we present a table that contains the values of atomic masses and their uncertainties (Table I), followed by a table containing the influences for primary nuclides (Table II) and a table of twelve reaction and decay energies (Table III).

The tabular information is followed by a series of graphs that include the two-neutron separation energies and total α-decay energies as a function of the neutron number, and the two-proton separation energies as a function of the proton number.

Finally, references of the input data used in the AME2020 [1] and the NUBASE2020 [2] evaluations are given at the end of this article.

2 Atomic mass table

Table I presents the atomic masses expressed as mass excess in keV, together with the binding energy per nucleon, the beta-decay energy and the total atomic mass in the unified atomic mass unit, similar to those published in the earlier AME editions [3–9]. Traditionally, the masses of nuclides are measured for electrically neutral atoms or single-charged ions. At present, the highest precision masses are measured using Penning traps for a single-charged ion. This is the main reason why atomic masses, rather than nuclear masses, are presented in the AME.

In general, the nuclear masses M_N can be calculated from the atomic ones M_A as:

$$M_N(A,Z) = M_A(A,Z) - Z \times m_e + B_e(Z), \qquad (1)$$

where B_e(Z) is the electron binding energy. The ionization energy is generally (much) smaller than the uncertainty of the mass and, for a small number of very precise mass measurements, corrections for the first- and second-ionization potentials can be applied without much loss of accuracy. The same is true for the electron mass, m_e; see Table A in Part I [1].

Nowadays, several mass measurements are conducted with fully or almost fully ionized atoms. In such cases,

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* wangm@impcas.ac.cn

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Table A. The most precisely known masses.

	Mass excess (keV)	Uncertainty (keV)	Atomic mass (μu)	Uncertainty (μu)
^{1}n	8 071.318 062	0.000 440	1 008 664.915 904	0.000 473
^{1}H	7 288.971 064	0.000 013	1 007 825.031 898	0.000 014
^{2}H	13 135.722 895	0.000 015	2 014 101.777 844	0.000 015
^{3}H	14 949.810 898	0.000 075	3 016 049.281 320	0.000 081
^{3}He	14 931.218 878	0.000 056	3 016 029.321 967	0.000 060
^{4}He	2 424.915 869	0.000 147	4 002 603.254 130	0.000 158
^{13}C	3 125.009 330	0.000 235	13 003 354.835 336	0.000 252
^{14}N	2 863.416 831	0.000 224	14 003 074.004 251	0.000 241
^{15}N	101.438 093	0.000 582	15 000 108.898 266	0.000 625
^{16}O	–4 737.002 171	0.000 297	15 994 914.619 257	0.000 319
^{17}O	–808.764 209	0.000 645	16 999 131.755 953	0.000 692
^{18}O	–782.816 339	0.000 642	17 999 159.612 136	0.000 690
^{19}F	–1 487.445 118	0.000 823	18 998 403.162 067	0.000 883
^{28}Si	–21 492.797 109	0.000 514	27 976 926.534 422	0.000 552
^{29}Si	–21 895.081 543	0.000 562	28 976 494.664 339	0.000 604
^{31}P	–24 440.544 423	0.000 746	30 973 761.997 677	0.000 800

a correction must be made for the total binding energy of all the removed electrons $B_e(Z)$. Unfortunately, the precision of the calculated $B_e(Z)$ values is not well established, since this quantity (approximately 760 keV for $_{92}$U) cannot be easily measured. However, we can state with a high confidence that the precision for $_{92}$U is better compared to that for the best known masses of the uranium isotopes, which is about 1.1 keV. An approximate formula for B_e can be found in the review of Lunney, Pearson and Thibault [10]:

$$B_e(Z) = 14.4381\,Z^{2.39} + 1.55468\times10^{-6}\,Z^{5.35}\,\text{eV}. \quad (2)$$

The atomic masses are given in mass units and the derived quantities in energy units. For the atomic mass unit we use the "unified atomic mass unit", symbol "u", defined as 1/12 of the atomic mass of one ^{12}C atom in its electronic and nuclear ground states and in its rest coordinate system. The energy values are expressed as electron-volt, using the *international* volt V (see discussion in Part I, Section 2).

Due to the dramatic increase in the mass accuracy for some light nuclides, the printing format of the mass table is not adequate for the most precisely known masses, which require additional digits. Table A gives mass excess and atomic mass values for 16 nuclides, whose masses are known with the highest precision, with an uncertainty below 1 eV.

3 Influences on primary nuclides

Table II lists all primary nuclides, together with the main data that contribute to their mass determination (up to the three most important ones) and the *influences* of these data on their masses. It complements the information given in the main table (Part I, Table I) where the *significance* (total *flux*) and the main *flux* of each datum are displayed. In other words, the flow-of-information matrix **F**, defined in Part I, Section 4.3, is (partly) displayed once along lines and once along columns.

4 Nuclear reaction and decay energies

The linear combinations involving neighboring nuclides with small differences in atomic number and mass number, and particles such as n, p, d, t, ^{3}He and α, are important for studies of the trends in the nuclear energy surface and for Q-values of frequently used reactions and decays. In Table III, values for 12 such combinations and their uncertainties are presented.

With the help of the instructions given in the explanation of Table III, values for 28 additional reactions and their uncertainties can be derived. The derived values will be correct, but in a few cases (when reactions involving light nuclei measured with very high precision) the uncertainties will be slightly larger than those obtained when correlations are taken into account.

Table B. Correlation matrices for the most precisely known very light nuclei (in squared nano atomic mass units).

	n	H	D	^{4}He	^{13}C	^{14}N	^{15}N	^{16}O	^{28}Si
n	0.223271								
H	–0.000128	0.000196							
D	0.000161	0.000068	0.000229						
^{4}He	0.000000	0.000000	0.000000	0.025069					
^{13}C	–0.000123	0.000214	0.000091	0.000000	0.063406				
^{14}N	–0.000251	0.000409	0.000159	0.000000	0.055803	0.058042			
^{15}N	–0.000128	0.000393	0.000265	0.000000	0.009958	0.009448	0.390416		
^{16}O	–0.000500	0.000821	0.000322	0.000000	0.045852	0.047347	0.011367	0.101771	
^{28}Si	–0.000469	0.000781	0.000313	0.000000	0.072213	0.066225	0.041849	0.075975	0.304901

	n	H	D	^{3}H	^{3}He	^{16}O	^{20}Ne	^{23}Na	^{28}Si
n	0.223271								
H	–0.000128	0.000196							
D	0.000161	0.000068	0.000229						
^{3}H	–0.000064	0.000339	0.000275	0.006483					
^{3}He	–0.000088	0.000358	0.000270	0.003050	0.003656				
^{16}O	–0.000500	0.000821	0.000322	0.001449	0.001525	0.101771			
^{20}Ne	0.000315	0.000326	0.000641	0.000970	0.000970	0.004583	2.722009		
^{23}Na	0.000046	0.000001	0.000000	0.000002	0.000002	0.000017	0.000027	3.780717	
^{28}Si	–0.000469	0.000781	0.000313	0.001384	0.001456	0.075975	0.004877	0.000057	0.304901

In cases where any combination of the most precise mass values are involved, the uncertainties can be obtained with the help of the correlation coefficients given in Table B, where the variances and covariances for the most precisely known light nuclei are listed. As an example, if one considers the mass difference between ^{3}H and ^{3}He, it can be easily obtained from the values listed in Table A. However, the corresponding uncertainty cannot be simply determined from the square root of the quadratic sum of the individual uncertainties, which would be:

$$\sqrt{0.081^2+0.060^2}=0.10 \text{ nu}. \quad (3)$$

Since there is a strong correlation between these two nuclides, the uncertainty of the mass difference should be calculated using the correlation information provided in Table B. Thus, its uncertainty can be obtained from the square root of the sum of the variances minus twice the covariance:

$$\sqrt{0.006483+0.003656-2\times 0.003050}=0.064 \text{ nu}. \quad (4)$$

As a result, the final uncertainty is smaller when the correlations are taken into account.

For all other cases, the correlation coefficients are made available at the AMDC websites [11].

5 Graphs of separation and decay energies

All the information contained in the mass table (Table I) and in the nuclear reaction and separation energy table (Table III) can be displayed in plots of the binding energy (or mass) versus Z, N, or A. The atomic mass surface as a function of Z and N splits into four sheets due to the pairing energy, as discussed in Ref. [3]. The even-even sheet lies lowest, the odd-odd highest, and the other two nearly halfway in-between. These sheets are nearly parallel almost everywhere in this three-dimensional space and have remarkably regular trends, as one may convince oneself by making various cuts (e.g. Z or N or A constant). Any derivative of the binding energies also defines four sheets. In this context, *derivative* means a specified difference between the masses of two nearby nuclides. For a derivative specified in such a way where the differences are between nuclides in the same mass sheet, the nearly parallelism of these sheets leads to an almost unified surface for the derivative, thus allowing a single display. The derivatives are also smooth and have the advantage of displaying much smaller variations in data. Therefore, in order to illustrate the regular trends in the mass surface, three derivatives of this last type were chosen:

1. the two-neutron separation energies versus N, with lines connecting the isotopes of a given element (Figs. 1–9);
2. the two-proton separation energies versus Z, with lines connecting the isotones (nuclides with the same number of neutrons) (Figs. 10–17);
3. the Q_α values versus N, with lines connecting the isotopes of a given element (Figs. 18–26).

Clearly showing the trends from the mass surface (TMS), these graphs can be quite useful for checking the quality of any interpolation or extrapolation (if not

too far). When some masses deviate from the regular TMS in a specific mass region, there could be a serious physical cause, like a shell or subshell closure or an onset of deformation. However, if only one mass exhibits an irregular pattern, thus violating the general smooth trends, then one may seriously question the correctness of the related input data.

6 List of references

A complete list of references related to the input data used in the AME2020 and the NUBASE2020 evaluations are presented at the end of this paper. The individual references are given using the "Nuclear Science Reference" (NSR) database [12] keynumbers and identified by the corresponding CODEN style [12]. There is only one exception for the Eur. Phys. A journal, where instead of the 'ZAANE' identifier [12], we have used 'EPJAA'.

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Table I. The 2020 Atomic mass table

EXPLANATION OF TABLE

N	Neutron number.
Z	Proton number.
A	Mass number $A = N + Z$.
Elt.	Element symbol

Orig. Origin of values for secondary nuclides.

zp nn	mass of ${}^{A}Z$ derived from mass of ${}^{A+z+n}(Z+z)$.

Special notations:

IT	when $z = 0, n = 0$;
+	when $z = +1, n = -1$;
−	when $z = -1, n = +1$;
++	when $z = +2, n = -2$;
−−	when $z = -2, n = +2$;
εp	when $z = -2, n = +1$;
$+\alpha$	when $z = +2, n = +2$;
$-\alpha$	when $z = -2, n = -2$;
x	for distant connection.

Mass excess Mass excess [M(in u)−A], in keV, and its uncertainty (one-standard deviation).
In cases where the furthest-left significant digit in the uncertainty was larger than 3, values and uncertainties were rounded off, but not to more than tens of keV. (Examples: $2345.67 \pm 2.78 \rightarrow 2345.7 \pm 2.8, 2345.67 \pm 4.68 \rightarrow 2346 \pm 5$, but $2346.7 \pm 468.2 \rightarrow 2350 \pm 470$).

\# in place of decimal point: value and uncertainty derived not from purely experimental data, but at least partly from TMS (see Part I, Section 5, p. 030002-19).

Binding energy per nucleon Tabulated binding energy per nucleon (in keV):
$B/A = 1/A[ZM({}^{1}\mathrm{H}) + NM(n) - M(A,Z)]$.
and its uncertainty.

\# in place of decimal point: see above.
a in place of uncertainty : uncertainty smaller than 0.5 eV. Full precisions are available in the ASCII format at the AMDC website [12].

Beta-decay energy Direction of decay, value and uncertainty in keV:
for β^-: $Q^- = M(A,Z) - M(A,Z+1)$;
for β^+: $Q^+ = M(A,Z) - M(A,Z-1)$.
For a few odd-odd nuclides near maximum β-stability decaying both β^- and β^+, the Q^+ values are given as negative Q^- values for the preceding even-even isobar.

$*$ in place of value: not calculable.
\# in place of decimal point: see above.
a in place of uncertainty : uncertainty smaller than 0.5 eV. Full precisions are available in the ASCII format at the AMDC website [12] .

Atomic mass Atomic mass M and its uncertainty in μu.

\# in place of decimal point: see above.

Table I. The 2020 Atomic mass table (Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu	
1	0	1	n		8071.3181	0.0004	0.0	0.0	β^-	782.347 *a*	1 008664.9159	0.0005
0	1		H		7288.97106	0.00001	0.0	0.0		*	1 007825.03190	0.00001
1	1	2	H		13135.72290	0.00002	1112.283	*a*		*	2 014101.77784	0.00002
2	1	3	H		14949.81090	0.00008	2827.265	*a*	β^-	18.592 *a*	3 016049.28132	0.00008
1	2		He		14931.21888	0.00006	2572.680	*a*		*	3 016029.32197	0.00006
0	3		Li	-pp	28670#	2000#	-2270#	670#	β^+	13740# 2000#	3 030780#	2150#
3	1	4	H	-n	24620	100	1720	25	β^-	22200 100	4 026430	110
2	2		He		2424.91587	0.00015	7073.916	*a*		*	4 002603.25413	0.00016
1	3		Li	-p	25320	210	1150	50	β^+	22900 210	4 027190	230
4	1	5	H	-nn	32890	90	1336	18	β^-	21660 90	5 035310	100
3	2		He	-n	11231	20	5512	4		*	5 012057	21
2	3		Li	-p	11680	50	5266	10	β^+	450 50	5 012540	50
1	4		Be	x	37140#	2000#	20#	400#	β^+	25460# 2000#	5 039870#	2150#
5	1	6	H	-3n	41880	250	960	40	β^-	24280 250	6 044960	270
4	2		He		17592.10	0.05	4878.520	0.009	β^-	3505.21 0.05	6 018885.89	0.06
3	3		Li		14086.8804	0.0014	5332.331	*a*		*	6 015122.8874	0.0015
2	4		Be	–	18375	5	4487.2	0.9	β^+	4288 5	6 019726	6
1	5		B	x	47320#	2000#	-470#	330#	β^+	28950# 2000#	6 050800#	2150#
6	1	7	H	-nn	49140#	1000#	940#	140#	β^-	23060# 1000#	7 052750#	1080#
5	2		He	-n	26073	8	4123.1	1.1	β^-	11166 8	7 027991	8
4	3		Li		14907.105	0.004	5606.440	0.001		*	7 016003.434	0.004
3	4		Be		15769.00	0.07	5371.549	0.010	β^+	861.89 0.07	7 016928.71	0.08
2	5		B	p4n	27677	25	3559	4	β^+	11908 25	7 029712	27
6	2	8	He		31609.68	0.09	3924.521	0.011	β^-	10663.88 0.10	8 033934.39	0.10
5	3		Li		20945.80	0.05	5159.712	0.006	β^-	16004.13 0.06	8 022486.24	0.05
4	4		Be	$-\alpha$	4941.67	0.04	7062.436	0.004		*	8 005305.10	0.04
3	5		B		22921.6	1.0	4717.16	0.12	β^+	17979.9 1.0	8 024607.3	1.1
2	6		C		35064	18	3101.5	2.3	β^+	12143 18	8 037643	20
7	2	9	He		40940	50	3349	5	β^-	15980 50	9 043950	50
6	3		Li	-3n	24954.91	0.19	5037.769	0.021	β^-	13606.45 0.20	9 026790.19	0.20
5	4		Be		11348.45	0.08	6462.669	0.009		*	9 012183.06	0.08
4	5		B	–	12416.5	0.9	6257.07	0.10	β^+	1068.0 0.9	9 013329.6	1.0
3	6		C	-pp	28911.0	2.1	4337.42	0.24	β^+	16494.5 2.3	9 031037.2	2.3
8	2	10	He	-nn	49200	90	2995	9	β^-	16140 90	10 052820	100
7	3		Li	-n	33053	13	4531.4	1.3	β^-	20445 13	10 035483	14
6	4		Be		12607.49	0.08	6497.631	0.008	β^-	556.88 0.08	10 013534.69	0.09
5	5		B		12050.611	0.015	6475.083	0.002		*	10 012936.862	0.016
4	6		C		15698.67	0.07	6032.043	0.007	β^+	3648.06 0.07	10 016853.22	0.08
3	7		N	––	38800	400	3640	40	β^+	23100 400	10 041650	430
8	3	11	Li	x	40728.3	0.6	4155.38	0.06	β^-	20551.1 0.7	11 043723.6	0.7
7	4		Be		20177.17	0.24	5952.540	0.022	β^-	11509.46 0.24	11 021661.08	0.26
6	5		B		8667.708	0.012	6927.732	0.001		*	11 009305.167	0.013
5	6		C		10649.40	0.06	6676.456	0.005	β^+	1981.69 0.06	11 011432.60	0.06
4	7		N	-p	24366	5	5358.4	0.5	β^+	13716 5	11 026158	5
3	8		O	-pp	47740	60	3162	5	β^+	23370 60	11 051250	60
9	3	12	Li	-n	49010	30	3791.6	2.5	β^-	23930 30	12 052610	30
8	4		Be		25077.8	1.9	5720.72	0.16	β^-	11708.4 2.3	12 026922.1	2.0
7	5		B		13369.4	1.3	6631.22	0.11	β^-	13369.4 1.3	12 014352.6	1.4
6	6		C		0.0	0.0	7680.145	*a*		*	12 000000.0	0.0
5	7		N		17338.1	1.0	6170.11	0.08	β^+	17338.1 1.0	12 018613.2	1.1
4	8		O	-pp	32013	12	4882.0	1.0	β^+	14675 12	12 034368	13

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu	
10	3	13	Li	-nn	56980	70	3508	5	β^-	23320	70	13 061170	80
9	4		Be	-n	33659	10	5241.4	0.8	β^-	17097	10	13 036135	11
8	5		B	-nn	16561.9	1.0	6496.42	0.08	β^-	13436.9	1.0	13 017780.0	1.1
7	6		C		3125.00933	0.00023	7469.850	*a*		*		13 003354.83534	0.00025
6	7		N	-p	5345.48	0.27	7238.863	0.021	β^+	2220.47	0.27	13 005738.61	0.29
5	8		O	+3n	23115	10	5811.8	0.7	β^+	17770	10	13 024815	10
4	9		F	x	42030#	500#	4300#	40#	β^+	18920#	500#	13 045120#	540#
10	4	14	Be	x	39950	130	4994	9	β^-	16290	130	14 042890	140
9	5		B		23664	21	6101.6	1.5	β^-	20644	21	14 025404	23
8	6		C		3019.893	0.004	7520.320	*a*	β^-	156.476	0.004	14 003241.989	0.004
7	7		N		2863.41683	0.00022	7475.615	*a*		*		14 003074.00425	0.00024
6	8		O		8007.781	0.025	7052.278	0.002	β^+	5144.364	0.025	14 008596.706	0.027
5	9		F	-p	31960	40	5285.2	2.9	β^+	23960	40	14 034320	40
11	4	15	Be	-n	49830	170	4541	11	β^-	20870	170	15 053490	180
10	5		B		28957	21	5880.0	1.4	β^-	19084	21	15 031087	23
9	6		C	-n	9873.1	0.8	7100.17	0.05	β^-	9771.7	0.8	15 010599.3	0.9
8	7		N		101.4381	0.0006	7699.460	*a*		*		15 000108.8983	0.0006
7	8		O		2855.6	0.5	7463.69	0.03	β^+	2754.2	0.5	15 003065.6	0.5
6	9		F	-p	16567	14	6497.5	0.9	β^+	13711	14	15 017785	15
5	10		Ne	-pp	40220	70	4869	4	β^+	23650	70	15 043170	70
12	4	16	Be	-nn	57450	170	4285	10	β^-	20340	170	16 061670	180
11	5		B		37112	25	5507.4	1.5	β^-	23418	25	16 039841	26
10	6		C	-nn	13694	4	6922.05	0.22	β^-	8010	4	16 014701	4
9	7		N	-n	5683.9	2.3	7373.80	0.14	β^-	10420.9	2.3	16 006101.9	2.5
8	8		O		-4737.00217	0.00030	7976.207	*a*		*		15 994914.6193	0.0003
7	9		F		10675	5	6964.0	0.3	β^+	15412	5	16 011460	6
6	10		Ne	−−	23987	20	6083.2	1.3	β^+	13312	21	16 025751	22
12	5	17	B	x	43720	200	5270	12	β^-	22680	200	17 046930	220
11	6		C	2p−n	21032	17	6558.0	1.0	β^-	13162	23	17 022579	19
10	7		N	+p	7870	15	7286.2	0.9	β^-	8679	15	17 008449	16
9	8		O		-808.7642	0.0006	7750.729	*a*		*		16 999131.7560	0.0007
8	9		F		1951.70	0.25	7542.328	0.015	β^+	2760.47	0.25	17 002095.24	0.27
7	10		Ne		16500.5	0.4	6640.499	0.021	β^+	14548.8	0.4	17 017714.0	0.4
6	11		Na	x	34720	60	5523	4	β^+	18220	60	17 037270	60
13	5	18	B	-n	51790	200	4977	11	β^-	26870	210	18 055600	220
12	6		C	++	24920	30	6426.1	1.7	β^-	11810	40	18 026750	30
11	7		N	+	13113	19	7038.6	1.0	β^-	13896	19	18 014078	20
10	8		O		-782.8163	0.0006	7767.098	*a*		*		17 999159.6121	0.0007
9	9		F		873.1	0.5	7631.638	0.026	β^+	1655.9	0.5	18 000937.3	0.5
8	10		Ne		5317.6	0.4	7341.258	0.020	β^+	4444.5	0.6	18 005708.7	0.4
7	11		Na		25040	90	6202	5	β^+	19720	90	18 026880	100
14	5	19	B	x	59770	530	4720	28	β^-	27360	530	19 064170	560
13	6		C	-n	32410	100	6118	5	β^-	16560	100	19 034800	110
12	7		N	p−2n	15856	16	6948.5	0.9	β^-	12523	17	19 017022	18
11	8		O	-n	3332.9	2.6	7566.50	0.14	β^-	4820.3	2.6	19 003578.0	2.8
10	9		F		-1487.4451	0.0008	7779.019	*a*		*		18 998403.1621	0.0009
9	10		Ne	+3n	1752.05	0.16	7567.343	0.008	β^+	3239.50	0.16	19 001880.91	0.17
8	11		Na		12929	11	6937.9	0.6	β^+	11177	11	19 013880	11
7	12		Mg	-pp	31840	60	5901	3	β^+	18910	60	19 034180	60

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
15	5	20	B	-n	69400	550	4406	27	β^-	31900	590	20 074510	590
14	6		C	x	37500	230	5961	12	β^-	15740	240	20 040260	250
13	7		N	x	21770	80	6709	4	β^-	17970	80	20 023370	80
12	8		O	-nn	3796.2	0.9	7568.57	0.04	β^-	3813.6	0.9	20 004075.4	0.9
11	9		F	-n	-17.463	0.030	7720.135	0.002	β^-	7024.469	0.030	19 999981.25	0.03
10	10		Ne		-7041.9322	0.0015	8032.241	*a*		*		19 992440.1753	0.0016
9	11		Na		6850.5	1.1	7298.50	0.06	β^+	13892.4	1.1	20 007354.3	1.2
8	12		Mg	+t	17477.7	1.9	6728.03	0.09	β^+	10627.2	2.2	20 018763.1	2.0
16	5	21	B	-nn	78380	560	4153	27	β^-	32740#	820#	21 084150	600
15	6		C	x	45640#	600#	5674#	28#	β^-	20410#	610#	21 049000#	640#
14	7		N	x	25230	130	6609	6	β^-	17170	130	21 027090	140
13	8		O	-3n	8062	12	7389.4	0.6	β^-	8110	12	21 008655	13
12	9		F	-nn	-47.6	1.8	7738.29	0.09	β^-	5684.2	1.8	20 999948.9	1.9
11	10		Ne		-5731.78	0.04	7971.714	0.002		*		20 993846.69	0.04
10	11		Na		-2184.86	0.04	7765.558	0.002	β^+	3546.919	0.018	20 997654.46	0.05
9	12		Mg	x	10903.9	0.8	7105.03	0.04	β^+	13088.7	0.8	21 011705.8	0.8
8	13		Al	x	27090#	600#	6297#	29#	β^+	16190#	600#	21 029080#	640#
16	6	22	C	-nn	53610	230	5421	11	β^-	21850	310	22 057550	250
15	7		N	x	31760	210	6379	9	β^-	22480	220	22 034100	220
14	8		O	-4n	9280	60	7364.9	2.6	β^-	6490	60	22 009970	60
13	9		F	+	2793	12	7624.3	0.6	β^-	10818	12	22 002999	13
12	10		Ne		-8024.716	0.018	8080.466	0.001		*		21 991385.114	0.019
11	11		Na		-5181.39	0.13	7915.662	0.006	β^+	2843.32	0.13	21 994437.55	0.14
10	12		Mg		-399.99	0.16	7662.765	0.007	β^+	4781.41	0.16	21 999570.60	0.17
9	13		Al	x	18200#	400#	6782#	18#	β^+	18600#	400#	22 019540#	430#
8	14		Si	x	33640#	500#	6044#	23#	β^+	15440#	640#	22 036110#	540#
17	6	23	C	x	64170#	1000#	5080#	40#	β^-	27450#	1080#	23 068890#	1070#
16	7		N	x	36720	420	6237	18	β^-	22100	440	23 039420	450
15	8		O	x	14620	120	7163	5	β^-	11340	130	23 015700	130
14	9		F		3290	30	7622.3	1.4	β^-	8440	30	23 003530	40
13	10		Ne	-n	-5154.05	0.10	7955.256	0.005	β^-	4375.81	0.10	22 994466.91	0.11
12	11		Na		-9529.8535	0.0018	8111.494	*a*		*		22 989769.2820	0.0019
11	12		Mg	–	-5473.67	0.03	7901.123	0.001	β^+	4056.18	0.03	22 994123.77	0.03
10	13		Al	––	6748.1	0.3	7335.728	0.015	β^+	12221.7	0.3	23 007244.4	0.4
9	14		Si	x	23950#	500#	6554#	22#	β^+	17200#	500#	23 025710#	540#
17	7	24	N	x	46940#	400#	5887#	17#	β^-	28440#	430#	24 050390#	430#
16	8		O	x	18500	160	7040	7	β^-	10960	190	24 019860	180
15	9		F	x	7540	100	7464	4	β^-	13500	100	24 008100	100
14	10		Ne	-nn	-5951.6	0.5	7993.325	0.021	β^-	2466.3	0.5	23 993610.6	0.6
13	11		Na	-n	-8417.901	0.017	8063.488	0.001	β^-	5515.677	0.021	23 990963.012	0.018
12	12		Mg		-13933.578	0.013	8260.710	0.001		*		23 985041.689	0.014
11	13		Al		-48.81	0.23	7649.581	0.009	β^+	13884.77	0.23	23 999947.60	0.24
10	14		Si	––	10745	19	7167.2	0.8	β^+	10794	19	24 011535	21
9	15		P	x	34020#	500#	6165#	21#	β^+	23280#	500#	24 036520#	540#
18	7	25	N	x	55980#	500#	5613#	20#	β^-	28650#	530#	25 060100#	540#
17	8		O	-n	27330	170	6728	7	β^-	15990	190	25 029340	180
16	9		F	x	11330	100	7336	4	β^-	13370	100	25 012170	100
15	10		Ne		-2036	29	7839.8	1.2	β^-	7322	29	24 997810	30
14	11		Na	-nn	-9357.8	1.2	8101.40	0.05	β^-	3835.0	1.2	24 989954.0	1.3
13	12		Mg		-13192.78	0.05	8223.503	0.002		*		24 985836.97	0.05
12	13		Al		-8915.97	0.06	8021.137	0.003	β^+	4276.81	0.04	24 990428.31	0.07
11	14		Si	+3n	3827	10	7480.1	0.4	β^+	12743	10	25 004109	11
10	15		P	x	20190#	400#	6794#	16#	β^+	16360#	400#	25 021680#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
18	8	26	O	-nn	34660	160	6497	6	β^-	15990	200	26 037210	180
17	9		F		18670	110	7082	4	β^-	18190	110	26 020050	110
16	10		Ne	x	481	18	7751.9	0.7	β^-	7342	19	26 000516	20
15	11		Na	x	-6861	4	8004.20	0.13	β^-	9354	4	25 992635	4
14	12		Mg		-16214.544	0.029	8333.871	0.001		*		25 982592.97	0.03
13	13		Al		-12210.14	0.07	8149.765	0.003	β^+	4004.40	0.06	25 986891.88	0.07
12	14		Si	–	-7141.00	0.11	7924.708	0.004	β^+	5069.14	0.08	25 992333.82	0.12
11	15		P	x	10970#	200#	7198#	8#	β^+	18110#	200#	26 011780#	210#
10	16		S	x	27680#	600#	6525#	23#	β^+	16710#	630#	26 029720#	640#
19	8	27	O	x	44670#	500#	6185#	19#	β^-	19540#	510#	27 047960#	540#
18	9		F		25130	120	6880	4	β^-	18080	150	27 026980	130
17	10		Ne	x	7050	90	7520	3	β^-	12570	90	27 007570	100
16	11		Na	++	-5518	4	7956.95	0.14	β^-	9069	4	26 994076	4
15	12		Mg		-14586.59	0.05	8263.853	0.002	β^-	2610.27	0.07	26 984340.65	0.05
14	13		Al		-17196.86	0.05	8331.553	0.002		*		26 981538.41	0.05
13	14		Si	–	-12384.51	0.11	8124.342	0.004	β^+	4812.36	0.10	26 986704.69	0.12
12	15		P	-p	-659	9	7661.1	0.3	β^+	11725	9	26 999292	10
11	16		S	–	17490#	400#	6960#	15#	β^+	18150#	400#	27 018780#	430#
20	8	28	O	x	52080#	700#	5988#	25#	β^-	18680#	710#	28 055910#	750#
19	9		F	-n	33400	120	6627	4	β^-	22100	170	28 035860	130
18	10		Ne	x	11300	130	7388	5	β^-	12290	130	28 012130	140
17	11		Na	x	-988	10	7799.3	0.4	β^-	14032	10	27 998939	11
16	12		Mg	x	-15019.95	0.26	8272.453	0.009	β^-	1830.77	0.27	27 983875.43	0.28
15	13		Al	-n	-16850.72	0.05	8309.897	0.002	β^-	4642.08	0.05	27 981910.01	0.05
14	14		Si		-21492.7971	0.0005	8447.744	*a*		*		27 976926.5344	0.0006
13	15		P		-7147.9	1.1	7907.48	0.04	β^+	14344.9	1.1	27 992326.5	1.2
12	16		S	––	4070	160	7479	6	β^+	11220	160	28 004370	170
11	17		Cl	-p	28270#	500#	6587#	18#	β^+	24200#	530#	28 030350#	540#
20	9	29	F	x	40150	530	6444	18	β^-	21750	550	29 043100	560
19	10		Ne	x	18400	150	7167	5	β^-	15720	150	29 019750	160
18	11		Na		2680	7	7682.15	0.25	β^-	13292	7	29 002877	8
17	12		Mg		-10612.4	0.3	8113.532	0.012	β^-	7595.4	0.5	28 988607.2	0.4
16	13		Al	x	-18207.8	0.3	8348.465	0.012	β^-	3687.3	0.3	28 980453.2	0.4
15	14		Si		-21895.0815	0.0006	8448.636	*a*		*		28 976494.6643	0.0006
14	15		P		-16952.8	0.4	8251.237	0.012	β^+	4942.2	0.4	28 981800.4	0.4
13	16		S	x	-3094	13	7746.4	0.4	β^+	13858	13	28 996678	14
12	17		Cl	-p	14020#	190#	7129#	7#	β^+	17120#	190#	29 015050#	200#
11	18		Ar	-pp	37970#	440#	6276#	15#	β^+	23950#	480#	29 040760#	470#
21	9	30	F	x	48960#	500#	6205#	17#	β^-	25680#	560#	30 052560#	540#
20	10		Ne		23280	250	7035	8	β^-	14810	250	30 024990	270
19	11		Na		8475	5	7501.97	0.16	β^-	17356	5	30 009098	5
18	12		Mg		-8881.4	1.3	8054.43	0.04	β^-	6982.7	2.3	29 990465.5	1.4
17	13		Al		-15864.1	1.9	8261.10	0.06	β^-	8568.8	1.9	29 982969.2	2.1
16	14		Si	-n	-24432.962	0.022	8520.655	0.001		*		29 973770.137	0.023
15	15		P	–	-20200.86	0.07	8353.506	0.002	β^+	4232.11	0.06	29 978313.49	0.07
14	16		S	–	-14059.25	0.21	8122.708	0.007	β^+	6141.60	0.20	29 984906.77	0.22
13	17		Cl	-p	4675	24	7472.2	0.8	β^+	18734	24	30 005018	26
12	18		Ar	-pp	22070#	180#	6866#	6#	β^+	17400#	180#	30 023690#	190#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
22	9	31	F	-nn	56840#	540#	6011#	17#	β^-	25660#	600#	31 061020#	570#
21	10		Ne		31180	270	6813	9	β^-	18940	270	31 033470	290
20	11		Na	x	12246	14	7398.7	0.5	β^-	15368	14	31 013147	15
19	12		Mg	x	-3122	3	7869.19	0.10	β^-	11829	4	30 996648	3
18	13		Al	x	-14950.7	2.2	8225.52	0.07	β^-	7998.3	2.2	30 983949.8	2.4
17	14		Si	-n	-22949.04	0.04	8458.292	0.001	β^-	1491.51	0.04	30 975363.20	0.05
16	15		P		-24440.5444	0.0007	8481.168	*a*		*		30 973761.9977	0.0008
15	16		S		-19042.53	0.23	8281.801	0.007	β^+	5398.01	0.23	30 979557.00	0.25
14	17		Cl	−−	-7035	3	7869.21	0.11	β^+	12008	3	30 992448	4
13	18		Ar	−	11330#	200#	7252#	6#	β^+	18360#	200#	31 012160#	220#
12	19		K	x	34260#	300#	6487#	10#	β^+	22940#	360#	31 036780#	320#
22	10	32	Ne	x	37000#	500#	6671#	16#	β^-	18360#	500#	32 039720#	540#
21	11		Na	x	18640	40	7219.9	1.2	β^-	19470	40	32 020010	40
20	12		Mg	x	-829	3	7803.84	0.10	β^-	10270	8	31 999110	4
19	13		Al	x	-11099	7	8100.34	0.22	β^-	12978	7	31 988084	8
18	14		Si	x	-24077.69	0.30	8481.469	0.009	β^-	227.2	0.3	31 974151.5	0.3
17	15		P	-n	-24304.88	0.04	8464.120	0.001	β^-	1710.66	0.04	31 973907.64	0.04
16	16		S		-26015.5371	0.0013	8493.130	*a*		*		31 972071.1735	0.0014
15	17		Cl		-13334.7	0.6	8072.406	0.018	β^+	12680.8	0.6	31 985684.6	0.6
14	18		Ar	x	-2200.4	1.8	7700.01	0.06	β^+	11134.4	1.9	31 997637.8	1.9
13	19		K	x	21990#	400#	6920#	12#	β^+	24190#	400#	32 023610#	430#
23	10	33	Ne	x	46130#	600#	6436#	18#	β^-	22350#	750#	33 049520#	640#
22	11		Na	x	23780	450	7090	14	β^-	18820	450	33 025530	480
21	12		Mg		4962.9	2.7	7636.44	0.08	β^-	13460	7	33 005327.9	2.9
20	13		Al	x	-8497	7	8020.62	0.21	β^-	12017	7	32 990878	8
19	14		Si	x	-20514.3	0.7	8361.060	0.021	β^-	5823.0	1.3	32 977977.0	0.8
18	15		P	+	-26337.4	1.1	8513.81	0.03	β^-	248.5	1.1	32 971725.7	1.2
17	16		S		-26585.8583	0.0013	8497.630	*a*		*		32 971458.9086	0.0014
16	17		Cl		-21003.3	0.4	8304.756	0.012	β^+	5582.5	0.4	32 977452.0	0.4
15	18		Ar	x	-9384.3	0.4	7928.956	0.012	β^+	11619.0	0.6	32 989925.5	0.4
14	19		K	x	7540#	200#	7392#	6#	β^+	16930#	200#	33 008100#	220#
13	20		Ca	x	31030#	400#	6657#	12#	β^+	23490#	450#	33 033310#	430#
24	10	34	Ne	-nn	52840#	510#	6287#	15#	β^-	21160#	790#	34 056730#	550#
23	11		Na	x	31680	600	6886	18	β^-	23360	600	34 034010	640
22	12		Mg	x	8323	7	7550.39	0.20	β^-	11321	7	34 008935	7
21	13		Al	x	-2997.6	2.1	7860.35	0.06	β^-	16994.1	2.3	33 996781.9	2.3
20	14		Si	x	-19991.7	0.8	8337.166	0.024	β^-	4557.0	1.1	33 978538.0	0.9
19	15		P	x	-24548.7	0.8	8448.186	0.024	β^-	5383.0	0.8	33 973645.9	0.9
18	16		S		-29931.69	0.04	8583.499	0.001		*		33 967867.01	0.05
17	17		Cl		-24440.09	0.05	8398.971	0.001	β^+	5491.60	0.04	33 973762.49	0.05
16	18		Ar		-18378.29	0.08	8197.672	0.002	β^+	6061.79	0.06	33 980270.09	0.08
15	19		K	x	-1220#	200#	7670#	6#	β^+	17160#	200#	33 998690#	210#
14	20		Ca	x	14890#	300#	7173#	9#	β^+	16110#	360#	34 015990#	320#
24	11	35	Na	-n	37830#	670#	6745#	19#	β^-	22190#	720#	35 040610#	720#
23	12		Mg	x	15640	270	7356	8	β^-	15860	270	35 016790	290
22	13		Al	x	-224	7	7787.12	0.21	β^-	14170	40	34 999760	8
21	14		Si	2p−n	-14390	40	8169.6	1.0	β^-	10470	40	34 984550	40
20	15		P	+p	-24857.8	1.9	8446.25	0.05	β^-	3988.4	1.9	34 973314.0	2.0
19	16		S		-28846.21	0.04	8537.851	0.001	β^-	167.322	0.026	34 969032.32	0.04
18	17		Cl		-29013.53	0.04	8520.279	0.001		*		34 968852.69	0.04
17	18		Ar	−	-23047.3	0.7	8327.462	0.019	β^+	5966.2	0.7	34 975257.7	0.7
16	19		K	4n	-11172.9	0.5	7965.841	0.015	β^+	11874.4	0.9	34 988005.4	0.6
15	20		Ca	x	5190#	200#	7476#	6#	β^+	16360#	200#	35 005570#	220#
14	21		Sc	x	27100#	400#	6828#	11#	β^+	21910#	450#	35 029090#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
25	11	36	Na	-n	45900#	690#	6557#	19#	β^-	25520#	970#	36 049280#	740#
24	12		Mg	x	20380	690	7244	19	β^-	14430	710	36 021880	740
23	13		Al	x	5950	150	7624	4	β^-	18390	170	36 006390	160
22	14		Si	x	-12440	70	8112.5	2.0	β^-	7810	70	35 986650	80
21	15		P	+	-20251	13	8307.9	0.4	β^-	10413	13	35 978260	14
20	16		S		-30664.14	0.19	8575.390	0.005	β^-	-1142.13	0.19	35 967080.69	0.20
19	17		Cl		-29522.01	0.04	8521.932	0.001	β^-	709.53	0.04	35 968306.82	0.04
18	18		Ar		-30231.542	0.027	8519.910	0.001		*		35 967545.106	0.029
17	19		K		-17417.2	0.3	8142.223	0.009	β^+	12814.4	0.3	35 981301.9	0.3
16	20		Ca	4n	-6450	40	7815.9	1.1	β^+	10970	40	35 993070	40
15	21		Sc	x	16150#	300#	7166#	8#	β^+	22600#	300#	36 017340#	320#
26	11	37	Na	-nn	53130#	690#	6403#	19#	β^-	24920#	980#	37 057040#	740#
25	12		Mg	-n	28210	700	7055	19	β^-	18400	720	37 030290	750
24	13		Al	x	9810	180	7531	5	β^-	16380	210	37 010530	190
23	14		Si	x	-6570	110	7953	3	β^-	12420	120	36 992950	120
22	15		P	p−2n	-19000	40	8267.6	1.0	β^-	7900	40	36 979610	40
21	16		S	-n	-26896.43	0.20	8459.936	0.005	β^-	4865.13	0.20	36 971125.50	0.21
20	17		Cl		-31761.55	0.05	8570.282	0.001		*		36 965902.57	0.06
19	18		Ar	–	-30947.68	0.21	8527.141	0.006	β^+	813.87	0.20	36 966776.30	0.22
18	19		K	-p	-24800.20	0.09	8339.848	0.003	β^+	6147.48	0.23	36 973375.89	0.10
17	20		Ca	x	-13136.1	0.6	8003.457	0.017	β^+	11664.1	0.6	36 985897.8	0.7
16	21		Sc	x	3780#	300#	7525#	8#	β^+	16920#	300#	37 004060#	320#
15	22		Ti	x	25170#	400#	6926#	11#	β^+	21390#	500#	37 027020#	430#
27	11	38	Na	-n	61910#	720#	6216#	19#	β^-	27830#	880#	38 066460#	770#
26	12		Mg	x	34070#	500#	6928#	13#	β^-	17600#	530#	38 036580#	540#
25	13		Al	x	16470#	150#	7370#	4#	β^-	20640#	180#	38 017680#	160#
24	14		Si	x	-4170	100	7892.8	2.8	β^-	10450	130	37 995520	110
23	15		P	x	-14620	70	8147.3	1.9	β^-	12240	70	37 984300	80
22	16		S	+	-26861	7	8448.78	0.19	β^-	2937	7	37 971163	8
21	17		Cl	-n	-29798.12	0.10	8505.482	0.003	β^-	4916.71	0.22	37 968010.41	0.11
20	18		Ar		-34714.83	0.19	8614.281	0.005		*		37 962732.10	0.21
19	19		K		-28800.76	0.20	8438.059	0.005	β^+	5914.07	0.04	37 969081.11	0.21
18	20		Ca		-22058.50	0.19	8240.043	0.005	β^+	6742.26	0.06	37 976319.22	0.21
17	21		Sc	x	-4250#	200#	7751#	5#	β^+	17810#	200#	37 995440#	220#
16	22		Ti	x	11370#	300#	7319#	8#	β^+	15620#	360#	38 012210#	320#
28	11	39	Na	-n	69980#	740#	6056#	19#	β^-	27200#	900#	39 075120#	800#
27	12		Mg	-n	42780#	510#	6734#	13#	β^-	21290#	590#	39 045920#	550#
26	13		Al	x	21490#	300#	7260#	8#	β^-	19170#	330#	39 023070#	320#
25	14		Si	x	2320	140	7731	3	β^-	15090	180	39 002490	150
24	15		P	x	-12770	110	8098.0	2.9	β^-	10390	120	38 986290	120
23	16		S	2p−n	-23160	50	8344.3	1.3	β^-	6640	50	38 975130	50
22	17		Cl	-nn	-29800.2	1.7	8494.40	0.04	β^-	3442	5	38 968008.2	1.9
21	18		Ar	+	-33242	5	8562.60	0.13	β^-	565	5	38 964313	5
20	19		K		-33807.195	0.005	8557.026	*a*		*		38 963706.485	0.005
19	20		Ca		-27282.7	0.6	8369.671	0.015	β^+	6524.5	0.6	38 970710.8	0.6
18	21		Sc	2n−p	-14173	24	8013.5	0.6	β^+	13110	24	38 984785	26
17	22		Ti	x	2500#	200#	7566#	5#	β^+	16670#	200#	39 002680#	220#
16	23		V	x	22570#	400#	7031#	10#	β^+	20070#	450#	39 024230#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
28	12	40	Mg	x	49550#	500#	6598#	13#	β^-	20730#	580#	40 053190#	540#
27	13		Al	x	28820#	300#	7097#	7#	β^-	23150#	320#	40 030940#	320#
26	14		Si	x	5670	120	7656	3	β^-	13810	150	40 006080	130
25	15		P	x	-8140	80	7981.4	2.1	β^-	14700	80	39 991260	90
24	16		S		-22838	4	8329.33	0.10	β^-	4720	30	39 975483	4
23	17		Cl	+	-27560	30	8427.8	0.8	β^-	7480	30	39 970420	30
22	18		Ar		-35039.9000	0.0022	8595.259	*a*	β^-	-1504.40	0.06	39 962383.1220	0.0023
21	19		K		-33535.50	0.06	8538.091	0.001	β^-	1310.91	0.06	39 963998.17	0.06
20	20		Ca		-34846.402	0.020	8551.305	0.001		*		39 962590.851	0.022
19	21		Sc	–	-20523.4	2.8	8173.67	0.07	β^+	14323.0	2.8	39 977967	3
18	22		Ti		-8990	70	7865.9	1.7	β^+	11530	70	39 990350	70
17	23		V	x	12470#	300#	7310#	7#	β^+	21460#	310#	40 013390#	320#
29	12	41	Mg	x	58100#	500#	6425#	12#	β^-	23510#	640#	41 062370#	540#
28	13		Al	x	34590#	400#	6980#	10#	β^-	21390#	500#	41 037130#	430#
27	14		Si	x	13200#	300#	7482#	7#	β^-	18180#	320#	41 014170#	320#
26	15		P	x	-4980	120	7906.6	2.9	β^-	14030	120	40 994650	130
25	16		S	x	-19009	4	8229.64	0.10	β^-	8300	70	40 979593	4
24	17		Cl	x	-27310	70	8413.0	1.7	β^-	5760	70	40 970680	70
23	18		Ar	-n	-33067.5	0.3	8534.373	0.008	β^-	2492.0	0.3	40 964500.6	0.4
22	19		K		-35559.549	0.004	8576.073	*a*		*		40 961825.256	0.004
21	20		Ca		-35137.91	0.14	8546.708	0.003	β^+	421.64	0.14	40 962277.91	0.15
20	21		Sc		-28642.36	0.08	8369.198	0.002	β^+	6495.55	0.16	40 969251.16	0.08
19	22		Ti	x	-15698	28	8034.4	0.7	β^+	12945	28	40 983150	30
18	23		V	x	310#	200#	7625#	5#	β^+	16010#	200#	41 000330#	220#
17	24		Cr	x	20410#	400#	7116#	10#	β^+	20100#	450#	41 021910#	430#
29	13	42	Al	x	41990#	500#	6829#	12#	β^-	25150#	580#	42 045080#	540#
28	14		Si	x	16840#	300#	7410#	7#	β^-	15750#	320#	42 018080#	320#
27	15		P	x	1090	100	7765.9	2.3	β^-	18730	100	42 001170	100
26	16		S	x	-17637.7	2.8	8193.23	0.07	β^-	7190	60	41 981065	3
25	17		Cl	x	-24830	60	8345.9	1.4	β^-	9590	60	41 973340	60
24	18		Ar	x	-34423	6	8555.61	0.14	β^-	599	6	41 963046	6
23	19		K	-n	-35022.03	0.11	8551.257	0.003	β^-	3525.26	0.18	41 962402.31	0.11
22	20		Ca		-38547.29	0.15	8616.565	0.004		*		41 958617.78	0.16
21	21		Sc		-32121.00	0.15	8444.930	0.004	β^+	6426.29	0.05	41 965516.69	0.17
20	22		Ti		-25104.35	0.27	8259.240	0.006	β^+	7016.65	0.22	41 973049.37	0.29
19	23		V	x	-7620#	200#	7824#	5#	β^+	17490#	200#	41 991820#	210#
18	24		Cr	x	7060#	300#	7456#	7#	β^+	14680#	360#	42 007580#	320#
30	13	43	Al	x	48270#	600#	6712#	14#	β^-	23940#	720#	43 051820#	640#
29	14		Si	x	24330#	400#	7251#	9#	β^-	19290#	500#	43 026120#	430#
28	15		P	x	5040#	300#	7681#	7#	β^-	17240#	300#	43 005410#	320#
27	16		S	x	-12195	5	8063.83	0.12	β^-	11960	60	42 986908	5
26	17		Cl	x	-24160	60	8323.9	1.4	β^-	7850	60	42 974060	70
25	18		Ar	x	-32010	5	8488.24	0.12	β^-	4566	5	42 965636	6
24	19		K	-4n	-36575.4	0.4	8576.220	0.010	β^-	1833.5	0.5	42 960734.7	0.4
23	20		Ca		-38408.87	0.23	8600.665	0.005		*		42 958766.38	0.24
22	21		Sc	-p	-36188.1	1.9	8530.83	0.04	β^+	2220.7	1.9	42 961150.4	2.0
21	22		Ti		-29316	6	8352.81	0.13	β^+	6873	6	42 968528	6
20	23		V	x	-17920	40	8069.5	1.0	β^+	11400	40	42 980770	50
19	24		Cr	x	-1970#	200#	7680#	5#	β^+	15950#	210#	42 997890#	220#
18	25		Mn	x	17370#	400#	7213#	9#	β^+	19340#	450#	43 018650#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
30	14	44	Si	x	29310#	500#	7156#	11#	β^-	18200#	640#	44 031470#	540#
29	15		P	x	11110#	400#	7552#	9#	β^-	20310#	400#	44 011930#	430#
28	16		S	x	-9204	5	7996.02	0.12	β^-	11270	90	43 990119	6
27	17		Cl	x	-20480	90	8234.5	1.9	β^-	12190	90	43 978010	90
26	18		Ar	x	-32673.3	1.6	8493.84	0.04	β^-	3108.2	1.6	43 964923.8	1.7
25	19		K	x	-35781.5	0.4	8546.702	0.010	β^-	5687.2	0.5	43 961587.0	0.5
24	20		Ca		-41468.7	0.3	8658.177	0.007		*		43 955481.5	0.3
23	21		Sc	-p	-37816.0	1.8	8557.38	0.04	β^+	3652.7	1.8	43 959402.8	1.9
22	22		Ti	$-\alpha$	-37548.6	0.7	8533.522	0.016	β^+	267.4	1.9	43 959689.9	0.8
21	23		V		-23808	7	8203.46	0.17	β^+	13741	7	43 974441	8
20	24		Cr	x	-13420	50	7949.6	1.2	β^+	10390	50	43 985590	60
19	25		Mn	x	7460#	300#	7457#	7#	β^+	20880#	300#	44 008010#	320#
31	14	45	Si	x	37090#	600#	7004#	13#	β^-	21130#	780#	45 039820#	640#
30	15		P	x	15960#	500#	7456#	11#	β^-	19300#	580#	45 017130#	540#
29	16		S	x	-3340#	300#	7867#	7#	β^-	14920#	330#	44 996410#	320#
28	17		Cl	x	-18260	140	8182	3	β^-	11510	140	44 980390	150
27	18		Ar	x	-29770.8	0.5	8419.953	0.011	β^-	6844.8	0.7	44 968039.7	0.6
26	19		K	x	-36615.6	0.5	8554.675	0.012	β^-	4196.6	0.6	44 960691.5	0.6
25	20		Ca		-40812.2	0.4	8630.547	0.008	β^-	260.1	0.7	44 956186.3	0.4
24	21		Sc		-41072.3	0.7	8618.941	0.015		*		44 955907.1	0.7
23	22		Ti		-39010.3	0.8	8555.732	0.019	β^+	2062.1	0.5	44 958120.8	0.9
22	23		V		-31886.4	0.9	8380.039	0.019	β^+	7123.82	0.21	44 965768.5	0.9
21	24		Cr	x	-19510	40	8087.7	0.8	β^+	12370	40	44 979050	40
20	25		Mn	x	-4980#	300#	7747#	7#	β^+	14540#	300#	44 994650#	320#
19	26		Fe	-pp	14410#	280#	7299#	6#	β^+	19390#	410#	45 015470#	300#
31	15	46	P	x	22840#	500#	7320#	11#	β^-	22200#	640#	46 024520#	540#
30	16		S	x	640#	400#	7785#	9#	β^-	14380#	410#	46 000690#	430#
29	17		Cl	x	-13730	100	8080.8	2.1	β^-	16040	100	45 985250	100
28	18		Ar	x	-29771.3	2.3	8412.38	0.05	β^-	5642.7	2.4	45 968039.2	2.5
27	19		K	x	-35413.9	0.7	8518.043	0.016	β^-	7725.7	2.3	45 961981.6	0.8
26	20		Ca		-43139.6	2.2	8668.98	0.05	β^-	-1378.0	2.3	45 953687.7	2.4
25	21		Sc	-n	-41761.6	0.7	8622.021	0.015	β^-	2366.6	0.7	45 955167.0	0.7
24	22		Ti		-44128.27	0.09	8656.462	0.002		*		45 952626.36	0.10
23	23		V		-37075.90	0.13	8486.142	0.003	β^+	7052.37	0.09	45 960197.39	0.14
22	24		Cr		-29472	11	8303.82	0.25	β^+	7604	11	45 968361	12
21	25		Mn	x	-12420	90	7916.1	1.9	β^+	17050	90	45 986670	90
20	26		Fe	x	1210#	300#	7603#	7#	β^+	13630#	310#	46 001300#	320#
32	15	47	P	x	28810#	600#	7209#	13#	β^-	21610#	720#	47 030930#	640#
31	16		S	x	7200#	400#	7652#	9#	β^-	16780#	450#	47 007730#	430#
30	17		Cl	x	-9580#	200#	7992#	4#	β^-	15790#	200#	46 989720#	220#
29	18		Ar	x	-25367.3	1.2	8311.425	0.026	β^-	10344.7	1.8	46 972767.1	1.3
28	19		K	x	-35712.0	1.4	8514.880	0.030	β^-	6632.7	2.6	46 961661.6	1.5
27	20		Ca		-42344.7	2.2	8639.35	0.05	β^-	1992.2	1.2	46 954541.1	2.4
26	21		Sc		-44336.8	1.9	8665.10	0.04	β^-	600.8	1.9	46 952402.4	2.1
25	22		Ti		-44937.61	0.08	8661.233	0.002		*		46 951757.49	0.09
24	23		V		-42007.07	0.11	8582.235	0.002	β^+	2930.54	0.09	46 954903.56	0.12
23	24		Cr		-34563	5	8407.21	0.11	β^+	7444	5	46 962895	6
22	25		Mn	x	-22570	30	8135.3	0.7	β^+	12000	30	46 975770	30
21	26		Fe	x	-7130#	500#	7790#	11#	β^+	15440#	500#	46 992350#	540#
20	27		Co	x	10620#	600#	7396#	13#	β^+	17750#	780#	47 011400#	640#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
32	16	48	S	x	12390#	500#	7552#	10#	β^-	16670#	710#	48 013300#	540#
31	17		Cl	x	-4280#	500#	7883#	10#	β^-	18080#	500#	47 995410#	540#
30	18		Ar	x	-22355	17	8243.7	0.3	β^-	9930	17	47 976001	18
29	19		K	x	-32284.5	0.8	8434.232	0.016	β^-	11940.4	0.8	47 965341.2	0.8
28	20		Ca		-44224.868	0.018	8666.692	*a*	β^-	279	5	47 952522.654	0.019
27	21		Sc		-44504	5	8656.21	0.10	β^-	3989	5	47 952223	5
26	22		Ti		-48492.95	0.07	8723.012	0.002		*		47 947940.68	0.08
25	23		V		-44478.0	1.0	8623.069	0.020	β^+	4014.9	1.0	47 952250.9	1.0
24	24		Cr	+nn	-42821	7	8572.26	0.15	β^+	1657	7	47 954029	8
23	25		Mn		-29297	7	8274.19	0.14	β^+	13525	10	47 968549	7
22	26		Fe	x	-18010	90	8022.7	1.9	β^+	11290	90	47 980670	100
21	27		Co	x	1730#	500#	7595#	10#	β^+	19740#	510#	48 001860#	540#
20	28		Ni	-pp	18180#	420#	7236#	9#	β^+	16450#	660#	48 019520#	460#
33	16	49	S	-n	20390#	580#	7400#	12#	β^-	19650#	710#	49 021890#	630#
32	17		Cl	x	740#	400#	7785#	8#	β^-	17800#	570#	49 000790#	430#
31	18		Ar	x	-17060#	400#	8132#	8#	β^-	12550#	400#	48 981690#	430#
30	19		K	x	-29611.5	0.8	8372.275	0.016	β^-	11688.5	0.8	48 968210.8	0.9
29	20		Ca	-n	-41300.00	0.18	8594.850	0.004	β^-	5262.4	2.3	48 955662.63	0.19
28	21		Sc		-46562.4	2.3	8686.28	0.05	β^-	2001.6	2.3	48 950013.2	2.4
27	22		Ti		-48564.01	0.08	8711.163	0.002		*		48 947864.39	0.08
26	23		V	–	-47962.2	0.8	8682.913	0.017	β^+	601.9	0.8	48 948510.5	0.9
25	24		Cr		-45332.4	2.2	8613.28	0.04	β^+	2629.8	2.3	48 951333.7	2.4
24	25		Mn		-37619.9	2.2	8439.92	0.05	β^+	7712.43	0.23	48 959613.4	2.4
23	26		Fe	x	-24751	24	8161.3	0.5	β^+	12869	24	48 973429	26
22	27		Co	x	-9780#	500#	7840#	10#	β^+	14970#	500#	48 989500#	540#
21	28		Ni	x	8530#	600#	7450#	12#	β^+	18310#	780#	49 009160#	640#
33	17	50	Cl	x	7700#	400#	7651#	8#	β^-	20930#	640#	50 008270#	430#
32	18		Ar	x	-13230#	500#	8054#	10#	β^-	12500#	500#	49 985800#	540#
31	19		K	x	-25728	8	8288.58	0.15	β^-	13861	8	49 972380	8
30	20		Ca	x	-39589.2	1.6	8550.16	0.03	β^-	4947.9	3.0	49 957499.2	1.7
29	21		Sc		-44537.1	2.5	8633.47	0.05	β^-	6894.7	2.5	49 952187.4	2.7
28	22		Ti		-51431.87	0.08	8755.723	0.002	β^-	-2208.63	0.06	49 944785.62	0.09
27	23		V		-49223.24	0.09	8695.903	0.002	β^-	1038.12	0.06	49 947156.68	0.10
26	24		Cr		-50261.36	0.09	8701.019	0.002		*		49 946042.21	0.10
25	25		Mn		-42626.89	0.12	8532.682	0.002	β^+	7634.48	0.07	49 954238.16	0.12
24	26		Fe	x	-34476	8	8354.03	0.17	β^+	8150	8	49 962988	9
23	27		Co	x	-17590	130	8000.6	2.5	β^+	16890	130	49 981120	140
22	28		Ni	x	-3460#	500#	7702#	10#	β^+	14130#	520#	49 996290#	540#
34	17	51	Cl	x	14290#	700#	7530#	14#	β^-	20780#	810#	51 015340#	750#
33	18		Ar	x	-6490#	400#	7922#	8#	β^-	16030#	400#	50 993030#	430#
32	19		K	x	-22515	13	8221.33	0.26	β^-	13817	13	50 975829	14
31	20		Ca	x	-36332.3	0.5	8476.914	0.010	β^-	6918.0	2.6	50 960995.7	0.6
30	21		Sc		-43250.4	2.5	8597.22	0.05	β^-	6482.6	2.6	50 953568.8	2.7
29	22		Ti		-49733.0	0.5	8708.991	0.009	β^-	2470.1	0.5	50 946609.5	0.5
28	23		V		-52203.11	0.10	8742.085	0.002		*		50 943957.66	0.10
27	24		Cr		-51450.71	0.17	8711.992	0.003	β^+	752.39	0.15	50 944765.39	0.18
26	25		Mn		-48243.2	0.3	8633.760	0.006	β^+	3207.5	0.3	50 948208.8	0.3
25	26		Fe	x	-40189.2	1.4	8460.498	0.027	β^+	8054.0	1.4	50 956855.1	1.5
24	27		Co	x	-27340	50	8193.3	0.9	β^+	12850	50	50 970650	50
23	28		Ni	x	-11650#	500#	7870#	10#	β^+	15690#	500#	50 987490#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
35	17	52	Cl	x	22360#	700#	7386#	13#	β^-	23740#	920#	52 024000#	750#
34	18		Ar	x	-1380#	600#	7827#	12#	β^-	15760#	600#	51 998520#	640#
33	19		K	x	-17140	30	8115.0	0.6	β^-	17130	30	51 981600	40
32	20		Ca	x	-34266.3	0.7	8429.382	0.013	β^-	6257	3	51 963213.6	0.7
31	21		Sc		-40524	3	8534.67	0.06	β^-	8954	4	51 956496	3
30	22		Ti		-49477.7	2.7	8691.82	0.05	β^-	1965.3	2.8	51 946883.5	2.9
29	23		V	-n	-51443.03	0.16	8714.569	0.003	β^-	3976.48	0.16	51 944773.64	0.17
28	24		Cr		-55419.51	0.11	8775.995	0.002		*		51 940504.71	0.12
27	25		Mn	–	-50711.39	0.13	8670.409	0.003	β^+	4708.12	0.06	51 945559.09	0.14
26	26		Fe	––	-48332.10	0.18	8609.608	0.003	β^+	2379.29	0.15	51 948113.36	0.19
25	27		Co		-34344	5	8325.56	0.10	β^+	13988	5	51 963130	6
24	28		Ni	x	-22560	80	8083.9	1.6	β^+	11780	80	51 975780	90
23	29		Cu	x	-1880#	600#	7671#	12#	β^+	20680#	610#	51 997980#	640#
35	18	53	Ar	x	6790#	700#	7677#	13#	β^-	19090#	710#	53 007290#	750#
34	19		K	x	-12300	110	8022.8	2.1	β^-	17090	120	52 986800	120
33	20		Ca	x	-29390	40	8330.6	0.8	β^-	9380	50	52 968450	50
32	21		Sc		-38770	18	8492.8	0.3	β^-	8112	18	52 958379	19
31	22		Ti	x	-46881.4	2.9	8631.13	0.05	β^-	4970	4	52 949671	3
30	23		V	+p	-51852	3	8710.14	0.06	β^-	3436	3	52 944335	3
29	24		Cr		-55287.62	0.12	8760.210	0.002		*		52 940646.30	0.12
28	25		Mn		-54690.3	0.3	8734.180	0.007	β^+	597.3	0.3	52 941287.5	0.4
27	26		Fe		-50947.5	1.7	8648.80	0.03	β^+	3742.9	1.7	52 945305.6	1.8
26	27		Co		-42659.4	1.7	8477.66	0.03	β^+	8288.1	0.4	52 954203.3	1.9
25	28		Ni	x	-29631	25	8217.1	0.5	β^+	13029	25	52 968190	27
24	29		Cu	x	-13140#	500#	7891#	9#	β^+	16490#	500#	52 985890#	540#
36	18	54	Ar	x	12560#	800#	7578#	15#	β^-	17710#	890#	54 013480#	860#
35	19		K	x	-5150#	400#	7891#	7#	β^-	20010#	400#	53 994470#	430#
34	20		Ca	x	-25160	50	8247.5	0.9	β^-	9280	50	53 972990	50
33	21		Sc	x	-34438	14	8404.81	0.26	β^-	11306	21	53 963029	15
32	22		Ti	x	-45744	16	8599.69	0.29	β^-	4154	19	53 950892	17
31	23		V		-49898	11	8662.14	0.21	β^-	7037	11	53 946432	12
30	24		Cr		-56935.38	0.13	8777.967	0.003	β^-	-1377.1	1.0	53 938877.36	0.14
29	25		Mn	-p	-55558.2	1.0	8737.977	0.019	β^-	696.4	1.1	53 940355.8	1.1
28	26		Fe		-56254.6	0.3	8736.385	0.006		*		53 939608.2	0.4
27	27		Co		-48010.1	0.4	8569.220	0.007	β^+	8244.55	0.09	53 948459.1	0.4
26	28		Ni	x	-39278	5	8393.03	0.09	β^+	8732	5	53 957833	5
25	29		Cu	x	-21240#	400#	8045#	7#	β^+	18040#	400#	53 977200#	430#
24	30		Zn	-pp	-5700#	220#	7742#	4#	β^+	15540#	450#	53 993880#	230#
36	19	55	K	x	470#	500#	7792#	9#	β^-	19120#	530#	55 000510#	540#
35	20		Ca	x	-18650	160	8125.9	2.9	β^-	12190	170	54 979980	170
34	21		Sc	x	-30840	60	8333.4	1.1	β^-	10990	70	54 966890	70
33	22		Ti	x	-41832	29	8519.0	0.5	β^-	7290	40	54 955090	30
32	23		V	x	-49125	27	8637.3	0.5	β^-	5985	27	54 947262	29
31	24		Cr	-n	-55110.32	0.23	8731.936	0.004	β^-	2602.2	0.3	54 940836.64	0.25
30	25		Mn		-57712.54	0.26	8765.025	0.005		*		54 938043.04	0.28
29	26		Fe		-57481.4	0.3	8746.598	0.006	β^+	231.12	0.18	54 938291.2	0.3
28	27		Co		-54030.0	0.4	8669.620	0.007	β^+	3451.4	0.3	54 941996.4	0.4
27	28		Ni	–	-45336.0	0.7	8497.323	0.013	β^+	8694.0	0.6	54 951329.8	0.8
26	29		Cu	x	-31640	160	8234.0	2.8	β^+	13700	160	54 966040	170
25	30		Zn	x	-14270#	400#	7904#	7#	β^+	17370#	430#	54 984680#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
37	19	56	K	x	7980#	600#	7663#	11#	β^-	21490#	650#	56 008570#	640#
36	20		Ca	x	-13510	250	8033	4	β^-	12010	360	55 985500	270
35	21		Sc	x	-25520	260	8234	5	β^-	13910	280	55 972610	280
34	22		Ti		-39420	100	8467.9	1.8	β^-	6760	190	55 957680	110
33	23		V		-46180	180	8575	3	β^-	9100	180	55 950420	190
32	24		Cr	++	-55285.1	0.6	8723.261	0.010	β^-	1626.5	0.6	55 940649.0	0.6
31	25		Mn	-n	-56911.67	0.29	8738.336	0.005	β^-	3695.50	0.21	55 938902.8	0.3
30	26		Fe		-60607.16	0.27	8790.356	0.005		*		55 934935.54	0.29
29	27		Co		-56040.5	0.5	8694.839	0.008	β^+	4566.6	0.4	55 939838.0	0.5
28	28		Ni		-53907.6	0.4	8642.781	0.007	β^+	2132.9	0.4	55 942127.8	0.4
27	29		Cu	x	-38630	6	8355.99	0.11	β^+	15278	6	55 958529	7
26	30		Zn	x	-25390#	400#	8106#	7#	β^+	13240#	400#	55 972740#	430#
25	31		Ga	x	-3840#	500#	7707#	9#	β^+	21550#	640#	55 995880#	540#
38	19	57	K	x	14130#	600#	7563#	11#	β^-	20690#	720#	57 015170#	640#
37	20		Ca	x	-6560#	400#	7912#	7#	β^-	14820#	440#	56 992960#	430#
36	21		Sc	x	-21380	180	8158	3	β^-	13020	270	56 977050	190
35	22		Ti	x	-34400	210	8373	4	β^-	10030	220	56 963070	220
34	23		V	x	-44440	80	8535.2	1.5	β^-	8090	80	56 952300	90
33	24		Cr	x	-52525.0	1.9	8663.40	0.03	β^-	4961.3	2.4	56 943612.1	2.0
32	25		Mn		-57486.3	1.5	8736.715	0.026	β^-	2695.7	1.5	56 938285.9	1.6
31	26		Fe		-60182.02	0.27	8770.283	0.005		*		56 935391.95	0.29
30	27		Co		-59345.7	0.5	8741.885	0.009	β^+	836.4	0.4	56 936289.8	0.6
29	28		Ni		-56084.0	0.6	8670.936	0.010	β^+	3261.7	0.6	56 939791.4	0.6
28	29		Cu		-47309.0	0.5	8503.265	0.009	β^+	8774.9	0.4	56 949211.7	0.5
27	30		Zn	x	-32550#	200#	8231#	4#	β^+	14760#	200#	56 965060#	220#
26	31		Ga	x	-15410#	400#	7916#	7#	β^+	17140#	450#	56 983460#	430#
39	19	58	K	x	21930#	700#	7437#	12#	β^-	23460#	860#	58 023540#	750#
38	20		Ca	x	-1530#	500#	7828#	9#	β^-	13950#	540#	57 998360#	540#
37	21		Sc	x	-15480	190	8055	3	β^-	15440	260	57 983380	200
36	22		Ti	x	-30920	180	8308	3	β^-	9510	210	57 966810	200
35	23		V	x	-40430	100	8458.2	1.7	β^-	11560	100	57 956600	100
34	24		Cr	x	-51991.8	3.0	8644.00	0.05	β^-	3836	4	57 944185	3
33	25		Mn	x	-55827.6	2.7	8696.64	0.05	β^-	6327.7	2.7	57 940066.6	2.9
32	26		Fe		-62155.3	0.3	8792.253	0.005	β^-	-2308.0	1.1	57 933273.6	0.3
31	27		Co		-59847.3	1.2	8738.972	0.020	β^-	381.6	1.1	57 935751.3	1.2
30	28		Ni		-60228.9	0.3	8732.062	0.006		*		57 935341.7	0.4
29	29		Cu		-51667.9	0.6	8570.970	0.010	β^+	8561.0	0.4	57 944532.3	0.6
28	30		Zn	−−	-42300	50	8395.9	0.9	β^+	9370	50	57 954590	50
27	31		Ga	x	-23540#	300#	8059#	5#	β^+	18760#	300#	57 974730#	320#
26	32		Ge	x	-7580#	500#	7770#	9#	β^+	15960#	580#	57 991860#	540#
40	19	59	K	x	28750#	800#	7332#	14#	β^-	22940#	1000#	59 030860#	860#
39	20		Ca	x	5810#	600#	7708#	10#	β^-	16640#	650#	59 006240#	640#
38	21		Sc	x	-10830	250	7976	4	β^-	15050#	390#	58 988370	270
37	22		Ti	x	-25880#	300#	8218#	5#	β^-	11730#	330#	58 972220#	320#
36	23		V	x	-37610	140	8403.8	2.3	β^-	10510	140	58 959620	150
35	24		Cr	x	-48115.9	0.7	8568.599	0.011	β^-	7409.4	2.4	58 948345.4	0.7
34	25		Mn	x	-55525.3	2.3	8680.92	0.04	β^-	5139.6	2.4	58 940391.1	2.5
33	26		Fe		-60665.0	0.3	8754.775	0.006	β^-	1564.9	0.4	58 934873.5	0.4
32	27		Co		-62229.8	0.4	8768.038	0.007		*		58 933193.5	0.4
31	28		Ni		-61156.8	0.4	8736.591	0.006	β^+	1073.00	0.19	58 934345.4	0.4
30	29		Cu		-56358.5	0.5	8642.003	0.009	β^+	4798.4	0.4	58 939496.7	0.6
29	30		Zn		-47215.7	0.8	8473.780	0.013	β^+	9142.8	0.6	58 949311.9	0.8
28	31		Ga	x	-33760#	170#	8232#	3#	β^+	13460#	170#	58 963760#	180#
27	32		Ge	x	-16370#	400#	7924#	7#	β^+	17390#	430#	58 982430#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
40	20	60	Ca	x	11000#	700#	7627#	12#	β^-	15550#	860#	60 011810#	750#
39	21		Sc	x	-4550#	500#	7873#	8#	β^-	17550#	560#	59 995120#	540#
38	22		Ti	x	-22100	240	8153	4	β^-	10990	300	59 976280	260
37	23		V	x	-33090	180	8323	3	β^-	13820	180	59 964480	200
36	24		Cr	x	-46908.5	1.1	8540.188	0.019	β^-	6059.4	2.6	59 949641.7	1.2
35	25		Mn	x	-52967.9	2.3	8628.14	0.04	β^-	8445	4	59 943136.6	2.5
34	26		Fe	-nn	-61413	3	8755.85	0.06	β^-	237	3	59 934070	4
33	27		Co	-n	-61650.4	0.4	8746.769	0.007	β^-	2822.81	0.21	59 933815.5	0.4
32	28		Ni		-64473.2	0.4	8780.777	0.006		*		59 930785.1	0.4
31	29		Cu	–	-58345.3	1.6	8665.605	0.027	β^+	6128.0	1.6	59 937363.8	1.7
30	30		Zn		-54174.5	0.5	8583.052	0.009	β^+	4170.8	1.6	59 941841.3	0.6
29	31		Ga	x	-39590#	200#	8327#	3#	β^+	14580#	200#	59 957500#	220#
28	32		Ge	x	-27530#	300#	8113#	5#	β^+	12060#	360#	59 970450#	320#
27	33		As	x	-5640#	400#	7735#	7#	β^+	21890#	500#	59 993950#	430#
41	20	61	Ca	x	19010#	800#	7503#	13#	β^-	18510#	1000#	61 020410#	860#
40	21		Sc	x	500#	600#	7794#	10#	β^-	16870#	670#	61 000540#	640#
39	22		Ti	x	-16370#	300#	8058#	5#	β^-	13810#	380#	60 982430#	320#
38	23		V	x	-30180	230	8271	4	β^-	12320	230	60 967600	250
37	24		Cr	x	-42496.5	1.9	8460.17	0.03	β^-	9245.6	3.0	60 954378.1	2.0
36	25		Mn	x	-51742.1	2.3	8598.92	0.04	β^-	7178	3	60 944452.5	2.5
35	26		Fe	x	-58920.5	2.6	8703.77	0.04	β^-	3977.7	2.7	60 936746.2	2.8
34	27		Co	p2n	-62898.2	0.8	8756.151	0.014	β^-	1323.9	0.8	60 932476.0	0.9
33	28		Ni		-64222.0	0.4	8765.028	0.006		*		60 931054.8	0.4
32	29		Cu	p2n	-61984.1	1.0	8715.515	0.016	β^+	2238.0	1.0	60 933457.4	1.0
31	30		Zn		-56349	16	8610.31	0.26	β^+	5635	16	60 939507	17
30	31		Ga		-47130	40	8446.4	0.6	β^+	9210	40	60 949400	40
29	32		Ge	x	-33790#	300#	8215#	5#	β^+	13350#	300#	60 963730#	320#
28	33		As	x	-17200#	300#	7930#	5#	β^+	16590#	420#	60 981540#	320#
41	21	62	Sc	x	7310#	600#	7688#	10#	β^-	19510#	720#	62 007850#	640#
40	22		Ti	x	-12200#	400#	7990#	6#	β^-	13010#	480#	61 986900#	430#
39	23		V	x	-25210	260	8188	4	β^-	15640	260	61 972930	280
38	24		Cr	x	-40853	3	8427.39	0.06	β^-	7671	7	61 956143	4
37	25		Mn	IT	-48524	7	8538.50	0.11	β^-	10354	7	61 947907	7
36	26		Fe	x	-58878.1	2.8	8692.88	0.05	β^-	2546	19	61 936792	3
35	27		Co	+	-61424	19	8721.33	0.30	β^-	5322	19	61 934058	20
34	28		Ni		-66746.4	0.4	8794.556	0.007		*		61 928344.8	0.5
33	29		Cu	–	-62787.5	0.6	8718.084	0.010	β^+	3958.9	0.5	61 932594.8	0.7
32	30		Zn		-61168.1	0.6	8679.345	0.010	β^+	1619.5	0.7	61 934333.4	0.7
31	31		Ga		-51987.0	0.6	8518.645	0.010	β^+	9181.1	0.4	61 944189.6	0.7
30	32		Ge	x	-42140#	140#	8347#	2#	β^+	9850#	140#	61 954760#	150#
29	33		As	x	-24420#	300#	8049#	5#	β^+	17720#	330#	61 973780#	320#
42	21	63	Sc	x	13070#	700#	7603#	11#	β^-	18930#	860#	63 014030#	750#
41	22		Ti	x	-5860#	500#	7891#	8#	β^-	15880#	610#	62 993710#	540#
40	23		V	x	-21740	340	8131	5	β^-	14440	350	62 976660	370
39	24		Cr	x	-36180	70	8347.5	1.2	β^-	10710	70	62 961160	80
38	25		Mn	x	-46887	4	8505.10	0.06	β^-	8749	6	62 949665	4
37	26		Fe		-55636	4	8631.55	0.07	β^-	6216	19	62 940273	5
36	27		Co		-61852	19	8717.80	0.29	β^-	3661	19	62 933600	20
35	28		Ni		-65512.9	0.4	8763.495	0.007	β^-	66.977	0.015	62 929669.0	0.5
34	29		Cu		-65579.9	0.4	8752.140	0.007		*		62 929597.1	0.5
33	30		Zn		-62213.4	1.6	8686.287	0.025	β^+	3366.4	1.5	62 933211.1	1.7
32	31		Ga	x	-56547.1	1.3	8583.927	0.021	β^+	5666.3	2.0	62 939294.2	1.4
31	32		Ge	x	-46920	40	8418.7	0.6	β^+	9630	40	62 949630	40
30	33		As	x	-33500#	200#	8193#	3#	β^+	13420#	200#	62 964040#	220#
29	34		Se	x	-16850#	500#	7917#	8#	β^+	16650#	540#	62 981910#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
42	22	64	Ti	x	-1480#	600#	7826#	9#	β^-	14840#	720#	63 998410#	640#
41	23		V	x	-16320#	400#	8045#	6#	β^-	17320#	500#	63 982480#	430#
40	24		Cr	x	-33640	300	8304	5	β^-	9350	300	63 963890	320
39	25		Mn	x	-42989	4	8437.42	0.06	β^-	11981	6	63 953849	4
38	26		Fe	x	-54970	5	8612.39	0.08	β^-	4823	21	63 940988	5
37	27		Co	+	-59792	20	8675.5	0.3	β^-	7307	20	63 935810	21
36	28		Ni		-67099.0	0.5	8777.464	0.007	β^-	-1674.62	0.21	63 927966.2	0.5
35	29		Cu		-65424.4	0.4	8739.074	0.007	β^-	579.6	0.6	63 929764.0	0.5
34	30		Zn		-66004.0	0.6	8735.906	0.010		*		63 929141.8	0.7
33	31		Ga		-58832.8	1.4	8611.632	0.022	β^+	7171.2	1.5	63 936840.4	1.5
32	32		Ge	x	-54316	4	8528.82	0.06	β^+	4517	4	63 941690	4
31	33		As	-p	-39530#	200#	8286#	3#	β^+	14780#	200#	63 957560#	220#
30	34		Se	x	-26860#	500#	8075#	8#	β^+	12670#	540#	63 971170#	540#
43	22	65	Ti	x	5210#	700#	7726#	11#	β^-	17320#	860#	65 005590#	750#
42	23		V	x	-12110#	500#	7981#	8#	β^-	16200#	540#	64 987000#	540#
41	24		Cr	x	-28310#	200#	8218#	3#	β^-	12660#	200#	64 969610#	220#
40	25		Mn	x	-40967	4	8400.68	0.06	β^-	10251	6	64 956020	4
39	26		Fe	x	-51218	5	8546.35	0.08	β^-	7967	6	64 945015	5
38	27		Co	x	-59185.2	2.1	8656.88	0.03	β^-	5940.6	2.1	64 936462.1	2.2
37	28		Ni	-n	-65125.8	0.5	8736.242	0.007	β^-	2137.9	0.7	64 930084.6	0.5
36	29		Cu		-67263.7	0.6	8757.097	0.010		*		64 927789.5	0.7
35	30		Zn		-65912.0	0.6	8724.266	0.010	β^+	1351.7	0.4	64 929240.5	0.7
34	31		Ga		-62657.5	0.8	8662.160	0.012	β^+	3254.5	0.6	64 932734.4	0.8
33	32		Ge		-56478.2	2.2	8555.06	0.03	β^+	6179.3	2.3	64 939368.1	2.3
32	33		As	x	-46940	80	8396.2	1.3	β^+	9540	80	64 949610	90
31	34		Se	x	-33020#	300#	8170#	5#	β^+	13920#	310#	64 964550#	320#
30	35		Br	x	-16490#	500#	7904#	8#	β^+	16530#	580#	64 982300#	540#
43	23	66	V	x	-6300#	500#	7894#	8#	β^-	18840#	580#	65 993240#	540#
42	24		Cr	x	-25140#	300#	8168#	5#	β^-	11610#	300#	65 973010#	320#
41	25		Mn	x	-36750	11	8331.80	0.17	β^-	13317	12	65 960547	12
40	26		Fe	x	-50068	4	8521.72	0.06	β^-	6341	15	65 946250	4
39	27		Co	x	-56409	14	8605.94	0.21	β^-	9598	14	65 939443	15
38	28		Ni	x	-66006.3	1.4	8739.509	0.021	β^-	252.0	1.5	65 929139.3	1.5
37	29		Cu		-66258.3	0.6	8731.473	0.010	β^-	2640.9	0.9	65 928868.8	0.7
36	30		Zn		-68899.2	0.7	8759.633	0.011		*		65 926033.6	0.8
35	31		Ga	–	-63723.7	1.1	8669.363	0.017	β^+	5175.5	0.8	65 931589.8	1.2
34	32		Ge	x	-61607.0	2.4	8625.44	0.04	β^+	2116.7	2.6	65 933862.1	2.6
33	33		As	x	-52025	6	8468.40	0.09	β^+	9582	6	65 944149	6
32	34		Se	x	-41660#	200#	8300#	3#	β^+	10370#	200#	65 955280#	220#
31	35		Br	x	-23570#	400#	8014#	6#	β^+	18090#	450#	65 974700#	430#
44	23	67	V	x	-1740#	600#	7829#	9#	β^-	17530#	720#	66 998130#	640#
43	24		Cr	x	-19270#	400#	8079#	6#	β^-	14310#	450#	66 979310#	430#
42	25		Mn	x	-33580#	200#	8281#	3#	β^-	12130#	200#	66 963950#	220#
41	26		Fe	x	-45708	4	8449.94	0.06	β^-	9613	7	66 950930	4
40	27		Co	x	-55322	6	8581.74	0.10	β^-	8421	7	66 940610	7
39	28		Ni	x	-63742.7	2.9	8695.75	0.04	β^-	3577	3	66 931569	3
38	29		Cu		-67319.6	0.9	8737.460	0.013	β^-	560.8	0.8	66 927729.5	1.0
37	30		Zn		-67880.4	0.8	8734.153	0.011		*		66 927127.4	0.8
36	31		Ga		-66879.2	1.2	8707.533	0.018	β^+	1001.2	1.1	66 928202.3	1.3
35	32		Ge		-62674	4	8633.09	0.06	β^+	4205	4	66 932717	5
34	33		As		-56587.2	0.4	8530.569	0.007	β^+	6086	4	66 939251.1	0.5
33	34		Se	x	-46580	70	8369.5	1.0	β^+	10010	70	66 949990	70
32	35		Br	x	-32530#	300#	8148#	4#	β^+	14050#	310#	66 965080#	320#
31	36		Kr	-pp	-15550#	420#	7883#	6#	β^+	16980#	520#	66 983310#	460#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
44	24	68	Cr	x	-15690#	500#	8026#	7#	β^-	13230#	580#	67 983160#	540#
43	25		Mn	x	-28920#	300#	8209#	4#	β^-	14980#	360#	67 968950#	320#
42	26		Fe	x	-43900#	190#	8418#	3#	β^-	7750#	190#	67 952880#	210#
41	27		Co		-51643	4	8520.13	0.06	β^-	11821	5	67 944559	4
40	28		Ni	x	-63463.8	3.0	8682.47	0.04	β^-	2103	3	67 931869	3
39	29		Cu	x	-65567.0	1.6	8701.891	0.023	β^-	4440.1	1.8	67 929610.9	1.7
38	30		Zn		-70007.2	0.8	8755.682	0.011		*		67 924844.2	0.8
37	31		Ga	–	-67086.1	1.4	8701.219	0.021	β^+	2921.1	1.2	67 927980.2	1.5
36	32		Ge	x	-66978.8	1.9	8688.137	0.028	β^+	107.3	2.4	67 928095.3	2.0
35	33		As		-58894.5	1.8	8557.746	0.027	β^+	8084.3	2.6	67 936774.1	2.0
34	34		Se	x	-54189.4	0.5	8477.048	0.007	β^+	4705.1	1.9	67 941825.2	0.5
33	35		Br	-p	-38790#	260#	8239#	4#	β^+	15400#	260#	67 958360#	280#
32	36		Kr	x	-25630#	500#	8034#	7#	β^+	13170#	560#	67 972490#	540#
45	24	69	Cr	x	-9630#	500#	7939#	7#	β^-	15730#	640#	68 989660#	540#
44	25		Mn	x	-25360#	400#	8155#	6#	β^-	13840#	450#	68 972780#	430#
43	26		Fe	x	-39200#	200#	8345#	3#	β^-	11190#	220#	68 957920#	220#
42	27		Co	x	-50390	90	8495.4	1.2	β^-	9590	90	68 945910	90
41	28		Ni	x	-59979	4	8623.10	0.05	β^-	5758	4	68 935610	4
40	29		Cu	x	-65736.2	1.4	8695.204	0.020	β^-	2681.7	1.6	68 929429.3	1.5
39	30		Zn	-n	-68417.9	0.8	8722.731	0.012	β^-	909.9	1.4	68 926550.4	0.9
38	31		Ga		-69327.8	1.2	8724.580	0.017		*		68 925573.5	1.3
37	32		Ge		-67100.7	1.3	8680.964	0.019	β^+	2227.1	0.5	68 927964.5	1.4
36	33		As		-63110	30	8611.8	0.5	β^+	3990	30	68 932250	30
35	34		Se		-56434.7	1.5	8503.708	0.022	β^+	6680	30	68 939414.8	1.6
34	35		Br	-p	-46260	40	8344.9	0.6	β^+	10180	40	68 950340	50
33	36		Kr	x	-32140#	300#	8129#	4#	β^+	14120#	300#	68 965500#	320#
46	24	70	Cr	x	-5640#	600#	7884#	9#	β^-	14810#	780#	69 993950#	640#
45	25		Mn	x	-20450#	500#	8084#	7#	β^-	16440#	580#	69 978050#	540#
44	26		Fe	x	-36890#	300#	8308#	4#	β^-	9640#	300#	69 960400#	320#
43	27		Co	x	-46525	11	8434.20	0.16	β^-	12689	11	69 950053	12
42	28		Ni	x	-59213.9	2.1	8604.29	0.03	β^-	3762.5	2.4	69 936431.3	2.3
41	29		Cu	x	-62976.4	1.1	8646.865	0.015	β^-	6588.4	2.2	69 932392.1	1.2
40	30		Zn		-69564.7	1.9	8729.809	0.027	β^-	-654.6	1.6	69 925319.2	2.1
39	31		Ga		-68910.2	1.2	8709.281	0.017	β^-	1651.9	1.5	69 926021.9	1.3
38	32		Ge		-70562.0	0.8	8721.703	0.012		*		69 924248.5	0.9
37	33		As	x	-64334.0	1.4	8621.554	0.020	β^+	6228.1	1.6	69 930934.6	1.5
36	34		Se	x	-61929.9	1.6	8576.034	0.023	β^+	2404.1	2.1	69 933515.5	1.7
35	35		Br	x	-51426	15	8414.80	0.21	β^+	10504	15	69 944792	16
34	36		Kr	x	-41100#	200#	8256#	3#	β^+	10330#	200#	69 955880#	220#
46	25	71	Mn	x	-16620#	500#	8030#	7#	β^-	15310#	640#	70 982160#	540#
45	26		Fe	x	-31930#	400#	8235#	6#	β^-	12440#	610#	70 965720#	430#
44	27		Co	x	-44370	470	8399	7	β^-	11040	470	70 952370	500
43	28		Ni	x	-55406.2	2.2	8543.16	0.03	β^-	7304.9	2.7	70 940519.0	2.4
42	29		Cu	x	-62711.1	1.5	8635.023	0.021	β^-	4618	3	70 932676.8	1.6
41	30		Zn		-67328.8	2.7	8689.04	0.04	β^-	2810.3	2.8	70 927719.6	2.8
40	31		Ga		-70139.1	0.8	8717.605	0.011		*		70 924702.6	0.9
39	32		Ge		-69906.7	0.8	8703.312	0.011	β^+	232.47	0.09	70 924952.1	0.9
38	33		As	–	-67893	4	8663.94	0.06	β^+	2013	4	70 927114	4
37	34		Se	x	-63146.5	2.8	8586.06	0.04	β^+	4747	5	70 932209	3
36	35		Br		-56502	5	8481.46	0.08	β^+	6644	6	70 939342	6
35	36		Kr		-46330	130	8327.1	1.8	β^+	10180	130	70 950270	140
34	37		Rb	x	-32290#	400#	8118#	6#	β^+	14040#	420#	70 965340#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
47	25	72	Mn	x	-11170#	600#	7955#	8#	β^-	18080#	780#	71 988010#	640#
46	26		Fe	x	-29250#	500#	8195#	7#	β^-	11050#	580#	71 968600#	540#
45	27		Co	x	-40300#	300#	8338#	4#	β^-	13930#	300#	71 956740#	320#
44	28		Ni	x	-54226.1	2.2	8520.21	0.03	β^-	5556.9	2.6	71 941785.9	2.4
43	29		Cu	x	-59783.0	1.4	8586.526	0.019	β^-	8362.5	2.6	71 935820.3	1.5
42	30		Zn	x	-68145.5	2.1	8691.805	0.030	β^-	442.8	2.3	71 926842.8	2.3
41	31		Ga		-68588.3	0.8	8687.089	0.011	β^-	3997.6	0.8	71 926367.5	0.9
40	32		Ge		-72585.91	0.08	8731.746	0.001		*		71 922075.82	0.08
39	33		As	–	-68230	4	8660.38	0.06	β^+	4356	4	71 926752	4
38	34		Se	x	-67868.2	2.0	8644.490	0.027	β^+	362	5	71 927140.5	2.1
37	35		Br	x	-59061.8	1.0	8511.313	0.014	β^+	8806.4	2.2	71 936594.6	1.1
36	36		Kr	x	-53941	8	8429.32	0.11	β^+	5121	8	71 942092	9
35	37		Rb	x	-38330#	500#	8202#	7#	β^+	15610#	500#	71 958850#	540#
48	25	73	Mn	x	-6700#	600#	7895#	8#	β^-	17290#	780#	72 992810#	640#
47	26		Fe	x	-23990#	500#	8121#	7#	β^-	13980#	580#	72 974250#	540#
46	27		Co	x	-37970#	300#	8302#	4#	β^-	12140#	300#	72 959240#	320#
45	28		Ni	x	-50108.2	2.4	8457.65	0.03	β^-	8879	3	72 946206.7	2.6
44	29		Cu		-58987.4	1.9	8568.570	0.027	β^-	6606.0	2.7	72 936674.4	2.1
43	30		Zn	x	-65593.4	1.9	8648.345	0.026	β^-	4105.9	2.5	72 929582.6	2.0
42	31		Ga	x	-69699.3	1.7	8693.874	0.023	β^-	1598.2	1.7	72 925174.7	1.8
41	32		Ge		-71297.53	0.06	8705.050	0.001		*		72 923458.95	0.06
40	33		As		-70953	4	8689.61	0.05	β^+	345	4	72 923829	4
39	34		Se		-68227	7	8641.56	0.10	β^+	2725	7	72 926755	8
38	35		Br		-63646	7	8568.08	0.09	β^+	4582	10	72 931673	7
37	36		Kr	x	-56552	7	8460.18	0.09	β^+	7094	9	72 939289	7
36	37		Rb	-p	-46010	40	8305.1	0.6	β^+	10540	40	72 950600	40
35	38		Sr	x	-31950#	400#	8102#	5#	β^+	14060#	400#	72 965700#	430#
48	26	74	Fe	x	-20660#	500#	8076#	7#	β^-	12880#	640#	73 977820#	540#
47	27		Co	x	-33540#	400#	8239#	5#	β^-	15160#	450#	73 963990#	430#
46	28		Ni	x	-48700#	200#	8433#	3#	β^-	7310#	200#	73 947720#	220#
45	29		Cu	x	-56006	6	8521.56	0.08	β^-	9751	7	73 939875	7
44	30		Zn	x	-65756.7	2.5	8642.75	0.03	β^-	2293	4	73 929407.3	2.7
43	31		Ga	x	-68049.6	3.0	8663.17	0.04	β^-	5372.8	3.0	73 926946	3
42	32		Ge		-73422.451	0.013	8725.201	*a*	β^-	-2562.4	1.7	73 921177.761	0.013
41	33		As		-70860.1	1.7	8680.002	0.023	β^-	1353.1	1.7	73 923928.6	1.8
40	34		Se		-72213.210	0.015	8687.716	*a*		*		73 922475.934	0.016
39	35		Br		-65288	6	8583.56	0.08	β^+	6925	6	73 929910	6
38	36		Kr		-62331.8	2.0	8533.039	0.027	β^+	2956	6	73 933084.0	2.2
37	37		Rb		-51916	3	8381.71	0.04	β^+	10416	3	73 944266	3
36	38		Sr	x	-40830#	100#	8221#	1#	β^+	11090#	100#	73 956170#	110#
49	26	75	Fe	x	-14700#	600#	7996#	8#	β^-	15860#	720#	74 984220#	640#
48	27		Co	x	-30560#	400#	8197#	5#	β^-	13680#	450#	74 967190#	430#
47	28		Ni	x	-44240#	200#	8369#	3#	β^-	10230#	200#	74 952510#	220#
46	29		Cu		-54470.2	0.7	8495.080	0.010	β^-	8088.7	2.1	74 941523.8	0.8
45	30		Zn	x	-62558.9	2.0	8592.498	0.026	β^-	5901.7	2.1	74 932840.2	2.1
44	31		Ga	x	-68460.6	0.7	8660.756	0.009	β^-	3396.3	0.7	74 926504.5	0.7
43	32		Ge	-n	-71856.97	0.05	8695.610	0.001	β^-	1177.2	0.9	74 922858.37	0.06
42	33		As		-73034.2	0.9	8700.875	0.012		*		74 921594.6	0.9
41	34		Se		-72169.49	0.07	8678.914	0.001	β^+	864.7	0.9	74 922522.87	0.08
40	35		Br	x	-69107	4	8627.65	0.06	β^+	3062	4	74 925811	5
39	36		Kr	x	-64324	8	8553.44	0.11	β^+	4783	9	74 930946	9
38	37		Rb	x	-57218.7	1.2	8448.276	0.016	β^+	7105	8	74 938573.2	1.3
37	38		Sr	–	-46620	220	8296.5	2.9	β^+	10600	220	74 949950	240
36	39		Y	x	-31820#	300#	8089#	4#	β^+	14800#	370#	74 965840#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
50	26	76	Fe	x	-10590#	600#	7943#	8#	β^-	15070#	780#	75 988630#	640#
49	27		Co	x	-25660#	500#	8131#	7#	β^-	16530#	580#	75 972450#	540#
48	28		Ni	x	-42190#	300#	8338#	4#	β^-	8790#	300#	75 954710#	320#
47	29		Cu	x	-50981.6	0.9	8443.602	0.012	β^-	11321.4	1.7	75 945269.0	1.0
46	30		Zn		-62303.0	1.5	8582.274	0.019	β^-	3993.6	2.4	75 933115.0	1.6
45	31		Ga	x	-66296.6	2.0	8624.527	0.026	β^-	6916.3	2.0	75 928827.6	2.1
44	32		Ge		-73212.898	0.018	8705.236	*a*	β^-	-921.5	0.9	75 921402.725	0.019
43	33		As	-n	-72291.4	0.9	8682.817	0.012	β^-	2960.6	0.9	75 922392.0	1.0
42	34		Se		-75251.959	0.016	8711.478	*a*		*		75 919213.703	0.017
41	35		Br	–	-70289	9	8635.88	0.12	β^+	4963	9	75 924542	10
40	36		Kr		-69014	4	8608.81	0.05	β^+	1275	10	75 925911	4
39	37		Rb	x	-60479.1	0.9	8486.216	0.012	β^+	8535	4	75 935073.0	1.0
38	38		Sr	x	-54250	30	8393.9	0.5	β^+	6230	30	75 941760	40
37	39		Y	x	-38250#	300#	8173#	4#	β^+	16000#	300#	75 958940#	320#
50	27	77	Co	x	-21910#	600#	8082#	8#	β^-	15440#	720#	76 976480#	640#
49	28		Ni	x	-37350#	400#	8272#	5#	β^-	11510#	400#	76 959900#	430#
48	29		Cu	x	-48862.8	1.2	8411.250	0.016	β^-	9926.4	2.3	76 947543.6	1.3
47	30		Zn		-58789.2	2.0	8530.004	0.026	β^-	7203	3	76 936887.2	2.1
46	31		Ga	x	-65992.4	2.4	8613.39	0.03	β^-	5220.5	2.4	76 929154.3	2.6
45	32		Ge	-n	-71212.87	0.05	8671.029	0.001	β^-	2703.5	1.7	76 923549.84	0.06
44	33		As		-73916.3	1.7	8695.979	0.022	β^-	683.2	1.7	76 920647.6	1.8
43	34		Se		-74599.50	0.06	8694.691	0.001		*		76 919914.15	0.07
42	35		Br	–	-73234.8	2.8	8666.81	0.04	β^+	1364.7	2.8	76 921379	3
41	36		Kr	x	-70169.5	2.0	8616.837	0.025	β^+	3065	3	76 924670.0	2.1
40	37		Rb	x	-64830.5	1.3	8537.340	0.017	β^+	5339.0	2.4	76 930401.6	1.4
39	38		Sr	x	-57803	8	8435.92	0.10	β^+	7027	8	76 937945	9
38	39		Y	-p	-46440#	200#	8278#	3#	β^+	11370#	200#	76 950150#	220#
37	40		Zr	x	-31600#	400#	8075#	5#	β^+	14840#	450#	76 966080#	430#
51	27	78	Co	x	-15320#	700#	7997#	9#	β^-	19560#	810#	77 983550#	750#
50	28		Ni	x	-34880#	400#	8238#	5#	β^-	9910#	400#	77 962560#	430#
49	29		Cu		-44789	13	8354.67	0.17	β^-	12694	13	77 951917	14
48	30		Zn		-57483.2	1.9	8507.380	0.025	β^-	6220.8	2.2	77 938289.2	2.1
47	31		Ga		-63704.1	1.1	8577.104	0.013	β^-	8158	4	77 931610.9	1.1
46	32		Ge	-nn	-71862	4	8671.66	0.05	β^-	955	10	77 922853	4
45	33		As	+pn	-72817	10	8673.88	0.13	β^-	4209	10	77 921828	10
44	34		Se		-77025.95	0.18	8717.807	0.002	β^-	-3574	4	77 917309.24	0.19
43	35		Br	–	-73452	4	8661.96	0.05	β^-	726	4	77 921146	4
42	36		Kr		-74178.3	0.3	8661.238	0.004		*		77 920366.3	0.3
41	37		Rb	x	-66935	3	8558.35	0.04	β^+	7243	3	77 928142	3
40	38		Sr	x	-63174	7	8500.10	0.10	β^+	3761	8	77 932180	8
39	39		Y	x	-52170#	300#	8349#	4#	β^+	11000#	300#	77 943990#	320#
38	40		Zr	x	-40850#	400#	8194#	5#	β^+	11320#	500#	77 956150#	430#
51	28	79	Ni	x	-28160#	500#	8150#	6#	β^-	14250#	510#	78 969770#	540#
50	29		Cu	x	-42410	100	8320.9	1.3	β^-	11020	110	78 954470	110
49	30		Zn		-53432.3	2.2	8450.583	0.028	β^-	9116.1	2.5	78 942638.1	2.4
48	31		Ga		-62548.4	1.2	8556.072	0.015	β^-	6980	40	78 932851.6	1.3
47	32		Ge		-69530	40	8634.5	0.5	β^-	4110	40	78 925360	40
46	33		As		-73636	5	8676.62	0.07	β^-	2281	5	78 920948	6
45	34		Se	-n	-75917.47	0.22	8695.592	0.003	β^-	150.6	1.0	78 918499.25	0.24
44	35		Br		-76068.1	1.0	8687.596	0.013		*		78 918337.6	1.1
43	36		Kr	–	-74442	3	8657.11	0.04	β^+	1626	3	78 920083	4
42	37		Rb		-70802.8	1.9	8601.140	0.025	β^+	3640	4	78 923990.1	2.1
41	38		Sr		-65480	7	8523.86	0.09	β^+	5323	8	78 929705	8
40	39		Y	x	-57800	80	8416.8	1.0	β^+	7680	80	78 937950	90
39	40		Zr	x	-46770#	300#	8267#	4#	β^+	11030#	310#	78 949790#	320#
38	41		Nb	x	-31650#	500#	8066#	6#	β^+	15120#	580#	78 966020#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
52	28	80	Ni	x	-23240#	600#	8088#	7#	β^-	13440#	670#	79 975050#	640#
51	29		Cu	x	-36680#	300#	8246#	4#	β^-	14970#	300#	79 960620#	320#
50	30		Zn		-51648.6	2.6	8423.55	0.03	β^-	7575	4	79 944552.9	2.8
49	31		Ga	x	-59223.7	2.9	8508.45	0.04	β^-	10312	4	79 936421	3
48	32		Ge	x	-69535.3	2.1	8627.571	0.026	β^-	2679	4	79 925350.8	2.2
47	33		As	x	-72215	3	8651.28	0.04	β^-	5545	3	79 922474	4
46	34		Se		-77759.5	0.9	8710.814	0.012	β^-	-1870.5	0.3	79 916521.8	1.0
45	35		Br		-75889.0	1.0	8677.654	0.012	β^-	2004.4	1.1	79 918529.8	1.1
44	36		Kr		-77893.5	0.7	8692.930	0.009		*		79 916377.9	0.7
43	37		Rb	x	-72175.5	1.9	8611.676	0.023	β^+	5718.0	2.0	79 922516.4	2.0
42	38		Sr	x	-70311	3	8578.60	0.04	β^+	1864	4	79 924518	4
41	39		Y	x	-61148	6	8454.28	0.08	β^+	9163	7	79 934355	7
40	40		Zr	x	-54760#	300#	8365#	4#	β^+	6390#	300#	79 941210#	320#
39	41		Nb	x	-38420#	400#	8151#	5#	β^+	16340#	500#	79 958750#	430#
53	28	81	Ni	x	-16090#	700#	8000#	9#	β^-	15820#	760#	80 982730#	750#
52	29		Cu	x	-31910#	300#	8185#	4#	β^-	14290#	300#	80 965740#	320#
51	30		Zn	x	-46200	5	8351.93	0.06	β^-	11428	6	80 950403	5
50	31		Ga	x	-57628	3	8483.36	0.04	β^-	8664	4	80 938134	4
49	32		Ge	x	-66291.7	2.1	8580.659	0.025	β^-	6242	3	80 928832.9	2.2
48	33		As		-72533.3	2.6	8648.06	0.03	β^-	3855.7	2.8	80 922132.3	2.8
47	34		Se		-76389.0	1.0	8686.000	0.012	β^-	1588.0	1.4	80 917993.0	1.0
46	35		Br		-77977.1	1.0	8695.947	0.012		*		80 916288.2	1.0
45	36		Kr		-77696.2	1.1	8682.821	0.013	β^+	280.9	0.5	80 916589.7	1.2
44	37		Rb		-75457	5	8645.51	0.06	β^+	2239	5	80 918994	5
43	38		Sr	x	-71528	3	8587.35	0.04	β^+	3929	6	80 923211	3
42	39		Y	x	-65713	5	8505.90	0.07	β^+	5815	6	80 929454	6
41	40		Zr	x	-57520	90	8395.2	1.1	β^+	8190	90	80 938250	100
40	41		Nb	x	-46360#	400#	8248#	5#	β^+	11160#	410#	80 950230#	430#
39	42		Mo	x	-31460#	500#	8054#	6#	β^+	14900#	640#	80 966230#	540#
54	28	82	Ni	x	-10720#	800#	7935#	10#	β^-	15010#	890#	81 988490#	860#
53	29		Cu	x	-25730#	400#	8108#	5#	β^-	16580#	400#	81 972380#	430#
52	30		Zn	x	-42314	3	8301.12	0.04	β^-	10617	4	81 954574	3
51	31		Ga	x	-52930.7	2.4	8421.049	0.030	β^-	12484	3	81 943176.5	2.6
50	32		Ge	x	-65415.1	2.2	8563.757	0.027	β^-	4690	4	81 929774.0	2.4
49	33		As	x	-70105	4	8611.42	0.05	β^-	7488	4	81 924739	4
48	34		Se		-77593.9	0.5	8693.197	0.006	β^-	-95.2	1.1	81 916699.5	0.5
47	35		Br		-77498.7	1.0	8682.495	0.012	β^-	3093.1	1.0	81 916801.8	1.0
46	36		Kr		-80591.795	0.006	8710.675	*a*		*		81 913481.154	0.006
45	37		Rb	IT	-76188	3	8647.43	0.04	β^+	4404	3	81 918209	3
44	38		Sr		-76010	6	8635.72	0.07	β^+	178	7	81 918400	6
43	39		Y	x	-68064	5	8529.28	0.07	β^+	7946	8	81 926930	6
42	40		Zr	x	-63614.1	1.6	8465.467	0.019	β^+	4450	6	81 931707.5	1.7
41	41		Nb	x	-51810#	300#	8312#	4#	β^+	11800#	300#	81 944380#	320#
40	42		Mo	x	-40370#	400#	8163#	5#	β^+	11440#	500#	81 956660#	430#
54	29	83	Cu	x	-20390#	500#	8044#	6#	β^-	15900#	580#	82 978110#	540#
53	30		Zn	x	-36290#	300#	8226#	4#	β^-	12970#	300#	82 961040#	320#
52	31		Ga	x	-49257.1	2.6	8372.58	0.03	β^-	11719	4	82 947120.3	2.8
51	32		Ge	x	-60976.4	2.4	8504.346	0.029	β^-	8693	4	82 934539.1	2.6
50	33		As	x	-69669.3	2.8	8599.65	0.03	β^-	5671	4	82 925207	3
49	34		Se	-n	-75341	3	8658.56	0.04	β^-	3673	5	82 919119	3
48	35		Br		-79014	4	8693.39	0.05	β^-	977	4	82 915175	4
47	36		Kr		-79990.643	0.009	8695.730	*a*		*		82 914126.517	0.010
46	37		Rb		-79070.6	2.3	8675.219	0.028	β^+	920.0	2.3	82 915114.2	2.5
45	38		Sr		-76798	7	8638.41	0.08	β^+	2273	6	82 917554	7
44	39		Y	x	-72206	19	8573.66	0.22	β^+	4592	20	82 922484	20
43	40		Zr	x	-65912	6	8488.40	0.08	β^+	6294	20	82 929241	7
42	41		Nb	x	-57610	160	8379.0	2.0	β^+	8300	160	82 938150	170
41	42		Mo	x	-46340#	400#	8234#	5#	β^+	11270#	430#	82 950250#	430#
40	43		Tc	x	-31320#	500#	8043#	6#	β^+	15020#	640#	82 966380#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
55	29	84	Cu	x	-13720#	500#	7965#	6#	β^-	18110#	640#	83 985270#	540#
54	30		Zn	x	-31830#	400#	8171#	5#	β^-	12260#	400#	83 965830#	430#
53	31		Ga	x	-44094	30	8307.5	0.4	β^-	14054	30	83 952660	30
52	32		Ge	x	-58148	3	8465.52	0.04	β^-	7705	4	83 937575	3
51	33		As	x	-65854	3	8547.94	0.04	β^-	10094	4	83 929303	3
50	34		Se		-75947.7	2.0	8658.793	0.023	β^-	1835	26	83 918466.8	2.1
49	35		Br		-77783	26	8671.3	0.3	β^-	4656	26	83 916496	28
48	36		Kr		-82439.345	0.004	8717.447	*a*	β^-	-2680.4	2.2	83 911497.727	0.004
47	37		Rb		-79759.0	2.2	8676.224	0.026	β^-	890.6	2.3	83 914375.2	2.4
46	38		Sr		-80649.6	1.2	8677.513	0.015		*		83 913419.1	1.3
45	39		Y		-73894	4	8587.78	0.05	β^+	6755	4	83 920671	5
44	40		Zr	x	-71422	5	8549.03	0.07	β^+	2473	7	83 923326	6
43	41		Nb	x	-61193.8	0.4	8417.956	0.005	β^+	10228	6	83 934305.7	0.4
42	42		Mo	x	-54170#	300#	8325#	4#	β^+	7020#	300#	83 941850#	320#
41	43		Tc	x	-37700#	400#	8120#	5#	β^+	16470#	500#	83 959530#	430#
55	30	85	Zn	x	-25100#	500#	8090#	6#	β^-	14640#	500#	84 973050#	540#
54	31		Ga	x	-39740	40	8253.6	0.4	β^-	13380	40	84 957330	40
53	32		Ge	x	-53123	4	8401.77	0.04	β^-	10066	5	84 942970	4
52	33		As	x	-63189	3	8510.99	0.04	β^-	9224	4	84 932164	3
51	34		Se	+3p	-72413.6	2.6	8610.30	0.03	β^-	6162	4	84 922260.8	2.8
50	35		Br	+n2p	-78575	3	8673.59	0.04	β^-	2905	4	84 915646	3
49	36		Kr	+	-81480.3	2.0	8698.563	0.024	β^-	687.0	2.0	84 912527.3	2.1
48	37		Rb		-82167.341	0.005	8697.442	*a*		*		84 911789.736	0.005
47	38		Sr		-81103.3	2.8	8675.72	0.03	β^+	1064.1	2.8	84 912932	3
46	39		Y	x	-77842	19	8628.15	0.22	β^+	3261	19	84 916433	20
45	40		Zr	x	-73175	6	8564.04	0.08	β^+	4667	20	84 921443	7
44	41		Nb	x	-66280	4	8473.71	0.05	β^+	6896	8	84 928846	4
43	42		Mo	x	-57510	16	8361.33	0.19	β^+	8770	16	84 938261	17
42	43		Tc	x	-45850#	400#	8215#	5#	β^+	11660#	400#	84 950780#	430#
41	44		Ru	x	-30630#	500#	8027#	6#	β^+	15220#	640#	84 967120#	540#
56	30	86	Zn	x	-20060#	500#	8032#	6#	β^-	13700#	640#	85 978460#	540#
55	31		Ga	x	-33760#	400#	8182#	5#	β^-	15640#	590#	85 963760#	430#
54	32		Ge	x	-49400	440	8355	5	β^-	9560	440	85 946970	470
53	33		As	x	-58962	3	8456.72	0.04	β^-	11541	4	85 936702	4
52	34		Se	x	-70503.2	2.5	8581.822	0.029	β^-	5129	4	85 924311.7	2.7
51	35		Br	+pp	-75632	3	8632.37	0.04	β^-	7633	3	85 918805	3
50	36		Kr		-83265.676	0.004	8712.030	*a*	β^-	-518.67	0.20	85 910610.625	0.004
49	37		Rb	-n	-82747.00	0.20	8696.901	0.002	β^-	1776.10	0.20	85 911167.44	0.21
48	38		Sr		-84523.100	0.005	8708.457	*a*		*		85 909260.725	0.006
47	39		Y	–	-79283	14	8638.43	0.16	β^+	5240	14	85 914886	15
46	40		Zr		-77969	4	8614.05	0.04	β^+	1314	15	85 916297	4
45	41		Nb	x	-69134	5	8502.22	0.06	β^+	8835	7	85 925782	6
44	42		Mo	x	-64110.9	2.9	8434.72	0.03	β^+	5023	6	85 931174	3
43	43		Tc	x	-51570#	300#	8280#	3#	β^+	12540#	300#	85 944640#	320#
42	44		Ru	x	-39770#	400#	8133#	5#	β^+	11800#	500#	85 957310#	430#
56	31	87	Ga	x	-28870#	500#	8124#	6#	β^-	14720#	580#	86 969010#	540#
55	32		Ge	x	-43590#	300#	8285#	3#	β^-	12030#	300#	86 953200#	320#
54	33		As	x	-55617.9	3.0	8413.85	0.03	β^-	10808	4	86 940292	3
53	34		Se	x	-66426.1	2.2	8529.092	0.026	β^-	7466	4	86 928688.6	2.4
52	35		Br	2p−n	-73892	3	8605.91	0.04	β^-	6818	3	86 920674	3
51	36		Kr	-n	-80709.53	0.25	8675.284	0.003	β^-	3888.27	0.25	86 913354.76	0.26
50	37		Rb		-84597.802	0.006	8710.984	*a*	β^-	282.275	0.006	86 909180.529	0.006
49	38		Sr		-84880.076	0.005	8705.236	*a*		*		86 908877.495	0.006
48	39		Y	–	-83018.4	1.1	8674.845	0.013	β^+	1861.7	1.1	86 910876.1	1.2
47	40		Zr		-79347	4	8623.65	0.05	β^+	3671	4	86 914817	4
46	41		Nb	x	-73874	7	8551.76	0.08	β^+	5473	8	86 920692	7
45	42		Mo		-66884.8	2.9	8462.42	0.03	β^+	6990	7	86 928196	3
44	43		Tc	x	-57690	4	8347.74	0.05	β^+	9195	5	86 938067	5
43	44		Ru	x	-45730#	400#	8201#	5#	β^+	11960#	400#	86 950910#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
57	31	88	Ga	x	-22390#	500#	8050#	6#	β^-	17130#	640#	87 975960#	540#
56	32		Ge	x	-39520#	400#	8236#	5#	β^-	10930#	450#	87 957570#	430#
55	33		As	x	-50450#	200#	8351#	2#	β^-	13430#	200#	87 945840#	220#
54	34		Se	x	-63884	3	8495.00	0.04	β^-	6832	5	87 931417	4
53	35		Br	++	-70716	3	8563.75	0.04	β^-	8975	4	87 924083	3
52	36		Kr	x	-79691.3	2.6	8656.850	0.030	β^-	2917.7	2.6	87 914447.9	2.8
51	37		Rb		-82609.00	0.16	8681.115	0.002	β^-	5312.62	0.16	87 911315.59	0.17
50	38		Sr		-87921.629	0.006	8732.596	*a*		*		87 905612.254	0.006
49	39		Y	–	-84299.0	1.5	8682.540	0.017	β^+	3622.6	1.5	87 909501.3	1.6
48	40		Zr		-83629	5	8666.03	0.06	β^+	670	6	87 910221	6
47	41		Nb		-76170	60	8572.4	0.7	β^+	7460	60	87 918230	60
46	42		Mo	x	-72687	4	8523.91	0.04	β^+	3490	60	87 921968	4
45	43		Tc	x	-61670	4	8389.83	0.05	β^+	11016	6	87 933794	4
44	44		Ru	x	-54340#	300#	8298#	3#	β^+	7330#	300#	87 941660#	320#
43	45		Rh	x	-36860#	400#	8090#	5#	β^+	17480#	500#	87 960430#	430#
57	32	89	Ge	x	-33040#	400#	8161#	4#	β^-	13490#	500#	88 964530#	430#
56	33		As	x	-46530#	300#	8304#	3#	β^-	12460#	300#	88 950050#	320#
55	34		Se	x	-58992	4	8435.28	0.04	β^-	9282	5	88 936669	4
54	35		Br	x	-68274	3	8530.78	0.04	β^-	8262	4	88 926705	4
53	36		Kr	x	-76535.8	2.1	8614.816	0.024	β^-	5177	6	88 917835.4	2.3
52	37		Rb		-81712	5	8664.19	0.06	β^-	4497	5	88 912278	6
51	38		Sr		-86209.03	0.09	8705.923	0.001	β^-	1502.2	0.4	88 907450.81	0.10
50	39		Y		-87711.2	0.3	8714.011	0.004		*		88 905838.2	0.4
49	40		Zr		-84878.0	2.8	8673.39	0.03	β^+	2833.2	2.8	88 908879.8	3.0
48	41		Nb		-80626	24	8616.82	0.27	β^+	4252	24	88 913445	25
47	42		Mo	x	-75015	4	8544.99	0.04	β^+	5611	24	88 919468	4
46	43		Tc	x	-67395	4	8450.58	0.04	β^+	7620	5	88 927649	4
45	44		Ru	x	-58369	24	8340.38	0.27	β^+	9025	25	88 937338	26
44	45		Rh	-p	-45650#	360#	8189#	4#	β^+	12720#	360#	88 950990#	390#
58	32	90	Ge	x	-28470#	500#	8109#	6#	β^-	12520#	640#	89 969440#	540#
57	33		As	x	-40990#	400#	8240#	4#	β^-	14810#	520#	89 956000#	430#
56	34		Se	x	-55800	330	8396	4	β^-	8200	330	89 940100	350
55	35		Br	x	-64000	3	8478.19	0.04	β^-	10959	4	89 931293	4
54	36		Kr	x	-74959.3	1.9	8591.260	0.021	β^-	4406	7	89 919527.9	2.0
53	37		Rb		-79366	6	8631.53	0.07	β^-	6585	6	89 914798	7
52	38		Sr		-85950.9	1.4	8696.004	0.016	β^-	546.0	1.4	89 907727.9	1.6
51	39		Y		-86496.9	0.4	8693.378	0.004	β^-	2275.6	0.4	89 907141.7	0.4
50	40		Zr		-88772.55	0.12	8709.970	0.001		*		89 904698.76	0.13
49	41		Nb		-82662	3	8633.38	0.04	β^+	6111	3	89 911259	4
48	42		Mo		-80173	3	8597.03	0.04	β^+	2489	3	89 913931	4
47	43		Tc	x	-70724.7	1.0	8483.360	0.011	β^+	9448	4	89 924073.9	1.1
46	44		Ru		-64884	4	8409.77	0.04	β^+	5841	4	89 930344	4
45	45		Rh	–	-51630#	200#	8254#	2#	β^+	13250#	200#	89 944570#	220#
44	46		Pd	x	-39710#	400#	8113#	4#	β^+	11920#	450#	89 957370#	430#
58	33	91	As	x	-36500#	400#	8189#	4#	β^-	14080#	590#	90 960820#	430#
57	34		Se	x	-50580	430	8335	5	β^-	10530	430	90 945700	470
56	35		Br	-n2p	-61107	4	8441.92	0.04	β^-	9867	4	90 934399	4
55	36		Kr	x	-70974.0	2.2	8541.752	0.025	β^-	6771	8	90 923806.3	2.4
54	37		Rb		-77745	8	8607.56	0.09	β^-	5907	9	90 916537	8
53	38		Sr		-83652	5	8663.88	0.06	β^-	2699	5	90 910196	6
52	39		Y		-86351.3	1.8	8684.942	0.020	β^-	1544.3	1.8	90 907298.0	2.0
51	40		Zr		-87895.59	0.09	8693.315	0.001		*		90 905640.21	0.10
50	41		Nb		-86638.0	2.9	8670.90	0.03	β^+	1257.6	2.9	90 906990	3
49	42		Mo		-82209	6	8613.63	0.07	β^+	4429	7	90 911745	7
48	43		Tc		-75986.7	2.4	8536.656	0.026	β^+	6222	7	90 918425.0	2.5
47	44		Ru		-68239.8	2.2	8442.929	0.024	β^+	7747	3	90 926741.5	2.4
46	45		Rh	x	-58570#	300#	8328#	3#	β^+	9670#	300#	90 937120#	320#
45	46		Pd	–	-46170#	420#	8183#	5#	β^+	12400#	300#	90 950440#	450#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
59	33	92	As	x	-30380#	500#	8121#	5#	β^-	16340#	640#	91 967390#	540#
58	34		Se	x	-46720#	400#	8290#	4#	β^-	9510#	400#	91 949840#	430#
57	35		Br	x	-56233	7	8384.91	0.07	β^-	12537	7	91 939632	7
56	36		Kr	x	-68769.3	2.7	8512.675	0.029	β^-	6003	7	91 926173.1	2.9
55	37		Rb		-74772	6	8569.42	0.07	β^-	8095	6	91 919728	7
54	38		Sr		-82867	3	8648.91	0.04	β^-	1949	9	91 911038	4
53	39		Y		-84816	9	8661.59	0.10	β^-	3643	9	91 908946	10
52	40		Zr		-88459.02	0.09	8692.678	0.001	β^-	-2005.7	1.8	91 905035.34	0.10
51	41		Nb		-86453.3	1.8	8662.373	0.019	β^-	355.3	1.8	91 907188.6	1.9
50	42		Mo		-86808.59	0.16	8657.731	0.002		*		91 906807.15	0.17
49	43		Tc		-78926	3	8563.54	0.03	β^+	7883	3	91 915270	3
48	44		Ru		-74301.2	2.7	8504.774	0.030	β^+	4624	4	91 920234.4	2.9
47	45		Rh	x	-62999	4	8373.42	0.05	β^+	11302	5	91 932368	5
46	46		Pd	–	-54780	350	8276	4	β^+	8220	350	91 941190	370
45	47		Ag	x	-37530#	400#	8080#	4#	β^+	17250#	530#	91 959710#	430#
59	34	93	Se	x	-40860#	400#	8225#	4#	β^-	12030#	590#	92 956140#	430#
58	35		Br	x	-52890	430	8346	5	β^-	11250	430	92 943220	460
57	36		Kr	x	-64136.0	2.5	8458.108	0.027	β^-	8484	8	92 931147.2	2.7
56	37		Rb		-72620	8	8540.92	0.08	β^-	7466	9	92 922039	8
55	38		Sr		-80086	8	8612.79	0.08	β^-	4141	12	92 914024	8
54	39		Y		-84227	10	8648.91	0.11	β^-	2895	10	92 909578	11
53	40		Zr		-87122.0	0.5	8671.621	0.005	β^-	90.8	1.5	92 906470.7	0.5
52	41		Nb		-87212.8	1.5	8664.185	0.016		*		92 906373.2	1.6
51	42		Mo	-n	-86807.08	0.18	8651.409	0.002	β^+	405.8	1.5	92 906808.77	0.19
50	43		Tc	-p	-83606.1	1.0	8608.578	0.011	β^+	3201.0	1.0	92 910245.1	1.1
49	44		Ru		-77216.7	2.1	8531.463	0.022	β^+	6389.4	2.3	92 917104.4	2.2
48	45		Rh		-69011.8	2.6	8434.826	0.028	β^+	8205	3	92 925912.8	2.8
47	46		Pd	–	-58980	370	8319	4	β^+	10030	370	92 936680	400
46	47		Ag	x	-46400#	400#	8175#	4#	β^+	12580#	550#	92 950190#	430#
60	34	94	Se	x	-36800#	500#	8180#	5#	β^-	10850#	540#	93 960490#	540#
59	35		Br	x	-47650#	200#	8287#	2#	β^-	13700#	200#	93 948850#	220#
58	36		Kr	x	-61348	12	8424.33	0.13	β^-	7215	12	93 934140	13
57	37		Rb		-68562.8	2.0	8492.764	0.022	β^-	10282.9	2.6	93 926394.8	2.2
56	38		Sr		-78845.7	1.7	8593.834	0.018	β^-	3506	6	93 915355.6	1.8
55	39		Y		-82351	6	8622.81	0.07	β^-	4918	6	93 911592	7
54	40		Zr		-87269.33	0.16	8666.802	0.002	β^-	-900.3	1.5	93 906312.52	0.18
53	41		Nb		-86369.1	1.5	8648.901	0.016	β^-	2045.0	1.5	93 907279.0	1.6
52	42		Mo		-88414.08	0.14	8662.334	0.002		*		93 905083.59	0.15
51	43		Tc	–	-84158	4	8608.74	0.04	β^+	4256	4	93 909652	4
50	44		Ru		-82584	3	8583.66	0.03	β^+	1575	5	93 911343	3
49	45		Rh		-72908	3	8472.40	0.04	β^+	9676	5	93 921730	4
48	46		Pd	x	-66102	4	8391.68	0.05	β^+	6805	5	93 929036	5
47	47		Ag	–	-52400#	400#	8238#	4#	β^+	13700#	400#	93 943740#	430#
46	48		Cd	x	-40440#	500#	8102#	5#	β^+	11960#	640#	93 956590#	540#
61	34	95	Se	x	-30460#	500#	8112#	5#	β^-	13390#	580#	94 967300#	540#
60	35		Br	x	-43850#	300#	8245#	3#	β^-	12310#	300#	94 952930#	320#
59	36		Kr	x	-56159	19	8366.00	0.20	β^-	9731	28	94 939711	20
58	37		Rb		-65890	20	8460.20	0.21	β^-	9227	20	94 929264	22
57	38		Sr		-75117	6	8549.09	0.06	β^-	6091	7	94 919358	6
56	39		Y		-81208	7	8604.96	0.07	β^-	4452	7	94 912820	7
55	40		Zr		-85659.9	0.9	8643.592	0.009	β^-	1126.3	1.0	94 908040.3	0.9
54	41		Nb		-86786.3	0.5	8647.213	0.005	β^-	925.6	0.5	94 906831.1	0.5
53	42		Mo		-87711.87	0.12	8648.721	0.001		*		94 905837.44	0.13
52	43		Tc		-86021	5	8622.69	0.05	β^+	1691	5	94 907652	5
51	44		Ru		-83458	10	8587.47	0.10	β^+	2564	11	94 910404	10
50	45		Rh		-78341	4	8525.37	0.04	β^+	5117	10	94 915898	4
49	46		Pd	x	-69966	3	8428.98	0.03	β^+	8375	5	94 924889	3
48	47		Ag	–	-59910#	400#	8315#	4#	β^+	10060#	400#	94 935690#	430#
47	48		Cd	–	-47060#	570#	8171#	6#	β^+	12850#	400#	94 949480#	610#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
61	35	96	Br	x	-38210#	300#	8184#	3#	β^-	14870#	300#	95 958980#	320#
60	36		Kr		-53082	19	8330.87	0.20	β^-	8273	20	95 943014	21
59	37		Rb		-61354	3	8408.90	0.03	β^-	11564	9	95 934133	4
58	38		Sr		-72918	8	8521.20	0.09	β^-	5412	10	95 921719	9
57	39		Y		-78330	6	8569.43	0.06	β^-	7109	6	95 915909	7
56	40		Zr		-85438.86	0.11	8635.328	0.001	β^-	163.97	0.10	95 908277.62	0.12
55	41		Nb		-85602.83	0.15	8628.887	0.002	β^-	3192.06	0.11	95 908101.59	0.16
54	42		Mo		-88794.89	0.12	8653.988	0.001	β^-	-2973	5	95 904674.77	0.13
53	43		Tc	–	-85822	5	8614.87	0.05	β^-	259	5	95 907867	6
52	44		Ru		-86080.39	0.17	8609.413	0.002		*		95 907588.91	0.18
51	45		Rh	–	-79688	10	8534.67	0.10	β^+	6393	10	95 914452	11
50	46		Pd	x	-76183	4	8490.02	0.04	β^+	3504	11	95 918214	5
49	47		Ag	εp	-64510	90	8360.3	0.9	β^+	11670	90	95 930740	100
48	48		Cd	–	-55570#	410#	8259#	4#	β^+	8940#	400#	95 940340#	440#
47	49		In	x	-38090#	500#	8069#	5#	β^+	17480#	650#	95 959110#	540#
62	35	97	Br	x	-34000#	400#	8140#	4#	β^-	13420#	420#	96 963500#	430#
61	36		Kr	x	-47420	130	8269.9	1.3	β^-	11100	130	96 949090	140
60	37		Rb		-58519.1	1.9	8376.187	0.020	β^-	10062	4	96 937177.1	2.1
59	38		Sr		-68581	3	8471.85	0.03	β^-	7535	8	96 926376	4
58	39		Y	+	-76115	7	8541.46	0.07	β^-	6821	7	96 918287	7
57	40		Zr		-82936.69	0.12	8603.718	0.001	β^-	2666	4	96 910963.80	0.13
56	41		Nb		-85603	4	8623.14	0.04	β^-	1942	4	96 908102	5
55	42		Mo		-87544.70	0.16	8635.093	0.002		*		96 906016.90	0.18
54	43		Tc		-87224	4	8623.73	0.04	β^+	320	4	96 906361	4
53	44		Ru	-n	-86120.6	2.8	8604.280	0.028	β^+	1104	5	96 907545.8	3.0
52	45		Rh	–	-82600	40	8559.9	0.4	β^+	3520	40	96 911330	40
51	46		Pd	x	-77806	5	8502.43	0.05	β^+	4790	40	96 916472	5
50	47		Ag	x	-70904	12	8423.21	0.12	β^+	6902	13	96 923881	13
49	48		Cd	–	-60730	420	8310	4	β^+	10170	420	96 934800	450
48	49		In	x	-47390#	400#	8165#	4#	β^+	13340#	580#	96 949130#	430#
63	35	98	Br	x	-28050#	400#	8078#	4#	β^-	16070#	500#	97 969890#	430#
62	36		Kr	x	-44120#	300#	8234#	3#	β^-	10250#	300#	97 952640#	320#
61	37		Rb		-54369	16	8330.73	0.16	β^-	12053	16	97 941632	17
60	38		Sr		-66422	3	8445.74	0.03	β^-	5866	9	97 928693	3
59	39		Y	p−2n	-72289	8	8497.62	0.08	β^-	8993	12	97 922395	9
58	40		Zr		-81282	8	8581.40	0.09	β^-	2243	10	97 912740	9
57	41		Nb	-pn	-83525	5	8596.30	0.05	β^-	4591	5	97 910333	5
56	42		Mo		-88115.98	0.17	8635.169	0.002	β^-	-1684	3	97 905403.61	0.19
55	43		Tc		-86432	3	8610.00	0.03	β^-	1793	7	97 907211	4
54	44		Ru		-88225	6	8620.31	0.07		*		97 905287	7
53	45		Rh	–	-83175	12	8560.80	0.12	β^+	5050	10	97 910708	13
52	46		Pd		-81321	5	8533.90	0.05	β^+	1854	13	97 912698	5
51	47		Ag		-73070	30	8441.7	0.3	β^+	8250	30	97 921560	40
50	48		Cd	–	-67640	50	8378.3	0.5	β^+	5430	40	97 927390	60
49	49		In	–	-53910#	300#	8230#	3#	β^+	13730#	300#	97 942130#	330#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
63	36	99	Kr	x	-38400#	400#	8175#	4#	β^-	12720#	400#	98 958780#	430#
62	37		Rb	x	-51121	4	8295.30	0.04	β^-	11397	6	98 945119	4
61	38		Sr		-62519	5	8402.52	0.05	β^-	8125	8	98 932884	5
60	39		Y	x	-70644	7	8476.69	0.07	β^-	6973	12	98 924161	7
59	40		Zr		-77617	10	8539.23	0.11	β^-	4719	16	98 916675	11
58	41		Nb	+p	-82335	12	8578.99	0.12	β^-	3635	12	98 911609	13
57	42		Mo		-85970.11	0.23	8607.798	0.002	β^-	1357.8	0.9	98 907707.30	0.25
56	43		Tc		-87327.9	0.9	8613.610	0.009	β^-	297.5	0.9	98 906249.7	1.0
55	44		Ru		-87625.4	0.3	8608.713	0.003		*		98 905930.3	0.4
54	45		Rh		-85585	19	8580.20	0.20	β^+	2041	19	98 908121	21
53	46		Pd		-82183	5	8537.93	0.05	β^+	3402	19	98 911773	5
52	47		Ag	x	-76712	6	8474.77	0.06	β^+	5470	8	98 917646	7
51	48		Cd	x	-69931.1	1.6	8398.373	0.016	β^+	6781	6	98 924925.8	1.7
50	49		In	x	-61380#	300#	8304#	3#	β^+	8560#	300#	98 934110#	320#
49	50		Sn	–	-47980#	580#	8161#	6#	β^+	13400#	500#	98 948500#	630#
64	36	100	Kr	x	-34470#	400#	8134#	4#	β^-	11800#	400#	99 963000#	430#
63	37		Rb		-46266	13	8244.51	0.13	β^-	13552	15	99 950332	14
62	38		Sr		-59818	7	8372.20	0.07	β^-	7504	13	99 935783	7
61	39		Y	x	-67321	11	8439.42	0.11	β^-	9051	14	99 927728	12
60	40		Zr		-76373	8	8522.11	0.08	β^-	3419	11	99 918010	9
59	41		Nb	IT	-79791	8	8548.47	0.08	β^-	6402	8	99 914341	9
58	42		Mo		-86193.0	0.3	8604.663	0.003	β^-	-172.1	1.4	99 907468.0	0.3
57	43		Tc	-n	-86021.0	1.4	8595.118	0.014	β^-	3206.4	1.4	99 907652.7	1.5
56	44		Ru		-89227.4	0.3	8619.359	0.003		*		99 904210.5	0.4
55	45		Rh		-85591	18	8575.17	0.18	β^+	3636	18	99 908114	19
54	46		Pd		-85213	18	8563.57	0.18	β^+	378	25	99 908520	19
53	47		Ag	x	-78138	5	8484.99	0.05	β^+	7075	18	99 916115	5
52	48		Cd	x	-74194.6	1.7	8437.737	0.017	β^+	3943	5	99 920348.8	1.8
51	49		In	x	-64178.1	2.2	8329.749	0.022	β^+	10016.4	2.8	99 931101.9	2.4
50	50		Sn	–	-57150	240	8251.6	2.4	β^+	7030	240	99 938650	260
65	36	101	Kr	x	-28580#	500#	8075#	5#	β^-	13990#	500#	100 969320#	540#
64	37		Rb	x	-42567	20	8206.18	0.20	β^-	12757	22	100 954302	22
63	38		Sr	x	-55325	8	8324.74	0.08	β^-	9730	11	100 940606	9
62	39		Y	x	-65055	7	8413.33	0.07	β^-	8106	11	100 930161	8
61	40		Zr		-73161	8	8485.84	0.08	β^-	5731	9	100 921458	9
60	41		Nb	x	-78891	4	8534.84	0.04	β^-	4628	4	100 915307	4
59	42		Mo	-n	-83520.0	0.3	8572.916	0.003	β^-	2825	24	100 910337.6	0.3
58	43		Tc	+	-86345	24	8593.14	0.24	β^-	1614	24	100 907305	26
57	44		Ru		-87958.1	0.4	8601.366	0.004		*		100 905573.1	0.4
56	45		Rh		-87412	6	8588.22	0.06	β^+	546	6	100 906159	6
55	46		Pd		-85432	5	8560.86	0.05	β^+	1980	4	100 908285	5
54	47		Ag	x	-81334	5	8512.55	0.05	β^+	4098	7	100 912684	5
53	48		Cd	x	-75836.5	1.5	8450.366	0.015	β^+	5498	5	100 918586.2	1.6
52	49		In	x	-68545	12	8370.43	0.12	β^+	7292	12	100 926414	13
51	50		Sn	εp	-60310	300	8281.1	3.0	β^+	8240	300	100 935260	320

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
65	37	102	Rb	x	-37250	80	8152.7	0.8	β^-	14910	110	101 960010	90
64	38		Sr	x	-52160	70	8291.2	0.7	β^-	9010	70	101 944000	70
63	39		Y	x	-61173	4	8371.92	0.04	β^-	10409	10	101 934328	4
62	40		Zr		-71581	9	8466.29	0.09	β^-	4717	9	101 923154	9
61	41		Nb		-76298.3	2.5	8504.867	0.025	β^-	7263	9	101 918090.4	2.7
60	42		Mo		-83561	8	8568.40	0.08	β^-	1012	12	101 910294	9
59	43		Tc		-84573	9	8570.65	0.09	β^-	4534	9	101 909207	10
58	44		Ru		-89106.4	0.4	8607.428	0.004	β^-	-2323	6	101 904340.3	0.4
57	45		Rh	–	-86783	6	8576.98	0.06	β^-	1120	6	101 906834	7
56	46		Pd		-87903.0	0.4	8580.289	0.004		*		101 905632.3	0.4
55	47		Ag	+	-82247	8	8517.17	0.08	β^+	5656	8	101 911705	9
54	48		Cd		-79659.7	1.7	8484.132	0.016	β^+	2587	8	101 914481.8	1.8
53	49		In		-70695	5	8388.57	0.04	β^+	8965	5	101 924106	5
52	50		Sn	–	-64930	100	8324.4	1.0	β^+	5760	100	101 930290	110
51	51		Sb	x	-51100#	400#	8181#	4#	β^+	13840#	410#	101 945140#	430#
66	37	103	Rb	x	-33160#	400#	8112#	4#	β^-	14120#	450#	102 964400#	430#
65	38		Sr	x	-47280#	200#	8242#	2#	β^-	11180#	200#	102 949240#	220#
64	39		Y	x	-58457	11	8342.63	0.11	β^-	9352	15	102 937244	12
63	40		Zr	x	-67809	9	8425.83	0.09	β^-	7220	10	102 927204	10
62	41		Nb	x	-75029	4	8488.33	0.04	β^-	5926	10	102 919453	4
61	42		Mo	x	-80954	9	8538.27	0.09	β^-	3650	13	102 913092	10
60	43		Tc	+p	-84604	10	8566.10	0.10	β^-	2663	10	102 909174	11
59	44		Ru		-87267.2	0.4	8584.366	0.004	β^-	764.5	2.3	102 906314.8	0.5
58	45		Rh		-88031.7	2.3	8584.193	0.022		*		102 905494.1	2.5
57	46		Pd	-n	-87457.0	0.9	8571.017	0.009	β^+	574.7	2.4	102 906111.1	0.9
56	47		Ag	x	-84803	4	8537.65	0.04	β^+	2654	4	102 908961	4
55	48		Cd		-80651.6	1.8	8489.755	0.018	β^+	4151	4	102 913416.9	1.9
54	49		In		-74632	9	8423.72	0.09	β^+	6019	9	102 919879	10
53	50		Sn	–	-67090#	100#	8343#	1#	β^+	7540#	100#	102 927970#	110#
52	51		Sb	x	-56670#	300#	8234#	3#	β^+	10420#	320#	102 939160#	320#
67	37	104	Rb	x	-27450#	500#	8057#	5#	β^-	16310#	580#	103 970530#	540#
66	38		Sr	x	-43760#	300#	8206#	3#	β^-	10320#	360#	103 953020#	320#
65	39		Y	x	-54080#	200#	8298#	2#	β^-	11640#	200#	103 941940#	220#
64	40		Zr	x	-65718	9	8402.32	0.09	β^-	6093	9	103 929449	10
63	41		Nb	x	-71811.0	1.8	8453.383	0.017	β^-	8533	9	103 922907.7	1.9
62	42		Mo		-80344	9	8527.91	0.09	β^-	2155	24	103 913747	10
61	43		Tc		-82499	25	8541.11	0.24	β^-	5597	25	103 911434	27
60	44		Ru		-88095.8	2.5	8587.400	0.024	β^-	-1136	3	103 905425.3	2.7
59	45		Rh	-n	-86959.3	2.3	8568.950	0.022	β^-	2435.8	2.7	103 906645.3	2.5
58	46		Pd	+n	-89395.1	1.3	8584.848	0.013		*		103 904030.4	1.4
57	47		Ag	–	-85116	4	8536.18	0.04	β^+	4279	4	103 908624	5
56	48		Cd		-83968.4	1.7	8517.623	0.016	β^+	1148	5	103 909856.2	1.8
55	49		In	x	-76183	6	8435.24	0.06	β^+	7786	6	103 918215	6
54	50		Sn		-71627	6	8383.91	0.06	β^+	4556	8	103 923105	6
53	51		Sb	$+\alpha$	-59300#	100#	8258#	1#	β^+	12330#	100#	103 936340#	110#
52	52		Te	$-\alpha$	-49630	320	8157	3	β^+	9670#	330#	103 946720	340

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
67	38	105	Sr	x	-38190#	500#	8152#	5#	β^-	12380#	640#	104 959000#	540#
66	39		Y	x	-50570#	400#	8262#	4#	β^-	10890#	400#	104 945710#	430#
65	40		Zr	x	-61458	12	8358.60	0.12	β^-	8457	13	104 934022	13
64	41		Nb	x	-69916	4	8431.69	0.04	β^-	7415	10	104 924943	4
63	42		Mo		-77331	9	8494.86	0.09	β^-	4960	40	104 916982	10
62	43		Tc		-82290	40	8534.6	0.3	β^-	3650	40	104 911660	40
61	44		Ru		-85934.5	2.5	8561.902	0.024	β^-	1916.7	2.9	104 907745.5	2.7
60	45		Rh		-87851.3	2.5	8572.705	0.024	β^-	566.6	2.3	104 905687.8	2.7
59	46		Pd		-88417.9	1.1	8570.651	0.011		*		104 905079.5	1.2
58	47		Ag		-87071	5	8550.37	0.04	β^+	1347	5	104 906526	5
57	48		Cd		-84333.8	1.4	8516.853	0.013	β^+	2737	4	104 909463.9	1.5
56	49		In	x	-79641	10	8464.70	0.10	β^+	4693	10	104 914502	11
55	50		Sn		-73338	4	8397.23	0.04	β^+	6303	11	104 921268	4
54	51		Sb	$+\alpha$	-64015	22	8300.99	0.21	β^+	9323	22	104 931277	23
53	52		Te	$-\alpha$	-52810	300	8186.8	2.9	β^+	11200	300	104 943300	320
68	38	106	Sr	x	-34300#	600#	8114#	6#	β^-	11490#	780#	105 963180#	640#
67	39		Y	x	-45790#	500#	8215#	5#	β^-	12960#	540#	105 950840#	540#
66	40		Zr	x	-58750#	200#	8330#	2#	β^-	7450#	200#	105 936930#	220#
65	41		Nb		-66202.7	1.4	8393.266	0.013	β^-	9925	9	105 928928.5	1.5
64	42		Mo	x	-76128	9	8479.52	0.09	β^-	3648	15	105 918273	10
63	43		Tc	+	-79776	12	8506.56	0.12	β^-	6547	11	105 914357	13
62	44		Ru		-86323	5	8560.94	0.05	β^-	39.40	0.21	105 907328	6
61	45		Rh		-86363	5	8553.93	0.05	β^-	3545	5	105 907286	6
60	46		Pd		-89907.5	1.1	8579.993	0.010	β^-	-2965.1	2.8	105 903480.3	1.2
59	47		Ag		-86942	3	8544.640	0.028	β^-	189.8	2.8	105 906663	3
58	48		Cd		-87132.2	1.1	8539.049	0.010		*		105 906459.8	1.2
57	49		In	–	-80608	12	8470.12	0.12	β^+	6524	12	105 913464	13
56	50		Sn		-77354	5	8432.04	0.05	β^+	3254	13	105 916957	5
55	51		Sb	x	-66473	7	8322.01	0.07	β^+	10880	9	105 928638	8
54	52		Te	$-\alpha$	-58220	100	8236.8	0.9	β^+	8250	100	105 937500	110
53	53		I	x	-43300#	400#	8089#	4#	β^+	14920#	410#	105 953520#	430#
69	38	107	Sr	x	-28250#	700#	8057#	7#	β^-	13720#	860#	106 969670#	750#
68	39		Y	x	-41970#	500#	8178#	5#	β^-	12050#	580#	106 954940#	540#
67	40		Zr	x	-54020#	300#	8284#	3#	β^-	9700#	300#	106 942010#	320#
66	41		Nb	x	-63724	8	8367.09	0.07	β^-	8821	12	106 931590	9
65	42		Mo	x	-72545	9	8442.22	0.09	β^-	6205	13	106 922120	10
64	43		Tc	x	-78750	9	8492.90	0.08	β^-	5113	12	106 915458	9
63	44		Ru	-nn	-83863	9	8533.37	0.08	β^-	3001	15	106 909970	9
62	45		Rh	+p	-86864	12	8554.10	0.11	β^-	1509	12	106 906748	13
61	46		Pd		-88372.7	1.2	8560.895	0.011	β^-	34.0	2.3	106 905128.1	1.3
60	47		Ag		-88406.7	2.4	8553.901	0.022		*		106 905091.5	2.6
59	48		Cd		-86990.3	1.7	8533.352	0.016	β^+	1416.4	2.6	106 906612.0	1.8
58	49		In		-83567	10	8494.04	0.09	β^+	3424	10	106 910287	10
57	50		Sn	x	-78512	5	8439.49	0.05	β^+	5054	11	106 915714	6
56	51		Sb		-70653	4	8358.73	0.04	β^+	7859	7	106 924151	4
55	52		Te	$-\alpha$	-60660#	100#	8258#	1#	β^+	10000#	100#	106 934880#	110#
54	53		I	x	-49430#	300#	8146#	3#	β^+	11230#	320#	106 946940#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
69	39	108	Y	x	-36780#	600#	8129#	6#	β^-	14170#	720#	107 960520#	640#
68	40		Zr	x	-50950#	400#	8253#	4#	β^-	8600#	400#	107 945300#	430#
67	41		Nb	x	-59545	8	8325.66	0.08	β^-	11204	12	107 936076	9
66	42		Mo	x	-70749	9	8422.16	0.09	β^-	5174	13	107 924048	10
65	43		Tc	x	-75923	9	8462.82	0.08	β^-	7739	12	107 918493	9
64	44		Ru	-3n	-83661	9	8527.23	0.08	β^-	1370	16	107 910186	9
63	45		Rh	x	-85031	14	8532.67	0.13	β^-	4493	14	107 908715	15
62	46		Pd		-89524.2	1.1	8567.024	0.010	β^-	-1917.4	2.6	107 903891.8	1.2
61	47		Ag	-n	-87606.8	2.4	8542.026	0.022	β^-	1645.6	2.6	107 905950.2	2.6
60	48		Cd		-89252.4	1.1	8550.020	0.010		*		107 904183.6	1.2
59	49		In		-84120	9	8495.25	0.08	β^+	5133	9	107 909694	9
58	50		Sn		-82070	5	8469.03	0.05	β^+	2050	10	107 911894	6
57	51		Sb	x	-72445	5	8372.67	0.05	β^+	9625	8	107 922227	6
56	52		Te		-65782	5	8303.72	0.05	β^+	6664	8	107 929380	6
55	53		I	-p	-52770#	100#	8176#	1#	β^+	13010#	100#	107 943350#	110#
54	54		Xe	$-\alpha$	-42630	380	8075	4	β^+	10140#	390#	107 954230	410
70	39	109	Y	x	-32480#	700#	8089#	6#	β^-	13250#	860#	108 965130#	750#
69	40		Zr	x	-45730#	500#	8204#	5#	β^-	10960#	660#	108 950910#	540#
68	41		Nb	x	-56690	430	8297	4	β^-	9970	430	108 939140	460
67	42		Mo	x	-66659	11	8381.42	0.10	β^-	7624	15	108 928438	12
66	43		Tc	x	-74283	10	8444.18	0.09	β^-	6456	13	108 920254	10
65	44		Ru	-4n	-80738	9	8496.23	0.08	β^-	4261	10	108 913324	10
64	45		Rh		-84999	4	8528.14	0.04	β^-	2607	4	108 908750	4
63	46		Pd		-87606.5	1.1	8544.882	0.010	β^-	1112.9	1.4	108 905950.6	1.2
62	47		Ag		-88719.4	1.3	8547.916	0.012		*		108 904755.8	1.4
61	48		Cd		-88504.3	1.5	8538.765	0.014	β^+	215.1	1.8	108 904986.7	1.6
60	49		In		-86490	4	8513.10	0.04	β^+	2015	4	108 907150	4
59	50		Sn		-82630	8	8470.52	0.07	β^+	3859	9	108 911293	9
58	51		Sb		-76251	5	8404.82	0.05	β^+	6379	9	108 918141	6
57	52		Te		-67715	4	8319.33	0.04	β^+	8536	7	108 927305	5
56	53		I	-p	-57673	7	8220.02	0.06	β^+	10043	8	108 938086	7
55	54		Xe	$-\alpha$	-46170	300	8107.3	2.8	β^+	11500	300	108 950430	320
70	40	110	Zr	x	-42220#	500#	8171#	5#	β^-	10090#	980#	109 954680#	540#
69	41		Nb	x	-52310	840	8255	8	β^-	12230	840	109 943840	900
68	42		Mo	x	-64536	24	8359.29	0.22	β^-	6499	26	109 930718	26
67	43		Tc	x	-71035	9	8411.26	0.09	β^-	9038	13	109 923741	10
66	44		Ru		-80073	9	8486.31	0.08	β^-	2756	19	109 914039	10
65	45		Rh		-82829	18	8504.26	0.16	β^-	5502	18	109 911080	19
64	46		Pd		-88330.9	0.6	8547.163	0.006	β^-	-873.6	1.4	109 905172.9	0.7
63	47		Ag		-87457.3	1.3	8532.109	0.012	β^-	2890.7	1.3	109 906110.7	1.4
62	48		Cd		-90348.0	0.4	8551.275	0.003		*		109 903007.5	0.4
61	49		In	–	-86470	12	8508.91	0.11	β^+	3878	12	109 907171	12
60	50		Sn	x	-85842	14	8496.09	0.13	β^+	628	18	109 907845	15
59	51		Sb	x	-77450	6	8412.68	0.05	β^+	8392	15	109 916854	6
58	52		Te		-72230	7	8358.12	0.06	β^+	5220	9	109 922458	7
57	53		I	$-\alpha$	-60470	60	8244.1	0.6	β^+	11760	60	109 935090	70
56	54		Xe	$-\alpha$	-51920	100	8159.3	0.9	β^+	8550	120	109 944260	110

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
71	40	111	Zr	x	-36480#	600#	8118#	5#	β^-	12480#	670#	110 960840#	640#
70	41		Nb	x	-48960#	300#	8223#	3#	β^-	10980#	300#	110 947440#	320#
69	42		Mo	+	-59940	13	8315.29	0.11	β^-	9085	7	110 935652	14
68	43		Tc	x	-69025	11	8390.09	0.10	β^-	7761	14	110 925899	11
67	44		Ru	x	-76785	10	8452.96	0.09	β^-	5519	12	110 917568	10
66	45		Rh		-82304	7	8495.63	0.06	β^-	3682	7	110 911643	7
65	46		Pd	-n	-85985.9	0.7	8521.750	0.007	β^-	2229.6	1.6	110 907690.4	0.8
64	47		Ag	+	-88215.4	1.5	8534.788	0.013	β^-	1036.8	1.4	110 905296.8	1.6
63	48		Cd		-89252.2	0.4	8537.080	0.003		*		110 904183.8	0.4
62	49		In		-88392	3	8522.28	0.03	β^+	860	3	110 905107	4
61	50		Sn	+n	-85939	5	8493.13	0.05	β^+	2453	6	110 907741	6
60	51		Sb	x	-80837	9	8440.12	0.08	β^+	5102	10	110 913218	10
59	52		Te	x	-73587	6	8367.76	0.06	β^+	7249	11	110 921001	7
58	53		I		-64954	5	8282.93	0.04	β^+	8634	8	110 930269	5
57	54		Xe	$-\alpha$	-54520#	120#	8182#	1#	β^+	10430#	120#	110 941470#	120#
56	55		Cs	x	-42900#	200#	8070#	2#	β^+	11620#	230#	110 953950#	220#
72	40	112	Zr	x	-32420#	700#	8081#	6#	β^-	11650#	760#	111 965200#	750#
71	41		Nb	x	-44070#	300#	8178#	3#	β^-	13410#	360#	111 952690#	320#
70	42		Mo	x	-57480#	200#	8291#	2#	β^-	7780#	200#	111 938290#	220#
69	43		Tc	x	-65259	6	8353.62	0.05	β^-	10372	11	111 929942	6
68	44		Ru	x	-75631	10	8439.24	0.09	β^-	4100	50	111 918807	10
67	45		Rh		-79730	40	8468.9	0.4	β^-	6590	40	111 914410	50
66	46		Pd		-86321	7	8520.72	0.06	β^-	263	7	111 907331	7
65	47		Ag	x	-86583.7	2.4	8516.081	0.022	β^-	3991.1	2.4	111 907048.5	2.6
64	48		Cd		-90574.86	0.25	8544.731	0.002	β^-	-2585	4	111 902763.90	0.27
63	49		In		-87990	4	8514.67	0.04	β^-	665	4	111 905539	5
62	50		Sn		-88655.05	0.29	8513.619	0.003		*		111 904824.9	0.3
61	51		Sb	x	-81599	18	8443.63	0.16	β^+	7056	18	111 912400	19
60	52		Te	x	-77568	8	8400.65	0.07	β^+	4031	20	111 916728	9
59	53		I	x	-67063	10	8299.88	0.09	β^+	10504	13	111 928005	11
58	54		Xe	$-\alpha$	-60026	8	8230.06	0.07	β^+	7037	13	111 935559	9
57	55		Cs	-p	-46420#	120#	8102#	1#	β^+	13610#	120#	111 950170#	120#
73	40	113	Zr	x	-26340#	300#	8027#	3#	β^-	13870#	500#	112 971720#	320#
72	41		Nb	x	-40210#	400#	8143#	4#	β^-	12440#	500#	112 956830#	430#
71	42		Mo	x	-52650#	300#	8246#	3#	β^-	10160#	300#	112 943480#	320#
70	43		Tc	x	-62812	3	8329.465	0.030	β^-	9060	40	112 932569	4
69	44		Ru		-71870	40	8402.7	0.3	β^-	6900	40	112 922850	40
68	45		Rh	x	-78767	7	8456.82	0.06	β^-	4824	10	112 915440	8
67	46		Pd	x	-83590	7	8492.58	0.06	β^-	3436	18	112 910262	7
66	47		Ag	+	-87027	17	8516.07	0.15	β^-	2016	17	112 906573	18
65	48		Cd		-89043.29	0.24	8526.987	0.002	β^-	323.84	0.27	112 904408.11	0.26
64	49		In		-89367.12	0.19	8522.930	0.002		*		112 904060.45	0.20
63	50		Sn		-88328.1	1.6	8506.812	0.014	β^+	1039.0	1.6	112 905175.9	1.7
62	51		Sb	–	-84417	17	8465.28	0.15	β^+	3911	17	112 909375	18
61	52		Te	x	-78347	28	8404.64	0.25	β^+	6070	30	112 915890	30
60	53		I	x	-71120	8	8333.75	0.07	β^+	7228	29	112 923650	9
59	54		Xe		-62204	7	8247.93	0.06	β^+	8916	11	112 933222	7
58	55		Cs	-p	-51765	9	8148.62	0.08	β^+	10439	11	112 944428	9
57	56		Ba	x	-39710#	300#	8035#	3#	β^+	12060#	300#	112 957370#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
73	41	114	Nb	x	-34960#	500#	8097#	4#	β^-	14720#	580#	113 962470#	540#
72	42		Mo	x	-49680#	300#	8219#	3#	β^-	8920#	530#	113 946670#	320#
71	43		Tc	x	-58600	430	8290	4	β^-	11620	430	113 937090	470
70	44		Ru	x	-70221	4	8385.34	0.03	β^-	5490	70	113 924614	4
69	45		Rh		-75710	70	8426.6	0.6	β^-	7780	70	113 918720	80
68	46		Pd	x	-83490	7	8488.01	0.06	β^-	1440	8	113 910369	7
67	47		Ag	x	-84931	5	8493.78	0.04	β^-	5084	5	113 908823	5
66	48		Cd		-90014.93	0.28	8531.513	0.002	β^-	-1445.1	0.4	113 903365.00	0.30
65	49		In		-88569.8	0.3	8511.974	0.003	β^-	1989.9	0.3	113 904916.4	0.3
64	50		Sn		-90559.735	0.029	8522.567	*a*		*		113 902780.13	0.03
63	51		Sb		-84497	20	8462.52	0.17	β^+	6063	20	113 909289	21
62	52		Te	x	-81890	24	8432.79	0.21	β^+	2610	30	113 912088	26
61	53		I	x	-72639	20	8344.78	0.18	β^+	9250	30	113 922019	22
60	54		Xe	x	-67086	11	8289.21	0.10	β^+	5553	23	113 927980	12
59	55		Cs	$-\alpha$	-54690	90	8173.6	0.7	β^+	12400	90	113 941290	90
58	56		Ba	$-\alpha$	-45910	100	8089.7	0.9	β^+	8780	130	113 950720	110
74	41	115	Nb	x	-30880#	500#	8061#	4#	β^-	13670#	640#	114 966850#	540#
73	42		Mo	x	-44550#	400#	8173#	3#	β^-	11250#	450#	114 952170#	430#
72	43		Tc	x	-55800#	200#	8264#	2#	β^-	10310#	200#	114 940100#	210#
71	44		Ru	x	-66105	25	8346.81	0.22	β^-	8124	26	114 929033	27
70	45		Rh	x	-74229	7	8410.65	0.06	β^-	6197	15	114 920312	8
69	46		Pd		-80426	14	8457.73	0.12	β^-	4557	22	114 913659	15
68	47		Ag		-84983	18	8490.56	0.16	β^-	3102	18	114 908767	20
67	48		Cd		-88084.5	0.7	8510.725	0.006	β^-	1451.9	0.7	114 905437.4	0.7
66	49		In		-89536.357	0.012	8516.547	*a*	β^-	497.489	0.010	114 903878.773	0.012
65	50		Sn		-90033.846	0.015	8514.070	*a*		*		114 903344.696	0.016
64	51		Sb	x	-87003	16	8480.92	0.14	β^+	3030	16	114 906598	17
63	52		Te	x	-82063	28	8431.15	0.24	β^+	4940	30	114 911900	30
62	53		I	x	-76338	29	8374.57	0.25	β^+	5720	40	114 918050	30
61	54		Xe	x	-68657	12	8300.97	0.11	β^+	7680	30	114 926294	13
60	55		Cs	x	-59700#	100#	8216#	1#	β^+	8960#	100#	114 935910#	110#
59	56		Ba	x	-48920#	200#	8116#	2#	β^+	10780#	230#	114 947480#	220#
75	41	116	Nb	x	-25230#	300#	8012#	3#	β^-	15980#	580#	115 972910#	320#
74	42		Mo	x	-41210#	500#	8143#	4#	β^-	10000#	580#	115 955760#	540#
73	43		Tc	x	-51210#	300#	8223#	3#	β^-	12860#	300#	115 945020#	320#
72	44		Ru	x	-64069	4	8326.88	0.03	β^-	6670	70	115 931219	4
71	45		Rh		-70740	70	8377.6	0.6	β^-	9100	70	115 924060	80
70	46		Pd	x	-79831	7	8449.28	0.06	β^-	2712	8	115 914298	8
69	47		Ag	x	-82543	3	8465.907	0.028	β^-	6170	3	115 911387	4
68	48		Cd		-88712.49	0.16	8512.351	0.001	β^-	-462.73	0.27	115 904763.23	0.17
67	49		In	-n	-88249.76	0.22	8501.618	0.002	β^-	3276.22	0.24	115 905259.99	0.24
66	50		Sn		-91525.98	0.10	8523.117	0.001		*		115 901742.83	0.10
65	51		Sb		-86822	5	8475.82	0.04	β^+	4704	5	115 906793	6
64	52		Te		-85264	24	8455.64	0.21	β^+	1558	25	115 908466	26
63	53		I		-77420	80	8381.3	0.6	β^+	7840	80	115 916890	80
62	54		Xe		-73047	13	8336.84	0.11	β^+	4370	80	115 921581	14
61	55		Cs	ea	-62040#	100#	8235#	1#	β^+	11000#	100#	115 933400#	110#
60	56		Ba	x	-54380#	200#	8162#	2#	β^+	7660#	220#	115 941620#	220#
59	57		La	$-\alpha$	-40050#	320#	8032#	3#	β^+	14330#	380#	115 957010#	350#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
75	42	117	Mo	x	-35690#	500#	8096#	4#	β^-	12450#	640#	116 961690#	540#
74	43		Tc	x	-48140#	400#	8195#	3#	β^-	11350#	590#	116 948320#	430#
73	44		Ru	x	-59490	430	8286	4	β^-	9410	430	116 936140	470
72	45		Rh	x	-68897	9	8359.28	0.08	β^-	7527	11	116 926036	10
71	46		Pd		-76424	7	8416.92	0.06	β^-	5758	15	116 917956	8
70	47		Ag		-82182	14	8459.45	0.12	β^-	4236	14	116 911774	15
69	48		Cd	-n	-86418.4	1.0	8488.974	0.009	β^-	2525	5	116 907226.0	1.1
68	49		In		-88943	5	8503.87	0.04	β^-	1455	5	116 904516	5
67	50		Sn		-90397.7	0.5	8509.612	0.004		*		116 902954.0	0.5
66	51		Sb		-88640	8	8487.90	0.07	β^+	1758	8	116 904842	9
65	52		Te		-85096	13	8450.92	0.12	β^+	3544	13	116 908646	14
64	53		I		-80439	26	8404.43	0.22	β^+	4657	28	116 913646	27
63	54		Xe	x	-74185	10	8344.30	0.09	β^+	6253	28	116 920359	11
62	55		Cs	x	-66490	60	8271.9	0.5	β^+	7690	60	116 928620	70
61	56		Ba	εp	-57460	250	8188.0	2.1	β^+	9040	260	116 938320	270
60	57		La	-p	-46270#	200#	8086#	2#	β^+	11190#	320#	116 950330#	220#
76	42	118	Mo	x	-32370#	500#	8067#	4#	β^-	10920#	640#	117 965250#	540#
75	43		Tc	x	-43290#	400#	8153#	3#	β^-	13710#	450#	117 953530#	430#
74	44		Ru	x	-57000#	200#	8263#	2#	β^-	7890#	200#	117 938810#	220#
73	45		Rh	x	-64887	24	8322.85	0.21	β^-	10502	24	117 930341	26
72	46		Pd		-75388.4	2.5	8405.220	0.021	β^-	4165	4	117 919067.3	2.7
71	47		Ag	x	-79553.8	2.5	8433.890	0.021	β^-	7148	20	117 914595.5	2.7
70	48		Cd	-nn	-86702	20	8487.83	0.17	β^-	527	21	117 906922	21
69	49		In		-87228	8	8485.67	0.07	β^-	4425	8	117 906357	8
68	50		Sn		-91652.8	0.5	8516.534	0.004		*		117 901606.6	0.5
67	51		Sb	–	-87996	3	8478.916	0.026	β^+	3656.6	3.0	117 905532	3
66	52		Te	+nn	-87691	18	8469.70	0.16	β^+	305	19	117 905860	20
65	53		I	x	-80971	20	8406.12	0.17	β^+	6720	27	117 913074	21
64	54		Xe	x	-78079	10	8374.98	0.09	β^+	2892	22	117 916179	11
63	55		Cs	IT	-68409	13	8286.41	0.11	β^+	9670	16	117 926560	14
62	56		Ba	x	-62200#	200#	8227#	2#	β^+	6210#	200#	117 933230#	220#
61	57		La	x	-49620#	300#	8114#	3#	β^+	12580#	360#	117 946730#	320#
77	42	119	Mo	x	-26580#	300#	8019#	3#	β^-	13590#	580#	118 971470#	320#
76	43		Tc	x	-40170#	500#	8126#	4#	β^-	11910#	580#	118 956880#	540#
75	44		Ru	x	-52080#	300#	8220#	3#	β^-	10740#	300#	118 944090#	320#
74	45		Rh	x	-62823	9	8303.40	0.08	β^-	8584	12	118 932557	10
73	46		Pd	x	-71407	8	8368.96	0.07	β^-	7238	17	118 923341	9
72	47		Ag		-78646	15	8423.21	0.12	β^-	5330	40	118 915570	16
71	48		Cd		-83980	40	8461.4	0.3	β^-	3720	40	118 909850	40
70	49		In		-87699	7	8486.14	0.06	β^-	2366	7	118 905852	8
69	50		Sn		-90065.0	0.7	8499.449	0.006		*		118 903311.3	0.8
68	51		Sb		-89476	7	8487.92	0.06	β^+	589	7	118 903944	8
67	52		Te	–	-87183	7	8462.08	0.06	β^+	2293.0	2.0	118 906406	8
66	53		I	x	-83778	22	8426.89	0.18	β^+	3405	23	118 910061	23
65	54		Xe		-78794	10	8378.44	0.09	β^+	4983	24	118 915411	11
64	55		Cs	IT	-72305	14	8317.33	0.12	β^+	6489	17	118 922377	15
63	56		Ba	εp	-64590	200	8245.9	1.7	β^+	7710	200	118 930660	210
62	57		La	x	-55020#	300#	8159#	3#	β^+	9570#	360#	118 940930#	320#
61	58		Ce	x	-43820#	500#	8058#	4#	β^+	11200#	580#	118 952960#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
77	43	120	Tc	x	-35000#	500#	8083#	4#	β^-	14720#	640#	119 962430#	540#
76	44		Ru	x	-49720#	400#	8199#	3#	β^-	8900#	450#	119 946620#	430#
75	45		Rh	x	-58620#	200#	8266#	2#	β^-	11660#	200#	119 937070#	220#
74	46		Pd		-70279.6	2.3	8357.082	0.019	β^-	5372	5	119 924551.7	2.5
73	47		Ag	x	-75652	4	8395.33	0.04	β^-	8306	6	119 918785	5
72	48		Cd	x	-83957	4	8458.02	0.03	β^-	1770	40	119 909868	4
71	49		In	+	-85730	40	8466.3	0.3	β^-	5370	40	119 907970	40
70	50		Sn		-91097.7	0.9	8504.488	0.008	β^-	-2681	7	119 902202.6	1.0
69	51		Sb	–	-88417	7	8475.63	0.06	β^-	945	7	119 905080	8
68	52		Te		-89362.2	1.8	8476.986	0.015		*		119 904065.8	1.9
67	53		I	–	-83747	15	8423.67	0.13	β^+	5615	15	119 910094	16
66	54		Xe	x	-82172	12	8404.03	0.10	β^+	1575	19	119 911784	13
65	55		Cs	IT	-73889	10	8328.48	0.08	β^+	8284	15	119 920677	11
64	56		Ba	–	-68890	300	8280.3	2.5	β^+	5000	300	119 926040	320
63	57		La	x	-57570#	300#	8179#	2#	β^+	11320#	420#	119 938200#	320#
62	58		Ce	x	-49730#	500#	8108#	4#	β^+	7840#	580#	119 946610#	540#
78	43	121	Tc	x	-31540#	500#	8054#	4#	β^-	13080#	640#	120 966140#	540#
77	44		Ru	x	-44620#	400#	8156#	3#	β^-	11630#	740#	120 952100#	430#
76	45		Rh	x	-56250	620	8245	5	β^-	9930	620	120 939610	670
75	46		Pd	x	-66182	3	8320.858	0.028	β^-	8220	13	120 928950	4
74	47		Ag	x	-74403	12	8382.33	0.10	β^-	6671	12	120 920125	13
73	48		Cd	x	-81073.8	1.9	8430.997	0.016	β^-	4761	27	120 912963.7	2.1
72	49		In	+p	-85835	27	8463.88	0.23	β^-	3362	27	120 907853	29
71	50		Sn		-89196.6	1.0	8485.196	0.008	β^-	402.5	2.5	120 904243.5	1.1
70	51		Sb		-89599.2	2.5	8482.057	0.021		*		120 903811.4	2.7
69	52		Te		-88543	26	8466.86	0.21	β^+	1056	26	120 904945	28
68	53		I		-86246	5	8441.41	0.04	β^+	2297	26	120 907411	5
67	54		Xe		-82481	10	8403.83	0.08	β^+	3765	11	120 911453	11
66	55		Cs		-77102	14	8352.92	0.12	β^+	5379	14	120 917227	15
65	56		Ba	–	-70740	140	8293.9	1.2	β^+	6360	140	120 924050	150
64	57		La	x	-62190#	300#	8217#	2#	β^+	8560#	330#	120 933240#	320#
63	58		Ce	x	-52690#	400#	8132#	3#	β^+	9500#	500#	120 943440#	430#
62	59		Pr	-p	-41550#	500#	8033#	4#	β^+	11140#	640#	120 955390#	540#
79	43	122	Tc	x	-26310#	300#	8011#	2#	β^-	15480#	580#	121 971760#	320#
78	44		Ru	x	-41780#	500#	8132#	4#	β^-	10100#	580#	121 955150#	540#
77	45		Rh	x	-51880#	300#	8208#	2#	β^-	12740#	300#	121 944310#	320#
76	46		Pd	x	-64616	20	8305.98	0.16	β^-	6490	40	121 930632	21
75	47		Ag	x	-71110	40	8352.8	0.3	β^-	9510	40	121 923660	40
74	48		Cd		-80612.4	2.3	8424.267	0.019	β^-	2960	50	121 913459.1	2.5
73	49		In	+	-83570	50	8442.1	0.4	β^-	6370	50	121 910280	50
72	50		Sn		-89940.0	2.4	8487.897	0.020	β^-	-1606	3	121 903445.5	2.6
71	51		Sb		-88334.2	2.5	8468.322	0.021	β^-	1979.1	2.1	121 905169.3	2.7
70	52		Te		-90313.3	1.4	8478.131	0.011		*		121 903044.7	1.5
69	53		I	–	-86079	5	8437.01	0.04	β^+	4234	5	121 907590	6
68	54		Xe	x	-85355	11	8424.66	0.09	β^+	724	12	121 908368	12
67	55		Cs		-78140	30	8359.15	0.28	β^+	7210	40	121 916110	40
66	56		Ba	x	-74609	28	8323.76	0.23	β^+	3540	40	121 919900	30
65	57		La	x	-64540#	300#	8235#	2#	β^+	10070#	300#	121 930710#	320#
64	58		Ce	x	-57870#	400#	8174#	3#	β^+	6670#	500#	121 937870#	430#
63	59		Pr	x	-44780#	500#	8060#	4#	β^+	13090#	640#	121 951930#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
79	44	123	Ru	x	-36550#	500#	8089#	4#	β^-	12640#	640#	122 960760#	540#
78	45		Rh	x	-49190#	400#	8185#	3#	β^-	11240#	890#	122 947190#	430#
77	46		Pd	x	-60430	790	8270	6	β^-	9140	790	122 935130	850
76	47		Ag	x	-69570	30	8337.97	0.27	β^-	7850	30	122 925320	40
75	48		Cd		-77414.2	2.7	8395.396	0.022	β^-	6015	20	122 916892.5	2.9
74	49		In		-83429	20	8437.94	0.16	β^-	4386	20	122 910435	21
73	50		Sn		-87814.7	2.5	8467.231	0.020	β^-	1408.2	2.4	122 905727.1	2.7
72	51		Sb		-89222.9	1.4	8472.320	0.011		*		122 904215.3	1.5
71	52		Te		-89171.0	1.4	8465.537	0.011	β^+	51.91	0.07	122 904271.0	1.5
70	53		I		-87943	4	8449.190	0.030	β^+	1228	3	122 905590	4
69	54		Xe		-85248	10	8420.92	0.08	β^+	2694	10	122 908482	10
68	55		Cs	x	-81044	12	8380.38	0.10	β^+	4205	15	122 912996	13
67	56		Ba	x	-75655	12	8330.21	0.10	β^+	5389	17	122 918781	13
66	57		La	x	-68650#	200#	8267#	2#	β^+	7000#	200#	122 926300#	210#
65	58		Ce	x	-60290#	300#	8193#	2#	β^+	8370#	360#	122 935280#	320#
64	59		Pr	x	-50230#	400#	8104#	3#	β^+	10060#	500#	122 946080#	430#
80	44	124	Ru	x	-33590#	600#	8065#	5#	β^-	11120#	720#	123 963940#	640#
79	45		Rh	x	-44710#	400#	8148#	3#	β^-	13690#	500#	123 952000#	430#
78	46		Pd	x	-58400#	300#	8252#	2#	β^-	7830#	390#	123 937310#	320#
77	47		Ag	x	-66230	250	8308.9	2.0	β^-	10470	250	123 928900	270
76	48		Cd		-76699.4	2.6	8387.018	0.021	β^-	4170	30	123 917659.8	2.8
75	49		In		-80870	30	8414.32	0.25	β^-	7360	30	123 913180	30
74	50		Sn		-88231.5	1.3	8467.400	0.011	β^-	-612.4	0.4	123 905279.6	1.4
73	51		Sb	-n	-87619.1	1.4	8456.152	0.011	β^-	2905.07	0.13	123 905937.1	1.5
72	52		Te		-90524.1	1.4	8473.270	0.011	β^-	-3159.6	1.9	123 902818.3	1.5
71	53		I	–	-87364.6	2.3	8441.481	0.019	β^-	302.9	1.9	123 906210.3	2.5
70	54		Xe		-87667.4	1.4	8437.614	0.011		*		123 905885.2	1.5
69	55		Cs	x	-81741	9	8383.51	0.07	β^+	5926	9	123 912247	10
68	56		Ba	x	-79090	12	8355.82	0.10	β^+	2651	15	123 915094	13
67	57		La	x	-70260	60	8278.3	0.5	β^+	8830	60	123 924570	60
66	58		Ce	x	-64920#	300#	8229#	2#	β^+	5340#	300#	123 930310#	320#
65	59		Pr	x	-53150#	400#	8128#	3#	β^+	11770#	500#	123 942940#	430#
64	60		Nd	x	-44830#	500#	8054#	4#	β^+	8320#	640#	123 951870#	540#
81	44	125	Ru	x	-28370#	300#	8023#	2#	β^-	13460#	580#	124 969540#	320#
80	45		Rh	x	-41830#	500#	8124#	4#	β^-	12130#	640#	124 955090#	540#
79	46		Pd	x	-53960#	400#	8215#	3#	β^-	10560#	590#	124 942070#	430#
78	47		Ag	x	-64520	430	8293	3	β^-	8830	430	124 930740	470
77	48		Cd	x	-73348.1	2.9	8357.682	0.023	β^-	7064	3	124 921258	3
76	49		In	x	-80412.3	1.8	8407.937	0.014	β^-	5481.3	2.2	124 913673.8	1.9
75	50		Sn	-n	-85893.7	1.3	8445.529	0.011	β^-	2361.4	2.2	124 907789.4	1.4
74	51		Sb	+	-88255.1	2.5	8458.161	0.020	β^-	766.7	2.1	124 905254.3	2.7
73	52		Te		-89021.8	1.4	8458.036	0.011		*		124 904431.2	1.5
72	53		I	–	-88836.0	1.4	8450.291	0.011	β^+	185.77	0.06	124 904630.6	1.5
71	54		Xe		-87199.4	1.4	8430.939	0.011	β^+	1636.7	0.4	124 906387.6	1.5
70	55		Cs		-84090	8	8399.80	0.06	β^+	3110	8	124 909726	8
69	56		Ba		-79669	11	8358.18	0.09	β^+	4421	13	124 914472	12
68	57		La		-73759	26	8304.64	0.21	β^+	5909	28	124 920816	28
67	58		Ce	x	-66660#	200#	8242#	2#	β^+	7100#	200#	124 928440#	210#
66	59		Pr	x	-58070#	300#	8167#	2#	β^+	8590#	360#	124 937660#	320#
65	60		Nd	x	-48070#	400#	8080#	3#	β^+	10000#	500#	124 948400#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
81	45	126	Rh	x	-37200#	500#	8087#	4#	β^-	14590#	640#	125 960060#	540#
80	46		Pd	x	-51790#	400#	8197#	3#	β^-	8930#	450#	125 944400#	430#
79	47		Ag	x	-60720#	200#	8261#	2#	β^-	11540#	200#	125 934810#	220#
78	48		Cd		-72255.7	2.3	8346.739	0.018	β^-	5554	5	125 922430.3	2.5
77	49		In	x	-77809	4	8384.61	0.03	β^-	8206	11	125 916468	5
76	50		Sn	-nn	-86015	11	8443.52	0.08	β^-	378	30	125 907659	11
75	51		Sb	–	-86390	30	8440.31	0.25	β^-	3670	30	125 907250	30
74	52		Te		-90064.2	1.4	8463.240	0.011	β^-	-2154	4	125 903312.1	1.5
73	53		I		-87910	4	8439.938	0.030	β^-	1236	4	125 905624	4
72	54		Xe		-89146.387	0.006	8443.538	*a*		*		125 904297.422	0.006
71	55		Cs		-84351	10	8399.27	0.08	β^+	4796	10	125 909446	11
70	56		Ba	x	-82670	12	8379.72	0.10	β^+	1681	16	125 911250	13
69	57		La	x	-74970	90	8312.4	0.7	β^+	7700	90	125 919510	100
68	58		Ce	x	-70821	28	8273.26	0.22	β^+	4150	90	125 923970	30
67	59		Pr	x	-60320#	200#	8184#	2#	β^+	10500#	200#	125 935240#	210#
66	60		Nd	x	-53380#	300#	8122#	2#	β^+	6940#	360#	125 942690#	320#
65	61		Pm	x	-39750#	500#	8008#	4#	β^+	13630#	580#	125 957330#	540#
82	45	127	Rh	x	-33730#	600#	8060#	5#	β^-	13490#	780#	126 963790#	640#
81	46		Pd	x	-47220#	500#	8160#	4#	β^-	11430#	540#	126 949310#	540#
80	47		Ag	x	-58650#	200#	8244#	2#	β^-	10090#	200#	126 937040#	220#
79	48		Cd	x	-68741	6	8316.90	0.05	β^-	8139	12	126 926203	7
78	49		In		-76880	10	8374.82	0.08	β^-	6590	12	126 917466	11
77	50		Sn		-83470	9	8420.55	0.07	β^-	3229	10	126 910392	10
76	51		Sb		-86698	5	8439.81	0.04	β^-	1582	5	126 906926	5
75	52		Te		-88280.5	1.4	8446.109	0.011	β^-	703	4	126 905227.0	1.5
74	53		I		-88983	4	8445.482	0.029		*		126 904473	4
73	54		Xe		-88321	4	8434.11	0.03	β^+	662.3	2.0	126 905184	4
72	55		Cs		-86240	6	8411.56	0.04	β^+	2081	6	126 907418	6
71	56		Ba		-82818	11	8378.46	0.09	β^+	3422	13	126 911091	12
70	57		La		-77896	26	8333.54	0.20	β^+	4922	28	126 916375	28
69	58		Ce	x	-71979	29	8280.79	0.23	β^+	5920	40	126 922730	30
68	59		Pr	x	-64540#	200#	8216#	2#	β^+	7440#	200#	126 930710#	210#
67	60		Nd	x	-55910#	300#	8142#	2#	β^+	8630#	360#	126 939980#	320#
66	61		Pm	x	-45310#	400#	8052#	3#	β^+	10600#	500#	126 951360#	430#
83	45	128	Rh	x	-27340#	300#	8010#	2#	β^-	17050#	580#	127 970650#	320#
82	46		Pd	x	-44390#	500#	8137#	4#	β^-	10320#	580#	127 952350#	540#
81	47		Ag	x	-54710#	300#	8211#	2#	β^-	12530#	300#	127 941270#	320#
80	48		Cd		-67238	6	8303.24	0.05	β^-	6952	7	127 927817	7
79	49		In	x	-74190.1	1.3	8351.436	0.010	β^-	9171	18	127 920353.6	1.4
78	50		Sn		-83361	18	8416.97	0.14	β^-	1268	13	127 910508	19
77	51		Sb	IT	-84630	19	8420.77	0.15	β^-	4364	19	127 909146	20
76	52		Te		-88993.8	0.7	8448.754	0.006	β^-	-1256	4	127 904461.2	0.8
75	53		I		-87738	4	8432.831	0.028	β^-	2123	4	127 905809	4
74	54		Xe		-89860.534	0.005	8443.301	*a*		*		127 903530.753	0.006
73	55		Cs		-85932	5	8406.50	0.04	β^+	3929	5	127 907748	6
72	56		Ba		-85369.2	1.6	8395.988	0.013	β^+	563	6	127 908352.4	1.7
71	57		La	x	-78630	50	8337.2	0.4	β^+	6740	50	127 915590	60
70	58		Ce	x	-75534	28	8306.93	0.22	β^+	3090	60	127 918910	30
69	59		Pr	x	-66331	30	8228.91	0.23	β^+	9200	40	127 928790	30
68	60		Nd	x	-60530#	200#	8177#	2#	β^+	5800#	200#	127 935020#	220#
67	61		Pm	x	-48220#	300#	8075#	2#	β^+	12310#	360#	127 948230#	320#
66	62		Sm	x	-39150#	500#	7998#	4#	β^+	9070#	580#	127 957970#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
83	46	129	Pd	x	-37880#	600#	8086#	5#	β^-	13990#	720#	128 959330#	640#
82	47		Ag	x	-51870#	400#	8188#	3#	β^-	11250#	400#	128 944320#	430#
81	48		Cd	x	-63122	5	8269.53	0.04	β^-	9713	6	128 932236	6
80	49		In		-72834.9	2.0	8338.759	0.015	β^-	7756	17	128 921808.5	2.1
79	50		Sn		-80591	17	8392.82	0.13	β^-	4039	27	128 913482	19
78	51		Sb	+	-84629	21	8418.06	0.16	β^-	2375	21	128 909147	23
77	52		Te		-87004.9	0.7	8430.410	0.006	β^-	1502	3	128 906596.4	0.8
76	53		I		-88507	3	8435.991	0.024	β^-	189	3	128 904984	3
75	54		Xe		-88696.070	0.005	8431.390	*a*		*		128 904780.857	0.005
74	55		Cs		-87499	5	8416.05	0.04	β^+	1197	5	128 906066	5
73	56		Ba		-85061	11	8391.08	0.08	β^+	2438	11	128 908683	11
72	57		La		-81324	21	8356.04	0.17	β^+	3737	22	128 912696	23
71	58		Ce	x	-76288	28	8310.94	0.22	β^+	5040	40	128 918100	30
70	59		Pr	x	-69774	30	8254.38	0.23	β^+	6510	40	128 925100	30
69	60		Nd	εp	-62380#	200#	8191#	2#	β^+	7400#	200#	128 933040#	220#
68	61		Pm	x	-53180#	300#	8114#	2#	β^+	9200#	360#	128 942910#	320#
67	62		Sm	x	-42330#	500#	8023#	4#	β^+	10850#	580#	128 954560#	540#
84	46	130	Pd	x	-32730#	300#	8046#	2#	β^-	13170#	520#	129 964860#	320#
83	47		Ag	-nn	-45900#	420#	8142#	3#	β^-	15220#	430#	129 950730#	460#
82	48		Cd	x	-61118	22	8252.59	0.17	β^-	8789	22	129 934388	24
81	49		In		-69906.5	1.8	8314.176	0.014	β^-	10225.7	2.6	129 924952.3	1.9
80	50		Sn		-80132.2	1.9	8386.817	0.014	β^-	2153	14	129 913974.5	2.0
79	51		Sb		-82286	14	8397.36	0.11	β^-	5067	14	129 911663	15
78	52		Te		-87352.960	0.011	8430.325	*a*	β^-	-417	3	129 906222.745	0.012
77	53		I	-n	-86936	3	8421.101	0.024	β^-	2944	3	129 906670	3
76	54		Xe		-89880.474	0.009	8437.731	*a*	β^-	-2981	8	129 903509.347	0.010
75	55		Cs		-86900	8	8408.78	0.06	β^-	357	8	129 906709	9
74	56		Ba		-87256.78	0.29	8405.513	0.002		*		129 906326.0	0.3
73	57		La	x	-81627	26	8356.19	0.20	β^+	5629	26	129 912369	28
72	58		Ce	x	-79423	28	8333.22	0.21	β^+	2200	40	129 914740	30
71	59		Pr	x	-71180	60	8263.8	0.5	β^+	8250	70	129 923590	70
70	60		Nd	x	-66596	28	8222.51	0.21	β^+	4580	70	129 928510	30
69	61		Pm	x	-55470#	200#	8131#	2#	β^+	11130#	200#	129 940450#	220#
68	62		Sm	x	-47700#	400#	8065#	3#	β^+	7770#	450#	129 948790#	430#
67	63		Eu	-p	-33510#	540#	7950#	4#	β^+	14190#	670#	129 964020#	580#
85	46	131	Pd	x	-25740#	300#	7993#	2#	β^-	15010#	580#	130 972370#	320#
84	47		Ag	x	-40750#	500#	8102#	4#	β^-	14460#	500#	130 956250#	540#
83	48		Cd		-55212	19	8206.12	0.15	β^-	12813	19	130 940728	21
82	49		In		-68024.4	2.2	8297.954	0.017	β^-	9240	4	130 926972.8	2.4
81	50		Sn		-77265	4	8362.518	0.028	β^-	4717	4	130 917053	4
80	51		Sb		-81981.4	2.1	8392.553	0.016	β^-	3229.6	2.1	130 911989.3	2.2
79	52		Te	-n	-85211.02	0.06	8411.234	0.001	β^-	2231.7	0.6	130 908522.21	0.07
78	53		I	+	-87442.7	0.6	8422.298	0.005	β^-	970.8	0.6	130 906126.4	0.6
77	54		Xe		-88413.575	0.005	8423.737	*a*		*		130 905084.128	0.005
76	55		Cs	+nn	-88055.57	0.18	8415.032	0.001	β^+	358.00	0.18	130 905468.46	0.19
75	56		Ba	-n	-86679.0	0.4	8398.551	0.003	β^+	1376.6	0.5	130 906946.3	0.4
74	57		La	x	-83769	28	8370.37	0.21	β^+	2910	28	130 910070	30
73	58		Ce		-79710	30	8333.40	0.25	β^+	4060	40	130 914430	40
72	59		Pr		-74300	50	8286.1	0.4	β^+	5410	60	130 920230	50
71	60		Nd		-67768	28	8230.30	0.21	β^+	6530	50	130 927248	30
70	61		Pm	x	-59770#	200#	8163#	2#	β^+	8000#	200#	130 935830#	220#
69	62		Sm	x	-50280#	400#	8085#	3#	β^+	9490#	450#	130 946020#	430#
68	63		Eu	-p	-39460#	400#	7996#	3#	β^+	10820#	570#	130 957630#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
85	47	132	Ag	x	-34400#	500#	8053#	4#	β^-	16070#	500#	131 963070#	540#
84	48		Cd	x	-50470	60	8169.1	0.5	β^-	11950	80	131 945820	60
83	49		In	+	-62410	60	8253.7	0.5	β^-	14140	60	131 933000	60
82	50		Sn		-76546.6	2.0	8354.873	0.015	β^-	3089	3	131 917823.9	2.1
81	51		Sb		-79635.3	2.5	8372.345	0.019	β^-	5553	4	131 914508.0	2.6
80	52		Te		-85188	3	8408.486	0.026	β^-	515	3	131 908547	4
79	53		I		-85704	4	8406.46	0.03	β^-	3575	4	131 907994	4
78	54		Xe		-89278.975	0.005	8427.623	*a*	β^-	-2126.3	1.0	131 904155.083	0.005
77	55		Cs		-87152.7	1.0	8405.588	0.008	β^-	1282.2	1.5	131 906437.7	1.1
76	56		Ba		-88434.9	1.1	8409.375	0.008		*		131 905061.2	1.1
75	57		La		-83720	40	8367.76	0.28	β^+	4710	40	131 910120	40
74	58		Ce		-82469	20	8352.32	0.15	β^+	1250	40	131 911466	22
73	59		Pr	x	-75227	29	8291.54	0.22	β^+	7240	40	131 919240	30
72	60		Nd	x	-71426	24	8256.81	0.18	β^+	3800	40	131 923321	26
71	61		Pm	x	-61630#	150#	8177#	1#	β^+	9800#	150#	131 933840#	160#
70	62		Sm	x	-55140#	300#	8122#	2#	β^+	6490#	340#	131 940810#	320#
69	63		Eu	x	-42200#	400#	8018#	3#	β^+	12940#	500#	131 954700#	430#
86	47	133	Ag	x	-29080#	500#	8013#	4#	β^-	15060#	540#	132 968780#	540#
85	48		Cd	x	-44140#	200#	8121#	2#	β^-	13550#	280#	132 952610#	220#
84	49		In	x	-57690#	200#	8217#	2#	β^-	13180#	200#	132 938070#	220#
83	50		Sn		-70873.9	1.9	8310.089	0.014	β^-	8050	4	132 923913.8	2.0
82	51		Sb		-78924	3	8364.730	0.024	β^-	4014	4	132 915272	3
81	52		Te		-82937.1	2.1	8389.025	0.016	β^-	2920	6	132 910963.3	2.2
80	53		I		-85857	6	8405.10	0.04	β^-	1786	6	132 907828	6
79	54		Xe	+	-87643.6	2.4	8412.648	0.018	β^-	427.4	2.4	132 905910.7	2.6
78	55		Cs		-88070.943	0.008	8409.979	*a*		*		132 905451.959	0.009
77	56		Ba		-87553.5	1.0	8400.206	0.007	β^+	517.4	1.0	132 906007.4	1.1
76	57		La	x	-85494	28	8378.84	0.21	β^+	2059	28	132 908220	30
75	58		Ce	x	-82418	16	8349.83	0.12	β^+	3080	30	132 911520	18
74	59		Pr	x	-77938	12	8310.26	0.09	β^+	4481	21	132 916331	13
73	60		Nd	x	-72330	50	8262.2	0.4	β^+	5610	50	132 922350	50
72	61		Pm	x	-65410	50	8204.3	0.4	β^+	6920	70	132 929780	50
71	62		Sm	x	-57230#	300#	8137#	2#	β^+	8180#	300#	132 938560#	320#
70	63		Eu	x	-47240#	300#	8056#	2#	β^+	10000#	420#	132 949290#	320#
69	64		Gd	x	-36060#	500#	7966#	4#	β^+	11180#	580#	132 961290#	540#
86	48	134	Cd	x	-39460#	300#	8086#	2#	β^-	12510#	360#	133 957640#	320#
85	49		In	x	-51970#	200#	8173#	1#	β^-	14460#	200#	133 944210#	220#
84	50		Sn	x	-66434	3	8275.172	0.024	β^-	7585	4	133 928680	3
83	51		Sb	x	-74019	3	8325.940	0.023	β^-	8515	4	133 920537	3
82	52		Te		-82533.8	2.7	8383.644	0.020	β^-	1510	5	133 911396.4	2.9
81	53		I		-84043	5	8389.07	0.04	β^-	4082	5	133 909776	5
80	54		Xe		-88125.834	0.006	8413.699	*a*	β^-	-1234.669	0.016	133 905393.030	0.006
79	55		Cs		-86891.165	0.016	8398.647	*a*	β^-	2058.84	0.25	133 906718.502	0.018
78	56		Ba		-88950.00	0.25	8408.173	0.002		*		133 904508.25	0.27
77	57		La	x	-85219	20	8374.49	0.15	β^+	3731	20	133 908514	21
76	58		Ce	x	-84833	20	8365.77	0.15	β^+	386	29	133 908928	22
75	59		Pr	x	-78528	20	8312.88	0.15	β^+	6305	29	133 915697	22
74	60		Nd	x	-75646	12	8285.54	0.09	β^+	2882	24	133 918790	13
73	61		Pm	x	-66760	40	8213.4	0.3	β^+	8880	40	133 928330	50
72	62		Sm	x	-61380#	200#	8167#	1#	β^+	5390#	200#	133 934110#	210#
71	63		Eu	x	-49800#	300#	8075#	2#	β^+	11580#	360#	133 946540#	320#
70	64		Gd	x	-41530#	400#	8008#	3#	β^+	8270#	500#	133 955420#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
87	48	135	Cd	x	-32820#	400#	8036#	3#	β^-	14290#	500#	134 964770#	430#
86	49		In	x	-47110#	300#	8136#	2#	β^-	13520#	300#	134 949430#	320#
85	50		Sn	x	-60632	3	8230.688	0.023	β^-	9058	4	134 934909	3
84	51		Sb		-69690.3	2.6	8291.989	0.020	β^-	8038	3	134 925184.4	2.8
83	52		Te		-77728.8	1.7	8345.738	0.013	β^-	6050.4	2.7	134 916554.7	1.8
82	53		I		-83779.2	2.1	8384.761	0.015	β^-	2634	4	134 910059.4	2.2
81	54		Xe		-86413	4	8398.478	0.027	β^-	1169	4	134 907231	4
80	55		Cs		-87582.0	0.4	8401.339	0.003	β^-	268.70	0.29	134 905976.9	0.4
79	56		Ba		-87850.65	0.25	8397.534	0.002		*		134 905688.45	0.26
78	57		La		-86643	9	8382.80	0.07	β^+	1207	9	134 906984	10
77	58		Ce		-84616	10	8361.99	0.08	β^+	2027	5	134 909161	11
76	59		Pr	x	-80936	12	8328.93	0.09	β^+	3680	16	134 913112	13
75	60		Nd	x	-76214	19	8288.15	0.14	β^+	4722	22	134 918181	21
74	61		Pm	x	-70060	80	8236.8	0.6	β^+	6150	90	134 924790	90
73	62		Sm	x	-62860	150	8177.6	1.1	β^+	7210	180	134 932520	170
72	63		Eu	x	-54150#	200#	8107#	1#	β^+	8710#	250#	134 941870#	210#
71	64		Gd	x	-44250#	400#	8028#	3#	β^+	9900#	450#	134 952500#	430#
70	65		Tb	-p	-33050#	400#	7939#	3#	β^+	11200#	570#	134 964520#	430#
87	49	136	In	x	-40970#	300#	8091#	2#	β^-	15200#	360#	135 956020#	320#
86	50		Sn	x	-56170#	200#	8197#	1#	β^-	8340#	200#	135 939700#	220#
85	51		Sb		-64507	6	8252.25	0.04	β^-	9918	6	135 930749	6
84	52		Te		-74425.3	2.3	8319.430	0.017	β^-	5120	14	135 920101.2	2.4
83	53		I		-79545	14	8351.32	0.10	β^-	6884	14	135 914605	15
82	54		Xe		-86429.170	0.007	8396.189	*a*	β^-	-90.3	1.9	135 907214.474	0.007
81	55		Cs	+	-86338.9	1.9	8389.772	0.014	β^-	2548.2	1.9	135 907311.4	2.0
80	56		Ba		-88887.08	0.24	8402.757	0.002	β^-	-2850	50	135 904575.80	0.26
79	57		La	x	-86040	50	8376.1	0.4	β^-	470	50	135 907630	60
78	58		Ce		-86508.5	0.3	8373.762	0.002		*		135 907129.3	0.3
77	59		Pr		-81340	11	8330.01	0.08	β^+	5168	11	135 912677	12
76	60		Nd	x	-79199	12	8308.51	0.09	β^+	2141	16	135 914976	13
75	61		Pm	x	-71170	70	8243.7	0.5	β^+	8030	70	135 923600	70
74	62		Sm	x	-66811	12	8205.92	0.09	β^+	4360	70	135 928276	13
73	63		Eu	x	-56240#	200#	8122#	1#	β^+	10570#	200#	135 939620#	210#
72	64		Gd	x	-49090#	300#	8064#	2#	β^+	7150#	360#	135 947300#	320#
71	65		Tb	x	-35900#	500#	7961#	4#	β^+	13190#	580#	135 961460#	540#
88	49	137	In	x	-35830#	400#	8053#	3#	β^-	14320#	500#	136 961540#	430#
87	50		Sn	x	-50150#	300#	8152#	2#	β^-	9910#	300#	136 946160#	320#
86	51		Sb	x	-60060	50	8218.5	0.4	β^-	9240	50	136 935520	60
85	52		Te		-69303.8	2.1	8280.236	0.015	β^-	7053	9	136 925599.4	2.3
84	53		I	p−2n	-76356	8	8326.00	0.06	β^-	6027	8	136 918028	9
83	54		Xe	-n	-82383.41	0.10	8364.287	0.001	β^-	4162.4	0.3	136 911557.77	0.11
82	55		Cs	+	-86545.8	0.3	8388.958	0.002	β^-	1175.63	0.17	136 907089.3	0.3
81	56		Ba		-87721.40	0.25	8391.829	0.002		*		136 905827.21	0.27
80	57		La	+	-87140.9	1.6	8381.881	0.012	β^+	580.5	1.6	136 906450.4	1.8
79	58		Ce		-85918.8	0.4	8367.250	0.003	β^+	1222.1	1.6	136 907762.4	0.4
78	59		Pr		-83202	8	8341.71	0.06	β^+	2717	8	136 910679	9
77	60		Nd		-79584	12	8309.59	0.09	β^+	3618	14	136 914563	13
76	61		Pm	x	-74073	13	8263.65	0.10	β^+	5511	18	136 920480	14
75	62		Sm		-67992	29	8213.55	0.21	β^+	6080	30	136 927010	30
74	63		Eu	x	-60146	4	8150.57	0.03	β^+	7846	29	136 935431	5
73	64		Gd	x	-51210#	300#	8080#	2#	β^+	8930#	300#	136 945020#	320#
72	65		Tb	x	-40970#	400#	7999#	3#	β^+	10250#	500#	136 956020#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
88	50	138	Sn	x	-45510#	400#	8118#	3#	β^-	9140#	500#	137 951140#	430#
87	51		Sb	x	-54650#	300#	8178#	2#	β^-	11050#	300#	137 941330#	320#
86	52		Te		-65696	4	8252.579	0.027	β^-	6284	7	137 929472	4
85	53		I	x	-71980	6	8292.45	0.04	β^-	7992	7	137 922726	6
84	54		Xe		-79972.2	2.8	8344.691	0.020	β^-	2915	10	137 914146	3
83	55		Cs		-82887	9	8360.14	0.07	β^-	5375	9	137 911017	10
82	56		Ba		-88261.81	0.25	8393.422	0.002	β^-	-1748.4	0.3	137 905247.06	0.27
81	57		La		-86513.4	0.4	8375.083	0.003	β^-	1052.5	0.4	137 907124.0	0.4
80	58		Ce		-87565.9	0.5	8377.041	0.004		*		137 905994.2	0.5
79	59		Pr	–	-83129	10	8339.22	0.07	β^+	4437	10	137 910757	11
78	60		Nd		-82017	12	8325.49	0.08	β^+	1112	15	137 911951	12
77	61		Pm		-74914	12	8268.36	0.08	β^+	7103	16	137 919576	12
76	62		Sm	x	-71498	12	8237.93	0.09	β^+	3417	17	137 923244	13
75	63		Eu	x	-61750	28	8161.62	0.20	β^+	9750	30	137 933710	30
74	64		Gd	x	-55660#	200#	8112#	1#	β^+	6090#	200#	137 940250#	220#
73	65		Tb	x	-43600#	300#	8019#	2#	β^+	12060#	360#	137 953190#	320#
72	66		Dy	x	-34930#	500#	7950#	4#	β^+	8670#	590#	137 962500#	540#
89	50	139	Sn	x	-39310#	400#	8073#	3#	β^-	10740#	570#	138 957800#	430#
88	51		Sb	x	-50050#	400#	8144#	3#	β^-	10160#	400#	138 946270#	430#
87	52		Te	x	-60205	4	8211.772	0.025	β^-	8266	5	138 935367	4
86	53		I	x	-68471	4	8265.610	0.029	β^-	7174	5	138 926493	4
85	54		Xe	x	-75644.6	2.1	8311.590	0.015	β^-	5057	4	138 918792.2	2.3
84	55		Cs	+	-80701	3	8342.340	0.023	β^-	4213	3	138 913364	3
83	56		Ba	-n	-84913.92	0.25	8367.019	0.002	β^-	2308.5	0.7	138 908841.16	0.27
82	57		La		-87222.4	0.6	8377.999	0.004		*		138 906362.9	0.7
81	58		Ce		-86957.7	2.1	8370.466	0.015	β^+	264.6	2.0	138 906647.0	2.2
80	59		Pr		-84829	4	8349.521	0.026	β^+	2129.1	3.0	138 908933	4
79	60		Nd		-82017	28	8323.66	0.20	β^+	2812	28	138 911951	30
78	61		Pm		-77501	14	8285.55	0.10	β^+	4516	26	138 916799	15
77	62		Sm	x	-72380	11	8243.08	0.08	β^+	5121	17	138 922297	12
76	63		Eu	x	-65398	13	8187.22	0.09	β^+	6982	17	138 929792	14
75	64		Gd	x	-57630#	200#	8126#	1#	β^+	7770#	200#	138 938130#	210#
74	65		Tb	x	-48130#	300#	8052#	2#	β^+	9500#	360#	138 948330#	320#
73	66		Dy	x	-37700#	500#	7971#	4#	β^+	10430#	580#	138 959530#	540#
90	50	140	Sn	x	-34490#	300#	8038#	2#	β^-	9900#	670#	139 962970#	320#
89	51		Sb	x	-44390#	600#	8103#	4#	β^-	11980#	600#	139 952350#	640#
88	52		Te		-56367	14	8183.36	0.10	β^-	7239	19	139 939487	15
87	53		I	x	-63606	12	8229.47	0.09	β^-	9380	12	139 931716	13
86	54		Xe	x	-72986.5	2.3	8290.888	0.017	β^-	4063	9	139 921645.8	2.5
85	55		Cs		-77050	8	8314.32	0.06	β^-	6218	10	139 917284	9
84	56		Ba		-83268	8	8353.15	0.06	β^-	1044	8	139 910608	8
83	57		La		-84312.1	0.6	8355.020	0.004	β^-	3762.2	1.3	139 909487.3	0.7
82	58		Ce		-88074.2	1.3	8376.304	0.009		*		139 905448.4	1.4
81	59		Pr	–	-84686	6	8346.52	0.04	β^+	3388	6	139 909086	7
80	60		Nd	x	-84257	3	8337.864	0.023	β^+	429	7	139 909546	4
79	61		Pm	–	-78212	24	8289.10	0.17	β^+	6045	24	139 916036	26
78	62		Sm	x	-75456	12	8263.82	0.09	β^+	2756	27	139 918995	13
77	63		Eu	–	-66990	50	8197.7	0.4	β^+	8470	50	139 928090	60
76	64		Gd	x	-61782	28	8154.98	0.20	β^+	5200	60	139 933670	30
75	65		Tb	–	-50480	800	8069	6	β^+	11300	800	139 945810	860
74	66		Dy	x	-42830#	400#	8008#	3#	β^+	7650#	900#	139 954020#	430#
73	67		Ho	-p	-29320#	500#	7906#	4#	β^+	13510#	640#	139 968530#	540#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
90	51	141	Sb	x	-39540#	500#	8069#	4#	β^-	11130#	640#	140 957550#	540#
89	52		Te	x	-50670#	400#	8142#	3#	β^-	9260#	400#	140 945600#	430#
88	53		I	x	-59927	16	8202.26	0.11	β^-	8271	16	140 935666	17
87	54		Xe	x	-68197.3	2.9	8255.365	0.020	β^-	6280	10	140 926787	3
86	55		Cs		-74477	9	8294.36	0.07	β^-	5255	10	140 920045	10
85	56		Ba		-79732	5	8326.08	0.04	β^-	3197	7	140 914404	6
84	57		La		-82930	4	8343.205	0.029	β^-	2501	4	140 910971	4
83	58		Ce		-85431.1	1.3	8355.396	0.009	β^-	583.5	1.2	140 908286.0	1.4
82	59		Pr		-86014.5	1.5	8353.985	0.011		*		140 907659.6	1.6
81	60		Nd	–	-84192	3	8335.507	0.023	β^+	1823.0	2.8	140 909617	3
80	61		Pm	x	-80523	14	8303.94	0.10	β^+	3669	14	140 913555	15
79	62		Sm		-75934	9	8265.85	0.06	β^+	4589	16	140 918482	9
78	63		Eu		-69926	13	8217.69	0.09	β^+	6008	14	140 924932	14
77	64		Gd	x	-63224	20	8164.61	0.14	β^+	6701	23	140 932126	21
76	65		Tb	x	-54540	110	8097.5	0.7	β^+	8680	110	140 941450	110
75	66		Dy	x	-45380#	300#	8027#	2#	β^+	9160#	320#	140 951280#	320#
74	67		Ho	-p	-34360#	400#	7943#	3#	β^+	11020#	500#	140 963110#	430#
91	51	142	Sb	x	-33610#	300#	8027#	2#	β^-	12940#	580#	141 963920#	320#
90	52		Te	x	-46550#	500#	8113#	4#	β^-	8250#	500#	141 950030#	540#
89	53		I	x	-54803	5	8165.25	0.03	β^-	10427	6	141 941167	5
88	54		Xe	x	-65229.6	2.7	8233.170	0.019	β^-	5285	8	141 929973.1	2.9
87	55		Cs		-70515	7	8264.88	0.05	β^-	7328	8	141 924300	8
86	56		Ba		-77842	6	8310.97	0.04	β^-	2182	8	141 916433	6
85	57		La		-80024	6	8320.83	0.04	β^-	4509	6	141 914091	7
84	58		Ce		-84532.9	2.4	8347.070	0.017	β^-	-746.5	2.5	141 909250.2	2.6
83	59		Pr		-83786.4	1.5	8336.303	0.011	β^-	2163.7	1.4	141 910051.6	1.6
82	60		Nd		-85950.1	1.3	8346.031	0.009		*		141 907728.8	1.3
81	61		Pm		-81142	24	8306.66	0.17	β^+	4809	24	141 912891	25
80	62		Sm		-78981.9	1.9	8285.941	0.013	β^+	2160	24	141 915209.4	2.0
79	63		Eu	–	-71310	30	8226.40	0.21	β^+	7673	30	141 923450	30
78	64		Gd	x	-66960	28	8190.26	0.20	β^+	4350	40	141 928120	30
77	65		Tb	–	-56560	700	8112	5	β^+	10400	700	141 939280	750
76	66		Dy	–	-50120#	730#	8061#	5#	β^+	6440#	200#	141 946190#	780#
75	67		Ho	x	-37250#	400#	7965#	3#	β^+	12870#	830#	141 960010#	430#
74	68		Er	x	-27930#	500#	7893#	4#	β^+	9320#	640#	141 970020#	540#
91	52	143	Te	x	-40530#	500#	8070#	3#	β^-	10260#	540#	142 956490#	540#
90	53		I	x	-50790#	200#	8137#	1#	β^-	9410#	200#	142 945480#	220#
89	54		Xe	x	-60203	5	8196.89	0.03	β^-	7473	9	142 935370	5
88	55		Cs		-67676	8	8243.67	0.05	β^-	6262	10	142 927347	8
87	56		Ba		-73937	7	8281.99	0.05	β^-	4234	10	142 920625	7
86	57		La		-78171	7	8306.13	0.05	β^-	3435	8	142 916079	8
85	58		Ce		-81606.4	2.4	8324.676	0.017	β^-	1461.8	1.9	142 912392.0	2.6
84	59		Pr		-83068.2	1.8	8329.428	0.013	β^-	934.1	1.4	142 910822.6	1.9
83	60		Nd		-84002.3	1.3	8330.489	0.009		*		142 909819.8	1.3
82	61		Pm		-82960.7	2.9	8317.734	0.021	β^+	1041.6	2.7	142 910938	3
81	62		Sm		-79517.1	2.7	8288.183	0.019	β^+	3444	4	142 914634.8	3.0
80	63		Eu	x	-74241	11	8245.82	0.08	β^+	5276	11	142 920299	12
79	64		Gd	–	-68230	200	8198.3	1.4	β^+	6010	200	142 926750	220
78	65		Tb	x	-60420	50	8138.2	0.4	β^+	7810	210	142 935140	60
77	66		Dy	x	-52169	13	8075.05	0.09	β^+	8250	50	142 943994	14
76	67		Ho	x	-42050#	300#	7999#	2#	β^+	10120#	300#	142 954860#	320#
75	68		Er	x	-31160#	400#	7917#	3#	β^+	10890#	500#	142 966550#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
92	52	144	Te	x	-36220#	300#	8040#	2#	β^-	9110#	500#	143 961120#	320#
91	53		I	x	-45330#	400#	8098#	3#	β^-	11540#	400#	143 951340#	430#
90	54		Xe	x	-56872	5	8172.88	0.04	β^-	6399	21	143 938945	6
89	55		Cs		-63271	20	8211.89	0.14	β^-	8496	20	143 932075	22
88	56		Ba		-71767	7	8265.45	0.05	β^-	3083	15	143 922955	8
87	57		La	x	-74850	13	8281.43	0.09	β^-	5582	13	143 919646	14
86	58		Ce	+	-80431.9	2.8	8314.761	0.020	β^-	318.6	0.8	143 913653	3
85	59		Pr	+	-80750.6	2.7	8311.541	0.019	β^-	2997.4	2.4	143 913310.7	2.9
84	60		Nd		-83748.0	1.3	8326.924	0.009	β^-	-2331.9	2.6	143 910092.8	1.3
83	61		Pm		-81416.1	2.9	8305.297	0.020	β^-	549.5	2.7	143 912596	3
82	62		Sm		-81965.6	1.5	8303.680	0.010		*		143 912006.3	1.6
81	63		Eu		-75619	11	8254.17	0.07	β^+	6346	11	143 918819	12
80	64		Gd	x	-71760	28	8221.94	0.19	β^+	3860	30	143 922960	30
79	65		Tb	x	-62368	28	8151.29	0.19	β^+	9390	40	143 933050	30
78	66		Dy	x	-56570	7	8105.59	0.05	β^+	5798	29	143 939270	8
77	67		Ho	x	-44610	8	8017.10	0.06	β^+	11961	11	143 952110	9
76	68		Er	x	-36610#	200#	7956#	1#	β^+	8000#	200#	143 960700#	210#
75	69		Tm	-p	-22160#	400#	7850#	3#	β^+	14450#	450#	143 976210#	430#
93	52	145	Te	x	-30010#	300#	7998#	2#	β^-	11120#	580#	144 967780#	320#
92	53		I	x	-41130#	500#	8069#	3#	β^-	10360#	500#	144 955850#	540#
91	54		Xe	x	-51493	11	8135.09	0.08	β^-	8561	14	144 944720	12
90	55		Cs		-60054	9	8188.73	0.06	β^-	7462	12	144 935529	10
89	56		Ba	x	-67516	8	8234.80	0.06	β^-	5319	15	144 927518	9
88	57		La		-72835	12	8266.09	0.08	β^-	4230	40	144 921808	13
87	58		Ce		-77070	30	8289.88	0.23	β^-	2560	30	144 917270	40
86	59		Pr		-79626	7	8302.13	0.05	β^-	1806	7	144 914518	8
85	60		Nd		-81432.0	1.3	8309.188	0.009		*		144 912579.2	1.4
84	61		Pm		-81267.5	2.8	8302.658	0.019	β^+	164.5	2.5	144 912756	3
83	62		Sm		-80651.4	1.5	8293.014	0.010	β^+	616.1	2.5	144 913417.2	1.6
82	63		Eu		-77992	3	8269.274	0.021	β^+	2659.9	2.7	144 916273	3
81	64		Gd		-72927	20	8228.95	0.14	β^+	5065	20	144 921710	21
80	65		Tb		-66400	110	8178.5	0.8	β^+	6530	110	144 928720	120
79	66		Dy	x	-58243	7	8116.89	0.04	β^+	8160	110	144 937474	7
78	67		Ho	x	-49120	7	8048.58	0.05	β^+	9122	10	144 947267	8
77	68		Er	x	-39240#	200#	7975#	1#	β^+	9880#	200#	144 957870#	220#
76	69		Tm	-p	-27580#	200#	7889#	1#	β^+	11660#	280#	144 970390#	210#
93	53	146	I	x	-35540#	300#	8031#	2#	β^-	12420#	300#	145 961850#	320#
92	54		Xe	x	-47955	24	8110.42	0.17	β^-	7355	24	145 948518	26
91	55		Cs	x	-55310.4	2.9	8155.437	0.020	β^-	9556	3	145 940622	3
90	56		Ba	x	-64866.3	1.8	8215.529	0.012	β^-	4354.9	2.4	145 930363.2	1.9
89	57		La		-69221.2	1.7	8239.999	0.011	β^-	6405	15	145 925688.0	1.8
88	58		Ce		-75626	15	8278.51	0.10	β^-	1050	30	145 918812	16
87	59		Pr		-76670	30	8280.33	0.24	β^-	4250	30	145 917690	40
86	60		Nd		-80925.9	1.3	8304.093	0.009	β^-	-1472	4	145 913122.5	1.4
85	61		Pm	+	-79454	4	8288.655	0.029	β^-	1542	3	145 914702	5
84	62		Sm		-80996	3	8293.858	0.021		*		145 913047	3
83	63		Eu		-77118	6	8261.93	0.04	β^+	3879	6	145 917211	6
82	64		Gd		-76086	4	8249.507	0.028	β^+	1032	7	145 918319	4
81	65		Tb		-67760	40	8187.1	0.3	β^+	8320	40	145 927250	50
80	66		Dy		-62555	7	8146.11	0.05	β^+	5210	50	145 932845	7
79	67		Ho		-51238	7	8063.24	0.05	β^+	11317	9	145 944994	7
78	68		Er		-44322	7	8010.51	0.05	β^+	6916	9	145 952418	7
77	69		Tm	-p	-31060#	200#	7914#	1#	β^+	13270#	200#	145 966660#	220#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
94	53	147	I	x	-31200#	300#	8001#	2#	β^-	11200#	360#	146 966510#	320#
93	54		Xe	x	-42400#	200#	8072#	1#	β^-	9520#	200#	146 954480#	220#
92	55		Cs	x	-51920	8	8131.80	0.06	β^-	8344	21	146 944262	9
91	56		Ba	x	-60264	20	8183.24	0.13	β^-	6414	22	146 935304	21
90	57		La	x	-66678	11	8221.55	0.07	β^-	5336	14	146 928418	12
89	58		Ce		-72014	9	8252.53	0.06	β^-	3430	16	146 922690	9
88	59		Pr		-75444	16	8270.54	0.11	β^-	2703	16	146 919007	17
87	60		Nd		-78146.8	1.3	8283.604	0.009	β^-	895.2	0.6	146 916106.0	1.4
86	61		Pm		-79042.0	1.3	8284.371	0.009	β^-	224.06	0.29	146 915144.9	1.4
85	62		Sm		-79266.0	1.3	8280.573	0.009		*		146 914904.4	1.4
84	63		Eu		-77544.6	2.6	8263.541	0.017	β^+	1721.4	2.3	146 916752.4	2.8
83	64		Gd		-75356.9	1.9	8243.337	0.013	β^+	2187.7	2.5	146 919101.0	2.0
82	65		Tb		-70743	8	8206.62	0.06	β^+	4614	8	146 924055	9
81	66		Dy	x	-64196	9	8156.77	0.06	β^+	6547	12	146 931083	10
80	67		Ho		-55757	5	8094.04	0.03	β^+	8439	10	146 940142	5
79	68		Er	x	-46610	40	8026.48	0.26	β^+	9150	40	146 949960	40
78	69		Tm		-35974	7	7948.82	0.05	β^+	10630	40	146 961380	7
94	54	148	Xe	x	-38650#	300#	8047#	2#	β^-	8260#	300#	147 958510#	320#
93	55		Cs	x	-46911	13	8097.55	0.09	β^-	10634	13	147 949639	14
92	56		Ba	x	-57544.9	1.5	8164.112	0.010	β^-	5164	20	147 938223.0	1.6
91	57		La	x	-62709	19	8193.72	0.13	β^-	7690	22	147 932679	21
90	58		Ce		-70398	11	8240.39	0.08	β^-	2137	13	147 924424	12
89	59		Pr		-72535	15	8249.54	0.10	β^-	4873	15	147 922130	16
88	60		Nd		-77408.1	2.1	8277.178	0.014	β^-	-542	6	147 916899.0	2.2
87	61		Pm	+p	-76866	6	8268.23	0.04	β^-	2470	6	147 917481	6
86	62		Sm		-79336.1	1.2	8279.633	0.008		*		147 914829.2	1.3
85	63		Eu		-76297	10	8253.82	0.07	β^+	3039	10	147 918091	11
84	64		Gd		-76269.4	1.5	8248.340	0.010	β^+	28	10	147 918121.4	1.6
83	65		Tb		-70537	12	8204.32	0.08	β^+	5732	13	147 924275	13
82	66		Dy		-67859	9	8180.94	0.06	β^+	2678	10	147 927150	9
81	67		Ho	x	-57990	80	8109.0	0.6	β^+	9870	80	147 937740	90
80	68		Er	x	-51479	10	8059.69	0.07	β^+	6510	80	147 944735	11
79	69		Tm	x	-38765	10	7968.50	0.07	β^+	12714	14	147 958384	11
78	70		Yb	x	-30230#	400#	7906#	3#	β^+	8540#	400#	147 967550#	430#
95	54	149	Xe	x	-33000#	300#	8009#	2#	β^-	10300#	500#	148 964570#	320#
94	55		Cs	x	-43300#	400#	8073#	3#	β^-	9530#	400#	148 953520#	430#
93	56		Ba	x	-52830.6	2.5	8131.850	0.017	β^-	7390	200	148 943284.0	2.7
92	57		La	+	-60220	200	8176.2	1.3	β^-	6450	200	148 935350	210
91	58		Ce	x	-66670	10	8214.23	0.07	β^-	4369	14	148 928427	11
90	59		Pr	x	-71039	10	8238.30	0.07	β^-	3336	10	148 923736	11
89	60		Nd	-n	-74375.5	2.1	8255.444	0.014	β^-	1688.9	2.5	148 920154.6	2.2
88	61		Pm		-76064.4	2.2	8261.528	0.015	β^-	1071.5	1.9	148 918341.5	2.3
87	62		Sm		-77135.9	1.2	8263.468	0.008		*		148 917191.2	1.2
86	63		Eu		-76441	4	8253.556	0.026	β^+	695	4	148 917937	4
85	64		Gd		-75127	3	8239.486	0.022	β^+	1314	4	148 919348	4
84	65		Tb		-71489	4	8209.815	0.024	β^+	3639	4	148 923254	4
83	66		Dy		-67694	9	8179.10	0.06	β^+	3795	9	148 927328	10
82	67		Ho		-61646	12	8133.26	0.08	β^+	6048	13	148 933820	13
81	68		Er	x	-53742	28	8074.96	0.19	β^+	7900	30	148 942310	30
80	69		Tm	x	-43940#	200#	8004#	1#	β^+	9800#	200#	148 952830#	220#
79	70		Yb	x	-33330#	300#	7927#	2#	β^+	10610#	360#	148 964220#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
96	54	150	Xe	x	-28990#	300#	7983#	2#	β^-	9180#	500#	149 968880#	320#
95	55		Cs	x	-38170#	400#	8039#	3#	β^-	11720#	400#	149 959020#	430#
94	56		Ba	x	-49890	6	8111.84	0.04	β^-	6421	6	149 946441	6
93	57		La	x	-56311.1	2.5	8149.434	0.017	β^-	8536	12	149 939547.5	2.7
92	58		Ce		-64847	12	8201.12	0.08	β^-	3454	14	149 930384	13
91	59		Pr		-68301	9	8218.93	0.06	β^-	5379	9	149 926676	10
90	60		Nd		-73680.0	1.1	8249.579	0.008	β^-	-83	20	149 920901.3	1.2
89	61		Pm	+	-73597	20	8243.81	0.13	β^-	3454	20	149 920990	22
88	62		Sm		-77051.3	1.1	8261.624	0.007	β^-	-2259	6	149 917282.0	1.2
87	63		Eu		-74792	6	8241.35	0.04	β^-	972	4	149 919707	7
86	64		Gd		-75764	6	8242.61	0.04		*		149 918664	7
85	65		Tb		-71106	7	8206.34	0.05	β^+	4658	8	149 923665	8
84	66		Dy		-69310	4	8189.150	0.029	β^+	1796	8	149 925593	5
83	67		Ho		-61946	14	8134.84	0.09	β^+	7364	14	149 933498	15
82	68		Er		-57831	17	8102.20	0.11	β^+	4115	14	149 937916	18
81	69		Tm	x	-46490#	200#	8021#	1#	β^+	11340#	200#	149 950090#	210#
80	70		Yb	x	-38830#	300#	7965#	2#	β^+	7660#	360#	149 958310#	320#
79	71		Lu	-p	-24770#	300#	7866#	2#	β^+	14060#	420#	149 973410#	320#
96	55	151	Cs	x	-34280#	500#	8013#	3#	β^-	10660#	640#	150 963200#	540#
95	56		Ba	x	-44940#	400#	8079#	3#	β^-	8370#	590#	150 951760#	430#
94	57		La	x	-53310	440	8129.0	2.9	β^-	7910	440	150 942770	470
93	58		Ce	x	-61225	18	8176.28	0.12	β^-	5555	21	150 934272	19
92	59		Pr		-66780	12	8207.88	0.08	β^-	4164	12	150 928309	13
91	60		Nd		-70943.2	1.1	8230.274	0.008	β^-	2443	4	150 923839.4	1.2
90	61		Pm		-73386	5	8241.27	0.03	β^-	1190	4	150 921217	5
89	62		Sm		-74576.5	1.1	8243.973	0.007	β^-	76.6	0.5	150 919938.9	1.2
88	63		Eu		-74653.1	1.2	8239.300	0.008		*		150 919856.6	1.3
87	64		Gd		-74188.9	3.0	8231.045	0.020	β^+	464.2	2.8	150 920355	3
86	65		Tb		-71624	4	8208.874	0.027	β^+	2565	4	150 923109	4
85	66		Dy	$-\alpha$	-68752	3	8184.679	0.022	β^+	2871	5	150 926191	3
84	67		Ho	$-\alpha$	-63623	8	8145.53	0.05	β^+	5130	9	150 931698	9
83	68		Er	x	-58266	16	8104.87	0.11	β^+	5356	18	150 937449	18
82	69		Tm		-50772	19	8050.06	0.13	β^+	7495	25	150 945494	21
81	70		Yb	εp	-41540	300	7983.8	2.0	β^+	9230	300	150 955400	320
80	71		Lu	-p	-30300#	300#	7904#	2#	β^+	11240#	430#	150 967470#	320#
97	55	152	Cs	x	-29130#	500#	7980#	3#	β^-	12480#	640#	151 968730#	540#
96	56		Ba	x	-41610#	400#	8057#	3#	β^-	7680#	500#	151 955330#	430#
95	57		La	x	-49290#	300#	8102#	2#	β^-	9690#	360#	151 947090#	320#
94	58		Ce	x	-58980#	200#	8161#	1#	β^-	4780#	200#	151 936680#	220#
93	59		Pr	x	-63758	19	8187.10	0.12	β^-	6390	30	151 931553	20
92	60		Nd		-70150	24	8224.01	0.16	β^-	1105	19	151 924691	26
91	61		Pm		-71254	26	8226.13	0.17	β^-	3509	26	151 923505	28
90	62		Sm		-74763.0	1.0	8244.065	0.007	β^-	-1874.5	0.7	151 919738.6	1.1
89	63		Eu		-72888.5	1.2	8226.585	0.008	β^-	1818.8	0.7	151 921751.0	1.3
88	64		Gd		-74707.3	1.0	8233.404	0.007		*		151 919798.4	1.1
87	65		Tb	–	-70720	40	8202.01	0.26	β^+	3990	40	151 924080	40
86	66		Dy	$-\alpha$	-70118	5	8192.92	0.03	β^+	600	40	151 924725	5
85	67		Ho		-63605	13	8144.92	0.08	β^+	6513	13	151 931718	13
84	68		Er		-60500	9	8119.35	0.06	β^+	3104	10	151 935050	9
83	69		Tm		-51720	50	8056.4	0.4	β^+	8780	50	151 944480	60
82	70		Yb		-46270	150	8015.4	1.0	β^+	5450	140	151 950330	160
81	71		Lu	x	-33420#	200#	7926#	1#	β^+	12850#	250#	151 964120#	210#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
97	56	153	Ba	x	-36470#	400#	8023#	3#	β^-	9590#	500#	152 960850#	430#
96	57		La	x	-46060#	300#	8081#	2#	β^-	8850#	360#	152 950550#	320#
95	58		Ce	x	-54910#	200#	8134#	1#	β^-	6660#	200#	152 941050#	220#
94	59		Pr		-61568	12	8172.04	0.08	β^-	5762	12	152 933904	13
93	60		Nd		-67330.4	2.7	8204.583	0.018	β^-	3318	9	152 927717.9	2.9
92	61		Pm		-70648	9	8221.15	0.06	β^-	1912	9	152 924156	10
91	62		Sm	-n	-72560.1	1.0	8228.537	0.007	β^-	807.4	0.7	152 922103.6	1.1
90	63		Eu		-73367.5	1.2	8228.701	0.008		*		152 921236.8	1.3
89	64		Gd		-72882.9	1.0	8220.421	0.007	β^+	484.5	0.7	152 921756.9	1.1
88	65		Tb		-71314	4	8205.050	0.026	β^+	1569	4	152 923442	4
87	66		Dy		-69143	4	8185.751	0.026	β^+	2170.4	1.9	152 925772	4
86	67		Ho	$-\alpha$	-65012	5	8153.64	0.03	β^+	4131	6	152 930207	5
85	68		Er		-60467	9	8118.82	0.06	β^+	4545	10	152 935086	10
84	69		Tm		-53973	12	8071.26	0.08	β^+	6494	13	152 942058	13
83	70		Yb	x	-47160#	200#	8022#	1#	β^+	6810#	200#	152 949370#	220#
82	71		Lu	$+\alpha$	-38380	150	7959.1	1.0	β^+	8780#	250#	152 958800	160
81	72		Hf	x	-27300#	300#	7882#	2#	β^+	11080#	340#	152 970690#	320#
98	56	154	Ba	x	-32920#	500#	8001#	3#	β^-	8610#	580#	153 964660#	540#
97	57		La	x	-41530#	300#	8051#	2#	β^-	10690#	360#	153 955420#	320#
96	58		Ce	x	-52220#	200#	8116#	1#	β^-	5640#	220#	153 943940#	220#
95	59		Pr	+	-57860	100	8147.3	0.6	β^-	7720	100	153 937890	110
94	60		Nd	x	-65579.6	1.0	8192.349	0.007	β^-	2687	25	153 929597.4	1.1
93	61		Pm	−	-68267	25	8204.72	0.16	β^-	4189	25	153 926713	27
92	62		Sm		-72455.6	1.3	8226.838	0.008	β^-	-717.2	1.1	153 922215.8	1.4
91	63		Eu		-71738.4	1.2	8217.101	0.008	β^-	1968.0	0.8	153 922985.7	1.3
90	64		Gd		-73706.4	1.0	8224.800	0.006	β^-	-3550	50	153 920873.0	1.1
89	65		Tb	−	-70160	50	8196.67	0.29	β^-	240	50	153 924680	50
88	66		Dy		-70394	7	8193.13	0.05		*		153 924429	8
87	67		Ho	$-\alpha$	-64639	8	8150.68	0.05	β^+	5755	10	153 930607	9
86	68		Er		-62605	5	8132.39	0.03	β^+	2034	9	153 932791	5
85	69		Tm	$-\alpha$	-54427	14	8074.21	0.09	β^+	8178	15	153 941570	15
84	70		Yb		-49932	17	8039.94	0.11	β^+	4495	14	153 946396	19
83	71		Lu	$+\alpha$	-39670#	200#	7968#	1#	β^+	10270#	200#	153 957420#	220#
82	72		Hf	x	-32730#	300#	7918#	2#	β^+	6940#	360#	153 964860#	320#
98	57	155	La	x	-37930#	400#	8028#	3#	β^-	9850#	500#	154 959280#	430#
97	58		Ce	x	-47780#	300#	8087#	2#	β^-	7640#	300#	154 948710#	320#
96	59		Pr		-55415	17	8131.04	0.11	β^-	6868	19	154 940509	18
95	60		Nd		-62284	9	8170.31	0.06	β^-	4656	10	154 933136	10
94	61		Pm		-66940	5	8195.30	0.03	β^-	3251	5	154 928137	5
93	62		Sm	-n	-70191.2	1.3	8211.226	0.009	β^-	1627.1	1.2	154 924646.6	1.4
92	63		Eu		-71818.3	1.3	8216.676	0.008	β^-	252.0	0.9	154 922899.8	1.3
91	64		Gd		-72070.3	1.0	8213.254	0.006		*		154 922629.4	1.1
90	65		Tb	+	-71250	10	8202.92	0.06	β^+	820	10	154 923510	11
89	66		Dy		-69156	10	8184.36	0.06	β^+	2094.5	1.9	154 925758	10
88	67		Ho		-66040	17	8159.21	0.11	β^+	3116	17	154 929103	19
87	68		Er	$-\alpha$	-62209	6	8129.44	0.04	β^+	3831	18	154 933216	7
86	69		Tm	$-\alpha$	-56626	10	8088.38	0.06	β^+	5583	12	154 939210	11
85	70		Yb	$-\alpha$	-50503	17	8043.82	0.11	β^+	6123	19	154 945783	18
84	71		Lu		-42545	19	7987.44	0.12	β^+	7958	25	154 954326	21
83	72		Hf	x	-34310#	300#	7929#	2#	β^+	8240#	300#	154 963170#	320#
82	73		Ta	-p	-23990#	300#	7858#	2#	β^+	10320#	420#	154 974250#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
99	57	156	La	x	-33050#	400#	7997#	3#	β^-	11770#	500#	155 964520#	430#
98	58		Ce	x	-44820#	300#	8068#	2#	β^-	6630#	300#	155 951880#	320#
97	59		Pr	x	-51449.3	1.0	8105.234	0.007	β^-	8752.8	1.7	155 944766.9	1.1
96	60		Nd	x	-60202.1	1.3	8156.326	0.008	β^-	3964.7	1.8	155 935370.4	1.4
95	61		Pm		-64166.8	1.2	8176.726	0.008	β^-	5194	9	155 931114.1	1.3
94	62		Sm		-69361	9	8205.01	0.05	β^-	722	8	155 925538	9
93	63		Eu		-70083	4	8204.619	0.023	β^-	2452	3	155 924763	4
92	64		Gd		-72535.3	1.0	8215.325	0.006	β^-	-2444	4	155 922130.1	1.1
91	65		Tb		-70091	4	8194.641	0.024	β^-	438	4	155 924754	4
90	66		Dy		-70529.4	1.0	8192.437	0.006		*		155 924283.6	1.1
89	67		Ho	–	-65540	40	8155.43	0.25	β^+	4990	40	155 929640	40
88	68		Er		-64212	25	8141.91	0.16	β^+	1330	50	155 931066	26
87	69		Tm		-56834	14	8089.60	0.09	β^+	7377	27	155 938986	15
86	70		Yb		-53266	9	8061.71	0.06	β^+	3569	13	155 942817	10
85	71		Lu	$-\alpha$	-43700	50	7995.4	0.3	β^+	9570	50	155 953090	60
84	72		Hf		-37820	150	7952.7	1.0	β^+	5880	140	155 959400	160
83	73		Ta	-p	-26000#	300#	7872#	2#	β^+	11820#	340#	155 972090#	320#
100	57	157	La	x	-29070#	300#	7972#	2#	β^-	10860#	500#	156 968790#	320#
99	58		Ce	x	-39930#	400#	8037#	3#	β^-	8500#	400#	156 957130#	430#
98	59		Pr	x	-48435	3	8085.817	0.020	β^-	8059	4	156 948003	3
97	60		Nd		-56494.1	2.1	8132.167	0.014	β^-	5803	7	156 939351.1	2.3
96	61		Pm		-62297	7	8164.15	0.04	β^-	4381	8	156 933121	8
95	62		Sm		-66678	4	8187.064	0.028	β^-	2781	6	156 928419	5
94	63		Eu		-69459	4	8199.798	0.027	β^-	1365	4	156 925433	5
93	64		Gd		-70823.9	1.0	8203.507	0.006		*		156 923967.4	1.0
92	65		Tb		-70763.8	1.0	8198.142	0.006	β^+	60.05	0.30	156 924031.9	1.1
91	66		Dy		-69425	5	8184.63	0.03	β^+	1339	5	156 925470	6
90	67		Ho		-66833	23	8163.14	0.15	β^+	2592	24	156 928252	25
89	68		Er		-63414	27	8136.38	0.17	β^+	3420	30	156 931923	28
88	69		Tm	x	-58709	28	8101.43	0.18	β^+	4700	40	156 936970	30
87	70		Yb		-53420	11	8062.76	0.07	β^+	5289	30	156 942651	12
86	71		Lu		-46440	12	8013.31	0.08	β^+	6980	14	156 950145	13
85	72		Hf	$-\alpha$	-38860#	200#	7960#	1#	β^+	7590#	200#	156 958290#	220#
84	73		Ta	IT	-29600	150	7896.1	1.0	β^+	9260#	250#	156 968230	160
83	74		W	x	-19690#	400#	7828#	3#	β^+	9910#	430#	156 978860#	430#
100	58	158	Ce	x	-36540#	400#	8015#	3#	β^-	7610#	500#	157 960770#	430#
99	59		Pr	x	-44150#	300#	8059#	2#	β^-	9690#	300#	157 952600#	320#
98	60		Nd	x	-53835.1	1.3	8114.953	0.008	β^-	5271.0	1.6	157 942205.6	1.4
97	61		Pm		-59106.1	0.9	8143.362	0.006	β^-	6146	5	157 936546.9	1.0
96	62		Sm		-65252	5	8177.31	0.03	β^-	2019	5	157 929949	5
95	63		Eu		-67270.5	2.0	8185.132	0.013	β^-	3419.5	2.3	157 927782.2	2.2
94	64		Gd		-70690.0	1.0	8201.823	0.006	β^-	-1219.1	1.0	157 924111.2	1.0
93	65		Tb		-69470.9	1.3	8189.156	0.008	β^-	936.3	2.5	157 925419.9	1.4
92	66		Dy		-70407.2	2.3	8190.130	0.015		*		157 924414.8	2.5
91	67		Ho	–	-66187	27	8158.47	0.17	β^+	4220	27	157 928945	29
90	68		Er		-65304	25	8147.93	0.16	β^+	880	40	157 929893	27
89	69		Tm		-58703	25	8101.20	0.16	β^+	6600	30	157 936980	27
88	70		Yb		-56010	8	8079.20	0.05	β^+	2694	26	157 939871	9
87	71		Lu	$-\alpha$	-47212	15	8018.57	0.10	β^+	8797	17	157 949316	16
86	72		Hf		-42102	17	7981.28	0.11	β^+	5110	15	157 954801	19
85	73		Ta	$+\alpha$	-31120#	200#	7907#	1#	β^+	10980#	200#	157 966590#	220#
84	74		W	$-\alpha$	-23690#	300#	7855#	2#	β^+	7430#	360#	157 974570#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
101	58	159	Ce	x	-31340#	500#	7983#	3#	β^-	9430#	640#	158 966360#	540#
100	59		Pr	x	-40770#	400#	8037#	3#	β^-	8950#	400#	158 956230#	430#
99	60		Nd	x	-49724	30	8088.82	0.19	β^-	6830	30	158 946620	30
98	61		Pm		-56554	10	8126.86	0.06	β^-	5653	12	158 939286	11
97	62		Sm		-62208	6	8157.50	0.04	β^-	3836	7	158 933217	6
96	63		Eu		-66043	4	8176.699	0.027	β^-	2518	4	158 929100	5
95	64		Gd		-68561.9	1.0	8187.618	0.006	β^-	970.7	0.7	158 926395.8	1.1
94	65		Tb		-69532.6	1.1	8188.803	0.007		*		158 925353.7	1.2
93	66		Dy		-69167.2	1.4	8181.584	0.009	β^+	365.4	1.2	158 925745.9	1.5
92	67		Ho	–	-67330	3	8165.107	0.019	β^+	1837.6	2.7	158 927719	3
91	68		Er	–	-64561	4	8142.774	0.023	β^+	2768.5	2.0	158 930691	4
90	69		Tm	x	-60570	28	8112.75	0.18	β^+	3991	28	158 934980	30
89	70		Yb	x	-55834	18	8078.04	0.11	β^+	4740	30	158 940060	19
88	71		Lu	x	-49710	40	8034.60	0.24	β^+	6120	40	158 946640	40
87	72		Hf	$-\alpha$	-42853	17	7986.56	0.11	β^+	6860	40	158 953996	18
86	73		Ta	IT	-34439	20	7928.73	0.12	β^+	8413	26	158 963028	21
85	74		W	$-\alpha$	-25430#	300#	7867#	2#	β^+	9010#	300#	158 972700#	320#
84	75		Re	IT	-14810#	310#	7795#	2#	β^+	10630#	430#	158 984110#	330#
101	59	160	Pr	x	-36200#	400#	8009#	2#	β^-	10530#	400#	159 961140#	430#
100	60		Nd	x	-46720	50	8069.97	0.29	β^-	6170	50	159 949840	50
99	61		Pm	x	-52894.6	2.0	8103.640	0.013	β^-	7338.5	2.8	159 943215.3	2.2
98	62		Sm	x	-60233.2	2.0	8144.616	0.012	β^-	3260.3	2.2	159 935337.0	2.1
97	63		Eu	x	-63493.4	0.9	8160.103	0.006	β^-	4448.6	1.4	159 931837.0	1.0
96	64		Gd		-67942.1	1.1	8183.017	0.007	β^-	-105.6	1.0	159 927061.2	1.2
95	65		Tb		-67836.5	1.1	8177.468	0.007	β^-	1836.0	1.1	159 927174.6	1.2
94	66		Dy		-69672.4	0.7	8184.053	0.004		*		159 925203.6	0.8
93	67		Ho	–	-66382	15	8158.60	0.09	β^+	3290	15	159 928736	16
92	68		Er		-66064	24	8151.72	0.15	β^+	318	29	159 929077	26
91	69		Tm		-60300	30	8110.81	0.20	β^+	5760	40	159 935260	40
90	70		Yb	x	-58163	5	8092.56	0.03	β^+	2140	30	159 937559	6
89	71		Lu	x	-50270	60	8038.3	0.4	β^+	7890	60	159 946030	60
88	72		Hf		-45939	10	8006.38	0.06	β^+	4330	60	159 950683	10
87	73		Ta	$-\alpha$	-35820	50	7938.3	0.3	β^+	10120	60	159 961540	60
86	74		W		-29330	150	7892.8	0.9	β^+	6490	140	159 968510	160
85	75		Re	$-\alpha$	-16880#	300#	7810#	2#	β^+	12450#	340#	159 981880#	320#
102	59	161	Pr	x	-32490#	500#	7986#	3#	β^-	9740#	640#	160 965120#	540#
101	60		Nd	x	-42230#	400#	8042#	2#	β^-	7860#	400#	160 954660#	430#
100	61		Pm	x	-50087	9	8086.00	0.06	β^-	6585	11	160 946230	10
99	62		Sm		-56672	7	8122.04	0.04	β^-	5120	12	160 939160	7
98	63		Eu		-61792	10	8148.98	0.06	β^-	3715	11	160 933664	11
97	64		Gd	-n	-65506.1	1.5	8167.193	0.009	β^-	1955.6	1.4	160 929676.3	1.6
96	65		Tb		-67461.8	1.2	8174.481	0.008	β^-	593.7	1.2	160 927576.8	1.3
95	66		Dy		-68055.5	0.7	8173.309	0.004		*		160 926939.4	0.7
94	67		Ho		-67196.3	2.2	8163.113	0.013	β^+	859.2	2.1	160 927861.8	2.3
93	68		Er	+n	-65201	9	8145.86	0.05	β^+	1995	9	160 930004	9
92	69		Tm	x	-61899	28	8120.49	0.17	β^+	3303	29	160 933550	30
91	70		Yb	x	-57834	15	8090.39	0.09	β^+	4060	30	160 937912	16
90	71		Lu	x	-52562	28	8052.78	0.17	β^+	5270	30	160 943570	30
89	72		Hf		-46316	23	8009.12	0.15	β^+	6250	40	160 950278	25
88	73		Ta	$+\alpha$	-38779	24	7957.45	0.15	β^+	7540	30	160 958369	26
87	74		W	$-\alpha$	-30510#	200#	7901#	1#	β^+	8270#	200#	160 967250#	220#
86	75		Re		-20840	150	7836.3	0.9	β^+	9660#	250#	160 977620	160
85	76		Os	$-\alpha$	-10200#	400#	7765#	2#	β^+	10650#	430#	160 989050#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
102	60	162	Nd	x	-39010#	400#	8022#	2#	β^-	7030#	500#	161 958120#	430#
101	61		Pm	x	-46040#	300#	8061#	2#	β^-	8340#	300#	161 950570#	320#
100	62		Sm		-54379	4	8107.574	0.022	β^-	4344	4	161 941622	4
99	63		Eu		-58722.9	1.3	8129.559	0.008	β^-	5558	4	161 936958.3	1.4
98	64		Gd	-nn	-64281	4	8159.037	0.024	β^-	1599	4	161 930992	4
97	65		Tb	x	-65879.5	2.0	8164.077	0.013	β^-	2301.6	2.2	161 929275.4	2.2
96	66		Dy		-68181.2	0.7	8173.456	0.004	β^-	-2141	3	161 926804.5	0.7
95	67		Ho		-66041	3	8155.413	0.019	β^-	294	3	161 929103	3
94	68		Er		-66334.2	0.8	8152.396	0.005		*		161 928787.3	0.8
93	69		Tm	–	-61477	26	8117.59	0.16	β^+	4857	26	161 934001	28
92	70		Yb	x	-59821	15	8102.53	0.09	β^+	1660	30	161 935779	16
91	71		Lu	x	-52830	80	8054.6	0.5	β^+	6990	80	161 943280	80
90	72		Hf		-49168	9	8027.12	0.06	β^+	3660	80	161 947216	10
89	73		Ta	$-\alpha$	-39780	60	7964.3	0.4	β^+	9390	60	161 957290	70
88	74		W		-33999	18	7923.82	0.11	β^+	5780	60	161 963500	19
87	75		Re	$+\alpha$	-22450#	200#	7848#	1#	β^+	11550#	200#	161 975900#	220#
86	76		Os	$-\alpha$	-14500#	300#	7794#	2#	β^+	7950#	360#	161 984430#	320#
103	60	163	Nd	x	-34080#	500#	7992#	3#	β^-	8880#	640#	162 963410#	540#
102	61		Pm	x	-42960#	400#	8042#	2#	β^-	7640#	400#	162 953880#	430#
101	62		Sm	x	-50600	7	8084.17	0.05	β^-	5974	7	162 945679	8
100	63		Eu	x	-56573.8	0.9	8116.017	0.006	β^-	4814.8	1.2	162 939265.5	1.0
99	64		Gd		-61388.6	0.8	8140.756	0.005	β^-	3207	4	162 934096.6	0.9
98	65		Tb	+p	-64596	4	8155.632	0.025	β^-	1785	4	162 930654	4
97	66		Dy		-66380.9	0.7	8161.784	0.004		*		162 928737.2	0.7
96	67		Ho		-66378.0	0.7	8156.967	0.004	β^+	2.831	0.022	162 928740.3	0.7
95	68		Er		-65167	5	8144.740	0.028	β^+	1211	5	162 930040	5
94	69		Tm	–	-62728	6	8124.98	0.03	β^+	2439	3	162 932658	6
93	70		Yb	x	-59294	15	8099.11	0.09	β^+	3435	16	162 936345	16
92	71		Lu	x	-54791	28	8066.68	0.17	β^+	4500	30	162 941180	30
91	72		Hf		-49269	26	8028.01	0.16	β^+	5520	40	162 947107	28
90	73		Ta	$-\alpha$	-42530	40	7981.89	0.23	β^+	6730	50	162 954340	40
89	74		W	$-\alpha$	-34910	60	7930.3	0.4	β^+	7630	70	162 962520	60
88	75		Re	$+\alpha$	-26002	19	7870.87	0.11	β^+	8910	60	162 972085	20
87	76		Os	$-\alpha$	-16340#	300#	7807#	2#	β^+	9670#	300#	162 982460#	320#
86	77		Ir	x	-5310#	400#	7734#	2#	β^+	11030#	500#	162 994300#	430#
103	61	164	Pm	x	-38360#	400#	8014#	2#	β^-	9570#	400#	163 958820#	430#
102	62		Sm	x	-47925	4	8067.780	0.025	β^-	5307	5	163 948550	4
101	63		Eu		-53232.1	2.1	8095.369	0.013	β^-	6461.5	2.3	163 942852.9	2.2
100	64		Gd		-59693.7	1.0	8129.998	0.006	β^-	2411.3	2.1	163 935916.2	1.1
99	65		Tb	x	-62105.0	1.9	8139.930	0.011	β^-	3862.7	2.0	163 933327.6	2.0
98	66		Dy		-65967.6	0.7	8158.713	0.004	β^-	-987.1	1.4	163 929180.8	0.7
97	67		Ho		-64980.5	1.4	8147.923	0.008	β^-	962.1	1.4	163 930240.5	1.5
96	68		Er		-65942.6	0.7	8149.019	0.004		*		163 929207.7	0.8
95	69		Tm		-61909	25	8119.65	0.15	β^+	4034	25	163 933538	27
94	70		Yb	x	-61012	15	8109.41	0.09	β^+	897	29	163 934501	16
93	71		Lu	x	-54642	28	8065.80	0.17	β^+	6370	30	163 941340	30
92	72		Hf		-51818	16	8043.81	0.10	β^+	2820	30	163 944371	17
91	73		Ta	x	-43283	28	7987.00	0.17	β^+	8540	30	163 953530	30
90	74		W		-38236	10	7951.45	0.06	β^+	5047	30	163 958952	10
89	75		Re	$-\alpha$	-27470	50	7881.1	0.3	β^+	10760	60	163 970510	60
88	76		Os		-20420	150	7833.3	0.9	β^+	7050	140	163 978070	160
87	77		Ir	$-\alpha$	-7480#	320#	7750#	2#	β^+	12940#	350#	163 991970#	340#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
104	61	165	Pm	x	-34670#	500#	7992#	3#	β^-	8840#	640#	164 962780#	540#
103	62		Sm	x	-43510#	400#	8041#	2#	β^-	7220#	400#	164 953290#	430#
102	63		Eu		-50729	5	8080.05	0.03	β^-	5797	5	164 945540	6
101	64		Gd		-56525.8	1.3	8110.443	0.008	β^-	4063.1	2.0	164 939317.1	1.4
100	65		Tb		-60588.8	1.5	8130.326	0.009	β^-	3023.4	1.7	164 934955.2	1.7
99	66		Dy	-n	-63612.3	0.7	8143.908	0.004	β^-	1285.7	0.8	164 931709.4	0.7
98	67		Ho		-64898.0	0.8	8146.959	0.005		*		164 930329.1	0.8
97	68		Er		-64521.4	0.9	8139.935	0.006	β^+	376.7	1.0	164 930733.5	1.0
96	69		Tm		-62930.0	1.7	8125.549	0.010	β^+	1591.3	1.5	164 932441.8	1.8
95	70		Yb		-60295	27	8104.84	0.16	β^+	2635	27	164 935270	28
94	71		Lu		-56442	27	8076.75	0.16	β^+	3850	40	164 939407	28
93	72		Hf	x	-51636	28	8042.87	0.17	β^+	4810	40	164 944570	30
92	73		Ta		-45848	14	8003.05	0.08	β^+	5790	30	164 950780	15
91	74		W		-38861	26	7955.97	0.16	β^+	6987	29	164 958281	28
90	75		Re	$+\alpha$	-30659	24	7901.52	0.14	β^+	8200	30	164 967086	25
89	76		Os	$-\alpha$	-21750#	200#	7843#	1#	β^+	8910#	200#	164 976650#	220#
88	77		Ir	IT	-11600#	160#	7776#	1#	β^+	10150#	260#	164 987550#	170#
87	78		Pt	$-\alpha$	-320#	400#	7703#	2#	β^+	11280#	430#	164 999660#	430#
104	62	166	Sm	x	-40450#	400#	8023#	2#	β^-	6300#	410#	165 956580#	430#
103	63		Eu	+	-46750#	100#	8056#	1#	β^-	7620#	100#	165 949810#	110#
102	64		Gd	x	-54370.9	1.6	8097.226	0.010	β^-	3437.9	2.2	165 941630.4	1.7
101	65		Tb		-57808.8	1.5	8113.223	0.009	β^-	4775.7	1.7	165 937939.7	1.6
100	66		Dy	-n	-62584.5	0.8	8137.279	0.005	β^-	485.9	0.9	165 932812.8	0.9
99	67		Ho		-63070.3	0.8	8135.493	0.005	β^-	1853.8	0.8	165 932291.2	0.8
98	68		Er		-64924.1	0.3	8141.948	0.002		*		165 930301.1	0.4
97	69		Tm	–	-61886	12	8118.94	0.07	β^+	3038	12	165 933562	12
96	70		Yb	+nn	-61594	7	8112.46	0.04	β^+	293	14	165 933876	8
95	71		Lu	x	-56021	30	8074.18	0.18	β^+	5570	30	165 939860	30
94	72		Hf	x	-53859	28	8056.44	0.17	β^+	2160	40	165 942180	30
93	73		Ta	x	-46098	28	8004.97	0.17	β^+	7760	40	165 950510	30
92	74		W		-41887	9	7974.90	0.06	β^+	4210	30	165 955032	10
91	75		Re	$-\alpha$	-31840	90	7909.6	0.5	β^+	10050	90	165 965820	90
90	76		Os		-25432	18	7866.34	0.11	β^+	6410	90	165 972698	19
89	77		Ir	-p	-13310#	200#	7789#	1#	β^+	12130#	200#	165 985720#	220#
88	78		Pt	$-\alpha$	-4780#	300#	7733#	2#	β^+	8520#	360#	165 994870#	320#
105	62	167	Sm	x	-35330#	500#	7992#	3#	β^-	8440#	640#	166 962070#	540#
104	63		Eu	x	-43770#	400#	8038#	2#	β^-	7010#	400#	166 953010#	430#
103	64		Gd		-50776	5	8075.54	0.03	β^-	5107	6	166 945490	6
102	65		Tb		-55883.1	1.9	8101.441	0.012	β^-	4028	4	166 940007.0	2.1
101	66		Dy	x	-59911	4	8120.878	0.024	β^-	2368	7	166 935682	4
100	67		Ho	p2n	-62279	5	8130.37	0.03	β^-	1010	5	166 933140	6
99	68		Er		-63289.26	0.29	8131.735	0.002		*		166 932056.2	0.3
98	69		Tm		-62543.1	1.3	8122.583	0.008	β^+	746.1	1.3	166 932857.2	1.4
97	70		Yb		-60590	4	8106.202	0.024	β^+	1953	4	166 934954	4
96	71		Lu	x	-57530	40	8083.17	0.22	β^+	3060	40	166 938240	40
95	72		Hf	x	-53468	28	8054.18	0.17	β^+	4060	50	166 942600	30
94	73		Ta	x	-48351	28	8018.86	0.17	β^+	5120	40	166 948090	30
93	74		W		-42093	19	7976.70	0.11	β^+	6260	30	166 954811	20
92	75		Re	$+\alpha$	-34830#	40#	7929#	0#	β^+	7260#	40#	166 962600#	40#
91	76		Os	$-\alpha$	-26500	80	7874.0	0.5	β^+	8340#	90#	166 971550	90
90	77		Ir		-17072	18	7812.83	0.11	β^+	9430	80	166 981672	20
89	78		Pt	$-\alpha$	-6750#	310#	7746#	2#	β^+	10320#	310#	166 992750#	330#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
106	62	168	Sm	x	-31640#	300#	7971#	2#	β^-	7610#	500#	167 966030#	320#
105	63		Eu	x	-39250#	400#	8012#	2#	β^-	8900#	500#	167 957860#	430#
104	64		Gd	x	-48150#	300#	8060#	2#	β^-	4630#	300#	167 948310#	320#
103	65		Tb	x	-52781	4	8082.798	0.025	β^-	5780	140	167 943337	5
102	66		Dy	+pp	-58560	140	8112.5	0.8	β^-	1500	140	167 937130	150
101	67		Ho	+	-60060	30	8116.81	0.18	β^-	2930	30	167 935520	30
100	68		Er		-62989.23	0.26	8129.590	0.002	β^-	-1676.9	1.7	167 932378.28	0.28
99	69		Tm		-61312.4	1.7	8114.952	0.010	β^-	267.5	1.7	167 934178.5	1.8
98	70		Yb		-61579.87	0.09	8111.887	0.001		*		167 933891.30	0.10
97	71		Lu		-57070	40	8080.40	0.23	β^+	4510	40	167 938730	40
96	72		Hf	x	-55361	28	8065.55	0.17	β^+	1710	50	167 940570	30
95	73		Ta	x	-48394	28	8019.43	0.17	β^+	6970	40	167 948050	30
94	74		W		-44893	13	7993.93	0.08	β^+	3500	30	167 951805	14
93	75		Re	$-\alpha$	-35790	30	7935.12	0.18	β^+	9100	30	167 961570	30
92	76		Os		-29995	10	7895.94	0.06	β^+	5800	30	167 967799	11
91	77		Ir	$-\alpha$	-18670	60	7823.9	0.3	β^+	11330	60	167 979960	60
90	78		Pt	$-\alpha$	-11010	150	7773.6	0.9	β^+	7660	140	167 988180	160
89	79		Au	x	2530#	400#	7688#	2#	β^+	13540#	430#	168 002720#	430#
106	63	169	Eu	x	-35660#	500#	7991#	3#	β^-	8230#	640#	168 961720#	540#
105	64		Gd	x	-43890#	400#	8035#	2#	β^-	6590#	500#	168 952880#	430#
104	65		Tb	x	-50480#	300#	8069#	2#	β^-	5120#	430#	168 945810#	320#
103	66		Dy	+	-55600	300	8094.8	1.8	β^-	3200	300	168 940320	320
102	67		Ho	+p	-58796	20	8109.06	0.12	β^-	2125	20	168 936880	22
101	68		Er	-n	-60921.2	0.3	8117.008	0.002	β^-	353.5	0.8	168 934598.4	0.3
100	69		Tm		-61274.7	0.7	8114.470	0.004		*		168 934219.0	0.8
99	70		Yb	-n	-60375.53	0.18	8104.521	0.001	β^+	899.1	0.8	168 935184.21	0.19
98	71		Lu	–	-58083	3	8086.323	0.018	β^+	2293	3	168 937646	3
97	72		Hf	x	-54717	28	8061.78	0.17	β^+	3366	28	168 941260	30
96	73		Ta	x	-50290	28	8030.96	0.17	β^+	4430	40	168 946010	30
95	74		W		-44918	15	7994.54	0.09	β^+	5370	30	168 951779	17
94	75		Re	$+\alpha$	-38409	11	7951.40	0.07	β^+	6509	19	168 958766	12
93	76		Os	$-\alpha$	-30723	26	7901.29	0.15	β^+	7686	28	168 967018	28
92	77		Ir	$+\alpha$	-22093	23	7845.59	0.14	β^+	8630	30	168 976282	25
91	78		Pt	$-\alpha$	-12460#	200#	7784#	1#	β^+	9630#	200#	168 986620#	220#
90	79		Au	x	-1790#	300#	7716#	2#	β^+	10680#	360#	168 998080#	320#
107	63	170	Eu	x	-30860#	500#	7963#	3#	β^-	9990#	710#	169 966870#	540#
106	64		Gd	x	-40850#	500#	8017#	3#	β^-	5860#	580#	169 956150#	540#
105	65		Tb	x	-46710#	300#	8047#	2#	β^-	7000#	360#	169 949860#	320#
104	66		Dy	x	-53710#	200#	8084#	1#	β^-	2530#	210#	169 942340#	220#
103	67		Ho	+	-56240	50	8093.79	0.29	β^-	3870	50	169 939630	50
102	68		Er		-60107.5	1.4	8111.953	0.008	β^-	-312.2	1.8	169 935471.9	1.5
101	69		Tm		-59795.3	0.7	8105.514	0.004	β^-	968.6	0.7	169 935807.1	0.8
100	70		Yb		-60763.929	0.010	8106.610	*a*		*		169 934767.243	0.011
99	71		Lu	–	-57306	17	8081.67	0.10	β^+	3458	17	169 938479	18
98	72		Hf	x	-56254	28	8070.88	0.16	β^+	1050	30	169 939610	30
97	73		Ta	x	-50138	28	8030.30	0.16	β^+	6120	40	169 946180	30
96	74		W		-47291	13	8008.95	0.08	β^+	2850	30	169 949231	14
95	75		Re		-38904	11	7955.01	0.07	β^+	8387	17	169 958235	12
94	76		Os		-33926	10	7921.13	0.06	β^+	4978	15	169 963579	10
93	77		Ir	$-\alpha$	-23180#	100#	7853#	1#	β^+	10740#	100#	169 975110#	110#
92	78		Pt		-16299	18	7808.24	0.11	β^+	6880#	100#	169 982502	20
91	79		Au	-p	-3700#	200#	7730#	1#	β^+	12600#	200#	169 996020#	220#
90	80		Hg	$-\alpha$	5420#	300#	7671#	2#	β^+	9120#	360#	170 005810#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
107	64	171	Gd	x	-36210#	500#	7990#	3#	β^-	7560#	640#	170 961130#	540#
106	65		Tb	x	-43770#	400#	8030#	2#	β^-	6240#	450#	170 953010#	430#
105	66		Dy	x	-50010#	200#	8062#	1#	β^-	4510#	630#	170 946310#	220#
104	67		Ho	+	-54520	600	8084	4	β^-	3200	600	170 941470	640
103	68		Er		-57717.8	1.4	8097.740	0.008	β^-	1492.4	1.1	170 938037.4	1.5
102	69		Tm		-59210.3	1.0	8101.893	0.006	β^-	96.5	1.0	170 936435.2	1.0
101	70		Yb		-59306.818	0.013	8097.883	*a*		*		170 936331.515	0.014
100	71		Lu		-57828.5	1.9	8084.662	0.011	β^+	1478.4	1.9	170 937918.6	2.0
99	72		Hf	x	-55431	29	8066.07	0.17	β^+	2397	29	170 940490	30
98	73		Ta	x	-51720	28	8039.79	0.16	β^+	3710	40	170 944480	30
97	74		W	x	-47086	28	8008.12	0.16	β^+	4630	40	170 949450	30
96	75		Re	x	-41250	28	7969.41	0.16	β^+	5840	40	170 955720	30
95	76		Os		-34297	18	7924.18	0.11	β^+	6950	30	170 963180	20
94	77		Ir	$-\alpha$	-26410	40	7873.49	0.22	β^+	7890	40	170 971650	40
93	78		Pt	$-\alpha$	-17470	80	7816.6	0.5	β^+	8950	90	170 981250	90
92	79		Au	-p	-7562	21	7754.11	0.12	β^+	9900	80	170 991882	22
91	80		Hg	$-\alpha$	3340#	310#	7686#	2#	β^+	10900#	310#	171 003590#	330#
108	64	172	Gd	x	-32970#	300#	7972#	2#	β^-	6720#	580#	171 964610#	320#
107	65		Tb	x	-39690#	500#	8006#	3#	β^-	8070#	580#	171 957390#	540#
106	66		Dy	x	-47760#	300#	8049#	2#	β^-	3720#	360#	171 948730#	320#
105	67		Ho	x	-51480#	200#	8066#	1#	β^-	5000#	200#	171 944730#	210#
104	68		Er		-56483	4	8090.405	0.023	β^-	891	5	171 939363	4
103	69		Tm		-57374	5	8091.04	0.03	β^-	1882	5	171 938407	6
102	70		Yb		-59255.456	0.014	8097.430	*a*		*		171 936386.654	0.015
101	71		Lu		-56736.1	2.3	8078.233	0.014	β^+	2519.4	2.3	171 939091.3	2.5
100	72		Hf	x	-56402	24	8071.74	0.14	β^+	334	25	171 939450	26
99	73		Ta	x	-51330	28	8037.71	0.16	β^+	5070	40	171 944900	30
98	74		W	x	-49097	28	8020.18	0.16	β^+	2230	40	171 947290	30
97	75		Re		-41570	40	7971.85	0.21	β^+	7530	50	171 955380	40
96	76		Os		-37244	13	7942.16	0.07	β^+	4320	40	171 960017	14
95	77		Ir	$-\alpha$	-27380	30	7880.26	0.19	β^+	9860	30	171 970610	30
94	78		Pt		-21107	10	7839.25	0.06	β^+	6270	30	171 977341	11
93	79		Au	$-\alpha$	-9320	60	7766.2	0.3	β^+	11790	60	171 990000	60
92	80		Hg	$-\alpha$	-1060	150	7713.6	0.9	β^+	8260	140	171 998860	160
108	65	173	Tb	x	-36510#	500#	7988#	3#	β^-	7230#	640#	172 960810#	540#
107	66		Dy	x	-43740#	400#	8026#	2#	β^-	5610#	500#	172 953040#	430#
106	67		Ho	x	-49350#	300#	8054#	2#	β^-	4300#	360#	172 947020#	320#
105	68		Er	x	-53650#	200#	8074#	1#	β^-	2600#	200#	172 942400#	210#
104	69		Tm	p2n	-56256	4	8084.463	0.025	β^-	1295	4	172 939607	5
103	70		Yb		-57551.234	0.011	8087.428	*a*		*		172 938216.212	0.012
102	71		Lu		-56881.0	1.6	8079.031	0.009	β^+	670.2	1.6	172 938935.7	1.7
101	72		Hf	x	-55412	28	8066.02	0.16	β^+	1469	28	172 940510	30
100	73		Ta	x	-52397	28	8044.06	0.16	β^+	3020	40	172 943750	30
99	74		W	x	-48727	28	8018.33	0.16	β^+	3670	40	172 947690	30
98	75		Re	x	-43554	28	7983.91	0.16	β^+	5170	40	172 953240	30
97	76		Os		-37438	15	7944.03	0.09	β^+	6120	30	172 959808	16
96	77		Ir		-30268	11	7898.07	0.06	β^+	7170	18	172 967505	11
95	78		Pt	$-\alpha$	-21940	60	7845.4	0.4	β^+	8330	60	172 976450	70
94	79		Au	$+\alpha$	-12832	23	7788.23	0.13	β^+	9100	70	172 986224	24
93	80		Hg	$-\alpha$	-2660#	200#	7725#	1#	β^+	10170#	200#	172 997140#	220#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
109	65	174	Tb	x	-31970#	500#	7963#	3#	β^-	9160#	710#	173 965680#	540#
108	66		Dy	x	-41130#	500#	8011#	3#	β^-	4740#	580#	173 955850#	540#
107	67		Ho	x	-45870#	300#	8034#	2#	β^-	6080#	420#	173 950760#	320#
106	68		Er	x	-51950#	300#	8064#	2#	β^-	1920#	300#	173 944230#	320#
105	69		Tm	+	-53860	40	8070.64	0.26	β^-	3080	40	173 942170	50
104	70		Yb		-56944.521	0.011	8083.848	*a*	β^-	-1374.2	1.6	173 938867.546	0.012
103	71		Lu		-55570.3	1.6	8071.454	0.009	β^-	274.3	2.2	173 940342.8	1.7
102	72		Hf		-55844.6	2.3	8068.534	0.013		*		173 940048.4	2.4
101	73		Ta	x	-51741	28	8040.45	0.16	β^+	4104	28	173 944450	30
100	74		W	x	-50227	28	8027.26	0.16	β^+	1510	40	173 946080	30
99	75		Re	x	-43673	28	7985.09	0.16	β^+	6550	40	173 953120	30
98	76		Os		-39995	10	7959.46	0.06	β^+	3678	30	173 957063	11
97	77		Ir	$+\alpha$	-30786	11	7902.04	0.06	β^+	9209	15	173 966950	12
96	78		Pt	$-\alpha$	-25318	10	7866.11	0.06	β^+	5468	15	173 972820	11
95	79		Au	$-\alpha$	-14060#	100#	7797#	1#	β^+	11260#	100#	173 984910#	110#
94	80		Hg	$-\alpha$	-6641	19	7749.79	0.11	β^+	7420#	100#	173 992871	21
109	66	175	Dy	x	-36730#	500#	7986#	3#	β^-	6570#	640#	174 960570#	540#
108	67		Ho	x	-43300#	400#	8019#	2#	β^-	5350#	570#	174 953520#	430#
107	68		Er	x	-48650#	400#	8045#	2#	β^-	3660#	400#	174 947770#	430#
106	69		Tm	+	-52310	50	8061.77	0.29	β^-	2390	50	174 943840	50
105	70		Yb		-54695.56	0.07	8070.925	0.001	β^-	470.1	1.2	174 941281.91	0.08
104	71		Lu		-55165.7	1.2	8069.141	0.007		*		174 940777.2	1.3
103	72		Hf		-54481.8	2.3	8060.763	0.013	β^+	683.9	2.0	174 941511.4	2.5
102	73		Ta	x	-52409	28	8044.45	0.16	β^+	2073	28	174 943740	30
101	74		W	x	-49633	28	8024.11	0.16	β^+	2780	40	174 946720	30
100	75		Re	x	-45288	28	7994.82	0.16	β^+	4340	40	174 951380	30
99	76		Os		-40105	12	7960.73	0.07	β^+	5180	30	174 956945	13
98	77		Ir		-33395	12	7917.91	0.07	β^+	6711	17	174 964150	13
97	78		Pt		-25709	19	7869.52	0.11	β^+	7686	22	174 972401	20
96	79		Au	$-\alpha$	-17400	40	7817.59	0.22	β^+	8300	40	174 981320	40
95	80		Hg	$-\alpha$	-7970	80	7759.2	0.5	β^+	9430	90	174 991440	90
110	66	176	Dy	x	-33610#	500#	7969#	3#	β^-	5780#	710#	175 963920#	540#
109	67		Ho	x	-39390#	500#	7997#	3#	β^-	7240#	640#	175 957710#	540#
108	68		Er	x	-46630#	400#	8034#	2#	β^-	2740#	410#	175 949940#	430#
107	69		Tm	+	-49370	100	8045.1	0.6	β^-	4120	100	175 947000	110
106	70		Yb		-53491.322	0.014	8064.085	*a*	β^-	-109.0	1.2	175 942574.706	0.016
105	71		Lu		-53382.3	1.2	8059.021	0.007	β^-	1194.1	0.9	175 942691.7	1.3
104	72		Hf		-54576.4	1.5	8061.360	0.008		*		175 941409.8	1.6
103	73		Ta	x	-51370	30	8038.67	0.17	β^+	3210	30	175 944860	30
102	74		W	x	-50642	28	8030.11	0.16	β^+	720	40	175 945630	30
101	75		Re	x	-45063	28	7993.97	0.16	β^+	5580	40	175 951620	30
100	76		Os		-42131	11	7972.87	0.06	β^+	2930	30	175 954770	12
99	77		Ir		-33882	8	7921.55	0.05	β^+	8249	14	175 963626	9
98	78		Pt		-28934	13	7888.99	0.07	β^+	4948	15	175 968938	14
97	79		Au	$-\alpha$	-18520	30	7825.38	0.19	β^+	10410	40	175 980120	40
96	80		Hg		-11785	11	7782.66	0.06	β^+	6740	30	175 987349	12
95	81		Tl	-p	580	80	7707.9	0.5	β^+	12370	80	176 000630	90

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
110	67	177	Ho	x	-36280#	500#	7980#	3#	β^-	6580#	710#	176 961050#	540#
109	68		Er	x	-42860#	500#	8013#	3#	β^-	4710#	540#	176 953990#	540#
108	69		Tm	x	-47570#	200#	8035#	1#	β^-	3420#	200#	176 948930#	220#
107	70		Yb	-n	-50986.40	0.22	8049.974	0.001	β^-	1397.5	1.2	176 945263.85	0.24
106	71		Lu		-52383.9	1.2	8053.450	0.007	β^-	496.8	0.8	176 943763.6	1.3
105	72		Hf		-52880.7	1.4	8051.836	0.008		*		176 943230.2	1.5
104	73		Ta	–	-51715	3	8040.829	0.019	β^+	1166	3	176 944482	4
103	74		W	x	-49702	28	8025.04	0.16	β^+	2013	28	176 946640	30
102	75		Re	x	-46269	28	8001.22	0.16	β^+	3430	40	176 950330	30
101	76		Os	$+\alpha$	-41956	15	7972.44	0.08	β^+	4310	30	176 954958	16
100	77		Ir	x	-36047	20	7934.63	0.11	β^+	5909	25	176 961302	21
99	78		Pt		-29370	15	7892.49	0.08	β^+	6677	25	176 968470	16
98	79		Au		-21546	10	7843.86	0.06	β^+	7825	18	176 976870	11
97	80		Hg	$-\alpha$	-12780	80	7789.9	0.5	β^+	8770	90	176 986280	90
96	81		Tl	IT	-3340	22	7732.17	0.12	β^+	9440	90	176 996414	23
111	67	178	Ho	x	-32130#	500#	7957#	3#	β^-	8130#	780#	177 965510#	540#
110	68		Er	x	-40260#	600#	7999#	3#	β^-	3980#	670#	177 956780#	640#
109	69		Tm	x	-44240#	300#	8017#	2#	β^-	5440#	300#	177 952510#	320#
108	70		Yb		-49677	7	8042.74	0.04	β^-	661	7	177 946669	7
107	71		Lu		-50337.9	2.3	8042.055	0.013	β^-	2097.5	2.1	177 945960.1	2.4
106	72		Hf		-52435.4	1.4	8049.444	0.008		*		177 943708.3	1.5
105	73		Ta	IT	-50600#	50#	8035#	0#	β^+	1840#	50#	177 945680#	60#
104	74		W	–	-50407	15	8029.26	0.09	β^+	190#	50#	177 945886	16
103	75		Re	x	-45653	28	7998.16	0.16	β^+	4750	30	177 950990	30
102	76		Os		-43544	14	7981.91	0.08	β^+	2110	30	177 953253	15
101	77		Ir		-36254	19	7936.56	0.11	β^+	7290	23	177 961079	20
100	78		Pt		-31997	10	7908.25	0.06	β^+	4257	21	177 965649	11
99	79		Au	x	-22303	10	7849.39	0.06	β^+	9694	14	177 976057	11
98	80		Hg	$-\alpha$	-16315	11	7811.36	0.06	β^+	5988	15	177 982485	12
97	81		Tl	$-\alpha$	-4610#	100#	7741#	1#	β^+	11700#	100#	177 995050#	110#
96	82		Pb	$-\alpha$	3573	23	7690.84	0.13	β^+	8190#	100#	178 003836	25
111	68	179	Er	x	-36080#	500#	7976#	3#	β^-	5820#	640#	178 961270#	540#
110	69		Tm	x	-41900#	400#	8004#	2#	β^-	4740#	450#	178 955020#	430#
109	70		Yb	x	-46640#	200#	8026#	1#	β^-	2420#	200#	178 949930#	220#
108	71		Lu		-49059	5	8035.074	0.029	β^-	1404	5	178 947333	6
107	72		Hf		-50463.0	1.4	8038.547	0.008		*		178 945825.7	1.5
106	73		Ta		-50357.5	1.5	8033.587	0.008	β^+	105.6	0.4	178 945939.1	1.6
105	74		W		-49295	15	8023.28	0.08	β^+	1062	15	178 947079	16
104	75		Re		-46584	25	8003.77	0.14	β^+	2711	27	178 949990	26
103	76		Os		-43020	16	7979.48	0.09	β^+	3564	29	178 953816	17
102	77		Ir		-38082	10	7947.52	0.05	β^+	4938	18	178 959118	10
101	78		Pt		-32268	8	7910.68	0.04	β^+	5814	13	178 965359	9
100	79		Au		-24989	12	7865.64	0.07	β^+	7280	14	178 973174	13
99	80		Hg		-16933	28	7816.26	0.16	β^+	8060	30	178 981820	30
98	81		Tl	$-\alpha$	-8270	40	7763.49	0.22	β^+	8660	50	178 991120	40
97	82		Pb	$-\alpha$	2050	80	7701.5	0.5	β^+	10320	90	179 002200	90

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
112	68	180	Er	x	-33180#	500#	7960#	3#	β^-	4990#	640#	179 964380#	540#
111	69		Tm	x	-38170#	400#	7983#	2#	β^-	6550#	500#	179 959020#	430#
110	70		Yb	x	-44720#	300#	8016#	2#	β^-	1960#	310#	179 951990#	320#
109	71		Lu	+	-46680	70	8022.0	0.4	β^-	3100	70	179 949890	80
108	72		Hf		-49779.5	1.4	8034.932	0.008	β^-	-845.8	2.3	179 946559.5	1.5
107	73		Ta	+n	-48933.6	2.1	8025.886	0.011	β^-	702.6	2.4	179 947467.6	2.2
106	74		W		-49636.2	1.4	8025.443	0.008		*		179 946713.3	1.5
105	75		Re	x	-45837	21	7999.99	0.12	β^+	3799	21	179 950792	23
104	76		Os		-44356	16	7987.42	0.09	β^+	1481	27	179 952382	17
103	77		Ir	x	-37978	22	7947.63	0.12	β^+	6379	27	179 959229	23
102	78		Pt		-34430	10	7923.58	0.06	β^+	3548	24	179 963038	11
101	79		Au		-25626	5	7870.319	0.026	β^+	8804	11	179 972490	5
100	80		Hg		-20251	13	7836.11	0.07	β^+	5375	14	179 978260	14
99	81		Tl	$-\alpha$	-9390	70	7771.4	0.4	β^+	10860	70	179 989920	80
98	82		Pb	$-\alpha$	-1941	12	7725.70	0.07	β^+	7450	70	179 997916	13
112	69	181	Tm	x	-35440#	500#	7969#	3#	β^-	5650#	580#	180 961950#	540#
111	70		Yb	x	-41090#	300#	7996#	2#	β^-	3710#	320#	180 955890#	320#
110	71		Lu	x	-44800	130	8011.9	0.7	β^-	2610	130	180 951910	140
109	72		Hf	-n	-47403.0	1.4	8022.003	0.008	β^-	1036.1	1.9	180 949110.8	1.5
108	73		Ta		-48439.1	1.6	8023.405	0.009		*		180 947998.5	1.7
107	74		W	-n	-48233.9	1.4	8017.949	0.008	β^+	205.1	1.9	180 948218.7	1.6
106	75		Re	4n	-46517	13	8004.14	0.07	β^+	1717	13	180 950062	13
105	76		Os		-43550	25	7983.43	0.14	β^+	2967	28	180 953247	27
104	77		Ir	$+\alpha$	-39463	5	7956.524	0.029	β^+	4087	26	180 957635	6
103	78		Pt		-34381	14	7924.13	0.08	β^+	5082	15	180 963090	15
102	79		Au	$-\alpha$	-27871	20	7883.84	0.11	β^+	6510	24	180 970079	21
101	80		Hg		-20661	15	7839.68	0.08	β^+	7210	25	180 977819	17
100	81		Tl		-12799	9	7791.92	0.05	β^+	7862	18	180 986260	10
99	82		Pb	$-\alpha$	-3110	90	7734.1	0.5	β^+	9690	90	180 996660	90
113	69	182	Tm	x	-31490#	500#	7948#	3#	β^-	7410#	640#	181 966190#	540#
112	70		Yb	x	-38900#	400#	7984#	2#	β^-	2870#	450#	181 958240#	430#
111	71		Lu	x	-41770#	200#	7996#	1#	β^-	4280#	200#	181 955160#	220#
110	72		Hf	-nn	-46050	6	8014.84	0.03	β^-	381	6	181 950564	7
109	73		Ta		-46430.7	1.6	8012.633	0.009	β^-	1815.5	1.5	181 950154.6	1.7
108	74		W		-48246.1	0.7	8018.310	0.004		*		181 948205.6	0.8
107	75		Re	IT	-45450	100	7998.6	0.6	β^+	2800	100	181 951210	110
106	76		Os		-44609	22	7989.73	0.12	β^+	840	100	181 952110	23
105	77		Ir		-39052	21	7954.89	0.12	β^+	5560	30	181 958076	23
104	78		Pt		-36168	13	7934.75	0.07	β^+	2883	25	181 961172	14
103	79		Au		-28304	19	7887.24	0.10	β^+	7864	23	181 969614	20
102	80		Hg		-23577	10	7856.97	0.05	β^+	4727	21	181 974689	11
101	81		Tl	$-\alpha$	-13327	12	7796.36	0.07	β^+	10250	15	181 985693	13
100	82		Pb	$-\alpha$	-6825	12	7756.33	0.07	β^+	6503	17	181 992674	13
113	70	183	Yb	x	-35000#	400#	7963#	2#	β^-	4720#	410#	182 962430#	430#
112	71		Lu	x	-39720	80	7984.8	0.4	β^-	3570	90	182 957360	90
111	72		Hf	+	-43280	30	8000.03	0.16	β^-	2010	30	182 953530	30
110	73		Ta	-n	-45293.5	1.6	8006.740	0.009	β^-	1072.1	1.5	182 951375.4	1.7
109	74		W		-46365.7	0.7	8008.323	0.004		*		182 950224.4	0.8
108	75		Re	−	-45810	8	8001.01	0.04	β^+	556	8	182 950821	9
107	76		Os		-43660	50	7985.01	0.27	β^+	2150	50	182 953130	50
106	77		Ir		-40202	25	7961.82	0.13	β^+	3460	50	182 956841	26
105	78		Pt		-35773	14	7933.34	0.08	β^+	4429	28	182 961596	15
104	79		Au		-30191	9	7898.56	0.05	β^+	5582	17	182 967588	10
103	80		Hg		-23805	7	7859.39	0.04	β^+	6387	12	182 974445	8
102	81		Tl		-16587	9	7815.67	0.05	β^+	7217	12	182 982193	10
101	82		Pb	$-\alpha$	-7580	29	7762.18	0.16	β^+	9010	30	182 991860	30

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
114	70	184	Yb	x	-32600#	500#	7951#	3#	β^-	3700#	540#	183 965000#	540#
113	71		Lu	x	-36300#	200#	7967#	1#	β^-	5200#	200#	183 961030#	220#
112	72		Hf	+	-41500	40	7990.72	0.22	β^-	1340	30	183 955450	40
111	73		Ta	+	-42839	26	7993.75	0.14	β^-	2866	26	183 954010	28
110	74		W		-45705.5	0.7	8005.078	0.004	β^-	-1486	4	183 950933.2	0.8
109	75		Re		-44220	4	7992.752	0.023	β^-	33	4	183 952528	5
108	76		Os		-44252.6	0.8	7988.678	0.005		*		183 952492.9	0.9
107	77		Ir	x	-39611	28	7959.20	0.15	β^+	4642	28	183 957480	30
106	78		Pt		-37332	15	7942.56	0.08	β^+	2280	30	183 959922	16
105	79		Au	$-\alpha$	-30319	22	7900.19	0.12	β^+	7014	27	183 967452	24
104	80		Hg		-26345	10	7874.35	0.05	β^+	3974	24	183 971718	10
103	81		Tl		-16883	10	7818.67	0.05	β^+	9461	14	183 981875	11
102	82		Pb		-11052	13	7782.73	0.07	β^+	5832	16	183 988136	14
101	83		Bi	$-\alpha$	1250#	120#	7712#	1#	β^+	12310#	120#	184 001350#	130#
115	70	185	Yb	x	-28480#	500#	7929#	3#	β^-	5480#	580#	184 969430#	540#
114	71		Lu	x	-33960#	300#	7955#	2#	β^-	4360#	310#	184 963540#	320#
113	72		Hf	x	-38320	60	7974.0	0.3	β^-	3070	70	184 958860	70
112	73		Ta	+	-41394	14	7986.36	0.08	β^-	1994	14	184 955561	15
111	74		W		-43387.9	0.7	7992.908	0.004	β^-	431.2	0.7	184 953421.2	0.8
110	75		Re		-43819.0	0.8	7991.010	0.004		*		184 952958.3	0.9
109	76		Os		-42805.9	0.8	7981.305	0.005	β^+	1013.1	0.4	184 954046.0	0.9
108	77		Ir	x	-40336	28	7963.72	0.15	β^+	2470	28	184 956700	30
107	78		Pt		-36688	26	7939.78	0.14	β^+	3650	40	184 960614	28
106	79		Au	x	-31858.1	2.6	7909.441	0.014	β^+	4830	26	184 965798.9	2.8
105	80		Hg		-26184	14	7874.54	0.07	β^+	5674	14	184 971891	15
104	81		Tl	IT	-19758	21	7835.58	0.11	β^+	6426	25	184 978789	22
103	82		Pb	$-\alpha$	-11541	16	7786.93	0.09	β^+	8217	26	184 987610	17
102	83		Bi	IT	-2240#	80#	7732#	0#	β^+	9310#	80#	184 997600#	90#
115	71	186	Lu	x	-30320#	400#	7936#	2#	β^-	6100#	400#	185 967450#	430#
114	72		Hf	x	-36420	50	7964.30	0.28	β^-	2180	80	185 960900	60
113	73		Ta	+	-38610	60	7971.8	0.3	β^-	3900	60	185 958550	60
112	74		W		-42508.6	1.2	7988.603	0.007	β^-	-581.3	1.2	185 954365.1	1.3
111	75		Re		-41927.3	0.8	7981.271	0.004	β^-	1072.7	0.8	185 954989.2	0.9
110	76		Os		-43000.0	0.8	7982.832	0.004		*		185 953837.6	0.8
109	77		Ir	x	-39172	17	7958.05	0.09	β^+	3828	17	185 957947	18
108	78		Pt		-37864	22	7946.81	0.12	β^+	1308	27	185 959351	23
107	79		Au		-31715	21	7909.54	0.11	β^+	6150	30	185 965953	23
106	80		Hg		-28539	12	7888.26	0.06	β^+	3176	24	185 969362	13
105	81		Tl		-19883	21	7837.52	0.11	β^+	8656	24	185 978655	22
104	82		Pb	$-\alpha$	-14681	11	7805.34	0.06	β^+	5202	23	185 984239	12
103	83		Bi	$-\alpha$	-3145	17	7739.12	0.09	β^+	11535	20	185 996623	18
102	84		Po	$-\alpha$	4102	18	7695.95	0.10	β^+	7247	25	186 004403	20
116	71	187	Lu	x	-27770#	400#	7923#	2#	β^-	5230#	450#	186 970190#	430#
115	72		Hf	x	-33000#	200#	7947#	1#	β^-	3900#	210#	186 964570#	220#
114	73		Ta	x	-36900	60	7963.21	0.30	β^-	3010	60	186 960390	60
113	74		W		-39904.0	1.2	7975.117	0.006	β^-	1312.5	1.1	186 957161.2	1.3
112	75		Re		-41216.5	0.7	7977.952	0.004	β^-	2.467	0.002	186 955752.2	0.8
111	76		Os		-41219.0	0.7	7973.781	0.004		*		186 955749.6	0.8
110	77		Ir	x	-39549	28	7960.67	0.15	β^+	1670	28	186 957540	30
109	78		Pt		-36685	24	7941.17	0.13	β^+	2860	40	186 960617	26
108	79		Au		-33029	22	7917.43	0.12	β^+	3657	27	186 964542	24
107	80		Hg		-28119	13	7886.99	0.07	β^+	4910	26	186 969814	14
106	81		Tl		-22445	8	7852.47	0.04	β^+	5674	15	186 975905	9
105	82		Pb		-14987	5	7808.401	0.027	β^+	7458	10	186 983911	5
104	83		Bi	$-\alpha$	-6383	10	7758.21	0.05	β^+	8604	11	186 993147	11
103	84		Po	$-\alpha$	2820	30	7704.79	0.17	β^+	9210	30	187 003030	40

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
117	71	188	Lu	x	-23820#	400#	7903#	2#	β^-	7010#	500#	187 974430#	430#
116	72		Hf	x	-30830#	300#	7936#	2#	β^-	3080#	360#	187 966900#	320#
115	73		Ta	x	-33910#	200#	7948#	1#	β^-	4760#	200#	187 963600#	220#
114	74		W	+	-38668	3	7969.053	0.016	β^-	349	3	187 958488	3
113	75		Re	-n	-39016.9	0.7	7966.748	0.004	β^-	2120.42	0.15	187 958113.7	0.8
112	76		Os		-41137.3	0.7	7973.866	0.004		*		187 955837.3	0.8
111	77		Ir		-38345	9	7954.85	0.05	β^+	2792	9	187 958835	10
110	78		Pt		-37821	5	7947.903	0.028	β^+	524	9	187 959398	6
109	79		Au	x	-32371.3	2.7	7914.754	0.014	β^+	5450	6	187 965248.0	2.9
108	80		Hg		-30198	7	7899.03	0.04	β^+	2173	7	187 967581	7
107	81		Tl	x	-22336	30	7853.05	0.16	β^+	7860	30	187 976020	30
106	82		Pb	$-\alpha$	-17811	10	7824.82	0.05	β^+	4530	30	187 980879	11
105	83		Bi	$-\alpha$	-7195	11	7764.19	0.06	β^+	10616	15	187 992276	12
104	84		Po	$-\alpha$	-544	20	7724.65	0.11	β^+	6650	23	187 999416	21
117	72	189	Hf	x	-27150#	300#	7917#	2#	β^-	4810#	360#	188 970850#	320#
116	73		Ta	x	-31960#	200#	7938#	1#	β^-	3850#	280#	188 965690#	220#
115	74		W	+	-35810#	200#	7954#	1#	β^-	2170#	200#	188 961560#	220#
114	75		Re	+p	-37979	8	7961.81	0.04	β^-	1008	8	188 959228	9
113	76		Os		-38986.8	0.7	7963.003	0.004		*		188 958145.9	0.7
112	77		Ir		-38450	13	7956.02	0.07	β^+	537	13	188 958723	14
111	78		Pt		-36469	10	7941.40	0.05	β^+	1980	14	188 960848	11
110	79		Au	x	-33582	20	7921.99	0.11	β^+	2887	22	188 963948	22
109	80		Hg		-29630	30	7896.92	0.17	β^+	3960	40	188 968190	30
108	81		Tl		-24616	8	7866.27	0.04	β^+	5010	30	188 973574	9
107	82		Pb		-17844	14	7826.30	0.07	β^+	6772	16	188 980844	15
106	83		Bi	$-\alpha$	-10065	21	7781.00	0.11	β^+	7779	25	188 989195	22
105	84		Po	$-\alpha$	-1422	22	7731.13	0.12	β^+	8640	30	188 998473	24
118	72	190	Hf	x	-24800#	400#	7905#	2#	β^-	3920#	450#	189 973380#	430#
117	73		Ta	x	-28720#	200#	7922#	1#	β^-	5650#	200#	189 969170#	220#
116	74		W		-34370	40	7947.50	0.19	β^-	1210	40	189 963100	40
115	75		Re		-35583	5	7949.776	0.026	β^-	3125	5	189 961800	5
114	76		Os		-38707.8	0.6	7962.105	0.003	β^-	-1954.2	1.2	189 958445.4	0.7
113	77		Ir	+n	-36753.6	1.4	7947.702	0.007	β^-	552.9	1.3	189 960543.4	1.5
112	78		Pt		-37306.5	0.7	7946.494	0.003		*		189 959949.8	0.7
111	79		Au	x	-32834	3	7918.835	0.018	β^+	4473	4	189 964752	4
110	80		Hg		-31371	16	7907.02	0.08	β^+	1463	16	189 966322	17
109	81		Tl	$+\alpha$	-24366	7	7866.03	0.04	β^+	7004	17	189 973842	8
108	82		Pb	$-\alpha$	-20417	13	7841.13	0.07	β^+	3950	14	189 978082	13
107	83		Bi	$-\alpha$	-10596	21	7785.32	0.11	β^+	9821	24	189 988625	23
106	84		Po	$-\alpha$	-4563	13	7749.45	0.07	β^+	6033	25	189 995102	14
118	73	191	Ta	x	-26520#	300#	7911#	2#	β^-	4660#	300#	190 971530#	320#
117	74		W	x	-31180	40	7931.44	0.22	β^-	3170	40	190 966530	50
116	75		Re	+p	-34350	10	7943.96	0.05	β^-	2045	10	190 963123	11
115	76		Os		-36395.2	0.7	7950.569	0.003	β^-	313.6	1.1	190 960928.1	0.7
114	77		Ir		-36708.8	1.3	7948.114	0.007		*		190 960591.5	1.4
113	78		Pt		-35698	4	7938.728	0.022	β^+	1010	4	190 961676	4
112	79		Au		-33798	5	7924.682	0.026	β^+	1900	6	190 963716	5
111	80		Hg		-30592	22	7903.80	0.12	β^+	3206	23	190 967158	24
110	81		Tl	$+\alpha$	-26283	7	7877.14	0.04	β^+	4309	23	190 971784	8
109	82		Pb		-20291	7	7841.68	0.03	β^+	5992	10	190 978216	7
108	83		Bi		-13239	7	7800.66	0.04	β^+	7052	10	190 985787	8
107	84		Po		-5069	7	7753.79	0.04	β^+	8171	10	190 994558	8
106	85		At	$-\alpha$	3864	16	7702.92	0.08	β^+	8933	18	191 004148	17

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
119	73	192	Ta	x	-23100#	400#	7894#	2#	β^-	6520#	450#	191 975200#	430#
118	74		W	x	-29620#	200#	7924#	1#	β^-	1970#	210#	191 968200#	220#
117	75		Re	x	-31590	70	7930.2	0.4	β^-	4290	70	191 966090	80
116	76		Os		-35882.3	2.3	7948.526	0.012	β^-	-1046.7	2.4	191 961478.8	2.5
115	77		Ir		-34835.6	1.3	7939.000	0.007	β^-	1452.9	2.3	191 962602.4	1.4
114	78		Pt		-36288.5	2.6	7942.492	0.013		*		191 961042.7	2.8
113	79		Au	–	-32772	16	7920.10	0.08	β^+	3516	16	191 964818	17
112	80		Hg	x	-32011	16	7912.07	0.08	β^+	761	22	191 965634	17
111	81		Tl	x	-25870	30	7876.02	0.16	β^+	6140	40	191 972230	30
110	82		Pb		-22552	6	7854.648	0.030	β^+	3320	30	191 975790	6
109	83		Bi	$-\alpha$	-13530	30	7803.61	0.16	β^+	9020	30	191 985470	30
108	84		Po	$-\alpha$	-8066	11	7771.05	0.06	β^+	5470	30	191 991340	11
107	85		At	$-\alpha$	2926	28	7709.73	0.15	β^+	10992	30	192 003141	30
120	73	193	Ta	x	-20810#	400#	7883#	2#	β^-	5380#	450#	192 977660#	430#
119	74		W	x	-26190#	200#	7907#	1#	β^-	4040#	200#	192 971880#	220#
118	75		Re	x	-30230	40	7923.94	0.20	β^-	3160	40	192 967550	40
117	76		Os		-33394.4	2.3	7936.272	0.012	β^-	1141.9	2.4	192 964149.6	2.5
116	77		Ir		-34536.3	1.3	7938.135	0.007		*		192 962923.8	1.4
115	78		Pt		-34479.7	1.4	7933.788	0.007	β^+	56.63	0.30	192 962984.5	1.5
114	79		Au		-33405	9	7924.16	0.04	β^+	1075	9	192 964138	9
113	80		Hg		-31062	16	7907.97	0.08	β^+	2343	14	192 966653	17
112	81		Tl	x	-27477	7	7885.34	0.03	β^+	3585	17	192 970502	7
111	82		Pb		-22229	10	7854.10	0.05	β^+	5248	12	192 976136	11
110	83		Bi		-15885	8	7817.17	0.04	β^+	6345	13	192 982947	8
109	84		Po	$-\alpha$	-8325	15	7773.95	0.08	β^+	7559	16	192 991062	16
108	85		At	$-\alpha$	-67	22	7727.11	0.11	β^+	8258	26	192 999928	23
107	86		Rn	$-\alpha$	9043	25	7675.85	0.13	β^+	9110	30	193 009708	27
121	73	194	Ta	x	-17130#	500#	7865#	3#	β^-	7280#	580#	193 981610#	540#
120	74		W	x	-24410#	300#	7899#	2#	β^-	2850#	360#	193 973800#	320#
119	75		Re	x	-27260#	200#	7909#	1#	β^-	5180#	200#	193 970740#	220#
118	76		Os	+	-32435.2	2.4	7932.023	0.012	β^-	96.6	2.0	193 965179.4	2.6
117	77		Ir	-n	-32531.8	1.3	7928.488	0.007	β^-	2228.3	1.3	193 965075.7	1.4
116	78		Pt		-34760.1	0.5	7935.942	0.003		*		193 962683.5	0.5
115	79		Au	+3n	-32211.9	2.1	7918.774	0.011	β^+	2548.2	2.1	193 965419.1	2.3
114	80		Hg	x	-32184.0	2.9	7914.597	0.015	β^+	28	4	193 965449	3
113	81		Tl	x	-26937	14	7883.52	0.07	β^+	5246	14	193 971081	15
112	82		Pb		-24208	17	7865.42	0.09	β^+	2730	22	193 974012	19
111	83		Bi	$+\alpha$	-16023	5	7819.195	0.027	β^+	8185	18	193 982799	6
110	84		Po	$-\alpha$	-11005	13	7789.29	0.07	β^+	5018	14	193 988186	14
109	85		At	$-\alpha$	-716	24	7732.23	0.12	β^+	10288	27	193 999231	25
108	86		Rn	$-\alpha$	5725	17	7695.00	0.09	β^+	6441	29	194 006146	18
121	74	195	W	x	-20740#	300#	7881#	2#	β^-	4820#	420#	194 977740#	320#
120	75		Re	x	-25560#	300#	7901#	2#	β^-	3950#	310#	194 972560#	320#
119	76		Os	x	-29510	60	7917.74	0.29	β^-	2180	60	194 968320	60
118	77		Ir	-n	-31692.3	1.3	7924.916	0.007	β^-	1101.6	1.3	194 965976.9	1.4
117	78		Pt		-32793.9	0.5	7926.553	0.003		*		194 964794.3	0.5
116	79		Au		-32567.1	1.1	7921.378	0.006	β^+	226.8	1.0	194 965037.8	1.2
115	80		Hg		-31013	23	7909.40	0.12	β^+	1554	23	194 966706	25
114	81		Tl		-28155	11	7890.73	0.06	β^+	2858	26	194 969774	12
113	82		Pb		-23738	5	7864.065	0.026	β^+	4417	12	194 974516	5
112	83		Bi		-18026	5	7830.758	0.027	β^+	5712	7	194 980649	6
111	84		Po		-11117	6	7791.32	0.03	β^+	6909	8	194 988066	6
110	85		At	$-\alpha$	-3470	10	7748.09	0.05	β^+	7646	11	194 996274	10
109	86		Rn	$-\alpha$	5050	50	7700.38	0.27	β^+	8520	50	195 005420	60

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
122	74	196	W	x	-18740#	400#	7872#	2#	β^-	3620#	500#	195 979880#	430#
121	75		Re	x	-22360#	300#	7886#	2#	β^-	5920#	300#	195 976000#	320#
120	76		Os	+pp	-28280	40	7912.23	0.20	β^-	1160	60	195 969640	40
119	77		Ir	+	-29440	40	7914.15	0.20	β^-	3210	40	195 968400	40
118	78		Pt		-32644.5	0.5	7926.530	0.003	β^-	-1505.8	3.0	195 964954.6	0.5
117	79		Au		-31138.7	3.0	7914.855	0.015	β^-	687	3	195 966571	3
116	80		Hg		-31825.9	2.9	7914.370	0.015		*		195 965833	3
115	81		Tl	x	-27497	12	7888.29	0.06	β^+	4329	12	195 970481	13
114	82		Pb		-25348	8	7873.34	0.04	β^+	2148	14	195 972788	8
113	83		Bi	x	-18009	24	7831.90	0.12	β^+	7339	26	195 980667	26
112	84		Po		-13469	5	7804.745	0.027	β^+	4540	25	195 985541	6
111	85		At	$-\alpha$	-3910	30	7752.00	0.15	β^+	9560	30	195 995800	30
110	86		Rn	$-\alpha$	1975	14	7717.97	0.07	β^+	5890	30	196 002120	15
123	74	197	W	x	-14870#	400#	7853#	2#	β^-	5480#	500#	196 984040#	430#
122	75		Re	x	-20350#	300#	7877#	2#	β^-	4730#	360#	196 978150#	320#
121	76		Os	x	-25080#	200#	7897#	1#	β^-	3190#	200#	196 973080#	220#
120	77		Ir	+p	-28264	20	7909.00	0.10	β^-	2156	20	196 969657	22
119	78		Pt		-30419.8	0.5	7915.971	0.003	β^-	720.0	0.5	196 967343.0	0.6
118	79		Au		-31139.8	0.5	7915.655	0.003		*		196 966570.1	0.6
117	80		Hg		-30540	3	7908.640	0.016	β^+	600	3	196 967214	3
116	81		Tl	$+\alpha$	-28354	14	7893.57	0.07	β^+	2186	14	196 969560	15
115	82		Pb		-24745	5	7871.282	0.024	β^+	3609	14	196 973435	5
114	83		Bi	$+\alpha$	-19687	8	7841.63	0.04	β^+	5058	10	196 978865	9
113	84		Po		-13393	10	7805.71	0.05	β^+	6294	13	196 985622	11
112	85		At		-6355	8	7766.02	0.04	β^+	7038	13	196 993177	9
111	86		Rn	$-\alpha$	1510	16	7722.12	0.08	β^+	7866	18	197 001621	17
110	87		Fr	$-\alpha$	10250	60	7673.76	0.29	β^+	8740	60	197 011010	60
123	75	198	Re	x	-16990#	400#	7861#	2#	β^-	6610#	450#	197 981760#	430#
122	76		Os	x	-23600#	200#	7890#	1#	β^-	2110#	280#	197 974660#	220#
121	77		Ir	x	-25710#	200#	7897#	1#	β^-	4190#	200#	197 972400#	220#
120	78		Pt		-29904.0	2.1	7914.151	0.011	β^-	-323.2	2.1	197 967896.7	2.3
119	79		Au		-29580.8	0.5	7908.568	0.003	β^-	1373.5	0.5	197 968243.7	0.6
118	80		Hg		-30954.3	0.5	7911.553	0.002		*		197 966769.2	0.5
117	81		Tl	x	-27529	8	7890.30	0.04	β^+	3426	8	197 970447	8
116	82		Pb		-26067	9	7878.97	0.04	β^+	1461	12	197 972015	9
115	83		Bi		-19374	28	7841.21	0.14	β^+	6694	29	197 979201	30
114	84		Po		-15473	17	7817.56	0.09	β^+	3900	30	197 983389	19
113	85		At		-6709	5	7769.345	0.025	β^+	8765	18	197 992798	5
112	86		Rn	$-\alpha$	-1230	13	7737.72	0.07	β^+	5478	14	197 998679	14
111	87		Fr	$-\alpha$	9580	30	7679.19	0.16	β^+	10810	30	198 010280	30
124	75	199	Re	x	-14730#	400#	7850#	2#	β^-	5540#	450#	198 984190#	430#
123	76		Os	x	-20270#	200#	7874#	1#	β^-	4130#	200#	198 978240#	220#
122	77		Ir	p$-$2n	-24400	40	7891.21	0.21	β^-	2990	40	198 973810	40
121	78		Pt	-n	-27388.7	2.2	7902.301	0.011	β^-	1705.1	2.1	198 970597.0	2.3
120	79		Au		-29093.8	0.5	7906.938	0.003	β^-	452.3	0.6	198 968766.6	0.6
119	80		Hg		-29546.1	0.5	7905.279	0.003		*		198 968281.0	0.6
118	81		Tl	x	-28059	28	7893.88	0.14	β^+	1487	28	198 969880	30
117	82		Pb	$+\alpha$	-25232	7	7875.74	0.03	β^+	2828	29	198 972913	7
116	83		Bi		-20798	11	7849.52	0.05	β^+	4434	13	198 977673	11
115	84		Po	$-\alpha$	-15239	5	7817.658	0.027	β^+	5559	12	198 983640	6
114	85		At		-8823	5	7781.488	0.027	β^+	6415	8	198 990528	6
113	86		Rn	$-\alpha$	-1560	7	7741.06	0.04	β^+	7264	9	198 998325	8
112	87		Fr	$-\alpha$	6771	14	7695.26	0.07	β^+	8331	16	199 007269	15

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
124	76	200	Os	x	-18550#	300#	7867#	1#	β^-	3020#	360#	199 980090#	320#
123	77		Ir	x	-21570#	200#	7878#	1#	β^-	5030#	200#	199 976840#	210#
122	78		Pt	-nn	-26599	20	7899.20	0.10	β^-	640	30	199 971445	22
121	79		Au		-27240	27	7898.49	0.13	β^-	2263	27	199 970757	29
120	80		Hg		-29503.3	0.5	7905.896	0.003		*		199 968326.9	0.6
119	81		Tl	−	-27047	6	7889.704	0.029	β^+	2456	6	199 970964	6
118	82		Pb		-26251	10	7881.81	0.05	β^+	796	12	199 971819	11
117	83		Bi	$+\alpha$	-20371	23	7848.50	0.11	β^+	5880	25	199 978131	24
116	84		Po		-16942	8	7827.44	0.04	β^+	3429	24	199 981812	8
115	85		At	$-\alpha$	-8988	24	7783.76	0.12	β^+	7954	26	199 990351	26
114	86		Rn	$-\alpha$	-4000	6	7754.911	0.029	β^+	4987	25	199 995705	6
113	87		Fr	$-\alpha$	6130	30	7700.33	0.15	β^+	10130	30	200 006580	30
125	76	201	Os	x	-14840#	300#	7849#	1#	β^-	5000#	360#	200 984070#	320#
124	77		Ir	x	-19840#	200#	7870#	1#	β^-	3900#	210#	200 978700#	220#
123	78		Pt	+	-23740	50	7885.83	0.25	β^-	2660	50	200 974510	50
122	79		Au		-26401	3	7895.175	0.016	β^-	1262	3	200 971658	3
121	80		Hg		-27662.5	0.7	7897.561	0.004		*		200 970303.1	0.8
120	81		Tl		-27181	14	7891.27	0.07	β^+	482	14	200 970820	15
119	82		Pb		-25271	14	7877.88	0.07	β^+	1910	19	200 972870	15
118	83		Bi	$+\alpha$	-21429	12	7854.87	0.06	β^+	3842	18	200 976995	13
117	84		Po		-16521	5	7826.562	0.025	β^+	4908	13	200 982264	5
116	85		At	$+\alpha$	-10789	8	7794.15	0.04	β^+	5732	10	200 988417	9
115	86		Rn	$-\alpha$	-4107	10	7757.02	0.05	β^+	6682	13	200 995591	11
114	87		Fr	$-\alpha$	3589	9	7714.84	0.05	β^+	7696	14	201 003852	10
113	88		Ra	$-\alpha$	11937	20	7669.41	0.10	β^+	8348	22	201 012815	22
126	76	202	Os	x	-12530#	400#	7839#	2#	β^-	4110#	500#	201 986550#	430#
125	77		Ir	x	-16640#	300#	7855#	1#	β^-	6050#	300#	201 982140#	320#
124	78		Pt	x	-22692	25	7881.56	0.12	β^-	1660	30	201 975639	27
123	79		Au	x	-24353	23	7885.91	0.12	β^-	2992	23	201 973856	25
122	80		Hg		-27345.3	0.7	7896.850	0.004		*		201 970643.6	0.8
121	81		Tl		-25980.4	1.8	7886.221	0.009	β^+	1364.9	1.8	201 972108.9	2.0
120	82		Pb		-25941	4	7882.151	0.019	β^+	40	4	201 972152	4
119	83		Bi		-20751	14	7852.59	0.07	β^+	5190	15	201 977723	15
118	84		Po		-17942	9	7834.81	0.04	β^+	2809	16	201 980739	9
117	85		At		-10595	28	7794.56	0.14	β^+	7346	29	201 988626	30
116	86		Rn	$-\alpha$	-6275	18	7769.30	0.09	β^+	4320	30	201 993264	19
115	87		Fr	$-\alpha$	3102	6	7719.012	0.030	β^+	9376	19	202 003330	6
114	88		Ra	$-\alpha$	9075	15	7685.57	0.07	β^+	5973	16	202 009742	16
127	76	203	Os	x	-7270#	400#	7814#	2#	β^-	7100#	570#	202 992200#	430#
126	77		Ir	x	-14370#	400#	7845#	2#	β^-	5140#	450#	202 984570#	430#
125	78		Pt	x	-19510#	200#	7867#	1#	β^-	3630#	200#	202 979060#	220#
124	79		Au		-23143	3	7880.865	0.015	β^-	2126	3	202 975154	3
123	80		Hg		-25269.2	1.6	7887.483	0.008	β^-	492.1	1.2	202 972872.4	1.8
122	81		Tl		-25761.3	1.2	7886.053	0.006		*		202 972344.1	1.3
121	82		Pb		-24786	7	7877.40	0.03	β^+	975	6	202 973391	7
120	83		Bi	$+\alpha$	-21525	13	7857.48	0.06	β^+	3262	14	202 976892	14
119	84		Po		-17311	5	7832.863	0.023	β^+	4214	14	202 981416	5
118	85		At		-12163	11	7803.65	0.05	β^+	5148	12	202 986943	11
117	86		Rn	$-\alpha$	-6184	6	7770.344	0.029	β^+	5979	12	202 993361	6
116	87		Fr		876	6	7731.71	0.03	β^+	7060	9	203 000941	7
115	88		Ra	$-\alpha$	8601	10	7689.80	0.05	β^+	7725	12	203 009234	10

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
127	77	204	Ir	x	-9570#	400#	7823#	2#	β^-	8050#	450#	203 989730#	430#
126	78		Pt	x	-17620#	200#	7859#	1#	β^-	2770#	280#	203 981080#	220#
125	79		Au	+	-20390#	200#	7868#	1#	β^-	4300#	200#	203 978110#	220#
124	80		Hg		-24690.1	0.5	7885.546	0.003	β^-	-344.1	1.2	203 973494.0	0.5
123	81		Tl		-24346.1	1.2	7880.024	0.006	β^-	763.75	0.18	203 973863.4	1.2
122	82		Pb		-25109.8	1.1	7879.933	0.006		*		203 973043.5	1.2
121	83		Bi	$+\alpha$	-20646	9	7854.22	0.04	β^+	4464	9	203 977836	10
120	84		Po		-18341	10	7839.08	0.05	β^+	2305	14	203 980310	11
119	85		At		-11875	23	7803.55	0.11	β^+	6466	25	203 987251	24
118	86		Rn		-7970	7	7780.57	0.04	β^+	3905	24	203 991444	8
117	87		Fr	$-\alpha$	607	25	7734.69	0.12	β^+	8577	26	204 000652	26
116	88		Ra	$-\alpha$	6061	9	7704.12	0.04	β^+	5454	26	204 006507	10
128	77	205	Ir	x	-5600#	500#	7805#	2#	β^-	7220#	580#	204 993990#	540#
127	78		Pt	x	-12820#	300#	7836#	1#	β^-	5750#	360#	204 986240#	320#
126	79		Au	x	-18570#	200#	7860#	1#	β^-	3720#	200#	204 980060#	220#
125	80		Hg		-22288	4	7874.732	0.018	β^-	1533	4	204 976073	4
124	81		Tl		-23820.8	1.2	7878.395	0.006		*		204 974427.3	1.3
123	82		Pb		-23770.2	1.1	7874.331	0.006	β^+	50.6	0.5	204 974481.7	1.2
122	83		Bi		-21066	5	7857.322	0.023	β^+	2705	5	204 977385	5
121	84		Po		-17521	10	7836.22	0.05	β^+	3544	11	204 981190	11
120	85		At	$+\alpha$	-12985	12	7810.27	0.06	β^+	4537	16	204 986061	13
119	86		Rn		-7710	5	7780.723	0.025	β^+	5275	13	204 991723	5
118	87		Fr	x	-1310	8	7745.69	0.04	β^+	6400	9	204 998594	8
117	88		Ra	$-\alpha$	5804	23	7707.17	0.11	β^+	7114	24	205 006231	24
116	89		Ac	$-\alpha$	14110	60	7662.85	0.29	β^+	8300	60	205 015140	60
128	78	206	Pt	x	-9240#	300#	7820#	1#	β^-	4950#	420#	205 990080#	320#
127	79		Au	x	-14190#	300#	7840#	1#	β^-	6760#	300#	205 984770#	320#
126	80		Hg	$+\alpha$	-20946	20	7869.17	0.10	β^-	1308	20	205 977514	22
125	81		Tl		-22253.3	1.3	7871.722	0.006	β^-	1532.2	0.6	205 976110.1	1.4
124	82		Pb		-23785.5	1.1	7875.362	0.006		*		205 974465.2	1.2
123	83		Bi	$-$	-20028	8	7853.32	0.04	β^+	3757	8	205 978499	8
122	84		Po	$-\alpha$	-18189	4	7840.597	0.019	β^+	1840	9	205 980474	4
121	85		At		-12439	14	7808.89	0.07	β^+	5749	14	205 986646	15
120	86		Rn		-9133	9	7789.04	0.04	β^+	3306	16	205 990195	9
119	87		Fr		-1247	28	7746.96	0.14	β^+	7886	29	205 998661	30
118	88		Ra	$-\alpha$	3566	18	7719.80	0.09	β^+	4810	30	206 003828	19
117	89		Ac	$-\alpha$	13480	70	7667.9	0.3	β^+	9920	70	206 014480	70
129	78	207	Pt	x	-4140#	400#	7797#	2#	β^-	6500#	500#	206 995560#	430#
128	79		Au	x	-10640#	300#	7824#	1#	β^-	5850#	300#	206 988580#	320#
127	80		Hg	x	-16487	30	7848.61	0.14	β^-	4550	30	206 982300	30
126	81		Tl		-21034	5	7866.798	0.026	β^-	1418	5	206 977419	6
125	82		Pb		-22452.0	1.1	7869.866	0.006		*		206 975896.8	1.2
124	83		Bi		-20054.6	2.4	7854.505	0.012	β^+	2397.4	2.1	206 978470.6	2.6
123	84		Po		-17146	7	7836.67	0.03	β^+	2909	7	206 981593	7
122	85		At	$+\alpha$	-13227	12	7813.97	0.06	β^+	3918	14	206 985800	13
121	86		Rn		-8635	5	7787.999	0.023	β^+	4593	13	206 990730	5
120	87		Fr		-2849	18	7756.27	0.08	β^+	5786	18	206 996941	19
119	88		Ra	$-\alpha$	3510	60	7721.75	0.28	β^+	6360	60	207 003770	60
118	89		Ac	$-\alpha$	11150	60	7681.10	0.27	β^+	7630	80	207 011970	60

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
130	78	208	Pt	x	-500#	400#	7780#	2#	β^-	5410#	500#	207 999460#	430#
129	79		Au	x	-5910#	300#	7803#	1#	β^-	7360#	300#	207 993660#	320#
128	80		Hg	x	-13270	30	7834.19	0.15	β^-	3480	30	207 985760	30
127	81		Tl	$+\alpha$	-16750.1	1.9	7847.184	0.009	β^-	4998.4	1.7	207 982018.0	2.0
126	82		Pb		-21748.5	1.1	7867.453	0.006		*		207 976652.0	1.2
125	83		Bi	+n	-18870.2	2.3	7849.853	0.011	β^+	2878.4	2.0	207 979742.1	2.5
124	84		Po		-17469.2	1.7	7839.357	0.008	β^+	1400.9	2.4	207 981246.0	1.8
123	85		At	$+\alpha$	-12470	9	7811.56	0.04	β^+	4999	9	207 986613	10
122	86		Rn		-9655	10	7794.27	0.05	β^+	2815	14	207 989635	11
121	87		Fr		-2665	12	7756.90	0.06	β^+	6990	15	207 997139	13
120	88		Ra	$-\alpha$	1728	9	7732.02	0.04	β^+	4393	15	208 001855	10
119	89		Ac	$-\alpha$	10760	60	7684.8	0.3	β^+	9030	70	208 011550	70
118	90		Th	$-\alpha$	16690	30	7652.57	0.15	β^+	5930	70	208 017920	30
130	79	209	Au	x	-2230#	400#	7786#	2#	β^-	6380#	430#	208 997610#	430#
129	80		Hg	x	-8610#	150#	7813#	1#	β^-	5040#	150#	208 990760#	160#
128	81		Tl	$+\alpha$	-13645	6	7833.398	0.029	β^-	3970	6	208 985352	7
127	82		Pb		-17614.6	1.7	7848.649	0.008	β^-	644.0	1.1	208 981090.0	1.9
126	83		Bi		-18258.6	1.4	7847.987	0.007		*		208 980398.6	1.5
125	84		Po	$-\alpha$	-16366.0	1.8	7835.188	0.009	β^+	1892.6	1.6	208 982430.4	1.9
124	85		At		-12884	5	7814.784	0.023	β^+	3482	5	208 986169	5
123	86		Rn		-8941	10	7792.18	0.05	β^+	3943	11	208 990401	11
122	87		Fr		-3782	12	7763.75	0.06	β^+	5159	15	208 995940	12
121	88		Ra	$-\alpha$	1858	6	7733.018	0.027	β^+	5640	13	209 001995	6
120	89		Ac	$-\alpha$	8840	60	7695.85	0.27	β^+	6990	60	209 009500	60
119	90		Th	IT	16400#	100#	7656#	0#	β^+	7550#	120#	209 017600#	110#
131	79	210	Au	x	2680#	400#	7764#	2#	β^-	7980#	450#	210 002880#	430#
130	80		Hg	x	-5300#	200#	7799#	1#	β^-	3950#	200#	209 994310#	220#
129	81		Tl	$+\alpha$	-9247	12	7813.59	0.06	β^-	5481	12	209 990073	12
128	82		Pb		-14728.4	1.4	7835.966	0.007	β^-	63.5	0.5	209 984188.4	1.6
127	83		Bi		-14791.9	1.4	7832.542	0.006	β^-	1161.2	0.8	209 984120.2	1.5
126	84		Po		-15953.1	1.1	7834.346	0.005		*		209 982873.7	1.2
125	85		At	$-\alpha$	-11972	8	7811.66	0.04	β^+	3981	8	209 987147	8
124	86		Rn	$-\alpha$	-9605	5	7796.665	0.022	β^+	2367	9	209 989689	5
123	87		Fr		-3344	13	7763.12	0.06	β^+	6261	14	209 996411	14
122	88		Ra	$-\alpha$	443	9	7741.37	0.04	β^+	3786	16	210 000475	10
121	89		Ac		8760	60	7698.02	0.30	β^+	8320	60	210 009410	70
120	90		Th	$-\alpha$	14060	19	7669.08	0.09	β^+	5300	70	210 015094	20
131	80	211	Hg	x	-390#	200#	7777#	1#	β^-	5690#	210#	210 999580#	220#
130	81		Tl	x	-6080	40	7799.79	0.20	β^-	4420	40	210 993480	50
129	82		Pb		-10493.0	2.3	7817.008	0.011	β^-	1366	5	210 988735.3	2.4
128	83		Bi		-11859	5	7819.775	0.026	β^-	573	5	210 987269	6
127	84		Po	$-\alpha$	-12432.5	1.3	7818.784	0.006		*		210 986653.2	1.3
126	85		At	$-\alpha$	-11647.2	2.7	7811.355	0.013	β^+	785.3	2.5	210 987496.2	2.9
125	86		Rn	$-\alpha$	-8755	7	7793.94	0.03	β^+	2892	7	210 990601	7
124	87		Fr		-4140	12	7768.36	0.06	β^+	4615	14	210 995555	13
123	88		Ra		832	5	7741.089	0.024	β^+	4972	13	211 000893	5
122	89		Ac		7140	50	7707.47	0.25	β^+	6310	50	211 007670	60
121	90		Th	$-\alpha$	13880	90	7671.9	0.4	β^+	6730	100	211 014900	90
120	91		Pa	$-\alpha$	22050	70	7629.4	0.3	β^+	8180	110	211 023670	70

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
132	80	212	Hg	x	3020#	300#	7762#	1#	β^-	4570#	360#	212 003240#	320#
131	81		Tl	$+\alpha$	-1550#	200#	7780#	1#	β^-	6000#	200#	211 998340#	220#
130	82		Pb		-7548.9	1.8	7804.320	0.009	β^-	569.0	1.8	211 991895.9	2.0
129	83		Bi		-8117.9	1.9	7803.314	0.009	β^-	2251.5	1.7	211 991285.0	2.0
128	84		Po		-10369.4	1.2	7810.244	0.005	β^-	-1741.3	2.1	211 988868.0	1.2
127	85		At	$-\alpha$	-8628.1	2.4	7798.340	0.011	β^-	31	4	211 990737.3	2.6
126	86		Rn	$-\alpha$	-8659	3	7794.796	0.015		*		211 990704	3
125	87		Fr		-3516	9	7766.85	0.04	β^+	5143	9	211 996225	9
124	88		Ra		-199	10	7747.51	0.05	β^+	3317	13	211 999787	11
123	89		Ac		7300	22	7708.45	0.10	β^+	7498	24	212 007836	23
122	90		Th	$-\alpha$	12111	10	7682.06	0.05	β^+	4811	24	212 013002	11
121	91		Pa	$-\alpha$	21600	90	7633.6	0.4	β^+	9490	90	212 023180	90
133	80	213	Hg	x	8200#	300#	7739#	1#	β^-	6420#	300#	213 008800#	320#
132	81		Tl	x	1784	27	7765.43	0.13	β^-	4987	28	213 001915	29
131	82		Pb	$+\alpha$	-3204	7	7785.17	0.03	β^-	2028	8	212 996561	7
130	83		Bi		-5232	5	7791.022	0.024	β^-	1422	5	212 994384	5
129	84		Po		-6654	3	7794.024	0.014		*		212 992857	3
128	85		At	$-\alpha$	-6580	5	7790.004	0.023	β^+	74	5	212 992937	5
127	86		Rn	$-\alpha$	-5696	3	7782.182	0.016	β^+	884	6	212 993885	4
126	87		Fr		-3554	5	7768.454	0.022	β^+	2142	6	212 996184	5
125	88		Ra		346	10	7746.47	0.05	β^+	3900	11	213 000371	11
124	89		Ac		6141	12	7715.59	0.05	β^+	5795	15	213 006593	13
123	90		Th	$-\alpha$	12120	9	7683.85	0.04	β^+	5979	15	213 013011	10
122	91		Pa	$-\alpha$	19650	60	7644.80	0.27	β^+	7530	60	213 021100	60
134	80	214	Hg	x	11770#	400#	7724#	2#	β^-	5310#	450#	214 012640#	430#
133	81		Tl	x	6470#	200#	7745#	1#	β^-	6650#	200#	214 006940#	210#
132	82		Pb		-183.0	2.0	7772.395	0.009	β^-	1018	11	213 999803.5	2.1
131	83		Bi		-1201	11	7773.50	0.05	β^-	3269	11	213 998711	12
130	84		Po		-4470.0	1.4	7785.116	0.007	β^-	-1091	4	213 995201.3	1.6
129	85		At		-3379	4	7776.363	0.019	β^-	941	10	213 996372	4
128	86		Rn	$-\alpha$	-4320	9	7777.10	0.04		*		213 995363	10
127	87		Fr	$-\alpha$	-958	9	7757.74	0.04	β^+	3361	12	213 998971	9
126	88		Ra	$-\alpha$	93	5	7749.172	0.025	β^+	1051	10	214 000100	6
125	89		Ac		6433	14	7715.89	0.06	β^+	6341	15	214 006906	15
124	90		Th	$-\alpha$	10695	11	7692.32	0.05	β^+	4262	17	214 011481	11
123	91		Pa	$-\alpha$	19460	80	7647.7	0.4	β^+	8760	80	214 020890	90
135	80	215	Hg	x	17110#	400#	7701#	2#	β^-	7080#	500#	215 018370#	430#
134	81		Tl	x	10030#	300#	7730#	1#	β^-	5690#	310#	215 010770#	320#
133	82		Pb	$+\alpha$	4340	50	7752.74	0.25	β^-	2710	50	215 004660	60
132	83		Bi		1629	6	7761.718	0.026	β^-	2171	6	215 001749	6
131	84		Po		-541.8	2.1	7768.177	0.010	β^-	715	7	214 999418.4	2.3
130	85		At	$-\alpha$	-1257	7	7767.86	0.03		*		214 998651	7
129	86		Rn	$-\alpha$	-1169	6	7763.816	0.028	β^+	88	9	214 998745	7
128	87		Fr	$-\alpha$	318	7	7753.26	0.03	β^+	1487	9	215 000342	8
127	88		Ra	$-\alpha$	2532	7	7739.32	0.03	β^+	2214	10	215 002718	8
126	89		Ac	$-\alpha$	6031	12	7719.41	0.06	β^+	3499	14	215 006474	13
125	90		Th	$-\alpha$	10921	6	7693.027	0.029	β^+	4891	14	215 011725	7
124	91		Pa	$-\alpha$	17800	80	7657.4	0.4	β^+	6880	80	215 019110	90
123	92		U	$-\alpha$	24890	100	7620.8	0.5	β^+	7080	130	215 026720	110

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
136	80	216	Hg	x	20920#	400#	7685#	2#	β^-	6050#	500#	216 022460#	430#
135	81		Tl	x	14870#	300#	7709#	1#	β^-	7360#	360#	216 015960#	320#
134	82		Pb	x	7510#	200#	7740#	1#	β^-	1640#	200#	216 008060#	220#
133	83		Bi	x	5874	11	7743.50	0.05	β^-	4092	11	216 006306	12
132	84		Po		1782.3	1.8	7758.820	0.008	β^-	-474	4	216 001913.4	1.9
131	85		At	$-\alpha$	2257	4	7753.002	0.017	β^-	2003	7	216 002423	4
130	86		Rn	$-\alpha$	253	6	7758.655	0.027		*		216 000272	6
129	87		Fr	$-\alpha$	2971	4	7742.451	0.019	β^+	2718	7	216 003190	4
128	88		Ra	$-\alpha$	3291	8	7737.35	0.04	β^+	320	9	216 003534	9
127	89		Ac		8150	9	7711.23	0.04	β^+	4858	12	216 008749	10
126	90		Th	$-\alpha$	10299	11	7697.66	0.05	β^+	2149	14	216 011056	12
125	91		Pa	$-\alpha$	17824	25	7659.20	0.11	β^+	7525	27	216 019135	26
124	92		U	$-\alpha$	23066	28	7631.31	0.13	β^+	5240	40	216 024760	30
136	81	217	Tl	x	18660#	400#	7693#	2#	β^-	6400#	500#	217 020030#	430#
135	82		Pb	x	12260#	300#	7719#	1#	β^-	3530#	300#	217 013160#	320#
134	83		Bi	x	8730	18	7731.85	0.08	β^-	2847	19	217 009372	19
133	84		Po	$+\alpha$	5883	7	7741.36	0.03	β^-	1489	8	217 006316	7
132	85		At		4395	5	7744.617	0.023	β^-	736	6	217 004718	5
131	86		Rn	$-\alpha$	3659	4	7744.404	0.019		*		217 003928	5
130	87		Fr	$-\alpha$	4315	7	7737.77	0.03	β^+	656	8	217 004632	7
129	88		Ra	$-\alpha$	5890	7	7726.91	0.03	β^+	1575	9	217 006323	8
128	89		Ac	$-\alpha$	8702	11	7710.34	0.05	β^+	2813	13	217 009342	12
127	90		Th	$-\alpha$	12206	11	7690.59	0.05	β^+	3503	15	217 013103	11
126	91		Pa	$-\alpha$	17055	12	7664.64	0.06	β^+	4849	16	217 018309	13
125	92		U	$-\alpha$	22970#	80#	7634#	0#	β^+	5920#	80#	217 024660#	90#
137	81	218	Tl	x	23710#	400#	7672#	2#	β^-	8080#	500#	218 025450#	430#
136	82		Pb	x	15630#	300#	7705#	1#	β^-	2410#	300#	218 016780#	320#
135	83		Bi	x	13216	27	7712.83	0.12	β^-	4859	27	218 014188	29
134	84		Po		8356.7	2.0	7731.530	0.009	β^-	256	12	218 008971.2	2.1
133	85		At	$-\alpha$	8100	12	7729.12	0.05	β^-	2883	12	218 008696	12
132	86		Rn		5217.4	2.3	7738.753	0.011	β^-	-1842	4	218 005601.1	2.5
131	87		Fr	$-\alpha$	7059	4	7726.714	0.019	β^-	414	11	218 007579	5
130	88		Ra	$-\alpha$	6646	10	7725.02	0.04		*		218 007134	11
129	89		Ac	$-\alpha$	10850	60	7702.14	0.26	β^+	4210	60	218 011650	60
128	90		Th	$-\alpha$	12367	11	7691.60	0.05	β^+	1520	60	218 013276	11
127	91		Pa	$-\alpha$	18650	18	7659.19	0.08	β^+	6283	21	218 020021	19
126	92		U	$-\alpha$	21895	14	7640.72	0.06	β^+	3245	23	218 023505	15
137	82	219	Pb	x	20620#	400#	7684#	2#	β^-	4300#	450#	219 022140#	430#
136	83		Bi	x	16320#	200#	7700#	1#	β^-	3640#	200#	219 017520#	220#
135	84		Po	x	12681	16	7713.33	0.07	β^-	2285	16	219 013614	17
134	85		At		10396	3	7720.197	0.015	β^-	1566.7	2.9	219 011161	3
133	86		Rn		8829.3	2.1	7723.778	0.010	β^-	212	7	219 009478.7	2.3
132	87		Fr	$-\alpha$	8617	7	7721.18	0.03		*		219 009251	7
131	88		Ra	$-\alpha$	9394	7	7714.06	0.03	β^+	777	10	219 010085	7
130	89		Ac	$-\alpha$	11570	50	7700.55	0.24	β^+	2180	50	219 012420	60
129	90		Th	$-\alpha$	14460	60	7683.77	0.26	β^+	2890	80	219 015530	60
128	91		Pa	$-\alpha$	18580	70	7661.4	0.3	β^+	4120	90	219 019950	70
127	92		U	$-\alpha$	23296	13	7636.29	0.06	β^+	4710	70	219 025009	14
126	93		Np	$-\alpha$	29440	90	7604.7	0.4	β^+	6140	90	219 031600	100

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
138	82	220	Pb	x	24130#	400#	7670#	2#	β^-	3170#	500#	220 025910#	430#
137	83		Bi	x	20960#	300#	7681#	1#	β^-	5700#	300#	220 022500#	320#
136	84		Po	x	15263	18	7703.22	0.08	β^-	888	23	220 016386	19
135	85		At	x	14376	14	7703.70	0.06	β^-	3764	14	220 015433	15
134	86		Rn		10612.0	1.8	7717.255	0.008	β^-	-870	4	220 011392.4	1.9
133	87		Fr	$-\alpha$	11482	4	7709.743	0.018	β^-	1210	8	220 012327	4
132	88		Ra	$-\alpha$	10272	8	7711.69	0.03		*		220 011028	8
131	89		Ac	$-\alpha$	13744	6	7692.352	0.028	β^+	3472	10	220 014755	7
130	90		Th	$-\alpha$	14690	14	7684.50	0.06	β^+	946	15	220 015770	15
129	91		Pa	$-\alpha$	20278	15	7655.54	0.07	β^+	5589	20	220 021770	16
128	92		U	$-\alpha$	23010#	100#	7640#	0#	β^+	2740#	100#	220 024710#	110#
127	93		Np	$-\alpha$	30480	30	7602.08	0.14	β^+	7460#	110#	220 032720	30
138	83	221	Bi	x	24200#	300#	7668#	1#	β^-	4430#	300#	221 025980#	320#
137	84		Po	x	19774	20	7684.48	0.09	β^-	2991	24	221 021228	21
136	85		At	x	16783	14	7694.48	0.06	β^-	2311	15	221 018017	15
135	86		Rn	$+\alpha$	14471	6	7701.394	0.026	β^-	1194	7	221 015536	6
134	87		Fr		13277	5	7703.257	0.022	β^-	313	6	221 014254	5
133	88		Ra	$-\alpha$	12964	5	7701.135	0.021		*		221 013917	5
132	89		Ac	$-\alpha$	14530	60	7690.50	0.26	β^+	1570	60	221 015600	60
131	90		Th	$-\alpha$	16940	8	7676.06	0.04	β^+	2410	60	221 018186	9
130	91		Pa	$-\alpha$	20370	60	7656.98	0.27	β^+	3440	60	221 021870	60
129	92		U	$-\alpha$	24520	70	7634.7	0.3	β^+	4150	90	221 026320	80
128	93		Np	x	29910#	200#	7607#	1#	β^+	5390#	210#	221 032110#	220#
127	94		Pu	x	35930#	300#	7576#	1#	β^+	6020#	360#	221 038570#	320#
139	83	222	Bi	x	28950#	300#	7648#	1#	β^-	6460#	300#	222 031080#	320#
138	84		Po	x	22490	40	7674.01	0.18	β^-	1530	40	222 024140	40
137	85		At	x	20953	16	7677.39	0.07	β^-	4581	16	222 022494	17
136	86		Rn		16372.0	1.9	7694.499	0.009	β^-	-6	8	222 017576.0	2.1
135	87		Fr	x	16378	7	7690.95	0.03	β^-	2058	9	222 017583	8
134	88		Ra		14320	4	7696.693	0.020		*		222 015373	5
133	89		Ac	$-\alpha$	16622	5	7682.801	0.021	β^+	2302	6	222 017844	5
132	90		Th	$-\alpha$	17203	10	7676.66	0.05	β^+	581	11	222 018468	11
131	91		Pa	$-\alpha$	22060	90	7651.2	0.4	β^+	4860	90	222 023690	90
130	92		U	$-\alpha$	24270	50	7637.77	0.23	β^+	2210	100	222 026060	60
129	93		Np	$-\alpha$	31270	40	7602.70	0.17	β^+	7000	60	222 033570	40
128	94		Pu	x	35060#	300#	7582#	1#	β^+	3790#	300#	222 037640#	320#
140	83	223	Bi	x	32240#	400#	7636#	2#	β^-	5160#	450#	223 034610#	430#
139	84		Po	x	27080#	200#	7655#	1#	β^-	3650#	200#	223 029070#	210#
138	85		At	x	23428	14	7668.06	0.06	β^-	3038	16	223 025151	15
137	86		Rn		20390	8	7678.17	0.04	β^-	2007	8	223 021889	8
136	87		Fr		18382.3	1.9	7683.666	0.009	β^-	1149.1	0.8	223 019734.2	2.1
135	88		Ra		17233.2	2.1	7685.310	0.009		*		223 018500.6	2.2
134	89		Ac	$-\alpha$	17825	7	7679.15	0.03	β^+	592	7	223 019136	7
133	90		Th	$-\alpha$	19385	8	7668.64	0.04	β^+	1560	10	223 020811	9
132	91		Pa	$-\alpha$	22340	80	7651.9	0.3	β^+	2950	80	223 023980	80
131	92		U	$-\alpha$	26050	60	7631.76	0.26	β^+	3710	100	223 027960	60
130	93		Np	$-\alpha$	30660	80	7607.6	0.4	β^+	4610	100	223 032910	90
129	94		Pu	x	36120#	300#	7580#	1#	β^+	5460#	310#	223 038780#	320#
128	95		Am	x	42700#	300#	7547#	1#	β^+	6580#	420#	223 045840#	320#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
141	83	224	Bi	x	37070#	400#	7616#	2#	β^-	7160#	450#	224 039800#	430#
140	84		Po	x	29910#	200#	7644#	1#	β^-	2200#	200#	224 032110#	210#
139	85		At	x	27711	22	7650.74	0.10	β^-	5266	24	224 029749	24
138	86		Rn		22445	10	7670.75	0.04	β^-	696	15	224 024096	11
137	87		Fr	x	21749	11	7670.37	0.05	β^-	2923	11	224 023348	12
136	88		Ra		18825.8	1.8	7679.924	0.008	β^-	-1408	4	224 020210.4	1.9
135	89		Ac	$-\alpha$	20234	4	7670.144	0.018	β^-	239	10	224 021722	4
134	90		Th	$-\alpha$	19996	10	7667.72	0.04		*		224 021466	10
133	91		Pa	$-\alpha$	23862	8	7646.96	0.03	β^+	3867	12	224 025617	8
132	92		U	$-\alpha$	25743	15	7635.07	0.07	β^+	1880	17	224 027636	16
131	93		Np		32032	29	7603.50	0.13	β^+	6290	30	224 034390	30
130	94		Pu	x	35280#	300#	7586#	1#	β^+	3250#	300#	224 037880#	320#
129	95		Am	x	43260#	400#	7546#	2#	β^+	7980#	500#	224 046440#	430#
141	84	225	Po	x	34580#	300#	7626#	1#	β^-	4280#	420#	225 037120#	320#
140	85		At	x	30300#	300#	7641#	1#	β^-	3770#	300#	225 032530#	320#
139	86		Rn		26534	11	7654.36	0.05	β^-	2714	16	225 028486	12
138	87		Fr		23821	12	7662.94	0.05	β^-	1828	12	225 025572	13
137	88		Ra		21993.0	2.6	7667.587	0.012	β^-	356	5	225 023610.5	2.8
136	89		Ac		21637	5	7665.691	0.021		*		225 023229	5
135	90		Th	$-\alpha$	22310	5	7659.223	0.023	β^+	673	7	225 023951	5
134	91		Pa	$-\alpha$	24360	80	7646.7	0.4	β^+	2050	80	225 026150	90
133	92		U	$-\alpha$	27372	10	7629.77	0.04	β^+	3020	80	225 029385	11
132	93		Np	$-\alpha$	31620	90	7607.4	0.4	β^+	4250	90	225 033940	100
131	94		Pu	x	36300#	300#	7583#	1#	β^+	4680#	310#	225 038970#	320#
130	95		Am	x	42390#	400#	7553#	2#	β^+	6090#	500#	225 045510#	430#
142	84	226	Po	x	37550#	400#	7614#	2#	β^-	2890#	500#	226 040310#	430#
141	85		At	x	34660#	300#	7624#	1#	β^-	5910#	300#	226 037210#	320#
140	86		Rn		28747	10	7646.41	0.05	β^-	1227	12	226 030861	11
139	87		Fr		27521	6	7648.377	0.028	β^-	3853	7	226 029545	7
138	88		Ra		23667.6	1.9	7661.964	0.009	β^-	-642	3	226 025408.2	2.1
137	89		Ac		24309	3	7655.663	0.014	β^-	1112	5	226 026097	3
136	90		Th		23198	4	7657.119	0.020		*		226 024904	5
135	91		Pa	$-\alpha$	26034	11	7641.11	0.05	β^+	2836	12	226 027948	12
134	92		U	$-\alpha$	27329	11	7631.92	0.05	β^+	1295	16	226 029339	12
133	93		Np	$-\alpha$	32820	100	7604.2	0.5	β^+	5490	100	226 035230	110
132	94		Pu	x	35630#	200#	7588#	1#	β^+	2810#	230#	226 038250#	220#
131	95		Am	x	42970#	300#	7552#	1#	β^+	7340#	360#	226 046130#	320#
143	84	227	Po	x	42280#	400#	7596#	2#	β^-	4850#	500#	227 045390#	430#
142	85		At	x	37430#	300#	7613#	1#	β^-	4540#	300#	227 040180#	320#
141	86		Rn		32886	14	7630.05	0.06	β^-	3203	15	227 035304	15
140	87		Fr		29682	6	7640.716	0.026	β^-	2505	6	227 031865	6
139	88		Ra	-n	27177.5	1.9	7648.305	0.009	β^-	1327.9	2.3	227 029176.2	2.1
138	89		Ac		25849.5	1.9	7650.708	0.008	β^-	44.8	0.8	227 027750.6	2.1
137	90		Th		25804.8	2.1	7647.459	0.009		*		227 027702.5	2.2
136	91		Pa	$-\alpha$	26830	7	7639.49	0.03	β^+	1026	7	227 028804	8
135	92		U	$-\alpha$	29045	9	7626.29	0.04	β^+	2215	11	227 031181	9
134	93		Np	$-\alpha$	32580	80	7607.3	0.3	β^+	3530	80	227 034980	80
133	94		Pu	x	36770#	100#	7585#	0#	β^+	4190#	130#	227 039470#	110#
132	95		Am	x	42180#	200#	7558#	1#	β^+	5410#	220#	227 045280#	220#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
143	85	228	At	x	41880#	400#	7596#	2#	β^-	6640#	400#	228 044960#	430#
142	86		Rn		35243	18	7621.65	0.08	β^-	1859	19	228 037835	19
141	87		Fr		33384	7	7626.369	0.030	β^-	4444	7	228 035839	7
140	88		Ra	$+\alpha$	28940.2	2.0	7642.429	0.009	β^-	45.5	0.6	228 031068.6	2.1
139	89		Ac	$-$	28894.7	2.1	7639.197	0.009	β^-	2123.8	2.6	228 031019.7	2.2
138	90		Th		26770.9	1.8	7645.081	0.008		*		228 028739.7	1.9
137	91		Pa	$-\alpha$	28924	4	7632.208	0.019	β^+	2153	4	228 031051	5
136	92		U	$-\alpha$	29220	13	7627.48	0.06	β^+	296	14	228 031369	14
135	93		Np	$-\alpha$	33830#	100#	7604#	0#	β^+	4610#	100#	228 036310#	110#
134	94		Pu	$-\alpha$	36108	23	7590.40	0.10	β^+	2280#	100#	228 038763	25
133	95		Am	x	42850#	200#	7557#	1#	β^+	6740#	200#	228 046000#	220#
144	85	229	At	x	44890#	400#	7585#	2#	β^-	5530#	400#	229 048190#	430#
143	86		Rn	x	39362	13	7605.62	0.06	β^-	3694	14	229 042257	14
142	87		Fr		35668	5	7618.338	0.022	β^-	3106	16	229 038291	5
141	88		Ra	x	32562	15	7628.49	0.07	β^-	1872	20	229 034957	17
140	89		Ac	x	30690	12	7633.24	0.05	β^-	1104	12	229 032947	13
139	90		Th		29585.5	2.4	7634.651	0.011		*		229 031761.4	2.6
138	91		Pa		29897	3	7629.875	0.014	β^+	311	4	229 032096	4
137	92		U	$-\alpha$	31211	6	7620.722	0.026	β^+	1314	7	229 033506	6
136	93		Np	$-\alpha$	33800	100	7606.0	0.4	β^+	2590	100	229 036290	110
135	94		Pu	$-\alpha$	37390	60	7586.88	0.26	β^+	3590	120	229 040150	70
134	95		Am	$-\alpha$	42180	110	7562.6	0.5	β^+	4790	120	229 045280	110
144	86	230	Rn	x	42170#	200#	7595#	1#	β^-	2680#	200#	230 045270#	220#
143	87		Fr		39487	7	7603.705	0.028	β^-	4970	12	230 042391	7
142	88		Ra	x	34516	10	7621.91	0.04	β^-	678	19	230 037055	11
141	89		Ac	x	33838	16	7621.46	0.07	β^-	2976	16	230 036327	17
140	90		Th		30862.5	1.2	7630.997	0.005	β^-	-1311.0	2.8	230 033132.3	1.3
139	91		Pa		32174	3	7621.896	0.013	β^-	559	5	230 034540	3
138	92		U	$-\alpha$	31615	5	7620.923	0.020		*		230 033940	5
137	93		Np	$-\alpha$	35240	60	7601.78	0.24	β^+	3620	60	230 037830	60
136	94		Pu	$-\alpha$	36932	14	7591.00	0.06	β^+	1700	60	230 039648	16
135	95		Am	$-\alpha$	42870#	140#	7562#	1#	β^+	5940#	140#	230 046030#	150#
145	86	231	Rn	x	46550#	300#	7579#	1#	β^-	4470#	300#	231 049970#	320#
144	87		Fr	x	42081	8	7594.50	0.03	β^-	3864	14	231 045175	8
143	88		Ra		38216	11	7607.84	0.05	β^-	2454	17	231 041027	12
142	89		Ac	x	35763	13	7615.08	0.06	β^-	1947	13	231 038393	14
141	90		Th		33815.8	1.2	7620.119	0.005	β^-	391.5	1.5	231 036302.8	1.3
140	91		Pa		33424.3	1.8	7618.427	0.008		*		231 035882.5	1.9
139	92		U	$-\alpha$	33806.0	2.7	7613.388	0.012	β^+	381.6	2.0	231 036292.2	2.9
138	93		Np	$-\alpha$	35620	50	7602.13	0.22	β^+	1820	50	231 038240	50
137	94		Pu	$-\alpha$	38309	22	7587.12	0.10	β^+	2680	60	231 041126	24
136	95		Am	x	42410#	300#	7566#	1#	β^+	4100#	300#	231 045530#	320#
135	96		Cm	x	47270#	300#	7542#	1#	β^+	4860#	420#	231 050750#	320#
145	87	232	Fr	x	46073	14	7579.35	0.06	β^-	5576	17	232 049461	15
144	88		Ra		40497	9	7600.01	0.04	β^-	1343	16	232 043475	10
143	89		Ac	x	39154	13	7602.42	0.06	β^-	3708	13	232 042034	14
142	90		Th		35446.7	1.4	7615.034	0.006	β^-	-500	8	232 038053.6	1.5
141	91		Pa	+	35947	8	7609.51	0.03	β^-	1337	7	232 038590	8
140	92		U		34609.4	1.8	7611.898	0.008		*		232 037154.8	1.9
139	93		Np	$-$	37360#	100#	7597#	0#	β^+	2750#	100#	232 040110#	110#
138	94		Pu	$-\alpha$	38361	17	7588.98	0.07	β^+	1000#	100#	232 041182	18
137	95		Am	x	43420#	300#	7564#	1#	β^+	5060#	300#	232 046610#	320#
136	96		Cm	$-\alpha$	46330#	200#	7548#	1#	β^+	2910#	360#	232 049740#	220#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
146	87	233	Fr	x	48920	20	7569.24	0.08	β^-	4586	21	233 052518	21
145	88		Ra		44334	9	7585.56	0.04	β^-	3026	16	233 047595	9
144	89		Ac	x	41308	13	7595.19	0.06	β^-	2576	13	233 044346	14
143	90		Th		38731.6	1.4	7602.894	0.006	β^-	1242.2	1.1	233 041580.1	1.5
142	91		Pa		37489.4	1.3	7604.867	0.006	β^-	570.3	2.0	233 040246.5	1.4
141	92		U		36919.1	2.3	7603.957	0.010		*		233 039634.3	2.4
140	93		Np	$-\alpha$	37950	50	7596.18	0.22	β^+	1030	50	233 040740	50
139	94		Pu	$-\alpha$	40050	50	7583.80	0.23	β^+	2100	70	233 043000	60
138	95		Am	$-\alpha$	43290#	110#	7567#	0#	β^+	3230#	130#	233 046470#	120#
137	96		Cm	$-\alpha$	47290	80	7546.0	0.3	β^+	4010#	140#	233 050770	90
136	97		Bk	$-\alpha$	52770#	230#	7519#	1#	β^+	5480#	250#	233 056650#	250#
146	88	234	Ra	x	46931	8	7576.54	0.04	β^-	2089	16	234 050382	9
145	89		Ac	x	44841	14	7582.13	0.06	β^-	4228	14	234 048139	15
144	90		Th	$+\alpha$	40613.0	2.6	7596.856	0.011	β^-	274	3	234 043599.8	2.8
143	91		Pa	IT	40339	4	7594.684	0.017	β^-	2194	4	234 043306	4
142	92		U		38145.0	1.1	7600.716	0.005		*		234 040950.3	1.2
141	93		Np	$-$	39955	8	7589.64	0.04	β^+	1810	8	234 042893	9
140	94		Pu	$-\alpha$	40350	7	7584.606	0.029	β^+	395	11	234 043317	7
139	95		Am	$-\alpha$	44460#	160#	7564#	1#	β^+	4110#	160#	234 047730#	170#
138	96		Cm	$-\alpha$	46722	17	7550.69	0.07	β^+	2260#	160#	234 050159	18
137	97		Bk	$-\alpha$	53400#	150#	7519#	1#	β^+	6670#	150#	234 057320#	160#
147	88	235	Ra	x	51130#	300#	7561#	1#	β^-	3770#	300#	235 054890#	320#
146	89		Ac	x	47357	14	7573.51	0.06	β^-	3339	19	235 050840	15
145	90		Th	x	44018	13	7584.39	0.06	β^-	1729	19	235 047255	14
144	91		Pa	x	42289	14	7588.41	0.06	β^-	1370	14	235 045399	15
143	92		U		40918.8	1.1	7590.915	0.005		*		235 043928.1	1.2
142	93		Np		41043.0	1.4	7587.057	0.006	β^+	124.3	0.9	235 044061.5	1.5
141	94		Pu	$-\alpha$	42182	21	7578.88	0.09	β^+	1139	20	235 045285	22
140	95		Am	$-\alpha$	44620	50	7565.16	0.22	β^+	2440	60	235 047910	60
139	96		Cm	$-\alpha$	48010#	100#	7547#	0#	β^+	3390#	120#	235 051550#	110#
138	97		Bk	x	52770#	400#	7524#	2#	β^+	4760#	410#	235 056650#	430#
147	89	236	Ac	x	51220	40	7559.24	0.16	β^-	4970	40	236 054990	40
146	90		Th	x	46255	14	7576.97	0.06	β^-	921	20	236 049657	15
145	91		Pa	x	45334	14	7577.56	0.06	β^-	2889	14	236 048668	15
144	92		U		42444.6	1.1	7586.485	0.005	β^-	-930	50	236 045566.1	1.2
143	93		Np	IT	43380	50	7579.21	0.21	β^-	480	50	236 046570	50
142	94		Pu		42901.5	1.8	7577.919	0.008		*		236 046056.7	1.9
141	95		Am	$-\alpha$	46040#	120#	7561#	1#	β^+	3140#	120#	236 049430#	130#
140	96		Cm	$-\alpha$	47853	18	7550.31	0.07	β^+	1810#	120#	236 051372	19
139	97		Bk	$-\alpha$	53540#	360#	7523#	2#	β^+	5690#	360#	236 057480#	390#
148	89	237	Ac	x	54020#	400#	7550#	2#	β^-	4070#	400#	237 057990#	430#
147	90		Th	x	49955	16	7563.44	0.07	β^-	2427	21	237 053629	17
146	91		Pa	x	47528	13	7570.38	0.06	β^-	2137	13	237 051023	14
145	92		U		45390.1	1.2	7576.103	0.005	β^-	518.5	0.5	237 048728.3	1.3
144	93		Np		44871.6	1.1	7574.989	0.005		*		237 048171.6	1.2
143	94		Pu		45091.7	1.7	7570.760	0.007	β^+	220.1	1.3	237 048407.9	1.8
142	95		Am	$-\alpha$	46570#	60#	7561#	0#	β^+	1480#	60#	237 050000#	60#
141	96		Cm	$-\alpha$	49250	70	7546.6	0.3	β^+	2680#	100#	237 052870	80
140	97		Bk	$-\alpha$	53210#	230#	7527#	1#	β^+	3960#	240#	237 057120#	250#
139	98		Cf	$-\alpha$	57940	100	7503.4	0.4	β^+	4730#	250#	237 062200	100

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
148	90	238	Th	$+\alpha$	52530#	280#	7555#	1#	β^-	1630#	280#	238 056390#	300#
147	91		Pa	x	50894	16	7558.34	0.07	β^-	3586	16	238 054637	17
146	92		U		47307.7	1.5	7570.126	0.006	β^-	-146.9	1.2	238 050786.9	1.6
145	93		Np	-n	47454.6	1.1	7566.222	0.005	β^-	1291.4	0.5	238 050944.6	1.2
144	94		Pu		46163.1	1.1	7568.361	0.005		*		238 049558.2	1.2
143	95		Am	$-\alpha$	48420	60	7555.59	0.25	β^+	2260	60	238 051980	60
142	96		Cm	$-\alpha$	49445	12	7548.00	0.05	β^+	1020	60	238 053082	13
141	97		Bk	$-\alpha$	54220#	260#	7525#	1#	β^+	4770#	260#	238 058200#	280#
140	98		Cf	x	57280#	300#	7509#	1#	β^+	3060#	390#	238 061490#	320#
149	90	239	Th	x	56500#	400#	7540#	2#	β^-	3160#	450#	239 060660#	430#
148	91		Pa	x	53340#	200#	7550#	1#	β^-	2770#	200#	239 057260#	210#
147	92		U	-n	50572.7	1.5	7558.562	0.006	β^-	1261.7	1.5	239 054292.0	1.6
146	93		Np		49311.0	1.3	7560.568	0.005	β^-	722.8	0.9	239 052937.5	1.4
145	94		Pu		48588.2	1.1	7560.319	0.005		*		239 052161.6	1.2
144	95		Am	$-\alpha$	49390.4	2.0	7553.689	0.008	β^+	802.1	1.7	239 053022.7	2.1
143	96		Cm	$-\alpha$	51150	150	7543.1	0.6	β^+	1760	150	239 054910	160
142	97		Bk	$-\alpha$	54250#	210#	7527#	1#	β^+	3100#	260#	239 058240#	220#
141	98		Cf	$-\alpha$	58200#	120#	7507#	1#	β^+	3950#	240#	239 062480#	130#
140	99		Es	x	63630#	300#	7481#	1#	β^+	5430#	320#	239 068310#	320#
149	91	240	Pa	x	57010#	200#	7537#	1#	β^-	4300#	200#	240 061200#	220#
148	92		U		52715.5	2.6	7551.770	0.011	β^-	399	17	240 056592.4	2.7
147	93		Np		52316	17	7550.17	0.07	β^-	2191	17	240 056164	18
146	94		Pu		50125.3	1.1	7556.043	0.005		*		240 053811.7	1.2
145	95		Am	+n	51510	14	7547.01	0.06	β^+	1385	14	240 055298	15
144	96		Cm		51724.2	1.9	7542.862	0.008	β^+	214	14	240 055528.2	2.0
143	97		Bk	$-$	55660#	150#	7523#	1#	β^+	3940#	150#	240 059760#	160#
142	98		Cf	$-\alpha$	57989	18	7510.24	0.08	β^+	2320#	150#	240 062253	19
141	99		Es	$-\alpha$	64230#	370#	7481#	2#	β^+	6240#	370#	240 068950#	390#
150	91	241	Pa	x	59740#	300#	7528#	1#	β^-	3540#	360#	241 064130#	320#
149	92		U	x	56200#	200#	7539#	1#	β^-	1880#	220#	241 060330#	210#
148	93		Np	+	54320	100	7544.0	0.4	β^-	1360	100	241 058310	110
147	94		Pu		52955.1	1.1	7546.440	0.005	β^-	20.78	0.17	241 056849.7	1.2
146	95		Am		52934.3	1.1	7543.279	0.005		*		241 056827.3	1.2
145	96		Cm		53701.8	1.6	7536.849	0.007	β^+	767.4	1.2	241 057651.2	1.7
144	97		Bk	$+\alpha$	55980#	170#	7524#	1#	β^+	2280#	170#	241 060100#	180#
143	98		Cf	$-\alpha$	59330#	170#	7507#	1#	β^+	3350#	240#	241 063690#	180#
142	99		Es	$-\alpha$	63890#	230#	7485#	1#	β^+	4570#	290#	241 068590#	250#
141	100		Fm	x	69220#	300#	7459#	1#	β^+	5330#	380#	241 074310#	320#
150	92	242	U	$+\alpha$	58620#	200#	7532#	1#	β^-	1200#	280#	242 062930#	220#
149	93		Np	+	57420	200	7533.4	0.8	β^-	2700	200	242 061640	210
148	94		Pu		54716.9	1.2	7541.328	0.005	β^-	-751.1	0.7	242 058741.0	1.3
147	95		Am	-n	55468.0	1.1	7534.992	0.005	β^-	664.3	0.4	242 059547.4	1.2
146	96		Cm		54803.7	1.1	7534.504	0.005		*		242 058834.2	1.2
145	97		Bk	IT	57750#	140#	7519#	1#	β^+	2950#	140#	242 062000#	140#
144	98		Cf	$-\alpha$	59387	13	7509.10	0.05	β^+	1640#	140#	242 063755	14
143	99		Es	$-\alpha$	64800#	260#	7483#	1#	β^+	5410#	260#	242 069570#	280#
142	100		Fm	x	68400#	400#	7465#	2#	β^+	3600#	480#	242 073430#	430#
151	92	243	U	x	62480#	300#	7518#	1#	β^-	2670#	300#	243 067080#	320#
150	93		Np	IT	59810#	30#	7526#	0#	β^-	2050#	30#	243 064200#	30#
149	94		Pu		57754.6	2.5	7531.009	0.010	β^-	579.6	2.6	243 062002.1	2.7
148	95		Am		57175.0	1.4	7530.174	0.006		*		243 061379.9	1.5
147	96		Cm	$-\alpha$	57181.9	1.5	7526.926	0.006	β^+	6.9	1.6	243 061387.3	1.6
146	97		Bk	$-\alpha$	58690	5	7517.502	0.019	β^+	1508	5	243 063006	5
145	98		Cf	$-\alpha$	60990#	180#	7505#	1#	β^+	2300#	180#	243 065480#	190#
144	99		Es	$-\alpha$	64750#	210#	7486#	1#	β^+	3760#	280#	243 069510#	220#
143	100		Fm	$-\alpha$	69320#	130#	7464#	1#	β^+	4570#	250#	243 074410#	140#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
151	93	244	Np	x	63240#	100#	7514#	0#	β^-	3430#	100#	244 067890#	110#
150	94		Pu		59806.0	2.3	7524.815	0.010	β^-	-73.1	2.7	244 064204.4	2.5
149	95		Am	+	59879.1	1.5	7521.309	0.006	β^-	1427.3	1.0	244 064282.9	1.6
148	96		Cm	$-\alpha$	58451.8	1.1	7523.953	0.005		*		244 062750.6	1.2
147	97		Bk	$-\alpha$	60714	14	7511.48	0.06	β^+	2262	14	244 065179	15
146	98		Cf		61478.1	2.6	7505.137	0.011	β^+	764	15	244 065999.4	2.8
145	99		Es	$-\alpha$	66030#	180#	7483#	1#	β^+	4550#	180#	244 070880#	200#
144	100		Fm	$-\alpha$	68960#	200#	7468#	1#	β^+	2940#	270#	244 074040#	220#
143	101		Md	$-\alpha$	75600#	370#	7438#	2#	β^+	6630#	430#	244 081160#	400#
152	93	245	Np	x	65850#	200#	7506#	1#	β^-	2670#	200#	245 070690#	220#
151	94		Pu	-n	63178	14	7513.28	0.06	β^-	1278	14	245 067825	15
150	95		Am	$+\alpha$	61900.4	1.9	7515.304	0.008	β^-	895.9	1.5	245 066452.8	2.0
149	96		Cm		61004.5	1.1	7515.768	0.005		*		245 065491.0	1.2
148	97		Bk	$-\alpha$	61813.8	1.8	7509.271	0.007	β^+	809.3	1.5	245 066359.8	1.9
147	98		Cf		63385.2	2.4	7499.664	0.010	β^+	1571.4	2.6	245 068046.8	2.6
146	99		Es	IT	66320#	170#	7485#	1#	β^+	2930#	170#	245 071190#	180#
145	100		Fm	$-\alpha$	70190#	200#	7465#	1#	β^+	3880#	260#	245 075350#	210#
144	101		Md	$-\alpha$	75330#	260#	7441#	1#	β^+	5130#	330#	245 080860#	280#
152	94	246	Pu		65395	15	7506.54	0.06	β^-	401#	14#	246 070204	16
151	95		Am	IT	64994#	18#	7505#	0#	β^-	2377#	18#	246 069774#	19#
150	96		Cm		62616.9	1.5	7511.472	0.006		*		246 067222.0	1.6
149	97		Bk	$-$	63970	60	7502.80	0.24	β^+	1350	60	246 068670	60
148	98		Cf		64090.2	1.5	7499.122	0.006	β^+	120	60	246 068803.7	1.6
147	99		Es		67820	90	7480.8	0.4	β^+	3730	90	246 072810	100
146	100		Fm	$-\alpha$	70191	14	7467.96	0.06	β^+	2370	90	246 075353	15
145	101		Md	$-\alpha$	76120#	260#	7441#	1#	β^+	5920#	260#	246 081710#	280#
153	94	247	Pu	x	69210#	200#	7493#	1#	β^-	2060#	220#	247 074300#	220#
152	95		Am	+	67150#	100#	7499#	0#	β^-	1620#	100#	247 072090#	110#
151	96		Cm		65533	4	7501.932	0.015	β^-	44	6	247 070353	4
150	97		Bk	$-\alpha$	65490	5	7498.941	0.021		*		247 070306	6
149	98		Cf	$+\alpha$	66109	14	7493.26	0.06	β^+	620	15	247 070971	15
148	99		Es	$+\alpha$	68578	19	7480.10	0.08	β^+	2469	24	247 073622	21
147	100		Fm	$+\alpha$	71670#	180#	7464#	1#	β^+	3090#	180#	247 076940#	190#
146	101		Md	$-\alpha$	75940#	210#	7444#	1#	β^+	4260#	280#	247 081520#	220#
153	95	248	Am	+	70560#	200#	7487#	1#	β^-	3170#	200#	248 075750#	220#
152	96		Cm		67392.7	2.4	7496.729	0.010	β^-	-740	50	248 072349.1	2.5
151	97		Bk	$+\alpha$	68130	50	7490.60	0.20	β^-	890	50	248 073140	50
150	98		Cf	$-\alpha$	67238	5	7491.044	0.021		*		248 072183	5
149	99		Es	$-\alpha$	70300#	50#	7476#	0#	β^+	3060#	50#	248 075470#	60#
148	100		Fm		71898	8	7465.95	0.03	β^+	1600#	50#	248 077185	9
147	101		Md	$-\alpha$	76950#	180#	7442#	1#	β^+	5050#	180#	248 082610#	200#
146	102		No	$-\alpha$	80690#	220#	7424#	1#	β^+	3740#	290#	248 086620#	240#
154	95	249	Am	x	73100#	300#	7479#	1#	β^-	2350#	300#	249 078480#	320#
153	96		Cm	-n	70750.7	2.4	7485.551	0.010	β^-	904.4	2.6	249 075954.0	2.5
152	97		Bk	+	69846.3	1.2	7486.041	0.005	β^-	123.6	0.4	249 074983.1	1.3
151	98		Cf		69722.7	1.2	7483.395	0.005		*		249 074850.4	1.3
150	99		Es	$-\alpha$	71180#	30#	7474#	0#	β^+	1450#	30#	249 076410#	30#
149	100		Fm		73519	6	7461.865	0.025	β^+	2340#	30#	249 078926	7
148	101		Md		77180	160	7444.0	0.7	β^+	3660	160	249 082860	180
147	102		No	$-\alpha$	81790#	280#	7422#	1#	β^+	4610#	320#	249 087800#	300#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
154	96	250	Cm	-nn	72990	10	7478.94	0.04	β^-	38	11	250 078358	11
153	97		Bk	$+\alpha$	72952.0	2.9	7475.959	0.012	β^-	1781.7	2.5	250 078317	3
152	98		Cf	$-\alpha$	71170.3	1.5	7479.957	0.006		*		250 076404.5	1.7
151	99		Es	–	73230#	100#	7469#	0#	β^+	2060#	100#	250 078610#	110#
150	100		Fm		74072	8	7462.09	0.03	β^+	850#	100#	250 079520	8
149	101		Md		78400	90	7441.7	0.4	β^+	4330	90	250 084160	100
148	102		No	$-\alpha$	81570#	200#	7426#	1#	β^+	3170#	220#	250 087570#	220#
155	96	251	Cm	+	76648	23	7466.72	0.09	β^-	1420	20	251 082285	24
154	97		Bk	+	75228	11	7469.26	0.04	β^-	1093	10	251 080761	12
153	98		Cf	$-\alpha$	74135	4	7470.501	0.016		*		251 079587	4
152	99		Es	$-\alpha$	74512	5	7465.884	0.021	β^+	377	6	251 079991	6
151	100		Fm		75959	14	7457.00	0.06	β^+	1447	15	251 081545	15
150	101		Md	$+\alpha$	78967	19	7441.90	0.08	β^+	3008	24	251 084774	20
149	102		No	IT	82850#	180#	7423#	1#	β^+	3880#	180#	251 088940#	190#
148	103		Lr	x	87830#	200#	7400#	1#	β^+	4980#	270#	251 094290#	220#
156	96	252	Cm	x	79060#	300#	7460#	1#	β^-	520#	360#	252 084870#	320#
155	97		Bk	+	78540#	200#	7459#	1#	β^-	2500#	200#	252 084310#	220#
154	98		Cf	$-\alpha$	76034.6	2.4	7465.347	0.009	β^-	-1260	50	252 081626.5	2.5
153	99		Es	–	77290	50	7457.24	0.20	β^-	480	50	252 082980	50
152	100		Fm	$-\alpha$	76817	5	7456.035	0.021		*		252 082466	6
151	101		Md	x	80470	90	7438.4	0.4	β^+	3650	90	252 086390	100
150	102		No		82871	9	7425.80	0.04	β^+	2400	90	252 088966	10
149	103		Lr	$-\alpha$	88540#	190#	7400#	1#	β^+	5670#	190#	252 095050#	200#
156	97	253	Bk	$-\alpha$	80930#	360#	7451#	1#	β^-	1630#	360#	253 086880#	390#
155	98		Cf	$-\alpha$	79302	4	7454.830	0.017	β^-	291	4	253 085134	5
154	99		Es	$-\alpha$	79010.5	1.2	7452.888	0.005		*		253 084821.2	1.3
153	100		Fm	$-\alpha$	79345.5	1.5	7448.471	0.006	β^+	335.1	1.1	253 085180.9	1.7
152	101		Md	$-\alpha$	81170#	30#	7438#	0#	β^+	1830#	30#	253 087140#	30#
151	102		No		84359	7	7422.472	0.027	β^+	3190#	30#	253 090563	7
150	103		Lr		88520	160	7402.9	0.7	β^+	4160	160	253 095030	180
149	104		Rf	$-\alpha$	93640#	410#	7380#	2#	β^+	5120#	440#	253 100530#	440#
157	97	254	Bk	x	84390#	300#	7440#	1#	β^-	3050#	300#	254 090600#	320#
156	98		Cf	$-\alpha$	81341	11	7449.23	0.05	β^-	-653	12	254 087324	12
155	99		Es	$-\alpha$	81994.2	2.9	7443.576	0.012	β^-	1091.6	2.3	254 088024	3
154	100		Fm	$-\alpha$	80902.5	1.8	7444.794	0.007		*		254 086852.4	2.0
153	101		Md	–	83450#	100#	7432#	0#	β^+	2550#	100#	254 089590#	110#
152	102		No		84723	10	7423.59	0.04	β^+	1270#	100#	254 090954	10
151	103		Lr	$-\alpha$	89650	90	7401.1	0.4	β^+	4920	90	254 096240	100
150	104		Rf	$-\alpha$	93200#	280#	7384#	1#	β^+	3560#	300#	254 100060#	300#
157	98	255	Cf	+	84810#	200#	7438#	1#	β^-	720#	200#	255 091050#	220#
156	99		Es	$-\alpha$	84089	11	7437.82	0.04	β^-	289	10	255 090274	12
155	100		Fm	$-\alpha$	83800	4	7435.886	0.015		*		255 089963	4
154	101		Md	$-\alpha$	84842	6	7428.733	0.022	β^+	1042	7	255 091082	6
153	102		No		86812	14	7417.94	0.06	β^+	1970	15	255 093196	15
152	103		Lr	x	89947	18	7402.58	0.07	β^+	3135	23	255 096562	19
151	104		Rf	$-\alpha$	94330#	180#	7382#	1#	β^+	4380#	180#	255 101270#	190#
150	105		Db	$-\alpha$	99600#	280#	7359#	1#	β^+	5270#	340#	255 106920#	300#
158	98	256	Cf	$-\alpha$	87040#	310#	7432#	1#	β^-	-140#	330#	256 093440#	340#
157	99		Es	+	87190#	100#	7428#	0#	β^-	1700#	100#	256 093600#	110#
156	100		Fm	$-\alpha$	85485	3	7431.789	0.012		*		256 091772	3
155	101		Md	IT	87460#	120#	7421#	0#	β^+	1970#	120#	256 093890#	130#
154	102		No	$-\alpha$	87823	8	7416.543	0.029	β^+	370#	120#	256 094282	8
153	103		Lr	x	91750	80	7398.2	0.3	β^+	3920	80	256 098490	90
152	104		Rf	$-\alpha$	94222	18	7385.43	0.07	β^+	2480	80	256 101151	19
151	105		Db	$-\alpha$	100300#	190#	7359#	1#	β^+	6080#	190#	256 107670#	200#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
158	99	257	Es	$-\alpha$	89400#	410#	7422#	2#	β^-	810#	410#	257 095980#	440#
157	100		Fm	$-\alpha$	88590	4	7422.194	0.017		*		257 095105	5
156	101		Md	$-\alpha$	88992.5	1.6	7417.585	0.006	β^+	402	5	257 095537.3	1.7
155	102		No	$-\alpha$	90247	6	7409.659	0.024	β^+	1255	6	257 096884	7
154	103		Lr	$-\alpha$	92670#	40#	7397#	0#	β^+	2420#	50#	257 099480#	50#
153	104		Rf	$-\alpha$	95866	11	7381.71	0.04	β^+	3200#	50#	257 102917	12
152	105		Db		100150	160	7362.0	0.6	β^+	4290	160	257 107520	180
159	99	258	Es	x	92700#	400#	7412#	2#	β^-	2280#	450#	258 099520#	430#
158	100		Fm	$-\alpha$	90430#	200#	7418#	1#	β^-	-1260#	200#	258 097080#	220#
157	101		Md	$-\alpha$	91690	3	7409.661	0.013	β^-	210#	100#	258 098434	4
156	102		No	$-\alpha$	91480#	100#	7407#	0#		*		258 098210#	110#
155	103		Lr	$-\alpha$	94780#	100#	7392#	0#	β^+	3300#	140#	258 101750#	110#
154	104		Rf	$-\alpha$	96344	16	7382.53	0.06	β^+	1560#	100#	258 103430	17
153	105		Db	$-\alpha$	101510	90	7359.5	0.4	β^+	5160	90	258 108970	100
152	106		Sg	$-\alpha$	105300#	410#	7342#	2#	β^+	3790#	420#	258 113040#	440#
159	100	259	Fm	$-\alpha$	93700#	280#	7407#	1#	β^-	140#	300#	259 100600#	300#
158	101		Md	$-\alpha$	93560#	100#	7405#	0#		*		259 100450#	110#
157	102		No	$-\alpha$	94079	6	7399.971	0.025	β^+	520#	100#	259 100998	7
156	103		Lr	$-\alpha$	95850#	70#	7390#	0#	β^+	1770#	70#	259 102900#	80#
155	104		Rf	$-\alpha$	98370#	70#	7377#	0#	β^+	2520#	100#	259 105600#	80#
154	105		Db	$-\alpha$	101990	60	7360.36	0.22	β^+	3620#	90#	259 109490	60
153	106		Sg	$-\alpha$	106520#	180#	7340#	1#	β^+	4530#	190#	259 114350#	190#
160	100	260	Fm	$-\alpha$	95770#	440#	7402#	2#	β^-	-780#	540#	260 102810#	470#
159	101		Md	$-\alpha$	96550#	320#	7396#	1#	β^-	940#	370#	260 103650#	340#
158	102		No	$-\alpha$	95610#	200#	7397#	1#		*		260 102640#	220#
157	103		Lr	$-\alpha$	98280#	130#	7383#	0#	β^+	2670#	240#	260 105500#	130#
156	104		Rf	$-\alpha$	99150#	200#	7377#	1#	β^+	870#	240#	260 106440#	220#
155	105		Db	$-\alpha$	103670#	90#	7357#	0#	β^+	4530#	220#	260 111300#	100#
154	106		Sg	$-\alpha$	106547	21	7342.56	0.08	β^+	2880#	100#	260 114383	22
153	107		Bh	$-\alpha$	113120#	200#	7314#	1#	β^+	6580#	200#	260 121440#	210#
160	101	261	Md	$-\alpha$	98580#	510#	7391#	2#	β^-	120#	550#	261 105830#	550#
159	102		No	$-\alpha$	98460#	200#	7388#	1#		*		261 105700#	220#
158	103		Lr	$-\alpha$	99560#	200#	7381#	1#	β^+	1100#	280#	261 106880#	220#
157	104		Rf	$-\alpha$	101320	70	7371.39	0.25	β^+	1760#	210#	261 108770	70
156	105		Db	$-\alpha$	104310#	110#	7357#	0#	β^+	2990#	130#	261 111980#	120#
155	106		Sg	$-\alpha$	108005	18	7339.77	0.07	β^+	3700#	110#	261 115948	20
154	107		Bh	$-\alpha$	113080	180	7317.3	0.7	β^+	5070	180	261 121400	190
161	101	262	Md	$-\alpha$	101670#	450#	7382#	2#	β^-	1570#	580#	262 109140#	480#
160	102		No	$-\alpha$	100100#	360#	7385#	1#		*		262 107460#	390#
159	103		Lr	$-\alpha$	102110#	200#	7374#	1#	β^+	2000#	410#	262 109620#	220#
158	104		Rf	$-\alpha$	102390#	220#	7370#	1#	β^+	290#	300#	262 109920#	240#
157	105		Db	$-\alpha$	106250#	140#	7352#	1#	β^+	3860#	270#	262 114070#	150#
156	106		Sg	$-\alpha$	108369	22	7341.17	0.08	β^+	2120#	150#	262 116339	24
155	107		Bh	$-\alpha$	114250	90	7315.7	0.4	β^+	5880	100	262 122650	100
161	102	263	No	$-\alpha$	103130#	490#	7376#	2#		*		263 110710#	530#
160	103		Lr	$-\alpha$	103670#	220#	7371#	1#	β^+	540#	540#	263 111290#	240#
159	104		Rf	$-\alpha$	104760#	150#	7364#	1#	β^+	1090#	270#	263 112460#	160#
158	105		Db	$-\alpha$	107110#	170#	7352#	1#	β^+	2350#	230#	263 114990#	180#
157	106		Sg	$-\alpha$	110200#	100#	7337#	0#	β^+	3090#	190#	263 118300#	100#
156	107		Bh	$-\alpha$	114500#	310#	7318#	1#	β^+	4300#	320#	263 122920#	330#
155	108		Hs	$-\alpha$	119680#	200#	7295#	1#	β^+	5180#	360#	263 128480#	210#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
162	102	264	No	$-\alpha$	105010#	590#	7371#	2#	β^-	-1360#	730#	264 112730#	630#
161	103		Lr	$-\alpha$	106380#	440#	7363#	2#	β^-	300#	570#	264 114200#	470#
160	104		Rf	$-\alpha$	106080#	360#	7361#	1#		*		264 113880#	390#
159	105		Db	$-\alpha$	109260#	240#	7346#	1#	β^+	3190#	430#	264 117300#	250#
158	106		Sg	$-\alpha$	110780#	280#	7338#	1#	β^+	1520#	370#	264 118930#	300#
157	107		Bh	$-\alpha$	115960#	180#	7315#	1#	β^+	5180#	330#	264 124490#	190#
156	108		Hs	$-\alpha$	119563	29	7298.38	0.11	β^+	3610#	180#	264 128360	30
162	103	265	Lr	$-\alpha$	108230#	550#	7359#	2#		*		265 116190#	590#
161	104		Rf	$-\alpha$	108690#	360#	7354#	1#	β^+	460#	660#	265 116680#	390#
160	105		Db	$-\alpha$	110380#	220#	7345#	1#	β^+	1690#	420#	265 118500#	240#
159	106		Sg	$-\alpha$	112790#	140#	7333#	1#	β^+	2410#	260#	265 121090#	150#
158	107		Bh	$-\alpha$	116400#	240#	7316#	1#	β^+	3600#	280#	265 124960#	260#
157	108		Hs	$-\alpha$	120900	24	7296.25	0.09	β^+	4510#	240#	265 129792	26
156	109		Mt	$-\alpha$	126620#	440#	7272#	2#	β^+	5720#	440#	265 135940#	470#
163	103	266	Lr	$-\alpha$	111660#	540#	7349#	2#	β^-	1530#	680#	266 119870#	580#
162	104		Rf	$-\alpha$	110140#	410#	7351#	2#		*		266 118240#	440#
161	105		Db	$-\alpha$	112740#	280#	7339#	1#	β^+	2600#	500#	266 121030#	300#
160	106		Sg	$-\alpha$	113620#	250#	7332#	1#	β^+	880#	370#	266 121970#	260#
159	107		Bh	$-\alpha$	118100#	160#	7313#	1#	β^+	4490#	290#	266 126790#	180#
158	108		Hs	$-\alpha$	121140	27	7298.26	0.10	β^+	3040#	170#	266 130049	29
157	109		Mt	$-\alpha$	127670	100	7270.8	0.4	β^+	6530	100	266 137060	100
163	104	267	Rf	$-\alpha$	113440#	580#	7342#	2#		*		267 121790#	620#
162	105		Db	$-\alpha$	114010#	370#	7337#	1#	β^+	570#	690#	267 122400#	400#
161	106		Sg	$-\alpha$	115810#	260#	7327#	1#	β^+	1790#	460#	267 124320#	280#
160	107		Bh	$-\alpha$	118770#	260#	7313#	1#	β^+	2960#	370#	267 127500#	280#
159	108		Hs	$-\alpha$	122660#	100#	7295#	0#	β^+	3890#	280#	267 131680#	100#
158	109		Mt	$-\alpha$	127790#	500#	7273#	2#	β^+	5130#	510#	267 137190#	540#
157	110		Ds	$-\alpha$	133880#	200#	7248#	1#	β^+	6090#	540#	267 143730#	220#
164	104	268	Rf	$-\alpha$	115480#	660#	7337#	2#	β^-	-1580#	850#	268 123970#	710#
163	105		Db	$-\alpha$	117060#	530#	7328#	2#	β^-	260#	710#	268 125670#	570#
162	106		Sg	$-\alpha$	116800#	470#	7326#	2#		*		268 125390#	500#
161	107		Bh	$-\alpha$	120710#	380#	7309#	1#	β^+	3910#	610#	268 129580#	410#
160	108		Hs	$-\alpha$	122970#	300#	7297#	1#	β^+	2260#	490#	268 132010#	320#
159	109		Mt	$-\alpha$	129150#	230#	7271#	1#	β^+	6180#	380#	268 138650#	250#
158	110		Ds	$-\alpha$	133650#	300#	7252#	1#	β^+	4500#	380#	268 143480#	320#
164	105	269	Db	$-\alpha$	119150#	620#	7323#	2#		*		269 127910#	670#
163	106		Sg	$-\alpha$	119690#	370#	7318#	1#	β^+	540#	720#	269 128500#	400#
162	107		Bh	$-\alpha$	121480#	370#	7309#	1#	β^+	1790#	530#	269 130410#	400#
161	108		Hs	$-\alpha$	124490#	130#	7294#	0#	β^+	3020#	400#	269 133650#	140#
160	109		Mt	$-\alpha$	129300#	310#	7274#	1#	β^+	4810#	340#	269 138810#	340#
159	110		Ds	$-\alpha$	134830	30	7250.16	0.12	β^+	5540#	310#	269 144750	30
165	105	270	Db	$-\alpha$	122400#	580#	7314#	2#	β^-	970#	740#	270 131400#	620#
164	106		Sg	$-\alpha$	121430#	460#	7314#	2#		*		270 130360#	490#
163	107		Bh	$-\alpha$	124230#	300#	7301#	1#	β^+	2800#	550#	270 133370#	320#
162	108		Hs	$-\alpha$	125110#	250#	7295#	1#	β^+	880#	390#	270 134310#	270#
161	109		Mt	$-\alpha$	130710#	190#	7271#	1#	β^+	5600#	310#	270 140320#	210#
160	110		Ds	$-\alpha$	134680	40	7253.76	0.15	β^+	3970#	200#	270 144590	40
165	106	271	Sg	$-\alpha$	124620#	590#	7305#	2#		*		271 133780#	630#
164	107		Bh	$-\alpha$	125860#	380#	7298#	1#	β^+	1240#	710#	271 135120#	410#
163	108		Hs	$-\alpha$	127690#	280#	7288#	1#	β^+	1830#	470#	271 137080#	300#
162	109		Mt	$-\alpha$	131100#	330#	7273#	1#	β^+	3410#	430#	271 140740#	350#
161	110		Ds	$-\alpha$	135950#	100#	7252#	0#	β^+	4850#	340#	271 145950#	100#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
166	106	272	Sg	$-\alpha$	126520#	690#	7301#	3#		*		272 135830#	740#
165	107		Bh	$-\alpha$	128790#	530#	7290#	2#	β^+	2270#	870#	272 138260#	570#
164	108		Hs	$-\alpha$	129000#	510#	7286#	2#	β^+	220#	740#	272 138490#	550#
163	109		Mt	$-\alpha$	133480#	490#	7267#	2#	β^+	4480#	700#	272 143300#	520#
162	110		Ds	$-\alpha$	136080#	420#	7255#	2#	β^+	2600#	650#	272 146090#	460#
161	111		Rg	$-\alpha$	142770#	230#	7227#	1#	β^+	6690#	480#	272 153270#	250#
167	106	273	Sg	x	129920#	400#	7292#	1#		*		273 139480#	430#
166	107		Bh	$-\alpha$	130680#	660#	7286#	2#	β^+	760#	770#	273 140290#	700#
165	108		Hs	$-\alpha$	131770#	370#	7279#	1#	β^+	1080#	750#	273 141460#	400#
164	109		Mt	$-\alpha$	134780#	420#	7265#	2#	β^+	3020#	570#	273 144700#	460#
163	110		Ds	$-\alpha$	138290#	140#	7250#	1#	β^+	3500#	450#	273 148460#	150#
162	111		Rg	$-\alpha$	142890#	400#	7230#	1#	β^+	4600#	420#	273 153390#	430#
167	107	274	Bh	$-\alpha$	133760#	580#	7278#	2#	β^-	360#	740#	274 143600#	620#
166	108		Hs	$-\alpha$	133410#	470#	7276#	2#		*		274 143220#	500#
165	109		Mt	$-\alpha$	137250#	380#	7259#	1#	β^+	3840#	600#	274 147340#	400#
164	110		Ds	$-\alpha$	139200#	390#	7249#	1#	β^+	1950#	540#	274 149430#	420#
163	111		Rg	$-\alpha$	144610#	210#	7227#	1#	β^+	5420#	440#	274 155250#	230#
168	107	275	Bh	x	135780#	600#	7273#	2#		*		275 145770#	640#
167	108		Hs	$-\alpha$	136490#	590#	7268#	2#	β^+	710#	840#	275 146530#	640#
166	109		Mt	$-\alpha$	138770#	390#	7257#	1#	β^+	2280#	710#	275 148970#	420#
165	110		Ds	$-\alpha$	141670#	340#	7243#	1#	β^+	2900#	520#	275 152090#	370#
164	111		Rg	$-\alpha$	145400#	450#	7227#	2#	β^+	3730#	560#	275 156090#	480#
169	107	276	Bh	x	138950#	600#	7265#	2#	β^-	770#	940#	276 149170#	640#
168	108		Hs	$-\alpha$	138190#	720#	7265#	3#		*		276 148350#	770#
167	109		Mt	$-\alpha$	141310#	530#	7250#	2#	β^+	3130#	900#	276 151710#	570#
166	110		Ds	$-\alpha$	142540#	550#	7243#	2#	β^+	1230#	760#	276 153020#	590#
165	111		Rg	$-\alpha$	147390#	630#	7223#	2#	β^+	4850#	830#	276 158230#	680#
164	112		Cn	x	150360#	500#	7209#	2#	β^+	2970#	800#	276 161420#	540#
170	107	277	Bh	x	141100#	600#	7260#	2#		*		277 151480#	640#
169	108		Hs	$-\alpha$	141380#	450#	7256#	2#	β^+	280#	750#	277 151770#	480#
168	109		Mt	$-\alpha$	143010#	660#	7247#	2#	β^+	1630#	800#	277 153530#	710#
167	110		Ds	$-\alpha$	145090#	390#	7237#	1#	β^+	2080#	770#	277 155760#	420#
166	111		Rg	$-\alpha$	148410#	470#	7222#	2#	β^+	3320#	610#	277 159320#	500#
165	112		Cn	$-\alpha$	152330#	150#	7205#	1#	β^+	3930#	490#	277 163540#	170#
171	107	278	Bh	x	144370#	400#	7251#	1#	β^-	1150#	500#	278 154990#	430#
170	108		Hs	x	143220#	300#	7252#	1#		*		278 153750#	320#
169	109		Mt	$-\alpha$	145770#	580#	7240#	2#	β^+	2550#	650#	278 156490#	620#
168	110		Ds	$-\alpha$	146250#	510#	7236#	2#	β^+	480#	770#	278 157010#	550#
167	111		Rg	$-\alpha$	150520#	390#	7218#	1#	β^+	4270#	640#	278 161590#	420#
166	112		Cn	$-\alpha$	152840#	440#	7206#	2#	β^+	2320#	590#	278 164080#	470#
165	113		Nh	$-\alpha$	159030#	220#	7181#	1#	β^+	6190#	490#	278 170730#	240#
171	108	279	Hs	x	146500#	600#	7243#	2#		*		279 157270#	640#
170	109		Mt	$-\alpha$	147590#	670#	7237#	2#	β^+	1090#	900#	279 158440#	720#
169	110		Ds	$-\alpha$	149020#	610#	7229#	2#	β^+	1440#	900#	279 159980#	650#
168	111		Rg	$-\alpha$	151720#	420#	7216#	2#	β^+	2700#	740#	279 162880#	450#
167	112		Cn	$-\alpha$	155020#	400#	7202#	1#	β^+	3300#	580#	279 166420#	420#
166	113		Nh	x	159460#	600#	7183#	2#	β^+	4440#	720#	279 171190#	640#
172	108	280	Hs	x	148420#	600#	7239#	2#	β^-	-2090#	850#	280 159340#	640#
171	109		Mt	x	150510#	600#	7229#	2#	β^-	190#	960#	280 161580#	640#
170	110		Ds	$-\alpha$	150320#	750#	7227#	3#		*		280 161380#	800#
169	111		Rg	$-\alpha$	153890#	530#	7212#	2#	β^+	3570#	920#	280 165200#	570#
168	112		Cn	$-\alpha$	155650#	580#	7202#	2#	β^+	1770#	790#	280 167100#	630#
167	113		Nh	x	161240#	400#	7180#	1#	β^+	5590#	710#	280 173100#	430#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
172	109	281	Mt	x	152400#	600#	7225#	2#		*		281 163610#	640#
171	110		Ds	$-\alpha$	153270#	490#	7220#	2#	β^+	870#	780#	281 164550#	530#
170	111		Rg	$-\alpha$	155330#	770#	7209#	3#	β^+	2060#	920#	281 166760#	830#
169	112		Cn	$-\alpha$	157950#	400#	7197#	1#	β^+	2610#	870#	281 169560#	430#
168	113		Nh	x	161810#	300#	7181#	1#	β^+	3860#	500#	281 173710#	320#
173	109	282	Mt	$-\alpha$	155460#	450#	7218#	2#	β^-	670#	540#	282 166890#	480#
172	110		Ds	x	154790#	300#	7217#	1#		*		282 166170#	320#
171	111		Rg	$-\alpha$	157740#	590#	7204#	2#	β^+	2950#	660#	282 169340#	630#
170	112		Cn	$-\alpha$	158830#	550#	7197#	2#	β^+	1080#	800#	282 170510#	590#
169	113		Nh	$-\alpha$	163730#	400#	7177#	1#	β^+	4900#	680#	282 175770#	430#
173	110	283	Ds	x	157830#	500#	7210#	2#		*		283 169440#	540#
172	111		Rg	$-\alpha$	159380#	680#	7201#	2#	β^+	1550#	840#	283 171100#	730#
171	112		Cn	$-\alpha$	161340#	620#	7192#	2#	β^+	1960#	920#	283 173200#	660#
170	113		Nh	$-\alpha$	164560#	440#	7177#	2#	β^+	3230#	750#	283 176670#	470#
174	110	284	Ds	x	159460#	500#	7207#	2#		*		284 171190#	540#
173	111		Rg	x	161970#	500#	7195#	2#	β^+	2510#	710#	284 173880#	540#
172	112		Cn	$-\alpha$	162420#	760#	7191#	3#	β^+	450#	910#	284 174360#	820#
171	113		Nh	$-\alpha$	166590#	530#	7173#	2#	β^+	4180#	930#	284 178840#	570#
170	114		Fl	$-\alpha$	168780#	660#	7163#	2#	β^+	2190#	850#	284 181190#	700#
174	111	285	Rg	x	163730#	600#	7192#	2#		*		285 175770#	640#
173	112		Cn	$-\alpha$	165090#	510#	7185#	2#	β^+	1360#	790#	285 177230#	540#
172	113		Nh	$-\alpha$	167770#	780#	7172#	3#	β^+	2680#	930#	285 180110#	830#
171	114		Fl	$-\alpha$	170930#	400#	7159#	1#	β^+	3160#	870#	285 183500#	430#
175	111	286	Rg	$-\alpha$	166510#	460#	7185#	2#	β^-	60#	840#	286 178760#	490#
174	112		Cn	x	166450#	700#	7183#	2#		*		286 178690#	750#
173	113		Nh	$-\alpha$	169960#	590#	7168#	2#	β^+	3510#	920#	286 182460#	630#
172	114		Fl	$-\alpha$	171610#	550#	7159#	2#	β^+	1650#	810#	286 184230#	590#
175	112	287	Cn	x	169370#	700#	7176#	2#		*		287 181830#	750#
174	113		Nh	$-\alpha$	171460#	710#	7166#	2#	β^+	2090#	1000#	287 184060#	760#
173	114		Fl	$-\alpha$	173930#	620#	7155#	2#	β^+	2470#	940#	287 186720#	660#
172	115		Mc	$-\alpha$	177750#	440#	7139#	2#	β^+	3820#	760#	287 190820#	480#
176	112	288	Cn	x	170930#	700#	7174#	2#		*		288 183500#	750#
175	113		Nh	x	173970#	700#	7160#	2#	β^+	3040#	990#	288 186760#	750#
174	114		Fl	$-\alpha$	174920#	760#	7154#	3#	β^+	950#	1040#	288 187780#	820#
173	115		Mc	$-\alpha$	179670#	540#	7135#	2#	β^+	4750#	930#	288 192880#	580#
176	113	289	Nh	x	175550#	500#	7158#	2#		*		289 188460#	540#
175	114		Fl	$-\alpha$	177470#	510#	7149#	2#	β^+	1920#	720#	289 190520#	550#
174	115		Mc	$-\alpha$	180680#	780#	7135#	3#	β^+	3220#	930#	289 193970#	830#
173	116		Lv	$-\alpha$	184460#	500#	7119#	2#	β^+	3770#	930#	289 198020#	540#
177	113	290	Nh	$-\alpha$	178320#	470#	7152#	2#		*		290 191430#	500#
176	114		Fl	$-\alpha$	178730#	700#	7147#	2#	β^+	420#	840#	290 191880#	750#
175	115		Mc	$-\alpha$	182790#	590#	7131#	2#	β^+	4060#	920#	290 196240#	640#
174	116		Lv	$-\alpha$	185030#	550#	7120#	2#	β^+	2240#	810#	290 198640#	590#
177	114	291	Fl	x	181500#	700#	7141#	2#		*		291 194850#	750#
176	115		Mc	$-\alpha$	184180#	740#	7129#	3#	β^+	2680#	1020#	291 197730#	790#
175	116		Lv	$-\alpha$	187240#	620#	7116#	2#	β^+	3060#	960#	291 201010#	670#
174	117		Ts	$-\alpha$	191650#	600#	7098#	2#	β^+	4410#	860#	291 205750#	640#
177	115	292	Mc	x	186600#	700#	7124#	2#		*		292 200320#	750#
176	116		Lv	$-\alpha$	188130#	760#	7116#	3#	β^+	1530#	1040#	292 201970#	820#
175	117		Ts	$-\alpha$	193620#	670#	7095#	2#	β^+	5490#	1010#	292 207860#	720#

Table I. The 2020 Atomic mass table (continued, Explanation of Table on p. 030003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
177	116	293	Lv	$-\alpha$	190570#	520#	7111#	2#		*		293 204580#	550#
176	117		Ts	$-\alpha$	194430#	780#	7095#	3#	β^+	3860#	930#	293 208730#	840#
175	118		Og	$-\alpha$	198800#	710#	7078#	2#	β^+	4370#	1050#	293 213420#	760#
177	117	294	Ts	$-\alpha$	196400#	590#	7092#	2#		*		294 210840#	640#
176	118		Og	$-\alpha$	199320#	550#	7079#	2#	β^+	2920#	810#	294 213980#	590#
177	118	295	Og	$-\alpha$	201370#	660#	7076#	2#		*		295 216180#	700#

Table II. Influences on primary nuclides

EXPLANATION OF TABLE

For each of the 1304 primary nuclides, this table presents up to three most important contributing data and their influences ($\times 100$) on its mass, as determined by the flow-of-information matrix..

Nuclide	Nuclide name (primaries only)			
Influence	*Influence* ($\times 100$) of a particular input data on the mass of a nuclide, as determined by the flow-of-information matrix.			
Equation	K^m, Cs^m, Cs^n, In^p, Tl^q: higher isomers, see NUBASE2020 [2].	In nuclear reactions: ε = electron capture,	In mass-doublet equation: H = ^{1}H, N = ^{14}N, D = ^{2}H, O = ^{16}O, C = ^{12}C, u = absolute mass-doublet.	In mass-triplet equation: Rb^x, Rb^y: different mixtures of isomers or contaminants.

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$0\pi^+$	100.0	π^+				
$0\pi^-$	99.9	$\pi^+(2\beta^+)\pi^-$				
1 n	99.9	^{1}H(n,γ)^{2}H				
^{1}H	58.5	H_2-D	21.8	$H_{12}-C$	7.8	$^{16}O-H_{16}$
^{2}H	82.5	D_6-C	8.5	H_2-D	8.2	H D−C
^{3}H	70.1	^{3}H−^{3}He	29.9	^{3}H−H D		
^{3}He	61.8	^{3}He−H D	25.8	$H_3-{}^3$He	12.4	^{3}H−^{3}He
^{4}He	100.0	$^4He_3-C$				
^{6}He	100.0	^{6}He−$^7Li_{.857}$				
^{6}Li	100.0	$^6Li_2-C$				
^{7}Li	99.8	^{7}Li−H_7	0.1	^{7}Li(n,γ)^{8}Li	0.1	^{8}He−$^7Li_{1.143}$
^{7}Li^i	61.0	^{9}Be(p,^{3}He)^{7}Li^i	39.0	^{6}Li(n,γ)^{7}Li^i		
^{7}Be	100.0	^{7}Li(p,n)^{7}Be				
^{8}He	74.9	^{8}He−$^7Li_{1.143}$	25.1	^{8}He−$^6Li_{1.333}$		
^{8}Li	78.7	^{7}Li(n,γ)^{8}Li	21.3	^{8}Li−$^6Li_{1.333}$		
^{8}Be^j	57.1	^{10}Be(p,t)^{8}Be^j	42.9	^{6}Li(d,γ)^{8}Be^j		
^{8}B	100.0	^{6}Li(^{3}He,n)^{8}B				
^{8}C	62.5	^{12}C(α,^{8}He)^{8}C	37.5	^{8}C−u		
^{9}He	56.2	^{9}He(γ,n)^{8}He	43.8	^{9}Be(π^-,π^+)^{9}He		
^{9}Be	67.1	^{9}Be−$^7Li_{1.286}$	32.9	^{9}Be(n,γ)^{10}Be		
^{10}Be	55.6	^{9}Be(n,γ)^{10}Be	44.4	^{10}Be−$^7Li_{1.429}$		
^{10}B	100.0	^{10}B−u				
^{10}C	67.2	^{10}C−^{10}B	32.8	^{10}B(p,n)^{10}C		
^{11}Be	83.1	^{11}Be−$^6Li_{1.833}$	16.9	^{11}Be−$^7Li_{1.571}$		
^{11}B	100.0	^{11}B−u				
^{11}B^i	79.1	^{9}Be(^{3}He,p)^{11}B^i	20.9	^{7}Li(α,γ)^{11}B^i		
^{11}C	100.0	^{11}C−$^{14}N_{.786}$				
^{11}C^i	50.0	^{11}B(^{3}He,t)^{11}C^i	50.0	^{9}Be(^{3}He,n)^{11}C^i		
^{12}Be	79.4	^{12}Be−C	20.6	^{10}Be(t,p)^{12}Be		
^{12}B	89.1	^{14}C(d,α)^{12}B	10.9	^{11}B(d,p)^{12}B		
^{12}B^i	86.3	^{14}C(p,^{3}He)^{12}B^i	13.7	^{9}Be(^{7}Li,α)^{12}B^i		
^{12}C^i	69.2	^{11}B(d,n)^{12}C^i	30.8	^{10}B(^{3}He,p)^{12}C^i		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{12}N	100.0	^{14}N(p,t)^{12}N				
^{13}C	78.2	^{13}C H$-^{14}$N	21.8	^{13}C$_2$ H$_2-^{28}$Si	0.2	^{136}Xe$-^{13}$C$_3$ O$_6$
^{14}B	100.0	^{14}C(^{7}Li,^{7}Be)^{14}B				
^{14}C	80.0	^{14}C H$_2-$N D	20.0	C D$_2-^{14}$C H$_2$		
^{14}N	77.9	N$_2-$C O	18.3	^{13}C H$-^{14}$N	1.4	^{86}Kr$-$N$_6$
^{14}O	100.0	^{14}O$-^{14}$N				
^{15}B	88.4	^{18}O(^{48}Ca,^{51}V)^{15}B	11.6	^{16}B(γ,n)^{15}B		
^{15}N	60.9	C D H$-^{15}$N	25.6	^{15}N$_2-^{28}$Si H$_2$	13.5	C H$_3-^{15}$N
^{15}O	70.1	^{15}N(p,n)^{15}O	29.7	^{14}N(p,γ)^{15}O	0.2	^{16}F(p)^{15}O
^{16}B	83.2	^{16}B(γ,n)^{15}B	16.8	^{14}C(^{14}C,^{12}N)^{16}B		
^{16}O	50.3	C$_4-$O$_3$	18.6	^{16}O$-$H$_{16}$	16.2	O$_2-^{31}$P H
^{16}O^i	54.4	^{14}N(^{3}He,p)^{16}O^i	45.6	^{15}N(p,γ)^{16}O^i		
^{16}O^j	77.0	^{14}N(d,γ)^{16}O^j	23.0	^{14}C(^{3}He,n)^{16}O^j		
^{16}F	58.4	^{16}F(p)^{15}O	41.6	^{16}O(^{3}He,t)^{16}F		
^{17}O	83.2	^{17}O$_2-^{28}$Si D$_3$	16.8	^{17}O$-^{16}$O H		
^{17}F	100.0	^{16}O(p,γ)^{17}F				
^{17}Ne	100.0	^{17}Ne$-^{22}$Ne$_{.773}$				
^{18}O	86.8	C D$_3-^{18}$O	13.2	C$_3-^{18}$O$_2$		
^{18}F	59.6	^{17}O(p,γ)^{18}F	40.4	^{18}O(p,n)^{18}F		
^{18}Ne	99.9	^{18}Ne$-^{22}$Ne$_{.818}$	0.1	^{22}Mg^i(α)^{18}Ne		
^{18}Na	69.7	^{18}Na(p)^{17}Ne	30.3	^{18}Na$-$u		
^{19}F	86.1	^{13}C D$_3-^{19}$F	13.9	^{28}Si H$_3-$C ^{19}F		
^{19}Na	77.1	^{24}Mg(^{3}He,^{8}Li)^{19}Na	22.9	^{19}Na(p)^{18}Ne		
^{20}Ne	59.8	^{20}Ne$_2-^{40}$Ar	40.2	C D$_4-^{20}$Ne		
^{20}Na	100.0	^{20}Ne(^{3}He,t)^{20}Na$-^{36}$Ar()^{36}K				
^{21}Ne	100.0	^{20}Ne(n,γ)^{21}Ne				
^{21}Na	100.0	^{21}Na$-^{21}$Ne				
^{22}Ne	99.7	^{22}Ne$-$u	0.3	^{22}Na$-^{22}$Ne	0.1	^{22}Mg$-^{22}$Ne
^{22}Na	42.6	^{22}Na$-^{23}$Na$_{.957}$	20.0	^{22}Mg$-^{22}$Na	18.3	^{22}Na$-^{22}$Ne
^{22}Mg	46.8	^{22}Mg$-^{23}$Na$_{.957}$	37.2	^{22}Mg$-^{22}$Na	10.6	^{22}Mg$-^{39}$K$_{.564}$
^{22}Mg^i	60.1	^{22}Mg^i(α)^{18}Ne	22.8	^{22}Mg^i(2p)^{20}Ne	17.1	^{22}Mg^i(p)^{21}Na
^{23}F	86.3	^{23}F$-$u	13.7	^{22}Ne(^{18}O,^{17}F)^{23}F		
^{23}Na	100.0	^{23}Na$-$u				
^{23}Al^i	55.8	^{23}Al^i(p)^{22}Mg	44.2	^{23}Al^i(2p)^{21}Na		
^{24}Mg	98.0	^{24}Mg$-$H$_{24}$	1.9	^{24}Mg(n,γ)^{25}Mg	0.1	^{22}Na$-^{24}$Mg$_{.917}$
^{24}Al	95.7	^{24}Al$-^{23}$Na$_{1.043}$	4.3	^{24}Mg(^{3}He,t)^{24}Al$-^{36}$Ar()^{36}K		
^{25}Ne	57.8	^{25}Ne$-$u	42.2	^{26}Mg(^{7}Li,^{8}B)^{25}Ne		
^{25}Mg	45.9	^{25}Mg(n,γ)^{26}Mg	42.7	^{24}Mg(n,γ)^{25}Mg	11.4	^{25}Mg(p,γ)^{26}Al
^{25}Al	100.0	^{25}Al$-^{25}$Mg				
^{25}Al^i	84.7	^{25}Al^i(IT)^{25}Al	15.3	^{27}Al(p,t)^{25}Al^i		
^{26}F	92.6	^{26}F$-$u	7.4	^{27}F(γ,n)^{26}F		
^{26}Mg	85.3	^{26}Mg$-$H$_{26}$	8.5	^{25}Mg(n,γ)^{26}Mg	4.0	^{26}Mg(n,γ)^{27}Mg
^{26}Al	63.5	^{25}Mg(p,γ)^{26}Al	14.9	^{26}Al$-^{26}$Mg	14.8	^{26}Al^m(IT)^{26}Al
^{26}Al^m	84.6	^{26}Al^m(IT)^{26}Al	15.4	^{26}Al$^m-^{26}$Mg		
^{27}F	90.5	^{27}F(γ,n)^{26}F	9.5	^{27}F$-$u		
^{27}Mg	88.6	^{26}Mg(n,γ)^{27}Mg	11.4	^{27}Mg$-^{23}$Na$_{1.174}$		
^{27}Al	88.5	^{27}Al$-^{23}$Na$_{1.174}$	11.4	^{27}Al(p,γ)^{28}Si		
^{27}Si^i	78.7	^{28}Si(^{3}He,α)^{27}Si^i	21.3	^{29}Si(p,t)^{27}Si^i		
^{28}Si	48.4	C$_2$ H$_4-^{28}$Si	31.5	^{13}C$_2$ H$_2-^{28}$Si	10.2	^{31}P$-^{28}$Si H$_3$
^{28}P	100.0	^{28}Si(^{3}He,t)^{28}P$-^{36}$Ar()^{36}K				
^{29}Na	63.3	^{29}Na$-^{39}$K$_{.744}$	36.7	^{29}Na$-$u		
^{29}Mg	99.9	^{29}Mg$-^{23}$Na$_{1.261}$	0.1	^{29}Mg$-$u		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{29}Si	100.0	^{29}Si−^{28}Si H				
^{29}P	59.4	^{29}P ^{40}Ar−u	40.2	^{28}Si(p,γ)^{29}P	0.4	^{29}P^{i}(IT)^{29}P
^{29}P^{i}	75.8	^{29}P^{i}(IT)^{29}P	24.2	^{28}Si(p,γ)^{29}P^{i}		
^{30}Ne	72.5	^{30}Ne−u	27.5	^{30}Ne(n,γ)^{31}Ne		
^{30}Na	82.1	^{30}Na−$O_{1.876}$	17.9	^{30}Na−$^{39}K_{.769}$		
^{30}Mg	85.9	^{30}Mg−$^{39}K_{.769}$	14.1	^{30}Mg−$O_{1.876}$		
^{30}Al	55.1	^{30}Al−$O_{1.875}$	44.9	^{30}Al−$^{39}K_{.769}$		
^{31}Ne	67.3	^{30}Ne(n,γ)^{31}Ne	32.7	^{31}Ne−u		
^{31}P	51.8	^{31}P−^{28}Si H_3	48.2	O_2−^{31}P H		
^{31}S	96.9	^{31}S−^{31}P	3.1	^{32}Cl(p)^{31}S		
^{32}S	55.1	^{32}S−C_2 D_4	44.9	^{32}S−O_2		
^{32}Cl	76.2	^{32}Cl(p)^{31}S	23.8	^{32}S(^{3}He,t)^{32}Cl−^{36}Ar()^{36}K		
^{33}Mg	85.1	^{33}Mg−$O_{2.062}$	14.9	^{33}Mg−$^{39}K_{.846}$		
^{33}S	100.0	^{33}S−^{32}S H				
^{33}Cl	79.9	^{32}S(p,γ)^{33}Cl	20.1	^{33}Cl^{i}(IT)^{33}Cl		
^{33}Cl^{i}	63.1	^{33}Cl^{i}(IT)^{33}Cl	36.9	^{32}S(p,γ)^{33}Cl^{i}		
^{34}S	46.4	^{34}S(n,γ)^{35}S	23.7	^{33}S(n,γ)^{34}S	18.0	^{34}Cl−^{34}S
^{34}Cl	48.4	^{33}S(p,γ)^{34}Cl	31.0	^{34}Cl−^{34}S	18.4	^{34}Cl^{m}(IT)^{34}Cl
^{34}Cl^{m}	65.1	^{34}Cl^{m}(IT)^{34}Cl	30.7	^{34}Cl^{m}−^{34}S	4.2	^{34}Cl^{m}−^{34}Ar
^{34}Ar	52.0	^{34}Ar−^{34}Cl	35.1	^{34}Cl^{m}−^{34}Ar	12.9	^{34}S−^{34}Ar
^{35}S	71.4	^{35}S(β^{-})^{35}Cl	28.6	^{34}S(n,γ)^{35}S		
^{35}Cl	55.8	C_3−^{35}Cl H	19.5	^{35}S(β^{-})^{35}Cl	15.3	C_5 H_{10}−$^{35}Cl_2$
^{36}S	63.6	^{36}S(p,γ)^{37}Cl	36.4	^{36}S(p,n)^{36}Cl		
^{36}Cl	99.1	^{35}Cl(n,γ)^{36}Cl	0.9	^{36}S(p,n)^{36}Cl		
^{36}Ar	99.9	^{36}Ar−u	0.1	^{24}Mg(^{3}He,t)^{24}Al−^{36}Ar()^{36}K		
^{36}K	84.4	^{36}K−$^{39}K_{.923}$	9.1	^{24}Mg(^{3}He,t)^{24}Al−^{36}Ar()^{36}K	6.5	^{32}S(^{3}He,t)^{32}Cl−^{36}Ar()^{36}K
^{37}Cl	85.8	C_3 H_6 O_2−$^{37}Cl_2$	9.3	C_5 H_{12}−^{35}Cl ^{37}Cl	1.8	^{36}S(p,γ)^{37}Cl
^{38}Ar	32.0	^{38}Ar−$^{39}K_{.974}$	27.4	^{38}K^{m}−^{38}Ar	23.5	^{38}K−^{38}Ar
^{38}K	26.5	^{38}K−^{38}Ar	26.1	^{38}K^{m}−^{38}K	24.6	^{38}Ca−^{38}K
^{38}K^{m}	44.5	^{38}K^{m}−^{38}Ar	34.0	^{38}K^{m}−^{38}K	21.5	^{38}K^{m}−^{38}Ca
^{38}Ca	48.4	^{38}Ca−H_6 O_2	20.5	^{38}Ca−^{38}K	15.8	^{38}K^{m}−^{38}Ca
^{39}K	99.8	^{39}K−^{40}Ar	0.1	^{39}K(n,γ)^{40}K		
^{39}Ca	100.0	^{39}Ca ^{19}F−$^{39}K_{1.487}$				
^{40}S	79.3	^{40}S−^{40}Ar	20.7	^{40}S−$^{41}K_{.976}$		
^{40}Ar	44.7	C_3 H_4−^{40}Ar	34.2	C_2 D_8−^{40}Ar	14.1	$^{20}Ne_2$−^{40}Ar
^{40}K	60.9	^{39}K(n,γ)^{40}K	39.1	^{40}K(n,γ)^{41}K		
^{40}Ca	100.0	^{40}Ca−H_{40}				
^{40}Ti	81.8	^{40}Ti−u	18.2	^{40}Ca(π^{+},π^{-})^{40}Ti		
^{41}K	99.9	^{41}K−^{40}Ar H	0.1	^{40}K(n,γ)^{41}K		
^{41}Ca	99.6	^{40}Ca(n,γ)^{41}Ca	0.4	^{41}Ca(n,γ)^{42}Ca	0.1	^{41}Ca(p,γ)^{42}Sc^{r}−^{40}Ca()^{41}Scr
^{41}Sc	68.7	^{40}Ca(p,γ)^{41}Sc	31.3	^{41}Sc^{r}(IT)^{41}Sc		
^{41}Sc^{r}	58.4	^{41}Sc^{r}(IT)^{41}Sc	41.6	^{41}Ca(p,γ)^{42}Sc^{r}−^{40}Ca()^{41}Sc^{r}		
^{42}Ca	85.7	^{41}Ca(n,γ)^{42}Ca	10.2	^{42}Sc−^{42}Ca	3.0	^{42}Sc^{m}−^{42}Ca
^{42}Sc	56.0	^{42}Sc−^{42}Ca	24.0	^{42}Sc^{r}(IT)^{42}Sc	15.9	^{42}Sc^{m}−^{42}Sc
^{42}Sc^{m}	59.3	^{42}Sc^{m}−^{42}Ca	39.4	^{42}Sc^{m}−^{42}Sc	1.3	^{42}Ti−^{42}Scm
^{42}Sc^{r}	51.3	^{42}Sc^{r}(IT)^{42}Sc	48.7	^{41}Ca(p,γ)^{42}Sc^{r}−^{40}Ca()^{41}Sc^{r}		
^{42}Ti	49.3	^{42}Ti−^{42}Sc	39.1	^{42}Ti−^{42}Sc^{m}	11.6	^{42}Ti−^{42}Ca
^{43}Ca	98.8	^{42}Ca(n,γ)^{43}Ca	1.1	^{43}Ca(n,γ)^{44}Ca		
^{43}Ca^{i}	76.8	^{44}Ca(p,d)^{43}Ca^{i}	23.2	^{41}K(^{3}He,p)^{43}Ca^{i}		
^{43}Sc^{i}	83.3	^{43}Ca(^{3}He,t)^{43}Sc^{i}	16.7	^{42}Ca(^{3}He,d)^{43}Sc^{i}		
^{43}Ti	39.6	^{40}Ca(α,n)^{43}Ti	37.7	^{43}Ti−u	22.7	^{46}Ti(^{3}He,^{6}He)^{43}Ti
^{43}V^{i}	88.8	^{43}V^{i}(2p)^{41}Sc	11.2	^{43}V^{i}(p)^{42}Ti		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{44}Ca	97.5	^{43}Ca(n,γ)^{44}Ca	2.3	^{44}Ca(n,γ)^{45}Ca	0.2	^{44}Ca(^{3}He,t)^{44}Sci
^{44}Sc^{i}	75.6	^{44}Ca(^{3}He,t)^{44}Sc^{i}	24.4	^{43}Ca(^{3}He,d)^{44}Sc^{i}		
^{44}V	86.2	^{44}V$-^{32}$S	13.8	^{44}V$-$u		
^{45}Ca	97.0	^{44}Ca(n,γ)^{45}Ca	3.0	^{45}Ca(β^-)^{45}Sc		
^{45}Sc	88.3	^{45}Sc(p,γ)^{46}Ti	10.6	^{45}Ca(β^-)^{45}Sc	1.1	^{45}Sc(^{3}He,t)^{45}Tii
^{45}Ti	100.0	^{45}Sc(p,n)^{45}Ti				
^{45}Ti^{i}	60.3	^{45}Sc(^{3}He,t)^{45}Ti^{i}	39.7	^{46}Ti(p,d)^{45}Ti^{i}		
^{45}V	100.0	^{45}V$-^{45}$Ti				
^{46}Ca	90.4	^{46}Ca(n,γ)^{47}Ca	9.6	^{46}Ca(^{3}He,t)^{46}Sc^{i}		
^{46}Sc^{i}	62.6	^{46}Ca(^{3}He,t)^{46}Sc^{i}	37.4	^{48}Ti(p,^{3}He)^{46}Sc^{i}		
^{46}Ti	94.2	^{46}Ti$-^{48}$Ti$_{.958}$	5.6	^{46}Ti(^{3}He,t)^{46}V$-^{47}$Ti()^{47}V	5.6	^{46}Ti(p,γ)^{47}V
^{46}V	86.8	^{46}V$-^{46}$Ti	13.1	^{46}Ti(^{3}He,t)^{46}V$-^{47}$Ti()^{47}V	0.1	^{46}Ti(^{3}He,t)^{46}V$-^{48}$Ti()^{48}Vxi
^{46}Cr	67.2	^{46}Cr$-$u	32.8	^{32}S(^{16}O,2n)^{46}Cr		
^{47}Ca	90.5	^{47}Ca(β^-)^{47}Sc	9.5	^{46}Ca(n,γ)^{47}Ca		
^{47}Sc	93.0	^{47}Sc(β^-)^{47}Ti	7.0	^{47}Ca(β^-)^{47}Sc		
^{47}Ti	60.7	^{47}Ti(n,γ)^{48}Ti	37.2	^{47}Ti$-^{48}$Ti$_{.979}$	2.2	^{46}Ti(^{3}He,t)^{46}V$-^{47}$Ti()^{47}V
^{47}V	85.6	^{46}Ti(p,γ)^{47}V	14.4	^{46}Ti(^{3}He,t)^{46}V$-^{47}$Ti()^{47}V		
^{47}Cr	67.8	^{47}Cr$-$u	18.4	^{48}Mn^{i}(p)^{47}Cr	13.8	^{50}Cr(^{3}He,^{6}He)^{47}Cr
^{48}Ca	99.1	^{48}Ca$-$C$_4$	0.9	^{48}Ti$-^{48}$Ca		
^{48}Sc	50.0	^{48}Ca(p,n)^{48}Sc	50.0	^{48}Sc(β^-)^{48}Ti		
^{48}Ti	81.3	^{48}Ti$-^{48}$Ca	11.9	^{48}Ti$-$N ^{18}O O	4.7	^{50}Ti$-^{48}$Ti$_{1.042}$
^{48}V	89.6	^{48}V^{i}(IT)^{48}V	10.4	^{48}V(β^+)^{48}Ti		
^{48}V^{i}	99.5	^{46}Ti(^{3}He,t)^{46}V$-^{48}$Ti()^{48}V^{i}	0.5	^{48}V^{i}(IT)^{48}V		
^{48}Mn	51.7	^{48}Mn$-$u	48.3	^{48}Mn^{i}(IT)^{48}Mn		
^{48}Mn^{i}	51.3	^{48}Mn^{i}(IT)^{48}Mn	48.7	^{48}Mn^{i}(p)^{47}Cr		
^{49}Sc	50.2	^{48}Ca(p,γ)^{49}Sc	29.3	^{49}Sc$-$u	20.6	^{49}Sc(β^-)^{49}Ti
^{49}Ti	68.1	^{48}Ti(n,γ)^{49}Ti	20.4	^{49}Ti$-^{48}$Ti$_{1.021}$	11.4	^{49}Ti(n,γ)^{50}Ti
^{49}Cr	100.0	^{50}Cr(d,t)^{49}Cr				
^{49}Mn	100.0	^{49}Mn$-^{49}$Cr				
^{50}Sc	100.0	^{50}Sc O$-^{19}$F ^{35}Cl				
^{50}Ti	49.0	^{49}Ti(n,γ)^{50}Ti	45.1	^{50}Ti$-^{48}$Ti$_{1.042}$	5.8	^{50}V$-^{50}$Ti
^{50}V	29.9	^{50}V$-^{50}$Cr	26.2	^{50}V$-^{48}$Ti$_{1.042}$	22.9	^{50}V(n,γ)^{51}V
^{50}V^{i}	100.0	^{46}Ti(^{3}He,t)^{46}V$-^{50}$Ti()^{50}V^{i}				
^{50}Cr	63.7	^{50}Cr$-^{48}$Ti$_{1.042}$	32.3	^{50}V$-^{50}$Cr	3.6	^{50}Cr(n,γ)^{51}Cr
^{50}Mn	52.0	^{50}Mn$-^{50}$Cr	36.5	^{50}Mn$^{m}-^{50}$Mn	11.5	^{50}Cr(^{3}He,t)^{50}Mn$-^{54}$Fe()^{54}Co
^{50}Mn^{m}	81.2	^{50}Mn$^{m}-^{50}$Cr	18.8	^{50}Mn$^{m}-^{50}$Mn		
^{51}Sc	100.0	^{51}Sc H$-^{19}$F ^{33}S				
^{51}Ti	94.9	^{50}Ti(n,γ)^{51}Ti	5.1	^{51}Ti$-^{39}$K$_{1.308}$		
^{51}V	58.0	^{51}V$-^{48}$Ti$_{1.063}$	34.7	^{50}V(n,γ)^{51}V	3.5	^{51}V(p,n)^{51}Cr
^{51}Cr	51.0	^{50}Cr(n,γ)^{51}Cr	35.3	^{51}V(p,n)^{51}Cr	7.5	^{51}Cr$-^{39}$K$_{1.308}$
^{51}Mn	93.3	^{50}Cr(p,γ)^{51}Mn	6.7	^{54}Fe(p,α)^{51}Mn		
^{52}Sc	100.0	^{52}Sc$-^{33}$S ^{19}F				
^{52}Ti	84.9	^{52}Ti$-^{39}$K$_{1.333}$	15.1	^{50}Ti(t,p)^{52}Ti		
^{52}Cr	77.9	^{52}Cr$-^{48}$Ti$_{1.083}$	20.7	^{52}Cr(n,γ)^{53}Cr	1.1	^{52}Cr(p,γ)^{53}Mn
^{52}Co	60.3	^{52}Co$-^{52}$Cr	39.7	^{52}Co$-$u		
^{52}Co^{m}	54.3	^{52}Co$^{m}-$u	45.7	^{52}Co$^{m}-^{52}$Cr		
^{53}Sc	100.0	^{53}Sc$-^{34}$S ^{19}F				
^{53}Cr	55.4	^{53}Cr$-^{48}$Ti$_{1.104}$	24.9	^{52}Cr(n,γ)^{53}Cr	19.7	^{53}Cr(n,γ)^{54}Cr
^{53}Mn	83.7	^{52}Cr(p,γ)^{53}Mn	16.3	^{56}Fe(p,α)^{53}Mn		
^{53}Fe	100.0	^{54}Fe(d,t)^{53}Fe				
^{53}Co	94.3	^{53}Co$-^{53}$Fe	5.7	^{53}Co$^{m}-^{53}$Co		
^{53}Co^{m}	59.6	^{53}Co$^{m}-^{53}$Fe	40.4	^{53}Co$^{m}-^{53}$Co		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{54}V	55.5	^{54}Cr(t,^{3}He)^{54}V	44.5	^{54}V−u		
^{54}Cr	49.0	^{54}Cr−^{48}Ti$_{1.125}$	45.1	^{53}Cr(n,γ)^{54}Cr	5.9	^{54}Cr(p,γ)^{55}Mn
^{54}Mn^{i}	51.3	^{52}Cr(^{3}He,p)^{54}Mn^{i}	48.7	^{54}Cr(^{3}He,t)^{54}Mn^{i}		
^{54}Fe	73.4	^{54}Fe(n,γ)^{55}Fe	17.8	^{54}Fe(p,γ)^{55}Co	8.8	^{54}Fe(p,α)^{51}Mn
^{54}Co	46.9	^{54}Co−^{54}Fe	29.7	^{54}Co^{m}−^{54}Co	23.5	^{50}Cr(^{3}He,t)^{50}Mn−^{54}Fe()^{54}Co
^{54}Co^{m}	80.8	^{54}Co^{m}−^{54}Fe	19.2	^{54}Co^{m}−^{54}Co		
^{55}Mn	37.3	^{54}Cr(p,γ)^{55}Mn	36.1	^{55}Mn(p,γ)^{56}Fe	12.2	^{55}Mn−^{85}Rb$_{.647}$
^{55}Fe	83.9	^{55}Fe(ε)^{55}Mn	16.1	^{54}Fe(n,γ)^{55}Fe		
^{55}Co	55.8	^{54}Fe(p,γ)^{55}Co	32.7	^{56}Ni−^{55}Co$_{1.018}$	11.5	^{58}Ni(p,α)^{55}Co
^{56}Ti	93.3	^{56}Ti−u	6.7	^{56}Ti(β^{-})^{56}V		
^{56}V	74.1	^{56}V−u	25.9	^{56}Ti(β^{-})^{56}V		
^{56}Fe	49.2	^{55}Mn(p,γ)^{56}Fe	22.9	^{56}Fe−^{85}Rb$_{.659}$	11.6	^{56}Fe(n,γ)^{57}Fe
^{56}Co	50.5	^{56}Co−^{58}Ni$_{.966}$	49.5	^{56}Ni−^{56}Co		
^{56}Ni	39.8	^{56}Ni−^{56}Fe	27.4	^{56}Ni−^{55}Co$_{1.018}$	17.5	^{56}Ni−^{56}Co
^{57}Mn	49.3	^{57}Mn−^{85}Rb$_{.671}$	33.3	^{57}Mn−^{39}K$_{1.462}$	17.4	^{55}Mn(t,p)^{57}Mn
^{57}Fe	88.2	^{56}Fe(n,γ)^{57}Fe	6.7	^{57}Fe(n,γ)^{58}Fe	4.1	^{57}Fe−^{58}Ni$_{.983}$
^{57}Co	33.0	^{60}Ni(p,α)^{57}Co	28.6	^{56}Fe(p,γ)^{57}Co	28.4	^{58}Fe(p,γ)^{59}Co−^{56}Fe()^{57}Co
^{57}Ni	50.1	^{57}Cu−^{57}Ni	49.9	^{57}Ni−^{58}Ni$_{.983}$		
^{57}Cu	48.0	^{57}Cu−^{56}Ni$_{1.018}$	28.6	^{57}Cu−^{57}Fe	23.4	^{57}Cu−^{57}Ni
^{58}Fe	86.4	^{57}Fe(n,γ)^{58}Fe	9.4	^{58}Fe(n,γ)^{59}Fe	4.2	^{58}Fe(p,γ)^{59}Co−^{56}Fe()^{57}Co
^{58}Co	60.9	^{59}Co(d,t)^{58}Co	25.1	^{60}Ni(d,α)^{58}Co	14.0	^{57}Fe(p,γ)^{58}Co
^{58}Ni	29.2	^{57}Fe−^{58}Ni$_{.983}$	26.5	^{56}Fe−^{58}Ni$_{.966}$	25.4	^{58}Ni(n,γ)^{59}Ni
^{58}Cu	90.2	^{58}Cu−^{58}Ni	9.8	^{59}Zn−^{58}Cu$_{1.017}$		
^{59}Fe	89.6	^{58}Fe(n,γ)^{59}Fe	10.4	^{59}Fe−^{85}Rb$_{.694}$		
^{59}Co	90.4	^{59}Co(p,n)^{59}Ni	8.5	^{58}Fe(p,γ)^{59}Co−^{56}Fe()^{57}Co	1.1	^{59}Co(d,t)^{58}Co
^{59}Ni	74.1	^{58}Ni(n,γ)^{59}Ni	21.8	^{59}Ni(n,γ)^{60}Ni	4.1	^{59}Co(p,n)^{59}Ni
^{59}Cu	62.4	^{58}Ni(p,γ)^{59}Cu	30.4	^{60}Zn−^{59}Cu$_{1.017}$	7.2	^{59}Zn−^{59}Cu
^{59}Zn	73.3	^{59}Zn−^{59}Cu	26.7	^{59}Zn−^{58}Cu$_{1.017}$		
^{60}Ni	77.6	^{59}Ni(n,γ)^{60}Ni	18.1	^{60}Ni(n,γ)^{61}Ni	4.1	^{60}Ni(p,α)^{57}Co
^{60}Cu^{i}	73.5	^{60}Ni(^{3}He,t)^{60}Cu^{i}	26.5	^{58}Ni(^{3}He,p)^{60}Cu^{i}		
^{60}Zn	65.1	^{60}Zn−^{58}Ni$_{1.034}$	34.9	^{60}Zn−^{59}Cu$_{1.017}$		
^{61}Ni	81.7	^{60}Ni(n,γ)^{61}Ni	18.3	^{61}Ni(n,γ)^{62}Ni		
^{61}Zn	95.4	^{64}Zn(^{3}He,^{6}He)^{61}Zn	4.6	^{61}Ga(β^{+})^{61}Zn		
^{61}Ga	52.2	^{61}Ga(β^{+})^{61}Zn	47.8	^{61}Ga−u		
^{62}Ni	68.9	^{61}Ni(n,γ)^{62}Ni	14.9	^{62}Ni(p,γ)^{63}Cu	13.1	^{62}Ni(n,γ)^{63}Ni
^{62}Zn	67.7	^{62}Zn−^{62}Ni	32.3	^{62}Ga−^{62}Zn		
^{62}Ga	51.7	^{62}Ga−^{62}Ni	48.3	^{62}Ga−^{62}Zn		
^{63}Fe	57.3	^{63}Fe−^{39}K$_{1.615}$	21.3	^{63}Fe−H C$_2$ F$_2$	21.3	^{63}Fe−C ^{32}S F
^{63}Co	86.2	^{64}Ni(t,α)^{63}Co	13.8	^{63}Co(β^{-})^{63}Ni		
^{63}Ni	55.1	^{63}Ni(β^{-})^{63}Cu	34.4	^{62}Ni(n,γ)^{63}Ni	10.4	^{63}Ni(n,γ)^{64}Ni
^{63}Cu	43.2	^{63}Ni(β^{-})^{63}Cu	38.8	^{62}Ni(p,γ)^{63}Cu	9.1	^{63}Cu(n,γ)^{64}Cu
^{63}Zn	72.7	^{64}Zn(d,t)^{63}Zn	27.3	^{63}Cu(p,n)^{63}Zn		
^{64}Co^{m}	86.8	H C$_2$ F$_2$−^{64}Co$^{m}_{.984}$	13.2	^{64}Co^{m}−^{32}S O$_2$		
^{64}Ni	87.4	^{63}Ni(n,γ)^{64}Ni	12.6	^{64}Ni−^{85}Rb$_{.753}$		
^{64}Cu	90.8	^{63}Cu(n,γ)^{64}Cu	9.2	^{64}Cu(β^{-})^{64}Zn		
^{64}Zn	43.4	^{64}Zn(n,γ)^{65}Zn	32.4	^{64}Cu(β^{-})^{64}Zn	16.7	^{64}Zn(p,γ)^{65}Ga
^{64}Ga	37.6	^{64}Ga−^{85}Rb$_{.753}$	32.7	C$_5$ H$_2$−^{64}Ga$_{.969}$	13.1	^{64}Ga−^{64}Zn
^{64}Ga^{i}	83.2	^{64}Ga^{i}(IT)^{64}Ga	16.8	^{64}Zn(^{3}He,t)^{64}Ga^{i}		
^{65}Cu	43.1	^{65}Cu(p,n)^{65}Zn	33.1	^{65}Cu−^{85}Rb$_{.765}$	10.3	^{65}Cu(p,α)^{62}Ni
^{65}Zn	54.3	^{64}Zn(n,γ)^{65}Zn	45.7	^{65}Cu(p,n)^{65}Zn		
^{65}Ga	59.0	^{64}Zn(p,γ)^{65}Ga	32.1	^{65}Ga−^{85}Rb$_{.765}$	8.9	^{65}Ga−^{65}Cu
^{65}Ge	56.7	C$_5$ H$_2$−^{65}Ge$_{.939}$	29.2	^{65}Ge O H−^{85}Rb$_{.965}$	14.0	^{65}Ge H−^{85}Rb$_{.776}$

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{66}Cu	90.0	^{65}Cu(n,γ)^{66}Cu	10.0	^{66}Cu−^{85}Rb$_{.776}$		
^{66}Zn	66.0	^{66}Zn(p,α)^{63}Cu	34.0	^{66}Zn(n,γ)^{67}Zn		
^{67}Cu	54.3	^{67}Cu−^{85}Rb$_{.788}$	45.7	^{67}Cu(β^-)^{67}Zn		
^{67}Zn	63.7	^{66}Zn(n,γ)^{67}Zn	23.1	^{67}Cu(β^-)^{67}Zn	11.5	^{67}Zn(p,n)^{67}Ga
^{67}Ga	54.3	^{67}Zn(p,n)^{67}Ga	45.7	^{70}Ge(p,α)^{67}Ga		
^{67}Ge	87.1	^{67}Ge−^{67}Zn	12.9	^{64}Zn(α,n)^{67}Ge		
^{67}As	77.4	^{67}As−^{85}Rb$_{.788}$	22.6	^{67}As O−^{85}Rb$_{.976}$		
^{68}Co	74.5	O ^{18}O−^{68}Co$_{.5}$	25.5	^{68}Co−^{34}S$_{2.000}$		
^{68}Zn	98.6	^{67}Zn(n,γ)^{68}Zn	1.4	^{70}Zn ^{35}Cl−^{68}Zn ^{37}Cl		
^{68}As	87.5	^{68}As−C$_5$ H$_8$	12.5	C F$_3$−^{68}As$_{1.015}$		
^{69}Co^m	92.8	^{69}Co^m−^{39}K$_{1.769}$	7.2	^{69}Co^m−u		
^{69}Ga	64.5	^{69}Ga−^{85}Rb$_{.812}$	35.4	^{69}Ga(n,γ)^{70}Ga		
^{69}Ge	100.0	^{69}Ga(p,n)^{69}Ge				
^{69}As	81.8	^{69}As(β^+)^{69}Ge	18.2	^{69}Se(β^+)^{69}As		
^{69}Se	100.0	C F$_3$−^{69}Se				
^{70}Zn	87.6	^{70}Zn(p,n)^{70}Ga	9.0	^{70}Zn ^{35}Cl−^{68}Zn ^{37}Cl	3.4	^{70}Zn(d,p)^{71}Zn
^{70}Ga	64.1	^{69}Ga(n,γ)^{70}Ga	31.4	^{70}Ga−^{85}Rb$_{.824}$	4.5	^{70}Zn(p,n)^{70}Ga
^{70}Ge	86.0	^{70}Ge(n,γ)^{71}Ge	14.0	^{70}Ge(p,α)^{67}Ga		
^{71}Zn	93.2	^{71}Zn^m(IT)^{71}Zn	6.8	^{70}Zn(d,p)^{71}Zn		
^{71}Zn^m	94.7	^{71}Zn^m−^{85}Rb$_{.835}$	5.3	^{71}Zn^m(IT)^{71}Zn		
^{71}Ga	53.3	^{71}Ga−^{85}Rb$_{.835}$	33.1	^{71}Ga(n,γ)^{72}Ga	12.2	^{71}Ga−^{71}Ge
^{71}Ge	77.2	^{71}Ga−^{71}Ge	13.8	^{70}Ge(n,γ)^{71}Ge	9.0	^{71}Ge(ε)^{71}Ga
^{71}Br	100.0	^{71}Br H$_2$−C$_4$ H$_9$ O				
^{71}Kr	83.8	^{71}Kr−u	16.2	^{71}Kr(ε)^{71}Br		
^{72}Ga	65.7	^{71}Ga(n,γ)^{72}Ga	34.3	^{72}Ga−^{85}Rb$_{.847}$		
^{72}Ge	99.9	^{72}Ge(n,γ)^{73}Ge	0.1	^{75}Cu−^{72}Ge$_{1.042}$		
^{73}Cu	75.4	^{73}Cu−^{72}Ge$_{1.014}$	24.6	^{73}Cu−^{85}Rb$_{.859}$		
^{73}Ge	99.9	^{73}Ge(n,γ)^{74}Ge	0.1	^{72}Ge(n,γ)^{73}Ge		
^{73}As	92.8	^{72}Ge(^{3}He,d)^{73}As	7.2	^{73}Se(β^+)^{73}As		
^{73}Se	52.5	^{73}Se−^{85}Rb$_{.859}$	47.5	^{73}Se(β^+)^{73}As		
^{73}Br	86.1	^{73}Br ^{27}Al−^{85}Rb$_{1.176}$	13.9	^{73}Br−u		
^{74}Ge	100.0	^{74}Ge−^{84}Kr				
^{74}As	82.1	^{74}As(β^+)^{74}Ge	17.9	^{74}As(β^-)^{74}Se		
^{74}Se	100.0	^{74}Se−^{74}Ge				
^{74}Br	84.9	^{74}Br ^{27}Al−^{85}Rb$_{1.188}$	15.1	^{74}Se(p,n)^{74}Br		
^{74}Kr	93.3	^{74}Kr−^{85}Rb$_{.871}$	6.7	^{74}Rb(β^+)^{74}Kr		
^{74}Rb	82.8	^{74}Rb−^{85}Rb$_{.871}$	17.2	^{74}Rb(β^+)^{74}Kr		
^{75}Cu	90.5	^{75}Cu−^{85}Rb$_{.882}$	9.5	^{75}Cu−^{72}Ge$_{1.042}$		
^{75}As	85.3	^{75}As(p,n)^{75}Se	14.7	^{78}Se(p,α)^{75}As		
^{75}Se	99.9	^{74}Se(n,γ)^{75}Se	0.1	^{75}As(p,n)^{75}Se		
^{76}Zn	61.1	^{76}Zn−^{85}Rb$_{.894}$	38.9	^{76}Zn−^{88}Rb$_{.864}$		
^{76}Ge	100.0	^{76}Ge−^{76}Se				
^{76}Se	100.0	^{76}Se−^{84}Kr				
^{76}Kr	84.0	^{76}Kr−^{85}Rb$_{.894}$	16.0	^{80}Kr(α,^{6}He)^{78}Kr−^{78}Kr()^{76}Kr		
^{77}Zn	77.9	^{77}Zn−^{85}Rb$_{.906}$	22.1	^{77}Zn−^{88}Rb$_{.875}$		
^{77}As	32.5	^{80}Se(p,α)^{77}As	31.8	^{76}Ge(^{3}He,d)^{77}As	17.9	^{77}As(β^-)^{77}Se
^{77}Se	99.4	^{76}Se(n,γ)^{77}Se	0.5	^{77}Se(n,γ)^{78}Se		
^{78}Cu	63.2	^{78}Cu−^{85}Rb$_{.918}$	36.8	^{78}Cu−u		
^{78}Zn	51.6	^{78}Zn−^{88}Rb$_{.886}$	48.4	^{78}Zn−^{85}Rb$_{.918}$		
^{78}Ga	88.3	^{78}Ga−^{85}Rb$_{.918}$	11.7	^{78}Ga−^{88}Rb$_{.886}$		
^{78}Se	95.3	^{77}Se(n,γ)^{78}Se	3.5	^{78}Kr−^{78}Se	0.6	^{80}Se(p,t)^{78}Se
^{78}Kr	88.8	^{78}Kr−^{78}Se	10.9	^{78}Kr−^{86}Kr$_{.907}$	0.3	^{80}Kr(α,^{6}He)^{78}Kr−^{78}Kr()^{76}Kr

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{79}Zn	67.7	^{79}Zn−^{88}Rb$_{.898}$	32.3	^{79}Zn−^{85}Rb$_{.929}$		
^{79}Ga	58.2	^{79}Ga−^{85}Rb$_{.929}$	41.8	^{79}Ga−^{88}Rb$_{.898}$		
^{79}Ge	86.2	^{79}Ga(β^-)^{79}Ge	13.8	^{79}Ge(β^-)^{79}As		
^{79}As	99.8	^{80}Se(d,^{3}He)^{79}As	0.2	^{79}Ge(β^-)^{79}As		
^{79}Br	96.2	^{79}Br(n,γ)^{80}Br	3.8	^{79}Br−^{79}Rb		
^{79}Rb	82.2	^{79}Rb−^{85}Rb$_{.929}$	16.6	^{79}Br−^{79}Rb	1.2	^{79}Sr−^{79}Rb
^{79}Sr	78.4	^{79}Sr−^{85}Rb$_{.929}$	21.6	^{79}Sr−^{79}Rb		
^{80}Zn	85.6	^{80}Zn−^{85}Rb$_{.941}$	14.4	^{80}Zn−^{88}Rb$_{.909}$		
^{80}Se	35.8	^{82}Se ^{35}Cl−^{80}Se ^{37}Cl	25.1	^{80}Se(n,γ)^{81}Se	19.8	^{80}Se(p,t)^{78}Se
^{80}Br	96.2	^{80}Se(p,n)^{80}Br	3.8	^{79}Br(n,γ)^{80}Br		
^{80}Kr	46.0	^{80}Kr−^{86}Kr$_{.930}$	19.2	^{80}Kr−^{85}Rb$_{.941}$	8.0	^{81}Se−^{80}Kr$_{1.013}$
^{81}As	73.8	^{81}As−^{88}Rb$_{.920}$	26.2	^{82}Se(d,^{3}He)^{81}As		
^{81}Se	72.1	^{80}Se(n,γ)^{81}Se	17.3	^{81}Se−^{80}Kr$_{1.013}$	10.6	^{82}Se(p,d)^{81}Se
^{81}Br	94.3	^{81}Br(n,γ)^{82}Br	5.1	^{81}Kr(ε)^{81}Br	0.6	^{87}Rb(^{3}He,t)^{87}Sr−^{81}Br()^{81}Kr
^{81}Kr	83.7	^{81}Kr(ε)^{81}Br	9.3	^{87}Rb(^{3}He,t)^{87}Sr−^{81}Br()^{81}Kr	7.0	^{80}Kr(d,p)^{81}Kr
^{81}Rb	76.1	^{81}Rb−^{85}Rb$_{.953}$	23.9	^{80}Kr(^{3}He,d)^{81}Rb		
^{82}Se	92.5	^{82}Se−^{82}Kr	4.3	^{82}Se ^{35}Cl−^{80}Se ^{37}Cl	1.2	^{82}Se(p,d)^{81}Se
^{82}Br	94.4	^{82}Br(β^-)^{82}Kr	5.6	^{81}Br(n,γ)^{82}Br		
^{82}Kr	75.4	^{82}Kr−^{84}Kr$_{.976}$	24.6	^{82}Kr−^{86}Kr$_{.953}$		
^{82}Sr	64.7	^{82}Sr−^{85}Rb$_{.965}$	35.3	^{84}Sr(p,t)^{82}Sr		
^{83}Br	54.4	^{83}Br(β^-)^{83}Kr	45.6	^{82}Se(^{3}He,d)^{83}Br		
^{83}Kr	100.0	^{83}Kr−^{84}Kr$_{.988}$				
^{83}Rb	100.0	^{83}Rb−^{85}Rb$_{.976}$				
^{83}Sr	58.7	^{83}Sr−^{83}Rb	41.3	^{83}Sr(β^+)^{83}Rb		
^{84}Se	99.9	^{84}Se−^{88}Rb$_{.955}$	0.1	^{84}Se(β^-)^{84}Br		
^{84}Br	73.6	^{84}Br(β^-)^{84}Kr	26.4	^{84}Se(β^-)^{84}Br		
^{84}Kr	21.0	^{84}Kr−N_6	19.7	^{86}Kr−^{84}Kr$_{1.024}$	14.6	^{86}Kr−^{84}Kr
^{84}Rb	72.7	^{84}Rb(β^+)^{84}Kr	27.3	^{84}Rb(β^-)^{84}Sr		
^{84}Sr	88.8	^{84}Sr−^{85}Rb$_{.988}$	6.8	^{84}Rb(β^-)^{84}Sr	2.1	^{84}Sr(d,p)^{85}Sr
^{84}Y	81.8	^{84}Y O−^{97}Mo$_{1.031}$	18.2	^{84}Y(β^+)^{84}Sr		
^{85}Rb	65.9	^{86}Kr−^{85}Rb	34.1	^{85}Rb−^{84}Kr		
^{85}Sr	87.9	^{85}Rb(^{3}He,t)^{85}Sr	12.1	^{84}Sr(d,p)^{85}Sr		
^{86}Kr	26.7	^{86}Kr−N_6	16.1	^{129}Xe$_2$−^{86}Kr$_3$	11.7	C_2 O_4−^{86}Kr
^{86}Sr	53.5	^{86}Sr−^{84}Kr$_{1.024}$	46.5	^{86}Sr−^{86}Kr		
^{86}Zr	69.2	^{86}Zr−^{85}Rb$_{1.012}$	30.8	^{86}Zr O−^{98}Mo$_{1.041}$		
^{87}Rb	81.0	^{87}Rb−^{86}Kr	18.6	^{87}Rb−C_6 H_{14}	0.1	^{91}Zr−^{87}Rb$_{1.046}$
^{87}Sr	58.9	^{87}Sr−^{86}Kr$_{1.012}$	41.1	^{87}Sr−^{84}Kr$_{1.036}$		
^{87}Zr	73.2	^{87}Zr O−^{97}Mo$_{1.062}$	26.8	^{90}Zr(^{3}He,^{6}He)^{87}Zr		
^{87}Mo	53.3	^{87}Mo−^{85}Rb$_{1.024}$	46.7	^{87}Mo$_{1.069}$−C_7 H_9		
^{88}Rb	98.6	^{87}Rb(n,γ)^{88}Rb	0.3	^{79}Ga−^{88}Rb$_{.898}$	0.2	^{76}Zn−^{88}Rb$_{.864}$
^{88}Sr	58.3	^{88}Sr−^{86}Kr$_{1.023}$	41.7	^{88}Sr−^{84}Kr$_{1.048}$		
^{88}Zr	70.6	^{88}Zr O−^{98}Mo$_{1.061}$	29.2	^{90}Zr(p,t)^{88}Zr	0.2	^{88}Nb(β^+)^{88}Zr
^{88}Nb	66.7	^{88}Nb O−^{98}Mo$_{1.061}$	33.3	^{88}Nb(β^+)^{88}Zr		
^{89}Rb	56.8	^{89}Rb(β^-)^{89}Sr	41.9	^{89}Rb−^{85}Rb$_{1.047}$	1.3	^{91}Rb−^{93}Rb$_{.489}$ ^{89}Rb$_{.511}$
^{89}Sr	100.0	^{88}Sr(n,γ)^{89}Sr				
^{89}Y	50.8	^{89}Y−^{87}Rb$_{1.023}$	48.9	^{89}Y−^{85}Rb$_{1.047}$	0.2	^{89}Zr(β^+)^{89}Y
^{89}Zr	84.4	^{89}Zr(β^+)^{89}Y	15.3	^{90}Zr(d,t)^{89}Zr	0.2	^{89}Nb(β^+)^{89}Zr
^{89}Nb	77.7	^{89}Nb−u	22.3	^{89}Nb(β^+)^{89}Zr		
^{90}Rb	59.2	^{90}Rb−^{85}Rb$_{1.059}$	40.8	^{90}Rb(β^-)^{90}Sr		
^{90}Sr	98.8	^{90}Sr(β^-)^{90}Y	1.2	^{90}Rb(β^-)^{90}Sr		
^{90}Y	99.9	^{89}Y(n,γ)^{90}Y	0.1	^{90}Sr(β^-)^{90}Y		
^{90}Zr	62.4	^{90}Zr−^{87}Rb$_{1.034}$	30.2	^{90}Zr−u	7.3	^{90}Zr(n,γ)^{91}Zr

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{90}Nb	68.7	^{90}Nb(β^+)^{90}Zr	31.3	^{90}Mo(β^+)^{90}Nb		
^{90}Mo	62.6	^{90}Mo−C_7 H_6	37.4	^{90}Mo(β^+)^{90}Nb		
^{90}Ru	85.9	^{90}Ru−^{85}Rb$_{1.059}$	14.1	^{90}Ru$_{1.033}$−C_7 H_9		
^{91}Rb	70.1	^{91}Rb−^{85}Rb$_{1.071}$	18.4	^{91}Rb(β^-)^{91}Sr	11.5	^{91}Rb−^{93}Rb$_{.489}$ ^{89}Rb$_{.511}$
^{91}Sr	81.0	^{91}Sr(β^-)^{91}Y	11.1	^{92}Rb(β^-n)^{91}Sr	8.0	^{91}Rb(β^-)^{91}Sr
^{91}Y	98.2	^{91}Y(β^-)^{91}Zr	1.8	^{91}Sr(β^-)^{91}Y		
^{91}Zr	50.3	^{91}Zr(n,γ)^{92}Zr	28.5	^{91}Zr−^{87}Rb$_{1.046}$	16.5	^{91}Zr−u
^{91}Nb	97.7	^{91}Zr(p,n)^{91}Nb	2.3	^{91}Mo(β^+)^{91}Nb		
^{91}Mo	65.1	^{91}Mo−C_7 H_7	23.5	^{92}Mo(p,d)^{91}Mo	11.4	^{91}Mo(β^+)^{91}Nb
^{91}Tc	44.7	^{91}Tc−C_7 H_7	33.2	^{91}Tc−^{94}Mo$_{.968}$	22.1	^{91}Tc−^{85}Rb$_{1.071}$
^{91}Ru	37.4	^{91}Ru−C_7 H_7	36.9	^{91}Ru−^{85}Rb$_{1.071}$	25.7	^{91}Ru−^{94}Mo$_{.968}$
^{92}Rb	53.3	^{92}Rb−^{85}Rb$_{1.082}$	31.7	^{92}Rb(β^-)^{92}Sr	14.5	^{92}Rb(β^-n)^{91}Sr
^{92}Sr	89.7	^{92}Sr−^{85}Rb$_{1.082}$	7.3	^{92}Rb(β^-)^{92}Sr	3.0	^{92}Sr(β^-)^{92}Y
^{92}Y	57.8	^{92}Y(β^-)^{92}Zr	28.8	^{92}Sr(β^-)^{92}Y	13.3	^{94}Zr(d,α)^{92}Y
^{92}Zr	45.2	^{91}Zr(n,γ)^{92}Zr	31.6	^{92}Zr−u	23.1	^{92}Zr−^{87}Rb$_{1.057}$
^{92}Nb	72.7	^{92}Zr(p,n)^{92}Nb	27.3	^{93}Nb(γ,n)^{92}Nb		
^{92}Mo	87.2	^{92}Mo−^{87}Rb$_{1.057}$	12.8	^{92}Mo−u		
^{92}Tc	60.0	^{92}Tc−^{85}Rb$_{1.082}$	40.0	^{92}Tc$_{.989}$−C_7 H_7		
^{92}Ru	72.3	^{92}Ru−^{85}Rb$_{1.082}$	27.7	^{92}Ru$_{1.011}$−C_7 H_9		
^{93}Rb	70.7	^{93}Rb−^{85}Rb$_{1.094}$	26.5	^{93}Rb(β^-)^{93}Sr	2.5	^{91}Rb−^{93}Rb$_{.489}$ ^{89}Rb$_{.511}$
^{93}Sr	65.8	^{93}Sr−^{85}Rb$_{1.094}$	23.7	^{93}Rb(β^-)^{93}Sr	10.5	^{93}Sr(β^-)^{93}Y
^{93}Y	76.3	^{93}Y(β^-)^{93}Zr	23.7	^{93}Sr(β^-)^{93}Y		
^{93}Zr	97.6	^{92}Zr(n,γ)^{93}Zr	2.4	^{93}Zr(β^-)^{93}Nb		
^{93}Nb	52.7	^{93}Zr(β^-)^{93}Nb	30.7	^{93}Nb(n,γ)^{94}Nb	16.6	^{93}Nb(γ,n)^{92}Nb
^{93}Ru	73.4	^{93}Ru−C_7 H_9	26.6	^{93}Ru−^{85}Rb$_{1.094}$		
^{93}Rh	55.1	^{93}Rh−C_7 H_9	44.9	^{93}Rh−^{85}Rb$_{1.094}$		
^{94}Rb	70.2	^{94}Rb−^{85}Rb$_{1.106}$	29.6	^{94}Rb−^{88}Rb$_{1.068}$	0.3	^{94}Rb−^{95}Rb$_{.660}$ ^{92}Rb$_{.341}$
^{94}Sr	98.3	^{94}Sr−^{85}Rb$_{1.106}$	1.7	^{94}Sr(β^-)^{94}Y		
^{94}Y	50.2	^{94}Y(β^-)^{94}Zr	39.6	^{94}Sr(β^-)^{94}Y	10.2	^{96}Zr(d,α)^{94}Y
^{94}Zr	77.2	^{94}Zr−u	22.5	^{94}Zr−^{87}Rb$_{1.080}$	0.3	^{94}Zr(n,γ)^{95}Zr
^{94}Nb	69.2	^{93}Nb(n,γ)^{94}Nb	30.8	^{94}Nb(β^-)^{94}Mo		
^{94}Mo	67.9	^{94}Mo(n,γ)^{95}Mo	18.7	^{94}Mo−^{87}Rb$_{1.080}$	13.0	^{94}Mo−u
^{94}Ru	56.2	^{94}Ru−^{85}Rb$_{1.106}$	43.8	^{94}Ru−C_7 H_{10}		
^{94}Rh	62.2	^{94}Rh−^{85}Rb$_{1.106}$	37.8	^{94}Rh−C_7 H_{10}		
^{95}Rb	51.4	^{95}Rb(β^-)^{95}Sr	25.5	^{95}Rb−^{96}Rb$_{.742}$ ^{92}Rb$_{.258}$	12.7	^{94}Rb−^{95}Rb$_{.660}$ ^{92}Rb$_{.341}$
^{95}Sr	38.9	^{95}Sr−^{85}Rb$_{1.118}$	38.9	^{95}Sr−^{97}Zr$_{.979}$	20.1	^{95}Sr(β^-)^{95}Y
^{95}Y	56.2	^{95}Y(β^-)^{95}Zr	32.3	^{95}Sr(β^-)^{95}Y	11.5	^{96}Zr(t,α)^{95}Y
^{95}Zr	91.4	^{94}Zr(n,γ)^{95}Zr	8.2	^{95}Zr(β^-)^{95}Nb	0.4	^{95}Y(β^-)^{95}Zr
^{95}Nb	97.4	^{95}Nb(β^-)^{95}Mo	2.6	^{95}Zr(β^-)^{95}Nb		
^{95}Mo	66.5	^{95}Mo(n,γ)^{96}Mo	21.1	^{94}Mo(n,γ)^{95}Mo	12.2	^{95}Mo−u
^{95}Tc	97.4	^{95}Tc(β^+)^{95}Mo	2.6	^{95}Ru(β^+)^{95}Tc		
^{95}Ru	90.3	^{96}Ru(p,d)^{95}Ru	9.7	^{95}Ru(β^+)^{95}Tc		
^{95}Rh	85.9	^{95}Rh−^{85}Rb$_{1.118}$	14.1	^{95}Rh$_{.989}$−C_7 H_{10}		
^{96}Kr	88.5	^{96}Kr−^{85}Rb$_{1.129}$	11.5	^{96}Kr−u		
^{96}Rb	99.7	^{96}Rb−^{88}Rb$_{1.091}$	0.3	^{95}Rb−^{96}Rb$_{.742}$ ^{92}Rb$_{.258}$		
^{96}Sr	82.6	^{96}Sr−^{97}Zr$_{.990}$	17.4	^{96}Sr(β^-)^{96}Y		
^{96}Y	92.0	^{96}Y−^{97}Zr$_{.990}$	8.0	^{96}Sr(β^-)^{96}Y		
^{96}Zr	52.2	^{96}Zr−u	29.3	^{96}Zr−^{96}Mo	13.0	^{96}Zr−^{87}Rb$_{1.103}$
^{96}Nb	62.8	^{96}Zr−^{96}Nb	37.2	^{96}Nb−^{96}Mo		
^{96}Mo	46.1	^{96}Zr−^{96}Mo	29.8	^{95}Mo(n,γ)^{96}Mo	15.4	^{96}Mo(n,γ)^{97}Mo
^{96}Ru	100.0	^{96}Ru−^{96}Mo				
^{97}Rb	87.0	^{97}Rb−^{85}Rb$_{1.141}$	13.0	^{97}Rb−^{88}Rb$_{1.102}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{97}Sr	86.8	^{97}Sr−^{85}Rb$_{1.141}$	13.2	^{97}Sr−^{97}Zr		
^{97}Zr	99.9	^{96}Zr(n,γ)^{97}Zr				
^{97}Nb	50.0	^{97}Zr(β^-)^{97}Nb	50.0	^{97}Nb(β^-)^{97}Mo		
^{97}Mo	43.8	^{96}Mo(n,γ)^{97}Mo	24.1	^{97}Mo−u	20.5	^{97}Mo−^{87}Rb$_{1.115}$
^{97}Tc	52.9	^{96}Mo(^{3}He,d)^{97}Tc	47.1	^{97}Mo(p,n)^{97}Tc		
^{98}Rb	70.9	^{98}Rb−u	29.1	^{98}Rb−^{85}Rb$_{1.153}$		
^{98}Sr	88.0	^{98}Sr−^{85}Rb$_{1.153}$	12.0	^{98}Sr−^{97}Zr$_{1.010}$		
^{98}Zr	82.2	^{98}Zr−^{97}Zr$_{1.010}$	17.8	^{96}Zr(t,p)^{98}Zr		
^{98}Mo	86.9	^{97}Mo(n,γ)^{98}Mo	12.4	^{98}Mo−u	0.6	^{98}Mo(n,γ)^{99}Mo
^{98}Tc	57.2	^{99}Tc(p,d)^{98}Tc	29.2	^{97}Mo(^{3}He,d)^{98}Tc	11.4	^{98}Mo(p,n)^{98}Tc
^{98}Ru	91.6	C$_7$ H$_{14}$−^{98}Ru	8.4	^{98}Tc(β^-)^{98}Ru		
^{98}Pd	99.6	^{98}Pd−^{85}Rb$_{1.153}$	0.4	^{98}Ag(β^+)^{98}Pd		
^{98}Ag	78.0	^{98}Ag−^{85}Rb$_{1.153}$	22.0	^{98}Ag(β^+)^{98}Pd		
^{99}Sr	52.8	^{99}Sr−^{85}Rb$_{1.165}$	47.2	^{99}Sr−^{97}Zr$_{1.021}$		
^{99}Zr	64.8	^{99}Zr−^{97}Zr$_{1.021}$	35.2	^{99}Zr−u		
^{99}Mo	98.9	^{98}Mo(n,γ)^{99}Mo	1.1	^{99}Mo(β^-)^{99}Tc		
^{99}Tc	78.2	^{99}Mo(β^-)^{99}Tc	20.0	^{99}Tc(β^-)^{99}Ru	1.8	^{99}Tc(p,d)^{98}Tc
^{99}Ru	97.7	^{99}Ru(n,γ)^{100}Ru	2.3	^{99}Tc(β^-)^{99}Ru		
^{99}Rh	88.8	^{99}Pd(β^+)^{99}Rh	11.2	^{99}Rh(β^+)^{99}Ru		
^{99}Pd	99.3	^{99}Pd−^{96}Mo$_{1.031}$	0.7	^{99}Pd(β^+)^{99}Rh		
^{100}Rb	55.0	^{100}Rb−u	45.0	^{100}Rb−^{85}Rb$_{1.176}$		
^{100}Sr	55.1	^{100}Sr−^{97}Zr$_{1.031}$	44.9	^{100}Sr−^{85}Rb$_{1.176}$		
^{100}Zr	76.4	^{100}Zr−^{97}Zr$_{1.031}$	23.6	^{100}Zr−u		
^{100}Mo	65.2	^{100}Mo−u	32.1	^{100}Mo−^{87}Rb$_{1.149}$	2.7	^{100}Mo−^{100}Ru
^{100}Ru	96.5	^{100}Mo−^{100}Ru	2.3	^{99}Ru(n,γ)^{100}Ru	1.1	^{100}Ru(n,γ)^{101}Ru
^{100}Rh	82.1	^{100}Rh(β^+)^{100}Ru	17.9	^{100}Rh−u		
^{100}Pd	54.0	^{102}Pd(p,t)^{100}Pd	46.0	^{96}Ru(^{16}O,^{12}C)^{100}Pd		
^{101}Zr	80.0	^{101}Zr−^{97}Zr$_{1.041}$	20.0	^{101}Zr−u		
^{101}Ru	98.3	^{100}Ru(n,γ)^{101}Ru	1.7	^{101}Ru(n,γ)^{102}Ru		
^{101}Rh	88.4	^{101}Pd(β^+)^{101}Rh	11.6	^{103}Rh(p,t)^{101}Rh		
^{101}Pd	93.2	^{101}Pd−^{96}Mo$_{1.052}$	6.8	^{101}Pd(β^+)^{101}Rh		
^{102}Zr	92.0	^{102}Zr−^{97}Zr$_{1.052}$	8.0	^{102}Zr(β^-)^{102}Nb^m		
^{102}Nb	99.4	^{102}Nb−^{97}Zr$_{1.052}$	0.6	^{102}Nb^m−^{102}Nb		
^{102}Nb^m	94.2	^{102}Nb^m−^{102}Nb	5.8	^{102}Zr(β^-)^{102}Nb^m		
^{102}Mo	82.8	^{102}Mo−^{97}Zr$_{1.052}$	17.2	^{100}Mo(t,p)^{102}Mo		
^{102}Tc	79.0	^{104}Ru(d,α)^{102}Tc	21.0	^{100}Mo(^{3}He,p)^{102}Tc		
^{102}Ru	98.3	^{101}Ru(n,γ)^{102}Ru	1.0	^{106}Nb−^{102}Ru$_{1.039}$	0.7	^{102}Ru(n,γ)^{103}Ru
^{102}Pd	100.0	^{102}Pd−^{102}Ru				
^{102}Cd	88.2	^{102}Cd−^{85}Rb$_{1.200}$	11.8	^{102}Cd−^{96}Mo$_{1.063}$		
^{102}In	85.7	^{102}In−^{96}Mo$_{1.063}$	14.3	^{102}In−^{85}Rb$_{1.200}$		
^{103}Ru	99.2	^{102}Ru(n,γ)^{103}Ru	0.8	^{104}Ru(d,t)^{103}Ru−^{148}Gd()^{147}Gd	0.1	^{103}Ru(β^-)^{103}Rh
^{103}Rh	98.4	^{103}Ru(β^-)^{103}Rh	1.6	^{103}Rh(p,t)^{101}Rh		
^{103}Cd	85.7	^{103}Cd−^{85}Rb$_{1.212}$	14.0	^{103}Cd−^{96}Mo$_{1.073}$	0.4	^{103}In(β^+)^{103}Cd
^{103}In	76.8	^{103}In−^{85}Rb$_{1.212}$	12.9	^{103}In−u	10.2	^{103}In(β^+)^{103}Cd
^{104}Mo	97.2	^{104}Mo−^{97}Zr$_{1.072}$	2.8	^{104}Mo(β^-)^{104}Tc		
^{104}Tc	70.2	^{104}Mo(β^-)^{104}Tc	29.8	^{104}Tc(β^-)^{104}Ru		
^{104}Ru	57.7	^{104}Ru(d,t)^{103}Ru−^{148}Gd()^{147}Gd	30.9	^{104}Ru(n,γ)^{105}Ru	10.0	C$_8$ H$_8$−^{104}Ru
^{104}Cd	89.3	^{104}Cd−^{85}Rb$_{1.224}$	10.7	^{104}Cd−^{96}Mo$_{1.083}$		
^{104}Sn	92.9	^{104}Sn−^{87}Rb$_{1.195}$	7.1	^{108}Te(α)^{104}Sn		
^{105}Mo	98.4	^{105}Mo−^{97}Zr$_{1.082}$	1.6	^{105}Mo(β^-)^{105}Tc		
^{105}Tc	59.0	^{105}Mo(β^-)^{105}Tc	41.0	^{105}Tc(β^-)^{105}Ru		
^{105}Ru	69.1	^{104}Ru(n,γ)^{105}Ru	25.4	^{105}Ru(β^-)^{105}Rh	5.1	^{106}Ru−^{105}Ru$_{1.010}$

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{105}Rh	74.6	^{105}Rh(β^-)^{105}Pd	25.4	^{105}Ru(β^-)^{105}Rh		
^{105}Pd	96.0	^{105}Pd(n,γ)^{106}Pd	3.9	^{105}Rh(β^-)^{105}Pd	0.2	^{105}Pd(^{3}He,d)^{106}Ag
^{105}Ag	91.1	^{105}Cd(β^+)^{105}Ag	8.9	^{107}Ag(p,t)^{105}Ag		
^{105}Cd	99.2	^{105}Cd$-^{85}$Rb$_{1.235}$	0.8	^{105}Cd(β^+)^{105}Ag		
^{105}Sn	58.0	^{105}Sn$-^{87}$Rb$_{1.207}$	36.1	^{105}Sn$-^{85}$Rb$_{1.235}$	6.0	^{109}Te(α)^{105}Sn
^{106}Nb	88.2	^{106}Nb$-^{52}$Cr$_{2.038}$	11.8	^{106}Nb$-^{102}$Ru$_{1.039}$		
^{106}Ru	63.3	^{106}Ru(β^-)^{106}Rh	36.7	^{106}Ru$-^{105}$Ru$_{1.010}$		
^{106}Rh	63.3	^{106}Rh(β^-)^{106}Pd	36.7	^{106}Ru(β^-)^{106}Rh		
^{106}Pd	69.9	^{106}Cd$-^{106}$Pd	20.2	^{106}Pd$-$u	5.2	^{106}Pd(n,γ)^{107}Pd
^{106}Ag	81.0	^{106}Ag(ε)^{106}Pd	12.3	^{105}Pd(^{3}He,d)^{106}Ag	6.6	^{107}Ag(p,d)^{106}Ag
^{106}Cd	43.3	^{106}Cd$-^{85}$Rb$_{1.247}$	29.9	^{106}Cd$-^{106}$Pd	26.8	^{106}Cd$-$u
^{106}Sn	51.7	^{106}Sn$-^{87}$Rb$_{1.218}$	39.5	^{106}Sn$-^{85}$Rb$_{1.247}$	8.8	^{110}Te(α)^{106}Sn
^{107}Pd	93.7	^{106}Pd(n,γ)^{107}Pd	6.3	^{107}Pd(β^-)^{107}Ag		
^{107}Ag	53.3	^{107}Pd(β^-)^{107}Ag	29.7	^{107}Cd(β^+)^{107}Ag	10.9	C_8 $H_{11}-^{107}$Ag
^{107}Cd	88.0	^{107}Cd$-^{85}$Rb$_{1.259}$	11.5	^{107}Cd(β^+)^{107}Ag	0.6	^{107}In(β^+)^{107}Cd
^{107}In	75.3	^{107}In(β^+)^{107}Cd	24.7	^{107}In$-$u		
^{107}Sb	58.9	^{107}Sb$-^{87}$Rb$_{1.230}$	21.1	^{107}Sb$-^{133}$Cs$_{.805}$	20.0	^{111}I(α)^{107}Sb
^{108}Pd	40.8	^{108}Pd$-^{108}$Cd	40.0	^{108}Pd$-$u	19.1	^{108}Pd(n,γ)^{109}Pd
^{108}Cd	45.7	^{108}Pd$-^{108}$Cd	27.5	^{108}Cd$-^{85}$Rb$_{1.271}$	25.1	^{108}Cd$-$u
^{108}In	88.6	^{108}In(β^+)^{108}Cd	11.4	^{108}Sn(β^+)^{108}In		
^{108}Sn	95.9	^{108}Sn$-^{87}$Rb$_{1.241}$	4.1	^{108}Sn(β^+)^{108}In		
^{108}Te	93.7	^{108}Te$-^{87}$Rb$_{1.241}$	6.3	^{108}Te(α)^{104}Sn		
^{109}Rh	64.3	^{110}Pd(d,^{3}He)^{109}Rh	35.7	^{109}Rh$-^{120}$Sn$_{.908}$		
^{109}Pd	80.6	^{108}Pd(n,γ)^{109}Pd	19.4	^{109}Pd(β^-)^{109}Ag		
^{109}Ag	56.6	^{109}Ag(n,γ)^{110}Ag	29.8	^{109}Pd(β^-)^{109}Ag	13.7	^{109}Cd(ε)^{109}Ag
^{109}Cd	75.3	^{109}Cd$-^{85}$Rb$_{1.282}$	21.5	^{109}Cd(ε)^{109}Ag	3.1	^{109}In(β^+)^{109}Cd
^{109}In	70.0	^{108}Cd(^{3}He,d)^{109}In$-^{110}$Cd()^{111}In	30.0	^{109}In(β^+)^{109}Cd		
^{109}Sn	77.9	^{112}Sn(^{3}He,^{6}He)^{109}Sn	22.1	^{109}Sb(β^+)^{109}Sn		
^{109}Sb	91.8	^{109}Sb$-^{87}$Rb$_{1.253}$	8.2	^{109}Sb(β^+)^{109}Sn		
^{109}Te	54.0	^{109}Te$-^{87}$Rb$_{1.253}$	32.1	^{109}Te$-^{133}$Cs$_{.820}$	7.4	^{109}Te(α)^{105}Sn
^{110}Ru	97.2	^{110}Ru$-^{105}$Ru$_{1.048}$	2.8	^{110}Ru(β^-)^{110}Rh		
^{110}Rh	87.7	^{110}Rh(β^-)^{110}Pd	12.3	^{110}Ru(β^-)^{110}Rh		
^{110}Pd	71.4	^{110}Pd$-^{110}$Cd	28.0	^{110}Pd$-$u	0.5	^{110}Pd(d,^{3}He)^{109}Rh
^{110}Ag	56.7	^{110}Ag(β^-)^{110}Cd	43.3	^{109}Ag(n,γ)^{110}Ag		
^{110}Cd	77.2	^{110}Cd(n,γ)^{111}Cd	12.0	^{110}Cd$-$u	8.6	^{110}Pd$-^{110}$Cd
^{110}Te	84.0	^{110}Te$-^{133}$Cs$_{.827}$	16.0	^{110}Te(α)^{106}Sn		
^{111}Cd	80.7	^{111}Cd(n,γ)^{112}Cd	19.3	^{110}Cd(n,γ)^{111}Cd		
^{111}In	69.0	^{113}In(p,t)^{111}In$-^{112}$Cd()^{110}Cd	19.3	^{108}Cd(^{3}He,d)^{109}In$-^{110}$Cd()^{111}In	11.7	^{113}In(p,t)^{111}In$-^{115}$In()^{113}In
^{111}I	70.0	^{111}I$-^{87}$Rb$_{1.276}$	30.0	^{111}I(α)^{107}Sb		
^{112}Rh	65.7	^{112}Rh(β^-)^{112}Pd	18.5	^{112}Rh$-^{120}$Sn$_{.933}$	15.8	^{112}Rh$-$u
^{112}Pd	88.8	^{112}Pd$-^{120}$Sn$_{.933}$	10.7	^{110}Pd(t,p)^{112}Pd	0.5	^{112}Rh(β^-)^{112}Pd
^{112}Cd	48.4	^{113}In$-^{112}$Cd$_{1.009}$	35.2	^{113}Cd$-^{112}$Cd$_{1.009}$	8.3	^{111}Cd(n,γ)^{112}Cd
^{112}In	50.0	^{112}Cd(p,n)^{112}In	50.0	^{112}In(β^-)^{112}Sn		
^{112}Sn	97.2	^{112}Sn$-^{112}$Cd	2.1	^{112}Sn$-^{120}$Sn$_{.933}$	0.7	^{112}Sn(n,γ)^{113}Sn
^{113}Ru	79.5	^{113}Ru$-^{105}$Ru$_{1.076}$	20.5	^{113}Ru$-$u		
^{113}Cd	59.5	^{113}Cd$-^{115}$In$_{.983}$	29.7	^{113}Cd$-^{112}$Cd$_{1.009}$	5.4	^{113}Cd(n,γ)^{114}Cd
^{113}In	77.1	^{113}In$-^{115}$In$_{.983}$	16.6	^{113}In$-^{112}$Cd$_{1.009}$	6.2	^{113}In(n,γ)^{114}In
^{113}Sn	69.3	^{112}Sn(n,γ)^{113}Sn	16.7	^{113}Sn(β^+)^{113}In	14.1	^{114}Sn(d,t)^{113}Sn
^{113}Xe	82.2	^{113}Xe$-^{133}$Cs$_{.850}$	17.8	^{113}Xe(α)^{109}Te		
^{114}Rh	59.0	^{114}Rh$-^{120}$Sn$_{.950}$	41.0	^{114}Rh$-$u		
^{114}Cd	92.9	^{113}Cd(n,γ)^{114}Cd	7.1	^{116}Cd ^{35}Cl$-^{114}$Cd ^{37}Cl		
^{114}In	81.9	^{113}In(n,γ)^{114}In	18.1	^{114}In(β^-)^{114}Sn		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{114}Sn	99.9	^{114}Sn(n,γ)^{115}Sn	0.1	^{114}In(β^-)^{114}Sn		
^{114}Sb	68.1	^{114}Sb−u	31.9	^{114}Sn(p,n)^{114}Sb		
^{115}Pd	93.6	^{115}Pd−^{120}Sn$_{.958}$	6.4	^{115}Pd(β^-)^{115}Ag		
^{115}Ag	66.8	^{115}Ag−^{133}Cs$_{.865}$	20.9	^{115}Ag(β^-)^{115}Cd	12.4	^{115}Pd(β^-)^{115}Ag
^{115}Cd	100.0	^{114}Cd(d,p)^{115}Cd				
^{115}In	100.0	^{115}In−^{129}Xe				
^{115}Sn	100.0	^{115}In−^{115}Sn				
^{116}Rh	62.8	^{116}Rh−^{120}Sn$_{.967}$	37.2	^{116}Rh−u		
^{116}Cd	97.8	^{116}Cd−^{116}Sn	2.2	^{116}Cd ^{35}Cl−^{114}Cd ^{37}Cl		
^{116}Sn	99.1	^{115}Sn(n,γ)^{116}Sn	0.8	^{116}Cd−^{116}Sn	0.1	^{116}Sn(n,γ)^{117}Sn
^{116}Sb	75.1	^{116}Sn(p,n)^{116}Sb	24.9	^{115}Sn(^{3}He,d)^{116}Sb−^{120}Sn()^{121}Sb		
^{116}Te	97.4	^{116}Te−u	2.6	^{116}I(β^+)^{116}Te		
^{116}I	45.1	^{116}I(β^+)^{116}Te	40.9	^{116}I−u	14.0	^{116}Xe(β^+)^{116}I
^{116}Xe	99.6	^{116}Xe−^{133}Cs$_{.872}$	0.4	^{116}Xe(β^+)^{116}I		
^{117}Pd	95.8	^{117}Pd−^{120}Sn$_{.975}$	4.2	^{117}Pd(β^-)^{117}Ag		
^{117}Ag	82.9	^{117}Ag−^{133}Cs$_{.880}$	17.1	^{117}Pd(β^-)^{117}Ag		
^{117}In	94.3	^{117}In(β^-)^{117}Sn	5.7	^{120}Sn(t,α)^{119}In−^{118}Sn()^{117}In		
^{117}Sn	96.8	^{116}Sn(n,γ)^{117}Sn	3.2	^{117}Sn(n,γ)^{118}Sn		
^{117}Sb	71.2	^{116}Sn(^{3}He,d)^{117}Sb	17.8	^{117}Sn(p,n)^{117}Sb	11.0	^{117}Te(β^+)^{117}Sb
^{117}Te	50.7	^{117}Te(β^+)^{117}Sb	46.4	^{117}Te−u	2.9	^{117}I(β^+)^{117}Te
^{117}I	88.5	^{117}I−u	11.5	^{117}I(β^+)^{117}Te		
^{118}Pd	61.2	^{118}Pd−^{120}Sn$_{.983}$	38.8	^{118}Pd−^{129}Xe$_{.915}$		
^{118}In	100.0	^{119}Sn(t,α)^{118}In−^{118}Sn()^{117}In				
^{118}Sn	96.6	^{117}Sn(n,γ)^{118}Sn	3.3	^{118}Sn(n,γ)^{119}Sn		
^{119}Ag	97.3	^{119}Ag−^{133}Cs$_{.895}$	2.7	^{119}Ag(β^-)^{119}Cd		
^{119}Cd	78.0	^{119}Ag(β^-)^{119}Cd	22.0	^{119}Cd(β^-)^{119}In		
^{119}In	86.2	^{120}Sn(t,α)^{119}In−^{118}Sn()^{117}In	13.1	^{120}Sn(d,^{3}He)^{119}In	0.6	^{119}Cd(β^-)^{119}In
^{119}Sn	92.5	^{118}Sn(n,γ)^{119}Sn	7.3	^{120}Sn(d,t)^{119}Sn	0.2	^{119}Sb(ε)^{119}Sn
^{119}Sb	48.8	^{118}Sn(^{3}He,d)^{119}Sb	33.8	^{119}Sb(ε)^{119}Sn	17.4	^{119}Sb−u
^{119}Xe	86.2	^{119}Xe−^{133}Cs$_{.895}$	13.8	^{119}Xe−u		
^{120}Pd	68.6	^{120}Pd−^{120}Sn	31.4	^{120}Pd−^{129}Xe$_{.930}$		
^{120}Sn	22.9	^{112}Sn−^{120}Sn$_{.933}$	22.4	^{115}Sn−^{120}Sn$_{.958}$	19.6	^{129}Xe−^{120}Sn$_{1.075}$
^{120}Te	98.0	^{122}Te(p,t)^{120}Te−^{132}Ba()^{130}Ba	2.0	^{122}Te(p,t)^{120}Te−^{144}Sm()^{142}Sm		
^{121}Sn	97.5	^{120}Sn(n,γ)^{121}Sn	2.5	^{122}Sn(d,t)^{121}Sn		
^{121}Sb	95.5	^{121}Sb(n,γ)^{122}Sb	4.3	^{115}Sn(^{3}He,d)^{116}Sb−^{120}Sn()^{121}Sb	0.1	^{121}Te(β^+)^{121}Sb
^{121}Te	73.6	^{121}Te(β^+)^{121}Sb	26.4	^{121}I(β^+)^{121}Te		
^{121}I	99.4	^{120}Te(^{3}He,d)^{121}I	0.6	^{121}I(β^+)^{121}Te		
^{121}Xe	85.0	^{121}Xe−^{133}Cs$_{.910}$	15.0	^{121}Cs(β^+)^{121}Xe		
^{121}Cs	46.0	^{121}Cs(β^+)^{121}Xe	37.7	^{121}Cs−^{133}Cs$_{.910}$	16.3	^{121}Cs−u
^{122}Cd	72.4	^{122}Cd−^{130}Xe$_{.938}$	27.6	^{122}Cd−^{133}Cs$_{.917}$		
^{122}Sn	58.5	^{122}Sn(d,t)^{121}Sn	41.5	^{122}Sn(n,γ)^{123}Sn		
^{122}Sb	67.6	^{122}Sb(β^-)^{122}Te	28.0	^{123}Sb(γ,n)^{122}Sb	4.4	^{121}Sb(n,γ)^{122}Sb
^{122}Te	98.8	^{122}Te(n,γ)^{123}Te	0.7	^{122}Sb(β^-)^{122}Te	0.5	^{122}Te(^{3}He,d)^{123}I
^{122}Cs	56.8	^{122}Cs−^{133}Cs$_{.917}$	43.2	^{122}Cs−u		
^{123}Cd	99.6	^{123}Cd−^{130}Xe$_{.946}$	0.4	^{123}Cd(β^-)^{123}In		
^{123}In	43.4	^{123}In(β^-)^{123}Sn	31.9	^{123}Cd(β^-)^{123}In	24.7	^{124}Sn(d,^{3}He)^{123}In
^{123}Sn	52.3	^{122}Sn(n,γ)^{123}Sn	37.1	^{124}Sn(d,t)^{123}Sn	10.2	^{123}Sn(β^-)^{123}Sb
^{123}Sb	98.1	^{123}Te−^{123}Sb	1.6	^{123}Sn(β^-)^{123}Sb	0.3	^{123}Sb(γ,n)^{122}Sb
^{123}Te	97.0	^{123}Te(n,γ)^{124}Te	1.8	^{123}Te−^{123}Sb	1.2	^{122}Te(n,γ)^{123}Te
^{123}I	96.3	^{122}Te(^{3}He,d)^{123}I	3.7	^{123}Xe(β^+)^{123}I		
^{123}Xe	62.0	^{123}Xe−^{133}Cs$_{.925}$	38.0	^{123}Xe(β^+)^{123}I		
^{124}Cd	67.8	^{124}Cd−^{130}Xe$_{.954}$	32.0	^{124}Cd−^{133}Cs$_{.932}$	0.2	^{124}Cd(β^-)^{124}In

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{124}In	61.1	^{124}Cd(β^-)^{124}In	38.9	^{124}In(β^-)^{124}Sn		
^{124}Sn	45.1	^{124}Sn−^{129}Xe$_{.961}$	33.8	^{124}Sn−^{120}Sn$_{1.033}$	16.1	^{124}Sn−^{124}Te
^{124}Te	82.5	^{124}Sn−^{124}Te	13.8	^{124}Te(n,γ)^{125}Te	3.0	^{123}Te(n,γ)^{124}Te
^{124}Xe	99.4	^{124}Xe−^{124}Te	0.6	^{124}Xe(n,γ)^{125}Xe		
^{125}Te	86.2	^{124}Te(n,γ)^{125}Te	13.8	^{125}Te(n,γ)^{126}Te		
^{125}Xe	99.3	^{124}Xe(n,γ)^{125}Xe	0.7	^{125}Cs(β^+)^{125}Xe		
^{125}Cs	70.4	^{125}Cs−^{133}Cs$_{.940}$	29.6	^{125}Cs(β^+)^{125}Xe		
^{125}Ba	97.9	^{125}Ba−^{133}Cs$_{.940}$	2.1	^{125}La(β^+)^{125}Ba		
^{125}La	86.5	^{125}La−u	13.5	^{125}La(β^+)^{125}Ba		
^{126}Cd	56.2	^{126}Cd−^{130}Xe$_{.969}$	43.8	^{126}Cd−^{133}Cs$_{.947}$		
^{126}Te	86.1	^{125}Te(n,γ)^{126}Te	10.1	^{128}Te ^{35}Cl−^{126}Te ^{37}Cl	2.1	^{126}I(β^+)^{126}Te
^{126}I	51.8	^{126}I(β^+)^{126}Te	48.2	^{127}I(γ,n)^{126}I		
^{126}Xe	100.0	^{126}Xe−^{128}Xe$_{.984}$				
^{126}Cs	73.2	^{126}Cs−^{133}Cs$_{.947}$	26.8	^{126}Cs(β^+)^{126}Xe		
^{127}In	80.1	^{127}In−^{133}Cs$_{.955}$	19.9	^{127}In(β^-)^{127}Sn		
^{127}In^n	57.9	^{127}In^n−^{133}Cs$_{.955}$	42.1	^{127}In^n(β^-)^{127}Sn		
^{127}Sn	68.1	^{127}Sn ^{34}S−^{133}Cs$_{1.211}$	16.2	^{127}In(β^-)^{127}Sn	14.1	^{127}Sn(β^-)^{127}Sb
^{127}Sb	96.2	^{127}Sb(β^-)^{127}Te	3.8	^{127}Sn(β^-)^{127}Sb		
^{127}Te	98.3	^{126}Te(n,γ)^{127}Te	1.5	^{127}Te(β^-)^{127}I	0.3	^{127}Sb(β^-)^{127}Te
^{127}I	35.3	^{127}I(γ,n)^{126}I	24.0	^{127}Te(β^-)^{127}I	20.9	C_{10} H_7−^{127}I
^{127}Xe	91.2	^{127}Xe(ε)^{127}I	8.8	^{127}Cs(β^+)^{127}Xe		
^{127}Cs	81.7	^{127}Cs−^{133}Cs$_{.955}$	18.3	^{127}Cs(β^+)^{127}Xe		
^{127}Ba	97.7	^{127}Ba−^{133}Cs$_{.955}$	2.3	^{127}La(β^+)^{127}Ba		
^{127}La	86.6	^{127}La−u	13.4	^{127}La(β^+)^{127}Ba		
^{128}Cd	60.6	^{128}Cd−^{133}Cs$_{.962}$	39.4	^{128}Cd−^{130}Xe$_{.985}$		
^{128}Sn	57.7	^{128}Sn−u	42.3	^{128}Sn(β^-)^{128}Sb^m		
^{128}Sb^m	55.0	^{128}Sb^m(β^-)^{128}Te	45.0	^{128}Sn(β^-)^{128}Sb^m		
^{128}Te	49.1	^{130}Te ^{35}Cl−^{128}Te ^{37}Cl	47.1	^{128}Te−^{128}Xe	2.6	^{128}Te ^{35}Cl−^{126}Te ^{37}Cl
^{128}I	86.8	^{127}I(n,γ)^{128}I	13.1	^{128}I(β^-)^{128}Xe		
^{128}Xe	100.0	^{128}Xe−^{129}Xe$_{.992}$				
^{128}Cs	80.3	^{128}Cs(β^+)^{128}Xe	19.7	^{128}Cs−^{133}Cs$_{.962}$		
^{128}Ba	98.2	^{130}Ba(p,t)^{128}Ba−^{144}Sm()^{142}Sm	1.8	^{128}Ba−^{133}Cs$_{.962}$		
^{129}In	53.3	^{129}In−^{130}Xe$_{.992}$	36.6	^{129}In^m(IT)^{129}In	10.0	^{129}In−^{133}Cs$_{.970}$
^{129}In^m	63.3	^{129}In^m(IT)^{129}In	36.6	^{129}In^m−^{130}Xe$_{.992}$	0.1	^{129}In^m(β^-)^{129}Sn
^{129}Sn	43.8	^{129}In(β^-)^{129}Sn	35.8	^{129}Sn−u	20.5	^{129}In^m(β^-)^{129}Sn
^{129}Te	98.8	^{128}Te(n,γ)^{129}Te	1.2	^{129}Te(β^-)^{129}I		
^{129}I	60.2	^{129}Te(β^-)^{129}I	39.8	^{129}I(β^-)^{129}Xe		
^{129}Xe	47.6	^{131}Xe−^{129}Xe$_{1.016}$	13.6	C_{10} H_{10}−^{129}Xe	11.9	^{129}Xe$_2$−^{86}Kr$_3$
^{129}Cs	82.9	^{129}Cs(β^+)^{129}Xe	12.2	^{129}Cs−^{133}Cs$_{.970}$	4.9	^{129}Ba(β^+)^{129}Cs
^{129}Ba	49.0	^{130}Ba(d,t)^{129}Ba	44.7	^{129}Ba(β^+)^{129}Cs	6.3	^{129}La(β^+)^{129}Ba
^{129}La	58.3	^{129}La−u	41.7	^{129}La(β^+)^{129}Ba		
^{130}In	92.3	^{130}In−^{133}Cs$_{.977}$	7.7	^{130}In−^{130}In^n		
^{130}In^m	79.4	^{130}In^m−^{133}Cs$_{.977}$	11.0	^{130}In^m−^{130}In^n	9.6	^{130}In^m−^{130}Te
^{130}In^n	59.7	^{130}In^n−^{133}Cs$_{.977}$	17.6	^{130}In^n−^{130}Te	12.0	^{130}In^m−^{130}Inn
^{130}Sn	73.3	^{130}Sn−^{130}Xe	26.6	^{130}Sn−^{133}Cs$_{.977}$	0.2	^{130}Sn(β^-)^{130}Sb
^{130}Sb	90.0	^{130}Sn(β^-)^{130}Sb	10.0	^{130}Sb(β^-)^{130}Te		
^{130}Te	77.9	^{130}Te−^{129}Xe	22.1	^{130}Te−^{130}Xe		
^{130}Xe	50.2	^{130}Xe−^{129}Xe	37.1	^{132}Xe−^{130}Xe	12.7	^{130}Te−^{130}Xe
^{130}Cs	47.6	^{130}Cs−^{133}Cs$_{.977}$	34.9	^{130}Cs(β^+)^{130}Xe	17.5	^{129}Xe(^{3}He,d)^{130}Cs
^{130}Ba	98.9	^{130}Ba−^{130}Xe	0.8	^{130}Ba−^{85}Rb$_{1.529}$	0.2	^{122}Te(p,t)^{120}Te−^{132}Ba()^{130}Ba
^{131}Cd	63.1	^{131}Cd−u	36.9	^{131}Cd−^{133}Cs$_{.985}$		
^{131}In	66.7	^{131}In−^{130}Xe$_{1.008}$	33.3	^{131}In−^{133}Cs$_{.985}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{131}In^{m}$	88.3	$^{131}In^{m}-^{133}Cs_{.985}$	11.7	$^{131}In^{m}-^{130}Xe_{1.008}$		
^{131}Sn	80.9	$^{131}Sn\ ^{34}S-^{133}Cs_{1.241}$	19.1	$^{131}Sn(\beta^{-})^{131}Sb$		
^{131}Sb	94.6	$^{131}Sb-^{130}Xe_{1.008}$	5.4	$^{131}Sn(\beta^{-})^{131}Sb$		
^{131}Xe	58.5	$^{131}Xe-^{132}Xe_{.992}$	41.5	$^{131}Xe-^{129}Xe_{1.016}$		
^{131}Ce	95.7	$^{131}Ce-u$	4.3	$^{131}Pr(\beta^{+})^{131}Ce$		
^{131}Pr	81.2	$^{131}Pr-u$	9.5	$^{131}Nd(\beta^{+})^{131}Pr$	9.3	$^{131}Pr(\beta^{+})^{131}Ce$
^{131}Nd	97.0	$^{131}Nd-u$	3.0	$^{131}Nd(\beta^{+})^{131}Pr$		
^{132}Sn	61.1	$^{132}Sn-^{133}Cs_{.992}$	38.9	$^{132}Sn-^{132}Xe$		
^{132}Sb	83.4	$^{132}Sb-^{130}Xe_{1.015}$	16.6	$^{132}Sb-^{133}Cs_{.992}$		
^{132}Te	75.8	$^{132}Te-^{130}Xe_{1.015}$	24.2	$^{132}Te(\beta^{-})^{132}I$		
^{132}I	51.6	$^{132}Te(\beta^{-})^{132}I$	48.4	$^{132}I(\beta^{-})^{132}Xe$		
^{132}Xe	32.8	$^{132}Xe-C_{10}\ H_{10}$	25.8	$^{131}Xe-^{132}Xe_{.992}$	14.2	$^{132}Xe-C_3\ O_6$
^{132}Cs	73.2	$^{132}Cs-^{133}Cs_{.992}$	26.8	$^{133}Cs(\gamma,n)^{132}Cs$		
^{132}Ba	98.2	$^{132}Ba(n,\gamma)^{133}Ba$	1.8	$^{122}Te(p,t)^{120}Te-^{132}Ba()^{130}Ba$		
^{132}La	66.1	$^{132}La(\beta^{+})^{132}Ba$	33.9	$^{132}La-u$		
^{132}Ce	53.3	$^{132}Ce-u$	46.7	$^{132}Ce\ O-^{142}Sm_{1.042}$		
^{133}Sn	72.5	$^{133}Sn-^{134}Xe_{.993}$	27.5	$^{133}Sn-^{133}Cs$		
^{133}Sb	70.5	$^{133}Sb-^{130}Xe_{1.023}$	18.3	$^{133}Sb(\beta^{-})^{133}Te$	11.3	$^{133}Sb-^{136}Xe_{.978}$
^{133}Te	93.0	$^{133}Te-^{130}Xe_{1.023}$	7.0	$^{133}Sb(\beta^{-})^{133}Te$		
^{133}I	84.3	$^{133}I-^{133}Cs$	15.7	$^{133}I-u$		
^{133}Cs	44.7	$^{133}Cs-^{129}Xe$	44.6	$^{133}Cs-^{132}Xe$	10.7	$^{133}Cs-C_3\ O_6$
^{133}Ba	98.4	$^{133}Ba(\varepsilon)^{133}Cs$	1.6	$^{132}Ba(n,\gamma)^{133}Ba$		
^{134}Te	71.0	$^{134}Te-^{130}Xe_{1.031}$	20.6	$^{134}Te-^{136}Xe_{.985}$	8.5	$^{134}Te(\beta^{-})^{134}I$
^{134}I	58.8	$^{134}I-^{133}Cs_{1.008}$	41.2	$^{134}Te(\beta^{-})^{134}I$		
^{134}Xe	100.0	$^{134}Xe-^{132}Xe_{1.015}$				
^{134}Cs	99.9	$^{133}Cs(n,\gamma)^{134}Cs$	0.1	$^{134}Cs(\beta^{-})^{134}Ba$		
^{134}Ba	60.8	$^{134}Ba(n,\gamma)^{135}Ba$	39.2	$^{134}Cs(\beta^{-})^{134}Ba$		
^{135}Sb	83.6	$^{135}Sb-^{130}Xe_{1.038}$	16.4	$^{135}Sb-^{133}Cs_{1.015}$		
^{135}Te	59.4	$^{135}Te-^{133}Cs_{1.015}$	40.6	$^{135}Te-^{130}Xe_{1.038}$		
^{135}I	92.4	$^{135}I-^{133}Cs_{1.015}$	7.6	$^{135}I(\beta^{-})^{135}Xe$		
^{135}Xe	66.8	$^{135}Xe(\beta^{-})^{135}Cs$	33.2	$^{135}I(\beta^{-})^{135}Xe$		
^{135}Cs	86.6	$^{135}Cs-^{135}Ba$	13.2	$^{134}Cs(n,\gamma)^{135}Cs$	0.2	$^{135}Xe(\beta^{-})^{135}Cs$
^{135}Ba	59.1	$^{135}Ba(n,\gamma)^{136}Ba$	35.3	$^{134}Ba(n,\gamma)^{135}Ba$	5.6	$^{135}Cs-^{135}Ba$
^{135}La	88.9	$^{135}La(\beta^{+})^{135}Ba$	11.1	$^{135}Ce(\beta^{+})^{135}La$		
^{135}Ce	86.5	$^{135}Ce(\beta^{+})^{135}La$	13.5	$^{135}Ce-u$		
^{136}Sb	84.7	$^{136}Sb-^{130}Xe_{1.046}$	15.3	$^{136}Sb-^{133}Cs_{1.023}$		
^{136}Te	62.4	$^{136}Te-^{130}Xe_{1.046}$	24.0	$^{136}Te-^{136}Xe$	13.0	$^{136}Te-^{133}Cs_{1.023}$
^{136}I	50.3	$^{136}I(\beta^{-})^{136}Xe$	49.7	$^{136}Te(\beta^{-})^{136}I$		
^{136}Xe	80.9	$^{136}Xe-^{13}C_3\ O_6$	19.1	$^{136}Xe-^{28}Si_4\ D_{12}$		
^{136}Ba	40.3	$^{135}Ba(n,\gamma)^{136}Ba$	31.1	$^{136}Ba(n,\gamma)^{137}Ba$	28.6	$^{136}Xe-^{136}Ba$
^{136}Ce	99.9	$^{136}Ce-^{136}Ba$				
^{136}Pr	67.2	$^{136}Pr-^{133}Cs_{1.023}$	32.8	$^{136}Pr(\beta^{+})^{136}Ce$		
^{137}Te	69.8	$^{137}Te-^{130}Xe_{1.054}$	30.2	$^{137}Te-^{133}Cs_{1.030}$		
^{137}Ba	67.2	$^{136}Ba(n,\gamma)^{137}Ba$	32.8	$^{137}Ba(n,\gamma)^{138}Ba$		
^{137}Ce	100.0	$^{136}Ce(n,\gamma)^{137}Ce$				
^{137}Pr	66.1	$^{137}Pr(\beta^{+})^{137}Ce$	33.9	$^{137}Pr-^{133}Cs_{1.030}$		
^{137}Nd	80.8	$^{137}Nd-^{133}Cs_{1.030}$	17.6	$^{137}Nd-u$	1.6	$^{137}Pm^{m}(\beta^{+})^{137}Nd$
$^{137}Pm^{m}$	65.2	$^{137}Pm^{m}(\beta^{+})^{137}Nd$	34.8	$^{137}Sm(\beta^{+})^{137}Pm^{m}$		
^{137}Sm	53.5	$^{137}Sm-^{133}Cs_{1.030}$	36.3	$^{137}Sm-u$	10.2	$^{137}Sm(\beta^{+})^{137}Pm^{m}$
^{138}Te	74.8	$^{138}Te-^{130}Xe_{1.062}$	25.2	$^{138}Te-^{133}Cs_{1.038}$		
^{138}Xe	74.0	$^{138}Xe-^{133}Cs_{1.038}$	26.0	$^{138}Xe-^{136}Xe_{1.015}$		
^{138}Cs	50.7	$^{138}Cs(\beta^{-})^{138}Ba$	49.3	$^{138}Cs-^{133}Cs_{1.038}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{138}Ba	66.6	^{137}Ba(n,γ)^{138}Ba	31.1	^{138}Ba−^{136}Xe$_{1.015}$	1.3	^{138}La−^{138}Ba
^{138}La	81.2	^{138}La−^{138}Ba	18.8	^{138}La−^{138}Ce		
^{138}Ce	52.7	^{138}La−^{138}Ce	37.3	^{138}Ce−^{138}Ba	9.9	^{138}Ce−^{136}Xe$_{1.015}$
^{138}Pr^{m}	66.1	^{138}Pr^{m}(β^+)^{138}Ce	33.9	^{138}Pr^{m}−u		
^{138}Nd	96.4	^{138}Nd−^{133}Cs$_{1.038}$	3.6	^{138}Pm(β^+)^{138}Nd		
^{138}Pm	79.2	^{138}Pm−^{133}Cs$_{1.038}$	17.2	^{138}Pm−u	3.6	^{138}Pm(β^+)^{138}Nd
^{139}La	94.5	^{139}La−^{136}Xe$_{1.022}$	5.5	^{139}La(n,γ)^{140}La		
^{139}Ce	99.9	^{139}Ce(β^+)^{139}La	0.1	^{139}Pr(β^+)^{139}Ce		
^{139}Pr	99.6	^{139}Pr(β^+)^{139}Ce	0.4	^{139}Nd(β^+)^{139}Pr		
^{139}Nd	69.9	^{139}Pm(β^+)^{139}Nd	30.1	^{139}Nd(β^+)^{139}Pr		
^{139}Pm	94.6	^{139}Pm−^{133}Cs$_{1.045}$	5.4	^{139}Pm(β^+)^{139}Nd		
^{140}Te	73.5	^{140}Te−^{133}Cs$_{1.053}$	26.5	^{140}Te−^{130}Xe$_{1.077}$		
^{140}Cs	79.1	^{140}Cs−^{133}Cs$_{1.053}$	20.9	^{140}Cs(β^-)^{140}Ba		
^{140}Ba	38.0	^{140}Ba(β^-)^{140}La	36.7	^{140}Ba−^{133}Cs$_{1.053}$	19.0	^{140}Cs(β^-)^{140}Ba
^{140}La	94.5	^{139}La(n,γ)^{140}La	5.4	^{140}La(β^-)^{140}Ce	0.1	^{140}Ba(β^-)^{140}La
^{140}Ce	39.3	^{140}La(β^-)^{140}Ce	31.8	^{140}Ce O−^{133}Cs$_{1.173}$	25.3	^{140}Ce(n,γ)^{141}Ce
^{140}Pm^{m}	77.9	^{140}Pm^{m}−^{133}Cs$_{1.053}$	22.1	^{140}Pm^{m}−u		
^{141}Cs	38.1	^{141}Cs−^{133}Cs$_{1.060}$	33.1	^{141}Cs(β^-)^{141}Ba	20.1	^{141}Cs−^{136}Xe$_{1.037}$
^{141}Ba	58.0	^{141}Ba−u	27.2	^{141}Ba−^{133}Cs$_{1.060}$	8.1	^{141}Cs(β^-)^{141}Ba
^{141}La	96.0	^{141}La(β^-)^{141}Ce	4.0	^{141}Ba(β^-)^{141}La		
^{141}Ce	74.6	^{140}Ce(n,γ)^{141}Ce	25.0	^{141}Ce(β^-)^{141}Pr	0.4	^{141}La(β^-)^{141}Ce
^{141}Pr	54.4	^{141}Ce(β^-)^{141}Pr	45.6	^{141}Pr(n,γ)^{142}Pr		
^{141}Sm	49.8	^{144}Sm(^{3}He,^{6}He)^{141}Sm	42.8	^{141}Sm−^{133}Cs$_{1.060}$	7.3	^{141}Eu(β^+)^{141}Sm
^{141}Eu	81.8	^{141}Eu−^{133}Cs$_{1.060}$	18.2	^{141}Eu(β^+)^{141}Sm		
^{142}Cs	47.6	^{142}Cs−^{136}Xe$_{1.044}$	33.4	^{142}Cs−^{133}Cs$_{1.068}$	18.8	^{142}Cs(β^-)^{142}Ba
^{142}Ba	48.8	^{142}Ba−u	33.7	^{142}Ba−^{133}Cs$_{1.068}$	12.2	^{142}Cs(β^-)^{142}Ba
^{142}La	94.0	^{142}La(β^-)^{142}Ce	6.0	^{142}Ba(β^-)^{142}La		
^{142}Ce	78.5	^{142}Ce(n,γ)^{143}Ce	20.7	^{140}Ce(t,p)^{142}Ce	0.9	^{142}La(β^-)^{142}Ce
^{142}Pr	54.3	^{141}Pr(n,γ)^{142}Pr	45.7	^{142}Pr(β^-)^{142}Nd		
^{142}Nd	77.4	^{142}Nd(n,γ)^{143}Nd	21.6	^{142}Pr(β^-)^{142}Nd	0.6	^{146}Sm(α)^{142}Nd
^{142}Pm	88.6	^{142}Pm−u	11.4	^{142}Sm(β^+)^{142}Pm		
^{142}Sm	96.8	^{122}Te(p,t)^{120}Te−^{144}Sm()^{142}Sm	1.0	^{130}Ba(p,t)^{128}Ba−^{144}Sm()^{142}Sm	0.8	^{148}Eu−^{142}Sm$_{1.042}$
^{143}Cs	91.5	^{143}Cs−^{133}Cs$_{1.075}$	8.5	^{143}Cs(β^-)^{143}Ba		
^{143}Ba	72.8	^{143}Ba−u	20.5	^{143}Ba−^{133}Cs$_{1.075}$	6.6	^{143}Cs(β^-)^{143}Ba
^{143}La	81.8	^{143}La−u	18.2	^{143}La(β^-)^{143}Ce		
^{143}Ce	76.8	^{143}Ce(β^-)^{143}Pr	21.5	^{142}Ce(n,γ)^{143}Ce	1.7	^{143}La(β^-)^{143}Ce
^{143}Pr	89.8	^{143}Pr(β^-)^{143}Nd	10.2	^{143}Ce(β^-)^{143}Pr		
^{143}Nd	60.9	^{143}Nd(n,γ)^{144}Nd	22.5	^{142}Nd(n,γ)^{143}Nd	12.8	^{176}Lu ^{37}Cl−^{143}Nd ^{35}Cl$_2$
^{143}Pm	49.2	^{143}Nd(^{3}He,d)^{144}Pm−^{142}Nd()^{143}Pm	28.6	^{142}Nd(^{3}He,d)^{143}Pm	22.2	^{147}Eu(α)^{143}Pm
^{143}Sm	100.0	^{144}Sm(p,d)^{143}Sm−^{148}Gd()^{147}Gd				
^{144}Cs	42.9	^{144}Cs−^{133}Cs$_{1.083}$	37.5	^{144}Cs(β^-)^{144}Ba	19.6	^{144}Cs−^{145}Cs$_{.662}$ ^{142}Cs$_{.338}$
^{144}Ba	70.9	^{144}Ba−u	26.1	^{144}Ba−^{133}Cs$_{1.083}$	3.0	^{144}Cs(β^-)^{144}Ba
^{144}Nd	43.9	^{148}Sm(α)^{144}Nd	39.0	^{143}Nd(n,γ)^{144}Nd	11.5	^{144}Nd(n,γ)^{145}Nd
^{144}Pm	57.4	^{144}Nd(^{3}He,d)^{145}Pm−^{143}Nd()^{144}Pm	41.9	^{143}Nd(^{3}He,d)^{144}Pm−^{142}Nd()^{143}Pm	0.7	^{148}Eu(α)^{144}Pm
^{144}Sm	86.3	^{144}Sm−^{144}Nd	7.0	^{144}Sm(n,γ)^{145}Sm	3.5	^{148}Gd(α)^{144}Sm
^{144}Eu	46.4	^{144}Eu−^{133}Cs$_{1.083}$	38.7	^{144}Eu(β^+)^{144}Sm	14.9	^{144}Eu−u
^{145}Cs	98.6	^{145}Cs−^{133}Cs$_{1.090}$	1.4	^{144}Cs−^{145}Cs$_{.662}$ ^{142}Cs$_{.338}$		
^{145}La	98.1	^{145}La−u	1.9	^{145}La(β^-)^{145}Ce		
^{145}Ce	66.9	^{145}Ce(β^-)^{145}Pr	17.5	^{145}La(β^-)^{145}Ce	15.6	^{145}Ce−u
^{145}Pr	49.5	^{145}Pr(β^-)^{145}Nd	49.5	^{146}Nd(d,^{3}He)^{145}Pr	1.0	^{145}Ce(β^-)^{145}Pr
^{145}Nd	84.5	^{144}Nd(n,γ)^{145}Nd	15.5	^{145}Nd(n,γ)^{146}Nd		
^{145}Pm	41.0	^{145}Sm(ε)^{145}Pm	33.6	^{144}Nd(^{3}He,d)^{145}Pm−^{143}Nd()^{144}Pm	25.4	^{144}Nd(^{3}He,d)^{145}Pm

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{145}Sm	92.2	^{144}Sm(n,γ)^{145}Sm	3.0	^{149}Gd(α)^{145}Sm	2.6	^{145}Sm(ε)^{145}Pm
^{145}Eu	91.0	^{144}Sm(^{3}He,d)^{145}Eu	9.0	^{149}Tb(α)^{145}Eu		
^{145}Gd	99.6	^{145}Gd−u	0.4	^{145}Tb(β^+)^{145}Gd		
^{145}Tb	83.1	^{145}Tb(β^+)^{145}Gd	16.9	^{145}Tb−u		
^{146}La	99.8	^{146}La−u	0.2	^{146}La(β^-)^{146}Ce		
^{146}Ce	72.8	^{146}Ce−u	23.8	^{146}La(β^-)^{146}Ce	3.4	^{146}Ce(β^-)^{146}Pr
^{146}Pr	76.4	^{146}Ce(β^-)^{146}Pr	23.6	^{146}Pr(β^-)^{146}Nd		
^{146}Nd	83.9	^{145}Nd(n,γ)^{146}Nd	14.5	^{146}Nd(n,γ)^{147}Nd	1.5	^{148}Nd ^{35}Cl−^{146}Nd ^{37}Cl
^{146}Sm	46.1	^{146}Sm(α)^{142}Nd	30.4	^{146}Sm(^{3}He,α)^{145}Sm	12.3	^{148}Sm(p,t)^{146}Sm
^{146}Eu	46.0	^{146}Eu(β^+)^{146}Sm	24.1	^{144}Sm(^{3}He,p)^{146}Eu	18.5	^{146}Eu−^{133}Cs$_{1.098}$
^{146}Gd	88.9	^{148}Gd(p,t)^{146}Gd−^{65}Cu()^{63}Cu	7.0	^{150}Dy(α)^{146}Gd	3.9	^{147}Tb(p)^{146}Gd
^{146}Tb	80.0	^{146}Tb(β^+)^{146}Gd	20.0	^{146}Dy(β^+)^{146}Tb		
^{146}Dy	99.6	^{146}Dy−^{85}Rb$_{1.718}$	0.4	^{146}Dy(β^+)^{146}Tb		
^{146}Ho	50.0	^{146}Ho−^{133}Cs$_{1.098}$	50.0	^{146}Ho−^{85}Rb$_{1.718}$		
^{146}Er	61.2	^{146}Er−^{85}Rb$_{1.718}$	38.8	^{147}Tm(p)^{146}Er		
^{147}Ce	92.1	^{147}Ce−u	7.9	^{147}Ce(β^-)^{147}Pr		
^{147}Pr	52.4	^{147}Ce(β^-)^{147}Pr	47.6	^{147}Pr(β^-)^{147}Nd		
^{147}Nd	85.0	^{146}Nd(n,γ)^{147}Nd	14.4	^{147}Nd(β^-)^{147}Pm	0.5	^{148}Nd(d,t)^{147}Nd
^{147}Pm	82.3	^{147}Pm(β^-)^{147}Sm	17.7	^{147}Nd(β^-)^{147}Pm		
^{147}Sm	71.5	^{147}Sm(n,γ)^{148}Sm	15.4	^{149}Sm ^{35}Cl−^{147}Sm ^{37}Cl	11.4	^{147}Pm(β^-)^{147}Sm
^{147}Eu	56.8	^{147}Eu(β^+)^{147}Sm	18.9	^{147}Gd(β^+)^{147}Eu	14.4	^{147}Eu(α)^{143}Pm
^{147}Gd	86.2	^{148}Gd(p,d)^{147}Gd−^{148}Sm()^{147}Sm	6.7	^{147}Gd(β^+)^{147}Eu	6.2	^{104}Ru(d,t)^{103}Ru−^{148}Gd()^{147}Gd
^{147}Tb	52.5	^{147}Tb−^{133}Cs$_{1.105}$	28.5	^{147}Tb(β^+)^{147}Gd	19.0	^{147}Tb(p)^{146}Gd
^{147}Ho	52.6	^{147}Ho−^{85}Rb$_{1.729}$	47.4	^{147}Ho−^{133}Cs$_{1.105}$		
^{147}Tm	55.5	^{147}Tm(p)^{146}Er	44.5	^{147}Tm−^{85}Rb$_{1.729}$		
^{148}Ce	85.5	^{148}Ce−u	14.5	^{148}Ce(β^-)^{148}Pr		
^{148}Pr	66.0	^{148}Ce(β^-)^{148}Pr	34.0	^{148}Pr(β^-)^{148}Nd		
^{148}Nd	60.6	^{148}Nd ^{35}Cl−^{146}Nd ^{37}Cl	16.7	^{148}Nd(d,t)^{147}Nd	11.3	^{148}Nd ^{35}Cl$_2$−^{144}Nd ^{37}Cl$_2$
^{148}Sm	35.4	^{148}Sm(α)^{144}Nd	27.8	^{150}Sm ^{35}Cl−^{148}Sm ^{37}Cl	21.2	^{147}Sm(n,γ)^{148}Sm
^{148}Eu	50.8	^{148}Eu−^{133}Cs$_{1.113}$	38.9	^{148}Eu−^{142}Sm$_{1.042}$	10.3	^{148}Eu(α)^{144}Pm
^{148}Gd	96.5	^{148}Gd(α)^{144}Sm	2.4	^{148}Gd(p,d)^{147}Gd−^{148}Sm()^{147}Sm	0.8	^{148}Gd(p,t)^{146}Gd−^{65}Cu()^{63}Cu
^{148}Tb	85.7	^{148}Dy(β^+)^{148}Tb	9.7	^{148}Tb(β^+)^{148}Gd	4.7	^{152}Ho(α)^{148}Tb
^{148}Dy	79.0	^{148}Dy−^{133}Cs$_{1.113}$	14.6	^{152}Er(α)^{148}Dy	6.4	^{148}Dy(β^+)^{148}Tb
^{149}Pm	86.8	^{149}Pm(β^-)^{149}Sm	13.2	^{148}Nd(^{3}He,d)^{149}Pm		
^{149}Sm	81.8	^{149}Sm(n,γ)^{150}Sm	8.8	^{148}Sm(n,γ)^{149}Sm	8.2	^{149}Sm ^{35}Cl−^{147}Sm ^{37}Cl
^{149}Eu	56.2	^{151}Eu(p,t)^{149}Eu	29.7	^{149}Gd(ε)^{149}Eu	14.1	^{149}Eu(ε)^{149}Sm
^{149}Gd	52.7	^{149}Gd(α)^{145}Sm	21.2	^{153}Dy(α)^{149}Gd	17.8	^{149}Gd(ε)^{149}Eu
^{149}Tb	85.9	^{149}Tb(α)^{145}Eu	10.5	^{149}Tb(β^+)^{149}Gd	3.6	^{149}Dy(β^+)^{149}Tb
^{149}Dy	45.7	^{149}Dy(β^+)^{149}Tb	36.9	^{149}Dy−^{142}Sm$_{1.049}$	15.1	^{149}Ho(β^+)^{149}Dy
^{149}Ho	53.3	^{153}Tm(α)^{149}Ho	32.3	^{149}Ho(β^+)^{149}Dy	14.3	^{149}Ho−u
^{150}Ce	91.9	^{150}Ce−u	8.1	^{150}Ce(β^-)^{150}Pr		
^{150}Pr	83.4	^{150}Pr−u	12.0	^{150}Pr(β^-)^{150}Nd	4.6	^{150}Ce(β^-)^{150}Pr
^{150}Nd	99.6	^{150}Nd−^{150}Sm	0.2	^{150}Nd(n,γ)^{151}Nd	0.2	^{150}Pr(β^-)^{150}Nd
^{150}Sm	66.2	^{150}Sm(n,γ)^{151}Sm	13.4	^{149}Sm(n,γ)^{150}Sm	11.7	^{150}Sm ^{35}Cl−^{148}Sm ^{37}Cl
^{150}Eu	53.3	^{150}Eu(β^-)^{150}Gd	46.7	^{151}Eu(p,d)^{150}Eu		
^{150}Gd	39.4	^{150}Gd(α)^{146}Sm	37.7	^{150}Eu(β^-)^{150}Gd	11.7	^{150}Tb(β^+)^{150}Gd
^{150}Tb	80.5	^{150}Tb(α)^{146}Eu	19.5	^{150}Tb(β^+)^{150}Gd		
^{150}Tb^m	89.2	^{150}Tb^m−u	10.8	^{154}Ho^m(α)^{150}Tb^m		
^{150}Dy	92.0	^{150}Dy(α)^{146}Gd	6.1	^{154}Er(α)^{150}Dy	1.9	^{150}Ho(ε)^{150}Dy
^{150}Ho	53.2	^{150}Ho−^{133}Cs$_{1.128}$	26.8	^{150}Ho(ε)^{150}Dy	20.0	^{150}Er(β^+)^{150}Ho
^{150}Er	62.1	^{150}Er(β^+)^{150}Ho	37.9	^{150}Er−u		
^{151}Pr	76.5	^{151}Pr−u	23.5	^{151}Pr(β^-)^{151}Nd		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{151}Nd	99.8	^{150}Nd(n,γ)^{151}Nd	0.2	^{151}Pr(β^-)^{151}Nd		
^{151}Pm	80.0	^{150}Nd(^{3}He,d)^{151}Pm	20.0	^{151}Pm(β^-)^{151}Sm		
^{151}Sm	44.2	^{151}Sm(n,γ)^{152}Sm	33.3	^{150}Sm(n,γ)^{151}Sm	22.5	^{151}Sm(β^-)^{151}Eu
^{151}Eu	57.7	^{151}Sm(β^-)^{151}Eu	40.5	^{151}Eu(n,γ)^{152}Eu	0.7	^{151}Gd(ε)^{151}Eu
^{151}Gd	85.1	^{151}Gd(ε)^{151}Eu	14.9	^{151}Tb(β^+)^{151}Gd		
^{151}Tb	51.5	^{151}Tb(β^+)^{151}Gd	48.5	^{151}Tb(α)^{147}Eu		
^{151}Tm	76.0	^{155}Lu(α)^{151}Tm	24.0	^{155}Lu^n(α)^{151}Tm		
^{152}Nd	66.4	^{150}Nd(t,p)^{152}Nd	33.6	^{152}Nd(β^-)^{152}Pm		
^{152}Pm	51.4	^{152}Nd(β^-)^{152}Pm	48.6	^{152}Pm(β^-)^{152}Sm		
^{152}Sm	77.9	^{152}Gd$-^{152}$Sm	13.1	^{151}Sm(n,γ)^{152}Sm	4.9	^{152}Eu(β^+)^{152}Sm
^{152}Eu	59.0	^{151}Eu(n,γ)^{152}Eu	27.7	^{152}Eu(β^+)^{152}Sm	13.3	^{152}Eu(n,γ)^{153}Eu
^{152}Gd	79.7	^{152}Gd(n,γ)^{153}Gd	20.3	^{152}Gd$-^{152}$Sm		
^{152}Ho	95.3	^{152}Ho(α)^{148}Tb	4.7	^{156}Tm(α)^{152}Ho		
^{152}Er	85.0	^{152}Er(α)^{148}Dy	15.0	^{156}Yb(α)^{152}Er		
^{152}Tm	100.0	^{152}Tm$-$u				
^{152}Yb	100.0	^{152}Yb(β^+)^{152}Tm				
^{153}Pr	79.7	^{153}Pr$-$u	10.2	^{153}Pr$-^{86}$Kr$_{1.779}$	10.2	^{153}Pr$-^{80}$Kr$_{1.913}$
^{153}Nd	35.8	^{153}Nd$-^{80}$Kr$_{1.913}$	32.2	^{153}Nd$-$u	31.0	^{153}Nd$-^{86}$Kr$_{1.779}$
^{153}Pm	33.4	^{154}Sm(d,^{3}He)^{153}Pm	17.9	^{153}Pm$-$u	17.9	^{153}Pm$-^{86}$Kr$_{1.779}$
^{153}Eu	86.4	^{152}Eu(n,γ)^{153}Eu	13.6	^{153}Eu(n,γ)^{154}Eu		
^{153}Gd	80.3	^{153}Gd(n,γ)^{154}Gd	19.3	^{152}Gd(n,γ)^{153}Gd	0.4	^{153}Tb(β^+)^{153}Gd
^{153}Tb	58.7	^{153}Tb(β^+)^{153}Gd	41.3	^{153}Dy(β^+)^{153}Tb		
^{153}Dy	52.2	^{153}Dy(β^+)^{153}Tb	47.8	^{153}Dy(α)^{149}Gd		
^{153}Er	97.7	^{153}Er(α)^{149}Dy	2.3	^{157}Yb(α)^{153}Er		
^{153}Tm	53.7	^{157}Lu^m(α)^{153}Tm	46.3	^{153}Tm(α)^{149}Ho		
^{154}Sm	78.5	^{154}Sm ^{35}Cl$-^{152}$Sm ^{37}Cl	21.0	^{154}Sm$-^{154}$Gd	0.5	^{154}Sm(d,^{3}He)^{153}Pm
^{154}Eu	85.0	^{153}Eu(n,γ)^{154}Eu	12.4	^{154}Eu(β^-)^{154}Gd	1.6	^{154}Eu(n,γ)^{155}Eu
^{154}Gd	79.7	^{154}Gd(n,γ)^{155}Gd	18.1	^{153}Gd(n,γ)^{154}Gd	1.8	^{154}Eu(β^-)^{154}Gd
^{154}Dy	81.6	^{154}Dy(α)^{150}Gd	17.6	^{154}Dy$-^{133}$Cs$_{1.158}$	0.8	^{154}Ho^m(β^+)^{154}Dy
^{154}Ho^m	88.9	^{154}Ho^m(α)^{150}Tb^m	11.1	^{154}Ho^m(β^+)^{154}Dy		
^{154}Er	91.6	^{154}Er(α)^{150}Dy	8.4	^{158}Yb(α)^{154}Er		
^{154}Yb	100.0	^{154}Yb(α)^{150}Er				
^{155}Pr	35.5	^{155}Pr$-$u	33.3	^{155}Pr$-^{86}$Kr$_{1.802}$	31.2	^{155}Pr$-^{80}$Kr$_{1.938}$
^{155}Nd	33.4	^{155}Nd$-$u	33.4	^{155}Nd$-^{86}$Kr$_{1.802}$	33.2	^{155}Nd$-^{80}$Kr$_{1.938}$
^{155}Pm	33.7	^{155}Pm$-^{80}$Kr$_{1.938}$	33.1	^{155}Pm$-$u	33.1	^{155}Pm$-^{86}$Kr$_{1.802}$
^{155}Eu	98.2	^{154}Eu(n,γ)^{155}Eu	1.8	^{158}Gd(t,α)^{157}Eu$-^{156}$Gd()^{155}Eu		
^{155}Gd	70.1	^{155}Gd(n,γ)^{156}Gd	19.7	^{154}Gd(n,γ)^{155}Gd	7.3	^{155}Gd O$-$C$_{15}$
^{155}Dy	92.1	^{156}Dy(d,t)^{155}Dy	7.9	^{155}Ho(β^+)^{155}Dy		
^{155}Ho	60.9	^{155}Ho(β^+)^{155}Dy	39.1	^{155}Ho$-$u		
^{155}Lu	100.0	^{159}Ta^m(α)^{155}Lu				
^{155}Lu^n	85.4	^{155}Lu^n(IT)^{155}Lu	14.6	^{155}Lu^n(α)^{151}Tm		
^{156}Pm	63.3	^{156}Pm^m(IT)^{156}Pm	29.4	^{156}Pm$-$u	3.8	^{156}Pm$-^{80}$Kr$_{1.950}$
^{156}Pm^m	63.4	^{156}Pm$^m-$u	36.6	^{156}Pm^m(IT)^{156}Pm		
^{156}Sm	88.5	^{156}Sm(β^-)^{156}Eu	11.5	^{154}Sm(t,p)^{156}Sm		
^{156}Eu	70.1	^{154}Eu(t,p)^{156}Eu	28.3	^{156}Eu(β^-)^{156}Gd	1.7	^{156}Sm(β^-)^{156}Eu
^{156}Gd	73.5	^{156}Gd(n,γ)^{157}Gd	29.7	^{155}Gd(n,γ)^{156}Gd	0.7	^{156}Dy$-^{156}$Gd
^{156}Tb	100.0	^{155}Gd(α,t)^{156}Tb$-^{158}$Gd()^{159}Tb				
^{156}Dy	99.3	^{156}Dy$-^{156}$Gd	0.6	^{156}Dy(d,p)^{157}Dy	0.1	^{156}Dy(d,t)^{155}Dy
^{156}Er	77.7	^{156}Er$-$u	22.3	^{156}Tm(β^+)^{156}Er		
^{156}Tm	93.8	^{156}Tm(α)^{152}Ho	6.2	^{156}Tm(β^+)^{156}Er		
^{156}Yb	82.9	^{156}Yb(α)^{152}Er	17.1	^{160}Hf(α)^{156}Yb		
^{156}Hf	65.3	^{156}Hf(α)^{152}Yb	34.7	^{156}Hf^m(IT)^{156}Hf		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{156}Hf^{m}$	62.9	$^{156}Hf^{m}(IT)^{156}Hf$	37.1	$^{156}Hf^{m}(\alpha)^{152}Yb$		
^{157}Nd	99.5	$^{157}Nd-u$	0.2	$^{157}Nd-^{86}Kr_{1.826}$	0.2	$^{157}Nd-^{80}Kr_{1.963}$
^{157}Pm	33.5	$^{157}Pm-u$	33.5	$^{157}Pm-^{86}Kr_{1.826}$	33.1	$^{157}Pm-^{80}Kr_{1.963}$
^{157}Sm	34.2	$^{157}Sm-^{80}Kr_{1.963}$	32.9	$^{157}Sm-u$	32.9	$^{157}Sm-^{86}Kr_{1.826}$
^{157}Eu	67.3	$^{158}Gd(t,\alpha)^{157}Eu-^{156}Gd()^{155}Eu$	32.7	$^{160}Gd(t,\alpha)^{159}Eu-^{158}Gd()^{157}Eu$		
^{157}Gd	63.1	$^{157}Gd(n,\gamma)^{158}Gd$	25.1	$^{156}Gd(n,\gamma)^{157}Gd$	7.3	$^{159}Tb\ ^{35}Cl-^{157}Gd\ ^{37}Cl$
^{157}Tb	94.4	$^{157}Tb(\varepsilon)^{157}Gd$	5.6	$^{156}Gd(\alpha,t)^{157}Tb-^{158}Gd()^{159}Tb$		
^{157}Dy	51.8	$^{156}Dy(d,p)^{157}Dy$	47.4	$^{158}Dy(d,t)^{157}Dy$	0.8	$^{157}Ho(\beta^{+})^{157}Dy$
^{157}Ho	70.5	$^{157}Ho-u$	21.8	$^{157}Ho(\beta^{+})^{157}Dy$	7.7	$^{157}Er(\beta^{+})^{157}Ho$
^{157}Er	90.0	$^{157}Er-u$	10.0	$^{157}Er(\beta^{+})^{157}Ho$		
^{157}Yb	96.8	$^{157}Yb(\alpha)^{153}Er$	3.2	$^{161}Hf(\alpha)^{157}Yb$		
^{157}Lu	82.5	$^{157}Lu^{m}(IT)^{157}Lu$	17.5	$^{157}Lu-u$		
$^{157}Lu^{m}$	45.6	$^{157}Lu^{m}(\alpha)^{153}Tm$	37.4	$^{161}Ta^{m}(\alpha)^{157}Lu^{m}$	17.1	$^{157}Lu^{m}(IT)^{157}Lu$
^{158}Pm	75.1	$^{158}Pm-u$	24.9	$^{158}Pm-^{158}Gd$		
^{158}Sm	31.0	$^{158}Sm-^{80}Kr_{1.975}$	29.8	$^{158}Sm-^{86}Kr_{1.837}$	29.2	$^{158}Sm-u$
^{158}Eu	98.4	$^{158}Eu-u$	1.6	$^{158}Sm(\beta^{-})^{158}Eu$		
^{158}Gd	36.5	$^{157}Gd(n,\gamma)^{158}Gd$	34.7	$^{158}Pm-^{158}Gd$	10.4	$^{160}Gd\ ^{35}Cl-^{158}Gd\ ^{37}Cl$
^{158}Tb	39.6	$^{157}Gd(\alpha,t)^{158}Tb-^{158}Gd()^{159}Tb$	39.6	$^{159}Tb(d,t)^{158}Tb-^{164}Dy()^{163}Dy$	17.6	$^{158}Gd(d,t)^{157}Gd-^{159}Tb()^{158}Tb$
^{158}Dy	63.5	$^{160}Dy(p,t)^{158}Dy$	17.5	$^{160}Dy\ ^{35}Cl-^{158}Dy\ ^{37}Cl$	13.9	$^{158}Tb(\beta^{-})^{158}Dy$
^{158}Er	81.4	$^{158}Er-u$	18.6	$^{158}Tm(\beta^{+})^{158}Er$		
^{158}Tm	81.4	$^{158}Tm-u$	18.6	$^{158}Tm(\beta^{+})^{158}Er$		
^{158}Yb	71.1	$^{158}Yb(\alpha)^{154}Er$	14.6	$^{158}Yb-^{142}Sm_{1.113}$	14.3	$^{162}Hf(\alpha)^{158}Yb$
^{158}Hf	100.0	$^{158}Hf(\alpha)^{154}Yb$				
^{159}Pm	35.8	$^{159}Pm-u$	32.2	$^{159}Pm-^{86}Kr_{1.849}$	32.0	$^{159}Pm-^{80}Kr_{1.988}$
^{159}Sm	33.5	$^{159}Sm-u$	33.5	$^{159}Sm-^{86}Kr_{1.849}$	32.9	$^{159}Sm-^{80}Kr_{1.988}$
^{159}Eu	35.9	$^{160}Gd(t,\alpha)^{159}Eu-^{158}Gd()^{157}Eu$	21.5	$^{159}Eu-u$	21.5	$^{159}Eu-^{86}Kr_{1.849}$
^{159}Gd	93.2	$^{158}Gd(n,\gamma)^{159}Gd$	6.8	$^{159}Gd(\beta^{-})^{159}Tb$		
^{159}Tb	20.3	$^{159}Tb\ ^{35}Cl-^{157}Gd\ ^{37}Cl$	18.2	$^{159}Gd(\beta^{-})^{159}Tb$	17.8	$^{161}Dy\ ^{35}Cl-^{159}Tb\ ^{37}Cl$
^{159}Dy	64.9	$^{159}Dy(\varepsilon)^{159}Tb$	35.1	$^{161}Dy(p,t)^{159}Dy$		
$^{159}Ta^{m}$	100.0	$^{163}Re^{m}(\alpha)^{159}Ta^{m}$				
^{160}Gd	39.3	$^{160}Gd\ ^{35}Cl-^{158}Gd\ ^{37}Cl$	30.5	$^{160}Gd(\alpha,t)^{161}Tb-^{158}Gd()^{159}Tb$	28.7	$^{160}Gd-^{160}Dy$
^{160}Tb	93.0	$^{159}Tb(n,\gamma)^{160}Tb$	7.0	$^{160}Tb(n,\gamma)^{161}Tb$		
^{160}Dy	92.8	$^{160}Dy(n,\gamma)^{161}Dy$	6.4	$^{160}Gd-^{160}Dy$	0.6	$^{160}Dy(p,t)^{158}Dy$
^{160}Er	94.7	$^{160}Er-u$	5.3	$^{160}Tm(\beta^{+})^{160}Er$		
^{160}Tm	89.9	$^{160}Tm-u$	10.1	$^{160}Tm(\beta^{+})^{160}Er$		
^{160}Hf	81.8	$^{160}Hf(\alpha)^{156}Yb$	18.2	$^{164}W(\alpha)^{160}Hf$		
^{160}W	100.0	$^{160}W(\alpha)^{156}Hf$				
^{161}Sm	36.6	$^{161}Sm-^{80}Kr_{2.013}$	31.7	$^{161}Sm-u$	31.7	$^{161}Sm-^{86}Kr_{1.872}$
^{161}Eu	34.5	$^{161}Eu-u$	34.3	$^{161}Eu-^{80}Kr_{2.013}$	31.2	$^{161}Eu-^{86}Kr_{1.872}$
^{161}Tb	77.0	$^{160}Tb(n,\gamma)^{161}Tb$	23.0	$^{160}Gd(\alpha,t)^{161}Tb-^{158}Gd()^{159}Tb$		
^{161}Dy	85.2	$^{161}Dy(n,\gamma)^{162}Dy$	7.1	$^{160}Dy(n,\gamma)^{161}Dy$	4.3	$^{161}Dy\ ^{35}Cl-^{159}Tb\ ^{37}Cl$
^{161}Ho	100.0	$^{160}Dy(^{3}He,d)^{161}Ho-^{164}Dy()^{165}Ho$				
^{161}Hf	70.4	$^{161}Hf-u$	17.5	$^{161}Hf(\alpha)^{157}Yb$	12.1	$^{165}W(\alpha)^{161}Hf$
$^{161}Ta^{m}$	56.5	$^{161}Ta^{m}(\alpha)^{157}Lu^{m}$	43.5	$^{165}Re^{m}(\alpha)^{161}Ta^{m}$		
^{161}Re	79.2	$^{161}Re(p)^{160}W$	20.9	$^{161}Re^{m}(IT)^{161}Re$		
$^{161}Re^{m}$	78.1	$^{161}Re^{m}(IT)^{161}Re$	21.8	$^{165}Ir^{m}(\alpha)^{161}Re^{m}$		
^{162}Sm	50.9	$^{162}Sm-^{136}Xe_{1.191}$	49.1	$^{162}Sm-^{84}Kr_{1.929}$		
^{162}Eu	77.7	$^{162}Eu-^{84}Kr_{1.929}$	16.7	$^{162}Eu^{m}-^{162}Eu$	5.5	$^{162}Eu-^{133}Cs_{1.218}$
$^{162}Eu^{m}$	47.9	$^{162}Eu^{m}-^{84}Kr_{1.929}$	36.2	$^{162}Eu^{m}-^{133}Cs_{1.218}$	16.0	$^{162}Eu^{m}-^{162}Eu$
^{162}Dy	100.0	$^{162}Dy(n,\gamma)^{163}Dy$	14.7	$^{161}Dy(n,\gamma)^{162}Dy$		
^{162}Ho	100.0	$^{161}Dy(^{3}He,d)^{162}Ho-^{164}Dy()^{165}Ho$				
^{162}Er	99.9	$^{162}Er-^{162}Dy$	0.1	$^{162}Er(d,p)^{163}Er$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{162}Hf	81.0	^{162}Hf(α)^{158}Yb	19.0	^{166}W(α)^{162}Hf		
^{162}W	100.0	^{162}W(α)^{158}Hf				
^{163}Gd	50.8	^{163}Gd$-^{82}$Kr$_{1.988}$	49.2	^{163}Gd^m(IT)^{163}Gd		
^{163}Gd^m	50.8	^{163}Gd$^m-^{82}$Kr$_{1.988}$	49.2	^{163}Gd^m(IT)^{163}Gd		
^{163}Dy	33.3	^{163}Dy O$-$C$_{15}$	27.6	^{163}Ho(ε)^{163}Dy	26.0	^{163}Dy(n,γ)^{164}Dy
^{163}Ho	30.8	^{163}Ho(ε)^{163}Dy	26.2	^{163}Ho O$-$C$_{15}$	21.9	^{163}Ho$-^{163}$Dy
^{163}Er	58.2	^{163}Er(β^+)^{163}Ho	20.9	^{164}Er(d,t)^{163}Er	20.9	^{162}Er(d,p)^{163}Er
^{163}Hf	84.5	^{163}Hf$-$u	15.5	^{167}W(α)^{163}Hf		
^{163}Re^m	100.0	^{167}Ir^m(α)^{163}Re^m				
^{164}Eu	67.6	^{164}Eu$-^{84}$Kr$_{1.952}$	32.4	^{164}Eu$-^{136}$Xe$_{1.206}$		
^{164}Gd	80.0	^{164}Gd$-^{84}$Kr$_{1.952}$	20.0	^{164}Gd$-^{171}$Yb$_{.959}$		
^{164}Dy	73.4	^{163}Dy(n,γ)^{164}Dy	21.2	^{162}Dy(^{3}He,d)^{163}Ho$-^{164}$Dy()^{165}Ho	4.9	^{158}Gd(α,t)^{159}Tb$-^{164}$Dy()^{165}Ho
^{164}Ho	67.1	^{163}Dy(^{3}He,d)^{164}Ho$-^{164}$Dy()^{165}Ho	32.9	^{165}Ho(γ,n)^{164}Ho		
^{164}Er	100.0	^{164}Er$-^{164}$Dy	0.1	^{164}Er(α,t)^{165}Tm$-^{168}$Er()^{169}Tm		
^{164}Tm	75.0	^{164}Tm$-$u	25.0	^{164}Tm(β^+)^{164}Er		
^{164}Hf	68.0	^{168}W(α)^{164}Hf	32.0	^{164}Hf$-$u		
^{164}W	81.2	^{164}W(α)^{160}Hf	18.8	^{168}Os(α)^{164}W		
^{164}Os	80.0	^{164}Os(α)^{160}W	20.0	^{165}Ir^m(p)^{164}Os		
^{165}Eu	74.1	^{165}Eu$-^{136}$Xe$_{1.213}$	25.9	^{165}Eu$-^{84}$Kr$_{1.964}$		
^{165}Gd	87.1	^{165}Gd$-^{84}$Kr$_{1.964}$	12.9	^{165}Gd O$-^{171}$Yb$_{1.058}$		
^{165}Tb	84.5	^{165}Tb$-^{84}$Kr$_{1.964}$	15.5	^{165}Tb$-^{136}$Xe$_{1.213}$		
^{165}Ho	51.0	^{165}Ho(n,γ)^{166}Ho	34.7	^{162}Dy(^{3}He,d)^{163}Ho$-^{164}$Dy()^{165}Ho	8.5	^{169}Tm ^{35}Cl$_2-^{165}$Ho ^{37}Cl$_2$
^{165}Er	96.1	^{164}Er(n,γ)^{165}Er	3.9	^{165}Tm(β^+)^{165}Er		
^{165}Tm	51.5	^{165}Tm(β^+)^{165}Er	48.5	^{164}Er(α,t)^{165}Tm$-^{168}$Er()^{169}Tm		
^{165}Yb	90.2	^{165}Yb$-$u	9.8	^{165}Lu(β^+)^{165}Yb		
^{165}Lu	90.2	^{165}Lu$-$u	9.8	^{165}Lu(β^+)^{165}Yb		
^{165}Ta	76.4	^{169}Re^m(α)^{165}Ta	23.6	^{165}Ta$-$u		
^{165}W	84.9	^{165}W$-$u	15.1	^{165}W(α)^{161}Hf		
^{165}Re^m	55.1	^{165}Re^m(α)^{161}Ta^m	44.9	^{169}Ir^m(α)^{165}Re^m		
^{165}Ir^m	51.6	^{165}Ir^m(p)^{164}Os	48.4	^{165}Ir^m(α)^{161}Re^m		
^{166}Tb	85.3	^{166}Tb$-^{84}$Kr$_{1.976}$	14.7	^{166}Tb$-^{136}$Xe$_{1.221}$		
^{166}Ho	51.1	^{166}Ho(β^-)^{166}Er	48.9	^{165}Ho(n,γ)^{166}Ho		
^{166}Er	95.4	^{166}Er(n,γ)^{167}Er	4.6	^{166}Ho(β^-)^{166}Er		
^{166}W	77.9	^{166}W(α)^{162}Hf	11.5	^{166}W$-$u	10.6	^{170}Os(α)^{166}W
^{166}Os	100.0	^{166}Os(α)^{162}W				
^{167}Gd	81.5	^{167}Gd$-^{84}$Kr$_{1.988}$	18.5	^{167}Gd$-^{136}$Xe$_{1.228}$		
^{167}Tb	74.5	^{167}Tb$-^{84}$Kr$_{1.988}$	25.5	^{167}Tb$-^{136}$Xe$_{1.228}$		
^{167}Er	95.8	^{167}Er(n,γ)^{168}Er	3.3	^{166}Er(n,γ)^{167}Er	0.9	^{169}Tm ^{35}Cl$-^{167}$Er ^{37}Cl
^{167}Tm	99.0	^{166}Er(α,t)^{167}Tm$-^{168}$Er()^{169}Tm	1.0	^{167}Yb(β^+)^{167}Tm		
^{167}Yb	89.1	^{167}Yb(β^+)^{167}Tm	10.9	^{168}Yb(d,t)^{167}Yb		
^{167}W	92.5	^{171}Os(α)^{167}W	7.5	^{167}W(α)^{163}Hf		
^{167}Ir	76.6	^{167}Ir(p)^{166}Os	23.4	^{167}Ir^m(IT)^{167}Ir		
^{167}Ir^m	70.3	^{167}Ir^m(IT)^{167}Ir	29.7	^{171}Au^m(α)^{167}Ir^m		
^{168}Er	95.0	^{168}Yb$-^{168}$Er	3.4	^{167}Er(n,γ)^{168}Er	0.8	^{170}Er(α,t)^{171}Tm$-^{168}$Er()^{169}Tm
^{168}Tm	100.0	^{167}Er(α,t)^{168}Tm$-^{168}$Er()^{169}Tm				
^{168}Yb	99.4	^{168}Yb$-^{170}$Yb$_{.988}$	0.6	^{168}Yb$-^{168}$Er		
^{168}Lu	53.2	^{168}Lu$-$u	46.8	^{168}Lu(β^+)^{168}Yb		
^{168}W	58.6	^{172}Os(α)^{168}W	22.5	^{168}W$-$u	18.9	^{168}W(α)^{164}Hf
^{168}Os	80.0	^{168}Os(α)^{164}W	20.0	^{172}Pt(α)^{168}Os		
^{169}Tm	65.8	^{169}Tm(n,γ)^{170}Tm	12.3	^{170}Er(α,t)^{171}Tm$-^{168}$Er()^{169}Tm	8.0	^{169}Tm ^{35}Cl$-^{167}$Er ^{37}Cl
^{169}W	69.5	^{173}Os(α)^{169}W	30.5	^{169}W$-$u		
^{169}Re^m	77.3	^{173}Ir(α)^{169}Re^m	22.7	^{169}Re^m(α)^{165}Ta		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{169}Ir^{m}$	53.7	$^{169}Ir^{m}(\alpha)^{165}Re^{m}$	46.3	$^{173}Au^{m}(\alpha)^{169}Ir^{m}$		
^{170}Er	62.6	$^{170}Er(\alpha,t)^{171}Tm-^{168}Er()^{169}Tm$	25.3	$^{170}Er(n,\gamma)^{171}Er$	10.7	$^{170}Er\ ^{35}Cl-^{168}Er\ ^{37}Cl$
^{170}Tm	67.0	$^{170}Tm(\beta^{-})^{170}Yb$	33.0	$^{169}Tm(n,\gamma)^{170}Tm$		
^{170}Yb	53.6	$^{170}Yb-^{129}Xe_{1.318}$	46.4	$^{170}Yb-^{132}Xe_{1.288}$		
^{170}W	77.7	$^{174}Os(\alpha)^{170}W$	22.3	$^{170}W-u$		
^{170}Re	80.4	$^{174}Ir^{m}(\alpha)^{170}Re$	19.6	$^{170}Re-u$		
^{170}Os	88.6	$^{170}Os(\alpha)^{166}W$	11.4	$^{170}Os-u$		
^{170}Pt	84.4	$^{170}Pt(\alpha)^{166}Os$	15.6	$^{171}Au^{m}(p)^{170}Pt$		
^{171}Er	72.5	$^{170}Er(n,\gamma)^{171}Er$	27.5	$^{171}Er(\beta^{-})^{171}Tm$		
^{171}Tm	94.4	$^{171}Tm(\beta^{-})^{171}Yb$	4.1	$^{170}Er(\alpha,t)^{171}Tm-^{168}Er()^{169}Tm$	1.6	$^{171}Er(\beta^{-})^{171}Tm$
^{171}Yb	100.0	$^{171}Yb-^{129}Xe_{1.326}$				
^{171}Lu	61.5	$^{170}Yb(\alpha,t)^{171}Lu-^{174}Yb()^{175}Lu$	38.5	$^{171}Lu(\beta^{+})^{171}Yb$		
^{171}Os	85.3	$^{171}Os-u$	7.6	$^{175}Pt(\alpha)^{171}Os$	7.1	$^{171}Os(\alpha)^{167}W$
$^{171}Au^{m}$	61.0	$^{171}Au^{m}(p)^{170}Pt$	39.0	$^{171}Au^{m}(\alpha)^{167}Ir^{m}$		
^{172}Er	87.4	$^{170}Er(t,p)^{172}Er$	12.6	$^{172}Er(\beta^{-})^{172}Tm$		
^{172}Tm	70.0	$^{172}Er(\beta^{-})^{172}Tm$	30.0	$^{172}Tm(\beta^{-})^{172}Yb$		
^{172}Yb	100.0	$^{172}Yb-^{132}Xe_{1.303}$				
^{172}Lu	100.0	$^{171}Yb(\alpha,t)^{172}Lu-^{174}Yb()^{175}Lu$				
^{172}Re	51.9	$^{172}Re-u$	48.1	$^{176}Ir(\alpha)^{172}Re$		
^{172}Os	65.9	$^{176}Pt(\alpha)^{172}Os$	34.1	$^{172}Os(\alpha)^{168}W$		
^{172}Pt	77.2	$^{172}Pt(\alpha)^{168}Os$	22.8	$^{176}Hg(\alpha)^{172}Pt$		
^{173}Yb	56.7	$^{173}Yb-^{129}Xe_{1.341}$	43.3	$^{173}Yb-^{132}Xe_{1.311}$		
^{173}Lu	100.0	$^{172}Yb(\alpha,t)^{173}Lu-^{174}Yb()^{175}Lu$				
^{173}Os	43.9	$^{177}Pt(\alpha)^{173}Os$	28.7	$^{173}Os-u$	27.4	$^{173}Os(\alpha)^{169}W$
^{173}Ir	87.6	$^{177}Au(\alpha)^{173}Ir$	12.4	$^{173}Ir(\alpha)^{169}Re^{m}$		
$^{173}Au^{m}$	52.2	$^{173}Au^{m}(\alpha)^{169}Ir^{m}$	47.8	$^{177}Tl^{m}(\alpha)^{173}Au^{m}$		
^{174}Yb	69.9	$^{174}Yb-^{129}Xe_{1.349}$	30.1	$^{174}Yb-^{132}Xe_{1.318}$		
^{174}Lu	100.0	$^{173}Yb(\alpha,t)^{174}Lu-^{174}Yb()^{175}Lu$				
^{174}Hf	74.2	$^{176}Hf\ ^{35}Cl-^{174}Hf\ ^{37}Cl$	13.8	$^{174}Hf(n,\gamma)^{175}Hf$	11.9	$^{176}Hf(p,t)^{174}Hf$
^{174}Os	74.7	$^{178}Pt(\alpha)^{174}Os$	13.5	$^{174}Os-u$	11.9	$^{174}Os(\alpha)^{170}W$
$^{174}Ir^{m}$	82.0	$^{178}Au^{n}(\alpha)^{174}Ir^{m}$	18.0	$^{174}Ir^{m}(\alpha)^{170}Re$		
^{175}Yb	99.9	$^{174}Yb(n,\gamma)^{175}Yb$	0.1	$^{175}Yb(\beta^{-})^{175}Lu$		
^{175}Lu	54.3	$^{175}Yb(\beta^{-})^{175}Lu$	20.8	$^{175}Lu(n,\gamma)^{176}Lu$	13.7	$^{175}Lu\ ^{35}Cl-^{173}Yb\ ^{37}Cl$
^{175}Hf	85.7	$^{174}Hf(n,\gamma)^{175}Hf$	14.3	$^{177}Hf(p,t)^{175}Hf$		
^{175}Os	82.2	$^{179}Pt(\alpha)^{175}Os$	17.8	$^{175}Os-u$		
^{175}Ir	80.4	$^{179}Au(\alpha)^{175}Ir$	19.6	$^{175}Ir-u$		
^{175}Pt	92.0	$^{175}Pt(\alpha)^{171}Os$	8.0	$^{179}Hg(\alpha)^{175}Pt$		
^{176}Yb	73.7	$^{176}Yb-^{129}Xe_{1.364}$	26.3	$^{176}Yb-^{132}Xe_{1.333}$		
^{176}Lu	78.9	$^{175}Lu(n,\gamma)^{176}Lu$	11.8	$^{176}Lu\ ^{37}Cl-^{143}Nd\ ^{35}Cl_{2}$	7.4	$^{176}Lu(n,\gamma)^{177}Lu$
^{176}Hf	74.6	$^{176}Lu(\beta^{-})^{176}Hf$	23.2	$^{180}W(\alpha)^{176}Hf$	1.9	$^{176}Hf\ ^{35}Cl-^{174}Hf\ ^{37}Cl$
^{176}Os	84.6	$^{180}Pt(\alpha)^{176}Os$	15.4	$^{176}Os-u$		
^{176}Ir	90.3	$^{180}Au(\alpha)^{176}Ir$	8.4	$^{176}Ir-u$	1.3	$^{176}Ir(\alpha)^{172}Re$
^{176}Pt	66.4	$^{180}Hg(\alpha)^{176}Pt$	33.6	$^{176}Pt(\alpha)^{172}Os$		
^{176}Hg	71.9	$^{176}Hg(\alpha)^{172}Pt$	28.1	$^{177}Tl^{m}(p)^{176}Hg$		
^{177}Lu	91.9	$^{176}Lu(n,\gamma)^{177}Lu$	8.1	$^{177}Lu(\beta^{-})^{177}Hf$	0.1	$^{179}Hf(t,\alpha)^{178}Lu-^{178}Hf()^{177}Lu$
^{177}Hf	70.4	$^{177}Lu(\beta^{-})^{177}Hf$	28.2	$^{177}Hf(n,\gamma)^{178}Hf$	1.4	$^{177}Hf(p,t)^{175}Hf$
^{177}Pt	55.3	$^{177}Pt(\alpha)^{173}Os$	28.8	$^{177}Pt-u$	16.0	$^{181}Hg(\alpha)^{177}Pt$
^{177}Au	89.1	$^{181}Tl(\alpha)^{177}Au$	10.9	$^{177}Au(\alpha)^{173}Ir$		
$^{177}Tl^{m}$	62.2	$^{177}Tl^{m}(p)^{176}Hg$	37.8	$^{177}Tl^{m}(\alpha)^{173}Au^{m}$		
^{178}Yb	56.6	$^{178}Yb-^{85}Rb_{2.094}$	43.4	$^{176}Yb(t,p)^{178}Yb$		
^{178}Lu	89.4	$^{179}Hf(t,\alpha)^{178}Lu-^{178}Hf()^{177}Lu$	10.6	$^{178}Lu^{m}(IT)^{178}Lu$		
$^{178}Lu^{m}$	65.7	$^{178}Lu^{m}(IT)^{178}Lu$	34.3	$^{176}Lu(t,p)^{178}Lu^{m}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{178}Hf	71.0	^{177}Hf(n,γ)^{178}Hf	29.1	^{178}Hf(n,γ)^{179}Hf		
^{178}Os	76.2	^{182}Pt(α)^{178}Os	23.8	^{178}Os−u		
^{178}Ir	54.6	^{182}Au(α)^{178}Ir	45.4	^{178}Ir−u		
^{178}Pt	62.4	^{182}Hg(α)^{178}Pt	24.5	^{178}Pt(α)^{174}Os	13.1	^{178}Pt−u
^{178}Au^{n}	87.3	^{178}Au^{n}−^{133}Cs$_{1.338}$	12.7	^{178}Au^{n}(α)^{174}Ir^{m}		
^{179}Lu	100.0	^{180}Hf(t,α)^{179}Lu−^{178}Hf()^{177}Lu				
^{179}Hf	70.8	^{178}Hf(n,γ)^{179}Hf	16.0	^{179}Hf(n,γ)^{180}Hf	6.7	^{181}Ta ^{35}Cl−^{179}Hf ^{37}Cl
^{179}Ta	93.0	^{179}Ta(ε)^{179}Hf	7.0	^{181}Ta(p,t)^{179}Ta		
^{179}W	93.5	^{180}W(d,t)^{179}W	6.5	^{179}Re(β^{+})^{179}W		
^{179}Re	77.7	^{179}Re−u	22.3	^{179}Re(β^{+})^{179}W		
^{179}Os	69.2	^{183}Pt(α)^{179}Os	30.8	^{179}Os−u		
^{179}Ir	87.8	^{183}Au(α)^{179}Ir	12.2	^{179}Ir−u		
^{179}Pt	92.8	^{183}Hg(α)^{179}Pt	7.2	^{179}Pt(α)^{175}Os		
^{179}Au	66.6	^{183}Tl^{m}(α)^{179}Au	16.9	^{179}Au(α)^{175}Ir	16.4	^{179}Au−u
^{179}Hg	78.8	^{179}Hg−^{208}Pb$_{.861}$	21.2	^{179}Hg(α)^{175}Pt		
^{180}Hf	83.4	^{179}Hf(n,γ)^{180}Hf	16.6	^{180}W−^{180}Hf		
^{180}W	81.7	^{180}W−^{180}Hf	18.3	^{180}W(α)^{176}Hf	0.1	^{180}W(d,t)^{179}W
^{180}Os	68.3	^{184}Pt(α)^{180}Os	31.7	^{180}Os−u		
^{180}Pt	74.5	^{184}Hg(α)^{180}Pt	12.9	^{180}Pt−u	12.5	^{180}Pt(α)^{176}Os
^{180}Au	92.9	^{180}Au−^{133}Cs$_{1.353}$	4.0	^{184}Tl(α)^{180}Au	3.1	^{180}Au(α)^{176}Ir
^{180}Hg	38.0	^{180}Hg−^{208}Pb$_{.865}$	32.9	^{180}Hg(α)^{176}Pt	29.2	^{184}Pb(α)^{180}Hg
^{181}Ta	32.1	^{181}Ta(n,γ)^{182}Ta	27.3	^{183}W ^{35}Cl−^{181}Ta ^{37}Cl	23.5	^{181}Ta O−^{202}Tl$_{.975}$
^{181}Os	64.0	^{181}Os−u	36.0	^{185}Pt(α)^{181}Os		
^{181}Pt	52.0	^{185}Hg(α)^{181}Pt	48.0	^{181}Pt−u		
^{181}Hg	83.0	^{181}Hg(α)^{177}Pt	17.0	^{181}Hg−^{208}Pb$_{.870}$		
^{181}Tl	78.9	^{181}Tl−^{133}Cs$_{1.361}$	12.2	^{185}Bi^{m}(α)^{181}Tl	8.9	^{181}Tl(α)^{177}Au
^{182}Ta	67.8	^{181}Ta(n,γ)^{182}Ta	32.2	^{182}Ta(β^{-})^{182}W		
^{182}W	100.0	^{182}W(n,γ)^{183}W	3.0	^{182}Ta(β^{-})^{182}W		
^{182}Os	60.6	^{182}Os−u	39.4	^{186}Pt(α)^{182}Os		
^{182}Ir	56.3	^{182}Ir−u	43.7	^{186}Au(α)^{182}Ir		
^{182}Pt	56.8	^{186}Hg(α)^{182}Pt	22.0	^{182}Pt−u	21.2	^{182}Pt(α)^{178}Os
^{182}Au	45.1	^{182}Au−u	44.0	^{182}Au(α)^{178}Ir	11.0	^{186}Tl(α)^{182}Au
^{182}Hg	55.3	^{182}Hg−^{208}Pb$_{.875}$	32.4	^{182}Hg(α)^{178}Pt	12.3	^{182}Hg−u
^{183}W	73.4	^{183}W(n,γ)^{184}W	15.7	^{183}W O−C$_2$ ^{35}Cl$_5$	11.4	^{199}Hg−^{183}W O
^{183}Os	76.7	^{183}Os−u	23.3	^{183}Ir(β^{+})^{183}Os		
^{183}Ir	77.9	^{183}Ir−u	17.5	^{187}Au(α)^{183}Ir	4.6	^{183}Ir(β^{+})^{183}Os
^{183}Pt	28.9	^{187}Hg(α)^{183}Pt	25.0	^{187}Hg^{m}(α)^{183}Pt	23.4	^{183}Pt(α)^{179}Os
^{183}Au	77.4	^{187}Tl^{m}(α)^{183}Au	11.4	^{183}Au−u	11.2	^{183}Au(α)^{179}Ir
^{183}Hg	62.6	^{187}Pb(α)^{183}Hg	31.8	^{183}Hg−^{208}Pb$_{.880}$	5.6	^{183}Hg(α)^{179}Pt
^{183}Tl	82.9	^{183}Tl−^{133}Cs$_{1.376}$	17.1	^{183}Tl^{m}(IT)^{183}Tl		
^{183}Tl^{m}	82.9	^{183}Tl^{m}(IT)^{183}Tl	17.1	^{183}Tl^{m}(α)^{179}Au		
^{184}W	28.5	^{184}W−u	25.5	^{183}W(n,γ)^{184}W	15.8	^{184}Os−^{184}W
^{184}Re	100.0	^{185}Re(d,t)^{184}Re−^{187}Re()^{186}Re				
^{184}Os	44.4	^{184}Os(n,γ)^{185}Os	30.7	^{184}Os−^{184}W	24.5	^{184}Os−u
^{184}Pt	46.6	^{188}Hg(α)^{184}Pt	27.8	^{184}Pt−u	25.6	^{184}Pt(α)^{180}Os
^{184}Hg	28.8	^{184}Hg−^{208}Pb$_{.885}$	26.0	^{184}Hg−^{204}Pb$_{.902}$	23.3	^{184}Hg−u
^{184}Tl	78.5	^{184}Tl(α)^{180}Au	21.5	^{184}Tl−^{133}Cs$_{1.383}$		
^{184}Pb	69.6	^{184}Pb(α)^{180}Hg	30.4	^{185}Bi^{m}(p)^{184}Pb		
^{185}W	84.4	^{184}W(n,γ)^{185}W	15.6	^{185}W(β^{-})^{185}Re		
^{185}Re	38.6	^{185}Os(ε)^{185}Re	28.2	^{185}W(β^{-})^{185}Re	27.7	^{185}Re(n,γ)^{186}Re
^{185}Os	50.8	^{184}Os(n,γ)^{185}Os	49.2	^{185}Os(ε)^{185}Re		
^{185}Pt	60.3	^{185}Pt(α)^{181}Os	39.7	^{185}Pt−u		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{185}Hg	45.3	^{185}Hg(α)^{181}Pt	25.5	^{185}Hg−^{208}Pb$_{.889}$	15.2	^{189}Pb(α)^{185}Hg
^{185}Bi^{m}	63.5	^{185}Bi^{m}(α)^{181}Tl	36.5	^{185}Bi^{m}(p)^{184}Pb		
^{186}W	54.7	^{186}W(n,γ)^{187}W	34.7	^{186}W(p,t)^{184}W−^{184}W()^{182}W	10.7	^{186}W ^{35}Cl−^{184}W ^{37}Cl
^{186}Re	72.3	^{185}Re(n,γ)^{186}Re	27.7	^{186}Re(β^{-})^{186}Os		
^{186}Os	39.5	^{186}Os(n,γ)^{187}Os	39.4	^{186}Os−^{190}Pt$_{.979}$	21.1	^{186}Re(β^{-})^{186}Os
^{186}Pt	60.6	^{186}Pt−u	39.4	^{186}Pt(α)^{182}Os		
^{186}Au	56.3	^{186}Au−u	43.7	^{186}Au(α)^{182}Ir		
^{186}Hg	56.2	^{186}Hg−^{204}Pb$_{.912}$	26.4	^{186}Hg(α)^{182}Pt	17.4	^{186}Hg−u
^{186}Tl	86.2	^{186}Tl−^{133}Cs$_{1.398}$	13.8	^{186}Tl(α)^{182}Au		
^{187}W	54.7	^{187}W(β^{-})^{187}Re	45.3	^{186}W(n,γ)^{187}W		
^{187}Re	88.7	^{187}Re(β^{-})^{187}Os	8.2	^{187}W(β^{-})^{187}Re	3.9	^{187}Re ^{35}Cl−^{185}Re ^{37}Cl
^{187}Os	57.5	^{187}Os(n,γ)^{188}Os	30.3	^{186}Os(n,γ)^{187}Os	12.7	^{187}Re(β^{-})^{187}Os
^{187}Pt	74.2	^{187}Pt−u	25.8	^{187}Au(β^{+})^{187}Pt		
^{187}Au	64.8	^{187}Au−u	21.3	^{187}Au(β^{+})^{187}Pt	13.9	^{187}Au(α)^{183}Ir
^{187}Hg	47.5	^{187}Hg−^{208}Pb$_{.899}$	19.8	^{187}Hg(α)^{183}Pt	18.0	^{187}Hg^{m}(IT)^{187}Hg
^{187}Hg^{m}	44.2	^{191}Pb^{m}(α)^{187}Hg^{m}	28.4	^{187}Hg^{m}(IT)^{187}Hg	27.3	^{187}Hg^{m}(α)^{183}Pt
^{187}Tl	69.2	^{191}Bi(α)^{187}Tl	30.8	^{187}Tl^{m}(IT)^{187}Tl		
^{187}Tl^{m}	72.2	^{191}Bi(α)^{187}Tl^{m}	13.9	^{187}Tl^{m}(IT)^{187}Tl	13.9	^{187}Tl^{m}(α)^{183}Au
^{187}Pb	85.9	^{187}Pb−^{133}Cs$_{1.406}$	14.1	^{187}Pb(α)^{183}Hg		
^{187}Pb^{m}	60.7	^{187}Pb^{m}(IT)^{187}Pb	39.3	^{191}Po(α)^{187}Pb^{m}		
^{188}Os	59.2	^{188}Os(n,γ)^{189}Os	40.8	^{187}Os(n,γ)^{188}Os	0.1	^{188}Ir(β^{+})^{188}Os
^{188}Ir	68.1	^{188}Pt(ε)^{188}Ir	31.9	^{188}Ir(β^{+})^{188}Os		
^{188}Pt	64.7	^{188}Pt(α)^{184}Os	27.9	^{190}Pt(p,t)^{188}Pt	7.4	^{188}Pt(ε)^{188}Ir
^{188}Hg	69.4	^{192}Pb(α)^{188}Hg	19.1	^{188}Hg−^{208}Pb$_{.904}$	5.9	^{188}Hg−u
^{189}Os	78.9	^{189}Os(n,γ)^{190}Os	21.1	^{188}Os(n,γ)^{189}Os		
^{189}Ir	69.7	^{191}Ir(p,t)^{189}Ir	30.3	^{189}Pt(β^{+})^{189}Ir		
^{189}Pt	83.8	^{190}Pt(p,d)^{189}Pt	16.2	^{189}Pt(β^{+})^{189}Ir		
^{189}Hg	65.0	^{189}Hg−u	35.0	^{189}Hg^{m}(IT)^{189}Hg		
^{189}Hg^{m}	92.0	^{189}Hg^{m}−^{208}Pb$_{.909}$	8.0	^{189}Hg^{m}(IT)^{189}Hg		
^{189}Tl	70.3	^{193}Bi(α)^{189}Tl	29.7	^{193}Bi^{m}(α)^{189}Tl		
^{189}Pb	67.2	^{189}Pb(α)^{185}Hg	19.7	^{189}Pb−u	13.1	^{189}Pb^{m}(IT)^{189}Pb
^{189}Pb^{m}	75.3	^{189}Pb^{m}(IT)^{189}Pb	24.7	^{189}Pb^{m}(α)^{185}Hg		
^{190}W	74.6	^{190}W−u	25.4	^{190}W(β^{-})^{190}Re		
^{190}Re	99.6	^{194}Pt(d,α)^{192}Ir−^{192}Os()^{190}Re	0.4	^{190}W(β^{-})^{190}Re		
^{190}Os	51.6	^{190}Os−^{194}Pt$_{.979}$	29.5	^{190}Os−^{190}Pt	18.2	^{189}Os(n,γ)^{190}Os
^{190}Pt	53.4	^{190}Pt−^{194}Pt$_{.979}$	32.6	^{190}Os−^{190}Pt	13.7	^{186}Os−^{190}Pt$_{.979}$
^{190}Hg	72.6	^{190}Hg−^{208}Pb$_{.913}$	27.4	^{194}Pb(α)^{190}Hg		
^{190}Tl^{m}	63.8	^{190}Tl^{m}−^{133}Cs$_{1.429}$	36.2	^{194}Bi^{n}(α)^{190}Tl^{m}		
^{191}Os	99.3	^{190}Os(n,γ)^{191}Os	0.7	^{191}Os(β^{-})^{191}Ir		
^{191}Ir	89.8	^{191}Os(β^{-})^{191}Ir	8.5	^{191}Ir(n,γ)^{192}Ir	1.6	^{193}Ir(t,α)^{192}Os−^{191}Ir()^{190}Os
^{191}Pt	74.1	^{192}Pt(p,d)^{191}Pt−^{194}Pt()^{193}Pt	25.9	^{192}Pt(p,d)^{191}Pt		
^{191}Au	99.6	^{191}Au−^{133}Cs$_{1.436}$	0.4	^{191}Hg(β^{+})^{191}Au		
^{191}Hg	67.9	^{191}Hg−^{208}Pb$_{.918}$	22.0	^{191}Hg−u	10.1	^{191}Hg(β^{+})^{191}Au
^{191}Pb	95.9	^{195}Po(α)^{191}Pb	4.1	^{191}Pb−u		
^{191}Pb^{m}	92.9	^{195}Po^{m}(α)^{191}Pb^{m}	7.1	^{191}Pb^{m}(α)^{187}Hg^{m}		
^{191}Bi	87.4	^{191}Bi−^{133}Cs$_{1.436}$	10.6	^{191}Bi(α)^{187}Tl^{m}	2.0	^{191}Bi(α)^{187}Tl
^{191}Po	93.9	^{191}Po(α)^{187}Pb	6.1	^{191}Po(α)^{187}Pb^{m}		
^{192}Os	50.6	^{192}Os(p,t)^{190}Os	30.7	^{193}Ir(t,α)^{192}Os−^{191}Ir()^{190}Os	18.6	^{192}Os(n,γ)^{193}Os
^{192}Ir	91.4	^{191}Ir(n,γ)^{192}Ir	6.0	^{192}Ir(n,γ)^{193}Ir	2.5	^{192}Ir(β^{-})^{192}Pt
^{192}Pt	87.2	^{192}Ir(β^{-})^{192}Pt	12.8	^{192}Pt(p,t)^{190}Pt	3.0	^{192}Pt(p,d)^{191}Pt−^{194}Pt()^{193}Pt
^{192}Pb	81.4	^{196}Po(α)^{192}Pb	18.6	^{192}Pb(α)^{188}Hg		
^{193}Os	81.2	^{192}Os(n,γ)^{193}Os	18.8	^{193}Os(β^{-})^{193}Ir		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{193}Ir	93.7	^{192}Ir(n,γ)^{193}Ir	4.3	^{193}Os(β^-)^{193}Ir	3.4	^{193}Pt(ε)^{193}Ir
^{193}Pt	96.4	^{193}Pt(ε)^{193}Ir	3.6	^{192}Pt(p,d)^{191}Pt$-^{194}$Pt()^{193}Pt		
^{193}Au	92.5	^{197}Au(α,^{8}He)^{193}Au	7.5	^{193}Hg(β^+)^{193}Au		
^{193}Hg	67.1	^{193}Hg(β^+)^{193}Au	32.9	^{193}Hg$-^{208}$Pb$_{.928}$		
^{193}Pb	91.9	^{197}Po(α)^{193}Pb	8.1	^{193}Pb$-$u		
^{193}Bi	62.0	^{193}Bi$-^{133}$Cs$_{1.451}$	21.9	^{193}Bi(α)^{189}Tl	16.1	^{197}At(α)^{193}Bi
^{193}Bi^m	64.1	^{193}Bi^m(α)^{189}Tl	35.9	^{197}At^m(α)^{193}Bi^m		
^{194}Pt	63.3	^{194}Pt$-$u	26.6	^{194}Pt(n,γ)^{195}Pt	5.3	^{190}Os$-^{194}$Pt$_{.979}$
^{194}Pb	60.4	^{198}Po(α)^{194}Pb	39.6	^{194}Pb(α)^{190}Hg		
^{194}Bi^n	58.1	^{198}At^m(α)^{194}Bi^n	41.9	^{194}Bi^n(α)^{190}Tl^m		
^{195}Pt	72.2	^{194}Pt(n,γ)^{195}Pt	27.8	^{195}Pt(n,γ)^{196}Pt		
^{195}Au	100.0	^{195}Au(ε)^{195}Pt				
^{195}Hg	78.6	^{195}Hg$-^{208}$Pb$_{.938}$	21.4	^{195}Hg(β^+)^{195}Au		
^{195}Tl	56.1	^{199}Bi^m(α)^{195}Tl	22.0	^{195}Tl$-$u	21.9	^{195}Tl$-^{133}$Cs$_{1.466}$
^{195}Pb	95.3	^{195}Pb^m(IT)^{195}Pb	4.7	^{195}Pb$-$u		
^{195}Pb^m	95.3	^{199}Po^m(α)^{195}Pb^m	4.7	^{195}Pb^m(IT)^{195}Pb		
^{195}Bi	89.5	^{195}Bi$-^{133}$Cs$_{1.466}$	10.5	^{199}At(α)^{195}Bi		
^{195}Po	96.6	^{195}Po$-^{133}$Cs$_{1.466}$	3.4	^{195}Po(α)^{191}Pb		
^{195}Po^m	93.8	^{195}Po$^m-^{133}$Cs$_{1.466}$	6.2	^{195}Po^m(α)^{191}Pb^m		
^{196}Pt	70.9	^{195}Pt(n,γ)^{196}Pt	28.9	^{196}Pt(n,γ)^{197}Pt	0.3	^{196}Au(β^+)^{196}Pt
^{196}Au	51.7	^{197}Au(γ,n)^{196}Au	30.7	^{196}Au(β^-)^{196}Hg	17.6	^{196}Au(β^+)^{196}Pt
^{196}Hg	57.0	^{198}Hg ^{35}Cl$-^{196}$Hg ^{37}Cl	30.1	^{196}Au(β^-)^{196}Hg	12.9	^{196}Hg(n,γ)^{197}Hg
^{196}Pb	78.7	^{200}Po(α)^{196}Pb	21.3	^{196}Pb$-^{208}$Pb$_{.942}$		
^{196}Po	84.1	^{196}Po$-^{133}$Cs$_{1.474}$	15.9	^{196}Po(α)^{192}Pb		
^{197}Pt	65.2	^{196}Pt(n,γ)^{197}Pt	34.1	^{197}Pt(β^-)^{197}Au	0.7	^{198}Pt(p,d)^{197}Pt
^{197}Au	62.8	^{197}Au(n,γ)^{198}Au	35.9	^{197}Pt(β^-)^{197}Au	0.8	^{198}Pt$-^{197}$Au$_{1.005}$
^{197}Hg	84.1	^{196}Hg(n,γ)^{197}Hg	15.9	^{199}Hg(p,t)^{197}Hg		
^{197}Pb	73.9	^{197}Pb^m(IT)^{197}Pb	26.1	^{201}Po(α)^{197}Pb		
^{197}Pb^m	73.9	^{197}Pb$^m-^{133}$Cs$_{1.481}$	26.1	^{197}Pb^m(IT)^{197}Pb		
^{197}Po	92.6	^{197}Po$-^{133}$Cs$_{1.481}$	7.4	^{197}Po(α)^{193}Pb		
^{197}At	81.6	^{197}At(α)^{193}Bi	18.4	^{197}At$-^{133}$Cs$_{1.481}$		
^{197}At^m	58.2	^{197}At^m(α)^{193}Bi^m	41.8	^{197}At$^m-^{133}$Cs$_{1.481}$		
^{198}Pt	53.5	^{198}Pt$-^{197}$Au$_{1.005}$	46.5	^{198}Pt(p,d)^{197}Pt		
^{198}Au	44.1	^{198}Au(β^-)^{198}Hg	36.5	^{197}Au(n,γ)^{198}Au	19.4	^{198}Au(n,γ)^{199}Au
^{198}Hg	67.2	^{198}Hg$-$u	21.7	^{198}Au(β^-)^{198}Hg	10.8	^{200}Hg ^{35}Cl$-^{198}$Hg ^{37}Cl
^{198}Pb	73.8	^{202}Po(α)^{198}Pb	26.2	^{198}Pb$-^{208}$Pb$_{.952}$		
^{198}Bi	97.3	^{198}Bi$-$u	2.7	^{202}At(α)^{198}Bi		
^{198}Po	60.5	^{198}Po$-^{208}$Pb$_{.952}$	39.5	^{198}Po(α)^{194}Pb		
^{198}At	69.8	^{198}At$-^{133}$Cs$_{1.489}$	27.2	^{198}At^m(IT)^{198}At	2.9	^{202}Fr^m(α)^{198}At
^{198}At^m	56.6	^{198}At^m(IT)^{198}At	37.3	^{198}At^m(α)^{194}Bi^n	6.1	^{202}Fr^m(α)^{198}Atm
^{199}Au	80.4	^{198}Au(n,γ)^{199}Au	19.6	^{199}Au(β^-)^{199}Hg		
^{199}Hg	35.3	^{199}Hg$-$C$_2$ ^{35}Cl$_5$	33.8	^{199}Hg(n,γ)^{200}Hg	17.9	^{199}Au(β^-)^{199}Hg
^{199}Bi	38.1	^{203}At(α)^{199}Bi	33.9	^{199}Bi^m(IT)^{199}Bi	27.9	^{199}Bi$-$u
^{199}Bi^m	63.6	^{199}Bi^m(IT)^{199}Bi	36.4	^{199}Bi^m(α)^{195}Tl		
^{199}Po^m	93.0	^{199}Po$^m-^{133}$Cs$_{1.496}$	4.1	^{199}Po^m(α)^{195}Pb^m	2.9	^{203}Rn^m(α)^{199}Pom
^{199}At	89.0	^{199}At(α)^{195}Bi	11.0	^{203}Fr(α)^{199}At		
^{200}Au	71.2	^{200}Au$-$u	28.8	^{200}Au(β^-)^{200}Hg		
^{200}Au^m	72.6	^{200}Au$^m-$u	27.4	^{200}Au^m(β^-)^{200}Hg		
^{200}Hg	64.4	^{199}Hg(n,γ)^{200}Hg	16.9	^{200}Hg ^{35}Cl$-^{198}$Hg ^{37}Cl	12.4	^{204}Hg ^{35}Cl$_2-^{200}$Hg ^{37}Cl$_2$
^{200}Pb	83.9	^{204}Pb(α,^{8}He)^{200}Pb	16.1	^{204}Po(α)^{200}Pb		
^{200}Po	79.7	^{204}Rn(α)^{200}Po	20.3	^{200}Po(α)^{196}Pb		
^{201}Au	100.0	^{202}Hg(d,^{3}He)^{201}Au$-^{206}$Pb()^{205}Tl				

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{201}Hg	59.4	^{201}Hg(n,γ)^{202}Hg	39.2	^{201}Hg ^{35}Cl−^{199}Hg ^{37}Cl	1.4	^{203}Tl ^{35}Cl−^{201}Hg ^{37}Cl
^{201}Tl	88.9	^{203}Tl(p,t)^{201}Tl	11.1	^{201}Pb(β^+)^{201}Tl		
^{201}Pb	89.7	^{205}Po(α)^{201}Pb	10.3	^{201}Pb(β^+)^{201}Tl		
^{201}Po	71.4	^{201}Po(α)^{197}Pb	28.6	^{205}Rn(α)^{201}Po		
^{202}Hg	37.5	^{201}Hg(n,γ)^{202}Hg	28.3	^{202}Hg ^{35}Cl−^{200}Hg ^{37}Cl	25.8	^{204}Hg ^{35}Cl−^{202}Hg ^{37}Cl
^{202}Tl	63.1	^{202}Tl−^{203}Tl$_{.995}$	36.9	^{181}Ta O−^{202}Tl$_{.975}$		
^{202}Pb	85.8	^{202}Pb−^{133}Cs$_{1.519}$	14.2	^{204}Pb(p,t)^{202}Pb		
^{202}Bi	74.9	^{206}At(α)^{202}Bi	25.1	^{202}Bi−u		
^{202}Po	74.5	^{206}Rn(α)^{202}Po	25.5	^{202}Po(α)^{198}Pb		
^{202}At	97.3	^{202}At(α)^{198}Bi	2.7	^{206}Fr(α)^{202}At		
^{202}Fr^m	76.2	^{202}Fr^m(α)^{198}At^m	23.8	^{202}Fr^m(α)^{198}At		
^{203}Au	100.0	^{204}Hg(d,^{3}He)^{203}Au−^{206}Pb()^{205}Tl				
^{203}Hg	85.1	^{203}Hg(β^-)^{203}Tl	10.3	^{204}Hg(d,t)^{203}Hg	4.6	^{202}Hg(d,p)^{203}Hg−^{204}Hg()^{205}Hg
^{203}Tl	70.0	^{203}Tl(n,γ)^{204}Tl	10.4	^{202}Tl−^{203}Tl$_{.995}$	8.5	^{203}Tl ^{35}Cl−^{201}Hg ^{37}Cl
^{203}Pb	52.1	^{204}Pb(p,d)^{203}Pb	37.5	^{207}Po(α)^{203}Pb	10.4	^{203}Pb(ε)^{203}Tl
^{203}Po	68.9	^{203}Po−^{133}Cs$_{1.526}$	31.1	^{207}Rn(α)^{203}Po		
^{203}At	61.7	^{203}At(α)^{199}Bi	20.8	^{203}At−^{208}Pb$_{.976}$	14.5	^{203}At−u
^{203}Rn^m	96.8	^{203}Rn^m(α)^{199}Po^m	3.2	^{203}Rn^m−^{208}Pb$_{.976}$		
^{203}Fr	84.5	^{203}Fr(α)^{199}At	15.5	^{203}Fr−^{133}Cs$_{1.526}$		
^{204}Hg	79.3	^{204}Hg−u	10.8	^{204}Hg ^{35}Cl$_2$−^{200}Hg ^{37}Cl$_2$	9.4	^{204}Hg ^{35}Cl−^{202}Hg ^{37}Cl
^{204}Tl	72.6	^{204}Tl(β^-)^{204}Pb	23.8	^{203}Tl(n,γ)^{204}Tl	3.6	^{205}Tl(d,t)^{204}Tl
^{204}Pb	69.8	^{204}Pb(n,γ)^{205}Pb	24.6	^{204}Tl(β^-)^{204}Pb	4.0	^{208}Po(α)^{204}Pb
^{204}Po	83.6	^{204}Po(α)^{200}Pb	16.4	^{208}Rn(α)^{204}Po		
^{204}At	84.0	^{204}At−u	16.0	^{208}Fr(α)^{204}At		
^{204}Rn	80.6	^{204}Rn−^{208}Pb$_{.981}$	19.4	^{204}Rn(α)^{200}Po		
^{205}Hg	52.5	^{204}Hg(d,p)^{205}Hg	47.5	^{202}Hg(d,p)^{203}Hg−^{204}Hg()^{205}Hg		
^{205}Tl	60.3	^{205}Tl(d,t)^{204}Tl	14.6	^{205}Tl ^{35}Cl−^{203}Tl ^{37}Cl	12.3	^{205}Tl(^{3}He,d)^{206}Pb
^{205}Pb	69.4	^{205}Pb(n,γ)^{206}Pb	29.2	^{204}Pb(n,γ)^{205}Pb	1.4	^{205}Bi(β^+)^{205}Pb
^{205}Bi	55.0	^{209}At(α)^{205}Bi	45.0	^{205}Bi(β^+)^{205}Pb		
^{205}Po	75.5	^{209}Rn(α)^{205}Po	19.3	^{205}Po−u	5.2	^{205}Po(α)^{201}Pb
^{205}Rn	68.5	^{205}Rn(α)^{201}Po	31.5	^{205}Rn−^{208}Pb$_{.986}$		
^{206}Tl	83.6	^{205}Tl(n,γ)^{206}Tl	16.4	^{210}Bi(α)^{206}Tl		
^{206}Pb	53.8	^{206}Pb ^{35}Cl$_2$−^{202}Hg ^{37}Cl$_2$	30.3	^{205}Pb(n,γ)^{206}Pb	13.5	^{206}Pb(n,γ)^{207}Pb
^{206}At	53.9	^{210}Fr(α)^{206}At	23.4	^{206}At−u	22.7	^{206}At(α)^{202}Bi
^{206}Rn	37.8	^{206}Rn−^{133}Cs$_{1.549}$	37.4	^{206}Rn−^{208}Pb$_{.990}$	24.8	^{206}Rn(α)^{202}Po
^{206}Fr	97.3	^{206}Fr(α)^{202}At	2.7	^{210}Ac(α)^{206}Fr		
^{207}Tl	44.9	^{207}Tl(β^-)^{207}Pb	42.4	^{211}Bi(α)^{207}Tl	12.8	^{205}Tl(t,p)^{207}Tl
^{207}Pb	86.3	^{206}Pb(n,γ)^{207}Pb	13.0	^{207}Pb(n,γ)^{208}Pb	0.7	^{207}Tl(β^-)^{207}Pb
^{207}Bi	97.4	^{209}Bi(p,t)^{207}Bi	2.6	^{207}Po(β^+)^{207}Bi		
^{207}Po	58.8	^{207}Po(α)^{203}Pb	41.2	^{207}Po(β^+)^{207}Bi		
^{207}Rn	66.2	^{207}Rn(α)^{203}Po	33.8	^{211}Ra(α)^{207}Rn		
^{207}Fr	88.8	^{207}Fr−^{133}Cs$_{1.556}$	8.9	^{207}Fr(α)^{203}At	2.3	^{211}Ac(α)^{207}Fr
^{208}Pb	87.0	^{207}Pb(n,γ)^{208}Pb	9.0	^{212}Po(α)^{208}Pb	1.1	^{205}Rn−^{208}Pb$_{.986}$
^{208}Po	91.0	^{208}Po(α)^{204}Pb	9.0	^{208}Po−^{133}Cs$_{1.564}$		
^{208}Rn	83.3	^{208}Rn(α)^{204}Po	16.7	^{212}Ra(α)^{208}Rn		
^{208}Fr	92.7	^{208}Fr−^{133}Cs$_{1.564}$	3.7	^{208}Fr(α)^{204}At	3.6	^{212}Ac(α)^{208}Fr
^{209}Pb	86.9	^{209}Pb(β^-)^{209}Bi	11.1	^{208}Pb(d,p)^{209}Pb	2.0	^{213}Po(α)^{209}Pb
^{209}Bi	85.8	^{209}Bi(n,γ)^{210}Bi	9.5	^{209}Bi(α)^{205}Tl	4.3	^{209}Pb(β^-)^{209}Bi
^{209}At	59.4	^{213}Fr(α)^{209}At	40.6	^{209}At(α)^{205}Bi		
^{209}Rn	76.2	^{213}Ra(α)^{209}Rn	23.8	^{209}Rn(α)^{205}Po		
^{209}Fr	61.7	^{209}Fr−^{226}Ra$_{.925}$	38.3	^{213}Ac(α)^{209}Fr		
^{210}Pb	97.4	^{210}Pb(β^-)^{210}Bi	2.6	^{214}Po(α)^{210}Pb		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{210}Bi	50.3	^{210}Bi(β^-)^{210}Po	33.4	^{210}Bi(α)^{206}Tl	14.0	^{209}Bi(n,γ)^{210}Bi
^{210}Po	98.1	^{210}Po(α)^{206}Pb	1.9	^{210}Bi(β^-)^{210}Po		
^{210}Fr	42.6	^{210}Fr(α)^{206}At	35.8	^{210}Fr−^{226}Ra$_{.929}$	21.6	^{214}Ac(α)^{210}Fr
^{210}Ac	84.4	^{210}Ac(α)^{206}Fr	15.6	^{210}Ac−u		
^{211}Pb	95.8	^{215}Po(α)^{211}Pb	4.2	^{211}Pb(β^-)^{211}Bi		
^{211}Bi	57.5	^{211}Bi(α)^{207}Tl	42.5	^{211}Pb(β^-)^{211}Bi		
^{211}Fr	73.6	^{211}Fr−^{133}Cs$_{1.586}$	26.4	^{211}Fr−^{226}Ra$_{.934}$		
^{211}Ra	56.8	^{211}Ra(α)^{207}Rn	39.3	^{211}Ra−^{133}Cs$_{1.586}$	3.9	^{211}Ra−u
^{211}Ac	70.4	^{211}Ac(α)^{207}Fr	29.6	^{211}Ac−u		
^{212}Pb	67.2	^{216}Po(α)^{212}Pb	32.8	^{212}Pb(β^-)^{212}Bi		
^{212}Bi	66.2	^{212}Bi(β^-)^{212}Po	33.8	^{212}Pb(β^-)^{212}Bi		
^{212}Po	90.9	^{212}Po(α)^{208}Pb	9.1	^{212}Bi(β^-)^{212}Po		
^{212}Fr	88.7	^{212}Fr−^{133}Cs$_{1.594}$	11.3	^{212}Fr−^{226}Ra$_{.938}$		
^{212}Ra	82.9	^{212}Ra(α)^{208}Rn	17.1	^{212}Ra−u		
^{212}Ac	85.5	^{212}Ac−u	14.5	^{212}Ac(α)^{208}Fr		
^{213}Bi	76.7	^{217}At(α)^{213}Bi	23.3	^{213}Bi(β^-)^{213}Po		
^{213}Po	93.2	^{213}Po(α)^{209}Pb	6.8	^{213}Bi(β^-)^{213}Po		
^{213}Fr	46.6	^{213}Fr−^{133}Cs$_{1.602}$	38.7	^{213}Fr(α)^{209}At	14.7	^{213}Fr−u
^{213}Ra	77.2	^{213}Ra−^{133}Cs$_{1.602}$	22.8	^{213}Ra(α)^{209}Rn		
^{213}Ac	58.3	^{213}Ac(α)^{209}Fr	41.7	^{213}Ac−u		
^{214}Pb	99.4	^{218}Po(α)^{214}Pb	0.6	^{214}Pb(β^-)^{214}Bi		
^{214}Bi	68.9	^{214}Bi(β^-)^{214}Po	31.1	^{214}Pb(β^-)^{214}Bi		
^{214}Po	97.4	^{214}Po(α)^{210}Pb	2.2	^{218}Rn(α)^{214}Po	0.3	^{214}Bi(β^-)^{214}Po
^{214}At	84.2	^{214}At(α)^{210}Bi	15.8	^{218}Fr^m(α)^{214}At		
^{214}At^n	76.3	^{214}At^n(α)^{210}Bi	23.7	^{218}Fr^m(α)^{214}At^n		
^{214}Ac	77.8	^{214}Ac(α)^{210}Fr	22.2	^{214}Ac−u		
^{215}Bi	85.8	^{219}At(α)^{215}Bi	14.2	^{215}Bi−^{133}Cs$_{1.617}$		
^{215}Po	96.3	^{219}Rn(α)^{215}Po	3.7	^{215}Po(α)^{211}Pb		
^{216}Po	68.9	^{220}Rn(α)^{216}Po	31.1	^{216}Po(α)^{212}Pb		
^{216}Ac	100.0	^{216}Ac(α)^{212}Fr				
^{217}At	77.7	^{221}Fr(α)^{217}At	22.3	^{217}At(α)^{213}Bi		
^{218}Po	99.4	^{222}Rn(α)^{218}Po	0.6	^{218}Po(α)^{214}Pb		
^{218}Rn	93.5	^{218}Rn(α)^{214}Po	6.5	^{222}Ra(α)^{218}Rn		
^{218}Fr^m	71.9	^{218}Fr^m(α)^{214}At	28.1	^{218}Fr^m(α)^{214}At^n		
^{219}At	78.7	^{223}Fr(α)^{219}At	17.1	^{219}At−^{133}Cs$_{1.647}$	4.2	^{219}At(α)^{215}Bi
^{219}Rn	96.4	^{223}Ra(α)^{219}Rn	3.6	^{219}Rn(α)^{215}Po		
^{220}Rn	69.0	^{224}Ra(α)^{220}Rn	31.0	^{220}Rn(α)^{216}Po		
^{220}Pa^m	95.3	^{220}Pa^m(α)^{216}Ac	4.7	^{224}Np(α)^{220}Pa^m		
^{220}Pa^n	54.7	^{220}Pa^n(α)^{216}Ac	45.3	^{224}Np(α)^{220}Pa^n		
^{221}Fr	79.1	^{225}Ac(α)^{221}Fr	20.9	^{221}Fr(α)^{217}At		
^{222}Rn	99.4	^{226}Ra(α)^{222}Rn	0.6	^{222}Rn(α)^{218}Po		
^{222}Ra	62.4	^{222}Ra(α)^{218}Rn	37.6	^{226}Th(α)^{222}Ra		
^{223}Rn	58.3	^{223}Rn−^{133}Cs$_{1.677}$	41.7	^{223}Rn−u		
^{223}Fr	93.6	^{227}Ac(α)^{223}Fr	6.4	^{223}Fr(α)^{219}At		
^{223}Ra	96.4	^{227}Th(α)^{223}Ra	3.6	^{223}Ra(α)^{219}Rn		
^{224}Rn	56.6	^{224}Rn−u	43.4	^{224}Rn−^{133}Cs$_{1.684}$		
^{224}Ra	69.1	^{228}Th(α)^{224}Ra	30.9	^{224}Ra(α)^{220}Rn		
^{224}Np	90.6	^{224}Np(α)^{220}Pa^m	9.4	^{224}Np(α)^{220}Pa^n		
^{225}Rn	73.0	^{225}Rn−u	27.0	^{225}Rn−^{133}Cs$_{1.692}$		
^{225}Fr	84.2	^{225}Fr−u	15.8	^{225}Fr(β^-)^{225}Ra		
^{225}Ra	94.8	^{229}Th(α)^{225}Ra	4.6	^{225}Ra(β^-)^{225}Ac	0.6	^{225}Fr(β^-)^{225}Ra
^{225}Ac	60.1	^{229}Pa(α)^{225}Ac	20.5	^{225}Ra(β^-)^{225}Ac	19.4	^{225}Ac(α)^{221}Fr

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{226}Rn	56.2	^{226}Rn−u	43.8	^{226}Rn−^{133}Cs$_{1.699}$		
^{226}Fr	73.5	^{226}Fr−^{133}Cs$_{1.699}$	26.5	^{226}Fr−u		
^{226}Ra	97.6	^{230}Th(α)^{226}Ra	0.6	^{226}Ra(α)^{222}Rn	0.6	^{209}Fr−^{226}Ra$_{.925}$
^{226}Ac	87.1	^{230}Pa(α)^{226}Ac	12.9	^{226}Ac(β^-)^{226}Th		
^{226}Th	61.1	^{226}Th(α)^{222}Ra	38.9	^{226}Ac(β^-)^{226}Th		
^{227}Rn	63.4	^{227}Rn−^{133}Cs$_{1.707}$	36.6	^{227}Rn−u		
^{227}Fr	79.5	^{227}Fr−^{133}Cs$_{1.707}$	20.5	^{227}Fr−u		
^{227}Ac	90.7	^{231}Pa(α)^{227}Ac	6.3	^{227}Ac(α)^{223}Fr	3.0	^{227}Ac(β^-)^{227}Th
^{227}Th	96.4	^{227}Ac(β^-)^{227}Th	3.6	^{227}Th(α)^{223}Ra		
^{228}Rn	62.5	^{228}Rn−^{133}Cs$_{1.714}$	37.5	^{228}Rn−u		
^{228}Fr	79.6	^{228}Fr−^{133}Cs$_{1.714}$	20.4	^{228}Fr−u		
^{228}Th	68.7	^{230}Th(p,t)^{228}Th−^{232}Th()^{230}Th	30.5	^{228}Th(α)^{224}Ra	0.8	^{232}U(α)^{228}Th
^{229}Fr	70.4	^{229}Fr−^{133}Cs$_{1.722}$	16.8	^{229}Fr−^{238}U$_{.962}$	12.8	^{229}Fr−u
^{229}Th	70.1	^{233}U(α)^{229}Th	25.5	^{230}Th(d,t)^{229}Th	4.3	^{229}Th(α)^{225}Ra
^{229}Pa	87.4	^{231}Pa(p,t)^{229}Pa	12.6	^{229}Pa(α)^{225}Ac		
^{230}Fr	87.7	^{230}Fr−^{133}Cs$_{1.729}$	12.3	^{230}Fr−u		
^{230}Th	38.9	^{234}U(α)^{230}Th	32.4	^{230}Th(p,t)^{228}Th−^{232}Th()^{230}Th	24.8	^{230}Th(n,γ)^{231}Th
^{230}Pa	87.8	^{230}Pa(ε)^{230}Th	12.2	^{230}Pa(α)^{226}Ac		
^{231}Ra	66.2	^{231}Ra−u	33.8	^{231}Ra−^{133}Cs$_{1.737}$		
^{231}Th	73.3	^{230}Th(n,γ)^{231}Th	20.8	^{235}U(α)^{231}Th	5.9	^{231}Th(β^-)^{231}Pa
^{231}Pa	47.3	^{231}Th(β^-)^{231}Pa	42.2	^{235}Np(α)^{231}Pa	7.7	^{231}Pa(α)^{227}Ac
^{232}Ra	57.1	^{232}Ra−^{133}Cs$_{1.744}$	42.9	^{232}Ra−u		
^{232}Th	83.0	^{236}U(α)^{232}Th	11.5	C_{24} H_{16}−^{232}Th ^{37}Cl ^{35}Cl	8.3	^{232}Th(n,γ)^{233}Th
^{232}U	99.2	^{232}U(α)^{228}Th	0.8	^{236}Pu(α)^{232}U		
^{233}Ra	70.5	^{233}Ra−^{133}Cs$_{1.752}$	29.5	^{233}Ra−u		
^{233}Th	91.6	^{232}Th(n,γ)^{233}Th	8.3	^{233}Th(β^-)^{233}Pa		
^{233}Pa	90.1	^{237}Np(α)^{233}Pa	5.6	^{233}Th(β^-)^{233}Pa	4.3	^{233}Pa(β^-)^{233}U
^{233}U	51.3	^{233}Pa(β^-)^{233}U	23.3	^{233}U(α)^{229}Th	14.6	^{237}Pu(α)^{233}U
^{234}U	62.7	^{234}U(n,γ)^{235}U	20.6	^{238}Pu(α)^{234}U	16.3	^{234}U(α)^{230}Th
^{235}U	41.2	^{239}Pu(α)^{235}U	30.4	^{235}U(n,γ)^{236}U	18.5	^{234}U(n,γ)^{235}U
^{235}Np	88.0	^{235}Np(ε)^{235}U	12.0	^{235}Np(α)^{231}Pa		
^{236}U	76.8	^{240}Pu(α)^{236}U	23.2	^{235}U(n,γ)^{236}U	1.1	^{236}U(n,γ)^{237}U
^{236}Pu	99.2	^{236}Pu(α)^{232}U	0.8	^{240}Cm(α)^{236}Pu		
^{237}U	84.3	^{236}U(n,γ)^{237}U	15.7	^{241}Pu(α)^{237}U		
^{237}Np	99.0	^{241}Am(α)^{237}Np	1.0	^{237}Np(α)^{233}Pa		
^{237}Pu	94.2	^{241}Cm(α)^{237}Pu	5.8	^{237}Pu(α)^{233}U		
^{238}U	77.9	^{242}Pu(α)^{238}U	20.9	C_{24} H_{20}−^{238}U $^{35}Cl_2$	1.2	^{229}Fr−^{238}U$_{.962}$
^{238}Pu	69.1	^{238}Pu(α)^{234}U	30.6	^{238}Pu(n,γ)^{239}Pu	0.3	^{242}Cm(α)^{238}Pu
^{239}Np	67.2	^{239}Np(β^-)^{239}Pu	32.8	^{243}Am(α)^{239}Np		
^{239}Pu	46.2	^{239}Pu(n,γ)^{240}Pu	27.1	^{239}Pu(α)^{235}U	19.3	^{239}Np(β^-)^{239}Pu
^{240}U	99.1	^{244}Pu(α)^{240}U	0.9	^{240}U(β^-)^{240}Np^m		
^{240}Np	67.9	^{240}Np^m(IT)^{240}Np	32.1	^{240}Np(β^-)^{240}Pu		
^{240}Np^m	42.7	^{240}Np^m(β^-)^{240}Pu	42.2	^{240}U(β^-)^{240}Np^m	15.2	^{240}Np^m(IT)^{240}Np
^{240}Pu	60.7	^{240}Pu(n,γ)^{241}Pu	25.9	^{239}Pu(n,γ)^{240}Pu	13.3	^{240}Pu(α)^{236}U
^{240}Cm	99.1	^{240}Cm(α)^{236}Pu	0.9	^{244}Cf(α)^{240}Cm		
^{241}Pu	39.3	^{240}Pu(n,γ)^{241}Pu	28.2	^{245}Cm(α)^{241}Pu	18.3	^{241}Pu(β^-)^{241}Am
^{241}Am	80.9	^{241}Pu(β^-)^{241}Am	17.6	^{241}Am O−C_{22}	0.7	^{241}Am(α)^{237}Np
^{241}Cm	94.1	^{241}Cm(ε)^{241}Am	4.7	^{241}Cm(α)^{237}Pu	1.2	^{245}Cf(α)^{241}Cm
^{242}Pu	80.8	^{241}Pu(n,γ)^{242}Pu	13.9	^{242}Pu(α)^{238}U	4.4	^{242}Pu(n,γ)^{243}Pu
^{242}Cm	99.7	^{242}Cm(α)^{238}Pu	0.3	^{246}Cf(α)^{242}Cm		
^{243}Pu	59.0	^{242}Pu(n,γ)^{243}Pu	19.1	^{244}Pu(d,t)^{243}Pu	11.4	^{243}Pu(β^-)^{243}Am
^{243}Am	53.8	^{243}Am(α)^{239}Np	43.9	^{243}Am O−C_{22}	2.3	^{243}Pu(β^-)^{243}Am

Table II. Influences on primary nuclides (continued, Explanation of Table on page 030003-76)

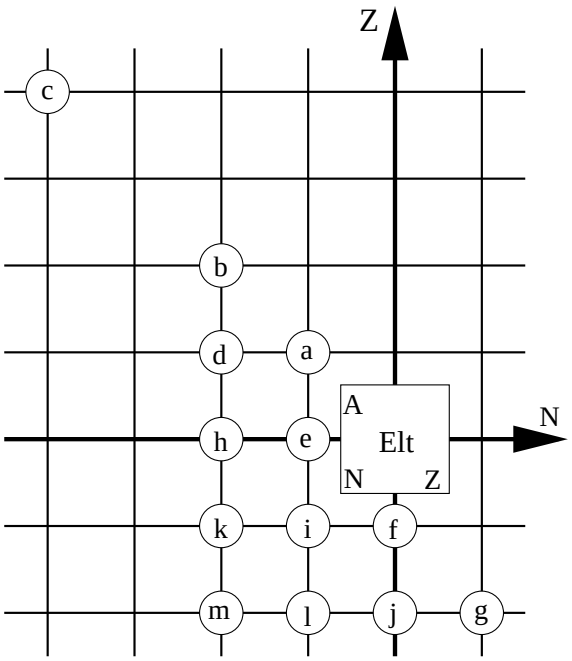
Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{244}Pu	78.1	^{244}Pu O−C_{22}	15.3	^{244}Pu(d,t)^{243}Pu	5.3	^{248}Cm(α)^{244}Pu
^{244}Cf	98.3	^{244}Cf(α)^{240}Cm	1.7	^{248}Fm(α)^{244}Cf		
^{245}Cm	67.6	^{245}Cm(α)^{241}Pu	32.4	^{249}Cf(α)^{245}Cm		
^{245}Cf	97.2	^{245}Cf(α)^{241}Cm	2.8	^{249}Fm(α)^{245}Cf		
^{246}Pu	55.3	^{244}Pu(t,p)^{246}Pu	44.7	^{246}Pu(β^-)^{246}Am^m		
^{246}Am^m	55.7	^{246}Am^m(β^-)^{246}Cm	44.3	^{246}Pu(β^-)^{246}Am^m		
^{246}Cm	98.1	^{246}Cm(α)^{242}Pu	1.7	^{246}Cm(d,p)^{247}Cm	0.2	^{246}Am^m(β^-)^{246}Cm
^{246}Cf	99.4	^{246}Cf(α)^{242}Cm	0.6	^{250}Fm(α)^{246}Cf		
^{246}Es	62.6	^{246}Es−u	37.4	^{250}Md(α)^{246}Es		
^{247}Cm	60.2	^{247}Cm(α)^{243}Pu	20.6	^{246}Cm(d,p)^{247}Cm	19.2	^{248}Cm(d,t)^{247}Cm
^{248}Cm	94.6	^{248}Cm(α)^{244}Pu	5.4	^{248}Cm(d,t)^{247}Cm		
^{248}Fm	76.8	^{248}Fm(α)^{244}Cf	23.2	^{252}No(α)^{248}Fm		
^{249}Cf	63.5	^{249}Cf(α)^{245}Cm	36.5	^{249}Cf O−C_{22}		
^{249}Fm	76.9	^{249}Fm(α)^{245}Cf	23.1	^{253}No(α)^{249}Fm		
^{249}Md	54.5	^{249}Md−u	45.5	^{253}Lr(α)^{249}Md		
^{250}Fm	79.6	^{250}Fm(α)^{246}Cf	20.4	^{254}No(α)^{250}Fm		
^{250}Md	60.3	^{250}Md(α)^{246}Es	39.7	^{250}Md−u		
^{251}Fm	88.4	^{255}No(α)^{251}Fm	11.6	^{251}Fm−u		
^{252}No	69.3	^{252}No(α)^{248}Fm	30.7	^{252}No−$^{133}Cs_{1.895}$		
^{253}No	67.4	^{253}No(α)^{249}Fm	32.6	^{253}No−$^{133}Cs_{1.902}$		
^{253}Lr	54.2	^{253}Lr(α)^{249}Md	45.8	^{257}Db(α)^{253}Lr		
^{254}No	58.0	^{254}No(α)^{250}Fm	42.0	^{254}No−$^{133}Cs_{1.910}$		
^{255}No	88.8	^{255}No−$^{133}Cs_{1.917}$	11.2	^{255}No(α)^{251}Fm		
^{257}Db	53.8	^{257}Db(α)^{253}Lr	46.2	^{257}Db−u		

Table III. Nuclear-reaction and separation energies

EXPLANATION OF TABLE

Separation energies (in keV) of particles (or groups of particles) and nuclear-reaction energies obtained as the following combinations of atomic masses (see accompanying diagram) are presented for all nuclides for which such data can be derived:

$$
\begin{array}{lcll}
Q(\beta^-) & = & M(A,Z) - M(A,Z+1) \text{ (in Part I)} & \text{(a)} \\
Q(2\beta^-) & = & M(A,Z) - M(A,Z+2) & \text{(b)} \\
Q(4\beta^-) & = & M(A,Z) - M(A,Z+4) & \text{(c)} \\
Q(\beta^-\text{n}) & = & M(A,Z) - M(A-1,Z+1) - \text{n} & \text{(d)} \\
S(\text{n}) & = & -M(A,Z) + M(A-1,Z) + \text{n} & \text{(e)} \\
S(\text{p}) & = & -M(A,Z) + M(A-1,Z-1) + {}^1\text{H} & \text{(f)} \\
Q(\varepsilon\text{p}) & = & M(A,Z) - M(A-1,Z-2) - {}^1\text{H} & \text{(g)} \\
S(2\text{n}) & = & -M(A,Z) + M(A-2,Z) + 2\text{n} & \text{(h)} \\
Q(\text{d},\alpha) & = & M(A,Z) - M(A-2,Z-1) + {}^2\text{H} - {}^4\text{He} & \text{(i)} \\
S(2\text{p}) & = & -M(A,Z) + M(A-2,Z-2) + 2\,{}^1\text{H} & \text{(j)} \\
Q(\text{p},\alpha) & = & M(A,Z) - M(A-3,Z-1) - {}^4\text{He} + \text{p} & \text{(k)} \\
Q(\text{n},\alpha) & = & M(A,Z) - M(A-3,Z-2) - {}^4\text{He} + \text{n} & \text{(l)} \\
Q(\alpha) & = & M(A,Z) - M(A-4,Z-2) - {}^4\text{He} & \text{(m)}
\end{array}
$$



A	Mass number.
Elt.	Element symbol
Z	Atomic number.

2224.57 0.04	2224.57 $\pm$ 0.04 keV. The uncertainties are derived from the adjusted masses and the correlation matrix. The precision of the most-precise values for several light nuclei is often better than 5 eV and they can not be conveniently given in this table. Such values are given in Table A.

$*$	in place of value: not calculable from the present input data.
#	in place of decimal point: values and uncertainties estimated from TMS (see Part I, Section 5, p. 030002-19).
a	in place of uncertainty : uncertainty smaller than 5 eV. Full precisions are available in the ASCII format at the AMDC website [12].

Other reaction energies can be derived from the given data with the help of the following relations:

$$
\begin{array}{lcl}
Q(\gamma,\mathrm{p}) &=& -\,S(\mathrm{p}) \\
Q(\gamma,\mathrm{n}) &=& -\,S(\mathrm{n}) \\
Q(\gamma,2\mathrm{p}) &=& -\,S(2\mathrm{p}) \\
Q(\gamma,\mathrm{pn}) &=& Q(\mathrm{d},\alpha) - 26071.0962 \pm 0.0005 \\
Q(\gamma,\mathrm{d}) &=& Q(\mathrm{d},\alpha) - 23846.5299 \pm 0.0002 \\
Q(\gamma,2\mathrm{n}) &=& -\,S(2\mathrm{n}) \\
Q(\gamma,\mathrm{t}) &=& Q(\mathrm{p},\alpha) - 19813.8661 \pm 0.0002 \\
Q(\gamma,{}^3\mathrm{He}) &=& Q(\mathrm{n},\alpha) - 20577.6211 \pm 0.0005 \\
Q(\gamma,\alpha) &=& Q(\alpha) \\
 & & \\
Q(\mathrm{p},\mathrm{n}) &=& Q(\beta^-) - 782.3470 \pm 0.0004 \\
Q(\mathrm{p},2\mathrm{p}) &=& -\,S(\mathrm{p}) \\
Q(\mathrm{p},\mathrm{pn}) &=& -\,S(\mathrm{n}) \\
Q(\mathrm{p},\mathrm{d}) &=& -\,S(\mathrm{n}) + 2224.5662 \pm 0.0004 \\
Q(\mathrm{p},2\mathrm{n}) &=& Q(\beta^-\mathrm{n}) - 782.3440 \pm 0.0004 \\
Q(\mathrm{p},\mathrm{t}) &=& -\,S(2\mathrm{n}) + 8481.7963 \pm 0.0009 \\
Q(\mathrm{p},{}^3\mathrm{He}) &=& Q(\mathrm{d},\alpha) - 18353.0548 \pm 0.0002 \\
 & & \\
Q(\mathrm{n},2\mathrm{p}) &=& Q(\varepsilon\mathrm{p}) + 782.3470 \pm 0.0004 \\
Q(\mathrm{n},\mathrm{np}) &=& -\,S(\mathrm{p}) \\
Q(\mathrm{n},\mathrm{d}) &=& -\,S(\mathrm{p}) + 2224.5662 \pm 0.0004 \\
Q(\mathrm{n},2\mathrm{n}) &=& -\,S(\mathrm{n}) \\
Q(\mathrm{n},\mathrm{t}) &=& Q(\mathrm{d},\alpha) - 17589.2999 \pm 0.0005 \\
Q(\mathrm{n},{}^3\mathrm{He}) &=& -\,S(2\mathrm{p}) + 7718.0413 \pm 0.0004 \\
 & & \\
Q(\mathrm{d},\mathrm{pn}) &=& 0 - 2224.5662 \pm 0.0004 \\
Q(\mathrm{d},\mathrm{t}) &=& -\,S(\mathrm{n}) + 6257.2301 \pm 0.0004 \\
Q(\mathrm{d},{}^3\mathrm{He}) &=& -\,S(\mathrm{p}) + 5493.4751 \pm 0.0001 \\
 & & \\
Q({}^3\mathrm{He},\mathrm{t}) &=& Q(\beta^-) - 18.5920 \pm 0.0002 \\
Q({}^3\mathrm{He},\alpha) &=& -\,S(\mathrm{n}) + 20577.6211 \pm 0.0005 \\
 & & \\
Q(\mathrm{t},\alpha) &=& -\,S(\mathrm{p}) + 19813.8661 \pm 0.0002
\end{array}
$$

Table III. Nuclear-reaction and separation energies (Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
1	n	0	0.0	0.0	*		*		*		*		*	
	H	1	*		0.0	0.0	*		*		*		*	
2	H	1	2224.57	*a*	2224.57	*a*	*		23846.53	*a*	*		*	
3	H	1	6257.23	*a*	*		*		17589.30	*a*	19813.87	*a*	*	
	He	2	*		5493.48	*a*	*		18353.05	*a*	*		20577.62	*a*
	Li	3	*		*		*		*		*		*	
4	H	1	−1600	100	*		*		*		21410	100	*	
	He	2	20577.62	*a*	19813.87	*a*	*		0.0	0.0	0.0	0.0	0.0	0.0
	Li	3	11420#	2010#	−3100	210	*		*		*		23680	210
5	H	1	−200	130	*		*		*		*		*	
	He	2	−735	20	20680	100	*		6992	20	2960	20	*	
	Li	3	21720	220	−1960	50	*		7460	50	*		4190	50
	Be	4	*		−4530#	2010#	*		19180#	2830#	*		*	
6	H	1	−910	270	*		−5440#	2020#	*		*		*	
	He	2	1710	20	22590	90	*		3680	100	7506.34	0.05	*	
	Li	3	5660	50	4433	20	*		22372.77	*a*	4019.72	*a*	4783.47	*a*
	Be	4	26840#	2000#	590	50	*		3760	210	−5430#	2000#	9090	5
	B	5	*		−2890#	2830#	*		*		*		24300#	2830#
7	H	1	810#	1040#	*		21460#	1000#	*		*		*	
	He	2	−410	8	23090	250	*		3890	90	6320	100	*	
	Li	3	7251.09	*a*	9973.96	0.05	*		14387	20	17346.24	*a*	−4070	100
	Be	4	10677	5	5606.85	0.07	*		14800	50	−4690	210	18990.48	0.07
	B	5	27720#	2000#	−2013	26	*		1250#	2000#	*		8000	210
8	He	2	2535	8	24810#	1000#	−3455	18	440	250	3580	90	*	
	Li	3	2032.62	0.05	12416	8	*		14064.52	0.07	14579	20	−6300	90
	Be	4	18898.64	0.08	17254.40	0.04	*		1565.60	0.04	−1870	50	−643	20
	B	5	12826	25	136.4	1.0	*		15257	6	−9350#	2000#	16890	50
	C	6	*		−100	30	*		−1550#	2000#	*		3570#	2000#
9	He	2	−1250	50	*		12020	50	2510#	1010#	3920	260	*	
	Li	3	4062.22	0.19	13943.75	0.21	*		9593	8	12226.87	0.19	−11270	250
	Be	4	1664.54	0.08	16886.32	0.09	*		7152.15	0.08	2125.63	0.08	−597.24	0.09
	B	5	18576.4	1.3	−185.8	0.9	*		7358.3	0.9	−1094	6	3976.0	0.9
	C	6	14225	18	1299.6	2.4	*		11945	25	−13550#	2000#	16182	6
10	He	2	−190	100	*		33500	90	*		4930#	1010#	*	
	Li	3	−26	13	15170	50	−5750	400	12154	13	11844	15	−10440#	1000#
	Be	4	6812.28	0.05	19636.39	0.20	*		2372.49	0.09	2564.44	0.08	−7819	8
	B	5	8437.2	0.9	6586.81	0.08	*		17819.75	0.04	1145.67	0.07	2789.91	0.01
	C	6	21283.6	2.1	4006.8	0.9	*		3487.9	1.0	−7114	25	5576.08	0.10
	N	7	*		−2600	400	*		14450	400	*		16770	400
11	Li	3	396	13	15760	90	16363	5	10500	50	13982.6	0.6	*	
	Be	4	501.64	0.25	20164	13	−27560	60	5933.1	0.3	4095.42	0.24	−5786.11	0.25
	B	5	11454.22	0.02	11228.75	0.08	*		8030.06	0.08	8590.09	0.04	−6631.69	0.05
	C	6	13120.59	0.09	8690.18	0.06	*		8943.7	0.9	−7408.1	1.0	11354.13	0.07
	N	7	22510	400	−1378	5	*		6165	5	−5835	19	7090	5
	O	8	*		−1650	400	*		*		*		18320	60
12	Li	3	−210	30	*		31670	30	10520	100	12940	60	*	
	Be	4	3170.7	1.9	22939.5	2.0	−6936	12	2736	13	4986.9	1.9	−10210	50
	B	5	3369.6	1.3	14096.7	1.3	*		11472.7	1.3	6885.0	1.3	−5939.1	1.3
	C	6	18720.72	0.06	15956.68	0.01	*		−1339.80	0.01	−7552.4	0.9	−5702.05	0.08
	N	7	15099	5	600.3	1.0	*		12350.2	1.0	−6708.8	2.4	10568.0	1.3
	O	8	23800	60	−359	13	*		3920	400	*		8749	12

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2β⁻)		Q(εp)		Q(β⁻n)	
1	n	0	*		*		*		*		*		*	
	H	1	*		*		*		*		*		*	
2	H	1	*		*		*		*		*		*	
3	H	1	8481.80	*a*	*		*		−13720#	2000#	*		*	
	He	2	*		7718.04	*a*	*		*		*		*	
	Li	3	*		−6800#	2000#	*		*		8240#	2000#	*	
4	H	1	4660	100	*		*		−700	230	*		1620	100
	He	2	*		*		0.0	0.0	*		*		−34310#	2000#
	Li	3	*		2390	210	*		*		3080	210	*	
5	H	1	−1800	90	*		*		21210	100	*		22400	90
	He	2	19843	20	*		735	20	−25910#	2000#	*		−22160	210
	Li	3	33130#	2000#	17850	50	1960	50	*		−20230	110	*	
	Be	4	*		−7630#	2000#	*		*		27430#	2000#	*	
6	H	1	−1110	270	*		*		27790	250	*		22570	250
	He	2	975.46	0.05	*		*		−783	5	*		−2160	50
	Li	3	27380	210	25110	100	−1473.76	*a*	−33230#	2000#	−26090	90	−31120#	2000#
	Be	4	*		−1372	5	*		*		−145	21	*	
	B	5	*		−7420#	2010#	*		*		28350#	2000#	*	
7	H	1	−100#	1000#	*		*		34230#	1000#	*		23470#	1000#
	He	2	1301	21	*		*		10304	8	*		3915	8
	Li	3	12910	50	32560	90	−2467.62	*a*	−12769	25	−34260	250	−11539	5
	Be	4	37510#	2000#	10040	20	−1587.14	0.07	*		−9112.07	0.09	−39620#	2000#
	B	5	*		−1420	60	−3420#	2000#	*		6301	25	*	
8	He	2	2125.05	0.10	*		*		26668.01	0.10	*		8631.26	0.09
	Li	3	9283.71	0.05	35510	250	−6100	100	−1975.8	1.0	−35480#	1000#	−2894.51	0.09
	Be	4	29576	5	27228.37	0.06	91.84	0.04	−30123	18	−28420	8	−30806	25
	B	5	40540#	2000#	5743.3	1.0	−4830	210	*		725.5	1.0	*	
	C	6	*		−2111	19	*		*		12006	18	*	
9	He	2	1280	50	*		*		29590	50	*		11920	50
	Li	3	6094.84	0.19	38760#	1000#	−10360	90	12538.4	0.9	*		11941.92	0.19
	Be	4	20563.18	0.10	29303	8	−2308	20	−17562.5	2.1	−27550.20	0.12	−19644.4	1.0
	B	5	31403	25	17068.6	0.9	−1690	50	*		−15818.3	0.9	−30719	18
	C	6	*		1436.0	2.1	−10650#	2000#	*		16680.3	2.1	*	
10	He	2	−1440	90	*		*		36590	90	*		16170	90
	Li	3	4036	13	*		−11250	250	21002	13	*		13633	13
	Be	4	8476.82	0.09	33580.14	0.12	−7409.52	0.10	−3091.19	0.11	−35620	50	−7880.3	0.9
	B	5	27013.6	1.0	23473.14	0.05	−4461.19	0.01	−26750	400	−20193.27	0.19	−24931.7	2.1
	C	6	35508	18	3820.94	0.08	−5101	5	*		−2938.75	0.10	*	
	N	7	*		−1300	400	−10950#	2040#	*		19090	400	*	
11	Li	3	369.3	0.6	*		−10830#	1000#	32060.6	0.6	*		20049.5	0.6
	Be	4	7313.92	0.25	35340	50	−8321	8	9527.77	0.25	−36310	90	55.24	0.24
	B	5	19891.4	0.9	30865.14	0.19	−8664.31	0.01	−15698	5	−31674	13	−15102.28	0.07
	C	6	34404.2	2.1	15277.00	0.10	−7544.52	0.09	−37090	60	−9247.06	0.10	−36220	400
	N	7	*		2629	5	−5736	26	*		5026	5	*	
	O	8	*		−4250	60	*		*		24750	60	*	
12	Li	3	190	30	*		*		35640	30	*		20760	30
	Be	4	3672.4	1.9	38700	90	−8956.8	1.9	25077.8	1.9	*		8338.7	1.9
	B	5	14823.8	1.3	34261	13	−10001.3	1.3	−3968.7	1.7	−34647.8	1.5	−5351.3	1.3
	C	6	31841.31	0.07	27185.43	0.08	−7366.59	0.04	−32013	12	−27466.14	0.24	−32437	5
	N	7	37600	400	9290.5	1.0	−8008.4	1.4	*		1381.4	1.0	−38470	60
	O	8	*		−1737	12	−5476	22	*		14075	12	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		Q(4β⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
13	Li	3	100	80	*		51640	70	*		12650	120	*	
	Be	4	−510	10	22640	30	10544	14	3642	10	5471	16	−9890	90
	B	5	4878.8	1.7	15804.8	2.2	−25470#	500#	7095.6	1.0	8818.5	1.0	−10844	13
	C	6	4946.31	*a*	17533.4	1.3	*		5168.11	0.01	−4061.55	0.01	−3836.08	0.08
	N	7	20063.9	1.0	1943.49	0.27	*		5406.89	0.28	−5489.14	0.28	−1058.73	0.27
	O	8	16969	15	1512	10	*		9461	11	−10820	400	13063	10
	F	9	*		−2730#	500#	*		5000#	500#	*		8880#	640#
14	Be	4	1780	130	24320	150	31950	130	1660	140	4090	130	*	
	B	5	970	21	17284	24	−8300	50	9297	21	8351	21	−11418	21
	C	6	8176.43	*a*	20831.0	1.0	*		361.3	1.3	−783.76	0.01	−11510.87	0.24
	N	7	10553.38	0.27	7550.56	*a*	*		13574.22	*a*	−2921.93	0.06	−157.89	0.01
	O	8	23179	10	4626.67	0.27	*		1380.5	1.0	−11494	5	3004.79	0.06
	F	9	18140#	500#	−1560	40	*		10660	40	−10910	70	13250	40
15	Be	4	−1800	100	*		46970	170	3560	180	5680	170	*	
	B	5	2778	30	18290	130	12391	25	6009	23	8744	21	−14410	40
	C	6	1218.1	0.8	21080	21	−30340	70	4022.0	1.3	1367.8	1.5	−9558.2	2.1
	N	7	10833.30	*a*	10207.43	*a*	*		7687.24	*a*	4965.49	*a*	−7621.6	1.3
	O	8	13223.5	0.5	7296.8	0.5	*		8220.9	0.6	−9618.4	1.1	8502.0	0.5
	F	9	23470	40	−1270	14	*		4162	17	−10583	18	4875	14
	Ne	10	*		−960	80	*		8900#	510#	*		13850	70
16	Be	4	450	140	*		62180	170	*		5330	180	*	
	B	5	−83	15	20000	170	26437	25	7870	130	8317	27	−14220	70
	C	6	4250	4	22552	21	−10293	21	741	22	1996	4	−14319	11
	N	7	2488.8	2.3	11478.2	2.4	*		13374.8	2.3	7423.0	2.3	−5231.6	2.5
	O	8	15663.9	0.5	12127.41	*a*	*		3110.39	*a*	−5218.43	0.27	−2215.61	*a*
	F	9	13963	15	−531	5	*		13378	5	−7576	11	10976	5
	Ne	10	24300	70	−131	25	*		2730	50	−13180#	500#	6518	23
17	B	5	1470	210	21020	260	41760	200	4600	260	8630	240	*	
	C	6	734	18	23370	30	4531	17	2785	27	2232	27	−13280	130
	N	7	5885	15	13113	15	−26850	60	8708	15	9714	15	−10147	26
	O	8	4143.08	*a*	13781.6	2.3	*		9800.60	*a*	1191.87	*a*	1817.74	*a*
	F	9	16795	5	600.27	0.25	*		9806.9	0.5	−1192.02	0.25	4734.69	0.25
	Ne	10	15558	20	1464	5	*		10645	14	−10600	40	14139.1	0.4
	Na	11	*		−3440	60	*		5220	90	*		8400	70
18	B	5	−5	5	*		50920	200	5060	260	6830	260	*	
	C	6	4180	30	26090	210	19600	30	−1480	40	830	40	−19260	170
	N	7	2828	24	15208	25	−11920	100	10130	19	8104	19	−10198	28
	O	8	8045.37	*a*	15942	15	*		4244.1	2.3	3979.80	*a*	−5009.6	0.8
	F	9	9149.9	0.5	5607.1	0.5	*		16320.9	0.5	2881.5	0.7	6418.1	0.5
	Ne	10	19254.2	0.5	3923.1	0.4	*		5353	5	−6385	14	8108.4	0.6
	Na	11	17750	110	−1250	90	*		11760	100	−10310	120	14120	90
19	B	5	90	560	*		61260	530	*		7190	550	*	
	C	6	580	90	26670	230	30660	100	−590	230	170	100	−19390	190
	N	7	5328	25	16350	30	2927	19	5535	24	7026	17	−15609	30
	O	8	3955.6	2.6	17069	19	−28510	60	6174	15	2513	3	−4715	4
	F	9	10431.9	0.5	7993.60	*a*	*		10032.13	*a*	8113.61	*a*	−1525.0	2.3
	Ne	10	11636.9	0.4	6410.0	0.5	*		10511.16	0.30	−4059	5	12135.46	0.16
	Na	11	20180	90	−323	11	*		7140	11	−6193	23	7901	12
	Mg	12	*		490	110	*		7830	80	*		13500	60

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
13	Li	3	−110	70	*		*		40420	70	*		23830	70
	Be	4	2661	10	*		−9700	50	30534	10	*		12218	10
	B	5	8248.4	1.0	38744.3	1.2	−10817.9	1.0	11216.5	1.0	−39740	30	8490.6	1.0
	C	6	23667.02	0.06	31630.10	0.24	−10648.36	0.08	−19990	10	−29241.7	1.9	−22284.4	1.0
	N	7	35163	5	17900.17	0.27	−9495.9	0.9	−36680#	500#	−15312.9	1.3	−34739	12
	O	8	40770	60	2112	10	−8220	10	*		15826	10	*	
	F	9	*		−3090#	500#	*		*		17400#	500#	*	
14	Be	4	1270	130	*		−11670	160	36930	130	*		15320	130
	B	5	5848	21	39920	40	−11814	25	20800	21	−40610	70	12467	21
	C	6	13122.74	*a*	36635.8	1.9	−12012.51	0.08	−4987.89	0.03	−37928	10	−10396.91	0.27
	N	7	30617.3	1.0	25083.9	1.3	−11612.11	0.01	−29100	40	−20987.5	1.0	−28323	10
	O	8	40148	12	6570.16	0.03	−10115.81	0.07	*		−2406.20	0.03	−42090#	500#
	F	9	*		−50	40	−9260	400	*		19330	40	*	
15	Be	4	−20	170	*		*		39950	170	*		18090	170
	B	5	3747	21	42600	70	−14196	21	28856	21	*		17866	21
	C	6	9394.5	0.8	38364	10	−12728.9	0.8	7017.5	0.9	−37370	130	−1061.6	0.8
	N	7	21386.68	0.27	31038.5	1.0	−10991.19	0.01	−16465	14	−30851	21	−15977.66	0.03
	O	8	36402	10	14847.3	0.5	−10218.7	0.5	−37360	70	−7453.2	0.5	−37180	40
	F	9	41610#	500#	3357	14	−10224	15	*		6414	14	*	
	Ne	10	*		−2520	70	−9950	90	*		24920	70	*	
16	Be	4	−1350	100	*		*		43750	170	*		20420	170
	B	5	2690	30	*		−14320	40	31428	25	*		19167	25
	C	6	5468	4	40840	130	−13809	4	18431	4	−43420	170	5521	4
	N	7	13322.1	2.3	32558	21	−10110.4	2.7	−4991	6	−30562	21	−5243.0	2.4
	O	8	28887.42	0.03	22334.84	*a*	−7161.92	*a*	−28724	20	−21899.1	0.8	−29375	14
	F	9	37430	40	6766	5	−9088	5	*		3285	5	−37610	70
	Ne	10	*		−1401	20	−10451	24	*		13842	20	*	
17	B	5	1380	210	*		−15690	220	35850	200	*		21950	200
	C	6	4984	17	43370	170	−15052	20	21841	17	−43700	170	7277	18
	N	7	8374	15	35665	26	−11117	15	5918	15	−36531	29	4536	15
	O	8	19807.0	0.5	25259.9	0.8	−6358.69	*a*	−17309.2	0.4	−21792	4	−19555	5
	F	9	30758	14	12727.68	0.25	−5818.7	0.4	−32770	60	−11021.2	2.3	−30106	20
	Ne	10	39860	70	933.1	0.6	−9040	10	*		13948.5	0.4	*	
	Na	11	*		−3570	60	−9740#	500#	*		16760	60	*	
18	B	5	1460	210	*		*		38680	210	*		22690	200
	C	6	4920	30	47110	170	−17460	140	25702	30	*		8980	30
	N	7	8713	19	38580	30	−12975	28	12240	19	−37890	200	5851	19
	O	8	12188.45	*a*	29055	4	−6227.62	*a*	−6100.4	0.4	−29104	17	−10805.84	0.25
	F	9	25945	5	19388.7	2.3	−4415.2	0.5	−24160	90	−14286	15	−23698.7	0.6
	Ne	10	34812	20	4523.3	0.4	−5115.1	0.4	*		−1162.6	0.4	−37470	60
	Na	11	*		220	90	−9350	100	*		15800	90	*	
19	B	5	90	560	*		*		43910	530	*		26780	530
	C	6	4760	100	*		−19840	190	29080	100	*		11230	100
	N	7	8156	22	42440	200	−15526	27	17344	16	−43230	200	8568	16
	O	8	12001.0	2.6	32277	18	−8965.2	2.8	1580.8	2.6	−28880	30	−5611.6	2.7
	F	9	19581.78	0.25	23935	15	−4013.80	*a*	−14417	11	−21890	19	−14876.4	0.4
	Ne	10	30891.0	0.4	12017.12	0.16	−3528.5	0.5	−30090	60	−4754.10	0.16	−31360	90
	Na	11	37930	60	3600	11	−6062	18	*		4767	11	*	
	Mg	12	*		−760	60	−10800	90	*		19230	60	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		Q(4β⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
20	B	5	−1560	150	*		69420	550	*		*		*	
	C	6	2980	250	29560	570	44550	230	−3580	310	−1350	310	*	
	N	7	2160	80	17940	130	14920	80	7560	80	5600	80	−16300	220
	O	8	7608.0	2.8	19349	16	−13681.5	2.1	1394	19	790	15	−11589	17
	F	9	6601.34	0.03	10639.3	2.6	*		11476.16	0.03	5655.36	0.03	−2241	15
	Ne	10	16865.30	0.16	12843.46	*a*	*		2795.8	0.5	−4129.58	0.25	−586.77	*a*
	Na	11	14150	11	2190.5	1.1	*		12243.7	1.2	−4785.9	1.2	10545.2	1.1
	Mg	12	22430	60	2741	11	*		3150	90	−12380	60	6623.6	1.9
21	B	5	−910	240	*		78430	560	*		*		*	
	C	6	−70#	640#	31050#	810#	51380#	600#	−3420#	800#	−1290#	630#	*	
	N	7	4610	160	19560	270	27420	130	3530	170	5180	140	−20910	240
	O	8	3805	12	20990	80	−2842	12	2917	20	−187	22	−11210	30
	F	9	8101.5	1.8	11132.7	2.0	−27140#	600#	7330	3	5599.3	1.8	−7514	19
	Ne	10	6761.16	0.04	13003.28	0.05	*		6466.48	0.04	−1740.8	0.5	697.44	0.04
	Na	11	17106.7	1.1	2431.90	0.04	*		6773.90	0.17	−2638.4	0.4	2588.4	0.5
	Mg	12	14645.2	2.0	3235.6	1.3	*		8685	11	−9270	90	11232.6	0.8
	Al	13	*		−2320#	600#	*		5960#	600#	*		7700#	610#
22	C	6	100#	640#	32060	600	61640	230	−5080	590	−1290	570	*	
	N	7	1540	250	21170#	630#	36950	210	4970	310	4220	230	−22360	560
	O	8	6850	60	23240	150	9680	60	−1770	100	−1710	60	−17480	110
	F	9	5230	13	12558	17	−15410#	400#	9708	12	4325	13	−7416	21
	Ne	10	10364.26	0.04	15266.1	1.8	−41670#	500#	2703.55	0.03	−1673.21	0.02	−5711.2	2.6
	Na	11	11067.85	0.14	6738.59	0.14	*		12571.35	0.13	−2069.39	0.21	1952.46	0.13
	Mg	12	19375.2	0.8	5504.10	0.16	*		3460.3	1.1	−8465	11	3494.36	0.23
	Al	13	16960#	720#	−10#	400#	*		11440#	400#	−8770#	410#	10920#	400#
	Si	14	*		740#	780#	*		*		*		7450#	500#
23	C	6	−2490#	1020#	*		69330#	1000#	−3500#	1140#	−370#	1140#	*	
	N	7	3120	470	24180	480	46250	420	1790#	730#	4080	480	−27030	690
	O	8	2730	130	24430	240	20100	120	100	180	−2280	150	−17240	260
	F	9	7580	40	13290	70	−3460	30	5930	40	4350	30	−12830	90
	Ne	10	5200.65	0.10	15236	12	−29100#	500#	5604.4	1.8	−272.53	0.11	−3303.8	0.9
	Na	11	12419.78	0.13	8794.11	0.02	*		6912.73	0.04	2376.13	*a*	−3865.99	0.03
	Mg	12	13145.01	0.16	7581.25	0.14	*		7421.99	0.05	−7460.1	1.1	7214.66	0.03
	Al	13	19530#	400#	140.9	0.4	*		6555.0	0.8	−5865.6	1.9	5544.0	1.2
	Si	14	17760#	710#	1540#	640#	*		7570#	780#	*		12120#	500#
24	N	7	−2150#	580#	24520#	1070#	55360#	400#	4040#	460#	6160#	720#	−25800#	690#
	O	8	4190	200	25510	450	32430	160	−2550	270	−1870	210	−21500#	620#
	F	9	3810	100	14370	160	7590	100	8970	110	4350	100	−12040	170
	Ne	10	8868.9	0.5	16530	30	−16697	19	1966	12	−1040.0	1.9	−8367	12
	Na	11	6959.36	0.02	10552.83	0.11	−42440#	500#	10317.62	0.02	2177.93	0.04	−2723.9	1.8
	Mg	12	16531.22	0.03	11692.70	0.01	*		1958.62	0.13	−6884.67	0.04	−2555.40	0.04
	Al	13	14868.2	0.4	1864.11	0.23	*		11061.98	0.28	−6088.6	0.8	7782.45	0.23
	Si	14	21280#	500#	3292	19	*		3260#	400#	−11480#	600#	5488	19
	P	15	*		−2780#	710#	*		11090#	710#	*		12580#	780#
25	N	7	−970#	640#	*		65340#	500#	2520#	1120#	7240#	550#	*	
	O	8	−757	8	26900#	430#	40520	170	1320	450	430	270	−20640	280
	F	9	4280	140	14460	190	20250	100	7420	160	6920	110	−14780	230
	Ne	10	4155	29	16870	100	−5860	30	5390	40	40	30	−5670	60
	Na	11	9011.2	1.2	10695.1	1.3	−29550#	400#	6507.0	1.2	3531.0	1.2	−6505	12
	Mg	12	7330.52	0.05	12063.85	0.05	*		7047.88	0.05	−3147.34	0.14	478.34	0.05
	Al	13	16938.48	0.24	2271.37	0.06	*		7268.51	0.07	−3651.93	0.17	1911.82	0.15
	Si	14	14989	22	3413	10	*		7790	10	−9510#	400#	9874	10
	P	15	21900#	640#	−2160#	400#	*		6950#	640#	−8590#	640#	7640#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2β⁻)		Q(εp)		Q(β⁻n)	
20	B	5	−1470	580	*		*		47640	550	*		28920	560
	C	6	3560	230	*		−22370	280	33710	230	*		13580	230
	N	7	7490	80	44600	220	−17770	80	21780	80	−45290	530	10360	80
	O	8	11563.6	0.9	35700	30	−12323	4	10838.1	0.9	−35910	100	−2787.7	0.9
	F	9	17033.2	0.5	27709	19	−8126.3	2.3	−6868.0	1.1	−23163	16	−9840.83	0.16
	Ne	10	28502.2	0.4	20837.06	*a*	−4729.85	*a*	−24519.6	1.9	−17663.8	2.6	−28043	11
	Na	11	34330	90	8600.6	1.2	−6250	5	*		1049.0	1.1	−33060	60
	Mg	12	*		2417.9	1.9	−8934	21	*		8436.7	1.9	*	
21	B	5	−2470	190	*		*		53150	570	*		32810	600
	C	6	2910#	600#	*		*		37580#	600#	*		15810#	600#
	N	7	6770	140	49120	540	−20910	240	25280	130	−51460	560	13360	130
	O	8	11413	12	38930	100	−15395	21	13794	12	−36730	230	8	12
	F	9	14702.8	1.8	30482	17	−10343	15	2137.3	1.8	−29100	80	−1077.0	1.8
	Ne	10	23626.47	0.16	23642.6	2.6	−7347.93	0.04	−16635.6	0.8	−16816.9	0.9	−20653.6	1.1
	Na	11	31257	11	15275.35	0.04	−6561.47	0.25	−29280#	600#	−9456.37	0.05	−27733.9	1.9
	Mg	12	37080	60	5426.1	0.8	−8021.5	0.8	*		10656.8	0.8	*	
	Al	13	*		420#	600#	−10060#	600#	*		12950#	600#	*	
22	C	6	35	20	*		*		44330	240	*		20310	270
	N	7	6140	220	52210	580	−22450	290	28970	210	−53910	600	15630	210
	O	8	10660	60	42800	240	−18060	60	17310	60	−43650#	600#	1260	60
	F	9	13332	12	33550	80	−12745	22	7975	12	−29730	130	454	12
	Ne	10	17125.42	0.02	26398.8	0.9	−9666.82	0.02	−7624.73	0.16	−23376	12	−13911.18	0.05
	Na	11	28174.5	1.1	19741.87	0.14	−8479.4	0.5	−23380#	400#	−12422.8	1.8	−24156.6	0.8
	Mg	12	34020.3	1.9	7936.00	0.16	−8142.5	0.4	−34040#	500#	−1957.18	0.16	−35560#	600#
	Al	13	*		3230#	400#	−9260#	410#	*		13100#	400#	*	
	Si	14	*		−1580#	500#	*		*		15450#	500#	*	
23	C	6	−2390#	1160#	*		*		49550#	1000#	*		24340#	1020#
	N	7	4650	440	56240	700	−25470	670	33440	420	*		19370	420
	O	8	9580	120	45600#	610#	−20220	160	19780	120	−46280	260	3760	120
	F	9	12810	30	36520	140	−15000	40	12820	30	−35770	210	3240	30
	Ne	10	15564.90	0.11	27794	12	−10911.8	2.6	319.63	0.11	−21730	60	−8043.97	0.17
	Na	11	23487.63	0.04	24060.2	1.8	−10467.32	*a*	−16277.9	0.3	−19612	12	−17201.19	0.16
	Mg	12	32520.2	0.8	14319.84	0.05	−9650.64	0.16	−29420#	500#	−4737.93	0.04	−31750#	400#
	Al	13	36480#	600#	5645.0	0.3	−8606	11	*		4640.5	0.4	−34960#	500#
	Si	14	*		1530#	500#	−10310#	500#	*		17060#	500#	*	
24	N	7	970#	450#	*		−24890#	680#	39390#	410#	*		24250#	420#
	O	8	6930	170	49690	280	−21430	280	24450	160	−52960#	1010#	7140	170
	F	9	11390	100	38800	230	−16650	130	15960	100	−36460	430	4630	100
	Ne	10	14069.6	0.5	29810	60	−12172.7	1.0	7981.9	0.5	−27860	120	−4493.1	0.5
	Na	11	19379.15	0.13	25789	12	−10825.35	0.03	−8369.09	0.23	−18990	30	−11015.54	0.04
	Mg	12	29676.23	0.16	20486.81	0.02	−9316.56	0.01	−24679	19	−16068.50	0.11	−28753.0	0.3
	Al	13	34390#	400#	9445.36	0.26	−9324.2	1.1	−34070#	500#	2192.07	0.23	−32070#	500#
	Si	14	39040#	500#	3433	19	−9157	20	*		8930	19	*	
	P	15	*		−1240#	640#	*		*		19980#	500#	*	
25	N	7	−3120#	660#	*		−24830#	750#	44650#	510#	*		29410#	530#
	O	8	3430	210	51420#	1010#	−20740#	620#	29360	170	*		11710	190
	F	9	8090	100	39960	430	−16320	170	20690	100	−42890#	410#	9210	100
	Ne	10	13024	29	31230	130	−12520	30	11157	29	−27820	170	−1689	29
	Na	11	15970.6	1.2	27220	30	−11735.1	2.2	−441.8	1.2	−24190	100	−3495.6	1.2
	Mg	12	23861.74	0.06	22616.68	0.11	−9885.92	0.06	−17020	10	−14530.1	0.5	−21215.29	0.23
	Al	13	31806.7	0.4	13964.06	0.06	−9156.03	0.08	−29110#	400#	−7787.04	0.07	−27732	19
	Si	14	36270#	500#	5277	10	−9501	10	*		10472	10	−38260#	500#
	P	15	*		1140#	400#	−9320#	720#	*		12950#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
26	O	8	739	10	28610#	530#	50880	160	−1570#	430#	2800	450	−23860#	1010#
	F	9	730	140	15940	200	30880	110	10890	200	8920	160	−12400	430
	Ne	10	5550	30	18140	100	7622	18	3650	100	2060	40	−8490	120
	Na	11	5574	4	12114	29	−17830#	200#	9802	4	3157	4	−4500	30
	Mg	12	11093.08	0.04	14145.7	1.2	−43900#	600#	2914.16	0.03	−1820.63	0.03	−5414.10	0.11
	Al	13	11365.48	0.07	6306.33	0.06	*		12434.25	0.07	−1872.41	0.07	2966.12	0.07
	Si	14	19040	10	5514.00	0.11	*		3618.62	0.25	−9025.0	0.4	3979.07	0.11
	P	15	17290#	450#	140#	200#	*		10940#	200#	−8110#	540#	9870#	200#
	S	16	*		−200#	720#	*		4370#	780#	*		9380#	780#
27	O	8	−1940#	530#	*		59260#	500#	−600#	710#	2600#	640#	*	
	F	9	1610	60	16820	200	42330	120	8520	200	11500	200	−16160#	420#
	Ne	10	1500	90	18910	140	19440	90	6430	130	4370	130	−5800	190
	Na	11	6728	5	13288	19	−4859	10	7229	29	5298	4	−7420	100
	Mg	12	6443.37	0.04	15015	4	−32080#	400#	5482.0	1.2	−1304.64	0.05	−2988.5	0.5
	Al	13	13058.04	0.08	8271.29	0.06	*		6706.73	0.07	1600.77	0.05	−3132.56	0.05
	Si	14	13314.82	0.15	7463.34	0.13	*		7242.28	0.13	−7471.64	0.25	7195.48	0.11
	P	15	19700#	200#	807	9	*		6224	13	−6540	21	5036	9
	S	16	18260#	720#	770#	450#	*		8010#	570#	−11670#	640#	12390#	400#
28	O	8	660#	860#	*		67100#	700#	*		960#	860#	*	
	F	9	−199	6	18560#	510#	50250	120	9450	200	10940	200	−16930#	520#
	Ne	10	3820	160	21120	170	32790	130	3340	170	4830	160	−10380	210
	Na	11	3542	11	15330	90	6160	10	9241	21	5910	30	−6680	100
	Mg	12	8504.67	0.27	16791	4	−19090	160	2552	4	−798.1	1.2	−7338	29
	Al	13	7725.17	0.01	9553.10	0.07	−45120#	500#	10074.63	0.06	1206.12	0.07	−1846.5	1.2
	Si	14	17179.61	0.11	11584.90	0.05	*		1428.15	0.07	−7712.77	0.06	−2653.61	0.05
	P	15	14560	9	2052.3	1.2	*		10704.0	1.2	−6111	10	7414.5	1.1
	S	16	21490#	430#	2560	160	*		3810#	250#	−11250#	430#	5890	160
	Cl	17	*		−3490#	300#	*		11300#	780#	*		13730#	640#
29	F	9	1320	540	19220#	870#	58360	530	6190#	730#	10350	550	*	
	Ne	10	970	200	22290	190	40290	150	3980	190	4590	180	−10610	220
	Na	11	4403	13	15910	130	19633	7	6340	90	7063	20	−10350	110
	Mg	12	3663.7	0.4	16913	10	−7518	13	5616	4	1112	4	−5447	18
	Al	13	9428.4	0.3	10476.8	0.4	−32230#	190#	7089.6	0.3	2870.8	0.3	−5701	4
	Si	14	8473.60	*a*	12333.33	0.05	−59860#	440#	6012.59	0.05	−4820.89	0.07	−34.14	0.03
	P	15	17876.3	1.2	2749.0	0.4	*		6142.5	0.4	−4947.8	0.4	903.7	0.4
	S	16	15240	160	3236	13	*		8275	16	−9200#	200#	9693	13
	Cl	17	22320#	530#	−2660#	100#	*		7240#	440#	−8790#	630#	8700#	270#
	Ar	18	*		−2410#	350#	*		*		*		15940#	740#
30	F	9	−740#	730#	*		64820#	500#	7590#	860#	9160#	710#	*	
	Ne	10	3190	290	24160	580	47710	250	590	280	3010	280	−15740#	560#
	Na	11	2277	9	17210	150	28676	5	7890	130	6290	90	−11010	120
	Mg	12	6340.3	1.3	18850	7	5177.9	1.3	2818	10	1500	4	−10290	90
	Al	13	5727.7	2.0	12540.7	2.0	−20539	24	9866.6	2.0	3586.5	1.9	−4700	4
	Si	14	10609.20	0.02	13514.2	0.3	−46500#	180#	3128.56	0.05	−2372.04	0.05	−4199.97	0.05
	P	15	11319.3	0.4	5594.75	0.07	*		12002.75	0.07	−2952.30	0.13	2642.41	0.08
	S	16	19036	13	4395.4	0.4	*		3799.4	1.2	−8536	9	3971.65	0.23
	Cl	17	17420#	190#	−480	20	*		11310	160	−7950#	400#	10980	26
	Ar	18	23970#	470#	−760#	130#	*		4510#	530#	*		10230#	440#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2β⁻)		Q(εp)		Q(β⁻n)	
26	O	8	−18	5	*		−21380	280	34180	170	*		15260	190
	F	9	5010	140	42840#	420#	−15520	230	25540	110	−44600#	510#	12640	110
	Ne	10	9710	18	32600	170	−11230	60	16696	18	−34140	170	1768	18
	Na	11	14586	4	28980	100	−12079	13	5349	4	−25480	100	−1739	4
	Mg	12	18423.60	0.03	24840.8	0.5	−10614.74	0.03	−9073.54	0.11	−21468	29	−15369.89	0.06
	Al	13	28303.96	0.24	18370.18	0.07	−9453.66	0.15	−23180#	200#	−10141.3	1.2	−24109	10
	Si	14	34029	19	7785.37	0.11	−9165.93	0.19	−34820#	600#	−1237.19	0.10	−35400#	400#
	P	15	39190#	540#	3560#	200#	−9650#	450#	*		12600#	200#	*	
	S	16	*		−2360#	600#	−8390#	780#	*		16560#	600#	*	
27	O	8	−1200#	530#	*		−21930#	1120#	37620#	510#	*		17920#	510#
	F	9	2340	150	45430#	520#	−14010	440	30650	120	*		16580	120
	Ne	10	7060	100	34860	190	−10000	150	21640	90	−34900	190	5840	90
	Na	11	12303	4	31430	100	−11230	30	11679	4	−31480	110	2625	4
	Mg	12	17536.45	0.06	27129	29	−11857.47	0.11	−2202.09	0.12	−22357	18	−10447.77	0.07
	Al	13	24423.53	0.08	22417.0	1.2	−10091.93	0.05	−16538	9	−17625	4	−18127.18	0.12
	Si	14	32354	10	13769.67	0.12	−9335.75	0.11	−29880#	400#	−3458.93	0.11	−31430#	200#
	P	15	36990#	400#	6321	9	−9832	9	*		4262	9	−36410#	600#
	S	16	*		910#	400#	−8880#	640#	*		17340#	400#	*	
28	O	8	−1280#	720#	*		*		40780#	710#	*		18880#	710#
	F	9	1410	60	*		−15960#	420#	34390	120	*		18280	150
	Ne	10	5320	130	37940	210	−9630	210	26320	130	−40660#	520#	8750	130
	Na	11	10270	11	34240	110	−10960	100	15862	10	−33410	120	5527	10
	Mg	12	14948.04	0.26	30079	18	−11493.2	0.6	6472.85	0.26	−29360	90	−5894.40	0.27
	Al	13	20783.22	0.08	24568	4	−10857.73	0.05	−9702.9	1.1	−18622	4	−12537.53	0.10
	Si	14	30494.43	0.11	19856.20	0.03	−9984.14	0.01	−25570	160	−14195.17	0.05	−28905	9
	P	15	34260#	200#	9515.7	1.1	−9524.0	1.2	−35420#	500#	2760.0	1.1	−32710#	400#
	S	16	39750#	620#	3360	160	−9100	160	*		9170	160	*	
	Cl	17	*		−2720#	540#	−8180#	710#	*		21640#	500#	*	
29	F	9	1130	540	*		−18260#	730#	37470	530	*		20780	540
	Ne	10	4790	170	40850#	520#	−11350	220	29010	150	−40970#	710#	11320	150
	Na	11	7945	8	37030	120	−11080	100	20888	7	−38010	120	9629	7
	Mg	12	12168.4	0.3	32240	90	−11002	29	11282.7	0.3	−29200	130	−1833.0	0.3
	Al	13	17153.5	0.3	27268	4	−11274.9	1.2	−1254.9	0.5	−24508	10	−4786.3	0.3
	Si	14	25653.21	0.11	21886.43	0.05	−11127.22	0.05	−18801	13	−14164.11	0.26	−22818.5	1.1
	P	15	32436	9	14333.9	0.4	−10461.8	0.4	−30980#	190#	−7391.1	0.4	−29100	160
	S	16	36730#	400#	5288	13	−9347	16	−41060#	440#	11109	13	−39440#	500#
	Cl	17	*		−100#	190#	−8590#	440#	*		13880#	190#	*	
	Ar	18	*		−5900#	180#	*		*		26610#	470#	*	
30	F	9	590#	510#	*		*		40490#	500#	*		22490#	520#
	Ne	10	4160	280	43380#	740#	−13810	300	32160	250	*		12530	250
	Na	11	6680	11	39510	120	−12620	110	24339	5	−38960	530	11016	5
	Mg	12	10004.1	1.3	34760	130	−11787	18	15551.6	1.3	−34570	150	1255.1	1.3
	Al	13	15156.0	1.9	29454	10	−11428	4	4336.7	1.9	−25833	8	−2040.4	1.9
	Si	14	19082.80	0.02	23990.96	0.26	−10643.33	0.04	−10373.71	0.21	−21109.6	0.3	−15551.4	0.4
	P	15	29195.6	1.1	17928.08	0.08	−10415.63	0.09	−24875	24	−9282.1	0.4	−25178	13
	S	16	34280	160	7144.40	0.21	−9343.17	0.23	−36130#	180#	546.86	0.21	−36150#	190#
	Cl	17	39740#	500#	2756	24	−8720#	200#	*		14338	24	−41370#	440#
	Ar	18	*		−3420#	80#	−8030#	630#	*		17880#	180#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
31	F	9	190#	730#	*		71790#	540#	*		9630#	880#	*	
	Ne	10	170	130	25070#	570#	54130	270	1740	590	2640	290	−15250#	750#
	Na	11	4300	15	18320	250	36687	14	4560	150	5810	130	−15510	120
	Mg	12	2312	3	18886	6	15920	3	4909	8	2730	11	−8780	130
	Al	13	7157.9	3.0	13358.3	2.6	−7916	4	6372.5	2.3	4933.3	2.3	−8316	10
	Si	14	6587.39	0.04	14373.9	1.9	−34270#	200#	5969.5	0.3	−1234.26	0.07	−2282.69	0.26
	P	15	12311.01	0.07	7296.55	0.02	−58700#	300#	8165.34	*a*	1916.31	*a*	−1943.42	0.05
	S	16	13054.6	0.3	6130.65	0.24	*		8621.1	0.4	−7030.6	1.2	8096.67	0.23
	Cl	17	19780	24	264	3	*		6771	13	−6240	160	5760	4
	Ar	18	18820#	270#	640#	200#	*		8010#	280#	−12080#	540#	12900#	260#
	K	19	*		−4900#	350#	*		7000#	530#	*		11640#	580#
32	Ne	10	2250#	570#	27130#	730#	61080#	500#	−1250#	710#	1710#	730#	*	
	Na	11	1680	40	19830	270	42950	40	6070	260	5100	150	−15860	530
	Mg	12	5778	4	20364	14	25187	3	1407	6	1355	8	−13580	150
	Al	13	4220	8	15266	8	2235	7	8493	7	4377	7	−8133	10
	Si	14	9200.0	0.3	16416.0	2.3	−21877.3	1.8	2497.2	2.0	−1005.9	0.5	−7818.9	0.5
	P	15	7935.65	0.04	8644.81	0.06	−46300#	400#	10838.89	0.05	2454.26	0.04	−450.7	0.3
	S	16	15044.32	0.23	8863.96	*a*	*		4896.13	0.07	−4198.6	0.4	1525.95	*a*
	Cl	17	14371	3	1581.1	0.5	*		11435.4	0.6	−5376	13	9264.5	0.7
	Ar	18	21600#	200#	2455	4	*		3836	24	−11360#	190#	6540	13
	K	19	20340#	500#	−3380#	450#	*		10630#	440#	−11120#	590#	13610#	440#
33	Ne	10	−1060#	780#	*		66650#	600#	−0#	800#	2030#	780#	*	
	Na	11	2930	450	20510#	680#	50120	450	3310	520	5360	520	−19530#	670#
	Mg	12	2280	4	20970	40	31548.7	2.7	3428	14	1352	5	−12670	250
	Al	13	5469	10	14957	8	12506	7	5336	8	5248	7	−11326	8
	Si	14	4508.0	0.8	16704	7	−11130.0	0.8	5147.2	2.3	213.8	2.1	−5986.6	1.5
	P	15	10103.8	1.1	9548.6	1.1	−33880#	200#	7322.5	1.1	2959.7	1.1	−4826.8	2.2
	S	16	8641.64	*a*	9569.95	0.04	−57620#	400#	8565.49	*a*	−1520.95	0.07	3493.51	0.02
	Cl	17	15740.0	0.7	2276.8	0.4	*		8750.0	0.5	−2080.0	0.4	4843.9	0.4
	Ar	18	15255.3	1.8	3338.6	0.7	*		8361	3	−9195	24	10321.4	0.5
	K	19	22520#	450#	−2450#	200#	*		6930#	280#	−9670#	270#	8510#	200#
	Ca	20	*		−1750#	570#	*		7480#	500#	*		14610#	440#
34	Ne	10	1360#	790#	*		72830#	510#	*		860#	740#	*	
	Na	11	170	750	21740#	850#	56230	600	5390#	780#	5360	660	−19520#	800#
	Mg	12	4711	7	22750	450	38255	7	390	40	941	16	−17210	270
	Al	13	2572	7	15249	3	21442.5	2.1	8542	4	4989	4	−9597	14
	Si	14	7548.7	1.1	18783	7	−1613.4	0.8	1818	7	−176.9	2.4	−11223	3
	P	15	6282.7	1.4	11323.3	1.1	−23330#	200#	10239.8	0.9	3264.4	0.8	−3951.6	2.4
	S	16	11417.15	0.04	10883.3	1.1	−44820#	300#	5083.99	0.06	−627.09	0.04	−1336.25	0.06
	Cl	17	11508.1	0.4	5143.20	0.05	*		12286.26	0.05	−533.50	0.23	5646.86	0.05
	Ar	18	17065.3	0.4	4663.9	0.4	*		5667.2	0.6	−6480	3	6310.64	0.24
	K	19	16830#	280#	−880#	200#	*		11690#	200#	−7680#	280#	11460#	200#
	Ca	20	24210#	500#	−60#	360#	*		3610#	500#	−14510#	420#	9210#	360#
35	Na	11	1920#	300#	22300#	840#	62690#	670#	2410#	900#	5700#	840#	*	
	Mg	12	750	270	23330	660	44490	270	2570	520	1860	270	−15710#	570#
	Al	13	5297	8	15836	10	28790	7	5524	8	5469	8	−13220	40
	Si	14	2470	40	18680	40	8660	40	4820	40	1570	40	−7920	40
	P	15	8380.4	2.0	12155.1	2.0	−13684.9	1.9	6367.3	2.0	4083.9	1.9	−8112	7
	S	16	6985.84	0.04	11586.5	0.8	−34040#	200#	8201.9	1.1	322.72	0.06	877.9	0.3
	Cl	17	12644.76	0.05	6370.81	0.04	−56110#	400#	8283.13	0.04	1866.06	0.04	937.75	0.05
	Ar	18	12740.3	0.7	5896.2	0.7	*		8666.9	0.8	−4848.5	0.9	8614.7	0.7
	K	19	18020#	200#	83.6	0.5	*		8922.2	0.7	−4108.5	1.8	7808.2	0.8
	Ca	20	17770#	360#	880#	280#	*		8360#	280#	−11940#	450#	13040#	200#
	Sc	21	*		−4920#	500#	*		6780#	570#	*		10760#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
31	F	9	−550#	100#	*		*		44600#	540#	*		25490#	590#
	Ne	10	3360	310	*		−15910#	570#	34300	270	*		14640	270
	Na	11	6577	16	42480	530	−15310	120	27197	14	−44000#	500#	13056	14
	Mg	12	8652	3	36100	150	−12600	90	19827	3	−33690	250	4671	4
	Al	13	12885.6	2.3	32209	8	−11858	4	9489.8	2.2	−30714	5	1410.9	2.2
	Si	14	17196.59	0.04	26914.6	0.3	−10787.36	0.06	−3906.51	0.23	−21356.6	1.3	−10819.50	0.07
	P	15	23630.3	0.4	20810.7	0.3	−9668.60	0.05	−17406	3	−15865.4	1.9	−18452.61	0.21
	S	16	32091	13	11725.39	0.23	−9082.94	0.25	−30370#	200#	−1898.54	0.23	−31788	24
	Cl	17	37200#	190#	4660	3	−8800	10	−41300#	300#	5877	3	−37180#	180#
	Ar	18	42790#	480#	160#	200#	−8590#	450#	*		18100#	200#	*	
	K	19	*		−5660#	350#	*		*		22300#	300#	*	
32	Ne	10	2420#	560#	*		−17510#	860#	37830#	500#	*		16680#	500#
	Na	11	5980	40	44900#	500#	−17190	130	29740	40	−45490#	540#	13690	40
	Mg	12	8090	4	38690	250	−14550	130	23249	3	−39300	270	6050	4
	Al	13	11378	7	34152	9	−12536	13	13206	7	−30634	16	3778	7
	Si	14	15787.36	0.30	29774.3	1.3	−11482.7	0.4	1937.85	0.30	−28245	3	−7708.46	0.30
	P	15	20246.66	0.08	23018.7	1.9	−9879.07	0.06	−10970.2	0.6	−16643.1	2.2	−13333.66	0.23
	S	16	28098.92	0.21	16160.52	0.02	−6947.66	*a*	−23815.2	1.8	−10355.47	0.04	−27052	3
	Cl	17	34152	24	7711.8	0.6	−8611.8	1.3	−35320#	400#	3816.9	0.6	−32730#	200#
	Ar	18	40410#	180#	2719.0	1.8	−8700	160	*		9553.2	1.8	−44530#	300#
	K	19	*		−2740#	400#	−8710#	640#	*		21740#	400#	*	
33	Ne	10	1190#	660#	*		*		41170#	600#	*		19420#	600#
	Na	11	4610	450	47640#	700#	−18790	690	32280	450	*		16540	450
	Mg	12	8058	4	40800	270	−15860	150	25477.2	2.8	−39330#	500#	7991	8
	Al	13	9689	7	35321	16	−13602	10	17840	7	−34430	40	7509	7
	Si	14	13707.9	0.7	31970	3	−12326.9	0.8	6071.5	0.7	−26974	3	−4280.8	0.7
	P	15	18039.4	1.1	25964.6	2.5	−10554.5	1.1	−5334.0	1.2	−22527	7	−8393.1	1.1
	S	16	23685.96	0.23	18214.76	0.04	−7115.69	*a*	−17201.6	0.4	−9797.14	0.30	−21322.5	0.6
	Cl	17	30111	3	11140.7	0.4	−6475.4	0.5	−28540#	200#	−3987.4	0.4	−26874.3	1.8
	Ar	18	36850#	200#	4919.7	0.5	−8715	13	−40410#	400#	9342.3	0.4	−39450#	400#
	K	19	42860#	360#	0#	200#	−8910#	280#	*		13590#	200#	*	
	Ca	20	*		−5130#	450#	−9360#	590#	*		25940#	400#	*	
34	Ne	10	300#	100#	*		*		44520#	510#	*		20990#	680#
	Na	11	3100	600	*		−19710#	780#	34680	600	*		18650	600
	Mg	12	6990	8	43250#	500#	−17380	250	28315	7	−45100#	600#	8749	10
	Al	13	8041	7	36220	40	−13897	5	21551.1	2.3	−34070	450	9445.4	2.2
	Si	14	12056.6	0.9	33741	3	−13535.2	1.5	9940.0	0.8	−32243.5	2.8	−1725.7	1.4
	P	15	16386.5	0.8	28027	7	−11109.5	2.1	−108.6	0.8	−23340	7	−6034.2	0.8
	S	16	20058.79	0.04	20431.9	0.3	−7923.64	0.05	−11553.40	0.07	−16706.3	0.7	−16999.7	0.4
	Cl	17	27248.0	0.6	14713.15	0.06	−6664.15	0.08	−23220#	200#	−5391.7	1.1	−23127.1	0.4
	Ar	18	32320.6	1.8	6940.70	0.08	−6743.95	0.22	−33270#	300#	918.59	0.08	−33990#	200#
	K	19	39350#	450#	2460#	200#	−8320#	200#	*		12490#	200#	−40320#	450#
	Ca	20	*		−2510#	300#	−9610#	350#	*		16990#	300#	*	
35	Na	11	2090#	810#	*		−21440#	860#	38060#	670#	*		21440#	670#
	Mg	12	5470	270	45070#	660#	−17970	380	30030	270	−44490#	580#	10570	270
	Al	13	7869	10	38580	450	−14895	16	24634	8	−39190	600	11697	7
	Si	14	10020	40	33930	40	−13690	40	14450	40	−30000	40	2090	40
	P	15	14663.1	2.2	30938	7	−12332.0	2.9	4155.7	1.9	−29149.2	2.8	−2997.4	1.9
	S	16	18402.99	0.04	22909.8	0.7	−8322.09	0.06	−5798.9	0.7	−16143.5	0.8	−12477.44	0.05
	Cl	17	24152.8	0.4	17254.1	1.1	−6997.90	0.04	−17840.6	0.5	−11753.8	0.8	−18706.56	0.08
	Ar	18	29805.6	0.8	11039.4	0.7	−6429.7	0.7	−28240#	200#	−404.6	0.7	−29900#	200#
	K	19	34860#	200#	4747.5	0.6	−6563	3	−38270#	400#	5978.2	0.5	−34130#	300#
	Ca	20	41980#	450#	0#	200#	−8560#	280#	*		16280#	200#	*	
	Sc	21	*		−4980#	450#	−9590#	500#	*		21030#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
36	Na	11	−0#	150#	*		66150#	690#	3770#	860#	4640#	910#	*	
	Mg	12	3330	740	24740#	960#	51040	690	−590	910	1460	820	−20100#	910#
	Al	13	1900	150	16980	310	35470	150	8340	150	5850	150	−12180	470
	Si	14	6120	80	19500	70	17800	70	1270	70	930	70	−11750	70
	P	15	3465	13	13150	40	−2834	13	10451	13	5127	13	−6107	15
	S	16	9889.25	0.19	13095.3	1.9	−24210	40	4595.4	0.8	537.3	1.1	−4503.4	0.7
	Cl	17	8579.79	0.01	7964.77	0.03	−45670#	300#	11120.49	0.04	1927.91	0.04	2461.7	1.1
	Ar	18	15255.6	0.7	8506.98	0.04	*		4919.35	0.06	−4364.1	0.4	2000.72	0.03
	K	19	14315.6	0.6	1658.9	0.8	*		11671.9	0.3	−3168.8	0.5	9232.6	0.5
	Ca	20	19710#	200#	2570	40	*		5480#	200#	−9130#	200#	8580	40
	Sc	21	19020#	500#	−3670#	360#	*		11970#	420#	−10020#	500#	14260#	360#
37	Na	11	840#	210#	*		72130#	690#	*		5160#	860#	*	
	Mg	12	240	110	24980#	980#	55110	700	1090#	970#	1400	920	−18980#	870#
	Al	13	4210	230	17860	710	41570	180	4880	320	6350	180	−16220	630
	Si	14	2210	130	19810	190	24380	110	4360	110	1290	110	−9250	110
	P	15	6820	40	13850	80	5800	40	6110	50	5860	40	−10350	40
	S	16	4303.60	0.06	13934	13	−13760.4	0.7	8672.2	1.9	2516.3	0.8	−1258.3	0.8
	Cl	17	10310.86	0.06	8386.38	0.19	−35540#	300#	7795.47	0.07	3034.19	0.07	−1566.4	0.8
	Ar	18	8787.45	0.21	8714.64	0.21	−56120#	400#	8776.66	0.21	−1643.54	0.21	4630.41	0.21
	K	19	15454.3	0.3	1857.63	0.09	*		8957.9	0.7	−1557.85	0.12	5286.29	0.11
	Ca	20	14760	40	3007.9	0.7	*		8747.6	0.8	−7050#	200#	10888.6	0.6
	Sc	21	20440#	420#	−2940#	300#	*		9300#	360#	−6250#	420#	10650#	360#
	Ti	22	*		−1730#	500#	*		8780#	570#	*		15930#	500#
38	Na	11	−700#	200#	*		76530#	720#	*		*		*	
	Mg	12	2210#	860#	26350#	850#	60940#	500#	−1120#	850#	1110#	840#	*	
	Al	13	1410#	230#	19030#	720#	46270#	150#	6800#	710#	5690#	310#	−15720#	690#
	Si	14	5670	150	21270	210	30540	100	590	180	920	110	−14160	290
	P	15	3700	80	15340	130	14180	70	8530	100	4630	80	−8750	70
	S	16	8036	7	15150	40	−4803	7	4101	15	2861	7	−6820	40
	Cl	17	6107.88	0.08	10190.66	0.21	−25550#	200#	11576.83	0.20	3912.15	0.11	706.1	1.9
	Ar	18	11838.47	0.28	10242.25	0.20	−46090#	300#	5517.99	0.20	−837.24	0.20	−222.21	0.20
	K	19	12071.88	0.22	5142.05	0.28	*		12141.59	0.20	−889.4	0.7	5859.17	0.20
	Ca	20	16993.8	0.7	4547.27	0.22	*		6069.5	0.4	−6021.6	0.5	6635.2	0.7
	Sc	21	16100#	360#	−1600#	200#	*		12910#	200#	−4580#	280#	12570#	200#
	Ti	22	21870#	500#	−300#	420#	*		5930#	420#	−10870#	500#	11830#	360#
39	Na	11	−0#	200#	*		82750#	750#	*		*		*	
	Mg	12	−630#	100#	26420#	880#	65940#	520#	350#	860#	1740#	860#	*	
	Al	13	3050#	340#	19870#	590#	51290#	300#	3990#	760#	5970#	750#	−18770#	750#
	Si	14	1580	170	21440#	200#	35560	140	3220	230	1230	200	−12410	700
	P	15	6220	130	15890	150	21030	110	4510	160	4530	130	−13080	190
	S	16	4370	50	15830	90	4120	50	6540	60	1950	50	−5080	90
	Cl	17	8073.4	1.7	10228	7	−15627	24	7807.0	1.7	5728.0	1.7	−3903	13
	Ar	18	6599	5	10733	5	−35740#	200#	9230	5	1144	5	3068	5
	K	19	13077.75	0.20	6381.34	0.19	−56380#	400#	7851.29	0.21	1288.40	0.03	1361.21	0.04
	Ca	20	13295.5	0.6	5770.9	0.6	*		8228.3	0.6	−5001.5	0.7	8595.2	0.6
	Sc	21	18000#	200#	−597	24	*		9674	24	−2860	50	8891	24
	Ti	22	16940#	360#	540#	280#	*		9430#	360#	−8790#	360#	14600#	200#
	V	23	*		−3910#	500#	*		8110#	570#	*		12070#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
36	Na	11	1920#	340#	*		*		39950#	700#	*		22190#	740#
	Mg	12	4090	690	47040#	860#	−19040#	850#	32820	690	*		12530	690
	Al	13	7190	150	40310	620	−15110	150	26200	150	−39170#	690#	12270	150
	Si	14	8590	70	35340	70	−14030	70	18230	70	−35360	280	4350	70
	P	15	11845	13	31831	13	−11577	15	9271	13	−27316	15	524	13
	S	16	16875.09	0.19	25250.4	0.8	−9011.4	0.4	−432.60	0.19	−23560	40	−9721.93	0.19
	Cl	17	21224.56	0.05	19551.2	0.8	−7642.05	0.05	−12104.8	0.3	−11953.2	1.9	−14546.0	0.7
	Ar	18	27995.89	0.08	14877.79	0.05	−6640.92	0.03	−23780	40	−8674.30	0.05	−27130.0	0.5
	K	19	32340#	200#	7555.0	0.3	−6507.4	0.6	−33570#	300#	4307.4	0.3	−30680#	200#
	Ca	20	37480#	300#	2650	40	−6680	40	*		9310	40	−41620#	400#
	Sc	21	*		−2790#	360#	−8260#	500#	*		20030#	300#	*	
37	Na	11	840#	150#	*		*		43330#	710#	*		24680#	970#
	Mg	12	3570	750	*		−20340#	920#	34780	710	*		14190	710
	Al	13	6110	180	42600#	690#	−16400	480	28810	180	−43380#	710#	14170	190
	Si	14	8320	120	36790	290	−13960	110	20320	110	−34240	700	5610	110
	P	15	10280	40	33350	40	−12920	40	12770	40	−32240	150	3600	40
	S	16	14192.85	0.20	27080	40	−8807.0	0.7	4051.25	0.28	−21750	70	−5445.74	0.20
	Cl	17	18890.66	0.06	21481.7	1.9	−7849.1	1.1	−6961.35	0.11	−18799	13	−9601.33	0.06
	Ar	18	24043.0	0.7	16679.41	0.21	−6786.74	0.21	−17811.6	0.7	−7572.51	0.27	−21601.8	0.4
	K	19	29769.9	0.5	10364.61	0.10	−6221.8	0.4	−28580#	300#	−2567.16	0.10	−26420	40
	Ca	20	34470#	200#	4666.7	0.9	−6176.7	0.8	−38310#	400#	9806.5	0.6	−37360#	300#
	Sc	21	39460#	500#	−380#	300#	−6190#	360#	*		13910#	300#	*	
	Ti	22	*		−5400#	450#	−8290#	570#	*		24330#	400#	*	
38	Na	11	140#	290#	*		*		45440#	730#	*		25620#	1000#
	Mg	12	2450#	850#	*		−21190#	720#	38240#	510#	*		16190#	530#
	Al	13	5620#	210#	44010#	700#	−17640#	620#	31090#	170#	−43950#	700#	14970#	190#
	Si	14	7880	130	39130	700	−14920	110	22690	110	−39670	710	6750	110
	P	15	10510	70	35150	170	−14050	70	15180	70	−31720	190	4200	70
	S	16	12340	7	29000	70	−9294	7	7854	7	−27580	110	−3171	7
	Cl	17	16418.74	0.11	24125	13	−7674.3	0.8	−997.36	0.22	−18090	40	−6921.76	0.22
	Ar	18	20625.92	0.20	18628.63	0.27	−7208.05	0.20	−12656.32	0.06	−15107.37	0.28	−17985.94	0.22
	K	19	27526.2	0.4	13856.69	0.20	−6785.59	0.20	−24550#	200#	−4328.18	0.20	−23736.0	0.7
	Ca	20	31750	40	6404.90	0.20	−6105.13	0.21	−33430#	300#	1600.20	0.28	−33910#	300#
	Sc	21	36540#	360#	1410#	200#	−5450#	280#	*		13260#	200#	−37490#	450#
	Ti	22	*		−3240#	300#	−5950#	420#	*		17220#	300#	*	
39	Na	11	−700#	280#	*		*		48490#	800#	*		27830#	900#
	Mg	12	1580#	870#	*		*		40460#	530#	*		18230#	530#
	Al	13	4460#	350#	46220#	750#	−18770#	730#	34260#	320#	−47710#	780#	17590#	320#
	Si	14	7250	180	40470	710	−15740	300	25480	140	−39040#	520#	8870	150
	P	15	9920	120	37160	210	−14980	110	17030	110	−36530#	190#	6020	110
	S	16	12410	50	31170	120	−11200	60	10080	50	−26280	120	−1440	50
	Cl	17	14181.3	1.7	25380	40	−7367.3	2.5	4007.0	1.7	−22470	70	−3156.7	1.7
	Ar	18	18437	5	20924	5	−6821	5	−5959	5	−13670	9	−12513	5
	K	19	25149.63	0.09	16623.59	0.05	−7218.58	0.04	−19634	24	−11298.05	0.10	−19820.01	0.19
	Ca	20	30289.3	0.9	10913.0	0.6	−6660.3	0.9	−29780#	200#	143.1	0.6	−31110#	200#
	Sc	21	34100#	300#	3950	24	−5425	24	−36740#	400#	7339	24	−33610#	300#
	Ti	22	38810#	450#	−1060#	200#	−5120#	280#	*		17270#	200#	*	
	V	23	*		−4210#	500#	−6960#	570#	*		19530#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
40	Mg	12	1300#	720#	27720#	900#	72390#	500#	−1650#	870#	1280#	850#	*	
	Al	13	740#	420#	21240#	590#	56380#	300#	5460#	590#	5470#	760#	−18670#	750#
	Si	14	4720	180	23110#	320#	40710	120	−90#	190#	720	220	−16900	710
	P	15	3440	140	17750	160	25400	80	6740	130	3300	140	−12300	200
	S	16	7750	50	17350	110	12009	4	2490	70	1020	40	−10620	110
	Cl	17	5830	30	11680	60	−7030	30	10010	30	4200	30	−2920	50
	Ar	18	9869	5	12528.7	1.7	−26050	70	5469.02	0.10	1585.71	0.05	−2497.07	0.20
	K	19	7799.62	0.06	7582	5	−46010#	300#	11890.14	0.20	2276.24	0.21	3872.46	0.08
	Ca	20	15635.0	0.6	8328.18	0.02	*		4665.16	0.20	−5182.15	0.10	1747.68	0.21
	Sc	21	14422	24	529.6	2.9	*		12246.0	2.8	−2523.2	2.9	9923.3	2.8
	Ti	22	19570#	210#	2110	70	*		5970#	210#	−7910#	310#	9790	70
	V	23	18170#	500#	−2680#	360#	*		11810#	420#	−7840#	500#	14340#	420#
41	Mg	12	−480#	710#	*		77110#	500#	−1170#	900#	1060#	870#	*	
	Al	13	2300#	500#	22250#	640#	61900#	410#	2530#	650#	5380#	640#	−21670#	820#
	Si	14	540#	320#	22910#	420#	46270#	300#	2420#	420#	1600#	340#	−15230#	590#
	P	15	4910	150	17940	170	30580	120	3410	180	4050	160	−15800#	190#
	S	16	4242	6	18160	80	16129	4	4480	110	480	70	−9190	100
	Cl	17	7820	80	11760	70	1340	70	6570	80	4420	70	−7040	100
	Ar	18	6098.9	0.3	12800	30	−17370	28	7443.5	1.8	1594.7	0.4	−560	7
	K	19	10095.37	0.06	7808.62	*a*	−35870#	200#	8393	5	4019.33	0.20	−115.03	0.10
	Ca	20	8362.82	0.14	8891.38	0.15	−55550#	400#	9380.09	0.14	−1473.09	0.24	5223.32	0.24
	Sc	21	16190.3	2.8	1084.93	0.07	*		9351.2	0.6	−1719.80	0.21	5804.80	0.21
	Ti	22	14780	70	2463	28	*		9190	40	−6580#	200#	12007	28
	V	23	20230#	360#	−2020#	210#	*		8520#	280#	−6200#	360#	10210#	280#
	Cr	24	*		−650#	500#	*		8550#	570#	*		14690#	500#
42	Al	13	670#	640#	23400#	710#	66820#	500#	3150#	710#	4080#	720#	−22340#	900#
	Si	14	4430#	420#	25040#	500#	51260#	300#	−1270#	420#	210#	420#	−20290#	590#
	P	15	2000	150	19400#	320#	36110	100	6140	150	3640	170	−14750#	320#
	S	16	6700	5	19950	120	20909.5	2.8	1210	80	0	110	−14310	140
	Cl	17	5600	90	13110	60	7290	60	8720	60	3190	80	−6410	130
	Ar	18	9426	6	14400	70	−9318	6	3850	30	242	6	−5610	50
	K	19	7533.80	0.11	9243.5	0.4	−27400#	200#	10728.68	0.11	3084	5	424.6	1.7
	Ca	20	11480.70	0.06	10276.72	0.15	−45610#	300#	5699.01	0.16	123.96	0.15	341	5
	Sc	21	11549.96	0.16	4272.07	0.07	*		13436.21	0.15	25.8	0.6	7332.59	0.15
	Ti	22	17478	28	3750.96	0.27	*		6129.8	2.8	−6068	24	7824.8	0.7
	V	23	16000#	280#	−790#	200#	*		12090#	210#	−5260#	280#	12200#	200#
	Cr	24	21420#	500#	540#	360#	*		5300#	420#	−10650#	500#	10210#	360#
43	Al	13	1790#	780#	*		72430#	600#	880#	780#	3580#	780#	*	
	Si	14	580#	500#	24950#	640#	56340#	400#	450#	570#	370#	500#	−19570#	640#
	P	15	4120#	320#	19090#	420#	41620#	300#	2550#	420#	4240#	320#	−18130#	420#
	S	16	2629	6	20580	100	26213	5	3500	120	810	80	−12220	120
	Cl	17	7400	90	13810	60	12030	60	5560	60	3540	60	−10370	100
	Ar	18	5658	8	14470	60	−2694	8	6010	70	410	30	−3526	7
	K	19	9624.7	0.4	9442	6	−18660	40	7202.9	0.5	3328.6	0.4	−3370	30
	Ca	20	7932.90	0.17	10675.81	0.25	−36440#	200#	7861.48	0.23	−9.32	0.23	2277.43	0.23
	Sc	21	12138.5	1.9	4929.8	1.9	−53560#	400#	9660.6	1.9	3522.3	1.9	2993.7	1.9
	Ti	22	12283	6	4484	6	*		10038	6	−3928	6	11177	6
	V	23	18370#	200#	100	40	*		8490	50	−4060	80	8250	40
	Cr	24	17100#	360#	1640#	280#	*		8430#	280#	−9580#	360#	12670#	210#
	Mn	25	*		−3020#	500#	*		7670#	570#	*		10550#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
40	Mg	12	670#	710#	*		*		43880#	520#	*		19990#	580#
	Al	13	3790#	340#	47660#	780#	−19510#	750#	36960#	310#	−48450#	800#	18430#	330#
	Si	14	6310	160	42990#	520#	−17140	700	28500	120	−44400#	530#	10370	170
	P	15	9660	110	39190#	170#	−16510	170	19420	90	−36920#	310#	6950	100
	S	16	12119	8	33250	100	−12830	70	12202	4	−32450	140	−1109	4
	Cl	17	13900	30	27510	80	−9730	30	5980	30	−22070	120	−2390	30
	Ar	18	16467.71	0.19	22757	7	−6800.67	0.19	−193.50	0.02	−19170	50	−9304.02	*a*
	K	19	20877.37	0.20	18315.32	0.11	−6438.40	0.07	−13012.1	2.8	−11024.2	1.7	−14324.1	0.6
	Ca	20	28930.53	0.20	14709.52	0.20	−7039.78	0.03	−25850	70	−8893	5	−28745	24
	Sc	21	32420#	200#	6300.5	2.8	−5531.1	2.8	−32990#	300#	5994.9	2.8	−31100#	200#
	Ti	22	36510#	310#	1510	70	−4970	80	*		11000	70	−39640#	410#
	V	23	*		−2140#	360#	−6110#	420#	*		19350#	300#	*	
41	Mg	12	820#	720#	*		*		44900#	580#	*		21210#	580#
	Al	13	3040#	500#	49970#	840#	−20970#	800#	39570#	420#	*		20850#	420#
	Si	14	5260#	330#	44150#	590#	−17440#	760#	32210#	300#	−43640#	580#	13270#	310#
	P	15	8350	160	41050#	320#	−17210	220	22330	140	−41090#	320#	9790	120
	S	16	11990	50	35910	140	−14860	110	14059	4	−31960	120	480	30
	Cl	17	13650	70	29110	130	−10740	80	8250	70	−26460	110	−340	70
	Ar	18	15968	5	24480	50	−8596.0	0.4	2070.4	0.4	−17519	4	−7603.3	0.4
	K	19	17894.99	0.01	20337.3	1.7	−6222.91	0.05	−6917.19	0.08	−15290	30	−8784.47	0.02
	Ca	20	23997.8	0.6	16474	5	−6615.15	0.25	−19440	28	−7386.98	0.14	−22685.9	2.8
	Sc	21	30612	24	9413.11	0.08	−6267.07	0.12	−28950#	200#	−2395.83	0.10	−27720	70
	Ti	22	34340#	200#	2993	28	−4986	28	−36110#	400#	11860	28	−36240#	300#
	V	23	38400#	450#	100#	200#	−5900#	360#	*		13550#	200#	*	
	Cr	24	*		−3330#	450#	−7190#	570#	*		22110#	410#	*	
42	Al	13	2970#	580#	*		−22340#	870#	40900#	510#	*		20720#	580#
	Si	14	4970#	320#	47290#	580#	−19660#	590#	34480#	300#	−48550#	580#	13750#	320#
	P	15	6910	130	42310#	320#	−17800#	180#	25920	110	−40790#	410#	12030	100
	S	16	10943	5	37880	120	−15890	100	16785	6	−38130#	300#	1600	70
	Cl	17	13420	70	31270	100	−12640	90	10190	60	−27140	130	160	60
	Ar	18	15525	6	26163	7	−9986	9	4125	6	−22703	7	−6934	6
	K	19	17629.17	0.12	22040	30	−7648.83	0.14	−2901.03	0.19	−15000	70	−7955.44	0.17
	Ca	20	19843.53	0.15	18085.34	0.15	−6257.38	0.25	−13442.94	0.23	−12768.8	0.4	−17976.25	0.16
	Sc	21	27740.3	2.8	13163.45	0.16	−5745.16	0.25	−24500#	200#	−3850.43	0.15	−24495	28
	Ti	22	32250	70	4835.89	0.27	−5470.8	0.3	−32160#	300#	2744.58	0.23	−33490#	200#
	V	23	36230#	360#	1670#	200#	−5800#	280#	*		13730#	200#	−36100#	450#
	Cr	24	*		−1480#	310#	−6740#	420#	*		15470#	300#	*	
43	Al	13	2460#	720#	*		−24130#	960#	43230#	670#	*		23360#	670#
	Si	14	5010#	500#	48350#	640#	−20870#	650#	36530#	400#	*		15170#	410#
	P	15	6120#	320#	44130#	500#	−18870#	420#	29200#	310#	−44240#	580#	14610#	300#
	S	16	9330	6	39970#	300#	−16940	140	19814	7	−36320#	300#	4560	60
	Cl	17	12990	90	33760	140	−13810	130	12420	60	−32540	110	2190	60
	Ar	18	15085	5	27579	7	−11270	50	6399	5	−21661	6	−5059	5
	K	19	17158.5	0.4	23850	70	−9200.1	1.8	−387.2	1.9	−19030	60	−6099.4	0.4
	Ca	20	19413.60	0.18	19919.3	0.4	−7592	5	−9093	6	−11275	6	−14359.19	0.18
	Sc	21	23688.4	1.9	15206.5	1.9	−4805.9	1.9	−18270	40	−8455.1	1.9	−19155.1	1.9
	Ti	22	29761	29	8756	6	−4458	6	−27350#	200#	1943	6	−29770#	200#
	V	23	34370#	210#	3850	40	−6170	50	−35290#	400#	6920	40	−33050#	300#
	Cr	24	38520#	450#	850#	200#	−6900#	280#	*		15850#	200#	*	
	Mn	25	*		−2480#	450#	−7630#	570#	*		17700#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
44	Si	14	3090#	640#	26250#	780#	61980#	500#	−1970#	710#	−420#	640#	−23140#	710#
	P	15	2000#	500#	20510#	570#	46890#	400#	4980#	500#	2770#	500#	−17830#	570#
	S	16	5080	7	21530#	300#	32264	5	410	100	640	120	−16760#	300#
	Cl	17	4390	110	15570	90	17340	90	7870	90	3390	90	−9850	150
	Ar	18	8735	6	15800	60	4875.3	1.7	2870	60	−500	70	−8018	4
	K	19	7277.4	0.6	11061	5	−11973	7	9352	6	2150.1	0.5	−2830	70
	Ca	20	11131.18	0.23	12182.3	0.5	−28050	50	4264.1	0.3	−1045.1	0.3	−2754.8	0.5
	Sc	21	9699.2	2.6	6696.1	1.7	−45280#	300#	11442.1	1.7	2185.9	1.8	3389.9	1.8
	Ti	22	16304	6	8649.4	2.0	*		5283.2	0.7	−4042.2	0.7	3235.7	0.7
	V	23	13960	40	1781	9	*		12007	7	−3246	29	10481	7
	Cr	24	19520#	210#	2790	70	*		4910#	200#	−8870#	210#	7920	60
	Mn	25	17980#	500#	−2140#	360#	*		11110#	420#	−8090#	500#	12800#	360#
45	Si	14	290#	780#	*		66860#	600#	−470#	850#	−40#	780#	*	
	P	15	3220#	640#	20640#	710#	52580#	500#	2340#	640#	3990#	580#	−20380#	710#
	S	16	2210#	300#	21740#	500#	37470#	300#	2330#	420#	430#	320#	−14530#	420#
	Cl	17	5850	160	16350	140	22810	140	4640	140	4240	140	−13710	170
	Ar	18	5168.9	1.7	16580	90	9239.5	1.0	5100	60	−70	60	−6486.7	2.8
	K	19	8905.5	0.7	11231.4	1.7	−4729.2	1.0	6105	5	2671	6	−6140	60
	Ca	20	7414.82	0.17	12319.7	0.6	−21300	40	6474.0	0.5	−926.1	0.4	−743	6
	Sc	21	11327.6	1.9	6892.6	0.7	−36090#	300#	8047.4	0.7	2339.0	0.7	−403.9	0.7
	Ti	22	9533.0	1.1	8483.2	1.9	−53420#	280#	7888.7	2.0	−2025.2	0.8	5183.4	0.8
	V	23	16150	7	1626.8	1.1	*		8140	6	−1918.0	0.9	5881.0	0.9
	Cr	24	14160	60	3000	40	*		9110	60	−7030#	200#	11240	40
	Mn	25	20510#	420#	−1150#	300#	*		7700#	360#	−7180#	420#	8290#	360#
	Fe	26	*		340#	410#	*		7750#	490#	*		12990#	410#
46	P	15	1190#	710#	21540#	780#	58250#	500#	4240#	710#	3380#	640#	−19780#	780#
	S	16	4090#	500#	22610#	640#	43780#	400#	240#	570#	460#	500#	−18040#	570#
	Cl	17	3540	170	17680#	320#	28030	100	6180	100	3320	100	−13130#	320#
	Ar	18	8071.8	2.4	18800	140	14357.0	2.3	1420	90	−750	60	−11929	5
	K	19	6869.6	0.9	12932.1	0.9	1662.0	0.7	7970.1	1.7	1460	5	−5610	60
	Ca	20	10398.7	2.3	13812.9	2.3	−13668	12	3352.7	2.3	−1700.2	2.3	−5483	6
	Sc	21	8760.64	0.10	8238.4	0.7	−29340	90	10417.9	0.7	1511.3	0.7	460.2	0.8
	Ti	22	13189.3	0.8	10344.9	0.7	−45340#	300#	4398.6	1.8	−3076.1	1.9	−72.99	0.24
	V	23	13260.8	0.9	5354.6	0.8	*		11183.5	0.7	−2896	6	4758.7	1.9
	Cr	24	18030	40	4874	11	*		5047	14	−6690	40	5490	13
	Mn	25	15510#	310#	190	90	*		11710	100	−5580#	220#	11150	100
	Fe	26	21270#	410#	1100#	420#	*		4460#	420#	−11300#	500#	8830#	360#
47	P	15	2100#	780#	*		64520#	600#	2430#	850#	4360#	780#	*	
	S	16	1510#	570#	22930#	640#	49550#	400#	1950#	640#	960#	570#	−16460#	640#
	Cl	17	3920#	220#	17510#	450#	34760#	200#	4470#	360#	4490#	200#	−15040#	450#
	Ar	18	3667.3	2.6	18920	100	19570.3	1.2	3610	140	−20	90	−10517	5
	K	19	8369.4	1.6	13229.7	2.7	6295.1	1.4	4769.6	1.5	1825.3	2.1	−9590	90
	Ca	20	7276.37	0.27	14219.7	2.3	−7782	6	4981.8	2.3	−1699.1	2.3	−4025.0	2.7
	Sc	21	10646.5	2.0	8486.2	1.2	−21770	30	7186.2	2.0	1995.9	2.0	−2908.9	2.0
	Ti	22	8880.66	0.06	10464.9	0.7	−37810#	500#	6845.5	0.7	−2257.5	1.8	2177.5	0.3
	V	23	13002.49	0.11	5167.77	0.07	−52630#	600#	7714.0	0.8	405.6	0.7	1455.4	1.8
	Cr	24	13163	13	4776	5	*		8034	5	−5891	9	8632	5
	Mn	25	18220	90	380	30	*		7660	50	−4280	60	6890	30
	Fe	26	16410#	580#	2000#	510#	*		8560#	580#	−9730#	580#	11940#	500#
	Co	27	*		−2120#	670#	*		6920#	660#	*		8810#	670#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
44	Si	14	3670#	580#	*		−22660#	710#	38520#	500#	*		16200#	580#
	P	15	6130#	410#	45460#	640#	−20140#	500#	31590#	410#	−44450#	720#	15230#	400#
	S	16	7709	6	40620#	300#	−17300	120	23469	5	−40820#	400#	6880	60
	Cl	17	11790	100	36150	130	−14760	120	15300	90	−32810#	310#	3460	90
	Ar	18	14393	6	29613	3	−12260	4	8795.5	1.6	−27767	5	−4169.2	1.6
	K	19	16902.1	0.4	25530	60	−10650	30	2034.5	1.8	−18910	60	−5443.9	0.5
	Ca	20	19064.07	0.29	21624	6	−8853.7	0.3	−3920.1	0.8	−16748	5	−13351.9	1.9
	Sc	21	21837.7	1.8	17371.9	1.8	−6705.5	1.8	−14008	7	−8529.6	1.8	−16572	6
	Ti	22	28586.9	0.7	13579.2	0.7	−5127.1	0.7	−24130	50	−6428.7	0.7	−27700	40
	V	23	32330#	200#	6265	7	−5710	8	−31270#	300#	5091	7	−29910#	200#
	Cr	24	36620#	300#	2900	50	−6850	90	*		8600	50	−38860#	400#
	Mn	25	*		−500#	360#	−7430#	420#	*		18090#	300#	*	
45	Si	14	3380#	720#	*		−23440#	780#	40430#	670#	*		17910#	720#
	P	15	5220#	580#	46890#	780#	−21060#	640#	34220#	520#	*		17090#	500#
	S	16	7290#	300#	42250#	500#	−18970#	420#	26430#	300#	−39940#	580#	9070#	310#
	Cl	17	10250	150	37880#	330#	−15710	180	18350	140	−36660#	420#	6340	140
	Ar	18	13904	5	32153	5	−13187	4	11041.4	0.6	−27856	5	−2060.6	0.7
	K	19	16182.9	0.7	27030	60	−11730	70	4456.7	0.8	−23430	90	−3218.2	0.6
	Ca	20	18545.99	0.29	23380	5	−10169.6	0.5	−1802.0	0.9	−15427.9	1.6	−11067.5	1.8
	Sc	21	21026.8	2.0	19074.9	0.8	−7937.7	0.7	−9185.9	0.6	−12579.8	0.8	−11595.1	1.0
	Ti	22	25837	6	15179.3	0.9	−6297.3	0.8	−19500	40	−4830.5	0.9	−23274	7
	V	23	30110	40	10276.2	2.1	−5669.0	0.9	−26910#	300#	−1359.4	2.0	−26540	50
	Cr	24	33690#	200#	4780	40	−6240	50	−33920#	290#	10740	40	−35050#	300#
	Mn	25	38490#	500#	1640#	300#	−7720#	360#	*		11540#	300#	*	
	Fe	26	*		−1800#	200#	−8430#	490#	*		20540#	290#	*	
46	P	15	4410#	640#	*		−21580#	710#	36580#	510#	*		18110#	580#
	S	16	6300#	400#	43250#	640#	−18630#	500#	30410#	400#	−43740#	720#	10830#	420#
	Cl	17	9400	130	39420#	410#	−17250	140	21680	100	−36980#	510#	7960	100
	Ar	18	13240.6	2.8	35145	6	−14558	4	13368	3	−33720#	300#	−1226.9	2.4
	K	19	15775.1	0.8	29510	90	−13010	60	6347.7	1.0	−24440	140	−2673.0	0.8
	Ca	20	17813.5	2.3	25044.3	2.7	−11142	6	988.7	2.2	−20657.8	2.3	−10138.6	2.3
	Sc	21	20088.2	1.9	20558.1	0.8	−9164.5	0.7	−4685.7	0.7	−12435.0	0.9	−10822.7	0.5
	Ti	22	22722.3	0.7	17237.5	0.3	−8005.89	0.17	−14657	11	−10605.0	0.4	−20313.1	0.9
	V	23	29410	7	13837.8	1.8	−7379.81	0.20	−24660	90	−3292.5	0.7	−25630	40
	Cr	24	32190	50	6501	11	−6792	11	−30680#	300#	2250	11	−32560#	300#
	Mn	25	36020#	310#	3190	90	−7220#	210#	*		12180	90	−34900#	300#
	Fe	26	*		−50#	300#	−8280#	420#	*		13440#	300#	*	
47	P	15	3290#	780#	*		−21890#	850#	38390#	630#	*		20100#	720#
	S	16	5600#	500#	44470#	720#	−19550#	570#	32570#	400#	*		12860#	410#
	Cl	17	7460#	240#	40120#	540#	−17050#	360#	26130#	200#	−39710#	540#	12120#	200#
	Ar	18	11739.1	1.3	36610#	300#	−15597	5	16977.4	2.5	−33300#	400#	1975.3	1.4
	K	19	15239.0	1.5	32030	140	−13980	60	8624.9	2.4	−29270	100	−643.7	2.6
	Ca	20	17675.1	2.3	27151.8	2.3	−12760	6	2592.9	2.2	−19862	3	−8654.3	2.3
	Sc	21	19407.2	2.0	22299.1	2.0	−10186.4	2.0	−2329.8	1.9	−16211.9	2.1	−8279.9	1.9
	Ti	22	22070.0	0.8	18703.3	0.4	−8953.66	0.24	−10375	5	−9087.0	2.2	−15933.03	0.12
	V	23	26263.3	0.9	15512.7	0.7	−8243.8	1.9	−19440	30	−7534.4	0.7	−20607	11
	Cr	24	31190	40	10131	5	−7672	8	−27430#	500#	2276	5	−30220	90
	Mn	25	33730#	300#	5260	30	−7070	50	−33190#	600#	7220	30	−31850#	300#
	Fe	26	37680#	580#	2190#	500#	−7580#	540#	*		15050#	500#	*	
	Co	27	*		−1020#	670#	−9180#	720#	*		15750#	610#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
48	S	16	2880#	640#	23710#	780#	56620#	500#	260#	710#	1290#	710#	−19050#	780#
	Cl	17	2770#	540#	18770#	640#	40220#	500#	5790#	640#	3920#	580#	−14590#	710#
	Ar	18	5059	17	20060#	200#	26138	17	2090	100	770	140	−13370#	300#
	K	19	4643.8	1.6	14206.2	1.4	12193.5	1.2	8197.6	2.5	2350.4	0.9	−8380	140
	Ca	20	9951.5	2.2	15801.9	1.4	−1404	7	1899.9	0.7	−2745.2	0.5	−8807.7	0.5
	Sc	21	8239	5	9448	5	−15207	8	9346	5	1172	5	−2242	5
	Ti	22	11626.66	0.03	11445.1	1.9	−30480	90	3979.5	0.7	−2556.6	0.7	−2034.3	0.4
	V	23	10542.3	1.0	6829.4	1.0	−46210#	500#	10361.1	1.0	−603.7	1.3	2240.7	1.2
	Cr	24	16330	9	8103	7	−61000#	420#	4965	7	−6071	7	1835	7
	Mn	25	14800	30	2023	6	*		10886	13	−4920	40	8236	7
	Fe	26	18950#	510#	2730	100	*		5120	130	−8170#	310#	7150	100
	Co	27	16960#	780#	−1570#	710#	*		11230#	580#	−7810#	580#	12360#	580#
	Ni	28	*		−270#	740#	*		*		*		9420#	510#
49	S	16	70#	300#	*		61690#	580#	2290#	840#	2420#	770#	*	
	Cl	17	3050#	640#	18940#	640#	47300#	400#	4250#	570#	4960#	570#	−16450#	640#
	Ar	18	2780#	400#	20070#	640#	31500#	400#	3230#	450#	1540#	410#	−12050#	570#
	K	19	5398.3	1.1	14546	17	18350.7	1.1	6466.6	1.5	5023.8	2.5	−10230	100
	Ca	20	5146.45	0.18	16304.5	0.8	4032.3	2.2	5122.8	1.4	−1022.0	0.7	−5882.3	2.3
	Sc	21	10130	5	9626.6	2.3	−8943	3	6493	3	1441	3	−5502.1	2.4
	Ti	22	8142.38	0.02	11349	5	−23813	24	6483.6	1.9	−1938.3	0.7	222.0	2.2
	V	23	11555.5	1.3	6758.2	0.8	−38180#	500#	7686.3	0.8	1030.2	0.8	−554.1	1.1
	Cr	24	10582	8	8143.3	2.4	−53860#	600#	7385.5	2.2	−3392.4	2.2	4442.3	2.2
	Mn	25	16395	7	2088	8	*		7654	6	−3284	12	5102.4	2.2
	Fe	26	14810	100	2743	25	*		8530	40	−7470	90	10367	27
	Co	27	19580#	710#	−940#	510#	*		8060#	710#	−6130#	580#	8280#	510#
	Ni	28	17720#	740#	490#	780#	*		8620#	850#	*		12970#	670#
50	Cl	17	1110#	570#	19980#	710#	52240#	400#	6020#	640#	5360#	570#	−15460#	720#
	Ar	18	4240#	640#	21260#	640#	38200#	500#	1760#	710#	1210#	540#	−14780#	640#
	K	19	4188	8	15960#	400#	23495	8	7338	18	4503	8	−10500#	200#
	Ca	20	6360.5	1.6	17266.7	1.8	10672.1	1.6	3406.1	1.8	986.8	2.1	−8575.6	2.0
	Sc	21	6046	3	10526.1	2.5	−1910.2	2.5	10398.6	2.5	2672	3	−3178.7	2.9
	Ti	22	10939.17	0.03	12158.4	2.3	−16955	8	3783	5	−2231.0	1.9	−3440.8	2.2
	V	23	9332.4	0.8	7948.20	0.06	−31630	130	9980.52	0.05	578.43	0.06	760.0	1.9
	Cr	24	13000.3	2.2	9588.2	0.8	−46800#	500#	4927.4	1.0	−3390.24	0.10	322.65	0.06
	Mn	25	13078.3	2.2	4583.5	2.2	*		10905	7	−3200	5	5026.59	0.12
	Fe	26	17797	26	4146	9	*		5531	11	−7050	30	5733	10
	Co	27	15880#	520#	130	130	*		11130	160	−5600#	520#	10620	130
	Ni	28	20060#	780#	970#	710#	*		5520#	710#	−9220#	780#	9320#	710#
51	Cl	17	1480#	810#	*		57540#	700#	4610#	910#	6760#	860#	*	
	Ar	18	1330#	640#	21480#	570#	43240#	400#	3480#	570#	2660#	640#	−13230#	640#
	K	19	4859	15	16570#	500#	29688	13	5260#	400#	4704	21	−12590#	500#
	Ca	20	4814.4	1.7	17893	8	15118.4	0.5	3990.0	1.0	816.2	0.9	−8331	17
	Sc	21	6785	4	10950.1	3.0	4992.9	2.5	8760.5	2.5	5838.6	2.5	−5319.5	2.6
	Ti	22	6372.4	0.5	12484.8	2.6	−9543.8	1.5	7540.3	2.3	−365	5	138.3	0.5
	V	23	11051.18	0.06	8060.21	0.07	−24860	50	7071.71	0.06	1153.90	0.06	−2053	5
	Cr	24	9260.67	0.15	9516.45	0.15	−39800#	500#	7222.2	0.8	−2108.7	1.0	2688.64	0.15
	Mn	25	13687.66	0.30	5270.83	0.29	*		7799.9	2.2	−558	7	1881.2	1.0
	Fe	26	13784	8	4851.3	1.4	*		8141.5	2.6	−6028	7	8279	7
	Co	27	17820	130	150	50	*		8120	50	−4470	100	7600	50
	Ni	28	16260#	710#	1350#	520#	*		8840#	710#	−8520#	710#	12010#	510#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
48	S	16	4390#	640#	*		−19350#	710#	34750#	500#	*		13900#	540#
	Cl	17	6690#	510#	41700#	710#	−17820#	640#	28000#	500#	−40380#	780#	13020#	500#
	Ar	18	8726	17	37570#	400#	−15576	18	21870	17	−36840#	400#	5286	17
	K	19	13013.2	1.1	33130	100	−14230	90	12220	5	−29990#	200#	1988.9	2.4
	Ca	20	17227.9	2.2	29031.6	2.3	−13976.5	1.6	4268.08	0.07	−26146.6	1.2	−7959.3	1.9
	Sc	21	18885	5	23668	5	−11148	5	−26	5	−16081	5	−7638	5
	Ti	22	20507.32	0.06	19931.3	2.2	−9449.1	0.3	−5672	7	−13437.3	2.2	−14557.20	0.08
	V	23	23544.7	1.0	17294.3	1.2	−9086.9	2.0	−15181	7	−7430.1	2.2	−17986	5
	Cr	24	29492	14	13271	7	−7698	7	−24810	90	−5173	7	−28330	30
	Mn	25	33020	90	6799	7	−7913	10	−31030#	500#	5421	7	−30240#	500#
	Fe	26	35360#	310#	3110	90	−7010	110	−36190#	430#	9270	90	−36700#	610#
	Co	27	*		430#	510#	−8160#	580#	*		17010#	500#	*	
	Ni	28	*		−2390#	300#	*		*		18020#	660#	*	
49	S	16	2950#	710#	*		−19120#	840#	37450#	710#	*		16600#	770#
	Cl	17	5820#	450#	42650#	720#	−17650#	640#	30350#	400#	*		15020#	400#
	Ar	18	7840#	400#	38840#	570#	−16150#	500#	24240#	400#	−36740#	640#	7150#	400#
	K	19	10042.2	1.6	34610#	200#	−13770	140	16951.0	2.4	−32620#	500#	6542.1	0.8
	Ca	20	15098.0	2.2	30510.7	1.2	−13954.1	0.5	7264.01	0.19	−26234	17	−4867	5
	Sc	21	18368.2	3.0	25428.4	2.7	−12371.7	2.3	1399.7	2.4	−21566.9	2.4	−6140.8	2.3
	Ti	22	19769.04	0.04	20797.3	2.2	−10176.7	0.4	−3231.7	2.2	−11628.12	0.08	−12157.3	1.0
	V	23	22097.7	0.8	18203.3	2.1	−9314.8	1.1	−10342.2	2.4	−10747	5	−13212	7
	Cr	24	26912	6	14972.7	2.2	−8747.0	2.4	−20582	24	−4128.4	2.2	−24107	7
	Mn	25	31200	30	10190.8	2.2	−8158.4	2.4	−27840#	500#	−430.9	2.4	−27680	90
	Fe	26	33760#	500#	4766	25	−7660	40	−33280#	600#	10782	25	−34550#	500#
	Co	27	36540#	780#	1790#	500#	−7230#	580#	*		12230#	500#	−36030#	660#
	Ni	28	*		−1080#	780#	−8300#	660#	*		19250#	610#	*	
50	Cl	17	4160#	640#	*		−17570#	640#	33430#	400#	*		16690#	570#
	Ar	18	7020#	500#	40200#	710#	−16300#	640#	26360#	500#	−40910#	770#	8310#	500#
	K	19	9586	8	36030#	500#	−14420	100	18809	8	−33760#	400#	7501	8
	Ca	20	11507.0	1.6	31812	17	−12242.9	2.8	11842.6	1.6	−29820#	400#	−1098.1	2.8
	Sc	21	16176	6	26830.6	2.6	−11548.1	2.6	4686.1	2.5	−22214.6	2.6	−4044.4	2.5
	Ti	22	19081.55	0.03	21784.94	0.08	−10717.2	2.2	−1170.50	0.06	−17420.84	0.19	−11541.0	0.8
	V	23	20887.9	1.0	19297	5	−9886.5	0.7	−6596.35	0.09	−9949.8	2.3	−11962.2	2.2
	Cr	24	23583	7	16346.35	0.05	−8558.01	0.08	−15785	8	−8986.32	0.06	−20712.8	2.2
	Mn	25	29473	7	12726.8	1.0	−7975.91	0.14	−25040	130	−1953.7	0.8	−25947	24
	Fe	26	32610	90	6233	11	−7430	14	−31020#	500#	3567	9	−32770#	500#
	Co	27	35460#	520#	2870	130	−7600	150	*		12740	130	−34190#	610#
	Ni	28	37780#	660#	30#	510#	−7090#	580#	*		14000#	500#	*	
51	Cl	17	2590#	810#	*		−16950#	920#	36810#	700#	*		19450#	860#
	Ar	18	5570#	570#	41460#	710#	−16120#	570#	29840#	400#	*		11170#	400#
	K	19	9047	13	37830#	400#	−15360#	200#	20735	13	−37500#	400#	9002	13
	Ca	20	11174.9	0.6	33850#	400#	−13390.0	1.3	13400.7	0.7	−30390#	500#	133.5	2.6
	Sc	21	12831	3	28216.8	2.6	−9963.3	2.9	8952.8	2.5	−24811	8	110.2	2.5
	Ti	22	17311.6	0.5	23010.9	0.5	−9813.2	2.3	1717.7	0.5	−17432.7	1.7	−8581.0	0.5
	V	23	20383.6	0.8	20218.6	2.3	−10291.2	1.9	−3959.88	0.30	−14955.0	2.5	−10013.06	0.07
	Cr	24	22261.0	2.2	17464.64	0.15	−8938.02	0.15	−11261.5	1.4	−7307.82	0.15	−16895.15	0.16
	Mn	25	26765.9	2.2	14859.0	0.9	−8661.1	0.3	−20900	50	−6308.96	0.30	−21838	8
	Fe	26	31581	24	9434.8	2.6	−8051	5	−28540#	500#	2783.2	1.4	−30670	130
	Co	27	33710#	500#	4300	50	−7200	60	*		8000	50	−31950#	500#
	Ni	28	36320#	780#	1480#	500#	−6950#	710#	*		15540#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
52	Cl	17	0#	990#	*		62880#	700#	*		6830#	910#	*	
	Ar	18	2960#	720#	22960#	920#	48100#	600#	1630#	720#	2750#	720#	−16120#	840#
	K	19	2690	40	17940#	400#	34310	30	6800#	500#	4790#	400#	−12230#	400#
	Ca	20	6005.3	0.8	19040	13	21153.2	0.7	2172	8	209.3	1.0	−11560#	400#
	Sc	21	5345	4	11480	3	10188	3	9776	3	5640	3	−5266	3
	Ti	22	7816.1	2.8	13516	4	−1145.6	2.8	5770	4	1949	4	−2531.3	2.8
	V	23	7311.24	0.13	8999.0	0.5	−17099	5	10699.64	0.14	1985.04	0.14	765.8	2.3
	Cr	24	12040.11	0.17	10505.37	0.10	−32860	80	4514.54	0.10	−2593.3	0.8	−1209.09	0.08
	Mn	25	10539.5	0.3	6549.64	0.18	−48830#	600#	10260.78	0.11	−515.0	2.2	2897.2	0.8
	Fe	26	16214.2	1.4	7377.8	0.3	*		5005.60	0.18	−5848.1	2.2	2646.7	2.2
	Co	27	15070	50	1444	5	*		10843	10	−4729	25	8922	6
	Ni	28	18980#	510#	2510	100	*		5740	150	−7920#	510#	7840	90
	Cu	29	*		−2480#	780#	*		12290#	780#	−5550#	850#	13550#	780#
53	Ar	18	−100#	920#	22860#	990#	53670#	700#	3210#	990#	3960#	810#	*	
	K	19	3230	120	18210#	610#	39560	110	4910#	420#	5800#	510#	−14350#	420#
	Ca	20	3190	40	19540	60	25900	40	3840	50	1200	40	−10510#	500#
	Sc	21	6317	18	11792	18	15921	18	8274	18	5684	18	−7395	19
	Ti	22	5475	4	13647	4	4066	3	7080	4	2520	4	−1646	3
	V	23	8480	3	9663	4	−9192	4	8592	3	4444	3	−1668	4
	Cr	24	7939.43	0.10	11133.56	0.16	−25657	25	7626.29	0.10	−1200.32	0.10	1790.65	0.09
	Mn	25	12050.3	0.3	6559.8	0.3	−41550#	500#	7471.2	0.4	435.1	0.3	179.3	0.3
	Fe	26	10686.7	1.7	7525.1	1.7	*		8006.5	1.7	−3456.5	1.7	4960.3	1.7
	Co	27	16387	6	1616.3	1.7	*		8240.6	2.2	−3319	9	5613.9	1.7
	Ni	28	15140	90	2576	26	*		8420	50	−7180	130	10492	27
	Cu	29	19330#	780#	−2130#	510#	*		9220#	710#	−4820#	710#	10100#	520#
54	Ar	18	2300#	1060#	*		58300#	800#	910#	1060#	3130#	1060#	*	
	K	19	930#	420#	19230#	810#	44750#	400#	6940#	720#	6200#	570#	−13790#	810#
	Ca	20	3840	70	20150	120	31770	50	2690	60	2220	50	−13020#	400#
	Sc	21	3740	23	12340	50	21120	14	10539	14	6758	14	−6276	19
	Ti	22	6934	16	14263	24	10511	16	5491	16	2371	16	−3765	16
	V	23	6118	12	10306	12	−1888	11	10290	12	4699	11	−1002	11
	Cr	24	9719.08	0.10	12373	3	−17657	5	5218.46	0.17	131.78	0.12	−1556.0	0.5
	Mn	25	8939.2	1.1	7559.6	1.0	−34320#	400#	10572.1	1.0	756.5	1.0	2291.3	1.0
	Fe	26	13378.5	1.6	8853.2	0.5	−50550#	220#	5167.6	0.4	−3147.3	0.4	842.5	0.4
	Co	27	13422.0	1.7	4351.6	1.6	*		11032.8	0.4	−2956.8	1.4	5879.6	0.4
	Ni	28	17719	26	3908	5	*		5776	7	−7070	50	6557	5
	Cu	29	16170#	640#	−1100#	400#	*		12030#	410#	−4730#	640#	11750#	400#
	Zn	30	*		−150#	550#	*		6890#	640#	*		11600#	550#
55	K	19	2450#	640#	19380#	940#	49600#	500#	4390#	860#	6710#	780#	−16240#	860#
	Ca	20	1560	170	20790#	430#	36460	160	4360	200	3350	160	−11620#	620#
	Sc	21	4480	60	12970	80	26870	60	9260	80	8290	60	−8060	70
	Ti	22	4160	30	14680	30	15649	29	7650	30	3555	29	−1920	29
	V	23	7298	29	10670	30	4905	27	8467	27	5217	27	−2955	27
	Cr	24	6246.26	0.19	12501	11	−9774.4	0.7	7452	3	1196.76	0.26	13.8	2.8
	Mn	25	10225.6	1.0	8066.13	0.26	−26080	160	8285.88	0.27	2571.02	0.27	−623.11	0.29
	Fe	26	9298.12	0.19	9212.1	1.0	−43210#	400#	7919.7	0.4	−1906.0	0.3	3584.5	0.3
	Co	27	14091.2	0.3	5064.35	0.30	*		7628.3	1.7	−833.8	0.4	2327.8	0.4
	Ni	28	14129	5	4614.9	0.7	*		8034.2	1.8	−6128	5	8642.5	0.7
	Cu	29	18470#	430#	−350	160	*		8710	160	−4210	180	8350	160
	Zn	30	16640#	450#	320#	570#	*		9580#	640#	−7530#	720#	13940#	410#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
52	Cl	17	1480#	810#	*		*		39500#	700#	*		20780#	810#
	Ar	18	4290#	780#	*		−16190#	780#	32890#	600#	*		13070#	600#
	K	19	7550	30	39420#	400#	−15280#	500#	23390	30	−38720#	700#	11120	30
	Ca	20	10819.7	1.7	35610#	500#	−14336	17	15211.4	2.8	−35070#	400#	912.8	2.6
	Sc	21	12129	4	29374	8	−10664	3	10919	3	−25297	13	1138	3
	Ti	22	14188.5	2.7	24466	3	−7677.7	2.7	5941.8	2.7	−20434.4	2.8	−5345.9	2.7
	V	23	18362.43	0.14	21483.9	2.5	−9364	5	−731.65	0.17	−15481.6	2.5	−8063.64	0.20
	Cr	24	21300.78	0.10	18565.58	0.09	−9351.47	0.08	−7087.41	0.14	−12975.5	0.5	−15247.6	0.3
	Mn	25	24227.14	0.13	16066.09	0.11	−8658.3	1.0	−16367	5	−5797.25	0.12	−18593.5	1.4
	Fe	26	29998	8	12648.67	0.17	−7936	7	−25770	80	−4170.35	0.22	−29060	50
	Co	27	32900	130	6295	5	−7472	9	−32460#	600#	6610	5	−30770#	500#
	Ni	28	35240#	510#	2660	80	−6980	120	*		10340	80	*	
	Cu	29	*		−1130#	610#	−6030#	780#	*		18170#	600#	*	
53	Ar	18	2860#	810#	*		−16030#	910#	36180#	700#	*		15860#	700#
	K	19	5920	110	41160#	710#	−15460#	420#	26470	110	−41940#	710#	13900	110
	Ca	20	9200	40	37480#	400#	−14750#	400#	17490	40	−35300#	600#	3060	40
	Sc	21	11662	18	30832	22	−11583	18	13082	18	−28920	40	2637	18
	Ti	22	13291.1	2.9	25127.1	2.9	−8006.3	2.9	8406.2	2.9	−19904.1	3.0	−3509.7	2.9
	V	23	15791	3	23179	4	−7714	4	2839	3	−18617	4	−4503	3
	Cr	24	19979.54	0.17	20132.6	0.5	−9148.52	0.09	−4340.1	1.7	−13098.9	2.7	−12647.55	0.12
	Mn	25	22589.8	0.4	17065.2	0.3	−9153.1	0.9	−12031.0	1.8	−10536.3	0.4	−14429.6	0.4
	Fe	26	26900.9	2.2	14074.7	1.7	−8040.0	2.8	−21317	25	−2816.9	1.7	−24675	6
	Co	27	31460	50	8994.1	1.7	−7464.4	2.8	−29520#	500#	763.0	1.7	−28170	80
	Ni	28	34120#	500#	4020	25	−7310	30	*		11412	25	−35820#	600#
	Cu	29	*		380#	500#	−5790#	710#	*		13920#	500#	*	
54	Ar	18	2200#	1000#	*		*		37720#	800#	*		16790#	810#
	K	19	4160#	400#	42090#	810#	−15280#	570#	29290#	400#	*		16170#	400#
	Ca	20	7040	50	38360#	600#	−14360#	500#	20580	50	−39240#	700#	5540	50
	Sc	21	10057	14	31880	40	−11135	16	15460	18	−29430	110	4372	14
	Ti	22	12409	16	26055	16	−8579	16	11192	16	−23650	50	−1963	16
	V	23	14598	11	23953	12	−7786	11	5660	11	−18418	21	−2682	11
	Cr	24	17658.51	0.12	22035.6	2.7	−7928.43	0.11	−680.8	0.3	−17342.9	2.9	−10316.3	0.3
	Mn	25	20989.5	1.0	18693.2	1.0	−8759.9	1.0	−7548.2	1.1	−10996	3	−12682.1	1.9
	Fe	26	24065.2	0.4	15413.0	0.3	−8418.2	0.3	−16976	5	−8256.0	0.3	−21666.6	1.7
	Co	27	29809	5	11876.6	0.4	−7808.1	0.4	−26770#	400#	−608.7	0.5	−26451	25
	Ni	28	32860	80	5524	5	−7227	10	−33580#	220#	4380	5	−34210#	500#
	Cu	29	35500#	720#	1470#	400#	−6080#	420#	*		14130#	400#	*	
	Zn	30	*		−2280#	200#	−4670#	550#	*		16640#	220#	*	
55	K	19	3380#	510#	*		−16250#	860#	31310#	500#	*		17560#	500#
	Ca	20	5410	170	40020#	720#	−14590#	430#	23180	160	−38500#	820#	7720	160
	Sc	21	8220	60	33120	130	−10750	60	18280	70	−32980#	400#	6830	60
	Ti	22	11094	29	27020	50	−7925	29	13278	29	−23960	60	−10	30
	V	23	13416	27	24930	30	−8300	27	8587	27	−21980	30	−261	27
	Cr	24	15965.34	0.21	22806.8	2.9	−7802.3	0.5	2371.1	0.4	−16655	16	−7623.4	1.0
	Mn	25	19164.8	0.4	20439	3	−7934.35	0.27	−3682.5	0.3	−15103	11	−9529.24	0.25
	Fe	26	22676.6	1.6	16771.7	0.3	−8455.6	0.3	−12145.5	0.7	−7835.0	0.3	−17542.67	0.21
	Co	27	27513.3	1.7	13917.6	0.5	−8211.7	0.5	−22390	160	−5760.7	1.1	−22823	5
	Ni	28	31848	25	8966.4	1.8	−7571.7	1.6	−31070#	400#	3629.7	0.6	−32170#	400#
	Cu	29	34640#	520#	3550	160	−6720	160	*		9090	160	−34010#	270#
	Zn	30	*		−780#	400#	−5040#	640#	*		17720#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
56	K	19	560#	780#	*		54160#	630#	6130#	1000#	6050#	920#	*	
	Ca	20	2930	300	21270#	560#	41770	250	2350#	470#	3650	270	−14660#	740#
	Sc	21	2750	270	14150	310	31400	260	10360	260	8740	260	−7570	280
	Ti	22	5660	100	15870	120	21180	100	5730	100	4210	100	−4390	110
	V	23	5130	180	11640	180	9860	180	10270	180	5560	180	−1770	180
	Cr	24	8246.1	0.6	13449	27	−1377.5	0.6	5324	11	1431	3	−2757.3	2.9
	Mn	25	7270.44	0.13	9090.3	0.3	−18282	6	10734.52	0.30	3240.01	0.30	586	3
	Fe	26	11197.06	0.23	10183.59	0.16	−35220#	400#	5661.9	1.0	−1052.8	0.4	326.86	0.27
	Co	27	10081.8	0.5	5848.1	0.4	−52200#	500#	10924.9	0.5	−229.0	1.7	4296.2	0.6
	Ni	28	16643.0	0.7	7166.6	0.3	*		4813.2	0.4	−6384.2	1.7	2686.2	1.7
	Cu	29	15070	160	583	6	*		11359	8	−4135	26	9676	7
	Zn	30	19190#	570#	1040#	430#	*		6560#	570#	−7390#	640#	9890#	400#
	Ga	31	*		−3140#	640#	*		12570#	550#	*		14950#	710#
57	K	19	1920#	850#	*		58570#	610#	*		6430#	1000#	*	
	Ca	20	1120#	470#	21830#	720#	45970#	400#	3680#	640#	3460#	570#	−13470#	890#
	Sc	21	3940	320	15160	310	36110	180	7980	240	8640	190	−10580#	440#
	Ti	22	3050	230	16170	330	25780	210	7150	220	4900	210	−3590	210
	V	23	6320	200	12300	130	14910	80	8110	90	6170	90	−4350	90
	Cr	24	5311.2	2.0	13630	180	3559.0	1.9	7311	27	2237	11	−1135	16
	Mn	25	8645.9	1.5	9490.1	1.6	−10177.3	1.6	8334.9	1.5	4313.2	1.5	−1942	11
	Fe	26	7646.17	0.02	10559.32	0.21	−27630#	200#	8241.33	0.16	240.3	1.0	2399.76	0.27
	Co	27	11376.5	0.6	6027.5	0.4	−43940#	400#	8846.6	0.5	1773.0	0.5	1859.0	1.1
	Ni	28	10247.6	0.5	7332.4	0.6	*		8656.8	0.6	−3209.8	0.6	5817.1	0.6
	Cu	29	16751	6	690.3	0.4	*		8737.8	0.8	−3167	5	6347.5	0.5
	Zn	30	15230#	450#	1210#	200#	*		9800#	250#	−6450#	450#	12380#	200#
	Ga	31	19640#	640#	−2690#	570#	*		9570#	570#	−4840#	450#	11480#	570#
58	K	19	270#	920#	*		62360#	710#	*		*		*	
	Ca	20	3040#	640#	22950#	780#	50460#	500#	1200#	780#	2860#	710#	*	
	Sc	21	2170	260	16210#	440#	40350	190	8740	310	8030	250	−10300#	540#
	Ti	22	4590	280	16830	260	31240	180	5310	320	4790	190	−6620	240
	V	23	4070	130	13320	230	19420	100	9700	140	6270	100	−3940	110
	Cr	24	7538	4	14850	80	8237	3	4900	180	1997	27	−4513	29
	Mn	25	6413	3	10592	3	−4159.7	2.8	10168.4	2.8	4146.8	2.7	−1056	27
	Fe	26	10044.57	0.18	11958.0	1.5	−19860	50	5467.20	0.27	421.33	0.24	−1398.5	0.4
	Co	27	8573.0	1.2	6954.2	1.1	−36310#	300#	11470.7	1.1	2498.2	1.1	3511.7	1.1
	Ni	28	12216.2	0.5	8172.2	0.4	−52650#	500#	6522.5	0.4	−1334.8	0.4	2899.0	0.3
	Cu	29	12430.2	0.6	2872.9	0.7	*		12950.6	0.6	−1467.8	0.8	8008.5	0.6
	Zn	30	17820#	210#	2280	50	*		7040	50	−5800	160	8680	50
	Ga	31	16200#	500#	−1720#	360#	*		12560#	500#	−4410#	500#	13740#	340#
	Ge	32	*		−540#	640#	*		6970#	710#	*		12340#	640#
59	K	19	1250#	1060#	*		66360#	810#	*		*		*	
	Ca	20	730#	780#	23410#	920#	53930#	600#	2390#	850#	2690#	850#	*	
	Sc	21	3420	310	16590#	560#	44700	250	6440#	470#	7540	350	−13160#	650#
	Ti	22	3030#	350#	17690#	360#	34790#	300#	6210#	350#	4500#	400#	−6720#	390#
	V	23	5250	170	13980	230	24620	140	7500	250	6680	170	−6450	290
	Cr	24	4195	3	14970	100	13040.9	0.8	7030	80	2930	180	−3050	100
	Mn	25	7769	4	10822	4	833.1	2.4	7710.5	3.0	4623.9	2.4	−3700	180
	Fe	26	6581.00	0.11	12126.4	2.7	−13449.3	0.7	7532.1	1.5	1110.76	0.29	266.6	0.6
	Co	27	10453.9	1.1	7363.5	0.4	−28470#	170#	8663.0	0.3	3241.4	0.3	328.2	0.4
	Ni	28	8999.28	0.05	8598.5	1.1	−44790#	400#	8899.6	0.4	−252.3	0.4	5096.73	0.25
	Cu	29	12761.9	0.6	3418.6	0.4	*		10436.3	0.6	2413.2	0.5	5328.5	0.6
	Zn	30	12990	50	2836.8	0.7	*		10804.1	0.8	−3722	6	12338.4	0.8
	Ga	31	18290#	350#	−1250#	180#	*		9500#	260#	−3510#	430#	10520#	170#
	Ge	32	16860#	640#	120#	500#	*		9750#	570#	−7670#	640#	14670#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
56	K	19	3010#	720#	*		−16800#	920#	33500#	650#	*		18560#	620#
	Ca	20	4490	250	40650#	840#	−14560#	650#	25910	270	*		9260	260
	Sc	21	7220	260	34940#	480#	−10800	260	20670	310	−33280#	560#	8250	260
	Ti	22	9820	100	28840	110	−7580	100	15860	100	−28060	190	1630	100
	V	23	12430	180	26320	180	−8080	180	10730	180	−22630	190	860	180
	Cr	24	14492.4	0.6	24119	16	−8232.3	2.8	5322.0	0.5	−20742	29	−5643.9	0.5
	Mn	25	17496.1	1.0	21591	11	−7893.6	0.3	−871.1	0.4	−15076	27	−7501.56	0.22
	Fe	26	20495.18	0.28	18249.73	0.27	−7612.57	0.28	−6699.5	0.3	−12785.8	0.3	−14648.5	0.3
	Co	27	24173.1	0.5	15060.2	1.1	−7754.0	0.5	−17411	6	−5616.9	0.4	−18775.9	0.7
	Ni	28	30772	5	12231.0	0.4	−8000.5	0.4	−28520#	400#	−3715.2	0.4	−30340	160
	Cu	29	33530#	400#	5198	6	−6711	8	−34790#	500#	8111	6	−32430#	400#
	Zn	30	35830#	450#	690#	400#	−5260#	410#	*		12660#	400#	*	
	Ga	31	*		−2820#	640#	−4390#	780#	*		20510#	520#	*	
57	K	19	2480#	780#	*		*		35510#	630#	*		19570#	650#
	Ca	20	4050#	430#	*		−15780#	810#	27840#	450#	*		10890#	480#
	Sc	21	6680	190	36430#	530#	−11510	210	23060	200	−36650#	630#	9970	210
	Ti	22	8710	210	30330	260	−7440	210	18120	210	−28180	320	3710	270
	V	23	11450	90	28170	110	−8090	90	13050	80	−26210	270	2780	80
	Cr	24	13557.3	1.9	25270	29	−8068	3	7657.0	1.9	−20390	100	−3684.6	1.9
	Mn	25	15916.4	1.5	22939	27	−8060	3	1859.4	1.6	−18590	180	−4950.4	1.5
	Fe	26	18843.23	0.23	19649.6	0.3	−7319.31	0.28	−4098.1	0.5	−12185.9	0.5	−12212.8	0.4
	Co	27	21458.3	0.5	16211.1	0.5	−7080.2	0.6	−12036.6	0.6	−9723.0	0.5	−13509.3	0.5
	Ni	28	26890.6	0.8	13180.5	0.5	−7561.4	1.7	−23530#	200#	−2765.8	0.5	−25526	6
	Cu	29	31820	160	7857.0	0.5	−7074.6	1.8	−31900#	400#	1442.5	0.5	−29990#	400#
	Zn	30	34420#	450#	1790#	200#	−5340#	200#	*		14070#	200#	−36780#	540#
	Ga	31	*		−1650#	430#	−4700#	640#	*		15930#	400#	*	
58	K	19	2190#	920#	*		*		37410#	730#	*		20420#	810#
	Ca	20	4160#	560#	*		−16520#	940#	29390#	530#	*		11780#	530#
	Sc	21	6110	320	38040#	630#	−12750#	440#	24950	210	−36900#	630#	10850	280
	Ti	22	7640	210	31990	310	−8180	190	21070	180	−31650#	440#	5450	200
	V	23	10390	200	29490	280	−8420	100	15400	100	−26340	200	4020	100
	Cr	24	12849	3	27150	100	−8673	16	10163.5	3.0	−24880	210	−2577	3
	Mn	25	15058.5	2.7	24220	180	−8354	12	4019.7	2.9	−18680	80	−3716.9	2.7
	Fe	26	17690.74	0.18	21448.1	0.5	−7644.8	0.3	−1926.4	0.3	−16919.3	1.9	−10880.9	0.5
	Co	27	19949.4	1.2	17513.6	1.1	−6714.0	1.5	−8179.4	1.2	−9650.0	1.9	−11834.6	1.2
	Ni	28	22463.9	0.3	14199.65	0.25	−6399.2	0.4	−17930	50	−7335.83	0.25	−20991.2	0.4
	Cu	29	29181	6	10205.3	0.6	−6082.7	0.6	−28130#	300#	388.8	0.6	−27190#	200#
	Zn	30	33050#	400#	2970	50	−5450	50	−34720#	500#	6500	50	−34960#	400#
	Ga	31	35840#	580#	−510#	300#	−4730#	500#	*		16480#	300#	*	
	Ge	32	*		−3230#	640#	−4300#	550#	*		17680#	540#	*	
59	K	19	1520#	1000#	*		*		39580#	840#	*		22210#	940#
	Ca	20	3770#	720#	*		*		31690#	670#	*		13220#	630#
	Sc	21	5590	310	39540#	650#	−13730#	560#	26780	280	−40050#	740#	12020	310
	Ti	22	7620#	360#	33900#	500#	−9650#	340#	22240#	300#	−31640#	580#	6480#	320#
	V	23	9320	160	30810	230	−9190	150	17910	140	−29420	230	6310	140
	Cr	24	11733.6	2.0	28290	210	−8708	29	12549.0	0.7	−24490	180	−359.7	2.8
	Mn	25	14181.7	2.8	25670	80	−8825	27	6704.5	2.4	−22380	100	−1441.4	2.4
	Fe	26	16625.58	0.21	22717.9	1.9	−7979.5	0.4	491.9	0.3	−15962.1	3.0	−8889.0	1.1
	Co	27	19026.8	0.4	19321.5	1.6	−6942.2	0.3	−5871.4	0.4	−13691.2	2.7	−10072.28	0.20
	Ni	28	21215.5	0.5	15552.76	0.25	−6100.3	0.3	−13941.2	0.7	−6290.5	0.3	−17560.3	0.4
	Cu	29	25192.1	0.6	11590.7	0.6	−4753.4	0.5	−22600#	170#	−3800.1	1.2	−22130	50
	Zn	30	30810#	200#	5709.7	0.8	−4304.6	1.0	−30850#	400#	5724.2	0.7	−31750#	300#
	Ga	31	34490#	430#	1030#	170#	−4550#	230#	*		10620#	170#	−34250#	530#
	Ge	32	*		−1600#	450#	−4530#	570#	*		18640#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
60	Ca	20	2880#	920#	25040#	1060#	57910#	700#	−220#	990#	1730#	920#	*	
	Sc	21	1790#	560#	17650#	780#	48420#	500#	7690#	710#	6870#	640#	−13030#	780#
	Ti	22	4290#	380#	18560	350	39310	240	4090	310	4140	300	−9890#	470#
	V	23	3550	230	14500#	350#	28560	180	8540	260	6180	270	−6060	260
	Cr	24	6863.9	1.3	16590	140	17564.7	1.2	4230	100	2390	80	−6860	210
	Mn	25	5514	3	12141.0	2.4	5377.3	2.8	9735	4	4421.1	3.0	−2890	80
	Fe	26	8820	3	13177	4	−7239	3	5125	4	937	4	−3242	4
	Co	27	7491.92	0.07	8274.5	0.4	−22060#	200#	11215.6	0.4	3395.6	0.3	1482.2	1.6
	Ni	28	11387.73	0.05	9532.38	0.20	−36940#	300#	6084.9	1.1	−263.5	0.4	1355.18	0.26
	Cu	29	10058.1	1.6	4477.4	1.6	−52710#	400#	12594.4	1.6	2602.8	1.7	6646.8	1.6
	Zn	30	15030.1	0.7	5105.0	0.4	*		8204.2	0.6	−2001.4	0.6	7555.9	0.6
	Ga	31	13900#	260#	−340#	200#	*		13420#	210#	−2180#	280#	13370#	200#
	Ge	32	19230#	500#	1060#	350#	*		6720#	420#	−7260#	500#	10670#	360#
	As	33	*		−3440#	570#	*		12650#	640#	*		15420#	570#
61	Ca	20	60#	1060#	*		61510#	800#	970#	1130#	1940#	1060#	*	
	Sc	21	3020#	780#	17790#	920#	52240#	600#	5400#	850#	6900#	780#	−15780#	920#
	Ti	22	2340#	380#	19110#	580#	42550#	300#	5170#	390#	3970#	360#	−9190#	580#
	V	23	5160	300	15370	340	32720	230	6410#	380#	5600	300	−9050	300
	Cr	24	3659.3	2.2	16700	180	21725.5	1.9	5820	140	2800	100	−5930	180
	Mn	25	6846	3	12122.6	2.6	10241.9	2.5	7084.6	2.4	5114	4	−5670	100
	Fe	26	5579	4	13242	3	−2572	16	7316	3	1771	4	−1282	4
	Co	27	9319.1	0.8	8774	3	−15760	40	8477.6	0.8	4121.1	0.8	−1424.2	2.8
	Ni	28	7820.10	0.05	9860.56	0.22	−30430#	300#	8718.62	0.21	489.3	1.1	3579.6	0.3
	Cu	29	11710.1	1.8	4799.8	1.0	−44780#	300#	9883.6	1.0	3108.9	1.0	3509.6	1.5
	Zn	30	10246	16	5293	16	*		10720	16	183	16	9526	16
	Ga	31	15620#	200#	250	40	*		10790	40	30	60	10180	40
	Ge	32	14330#	420#	1490#	360#	*		10680#	350#	−5390#	420#	14160#	300#
	As	33	19630#	500#	−3040#	420#	*		9880#	500#	−4760#	580#	11990#	420#
62	Sc	21	1260#	850#	18990#	1000#	55830#	600#	7020#	920#	6370#	850#	−15790#	1000#
	Ti	22	3900#	500#	19990#	720#	46680#	400#	3060#	640#	3490#	470#	−12360#	720#
	V	23	3110	350	16130#	400#	36210	260	7600	360	5530#	400#	−8740	360
	Cr	24	6427	4	17960	230	25894	3	2950	180	1620	140	−9330#	300#
	Mn	25	4853	7	13316	7	14264	7	9095	7	4456	7	−5270	140
	Fe	26	8029	4	14425	4	2290.0	2.9	4801	4	1511	4	−5115.7	2.9
	Co	27	6598	19	9793	19	−9437	19	10700	19	4105	19	−253	19
	Ni	28	10595.7	0.3	11137.2	0.7	−24610#	140#	5614.8	0.4	347.5	0.4	−435.1	0.4
	Cu	29	8874.8	1.1	5854.5	0.6	−38370#	300#	12396.5	0.6	3233.3	0.6	5088.7	0.6
	Zn	30	12891	16	6473.0	1.1	*		7888.0	1.7	54.4	0.7	5635.1	0.5
	Ga	31	12920	40	2927	16	*		12898.3	0.7	92.7	0.9	10017.8	0.7
	Ge	32	16420#	330#	2290#	150#	*		8160#	240#	−3520#	220#	10720#	140#
	As	33	15290#	420#	−2080#	420#	*		13820#	420#	−3190#	500#	14990#	350#
63	Sc	21	2310#	920#	*		59960#	700#	4770#	1060#	6930#	990#	*	
	Ti	22	1730#	640#	20460#	780#	49780#	500#	4350#	780#	3550#	710#	−11210#	860#
	V	23	4600	430	16830#	530#	40110	340	5340#	450#	5220	420	−11540#	610#
	Cr	24	3400	70	18250	270	29330	70	4710	250	1770	200	−8430	250
	Mn	25	6434	8	13323	5	18693	4	6320	4	4885	4	−8150	180
	Fe	26	4829	5	14401	8	6578	5	6817	5	2196	5	−3081	4
	Co	27	8498	26	10262	19	−5304	19	7780	19	4426	19	−3237	19
	Ni	28	6837.77	0.06	11377	19	−18590	40	8096.1	0.7	1001.6	0.4	1547	3
	Cu	29	10863.6	0.5	6122.40	0.06	−32080#	200#	9353.0	0.3	3757.4	0.3	1717.0	0.4
	Zn	30	9116.7	1.6	6714.9	1.6	−45360#	500#	10481.4	1.6	995.9	2.2	7906.2	1.6
	Ga	31	12631.4	1.5	2668.0	1.4	*		10513	16	2491.4	1.4	7444.6	2.1
	Ge	32	12850#	150#	2220	40	*		10920	50	−2470#	200#	12900	40
	As	33	17150#	360#	−1350#	240#	*		11000#	360#	−1110#	360#	11740#	280#
	Se	34	*		−280#	580#	*		11060#	580#	−6350#	640#	16330#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
60	Ca	20	3610#	860#	*		*		33100#	740#	*		13760#	740#
	Sc	21	5210#	540#	41060#	860#	−14960#	780#	28540#	530#	−40590#	940#	13260#	580#
	Ti	22	7320	300	35150#	560#	−11010	350	24810	240	−35200#	650#	7440	280
	V	23	8800	210	32190	260	−10000	320	19880	180	−29550	310	6960	180
	Cr	24	11059	3	30570	180	−9910	100	14505	4	−28320#	300#	545.5	2.6
	Mn	25	13283	4	27120	100	−9210	180	8682.5	2.4	−22650	140	−374.3	2.4
	Fe	26	15401	3	23999	5	−8553	3	3060	3	−20586	3	−7255	3
	Co	27	17945.8	1.1	20400.8	2.7	−7163.7	0.4	−3305.2	1.6	−13414.1	2.4	−8564.92	0.21
	Ni	28	20387.01	0.07	16895.9	0.3	−6291.00	0.26	−10298.8	0.4	−11097.3	0.3	−16186.1	0.4
	Cu	29	22820.0	1.6	13075.9	1.9	−4729.7	1.6	−18760#	200#	−3404.4	1.6	−19200.9	1.7
	Zn	30	28020	50	8523.5	0.4	−2691.7	0.5	−26640#	300#	−306.6	0.4	−28490#	170#
	Ga	31	32190#	360#	2500#	200#	−3390#	200#	−33950#	450#	9480#	200#	−31290#	450#
	Ge	32	36090#	580#	−190#	300#	−4570#	500#	*		12400#	300#	*	
	As	33	*		−3320#	500#	−4230#	640#	*		20830#	430#	*	
61	Ca	20	2940#	1000#	*		*		35380#	860#	*		15490#	940#
	Sc	21	4810#	650#	42830#	1000#	−16060#	850#	30680#	640#	*		14530#	650#
	Ti	22	6630#	420#	36760#	670#	−12240#	500#	26130#	300#	−34660#	760#	8650#	350#
	V	23	8710	270	33930	340	−11220	300	21570	230	−32920#	550#	8660	230
	Cr	24	10523.2	2.0	31200#	300#	−10520	210	16424	3	−27690	240	2400.1	3.0
	Mn	25	12359	3	28710	140	−9730	80	11156.0	2.5	−25940	180	1600	4
	Fe	26	14398.2	2.6	25382.5	2.7	−8820	3	5301.5	2.6	−19301.0	2.8	−5341.4	2.6
	Co	27	16811.0	0.8	21950.8	2.5	−7836.8	1.7	−914.1	1.2	−17219.2	2.5	−6496.3	0.8
	Ni	28	19207.83	0.07	18135.0	0.3	−6464.93	0.26	−7873	16	−10098	3	−13948.1	1.6
	Cu	29	21768.2	1.0	14332.2	1.0	−5063.3	1.0	−14850	40	−7622.6	1.0	−15880.9	1.0
	Zn	30	25276	16	9770	16	−2690	16	−22560#	300#	835	16	−24830#	200#
	Ga	31	29520#	180#	5350	40	−2250	40	−29940#	300#	3920	40	−27680#	300#
	Ge	32	33560#	500#	1150#	300#	−3670#	360#	*		13100#	300#	−36220#	500#
	As	33	*		−1980#	350#	−4220#	500#	*		15100#	360#	*	
62	Sc	21	4280#	780#	*		−17050#	920#	32520#	660#	*		15610#	670#
	Ti	22	6240#	470#	37780#	810#	−13090#	640#	28650#	400#	−38500#	890#	9910#	460#
	V	23	8270	320	35240#	570#	−12160	330	23310	260	−33000#	660#	9210	260
	Cr	24	10087	4	33330	240	−12360	180	18025	4	−31770#	300#	2818	4
	Mn	25	11699	7	30010	180	−10520	100	12900	20	−25640	240	2325	7
	Fe	26	13608	4	26547	3	−9311	4	7868.4	2.8	−23671	3	−4051.2	2.9
	Co	27	15917	19	23034	19	−8022	19	1363	19	−16971	19	−5274	19
	Ni	28	18415.8	0.3	19911	3	−7016.1	0.4	−5578.4	0.4	−15114.9	2.6	−12833.7	1.0
	Cu	29	20584.9	1.7	15715.0	0.6	−5365.2	1.2	−10800.5	0.7	−7178.3	0.9	−14510	16
	Zn	30	23136.3	0.7	11272.8	0.5	−3364.1	0.5	−19030#	140#	−4235.0	0.5	−22100	40
	Ga	31	28540#	200#	8219.7	1.7	−2744.1	0.7	−27570#	300#	2708.1	1.1	−26270#	300#
	Ge	32	30750#	330#	2540#	140#	−2270#	150#	*		6920#	140#	−33010#	330#
	As	33	34920#	500#	−590#	360#	−3310#	420#	*		15430#	300#	*	
63	Sc	21	3570#	920#	*		−18110#	1060#	34810#	780#	*		17200#	810#
	Ti	22	5630#	580#	39450#	940#	−14100#	780#	30320#	510#	*		11280#	570#
	V	23	7710	410	36820#	690#	−13340	420	25150	340	−36340#	690#	11040	340
	Cr	24	9820	70	34390#	310#	−12720#	310#	19460	70	−31270#	410#	4270	70
	Mn	25	11288	4	31290	230	−11700	140	14964	19	−28960	260	3920	5
	Fe	26	12858	5	27717	5	−9945	4	9877	4	−22072	6	−2283	19
	Co	27	15096	19	24687	19	−8751	19	3728	19	−20617	20	−3176	19
	Ni	28	17433.5	0.3	21170.3	2.6	−7272.8	0.4	−3299.5	1.5	−13923.8	2.8	−10796.7	0.5
	Cu	29	19738.4	1.0	17259.6	0.7	−5774.9	0.4	−9032.8	1.4	−11444	19	−12483.1	0.4
	Zn	30	22007	16	12569.3	1.6	−3481.5	1.6	−15290	40	−2756.0	1.5	−18297.7	1.6
	Ga	31	25560	40	9141.0	1.6	−2613.6	1.4	−23050#	200#	−1048.5	1.5	−22480#	140#
	Ge	32	29270#	300#	5150	40	−2130	40	−30070#	500#	6960	40	−30570#	300#
	As	33	32440#	360#	940#	200#	−2170#	260#	*		11200#	200#	*	
	Se	34	*		−2360#	580#	−2910#	640#	*		18000#	520#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
64	Ti	22	3690#	780#	21840#	920#	53490#	600#	1920#	850#	2880#	850#	−14840#	1000#
	V	23	2650#	530#	17750#	640#	43470#	400#	6590#	570#	4910#	500#	−11170#	720#
	Cr	24	5530	310	19190	450	33460	300	2280	400	1400	380	−11620#	420#
	Mn	25	4173	5	14100	70	22435	4	8574	5	4372	4	−7170	230
	Fe	26	7405	7	15371	6	11034	5	4265	8	1637	6	−6827	5
	Co	27	6012	27	11446	20	−960	20	9796	20	3992	20	−2404	20
	Ni	28	9657.46	0.20	12536	19	−12784	4	5036	19	663.2	0.7	−2532.1	2.6
	Cu	29	7915.87	0.02	7200.50	0.03	−25890#	200#	12032.83	0.06	3661.7	0.3	3120.2	0.7
	Zn	30	11861.9	1.5	7713.1	0.6	−39140#	500#	7494.3	0.8	844.1	0.7	3864.4	0.7
	Ga	31	10357.0	1.9	3908.4	2.1	*		13046.1	1.5	2380	16	8797.6	1.6
	Ge	32	15470	40	5057	4	*		8382	4	−2320	40	7680	16
	As	33	14100#	290#	−100#	200#	*		13320#	250#	−880#	360#	13250#	210#
	Se	34	18080#	710#	650#	540#	*		8270#	580#	−4800#	580#	12580#	580#
65	Ti	22	1380#	920#	*		56430#	700#	2850#	990#	2760#	920#	*	
	V	23	3860#	640#	17920#	780#	47080#	500#	4460#	710#	4950#	640#	−13770#	780#
	Cr	24	2740#	360#	19280#	450#	36820#	200#	4140#	400#	1770#	330#	−10460#	450#
	Mn	25	6050	5	14620	300	26296	4	5920	70	4749	5	−10110	260
	Fe	26	4320	7	15518	6	14694	5	6380	6	2170	8	−4719	6
	Co	27	7464	20	11505	5	3472.3	2.2	7161	5	4557	3	−5015	7
	Ni	28	6098.08	0.14	12622	20	−8647.6	2.2	7437	19	1163	19	−601.3	2.8
	Cu	29	9910.6	0.7	7453.6	0.7	−20330	80	8960.0	0.7	4346.8	0.7	−193	19
	Zn	30	7979.32	0.17	7776.6	0.6	−32890#	300#	10378.7	0.6	1739.6	0.8	6480.8	0.6
	Ga	31	11896.0	1.6	3942.4	0.6	−46170#	500#	10266.7	1.6	3374.7	0.9	5776.5	0.9
	Ge	32	10234	4	4934.4	2.6	*		10779.7	2.5	372.9	2.3	10336.3	2.3
	As	33	15480#	220#	−90	80	*		10690	90	70#	160#	10700	80
	Se	34	14230#	580#	780#	360#	*		11190#	360#	−3740#	420#	14770#	330#
	Br	35	*		−3080#	710#	*		11070#	710#	*		13580#	580#
66	V	23	2260#	710#	18800#	860#	50110#	500#	5890#	780#	4420#	710#	−13720#	860#
	Cr	24	4900#	360#	20320#	580#	40870#	300#	1890#	500#	1460#	450#	−13630#	580#
	Mn	25	3854	12	15730#	200#	29508	11	7600	300	4290	70	−9360	340
	Fe	26	6921	7	16389	6	18831	4	3632	5	1683	6	−8240	70
	Co	27	5295	14	12480	15	7315	14	9272	15	4091	15	−3875	14
	Ni	28	8951.8	1.5	14110.1	2.5	−4399.3	2.8	4497	20	709	19	−4724	5
	Cu	29	7065.93	0.09	8421.5	0.7	−14233	6	11551.6	0.7	4118.7	0.7	1240	19
	Zn	30	11058.5	0.9	8924.5	0.9	−27240#	200#	7236.0	0.7	1544.7	0.7	2260.1	0.7
	Ga	31	9137.6	1.3	5100.7	1.2	−40150#	400#	12991.1	1.2	3353.8	1.9	7502.5	1.1
	Ge	32	13200	3	6238.5	2.5	*		7936.6	2.8	−195.9	2.7	6252.8	2.9
	As	33	13160	80	2836	6	*		13001	7	−240	40	10168	6
	Se	34	16710#	360#	2010#	220#	*		8580#	290#	−3300#	280#	10910#	200#
	Br	35	15150#	640#	−2160#	500#	*		14000#	640#	−1860#	640#	15580#	450#
67	V	23	3520#	780#	*		53580#	600#	3760#	920#	4600#	850#	*	
	Cr	24	2200#	500#	20260#	640#	44470#	400#	3550#	640#	1910#	570#	−12140#	720#
	Mn	25	4900#	200#	15730#	360#	33740#	200#	5440#	280#	4920#	360#	−11610#	450#
	Fe	26	3712	6	16247	12	22172	4	5970	5	2145	5	−6420	300
	Co	27	6985	15	12543	8	11557	7	6607	8	4512	8	−6686	7
	Ni	28	5808	3	14623	14	−1069	5	6153	4	914	20	−3127	6
	Cu	29	9132.6	1.1	8602.2	1.7	−10732.3	1.0	8517.0	0.9	4643.5	0.9	−1881	20
	Zn	30	7052.47	0.23	8911.1	0.9	−21300	70	10094.1	0.9	2408.1	0.7	4865.1	0.7
	Ga	31	11226.7	1.4	5268.9	1.1	−34350#	300#	9743.7	1.3	3988.9	1.3	4191.7	1.2
	Ge	32	9138	5	6239	4	−47120#	420#	10695	4	1023	5	8977	4
	As	33	12633	6	2269.2	2.4	*		10601.8	2.2	2592	4	7892.0	1.5
	Se	34	12990#	210#	1840	70	*		11070	110	−2180#	210#	13380	70
	Br	35	17030#	500#	−1840#	360#	*		11200#	420#	−810#	580#	12650#	360#
	Kr	36	*		−730#	580#	*		11650#	660#	*		16950#	660#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
64	Ti	22	5420#	720#	*		−14910#	920#	32160#	670#	*		12190#	690#
	V	23	7250#	480#	38210#	720#	−14190#	640#	26670#	400#	−36680#	810#	11790#	410#
	Cr	24	8930	300	36020#	500#	−13970	380	21330	300	−35070#	580#	5180	300
	Mn	25	10608	7	32350	260	−12330	180	16803	20	−28540	340	4575	6
	Fe	26	12234	6	28695	6	−10486	5	12129	5	−26080	70	−1189	19
	Co	27	14511	27	25846	21	−9249	20	5632	20	−20194	20	−2351	20
	Ni	28	16495.23	0.21	22798.9	2.8	−8111	3	−1095.0	0.7	−18752	4	−9590.48	0.20
	Cu	29	18779.5	0.5	18578	19	−6198.9	0.4	−6591.6	1.5	−10862	19	−11282.3	1.5
	Zn	30	20978.6	0.8	13835.5	0.6	−3955.7	0.7	−11689	4	−7780.1	0.6	−17528.2	1.5
	Ga	31	22988.4	1.5	10623.2	1.5	−2912.5	2.1	−19300#	200#	−541.9	1.5	−19980	40
	Ge	32	28320#	140#	7725	4	−2566	4	−27460#	500#	609	4	−28890#	200#
	As	33	31260#	360#	2120#	200#	−2370#	290#	*		9730#	200#	−30750#	540#
	Se	34	*		−700#	520#	−1750#	580#	*		12770#	500#	*	
65	Ti	22	5070#	860#	*		−16230#	1060#	33520#	730#	*		13460#	810#
	V	23	6510#	610#	39760#	860#	−15040#	780#	28860#	500#	*		13460#	580#
	Cr	24	8270#	210#	37030#	540#	−14370#	360#	22910#	200#	−34120#	630#	6610#	200#
	Mn	25	10223	5	33810	340	−13220	230	18218	4	−31940#	400#	5931	6
	Fe	26	11725	7	29620	70	−11146	5	13908	5	−24870	300	503	21
	Co	27	13476	19	26876	4	−9868	3	8078.5	2.2	−23485	4	−157.5	2.1
	Ni	28	15755.54	0.25	24068	4	−8630.2	2.7	786.2	0.7	−17445	5	−7772.70	0.25
	Cu	29	17826.4	0.7	19990	19	−6790.4	1.0	−4606.2	0.7	−14760	20	−9331.0	0.4
	Zn	30	19841.2	1.5	14977.1	0.6	−4114.9	0.7	−9433.8	2.3	−6102.0	0.7	−15150.5	1.5
	Ga	31	22253.0	1.5	11655.6	0.8	−3098.3	0.9	−15720	80	−4522.0	0.8	−16413	4
	Ge	32	25700	40	8842.7	2.7	−2554	16	−23460#	300#	2236.8	2.3	−25020#	200#
	As	33	29580#	220#	4970	80	−2230	90	−30450#	510#	4610	80	−28150#	510#
	Se	34	32310#	580#	680#	300#	−1660#	420#	*		14010#	300#	*	
	Br	35	*		−2430#	540#	−1720#	580#	*		15750#	540#	*	
66	V	23	6120#	640#	*		−16040#	780#	30450#	500#	*		13940#	540#
	Cr	24	7640#	420#	38240#	670#	−15370#	500#	24930#	300#	−37640#	760#	7760#	300#
	Mn	25	9904	12	35010#	400#	−13960	260	19658	18	−31930#	500#	6396	12
	Fe	26	11241	6	31010	300	−11640	5	15938	4	−29050#	200#	1046	5
	Co	27	12759	24	27997	14	−10309	15	9850	14	−22730	14	646	14
	Ni	28	15049.9	1.5	25615	5	−9553	3	2892.9	1.6	−22077	5	−6813.9	1.5
	Cu	29	16976.5	0.7	21044	20	−7259	19	−2534.6	1.2	−14362.1	2.2	−8417.6	0.4
	Zn	30	19037.8	0.9	16378.1	0.7	−4577.7	0.7	−7292.2	2.5	−11062.4	0.7	−14313.1	1.0
	Ga	31	21033.5	1.8	12877.3	1.1	−3361.1	1.2	−11699	6	−3749.0	1.2	−15316.8	2.4
	Ge	32	23434	4	10181.0	2.5	−2863.9	2.5	−19950#	200#	−2984.0	2.5	−22740	80
	As	33	28640#	200#	7770	6	−2463	6	−28460#	400#	3343	6	−27080#	300#
	Se	34	30940#	540#	1920#	200#	−1950#	240#	*		7530#	200#	−33240#	540#
	Br	35	*		−1390#	450#	−1570#	500#	*		16080#	410#	*	
67	V	23	5780#	780#	*		−17240#	920#	31840#	630#	*		15330#	670#
	Cr	24	7100#	450#	39060#	810#	−15840#	640#	26440#	400#	*		9410#	400#
	Mn	25	8760#	200#	36050#	540#	−14270#	400#	21740#	200#	−34570#	540#	8420#	200#
	Fe	26	10633	6	31980#	200#	−11960	70	18034	5	−27860#	300#	2629	14
	Co	27	12279	7	28932	7	−10860	7	11998	7	−25860	13	2613	7
	Ni	28	14759.5	2.9	27103	6	−10532	5	4137.7	3.0	−20964	5	−5555.7	3.0
	Cu	29	16198.5	1.1	22712.3	2.3	−7893	19	−440.4	1.3	−18200	14	−6491.6	0.8
	Zn	30	18111.0	0.9	17332.5	0.7	−4792.4	0.7	−5207	4	−9163.1	1.6	−12228.0	0.8
	Ga	31	20364.3	1.4	14193.4	1.3	−3724.2	1.2	−10291.9	1.3	−7909.8	1.3	−13343.4	2.7
	Ge	32	22338	5	11340	4	−2885	5	−16090	70	−1063	4	−18720	7
	As	33	25790	80	8507.7	0.9	−2465.0	1.4	−24060#	300#	−152.5	1.2	−23000#	200#
	Se	34	29700#	310#	4680	70	−2080	80	−31030#	430#	7740	70	−31080#	410#
	Br	35	32180#	580#	170#	310#	−1450#	360#	*		12210#	300#	*	
	Kr	36	*		−2890#	300#	−1130#	660#	*		18820#	470#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
68	Cr	24	4490#	640#	21240#	780#	47770#	500#	1320#	710#	1280#	710#	−15250#	860#
	Mn	25	3410#	360#	16940#	500#	36650#	300#	6930#	420#	4250#	360#	−11160#	580#
	Fe	26	6260#	190#	17610#	280#	26110#	190#	3560#	190#	1940#	190#	−9940#	280#
	Co	27	4392	8	13223	5	15443	4	9136	6	4439	6	−5029	5
	Ni	28	7792	4	15431	7	3515	4	3656	14	585	4	−6600	6
	Cu	29	6318.8	1.8	9113	3	−6672.5	2.4	11150.1	2.1	4422.8	1.7	−735.4	2.6
	Zn	30	10198.10	0.19	9976.6	0.9	−15817.7	0.9	6961.9	1.0	2120.6	1.0	765.0	0.8
	Ga	31	8278.2	1.7	6494.6	1.2	−28300#	260#	12524.0	1.2	3690.0	1.5	5824.0	1.5
	Ge	32	12376	5	7388.6	2.2	−41350#	500#	7455.7	2.2	542.7	2.0	4579.6	2.0
	As	33	10378.6	1.9	3510	5	*		13423	3	2447.8	2.8	9409.4	2.0
	Se	34	15680	70	4891.2	0.7	*		8546	6	−2390	80	7935.2	2.2
	Br	35	14330#	400#	−500#	250#	*		13580#	330#	−910#	400#	13790#	270#
	Kr	36	18150#	660#	390#	580#	*		8650#	640#	−4270#	710#	13040#	580#
69	Cr	24	2010#	710#	*		50350#	500#	2830#	780#	1530#	710#	*	
	Mn	25	4510#	500#	16960#	640#	40380#	400#	4620#	570#	4640#	500#	−13410#	640#
	Fe	26	3370#	280#	17570#	360#	29220#	200#	5090#	280#	2420#	200#	−8410#	360#
	Co	27	6810	90	13780#	210#	18940	90	6030	90	4550	90	−7990	90
	Ni	28	4586	5	15625	5	7122	4	6054	7	1294	14	−4264	6
	Cu	29	8240.5	2.1	9561	3	−2620	30	8717	3	5134.1	2.0	−3681	14
	Zn	30	6482.07	0.16	10139.8	1.8	−11983.2	1.7	9612.5	0.9	2704.4	1.0	3234.8	1.6
	Ga	31	10313.1	1.9	6609.6	1.4	−23070	40	9263.4	1.4	4435.5	1.4	2576.9	1.4
	Ge	32	8193.2	2.3	7303.6	1.9	−34960#	300#	10489.3	1.8	1487.1	1.7	7445.0	1.5
	As	33	12290	30	3420	30	*		10270	30	3360	30	6260	30
	Se	34	10316.6	1.6	4829.2	2.4	*		10863.3	1.6	454	6	10818.7	2.8
	Br	35	15540#	260#	−640	40	*		11030	80	270#	210#	11410	40
	Kr	36	14590#	580#	640#	400#	*		11100#	420#	−3710#	500#	15170#	360#
70	Cr	24	4080#	780#	*		53570#	600#	*		970#	850#	*	
	Mn	25	3160#	640#	18110#	710#	42530#	500#	5950#	710#	3680#	640#	−13060#	780#
	Fe	26	5760#	360#	18820#	500#	32680#	300#	2740#	420#	1550#	360#	−11970#	500#
	Co	27	4210	90	14620#	200#	22385	11	8080#	190#	4048	12	−7300#	200#
	Ni	28	7307	4	16120	90	11348.2	2.3	3140	4	972	7	−7859	4
	Cu	29	5311.5	1.8	10287	4	1357.6	1.8	11198	3	5630	3	−2008	7
	Zn	30	9218.2	2.0	11117.5	2.4	−7634.8	2.5	6713.1	2.5	2618.9	2.1	−176	3
	Ga	31	7653.65	0.17	7781.2	1.4	−17485	15	11807.8	1.4	3834.3	1.4	4055.8	1.5
	Ge	32	11532.7	1.5	8523.2	1.4	−29460#	200#	7234.8	1.6	1181.2	1.2	2964.7	1.0
	As	33	9290	30	4522.3	1.9	*		13355.6	2.3	3204	5	8191.6	1.8
	Se	34	13566.5	2.2	6110	30	*		7675.4	2.4	−478.6	1.6	6390	5
	Br	35	13240	40	2280	15	*		13475	15	20	70	10808	15
	Kr	36	17030#	360#	2130#	210#	*		8400#	330#	−3710#	360#	11130#	210#
71	Mn	25	4240#	710#	18270#	780#	46090#	500#	3720#	710#	3930#	710#	*	
	Fe	26	3110#	500#	18770#	640#	35400#	400#	4140#	570#	1850#	500#	−10590#	640#
	Co	27	5920	470	14770#	550#	25770	470	5540#	510#	4390#	500#	−9800#	550#
	Ni	28	4264	3	16170	11	14500.4	2.4	5690	90	1100	4	−5860#	190#
	Cu	29	7806.1	1.8	10786.2	2.6	5182	4	7978	4	5617	3	−5422	4
	Zn	30	5835	3	11641.4	2.9	−4182	4	9118.2	3.0	3102	3	1781	4
	Ga	31	9300.3	1.4	7863.3	2.1	−13637	5	8989.6	1.1	4732.1	1.0	1074.3	1.8
	Ge	32	7415.94	0.11	8285.5	1.4	−23580	130	10132.0	1.4	2043.5	1.6	5746.9	1.0
	As	33	11631	4	4620	4	−35600#	400#	9918	4	3950	5	4839	4
	Se	34	9288	3	6102	3	*		10680	30	612	3	9479	3
	Br	35	13148	16	1861	6	*		10643	6	2551	5	8039	6
	Kr	36	13300#	240#	2190	130	*		10640	140	−2670#	290#	13510	130
	Rb	37	*		−1520#	450#	*		10560#	500#	−1800#	640#	12150#	480#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
68	Cr	24	6690#	580#	*		−16640#	780#	28210#	540#	*		9820#	540#
	Mn	25	8310#	300#	37200#	580#	−15030#	500#	22720#	300#	−34470#	670#	8720#	300#
	Fe	26	9970#	190#	33340#	360#	−12680#	360#	19570#	190#	−31920#	440#	3350#	190#
	Co	27	11377	14	29470	12	−11078	5	13924	4	−25350#	200#	4029	5
	Ni	28	13600	3	27974	5	−10919	6	6543	3	−25044	5	−4216	3
	Cu	29	15451.4	1.7	23736	14	−8200	20	1519.0	2.1	−17534	7	−5758.0	1.8
	Zn	30	17250.6	0.3	18578.8	1.6	−5333.0	0.8	−3028.4	2.0	−13553.4	3.0	−11199.3	1.1
	Ga	31	19505.0	1.5	15405.7	1.5	−4086.6	1.4	−8191.5	2.3	−7055.5	1.5	−12484	4
	Ge	32	21514	3	12657.5	2.0	−3399.7	2.0	−12789.4	1.9	−6387.4	2.0	−18462.9	1.9
	As	33	23012	6	9748.7	2.1	−2486.6	2.3	−20100#	260#	695.7	2.2	−20390	70
	Se	34	28670#	200#	7160.4	2.5	−2299	4	−28560#	500#	1195	4	−29730#	300#
	Br	35	31360#	480#	1340#	260#	−1680#	330#	*		10510#	260#	−31310#	500#
	Kr	36	*		−1460#	540#	−1190#	710#	*		13670#	510#	*	
69	Cr	24	6500#	640#	*		−17270#	860#	29570#	540#	*		11220#	580#
	Mn	25	7920#	450#	38190#	720#	−15670#	640#	25030#	410#	*		10470#	440#
	Fe	26	9630#	200#	34510#	450#	−13310#	280#	20780#	200#	−30800#	540#	4370#	200#
	Co	27	11210	90	31380#	220#	−11840	90	15350	90	−28750#	310#	5010	90
	Ni	28	12379	5	28848	5	−11186	6	8439	4	−23370#	190#	−2483	4
	Cu	29	14559.3	1.7	24992	7	−8975.9	2.5	3591.6	1.8	−21383	4	−3800.4	1.6
	Zn	30	16680.17	0.25	19253.2	3.0	−5717.0	0.8	−1317.2	1.5	−12243	3	−9403.2	1.2
	Ga	31	18591.3	1.7	16586.2	1.5	−4489.1	1.4	−6220	30	−11049.7	2.0	−10420.3	2.2
	Ge	32	20570	5	13798.2	1.5	−3613.6	1.5	−10666.0	2.0	−4382.5	1.5	−16277.5	2.3
	As	33	22670	30	10810	30	−2880	30	−16850	50	−3320	30	−16990	30
	Se	34	26000	70	8339	5	−2381.4	2.6	−24290#	300#	3255.1	2.4	−25720#	260#
	Br	35	29870#	300#	4250	40	−1750	90	*		5350	40	−28700#	500#
	Kr	36	32730#	520#	140#	310#	−1550#	420#	*		14760#	300#	*	
70	Cr	24	6090#	780#	*		*		31250#	670#	*		11650#	720#
	Mn	25	7670#	580#	*		−16580#	710#	26080#	500#	*		10680#	540#
	Fe	26	9140#	360#	35780#	580#	−14180#	420#	22320#	300#	−34550#	580#	5420#	310#
	Co	27	11025	12	32180#	300#	−12199	16	16451	11	−28450#	400#	5382	12
	Ni	28	11893	4	29900#	190#	−11571	5	10350.9	2.9	−27300#	200#	−1549.0	2.6
	Cu	29	13552.0	1.9	25912	4	−8993	14	5933.8	1.6	−19880	90	−2629.8	1.3
	Zn	30	15700.2	2.0	20679	4	−5983.4	2.4	997.3	2.1	−16875	4	−8308.2	1.6
	Ga	31	17966.7	1.9	17921.0	2.0	−5076.8	1.4	−4576.2	1.8	−10462.9	1.8	−9880.8	0.6
	Ge	32	19725.9	2.0	15132.8	1.0	−4087.7	1.0	−8632.1	1.8	−9433.1	1.1	−15520	30
	As	33	21582.1	2.3	11825.9	2.0	−3035.2	1.8	−12908	15	−2295.1	1.8	−15970.6	2.0
	Se	34	23883.1	1.7	9529.0	2.5	−2747.8	2.9	−20830#	200#	−2118.2	2.1	−23740	40
	Br	35	28780#	260#	7109	15	−1825	16	*		4400	40	−27360#	300#
	Kr	36	31620#	540#	1490#	200#	−1870#	280#	*		8050#	200#	*	
71	Mn	25	7400#	640#	*		−17300#	780#	27750#	680#	*		12200#	580#
	Fe	26	8870#	450#	36880#	640#	−15090#	570#	23480#	400#	−33580#	720#	6520#	400#
	Co	27	10130	470	33590#	610#	−13210#	510#	18340	470	−31210#	680#	6770	470
	Ni	28	11570	4	30790#	200#	−12123	4	11923	3	−25810#	300#	−501.2	2.5
	Cu	29	13117.5	2.0	26900	90	−9814	7	7428.0	1.7	−23475	11	−1217.7	2.4
	Zn	30	15053.5	2.8	21928	5	−6011	4	2577.9	2.8	−15404	3	−6490.0	2.9
	Ga	31	16953.9	1.4	18980.8	1.6	−5244.5	1.2	−2246	4	−14451.7	1.4	−7648.41	0.14
	Ge	32	18948.6	1.5	16066.7	1.1	−4451.2	1.0	−6760.1	2.9	−7630.9	2.1	−13644.0	1.6
	As	33	20920	30	13143	4	−3439	4	−11391	7	−6272	4	−14035	4
	Se	34	22854	3	10624	3	−2898	5	−16820	130	126.6	2.9	−19792	15
	Br	35	26390	40	7970	30	−2340	5	−24210#	400#	543	6	−23470#	200#
	Kr	36	30330#	330#	4470	130	−2170	150	*		8310	130	*	
	Rb	37	*		610#	400#	−2190#	500#	*		11850#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
72	Mn	25	2620#	780#	*		48610#	600#	5180#	850#	3320#	780#	*	
	Fe	26	5390#	640#	19920#	710#	38900#	500#	1910#	710#	970#	640#	−13970#	710#
	Co	27	4000#	550#	15660#	500#	28290#	300#	7300#	420#	3760#	360#	−9290#	500#
	Ni	28	6891	3	17150	470	18359.8	2.2	3010	11	1020	90	−9380#	200#
	Cu	29	5143.2	2.0	11665.7	2.6	8447	4	10141.7	2.6	5060	4	−3750	90
	Zn	30	8888	3	12723.3	2.6	−277.3	2.9	5541.7	2.4	2454.8	2.6	−2520	4
	Ga	31	6520.48	0.19	8548.5	2.8	−9526.5	1.3	11687.3	2.1	4693.7	1.1	2794.3	1.6
	Ge	32	10750.6	0.8	9735.8	0.8	−18645	8	7035.0	1.2	1606.0	1.2	1478.4	0.8
	As	33	8408	6	5612	4	−29900#	500#	13043	4	3735	4	6744	4
	Se	34	12793	3	7264	5	*		7176.6	2.4	110	30	4878.9	2.4
	Br	35	10631	5	3204.2	3.0	*		13579.0	1.9	2237.0	1.8	9700	30
	Kr	36	15680	130	4727	10	*		8196	17	−2820	40	8141	8
	Rb	37	14110#	640#	−710#	520#	*		13480#	540#	−1330#	580#	13580#	500#
73	Mn	25	3600#	850#	*		52290#	600#	*		3800#	850#	*	
	Fe	26	2810#	710#	20110#	780#	41600#	500#	3340#	710#	1320#	710#	−12700#	780#
	Co	27	5740#	420#	16010#	580#	31730#	300#	4670#	500#	3780#	420#	−11870#	580#
	Ni	28	3953	3	17100#	300#	21189.4	2.4	4970	470	1281	11	−7570#	300#
	Cu	29	7275.8	2.4	12050.3	3.0	11965	4	7129.6	3.0	5090.5	2.9	−6816	11
	Zn	30	5519.2	2.8	13099.4	2.3	2634	8	7828.5	2.4	2247.0	2.2	−733.1	2.8
	Ga	31	9182.4	1.9	8842.8	2.7	−6054	7	8340	3	4729.5	2.5	−1076.6	2.0
	Ge	32	6782.94	0.05	9998.2	0.8	−14746	7	9552.4	0.8	2476.7	1.2	3913.6	1.9
	As	33	10794	6	5656	4	−24940	40	9665	4	4473	4	3604	4
	Se	34	8431	8	7287	8	−36280#	400#	10377	9	971	8	7981	7
	Br	35	12655	7	3067	7	*		10212	7	3148	7	6335	7
	Kr	36	10682	10	4779	7	*		10661	9	−262	16	11025	7
	Rb	37	15750#	500#	−640	40	*		11030	140	−50#	200#	11060	40
	Sr	38	*		910#	640#	*		11050#	570#	*		14800#	450#
74	Fe	26	4740#	710#	21250#	780#	45100#	500#	1220#	780#	820#	710#	*	
	Co	27	3640#	500#	16840#	640#	34510#	400#	6420#	640#	3250#	570#	−11270#	640#
	Ni	28	6660#	200#	18020#	360#	24720#	200#	2310#	360#	530#	510#	−11120#	450#
	Cu	29	5090	6	13187	7	14854	6	8931	7	4264	7	−5990	470
	Zn	30	8235	3	14058	3	6456.5	2.5	4737.1	2.9	1818.5	2.9	−4704	3
	Ga	31	6422	3	9745	4	−2761	7	10807	4	4143	4	308	3
	Ge	32	10196.24	0.06	11012.1	1.7	−11090.6	2.0	5876.6	0.8	1580.7	0.8	−447.3	2.7
	As	33	7979	4	6851.5	1.7	−18944	3	12436.7	1.7	3910.6	1.9	4925.5	1.9
	Se	34	12057	7	8549	4	−31390#	100#	6727	4	544	4	3339.8	0.8
	Br	35	9714	9	4350	9	*		13291	6	2722	6	8251	7
	Kr	36	13851	7	5975	7	*		7440.7	2.3	−965	6	6461	3
	Rb	37	13980	40	2653	7	*		12735	9	−720	130	10233	6
	Sr	38	16950#	410#	2110#	110#	*		8210#	510#	−3670#	410#	11150#	160#
75	Fe	26	2110#	780#	*		47860#	600#	2710#	850#	1330#	850#	*	
	Co	27	5090#	570#	17190#	640#	37900#	400#	4140#	640#	3550#	640#	−13750#	720#
	Ni	28	3610#	280#	17990#	450#	27620#	200#	4440#	360#	920#	360#	−9340#	540#
	Cu	29	6535	6	13060#	200#	18564.0	1.1	6348.7	2.5	4619.9	2.3	−8520#	300#
	Zn	30	4874	3	13842	6	9610.6	2.0	7139.3	2.8	2088.1	2.4	−2686.4	3.0
	Ga	31	8482	3	9992.9	2.6	646	4	7843.6	2.0	4548.9	2.2	−3031.2	1.5
	Ge	32	6505.84	0.05	11096.3	3.0	−7533	8	8553.2	1.7	1595.4	0.8	1934.9	2.1
	As	33	10245.5	1.9	6900.7	0.9	−15815.5	1.5	8974.1	0.9	4415.8	0.9	1200.5	1.2
	Se	34	8027.60	0.07	8598.4	1.7	−25550	220	9494	4	924	4	6062.82	0.10
	Br	35	11890	7	4183	4	−37290#	300#	9831	9	3625	5	4769	6
	Kr	36	10063	8	6324	10	*		10033	11	−398	8	9191	8
	Rb	37	13374	3	2175.8	2.3	*		10044	7	1586	8	7489.5	1.6
	Sr	38	13860#	240#	1990	220	*		10100	220	−3430#	550#	12970	220
	Y	39	*		−1720#	320#	*		10840#	500#	*		12160#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
72	Mn	25	6860#	780#	*		*		29130#	670#	*		12690#	720#
	Fe	26	8500#	580#	38190#	780#	−15990#	710#	24980#	500#	*		7050#	680#
	Co	27	9920#	300#	34430#	580#	−13810#	420#	19480#	300#	−30970#	580#	7040#	300#
	Ni	28	11155	3	31910#	300#	−12750#	190#	13919	3	−29590#	400#	413.7	2.7
	Cu	29	12949.3	1.8	27836	11	−10565	4	8805.3	1.6	−22700	470	−525.5	3.0
	Zn	30	14723.4	2.9	23510	3	−7107	4	4440.4	2.1	−20028	3	−6077.7	2.3
	Ga	31	15820.8	1.5	20189.8	1.4	−5446.2	1.8	−358	4	−13166.1	1.7	−6752.95	0.21
	Ge	32	18166.5	0.8	17599.1	1.9	−5003.7	0.8	−4717.7	2.0	−12546.1	2.7	−12764	4
	As	33	20038	4	13898	4	−3569	4	−9168	4	−5380	4	−13155	5
	Se	34	22080.9	2.5	11884.1	2.1	−3314.3	2.7	−13928	8	−5250.5	2.1	−19437	6
	Br	35	23779	15	9305.7	1.7	−2592.1	2.1	−20730#	500#	1543	4	−20810	130
	Kr	36	28980#	200#	6589	8	−2176	8	*		1917	8	−29720#	400#
	Rb	37	*		1480#	500#	−1960#	560#	*		10880#	500#	*	
73	Mn	25	6220#	780#	*		*		31270#	670#	*		14480#	780#
	Fe	26	8200#	640#	*		−16790#	710#	26120#	500#	*		8240#	580#
	Co	27	9740#	550#	35930#	580#	−15040#	500#	21020#	300#	−34090#	670#	8190#	300#
	Ni	28	10845	3	32760#	400#	−13330#	200#	15485	3	−28150#	500#	1603.5	2.8
	Cu	29	12418.9	2.4	29200	470	−11030	90	10711.9	2.6	−25980#	300#	1086.7	2.9
	Zn	30	14407	3	24765.1	2.9	−8040	4	5704.1	1.9	−18656.3	2.9	−5076.4	2.0
	Ga	31	15702.9	1.9	21566.2	2.2	−6388.0	2.2	1253	4	−17205.3	2.2	−5184.8	1.7
	Ge	32	17533.5	0.8	18546.7	2.7	−5304.5	0.8	−3070	7	−10441.0	2.1	−11139	4
	As	33	19202	6	15392	4	−4050	4	−7307	8	−9653	4	−11156	4
	Se	34	21224	8	12899	7	−3552	8	−11676	10	−2930	7	−17237	7
	Br	35	23286	9	10330	8	−2960	30	−17630	40	−2705	8	−17777	10
	Kr	36	26370	130	7983	7	−2542	7	−24600#	400#	4027	7	−26290#	500#
	Rb	37	29860#	400#	4090	40	−2180	60	*		5760	40	*	
	Sr	38	*		200#	420#	−2240#	500#	*		14700#	400#	*	
74	Fe	26	7550#	710#	*		−17440#	780#	28040#	540#	*		9240#	580#
	Co	27	9380#	500#	36950#	720#	−15520#	640#	22470#	400#	−34130#	720#	8500#	400#
	Ni	28	10620#	200#	34030#	540#	−14240#	360#	17060#	200#	−32000#	540#	2220#	200#
	Cu	29	12366	6	30280#	300#	−11906	13	12043	7	−25330#	300#	1516	6
	Zn	30	13754	3	26109	3	−8968	3	7665.7	2.5	−22938	3	−4129	3
	Ga	31	15604	3	22845	3	−7498	3	2810	3	−16351	4	−4823.4	3.0
	Ge	32	16979.18	0.07	19854.9	2.1	−6282.6	1.9	−1209.24	0.01	−15118.0	1.9	−10541	4
	As	33	18773	4	16849.7	1.9	−4374.8	2.1	−5572	6	−8449.7	2.4	−10704	8
	Se	34	20487.7	2.0	14205.24	0.08	−4076.1	0.8	−9881.4	2.0	−8204.65	0.06	−16639	7
	Br	35	22369	6	11636	7	−3379	6	−13372	7	−1624	7	−16808	9
	Kr	36	24534	8	9041.6	2.8	−2826.9	2.6	−21500#	100#	−1393	8	−24390	40
	Rb	37	29730#	500#	7432	3	−2915	15	*		4441	7	−28040#	400#
	Sr	38	*		1470#	100#	−2150#	220#	*		8440#	100#	*	
75	Fe	26	6850#	780#	*		*		29540#	630#	*		10770#	720#
	Co	27	8730#	500#	38440#	720#	−16370#	640#	23910#	400#	*		10070#	450#
	Ni	28	10280#	200#	34830#	540#	−14740#	450#	18320#	200#	−30870#	540#	3700#	200#
	Cu	29	11625.4	2.1	31080#	300#	−12530	470	13990.4	1.0	−28220#	400#	3215.2	2.6
	Zn	30	13108.1	2.7	27029	3	−9577.6	3.0	9298.1	2.0	−21150#	200#	−2581	4
	Ga	31	14903.9	1.8	24051.1	2.1	−8174.4	1.6	4573.6	1.1	−19743	6	−3109.5	0.7
	Ge	32	16702.08	0.07	20841.5	1.9	−6953.1	2.7	312.52	0.09	−13389.2	2.5	−9068.2	1.7
	As	33	18224	4	17912.8	1.9	−5320.0	1.2	−3927	4	−12274	3	−8892.3	0.9
	Se	34	20085	7	15449.90	0.09	−4687.7	0.8	−7846	8	−6036.01	0.07	−14953	6
	Br	35	21604	8	12732	6	−3639	6	−11888	4	−5536	5	−14846	5
	Kr	36	23915	10	10674	11	−3602	9	−17700	220	601	8	−20479	9
	Rb	37	27350	40	8151	7	−3141	6	−25400#	300#	780	6	−24460#	100#
	Sr	38	30810#	460#	4640	220	−2720	250	*		8420	220	*	
	Y	39	*		390#	300#	−1960#	500#	*		12810#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
76	Fe	26	3960#	850#	*		51710#	600#	*		970#	850#	*	
	Co	27	3170#	640#	18250#	780#	40640#	500#	5710#	710#	3190#	710#	−13310#	780#
	Ni	28	6020#	360#	18920#	500#	31020#	300#	2060#	500#	640#	420#	−12550#	580#
	Cu	29	4582.7	1.2	14030#	200#	21309.8	1.3	8430#	200#	3990.6	2.6	−7370#	300#
	Zn	30	7815.4	2.4	15121.8	1.6	12948.9	1.5	4414	6	1548.5	2.4	−6548.5	2.8
	Ga	31	5907.3	2.1	11026.7	2.8	3992	10	10171	3	4160.8	2.7	−1662.8	2.8
	Ge	32	9427.24	0.05	12041.2	0.7	−4199	4	5547.5	3.0	1350.5	1.7	−1973.1	1.9
	As	33	7328.50	0.07	7723.4	0.9	−11812.3	1.3	11841.9	0.9	3870.2	0.9	3054.4	1.9
	Se	34	11153.79	0.07	9506.7	0.9	−21000	30	6318.9	1.7	565	4	1691.98	0.06
	Br	35	9253	10	5409	9	−32040#	300#	12635	9	2802	12	6310	10
	Kr	36	12761	9	7196	6	*		6985	7	−504	8	4860	8
	Rb	37	11331.7	1.5	3444	8	*		12563.6	2.2	937	7	8813	7
	Sr	38	15700	220	4320	30	*		8380	30	−3370	50	7950	40
	Y	39	14500#	420#	−1080#	370#	*		13290#	320#	−1440#	500#	13410#	300#
77	Co	27	4320#	780#	18610#	850#	44080#	600#	3500#	850#	3610#	780#	*	
	Ni	28	3230#	500#	18980#	640#	33860#	400#	3920#	570#	1050#	570#	−11040#	640#
	Cu	29	5952.5	1.5	13960#	300#	25053.5	2.1	6090#	200#	4700#	200#	−9680#	400#
	Zn	30	4557.5	2.5	15096.5	2.2	15810.3	2.0	6391.8	2.1	2081	6	−4440#	200#
	Ga	31	7767	3	10978.3	2.8	7242	4	7277	3	4628	3	−4340	7
	Ge	32	6071.29	0.05	12205.2	2.0	−1043.4	2.0	7958.6	0.7	1700.8	3.0	190.3	2.5
	As	33	9696.3	1.9	7992.4	1.7	−9085.8	2.1	8651.4	1.7	4370.2	1.7	−220	3
	Se	34	7418.86	0.06	9597.1	0.9	−16796	8	9145.5	0.9	1124.6	1.7	4469.36	0.06
	Br	35	11017	10	5271.8	2.8	−26800#	200#	9645.5	2.8	3842.4	2.8	3272	3
	Kr	36	9227	4	7169	10	−38570#	400#	9648	5	−17	6	7690.2	2.0
	Rb	37	12422.7	1.6	3106	4	*		10204	8	2365.4	2.4	6104	6
	Sr	38	11630	40	4613	8	*		10126	8	−1023	8	10175	8
	Y	39	16260#	360#	−520#	200#	*		10890#	300#	−750#	230#	11120#	200#
	Zr	40	*		640#	500#	*		10930#	500#	*		14870#	410#
78	Co	27	1480#	920#	*		48380#	700#	5980#	920#	4240#	920#	*	
	Ni	28	5600#	570#	20260#	720#	36980#	400#	1490#	640#	550#	570#	−14530#	720#
	Cu	29	3998	13	14730#	400#	28027	17	8110#	300#	4320#	200#	−8580#	400#
	Zn	30	6765.4	2.8	15909.4	2.3	19542.7	2.0	4209.2	2.1	1851.0	2.1	−7600#	200#
	Ga	31	5783.1	2.6	12203.9	2.2	9748	4	9309.7	1.8	3718.9	2.2	−3587.5	1.3
	Ge	32	8721	4	13159	4	2316	4	5145	4	1463	4	−3657	4
	As	33	6972	10	8893	10	−5882	10	11107	10	3904	10	1290	10
	Se	34	10497.77	0.17	10398.6	1.7	−13852	7	5976.2	0.9	872.3	0.9	477.42	0.19
	Br	35	8289	5	6142	4	−21280#	300#	12511	4	3581	4	5228	4
	Kr	36	12080.1	2.0	8232.4	2.8	−33330#	400#	6822	9	−207	4	3637.6	0.3
	Rb	37	10176	3	4055	4	*		12789	5	2252	9	7818	5
	Sr	38	13442	11	5632	8	*		8016	8	−1091	8	6796	11
	Y	39	13810#	360#	1660#	300#	*		12790#	300#	−690#	370#	10690#	300#
	Zr	40	17320#	570#	1700#	450#	*		8110#	500#	−4170#	500#	11420#	460#
79	Ni	28	1350#	640#	20130#	860#	41370#	500#	4460#	780#	2360#	710#	−11920#	780#
	Cu	29	5690	110	14820#	410#	31230	110	5650#	410#	4650#	320#	−11100#	510#
	Zn	30	4020.4	3.0	15932	14	22485.2	2.2	6141.3	2.5	2413.4	2.4	−5600#	300#
	Ga	31	6915.6	1.6	12354.1	2.3	13519.7	1.6	6951.7	2.3	4618.7	1.9	−5920.3	1.5
	Ge	32	5740	40	13110	40	4920	40	7180	40	1630	40	−1580	40
	As	33	8890	11	9063	6	−2833	6	8288	5	4441	5	−1693	6
	Se	34	6962.83	0.13	10389	10	−10438	7	8709.7	1.7	1238.0	0.9	2941.83	0.22
	Br	35	10687	4	6331.1	1.0	−18270	80	9242.2	1.0	4047.9	1.0	1869.7	1.3
	Kr	36	8335	3	8279	5	−27670#	300#	9503	4	711	10	6456	3
	Rb	37	11939	4	3913.5	2.0	−39150#	500#	10077.5	2.8	3075	4	5133	10
	Sr	38	10377	11	5833	8	*		10062	8	−137	7	9180	8
	Y	39	13700#	310#	1920	80	*		10710	80	1310	90	8320	80
	Zr	40	13990#	500#	1890#	420#	*		10380#	360#	−3660#	420#	13120#	300#
	Nb	41	*		−1910#	640#	*		10660#	640#	*		12250#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
76	Fe	26	6070#	780#	*		*		31600#	670#	*		11900#	720#
	Co	27	8260#	640#	*		−16920#	780#	25320#	500#	*		10510#	540#
	Ni	28	9630#	360#	36110#	580#	−15370#	580#	20110#	300#	−34780#	670#	4210#	300#
	Cu	29	11118	6	32020#	400#	−13110#	300#	15315.0	2.2	−27710#	400#	3506.0	2.2
	Zn	30	12688.9	2.9	28180#	200#	−10501.9	2.7	10909.9	1.5	−25350#	200#	−1913.7	1.6
	Ga	31	14390	4	24868	6	−8938.6	2.4	5994.7	2.1	−19115.4	2.1	−2511.0	2.0
	Ge	32	15933.08	0.02	22034.1	2.5	−7492.3	2.1	2039.06	0.01	−17943.0	2.0	−8250.0	0.9
	As	33	17574.0	1.9	18820	3	−6128.0	1.2	−2002	9	−11119.7	1.1	−8193.2	0.9
	Se	34	19181.38	0.02	16407.45	0.02	−5090.96	0.08	−6238	4	−10683.96	0.05	−14216	4
	Br	35	21144	11	14007	9	−4484	10	−9810	9	−4544	9	−14037	12
	Kr	36	22824	4	11378	4	−3570	4	−14770	30	−4133	4	−19866	4
	Rb	37	24706	3	9769	6	−3842.3	1.4	−22230#	300#	1339	4	−21930	220
	Sr	38	29560#	110#	6490	30	−2730	40	*		2790	40	−30500#	300#
	Y	39	*		910#	300#	−2350#	580#	*		11680#	300#	*	
77	Co	27	7490#	720#	*		−17630#	850#	26950#	600#	*		12210#	670#
	Ni	28	9250#	450#	37230#	720#	−15790#	640#	21440#	400#	−34050#	720#	5560#	400#
	Cu	29	10535.2	1.4	32880#	400#	−13320#	300#	17129.5	2.7	−30490#	500#	5368.9	1.9
	Zn	30	12372.9	2.8	29130#	200#	−11106	3	12423.7	2.0	−23890#	300#	−563.9	2.8
	Ga	31	13674.3	2.5	26100.1	2.5	−9430	3	7924.0	3.0	−22299.7	2.6	−850.8	2.4
	Ge	32	15498.53	0.07	23231.9	2.0	−8044.4	1.9	3386.63	0.08	−16198.8	1.5	−6992.8	0.9
	As	33	17024.8	1.9	20033.6	1.8	−6641.9	2.4	−682	3	−14908.7	2.6	−6735.7	1.7
	Se	34	18572.64	0.10	17320.47	0.08	−5726.88	0.08	−4430.0	2.0	−8675.57	0.06	−12382	9
	Br	35	20270	5	14778.6	2.9	−4707	5	−8404	3	−8232.4	2.9	−12292	5
	Kr	36	21988	8	12577.9	2.0	−4367	8	−12366	8	−2206.5	2.0	−17761.7	2.2
	Rb	37	23754.4	1.8	10301	4	−3610	7	−18390#	200#	−1830	9	−18650	30
	Sr	38	27330	220	8058	11	−3677	10	−26200#	400#	3921	9	−27630#	300#
	Y	39	30760#	360#	3800#	200#	−2850#	210#	*		6750#	200#	*	
	Zr	40	*		−440#	460#	−2080#	570#	*		15360#	400#	*	
78	Co	27	5800#	860#	*		*		29470#	700#	*		13960#	810#
	Ni	28	8830#	500#	38870#	720#	−16650#	640#	22600#	400#	*		5910#	400#
	Cu	29	9950	13	33710#	500#	−13670#	400#	18915	13	−30170#	600#	5928	13
	Zn	30	11322.9	2.4	29870#	300#	−11210#	200#	14379	4	−27420#	400#	438	3
	Ga	31	13550.1	2.2	27300.4	1.4	−10123	6	9113	10	−22130.2	1.6	−562.5	1.1
	Ge	32	14792	4	24137	4	−8530	4	5164	4	−20362	4	−6017	4
	As	33	16668	10	21098	10	−7192	10	635	10	−14114	10	−6289	10
	Se	34	17916.63	0.18	18391.00	0.18	−6028.42	0.18	−2847.67	0.26	−13102.05	0.19	−11862.5	2.8
	Br	35	19306	10	15739	4	−5017	4	−6517	5	−6825	4	−11354	4
	Kr	36	21307	4	13504.3	0.3	−4390.0	0.3	−11004	7	−6867.8	0.3	−17419.1	1.3
	Rb	37	22599	3	11224	10	−4072	7	−14760#	300#	−990	4	−17203	9
	Sr	38	25070	40	8738	8	−3267	8	−22320#	400#	−293	8	−24810#	200#
	Y	39	30070#	420#	6270#	300#	−2680#	300#	*		5370#	300#	−28640#	500#
	Zr	40	*		1180#	400#	−2450#	410#	*		9670#	400#	*	
79	Ni	28	6950#	640#	*		−15890#	780#	25270#	500#	*		8560#	500#
	Cu	29	9690	100	35080#	610#	−14270#	410#	20140	100	−34380#	710#	7000	100
	Zn	30	10785.7	3.0	30660#	400#	−11620#	200#	16090	40	−25840#	400#	2200.5	2.5
	Ga	31	12698.6	2.7	28263.5	1.7	−10503.1	1.4	11088	5	−25048	13	1242	4
	Ge	32	14460	40	25320	40	−9390	40	6390	40	−19330	40	−4780	40
	As	33	15862	6	22222	6	−7600	5	2432	5	−17221	5	−4681	5
	Se	34	17460.60	0.21	19282.54	0.23	−6485.41	0.23	−1475	3	−11344	4	−10537	4
	Br	35	18975.9	3.0	16729.7	1.8	−5458.8	1.3	−5265.3	2.1	−10540	10	−9961.1	1.0
	Kr	36	20415	4	14421	3	−4698	3	−8963	8	−4705	3	−15578	5
	Rb	37	22114.9	2.3	12146	3	−4121	5	−13000	80	−4640	4	−15700	8
	Sr	38	23819	11	9888	8	−3581	11	−18710#	300#	1410	7	−21380#	300#
	Y	39	27510#	220#	7550	80	−3010	80	−26150#	510#	1840	80	−25030#	410#
	Zr	40	31310#	500#	3550#	300#	−2580#	370#	*		9120#	300#	*	
	Nb	41	*		−210#	540#	−2260#	580#	*		13230#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
80	Ni	28	3150#	780#	*		46300#	600#	2790#	920#	3530#	850#	*	
	Cu	29	2340#	320#	15810#	580#	35540#	300#	8910#	500#	5540#	500#	−9120#	670#
	Zn	30	6288	3	16530	110	26110.9	2.8	3852	14	2078.3	2.9	−8650#	400#
	Ga	31	4747	3	13080	4	16665	3	8970	3	4430	3	−4714	3
	Ge	32	8080	40	14275.9	2.4	8358.1	2.2	4879.6	2.3	1321	3	−5099.7	2.8
	As	33	6650	6	9980	40	−39	4	10358	5	3862	3	−576	4
	Se	34	9913.3	1.0	11412	5	−7448	4	5768	10	1020.9	1.8	−900.2	0.9
	Br	35	7892.28	0.13	7260.5	1.0	−14741	6	11847.7	1.0	3574.5	1.0	3673.7	1.8
	Kr	36	11522	4	9114.4	1.1	−23130#	300#	6270	4	205.4	2.9	2352.4	0.7
	Rb	37	9444.0	2.7	5022	4	−33760#	400#	12713.6	1.9	2858.0	2.7	6706	3
	Sr	38	12903	8	6798	4	*		7335	5	−617	4	5504	4
	Y	39	11420	80	2957	10	*		12737	10	1519	10	9329	6
	Zr	40	16060#	420#	4250#	310#	*		8120#	420#	−3460#	360#	8690#	300#
	Nb	41	14840#	640#	−1060#	500#	*		13140#	570#	−1960#	570#	13670#	450#
81	Ni	28	920#	920#	*		50200#	700#	*		4100#	990#	*	
	Cu	29	3300#	420#	15960#	670#	40620#	300#	6960#	580#	7830#	500#	−10940#	760#
	Zn	30	2622	6	16810#	300#	30189	5	6920	110	3454	14	−5670#	400#
	Ga	31	6476	4	13268	4	20349	3	6515	4	4719	4	−7192	14
	Ge	32	4827.7	2.9	14357	4	11404.5	2.3	6967.5	2.4	2276.4	2.3	−3162.1	2.8
	As	33	8390	4	10287	3	2923	6	7700	40	4193	4	−3182.8	2.8
	Se	34	6700.8	0.3	11463	3	−4861	3	7958	5	1292	10	1119	4
	Br	35	10159.3	1.4	7506.5	1.4	−12264	5	8651.2	1.0	3913.0	1.0	486	10
	Kr	36	7874.1	1.3	9096.1	1.5	−20170	90	9082.7	1.5	620	4	4976.2	1.1
	Rb	37	11353	5	4852	5	−29100#	400#	9696	6	3586	5	3642	6
	Sr	38	9288	5	6642	4	−40070#	500#	9985	4	271	5	8297	3
	Y	39	12636	8	2690	6	*		10478	9	2325	9	6869	6
	Zr	40	10840#	310#	3670	90	*		10990	120	−490#	310#	11300	90
	Nb	41	16010#	570#	−1110#	500#	*		11120#	500#	−650#	570#	11460#	500#
	Mo	42	*		330#	640#	*		10900#	710#	*		15040#	640#
82	Ni	28	2700#	1060#	*		54700#	800#	*		*		*	
	Cu	29	1890#	500#	16930#	810#	44380#	400#	8220#	720#	7290#	640#	*	
	Zn	30	4186	6	17690#	300#	35280	3	5080#	300#	4960	110	−8510#	500#
	Ga	31	3374	4	14020	6	24568.0	2.6	9429	4	5366	3	−4880	110
	Ge	32	7195	3	15076	4	15176.7	2.2	4519	4	1997.3	2.5	−6336	3
	As	33	5643	5	11103	4	6082	5	10141	4	4290	40	−1911	4
	Se	34	9276.2	1.0	12349.6	2.7	−1584	6	5332	3	906	5	−2420	40
	Br	35	7592.94	0.12	8398.6	1.4	−9435	6	10971.6	1.4	3282.8	1.0	1784	5
	Kr	36	10966.9	1.1	9903.7	1.0	−16977.7	1.6	6008.0	1.0	340.3	1.0	972.07	0.22
	Rb	37	8802	6	5781	3	−24380#	300#	12416	3	3119	5	5527	3
	Sr	38	12553	7	7842	8	−35640#	400#	6876	6	−343	6	4079	7
	Y	39	10422	8	3825	6	*		12958	6	2280	9	8385	6
	Zr	40	14160	90	5190	6	*		8245	6	−950	80	7512	8
	Nb	41	13520#	500#	1570#	310#	*		13660#	420#	−180#	420#	11640#	310#
	Mo	42	16980#	640#	1300#	570#	*		8760#	570#	−3860#	640#	12050#	500#
83	Cu	29	2730#	640#	16960#	940#	49280#	500#	6410#	860#	7710#	780#	*	
	Zn	30	2050#	300#	17850#	500#	39050#	300#	6330#	420#	5250#	420#	−7400#	670#
	Ga	31	4398	4	14232	4	29757	5	7653	6	7256	4	−6930#	300#
	Ge	32	3633	3	15335	3	19014.2	2.4	7362	4	3111	4	−3681	4
	As	33	7635	5	11543	4	9401	4	7333	3	4730	3	−4799	4
	Se	34	5818	3	12524	5	1457	7	7904	4	1738	5	−159	4
	Br	35	9586	4	8709	4	−6808	19	8086	4	3610	4	−1153	5
	Kr	36	7470.17	0.01	9780.9	1.0	−14079	6	8697.2	1.0	762.4	1.0	3415.2	0.9
	Rb	37	10954	4	5767.8	2.3	−21460	160	9336.4	2.6	3686.9	2.4	2464.8	2.5
	Sr	38	8859	9	7899	7	−30460#	400#	9370	8	242	7	6742	7
	Y	39	12213	19	3485	20	−40890#	500#	10033	19	2970	19	5616	19
	Zr	40	10369	7	5137	8	*		10512	8	101	9	10046	7
	Nb	41	13880#	340#	1290	160	*		10620	190	2010#	340#	9180	160
	Mo	42	14040#	570#	1820#	500#	*		10730#	570#	−3060#	570#	14070#	500#
	Tc	43	*		−1760#	640#	*		10850#	710#	*		12750#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
80	Ni	28	4500#	720#	*		−15080#	850#	28410#	600#	*		11100#	610#
	Cu	29	8030#	300#	35940#	760#	−13440#	580#	22540#	300#	*		8680#	300#
	Zn	30	10308	3	31350#	400#	−11880#	300#	17887	3	−30780#	500#	2828.4	2.9
	Ga	31	11662	3	29012	14	−10667	3	12991	4	−24100	110	2230	40
	Ge	32	13816	4	26630.0	2.8	−9657.2	2.5	8224.2	2.3	−23392	3	−3971	6
	As	33	15540	10	23088	3	−8343	4	3674	3	−16955	4	−4368	3
	Se	34	16876.2	1.0	20475	4	−6971.5	0.9	134.0	1.1	−15520	40	−9762.7	0.3
	Br	35	18579	4	17650	10	−6022.6	1.3	−3713.5	2.1	−9542	5	−9518	3
	Kr	36	19857.8	0.8	15445.4	0.7	−5066.4	0.7	−7582	4	−9265.0	0.7	−15162.0	2.1
	Rb	37	21383	4	13301	4	−4311	10	−11027	7	−3396.4	2.1	−14767	8
	Sr	38	23280	8	10711	3	−3723	5	−15550#	300#	−3158	5	−20580	80
	Y	39	25120#	300#	8791	7	−3094	6	−22730#	400#	2366	7	−22450#	300#
	Zr	40	30050#	500#	6160#	300#	−2940#	300#	*		3430#	300#	−31180#	580#
	Nb	41	*		830#	500#	−2600#	500#	*		12090#	410#	*	
81	Ni	28	4070#	860#	*		*		30110#	700#	*		12520#	760#
	Cu	29	5650#	320#	*		−12430#	670#	25720#	300#	*		11670#	300#
	Zn	30	8910	6	32620#	500#	−11270#	400#	20092	5	−30250#	600#	4953	6
	Ga	31	11222	3	29800	110	−11190	3	14905	4	−28240#	300#	3836	4
	Ge	32	12910	40	27437	3	−9927.4	2.8	10097.3	2.3	−21932	3	−2148	4
	As	33	15040	6	24562.9	2.9	−8966	4	5443.7	2.8	−20599	4	−2845.1	2.8
	Se	34	16614.2	1.0	21440	40	−7601.1	1.0	1307.2	1.4	−14142.7	2.3	−8571.3	0.5
	Br	35	18051.6	1.4	18919	5	−6485.6	2.0	−2520	5	−13051	3	−8154.9	1.2
	Kr	36	19397	4	16356.7	1.1	−5521.6	1.1	−6168	3	−7225.7	1.4	−13592.0	2.2
	Rb	37	20797	5	13967	5	−4647	6	−9744	7	−6857	5	−13217	6
	Sr	38	22191	8	11664	5	−3784	4	−14000	90	−924	3	−18451	7
	Y	39	24050	80	9488	6	−3307	6	−19350#	400#	−826	6	−19020#	300#
	Zr	40	26900#	310#	6620	90	−2150	90	−26060#	510#	5500	90	−27180#	410#
	Nb	41	30850#	640#	3140#	410#	−2350#	450#	*		7500#	400#	*	
	Mo	42	*		−730#	580#	−2290#	640#	*		16010#	580#	*	
82	Ni	28	3620#	1000#	*		*		31590#	800#	*		13120#	860#
	Cu	29	5190#	500#	*		−12830#	810#	27200#	400#	*		12400#	400#
	Zn	30	6808	4	33650#	600#	−9860#	400#	23101	4	−33510#	700#	7243	4
	Ga	31	9850	4	30830#	300#	−10566	14	17175	4	−28310#	300#	5290	3
	Ge	32	12022	3	28344	3	−10356.7	3.0	12178.8	2.3	−26504	6	−953	3
	As	33	14033	5	25460	5	−8826	4	7393	4	−19766	5	−1788	4
	Se	34	15977.0	0.9	22636.5	2.1	−8157	4	2997.9	0.5	−18591.2	2.1	−7688.2	1.1
	Br	35	17752.3	1.4	19862	3	−7107	10	−1311	3	−12254.3	2.8	−7873.8	0.5
	Kr	36	18841.0	0.7	17410.3	0.9	−5990.76	0.18	−4582	6	−11491.7	1.0	−13206	5
	Rb	37	20155	4	14877	3	−5161	5	−8124	6	−5500	3	−12731	4
	Sr	38	21841	7	12695	6	−4257	6	−12396	6	−5603	6	−18368	8
	Y	39	23059	8	10467	6	−3554	6	−16250#	300#	104	7	−18610	90
	Zr	40	25000#	300#	7881	4	−2865	8	−23240#	400#	625	4	−25330#	400#
	Nb	41	29530#	500#	5240#	300#	−2060#	420#	*		6610#	300#	−28420#	580#
	Mo	42	*		190#	500#	−1950#	570#	*		9870#	410#	*	
83	Cu	29	4620#	580#	*		*		28870#	500#	*		13850#	500#
	Zn	30	6230#	300#	34780#	760#	−10560#	580#	24690#	300#	−32860#	860#	8570#	300#
	Ga	31	7772	4	31930#	300#	−9270	110	20412	4	−30820#	400#	8087	3
	Ge	32	10827	3	29355	6	−9969	3	14364	4	−25951	4	1058	4
	As	33	13279	4	26619	4	−9546	3	9344	5	−24028	4	−146.8	2.8
	Se	34	15094	3	23627	4	−8240	40	4650	3	−17214	4	−5913	3
	Br	35	17179	4	21058	5	−7803	7	57	4	−16197	5	−6493	4
	Kr	36	18437.1	1.1	18179.6	1.0	−6498.09	0.22	−3193	7	−9685.7	0.5	−11874	3
	Rb	37	19757	5	15671.5	2.5	−5427.5	2.5	−6865	19	−8860.9	2.5	−11132	6
	Sr	38	21412	8	13679	7	−4780	8	−10886	9	−3495	7	−16805	9
	Y	39	22635	19	11327	19	−3828	19	−14590	160	−3307	19	−16663	19
	Zr	40	24530	90	8961	7	−2857	10	−19570#	400#	2809	9	−22170#	300#
	Nb	41	27400#	430#	6480	160	−2230	180	−26290#	530#	3160	160	−25310#	430#
	Mo	42	31020#	640#	3390#	410#	−2000#	500#	*		9990#	400#	*	
	Tc	43	*		−460#	640#	−2090#	710#	*		13200#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
84	Cu	29	1400#	710#	*		52130#	500#	7710#	940#	7230#	860#	*	
	Zn	30	3610#	500#	18730#	640#	44120#	400#	4610#	570#	4940#	500#	−10090#	810#
	Ga	31	2908	30	15090#	300#	33690	40	8931	30	6970	30	−6540#	300#
	Ge	32	5243	4	16180	4	24291	3	5493	4	4344	5	−6302	6
	As	33	4256	4	12166	4	13905	4	10272	4	5302	4	−2579	5
	Se	34	8679	4	13567	3	4701.8	2.3	4869	4	1450	3	−4009.6	2.8
	Br	35	6841	26	9732	26	−3889	26	10522	26	3470	26	397	26
	Kr	36	10520.02	0.01	10715	4	−11018	5	5770.1	1.0	401.8	1.0	−403.9	1.0
	Rb	37	8760	3	7057.3	2.2	−18565.1	2.2	11543.6	2.2	2801.3	2.4	3864.5	2.4
	Sr	38	11923	7	8867.9	2.6	−26480#	300#	6249	3	−329	5	2693.0	1.6
	Y	39	9760	19	4386	8	−36190#	400#	12826	7	2498	5	7209	7
	Zr	40	13581	8	6505	19	*		7353	8	−845	8	5753	6
	Nb	41	11650	160	2571	6	*		13131.0	1.6	1190	90	10165	5
	Mo	42	15900#	500#	3850#	340#	*		8350#	420#	−2950#	500#	9000#	310#
	Tc	43	14450#	640#	−1350#	570#	*		13380#	570#	−1380#	640#	14310#	570#
85	Zn	30	1340#	640#	18670#	710#	47310#	500#	6000#	710#	5490#	640#	−8730#	940#
	Ga	31	3720	50	15200#	400#	38830	40	7260#	300#	7430	40	−8370#	400#
	Ge	32	3046	5	16320	30	28357	4	6845	5	4671	4	−5163	5
	As	33	5407	4	12330	4	18978	3	8498	4	7090	4	−4612	4
	Se	34	4537	3	13849	4	8690	4	7966	4	2556	5	−1352	3
	Br	35	8864	26	9917	4	−733	19	7476	4	3882	3	−2824	5
	Kr	36	7112.3	2.0	10986	26	−8305	7	8244	4	882.4	2.2	1760.0	2.1
	Rb	37	10479.7	2.2	7016.97	*a*	−15888	4	8534.11	0.01	3288.51	0.01	977.7	1.0
	Sr	38	8525	3	8633	4	−23594	16	8678	4	−51	4	5134.9	2.8
	Y	39	12019	19	4482	19	−31990#	400#	9666	20	3032	20	3992	19
	Zr	40	9825	8	6570	8	−42550#	500#	9741	20	−247	8	8481	9
	Nb	41	13157	4	2147	7	*		10343	8	2198	4	7431	7
	Mo	42	11410#	300#	3605	16	*		10810	160	−840#	300#	11751	16
	Tc	43	16220#	570#	−1030#	500#	*		11200#	570#	−620#	570#	11610#	500#
	Ru	44	*		220#	640#	*		11400#	710#	*		15390#	640#
86	Zn	30	3030#	710#	*		50440#	500#	4370#	710#	5190#	710#	*	
	Ga	31	2090#	400#	15950#	640#	41870#	400#	8780#	570#	7390#	500#	−7720#	640#
	Ge	32	4350	440	16940	440	33870	440	5410	440	4720	440	−7460#	530#
	As	33	3844	5	13128	5	23785	3	9897	5	6878	4	−4059	4
	Se	34	6161	4	14603	4	14019.9	2.5	6061	4	4030	4	−3880	3
	Br	35	5128	4	10508	4	3651	14	11026	4	4572	4	−317	4
	Kr	36	9856.7	2.0	11979	3	−5297	4	5228	26	612	4	−2279	3
	Rb	37	8650.98	0.20	8555.6	2.0	−13613	6	10403.15	0.20	2107.70	0.20	1913	4
	Sr	38	11491.1	2.8	9644.73	0.01	−20412.2	2.9	5946.7	2.2	−588.4	2.3	1113.95	0.01
	Y	39	9512	24	5469	14	−27710#	300#	12077	14	2379	16	5434	14
	Zr	40	12865	7	7416	19	−38200#	400#	6636	6	−899	19	4475	8
	Nb	41	10926	7	3248	8	*		12998	8	1642	8	8718	19
	Mo	42	14672	16	5120	5	*		7793.7	3.0	−1630	160	7447	7
	Tc	43	13790#	500#	1350#	300#	*		13310#	420#	−370#	500#	11690#	340#
	Ru	44	17210#	640#	1210#	570#	*		8640#	570#	−3590#	640#	12220#	570#
87	Ga	31	3180#	640#	16100#	710#	45020#	500#	6940#	710#	7820#	640#	−9500#	710#
	Ge	32	2260#	530#	17120#	500#	37120#	300#	6870#	300#	5370#	300#	−6110#	500#
	As	33	4727	5	13510	440	28979.9	3.0	8216	5	7395	4	−5877	30
	Se	34	3994	3	14753	4	18453.9	2.2	7474	4	4291	4	−2631	4
	Br	35	6331	4	10677	4	9127	3	9233	4	6920	4	−2392	4
	Kr	36	5515.17	0.25	12366	3	−1362	4	8577	3	1938	26	884.6	2.0
	Rb	37	9922.12	0.20	8621.10	0.01	−10723	7	7593.3	2.0	2705.60	0.01	−1168	26
	Sr	38	8428.30	0.01	9422.04	0.20	−17995.3	2.9	7998.07	0.01	−257.0	2.2	3205.67	*a*
	Y	39	11807	14	5784.3	1.1	−25328	4	8796	3	2495.2	1.7	2387.0	2.5
	Zr	40	9449	5	7353	15	−33620#	400#	9206	19	−589	6	6949	4
	Nb	41	12812	9	3194	8	*		10012	9	2411	9	5666	8
	Mo	42	10845	4	5040	6	*		10106	5	−826.9	2.9	10183	6
	Tc	43	14190#	300#	868	5	*		10531	16	1340#	300#	9150	4
	Ru	44	14030#	570#	1450#	500#	*		10830#	570#	−3170#	570#	14090#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
84	Cu	29	4130#	640#	*		*		30370#	500#	*		14500#	580#
	Zn	30	5660#	400#	35690#	890#	−11020#	720#	26320#	400#	*		9360#	400#
	Ga	31	7306	30	32940#	400#	−9840#	300#	21759	30	−30990#	500#	8811	30
	Ge	32	8876	4	30412	4	−8925	4	17799	4	−29150#	300#	3450	4
	As	33	11891	5	27501	4	−9055	4	11930	26	−23885	4	1416	4
	Se	34	14496.5	2.0	25110.6	3.0	−8837.3	2.8	6491.6	2.0	−22260	3	−5005	4
	Br	35	16427	26	22256	26	−7993	26	1976	26	−15403	26	−5864	26
	Kr	36	17990.19	*a*	19423.4	0.5	−7104.8	0.9	−1789.8	1.2	−14388	3	−11440.0	2.3
	Rb	37	19714	4	16838.2	2.4	−6294.9	2.4	−5865	5	−8034	4	−11033	7
	Sr	38	20782	6	14635.7	1.2	−5181.0	1.4	−9228	6	−7947.9	1.2	−16515	19
	Y	39	21973	7	12285	5	−4144	5	−12701	4	−2113	5	−16054	8
	Zr	40	23950	6	9990	8	−3535	6	−17250#	300#	−1913	9	−21880	160
	Nb	41	25530#	300#	7708	6	−2471	6	−23490#	400#	3723	19	−22930#	400#
	Mo	42	29940#	500#	5130#	300#	−1840#	420#	*		4450#	300#	−30920#	580#
	Tc	43	*		470#	500#	−1710#	570#	*		12620#	430#	*	
85	Zn	30	4950#	580#	*		−11440#	860#	28020#	500#	*		10920#	500#
	Ga	31	6630	40	33930#	500#	−10260#	300#	23450	40	−33310#	500#	10330	40
	Ge	32	8290	4	31410#	300#	−9349	6	19290	5	−28580#	400#	4659	5
	As	33	9662	4	28510	4	−7986	4	15386	4	−26384	30	4687	4
	Se	34	13216	4	26015	4	−8547	3	9067	3	−21554	4	−2702	26
	Br	35	15704	5	23484	4	−8467	4	3592	3	−20011	4	−4207	3
	Kr	36	17632.3	2.0	20718	4	−7516.2	2.2	−377	3	−12821.6	2.8	−9792.7	3.0
	Rb	37	19239.3	2.3	17732	4	−6615.2	1.0	−4325	19	−11673	26	−9589.1	1.2
	Sr	38	20448	7	15690.6	2.8	−5832	3	−7928	7	−5952.9	2.8	−15280	5
	Y	39	21779	27	13349	19	−4810	20	−11562	19	−5372	19	−14492	20
	Zr	40	23406	9	10956	9	−4072	7	−15665	17	185	7	−20053	6
	Nb	41	24810	160	8652	19	−2992	7	−20430#	400#	326	6	−20180#	300#
	Mo	42	27310#	400#	6176	17	−2410	90	−26880#	500#	6623	17	−27880#	400#
	Tc	43	30670#	640#	2820#	430#	−1910#	570#	*		8060#	400#	*	
	Ru	44	*		−1130#	640#	−1600#	710#	*		16250#	580#	*	
86	Zn	30	4370#	640#	*		−11770#	940#	29340#	670#	*		11610#	500#
	Ga	31	5810#	400#	34620#	640#	−10460#	570#	25200#	400#	*		11290#	400#
	Ge	32	7390	440	32150#	590#	−9510	440	21100	440	−31590#	670#	5720	440
	As	33	9251	5	29450	30	−8456	4	16670	5	−26510	40	5380	4
	Se	34	10698	3	26933	4	−7513	3	12762.5	2.5	−24669	4	1	4
	Br	35	13992	26	24357	4	−7952	5	7115	3	−19732	4	−2223	4
	Kr	36	16968.97	*a*	21895.9	2.0	−8096.7	0.5	1257.42	*a*	−18141.0	2.6	−9169.65	*a*
	Rb	37	19130.7	2.2	19542	26	−7673.2	1.0	−3464	14	−11460	3	−9715.0	2.8
	Sr	38	20016.2	1.2	16661.70	*a*	−6356.22	0.01	−6554	4	−10331.7	2.0	−14752	19
	Y	39	21531	15	14102	14	−5520	14	−10149	15	−4405	14	−14179	16
	Zr	40	22690	7	11897	4	−4384	7	−13858	5	−4155	5	−19761	5
	Nb	41	24083	6	9818	7	−3495	8	−17560#	300#	1419	20	−19696	17
	Mo	42	26080#	300#	7267	6	−2922	3	−24340#	400#	1775	7	−26330#	400#
	Tc	43	30010#	500#	4950#	300#	−2190#	420#	*		7420#	300#	−29010#	580#
	Ru	44	*		180#	500#	−1830#	570#	*		10450#	400#	*	
87	Ga	31	5270#	500#	*		−10900#	710#	26750#	500#	*		12460#	670#
	Ge	32	6610#	300#	33070#	580#	−9730#	420#	22840#	300#	−30820#	580#	7300#	300#
	As	33	8571	4	30450	40	−8786	4	18274	4	−29150#	400#	6814	4
	Se	34	10155	3	27881	4	−7875	3	14283.4	2.3	−24320	440	1135	4
	Br	35	11459	4	25280	4	−6647	4	10706	3	−22219	5	1303	3
	Kr	36	15371.8	2.0	22873.8	2.6	−7794	3	4170.55	0.25	−17495.3	2.5	−6033.8	0.3
	Rb	37	18573.10	0.01	20600	3	−8009	4	−1579.4	1.1	−16255	3	−8146.02	0.01
	Sr	38	19919.4	2.8	17977.7	2.0	−7314.35	0.01	−5533	4	−8903.37	*a*	−13668	14
	Y	39	21319	19	15429.0	1.1	−6372.7	2.6	−9144	7	−7560.4	1.1	−13121	4
	Zr	40	22315	8	12822	5	−4974	8	−12462	5	−2113	4	−18284	7
	Nb	41	23737	8	10610	20	−4094	20	−16184	8	−1880	16	−17835	7
	Mo	42	25518	16	8288	7	−3398	7	−21160#	400#	3795	5	−23390#	300#
	Tc	43	27980#	400#	5988	6	−2500	160	*		4155	7	−25990#	400#
	Ru	44	31240#	640#	2800#	400#	−1820#	570#	*		11090#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
88	Ga	31	1590#	710#	*		48330#	500#	8380#	710#	7570#	710#	*	
	Ge	32	4000#	500#	17940#	640#	40170#	400#	4950#	570#	5090#	400#	−8770#	640#
	As	33	2900#	200#	14150#	360#	32160#	200#	9660#	480#	7540#	200#	−5060#	200#
	Se	34	5529	4	15555	4	24037	3	5789	5	4169	5	−5114	5
	Br	35	4896	4	11579	4	13583	4	10498	4	6562	4	−1880	4
	Kr	36	7053.1	2.6	13089	4	3938	6	6652	4	3748	4	−1631	4
	Rb	37	6082.52	0.16	9188.44	0.29	−6440	60	11367.48	0.16	3735.4	2.0	1613	3
	Sr	38	11112.87	0.01	10612.80	0.01	−15235	4	5536.18	0.20	−890.23	0.01	−794.9	2.0
	Y	39	9352.0	1.9	6707.9	1.5	−22629	4	10934.9	1.5	1668	3	3514.7	1.5
	Zr	40	12353	7	7899	6	−29290#	300#	6365	15	−923	20	3121	6
	Nb	41	10370	60	4110	60	−39310#	400#	12510	60	1870	60	7320	60
	Mo	42	13873	5	6101	8	*		7158	7	−1543	6	6135	7
	Tc	43	12052	6	2074	5	*		13151	5	704	16	10256	6
	Ru	44	16680#	500#	3940#	300#	*		7940#	420#	−3630#	500#	8820#	300#
	Rh	45	*		−1580#	570#	*		13620#	570#	−1370#	640#	14640#	570#
89	Ge	32	1590#	570#	17940#	640#	43500#	400#	6540#	640#	5580#	570#	−7330#	640#
	As	33	4150#	360#	14300#	500#	35180#	300#	7770#	420#	7730#	530#	−7120#	500#
	Se	34	3180	5	15830#	200#	27217	4	7336	5	4834	5	−3950	440
	Br	35	5630	5	11679	5	19437	3	8863	4	7093	4	−3666	5
	Kr	36	4916	3	13109	4	8342	4	8067	4	3961	4	−386	3
	Rb	37	7175	5	9310	6	−1087	24	9708	5	6417	5	−434	6
	Sr	38	6358.72	0.09	10888.99	0.18	−11194	4	9099.58	0.09	1402.03	0.22	2703.05	0.09
	Y	39	11483.5	1.5	7078.5	0.3	−20316	4	7879.7	0.3	1676.0	0.3	682.2	0.4
	Zr	40	9320	6	7868	3	−26509	24	8851.2	3.0	−731	14	5291.5	2.8
	Nb	41	12530	60	4286	24	−34980#	360#	9432	24	2207	24	4304	28
	Mo	42	10400	5	6130	60	*		9570	8	−1017	7	8600	5
	Tc	43	13796	6	1997	5	*		10201	5	1580	5	7386	7
	Ru	44	12100#	300#	3988	25	*		10031	25	−1940#	300#	11388	24
	Rh	45	16860#	540#	−1400#	200#	*		10790#	540#	−1020#	540#	11570#	470#
90	Ge	32	3500#	640#	*		46490#	500#	4630#	710#	5260#	710#	*	
	As	33	2530#	500#	15240#	570#	38380#	400#	9240#	570#	7460#	500#	−6470#	640#
	Se	34	4880	330	16560#	450#	30150	330	5360#	390#	4680	330	−6560#	450#
	Br	35	3797	5	12297	5	22497	3	10595	5	7290	4	−2736	4
	Kr	36	6494.8	2.8	13974	4	13813.3	1.9	6468	4	3796	4	−2886.7	2.9
	Rb	37	5724	8	10119	7	3296	7	11037	7	6208	6	173	7
	Sr	38	7813.2	1.5	11528	6	−5778	4	7368.9	1.5	3510.9	1.4	405.0	1.5
	Y	39	6857.03	0.10	7576.9	0.4	−15772.2	1.1	12135.5	0.4	3247.2	0.4	3747.3	0.4
	Zr	40	11965.9	2.8	8350.3	0.4	−23889	4	6237.3	1.5	−890.1	1.1	1753.93	0.12
	Nb	41	10107	24	5073	4	−31030#	200#	11678	6	1550	5	6003	4
	Mo	42	13229	5	6836	24	−40460#	400#	6710	60	−1434	8	4821	5
	Tc	43	11401	4	2999	4	*		12673	4	1024	3	8796	7
	Ru	44	14586	25	4778	5	*		7497	6	−2330	6	7647	5
	Rh	45	14050#	410#	550#	200#	*		13420#	360#	−1040#	450#	11700#	200#
	Pd	46	*		1350#	540#	*		7860#	570#	*		11670#	570#
91	As	33	3580#	570#	15320#	640#	41250#	400#	7250#	570#	7880#	570#	−8460#	640#
	Se	34	2850	540	16880#	590#	33070	430	6660#	530#	4730#	480#	−5410#	590#
	Br	35	5178	5	12600	330	25244	4	8596	5	7641	5	−5010#	200#
	Kr	36	4086.0	2.9	14263	4	16921.6	2.2	8011	4	4606	4	−1443	4
	Rb	37	6451	10	10075	8	8893	8	9502	8	6810	8	−1383	8
	Sr	38	5772	6	11575	8	−1443	8	8771	8	3821	5	1686	6
	Y	39	7925.7	1.9	7689.3	2.3	−10364.7	3.0	10568.5	1.8	6434.4	1.8	1904.1	1.8
	Zr	40	7194.36	0.15	8687.7	0.4	−19655.8	2.2	10526.4	0.4	1267.5	1.5	5672.44	0.09
	Nb	41	12048	4	5154.5	2.9	−28070#	300#	8951	4	1855	6	3307	3
	Mo	42	10108	7	6836	7	−36040#	420#	9128	24	−1170	60	7066	8
	Tc	43	13333.3	2.6	3103	4	*		9739	5	1564	4	5830	60
	Ru	44	11427	4	4804.1	2.4	*		9866	4	−1705	5	10093	4
	Rh	45	15010#	360#	980#	300#	*		10510#	300#	630#	420#	8750#	300#
	Pd	46	14530#	580#	1830#	470#	*		10190#	560#	−4450#	580#	13820#	520#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
88	Ga	31	4770#	640#	*		−11100#	710#	28060#	540#	*		13130#	580#
	Ge	32	6260#	590#	34040#	640#	−10110#	570#	24370#	400#	*		8030#	400#
	As	33	7630#	200#	31270#	450#	−8780#	200#	20270#	200#	−28870#	540#	7910#	200#
	Se	34	9524	4	29060	440	−8161	5	15807	4	−27580#	300#	1936	5
	Br	35	11226	4	26332	5	−7287	4	11893	3	−22387	4	1922	3
	Kr	36	12568.3	2.6	23766	4	−6168	3	8230.3	2.6	−20554	3	−3164.8	2.6
	Rb	37	16004.64	0.26	21555	3	−7251	26	1690.0	1.5	−16006	3	−5800.25	0.16
	Sr	38	19541.17	0.01	19233.90	*a*	−7907.20	*a*	−4293	5	−14501.07	0.25	−12974.6	1.1
	Y	39	21159	14	16130.0	1.5	−6965.0	2.7	−8130	60	−6990.2	1.5	−13023	4
	Zr	40	21802	6	13684	5	−5404	6	−10942	7	−6038	5	−17826	9
	Nb	41	23180	60	11470	60	−4700	60	−14500	60	−440	60	−17360	60
	Mo	42	24718	5	9295	5	−3690	7	−18350#	300#	−628	6	−23068	6
	Tc	43	26240#	300#	7114	7	−2901	4	−24810#	400#	4915	8	−24010#	400#
	Ru	44	30710#	500#	4810#	300#	−2590#	420#	*		5260#	300#	*	
	Rh	45	*		−130#	500#	−1590#	570#	*		13540#	400#	*	
89	Ge	32	5590#	500#	*		−10370#	640#	25950#	400#	*		9340#	450#
	As	33	7060#	300#	32240#	580#	−9210#	300#	21740#	300#	−31430#	580#	9280#	300#
	Se	34	8709	4	29980#	300#	−8294	5	17543	4	−26760#	400#	3652	5
	Br	35	10525	5	27234	4	−7510	4	13438	6	−25110#	200#	3346	4
	Kr	36	11968.9	2.2	24688	3	−6547	3	9673.2	2.1	−19941	4	−1998.1	2.1
	Rb	37	13257	5	22399	6	−5562	6	5999	5	−18285	6	−1862	5
	Sr	38	17471.59	0.09	20077.44	0.26	−7153.6	2.0	−1331.1	2.8	−13806.7	2.6	−9981.3	1.5
	Y	39	20835.5	1.2	17691.3	0.3	−7968.8	0.3	−7085	24	−12391.2	0.4	−12154	5
	Zr	40	21673	5	14575.8	2.8	−6200	4	−9863	5	−4245.3	2.8	−16780	60
	Nb	41	22894	25	12185	24	−5210	30	−13231	24	−3616	24	−16011	24
	Mo	42	24273	5	10246	6	−4265	8	−16646	25	1325	7	−21416	6
	Tc	43	25847	6	8098	8	−3540	6	−21740#	360#	1490	60	−21130#	300#
	Ru	44	28780#	400#	6063	24	−3285	29	*		7028	25	−29580#	400#
	Rh	45	*		2540#	360#	−2230#	540#	*		8730#	360#	*	
90	Ge	32	5090#	640#	*		−10830#	710#	27330#	600#	*		9990#	580#
	As	33	6680#	450#	33180#	640#	−9660#	570#	23010#	400#	*		9930#	400#
	Se	34	8060	330	30860#	520#	−8830	550	19160	330	−30050#	520#	4400	330
	Br	35	9427	5	28130#	200#	−7463	5	15365	7	−24760#	300#	4464	4
	Kr	36	11411	3	25653	4	−6881	3	10991.7	2.4	−23256	4	−1318	6
	Rb	37	12899	6	23228	7	−6158	7	7131	6	−18380	7	−1228	6
	Sr	38	14172.0	1.4	20837.6	3.0	−5110.2	1.4	2821.6	1.5	−16704.1	2.6	−6311.1	1.4
	Y	39	18340.5	1.5	18465.8	0.4	−6174.8	0.4	−3835	3	−12073	5	−9690.3	2.8
	Zr	40	21286	5	15428.86	0.12	−6674.36	0.12	−8600	3	−9852.49	0.15	−16218	24
	Nb	41	22630	60	12940	4	−5803	15	−11937	3	−2239	3	−15718	5
	Mo	42	23629	5	11122	6	−4628	5	−15289	5	−2584	4	−20849	5
	Tc	43	25197	4	9130	60	−4016	6	−19090#	200#	2612	24	−20427	24
	Ru	44	26690#	300#	6775	5	−3198	5	−25170#	400#	2842	5	−27300#	360#
	Rh	45	30920#	450#	4540#	200#	−2490#	360#	*		8470#	200#	*	
	Pd	46	*		−50#	500#	−2360#	570#	*		11370#	400#	*	
91	As	33	6110#	500#	*		−10060#	640#	24610#	400#	*		11230#	520#
	Se	34	7730	430	32120#	590#	−9420#	530#	20390	430	−29400#	660#	5350	430
	Br	35	8976	5	29160#	300#	−7914	5	16638	9	−27410#	400#	5781	4
	Kr	36	10581	3	26560	4	−6973	3	12678	6	−22460	330	320	7
	Rb	37	12175	9	24049	8	−6278	8	8606	8	−21034	8	135	8
	Sr	38	13586	5	21694	6	−5367	5	4244	5	−15982	6	−5226	5
	Y	39	14782.8	1.9	19217	6	−4178.4	1.8	287	3	−14275	7	−5650.1	1.8
	Zr	40	19160.3	2.8	16264.51	0.13	−5440.43	0.09	−5687	6	−9233.6	1.5	−13305	3
	Nb	41	22155	24	13504.8	2.9	−6045	3	−10651	4	−7430.1	2.9	−14537	5
	Mo	42	23337	7	11909	7	−5287	7	−13969	7	−725	6	−19555	6
	Tc	43	24734	4	9939	24	−4537	7	−17420#	300#	−614	4	−19174	4
	Ru	44	26013	24	7803	4	−3780	4	−22070#	420#	4644	4	−24680#	200#
	Rh	45	29060#	470#	5750#	300#	−3300#	300#	*		4870#	300#	−26930#	500#
	Pd	46	*		2380#	420#	−2870#	580#	*		11430#	420#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
92	As	33	1950#	640#	*		44390#	500#	8800#	710#	7520#	640#	*	
	Se	34	4220#	590#	17510#	570#	36140#	400#	4980#	570#	4670#	500#	−8040#	570#
	Br	35	3197	8	12940	430	28584	11	10280	330	7624	8	−4060#	300#
	Kr	36	5867	4	14951	4	19689.7	2.7	5942	4	4369	4	−4131	5
	Rb	37	5099	10	11087	7	11681	6	10898	6	6627	6	−852	7
	Sr	38	7287	6	12411	9	3941	3	7209	7	3709	6	−685	4
	Y	39	6536	9	8454	11	−5891	10	11845	9	6257	9	2542	11
	Zr	40	8634.75	0.04	9396.7	1.8	−14157.8	2.7	8748.7	0.4	4116.2	0.4	3396.40	0.13
	Nb	41	7887	3	5846.7	1.8	−23454	5	13030.1	1.8	3289	3	6904.3	1.8
	Mo	42	12671	6	7459.5	2.9	−32030	350	6564	3	−1319	24	3715.8	2.8
	Tc	43	11010	4	4006	7	−41400#	400#	11958	5	953	5	7346	24
	Ru	44	14133	4	5604	4	*		7134.3	2.9	−2042	5	6360	5
	Rh	45	12500#	300#	2048	5	*		12596	6	234	25	10042	6
	Pd	46	16680#	550#	3500#	460#	*		7570#	400#	−4260#	500#	9240	350
	Ag	47	*		−1350#	580#	*		12890#	570#	*		13770#	540#
93	Se	34	2210#	570#	17770#	640#	39230#	400#	6350#	570#	4990#	570#	−6740#	640#
	Br	35	4730	430	13460#	590#	31340	430	8400	610	7770	540	−6250#	590#
	Kr	36	3438	4	15192	7	22986.0	2.6	7682	4	4728	4	−2690	330
	Rb	37	5919	10	11140	8	14593	8	9065	8	7203	8	−2973	9
	Sr	38	5290	8	12602	10	6721	8	8370	11	4144	10	520	8
	Y	39	7482	14	8649	11	−621	11	10136	12	6588	11	785	12
	Zr	40	6734.3	0.4	9595	9	−9905.3	2.1	9940.1	1.9	4238.9	0.6	4475.3	1.5
	Nb	41	8830.9	2.0	6042.8	1.5	−18201	3	11393.6	1.5	6423.8	1.5	4930.5	1.5
	Mo	42	8069.81	0.09	7642.8	1.8	−27830	370	10541.8	2.9	719	3	7611.87	0.22
	Tc	43	12752	3	4086.5	1.0	−37210#	400#	9314	6	1430	4	4702	3
	Ru	44	10987	3	5580	4	*		9481	3	−1628.0	2.3	8602	4
	Rh	45	14084	5	2000	4	*		9939	3	736	5	7359.3	2.8
	Pd	46	12270	510	3270	370	*		10300#	480#	−2480#	420#	11550	370
	Ag	47	16940#	570#	−1090#	530#	*		10480#	580#	−1830#	570#	10880#	450#
94	Se	34	4020#	640#	*		42040#	500#	4290#	710#	4560#	640#	*	
	Br	35	2830#	480#	14080#	450#	34700#	200#	9790#	450#	7800#	480#	−5500#	450#
	Kr	36	5283	12	15750	430	25922	12	5596	14	4624	13	−5120	430
	Rb	37	4014	8	11716	3	17806.3	2.5	10917	3	7275	3	−1809	4
	Sr	38	6831	8	13515	8	9568.4	1.7	6638	6	3763	8	−2225.3	2.8
	Y	39	6196	12	9555	10	1807	8	11227	7	6165	8	1040	10
	Zr	40	8218.6	0.5	10331	10	−4686	3	8258	9	3946.0	1.8	2029	5
	Nb	41	7227.54	0.08	6536.0	1.5	−13461	4	12800.8	1.5	6390.6	1.5	5628.7	2.4
	Mo	42	9678.32	0.23	8490.2	1.5	−22312	4	8750.0	1.8	3088.0	2.9	5127.91	0.17
	Tc	43	8624	4	4640	4	−31760#	400#	13361	4	2915	7	8126	5
	Ru	44	13438	4	6266	3	−42140#	500#	7053	4	−1733	4	5272	7
	Rh	45	11967	4	2980	4	*		12104	4	196	4	8725	4
	Pd	46	15190	370	4379	5	*		7608	6	−2670#	300#	7784	5
	Ag	47	14070#	570#	710#	550#	*		13090#	530#	−1370#	580#	11810#	500#
	Cd	48	*		1330#	640#	*		7800#	640#	*		11380#	660#
95	Se	34	1730#	710#	*		44660#	500#	*		4780#	710#	*	
	Br	35	4270#	360#	14340#	580#	37360#	300#	7720#	500#	7740#	500#	−7820#	580#
	Kr	36	2882	22	15800#	200#	29501	19	7440	430	4938	20	−3790#	400#
	Rb	37	5399	20	11831	24	20896	20	8957	20	7743	20	−4011	21
	Sr	38	4343	6	13843	6	12595	6	8213	10	4519	8	−702	6
	Y	39	6928	9	9651	7	4813	8	9589	10	6523	8	−789	9
	Zr	40	6461.9	0.9	10597	6	−2202	10	9278	11	4021	9	2854	4
	Nb	41	8488.5	1.6	6805.9	0.5	−8446	4	11046.6	0.7	6536.8	0.5	3677	9
	Mo	42	7369.11	0.09	8631.8	1.5	−17746	3	10211.8	1.5	3605.5	1.8	6393.55	0.16
	Tc	43	9934	7	4896	5	−26120#	400#	11497	5	5651	5	6078	5
	Ru	44	8945	10	6588	10	−36400#	570#	10859	10	332	10	8997	10
	Rh	45	13504	5	3046	5	*		9587	4	825	5	6231	5
	Pd	46	11935	5	4347	5	*		9757	4	−2103	5	9982	4
	Ag	47	15580#	570#	1090#	400#	*		9790#	550#	−260#	530#	8740#	400#
	Cd	48	14690#	760#	1940#	690#	*		10050#	690#	−4660#	690#	13370#	660#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
92	As	33	5530#	640#	*		−10410#	710#	25850#	500#	*		12130#	660#
	Se	34	7070#	520#	32830#	640#	−9630#	570#	22050#	400#	*		6310#	400#
	Br	35	8375	7	29820#	400#	−8210#	200#	18540	9	−27020#	400#	6670	7
	Kr	36	9953	3	27550	330	−7310	4	14098	4	−25480	430	904	8
	Rb	37	11550	9	25350	7	−6481	7	10044	11	−20954	7	808	8
	Sr	38	13059	4	22486	4	−5601	4	5592	3	−19182	4	−4587	4
	Y	39	14462	9	20029	11	−4632	9	1637	9	−14360	12	−4992	9
	Zr	40	15829.11	0.15	17086.0	1.5	−2962.31	0.09	−1650.44	0.18	−12096	5	−9892.3	2.9
	Nb	41	19934	4	14534.3	1.8	−4579.2	2.3	−7528	4	−7390.9	2.6	−12316	6
	Mo	42	22779	3	12613.98	0.20	−5605	5	−12507.4	2.7	−6201.97	0.18	−18893.2	2.4
	Tc	43	24344	3	10842	5	−5180	60	−15927	5	423	4	−18757	4
	Ru	44	25560	5	8707	4	−4040	5	−19520	350	619	7	−23800#	300#
	Rh	45	27510#	200#	6852	4	−3754	6	−25470#	400#	5699	5	−24900#	420#
	Pd	46	31210#	530#	4470	350	−2860#	460#	*		6170	350	*	
	Ag	47	*		470#	450#	−3100#	570#	*		13750#	500#	*	
93	Se	34	6420#	590#	*		−10250#	570#	23280#	400#	*		7300#	400#
	Br	35	7930	430	30970#	590#	−8790#	530#	19730	430	−29800#	660#	7810	430
	Kr	36	9305	3	28130	430	−7569	4	15950	8	−24700#	400#	2565	7
	Rb	37	11017	11	26091	9	−6771	8	11607	13	−23676	10	2176	9
	Sr	38	12577	9	23690	8	−5975	8	7036	8	−18605	8	−3341	12
	Y	39	14018	11	21060	13	−4940	12	2986	11	−16744	12	−3839	10
	Zr	40	15369.1	0.4	18048	5	−3337.9	0.5	−314.9	0.5	−11544	3	−8740.1	1.8
	Nb	41	16717	3	15439.5	2.4	−1926.6	1.5	−3606.7	1.8	−9685	9	−8475.6	1.5
	Mo	42	20741	6	13489.43	0.20	−4354.0	2.8	−9590.4	2.1	−5637.03	0.20	−15953	3
	Tc	43	23762.1	2.6	11546	3	−5405	24	−14594.3	2.8	−4441.8	2.1	−17376.2	2.9
	Ru	44	25120	3	9586	7	−4627	4	−18230	370	2302.9	2.1	−22289	5
	Rh	45	26590#	300#	7603	4	−4042	5	−22610#	400#	2625	4	−22300	350
	Pd	46	28960#	560#	5320	370	−3040	370	*		8030	370	−29520#	550#
	Ag	47	*		2410#	500#	−3170#	540#	*		9310#	400#	*	
94	Se	34	6220#	640#	*		−10760#	710#	24540#	500#	*		8020#	660#
	Br	35	7560#	200#	31850#	540#	−9080#	450#	20910#	200#	*		8420#	200#
	Kr	36	8721	12	29200#	400#	−7970	330	17498	12	−27780#	400#	3201	14
	Rb	37	9933	6	26908	7	−6987	4	13789	7	−22960	430	3452	8
	Sr	38	12121	4	24654	3	−6311.4	2.5	8423.6	1.7	−21999	3	−2690	11
	Y	39	13678	11	22157	9	−5411	9	4018	7	−17021	10	−3301	6
	Zr	40	14952.94	0.19	18980	3	−3743.3	1.5	1144.75	0.22	−14472	8	−8127.8	1.5
	Nb	41	16058.4	2.0	16131	9	−2297.1	1.5	−2211	4	−9431	11	−7633.3	1.5
	Mo	42	17748.13	0.21	14533.00	0.17	−2066.45	0.18	−5830	3	−8581.0	0.5	−12879.3	1.0
	Tc	43	21375	5	12283	4	−3922	5	−11251	5	−4234	4	−15013	5
	Ru	44	24425	4	10353	3	−4836	5	−16481	5	−3065	3	−21643	4
	Rh	45	26051	6	8560	5	−4608	4	−20510#	400#	3410	4	−22000	370
	Pd	46	27470	350	6379	5	−3643	6	−25660#	500#	3825	5	−27770#	400#
	Ag	47	31020#	570#	3980#	400#	−3190#	450#	*		9320#	400#	*	
	Cd	48	*		240#	610#	−3160#	640#	*		11250#	620#	*	
95	Se	34	5740#	640#	*		*		25700#	500#	*		9120#	540#
	Br	35	7100#	530#	*		−9780#	500#	22040#	300#	*		9430#	300#
	Kr	36	8166	19	29880#	400#	−8000	430	18958	20	−26650#	500#	4333	19
	Rb	37	9413	22	27580	430	−7208	21	15318	21	−25530#	200#	4884	20
	Sr	38	11174	10	25559	6	−6568	6	10543	6	−21058	13	−837	9
	Y	39	13123	12	23166	10	−5888	10	5578	7	−19934	7	−2010	7
	Zr	40	14680.5	1.0	20152	8	−4433	6	2051.9	0.9	−14103.2	1.9	−7362.2	1.7
	Nb	41	15716.1	1.6	17137	11	−2859.9	1.9	−765	5	−11724	6	−6443.5	0.5
	Mo	42	17047.43	0.22	15167.8	0.5	−2241.20	0.16	−4254	10	−7731.51	0.20	−11625	4
	Tc	43	18558	5	13386	5	−1808	6	−7681	6	−6941	5	−11509	6
	Ru	44	22384	10	11229	10	−3674	11	−13492	10	−2333	10	−18621	10
	Rh	45	25471	5	9312	4	−4779	5	−18440#	400#	−1471	6	−20310	6
	Pd	46	27130	370	7327	4	−4151	4	−22910#	570#	5329	4	−25640#	400#
	Ag	47	29650#	570#	5470#	400#	−3760#	500#	*		5710#	400#	−27540#	640#
	Cd	48	*		2650#	680#	−3310#	710#	*		11760#	570#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
96	Br	35	2430#	420#	15040#	580#	40120#	300#	9300#	580#	7510#	500#	*	
	Kr	36	4994	27	16520#	300#	32357	19	5280#	200#	4670	430	−6580#	400#
	Rb	37	3535	20	12484	19	24248	3	10704	13	7646	4	−2820	430
	Sr	38	5872	10	14317	22	15877	8	6355	9	4566	12	−3136	9
	Y	39	5193	9	10502	8	7492	8	11227	6	6620	10	−64	10
	Zr	40	7850.2	0.9	11520	7	641.53	0.14	7623	6	3652	10	293	8
	Nb	41	6887.9	0.5	7231.9	0.9	−5915	10	12377.31	0.22	6383.3	0.5	4271	10
	Mo	42	9154.34	0.05	9297.6	0.5	−12611	4	8285.0	1.5	3282.0	1.5	3973.5	0.5
	Tc	43	7872	7	5399	5	−21310	90	13303	5	5849	5	7038	5
	Ru	44	10694	10	7348	5	−30510#	410#	8789	4	2389.8	1.0	6373.10	0.25
	Rh	45	9418	11	3519	14	−41600#	500#	13607	10	2393	10	9565	10
	Pd	46	14289	5	5132	6	*		7435	5	−2308	5	6680	5
	Ag	47	12680#	410#	1830	90	*		12300	90	−670	380	10150	90
	Cd	48	16590#	700#	2960#	570#	*		7540#	570#	−4310#	570#	9060#	550#
	In	49	*		−1680#	760#	*		13060#	710#	*		13960#	640#
97	Br	35	3860#	500#	*		42120#	400#	7170#	640#	7670#	640#	*	
	Kr	36	2410	130	16500#	330#	35510	130	7140#	330#	5090#	240#	−4970#	520#
	Rb	37	5236	4	12726	19	27084	5	8351	19	7693	12	−5220#	200#
	Sr	38	3734	9	14515	5	18964	3	8020	21	4846	4	−1586	13
	Y	39	5857	9	10486	11	11109	8	9713	9	7594	7	−1906	7
	Zr	40	5569.15	0.04	11896	6	3183.9	2.8	8982	7	4279	6	1555.4	1.7
	Nb	41	8071	4	7453	4	−3010	40	10768	4	6531	4	2395	8
	Mo	42	6821.13	0.16	9230.84	0.19	−9739	5	9952.4	0.5	3688.4	1.5	5371.03	0.23
	Tc	43	9474	7	5719	4	−16320	13	11198	4	6054	4	4791	4
	Ru	44	8111.5	2.8	7588	6	−25390	420	10612	6	2902	5	7939.9	2.8
	Rh	45	10980	40	3810	40	−35210#	400#	11570	40	4850	40	7210	40
	Pd	46	9694	6	5407	11	*		11246	6	−34	6	10424	6
	Ag	47	14460	90	2010	13	*		9773	12	62	13	7650	12
	Cd	48	13230#	590#	3510	430	*		9880#	580#	−3470#	580#	11010	420
	In	49	17370#	640#	−890#	570#	*		10380#	690#	−2090#	640#	10660#	570#
98	Br	35	2120#	570#	*		44240#	400#	*		7270#	640#	*	
	Kr	36	4770#	330#	17410#	500#	37160#	300#	4800#	420#	4590#	420#	−8010#	580#
	Rb	37	3921	16	14230	130	29155	17	9423	25	6654	25	−4870#	300#
	Sr	38	5913	5	15192	4	21694	3	5643	5	4332	21	−4617	19
	Y	39	4245	10	10997	9	14143	9	11340	12	7693	10	−752	22
	Zr	40	6416	8	12455	11	6943	11	7759	10	4790	11	−518	10
	Nb	41	5993	7	7877	5	−349	13	12625	5	6999	5	3330	8
	Mo	42	8642.60	0.06	9802	4	−6795	5	8197.66	0.20	3534.3	0.5	3190.4	0.9
	Tc	43	7279	5	6176	3	−13370	30	13073	3	6144	3	6000	3
	Ru	44	10176	7	8289	8	−20590	50	8308	8	2661	8	5133	6
	Rh	45	8650	40	4344	12	−29270#	310#	13616	12	5147	15	8493	13
	Pd	46	11586	7	6010	40	*		9078	11	1884	6	7783	11
	Ag	47	10230	40	2550	30	*		13830	30	1760	30	10920	30
	Cd	48	14970	420	4020	50	*		7590	100	−2870#	400#	7980	50
	In	49	14590#	500#	460#	520#	*		12380#	510#	−1990#	640#	11650#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
96	Br	35	6700#	360#	*		−10260#	580#	23140#	300#	*		9880#	300#
	Kr	36	7877	23	30860#	500#	−8780#	400#	19837	21	−29910#	500#	4737	28
	Rb	37	8934	4	28280#	200#	−7546	7	16976	7	−24790#	300#	5692	7
	Sr	38	10215	9	26148	15	−6574	9	12521	8	−24048	20	218	11
	Y	39	12121	9	24345	6	−5982	9	7273	6	−19729	21	−741	6
	Zr	40	14312.16	0.20	21171.1	1.7	−4996	3	3356.03	0.07	−17611	6	−6723.9	0.5
	Nb	41	15376.4	1.5	17829	6	−3211	9	219	5	−11684	7	−5962.28	0.12
	Mo	42	16523.45	0.10	16103.50	0.20	−2760.78	0.15	−2714.50	0.12	−10423.9	0.9	−10845	5
	Tc	43	17806	7	14031	5	−1793	5	−6134	11	−6324	5	−10435	11
	Ru	44	19639	3	12244.25	0.16	−1696.71	0.23	−9897	4	−5657.48	0.13	−15811	4
	Rh	45	22923	11	10107	11	−3187	10	−15180	90	−955	11	−17793	10
	Pd	46	26224	6	8178	5	−4307	5	−20610#	410#	−15	10	−24350#	400#
	Ag	47	28250#	410#	6180	90	−3940	90	−26420#	510#	6540	90	−25530#	570#
	Cd	48	31270#	650#	4050#	410#	−3220#	540#	*		7110#	410#	*	
	In	49	*		270#	640#	−2990#	640#	*		14530#	640#	*	
97	Br	35	6290#	500#	*		*		24520#	400#	*		11010#	400#
	Kr	36	7410	130	31540#	520#	−8990#	420#	21160	130	*		5860	130
	Rb	37	8771	20	29250#	300#	−8050	430	17596	7	−27600#	300#	6328	9
	Sr	38	9606	7	27000	19	−6870	4	14356	3	−22788	20	1678	7
	Y	39	11050	10	24803	21	−5920	10	9487	8	−22050	7	1252	7
	Zr	40	13419.4	0.9	22397	6	−5276	8	4608.01	0.17	−17307	8	−5405.18	0.11
	Nb	41	14959	4	18973	8	−3801	11	1622	6	−14562	7	−4879	4
	Mo	42	15975.46	0.17	16462.7	0.9	−2847.6	0.5	−1424.1	2.8	−9394.81	0.17	−9794	5
	Tc	43	17346	7	15016	4	−2437	4	−4630	40	−8911	4	−9215	4
	Ru	44	18805	10	12986.6	2.8	−1738.4	2.8	−8315	6	−4614.6	2.8	−14504	10
	Rh	45	20400	40	11150	40	−1420	40	−11690	40	−4060	40	−14490	40
	Pd	46	23983	6	8926	11	−3014	5	−17070	420	986	5	−21370	90
	Ag	47	27140#	400#	7141	13	−4317	12	−23510#	400#	1495	16	−23400#	410#
	Cd	48	29820#	710#	5350	420	−4180	560	*		8160	420	−30720#	650#
	In	49	*		2060#	570#	−3420#	570#	*		9830#	410#	*	
98	Br	35	5980#	500#	*		*		26320#	400#	*		11300#	420#
	Kr	36	7180#	300#	*		−9740#	580#	22300#	300#	*		6330#	300#
	Rb	37	9157	16	30740#	300#	−9140#	200#	17920	18	−27660#	400#	6140	16
	Sr	38	9647	9	27919	20	−7500	13	14859	9	−26290	130	1622	7
	Y	39	10101	10	25512	9	−6151	8	11236	9	−21059	8	2577	8
	Zr	40	11986	8	22941	12	−4861	9	6834	8	−19990	9	−3750	9
	Nb	41	14064	5	19773	8	−3598	8	2908	6	−14698	8	−4051	5
	Mo	42	15463.73	0.17	17255.06	0.18	−3271.56	0.24	109	6	−12468.26	0.18	−8963	4
	Tc	43	16753	6	15407	3	−2488	4	−3257	12	−8118	5	−8383	4
	Ru	44	18287	6	14008	6	−2236	6	−6904	8	−7969	6	−13700	40
	Rh	45	19630	16	11932	13	−1442	13	−10110	30	−3240	13	−13441	13
	Pd	46	21280	6	9819	5	−1162	6	−13680	50	−2489	5	−18488	13
	Ag	47	24700	100	7960	30	−2580	30	−19160#	300#	2240	50	−20400	420
	Cd	48	28210#	410#	6030	50	−3960	50	*		2880	50	−28320#	400#
	In	49	31960#	590#	3970#	320#	−3930#	500#	*		9710#	310#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
99	Kr	36	2350#	500#	17640#	570#	39220#	400#	6310#	570#	4670#	500#	*	
	Rb	37	4823	17	14290#	300#	31214	13	7010	130	6825	20	−7270#	300#
	Sr	38	4167	6	15438	17	23452	5	6711	5	3700	6	−3790	20
	Y	39	6426	10	11510	7	16684	7	8648	7	7139	11	−3643	7
	Zr	40	4406	13	12617	13	10009	11	9210	12	5577	12	948	13
	Nb	41	6882	13	8343	15	3249	23	11312	12	7968	12	1641	13
	Mo	42	5925.44	0.15	9734	5	−3787	5	10343	4	4496.78	0.25	5115.16	0.23
	Tc	43	8967	3	6500.9	0.9	−10615	6	10927.6	0.9	6331.1	0.9	3921.4	0.9
	Ru	44	7472	6	8482	3	−17694.3	1.6	10310	4	3060	5	6815.9	0.4
	Rh	45	10481	23	4649	20	−24210#	300#	11247	20	5360	19	5884	20
	Pd	46	8933	7	6297	13	−34210#	580#	11130	40	2369	11	9544	5
	Ag	47	11720	30	2680	8	*		11804	8	4335	8	8622	12
	Cd	48	10370	50	4150	30	*		11684	12	−560	90	11899	4
	In	49	15540#	430#	1030#	300#	*		10070#	520#	−940#	510#	8780#	310#
	Sn	50	*		1360#	660#	*		10120#	710#	−5020#	770#	13240#	710#
100	Kr	36	4140#	570#	*		41900#	400#	4290#	570#	4400#	570#	*	
	Rb	37	3216	14	15160#	400#	33525	15	8570#	300#	6020	130	−6620#	400#
	Sr	38	5370	8	15985	8	26376	7	5262	18	3566	7	−6750	130
	Y	39	4749	13	12092	12	18700	11	9812	12	6123	12	−3156	11
	Zr	40	6827	13	13018	10	12855	8	6627	11	4607	11	−2146	9
	Nb	41	5527	14	9464	13	5800	20	12201	12	8010	8	1971	10
	Mo	42	8294.2	0.4	11147	12	−980	18	8042	5	4274	4	2390.1	0.3
	Tc	43	6764.4	1.0	7339.8	1.3	−7883	5	12805.8	1.3	6387.8	1.3	5228	4
	Ru	44	9673.32	0.03	9188.5	0.9	−15032.8	1.7	7916	3	2861	4	3963.7	0.4
	Rh	45	8078	27	5255	18	−21413	18	13345	19	5393	18	7280	19
	Pd	46	11101	18	6917	26	−28060	240	8673	21	2250	40	6554	18
	Ag	47	9497	8	3244	7	*		13894	7	4532	7	10110	40
	Cd	48	12334.8	2.3	4771	6	*		9580	30	1573	12	9258	5
	In	49	10870#	300#	1536.0	2.7	*		14170	50	1420	420	12372	12
	Sn	50	17240#	630#	3060#	380#	*		7470#	390#	−4890#	470#	9230	480
101	Kr	36	2180#	640#	*		44580#	500#	*		4330#	640#	*	
	Rb	37	4373	24	15390#	400#	36324	21	6540#	400#	6420#	300#	−8870#	400#
	Sr	38	3579	11	16348	16	28195	8	6507	9	3908	18	−5560#	300#
	Y	39	5805	13	12526	10	21290	25	8175	9	6232	8	−5039	18
	Zr	40	4860	12	13129	14	14797	8	8194	11	3992	11	−1092	9
	Nb	41	7172	9	9808	9	8521	7	9436	11	7254	9	−956	9
	Mo	42	5398.24	0.07	11018	8	1912	5	9526	12	4869	5	3408	8
	Tc	43	8395	24	7441	24	−5010	24	10336	24	6635	24	2826	25
	Ru	44	6802.04	0.23	9226.1	1.4	−12121.6	1.5	10080.6	1.0	3338	3	5804.3	0.4
	Rh	45	9893	19	5474	6	−18868	13	10924	6	5676	9	4666	7
	Pd	46	8291	18	7130	19	−25130	300	10863	20	2607	13	8439	8
	Ag	47	11268	7	3411	18	*		11559	7	4851	7	7487	13
	Cd	48	9713.2	2.2	4987	5	*		11587	6	2090	30	11131	5
	In	49	12438	12	1639	12	*		12097	12	3960	50	10170	30
	Sn	50	11230	380	3420	300	*		11780#	420#	−1540#	430#	12980	300

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
99	Kr	36	7120#	420#	*		−10370#	640#	24120#	400#	*		7900#	400#
	Rb	37	8745	4	31700#	400#	−9700#	300#	19523	8	−30360#	400#	7230	5
	Sr	38	10080	6	29670	130	−8785	19	15098	12	−25690#	300#	1699	9
	Y	39	10671	9	26703	7	−7178	21	11692	14	−23564	17	2567	11
	Zr	40	10823	10	23614	11	−4924	12	8353	11	−18483	11	−2163	12
	Nb	41	12875	13	20798	14	−3552	14	4993	12	−17336	14	−2291	12
	Mo	42	14568.04	0.16	17611.36	0.24	−2735.1	0.9	1655.3	0.4	−11977	8	−7609	3
	Tc	43	16246	4	16303	4	−2966.5	1.0	−1743	19	−11092	5	−7174	7
	Ru	44	17647.5	2.8	14658.6	0.4	−2338.4	0.4	−5443	5	−6798.4	0.4	−12521	12
	Rh	45	19130	40	12938	20	−1988	20	−8872	20	−6441	20	−12335	20
	Pd	46	20520	7	10640	6	−1150	11	−12252	5	−1247	8	−17190	30
	Ag	47	21951	14	8690	40	−797	7	−15340#	300#	−826	13	−17150	50
	Cd	48	25340	420	6703	5	−2390	3	−21960#	580#	4101	5	−24100#	300#
	In	49	30130#	500#	5050#	300#	−3900#	500#	*		4400#	300#	*	
	Sn	50	*		1820#	720#	−3350#	810#	*		12370#	580#	*	
100	Kr	36	6490#	500#	*		*		25350#	400#	*		8580#	400#
	Rb	37	8039	21	32790#	400#	−10480#	300#	21055	17	*		8181	14
	Sr	38	9538	8	30280#	300#	−9161	20	16555	11	−28710#	400#	2755	10
	Y	39	11175	14	27530	20	−8392	12	12470	14	−23489	12	2224	15
	Zr	40	11234	12	24528	9	−5879	12	9820	8	−21143	9	−2109	15
	Nb	41	12409	9	22080	11	−3886	10	6230	8	−16436	10	−1892	8
	Mo	42	14219.7	0.3	19489	8	−3179.1	0.3	3034.36	0.17	−15865	11	−6936.5	0.9
	Tc	43	15731	4	17074	5	−2843.0	1.4	−430	18	−10975	12	−6466.9	1.4
	Ru	44	17145	6	15689.4	0.4	−2857.4	0.4	−4015	18	−10546.3	0.4	−11714	19
	Rh	45	18559	22	13737	18	−2194	19	−7453	19	−5552	18	−11480	19
	Pd	46	20034	18	11566	19	−1557	18	−11018	18	−4876	18	−16572	19
	Ag	47	21210	30	9541	13	−875	11	−13960	5	158	20	−16278	5
	Cd	48	22700	50	7452	5	−436	5	−17050	240	699	5	−20890#	300#
	In	49	26410#	300#	5690	30	−2090	90	*		5245	7	−24270#	580#
	Sn	50	*		4090	250	−4000#	480#	*		5490	240	*	
101	Kr	36	6320#	640#	*		*		26750#	500#	*		9610#	500#
	Rb	37	7589	21	*		−10990#	400#	22487	22	*		9179	22
	Sr	38	8949	10	31500#	400#	−10330	130	17836	12	−28140#	400#	3925	14
	Y	39	10554	10	28512	8	−8961	7	13837	8	−26078	15	3247	11
	Zr	40	11687	13	25220	10	−7005	9	10359	8	−20632	11	−1441	12
	Nb	41	12699	13	22826	8	−5201	8	7453	24	−18859	12	−770	4
	Mo	42	13692.5	0.4	20481	11	−3008.2	0.3	4438.16	0.30	−14436	8	−5570.3	1.4
	Tc	43	15159	24	18587	27	−3167	24	1068	25	−13842	25	−5189	24
	Ru	44	16475.36	0.24	16565.9	0.5	−2838.3	0.4	−2526	5	−9054.06	0.29	−10438	18
	Rh	45	17971	20	14663	6	−2613	7	−6078	8	−8680	6	−10271	19
	Pd	46	19392	7	12385	5	−1736	5	−9596	5	−3494	5	−15365	7
	Ag	47	20765	8	10328	20	−1160	40	−12789	13	−3032	19	−15211	5
	Cd	48	22048.0	2.2	8232	5	−456	5	−15530	300	2087	18	−19729.6	2.7
	In	49	23310#	300#	6410	13	−66	17	*		2304	13	−19470	240
	Sn	50	28470#	660#	4950	300	−2000	520	*		6600	300	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
102	Rb	37	2760	90	15960#	510#	39050	80	7930#	410#	6010#	410#	*	
	Sr	38	4910	70	16880	70	31400	70	4820	70	3830	70	−8110#	410#
	Y	39	4189	8	13137	9	23400	10	9356	8	6210	6	−4405	6
	Zr	40	6492	12	13816	11	17525	9	6451	14	3926	11	−3416	10
	Nb	41	5478	5	10426	9	10485	7	10785	9	6182	11	−8	7
	Mo	42	8112	8	11958	9	4342	8	6941	12	3639	15	−298	13
	Tc	43	6300	26	8342	9	−2326	12	12331	9	6261	9	3409	15
	Ru	44	9219.64	0.05	10051	24	−9446.7	1.7	7625.3	1.4	3085.5	1.0	2510.1	0.5
	Rh	45	7442	9	6114	6	−16088	8	13155	6	5706	6	6191	6
	Pd	46	10542	5	7780	6	−22970	100	8399	18	2546	19	5368.82	0.25
	Ag	47	8984	9	4104	9	−31150#	400#	13677	19	4800	10	8984	21
	Cd	48	11894.6	2.2	5614	5	*		9189	5	1917	6	8170	5
	In	49	10221	13	2147	5	*		14211	5	4100	5	11664	8
	Sn	50	12700	320	3680	100	*		9950	100	1310#	310#	10640	100
	Sb	51	*		−1920#	500#	*		16760#	470#	1740#	710#	15920#	500#
103	Rb	37	3980#	410#	*		41870#	400#	6130#	640#	6170#	570#	*	
	Sr	38	3190#	210#	17320#	220#	33670#	200#	6000#	200#	3850#	200#	−7160#	450#
	Y	39	5356	12	13590	70	26147	15	7579	14	6225	13	−6545	17
	Zr	40	4299	13	13925	10	19458	9	7957	12	4376	14	−2345	12
	Nb	41	6802	5	10736	10	13003	5	8843	9	6208	9	−2061	12
	Mo	42	5465	12	11945	10	6503	9	8648	10	3701	12	1065	12
	Tc	43	8102	13	8332	13	199	11	9627	10	6453	10	834	13
	Ru	44	6232.05	0.15	9983	9	−6615.5	1.9	9788	24	3617.8	1.4	4572.3	0.3
	Rh	45	9320	7	6214.2	2.3	−13399	9	10637.2	2.3	6059.7	2.3	3635.6	2.7
	Pd	46	7625.3	0.8	7963	6	−20370#	100#	10666	6	2998	18	7416.8	0.8
	Ag	47	10627	9	4189	4	−28130#	300#	11340	6	5274	18	6435	19
	Cd	48	9063.2	2.5	5694	8	*		11394	5	2350	5	10207	18
	In	49	12009	10	2262	9	*		11915	9	4426	9	9152	10
	Sn	50	10230#	140#	3690#	100#	*		12160#	100#	1950#	100#	12750#	100#
	Sb	51	13640#	500#	−980#	320#	*		14350#	420#	5340#	380#	13150#	300#
104	Rb	37	2360#	640#	*		44360#	500#	*		5990#	710#	*	
	Sr	38	4550#	360#	17890#	500#	36580#	300#	4200#	310#	3670#	300#	−9530#	580#
	Y	39	3690#	200#	14090#	280#	28420#	200#	8790#	210#	6110#	200#	−5870#	200#
	Zr	40	5980	13	14550	15	22378	10	6166	10	4201	12	−4746	13
	Nb	41	4854	4	11291	9	15148.3	2.9	10481	9	6214	9	−1110	7
	Mo	42	7461	13	12604	10	9051	9	6665	9	3412	10	−1536	12
	Tc	43	5966	27	8834	27	2618	25	11773	26	5885	25	2039	25
	Ru	44	8899.9	2.5	10781	9	−4127	3	7188	9	3113	24	1070.6	2.5
	Rh	45	6998.96	0.08	6981.1	2.3	−10777	6	12857.9	2.3	5862.8	2.3	5032	24
	Pd	46	10009.5	1.6	8652.4	2.7	−17768	6	8099	7	2881	6	4209.4	1.4
	Ag	47	8385	6	4948	4	−25820#	100#	13497	4	5180	6	7942	7
	Cd	48	11388.1	2.5	6455	4	−34340	320	8989	8	2230	5	7110	5
	In	49	9622	11	2820	6	*		14188	6	4518	6	10798	8
	Sn	50	12610#	100#	4284	11	*		9779	7	1782	13	9856	6
	Sb	51	10700#	320#	−509	15	*		16350#	140#	5880#	320#	14900#	100#
	Te	52	*		250#	440#	*		12180#	510#	*		16330	440

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
102	Rb	37	7130	80	*		−11630#	410#	23920	80	*		10000	80
	Sr	38	8480	70	32270#	410#	−10460#	310#	19420	70	−30870#	510#	4820	70
	Y	39	9994	12	29485	14	−9228	17	15126	5	−25894	21	3917	9
	Zr	40	11351	12	26342	11	−7584	9	11979	12	−23545	12	−761	10
	Nb	41	12650	8	23555	11	−6434	8	8275	10	−18532	8	−849.6	2.5
	Mo	42	13510	8	21766	12	−4704	12	5546	8	−17689	12	−5288	25
	Tc	43	14695	9	19360	12	−3473	10	2210	11	−12970	10	−4686	9
	Ru	44	16021.68	0.24	17491.35	0.29	−3415.4	0.4	−1203.47	0.04	−12875.45	0.30	−9765	6
	Rh	45	17335	19	15340	7	−2776	7	−4537	10	−7728	25	−9422	8
	Pd	46	18833	18	13253.51	0.24	−2103	6	−8243.3	1.7	−7233.82	0.07	−14640	5
	Ag	47	20251	10	11234	20	−1496	14	−11552	9	−2123	10	−14482	8
	Cd	48	21607.7	2.4	9025	18	−764	5	−14720	100	−1517	5	−19186	12
	In	49	22659	5	7135	7	−50	30	−19600#	400#	3351	7	−18460	300
	Sn	50	23930	260	5320	100	280	110	*		3610	100	*	
	Sb	51	*		1500#	400#	380#	500#	*		10160#	400#	*	
103	Rb	37	6740#	400#	*		*		25300#	400#	*		10930#	410#
	Sr	38	8100#	200#	33280#	540#	−11310#	450#	20530#	200#	*		5820#	200#
	Y	39	9545	13	30468	23	−9761	12	16572	12	−28490	80	5053	14
	Zr	40	10791	12	27062	13	−7715	10	13145	13	−22940	70	418	10
	Nb	41	12280	5	24552	8	−6810	8	9575	11	−21145	6	461	9
	Mo	42	13577	9	22371	12	−5763	14	6313	9	−16662	13	−4453	13
	Tc	43	14402	26	20290	10	−4693	15	3428	10	−15595	10	−3569	10
	Ru	44	15451.69	0.16	18325.2	0.3	−3722.0	0.5	189.8	0.8	−10995	8	−8555	6
	Rh	45	16762	6	16265	24	−3128.8	2.5	−3229	5	−10748	9	−8200.1	2.3
	Pd	46	18167	5	14076.8	0.8	−2256.5	0.8	−6805.4	2.0	−5639.5	0.8	−13282	8
	Ag	47	19611	6	11968	7	−1643	20	−10170	10	−5308	8	−13214	4
	Cd	48	20957.8	2.3	9797	5	−894	5	−13560#	100#	−37.6	1.9	−18028	5
	In	49	22230	15	7876	10	−345	11	−17960#	300#	325	12	−17770	100
	Sn	50	22930#	320#	5830#	100#	410#	100#	*		5280#	100#	−24060#	410#
	Sb	51	*		2700#	300#	2280#	420#	*		6740#	300#	*	
104	Rb	37	6340#	510#	*		*		26630#	540#	*		11760#	540#
	Sr	38	7740#	310#	*		−11720#	500#	21960#	300#	*		6630#	300#
	Y	39	9050#	200#	31410#	220#	−10240#	200#	17730#	200#	−28210#	450#	5660#	200#
	Zr	40	10279	13	28140	70	−8325	12	14626	13	−25730#	200#	1240	10
	Nb	41	11655	3	25216	4	−6915	11	10688	25	−20643	11	1072	9
	Mo	42	12926	12	23340	12	−6396	12	7752	9	−19824	13	−3811	13
	Tc	43	14069	26	20779	25	−5133	26	4460	25	−14759	25	−3303	25
	Ru	44	15132.0	2.5	19113	9	−4327.7	2.5	1299.4	2.7	−14430	10	−8135	3
	Rh	45	16319	7	16964	9	−3363.3	2.7	−1843	5	−9644	10	−7573.7	2.4
	Pd	46	17634.8	1.4	14866.6	1.4	−2592.6	1.4	−5426.7	2.1	−9416.9	1.4	−12664	4
	Ag	47	19012	9	12911	8	−1950	19	−8934	7	−4374	5	−12536	5
	Cd	48	20451.3	2.4	10643.4	1.7	−1181	18	−12341	6	−3800.4	1.9	−17407	9
	In	49	21630	7	8514	10	−470	8	−16890#	100#	1331	7	−17160#	100#
	Sn	50	22830	100	6545	6	143	6	−22000	320	1736	6	−23030#	300#
	Sb	51	24340#	410#	3180#	100#	2460#	100#	*		8050#	100#	*	
	Te	52	*		−730	330	5100	210	*		10180#	330#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
105	Sr	38	2500#	580#	18030#	710#	39140#	500#	5680#	640#	3930#	510#	*	
	Y	39	4560#	450#	14100#	500#	31720#	400#	7420#	450#	6450#	410#	−7670#	410#
	Zr	40	3812	15	14670#	200#	24476	12	7710	16	4578	13	−3650	70
	Nb	41	6176	4	11487	10	17936	5	8604	10	6530	10	−3097	6
	Mo	42	5058	13	12809	9	11087	9	8409	10	3832	9	−103	13
	Tc	43	7860	40	9230	40	4780	40	9380	40	6140	40	−340	40
	Ru	44	5910.10	0.11	10725	25	−1600.7	2.9	9380	9	3502	9	3273	9
	Rh	45	8963	3	7044.5	2.9	−8211	11	10126.7	2.5	6119.2	2.5	2368	9
	Pd	46	7094.1	0.7	8747.5	2.6	−15080	4	10324.6	2.6	3229	7	6334.9	1.2
	Ag	47	10026	6	4965	5	−23055	22	11097	5	5696	5	5359	8
	Cd	48	8436.8	2.2	6506	4	−31520	300	11180	4	2777	8	9215.5	1.5
	In	49	11529	12	2961	10	*		11722	10	4883	10	8253	13
	Sn	50	9782	7	4444	7	*		12005	10	2221	6	11968	4
	Sb	51	12790#	100#	−323	22	*		13790#	100#	5780	100	12326	22
	Te	52	11260	440	810#	320#	*		14570#	420#	3150#	500#	17770	320
106	Sr	38	4180#	780#	*		41830#	600#	3860#	780#	3720#	720#	*	
	Y	39	3290#	640#	14890#	710#	33990#	500#	8680#	580#	6350#	540#	−6980#	640#
	Zr	40	5360#	200#	15470#	450#	27570#	200#	6040#	280#	4570#	200#	−5820#	280#
	Nb	41	4358	4	12033	12	20160	6	10226	9	6470	9	−2099	11
	Mo	42	6869	13	13501	10	13780	9	6394	9	3765	10	−2673	13
	Tc	43	5560	40	9734	15	7166	13	11278	15	6042	15	899	13
	Ru	44	8460	5	11330	40	809	5	6887	25	3145	11	277	11
	Rh	45	6583	6	7717	5	−5755	13	12444	5	5769	5	3888	11
	Pd	46	9560.96	0.28	9345.2	2.4	−12554	5	7762.6	2.6	2988.2	2.6	3006.0	1.2
	Ag	47	7943	5	5813.5	2.8	−20469	8	13163.5	2.9	5379	3	6736	4
	Cd	48	10869.6	1.8	7350	5	−28910	100	8695	4	2535	4	5971.2	1.4
	In	49	9039	16	3563	12	−37310#	400#	14071	12	4908	12	9841	13
	Sn	50	12087	6	5002	11	*		9540	8	2143	10	8944	5
	Sb	51	10529	23	424	8	*		15865	9	5480#	100#	13805	12
	Te	52	13480	320	1490	100	*		11790#	140#	3320#	320#	14520#	140#
	I	53	*		−2220#	500#	*		17040#	510#	*		19020#	500#
107	Sr	38	2020#	920#	*		44300#	700#	*		4060#	860#	*	
	Y	39	4250#	710#	14960#	780#	36780#	500#	6930#	710#	6650#	580#	−8870#	710#
	Zr	40	3340#	360#	15520#	580#	29840#	300#	7260#	500#	4920#	360#	−4610#	420#
	Nb	41	5592	8	12260#	200#	23140	14	8445	15	6858	12	−4000#	200#
	Mo	42	4488	13	13631	9	15828	9	8081	10	4130	9	−1181	13
	Tc	43	7045	15	9911	13	9657	9	9292	13	6458	12	−1293	9
	Ru	44	5611	10	11375	15	3128	9	9130	40	3500	26	2128	12
	Rh	45	8572	13	7829	13	−3297	15	9782	12	6096	12	1282	28
	Pd	46	6536.4	0.5	9299	5	−9860	5	10189.4	2.4	3450.7	2.6	5369.5	2.6
	Ag	47	9536	4	5788.1	2.3	−17753	5	10722.0	2.3	5852.5	2.4	4199	3
	Cd	48	7929.5	1.9	7337	3	−26330#	100#	10791	5	2990	5	8051.2	2.1
	In	49	11030	16	3723	10	−34140#	300#	11478	10	5266	10	7196	11
	Sn	50	9230	7	5193	13	*		11839	12	2534	8	11103	6
	Sb	51	12251	9	589	7	*		13396	6	5838	7	11176	7
	Te	52	10510#	140#	1470#	100#	*		14070#	100#	3502	14	16620#	100#
	I	53	14200#	500#	−1500#	320#	*		14090#	420#	5060#	440#	15510#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
105	Sr	38	7050#	540#	*		−12040#	710#	23270#	500#	*		7820#	540#
	Y	39	8260#	400#	31990#	570#	−10430#	400#	19350#	400#	−30410#	640#	7080#	400#
	Zr	40	9792	15	28760#	200#	−8558	15	15873	15	−24990#	300#	2281	12
	Nb	41	11030	6	26036	12	−7286	8	12370	40	−23130#	200#	2357	10
	Mo	42	12519	13	24100	13	−6595	12	8604	9	−18902	13	−2903	26
	Tc	43	13830	40	21840	40	−5820	40	5560	40	−17760	40	−2260	40
	Ru	44	14810.0	2.5	19558	10	−4839.5	2.5	2483.4	2.6	−12880	9	−7047	3
	Rh	45	15962	3	17825	10	−3932	24	−780	5	−12641	25	−6527.5	2.4
	Pd	46	17103.6	1.4	15728.7	1.2	−2884.7	1.2	−4084.1	1.8	−7611.1	2.6	−11373	4
	Ag	47	18411	6	13617	5	−2083	7	−7430	11	−7400	5	−11174	5
	Cd	48	19824.9	2.3	11454.8	1.6	−1327	5	−10996	4	−2227.7	1.9	−16222	6
	In	49	21151	14	9416	11	−731	11	−15625	24	−1813	11	−16085	12
	Sn	50	22390#	100#	7264	4	74	4	−20530	300	3341	4	−22120#	100#
	Sb	51	23490#	300#	3961	24	2104	25	*		4878	23	−22460	320
	Te	52	*		300#	320#	5069	3	*		11530	300	*	
106	Sr	38	6680#	670#	*		*		24450#	630#	*		8200#	720#
	Y	39	7850#	540#	32920#	710#	−10960#	510#	20410#	500#	*		7600#	500#
	Zr	40	9170#	200#	29570#	360#	−9020#	210#	17380#	200#	−27850#	540#	3100#	200#
	Nb	41	10534.3	2.3	26700#	200#	−7455	4	13574	12	−22920#	400#	3057	9
	Mo	42	11927	13	24988	13	−6971	13	10195	11	−21959	15	−1910	40
	Tc	43	13420	28	22543	12	−5903	13	6586	11	−17150	13	−1913	12
	Ru	44	14370	5	20557	10	−5187	10	3584	5	−16281	11	−6543	6
	Rh	45	15546	6	18442	25	−4215	10	580	6	−11370	40	−6016	5
	Pd	46	16655.1	0.8	16389.7	2.6	−3226.0	1.2	−2775.39	0.10	−11262.0	2.6	−10908	5
	Ag	47	17969	5	14561	4	−2584	7	−6334	12	−6380	4	−10680	3
	Cd	48	19306.4	2.0	12315.0	0.8	−1654.1	1.2	−9778	5	−6003.2	0.3	−15563	10
	In	49	20568	14	10070	13	−786	15	−14135	14	−826	13	−15341	13
	Sn	50	21869	8	7963	5	−119	5	−19130	100	−309	5	−21410	22
	Sb	51	23320#	100#	4869	9	1797	9	−23170#	400#	5878	13	−21730	300
	Te	52	24740	330	1170	100	4290	9	*		7830	100	*	
	I	53	*		−1420#	410#	5380#	570#	*		13430#	400#	*	
107	Sr	38	6200#	860#	*		*		25770#	760#	*		9470#	860#
	Y	39	7540#	640#	*		−11240#	640#	21750#	500#	*		8710#	540#
	Zr	40	8700#	300#	30410#	580#	−9170#	360#	18530#	300#	−27010#	670#	4110#	300#
	Nb	41	9951	9	27730#	400#	−7692	14	15026	12	−25220#	500#	4333	12
	Mo	42	11357	13	25665	15	−7161	13	11318	13	−21090#	200#	−840	15
	Tc	43	12610	40	23412	10	−6146	10	8114	15	−19836	9	−498	10
	Ru	44	14071	8	21110	13	−5333	13	4510	9	−15024	13	−5571	10
	Rh	45	15155	12	19160	40	−4685	16	1543	12	−14376	17	−5027	12
	Pd	46	16097.4	0.6	17016.1	2.6	−3530.4	1.3	−1382.3	2.0	−9338	5	−9501.6	2.9
	Ag	47	17478	5	15133	3	−2800	3	−4840	10	−9333	6	−9345.9	2.3
	Cd	48	18799.1	2.2	13150.4	2.0	−1958.3	1.9	−8478	6	−4371.8	1.9	−14453	12
	In	49	20069	14	11074	11	−1189	10	−12913	11	−3913	10	−14284	11
	Sn	50	21317	7	8756	5	−286	6	−17860#	100#	1331	5	−20110	9
	Sb	51	22780	22	5591	11	1554	10	−21220#	300#	2666	13	−20500	100
	Te	52	23990#	320#	1900#	100#	4010	5	*		9410#	100#	−25430#	410#
	I	53	*		−10#	300#	4820#	420#	*		9760#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
108	Y	39	2880#	780#	15820#	920#	39140#	600#	8230#	850#	6270#	780#	*	
	Zr	40	5000#	500#	16270#	640#	32710#	400#	5550#	640#	4480#	570#	−7110#	640#
	Nb	41	3893	11	12810#	300#	25486	16	9920#	200#	6777	15	−3330#	400#
	Mo	42	6276	13	14314	12	18775	9	6164	9	4030	10	−3645	15
	Tc	43	5244	12	10667	13	11684	9	10916	13	6272	13	−361	10
	Ru	44	7870	12	12200	12	5591	9	6826	15	3490	40	−684	13
	Rh	45	6239	18	8458	16	−911	16	12003	15	5767	14	2900	40
	Pd	46	9222.9	1.6	9949	12	−7454	5	7549	6	3191.1	2.7	2056.7	2.7
	Ag	47	7271.41	0.17	6523.1	2.3	−15161	6	13011.6	2.3	5675.2	2.3	5891	3
	Cd	48	10333.4	2.0	8134.7	2.6	−23471	6	8401	3	2682	5	4811.9	1.6
	In	49	8624	13	4418	9	−31350#	100#	13723	9	5078	9	8597	10
	Sn	50	11629	8	5792	11	−39440	380	9249	13	2435	12	7910	6
	Sb	51	9863	7	1222	8	*		15619	7	5757	7	12842	12
	Te	52	13200#	100#	2417	7	*		11402	9	3098	21	13203	7
	I	53	11410#	320#	−597	13	*		16160#	140#	4900#	320#	16890#	100#
	Xe	54	*		490#	480#	*		11380#	550#	*		15830	480
109	Y	39	3770#	920#	*		41800#	700#	6480#	990#	6680#	920#	*	
	Zr	40	2850#	640#	16240#	780#	35010#	500#	6950#	710#	4930#	710#	−5780#	780#
	Nb	41	5220	430	13030#	590#	28310	430	8040#	530#	6920#	480#	−5250#	660#
	Mo	42	3981	14	14403	14	20947	11	7775	14	4407	11	−2260#	200#
	Tc	43	6431	13	10823	13	14437	10	8973	13	6709	13	−2434	10
	Ru	44	5148	12	12105	12	7766	9	8722	12	3902	15	1036	13
	Rh	45	8039	15	8627	10	1490	6	9574	10	6188	7	423	13
	Pd	46	6153.59	0.15	9864	14	−4976	8	9968	12	3620	6	4363	6
	Ag	47	9184.0	2.7	6484.2	1.4	−12468	5	10364.0	1.8	6052.2	1.7	3290	6
	Cd	48	7323.2	1.8	8186.5	2.8	−20789	5	10613.2	2.8	3302	3	7049.6	1.9
	In	49	10441	9	4526	4	−28817	8	11212	4	5507	4	6099	5
	Sn	50	8632	10	5799	12	−36460	300	11647	13	2842	15	10148	8
	Sb	51	11877	8	1470	8	*		12972	7	5967	7	10004	13
	Te	52	10005	7	2559	7	*		13649	6	3622	9	15285	7
	I	53	12970#	100#	−820	4	*		13700#	100#	5410	100	14447	10
	Xe	54	11610	480	690#	320#	*		13970#	420#	1990#	500#	17700	320
110	Zr	40	4560#	710#	17030#	860#	37850#	500#	5270#	780#	4610#	710#	−8320#	860#
	Nb	41	3690	940	13870#	980#	30520	840	9350#	930#	6570#	890#	−4690#	980#
	Mo	42	5948	27	15130	430	23795	24	5720	26	4052	26	−4870#	300#
	Tc	43	4823	13	11664	15	16423	10	10426	13	6374	13	−1664	12
	Ru	44	7405	12	13079	13	10275	9	6561	12	3541	12	−1881	13
	Rh	45	5901	18	9379	20	3641	21	11544	20	5898	20	1568	20
	Pd	46	8795.7	1.3	10621	4	−2489	14	7411	14	3397	12	1178	9
	Ag	47	6809.19	0.10	7139.8	1.4	−10008	6	12777.7	1.4	5779.4	1.8	5053	12
	Cd	48	9915.0	1.6	8917.5	1.3	−18118	7	7969.6	2.4	2922.8	2.4	3671.1	1.3
	In	49	8052	12	5255	12	−26000	60	13493	12	5384	12	7583	12
	Sn	50	11283	16	6641	14	−33920	100	8989	16	2589	17	6795	14
	Sb	51	9270	8	2109	10	*		15331	8	5927	8	11763	11
	Te	52	12586	8	3268	8	*		10926	9	3287	8	11929	8
	I	53	10870	60	40	60	*		16020	60	5050#	120#	15830	60
	Xe	54	13820	320	1540	100	*		11560#	140#	2370#	320#	14380#	140#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
108	Y	39	7130#	780#	*		−11760#	780#	22770#	600#	*		9170#	670#
	Zr	40	8340#	450#	31230#	720#	−9620#	500#	19800#	400#	−29990#	810#	4700#	400#
	Nb	41	9485	8	28330#	500#	−7890#	200#	16378	12	−24860#	500#	4928	12
	Mo	42	10764	13	26580#	200#	−7457	13	12912	13	−24020#	300#	−71	13
	Tc	43	12289	15	24298	9	−6537	9	9108	17	−19488	12	−132	12
	Ru	44	13481	10	22111	13	−5743	12	5863	9	−18405	13	−4869	15
	Rh	45	14811	15	19833	19	−4957	29	2576	14	−13570	16	−4730	14
	Pd	46	15759.3	1.6	17779	6	−3853.4	2.7	−271.8	0.8	−12951	9	−9188.8	2.6
	Ag	47	16807	4	15822	6	−3072	3	−3487	9	−8032	12	−8687.8	2.6
	Cd	48	18262.9	1.6	13922.8	1.6	−2282.2	1.7	−7182	5	−8168.7	1.6	−13757	10
	In	49	19654	15	11755	9	−1428	10	−11674	10	−3002	9	−13679	10
	Sn	50	20859	7	9516	5	−526	6	−16288	8	−2369	6	−19488	7
	Sb	51	22115	9	6415	13	1312	8	−19670#	100#	3832	11	−19860#	100#
	Te	52	23700	100	3006	7	3420	8	−23150	380	5442	8	−24420#	300#
	I	53	25610#	410#	880#	100#	4099	5	*		10590#	100#	*	
	Xe	54	*		−1010	390	4570	210	*		10740#	390#	*	
109	Y	39	6650#	860#	*		*		24210#	820#	*		10400#	810#
	Zr	40	7850#	580#	32060#	860#	−9960#	710#	20930#	500#	*		5740#	500#
	Nb	41	9110	430	29300#	660#	−8550#	590#	17590	430	−27200#	740#	5990	430
	Mo	42	10257	14	27220#	300#	−7626	16	14079	14	−23000#	400#	1192	14
	Tc	43	11675	12	25137	13	−6792	10	10716	10	−22027	13	1307	12
	Ru	44	13019	12	22771	13	−5833	13	6868	9	−17278	13	−3779	17
	Rh	45	14278	13	20827	10	−5140	40	3720	4	−16365	10	−3546	4
	Pd	46	15376.5	1.6	18322	9	−4096.9	2.7	897.8	1.8	−11234	9	−8071.0	2.6
	Ag	47	16455.4	2.7	16434	12	−3293.1	2.8	−2230	4	−10977	14	−7538.3	1.5
	Cd	48	17656.6	2.3	14709.6	2.0	−2511.3	1.9	−5874	8	−6269.1	1.8	−12456	9
	In	49	19065	10	12661	5	−1844	6	−10239	7	−6172	5	−12491	7
	Sn	50	20261	10	10218	8	−721	8	−14915	9	−667	8	−18256	10
	Sb	51	21740	7	7262	11	965	12	−18578	9	580	10	−18541	8
	Te	52	23200#	100#	3781	7	3198	6	−21550	300	7066	7	−23020#	100#
	I	53	24390#	300#	1597	8	3918	21	*		7484	9	−23110	380
	Xe	54	*		90#	320#	4217	7	*		12320	300	*	
110	Zr	40	7410#	640#	*		−10340#	780#	22320#	500#	*		6400#	660#
	Nb	41	8910	840	30110#	1030#	−8940#	980#	18720	840	−27120#	1090#	6280	840
	Mo	42	9929	26	28160#	400#	−8210#	200#	15537	26	−26100#	500#	1676	26
	Tc	43	11254	12	26067	13	−7257	10	11794	20	−21630	430	1633	13
	Ru	44	12554	12	23901	13	−6370	13	8258	9	−20702	14	−3145	10
	Rh	45	13940	23	21484	20	−5477	22	4629	18	−15835	20	−3294	18
	Pd	46	14949.3	1.3	19247	9	−4433	5	2017.1	0.5	−14881	9	−7682.8	1.4
	Ag	47	15993.2	2.7	17004	14	−3520	6	−987	12	−9747	4	−7024.3	1.8
	Cd	48	17238.2	1.2	15401.7	1.2	−2865.3	1.2	−4506	14	−10030.5	1.2	−11930	4
	In	49	18493	14	13441	12	−1952	12	−9020	13	−5040	12	−11911	14
	Sn	50	19915	15	11168	14	−1135	14	−13612	15	−4627	14	−17662	15
	Sb	51	21147	8	7908	10	733	14	−16980	60	1751	7	−17806	7
	Te	52	22591	9	4738	8	2699	8	−20310	100	3111	10	−22629	9
	I	53	23840#	120#	2600	60	3580	60	*		8490	60	−22370	310
	Xe	54	25430	390	720	100	3872	9	*		8500	100	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
111	Zr	40	2330#	780#	*		40310#	600#	6710#	920#	5160#	850#	*	
	Nb	41	4720#	890#	14030#	580#	33340#	300#	7480#	580#	6850#	500#	−6530#	670#
	Mo	42	3475	27	14920	840	26046	13	7460	430	4469	15	−3340#	400#
	Tc	43	6061	14	11778	26	19191	11	8345	15	6589	14	−3833	13
	Ru	44	4784	13	13040	13	12467	10	8208	13	4002	13	−390	13
	Rh	45	7546	19	9520	11	6088	8	9145	11	6222	11	−735	11
	Pd	46	5726.3	0.4	10446	18	−47	5	9724	4	3909	14	3322	9
	Ag	47	8829.5	1.9	7173.5	1.5	−7379	9	10101.8	1.8	6172.8	1.8	2462	14
	Cd	48	6975.60	0.17	9083.9	1.3	−15665	6	10178.0	1.3	3218.6	2.4	5918.4	1.1
	In	49	9993	12	5333	3	−23438	6	10823	4	5724	4	4861	4
	Sn	50	8168	15	6758	13	−31420#	120#	11262	7	3045	10	8960	5
	Sb	51	11458	11	2284	16	−37940#	200#	12504	12	6097	10	8929	12
	Te	52	9429	9	3427	9	*		13374	8	3722	8	14129	8
	I	53	12560	60	13	8	*		13472	6	5692	7	13138	7
	Xe	54	10670#	150#	1340#	130#	*		13860#	120#	3120	60	16910#	120#
	Cs	55	*		−1730#	220#	*		13980#	360#	4600#	430#	15520#	220#
112	Zr	40	4010#	920#	*		43210#	700#	*		4930#	990#	*	
	Nb	41	3180#	420#	14880#	670#	35660#	300#	8860#	580#	6520#	580#	−5940#	760#
	Mo	42	5610#	200#	15810#	360#	28840#	200#	5540#	860#	4070#	480#	−6100#	540#
	Tc	43	4306	12	12608	14	21325	6	9988	25	6264	12	−2920	430
	Ru	44	6917	13	13895	14	14944	10	6114	13	3516	13	−3325	15
	Rh	45	5500	40	10230	50	8260	40	11050	40	5870	40	200	50
	Pd	46	8406	7	11306	9	2334	7	7218	19	3542	8	64	11
	Ag	47	6439.6	2.8	7886.8	2.5	−4985	18	12458.0	2.5	5886.8	2.7	4062	5
	Cd	48	9393.93	0.28	9648.4	1.4	−13007	8	7593.3	1.3	3008.6	1.3	2678.0	1.1
	In	49	7669	5	6027	4	−20927	11	13069	4	5378	5	6376	4
	Sn	50	10788	5	7552	3	−28629	8	8526	12	2699	4	5495.7	1.6
	Sb	51	8834	20	2949	19	−35180#	120#	14954	23	5895	20	10537	18
	Te	52	12051	11	4020	12	*		10593	10	3548	10	10709	12
	I	53	10181	11	765	12	*		15877	12	5516	11	14834	12
	Xe	54	13580#	120#	2362	10	*		11150	60	2510	7	13335	9
	Cs	55	11590#	230#	−816	4	*		16220#	150#	4620#	320#	16900#	120#
113	Zr	40	1990#	760#	*		45530#	300#	*		*		*	
	Nb	41	4210#	500#	15080#	810#	38560#	400#	6980#	720#	6870#	640#	*	
	Mo	42	3240#	360#	15870#	420#	30940#	300#	7020#	420#	4520#	890#	−4780#	580#
	Tc	43	5624	6	12620#	200#	24215	17	7839	13	6588	24	−4860	840
	Ru	44	4310	40	13900	40	17180	40	7870	40	4030	40	−1690	50
	Rh	45	7110	40	10425	12	10600	7	8729	12	6170	11	−2086	12
	Pd	46	5341	9	11150	40	4738	7	9424	10	4102	19	2129	11
	Ag	47	8514	17	7995	18	−2610	24	9670	17	6168	17	1448	24
	Cd	48	6539.75	0.22	9748.5	2.4	−10696	28	9883.0	1.5	3278.1	1.3	4934.0	0.6
	In	49	9448	4	6081.24	0.24	−18248	8	10595.9	0.4	5844.9	0.4	3736.6	1.3
	Sn	50	7744.4	1.6	7627	5	−26125	7	10775	4	3006	12	7666.2	1.6
	Sb	51	10889	25	3051	17	−32652	19	12232	18	6289	22	7699	21
	Te	52	8851	29	4040	30	−38640#	300#	13201	29	3967	29	13140	30
	I	53	12127	13	841	12	*		13179	10	5974	10	11977	10
	Xe	54	10249	11	2429	12	*		13461	8	3130	60	15673	9
	Cs	55	13420#	120#	−972.8	2.2	*		13470#	120#	5020	100	14350	60
	Ba	56	*		580#	320#	*		13900#	360#	*		17860#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
111	Zr	40	6890#	780#	*		−10660#	920#	23460#	600#	*		7760#	1030#
	Nb	41	8410#	530#	31060#	760#	−9420#	580#	20060#	300#	*		7500#	300#
	Mo	42	9423	17	28790#	500#	−8350#	300#	16846	15	−25010#	500#	3023	15
	Tc	43	10884	14	26910	430	−7726	13	13279	13	−24000	840	2977	13
	Ru	44	12190	13	24704	15	−6665	13	9201	10	−19538	26	−2028	20
	Rh	45	13447	8	22599	12	−5979	11	5912	7	−18558	12	−2044	7
	Pd	46	14522.0	1.3	19825	9	−4548	9	3266.4	0.7	−13202	9	−6599.9	1.4
	Ag	47	15638.7	1.9	17794	4	−3777	12	177	4	−12676	18	−5938.8	1.4
	Cd	48	16890.6	1.6	16223.7	1.2	−3304.5	1.3	−3314	5	−8210.3	0.6	−10854	12
	In	49	18045.2	2.7	14251	4	−2410	4	−7555	9	−8224	4	−10621	14
	Sn	50	19451	10	12012	6	−1373	6	−12351	8	−2880	5	−16560	8
	Sb	51	20728	10	8925	10	305	13	−15883	10	−1656	15	−16678	11
	Te	52	22015	8	5535	10	2500	8	−19070#	120#	4966	15	−21190	60
	I	53	23424	8	3281	7	3275	5	−22050#	200#	5207	8	−21100	100
	Xe	54	24490#	320#	1380#	120#	3710	60	*		10420#	120#	*	
	Cs	55	*		−200#	200#	4110#	360#	*		10280#	210#	*	
112	Zr	40	6340#	860#	*		*		25060#	730#	*		8470#	760#
	Nb	41	7900#	890#	*		−9720#	670#	21190#	300#	*		7800#	300#
	Mo	42	9090#	200#	29840#	540#	−8960#	450#	18150#	200#	−28290#	630#	3470#	200#
	Tc	43	10367	11	27530	840	−8139	10	14470	40	−23590#	300#	3455	11
	Ru	44	11701	13	25673	26	−7306	13	10690	12	−22980	15	−1398	12
	Rh	45	13040	50	23270	50	−6230	40	6850	40	−18000	50	−1820	40
	Pd	46	14133	7	20826	11	−5085	11	4254	7	−16825	12	−6177	7
	Ag	47	15269.1	2.7	18333	18	−3977	14	1406	5	−11569	7	−5402.8	2.4
	Cd	48	16369.5	0.3	16821.9	0.6	−3475.6	1.1	−1919.81	0.16	−11877.9	0.7	−10254	3
	In	49	17663	12	15111	4	−2808	5	−6391	18	−7064	4	−10123	7
	Sn	50	18956	14	12885.0	0.4	−1827.5	1.2	−11088	8	−6691.8	0.3	−15890	9
	Sb	51	20292	19	9707	21	96	20	−14536	21	−496	18	−16083	19
	Te	52	21480	11	6303	16	2078	10	−17541	12	1082	10	−20685	10
	I	53	22740	60	4192	12	2957	12	−20650#	120#	6484	14	−20620#	120#
	Xe	54	24250	100	2374	11	3330	6	*		6272	10	−25200#	200#
	Cs	55	*		530#	130#	3930	60	*		11250#	120#	*	
113	Zr	40	6000#	670#	*		*		26310#	420#	*		9660#	420#
	Nb	41	7390#	500#	*		−10150#	810#	22600#	400#	*		9200#	450#
	Mo	42	8850#	300#	30750#	670#	−9350#	580#	19220#	300#	−27520#	760#	4540#	300#
	Tc	43	9930	11	28430#	300#	−8550	430	15955	8	−26030#	300#	4748	10
	Ru	44	11230	40	26510	40	−7630	40	11720	40	−21680#	200#	−210	60
	Rh	45	12606	10	24320	13	−6909	12	8260	18	−20797	9	−517	10
	Pd	46	13747	7	21383	12	−5277	11	5453	7	−15249	12	−5078	7
	Ag	47	14954	17	19301	18	−4452	17	2340	17	−14580	50	−4523	17
	Cd	48	15933.7	0.3	17635.3	0.7	−3861.7	1.1	−715.2	1.6	−10011	7	−9124	4
	In	49	17118	3	15729.6	1.5	−3072.6	1.3	−4950	17	−10072.4	2.4	−8783.39	0.28
	Sn	50	18532	6	13653.8	1.6	−2248.7	2.2	−9981	28	−5042.2	1.6	−14800	18
	Sb	51	19723	19	10603	18	−352	18	−13297	19	−3716	18	−14921	19
	Te	52	20902	29	6986	28	1858	29	−16143	29	3019	28	−19355	30
	I	53	22308	9	4861	12	2707	10	−19355	12	3190	20	−19164	12
	Xe	54	23830#	120#	3194	9	3087	8	−22490#	300#	8075	11	−23860#	120#
	Cs	55	25010#	200#	1389	10	3483	8	*		8010	13	*	
	Ba	56	*		−230#	320#	4040#	420#	*		13030#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
114	Nb	41	2820#	640#	15910#	580#	40750#	510#	8170#	860#	6380#	780#	*	
	Mo	42	5100#	420#	16760#	500#	33810#	300#	5100#	420#	4140#	420#	−7550#	670#
	Tc	43	3860	430	13240#	530#	26330	430	9590#	480#	6200	430	−3990#	530#
	Ru	44	6420	40	14699	5	19794	4	5749	7	3668	11	−4635	13
	Rh	45	5010	70	11130	80	12860	70	10630	70	5940	70	−1040	70
	Pd	46	7971	10	12012	10	7069	7	6950	40	3678	10	−1059	12
	Ag	47	5975	17	8629	8	−434	20	12101	8	5919	5	3019	8
	Cd	48	9042.97	0.14	10277	17	−8125	24	7279.6	2.4	3064.6	1.5	1617.4	0.7
	In	49	7274.00	0.25	6815.5	0.4	−15931	20	12715.9	0.3	5546.5	0.4	5292.0	1.5
	Sn	50	10302.9	1.6	8481.58	0.19	−23474	11	8141	4	2696	3	4338.9	0.4
	Sb	51	8151	26	3457	20	−29810	90	14869	20	6306	20	9542	20
	Te	52	11610	40	4762	30	−35980	110	10420	30	3811	26	9695	25
	I	53	9591	22	1580	30	*		15639	22	5813	21	13844	22
	Xe	54	12954	13	3255	14	*		10688	15	2732	12	12148	13
	Cs	55	10990	90	−230	90	*		16050	90	4700#	140#	15910	90
	Ba	56	14270#	320#	1430	100	*		11220#	160#	1860#	230#	14260#	160#
115	Nb	41	3990#	710#	*		43350#	500#	6170#	580#	6400#	860#	*	
	Mo	42	2940#	500#	16880#	640#	35880#	400#	6370#	570#	4380#	500#	−6480#	810#
	Tc	43	5270#	480#	13410#	360#	29190#	200#	7560#	360#	6550#	280#	−6080#	360#
	Ru	44	3955	25	14790	430	21979	25	7417	25	4018	26	−2980#	200#
	Rh	45	6590	70	11297	8	15307	7	8350	40	6266	12	−3324	9
	Pd	46	5007	15	12000	70	9608	14	9052	15	4170	50	851	17
	Ag	47	8123	19	8781	20	2021	24	9319	20	6203	19	390	50
	Cd	48	6140.9	0.6	10443	5	−6022	28	9653	17	3363.3	2.5	3883	7
	In	49	9037.9	0.3	6810.39	0.28	−13199	29	10217.74	0.24	5902.56	0.25	2693.8	2.4
	Sn	50	7545.43	0.03	8753.0	0.3	−21377	12	10044.08	0.19	2820	4	6187.41	0.25
	Sb	51	10578	25	3733	16	−27300#	100#	12036	16	6516	16	6633	17
	Te	52	8240	40	4860	30	−33140#	200#	13070	30	4400	30	12239	28
	I	53	11770	40	1740	40	*		12720	40	6090	30	10910	30
	Xe	54	9642	16	3307	23	*		13174	15	3271	16	14557	15
	Cs	55	13090#	130#	−100#	100#	*		13220#	100#	5190#	100#	13010#	100#
	Ba	56	11090#	230#	1520#	220#	*		13560#	200#	2360#	230#	16750#	200#
116	Nb	41	2420#	580#	*		45510#	310#	*		5970#	420#	*	
	Mo	42	4730#	640#	17620#	710#	38620#	500#	4460#	710#	3860#	640#	−9220#	580#
	Tc	43	3490#	360#	13950#	500#	31330#	300#	9180#	420#	6300#	420#	−5360#	500#
	Ru	44	6035	25	15560#	200#	24644	4	5240	430	3607	5	−5770#	300#
	Rh	45	4580	70	11920	80	17510	70	10200	70	6000	80	−2280	70
	Pd	46	7477	15	12891	10	11695	7	6590	70	3800	10	−2320	40
	Ag	47	5631	19	9406	14	4279	6	11658	8	5912	8	1871	8
	Cd	48	8699.3	0.7	11019	18	−3449	24	6929	5	3178	17	524	7
	In	49	6784.72	0.22	7454.2	0.7	−10830	80	12476.0	0.4	5657.6	0.3	4423	17
	Sn	50	9563.45	0.09	9278.59	0.10	−18479	13	7754.6	0.3	2705.20	0.21	3163.71	0.26
	Sb	51	7890	17	4077	5	−24780#	100#	14449	5	6370	5	8192	5
	Te	52	11270	40	5549	29	−30880#	200#	9940	30	4017	30	8711	24
	I	53	9150	80	2650	80	−37370#	330#	15180	80	5790	80	12640	80
	Xe	54	12461	18	4000	30	*		10303	24	2937	15	10950	30
	Cs	55	10410#	140#	680#	100#	*		15750#	100#	5030#	100#	14720#	100#
	Ba	56	13530#	280#	1970#	230#	*		11020#	220#	2250#	200#	13470#	200#
	La	57	*		−1580#	380#	*		16570#	340#	4520#	440#	17360#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
114	Nb	41	7030#	580#	*		*		23640#	660#	*		9620#	580#
	Mo	42	8340#	360#	31840#	760#	−9890#	580#	20540#	300#	−30630#	420#	5060#	300#
	Tc	43	9480	430	29110#	530#	−8720	940	17110	440	−25680#	590#	5200	430
	Ru	44	10733	10	27320#	200#	−8110	24	13269	8	−24860#	300#	474	8
	Rh	45	12120	80	25030	70	−7100	70	9220	70	−20190	70	−190	70
	Pd	46	13312	9	22437	12	−5843	11	6525	7	−18910	40	−4535	18
	Ag	47	14490	5	19780	40	−4527	18	3639	5	−13453	8	−3959	5
	Cd	48	15582.71	0.25	18272	7	−4108.9	0.6	544.80	0.28	−13713	7	−8719.13	0.30
	In	49	16722	4	16564.0	2.4	−3537.4	1.3	−4073	20	−8832	17	−8313.0	1.6
	Sn	50	18047.32	0.30	14562.82	0.25	−2636.7	0.4	−8670	24	−8805.42	0.25	−14214	17
	Sb	51	19040	27	11084	20	−452	23	−11858	28	−2418	20	−14220	30
	Te	52	20465	26	7813	24	1527	28	−14804	27	−851	24	−18841	26
	I	53	21718	22	5618	27	2386	21	−17950	90	4489	26	−18507	21
	Xe	54	23202	14	4096	14	2719	13	−21180	100	3970	30	−23393	14
	Cs	55	24410#	140#	2200	90	3360	60	*		9140	90	−23050#	310#
	Ba	56	*		460	100	3592	19	*		9010	100	*	
115	Nb	41	6810#	640#	*		*		24920#	540#	*		10730#	580#
	Mo	42	8040#	500#	32790#	500#	−10490#	720#	21560#	400#	*		5980#	590#
	Tc	43	9130#	200#	30170#	450#	−9260#	360#	18430#	200#	−28130#	540#	6350#	200#
	Ru	44	10380	50	28030#	300#	−8590	28	14321	29	−23710#	300#	1530	80
	Rh	45	11605	10	25996	8	−7629	13	10753	20	−22920	430	1190	10
	Pd	46	12978	15	23140	40	−6065	17	7659	14	−17494	14	−3566	14
	Ag	47	14098	25	20794	20	−5104	20	4554	18	−16560	70	−3039	18
	Cd	48	15183.8	0.6	19072	7	−4523.5	1.0	1949.4	0.7	−11883	7	−7586.0	0.7
	In	49	16311.87	0.19	17087	17	−3745.8	1.5	−2533	16	−11895	5	−7047.94	0.03
	Sn	50	17848.4	1.6	15568.50	0.24	−3206.5	0.4	−7971	28	−7307.88	0.28	−13609	20
	Sb	51	18729	24	12214	16	−1036	16	−10670	30	−5723	16	−13185	29
	Te	52	19860	40	8313	28	1451	28	−13410	30	1208	28	−17500	30
	I	53	21361	30	6500	30	2070	30	−16640#	110#	870	30	−17320	30
	Xe	54	22596	14	4890	30	2506	14	−19740#	200#	5944	27	−22040	90
	Cs	55	24080#	100#	3160#	100#	2830#	100#	*		5650#	100#	−21870#	150#
	Ba	56	25350#	360#	1300#	200#	3180#	230#	*		10880#	200#	*	
116	Nb	41	6410#	580#	*		*		25980#	420#	*		11250#	500#
	Mo	42	7670#	580#	*		−11220#	860#	22860#	500#	*		6520#	540#
	Tc	43	8760#	530#	30830#	580#	−9570#	420#	19520#	310#	−27620#	580#	6820#	300#
	Ru	44	9990	5	28970#	300#	−9010#	200#	15762	8	−26810#	400#	2089	8
	Rh	45	11170	100	26710	440	−7900	70	11810	70	−22230#	210#	1620	80
	Pd	46	12483	10	24188	8	−6625	12	8881	7	−21015	26	−2920	20
	Ag	47	13754	6	21410	70	−5240	40	5707	3	−15602	8	−2530	3
	Cd	48	14840.2	0.3	19800	7	−4816	7	2813.49	0.13	−15576	14	−7247.45	0.16
	In	49	15822.6	0.4	17897	5	−4090.9	2.4	−1428	5	−10556	18	−6287.23	0.22
	Sn	50	17108.88	0.10	16088.99	0.29	−3376.04	0.27	−6262	24	−10730.5	0.7	−12594	16
	Sb	51	18468	20	12830	5	−1257	7	−9400	80	−4575	5	−12831	28
	Te	52	19520	30	9282	24	966	24	−12217	27	−2519	24	−17000	40
	I	53	20920	80	7500	80	1750	80	−15380#	130#	2290	80	−16840	80
	Xe	54	22104	17	5735	28	2096	15	−18670#	200#	1730	30	−21420#	100#
	Cs	55	23500#	130#	3980#	100#	2600#	100#	−21990#	340#	7010#	100#	−21190#	220#
	Ba	56	24620#	230#	1870#	200#	3220#	200#	*		6990#	200#	*	
	La	57	*		−60#	330#	3940#	300#	*		12360#	340#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
117	Mo	42	2550#	710#	17750#	580#	40740#	500#	5900#	710#	4140#	710#	*	
	Tc	43	5000#	500#	14220#	640#	34040#	400#	7120#	570#	6410#	500#	−7530#	640#
	Ru	44	3490	430	15570#	530#	26930	430	7020#	480#	3970	610	−4160#	530#
	Rh	45	6230	70	12117	10	20046	10	7919	27	6189	9	−4650	430
	Pd	46	4664	10	12980	70	13974	7	8516	10	4150	70	−556	8
	Ag	47	7711	14	9640	15	6458	16	8955	19	6172	15	−830	70
	Cd	48	5777.2	1.0	11165	3	−1323	13	9275	18	3376	5	2718	7
	In	49	8765	5	7520	5	−8504	26	9852	5	5936	5	1634	7
	Sn	50	6943.1	0.5	9437.0	0.5	−16212	10	9849.4	0.5	3036.1	0.6	5263.6	0.6
	Sb	51	9889	10	4403	8	−22150	60	12105	8	6784	8	5577	8
	Te	52	7903	28	5562	14	−27640	250	12619	21	4265	24	11111	13
	I	53	11090	80	2460	40	−34170#	200#	12340	40	6320	40	9700	30
	Xe	54	9210	17	4050	80	*		12860	30	3318	23	13351	27
	Cs	55	12520#	120#	740	60	*		12870	60	5460	60	11790	70
	Ba	56	11150#	320#	2700#	270#	*		12950#	270#	2090	260	15270	250
	La	57	14290#	380#	−820	3	*		13360#	280#	4500#	230#	14060#	220#
118	Mo	42	4750#	710#	*		43020#	500#	3570#	580#	3370#	710#	*	
	Tc	43	3220#	570#	14890#	640#	36260#	400#	8630#	640#	6120#	570#	−6760#	640#
	Ru	44	5580#	480#	16150#	450#	29700#	200#	4920#	360#	3660#	280#	−6800#	450#
	Rh	45	4061	26	12690	430	22341	25	9893	25	6080	30	−3440#	200#
	Pd	46	7036	8	13781	9	16264.5	2.5	6060	70	3705	8	−3637	25
	Ag	47	5443	14	10419	8	8442	4	10988	8	5736	14	322	8
	Cd	48	8355	20	11809	24	989	27	6552	20	3145	27	−629	24
	In	49	6356	6	8099	8	−6257	21	12195	8	5720	8	3401	20
	Sn	50	9326.42	0.13	9999	5	−13574	10	7307.7	0.5	2747.6	0.5	2078.0	0.8
	Sb	51	7428	9	4887.4	3.0	−19587	13	14241	3	6902	3	7187	3
	Te	52	10667	23	6340	20	−25490#	200#	9842	19	4177	24	7989	18
	I	53	8600	30	3165	24	−31350#	300#	15000	30	5960	30	11679	25
	Xe	54	11965	15	4929	28	*		10050	80	3120	30	9630	30
	Cs	55	9990	60	1513	16	*		15348	18	5111	18	13570	30
	Ba	56	12810#	320#	3000#	210#	*		10550#	220#	2360#	230#	12100#	200#
	La	57	11420#	360#	−550#	390#	*		15470#	360#	4170#	360#	15730#	320#
119	Mo	42	2280#	580#	*		44830#	300#	*		3510#	420#	*	
	Tc	43	4950#	640#	15090#	710#	38480#	500#	6230#	710#	5910#	710#	−9290#	580#
	Ru	44	3150#	360#	16080#	500#	31900#	300#	6770#	500#	4000#	420#	−5220#	580#
	Rh	45	6007	26	13110#	200#	24876	12	7380	430	6110	10	−5960#	300#
	Pd	46	4090	9	13809	26	18658	8	8200	12	4190	70	−1692	9
	Ag	47	7163	15	10546	15	10830	16	8489	16	6049	16	−2260	80
	Cd	48	5350	40	11710	40	3210	40	8920	40	3430	40	1500	40
	In	49	8542	8	8286	21	−3921	23	9431	7	5878	7	490	8
	Sn	50	6483.5	0.5	10126	8	−11270	10	9589	5	3048.8	0.8	4293.9	0.7
	Sb	51	9551	8	5112	7	−17170	16	11633	7	6914	7	4421	7
	Te	52	7563	20	6475	8	−22590	200	12168	11	4504	9	9990	7
	I	53	10878	29	3376	28	−28760#	300#	12029	26	6350	30	8691	22
	Xe	54	8787	15	5112	22	−34970#	500#	12355	28	3490	80	12116	26
	Cs	55	11967	19	1515	17	*		12591	17	5606	19	10760	80
	Ba	56	10460#	280#	3470	200	*		12610	210	2320#	220#	14100	200
	La	57	13470#	420#	110#	360#	*		13150#	390#	4220#	360#	12670#	320#
	Ce	58	*		1490#	580#	*		13160#	540#	1090#	600#	16210#	540#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
117	Mo	42	7280#	640#	*		−11770#	580#	23800#	660#	*		7450#	580#
	Tc	43	8490#	450#	31840#	640#	−10360#	570#	20760#	400#	−30200#	500#	7860#	400#
	Ru	44	9530	430	29520#	590#	−9270#	530#	16930	430	−25570#	660#	3170	440
	Rh	45	10810	11	27680#	200#	−8510	10	13285	16	−24970#	300#	2863	11
	Pd	46	12141	15	24897	26	−6980	40	9995	7	−19644	8	−1953	8
	Ag	47	13342	23	22531	15	−5840	15	6761	14	−18740	80	−1541	14
	Cd	48	14476.6	1.2	20571	14	−5253	7	3979.3	1.1	−13876	7	−6240.0	1.0
	In	49	15549	5	18538	19	−4341	17	−303	10	−13689	6	−5488	5
	Sn	50	16506.5	0.5	16891.2	0.8	−3779.4	0.5	−5302	13	−8974.2	0.5	−11647	5
	Sb	51	17779	18	13681	8	−1697	8	−8201	27	−7679	8	−11447	26
	Te	52	19180	30	9640	13	808	14	−10910	17	−858	13	−15750	80
	I	53	20240	40	8010	30	1550	30	−13950	70	−906	26	−15463	29
	Xe	54	21671	16	6701	30	1737	30	−16730	250	3789	26	−20210#	100#
	Cs	55	22940#	120#	4730	70	2200	60	−20220#	210#	3640	100	−20190#	210#
	Ba	56	24680#	320#	3380	250	2320	250	*		8300	250	−25480#	410#
	La	57	*		1150#	230#	3070#	200#	*		8480#	220#	*	
118	Mo	42	7300#	710#	*		*		24630#	540#	*		7700#	640#
	Tc	43	8220#	500#	32640#	500#	−10760#	640#	21600#	400#	*		8130#	590#
	Ru	44	9070#	200#	30370#	540#	−9750#	360#	18390#	200#	−28600#	540#	3830#	200#
	Rh	45	10290	80	28250#	300#	−8710	430	14667	24	−24040#	400#	3466	25
	Pd	46	11700	7	25897	4	−7592	4	11313	20	−23190	430	−1278	14
	Ag	47	13154	4	23400	70	−6270	70	7674	8	−17946	9	−1206.7	2.7
	Cd	48	14132	20	21449	21	−5636	21	4951	20	−17567	21	−5830	21
	In	49	15121	8	19263	8	−4722	9	768	8	−12335	16	−4902	8
	Sn	50	16269.5	0.5	17518.3	0.5	−4062.8	0.6	−3962	18	−12523.4	1.1	−11085	8
	Sb	51	17317	6	14324	3	−1851	3	−7025	20	−6342	6	−10972	14
	Te	52	18570	30	10743	18	444	18	−9612	21	−4582	18	−15320	30
	I	53	19690	80	8727	20	1101	28	−12562	24	380	21	−14857	22
	Xe	54	21175	17	7393	26	1386	27	−15880#	200#	−273	17	−19660	60
	Cs	55	22510#	100#	5570	80	1805	24	−18790#	300#	4740	29	−19020	250
	Ba	56	23960#	280#	3730#	200#	2460#	200#	*		4700#	200#	−24000#	280#
	La	57	25710#	440#	2160#	320#	2640#	310#	*		9580#	310#	*	
119	Mo	42	7030#	580#	*		*		25500#	420#	*		8640#	500#
	Tc	43	8170#	640#	*		−11720#	710#	22650#	500#	*		8760#	540#
	Ru	44	8730#	530#	30970#	580#	−9960#	500#	19330#	300#	−27000#	580#	4740#	300#
	Rh	45	10069	13	29260#	400#	−9450#	200#	15823	17	−26820#	400#	4494	10
	Pd	46	11126	11	26500	430	−7727	26	12570	40	−21700#	200#	75	9
	Ag	47	12606	20	24327	17	−6841	16	9053	16	−21048	28	−15	25
	Cd	48	13700	40	22130	40	−5980	40	6090	40	−15880	40	−4820	40
	In	49	14898	6	20095	15	−5141	20	1777	10	−15434	8	−4117	7
	Sn	50	15809.9	0.6	18224.5	1.2	−4405.4	1.0	−2882	7	−10652	20	−10140	3
	Sb	51	16979	11	15110	9	−2364	7	−5698	23	−9536	10	−9856	20
	Te	52	18230	15	11363	7	426	7	−8388	13	−2819	7	−14283	21
	I	53	19480	30	9716	23	801	27	−11473	26	−3070	22	−13770	24
	Xe	54	20752	15	8277	17	843	30	−14200	200	1607	21	−18456	16
	Cs	55	21950	60	6444	29	1610	30	−17290#	300#	1377	24	−18180#	200#
	Ba	56	23270	320	4980	200	1640	200	−20770#	540#	6200	200	−23040#	360#
	La	57	24890#	360#	3100#	310#	2260#	320#	*		6100#	300#	*	
	Ce	58	*		940#	560#	2680#	540#	*		11090#	540#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
120	Tc	43	2900#	710#	15710#	580#	40650#	500#	8080#	710#	5550#	710#	*	
	Ru	44	5710#	500#	16840#	640#	34240#	400#	4280#	570#	3280#	570#	−8390#	640#
	Rh	45	3870#	200#	13830#	360#	27110#	200#	9090#	280#	5730#	480#	−4830#	450#
	Pd	46	6944	8	14746	10	20818.1	2.2	5318	24	3481	9	−5140	430
	Ag	47	5077	15	11533	9	12766	8	10448	5	5636	9	−1108	10
	Cd	48	8050	40	12601	15	5405	4	6307	4	3089	14	−1887	8
	In	49	6100	40	9040	50	−1980	40	11680	40	5550	40	2100	40
	Sn	50	9104.1	1.1	10688	7	−8925	12	6841	8	2709	5	967.1	1.4
	Sb	51	7013	10	5641	7	−14528	12	13947	7	6845	7	6172	9
	Te	52	10251	7	7176	7	−20470	300	9345	3	4141	9	6682.0	1.8
	I	53	8041	26	3854	17	−26180#	300#	14654	24	6212	20	10539	17
	Xe	54	11449	16	5684	25	−32440#	500#	9509	23	3130	28	8569	18
	Cs	55	9655	17	2383	14	*		14901	14	5161	14	12196	27
	Ba	56	12370	360	3870	300	*		10230	300	2470	310	10940	300
	La	57	10620#	420#	270#	360#	*		15340#	360#	4750#	390#	14570#	310#
	Ce	58	13980#	710#	2000#	580#	*		10600#	580#	1410#	540#	13380#	560#
121	Tc	43	4610#	710#	*		42860#	500#	5750#	580#	5690#	710#	*	
	Ru	44	2970#	570#	16910#	640#	36450#	400#	6260#	640#	3530#	570#	−6600#	640#
	Rh	45	5700#	650#	13820#	740#	29580	620	6540#	690#	5610#	650#	−7310#	740#
	Pd	46	3974	4	14850#	200#	23014	3	7351	10	3569	24	−3540#	200#
	Ag	47	6823	13	11412	12	15196	12	7715	15	5850	12	−3870	27
	Cd	48	5188	4	12711	5	7469	26	8283	15	3344	3	−39	3
	In	49	8180	50	9166	28	411	28	8850	50	5730	30	−634	28
	Sn	50	6170.2	0.3	10760	40	−6716	10	9213	7	2896	8	3151	20
	Sb	51	9253	8	5790.4	2.5	−12497	15	11176.6	2.6	6917.7	2.5	3275	8
	Te	52	7252	26	7415	27	−17800	140	11643	27	4317	26	8756	26
	I	53	10570	16	4172	4	−24060#	300#	11648	9	6309	19	7397	6
	Xe	54	8380	16	6023	18	−29790#	400#	12008	24	3354	22	10856	21
	Cs	55	11285	17	2219	19	−35550#	500#	12403	18	5841	18	9515	24
	Ba	56	9930	330	4150	140	*		12270	140	2530	140	12980	140
	La	57	12690#	420#	590#	420#	*		13110#	360#	4870#	360#	11870#	300#
	Ce	58	11030#	640#	2410#	500#	*		13040#	500#	1790#	500#	15160#	450#
	Pr	59	*		−890	10	*		12980#	710#	*		13720#	580#
122	Tc	43	2840#	580#	*		44800#	300#	*		5140#	420#	*	
	Ru	44	5230#	640#	17530#	710#	38830#	500#	3930#	710#	3250#	710#	−9550#	580#
	Rh	45	3700#	690#	14550#	500#	31690#	300#	8550#	500#	5060#	420#	−6060#	580#
	Pd	46	6505	20	15660	620	25324	20	4710#	200#	3071	22	−6890#	300#
	Ag	47	4770	40	12210	40	17230	40	9880	40	5170	40	−2640	40
	Cd	48	7610	3	13499	12	9700.9	2.7	5750	5	2897	15	−3559	9
	In	49	5810	60	9790	50	2510	50	11100	50	5270	60	720	50
	Sn	50	8814.6	2.3	11394	27	−4585	11	6500	40	2623	8	−320	40
	Sb	51	6806.37	0.13	6426.5	2.5	−10190	30	13474.3	2.5	6594.8	2.6	5011	8
	Te	52	9841	26	8003.1	2.1	−15704	28	8815	7	4026	7	5398.1	1.5
	I	53	7905	7	4825	26	−21540#	300#	13994	5	5967	9	9043	9
	Xe	54	10945	15	6398	12	−27480#	400#	9103	19	3287	24	7474	13
	Cs	55	9110	40	2950	40	−33370#	500#	14740	40	5510	40	11280	40
	Ba	56	11940	140	4800	30	*		9991	30	2560	30	9832	30
	La	57	10420#	420#	1090#	330#	*		15060#	420#	4910#	360#	13410#	300#
	Ce	58	13260#	570#	2970#	500#	*		10410#	500#	2010#	500#	12360#	450#
	Pr	59	11300#	710#	−620#	640#	*		15660#	710#	3910#	710#	15890#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
120	Tc	43	7850#	640#	*		−12190#	580#	23620#	540#	*		9010#	580#
	Ru	44	8860#	450#	31930#	640#	−10940#	640#	20560#	400#	−30430#	500#	5030#	400#
	Rh	45	9880#	200#	29910#	450#	−9830#	360#	17030#	200#	−25740#	540#	4720#	200#
	Pd	46	11034	3	27860#	200#	−8636	4	13678	4	−25490#	300#	295	15
	Ag	47	12240	5	25343	25	−7340	70	10080	40	−20118	10	250	40
	Cd	48	13398	20	23147	4	−6551	8	7140	4	−19839	9	−4330	8
	In	49	14640	40	20750	40	−5610	40	2690	40	−14370	40	−3730	40
	Sn	50	15587.5	1.0	18974	20	−4810.2	0.9	−1735.6	1.8	−14410	40	−9694	7
	Sb	51	16564	8	15767	11	−2592	7	−4670	17	−8007	10	−9306	10
	Te	52	17814	18	12287.3	1.8	−261.1	1.8	−7190	12	−6586.1	1.9	−13656	22
	I	53	18919	25	10329	15	650	16	−9859	18	−1561	17	−13024	18
	Xe	54	20236	16	9060	22	666	27	−13280	300	−2279	14	−17939	18
	Cs	55	21622	16	7496	22	1110	80	−16320#	300#	2600	24	−17370	200
	Ba	56	22830#	360#	5390	300	1730	300	−19160#	580#	2620	300	−21940#	420#
	La	57	24090#	420#	3740#	300#	2050#	320#	*		7450#	300#	−21820#	580#
	Ce	58	*		2110#	540#	2230#	540#	*		7570#	540#	*	
121	Tc	43	7510#	710#	*		*		24710#	800#	*		10110#	640#
	Ru	44	8680#	500#	32620#	500#	−11360#	640#	21560#	400#	*		5930#	450#
	Rh	45	9570	620	30660#	800#	−10540#	740#	18150	620	−28540#	800#	5960	620
	Pd	46	10918	9	28680#	300#	−9120	430	14891	4	−23750#	400#	1398	6
	Ag	47	11900	19	26158	15	−7931	15	11432	30	−23070#	200#	1483	13
	Cd	48	13240	40	24245	8	−7075	8	8122.8	2.2	−18083	3	−3420	40
	In	49	14279	28	21770	30	−6080	30	3765	27	−17472	28	−2808	27
	Sn	50	15274.3	1.2	19800	40	−5203.1	1.4	−654	26	−12528	4	−8851	7
	Sb	51	16266	7	16478	8	−3081	5	−3354	5	−11160	40	−8308.3	2.4
	Te	52	17503	27	13056	26	−570	26	−6062	28	−4734	26	−12867	30
	I	53	18611	22	11348	8	−31	10	−9143	15	−5117	9	−12145	13
	Xe	54	19829	15	9876	13	190	17	−11740	140	−408	10	−16664	14
	Cs	55	20940	20	7903	26	911	29	−14910#	300#	−644	21	−16290	300
	Ba	56	22300	250	6530	140	1020	140	−18060#	430#	4140	140	−21250#	330#
	La	57	23310#	420#	4460#	300#	1880#	310#	−20640#	580#	4410#	300#	−20530#	580#
	Ce	58	25010#	640#	2680#	450#	2340#	470#	*		8910#	500#	*	
	Pr	59	*		1110#	580#	2300#	540#	*		8730#	580#	*	
122	Tc	43	7450#	580#	*		*		25570#	420#	*		10240#	500#
	Ru	44	8200#	640#	*		−11840#	710#	22840#	500#	*		6400#	800#
	Rh	45	9400#	360#	31460#	580#	−11010#	500#	19230#	300#	−27630#	580#	6230#	300#
	Pd	46	10479	20	29470#	400#	−10040#	200#	15996	20	−27290#	400#	1715	23
	Ag	47	11600	40	27060#	200#	−8640	50	12470	60	−22140	620	1900	40
	Cd	48	12798	4	24911	3	−7649	3	9328	3	−21719	4	−2849	28
	In	49	13990	60	22500	50	−6440	50	4760	50	−16460	50	−2450	50
	Sn	50	14984.8	2.3	20561	4	−5663	20	373.3	2.4	−16155	3	−8412	3
	Sb	51	16060	8	17180	40	−3531	8	−2255	5	−9789	27	−7862	26
	Te	52	17093.8	1.1	13793.5	1.4	−1085.4	1.4	−4958	11	−8405.6	1.4	−12139	5
	I	53	18475	16	12240	9	−508	6	−7930	30	−3769	5	−11670	11
	Xe	54	19325	16	10571	11	−89	21	−10750	30	−4101	28	−16324	18
	Cs	55	20400	40	8980	40	400	40	−13600#	300#	810	30	−15470	150
	Ba	56	21860	300	7010	30	1045	30	−16740#	400#	583	30	−20490#	300#
	La	57	23120#	420#	5230#	300#	1440#	300#	−19760#	580#	5270#	300#	−19930#	500#
	Ce	58	24290#	640#	3560#	500#	1900#	450#	*		5580#	430#	−24390#	640#
	Pr	59	*		1790#	580#	2420#	580#	*		10120#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
123	Ru	44	2840#	710#	17530#	580#	40860#	500#	5700#	710#	3310#	710#	*	
	Rh	45	5380#	500#	14700#	640#	34240#	400#	6140#	570#	5390#	570#	−8540#	640#
	Pd	46	3880	790	15840#	850#	27380	790	6530	1000	3050#	810#	−5060#	890#
	Ag	47	6530	50	12240	40	19650	30	7320	30	5580	30	−5300#	200#
	Cd	48	4873	4	13600	40	11757	3	7699	12	3101	5	−1488	4
	In	49	7930	50	10106	20	4514	20	8356	20	5392	20	−2131	20
	Sn	50	5946.0	1.2	11530	50	−2566	10	8731	27	2780	40	1789	4
	Sb	51	8960.0	2.1	6571.9	2.4	−8179	12	10684.5	1.4	6738.9	1.4	2150	40
	Te	52	6929.01	0.08	8125.7	2.1	−13516	12	11139.0	2.1	4110	7	7573.2	1.4
	I	53	9935	6	4918	3	−19290#	200#	11311	26	6284	4	6121	8
	Xe	54	7965	15	6458	11	−24960#	300#	11708	11	3363	18	9760	10
	Cs	55	10970	40	2978	16	−30810#	400#	12148	16	5993	17	8350	19
	Ba	56	9120	30	4800	40	*		12158	19	3098	16	12164	17
	La	57	12180#	360#	1330#	200#	*		12810#	240#	5100#	360#	10880#	200#
	Ce	58	10480#	500#	3030#	420#	*		12620#	420#	2150#	420#	14250#	420#
	Pr	59	13520#	640#	−360#	570#	*		13170#	570#	4360#	640#	12990#	500#
124	Ru	44	5110#	780#	*		43110#	600#	3430#	670#	2820#	780#	*	
	Rh	45	3590#	570#	15450#	640#	36160#	400#	7780#	640#	4780#	570#	−7520#	640#
	Pd	46	6040#	850#	16500#	500#	29830#	300#	4190#	420#	2710#	690#	−8130#	500#
	Ag	47	4730	250	13090	830	21390	250	9100	250	4820	250	−4330	670
	Cd	48	7357	4	14420	30	13824.7	2.9	5120	40	2567	12	−4871	4
	In	49	5510	40	10740	30	6500	30	10460	30	5070	30	−820	30
	Sn	50	8488.1	2.4	12091	20	−564.1	0.4	6050	50	2467	27	−1511.2	2.3
	Sb	51	6467.50	0.06	7093.4	2.4	−5878	9	13031.7	2.4	6441.6	1.4	3862	27
	Te	52	9424.48	0.09	8590.22	0.12	−11434	13	8520.9	2.1	3939.1	2.1	4318.9	1.4
	I	53	7493	4	5482.5	1.9	−17110	60	13659.5	1.9	6043	26	7881.0	2.8
	Xe	54	10490	10	7014	3	−22750#	300#	9123	5	3442	5	6522	26
	Cs	55	8769	15	3782	13	−28590#	400#	14325	14	5604	14	10151	10
	Ba	56	11506	17	5335	17	−34260#	500#	9770	40	2877	19	9038	16
	La	57	9680#	200#	1890	60	*		15060	60	5350	150	12490	60
	Ce	58	12700#	420#	3550#	360#	*		10340#	420#	2140#	420#	11480#	330#
	Pr	59	10990#	570#	150#	500#	*		15430#	570#	4400#	570#	14690#	500#
	Nd	60	*		1890#	640#	*		10660#	710#	1590#	710#	13510#	640#
125	Ru	44	2850#	670#	*		44980#	300#	*		2800#	420#	*	
	Rh	45	5190#	640#	15530#	780#	38580#	500#	5430#	710#	4820#	710#	−9880#	580#
	Pd	46	3630#	500#	16540#	570#	31930#	400#	5940#	570#	2780#	500#	−6530#	640#
	Ag	47	6360	500	13410#	530#	23740	430	6620	900	4960	430	−6990#	530#
	Cd	48	4720	4	14410	250	15674	3	6930	30	2620	40	−3086	20
	In	49	7620	30	11002	3	8423.7	2.2	7713	3	5064.1	2.9	−3660	40
	Sn	50	5733.50	0.20	12310	30	1305.7	0.6	8246	20	2540	50	365.1	2.7
	Sb	51	8707.3	2.1	7312.6	2.2	−4165	8	10270	3	6549	3	960	50
	Te	52	6568.97	0.03	8691.70	0.14	−9353	11	10911.90	0.12	4176.5	2.1	6564.6	2.4
	I	53	9542.8	1.9	5600.85	0.07	−15077	26	11045.76	0.12	6341.31	0.14	5144.6	2.1
	Xe	54	7603.3	0.4	7123.8	1.9	−20540#	200#	11454	3	3744	5	8760.3	0.4
	Cs	55	10420	12	3711	8	−26020#	300#	11869	12	6129	14	7636	9
	Ba	56	8651	17	5217	14	−31600#	400#	12085	16	3340	40	11332	16
	La	57	11570	60	1959	29	*		12606	29	5710	40	10030	40
	Ce	58	9810#	360#	3690#	200#	*		12700#	280#	2750#	360#	13600#	200#
	Pr	59	12990#	500#	440#	420#	*		12930#	420#	4670#	500#	12120#	420#
	Nd	60	11310#	640#	2210#	570#	*		12870#	570#	1570#	640#	15450#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
123	Ru	44	8070#	640#	*		−12400#	580#	23880#	940#	*		7260#	580#
	Rh	45	9080#	740#	32230#	640#	−11450#	640#	20380#	400#	−30170#	500#	7360#	400#
	Pd	46	10390	790	30390#	890#	−10780#	850#	16980	790	−25940#	940#	2610	790
	Ag	47	11310	30	27900	620	−9170	30	13860	40	−24980#	300#	2970	30
	Cd	48	12483	3	25810	4	−8432	9	10400	4	−20087	20	−1910	50
	In	49	13740	30	23604	23	−7208	25	5794	20	−19610	40	−1560	20
	Sn	50	14760.7	2.4	21319	3	−6260	40	1356.3	2.4	−14491	3	−7552	3
	Sb	51	15766.4	2.1	17966	27	−3949	7	−1280	3	−12940	50	−6980.93	0.10
	Te	52	16771	26	14552.3	1.4	−1530.9	1.5	−3923	10	−6520.0	2.4	−11163	5
	I	53	17840	6	12921	4	−892	8	−6899	13	−6897	4	−10659	12
	Xe	54	18910	14	11283	28	−491	12	−9593	15	−2224	10	−15170	40
	Cs	55	20084	19	9376	13	309	25	−12390#	200#	−2253	13	−14510	30
	Ba	56	21050	140	7752	16	715	16	−15370#	300#	2411	16	−19180#	300#
	La	57	22600#	360#	6130#	200#	1230#	200#	−18420#	450#	2210#	200#	−18850#	450#
	Ce	58	23740#	500#	4120#	330#	1880#	360#	*		7030#	300#	−23580#	580#
	Pr	59	24820#	640#	2620#	500#	2370#	500#	*		7020#	500#	*	
124	Ru	44	7950#	780#	*		*		24810#	670#	*		7530#	720#
	Rh	45	8970#	500#	32980#	500#	−12140#	640#	21520#	470#	*		7650#	890#
	Pd	46	9930#	300#	31200#	580#	−11110#	500#	18300#	300#	−29140#	580#	3100#	300#
	Ag	47	11270	250	28930#	390#	−10040#	320#	14640	250	−24330#	470#	3110	250
	Cd	48	12230	3	26661	20	−8845	3	11532.0	2.9	−23560	790	−1342	20
	In	49	13440	60	24340	50	−7640	30	6750	30	−18590	40	−1120	30
	Sn	50	14434.2	2.4	22197.0	2.6	−6699	4	2292.7	0.4	−18106.3	3.0	−7079.9	0.4
	Sb	51	15427.5	2.1	18630	50	−4320	40	−254.5	1.9	−11479	20	−6519.41	0.09
	Te	52	16353.50	0.12	15162.1	2.4	−1851.3	1.4	−2856.74	0.13	−9998.4	2.4	−10653	3
	I	53	17428	5	13608.3	2.8	−1372	8	−5623	9	−5430.6	1.9	−10188	10
	Xe	54	18455	11	11932.07	0.18	−730.2	1.1	−8578	13	−5785.40	0.16	−14695	12
	Cs	55	19740	30	10240	11	−419	18	−11480	60	−1087	10	−14157	15
	Ba	56	20620	30	8313	17	658	17	−14170#	300#	−1130	16	−18510#	200#
	La	57	21860#	300#	6690	70	1210	60	−17110#	410#	3500	60	−18040#	300#
	Ce	58	23190#	500#	4890#	300#	1550#	420#	−20090#	580#	3450#	300#	−22760#	500#
	Pr	59	24510#	640#	3190#	500#	1990#	500#	*		8210#	450#	*	
	Nd	60	*		1530#	640#	2480#	710#	*		8170#	580#	*	
125	Ru	44	7960#	580#	*		*		25590#	500#	*		8270#	500#
	Rh	45	8780#	640#	*		−12710#	710#	22690#	660#	*		8500#	580#
	Pd	46	9670#	890#	31990#	640#	−11760#	570#	19390#	400#	−27660#	720#	4200#	470#
	Ag	47	11090	430	29910#	590#	−10690	760	15890	430	−27100#	590#	4110	430
	Cd	48	12077	4	27500	790	−9591	4	12546	3	−22240#	300#	−550	30
	In	49	13126	20	25420	30	−8434	12	7843	3	−21470	250	−252.2	2.2
	Sn	50	14221.6	2.4	23057	3	−7244.7	2.4	3128.1	0.4	−16483.2	2.9	−6345.9	0.5
	Sb	51	15174.8	2.1	19404	20	−4845	27	580.9	2.1	−14680	30	−5802.3	2.1
	Te	52	15993.45	0.10	15785.1	2.4	−2250.1	1.4	−1822.4	0.4	−8079.3	0.4	−9728.6	1.9
	I	53	17036	3	14191.08	0.13	−1661.8	2.1	−4746	8	−8505.93	0.15	−9239.94	0.15
	Xe	54	18094	10	12606.3	0.4	−1081	26	−7530	11	−3964.2	0.4	−13530	9
	Cs	55	19189	14	10725	9	−269	9	−10330	27	−4014	8	−13071	15
	Ba	56	20157	16	8999	15	387	15	−13010#	200#	709	11	−17480	60
	La	57	21250#	200#	7294	29	918	30	−15690#	300#	693	28	−16920#	300#
	Ce	58	22510#	360#	5580#	200#	1660#	240#	−18590#	450#	5140#	200#	−21580#	450#
	Pr	59	23980#	500#	4000#	360#	1700#	420#	*		4900#	310#	−21310#	580#
	Nd	60	*		2360#	500#	2200#	570#	*		9560#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
126	Rh	45	3440#	710#	16120#	580#	40610#	500#	7100#	780#	4210#	710#	*	
	Pd	46	5900#	570#	17250#	640#	34230#	400#	3630#	570#	2260#	570#	−9590#	640#
	Ag	47	4270#	480#	14050#	450#	25670#	200#	8390#	360#	4570#	810#	−5880#	450#
	Cd	48	6979	4	15020	430	17808.4	2.7	4690	250	2180	30	−6180	790
	In	49	5468	5	11750	5	10101	6	9601	5	4469	5	−2590	30
	Sn	50	8193	11	12892	11	3131	11	5560	30	2278	22	−2955	11
	Sb	51	6210	30	7790	30	−2040	30	12550	30	6290	30	2680	40
	Te	52	9113.69	0.08	9098.0	2.1	−7394	13	8265.71	0.16	4022.78	0.14	3396.9	2.4
	I	53	7146	4	6178	4	−12940	90	13324	4	6125	4	6959	4
	Xe	54	10018.3	1.4	7599.3	1.4	−18326	28	8929.0	2.3	3660	4	5671.0	1.4
	Cs	55	8332	13	4440	10	−24030#	200#	14028	10	5762	14	9238	11
	Ba	56	11072	17	5869	15	−29290#	300#	9782	15	3238	17	8225	16
	La	57	9290	90	2590	90	−35220#	510#	14830	90	5550	90	11720	90
	Ce	58	12230#	200#	4350	40	*		10150	60	2700#	200#	10480	30
	Pr	59	10330#	360#	960#	280#	*		15300#	360#	4830#	360#	13970#	280#
	Nd	60	13380#	500#	2600#	420#	*		10480#	500#	1710#	500#	12550#	420#
	Pm	61	*		−1030#	640#	*		15790#	710#	*		16130#	640#
127	Rh	45	4600#	780#	*		43150#	600#	5350#	670#	4720#	850#	*	
	Pd	46	3500#	640#	17310#	710#	36250#	500#	5320#	710#	2350#	640#	−7980#	780#
	Ag	47	6000#	280#	14150#	450#	28050#	200#	6020#	450#	4610#	360#	−8290#	450#
	Cd	48	4557	7	15310#	200#	19539	6	6490	430	2350	250	−4700#	300#
	In	49	7142	11	11913	10	12103	11	7179	10	4684	10	−5000	250
	Sn	50	5526	14	12949	10	4851	10	7654	9	2260	30	−1124	10
	Sb	51	8380	30	7972	12	−458	8	9906	5	6397	5	−180	30
	Te	52	6287.65	0.18	9180	30	−5463	11	10685.4	2.1	4202.63	0.24	5597.4	0.4
	I	53	9144.0	2.7	6208	4	−11087	26	10749	4	6405	4	4282	4
	Xe	54	7246	4	7699	3	−16342	29	11226	4	3908	4	7850	4
	Cs	55	9961	12	4383	6	−21700#	200#	11670	6	6291	6	6771	6
	Ba	56	8219	17	5756	15	−26910#	300#	11983	14	3787	15	10496	11
	La	57	10990	90	2515	29	−32590#	400#	12484	28	6058	29	9491	28
	Ce	58	9230	40	4290	100	*		12490	40	3140	60	12760	30
	Pr	59	12290#	280#	1010#	200#	*		12830#	280#	5240#	360#	11360#	200#
	Nd	60	10600#	420#	2880#	360#	*		12870#	420#	2110#	500#	14650#	420#
	Pm	61	13630#	640#	−780#	500#	*		13470#	570#	4380#	640#	13490#	570#
128	Rh	45	1680#	670#	*		46850#	300#	*		5890#	420#	*	
	Pd	46	5240#	710#	17950#	780#	38970#	500#	3520#	710#	2300#	710#	−10370#	580#
	Ag	47	4130#	360#	14780#	580#	29920#	300#	7790#	500#	4110#	500#	−7230#	580#
	Cd	48	6568	9	15880#	200#	21756	6	4190#	200#	2150	430	−7630#	400#
	In	49	5382	10	12738	6	13548	4	8776.4	2.7	4022	3	−4020	430
	Sn	50	7963	20	13771	20	6499	18	5159	18	1915	18	−4367	18
	Sb	51	6003	19	8449	21	1302	20	12096	22	6128	19	1429	19
	Te	52	8784.6	1.5	9584	5	−3624.6	1.8	8110	30	4125.4	2.6	2546.3	1.5
	I	53	6826.13	0.05	6747	4	−9110	50	13037	4	6148	4	6163	4
	Xe	54	9611	4	8166	4	−14327	28	8761	4	3839.5	1.4	4807.7	1.4
	Cs	55	7763	8	4900	7	−19600	30	13925	5	6132	6	8551	6
	Ba	56	10623	11	6418	6	−24840#	200#	9692	10	3585	8	7476.6	2.1
	La	57	8800	60	3100	60	−30410#	310#	14760	60	5910	60	11110	50
	Ce	58	11630	40	4930	40	−36380#	500#	10150	90	3090	40	9780	30
	Pr	59	9860#	200#	1640	40	*		15200	40	5190#	200#	13080	40
	Nd	60	12690#	360#	3280#	280#	*		10500#	280#	2400#	360#	11770#	280#
	Pm	61	10980#	500#	−400#	420#	*		15870#	420#	4710#	500#	15500#	420#
	Sm	62	*		1130#	640#	*		11310#	710#	*		14570#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
126	Rh	45	8630#	640#	*		−13320#	580#	23520#	540#	*		8690#	640#
	Pd	46	9530#	500#	32780#	720#	−12440#	640#	20470#	400#	−30710#	500#	4660#	590#
	Ag	47	10630#	320#	30590#	450#	−11270#	360#	17090#	200#	−26180#	540#	4560#	200#
	Cd	48	11699	3	28430#	300#	−10064	20	13759	11	−25590#	400#	85.3	2.9
	In	49	13080	30	26160	250	−9130	40	8580	30	−20580	430	13	4
	Sn	50	13926	11	23894	11	−7828	11	4049	11	−19956	11	−5831	11
	Sb	51	14920	30	20100	40	−5250	60	1520	30	−13270	30	−5440	30
	Te	52	15682.66	0.09	16410.6	0.4	−2549.1	2.4	−917.8	1.4	−11459.5	0.4	−9299.46	0.10
	I	53	16689	4	14869	4	−2001	4	−3560	11	−6944	4	−8782	4
	Xe	54	17621.6	1.4	13200.2	1.4	−1258.0	1.4	−6476	12	−7413.6	1.4	−13128	8
	Cs	55	18752	14	11564	11	−696	12	−9380	90	−2804	10	−12753	15
	Ba	56	19723	18	9580	13	260	17	−11850	30	−2760	13	−16982	29
	La	57	20860	110	7810	90	750	100	−14650#	220#	1830	90	−16390#	220#
	Ce	58	22050#	300#	6310	30	1360	40	−17440#	300#	1560	30	−20820#	300#
	Pr	59	23320#	450#	4640#	200#	1800#	360#	−20570#	540#	6150#	200#	−20330#	450#
	Nd	60	24690#	580#	3040#	420#	2070#	500#	*		5990#	360#	*	
	Pm	61	*		1180#	640#	2610#	710#	*		11030#	580#	*	
127	Rh	45	8040#	780#	*		*		24920#	630#	*		9990#	720#
	Pd	46	9400#	640#	33430#	580#	−13100#	710#	21520#	500#	*		5430#	540#
	Ag	47	10270#	480#	31400#	540#	−11880#	450#	18230#	200#	−28740#	540#	5540#	200#
	Cd	48	11536	7	29360#	400#	−10740	790	14728	11	−24240#	400#	997	7
	In	49	12610	10	26940	430	−9740	30	9818	11	−23450#	200#	1064	15
	Sn	50	13719	9	24699	10	−8480	10	4811	9	−18503	10	−5150	30
	Sb	51	14586	5	20864	5	−5694	20	2285	6	−16178	7	−4705	5
	Te	52	15401.34	0.20	16964.8	0.5	−2890.7	2.4	40	4	−9554	11	−8441	4
	I	53	16290	4	15306	4	−2185	4	−2743	6	−9880	30	−7908	4
	Xe	54	17264	4	13877	4	−1575	4	−5503	12	−5546	4	−12042	11
	Cs	55	18293	10	11982	6	−722	7	−8344	27	−5619	6	−11641	14
	Ba	56	19292	16	10197	11	5	15	−10840	30	−961	11	−15920	90
	La	57	20280	40	8384	27	723	29	−13350#	200#	−834	28	−15150	40
	Ce	58	21460#	200#	6890	30	1250	30	−16070#	300#	3400	30	−19730#	200#
	Pr	59	22620#	360#	5360#	200#	1680#	280#	−19230#	450#	3140#	220#	−19230#	360#
	Nd	60	23980#	500#	3830#	360#	1950#	420#	*		7620#	300#	−24230#	580#
	Pm	61	*		1820#	500#	2500#	570#	*		7730#	450#	*	
128	Rh	45	6280#	580#	*		*		27370#	420#	*		11810#	580#
	Pd	46	8740#	640#	*		−13230#	780#	22850#	500#	*		6190#	540#
	Ag	47	10130#	360#	32090#	580#	−12430#	500#	19480#	300#	−28270#	670#	5960#	300#
	Cd	48	11125	7	30030#	400#	−11260#	300#	16123	19	−27310#	500#	1570	12
	In	49	12523	4	28050#	200#	−10390	250	10440	19	−22830#	200#	1208	9
	Sn	50	13489	21	25684	18	−9087	18	5632	18	−21909	19	−4734	18
	Sb	51	14380	40	21398	19	−6190	40	3108	19	−15039	21	−4421	19
	Te	52	15072.3	1.5	17557	11	−3187.2	1.5	866.7	0.7	−12813	9	−8082	4
	I	53	15970.2	2.7	15920	30	−2544	4	−1806	6	−8329	6	−7488.5	2.0
	Xe	54	16856.78	*a*	14374.3	1.4	−1761.3	1.4	−4491.4	1.6	−8869.0	1.4	−11692	6
	Cs	55	17724	12	12599	7	−992	6	−7310	50	−4238	6	−11185	13
	Ba	56	18842	13	10800.7	1.6	−126.7	2.1	−9835	28	−4337	4	−15544	26
	La	57	19790	110	8850	60	690	60	−12290	60	330	50	−14720	60
	Ce	58	20860	40	7440	30	1130	30	−15000#	200#	−0	30	−19060#	200#
	Pr	59	22150#	200#	5940	100	1500	60	−18110#	300#	4280	40	−18490#	300#
	Nd	60	23290#	360#	4290#	200#	1960#	360#	−21380#	540#	4160#	200#	−23290#	450#
	Pm	61	24610#	580#	2470#	360#	2510#	500#	*		9040#	360#	*	
	Sm	62	*		350#	580#	3260#	710#	*		9470#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
129	Pd	46	1560#	780#	17830#	670#	42710#	600#	6560#	850#	4180#	780#	*	
	Ag	47	5230#	500#	14770#	640#	32760#	400#	6060#	640#	4780#	570#	−9020#	640#
	Cd	48	3955	8	15700#	300#	23883	5	6240#	200#	2460#	200#	−5690#	400#
	In	49	6716.1	2.4	12886	7	15672	4	6617	7	4285	3	−6470#	200#
	Sn	50	5300	25	13689	17	8105	17	7000	20	2083	18	−2688	17
	Sb	51	8071	28	8557	28	2870	22	9551	23	6250	24	−1174	22
	Te	52	6082.41	0.08	9664	19	−1944	11	10404	5	4250	30	4657	11
	I	53	8840	5	6802	3	−7184	22	10484	3	6421	3	3530	30
	Xe	54	6906.85	*a*	8247	4	−12409	28	10998	4	4078	4	7014.5	1.4
	Cs	55	9639	7	4927	5	−17730	30	11533	6	6511	5	6058	6
	Ba	56	7763	11	6418	12	−22690#	200#	11890	12	4154	15	9732	11
	La	57	10770	60	3243	21	−28140#	300#	12205	24	6210	25	8674	24
	Ce	58	8820	40	4950	60	−33960#	500#	12320	40	3550	90	12030	30
	Pr	59	11510	40	1530	40	*		12920	40	5910	40	10850	100
	Nd	60	9920#	280#	3330#	200#	*		12880#	280#	2810#	280#	14090#	200#
	Pm	61	13030#	420#	−60#	360#	*		13440#	420#	5060#	420#	12790#	360#
	Sm	62	11250#	710#	1400#	580#	*		13690#	640#	2280#	710#	16700#	580#
130	Pd	46	2920#	670#	*		47400#	300#	5320#	420#	5860#	670#	*	
	Ag	47	2100#	580#	15310#	740#	36390#	420#	9200#	660#	6190#	660#	−6520#	740#
	Cd	48	6067	23	16540#	400#	26235	22	4300#	300#	2400#	200#	−8250#	500#
	In	49	5143.0	2.7	14073	6	17030	4	8043	7	3699	6	−5610#	200#
	Sn	50	7613	17	14586.3	2.7	9748.3	1.9	4768.7	2.3	1612	10	−5745	6
	Sb	51	5728	26	8984	22	4614	16	11787	23	6048	17	241	17
	Te	52	8419.4	0.7	10013	21	−96.18	0.29	7988	19	4209	5	1763	9
	I	53	6500.33	0.04	7220	3	−5309	26	12768	3	6208	3	5409	6
	Xe	54	9255.72	0.01	8662	3	−10458	28	8568	4	3967	4	4046.4	1.4
	Cs	55	7472	10	5493	8	−15720	60	13672	8	6285	9	7730	9
	Ba	56	10267	11	7047	5	−20661	28	9386	5	3847	6	6711	4
	La	57	8380	30	3855	28	−26160#	200#	14453	26	6055	28	10259	27
	Ce	58	11210	40	5390	40	−31720#	400#	9910	60	3340	40	9040	30
	Pr	59	9470	70	2180	70	−37660#	540#	15070	70	5670	70	12370	70
	Nd	60	12290#	200#	4110	40	*		10450	40	2810#	200#	11030	40
	Pm	61	10360#	360#	380#	280#	*		15770#	280#	5310#	360#	14720#	280#
	Sm	62	13440#	640#	1810#	500#	*		11230#	500#	2470#	570#	13860#	500#
	Eu	63	*		−1530#	200#	*		16350#	740#	*		17440#	670#
131	Pd	46	1080#	420#	*		51530#	300#	*		6460#	420#	*	
	Ag	47	2920#	660#	15310#	580#	41230#	500#	7840#	780#	8500#	710#	−7760#	580#
	Cd	48	2165	29	16600#	430#	29999	19	7370#	400#	4360#	300#	−5180#	500#
	In	49	6189.2	2.8	14196	22	19418.4	2.3	5809	6	4078	7	−7670#	300#
	Sn	50	5204	4	14647	4	11149	4	6281	4	1790	4	−4380	7
	Sb	51	7767	14	9138.2	2.8	6074.2	2.1	9320	17	6244	18	−2144.9	2.5
	Te	52	5929.38	0.06	10214	14	1467.9	0.4	10129	21	4283	19	3797	18
	I	53	8578	3	7378.7	0.6	−3673	28	10273.0	0.9	6415.1	0.9	2834	19
	Xe	54	6604.42	0.01	8766	3	−8710	30	10804	3	4189	4	6226.6	0.7
	Cs	55	9227	8	5464.07	0.18	−13750	50	11351.30	0.18	6669.02	0.18	5329	4
	Ba	56	7493.5	0.3	7068	8	−18911	28	11531	5	4117	5	8828.0	0.4
	La	57	10210	40	3801	28	−24000#	200#	12002	30	6464	28	7809	28
	Ce	58	8360	40	5370	40	−29430#	400#	12330	40	3780	60	11310	30
	Pr	59	11200	80	2170	50	−34840#	400#	12700	50	6100	50	9970	70
	Nd	60	9240	40	3880	70	*		12720	40	3430	40	13410	40
	Pm	61	12370#	280#	460#	200#	*		13320#	280#	5620#	280#	12210#	200#
	Sm	62	10650#	570#	2100#	450#	*		13610#	500#	2800#	500#	15900#	450#
	Eu	63	14020#	670#	−947	5	*		13580#	640#	4550#	640#	14400#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
129	Pd	46	6800#	780#	*		−11940#	670#	25240#	600#	*		8760#	670#
	Ag	47	9360#	450#	32720#	720#	−12470#	640#	20970#	400#	−31820#	500#	7300#	400#
	Cd	48	10524	8	30480#	500#	−11590#	400#	17468	18	−26020#	500#	2997	5
	In	49	12098	10	28760#	200#	−10740	430	11794	21	−25410#	300#	2455	18
	Sn	50	13264	20	26427	18	−9667	18	6414	17	−20641	18	−4032	26
	Sb	51	14074	22	22327	23	−6642	21	3878	21	−17728	21	−3707	21
	Te	52	14867.0	1.5	18113	9	−3536.1	1.5	1691.2	0.7	−10932	18	−7338	4
	I	53	15667	5	16387	6	−2677	4	−1008	6	−11166	19	−6718	3
	Xe	54	16518	4	14993.5	1.4	−2099.2	1.4	−3635	11	−6991.2	0.7	−10836	5
	Cs	55	17402	7	13094	6	−1088	5	−6176	22	−7050	6	−10201	5
	Ba	56	18386	15	11318	11	−286	11	−8773	30	−2489	11	−14510	60
	La	57	19570	30	9661	22	341	23	−11550	40	−2681	22	−13860	40
	Ce	58	20450	40	8050	30	960	30	−13910#	200#	1793	28	−18030	40
	Pr	59	21370#	200#	6460	40	1560	40	−16590#	300#	1560	60	−17320#	200#
	Nd	60	22610#	360#	4970#	200#	1860#	280#	−20050#	540#	5870#	200#	−22230#	360#
	Pm	61	24010#	500#	3220#	360#	2470#	420#	*		5860#	300#	−22100#	580#
	Sm	62	*		1000#	580#	3320#	640#	*		10910#	540#	*	
130	Pd	46	4480#	580#	*		*		28390#	300#	*		11070#	500#
	Ag	47	7330#	300#	33140#	520#	−11120#	660#	24010#	420#	*		9150#	420#
	Cd	48	10022	23	31310#	500#	−11750#	400#	19015	22	−30530#	600#	3646	22
	In	49	11859.0	2.2	29770#	300#	−11610#	200#	12379	14	−25330#	400#	2613	17
	Sn	50	12913	18	27472	7	−10301.4	3.0	7220.7	1.9	−24299	6	−3574	21
	Sb	51	13798	24	22674	14	−6901	15	4651	15	−16740	14	−3352	14
	Te	52	14501.8	0.7	18569	18	−3763	11	2527.51	0.01	−14051	17	−6917	3
	I	53	15341	5	16884	19	−2970	30	−36	9	−9596	21	−6311	3
	Xe	54	16162.58	0.01	15464.6	0.7	−2241.2	1.4	−2623.70	0.29	−10164.6	0.7	−10453	5
	Cs	55	17111	10	13740	9	−1414	9	−5272	27	−5682	9	−9910	13
	Ba	56	18030.3	1.5	11974.18	0.29	−535.31	0.29	−7834	28	−5849.68	0.29	−14005	21
	La	57	19140	60	10274	26	298	28	−10450	70	−1417	26	−13410	40
	Ce	58	20030	40	8632	28	820	30	−12830	40	−1651	30	−17720	40
	Pr	59	20990	70	7130	80	1370	110	−15710#	210#	2860	70	−16870#	210#
	Nd	60	22210#	200#	5640	40	1800	40	−18900#	400#	2400	40	−21490#	300#
	Pm	61	23390#	360#	3720#	200#	2430#	280#	−21960#	580#	7020#	200#	−21210#	540#
	Sm	62	24690#	640#	1750#	450#	3260#	500#	*		7390#	450#	*	
	Eu	63	*		−130#	620#	3810#	740#	*		12380#	620#	*	
131	Pd	46	4000#	670#	*		*		29470#	300#	*		12090#	520#
	Ag	47	5020#	640#	*		−9450#	780#	27270#	500#	*		12300#	500#
	Cd	48	8232	20	31910#	600#	−10420#	500#	22053	20	−29770#	300#	6623	19
	In	49	11332.1	3.0	30730#	400#	−11800#	200#	13957	3	−29420#	420#	4036.5	2.9
	Sn	50	12817	18	28720	6	−10948	7	7946	4	−23436	23	−3050	15
	Sb	51	13495	21	23724.5	2.9	−7526	10	5461.3	2.2	−19363.9	2.7	−2699.8	2.1
	Te	52	14348.8	0.7	19198	17	−4166	9	3202.55	0.06	−12367.8	1.9	−6346	3
	I	53	15078	3	17391	21	−3169	5	612.8	0.6	−12446	14	−5633.6	0.6
	Xe	54	15860.14	*a*	15986.6	0.7	−2558.0	1.4	−1734.6	0.4	−8349.59	0.01	−9585	8
	Cs	55	16699	5	14126	3	−1497	4	−4286	28	−8408	3	−8870.1	0.3
	Ba	56	17761	11	12560.8	0.4	−783	4	−6970	30	−4087.5	0.4	−13123	26
	La	57	18590	40	10848	28	46	28	−9470	50	−4158	29	−12420	40
	Ce	58	19560	40	9230	30	680	30	−11940	40	260	30	−16600	70
	Pr	59	20670	60	7560	50	1170	50	−14530#	210#	40	50	−15780	50
	Nd	60	21540#	200#	6060	40	1790	40	−17490#	400#	4370	40	−20370#	200#
	Pm	61	22730#	360#	4580#	200#	2350#	280#	−20310#	450#	4120#	210#	−20140#	450#
	Sm	62	24090#	640#	2480#	450#	3210#	500#	*		9030#	400#	−24840#	670#
	Eu	63	*		860#	500#	3420#	570#	*		8720#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
132	Ag	47	1720#	710#	15950#	580#	45240#	500#	9040#	580#	8340#	780#	*	
	Cd	48	3320	60	17000#	500#	34720	60	6140#	430#	6270#	400#	−6940#	600#
	In	49	2460	60	14490	60	23290	60	9420	60	5570	60	−4900#	400#
	Sn	50	7353	4	15811.2	3.0	12732.4	2.0	4070.8	2.7	1152.4	2.8	−7778	6
	Sb	51	5725	3	9660	4	7517.4	2.7	11208	3	5819	17	−1154	3
	Te	52	8048	3	10496	4	3247	4	7808	15	4305	22	1049	18
	I	53	6332	4	7781	4	−1980	40	12360	4	6165	4	4572	22
	Xe	54	8936.72	*a*	9125.2	0.6	−6810	20	8368	3	4092	3	3372.3	0.7
	Cs	55	7168.4	1.1	6028.1	1.0	−11925	29	13438.6	1.0	6407.4	1.0	7001	3
	Ba	56	9827.3	1.1	7668.3	1.1	−17009	24	9176	8	3928	5	5907.6	1.1
	La	57	8030	50	4330	40	−22100#	150#	14240	40	6200	40	9420	40
	Ce	58	10830	40	5990	30	−27330#	300#	9870	30	3719	30	8239	23
	Pr	59	9000	60	2810	40	−33030#	400#	14910	40	5920	40	11740	40
	Nd	60	11730	40	4410	50	*		10460	70	3210	40	10510	40
	Pm	61	9930#	250#	1150#	150#	*		15680#	150#	5610#	250#	13790#	150#
	Sm	62	12930#	500#	2660#	360#	*		11040#	360#	2900#	420#	12880#	360#
	Eu	63	10810#	570#	−790#	570#	*		16210#	570#	4990#	640#	16630#	500#
133	Ag	47	2750#	710#	*		49840#	500#	7370#	580#	8510#	580#	*	
	Cd	48	1750#	210#	17030#	540#	38800#	200#	7320#	540#	6620#	470#	−5760#	360#
	In	49	3350#	210#	14510#	210#	28170#	200#	8230#	200#	8290#	200#	−6150#	470#
	Sn	50	2398.7	2.7	15750	60	16770	3	7861.3	2.9	3896.7	2.6	−4110	22
	Sb	51	7360	4	9666	4	9147	3	9052	5	6073	4	−3371	4
	Te	52	5820	4	10591	3	4616.4	2.3	9755.1	2.9	4213	14	2841.5	2.8
	I	53	8225	7	7958	7	−363	29	10065	6	6360	6	2075	15
	Xe	54	6435.9	2.4	9229	5	−5225	17	10510.0	2.5	4157	4	5355.8	2.4
	Cs	55	8989.6	1.0	6080.94	0.01	−10133	12	11053.44	0.01	6673.59	0.01	4512	3
	Ba	56	7189.9	0.4	7689.8	1.4	−15220	50	11212.9	1.0	4210	8	7973.4	1.0
	La	57	9840	50	4348	28	−20090	60	11895	28	6626	28	7052	29
	Ce	58	8021	26	5980	40	−25190#	300#	12060	30	4070	30	10485	16
	Pr	59	10780	30	2758	24	−30700#	300#	12480	40	6350	30	9336	29
	Nd	60	8980	50	4390	50	−36270#	500#	12680	70	3710	80	12740	50
	Pm	61	11850#	160#	1270	60	*		13070	60	6050	60	11410	80
	Sm	62	10160#	420#	2890#	330#	*		13250#	360#	3100#	360#	15010#	300#
	Eu	63	13110#	500#	−620#	420#	*		13760#	500#	5330#	500#	13880#	360#
	Gd	64	*		1150#	640#	*		14120#	640#	2320#	740#	17290#	640#
134	Cd	48	3390#	360#	17670#	580#	43070#	300#	5650#	580#	6150#	580#	−8070#	420#
	In	49	2350#	280#	15120#	280#	32070#	200#	9210#	210#	8110#	200#	−5570#	540#
	Sn	50	3631	4	16030#	200#	21692	3	6690	60	6455	4	−5576	19
	Sb	51	3167	4	10434	4	12872	3	13238	4	8110	5	−348	4
	Te	52	7668	3	10899	4	6416.2	2.8	7812	4	4312	3	377	5
	I	53	6257	8	8395	5	1175	21	11856	6	6032	5	3584	5
	Xe	54	8553.6	2.4	9558	6	−3293	20	8288	4	4180.9	0.6	2731.59	0.06
	Cs	55	6891.54	0.01	6536.6	2.4	−8363	20	13098.62	0.02	6386.47	0.02	6198.0	0.6
	Ba	56	9467.8	1.0	8168.03	0.25	−13304	12	8913.5	1.1	3969.6	0.3	5109.97	0.25
	La	57	7800	30	4954	20	−18450	50	13927	20	6324	20	8483	20
	Ce	58	10486	26	6630	30	−23460#	200#	9600	40	3800	30	7492	20
	Pr	59	8662	24	3399	26	−28730#	300#	14651	29	6040	40	10890	30
	Nd	60	11390	50	4998	17	−34120#	400#	10290	30	3520	50	9710	30
	Pm	61	9430	70	1720	60	*		15370	50	5870	50	13180	60
	Sm	62	12220#	360#	3260#	200#	*		10960#	250#	3260#	280#	12040#	200#
	Eu	63	10640#	420#	−140#	420#	*		16050#	420#	5340#	500#	15620#	360#
	Gd	64	13540#	640#	1580#	500#	*		11380#	570#	2800#	570#	14400#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
132	Ag	47	4650#	660#	*		−9490#	580#	28010#	500#	*		12740#	500#
	Cd	48	5490	60	32310#	310#	−8500#	500#	26080	60	−32010#	310#	9490	60
	In	49	8650	60	31090#	430#	−10130#	310#	17220	60	−28950#	500#	6780	60
	Sn	50	12557.0	2.7	30007	22	−11733	7	8642	4	−28624	19	−2636.5	2.9
	Sb	51	13492	14	24307	3	−7870.1	2.8	6068	5	−18900	3	−2495.6	2.5
	Te	52	13978	3	19634	4	−4252	18	4091	3	−15213	5	−5817	4
	I	53	14910	5	17996	15	−3499	19	1449	4	−11011	5	−5361	4
	Xe	54	15541.14	0.01	16503.96	0.01	−2710.1	0.7	−844.1	1.1	−11356.92	0.06	−9294.72	0.18
	Cs	55	16396	8	14794	3	−1840	4	−3430	40	−6998.9	1.2	−8545.1	1.1
	Ba	56	17320.8	1.1	13132.4	1.1	−999.3	1.1	−5966	20	−7310.3	1.1	−12737	28
	La	57	18240	40	11400	40	−220	40	−8500	50	−2960	40	−12090	50
	Ce	58	19190	30	9790	20	476	20	−11040	30	−3079	20	−16240	50
	Pr	59	20190	70	8180	40	970	60	−13600#	150#	1250	40	−15530	40
	Nd	60	20970	40	6580	40	1680	40	−16290#	300#	990	40	−19730#	200#
	Pm	61	22300#	250#	5030#	160#	2280#	150#	−19430#	430#	5380#	160#	−19420#	430#
	Sm	62	23580#	500#	3120#	300#	2970#	360#	*		5340#	300#	−23750#	500#
	Eu	63	24830#	670#	1310#	450#	3590#	500#	*		10280#	450#	*	
133	Ag	47	4470#	710#	*		*		28610#	540#	*		13310#	500#
	Cd	48	5070#	200#	32980#	360#	−8690#	630#	26730#	200#	*		10200#	210#
	In	49	5810#	200#	31520#	540#	−8250#	450#	21230#	200#	−30580#	540#	10790#	200#
	Sn	50	9752	4	30240	19	−10177	6	12063.2	2.8	−27700	60	690	3
	Sb	51	13085	4	25477	4	−8514	4	6934	7	−23800	60	−1807	5
	Te	52	13868.7	2.1	20250	4	−4771	17	4706	3	−13679.6	2.9	−5305	5
	I	53	14557	6	18454	6	−3653	22	2214	6	−13511	6	−4650	6
	Xe	54	15372.6	2.4	17010.5	2.4	−3063.6	2.5	−90.1	2.6	−9744	4	−8562.2	2.6
	Cs	55	16158.01	0.18	15206.2	0.6	−1989	3	−2577	28	−9656	4	−7707.4	1.1
	Ba	56	17017.2	1.1	13717.9	1.0	−1282.4	1.0	−5135	16	−5563.5	1.0	−11900	40
	La	57	17870	40	12017	28	−420	28	−7560	30	−5631	28	−11100	30
	Ce	58	18850	40	10317	16	218	19	−10090	50	−1272	16	−15260	30
	Pr	59	19780	50	8750	30	961	25	−12530	50	−1500	40	−14583	27
	Nd	60	20710	50	7200	60	1530	50	−15100#	300#	2850	50	−18780#	160#
	Pm	61	21780#	210#	5680	70	1940	60	−18170#	300#	2530	60	−18340#	300#
	Sm	62	23090#	500#	4040#	300#	2720#	360#	−21170#	580#	6910#	300#	−23100#	500#
	Eu	63	23920#	500#	2040#	360#	3520#	420#	*		7100#	330#	*	
	Gd	64	*		360#	640#	3850#	710#	*		11790#	580#	*	
134	Cd	48	5140#	310#	*		−9160#	420#	26970#	300#	*		10160#	360#
	In	49	5700#	210#	32150#	540#	−8500#	470#	22050#	200#	−30180#	540#	10830#	200#
	Sn	50	6030	4	30550	60	−7741	23	16100	4	−29580#	200#	4418	4
	Sb	51	10526	4	26190	60	−6537	4	10024	6	−23620#	200#	847	4
	Te	52	13488	4	20565	3	−4826	3	5592.1	2.7	−18949	3	−4748	7
	I	53	14483	6	18986	5	−4183	15	2848	5	−12409	6	−4471	5
	Xe	54	14989.50	*a*	17516	3	−3197.79	0.01	824.17	0.25	−12477.7	2.1	−8126.21	0.01
	Cs	55	15881.1	1.0	15766	4	−2380	3	−1673	20	−8323	6	−7409.0	1.0
	Ba	56	16657.7	1.1	14248.97	0.25	−1494.44	0.25	−4117	20	−8595.4	2.4	−11527	28
	La	57	17640	40	12644	20	−744	22	−6691	28	−4437	20	−10872	26
	Ce	58	18507	29	10976	20	−1	20	−9186	24	−4568	20	−14967	24
	Pr	59	19440	40	9380	40	670	30	−11760	50	−320	30	−14270	50
	Nd	60	20363	27	7756	24	1350	30	−14270#	200#	−517	20	−18310	50
	Pm	61	21280#	160#	6110	50	1990	80	−16960#	300#	3880	40	−17600#	300#
	Sm	62	22380#	360#	4530#	200#	2800#	200#	−19850#	450#	3670#	200#	−22210#	360#
	Eu	63	23740#	500#	2750#	340#	3240#	360#	*		8320#	300#	−21810#	580#
	Gd	64	*		970#	500#	3750#	570#	*		8410#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
135	Cd	48	1430#	500#	*		44910#	400#	6970#	640#	6440#	640#	*	
	In	49	3210#	360#	14940#	420#	36670#	300#	7740#	360#	8220#	310#	−7060#	580#
	Sn	50	2270	4	15950#	200#	25781	5	7770#	200#	6640	60	−4520	60
	Sb	51	3743	4	10546	4	17891.6	2.7	11894	3	11720	3	−1630	60
	Te	52	3266	3	10999	4	10121.9	1.7	11906	4	6771	3	4464.2	2.6
	I	53	7807	5	8534	3	2864	10	9868.8	2.9	6273	4	1503	3
	Xe	54	6359	4	9659	6	−1797	11	10155	7	4154	5	4421	5
	Cs	55	8762.1	0.4	6745.1	0.4	−6646	12	10772.4	2.4	6561.1	0.4	3768	4
	Ba	56	6971.97	0.10	8248.46	0.25	−11637	19	10931.10	0.25	4166.1	1.1	7074.72	0.25
	La	57	9496	22	4982	9	−16580	80	11621	9	6656	9	6156	9
	Ce	58	7855	23	6687	22	−21760	150	11589	30	3970	40	9465	10
	Pr	59	10479	24	3392	24	−26790#	200#	12193	20	6397	24	8430	40
	Nd	60	8638	22	4975	28	−31960#	400#	12435	23	3880	30	11901	28
	Pm	61	11370	90	1700	80	−37010#	410#	12980	100	6230	90	10810	90
	Sm	62	9550#	250#	3380	160	*		13260	160	3630#	220#	14210	160
	Eu	63	12420#	360#	60#	280#	*		13790#	360#	5860#	360#	13130#	250#
	Gd	64	10790#	570#	1740#	500#	*		13700#	500#	2820#	570#	16540#	500#
	Tb	65	*		−1188	7	*		13720#	640#	*		14790#	570#
136	In	49	1930#	420#	15440#	500#	38580#	300#	9200#	420#	8030#	360#	−6240#	580#
	Sn	50	3610#	200#	16350#	360#	30260#	200#	6510#	280#	6380#	280#	−6380#	280#
	Sb	51	2888	6	11164	7	21832	6	12638	7	11231	6	−1170#	200#
	Te	52	4767.8	2.9	12024	3	14461.8	2.3	10305	4	9362	4	2095.0	3.0
	I	53	3837	14	9105	14	6490	60	13699	14	8256	14	5025	15
	Xe	54	8087	4	9939.0	2.1	79.4	0.3	8325	5	4292	6	2154.4	2.1
	Cs	55	6828.2	1.9	7214	4	−4998	12	12497.8	1.9	6169	3	5165	6
	Ba	56	9107.74	0.04	8594.09	0.29	−9688	12	8714.89	0.24	4047.92	0.24	4402.9	2.4
	La	57	7470	50	5480	50	−14870	90	13620	50	6380	50	7680	50
	Ce	58	9964	10	7154	9	−19698	13	9421	20	3850	28	6691.4	1.0
	Pr	59	8476	16	4013	15	−25100#	200#	14203	23	5942	20	9800	30
	Nd	60	11057	22	5552	17	−30110#	300#	10040	24	3602	17	8865	20
	Pm	61	9180	110	2250	70	−35270#	510#	15190	70	6030	80	12410	70
	Sm	62	12020	160	4040	80	*		10660	40	3460	50	11170	50
	Eu	63	10170#	280#	680#	250#	*		15840#	280#	5850#	360#	14810#	200#
	Gd	64	12910#	500#	2230#	360#	*		11420#	420#	3010#	420#	13790#	420#
	Tb	65	10920#	640#	−1060#	640#	*		16340#	640#	5020#	710#	16980#	580#
137	In	49	2930#	500#	*		40530#	400#	7700#	570#	8490#	500#	*	
	Sn	50	2050#	360#	16470#	420#	32230#	300#	7670#	420#	6680#	360#	−5040#	420#
	Sb	51	3620	50	11180#	210#	26490	50	11280	50	11240	50	−2440#	210#
	Te	52	2950	3	12086	6	18417.6	2.1	11097	3	9579	4	2776	4
	I	53	4882	16	9220	9	10785	9	12083	9	11042	9	3309	9
	Xe	54	4025.56	0.10	10127	14	3535.4	0.4	12106.6	2.1	6524	5	5796.7	2.7
	Cs	55	8278.2	1.9	7405.6	0.3	−3344	8	10578	4	6444.1	0.3	3144	5
	Ba	56	6905.64	0.07	8671.5	1.9	−8137	12	10571.36	0.30	4033.82	0.25	6050.84	0.25
	La	57	9170	50	5542.8	1.6	−13068	13	11420.6	1.6	6673.2	1.6	5396.7	1.6
	Ce	58	7481.53	0.16	7170	50	−17927	29	11435	9	4164	20	8677.64	0.28
	Pr	59	9933	14	3982	8	−23056	9	12125	13	6495	22	7663	22
	Nd	60	8456	17	5533	16	−28370#	300#	12063	17	3808	23	10895	24
	Pm	61	10970	70	2163	18	−33110#	400#	12852	23	6438	18	10102	24
	Sm	62	9250	30	4110	70	*		12780	90	3640	50	13300	30
	Eu	63	11970#	200#	624	13	*		13420	150	6090#	200#	12260	40
	Gd	64	10200#	420#	2260#	360#	*		13650#	360#	3450#	420#	15810#	360#
	Tb	65	13140#	640#	−830#	500#	*		13990#	570#	5430#	570#	14480#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
135	Cd	48	4820#	450#	*		−9510#	500#	27810#	400#	*		11080#	450#
	In	49	5560#	360#	32610#	580#	−8790#	580#	22580#	300#	*		11250#	300#
	Sn	50	5901	4	31070#	200#	−7845	19	17097	4	−28460#	300#	5315	4
	Sb	51	6909	4	26580#	200#	−4091	3	14089	3	−25010#	200#	4772	4
	Te	52	10934.3	2.7	21432.8	2.6	−2889	4	8685	4	−18584	4	−1757	5
	I	53	14065	6	19434	4	−4222.7	2.9	3802.8	2.1	−17049	4	−3724.7	2.1
	Xe	54	14912	4	18054	4	−3627	4	1437	4	−11169	5	−7594	4
	Cs	55	15653.6	0.4	16303	6	−2564.1	0.7	−938	9	−10827	5	−6703.3	0.3
	Ba	56	16439.8	1.0	14785.0	2.4	−1862.00	0.25	−3234	10	−7013.79	0.25	−10703	20
	La	57	17292	29	13150	9	−1013	9	−5708	15	−7041	9	−9882	22
	Ce	58	18341	19	11641	10	−362	10	−8403	22	−2955	10	−14160	23
	Pr	59	19141	17	10020	30	410	30	−10870	80	−3006	23	−13361	17
	Nd	60	20020	50	8373	25	1070	40	−13360	160	1330	28	−17520	50
	Pm	61	20800	100	6700	80	1810	100	−15920#	210#	1180	90	−16760#	210#
	Sm	62	21770#	340#	5100	160	2490	160	−18610#	430#	5500	160	−21130#	340#
	Eu	63	23050#	360#	3320#	200#	3200#	280#	−21100#	450#	5330#	200#	−20690#	450#
	Gd	64	24330#	640#	1600#	500#	3610#	570#	*		9840#	450#	*	
	Tb	65	*		400#	500#	3990#	570#	*		9460#	500#	*	
136	In	49	5140#	360#	*		−9000#	580#	23540#	300#	*		11590#	300#
	Sn	50	5880#	200#	31290#	360#	−8130#	210#	18260#	200#	−30640#	450#	5450#	200#
	Sb	51	6631	7	27120#	200#	−4520	60	15038	15	−24690#	300#	5151	6
	Te	52	8034	4	22569	4	−304	3	12003.9	2.3	−21082	4	1283	3
	I	53	11644	15	20104	15	−2335	14	6794	14	−17144	14	−1203	15
	Xe	54	14445.97	0.01	18473.4	2.7	−3666	3	2457.91	0.24	−15989.4	1.7	−6918.5	0.4
	Cs	55	15590.3	1.9	16873	5	−3060	4	−300	50	−9848.6	2.8	−6559.5	1.9
	Ba	56	16079.71	0.11	15339.19	0.24	−2033.02	0.24	−2378.53	0.21	−9763	4	−10315	9
	La	57	16960	60	13720	50	−1310	50	−4700	50	−5740	50	−9490	50
	Ce	58	17818	20	12136.49	0.24	−498.6	1.1	−7309	12	−5946.87	0.22	−13644	12
	Pr	59	18955	23	10700	23	−40	40	−10170	70	−1986	15	−13198	22
	Nd	60	19695	17	8944	24	844	24	−12388	17	−1872	16	−17210	80
	Pm	61	20550	80	7220	70	1630	70	−14930#	210#	2480	70	−16380	170
	Sm	62	21580#	200#	5742	17	2190	27	−17720#	300#	2114	23	−20730#	200#
	Eu	63	22590#	360#	4060#	200#	2960#	250#	−20340#	540#	6530#	210#	−20070#	450#
	Gd	64	23700#	500#	2290#	360#	3630#	420#	*		6480#	340#	−24110#	500#
	Tb	65	*		680#	580#	3880#	640#	*		10960#	540#	*	
137	In	49	4860#	500#	*		−9180#	640#	24230#	400#	*		12270#	450#
	Sn	50	5660#	300#	31910#	500#	−8440#	360#	19150#	300#	*		6290#	300#
	Sb	51	6510	50	27530#	300#	−4800#	210#	16300	50	−26380#	300#	6290	50
	Te	52	7717.6	2.7	23249	4	−854.8	2.8	13079.7	2.1	−20420#	200#	2170	14
	I	53	8720	9	21244	9	142	9	10190	8	−19138	10	2002	8
	Xe	54	12113	4	19232.6	1.7	−1871.2	2.1	5337.99	0.27	−15247.1	2.3	−4115.9	1.9
	Cs	55	15106.5	0.3	17344.5	2.1	−3113	6	595.1	1.6	−14290	14	−5730.01	0.19
	Ba	56	16013.38	0.08	15886	4	−2502.7	2.4	−1802.64	0.27	−8581.20	0.25	−9760	50
	La	57	16640	10	14136.9	1.6	−1494.8	1.6	−3939	8	−8091.0	2.5	−8703.6	1.6
	Ce	58	17445	10	12646.05	0.27	−790.2	1.1	−6335	12	−4320.66	0.26	−12650	11
	Pr	59	18409	14	11136	12	−132	29	−9129	15	−4450	50	−12074	14
	Nd	60	19513	22	9546	16	409	20	−11590	30	−364	12	−16490	70
	Pm	61	20150	80	7715	18	1440	18	−13927	14	−21	17	−15333	18
	Sm	62	21280	160	6360	30	1920	50	−16780#	300#	3920	30	−19820#	200#
	Eu	63	22140#	200#	4660	80	2840	50	−19180#	400#	3740	70	−19130#	300#
	Gd	64	23110#	500#	2930#	340#	3590#	420#	*		8310#	300#	−23390#	580#
	Tb	65	24060#	570#	1400#	450#	3840#	500#	*		7990#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
138	Sn	50	3430#	500#	16970#	570#	34460#	400#	6170#	500#	6460#	500#	−7040#	570#
	Sb	51	2660#	300#	11790#	420#	28240#	300#	12230#	360#	10850#	300#	−1890#	420#
	Te	52	4464	4	12920	50	22566	4	9522	7	8858	5	583	5
	I	53	3695	10	9965	6	14533	6	13156	6	10613	6	3357	7
	Xe	54	5660.1	2.8	10905	9	7593.6	2.8	10284	14	8671	3	3403	3
	Cs	55	4413	9	7793	9	242	14	14253	9	8390	10	6539	9
	Ba	56	8611.72	0.04	9005.00	0.18	−6245	12	8787.9	1.9	4184.21	0.30	3798	4
	La	57	7443.9	1.7	6081.0	0.3	−11599	12	13084.5	0.3	6201.3	0.3	6715.0	0.5
	Ce	58	9718.4	0.5	7714.0	1.7	−16068	12	9180	50	3942	9	5931.2	0.5
	Pr	59	7998	13	4499	10	−21379	30	14090	10	6351	14	9161	14
	Nd	60	10505	16	6104	14	−26360#	200#	10034	16	3783	17	8246	15
	Pm	61	8913	17	2619	16	−31310#	300#	14996	17	6163	22	11668	17
	Sm	62	11580	30	4714	18	−36570#	500#	10380	70	3430	80	10362	22
	Eu	63	9675	28	1050	40	*		15770	30	5970	160	13960	90
	Gd	64	12520#	360#	2800#	200#	*		11300#	280#	3350#	280#	12840#	250#
	Tb	65	10710#	500#	−320#	420#	*		16200#	420#	5510#	500#	16190#	360#
	Dy	66	*		1250#	640#	*		11680#	710#	2990#	640#	14970#	640#
139	Sn	50	1870#	570#	*		36340#	400#	7230#	570#	6520#	500#	*	
	Sb	51	3470#	500#	11830#	570#	30650#	400#	10810#	500#	10980#	450#	−3430#	500#
	Te	52	2580	5	12840#	300#	24709	4	10570	50	9166	7	1610#	200#
	I	53	4562	7	10064	6	18751	4	11544	5	10818	5	1682	7
	Xe	54	3744	4	10954	6	11313.2	3.0	11422	9	8765	14	4427	3
	Cs	55	5885	10	8018	4	4128	5	12393	3	10592	3	4491	15
	Ba	56	4723.43	0.04	9316	9	−2897	28	12342.66	0.18	6289.0	1.9	7161.65	0.25
	La	57	8780.3	0.7	6249.5	0.7	−9721	14	11209.8	0.7	6528.8	0.7	4762.9	2.0
	Ce	58	7463.2	2.1	7733.3	2.1	−14578	11	10893.9	2.7	3940	50	7575.7	2.1
	Pr	59	9771	11	4552	4	−19431	14	11801	4	6544	4	6860	50
	Nd	60	8071	30	6177	29	−24390#	200#	11896	29	4188	30	10138	28
	Pm	61	10658	18	2773	18	−29370#	300#	12794	18	6562	18	9486	18
	Sm	62	8954	16	4755	16	−34680#	500#	12403	17	3650	70	12465	16
	Eu	63	11720	30	1189	18	*		13300	30	6277	18	11420	70
	Gd	64	10040#	280#	3170#	200#	*		13230#	200#	3480#	280#	14830#	200#
	Tb	65	12600#	420#	−240#	360#	*		13790#	420#	5820#	420#	13760#	360#
	Dy	66	10840#	710#	1390#	580#	*		13980#	640#	3060#	710#	17040#	580#
140	Sn	50	3250#	500#	*		38500#	300#	*		6200#	500#	*	
	Sb	51	2410#	720#	12370#	720#	32660#	600#	11830#	720#	10620#	670#	−2910#	720#
	Te	52	4234	15	13610#	400#	26900	16	8990#	300#	8560	50	−570#	300#
	I	53	3207	13	10690	13	20706	12	12801	13	10562	12	2100	50
	Xe	54	5413	3	11804	5	15087.8	2.7	9704	6	8234	9	1964	3
	Cs	55	4420	9	8694	8	7636	10	13633	9	10198	8	4953	12
	Ba	56	6425	8	9856	8	989	9	10330	12	8142	8	4762	8
	La	57	5161.00	0.02	6687.1	0.7	−6100	24	14660.6	0.7	8273.4	0.7	7880.1	0.7
	Ce	58	9187.8	2.4	8140.8	1.3	−12618	13	9150.0	1.4	3930.7	2.1	5293.6	1.3
	Pr	59	7929	7	5017	6	−17700	50	13590	6	6097	6	8101	6
	Nd	60	10312	28	6718	5	−22475	28	9582	11	3809	9	7308	3
	Pm	61	8782	28	3480	40	−27730	800	14516	27	6236	27	10636	26
	Sm	62	11147	17	5244	18	−32630#	400#	10169	17	3481	18	9774	17
	Eu	63	9660	50	1890	50	−37670#	500#	15220	50	5870	60	12730	50
	Gd	64	12220#	200#	3670	30	*		10680	40	3228	28	11860	40
	Tb	65	10420#	850#	140#	820#	*		15890#	830#	5600#	850#	15310	800
	Dy	66	13200#	640#	1990#	500#	*		11480#	500#	3000#	570#	14030#	500#
	Ho	67	*		−1094	10	*		16320#	710#	*		17300#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
138	Sn	50	5480#	450#	*		−8480#	500#	20190#	400#	*		6480#	400#
	Sb	51	6290#	300#	28260#	420#	−5110#	360#	17330#	300#	−26110#	500#	6580#	300#
	Te	52	7413	4	24100#	200#	−1687	5	14276	5	−22840#	300#	2589	9
	I	53	8577	15	22051	8	−386	7	10907	11	−19210	50	2332	6
	Xe	54	9685.7	2.8	20125	4	137	4	8289.6	2.8	−17957	4	−1497.8	2.8
	Cs	55	12691	9	17920	17	−1269	10	3626	9	−13820	12	−3237	9
	Ba	56	15517.36	0.08	16410.58	0.25	−2560.89	0.25	−695.9	0.4	−13167.36	0.27	−9192.3	1.6
	La	57	16620	50	14752.5	1.9	−2047.2	0.4	−3385	10	−7256.6	0.4	−8666.0	0.4
	Ce	58	17200.0	0.5	13256.7	0.5	−1040.8	0.5	−5549	12	−7133.4	0.4	−12435	8
	Pr	59	17931	15	11670	50	−335	22	−8214	15	−3277	10	−11616	15
	Nd	60	18961	17	10087	12	391	23	−10519	17	−3387	12	−16016	17
	Pm	61	19890	70	8152	16	1189	23	−13160	30	998	14	−14990	30
	Sm	62	20830	17	6876	17	1724	17	−15840#	200#	797	17	−19423	13
	Eu	63	21650#	200#	5160	70	2590	50	−18150#	300#	5030	30	−18610#	300#
	Gd	64	22710#	360#	3430#	200#	3290#	280#	−20730#	540#	5040#	200#	−22760#	450#
	Tb	65	23840#	580#	1940#	360#	3780#	420#	*		9260#	300#	*	
	Dy	66	*		420#	590#	4170#	640#	*		8990#	590#	*	
139	Sn	50	5300#	500#	*		−8920#	570#	20900#	400#	*		7270#	500#
	Sb	51	6130#	400#	28800#	570#	−5370#	500#	18420#	400#	*		7580#	400#
	Te	52	7044	4	24630#	300#	−1998	5	15440	4	−21980#	400#	3704	7
	I	53	8257	9	22990	50	−1206	5	12230	5	−21110#	300#	3430	5
	Xe	54	9403.8	2.1	20919	3	−340.7	2.7	9269.3	2.2	−17238	4	−829	9
	Cs	55	10298	3	18923	9	653	4	6521	3	−16010	7	−511	3
	Ba	56	13335.15	0.06	17108.45	0.27	−925	4	2043.8	2.1	−12230.6	2.8	−6471.8	0.3
	La	57	16224.2	1.7	15254.6	0.7	−2065.3	0.7	−2394	4	−11624	9	−7727.8	0.8
	Ce	58	17181.6	2.1	13814.3	2.1	−1532.0	2.1	−4941	28	−5984.9	2.1	−11900	10
	Pr	59	17769	9	12266	4	−610	10	−7328	14	−5604	4	−10883	12
	Nd	60	18576	30	10676	28	174	29	−9637	30	−1740	28	−15174	30
	Pm	61	19571	19	8877	16	1010	18	−12103	19	−1661	17	−14075	18
	Sm	62	20530	30	7374	16	1408	22	−14750#	200#	2348	16	−18702	30
	Eu	63	21395	14	5903	19	2240	80	−17270#	300#	2227	18	−17810#	200#
	Gd	64	22560#	360#	4220#	200#	2800#	250#	−19930#	540#	6580#	200#	−22100#	360#
	Tb	65	23310#	500#	2560#	300#	3590#	360#	*		6330#	300#	−21270#	590#
	Dy	66	*		1070#	580#	4120#	640#	*		10670#	540#	*	
140	Sn	50	5120#	500#	*		*		21880#	300#	*		7490#	500#
	Sb	51	5880#	670#	*		−5850#	670#	19220#	600#	*		7740#	600#
	Te	52	6814	15	25440#	400#	−2620#	200#	16619	15	−24350#	400#	4032	15
	I	53	7769	13	23530#	300#	−1524	13	13444	15	−20850#	400#	3967	12
	Xe	54	9157	4	21868	4	−986	3	10281	8	−20070	4	−357	4
	Cs	55	10305	12	19648	10	71	16	7262	8	−15868	9	−207	8
	Ba	56	11149	8	17874	8	736	8	4806	8	−14912	8	−4117	8
	La	57	13941.3	0.7	16003	9	−398.1	2.0	374	6	−10900	3	−5425.6	2.0
	Ce	58	16651.0	1.4	14390.4	1.3	−1612.1	1.3	−3817	4	−10449.3	1.3	−11317	4
	Pr	59	17700	12	12751	6	−1070	50	−6474	25	−4753	6	−10741	28
	Nd	60	18383	12	11269	3	−174	3	−8801	13	−4588	4	−14828	14
	Pm	61	19440	27	9661	26	703	27	−11230	60	−672	24	−13903	27
	Sm	62	20101	17	8017	17	1318	17	−13670	30	−730	30	−18129	18
	Eu	63	21380	60	6650	50	1760	90	−16500	800	3230	50	−17430#	200#
	Gd	64	22270#	200#	4860	30	2600	30	−18950#	400#	3309	30	−21720#	300#
	Tb	65	23020#	860#	3310	800	3340#	820#	−21170#	940#	7630	800	−20850#	940#
	Dy	66	24040#	640#	1750#	450#	3840#	500#	*		7510#	450#	*	
	Ho	67	*		300#	580#	4160#	710#	*		11520#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
141	Sb	51	3220#	780#	12340#	580#	34940#	500#	10480#	640#	10830#	640#	*	
	Te	52	2370#	400#	13570#	720#	29060#	400#	10090#	570#	8840#	500#	490#	570#
	I	53	4392	20	10848	21	23003	16	10989	16	10633	16	370#	300#
	Xe	54	3282	4	11880	12	17234	3	10984	5	8647	7	3145	5
	Cs	55	5499	12	8780	9	11537	9	11878	9	10359	10	3149	11
	Ba	56	4536	9	9972	10	4459	6	11679	6	8019	11	5886	6
	La	57	6689	4	6951	9	−2407	15	12695	4	10196	4	5604	10
	Ce	58	5428.15	0.10	8408.0	1.3	−9497	9	12502.1	1.3	5946.4	1.4	8477.2	1.3
	Pr	59	9400	6	5229.3	1.2	−16089	13	11654.0	2.5	6415.4	1.6	6145.3	1.6
	Nd	60	8006	5	6794	7	−20967	20	11348	5	3801	11	9021	3
	Pm	61	10382	28	3555	14	−25980	110	12200	30	6358	18	8252	17
	Sm	62	8549	15	5011	26	−30550#	300#	12278	16	3844	14	11730	14
	Eu	63	11010	50	1759	18	−35560#	400#	13165	17	6436	17	10635	17
	Gd	64	9510	30	3530	60	*		12885	24	3390	30	13920	23
	Tb	65	12130	810	50	110	*		13800#	220#	5980#	230#	12860	110
	Dy	66	10620#	500#	2190#	850#	*		13460#	420#	3080#	420#	15920#	360#
	Ho	67	13120#	640#	−1177	7	*		14050#	640#	5430#	640#	14880#	500#
142	Sb	51	2140#	580#	*		36900#	300#	11590#	420#	10560#	500#	*	
	Te	52	3950#	640#	14300#	710#	31290#	500#	8550#	780#	8370#	640#	−1590#	640#
	I	53	2948	17	11420#	400#	25221	8	12275	15	10266	6	890#	400#
	Xe	54	5104	4	12592	16	19303	4	9087	12	8105	5	622	4
	Cs	55	4109	12	9606	8	13272	7	13183	7	9994	7	3603	8
	Ba	56	6181	8	10654	11	8108	6	9918	10	7723	7	3449	6
	La	57	5165	7	7580	8	1118	24	13955	10	9754	6	6324	7
	Ce	58	7173.2	2.5	8892	5	−5551.0	2.6	10490.0	2.5	7553.5	2.5	6027.4	2.5
	Pr	59	5843.15	0.08	5644.3	1.2	−12480	30	14998.7	1.2	8035.4	2.5	9082.4	1.5
	Nd	60	9830	3	7224.5	1.4	−18991	28	9447	6	3743	4	6654.1	2.4
	Pm	61	8690	27	4239	24	−24580	700	13827	24	5740	40	9334	24
	Sm	62	11119	9	5748	14	−28860#	730#	9941	24	3383	14	8681	28
	Eu	63	9450	30	2660	30	−34060#	400#	14860	30	5940	30	11840	30
	Gd	64	11810	30	4320	30	−39030#	500#	10740	60	3300	30	11067	30
	Tb	65	10090	710	620	700	*		15930	700	5940#	730#	14480	700
	Dy	66	12810#	790#	2870#	740#	*		11070#	1080#	2880#	790#	13160#	750#
	Ho	67	10960#	570#	−840#	500#	*		16290#	570#	5310#	640#	16530#	500#
	Er	68	*		860#	640#	*		12100#	710#	*		15420#	710#
143	Te	52	2050#	710#	14210#	580#	33410#	500#	9720#	710#	8720#	780#	−390#	580#
	I	53	4060#	200#	11530#	540#	27380#	200#	10590#	450#	10440#	200#	−750#	630#
	Xe	54	3045	5	12689	7	21403	5	10435	17	8267	13	1811	15
	Cs	55	5232	10	9735	8	15393	8	11233	8	10175	8	1577	14
	Ba	56	4166	9	10712	10	10065	7	11251	11	7977	11	4696	7
	La	57	6219	10	7618	9	4789	8	12272	9	9960	11	4525	11
	Ce	58	5144.80	0.09	8871	6	−2089	3	12034	5	7569.7	2.5	7308	8
	Pr	59	7353.2	1.9	5824.3	1.9	−8827	11	13073.7	1.9	9870.1	1.9	6890.3	1.9
	Nd	60	6123.57	0.07	7504.9	1.4	−15770	200	12723.0	1.4	5548	6	9718.3	1.5
	Pm	61	9890	24	4299.6	2.7	−22540	50	11942	4	6161	4	7372	7
	Sm	62	8606.5	2.6	5665	24	−27348	13	11717	14	3559	24	10387	4
	Eu	63	11000	30	2548	11	−32190#	300#	12403	14	6079	17	9617	27
	Gd	64	9340	200	4210	200	−37070#	450#	12410	200	3620	210	12870	200
	Tb	65	11930	700	750	60	*		13520	50	6230	60	12210	70
	Dy	66	10120#	730#	2900	700	*		13080	110	3180	800	15260	30
	Ho	67	12870#	500#	−780#	790#	*		14050#	420#	5650#	500#	14080#	850#
	Er	68	11300#	640#	1200#	570#	*		13920#	570#	3020#	640#	17320#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
141	Sb	51	5630#	640#	*		−6140#	640#	20390#	500#	*		8760#	500#
	Te	52	6610#	400#	25940#	570#	−2950#	500#	17530#	400#	−23470#	500#	4870#	400#
	I	53	7598	16	24450#	400#	−2290	50	14551	18	−22830#	600#	4988	16
	Xe	54	8695	4	22570	5	−1318	4	11535	6	−19119	15	781	9
	Cs	55	9919	10	20584	10	−546	12	8452	10	−18160	15	719	12
	Ba	56	10961	5	18666	6	226	5	5699	5	−14035	6	−3492	5
	La	57	11850	4	16807	5	1191	4	3085	4	−13169	9	−2927	4
	Ce	58	14616.0	2.4	15095.1	1.3	−134.6	1.3	−1240	3	−9452	8	−8816	6
	Pr	59	17329	4	13370.1	1.5	−1298.6	2.2	−5492	14	−8991.4	1.5	−9829	4
	Nd	60	18317	28	11812	4	−698	3	−8258	9	−3406	3	−14051	24
	Pm	61	19165	19	10272	14	254	16	−10597	19	−3126	15	−13138	19
	Sm	62	19696	14	8495	29	1225	15	−12710	22	1034	9	−17020	50
	Eu	63	20670	18	7003	19	1722	18	−15380	110	997	27	−16210	30
	Gd	64	21740#	200#	5422	23	2340	30	−17840#	300#	4943	23	−20810	800
	Tb	65	22550#	320#	3720	110	3180	110	−20180#	410#	5160	120	−19780#	410#
	Dy	66	23830#	580#	2330#	360#	3410#	420#	*		9110#	300#	−24140#	580#
	Ho	67	*		810#	500#	4180#	570#	*		8830#	900#	*	
142	Sb	51	5360#	670#	*		*		21190#	300#	*		8990#	500#
	Te	52	6330#	500#	26640#	580#	−3460#	640#	18680#	500#	*		5310#	500#
	I	53	7339	13	24990#	600#	−2580#	300#	15712	9	−22550#	500#	5323	6
	Xe	54	8386	4	23440	15	−1959	5	12613	7	−21850#	400#	1176	10
	Cs	55	9607	11	21486	14	−960	9	9509	9	−17877	17	1147	9
	Ba	56	10717	10	19434	6	−295	7	6691	6	−16934	7	−2984	7
	La	57	11855	6	17552	10	438	11	3762	6	−12836	11	−2664	6
	Ce	58	12601.3	2.5	15843	8	1304.0	2.5	1417.2	2.2	−12089	6	−6589.7	2.5
	Pr	59	15243	6	14052.2	1.5	302.1	1.6	−2645	24	−8145	4	−7666.2	2.8
	Nd	60	17835	3	12453.8	1.5	−809.1	1.4	−6968.1	1.4	−7808.0	1.5	−13498	14
	Pm	61	19070	30	11033	24	−438	26	−9830	40	−2416	24	−13279	25
	Sm	62	19669	13	9303	4	610	12	−12022	28	−2079	3	−17128	13
	Eu	63	20470	60	7670	40	1180	30	−14750	700	1930	30	−16160	40
	Gd	64	21320	40	6080	30	2110	30	−16840#	730#	1685	29	−20490	110
	Tb	65	22220	1060	4150	700	2770	700	−19310#	810#	6080	700	−19250#	760#
	Dy	66	23430#	830#	2920#	730#	3120#	760#	−22190#	880#	5820#	730#	−23830#	830#
	Ho	67	24080#	640#	1350#	900#	3930#	500#	*		10000#	410#	*	
	Er	68	*		−320#	640#	4580#	710#	*		10160#	580#	*	
143	Te	52	6000#	640#	*		−3650#	640#	19670#	500#	*		6200#	500#
	I	53	7010#	200#	25830#	540#	−3170#	450#	16890#	200#	−24470#	360#	6370#	200#
	Xe	54	8148	5	24110#	400#	−2423	6	13734	8	−20940#	500#	2240	8
	Cs	55	9341	12	22327	18	−1629	9	10496	11	−20162	9	2095	10
	Ba	56	10347	9	20318	7	−718	7	7669	7	−15997	7	−1985	9
	La	57	11384	8	18272	12	105	8	4897	7	−14946	10	−1710	8
	Ce	58	12318.0	2.5	16452	6	882.6	2.5	2395.9	2.2	−11053	6	−5891.3	2.5
	Pr	59	13196.3	1.9	14716	4	1729.3	1.9	−108	3	−10333	6	−5189.5	1.4
	Nd	60	15953	3	13149.2	1.5	530.5	2.4	−4485.2	2.5	−6758.4	2.2	−10932	24
	Pm	61	18580	14	11524	3	−557	5	−8719	11	−6463	3	−12050.1	3.0
	Sm	62	19726	9	9904	4	75	28	−11290	200	−856.1	2.5	−16280	30
	Eu	63	20458	17	8296	18	835	17	−13820	50	−389	26	−15350	30
	Gd	64	21150	200	6880	200	1720	200	−16060	200	3460	200	−19740	730
	Tb	65	22020	120	5070	50	2550	50	−18370#	300#	3600	60	−18370#	730#
	Dy	66	22930#	300#	3523	24	3040#	200#	−21010#	400#	7500	30	−22990#	400#
	Ho	67	23830#	500#	2090#	320#	3660#	420#	*		7220#	760#	−22190#	580#
	Er	68	*		360#	500#	4120#	640#	*		11670#	830#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
144	Te	52	3760#	580#	*		35550#	300#	8100#	420#	8180#	580#	*	
	I	53	2610#	450#	12090#	640#	29520#	400#	11930#	640#	10200#	570#	−140#	640#
	Xe	54	4741	7	13370#	200#	23560	6	8641	7	7918	17	−560#	400#
	Cs	55	3667	22	10357	21	17479	20	12669	20	9790	20	2302	26
	Ba	56	5901	10	11381	10	11981	7	9458	10	7574	12	2077	8
	La	57	4750	15	8201	15	6566	13	13703	14	9747	14	5274	16
	Ce	58	6897	3	9549	8	1533.7	2.7	10303	7	7362	5	4947	6
	Pr	59	5753.7	2.8	6433	3	−5131	11	14493	3	9544.5	2.8	7826	5
	Nd	60	7817.04	0.05	7968.8	1.4	−11989	28	10749.1	1.4	7130.6	1.4	7329.4	1.5
	Pm	61	6526.8	1.5	4702.8	2.6	−19048	28	15244.7	2.6	7639	4	10244.8	3.0
	Sm	62	10519.8	2.3	6293.9	2.7	−25396	7	9887	24	3421	14	7872	3
	Eu	63	9449	15	3391	11	−31010	14	14074	11	5179	14	10550	18
	Gd	64	11600	200	4810	30	−35150#	200#	10260	40	3030	30	9821	29
	Tb	65	10020	60	1430	200	−40210#	400#	15300	40	5720	30	13200	30
	Dy	66	12472	15	3440	50	*		10700	700	2830	110	12301	21
	Ho	67	10630#	300#	−270	16	*		16220#	730#	5640#	300#	15580	110
	Er	68	13520#	450#	1850#	360#	*		11350#	450#	2620#	450#	14420#	360#
	Tm	69	*		−1712	16	*		16480#	640#	*		17850#	570#
145	Te	52	1860#	420#	*		37510#	300#	*		8460#	420#	*	
	I	53	3870#	640#	12200#	580#	31710#	500#	10110#	710#	10280#	710#	−1870#	580#
	Xe	54	2692	12	13450#	400#	25570	40	10010#	200#	8174	12	700#	500#
	Cs	55	4854	22	10471	11	19572	12	10859	10	10039	9	395	10
	Ba	56	3820	11	11534	22	13916	9	10870	11	7862	11	3360	9
	La	57	6057	18	8357	14	8432	13	11813	14	9871	14	3326	14
	Ce	58	4710	30	9510	40	3580	30	11820	30	7820	30	6420	30
	Pr	59	6947	7	6483	7	−1634	8	12691	7	9771	7	6044	9
	Nd	60	5755.29	0.23	7970.4	2.4	−8505	20	12347.0	1.4	7218.4	1.4	8747.3	2.2
	Pm	61	7922.7	1.5	4808.4	2.5	−14870	110	13445.6	2.5	9546.6	2.5	8165.3	2.9
	Sm	62	6757.10	0.30	6524.3	2.7	−22409	7	13020.1	2.7	5354	24	10945.1	0.8
	Eu	63	10444	11	3314.9	2.7	−28871	8	12236	4	5854.5	2.9	8796	24
	Gd	64	9240	30	4596	22	−33690#	200#	12025	23	3250	40	11702	20
	Tb	65	12100	110	1930	110	−38820#	230#	12540	230	5420	110	10560	110
	Dy	66	9744	10	3163	29	*		12890	50	3180	700	14363	29
	Ho	67	12582	11	−161	10	*		13760	15	5860#	730#	13090	700
	Er	68	10700#	280#	1920#	200#	*		13520#	360#	2870#	450#	16530#	760#
	Tm	69	13500#	450#	−1736	7	*		14290#	450#	5210#	540#	15310#	450#
146	I	53	2480#	580#	12820#	420#	33680#	300#	11390#	420#	9850#	580#	*	
	Xe	54	4533	27	14110#	500#	27671	28	8090#	400#	7700#	200#	−1780#	500#
	Cs	55	3327	10	11106	12	21360	30	12273	6	9757	5	1130#	200#
	Ba	56	5421	9	12101	9	16059.6	2.2	9116	20	7673	8	983	5
	La	57	4457	12	8994	9	10233	5	13257	7	9580	7	4101	8
	Ce	58	6630	40	10080	19	5370	15	9935	20	7410	16	3958	16
	Pr	59	5120	40	6900	50	440	30	14470	30	9800	30	7140	40
	Nd	60	7565.23	0.09	8589	7	−4840	4	10535.5	2.4	7006.3	1.4	6326.9	2.2
	Pm	61	6258	5	5311	4	−11690	50	15004	4	9412	4	9260	4
	Sm	62	8416.3	2.9	7018	4	−18441	7	11131	4	6828	4	8652.4	2.8
	Eu	63	7197	7	3755	6	−25879	9	15559	6	7264	6	11489	7
	Gd	64	11231	20	5383	5	−31764	8	10244	11	3020	12	9078	4
	Tb	65	9440	120	2130	50	−36710#	210#	14710	50	5330	210	12120	50
	Dy	66	12384	9	3440	110	*		10524	29	2730	50	11320	200
	Ho	67	10189	10	285	9	*		16043	10	5795	15	14830	50
	Er	68	13150#	200#	2491	10	*		10998	11	2590#	300#	13493	15
	Tm	69	11540#	280#	−896	6	*		16260#	280#	4970#	450#	16640#	360#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
144	Te	52	5810#	580#	*		−4160#	420#	20650#	300#	*		6500#	360#
	I	53	6670#	400#	26300#	500#	−3370#	720#	17940#	400#	*		6800#	400#
	Xe	54	7785	6	24900#	500#	−2930	15	14895	9	−23630#	500#	2732	9
	Cs	55	8899	21	23046	21	−2090	23	11578	24	−19770#	200#	2595	21
	Ba	56	10068	9	21115	8	−1206	8	8665	8	−18853	9	−1667	10
	La	57	10968	14	18913	15	−225	15	5901	13	−14463	15	−1315	13
	Ce	58	12042	3	17168	7	411	8	3316.1	2.5	−13784	7	−5435.1	2.9
	Pr	59	13106.9	2.8	15305	7	1136.6	2.8	666	4	−9868	8	−4819.6	2.4
	Nd	60	13940.61	0.09	13793.1	2.2	1901.3	1.5	−1782.4	0.8	−9430.6	2.2	−8858.7	2.7
	Pm	61	16417	24	12207.7	3.0	845	7	−5797	11	−5636.9	3.0	−9970	4
	Sm	62	19126.3	1.2	10593.5	0.8	−133	4	−10206	28	−5252.3	0.8	−15796	11
	Eu	63	20450	30	9056	26	168	27	−13251	30	53	11	−15460	200
	Gd	64	20940	40	7356	28	1270	30	−15189	29	469	28	−19410	60
	Tb	65	21950	700	5640	40	2190	60	−17759	29	4580	30	−18270	30
	Dy	66	22590#	730#	4189	29	2787	29	−19960#	200#	4370	200	−22590#	300#
	Ho	67	23500#	400#	2630	700	3450	800	−22450#	400#	8520	50	−21520#	400#
	Er	68	24820#	540#	1070#	750#	3800#	450#	*		8270#	200#	*	
	Tm	69	*		−510#	570#	4730#	640#	*		12600#	500#	*	
145	Te	52	5620#	580#	*		*		21480#	300#	*		7250#	500#
	I	53	6480#	540#	*		−4020#	710#	18920#	500#	*		7670#	500#
	Xe	54	7433	12	25540#	500#	−3250#	400#	16023	14	−22560#	300#	3707	23
	Cs	55	8522	12	23840#	200#	−2553	18	12781	15	−22010#	400#	3641	11
	Ba	56	9722	11	21891	10	−1744	9	9550	30	−17933	10	−738	15
	La	57	10806	14	19738	14	−783	15	6791	14	−16853	24	−475	13
	Ce	58	11600	30	17710	30	240	30	4360	30	−12590	30	−4390	30
	Pr	59	12700	7	16032	10	879	8	1642	7	−12065	15	−3949	7
	Nd	60	13572.33	0.24	14403.6	2.2	1574.1	1.5	−780.6	0.9	−8289.0	2.6	−8087.2	2.7
	Pm	61	14449.5	2.1	12777.2	2.9	2322.1	2.9	−3276	4	−7806	3	−7373.2	2.5
	Sm	62	17276.9	2.4	11227.0	0.8	1115	3	−7725	20	−4192.4	0.8	−13104	11
	Eu	63	19893	11	9609	4	106	14	−11590	110	−3864	4	−14303	28
	Gd	64	20840	200	7987	20	582	21	−14684	21	1750	20	−18630	30
	Tb	65	22120	120	6740	110	1100	110	−17280	110	1930	110	−17900	110
	Dy	66	22216	15	4590	200	2557	21	−19000#	200#	6228	29	−21704	11
	Ho	67	23220#	300#	3280	50	3000	110	−21540#	200#	5959	29	−20580#	200#
	Er	68	24220#	450#	1650#	200#	3720#	360#	*		10040#	200#	−25150#	450#
	Tm	69	*		110#	360#	4360#	450#	*		9740#	200#	*	
146	I	53	6350#	500#	*		−4360#	420#	19770#	300#	*		7880#	300#
	Xe	54	7225	25	26310#	300#	−3830#	500#	16911	24	−25230#	300#	4028	26
	Cs	55	8182	20	24560#	400#	−2932	6	13911	3	−21470#	500#	4134	9
	Ba	56	9242	7	22572	6	−2062	3	10760	15	−20662	11	−102	12
	La	57	10514	13	20528	20	−1132	7	7450	30	−16456	9	−230	30
	Ce	58	11337	15	18437	16	−209	16	5300	15	−15399	17	−4071	16
	Pr	59	12070	30	16400	40	930	30	2780	30	−11130	40	−3310	30
	Nd	60	13320.52	0.25	15071.9	2.6	1182.1	2.2	70.4	2.8	−11150	30	−7729.7	2.5
	Pm	61	14181	5	13282	5	1907	4	−2337	7	−7117	8	−6874	4
	Sm	62	15173.4	2.8	11826.3	2.8	2528.8	2.8	−4911	5	−6853.3	2.8	−11076	4
	Eu	63	17641	12	10279	6	1599	24	−9350	50	−3139	6	−12262	21
	Gd	64	20469	28	8698	4	471	4	−13531	8	−2723	4	−17760	110
	Tb	65	21540	50	6720	50	1120	50	−16530	50	2940	40	−17590	50
	Dy	66	22127	10	5373	29	1980	29	−18233	9	3083	21	−21506	10
	Ho	67	22771	11	3448	29	2900	700	−20180#	200#	7870	110	−20070#	200#
	Er	68	23860#	200#	2330	10	3370#	730#	*		6632	9	−24810#	200#
	Tm	69	25040#	450#	1020#	200#	3770#	450#	*		10780#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
147	I	53	3730#	420#	*		35480#	300#	9520#	420#	9880#	420#	*	
	Xe	54	2520#	200#	14150#	360#	29610#	200#	9440#	540#	7800#	450#	−530#	360#
	Cs	55	4681	9	11254	26	23524	18	10284	14	9816	10	−940#	400#
	Ba	56	3469	20	12243	20	17883	20	10501	22	7871	28	2255	20
	La	57	5529	11	9101	11	12364	11	11549	14	9953	13	2239	23
	Ce	58	4459	17	10082	9	7252	9	11532	15	7700	16	5400	11
	Pr	59	6840	40	7107	22	2101	16	12330	40	9852	16	5052	20
	Nd	60	5292.20	0.09	8760	30	−2789.9	1.5	12190	7	7467.8	2.4	7931.5	2.6
	Pm	61	7659	4	5405.0	0.6	−8299	8	13100.8	0.6	9570.1	0.5	7355.0	2.5
	Sm	62	6341.0	2.8	7101	4	−15070	9	12712.3	2.6	7014.1	2.7	10128.4	0.5
	Eu	63	8498	6	3837	4	−21788	6	13817.6	2.4	9285.1	2.4	9518	3
	Gd	64	7342	4	5528	6	−28750	40	13345.4	3.0	5126	11	12255.1	1.2
	Tb	65	11050	50	1946	9	−34768	11	12895	21	5881	29	10523	13
	Dy	66	9712	11	3720	50	*		12910	110	3036	29	13210	29
	Ho	67	12590	8	491	8	*		13196	8	5677	9	12257	28
	Er	68	10360	40	2660	40	*		13220	40	2870	40	15610	40
	Tm	69	12990#	200#	−1059	3	*		13980#	200#	5500#	200#	14282	11
148	Xe	54	4320#	360#	14740#	420#	31750#	300#	7600#	420#	7350#	580#	−2990#	420#
	Cs	55	3062	16	11800#	200#	25625	20	11755	28	9446	17	−130#	500#
	Ba	56	5352	20	12914	9	19863.2	2.5	8476	3	7374	9	−405	11
	La	57	4102	22	9734	28	14157	20	12868	20	9671	21	2992	21
	Ce	58	6456	14	11009	15	8938	11	9534	11	7301	17	2764	14
	Pr	59	5163	22	7811	17	3762	18	13801	21	9400	40	5946	19
	Nd	60	7332.6	1.7	9253	16	−1138.6	1.8	9980	30	7082	7	5310	30
	Pm	61	5895	6	6008	6	−6329	14	14771	6	9430	6	8407	9
	Sm	62	8141.34	0.27	7583.1	0.4	−11477	9	10829	4	6795.5	2.6	7742.3	0.5
	Eu	63	6824	10	4320	10	−18310	80	15410	10	9218	10	10616	10
	Gd	64	8983.8	1.2	6013.8	2.4	−24790	10	11559	6	6586.2	2.7	10028.4	0.3
	Tb	65	7866	15	2469	13	−31772	16	16260	13	7254	23	13101	13
	Dy	66	11735	12	4406	12	−37630#	400#	10620	50	3400	110	10714	22
	Ho	67	10310	80	1080	80	*		15270	80	5120	80	14050	140
	Er	68	12940	40	3011	11	*		10470	12	2505	13	12410	12
	Tm	69	10862	12	−550	40	*		16268	12	5340#	200#	16001	13
	Yb	70	*		1540#	400#	*		11540#	450#	2220#	450#	14660#	450#
149	Xe	54	2420#	420#	*		33670#	300#	8910#	420#	7400#	420#	*	
	Cs	55	4460#	400#	11940#	500#	27740#	400#	9810#	450#	9520#	400#	−2110#	500#
	Ba	56	3357.0	2.9	13209	13	21545	3	9800	9	7344	4	771	24
	La	57	5580	200	9960	200	15840	200	10750	200	9510	200	740	200
	Ce	58	4343	15	11250	22	10466	10	10719	15	7415	10	3843	10
	Pr	59	6575	18	7930	15	5402	11	11685	13	9451	18	3828	10
	Nd	60	5038.79	0.07	9129	15	752	4	11779	16	7160	30	6897	15
	Pm	61	7270	6	5945.3	2.5	−4576	4	12793.2	2.1	9725.6	2.1	6260	30
	Sm	62	5871.1	0.9	7559	6	−9442	9	12616.9	0.9	7183	4	9436.4	1.0
	Eu	63	8215	11	4394	4	−14795	13	13536	4	9419	5	8659	6
	Gd	64	6929	3	6119	10	−21386	28	13128	4	6854	7	11516	4
	Tb	65	9023	13	2508	3	−27550#	200#	14579	4	9461	5	11275	7
	Dy	66	7906	12	4446	15	−34360#	300#	13759	12	4930	50	14038	10
	Ho	67	11730	80	1075	12	*		13261	15	5773	14	11760	50
	Er	68	10334	30	3040	90	*		12726	28	2361	29	14460	29
	Tm	69	13250#	200#	−250#	200#	*		13380#	200#	5250#	200#	12940#	200#
	Yb	70	11170#	500#	1850#	300#	*		13360#	300#	2590#	360#	16640#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
147	I	53	6210#	580#	*		*		20720#	300#	*		8680#	300#
	Xe	54	7050#	200#	26970#	360#	−4290#	540#	17860#	200#	*		4840#	200#
	Cs	55	8008	12	25370#	500#	−3560#	200#	14758	14	−23670#	300#	4875	9
	Ba	56	8890	21	23349	23	−2486	20	11750	22	−19600	30	886	20
	La	57	9986	16	21202	14	−1428	13	8766	19	−18657	11	876	18
	Ce	58	11090	30	19076	12	−502	11	6133	9	−14437	9	−3410	40
	Pr	59	11961	17	17187	20	302	17	3598	16	−13512	16	−2589	16
	Nd	60	12857.43	0.12	15660	30	1034.7	2.2	1119.3	0.5	−9810	15	−6764	4
	Pm	61	13917.1	2.6	13994	7	1601.3	1.5	−1497.4	2.3	−9660	30	−6116.9	2.9
	Sm	62	14757.3	1.0	12412.0	0.5	2311.3	0.5	−3909.1	1.5	−5629.1	0.5	−10220	6
	Eu	63	15696	4	10855	3	2991	3	−6802	8	−5379	5	−9530	5
	Gd	64	18573	20	9283.5	1.3	1735.3	2.0	−11161	9	−1650	3	−15660	40
	Tb	65	20490	110	7329	9	1074	14	−14986	10	−914	10	−16259	11
	Dy	66	22096	11	5847	22	1610	200	−17590	40	4601	10	−21029	11
	Ho	67	22780	9	3940	110	2240	50	−19783	8	4720	50	−19506	8
	Er	68	23510#	200#	2940	40	3140	40	*		8660	40	−23620#	200#
	Tm	69	24530#	200#	1432	10	3650#	300#	*		7975	9	*	
148	Xe	54	6840#	300#	*		−4850#	420#	18900#	300#	*		5200#	300#
	Cs	55	7743	13	25950#	300#	−4010#	400#	15798	23	−23000#	300#	5282	24
	Ba	56	8821.3	2.3	24168	24	−3098	6	12854	11	−22430#	200#	1062	11
	La	57	9630	20	21976	20	−1862	28	9827	25	−18078	21	1234	21
	Ce	58	10915	18	20110	11	−1056	13	7010	11	−17423	23	−3026	19
	Pr	59	12000	40	17892	15	−111	20	4330	16	−13146	18	−2460	15
	Nd	60	12624.8	1.7	16360	15	599	3	1928.0	1.7	−12683	9	−6437.4	1.7
	Pm	61	13554	7	14770	30	1460	6	−568	11	−8711	17	−5671	6
	Sm	62	14482.3	2.8	12988.1	0.5	1987.0	0.4	−3066.6	0.9	−8478.2	0.5	−9862.8	2.3
	Eu	63	15323	12	11421	11	2694	10	−5761	16	−4544	10	−9012	10
	Gd	64	16326	4	9851.0	2.8	3271.29	0.03	−8410	9	−4292.3	0.9	−13598	8
	Tb	65	18920	50	7997	14	2657	16	−12550	80	−281	13	−14412	15
	Dy	66	21447	11	6352	10	1475	29	−16380	13	209	9	−20174	10
	Ho	67	22900	80	4810	100	1950	90	−19230	80	5460	80	−19450	90
	Er	68	23300	12	3502	12	2666	13	−21250#	400#	5428	14	−23576	12
	Tm	69	23850#	200#	2105	12	3420	13	*		9703	11	*	
	Yb	70	*		490#	400#	3950#	450#	*		9090#	400#	*	
149	Xe	54	6740#	360#	*		−5420#	420#	19830#	300#	*		5840#	300#
	Cs	55	7520#	400#	26680#	500#	−4590#	640#	16920#	450#	*		6170#	400#
	Ba	56	8709	20	25010#	200#	−3762	11	13839	11	−21470#	300#	1807	20
	La	57	9680	200	22880	200	−2590	200	10820	200	−20600	200	2110	200
	Ce	58	10799	13	20984	22	−1579	13	7706	10	−16414	10	−2206	18
	Pr	59	11738	19	18939	15	−629	16	5025	10	−15620	22	−1703	10
	Nd	60	12371.4	1.7	16940	9	270	30	2760.4	1.9	−11266	11	−5581	6
	Pm	61	13165.1	2.1	15198	16	1137	7	377	4	−10818	15	−4799.7	2.0
	Sm	62	14012.5	0.9	13567.0	1.0	1871.2	1.0	−2009	3	−7016.8	1.9	−8910	10
	Eu	63	15039	4	11977	4	2401	5	−4953	5	−6864	7	−8243	4
	Gd	64	15913	3	10439	3	3099	3	−7433	10	−3080	3	−12662	13
	Tb	65	16889	9	8522	4	4078.0	2.2	−9843	12	−2480	11	−11701	9
	Dy	66	19641	13	6915	9	2808	22	−13952	29	1286	9	−17770	80
	Ho	67	22031	13	5481	14	2330	110	−17710#	200#	1602	15	−18238	16
	Er	68	23280	50	4124	29	2076	29	−20410#	300#	6829	29	−23048	30
	Tm	69	24110#	200#	2760#	200#	2760#	200#	*		6760#	220#	−21780#	450#
	Yb	70	*		1300#	300#	3490#	360#	*		10860#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
150	Xe	54	4060#	420#	*		35860#	300#	*		7070#	420#	*	
	Cs	55	2940#	570#	12460#	500#	30130#	400#	11190#	500#	9090#	450#	−1320#	500#
	Ba	56	5130	6	13880#	400#	23790	6	7732	14	6894	10	−1840#	200#
	La	57	4160	200	10769	4	17286	20	11944.6	2.9	8817	20	1255	9
	Ce	58	6248	16	11920	200	12204	12	8573	23	6696	16	1064	23
	Pr	59	5332	13	8920	14	6492	11	12809	14	8577	12	4024	14
	Nd	60	7375.7	1.9	9930	10	2084	6	9566	15	6628	16	3980	9
	Pm	61	5604	20	6511	20	−2492	21	14522	20	9414	20	7493	26
	Sm	62	7986.8	0.4	8275.9	1.9	−7742	4	10525	6	6854.7	0.9	6741.9	1.0
	Eu	63	6422	7	4945	6	−12846	15	15255	6	9338	6	9896	6
	Gd	64	8708	7	6612	7	−17933	18	11244	12	6645	6	9148	6
	Tb	65	7688	8	3268	8	−24620#	200#	15874	7	9115	7	12085	8
	Dy	66	9687	10	5110	5	−30480#	300#	11938	13	6297	9	11694	4
	Ho	67	8371	19	1541	17	−37180#	300#	16624	17	7114	17	14443	16
	Er	68	12160	30	3474	21	*		10870	90	2790	18	12011	19
	Tm	69	10620#	280#	40#	200#	*		15700#	200#	4980#	200#	14910#	200#
	Yb	70	13570#	420#	2180#	360#	*		10650#	300#	2010#	300#	13420#	300#
	Lu	71	*		−1269.6	2.3	*		16170#	500#	*		16850#	300#
151	Cs	55	4180#	640#	12580#	580#	32500#	500#	9430#	580#	9230#	580#	*	
	Ba	56	3120#	400#	14060#	570#	26000#	400#	9070#	570#	6840#	400#	−640#	500#
	La	57	5070	440	10710	440	20080	440	10230	440	9100	440	−750	440
	Ce	58	4450	21	12203	18	13351	18	9710	200	6348	26	1966	18
	Pr	59	6550	15	9222	17	7873	12	10601	16	8483	16	1575	23
	Nd	60	5334.55	0.10	9932	9	3245.7	2.8	10807	10	6456	15	5102	11
	Pm	61	7860	20	6995	4	−1763	6	11700	5	8886	5	4796	16
	Sm	62	5596.46	0.11	8268	20	−5824	3	12198.7	1.9	7153	6	8478.0	1.9
	Eu	63	7932	6	4890.7	0.5	−11030	8	13193.6	0.7	9547.0	1.0	7859	6
	Gd	64	6496	7	6686	7	−15923	17	12963	5	6973	10	10793.5	2.9
	Tb	65	8589	8	3148	7	−20852	20	14214	5	9510	4	10320	11
	Dy	66	7514	5	4936	8	−27210	300	13447	4	6649	13	13163.4	2.9
	Ho	67	9748	16	1602	9	−33320#	300#	14782	12	9101	12	12561	15
	Er	68	8506	24	3609	22	*		14090	20	4590	90	15240	19
	Tm	69	12350#	200#	229	9	*		13680	30	5571	22	12870	90
	Yb	70	10780#	430#	2340#	360#	*		13110#	360#	2090	300	15580	300
	Lu	71	13600#	420#	−1241.0	1.8	*		13740#	420#	4790#	500#	14110#	300#
152	Cs	55	2920#	710#	*		34630#	500#	10570#	580#	8730#	580#	*	
	Ba	56	4740#	570#	14620#	640#	28540#	400#	7270#	570#	6550#	570#	−2960#	500#
	La	57	4050#	530#	11640#	500#	21960#	300#	11310#	300#	8410#	300#	−340#	500#
	Ce	58	5830#	200#	12960#	480#	15780#	200#	8040#	200#	6100#	280#	−500#	200#
	Pr	59	5050	22	9822	26	9130	19	11800	22	7776	21	2110	200
	Nd	60	7278	24	10659	27	4558	24	8862	26	5754	26	2167	27
	Pm	61	5940	26	7600	26	−540	50	13136	26	7985	26	5431	28
	Sm	62	8257.8	0.6	8666	5	−4645	5	9545	20	6165.5	2.0	5259.0	1.9
	Eu	63	6306.72	0.10	5601.0	0.5	−9284	13	14873.6	0.6	9111.5	0.7	8822.3	2.0
	Gd	64	8589.7	2.9	7343.2	0.7	−14207	9	10796	6	6598	4	8075.0	0.7
	Tb	65	7170	40	3820	40	−19000	70	15760	40	9270	40	11370	40
	Dy	66	9437	5	5783	6	−23850	150	11699	9	6235	5	10656	5
	Ho	67	8053	15	2141	13	−30180#	200#	16416	13	8953	15	13530	13
	Er	68	10305	19	4166	12	*		12156	17	6010	12	12840	12
	Tm	69	9020	60	740	60	*		16820	60	6890	60	15570	60
	Yb	70	12800	340	2790	150	*		10930#	250#	2530#	250#	13120	150
	Lu	71	11190#	360#	−830#	360#	*		16120#	360#	4770#	360#	16170#	280#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
150	Xe	54	6480#	420#	*		*		20900#	300#	*		6240#	500#
	Cs	55	7400#	400#	*		−5060#	500#	18140#	400#	*		6590#	400#
	Ba	56	8488	6	25820#	300#	−4360	25	14957	13	−24180#	300#	2260	200
	La	57	9745	20	23978	13	−3426	4	11989	9	−20300#	400#	2287	11
	Ce	58	10591	16	21880	12	−2406	12	8833	12	−19305	12	−1879	15
	Pr	59	11908	18	20170	21	−1504	9	5297	22	−15370	200	−1996	9
	Nd	60	12414.5	1.9	17859	11	−479	15	3371.38	0.20	−14299	10	−5686.9	1.9
	Pm	61	12874	21	15640	25	650	40	1195	21	−9847	22	−4533	20
	Sm	62	13857.9	0.9	14221.2	1.9	1449.7	1.0	−1287	6	−9964.8	1.9	−8681	4
	Eu	63	14638	12	12504	8	2237	7	−3687	9	−6017	6	−7737	7
	Gd	64	15637	6	11006	6	2807	6	−6454	7	−5917	6	−12347	7
	Tb	65	16711	14	9386	12	3587	5	−9160	16	−1953	8	−11483	12
	Dy	66	17593	10	7618	4	4351.3	1.5	−11478	18	−1471	5	−15735	13
	Ho	67	20100	90	5987	19	3390	50	−15460#	200#	2254	15	−16280	30
	Er	68	22495	20	4550	19	2299	18	−19000#	300#	2574	19	−21960#	200#
	Tm	69	23870#	200#	3080#	210#	2320#	200#	−21720#	360#	7870#	200#	−21230#	360#
	Yb	70	24740#	500#	1930#	300#	3070#	300#	*		7620#	300#	*	
	Lu	71	*		580#	300#	3860#	360#	*		11880#	360#	*	
151	Cs	55	7120#	640#	*		−5500#	580#	19030#	660#	*		7540#	500#
	Ba	56	8250#	400#	26520#	500#	−4970#	450#	16290#	400#	−23240#	500#	3300#	400#
	La	57	9230	480	24590#	590#	−3820	440	13470	440	−22430#	590#	3470	440
	Ce	58	10698	20	22972	18	−3386	27	9718	18	−18624	19	−996	20
	Pr	59	11883	15	21140	200	−2526	16	6607	13	−17758	12	−1171	12
	Nd	60	12710.3	1.9	18851	10	−1354	9	3633.30	0.24	−13385	12	−5417	20
	Pm	61	13464	5	16925	11	−367	16	1267	5	−12375	10	−4406	4
	Sm	62	13583.2	0.4	14778.9	1.9	1145.4	1.0	−387.6	2.8	−8185.50	0.22	−7855	6
	Eu	63	14354	4	13166.6	2.0	1964.0	1.1	−3030	4	−8345	20	−6960	6
	Gd	64	15204	4	11631.0	2.8	2652.2	2.9	−5437	4	−4426.6	2.8	−11154	8
	Tb	65	16278	5	9760	5	3496	4	−8001	9	−4120	7	−10385	6
	Dy	66	17201	10	8203	4	4179.6	2.6	−10486	17	−277	7	−14878	14
	Ho	67	18120	15	6712	9	4695.0	1.8	−12851	21	194	11	−13863	19
	Er	68	20670	30	5150	19	3505	19	−16720	300	3754	17	−19850#	200#
	Tm	69	22970#	200#	3704	23	2561	20	−20470#	300#	3885	16	−20010#	300#
	Yb	70	24360#	430#	2380	300	2640	300	*		9000	300	−24840#	430#
	Lu	71	*		940#	360#	3250#	300#	*		8900#	360#	*	
152	Cs	55	7100#	640#	*		*		20160#	580#	*		7740#	640#
	Ba	56	7860#	400#	27200#	500#	−5390#	500#	17370#	450#	*		3630#	590#
	La	57	9120#	300#	25700#	500#	−4800#	300#	14470#	300#	−22300#	580#	3860#	300#
	Ce	58	10280#	200#	23670#	200#	−3860#	200#	11170#	200#	−21330#	450#	−270#	200#
	Pr	59	11600	21	22025	19	−3474	27	7500	30	−17740	440	−886	19
	Nd	60	12612	24	19881	27	−2176	27	4613	24	−16210	30	−4835	25
	Pm	61	13800	30	17532	27	−1144	30	1634	26	−11764	28	−4749	26
	Sm	62	13854.3	0.6	15661.0	0.6	220.2	1.9	−55.67	0.18	−11108.8	0.6	−8181.2	0.7
	Eu	63	14239	6	13869	20	1552	6	−2170	40	−6791	5	−6770.9	2.8
	Gd	64	15086	6	12233.9	0.6	2203.8	1.0	−4589	5	−7419.8	0.6	−11155	4
	Tb	65	15750	40	10500	40	3160	40	−7110	40	−3350	40	−10040	40
	Dy	66	16951	6	8932	7	3727	4	−9618	10	−3218	5	−14567	9
	Ho	67	17801	19	7077	15	4507.4	1.3	−11880	60	730	13	−13410	21
	Er	68	18812	19	5769	10	4934.3	1.6	−14230	150	963	9	−17800	21
	Tm	69	21370#	200#	4350	60	3850	100	−18300#	200#	4610	50	−18250	310
	Yb	70	23580#	340#	3020	150	2780	150	*		4710	150	−24040#	340#
	Lu	71	24790#	360#	1510#	280#	2920#	200#	*		10060#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
153	Ba	56	2930#	570#	14630#	640#	30860#	400#	8520#	640#	6560#	570#	−1830#	500#
	La	57	4840#	420#	11740#	500#	24590#	300#	9590#	500#	8690#	300#	−2240#	500#
	Ce	58	4000#	280#	12910#	360#	17650#	200#	9110#	480#	6270#	200#	630#	200#
	Pr	59	5882	22	9880#	200#	11799	12	10367	21	8142	17	389	12
	Nd	60	5252	25	10861	19	5552.6	2.9	10160	12	5834	9	3163	12
	Pm	61	7465	27	7787	26	666	10	11006	9	7896	9	3299	13
	Sm	62	5868.40	0.13	8595	26	−3417	4	11537	5	5901	20	6766.3	0.7
	Eu	63	8550.28	0.12	5893.5	0.7	−8355	5	11919.8	0.6	8547.9	0.6	5876	20
	Gd	64	6246.96	0.13	7283.4	0.7	−12416	9	12481.0	0.7	6773	6	9814.8	0.6
	Tb	65	8670	40	3895	4	−17341	13	13586	5	9314	7	9125	7
	Dy	66	7097	6	5710	40	−21980#	200#	13191	6	6827	8	12267	7
	Ho	67	9479	13	2183	7	−26640	150	14451	6	9162	6	11740	9
	Er	68	8038	12	4151	15	−33170#	300#	13867	12	6343	17	14489	10
	Tm	69	10320	60	761	12	*		15004	20	8723	21	13620	19
	Yb	70	8960#	250#	2730#	210#	*		14320#	200#	4200#	280#	16320#	200#
	Lu	71	13030#	250#	−606	10	*		13880	340	5320#	340#	13760#	250#
	Hf	72	*		1170#	360#	*		13710#	420#	2340#	420#	17180#	420#
154	Ba	56	4520#	640#	*		32660#	500#	6920#	710#	6220#	710#	*	
	La	57	3540#	420#	12350#	500#	26740#	300#	10790#	500#	8270#	500#	−1600#	580#
	Ce	58	5380#	280#	13450#	360#	20240#	200#	7780#	360#	5960#	480#	−1630#	450#
	Pr	59	4360	100	10240#	220#	13880	100	11830#	220#	8230	100	1100	450
	Nd	60	6320.5	2.9	11300	12	8126.8	1.4	8889	19	6064	12	1292	18
	Pm	61	5690	27	8225	25	1890	50	12590	40	7541	25	4159	28
	Sm	62	7966.8	0.8	9097	9	−2062	7	9510	26	5795	5	4134.0	1.1
	Eu	63	6442.22	0.24	6467.3	0.7	−7099	8	13735.4	0.7	7702.2	0.6	7294	5
	Gd	64	8894.73	0.17	7627.9	0.7	−11101	5	9892.9	0.7	5810.8	0.7	6516.5	0.6
	Tb	65	6910	50	4560	50	−15730	50	15260	50	8900	50	10140	50
	Dy	66	9322	8	6369	8	−20462	19	11030	40	6094	8	9441	8
	Ho	67	7699	10	2785	9	−24970#	200#	16189	9	8977	9	12631	9
	Er	68	10210	10	4882	7	−29880#	300#	11710	13	5882	9	11794	6
	Tm	69	8526	19	1249	17	*		16784	17	8703	22	14842	17
	Yb	70	10840#	200#	3248	21	*		12500	60	5704	9	13981	24
	Lu	71	9360#	250#	−204	14	*		17320#	250#	6740#	360#	16750#	200#
	Hf	72	13500#	420#	1640#	340#	*		11400#	360#	2430#	420#	14460#	430#
155	La	57	4470#	500#	12300#	640#	29010#	400#	9250#	570#	8540#	570#	−3150#	640#
	Ce	58	3630#	360#	13540#	420#	22410#	300#	8990#	420#	6370#	420#	−520#	500#
	Pr	59	5630	100	10490#	200#	16403	17	10210#	200#	8430#	200#	−480#	300#
	Nd	60	4776	9	11710	100	9787	9	9996	15	6338	21	2340#	200#
	Pm	61	6745	25	8649	5	4310	11	11101	5	8074	25	2464	19
	Sm	62	5806.96	0.27	9214	25	−1035	10	11168	9	5927	26	5605	24
	Eu	63	8151.3	0.4	6651.7	1.2	−5779	17	11452.5	0.8	7808.7	0.8	5083	26
	Gd	64	6435.26	0.18	7620.9	0.8	−9861	6	12008.0	0.7	5682.3	0.7	8339.1	0.3
	Tb	65	9170	50	4833	10	−14625	14	12343	10	8321	10	7284	10
	Dy	66	6833	12	6290	50	−18653	19	12868	10	6430	40	11198	10
	Ho	67	9472	19	2935	19	−23495	26	13814	18	8942	18	10320	40
	Er	68	7676	8	4859	10	−27900#	300#	13514	8	6260	14	13555	7
	Tm	69	10270	17	1310	11	−32640#	300#	14552	14	8738	13	12625	16
	Yb	70	8642	24	3364	22	*		14181	20	6080	60	15644	19
	Lu	71	10950#	200#	−98	8	*		15330#	200#	8590	150	14820	60
	Hf	72	9650#	420#	1930#	360#	*		14780#	340#	3980#	360#	17610#	340#
	Ta	73	*		−1453	15	*		14020#	420#	*		15080#	360#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
153	Ba	56	7670#	570#	*		−5900#	500#	18440#	450#	*		4750#	500#
	La	57	8890#	530#	26360#	580#	−5190#	500#	15510#	300#	−24220#	580#	4850#	360#
	Ce	58	9830#	200#	24550#	450#	−4500#	200#	12420#	200#	−20590#	450#	780#	200#
	Pr	59	10931	17	22840	440	−3770	200	9080	15	−19570#	300#	510	27
	Nd	60	12529.8	3.0	20683	18	−3085	11	5229.7	2.9	−15640#	200#	−4147	26
	Pm	61	13404	10	18446	15	−2034	13	2719	9	−14179	21	−3956	9
	Sm	62	14126.2	0.6	16194.8	0.7	−609.4	1.9	322.88	0.25	−9699	24	−7742.9	0.7
	Eu	63	14857.00	0.16	14559	5	272.0	2.0	−2054	4	−9402	26	−6731.5	0.7
	Gd	64	14836.7	2.9	12884.4	0.6	1828.0	0.7	−3740	4	−5408.94	0.22	−10240	40
	Tb	65	15833	6	11238	4	2703	5	−6302	6	−5714	4	−9267	6
	Dy	66	16533	5	9532	5	3559	4	−8677	10	−1725	4	−13610	13
	Ho	67	17532	10	7966	6	4052	4	−11039	13	−1580	40	−12583	10
	Er	68	18343	19	6292	10	4802.4	1.4	−13310#	200#	2362	10	−16820	50
	Tm	69	19344	23	4928	15	5248.3	1.5	−15600	150	2343	16	−15770	150
	Yb	70	21760#	360#	3470#	200#	4160#	200#	−19860#	360#	6050#	200#	−21810#	280#
	Lu	71	24220#	340#	2180	150	3140#	250#	*		6060	140	*	
	Hf	72	*		340#	430#	3610#	420#	*		11680#	340#	*	
154	Ba	56	7450#	640#	*		−6360#	580#	19300#	540#	*		5070#	580#
	La	57	8380#	420#	26980#	580#	−5790#	500#	16330#	320#	*		5310#	360#
	Ce	58	9380#	280#	25190#	450#	−4760#	200#	13360#	200#	−23040#	450#	1280#	200#
	Pr	59	10240	100	23150#	320#	−3970	100	10410	100	−19090#	320#	1400	100
	Nd	60	11573	24	21180#	200#	−3158	12	6876.0	1.7	−17960#	200#	−3003	9
	Pm	61	13150	40	19090	30	−2391	27	3472	25	−13987	28	−3778	25
	Sm	62	13835.2	0.8	16884	24	−1200.5	1.1	1250.8	0.9	−12414	3	−7159.4	1.1
	Eu	63	14992.50	0.27	15062	26	−566	20	−1580	50	−8379	9	−6926.7	0.7
	Gd	64	15141.69	0.21	13521.32	0.27	920.1	0.7	−3312	7	−8435.3	0.3	−10464	4
	Tb	65	15580	60	11850	50	2210	50	−5520	50	−4080	50	−9080	50
	Dy	66	16419	9	10265	7	2945	5	−7789	9	−4800	7	−13453	9
	Ho	67	17177	15	8500	40	4041	4	−10212	17	−615	9	−12244	12
	Er	68	18247	10	7065	6	4279.7	2.6	−12673	18	−751	6	−16704	13
	Tm	69	18850	60	5400	19	5093.8	2.6	−14760#	200#	3296	15	−15340#	200#
	Yb	70	19800	150	4010	19	5474.3	1.7	−17200#	300#	3246	20	−19630	150
	Lu	71	22390#	280#	2520#	210#	4400#	280#	*		7020#	200#	−20440#	360#
	Hf	72	*		1040#	340#	3680#	420#	*		7140#	360#	*	
155	La	57	8010#	500#	*		−6080#	640#	17490#	400#	*		6220#	450#
	Ce	58	9010#	360#	25890#	500#	−5270#	500#	14500#	300#	−22150#	580#	2010#	320#
	Pr	59	9989	21	23930#	300#	−4530	440	11525	18	−21180#	300#	2093	17
	Nd	60	11096	10	21950#	200#	−3484	20	7907	9	−17350#	200#	−2089	27
	Pm	61	12435	10	19949	13	−2585	13	4878	5	−16370	100	−2556	5
	Sm	62	13773.8	0.9	17439	3	−1672.9	1.1	1879.1	0.9	−11900.6	1.7	−6524.2	1.1
	Eu	63	14593.5	0.5	15748	9	−857	5	−568	10	−10841	25	−6183.3	0.9
	Gd	64	15329.99	0.25	14088.2	0.4	81.3	0.7	−2914	10	−6903.7	0.9	−9980	50
	Tb	65	16079	11	12461	10	978	10	−5211	17	−6801	10	−8928	12
	Dy	66	16155	10	10851	10	2608	10	−6947	11	−2739	10	−12588	13
	Ho	67	17170	18	9304	18	3159	18	−9414	20	−3170	50	−11506	18
	Er	68	17885	11	7644	7	4118	5	−11707	18	896	9	−15853	16
	Tm	69	18796	16	6192	11	4572	5	−14081	22	724	13	−14765	20
	Yb	70	19490#	200#	4614	19	5338.8	2.1	−16190#	300#	4813	17	−18910#	200#
	Lu	71	20310	150	3150	23	5801.6	2.2	−18560#	300#	4593	16	−17890#	300#
	Hf	72	23150#	420#	1730#	360#	4810#	430#	*		8330#	300#	*	
	Ta	73	*		190#	340#	3890#	420#	*		8390#	360#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
156	La	57	3190#	570#	*		31120#	400#	10580#	640#	8280#	570#	*	
	Ce	58	5110#	420#	14180#	500#	24540#	300#	7420#	420#	6100#	420#	−2700#	500#
	Pr	59	4105	17	10960#	300#	18634	4	11480#	200#	8320#	200#	260#	300#
	Nd	60	5990	9	12076	17	12333.2	1.6	8370	100	6230	12	350#	200#
	Pm	61	5298	5	9172	9	5924	4	12123.6	1.6	8027.6	3.0	3048	12
	Sm	62	7241	9	9710	10	1169	8	9617	26	6151	12	3616	9
	Eu	63	6336	3	7181	4	−4540	40	13084	4	7341	3	6212	10
	Gd	64	8536.35	0.07	8006.0	0.9	−8324	25	9913.8	0.8	5696.2	0.7	5671.1	0.4
	Tb	65	6912	10	5310	4	−13257	15	14326	4	7656	4	8923	4
	Dy	66	9445	10	6568	10	−17264	9	10340	50	5648	4	7999.96	0.27
	Ho	67	7570	40	3670	40	−21840	70	15570	40	8470	40	11420	40
	Er	68	10074	25	5460	30	−26390	150	11139	26	5664	25	10578	25
	Tm	69	8280	17	1914	15	−30830#	300#	16481	15	8496	17	13824	15
	Yb	70	10834	19	3929	14	*		11872	17	5571	12	12848	12
	Lu	71	9230	60	490	60	*		16940	60	8320#	210#	15920	60
	Hf	72	11580#	340#	2560	150	*		12560#	250#	5420	9	14990#	250#
	Ta	73	10080#	420#	−1020	4	*		17440#	420#	6160#	420#	18020#	340#
157	La	57	4090#	500#	*		33230#	300#	*		8710#	580#	*	
	Ce	58	3180#	500#	14170#	570#	26750#	400#	8710#	570#	6460#	500#	−1360#	640#
	Pr	59	5057	3	10900#	300#	21024	5	10060#	300#	8650#	200#	−1260#	300#
	Nd	60	4363.3	2.5	12333.8	2.4	14329.8	2.3	9632	17	6230	100	1370#	200#
	Pm	61	6202	7	9384	7	8467	7	10697	12	8147	7	1210	100
	Sm	62	5388	10	9800	5	2747	7	10973	6	6453	25	4548	5
	Eu	63	7448	5	7387	9	−2626	24	11443	4	7860	4	4454	25
	Gd	64	6359.88	0.15	8030	3	−7410	27	11705.2	0.9	5778.5	0.8	7278.1	0.9
	Tb	65	8744	4	5517.5	0.3	−12055	28	12017.3	0.3	7806.6	0.4	6620.9	0.8
	Dy	66	6967	5	6623	6	−16005	12	12537	11	5600	50	9928	5
	Ho	67	9370	50	3592	23	−20393	26	13034	25	8425	25	8970	50
	Er	68	7270	40	5160	50	−24560#	200#	13340	30	6090	28	12627	28
	Tm	69	9950	30	1790	40	−29110	150	14211	29	8760	28	11577	29
	Yb	70	8226	14	3874	18	−33730#	400#	13917	15	5871	18	14831	12
	Lu	71	10810	60	463	12	*		14774	21	8356	21	13634	19
	Hf	72	9110#	250#	2440#	210#	*		14400#	200#	5676	14	16720#	200#
	Ta	73	11670#	340#	−935	10	*		15430#	340#	8000#	340#	15720#	250#
	W	74	*		980#	500#	*		15010#	500#	*		18690#	500#
158	Ce	58	4680#	570#	14760#	500#	28710#	400#	7220#	570#	6260#	570#	*	
	Pr	59	3790#	300#	11510#	500#	23120#	300#	11380#	420#	8490#	420#	−570#	500#
	Nd	60	5412.3	2.5	12689	3	16854.8	1.6	8325.0	1.7	6444	17	−410#	300#
	Pm	61	4880	7	9901.0	2.3	10364.7	1.3	11806.8	1.6	8042	9	1956	17
	Sm	62	6646	6	10244	8	5155	5	9626	5	6552	7	2678	10
	Eu	63	5883	5	7882	5	−1083	27	12801	9	7784.8	2.4	5316	5
	Gd	64	7937.39	0.06	8520	4	−5386	25	10104	3	5992.4	0.9	5147.6	0.9
	Tb	65	6778.4	1.0	5936.0	1.0	−10768	25	13775.3	1.0	7463.5	1.0	7993.9	1.3
	Dy	66	9054	5	6932.3	2.4	−14398	8	10395	4	5707	10	7309.5	2.4
	Ho	67	7430	40	4052	27	−18980	30	15053	27	7833	29	10709	29
	Er	68	9960	40	5760	30	−23200	30	10950	50	5600	30	9499	27
	Tm	69	8070	40	2580	40	−27590#	200#	16220	40	8370	26	12980	30
	Yb	70	10661	13	4589	29	−32320#	300#	11536	16	5480	12	11846	10
	Lu	71	8844	19	1081	19	*		16764	18	8154	22	15060	18
	Hf	72	11320#	200#	2952	21	*		12310	60	5307	8	14047	24
	Ta	73	9590#	250#	−448	13	*		17410#	250#	8060#	360#	17070#	200#
	W	74	12070#	500#	1390#	340#	*		13020#	420#	5159	15	16260#	420#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
156	La	57	7660#	500#	*		−6350#	640#	18400#	400#	*		6660#	500#
	Ce	58	8740#	360#	26480#	580#	−5640#	500#	15380#	300#	*		2520#	300#
	Pr	59	9730	100	24500#	300#	−4580#	300#	12717.5	1.6	−20810#	400#	2763	9
	Nd	60	10765.2	1.7	22560#	200#	−3650#	200#	9159	9	−19710#	300#	−1333	5
	Pm	61	12043	25	20890	100	−2834	19	5916	4	−16040	17	−2047.0	1.8
	Sm	62	13048	9	18359	9	−1636	26	3175	8	−14366	13	−5614	8
	Eu	63	14487	3	16394	25	−1253	26	8	5	−10432	6	−6084	3
	Gd	64	14971.61	0.19	14657.7	0.9	−197.3	0.3	−2005.95	0.10	−9633.1	0.9	−9356	10
	Tb	65	16080	50	12931	4	373	4	−4550	40	−5562	4	−9006	10
	Dy	66	16278	7	11400.97	0.22	1753.0	0.3	−6318	25	−5748.06	0.12	−12561	17
	Ho	67	17040	40	9960	60	2750	60	−8700	40	−1580	40	−11400	40
	Er	68	17749	25	8396	26	3481	25	−10946	26	−2345	26	−15657	27
	Tm	69	18550	20	6773	16	4345	7	−13130	60	1916	23	−14403	22
	Yb	70	19476	20	5239	11	4810	4	−15450	150	1655	11	−18792	21
	Lu	71	20180#	210#	3850	60	5596	3	−17700#	310#	5640	60	−17460#	310#
	Hf	72	21230#	340#	2470	150	6026	3	*		5390	150	−21900#	340#
	Ta	73	*		910#	360#	5000#	360#	*		9260#	300#	*	
157	La	57	7280#	500#	*		*		19370#	300#	*		7680#	420#
	Ce	58	8290#	500#	*		−5890#	570#	16560#	400#	*		3450#	400#
	Pr	59	9162	17	25080#	400#	−4800#	300#	13862	8	−22670#	400#	3696	3
	Nd	60	10353	9	23290#	300#	−4010#	200#	10184	5	−18960#	300#	−398.6	2.4
	Pm	61	11500	8	21460	19	−3154	14	7162	8	−18137	7	−1008	11
	Sm	62	12629	5	18972	10	−1772	5	4146	5	−13764	5	−4666	6
	Eu	63	13783	4	17097	6	−1236	10	1305	4	−12581	4	−4995	4
	Gd	64	14896.23	0.16	15210.6	0.9	−688.8	0.4	−1399	5	−8752	8	−8804	4
	Tb	65	15656	10	13523.5	0.9	178.7	0.8	−3931	23	−7970	3	−8305.8	0.3
	Dy	66	16411	11	11932	5	1033	5	−6011	27	−4178	5	−11960	40
	Ho	67	16936	29	10160	25	2056	24	−8120	40	−4031	24	−10690	30
	Er	68	17347	27	8836	28	3305	27	−9994	29	−173	27	−14650	30
	Tm	69	18226	30	7250	30	3878	28	−12270	30	−460	50	−13515	29
	Yb	70	19060	20	5789	12	4622	6	−14570#	200#	3503	27	−17790	60
	Lu	71	20037	23	4392	16	5107.9	2.9	−16840	150	3106	17	−16690	150
	Hf	72	20690#	360#	2930#	200#	5880	3	−19170#	450#	7120#	200#	−20930#	360#
	Ta	73	21750#	340#	1630	150	6355	6	*		6810	140	*	
	W	74	*		−40#	500#	5190#	500#	*		10840#	430#	*	
158	Ce	58	7860#	500#	*		−6050#	640#	17300#	400#	*		3820#	400#
	Pr	59	8840#	300#	25680#	500#	−5050#	420#	14960#	300#	−22370#	420#	4270#	300#
	Nd	60	9775.6	1.8	23590#	300#	−4040#	200#	11417	5	−21190#	400#	391	7
	Pm	61	11081.9	1.5	22234.8	1.4	−3670	100	8164.3	2.2	−17960	3	−500	5
	Sm	62	12034	10	19628	5	−2097	5	5438	5	−16047	5	−3864	6
	Eu	63	13330	4	17681.6	2.4	−1429	25	2200.4	2.4	−12262	7	−4517.9	2.3
	Gd	64	14297.27	0.16	15907	8	−659.3	0.9	−282.8	2.4	−11301	5	−7997.4	0.3
	Tb	65	15523	4	13966	4	−157.4	1.2	−3283	27	−7301	4	−8118	5
	Dy	66	16020.4	2.4	12449.8	2.4	874.3	2.4	−5103	25	−6872.2	2.4	−11646	24
	Ho	67	16790	50	10674	27	1540	50	−7480	40	−2713	27	−10850	40
	Er	68	17230	40	9352	25	2665	26	−9294	26	−3168	26	−14670	40
	Tm	69	18011	29	7740	50	3511	27	−11491	29	840	30	−13355	27
	Yb	70	18887	12	6376	26	4170	7	−13907	19	115	28	−17641	14
	Lu	71	19660	60	4956	21	4790	5	−16090#	200#	4210	30	−16430#	200#
	Hf	72	20430	150	3415	20	5404.8	2.7	−18410#	300#	4029	21	−20580	150
	Ta	73	21260#	360#	2000#	210#	6124	4	*		8030#	200#	−19500#	450#
	W	74	*		450#	340#	6612.5	2.6	*		7870#	360#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
159	Ce	58	2870#	640#	*		30870#	500#	8440#	580#	6570#	640#	*	
	Pr	59	4690#	500#	11520#	570#	25270#	400#	9870#	570#	8910#	500#	−2070#	570#
	Nd	60	3960	30	12860#	300#	18838	30	9422	30	6589	30	740#	300#
	Pm	61	5520	10	10008	10	12978	10	10651	10	8512	10	541	10
	Sm	62	5027	8	10391	6	6959	6	10800	9	6823	6	3641	6
	Eu	63	6844	5	8081	6	1286	5	11345	6	8181	10	3770	4
	Gd	64	5943.21	0.08	8580.4	2.3	−4001	4	11608	4	6385	3	6445	8
	Tb	65	8133.0	0.6	6131.6	0.7	−8962	28	12002.1	0.7	7866.8	0.8	6197	3
	Dy	66	6831.4	2.6	6985.3	1.3	−13334	18	12307.4	1.3	5788	4	9014.5	1.3
	Ho	67	9214	27	4211	4	−17620	40	12806	6	8063.8	3.0	8408	5
	Er	68	7329	25	5663	27	−21709	17	12983	24	5840	40	11615	4
	Tm	69	9940	40	2560	40	−26130	30	13550	40	8510	40	10610	50
	Yb	70	7895	19	4420	30	−30400#	300#	13590	30	5865	23	14020	30
	Lu	71	10570	40	990	40	−34900#	310#	14420	40	8420	40	12770	40
	Hf	72	8822	24	2929	23	*		14298	21	5710	60	16059	19
	Ta	73	11390#	200#	−374	9	*		15130#	200#	8240	150	14910	60
	W	74	9810#	420#	1610#	360#	*		14870#	340#	5431	6	18030#	340#
	Re	75	*		−1600#	50#	*		15600#	500#	*		16840#	430#
160	Pr	59	3500#	570#	12150#	640#	27290#	400#	11050#	570#	8600#	570#	−1480#	500#
	Nd	60	5070	60	13240#	400#	21220	50	8140#	300#	6570	50	−1150#	400#
	Pm	61	4412	10	10460	30	14941.8	2.3	11651.3	2.4	8463.5	3.0	1187	4
	Sm	62	6097	6	10968	10	9439.3	2.1	9583.8	2.1	6928	7	1907.3	2.9
	Eu	63	5521	4	8575	6	2889	15	12469	5	8048	5	4450	7
	Gd	64	7451.5	0.7	9188	4	−1878	24	10039.2	2.3	6381	4	4382	5
	Tb	65	6375.21	0.13	6563.6	0.8	−7540	30	13564.3	0.8	7851.5	0.8	7269	4
	Dy	66	8576.5	1.4	7428.8	1.1	−11509	6	10509.3	1.3	5955.5	1.0	6797.9	1.0
	Ho	67	7124	15	4504	15	−16110	60	14736	15	7906	16	10028	15
	Er	68	9574	25	6024	24	−20125	26	10830	40	5630	30	9007	25
	Tm	69	7800	40	3030	30	−24480	60	15710	40	7980	40	12180	40
	Yb	70	10401	18	4882	28	−28830	150	11251	26	5410	28	10897	27
	Lu	71	8630	70	1730	60	−33390#	310#	16450	60	8010	60	14090	60
	Hf	72	11157	19	3520	40	*		11984	18	5365	12	13128	14
	Ta	73	9460	60	260	60	*		16990	60	7900#	210#	16260	60
	W	74	11970#	340#	2180	150	*		12500#	250#	5131	9	15170#	250#
	Re	75	10150#	430#	−1267	7	*		17530#	420#	7680#	500#	18360#	340#
161	Pr	59	4360#	640#	*		29300#	500#	9560#	710#	8910#	640#	*	
	Nd	60	3580#	400#	13320#	570#	23280#	400#	9250#	570#	6780#	500#	−40#	570#
	Pm	61	5263	9	10650	50	17375	9	10350	30	8613	9	−290#	300#
	Sm	62	4510	7	11066	7	11383	7	10593	12	7298	7	2809	7
	Eu	63	6369	10	8847	11	5405	11	11127	12	8324	11	2961	10
	Gd	64	5635.4	1.0	9301.7	1.8	−305	9	11248	4	6628.4	2.5	5392	5
	Tb	65	7696.6	0.5	6808.7	1.0	−5563	28	11810.9	0.9	8092.2	0.9	5455.1	2.4
	Dy	66	6454.39	0.08	7508.0	1.1	−10221	15	12187.9	1.1	6279.4	1.3	8280.9	1.0
	Ho	67	8885	15	4812.8	2.1	−14634	28	12681.7	2.5	8075	3	7921.0	2.4
	Er	68	7208	26	6108	17	−18885	25	12839	9	5850	28	10852	9
	Tm	69	9670	40	3120	40	−23120	40	13373	28	8270	40	9940	40
	Yb	70	7742	16	4820	40	−27330#	200#	13450	30	5733	29	13116	29
	Lu	71	10360	60	1688	28	−31720	150	13980	30	8311	29	11790	40
	Hf	72	8448	25	3330	60	−36120#	400#	14100	40	5760	28	15340	25
	Ta	73	11030	60	129	23	*		14785	30	8190	30	14080	29
	W	74	9250#	250#	1970#	210#	*		14640#	200#	5475	12	17240#	200#
	Re	75	12040#	340#	−1197	5	*		15300#	340#	7710#	340#	15920#	250#
	Os	76	*		610#	500#	*		15320#	500#	*		19140#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
159	Ce	58	7550#	640#	*		*		18380#	500#	*		4740#	580#
	Pr	59	8480#	400#	26280#	500#	−5260#	570#	15790#	400#	*		4990#	400#
	Nd	60	9373	30	24370#	400#	−4370#	300#	12480	30	−20470#	400#	1311	30
	Pm	61	10400	12	22697	11	−3564	20	9489	11	−19690#	300#	626	11
	Sm	62	11673	7	20292	6	−2349	11	6354	6	−15662	6	−3009	6
	Eu	63	12727	4	18324	8	−1528	6	3489	4	−14226	4	−3425	4
	Gd	64	13880.60	0.11	16462	5	−795.6	0.9	605.4	1.3	−10599	5	−7162.3	1.0
	Tb	65	14911.4	0.8	14651	4	−139.2	1.1	−2203.0	2.9	−9551.1	2.3	−7196.7	2.4
	Dy	66	15885	5	12921.3	1.3	478.2	1.3	−4606	3	−5766.2	1.3	−11051	27
	Ho	67	16639	24	11143.7	3.0	1496	10	−6759	28	−5147.7	3.0	−10097	25
	Er	68	17290	27	9714	6	2170	10	−8728	18	−1443	4	−13929	25
	Tm	69	18000	40	8320	40	3040	30	−10860	50	−1670	40	−12632	29
	Yb	70	18556	21	7000	30	3951	18	−12981	24	2180	30	−16693	23
	Lu	71	19410	40	5580	50	4490	40	−15270	40	1710	50	−15680	40
	Hf	72	20140#	200#	4011	20	5225.1	2.7	−17420#	300#	5868	19	−19810#	200#
	Ta	73	20990	150	2577	23	5681	6	−19630#	310#	5484	17	−18820#	300#
	W	74	21890#	500#	1160#	360#	6451	4	*		9380#	300#	*	
	Re	75	*		−210#	340#	6760#	60#	*		9020#	370#	*	
160	Pr	59	8190#	500#	*		−5570#	570#	16700#	400#	*		5450#	400#
	Nd	60	9030	50	24760#	400#	−4330#	300#	13510	50	−22670#	500#	1760	50
	Pm	61	9931.1	2.2	23320#	300#	−3870.2	2.3	10598.8	2.2	−19410#	400#	1242	6
	Sm	62	11124	5	20976.0	2.4	−2456.0	2.4	7708.9	2.3	−17798	30	−2261	5
	Eu	63	12365.6	2.2	18965.2	1.3	−1751.5	1.5	4343.0	1.4	−14228	10	−3002.9	1.3
	Gd	64	13394.7	0.7	17268	5	−1006	9	1730.4	1.1	−13023	6	−6480.8	1.0
	Tb	65	14508.2	0.7	15144.0	2.3	−179	3	−1454	15	−9082	4	−6740.6	1.2
	Dy	66	15407.9	2.3	13560.4	1.0	438.0	1.0	−3608	24	−8399.5	1.0	−10414	3
	Ho	67	16340	30	11489	15	1284	15	−6080	40	−4139	15	−9893	15
	Er	68	16900	30	10235	24	2040	24	−7901	25	−4186	24	−13570	40
	Tm	69	17740	40	8690	40	2810	50	−10030	70	−260	30	−12540	40
	Yb	70	18296	10	7437	26	3624	25	−12224	11	−891	7	−16530	40
	Lu	71	19200	60	6140	60	4140	60	−14450	80	3010	60	−15490	60
	Hf	72	19979	20	4507	12	4901.9	2.6	−16610	150	2606	20	−19571	22
	Ta	73	20850#	210#	3190	60	5451	5	−18950#	310#	6600	70	−18460#	310#
	W	74	21780#	340#	1800	150	6066	5	*		6230	150	−22600#	340#
	Re	75	*		340#	360#	6698	4	*		10270#	300#	*	
161	Pr	59	7860#	640#	*		−5840#	580#	17600#	500#	*		6160#	500#
	Nd	60	8650#	400#	25470#	640#	−4730#	570#	14440#	400#	*		2590#	400#
	Pm	61	9675	14	23900#	400#	−4077	10	11705	14	−21180#	400#	2075	9
	Sm	62	10607	9	21530	30	−2603	7	8834	7	−17240	50	−1250	7
	Eu	63	11891	11	19815	14	−1919	13	5670	10	−16186	11	−1921	10
	Gd	64	13086.9	1.2	17876	6	−1253	5	2549.4	1.5	−12561.9	2.5	−5741.0	1.4
	Tb	65	14071.8	0.6	15996	4	−428	4	−265.5	2.4	−11257.3	1.5	−5860.7	1.2
	Dy	66	15030.9	1.4	14071.6	1.0	343.5	1.0	−2854	9	−7402.4	1.1	−9744	15
	Ho	67	16009	4	12241.7	2.3	1142.6	2.3	−5298	28	−6648.8	2.3	−9203	24
	Er	68	16783	9	10612	9	1798	10	−7367	17	−2818	9	−12970	30
	Tm	69	17470	40	9147	28	2510	40	−9340	40	−2810	30	−11807	28
	Yb	70	18143	23	7851	16	3150	30	−11518	28	941	29	−15640	60
	Lu	71	19000	50	6570	40	3720	40	−13780	40	450	40	−14695	30
	Hf	72	19606	29	5060	29	4679	25	−15810#	200#	4558	24	−18560	60
	Ta	73	20480	30	3650	40	5236	24	−17940	150	4200	60	−17520	150
	W	74	21220#	360#	2230#	200#	5923	4	−20310#	450#	8140#	200#	−21700#	360#
	Re	75	22180#	340#	980	150	6328	7	*		7690	140	*	
	Os	76	*		−660#	500#	7069	11	*		11840#	430#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
162	Nd	60	4850#	570#	13810#	640#	25270#	400#	7900#	570#	6620#	570#	−2020#	640#
	Pm	61	4030#	300#	11100#	500#	19840#	300#	11400#	300#	8550#	300#	380#	500#
	Sm	62	5778	8	11581	10	13802	4	9226	4	7039	11	990	30
	Eu	63	5003	10	9340	7	7318	3	12221.0	2.4	8349	6	3478	10
	Gd	64	6846	4	9778	11	2053	4	9924	4	6627	6	3574	7
	Tb	65	6489.1	2.4	7662.4	2.5	−4402	26	12773.3	2.3	7546.4	2.3	5810	5
	Dy	66	8196.99	0.06	8008.4	1.2	−8360	15	10366.1	1.1	6215.5	1.1	6027.1	1.0
	Ho	67	6916	4	5274	3	−13210	80	14343	3	7991	3	9138	3
	Er	68	9204	9	6426.9	2.2	−17166	9	10759	15	5859	3	8479.4	1.4
	Tm	69	7650	40	3565	27	−21700	70	15300	40	7948	26	11499	26
	Yb	70	10058	21	5210	30	−25822	23	11190	40	5610	30	10386	16
	Lu	71	8340	80	2290	80	−30380#	210#	16040	80	7870	80	13390	80
	Hf	72	10924	25	3895	29	−34670#	300#	11810	60	5400	40	12311	20
	Ta	73	9070	70	750	70	*		16870	60	7940	70	15570	70
	W	74	11560#	200#	2510	30	*		12540	60	5304	9	14500	24
	Re	75	9680#	250#	−765	11	*		17590#	250#	7850#	360#	17630#	200#
	Os	76	12380#	500#	950#	340#	*		13090#	420#	5170#	50#	16580#	420#
163	Nd	60	3140#	640#	*		27310#	500#	9120#	710#	6980#	640#	*	
	Pm	61	4990#	500#	11240#	570#	21640#	400#	9980#	570#	8630#	400#	−1110#	570#
	Sm	62	4292	8	11850#	300#	15781	7	10198	12	7159	8	1770	50
	Eu	63	5922.2	1.6	9484	4	9804.2	1.1	10809	7	8523.4	2.2	1967.2	2.2
	Gd	64	5179	4	9954.6	1.5	3779	5	11114	10	6968.9	1.2	4491.0	2.1
	Tb	65	6788	5	7604	6	−1867	7	11621	4	8210	4	4544	4
	Dy	66	6271.01	0.05	7790.3	2.2	−7087	15	11791.7	1.2	6319.7	1.1	7207.6	1.1
	Ho	67	8409	3	5485.83	0.05	−11587	28	12388.27	0.08	8158.45	0.11	7104.8	1.1
	Er	68	6905	5	6416	6	−15898	26	12740	5	6079	16	10151	5
	Tm	69	9322	27	3683	5	−20190	40	13184	10	8200	25	9300	16
	Yb	70	7544	21	5110	30	−24390	60	13320	30	5870	40	12417	29
	Lu	71	10030	80	2260	30	−28790	30	13750	30	8236	28	11160	40
	Hf	72	8172	27	3730	80	−32930#	300#	14000	40	5860	60	14540	26
	Ta	73	10820	70	660	40	−37220#	400#	14490	40	8270	40	13380	70
	W	74	8980	60	2420	90	*		14580	60	5780	80	16680	60
	Re	75	11620#	200#	−708	6	*		15220#	200#	8190	150	15470	60
	Os	76	9910#	420#	1170#	360#	*		15220#	340#	5406	10	18640#	340#
	Ir	77	*		−1900#	500#	*		15600#	570#	*		17210#	500#
164	Pm	61	3470#	570#	11570#	640#	23750#	400#	11360#	570#	8730#	570#	−220#	640#
	Sm	62	5397	8	12260#	400#	18042	4	8830#	300#	7025	10	−50#	400#
	Eu	63	4729.6	2.3	9922	8	11748.4	2.5	11858	4	8304	7	2501	9
	Gd	64	6376.4	1.3	10408.8	1.3	6248.9	1.2	9740.1	1.7	6962	10	2625	7
	Tb	65	5581	4	8005.4	2.0	−196	25	12887	4	8265.2	2.4	5333	11
	Dy	66	7658.11	0.07	8661	4	−4955	15	10622.7	2.2	6358.2	1.2	5184.9	1.5
	Ho	67	6673.8	1.4	5888.6	1.4	−10338	28	13911.5	1.4	7939.0	1.4	8127.7	1.7
	Er	68	8846	5	6853.52	0.13	−14124	16	10809	3	6117.8	2.1	7759.32	0.15
	Tm	69	7252	26	4031	25	−18630	40	15136	25	8156	26	10934	25
	Yb	70	9790	21	5573	16	−22777	18	11180	30	5750	30	9836	17
	Lu	71	7920	40	2640	30	−27170	60	15890	30	8060	30	12900	40
	Hf	72	10620	30	4320	30	−31390	150	11720	80	5610	30	11662	22
	Ta	73	8820	50	1300	40	−35800#	320#	16596	29	7900	40	14930	40
	W	74	11400	60	2990	40	*		12260	60	5407	23	13727	25
	Re	75	9540	60	−150	80	*		17240	60	7900#	210#	16950	60
	Os	76	12160#	340#	1710	150	*		12740#	250#	5282	6	15730#	250#
	Ir	77	10240#	510#	−1560#	100#	*		17730#	440#	7580#	510#	19010#	350#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
162	Nd	60	8430#	400#	*		−4900#	570#	15370#	400#	*		3010#	400#
	Pm	61	9290#	300#	24420#	500#	−4320#	420#	12680#	300#	−20840#	580#	2560#	300#
	Sm	62	10289	4	22230	50	−2969	4	9902	5	−19440#	400#	−659	11
	Eu	63	11372.1	1.6	20406.2	2.4	−2041.7	1.6	7156.6	2.4	−15925	9	−1288.1	2.0
	Gd	64	12481	4	18625	4	−1454	6	3900	4	−14898	8	−4890	4
	Tb	65	14185.7	2.3	16964.0	2.2	−1034.0	2.9	161	4	−11377	11	−5895.4	2.2
	Dy	66	14651.38	0.10	14817.1	1.1	83.9	1.0	−1846.96	0.30	−9964.0	1.5	−9056.2	2.1
	Ho	67	15801	15	12782	3	1005	3	−4563	26	−5868	3	−8911	9
	Er	68	16413	24	11239.7	0.3	1648.0	2.3	−6513	15	−5567.7	0.3	−12507	28
	Tm	69	17320	40	9670	30	2280	40	−8650	80	−1570	26	−11710	30
	Yb	70	17801	16	8335	29	3058	29	−10653	17	−1909	17	−15330	30
	Lu	71	18700	90	7110	80	3450	80	−13050	100	1780	80	−14590	80
	Hf	72	19372	13	5583	11	4416	5	−15169	20	1377	17	−18461	26
	Ta	73	20100	80	4090	90	5010	60	−17330#	210#	5490	70	−17350#	210#
	W	74	20810	150	2638	20	5678.3	2.4	−19500#	300#	5028	29	−21230	150
	Re	75	21720#	360#	1210#	210#	6240	5	*		9040#	200#	−20330#	450#
	Os	76	*		−250#	340#	6767.8	2.9	*		8720#	360#	*	
163	Nd	60	7990#	640#	*		−5160#	710#	16520#	500#	*		3890#	580#
	Pm	61	9020#	400#	25050#	640#	−4620#	570#	13610#	400#	*		3350#	400#
	Sm	62	10070	10	22950#	400#	−3300	30	10789	7	−18880#	400#	52	7
	Eu	63	10925	10	21065	9	−2444	10	8022	4	−17820#	300#	−364	4
	Gd	64	12025.1	1.7	19294	7	−1606	6	4992.3	1.1	−14299	4	−3580.4	2.2
	Tb	65	13277	4	17382	11	−977	6	1782	4	−13162	4	−4486	4
	Dy	66	14468.00	0.08	15452.7	1.5	−243.9	1.0	−1213	5	−9389	4	−8412	3
	Ho	67	15324.4	2.1	13494.2	1.2	729.6	1.1	−3650	5	−7787.5	2.2	−8115.1	0.3
	Er	68	16109	10	11690	5	1575	5	−5874	16	−4275	5	−11761	26
	Tm	69	16972	28	10110	6	2176	6	−7937	28	−3977	6	−10979	16
	Yb	70	17602	21	8671	17	2842	16	−10025	30	−249	15	−14530	80
	Lu	71	18370	40	7470	40	3350	40	−12260	50	−600	40	−13694	29
	Hf	72	19100	30	6013	30	4140	30	−14360	60	3263	30	−17560	70
	Ta	73	19900	50	4550	50	4749	5	−16530	40	3010	80	−16610	40
	W	74	20540#	210#	3170	60	5520	60	−18570#	310#	6970	60	−20530#	210#
	Re	75	21300	150	1800	30	6012	8	−20690#	400#	6490	60	−19570#	300#
	Os	76	22280#	500#	410#	360#	6673	7	*		10370#	300#	*	
	Ir	77	*		−950#	430#	7070#	500#	*		9850#	450#	*	
164	Pm	61	8460#	500#	*		−4590#	570#	14870#	400#	*		4170#	400#
	Sm	62	9689	5	23490#	400#	−3630	50	11768	4	−21140#	500#	577	4
	Eu	63	10651.8	2.5	21770#	300#	−2762.4	2.9	8872.8	2.8	−17560#	400#	85.1	2.2
	Gd	64	11556	4	19893	4	−1885.4	2.2	6274.0	1.2	−16383	7	−3169	4
	Tb	65	12368.1	2.8	17960.0	2.3	−1036.5	2.1	2875.5	2.3	−12820.1	2.1	−3795.4	2.0
	Dy	66	13929.12	0.08	16265	4	−450.5	1.1	−25.08	0.11	−11868.0	1.1	−7660.94	0.07
	Ho	67	15083	3	13678.9	2.5	431.0	1.7	−3072	25	−7674	4	−7884	5
	Er	68	15751.0	0.3	12339.35	0.14	1304.94	0.17	−4930	15	−6850.69	0.13	−11285	5
	Tm	69	16570	40	10446	25	2049	29	−7270	40	−2820	25	−10686	29
	Yb	70	17334	21	9256	15	2627	29	−9194	22	−3134	16	−14290	30
	Lu	71	17950	80	7740	40	3230	40	−11360	40	797	28	−13440	40
	Hf	72	18793	18	6575	22	3920	17	−13583	19	187	22	−17360	40
	Ta	73	19640	70	5030	80	4560	60	−15810	60	4220	40	−16450	60
	W	74	20379	20	3645	13	5278.3	2.0	−17810	150	3745	27	−20305	21
	Re	75	21160#	210#	2270	80	5926	5	−19990#	320#	7770	70	−19210#	310#
	Os	76	22070#	340#	1000	150	6479	5	*		7190	160	−23190#	430#
	Ir	77	*		−390#	380#	6970#	100#	*		11230#	320#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
165	Pm	61	4380#	640#	*		25920#	500#	10120#	710#	9200#	640#	*	
	Sm	62	3660#	400#	12440#	570#	20100#	400#	10160#	570#	7390#	500#	1150#	570#
	Eu	63	5568	6	10093	7	14169	5	10581	9	8514	6	960#	300#
	Gd	64	4903.4	1.6	10582.6	2.4	7995.6	1.6	10758.8	1.6	7061.2	1.9	3500	4
	Tb	65	6555.2	2.4	8184.1	1.8	2341.2	2.3	11510.5	1.7	8556	4	3780.5	2.0
	Dy	66	5715.96	0.05	8796.3	2.0	−3317	27	11694	4	7131.3	2.2	6315	4
	Ho	67	7988.8	1.1	6219.3	0.7	−8456	27	12193.6	0.7	8147.2	0.8	6627.9	2.2
	Er	68	6650.1	0.6	6829.8	1.5	−12886	28	12567.5	0.6	6383	3	9306.2	0.6
	Tm	69	9092	25	4276.4	1.5	−17082	14	12948	5	8268.2	1.5	8757	3
	Yb	70	7350	30	5680	40	−21430	40	13144	27	6050	40	11685	27
	Lu	71	9870	40	2720	30	−25780	40	13560	30	8240	30	10680	40
	Hf	72	7890	30	4280	40	−29890#	200#	13870	40	6060	80	13830	30
	Ta	73	10640	30	1318	20	−34250#	160#	14132	29	8185	16	12630	80
	W	74	8697	28	2870	40	−38540#	400#	14380	50	5780	70	15954	27
	Re	75	11260	60	−287	23	*		14960	60	8204	29	14770	70
	Os	76	9390#	250#	1560#	210#	*		14970#	200#	5570	10	17900#	200#
	Ir	77	12180#	350#	−1540#	50#	*		15450#	340#	7770#	340#	16500#	260#
	Pt	78	*		120#	510#	*		15700#	570#	*		19830#	500#
166	Sm	62	5010#	570#	13070#	640#	22130#	400#	8620#	570#	7370#	570#	−720#	640#
	Eu	63	4090#	100#	10530#	410#	16320#	100#	11890#	100#	8720#	100#	1860#	410#
	Gd	64	5916.5	2.1	10931	5	10553.2	1.6	9572.0	2.6	7066.9	1.8	1875	8
	Tb	65	5291.2	2.1	8572.0	2.0	4078	12	12595.7	1.8	8443.9	1.7	4411.4	1.7
	Dy	66	7043.5	0.4	9284.6	1.7	−991	7	10231.3	2.0	6875	4	4450.5	1.1
	Ho	67	6243.64	0.02	6747.0	0.8	−7049	30	13608.1	0.7	8174.6	0.7	7172	4
	Er	68	8474.1	1.0	7315.1	0.8	−11065	28	10767.2	1.4	6317.9	0.7	7103.1	0.7
	Tm	69	7028	12	4654	12	−15790	30	14767	12	8145	12	10138	12
	Yb	70	9370	27	5953	7	−19706	12	11026	26	5999	9	9220	8
	Lu	71	7650	40	3010	40	−24180	90	15700	30	8140	30	12350	30
	Hf	72	10290	40	4710	40	−28430	30	11490	40	5800	40	11080	30
	Ta	73	8320	30	1750	40	−32790#	200#	16430	30	8040	40	14340	40
	W	74	11097	27	3329	17	−37110#	300#	12106	30	5510	40	13028	27
	Re	75	9250	90	260	90	*		17110	90	7940	110	16340	100
	Os	76	11760#	200#	2061	30	*		12750	60	5435	5	15120	60
	Ir	77	9780#	260#	−1152	8	*		17830#	250#	7900#	360#	18340#	200#
	Pt	78	12540#	500#	480#	340#	*		13410#	440#	5390#	500#	17200#	420#
167	Sm	62	2950#	640#	*		24580#	500#	10050#	710#	7890#	640#	*	
	Eu	63	5090#	410#	10610#	570#	18510#	400#	10450#	570#	9020#	400#	240#	570#
	Gd	64	4476	5	11320#	100#	12514	5	10664	7	7320	6	2796	7
	Tb	65	6145.6	2.4	8801.1	2.5	6660.0	2.3	11353.5	2.3	8674.7	2.2	2995.5	2.8
	Dy	66	5398	4	9392	4	678	6	11388	4	7058	4	5429	4
	Ho	67	7280	5	6984	5	−4750	40	12044	5	8552	5	5472	6
	Er	68	6436.43	0.18	7507.9	0.8	−9821	28	12319.6	0.8	6555.3	1.4	8324.8	0.7
	Tm	69	8728	12	4907.9	1.2	−14192	28	12689.0	1.5	8263.5	1.4	8083.8	1.8
	Yb	70	7068	8	5992	12	−18497	19	13051	4	6183	25	10999	4
	Lu	71	9580	50	3220	40	−22690#	60#	13480	50	8350	40	10030	40
	Hf	72	7680	40	4740	40	−26970	90	13690	40	6040	40	13190	30
	Ta	73	10320	40	1780	40	−31280	30	14000	40	8330	30	11940	40
	W	74	8277	21	3280	30	−35340#	310#	14465	23	6050	30	15372	24
	Re	75	11070#	100#	240#	40#	*		14740#	50#	8270#	40#	14100#	50#
	Os	76	9140	80	1950	120	*		14870	80	5840	100	17380	80
	Ir	77	11840#	200#	−1070	4	*		15390#	200#	8220	150	16050	60
	Pt	78	10040#	430#	740#	370#	*		15550#	350#	5590#	120#	19320#	340#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
165	Pm	61	7850#	640#	*		−4610#	710#	16060#	500#	*		5180#	500#
	Sm	62	9050#	400#	24010#	640#	−3710#	570#	13020#	400#	*		1650#	400#
	Eu	63	10298	5	22350#	400#	−3067	10	9860	5	−19660#	400#	893	5
	Gd	64	11279.8	1.5	20504	7	−2279	7	7086.5	1.5	−15889	4	−2492.1	2.3
	Tb	65	12136	4	18593.0	1.8	−1222	11	4309.2	1.7	−14645.7	2.6	−2692.5	1.7
	Dy	66	13374.07	0.09	16801.6	1.1	−531.1	1.5	909.1	0.6	−11207.6	1.2	−6703.1	1.4
	Ho	67	14662.6	0.7	14880	4	138.8	1.3	−1968.0	1.7	−10082.0	2.0	−7026.8	0.8
	Er	68	15497	5	12718.4	0.6	1109.2	0.6	−4226	27	−5842.7	0.6	−10684	25
	Tm	69	16344	6	11129.9	1.5	1841.4	2.6	−6488	27	−5238.5	2.0	−9989	15
	Yb	70	17140	30	9706	27	2481	28	−8660	40	−1642	27	−13720	40
	Lu	71	17790	40	8292	27	3030	40	−10594	30	−1820	40	−12700	30
	Hf	72	18510	40	6920	30	3770	30	−12770	40	2090	30	−16420	40
	Ta	73	19460	40	5630	30	4290	30	−15189	27	1510	30	−15684	17
	W	74	20100	60	4170	40	5030	30	−17120#	200#	5670	30	−19460	60
	Re	75	20800	30	2700	40	5694	6	−19060#	160#	5330	40	−18310	150
	Os	76	21550#	360#	1420#	210#	6335	6	−21430#	450#	9200#	200#	−22340#	370#
	Ir	77	22430#	430#	170#	160#	6820#	50#	*		8590#	150#	*	
	Pt	78	*		−1440#	500#	7453	14	*		12820#	430#	*	
166	Sm	62	8670#	400#	*		−3870#	570#	13920#	400#	*		2210#	400#
	Eu	63	9660#	100#	22970#	410#	−3130#	320#	11060#	100#	−19370#	510#	1710#	100#
	Gd	64	10819.9	1.9	21024	4	−2417	4	8213.5	1.8	−18150#	400#	−1853.4	2.2
	Tb	65	11846.4	2.4	19154.6	2.5	−1510.7	2.0	5261.6	1.7	−14369	5	−2267.8	1.6
	Dy	66	12759.5	0.4	17468.7	1.3	−729	4	2339.7	0.8	−13347.7	1.5	−5757.8	0.9
	Ho	67	14232.5	1.1	15543.3	2.0	384.3	2.2	−1184	12	−9770.5	1.7	−6620.3	1.0
	Er	68	15124.2	0.7	13534.4	0.7	832.1	0.7	−3330	7	−8600.8	0.7	−10065.4	1.7
	Tm	69	16120	28	11484	12	1729	12	−5870	30	−4277	12	−9662	29
	Yb	70	16724	17	10229	7	2316	7	−7735	29	−4361	7	−13223	27
	Lu	71	17520	40	8690	40	3030	40	−9920	40	−380	30	−12460	40
	Hf	72	18180	30	7420	30	3540	30	−11972	30	−850	40	−16080	30
	Ta	73	18960	40	6030	40	4310	80	−14260	90	3060	40	−15310	40
	W	74	19795	14	4647	18	4856	4	−16456	20	2459	30	−19299	25
	Re	75	20510	100	3130	90	5520	60	−18530#	220#	6720	90	−18160#	220#
	Os	76	21150	150	1774	20	6143	3	−20650#	300#	6140	30	−21910#	160#
	Ir	77	21970#	370#	410#	210#	6722	6	*		10070#	200#	−21060#	450#
	Pt	78	*		−1060#	340#	7292	7	*		9680#	360#	*	
167	Sm	62	7960#	640#	*		−3680#	710#	15450#	500#	*		3350#	510#
	Eu	63	9180#	400#	23680#	640#	−3240#	570#	12110#	400#	*		2530#	400#
	Gd	64	10393	5	21840#	400#	−2601	9	9136	7	−17620#	400#	−1038	5
	Tb	65	11436.9	2.5	19732	6	−1734.2	2.1	6396	6	−16420#	100#	−1369.9	2.1
	Dy	66	12442	4	17964	4	−948	4	3378	4	−12829	4	−4912	4
	Ho	67	13524	5	16269	5	−109	7	264	5	−11760	5	−5427	5
	Er	68	14910.5	0.9	14254.9	0.7	666.7	0.7	−2699	4	−7993.8	0.8	−9474	12
	Tm	69	15755.7	1.9	12223.0	1.4	1410.0	1.4	−5020	40	−6761.7	1.4	−9021	7
	Yb	70	16437	27	10646	4	2153	6	−7122	28	−2955	4	−12640	30
	Lu	71	17230	50	9170	40	2780	40	−9180	50	−2930	40	−11740	50
	Hf	72	17970	40	7750	40	3400	30	−11370	30	837	29	−15440	40
	Ta	73	18650	30	6490	40	4020	40	−13520#	50#	380	40	−14535	30
	W	74	19370	30	5040	30	4751	30	−15590	80	4480	30	−18330	90
	Re	75	20320#	50#	3560#	40#	5276#	13#	−17760#	40#	3980#	50#	−17470#	40#
	Os	76	20900#	220#	2220	80	5980	60	−19750#	320#	8100	80	−21270#	220#
	Ir	77	21620#	160#	991	30	6504.9	2.6	*		7480	90	−20360#	300#
	Pt	78	22580#	500#	−420#	370#	7160	60	*		11390#	310#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
168	Sm	62	4380#	580#	*		26920#	330#	*		7890#	580#	*	
	Eu	63	3550#	570#	11210#	640#	20810#	400#	11910#	570#	9120#	570#	1070#	640#
	Gd	64	5450#	300#	11670#	500#	14840#	300#	9310#	320#	7440#	300#	1010#	500#
	Tb	65	4969	5	9294	7	8531	5	12301	4	8609	4	3594	7
	Dy	66	6720	140	9960	140	3020	140	9960	140	6890	140	3610	140
	Ho	67	5850	30	7440	30	−2990	50	13240	30	8420	30	6180	30
	Er	68	7771.29	0.12	7999	5	−7629	28	10791.9	0.8	6772.8	0.8	6269.5	0.7
	Tm	69	6840.6	1.8	5312.1	1.7	−12918	28	14322.6	1.7	8073.0	1.9	9232.0	1.8
	Yb	70	9061	4	6325.7	1.3	−16687	13	11017	12	6214.2	1.7	8587.9	0.9
	Lu	71	7620	50	3770	40	−21280	50	15230	40	8090	50	11500	40
	Hf	72	9960	40	5120	50	−25366	30	11370	40	5950	40	10580	40
	Ta	73	8110	40	2220	40	−29730	60	16180	40	8110	40	13690	40
	W	74	10871	23	3830	30	−33880	150	11920	30	5819	18	12390	30
	Re	75	9030#	50#	990	40	−38330#	400#	16800	30	7930	40	15700	30
	Os	76	11570	80	2450#	40#	*		12550	90	5528	22	14513	28
	Ir	77	9670	60	−540	100	*		17480	60	7940#	210#	17640	60
	Pt	78	12330#	340#	1230	150	*		13010#	250#	5450#	50#	16380#	250#
	Au	79	*		−1990#	500#	*		18020#	500#	7710#	570#	19770#	430#
169	Eu	63	4480#	640#	11310#	580#	23140#	500#	10380#	710#	9650#	640#	*	
	Gd	64	3810#	500#	11930#	570#	17030#	400#	10590#	570#	7720#	410#	2210#	570#
	Tb	65	5770#	300#	9620#	420#	10790#	300#	11010#	300#	8760#	300#	1920#	320#
	Dy	66	5110	330	10100	300	4780	300	11000	300	7080	300	4420	300
	Ho	67	6810	40	7530	140	−713	20	11826	20	8653	20	4659	20
	Er	68	6003.25	0.15	8150	30	−6204	28	12069	5	7013.2	0.8	7309.7	0.8
	Tm	69	8033.6	1.5	5574.4	0.8	−10984	28	12725.4	0.8	8513.5	0.8	7442.1	1.0
	Yb	70	6866.98	0.15	6352.1	1.7	−15458	15	12878.4	1.3	6375	12	10195.0	0.4
	Lu	71	9080	40	3792	3	−19673	12	13218	5	8375	8	9450	12
	Hf	72	7430	40	4930	50	−23990	40	13520	50	6170	40	12523	29
	Ta	73	9970	40	2220	40	−28200	40	13890	40	8430	40	11380	40
	W	74	8096	20	3810	30	−32450#	200#	14140	30	6040	30	14590	30
	Re	75	10690	30	805	16	−36620#	300#	14395	22	8342	15	13330	30
	Os	76	8799	28	2220	40	*		14820#	50#	5980	90	16811	28
	Ir	77	11500	60	−613	22	*		15120	80	8202	29	15390	90
	Pt	78	9530#	250#	1090#	210#	*		15320#	200#	5706	9	18610#	200#
	Au	79	12390#	500#	−1930#	330#	*		15680#	430#	7860#	420#	17160#	360#
170	Eu	63	3270#	710#	*		25380#	500#	11490#	580#	9330#	710#	*	
	Gd	64	5030#	640#	12480#	710#	19260#	500#	9110#	640#	7780#	640#	130#	710#
	Tb	65	4300#	420#	10110#	500#	13090#	300#	12150#	420#	8930#	300#	2710#	500#
	Dy	66	6190#	360#	10520#	360#	7050#	200#	9780#	200#	7040#	200#	2710#	200#
	Ho	67	5510	50	7930	300	1070	50	13030	150	8540	50	5290	50
	Er	68	7257.7	1.4	8600	20	−3854	28	10660	30	7036	5	5450	4
	Tm	69	6591.98	0.17	6163.1	0.8	−9658	28	13904.7	0.8	8358.0	0.8	8131	5
	Yb	70	8459.72	0.18	6778.2	0.7	−13473	13	11259.3	1.7	6643.2	1.3	8171.73	0.29
	Lu	71	7295	17	4220	17	−18402	20	14984	17	8148	17	10883	17
	Hf	72	9610	40	5460	28	−22328	30	11530	50	6140	50	9982	28
	Ta	73	7920	40	2710	40	−26960#	110#	15930	40	8190	40	13040	50
	W	74	10444	20	4290	30	−30992	23	11810	30	5920	30	11820	30
	Re	75	8566	16	1275	19	−35200#	200#	16700	18	8053	22	15090	30
	Os	76	11274	28	2805	15	−39340#	300#	12580	30	5770#	40#	13814	21
	Ir	77	9160#	100#	−250#	110#	*		17520#	100#	8180#	130#	17300#	110#
	Pt	78	11910#	200#	1495	30	*		13080	60	5637	4	15850	80
	Au	79	9990#	360#	−1472	12	*		18020#	250#	7910#	370#	19020#	200#
	Hg	80	*		90#	420#	*		13600#	500#	*		17820#	430#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
168	Sm	62	7330#	500#	*		*		16510#	420#	*		4060#	500#
	Eu	63	8640#	410#	*		−3320#	570#	13530#	400#	*		3450#	400#
	Gd	64	9920#	300#	22280#	500#	−2650#	300#	10410#	330#	−20110#	580#	−340#	300#
	Tb	65	11115	4	20610#	100#	−1974	5	7280	30	−16300#	400#	−941	6
	Dy	66	12120	140	18770	140	−1290	140	4430	140	−15070	140	−4350	140
	Ho	67	13130	30	16830	30	−380	30	1250	30	−11470	30	−4840	30
	Er	68	14207.72	0.21	14982.7	0.8	553.5	0.7	−1409.36	0.25	−10367	4	−8517.4	1.3
	Tm	69	15569	12	12820.0	1.8	1243.2	2.1	−4240	40	−6322	6	−8794	4
	Yb	70	16129	7	11233.7	0.3	1937.8	0.7	−6219	28	−5579.58	0.27	−12120	40
	Lu	71	17190	50	9760	40	2410	50	−8680	50	−1820	40	−11680	50
	Hf	72	17640	40	8345	29	3230	30	−10470	30	−2060	28	−15080	40
	Ta	73	18440	40	6950	40	3820	40	−12600	40	1840	50	−14370	30
	W	74	19148	16	5610	30	4501	11	−14898	17	1290	30	−18130#	40#
	Re	75	20100	90	4280	40	5063	13	−17130	60	5270	40	−17370	90
	Os	76	20706	21	2685	14	5815.6	2.7	−18980	150	4809	21	−20994	21
	Ir	77	21500#	210#	1410	100	6381	9	−21200#	400#	8880#	70#	−19980#	310#
	Pt	78	22370#	340#	160	150	6990	3	*		8200	170	*	
	Au	79	*		−1260#	450#	7590#	510#	*		12310#	400#	*	
169	Eu	63	8030#	640#	*		−3420#	710#	14820#	580#	*		4420#	580#
	Gd	64	9260#	400#	23140#	640#	−2810#	570#	11710#	500#	−19540#	500#	820#	400#
	Tb	65	10740#	300#	21290#	500#	−2180#	300#	8320#	300#	−18520#	500#	10#	330#
	Dy	66	11830	300	19400	300	−1500	300	5330	300	−14740#	430#	−3610	300
	Ho	67	12659	21	17491	20	−632	20	2479	20	−13304	20	−3878	20
	Er	68	13774.54	0.19	15588	4	266.2	0.7	−545.6	0.3	−9650	140	−7680.1	1.7
	Tm	69	14874.2	1.0	13573	5	1198.4	1.0	−3192	3	−8500	30	−7766.1	0.7
	Yb	70	15928	4	11664.2	0.3	1720.9	0.9	−5659	28	−4675.27	0.29	−11370	40
	Lu	71	16700	40	10117	3	2423	3	−7792	28	−4059	3	−10793	28
	Hf	72	17390	40	8705	28	3150	40	−9800	30	−426	28	−14390	40
	Ta	73	18080	40	7340	50	3730	40	−11880	30	−510	50	−13470	30
	W	74	18967	24	6030	30	4290	30	−14190	30	3150	30	−17190	30
	Re	75	19720#	40#	4640	30	5014	13	−16316	26	2700	30	−16486	15
	Os	76	20370	80	3210	30	5713	3	−18260#	200#	6881	29	−20130	60
	Ir	77	21164	30	1840#	50#	6141	4	−20310#	300#	6410	40	−19150	150
	Pt	78	21850#	370#	540#	220#	6858	5	*		10240#	200#	−23070#	450#
	Au	79	*		−710#	300#	7380#	340#	*		9590#	300#	*	
170	Eu	63	7750#	640#	*		*		15850#	580#	*		4960#	640#
	Gd	64	8840#	580#	23790#	580#	−2830#	640#	12860#	540#	*		1560#	580#
	Tb	65	10070#	300#	22040#	500#	−2390#	320#	9530#	300#	−18340#	580#	820#	430#
	Dy	66	11290#	240#	20140#	360#	−1760#	200#	6400#	200#	−17110#	450#	−2990#	200#
	Ho	67	12320	60	18030	50	−850	50	3560	50	−13050#	300#	−3390	50
	Er	68	13260.9	1.4	16130	140	52.0	1.6	656.4	1.4	−11800	300	−6904.2	1.8
	Tm	69	14625.6	1.5	14310	30	850.1	1.0	−2489	17	−8288	20	−7491.1	0.8
	Yb	70	15326.70	0.09	12352.64	0.26	1735.3	0.3	−4510	28	−7131.7	0.3	−10753	3
	Lu	71	16380	40	10572	17	2155	20	−7170	30	−3321	17	−10660	30
	Hf	72	17040	40	9252	28	2915	29	−8960	30	−3167	28	−14030	40
	Ta	73	17890	40	7640	50	3460	40	−11230	30	656	28	−13290	30
	W	74	18541	19	6510	30	4140	30	−13365	16	140	30	−16953	17
	Re	75	19250	30	5090	30	4770	30	−15720#	100#	4100	30	−16252	28
	Os	76	20073	14	3611	16	5536.9	2.7	−17626	21	3703	18	−19904	25
	Ir	77	20660#	120#	1970#	110#	6230#	50#	−19480#	230#	7940#	100#	−18790#	230#
	Pt	78	21430	150	882	21	6707	3	−21720#	300#	7130	30	−22580#	300#
	Au	79	22380#	450#	−390#	210#	7177	15	*		11100#	200#	*	
	Hg	80	*		−1850#	340#	7770	30	*		10590#	360#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
171	Gd	64	3430#	710#	12640#	710#	21510#	500#	10160#	710#	7900#	640#	1080#	580#
	Tb	65	5130#	500#	10210#	640#	15440#	400#	10830#	570#	9240#	500#	1130#	570#
	Dy	66	4370#	280#	10590#	360#	9300#	200#	11180#	360#	7640#	200#	3790#	360#
	Ho	67	6350	600	8100#	630#	3310	600	11790	670	8900	620	3910	600
	Er	68	5681.6	0.3	8770	50	−2286	29	11789	20	7210	30	6490	140
	Tm	69	7486.3	1.2	6391.7	1.1	−7490	28	12421.7	1.0	8643.0	1.0	6500	30
	Yb	70	6614.21	0.01	6800.5	0.7	−12221	28	12678.6	0.7	6869.6	1.7	9328.82	0.26
	Lu	71	8594	17	4353.5	1.9	−16578	28	13257.9	1.9	8615.5	1.9	9130.3	2.5
	Hf	72	7250	40	5410	30	−21130	30	13362	29	6510	50	11795	29
	Ta	73	9650	40	2760	40	−25310	50	13710	40	8500	40	11000	50
	W	74	7870	30	4240	40	−29620	90	13920	40	6170	40	13920	40
	Re	75	10420	30	1250	30	−33690	30	14380	30	8510	30	12790	40
	Os	76	8443	21	2682	22	−37640#	310#	14823	21	6360	40	16242	23
	Ir	77	11300#	110#	−220	40	*		15020	50	8450	40	15030	50
	Pt	78	9240	80	1570#	130#	*		15340	80	6060	100	18170	80
	Au	79	11930#	200#	−1448	10	*		15610#	200#	8310	150	16750	60
	Hg	80	10150#	430#	250#	370#	*		15840#	430#	5670#	500#	20000#	340#
172	Gd	64	4830#	580#	*		23510#	300#	8600#	580#	7550#	580#	*	
	Tb	65	3990#	640#	10770#	710#	17680#	500#	11870#	710#	9060#	640#	1620#	710#
	Dy	66	5820#	360#	11280#	500#	11500#	300#	9660#	420#	7590#	420#	1780#	500#
	Ho	67	5040#	630#	8760#	280#	5250#	200#	12940#	280#	8980#	360#	4640#	360#
	Er	68	6836	4	9250	600	−80	25	10470	50	7177	20	4760	300
	Tm	69	6235	5	6945	5	−6044	28	13445	5	8412	5	7069	21
	Yb	70	8019.96	0.02	7334.2	1.0	−10158	28	11250.7	0.7	6883.3	0.7	7312.1	0.3
	Lu	71	6978.9	2.6	4718.2	2.3	−15170	40	14738.7	2.3	8503.5	2.3	10185.0	2.4
	Hf	72	9040	40	5863	24	−19159	28	11615	30	6544	25	9620	24
	Ta	73	7680	40	3190	40	−23950	40	15630	40	8250	40	12399	28
	W	74	10080	40	4670	40	−27991	30	11750	40	6060	40	11270	40
	Re	75	8390	50	1770	50	−32250	70	16430	40	8220	40	14370	50
	Os	76	11018	22	3280	30	−36180	150	12371	17	6030	15	13321	20
	Ir	77	9040	50	370	40	*		17260	30	8210	40	16680	30
	Pt	78	11710	80	1980	40	*		12790#	100#	5851	22	15263	28
	Au	79	9830	60	−860	100	*		17690	60	8010#	210#	18420	60
	Hg	80	12470#	340#	790	150	*		13350#	250#	5590#	330#	17050#	250#
173	Tb	65	4890#	710#	10830#	580#	19750#	500#	10410#	710#	9200#	710#	−0#	710#
	Dy	66	4050#	500#	11340#	640#	13810#	400#	10740#	570#	7830#	500#	2760#	640#
	Ho	67	5940#	360#	8880#	420#	7530#	300#	11370#	360#	9220#	360#	3010#	420#
	Er	68	5240#	200#	9460#	280#	1760#	200#	11580#	630#	7450#	200#	5700#	280#
	Tm	69	6954	7	7062	6	−3860	28	12173	5	8716	5	5630	50
	Yb	70	6367.10	0.01	7467	5	−8824	28	12369.8	1.0	7108.1	0.7	8202.7	1.4
	Lu	71	8216.3	2.2	4914.5	1.6	−13327	28	13136.6	1.6	8747.0	1.6	8560.7	1.7
	Hf	72	7080	40	5965	28	−17970	30	13127	28	6760	30	10999	28
	Ta	73	9140	40	3280	40	−22128	30	13750	40	8720	40	10560	30
	W	74	7700	40	4690	40	−26790	70	13700	40	6270	40	13170	40
	Re	75	10060	50	1750	40	−30720	40	14240	40	8600	30	12230	40
	Os	76	8266	20	3160	40	−34780#	200#	14520	30	6330	19	15499	20
	Ir	77	10960	30	314	15	*		14740	21	8521	14	14282	16
	Pt	78	8900	60	1850	70	*		15190	70	6110#	120#	17640	60
	Au	79	11590	60	−986	21	*		15350	80	8331	29	16000#	100#
	Hg	80	9670#	250#	630#	210#	*		15610#	200#	5906	13	19290#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
171	Gd	64	8460#	640#	*		−3310#	710#	13800#	540#	*		2430#	580#
	Tb	65	9430#	500#	22690#	640#	−2430#	570#	10750#	720#	−20200#	640#	1870#	450#
	Dy	66	10560#	360#	20700#	450#	−1660#	200#	7710#	200#	−16450#	540#	−1840#	210#
	Ho	67	11860	600	18620#	670#	−1060	600	4690	600	−15100#	670#	−2480	600
	Er	68	12939.3	1.4	16700	300	−231	4	1589.0	1.4	−11300#	200#	−5993.8	1.8
	Tm	69	14078.3	1.2	14992	20	644	5	−1381.8	2.1	−10260	50	−6517.7	1.0
	Yb	70	15073.93	0.18	12963.6	0.3	1557.52	0.29	−3875	29	−6488.3	1.4	−10072	17
	Lu	71	15889	4	11131.8	2.0	2289.7	2.2	−6108	28	−5322.1	2.0	−9646	28
	Hf	72	16860	40	9634	29	2734	29	−8350	40	−1956	29	−13360	40
	Ta	73	17570	40	8216	28	3380	50	−10470	40	−1700	30	−12500	30
	W	74	18310	30	6950	40	3960	40	−12790	30	1880	40	−16250	30
	Re	75	18980	30	5540	40	4680	40	−14840	50	1600	40	−15396	30
	Os	76	19720	30	3957	24	5371	4	−16830	80	5705	23	−19190#	100#
	Ir	77	20460	40	2580	40	5997#	12#	−18850	40	5200	40	−18180	40
	Pt	78	21150#	220#	1320	90	6607	3	−20810#	320#	9170	80	−21840#	220#
	Au	79	21920#	300#	50	30	7085	11	*		8330#	100#	−21050#	300#
	Hg	80	*		−1230#	370#	7668	15	*		12350#	310#	*	
172	Gd	64	8260#	580#	*		−3760#	420#	14790#	420#	*		2730#	500#
	Tb	65	9120#	580#	23410#	710#	−2870#	640#	11790#	540#	*		2250#	540#
	Dy	66	10190#	360#	21490#	580#	−2040#	420#	8720#	300#	−18840#	580#	−1310#	670#
	Ho	67	11390#	200#	19350#	360#	−1130#	200#	5890#	200#	−15000#	450#	−1840#	200#
	Er	68	12518	4	17350#	200#	−350	140	2773	4	−13760#	200#	−5344	4
	Tm	69	13721	6	15710	50	260	30	−637	6	−10140	600	−6138	5
	Yb	70	14634.16	0.01	13725.9	1.4	1308.86	0.26	−2853	24	−8826.6	1.4	−9498.3	1.9
	Lu	71	15572	17	11518.7	2.4	2151.4	2.9	−5406	28	−4814.8	2.5	−9376	29
	Hf	72	16290	40	10216	24	2753	24	−7310	40	−4384	24	−12750	40
	Ta	73	17330	40	8600	30	3320	50	−9760	50	−790	28	−12320	40
	W	74	17950	30	7420	40	3840	40	−11850	30	−950	40	−15920	40
	Re	75	18810	40	6010	50	4400	50	−14190	50	2860	50	−15340	40
	Os	76	19461	16	4531	18	5224	7	−16137	16	2550	30	−18900	40
	Ir	77	20340#	110#	3050	30	5991	10	−18060	60	6580	40	−17980	90
	Pt	78	20950	21	1759	14	6463	4	−20050	150	5902	21	−21616	23
	Au	79	21760#	210#	710#	120#	6923	10	*		9810	70	−20730#	310#
	Hg	80	22620#	340#	−660	150	7524	6	*		9120	170	*	
173	Tb	65	8880#	640#	*		−3270#	710#	12840#	580#	*		3180#	580#
	Dy	66	9870#	450#	22110#	640#	−2280#	570#	9910#	450#	−18060#	500#	−330#	450#
	Ho	67	10980#	670#	20160#	500#	−1300#	420#	6910#	300#	−16950#	580#	−940#	300#
	Er	68	12080#	200#	18220#	280#	−480#	360#	3900#	200#	−13180#	360#	−4350#	200#
	Tm	69	13188	5	16320	600	115	21	625	5	−12060#	200#	−5072	4
	Yb	70	14387.05	0.01	14411.4	1.4	945.0	0.3	−2139	28	−8358	4	−8886.5	2.3
	Lu	71	15195.2	2.0	12248.7	1.8	1968.7	1.7	−4484	28	−6796	6	−8550	24
	Hf	72	16120	40	10683	28	2539	28	−6680	40	−3445	28	−12150	40
	Ta	73	16820	40	9146	28	3261	28	−8840	40	−2949	28	−11370	40
	W	74	17780	40	7870	40	3560	40	−11290	30	390	40	−15230	50
	Re	75	18450	40	6410	40	4310	40	−13285	30	490	40	−14380	30
	Os	76	19284	24	4930	30	5055	6	−15500	70	4370	30	−18130	40
	Ir	77	20000	40	3596	30	5716	9	−17436	25	4010	40	−17233	15
	Pt	78	20610	100	2220	70	6360	60	−19280#	210#	8020	60	−20690	80
	Au	79	21410	30	1000	40	6836	5	*		7260	40	−19840	150
	Hg	80	22140#	370#	−230#	220#	7378	4	*		11160#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
174	Tb	65	3530#	710#	*		21900#	500#	11710#	580#	9100#	710#	*	
	Dy	66	5460#	640#	11910#	710#	15810#	500#	9270#	710#	7500#	640#	730#	710#
	Ho	67	4590#	420#	9420#	500#	9700#	300#	12600#	420#	9010#	360#	3550#	500#
	Er	68	6370#	360#	9890#	420#	3900#	300#	10250#	360#	7430#	670#	3710#	360#
	Tm	69	5680	40	7500#	200#	−2120	50	13330	40	8720	40	6300	600
	Yb	70	7464.60	0.01	7977	4	−6717	28	11140	5	7129.8	1.0	6419.7	1.4
	Lu	71	6760.6	1.4	5308.0	1.6	−11897	28	14396.0	1.6	8600.6	1.6	9286.4	1.8
	Hf	72	8504	28	6252.5	2.2	−15849	10	11602.3	2.8	6847.9	2.6	9108.6	2.3
	Ta	73	7420	40	3620	40	−20950	30	15370	40	8550	40	11734	28
	W	74	9570	40	5120	40	−24909	30	11810	40	6360	40	10850	40
	Re	75	8190	40	2230	40	−29620#	110#	16130	40	8280	40	13690	40
	Os	76	10628	18	3730	30	−33354	22	12280	40	6119	30	12737	30
	Ir	77	8589	15	637	19	*		17169	17	8375	21	16110	30
	Pt	78	11450	60	2338	15	*		12770	30	5960	40	14626	21
	Au	79	9300#	100#	−590#	120#	*		17760#	100#	8270#	130#	18000#	110#
	Hg	80	12050#	200#	1098	30	*		13390	60	5785	11	16470	80
175	Dy	66	3670#	710#	12050#	710#	17970#	500#	10490#	710#	7820#	710#	1890#	580#
	Ho	67	5500#	500#	9460#	640#	11870#	400#	11150#	570#	9320#	500#	2040#	640#
	Er	68	4770#	500#	10070#	500#	5830#	400#	11410#	500#	7700#	450#	4750#	500#
	Tm	69	6520	70	7650#	300#	100	60	12050#	200#	9040	50	4820#	200#
	Yb	70	5822.35	0.07	8120	40	−5063	28	12271	4	7542	5	7433	4
	Lu	71	7666.7	1.0	5510.1	1.2	−9877	28	13096.4	1.2	8953.8	1.2	7854	6
	Hf	72	6708.5	0.4	6200.4	2.2	−14376	12	13110.1	2.2	7118.4	2.8	10420.1	2.3
	Ta	73	8740	40	3853	28	−19010	30	13710	40	8860	40	9974	28
	W	74	7480	40	5180	40	−23920	30	13470	40	6560	40	12420	40
	Re	75	9690	40	2350	40	−27880	50	14150	40	8670	40	11690	40
	Os	76	8181	16	3720	30	−32140	80	14160	30	6330	40	14640	30
	Ir	77	10680	17	688	16	*		14755	19	8713	18	13820	40
	Pt	78	8462	21	2212	22	*		15271	21	6530	40	17181	23
	Au	79	11420#	110#	−620	40	*		15240	70	8570	40	15620	50
	Hg	80	9400	80	1200#	130#	*		15570	80	6210	100	18780	80
176	Dy	66	4950#	710#	*		19880#	500#	9070#	710#	7760#	710#	*	
	Ho	67	4160#	640#	9950#	710#	13990#	500#	12450#	710#	9210#	640#	2770#	710#
	Er	68	6050#	570#	10620#	570#	7950#	400#	9950#	500#	7580#	500#	2760#	570#
	Tm	69	5130	110	8010#	410#	1990	100	13290#	310#	9150#	220#	5630#	310#
	Yb	70	6867.08	0.07	8470	50	−2850	28	11080	40	7629	4	5810#	200#
	Lu	71	6287.97	0.15	5975.7	1.2	−8319	28	14273.0	1.2	9033.0	1.2	8520	5
	Hf	72	8166.0	1.8	6699.7	0.9	−12445	11	11704.7	1.3	7168.6	1.3	8621.2	1.5
	Ta	73	7030	40	4170	30	−17480	30	15190	30	8910	40	11160	30
	W	74	9080	40	5520	40	−21710	30	11810	40	6620	40	10420	40
	Re	75	7850	40	2720	40	−26540	40	15880	40	8530	40	12980	40
	Os	76	10097	16	4130	30	−30347	16	12250	30	6290	30	12240	30
	Ir	77	8559	15	1066	14	−34470	80	16824	13	8420	17	15318	29
	Pt	78	11297	23	2828	18	*		12563	17	6199	15	14151	20
	Au	79	9190	50	100	40	*		17510	30	8280	70	17390	30
	Hg	80	11890	80	1670	40	*		12980#	100#	5911	21	15800	60
	Tl	81	*		−1265	18	*		17940	90	8110#	220#	19060	90

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
174	Tb	65	8420#	710#	*		−3530#	710#	13900#	580#	*		3700#	640#
	Dy	66	9510#	580#	22740#	580#	−2710#	710#	10820#	580#	*		150#	580#
	Ho	67	10530#	360#	20760#	580#	−1590#	420#	8000#	300#	−16650#	580#	−290#	360#
	Er	68	11610#	300#	18770#	420#	−660#	360#	5000#	300#	−15500#	500#	−3770#	300#
	Tm	69	12630	50	16960#	200#	−50	70	1710	40	−11800#	300#	−4380	40
	Yb	70	13831.70	0.01	15040	4	738.1	1.4	−1099.9	2.3	−10580#	200#	−8134.8	1.6
	Lu	71	14976.9	2.2	12775	6	1800.1	1.7	−3830	28	−6603	5	−8230	28
	Hf	72	15585	25	11167.1	2.3	2494.4	2.3	−5617	28	−5582.3	2.3	−11519	28
	Ta	73	16550	40	9583	28	3140	30	−8070	40	−2149	28	−11080	40
	W	74	17270	40	8400	40	3600	40	−10232	30	−2100	40	−14740	40
	Re	75	18250	50	6920	40	4040	40	−12890	30	1430	40	−14310	30
	Os	76	18894	16	5476	30	4871	10	−14678	15	1443	30	−17798	15
	Ir	77	19550	30	3800	40	5693	16	−16730#	100#	5480	30	−16920	60
	Pt	78	20354	15	2652	16	6183	3	−18677	22	4832	18	−20557	25
	Au	79	20880#	120#	1260#	110#	6699	7	*		8920#	100#	−19470#	230#
	Hg	80	21720	150	112	22	7233	6	*		8010	70	*	
175	Dy	66	9130#	640#	*		−2950#	710#	11920#	640#	*		1070#	580#
	Ho	67	10090#	500#	21370#	640#	−1960#	570#	9010#	400#	−18620#	640#	580#	500#
	Er	68	11140#	450#	19490#	570#	−1070#	450#	6040#	400#	−14810#	640#	−2860#	400#
	Tm	69	12200	50	17540#	300#	−220	600	2860	50	−13730#	300#	−3440	50
	Yb	70	13286.96	0.07	15620#	200#	597.3	1.4	−213.8	2.3	−10040#	300#	−7196.6	1.6
	Lu	71	14427.3	1.0	13488	5	1619.7	1.5	−2757	28	−8590	40	−7392.4	1.9
	Hf	72	15213	28	11508.5	2.3	2400.1	2.3	−4849	28	−4826.2	2.3	−10812	28
	Ta	73	16150	40	10106	28	2995	28	−7120	40	−4127	28	−10250	40
	W	74	17050	40	8800	40	3370	40	−9530	30	−1077	28	−14030	40
	Re	75	17880	40	7470	40	4010	40	−11890	30	−840	40	−13364	30
	Os	76	18810	19	5960	30	4560	30	−14397	22	2830	30	−17391	16
	Ir	77	19269	16	4420	30	5430	30	−15990	40	2990	30	−16148	16
	Pt	78	19910	70	2848	24	6164	4	−17740	80	6998	21	−19720#	100#
	Au	79	20710	40	1710	40	6583.4	2.7	*		6090	40	−18830	40
	Hg	80	21450#	220#	610	100	7072	5	*		10060	80	*	
176	Dy	66	8620#	710#	*		−3070#	580#	13020#	640#	*		1620#	640#
	Ho	67	9660#	580#	22000#	710#	−2130#	710#	9980#	510#	*		1190#	640#
	Er	68	10820#	500#	20080#	640#	−1300#	500#	6860#	400#	−17190#	640#	−2390#	400#
	Tm	69	11650	110	18080#	320#	−310#	220#	4010	100	−13360#	410#	−2750	100
	Yb	70	12689.44	0.01	16120#	300#	566	4	1085.1	1.5	−12130#	400#	−6397.0	1.2
	Lu	71	13954.7	1.0	14100	40	1566	6	−2020	30	−8360	50	−6971.9	1.9
	Hf	72	14874.5	1.7	12209.8	1.5	2254.1	1.5	−3935	28	−7169.8	1.5	−10239	28
	Ta	73	15770	40	10370	30	2950	30	−6300	40	−3490	30	−9800	40
	W	74	16560	40	9375	28	3340	40	−8510	30	−3449	28	−13420	40
	Re	75	17530	40	7900	40	3840	40	−11181	29	60	40	−13030	30
	Os	76	18278	15	6480	30	4540	30	−13197	17	210	30	−16808	17
	Ir	77	19239	14	4787	29	5260	40	−15360	30	4117	29	−16245	20
	Pt	78	19759	16	3516	16	5884.8	2.0	−17149	17	3882	17	−19600	40
	Au	79	20610#	110#	2310	40	6433	7	−19110	90	7580	40	−18620	90
	Hg	80	21286	22	1045	15	6897	6	*		6635	22	*	
	Tl	81	*		−70#	130#	7480	100	*		10700	90	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
177	Ho	67	4960#	710#	9960#	710#	16100#	500#	11160#	710#	9710#	710#	1340#	710#
	Er	68	4300#	640#	10760#	710#	10020#	500#	11150#	640#	7880#	590#	3920#	710#
	Tm	69	6270#	220#	8230#	450#	4150#	200#	11790#	450#	9240#	360#	3950#	360#
	Yb	70	5566.40	0.22	8900	100	−1285	28	12030	50	7740	40	6610#	300#
	Lu	71	7072.89	0.16	6181.6	1.2	−6115	28	13022.5	1.2	9424.7	1.2	7130	40
	Hf	72	6375.6	1.0	6787.4	0.8	−10924	15	12995.7	0.8	7553.6	1.3	9710.2	1.4
	Ta	73	8420	30	4427	3	−15667	20	13478	4	8994	4	9502	3
	W	74	7130	40	5630	40	−20330	30	13420	40	6900	40	11789	28
	Re	75	9280	40	2920	40	−24723	30	14070	40	8820	40	11120	40
	Os	76	7897	18	4180	30	−29180	90	14040	30	6580	30	13920	30
	Ir	77	10237	21	1205	23	−32707	29	14769	23	8812	22	13270	30
	Pt	78	8508	20	2777	17	*		14735	19	6280	19	16271	18
	Au	79	11100	30	−99	14	*		14874	21	8636	14	14887	15
	Hg	80	9060	90	1540	90	*		15340	90	6150#	130#	18190	90
	Tl	81	12000	90	−1156	19	*		15340	80	8165	29	16370#	100#
178	Ho	67	3920#	710#	*		18210#	500#	12190#	710#	9460#	710#	*	
	Er	68	5470#	780#	11270#	780#	12180#	600#	9840#	780#	7900#	720#	2120#	780#
	Tm	69	4740#	360#	8670#	590#	6360#	300#	13100#	500#	9280#	500#	4710#	500#
	Yb	70	6762	7	9400#	200#	730	17	10400	100	7500	50	4620#	400#
	Lu	71	6025.3	1.9	6640.4	2.3	−4684	28	13864.2	2.3	9221.7	2.3	7620	50
	Hf	72	7625.94	0.18	7340.4	0.8	−8891	14	11657.8	0.8	7594.4	0.8	7906.6	1.4
	Ta	73	6960#	50#	5010#	50#	−14340#	60#	14690#	50#	8750#	50#	10210#	50#
	W	74	8780	30	5981	15	−18410	18	11670	30	6870	30	9721	15
	Re	75	7460	40	3240	40	−23350	30	15700	40	8840	40	12400	40
	Os	76	9659	20	4560	30	−27229	17	12230	30	6610	30	11730	30
	Ir	77	8278	27	1587	24	−31640#	100#	16588	22	8715	22	14680	30
	Pt	78	10698	18	3239	22	−35571	25	12595	13	6261	16	13754	16
	Au	79	8829	14	222	18	*		17342	16	8270	21	16738	16
	Hg	80	11610	90	2059	15	*		12920	30	5950	40	15040	21
	Tl	81	9340#	100#	−870#	130#	*		17880#	100#	8220#	130#	18440#	110#
	Pb	82	*		380	30	*		13700	90	*		17190	80
179	Er	68	3890#	780#	11240#	710#	14380#	500#	10910#	710#	8180#	710#	3180#	710#
	Tm	69	5730#	500#	8930#	720#	8460#	400#	11670#	640#	9590#	570#	3140#	640#
	Yb	70	5030#	200#	9690#	360#	2660#	200#	11640#	280#	7600#	220#	5640#	450#
	Lu	71	6792	5	6671	8	−2475	25	12638	5	9296	5	5960	100
	Hf	72	6098.99	0.08	7414.1	2.1	−7443	16	12631.7	0.8	7783.4	0.8	8674.7	1.4
	Ta	73	7830#	50#	5211.1	0.4	−12276	10	13234.1	0.5	9083.0	1.1	8671.3	0.9
	W	74	6959	21	5990#	50#	−17027	17	13130	15	6930	30	10928	15
	Re	75	9000	40	3466	29	−21596	27	13830	40	8920	40	10430	40
	Os	76	7547	21	4660	30	−26090	30	13960	30	6910	30	13270	30
	Ir	77	9899	21	1826	17	−29810	40	14586	18	8914	15	12628	30
	Pt	78	8342	13	3303	20	−34320	80	14490	21	6478	11	15509	14
	Au	79	10757	16	280	15	*		15093	19	8809	17	14540	14
	Hg	80	8690	30	1919	30	*		15324	30	6450	40	17650	30
	Tl	81	11730#	110#	−760	40	*		15220	90	8380	40	15900	50
	Pb	82	9590	80	620#	130#	*		16100	80	6331	19	19480	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
177	Ho	67	9120#	640#	*		−2200#	710#	11290#	540#	*		2280#	640#
	Er	68	10350#	640#	20710#	710#	−1540#	640#	8130#	500#	−16540#	710#	−1560#	510#
	Tm	69	11400#	210#	18850#	450#	−640#	360#	4810#	200#	−15470#	540#	−2150#	200#
	Yb	70	12433.48	0.23	16910#	400#	240#	200#	1894.3	1.4	−11650#	400#	−5675.4	1.2
	Lu	71	13360.86	0.22	14650	50	1447	5	−669	3	−10300	100	−5878.8	0.9
	Hf	72	14541.6	2.0	12763.1	1.4	2245.6	1.4	−3179	28	−6678.4	1.4	−9590	30
	Ta	73	15449	28	11127	3	2741	3	−5446	28	−5621	3	−9144	28
	W	74	16210	40	9798	28	3290	40	−7750	30	−2414	28	−12710	40
	Re	75	17120	40	8440	40	3700	40	−10220	30	−2190	40	−12210	30
	Os	76	17994	19	6900	30	4350	30	−12586	21	1400	30	−16146	17
	Ir	77	18796	23	5340	30	5080	30	−14502	22	1730	30	−15185	23
	Pt	78	19804	24	3843	19	5642.9	2.7	−16590	90	5472	19	−18920	40
	Au	79	20280	40	2729	16	6298	4	−18206	24	5047	13	−17832	15
	Hg	80	20950	120	1650	90	6740	60	*		8870	90	−21430	120
	Tl	81	*		510	40	7067	7	*		7890	40	*	
178	Ho	67	8880#	710#	*		−2590#	710#	12110#	580#	*		2660#	710#
	Er	68	9770#	720#	21230#	780#	−1560#	780#	9420#	600#	*		−760#	630#
	Tm	69	11010#	320#	19430#	580#	−800#	420#	6100#	300#	−15250#	580#	−1330#	300#
	Yb	70	12328	7	17620#	400#	−150#	300#	2758	7	−14110#	500#	−5365	7
	Lu	71	13098.2	1.9	15540	100	1100	40	260#	50#	−10060#	200#	−5528.5	2.1
	Hf	72	14001.6	1.0	13522.0	1.4	2084.2	1.4	−2028	15	−8737.9	1.4	−8792	3
	Ta	73	15380#	60#	11790#	50#	2550#	50#	−4950#	60#	−5500#	50#	−8970#	60#
	W	74	15910	30	10409	15	3013	15	−6863	20	−4815	15	−12210	30
	Re	75	16730	40	8870	40	3660	40	−9400	30	−1228	28	−11770	30
	Os	76	17556	17	7480	30	4260	30	−11547	17	−1130	30	−15568	24
	Ir	77	18515	20	5770	30	4990	30	−13951	21	2730	30	−14955	24
	Pt	78	19206	16	4444	15	5573.0	2.2	−15682	15	2670	18	−18523	14
	Au	79	19920	30	2999	13	6058	5	−17690#	100#	6455	22	−17600	90
	Hg	80	20673	15	1959	17	6577.3	3.0	−19889	25	5766	18	−21047	24
	Tl	81	21340#	130#	670#	110#	7020	10	*		9640#	100#	*	
	Pb	82	*		−780	26	7789	13	*		9060	90	*	
179	Er	68	9360#	710#	*		−1780#	710#	10560#	540#	*		90#	580#
	Tm	69	10470#	450#	20200#	640#	−1030#	570#	7160#	400#	−17060#	640#	−300#	400#
	Yb	70	11800#	200#	18360#	540#	−410#	450#	3820#	200#	−13670#	630#	−4370#	200#
	Lu	71	12818	5	16070#	200#	830	50	1298	5	−12110#	300#	−4695	5
	Hf	72	13724.93	0.19	14054.6	1.4	1807.6	1.4	−1168	15	−8075	7	−7940#	50#
	Ta	73	14785	3	12551.5	0.9	2383.3	0.9	−3773	25	−7308.5	2.1	−8022	15
	W	74	15740	30	10992	15	2762	15	−6275	21	−4149	15	−11710	30
	Re	75	16460	40	9448	25	3400	40	−8503	27	−3280#	60#	−11111	28
	Os	76	17206	21	7900	30	4190	30	−10752	17	98	22	−14837	24
	Ir	77	18177	22	6390	30	4782	30	−13093	15	283	30	−14156	14
	Pt	78	19040	17	4890	17	5412	9	−15335	29	3987	16	−18036	13
	Au	79	19585	15	3519	23	5981	5	−16720	40	3977	22	−16745	16
	Hg	80	20300	90	2140	30	6350	30	−18980	90	7776	30	−20390#	110#
	Tl	81	21070	40	1300	40	6709.1	2.6	*		6740	40	−19910	50
	Pb	82	*		−250	120	7596	5	*		11080	80	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
180	Er	68	5170#	710#	*		16600#	500#	9660#	710#	7960#	710#	*	
	Tm	69	4340#	570#	9380#	640#	10760#	400#	12800#	720#	9550#	640#	3760#	640#
	Yb	70	6150#	360#	10110#	500#	4920#	300#	10230#	420#	7710#	360#	3780#	590#
	Lu	71	5690	70	7330#	210#	−840	70	13710	70	9170	70	6540#	210#
	Hf	72	7387.76	0.15	8009	5	−5423	16	11269.2	2.1	7468.5	0.8	6853.3	1.4
	Ta	73	6647.5	2.4	5759.6	2.3	−10956	22	14212.5	2.3	8811.2	2.3	9096.7	2.3
	W	74	8412	15	6567.8	0.5	−15206	10	11670#	50#	6943	3	8890.9	0.4
	Re	75	7320	30	3831	26	−20212	22	15281	26	8730	40	11524	22
	Os	76	9407	22	5061	29	−24106	20	12010	30	6780	30	10990	30
	Ir	77	7967	24	2246	27	−28590	70	16278	26	8843	26	13940	40
	Pt	78	10233	13	3637	14	−32489	16	12535	21	6482	22	13173	18
	Au	79	8708	13	646	9	*		17083	11	8609	16	16068	20
	Hg	80	11390	30	2551	17	*		12763	16	6159	14	14766	20
	Tl	81	9190	80	−250	80	*		17640	70	8250	110	17800	70
	Pb	82	12060	80	960	40	*		13380#	100#	6263	20	16480	90
181	Tm	69	5340#	640#	9550#	710#	13000#	500#	11350#	710#	9690#	780#	2340#	710#
	Yb	70	4440#	420#	10210#	500#	7150#	300#	11520#	500#	8020#	420#	4820#	670#
	Lu	71	6190	140	7370#	330#	1720	130	12550#	240#	9740	130	5090#	330#
	Hf	72	5694.80	0.07	8020	70	−3853	25	12367	5	7799.0	2.1	7921	7
	Ta	73	7576.8	1.3	5948.6	1.9	−8976	5	12734.8	1.9	8860.4	1.9	7545.2	2.6
	W	74	6669.02	0.16	6589.3	2.4	−13852	14	12834.3	0.5	7230#	50#	9847.8	0.4
	Re	75	8751	25	4170	13	−18646	24	13489	19	8754	20	9730#	50#
	Os	76	7265	30	5000	30	−22889	30	13750	40	6970	40	12503	30
	Ir	77	9557	22	2396	17	−26664	11	14268	16	8945	15	11837	28
	Pt	78	8023	17	3693	26	−31270	90	14411	17	6737	23	14809	19
	Au	79	10317	21	730	22	*		15108	22	8990	22	14030	27
	Hg	80	8482	20	2324	16	*		15038	19	6506	18	16983	18
	Tl	81	11480	70	−163	14	*		14845	30	8381	14	15151	14
	Pb	82	9240	90	1010	110	*		15870	90	6370#	130#	18850	90
182	Tm	69	4120#	710#	*		14940#	500#	12400#	710#	9450#	710#	*	
	Yb	70	5880#	500#	10750#	640#	9350#	400#	9980#	570#	7860#	570#	2830#	640#
	Lu	71	5040#	240#	7970#	360#	3680#	230#	13660#	360#	9730#	280#	5780#	450#
	Hf	72	6718	6	8540	130	−1441	23	11340	70	7873	8	6240#	200#
	Ta	73	6062.94	0.11	6316.7	1.9	−7379	21	14059.6	1.9	8896.4	1.9	8275	5
	W	74	8083.5	1.6	7096.1	1.5	−12078	13	11398.3	2.0	6975.4	1.6	7863.3	1.6
	Re	75	7000	100	4500	100	−17140	100	14900	100	8710	100	10560	100
	Os	76	9130	30	5381	25	−21032	24	11940	30	6840	30	10333	26
	Ir	77	7660	22	2790	30	−25724	24	16015	26	8833	26	13180	30
	Pt	78	9858	19	3994	14	−29344	18	12520	25	6777	16	12498	20
	Au	79	8504	27	1211	23	*		16837	21	8828	20	15424	21
	Hg	80	10987	18	2995	22	*		12760	11	6276	15	14338	13
	Tl	81	8600	15	−45	19	*		17634	17	8470	30	17308	17
	Pb	82	11790	90	1315	15	*		13280	70	6310	40	15750	30
183	Yb	70	4170#	570#	10800#	640#	11370#	400#	11150#	640#	8030#	570#	3830#	640#
	Lu	71	6020#	220#	8110#	410#	6090	80	12080#	310#	9870#	310#	4100#	410#
	Hf	72	5310	30	8800#	200#	380	60	12220	130	8260	80	7080#	300#
	Ta	73	6934.18	0.20	6533	6	−5091	25	12820.2	1.9	9350.0	1.9	7030	70
	W	74	6190.84	0.04	7223.9	1.5	−10592	14	12784.2	1.5	7432.0	2.0	9060.2	1.6
	Re	75	8430	100	4852	8	−15618	12	13135	8	8691	8	8770	8
	Os	76	7130	50	5510	110	−19860	50	13560	50	7040	50	11620	50
	Ir	77	9220	30	2880	30	−23615	26	14060	40	9018	29	11280	30
	Pt	78	7676	19	4010	25	−28190	30	14401	15	7068	26	14229	21
	Au	79	9959	21	1312	16	*		14901	17	9102	14	13432	24
	Hg	80	8299	12	2790	20	*		14777	21	6685	9	16272	12
	Tl	81	11331	15	299	14	*		14785	18	8527	16	14685	10
	Pb	82	8830	30	1540	30	*		15930	30	6670	80	18320	30

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
180	Er	68	9060#	780#	*		−2000#	710#	11540#	580#	*		650#	640#
	Tm	69	10070#	500#	20620#	640#	−1210#	640#	8510#	410#	*		400#	450#
	Yb	70	11190#	300#	19040#	670#	−510#	500#	5060#	300#	−15930#	580#	−3730#	300#
	Lu	71	12480	70	17010#	310#	270	120	2260	70	−12070#	410#	−4280	70
	Hf	72	13486.75	0.17	14680	7	1286.9	1.4	−143.23	0.28	−10430#	200#	−7493.3	0.4
	Ta	73	14480#	50#	13173.7	3.0	2023.8	2.3	−3096	21	−7164	5	−7710	15
	W	74	15372	15	11778.8	0.3	2515.3	1.0	−5280	16	−6462.2	0.3	−11123	25
	Re	75	16330	40	9820#	60#	3100	40	−7860	30	−2769	21	−10889	26
	Os	76	16955	21	8527	22	3860	30	−9926	19	−2350	21	−14346	19
	Ir	77	17866	29	6900	40	4660	40	−12352	22	1320	30	−13781	23
	Pt	78	18575	14	5464	17	5276	5	−14179	16	1301	18	−17513	15
	Au	79	19465	11	3949	19	5831	7	−16240	70	5167	11	−16764	29
	Hg	80	20078	17	2831	16	6258.5	2.3	−18309	18	4729	15	−20050	40
	Tl	81	20920#	120#	1670	70	6710	60	*		8310	70	−19510	110
	Pb	82	21657	26	204	16	7419	5	*		7700	30	*	
181	Tm	69	9680#	640#	*		−1590#	710#	9360#	520#	*		1210#	580#
	Yb	70	10590#	360#	19590#	580#	−660#	590#	6320#	300#	−15200#	580#	−2480#	310#
	Lu	71	11880	130	17480#	420#	350#	240#	3640	130	−13920#	420#	−3090	130
	Hf	72	13082.56	0.17	15340#	200#	1158.5	1.4	831.0	0.3	−9970#	300#	−6540.6	2.3
	Ta	73	14224.2	2.0	13958	5	1519.9	1.8	−1922	13	−9050	70	−6874.1	1.9
	W	74	15081	15	12348.9	0.4	2221.9	0.4	−4684	25	−5743.4	0.3	−10468	21
	Re	75	16076	28	10738	13	2772	13	−7054	14	−4873	13	−10233	20
	Os	76	16672	30	8833	29	3730	40	−9168	29	−1203	25	−13640	30
	Ir	77	17524	11	7457	25	4381	28	−11592	21	−915	22	−13104	11
	Pt	78	18256	16	5939	21	5150	5	−13720	21	2686	21	−16827	14
	Au	79	19025	23	4367	22	5751.4	2.9	−15072	22	2817	29	−15692	24
	Hg	80	19870	30	2971	17	6284	4	−17550	90	6480	18	−19340	70
	Tl	81	20670	40	2388	15	6322	4	*		5538	10	−18929	15
	Pb	82	21300	120	760	90	7240	7	*		9850	90	*	
182	Tm	69	9460#	640#	*		−1790#	710#	10280#	540#	*		1530#	580#
	Yb	70	10320#	500#	20300#	640#	−1070#	720#	7150#	400#	*		−2170#	420#
	Lu	71	11240#	210#	18180#	450#	50#	360#	4660#	200#	−13620#	540#	−2440#	200#
	Hf	72	12413	6	15910#	300#	1203	9	2197	6	−12250#	300#	−5682	6
	Ta	73	13639.7	1.3	14330	70	1482.3	2.6	−980	100	−8920	130	−6268.1	2.0
	W	74	14752.5	1.6	13044.6	1.6	1764.3	1.6	−3637	22	−8132.2	1.6	−9800	13
	Re	75	15750	100	11090	100	2730#	120#	−6390	100	−4300	100	−9970	110
	Os	76	16396	27	9551	22	3373	27	−8441	25	−3664	22	−13217	22
	Ir	77	17220	30	7792	30	4180	30	−10748	28	177	24	−12742	25
	Pt	78	17881	16	6390	20	4951	5	−12592	16	93	29	−16369	24
	Au	79	18821	19	4904	29	5525	4	−14977	22	3870	19	−15714	24
	Hg	80	19469	16	3725	14	5996	5	−16752	16	3516	17	−18849	13
	Tl	81	20080	70	2280	13	6551	6	*		7255	23	−18290	90
	Pb	82	21026	17	1152	17	7066	6	*		6548	20	*	
183	Yb	70	10050#	500#	*		−1350#	640#	8280#	400#	*		−1300#	450#
	Lu	71	11060	150	18850#	510#	−240#	410#	5580	80	−15520#	510#	−1740	80
	Hf	72	12020	30	16770#	300#	930#	200#	3080	30	−11670#	400#	−4920	30
	Ta	73	12997.12	0.23	15070	130	1341	5	516	8	−10810#	200#	−5118.7	1.5
	W	74	14274.4	1.6	13540.6	1.6	1672.5	1.6	−2700	50	−7605	6	−8990	100
	Re	75	15435	15	11949	8	2123	8	−5608	26	−6668	8	−9272	23
	Os	76	16260	60	10010	50	3210	50	−7890	50	−2710	50	−12680	50
	Ir	77	16882	25	8263	28	3960	30	−10011	26	−2040	100	−12105	28
	Pt	78	17534	20	6801	29	4822	9	−11969	16	1547	26	−15541	24
	Au	79	18463	22	5306	11	5465.3	2.9	−13604	13	1571	23	−14686	14
	Hg	80	19286	17	4001	15	6039	4	−16225	30	5075	15	−18549	14
	Tl	81	19931	13	3294	22	5976	9	*		4428	21	−17834	15
	Pb	82	20610	90	1500	30	6928	7	*		8710	30	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
184	Yb	70	5670#	640#	*		13110#	500#	9600#	710#	7700#	710#	*	
	Lu	71	4660#	220#	8590#	450#	7920#	200#	13310#	450#	9650#	360#	4790#	540#
	Hf	72	6290	50	9070	90	2750	40	10980#	200#	8160	130	5240#	300#
	Ta	73	5617	26	6840	40	−3230	40	13921	27	9428	26	7600	130
	W	74	7411.11	0.13	7700.9	1.5	−8373	15	11436.0	1.5	7597.7	1.5	7343.9	1.6
	Re	75	6481	9	5143	4	−13901	23	14737	4	8878	5	9866	4
	Os	76	8660	50	5732	8	−17908	10	11900	100	7129	13	9627.8	1.6
	Ir	77	7480	40	3240	60	−22728	30	15710	40	8800	40	12550	30
	Pt	78	9631	20	4419	29	−26281	20	12430	26	6995	16	11864	29
	Au	79	8199	24	1834	26	−31570#	120#	16561	26	8927	26	14791	23
	Hg	80	10611	12	3442	13	*		12670	21	6390	22	13683	17
	Tl	81	8367	14	368	12	*		17404	14	8642	18	16634	22
	Pb	82	11540	30	1753	16	*		12986	18	6611	14	15256	20
	Bi	83	*		−1550#	130#	*		18790#	120#	9230#	150#	19700#	120#
185	Yb	70	3950#	710#	*		14910#	500#	*		7870#	710#	*	
	Lu	71	5730#	360#	8650#	590#	9860#	300#	11750#	500#	9800#	500#	3180#	580#
	Hf	72	4890	80	9310#	210#	4490	60	12110	100	8310#	210#	6230#	410#
	Ta	73	6626	30	7180	40	−1060	30	12600	30	9519	15	6020#	200#
	W	74	5753.74	0.05	7837	26	−6700	26	12616.5	1.5	7906.9	1.5	8308	6
	Re	75	7671	4	5402.6	0.7	−11960.9	2.7	13257.4	0.7	9291.2	0.7	8258.0	1.6
	Os	76	6624.66	0.27	5875	4	−16622	14	13715	8	7500	100	11086.6	0.7
	Ir	77	8800	40	3372	28	−20580	30	14040	60	9140	40	10760	110
	Pt	78	7427	30	4370	40	−25150	30	14220	40	7230	30	13570	30
	Au	79	9611	22	1815	15	−29620#	80#	14626	14	9174	13	12840	21
	Hg	80	7910	17	3154	26	*		14719	17	6984	23	15631	19
	Tl	81	10946	23	702	23	*		14758	22	8683	23	14193	28
	Pb	82	8561	21	1947	19	*		15757	19	6650	20	17682	19
	Bi	83	11560#	150#	−1530#	80#	*		16060#	90#	9450#	80#	16740#	80#
186	Lu	71	4430#	500#	9130#	640#	11610#	400#	12990#	640#	9540#	570#	*	
	Hf	72	6180	80	9750#	300#	6580	50	10590#	210#	8160	100	4220#	400#
	Ta	73	5280	60	7580	90	560	60	13600	70	9540	70	6750	100
	W	74	7192.0	1.2	8403	14	−4644	22	11042	26	7649.0	1.9	6420	30
	Re	75	6179.59	0.05	5828.4	0.7	−10212	21	14488.9	0.7	9302.4	0.7	9012.6	1.6
	Os	76	8265.4	0.9	6470.0	0.8	−14461	12	11931	4	7674	8	9012.0	0.9
	Ir	77	6910	30	3655	17	−19289	27	15791	17	9360	50	12284	18
	Pt	78	9250	30	4820	40	−23184	24	12460	40	7200	30	11450	50
	Au	79	7928	21	2320	30	−28569	27	16328	26	8922	25	14130	30
	Hg	80	10427	18	3970	12	−32641	22	12490	25	6516	15	12881	18
	Tl	81	8197	29	988	25	*		17173	23	8786	22	15955	23
	Pb	82	11211	20	2212	23	*		12913	15	6770	14	14770	13
	Bi	83	8980#	80#	−1107	23	*		18617	21	9300	30	19088	19
	Po	84	*		950#	80#	*		13560#	120#	*		17330	30
187	Lu	71	5520#	570#	*		13450#	400#	11420#	640#	9700#	640#	*	
	Hf	72	4650#	210#	9970#	450#	8220#	200#	11670#	360#	8160#	280#	5250#	540#
	Ta	73	6360	80	7760	80	2650	60	12140	90	9470	70	5050#	210#
	W	74	5466.76	0.04	8590	60	−3219	24	12201	14	7799	26	7240	40
	Re	75	7360.5	0.9	5996.9	1.1	−8188	23	12882.1	0.9	9353.0	0.9	7269	26
	Os	76	6290.3	0.5	6580.7	0.9	−13101	13	13310.8	0.9	7865	4	10132.8	0.9
	Ir	77	8450	30	3838	28	−17105	29	13967	28	9567	28	10317	28
	Pt	78	6890	30	4802	29	−21698	25	14360	40	7790	40	13214	24
	Au	79	9390	30	2450	30	−26646	25	14370	30	9168	27	12230	40
	Hg	80	7651	17	3693	25	−30940	40	14450	13	7064	26	14860	20
	Tl	81	10633	22	1195	14	*		14450	16	8764	12	13521	24
	Pb	82	8377	12	2393	21	*		15482	21	6760	11	17004	11
	Bi	83	11309	20	−1009	15	*		15869	19	9532	16	16146	14
	Po	84	9350	40	1320	40	*		15770#	90#	6430#	130#	19520	40

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
184	Yb	70	9840#	640#	*		−1850#	710#	8900#	510#	*		−960#	510#
	Lu	71	10670#	280#	19390#	540#	−560#	450#	6540#	200#	*		−1090#	200#
	Hf	72	11590	40	17180#	400#	800#	300#	4210	40	−13790#	400#	−4280	40
	Ta	73	12551	26	15650#	200#	1410	80	1380	26	−10410	80	−4545	26
	W	74	13601.94	0.14	14234	6	1649.1	1.6	−1452.9	0.7	−9710	30	−7967	8
	Re	75	14920	100	12367	4	2289	5	−4609	28	−6215	4	−8630	50
	Os	76	15786	22	10584.4	0.7	2958.8	1.6	−6920	15	−5175.9	0.7	−12122	25
	Ir	77	16700	30	8740	110	3800	40	−9290	40	−1090	29	−11910	30
	Pt	78	17307	20	7301	26	4599	8	−10988	18	−960	50	−15212	17
	Au	79	18157	29	5840	30	5234	5	−13435	24	2590	30	−14585	23
	Hg	80	18911	14	4754	16	5660	4	−15293	16	2139	17	−17829	13
	Tl	81	19699	16	3157	21	6317	9	−18140#	120#	6019	14	−17370	30
	Pb	82	20370	18	2053	16	6774	3	*		5464	15	*	
	Bi	83	*		−0#	120#	8220#	100#	*		10550#	120#	*	
185	Yb	70	9620#	640#	*		*		9840#	500#	*		−250#	540#
	Lu	71	10390#	310#	*		−950#	580#	7430#	300#	*		−530#	300#
	Hf	72	11180	70	17900#	410#	340#	310#	5070	60	−13010#	510#	−3550	70
	Ta	73	12243	14	16260	80	980	130	2425	14	−12380#	200#	−3760	14
	W	74	13164.84	0.14	14680	30	1590.2	1.6	−582.0	0.7	−9180	40	−7239	4
	Re	75	14152	8	13103.4	1.6	2195.1	1.6	−3483	28	−8269	26	−7637.8	0.5
	Os	76	15280	50	11018.2	0.7	3003.1	1.6	−6118	26	−4389.4	0.7	−11266	28
	Ir	77	16280	40	9104	29	3760	30	−8477	28	−3405	28	−11070	30
	Pt	78	17058	29	7600	60	4437	10	−10504	29	275	26	−14440	30
	Au	79	17809	10	6234	25	5180	5	−12100	21	464	28	−13585	10
	Hg	80	18522	15	4988	20	5773	4	−14642	21	3860	20	−17372	17
	Tl	81	19313	23	4144	23	5688	5	−17520#	80#	3270	30	−16777	24
	Pb	82	20100	30	2314	18	6695	5	*		7515	19	−20870#	120#
	Bi	83	*		230#	80#	8140#	80#	*		7360#	80#	*	
186	Lu	71	10160#	450#	*		−1260#	640#	8290#	400#	*		−70#	410#
	Hf	72	11070	60	18400#	510#	50#	400#	6080	50	−15230#	500#	−3100	50
	Ta	73	11910	70	16890#	210#	740#	210#	3320	60	−11940#	310#	−3290	60
	W	74	12945.8	1.2	15590	40	1116	6	491.4	1.2	−11480	60	−6760.9	1.2
	Re	75	13850	4	13666	26	2078.4	1.6	−2755	17	−7822	14	−7192.7	0.4
	Os	76	14890.1	0.9	11872.5	0.9	2821.2	0.9	−5136	22	−6901.1	0.9	−10736	28
	Ir	77	15700	30	9530	17	3850	100	−7457	27	−2642	17	−10560	30
	Pt	78	16675	26	8190	22	4320	18	−9325	25	−2348	22	−14078	22
	Au	79	17540	30	6680	30	4912	14	−11832	29	1330	30	−13603	25
	Hg	80	18337	15	5785	19	5204	10	−13858	16	860	28	−16853	24
	Tl	81	19142	23	4140	30	5996	26	−16737	27	4686	21	−16413	26
	Pb	82	19772	17	2914	15	6471	5	−18782	21	4214	18	−20520#	80#
	Bi	83	20540#	120#	840	20	7757	12	*		9323	27	*	
	Po	84	*		−575	22	8501	14	*		8354	24	*	
187	Lu	71	9950#	500#	*		*		9130#	400#	*		580#	400#
	Hf	72	10820#	210#	19100#	540#	−430#	450#	6900#	200#	*		−2460#	210#
	Ta	73	11640	60	17510#	310#	400	100	4320	60	−13860#	400#	−2460	60
	W	74	12658.8	1.2	16160	60	950	30	1315.0	1.1	−10770	50	−6048.0	1.2
	Re	75	13540.1	0.9	14400	14	1652.1	1.7	−1667	28	−9900	60	−6287.8	0.5
	Os	76	14555.7	0.9	12409.1	0.9	2721.7	0.9	−4534	24	−5999.4	1.1	−10118	17
	Ir	77	15360	40	10308	28	3835	29	−6520	40	−4911	28	−9760	40
	Pt	78	16140	40	8457	24	4550	60	−8567	27	−974	24	−13040	30
	Au	79	17313	23	7270	40	4750	30	−10584	24	−1145	28	−12561	25
	Hg	80	18077	19	6008	29	5230	14	−13132	14	2457	25	−16307	24
	Tl	81	18829	22	5164	8	5322	7	−16061	13	1981	22	−15835	14
	Pb	82	19588	17	3381	15	6393	6	−17810	30	6263	13	−19913	18
	Bi	83	20290#	80#	1203	23	7779	4	*		6211	23	−18556	21
	Po	84	*		210	40	7979	15	*		10220	30	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
188	Lu	71	4120#	570#	*		15200#	400#	*		9520#	640#	*	
	Hf	72	5900#	360#	10350#	500#	10310#	300#	10200#	500#	8000#	420#	3300#	580#
	Ta	73	5090#	210#	8200#	280#	4440#	200#	13230#	210#	9270#	210#	5700#	360#
	W	74	6835	3	9060	60	−847	6	10650	60	7591	14	5300	60
	Re	75	5871.65	0.04	6401.8	1.1	−6645.6	2.8	14202.5	1.1	9235.0	0.9	8024	14
	Os	76	7989.60	0.15	7209.72	0.15	−10939	7	11500.8	0.9	7545.8	0.9	7897.0	0.9
	Ir	77	6867	29	4415	9	−16010	30	15366	9	9325	9	11120	9
	Pt	78	9207	25	5561	28	−20010	11	12062	17	7379	28	10631	5
	Au	79	7414	23	2975	24	−25177	12	16204	22	9181	26	13611	28
	Hg	80	10151	15	4459	24	−29654	21	12227	22	6524	7	12136	27
	Tl	81	7960	30	1510	30	*		16910	30	8710	30	15170	30
	Pb	82	10895	11	2655	13	*		12783	23	6811	23	14019	17
	Bi	83	8883	15	−503	12	*		18197	16	9210	20	18209	24
	Po	84	11440	40	1450	22	*		13312	26	6560#	80#	16643	26
189	Hf	72	4390#	420#	10620#	500#	11840#	300#	11330#	500#	8030#	500#	*	
	Ta	73	6120#	280#	8420#	360#	6490#	200#	11750#	280#	9330#	210#	4010#	450#
	W	74	5210#	200#	9190#	280#	660#	200#	11800#	210#	7660#	210#	6260#	210#
	Re	75	7034	8	6600	9	−4397	22	12636	8	9394	8	6270	60
	Os	76	5920.8	0.4	7258.9	0.5	−9360	30	12940.6	0.5	7804.6	0.9	9168.2	1.2
	Ir	77	8176	16	4601	13	−13834	15	13480	13	9414	13	9124	13
	Pt	78	6720	11	5413	14	−18625	17	13791	30	7567	19	12177	10
	Au	79	9282	20	3050	21	−23517	29	13810	30	9147	30	11237	26
	Hg	80	7500	30	4540	30	−28200	40	14110	40	6950	40	13880	40
	Tl	81	10350	30	1707	11	*		14213	15	8787	14	12745	23
	Pb	82	8104	17	2800	30	*		15311	16	6903	25	16341	18
	Bi	83	10941	24	−457	23	*		15633	21	9480	24	15465	29
	Po	84	8949	30	1516	25	*		15672	24	6588	28	18905	25
190	Hf	72	5720#	500#	*		13910#	400#	9730#	570#	7830#	570#	*	
	Ta	73	4830#	280#	8860#	360#	8030#	200#	12820#	360#	9140#	280#	4700#	450#
	W	74	6630#	200#	9700#	200#	2940	40	10250#	200#	7390	70	4280#	200#
	Re	75	5675	9	7060#	200#	−2749	6	13796	6	9185	5	6960	60
	Os	76	7792.34	0.19	8018	8	−7337	16	11019.9	0.5	7372.8	0.5	6842.6	1.2
	Ir	77	6375	13	5055.8	1.2	−12387	7	15094.5	1.3	9329.5	1.3	10109.3	1.3
	Pt	78	8908	10	6146	13	−16890	13	11749	9	7107	28	9558.9	0.6
	Au	79	7323	20	3653	11	−22238	21	15698	6	8716	24	12362	28
	Hg	80	9820	40	5078	26	−26808	21	11711	16	6522	28	10961	29
	Tl	81	7821	11	2030	30	*		16543	10	8616	15	14309	24
	Pb	82	10644	19	3089	15	*		12630	30	6892	15	13348	18
	Bi	83	8603	30	41	25	*		17926	23	9255	22	17495	22
	Po	84	11212	26	1787	25	*		13343	17	6685	17	16071	14
191	Ta	73	5870#	360#	9010#	500#	10190#	300#	11340#	420#	9170#	420#	2950#	500#
	W	74	4880	50	9750#	210#	4520	40	11490#	210#	7600#	210#	5300#	300#
	Re	75	6839	11	7270	40	−552	11	12170#	200#	9182	11	5210#	200#
	Os	76	5758.73	0.11	8101	5	−5803	22	12295	8	7485.7	0.5	7919	3
	Ir	77	8026.5	0.4	5290.0	1.1	−10426	7	12988.8	1.2	9292.5	1.2	7954.5	1.2
	Pt	78	6463	4	6234	4	−15407	8	13462	13	7511	10	11085	4
	Au	79	9036	6	3780	5	−20559	9	13382	11	8887	7	10193	11
	Hg	80	7293	27	5047	23	−25523	23	13701	30	6644	22	12876	23
	Tl	81	9988	10	2201	18	−30147	18	14050	30	8779	10	11735	8
	Pb	82	7946	14	3214	10	*		15036	11	6910	30	15554	9
	Bi	83	10715	22	112	15	*		15315	16	9436	13	14740	30
	Po	84	8577	15	1762	22	*		15707	22	6990	13	18389	12
	At	85	*		−1138	21	*		15997	27	9272	26	16705	20

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
188	Lu	71	9640#	570#	*		*		10090#	450#	*		1110#	450#
	Hf	72	10550#	300#	*		−650#	590#	7840#	300#	*		−2010#	310#
	Ta	73	11450#	210#	18170#	450#	−40#	280#	5110#	200#	−13430#	450#	−2080#	200#
	W	74	12302	3	16820	50	410	40	2469	3	−12960#	200#	−5523	3
	Re	75	13232.2	0.9	14990	60	1398	26	−672	9	−9410	60	−5869.18	0.04
	Os	76	14279.9	0.5	13206.6	1.1	2143.2	0.9	−3316	5	−8522.2	1.1	−9659	28
	Ir	77	15315	19	10996	9	3450	10	−5974	10	−4417	9	−9731	26
	Pt	78	16099	22	9399	5	4007	5	−7623	9	−3891	5	−12864	23
	Au	79	16799	21	7777	17	4815	28	−10030	30	−111	28	−12324	13
	Hg	80	17802	13	6912	23	4709	15	−12387	12	−802	25	−15825	11
	Tl	81	18600	40	5200	40	5560	40	−15140	30	3400	40	−15420	30
	Pb	82	19273	15	3850	15	6109	3	−17267	22	3019	16	−19499	14
	Bi	83	20192	20	1890	24	7264	5	*		7961	14	−18090	30
	Po	84	20789	27	441	23	8082	15	*		7154	21	*	
189	Hf	72	10290#	360#	*		−1100#	580#	8660#	360#	*		−1310#	360#
	Ta	73	11210#	210#	18770#	450#	−420#	360#	6020#	200#	−15430#	450#	−1360#	200#
	W	74	12050#	200#	17390#	280#	90#	210#	3180#	200#	−12270#	360#	−4860#	200#
	Re	75	12905	8	15660	60	990	16	471	15	−11360#	200#	−4913	8
	Os	76	13910.4	0.5	13660.7	1.2	1976.2	0.9	−2517	10	−7608	3	−8713	9
	Ir	77	15040	30	11811	13	2944	13	−4868	24	−6722	13	−8700	14
	Pt	78	15927	26	9828	10	3912	10	−6840	30	−2621	10	−12169	10
	Au	79	16700	30	8610	30	4330	30	−8966	22	−2526	22	−11455	21
	Hg	80	17650	30	7520	40	4640	40	−11780	30	910	30	−15360	40
	Tl	81	18314	12	6165	24	4817	9	−14551	22	466	9	−14876	13
	Pb	82	19000	15	4303	19	5915	4	−16422	26	5065	16	−18721	18
	Bi	83	19824	23	2198	22	7268.2	2.7	*		4980	40	−17592	29
	Po	84	20390	40	1013	23	7694	15	*		9100	24	*	
190	Hf	72	10110#	500#	*		*		9570#	400#	*		−910#	450#
	Ta	73	10950#	280#	19480#	450#	−830#	450#	6860#	200#	*		−980#	280#
	W	74	11840	40	18120#	300#	−370	60	4340	40	−14510#	300#	−4460	40
	Re	75	12709	5	16250#	200#	600	60	1171	5	−10910#	200#	−4668	5
	Os	76	13713.2	0.5	14618	3	1375.9	1.2	−1401.3	0.4	−10190#	200#	−8329	13
	Ir	77	14551	9	12314.7	1.3	2748.8	1.5	−3920	4	−6063	8	−8356	10
	Pt	78	15628	5	10747.1	0.6	3268.6	0.6	−5936	16	−5608.7	0.5	−11796	20
	Au	79	16605	4	9067	10	3914	17	−8467	8	−1673	13	−11280	30
	Hg	80	17315	17	8128	17	4069	27	−10954	20	−2190	19	−14826	18
	Tl	81	18170	30	6573	8	4924	22	−13770	22	1927	21	−14594	16
	Pb	82	18748	16	4796	14	5698	5	−15854	18	1920	30	−18423	24
	Bi	83	19544	24	2840	40	6862	3	*		6731	23	−17250	30
	Po	84	20161	24	1330	17	7693	7	*		5992	19	*	
191	Ta	73	10700#	360#	*		−1180#	500#	7830#	300#	*		−220#	300#
	W	74	11510#	210#	18600#	300#	−600#	210#	5220	40	−13670#	400#	−3660	40
	Re	75	12514	13	16970#	200#	120	60	2358	10	−12920#	200#	−3714	10
	Os	76	13551.07	0.22	15160#	200#	1083.9	1.2	−697	4	−9320	40	−7712.9	1.2
	Ir	77	14402	13	13308	8	2082.8	1.2	−2911	5	−8415	5	−7473.6	1.2
	Pt	78	15372	11	11289	4	3096	4	−5106	23	−4279	4	−10936	5
	Au	79	16359	21	9926	14	3327	28	−7515	9	−4333	5	−10499	17
	Hg	80	17110	40	8700	24	3670	30	−10301	23	−574	22	−14297	23
	Tl	81	17809	11	7279	21	4321	24	−13044	10	−738	8	−13938	15
	Pb	82	18590	16	5240	30	5402	14	−15223	10	3790	17	−17767	22
	Bi	83	19317	22	3201	11	6780	3	−17103	18	3838	10	−16748	15
	Po	84	19789	23	1803	16	7493	5	*		8059	14	*	
	At	85	*		649	26	7822	14	*		7171	26	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
192	Ta	73	4650#	500#	*		11740#	400#	12410#	570#	8910#	500#	*	
	W	74	6520#	210#	10390#	360#	6670#	200#	9810#	280#	7200#	280#	3180#	360#
	Re	75	5310	70	7700	80	1180	70	13490	80	9080#	210#	6020#	210#
	Os	76	7558.4	2.2	8821	10	−3871	16	10412	4	6961	8	5570#	200#
	Ir	77	6198.12	0.11	5729.4	1.1	−8960	30	14583.0	1.1	9015.2	1.2	8790	8
	Pt	78	8661.5	2.9	6868.7	2.3	−13737	6	11175.9	2.3	7025	13	8344.7	2.5
	Au	79	7046	17	4363	16	−19240	30	15245	16	8561	19	11324	20
	Hg	80	9491	27	5503	16	−23945	19	11533	16	6435	25	10104	19
	Tl	81	7660	30	2570	40	−28800	40	16210	40	8620	40	13360	40
	Pb	82	10332	9	3558	9	*		12525	9	6928	10	12720	30
	Bi	83	8370	30	530	30	*		17590	30	9170	30	16730	30
	Po	84	11069	13	2116	13	*		13240	24	6862	23	15424	18
	At	85	9010	30	−706	29	*		18200	30	9210	40	18640	30
193	Ta	73	5780#	570#	*		13730#	400#	*		8860#	570#	*	
	W	74	4640#	280#	10380#	450#	8290#	200#	11040#	360#	7390#	280#	4260#	450#
	Re	75	6710	80	7900#	200#	3170	40	11660	60	9000	50	4140#	200#
	Os	76	5583.42	0.20	9090	70	−2332	16	11667	10	7053	4	6620	40
	Ir	77	7771.99	0.20	5943.0	2.4	−7059	7	12569.7	1.2	9035.6	1.2	6693	5
	Pt	78	6262.5	2.3	6933.0	0.4	−12250	10	12940.0	0.4	7138.0	0.5	9874.6	1.2
	Au	79	8704	18	4405	9	−17520	12	13004	10	8766	9	8995	9
	Hg	80	7122	22	5579	22	−22737	21	13447	16	6635	16	11891	16
	Tl	81	9680	30	2755	17	−27410	23	13825	23	8757	17	11003	8
	Pb	82	7749	12	3650	30	−31272	27	14765	13	7001	13	14788	19
	Bi	83	10420	30	622	9	*		15117	10	9396	15	14128	10
	Po	84	8330	18	2080	30	*		15625	16	7135	26	17738	19
	At	85	11060	40	−710	24	*		15712	23	9359	25	16170	30
	Rn	86	*		1170	40	*		15890	30	*		19252	28
194	Ta	73	4390#	640#	*		15400#	500#	*		*		*	
	W	74	6290#	360#	10890#	500#	10350#	300#	9400#	500#	6970#	420#	*	
	Re	75	5100#	200#	8360#	280#	4950#	200#	13070#	280#	8780#	210#	4910#	360#
	Os	76	7112	3	9490	40	−251	4	9860	70	6779	10	4390	40
	Ir	77	6066.79	0.11	6426.3	2.4	−5594	14	14061.3	2.4	8727.5	1.2	7465	10
	Pt	78	8351.7	1.3	7512.8	1.3	−10552	17	10786.3	1.2	6812.8	1.2	7281.5	0.5
	Au	79	6878	9	5021.2	2.5	−16189	6	14787	3	8350	5	10143.3	2.4
	Hg	80	9193	16	6068	9	−21179	13	11299	16	6478	6	9161	5
	Tl	81	7532	15	3164	21	−26221	27	15785	21	8518	26	12507	15
	Pb	82	10050	20	4020	19	−29932	24	12380	40	6939	19	12030	28
	Bi	83	8210	9	1083	12	*		17240	8	9132	8	15906	9
	Po	84	10751	19	2409	15	*		13240	30	7099	15	14933	15
	At	85	8720	30	−320	28	*		18061	26	9216	25	18169	25
	Rn	86	11390	30	1497	27	*		13510	30	6725	23	16440	18
195	W	74	4400#	420#	10900#	580#	12050#	300#	10780#	500#	7220#	500#	*	
	Re	75	6370#	360#	8440#	420#	7010#	300#	11340#	360#	8920#	360#	3190#	500#
	Os	76	5150	60	9540#	210#	1500	60	11430	70	6940	90	5750#	210#
	Ir	77	7231.86	0.06	6546.1	2.0	−3537	11	12412.9	2.4	9054.0	2.4	5540	70
	Pt	78	6105.09	0.12	7551.1	1.3	−9056	5	12453.2	1.3	6905.8	1.2	8734.8	2.3
	Au	79	8426.4	2.3	5095.9	1.0	−14541	5	12623.4	1.6	8585.5	2.7	7915.0	1.6
	Hg	80	6901	23	6090	23	−19897	24	13102	25	6623	28	10922	23
	Tl	81	9289	18	3260	11	−24685	15	13618	19	8720	19	10263	19
	Pb	82	7601	18	4090	15	−28790	50	14450	8	7000	30	13920	16
	Bi	83	10074	7	1107	18	*		14914	12	9390	8	13490	30
	Po	84	8183	14	2383	8	*		15479	10	7280	30	17082	8
	At	85	10825	25	−245	16	*		15566	17	9460	14	15710	30
	Rn	86	8750	50	1520	60	*		15830	60	6990	60	18760	50

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
192	Ta	73	10520#	450#	*		−1710#	570#	8490#	410#	*		10#	400#
	W	74	11390#	200#	19400#	450#	−1220#	360#	6260#	200#	*		−3340#	200#
	Re	75	12150	70	17450#	210#	−100#	210#	3250	70	−12360#	310#	−3260	70
	Os	76	13317.1	2.2	16090	40	361	4	406	3	−12000	40	−7244.8	2.4
	Ir	77	14224.7	0.4	13831	5	1756.3	1.2	−2063	16	−7774	10	−7209	4
	Pt	78	15124.7	2.5	12158.6	2.5	2423.9	2.5	−4277	16	−7182.3	2.5	−10562	6
	Au	79	16081	16	10597	16	3148	18	−6900	40	−3352	16	−10252	27
	Hg	80	16783	22	9283	16	3385	16	−9460	17	−3602	16	−13800	17
	Tl	81	17650	30	7620	30	4070	30	−12340	40	640	30	−13650	30
	Pb	82	18278	14	5759	17	5222	5	−14485	12	751	23	−17384	9
	Bi	83	19080	40	3750	30	6377	4	−16460	40	5460	30	−16540	30
	Po	84	19646	17	2228	16	7320	3	*		4936	13	−20002	19
	At	85	*		1060	30	7696	26	*		8876	29	*	
193	Ta	73	10430#	500#	*		*		9420#	400#	*		740#	450#
	W	74	11160#	210#	*		−1470#	360#	7210#	200#	*		−2670#	210#
	Re	75	12020	40	18290#	300#	−700#	200#	4300	40	−14420#	400#	−2420	40
	Os	76	13141.8	2.2	16800	40	−10#	200#	1085.3	2.4	−11060#	200#	−6630.1	2.4
	Ir	77	13970.11	0.23	14764	10	1018	8	−1131	9	−10240	70	−6319.1	2.3
	Pt	78	14924	4	12662.4	1.2	2082.2	1.2	−3418	16	−5886.3	2.4	−9779	16
	Au	79	15750	10	11274	9	2620	15	−5928	11	−5858	9	−9465	18
	Hg	80	16613	27	9942	16	2982	18	−8833	19	−2063	16	−13260	40
	Tl	81	17337	10	8257	8	3680	21	−11593	10	−1994	17	−12997	9
	Pb	82	18081	12	6215	25	4970	30	−13904	18	2493	19	−16770	30
	Bi	83	18788	11	4180	11	6307	5	−15817	23	2700	30	−15889	13
	Po	84	19399	16	2612	16	7094	4	−17368	29	6938	16	−19320	30
	At	85	20074	27	1406	23	7572	7	*		6180	40	*	
	Rn	86	*		466	26	8040	12	*		9820	27	*	
194	Ta	73	10170#	640#	*		*		10130#	540#	*		990#	540#
	W	74	10930#	360#	*		−2040#	500#	8030#	300#	*		−2250#	300#
	Re	75	11810#	210#	18740#	450#	−970#	280#	5270#	200#	−13740#	450#	−1940#	200#
	Os	76	12696	3	17390#	200#	−490	40	2324.9	2.4	−13530#	200#	−5970.2	2.0
	Ir	77	13838.78	0.23	15520	70	626	5	−319.8	2.5	−9590	40	−6123.4	0.3
	Pt	78	14614.2	2.5	13455.7	2.3	1522.8	0.5	−2576.1	2.9	−8654.7	2.3	−9427	9
	Au	79	15582	16	11954.3	2.4	2116.7	2.5	−5274	14	−4964.6	2.5	−9221	16
	Hg	80	16315	16	10473	4	2697.6	3.0	−7976	18	−4993	3	−12778	7
	Tl	81	17210	30	8743	21	3471	14	−10914	15	−822	16	−12780	17
	Pb	82	17799	18	6774	23	4738	17	−13203	22	−435	23	−16395	19
	Bi	83	18630	30	4730	30	5918	5	−15307	24	4165	9	−15769	15
	Po	84	19081	17	3031	14	6987	3	−16729	21	3936	17	−19009	25
	At	85	19780	40	1760	40	7454	11	*		7879	25	−17830	30
	Rn	86	*		787	20	7862	10	*		6761	22	*	
195	W	74	10690#	360#	*		*		8770#	310#	*		−1550#	360#
	Re	75	11470#	300#	19330#	500#	−1470#	420#	6130#	300#	−15720#	580#	−1200#	300#
	Os	76	12260	60	17900#	210#	−760	70	3280	60	−12390#	310#	−5050	60
	Ir	77	13298.65	0.13	16040	40	233	10	874.7	1.6	−11720#	200#	−5003.5	1.3
	Pt	78	14456.8	1.3	13977.4	2.3	1176.4	0.5	−1781	23	−7647.7	2.4	−8653.2	2.1
	Au	79	15305	9	12608.7	1.6	1716.8	1.6	−4412	11	−7324.3	1.6	−8454	3
	Hg	80	16094	28	11112	23	2260	24	−7275	24	−3542	23	−12147	27
	Tl	81	16821	13	9328	14	3218	12	−10130	12	−3232	11	−12019	21
	Pb	82	17651	11	7254	16	4429	23	−12621	8	1157	6	−15786	7
	Bi	83	18284	9	5126	9	5832	5	−14555	11	1623	15	−15092	14
	Po	84	18934	16	3465	12	6749.7	2.8	−16170	50	5802	18	−18471	24
	At	85	19546	24	2164	12	7344	6	*		5264	11	−17266	19
	Rn	86	20140	60	1200	50	7690	50	*		8770	50	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
196	W	74	6070#	500#	*		13910#	400#	9100#	640#	6930#	570#	*	
	Re	75	4870#	420#	8910#	420#	8780#	300#	12760#	420#	8690#	360#	4100#	500#
	Os	76	6840	70	10010#	300#	3550	40	9690#	200#	6820	60	3560#	200#
	Ir	77	5810	40	7210	70	−1940	40	13710	40	8820	40	6440	50
	Pt	78	7921.98	0.13	8241.2	1.3	−7296	8	10598.0	1.3	6755.8	1.3	6396.3	2.3
	Au	79	6643	3	5633.8	3.0	−13130	25	14332.2	3.0	8205	3	9044	3
	Hg	80	8884	23	6548	3	−18357	6	11097	4	6443	9	8300	3
	Tl	81	7413	16	3772	26	−23580	30	15398	12	8430	20	11555	15
	Pb	82	9682	9	4482	14	−27323	16	12300	16	6993	10	11360	17
	Bi	83	8055	25	1560	25	*		16910	30	9084	27	15115	25
	Po	84	10423	8	2732	8	*		13265	8	7280	9	14407	12
	At	85	8510	30	90	30	*		17800	30	9280	30	17620	30
	Rn	86	11150	50	1844	17	*		13402	27	6907	26	15947	20
197	W	74	4200#	570#	*		15550#	400#	*		7120#	640#	*	
	Re	75	6060#	420#	8900#	500#	10790#	300#	11100#	420#	8920#	420#	2430#	580#
	Os	76	4870#	200#	10010#	360#	5460#	200#	11190#	360#	7050#	280#	4980#	360#
	Ir	77	6900	40	7280	40	90	24	11960	60	9035	20	4640#	200#
	Pt	78	5846.55	0.26	8270	40	−5674	5	11983.4	1.3	6976.1	1.3	7661.8	2.4
	Au	79	8072.4	2.9	5784.2	0.5	−11453	8	12364.9	0.5	8484.4	0.5	7038.4	1.4
	Hg	80	6785.6	1.5	6690	3	−17147	10	12738	3	6536	4	9866	3
	Tl	81	8929	18	3817	14	−21999	16	13370	27	8694	14	9504	14
	Pb	82	7468	9	4538	13	−26256	17	14121	12	7056	15	13085	6
	Bi	83	9749	26	1628	11	−29940	60	14762	10	9385	19	12897	16
	Po	84	7996	11	2673	26	*		15343	11	7494	11	16461	20
	At	85	10510	30	175	10	*		15472	10	9513	15	15314	10
	Rn	86	8536	21	1870	30	*		15691	19	7091	29	18161	21
	Fr	87	*		−990	60	*		15910	80	9390	60	16620	60
198	Re	75	4710#	500#	9410#	570#	12590#	400#	12460#	570#	8610#	500#	*	
	Os	76	6590#	280#	10540#	360#	7350#	200#	9470#	360#	6820#	360#	2790#	360#
	Ir	77	5520#	200#	7920#	280#	1820#	200#	13280#	200#	8670#	210#	5500#	360#
	Pt	78	7555.6	2.1	8929	20	−3837	9	10240	40	6652.4	2.4	5250	60
	Au	79	6512.36	0.09	6450.0	0.5	−10207	28	13774.6	0.5	8077.1	0.5	7757.9	1.4
	Hg	80	8485	3	7103.5	0.5	−15481	17	10895.2	3.0	6476.8	1.2	7486.0	0.6
	Tl	81	7246	16	4277	8	−20820	9	15008	8	8349	24	10685	8
	Pb	82	9393	10	5002	16	−24837	16	12140	15	6952	14	10592	25
	Bi	83	7758	29	1917	28	−28950	40	16685	29	9228	28	14428	30
	Po	84	10152	20	3075	19	*		13250	30	7416	18	13911	18
	At	85	8425	9	605	11	*		17471	7	9272	8	16963	7
	Rn	86	10812	21	2164	16	*		13390	30	7104	16	15533	15
	Fr	87	8750	60	−780	40	*		18310	30	9390	60	18690	30
199	Re	75	5810#	570#	*		14360#	400#	10850#	570#	8870#	570#	*	
	Os	76	4740#	280#	10570#	450#	9280#	200#	10790#	360#	6950#	360#	4120#	450#
	Ir	77	6760#	200#	8090#	200#	3660	50	11390#	200#	8740	60	3610#	300#
	Pt	78	5556.0	0.5	8970#	200#	−2157	7	11586	20	6910	40	6530	40
	Au	79	7584.28	0.06	6478.7	2.1	−8296	11	12036.8	0.5	8414.8	0.5	5990	40
	Hg	80	6663.1	0.6	7254.2	0.6	−14307	5	12304.5	0.6	6456.7	3.0	8744.9	0.7
	Tl	81	8602	29	4394	28	−19236	28	13192	28	8631	28	8726	28
	Pb	82	7236	11	4992	10	−23672	10	13833	15	7129	14	12241	7
	Bi	83	9495	30	2019	14	−27569	17	14659	12	9415	13	12345	16
	Po	84	7837	18	3154	28	*		15159	10	7634	25	15756	9
	At	85	10186	7	639	18	*		15281	11	9509	8	14832	25
	Rn	86	8401	15	2140	9	*		15506	11	7220	30	17555	9
	Fr	87	10880	30	−713	19	*		15972	21	9660	20	16330	30

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
196	W	74	10470#	500#	*		*		9540#	400#	*		−1250#	500#
	Re	75	11240#	360#	19810#	580#	−1680#	500#	7080#	300#	*		−920#	310#
	Os	76	11980	40	18450#	300#	−1080#	200#	4370	40	−14830#	300#	−4660	40
	Ir	77	13050	40	16750#	200#	−270	80	1700	40	−11160#	300#	−4710	40
	Pt	78	14027.07	0.17	14787.3	2.4	812.8	2.3	−818.6	3.0	−10420	60	−8148.8	1.0
	Au	79	15069	4	13185	3	1272	3	−3642	12	−6735	3	−8197	23
	Hg	80	15785	4	11643.8	3.0	2038	4	−6478	8	−6321.0	3.0	−11742	12
	Tl	81	16702	18	9863	12	2851	20	−9488	27	−2219	12	−11830	13
	Pb	82	17283	19	7742	8	4238	17	−11880	9	−1624	24	−15394	9
	Bi	83	18129	25	5649	28	5440	40	−14100	40	2857	27	−14964	25
	Po	84	18607	14	3839	18	6658.2	2.4	−15444	15	2980	7	−18070	11
	At	85	19340	40	2470	30	7196.4	2.7	*		6820	30	−17030	60
	Rn	86	19892	22	1598	19	7617	9	*		5803	15	*	
197	W	74	10270#	500#	*		*		10210#	450#	*		−580#	500#
	Re	75	10930#	420#	*		−1970#	500#	7910#	300#	*		−150#	300#
	Os	76	11710#	210#	18920#	360#	−1320#	280#	5340#	200#	−13630#	450#	−3720#	200#
	Ir	77	12714	20	17280#	300#	−460	40	2876	20	−13190#	300#	−3691	20
	Pt	78	13768.53	0.29	15490	60	549.7	2.3	120	3	−9430	40	−7352.4	3.0
	Au	79	14715.3	1.1	14025.4	1.4	971.6	1.4	−2786	14	−8990	40	−7385.1	2.9
	Hg	80	15670	23	12324	3	1515	3	−5795	6	−5185	3	−11115	13
	Tl	81	16342	18	10365	14	2626	16	−8667	16	−4504	14	−11077	16
	Pb	82	17150	7	8310	24	3892	16	−11352	11	−208	6	−14808	25
	Bi	83	17804	10	6110	14	5365	11	−13332	12	520	15	−14290	10
	Po	84	18419	12	4233	11	6411	3	−14903	19	4666	13	−17550	30
	At	85	19028	12	2908	10	7104	3	−16610	60	4365	26	−16402	16
	Rn	86	19680	50	1951	17	7411	7	*		7690	17	*	
	Fr	87	*		850	60	7900	50	*		6880	60	*	
198	Re	75	10770#	500#	*		−2290#	640#	8720#	450#	*		20#	450#
	Os	76	11470#	200#	19440#	450#	−1620#	360#	6300#	200#	−16020#	450#	−3410#	200#
	Ir	77	12420#	200#	17930#	360#	−880#	280#	3870#	200#	−12650#	360#	−3360#	200#
	Pt	78	13402.1	2.1	16200	40	106	3	1050.3	2.1	−12110#	200#	−6835.6	2.1
	Au	79	14584.7	2.9	14720	40	526.1	1.4	−2052	8	−8606	20	−7112	3
	Hg	80	15271.0	2.9	12887.7	0.6	1380.9	0.6	−4887	9	−7823.5	0.6	−10671	14
	Tl	81	16175	14	10968	8	2258	8	−8155	29	−3678	8	−10855	9
	Pb	82	16862	12	8819	9	3692	9	−10594	19	−2816	9	−14452	12
	Bi	83	17510	40	6460	30	5140	30	−12665	28	1690	30	−14052	29
	Po	84	18147	18	4703	19	6309.7	1.4	−14243	22	1983	18	−17189	19
	At	85	18940	30	3278	25	6889.4	1.9	−16290	30	5689	10	−16290	17
	Rn	86	19348	19	2340	14	7349	4	*		4874	17	−19560	60
	Fr	87	*		1090	40	7869	20	*		8640	30	*	
199	Re	75	10520#	500#	*		*		9670#	400#	*		800#	450#
	Os	76	11330#	280#	19980#	450#	−1960#	360#	7120#	200#	*		−2630#	280#
	Ir	77	12280	50	18630#	300#	−1260#	300#	4700	40	−14700#	400#	−2570	40
	Pt	78	13111.6	2.1	16890#	200#	−300	60	2157.4	2.2	−11080#	200#	−5879.2	2.1
	Au	79	14096.64	0.11	15408	20	173.7	1.4	−1034	28	−10670#	200#	−6210.8	0.5
	Hg	80	15148	3	13704.2	0.7	822.9	0.7	−4314	7	−6931.0	2.1	−10089	8
	Tl	81	15850	30	11498	28	2083	28	−7262	30	−5768	28	−10063	29
	Pb	82	16629	8	9269	8	3357	24	−9993	9	−1566	7	−13929	28
	Bi	83	17253	13	7021	17	4933	7	−11974	12	−558	13	−13396	20
	Po	84	17988	11	5071	7	6074.3	1.9	−13679	9	3540	10	−16601	7
	At	85	18611	10	3714	10	6777.3	1.2	−15595	15	3262	28	−15664	14
	Rn	86	19213	18	2745	12	7132	4	*		6624	19	−19210	30
	Fr	87	19630	60	1451	16	7817	10	*		6191	15	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
200	Os	76	6350#	360#	11110#	500#	10950#	300#	9150#	500#	6670#	420#	1970#	500#
	Ir	77	5240#	200#	8590#	280#	5480#	200#	12740#	280#	8370#	280#	4430#	360#
	Pt	78	7282	20	9490	50	−348	22	9820#	200#	6529	28	4130#	200#
	Au	79	6218	27	7140	27	−6870	40	13375	27	8044	27	6670	30
	Hg	80	8028.52	0.11	7698.5	0.6	−12562	8	10788.3	0.6	6500.5	0.6	6562.9	0.7
	Tl	81	7059	29	4790	6	−18059	25	14618	6	8357	7	9739	6
	Pb	82	9090	12	5480	30	−22250	12	11989	13	6967	17	9936	11
	Bi	83	7644	25	2428	24	−26500	40	16408	24	9239	23	13630	26
	Po	84	9774	9	3433	13	*		13143	29	7610	11	13450	9
	At	85	8236	25	1038	25	*		17200	30	9269	26	16346	26
	Rn	86	10512	9	2466	8	*		13419	8	7219	10	15039	11
	Fr	87	8710	30	−400	30	*		18070	30	9490	30	18140	30
201	Os	76	4360#	420#	*		12820#	300#	10600#	500#	7020#	500#	*	
	Ir	77	6340#	280#	8580#	360#	7340#	200#	11140#	280#	8620#	280#	2800#	450#
	Pt	78	5210	50	9460#	200#	1530	50	11370	60	6830#	210#	5510#	210#
	Au	79	7232	27	7090	20	−4972	13	11699	4	8367	4	4960#	200#
	Hg	80	6230.6	0.6	7711	27	−11141	5	12142.0	0.8	6782.3	0.8	7887.9	2.2
	Tl	81	8205	15	4966	14	−16391	16	13076	14	8638	14	8046	14
	Pb	82	7091	17	5513	15	−21164	17	13500	30	7122	16	11330	14
	Bi	83	9130	26	2467	16	−25018	15	14514	14	9502	15	11746	14
	Po	84	7651	9	3440	23	−28458	21	14987	12	7717	28	15193	10
	At	85	9873	26	1137	11	*		15160	10	9548	19	14231	29
	Rn	86	8178	12	2408	26	*		15427	11	7465	11	17012	20
	Fr	87	10620	30	−300	11	*		15859	12	9683	16	15944	10
	Ra	88	*		1490	40	*		15876	25	7220	40	18814	24
202	Os	76	5760#	500#	*		14820#	400#	*		7060#	570#	*	
	Ir	77	4870#	360#	9090#	420#	9340#	300#	12620#	420#	8490#	360#	3740#	500#
	Pt	78	7020	60	10140#	200#	3248	25	9590#	200#	6570	50	3230#	200#
	Au	79	6024	24	7900	60	−3602	27	12960	30	7900	23	5690	50
	Hg	80	7754.10	0.20	8234	3	−9404	9	10606	27	6612.5	0.8	5689.8	2.2
	Tl	81	6871	14	5606.9	1.8	−15385	28	14233.7	1.8	8429.7	1.8	8759.7	1.9
	Pb	82	8741	14	6049	15	−19666	18	11817	7	6983	28	9252	4
	Bi	83	7393	19	2769	20	−23852	15	16211	17	9345	16	12950	30
	Po	84	9492	10	3802	15	−27016	17	13140	24	7720	14	12937	11
	At	85	7877	29	1363	28	*		17057	29	9508	28	15849	30
	Rn	86	10238	20	2774	19	*		13420	30	7413	18	14611	18
	Fr	87	8558	11	80	12	*		17813	8	9525	9	17571	8
	Ra	88	10933	25	1803	18	*		13650	30	7168	20	16281	17
203	Os	76	2810#	570#	*		18000#	400#	*		*		*	
	Ir	77	5800#	500#	9130#	570#	11390#	400#	11180#	500#	9040#	500#	*	
	Pt	78	4890#	200#	10160#	360#	5280#	200#	11040#	280#	6920#	280#	4690#	360#
	Au	79	6862	23	7740	25	−1619	13	11310	50	8320	20	4070#	200#
	Hg	80	5995.2	1.6	8205	23	−7958	5	11842	4	6835	27	6976	20
	Tl	81	7852.2	1.7	5705.0	1.1	−13599	11	12612.0	1.1	8606.0	1.2	7125	27
	Pb	82	6917	8	6095	7	−18602	9	13105	16	7125	9	10363	7
	Bi	83	8845	19	2873	13	−22401	14	14457	19	9590	16	11169	14
	Po	84	7441	10	3849	15	−25912	11	14829	13	7924	23	14586	11
	At	85	9639	30	1510	14	*		15069	12	9643	13	13854	25
	Rn	86	7981	18	2878	28	*		15316	10	7668	25	16404	10
	Fr	87	10296	9	138	19	*		15695	12	9741	9	15511	25
	Ra	88	8545	18	1789	11	*		15724	13	7330	30	18248	11

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
200	Os	76	11090#	360#	*		−2240#	500#	8050#	300#	*		−2220#	300#
	Ir	77	12000#	280#	19160#	450#	−1640#	360#	5670#	200#	−14130#	450#	−2250#	200#
	Pt	78	12838	20	17580#	200#	−750	40	2904	20	−13620#	200#	−5577	20
	Au	79	13802	27	16110#	200#	−230	50	−193	27	−10130	50	−5765	27
	Hg	80	14691.6	0.6	14177.2	2.1	716.4	0.7	−3252	10	−9403.5	2.2	−9515	28
	Tl	81	15661	9	12044	6	1667	6	−6677	23	−5242	6	−9887	9
	Pb	82	16326	13	9874	10	3150	10	−9309	12	−3994	10	−13525	15
	Bi	83	17140	40	7420	24	4701	26	−11380	30	400	40	−13203	23
	Po	84	17611	19	5452	12	5981.6	1.8	−12941	10	1001	10	−16190	9
	At	85	18422	25	4190	40	6596.2	1.3	−15120	40	4521	27	−15499	26
	Rn	86	18913	15	3105	18	7043.4	2.1	*		3949	8	−18843	15
	Fr	87	19590	40	1740	30	7622	4	*		7670	30	*	
201	Os	76	10710#	360#	*		−2390#	500#	8900#	300#	*		−1340#	360#
	Ir	77	11580#	200#	19690#	450#	−1910#	360#	6560#	200#	*		−1310#	200#
	Pt	78	12490	50	18050#	210#	−1090#	210#	3920	50	−12480#	300#	−4570	60
	Au	79	13450	3	16580	40	−561	20	780	15	−12120#	200#	−4969	3
	Hg	80	14259.1	0.6	14851.8	2.2	332.3	0.8	−2391	14	−8352	20	−8687	6
	Tl	81	15260	30	12665	14	1534	14	−5752	19	−7230	30	−9001	17
	Pb	82	16182	15	10303	14	2844	14	−8750	15	−3057	14	−12972	27
	Bi	83	16774	16	7950	30	4500	6	−10640	15	−1671	13	−12559	14
	Po	84	17425	7	5867	8	5799.3	1.7	−12414	11	2441	11	−15605	25
	At	85	18109	10	4570	13	6472.8	1.6	−14378	12	2292	24	−14860	10
	Rn	86	18690	12	3447	11	6860.7	2.3	−16044	23	5545	13	−18310	30
	Fr	87	19325	16	2166	11	7519	4	*		5287	26	*	
	Ra	88	*		1081	22	8002	12	*		8648	21	*	
202	Os	76	10120#	500#	*		*		10160#	400#	*		−760#	450#
	Ir	77	11210#	360#	*		−2080#	500#	7710#	300#	*		−970#	300#
	Pt	78	12240	30	18720#	300#	−1520#	200#	4653	25	−15140#	300#	−4363	25
	Au	79	13260	40	17360#	200#	−1070#	200#	1627	23	−11800#	200#	−4762	23
	Hg	80	13984.7	0.6	15324	20	133.8	2.2	−1405	4	−10890	50	−8236	14
	Tl	81	15076	6	13318	27	1175.5	1.9	−5230	14	−6869	4	−8781	14
	Pb	82	15832	11	11015	4	2589	4	−7999	9	−5567	4	−12583	13
	Bi	83	16523	27	8282	15	4353	16	−10160	30	−859	20	−12301	15
	Po	84	17143	11	6269	13	5701.0	1.7	−11667	20	40	16	−15223	12
	At	85	17750	40	4800	40	6353.8	1.3	−13697	28	3540	30	−14559	29
	Rn	86	18417	18	3911	19	6773.8	1.8	−15349	23	2958	18	−17934	20
	Fr	87	19170	30	2489	25	7385	4	*		6602	10	−16907	21
	Ra	88	*		1503	16	7880	7	*		5893	18	*	
203	Os	76	8570#	500#	*		*		12240#	450#	*		1300#	500#
	Ir	77	10670#	450#	*		−2070#	570#	8770#	400#	*		250#	400#
	Pt	78	11910#	210#	19250#	360#	−1670#	280#	5760#	200#	−14270#	450#	−3230#	200#
	Au	79	12885	4	17880#	200#	−1170	40	2618	3	−13790#	300#	−3869	3
	Hg	80	13749.3	1.6	16110	50	−305.4	2.7	−483	7	−9866	25	−7360.1	2.1
	Tl	81	14723	14	13939	3	907.5	1.2	−4236	13	−8697	23	−7892	4
	Pb	82	15658	15	11702	7	2335	7	−7476	8	−4730	7	−12107	15
	Bi	83	16239	18	8922	19	4110	30	−9362	17	−2833	13	−11655	15
	Po	84	16932	7	6618	15	5496	5	−11127	7	1341	6	−14787	28
	At	85	17516	13	5312	16	6210.1	0.8	−13039	12	1299	18	−13959	20
	Rn	86	18219	12	4241	8	6629.9	2.1	−14785	11	4469	10	−17357	8
	Fr	87	18855	11	2912	10	7275	4	*		4183	28	−16270	16
	Ra	88	19478	22	1869	14	7736	6	*		7587	20	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
204	Ir	77	3270#	570#	9590#	570#	14780#	400#	13670#	570#	10130#	500#	*	
	Pt	78	6180#	280#	10540#	450#	7490#	200#	9730#	360#	7080#	280#	2870#	360#
	Au	79	5320#	200#	8170#	280#	260#	200#	13010#	200#	8220#	210#	5100#	280#
	Hg	80	7492.3	1.6	8836	3	−6349	10	10374	23	6575	3	4700	50
	Tl	81	6656.08	0.29	6365.8	1.3	−12471	23	13710.0	1.1	8180.5	1.1	7701	3
	Pb	82	8395	6	6637.5	0.3	−17140	7	11581.4	1.7	6935	14	8199.1	1.1
	Bi	83	7192	16	3148	11	−21253	26	16005	10	9489	17	12181	17
	Po	84	9102	11	4105	16	−24402	13	13121	17	7952	16	12576	17
	At	85	7784	25	1853	23	*		16777	24	9510	23	15200	26
	Rn	86	9857	9	3096	13	*		13336	29	7683	11	14197	9
	Fr	87	8340	25	498	25	*		17590	30	9579	27	17043	26
	Ra	88	10612	13	2104	11	*		13670	11	7337	13	15815	13
205	Ir	77	4100#	640#	*		18220#	500#	12380#	640#	11790#	640#	*	
	Pt	78	3270#	360#	10540#	500#	10950#	300#	12260#	500#	8680#	420#	5360#	500#
	Au	79	6250#	280#	8240#	280#	2500#	200#	11650#	280#	8990#	200#	3720#	360#
	Hg	80	5669	4	9190#	200#	−4766	11	11567	5	6929	24	6051	25
	Tl	81	7546.1	0.5	6419.6	1.3	−10836	12	12159.2	1.3	8388.6	1.2	6179	23
	Pb	82	6731.67	0.11	6713.06	0.21	−16060	5	12702.0	0.4	7074.3	1.7	9221.5	1.1
	Bi	83	8491	10	3245	5	−19756	9	14432	8	9739	6	10561	5
	Po	84	7252	14	4164	14	−23325	25	14714	16	8094	17	14066	11
	At	85	9181	26	1932	16	−27090	60	15037	13	9821	15	13413	18
	Rn	86	7811	9	3123	23	*		15164	12	7749	28	15878	10
	Fr	87	9988	26	629	11	*		15585	10	9829	19	14932	29
	Ra	88	8329	24	2090	30	*		15638	24	7566	24	17725	29
	Ac	89	*		−760	60	*		16220	60	9900	60	16650	60
206	Pt	78	4490#	420#	10930#	580#	14550#	300#	11040#	500#	9990#	500#	3680#	500#
	Au	79	3690#	360#	8660#	420#	5840#	300#	14140#	360#	10180#	360#	5830#	500#
	Hg	80	6729	21	9660#	200#	−2757	21	10160#	200#	7062	21	4210#	200#
	Tl	81	6503.8	0.4	7255	4	−9814	14	13147.7	1.3	7880.0	1.4	6537	3
	Pb	82	8086.66	0.06	7253.7	0.5	−14653	9	11271.37	0.21	6839.9	0.4	7130.1	1.3
	Bi	83	7034	9	3547	8	−18781	29	15792	8	9622	10	11380	8
	Po	84	8739	11	4412	6	−21754	18	13168	10	8200	13	12244	8
	At	85	7526	18	2207	17	−25920	70	16612	17	9735	14	14732	19
	Rn	86	9494	10	3437	15	*		13453	24	7894	14	13824	10
	Fr	87	8008	29	826	28	*		17434	29	9801	28	16562	30
	Ra	88	10310	29	2414	20	*		13670	30	7553	19	15396	19
	Ac	89	8690	90	−390	70	*		18130	70	9750	70	18250	70
207	Pt	78	2970#	500#	*		18310#	400#	12170#	640#	10300#	570#	*	
	Au	79	4520#	420#	8690#	420#	9410#	300#	12890#	420#	11840#	360#	4580#	500#
	Hg	80	3610	40	9590#	300#	660	30	12790#	200#	8770#	200#	6780#	200#
	Tl	81	6852	5	7378	21	−7807	14	11964	7	8520	5	5000#	200#
	Pb	82	6737.78	0.10	7487.6	0.6	−13817	5	12079.6	0.5	6758.16	0.23	7884.6	1.2
	Bi	83	8098	8	3558.0	2.1	−17206	18	14426.4	2.1	9919.3	2.1	9937.9	2.1
	Po	84	7028	8	4406	10	−20660	60	14631	8	8364	11	13611	7
	At	85	8859	18	2328	13	−24370	60	15005	16	9978	16	13065	15
	Rn	86	7573	10	3484	14	*		15061	13	8105	23	15353	11
	Fr	87	9670	30	1005	20	*		15572	18	9985	19	14673	29
	Ra	88	8120	60	2530	60	*		15530	60	7770	60	17130	60
	Ac	89	10410	90	−290	60	*		16050	60	9950	60	16190	60

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
204	Ir	77	9070#	500#	*		*		10820#	450#	*		1870#	450#
	Pt	78	11070#	200#	19670#	450#	−1500#	360#	7070#	200#	−17640#	450#	−2550#	200#
	Au	79	12180#	200#	18330#	360#	−1250#	280#	3960#	200#	−13310#	450#	−3190#	200#
	Hg	80	13487.5	0.7	16576	25	−516	20	419.7	1.2	−12470#	200#	−7000.2	1.2
	Tl	81	14508.3	1.7	14571	23	469	27	−3700	9	−8492	3	−7631	6
	Pb	82	15312	4	12342.4	1.1	1968.5	1.1	−6769	10	−7129.6	1.3	−11656	13
	Bi	83	16038	17	9243	9	3976	11	−8771	24	−2174	9	−11406	10
	Po	84	16542	13	6978	11	5484.9	1.4	−10371	12	−844	12	−14250	15
	At	85	17420	40	5702	27	6070.4	1.2	−12480	30	2361	26	−13763	23
	Rn	86	17838	19	4606	11	6546.7	1.8	−14031	12	2052	9	−16918	10
	Fr	87	18637	25	3380	40	7170.3	2.4	*		5481	27	−16065	26
	Ra	88	19156	17	2242	20	7637	7	*		4956	11	*	
205	Ir	77	7370#	640#	*		*		12970#	540#	*		3950#	540#
	Pt	78	9450#	360#	20130#	500#	−410#	420#	9470#	300#	*		−500#	360#
	Au	79	11570#	200#	18780#	450#	−1160#	280#	5250#	200#	−16290#	450#	−1950#	200#
	Hg	80	13161	4	17360#	200#	−970	50	1482	4	−11960#	200#	−6013	4
	Tl	81	14202.1	0.5	15255	3	155	3	−2755	5	−10720#	200#	−6782.3	0.5
	Pb	82	15126	6	13078.9	1.3	1467.5	1.1	−6249	10	−6369.0	1.2	−11196	9
	Bi	83	15683	14	9882	5	3690	15	−8081	13	−4008	5	−10796	11
	Po	84	16353	11	7313	12	5325	10	−9812	11	299	10	−13717	25
	At	85	16965	16	6038	18	6019.6	1.7	−11675	14	372	15	−13086	14
	Rn	86	17668	8	4977	7	6386.5	1.8	−13514	23	3342	11	−16388	25
	Fr	87	18329	10	3725	13	7054.7	2.4	−15420	60	3276	24	−15442	12
	Ra	88	18940	25	2590	24	7486	20	*		6485	24	*	
	Ac	89	*		1350	60	8090	60	*		6210	60	*	
206	Pt	78	7760#	360#	*		870#	500#	11710#	300#	*		1260#	360#
	Au	79	9940#	360#	19200#	500#	30#	420#	8060#	300#	−15880#	580#	30#	300#
	Hg	80	12398	20	17900#	200#	−680	30	2840	20	−15420#	300#	−5196	20
	Tl	81	14049.9	0.6	16440#	200#	−325	23	−2225	8	−10970#	200#	−6554.4	0.6
	Pb	82	14818.33	0.12	13673.3	1.2	1134.9	1.0	−5597	4	−8787	4	−10791	5
	Bi	83	15525	12	10260	8	3527	8	−7589	16	−3496	8	−10578	13
	Po	84	15990	11	7657	4	5327.0	1.3	−9056	9	−1707	4	−13275	13
	At	85	16707	26	6371	16	5887	5	−11190	30	1337	14	−12801	14
	Rn	86	17305	11	5370	13	6383.7	1.6	−12699	20	1100	13	−15894	12
	Fr	87	18000	40	3950	40	6923	3	−14730	70	4450	30	−15120	40
	Ra	88	18638	20	3042	19	7415	4	*		3986	19	−18610	60
	Ac	89	*		1700	70	7960	60	*		7510	70	*	
207	Pt	78	7460#	500#	*		710#	570#	12350#	400#	*		1980#	500#
	Au	79	8210#	360#	19620#	580#	1310#	500#	10390#	300#	*		2230#	300#
	Hg	80	10340	30	18250#	300#	600#	200#	5965	30	−14540#	300#	−2305	30
	Tl	81	13356	5	17040#	200#	−316	6	−980	6	−14130#	300#	−5320	5
	Pb	82	14824.44	0.11	14742	4	392.3	1.3	−5306	7	−8795	20	−10495	8
	Bi	83	15132	5	10811.7	2.1	3281.8	2.1	−6827	13	−5090.2	2.1	−9937	5
	Po	84	15767	12	7953	7	5215.9	2.5	−8511	8	−649	7	−12778	15
	At	85	16386	17	6740	13	5872	3	−10378	21	−488	15	−12166	15
	Rn	86	17068	7	5691	11	6251.2	1.6	−12150	60	2265	6	−15459	28
	Fr	87	17682	19	4442	21	6889	20	−14000	60	2301	22	−14486	25
	Ra	88	18430	60	3350	60	7270	60	*		5360	60	−18040	90
	Ac	89	19100	80	2120	60	7840	60	*		5100	60	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
208	Pt	78	4430#	570#	*		21250#	400#	*		9960#	640#	*	
	Au	79	3340#	420#	9060#	500#	12960#	300#	14040#	420#	11770#	420#	5340#	580#
	Hg	80	4850	40	9910#	300#	4200	30	11640#	300#	10170#	200#	5200#	300#
	Tl	81	3787	6	7552	30	−4280	9	14906	20	10402	4	7470#	200#
	Pb	82	7367.87	0.05	8003	5	−12093	10	11215.6	0.6	6936.3	0.5	6186	4
	Bi	83	6886.9	2.7	3707.2	2.0	−16205	12	15626.2	2.0	9764.1	2.0	10597.1	2.0
	Po	84	8395	7	4703.6	2.5	−19197	9	13270	8	8460	5	11947.4	1.3
	At	85	7314	15	2613	11	−23230	70	16430	10	9916	13	14242	10
	Rn	86	9092	11	3717	16	−26340	30	13495	17	8193	16	13512	14
	Fr	87	7887	21	1319	13	*		17179	14	9909	13	15966	17
	Ra	88	9860	60	2712	20	*		13686	29	7902	12	15084	10
	Ac	89	8460	90	40	90	*		17910	70	9820	70	17720	60
	Th	90	*		1750	60	*		13910	70	7450	70	16530	40
209	Au	79	4390#	500#	9020#	570#	16030#	400#	12620#	570#	11870#	500#	*	
	Hg	80	3420#	150#	9990#	340#	7760#	150#	12740#	340#	10450#	340#	6280#	340#
	Tl	81	4966	6	7670	30	−761	8	13550	30	12165	21	6190#	300#
	Pb	82	3937.4	1.3	8153.4	2.1	−8674	10	14131	6	9502.8	1.4	8978	20
	Bi	83	7459.8	1.9	3799.0	0.8	−14476	12	14904.2	0.8	10391.0	0.8	9641.1	0.8
	Po	84	6968.1	1.9	4784.8	2.4	−18224	6	14399.3	2.5	8526	8	13065.9	1.4
	At	85	8485	10	2704	5	−21730	60	14973	8	10169	6	12791	9
	Rn	86	7357	14	3760	13	−25340#	100#	14997	16	8362	17	14894	11
	Fr	87	9189	16	1416	15	*		15563	12	10215	14	14304	18
	Ra	88	7941	11	2766	13	*		15418	18	7969	28	16638	10
	Ac	89	9990	90	170	60	*		16040	80	10140	60	15740	60
	Th	90	8360#	110#	1660#	120#	*		15960#	120#	7770#	120#	18480#	110#
210	Au	79	3160#	570#	*		17470#	400#	13890#	570#	11680#	570#	*	
	Hg	80	4760#	250#	10360#	450#	10650#	200#	11320#	360#	10200#	360#	4490#	450#
	Tl	81	3674	13	7930#	150#	2725	14	14730	30	12100	30	7040#	300#
	Pb	82	5185.2	1.3	8373	6	−5124	5	12732.5	1.9	11170	5	7405	30
	Bi	83	4604.63	0.08	4466.3	1.1	−11448	13	17667.4	0.8	12524.1	0.8	11889	5
	Po	84	7658.4	1.4	4983.4	0.8	−16396	9	13627.9	2.0	8965.5	2.1	12145.31	0.12
	At	85	7160	9	2895	8	−20740	60	16208	8	10038	10	13729	8
	Rn	86	8735	11	4010	7	−23664	19	13576	10	8487	13	13187	8
	Fr	87	7633	18	1691	17	*		17023	17	10155	14	15530	18
	Ra	88	9487	11	3064	15	*		13819	15	8156	20	14724	10
	Ac	89	8150	80	380	60	*		17750	60	10110	90	17260	60
	Th	90	10410#	110#	2070	60	*		14010	70	7780	60	16190	60
211	Hg	80	3160#	280#	10360#	450#	12040#	200#	12550#	450#	10380#	360#	5760#	450#
	Tl	81	4900	40	8070#	210#	5570	40	13240#	160#	12050	50	5480#	300#
	Pb	82	3835.9	2.6	8535	12	−1738	7	13863	6	11121.2	2.7	8420	30
	Bi	83	5139	5	4420	5	−7719	13	16466	6	14753	5	10537	6
	Po	84	4550.8	0.5	4929.6	0.9	−13264	5	16536.9	0.9	11301.7	2.1	14962.4	0.5
	At	85	7746	8	2983.1	2.5	−18790	50	15429.6	2.8	10686.1	2.8	12869	3
	Rn	86	7222	8	4072	10	−22630	90	14839	8	8579	11	14360	7
	Fr	87	8868	18	1825	13	−26190	70	15512	16	10379	16	13976	15
	Ra	88	7682	10	3114	14	*		15325	13	8361	13	16134	11
	Ac	89	9690	80	590	50	*		16000	50	10280	50	15450	60
	Th	90	8250	90	2180	110	*		15740	100	7980	110	17790	90
	Pa	91	*		−700	70	*		16370#	120#	10230	80	16940	90

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
208	Pt	78	7400#	500#	*		*		12770#	400#	*		2070#	500#
	Au	79	7860#	420#	*		1240#	500#	10840#	300#	*		2510#	300#
	Hg	80	8460	40	18600#	300#	1930#	200#	8480	30	−16420#	400#	−300	30
	Tl	81	10639.5	1.8	17140#	300#	1220#	200#	2120.0	2.6	−13400#	300#	−2369.5	1.7
	Pb	82	14105.65	0.11	15381	20	516.7	1.2	−4279.3	1.3	−12550	30	−9765.3	2.1
	Bi	83	14985	8	11194.8	2.0	3051.0	2.0	−6400	9	−5125	6	−9796	7
	Po	84	15423	4	8261.6	1.3	5215.7	1.3	−7814	10	−2306.2	1.3	−12313	13
	At	85	16173	16	7020	12	5751.1	2.2	−9805	15	296	9	−11906	10
	Rn	86	16665	13	6045	11	6260.7	1.7	−11383	14	201	12	−14878	20
	Fr	87	17560	30	4803	18	6785	25	−13430	70	3274	17	−14250	60
	Ra	88	17980	20	3717	12	7273	5	−14960	30	3074	10	−17490	60
	Ac	89	18870	90	2570	70	7730	60	*		6320	70	*	
	Th	90	*		1460	40	8200	30	*		5890	70	*	
209	Au	79	7730#	500#	*		950#	640#	11420#	400#	*		2960#	400#
	Hg	80	8270#	150#	19050#	430#	1790#	340#	9010#	150#	−15400#	430#	70#	150#
	Tl	81	8753	8	17580#	300#	2500#	200#	4614	6	−15020#	300#	32	6
	Pb	82	11305.2	1.3	15705	30	2248	4	−1248.6	1.9	−11640	30	−6815.7	2.2
	Bi	83	14346.7	2.0	11802	5	3137.3	0.8	−5375	5	−8797.4	1.8	−8860.7	1.5
	Po	84	15363	7	8492.0	1.4	4979.2	1.4	−7425	10	−1906.5	1.4	−11967	9
	At	85	15799	13	7407	5	5756.9	2.0	−9102	12	−1303	5	−11300	11
	Rn	86	16449	11	6373	12	6155.4	2.0	−10799	11	1239	10	−14347	15
	Fr	87	17076	21	5133	17	6777	4	−12630	60	1399	15	−13581	15
	Ra	88	17800	60	4085	7	7143.1	2.7	−14540#	100#	4225	12	−16970	60
	Ac	89	18440	80	2880	60	7730	60	*		4220	60	−15910	60
	Th	90	*		1700#	120#	8170#	110#	*		7380#	100#	*	
210	Au	79	7550#	500#	*		*		11930#	400#	*		3220#	430#
	Hg	80	8180#	200#	19380#	450#	1520#	360#	9430#	200#	*		270#	200#
	Tl	81	8640	12	17920#	300#	2520#	300#	5545	12	−14310#	400#	296	12
	Pb	82	9122.5	0.9	16040	30	3792	20	1224.6	0.9	−13410#	150#	−4541.2	0.5
	Bi	83	12064.4	1.9	12619.7	1.8	5036.5	0.8	−2820	8	−8436	6	−6497.2	1.6
	Po	84	14626.5	1.3	8782.48	0.13	5407.53	0.07	−6348	5	−5627.5	1.3	−11141	5
	At	85	15645	12	7680	8	5631.2	1.0	−8629	15	−1002	8	−11102	13
	Rn	86	16092	11	6713	5	6159.0	2.2	−10048	10	−528	5	−13894	12
	Fr	87	16821	18	5452	16	6671	5	−12110	60	2251	14	−13273	15
	Ra	88	17428	13	4480	14	7151	3	−13617	21	2095	14	−16470	60
	Ac	89	18140	90	3150	60	7590	60	*		5260	60	−15700#	120#
	Th	90	18770	40	2246	21	8069	6	*		4912	20	*	
211	Hg	80	7920#	250#	*		1320#	450#	10100#	200#	*		790#	200#
	Tl	81	8580	40	18430#	400#	2140#	300#	5780	40	−16050#	400#	580	40
	Pb	82	9021.1	2.7	16460#	150#	3570	30	1939.5	2.5	−12480#	200#	−3772.4	2.5
	Bi	83	9743	5	12792	8	6750.4	0.5	−212	6	−9901	13	−3977	5
	Po	84	12209.1	1.5	9395.9	1.4	7594.6	0.5	−3677	7	−4993.0	1.0	−8532	8
	At	85	14906	5	7966.5	2.4	5982.4	1.3	−7507	12	−4144.3	2.4	−10114	5
	Rn	86	15957	12	6967	7	5965.5	1.4	−9587	8	−91	7	−13483	15
	Fr	87	16501	17	5834	13	6662	3	−11280	60	543	14	−12654	15
	Ra	88	17169	8	4805	11	7041.7	2.9	−13040	90	3148	7	−16000	60
	Ac	89	17840	80	3650	50	7570	50	−14910	90	3200	60	−14990	60
	Th	90	18660#	130#	2560	90	7940	60	*		6140	90	*	
	Pa	91	*		1370	90	8480	40	*		6000	90	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
212	Hg	80	4660#	360#	*		13390#	300#	11050#	500#	10110#	500#	*	
	Tl	81	3540#	210#	8450#	280#	7080#	200#	14460#	280#	11920#	250#	6330#	450#
	Pb	82	5127.2	2.5	8760	40	1110	3	12409	12	10960	6	6710#	150#
	Bi	83	4330	6	4913.9	2.7	−4602	9	17321.3	1.9	14360.7	2.1	11173	6
	Po	84	6008.2	0.5	5799	5	−10171	10	15133.3	0.8	12753.2	0.8	12891.6	1.3
	At	85	5052	3	3484.6	2.2	−15928	22	18035.7	2.1	12601.9	2.5	15276.8	2.0
	Rn	86	7975	7	4301	4	−20770	10	14024	8	9089	6	13353	3
	Fr	87	7447	15	2050	11	−25110	90	16800	10	10289	13	15014	10
	Ra	88	9102	11	3347	16	*		13856	17	8447	15	14389	14
	Ac	89	7920	60	821	22	*		17568	24	10305	23	16728	25
	Th	90	9840	90	2320	50	*		14060	60	8130	60	15899	12
	Pa	91	8530	110	−430	120	*		18250	90	10070#	140#	18400	100
213	Hg	80	2890#	420#	*		14850#	300#	*		10380#	500#	*	
	Tl	81	4740#	200#	8530#	300#	8363	27	12890#	200#	11950#	200#	4750#	400#
	Pb	82	3726	7	8940#	200#	2492	8	13590	40	10907	13	7740#	200#
	Bi	83	5185	5	4972	5	−1677	7	15972	5	14361	5	9662	13
	Po	84	4355.4	2.9	5825	3	−6999	10	15916	6	13002.4	2.8	13721.3	2.8
	At	85	6023	5	3499	5	−12721	13	16564	5	14238	5	13859	5
	Rn	86	5108	4	4357	4	−17816	10	16662	4	11140	8	15904	3
	Fr	87	8110	10	2184	6	−23210	60	15912	8	10915	7	14064	9
	Ra	88	7527	14	3427	13	*		15197	15	8553	17	15597	11
	Ac	89	9230	25	949	16	*		16020	13	10562	15	15131	18
	Th	90	8062	14	2468	24	*		15690	50	8220	60	17324	13
	Pa	91	10010	100	−250	60	*		16490	100	10460	60	16540	80
214	Hg	80	4500#	500#	*		16240#	400#	*		*		*	
	Tl	81	3390#	200#	9020#	360#	9840#	200#	14160#	360#	11720#	280#	*	
	Pb	82	5051	7	9256	27	4137	9	12080#	200#	10760	40	5850#	200#
	Bi	83	4040	12	5286	13	−242	14	17059	11	14156	11	10520	40
	Po	84	5887.8	2.8	6527	5	−4563	5	14358.8	1.9	12253	5	11669.4	2.6
	At	85	4871	6	4015	5	−9812	14	17701	4	13917	4	14126	7
	Rn	86	6695	10	5029	10	−15015	14	15019	9	12192	9	13759	9
	Fr	87	5475	10	2551	9	−20420	80	18412	9	12661	11	16335	9
	Ra	88	8324	11	3642	7	*		14320	10	9097	13	14494	9
	Ac	89	7779	18	1201	17	*		17343	17	10465	14	16220	18
	Th	90	9496	14	2735	16	*		14106	24	8420	50	15509	12
	Pa	91	8270	100	−50	80	*		18060	80	10450	120	17960	100
215	Hg	80	2730#	570#	*		17650#	400#	*		*		*	
	Tl	81	4510#	360#	9030#	500#	11290#	300#	12540#	420#	11870#	420#	*	
	Pb	82	3550	50	9410#	200#	5510	50	13270	60	10760#	210#	6970#	310#
	Bi	83	5241	13	5477	6	1311	9	15544	9	14042	6	8830#	200#
	Po	84	4143.1	2.5	6630	11	−3074	7	15401	5	12440.2	2.6	12653.6	2.3
	At	85	5949	8	4076	7	−7287	14	16108	7	13977	7	12508	7
	Rn	86	4921	11	5079	7	−12090	9	16121	8	12323	6	14847	6
	Fr	87	6795	11	2651	11	−17490	80	16725	8	13841	8	14593	7
	Ra	88	5632	9	3799	11	−22360	100	16797	9	10912	11	16838	8
	Ac	89	8474	18	1351	13	*		16396	16	11093	16	15193	15
	Th	90	7845	12	2801	15	*		15491	13	8486	23	16767	12
	Pa	91	9730	120	180	80	*		16400	80	10560	80	16150	90
	U	92	*		1860	130	*		15950	120	8160	140	18420	100

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
212	Hg	80	7820#	360#	*		1100#	500#	10570#	300#	*		1030#	300#
	Tl	81	8450#	200#	18810#	450#	1930#	360#	6570#	200#	*		870#	200#
	Pb	82	8963.1	2.1	16830#	200#	3290	30	2820.5	1.9	−14450#	200#	−3761	6
	Bi	83	9468.7	1.8	13449	12	6207.26	0.03	510.2	2.7	−9330	40	−3756.8	1.7
	Po	84	10558.98	0.17	10218.9	0.9	8954.19	0.11	−1710.2	2.9	−7165.4	2.4	−6793.5	2.5
	At	85	12799	8	8414.2	2.0	7817.1	0.6	−5112	9	−4058	6	−7944	7
	Rn	86	15197	5	7284.1	2.9	6385.1	2.6	−8460	11	−3515.7	3.0	−12590	12
	Fr	87	16315	16	6122	12	6529.0	1.6	−10816	24	842	9	−12419	10
	Ra	88	16784	14	5172	11	7031.7	1.7	−12310	14	1268	12	−15410	50
	Ac	89	17610	70	3935	26	7540	24	−14300	90	4151	25	−14650	90
	Th	90	18091	21	2910	14	7958	5	*		3990	11	−18010	70
	Pa	91	*		1750	110	8410	60	*		7160	100	*	
213	Hg	80	7550#	360#	*		*		11400#	300#	*		1680#	360#
	Tl	81	8280	50	*		1590#	400#	7015	27	*		1261	27
	Pb	82	8853	7	17390#	200#	2980#	150#	3450	8	−13510#	300#	−3157	7
	Bi	83	9515	7	13730	40	5988	3	1348	7	−10970#	200#	−2934	5
	Po	84	10363.7	2.9	10738	4	8536.1	2.6	−958	4	−6394	3	−6097	3
	At	85	11075	5	9298	7	9254	5	−3025	7	−5751	5	−5992	6
	Rn	86	13083	7	7841	3	8245.2	2.9	−6042	10	−2616	3	−10251	9
	Fr	87	15557	13	6485	5	6904.7	1.3	−9695	13	−2215	5	−11427	11
	Ra	88	16629	11	5477	12	6861.7	2.3	−11775	13	1716	10	−15025	24
	Ac	89	17150	60	4297	17	7498	4	−13510	60	2368	15	−14041	15
	Th	90	17900	90	3290	10	7837	7	*		5030	14	−17550	90
	Pa	91	18540	90	2070	80	8384	12	*		5070	60	*	
214	Hg	80	7390#	500#	*		*		11950#	400#	*		1920#	400#
	Tl	81	8130#	280#	*		1360#	450#	7670#	200#	*		1600#	200#
	Pb	82	8776.7	2.0	17780#	300#	2690#	200#	4287.0	2.3	−15670#	300#	−3023	5
	Bi	83	9225	11	14230#	200#	5621	3	2178	12	−10274	29	−2619	12
	Po	84	10243.2	0.9	11499.0	2.1	7833.54	0.06	−150	9	−8555	7	−5962	5
	At	85	10894	4	9839	4	8988	4	−2421	9	−5436	6	−5755	5
	Rn	86	11803	10	8528	9	9208	9	−4412	11	−4955	10	−8837	10
	Fr	87	13585	12	6908	9	8589	4	−7392	16	−1668	10	−9375	13
	Ra	88	15851	12	5826	6	7272.6	2.6	−10602	12	−1500	6	−14120	13
	Ac	89	17009	26	4629	16	7351.9	2.5	−13030	80	2699	14	−13758	16
	Th	90	17559	15	3684	15	7827	5	*		3060	14	−17030	60
	Pa	91	18280	120	2420	80	8270	50	*		6030	80	*	
215	Hg	80	7230#	500#	*		*		12770#	400#	*		2570#	450#
	Tl	81	7900#	300#	*		*		8400#	300#	*		2140#	300#
	Pb	82	8600	50	18440#	310#	2310#	210#	4880	50	−14720#	400#	−2530	50
	Bi	83	9282	7	14732	28	5280	40	2886	9	−12120#	200#	−1972	6
	Po	84	10031	4	11916	7	7526.3	0.8	627	6	−7647.7	2.5	−5234	4
	At	85	10820	8	10603	8	8178	4	−1575	10	−7345	13	−5008	11
	Rn	86	11616	7	9093	7	8839	6	−3701	9	−3988	6	−8282	10
	Fr	87	12270	8	7680	8	9540	7	−5712	14	−3592	8	−7846	9
	Ra	88	13956	12	6350	8	8862.4	2.3	−8389	10	−437	12	−11973	15
	Ac	89	16253	17	4993	13	7746	3	−11770	80	−300	15	−12736	16
	Th	90	17341	11	4002	12	7665	4	−13970	100	3540	8	−16610	80
	Pa	91	17990	100	2910	80	8240	60	*		4080	80	*	
	U	92	*		1810	100	8590	60	*		6910	100	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
216	Hg	80	4260#	570#	*		19140#	400#	*		*		*	
	Tl	81	3230#	420#	9530#	500#	12610#	300#	13810#	500#	11530#	420#	*	
	Pb	82	4900#	210#	9810#	360#	7260#	200#	11760#	280#	10590#	200#	4960#	360#
	Bi	83	3827	13	5760	50	2903	12	16768	11	13942	13	9737	29
	Po	84	5747.2	2.3	7136	6	−1509	8	13694	11	11878	5	10632	7
	At	85	4558	7	4491	4	−5893	10	17437	4	13774	4	13135	6
	Rn	86	6649	8	5779	9	−10045	12	14343	7	11697	7	12553	6
	Fr	87	5418	8	3149	7	−14853	25	18001	10	13531	5	15197	6
	Ra	88	7312	11	4316	11	−19775	29	14961	12	11710	9	14634	9
	Ac	89	5952	15	1671	12	*		18768	11	12668	13	17350	10
	Th	90	8694	13	3021	17	*		14576	18	9022	16	15599	15
	Pa	91	8050	90	387	25	*		17840	27	10568	26	17329	27
	U	92	9890	110	2030	90	*		14320	90	8280	60	16593	30
217	Tl	81	4280#	500#	9550#	570#	14270#	400#	12260#	570#	11750#	570#	*	
	Pb	82	3320#	360#	9900#	420#	8600#	300#	12940#	420#	10660#	360#	6140#	500#
	Bi	83	5215	21	6070#	200#	4415	19	15100	60	13777	18	7910#	200#
	Po	84	3970	7	7280	13	−6	10	14965	9	11948	13	11713	7
	At	85	5933	6	4677	5	−4308	12	15647	5	13729	5	11242	12
	Rn	86	4666	7	5887	5	−8547	11	15626	8	11902	5	13775	4
	Fr	87	6728	8	3228	9	−12740	14	16194	9	13498	11	13340	7
	Ra	88	5473	11	4370	8	−17080#	80#	16282	10	11712	11	15856	11
	Ac	89	7519	15	1878	14	*		16881	13	13474	12	15307	14
	Th	90	6164	15	3233	14	*		16886	16	10637	17	17759	12
	Pa	91	8840	28	533	17	*		16844	14	11224	16	16268	18
	U	92	8170#	90#	2140#	80#	*		15880#	120#	8380#	110#	17920#	80#
218	Tl	81	3020#	570#	*		15610#	400#	13500#	570#	11470#	570#	*	
	Pb	82	4700#	420#	10320#	500#	10410#	300#	11470#	420#	10460#	420#	4170#	500#
	Bi	83	3590	30	6330#	300#	6157	27	16420#	200#	13740	60	8830#	300#
	Po	84	5598	7	7662	18	1711	10	13193	11	11591	6	9660	50
	At	85	4366	12	5072	13	−2750	60	17029	12	13506	12	12117	13
	Rn	86	6512	4	6466	5	−7149	11	13672	4	11338	7	11406	3
	Fr	87	5327	8	3888	6	−11590	18	17517	7	13092	7	13962	8
	Ra	88	7315	12	4958	12	−15249	17	14385	11	11191	12	13461	11
	Ac	89	5920	60	2330	60	*		18270	60	13180	60	16180	60
	Th	90	7910	15	3625	15	*		14928	14	11200	16	15481	13
	Pa	91	6476	22	845	21	*		19062	21	12592	19	18265	22
	U	92	9150#	80#	2449	19	*		14782	28	8950	80	16620	15
219	Pb	82	3080#	500#	10380#	570#	11790#	400#	12670#	570#	10610#	500#	5350#	570#
	Bi	83	4970#	200#	6600#	360#	7700#	200#	14770#	360#	13670#	280#	7100#	360#
	Po	84	3747	16	7820	30	3288	17	14662	24	11671	19	10820#	200#
	At	85	5776	12	5250	4	−1170	50	15223	7	13478	3	10168	12
	Rn	86	4459	3	6560	12	−5630	60	15146	5	11437	4	12693.4	2.3
	Fr	87	6514	8	3889	7	−9970	70	15669	8	13228	9	12007	8
	Ra	88	5323	12	4955	8	−13902	15	15790	9	11287	8	14787	9
	Ac	89	7350	80	2360	50	−17870	110	16390	50	13140	50	14240	50
	Th	90	5980	60	3680	80	*		16470	60	11180	60	16820	60
	Pa	91	8140	70	1070	70	*		17090	70	13150	70	16080	70
	U	92	6670	19	2643	22	*		16952	18	10336	28	18644	17
	Np	93	*		−250	90	*		17180#	120#	11230	100	17260	100

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
216	Hg	80	6990#	570#	*		*		13410#	450#	*		2820#	500#
	Tl	81	7740#	360#	*		*		9000#	300#	*		2460#	310#
	Pb	82	8450#	200#	18840#	450#	2070#	360#	5730#	200#	−16890#	450#	−2190#	200#
	Bi	83	9068	16	15170#	200#	5000#	200#	3617	12	−11450#	300#	−1656	11
	Po	84	9890.3	2.1	12612.6	2.0	6906.3	0.5	1529	6	−9850	50	−5032	7
	At	85	10507	5	11120	12	7950	3	−714	5	−6662	7	−4646	7
	Rn	86	11570	11	9855	6	8198	6	−3038	10	−6494	6	−8136	9
	Fr	87	12213	9	8228	5	9174	3	−5179	10	−3061	8	−7632	8
	Ra	88	12944	10	6967	12	9526	7	−7007	14	−2829	10	−10810	15
	Ac	89	14426	16	5470	13	9240.8	2.9	−9674	26	543	12	−10843	11
	Th	90	16539	15	4372	12	8072	4	−12770	30	478	13	−15580	80
	Pa	91	17780	80	3187	28	8099	11	*		4504	28	−15140	110
	U	92	*		2210	30	8531	26	*		4856	29	*	
217	Tl	81	7510#	500#	*		*		9930#	400#	*		3080#	450#
	Pb	82	8230#	310#	19430#	500#	1640#	420#	6380#	300#	−15950#	500#	−1690#	300#
	Bi	83	9042	19	15880#	300#	4520	30	4335	18	−13430#	300#	−1124	18
	Po	84	9717	7	13040	50	6662.1	2.4	2225	8	−8920#	200#	−4445	7
	At	85	10491	8	11813	7	7201.4	1.2	80	8	−8768	12	−3930	8
	Rn	86	11315	7	10378	5	7887.2	2.9	−2231	8	−5413	4	−7384	6
	Fr	87	12146	9	9007	9	8469	4	−4388	13	−5231	7	−7048	10
	Ra	88	12785	10	7519	9	9161	6	−6316	13	−1653	9	−10332	12
	Ac	89	13471	17	6194	13	9832	10	−8352	17	−1558	12	−9668	16
	Th	90	14858	12	4904	13	9435	4	−10770#	80#	1625	13	−13689	27
	Pa	91	16890	80	3554	18	8489	4	*		1616	16	−14080	30
	U	92	18060#	130#	2530#	80#	8430#	80#	*		5380#	80#	*	
218	Tl	81	7300#	500#	*		*		10490#	400#	*		3380#	500#
	Pb	82	8020#	360#	19870#	500#	1430#	500#	7270#	300#	*		−1170#	300#
	Bi	83	8801	29	16230#	300#	4330#	200#	5116	29	−12730#	400#	−739	28
	Po	84	9568.3	2.0	13730#	200#	6114.75	0.09	3139.2	2.9	−11190#	300#	−4109	5
	At	85	10299	12	12352	16	6876.1	2.6	1041	12	−7919	21	−3630	12
	Rn	86	11179	6	11142.9	2.7	7262.5	1.9	−1428	10	−7955	7	−7169	7
	Fr	87	12054	6	9775	5	8013.7	1.4	−3790	60	−4624	6	−6901	8
	Ra	88	12789	13	8186	11	8540	3	−5721	14	−4302	11	−10128	15
	Ac	89	13440	60	6700	60	9380	60	−7800	60	−750	60	−9430	60
	Th	90	14074	15	5503	13	9849	9	−9528	17	−812	13	−12759	16
	Pa	91	15320	30	4078	20	9791	12	*		2658	21	−12390#	80#
	U	92	17310	30	2982	18	8775	9	*		2400	17	*	
219	Pb	82	7780#	500#	*		1090#	570#	7940#	400#	*		−670#	400#
	Bi	83	8550#	200#	16920#	450#	3870#	360#	5920#	200#	−14680#	450#	−110#	200#
	Po	84	9345	17	14160#	300#	5910	50	3852	16	−10240#	300#	−3490	20
	At	85	10141	6	12912	18	6342	5	1779	7	−10109	27	−2893	4
	Rn	86	10972	5	11632	7	6946.2	0.3	−565	7	−6816.3	2.4	−6301	5
	Fr	87	11840	9	10356	8	7448.6	1.8	−2950	50	−6772	13	−6100	12
	Ra	88	12638	10	8843	8	8138	3	−5070	60	−3113	7	−9530	60
	Ac	89	13280	50	7320	50	8830	50	−7010	90	−2780	50	−8870	50
	Th	90	13890	60	6000	60	9510	60	−8830	60	530	60	−12260	60
	Pa	91	14610	70	4700	70	10130	70	−10850	120	440	90	−11380	70
	U	92	15820#	80#	3488	17	9950	12	*		3640	17	*	
	Np	93	*		2200	90	9210	40	*		3500	90	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
220	Pb	82	4560#	570#	*		13520#	400#	11130#	570#	10340#	570#	*	
	Bi	83	3430#	360#	6950#	500#	9480#	300#	16040#	420#	13560#	420#	7950#	500#
	Po	84	5489	24	8350#	200#	4991	19	12760	30	11398	25	8650#	300#
	At	85	4092	14	5595	21	632	15	16730	14	13356	15	11292	23
	Rn	86	6288.7	2.3	7073	3	−4078	14	13223	12	11081	5	10375	7
	Fr	87	5206	8	4636	4	−8796	15	16976	4	12688	6	12734	6
	Ra	88	7193	10	5634	10	−12740#	100#	13923	9	10821	10	12260	9
	Ac	89	5900	50	2939	9	−16730	30	17809	11	12718	9	15075	9
	Th	90	7840	60	4170	50	*		14550	60	10851	18	14446	15
	Pa	91	6380	70	1470	60	*		18622	18	12937	18	17222	18
	U	92	8350#	100#	2860#	120#	*		15080#	100#	10820#	100#	16450#	100#
	Np	93	7030	100	110	30	*		19290	30	12370#	90#	19070	30
221	Bi	83	4830#	420#	7220#	500#	10920#	300#	14290#	500#	13440#	420#	6140#	500#
	Po	84	3561	26	8480#	300#	6810	20	14170#	200#	11420	30	9790#	300#
	At	85	5664	20	5770	23	2250	60	14812	21	13290	14	9210	30
	Rn	86	4212	6	7193	15	−2469	10	14786	6	11235	13	11761	6
	Fr	87	6276	6	4624	5	−7100	60	15159	5	12924	5	10823	12
	Ra	88	5380	9	5807	6	−11560	70	15058	8	10768	6	13393	5
	Ac	89	7280	60	3030	60	−15380#	210#	15850	60	12750	60	13120	60
	Th	90	5821	16	4093	10	−18990#	300#	16080	50	10950	60	15941	13
	Pa	91	7970	60	1600	60	*		16620	80	12870	60	15170	80
	U	92	6570#	120#	3050	70	*		16650	100	10730	70	17800	70
	Np	93	8640#	200#	390#	220#	*		17330#	200#	12880#	200#	16910#	200#
	Pu	94	*		1830#	300#	*		17200#	310#	*		19680#	300#
222	Bi	83	3320#	420#	*		12570#	300#	15530#	500#	13190#	500#	*	
	Po	84	5360	40	9000#	300#	8170	40	12240#	300#	11030#	200#	7510#	400#
	At	85	3901	21	6110	25	4331	17	16400	24	13136	22	10280#	200#
	Rn	86	6171	6	7700	14	−831	10	12707	14	10840	4	9337	16
	Fr	87	4970	9	5382	9	−5690	90	16477	8	12413	8	11628	8
	Ra	88	6715	6	6246	6	−9950	50	13549	6	10567	8	11137	5
	Ac	89	5980	60	3631	6	−14650	40	17061	9	12092	8	13651	8
	Th	90	7808	13	4620	60	−17860#	300#	14170	12	10500	50	13456	12
	Pa	91	6380	110	2160	90	*		18090	90	12470	100	16140	100
	U	92	8320	90	3390	80	*		14710	50	10550	90	15460	80
	Np	93	6710#	200#	530	80	*		18970#	110#	12840	40	18340	80
	Pu	94	8940#	420#	2140#	360#	*		15300#	300#	10490#	310#	17410#	300#
223	Bi	83	4780#	500#	*		13860#	400#	*		12970#	570#	*	
	Po	84	3480#	200#	9160#	360#	9850#	200#	13590#	360#	10980#	360#	8600#	450#
	At	85	5596	21	6350	40	5603	16	14365	24	13029	23	8120#	300#
	Rn	86	4054	8	7852	18	1004	11	14318	16	10878	16	10773	19
	Fr	87	6067	8	5278.6	2.3	−3960	80	14622	6	12634.4	2.1	9653	14
	Ra	88	5158	5	6434	8	−8810	60	14667	5	10615	4	12267.7	2.3
	Ac	89	6868	8	3784	8	−12830	80	15572	8	12417	10	11989	8
	Th	90	5889	13	4525	9	−16740#	300#	15570	60	10506	10	14760	11
	Pa	91	7800	110	2150	80	−20360#	310#	16110	80	12510	80	14240	80
	U	92	6300	80	3310	100	*		16380	80	10630	60	17000	60
	Np	93	8690	90	900	100	*		16850	110	12510#	130#	16030	80
	Pu	94	7010#	420#	2440#	300#	*		16920#	360#	10510#	300#	18750#	320#
	Am	95	*		−350#	420#	*		17480#	420#	*		17870#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
220	Pb	82	7640#	500#	*		790#	570#	8870#	400#	*		−260#	450#
	Bi	83	8400#	300#	17330#	500#	3660#	420#	6580#	300#	*		210#	300#
	Po	84	9236	18	14940#	300#	5330#	200#	4651	18	−12650#	400#	−3204	18
	At	85	9867	18	13420	30	6077	18	2893	15	−9230#	200#	−2525	14
	Rn	86	10748.1	2.7	12322.6	2.0	6404.74	0.10	340	8	−9358	16	−6076	7
	Fr	87	11720	6	11196	12	6800.7	1.9	−2261	7	−6203	5	−5983	8
	Ra	88	12516	12	9523	8	7594	5	−4417	16	−5846	8	−9370	50
	Ac	89	13250	60	7894	7	8348	4	−6535	16	−2162	9	−8790	60
	Th	90	13820	17	6534	17	8973	11	−8320#	100#	−1993	15	−11970	70
	Pa	91	14514	23	5150	60	9704	11	−10200	30	1420	50	−11089	20
	U	92	15020#	100#	3930#	100#	10290#	100#	*		1260#	120#	−14500#	140#
	Np	93	*		2750	40	10226	18	*		4600	80	*	
221	Bi	83	8260#	360#	*		3120#	500#	7420#	300#	*		870#	300#
	Po	84	9050	25	15420#	400#	5090#	300#	5302	20	−11650#	400#	−2673	24
	At	85	9756	14	14120#	200#	5628	23	3505	15	−11470#	300#	−1901	14
	Rn	86	10501	6	12788	17	6163	3	1507	7	−8081	19	−5082	7
	Fr	87	11482	8	11697	6	6457.7	1.4	−1250	60	−8387	15	−5066	9
	Ra	88	12573	8	10443	5	6880.4	2.0	−3976	9	−4937	5	−8851	7
	Ac	89	13180	80	8660	60	7790	60	−5840	80	−4240	60	−8230	60
	Th	90	13670	60	7032	10	8625	4	−7580	70	−621	11	−11410	17
	Pa	91	14350	90	5770	80	9250	60	−9540#	210#	−660	60	−10710#	120#
	U	92	14920	70	4520	90	9890	70	−11410#	310#	2540	70	−14030	80
	Np	93	15670#	220#	3250#	210#	10430#	200#	*		2340#	200#	*	
	Pu	94	*		1940#	300#	10530#	310#	*		5630#	320#	*	
222	Bi	83	8150#	420#	*		2820#	500#	8000#	300#	*		1110#	300#
	Po	84	8920	40	16220#	400#	4430#	300#	6110	40	*		−2370	40
	At	85	9565	21	14580#	300#	5310	30	4575	18	−10540#	300#	−1590	17
	Rn	86	10382.7	1.9	13469	18	5590.4	0.3	2052	5	−10691	20	−4977	5
	Fr	87	11247	8	12576	16	5853	14	−244	9	−7694	16	−4657	9
	Ra	88	12095	9	10870	5	6678	4	−2883	11	−7440	7	−8280	60
	Ac	89	13265	7	9438	6	7137.4	2.0	−5440	90	−3944	7	−8389	9
	Th	90	13629	17	7647	13	8132.6	2.9	−7070	50	−3050	11	−11240	60
	Pa	91	14360	90	6260	90	8790	60	−9210	90	240	100	−10530	110
	U	92	14880#	110#	4990	50	9480	50	−10790#	300#	40	50	−13710#	210#
	Np	93	15340	50	3580	40	10200	30	*		3610	70	−12730#	300#
	Pu	94	*		2530#	320#	10740#	300#	*		3250#	310#	*	
223	Bi	83	8100#	500#	*		*		8810#	400#	*		1680#	400#
	Po	84	8840#	200#	*		4030#	450#	6690#	200#	*		−1950#	200#
	At	85	9497	20	15350#	300#	4680#	200#	5046	14	−12810#	300#	−1015	14
	Rn	86	10224	10	13962	21	5283	18	3156	8	−9390	40	−4060	11
	Fr	87	11038	5	12978	14	5561.4	2.8	557	7	−9860	16	−4009	5
	Ra	88	11873	5	11816	6	5978.99	0.21	−2152	8	−6427.7	2.4	−7460	5
	Ac	89	12850	60	10030	8	6783.2	1.0	−4510	80	−5842	10	−7449	12
	Th	90	13697	11	8156	9	7567	4	−6660	60	−2224	9	−10750	90
	Pa	91	14180	100	6770	90	8340	60	−8320	110	−1570	80	−10010	90
	U	92	14620	90	5470	60	9158	17	−10080#	310#	1550	60	−13300	70
	Np	93	15390#	220#	4290	100	9650	40	−12040#	310#	1310	120	−12470#	310#
	Pu	94	15950#	420#	2980#	310#	10400#	300#	*		4560#	300#	*	
	Am	95	*		1790#	360#	10840#	310#	*		4140#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
224	Bi	83	3240#	570#	*		15320#	400#	*		*		*	
	Po	84	5240#	280#	9620#	450#	11080#	200#	11670#	360#	10570#	360#	*	
	At	85	3788	26	6660#	200#	7477	23	15940	50	12801	30	9160#	300#
	Rn	86	6016	13	8272	17	2450	14	12203	19	10526	17	8318	22
	Fr	87	4705	11	5930	14	−2114	14	16087	11	12141	13	10612	18
	Ra	88	6478.7	2.3	6845.5	2.1	−6917	15	13159	8	10413	5	10001	6
	Ac	89	5662	8	4288	4	−11798	29	16625	6	12134	6	12603	6
	Th	90	7461	12	5118	12	−15290#	300#	14085	11	10330	60	12678	11
	Pa	91	6550	80	2812	11	−19400#	400#	17370	13	11786	11	14980	60
	U	92	8370	60	3880	80	*		14390	90	10230	60	14449	17
	Np	93	6700	90	1300	70	*		18470	60	12380	80	17300	70
	Pu	94	8910#	420#	2670#	310#	*		14720#	300#	10230#	360#	16410#	310#
	Am	95	7510#	500#	150#	500#	*		18910#	500#	12200#	500#	19000#	450#
225	Po	84	3400#	360#	9780#	500#	12590#	300#	13050#	500#	10490#	420#	*	
	At	85	5480#	300#	6900#	360#	8660#	300#	13930#	360#	12680#	300#	7000#	420#
	Rn	86	3982	15	8466	25	4224	12	13817	18	10445	19	9690	40
	Fr	87	5999	16	5913	15	−540	80	14142	14	12313	12	8514	20
	Ra	88	4904.1	2.8	7045	11	−5379	10	14321.5	2.9	10479	8	11267.5	2.9
	Ac	89	6668	6	4477	5	−9980	90	15115	5	12181	6	10906	9
	Th	90	5757	11	5213	6	−13990#	300#	15196	9	10552	7	13636	7
	Pa	91	7580	80	2930	80	−18030#	410#	15680	80	12020	80	13380	80
	U	92	6442	18	3779	12	*		15750	80	10170	90	15815	14
	Np	93	8490	100	1410	90	*		16280	110	12210	110	15200	130
	Pu	94	7050#	420#	3020#	300#	*		16350#	310#	9890#	300#	17670#	300#
	Am	95	8940#	570#	180#	500#	*		16980#	500#	12200#	500#	16760#	400#
226	Po	84	5100#	500#	*		13880#	400#	11190#	570#	10170#	570#	*	
	At	85	3710#	420#	7210#	420#	10350#	300#	15460#	360#	12450#	360#	8070#	500#
	Rn	86	5858	15	8840#	300#	5550	11	11747	25	10183	17	7320#	200#
	Fr	87	4371	13	6303	13	1487	13	15786	12	11995	10	9739	15
	Ra	88	6396.8	2.9	7442	12	−3661	11	12630	11	10149.3	2.3	8924	8
	Ac	89	5399	6	4973	4	−8510	100	16194	3	11940	3	11573	3
	Th	90	7184	7	5729	6	−12430#	200#	13674	6	10237	8	11611	5
	Pa	91	6390	80	3566	12	−16940#	300#	16749	15	11512	14	13855	13
	U	92	8115	15	4320	80	*		14177	13	9860	80	13590	14
	Np	93	6870	140	1840	100	*		17780	100	11640	120	16130	130
	Pu	94	8740#	360#	3280#	220#	*		14310#	200#	9840#	220#	15230#	210#
	Am	95	7490#	500#	620#	420#	*		18400#	420#	11710#	420#	17960#	310#
227	Po	84	3340#	570#	*		15100#	400#	*		10080#	570#	*	
	At	85	5300#	420#	7410#	500#	11580#	300#	13560#	420#	12380#	360#	6010#	500#
	Rn	86	3933	18	9060#	300#	7081	14	13300#	300#	10039	26	8620#	200#
	Fr	87	5909	9	6354	12	2852	9	13859	13	12101	11	7618	23
	Ra	88	4561.43	0.27	7632	7	−1868	9	14068	12	10293	11	10379	10
	Ac	89	6531	3	5107.0	2.2	−6730	80	14567.3	2.9	11887.7	2.1	9747	11
	Th	90	5464	5	5793	3	−10970#	100#	14878	5	10435	4	12625.3	2.3
	Pa	91	7275	13	3656	8	−15350#	200#	15231	9	11699	12	12243	8
	U	92	6355	14	4278	14	*		15400	80	10047	11	14696	13
	Np	93	8310	130	2040	80	*		15920	80	11700	80	14360	80
	Pu	94	6930#	220#	3340#	140#	*		15860#	140#	9600#	100#	16670#	100#
	Am	95	8860#	360#	740#	280#	*		16590#	360#	11760#	360#	15790#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
224	Bi	83	8020#	500#	*		*		9360#	400#	*		1920#	450#
	Po	84	8720#	200#	*		3360#	450#	7470#	200#	*		−1590#	200#
	At	85	9385	27	15820#	300#	4330#	300#	5962	25	−11820#	400#	−750	24
	Rn	86	10069	10	14620	40	4757	20	3619	10	−11920#	200#	−4009	10
	Fr	87	10772	13	13782	19	4948	18	1514	12	−8968	18	−3556	11
	Ra	88	11637	5	12124.1	1.9	5788.92	0.15	−1170	10	−8853	8	−7071	7
	Ac	89	12530	6	10722	8	6326.9	0.7	−3628	9	−5437	4	−7223	9
	Th	90	13350	14	8903	10	7299	6	−5747	18	−4527	10	−10410	80
	Pa	91	14340	90	7337	9	7694	4	−8170	30	−1252	10	−10250	60
	U	92	14670	50	6038	18	8628	7	−9540#	300#	−932	17	−12990	80
	Np	93	15390	50	4610	90	9329	30	−11230#	400#	2410	80	−12160#	300#
	Pu	94	15920#	420#	3570#	300#	9840#	320#	*		1950#	310#	−15490#	420#
	Am	95	*		2590#	400#	10360#	400#	*		5310#	410#	*	
225	Po	84	8640#	360#	*		*		8050#	300#	*		−1200#	300#
	At	85	9270#	300#	16520#	500#	3680#	420#	6480#	300#	−14060#	500#	−220#	300#
	Rn	86	9998	14	15120#	200#	4335	23	4541	11	−10670#	200#	−3286	16
	Fr	87	10704	12	14185	18	4613	18	2183	13	−11179	25	−3077	12
	Ra	88	11382.8	3.0	12975	8	5097	5	−317	6	−7741	10	−6312	5
	Ac	89	12330	8	11323	5	5935.1	1.4	−2720	80	−7400	12	−6430	11
	Th	90	13218	9	9501	5	6921.4	2.1	−5062	11	−3805	5	−9623	9
	Pa	91	14120	110	8050	80	7400	60	−7260	120	−3170	80	−9460	80
	U	92	14820	60	6591	13	8007	6	−8930#	300#	87	14	−12730	30
	Np	93	15180	120	5300	120	8820	70	−10770#	410#	470	90	−11730#	310#
	Pu	94	15960#	420#	4320#	310#	9360#	310#	*		3270#	300#	−15030#	500#
	Am	95	16450#	500#	2850#	410#	10060#	450#	*		3070#	400#	*	
226	Po	84	8500#	450#	*		*		8800#	400#	*		−820#	500#
	At	85	9190#	300#	16990#	500#	3290#	420#	7140#	300#	*		60#	300#
	Rn	86	9841	14	15740#	200#	3840	40	5080	11	−13120#	300#	−3145	16
	Fr	87	10371	13	14768	23	4143	17	3211	7	−10070#	300#	−2544	7
	Ra	88	11300.9	1.9	13355	10	4870.70	0.25	470	5	−10156	11	−6041	5
	Ac	89	12068	5	12017	12	5506	8	−1724	12	−6800	12	−6072	6
	Th	90	12941	11	10206	5	6452.5	1.0	−4131	12	−6084	5	−9230	80
	Pa	91	13971	13	8778	12	6987	10	−6780	100	−2893	12	−9410	15
	U	92	14557	19	7245	15	7701	4	−8300#	200#	−2270	12	−12360	90
	Np	93	15360	110	5620	100	8330	50	−10150#	320#	1170	130	−11560#	320#
	Pu	94	15790#	360#	4690#	200#	8930#	210#	*		970#	200#	−14830#	450#
	Am	95	16430#	500#	3640#	300#	9270#	300#	*		4060#	310#	*	
227	Po	84	8440#	500#	*		*		9400#	400#	*		−450#	500#
	At	85	9010#	420#	*		2770#	500#	7750#	300#	*		610#	300#
	Rn	86	9791	18	16270#	300#	3380#	200#	5708	14	−11950#	400#	−2706	15
	Fr	87	10281	13	15200#	300#	3830	15	3833	6	−12270#	300#	−2056	6
	Ra	88	10958.2	2.9	13935	11	4363	8	1372.7	2.4	−8859	11	−5203	3
	Ac	89	11930	5	12549	12	5042.27	0.14	−981	7	−8960	7	−5419	5
	Th	90	12648	5	10766.2	3.0	6146.60	0.10	−3240	9	−5151.8	2.4	−8300	11
	Pa	91	13670	80	9385	9	6580.4	2.1	−5750	80	−4768	8	−8570	13
	U	92	14470	13	7843	10	7235	3	−7730#	100#	−1442	10	−11840	100
	Np	93	15180	120	6360	110	7816	14	−9600#	220#	−740	80	−11120#	220#
	Pu	94	15670#	320#	5180#	100#	8300#	120#	*		2150#	100#	−14270#	320#
	Am	95	16350#	450#	4020#	220#	9100#	220#	*		2070#	230#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
228	At	85	3620#	500#	7690#	570#	12990#	400#	15040#	570#	12160#	500#	*	
	Rn	86	5714	23	9480#	300#	8473	18	11290#	300#	9810#	300#	6310#	300#
	Fr	87	4370	9	6791	16	4461	8	15348	12	11714	13	8730#	300#
	Ra	88	6308.6	2.3	8031	6	−280	14	12130	7	9984	12	8052	11
	Ac	89	5026.2	2.4	5571.8	2.4	−4930#	100#	15937.9	2.4	11765.7	2.9	10720	12
	Th	90	7105.2	2.3	6367.6	2.1	−9337	23	13173	3	9998	5	10424.3	2.8
	Pa	91	5978	8	4170	5	−13930#	200#	16437	6	11477	7	12933	6
	U	92	7896	16	4899	15	*		13897	17	9730	80	12556	14
	Np	93	6830#	130#	2510#	100#	*		17210#	100#	11320#	100#	15120#	130#
	Pu	94	8730#	100#	3760	80	*		14000	100	9350	90	14382	25
	Am	95	7400#	280#	1210#	220#	*		17930#	280#	11410#	360#	16880#	220#
229	At	85	5060#	570#	*		14200#	400#	13320#	570#	12210#	570#	*	
	Rn	86	3952	22	9810#	400#	9777	13	12640#	300#	9570#	300#	7460#	400#
	Fr	87	5787	8	6864	18	5771	6	13493	15	11785	12	6660#	300#
	Ra	88	4450	16	8111	17	1351	17	13590	17	9905	17	9461	19
	Ac	89	6276	12	5539	12	−3110	100	14223	12	11886	12	8816	14
	Th	90	5256.7	2.6	6598.1	2.8	−7810	60	14446.8	2.7	10140	4	11564.3	2.7
	Pa	91	7098	5	4163	3	−12280	110	14803	3	11563	5	11234	4
	U	92	6081	15	5002	7	*		15091	9	10041	13	13659	7
	Np	93	8100#	140#	2710	100	*		15470	100	11340	100	13410	100
	Pu	94	6780	60	3720#	120#	*		15530	100	9440	120	15710	60
	Am	95	8740#	230#	1220	110	*		16120#	150#	11420#	230#	15010	150
230	Rn	86	5260#	200#	10010#	450#	11310#	200#	11000#	450#	9600#	360#	5540#	450#
	Fr	87	4253	8	7165	15	7313	7	14954	19	11465	16	7700#	300#
	Ra	88	6117	19	8441	11	2901	11	11843	12	9698	12	7277	17
	Ac	89	4923	20	6013	22	−1400	60	15609	16	11525	16	9802	17
	Th	90	6794.3	2.2	7116	12	−6070	14	12678.7	1.9	9877.1	1.7	9331.5	1.5
	Pa	91	5795	4	4701	4	−10700#	140#	16113	3	11233	3	11970	3
	U	92	7667	7	5571	5	*		13402	6	9649	8	11457	5
	Np	93	6640	120	3260	60	*		16730	60	11060	60	14050	60
	Pu	94	8530	60	4160	100	*		13820#	100#	9220	80	13534	17
	Am	95	7380#	180#	1810#	160#	*		17480#	150#	10970#	170#	15940#	160#
231	Rn	86	3690#	360#	*		12730#	300#	12370#	500#	9530#	500#	*	
	Fr	87	5478	10	7380#	200#	8656	8	13429	15	11701	19	5850#	400#
	Ra	88	4371	15	8559	13	4411	12	13259	12	9696	13	8619	21
	Ac	89	6147	21	6042	17	140	50	13912	20	11687	13	8025	15
	Th	90	5118.02	0.20	7312	16	−4493	22	13837	12	9785.2	1.9	10522.0	1.8
	Pa	91	6821	3	4727.1	1.5	−8990#	300#	14549.6	2.6	11517.5	1.9	10176.1	2.3
	U	92	5880	5	5657	4	−13460#	300#	14620	3	9746	5	12681.5	2.8
	Np	93	7680	80	3280	50	*		15120	50	11270	50	12350	50
	Pu	94	6695	26	4220	60	*		15220	100	9350#	100#	14735	26
	Am	95	8530#	330#	1810#	300#	*		15730#	310#	11170#	300#	14230#	320#
	Cm	96	*		2890#	330#	*		15800#	320#	9280#	360#	16810#	300#
232	Fr	87	4079	16	7770#	300#	10126	16	14610#	200#	11574	19	6830#	400#
	Ra	88	5791	15	8873	12	5888	9	11721	11	9693	10	6781	16
	Ac	89	4680	18	6351	17	1800#	100#	15349	17	11457	20	9133	14
	Th	90	6440.4	1.1	7605	13	−2914	17	12319	16	9621	12	8531	16
	Pa	91	5549	8	5158	8	−7470#	300#	15795	8	11225	8	10903	14
	U	92	7267.8	2.8	6103.9	2.0	−11720#	200#	13147	3	9577	3	10670.3	2.6
	Np	93	6340#	110#	3740#	100#	*		16460#	100#	11010#	100#	13110#	100#
	Pu	94	8019	28	4550	50	*		13840	60	9420	100	12797	18
	Am	95	7060#	420#	2180#	300#	*		17200#	300#	10890#	310#	15270#	320#
	Cm	96	9010#	360#	3370#	360#	*		14170#	250#	9020#	230#	14580#	210#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
228	At	85	8920#	500#	*		2390#	570#	8500#	400#	*		920#	400#
	Rn	86	9646	21	16880#	400#	2910#	200#	6303	18	−14330#	400#	−2510	19
	Fr	87	10279	9	15850#	300#	3248	23	4490	7	−11340#	300#	−1865	7
	Ra	88	10870.0	2.3	14385	11	4070	10	2169.3	2.6	−11235	14	−4980.6	2.3
	Ac	89	11557	3	13204	7	4721	11	−29	5	−8077	6	−4981.4	2.6
	Th	90	12569	5	11474.6	1.9	5520.15	0.22	−2449	14	−7695.5	1.9	−8131	7
	Pa	91	13253	12	9964	5	6264.5	1.5	−4900#	100#	−4215	5	−8193	9
	U	92	14251	17	8556	14	6800	9	−6888	27	−3874	14	−11430	80
	Np	93	15130#	140#	6790#	100#	7540#	100#	−9020#	220#	−290#	100#	−11020#	140#
	Pu	94	15660#	200#	5799	26	7940	18	*		−226	25	−14140#	200#
	Am	95	16260#	360#	4550#	230#	8390#	200#	*		2980#	220#	*	
229	At	85	8680#	500#	*		*		9220#	400#	*		1580#	400#
	Rn	86	9666	19	17500#	400#	2360#	300#	6800	20	*		−2093	15
	Fr	87	10157	8	16340#	300#	2940#	300#	4978	13	−13500#	400#	−1343	5
	Ra	88	10758	16	14902	21	3603	19	2976	16	−9970	23	−4404	16
	Ac	89	11302	12	13570	13	4444	17	793	13	−9983	14	−4152	12
	Th	90	12361.9	2.8	12169.9	2.7	5167.6	1.0	−1625	6	−6643.6	2.7	−7409	5
	Pa	91	13076	8	10530.6	3.0	5835	4	−3900	100	−6287	4	−7394	14
	U	92	13977	10	9172	6	6476	3	−6180	60	−2849	6	−10690#	100#
	Np	93	14920	130	7610	100	7020	60	−8380	150	−2410	100	−10380	100
	Pu	94	15520#	120#	6230	60	7600	60	*		890	60	−13530#	210#
	Am	95	16140#	230#	4980	130	8140	50	*		1070#	150#	*	
230	Rn	86	9220#	200#	*		2200#	450#	7650#	200#	*		−1570#	200#
	Fr	87	10040	9	16970#	400#	2400#	300#	5648	17	−12690#	400#	−1147	17
	Ra	88	10567	10	15305	20	3344	15	3654	10	−12135	17	−4245	16
	Ac	89	11199	16	14124	17	3893	17	1665	16	−9119	17	−3818	16
	Th	90	12051.0	1.1	12655.6	1.8	4770.0	1.5	−753	5	−8988	15	−7106	3
	Pa	91	12893	5	11299	3	5439.4	0.7	−3060	60	−5805	12	−7108	7
	U	92	13748	14	9734	5	5992.5	0.5	−5317	15	−5259	5	−10260	100
	Np	93	14730#	110#	8260	60	6780	50	−7640#	150#	−1950	60	−10230	80
	Pu	94	15318	27	6866	20	7178	9	*		−1567	16	−13320	110
	Am	95	16120#	250#	5530#	180#	7630#	100#	*		1780#	180#	*	
231	Rn	86	8960#	300#	*		1840#	500#	8330#	300#	*		−1010#	300#
	Fr	87	9730	9	17390#	400#	2230#	300#	6318	15	*		−507	13
	Ra	88	10488	19	15724	17	2906	18	4401	11	−11240#	200#	−3693	19
	Ac	89	11070	18	14483	14	3655	14	2339	13	−11013	15	−3171	13
	Th	90	11912.3	2.2	13324	15	4213.4	1.6	9.9	2.5	−7989	10	−6429.1	2.8
	Pa	91	12615.1	2.8	11844	12	5149.9	0.8	−2200	50	−7703	16	−6262	5
	U	92	13547	6	10358	3	5576.3	1.7	−4503	22	−4345.5	2.5	−9500	60
	Np	93	14320	110	8850	50	6370	50	−6790#	300#	−3840	50	−9380	50
	Pu	94	15230	60	7480	23	6839	20	−8960#	300#	−595	22	−12640#	150#
	Am	95	15910#	320#	5970#	320#	7410#	310#	*		−120#	310#	*	
	Cm	96	*		4700#	310#	8080#	320#	*		3050#	300#	*	
232	Fr	87	9557	15	*		1770#	400#	6918	19	*		−215	18
	Ra	88	10162	14	16250#	200#	2829	20	5050	9	−13340#	300#	−3337	16
	Ac	89	10827	21	14910	15	3345	15	3208	15	−10215	15	−2733	13
	Th	90	11558.4	1.1	13648	10	4081.6	1.4	837.3	2.2	−10059	11	−6048.9	1.7
	Pa	91	12370	8	12470	18	4627	8	−1410#	100#	−7105	15	−5931	8
	U	92	13148	5	10831.0	1.1	5413.63	0.09	−3751	17	−6495.3	1.2	−9090	50
	Np	93	14020#	110#	9390#	100#	6010#	100#	−6060#	320#	−3350#	100#	−9020#	100#
	Pu	94	14714	22	7832	17	6716	10	−7970#	200#	−2734	17	−12120#	300#
	Am	95	15600#	330#	6400#	310#	7170#	320#	*		510#	300#	−11920#	420#
	Cm	96	*		5180#	200#	7800#	200#	*		740#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
233	Fr	87	5224	24	*		11431	20	13080#	300#	11610#	200#	*	
	Ra	88	4234	13	9028	16	7415	9	12964	12	9711	11	7810#	200#
	Ac	89	5918	18	6478	16	3360	50	13802	17	11656	17	7468	15
	Th	90	4786.39	0.09	7712	13	−1320	50	13680	13	9757	16	9862	10
	Pa	91	6528	8	5246.3	1.1	−5800#	110#	14384.4	1.0	11491.0	1.0	9297	16
	U	92	5761.7	2.5	6316	8	−10370	80	14205.6	2.4	9610	3	11703.0	2.1
	Np	93	7480#	110#	3950	50	−14820#	240#	14850	50	11200	50	11420	50
	Pu	94	6380	60	4600#	110#	*		15140	70	9680	80	14080	50
	Am	95	8210#	320#	2370#	120#	*		15690#	120#	11220#	120#	13700#	130#
	Cm	96	7110#	220#	3420#	310#	*		15590#	310#	9290#	160#	16010	80
	Bk	97	*		850#	310#	*		16210#	380#	*		15550#	270#
234	Ra	88	5475	12	9278	21	8786	8	11569	16	9714	11	6030#	300#
	Ac	89	4538	19	6782	16	4886	16	15055	17	11489	18	8407	16
	Th	90	6190.0	2.6	7984	13	263	7	12169	13	9714	13	8043	12
	Pa	91	5222	4	5682	4	−4120#	160#	15603	4	11387	4	10222	14
	U	92	6845.5	2.0	6633.4	0.8	−8577	17	12909	8	9584.7	1.5	9975.6	0.7
	Np	93	6070	50	4253	9	−13440#	150#	16056	8	11013	9	12177	8
	Pu	94	7770	50	4890	50	*		13700#	100#	9590	50	12190	7
	Am	95	6900#	200#	2880#	170#	*		16810#	160#	11020#	160#	14480#	170#
	Cm	96	8640	80	3850#	120#	*		14010#	300#	9180#	300#	14060	28
	Bk	97	7450#	280#	1190#	170#	*		17770#	250#	10990#	340#	16630#	340#
235	Ra	88	3870#	300#	*		10210#	300#	12920#	300#	9920#	300#	*	
	Ac	89	5555	20	6862	16	6314	14	13734	16	11724	17	6931	20
	Th	90	4667	13	8112	19	1835	24	13421	18	9727	18	9167	16
	Pa	91	6121	15	5613	14	−2340	50	14268	14	11706	14	8781	19
	U	92	5297.50	0.23	6709	4	−7100#	100#	14140.2	0.8	9836	8	11118.5	0.9
	Np	93	6983	8	4390.9	0.9	−11730#	400#	14834.7	2.2	11297.7	1.8	10743	8
	Pu	94	6239	22	5061	22	*		14940	50	9690#	100#	13219	21
	Am	95	7910#	170#	3010	50	*		15280	80	11130	60	12910#	110#
	Cm	96	6780#	100#	3740#	190#	*		15440#	150#	9460#	320#	15300#	100#
	Bk	97	8700#	430#	1240#	400#	*		16190#	410#	11300#	450#	15000#	500#
236	Ac	89	4210	40	7200#	300#	7840	60	15000	40	11750	40	7950	40
	Th	90	5834	19	8391	20	3354	14	12125	20	9811	19	7568	16
	Pa	91	5026	20	5973	19	−710#	120#	15432	14	11466	14	9672	19
	U	92	6545.52	0.26	7133	14	−5408	18	12817	4	9819.2	0.8	9359.3	0.9
	Np	93	5740	50	4830	50	−10160#	360#	15940	50	11320	50	11540	50
	Pu	94	7352	21	5430.5	1.8	*		13658	8	9820	50	11628.8	2.5
	Am	95	6660#	130#	3430#	120#	*		16400#	120#	10850#	130#	13740#	130#
	Cm	96	8230#	100#	4060	60	*		14100#	160#	9430#	120#	13450	60
	Bk	97	7300#	540#	1760#	380#	*		17530#	360#	11110#	370#	15900#	380#
237	Ac	89	5270#	400#	*		9150#	400#	13600#	500#	11950#	400#	*	
	Th	90	4371	21	8550	40	4863	16	13309	21	9978	21	8671	18
	Pa	91	5878	19	6017	19	960#	60#	14221	18	11779	13	8333	19
	U	92	5125.8	0.5	7233	14	−3860	70	13812	14	9915	4	10423.6	2.5
	Np	93	6580	50	4861.95	0.25	−8340#	230#	14663.6	0.3	11590.7	0.4	10179	4
	Pu	94	5881.2	2.1	5580	50	−12850	100	14759.4	1.6	10001	8	12593.1	1.3
	Am	95	7540#	130#	3620#	60#	*		15100#	60#	11080#	60#	12260#	60#
	Cm	96	6680	80	4080#	140#	*		15330	90	9650#	180#	14540	70
	Bk	97	8400#	430#	1930#	230#	*		15910#	250#	11350#	230#	14400#	280#
	Cf	98	*		2890#	370#	*		15880#	410#	9410#	180#	16860	100

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
233	Fr	87	9303	21	*		1610#	400#	7612	24	*		352	22
	Ra	88	10025	14	16790#	300#	2547	16	5602	9	*		−2892	16
	Ac	89	10597	18	15350	15	3215	14	3819	13	−12054	19	−2210	13
	Th	90	11226.8	1.1	14063	11	3745	16	1812.5	2.2	−9054	9	−5286	8
	Pa	91	12077.6	1.7	12851	13	4375	12	−460	50	−8954	13	−5191.4	1.8
	U	92	13029	3	11474.6	2.1	4908.7	1.2	−3130	50	−5816.6	2.2	−8510#	100#
	Np	93	13820	70	10050	50	5630	50	−5340#	130#	−5290	50	−8480	50
	Pu	94	14400	60	8330	50	6420	50	−7240	100	−1850	50	−11440#	310#
	Am	95	15270#	320#	6920#	130#	7060#	50#	−9490#	260#	−1360#	150#	−11120#	230#
	Cm	96	16120#	310#	5590	80	7470	50	*		1640	80	*	
	Bk	97	*		4220#	380#	8170#	210#	*		2060#	380#	*	
234	Ra	88	9709	12	*		2340#	200#	6318	9	*		−2449	16
	Ac	89	10456	19	15810	20	2930	15	4502	15	−11368	24	−1962	14
	Th	90	10976.4	2.6	14462	10	3672	11	2468.0	2.4	−11010	9	−4947.8	2.5
	Pa	91	11750	9	13393	14	4076	16	384	9	−8258	14	−4652	4
	U	92	12607.1	1.6	11879.7	0.9	4857.5	0.7	−2205	7	−7875.7	0.9	−7870	50
	Np	93	13550#	100#	10570	11	5356	9	−4510#	160#	−4824	8	−8170	50
	Pu	94	14154	18	8837	7	6310	5	−6372	18	−3858	7	−11010#	110#
	Am	95	15100#	340#	7480#	190#	6800#	150#	−8930#	220#	−780#	170#	−10900#	180#
	Cm	96	15750#	200#	6216	24	7365	9	*		−620	60	−14120#	230#
	Bk	97	*		4600#	340#	8100	50	*		2820#	190#	*	
235	Ra	88	9350#	300#	*		2160#	420#	7110#	300#	*		−1780#	300#
	Ac	89	10094	19	16141	24	2852	16	5068	20	*		−1327	14
	Th	90	10857	13	14894	16	3376	17	3099	13	−10202	16	−4392	14
	Pa	91	11343	14	13597	19	4101	19	1246	14	−9841	20	−3927	14
	U	92	12143.0	2.0	12390.8	0.9	4678.1	0.7	−1264	20	−6983.1	2.4	−7107	8
	Np	93	13050	50	11024.3	1.2	5193.8	1.5	−3580	50	−6585	4	−7378	7
	Pu	94	14010	60	9315	21	5951	20	−5830#	100#	−3252	20	−10350#	160#
	Am	95	14800#	130#	7900	70	6576	13	−8150#	400#	−2620	50	−10170	60
	Cm	96	15420#	130#	6620#	120#	7280#	100#	*		380#	100#	−13450#	180#
	Bk	97	16140#	460#	5090#	420#	7940#	500#	*		1020#	430#	*	
236	Ac	89	9760	40	*		2720	40	5890	40	*		−870	40
	Th	90	10500	14	15253	16	3333	17	3811	14	−12160#	300#	−4105	20
	Pa	91	11148	15	14085	20	3755	19	1960	50	−9312	20	−3656	14
	U	92	11843.0	0.3	12746.3	2.4	4573.0	0.9	−456.9	1.6	−8862	13	−6669.8	0.9
	Np	93	12720	50	11540	50	5010	50	−2660#	130#	−6200	50	−6880	50
	Pu	94	13591	7	9821.4	1.6	5867.15	0.08	−4951	18	−5306.2	1.6	−9790	50
	Am	95	14560#	200#	8490#	120#	6260	60	−7500#	380#	−2290#	120#	−10040#	160#
	Cm	96	15012	24	7075	19	7067	5	*		−1618	27	−12990#	400#
	Bk	97	16000#	390#	5500#	390#	7700#	200#	*		1630#	360#	*	
237	Ac	89	9480#	400#	*		2680#	400#	6490#	400#	*		−310#	400#
	Th	90	10205	21	15750#	300#	3196	18	4565	16	*		−3450	21
	Pa	91	10904	19	14407	19	3795	18	2656	13	−10980	40	−2988	13
	U	92	11671.3	0.5	13206	13	4233.6	1.0	298.5	1.4	−8154	14	−6060	50
	Np	93	12314.1	0.9	11995	14	4957.3	0.7	−1700#	60#	−7751	14	−6101.2	1.6
	Pu	94	13233	21	10405.1	1.3	5747.6	2.3	−4160	70	−4641.9	1.3	−9020#	120#
	Am	95	14200#	80#	9050#	60#	6200#	30#	−6640#	240#	−4100#	80#	−9350#	60#
	Cm	96	14910#	130#	7510	80	6770	50	−8690	120	−940	70	−12370#	370#
	Bk	97	15700#	460#	5990#	240#	7500#	200#	*		−120#	260#	*	
	Cf	98	*		4650#	140#	8220	50	*		2800	100	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
238	Th	90	5500#	280#	8780#	490#	6360#	280#	12020#	290#	10030#	280#	7040#	410#
	Pa	91	4705	21	6350	22	2470	60	15350	21	11740	21	9183	21
	U	92	6153.7	1.3	7509	13	−2137	12	12685	14	9883	14	8936	13
	Np	93	5488.32	0.20	5224.5	0.6	−6760#	260#	15720.8	0.3	11399.9	0.4	10812	14
	Pu	94	6999.8	1.3	5997.4	0.4	−11110#	300#	13500	50	9984.2	0.9	10890.77	0.28
	Am	95	6220#	80#	3960	60	*		16230	60	11100	60	13020	60
	Cm	96	7870	80	4410#	60#	*		14120#	120#	9680	50	12909	24
	Bk	97	7070#	340#	2320#	270#	*		17070#	260#	11070#	280#	15240#	260#
	Cf	98	8730#	310#	3220#	380#	*		14450#	470#	9370#	500#	14910#	320#
239	Th	90	4100#	490#	*		7910#	400#	13190#	570#	10140#	400#	*	
	Pa	91	5630#	200#	6480#	340#	3950#	200#	14090#	200#	11950#	200#	7760#	200#
	U	92	4806.38	0.17	7610	16	−570	150	13756	13	10103	14	9964	14
	Np	93	6214.9	1.0	5285.7	1.5	−4940#	210#	14631.7	1.1	11730.5	1.0	9623	14
	Pu	94	5646.2	0.3	6155.3	0.4	−9610#	120#	14427.4	0.3	10070	50	11790.04	0.25
	Am	95	7100	60	4061.8	1.7	−14240#	300#	15009.5	2.1	11352.9	2.3	11660	50
	Cm	96	6370	150	4560	160	*		15290#	160#	9970#	190#	13890	150
	Bk	97	8040#	330#	2490#	210#	*		15710#	220#	11260#	210#	13860#	240#
	Cf	98	7150#	320#	3300#	280#	*		15700#	260#	9520#	380#	16000#	120#
	Es	99	*		940#	420#	*		16400#	320#	*		15740#	470#
240	Pa	91	4400#	280#	6780#	450#	5500#	200#	15200#	350#	11920#	200#	8640#	450#
	U	92	5928.5	2.9	7910#	200#	991	3	12532	16	10052	13	8407	16
	Np	93	5066	17	5545	17	−3350#	150#	15719	17	11790	17	10435	21
	Pu	94	6534.22	0.23	6474.7	1.0	−7863	18	13381.53	0.29	10117.78	0.21	10381.6	0.5
	Am	95	5952	14	4367	14	−12720#	370#	16058	14	11283	14	12285	14
	Cm	96	7490	150	4955.1	2.3	*		14010	60	10020#	60#	12279.0	2.2
	Bk	97	6660#	260#	2770#	210#	*		16930#	150#	11280#	170#	14740#	160#
	Cf	98	8280#	120#	3550#	210#	*		14480#	260#	9640#	230#	14390	80
	Es	99	7480#	470#	1270#	390#	*		17660#	470#	11150#	380#	16660#	430#
241	Pa	91	5340#	360#	*		6810#	300#	13950#	500#	12080#	410#	*	
	U	92	4590#	200#	8100#	280#	2500#	200#	13570#	280#	10170#	200#	9320#	340#
	Np	93	6070	100	5690	100	−1670#	190#	14450	100	11870	100	9070	100
	Pu	94	5241.52	0.03	6650	17	−6370#	170#	14354.9	1.0	10364.57	0.29	11293.8	1.2
	Am	95	6647	14	4479.95	0.17	−10960#	230#	15056.92	0.29	11635.2	0.4	11126.14	0.23
	Cm	96	6093.8	2.1	5097	14	−15520#	300#	15022.2	2.0	10140	60	13185.0	1.2
	Bk	97	7760#	220#	3030#	170#	*		15550#	220#	11400#	170#	13210#	180#
	Cf	98	6730#	170#	3630#	230#	*		15790#	270#	9970#	310#	15530#	170#
	Es	99	8400#	430#	1380#	230#	*		16400#	260#	11480#	380#	15320#	350#
	Fm	100	*		2290#	470#	*		16300#	420#	*		17590#	420#
242	U	92	5650#	280#	8410#	360#	3820#	200#	12320#	280#	10150#	280#	7770#	450#
	Np	93	4970	220	6070#	280#	−340#	240#	15410	200	11710	200	9730#	280#
	Pu	94	6309.6	0.7	6890	100	−4670	13	13111	17	10269.9	1.2	9790.6	1.0
	Am	95	5537.64	0.10	4776.07	0.19	−9330#	260#	16053.50	0.20	11743.8	0.3	11803.4	1.0
	Cm	96	6969.4	1.2	5419.6	0.4	−13600#	400#	14004	14	10277.4	1.7	11861.9	0.3
	Bk	97	6300#	210#	3240#	140#	*		16740#	140#	11470#	200#	14010#	140#
	Cf	98	8010#	170#	3880#	170#	*		14430#	150#	10000#	210#	13890	150
	Es	99	7160#	350#	1810#	310#	*		17520#	260#	11460#	280#	16200#	330#
	Fm	100	8890#	500#	2780#	460#	*		14890#	540#	9630#	500#	15840#	420#
243	U	92	4210#	360#	*		5300#	300#	13450#	420#	10330#	360#	*	
	Np	93	5680#	200#	6100#	200#	1120#	30#	14320#	200#	11950#	30#	8440#	200#
	Pu	94	5033.6	2.4	6950	200	−3240#	180#	14150	100	10302	17	10685	3
	Am	95	6364.3	1.2	4830.8	1.4	−7570#	210#	14930.7	1.2	11913.7	1.2	10505	17
	Cm	96	5693.1	1.0	5575.0	1.0	−12130#	130#	14958.4	1.0	10536	14	12703.0	1.0
	Bk	97	7130#	140#	3403	4	*		15699	5	11829	5	12826	14
	Cf	98	6470#	180#	4050#	230#	*		15720#	250#	10190#	240#	14910#	180#
	Es	99	8130#	330#	1930#	210#	*		16130#	270#	11620#	210#	14730#	260#
	Fm	100	7160#	420#	2770#	290#	*		16130#	270#	9960#	390#	16970#	130#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
238	Th	90	9870#	280#	*		3170#	280#	5220#	280#	*		−3070#	280#
	Pa	91	10583	21	14900	40	3628	21	3439	16	−10420#	400#	−2567	16
	U	92	11279.5	1.2	13525	14	4269.9	2.1	1144.6	1.2	−9936	16	−5635.2	1.2
	Np	93	12070	50	12457	14	4691	4	−970	60	−7362	13	−5708.4	1.3
	Pu	94	12881.0	1.6	10859.4	0.4	5593.27	0.19	−3282	12	−6516.0	0.6	−8480#	60#
	Am	95	13760#	130#	9530	80	6040	60	−5800#	260#	−3740	60	−8900	90
	Cm	96	14550	21	8034	12	6670	10	−7830#	300#	−2935	12	−11840#	230#
	Bk	97	15470#	440#	6400#	280#	7330#	200#	*		360#	260#	−11790#	270#
	Cf	98	*		5150#	300#	8130#	300#	*		740#	310#	*	
239	Th	90	9600#	400#	*		2950#	500#	5930#	400#	*		−2470#	400#
	Pa	91	10330#	200#	15260#	450#	3560#	200#	4030#	200#	*		−2040#	200#
	U	92	10960.1	1.3	13960	16	4130	13	1984.4	1.2	−9240#	280#	−4953.2	1.2
	Np	93	11703.2	1.0	12795	13	4597	14	−79.4	1.9	−8872	16	−4923.5	1.0
	Pu	94	12646.1	1.3	11379.9	0.5	5244.52	0.21	−2560	150	−6008.5	1.2	−7900	60
	Am	95	13320#	60#	10059.2	1.7	5922.4	1.4	−4860#	210#	−5353.2	1.7	−8126	12
	Cm	96	14240	170	8520	150	6540	150	−7060#	190#	−2310	150	−11140#	300#
	Bk	97	15100#	310#	6900#	220#	7200#	200#	−9380#	360#	−1460#	220#	−11100#	360#
	Cf	98	15880#	150#	5620#	140#	7760	60	*		1470#	120#	*	
	Es	99	*		4160#	380#	8440#	500#	*		2130#	390#	*	
240	Pa	91	10030#	200#	*		3360#	200#	4690#	200#	*		−1630#	200#
	U	92	10734.9	2.9	14390#	280#	4035	14	2590.2	2.7	−11070#	400#	−4666.8	2.8
	Np	93	11281	17	13156	23	4557	22	806	22	−8310#	200#	−4343	17
	Pu	94	12180.5	0.4	11760.4	1.2	5255.82	0.14	−1598.9	1.7	−7736.3	1.2	−7336.4	1.7
	Am	95	13050	60	10522	14	5710	50	−4150#	150#	−5090	14	−7710	150
	Cm	96	13864	12	9016.9	1.7	6397.8	0.6	−6264	18	−4153.0	1.7	−10600#	210#
	Bk	97	14700#	300#	7340#	160#	7200#	190#	−8560#	400#	−1020#	150#	−10610#	190#
	Cf	98	15430#	300#	6034	22	7711	4	*		−450	150	−13710#	300#
	Es	99	*		4570#	450#	8260	60	*		2690#	420#	*	
241	Pa	91	9740#	360#	*		3300#	500#	5430#	320#	*		−1050#	300#
	U	92	10520#	200#	14880#	450#	3820#	200#	3240#	200#	*		−4190#	200#
	Np	93	11140	100	13600#	220#	4360	100	1380	100	−9980#	220#	−3880	100
	Pu	94	11775.74	0.23	12195.5	1.2	5140.1	0.5	−746.7	1.2	−7049.4	2.7	−6626	14
	Am	95	12598.7	1.7	10954.6	1.0	5637.82	0.12	−3050#	170#	−6671	17	−6861.2	1.7
	Cm	96	13590	150	9464.4	1.2	6185.2	0.6	−5630#	170#	−3712.5	1.2	−10030#	150#
	Bk	97	14410#	270#	7990#	170#	6990#	180#	−7910#	280#	−2820#	170#	−10080#	170#
	Cf	98	15020#	210#	6400#	230#	7660#	150#	−9890#	340#	310#	170#	−12970#	400#
	Es	99	15880#	380#	4930#	310#	8259	17	*		940#	280#	*	
	Fm	100	*		3560#	320#	8860#	320#	*		3940#	300#	*	
242	U	92	10240#	200#	*		3670#	200#	3900#	200#	*		−3770#	220#
	Np	93	11040	200	14170#	280#	4100	200	1950	200	−9610#	360#	−3610	200
	Pu	94	11551.1	0.7	12576.6	2.7	4984.2	1.0	−86.8	0.8	−8770#	200#	−6288.8	0.7
	Am	95	12185	14	11426	17	5588.50	0.25	−2280#	140#	−6140	100	−6305.1	1.2
	Cm	96	13063.2	1.7	9899.6	0.4	6215.63	0.08	−4583	13	−5440.4	0.4	−9250#	170#
	Bk	97	14060#	200#	8340#	140#	6910#	150#	−7050#	290#	−2470#	140#	−9650#	220#
	Cf	98	14744	22	6915	13	7517	4	−9010#	400#	−1604	13	−12580#	230#
	Es	99	15570#	450#	5440#	300#	8160	20	*		1530#	310#	−12490#	400#
	Fm	100	*		4170#	400#	8700#	500#	*		1780#	430#	*	
243	U	92	9860#	360#	*		3560#	500#	4730#	300#	*		−3010#	360#
	Np	93	10650#	110#	14510#	300#	4040#	200#	2630#	30#	*		−2980#	30#
	Pu	94	11343.2	2.4	13020#	200#	4757.0	2.6	572.6	2.6	−8150#	200#	−5784.8	2.4
	Am	95	11902.0	1.2	11720	100	5439.1	0.9	−1515	5	−7530	200	−5700.0	1.2
	Cm	96	12662.5	1.6	10351.1	1.0	6168.8	1.0	−3810#	180#	−4823.9	1.2	−8640#	140#
	Bk	97	13430#	170#	8823	4	6874	4	−6060#	210#	−4067	4	−8769	14
	Cf	98	14480#	250#	7290#	180#	7420#	100#	−8330#	220#	−1100#	180#	−11880#	310#
	Es	99	15290#	310#	5810#	270#	8072	10	*		−290#	250#	−11720#	450#
	Fm	100	16050#	330#	4590#	210#	8690	50	*		2640#	130#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
244	Np	93	4640#	110#	6530#	320#	2530#	100#	15330#	220#	11910#	220#	9150#	320#
	Pu	94	6019.9	2.9	7290#	30#	−1672	3	13100	200	10350	100	9260#	200#
	Am	95	5367.2	1.6	5164.4	2.6	−6150#	180#	15873.1	1.2	11788.1	1.0	11210	100
	Cm	96	6801.4	1.0	6012.1	1.2	−10510#	200#	13694.63	0.20	10381.55	0.17	11143.12	0.04
	Bk	97	6047	15	3757	14	−14880#	380#	16621	14	11876	14	13426	14
	Cf	98	7580#	180#	4501	5	*		14440#	140#	10360#	170#	13422.7	2.8
	Es	99	6790#	280#	2250#	260#	*		17350#	180#	11560#	250#	15690#	250#
	Fm	100	8420#	240#	3070#	290#	*		14870#	330#	9930#	310#	15280#	260#
	Md	101	*		1010#	400#	*		17910#	550#	11240#	480#	17350#	440#
245	Np	93	5460#	220#	*		4040#	200#	14080#	360#	12090#	280#	*	
	Pu	94	4699	13	7350#	100#	−207	14	14080#	30#	10630	200	10210#	200#
	Am	95	6050.0	1.9	5194.6	2.9	−4420#	170#	14856.7	2.9	12047.6	1.8	10130	200
	Cm	96	5518.6	0.5	6163.6	1.1	−9190#	200#	14540.3	1.3	10400.6	0.5	11934.1	0.8
	Bk	97	6971	14	3927.0	1.4	−13510#	260#	15342.6	1.7	11874.1	1.5	11992.2	1.4
	Cf	98	6164	3	4618	15	*		15406	5	10500#	140#	14227.9	2.2
	Es	99	7780#	250#	2450#	170#	*		16040#	250#	11790#	170#	14210#	210#
	Fm	100	6840#	280#	3120#	270#	*		16160#	290#	10250#	320#	16450#	200#
	Md	101	8340#	460#	930#	330#	*		16720#	290#	11790#	480#	16170#	370#
246	Pu	94	5855	20	7740#	200#	1305	15	12870#	100#	10450#	40#	8560#	300#
	Am	95	4978#	18#	5473#	22#	−2830#	90#	15899#	18#	12103#	18#	10830#	40#
	Cm	96	6458.9	1.2	6572.5	2.0	−7574	14	13448.6	1.5	10306.0	1.6	10508.8	2.5
	Bk	97	5920	60	4330	60	−12150#	270#	16230	60	11650	60	12440	60
	Cf	98	7366.2	2.4	5012.5	1.8	*		14087	14	10265	5	12554.7	1.4
	Es	99	6570#	190#	2860	90	*		17050	90	11690#	200#	14780	90
	Fm	100	8070#	200#	3410#	170#	*		14880#	180#	10310#	210#	14850#	180#
	Md	101	7280#	370#	1370#	330#	*		17860#	330#	11660#	290#	17020#	330#
247	Pu	94	4260#	200#	*		3100#	200#	14070#	280#	10830#	220#	*	
	Am	95	5910#	100#	5530#	100#	−1430#	100#	14690#	100#	12210#	100#	9560#	140#
	Cm	96	5155	4	6750#	18#	−6140#	180#	14343	4	10518	4	11373	4
	Bk	97	6550	60	4416	5	−10450#	210#	15196	5	11902	5	11257	5
	Cf	98	6052	14	5150	60	*		15006	14	10260	20	13304	14
	Es	99	7310	90	2801	19	*		15904	20	11964	20	13511	24
	Fm	100	6590#	180#	3440#	200#	*		16070#	250#	10510#	260#	15840#	180#
	Md	101	8250#	330#	1540#	210#	*		16460#	290#	11840#	290#	15560#	280#
248	Am	95	4660#	220#	5940#	280#	260#	210#	15880#	200#	12250#	200#	10360#	280#
	Cm	96	6212	4	7050#	100#	−4505	9	13110#	18#	10356.4	2.9	9861	13
	Bk	97	5430	50	4690	50	−8820#	190#	16220	50	11990	50	11880	50
	Cf	98	6943	15	5541	7	−13450#	220#	13980	60	10288	5	11880	5
	Es	99	6350#	60#	3100#	50#	*		16920#	50#	11780#	50#	14130#	50#
	Fm	100	7850#	180#	3970	21	*		14790	90	10450#	170#	14159	9
	Md	101	7060#	280#	2010#	260#	*		17470#	180#	11620#	270#	16280#	250#
	No	102	*		2540#	310#	*		15280#	340#	10230#	340#	16140#	300#
249	Am	95	5530#	360#	*		1930#	300#	14600#	360#	12570#	300#	*	
	Cm	96	4713.37	0.25	7100#	200#	−2768	7	14310#	100#	10621#	18#	11002	15
	Bk	97	6360	50	4835.4	2.6	−7330	160	15024	4	12093.5	1.4	10499#	18#
	Cf	98	5587	5	5700	50	−12060#	280#	14944	5	10620	60	12752.2	1.3
	Es	99	7200#	60#	3350#	30#	*		15780#	30#	11950#	30#	12850#	70#
	Fm	100	6450	10	4070#	50#	*		15652	20	10560	90	15075	6
	Md	101	7840#	250#	2010	160	*		16220#	240#	11850	160	15010	190
	No	102	6970#	360#	2450#	340#	*		16560#	350#	10540#	380#	17240#	280#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
244	Np	93	10320#	220#	*		3810#	220#	3360#	100#	*		−2590#	100#
	Pu	94	11053.5	2.5	13390#	200#	4665.6	1.0	1354.2	2.5	−9960#	300#	−5440.3	2.6
	Am	95	11731.5	1.0	12120	200	5138	17	−835	14	−7220#	30#	−5374.1	1.4
	Cm	96	12494.5	0.4	10843.0	0.7	5901.60	0.03	−3026.3	2.5	−6591.7	2.4	−8309	4
	Bk	97	13180#	140#	9332	14	6779	4	−5310#	180#	−3750	14	−8350#	180#
	Cf	98	14052	13	7903.5	2.5	7329.0	1.8	−7490#	200#	−2992.8	2.7	−11340#	210#
	Es	99	14920#	310#	6300#	230#	7940#	100#	−9570#	420#	50#	180#	−11360#	220#
	Fm	100	15580#	450#	5000#	200#	8550#	200#	*		690#	270#	*	
	Md	101	*		3780#	450#	8950	80	*		3560#	430#	*	
245	Np	93	10100#	200#	*		3690#	360#	3950#	200#	*		−2030#	200#
	Pu	94	10719	14	13880#	300#	4560#	200#	2174	14	*		−4772	14
	Am	95	11417.2	2.0	12480#	30#	5160	100	86.6	2.1	−8630#	100#	−4622.7	1.6
	Cm	96	12320.0	1.1	11328.0	2.5	5624.5	0.5	−2380.6	2.2	−6090.5	2.5	−7781	14
	Bk	97	13018	5	9939.2	1.9	6454.5	1.4	−4500#	170#	−5354.3	1.7	−7735.6	2.9
	Cf	98	13750#	180#	8374.7	2.4	7258.5	1.8	−6810#	200#	−2355.7	2.2	−10710#	180#
	Es	99	14570#	270#	6950#	170#	7909	3	−9010#	310#	−1690#	170#	−10720#	260#
	Fm	100	15270#	240#	5380#	270#	8440#	100#	*		1430#	200#	−13480#	420#
	Md	101	*		4000#	330#	9010#	120#	*		2010#	320#	*	
246	Pu	94	10554	15	*		4350#	200#	2778	15	*		−4577	15
	Am	95	11028#	18#	12820#	100#	5150#	200#	1030#	60#	−8150#	200#	−4082#	18#
	Cm	96	11977.6	1.1	11767.1	2.7	5475.1	0.9	−1473.3	1.5	−7850	14	−7268.2	1.8
	Bk	97	12890	60	10490	60	6070	60	−3850	110	−5220	60	−7490	60
	Cf	98	13530.5	2.7	8939.5	1.1	6861.6	1.0	−6101	14	−4203.3	1.2	−10300#	170#
	Es	99	14350#	200#	7470	90	7640#	100#	−8300#	280#	−1280	90	−10440#	220#
	Fm	100	14920#	200#	5865	14	8379	5	*		−483	14	−13210#	260#
	Md	101	15630#	460#	4490#	320#	8890	40	*		2510#	310#	*	
247	Pu	94	10110#	200#	*		4310#	360#	3680#	200#	*		−3860#	200#
	Am	95	10890#	100#	13280#	220#	4920#	110#	1660#	100#	*		−3540#	100#
	Cm	96	11614	4	12223	14	5354	3	−576	15	−7151	15	−6510	60
	Bk	97	12467	5	10989	5	5890	5	−3089	20	−6793#	19#	−6672	5
	Cf	98	13418	15	9473	14	6503	14	−5560#	180#	−3796	14	−9780	90
	Es	99	13880#	170#	7813	20	7464	20	−7360#	210#	−2680	60	−9684	24
	Fm	100	14660#	270#	6290#	180#	8258	10	*		290#	180#	−12510#	320#
	Md	101	15530#	330#	4960#	270#	8764	10	*		830#	230#	*	
248	Am	95	10570#	200#	*		4900#	220#	2430#	210#	*		−3040#	200#
	Cm	96	11366.8	2.7	12580	15	5161.81	0.25	155	6	−9110#	200#	−6168	6
	Bk	97	11980	80	11440#	50#	5830	50	−2170#	70#	−6310#	110#	−6050	50
	Cf	98	12995	5	9957	5	6361	5	−4660	10	−5584	6	−9412	20
	Es	99	13660#	100#	8250#	80#	7160#	50#	−6650#	190#	−2480#	50#	−9450#	190#
	Fm	100	14436	16	6770	9	7995	8	−8790#	220#	−1501	17	−12110#	210#
	Md	101	15310#	320#	5450#	210#	8500	30	*		1080#	190#	*	
	No	102	*		4080#	230#	9300#	100#	*		1730#	290#	*	
249	Am	95	10190#	310#	*		4830#	360#	3260#	300#	*		−2360#	300#
	Cm	96	10925	4	13040#	200#	5148	13	1028.0	2.6	*		−5450	50
	Bk	97	11786	5	11890#	100#	5521.0	1.4	−1330#	30#	−8010#	200#	−5463	5
	Cf	98	12529	14	10388	4	6293.3	0.5	−3796	6	−4959.0	2.6	−8650#	50#
	Es	99	13550#	40#	8890#	30#	6940#	30#	−6010#	170#	−4250#	60#	−8790#	30#
	Fm	100	14300#	180#	7168	16	7709	6	−8270#	280#	−1008	8	−11500#	180#
	Md	101	14900#	270#	5980	170	8441#	18#	*		−410#	170#	−11580#	280#
	No	102	*		4460#	330#	9170#	200#	*		2600#	280#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
250	Cm	96	5832	10	7400#	300#	−1083	13	13140#	200#	10700#	100#	9430#	200#
	Bk	97	4965.6	2.8	5088	4	−5450	90	16270	4	12283	5	11450#	100#
	Cf	98	6623.7	1.3	5965.0	1.4	−10400#	200#	13750	50	10545	5	11284	4
	Es	99	6020#	100#	3790#	100#	*		16700#	100#	11980#	100#	13380#	100#
	Fm	100	7518	10	4390#	30#	*		14480#	50#	10358	21	13609	16
	Md	101	6850	190	2410	90	*		17210	90	11590#	200#	15470	90
	No	102	8290#	340#	2900#	260#	*		15330#	270#	10490#	290#	15540#	270#
251	Cm	96	4413	25	*		689	27	14260#	300#	10950#	200#	*	
	Bk	97	5795	11	5051	15	−3739	22	15188	11	12699	11	10310#	200#
	Cf	98	5107	4	6106	5	−8710#	180#	14999	4	10870	50	12389	4
	Es	99	6790#	100#	3948	5	−13320#	200#	15500	5	12138	7	12030	50
	Fm	100	6185	16	4560#	100#	*		15500#	30#	10520#	50#	14367	15
	Md	101	7500	90	2394	20	*		16158	20	11933	21	14310#	60#
	No	102	6790#	270#	2840#	200#	*		16380#	240#	10770#	260#	16600#	180#
	Lr	103	*		1030#	280#	*		16750#	340#	12010#	300#	16530#	270#
252	Cm	96	5660#	300#	*		2240#	300#	*		10820#	420#	*	
	Bk	97	4770#	200#	5400#	200#	−1930#	220#	16260#	200#	12650#	200#	11080#	360#
	Cf	98	6172	4	6482	11	−6837	10	13793	4	11052.3	2.6	10930.32	0.25
	Es	99	5290	50	4130	50	−11240#	190#	16840	50	12440	50	13090	50
	Fm	100	7214	15	4984	7	*		14300#	100#	10510#	30#	12740	5
	Md	101	6570	90	2780	90	*		17110	90	11810	90	14940#	100#
	No	102	8050#	180#	3384	21	*		15180	90	10550	160	14999	11
	Lr	103	7360#	270#	1600#	260#	*		17680#	270#	11610#	340#	17000#	250#
253	Bk	97	5680#	410#	5420#	470#	−240#	360#	14990#	360#	12800#	360#	*	
	Cf	98	4804	4	6520#	200#	−5057	8	14784	11	11214	5	11958	11
	Es	99	6360	50	4313.1	2.6	−9510	160	15586	4	12704.2	1.4	11704.9	2.8
	Fm	100	5542	5	5240	50	−14300#	410#	15545	5	10980#	100#	13821.6	1.7
	Md	101	7370#	100#	2930#	30#	*		15930#	30#	11970#	30#	13590#	110#
	No	102	6584	12	3400	90	*		16103	20	10820	90	15933	10
	Lr	103	8090#	250#	1640	160	*		16390#	240#	11820#	260#	15770	190
	Rf	104	*		2180#	450#	*		16520#	460#	*		17720#	460#
254	Bk	97	4610#	470#	*		940#	310#	16050#	420#	12610#	300#	*	
	Cf	98	6031	12	6880#	360#	−3382	15	13520#	200#	10977	16	10340	25
	Es	99	5087.7	2.9	4596	5	−7650	90	16670	4	12723	5	12413	11
	Fm	100	6514.3	1.9	5396.9	1.7	−12300#	280#	14320	50	11255	5	12414	4
	Md	101	5790#	110#	3180#	100#	*		17350#	100#	12360#	100#	14590#	100#
	No	102	7707	12	3740#	30#	*		14970	90	10621	21	14411	17
	Lr	103	6950	190	2000	90	*		17490	90	11660#	200#	16330	90
	Rf	104	8510#	500#	2610#	330#	*		15380#	340#	10240#	350#	16000#	340#
255	Cf	98	4600#	200#	6870#	360#	−2000#	200#	14590#	410#	11140#	280#	11400#	360#
	Es	99	5976	11	4541	16	−5858	21	15498	11	12919	11	11200#	200#
	Fm	100	5173	4	5483	5	−10530#	180#	15501	4	11370	50	13412	4
	Md	101	6680#	100#	3349	6	−14750#	280#	16207	6	12890	8	13190	50
	No	102	5983	17	3930#	100#	*		16350#	30#	11210	90	15642	15
	Lr	103	7770	90	2065	20	*		16299	19	11940	20	15130	90
	Rf	104	6940#	340#	2610#	200#	*		16520#	250#	10660#	260#	17110#	180#
	Db	105	*		900#	400#	*		16660#	500#	*		16700#	340#
256	Cf	98	5840#	370#	*		−780#	310#	13360#	430#	10980#	480#	*	
	Es	99	4980#	100#	4910#	220#	−4560#	130#	16550#	100#	12750#	100#	11900#	370#
	Fm	100	6387	5	5893	11	−8737	18	14201	4	11338	3	11830	4
	Md	101	5460#	120#	3630#	120#	−12840#	220#	17260#	120#	12980#	120#	14090#	120#
	No	102	7060	16	4308	9	*		15080#	100#	11510#	30#	14124	8
	Lr	103	6270	80	2350	80	*		17730	80	12250	80	16220#	90#
	Rf	104	8180#	180#	3014	25	*		15290	90	10560	170	15510	19
	Db	105	7370#	340#	1320#	260#	*		17810#	340#	11520#	450#	17420#	250#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
250	Cm	96	10546	10	*		5170	18	1819	10	*		−4928	10
	Bk	97	11320	50	12190#	200#	5533#	18#	−270#	100#	−7440#	300#	−4842.0	2.8
	Cf	98	12210	5	10800.4	2.7	6128.51	0.19	−2902	8	−6869.3	2.7	−8080#	30#
	Es	99	13220#	110#	9480#	110#	6830#	120#	−5170#	140#	−3910#	100#	−8370#	100#
	Fm	100	13968	12	7744	9	7557	8	−7490#	200#	−2940	8	−11180	160
	Md	101	14690#	210#	6480#	110#	8155	28	*		−70#	100#	−11460#	290#
	No	102	15270#	300#	4910#	200#	8950#	200#	*		760#	200#	*	
251	Cm	96	10245	23	*		5010#	200#	2513	22	*		−4375	23
	Bk	97	10761	11	12450#	300#	5650#	100#	716	12	*		−4014	11
	Cf	98	11730	4	11194	4	6177.0	0.9	−1824	15	−6144	11	−7160#	100#
	Es	99	12810#	30#	9913	5	6597.1	1.0	−4455	20	−5729	6	−7632	9
	Fm	100	13703	16	8342	14	7424.5	1.0	−6890#	180#	−2500	14	−10510	90
	Md	101	14360	170	6790#	40#	7963	4	−8860#	200#	−1550#	100#	−10670#	200#
	No	102	15080#	330#	5250#	180#	8752	4	*		1490#	180#	*	
	Lr	103	*		3930#	260#	9470#	290#	*		2140#	220#	*	
252	Cm	96	10080#	300#	*		*		3020#	300#	*		−4240#	300#
	Bk	97	10560#	200#	*		5550#	280#	1240#	210#	*		−3670#	200#
	Cf	98	11278.4	2.7	11533	10	6216.95	0.04	−782	6	−7902	23	−6548	6
	Es	99	12070#	110#	10240	50	6738.6	0.5	−3170	100	−5220	50	−6740	50
	Fm	100	13398	9	8932	5	7153.7	1.0	−6055	11	−4607	6	−10221	20
	Md	101	14070	130	7340#	140#	7740#	110#	−8070#	210#	−1330	90	−10450#	200#
	No	102	14840#	200#	5779	12	8549	5	*		−376	17	−13030#	200#
	Lr	103	*		4440#	210#	9164	17	*		2280#	190#	*	
253	Bk	97	10440#	360#	*		5400#	200#	1920#	360#	*		−3180#	360#
	Cf	98	10976	5	11924	23	6126	4	−44	4	−7040#	300#	−6060	50
	Es	99	11644	5	10795	11	6739.24	0.05	−2160#	30#	−6810#	200#	−5877	5
	Fm	100	12756	14	9367	4	7197.9	1.0	−5013	7	−3978.0	2.7	−9190	90
	Md	101	13940#	40#	7920#	30#	7573	8	−7350#	170#	−3410#	60#	−9770#	30#
	No	102	14630#	180#	6178	16	8415	4	−9280#	410#	253	9	−12250#	190#
	Lr	103	15450#	260#	5020	170	8918	20	*		770	190	*	
	Rf	104	*		3790#	450#	9430#	300#	*		3480#	410#	*	
254	Bk	97	10280#	360#	*		*		2400#	300#	*		−2980#	300#
	Cf	98	10836	11	12290#	300#	5927	5	439	12	*		−5740	12
	Es	99	11440	50	11120#	200#	6617.2	0.5	−1460#	100#	−6220#	360#	−5422.7	3.0
	Fm	100	12057	5	9710.0	2.9	7307.3	1.0	−3821	10	−5688	5	−8340#	30#
	Md	101	13160#	140#	8420#	110#	7800#	140#	−6190#	140#	−2850#	100#	−8980#	100#
	No	102	14291	13	6671	11	8226	8	−8480#	280#	−1911	10	−11870	160
	Lr	103	15030#	210#	5400	130	8822	8	*		1180#	100#	−12070#	420#
	Rf	104	*		4250#	280#	9210#	200#	*		1550#	280#	*	
255	Cf	98	10640#	200#	*		5740#	200#	1010#	200#	*		−5260#	200#
	Es	99	11064	11	11420#	360#	6436.3	1.3	−753	12	−7590#	300#	−4885	11
	Fm	100	11688	4	10079	5	7240.6	0.5	−3011	15	−4830	12	−7720#	100#
	Md	101	12470#	30#	8746	6	7905.6	1.7	−5105	19	−4441	6	−7953	11
	No	102	13689	16	7112	14	8428.2	3.0	−7520#	180#	−1380	14	−10910	90
	Lr	103	14720	170	5800#	40#	8556	7	−9650#	280#	−790#	100#	−11330#	280#
	Rf	104	15460#	450#	4610#	180#	9055	4	*		2320#	180#	*	
	Db	105	*		3510#	330#	9340#	200#	*		2660#	300#	*	
256	Cf	98	10440#	320#	*		5560#	100#	1560#	310#	*		−5120#	320#
	Es	99	10950#	100#	11790#	310#	6230#	220#	−270#	160#	*		−4690#	100#
	Fm	100	11560	3	10435	11	7025.3	1.9	−2338	8	−6610#	200#	−7429	6
	Md	101	12140#	160#	9120#	120#	7740#	110#	−4290#	150#	−3920#	120#	−7430#	120#
	No	102	13043	12	7657	8	8582	5	−6399	19	−3266	8	−10196	19
	Lr	103	14040	120	6280#	130#	8850	120	−8550#	210#	−380	80	−10650#	200#
	Rf	104	15120#	280#	5079	20	8926	15	*		121	23	−13440#	280#
	Db	105	*		3930#	210#	9340	30	*		3060#	190#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
257	Es	99	5850#	420#	4930#	520#	−3260#	410#	15310#	460#	12930#	410#	10660#	510#
	Fm	100	4966	4	5880#	100#	−7276	12	15212	11	11460	5	12895	12
	Md	101	6540#	120#	3781	3	−11160	160	15903	4	12954.0	2.0	12645	3
	No	102	5647	10	4500#	120#	*		16116	8	11660#	100#	14991	6
	Lr	103	7150#	90#	2450#	50#	*		16560#	50#	12810#	50#	14860#	110#
	Rf	104	6427	21	3170	80	*		16630	21	11080	90	16789	14
	Db	105	8220#	250#	1360	170	*		16540#	250#	11820#	330#	16150	190
258	Es	99	4770#	570#	*		−2080#	410#	16370#	510#	12760#	450#	*	
	Fm	100	6240#	200#	6270#	460#	−5920#	200#	13950#	220#	11200#	200#	11260#	280#
	Md	101	5373	4	4189	6	−9820	90	16916	5	12754	5	13248	11
	No	102	6840#	100#	4800#	100#	−13820#	420#	14730#	160#	11500#	100#	13320#	100#
	Lr	103	5960#	110#	2750#	100#	*		17670#	100#	12830#	100#	15590#	100#
	Rf	104	7593	19	3610#	50#	*		15310	80	11261	24	15179	21
	Db	105	6720	190	1650	90	*		18000	90	12040#	200#	17210	90
	Sg	106	*		2150#	440#	*		15710#	450#	10570#	500#	16610#	450#
259	Fm	100	4790#	350#	6290#	490#	−4660#	290#	15010#	500#	11380#	300#	12310#	420#
	Md	101	6200#	100#	4150#	220#	−8430#	120#	15690#	100#	12940#	100#	12030#	140#
	No	102	5470#	100#	4900	7	−12440#	180#	15798	6	11490#	120#	14241	7
	Lr	103	7000#	120#	2920#	120#	*		16320#	70#	12890#	70#	14040#	140#
	Rf	104	6050#	70#	3700#	130#	*		16410#	90#	11480#	110#	16190#	70#
	Db	105	7590	110	1640	60	*		16840	60	12630	60	15890	100
	Sg	106	6850#	450#	2280#	200#	*		17080#	250#	11090#	260#	17940#	180#
260	Fm	100	6010#	520#	*		−3380#	480#	13770#	590#	11230#	600#	*	
	Md	101	5090#	330#	4440#	420#	−7120#	330#	16830#	370#	12820#	320#	12790#	520#
	No	102	6540#	200#	5240#	220#	−10940#	200#	14630#	200#	11480#	200#	12670#	200#
	Lr	103	5650#	140#	3090#	130#	−14850#	230#	17510#	160#	12890#	130#	14930#	130#
	Rf	104	7290#	210#	3990#	210#	*		15080#	230#	11350#	210#	14550#	200#
	Db	105	6390#	110#	1980#	120#	*		18040#	90#	12670#	90#	16650#	100#
	Sg	106	8040#	180#	2730	60	*		15750	90	11260	170	16328	23
	Bh	107	*		690#	270#	*		18540#	460#	*		18620#	260#
261	Md	101	6040#	600#	4480#	670#	−5730#	520#	15590#	580#	13020#	550#	11520#	650#
	No	102	5230#	280#	5380#	370#	−9550#	200#	15600#	220#	11630#	200#	13680#	280#
	Lr	103	6790#	240#	3340#	280#	−13520#	270#	16190#	200#	12940#	220#	13510#	200#
	Rf	104	5900#	210#	4250#	140#	*		16180#	100#	11400#	120#	15490#	120#
	Db	105	7440#	140#	2130#	230#	*		16650#	130#	12830#	110#	15170#	150#
	Sg	106	6614	28	2960#	100#	*		16720	60	11360	90	17307	25
	Bh	107	8120#	270#	760	180	*		17270#	260#	12650#	450#	17220	200
262	Md	101	4980#	680#	*		−4590#	470#	16610#	620#	12830#	530#	*	
	No	102	6430#	410#	5770#	620#	−8270#	360#	14260#	480#	11400#	370#	12040#	460#
	Lr	103	5520#	280#	3640#	280#	−12150#	220#	17210#	280#	12890#	200#	14190#	220#
	Rf	104	7000#	230#	4450#	300#	*		14830#	260#	11410#	240#	13960#	220#
	Db	105	6130#	180#	2350#	160#	*		17820#	250#	12750#	160#	16050#	160#
	Sg	106	7707	29	3230#	110#	*		15410#	100#	11240	60	15650#	80#
	Bh	107	6900	200	1040	90	*		18420	100	12600#	200#	17910	110
263	No	102	5040#	610#	5830#	660#	−7070#	500#	15260#	710#	11440#	580#	13010#	660#
	Lr	103	6510#	300#	3720#	430#	−10830#	380#	15930#	300#	12920#	300#	12770#	390#
	Rf	104	5710#	270#	4640#	250#	−14920#	250#	15910#	250#	11340#	200#	14790#	250#
	Db	105	7210#	220#	2570#	280#	*		16500#	180#	12830#	260#	14480#	210#
	Sg	106	6250#	100#	3350#	170#	*		16600#	150#	11390#	130#	16690#	220#
	Bh	107	7830#	320#	1160#	310#	*		17200#	310#	12810#	310#	16470#	320#
	Hs	108	*		1860#	220#	*		17310#	270#	11420#	280#	18780#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
257	Es	99	10830#	410#	*		6050#	200#	410#	410#	*		−4150#	410#
	Fm	100	11353	5	10800#	200#	6863.7	0.9	−1657	8	−5740#	310#	−6940#	120#
	Md	101	11992	6	9675	11	7557.1	0.9	−3670#	40#	−5480#	100#	−6902	8
	No	102	12708	15	8131	7	8477	6	−5619	12	−2527	7	−9570	80
	Lr	103	13430#	50#	6760#	40#	9070	30	−7490#	170#	−2080#	130#	−9630#	50#
	Rf	104	14610#	180#	5523	18	9083	8	*		754	13	−12500#	190#
	Db	105	15580#	330#	4370	170	9206	20	*		1120	180	*	
258	Es	99	10630#	410#	*		5880#	500#	1010#	400#	*		−3960#	400#
	Fm	100	11200#	200#	11190#	370#	6660#	200#	−1050#	220#	*		−6640#	200#
	Md	101	11910#	120#	10070#	100#	7271.3	1.9	−3090#	100#	−5000#	410#	−6628	7
	No	102	12490#	100#	8590#	100#	8150#	100#	−4870#	100#	−4400#	100#	−9260#	110#
	Lr	103	13110#	130#	7250#	160#	8904	19	−6730#	140#	−1500#	100#	−9160#	100#
	Rf	104	14020	24	6057	18	9196	13	−8950#	410#	−1192	17	−11880	170
	Db	105	14930#	210#	4820	120	9437	10	*		1550#	100#	*	
	Sg	106	*		3500#	410#	9670#	300#	*		2140#	410#	*	
259	Fm	100	11030#	280#	*		6470#	200#	−380#	280#	*		−6060#	280#
	Md	101	11570#	100#	10420#	420#	7050#	100#	−2290#	120#	−6430#	410#	−5990#	140#
	No	102	12310	9	9089	7	7854	5	−4290#	70#	−3640#	200#	−8770#	100#
	Lr	103	12960#	80#	7720#	70#	8580#	70#	−6140#	90#	−3130#	70#	−8570#	70#
	Rf	104	13640#	70#	6460#	70#	9130#	70#	−8150#	200#	−400#	120#	−11210#	120#
	Db	105	14310	170	5250#	70#	9620	50	*		−80#	120#	−11380#	420#
	Sg	106	*		3930#	180#	9765	8	*		2890#	180#	*	
260	Fm	100	10800#	480#	*		6300#	300#	160#	480#	*		−5870#	450#
	Md	101	11280#	320#	10730#	510#	6940#	300#	−1730#	340#	*		−5600#	320#
	No	102	12010#	220#	9400#	280#	7700#	200#	−3540#	280#	−5380#	350#	−8310#	210#
	Lr	103	12650#	160#	7990#	130#	8400#	140#	−5400#	160#	−2580#	160#	−8160#	150#
	Rf	104	13340#	200#	6910#	220#	8900#	200#	−7400#	200#	−2220#	200#	−10910#	210#
	Db	105	13980#	130#	5690#	140#	9500#	40#	−9450#	220#	530#	120#	−10920#	200#
	Sg	106	14890#	410#	4375	26	9901	10	*		890#	80#	*	
	Bh	107	*		2960#	220#	10400	60	*		3840#	200#	*	
261	Md	101	11130#	520#	*		6750#	300#	−980#	550#	*		−5100#	550#
	No	102	11770#	200#	9830#	350#	7440#	200#	−2860#	210#	−4600#	480#	−7890#	240#
	Lr	103	12440#	210#	8590#	220#	8140#	200#	−4750#	230#	−4280#	370#	−7660#	280#
	Rf	104	13190#	100#	7340	70	8650	70	−6690	70	−1580#	210#	−10430#	110#
	Db	105	13830#	120#	6120#	130#	9220#	100#	−8770#	210#	−1260#	170#	−10310#	110#
	Sg	106	14660#	180#	4940#	80#	9714	15	*		1570#	200#	−13190#	200#
	Bh	107	*		3490	190	10500	70	*		2120#	200#	*	
262	Md	101	11030#	550#	*		6540#	200#	−440#	490#	*		−4860#	490#
	No	102	11650#	410#	10240#	570#	7250#	300#	−2290#	420#	*		−7530#	410#
	Lr	103	12310#	240#	9020#	370#	7990#	200#	−4150#	250#	−3760#	550#	−7280#	210#
	Rf	104	12900#	300#	7800#	300#	8490#	200#	−5980#	230#	−3350#	300#	−9990#	250#
	Db	105	13560#	170#	6600#	190#	9050#	100#	−8000#	170#	−590#	250#	−9820#	140#
	Sg	106	14320	30	5360#	200#	9600	15	*		−240	70	−12780	180
	Bh	107	15010#	220#	4000#	130#	10319	15	*		2660#	140#	*	
263	No	102	11470#	530#	*		7000#	400#	−1630#	510#	*		−7050#	530#
	Lr	103	12030#	300#	9490#	560#	7680#	200#	−3440#	280#	−5290#	500#	−6800#	320#
	Rf	104	12700#	170#	8280#	250#	8250#	150#	−5440#	180#	−2630#	390#	−9570#	210#
	Db	105	13340#	200#	7030#	260#	8830#	150#	−7390#	350#	−2280#	260#	−9330#	170#
	Sg	106	13950#	100#	5700#	120#	9400	60	−9480#	220#	510#	240#	−12130#	130#
	Bh	107	14730#	350#	4390#	330#	10080#	300#	*		950#	340#	*	
	Hs	108	*		2910#	200#	10730	80	*		4020#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
264	No	102	6190#	770#	*		−5770#	660#	14050#	740#	11300#	780#	*	
	Lr	103	5370#	490#	4040#	660#	−9580#	470#	16980#	570#	12780#	480#	13440#	670#
	Rf	104	6750#	390#	4880#	420#	−13490#	360#	14680#	410#	11380#	410#	13270#	410#
	Db	105	5920#	290#	2780#	280#	*		17580#	330#	12810#	250#	15350#	310#
	Sg	106	7480#	300#	3620#	330#	*		15240#	320#	11340#	300#	15110#	290#
	Bh	107	6610#	350#	1530#	200#	*		18300#	180#	12820#	180#	17300#	210#
	Hs	108	8190#	200#	2220#	310#	*		16020	100	11350	180	17200	30
265	Lr	103	6210#	700#	4070#	810#	−8160#	600#	15820#	730#	13000#	660#	12210#	710#
	Rf	104	5460#	510#	4970#	570#	−12210#	360#	15730#	420#	11450#	410#	14240#	510#
	Db	105	6950#	330#	2980#	420#	−16240#	490#	16340#	270#	12850#	320#	13920#	300#
	Sg	106	6060#	320#	3760#	270#	*		16400#	220#	11410#	200#	16050#	260#
	Bh	107	7630#	300#	1680#	370#	*		16910#	260#	12890#	240#	15790#	280#
	Hs	108	6730	40	2350#	180#	*		17120#	310#	11510	100	18180	30
	Mt	109	*		230#	440#	*		17660#	480#	*		18020#	450#
266	Lr	103	4640#	770#	*		−6440#	560#	17360#	800#	13400#	730#	*	
	Rf	104	6630#	550#	5390#	690#	−11000#	410#	14470#	600#	11330#	470#	12650#	640#
	Db	105	5710#	360#	3240#	460#	−14930#	300#	17380#	460#	12850#	320#	14720#	360#
	Sg	106	7250#	280#	4050#	330#	*		15070#	340#	11370#	300#	14510#	290#
	Bh	107	6360#	290#	1980#	210#	*		18030#	330#	12770#	190#	16640#	230#
	Hs	108	7830	40	2540#	240#	*		15890#	180#	11510#	310#	16590#	100#
	Mt	109	7020#	450#	520	100	*		18820	100	12860#	220#	18820#	320#
267	Rf	104	4760#	710#	5510#	790#	−9210#	580#	15920#	790#	11930#	720#	14080#	820#
	Db	105	6800#	470#	3410#	560#	−13780#	630#	16040#	520#	12800#	520#	13290#	580#
	Sg	106	5880#	360#	4220#	390#	−18070#	330#	16140#	340#	11410#	350#	15380#	450#
	Bh	107	7410#	310#	2140#	360#	*		16680#	300#	12850#	390#	15150#	350#
	Hs	108	6550#	100#	2740#	190#	*		16970#	260#	11560#	200#	17520#	300#
	Mt	109	7950#	510#	640#	500#	*		17600#	500#	13090#	500#	17480#	530#
	Ds	110	*		1080#	230#	*		17970#	480#	*		19960#	210#
268	Rf	104	6040#	880#	*		−7490#	730#	14520#	850#	12110#	860#	*	
	Db	105	5030#	650#	3670#	780#	−12090#	580#	17630#	670#	13230#	640#	14470#	760#
	Sg	106	7080#	540#	4500#	600#	−16850#	560#	14770#	550#	11280#	520#	13760#	590#
	Bh	107	6130#	460#	2390#	460#	*		17800#	450#	12780#	410#	15970#	440#
	Hs	108	7760#	320#	3090#	400#	*		15580#	340#	11440#	380#	15820#	330#
	Mt	109	6710#	560#	800#	250#	*		18720#	240#	13120#	230#	18400#	330#
	Ds	110	8300#	360#	1430#	590#	*		16690#	320#	11890#	530#	18390#	300#
269	Db	105	5980#	820#	3620#	910#	−10150#	700#	16420#	850#	13880#	750#	13130#	820#
	Sg	106	5180#	600#	4660#	650#	−15140#	370#	16390#	530#	11820#	460#	15200#	550#
	Bh	107	7300#	530#	2610#	600#	*		16380#	460#	12720#	450#	14380#	470#
	Hs	108	6550#	330#	3500#	400#	*		16440#	290#	11250#	210#	16520#	280#
	Mt	109	7920#	390#	960#	430#	*		17350#	330#	13020#	310#	16840#	350#
	Ds	110	6890#	300#	1610#	240#	*		17760#	500#	12030	100	19340	40
270	Db	105	4820#	850#	*		−8310#	610#	17630#	880#	13820#	810#	*	
	Sg	106	6330#	590#	5010#	770#	−13250#	460#	15080#	700#	12280#	590#	13630#	740#
	Bh	107	5320#	480#	2750#	470#	*		18140#	560#	13290#	400#	15860#	480#
	Hs	108	7450#	280#	3650#	450#	*		15120#	460#	11210#	360#	14950#	360#
	Mt	109	6660#	370#	1070#	230#	*		18450#	360#	12920#	210#	17590#	330#
	Ds	110	8220	50	1910#	310#	*		16240#	240#	11760#	510#	17670#	100#
271	Sg	106	4890#	750#	5070#	820#	−11340#	600#	16180#	860#	12420#	790#	14790#	890#
	Bh	107	6440#	490#	2860#	600#	*		16880#	530#	13920#	610#	14450#	650#
	Hs	108	5490#	370#	3830#	410#	*		16930#	470#	11850#	470#	16540#	540#
	Mt	109	7680#	380#	1300#	410#	*		17320#	360#	13000#	450#	16040#	510#
	Ds	110	6800#	110#	2050#	210#	*		17360#	330#	11670#	250#	18630#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
264	No	102	11230#	690#	*		6820#	400#	−1060#	690#	*		−6730#	630#
	Lr	103	11870#	480#	9870#	630#	7400#	300#	−2890#	500#	*		−6450#	460#
	Rf	104	12460#	420#	8610#	510#	8040#	300#	−4710#	460#	−4340#	610#	−9110#	400#
	Db	105	13130#	280#	7420#	310#	8560#	200#	−6700#	300#	−1700#	330#	−9010#	250#
	Sg	106	13730#	280#	6190#	360#	9210#	200#	−8780#	280#	−1260#	320#	−11780#	420#
	Bh	107	14440#	200#	4870#	230#	9860#	150#	*		1560#	240#	−11790#	270#
	Hs	108	*		3380	40	10591	20	*		2080#	100#	*	
265	Lr	103	11580#	590#	*		7230#	200#	−2150#	590#	*		−5910#	660#
	Rf	104	12210#	390#	9020#	610#	7810#	300#	−4100#	390#	−3610#	690#	−8640#	430#
	Db	105	12870#	280#	7870#	320#	8400#	100#	−6010#	330#	−3280#	490#	−8470#	360#
	Sg	106	13540#	170#	6540#	210#	9050#	120#	−8110#	140#	−570#	390#	−11240#	230#
	Bh	107	14240#	390#	5290#	290#	9660#	210#	−10230#	500#	−160#	340#	−11240#	240#
	Hs	108	14920#	200#	3870#	100#	10470	15	*		2830#	280#	*	
	Mt	109	*		2450#	530#	11120#	400#	*		3380#	470#	*	
266	Lr	103	10860#	690#	*		7570#	300#	−1080#	610#	*		−5100#	650#
	Rf	104	12080#	550#	9450#	720#	7610#	200#	−3480#	480#	*		−8320#	470#
	Db	105	12660#	370#	8210#	520#	8210#	200#	−5360#	330#	−2780#	620#	−8130#	320#
	Sg	106	13310#	370#	7040#	440#	8800#	100#	−7520#	250#	−2360#	440#	−10850#	340#
	Bh	107	14000#	240#	5740#	290#	9430#	80#	−9570#	190#	430#	280#	−10870#	160#
	Hs	108	14570	40	4220#	280#	10346	16	*		1060#	140#	−13560#	440#
	Mt	109	*		2860#	200#	10996	25	*		3990#	260#	*	
267	Rf	104	11390#	680#	*		7890#	300#	−2360#	630#	*		−7370#	640#
	Db	105	12510#	440#	8800#	660#	7920#	300#	−4750#	460#	−4940#	660#	−7680#	450#
	Sg	106	13130#	300#	7460#	450#	8630#	210#	−6850#	280#	−1620#	490#	−10370#	310#
	Bh	107	13770#	360#	6200#	350#	9230#	200#	−9030#	570#	−1260#	390#	−10450#	260#
	Hs	108	14390#	100#	4710#	170#	10038	13	−11220#	230#	1750#	260#	−13090#	140#
	Mt	109	14980#	670#	3180#	560#	10870#	400#	*		2400#	530#	*	
	Ds	110	*		1600#	210#	11780	50	*		5450#	210#	*	
268	Rf	104	10800#	780#	*		8040#	300#	−1320#	810#	*		−6610#	760#
	Db	105	11820#	600#	9180#	760#	8260#	300#	−3650#	650#	*		−6820#	590#
	Sg	106	12960#	530#	7920#	630#	8300#	300#	−6170#	560#	−3930#	740#	−10040#	540#
	Bh	107	13540#	420#	6610#	480#	9020#	300#	−8440#	450#	−600#	540#	−10020#	390#
	Hs	108	14320#	300#	5230#	390#	9760#	100#	−10680#	430#	−130#	400#	−12890#	590#
	Mt	109	14670#	250#	3530#	280#	10770#	150#	*		3100#	350#	−12800#	310#
	Ds	110	*		2070#	300#	11660#	300#	*		3700#	320#	*	
269	Db	105	11010#	730#	*		8490#	300#	−2330#	730#	*		−5720#	780#
	Sg	106	12260#	450#	8330#	680#	8580	70	−4800#	390#	−3070#	760#	−9090#	530#
	Bh	107	13430#	460#	7120#	530#	8670#	300#	−7820#	490#	−2870#	650#	−9560#	480#
	Hs	108	14310#	160#	5890#	290#	9270#	170#	−10340#	140#	410#	490#	−12730#	270#
	Mt	109	14630#	590#	4040#	410#	10480#	200#	*		1300#	490#	−12420#	430#
	Ds	110	15190#	210#	2400#	100#	11510	30	*		4580#	300#	*	
270	Db	105	10810#	780#	*		8310#	200#	−1830#	650#	*		−5370#	680#
	Sg	106	11510#	660#	8620#	810#	8870#	200#	−3680#	520#	*		−8120#	590#
	Bh	107	12620#	490#	7410#	610#	9060	100	−6480#	350#	−2210#	690#	−8340#	330#
	Hs	108	14000#	390#	6270#	530#	9070	40	−9570#	250#	−1870#	440#	−12260#	400#
	Mt	109	14580#	300#	4580#	430#	10180#	100#	*		1940#	420#	−12200#	190#
	Ds	110	15110#	300#	2860#	300#	11117	28	*		2900#	140#	*	
271	Sg	106	11220#	700#	*		8750#	140#	−3070#	650#	*		−7680#	660#
	Bh	107	11760#	540#	7870#	730#	9420	90	−5240#	510#	−3830#	690#	−7330#	460#
	Hs	108	12950#	310#	6580#	460#	9460#	90#	−8260#	290#	−1030#	540#	−11090#	340#
	Mt	109	14340#	450#	4960#	500#	9910#	200#	*		−420#	450#	−11650#	330#
	Ds	110	15030#	100#	3120#	160#	10870	18	*		3550#	270#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
272	Sg	106	6170#	910#	*		−9560#	810#	14830#	900#	12240#	930#	*	
	Bh	107	5140#	660#	3120#	800#	−13990#	580#	18070#	700#	13960#	650#	15290#	820#
	Hs	108	6760#	580#	4140#	640#	*		15490#	590#	12390#	630#	14960#	630#
	Mt	109	5690#	590#	1500#	560#	*		19080#	550#	13850#	500#	17650#	610#
	Ds	110	7940#	440#	2310#	540#	*		16090#	470#	11650#	530#	17240#	440#
	Rg	111	*		470#	250#	*		18800#	240#	12800#	240#	19120#	390#
273	Sg	106	4670#	800#	*		−8370#	420#	*		12390#	700#	*	
	Bh	107	6180#	840#	3130#	950#	−12200#	770#	16780#	880#	14120#	800#	13930#	870#
	Hs	108	5310#	630#	4310#	650#	*		16620#	540#	12400#	480#	15980#	590#
	Mt	109	6770#	650#	1510#	660#	*		17800#	510#	14530#	490#	16200#	520#
	Ds	110	5870#	450#	2490#	510#	*		17900#	360#	12440#	240#	18820#	290#
	Rg	111	7960#	460#	490#	580#	*		17640#	410#	13070#	400#	17820#	440#
274	Bh	107	4990#	870#	3450#	700#	−10850#	620#	17950#	900#	14010#	830#	*	
	Hs	108	6430#	600#	4570#	810#	*		15330#	710#	12410#	610#	14440#	760#
	Mt	109	5600#	570#	1810#	530#	*		18960#	630#	14420#	470#	17040#	540#
	Ds	110	7160#	410#	2870#	580#	*		16430#	620#	12960#	510#	17150#	480#
	Rg	111	6340#	450#	960#	250#	*		19240#	470#	13520#	230#	19160#	390#
275	Bh	107	6050#	830#	*		−9610#	750#	16570#	720#	14120#	920#	*	
	Hs	108	4990#	760#	4560#	830#	*		16520#	880#	12570#	800#	15620#	910#
	Mt	109	6550#	540#	1930#	610#	*		17710#	540#	14630#	640#	15630#	660#
	Ds	110	5600#	520#	2870#	510#	*		17600#	540#	13050#	590#	18310#	610#
	Rg	111	7290#	490#	1090#	590#	*		17820#	470#	14180#	620#	17560#	660#
276	Bh	107	4900#	850#	*		−8440#	870#	*		13890#	720#	*	
	Hs	108	6380#	930#	4880#	940#	−12180#	880#	15130#	920#	12370#	970#	13910#	820#
	Mt	109	5530#	660#	2470#	800#	*		18620#	710#	14410#	650#	16280#	840#
	Ds	110	7200#	650#	3520#	670#	*		16000#	670#	12620#	690#	16420#	660#
	Rg	111	6080#	770#	1570#	720#	*		18900#	740#	13970#	650#	18250#	760#
	Cn	112	*		2320#	670#	*		16460#	540#	12340#	640#	17720#	520#
277	Bh	107	5920#	850#	*		−7310#	760#	*		*		*	
	Hs	108	4880#	850#	4860#	750#	−10960#	470#	16310#	750#	12480#	730#	*	
	Mt	109	6380#	850#	2470#	980#	*		17230#	890#	14470#	810#	14890#	880#
	Ds	110	5520#	670#	3510#	660#	*		17040#	550#	12710#	540#	17330#	610#
	Rg	111	7050#	790#	1420#	720#	*		17450#	580#	14070#	610#	16800#	600#
	Cn	112	6100#	520#	2340#	650#	*		17650#	470#	12590#	260#	18780#	420#
278	Bh	107	4800#	720#	*		−6150#	560#	*		*		*	
	Hs	108	6230#	540#	5170#	670#	−9620#	530#	14980#	670#	12300#	670#	*	
	Mt	109	5310#	880#	2900#	730#	−13260#	620#	18290#	920#	14140#	830#	15630#	830#
	Ds	110	6910#	640#	4050#	840#	*		15650#	740#	12350#	640#	15410#	780#
	Rg	111	5960#	610#	1860#	550#	*		18690#	670#	13720#	520#	17400#	550#
	Cn	112	7560#	460#	2850#	640#	*		16170#	770#	12310#	630#	16820#	550#
	Nh	113	*		590#	270#	*		19380#	550#	*		19280#	500#
279	Hs	108	4790#	670#	5160#	720#	−8520#	720#	16110#	850#	12410#	850#	*	
	Mt	109	6250#	890#	2920#	740#	−11880#	900#	16920#	810#	14260#	980#	14280#	900#
	Ds	110	5300#	790#	4030#	840#	*		16730#	900#	12580#	810#	16490#	940#
	Rg	111	6870#	570#	1820#	660#	*		17340#	580#	14050#	690#	16060#	680#
	Cn	112	5890#	590#	2790#	550#	*		17330#	610#	12500#	740#	18130#	680#
	Nh	113	7640#	640#	670#	740#	*		17840#	620#	13960#	780#	17720#	870#
280	Hs	108	6150#	850#	*		−7240#	840#	14760#	720#	12180#	850#	*	
	Mt	109	5150#	900#	3280#	850#	−10730#	720#	18000#	670#	14000#	750#	15060#	850#
	Ds	110	6780#	960#	4550#	1000#	*		15260#	950#	12180#	1000#	14590#	870#
	Rg	111	5910#	680#	2430#	810#	*		18350#	740#	13660#	660#	16520#	850#
	Cn	112	7440#	700#	3360#	720#	*		15850#	700#	12110#	750#	16210#	700#
	Nh	113	6290#	720#	1070#	560#	*		19110#	590#	13770#	430#	18480#	620#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
272	Sg	106	11050#	830#	*		8620#	200#	−2480#	860#	*		−7410#	790#
	Bh	107	11590#	610#	8190#	780#	9300	50	−4690#	720#	*		−6980#	600#
	Hs	108	12250#	570#	7010#	690#	9780#	200#	−7080#	660#	−2900#	780#	−10170#	610#
	Mt	109	13370#	520#	5330#	570#	10350#	300#	−9290#	540#	330#	620#	−10540#	500#
	Ds	110	14740#	430#	3610#	490#	10690#	300#	*		1100#	510#	*	
	Rg	111	*		2510#	300#	11197	13	*		4380#	400#	*	
273	Sg	106	10840#	710#	*		*		−1850#	550#	*		−6940#	670#
	Bh	107	11320#	760#	*		9110#	200#	−4100#	780#	*		−6390#	830#
	Hs	108	12070#	460#	7430#	700#	9650	60	−6520#	400#	−2040#	790#	−9790#	610#
	Mt	109	12460#	540#	5660#	570#	10880#	200#	−8100#	580#	−1290#	680#	−9370#	600#
	Ds	110	13810#	170#	3980#	310#	11370	50	*		1990#	530#	−12560#	270#
	Rg	111	*		2790#	520#	11160#	250#	*		2110#	630#	*	
274	Bh	107	11170#	790#	*		8940	60	−3490#	690#	*		−6080#	690#
	Hs	108	11740#	690#	7690#	840#	9550#	100#	−5790#	610#	−3800#	620#	−9450#	630#
	Mt	109	12380#	610#	6120#	650#	10600#	230#	−7360#	430#	−720#	760#	−9110#	400#
	Ds	110	13030#	580#	4390#	640#	11660#	300#	*		140#	540#	−11760#	560#
	Rg	111	14300#	310#	3450#	530#	11480	90	*		2540#	470#	*	
275	Bh	107	11050#	890#	*		*		−2990#	710#	*		−5700#	760#
	Hs	108	11420#	700#	8010#	720#	9450	50	−5170#	680#	*		−8830#	700#
	Mt	109	12160#	580#	6500#	760#	10480	50	−6630#	590#	−2280#	700#	−8500#	550#
	Ds	110	12760#	370#	4680#	510#	11550#	200#	*		970#	580#	−11020#	400#
	Rg	111	13630#	600#	3970#	620#	11870#	300#	*		860#	580#	*	
276	Bh	107	10960#	830#	*		*		−2360#	800#	*		−5610#	840#
	Hs	108	11360#	860#	*		9240#	200#	−4350#	910#	*		−8650#	820#
	Mt	109	12080#	650#	7030#	790#	10100	10	−6070#	820#	−1760#	800#	−8430#	630#
	Ds	110	12800#	670#	5450#	720#	11110#	200#	−7820#	740#	−1240#	810#	−10930#	710#
	Rg	111	13370#	660#	4440#	730#	11480#	400#	*		1330#	740#	*	
	Cn	112	*		3420#	630#	11850#	660#	*		1410#	610#	*	
277	Bh	107	10820#	850#	*		*		−1910#	890#	*		−5160#	940#
	Hs	108	11260#	740#	*		9030#	200#	−3720#	600#	*		−8010#	700#
	Mt	109	11900#	770#	7350#	890#	9900#	100#	−5400#	810#	−3230#	890#	−7600#	860#
	Ds	110	12720#	520#	5980#	710#	10900#	120#	−7240#	420#	−380#	820#	−10370#	740#
	Rg	111	13130#	650#	4940#	610#	11200#	200#	*		−190#	710#	−10020#	690#
	Cn	112	*		3910#	370#	11620	60	*		2500#	570#	*	
278	Bh	107	10720#	720#	*		*		−1400#	700#	*		−5080#	600#
	Hs	108	11110#	780#	*		*		−3030#	590#	*		−7860#	730#
	Mt	109	11690#	790#	7760#	830#	9580	30	−4750#	700#	−2620#	830#	−7400#	700#
	Ds	110	12430#	750#	6510#	880#	10420#	200#	−6590#	670#	−2410#	680#	−10230#	690#
	Rg	111	13010#	740#	5370#	660#	10850	100	−8510#	450#	220#	770#	−9880#	420#
	Cn	112	13660#	670#	4280#	700#	11220#	200#	*		460#	590#	*	
	Nh	113	*		2940#	670#	11990	80	*		3330#	520#	*	
279	Hs	108	11020#	750#	*		*		−2520#	850#	*		−7340#	830#
	Mt	109	11570#	940#	8090#	900#	9380#	300#	−4140#	790#	−4070#	780#	−6740#	840#
	Ds	110	12210#	720#	6930#	750#	10110#	120#	−6000#	720#	−1490#	680#	−9570#	720#
	Rg	111	12830#	630#	5870#	790#	10530	170	−7740#	730#	−1330#	720#	−9190#	610#
	Cn	112	13450#	420#	4650#	560#	10930#	200#	*		1480#	650#	−12080#	450#
	Nh	113	*		3530#	760#	11640#	750#	*		1650#	720#	*	
280	Hs	108	10940#	670#	*		*		−1900#	960#	*		−7240#	900#
	Mt	109	11400#	830#	8440#	720#	9140#	850#	−3380#	800#	*		−6590#	850#
	Ds	110	12070#	910#	7480#	810#	9710#	200#	−5330#	950#	−3470#	960#	−9470#	860#
	Rg	111	12780#	660#	6460#	790#	10149	10	−7350#	670#	−990#	860#	−9210#	660#
	Cn	112	13330#	730#	5180#	780#	10690#	200#	*		−660#	840#	−11880#	840#
	Nh	113	13930#	460#	3860#	560#	11430#	750#	*		2230#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
281	Mt	109	6180#	850#	3310#	850#	−9410#	670#	16610#	850#	14040#	670#	13680#	720#
	Ds	110	5120#	900#	4530#	780#	*		16400#	830#	12370#	760#	15700#	580#
	Rg	111	6620#	940#	2280#	1080#	*		17020#	980#	13950#	930#	15210#	970#
	Cn	112	5780#	710#	3230#	660#	*		16940#	580#	12290#	560#	17340#	650#
	Nh	113	7500#	500#	1130#	660#	*		17500#	500#	13830#	530#	16940#	490#
282	Mt	109	5020#	750#	*		−8270#	600#	17750#	750#	13820#	750#	*	
	Ds	110	6550#	580#	4900#	670#	*		14990#	670#	12070#	740#	13940#	670#
	Rg	111	5660#	970#	2820#	770#	*		18130#	950#	13580#	840#	15800#	890#
	Cn	112	7190#	680#	3800#	950#	*		15650#	760#	11970#	690#	15450#	820#
	Nh	113	6150#	500#	1510#	560#	*		18790#	710#	13570#	560#	17650#	580#
283	Ds	110	5030#	580#	4920#	670#	*		16140#	780#	12180#	780#	15060#	780#
	Rg	111	6430#	900#	2700#	740#	*		16820#	840#	13920#	1010#	14520#	910#
	Cn	112	5560#	820#	3690#	850#	*		16720#	990#	12320#	810#	16660#	970#
	Nh	113	7240#	590#	1550#	700#	*		17330#	590#	13770#	730#	16320#	690#
284	Ds	110	6440#	710#	*		−9320#	830#	14720#	670#	11920#	780#	*	
	Rg	111	5480#	840#	3150#	710#	*		17890#	580#	13560#	700#	15220#	780#
	Cn	112	6990#	980#	4250#	1020#	*		15380#	960#	11950#	1090#	14790#	910#
	Nh	113	6040#	690#	2040#	810#	*		18480#	770#	13510#	670#	16900#	940#
	Fl	114	*		3070#	790#	*		15760#	770#	11830#	720#	16480#	770#
285	Rg	111	6310#	780#	3020#	780#	*		16610#	780#	13800#	670#	13920#	750#
	Cn	112	5400#	920#	4170#	710#	*		16420#	850#	12210#	780#	15940#	590#
	Nh	113	6890#	940#	1940#	1090#	*		17140#	990#	13810#	950#	15670#	970#
	Fl	114	5920#	770#	2950#	670#	*		17080#	600#	12070#	570#	17750#	680#
286	Rg	111	5290#	760#	*		*		17760#	680#	13550#	680#	*	
	Cn	112	6710#	860#	4570#	920#	*		15190#	860#	11930#	970#	14270#	860#
	Nh	113	5880#	970#	2420#	780#	*		18250#	960#	13480#	850#	16220#	900#
	Fl	114	7400#	680#	3450#	950#	*		15730#	770#	11910#	700#	15920#	830#
287	Cn	112	5150#	990#	4430#	840#	*		16350#	920#	12260#	860#	15560#	860#
	Nh	113	6570#	920#	2280#	1000#	*		17080#	870#	13900#	1040#	15130#	870#
	Fl	114	5750#	830#	3320#	850#	*		16870#	990#	12200#	820#	17160#	980#
	Mc	115	*		1150#	710#	*		17530#	600#	13830#	790#	16800#	690#
288	Cn	112	6510#	990#	*		*		15130#	840#	12070#	920#	*	
	Nh	113	5560#	1000#	2690#	990#	*		18230#	990#	13750#	860#	15890#	920#
	Fl	114	7080#	980#	3830#	1040#	*		15670#	960#	12010#	1090#	15480#	920#
	Mc	115	6150#	700#	1550#	820#	*		18770#	770#	13600#	670#	17540#	940#
289	Nh	113	6490#	860#	2670#	860#	*		16890#	860#	13970#	860#	14690#	680#
	Fl	114	5520#	920#	3790#	870#	*		16720#	870#	12370#	780#	16660#	870#
	Mc	115	7050#	940#	1520#	1090#	*		17470#	990#	13940#	950#	16370#	980#
	Lv	116	*		2500#	740#	*		17420#	670#	*		18500#	750#
290	Nh	113	5310#	690#	*		*		18100#	840#	13810#	840#	*	
	Fl	114	6810#	870#	4110#	860#	*		15470#	990#	12140#	1000#	15010#	990#
	Mc	115	5960#	980#	1960#	780#	*		18590#	970#	13730#	860#	16980#	920#
	Lv	116	7500#	750#	2940#	950#	*		16070#	770#	12140#	710#	16750#	830#
291	Fl	114	5300#	990#	4100#	840#	*		16660#	860#	12390#	990#	16220#	990#
	Mc	115	6680#	940#	1840#	1020#	*		17430#	900#	14130#	1060#	15860#	1020#
	Lv	116	5860#	830#	2840#	860#	*		17270#	1000#	12440#	820#	17970#	990#
	Ts	117	*		660#	810#	*		17910#	780#	*		17630#	800#
292	Mc	115	5650#	1020#	2190#	990#	*		18580#	990#	14000#	870#	16700#	860#
	Lv	116	7180#	990#	3340#	1060#	*		16050#	970#	12310#	1090#	16310#	920#
	Ts	117	6100#	900#	910#	910#	*		19300#	870#	14030#	840#	18580#	1030#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
281	Mt	109	11330#	900#	*		8880#	850#	−2930#	980#	*		−5990#	960#
	Ds	110	11890#	780#	7810#	780#	9470#	210#	−4670#	630#	−2440#	780#	−8680#	730#
	Rg	111	12530#	880#	6830#	1020#	9900#	400#	−6480#	830#	−2470#	980#	−8390#	970#
	Cn	112	13220#	560#	5660#	720#	10430	60	*		340#	850#	−11360#	560#
	Nh	113	13790#	670#	4490#	520#	10980#	560#	*		640#	610#	*	
282	Mt	109	11200#	750#	*		8660#	200#	−2290#	740#	*		−5890#	670#
	Ds	110	11670#	810#	8210#	670#	9150#	420#	−4040#	630#	*		−8610#	830#
	Rg	111	12290#	790#	7350#	840#	9550#	100#	−5990#	710#	−1950#	840#	−8280#	710#
	Cn	112	12970#	800#	6070#	930#	10150#	200#	*		−1740#	740#	−11060#	630#
	Nh	113	13650#	570#	4740#	670#	10780	100	*		1110#	870#	*	
283	Ds	110	11590#	700#	*		8910#	780#	−3510#	790#	*		−7980#	770#
	Rg	111	12100#	1030#	7600#	910#	9370#	100#	−5180#	810#	−3360#	810#	−7520#	870#
	Cn	112	12750#	730#	6510#	790#	9890#	110#	*		−740#	680#	−10460#	730#
	Nh	113	13390#	530#	5350#	890#	10420#	110#	*		−470#	730#	*	
284	Ds	110	11470#	580#	*		8620#	780#	−2960#	910#	*		−7990#	840#
	Rg	111	11910#	770#	8060#	670#	9040#	780#	−4620#	730#	*		−7440#	790#
	Cn	112	12550#	940#	6950#	820#	9670#	150#	−6360#	1010#	−2700#	910#	−10220#	880#
	Nh	113	13280#	670#	5730#	790#	10280	40	*		−80#	860#	*	
	Fl	114	*		4630#	850#	10700#	300#	*		150#	900#	*	
285	Rg	111	11790#	910#	*		8910#	850#	−4040#	980#	*		−6760#	970#
	Cn	112	12390#	800#	7320#	710#	9390#	120#	−5850#	650#	−1660#	710#	−9580#	740#
	Nh	113	12940#	890#	6190#	1030#	10010	40	*		−1490#	920#	−9080#	1020#
	Fl	114	*		4980#	740#	10560	70	*		1230#	860#	*	
286	Rg	111	11600#	680#	*		8630#	100#	−3450#	750#	*		−6650#	680#
	Cn	112	12110#	1040#	7590#	860#	9240#	760#	−5160#	890#	*		−9390#	1040#
	Nh	113	12780#	800#	6590#	770#	9790	50	*		−1060#	840#	−9050#	720#
	Fl	114	13320#	860#	5390#	940#	10360	40	*		−770#	750#	*	
287	Cn	112	11860#	860#	*		9120#	860#	−4560#	930#	*		−8660#	920#
	Nh	113	12460#	1050#	6850#	930#	9650#	200#	−6290#	830#	−2340#	840#	−8220#	900#
	Fl	114	13150#	740#	5740#	800#	10170	50	*		190#	930#	*	
	Mc	115	*		4600#	890#	10760	70	*		500#	740#	*	
288	Cn	112	11660#	990#	*		9050#	860#	−3990#	1040#	*		−8600#	1000#
	Nh	113	12130#	920#	7120#	840#	9580#	860#	−5700#	880#	*		−8030#	930#
	Fl	114	12830#	940#	6110#	1040#	10076	12	*		−1740#	1040#	−10900#	880#
	Mc	115	*		4870#	800#	10650	50	*		920#	890#	*	
289	Nh	113	12050#	870#	*		9400#	780#	−5130#	920#	*		−7440#	910#
	Fl	114	12610#	800#	6480#	870#	9950	70	−6990#	720#	−750#	870#	−10270#	740#
	Mc	115	13210#	890#	5350#	1050#	10490	50	*		−580#	1050#	*	
	Lv	116	*		4050#	800#	11100#	300#	*		2250#	910#	*	
290	Nh	113	11800#	840#	*		9380#	100#	−4480#	760#	*		−7220#	690#
	Fl	114	12330#	1040#	6780#	990#	9860	30	−6300#	890#	*		−10020#	1050#
	Mc	115	13020#	800#	5760#	920#	10410	40	*		−50#	780#	−9740#	780#
	Lv	116	*		4470#	940#	11000	60	*		270#	750#	*	
291	Fl	114	12110#	870#	*		9710#	990#	−5740#	940#	*		−9360#	920#
	Mc	115	12650#	1070#	5950#	890#	10300#	200#	−7470#	950#	−1420#	870#	−8920#	920#
	Lv	116	13360#	800#	4800#	810#	10890	90	*		1220#	940#	*	
	Ts	117	*		3610#	980#	11480#	400#	*		1570#	840#	*	
292	Mc	115	12340#	920#	6290#	840#	10210#	990#	−7020#	970#	*		−8720#	940#
	Lv	116	13040#	940#	5180#	1040#	10791	12	*		−660#	1040#	−11590#	970#
	Ts	117	*		3750#	890#	11530#	400#	*		2150#	990#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$	Q(d,α)		Q(p,α)		Q(n,α)	
293	Lv	116	5640#	920#	3320#	870#	*	17100#	900#	12640#	780#	17480#	870#
	Ts	117	7260#	1030#	990#	1090#	*	17900#	1000#	14260#	950#	17280#	980#
	Og	118	*		2110#	980#	*	17860#	930#	*		19420#	900#
294	Ts	117	6100#	980#	1460#	790#	*	18980#	970#	14020#	860#	17860#	940#
	Og	118	7550#	900#	2400#	960#	*	16410#	870#	12530#	810#	17720#	830#
295	Og	118	6020#	860#	2320#	880#	*	17650#	1020#	12610#	940#	18880#	1010#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 030003-102)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
293	Lv	116	12820#	810#	5510#	870#	10680	60	−8230#	880#	*		−11130#	840#
	Ts	117	13370#	980#	4330#	1070#	11320	50	*		540#	1050#	*	
	Og	118	*		3020#	940#	11920#	500#	*		3380#	1040#	*	
294	Ts	117	13370#	890#	4780#	920#	11180	40	*		*		−10480#	920#
	Og	118	*		3390#	940#	11870	30	*		1460#	760#	*	
295	Og	118	13580#	970#	3780#	830#	11700#	200#	*		*		*	

Graphs of separation and decay energies

Figs.	1– 9.	S_{2n}	two-neutron separation energies.
Figs.	10–17.	S_{2p}	two-proton separation energies.
Figs.	18–26.	Q_α	α-decay energies.

Mass numbers and element symbols are indicated only along the borders of the graphs; those for the intermediate points must be derived by enumeration.

Points represent experimental values.
Open circles represent values estimated from TMS (see Part I, Section 5).

Lines connect points for isotopes (S_{2n}, Q_α) or isotones (S_{2p}).

Other types of graphs are available at the AMDC website [12].

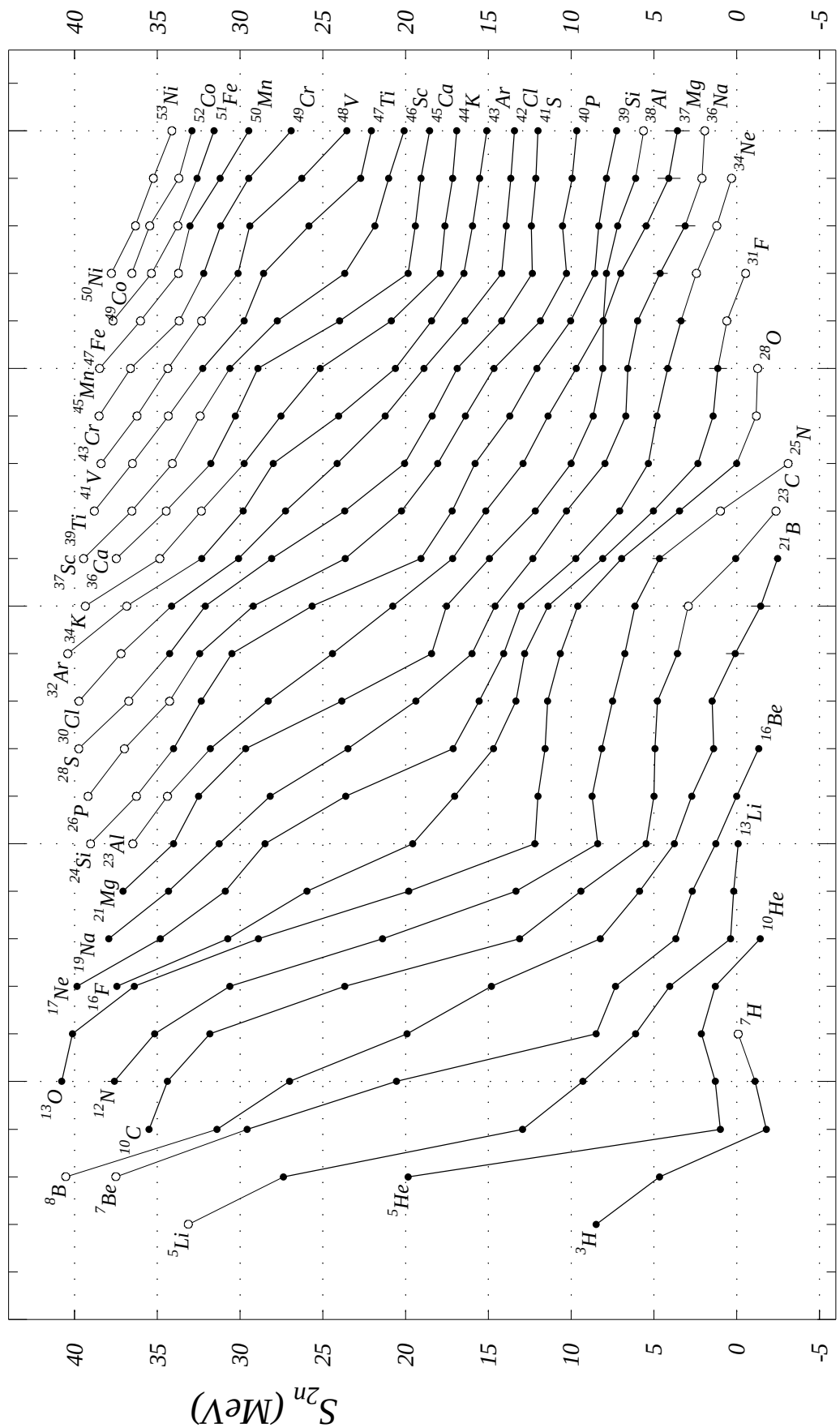


Fig. 1. Two-neutron separation energies N = 0 to 25

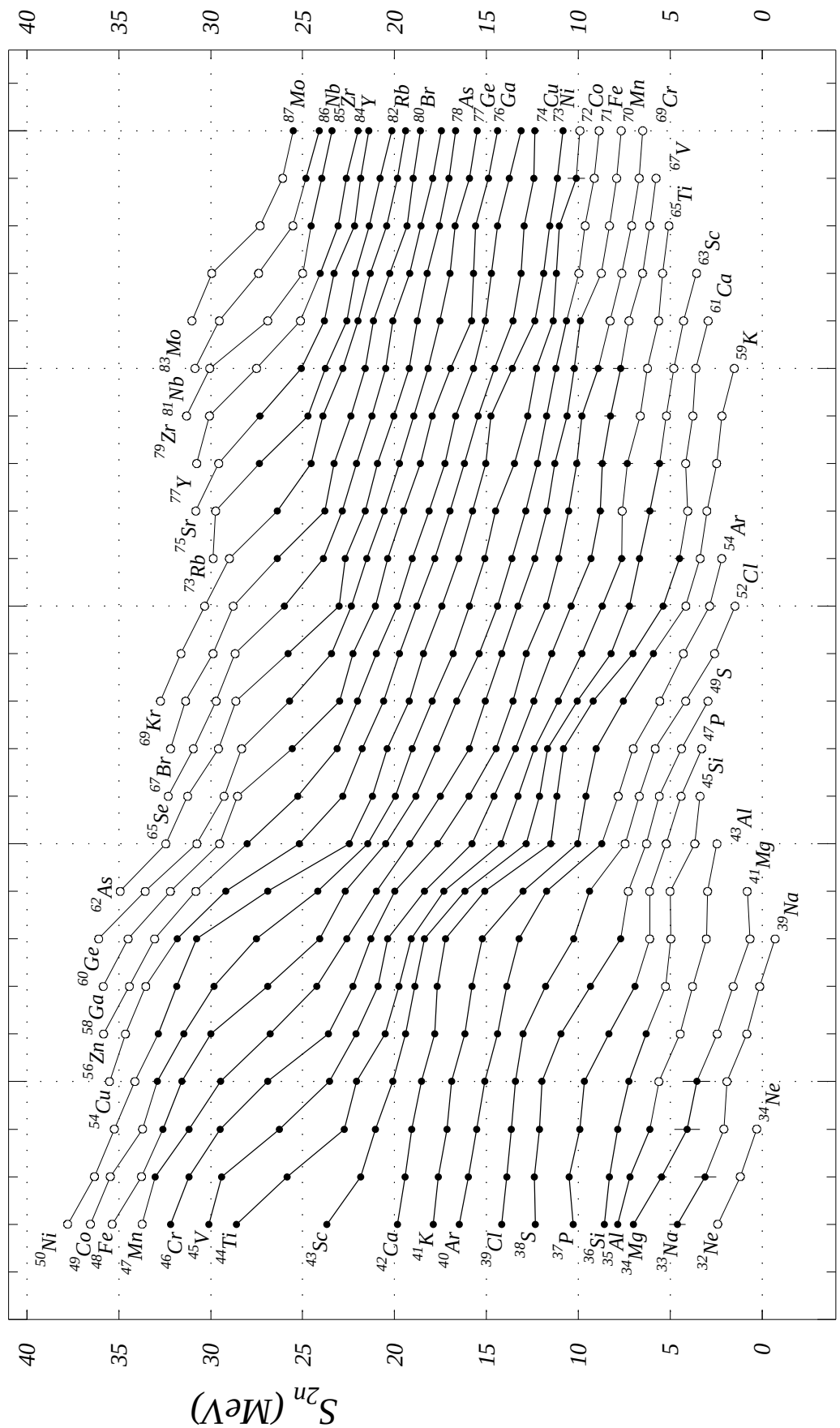


Fig. 2. Two-neutron separation energies $N = 22$ to 45

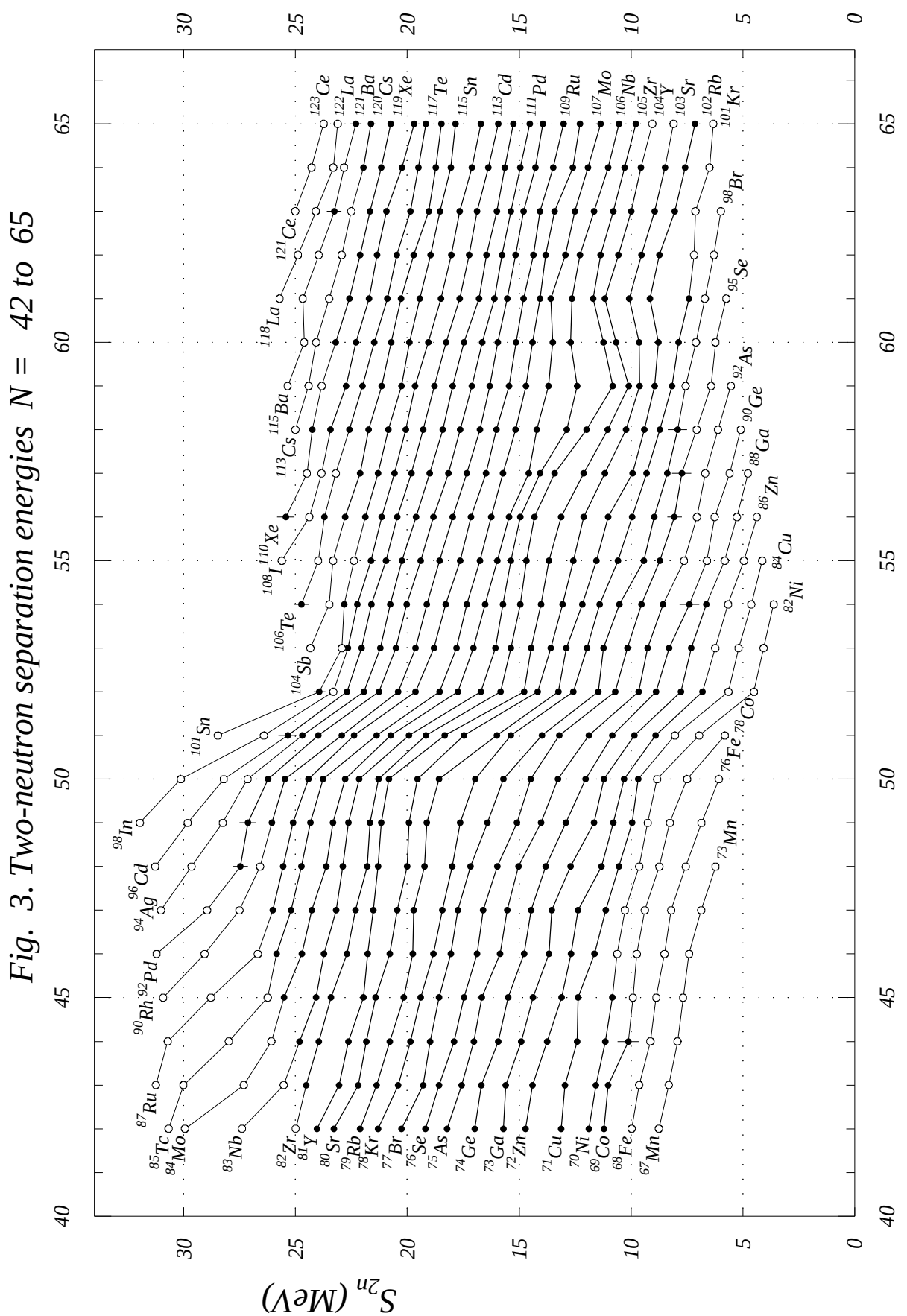


Fig. 3. Two-neutron separation energies $N = 42$ to 65

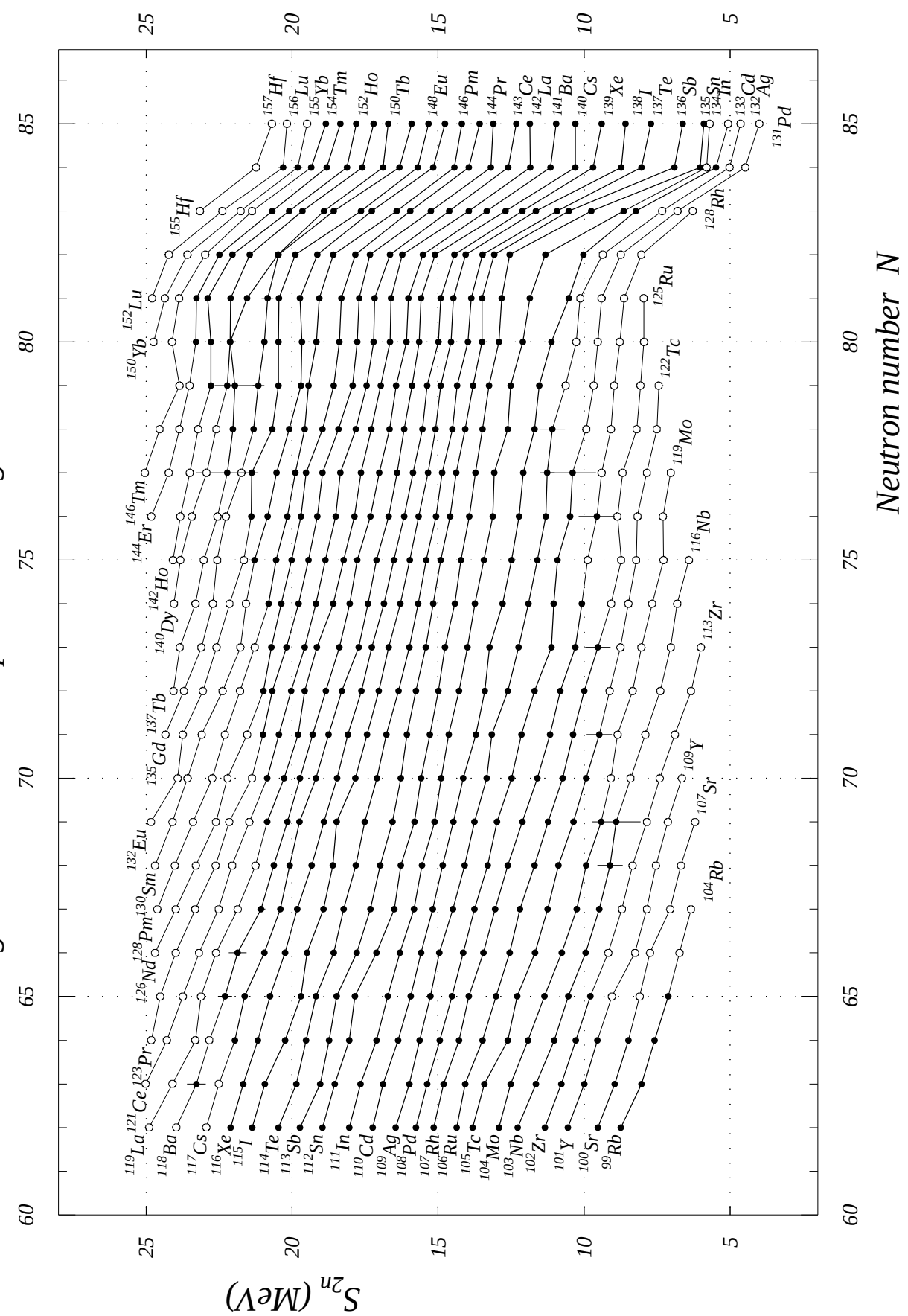


Fig. 4. Two-neutron separation energies N = 62 to 85

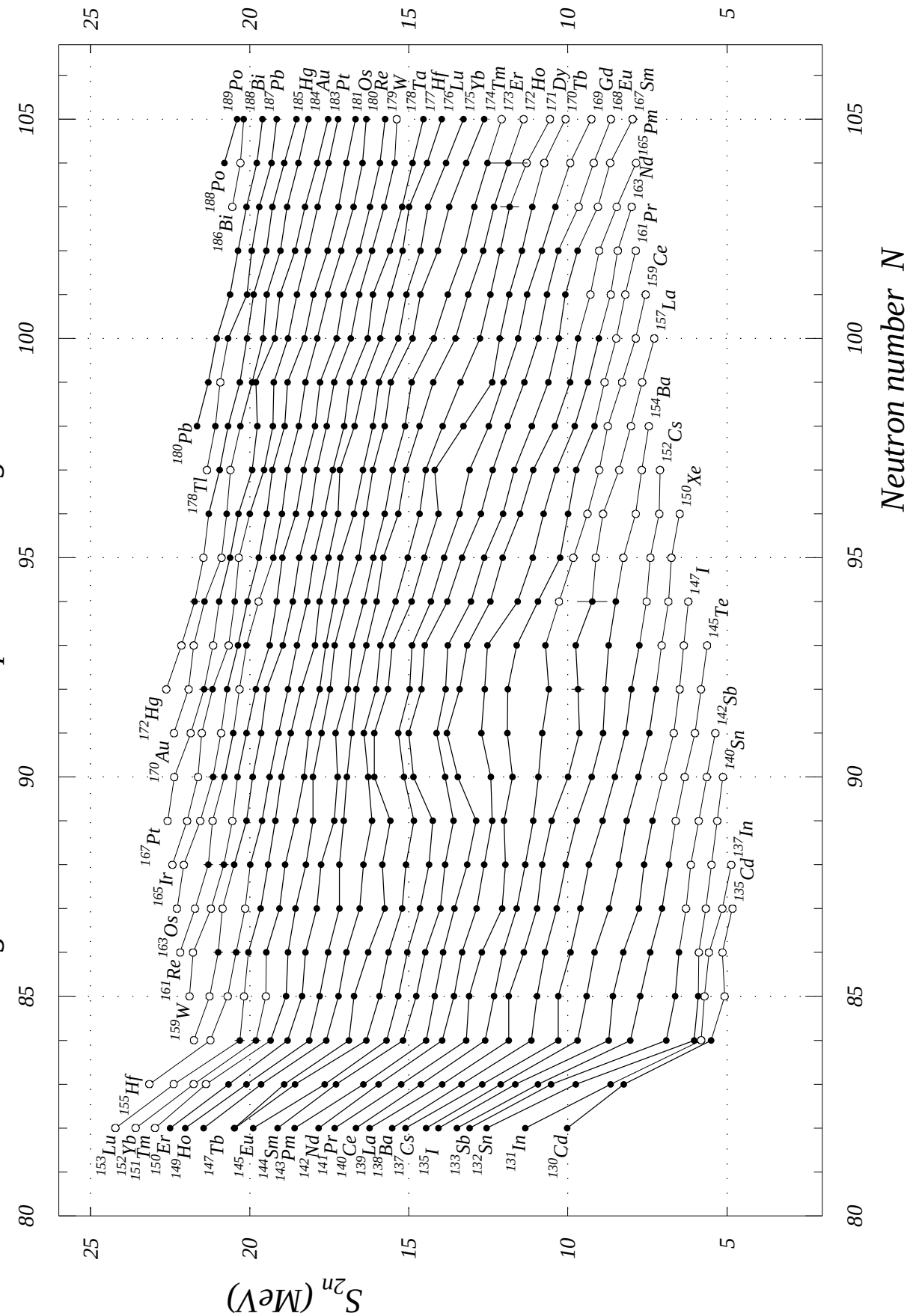


Fig. 5. Two-neutron separation energies N = 82 to 105

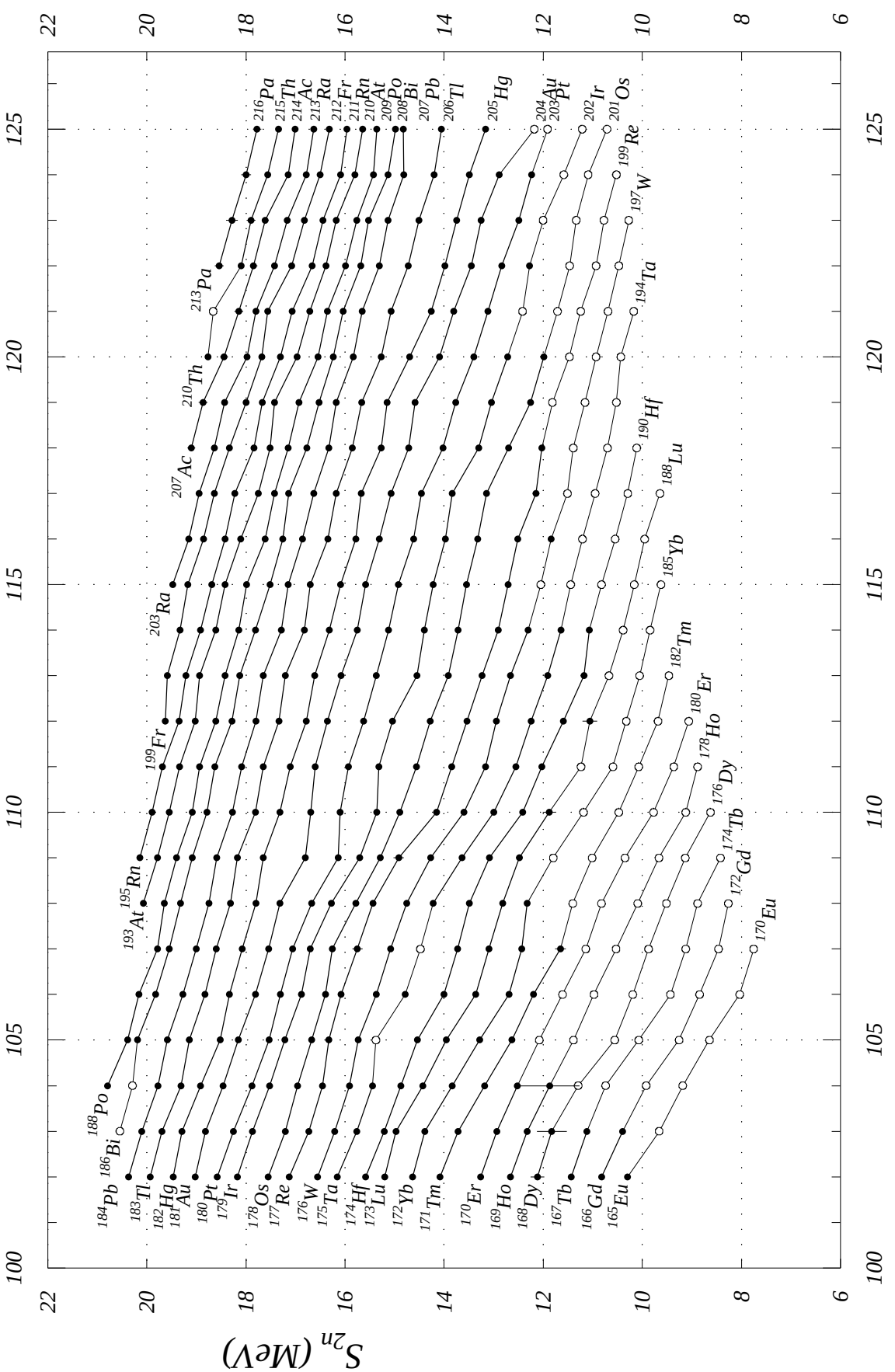


Fig. 6. Two-neutron separation energies N = 102 to 125

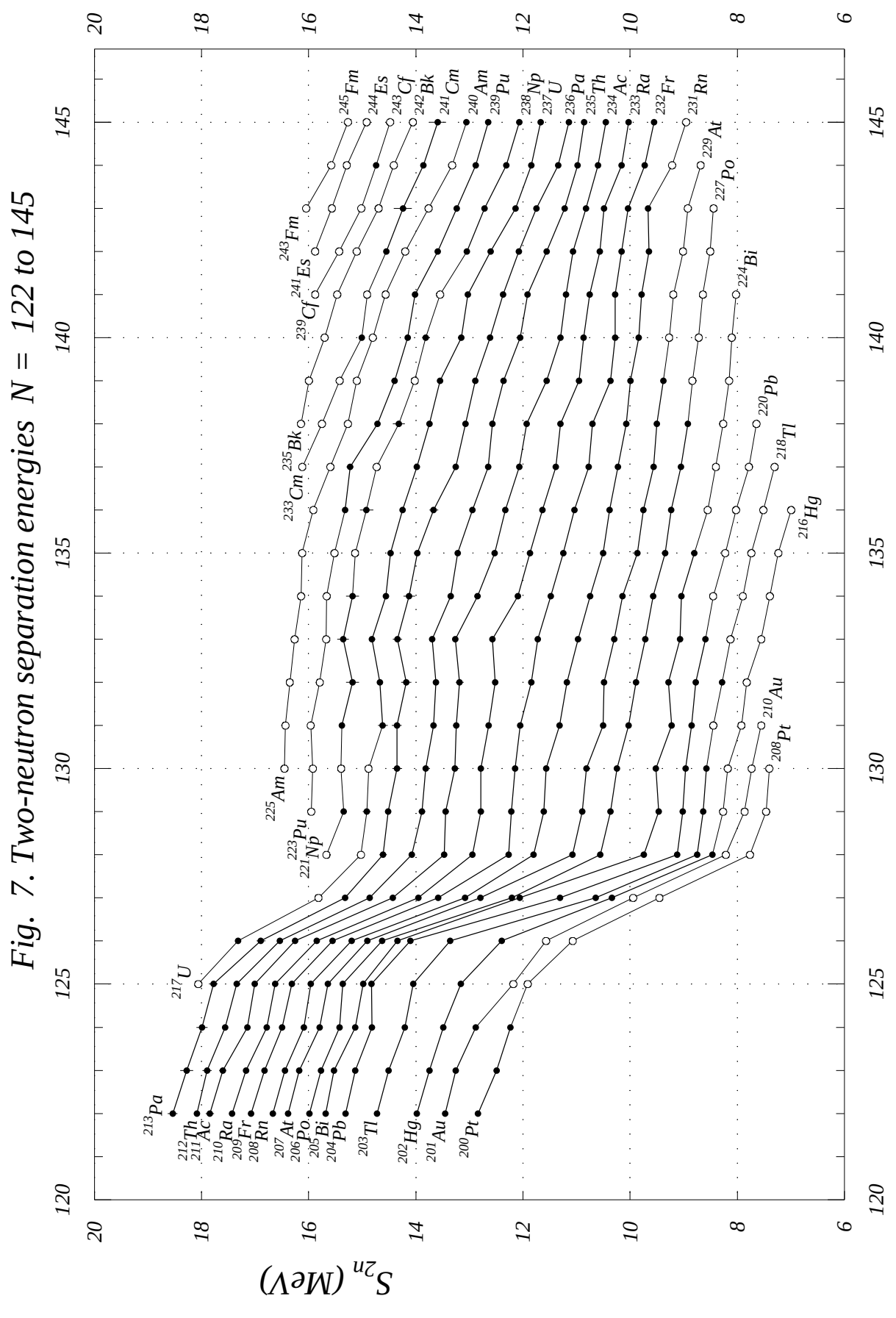


Fig. 7. Two-neutron separation energies N = 122 to 145

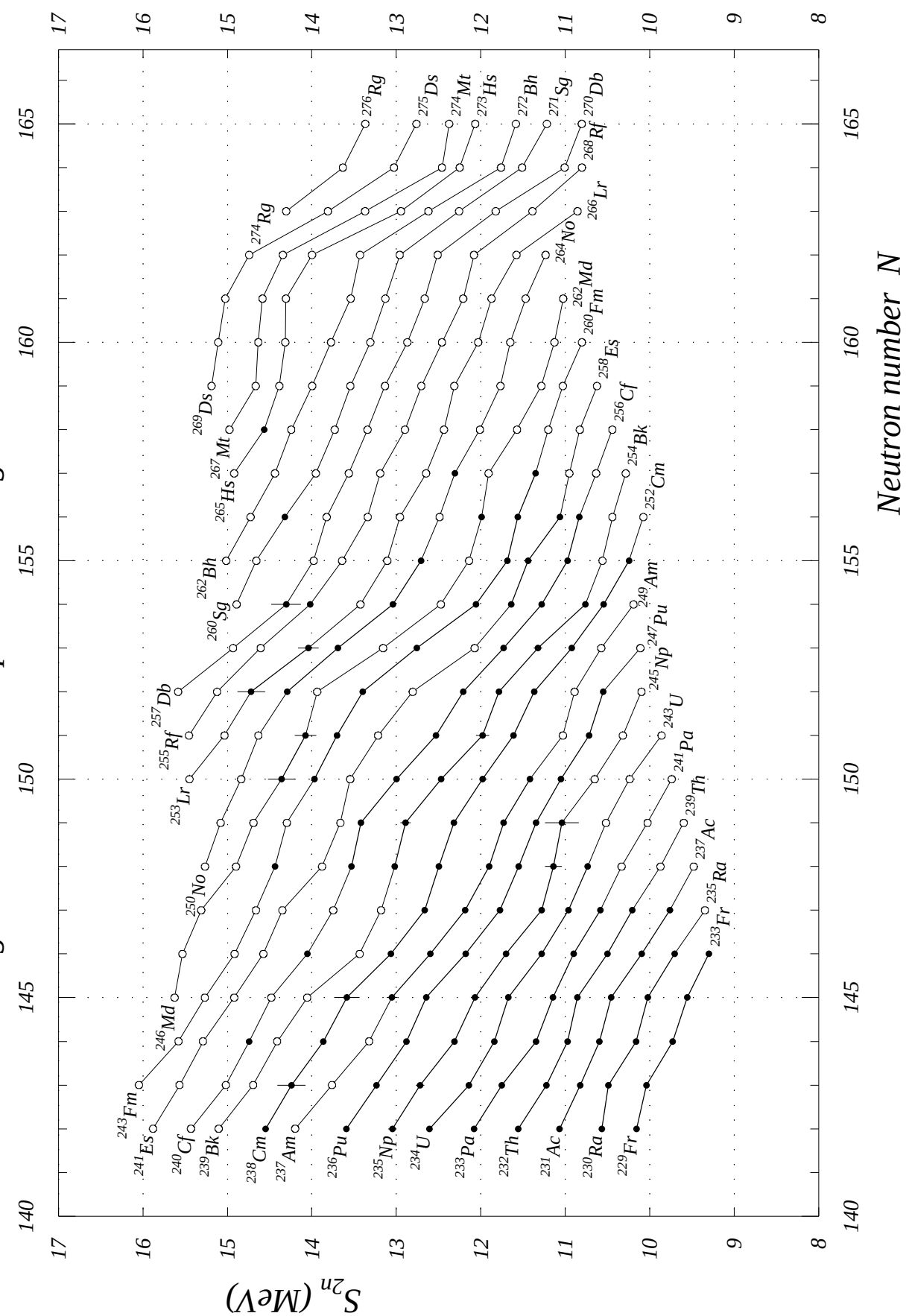


Fig. 8. Two-neutron separation energies N = 142 to 165

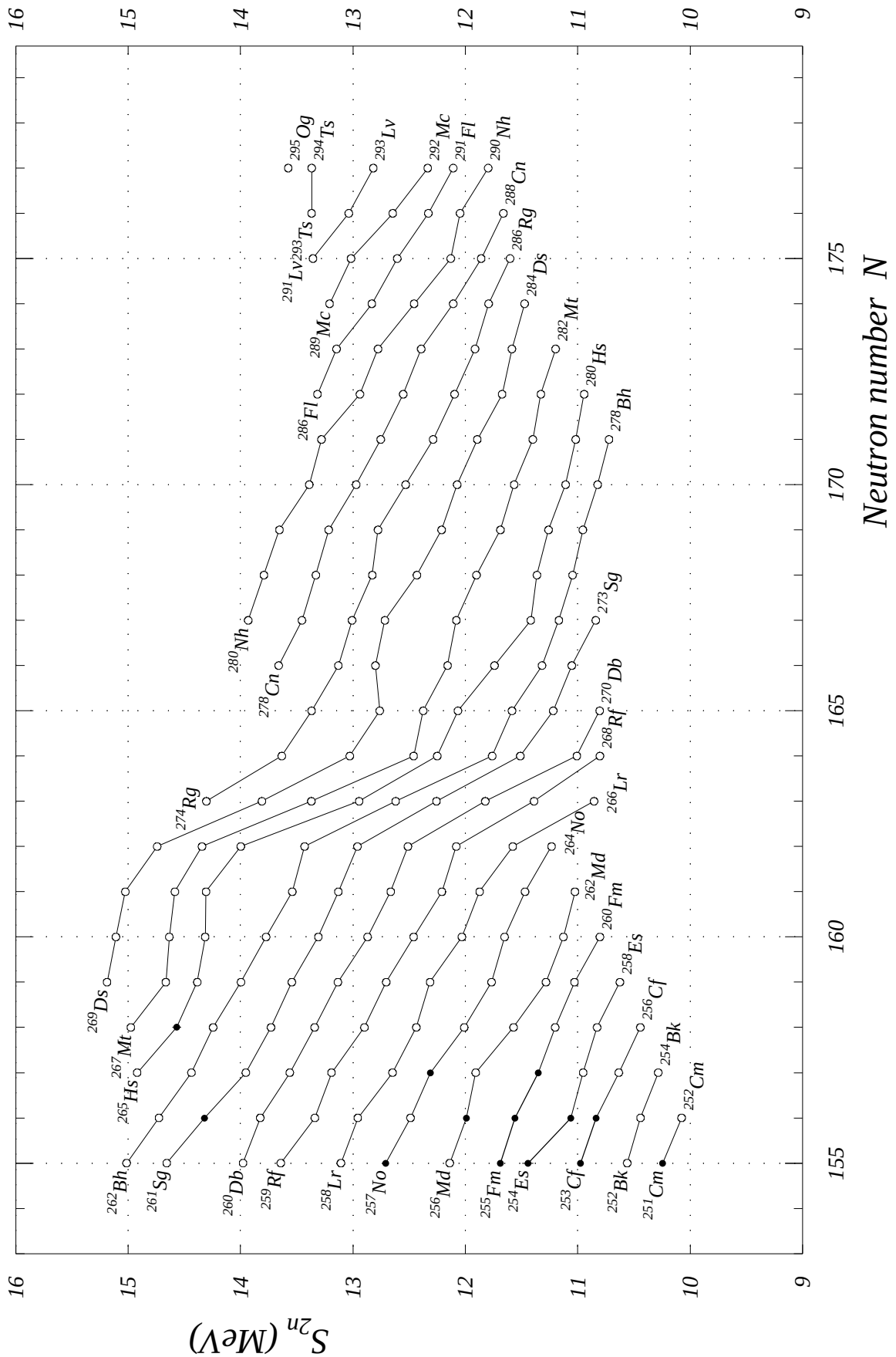


Fig. 9. Two-neutron separation energies N = 155 to 178

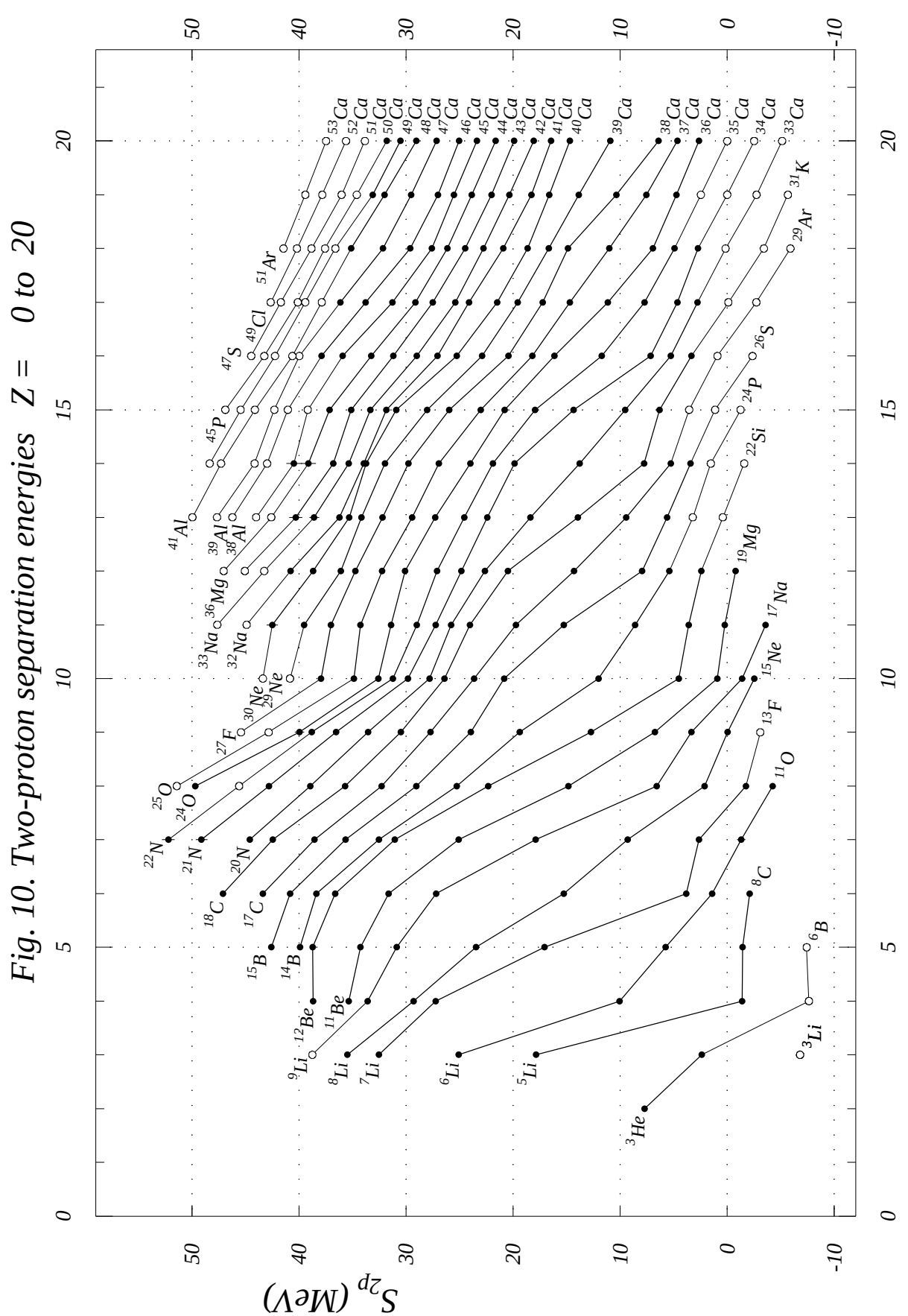


Fig. 10. Two-proton separation energies Z = 0 to 20

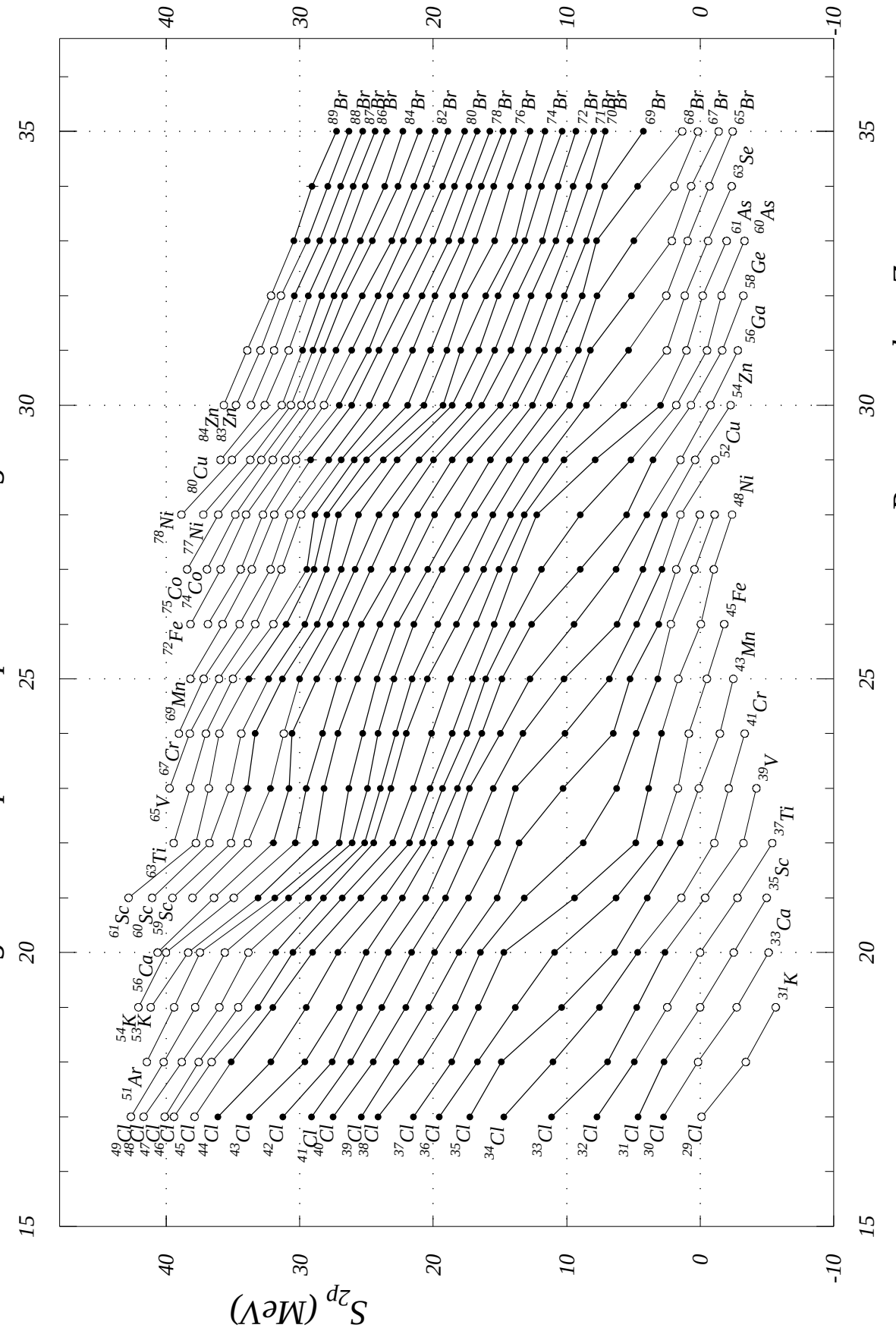


Fig. 11. Two-proton separation energies Z = 17 to 35

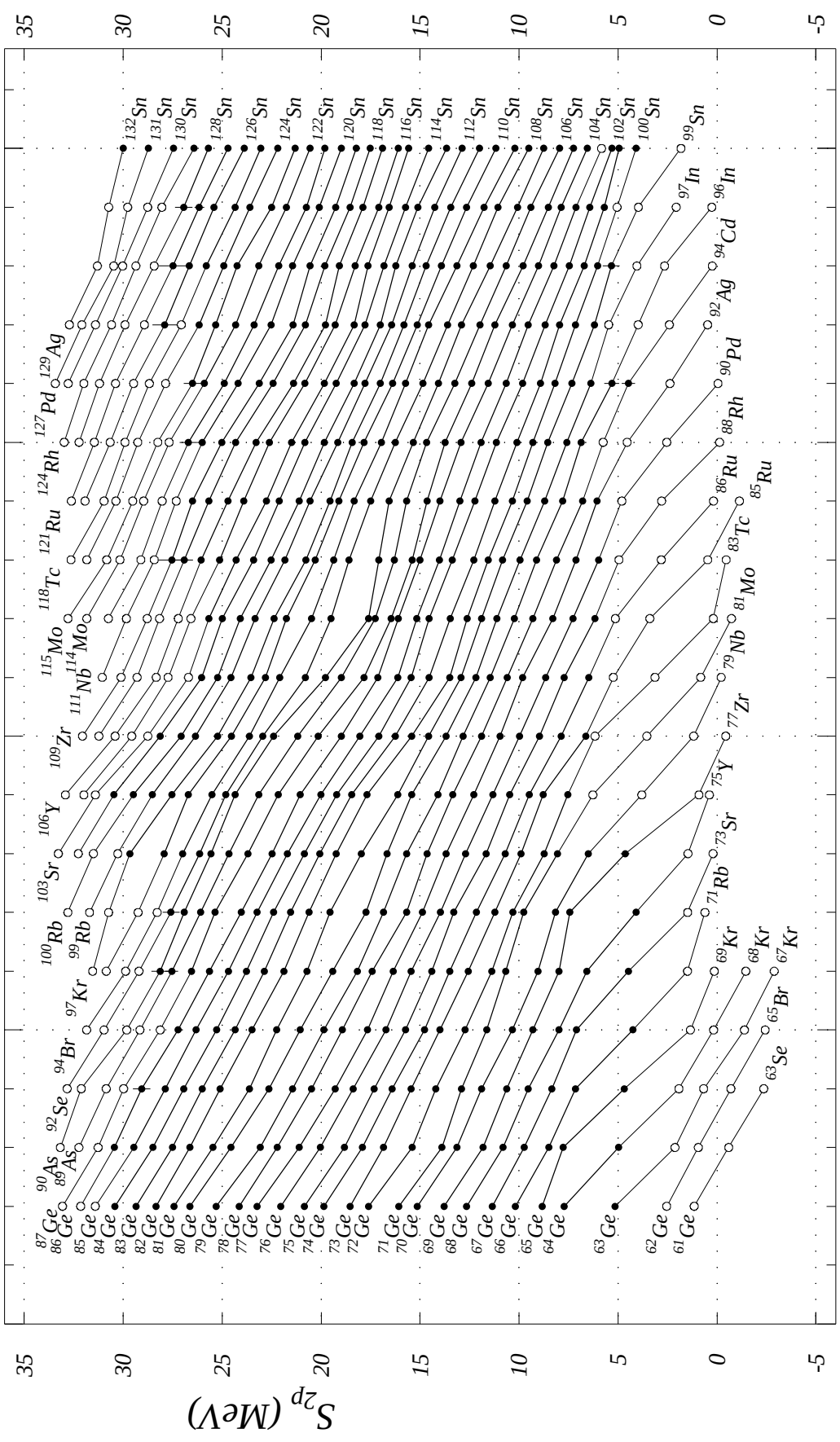


Fig. 12. Two-proton separation energies Z = 32 to 50

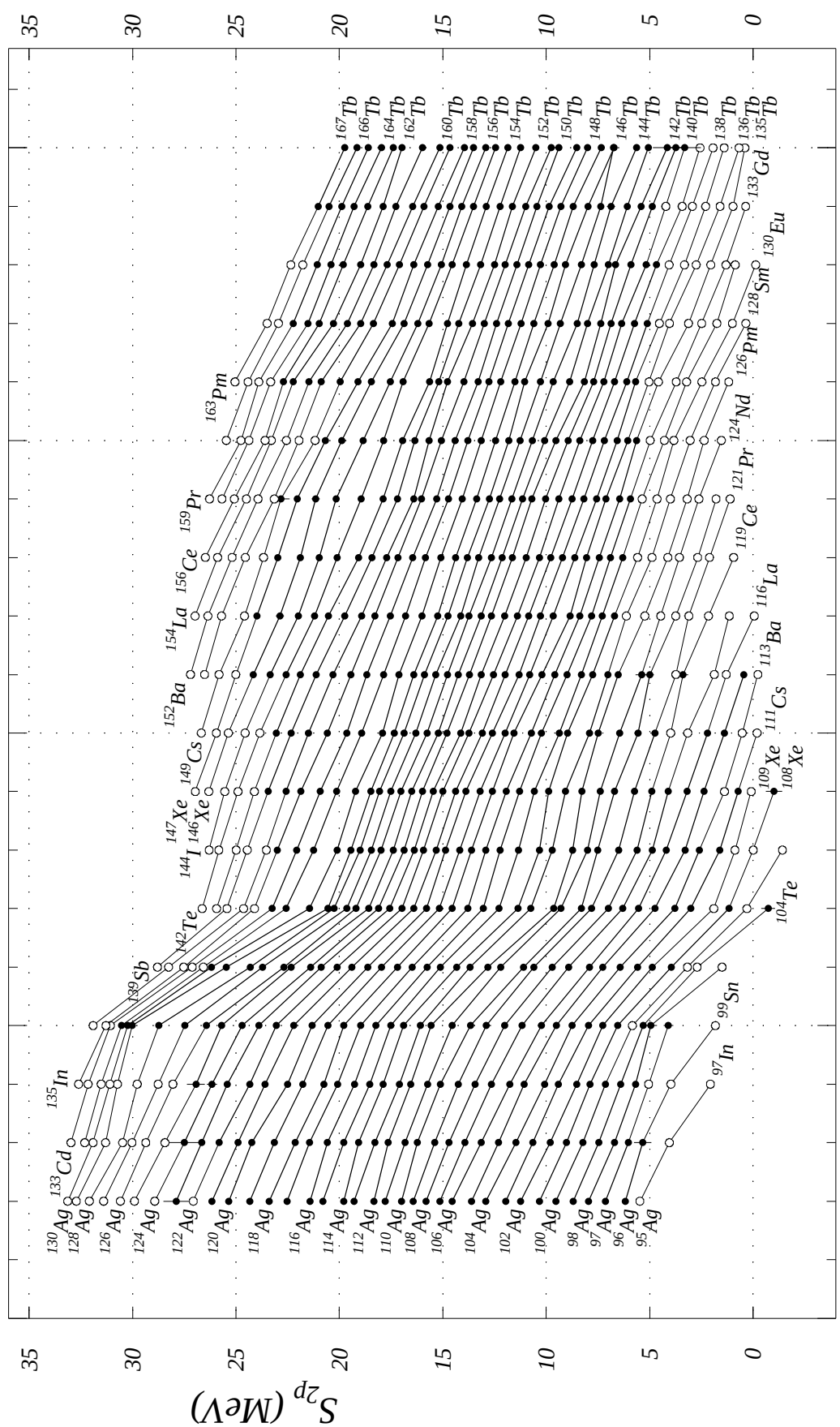


Fig. 13. Two-proton separation energies Z = 47 to 65

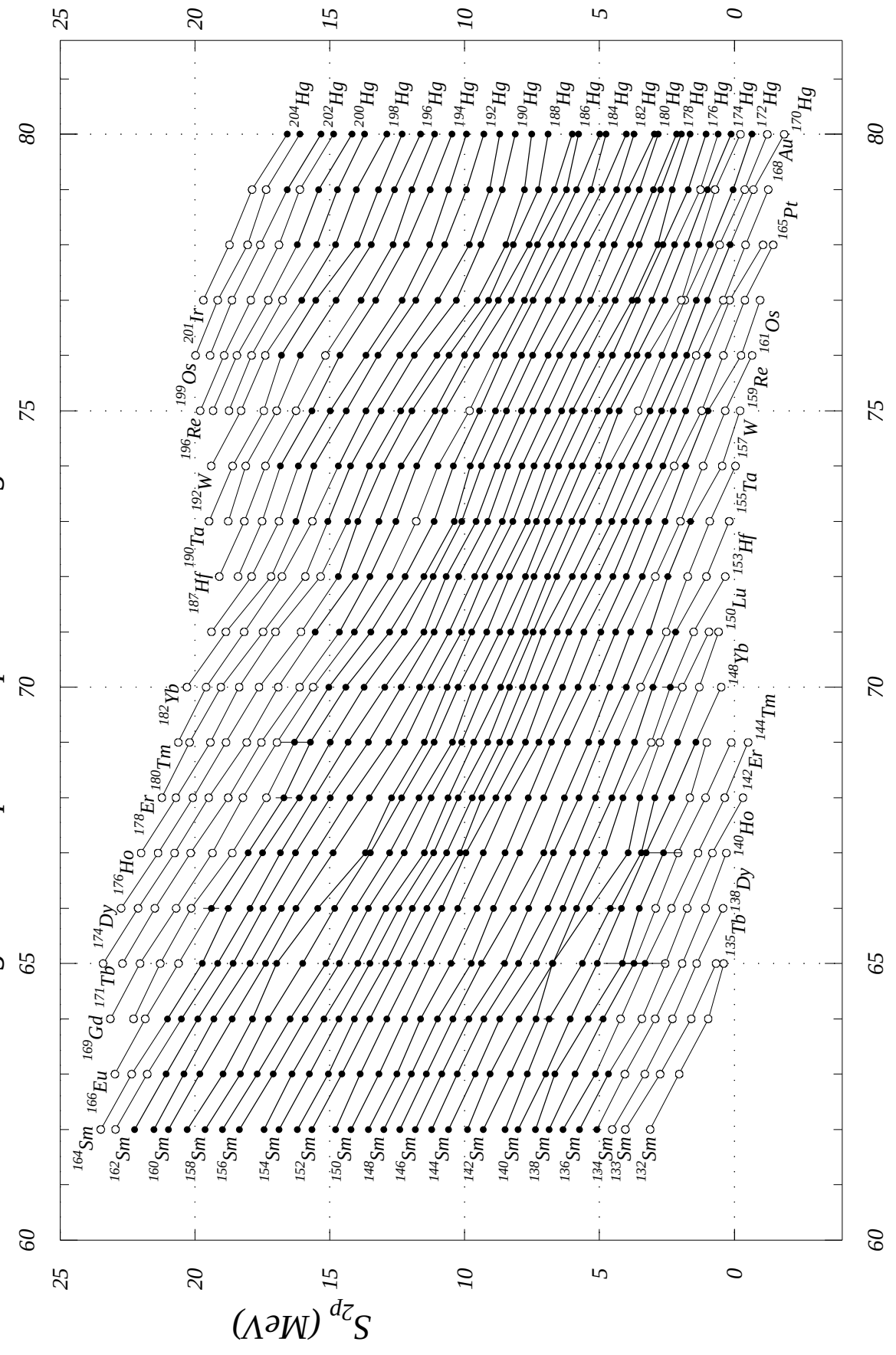


Fig. 14. Two-proton separation energies Z = 62 to 80

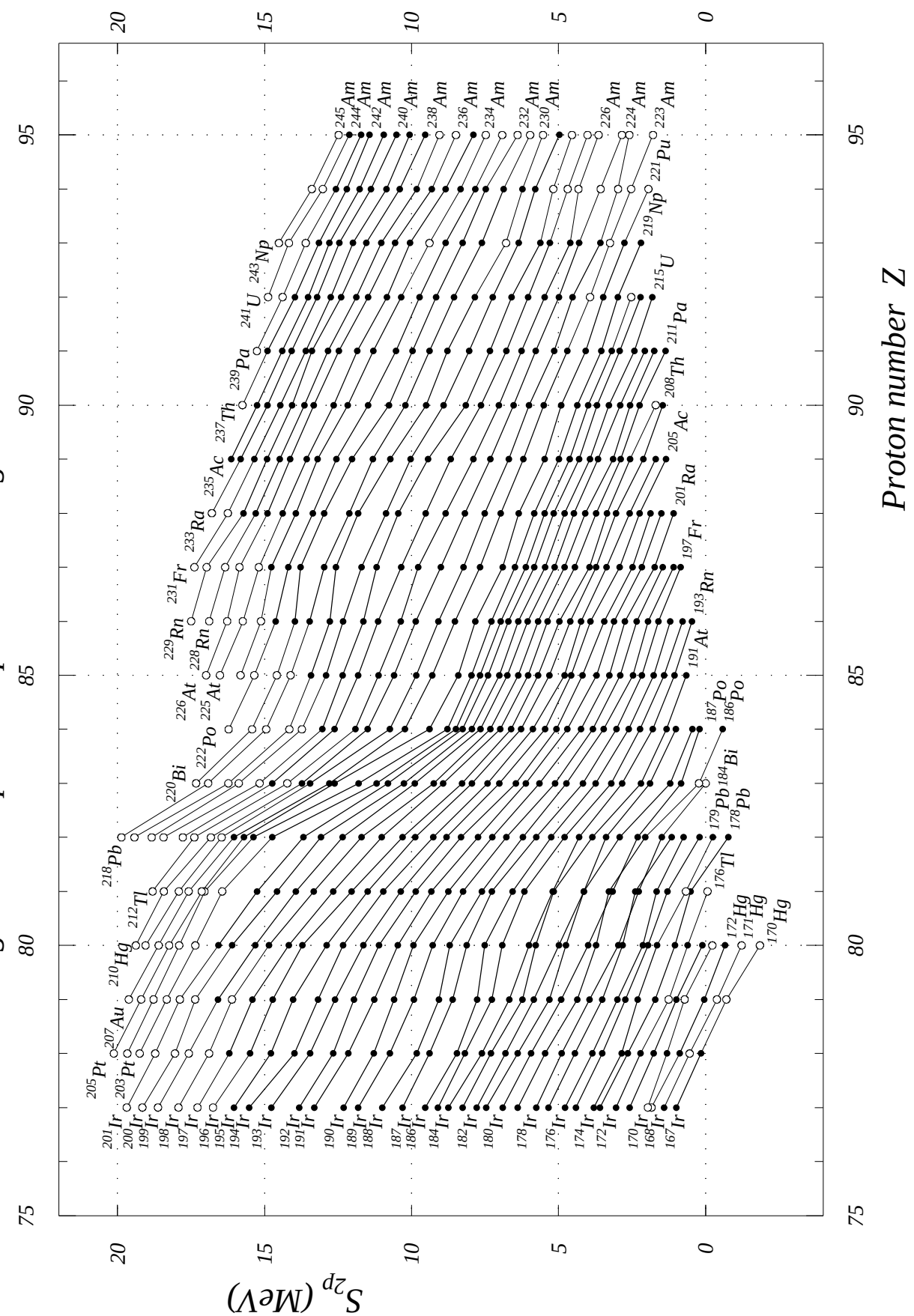


Fig. 15. Two-proton separation energies Z = 77 to 95

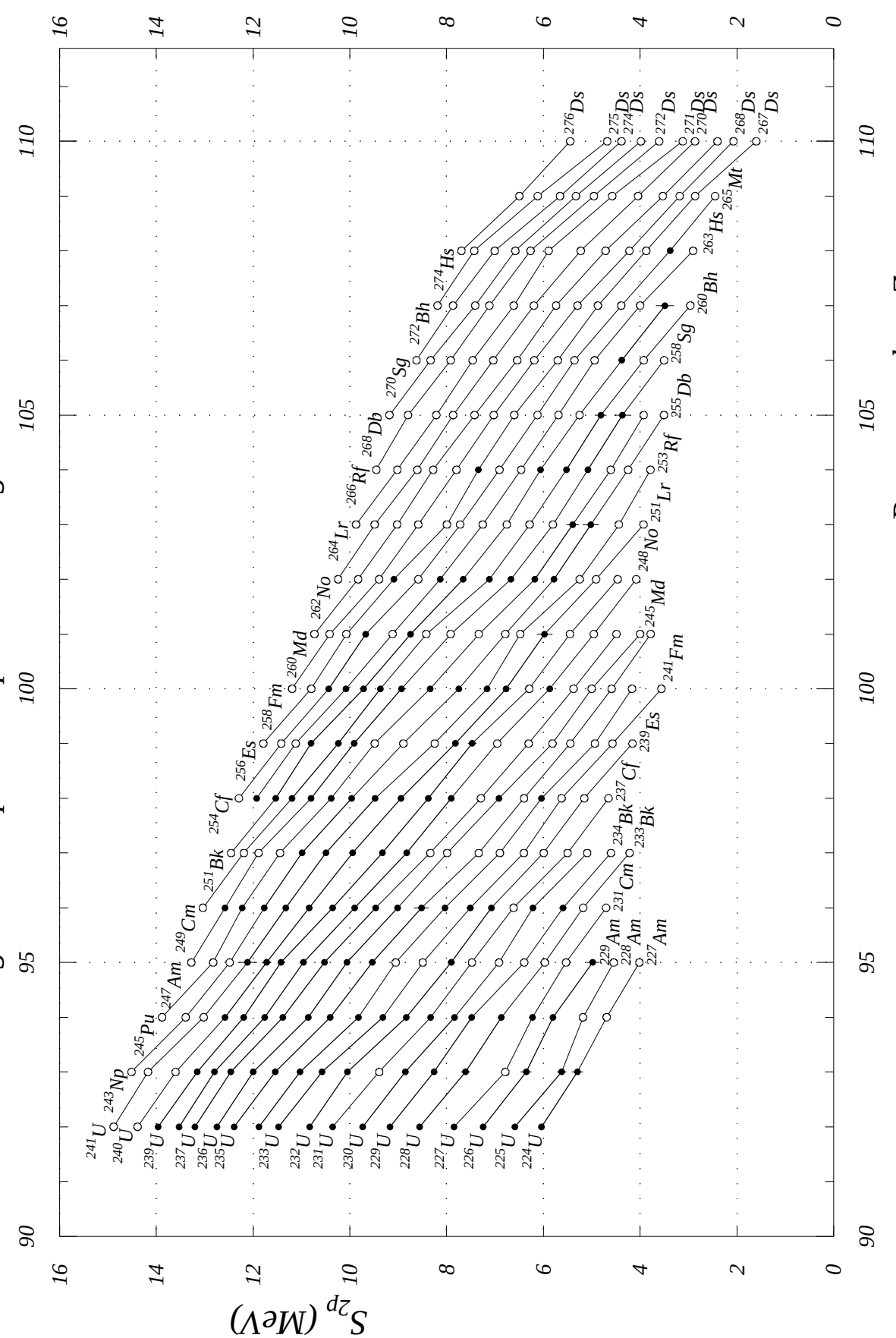


Fig. 16. Two-proton separation energies Z = 92 to 110

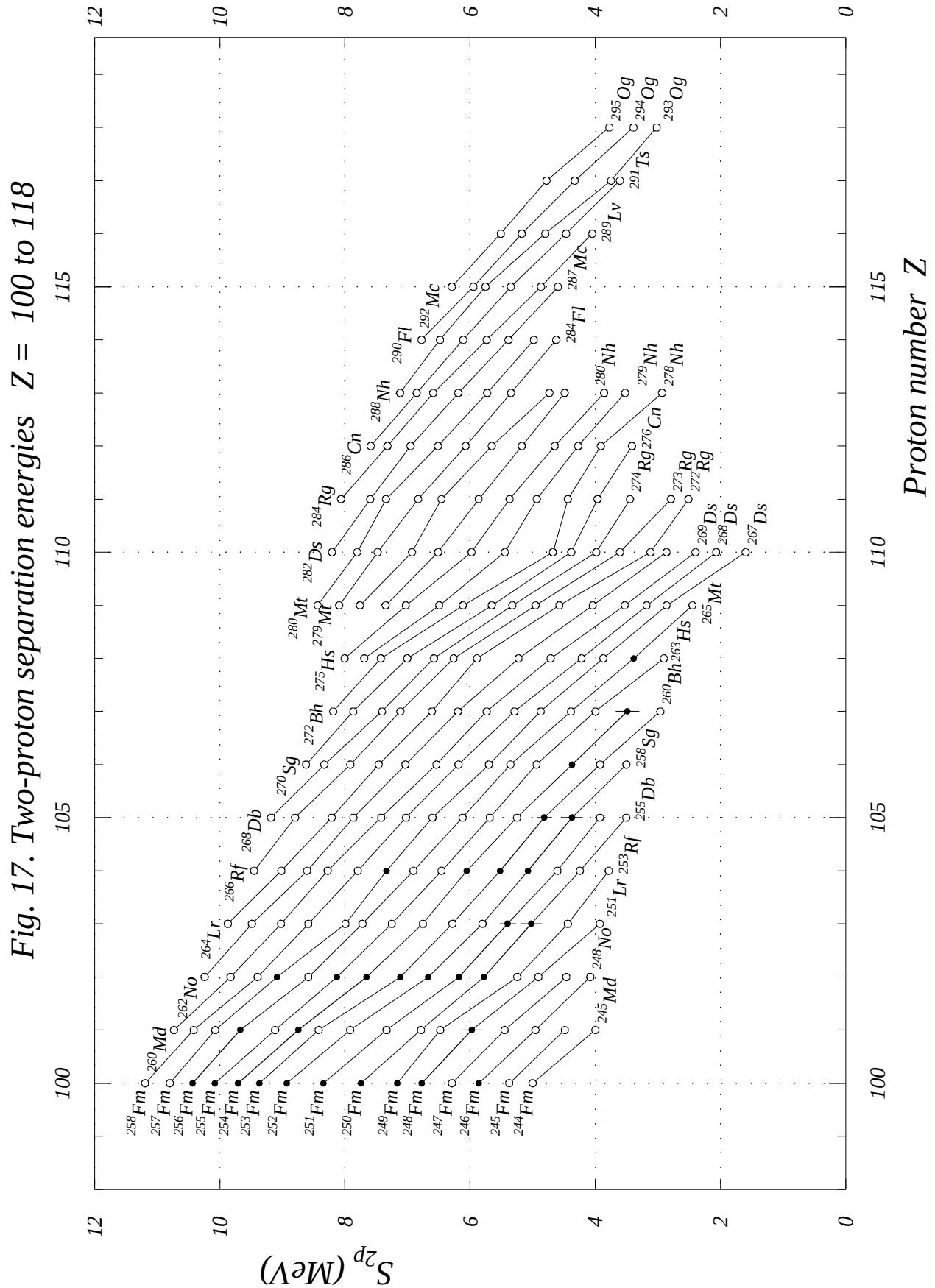


Fig. 17. Two-proton separation energies $Z = 100$ to 118

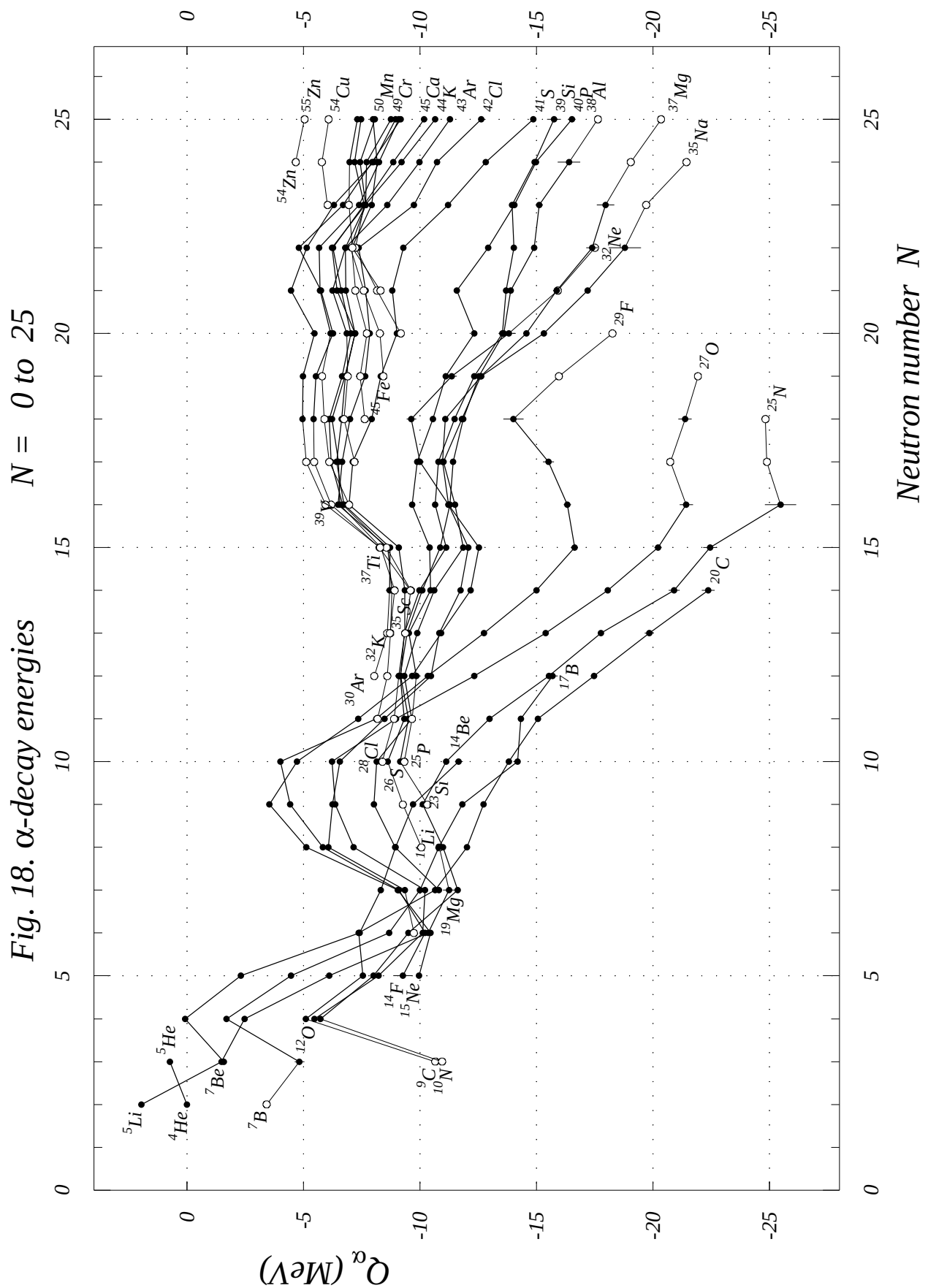


Fig. 18. α-decay energies
N = 0 to 25
Neutron number N
Q_α (MeV)
0
5
10
15
20
25
-5
-10
-15
-20
-25
^{5}Li
^{4}He
^{5}He
^{7}Be
^{7}B
^{12}O
^{9}C
^{10}N
^{14}F
^{15}Ne
^{19}Mg
^{10}Li
^{23}Si
^{26}S
^{28}Cl
^{25}P
^{14}Be
^{30}Ar
^{32}K
^{35}Sc
^{37}Ti
^{39}V
^{45}Fe
^{49}Cr
^{50}Mn
^{54}Cu
^{55}Zn
^{54}Zn
^{17}B
^{20}C
^{25}N
^{27}O
^{29}F
^{32}Ne
^{35}Na
^{37}Mg
^{38}Al
^{40}P
^{39}Si
^{41}S
^{42}Cl
^{43}Ar
^{44}K
^{45}Ca

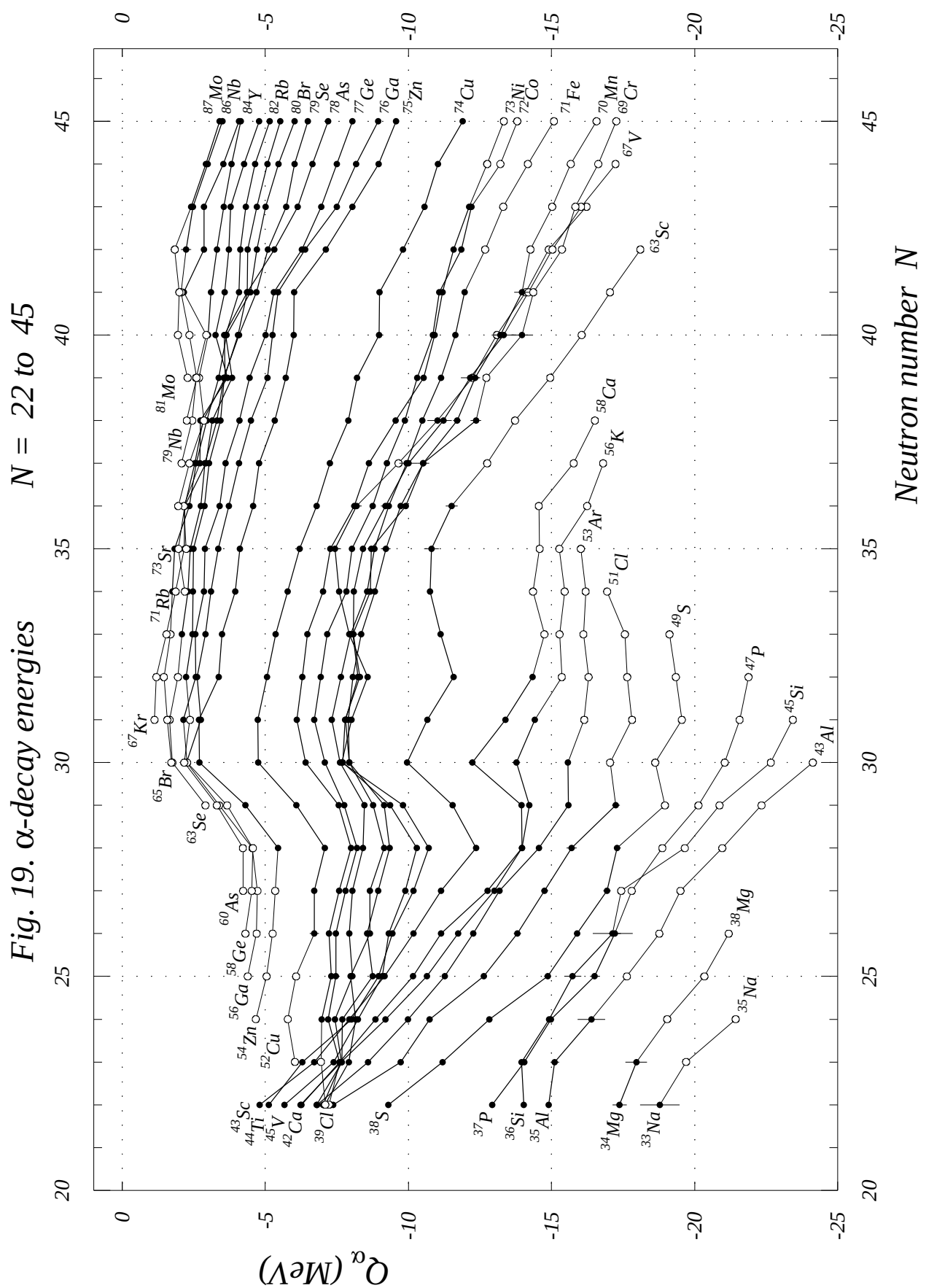


Fig. 19. α-decay energies
N = 22 to 45
Q_α (MeV)
Neutron number N
0
-5
-10
-15
-20
-25
20
25
30
35
40
45
^{87}Mo
^{86}Nb
^{84}Y
^{82}Rb
^{80}Br
^{79}Se
^{78}As
^{77}Ge
^{76}Ga
^{75}Zn
^{74}Cu
^{73}Ni
^{72}Co
^{71}Fe
^{70}Mn
^{69}Cr
^{67}V
^{63}Sc
^{58}Ca
^{56}K
^{53}Ar
^{51}Cl
^{49}S
^{47}P
^{45}Si
^{43}Al
^{81}Mo
^{79}Nb
^{73}Sr
^{71}Rb
^{67}Kr
^{65}Br
^{63}Se
^{60}As
^{58}Ge
^{56}Ga
^{54}Zn
^{52}Cu
^{43}Sc
^{44}Ti
^{45}V
^{42}Ca
^{39}Cl
^{38}S
^{38}Mg
^{35}Na
^{37}P
^{36}Si
^{35}Al
^{34}Mg
^{33}Na

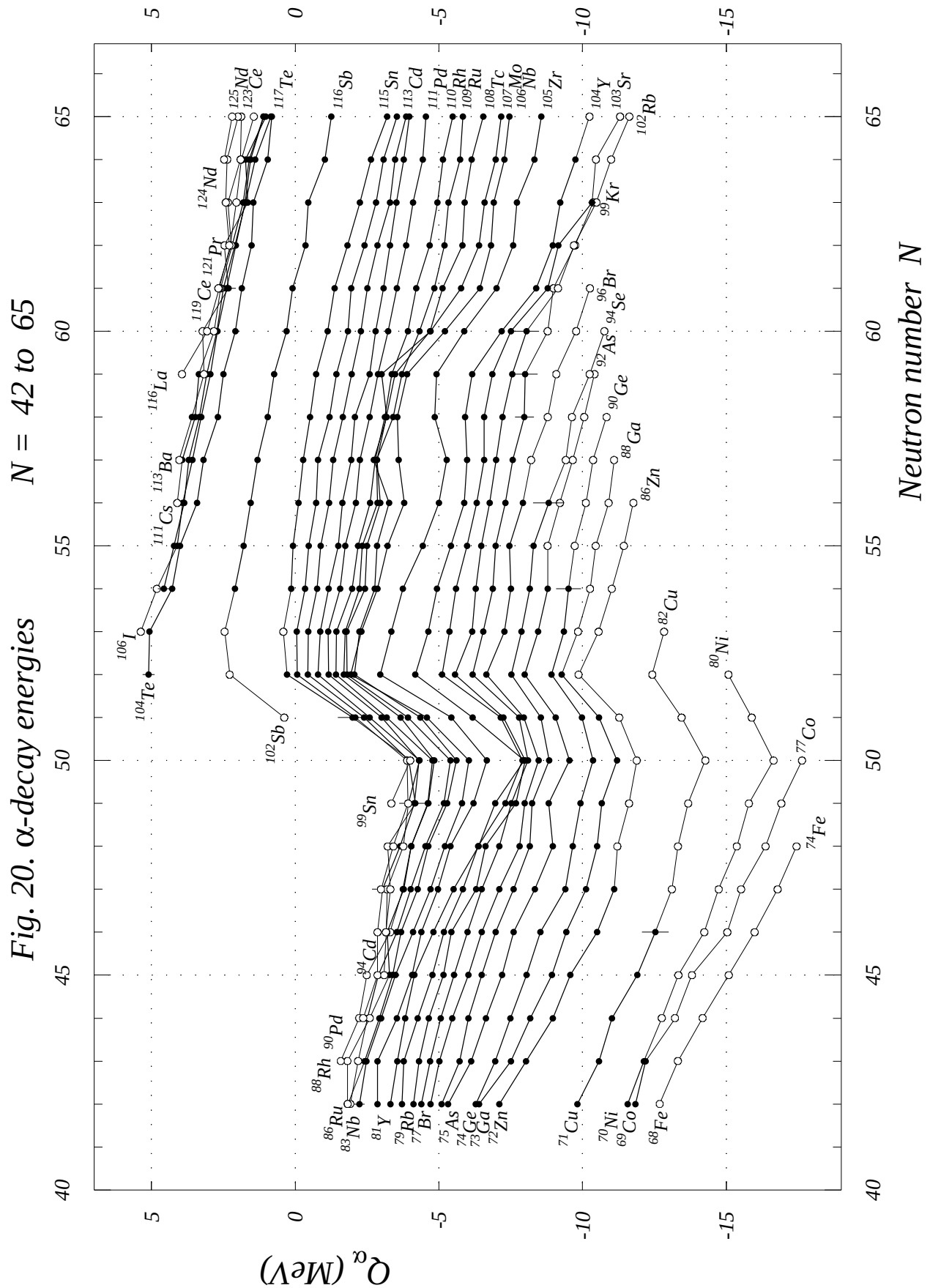


Fig. 20. α-decay energies
N = 42 to 65
Neutron number N
Q_α (MeV)
106I
104Te
102Sb
116La
113Ba
111Cs
119Ce
121Pr
124Nd
125Nd
123Ce
117Te
116Sb
115Sn
113Cd
111Pd
110Rh
109Ru
108Tc
107Mo
106Nb
105Zr
104Y
103Sr
102Rb
99Kr
96Br
94Se
92As
90Ge
88Ga
86Zn
82Cu
80Ni
77Co
74Fe
99Sn
94Cd
90Pd
88Rh
86Ru
83Nb
81Y
79Rb
77Br
75As
74Ge
73Ga
72Zn
71Cu
70Ni
69Co
68Fe

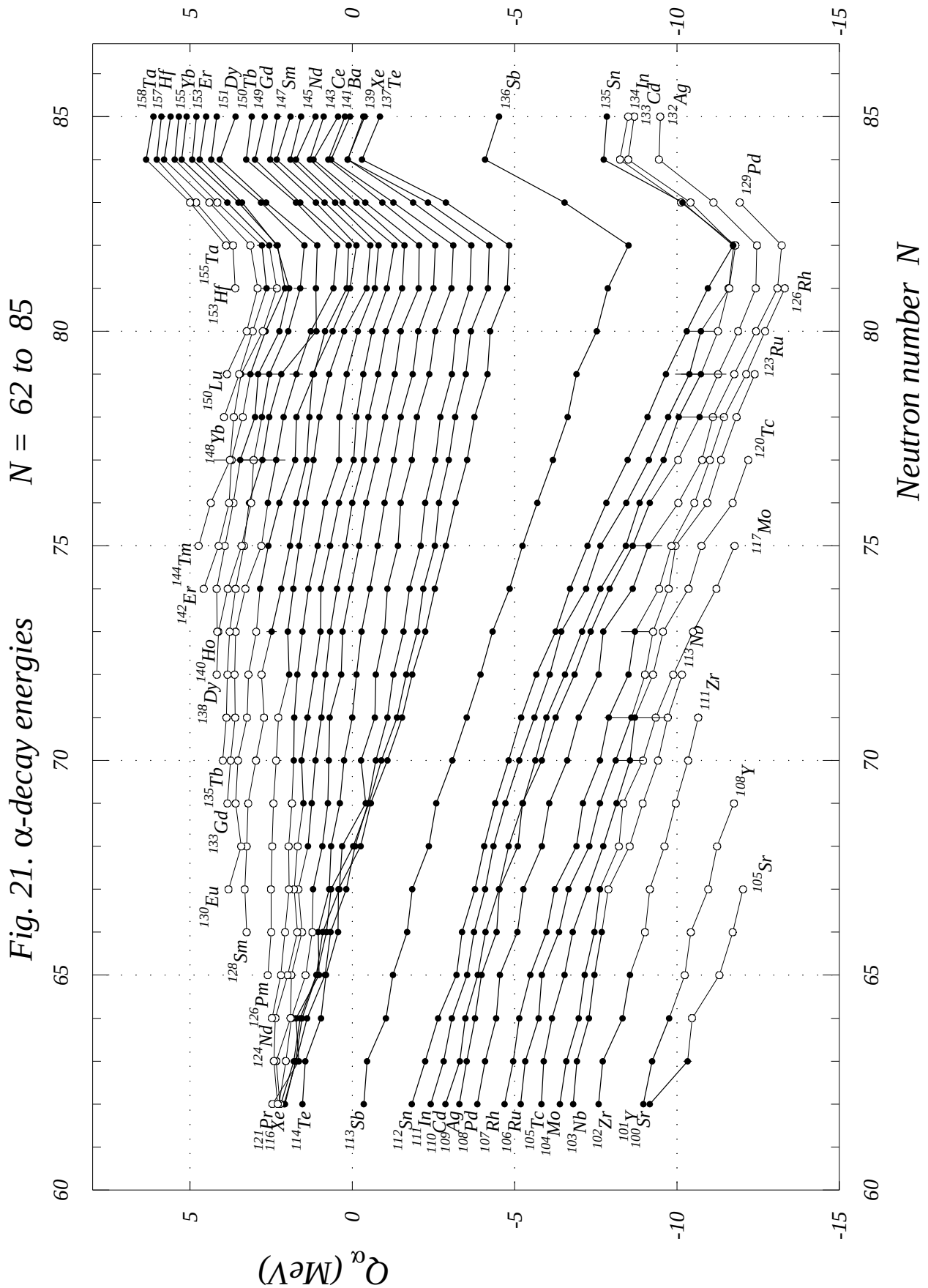


Fig. 21. α-decay energies
N = 62 to 85
Neutron number N
Q_α (MeV)
158Ta
157Hf
155Yb
153Er
151Dy
150Tb
149Gd
147Sm
145Nd
143Ce
141Ba
139Xe
137Te
136Sb
135Sn
134In
133Cd
132Ag
129Pd
126Rh
123Ru
120Tc
117Mo
113Nb
111Zr
108Y
105Sr
155Ta
153Hf
150Lu
148Yb
144Tm
142Er
140Ho
138Dy
135Tb
133Gd
130Eu
128Sm
126Pm
124Nd
121Pr
116Xe
114Te
113Sb
112Sn
111In
110Cd
109Ag
108Pd
107Rh
106Ru
105Tc
104Mo
103Nb
102Zr
101Y
100Sr

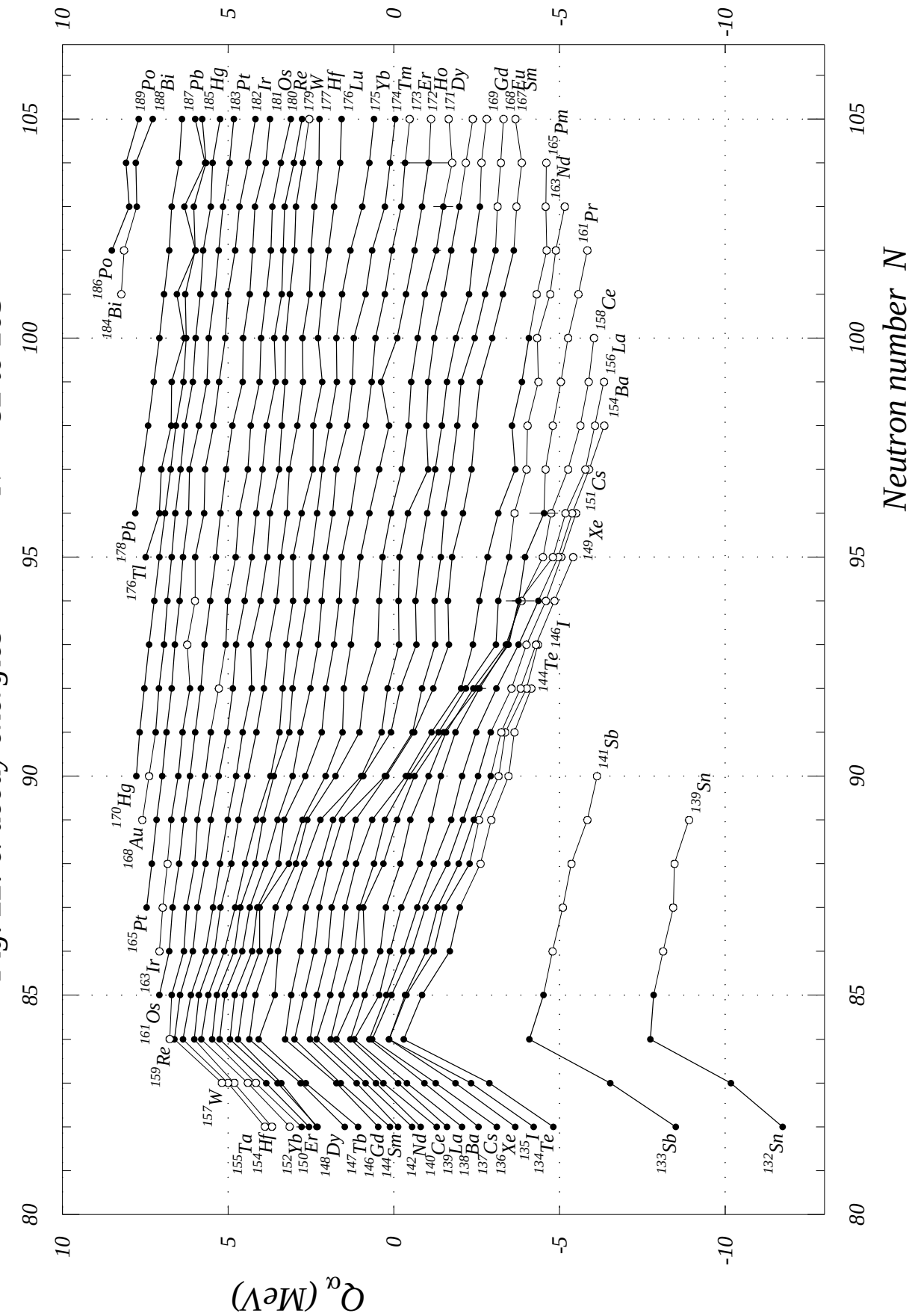


Fig. 22. α-decay energies
N = 82 to 105
Neutron number N
Q_α (MeV)
80
85
90
95
100
105
10
5
0
-5
-10
189Po
188Bi
187Pb
185Hg
183Pt
182Ir
181Os
180Re
179W
177Hf
176Lu
175Yb
174Tm
173Er
172Ho
171Dy
169Gd
168Eu
167Sm
165Pm
163Nd
161Pr
158Ce
156La
154Ba
151Cs
149Xe
146I
144Te
141Sb
139Sn
132Sn
133Sb
134Te
135I
136Xe
137Cs
138Ba
139La
140Ce
142Nd
144Sm
146Gd
147Tb
148Dy
150Er
152Yb
154Hf
155Ta
157W
159Re
161Os
163Ir
165Pt
168Au
170Hg
176Tl
178Pb
184Bi
186Po

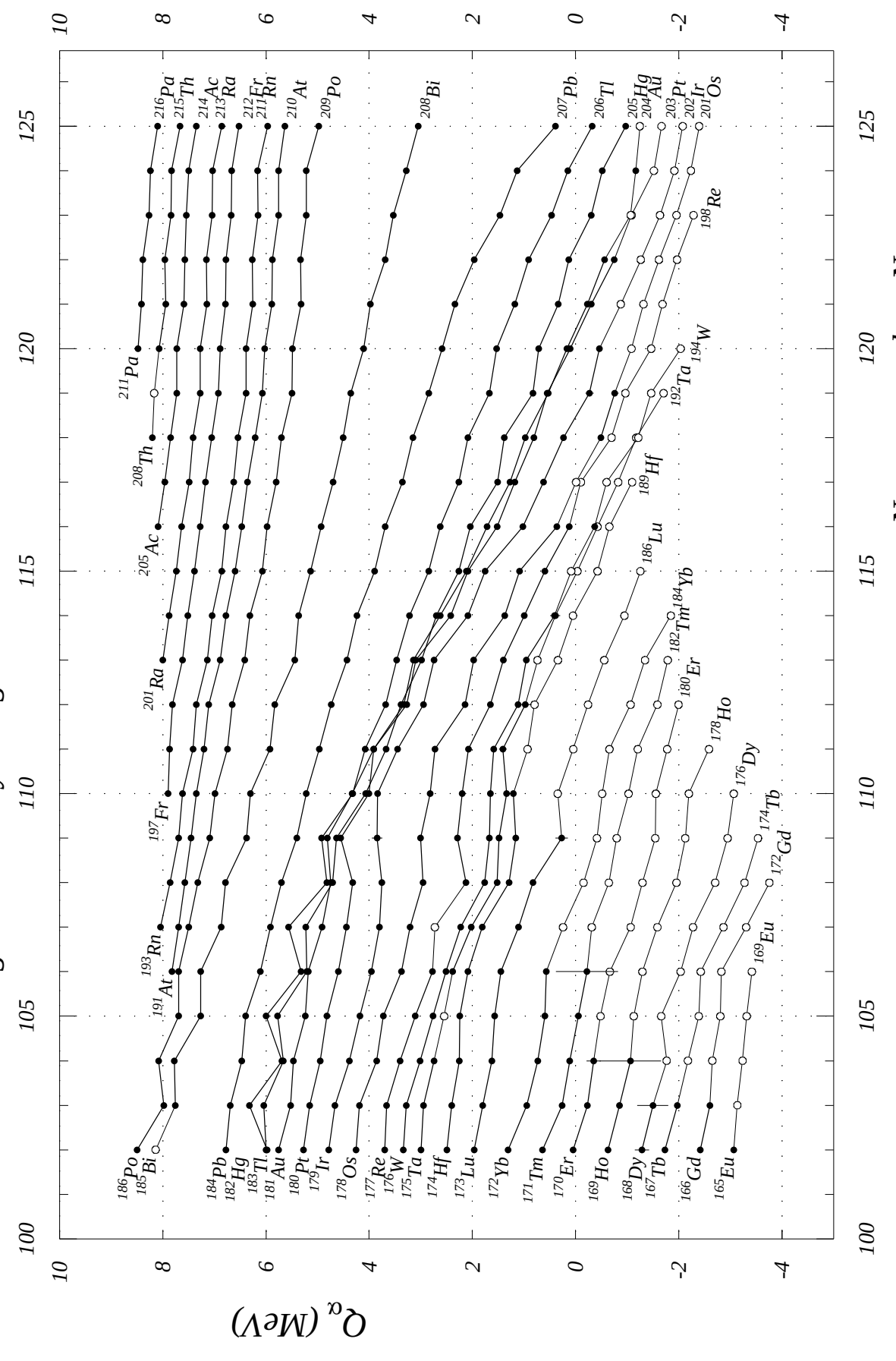


Fig. 23. α-decay energies
N = 102 to 125
Q_α (MeV)
Neutron number N
100
105
110
115
120
125
10
8
6
4
2
0
-2
-4
^{216}Pa
^{215}Th
^{214}Ac
^{213}Ra
^{212}Fr
^{211}Rn
^{210}At
^{209}Po
^{208}Bi
^{207}Pb
^{206}Tl
^{205}Hg
^{204}Au
^{203}Pt
^{202}Ir
^{201}Os
^{198}Re
^{194}W
^{192}Ta
^{189}Hf
^{186}Lu
^{184}Yb
^{182}Tm
^{180}Er
^{178}Ho
^{176}Dy
^{174}Tb
^{172}Gd
^{169}Eu
^{211}Pa
^{208}Th
^{205}Ac
^{201}Ra
^{197}Fr
^{193}Rn
^{191}At
^{186}Po
^{185}Bi
^{184}Pb
^{182}Hg
^{183}Tl
^{181}Au
^{180}Pt
^{179}Ir
^{178}Os
^{177}Re
^{176}W
^{175}Ta
^{174}Hf
^{173}Lu
^{172}Yb
^{171}Tm
^{170}Er
^{169}Ho
^{168}Dy
^{167}Tb
^{166}Gd
^{165}Eu

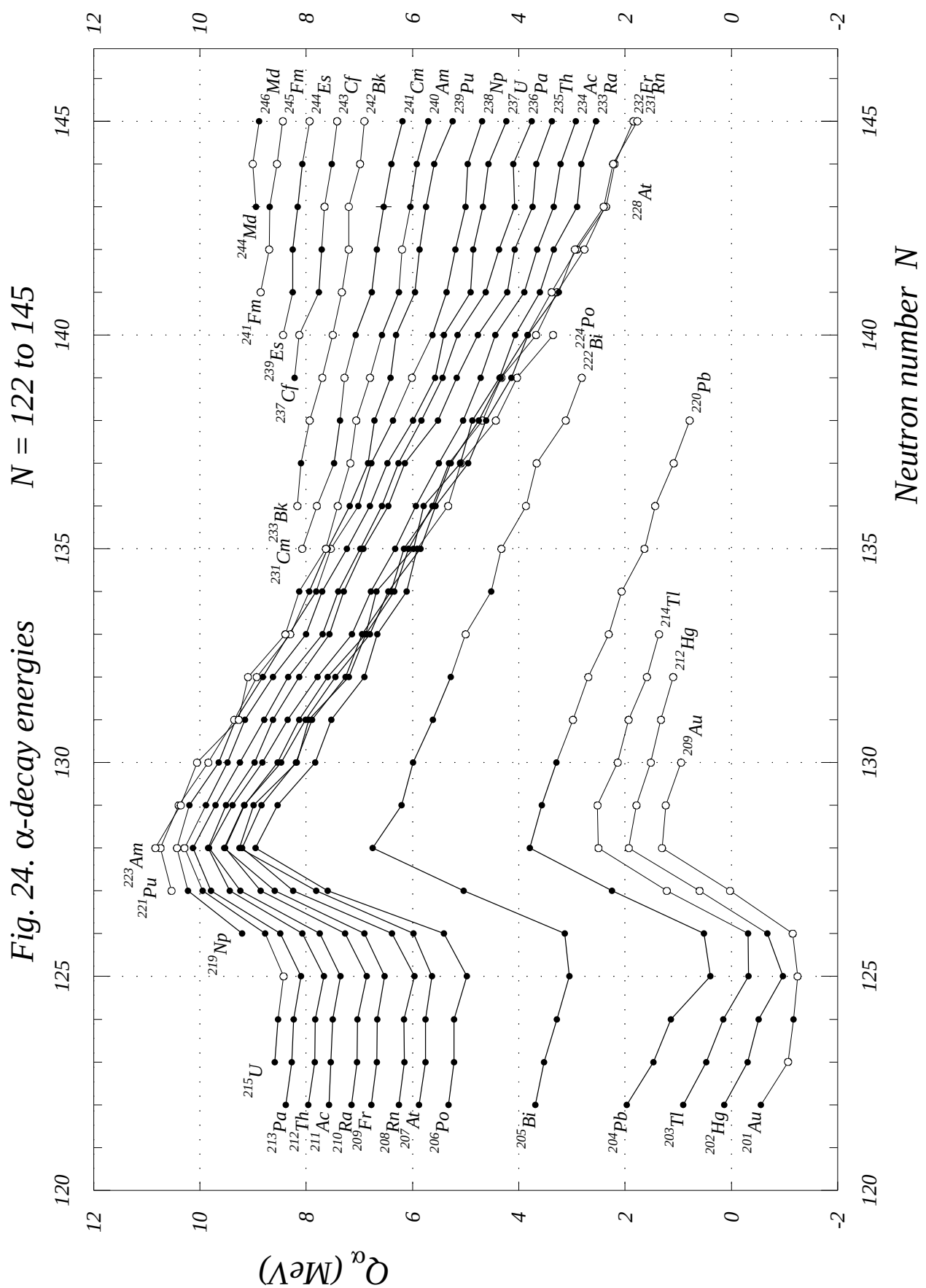


Fig. 24. α-decay energies
N = 122 to 145
Neutron number N
Q_α (MeV)
120
125
130
135
140
145
12
10
8
6
4
2
0
-2
246Md
245Fm
244Es
243Cf
242Bk
241Cm
240Am
239Pu
238Np
237U
236Pa
235Th
234Ac
233Ra
232Er
231Rn
228At
224Po
222Bi
220Pb
214Tl
212Hg
209Au
244Md
241Fm
239Es
237Cf
233Bk
231Cm
223Am
221Pu
219Np
215U
213Pa
212Th
211Ac
210Ra
209Fr
208Rn
207At
206Po
205Bi
204Pb
203Tl
202Hg
201Au

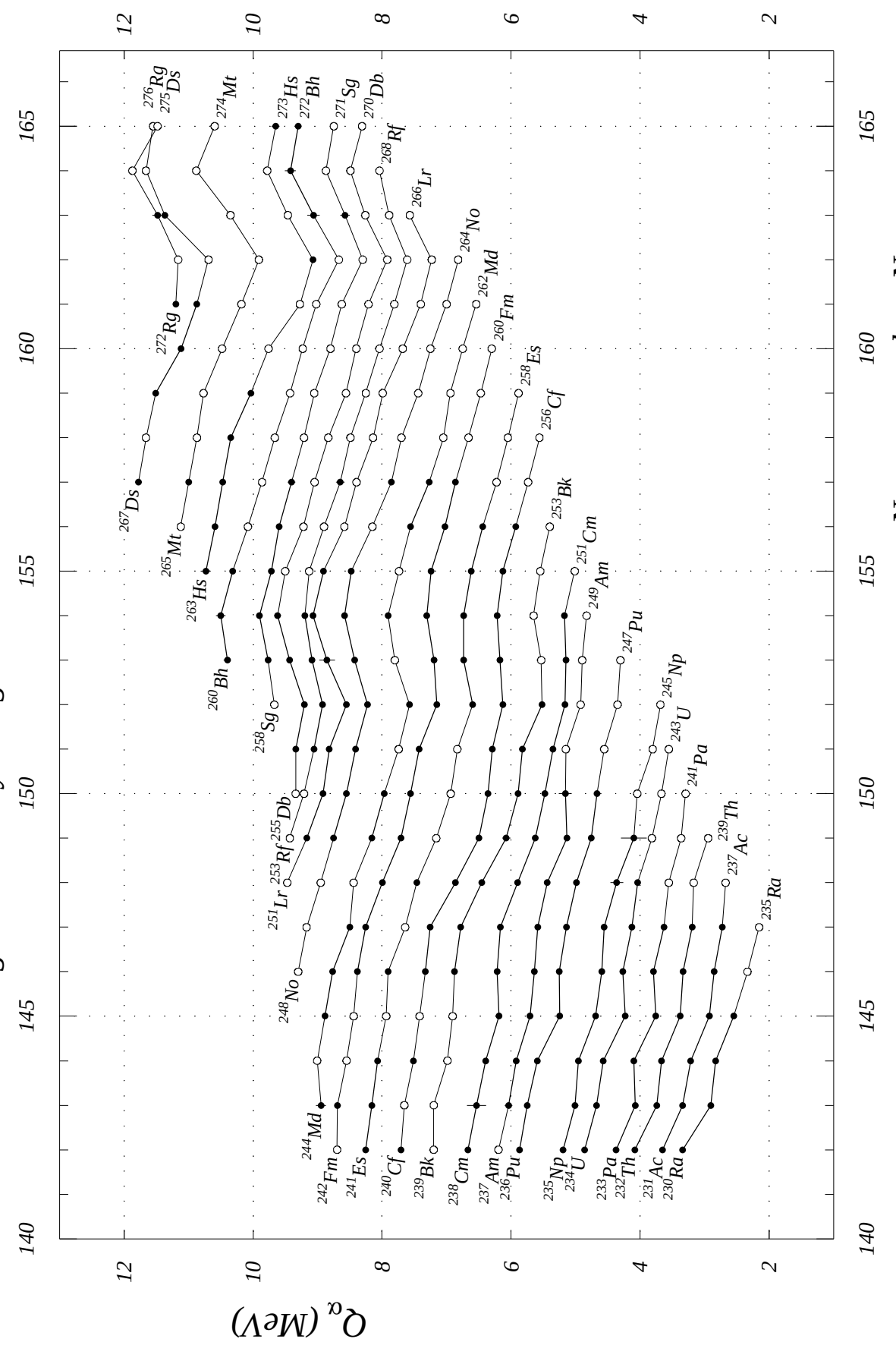


Fig. 25. α-decay energies
N = 142 to 165
Q_α (MeV)
Neutron number N
140
145
150
155
160
165
2
4
6
8
10
12
^{267}Ds
^{272}Rg
^{265}Mt
^{263}Hs
^{260}Bh
^{258}Sg
^{255}Db
^{253}Rf
^{251}Lr
^{248}No
^{244}Md
^{242}Fm
^{241}Es
^{240}Cf
^{239}Bk
^{238}Cm
^{237}Am
^{236}Pu
^{235}Np
^{234}U
^{233}Pa
^{232}Th
^{231}Ac
^{230}Ra
^{276}Rg
^{275}Ds
^{274}Mt
^{273}Hs
^{272}Bh
^{271}Sg
^{270}Db
^{268}Rf
^{266}Lr
^{264}No
^{262}Md
^{260}Fm
^{258}Es
^{256}Cf
^{253}Bk
^{251}Cm
^{249}Am
^{247}Pu
^{245}Np
^{243}U
^{241}Pa
^{239}Th
^{237}Ac
^{235}Ra

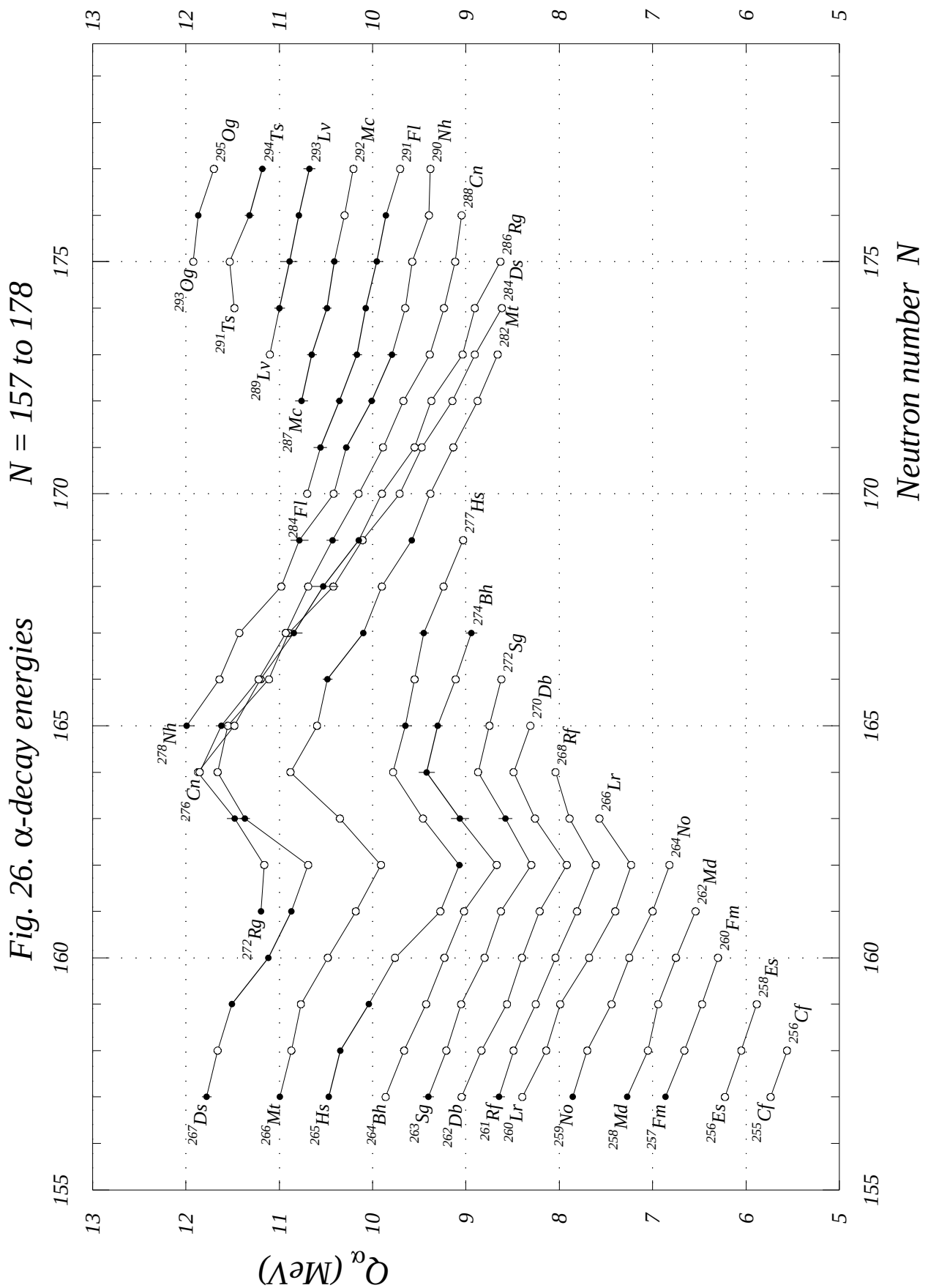


Fig. 26. α-decay energies N = 157 to 178
Q_α (MeV)
Neutron number N
155
160
165
170
175
5
6
7
8
9
10
11
12
13
^{293}Og
^{295}Og
^{291}Ts
^{294}Ts
^{289}Lv
^{293}Lv
^{287}Mc
^{292}Mc
^{284}Fl
^{291}Fl
^{290}Nh
^{278}Nh
^{288}Cn
^{276}Cn
^{286}Rg
^{284}Mt
^{282}Ds
^{277}Hs
^{274}Bh
^{272}Rg
^{272}Sg
^{270}Db
^{268}Rf
^{266}Lr
^{267}Ds
^{266}Mt
^{265}Hs
^{264}Bh
^{263}Sg
^{262}Db
^{261}Rf
^{260}Lr
^{264}No
^{262}Md
^{260}Fm
^{259}No
^{258}Md
^{257}Fm
^{258}Es
^{256}Es
^{255}Cf
^{256}Cf

References used in the AME2020 and the NUBASE2020 evaluations

REGULAR JOURNALS (CODEN identifiers) AND BOOKS

AAFPA		Annales Academiae Scientiarum Fennicae, series A VI (Finland)
ADNDA		Atomic Data and Nuclear Data Tables (Elsevier, USA)
AENGA		Atomnaya Energiya (Russia)
AFYSA	1950-70	Arkiv för Fysik (Sweden)
ANPHA		Annales de Physique (France)
ANPYA		Annalen der Physik (Germany,DR)
APAHA		Acta Physica Academiae Scientiarium Hungaricae
APASA		Acta Physica Austriaca
APCPC		AIP Conference Proceedings
APJLA		Astrophysical Journal Letters
APNYA	1957-...	Annals of Physics
APOBB	1970-...	Acta Physica Polonica Section B
APPOA	...-1969	Acta Physica Polonica
ARISE	1986-92	International Journal of Radiation Applications and Instrumentation - Part A - Applied Radiation and Isotopes (Great Britain)
ARISE	1993-...	Applied Radiation and Isotopes (Elsevier)
ATKEA		Atomkernenergie (Germany)
ATKOA		Atomki Kozlemenyek (Hungary)
AUJPA		Australian Journal Physics
BAPMA		Bulletin de l'Académie Polonaise des Sciences, Série des Sciences Mathématiques, Astronomiques et Physiques
BAPSA		Bulletin of the American Physical Society
BRSPE		Bulletin of the Russian Academy of Sciences, Physics
CHDBA	1966-...	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences, serie B (France)
CHJPB		Acta Physica Sinica (Beijing)
CJCHA		Canadian Journal of Chemistry
CJPHA	1934-50	Canadian Journal of Physics
CJREA		Canadian Journal of Research
COREA	...-1965	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences (France)
CPCHC	2008-...	Chinese Physics C (former "High-Energy Physics and Nuclear Physics")
CPHMA		Commentationes Physico-Mathematicae : Societas Scientiarum Fennicae (Finland)
CPLEE	1992-...	Chinese Physics Letters
CUSCA		Current Science (India)
CZYPA		Czechoslovak Journal of Physics (Kluwer, london)
DABBB	1953-96	Dissertation Abstract International B
DANKA		Doklady Akademii Nauk SSSR
EPJAA	1998-...	European Physical Journal A (replaces ZPAAD)
EPJDD	1998-...	European Physical Journal D
EPJDR	1999-...	European Physical Journal Direct
EPJST	2007-...	European Physical Journal Special Topics [nsr: ZSTNE]
EPJWC		European Physical Journal Web of Conferences
EPSLA		Earth and Planetary Science Letters
EULEE	1986-...	Europhysics Letters (replaces JPSLB and NCLTA)
FECLA		Particles and Nuclei, Letters (Russia)
FZKAA		Fizika (Croatia)
GCACA		Geochimica et Cosmochimica Acta (Elsevier, USA)
HPACA		Helvetica Physica Acta
HYIND		Hyperfine Interactions
IANFA		Izvestiya Akademii Nauk SSSR, seriya Fizicheskaya

IEIMA		IEEE Transactions on Instrumentation and Measurement (USA)
IJARA	1956-85	International Journal of Applied Radiation and Isotopes (Great Britain)
IJMIB	1968-83	International Journal of Mass Spectrometry and Ion Physics
IJMPD	1983-98	International Journal of Mass Spectrometry and Ion Processes (Elsevier)
IMSPF	1998-...	International Journal of Mass Spectrometry
IJOPA		Indian Journal of Pure and Applied Physics
IJPYA		Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science
IMPAE		International Journal of Modern Physics A (World Scientific Publishing, Singapore)
IMPEE		International Journal of Modern Physics E (World Scientific Publishing, Singapore)
JACSA		
INUCA	1947-60	Inorganic Nuclear Chemistry Letters (Great Britain)
JCAPBP	2003-...	Journal of Cosmology and Astroparticle Physics
JCOMA	...-1991	Journal of the Less Common Metals (Switzerland)
JINCA	...-1981	Journal of Inorganic and Nuclear Chemistry (USA)
JINST		Journal of Instrumentation
JLTPA		Journal of Low Temperature Physics
JMOPE		Journal of Modern Optics (Great Britain)
JNCEA		Journal of Nuclear Energy A and B (Great Britain)
JNRSA		Journal of Nuclear and Radiochemical Sciences (Japan)
JOPQA	1961-98	Journal de Physique (France)
JOPQS		Journal de Physique (France) Suppl. Colloques
JPAGB		Journal of Physics, A (Great Britain)
JPCRB		Journal of Physical and Chemical Reference Data (USA)
JPCSD		Journal of Physics, G Conference Series (Great Britain)
JPGPE	1989-...	Journal of Physics, G Nuclear Physics (Great Britain)
JPHGB	...-1988	Journal of Physics, G Nuclear Physics (Great Britain)
JPRAA	...-1960	Journal de Physique et le Radium (France)
JPSLB	...-1985	Journal de Physique Lettres (France)
JRNBA		Journal of Research of the National Institute of Standards and Technology
JRNCD		Journal Radioanal. Nuclear Chemistry
JUPSA		Journal of the Physical Society of Japan
JUPSC		Japanese Physical Society Conference Proceedings
KDVSA		Det Kongelige Danske Videnskabernes Selskab, Matematisk-Fysiske Meddelelser
KERNA		Kernenergie (Germany)
KPSJA		Journal of the Korean Physical Society
KURAA		Kyoto University, Research Reactor Institute : Annual Report
MPLAE		Modern Physics Letters section A (World Scientific Publishing, Singapore)
MTRGA		Metrologia
NACOP		Communications Physics
NATUA		Nature (Great Britain)
NCAOB	2016-	Nature Communications
NCIAA	1955-99	Nuovo Cimento A (Italy)
NCLTA	...-1985	Nuovo Cimento Lettere (Italy)
NDSAA		Nuclear Data Tables, section A (USA)
NDSBA		Nuclear Data Sheets (USA)
NIMAE	1986-...	Nuclear Instruments and Methods in Physics Research A (Netherlands)
NIMBE	1983-...	Nuclear Instruments and Methods in Physics Research B (Netherlands)
NPBSE		Nuclear Physics, section B (Proceedings Supplements) (Netherlands)
NSENA		Nuclear Science and Engineering (American Nuclear Society, USA)
NUCIA	...-1969	Nuovo Cimento (Italy)
NUIMA	...-1985	Nuclear Instruments and Methods (Netherlands)
NUPAB	1967-...	Nuclear Physics, section A (Netherlands)
NUPBB	1967-...	Nuclear Physics, section B (Netherlands)

NUPHA	1957-66	Nuclear Physics (Netherlands)
PACHA		Pure and Applied Chemistry
PANUE	2006-18	Physics of Atomic Nuclei
PCPSA		Proceedings Cambridge Philosophical Society
PENUC		Particle Emission from Nuclei, ed. by D.N. Poenaru and M.S. Ivaşcu, CRC Press (USA), 1989
PHFEA		Physica Fennica (Finland)
PHLTA	...-1967	Physics Letters (Netherlands)
PHMAA	...-1955	Philosophical Magazine (Great Britain)
PHMAB	1956-...	Philosophical Magazine (Great Britain)
PHNOA		Physica Norvegia
PHRVA	1930-69	Physical Review (USA) (not 1964 and 1965)
PHSTB	1970-...	Physica Scripta (Sweden)
PHSTT	1970-...	Physica Scripta (Sweden) T-volumes
PHYSA		Physica (Netherlands)
PISAA		Proceedings of the Indian Academy of Sciences, section A
PLRBA	1964-65	Physical Review, section B (USA)
PLSSA		Planetary and Space Science (Netherlands)
PNEND	1977-...	Progress in Nuclear Energy
PPNLA		Physics of Particles and Nuclei Letters
PPNPD		Progress in Particle and Nuclear Physics
PPNUE	2005	Physics of Particle and Nuclei
PPSOA		Proceedings of the Physical Society (Great Britain)
PRAMC		Pramana, Journal of Physics (India)
PRLAA		Proceedings of the Royal Society of London,Series A
PRLTA		Physical Review Letters (USA)
PRVAA	1970-...	Physical Review, section A (USA)
PRVCA	1970-...	Physical Review, section C (USA)
PRVDA	1970-...	Physical Review, section D (USA)
PRXHA	2014-...	Physical Review, section X (USA)
PRYCA		Proceedings of the Royal Society of Canada
PTPSA	-12	Progress in Theoretical Physics (Kyoto), Suppl.
PTEP.	2013-...	Progress of Theoretical and Experimental Physics
PYLAA	1968-...	Physics Letters, section A (Netherlands)
PYLBB	1968-...	Physics Letters, section B (Netherlands)
PZETA		Pis'ma v Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (Russie)
RAACA		Radiochimica Acta (Germany)
RADKA		Radiokhimiya (Russia)
RAEFB		Radiation Effects and Defects in Solids (Great Britain)
RMAFA		Revista de la Union Matematica Argentina (Argentina)
RPCHD		Radiation Physics and Chemistry
RBFSA		Revista Brasiliera de Fisica
RMPHA		Reviews of Modern Physics (USA)
RMXFA		Revista Mexicana de Física
RPHAA	1966-90	Revue de Physique Appliquée (Paris)
RPPHA		Reports on Progress in Physics (Great Britain)
RRALA		Radiochemical and Radioanalytical Letters (Hungary)
RSINA	1948	Review of Scientific Instruments
SAPHD		South African Journal of Physics
SCIEA		Science (American Association for the Advancement of Science)
SHIBA		Shitsuryo Bunseki (Mass Spectrometry, Japan)
THISc		Treatise on Heavy-Ion Science, ed. by D.A. Bromley, Plenum Press, 1989
UFZHA		Ukrains'kii Fizicheskii Zhurnal
VDPEA		Verhandlungen der Deutschen Physikalischen Gesellschaft

VHDPG		Verhandlungen der Deutschen Physikalischen Gesellschaft
YAFIA		Yadernaya Fizika (Russia)
YTHLD	...-1997	Chinese Journal of Nuclear Physics
YWPIF		Nuclear Physics Review (China)
ZAANE	1998-...	see EPJAA
ZCCNE		Eur.Phys.J. C
ZDACE	1974-...	Zeitschrift für Physik D (Germany)
ZENAA		Zeitschrift für Naturforschung, part A (Germany)
ZEPYA	...-1974	Zeitschrift für Physik (Germany)
ZETFA		Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (Russia)
ZPAAD	1975-97	Zeitschrift für Physik A (Germany) (replaces ZEPYA)
ZPCFD	1975-97	Zeitschrift für Physik C (Germany)

REPORTS, PREPRINTS, THESIS, ABSTRACTS, COMMUNICATIONS

AAAAA to be pd	To be published in journal AAAAA
ArXiv	open-access repository of electronic preprints
PrvCom AHW Mon	Private communication to A.H. Wapstra in given Month
PrvCom BPf Mon	Private communication to B. Pfeiffer in given Month
PrvCom FGK Mon	Private communication to F.G. Kondev in given Month
PrvCom GAu Mon	Private communication to G. Audi in given Month
PrvCom HWJ Mon	Private communication to Huang Wenjia in given Month
PrvCom JBl Mon	Private communication to J. Blachot in given Month
PrvCom NDG Mon	Private communication to Nuclear Data Group in given Month
PrvCom SNa Mon	Private communication to S. Naimi in given Month
PrvCom WgM Mon	Private communication to M. Wang in given Month
PrvCom Ref	Quoted by reference in question
Table of Isotopes	Table of Isotopes, LBL Brookhaven
AnRpt Institute	Annual Report from Institute (or City)
ANL-	Argonne National Laboratory, report
CERN-	European Organization for Nuclear Research, report
COO-	Reports on work done with DOE support
DASA-	Defense Atomic Support Agency, Washington, DC, report
GANIL-	Grand Accelerateur National d'Ions Lourds, report
GSI-	Gesellschaft für SchwerIonforschung, report
IAEA-	International Atomic Energy Agency, report
IDO-	Idaho Operations Office of US Atomic Energy Commission, report
IPNO-DRE	Institut de Physique Nucléaire d'Orsay, report
JINR-	Joint Institute for Nuclear Research Dubna, report
KFK-	Kernphysik Zentrum Karlsruhe, report
LBL-	Lawrence Berkeley National Laboratory, report
LNPI-	Leningrad report
Leninst YF-	Leningradskii Institut Yadernoi Fiziki
NEANDC-	Nuclear Energy Agency - Nuclear Data Center
NP-	Cited in NSR for 1965An05
ORNL-	Oak Ridge National Laboratory report
RIKAR	RIKEN Accelerator Progress Report
UCRL-	University of California Radiation Laboratory report
USIP-	University of Stockholm Institute of Physics report
Th.- City	Dissertation from corresponding University

CONFERENCE PROCEEDINGS AND ABSTRACTS

P-Adelaide	2016	Int. Nucl. Physics Conf. (INPC2016), Adelaide, Australia, September 2016
P-Aizu	2002	Proc. Frontiers of Collective Motion, Aizu, Japan, November 2002
P-Alma Ata	1978	Program of 28th USSR Conference on Nuclear Spectroscopy
P-Alma Ata	1984	Program of 34th USSR Conference on Nuclesr Spectroscopy
P-Amsterdam	1974	Proc. Intern. Conference Nuclear Structure
P-Amsterdam	1982	Proc. Intern. Conference Nuclear Structure
P-Amsterdam	1996	2nd. North-West Europe Nuclear Physics Conference NWE'96
P-Argonne	2012	Int. Conf. on Nuclear Structure 2012
P-Arles	1995	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-95
B-Arles	1995	Abstracts ENAM-95
P-Aulanko	2001	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-2001
B-Aulanko	2001	Abstracts ENAM-2001
P-BadHonnef	1988	Proc. Int. Workshop Nucl. Struct. of the Zr Region
P-Baku	1976	Program of 26th USSR Conference on Nuclear Spectroscopy
P-Bellaire	1998	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-98
B-Bellaire	1998	Abstracts ENAM-98
P-Berkeley	1980	Proc. Intern. Conf. Nuclear Physics Berkeley
P-Bernkastel	1992	Proc. 9th Int. Conf. Atomic Masses and Fundamental Constants AMCO-9, and 6th Int. Conf. Nuclei far from Stability NUFAST-6
B-Bernkastel	1992	Abstracts AMCO-9 and NUFAST-6
P-Birmingham	1985	Proc. Specialists Meeting on Delayed Neutron Properties
P-Birmingham	1987	Proc. Int. Conf. Delayed Neutron Properties
P-Bombay	1974	Proc. Nucl. Phys. and Solid State Phys. Symposium
P-Bombay	1985	Symposium on Quantum Electronics
P-Bormio	1999	XXXVII International Winter meeting on Nuclear Physics
P-Brookhaven	1979	Proc. 3rd Int. Conf. Neutron Capture Gamma Ray Spectroscopy
B-Bruges	2016	ND2016 conference
P-Budapest	1972	Proc. 1st Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Cadarache	2005	Proc. Nuclear Fission and Fission-Product Spectroscopy, AIP-798
P-Canterbury	1971	Proc. Int. Conf. Chemical Nuclear Data
P-Cargese	1976	Proc. 3rd Int. Conf. Nuclei far from Stability NUFAST-3 CERN 76-13
P-Charkov	1986	Program of 38th USSR Conference on Nuclear Spectroscopy
P-Darmstadt	1984	Proc. 7th Int. Conf. Atomic Masses and Fundamental Constants AMCO-7
P-Debreccen	1968	Proc. Conf. Electron Capture and Higher Order Processes in Nuclear Decays
P-Debreccen	2005	Int. Symposium on Exotic Nuclear Systems, AIP-802
P-Dubna	1961	Repts. Third Conf. Neutron-deficient Isotopes
P-Dubna	1968	Proc. International Symposium on Nuclear Structure
P-Dubna	1989	Int. School-Seminar on Heavy-Ion Physics
P-Dubna	1999	Proc.49th Ann.Conf.Nucl.Spectrosc.Struct.At.Nuclei
P-Florence	1983	Proc. Intern. Conf. Nuclear Physics Florence
P-Florence	2014	Proc. Intern. Conf. Nuclear Physics Florence
P-Fribourg	1993	Proc. 8th Int. Symp. Capture Gamma Ray Spectroscopy and Related Topics
P-Gatlinburg	1967	Proc. Intern. Conf. Gatlinburg
P-Grenoble	1981	Proc. 4th Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Helsingor	1981	Proc. 4th Int. Conf. Nuclei far from Stability NUFAST-4 CERN 81-09
P-Kiev	1982	Program of 32th USSR Conference on Nuclear Spectroscopy
P-Kingston	1960	Proc.Intern.Conf.Nuclear Structure, Kingston, Canada, D.A.Bromley, E.W.Vogt, Eds., Univ. Toronto Press
P-Knoxville	1984	Proc. 5th Int. Symp. Capture Gamma-Ray Spectroscopy and Related Topics
P-Kyoto	1970	Conference on Mass Spectroscopy
P-Kyoto	1996	Proc. Research Meeting Unstable Nuclei and Nuclear Methodology
P-Lansing	1979	Proc. 6th Int. Conf. Atomic Masses and Fundamental Constants AMCO-6
P-Legnaro	1971	Proc. Conf. Structure of 1f7/2 Nuclei, Legnaro

P-Leningrad	1975	Program of 25th USSR Conference on Nuclear Spectroscopy
P-Leningrad	1985	Program of 35th USSR Conference on Nuclear Spectroscopy
P-Leningrad	1990	Program of 40th USSR Conference on Nuclear Spectroscopy
P-Leuven	1987	Proc. 6th Int. Symp. Capture Gamma-Ray Spectroscopy and Related Topics
P-Leuven	2011	Int. Conf. on Advances in Radioactive Isotope Science ARIS2011
P-Leysin	1970	Proc. 2nd Int. Conf. Nuclei far from Stability NUFAST-2 CERN 70-30
P-Lisbon	2007	Proc. Proton Emitting Nuclei and Related Topics -PROCON 2007, AIP-961
P-Miami	1989	Symposium on Exotic Nuclear Spectroscopy
P-Minsk	1991	Program of 41th USSR Conference on Nuclear Spectroscopy
P-Monterey	1990	Proc. Xth Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Moscow	1955	Conf. Acad. Sci. USSR Peaceful Use of Atomic Energy
P-Moscow	1971	Program of 21st USSR Conference on Nuclear Spectroscopy
P-Moscow	1983	Program of 33rd USSR Conference on Nuclear Spectroscopy
P-Moscow	1996	Program of 46th USSR Conference on Nuclear Spectroscopy
P-Moscow	2008	Program of 58th USSR Conference on Nuclear Spectroscopy
P-New-Dehli	2012	Frontiers in Gamma-Ray Spectroscopy 2012 - FIG12, AIP-1609
P-Niigata	1991	Proc. Int. Symp. on Structure and Reactions of Unstable Nuclei
P-PacGrove	1991	Proc. 7th Int. Symp. Capture Gamma Ray Spectroscopy
P-Paris	1958	Compt.Rend.Congr.Intern.Phys.Nucl., Paris, P.Gugenberger, Ed., Dunod, Paris(1959)
P-Paris	1975	Proc. 5th Int. Conf. Atomic Masses and Fundamental Constants AMCO-5
P-Petten	1975	Proc. 2nd Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Rosseau	1987	Proc. 5th Int. Conf. Nuclei far from Stability NUFAST-5, AIP-164
P-Samarkand	1981	Program of 31st USSR Conference on Nuclear Spectroscopy
P-Sanibel	1997	Int. Conf. on Fission and Properties of Neutron-Rich Nuclei
P-Santa Fe	2004	Int. Conf. Nuclear Data for Science and Technology
B-Seeheim	1999	1st Int. Conf. Chemistry and Physics of the Transactinide Elements (TAN'99)
P-StMalo	1988	Proc. 3rd Int. Conf. Nucleus-Nucleus Collisions
P-StPetersbg	1995	Low Energy Nuclear Dynamics, EPS XV Nucl. Phys. Div.
P-Studsvik	1969	Proc. Conf, Neutron Capture Gamma Ray Spectroscopy
P-Swansea	1985	10th Int. Mass Spectrometry Conf. (in Adv. in Mass Spectr. 1985)
P-Tashkent	1977	Program of 27th USSR Conference on Nuclear Spectroscopy
P-Tbilis	1964	Program of 14th USSR Conference on Nuclear Spectroscopy
P-Teddington	1972	Proc. 4th Int. Conf. Atomic Masses and Fundamental Constants
P-Tokai	1994	Symposium on Nuclear Data, JAERI
P-Vienna	1959	Proc. Symp. Metrology Radionuclides
P-Vienna	1964	Proc. 2nd Intern. Conf. Nuclidic Masses
P-Winnipeg	1967	Proc. 3rd Int. Conf. Atomic Masses and Fundamental Constants
P-Yamanishi	1982	Proc.Intern.Symp. Dynamics of Nuclear Collective Motion - High Spin States and Transitional Nuclei
P-Yerevan	1969	Program of 19th USSR Conference on Nuclear Spectroscopy
P-Yurmala	1987	Program of 37th USSR Conference on Nuclear Spectroscopy

LIST OF REFERENCES

Before 1948

1934Le01	PRLAA	145,	235	W.B. Lewis, B.V. Bowden
1937Ja01	PRLAA	158,	372	D.A. Jackson, H. Kuhn
1939Sa11	CJREA	17,	103	B.W. Sargent
1940Kr08	PCPSA	36,	490	R.S. Krishnan, E.A. Nahum
1941Fa04	PHRVA	60,	619	K. Fajans, A.F. Voigt
1942Ma03	ZEPYA	119,	602	W. Maurer, W. Ramm

1948

1948Fe09	PPSOA	61,	466	N. Feather, J. Kyles, R.W. Pringle
1948Kn23	PHRVA	74,	1540	G.B. Knight, R.L. Macklin
1948Ma29	PPSOA	60,	466	D.G.E. Martin, H.O.W. Richardson, Y.K. Hsu
1948Ma30	PRLAA	195,	287	D.G.E. Martin, H.O.W. Richardson
1948Sa18	PHRVA	74,	1264	D. Saxon
1948St.A	PrvCom		58St50	K. Street,Jr., A. Ghiorso, D.A. Orth, G.T. Seaborg

1949

1949Be36	PHRVA	76,	1624	L.A. Beach, C.L. Peacock, R.G. Wilkinson
1949Be53	PHRVA	76,	574	P.R. Bell, B.H. Ketelle, J.M. Cassidy
1949Bo67	PHRVA	75,	1401	T.W. Bonner, J.E. Evans, J.C. Harris, G.C. Phillips
1949Ch35	PHRVA	76,	586	C.Y. Chao, C.C. Lauritsen, A.V. Tollestrup
1949Du15	PHRVA	76,	1272	R.B. Duffield, L.M. Langer
1949Fe18	PHRVA	76,	1888	L. Feldman, L. Lidofsky, P. Macklin, C.S. Wu
1949Ki26	PHRVA	76,	1561	C.A. Kienberger
1949La06	PHRVA	76,	641	L.M. Langer, H.C. Price,Jr.
1949Ma57	PHRVA	76,	1719	K.C. Mann, D. Rankin, P.N. Kaykin
1949Pa.A	ORNL-499		45	G.W. Parker, G.E. Creek, G.M. Hebert, P.M. Lantz, W.J. Martin
1949Pa.B	ORNL-336		42	G.W. Parker, G.E. Creek, G.M. Hebert, P.M. Lantz
1949Se01	NNES-14B-1554			G.T. Seaborg, R.A. James, A. Ghiorso
1949To09	PHRVA	76,	700	C.H. Townes, J.M. Mays, B.P. Dailey
1949To16	PHRVA	76,	428	A.V. Tollestrup, C.C. Lauritsen, W.A. Fowler
1949To23	PHRVA	75,	1947	A.V. Tollestrup, F.A. Jenkins, W.A. Fowler, C.C. Lauritsen
1949Va02	JACSA	71,	2585	Q. Van Winkle, R.G. Larson, L.I. Katzin

1950

1950Ag01	PHRVA	77,	655	H.M. Agnew
1950Bl92	HPACA	23,	623	J.P. Blaser, F. Boehm, P. Marmier
1950Br52	PHRVA	79,	606	J.A. Bruner, L.M. Langer
1950Br66	PHRVA	79,	902	A.R. Brosi, H. Zeldes, B.H. Ketelle
1950Ch53	PHRVA	79,	108	C.Y. Chao, A.V. Tollestrup, W.A. Fowler, C.C. Lauritsen
1950Cr26	CJREA	28,	558	M.F. Crawford, A.L. Schawlow, F.M. Kelly, W.M. Gray
1950Fr10	PHRVA	80,	30	G. Friedlander, M.L. Perlman, D.E. Alburger, A.W. Sunyar
1950Fr58	PHRVA	79,	897	M.S. Freedman, D.W. Engelkemeir
1950Ha52	PHRVA	79,	435	F. Hagemann, L.I. Katzin, M.H. Studier, G.T. Seaborg, A. Ghiorso
1950Ha58	PHRVA	79,	409	R.W. Hayward
1950Ha65	PHRVA	79,	541	R.W. Hayward
1950Hu27	PHRVA	77,	726	D.J. Hugheas, C. Eggler, D.E. Alburger
1950Ke11	PHRVA	79,	242	B.H. Ketelle, C.M. Nelson, G.E. Boyd
1950La04	PHRVA	77,	798	L.M. Langer, J.W. Motz, H.C. Price,Jr.
1950Ma14	PHRVA	78,	363	L.B. Magnusson, S.G. Thompson, G.T. Seaborg
1950Ma76	PHRVA	80,	977	E.A. Martell, W.F. Libby
1950Me55	PHRVA	79,	19	J.Y. Mei, A.C.G. Mitchell, C.M. Huddleston
1950Mo56	PHRVA	80,	309	R.C. Mobley, R.A. Laubenstein

1950Na09	PHRVA	77,	398	R.A. Naumann, F.L. Reynolds, I. Perlman
1950Ok52	PHRVA	80,	293	G.D. O'Kelley, G.W. Barton,Jr.
1950Ow03	PHRVA	78,	606	G.E. Owen, C. Sharp Cook, P.H. Owen
1950Ri59	PHRVA	80,	524	H.T. Richards, R.V. Smith, C.P. Browne

1951

1951Bo48	PHRVA	83,	216	G.E. Boyd, B.H. Ketelle
1951Bo49	PHRVA	83,	1091	T.W. Bonner, J.W. Butler
1951Br10	PHRVA	82,	159	A.B. Brown, C.W. Snyder, W.A. Fowler, C.C. Lauritsen
1951Br87	PHRVA	84,	292	H.N. Brown, W.L. Bendel, F.J. Shore, R.A. Becker
1951Ca04	PHRVA	81,	485	R. Canada, A.C.G. Mitchell
1951Ca28	PHRVA	83,	955	R. Canada, A.C.G. Mitchell
1951Ca37	PHRVA	84,	749	R.R. Carlson
1951Ca43	PHRVA	83,	483	J.M. Cassidy
1951Du03	PHRVA	81,	203	R.B. Duffield, L.M. Langer
1951Du19	PHRVA	84,	1065	R.B. Duffield, L.M. Langer
1951Fr19	PHRVA	84,	231	G. Friedlander, D.E. Alburger
1951Hu38	PHRVA	84,	289	C.M. Huddleston, A.B. Smith
1951Hy24	PHRVA	82,	944	E.K. Hyde, G.D. O'Kelley
1951Je01	PHRVA	81,	143	E.N. Jensen, R.T. Nichols, J. Clement
1951Kl55	PHRVA	83,	212	E.D. Klema, G.C. Phillips
1951Ko17	AFYSA	3,	47	E. Kondaiah
1951Li26	PHRVA	83,	512	C.W. Li, W. Whaling, W.A. Fowler, C.C. Lauritsen
1951Li29	PHRVA	82,	122	C.W. Li, W. Whaling
1951Ly10	PHRVA	82,	276	W.S. Lyon
1951Mc11	PHRVA	81,	734	C.L. McGinnis
1951Mc48	PHRVA	84,	384	J.J.G. McCue, W.M. Preston
1951Me10	PHRVA	81,	782	W.W. Meinke, A. Ghiorso, G.T. Seaborg
1951Or.A	UCRL- 1951			D.A. Orth, K. Street,Jr.
1951Ro50	PHRVA	83,	349	J.M. Robson
1951Ta05	PHRVA	81,	461	S.I. Taimuty
1951Ve05	PHYSA	17,	637	N.F. Verster, G.J. Nijgh, R. van Lieshout, C.J. Bakker
1951Wh05	PHRVA	81,	150	W. Whaling, C.W. Li
1951Wi26	PHRVA	84,	731	R.M. Williamson, C.P. Browne, D.S. Craig, D.J. Donahue

1952

1952Al06	PHRVA	85,	734	D.E. Alburger
1952Be55	AFYSA	5,	191	I. Bergström
1952Be78	IANFA	16,	314	E.Y. Berlovich
1952Ch31	PHRVA	88,	887	L.S. Cheng, J.L. Dick, J.D. Kurbatov
1952Cr30	PHRVA	88,	808	D.S. Craig, D.J. Donahue, K.W. Jones
1952Fa14	PHRVA	87,	252	C.Y. Fan
1952Fe16	PHRVA	87,	1091	L. Feldman, C.S. Wu
1952Fr23	PPSOA	65,	911	J.H. Fremlin, M.C. Walters, and 95Tr07 and 02Tr04
1952Fu04	PHRVA	86,	347	S.C. Fultz, M.L. Pool
1952Ha44	PHRVA	88,	876	J.R. Haskins, J.E. Duval, L.S. Cheng, J.D. Kurbatov
1952Hi.A	Th.-Berkeley			G.H. Higgins
1952Ka41	PHRVA	85,	368	M.I. Kalkstein, W.F. Libby
1952Ko27	AFYSA	4,	81	E. Kondaiah
1952Lo06	PHRVA	85,	585	J.A. Lovington, J.J.G. McCue, W.M. Preston
1952Mc34	PHRVA	87,	202	C.L. McGinnis (also PrvCom NDG)
1952Me53	PHRVA	88,	1360	F.R. Metzger
1952Mi54	PHRVA	88,	1254	C. Mileikowsky, W. Whaling
1952Mo12	PHRVA	85,	501	H.T. Motz
1952Mo22	PHRVA	86,	165	H.T. Motz, D.E. Alburger
1952Ro16	PHRVA	86,	863	D. Rose, G. Hinman, L.G. Lang
1952Sc09	PHRVA	85,	873	W.A. Schoenfeld, R.W. Duborg, W.M. Preston, C. Goodman

1952Sc11	PHRVA	85,	1046	C.L. Scoville, S.C. Fultz, M.L. Pool
1952Sc15	PHRVA	86,	248	G. Schrank, J.R. Richardson
1952Sm13	PHRVA	86,	98	A.B. Smith
1952Sm41	PHRVA	87,	454	A.B. Smith, A.C.G. Mitchell, R.S. Caird
1952Wa12	PHRVA	86,	561	A.H. Wapstra

1953

1953Am08	PHRVA	91,	68	D.P. Ames, M.E. Bunker, L.M. Langer, B.M. Sorenson
1953An01	PHRVA	90,	656	C.E. Anderson, G.W. Wheeler, W.W. Watson
1953As.A	Th.-Berkeley			F. Asaro
1953Ba81	IANFA	17,	437	A.A. Bashilov, N.M. Antoneva, B.S. Dzelepov, A.I. Dolgintseva
1953Ba82	IANFA	17,	468	A.A. Bashilov, N.M. Antoneva, D.C. Broder, B.S. Dzelepov
1953Be42	PHRVA	90,	888	W.L. Bendel, F.J. Shore, H.N. Brown, R.A. Becker
1953Bl44	PHRVA	90,	464	E. Bleuler, J.W. Blue, S.A. Chowdary, A.C. Johnson, D.J. Tendam
1953Bu63	PHRVA	91,	1219	J.P. Butler, J.S. Adams
1953Co02	PRLAA	216,	242	E.R. Collins, C.D. MacKenzie, C.A. Ramm
1953Cr18	PHRVA	90,	1124	B. Crasemann, H.T. Easterday
1953Cr.A	PrvCom		58St50	W.W.T. Crane
1953Do04	PHRVA	89,	824	D.J. Donahue, K.W. Jones, M.T. McEllistrem, H.T. Richards
1953Du03	PHRVA	89,	854	R.B. Duffield, L.M. Langer
1953Ea11	PHRVA	91,	653	H.T. Easterday
1953Ei02	PHRVA	89,	525	G.G. Eichholz
1953Fa18	PHRVA	91,	1195	K.F. Famularo, G.C. Phillips
1953Fi.A	Th.-Rochester			R.W. Fink
1953Gl.A	ANL-5000		55	L.E. Glendenin, E.P. Steinberg
1953Ha66	CJPHA	31,	278	J.A. Harvey
1953Hy83	PHRVA	90,	267	E.K. Hyde, A. Ghiorso
1953Jo20	CJPHA	31,	1136	F.A. Johnson
1953Kn23	PHRVA	91,	889	J.D. Knight, M.E. Bunker, B. Warren, J.W. Starner
1953Ky19	PPSOA	66,	519	J. Kyles, C.G. Campbell, W.J. Henderson
1953Li01	PHRVA	90,	387	L. Lidofsky, E. Alperovitch, C.S. Wu
1953Ma23	PHRVA	90,	330	L. Marquez
1953Ma64	PHRVA	92,	1511	L. Marquez
1953Pe14	PHRVA	92,	687	J.F. Perkins, S.K. Haynes
1953Ph28	PHRVA	91,	462	G.C. Phillips, K.F. Famularo, C.R. Gosset
1953Sa26	COREA	236,	1249	M. Sakai, P. Hubert
1953Sh48	PHRVA	91,	1203	F.J. Shore, W.L. Bendel, H.N. Brown, R.A. Becker
1953St31	PHYSA	19,	279	P.H. Stoker, Ong Ping Hok
1953Wa05	PHRVA	89,	502	F. Wagner,Jr., M.S. Freedman, D.W. Engelkemeir, J.R. Huizenga
1953Yo03	JUPSA	8,	435	Y. Yoshizawa
1953Yu04	COREA	237,	1077	T. Yuasa

1954

1954Ah20	AFYSA	7,	459	K. Ahnlund
1954Ah37	PHRVA	96,	999	K. Ahnlund
1954Ah47	AFYSA	8,	489	K. Ahnlund, S. Thulin, R. Pauli
1954Al35	PHRVA	96,	684	K.W. Allen, E. Almqvist, J.T. Dewan, T. Pepper
1954Be10	PHRVA	93,	1073	W. Bernstein, S.S. Markowitz, S. Katcoff
1954Bo24	PHRVA	93,	113	G. Boyd
1954Bo39	PHRVA	94,	1078	F.I. Boley
1954Br37	PPSOA	67,	397	W.D. Brodie
1954Br96	PHRVA	96,	1372	H.N. Brown, R.A. Becker
1954Da22	ZENAA	9,	402	H. Daniel, W. Bothe
1954Da31	ZENAA	9,	974	H. Daniel
1954De13	PHRVA	95,	646	E. Der Mateosian
1954De17	PHRVA	95,	458	E. Der Mateosian, C.S. Wu
1954El10	PRLAA	224,	129	R.B. Elliott, D.J. Livesey

1954El24	PRYCA	48,	12	L.G. Elliott, R.L. Graham, J. Walker, J.L. Wolfson
1954Gr19	PHRVA	94,	794	R.L. Graham, J. Walker
1954Ha68	PHRVA	96,	1003	T.H. Handley, E.L. Olsen
1954Hu61	PHRVA	96,	548	J.R. Huizenga, C.M. Stevens
1954Ki23	RMPHA	26,	327	R.W. King
1954Le08	PHRVA	93,	155	M.R. Lee, R. Katz
1954Li19	PHRVA	94,	780	L. Lidofsky, R. Gold, C.S. Wu
1954Li24	PHRVA	95,	444	T. Lindqvist, A.C.G. Mitchell
1954Li42	PHRVA	95,	1535	T. Lindqvist, A.C.G. Mitchell
1954Ma54	PHRVA	95,	708	H.B. Mathur, E.K. Hyde
1954Ma75	PHRVA	96,	126	H.B. Mathur, E.K. Hyde
1954Mi60	AFYSA	7,	89	C. Mileikowsky
1954Mi61	AFYSA	8,	117	C. Mileikowsky
1954Mi89	PHRVA	96,	996	C. Mileikowsky, K. Ahnlund
1954Na14	JPRAA	15,	570	M.E. Nahmias, A.H. Wapstra
1954Na18	COREA	239,	47	M.E. Nahmias, T. Yuasa
1954Ni06	PHRVA	94,	369	R.T. Nichols, E.N. Jensen
1954Nu26	PHYSA	20,	555	R.H. Nussbaum, R. van Lieshout, A.H. Wapstra, N.F. Verster, F.E.L. Ten Haaf, G.J. Nijgh, L. Th. M. Ornstein
1954Nu27	PHYSA	20,	571	R.H. Nussbaum, A.H. Wapstra, R. van Lieshout, G.J. Nijgh, L. Th. M. Ornstein, (and PrvCom NDG)
1954Ol03	PHRVA	93,	1125	J.L. Olsen, G.D. O'Kelley
1954Ol05	PHRVA	95,	1539	J.L. Olsen, G.D. O'Kelley
1954Pa39	AFYSA	8,	212	R. Pauli, K. Ahnlund, C. Mileikowsky
1954Po26	PHRVA	95,	1523	A.V. Pohm, W.E. Lewis, J.H. Talboy,Jr., E.N. Jensen
1954Pr31	PHRVA	96,	1390	C.H. Pruett, R.G. Wilkinson
1954Ri09	PHYSA	20,	107	L.H. Th. Rietjens, H.J. van den Bold, P.M. Endt
1954Sa22	PHRVA	94,	642	B. Saraf
1954Th17	AFYSA	7,	289	S. Thulin, K. Nybø
1954Th30	PHRVA	96,	850	J. Thirion, R. Cohen, W. Whaling
1954Th36	AFYSA	8,	219	S. Thulin, J. Moreau, H. Atterling
1954Th39	AFYSA	8,	229	S. Thulin, J. Moreau, H. Atterling
1954Wo23	PHRVA	95,	761	C. Wong
1954Za05	IANFA	18,	563	P.P. Zarubin

1955

1955Ad10	COREA	240,	1421	J.P. Adloff
1955Ah41	AFYSA	9,	39	K. Ahnlund
1955At21	PHYSA	21,	543	A.H.W. Aten,Jr., G.D. De Feyfer
1955Ba.A	P-Moscow		251	S.A. Baranov, K.N. Shlyagin
1955Be20	ZEPYA	142,	585	W. Beekman
1955Be78	PHMAA	46,	341	E.H. Bellamy, F.C. Flack
1955Bi29	NUCIA	2,	1052	A. Bisi, E. Germagnoli, L. Zappa
1955Bl23	PHRVA	100,	1324	J.W. Blue, E. Bleuler
1955Br02	JINCA	1,	254	C.P. Browne, D.C. Hoffman, W.T. Crane, J.P. Balagna, G.H. Higgins, J.W. Barnes, R.W. Hoff, H.L. Smith, J.P. Mize, M.E. Bunker
1955Br16	PHRVA	100,	84	R.M. Brugger, T.W. Bonner, J.B. Marion
1955Bu01	PHRVA	97,	1272	M.E. Bunker, J.W. Starner
1955Bu.A	PHRVA	99,	659	M.E. Bunker, J.P. Mize, J.W. Starner
1955Da37	PHRVA	100,	796	M.C. Day,Jr., G.W. Eakins, A.F. Voigt
1955De18	PHMAA	46,	445	H. De Waard
1955De40	PHYSA	21,	803	E.F. De Haan, G.J.S. Sizoo, P. Kramer
1955Dr43	IANFA	19,	324	G.M. Drabkin, V.I. Orlov, L.I. Rusinov
1955En16	JINCA	1,	345	D.W. Engelkemeir, P.R. Fields, S. Fried, G.L. Pyle, C.M. Stevens, L.B. Asprey, C.P. Browne, H.L. Smith, R.W. Spence
1955Fa33	PHRVA	99,	1440	B. Farrelly, L. Koerts, N. Benczer, R. van Lieshout, C.S. Wu
1955Go.A	P-Moscow		226	L.L. Goldin, E.F. Tretyakov, G.I. Novikov
1955Gr08	PHRVA	97,	1033	W.E. Graves, A.C.G. Mitchell

1955Ha.A	Th.-Delft			H. Hagedoorn
1955Jo02	PHRVA	97,	1031	J.T. Jones,Jr., E.N. Jensen
1955Jo09	PHRVA	99,	1645	M.W. Johns, B.C. Chidley, I.R. Williams
1955Ki28	PHRVA	99,	1393	J.D. Kington, J.K. Bair, H.O. Cohn, H.B. Willard
1955Ko13	PHRVA	98,	46	A.F. Kovarik, N.I. Adams
1955Ko14	PHRVA	98,	1230	L. Koerts, P. Macklin, B. Farrelly, R. van Lieshout, C.S. Wu
1955Ma01	ZENAA	10,	168	Th. Mayer-Kuckuk, H. Daniel
1955Ma12	PHRVA	97,	103	P. Marmier, F. Boehm
1955Ma13	PHRVA	97,	117	H.B. Mathur, E.K. Hyde, C.A. Levine, P.K. Kofstad
1955Ma40	COREA	240,	291	N. Marty
1955Ma62	JPRAA	16,	458	N. Marty
1955Ma63	HPACA	28,	193	D. Maeder, P. Stahelin
1955Ma76	PHRVA	100,	847	J.B. Marion, T.W. Bonner, C.F. Cook
1955Ma84	PHRVA	100,	91	J.B. Marion, T.W. Bonner, C.F. Cook
1955Ma.A	ANL-5386			L.B. Magnusson, F. Wagner,Jr., D.W. Engelkemeir, M.S. Freedman
1955Mc17	PHRVA	97,	93	C.L. McGinnis
1955Mi90	PHRVA	100,	1390	J.P. Mize, M.E. Bunker, J.W. Starner
1955Mo69	JINCA	1,	274	F.F. Momyer,Jr., F. Asaro, E.K. Hyde
1955Mu19	PHRVA	97,	1007	J.J. Murray, F. Boehm, F. Marmier, J.W.M. Dumond
1955Nu11	PHYSA	21,	77	R.H. Nussbaum, A.H. Wapstra, M.J. Sterk, R.E.W. Kropveld
1955On05	PHYSA	21,	676	Ong Ping Hok, P. Kramer
1955Pa50	AFYSA	9,	571	R.T. Pauli
1955Pe24	PHRVA	98,	262	I. Perlman, F. Stephens, F. Asaro
1955Ra27	PHRVA	99,	42	J.O. Rasmussen, H. Slatis, T.O. Passel
1955Ro05	PHRVA	97,	97	H. Roderick, O. Lonsjo, W.E. Meyerhof
1955Sc09	PHRVA	99,	810	A.W. Schardt, J.P. Welker
1955So31	PHRVA	99,	613A	P.B. Sogo, C.D. Jeffries
1955Th01	AFYSA	9,	137	S. Thulin
1955To11	JPRAA	16,	115	J. Tobailem, J. Robert

1956

1956Ar33	AFYSA	10,	1	E. Arbman, N. Svartholm
1956As38	PHRVA	104,	91	F. Asaro, I. Perlman
1956Av28	ANPHA	1,	10	P. Avignon
1956Ba39	ZETFA	30,	225	S.A. Baranov, K.N. Shlyagin
1956Ba95	JNCEA	3,	132	S.A. Baranov, K.N. Shlyagin
1956Be18	PHRVA	101,	1027	N. Benczer, B. Farrelly, L. Koerts, C.S. Wu
1956Bi30	NUCIA	4,	758	A. Bisi, S. Terrani, L. Zappa
1956Bl10	PHRVA	104,	202	N.C. Blais, W.W. Watson
1956Ch67	PHRVA	104,	1314	A. Chetham-Strode, L.W. Holm
1956Ch.A	Th.-Berkeley			A. Chetham-Strode, Jr. UCRL-3322
1956Co13	PHRVA	101,	1042	J.M. Cork, M.K. Brice, D.W. Martin, L.C. Schmid, R.G. Helmer
1956Da06	ZENAA	11,	212	H. Daniel, R. Nierhaus
1956Do41	PHRVA	104,	1059	R.A. Douglas, J.W. Broer, R. Chiba, D.F. Herring, E.A. Silverstein
1956Do45	PHRVA	104,	1378	W. Dobrowolski, R.V. Jones, C.D. Jeffries
1956Dr11	PHRVA	102,	426	B.J. Dropesky, A.W. Schardt
1956Du31	PHRVA	103,	1413	V.S. Dubey, C.E. Mandeville, M.A. Rothman
1956Gr07	PHRVA	101,	776	D. Green, J.R. Richardson
1956Gr10	PHRVA	101,	701	W.E. Graves, A.C.G. Mitchell
1956Gr11	PHRVA	101,	1306	P.R. Gray
1956Gr12	PHRVA	101,	1368	W.E. Graves, S.K. Suri
1956Gr35	PHRVA	102,	761	L. Grodzins, H. Motz
1956Ha10	PHRVA	101,	93	R.W. Hayward, D.D. Hoppes
1956Ha59	PHRVA	104,	183	R.W. Hayward, D.D. Hoppes
1956Ho23	JINCA	2,	209	D.C. Hoffman, C.P. Browne
1956Ho66	PHRVA	104,	368	D.D. Hoppes, R.W. Hayward
1956Jo05	CJPHA	34,	69	M.W. Johns, C.V. McMullen, I.R. Williams, S.V. Nablo
1956Jo20	PHRVA	102,	831	N.R. Johnson, R.K. Sheline, R. Wolfgang

1956Ke23	PHRVA	103,	190	B.H. Ketelle, H. Thomas, A.R. Brosi
1956Ki16	PHRVA	102,	1140	H.W. Kirby, G.R. Grove, D.L. Timma
1956Ki29	PHRVA	104,	154	O.C. Kistner, A. Schwarzschild, B.M. Rustad
1956Kn20	PHRVA	102,	1592	J.D. Knight, J.P. Mize, J.W. Starner, J.W. Barnes
1956Ko67	ZETFA	31,	771	L.M. Kondratev, G.I. Novikova, Y.P. Sobolev, L.L. Goldin
1956La24	ANPHA	1,	152	J. Laberrigue-Frolow
1956Ma14	PHRVA	101,	283	J.B. Marion, R.A. Chapman
1956Ma27	PHRVA	102,	457	D.W. Martin, J.M. Cork, S.B. Burson
1956Ma87	PHRVA	104,	1028	J. Marion, F.B. Hagedorn
1956Nu02	PHRVA	101,	905	R.H. Nussbaum, A.H. Wapstra, W.A. Bruil, M.J. Sterk, G.J. Nijgh, N. Grobben
1956Ok02	PHRVA	101,	1059	G.D. O'Kelley, N.H. Lazar, E. Eichler
1956Pe38	PHRVA	104,	740	J.R. Penning, H.R. Maltrud, J.C. Hopkins, F.H. Schmidt
1956Po16	ZENAA	11,	143	W. Porschen, W. Riezler
1956Po28	PHRVA	103,	921	F.T. Porter, M.S. Freedman, T.B. Novey, F. Wagner,Jr.
1956Sa06	PHRVA	104,	1434	R.M. Sanders
1956Sc.A	BAPSA	1,	162	A.W. Schardt, B. Dropesky
1956Sh31	ZETFA	30,	891	K.N. Shlyagin
1956Sm85	JINCA	3,	93	H.L. Smith, C.P. Browne, D.C. Hoffman, J.P. Mize, M.E. Bunker
1956Sm96	PHRVA	104,	706	F.B. Smith, N.B. Gove, R.W. Henry, R.A. Becker
1956Th11	PHRVA	102,	195	M.T. Thieme, E. Bleuler
1956Tu17	PHRVA	103,	1000	W. Turchinetz, R.W. Pringle
1956Va14	PHRVA	103,	656	D.M. Van Patter, C.P. Swann, W.C. Porter, C.E. Mandeville
1956Wa24	PHRVA	102,	816	R.G. Waddell, E.N. Jensen
1956Wo09	CJPHA	34,	256	J.R. Wolfson

1957

1957Ah19	AFYSA	11,	379	K. Ahnlund
1957Am47	PHRVA	106,	553	S. Amiel, A. Chetham-Strode,Jr., G.R. Choppin, A. Ghiorso, B.G. Harvey, L.W. Holm, S.G. Thompson
1957As.A	BAPSA	2,	393	F. Asaro, S.G. Thompson, F.S. Stephens,Jr., I. Perlman
1957Ba08	ZENAA	12,	520	G. Baro, P. Rey
1957Be44	PHRVA	107,	737	E.M. Bernstein, H.W. Lewis
1957Be46	NUPHA	2,	593	J. Beydon, R. Chaminade, M. Crut, H. Faraggi, J. Olkowsky, A. Papineau
1957Bi84	PHRVA	108,	1025	H. Bichsel, T.W. Bonner
1957Bj56	NUPHA	4,	313	S. Bjornholm, O. Nathan, O.B. Nielsen, R.K. Sheline
1957Br82	PHRVA	108,	1007	C.P. Browne
1957Bu37	PHRVA	106,	1224	J.W. Butler, K.L. Dunning, R.O. Bondelid
1957Bu41	PHRVA	105,	227	M.E. Bunker, J.P. Mize, J.W. Starner
1957Ch30	PHRVA	105,	633	R.A. Chapman, J.C. Slattery
1957Co62	PPSOA	70,	769	R.D. Connor, I.L. Fairweather
1957Da07	ZENAA	12,	363	H. Daniel
1957Dz64	IANFA	21,	978	B.S. Dzelepov, O.E. Kraft, V.B. Zhinkina
1957Fr.A	PrvCom		58St50	M.S. Freedman, D.W. Engelkemeir, F.T. Porter, F. Wagner,Jr.
1957Ga15	PHRVA	107,	1628	D.G. Gardner, W.W. Meinke
1957Gl20	PHMAB	2,	49	R.N. Glover, D.E. Watt
1957Gr47	PHRVA	105,	1570	H.G. Graetzer, A.B. Robbins
1957Ha08	CJPHA	35,	258	B.G. Harvey, H.G. Jackson, T.A. Eastwood, G.C. Hanna
1957Ha99	PHRVA	108,	735	F.B. Hagedorn
1957He39	PHRVA	105,	1011	R.L. Heath
1957He43	NUPHA	3,	161	C.J. Herrlander, T.R. Gerholm
1957Je.A	PrvCom	NDG	Jun	E.N. Jensen
1957Jo24	PISAA	45,	390	M.C. Joshi, B.N. Subba Rao, B.V. Thosar
1957Ki22	PHRVA	105,	1339	O.G. Kistner, A. Schwarzschild, B.M. Rustadt, D.E. Alburger
1957Kn.A	PrvCom	NDG	Apr	J.D. Knight
1957Le27	COREA	244,	1358	C. Levi, L. Papineau
1957Mi63	ANPHA	2,	116	A. Michalowicz
1957Na03	NUPHA	4,	125	O. Nathan
1957Ok.A	BAPSA	2,	24	G.D. O'Kelley, Q.V. Larson, G.E. Boyd

1957Ol05	PHRVA	106,	985	J.L. Olsen, L.G. Mann, M. Lindner
1957Ra04	PHRVA	107,	141	J.O. Rasmussen, F.L. Canavan, J.M. Hollander
1957Ri43	ZENAA	12,	665	W. Riezler, G. Kauw
1957Sm73	PHRVA	107,	1314	W.G. Smith, R.L. Robinson, J.H. Hamilton, L.M. Langer
1957Th10	PHRVA	106,	1228	T.D. Thomas, R. Vandenbosch, R.A. Glass, G.T. Seaborg
1957Va03	PHRVA	107,	171	D.M. Van Patter, M.A. Rothman, W.C. Porter, C.E. Mandeville
1957Va08	PHYSA	23,	753	B. Van Nooijen, J. Konijn, A. Heyligers, J.F. van den Brugge, A.H. Wapstra
1957Wa01	PHRVA	105,	639	E.K. Warburton, J.N. McGruer
1957Wr37	NSENA	2,	427	H.W. Wright, E.I. Wyatt, S.A. Reynolds, W.S. Lyon, T.H. Handley
1957Yo04	PHRVA	108,	72	T.E. Young, G.C. Phillips, R.R. Spencer

1958

1958Al99	PHRVA	112,	1998	D.E. Alburger, S. Ofer, M. Goldhaber
1958Ar56	AFYSA	13,	501	E. Arbman, J. Brude, T.R. Gerholm
1958Bi41	PHRVA	112,	1089	H. Bichsel
1958Br88	HPACA	31,	335	J. Brunner, J. Halter, P. Scherrer
1958Du78	PHRVA	110,	1076	K.L. Dunning, J.W. Butler, R.O. Bondelid
1958Ea06	JINCA	6,	261	T.A. Eastwood, R.P. Schuman
1958El44	PHRVA	112,	1200	A.J. Elwyn, H.H. Landon, S. Oleksa, G.N. Glasoe
1958Fe16	PHRVA	112,	1238	J.M. Ferguson
1958Gi05	PHRVA	109,	1263	J.E. Gindler, J.R. Huizenga, D.W. Engelkemeir
1958Gl56	IANFA	22,	941	M.P. Glazunov, B.F. Fulev
1958Go77	PRLTA	1,	251	H.E. Gove, J.A. Kuehner, A.E. Litherland, E. Almqvist, D.A. Bromley, A.D. Ferguson, P.H. Rose, R.P. Bastide, N. Brooks, R.D. Connor
1958Gr07	IANFA	22,	194	E.P. Grigorev, A.V. Zolotavin, I.I. Kuzmin, E.D. Pavlitskaia
1958Ha32	PHRVA	112,	2010	J.H. Hamilton, L.M. Langer, W.G. Smith
1958Hi.A	Th.-Berkeley			M.W. Hill
1958Ho02	PHRVA	109,	1282	D.C. Hoffman, B.J. Dropesky
1958Jo01	PHRVA	109,	1243	C.H. Johnson, A. Galonsky, J.P. Ulrich
1958Jo28	PHRVA	112,	1252	K.W. Jones, L.J. Lidofsky, J.L. Weil
1958Ki40	PHRVA	112,	1972	O.C. Kistner, B.M. Rustad
1958Ko57	PHYSA	24,	377	J. Konijn, B. van Nooijen, H.L. Hagedoorn
1958Ko60	PHYSA	24,	129	J. Konijn, H.L. Hagedoorn, B. van Nooijen
1958Lo62	PHRVA	110,	842	W. Low, P.M. Llewellyn
1958Ma43	PHRVA	111,	286	L.L. Marino, W.B. Ewbank, W.A. Nierenberg, H.A. Shugart, H.B. Silsbee
1958Mc64	PHRVA	111,	1636	M.T. McEllistrem, H.J. Martin, D.W. Miller, M.B. Sampson
1958Na15	CJPHA	36,	1409	S.V. Nablo, M.W. Johns, A. Artna, R.H. Goodman
1958Ni28	NUPHA	9,	528	G.J. Nijgh, A.H. Wapstra, L.T.M. Ornstein, N. Salomons-Grobben
1958No30	AFYSA	14,	85	T. Novakov, R. Stockendal, M. Schmorak, B. Johansson
1958Pe17	PHRVA	110,	381	M.L. Perlman, J.P. Welker, M. Wolfsberg
1958Po79	PHRVA	112,	1954	N.T. Porile
1958Ri23	ZENAA	13,	904	W. Riezler, G. Kauw
1958Ro09	PHRVA	109,	1255	R.L. Robinson, L.M. Langer
1958Se71	IANFA	22,	198	V.A. Sergienko
1958St50	RMPHA	30,	585	D. Strominger, J.M. Hollander, G.T. Seaborg
1958Su60	PHRVA	109,	109	C.R. Sun, B.T. Wright
1958To25	AFYSA	13,	549	P.A. Tove
1958Wa.A	P-Paris		910	R.J. Walen, G. Bastin
1958Yt22	NUPHA	9,	108	C. Ythier, R.K. Girgis, R.A. Ricci, R. van Lieshout

1959

1959Ac28	PHRVA	114,	137	W.T. Achor, W.E. Phillips, J.I. Hopkins, S.K. Haynes
1959Al06	PHRVA	116,	939	D.E. Alburger, A. Gallmann, D.H. Wilkinson
1959Am16	PISAA	50,	342	K.S.Y. Ambiye, M.C. Yoshi, B.V. Thosar
1959An33	NUPHA	13,	310	S.L. Anderson, T. Holtebekk, O. Lonsjo, R. Tangen
1959Ba13	PPSOA	73,	513	F. De S. Barros, P.D. Forsyth, A.A. Jaffe, I.J. Taylor
1959Be72	PHRVA	115,	108	N. Benczer-Koller, A. Schwarzschild, C.S. Wu

1959Bo52	ZEPYA	155,	488	F. Bonhoeffer, H.H. Hennies, A. Flammersfeld
1959Bo61	NUPHA	14,	145	P. Boskma, H. De Waard
1959Br06	CJPHA	37,	1514	D.A. Bromley, A.J. Ferguson, H.E. Gove, J.A. Kuehner, A.E. Litherland, E. Almqvist, R. Batchelor
1959Br65	PHRVA	113,	239	A.R. Brosi, B.H. Ketelle, H.C. Thomas, R.J. Kerr
1959Br74	NUPHA	12,	662	C.P. Browne
1959Bu20	PHRVA	116,	143	M.E. Bunker, B.J. Dropesky, J.D. Knight, J.W. Stamer, B. Warren
1959Co63	PPSOA	74,	161	R.D. Connor, I.L. Fairweather
1959Cu86	PHRVA	114,	1600	J.B. Cumming
1959Dr.A	BAPSA	4,	57	B.J. Dropesky, D.C. Hoffman, W.R. Daniels
1959Fe99	CJPHA	37,	660	A.J. Ferguson, H.E. Gove
1959Fl40	PHRVA	116,	744	K.F. Flynn, L.E. Glendenin
1959Gh.A	UCRL- 8714			A. Ghiorso
1959Gi50	NUPHA	12,	204	R.K. Girgis, R. van Lieshout
1959Gi54	PHRVA	115,	1271	J.E. Gindler, J. Gray,Jr., J.R. Huizenga
1959Go68	PHRVA	113,	246	C.R. Gossett, J.W. Butler
1959Gr93	IANFA	23,	191	E.P. Grigorev, A.V. Zolotavin, B. Kratsik
1959Ha27	PHRVA	114,	1133	D.S. Harmer, M.L. Perlman
1959Hi66	PPSOA	73,	501	S. Hinds, R. Middleton
1959Hi67	PPSOA	73,	721	S. Hinds, R. Middleton
1959Hi68	PPSOA	73,	727	S. Hinds, R. Middleton
1959Hi75	PPSOA	74,	779	S. Hinds, R. Middleton
1959Ho97	AFYSA	15,	387	G. Holm, H. Ryde
1959Jo37	PHRVA	114,	279	N.R. Johnson, G.D. O'Kelley
1959Ju40	PHRVA	113,	602	J.O. Juliano, C.W. Kocher, T.D. Nainan, A.C.G. Mitchell
1959Ke26	NUPHA	11,	492	W.H. Kelly, G.B. Beard, R.A. Peters
1959Kn38	JINCA	10,	183	J.D. Knight, D.C. Hoffman, B.J. Dropesky, D.L. Frasco
1959Ku79	PHYSA	25,	600	J. Kuperus, P.J.M. Smulders, P.M. Endt
1959Ma19	Th.-California			L.L. Marino
1959Me68	PPSOA	74,	693	R.E. Meads, J.E.G. McIldowie
1959Mi19	CJPHA	37,	1126	C.H. Millar, T.A. Eastwood, J.C. Roy
1959No41	ZETFA	37,	928	G.I. Novikova, E.A. Volkova, L.I. Goldin, D.M. Ziv, E.F. Tretyakov
1959Pe27	ZETFA	37,	1558	V.P. Perelygin, E.D. Donets, G.N. Flerov
1959Po64	PHRVA	115,	989	A. Poularikas, R.W. Fink
1959Po77	PHRVA	114,	1286	F.T. Porter, P.P. Day
1959Ri35	NUPHA	10,	360	R.A. Ricci, R. van Lieshout
1959Ro53	CJPHA	37,	385	J.P. Roy, L.P. Roy
1959St45	P-Vienna		155	J. Steyn, F.W.E. Strelow
1959Su.A	BAPSA	4,	278	D.C. Sutton, H.A. Hill, R. Sherr, and PrvCom
1959To25	BAPSA	4,	366	C.W. Townley, J.D. Kurbatov, M.H. Kurbatov
1959Va02	PHRVA	115,	115	S.E. Vandenbosch, H. Diamond, R.K. Sjoblom, P.R. Fields
1959Va32	PHRVA	113,	259	S.E. Vandenbosch
1959Wa15	PHRVA	115,	191	M.A. Wahlgren, W.W. Meinke
1959We30	PHRVA	113,	881	H.I. West,Jr., L.G. Mann, G.M. Iddings
1959Yo25	PHRVA	116,	962	T.E. Young, G.C. Phillips, R.R. Spencer, D.A.A.S.N. Rao

1960

1960An04	ZETFA	38,	372	S.F. Antonova, S.S. Vasilenko, M.G. Kaganskii, D.L. Kaminskii
1960Ar05	CJPHA	38,	1577	A. Artna, M.E. Law
1960As06	P-Kingston		581	F. Asaro, S.G. Thompson, F.S. Stephens, I. Perlman
1960Ba17	NUPHA	15,	566	G. Backstrom, O. Bergman, J. Burde, J. Lindskog
1960Ba44	IANFA	24,	1035	S.A. Baranov, A.G. Zelenkov, V.M. Kulakov
1960Bo21	PHRVA	120,	889	R.O. Bondelid, C.A. Kennedy, J.W. Butler
1960Bu22	JINCA	16,	10	F.D.S. Butement, G.G.J. Boswell
1960Cl02	NUPHA	14,	472	R.L. Clarke, E. Almqvist, E.B. Paul
1960Cr01	NUPHA	14,	578	C.B. Creager, C.W. Kocher, A.C.G. Mitchell
1960Dr03	NUPHA	16,	357	B.J. Dropesky, A.W. Schardt, T.T. Shull
1960Dz02	IANFA	24,	802	B.S. Dzelepov, I.F. Uchevatkin, S.A. Shestopalova

1960Fe03	ANPHA	5,	181	L. Feuvrais
1960Fo01	PPSOA	75,	291	P.D. Forsyth, F. De S. Barros, A.A. Jaffe, T.J. Taylor, S. Ramavataram
1960Fr04	PHRVA	120,	1436	J.M. Freeman
1960Ge01	PHRVA	118,	1302	K.N. Geller, J. Halpern, E.G. Muirhead
1960Gi01	NUPHA	14,	589	R.K. Girgis, R.A. Ricci, R. van Lieshout
1960Gu05	AFYSA	17,	337	R.K. Gupta
1960Ha26	PHRVA	119,	772	J.H. Hamilton, L.M. Langer, W.G. Smith
1960He09	PHRVA	119,	788	R.G. Helmer, S.B. Burson
1960Hi03	PPSOA	75,	444	S. Hinds, R. Middleton
1960Ho.A	PrvCom		Hyde	R.W. Hoff, F. Asaro, I. Perlman, in E.K. Hyde, I. Perlman, G.T. Seaborg, Nuclear Properties Heavy Elements p. 799
1960Ja07	PHRVA	117,	1086	T.H. Jacobi, H.A. Howie, J.R. Richardson
1960Ja12	ZENAA	15,	593	J. Janecke
1960Ja13	PHRVA	120,	914	N. Jarmie, M.G. Silbert
1960Ja17	PPSOA	76,	914	A.A. Jaffe, F. De S. Barros, P.D. Forsyth, J. Muto, I.J. Taylor, S. Ramavataram
1960Je03	NUPHA	19,	654	B.S. Jensen, O.B. Nielsen, O. Skilbreit
1960Ka14	PHRVA	119,	1953	W.R. Kane, G.T. Emery, G. Scharff-Goldhaber, M. McKeown
1960Ka20	JUPSA	15,	2140	T. Katoh, M. Nozawa, Y. Yoshizawa, Y. Koh
1960Ko04	ZETFA	38,	1436	A.P. Komar, G.A. Korolev, G.E. Kocharov
1960Ko12	PHRVA	120,	1348	C.W. Kocher, A.C.G. Mitchell, C.B. Creager, T.D. Nainan
1960Ku06	JUPSA	15,	2179	T. Kuroyanagi
1960La04	PHRVA	119,	1308	L.M. Langer, D.R. Smith
1960Lu07	ZENAA	15,	939	G. Luhrs, C. Mayer-Boricke
1960Ma21	PPSOA	76,	56	B.E.F. Macefield, J.H. Towle
1960Ma.A	UCRL- 8740			T.V. Marshall
1960Mc12	NUPHA	17,	116	G.J. McCallum, A.T.G. Ferguson, G.S. Mani
1960Mi.A	Th.-Princeton			J.H. Miller III
1960Mo01	JUPSA	15,	213	H. Morinaga, T. Kuroyanagi, H. Mitsui, K. Shoda
1960Mo.A	BAPSA	5,	338	R.B. Moore
1960Mu07	PPSOA	75,	929	J. Muto, F. De S. Barros, A.A. Jaffe
1960Nu02	PHRVA	120,	1815	H. Nutley, J.B. Gerhard
1960Pr07	PHRVA	118,	113	W.W. Pratt, R.G. Cochran
1960Sc14	NUPHA	21,	55	W. Schneider
1960Se05	NUPHA	16,	138	O.J. Segaert, J. Demuynck, A.M. Hoogenboom, H. van den Bold
1960Sp08	NUPHA	21,	310	R.R. Spencer, G.C. Phillips, T.E. Young
1960Ta12	PPSOA	75,	772	I.J. Taylor, F. De S. Barros, P.D. Forsyth, A.A. Jaffe, S. Ramavataram
1960Ta19	NUPHA	21,	133	K. Takahashi, H. Morinaga
1960Vo05	ZETFA	39,	70	A.A. Vorobiev, A.P. Komar, V.A. Korolev
1960Vo07	IANFA	24,	1092	A.A. Vorobiev, A.P. Komar, V.A. Korolev
1960Wa03	PHRVA	117,	191	W.R. Ware, E.O. Wiig
1960Wa04	PHRVA	117,	1297	R. Wallace, J.A. Welch,Jr.
1960Wa10	PHRVA	118,	181	M.A. Wahlgren, W.W. Meinke
1960Wa14	NUPHA	16,	246	R.J. Walen, G. Bastin-Scoffier
1960Wi07	PHRVA	117,	1325	R.M. Williamson, T. Katman, B.S. Burton
1960Yu01	NUPHA	16,	119	H. Yuta, H. Morinaga
1960Ze02	PHRVA	120,	1723	B. Zeidman, J.L. Yntema, B.J. Raz

1961

1961Ar05	NUPHA	22,	341	E. Arbman, I.B. Haller
1961Ar15	CJPHA	39,	1817	A. Artna, M.W. Johns
1961Ba43	ZETFA	41,	1484	K.A. Baskova, S.S. Vasilev, N.S. Chang, L.Y. Shavtvalov
1961Ba44	ZETFA	41,	1733	S.A. Baranov, V.M. Kulakov, P.S. Samoilov, A.G. Zelenkov, Y.F. Rodionov
1961Be13	PHRVA	123,	2100	E.H. Beckner, R.L. Bramblett, G.C. Phillips, T.A. Eastwood
1961Be15	PHRVA	122,	1576	G.B. Beard, W.H. Kelly
1961Be20	ZETFA	40,	91	A. Bedesku, O.M. Kalinkina, K.P. Mitrofanov, A.A. Sorokin, N.V. Forafontov, V.S. Shpinel
1961Be41	NUPHA	28,	570	G.B. Beard, W.H. Kelly
1961Bo13	PHRVA	124,	213	H.H. Bolotin, A.C. Li, A. Schwarzschild

1961Bo24	NUPHA	27,	581	N.A. Bonch-Osmolovskaya, B.S. Dzelepov, O.E. Kraft, Y.Y. Yang
1961Bo.B	P-Dubna			N.A. Bonch-Osmolovskaya, B.S. Dzelepov, O.E. Kraft
1961Bu04	PHRVA	121,	1770	J.W. Butler, R.O. Bondelid
1961Ca12	NUPHA	27,	415	C. Carter-Waschek, B. Linder
1961Cu02	PHRVA	122,	1267	J.B. Cumming, N.T. Porile
1961Da01	ZEPYA	164,	303	H. Daniel, P. Panussi
1961De17	NUPHA	28,	148	H.G. Devare
1961De25	JOPQA	22,	656	P. Depommier, M. Chabre
1961Di04	NUPHA	25,	248	R.M. Diamond, J.M. Hollander, D.J. Horen, R.A. Naumann
1961Du02	PHRVA	123,	1321	K.L. Dunning, J.W. Butler
1961Er04	AFYSA	20,	209	P. Erman, Z. Sujkowski
1961Fi05	AFYSA	19,	323	R.W. Fink, G. Andersson, J. Kantele
1961Ga05	PHRVA	122,	1590	C.J. Gallagher,Jr., H.L. Nielsen, O.B. Nielsen
1961Gl02	PHRVA	122,	229	C.E. Gleit, C.D. Coryell
1961Gl06	PHRVA	124,	1914	C.E. Gleit, C.D. Coryell
1961Gr33	IANFA	25,	1217	E.P. Grigorev, K.Y. Gromov, B.S. Dzelepov, Z.T. Zhelev, V. Zvolska, I. Zvolskii
1961Gu02	AFYSA	18,	443	R.K. Gupta, J. Svedberg, G. Andersson
1961Ha17	PHRVA	123,	184	L. Haskin, R. Vandenbosch
1961He09	PHRVA	123,	903	R.L. Heath, J.E. Cline, C.W. Reich, E.C. Yates, E.H. Turk
1961Hi06	JUPSA	16,	1280	H. Hisatake
1961Hi11	PPSOA	78,	473	S. Hinds, H. Marchant, R. Middleton
1961Ho10	JUPSA	16,	841	S. Homma, T. Kuroyanagi, H. Morinaga
1961Ho13	JINCA	18,	1	R.W. Hoff, J.M. Hollander, M.C. Michel
1961Ja07	PHRVA	123,	909	N. Jarmie, M.G. Silbert
1961Ja21	PHRVA	124,	1142	H.E. Jackson, L.M. Bollinger
1961Ja22	ZEPYA	165,	94	J. Jaenecke, H. Jung
1961Ja23	RMXFA	10,	247	A. Jaidar, G. Lopez, M. Mazari, R. Dominguez
1961Jo08	PHRVA	122,	1546	N.R. Johnson, E. Eichler, G.D. O'Kelley, J.W. Chase, J.T. Wasson
1961Jo15	PHRVA	124,	157	R.C. Jopson, H. Mark, C.S. Swift, J.H. Zenger
1961Ju05	AFYSA	17,	429	B. Jung, T. Svedberg
1961Ki05	JINCA	18,	8	H.W. Kirby
1961Ko11	IANFA	25,	237	G.E. Kocharov, G.A. Korolev
1961Ku09	JUPSA	16,	2369	T. Kuroyanagi
1961Ku10	JUPSA	16,	2393	T. Kuroyanagi, H. Yuta, K. Takahashi, H. Morinaga
1961La05	DANKA	137,	551	A.K. Lavrukhina, T.V. Malysheva, B.A. Khotin
1961La16	ZEPYA	165,	393	H. Langhoff, P. Kilian, A. Flammersfeld
1961Ma03	PHRVA	121,	877	H.J. Martin, M.B. Sampson, D.W. Miller
1961Ma05	PHRVA	121,	1758	R.D. Macfarlane, T.P. Kohman
1961Ma08	PPSOA	77,	1050	B.E.F. Macefield, J.H. Towle, W.B. Gilboy
1961Ni02	PHRVA	122,	172	R.T. Nichols, R.E. McAdams, E.N. Jensen
1961Pe23	ZETFA	41,	1780	K.A. Petrzhak, M.I. Yakunin
1961Re06	JINCA	18,	13	I. Rezanka, J. Frana, M. Vobecky, A. Mastalka
1961Ri02	NUPHA	24,	494	R. Rikmenspoel, C.M. Van Patter
1961Ro12	PHRVA	123,	1349	E.L. Robinson, O.E. Johnson
1961Ru05	AECL-1290			A.R. Rutledge
1961Ru06	Th.-Berkeley			C.P. Ruiz
1961Ry02	HPACA	34,	240	A. Rytz
1961Ry04	HPACA	34,	819	A. Rytz, H. Winkler, F. Zamboni, W. Zych
1961Ry05	HPACA	34,	819	A. Rytz, H.H. Staub, H. Winckler
1961Sa11	PHRVA	123,	855	D. Sadeh
1961Sc11	PHRVA	123,	893	A.W. Schardt, A. Goodman
1961Se08	IANFA	25,	848	I.P. Selinov, V.L. Chikhladze, D.E. Khulelidze
1961Sh23	NUPHA	28,	649	S.M. Shafroth
1961Si03	PHRVA	123,	221	M.G. Silbert, N. Jarmie
1961Sm05	PHRVA	122,	1527	A.M. Smith, F.E. Steigert
1961St20	TID-14880		1409	G. Stetter
1961Th01	PHRVA	124,	1526	T.T. Thwaites, W.W. Pratt
1961Th04	PHRVA	124,	1526	T.T. Thwaites, W.W. Pratt
1961To03	PPSOA	77,	399	J.H. Towle, B.E.F. Macefield

1961To10	JOPQA	22,	683	J. Tousset, A. Moussa
1961Va08	ZETFA	40,	475	S.S. Vasilev, No Hsieng Chang, L. Ya. Shavtvalov
1961Va19	IANFA	25,	1127	A.K. Valter, I.I. Zalubovski, A.P. Klyucharev, V.A. Lutsik
1961We11	PHRVA	124,	527	H.I. West,Jr., L.G. Mann, R.J. Nagle
1961Ya01	PHRVA	121,	600	S.S. Yamamoto, F.E. Steigert
1961Zy02	APPOA	20,	321	J. Żylicz, Z. Preibisz, S. Chojnacki, J. Wolowski, Y. Norseev

1962

1962Ab03	RMAFA	21,	104	S. Abecasis, H. Bosch, M.C. Caracoche, A. Mocoroa, H. Vignau
1962An05	ZENAA	17,	238	G. Andersson-Lindstrom
1962Ar05	PRLTA	9,	405	P.E. Argan, G. Bendiscioli, A. Piazzoli, V. Bisi, M.I. Ferrero, G. Piragino
1962Ba23	PRLTA	9,	16	R.C. Barber, L.A. Cambey, J.H. Ormrod, R.L. Bishop, H.E. Duckworth
1962Ba24	CJPHA	40,	1496	R.C. Barber, R.L. Bishop, L.A. Cambey, W. McLatchie, H.E. Duckworth
1962Ba26	PHRVA	127,	583	R.K. Bardin, C.A. Barnes, W.A. Fowler, P.A. Seeger
1962Ba28	NUPHA	33,	347	B. Basu, A.P. Patro
1962Ba32	AFYSA	21,	65	E. Bashandy, M.S. El-Nesr
1962Bj01	NUPHA	30,	488	S. Bjornholm, O.B. Nielsen
1962Bo22	IANFA	26,	975	N.A. Bonch-Osmolovskaya, K. Ya. Gromov, B.S. Dzelepov, O.E. Kraft, T.V. Malysheva, L.N. Nikityuk, B.A. Khotin, Chzhou,Yue-Va, V.G. Chumin
1962Bo25	AFYSA	22,	111	E.C.O. Bonacalza, P. Thieberger, I. Bergström
1962Br10	PHRVA	125,	992	C.P. Browne, W.E. Dorenbusch, J.R. Erskine
1962Br15	PHRVA	125,	1323	H.W. Brandhorst,Jr., J.W. Cobble
1962Bu16	PHRVA	127,	844	M.E. Bunker, B.J. Dropesky, J.D. Knight, J.W. Starner
1962Ch21	ZETFA	43,	453	V.L. Chikhladze, D.E. Khulelidze, R.A. Ryukhin
1962Cr04	NUPHA	34,	580	J.G. Cramer,Jr., C.M. Class
1962Da03	NUPHA	31,	293	H. Daniel
1962Ei02	NUPHA	35,	625	E. Eichler, G.D. O'Kelley, R.L. Robinson, J.A. Marinsky, N.R. Johnson
1962El02	NUPHA	31,	128	M.S. El-Nesr, E. Bashandy
1962Ew01	NUPHA	29,	153	G.T. Ewan, R.L. Graham, J.S. Geiger
1962Fr07	ZEPYA	169,	456	L. Frevert
1962Fr09	NUPHA	38,	89	J.M. Freeman, D. West
1962Fu16	NUPHA	39,	147	E.G. Funk,Jr., J.W. Mihelich, C.F. Schwerdtfeger
1962Ga07	NUPHA	33,	285	C.J. Gallagher,Jr., M. Jorgensen, O. Skilbreid
1962Gu03	PHRVA	126,	642	R. Gunnink, A.W. Stoner
1962Hi01	NUPHA	31,	118	S. Hinds, M. Marchant, R. Middleton
1962Hi06	NUPHA	38,	81	S. Hinds, H. Marchant, R. Middleton
1962Ho14	PHRVA	128,	2748	D.A. Howe, L.M. Langer, E.H. Spejewaki, D.E. Wortman
1962In01	NUPHA	38,	50	H. Inoue, J. Ruan, S. Yasukawa, Y. Yoshizawa
1962Ka08	NUPHA	32,	25	T. Katoh, M. Nozawa, Y. Yoshizawa
1962Ka23	NUPHA	36,	394	T. Katoh, M. Nozawa, Y. Yoshizawa, Y. Koh
1962Ka27	AAFPA	6,	96	P. Kauranen
1962Kh05	IANFA	26,	1036	D.E. Khulelidze, V.L. Chikhladze, N.A. Vartenov, Y.A. Kyukhin
1962Ko10	NUPHA	39,	89	K. Kotajima
1962Ko12	IANFA	26,	235	G.A. Korolev, G.E. Kocharov
1962La10	NUPHA	35,	582	N.L. Lark, P.F.A. Goudsmit, J.F.W. Jansen, J.E.J. Oberski, A.H. Wapstra
1962Li03	NUPHA	31,	584	E.W.A. Lingeman, K.E.G. Lobner, G.J. Nijgh, A.H. Wapstra
1962Lo10	ZETFA	43,	1579	V.M. Lobashov, V.A. Nazarenko, L.F. Saenko
1962Ma06	PHRVA	125,	942	H.J. Martin,Jr., M.B. Sampson, R.L. Preston
1962Ne08	PHRVA	125,	2005	J.W. Nelson, H.S. Plendl, R.H. Davis
1962No06	NUPHA	36,	411	M. Nozawa
1962Nu01	PHRVA	127,	943	M. Nurmia, P. Kauranen, A. Siivola
1962Pa05	PHRVA	127,	1258	A.P. Patro, B. Basu
1962Pe08	HPACA	35,	175	C.F. Perdrisat, J.H. Brunner, H.J. Leisi
1962Pe15	PHRVA	127,	917	I. Perlman, F. Asaro, A. Ghiorso, A. Larsh, R. Latimer
1962Pi02	PHRVA	127,	1708	W.R. Pierson, H.C. Griffin, C.D. Coryell
1962Pu01	NUPHA	36,	1	D.J. Pullen, A.E. Litherland, S. Hinds, R. Middleton
1962Ru05	NUPHA	36,	431	J. Ruan, Y. Yoshizawa, Y. Koh
1962Sc04	PHRVA	125,	1641	C.F. Schwerdtfeger, E.G. Funk,Jr., J.W. Mihelich

1962Se03	PHRVA	125,	968	M.L. Seghal
1962Sh01	NUPHA	29,	177	R.K. Sheline, R.A. Harlan
1962Si14	AAFPA	6,	109	A. Siivola
1962Un01	NUPHA	36,	284	J. Unik, P. Day, S. Vandenbosch
1962Va08	NUPHA	30,	177	S.E. Vandenbosch, P. Day
1962Va10	NUPHA	31,	406	B. Van Nooijen, H. van Krugten, W.J. Wiesehahn, A.H. Wapstra
1962Wa15	PHMAB	7,	105	D.E. Watt, R.N. Glover
1962Wa16	NUPHA	31,	575	A.H. Wapstra, J.F.W. Jansen, P.F.A. Goudsmit, J. Oberski
1962Wa18	NUPHA	35,	232	R.J. Walen, V. Nedovesov, G. Bastin-Scoffier
1962Wa20	NUPHA	36,	207	L.B. Warner, R.K. Sheline
1962Wa28	COREA	255,	1604	R.J. Walen
1962Ya01	NUPHA	30,	68	T. Yamazaki, H. Ikegami, M. Sakai

1963

1963Ab02	PHLTA	5,	359	A. Abdumalikov, A. Abdurazakov, K. Gromov, Z. Zhelev, N. Lebedev, B. Dzelepov, A. Kudryavtseva
1963Ba20	CJPHA	41,	696	R.C. Barber, R.L. Bishop, W. McLatchie, P. Van Rookhuyzen, H.E. Duckworth
1963Ba31	NUPHA	43,	264	C.V.K. Baba, G.T. Ewan, J.F. Suarez
1963Ba32	NUPHA	43,	285	C.V.K. Baba, G.T. Ewan, J.F. Suarez
1963Ba37	ZETFA	44,	35	N.B. Badalov, S.S. Vasilenko, M.G. Kaganskii, D.L. Kaminskii, M.K. Nikitin
1963Ba47	CJPHA	41,	1482	R.C. Barber, W. McLatchie, R.L. Bishop, P. Van Rookhuyzen, H.E. Duckworth
1963Ba52	PHRVA	132,	1763	F.J. Bartis
1963Bi03	NUPHA	41,	21	K.M. Bisgard, P. Dahl, P. Hornshoj, A.B. Knutsen
1963Bi12	CJPHA	41,	1532	R.L. Bishop, R.C. Barber, W. McLatchie, J.D. Macdougall, P. Van Rookhuyzen, H.E. Duckworth
1963Bj01	NUPHA	42,	469	S. Bjornholm, F. Boehm, A.B. Knutsen, O.B. Nielsen
1963Bj02	NUPHA	42,	642	S. Bjornholm, O.B. Nielsen
1963Bo07	PHRVA	130,	1078	R.O. Bondelid, J.W. Butler
1963Bo14	PHYSA	29,	277	P. Born, C. Bobeldijk, W.A. Oost, J. Blok
1963Bo17	PHYSA	29,	535	P. Born, A. Veefkind, W.H. Elsenaar, J. Blok
1963Ca03	PHRVA	129,	1782	D.C. Camp, L.M. Langer
1963Ca06	PHRVA	132,	2239	T.A. Carlson
1963Ch03	NUCIA	27,	86	G. Chilosi, P. Cuzzocrea, G.B. Vingiani, R.A. Ricci, H. Morinaga
1963Cr06	PHRVA	132,	1681	B. Crasemann, G.T. Emery, W.R. Kane, M.L. Perlman
1963Da03	ZEPYA	172,	202	H. Daniel, O. Mehling, D. Schotte
1963Da10	PHRVA	132,	1673	R.A. Damerow, R.R. Ries, W.H. Johnson,Jr.
1963De11	JINCA	25,	741	P. Del Marmol, P.F. Fettweis
1963Di05	JINCA	25,	143	H. Diamond, J.E. Gindler
1963Do07	PHRVA	132,	2600	I. Dostrovsky, S. Katcoff, R.W. Stoenner
1963Dz07	ZETFA	45,	1360	B.S. Dzelepov, R.B. Ivanov, V.G. Nedovesov, V.P. Chechev
1963Em02	PHRVA	129,	2597	G.T. Emery, W.R. Kane, M. McKeown, M.L. Perlman, G. Scharff-Goldhaber
1963Fr04	PHRVA	131,	772	A.M. Friedman, J. Milsted
1963Fr10	PHRVA	132,	2169	G. Frick, A. Gallmann, D.E. Alburger, D.H. Wilkinson, J.P. Coffin
1963Fu17	KERNA	6,	152	L. Funke, K. Hohmuth, H. Jungclaussen, K.-H. Kaun, G. Muller, H. Sodan, L. Werner
1963Ga09	PHRVA	131,	1759	B.R. Gasten
1963Ge02	NUPHA	40,	177	K.N. Geller
1963Gl04	PHRVA	130,	299	N.W. Glass, R.W. Peterson
1963Go06	NUCIA	30,	14	K.P. Gopinathan, M.C. Joshi, M. Radha Menon
1963Gr08	AAFPA	6,	128	G. Graeffe
1963Gr.A	BAPSA	8,	486	D.E. Groce, J.H. McNally, W. Whaling
1963Gu04	PHRVA	131,	301	R. Gunnink
1963Ho18	JINCA	25,	1303	R.W. Hoff, F. Asaro, I. Perlman
1963Ho.A	PrvCom	AHW		A.M. Hoogenboom
1963Ik01	NUPHA	41,	130	H. Ikegami, K. Sugiyama, T. Yamazaki, M. Sakai
1963Ja06	NUPHA	41,	303	A. Jasinski, J. Kownacki, H. Lancman, J. Ludziejewski, S. Chojnacki, I. Yutlandov
1963Ja12	PHLTA	6,	69	J. Jaenecke

1963Jo04	NUPHA	41,	167	C.H. Johnson, F. Pleasonton, T.A. Carlson
1963Ka21	PHLTA	6,	98	M. Karras, J. Kantele
1963Ko08	PHRVA	130,	1503	P.F.M. Koehler, L. Slack, N.B. Gove
1963Kr04	CZYPA	13,	79	B. Kracik, Z. Miligui, V. Brabec, M. Vejs, A. Mastalka, T. Kucarova
1963Ku22	NUPHA	48,	675	T. Kuroyanagi, T. Tamura
1963La06	PHRVA	132,	324	L.M. Langer, D.E. Wortman
1963Ma27	NUPHA	44,	309	B.E.F. Macefield, R. Middleton, D.J. Pullen
1963Mc02	CJPHA	41,	180	W.J. McDonald, E. Buchhols, R.N.H. Haslam
1963Me06	NUPHA	46,	233	D.G. Megli, T.T. Thwaites
1963Me08	NUPHA	48,	90	M.K. Mehta, W.E. Hunt, H.S. Plendl, R.H. Davis
1963Mi17	NUPHA	49,	315	K. Miyano, T. Kuroyanagi
1963Ne05	PHRVA	129,	1723	J.W. Nelson, E.B. Carter, G.E. Mitchell, R.H. Davis
1963Ok01	JUPSA	18,	1563	K. Okano, K. Nishimira
1963Or01	PHRVA	132,	355	C.J. Orth, M.E. Bunker, J.W. Starner
1963Pa09	NUPHA	45,	336	M. Pasternak, T. Sonnino
1963Pe11	AFYSA	23,	1	L. Persson, R. Hardell, S. Nilsson
1963Pe13	NUPHA	44,	653	L. Persson, H. Ryde, K. Oelsner-Ryde
1963Pe16	PHLTA	6,	347	L. Persson
1963Pl01	CZYPA	13,	23	Z. Plajner, L. Maly, N. Eissa, A. Benadek
1963Pr13	BAPMA	11,	691	Z. Preibisz, K. Pawlak, K. Stryczniewicz
1963Rh02	PHRVA	131,	1227	J.I. Rhode, O.E. Johnson
1963Ri07	PHRVA	132,	1662	R.R. Ries, R.A. Damerow, W.H. Johnson,Jr.
1963Ro10	PHRVA	129,	2653	P.C. Rogers, G.E. Gordon
1963Ry01	AFYSA	23,	171	H. Ryde, L. Persson, K. Oelsner-Ryde
1963Ry04	NUPHA	43,	229	A. Rytz, H.H. Staub, H. Winkler, F. Zamboni
1963Sc15	PHRVA	132,	2650	F. Schima, E.G. Funk,Jr., J.W. Mihelich
1963St06	NUPHA	41,	524	W.A. Stensland, A.F. Voigt
1963Su.A	Th.-Berkeley			V.B. Subrahmanyam
1963Ta05	NUPHA	41,	221	H.W. Taylor, G.N. White, R. McPherson
1963Th02	NUPHA	41,	380	B.V. Thosar, R.P. Sharma, K.G. Prasad
1963Th03	PHRVA	129,	1778	T.T. Thwaites
1963Va24	PHYSA	29,	990	C. van der Leun, P.M. Endt
1963Va37	ZETFA	45,	1385	S.S. Vasilev, L.Y. Shavtvalov
1963Ve09	PHRVA	132,	1736	M.N. Vergnes, R.K. Sheline
1963Wo01	PHRVA	131,	325	D.E. Wortman, L.M. Langer
1963Wo04	RAACA	1,	225	G. Wolzak, H. Morinaga
1963Wu01	CHJPB	19,	524	P.-K. Wung, G.-G. Yan, S.-K. Chu, S.-P. Chen, S. Huo, S.-F. Wang, L.-S. Chen
1963Yo07	NUPHA	46,	78	Y. Yoshizawa, H. Okamura, S. Iwata, I. Fugiwara, T. Shigematsu, M. Tabushi, T. Tarumoto, K. Sakamoto
1963Zy01	NUPHA	42,	330	J. Żylicz, Z. Sujkowski, J. Jastrzebski, O. Wolczek, S. Chojnacki, I. Yutlandov

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1964Ag.A	P-Tbilis		63	V.K. Ageev, K.Y. Gromov, B.S. Dzelepov, Z. Zhelev, V. Kalinnikov, A. Kudryavtseva
1964Al29	AFYSA	26,	235	N.H. Albins
1964An02	JINCA	26,	1117	R.L. Andelin
1964An12	JOPQA	25,	673	S. Andre, P. Depommier
1964Ar17	AFYSA	26,	153	S.E. Arnell
1964As01	PLRBA	133,	291	F. Asaro, S. Bjornholm, I. Perlman
1964Ba03	CJPHA	42,	391	R.C. Barber, W. McLatchie, R.L. Bishop, J.D. Macdougall, P. van Rookhuyzen, H.E. Duckworth
1964Ba13	NUPHA	52,	125	H. Bakhru, S.K. Mukherjee
1964Ba15	PRLTA	12,	597	R.C. Barber, H.E. Duckworth, B.G. Hogg, J.D. Macdougall, W. McLatchie, P. Van Rookhuyzen
1964Ba36	PLRBA	136,	603	E.L. Bahn,Jr., B.D. Pate, R.D. Fink, C.D. Coryell
1964Ba46	ZETFA	47,	1162	K.A. Baskova, S.S. Vasilev, M.A. Khamo-LEILA, L.Y. Shavtvalov
1964Be10	NUPHA	50,	657	U. Bertelsen, G.T. Ewan, H.L. Nielsen
1964Bj02	PLRBA	136,	1348	J.H. Bjerregaard, H.R. Blieden, O. Hansen, G. Sidenius, G.R. Satchler

1964Bl11	NUPHA	55,	331	K.J. Blinowska, P.G. Hansen, H.L. Nielsen, O. Schult, K. Wien
1964Bo10	PLRBA	134,	591	R.O. Bondelid, E.E. Dowling Whiting
1964Bo13	NUPHA	53,	618	R.O. Bondelid, J.W. Butler
1964Bo25	AFYSA	26,	141	E.C.O. Bonacalza
1964Br08	PLRBA	134,	133	C.P. Browne, I. Michael
1964Br09	JINCA	26,	677	R.L. Brodzinski, J.R. Finkel, D.C. Conway
1964Br27	NUPHA	59,	33	K. Brandi, R. Engelmann, V. Hepp, E. Kluge, H. Krehbiel, U. Meyer-Berkhout
1964Bu10	PLRBA	136,	1	S.B. Burson, E.B. Shera, T. Gedayloo, R.G. Helmer, D. Zei
1964Bu12	JINCA	26,	1491	F.D.S. Butement, S.M. Qaim
1964Ch17	NUPHA	55,	577	P. Christmas
1964Ch19	PRLTA	13,	665	L.F. Chase,Jr., H.A. Grench, R.E. McDonald, F.J. Vaughn
1964Co11	PLRBA	135,	383	B.L. Cohen, R. Patell, A. Prakash, E.J. Schneid
1964Da11	NUPHA	55,	643	E.A. Davis, T.W. Bonner, D.M. Worley,Jr., R. Bass
1964Da15	NUPHA	56,	147	H. Daniel, J. Huefner, T. Lorenz, O.W.B. Schult, U. Gruber
1964Da16	PLRBA	136,	1240	H. Daniel, G. Th. Kaschl, H. Schmitt, K. Springer
1964De02	PLRBA	133,	568	S.H. Devare, H.G. Devare
1964De10	PLRBA	134,	705	S.H. Devare, H.G. Devare
1964De15	P-Vienna		430	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1964De16	PHYSA	30,	1938	A. De Beer, H.P. Blok, J. Blok
1964Ej05	NUPHA	59,	625	H. Ejiri, Y. Nogami, Y. Nakajima, K. Horie, K. Etoh, A. Sugawara
1964Er02	PLRBA	133,	370	J.R. Erskine, W.W. Buechner
1964Er06	PLRBA	135,	110	J.R. Erskine
1964Fi02	PLRBA	133,	1502	T.R. Fisher, W. Whaling
1964Fl02	RAACA	2,	210	J. Flegenheimer, G.B. Baro
1964Fr04	CZYPA	14,	152	J. Frana, I. Rezanka
1964Fu08	NUPHA	60,	294	M. Fujioka, K. Hisatake, K. Takahashi
1964Fu11	NUPHA	55,	401	L. Funke, H. Graber, K.-H. Kaun, H. Sodan, L. Werner
1964Go08	PLRBA	134,	297	K.P. Gopinathan, M.G. Joshi
1964Gr11	AAFPA	6,	145	G. Graeffe, K. Valli, J. Aaltonen
1964Ha29	PHYSA	30,	1802	J.H. Hamilton, K.E.G. Lobner, A.R. Sattler, R. van Lieshout
1964Ho03	JINCA	26,	1769	D.C. Hoffman, W.R. Daniels
1964Ho08	NUPHA	52,	590	K. Hohmuth, G. Muller, J. Schintlmeister
1964Ho14	PRLTA	13,	241	R.E. Holland, F.J. Lynch, K.-E. Nysten
1964Ho28	APASA	18,	309	I. Hofman
1964Jo03	PHLTA	8,	61	H.S. Johansen, M. Jorgensen, O.B. Nielsen, G. Sidenius
1964Jo09	NUPHA	52,	301	M.C. Joshi, B.V. Thosar, K.G. Prasad
1964Jo11	PLRBA	136,	1719	C.H. Johnson, C.C. Trail, A. Galonsky
1964Ka08	PLRBA	133,	1504	R.W. Kavanagh
1964Ka10	PLRBA	135,	9	J. Kantele, M. Karras
1964Ka16	AAFPA	6,	162	J. Kantele, K.M. Broom, D.M. Chittenden
1964Ka23	AFYSA	27,	61	S.E. Karlsson, O. Bergman, W. Scheuer
1964Ke03	PLRBA	133,	25	R.A. Kenefick, R.K. Sheline
1964Kr02	PHLTA	13,	65	H. Krehbiel
1964Ku02	NUPHA	50,	417	T. Kuroyanagi, T. Tamura, K. Tanaka, H. Morinaga
1964La03	PLRBA	133,	1145	L.M. Langer, E.H. Spejewski, D.E. Wortman
1964La13	PLRBA	135,	581	L.M. Langer, E.H. Spejewski, D.E. Wortman
1964Le05	NUPHA	50,	648	H. Leutz, K. Ziegler
1964Le09	JOPQA	25,	326	J. Lehmann
1964Le10	PLRBA	134,	752	J.C. Legg, E. Rost
1964Li10	NUPHA	59,	504	P. Lipnik, G. Pralong, J.W. Sunier
1964Ma30	CJPHA	42,	1700	K.C. Mann, F.A. Payne, R.P. Chaturvedi
1964Ma35	PHLTA	9,	174	E. Matt, H. Pfander, H. Rieseberg, V. Soergel
1964Ma36	CZYPA	14,	240	L. Maly, Z. Plajner, J. Jursik, M. Finger
1964Ma.A	P-Vienna		279	J.B. Marion
1964Ma.B	P-Vienna		305	M. Mazari, A. Jaidar, G. Lopez, A. Tejera, J. Caracea, R. Dominguez, F. Alba
1964Mc07	CJPHA	42,	926	W. McLatchie, R.C. Barber, R.L. Bishop, H.E. Duckworth
1964Mc11	PHLTA	10,	330	W. McLatchie, R.C. Barber, H.E. Duckworth, P. Van Rookhuyzen
1964Mc21	CPHMA	30,	#4	J.D. McCoy
1964Mi04	NUPHA	51,	50	R. Middleton, D.J. Pullen

1964Mi.A	P-Vienna		329	R. Middleton, H. Marchant
1964Mo18	PHLTA	11,	148	H. Morinaga, G. Wolzak
1964Mo.A	P-Vienna		423	P.E. Moreland,Jr., K.T. Bainbridge
1964Ne10	PLRBA	135,	325	C.L. Nealy, R.K. Sheline
1964No06	PLRBA	136,	40	L.R. Norris, C.F. Moore
1964Nu02	AAFPA	6,	148	M. Nurmia, G. Graeffe, K. Valli, J. Aaltonen
1964On03	PLRBA	136,	365	R.J. Onega, W.W. Pratt
1964Pa03	APASA	18,	315	H. Paul
1964Pe17	PLRBA	136,	330	N.F. Peek, J.A. Jungerman, C.G. Patten
1964Ro17	PLRBA	136,	664	B. Rosner
1964Sa12	NUPHA	53,	457	R.C. Salgo, H.H. Staub, H. Winkler, F. Zamboni
1964Sa32	SHIBA	5,	54	K. Sato
1964Sc27	IDO-17042		11	R.P. Schuman
1964Sh04	PHLTA	8,	121	R.K. Sheline, C. Watson, E.W. Hamburger
1964Sh06	PLRBA	133,	624	W.N. Shelton, R.K. Sheline
1964Sh13	PLRBA	136,	351	R.K. Sheline, W.N. Shelton, H.T. Motz, R.E. Carter
1964Sh21	JUPSA	19,	245	Y. Shida
1964Si18	PLRBA	136,	618	R.J. Silva, G.E. Gordon
1964Sm03	PHYSA	30,	1197	P.J.M. Smulders
1964So01	NUPHA	54,	568	T. Sonino, E. Eichler, S. Amiel
1964Sp12	P-Vienna		289	A. Sperduto, W.W. Buechner
1964St01	PLRBA	133,	911	P.H. Stelson, F.K. McGowan
1964Ta11	JUPSA	19,	587	E. Takekoshi, Z.-I. Matumoto, M. Ishii, K. Sugiyama, S. Hayashibe, H. Sekiguchi, H. Natsume
1964Te02	JINCA	26,	1129	G.P. Tercho, J.A. Marinsky
1964Th05	NUPHA	60,	35	K.S. Thorne, E. Kashy
1964To04	PLRBA	136,	1233	K.S. Toth, T.H. Handley, E. Newman, I.R. Williams
1964Va03	NUPHA	50,	113	D.M. Van Patter, S.M. Shafroth
1964Va05	PHLTA	9,	164	R. van Lieshout, S. Monaro, G.B. Vingiani, H. Morinaga
1964Va20	AAFPA	6,	165	K. Valli
1964Ve02	NUPHA	57,	451	E. Veje, C. Droste, O. Hansen, S. Holm
1964Wa14	NUPHA	54,	519	C. Watson, C.F. Moore, R.K. Sheline
1964We06	PLRBA	134,	257	P. Weinzierl, E. Ujlaki, G. Preinreich, G. Eder
1964Wi07	PLRBA	135,	289	D.C. Williams, R.A. Naumann
1964Yn03	PLRBA	134,	976	J.L. Yntema, G.R. Satchler

1965

1965An05	AFYSA	28,	37	G. Andersson, G. Rudstam, G. Sorensen
1965Ba29	PLRBA	140,	904	J.B. Ball, R.F. Sweet
1965Ba48	IANFA	29,	2255	Ts. Vylov, V.M. Gorodzankin, K. Ya. Gromov, V.V. Kuznetsov
1965Be19	PHLTA	18,	293	D. Berenyi, C. Ujhelyi, I. Feher
1965Be24	NUPHA	74,	459	H. Beekhuis, H. de Waard
1965Bi04	PLRBA	138,	514	W.N. Bishop
1965Bi12	IANFA	29,	151	E.I. Biryukov, V.T. Novikov, N.S. Shimanskaya
1965Bl06	AFYSA	28,	415	P.H. Blichert-Toft
1965Bl13	PLRBA	140,	1567	A.G. Blair, D.D. Armstrong
1965Br12	PLRBA	138,	1368	R.L. Brodzinski, D.C. Conway
1965Br28	NUPHA	72,	194	C.P. Browne, W.E. Dorenbusch, F.H. O'Donnell
1965Br31	NUPHA	72,	529	L. Broman, J. Dubois
1965Bu03	JINCA	27,	907	F.D.S. Butement, S.M. Quaim
1965Bu07	NUPHA	65,	561	J. Burde, M. Rakavi, G. Adam
1965Ce02	PRLTA	15,	300	J. Cerny, C. Détraz, R.H. Pehl
1965Co06	CJPHA	43,	383	C.R. Cothern, R.D. Connor
1965Cr04	NUPHA	70,	129	T. Cretzu, K. Hohmuth, J. Schintlmeister
1965Da01	NUPHA	63,	145	H. Daniel, M. Kuntze, B. Martin, P. Schmidlin, H. Schmitt
1965De08	PRLTA	14,	708	C. Détraz, J. Cerny, R.H. Pehl
1965De09	PLRBA	138,	540	J.W. Dewdney, K.T. Bainbridge
1965De13	IANFA	29,	859	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya

1965De15	YAFIA	1,	198	A.G. Demin, Y.P. Kushakevich
1965De20	NUPHA	73,	49	S.A. De Wit, A.H. Wapstra
1965De22	PLRBA	140,	536	S.H. Devare, R.M. Singru, H.G. Devare
1965Du02	COREA	261,	98	J.C. Duperrin, A. Guizon-Juillard
1965Er02	PLRBA	138,	851	J.R. Erskine
1965Er03	PLRBA	138,	66	J.R. Erskine
1965Er04	PRLTA	15,	915	J.R. Erskine, R.E. Holland, R.D. Lawson, M.H. Macfarlane, J.P. Schiffer
1965Fl02	NSENA	22,	416	K.F. Flynn, L.E. Glendenin, E.P. Steinberg
1965Fr04	NUPHA	64,	303	K. Fritze
1965Fr12	PLRBA	140,	563	M.S. Freedman, F.T. Porter, F. Wagner,Jr.
1965Fu13	NUPHA	70,	335	L. Kunke, H. Graber, K.-H. Kaun, H. Sodan, L. Werner
1965Go05	PLRBA	137,	1466	S. Gorodetsky, A. Gallmann, R. Rebmeister
1965Gr35	YAFIA	2,	783	K.Y. Gromov, Z.T. Zhelev, V. Zvolska, V.G. Kalinnikov
1965Gu03	NUPHA	64,	401	M. Guttman, E.G. Funk,Jr., J.W. Mihelich
1965Ha20	CJPHA	43,	1671	J.C. Hardy, R.E. Bell
1965Ha30	PHLTA	19,	304	P.G. Hansen, H.L. Nielsen, K. Wilsky, J. Treherne
1965Ho07	NUPHA	71,	449	C.G. Hoot, M. Kondo, M.E. Rickey
1965Hs02	NUPHA	73,	379	S.T. Hsue, L.M. Langer, S.M. Tang, D.A. Zollman
1965Is01	ZENAA	20,	541	A. Isola, M. Nurmia
1965Iv01	IANFA	29,	157	Y.F. Ivanov, I.A. Rumer, A.Y. Bukach
1965Iw01	JUPSA	20,	2105	T. Iwashita
1965Jo04	NUPHA	61,	385	M.W. Johns, M. Kawamura
1965Jo13	NUPHA	72,	617	N.R. Johnson, K. Wilsky, P.G. Hansen, H.L. Nielsen
1965Ka07	JINCA	27,	1451	P. Kauranen, H. Ihochi
1965Ke04	NUPHA	61,	513	W.J. Keeler, R.D. Connor
1965Ke09	PLRBA	139,	1479	R.A. Kenefick, R.K. Sheline
1965Ki05	JINCA	27,	1881	H.W. Kirby, K.C. Jordan, J.Z. Braun, M.L. Curtis, M.L. Salutsky
1965Ko09	ZENAA	20,	969	W. Kohler, K. Knopf
1965Ku02	NUPHA	64,	524	H.-M. Kuan, J.R. Risser
1965Kv01	NUPHA	74,	27	E. Kvale, A.C. Pappas
1965Le06	NUPHA	63,	263	H. Leutz, K. Schneckenberger, H. Wennige
1965Le07	NUPHA	65,	337	W.H.G. Lewin, J. Lettinga, B. van Nooijen, A.H. Wapstra
1965Ma07	PHLTA	14,	46	A. Marinov, J.R. Erskine
1965Ma12	PRLTA	14,	114	R.D. Macfarlane, A. Siivola
1965Ma51	IANFA	29,	1121	I. Mahunka, T. Fenyes
1965Ma56	NUPHA	67,	73	J.H.E. Mattauch, W. Thiele, A.H. Wapstra
1965Mc09	PLRBA	140,	1513	R. McPherson, R.A. Easterlund, A.M. Poskanzer, P.L. Reeder
1965Me02	JINCA	27,	33	D. Metta, H. Diamond, R.F. Barnes, J. Milsted, J. Gray, Jr., D.J. Henderson, C.M. Stevens
1965Me12	PHLTA	19,	133	R. Messlinger, H. Morinaga, C. Signorini
1965Mo05	NUPHA	61,	613	S. Morinobu, T. Hirose, K. Hisatake
1965Mo16	NUPHA	74,	403	R. Moreh, T. Daniels
1965Mo19	NUPHA	70,	293	R. Moreh
1965Mu09	NUPHA	67,	466	A. Mukerji, D.N. McNelis, J.W. Kane,Jr.
1965Ne02	NUPHA	62,	434	J.W. Nelson, J.D. Oberholtzer, H.S. Plendl
1965Nu03	AAFPA	167,	1	M. Nurmia, D. Giessing, W. Sievers, L. Varga
1965Og01	NUPHA	66,	119	I. Ogawa, T. Doke, M. Miyajima, A. Nakamoto
1965Pa08	NUPHA	72,	326	H. Paul
1965Pe18	AFYSA	29,	423	H. Pettersson, O. Berhman, C. Bergman
1965Pl01	NUPHA	73,	131	H.S. Plendl, L.J. Defelice, R.K. Sheline
1965Pr03	NUPHA	67,	302	W.V. Prestwich, T.J. Kennett
1965Ra02	PLRBA	137,	13	A.V. Ramaya, Y. Yoshizawa
1965Re07	NUPHA	65,	609	R. Reising, B.D. Pate
1965Ri06	PHLTA	17,	296	M.E. Rickey, P.D. Kunz, J.J. Kraushaar, W.G. Anderson
1965Ry01	NUPHA	70,	369	A. Rytz
1965Sa22	AFYSA	30,	540	L. Sanner, R. Djay, J.O. Jonsson, I. Lindgren, M. Olsmats, A. Rosen, B. Wannberg, K.E. Adelroth
1965Sc19	PLRBA	140,	1496	F. Schima, T. Katoh
1965Si06	NUPHA	64,	161	A. Siivola, G. Graeffe

1965St06	PLRBA	137,	772	G.L. Struble, J. Kern, R.K. Sheline
1965Va02	NUPHA	63,	241	B. Van Nooijen, W. Lourens, H. van Krugten, A.H. Wapstra
1965Wa14	PLRBA	140,	882	W.N. Wang, E.J. Winhold
1965Wi08	PHLTA	15,	143	E.T. Williams, P.G. Hansen, J. Lipperts, H.L. Nielsen, K. Wilsky
1965Za01	PLRBA	137,	1479	C.D. Zafiratos, F. Ajzenberg-Selove, F.S. Dietrich

1966

1966Ah.A	UCRL-16580		21	I. Ahmad, F. Asaro, I. Perlman
1966Ah.B	Th.-Berkeley			I. Ahmad
1966Ak01	AENGA	21,	243	G.N. Akapev, A.G. Demin, V.A. Druin, E.G. Imaev, I.V. Kolesov, Y.V. Lobanov, L.P. Pashchenko
1966An10	CHDBA	262,	214	S. Andre, P. Depommier
1966Ar05	PHRVA	146,	869	N.K. Aras, G.D. O'Kelley, G. Chilosi
1966Au04	NUPHA	81,	441	R.L. Auble, W.H. Kelly
1966Av03	IANFA	30,	542	M.P. Avotina, E.P. Grigorev, B.S. Dzelepov, A.V. Zolotavin, V.O. Sergeev
1966Ba07	YAFIA	4,	1108	S.A. Baranov, Y.F. Rodionov, V.M. Kulakov, V.M. Shatinskii
1966Ba14	CHDBA	262,	89	G. Bastin, C.F. Leang, R.J. Walen
1966Ba19	CHDBA	262,	370	G. Bastin, C.F. Leang, R.J. Walen
1966Be10	PHRVA	141,	1112	J.L. Benson, W.H. Johnson,Jr.
1966Be12	PHLTA	21,	205	H. Beekhuis
1966Be21	IANFA	30,	1130	Yu. I. Belyanin, E.I. Biryukov, N.S. Shimanskaya
1966Bj01	NUPHA	86,	145	J.H. Bjerregaard, O. Hansen, O. Nathan, S. Hinds
1966Bj02	NUPHA	85,	593	J.H. Bjerregaard, O. Nathan, S. Hinds, R. Middleton
1966Bl04	NUPHA	76,	45	L.M. Blau, W.P. Alford, D. Cline, H.E. Gove
1966Bl15	PHRVA	151,	930	A.G. Blair, D.D. Armstrong
1966Bo20	NUPHA	86,	187	B.E. Bonner, G. Rickards, D.L. Bernard, G.C. Phillips
1966Br05	NUPHA	77,	365	G. Brown, S.E. Warren, R. Middleton
1966Br06	NUPHA	77,	385	G. Brown, A. Macgregor, R. Middleton
1966Br14	NUPHA	81,	233	H.F. Brinckmann, C. Heiser, K.F. Alexander, W. Neubert, H. Rotter
1966Br18	PHRVA	149,	767	D.G. Burke, B. Zeidman, B. Elbek, B. Herskind, M. Olesen
1966Bu16	KDVSA	35,	#2	D.G. Burke, B. Zeidman, B. Elbek, B. Herskind, M. Olesen
1966Ca09	NUPHA	82,	471	R.C. Catura, J.R. Richardson
1966Ca10	NUPHA	85,	317	M.J. Canty, W.F. Davidson, R.D. Connor
1966Cu02	NUPHA	86,	481	R.Y. Cusson
1966Da04	NUPHA	76,	97	H. Daniel, G.T. Kaschl
1966Da06	PHRVA	147,	845	W.R. Daniels, D.C. Hoffman
1966De11	NUPHA	83,	289	E.Y. De Aisenberg, J.F. Suarez
1966Do02	PHRVA	146,	734	W.E. Dorenbusch, T.A. Belote, O. Hansen
1966Do06	NUPHA	81,	390	W.E. Dorenbusch, O. Hansen, D.J. Pullen, T.A. Belote, G. Sidenius
1966Ei01	PHRVA	146,	899	E. Eichler, J.W. Chase, N.R. Johnson, G.D. O'Kelley
1966El09	ORNL-3889		49	J.S. Eldridge, W.S. Lyon
1966Er02	PHRVA	142,	633	J.R. Erskine, A. Marinov, J.P. Schiffer
1966Fi06	PHRVA	150,	941	H.J. Fischbeck, F.T. Porter, M.S. Freedman, F. Wagner,Jr., H.H. Bolotin
1966Fr11	RAACA	5,	192	A.M. Friedman, J. Milsted, D. Metta, D. Henderson, J. Lerner, A.L. Harkness, D.J. Rokop
1966Fu05	NUPHA	84,	461	L. Funke, H. Graber, K.-H. Kaun, R. Ross, H. Sodan, L. Werner, J. Frana
1966Fu08	NUPHA	84,	424	L. Funke, H. Graber, K.-H. Kaun, H. Sodan, G. Geske, J. Frana
1966Ga03	NUPHA	76,	353	R. Gaeta, M.A. Vigon
1966Ga06	PHLTA	20,	669	J. Gastebois, M. Berloutaud, J.M. Lagat, J. Quidort
1966Ga08	PHRVA	147,	753	A. Gallmann, P. Fintz, J.B. Nelson, D.E. Alburger
1966Gl02	NUPHA	86,	279	K.M. Glibert, H.T. Easterday
1966Gr05	PHRVA	142,	725	J.T. Grissom, D.R. Koehler, W.L. Alford
1966Gr26	PHNOA	2,	1	A. Graue
1966Gu05	NUPHA	85,	288	S.G. Gujrathi, S.K. Mukherjee
1966Ha15	NUPHA	76,	257	P.G. Hansen, H.L. Nielsen, K. Wilsky, Y.K. Agarwal, C.V.K. Baba, S.K. Bhattacherjee
1966Ha29	NUPHA	84,	62	G.R. Hagee, R.C. Lange, J.T. McCarty
1966Ha32	PHLTA	23,	487	J.C. Hardy, D.J. Skyrme, I.S. Towner

1966He10	NUPHA	88,	561	P.V. Hewka, C.H. Holbrow, R. Middleton
1966Hi01	PHLTA	21,	328	S. Hinds, J.H. Bjerregaard, O. Hansen, O. Nathan
1966Hi06	NUPHA	84,	651	S. Hinds, R. Middleton
1966Hs01	NUPHA	80,	657	S.T. Hsue, L.M. Langer, E.H. Spejewski, S.M. Tang
1966Ja12	PHRVA	151,	956	A.D. Jackson,Jr., J.S. Evans, R.A. Naumann, J.D. McCullen
1966Ki06	CJPHA	44,	2661	J.E. Kitching, M.W. Johns
1966Kl02	NUPHA	79,	27	H. Klein, H. Leutz
1966La04	NUPHA	78,	1	T. Lauritsen, F. Ajzenberg-Selove
1966La13	JINCA	28,	2477	F.O. Lawrence, W.R. Daniels, D.C. Hoffman
1966Le06	NUPHA	75,	81	H. Leutz, G. Schulz, H. Wenniger
1966Li04	PHRVA	141,	1089	A.C. Li, I.L. Preiss, P.M. Strudler, D.A. Bromley
1966Ma05	ZENAA	21,	63	J.D. Macdougall, W.M. McLatchie, S. Whineray, H.E. Duckworth
1966Ma18	PHLTA	21,	661	N. Mangelson, M. Reed, C.C. Lu, F. Ajzenberg-Selove
1966Ma49	IANFA	30,	1185	E.P. Mazets, Y.V. Sergeenkov
1966Ma51	IANFA	30,	1375	I. Mahunka, L. Tron, T. Fenyes, V.A. Khalkin
1966Ma60	RMPHA	38,	660	J. Marion
1966Mc13	NUPHA	88,	257	J.H. McNally
1966Mo06	PHRVA	141,	1166	C.F. Moore, P. Richard, C.E. Watson, D. Robson, J.D. Fox
1966Ne01	PRLTA	16,	28	E. Newman, J.C. Hiebert, B. Zeidman
1966No05	NUPHA	86,	102	A.E. Norris, G. Friedlander, E.M. Franz
1966Ny01	NUPHA	88,	63	B. Nyman, A. Johansson, C. Bergman, G. Backstrom
1966Pa06	CJPHA	44,	1029	P.J. Pan, Y.S. Horowitz, R.B. Moore, R. Barton
1966Pa18	NUPHA	85,	504	P.B. Parks, P.M. Beard, E.G. Bilpuch, H.W. Newson
1966Pa20	PHLTA	23,	269	B. Parsa, G.E. Gordon
1966Pe10	NUPHA	83,	33	H. Pettersson, G. Backstrom, C. Bergman
1966Po04	PHRVA	146,	774	F.T. Porter, M.S. Freedman, F. Wagner,Jr., K.A. Orlandini
1966Qa02	NUPHA	88,	285	S.N. Qaim
1966Ra03	PHRVA	142,	768	P.V. Rao, B. Crasemann
1966Re02	PHLTA	20,	40	W. Reichart, H.H. Staub, H. Stussi, F. Zamboni
1966Rg01	PHRVA	148,	1192	Research-Group, Combined Radioactivity Group LRL-LASL-UCRL-ANL
1966Ri01	NUPHA	75,	381	P. Riehs
1966Ri09	NUPHA	86,	167	G. Rickards, B.E. Bonner, G.C. Phillips
1966Ry01	NUPHA	80,	241	H. Ryde, G.D. Symons, S. Szymanski
1966Sc17	PHRVA	149,	820	J.J. Schwartz, W. Parker, Q. Alford
1966Sc24	PHRVA	151,	950	F.J. Schima
1966Se07	NUPHA	85,	227	B. Sethi, S.K. Mukherjee
1966Sh03	PHRVA	143,	857	R.K. Sheline, C.E. Watson, B.P. Maier, U. Gruber, R.H. Koch, O.W.B. Shult, H.T. Motz, E.T. Jurney, G.L. Struble, T. von Egidy, T. Elze, E. Bieber
1966Sh14	PHLTA	22,	648	W.N. Shelton, C.E. Watson
1966Sh16	PHRVA	151,	1011	R.K. Sheline, W.N. Shelton, T. Udagawa, E.T. Jurney, H.T. Motz
1966Si08	NUPHA	84,	385	A. Siivola
1966Sm05	NUPHA	89,	561	K.M. Smith, G.M. Lewis
1966Sn02	PHRVA	147,	967	R.E. Snyder, G.B. Beard
1966St15	PHRVA	151,	969	M.M. Stautberg, J.J. Kraushaar
1966Ta01	PHRVA	143,	818	J.R. Tatarczuk, H.A. Medicus
1966Va12	PHRVA	150,	886	J. Van Klinken, A.J. Bureau, G.W. Eakins, R.J. Hanson
1966Va.A	UCRL-16580		85	K. Valli, E.K. Hyde
1966Vo05	ZEPYA	195,	343	H. Vonach, H. Munzer, P. Hille
1966Wh01	PHRVA	150,	836	W. Whaling
1966Wi04	ZEPYA	191,	137	K. Wien
1966Wi11	PHLTA	22,	162	D.C. Williams, J.D. Knight, W.T. Leland
1966Wi12	NUPHA	84,	609	I.R. Williams, K.S. Toth, T.H. Handley
1966Yo01	PHLTA	22,	625	D.H. Youngblood, G.C. Morrison, R.E. Segel
1966Za01	NUPHA	77,	81	C.D. Zafiratos, F. Ajzenberg-Selove, F.S. Dietrich
1966Zy02	NUPHA	84,	13	J. Żylicz, P.G. Hansen, H.L. Nielsen, K. Wilsky

1967

1967Ad03	PHRVA	159,	985	I. Adam, K.S. Toth, R.A. Meyer
1967Ah02	PHRVA	164,	1537	I. Ahmad, A.M. Friedman, R.F. Barnes, R.K. Sjoblom, J. Milsted, P.R. Fields
1967Al08	NUPAB	98,	323	A.M. Aldridge, H.S. Plendl, J.P. Aldridge,III
1967An01	NUPAB	94,	289	S. Antman, H. Pettersson, A. Suarez
1967Ar01	PYLBB	24,	84	E. Arei, H. Miessner
1967As02	PHRVA	158,	1073	F. Asaro, I. Perlman
1967Ba01	NUPAB	91,	465	V.A. Balalaev, B.S. Dzelepov, L.N. Moskvin, S.A. Shetopalova, N.A. Voinova
1967Ba15	PHRVA	155,	1319	P.D. Barnes, J.R. Comfort, C.D. Bockelman
1967Ba32	PHRVA	159,	920	P.D. Barnes, J.R. Comfort, C.D. Bockelman, O. Hansen, A. Sperduto
1967Ba34	PHRVA	160,	1011	A. Backlin, A. Suarez, O.W.B. Schult, B.P.K. Mayer, U. Gruber, E.B. Shera, D.W. Hafemeister, W.N. Shelton, R.K. Sheline
1967Ba42	YAFIA	5,	241	S.A. Baranov, I.G. Aliev, L.V. Chistyakov
1967Ba43	YAFIA	5,	518	S.A. Baranov, M.K. Chadzhiev, V.M. Kulakov, V.M. Shatinskii
1967Ba51	CHDBA	265,	863	G. Bastin-Scoffier
1967Ba.A	P-Gatlinburg		261	C.A. Barnes, E.G. Adelsberger, D.C. Hensley, A.B. Macdonald
1967Be46	NUPAB	104,	241	G. Berzins, W.H. Kelly, G. Graeffe, W.B. Walters
1967Bi04	NUPAB	97,	203	L. Birstein, C. Drory, A.A. Jaffe, Y. Zioni
1967Bj01	NUPAB	94,	457	J.H. Bjerregaard, O. Hansen, O. Nathan, S. Hinds
1967Bj02	PHRVA	155,	1229	J.H. Bjerregaard, O. Hansen
1967Bj05	PHRVA	160,	889	J.H. Bjerregaard, O. Hansen, G.R. Satchler
1967Bj06	NUPAB	103,	33	J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds, R. Middleton
1967Bl19	PYLBB	25,	215	R. Bloch, R.E. Pixley, P. Truol
1967Bo41	YAFIA	6,	893	D.D. Bogdanov, S. Darotsi, V.A. Karnaukhov, L.A. Petrov, G.M. Ter-Akopyan
1967Br10	NUPAB	101,	163	G. Brown, J.G.B. Haigh, F.R. Hudson, A.E. Macgregor
1967Ca18	NUPAB	104,	35	M.J. Canty, R.D. Connor
1967Ch05	NUPAB	94,	417	P. Charoenkwan, J.R. Richardson
1967Ch16	NUPAB	102,	481	P.R. Christensen, B. Herskind, R.R. Borchers, L. Westgaard
1967Co15	PHRVA	157,	1065	J.R. Comfort, C.K. Bockelman, P.D. Barnes
1967Da10	CJPHA	45,	2295	W.F. Davidson, C.R. Cothern, R.D. Connor
1967De02	NUPAB	94,	673	M.E. De Lopez, M. Mazari, T.A. Belote, W.E. Dorenbusch, O. Hansen
1967De15	JNCEA	21,	833	A.J. De Ruytter, P. Pelfer
1967Do03	NUPAB	102,	681	W.E. Dorenbusch, J. Rapaport, T.A. Belote
1967Dz02	IANFA	31,	568	B.S. Dzelepov, R.B. Ivanov, M.A. Mikhailov, L.N. Moskvin, O.M. Nazarenko, V.F. Radionov
1967Eh02	ZEPYA	207,	268	D. Ehrlich
1967Er02	P-Winnipeg		622	J.R. Erskine, A.M. Friedman, T.H. Braid, R.R. Chasman
1967Es02	PHRVA	156,	1094	R.A. Esterlund, R. McPherson, A.M. Poskanzer, P.L. Reeder
1967Fi04	PYLBB	24,	340	P.R. Fields, R.F. Barnes, R.K. Sjoblom, J. Milsted
1967Fl05	YAFIA	5,	1186	G.N. Flerov, S.M. Polikhanov, V.L. Mikheev, V.I. Ilyushchenko, V.F. Kushniruk, M.B. Miller, A.M. Sukhov, V.A. Schegolov
1967Fl15	AENGA	22,	342	G.N. Flerov, S.M. Polikanov, V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller, V.A. Shchegolev
1967Fo04	PHRVA	155,	1248	C.M. Fou, R.W. Zurmuhle, J.M. Joyce
1967Fr02	NUPAB	94,	366	J. Frana, I. Rezanka, Z. Plajner, A. Spalek, J. Jursik, M. Vobecky, A. Mastalka, L. Funke, A. Graber, H. Sodan
1967Gh01	PRLTA	18,	401	A. Ghiorso, T. Sikkeland, M.J. Nurmia
1967Go22	NUPAB	104,	497	P.F.A. Goudsmit, J. Konijn, F.W.N. De Boer
1967Go25	PHYSA	35,	479	P.F.A. Goudsmit
1967Go32	IANFA	31,	1618	N.A. Golovkov, K.Y. Gromov, N.A. Lebedev, B. Makhmudov, A.S. Rudnev, V.G. Chumin
1967Gr01	PYLBB	24,	171	M.W. Greene
1967Gr02	NUPAB	A94,	157	H.A. Grench, K.L. Coop, H.O. Menlove, F.J. Vaughn
1967Gr21	NUPAB	103,	209	A. Graue, E. Jastad, J.R. Lien, P. Torvund, W.H. Moore
1967Gu06	PHRVA	159,	909	S.C. Gujrathi, S.K. Mukherjee
1967Gu11	IJPYA	41,	633	S.C. Gujrathi, S.K. Mukherjee
1967Gu12	IJPYA	41,	667	S.C. Gujrathi, S.K. Mukherjee

1967Ha03	NUPAB	90,	573	S.K. Haynes, M. Velinsky, L.J. Velinsky
1967Ha04	PYLBB	24,	95	P.G. Hansen, H.L. Nielsen, K. Wilsky, J.G. Cuninghame
1967Ha08	NUPAB	92,	260	W.D. Harrison
1967Ha17	NUPAB	98,	330	H.J. Hay, D.C. Kean
1967Ha25	PHRVA	160,	1005	R.A. Harlan, R.K. Sheline
1967Ha27	JINCA	29,	2515	E. Hagebo
1967Ha.A	P-Winnipeg		527	O. Hansen
1967Hi01	PYLBB	24,	89	S. Hinds, H. Marchant, R. Middleton
1967Hi02	PYLBB	24,	34	S. Hinds, H. Marchant, R. Middleton
1967Hj01	AFYSA	33,	147	S.A. Hjorth
1967Hj03	AFYSA	33,	121	S.A. Hjorth, L.H. Allen
1967Ho01	NUPAB	90,	545	J.L. Honsaker
1967Ho12	PHRVA	159,	1000	K.J. Hofstetter, P.J. Daly
1967Ho19	AFYSA	36,	211	D.C. Hoffman, O.B. Michelsen, W.R. Daniels
1967Hs01	NUPAB	94,	146	S.T. Hsue, M.U. Kim, S.M. Tang
1967Hs03	NUPAB	101,	688	S.T. Hsue, M.U. Kim, L.M. Langer, E.H. Spejewski, J.B. Willet
1967Hu05	ZEPYA	203,	435	E. Huster, H. Verbeek
1967Hu07	CHDBA	265,	162	K. Hubenthal, J. Berthier, J.-C. Hocquenghem, A. Moussa
1967Il01	YAFIA	6,	1117	V.I. Ilyushchenko, M.B. Miller, V.L. Mikheev, V.A. Shchegolev
1967Jo03	PHRVA	153,	1169	R.R. Johnson, N.M. Hintz
1967Jo18	P-Winnipeg		793	W.H. Johnson, M.C. Hudson, R.A. Britten, D.C. Kayser
1967Ka01	NUPAB	90,	23	V.A. Karnaukhov, G.M. Ter-Akopyan, L.S. Vertogradov, L.A. Petrov
1967Ka11	PHRVA	159,	931	A.A. Katsanos, J.R. Huizenga
1967Ke02	PHRVA	153,	1331	J. Kern, G.L. Struble, R.K. Sheline
1967Ki01	NUPAB	98,	337	J.E. Kitching, M.W. Johns
1967Ko01	NUPAB	90,	558	J. Konijn, E.W.A. Lingeman, S.A. De Wit
1967Le06	NUPAB	98,	273	J. Lehmann
1967Le21	AFYSA	36,	183	Y. Le Beyec, M. Lefort
1967Ma07	NUPAB	95,	632	A. Marelius, P. Sparrman, S.-E. Hagglund
1967Ma35	PHRVA	163,	1098	K.W. Marlow, M.A. Waggoner
1967Mc03	NUPAB	92,	401	W.R. McMurray, P. Van Der Merwe, I.J. Van Heerden
1967Mc07	NUPAB	99,	6	W.R. McMurray, M. Peisach, R. Pretorius, P. Van der Merwe, I.J. Van Heerden
1967Mc10	NUPAB	98,	577	M.F. McCann, G.M. Lewis, K.M. Smith
1967Mc14	PRLTA	19,	1442	R.L. McGrath, J. Cerny, E. Norbeck
1967Mi02	NUPAB	94,	261	R.G. Miller, R.W. Kavanagh
1967Mi03	AENGA	22,	90	V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller, S.M. Polikanov, G.N. Flerov, Y.P. Kharitonov
1967Mi06	YAFIA	5,	49	V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller
1967Mi13	JUPSA	23,	1191	K. Miyano
1967Mo10	CHDBA	264,	330	E. Monnand, J.A. Pinston, R. Henck
1967Mo11	PYLBB	25,	22	H. Morinaga, K. Miyano, K. Fujikawa, R. Chiba, K. Ebisawa, N. Kawai
1967Mo12	NUPAB	99,	652	J.A. Moragues, P. Reyes-Suter, T. Suter
1967Mo13	NUPAB	100,	45	Y. Motavalledi-Nobar, J. Berthier, J. Blachot, R. Henck
1967Mo17	NUPAB	102,	406	W.G. Mourad, K.E. Nielsen, M. Petrilak
1967Mo22	NUPAB	104,	327	W.H. Moore, G.K. Schlegel, S.O. Dell, A. Graue, J.R. Lien
1967Mu16	PHRVA	159,	1039	G. Muehllehner, A.S. Poltorak, W.C. Parkinson, R.H. Bassel
1967Na08	PHRVA	160,	1035	R.A. Naumann, P.K. Hopke
1967Ne04	PHRVA	155,	1314	C.L. Nealy, R.K. Sheline
1967Ne08	PHRVA	164,	1503	C.L. Nealy, R.K. Sheline
1967Ni02	NUPAB	93,	385	H.L. Nielsen, K. Wilsky, J. Żylicz, G. Sorensen
1967Nu01	PYLBB	26,	78	M. Nurmia, T. Sikkeland, R. Silva, A. Ghiorso
1967Oa01	PYLBB	24,	142	N.S. Oakey, R.D. McFarlane
1967Ob04	NUPAB	104,	609	B.J. O'Brien, W.E. Dorenbusch, T.A. Belote, J. Rapaport
1967Od01	PHRVA	158,	957	F.H. O'Donnel, C.P. Browne
1967Pa04	JOPQA	28,	388	P. Paris
1967Pa08	CJPHA	45,	2621	J.J.H. Park, P. Christmas
1967Pa22	AAFPA	253,	1	A. Pakkanen
1967Pi03	PHRVA	159,	939	W.R. Pierson, K. Rengan
1967Pr04	PHRVA	157,	779	F.W. Prosser,Jr., G.U. Din, D.D. Tolbert

1967Pr10	PHRVA	161,	1080	W.V. Prestwich, R.E. Cote, G.E. Thomas
1967Ra13	NUPAB	99,	547	R.C. Ragaini, G.E. Gordon, W.B. Walters
1967Ra14	NUPAB	100,	280	J. Rapaport, T.A. Belote, W.E. Dorenbusch
1967Ri.A	BAPSA	12,	522	F.A. Rickey,Jr., H.C. Britt, and PrvCom AHW
1967Ro17	JOPQA	28,	637	G. Rotbart, J. Kalifa, G. Ronsin, M. Vergnes
1967Sc01	NUPAB	96,	337	S.O. Schriber, M.W. Johns
1967Sc05	PHRVA	154,	1146	O.W.B. Schult, M.E. Bunker, D.W. Hafemeister, E.B. Shera, E.T. Jurney, J.W. Starner, A. Backlin, B. Fogelberg, U. Gruber, B.P.K. Maier, H.R. Koch, W.N. Shelton, M. Minor, R.K. Sheline
1967Sc10	ZEPYA	203,	289	G. Schulz
1967Sc15	NUPAB	101,	177	G. Schulte
1967Sc26	NUPAB	104,	692	G. Schulz, K. Ziegler
1967Sc30	PHRVA	164,	1548	O.W.B. Schult, W.R. Kane, M.A.J. Mariscotti, J.M. Simic
1967Se10	PHRVA	164,	1450	K.K. Seth, J.A. Biggerstaff, P.D. Miller, G.R. Satchler
1967Si02	NUPAB	92,	475	A. Siivola
1967Si07	PYLBB	24,	331	T. Sikkeland, A. Ghiorso
1967Si08	PYLBB	24,	333	T. Sikkeland, A. Ghiorso, J. Maly, M.J. Nurmia
1967Si09	NUPAB	101,	129	A. Siivola
1967Sp03	PHRVA	155,	1368	R.R. Spencer, K.T. Faler
1967Sp06	NUPAB	99,	625	E.H. Spejewski, J.B. Willett
1967Sp08	ZEPYA	204,	129	A. Spalek, I. Rezanka, J. Frana, A. Mastalka
1967Sp09	P-Winnipeg		657	A. Sperduto
1967St14	YAFIA	5,	1205	G.L. Struble, R.K. Sheline
1967St22	CJPHA	45,	3393	G.M. Stinson, N.P. Archer, J.C. Waddington, R.G. Summers-Gill
1967St24	NUPAB	104,	67	M.M. Stautberg, R.R. Johnson, J.J. Kraushaar, B.W. Ridley
1967St30	P-Winnipeg		495	H.H. Staub
1967Su05	PHRVA	163,	1091	J.W. Sunier, A.J. Armini, R.M. Polichar, J.R. Richardson
1967Te02	NUPAB	98,	417	R.G. Tee, A. Aspinal
1967Th05	NUIMA	56,	325	G.F. Thomas, D.E. Blatchley, L.M. Bollinger
1967Ti04	NUPAB	100,	425	E. Tielsch-Cassel
1967Tj01	KDVSA	36,	#8	P.O. Tjom, B. Elbek
1967Tr06	NUPAB	97,	405	W. Treytl, K. Valli
1967Va01	NUPAB	91,	157	D. Varga, D. Berenyi, C. Ujhelyi, F. Molnar
1967Va14	NUPAB	99,	473	J. Van Klinken, L.M. Taff
1967Va17	PHRVA	159,	1013	K. Valli, M.J. Nurmia, E.K. Hyde
1967Va20	JINCA	29,	2503	K. Valli, E.K. Hyde, W. Treytl
1967Va22	PHRVA	161,	1284	K. Valli, W. Treytl, E.K. Hyde
1967Va23	NUPAB	102,	369	L. Van Neste, R. Coussement, J.P. Deutsch
1967Va27	IANFA	31,	284	S.S. Vasilev, E.T. George, L.Y. Shavtalov
1967Va.A	P-Winnipeg		296	K. Valli
1967Ve04	NUPAB	103,	188	E. Veje
1967Vo05	PHRVA	164,	1374	D. Von Ehrenstein, J.P. Schiffer
1967Vr04	IANFA	31,	604	J. Vrzal, K.Y. Gromov, J. Liptak, F. Molnar, V.A. Morozov, J. Urbanets, V.G. Chumin
1967Wa09	NUPAB	97,	641	A.H. Wapstra
1967Wa23	PHRVA	164,	1545	T.E. Ward, H. Ihochi, M. Karras, J.L. Meason
1967Wh03	PHRVA	160,	997	C.A. Whitten,Jr., L.C. McIntyre
1967Wi08	NUPAB	103,	433	C.A. Wiedner, A. Heusler, J. Solf, J.P. Wurm
1967Wi14	PHRVA	163,	1094	S. Wirjoamidjojo, B.D. Kern
1967Wi19	NUIMA	52,	77	J.B. Willet, E.H. Spejewski
1967Yt03	PHYSA	34,	559	C. Ythier, J.C. Meyer, J. Konijn, R. van Lieshout

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1968Ab14	IANFA	32,	749	A.A. Abdurazakov, J. Vrzal, K. Ya. Gromov, Zh. T. Zhelev, V.G. Kalinnikov, J. Liptak, S.K. Li, F.N. Mukhtasimov, U.K. Nazarov, J. Urbanets
1968Ab17	IANFA	32,	793	L.N. Abesalashvili, K.Y. Gromov, Z.T. Zhelev, V.G. Kalinnikov, J. Liptak, U.K. Nazarov, J. Urbanets
1968Ad03	JPAGB	1,	549	J.M. Adams, A. Adams, J.M. Calvert

1968Ad04	NUPAB	121,	289	I. Adam, K.S. Toth, M.F. Roche
1968Ad08	APPOA	34,	529	B. Adamowicz, Z. Moroz, Z. Preibisz, A. Zglinski
1968Ah01	NUPAB	119,	27	I. Ahmad, A.M. Friedman, J.P. Unik
1968An03	NUPAB	110,	289	S. Antman, H. Petterson, Y. Grunditz
1968An11	NUPAB	121,	337	S. Andre, P. Liaud
1968Ar03	PHRVA	165,	1194	A.J. Armini, J.W. Sunier, J.R. Richardson
1968Ar06	NUPAB	112,	609	N.K. Aras, E. Eichler, G.G. Chilosi
1968Au04	NUPAB	116,	14	R.L. Auble, J.B. Ball, C.B. Fulmer
1968Az01	ZEPYA	208,	234	A. Azman, A. Mojlk, J. Pahor
1968Ba25	YAFIA	7,	727	S.A. Baranov, V.M. Kulakov, V.M. Shatinskii
1968Ba53	YAFIA	7,	1153	I. Bacso, D.D. Bogdanov, S. Darocsy, V.A. Karnaukhov, L.A. Petrov
1968Ba73	JOPQS	1,C1	181	G. Bastin, C.F. Leang, R.J. Walen
1968Be02	NUPAB	106,	296	J.E. Benn, E.B. Dally, H.H. Muller, R.E. Pixley, H.H. Staub, H. Winkler
1968Be06	NUPAB	108,	382	H. Beekhuis, R.J. Van Duinen
1968Be10	NUPAB	109,	666	T.A. Belote, W.E. Dorenbusch, J. Rapaport
1968Be13	PHRVA	167,	1043	R.C. Bearse, D.H. Youngblood, J.L. Yntema
1968Be21	NUPAB	121,	433	C.E. Bemis,Jr., J. Halperin
1968Be35	ZEPYA	216,	229	E. Beck, H. Daniel
1968Be36	NUPAB	120,	401	T.A. Belote, W.E. Dorenbusch, J. Rapaport
1968Be.A	BAPSA	13,	1430	M.J. Bennet, R.K. Sheline
1968Bj01	NUPAB	107,	241	J.H. Bjerregaard, O. Hanson, O. Nathan, R. Chapman, S. Hinds
1968Bj02	NUPAB	110,	1	J.H. Bjerregaard, O. Hansen, O. Nathan, L. Vistisen, R. Chapman, S. Hinds
1968Bj03	NUPAB	113,	484	J.H. Bjerregaard, O. Hansen, O. Nathan, L. Vistisen, R. Chapman
1968Bj05	NUPAB	118,	241	S. Bjornholm, J. Dubois, B. Elbek
1968Br04	JINCA	30,	19	D. Brown, S.N. Dixon, K.M. Glover, F.J.G. Rogers
1968Br22	JINCA	30,	2591	L.C. Brown, R.C. Propst
1968Br23	PHRVA	174,	1247	H. Brunnader, J.C. Hardy, J. Cerny
1968Bu02	PHRVA	166,	1096	G.W. Butler, J. Cerny, S.W. Cosper, R.L. McGrath
1968Ch20	NUPAB	119,	305	R. Chapman, S. Hinds, A.E. Macgregor
1968Ch.A	PrvCom	AHW	May	R.E. Chrien
1968Co20	PHRVA	172,	1126	E.R. Cosman, D.C. Slater
1968Co22	NUPAB	117,	449	M. Conjeaud, S. Harar, Y. Cassagnou
1968Da02	NUPAB	107,	569	W.R. Daniels, D.C. Hoffman, F.O. Lawrence, C.J. Orth
1968Da09	PHRVA	172,	1176	J.M. D'Auria, H. Bakhru, J.C. Preiss
1968Da13	NUPAB	112,	241	W.R. Daniels, F.O. Lawrence, D.C. Hoffman
1968De17	YAFIA	8,	255	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1968De19	JINCA	30,	2873	P. del Marmol
1968Di09	JINCA	30,	2553	H. Diamond, J.J. Hines, R.K. Sjoblom, R.F. Barnes, D.N. Metta, J.L. Lerner, P.R. Fields
1968Do02	PYLBB	26,	148	W.E. Dorenbusch, F.T. Dao, J. Rapaport, T.A. Belote
1968Do03	NUPAB	109,	649	W.E. Dorenbusch, T.A. Belote, J. Rapaport
1968Do06	NUPAB	112,	385	W.E. Dorenbusch
1968Do12	PHRVA	175,	1446	K.W. Dolan, D.K. Daniels
1968Ea04	PHRVA	170,	1083	W.C. Easley, J.A. Barclay, D.A. Shirley
1968En01	NUPAB	107,	305	G.A.P. Engelbertink, H. Lindeman, M.J.N. Jacobs
1968Er03	JINCA	30,	1985	B.R. Erdal, A.C. Wahl
1968Et01	PHRVA	168,	1249	R.C. Etherton, L.M. Beyer, W.H. Kelly, D.J. Horen
1968Fi01	NUPAB	111,	338	E. Fincke, U. Jahnke
1968Fi04	PHRVA	173,	1078	H.J. Fischbeck
1968Fu07	NUPAB	118,	97	L. Funcke, W. Andrejtscheff, H. Graber, U. Hagemann, K.-H. Kaun, P. Kemnitz, W. Meiling, H. Sodan, F. Stary, G. Winter
1968Fu11	JUPSA	25,	946	S. Fukumoto, T. Matsuo, H. Matsuda
1968Go34	APPOA	34,	511	M. Gonsior, G.I. Lizurei, G. Nevodnichanskii, A.V. Potempa
1968Go.A	BAPSA	13,	1452	K.P. Gopinathan, W. Rubinson
1968Go.B	P-Dubna		54	N.A. Golovkov, R.B. Ivanov, Y.V. Norseev, So Ki Kvan, V.A. Khalkin, V.G. Shumin
1968Go.C	P-Dubna		27	N.A. Golovkov, S.V. Khvan, V.G. Chumin
1968Gr09	NUPAB	113,	353	T.B. Grandy, W.J. McDonald, W.K. Dawson, G.C. Neilson
1968Gr14	PYLBB	27,	274	R.C. Greenwood

1968Gr16	NUPAB	120,	493	A. Graue, E. Hvidsen, J.R. Lien, G. Sandvik, W.H. Moore
1968Gr17	NUPAB	120,	513	A. Graue, L. Herland, J.R. Lien, E.R. Cosman
1968Gu.A	JINR-P6-4079			L. Gueth, S. Gueth, E. Daroczy, B.S. Dzhelepov, Y.V. Norseev, V.A. Khalkin
1968Ha09	PYLBB	26,	432	M. Hagen, K.H. Maier, R. Michaelsen
1968Ha10	PHRVA	168,	1373	R.A. Harlan, R.R. Sheline
1968Ha13	NUPAB	113,	75	O. Hansen, O. Nathan, L. Vistisen, R. Chapman
1968Ha14	NUPAB	113,	206	R.L. Hahn, M.F. Roche, K.S. Toth
1968He03	PYLBB	26,	435	D.C. Hensley, P.H. Nettles, C.A. Barnes
1968Ho01	NUPAB	106,	382	K.J. Hofstetter, P.J. Daly
1968Ho10	JOPQA	29,	138	J.C. Hocquenghem, S. Andre, P. Liaud
1968Ho13	NUPAB	115,	225	R.W. Hoff, J.E. Evans, E.K. Hulet, R.J. Dupzyk, B.J. Qualheim
1968Ho22	AFYSA	37,	1	G. Holm
1968Hs01	NUPAB	109,	423	S.T. Hsue, M.U. Kim, L.M. Langer, E.H. Spejewski
1968Hs02	NUPAB	117,	686	S.T. Hsue, M.U. Kim, L.M. Langer, W.F. Piel, E.H. Spejewski
1968Hu05	PHRVA	167,	1064	H.C. Hudson, W.H. Johnson,Jr.
1968Ja06	NUPAB	115,	321	J.F.W. Jansen, W. Pauw, C.J. Touset
1968Ja11	AFYSA	37,	585	A. Jasinski, C.J. Herrlander
1968Jo11	NUPAB	113,	104	L.V. Johnson, T.J. Kennett
1968Jo18	AFYSA	37,	453	K. Johansson, E. Karlsson, L.O. Norlin, P.N. Tandon, H.C. Jain
1968Ki06	IANFA	32,	677	B.G. Kiselev, V.R. Burmistrov, V.A. Didorenko
1968Ki07	YAFIA	8,	1057	B.G. Kiselev, V.R. Burmistrov
1968Kl08	IANFA	32,	1640	A.A. Klyushnikov, N.F. Mitrokhovich, A.I. Feoktistov
1968La18	PHRVA	175,	1507	I.M. Ladenbauer-Bellis, H. Bakhru
1968Le07	CHDBA	266,	629	C.F. Leang, G. Bastin-Scoffier
1968Li01	ZEPYA	208,	208	E. Liukhonen, J. Kantele
1968Li08	NUPAB	118,	379	H. Liskien
1968Li12	NUPAB	122,	373	H. Lindeman, G.A.P. Engelbertink, M.W. Ockeloen, H.S. Pruys
1968Lo15	YAFIA	8,	849	Y.V. Lobanov, V.A. Durin
1968Ma35	PHRVA	174,	1485	M.A.J. Mariscotti, W. Gelletly, J.A. Moragues, W.R. Kane
1968Ma45	JUPSA	25,	950	H. Matsuda, T. Matsuo
1968Mc06	PHRVA	168,	1393	M. McDonnel, M.K. Ramaswami
1968Mc09	PHRVA	172,	1253	L.D. McIsaac
1968Mc10	PHRVA	171,	1254	W.J. McDonald, J.T. Sample, D.M. Sheppard, G.M. Stinson, K.W. Jon
1968Mc12	PYLBB	27,	443	R.L. McGrath, J.C. Hardy, J. Cerny
1968Mi08	NUPAB	119,	609	W. Michaelis, F. Weller, H. Schmidt, G. Markus, U. Fanger
1968Mo21	PHRVA	175,	1516	P.A. Moore, P.J. Riley, C.M. Jones, M.D. Mancusi, J.L. Foster,Jr.
1968My.A	P-Debreccen		102	B. Mysek, Z. Sujkowski, B. Kotlinska
1968Pa03	NUPAB	110,	674	B. Parsa, G.E. Gordon, W.B. Walters
1968Pe01	NUPAB	108,	124	H. Petterson, S. Antman, Y. Grunditz
1968Pi03	JOPQA	29,	257	R.A. Pinston, E. Monnand, A. Moussa
1968Re04	NSENA	32,	46	S.A. Reynolds, J.F. Emery, E.I. Wyatt
1968Re12	JINCA	30,	2887	K. Rengan, H.C. Griffin
1968Ri07	PHRVA	170,	1157	F.A. Rickey, R.K. Sheline
1968Ro09	PHRVA	170,	1013	J.E. Robertshaw, S. Mecca, A. Sperduto, W.W. Buechner
1968Sa09	NUPAB	118,	409	R. Santo, R. Stock, J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds
1968Sa13	NUPAB	121,	65	C. Samour, H.E. Jackson, J. Julien, A. Bloch, C. Lopata, J. Morgenstern
1968Sc01	PHRVA	165,	1184	I.G. Schröder, M. McKeown, G. Scharff-Goldhaber
1968Sc04	PHRVA	166,	1212	D. Schroeer, P.S. Jastram
1968Sc10	JOPQA	29,	385	F. Schussler
1968Sc14	ZEPYA	217,	282	W.D. Schmidt-Ott, W. Weirauch, F. Smend, H. Langhoff, D.G. Foller
1968Sc15	PHRVA	175,	1453	J.J. Schwartz
1968Sh12	PHRVA	170,	1108	E.B. Shera, M.E. Bunker, R.K. Sheline, S.H. Vegors
1968Si01	NUPAB	109,	231	A. Siivola
1968Sn01	NUPAB	113,	581	R.E. Snyder, G.B. Beard
1968Sp01	NUPAB	113,	395	R. Spilling, H. Gruppelaar, H.F. de Vries, A.M.J. Spits
1968Su02	PRLTA	21,	237	A.W. Sunyar, G. Scharff-Goldhaber, M. McKeown
1968Te01	PYLBB	26,	371	B. Teitelman, G.M. Temmer
1968To10	PHRVA	174,	1494	D.F. Torgerson, R.A. Gough, R.D. Macfarlane

1968To18	JINCA	30,	1125	L. Tomlinson, M.H. Hurdus
1968To19	JINCA	30,	1649	L. Tomlinson, M.H. Hurdus
1968Tr01	NUPAB	111,	241	A. Trier, L. Gonzáles, J. Rapaport, T.A. Belote, W.E. Dorenbusch
1968Tr07	ZENAA	23,	2127	N. Trautmann, R. Denig, N. Karfeel, G. Herrmann
1968Va04	PHRVA	167,	1094	K. Valli, W.J. Treytl, E.K. Hyde
1968Va06	NUPAB	112,	372	J. Van Klinken, F. Pleiter, H.T. Dijkstra
1968Va08	ATKOA	10,	27	E. Vatai, K. Hohmuth
1968Va17	PHYSA	40,	253	H. Van Krugten, E.W. Koopmans
1968Va18	PHRVA	176,	1377	K. Valli, E.K. Hyde
1968Vi01	PYLBB	26,	285	G.B. Vingiani, G. Chilosi, W. Bruynesteyn
1968Vi05	IANFA	32,	1625	V.D. Vitman, B.S. Dzelepov, A.I. Medvedev
1968We02	NUPAB	109,	561	H. Wenniger, J. Stiewe, H. Leutz
1968Wh03	NUIMA	66,	70	D.H. White, D.J. Groves, R.E. Birket
1968Wi21	IANFA	32,	187	K. Wilsky, K.Y. Gromov, Z.T. Zhelev, V.V. Kuznetsov, G. Muziol, O.B. Nielsen, O. Skillbreit
1968Wi25	ATKEA	13,	383	P. Wille
1968Wo01	NUPAB	107,	332	A.C. Wolff, M.A. Meyer, P.M. Endt
1968Wo02	NUPAB	112,	156	J.L. Wolfson, A.J. Collier
1968Wo09	PYLBB	28,	77	S.S.M. Wong, W.G. Davies
1968Yo01	PYLBB	26,	143	H.J. Young, J. Rapaport, and PrvCom AHW
1968Yo06	PHRVA	173,	949	P.G. Young, R.H. Stoker, G.G. Olsen
1968Ze04	APASA	27,	31	H. Zemann, D. Zemrad
1968Zh04	IANFA	32,	1610	Zh. Zhelev, V.G. Kalinnikov, J. Liptak, L.K. Peker

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1969Aj03	PHRVA	188,	1813	F. Ajzenberg-Selove
1969Ak01	IANFA	33,	104	M.R. Akhmed, K.A. Baskova, S.S. Vasilev, L.Y. Shaftalov
1969Am01	JINCA	31,	577	I. Amarel, H. Gauvin, A. Johnson
1969An18	PYLBB	30,	160	S. Andre, P. Liaud, F. Perales, S.Y. van der Werf
1969Ar23	IANFA	33,	1218	R. Arlt, Z. Malek, G. Musiol, G. Pfrepper, H. Strusny
1969Ar.A	P-Studsvik			S.E. Arnell, R. Hardell, O. Skeppstedt, E. Wallander
1969Ba02	CJPHA	47,	419	H. Bakhru, R.I. Morse, I.L. Preiss
1969Ba07	PHRVA	177,	1686	H. Bakhru, I.M. Ladenbauer-Bellis
1969Ba31	PHRVA	184,	1142	H. Bakhru, I.M. Ladenbauer-Bellis
1969Ba57	YAFIA	10,	1110	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov
1969Be06	JINCA	31,	599	C.E. Bemis,Jr., J. Halperin, R. Eby
1969Be17	NUPAB	129,	571	K. Beg, R.D. Macfarlane
1969Be74	NUIMA	76,	77	E. Beck
1969Bj01	NUPAB	131,	481	J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds
1969Bl01	PRLTA	22,	470	A.G. Blair, J.G. Beery, E.R. Flynn
1969Bl03	NUPAB	123,	129	R. Bloch, T. Knellwolf, R.E. Pixley
1969Bl16	NUPAB	139,	434	J. Blachot, J.A. Pinston, F. Schussler
1969Bo48	NUIMA	72,	40	H.M.W. Booij, E.A. Van Hoek, J. Blok
1969Bo49	NUIMA	73,	323	H.E. Bosch, M.A. Fariolli, N. Martin, M.C. Simon
1969Br11	PHRVA	185,	1553	H.C. Britt, J.D. Cramer
1969Br21	NUPAB	137,	487	H. Brunnader, J.C. Hardy, J. Cerny
1969Bu01	NUPAB	124,	683	D.G. Burke, D.E. Nelson, C.W. Reich
1969Bu05	PHRVA	179,	1113	D.L. Bushnell, R.P. Chaturvedi, R.K. Smither
1969Bu.A	P-Yerevan		71	V.R. Burmistrov, B.G. Kiselev
1969Ca03	NUPAB	125,	267	G.C. Carlson, W.C. Schick, Jr., W.L. Talbert, Jr., F.K. Wohn
1969Ce01	PRLTA	22,	612	J. Cerny, E.A. Mendelson,Jr., G.J. Wozniak, J.E. Esterl, J.S. Har
1969Ch18	PYLBB	29,	652	J. Chaumont, E. Roeckl, Y. Nir-El, C. Thibault-Philippe, R. Klapisch, R. Bernas
1969Co03	NUPAB	129,	10	M. Conjeaud, S. Harar, E. Thuriere
1969Da15	PHRVA	181,	1618	J.W. Dawson, R.K. Sheline, E.T. Jurney
1969De19	YAFIA	10,	433	R.A. Demirkhanov, V.V. Dorokhov
1969De27	PYLBB	30,	639	P. De Wit, C. Van der Leun
1969Do01	NUPAB	133,	146	W.E. Dorenbusch, T.A. Belote, J. Rapaport
1969Fa01	NUPAB	123,	616	K.T. Faler, R.R. Spencer, R.A. Harlan

1969Fl02	ZEPYA	225,	164	D. Flothman, W. Wiesner, R. Lohken, H. Rebel
1969Fr01	NUPAB	127,	33	A.M. Friedman, I. Ahmad, J. Milsted, D.W. Engelkemeir
1969Fr08	NUPAB	132,	593	J.M. Freeman, J.G. Jenkin, G. Murray, D.C. Robinson, W.E. Burcham
1969Fr22	ANPYA	23,	168	V.R. Friedrich, M. Kiesling, G. Otto
1969Ge07	PHRVA	181,	1682	W. Gelletly, J.A. Moragues, M.A.J. Mariscotti, W.R. Kane
1969Gh01	PRLTA	22,	1317	A. Ghiorso, M. Nurmia, J. Harris, K. Eskola, P. Eskola
1969Go23	IANFA	33,	1622	N.A. Golovkov, S. Guetch, B.S. Dzelepov, Yu. V. Norseev, V.A. Chalkin, V.G. Shumin
1969Gr08	NUPAB	131,	180	H. Gruppelaar, A.M.F. Op den Kamp, A.M.J. Spits
1969Gr24	NUPAB	136,	513	A. Graue, J.R. Lien, S. Royrvik, O.J. Aaroy, W.H. Moore
1969Gr28	CHDBA	269,	652	B. Grennberg, A. Rytz
1969Gr31	YAFIA	10,	681	L.V. Groshev, V.N. Dvoretskii, A.M. Demidov, M.S. Alvash
1969Ha03	PYLBB	28,	415	P.G. Hansen, P. Hornshoj, H.L. Nielsen, K. Wilsky, H. Kugler, G. Astner, E. Hagebo, J. Hudis, A. Kjelberg, F. Munnich, P. Patzelt, M. Alpsten, G. Andersson, A. Appelqvist, B. Bengtsson, R.A. Naumann, O.B. Nielsen, E. Beck, R. Foucher, J.P. Husson, J. Jastrzebski, A. Johnson, J. Alstad, T. Jahnsen, A.C. Pappas, T. Tunaal, R. Henck, P. Siffert, G. Rudstam
1969Ha11	NUPAB	127,	71	O. Hansen, O. Nathan, R. Chapman, S. Hinds
1969Ha32	PHRVA	182,	1329	R.L. Hahn, M.F. Roche, K.S. Toth
1969Ha44	NUPAB	136,	414	P.E. Haustein, A.F. Voigt
1969Ha.A	P-Studsvik		209	R. Hardell
1969He05	ZEPYA	218,	137	G. Heymann, P. van der Merwe, I.J. van Heerden, I.C. Dormehl
1969He16	NUPAB	137,	157	R. Hess, F.C. Roehmer, F. Gassmann, T. von Ledebur
1969Ho10	NUPAB	131,	551	D.C. Hoffman, F.O. Lawrence, W.R. Daniels
1969Ho37	PHRVA	187,	1709	P.K. Hopke, R.A. Naumann, E.H. Spejewski
1969Jo16	NUPAB	133,	213	K.H. Johansen, B. Bengtson, P.G. Hansen, P. Hornshøj
1969Ka06	JUPSA	26,	1071	T. Katoh, T. Morii, H. Inoue, Y. Yoshizawa, H. Gotoh, E. Sakai
1969Ka13	NUCIA	61,	220	Y. Kabasakal, M.K. Ramaswamy
1969Ki15	IANFA	33,	1340	B.G. Kiselev, V.R. Burmistrov
1969Ki16	YAFIA	10,	1105	B.G. Kiselev, V.R. Burmistrov
1969Ki.A	P-Yerevan		42	B.G. Kiselev, V.N. Lebkovskii
1969Ku03	ZEPYA	222,	144	E. Kuhlmann, K.E.G. Lobner
1969Ku07	NUPAB	133,	554	T. Kuroyanagi, T. Tamura
1969La11	PHRVA	178,	1919	R.G. Lanier, R.K. Sheline, H.F. Mahlein, T. von Egidy, W. Kaiser, H.R. Koch, U. Gruber, B.P.K. Maier, O.W.B. Schult, D.W. Hafemeister, E.B. Shera
1969La15	PHRVA	180,	1015	I.M. Ladenbauer-Bellis, H. Bakhru
1969La33	PHRVA	187,	1739	I.M. Ladenbauer-Bellis, H. Bakhru, A. Luzzati
1969Le05	NUPAB	135,	36	C.M. Lederer, J.M. Jaklevic, S.G. Prussin
1969Le.A	Th.-Paris			C.F. Leang
1969Lu09	APPOA	36,	939	J. Ludziejewski, J. Kownacki, W. Klamra, J. Chaszczewska, W. Przyborski
1969Ly06	NUPAB	135,	97	L.L. Lynn, W.E. Dorenbusch, T.A. Belote, J. Rapaport
1969Mc05	NUPAB	127,	531	M. McDonnel, M.K. Ramaswami
1969Mi10	PHRVA	177,	1455	R.C. Minehart, L. Coulson, W.F. Grubb,III, K. Ziock
1969Mo13	PHRVA	180,	1105	J.A. Moragues, M.A.J. Mariscotti, W. Gelletly, W.R. Kane
1969Mo16	NUPAB	134,	321	E. Monnand, J. Blachot, A. Moussa
1969Na03	PHRVA	178,	1968	T. Nagarajan, M. Ravindranath, K.V. Reddy, S. Jananandа
1969Na05	NUPAB	134,	433	T. Nagarajan, M. Ravindranath, K.V. Reddy
1969Na11	NUPAB	137,	467	T. Nagarajan, M. Ravindranath, K.V. Reddy
1969Na21	SHIBA	17,	705	H. Nakabushi, I. Katakuse, K. Ogata
1969Oh01	PHRVA	177,	1695	H. Ohnuma, J.R. Erskine, J.A. Nolen,Jr., J.P. Schiffer, P.G. Roos
1969Ov01	NUIMA	68,	61	J.C. Overley, P.D. Parker, D.A. Bromley
1969Ph01	NUPAB	135,	116	M.E. Phelps, D.G. Sarantes
1969Ph03	RRALA	1,	351	A. Phillippe, C. Ballaux, R. Dams, F. Adams
1969Pi08	NUPAB	133,	124	J.A. Pinston, F. Schussler, A. Moussa
1969Pr04	NUPAB	131,	679	G. Presser, R. Bass, K. Kruger
1969Pr06	PHRVA	180,	945	W.V. Prestwich, G.E. Thomas
1969Pr11	PHRVA	188,	1930	V. Prodi, K.F. Flynn, L.E. Glendenin
1969Ra02	NUPAB	123,	627	J. Rapaport, T.A. Belote, W.E. Dorenbusch
1969Ra05	NUPAB	125,	97	R.C. Ragaini, J.D. Knight

1969Ra16	JINCA	31,	1883	H. Ravn
1969Ra24	NUPAB	138,	49	S. Ray, J.N. Mo, S. Murzynski, S.K. Mark
1969Re04	PHYSA	40,	567	E.R. Reddingius, H. Postma
1969Ri04	NUPAB	127,	399	J.C. Ritter, R.E. Larson
1969Ro33	RAACA	11,	104	J. Robert, C.F. Miranda, R. Muxart
1969Ru14	PHRVA	179,	1188	N.G. Runnalls, D.E. Troutner, R.L. Ferguson
1969Sa08	NUPAB	130,	97	D.G. Sarantites, S. Gronemeyer
1969Sa34	CJCHA	47,	1667	D.R. Sachdev, L. Yaffe
1969Sh04	NUPAB	128,	73	M.H. Shapiro, C. Moss, W.M. Denny
1969St02	PHRVA	178,	2024	R.H. Stokes, P.G. Young
1969St07	PHRVA	178,	1789	R.H. Stokes, P.G. Young
1969Ta04	PHRVA	177,	1805	W.L. Talbert, Jr., A.B. Tucker, G.M. Day
1969Te01	PHRVA	177,	1595	J. Tenenbaum, R. Moreh, Y. Wand, B. Arad, G. Ben-David
1969Tj01	KDVSA	37,	#7	P.O. Tjom, B. Elbek
1969To14	AFYSA	38,	261	S. Toernqvist, S. Stroem
1969Va06	NUPAB	130,	586	J.M. Vara, R. Gaeta
1969Va17	NUPAB	134,	215	S.Y. Van der Werf, H. De Waard, H. Beekhuis
1969Wa10	PHRVA	182,	1186	T.E. Ward, P.H. Riley, P.K. Kuroda
1969Wa15	JINCA	31,	2679	T.E. Ward, P.H. Pile, P.K. Kuroda
1969Wa19	PHRVA	185,	1439	J. Walinga, J.C. Manthuruthil, C.P. Poirier
1969Wa24	RAACA	12,	217	T.E. Ward, P.K. Kuroda
1969Wa29	PHRVA	178,	1894	R.B. Walton, R.E. Sund
1969Wa.A	UCRL-18667		54	D. Ward, F.S. Stephens, R.M. Diamond
1969Wi.A	Th.-Berkeley			J.B. Wilhelmy UCRL-18978
1969WiZX	Th.-California			J.B. Wilhelmy
1969Ya02	NUPAB	130,	456	T. Yamazaki, J. Sato
1969Zo04	PHRVA	185,	1537	W.H. Zoller, W.B. Walters, C.D. Coryell

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1970Ab05	NUPAB	151,	187	C. Abulaffio, J. Felsteiner, R. Kalish, B. Rosner, G. Vourvopoulos
1970Ab15	NUCIA	70,	391	U. Abbondanno, R. Giacomich, L. Granata, M. Lagonegro, G. Poiani, P. Blasi, R.A. Ricci
1970Ad01	NUPAB	143,	97	E.G. Adelsberger, A.V. Nero, A.B. McDonald
1970Ad09	PHSTB	2,	96	K.E. Adelroth, H. Nyqvist, A. Rosen
1970Af.A	JINR-P6-4972			V.P. Afanasiev, M. Bocharova, N.A. Golovkov, I. Gromova, R.B. Ivanov, V.I. Kuzmin, Y.V. Norseev, V.G. Chumin
1970Ag01	IANFA	34,	397	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ag02	IANFA	34,	435	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ag03	IANFA	34,	201	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ah01	NUPAB	140,	141	I. Ahmad, R.K. Sjoblom, R.F. Barnes, E.P. Horwitz, P.R. Fields
1970Aj01	NUPAB	142,	641	F. Ajzenberg-Selove, G. Igo
1970Ak02	IANFA	34,	777	A.I. Akhmadzhanov, R. Broda, V. Valyus, I. Zvolski, I. Molnar, Y. Stygen, V.I. Fominikh, A. Krynkevich, V.M. Tsupko-Sitnikov
1970An06	ZEPYA	234,	455	A. Antilla, M. Bister, E. Arminen
1970An14	NUPAB	153,	17	M.L. Andersen, S.A. Andersen, O. Nathan, K.M. Bisgard, K. Gregersen, O. Hansen, S. Hinds, R. Chapman
1970An25	NUPAB	157,	561	T.R. Anfinsen, K. Bjorndal, A. Graue, J.R. Lien, G.E. Sandvik, L.O. Tveita, K. Ytterstad, E.R. Cosman
1970Ar04	IANFA	34,	409	R. Arlt, G. Beyer, G. Musiol, L.K. Peker, G. Pfrepper, H. Strusny
1970As08	NUPAB	158,	146	J. Ashkenazi, E. Friedman, D. Nir, J. Zioni
1970Be24	PRVCA	2,	297	R.W. Bercaw, R.E. Warner
1970Be48	NUPAB	157,	520	G.B. Beard, G.E. Thomas
1970Be.A	P-Leysin		353	E. Beck, ISOLDE
1970Bo13	PRVCA	2,	1841	J. Borggreen, K. Valli, E.K. Hyde
1970Bo19	JINCA	32,	2805	G.G.J. Boswell, T. McGee
1970Bo22	NUPAB	157,	481	M. Bormann, H.H. Bissem, E. Magiera, R. Warnemunde
1970Bo29	PRVCA	2,	1951	L.M. Bollinger, G.E. Thomas
1970Br01	PRVCA	1,	275	T.H. Braid, R.R. Chasman, J.R. Erskine, A.M. Friedman

1970Br23	NUPAB	153,	289	C.P. Browne, G. Maille, R. Tarara J.R. Duray
1970Br.A	JINR-E6-5197			R. Broda, S. Chojnacki, C. Droste, T. Morek, W. Walus
1970Bu19	PRVCA	2,	1513	D.J. Buss, R.K. Smither
1970Ca01	NUPAB	141,	97	P.E. Cavanagh, C.F. Coleman, A.G. Hardacre, G.A. Gard, J.F. Turner
1970Ca25	NUPAB	158,	403	L.C. Carraz, J. Blachot, E. Monnand, A. Moussa
1970Ce02	PRLTA	24,	1128	J. Cerny, C.U. Cardinal, H.C. Evans, K.P. Jackson, N.A. Jelley
1970Ce04	PYLBB	33,	284	J. Cerny, J.E. Esterl, R.A. Gough, R.G. Sextro
1970Ch02	NUPAB	142,	634	J.C. Chang, G. Schupp, R.R. Hurst
1970Ch28	NUPAB	156,	276	A. Charvet, R. Duffait, A. Emsallem, R. Chéry
1970Ch29	JOPQA	31,	737	A. Charvet, R. Duffait, A. Emsallem, R. Chéry
1970Ch.A	BAPSA	15,	87	R.E. Chrien, S. Bokharee, J.B. Garg
1970Cr04	NUPAB	153,	413	F.P. Cranston, R.E. Birkett, D.H. White, J.A. Hughes
1970De08	JINCA	32,	705	P. del Marmol, D.C. Perricos
1970De39	NUPAB	158,	166	F.W.N. De Boer, E.W.A. Lingeman, R. van Lieshout, R.A. Ricci
1970Do.A	COO-1779-49		47	R. Doebler (Also Thesis Michigan State University)
1970Dz04	PYLBB	33,	302	T.G. Dzubay, A.A. Jaffe, E.J. Ludwig, T.A. White, F. Everling, D.W. Miller, D.A. Outlaw
1970Ei02	NUPAB	141,	289	J. Eidens, E. Roeckl, P. Armbruster
1970El.A	BAPSA	15,	1670	J.L. Ellis, H.E. Hall,Jr.
1970Er01	AFYSA	40,	139	B. Erlandsson, A. Marcinkowski, N. Wall
1970Er03	NUPAB	146,	43	B. Erlandson, A. Marcinkowski
1970Es02	PRVCA	2,	1058	P. Eskola, K. Eskola, M. Nurmia, A. Ghiorso
1970Es03	PYLBB	33,	287	J.E. Esterl, J.C. Hardy, R.G. Sextro, J. Cerny
1970Fa06	NUPAB	146,	549	U. Fanger, D. Heck, W. Michaelis, H. Ottmar, H. Schmidt, R. Gaeta
1970Fi03	NUPAB	144,	67	E. Fincke, U. Jahnke, B. Schreiber, A. Weidinger
1970Fi12	NUPAB	154,	407	P.R. Fields, I. Ahmad, R.F. Barnes, R.K. Sjoblom, E.P. Horwitz
1970Fi.A	CERN-70-29			M. Finger, R. Foucher, J.P. Husson, J. Jastrzebski, A. Johnson, C. Sebille, R. Henck, J.M. Kuchly, R. Regal, P. Siffert, G. Astner, B.R. Erdal, E. Hagebo, A. Kjelberg, F. Munnich, P. Patzelt, E. Beck, H. Kugler
1970Fl05	NUPAB	154,	225	E.R. Flynn, J.G. Beery, A.G. Blair
1970Fl08	NUPAB	157,	1	D.G. Fleming, M. Blann, H.W. Fulbright, J.A. Robbins
1970Fo09	PYLBB	32,	689	I. Fodor, I. Szentpetery, J. Szucz
1970Ga32	IANFA	34,	2048	S. Gabrakov, Z. Zhelev, N.G. Zaitseva, I. Penev, S.S. Sabirov
1970Ge03	PRVCA	1,	1052	W. Gelletly, J.A. Moragues, M.A. Mariscotti, W.R. Kane
1970Gh01	PYLBB	32,	95	A. Ghiorso, M. Nurmia, K. Eskola, P. Eskola
1970Gh02	PRLTA	24,	1498	A. Ghiorso, M. Nurmia, K. Eskola, J. Harris, P. Eskola
1970Go04	PRVCA	1,	123	D.R. Goosman, E.G. Adelsberger, K.A. Snover
1970Go11	PRVCA	1,	1939	D.R. Goosman, R.W. Kavanagh
1970Go20	NUPAB	151,	513	P.F.A. Goudsmit, J. Konijn, F.W.N. De Boer
1970Go39	NUIMA	88,	197	W. Goedbloed, S.C. Goverse, C.P. Gerner, A. Brinkman, J. Blok
1970Go42	PRVCA	2,	2406	D.J. Gorman, F. Asaro
1970Go45	PRVCA	1,	1939	D.R. Goosman, R.W. Kavanagh
1970Gr38	PYLBB	33,	474	J.W. Gruter, K. Sistemich, P. Armbruster, J. Eidens, H. Lawin
1970Gr46	KDVSA	37,	#12	T. Grotdal, K. Nybø, B. Elbek
1970Gu14	JINCA	32,	3425	M.C. Gupta, R.D. MacFarlane
1970Ha10	PRVCA	1,	561	J.C. Hardy, H. Brunnader, J. Cerny
1970Ha18	NUPAB	148,	249	P.G. Hansen, H.L. Nielsen, K. Wilsky, M. Alpsten, M. Finger, A. Lindahl, R.A. Naumann, O.B. Nielsen
1970Ha21	NUPAB	158,	625	T. Hattula, S. Andre, F. Schussler, A. Moussa
1970Ha56	PHSTB	1,	85	R. Hardell, C. Boer
1970Ha60	PHSTB	2,	23	A. Hasselgren
1970He14	CJPHA	48,	1040	A.W. Herman, E.A. Heighway, J.D. McArthur
1970He27	NUPAB	159,	49	D. Heck, N.M. Ahmed, U. Fanger, W. Michaelis, H. Ottmar, H. Schmidt
1970HeZH	P-Leysin		985	G. Herrmann, N. Kaffrell, N. Trautmann, R. Denig, W. Herzog, D. Hubscher, K.L. Kratz
1970HeZX	P-Leysin		985	G. Herrmann, N. Kaffrell, N. Trautmann, R. Denig, W. Herzog, D. Hubscher, K.L. Kratz
1970Hi06	PRLTA	25,	829	R.A. Hinrichs, R. Sherr, G.M. Crawley, I. Proctor
1970Ho01	NUPAB	140,	658	K.J. Hofstetter, T.T. Sugihara

1970Hu02	ZEPYA	230,	358	H.A.M. Hussein
1970Ja22	PYLBB	33,	281	K.P. Jackson, C.U. Cardinal, H.C. Evans, N.A. Jelley, J. Cerny
1970Jo08	PRVCA	1,	2030	H.D. Jones, R.K. Sheline
1970Jo11	NUPAB	150,	497	H.D. Jones, R.K. Sheline
1970Jo12	NUPAB	150,	520	H.W. Jongsma, J.C. de Lange, J.C. Boddendijk, R. Kamermans, H. Verheul
1970Jo20	PRVCA	2,	1451	W. John, F.W. Guy, J.J. Wesolowski
1970Jo22	PRVCA	2,	1747	H.D. Jones, R.K. Sheline
1970Ju04	PRVCA	2,	2323	E.T. Jurney, R.K. Sheline, E.B. Shera, H.R. Koch, B.P.K. Maier, U. Gruber, H. Baader, D. Breitig, O.W.B. Schult
1970Ka04	NUPAB	147,	120	M. Karras, T.E. Ward, H. Schoche
1970Ka22	PRLTA	25,	953	W.R. Kane
1970KaZV	BMBW-FB-70-19-P78			N. Kaffrell, W. Herzog, N. Trautmann
1970Ke05	P-Kyoto			D.P. Kerr, K.T. Bainbridge
1970Ke08	PRVCA	2,	213	K.W. Kemper, C.M. McKenna, J.W. Nelson
1970Ki01	NUPAB	142,	35	H.J. Kim, R.L. Robinson, C.H. Jonnson, S. Raman
1970Kl05	ZEPYA	238,	11	H.V. Klapdor, K. Buchholz, F. Kaestner
1970Kn03	PRLTA	25,	1210	D.W. Kneff, H.W. Lefevre, G.U. Din
1970Kn05	NUPAB	159,	642	K.T. Knoepfle, M. Rogge, C. Mayer-Boricke, J. Pedersen, D. Burch
1970Kr05	JINCA	32,	3713	J.-V. Kratz, G. Herrmann
1970Le05	YAFIA	11,	483	V.N. Levkovskii, I.V. Kazachevskii
1970Li04	AFYSA	40,	197	H. Linusson, R. Hardell, S. Arnell
1970Lo02	NUPAB	152,	463	W. Lourens, B.O. Ten Brink, A.H. Wapstra
1970Ma05	NUPAB	145,	223	J.D. Macdougall, W. McLatchie, S. Whineray, H.E. Duckworth
1970Ma11	CJPHA	48,	2056	J.F. Mason, M.W. Johns
1970Ma19	NUPAB	147,	513	E.S. Macias, J.P. Op den Beeck, W.B. Walters
1970Ma25	NUPAB	149,	593	S. Maripuu
1970Ma31	NUPAB	151,	465	S. Maripuu
1970Ma36	NUPAB	153,	183	S. Maripuu
1970Ma47	JUPSA	29,	1116	Z.-IMatumoto, T. Tamura
1970Ma.A	P-Leysin		321	M.I. Macias-Marques, R. Foucher, M. Caillau, J. Belhassen
1970Mc01	NUPAB	140,	529	D.K. McMillan, B.D. Pate
1970Mc03	NUPAB	145,	244	W. McLatchie, S. Whineray, J.D. Macdougall, H.E. Duckworth
1970Mc06	NUPAB	144,	593	A.B. McDonald, E.G. Adelsberger
1970Me11	PRLTA	25,	533	R. Mendelson, G.J. Wozniak, A.D. Bacher, J.M. Loiseaux, J. Cerny
1970Mi01	NUPAB	143,	225	W. Michaelis, F. Weller, U. Fanger, R. Gaeta, G. Markus, H. Ottmar, H. Schmidt
1970Mo08	NUPAB	145,	423	C.E. Moss
1970Mu02	NUPAB	142,	21	G. Murray, W.J.K. White, J.C. Wilmott, R.F. Entwistle
1970Mu15	PRVCA	2,	655	T.J. Mulligan, R.K. Sheline, M.E. Bunker, E.T. Jurney
1970Mu17	NUPAB	158,	183	F. Münnich, A. Kjelberg, D.J. Hnatowich
1970Ob02	NUPAB	153,	593	B.J. O'Brien, G.E. Coote
1970Oh05	JUPSA	29,	1435	S. Ohya, T. Tamura, S. Kageyama
1970Or.A	DASA-2570			V.J. Orphan, N.C. Rasmussen, T.L. Harper
1970Pe04	ZEPYA	233,	260	H. Petterson, S. Antman, Y. Grunditz
1970Pi01	NUPAB	144,	42	J.A. Pinston, F. Schussler
1970Qa03	NUPAB	154,	145	S.M. Qaim
1970Ra14	APAHA	28,	263	K. Raichev, L. Tron
1970Re02	PRVCA	1,	721	P.L. Reeder
1970Re13	RAACA	14,	46	J.L. Repace
1970Re.A	PrvCom	NDG		A.C. Rester
1970Ro06	PRVCA	1,	1761	A.A. Rollefson, P.F. Jones, R.J. Shea
1970Ro07	NUPAB	147,	235	M.L. Roush, L.A. West, J.B. Marion
1970Ru.A	P-Leysin		341	G. Rudstam, E. Lund, L. Westgaard, B. Grapengieser, and PrvCom AHW
1970Sa19	NUPAB	157,	113	M. Sakai, R. Bertini, C. Gehringer
1970Sc06	ZEPYA	232,	398	W.D. Schmidt-Ott
1970Sc20	ZEPYA	236,	445	W.D. Schmidt-Ott
1970Sc22	NUPAB	153,	502	W. Schlegel, D. Schmitt, R. Santo, F. Puhlhofer
1970Se14	PHSTB	2,	169	E. Selin
1970Sh05	PRVCA	1,	1835	S. Shastri, H. Bakhru, I.M. Ladenbauer-Bellis
1970Si19	PRVCA	2,	1948	R.J. Silva

1970Sm.A	BAPSA	15,	549	R.K. Smither, D.J. Bush, D.L. Bushnell
1970Sp02	NUPAB	145,	449	A.M.J. Spits, A.M.F. Op den Kamp, H. Gruppelaar
1970St25	P-Kyoto		1296	C.M. Stevens, P.E. Moreland
1970Th.A	Th.-Paris			F. Thuriere
1970To07	NUPAB	149,	641	D.F. Torgerson, R.D. Macfarlane
1970To18	PRVCA	2,	2309	D.F. Torgerson, R.D. Macfarlane
1970Um01	PRVCA	2,	1378	C.J. Umbarger, K.W. Kemper, J.W. Nelson, H.S. Plendl
1970Va13	PRVCA	1,	2115	K. Valli, E.K. Hyde, J. Borggreen
1970Va31	NUPAB	157,	385	J. Van Klinken, L.M. Taff, H.T. Dijkstra, A.H. De Haan, H. Hanson, B.K.S. Koene, J.W. Maring, J.J. Schuurman, F.B. Yano
1970Va.A	PrvCom	AHW	Apr	B. Van Nooijen, N.R. Johnson
1970Vo04	PRVCA	1,	2066	D. Von Ehrenstein, G.C. Morrison, J.A. Nolen,Jr., N. Williams
1970Wa14	NUPAB	148,	225	T.E. Ward, P.H. Pile, P.K. Kuroda
1970Wa20	PRVCA	2,	675	O.A. Wasson, R.E. Chrien
1970Wa21	JINCA	32,	2483	T.E. Ward, D.L. Swindle, R.J. Wright, P.K. Kuroda
1970Wh01	NUPAB	151,	377	S. Whineray, J.D. Macdougall, W. McLatchie, H.E. Duckworth
1970Wh04	PRVCA	1,	1455	C.A. Whitten,Jr., M.C. Mermaz, D.A. Bromley
1970WiZN	UCRL-19530-P178			J.B. Wilhelmy, S.G. Thompson, J.O. Rasmussen, J.T. Routti, J.E. Phillips
1970Wo05	NUPAB	146,	33	F.K. Wohn, W.L. Talbert
1970Wo08	NUPAB	152,	561	F.K. Wohn, W.L. Talbert,Jr., J.K. Halbig
1970Ya03	PRVCA	1,	290	T. Yamazaki
1970Ya05	NUPAB	149,	45	K. Yagi, Y. Aoki, K. Sato
1970Zo01	NUPAB	142,	177	W.H. Zoller, W.B. Walters, G.E. Gordon

1971

1971Af05	IANFA	35,	1618	V.P. Afanasiev, V.S. Buttsev, I.I. Gromova, V.G. Kalinnikov, N.A. Tikhonov
1971Al01	NUPAB	161,	209	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Al14	PHSTB	3,	55	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Al19	NUPAB	174,	148	W.P. Alford, N. Schulz, J. Jamshidi
1971Al22	PHSTB	3,	105	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Ar12	NUPAB	166,	241	S.E. Arnell, H. Linusson, Z. Sawa
1971Ar23	NUPAB	169,	209	N.K. Aras, P. Fettweis, G. Chilosi, G.D. O'Kelley
1971Ar39	PHSTB	4,	89	S.E. Arnell, R. Hardell, A. Hasselgren, C.G. Mattson, O. Skeppstedt
1971Ba01	NUPAB	160,	225	J.B. Ball
1971Ba08	PRVCA	3,	937	H. Bakhru, I.M. Ladenbauer-Bellis, I. Rezanka
1971Ba18	NUPAB	164,	552	F. Bazan, R.A. Meyer
1971Ba43	PRVCA	4,	196	J.B. Ball, R.L. Auble, P.G. Roos
1971Bb10	YAFIA	14,	1101	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov
1971Be10	PRVCA	3,	1294	F.M. Bernthal, J.O. Rasmussen, J.M. Hollander
1971Be29	NUPAB	168,	151	F.D. Becchetti, D. Dehnhard, T.G. Dzubay
1971Be41	NUPAB	171,	113	M.J. Bennet, R.K. Sheline, Y. Shida
1971Bi.A	UCRL-51060			R.E. Birkett
1971Bo01	NUPAB	160,	337	H.M.W. Booij, E.A. Van Hoek, H. Van der Molen, W.F. Slot, J. Blok
1971Bo06	NUPAB	162,	407	J. Borggreen, E.K. Hyde
1971Bo30	ZEPYA	244,	338	I. Borchert
1971Br13	JOPQA	32,	101	J.P. Briand, P. Chevallier, A. Touati
1971Br39	PRVCA	4,	1444	H.C. Britt, S.C. Burnett, B.H. Erkkila, J.E. Lynn, W.E. Stein
1971Ca19	PRVCA	4,	130	R.F. Casten, E.R. Flynn, O. Hansen, T.J. Mulligan
1971Ch02	PRVAA	3,	25	W.J. Childs, L.S. Goodman
1971Ch26	JOPQA	32,	359	A. Charvet, D.H. Phuoc, R. Duffait, A. Emsallem, R. Chery
1971Ch54	IJARA	22,	715	G.A. Chackett, K.F. Chackett, J.B. Welborn
1971Da01	PRVCA	3,	1326	O.B. Dabbousi, M.H. Prior, H.A. Shugart
1971Da16	NUPAB	170,	253	W. Darcey, R. Chapman, S. Hinds
1971Da19	PRVCA	4,	919	W.R. Daniels, D.C. Hoffman
1971Da28	NUPAB	178,	172	J.M. D'Auria, D. Ostrom, S.C. Gujrathi
1971De52	RMXFA	20,	17	H. Del Castillo, R. Roos, A. Tejera, F. Alba
1971Di03	PRLTA	26,	1037	P.F. Dittner, C.E. Bemis,Jr., D.C. Henley, R.J. Silva, C.D. Goodman
1971Do18	PYLBB	37,	173	W.E. Dorenbusch, J.B. Ball, R.L. Auble, J. Rapaport, T.A. Belote

1971Dr01	YAFIA	13,	251	V.A. Druin, A.G. Demin, Y.P. Kharitonov, G.N. Akapev, V.I. Rud, G.Y. Sung-Ching-Yang, L.P. Chelnokov, K.A. Gavrilov
1971Du02	PRVCA	3,	1391	J.L. Dubbard, R.K. Sheline, J.B. Ball
1971Dy01	NUPAB	173,	393	N.C. Dyer, J.H. Hamilton
1971Dz08	IANFA	35,	2249	B.S. Dzelepov, A.G. Dmitriev, N.N. Zhukovskii
1971El05	NUPAB	170,	209	C. Ellegaard, P.D. Barnes, E.R. Flynn
1971En01	PRVCA	3,	180	G.A.P. Engelbertink, J.W. Olness
1971Es01	PRVCA	4,	632	K. Eskola, P. Eskola, M. Nurmia, A. Ghiorso
1971Ev01	CJPHA	49,	402	F. Everling, G.L. Morgan, D.W. Miller, L.W. Seagondollar, P.W. Tillman,Jr.
1971Fi01	NUPAB	160,	460	P.R. Fields, I. Ahmad, A.M. Friedman, J. Lerner, D.N. Metta
1971Fl02	NUPAB	160,	181	G.N. Flerov, Y.T. Oganesian, Y.V. Lobanov, Y.A. Lazarev, S.P. Tretiakova, I.V. Kolesov, V.M. Plotko
1971Fo01	PRVCA	3,	337	H.T. Fortune, G.C. Morrisson, J.A. Nolen,Jr., P. Kienle
1971Fo22	PYLBB	36,	334	B. Fogelberg, A. Backlin, T. Nagarajan
1971Fr03	NUPAB	165,	625	A. Frana, A. Spalek, M. Fiser, A. Kolec
1971Ge05	PRVCA	3,	1678	W. Gelletly, W.R. Kane, D.R. MacKenzie
1971Gh01	PRVCA	4,	1850	A. Ghiorso, M. Nurmia, K. Eskola, P. Eskola
1971Gh03	NATUA	229,	603	A. Ghiorso, M. Nurmia, J. Harris, K. Eskola, P. Eskola
1971Go01	PRVCA	3,	746	D.J. Gorman, F. Asaro
1971Go18	PRVCA	4,	1800	D.R. Goosman, K.W. Jones, E.K. Warburton, D.E. Alburger
1971Go21	YAFIA	14,	3	K.S. Goncharov, A.P. Klyucharev, S.A. Pisminetskii, Y.N. Rakivnenko, V.V. Remaev, I.A. Romanii, E.A. Skakun
1971Go35	IANFA	35,	2272	N.A. Golovkov, R.B. Ivanov, A. Kolaczkowski, Y.V. Norseev, V.G. Chumin
1971GoYM	P-Canterbury		175	I.W. Goodier, M.J. Woods, A. Williams
1971Gr01	NUPAB	160,	497	A. Graue, J.R. Lien, H. Vinje, P.B. Vold, W.H. Moore
1971Gr04	NUPAB	162,	593	A. Graue, J.R. Lien, L. Rasmussen, G.E. Sandvik, E.R. Cosman
1971Gr17	MTRGA	7,	65	B. Grennberg, A. Rytz
1971Gr22	YAFIA	13,	681	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr28	YAFIA	13,	1129	L.V. Groshev, L.I. Govor, A.M. Demidov, A.S. Rachimov
1971Gr37	YAFIA	14,	473	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr42	IANFA	35,	1644	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr.A	P-Moscow		70	L.V. Groshev, V.N. Dvoretskii, A.M. Demidov
1971Gu02	NUPAB	161,	410	S.C. Gujrathi, J.M. D'Auria
1971Gu18	NUPAB	172,	353	S.C. Gujrathi, J.M. D'Auria
1971Gu.A	Th.-Strasbourg			G. Guillaume
1971Ha01	NUPAB	175,	428	U. Hagemann, W. Neubert, W. Schulze
1971He10	NUPAB	165,	327	D. Heck, U. Fanger, W. Michaelis, H. Ottmar, J. Schmidt
1971He13	NUPAB	168,	449	R.G. Helmer, R.C. Greenwood, C.W. Reich
1971Ho01	NUPAB	163,	277	P. Hornshøj, K. Wilsky, P.G. Hansen, A. Lindahl, O.B. Nielsen
1971Ho07	PYLBB	34,	591	P. Hornshøj, K. Wilsky, P.G. Hansen, A. Lindahl, O.B. Nielsen
1971Ho16	NUPAB	169,	641	R.W. Hoff, E.K. Hulet, R.J. Dupzyk, R.W. Lougheed, J.E. Evans
1971Ho26	PRLTA	27,	1086	H.H. Howard, R.H. Stokes, B.H. Erkila
1971Ho27	APNYA	63,	607	R.E. Holland, R.D. Lawson, F.J. Lynch
1971Hs03	NUPAB	174,	365	T.H. Hsu, J.L. Honsaker, W.J. McDonald, G.C. Nelson
1971Ib01	PHSTB	4,	161	N. Ibrahiem, H. Pettersson
1971Ja07	PRVCA	4,	1889	A.H. Jaffey, K.F. Flynn, L.E. Glendenin, W.C. Bentley, A.M. Essling
1971Ja09	PRVCA	3,	2489	A.A. Jaffe, G.A. Bissinger, S.M. Shafroth, T.A. White, T.G. Dzubay, F. Everling, D.W. Miller, D.A. Outlaw
1971Jo14	JINCA	33,	1215	K.C. Jordan, G.W. Otto, R.P. Ratay
1971Ka22	ZEPYA	245,	451	N. Kaffrell
1971Ka42	APOBB	2,	423	R. Kaczarowski, W. Kurcewicz, A. Płochocki, J. Żylicz
1971Ke01	CJPHA	49,	756	D.P. Kerr, K.T. Bainbridge
1971Ke02	CJPHA	49,	1950	D.P. Kerr, K.T. Bainbridge
1971Ke07	PRVCA	4,	1431	B.H. Ketelle, A.R. Brosi, J.R. van Hise
1971Ke21	NUPAB	176,	449	R.L. Kernell, H.J. Kim, R.L. Robinson, C.H. Johnson
1971Ki01	NUPAB	170,	187	C.H. King, P.R. Maurenzig, N. Stein, T.P. Cleary
1971Ki15	YAFIA	14,	249	B.G. Kiselev, V.N. Levkovskiĭ, O.I. Artem'ev
1971La02	PRVCA	3,	188	H. Lancman, J.M. Lebowitz
1971Le19	NUPAB	169,	449	C.M. Lederer, J.M. Jaklevic, J.M. Hollander

1971Le21	NUPAB	170,	115	J.R. Leslie, W. McLatchie, C.F. Monahan, J.K. Thrasher
1971Li02	NUPAB	160,	630	E.W.A. Lingeman, F.W.N. De Boer, P. Koldewijn, P.R. Maurenzig
1971Lo15	NUPAB	171,	337	W. Lourens, B.O. Ten Brink, A.H. Wapstra
1971Lu01	PRVCA	3,	1243	M.T. Lu, W.P. Alford
1971Ma11	PRVCA	3,	1162	J.V. Maher, J.R. Comfort, G.C. Morrisson
1971Ma24	NUPAB	166,	573	S.G. Malmskog, V. Berg, B. Fogelberg, A. Backlin
1971Ma45	NUPAB	172,	298	P. Manfrass, H. Prade, M.R. Beitins, W.A. Bondarenko, N.D. Kramer, P.T. Prokofjew
1971Ma47	NUPAB	174,	343	S. Matsuki, Y. Yoshida, M. Hyakutake, M. Matoba, S. Nakamura
1971Mi01	PRVCA	3,	766	M.M. Minor, R.K. Sheline, E.T. Jurney
1971Mo01	PRVCA	3,	438	J.M. Mosher, R.W. Kavanagh, T.H. Tombrello
1971Mo02	NUPAB	161,	228	J.M. Morton, W.G. Davies, W. McLatchie, W. Darcey, J.E. Kitching
1971Mo03	PRLTA	26,	854	H.T. Motz, E.T. Jurney, E.B. Shera, R.K. Sheline
1971Mo20	NUPAB	168,	561	N.A. Morcos, T.E. Ward, P.K. Kuroda
1971My01	APOBB	2,	441	B. Myslek, B. Pietrzek, Z. Sujkowski, J. Szcepankowski
1971Na01	PRVCA	3,	247	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Na02	PRVCA	3,	254	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Ne.A	BAPSA	16,	489	P.H. Nettles, C.A. Barbes, D.C. Hensley, C.D. Goodman, and Nettles Thesis
1971Oh01	PRVCA	3,	158	H. Ohnuma, A.M. Sourkes
1971Or04	PRVCA	3,	2402	C.J. Orth, B.J. Dropesky, N.J. Freeman
1971Ot01	NUPAB	164,	69	H. Ottmar, N.M. Ahmed, U. Fanger, D. Heck, W. Michaelis, H. Schmidt
1971Pe03	NUPAB	167,	470	B.I. Persson, I. Plesser, J.W. Sunier
1971Pe23	NUPAB	167,	387	B.I. Person, J.L. Plesser, J.W. Sunier
1971Pi08	ZEPYA	247,	400	M. Piiparinen, A. Anttila, M. Viitasalo
1971Pl08	IANFA	35,	1569	Z. Plajner, M. Vejs, I. Prochazka, A. Mashtalka, O. Voitishek, M. Gonusek, A. Kokesh
1971Po.A	P-Legnaro		375	C.P. Poirier, J.C. Manthuruthil
1971Pr03	NUPAB	167,	667	R. Prieels, J.P. Deutsch
1971Pr13	NUPAB	176,	338	R.H. Price, D.G. Burke, M.W. Johns
1971Ra08	ZEPYA	243,	105	F. Rauch
1971Ra09	NUPAB	168,	177	J. Rapaport, T.A. Belote, D.E. Bainum, W.E. Dorenbusch
1971Ra17	NUPAB	170,	199	J. Rapaport, T.A. Belote, D.E. Bainum
1971Ra35	NUPAB	177,	307	J. Rapaport, W.E. Dorenbusch, T.A. Belote
1971Ro19	JINCA	33,	2684	G. Rossner, G. Herrmann
1971Ru17	PYLAA	36,	321	S.L. Ruby, R.G. Clark, L.E. Glendenin
1971Sc07	NUPAB	165,	415	L.A. Schaller, J. Kern, B. Michaud
1971Sh04	ZEPYA	242,	368	W.N. Shelton, R.K. Sheline
1971Sm01	PRVCA	4,	22	L.G. Smith
1971Su14	YAFIA	14,	1297	G.Y. Sung-Ching-Yang, V.A. Druin, A.S. Trofimov
1971Sw01	PRVCA	3,	259	D.L. Swindle, T.E. Ward, P.K. Kuroda
1971Ta07	PRVCA	4,	517	K. Takehashi, D.L. Swindle, P.K. Kuroda
1971To01	PRVCA	3,	854	K.S. Toth, R.L. Hahn
1971To05	NUPAB	171,	305	R. Torti, R. Graetzer
1971To10	PRVCA	4,	2223	K.S. Toth, R.L. Hahn, M.A. Ijaz
1971To13	JINCA	33,	3609	L. Tomlinson, M.H. Hurdus
1971Tr02	PYLBB	34,	277	B.L. Tracy, J. Chaumont, R. Klapisch, J.M. Nitschke, A.M. Poskanzer, E. Roeckl, C. Thibault
1971Tr03	PRVCA	3,	2205	G.F. Trentelman, B.M. Preedom, E. Kashy
1971Um03	NUPAB	169,	109	C.J. Umbarger, J.A. Robinson, R.R. Reece, R.C. Bearce
1971Va18	NUPAB	170,	607	J.G. Vanderbaan, H.G. Leighton
1971Va21	NUPAB	173,	456	J.G. Vanderbaan, B.R. Sikura
1971Ve03	PRVCA	3,	1570	J. Vervier, H.H. Bolotin
1971Vi14	CPHMA	41,	319	M. Viitasalo
1971Wa21	NUPAB	173,	634	B.A. Watson, C.C. Chang, M. Hasinoff
1971We01	PRVCA	3,	1668	C.V. Weiffenbach, R. Tickle
1971Wi04	PRVCA	3,	1199	B.H. Wildenthal, E. Newman, R.L. Auble
1971Wi05	PRLTA	26,	1127	D.H. Wilkinson, D.E. Alburger
1971Wi07	NUPAB	166,	661	D.H. Wilkinson, D.E. Alburger, D.R. Goosman, K.W. Jones, E.K. Warburton, G.T. Garvey, R.L. Williams

1971Ya10	PYLBB	37,	369	K. Yagi, K. Sato, Y. Aoki
1971Zi03	PRVCA	4,	1809	M.S. Zisman, B.G. Harvey

1972

1972Ah04	NUPAB	186,	620	I. Ahmad, R.K. Sjoblom, R.F. Barnes, F. Wagner,Jr., P.R. Fields
1972Ah07	JINCA	34,	3335	I. Ahmad, R.F. Barnes, R.K. Sjoblom, P.R. Fields
1972Al01	PRVCA	C5,	274	D.E. Alburger
1972Al19	NUPAB	186,	209	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1972Am01	PRVCA	5,	270	S. Amiel, H. Feldstein, M. Oron, E. Yellin
1972Ba08	CJPHA	50,	34	R.C. Barber, R.L. Bishop, J.O. Meredith, F.C.G. Southon, P. Williams, H.E. Duckworth, P. van Rookhuyzen
1972Ba26	PRVCA	5,	1351	T.T. Bardin, J.A. Becker, T.R. Fisher
1972Ba31	NUPAB	184,	609	D. Bachner, H. Kelleter, B. Schmidt, W. Seliger
1972Ba35	PRLTA	28,	1069	G.C. Ball, W.G. Davies, J.S. Forster, J.C. Hardy
1972Ba37	NUPAB	186,	321	H. Bakhru, I.M. Ladenbauer-Bellis, B. Jones
1972Ba91	IANFA	36,	782	G.Y. Baier, V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov, K.O. Mortensen, G.L. Nilsson, N.A. Tikhonov
1972Bb24	ZETFA	63,	375	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov, Y.F. Radionov
1972Be07	NUPAB	182,	69	R.R. Betts, O. Hansen, D.J. Pullen
1972Be11	NUPBB	39,	371	K.-E. Bergkvist
1972Be12	PRVCA	5,	1426	W. Benenson, J. Driesbach, I.D. Proctor, G.F. Trentelman, B.M. Preedom
1972Be44	ZEPYA	252,	349	H. Behrens, M. Kobelt, W.G. Thies, H. Appel
1972Be51	PRVCA	6,	957	R.R. Betts, H.T. Fortune, D.J. Pullen
1972Bl16	NUPAB	197,	620	J. Bleck, R. Butt, K.H. Lindenberger, W. Ribbe, W. Zeitz
1972Bo09	PYLBB	38,	308	J. Bonn, G. Huber, H.-J. Kluge, L. Kugler, E.W. Otten
1972Bo46	PRVCA	6,	1322	L.M. Bollinger, G.E. Thomas
1972Br13	NUPAB	185,	289	M. Brien, J.E. Kitching, J.K.P. Lee, P.F. Hinrichsen
1972Br31	APOBB	3,	263	R. Broda, M. Rybicka, J. Styczen, W. Walus, K. Krolas
1972Bu05	JINCA	34,	1087	F.T. Bunus
1972Ca01	KDVSA	38,	#13	R.F. Casten, P. Kleinheinz, P.J. Daly, B. Elbek
1972Ca07	NUIMA	98,	432	J.L. Campbell, L.A. McNellen
1972Ca10	NUPAB	184,	357	R.F. Casten, E.R. Flynn, O. Hansen, T.J. Mulligan
1972Ca33	NUPAB	198,	289	P.L. Carson, L.C. McIntyre
1972Ce01	NUPAB	188,	666	J. Cerny, R.A. Gough, R.G. Sextro, J.E. Esterl
1972Ch11	NUPAB	186,	603	R. Chapman, W. McLatchie, J.E. Kitching
1972Ch33	NUPAB	193,	225	H.C. Cheung, J.K.P. Lee, J.E. Kitching, S.K. Mark, Tseh Y. Li
1972Ch44	NUPAB	197,	490	A. Charvet, R. Chery, D.H. Phuoc, R. Duffait, A. Emsallem, G. Marguier
1972Co13	NUPAB	185,	644	W.F. Coetzee, M.A. Meyer, D. Reitmann
1972Cr02	PRVCA	5,	419	D.F. Crisler, H.B. Eldridge, R. Kunselman, C.S. Zaidins
1972Cu07	NUPAB	196,	593	J.C. Cunnane, R. Hochel, C.W. Yates, P.J. Daly
1972Da.A	BAPSA	17,	71	C.N. Davids, D.L. Matthews, D. Whitmire
1972De11	P-Teddington		210	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya see also 72De39
1972De43	NUPAB	194,	140	P. Del Marmol, P. Fettweis
1972De47	NUPAB	195,	385	P. Debenham, N.H. Hintz
1972Dz13	YAFIA	15,	1093	J.D. Dzafar, A.A. Abdullah, N.H. Al Quaraishi, M.S. Alwash, M.A. Khalil, A.M. Demidov
1972Ek04	NUPAB	196,	178	C. Ekstrom, S. Ingelman, M. Olsmats, B. Wannberg, G. Andersson, A. Rosen
1972El03	CJPHA	50,	674	S.A. Elbakr, C. Glavina, W.K. Dawson, V.K. Gupta, W.J. McDonald, G.C. Nelson
1972Em01	NSENA	48,	319	J.F. Emery, S.A. Reynolds, E.I. Wyatt, G.I. Gleason
1972Er05	NUPAB	194,	449	B.R. Erdal, L. Westgaard, J. Żylicz, E. Roeckl, ISOLDE
1972Es03	PRVCA	5,	942	K. Eskola
1972Ev01	PRVCA	6,	1372	J.L. Evans, J.R. Cooper, D.M. Moore, W.L. Alford
1972Fa08	NUPAB	186,	545	L.C. Farwell, J.J. Kraushaar, H.W. Baer
1972Fe06	NUPAB	187,	123	J.A. Fenton, T.H. Kruse, N. Williams, M.E. Williams, R.N. Boyd, W. Savin
1972Fi14	PYLBB	40,	87	W. Fischer, H. Huhnermann, K. Mandrek, H. Ihle
1972Fi.A	AnRpt MSUCL		28	R.B. Firestone, K. Kosanke, W.C. McHarris, W.H. Kelly
1972Fl17	PYLBB	42,	49	E.R. Flynn, J.D. Garrett

1972Fo25	PHSTB	6,	309	I. Forsblom, T. Weckstrom, T. Sundius, G. Bergstrom, S. Forss, G. Wansen
1972Fu10	NCLTA	4,	430	A. Fubini
1972Ga27	PRLTA	29,	958	H. Gauvin, Y. Le Beyec, M. Lefort, N.T. Porile
1972Ge10	CJPHA	50,	1480	J.S. Geiger
1972Gi17	NUIMA	105,	179	H.J. Gils, R. Lohken, W. Wiesner
1972Go31	PRVCA	6,	820	D.R. Goosman, D.E. Alburger
1972Go33	CHDBA	275,	291	J. Gorman, A. Rytz, H.V. Michel
1972Go.A	PrvCom		91Ry01	J. Gorman, A. Rytz
1972Gr12	NUPAB	187,	141	A. Graue, L.H. Herland, K.J. Lervik, J.T. Nesse, E.R. Cosman
1972Gr19	NUPAB	189,	592	T. Grotdal, J. Limstrand, K. Nybø, K. Skar, T.F. Thorsteinsen
1972Gr23	YAFIA	15,	625	L.V. Groshev, L.I. Govor, A.M. Demidov
1972Gr34	IANFA	36,	833	L.V. Groshev, L.I. Govor, A.M. Demidov
1972Gr39	PRVCA	6,	1756	M.B. Greenfield, C.R. Bingham, E. Newman, M.J. Saltmars
1972Ha74	NUPAB	198,	353	A. Hasselgren
1972Ha82	PYLBB	42,	341	J.C. Hardy, D.E. Alburger
1972He23	NUPAB	193,	357	G. Heymann, P.M. Cronje
1972He36	ZEPYA	255,	385	A. Helppi, A. Pakkanen
1972He.A	AnRpt Grenoble			M. Hermen, A. Gizon also Thesis Grenoble 1971
1972Ho18	NUPAB	187,	599	P. Hornshøj, K. Wilsky, P.G. Hansen, B. Jonson, O.B. Nielsen
1972Ho19	NUPAB	187,	609	P. Hornshøj, K. Wilsky, P.G. Hansen, B. Jonson, O.B. Nielsen
1972Ho40	NUPAB	194,	481	G.A. Hokken, A.J.G. Hendricx, J. De Kogel
1972Hs01	NUPAB	179,	80	T.H. Hsu, R. Fournier, B. Hird, J. Kroon, G.C. Ball, F. Ingebretsen
1972Hu06	NUPAB	189,	264	F.R. Hudson, R.N. Glover
1972Hu10	NUPAB	195,	485	P. Hubert, M.M. Aleonard, D. Castera, F. Leccia, P. Mennrath
1972Is01	NUPAB	179,	223	M. Ishihara
1972Ja28	APOBB	3,	643	M. Jaskola, K. Nybø, B. Elbek
1972Ja.A	P-Teddington		236	A.A. Jaffe, G.A. Bissinger, S.M. Shafroth, T.A. White, T.G. Dzubay, F. Everling, D.W. Miller, D.A. Outlaw
1972Je02	NUPAB	185,	209	H.B. Jensen, H.B. Mak, C.A. Barnes
1972Jo08	ZEPYA	251,	425	H.W. Jongsma, R. Kamermans, H. Verheul
1972Ka57	SHIBA	20,	255	I. Kakatuse
1972Ke21	NUPAB	195,	177	A. Kerek, G.B. Holm, S. Borg, L.-E. de Geer
1972Ke28	NUPAB	198,	466	A. Kerek, P. Carle, J. McDonald
1972Ki06	ZEPYA	251,	93	A. Kiuru
1972Ki15	CPHMA	42,	11	A. Kiuru, P. Holmberg, L. Vanhanen
1972Ko03	PRVCA	5,	568	J.J. Kolata, W.W. Daehnick
1972Ko47	PRVCA	6,	1713	S.E. Koonin, B.I. Persson
1972La20	ZEPYA	253,	16	R. Lasijo, R.K. Sheline, R.D. Griffioen, J.L. Dubbard
1972Le17	PRVCA	6,	517	L. Lessard, S. Gales, J.L. Foster,Jr.
1972Le37	IJARA	23,	279	V.E. Lewis, M.J. Woods, I.W. Goodier
1972Lo26	NUIMA	105,	453	G.D. Lopez, G.E. Thomas
1972Ly01	NUPAB	182,	272	L.L. Lynn, R.C. Schaller, D.A. Barbour, T.A. Belote, W.E. Dorenbusch
1972Ma15	PRVCA	5,	1380	J.V. Maher, J.R. Erskine, A.M. Friedman, R.H. Siemsen, J.P. Schiffer
1972Ma23	NUPAB	185,	465	P. Martin, M. Buenerd, Y. Dupont, M. Chabre
1972Ma42	PHSTB	5,	58	C.G. Mattsson, S.E. Arnell, L. Jonsson
1972Ma50	PRVCA	6,	851	J.C. Manthuruthil, F.W. Prosser,Jr.
1972Ma.A	P-Budapest		90	P. Matusek, H. Ottmar, C. Weitkamp, H. Woods
1972Mc08	PRVCA	5,	922	D.A. McClure, J.W. Lewis,III
1972Mc25	ZEPYA	255,	335	J.C. McGeorge, D.W. Nix, R.W. Fink, J.H. Landrum
1972Me09	NUPAB	185,	625	M.A. Meyer, J.P.L. Reinecke, D. Reitmann
1972Mi16	HPACA	45,	93	B. Michaud, J. Kern, L. Ribordy, L.A. Schaller
1972Mi23	NUIMA	104,	11	G.H. Miller, P. Dillard, M. Eckhause, R.E. Welsh
1972Mi26	JUPSA	33,	1505	K. Miyano, H. Nakharr, G. Gil
1972Mi27	JUPSA	33,	1509	K. Miyano, C. Gil
1972Mo12	PRVCA	5,	1678	R.A. Moyer
1972Mo33	NUPAB	195,	192	E. Monnand, R. Brissot, L.C. Carraz, J. Crançon, R. Ristori, F. Schussler, A. Moussa
1972Mu02	PRVCA	5,	95	T. Mukoyama, S. Shimizu
1972Mu09	PRVCA	6,	1802	T.J. Mulligan, E.R. Flynn, O. Hansen, R.F. Carsten, R.K. Sheline

1972Mu.A	BAPSA	17,	557	S.F. Mughabghab, G.W. Cole, R.E. Chrien, O.A. Wasson, M.R. Bhat
1972Na04	NCIAA	8,	305	T. Nagarajan, M. Ravindranath, K.V. Reddy
1972Ne05	NUPAB	185,	213	A.V. Nero
1972Ne10	PRVCA	6,	6793	A.V. Nero, R.E. Pixley, E.G. Adelsberger
1972Og03	IJMIB	8,	365	K. Ogata
1972Op01	NUPAB	180,	569	A.M.F. Op den Kamp, A.M.J. Spits
1972Pa02	PRVCA	5,	485	R.A. Paddock
1972Pa06	NUPAB	184,	157	A. Pakkanen, T. Komppa, H. Helppi
1972Pa13	JINCA	34,	1485	J.A. Panontin, N. Sugarman
1972Pa24	ZEPYA	254,	98	A. Pakkanen, H. Helppi, T. Komppa, P. Puumalainen
1972Pa26	NUPAB	194,	443	D.G. Parkinson, I.A. Fraser, J.C. Lisle, J.C. Willmott
1972Pe05	PRVCA	5,	1443	B.I. Persson, S.E. Koonin
1972Pi07	ZEPYA	252,	206	M. Piiparinen
1972Pu02	ZEPYA	252,	283	V. Pursiheimo, T. Tuurnala, T. Raunemaa
1972Ra05	PRVCA	5,	453	J. Rapaport, J.B. Ball, R.L. Auble, T.A. Belote, W.E. Dorenbusch
1972Ra39	NUPAB	197,	129	D. Rabenstein, D. Harrach, H. Vonach, G.G. Dussel, R.P.I. Perazzo
1972Ri08	PRVCA	5,	2072	F.A. Rickey, E.T. Jurney, H.C. Britt
1972Sc08	ZEPYA	249,	286	W.D. Schmidt-Ott, R.W. Fink
1972ScYY	BMBW-FBK-72-15	88		F.J. Schweden, N. Kaffrell
1972Sh08	NUPAB	189,	220	R.E. Shamu, E.M. Bernstein, D. Blondin, J.J. Ramirez
1972Sh13	PRVCA	6,	537	E.B. Shera, U. Gruber, B.P.K. Maier, H.R. Koch, O.W.B. Schult, R.G. Lanier, N. Onishi, R.K. Sheline
1972Sh27	NUPAB	197,	17	J.R. Sheppard, R. Graetzer, J.J. Kraushaar
1972Sh.A	PrvCom	NDG	Jan	E.B. Shera
1972Si25	PRVCA	6,	1001	W.L. Sievers, D.A. Close, C.J. Umbarger, R.C. Bearse, F.W. Prosser,Jr.
1972Si28	NUPAB	193,	449	M. Singh, J.W. Sunier, R.M. Devries, G.E. Johnson
1972Si50	IJOPA	10,	289	J. Singh
1972Sl03	NUPAB	186,	28	W.F. Slot, G.H. Dulfer, H. Van der Molen, H. Verheul
1972Sv02	PHSTB	5,	23	B. Svahn, C. Bergman, H. Petterson
1972Sw01	NUPAB	185,	561	D.L. Swindle, N.A. Morcos, T.E. Ward, J.L. Meason
1972Ta13	ZEPYA	251,	87	O. Tannila, J. Kantele
1972Th08	PRVCA	6,	452	D.T. Thompson, G.E. Tripard
1972To05	NUPAB	185,	574	J.P. Torres, P. Paris
1972To06	PRVCA	5,	2060	K.S. Toth, R.L. Hahn, M.A. Ijaz, R.F. Walker,Jr.
1972To07	NUPAB	189,	609	J.P. Torres, P. Paris, D. Lecouturier, P. Kilcher
1972Vi11	RAACA	17,	213	J. Visser, L. Lindner
1972Vo08	PRVCA	6,	266	T. von Egidy, O.W.B. Schult, D. Rabenstein, J.R. Erskine, O.A. Wasson, R.E. Chrien, D. Breitig, R.P. Sharma, H.A. Baader, H.R. Koch
1972Wa04	JINCA	34,	13	T.E. Ward, N.A. Morcos, P.K. Kuroda
1972Wa06	NUPAB	184,	166	G. Wallace, G.J. McCallum, N.G. Chapman
1972Wa10	NUPAB	188,	129	E. Wallander, E. Selin
1972Wa11	JINCA	34,	1767	A.C. Wahl
1972We.A	P-Teddington		94	L. Westgaard, J. Żylicz, O.B. Nielsen, ISOLDE
1972Wh02	PRVCA	5,	513	D.H. White, R.E. Birkett
1972Wh05	NUPAB	187,	12	D.H. White, R.E. Howe
1972Wi07	NUPAB	183,	439	J.L. Wiza, J.D. Garrett, R. Middleton
1972Wi18	NUPAB	191,	166	W. Wiesner, D. Flothman, H.J. Gils, R. Lohken, H. Rebel
1972Za04	PRVCA	6,	506	J.I. Zaitz, R.K. Sheline
1972Zi02	NUPAB	181,	465	J. Zioni, A.A. Jaffe, E. Friedman, N. Haik, R. Schreckman, D. Nir

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1973Ab10	IANFA	37,	1967	S.N. Abramovich, B. Ya. Guzhkovskii, A.G. Zvenigorodskii, S.V. Trusillo
1973Ad02	PRVCA	7,	889	E.G. Adelsberger, A.B. McDonald, C.L. Cocke, C.N. Davis, A.P. Shukla, H.B. Mak, D. Ashery
1973Ah02	PRVCA	8,	737	I. Ahmad, J. Milsted, R.K. Sjoblom, J. Lerner, P.R. Fields
1973Ah04	NUPAB	208,	287	I. Ahmad, H. Diamond, J.M. Isted, J. Lerner, R.K. Sjoblom
1973Al02	PRVCA	C7,	1440	D.E. Alburger
1973Al11	PRVCA	8,	657	D.E. Alburger, D.H. Wilkinson

1973Al13	PRVCA	8,	1011	D.E. Alburger, D.R. Goosman, C.N. Davids
1973Al20	IANFA	37,	1035	V.S. Aleksandrov, B.S. Dzelepov, A.I. Medvedev, V.E. Ter-Nersesyants, I.F. Uchevatkin, S.A. Shestopalova
1973Ba22	IANFA	37,	73	K.A. Baskova, S.S. Vasilev, M.A. Mokhsen, T.V. Shugay, L.Y. Shavtalov
1973Ba34	PRLTA	31,	395	G.C. Ball, J.G. Costa, W.G. Davies, J.S. Forster, J.C. Hardy, A.B. McDonald
1973Ba35	JPAGB	6,	1011	D.G. Barnes, J.M. Calvert, T. Toy
1973Ba40	PRLTA	31,	728	R.C. Barber, J.O. Meredith, F.C.G. Southon, P. Williams, J.W. Barnard, K. Sharma, H.E. Duckworth
1973Ba56	PRVCA	8,	1438	J.B. Ball, J.J. Pinajian, J.S. Larsen, A.C. Rester
1973Ba72	NUPAB	217,	116	B.B. Back, E.R. Flynn, O. Hansen, R.F. Casten, J.D. Garrett
1973Be09	PYLBB	43,	117	W. Benenson, E. Kashy, I.D. Proctor, B.M. Preedom
1973Be14	PRVCA	7,	1143	W. Benenson, E. Kashy, I.D. Proctor
1973Be23	PRVCA	8,	210	W. Benenson, E. Kashy, I.D. Proctor
1973Be33	PRLTA	31,	647	C.E. Bemis,Jr., R.J. Silva, D.C. Hensley, O.L. Keller,Jr., J.R. Tarrant, L.D. Hunt, P.F. Dittner, R.L. Hahn, C.D. Goodman
1973Bi06	PRVCA	7,	2575	C.R. Bingham, D.U. O'Kain, K.S. Toth, R.L. Hahn
1973Bo13	PRVCA	7,	1686	W.W. Bowman, D.R. Haenni, T.T. Sugihara
1973Bo20	YAFIA	17,	457	D.D. Bogdanov, V.A. Karnaukhov, L.A. Petrov
1973Bo42	NUPAB	212,	197	S. Borg, G.B. Holm, B. Rydberg
1973Br06	PRVCA	7,	1545	R.A. Britten, W.H. Johnson
1973Br12	PRVCA	7,	2545	E. Browne, F. Asaro
1973Br27	PRVCA	8,	1805	C.P. Browne, V.D. Coss, A.A. Rollefson
1973Br32	NUPAB	216,	493	R. Broda, A.Z. Hrynkiewicz, J. Styczen, W. Walus
1973Bu02	CJPHA	51,	455	D.G. Burke, J.C. Waddington, D.E. Nelson, J. Buckley
1973Bu17	IANFA	37,	938	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov, V.A. Morozov, T.M. Muminov, A.B. Khalikulov
1973Bu18	IANFA	37,	953	V.S. Buttsev, Ts. Vylov, K.Y. Gromov, V.G. Kalinnikov, I.I. Gromova, V.A. Morozov, T.M. Muminov, H. Fuia, A.B. Khalikulov
1973Bu21	IANFA	37,	1024	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov
1973Ca10	NUPAB	205,	121	M.H. Cardoso, P.F.A. Goudsmit, J. Konijn
1973Ch18	PRVCA	8,	422	Y.Y. Chu, T.E. Ward
1973Ch24	JINCA	35,	3061	K. Chayawattanangkur, G. Herrmann, N. Trautmann
1973Cl12	NUPAB	215,	429	G.J. Clark, J.M. Freeman, D.C. Robinson, J.S. Ryder, W.E. Burcham, G.T.A. Squier
1973Da01	PRVCA	7,	122	C.N. Davids, D.R. Goosman
1973Da05	CJPHA	51,	686	J.M. D'Auria, R.D. Guy, S.C. Gujrathi
1973Da22	PRVCA	8,	1029	C.N. Davids, D.R. Goosman
1973De16	PRVCA	7,	2131	J.H. Degnan, G.R. Rao
1973De22	ZEPYA	260,	75	F.W.N. De Boer, P.F.A. Goudsmit, B.J. Meyer, and PrvCom AHW
1973De39	IANFA	37,	998	A.M. Demidov, M.R. Akhmed, M.A. Khalil, C. Al-Nadzar
1973Dj01	PRVCA	8,	323	F. Djadali, K. Krien, R.A. Naumann, E.H. Spejewski
1973Dr10	AENGA	35,	279	V.B. Druin, Y.V. Lobanov, D.M. Nadkarni, Y.P. Kharitonov, Y.S. Korotkin, S.P. Tretyakova, V.I. Krashonkin
1973Ea01	NUPAB	208,	119	D.A. Eastham, I.S. Grant
1973Ed01	NUPAB	199,	463	F.M. Edwards, J.J. Kraushaar, B.W. Ridley
1973Es01	PRVCA	7,	280	P. Eskola
1973Es02	PHFEA	8,	357	P. Eskola, K. Eskola, M. Nurmia, A. Ghiorso
1973Fi06	NUPAB	208,	269	P.R. Fields, I. Ahmad, R.F. Barnes, R.K. Sjoblom, W.C. McHarris
1973FoZF	PrvCom			B. Fogelberg
1973Fr01	PRLTA	30,	102	A. Friedman, K. Katori
1973Ga01	NUPAB	202,	535	S. Gales, L. Lessard, J.L. Foster,Jr.
1973Ga04	CJPHA	51,	203	R.D. Gadsby, D.G. Burke, J.C. Waddington
1973Gh03	PRVCA	7,	2032	A. Ghiorso, K. Eskola, P. Eskola, M. Nurmia
1973Go05	NUPAB	201,	326	S.C. Goverse, J. Van Pelt, J. Vandenberg, J.C. Klein, J. Blok
1973Go11	PRVCA	7,	1133	D.R. Goosman, D.E. Alburger, J.C. Hardy
1973Go19	PRLTA	30,	1255	J.D. Goss, C.P. Browne, A.A. Rollefson
1973Go22	PRVCA	7,	2409	D.R. Goosman, C.N. Davids, D.E. Alburger
1973Go29	CHDBA	276,	669	D.J. Gorman, H.V. Michel, F. Asaro, A. Rytz
1973Go33	PRVCA	8,	1324	D.R. Goosman, C.N. Davids, D.E. Alburger

1973Go34	PRVCA	8,	1331	D.R. Goosman, C.N. Davids, D.E. Alburger
1973Go39	CHDBA	277,	29	D.J. Gorman, A. Rytz
1973Go40	NUPAB	217,	159	J. Godart, A. Gizon
1973Gr26	NUPAB	211,	541	T. Grotdal, L. Loset, K. Nybø, T.F. Thorsteinsen
1973Gu05	NUPAB	205,	574	H. Guratzsch, A.P. Kabachenko, I.V. Kuznetsov, K. Siewek-Wilczynska, N.I. Tarantin
1973Ha02	NUPAB	199,	560	S.I. Hayakawa, S.K. Mark, J.K.P. Lee, J.E. Kitching, G.C. Ball, W.G. Davies
1973Ha11	NUPAB	203,	532	J.K. Halbig, F.K. Wohn, W.L. Talbert,Jr., J.J. Eitter
1973Ha32	PRLTA	31,	323	O. Hausser, W. Witthuhn, T.K. Alexander, A.B. McDonald, J.C.D. Milton, A. Olin
1973Hi01	NUPAB	212,	365	P.F. Hinrichsen, G. Kennedy, T. Paradellis
1973Hi.A	HPACA	47,	93	T. Hinderling, H.H. Staub
1973Ho09	NUPAB	211,	165	R. Hochel, P.J. Daly, K.J. Hofstetter
1973Hu07	PYLBB	46,	361	E. Huenges, H. Rosler, H. Vonach
1973In04	PHSTB	7,	24	S. Ingelman, C. Ekstrom, M. Olsmats, B. Wannberg
1973Ja06	ZEPYA	258,	337	U. Jäger, H. Münzel, G. Pfennig
1973Ja10	ZEPYA	261,	95	J.F.W. Jansen, A. Faas, W.J.B. Winter
1973Jo11	PHSTB	8,	99	A. Johansson, B. Nyman
1973Ka03	NUPAB	203,	97	N. Kato
1973Ka07	JUPSA	34,	857	K. Kawade, H. Yamamoto, K. Tsuchiya, T. Katoh
1973Ka23	PRVCA	8,	414	N. Kaffrell
1973Kh03	NUPAB	202,	289	T.L. Khoo, J.C. Waddington, Z. Preibisz, M.W. Johns
1973Ki11	NUPAB	213,	61	K. Kimura
1973Ko03	PRVCA	7,	404	R.L. Kozub, D.H. Youngblood
1973Ko06	PRVCA	8,	285	J.J. Kolata, J.V. Maher
1973Ko10	NUPAB	204,	185	S. Kochan, B. Rosner, I. Tserruya, R. Kalish
1973Ko13	NUIMA	109,	83	J. Konijn, P.F.A. Goudsmit, E.W.A. Lingeman
1973Kr06	JINCA	35,	1407	J.-V. Kratz, H. Franz, G. Herrmann
1973Kr.A	P-Rochester		95	J.-V. Kratz, G. Herrmann
1973Ku09	JOPQA	34,	159	W. Kurcewicz, K. Stryczniewicz, J. Żylicz, R. Broda, S. Chojnacki, W. Walus, I. Yutlandov
1973La17	PRVCA	7,	2600	H. Lancman, A. Bond
1973Le18	MTRGA	9,	14	V.E. Lewis, D. Smith, A. Williams
1973Lo08	CJPHA	51,	1369	G. Løvhøiden, D.G. Burke, J.C. Waddington
1973Mc04	PRVCA	7,	2097	J.R. McPherson, F. Gabbard
1973McZW	BAPSA	18,	651	C.R. McClenahan, R.E. Segel, R.P. Redwine
1973Me09	NUPAB	204,	636	B.J. Meyer, F.W.N. De Boer, P.F.A. Goudsmit
1973Me28	IJMIB	10,	359	J.O. Meredith, F.C.G. Southon, R.C. Barber, P. Williams, H.E. Duckworth
1973Mo03	NUPAB	202,	473	M.A. Moinester, G. Finkel, J. Alster, P. Martin
1973Mo18	JINCA	35,	3659	N.A. Morcos, W.D. James, D.E. Adams, P.K. Kuroda
1973Mo23	PRVCA	8,	1961	A. Moalem, B.H. Wildenthal
1973My02	JINCA	35,	3985	W.A. Myers, R.J. Nagle, Jr.
1973No09	NUPAB	217,	253	T. Nomura, K. Hiruta, T. Inamura, M. Odera
1973Oe02	ZEPYA	259,	263	W. Oelert
1973Ok.A	PrvCom	NDG	Aug	G.D. O'Kelley, C.F. Goeking, L.L. Collins,Sr.
1973Oo01	NUPAB	213,	221	M.A. Oothoudt, N.M. Hintz
1973Or03	PRVCA	8,	718	C.J. Orth, W.R. Daniels, D.C. Hoffman, F.O. Lawrence
1973Pa03	NUPAB	201,	449	M. Pautrat, G. Albouy, J.C. David, J.M. Lagrange, N. Poffe, C. Roulet, H. Sergolle, J. Vanhorenbeeck, H. Abou-Leila
1973Pa04	NUPAB	201,	469	M. Pautrat, G. Albouy, J.M. Lagrange, C. Roulet, H. Sergolle, J. Vanhorenbeeck, P. Paris
1973Pa21	PHFEA	8,	345	A. Pakkanen, D.W. Heikkinen
1973PaZV	PrvCom			D.G. Parkinson, I.A. Fraser, J.C. Lisle, J.C. Willmott
1973Pi01	NUPAB	203,	369	W.F. Piel,Jr.
1973Po16	RAACA	19,	148	P. Polak
1973Pr05	JINCA	35,	1057	I.L. Preiss, J.J. Labrecque
1973Ra13	PYLBB	44,	255	S. Raman, H.J. Kim, T.A. Wakiewicz, M.J. Martin
1973Re03	PRVCA	7,	1663	I. Rezanka, I.M. Ladenbauer-Bellis, T. Tamura, W.B. Jones, F.M. Bernthal
1973Ry01	PYLBB	43,	30	J.S. Ryder, G.J. Clark, J.E. Draper, J.M. Freeman, W.E. Burcham, G.T.A. Squier

1973Sc17	PYLBB	44,	449	H. Schmeing, J.C. Hardy, R.L. Graham, J.S. Geiger, K.P. Jackson
1973Se03	NUPAB	199,	241	J.C. Sens, A. Pape, R. Armbruster
1973Se08	PRVCA	8,	258	R.G. Sextro, R.A. Gough, J. Cerny
1973Se12	JUPSA	34,	1443	T. Seo, T. Hayashi, T. Mitamura
1973Sh.A	PrvCom	NDG	Jan	E.B. Shera in NDS974
1973Si40	NUPAB	216,	97	R.J. Silva, P.F. Dittner, M.L. Mallory, O.L. Keller, K. Eskola, P. Eskola, M. Nurmia, A. Ghiorso
1973Sp06	NUPAB	215,	260	A.M.J. Spits, J.A. Akkermans
1973Sz03	RRALA	14,	135	A. Szalay, S. Uray
1973Ta04	JUPSA	34,	848	I. Tanihata, T. Minamisono, A. Mizobuchi, K. Sugimoto
1973To08	PRVCA	8,	161	D.F. Torgerson, K. Wien, Y. Fares, N.S. Oakey, R.D. Macfarlane, W.A. Lanford
1973Ur01	ATKOA	15,	161	I. Uray
1973Va11	ZEPYA	259,	45	S.Y. Van der Werf
1973Ve06	PRVCA	8,	178	J. Vernotte, S. Galès, M. Langevin, J.M. Maison
1973Ve08	NUPAB	212,	493	J. Vernotte, S. Galès, M. Langevin, J.M. Maison
1973Vi09	RPHAA	8,	231	C. Vieu, A. Peghaire, J.S. Dionisio
1973Vi10	NUPAB	217,	372	V.E. Viola,Jr., M.M. Minor, C.T. Roche
1973Wa17	PRVCA	8,	297	O.A. Wasson, G.G. Slaughter
1973Wa18	PRVCA	8,	340	T.E. Ward, Y.Y. Chu, J.B. Cunning
1973Wi06	PRLTA	30,	866	K.H. Willcox, N.A. Jelley, G.J. Wozniak, R.B. Weisenmiller, H.L. Harney, J. Cerny
1973Wo01	PRVCA	7,	160	F.K. Wohn, J.K. Halbig, W.L. Talbert,Jr., J.R. McConnel
1973Ya02	NUPAB	204,	33	S.W. Yates, P.J. Daly, N.R. Johnson, N.K. Arras
1973Za08	ZEPYA	264,	227	J.I. Zaitz, R.K. Sheline, R.D. Griffieon

1974

1974Aj01	NUPAB	227,	1	F. Ajzenberg-Selove, T. Lauritsen
1974Al03	PRVCA	9,	991	D.E. Alburger
1974An05	IANFA	38,	48	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, P.P. Dmitriev, S.V. Kamynov, G.S. Katykhin, E.T. Kondrat, N.I. Krasnov, Y.N. Podkopayen, V.A. Sergienko, V.I. Fominikh
1974An22	IANFA	38,	1741	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, A.V. Zolotavin, G.S. Katykhin, V.M. Makarov, A.G. Shablinskii
1974An23	IANFA	38,	1748	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, A.V. Zolotavin, G.S. Katykhin, V.M. Makarov, A.G. Shablinskii
1974An24	IANFA	38,	1757	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, P.P. Zarubin, V.M. Makarov, V.Y. Padalko, Y.N. Podkopaev, V.A. Sergienko
1974Ap01	PRVCA	9,	310	K.E. Apt, W.B. Walters
1974Ar27	IANFA	38,	1569	R. Arlt, K.Y. Gromov, A. Latuszynski, K.G. Ortlepp, A. Jasinski
1974Az01	PRVCA	9,	1213	G. Azuelos, J.E. Crawford, J.E. Kitching
1974Ba15	PYLBB	49,	33	G.C. Ball, J.G. Costa, W.G. Davies, J.S. Forster, J.C. Hardy, A.B. McDonald
1974Ba90	CJPHA	52,	2386	R.C. Barber, J.W. Barnard, D.A. Burrel, J.O. Meredith, F.C.G. Southon, P. Williams, H.E. Duckworth
1974Be07	PRVCA	9,	589	R.R. Betts, H.T. Fortune, D.J. Pullen
1974Be20	PRVCA	9,	2130	W. Benenson, E. Kashy, D.H. Kong, A. Siou, A. Moalem, H. Nann
1974Be.A	ORNL-4967		37	C.E. Bemis, R.J. Silva, D.C. Hensley, O.L. Keller, Jr., O.L. Keller, J.R. Tarrant, L.D. Hunt, P.F. Dittner, R.L. Hahn, C.D. Goodman
1974Bi08	PRVCA	10,	729	P.K. Bindal, D.H. Youngblood, L. Kozun
1974Bl03	PHSTB	9,	321	J. Blomqvist, S. Borg, A. Kerek, K.-G. Rensfelt, J. Sztarkier
1974Bo05	PRVCA	9,	836	J.D. Bowman, A.M. Poskanzer, R.G. Korteling, G.W. ButlerJ.D. Bowman, A.M. PoskaJ.D. Bowman, A.M. Poskanzer, R.G. Korteling, G.W. Butlernzer, R.G. Korteling, G.W. Butler
1974Bo26	NUIMA	117,	213	H.E. Bosch, J. Davidson, M.A. Fariolli, V. Silbergleit
1974Bu21	IANFA	38,	1566	V.P. Burminskii, B.G. Kiselev, O.D. Kovrigin
1974Bu22	PRVCA	10,	2483	D.L. Bushnell, D.J. Buss, R.K. Smither
1974By01	NUPAB	223,	125	T. Byrski, F.A. Beck, P. Engelstein
1974Ca06	NUPAB	221,	1	P.T. Callaghan, M. Shott, N.J. Stone
1974Ca.A	Th.-Amsterdam			M.H. Cardoso

1974Ce05	PRVCA	10,	2654	J. Cerny, N.A. Jelley, D.L. Hendrie, C.F. Maguire, J. Mahoney, D.K. Scott, R.B. Weisenmiller
1974Ch17	JPSLB	35,	41	A. Charvet, R. Chery, R. Duffait
1974Ch18	PRVCA	9,	1839	R.E. Chrien, D.I. Garber, J.L. Holm, K. Rimawi
1974Ch21	ZEPYA	267,	355	A. Charvet, R. Chery, D.P. Phuoc, R. Duffait
1974Ch51	JOPQA	35,	1804	A. Charvet, R. Chery, P.H. Do, R. Duffield, M. Morgue
1974ClZX	P-Rochester		221	R.G. Clark, L.E. Glendenin, W.L. Talbert, Jr.
1974Co21	CJPHA	52,	1215	A.H. Colenbrander, T.J. Kennett
1974Co27	PRVCA	10,	1236	J.R. Comfort, R.W. Finlay, C.M. McKenna, P.T. Debevec
1974Co35	NUPAB	233,	185	F. Corvi, M. Stefanon
1974Da02	PRVCA	9,	216	C.N. Davids, D.R. Goosman, D.E. Alburger, A. Gallmann, G. Guillaume, D.H. Wilkinson, W.A. Lanford
1974De09	NUPAB	225,	317	F.W.N. De Boer, P.F.A. Goudsmit, P. Koldewijn, B.J. Meyer
1974De22	YAFIA	19,	1161	R.A. Demirkhanov, M.I. Dzkuya, V.V. Dorokhov, G.A. Dorokhova
1974De31	CJPHA	52,	1416	P. Debenham, W.R. Falk, M. Canty
1974De37	NUPAB	230,	490	E.O. Deneijs, M.A. Meyer, J.P.L. Reinecke, D. Reitman
1974De47	NUPAB	236,	349	F.W.N. De Boer, P.F.A. Goudsmit, B.J. Meijer, P. Koldewijn, J. Konijn, R. Beetz
1974Di03	PRVCA	10,	1172	M. Diksie, L. Yaffe, D.G. Sarantites
1974Di.A	P-Amsterdam		114	J.S. Dionisio, C. Vieu, V. Berg, C. Bourgeois
1974Do09	NUPAB	229,	47	G. Doukellis, C. McKenna, R. Finlay, J. Rappaport, H.J. Kim
1974Em01	NUPAB	231,	437	A. Emsallem, D.P. Huoc, R. Chery, M. Ashgar
1974Er.A	AnRpt Julich			R. Ermer, W. Delang, P. Gottel, H.H. Guven, B. Hrastnik, O.W.B. Schult, H. Seyfarth
1974Ev02	NUPAB	230,	109	D. Evers, W. Assmann, K. Rudolph, S.J. Skorka, P. Sperr
1974Fl01	PRVCA	9,	210	E.R. Flynn, J.D. Garrett
1974Fo23	NUPAB	230,	214	B. Fogelberg, T. Nagarajan, B. Grapengiesser
1974Fr01	PRVCA	9,	760	A.M. Friedman, K. Katori, D. Albroght, J.P. Schiffer
1974Ge05	PRVCA	9,	2363	W. Gelletly, W.R. Kane, D.R. MacKenzie
1974Gh04	PRLTA	33,	1490	A. Ghiorso, J.M. Nitschke, J.R. Alonso, C.T. Alonso, M. Nurmia, G.T. Seaborg, E.K. Hulet, R.W. Lougheed
1974Gi09	NUPAB	233,	81	S. Gilad, S. Cochavi, M.A. Moinester, J. Alster, M. Buenard, P. Nartin
1974Gl10	AENGA	37,	78	V.M. Glazov, R.I. Borisova, A.I. Shaviev
1974Go17	PRVCA	10,	756	D.R. Goosman, D.E. Alburger
1974Go20	ZEPYA	269,	111	S.C. Goverse, J. Kuiper, J. Blok
1974Gr11	NUPAB	223,	66	R.C. Greenwood, C.W. Reich
1974Gr22	PRVCA	10,	624	R.D. Griffioen, R.K. Sheline
1974Gr29	JINCA	36,	2409	B. Grapengiesser, E. Lund, G. Rudstam
1974Gr37	NUIMA	121,	385	R.C. Greenwood, R.G. Helmer
1974Gr41	IANFA	38,	2499	E.P. Grigorev, A.V. Zolotavin, S.V. Kaminov
1974Gu10	YAFIA	19,	1167	K. Gurach, A.P. Kabachenko, I.V. Kuznetsov, N.I. Tarantin
1974Ha02	PRVCA	9,	252	J.C. Hardy, H. Schmeing, W. Benenson, G.M. Crawley, E. Kashy, H. Nann
1974Ha26	NUPAB	223,	157	J.C. Hardy, H. Schmeing, J.S. Geiger, R.L. Graham
1974Ha35	PRLTA	33,	320	J.C. Hardy, G.C. Ball, J.S. Geiger, R.L. Graham, J.A. Macdonald, H. Schmeing
1974Ha55	PRVCA	10,	1829	G. Hardie, D. Gloeckner, L. Meyer-Schutzmeister, T.H. Braid
1974Ha59	PRLTA	33,	1647	J.C. Hardy, H.R. Andrews, J.S. Geiger, R.L. Graham, J.A. Macdonald, H. Schmeing
1974Ho17	PHSTB	9,	317	W. Hogervorst, C. Ekstrom, S. Ingelman, G. Wannberg
1974Ho21	PYLBB	51,	345	S.D. Hoath, R.J. Petty, J.M. Freeman, G.T.A. Squier, W.E. Burcham
1974Ho26	NUPAB	230,	365	P. Hornshoj, P.G. Hansen, B. Jonson, H.L. Ravn, L. Westgaard, O.B. Nielsen
1974Ho27	NUPAB	230,	380	P. Hornshøj, P.G. Hansen, B. Jonson
1974Hr01	NUPAB	219,	381	B. Hrastnik, H. Seyfarth, A.M. Hassan, W. Delang, P. Gottel
1974Hu15	NUIMA	121,	307	E. Huenges, H. Vonach, J. Labetzki
1974Ia01	CJPHA	52,	96	R. Iafigliola, S.C. Gujrathi, B.L. Tracy, J.K.P. Lee
1974Is01	PRVCA	9,	1662	H.A. Ismail, W.H. Moore, J.N. Hallock, H.A. Enge
1974Ja10	PYLBB	49,	341	K.P. Jackson, J.C. Hardy, H. Schmeing, R.L. Graham, J.S. Geiger, K.W. Allen
1974Je01	PRVCA	9,	2067	N.A. Jelley, K.H. Wilcox, R.B. Weisenmiller, G.J. Wozniak, J. Cerny
1974Jo14	PRVCA	10,	2449	P.L. Jolivette, J.D. Goss, G.L. Marolt, A.A. Rollefson, C.P. Browne
1974Ju.A	PrvCom		74AjLa	E.T. Jurney
1974Ju.B	PrvCom	AHW		E.T. Jurney

1974Ka05	ZEPYA	266,	21	N. Kaffrell, N. Trautmann, R. Denig
1974Ka15	PRVCA	9,	2102	E. Kashy, W. Benenson, J.A. Nolen,Jr.
1974Ke01	NUPAB	221,	333	J. Kern, G. Mauron, B. Michaud, K. Schreckenbach, T. von Egidy, W. Mampe, H.R. Koch, H.A. Baader, D. Breitig, U. Gruber
1974Ke13	PRVCA	10,	1554	J. Kern, D. Duc
1974Ke14	ZEPYA	270,	129	J. Keinonen, A. Anttila, M. Bister
1974Ki02	PRVCA	9,	767	J. Kim, R.L. Robinson
1974Kn02	PRVCA	9,	1467	J.D. Knight, C.J. Orth, W.T. Leland, A.B. Tucker
1974Ko08	NUPAB	221,	45	D.H. Kong-A-Siou, A.J. Cole, A. Giorni, J.P. Longequeue
1974Ko20	NUPAB	231,	266	D.G. Kovar, N. Stein, C.K. Bockelman
1974Kr21	NUPAB	229,	179	K.-L. Kratz, G. Herrmann
1974KrZG	P-Rochester		95	J.-V. Kratz, G. Herrmann
1974Ku01	NUPAB	218,	201	I. Kumabe, S. Matsuki, S. Nakamura, M. Hyakutake, M. Matoba, T. Sato
1974Le02	PRVCA	9,	1091	Y. Le Beyec, M. Lefort, J. Livet, N.T. Porile, A. Siivola
1974Lu03	NUPAB	229,	230	R. Lutter, O. Hausser, D.J. Donahue, R.L. Hershberger, F. Riess, H. Bohn, T. Faestermann, F.V. Feilitzsch, K.E.G. Lobner
1974Ma09	PRVCA	9,	1633	R.G. Markham, H.W. Fulbright
1974Me15	YAFIA	19,	437	R.J. Metskvarishvili, Z.N. Miminoshvili, M.A. Elizbarashvili
1974Mu10	NUPAB	224,	437	F. Münnich, D. Lode, H. Schrader, A. Hoglund, W. Pessara
1974Na07	PRVCA	9,	1848	H. Nann, W. Benenson, E. Kashy, P. Turek
1974No02	PRVCA	9,	1168	T. Nomura, K. Hiruta, M. Yoshie, O. Hashimoto
1974No07	NUIMA	115,	189	J.A. Nolen,Jr., G. Hamilton, E. Kashy, D. Proctor
1974Oe03	NUPAB	230,	413	W. Oelert, G. Lindstrom, V. Riech
1974Pe15	NUPAB	235,	205	R.J. Peel, D.R. Dixon, M.W. Hill, G.L. Jensen, N.F. Mangelson, N. Nath, V.C. Rogers
1974Po08	PRVCA	10,	803	F.T. Porter, I. Ahmad, M.S. Freedman, J. Milsted, A.M. Friedman
1974Po17	AENGA	37,	357	V.G. Polyukhov, G.A. Timofeev, P.A. Privalova, V.Y. Gabeskiriya, A.P. Chetverikov
1974Pr15	IANFA	38,	2135	P.T. Prokofev, L.I. Simonov
1974Ra31	PHFEA	9,	103	V. Rahkonen, J. Kantele
1974Ra.A	P-Bombay		10	C.N. Rao, B.M. Rao, P.M. Rao, K.V. Reddy
1974Ri03	PRVCA	9,	1978	K. Rimawi, J.B. Garg, R.E. Chrien, G.W. Cole, O.A. Wasson
1974Ri08	NUPAB	228,	461	A. Riccato, P. David
1974Ro01	PRVCA	9,	149	W.J. Roberts, E.E. Gross, E. Newman
1974Ro11	ZEPYA	266,	65	E. Roeckl, D. Lode, K. Bächmann, B. Neidhart, G.K. Wolf, W. Lauppe, N. Kaffrell, P. Patzelt
1974Ro12	ZEPYA	266,	123	E. Roeckl, D. Lode, W. Pessar
1974Ro15	NUPAB	222,	621	E. Roeckl, P.F. Dittner, R. Klapisch, C. Thibault, C. Rigaud, R. Prieels
1974Ro16	PRVCA	9,	1801	R.G.H. Robertson, S.M. Austin
1974Ro17	PRLTA	32,	1207	R.G.H. Robertson, S. Martin, W.R. Falk, D. Ingham, A. Djaloeis
1974Ro18	PRVCA	9,	2272	S.J. Rothman, N.L. Peterson, W.K. Chen, J.J. Hines, R. Bastar, L.C. Robinson, L.J. Nowicki, J.B. Anderson
1974Ro21	NUPAB	225,	109	D.C. Robinson, P.H. Barker
1974Ro31	PRVCA	10,	1181	E. Roeckl, P.F. Dittner, C. Détraz, R. Klapisch, C. Thibault, C. Rigaud
1974Ro44	PRAMC	3,	186	A. Roy, K.V.K. Iyengar, M.L. Jhingan, S.K. Bhattacherjee
1974Ru05	NUIMA	119,	269	H. Rubinsztein, I. Lindgren, L. Lindstrom, H. Riedl, A. Rosen
1974Ru08	NUIMA	120,	333	G. Rudstam, S. Shalev, O.C. Jonsson
1974Sc02	CJPHA	52,	131	R.L. Schulte, J.D. King, W. Taylor
1974Sc06	ZEPYA	266,	129	H.M. Schupferling, K.-W. Hoffmann
1974Sc19	PRVCA	10,	296	W.D. Schmidt-Ott, K.S. Toth, E. Newman, C.R. Bingham
1974Sc26	PRLTA	33,	1343	D.K. Scott, B.G. Harvey, D.L. Hendrie, L. Krauss, C.F. Maguire, J. Mahoney, Y. Terrien, K. Yagi
1974Se05	PRLTA	33,	233	K.K. Seth, A. Saha, W. Benenson, W.A. Langford, H. Nann, B.H. Wildenthal
1974Se11	NUPAB	234,	130	R.G. Sextro, R.A. Gough, J. Cerny
1974Sp04	NUPAB	224,	517	A.M. Spits, J. de Boer
1974Su04	PRVCA	10,	853	R.E. Sund, H. Weber, V.V. Verbinski
1974To04	ZEPYA	268,	289	F. Tolea, K.R. Baker, W.D. Schmidt-Ott, R.W. Fink
1974To07	PRVCA	10,	2550	K.S. Toth, C.R. Bingham, W.D. Schmidt-Ott
1974Vi02	ZEPYA	269,	173	M. Viitasalo, I. Forsblom

1974Vo08	IANFA	38,	672	I. Votsilka, K.U. Zibert, B. Kracik, J. Liptak, A.F. Novgorodov, K.G. Ortlepp, M. Toshev, V. Habenicht
1974Vy01	IANFA	38,	701	Ts. Vylov, N.A. Golovkov, K.Y. Gromov, I.I. Gromova, A. Kolachkovsky, M.Y. Kuznetsova, Y.V. Norseev, V.G. Chumin
1974Wa08	PRVCA	9,	1396	C.W. Wang, Y.C. Liu, E.K. Lin, C.C. Hsu, G.C. Kiang
1974Wa14	PRVCA	10,	1983	T.R. Ward, P.F. Haustein, J.B. Cumming, Y.Y. Chu
1974Wi17	PRVCA	10,	2184	B.H. Wildenthal, J.A. Rice, B.M. Preedom
1974Ya07	JUPSA	37,	10	H. Yamamoto, K. Kawade, H. Fukaya, T. Katoh

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1975Ad08	IANFA	39,	1681	I. Adam, G. Baier, K.Y. Gromov, T.A. Islamov, K.G. Ortlepp, K. Tiroff, E. Hermann, H. Strusnii
1975Ad09	NUPAB	254,	63	I. Adam, K.Y. Gromov
1975Ag01	NUPAB	249,	239	P. Aguer, C.F. Liang, J. Libert, P. Paris, A. Peghaire, A. Charvet, R. Duffait, G. Marguier
1975Ah01	NUPAB	239,	1	I. Ahmad, J. Milsted
1975Ah05	PRVCA	12,	541	I. Ahmad, F.T. Porter, M.S. Freedman, R.K. Sjoblom, J. Lerner, R.F. Barnes, J. Milsted, P.R. Fields
1975Aj03	PRVCA	12,	1868	F. Ajzenberg-Selove, R. Middleton, J.D. Garrett
1975Al27	PRVCA	12,	1690	D.E. Alburger, F.P. Calaprice
1975Al.A	P-Leningrad			A.A. Aleksandrov, et al
1975An07	NUPAB	242,	93	R.E. Anderson, R.L. Bunting, J.D. Burch, S.R. Chinn, J.J. Kraushaar, R.J. Peterson, D.E. Prull, B.W. Ridley, R.A. Ristinen
1975As04	NUPAB	247,	359	M. Asghar, J.P. Gautheron, G. Bailleul, J.P. Bocquet, J. Greif, H. Schrader, G. Siegert, C. Ristori, J. Crancon, G.I. Crawford
1975Az01	PRVCA	12,	563	G. Azuelos, J.E. Kitching
1975Ba25	YAFIA	21,	230	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, V.M. Shubko
1975Ba27	ZETFA	68,	8	S.A. Baranov, V.M. Shatinskii
1975Ba36	ZEPYA	273,	283	G. Bailleul, J.P. Bocquet, H. Schrader, R. Stippler, B. Pfeiffer, M. Asghar, C. Chauvin, J.P. Gautheron, J. Greif, G. Siegert, P. Armbruster, H. Ewald, J. Blachot, E. Monnand, F. Schussler
1975Ba65	YAFIA	22,	670	S.A. Baranov, V.M. Shatinskii
1975Ba.B	AnRpt CSNSM		35	G. Bastin, C.F. Liang
1975Be09	ZENAA	30,	356	M.J. Bechara, O. Dietsch
1975Be21	NUPAB	245,	515	H. Behrens, M. Kobelt, L. Szybisz, W.G. Thies
1975Be28	NUPAB	246,	317	H. Behrens, M. Kobelt, L. Szybisz, W.G. Thies
1975Be38	PYLBB	58,	46	W. Benenson, A. Guilchard, E. Kashy, D. Mueller, H. Nann, L.W. Robinson
1975Be.B	P-Paris		54	U. Bertsche, F. Rauch, K. Stelzer
1975Bh01	PRVCA	12,	1457	M.R. Bhat, R.E. Chrien, G.W. Cole, O.A. Wasson
1975Bl01	PRVCA	11,	939	J.N. Black, W.C. McHarris, W.H. Kelly, B.H. Wildenthal
1975Bo11	YAFIA	21,	233	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov
1975Bo14	NUPAB	245,	107	W. Bohne, H. Fuchs, K. Grabisch, D. Hilscher, U. Jahnke, H. Kluge, T.G. Masterson, H. Morgenstern
1975Bo29	ZPAAD	273,	373	H.E. Bosch, J. Davidson, V. Silbergleit, C.A. Heras, S.M. Abecassis
1975Bo59	RBFSA	5,	215	L.C.S. Boueres, O. Dietsch, T. Polga
1975Br02	PRVCA	11,	546	D. Breitig, R.F. Casten, W.R. Kane, G.W. Cole, J.A. Cizewski
1975Br16	NUPAB	245,	243	A.R. Brosi, B.H. Ketelle
1975Br29	NCIAA	30,	483	A. Brondi, R. Moro, P. Pelter, F. Terassi
1975Br.A	Th.-Mainz			W. Brüchle
1975Bu01	PRVCA	11,	1401	D.L. Bushnell, J. Hawkins, R. Goebbert, R.K. Smither
1975Bu02	CJPHA	53,	948	D.G. Burke, J.M. Balogh, and erratum CJPHA 63(1985)649
1975Bu.A	BAPSA	20,	625	M.E. Bunker, B.S. Nielsen, J.W. Starner, B.J. Dropesky, W.R. Daniels
1975Ca06	NUPAB	241,	341	C. Cabot, C. Deprun, H. Gauvin, B. Lagarde, Y. Le Beyec, M. Lefort
1975Ca07	NUPAB	242,	221	T. Caldwell, D.J. Pullen, O. Hansen
1975Ch05	NUPAB	238,	333	A. Charvet, R. Chery, R. Duffait, M. Morgue
1975Ch11	PRVCA	11,	1237	J. Chao, D.K. Olsen, C. Newson, P.J. Riley
1975Ch21	JPHGB	1,	657	R. Chapman, G.D. Dracoulis
1975Co.A	AnRpt CSNSM			Collaboration CSNSM-IPN-Marbourg-Stockholm-Varsovie

1975Da14	NUPAB	250,	221	J.M. Davidson, T. Taylor, D.A. Hutcheon, D.M. Sheppard, W.C. Olsen
1975De.A	P-Petten		609	J. de Boer
1975Em04	ZPAAD	275,	157	A. Emsallem, M. Ashgar
1975Em.A	P-Petten		395	A. Emsallem, M. Ashgar
1975Er.A	PrvCom	NDG	Jul	J.R. Erskine
1975Fl07	ZPAAD	272,	219	D. Flothman, H.J. Gils, W. Wiesner, R. Loehken
1975Fr16	PRVCA	12,	616	E.M. Franz, S. Katcoff
1975Fr.A	P-Paris		126	J.M. Freeman, R.J. Petty, S.H. Hoath, J.S. Ryder, W.E. Burcham, G.T.A. Squier
1975Fr.B	AnRpt AFI		146	K. Fransson, M. af Ugglas, P. Carle
1975Gr32	NUPAB	252,	260	R.C. Greenwood, C.W. Reich, S.H. Vegors,Jr.
1975Gu01	JPHGB	1,	67	S.C. Gujrathi, C. Weiffenbach, J.K.P. Lee
1975Gu15	PRVCA	12,	1109	A. Guichard, H. Nann, B.H. Wildenthal
1975Ha21	NUPAB	246,	61	J.C. Hardy, H. Schmeing, J.S. Geiger, R.L. Graham
1975Ha43	ZPAAD	274,	335	H.H. Hansen, D. Mouchet
1975He.C	KFK-2223			D. Heck, J.A. Pinston, H. Börner, F. Braumandl, P. Jeuch, H.R. Koch, W. Mampe, R. Rousille, K. Schreckenbach
1975Ho02	PYLBB	55,	53	P. Hornshøj, K. Wilsky, P.G. Hansen, B. Jonson, K. Wilsky, P.G. Hansen, B. Jonson
1975Ho09	PYLBB	57,	147	P. Hornshøj, P. Tidemand-Petersson, R. Bethoux, A.A. Caretto, J.W. Grüter, P.G. Hansen, B. Jonson, E. Hagberg, S. Mattsson
1975Ho14	NUPAB	248,	406	P. Hornshøj, P. Tidemand-Petersson, R. Kaczarowski, B. Kotlinska
1975Ij.A	BAPSA	20,	1154	M.A. Ijaz, Vpi e su, E.L. Robinson, K.S. Toth, C.R. Bingham
1975Is04	PRVCA	12,	708	H.A. Ismail, J.N. Hallock, W.H. Moore, H.A. Enge
1975Ja10	PRVCA	11,	2114	J. Jänecke, F.D. Becchetti, L.T. Chua, A.M. Vandermolen
1975Jo.A	BAPSA	20,	625	O.P. Jolly, D.G. Burke
1975Ka15	JUPSA	38,	314	K. Kawade, H. Yamamoto, Y. Ikeda, T. Katoh
1975Ka18	PRVCA	11,	1959	E. Kashy, W. Benenson, D. Mueller, R.G.H. Robertson, D.R. Goosman
1975Ka25	PRVCA	12,	1054	D. Kaiser, W.H. Johnson,Jr.
1975Ka.A	P-Petten		544	B. Kardon, H. Seyfarth, P. Gottel, H.H. Guven
1975Ke06	NUPAB	245,	221	P. Kemnitz, L. Funke, H. Sodan, E. Will, G. Winter
1975Ke08	PRVCA	12,	553	G.G. Kennedy, S.C. Gujrathi, S.K. Mark
1975Ke09	ZPAAD	274,	233	G.G. Kennedy, S.C. Gujrathi, S.K. Mark
1975Ke12	NUPAB	255,	296	J.J. Kent, S.L. Blatt
1975Kl06	NUPAB	245,	133	H.V. Klapdor, M. Schrader, G. Bergdolt, A.M. Bergdolt
1975Ko18	PRVCA	12,	1511	R. Kouzes, W.H. Moore, and erratum PRVCA 13,890
1975Kr08	NUPAB	250,	13	J.V. Kratz, H. Franz, N. Kaffrell, G. Herrmann
1975Kr17	INUCA	11,	331	K.-L. Kratz, W. Lauppe, G. Herrmann
1975Ku14	NUPAB	247,	152	A.W. Kuhfeld, N.M. Hintz
1975La02	JINCA	37,	623	J.J. Labreque, I.L. Preiss, H. Bakhru, R.I. Morse
1975Li14	JUPSA	39,	1	C.Y. Liu, T.H. Hsue, K. Lin, P.K. Tseng, C.C. Hsu, C.W. Wang
1975Li22	NUPAB	253,	165	J.R. Lien, J.S. Vaagen, A. Graue
1975Lo03	NUPAB	243,	413	M.A. Lone, E.D. Earle, G.A. Bartholemew
1975Lu02	PRVCA	11,	1470	D.H. Lueders, J.M. Daley, S.G. Buccino, F.E. Durham, C.E. Hollandsworth, W.P. Bucher, H.D. Jones
1975Ma04	NUPAB	237,	285	M.R. MacPhail, R.G. Summers-Gill, see also thesis Winnipeg, and PrvCom AHW September 1980
1975Ma05	PRVCA	11,	587	G.J. Matthews, F.M. Bernthal, J.D. Immele
1975Ma.A	P-Petten		655	P. Matusek
1975Me10	PRVCA	12,	401	L.R. Medsker, H.T. Fortune, S.C. Headley
1975Me13	PYLBB	58,	297	L.R. Medsker, H.T. Fortune
1975Me20	ZPAAD	275,	67	B.J. Meijer, J. Konijn
1975Me23	PRVCA	12,	2010	R.A. Meyer, R.G. Lanier, J.T. Larsen
1975Mo26	PYLBB	58,	286	A. Moallem, M.A.M. Shahabuddin, R.G. Markham, H. Nann
1975Mo29	NUPAB	252,	477	P. Morgen, J.H. Onsgaard, B.S. Nielsen, C. Sondergaard
1975Mu08	PYLBB	57,	44	L.G. Multhauf, K.G. Tirsell, S. Raman, J.B. McGrory
1975Mu09	PRVCA	12,	51	D. Mueller, E. Kashy, W. Benenson, H. Nann
1975Na.A	P-Petten		566	M.R. Najam, A.F.M. Ishaq, M. Anwar, A.M. Khan, J.A. Mirza
1975No.A	P-Paris		140	J. Nolen
1975Pa01	PRLTA	34,	212	L. Palffy, J.P. Deutsch, L. Grenacs, J. Lehmann, M. Steels

1975Pl06	IJARA	26,	579	J. Plch, J. Zderadicka, O. Dragoun
1975Ra03	JINCA	37,	383	H.L. Ravn, S. Sundell, L. Westgaard, E. Roeckl
1975Ra07	NUPAB	242,	189	D. Rabenstein, D. Harrach
1975Ra08	JPHGB	1,	461	C.N. Rao, B.M. Rao, P.M. Rao, K.V. Reddy see 75Ra09
1975Ra09	PRVCA	11,	1735	C.N. Rao, B.M. Rao, K.V. Reddy
1975Re09	NUPAB	249,	166	W. Reiter, W.H. Breunlich, P. Hille
1975Ro01	PRLTA	34,	33	R.G.H. Robertson, W.S. Chien, D.R. Goosman
1975Ro05	NUPAB	240,	221	C. Rolfs, W.S. Rodney, S. Durrance, H. Winkler
1975Ro16	NUPAB	246,	380	R. Rousille, J.A. Pinston, H. Börner, H.R. Koch, D. Heck
1975Ro25	ZEPYA	275,	45	S. Roodbergen, H. Visser, W. Molendijk, H.S. Bedet, H. Verheul
1975Ru06	PYLBB	58,	283	H. Rubinsztein, M. Gustafsson
1975Sc07	NUPAB	242,	232	H. Schmeing, J.C. Hardy, R.L. Graham, J.S. Geiger
1975Se.A	BAPSA	20,	73	F.J.D. Serduke, W. Henning
1975Si03	CJPHA	53,	391	B. Singh, M.W. Johns
1975Sl.A	BAPSA	20,	560	G.G. Slaughter, S. Raman
1975Sm02	PRVCA	11,	1392	L.G. Smith, A.H. Wapstra
1975Sq01	NUPAB	242,	62	G.T.A. Squier, W.E. Burcham, J.M. Freedman, R.J. Petty, S.D. Hoath, J.S. Ryder
1975St07	NUPAB	242,	30	H. Strusny, H. Tyrroff, E. Herrmann, G. Musiol, M.I. Baznat, G. Beyer, K.Y. Gromov, M. Honusek, T.A. Islamov, V.V. Kuznetsov, H.-U. Siebert
1975St08	CJPHA	53,	922	W.R. Stott, J.C. Waddington, D.G. Burke, G. Løvhøiden
1975St12	CZYPA	25,	626	H. Strusny, H. Tyrroff, E. Herrmann, G. Musiol
1975Ta06	ZPAAD	272,	301	C.W. Tang, A. Pakkanen, Z.C. Mester, C.D. Coryell, G. Chilosi, A.H. Wapstra, K. Bos
1975Ta12	PRVCA	12,	108	H. Taketani, H.L. Sharma, N.M. Hintz
1975Th04	NUPAB	242,	1	R.C. Thompson, J.S. Boyno, J.R. Huizenga, D.G. Burke, T.W. Elze
1975Th06	NUPAB	245,	444	R. Thompson, A. Ikeda, R.K. Sheline
1975Th08	PRVCA	12,	644	C. Thibault, R. Klapisch, C. Rigaud, A.M. Poskanzer, R. Prieels, L. Lessard, W. Reisdorf
1975To05	PRVCA	12,	533	K.S. Toth, W.D. Schmidt-Ott, C.R. Bingham, M.A. Ijaz
1975Un.A	P-Paris		81	UNISOR consortium
1975Va12	ZPAAD	274,	383	J.R. Van Hise, D.C. Camp, R.A. Meyer
1975Va24	PHFEA	10,	133	S. Vaisala, T. Raunemaa, A. Fontell, G. Graeffe, A. Siivola
1975Va.A	P-Leningrad		156	V.M. Vachte, N.A. Golovkov, B.S. Dzelepov, R.B. Ivanov, A. Lyushenski, M.A. Michailova, A.B. Mozhuchin, B.G. Shumin
1975Vi01	JINCA	37,	11	V.E. Viola,Jr., C.T. Roche, M.M. Minor
1975Vy02	IANFA	39,	1671	Ts. Vylov, I.I. Gromova, V.G. Kalinnikov, V. Kuznetsov, T.M. Muminov, V.A. Morozov, V.I. Fominikh, R.R. Uzmanov, E.R. Shavgulidze
1975We03	CJPHA	53,	101	C. Weiffenbach, S.C. Gujrathi, J.K.P. Lee
1975We10	PHSTB	11,	10	T. Westrom, B. Fant, I. Forsblom, M. Viitasalo
1975We23	ZPAAD	275,	127	L. Westgaard, K. Aleklett, G. Nyman, E. Roeckl
1975We24	PHFEA	10,	167	T. Weckstrom, I. Forsblom, P. Holmberg
1975We.A	P-Petten		749	C. Weitkamp, P. Matusek, H. Ottmar
1975Wi06	PRVCA	11,	1477	W.M. Wilson, G.E. Thomas, H.E. Jackson
1975Wi08	ZPAAD	272,	291	G. Wirth, N. Kaffrell, K. Chayawattanangkur, G. Herrmann, K.E. Seyb
1975Wi26	PYLBB	59,	142	K.H. Wilcox, R.B. Weisenmiller, G.J. Wozniak, N.A. Jelley, D. Ashery, J. Cerny
1975Yo01	NUPAB	243,	143	N. Yoshikawa
1975Yo04	PRVCA	12,	1242	L.E. Young, S.K. Bhattacherjee, R. Brenn, B.A. Brown, D.B. Fossan, G.D. Sprouse
1975Ze.A	JINR-P6-8929			A. Zelinsky, K. Zuber, Y. Zuber, V.V. Kuznetsov, A. Kolachkovsky, A. Lyatushinsky, Y.V. Norseev, H.G. Ortlepp, I. Penev, A.V. Potempa

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1976Ah01	JINCA	38,	191	H. Ahrens, P. Patzelt, G. Herrmann
1976Ah06	PRVCA	14,	211	H. Ahrens, N. Kaffrell, N. Trautmann, G. Herrmann
1976Aj03	PRVCA	14,	767	F. Ajzenberg-Selove, E.R. Flynn, O. Hansen, J.D. Sherman, N. Stern, J.W. Sunier
1976Al01	NUPAB	257,	490	M.M. Aleonard, P. Hubert, L. Sarger, P. Mennrath
1976Al02	PRVCA	13,	835	D.E. Alburger, D.H. Wilkinson

1976Al16	NUIMA	136,	323	D.E. Alburger
1976AmZW	CERN-76-13		501	S. Amiel, G. Engler, Y. Nir-El, M. Shmid
1976An05	PYLBB	61,	234	G. Andersson, M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson
1976Ba68	AENGA	41,	342	S.A. Baranov, A.G. Zelenkov, V.M. Kulakov
1976Ba.A	P-Cargese		106	T. Batsch, M. Nowicki, J. Żylicz
1976Be02	NUPAB	256,	87	D. Berenyi, G. Hock, A. Menes, G. Szekely, Cs. Ujhelyi, B.A. Zon
1976Be08	PRVCA	13,	1479	W. Benenson, A. Guichard, E. Kashy, D. Mueller, H. Nann
1976Be11	NUPAB	260,	269	G. Beyer, A. Jasinski, O. Knotek, H.G. Ortlepp, H.U. Siebert, R. Aelt, E. Herrmann, G. Musiol, H. Tyrroff
1976Be12	PRLTA	36,	1128	H. Beuscher, D.R. Zolnowski, D.R. Haenni, T.T. Sugihara
1976Be50	PRVCA	14,	2095	D. Benson,Jr., P. Kleinheinz, R.K. Sheline, R.B. Shera
1976Be.A	AnRpt OakRidge		73	C.E. Bemis,Jr., C.E. Bemis, D.C. Hensley, P.F. Dittner, R.L. Hahn, R.J. Silva, J.R. Tarrant, L.D. Hunt, and PrvCom AHW July 1981
1976Be.B	AnRpt MSUCL		11	F.M. Bernthal
1976Bi09	PRVCA	14,	1586	C.R. Bingham, L.L. Riedinger, F.E. Turner, B.D. Kern, J.L. Weil, K.J. Hofstetter, J. Lin, E.F. Zganjar, A.V. Ramayya, J.H. Hamilton, J.L. Wood, G.M. Gowdy, R.W. Fink, E.H. Spejewski, W.D. Schmidt-Ott, R.L. Mlekodaj, H.K. Carter, K.S.R. Sastry
1976Bo09	ZEPYA	276,	203	J. Bonn, G. Huber, H.-J. Kluge, E.W. Otten
1976Ca10	NUPAB	261,	445	R.F. Casten, D. Burke, O. Hansen
1976Ca24	PRVCA	14,	1439	R.F. Carlton, S. Raman, J.A. Harvey, G.G. Slaughter
1976Ca25	PRVCA	14,	912	R.F. Casten, W.R. Kane, J.R. Erskine, A.M. Friedman, D.S. Gale
1976Ch02	PRVCA	13,	578	R.E. Chrien, G.W. Cole, G.C. Slaughter, J.A. Harvey
1976ChZD	CERN-76-13		471	E. Cheifetz, A. Wolf
1976Co24	PRLTA	37,	1185	J.D. Cole, J.H. Hamilton, A.V. Ramayya, W.G. Nettles, H. Kawakami, E.H. Spejewski, M.A. Ijaz, K.S. Toth, E.L. Robinson, K.S.R. Sastry, J. Lin, F.T. Avignone, W.H. Brantley, P.V.G. Rao
1976Cr03	PYLBB	64,	143	G.M. Crawley, W.F. Steele, J.N. Bishop, P.A. Smith, S. Maripuu
1976Cr.B	JINR-P6-9711			T. Cretzu, V.V. Kuznetsov, G. Luzurej, G. Macarie, M. Finger
1976Da20	PRVCA	14,	2011	W.W. Daehnick, M.M. Spisak, R.M. Del Vecchio
1976Da.C	P-Cargese		100	J.M. D'Auria, J.W. Grüter, L. Westgaard, G. Nyman, P. Peuser, E. Roeckl, H. Otto, ISOLDE
1976Da.D	P-Cargese		262	J.M. D'Auria, L.C. Carraz, P.G. Hansen, B. Jonson, S. Mattsson, H.L. Ravn, M. Skarestad, L. Westgaard
1976Di15	NUIMA	139,	181	J.S. Dionisio, C. Vieu, C.M. Truong, G. Leur
1976Di.A	AnRpt OakRidge			P.F. Dittner, R.J. Silva, D.C. Hensley, R.L. Hahn, J.R. Tarrant, L.D. Hunt, and PrvCom AHW July 1981
1976Do05	NUPAB	263,	210	P. Doll, G.J. Wagner, K.T. Knopfle
1976Ed.A	P-Cargese		258	M.D. Edmiston, R.A. Warner, W.C. McHarris, W.H. Kelly
1976El11	PRVCA	14,	583	D. Elmore, W.P. Alford
1976El12	CJPHA	54,	1493	D. Elmore, W.P. Alford
1976Fl02	PRVCA	13,	568	E.R. Flynn, J.D. Sherman, N. Stein, D.K. Olsen, P.J. Riley
1976Fo01	PRVCA	13,	1049	S. Fortier, H. Laurent, J.P. Schapira, M.S. Antony, A. Knipper
1976Fr13	NUIMA	134,	153	J.M. Freeman
1976Fr.A	USIP-76-09			K. Fransson, M. af Ugglas, P. Carle, T. Erikson
1976Fu06	JPCRB	5,	835	G.H. Fuller
1976Ga19	NUPAB	268,	257	S. Galès, S. Fortier, H. Laurent, J.M. Maison, J.P. Schapira
1976Ga.A	P-Baku			M. Gasior, B.G. Kalinnikov, T. Kretsu
1976Ge02	PRVCA	13,	1434	W. Gelletly, W.R. Kane, R.F. Casten
1976Ge06	NUIMA	134,	309	H. Genz, J. Reisberg, A. Richter, B.M. Schmitz, G. Schrieder, K. Werner
1976Ge08	NUPAB	267,	13	H. Genz, A. Richter, B.M. Schmitz, H. Behrens
1976Ge14	PRVCA	14,	1896	R.J. Gehrke, R.G. Helmer, C.W. Reich, R.A. Anderl
1976Go02	PRVCA	13,	1601	G.M. Gowdy, A.C. Xenoulis, J.L. Wood, K.R. Baker, R.W. Fink, J.L. Weil, B.D. Kern, K.J. Hofstetter, E.H. Spejewski, R.L. Mlekodaj, H.K. Carter, W.D. Schmidt-Ott, J. Lin, C.B. Ringham, L.L. Riedinger, E.F. Zganjar, K.S. Sastry, A.V. Ramayya, J.H. Hamilton
1976Gr09	NUPAB	270,	29	R.C. Greenwood, R.J. Gehrke, R.G. Helmer, C.W. Reich, J.D. Baker
1976Gr19	PHSTB	14,	263	T. Grotdal, L. Guldberg, K. Nybø, T.F. Thorsteinsen

1976Gr20	APOBB	7,	507	K.Y. Gromov, D.T. Dzelev, K. Zuber, Y. Zuber, T.A. Islamov, V.V. Kuznetsov, H.G. Ortlepp, A.V. Potempa
1976Gr.A	P-Cargese		428	J.W. Grüter, B. Jonson, O.B. Nielsen
1976Ha25	IANFA	40,	2	J.H. Hamilton, K.R. Baker, C.R. Bingham, E.L. Bosworth, H.K. Carter, J.D. Cole, R.W. Fink, G. Garcia Bermudez, G.W. Gowdy, K.J. Hofstetter, M.A. Ijaz, A.C. Kahler, B.D. Kern, W. Lourens, B. Martin, R.L. Mlekodaj, A.V. Ramayya, L.L. Riedinger, W.D. Schmidt-Ott, E.H. Spejewski, B.N. Subba Rao, E.L. Robinson, K.S. Toth, F. Turner, J.L. Weil, J.L. Wood, A. Xenoulis, E.F. Zganjar
1976Ha29	PYLBB	63,	27	J.C. Hardy, J.A. Macdonald, H. Schmeing, T. Faestermann, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson
1976Ha36	ZPAAD	278,	183	W. Hartl, J.W. Hammer
1976Ha39	PRVCA	14,	645	P.E. Haustein, E.M. Franz, S. Katcoff, N.A. Morcos, H.A. Smith,Jr., T.E. Ward
1976Ha56	NUPAB	273,	253	O. Hausser, T.K. Alexander, J.R. Beene, E.D. Earle, A.B. McDonald, F.C. Khanna, I.S. Towner
1976He03	NDSBA	17,	287	E.A. Henry
1976He04	NUPAB	258,	83	R.G. Helmer, R.J. Gehrke, R.C. Greenwood, C.W. Reich, L.D. McIsaac
1976He10	ZPAAD	276,	393	W. Herzog, N. Trautmann, R. Denig, G. Herrmann
1976He24	HYIND	2,	399	H.A. Helms, G.J. Zaal, W. Hogervorst, J. Blok
1976Hi08	CJPHA	54,	1360	C.R. Hirning, D.G. Burke
1976Hi09	NUPAB	263,	460	F. Hintenberger, P. von Rossen, B. Schuller, J. Bisping, R. Jahn
1976Hi10	PRLTA	37,	130	G.T. Hickey, D.C. Weisser, J. Cerny, G.M. Crawley, A.F. Zeller, T.R. Ophel, D.F. Hebbard
1976Hi14	JPHGB	2,	L143	G.T. Hickey, G.M. Crawley, D.C. Weisser, N. Shikazono
1976Hu01	PRVCA	13,	1786	A. Huck, G.J. Costa, G. Walter, M.M. Aleonard, J. Dalmas, P. Hubert, F. Leccia, P. Mennrath, J. Vernotte, M. Langevin, J.M. Maison
1976In06	PRVCA	14,	254	P.D. Ingalls
1976Jo01	PRVCA	13,	439	P.L. Jolivette, J.D. Goss, J.A. Bieszk, R.D. Hichwa, C.P. Browne
1976Jo.A	P-Cargese		277	B. Jonson, E. Hagberg, P.G. Hansen, P. Hornshøj, P. Tidemand-Petersson, ISOLDE
1976Ka08	NUPAB	260,	141	E.J. Kaptein, H.P. Blok, L. Hulstman, J. Blok
1976Ka19	NUPAB	266,	346	R. Kamermans, H.W. Jongsma, T.J. Ketel, R. van der Wey, H. Verheul
1976Ka24	PRVCA	14,	1773	E. Kashy, W. Benenson, D. Mueller, H. Nann, L. Robinson
1976Ka50	SHIBA	24,	247	I. Kakatuse, H. Nakabushi, K. Ogata
1976Ki12	NUPAB	272,	381	K. Kimura, N. Takagi, M. Tanaka
1976Lu02	PRVCA	13,	1544	E. Lund, G. Rudstam
1976Lu04	NUIMA	134,	173	E. Lund, G. Rudstam
1976Ma03	PRVCA	13,	118	J.F. Mateja, G.F. Neal, J.D. Goss, P.R. Chagnon, C.P. Browne
1976Ma16	PRVCA	13,	1117	D.J. Martin, M.R. MacPhail
1976Ma35	PRVCA	14,	1141	L.G. Mann, W.B. Walters, R.A. Meyer
1976Ma40	PRVCA	14,	1320	D.J. Martin, H.C. Evans, J.A. Szucs
1976Ma49	ZPAAD	278,	327	P. Maier-Komor, P. Glassel, E. Huengas, H. Rossler, H.K. Vonach, H. Baier
1976Me08	PRVCA	13,	1751	L.R. Medsker
1976Mi01	PRVCA	13,	879	G.F. Millington, R.M. Hutcheon, J.R. Leslie, W.M. McLatchie
1976Mo32	NUPAB	272,	82	S. Mordechai, E. Friedman, A.A. Jaffe, D. Nir, M. Paul
1976Na23	PRVCA	14,	2338	H. Nann, D. Mueller, A. Saha, E. Kashy
1976No07	PYLBB	65,	125	J.W. Noé, D.F. Geesaman, P. Paul, M. Suffert
1976Nu01	PRVCA	13,	2017	L.L. Nunnelley, W. Loveland
1976Og02	NUPAB	273,	505	Y.T. Oganessian, A.G. Demin, N.A. Danilov, G.N. Flerov, M.P. Ivanov, A.S. Iljinov, N.N. Kolesnikov, B.N. Markov, V.M. Plotko, S.P. Tretyakova
1976Ot03	PRVCA	13,	1996	D. Otero, A.N. Proto, F.C. Iglesias
1976Pa11	PRVCA	14,	1573	B.P. Pathak, L. Lesard, L. Nikkinen
1976Pi04	NUPAB	264,	1	J.A. Pinston, R. Rousille, H. Börner, H.R. Koch
1976Pi13	NUPAB	270,	61	J.A. Pinston, R. Rousille, H. Börner, W.F. Davidson, P. Jeuch, H.R. Koch, K. Schreckenbach
1976Ra16	JPGPE	2,	243	B.M. Rao, C.N. Rao, P.M. Rao, R. Mathews, K.V. Reddy
1976Ra33	CUSCA	45,	606	K.V. Ramania, G.K. Raju, K.V. Reddy
1976Ra37	ZPAAD	279,	301	D.G. Raich, H.R. Bowman, R.E. Eppley, J.O. Rasmussen, I. Rezanka
1976Ro04	PRVCA	13,	1018	R.G.H. Robertson, W. Benenson, E. Kashy, D. Mueller

1976Ru01	PRVCA	13,	321	G. Rudstam, E. Lund
1976Sc13	NUPAB	263,	193	M. Schrader, H. Reiss, G. Rosner, H.V. Klapdor
1976Sc30	JINCA	38,	1757	O. Scheidemann
1976Sh24	NUIMA	135,	583	J.F. Sharpey-Schafer, A.M. Al Naser, A.H. Behbehani, L.L. Green, A.N. James, C. Lister, P.J. Nolan
1976Sl06	NUPAB	274,	93	D.N. Slater, W. Booth
1976Sm01	PRVCA	13,	387	H.A. Smith, Jr., M.E. Bunker, J.W. Starner, C.J. Orth, K.E.G. Lobner
1976Sp08	NUPAB	265,	416	R.J. Sparks
1976Sq01	PYLBB	65,	122	G.T.A. Squier, W.E. Burcham, S.D. Hoath, J.M. Freeman, P.H. Barker, R.J. Petty
1976St10	NUPAB	266,	390	O. Straume, G. Løvhøiden, D.G. Burke
1976St11	NUPAB	266,	424	W.F. Steele, P.A. Smith, J.E. Finck, G.M. Crawley
1976Su.A	BAPSA	21,	658	E. Sugarbaker, W.S. Gray
1976Su.B	BAPSA	21,	984	E. Sugarbaker, W.S. Gray
1976To06	PYLBB	63,	150	K.S. Toth, M.A. Ijaz, J. Lin, E.L. Robinson, B.O. Hannah, E.H. Spejewski, J.D. Cole, J.H. Hamilton, A.V. Ramayya
1976Tr01	PRVCA	13,	50	R.E. Tribble, R.A. Kenefick, R.L. Spross
1976Tr03	PYLBB	61,	353	R.E. Tribble, J.D. Cossairt, R.A. Kenefick
1976Tr07	IANFA	40,	2026	E.F. Tretyakov, N.F. Myasoedov, A.M. Apalikov, V.F. Konyaev, V.A. Lyubimov, E.G. Novikov
1976Tu.A	Th.-Berkeley			D.G. Tuggle
1976Vi02	PYLBB	60,	261	D.J. Vieira, D.F. Sherman, M.S. Zisman, R.A. Gough, J. Cerny
1976Vi.A	P-Cargese		462	C. Vieu, J.S. Dionisio, V. Berg, C. Bourgeois
1976Wi08	PRVCA	13,	2517	D.H. Wilkinson, D.E. Alburger

1977

1977Aj01	PRVCA	15,	1	F. Ajzenberg-Selove, E.R. Flynn, S. Orbesen, J.W. Sunier
1977Al09	NUPAB	281,	213	K. Aleklett, E. Lund, G. Nyman, G. Rudstam
1977Al11	PRVCA	15,	2174	D.E. Alburger, D.H. Wilkinson
1977Al17	NUPAB	285,	1	K. Aleklett, E. Lund, G. Nyman, G. Rudstam
1977Az01	PRVCA	15,	1847	G. Azuelos, J.E. Kitching, K. Ramavataram
1977Ba01	NUPAB	275,	37	P.H. Barker, C.J. Sofield, R.J. Petty, J.M. Freeman, S.D. Hoath, W.E. Burcham, G.T.A. Squier
1977Ba10	CJPHA	55,	200	J.W. Barnard, P. Williams, R.C. Barber, S.S. Hague, K.S. Kozier, K.K. Sharma, H.E. Duckworth
1977Ba16	NUPAB	279,	199	P.H. Barker, R.E. White, H. Naylor, N.S. Wyatt
1977Ba33	IANFA	41,	101	I.F. Barchuk, G.V. Belykh, V.I. Golyshkin, A.F. Ogorodnik, M.M. Tuschinski
1977Ba69	YAFIA	26,	461	S.A. Baranov, V.M. Shatinskii
1977Be03	PRVCA	15,	146	M.J. Bennet, R.K. Sheline
1977Be09	PRVCA	15,	705	C.E. Bemis,Jr., R.L. Ferguson, F. Plasil, R.J. Silva, F. Pleasanton, R.L. Hahn
1977Be13	PRVCA	15,	1187	W. Benenson, D. Mueller, E. Kashy, H. Nann, L.W. Robinson
1977Be15	ZPAAD	281,	145	D. Benson,Jr., P. Kleinheinz, R.K. Sheline
1977Be36	PRVCA	16,	1146	C.E. Bemis,Jr., P.F. Dittner, R.J. Silva, R.L. Hahn, J.R. Tarrant, L.D. Hunt, D.C. Hensley
1977Bh03	ZPAAD	281,	65	T.S. Bhatia, H. Hafner, R. Haupt, R. Maschuw, G.J. Wagner
1977Bo02	NUPAB	275,	229	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov, A. Płochocki, V.G. Subbotin, J. Voboril
1977Bo28	PYLBB	71,	67	D.D. Bogdanov, J. Vobořil, A.V. Demyanov, L.A. Petrov
1977Bo31	IANFA	41,	1149	N.A. Bonch-Osmolovskaya, V.M. Gorodzankin, K.Y. Gromov, T. Kretsu, V.V. Kuznetsov, G. Makarie, A.S. Khamidov, M. Yatiski
1977Bo32	IANFA	41,	1189	B. Bogdan, M. Gasior, T. Kretsu, V.V. Kuznetsov, N.A. Lebedev, G.I. Lizurei, G. Makarie, D.G. Popesku, A.S. Khamidov
1977Bo.A	PrvCom	AHW	Oct	V.R. Bom, D. De Bruin
1977Ca09	PRVCA	15,	883	R.F. Carlton, S. Raman, G.G. Slaughter
1977Ca19	NUPAB	285,	235	R.F. Casten, R.C. Greenwood, M.R. MacPhail, R.E. Chrien, W.R. Kane, G.J. Smith, J.A. Cizewski BNL-22352
1977Ca23	ZPAAD	283,	221	C. Cabot, S. Della Negra, C. Deprun, H. Gauvin, Y. Le Beyec
1977Ch06	ZPAAD	280,	149	H.C. Cheung, S.I. Hayakawa, J.E. Kitching, J.K.P. Lee, S.K. Mark, J.C. Waddington

1977Co08	PRVCA	15,	1685	J.D. Cossairt, R.E. Tribble, R.A. Kenefick
1977Cr05	IANFA	41,	2032	T. Cretsu, G. Makarie, A.V. Potempa, E. Senyavski
1977De06	PRVCA	15,	800	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1977De25	ZPAAD	283,	33	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1977De32	JPSLB	38,	393	S. Della Negra, B. Lagarde, Y. Le Beyec
1977Dr07	AENGA	42,	314	A.A. Druzhinin, V.K. Grigorev, A.A. Lbov, S.P. Vesnovskii, N.G. Krylov, V.N. Polynov
1977Ed01	NUIMA	141,	315	M.D. Edmiston, R.A. Warner, W.C. McHarris, W.H. Kelly
1977Em02	NUPAB	293,	379	R.A. Emigh, R.E. Anderson
1977Er02	ZPAAD	280,	79	B. Erlandson, J. Lyttkens
1977Fi08	NUPAB	288,	57	L.K. Fifield, F.P. Calaprice, C.H. Zimmermann, M.J. Hurst, A. Pakkanen, T.J.M. Symons, F. Watt, K.W. Allen
1977Fl03	PRVCA	15,	879	E.R. Flynn, J.W. Sunier, F. Ajzenberg-Selove
1977Fo02	ZPAAD	281,	89	B. Fogelberg, W. Maup
1977Fo09	PYLBB	70,	408	H.T. Fortune, R. Middleton, M.E. Coburn, G.E. Moore, S. Mordechai, R.V. Kollarits, H. Nann, W. Chung, B.H. Wildenthal
1977Fr11	PRVCA	16,	603	N. Frascaria, J.P. Didelez, N.S. Chant, C.C. Chang
1977Fr20	ZPAAD	281,	211	T. Freie, H. Lorenz-Wirba, B. Cleff, H.P. Trautvetter, C. Rolfs
1977Ge03	NUPAB	283,	45	J. Genevey-Rivier, A. Charvet, G. Marguier, C. Richard-Serre, J. D'Auria, A. Huck, G. Klotz, A. Knipper, G. Walter
1977Gu02	PRVCA	15,	894	P. Guilbault, D. Ardouin, R. Tamisier, P. Avignon, M. Vergnes, G. Rotbard, G. Berrier
1977Ha31	PRVCA	16,	1129	D.R. Haenni, T.T. Sugihara
1977Ha32	PRVCA	16,	1559	P.E. Haustein, E.M. Franz, R.F. Petry, J.C. Hill
1977Ha48	NUPAB	293,	1	E. Hagberg, P.G. Hansen, J.C. Hardy, P. Hornshøj, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1977Ha49	NUPAB	293,	248	O. Hausser, I.S. Towner, T. Faestermann, H.R. Andrews, J.R. Beene, D. Horn, D. Ward
1977He26	NUIMA	147,	425	J.C.P. Heggie, Z.E. Zwitkowski
1977Ho02	NUPAB	276,	1	C.L. Hollas, K.A. Aniol, D.W. Gebbie, M. Borsaru, J. Nurzinski, L.O. Barbopoulos
1977Ho09	JUPSA	42,	1098	M. Hoshi, M. Fujiwara, Y. Yoshisama
1977Ho18	PRLTA	39,	537	P. Hornshøj, H.L. Nielsen, N. Rud
1977Ho25	NUPAB	288,	429	P. Hornshøj, L. Hojsholt-Poulsen, N. Rud
1977Hu05	JPSLB 38, L-245			J.P. Husson, C.F. Liang, C. Richard-Serre
1977Ij01	PRVCA	15,	2251	M.A. Ijaz, C.R. Bingham, H.K. Carter, E.L. Robinson, K.S. Toth
1977Is01	ZPAAD	281,	365	A.F.M. Ishaq, S. Robertson, W.V. Prestwich, T.J. Kennett
1977Je03	PRVCA	15,	1972	C.M. Jensen, W.R.G. Lanier, G.L. Struble, L.G. Mann, S.G. Prussin
1977Jo03	PRVCA	15,	915	C.H. Johnson, J.K. Bair, C.M. Jones
1977Ka08	NUPAB	279,	269	K. Kawade, H. Yamamoto, Y. Ikeda, V.N. Bhoraskar, T. Katoh
1977Ke03	PRVCA	15,	792	G. Kennedy, J. Deslauriers, S.C. Gujrathi, S.K. Mark
1977Kh03	ZPAAD	283,	105	T.A. Khan, W.D. Lauppe, K. Sistemich, H. Lawin, G. Sadler, H.A. Selle
1977Ki11	PYLBB	70,	150	R. Kirchner, O. Klepper, G. Nyman, W. Reisdorf, E. Roeckl, D. Schardt, N. Kaffrell, P. Peuser, K. Schneeweiss
1977Ko04	PRVCA	15,	1947	J.J. Kolata, M. Oothoudt
1977Ko10	PRVCA	16,	132	R.L. Kozub, B.E. Cooke, J.R. Leslie, B.C. Robertson
1977Ko15	PRVCA	16,	588	B.K.S. Koene, R.E. Chrien
1977Ko.A	PrvCom	AHW	Feb	B.K. Koene, R.E. Chrien, M. Yachim
1977Ko.B	P-Tashkent		65	T. Kozlowski, T. Kormitski, Y. Lushtshnski, A. Yasinski
1977Kr04	NUPAB	282,	243	A.J. Kreiner, M. Fenzl, S. Lunardi, M.A.J. Mariscotti
1977Kr14	CZYPA	27,	1099	T. Kracikova, I. Prochazka, Z. Hons, M. Fiser, A. Kuklik
1977Kr.A	JINR-P6-10748			T. Kretsu, V.V. Kuznetsov, G. Luzurej, Chan Chen Mo, V.M. Gorodzankin, G. Makarie
1977Li14	NUPAB	286,	263	J. Liptak, K. Kristiakova, J. Kristiak
1977Li16	PHSTB	15,	205	E. Lingeman
1977Lu06	NUPAB	286,	403	E. Lund, K. Aleklett, G. Rudstam
1977Ma12	PRVCA	15,	1708	J.F. Mateja, C.P. Browne
1977Ma24	NUPAB	288,	1	J.A. Macdonald, J.C. Hardy, H. Schmeing, T. Faestermann, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson

1977Mc05	NUPAB	281,	325	A.B. McDonald, E.D. Earle, M.A. Lone, F.C. Khanna, H.C. Lee
1977Mc09	PRVCA	16,	1278	D.A. McClure, S. Raman, G.C. Slaughter
1977Me04	PRVCA	15,	649	L.R. Medsker, L.H. Fry,Jr., J.L. Yntema
1977Mi10	PRVCA	16,	1605	R.J. Mitchell, T.V. Ragland, R.P. Scharenberg, R.E. Holland, F.J. Lynch
1977Mi.A	KFK-2438			M. Mirkiditsian
1977Mo13	NUPAB	289,	36	S. Mordechai, M.E. Coburn, G.E. Moore, H.T. Fortune
1977Mu03	PRVCA	15,	1282	D. Mueller, E. Kashy, W. Benenson
1977Na05	PRVCA	15,	1448	A.M. Nathan, D.E. Alburger
1977Na17	PRVCA	16,	1566	A.M. Nathan, D.E. Alburger, J.W. Olness, E.K. Warburton
1977Na24	NUIMA	144,	331	H. Naylor, R.E. White
1977No08	PYLBB	71,	314	J.A. Nolen, T.S. Bhatia, H. Hafner, P. Doll, C.A. Wiedner, G.J. Wagner
1977Nu01	PRVCA	15,	444	L.L. Nunnelley, W.D. Loveland
1977Pa01	PRVCA	15,	730	L.A. Parks, C.N. Davids, R.C. Pardo
1977Pa13	PRVCA	15,	1811	R.C. Pardo, C.N. Davids, M.J. Murphy, E.B. Norman, L.A. Parks
1977Pa18	PRVCA	16,	370	R.C. Pardo, C.N. Davids, M.J. Murphy, E.B. Norman, L.A. Parks
1977Pa24	NUPAB	289,	94	M. Paul, A. Murinov, J. Burde, C. Drory, J. Lichtenstadt, S. Mordechai, E. Navon
1977Pe17	PRVCA	16,	1878	F. Pellegrini, P. Guazzoni, D. Sinclair, E. Garman
1977Pr07	PRVCA	16,	1001	S.G. Prussin, R.G. Lanier, G.L. Struble, L.G. Mann, S.M. Schoenung
1977Ra08	IJOPA	15,	41	K.V. Ramaniah, G.R. Raju, K.V. Reddy
1977Ra17	JPHGB	3,	637	Venkata Ramaniahah, G. Kusa Raju, K. Venkata Reddy
1977Ra18	JPHGB	3,	633	Venkata Ramaniahah, K. Venkata Reddy
1977Re05	PRVCA	15,	2108	P.L. Reeder, J.F. Wright, L.J. Alquist
1977Re12	CUSCA	46,	95	T.S. Reddy, R. Matthews, K.V. Reddy
1977Re.A	Th.-Montreal			D.M. Rehfield DABBB 38,4874(1978)
1977Ri04	PRVCA	15,	1271	K. Rimawi, R.E. Chrien
1977Ro03	CJPHA	55,	206	D.W.O. Rogers, N. Anyas-Weiss, S.P. Dolan, N.A. Jelley, T.K. Alexander
1977Ru04	JINCA	39,	753	W. Rudolph, K.-L. Kratz, G. Herrmann
1977Sc03	PYLBB	66,	133	A.G. Schmidt, R.L. Mlekodaj, E.L. Robinson, F.T. Avignone, J. Lin, G.M. Gowdy, J.L. Wood, R.W. Fink
1977Sc21	ZPAAD	283,	43	F. Schussler, J. Blachot, E. Monnand, J.A. Pinston, B. Pfeiffer, K. Hawerkamp, R. Stippler
1977Sh04	CJPHA	55,	506	S.H. Sharma, K.S. Kozier, J.W. Barnard, R.C. Barber, S.S. Haque, H.E. Duckworth
1977Sh06	PRVCA	15,	903	J.D. Sherman, D.L. Hendrie, M.S. Zisman
1977Sh08	PYLBB	67,	275	J.D. Sherman, E.R. Flynn, O. Hansen, N. Stein, J.W. Sunier
1977Sh12	CJPHA	55,	1360	K.S. Sharma, J.O. Meredith, R.C. Barber, K.S. Kozier, S.S. Hague, J.W. Barnard, F.C.G. Southon, P. Williams, H.E. Duckworth
1977So02	CJPHA	55,	383	F.C.G. Southon, J.O. Meredith, R.C. Barber, H.E. Duckworth
1977St10	NUPAB	281,	240	M. Stefanon, F. Corvi
1977St15	PRVCA	16,	574	M.L. Stelts, J.C. Browne
1977St22	CJPHA	55,	1687	O. Straume, D.G. Burke
1977Th04	PRVCA	15,	2019	R.C. Thompson, W. Wilcke, J.R. Huizenga, W.K. Hensley, D.G. Perry
1977Tr03	PRVCA	15,	2028	R.E. Tribble, J.D. Cossairt, R.A. Kenefick
1977Tr05	PRVCA	16,	917	R.E. Tribble, J.D. Cossairt, D.P. May, R.A. Kenefick
1977Tr07	PRVCA	16,	1835	R.E. Tribble, J.D. Cossairt, D.P. May, R.A. Kenefick
1977Tu01	ZPAAD	280,	309	T. Tuurnala, K. Katajanheimo, E. Hammaren
1977Vo02	NUPAB	278,	189	H. Vonach, P. Glässel, E. Huenges, P. Maier-Komor, H. Rösler, H.J. Scheerer, H. Paul, D. Semrad
1977Vy02	IANFA	41,	1634	Ts. Vylov, N.A. Golovkov, B.S. Dzelepov, R.B. Ivanov, M.A. Mikhailova, Y.V. Norseev, V.G. Shumin
1977Wh01	NUPAB	276,	333	R.E. White, H. Naylor
1977Wh03	AUJPA	30,	365	R.E. White, H. Naylor
1977Ya07	JUPSA	43,	8	H. Yamamoto, K. Kawade, K. Ikeda, T. Katoh
1977Zo02	PRVCA	16,	408	D.R. Zolnowski, T.T. Sugihara

1978

1978Aj01	PRVCA	17,	960	F. Ajzenberg-Selove, E.R. Flynn, J.W. Sunier, D.L. Hanson
1978Al01	PRVCA	17,	280	D.E. Alburger, A.M. Nathan
1978Al18	PRVCA	18,	462	K. Aleklett, E. Lund, G. Rudstam
1978Al23	PRVCA	18,	1875	D.E. Alburger
1978Al29	PRVCA	18,	2727	D.E. Alburger, S. Mordechai, H.T. Fortune, R. Middleton
1978An10	NUPAB	303,	154	K.A. Aniol, D.W. Gebbie, C.L. Hollas, J. Nurzinski
1978An14	PHSTB	18,	165	G. Andersson, M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson, P. Tidemand-Petersson
1978Ar12	PRVCA	18,	1201	D. Ardouin, C. Lebrun, F. Guilbault, B. Remand, E.R. Flynn, D.L. Hanson, S.D. Orbesen, M.N. Vergnes, G. Rotbard, K. Kumar
1978As06	ZPAAD	288,	45	M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson, P. Tidemand-Petersson
1978Az01	PRVCA	17,	443	G. Azuelos, G.R. Rao, P. Taras
1978Ba30	IANFA	42,	205	Y.A. Badenko, K.I. Derebshova, V.N. Kushmin, Y.A. Nemilov, L.M. Solin, E.D. Teterin, V.S. Romanov
1978Ba44	PRLTA	41,	738	P.A. Baisden, R.E. Leber, M. Nurmia, J.M. Nitschke, M. Michel, A. Ghiorso
1978Ba.C	P-Alma Ata		123	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, N.I. Aleshin
1978Be09	PRVCA	17,	529	G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, J. Kalifa, R. Seltz, H.L. Sharma
1978Be22	ZPAAD	285,	405	D. Benson,Jr., P. Kleinheinz, R.K. Sheline, E.B. Shera
1978Be26	PRVCA	17,	1939	W. Benenson, E. Kashy, A.G. Ledebuhr, R.C. Pardo, R.G.H. Robertson, L.W. Robinson
1978Be61	NUIMA	155,	211	J.A. Becker, R.A. Chalmers, B.A. Watson, D.H. Wilkinson
1978Bh02	PYLBB	76,	562	T.S. Bhatia, H. Hafner, J.A. Nolen,Jr., W. Saathoff, R. Schuhmacher, R.E. Tribble, G.J. Wagner, C.A. Wiedner
1978Bo20	NUPAB	303,	145	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov, J. Voboril
1978Bo32	NUPAB	307,	421	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, M. Nowicki, L.A. Petrov, J. Voboril, A. Płochocki
1978Bo.A	P-Alma Ata		54	D.D. Bogdanov, I. Bobordzil, A.V. Demianov, L.A. Petrov
1978Br25	NUPAB	306,	242	B.A. Brown, O. Hausser, T. Faestermann, D. Ward, H.R. Andrews, D. Horn
1978Bu18	PRVCA	18,	693	D.G. Burke, G. Løvhøiden, E.R. Flynn, J.W. Sunier
1978Ca11	ZPAAD	287,	71	C. Cabot, S. Della Negra, C. Deprun, H. Gauvin, Y. Le Beyec
1978Ch11	PRVCA	17,	2219	R. Chiba, S. Shibazaki, T. Numao, H. Yokota, S. Yamada, K. Kotajima, S. Itagaki, S. Iwasaki, T. Takeda, T. Shinozuka
1978Ch22	MTRGA	14,	157	P. Christmas, P. Cross
1978Co.A	AnRpt Texas AM			J.D. Cossairt, D.P. May
1978Cr02	IANFA	42,	56	T. Cretzu, V.V. Kuznetsov, G. Luzurej, V.M. Gorodzankin, G. Macarie
1978Cr03	ZPAAD	287,	45	J. Crançon, C. Ristori, H. Ohm, W. Rudolph, K.-L. Kratz, M. Asghar
1978Da04	PRVCA	17,	1815	C.N. Davids, D.F. Geesaman, S.L. Tabor, M.J. Murphy, E.B. Norman, R.C. Pardo
1978Da07	NUPAB	301,	397	J.M. D'Auria, J.W. Grüter, E. Hagberg, P.G. Hansen, J.C. Hardy, P. Hornshøj, B. Jonson, S. Mattsson, H.L. Ravn, P. Tidemand-Petersson
1978De17	NUPAB	302,	41	C. Detraz, D. Guillemaud, G. Huber, R. Klapisch, M. Langevin, F. Naulin, C. Thibault, L.C. Carraz, F. Touchard
1978De18	NUPAB	302,	186	P. Decowski, W. Benenson, B.A. Brown, A.A. Rollefson
1978De.A	AnRpt Berkeley			R.J. De Meyer, D.P. Stahel, A.N. Bice, R. Jahn, J. Cerny
1978Di09	YAFIA	28,	273	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, G.A. Dorokhova, see also report SFTI1 Suchumi
1978Do06	ZPAAD	286,	107	P.H. Do, R. Chery, H.G. Börner, W.F. Davidson, J.A. Pinston, R. Rousille, K. Schreckenbach, H.R. Koch, H. Seyfarth, D. Heck
1978Du06	ZPAAD	287,	165	F. Dubbers, L. Funke, P. Kemnitz, G. Winter, S. Elfstrom, T. Lindblad, C.G. Linden
1978El11	PRVCA	18,	2713	Y.A. Ellis, K.S. Toth, H.K. Carter
1978Fi02	PRVCA	17,	718	R.B. Firestone, R.A. Warner, W.C. McHarris, W.H. Kelly
1978Fu06	PRVCA	18,	621	C.B. Fulmer, G. Mariolopoulos, G. Bagieu, A.J. Cole, R. de Swiniarski, D.H. Koang
1978Ga18	PRVCA	18,	1463	M.L. Gartner, J.C. Hill

1978Ge01	NUPAB	295,	221	C.P. Gerner, J. Van Pelt, O.W. De Ridder, J. Blok
1978Go15	NUPAB	312,	56	G.M. Gowdy, J.L. Wood, R.C. Fink
1978Gr10	NUPAB	303,	265	H.C. Griffin, I. Ahmad, A.M. Friedman, L.E. Glendenin
1978Gr13	YAFIA	27,	1421	I.I. Gromova, T. Kretsu, V.V. Kuznetsov, G.I. Lizurei, N.A. Lebedev, V.M. Gorozhankin, G. Macarie
1978Gu14	ZPAAD	287,	271	H.H. Guven, B. Kardon, H. Seyfarth
1978Ha07	PYLBB	73,	127	O. Hausser, T.K. Alexander, T. Faestermann, D. Horn, D. Ward, H.R. Andrews, I.S. Towner
1978Ha11	NUPAB	296,	251	S.I. Hayakama, I.R. Hyman, J.K.P. Lee
1978Ha14	PRVCA	17,	1414	J.E. Halverson, W.H. Johnson,Jr.
1978Ha52	HYIND	4,	196	O. Häusser, T. Faestermann, I.S. Towner, T.K. Alexander, H.R. Andrews, J.R. Beene, D. Horn, D. Ward, C. Broude
1978Hi06	NUPAB	308,	61	F. Hintenberger, R. Schonhagen, P. von Rossesn, B. Schuller, F.E. Blumenberg, P.D. Eversheim, R. Gorgen
1978Hu06	CJPHA	56,	936	H. Huang, B.P. Pathek, J.K.P. Lee
1978IbZZ	JUL-Spez-15		19	R. Ibowski, W. Scholz, J. Bisplinghoff, H. Ernst, J. Rama Rao, T. Mayer-Kuckuk
1978Ik02	PYLBB	74,	326	H. Ikegami, T. Yamazaki, S. Morinobu, I. Katayama, M. Fujiwara, Y. Fujita, N. Koori
1978Ik03	JUPSA	45,	725	Y. Ikeda, H. Yamamoto, K. Kawade, T. Katoh, K. Nagahara
1978Ja06	JPHGB	4,	579	A.N. James, J.F. Sharpey-Schafer, A.M. Al Naser, A.H. Behbehani, C.J. Lister, P.J. Nolan, P.H. Barker, W.E. Burcham
1978Ka10	JUPSA	44,	25	M. Kanazawa, S. Ohya, T. Tamura, Z. Ishibashi, N. Mutsuro
1978Ka12	PRVCA	17,	1555	R. Kamermans, J. Van Driel, H.P. Blok, P.J. Blankhorst
1978Ke06	PRVCA	17,	1929	G.J. KeKelis, M.S. Zisman, D.K. Scott, R. Jahn, D.J. Vieira, J. Cerny, F. Ajzenberg-Selove
1978Ke10	PRVCA	18,	1938	B.D. Kern, F. Gabbard, R.G. Kruzek, M.R. McPherson, K.K. Sekharan, F.D. Snyder
1978Ko24	NUPAB	307,	71	R.T. Kouzes, D. Mueller
1978Ko27	NUPAB	309,	329	R.T. Kouzes, P. Kutt, D. Mueller, R. Sherr
1978Ko28	PRVCA	18,	1587	R.T. Kouzes, D. Mueller, C. Yu
1978Ko29	ZPAAD	288,	319	E. Koglin, G. Jung, G. Siegert, R. Decker, K.D. Wunsch, H. Wollnik
1978Lo07	NUPAB	302,	51	G. Løvhøiden, O. Straume, D.G. Burke
1978Lo13	JINCA	40,	1865	R.W. Lougheed, J.F. Wild, E.K. Hulet, R.W. Hoff, J.H. Landrum
1978Ma18	JUPSA	44,	1070	Z. Matumoto, T. Tamura
1978Ma23	NUPAB	301,	213	J.W. Maas, E. Somorjai, H.D. Graber, C.A. Vandenwijngaard, C. Van der Leun, P.M. Endt
1978Ma24	NUPAB	301,	237	J.W. Maas, A.J.C. Holvast, A. Baghus, H.J.M. Aarts, P.M. Endt
1978Mc03	PRVCA	17,	944	R.J. McDonald, J.E. Draper
1978Mo12	NUPAB	305,	29	L.A. Montestraque, M.C. Cobian Rozak, G. Szaloky, J.D. Zumbro, S.E. Darden
1978MoZQ	PrvCom			E. Monnand, J. Blachot, F. Schussler, K. Jung, K. Wunsch, B. Fogelberg, J. Feenstra, J. van Klinken
1978Mu05	PRVCA	17,	1574	M.J. Murphy, C.N. Davids, E.B. Norman, R.C. Pardo
1978Na02	PRVCA	17,	830	F. Naulin, C. Détraz, M. Bernas, E. Kashy, M. Langevin, F. Pougheon, P. Roussel
1978Na11	PRVCA	18,	1619	H. Nann, A. Saha, S. Raman
1978No03	PRVCA	17,	2176	E.B. Norman, C.N. Davids, M.J. Murphy, R.C. Pardo
1978No05	PRVCA	18,	102	E.B. Norman, C.N. Davids
1978Pa11	PRVCA	18,	1249	R.C. Pardo, E. Kashy, W. Benenson, L.W. Robinson
1978Pa12	PRVCA	18,	1277	I. Paschopoulos, E. Müller, H.J. Körner, I.C. Oelrich, K.E. Rehm, H.J. Scheerer
1978Pe08	NUPAB	302,	1	J.G. Pengra, H. Genz, R.W. Fink
1978Pf01	PRLTA	41,	63	L.P. Pfeiffer, A.P. Mills,Jr., R.S. Raghavan, F. Achandros
1978Ra15	PRVCA	18,	1085	G.R. Rao, G. Azuelos, J.C. Kim, J.P. Martin, P. Taras
1978Ra16	PRVCA	18,	1158	S. Raman, R.F. Carlton, G.G. Slaughter, M.R. Meder
1978Re01	ZPAAD	284,	403	T.S. Reddy, R. Matthews, K.V. Reddy
1978Ro01	PRVCA	17,	4	R.G. HRobertson, E. Kashy, W. Benenson, A. Ledebuhr
1978Ro03	ZPAAD	284,	407	A. Robertson, T.J. Kennett, W.V. Prestwich
1978Ro08	PRVCA	17,	1535	R.G.H. Robertson, T.L. Khoo, G.M. Crawley, A.B. McDonald, E.G. Adelberger, S.J. Freedman
1978Ro14	PRVCA	18,	86	G. Rotbard, L. Larana, M. Vergnes, G. Berrier, J. Kalifa, F. Guilbault, R. Tamisier

1978Ro19	PYLBB	78,	393	E. Roeckl, R. Kirchner, O. Klepper, G. Nyman, W. Reisdorf, D. Schardt, K. Wien, R. Fass, S. Mattsson
1978Ru04	PHSTB	18,	209	H. Rubinsztein, M. Gustavsson
1978Sc26	ZPAAD	288,	189	U.J. Schrewe, W.D. Schmidt-Ott, R.-D. von Dincklage, E. Georg, P. Lemmertz, H. Jungclas, D. Hirdes
1978Sc27	PYLBB	79,	209	B. Schinzler, W. Klempt, S.L. Kaufman, H. Lochmann, G. Moruzzi, R. Neugart, E.-W. Otten, J. Bonn, L. Von Reisky, K.P.C. Spath, J. Steinacher, D. Weskott
1978Se04	PRVCA	17,	1919	R.R. Sercely, R.J. Peterson, E.R. Flynn
1978Se07	PRLTA	41,	1589	K. Seth, H. Nann, S. Iversen, M. Kaletka
1978Sh11	NUPAB	304,	40	S. Shastry, R.A. Emigh, R.J. Peterson, R.E. Anderson
1978Si05	ZPAAD	285,	305	K. Sistemich, W.-D. Lauppe, T.A. Khan, H. Lawin, H.A. Selic, J.P. Bocquet, E. Monnand, F. Schussler
1978So02	PRVCA	17,	816	L.G. Sobotka, H.C. Griffin, E.C. Kao
1978St02	ZPAAD	284,	95	R. Stippler, F. Münnich, H. Schrader, J.P. Bocquet, M. Asghar, G. Siegert, R. Decker, B. Pfeiffer, H. Wollnik, E. Monnand, F. Schussler
1978St25	NUIMA	155,	253	H.L. Stelts, R.E. Chrien
1978Su03	ZPAAD	287,	287	K. Sümmerer, N. Kaffrell, H. Otto, P. Peuser, N. Trautmann
1978Sz04	PRVCA	17,	2253	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, W. Saathoff, E.M. Szanto, M. Schrader
1978Sz09	JPHGB	4,	L187	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, W. Saathoff, E.M. Szanto, M. Schrader, H. Dias
1978Ta10	PRVCA	18,	1064	R.W. Tarara, J.P. Zumbro, C.P. Browne
1978Th02	PYLBB	73,	411	W.-G. Thies, H. Appel, H. Behrens
1978Tu04	PHSTB	18,	31	T. Tuurnala, R. Katajanheimo, O. Heinonen
1978Va04	NUPAB	295,	211	J. Van Pelt, C.P. Gerner, O.W. De Ridder, J. Blok
1978Ve10	JPSLB	39,	291	L. Vergnes, G. Rotbard, J. Kalifa, G. Berrier, J. Vernotte, Y. Deschamps, R. Selz
1978We12	PHSTB	18,	275	T. Weckstrom
1978We14	NUPAB	308,	222	D.C. Weisser, A.F. Zeller, T.R. Ophel, D.F. Hebbard
1978Wi04	PRVCA	18,	401	D.H. Wilkinson, A. Gallmann, D.E. Alburger
1978Wo01	PRVCA	17,	66	C. Woods
1978Wo09	PRVCA	17,	2185	F.K. Wohn, K.D. Wunsch, H. Wollnik, R. Decker, G. Jung, E. Koglin, G. Siegert
1978Wo15	PRVCA	18,	2328	F.K. Wohn, W.L. Talbert,Jr.
1978Ya03	ZPAAD	285,	191	Y. Yamazaki, R.K. Sheline, D.G. Burke
1978Ya07	PRVCA	17,	2061	Y. Yamazaki, R.K. Sheline, E.B. Shera corr PRVCA 18,2450
1978Ze04	PRVCA	18,	2122	B. Zeidman, J.A. Nolen,Jr.
1978Zg.A	PrvCom	AHW	Sep	E.F. Zganjar, W.R. Kane, G.J. Smith, J.A. Cizewski

1979

1979Ad08	IANFA	43,	1089	I.A. Adam, A.V. Budzyak, M. Gonusek, V.M. Gorodzhankin, B.S. Dzelepov, V.G. Kalinnikov, A.V. Kudryavtseva, V.V. Kuznetsov, V.I. Stegaylov, A. Shshalek
1979Ah03	PRVCA	20,	290	I. Ahmad, S.W. Yates, R.K. Sjoblom, A.M. Friedman
1979Aj02	PRVCA	19,	1742	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hanson, S. Orbesen
1979Aj03	PRVCA	19,	2068	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hansen, S. Orbesen
1979Al04	JPHGB	5,	423	A.M. Al Naser, A.H. Behbehani, P.A. Butler, L.L. Green, A.N. James, C.J. Lister, P.J. Nolan, N.R.F. Ramsmo, J.F. Sharpey-Schafer, H.M. Sheppard, L.H. Zyber, R. Zyber
1979Al05	ZPAAD	290,	173	K. Aleklett, E. Lund, G. Rudstam
1979Al07	NUPAB	321,	45	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, R.A. Emigh, D.A. Lind, P.A. Smith, C.D. Zafiratos
1979Al16	ZPAAD	291,	397	G.D. Alkhazov, L.K. Batist, E.Y. Berlovich, Y.S. Blinnikov, Y.V. Yelkin, K.A. Mezilev, Y.N. Novikov, V.N. Pantelejev, A.G. Poljakov, N.D. Schigolev, V.N. Tatasov, V.P. Afanasjev, K.Y. Gromov, M. Jachim, M. Janicki, V.G. Kalinnikov, J. Kormicki, A. Potempa, E. Rurarz, F. Tarkanyi, Y.V. Yushkievich
1979Al19	NUPAB	330,	77	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, R.A. Emigh, D.A. Lind, P.A. Smith, C.D. Zafiratos
1979An36	IANFA	43,	1076	N.M. Antoneva, V.M. Vinogradov, E.P. Grigorev, P.P. Dimitrev, A.V. Zolotavin, G.S. Katichin, N.N. Krasnov, V.M. Makarov

1979Ay01	PYLBB	82,	43	J. Äystö, D.M. Moltz, M.D. Cable, R.D. Von Dincklage, R.F. Parry, J.M. Wouters, J. Cerny
1979Ba06	ZPAAD	289,	325	J.N. Barkman, J.E. McFee, T.J. Kennett, W.V. Prestwich
1979Ba31	NUPAB	325,	305	G.C. Ball, W.G. Davies, J.S. Forster, H.R. Andrews, D. Horn, W. McLatchie
1979Ba67	AENGA	47,	404	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov
1979Be.A	P-Brookhaven		561	Z. Berant, Y. Birenbaum, R. Moreh, see NUIMA 166(1979)81, and PrvCom AHW February 1980
1979Bo01	ZPAAD	289,	227	J. Bonn, W. Klempt, R. Neugart, E.-W. Otten, B. Schinzler
1979Bo37	ZENAA	34,	1536	T. Borello-Lewin, O. Dietsch
1979Br05	ZPAAD	289,	289	P. Brodeur, B.P. Pathek, S.K. Mark
1979Br19	PRVCA	20,	1301	R.E. Brown, J.A. Cizewski, E.R. Flynn, J.W. Sunier
1979Br25	NUIMA	166,	243	F. Braumandl, K. Schreckenbach, T. von Egidy
1979Br26	ZPAAD	292,	397	F. Braumandl, T. von Egidy, D.D. Warner
1979Br.A	Th.-McMaster			P.M. Brewste
1979Br.B	AnRpt NotrDame			C.P. Browne, et al
1979Bu05	NUPAB	318,	77	D.G. Burke, G. Løvhøiden, E.R. Flynn, J.W. Sunier
1979Ca02	NUPAB	316,	61	R.F. Casten, M.R. MacPhail, W.R. Kane, D. Breitig, K. Schreckenbach, J.A. Cizewski
1979Da04	PRVCA	19,	1463	C.N. Davids, C.A. Gagliardi, M.J. Murphy, E.B. Norman
1979Da06	PYLBB	82,	199	P. Dabkiewicz, F. Buchinger, H. Fischer, H.-J. Kluge, H. Kremmling, T. Kuhl, A.C. Muller, H.A. Schuessler
1979Da.A	P-Lansing		419	C.N. Davids
1979De02	PRVCA	19,	164	C. Détraz, D. Guillemaud, G. Huber, R. Klapisch, M. Langevin, F. Naulin, C. Thibault, L.C. Carraz, F. Touchard
1979De19	ZPAAD	291,	207	J. Dembczynski, W. Ertmer, U. Johann, S. Penselin, P. Stinner
1979De44	NUPAB	332,	382	K.R.S. Devan, C.E. Brient
1979Do09	PRVCA	20,	1112	R.E. Doebler, W.M. McHarris, W.H. Kelly
1979Du02	NUPAB	315,	317	F. Dubbers, L. Funke, P. Kemnitz, K.D. Schilling, H. Strusny, E. Will, G. Winter, M.K. Balodis
1979Ek02	PHSTB	19,	516	C. Ekstrom, L. Robertsson, G. Wannberg, J. Heinemeier
1979El11	ZPAAD	293,	261	K. Elix, H.W. Becker, L. Buchmann, J. Görres, K.U. Kettner, M. Wiescher, C. Rolfs
1979En02	PRVCA	19,	1948	G. Engler, Y. Nir-El, M. Shmid, S. Amiel
1979Fi07	PYLBB	89,	36	R.B. Firestone, R.C. Pardo, W.C. McHarris
1979Fl02	PRVCA	19,	355	E.R. Flynn, D.L. Hansen, R.A. Hardekopf
1979Fo09	NUPAB	321,	137	S. Fortier, S. Galès
1979Fo10	NUPAB	323,	205	B. Fogelberg, P. Carlé
1979Ge02	PRVCA	19,	1938	D.F. Geesaman, R.L. McGrath, J.W. Noé, R.E. Malmin
1979Ha09	ZPAAD	290,	113	H.H. Hansen, E. Cellen, G. Grosse, D. Mouchel, A. Larsen, R. Vaninbroukx
1979Ha10	NUPAB	318,	29	E. Hagberg, P.G. Hansen, P. Hornshøj, B. Jonson, S. Mattsson, P. Tidemand-Petersson, ISOLDE
1979Ha26	PRVCA	19,	2332	P.E. Haustein, H.-C. Hseuh, R.L. Klobuchar, E.M. Franz, S. Katcoff, L.K. Peker
1979Ha32	PRVCA	20,	345	J.E. Halvarson, W.H. Johnson,Jr.
1979Ho10	ZPAAD	291,	53	S. Hofmann, W. Faust, G. Münzenberg, W. Reisdorf, P. Armbruster, K. Güttner, H. Ewald
1979Ho27	NUPAB	330,	429	J. Honkanen, M. Kortelahti, K. Valli, K. Eskola, A. Hautojärvi, K. Vierinen
1979Ik04	NUPAB	329,	84	H. Ikegami, T. Yamazaki, S. Morinobu, I. Katayama, M. Fujiwara, Y. Fujita, H. Taketani, M. Adachi, T. Matsuzaki, N. Koori, M. Matoba
1979Ik06	JUPSA	47,	1039	Y. Ikeda, H. Yamamoto, K. Kawade, T. Takeuchi, T. Katoh, T. Nagahara
1979Ik07	JUPSA	47,	1389	Y. Ikeda, H. Yamamoto, K. Kawade, T. Katoh, T. Nagahara
1979Io01	NUPAB	313,	283	V.A. Ionescu, J. Kern, R.F. Casten, W.R. Kane, I. Ahmad, J. Erskine, A.M. Friedman, K. Katori
1979Ja21	NUPAB	325,	337	J. Jänecke, F.D. Becchetti, C.E. Thorn
1979KaYT	PrvCom			N. Kaffrell
1979Ka.A	P-Lansing		39	E. Kashy, W. Benenson, J.A. Nolen,Jr., R.G.H. Robertson
1979Ka.B	PrvCom	NDG	Sep	N. Kaffrell
1979Ke02	ZPAAD	289,	407	U. Keyser, H. Berg, F. Münnich, K. Hawerkamp, H. Schrader, B. Pfeiffer, E. Monnand
1979Ke.D	P-Brookhaven		646	M.J. Kenny, M.L. Stelts, R.E. Chrien

1979Ko10	CJPHA	57,	266	K.S. Kozier, K.S. Sharma, R.C. Barber, J.W. Barnard, R.J. Ellis, V.P. Derenchuk
1979Ko.B	P-Lansing		45	R.T. Kouzes, R. Sherr
1979Lu01	NUPAB	313,	191	J. Lukasiak, R. Kaczarowski, J. Jastrzebski, S. André, J. Treherne
1979Ma37	PYLBB	88,	48	H.-E. Mahnke, T.K. Alexander, H.R. Andrews, O. Hausser, P. Taras, D. Ward, E. Dafni, G.D. Sprouse
1979Me13	NUPAB	324,	335	T.C. Meyer
1979Mo02	PRLTA	42,	43	D.M. Moltz, J. Äystö, M.D. Cable, R.D. von Dincklage, R.F. Parry, J.M. Wouters, J. Cerny
1979Pa14	NUPAB	331,	16	V. Paar
1979Pe17	NUPAB	332,	95	P. Peuser, H. Otto, N. Kaffrell, G. Nyman, E. Roeckl
1979Pi08	NUPAB	321,	25	J.A. Pinston, W. Mampe, R. Rousille, K. Schreckenbach, D. Heck, H.G. Börner, H.R. Koch, S. Andre, D. Barnéoud
1979Pl06	NUPAB	332,	29	A. Płochocki, G.M. Gowdy, R. Kirchner, O. Klepper, W. Reisdorf, E. Roeckl, P. Tidemand-Petersson, J. Żylicz, U.J. Schrewe, R. Kantus, R.-D. von Dincklage, W.D. Schmidt-Ott
1979Pr15	ZENAA	34,	387	H.-J. Probst, C. Alderliesten, P. Jahn
1979Ri09	ZPAAD	290,	311	C. Ristori, J. Crançon, K.D. Wunsch, G. Jung, R. Decker, K.-L. Kratz
1979Ry.A	P-Lansing		249	A. Rytz
1979Sa.A	AnRpt KVI			A. Saha, R.H. Siemsen, J.W. Smits, J. Van Popta, and PrvCom AHW
1979Sc01	NDSBA	26,	81	M.R. Schmorak
1979Sc09	NUPAB	318,	253	K.-H. Schmidt, W. Faust, G. Münzenberg, H.-G. Clerc, W. Lang, K. Pielenz, D. Vermeulen, H. Wohlfarth, H. Ewald, K. Güttner
1979Sc11	ZPAAD	290,	359	F. Schussler, J. Blachot, E. Monnand, B. Fogelberg, S.H. Feenstra, J. van Klinken, G. Jung, K.D. Wünsch
1979Sc22	NUPAB	326,	65	D. Schardt, R. Kirchner, O. Klepper, W. Reisdorf, E. Roeckl, P. Tidemand-Petersson, G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, G. Nyman
1979Se01	ZPAAD	289,	197	H.A. Selic, G. Sadler, T.A. Khan, W.-D. Lauppe, H. Lawin, K. Sistemich, E. Monnand, J. Blachot, J.P. Bocquet, F. Schussler
1979Sh03	PRVCA	19,	1324	R.E. Shroy, A.K. Gaigalas, G. Schatz, D.B. Fossan
1979Si08	CJPHA	57,	358	N.C. Singhal, M.W. Johns
1979Sw01	NUIMA	159,	407	Z.E. Switkowski, R.J. Petty, J.C.P. Heggie, G.J. Clark
1979Ta22	JUPSA	47,	1735	Y. Tagishi, K. Katori, Y. Toba, M. Sasagase, M. Sato, T. Mikumo
1979Ta.B	BAPSA	24,	836	R.W. Tarara, J.D. Zumbro, C.P. Browne
1979To06	PRVCA	19,	2399	K.S. Toth, M.A. Ijaz, C.R. Bingham, L.L. Riedinger, H.K. Carter, D.C. Sousa
1979To18	PRVCA	20,	1902	K.S. Toth, Y.A. Ellis, D.C. Sousa, H.K. Carter, D. Sen, E.F. Zganjar
1979Ve.A	P-Lansing		431	J. Verplancke, D. Vandeplassche, M. Huyse, K. Cornelis, G. Lhersonneau
1979Vi01	PRVCA	19,	177	D.J. Vieira, R.A. Gough, J. Cerny
1979Vo05	PRVCA	20,	944	T. von Egidy, J.A. Cizewski, C.M. McCullagh, S.S. Malik, M.L. Stelts, R.E. Chrien, D. Breitig, R.F. Casten, W.R. Kane, G.J. Smith
1979Wa04	NUPAB	316,	13	D.D. Warner, W.F. Davidson, H.G. Börner, R.F. Casten, A.I. Namenson
1979Wa22	JPHGB	5,	1723	D.D. Warner, W.F. Davidson, W. Gelletly
1979We02	NUPAB	313,	385	D. Weber, G.M. Crawley, W. Benenson, E. Kashy, H. Nann
1979We07	PRVCA	20,	115	H. Weigmann, S. Raman, J.A. Harvey, R.L. Macklin, G.G. Slaughter

1980

1980Ad04	ZPAAD	295,	251	M. Adachi, A. Muroi, T. Matsuzaki, H. Taketani
1980Al02	PRVCA	21,	705	D.E. Alburger, P. Richards, T.H. Ku
1980Al14	ZPAAD	295,	305	G.D. Alkhazov, E.Y. Berlovich, K.A. Mezilev, Y.N. Novikov, V.N. Pantelejev, A.G. Poljakov, K.Y. Gromov, V.G. Kalinnikov, J. Kormicki, A. Potempa, E. Rurarz, F. Tarkanyi
1980Al15	ZPAAD	295,	331	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1980An.A	P-Berkeley		134	M.S. Antony, A. Huck, G. Klotz, A. Knipper, C. Miehé, G. Walter
1980Ba.A	Th.-Utrecht			J.R. Balder
1980BaZL	NEANDC(E)-212U			G. Battistuzzi, K. Kawade, B.D. Kern, T.A. Khan, W.D. Lauppe, H. Lawin, H.A. Selic, K. Sistemich, A. Wolf
1980Bl.A	Th.-Giessen			A. Blönnigen Diplomarbeit
1980Br23	NUPAB	349,	61	R.A. Braga, W.R. Western, J.L. Wood, R.W. Fink, R. Stone, C.R. Bingham, L.L. Riedinger

1980Bu04	IANFA	44,	79	A.V. Budzyak, T. Kretsu, V.V. Kuznetsov, N.A. Lebedev, G.I. Lizurei, Y.V. Yushkvich, M. Yanitski
1980Bu15	PRVCA	22,	1180	G.R. Burleson, G.S. Blanpied, G.H. Daw, A.J. Viescas, C.L. Morris, H.A. Thiessen, S.J. Greene, W.J. Braithwaite, W.B. Cottingame, D.B. Holtkamp, I.B. Moore, C.F. Moore
1980Ca02	PRVCA	21,	65	R.F. Casten, G.J. Smith, M.R. MacPhail, D. Breitig, W.R. Kane, M.L. Stelts, S.F. Mughabghab, J.A. Cizewski, H.G. Börner, W.F. Davidson, K. Schreckenbach
1980Da18	ZPAAD	298,	173	P.J. Daly, P. Kleinheinz, R. Broda, S. Lunardi, H. Backe, J. Blomqvist
1980De02	ZPAAD	294,	35	R. Decker, K.D. Wünsch, H. Wollnik, E. Koglin, G. Siegert, G. Jung
1980De26	PYLBB	94,	307	C. Detraz, M. Epherre, D. Guillemaud, P.G. Hansen, B. Jonson, R. Klapisch, M. Langevin, S. Mattsson, F. Naulin, G. Nyman, A.M. Poskanzer, H.L. Ravn, M. de Saint-Simon, K. Takahashi, C. Thibault, F. Touchard
1980De35	PRVCA	22,	2163	E. De Geer, G.B. Holm
1980Di07	PRVCA	21,	2101	A.C. Di Rienzo, H.A. Enge, D.B. Gazes, M.K. Salomaa, A. Sperduto, W. Schier, H.E. Wegner
1980Du02	ZPAAD	294,	107	J.P. Dufour, A. Fleury, F. Hubert, Y. Llabador, M.B. Mahourat, R. Bimbert, D. Gardes
1980Ew03	ZPAAD	296,	223	G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1980Ga07	YAFIA	31,	306	Yu. P. Gangrskii, M.B. Miller, L.V. Mikhailov, I.F. Kharisov
1980Gi04	PRVCA	21,	2041	J. Gilat, S. Katcoff, L.K. Peker
1980Go11	NUPAB	344,	1	H. Gokturk, N.K. Aras, P. Fettweis, P. Del Marmol, J. Vanhorenbeek, K. Cornelis
1980Gr02	PRVCA	21,	498	R.C. Greenwood, R.E. Chrien
1980Gr12	NUIMA	175,	515	R.C. Greenwood, R.E. Chrien
1980Gr.A	DABBB	40,	3235	S.A. Gronemeyer in Diss. Abst. Int. 40B, 3235 (1980)
1980Ha20	PRVCA	22,	247	H.I. Hayakawa, I. Hyman, J.K.P. Lee
1980Ha36	PHSTB	22,	439	R. Hanninen, G.U. Din
1980Ho17	IJARA	31,	153	H. Houtermans, O. Milosevic, F. Reichel
1980Ho29	CZYPA	30,	763	J. Hinzatko, K. Konesny, F. Becvar, E.A. Eissa
1980Is02	CJPHA	58,	168	M.A. Islam, T.J. Kennett, S.A. Kerr, W.V. Prestwich
1980Ja.A	AnRpt KVI		31	J. Jänecke, E.H.L. Aarts, A.G. Drentje, C. Gaarde, M.H. Harakeh
1980Ka19	PRVCA	22,	997	J. Kalifa, G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, Y. Deschamps, R. Seltz
1980Ko01	NUPAB	334,	35	J. Kopecky, R.E. Chrien, H. Liou
1980Ko25	CJPHA	58,	1311	K.S. Kozier, K.S. Sharma, R.C. Barber, J.W. Barnard, R.J. Ellis, V.P. Derenchuk, H.E. Duckworth
1980Kr07	ZPAAD	295,	199	K.L. Kratz, H. Ohm
1980Kr.A	P-Berkeley		135	L. Krauss, I. Linck, A. Poves, J.C. Sens
1980Le18	PRVCA	22,	1976	A.G. Ledebuhr, L.H. Harwood, R.G.H. Robertson, T.J. Bowles
1980Li07	NUPAB	337,	401	H.I. Liou, R.E. Chrien, J. Kopecky, J.A. Konter
1980Lo10	PHSTB	22,	203	G. Løvhøiden, D.G. Burke, E.R. Flynn, J.W. Sunier
1980Lu04	ZPAAD	294,	233	E. Lund, P. Hoff, K. Aleklett, O. Glomset, G. Rudstam
1980Ma40	PRVCA	22,	2449	W. Mayer, K.E. Rehm, H.J. Körner, W. Mayer, E. Müller, I. Oelrich, H.J. Scheerer, R.E. Segel, P. Sperr, W. Wagner
1980Mo.A	CEA-N2176,		20	E. Monnand, J.A. Pinston, F. Schussler, J.B. Battistuzzi, K. Kamada, H. Lawin, K. Sistemich, B. Pfeiffer
1980Mu12	PRVCA	22,	2204	M.J. Murphy, C.N. Davids, E.B. Norman
1980Na12	PYLBB	96,	261	H. Nann, K.K. Seth, S.G. Iversen, M.O. Kaletka, D.B. Barlow, D. Smith
1980Na14	JPSLB	41,	79	F. Naulin, C. Détraz, M. Bernas, D. Guillemaud, E. Kashy, M. Langevin, F. Pougheon, P. Roussel, M. Roy-Stephan
1980No06	ZPAAD	298,	191	E. Nolte, G. Korschinek, U. Heim
1980Ox01	ZPAAD	294,	389	K. Oxorn, B. Singh, S.K. Mark
1980Pa02	PRVCA	21,	462	R.C. Pardo, L.W. Robinson, W. Benenson, E. Kashy, R.M. Ronnigen
1980Pa07	PYLBB	91,	41	R.C. Pardo, S. Gales, R.M. Ronningen, L.H. Harwood
1980ReZQ	PNL-SA-8766			P.L. Reeder, R.A. Warner
1980Ro04	ZPAAD	294,	221	E. Roeckl, G.M. Gowdy, R. Kirchner, O. Klepper, A. Piotrowski, A. Płochocki, W. Reisdorf, P. Tidemand-Petersson, J. Żylicz, D. Schardt, G. Nyman, W. Lindenzweig
1980Sa11	JPHGB	6,	525	J. Sala-Lizzaraga, J. Byrne

1980Sc09	PYLBB	91,	46	U.J. Schrewe, P. Tidemand-Petersson, G.M. Gowdy, R. Kirchner, O. Klepper, A. Płochocki, W. Reisdorf, E. Roeckl, J.L. Wood, J. Żylicz, R. Fass, D. Schardt
1980Sh06	PYLBB	91,	211	K.S. Sharma, R.J. Ellis, V.P. Derenchuk, R.C. Barber, H.E. Duckworth
1980Sh14	CJPHA	58,	837	M.A.M. Shababuddin, D.G. Burke
1980Sj01	PRVCA	21,	1838	T.P. Sjoreen, U. Garg, D.B. Fossan
1980St10	ZPAAD	295,	259	O. Straume, G. Løvhøiden, D.G. Burke
1980Ta07	PRVCA	21,	1667	E.M. Takagui, O. Dietzsch
1980Tr04	PRVCA	22,	17	R.E. Tribble, D.M. Tanner, A.F. Zeller
1980Ve01	ZPAAD	294,	144	D. Vermeulen, H.-G. Clerc, W. Lang, K.H. Schmidt, G. Münzenberg
1980Ve05	NUPAB	344,	421	R. Vennink, J. Kopecky, P.M. Endt, P.W.W. Glaudemans
1980Vi.A	PrvCom	AHW		V.D. Vitman, F.V. Moroz, Yu. Ya. Sergeev, V.K. Tarasov
1980Vy01	IANFA	44,	67	Ts. Vylov, S. Omanov, V. Csaleksandrov, N.B. Badalov, A. Budzyak, V.V. Kuznetsov, A.I. Muminov, Han Ken Mo
1980Wa24	PRVCA	22,	2330	E.K. Warburton, D.E. Alburger, D.J. Millener
1980Wi13	PRVCA	22,	1696	H.S. Wilson, R.W. Kavanagh, F.M. Mann
1980Ya07	JINCA	42,	1539	H. Yamamoto, Y. Ikeda, K. Kawade, T. Katoh, T. Nagahara
1980Ya.A	AnRpt Berkeley			S. Yashita, M. Leino, A. Ghiorso
1980Ze.A	AnRpt Mainz		1	M. Zendel, N. Trautmann

1981

1981Ad02	NUPAB	356,	129	I. Adam, M. Honusek, Z. Hons, V.V. Kuznetsov, T.M. Muminov, R.R. Usmanov, A. Budzyak
1981Aj02	PRVCA	24,	1762	F. Ajzenberg-Selove, R.E. Brown, E.R. Flynn, J.W. Sunier
1981Al03	PRVCA	23,	473	D.E. Alburger, D.J. Millener, D.H. Wilkinson
1981Al07	PRVCA	23,	2217	D.E. Alburger, C.J. Lister, J.W. Olness, D.J. Millener
1981Al20	ZPAAD	302,	241	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1981Ar13	PYLBB	104,	186	Y. Arai, M. Fujioka, E. Tanaka, J. Shinozuka, H. Miyatake, M. Yoshii, T. Ishimatsu, see also NUPAB 420(84)193
1981Ar.A	JINR-P6-81-524			K.P. Artamonova, A. Budzyak, E.P. Grigorev, A. Dzumamuratov, A.V. Zolotavin, A.I. Ivanov, V.G. Kalinnikov, V.V. Kuznetsov, V.O. Sergeev, R. Usmanov
1981Ay01	PRVCA	23,	879	J. Äystö, M.D. Cable, R.F. Parry, J.M. Wouters, D.M. Moltz, J. Cerny
1981Ba40	ZPAAD	302,	329	G.K. Bavaria, J.E. Crawford, S. Calamawy, J.E. Kitching
1981Ba53	IANFA	45,	727	I.F. Barchuck, V.I. Goyshkin, E.N. Gorban, A.F. Ogorodnik
1981Be03	PRVCA	23,	555	C.E. Bemis,Jr., P.F. Dittner, R.L. Ferguson, D.C. Hensley, F. Plasil, F. Pleasonton
1981Be40	PRVCA	24,	756	M. Bernas, J.C. Peng, H. Doubre, M. Langevin, M.J. Le Vine, F. Pougheon, P. Roussel
1981Bj01	NUPAB	359,	1	T. Bjornstad, H.A. Gustafsson, P.G. Hansen, B. Jonson, V. Lindfors, S. Mattsson, A.M. Poskanzer, H.L. Ravn, ISOLDE
1981Bo30	ZPAAD	302,	121	J. Bonn, P. Hartmann, D. Weskott
1981Bo.B	AnRpt Julich		76	M. Bogdanovic, T.D. MacMahon, H. Seyfarth
1981Bu.A	P-Samarkand		621	M. Budzinski, K. Ya. Gromov, V.V. Kuznetsov, T.M. Muminov, P.R. Usmanov, T. Chazratov
1981Ci01	PRVCA	23,	1453	J.A. Cizewski, E.R. Flynn, R.E. Brown, D.L. Hanson, S.D. Orbesen, J.W. Sunier
1981Co17	PRVCA	24,	911	T. Cousins, T.J. Kennett, W.V. Prestwich
1981Da06	PRVCA	23,	1612	E. Dafni, H.E. Mahnke, J.W. Noe, M.H. Rafailovich, G.D. Sprouse
1981De22	ZPAAD	300,	251	S. Della Negra, C. Deprun, D. Jacquet, Y. Le Beyec
1981De25	ZPAAD	301,	165	R. Decker, K.D. Wünsch, H. Wollnik, G. Jung, J. Münzel, G. Siegert, E. Koglin
1981De38	ZPAAD	303,	151	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1981Dr07	ZPAAD	302,	361	S. Drissi, S. André, J. Genevey, V. Barci, A. Gizon, J. Gizon, J.A. Pinston, J. Jastrzebski, R. Kossakowski, Z. Preibisz
1981Eb01	ZPAAD	299,	209	I.D.U. Ebong, R.R. Roy
1981El03	PRVCA	23,	480	Y.A. Ellis-Akovali, K.S. Toth, C.R. Bingham, H.K. Carter, D.C. Sousa
1981En05	NUPAB	367,	29	G. Engler, E. Neeman
1981En07	NUPAB	372,	125	G. Engler, R.E. Chrien, H.I. Liou
1981Ew01	NUPAB	352,	13	G.T. Ewan, E. Hagberg, P.G. Hansen, B. Jonson, S. Mattsson, H.L. Ravn, P. Tidemand-Petersson

1981Fe05	NUPAB	369,	425	M. Fernandez, G. Murillo, J. Ramirez, O. Avila, S.E. Darden, M.C. Rozak, J.L. Foster, B.P. Hichwa, P.L. Jolivette
1981Fi02	NUPAB	363,	311	C.A. Fields, F.W.N. De Boer, J.J. Kraushaar, R.A. Ristinen, L.E. Samuelson, E. Sugarbaker
1981Fl02	PRVCA	24,	902	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, J.A. Cizewski, J.W. Sunier, and erratum PRVCA 25(1982)2851
1981Fl05	PYLBB	105,	125	E.R. Flynn, R.E. Brown, J.W. Sunier, J.M. Gurski, J.A. Cizewski, D.G. Burke
1981Fl.A	P-Helsingor		107	E.R. Flynn, R.E. Brown, J.W. Sunier, D.G. Burke, F. Ajzenberg-Selove, J.A. Cizewski
1981Ga36	IANFA	45,	1861	N. Ganbaatar, J. Kormicki, K.A. Mezilev, Y.N. Novikov, Y.P. Prokofiev, A. Potempa, F. Tarkani
1981Gi01	PYLBB	98,	29	F. Girshik, K. Krien, R.A. Naumann, G.L. Struble, R.G. Lanier, L.G. Mann, J.A. Cizewski, E.R. Flynn, T. Nail, R.K. Sheline
1981Ha08	NUPAB	357,	356	J.C. Hardy, G.C. Ball, W.G. Davies, J.S. Forster, H. Schmeing, E.T.H. Clifford
1981Ha44	NUPAB	371,	349	J.C. Hardy, T. Faestermann, H. Schmeing, J.A. Macdonald, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson
1981He07	PRVCA	23,	1446	H. Helppi, S.K. Saha, P.J. Daly, S.R. Faber, T.L. Khoo, F.M. Bernthal
1981Hi01	NUPAB	352,	93	F. Hintenberger, P. von Rossen, S. Cierjacks, G. Schmalz, D. Erbe, B. Leugers
1981Ho07	NUPAB	359,	9	P. Hoff
1981Ho10	ZPAAD	299,	281	S. Hofmann, G. Münzenberg, F. Heßberger, W. Reisdorf, P. Armbruster, B. Thuma
1981Ho17	ZPAAD	300,	289	P. Hoff, K. Aleklett, E. Lund, G. Rudstam
1981Ho18	NUIMA	186,	257	P. Hornshøj, H.L. Nielsen, N. Rud, H.L. Ravn
1981Ho19	NUPAB	366,	109	J. Honkanen, M. Kortelahti, K. Eskola, K. Vierinen
1981Ho24	NUPAB	368,	210	P. Hoff, B. Fogelberg
1981Ho.A	P-Helsingor		190	S. Hofmann, G. Münzenberg, W. Faust, F. Heßberger, W. Reisdorf, J.R.H. Schneider, P. Armbruster, K. Güttner, B. Thuma
1981Ho.B	PrvCom	AHW	Oct	C. Hofmeyr, D. Warner, H.G. Börner, G. Barreau, R.F. Casten, M. Stelts, J.S. Dionisio
1981Hs02	PRVCA	23,	1217	H.-C. Hseuh, E.-M. Franz, P.E. Haustein, S. Katcoff, L.K. Peker
1981Hu03	NUPAB	352,	247	M. Huyse, K. Cornelis, G. Lhersonneau, J. Verplancke, W.B. Wolters, K. Heyde, P. Van Isacker, M. Warnquier, G. Wenes, H. Vincx
1981HuZT	P-Helsingor		378	A. Huck, G. Klotz, A. Knipper, C. Miehe, C. Richard-Serre, G. Walter
1981Jo.B	P-Helsingor		640	B. Jonson, O.B. Nielsen, L. Westgaard, J. Żylicz
1981JoZV	P-Helsingor		265	B. Jonson, H. Å. Gustafsson, P.G. Hansen, P. Hoff, P.O. Larsson, S. Mattsson , G. Nyman, H.L. Ravn, D. Schardt
1981Ka07	PRVCA	23,	1274	R. Kantus, U.J. Schrewe, W.D. Schmidt-Ott, R. Michaelsen
1981Ke02	CJPHA	59,	93	T.J. Kennett, M.A. Islam, W.V. Prestwich
1981Ke03	ZPAAD	299,	323	T.J. Kennett, W.V. Prestwich, M.A. Islam
1981Ke11	CJPHA	59,	1212	T.J. Kennett, W.V. Prestwich, M.A. Islam
1981Ko13	PRVCA	23,	2743	R.T. Kouzes, K. Krien
1981Ko.A	PrvCom	NDG	Oct	B.K. Koene, R.E. Chrien, M.L. Stets, L.K. Peker
1981Le23	PRVCA	24,	2370	M.E. Leino, S. Yashita, A. Ghiorso
1981Li12	PRVCA	24,	260	C.J. Lister, P.E. Haustein, D.E. Alburger, J.W. Olness
1981Lo15	JINCA	43,	2239	R.W. Lougheed, E.K. Hulet, J.F. Wild, B.J. Qualheim, J.E. Evans, R.J. Dupzyk
1981Lo.A	P-Grenoble		383	M.A. Lone
1981Lu07	ZETFA	81,	1158	V.A. Lyubimov, E.G. Novikov, V.Z. Nozik, E.F. Tretyakov, V.S. Kozik, N.F. Myasoedov
1981Ma30	NUPAB	370,	1	S. Matsuki, N. Sakamoto, K. Ogino, Y. Kadota, T. Tanabe, Y. Okuma
1981Mi10	IJARA	32,	573	H. Miyahara, T. Gotoh, T. Watanabe
1981Mi12	ZPAAD	301,	199	P. Misaelides, P. Tidemand-Petersson, U.J. Schrewe, I.S. Grant, R. Kirchner, O. Klepper, I.C. Malcolm, P.J. Nolan, E. Roeckl, W.-D. Schmidt-Ott, J.L. Wood
1981Mu06	ZPAAD	300,	107	G. Münzenberg, S. Hofmann, F.P. Heßberger, W. Reisdorf, K.H. Schmidt, J.R.H. Schneider, P. Armbruster, C.C. Sahm, B. Thuma
1981Mu12	ZPAAD	302,	7	G. Münzenberg, S. Hofmann, W. Faust, F.P. Heßberger, W. Reisdorf, K.-H. Schmidt, T. Kitahara, P. Armbruster, K. Güttner, B. Thuma, D. Vermeulen
1981Na.A	P-Helsingor		376	F. Naulin, C. Détraz, M. Roy-Stephan, M. Bernas, J. de Boer, D. Guillemaud, M. Langevin, F. Pougheon, P. Roussel
1981Ni08	RAACA	29,	113	K. Nishiizumi, R. Gensho, M. Honda

1981Ox01	ZPAAD	303,	63	K. Oxorn, S.K. Mark
1981Pa11	PYLBB	103,	297	A.D. Panagiotou, I. Paschopoulos, A. Huck, N. Schulz
1981Pa17	ZPAAD	302,	117	A.D. Panagiotou, P.K. Kananis, E.N. Gazis, M. Bernas, C. Détraz, M. Langevin, D. Guillemaud, E. Plagnol
1981Po08	NUPAB	359,	180	A.R. Poletti, G.D. Dracoulis, C. Fahlander, I. Morrison
1981Pr06	PRVCA	24,	1346	R.J. Prestwood, D.B. Curtis, J.H. Cappis
1981Ra07	PRVCA	23,	1979	S. Raman, O. Shahal, A.Z. Hussein, G.C. Slaughter, J.A. Harvey
1981Ri04	PRVCA	23,	2342	B.G. Ritchie, K.S. Toth, H.K. Carter, R.L. Mlekodaj, E.H. Speje
1981Ro02	PRVCA	23,	973	R.G.H. Robertson, J.A. Nolen,Jr., T. Chapuran, R. Vodhanel
1981Sa09	PRVCA	23,	1713	T. Saito, T. Toriyama, M. Kanbe, K. Hisatake
1981Sc17	NUPAB	368,	153	D. Schardt, T. Batsch, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, P. Tidemand-Petersson
1981Sc21	PRVCA	24,	2695	W.D. Schmidt-Ott, R. Kantus, E. Runte, U.J. Schrewe, R. Michaelsen
1981Se11	PYLBB	103,	409	U. Sennhauser, L. Felawka, T. Kozlowski, H.K. Walter, F.W. Schlepuetz, R. Engfer, E.A. Hermes, P. Heusi, H.P. Isaak, H.S. Pruys, A. Zglinski, W.H.A. Hesseling
1981Se.A	P-Helsingor		655	K.T. Seth
1981Sm02	PYLBB	102,	114	L.G. Smith, E. Koets, A.H. Wapstra
1981So06	PRVCA	24,	1615	K. Sofia, B.N. Subba Rao, J.E. Cramfort
1981Sp03	ZPAAD	299,	112	L. Spanier, S.Z. Gui, H. Hick, E. Nolte
1981St18	PRVCA	24,	1785	P. Stephans, E. Mordechai, H.T. Fortune
1981Su.A	Leninst-YF-644			L.A. Sushkov, V.L. Alekseev, L.D. Kabina, I.A. Kondurov, D.D. Uorner
1981Th03	NUPAB	362,	71	B.V. Thirumala Rao, R. Broda, C. Gunther, A. Kleinrahm, M. Ogawa
1981Th04	PRVCA	23,	2720	C. Thibault, F. Touchard, S. Buttgenbach, R. Klapisch, M. de Saint Simon, H.T. Duong, P. Jacquinot, P. Juncar, S. Liberman, P. Pillet, J. Pinard, J.L. Vialle, A. Pesnelle, G. Huber
1981Th06	NUPAB	367,	1	C. Thibault, F. Touchard, S. Buttgenbach, R. Klapisch, M. de Saint Simon, H.T. Duong, P. Jacquinot, P. Juncar, S. Liberman, P. Pillet, J. Pinard, J.L. Vialle, A. Pesnelle, G. Huber, ISOLDE
1981To02	NUPAB	356,	26	K.S. Toth, Y.A. Ellis-Akovali, D.M. Moltz, C.R. Bingham, H.K. Carter, D.C. Sousa
1981Va27	IANFA	45,	1861	V.M. Vakhtel, N.A. Golovkov, R.B. Ivanov, M.I. Mikhailova, A.F. Novgorodov, Y.V. Norseev, V.G. Chumin, Y.V. Yushkevich
1981Va.B	P-Grenoble		548	C. Van der Leun, P. De Wit, C. Alderliesten, and PrvCom AHW
1981Vo03	NUPAB	365,	26	T. von Egidy, G. Barreau, H.G. Börner, W.F. Davidson, J. Larysz, D.D. Warner, P.H.M. Van Assche, K. Nybo, T.F. Thorsteinsen, G. Lovhoiden, E.R. Flynn, J.A. Cizewski, R.K. Sheline, D. Decman, D.G. Burke, G. Sletten, N. Kaffrell, W. Kurcewicz, T. Bjornstad, G. Nyman
1981Vo04	NUIMA	186,	307	B. Vosicki, T. Bjornstad, L.C. Carraz, J. Heinemeier, H.L. Ravn
1981Wa11	NUPAB	362,	1	C. Wagemans, E. Allaert, A. De Clerq, P. D'Hondt, A. De Ruytter, G. Barreau, A. Emsallem
1981Wa26	IJARA	32,	757	S.L. Waters, G.R. Forse, P.L. Horlock, M.J. Woods
1981Wa31	NUIMA	190,	167	C. Wagemans, E. Allaert, G. Barreau, A. Emsallem, P. D'Hondt
1981We12	NUPAB	368,	117	H. Weigmann, C. Wagemans, A. Emsallem, M. Ashgar
1981Wh03	PYLBB	105,	116	R.E. White, H. Naylor, P.H. Barker, D.M.J. Lovelock, R.M. Smythe
1981Ya06	JINCA	43,	855	H. Yamamoto, Y. Ikeda, K. Kawade, T. Katoh, T. Nagahara

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1982Ah01	NUPAB	373,	434	I. Ahmad, E.P. Horwitz
1982Ah08	PRLTA	49,	1758	I. Ahmad, J.E. Gindler, R.R. Betts, R.R. Chasman, A.M. Friedman
1982Al19	NUIMA	197,	383	P.F. AAlkemade, C. Alderliesten, P. De Wit, C. Van der Leun
1982Al29	PRVCA	26,	1157	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1982Al.A	LNPI-820			G.D. Alkhazov, N. Ganbaatar, K.Y. Gromov, V.G. Kalinnikov,K.A. Mezilev, Y.N. Novikov, A.M. Nurmukhamedov, A. Potempa, F. Tarkanyi
1982Al.C	PrvCom	NDG	Dec	D.E. Alburger, J.W. Olness, T.W. Burrows
1982An12	JPHGB	8,	1659	M.S. Antony
1982An19	PYLBB	113,	72	J.U. Andersen, G.J. Beyer, G. Charpak, A. De Rújula, B. Elbek, H.A. Gustavson, P.G. Hansen, B. Jonson, P. Knudsen, E. Laegsgaard, J. Pedersen, H.L. Ravn

1982Au01	NUPAB	378,	443	G. Audi, M. Epherre, C. Thibault, A.H. Wapstra, K. Bos
1982Ba15	IANFA	46,	63	I.F. Barchuk, V.I. Golyshkin, E.N. Gorban
1982Ba28	NUPAB	380,	189	A. Backlin, G. Hedin, B. Fogelberg, M. Saraceno, R.C. Greenwood, C.W. Reich, H.R. Koch, H.A. Baader, H.D. Breitig, O.W.B. Schult, K. Schreckenbach, T. von Egidy, W. Mampe
1982Ba69	IANFA	46,	2077	I.F. Barchuk, V.I. Golyshkin, E.N. Gorbinj
1982Be20	NCLTA	33,	273	E. Bellotti, E. Fiorini, C. Liguori, A. Pullia, A. Sarracino, L. Zanotti
1982Be21	PRVCA	25,	2848	G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, S. Fortier, J.M. Maison, R. Tamisier
1982Be38	PRVCA	26,	914	J.A. Becker, J.B. Carlson, R.G. Lanier, L.G. Mann, G.L. Struble, K.H. Maier, L. Ussery, W. Stoffl, T. Nail, R.K. Sheline, J.A. Cizewski
1982Be46	NUPAB	389,	158	R. Bengtsson, J.A. Pinston, D. Barneoud, E. Monnand, F. Schussler
1982Be.A	P-Kiev		127	R.B. Begdzanov, K. Sh. Azimov
1982BeZY	BAPSA	27,	DF10	C. Bell, P. Raghavan, Y. Niv, D.E. Murnick, P. Pappas
1982Bo04	PRVCA	25,	941	J.D. Bowman, R.E. Eppley, E.K. Hyde
1982Br10	RAACA	30,	1	W. Brüchle, G. Herrmann
1982Br23	PRVCA	26,	2166	D.S. Brenner, M.K. Martel, A. Aprahamian, R.E. Chrien, R.L. Gill, H.I. Liou, M. Shmid, M.L. Stelts, A. Wolf, F.K. Wohn, D.M. Rehfield, H. Dejbakhsh, C. Chung
1982Ca04	PYLBB	109,	419	L.C. Carraz, P.G. Hansen, A. Huck, B. Jonson, G. Klotz, A. Knipper, K.L. Kratz, C. Miéhé, S. Mattsson, G. Nyman, H. Ohm, A.M. Poskanzer, A. Poves, H.L. Ravn, C. Richard-Serre, A. Schröder, G. Walter, W. Ziegert
1982Ca16	PRVCA	26,	1778	M.D. Cable, J. Honkanen, R.F. Parry, H.M. Thierens, J.M. Wouters, Z.Y. Zhou, J. Cerny
1982Ch22	PRVCA	26,	1198	C. Chung, W.B. Walters, R. Gill, M. Shmid, R.E. Chrien, D.S. Brenner
1982Cr01	PYLBB	109,	8	G.M. Crawley, W. Benenson, G. Bertsch, S. Gales, D. Weber, B. Zwieglinsky
1982De03	PRVCA	25,	146	P. De Gelder, D. De Frenne, E. Jacobs, K. Heyde, S. Fortier, J.M. Maison, M.N. Rao, C.P. Massolo
1982De06	PRVCA	25,	504	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1982De11	ANPHA	7,	149	S. Della Negra, C. Deprun, D. Jacquet, Y. Le Beyec
1982De36	ZPAAD	307,	305	S. Della Negra, H. Gauvin, D. Jacquet, Y. Le Beyec
1982De43	ZPAAD	308,	243	S. Della Negra, D. Jacquet, Y. Le Beyec
1982De.A	Th.-Orsay			Ph. Dessagne
1982Di01	PYLBB	108,	265	W.R. Dixon, W.F. Davidson, R.S. Storey, D.M. Rehfield
1982Di05	NUPAB	378,	273	W.R. Dixon, R.S. Storey, A.F. Bielajew
1982En03	PRVCA	25,	1830	H.A. Enge, M. Salomaa, A. Sperduto, J. Ball, W. Schier, A. Graue, A. Graue
1982Ew01	NUPAB	380,	423	G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1982Fi10	NUPAB	385,	505	L.K. Fifield, J.L. Durell, M.A.C. Hotchkis, J.R. Leigh, T.R. Ophel, D.C. Weisser
1982Fl09	PRVCA	25,	2851	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, J.A. Cizewski, J.W. Sunier
1982Fo10	NUPAB	391,	445	B. Fogelberg, P. Hoff
1982Ga05	PRLTA	48,	914	C.A. Gagliardi, G.T. Garvey, J.R. Wrobel, S.J. Freedman
1982Ga24	ZPAAD	308,	359	H. Gabelmann, J. Munzel, B. Pfeiffer, G.I. Crawford, H. Wollnik, K.-L. Kratz
1982Gi.A	Th.-Mainz			H. Gietz
1982GoZU	P-Yamanishi		283	Y. Gono, Y. Itoh, S. Sasagase, M. Sugawara, T. Kubo, T. Nomura, S. Hayashibe, K. Hiruta
1982Gr10	IJARA	33,	533	A. Grutter
1982Gr.A	P-Amsterdam			K.Y. Gromov, et al
1982Hi04	PRVCA	25,	2710	K.H. Hicks, T.E. Ward, J. Wiggins, C.A. Fields, F.W.N. de Boer
1982Hi14	ZPAAD	309,	27	R. Hingmann, H.-G. Clerc, C.C. Sahm, D. Vermeulen, K.H. Schmidt, J.G. Keller
1982Ho04	ZPAAD	305,	111	S. Hofmann, W. Reisdorf, G. Münzenberg, F.P. Heßberger, J.R.H. Schneider, P. Armbruster
1982Ho07	PRVCA	25,	2232	R.W. Hoff, W.F. Davidson, D.D. Warner, H.G. Börner, T. von Egidy
1982Ho11	PYLBB	116,	4	P. Hornshoj, J. Kolind, N. Rud
1982Hu02	NUIMA	192,	609	P. Hungerford, H.H. Schmidt
1982Is05	PRVCA	25,	3184	M.A. Islam, T.J. Kennett, W.V. Prestwich
1982Jo03	JPHGB	8,	1405	M.G. Johnson, I.S. Grant, P. Misealides, P.J. Nolan, P. Peuser, R. Kirchner, O. Klepper, E. Roeckl, P. Tidemand-Petersson
1982Ka25	ZPAAD	308,	33	K. Kawade, K. Sistemich, G. Battistuzzi, H. Lawin, K. Shizuma, J. Blomqvist
1982Ka.A	PrvCom	AHW	Jul	W. Kane, et al

1982Ke05	ZPAAD	306,	161	B.D. Kern, K. Sistemich, W.-D. Lauppe, H. Lawin
1982Kl03	ZPAAD	305,	125	O. Klepper, T. Batsch, S. Hofmann, R. Kirchner, W. Kurcewicz, W. Reisdorf, E. Roeckl, D. Schardt, G. Nymann
1982Ko06	PRVCA	25,	1076	R.T. Kouzes, M.M. Lowry, C.L. Bennett, and PrvCom AHW May 1988
1982Kr05	ZPAAD	304,	307	H. Kräwinkel, H.W. Becker, L. Buchmann, J. Görres, K.U. Kettner, W.E. Kieser, R. Santo, P. Schmalbrock, H.P. Trautvetter, A. Vlieks,C. Rolfs, J.W. Hammer, R.E. Azuma, W.S. Rodney
1982Kr12	NUPAB	386,	245	B. Krusche, K.P. Lieb, H. Daniel, T. von Egidy, G. Barreau, H.G. Börner, R. Brissot, C. Hofmeyr, R. Rascher
1982Ku15	ZPAAD	308,	21	W. Kurcewicz, E.F. Zganjar, R. Kirchner, O. Klepper, E. Roeckl, P. Komninos, E. Nolte, D. Schardt, P. Tidemand-Petersson
1982La22	NUIMA	196,	559	R.G. Lanier, L.G. Mann, G.L. Stuble
1982Mo04	PRVCA	25,	1276	S. Mordechai, S. Lafrance, H.T. Fortune
1982Mo10	PYLBB	113,	16	D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.G. Ritchie, B.D. Kern
1982Mo12	PRVCA	25,	3218	C.L. Morris, H.T. Fortune, L.C. Bland, R. Gilman, S.J. Greene, W.B. Cottingame, D.B. Holtkamp, G.R. Burleson, C.F. Moore
1982Mo23	PRVCA	26,	1914	D.M. Moltz, K.S. Toth, R.E. Tribble, R.E. Neese, J.P. Sullivan
1982Na04	PRVCA	25,	1074	F. Naulin, C. Détraz, M. Roy-Stéphan, M. Bernas, J. de Boer, D. Guillemaud, M. Langevin, F. Pougheon, P. Roussel
1982No06	ZPAAD	305,	289	E. Nolte, H. Hick
1982No08	ZPAAD	306,	223	E. Nolte, S.Z. Gui, G. Colombo, G. Korschinek, K. Eskola
1982Oh04	JUPSA	51,	43	M. Ohshima, Z. Matumoto, T. Tamura
1982Ol01	NUPAB	373,	13	J.W. Olness, E.K. Warburton, D.E. Alburger, C.J. Lister, D.J. Millener
1982Pa24	ZPAAD	308,	345	B. Pahlmann, U. Keyser, F. Münnich, B. Pfeiffer
1982Pl05	NUPAB	388,	93	A. Płochocki, J. Żylicz, R. Kirchner, O. Klepper, E. Roeckl, P. Tidemand-Petersson, I.S. Grant, P. Misealides
1982Ra13	ZPAAD	305,	359	M.S. Rapaport, G. Engler, A. Gayer, I. Yoresh
1982Ra.A	PrvCom	AHW	Nov	A. Raemy, J.C. Dousse, J. Kern, W. Schwitz
1982Sc03	NUPAB	376,	144	K. Schreckenbach, A.I. Namenson, W.F. Davidson, T. von Egidy, H.G. Börner, J.A. Pinston, R.K. Smither, D.D. Warner, R.F. Casten, M.L. White, W. Stofl
1982Sc14	PRVCA	25,	2888	H.H. Schmidt, P. Hungerford, H. Daniel, T. von Egidy, S.A. Kerr, R. Brissot, G. Barreau, H.G. Börner, C. Hofmeyr, K.P. Lieb
1982Sc15	PRVCA	25,	3091	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma, E.T.H. Clifford
1982Sc25	ZPAAD	308,	183	H.J. Scheerer, D. Pereira, A. Chalupka, R. Gyufko
1982So.A	P-Kiev		51	L.M. Solin, V.A. Yakovlev, V.N. Kushmin, Yu. A. Nemilov
1982So.B	AnRpt Julich		54	F. Soramel-Stanco, R. Julin, B. Rubio, A. Ercan, P. Kleinheinz, J. Tain, G.P.A. Berg, W. Huerliman, I. Katayama, S.A. Martin, J. Messburger, J.G.M. Roemer, B. Styczen, H.J. Scheerer
1982Ta18	NUPAB	388,	498	M. Tan, R.A. Braga, R.W. Fink, P.V. Rao
1982Th01	PRVCA	25,	331	C.E. Thorn, W.F. Piel,Jr., M.J. LeVine, P.D. Bond, A. Gallmann
1982Ti02	NUPAB	376,	421	T.A.A. Tielens, J. Kopecky, F. Stecher-Rasmussen, W. Ratinsky, K. Abrahams, P.M. Endt
1982To02	PYLBB	108,	169	F. Touchard, P. Guimbal, S. Buttgenbach, R. Klapisch, M. de Saint Simon, J.M. Serre, C. Thibault, H.T. Duong, P. Juncar, S. Liberman, J. Pinard, J.L. Vialle
1982To14	PYLBB	117,	11	K.S. Toth, Y.A. Ellis-Akovali, D.M. Moltz, R.L. Mlekodaj
1982Va13	NUPAB	380,	261	C. Van der Leun, C. Alderliesten
1982Ve.A	P-Kiev		91	G.V. Veselov, N. Ganbataar, K.A. Mezilev
1982Vy02	IANFA	46,	16	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, V.G. Kalinnikov, T. Kretsu, V.V. Kuznetsov
1982Vy03	IANFA	46,	834	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, V.V. Kuznetsov
1982Vy06	IANFA	46,	2066	Ts. Vylov, V.G. Kalinnikov, V.V. Kuznetsov, Z.N. Li, A.A. Solnyshkin, Y.U. Yuskevich
1982Vy07	IANFA	46,	2239	Ts. Vylov, V.M. Gorodzhankin, K.Y. Gromov, V.V. Kuznetsov, T. Kretsu, N.A. Lebedev, Yu. V. Yushkevich
1982Vy10	YAFIA	36,	812	Ts. Vylov, V.M. Gorozhankin, K. Ya. Gromov, A.I. Ivanov, I.F. Uchevatkin, V.G. Chumin
1982Wi.A	Th.-Un.N.Caroln			J.F. Wilkerson
1982Zu02	PRVCA	26,	965	J.D. Zumbro, C.P. Browne, J.F. Mateja, H.T. Fortune, R. Middleton

1982Zu04	PRVCA	26,	2668	J.D. Zumbro, A.A. Rollefson, R.W. Tarara, C.P. Browne
1982Zw02	NUPAB	389,	301	B. Zwiegliński, W. Benenson, G.M. Crawley, S. Galès, D. Weber

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1983Ad05	CZYPA	33,	465	J. Adam, V. Hnatowicz, A. Kugler
1983Ah03	PYLBB	133,	47	S.A. Ahmad, W. Klempt, R. Neugart, E.W. Otten, K. Wendt, C. Ekstrom, and the ISOLDE Collaboration
1983Al06	ZPAAD	310,	247	G.D. Alkhazov, K.A. Mezilev, Yu. N. Novikov, N. Ganbaatar, K. Ya. Gromov, V.G. Kalinnikov, A. Potempa, E. Sieniawski, F. Tarkanyi
1983Al18	PZETA	38,	144	G.D. Alkhazov, A.A. Bykov, V.D. Vitman, Yu. V. Naukov, S. Yu. Orlov, V.K. Tarasov
1983Al20	YAFIA	37,	797	D.V. Aleksandrov, E.A. Ganza, Yu. A. Glukhov, V.I. Dukhanov, I.B. Mazurov
1983Al.A	PrvCom	AHW	Jan	G.D. Alkhazov
1983Al.B	P-Moscow		87	G.D. Alkhazov, A.A. Akhmonen, L. Kh. Batist, Yu. S. Blinnikov, N. Ganbataar, K. Ya. Gromov, Yu. V. Elkin, V.G. Kalinnikov, K.A. Mezilev, F.V. Moroz, Yu. N. Novikov, A.M. Nurmukhamedov, V.N. Panteleev, A.G. Polyakov, A. Potempa, E. Senyavski, V.K. Tarasov, F. Tarkani
1983An15	JPHGB	9,	L245	M.S. Antony, J. Britz, J.B. Buep, A. Papp
1983Ay01	NUPAB	404,	1	J. Äystö, J. Honkanen, W. Trzaska, K. Eskola, K. Vierinen, S. Messelt
1983Ba32	PRVCA	28,	337	P.A. Baisden, D.H. Sisson, S. Niemeyer, B. Hudson, C.L. Bennet, R.A. Naumann
1983Be18	NUPAB	399,	131	H. Behrens, P. Christmas
1983Be42	NUPAB	408,	87	G.J. Beyer, A. De Rújula, R.-D. von Dincklage, H. Å. Gustafsson, P.G. Hansen, P. Hoff, B. Jonson, H.L. Ravn, K. Riisager
1983Be.C	PrvCom	GAu	Sep	M. Bernas, et al
1983Bl16	ZPAAD	314,	199	J. Blomqvist, A. Kerek, B. Fogelberg
1983Bo29	PYLBB	130,	167	P.D. Bond, R.F. Casten, D.D. Warner, D. Horn
1983Bu03	CJPHA	61,	460	D.G. Burke, I. Nowikov, Y.K. Peng, J.C. Yanch
1983Ca04	PRVCA	27,	1310	R.F. Casten, D.D. Warner, G.M. Gowdy, N. Rofail, K.P. Lieb
1983Ca06	PYLBB	123,	25	M.D. Cable, J. Honkanen, R.F. Parry, S.H. Zhou, Z.Y. Zhou, J. Cerny for 26Sii
1983Ch08	ZPAAD	310,	135	A. Chalupka, H. Vonach, E. Hueges, H.J. Scheerer
1983Ch39	PRVCA	28,	2099	C. Chung, W.B. Walters, D.S. Brenner, A. Aprahamian, R.L. Gill, M. Shmid, R.E. Chrien, L.-J. Yuan, A. Wolf, Z. Berant
1983Ch47	NUIMA	215,	397	P. Christmas, S.M. Judge, T.B. Ryves, D. Smith, G. Winkler
1983Ci01	PRVCA	27,	1040	J.A. Cizewski, D.G. Burke, E.R. Flynn, R.E. Brown, J.W. Sunier
1983De03	PRVCA	27,	892	R.A. Dewberry, R.T. Kouzes, R.A. Neumann
1983De04	NUPAB	394,	378	C. Détraz, M. Langevin, M.C. Goffri-Kouassi, D. Guillemaud, M. Epherre, G. Audi, C. Thibault, F. Touchard
1983De17	ZPAAD	312,	209	D.J. Decman, R.K. Sheline, Y. Tanaka, E.T. Jurney
1983De20	NUPAB	401,	397	P. De Gelder, D. De Frenne, K. Heyde, N. Kaffrell, A.M. VanDenBerg, N. Blasi, M.N. Harakah, W. Sterrenburg
1983De23	NUPAB	402,	301	C. Detraz, M. Langevin, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, G. Klotz, C. Miehe, G. Walter, M. Epherre, C. Richard-Serre
1983De28	NUPAB	404,	225	M.G. Delfini, J. Kopecky, J.B.M. de Haas, H.I. Liou, R.E. Chrien, P.M. Endt
1983De29	NUPAB	404,	250	M.G. Delfini, J. Kopecky, R.E. Chrien, H.I. Liou, P.M. Endt
1983De47	YAFIA	38,	1105	A.V. Derbin, L.A. Popeko
1983De51	YAFIA	38,	1377	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, G.A. Dorokhova, see also report SFTI1 Suchumi
1983Do11	ZPAAD	313,	207	Zs. Dombrádi, A. Krasznahorkay, J. Gulyás
1983En03	NSENA	85,	139	T.R. England, W.B. Wilson, R.E. Schenter, F.M. Mann
1983Fe06	ZPAAD	314,	159	P. Fettweiss, J.C. Dehaes
1983Fl05	PRVCA	28,	97	E.R. Flynn, J. van der Plicht, J.B. Wilhelmy, L.G. Mann, G.L. Struble, R.G. Lanier
1983Fl06	PRVCA	28,	575	E.R. Flynn, R.E. Brown, F. Ajzenberg-Selove, J.A. Cizewski
1983Fo.B	PrvCom	AHW	Jun	I. Förster
1983Ga05	JPHGB	9,	309	D. Galeriu
1983Ga18	PRVCA	28,	2423	C.A. Gagliardi, G.T. Garvey, J.R. Wrobel, S.J. Freedman

1983Ga.A	P-Moscow		90	N. Ganbaatar, Ya. Kormitski, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmukhamedov, A. Potempa, E. Senyavski, F. Tarkani
1983Ge08	NUIMA	211,	89	W. Gelletly
1983Gn01	NUPAB	406,	29	B.E. Gnade, R.E. Fink, J.L. Wood
1983Gr01	PYLBB	120,	63	H. Grawe, H. Haas
1983Gr33	HYIND	15/16	65	H. Grawe, H.H. Bertschat, H. Haas
1983Ha06	NUPAB	395,	152	E. Hagberg, J.C. Hardy, H. Schmeing, E.T.H. Clifford, V.T. Koslowsky
1983Ha15	ZPAAD	312,	251	K. Hardt, Y.K. Agarwal, C. Gunther, M. Guttormsen, R. Kroth, J. Recht, F.A. Beck, T. Byrski, J.C. Merdinger, A. Nourredine, D.C. Radford, J.P. Vivien, C. Bourgeois
1983Ha35	IJARA	34,	1241	H.H. Hansen
1983He08	PRVCA	27,	2248	R.G. Helmer, C.W. Reich
1983Hi05	PRVCA	27,	2857	J.C. Hill, H. Yamamoto, A. Wolf
1983Hi08	NUPAB	404,	51	R. Hingmann, H.-G. Clerc, C.-C. Sahm, D. Vermeulen, K.-H. Schmidt, J.G. Kekeller
1983Ho08	NUPAB	398,	130	M.A.C. Hotchkis, L.K. Fifield, J.R. Leigh, T.R. Ophel, G.D. Putt, D.C. Weiser
1983Ho23	PYLBB	133,	146	J. Honkanen, M.D. Cable, R.F. Parry, S.H. Zhou, Z.Y. Zhou, J. Cerny
1983Hu11	ZPAAD	313,	325	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnand
1983Hu12	ZPAAD	313,	337	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnand
1983Hu13	ZPAAD	313,	349	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnand
1983Ia02	CJCHA	61,	694	R. Iafigliola, M. Chatterjee, H. Dautet, J.K.P. Lee
1983Jo04	NUPAB	396,	479c	B. Jonson, J.U. Andersen, G.J. Beyer, G. Charpak, A. De Rújula, B. Elbek, H.A. Gustavson, P.G. Hansen, P. Knudsen, E. Laegsgaard, J. Pedersen, H.L. Ravn
1983Ke.A	P-Florence		B118	S.A. Kerr, F. Hoyler, K. Schreckenbach, H.G. Börner, G.G. Colvin, see also P-Knoxville(1984)416
1983Ko07	ZPAAD	310,	137	P. Komninos, E. Nolte, P. Blasi
1983Ko22	NUPAB	405,	29	V.T. Koslowsky, E. Hagberg, J.C. Hardy, R.E. Azuma, E.T.H. Clifford, H.C. Evans, H. Schmeing, U.J. Schrewe, K.S. Sharma
1983Kr11	ZPAAD	312,	43	K.-L. Kratz, H. Ohm, A. Schroder, H. Gabelmann, W. Ziegert, B. Pfeiffer, G. Jung, E. Monnand, J.A. Pinston, F. Schussler, G.I. Crawford, S.G. Prussin, Z.M. de Oliveira
1983La12	PYLBB	125,	116	M. Langevin, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, M. Epherre
1983La23	PYLBB	130,	251	M. Langevin, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, G. Klotz, C. Miehé, G. Walter, M. Epherre, C. Richard-Serre
1983La.A	VDPEA	18,	1138	P.O. Larsson, T. Batsch, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, D. Schardt, G. Nymann, P. Tidemand-Petersson, and verbal report
1983Le.A	Th.-Helsinki			M. Leino (Report HU-P-D37)
1983Li11	PRVCA	28,	2127	C.J. Lister, B.J. Varley, D.E. Alburger, P.E. Haustein, S.K. Saha, J.W. Olness, H.G. Price, A.D. Irving
1983Mi20	PYLBB	130,	1	T. Minamisono, K. Takeyama, T. Ishigai, H. Takeshima, Y. Nojiri, K. Asahi
1983Mo09	PRVCA	28,	623	S. Mordechai, S. LaFrance, H.T. Fortune
1983Mu12	NUPAB	403,	234	A.C. Mueller, F. Buchinger, W. Klempt, E.W. Otten, R. Neugart, C. Ekstrom, J. Heinemeier
1983Mu14	PYLBB	127,	291	K. Muto, H. Horie
1983Mu19	ZPAAD	313,	247	J. Munzel, B. Pfeiffer, H. Wollnik
1983Ni05	ZPAAD	312,	265	J.M. Nitschke, M.D. Cable, W.-D. Zeitz
1983Ny01	NUPAB	408,	127	K. Nybø, T.F. Thorsteinsen, G. Løvhøiden, E.R. Flynn, J.A. Cizewski, R.K. Sheline, D. Decman, D.G. Burke, G. Sletten, P. Hill, N. Kaffrell, W. Kurcewicz, G. Nymann
1983Og.A	JINR-D7-83-644			Yu. Ts. Oganessian
1983OgZW	JINR-P7-83-644			Yu. Ts. Oganesyan
1983Pa.A	Th.-Berkeley			R.F. Parry DABBB 44,2472(1984)
1983Pu01	NUPAB	399,	190	G.P. Putt, L.K. Field, M.A.C. Hotchkis, T.R. Ophel, D.C. Weisser
1983Ra04	PRVCA	27,	1188	S. Raman, E.T. Jurney, D.A. Outlaw, I.S. Towner
1983Ra25	PRLTA	51,	975	R.S. Raghavan
1983Ra.A	P-Florence		I-1	K.V. Ramaniah, S.B. Reddy, V.V. Rama Murti, K.L. Narasimham
1983Re05	PRVCA	27,	3002	P.L. Reeder, R.A. Warner, R.L. Gill

1983Re10	PRVCA	28,	1740	P.L. Reeder, R.A. Warner
1983Ro08	NUPAB	401,	41	M. Rotbard, M. Vergnes, J. Vernotte, G. Berrier-Ronsin, J. Kalifa, R. Tamisier
1983Ru06	NUPAB	399,	163	E. Runte, W.-D. Schmidt-Ott, P. Tidemand-Petersson, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, N. Kaffrell, P. Peuser, K. Rykaczewski, M. Bernas, P. Dessagne, M. Langevin
1983Ru08	NUPAB	407,	60	J.F.G.A. Ruyl, P.M. Endt
1983Sc18	ZPAAD	310,	295	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma
1983Sc23	PRVCA	28,	435	N. Schulz, A. Chevallier, J. Chevallier, S. Khazrouni, L. Kraus, I. Linck
1983Sc24	ZPAAD	312,	21	J.R.H. Schneider, S. Hofmann, F.P. Heßberger, G. Münzenberg, W. Reisdorf, P. Armbruster
1983Sc28	ZPAAD	313,	137	U.J. Schrewe, W.D. Schmidt-Ott
1983Se17	IANFA	47,	885	V.A. Sergienko, A.V. Borontsovskii, M.A. Nain
1983Sh06	ZPAAD	311,	71	K. Shizuma, H. Lawin, K. Sistemich
1983Sh07	ZPAAD	311,	113	M. Shmid, G. Engler
1983Sh31	PRVCA	28,	1712	B. Sherrill, K. Beard, W. Benenson, B.A. Brown, E. Kashy, W.E. Ormand, H. Nann, J.J. Kehayias, A.D. Bacher, T.E. Ward
1983St15	NUPAB	411,	248	Ch. Stenzel, H. Grawe, H. Haas, H.-E. Mahnke, K.H. Maier
1983Ta.A	BAPSA	28,	658	R.W. Tarara, C.P. Browne, see BAPSA 28,968
1983Ti02	NUPAB	403,	13	T.A.A. Tielens, J. Kopecky, K. Abrahams, P.M. Endt
1983To01	PRVCA	27,	889	K.S. Toth
1983To20	NUPAB	411,	209	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, H.G. Börner, Ch. Hofmeyr, G. Barreau, R. Brissot, Ch. Monkemeyer, U. Kaup
1983Ts01	PRVCA	27,	2397	J.S. Tsai, T.J. Kennett, W.V. Prestwich
1983Ve06	IANFA	47,	834	G.V. Veselov, N. Ganbaatar, Ya. Kormitski, K.A. Mezilev, Yu. N. Novikov, A. Potempa, E. Senyavski, V.A. Sergienko, G. Tarkani
1983Ve.A	P-Moscow		99	G.V. Veselov, N. Ganbaatar, K.A. Mezilev, Yu. N. Novikov, A. Potempa, V.A. Sergienko, F. Tarkanyi, A.G. Teterin
1983Vi.A	P-Moscow		575	V.D. Vitman, F.V. Moroz, S. Yu. Orlov, V.K. Tarasov
1983Vo10	ZPAAD	313,	167	E. Voth, W.D. Schmidt-Ott, H. Behrens
1983Vo.A	PrvCom	AHW	Jul	H. Vonach
1983Wa26	IJARA	34,	1191	K.F. Walz, K. Debertin, H. Schrader
1983Wa27	NUPAB	411,	81	F.B. Waanders, J.P.L. Reinecke, H.N. Jacobs, J.J.A. Smit, M.A. Meyer, P.M. Endt
1983We07	ZPAAD	313,	173	B. Weiss, C.F. Liang, P. Paris, A. Peghaire, A. Gizon, and PrvCom GAu Oct 1983
1983Wi14	NUPAB	411,	151	C.A. Wiedner, R. Haupt, W. Saathoff, J. Haas, R. Gyufko, K.R. Cordell, S.T. Thornton, R.A. Cecil, R.L. Parks
1983Wi.A	PrvCom	AHW	Jan	C.A. Wiedner, et al
1983Wi.B	PrvCom	AHW	Jun	C.-A. Wiedner, et al
1983Wo01	PRVCA	27,	27	C.J. Woodward, R.E. Tribble, D.M. Tanner
1983Wo04	PRVCA	27,	1745	J.M. Wouters, H.M. Thierens, J. Äystö, M.D. Cable, P.E. Haustein, R.F. Parry, J. Cerny
1983Wo10	PRLTA	51,	873	F.K. Wohn, J.C. Hill, R.F. Petry, H. Dejbakhsh, Z. Berant, R.L. Gill
1983Zu01	NUPAB	393,	15	J.D. Zumbro, R.W. Tarara

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1984Ah02	NUPAB	413,	423	I. Ahmad, J.L. Lerner
1984Al08	YAFIA	39,	513	D.V. Aleksandrov, E.A. Ganza, Yu. A. Glukhov, B.G. Novatskiĭ, A.A. Ogloblin, D.N. Stepanov
1984Al36	IANFA	48,	834	G.D. Alkhazov, N. Ganbaatar, K. Ya. Gromov, V.K. Kalinnikov, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmhukhamedov, A. Potempa, F. Tarkani
1984An03	NCIAA	79,	100	M.S. Antony, J. Britz, J.B. Bueb, A. Pape
1984An17	NCIAA	81,	414	M.S. Antony, J. Britz, J. Bueb, A. Pape
1984Ar12	NUPAB	420,	193	Y. Arai, E. Tanaka, H. Miyatake, M. Yoshii, T. Ishimatsu, T. Shinozuka, M. Fujioka
1984Ay01	PYLBB	138,	369	J. Äystö, J. Arje, V. Koponen, P. Taskinen, H. Hyvonen, A. Hautojarvi, K. Vierinen

1984Ba12	PRVCA	29,	1530	P.H. Barker, R.E. White
1984Ba.B	P-Darmstadt		55	P.H. Barker, R.E. White, D.M.J. Lovelock, R.M. Smythe
1984Be10	NUPAB	413,	363	M. Bernas, Ph. Dessagne, M. Langevin, J. Payet, F. Pougheon, P. Roussel, W.-D. Schmidt-Ott, P. Tidemand-Petersson, M. Girod
1984Be.A	PrvCom		84De33	M. Bernas, Ph. Dessagne, M. Langevin, J. Payet, F. Pougheon, P. Roussel, I. Turkevicz, M. Girod confirmed PrvCom GAu 1988
1984Bh02	NCIAA	79,	471	P. Bhattacharya
1984Bl.A	P-Darmstadt		134	F. Blönnigen, G. Bewersdorf, C. Geisse, W. Lippert, B. Pfeiffer, U. Stöhlker, H. Wollnik
1984Bo.C	P-Knoxville		382	M. Bogdanovic, H. Seyfarth, H.R. Börner, S. Kerr, F. Hoyler, K. Schreckenbach, G.G. Colvin
1984Br.A	AnRpt IPN		13	F. Bragança Gil, C. Bourgeois, P. Kilcher, M.G. Porquet, B. Roussière, J. Sauvage, ISOCELE
1984Bu09	NUPAB	415,	93	L. Buchmann, M. Hilgemeier, A. Krauss, A. Redder, C. Rolfs, H.P. Trautvetter, T.R. Donoghue
1984Bu14	PRVCA	29,	2339	D.G. Burke
1984Bu23	PRVCA	30,	742	B.L. Burks, R.E. Anderson, Y. Aoki, B.C. Karp, E.J. Ludwig, W.J. Thompson, R.L. Varner
1984Ca29	PRVCA	30,	1276	M.D. Cable, J. Honkanen, E.C. Schloemer, M. Ahmed, J.E. Reiff, Z.Y. Zhou, J. Cerny
1984Ca32	PRVCA	30,	1671	F. Calaprice, G.T. Ewan, R.-D. von Dincklage, B. Jonson, O.C. Jonsson, H.L. Ravn
1984Ch02	PRVCA	29,	592	C. Chung, W.B. Walters, N.K. Aras, F.K. Wohn, D.S. Brenner, Y.Y. Chu, M. Shmid, R.L. Gill, R.E. Chrien, L.-J. Yuan
1984Co19	ZPAAD	319,	107	M.D. Cohler, D.L. Watson, R. Wadsworth, S.M. Lane, M.J. Smithson, R.E. Brown, J.-C. Peng, N. Stein, J.W. Sunier, D.M. Drake
1984Co.A	P-Darmstadt		272	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, and PrvCom AHW July 1984
1984Cr01	JPGPE	10,	1133	D.A. Craig, H.W. Taylor
1984Da.A	P-Darmstadt		257	H. Dautet, N. Campeau, J.K.P. Lee, C. Bourgeois, B. Roussière, A. Houdayer
1984De15	NUPAB	419,	101	J.B.M. De Hass, K. Abrahams, T.A.A. Tielens, H. Postma, W.J. Huiskamp
1984De16	NUPAB	419,	165	D.J. Decman, H. Grawe, H. Kluge, K.H. Maier, A. Maj, M. Menningen, N. Roy, W. Wiegner
1984De33	NUPAB	426,	399	Ph. Dessagne, M. Bernas, M. Langevin, G.C. Morrison, J. Payet, F. Pougheon, P. Roussel
1984El05	PYLBB	141,	306	R.J. Ellis, K.S. Sharma, R.C. Barber, S.R. Loewen, H.E. Duckworth
1984Fa04	PYLBB	137,	23	T. Faestermann, A. Gillitzer, K. Hartel, P. Kienle, E. Nolte, and AMCO-7,p.177,184
1984Fi02	NUPAB	417,	534	L.K. Fifield, M.A.C. Hotchkis, P.V. Drumm, T.R. Ophel, G.D. Putt, D.C. Weisser
1984Fi05	PRVCA	29,	2118	B.W. Filippone, C.N. Davids, R.C. Pardo, J. Äystö
1984Fi.A	BAPSA	29,	1056	S.A. Fisher, R.L. Hershberger, F. Gabbard
1984Fo19	NUPAB	429,	205	B. Fogelberg, J. Blomqvist
1984Fo.A	P-Knoxville		427	I. Förster, H.G. Börner, P. von Brentano, G.G. Colvin, A.M.I. Haque, S.A. Kerr, R. Rascher, R. Richter, K. Schreckenbach
1984Ga.B	BAPSA	29,	1041	Z. Gacsi, Ya. Guyash, T. Kibedi, E. Koltai, A. Krasnakhorkai, T. Fenesh
1984Gi09	PRVCA	30,	958	R. Gilman, H.T. Fortune, L.C. Bland, R.R. Kiziah, C.F. Moore, P.A. Seidl, C.L. Morris, W.B. Cottingame
1984Gu19	NUPAB	426,	37	D. Guillemaud-Mueller, C. Détraz, M. Langevin, F. Naulin, M. de Saint Simon, C. Thibault, F. Touchard, M. Epherre
1984Ha20	PYLBB	138,	260	B.J. Hall, R.J. Ellis, G.R. Dyck, C.A. Lander, R. Beach, K.S. Sharma, R.C. Barber, H.E. Duckworth
1984Ha27	NUPAB	420,	351	R. Hanninen
1984Ha31	ZPAAD	317,	193	R. Haupt, C.-A. Wiedner, G.J. Wagner, K. Wannebo, T.S. Bhatia, H. Hafner, R. Maschuw, W. Saathoff, S.T. Thornton
1984Ha.A	P-Darmstadt		89	W. Hampel, R. Schlotz
1984Ha.B	P-Darmstadt		244	W. Habenicht, L. Spanier, G. Korschinek, H. Ernst, E. Nolte
1984He.A	Th.-Montreal			D.W. Hetherington
1984Hi03	PRVCA	29,	1078	J.C. Hill, F.K. Wohn, Z. Berant, R.L. Gill, R.E. Chrien, C. Chung, A. Aprahamian

1984Ho02	PRVCA	29,	618	R.W. Hoff, T. von Egidy, R.W. Lougheed, D.H. White, H.G. Börner, K. Schreckenbach, G. Barreau, D.D. Warner
1984Ho.A	P-Darmstadt		184	S. Hofmann, Y.K. Agarwal, P. Armbruster, F.P. Heßberger, P.O. Larsson, G. Münzenberg, K. Poppensieker, W. Reisdorf, J.R.H. Schneider, H.J. Schött
1984Ho.B	Th.-Canberra			M.A.C. Hotchkis
1984Ia.A	P-Darmstadt		141	R. Iafigliola, H. Dautet, S.W. Xu, J.K.P. Lee, R. Chrien, R. Gill, M. Shmid
1984Is09	KURAA	17,	132	T. Ishii, H. Yamamoto, M. Yoshida, K. Kawade, H. Miyade, Y. Iwata, T. Katoh, J.-Z. Ruan, Y. Fumakoshi, Y. Kawase, K. Okano
1984Ka07	PYLBB	137,	150	I. Katayama, S. Morinobu, M. Fujiwara, Y. Fujita, T. Yamazaki, H. Ikegami
1984Ka22	PRVCA	30,	807	S. Kahane, S. Raman, G.G. Slaughter, C. Coceva, M. Stefanon
1984Ka.A	P-Alma Ata		128	V.G. Kalinnikov, V.V. Kuznetsov, V.I. Stegailov, see also P-Yurmala(1987)p119
1984Ke11	CJPHA	62,	861	T.J. Kennett, W.V. Prestwich, J.S. Tai
1984Ke15	PRVCA	30,	1840	T.J. Kennett, M.A. Islam, W.V. Prestwich
1984Ko10	PRVCA	29,	2343	R.T. Kouzes, M.M. Lowry, C.L. Bennett, and PrvCom AHW May 1988
1984Ko29	NUPAB	427,	413	J. Kopecky, M.G. Delfini, R.E. Chrien
1984Kr05	NUPAB	417,	231	B. Krusche, K.P. Lieb, L. Ziegler, H. Daniel, T. von Egidy, R. Rascher, H.G. Börner, G. Barreau, D.D. Warner
1984Kr.B	P-Darmstadt		127	K.-L. Kratz, A. Schröder, H. Ohm, H. Gabelmann, W. Ziegert, B. Steinmüller, B. Pfeiffer
1984La02	JPHGB	10,	247	V. Lakshminarayana, T.T. Neo, S.M. Tang, A. Rajaratnam
1984La03	NUPAB	414,	151	M. Langevin, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, M. Epherre
1984La06	NUPAB	413,	236	R.G. Lanier, R.K. Sheline, G.L. Struble, L.G. Mann, J.A. Cizewski, and erratum NUPAB 427,650
1984La.A	P-Darmstadt		652	E. Laegsgaard, J.U. Andersen, G.J. Beyer, A. De Rújula, P.G. Hansen, B. Jonson, H.L. Ravn
1984Li05	NUPAB	417,	365	Y.-F. Liu, K.J. Moody, D. Lee, Y. Morita, G.T. Seaborg, H.R. von Gunten
1984Li24	PZETA	39,	529	É.T. Lippmaa, R. Ĭ. Pikver, É.R. Suurmaa, Ya. O. Past, Yu. Kh. Puskar, I.A. Koppel', A.A. Tammik
1984Li.A	AnRpt Berkeley			W.X. Li, K.E. Gregorich, R.B. Welch, W. Kot, D. Lee, G.T. Seaborg
1984Lu02	ZPAAD	315,	295	E. Lund, B. Fogelberg
1984Ma49	ZPAAD	319,	287	W.A. Mayer, W. Henning, R. Holzwarth, H.J. Körner, G. Korschinek, W.U. Mayer, G. Rosner, H.J. Scheerer
1984Mi.A	AnRpt Munich		40	C. Mittag, H. Puchta, F. Riess, M. Stallknecht
1984Mo22	NUPAB	427,	317	D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.D. Kern, R.E. Tribble, J.P. Sullivan
1984Mu07	ZPAAD	315,	145	G. Münzenberg, W. Reisdorf, S. Hofmann, Y.K. Agarwal, F.P. Heßberger, K. Poppensieker, J.R.H. Schneider, W.F.W. Schneider, K.-H. Schmidt, H.J. Schött, P. Armbruster, C.-C. Sahm, D. Vermeulen
1984Ni03	ZPAAD	316,	249	J.M. Nitschke, P.A. Wilmarth, P.K. Lemmertz, W.-D. Zeitz, J.A. Honkanen
1984Ni16	PZETA	39,	441	E.N. Nikolaev, Yu. I. Neronov, M.V. Gorshkov, V.L. Talroze
1984No05	NUPAB	423,	197	G.J.L. Nooren, C. van der Leun
1984Og02	ZPAAD	319,	215	Yu. Ts. Oganessian, A.G. Demin, M. Hussonnois, S.P. Tretyakova, Yu. P. Kharitonov, V.K. Utyonkov, I.V. Shirokovsky, O. Constantinescu, H. Bruchertseifer, Yu. S. Korotkin
1984Ox01	ZPAAD	316,	97	K. Oxorn, S.K. Mark
1984Pi03	NUPAB	414,	219	Š. Piskoř, P. Franc, J. Kremenek, W. Schäferlingová
1984Po09	RAACA	35,	23	P. Polak, L. Lindner
1984Ra09	PRVCA	30,	26	S. Raman, W. Ratynski, E.T. Jurney, M.E. Bunker, J.W. Starner
1984Ro.A	BAPSA	29,	1041	G. Rotbard, M. Vergnes, J. Vernotte, G. Berrier Ronsin, S. Gales, G.M. Crawley
1984Ru06	NUPAB	419,	439	J.F.A.G. Ruyl, J.B.M. de Haas, P.M. Endt, L. Zybert
1984Ru.A	P-Darmstadt		196	B. Rubio, R. Julin, A. Ercan, K. Zuber, P. Kleinheinz, J.L. Tain, G.P.A. Berg, G. Hlawatsch, I. Katayama, J. Meissburger, D. Paul, J.G. Roemer, J. Blomqvist
1984Ry02	NUIMA	223,	325	A. Rytz, R.A.P. Wiltshire
1984Sc06	ZPAAD	315,	49	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma
1984Sc13	ZPAAD	316,	19	K.-H. Schmidt, C.-C. Sahm, K. Pielenz, H.-G. Clerc
1984Sc18	ZPAAD	317,	305	U.J. Schrewe, E. Voth, U. Bosch, W.-D. Schmidt-Ott, H. Behrens

1984Sc25	JPHGB	10,	1201	N. Schulz, S. Khazrouni, A. Chevallier, J. Chevallier, L. Kraus, I. Linck, D.C. Radford, J. Dudek, W. Nazarewicz
1984Sc.A	GSI-84-3			J. Schneider Thesis
1984Sc.B	P-Darmstadt		203	U.J. Schrewe, P. Tidemand-Petersson, H. Behrens, H. Dornhöfer, R. Michaelsen, E. Runte, W.-D. Schmidt-Ott, E. Voth
1984Sc.C	P-Darmstadt		229	D. Schardt, P.O. Larsson, R. Kirchner, O. Klepper, V.T. Koslowsky, E. Roeckl, K. Rykaczewski, P. Kleinheinz, K. Zuber
1984ScZQ	GSI-84-3			J. Schneider
1984Sh28	PRVCA	30,	2111	T. Shinozuka, M. Fujioka, H. Miyatake, M. Yoshii, H. Hama, T. Kamiya
1984Sh31	AENGA	56,	245	V.M. Shatinsky
1984Th08	PRVCA	30,	1442	C.E. Thorn, J.W. Olness, E.K. Warburton, S. Raman
1984To09	PRLTA	53,	1623	K.S. Toth, Y.A. Ellis-Akovali, C.R. Bingham, D.M. Moltz, D.C. Sousa, H.K. Carter, R.L. Mlekodaj, E.H. Spejewski
1984To11	NUPAB	430,	269	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, S. Brant, V. Paar, D. Vretenar, H.G. Börner, G. Barreau, H. Faust, Ch. Hofmeyr, K. Schreckenbach, R.A. Meyer
1984Vo01	JPHGB	10,	221	T. von Egidy, H. Daniel, P. Hungerford, H.H. Schmidt, K.P. Lieb, B. Krusche, S.A. Kerr, G. Barreau, H.G. Börner, R. Brissot, C. Hofmeyr, R. Rascher
1984Vo07	PRVCA	29,	1243	T. von Egidy, R.W. Hoff, R.W. Lougheed, D.H. White, H.G. Börner, K. Schreckenbach, D.D. Warner, G. Barreau, E. Hungerford
1984Ya.A	Th.-Berkeley			S. Yashita

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1985Ad.A	P-Leningrad		93	Dz. Adam, T. Dzelev, D. Zakoutski, B. Kratsik, I. Penev
1985Af.A	P-Leningrad		1083	V.P. Afanasiev, Yu. S. Blinnikov, N. Ganbaatar, V. Dzeleznyakov, V.G. Kalinikov, Ya. Kormitski, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmudzamedov, V.N. Panteleev, A.G. Polyakov, A. Potempa, F. Tarkani
1985Ah03	PYLBB	157,	333	S. Ahmad, C. Amsler, R. Armenteros, E.G. Auld, D. Axen, D. Bailey, S. Barlag, G.A. Beer, J.C. Bizot, M. Caria, M. Comyn, W. Dahme, B. Delcourt, M. Doser, K.D. Duch, K.L. Erdman, F. Feld-Dahme, U. Gastaldi, M. Heel, B. Howard, R. Howard, J. Jeanjean, H. Kalinowsky, F. Kayser, E. Klempt, R. Landua, G. Marshall, H. Nguyen, N. Prevot, L. Robertson, C. Sabev, U. Schaefer, R. Schneider, O. Schreiber, U. Straumann, P. Truoel, B. White, W.R. Wodrich, M. Ziegler, and the ASTERIX Collaboration
1985Ah.A	P-Bombay			S.A. Ahmad, et al, and 89Ot.1
1985Al02	PRVCA	31,	360	T. Altzitzoglou, R.T. Kouzes, F.W. Loeser, M.M. Lowry, R.A. Naumann, R.E. Chrien, and erratum PRVCA 32,665
1985Al08	NUPAB	438,	482	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, V.E. Starodubsky, S.Y. Orlov, V.N. Panteleyev, A.G. Polyakov, V.K. Tarasov
1985Al11	PRLTA	55,	799	T. Altzitzoglou, F. Calaprice, M. Dewey, M. Lowry, L. Piilonen, J. Brorson, S. Hagen, F. Loeser
1985Al13	PYLBB	157,	350	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, S. Yu. Orlov, V.K. Tarasov
1985An17	NCIAA	88,	265	M.S. Antony, J. Britz, J.B. Bueb, V.B. Ndocko-Ndongué
1985Ap01	PZETA	42,	233	A.M. Apalikov, S.D. Boris, A.I. Golutvin, L.P. Laptin, V.A. Lyubimov, N.F. Myasoedov, V.V. Nagovitsyn, E.G. Novikov, V.Z. Nozik, V.A. Soloshchenko, I.N. Tikhomirov, E.F. Tretyakov
1985Ar19	PRVCA	32,	1855	R. Aryaeinejad, P.M. Walker, R.B. Firestone, Wm. C. McHarris
1985Au07	ZPAAD	321,	533	G. Audi, R.L. Graham, J.S. Geiger
1985Ay01	PRLTA	55,	1384	J. Äystö, D.M. Moltz, X.J. Xu, J.E. Reiff, J. Cerny
1985Ba57	ZPAAD	322,	457	A. Baas-May, J.V. Kratz, N. Trautmann
1985Be17	ZPAAD	320,	693	F.J. Bergmeister, K.P. Lieb, K. Pampus, M. Uhrmacher
1985Be20	PYLBB	156,	159	Z. Berant, R.L. Gill, M.H. Rafailovich, R.E. Chrien, J.C. Hill, F.K. Wohn, R.F. Petry, C. Chung, G. Peaslee, M. Mohsen
1985Be24	ZPAAD	321,	435	M. Bernas, M. Langevin, G. Parrot, E. Pougheon, E. Quiniou, P. Roussel, Ph. Dessagne, W.D. Schmidt-Ott
1985Be50	PYLBB	162,	87	W. Benenson, K. Beard, C. Bloch, B. Sherrill, B.A. Brown, A.D. Panagiotou, J. van der Plicht, J.S. Winsfield, C.E. Thorn

1985Bj01	NUPAB	443,	283	T. Bjornstad, M.J.G. Borge, P. Dessagne, R.-D. von Dincklage, G.T. Ewan, P.G. Hansen, A. Huck, B. Jonson, G. Klotz, A. Knipper, P.O. Larsson, G. Nyman, H.L. Ravn, C. Richard-Serre, K. Riisager, D. Schardt, G. Walter
1985Bo34	PYLBB	159,	217	S. Boris, A. Golutvin, L. Laptin, V. Lubimov, V. Nagovizin, E. Novikov, V. Nozik, V. Soloshenko, I. Tihomirov, E. Tretjakov
1985Bo46	PRLTA	55,	2269	J.A. Bounds, C.R. Bingham, P. Juncar, H.K. Carter, G.A. Leander, R.L. Mlekodaj, E.H. Spejewski, W.M. Fairbank,Jr.
1985Bo49	PYLBB	164,	22	U. Bosch, W.-D. Schmidt-Ott, P. Tidemand-Petersson, E. Runte, W. Hillebrandt, M. Lechle, F.-K. Thielemann, R. Kirchner, O. Klepper, E. Roeckl, K. Rykaczewski, D. Schardt, N. Kaffrell, M. Bernas, Ph. Dessagne, W. Kurcewicz
1985Bo58	NUIMA	228,	387	V.R. Bom, P.C. Coops
1985Br03	PYLBB	150,	75	M. Brauner, D. Rychel, R. Gyufko, C.A. Wiedner, S.T. Thornton
1985Br08	NUIMA	234,	218	M. Brugger, N. Hildebrand, T. Karlewski, N. Trautmann, A.K. Mazumdar, G. Herrmann
1985Bu07	PRVCA	31,	1490	T.W. Burrows, J.W. Olness, D.E. Alburger
1985Ch16	PRVCA	31,	2199	C. Chung, W.B. Walters, D.S. Brenner, R.L. Gill, M. Shmid, Y.Y. Chu, R.E. Chrien, L.-J. Yuan, F.K. Wohn, R.A. Meyer
1985Co06	PRLTA	54,	1783	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, J.L. Wood
1985Co.B	PrvCom	AHW	Dec	G.G. Colvin
1985Da15	PRVCA	32,	713	N.J. Davis, J.A. Kuehner, A.A. Pilt, A.J. Trudel, M.C. Vetterli, C. Bamber, E.K. Warburton, J.W. Olness, S. Raman
1985De14	NUPAB	436,	311	D.J. Decman, H. Grawe, H. Kluge, K.H. Maier, A. Maj, N. Roy, Y.K. Agarwal, K.P. Blume, M. Guttormsen, H. Hubel, J. Recht
1985De40	CJPHA	63,	966	V.P. Derenchuk, R.J. Ellis, K.S. Sharma, R.C. Barber, H.E. Duckworth
1985Dr06	NUPAB	441,	95	P.V. Drumm, L.K. Fifield, R.A. Bark, M.A.C. Hotchkis, C.L. Woods, P. Maier-Komor
1985Dy04	PYLBB	157,	139	G.R. Dyck, R.J. Ellis, K.S. Sharma, C.A. Lander, M.H. Sidky, R.C. Barber, H.E. Duckworth
1985El01	NUPAB	435,	34	R.J. Ellis, R.C. Barber, G.R. Dyck, B.J. Hall, K.S. Sharma, C.A. Lander, H.E. Duckworth, and PrvCom AHW October 1991
1985Ev01	PYLBB	153,	25	P.D. Eversheim, F. Hinterberger, S. Kuhn, P. Von Rossen, J. Romer, R.P. Trelle
1985Fi03	NUPAB	440,	531	L.K. Fifield, C.L. Woods, R.A. Bark, P.V. Drumm, M.A.C. Hotchkis
1985Fi08	NUPAB	437,	141	L.K. Fifield, P.V. Drumm, M.A.C. Hotchkis, T.R. Ophel, C.L. Woods
1985Fr01	NUPAB	433,	351	R. Franke, H. Kockskamper, B. Steinheuer, K. Wingender, W. von Witsch
1985Fu03	NUPAB	435,	7	Y. Fujita, S. Morinobu, I. Katayama, M. Fujiwara, T. Yamazaki, H. Ikegami, H. Taketani, M. Adachi, T. Matsuzaki, M. Matoba, N. Koori
1985Ge02	JPHGB	11,	1055	W. Gelletly, J.R. Larysz, H.G. Börner, R.F. Casten, W.F. Davidson, W. Mampe, K. Schreckenbach, D.D. Warner
1985Gy01	PYLBB	150,	335	R. Gyufko, D. Rychel, M. Steck, C.-A. Wiedner, R.L. Parks, S.T. Thornton
1985Ha12	PRVCA	31,	1594	F.X. Hartmann, R.A. Naumann
1985He06	ZPAAD	321,	317	F.P. Heßberger, G. Münzenberg, S. Hofmann, W. Reisdorf, K.-H. Schmidt, H.J. Schött, P. Armbruster, R. Hingmann, B. Thuma, D. Vermeulen
1985He22	ZPAAD	322,	557	F.P. Heßberger, G. Münzenberg, S. Hofmann, Y.K. Agarwal, K. Poppensieker, W. Reisdorf, K.-H. Schmidt, J.R.H. Schneider, W.F.W. Schneider, H.J. Schött, P. Armbruster, B. Thuma, C.-C. Sahm, D. Vermeulen
1985He.A	GSI-85-11			F.P. Heßberger
1985Hi.A	AnRpt GSI		88	R. Hingmann, W. Kuehn, V. Metag, R. Novotny, A. Ruckelshausen, H. Stroeher, F.P. Heßberger, S. Hofmann, G. Münzenberg, W. Reisdorf
1985Ho21	PYLBB	160,	375	E. Hourani, M. Hussonnois, L. Stab, L. Brillard, S. Gales, J.P. Schapira
1985Ho.A	PrvCom	NDG	876	C. Hofmeyr, C. Franklyn, G. Barreau, H.G. Börner, R. Brissot, H. Faust, K. Schreckenbach
1985HoZS	AnRpt JYFL		42	J. Honkanen, P. Taskinen, H. Hyvonen, V. Koponen, J. Aysto, K. Eskola, K. Vierinen
1985Hu03	PRVCA	31,	2226	A. Huck, G. Klotz, A. Knipper, C. Miehé, C. Richard-Serre, G. Walter, A. Poves, H.L. Ravn, G. Marguier
1985IaZZ	Th.-McGill			R. Iafigliola
1985Ke08	ZPAAD	322,	121	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1985Ke11	PRVCA	32,	2148	T.J. Kennett, W.V. Prestwich, J.S. Tsai

1985Ke.A	PrvCom	AHW	Jan	T.J. Kennett
1985Kh04	PYLBB	156,	155	S. Khan, Th. Kihm, K.T. Knöpfle, G. Mairle, V. Bechtold, L. Friedrich
1985Ko47	NIMBE	12,	325	P.J.J. Kok, K. Abrahams, H. Postma, W.J. Huiskamp
1985Kr06	NUPAB	439,	219	B. Krusche, Ch. Winter, K.P. Lieb, P. Hungerford, H.H. Schmidt, T. von Egidy, H.J. Scheerer, S.A. Kerr, H.G. Börner
1985La17	IJARA	36,	443	R.M. Lambrecht, S. Mirzadeh
1985Le10	PRVCA	32,	277	R.S. Lee, J.H. Hamilton, A.V. Ramayya, A.P. de Lima, D.L. Sastry, K.S.R. Sastry, E.H. Spejewski, R.L. Mlekodaj, H.K. Carter, W.-D. Schmidt-Ott, J. Lin, C.R. Bingham, L.L. Riedinger, E.F. Zganjar, J.L. Weil, B.D. Kern, A.C. Xenoulis, R.W. Fink, Sun Xi-jun, Guo Jun-sheng, Cho Chi-cheng, Pan Zong-you, Guo Ying-xian
1985Li02	PRLTA	54,	285	E. Lippmaa, R. Pikver, E. Suurmaa, J. Past, J. Puskar, I. Koppel, A. Tammik
1985Ma54	JPHGB	11,	1231	T.D. MacMahon, G.R. Massoumi, T. Mitsunari, M. Thein, O. Chalhoub, D. Breitig, H.A. Baader, U. Heim, H.R. Koch, L. Wimmwer, H. Seyfarth, K. Schreckenbach, G.B. Orr, G.J. Smith, W.R. Kane, I.A. Kondurov, P.A. Sushkov, Yu. E. Loginov, D. Rabenstein, M. Bogdanovic
1985Ma59	PRVCA	32,	2215	J. Markey, F. Boehm
1985Me09	NUPAB	439,	510	R.A. Meyer, E. Monnand, J.A. Pinston, F. Schussler, I. Ragnarsson, B. Pfeiffer, H. Lawin, G. Lhersonneau, T. Seo, K. Sistemich
1985Mu11	ZPAAD	322,	227	G. Münzenberg, S. Hofmann, H. Folger, F.P. Heßberger, J. Keller, K. Poppensieker, B. Quint, W. Reisdorf, K.-H. Schmidt, H.J. Schött, P. Armbruster, M.E. Leino, R. Hingmann
1985No03	PRVCA	31,	1937	E.B. Norman
1985Oh06	PYLBB	160,	322	T. Ohi, M. Nakajima, H. Tamura, T. Matsuzaki, T. Yamazaki, O. Hashimoto, R.S. Hayano
1985Pi03	PRVCA	31,	1032	A.A. Pilt, J.A. Cameron, R.B. Schubank, E.E. Habib
1985Pi05	PRVCA	31,	2087	W.F. Piel, Jr., T. Chapuran, K. Dybdal, D.B. Fossan, T. Lonnroth, D. Horn, E.K. Warburton
1985Po06	PYLBB	154,	263	A.R. Poletti, G.D. Dracoulis, A.P. Byrne, A.E. Stuchbery, S.J. Poletti, J. Gerl, P.M. Lewis
1985Re01	PRVCA	31,	1029	P.L. Reeder, R.A. Warner, R.M. Liebsch, R.L. Gill, A. Piotrowski
1985Re02	NUPAB	435,	333	J.P.L. Reinecke, F.B. Waanders, P. Oberholzer, P.J.C. Janse van Rensburg, J.A. Cilliers, J.J.A. Smit, M.A. Meyer, P.M. Endt
1985Re.A	P-Chicago		171	P.L. Reeder, et al, and 93Ru01
1985Ry02	ZPAAD	322,	263	K. Rykaczewski, I.S. Grant, R. Kirchner, O. Klepper, V.T. Koslowsky, P.O. Larsson, E. Nolte, G. Nyman, E. Roeckl, D. Schardt, L. Spanier, P. Tidemand-Petersson, E.F. Zganjar, J. Żylicz
1985Sa15	ZPAAD	321,	255	M. Samri, J.G. Costa, G. Klotz, D. Magnac, R. Selz, J.P. Zirnfeld
1985Sc09	ZPAAD	320,	595	U.J. Schrewe, H. Dornhöfer, E. Runte, W.D. Schmidt-Ott, T. Tidemand-Petersson, R. Michaelsen
1985Sc16	NUIMA	236,	225	H. Schölermann, B.R.L. Siebert
1985Sh03	PRVCA	31,	875	B. Sherrill, K. Beard, W. Benenson, C. Bloch, B.A. Brown, E. Kashy, J.A. Nolen,Jr., A.D. Panagiotou, J. van der Plicht, J.S. Winfield, see P-Darmstadt p. 82
1985Si07	PRVCA	31,	1891	J.J. Simpson, W.R. Dixon, R.S. Storey
1985Si25	JPSLB	46,	L1095	C. Signarbieux, G. Simon, J. Trochon, F. Brisard and PrvCom GAu Jan 1988
1985So03	PRVCA	31,	1801	L.P. Somerville, M.J. Nurmia, J.M. Nitschke, A. Ghiorso, E.K. Hulet, R.W. Lougheed
1985St02	PRVCA	32,	582	R.E. Stone, C.E. Bingham, L.L. Riedinger, R.W. Lide, H.K. Carter, R.L. Mlekosdaj, E.H. Spejewski
1985St16	ZPAAD	322,	83	[190Pb]C. Stenzel, H. Grawe, H. Haas, H.-E. Mahnke, K.H. Maier
1985Ta01	IJARA	36,	89	H.W. Taylor, D.A. Craig, B. Singh, D.A. Viggars
1985Ta.A	P-Swansea		343	V.L. Talrose, E.N. Nikolaev
1985Ti01	ZPAAD	320,	405	P. Tidemand-Petersson, E. Runte, W.-D. Schmidt-Ott, U.J. Schrewe
1985Ti02	NUPAB	437,	342	P. Tidemand-Petersson, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, A. Płochocki, J. Żylicz
1985To10	NUPAB	439,	427	Y. Tokunaga, H. Seyfarth, R.A. Meyer, O.W.B. Schult, H.G. Börner, G. Barreau, H.R. Faust, K. Schreckenbach, S. Brant, V. Paar, M. Vouk, D. Vretenar
1985Ts01	ZPAAD	322,	295	J.S. Tsai, T.J. Kennett, W.V. Prestwich

1985Ts02	ZPAAD	322,	597	J.S. Tsai, W.V. Prestwich, T.J. Kennett
1985Uh01	NIMBE	9,	234	M. Uhrmacher, K. Pampus, F.J. Bergmeister, D. Purschke, K.P. Lieb
1985Va03	PYLBB	154,	354	P. Van Duppen, E. Coenen, K. Deneffe, M. Huyse, J.L. Wood
1985Va.A	JINR-R6-85-22			E.V. Vasileva, et al
1985Vo03	PRVCA	31,	1510	R.-D. von Dincklage, J. Gerl, H.L. Ravn, G.J. Beyer
1985Vo09	ZPAAD	321,	375	R.-D. von Dincklage, H.J. Hay
1985Vo13	NUPAB	445,	113	R.-D. von Dincklage, H.J. Hay, H.L. Ravn
1985Vo15	ZPAAD	322,	669	T. von Egidy, H.G. Börner, F. Hoyler
1985Wh03	MTRGA	21,	193	R.E. White, P.H. Barker, D.M.J. Lovelock
1985Wi07	ZPAAD	321,	179	P.A. Wilmarth, J.M. Nitschke, P.K. Lemmertz, R.B. Firestone
1985Wo01	PYLBB	150,	79	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, N.E. Sanderson, R.A. Cunningham, B.R. Fulton
1985Wo04	NUPAB	437,	454	C.L. Woods, L.K. Fifield, R.A. Bark, P.V. Drumm, M.A.C. Hotchkis
1985Wo07	ZPAAD	321,	119	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, N.E. Sanderson, B.R. Fulton, R.A. Cunningham
1985Wo.A	PrvCom	GAu	Feb	P.J. Woods

1986

1986Ad07	IANFA	50,	855	J. Adam, V. Vagner, M. Gonusek, B. Kratick
1986Ag.A	P-Charkov		98	V.A. Ageev, V.S. Belyavenko, V.A. Dzeltonodzskii, A.A. Klyushnikov
1986Au02	NUPAB	449,	491	G. Audi, A. Coc, M. Epherre, G. Le Scornet, C. Thibault, F. Touchard, ISOLDE
1986Ba26	PRVCA	34,	362	S.W. Barwick, P.B. Price, H.L. Ravn, E. Hourani, M. Hussonnois
1986Ba72	IANFA	50,	1898	K.A. Baskova, G.I. Borisov, A.B. Vovk, T.M. Gerus, L.I. Go
1986Be35	NUPAB	460,	352	A.V. Belozyorov, C. Borcea, Z. Dlouhy, A.M. Kalinin, R. Kalpakchieva, Nguyen Hoai Chau, Yu. Ts. Oganessian, Yu. E. Penionzhkevich
1986Be53	UFZHA	31,	1773	V.S. Belyavenko, G.P. Borozenets, I.N. Vishnevsky, V.A. Zheltonozhsky
1986Bj01	NUPAB	453,	463	T. Björnstad, M.J.G. Borge, J. Blomqvist, R.D. von Dincklage, G.T. Ewan, P. Hoff, B. Jonson, K. Kawade, A. Kerek, O. Klepper, G. Løvhøiden, S. Mattsson, G. Nyman, H.L. Ravn, G. Rudstam, K. Sistemich, O. Tengblad, ISOLDE
1986Bo28	ZPAAD	325,	149	V.R. Bom, P.C. Coops, R.W. Hollander, E. Coenen, K. Deneffe, P. Van Duppen, M. Huyse
1986Bo35	ZPAAD	325,	429	M.J.G. Borge, D.G. Burke, F. Calaprice, O.C. Jonsson, G. Løvhøiden, R.A. Naumann, K. Nybø, G. Nyman, H.L. Ravn, T.F. Thorsteinsen, ISOLDE
1986Bo41	NUPAB	460,	373	M.J.G. Borge, M. Epherre-Rey-Campagnolle, D. Guillemaud-Mueller, B. Jonson, M. Langevin, G. Nyman, C. Thibault, ISOLDE
1986Bo46	PHSTB	34,	591	M.J.G. Borge, A. De Rújula, P.G. Hansen, B. Jonson, G. Nyman, H.L. Ravn, K. Riisager, ISOLDE
1986Bu18	PRVCA	34,	2316	B.L. Burks, R.L. Varner, E.J. Ludwig
1986By01	NUPAB	448,	137	A.P. Byrne, G.D. Dracoulis, C. Fahlander, H. Hubel, A.R. Poletti, A.E. Stuchbery, J. Gerl, R.F. Davie, S.J. Poletti
1986Ch01	PRVCA	33,	130	T. Chapuran, K. Dybdal, D.B. Fossan, T. Lönnroth, W.F. Piel, Jr., D. Horn, E.K. Warburton
1986Co12	ZPAAD	324,	485	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, J.L. Wood
1986Da.A	AnRpt McGill		29	H. Dautet, R. Turcotte, S.K. Mark
1986De13	NUPAB	454,	1	H.P.L. De Esch, C. van der Leun
1986De14	NUPAB	454,	48	H.P.L. De Esch, J.B.J.M. Lanen, C. van der Leun
1986Ek01	PHSTB	34,	614	B. Ekström, B. Fogelberg, P. Hoff, E. Lund, A. Sangiyavanish
1986Fi06	NUPAB	453,	497	L.K. Fifield, C.L. Woods, W.N. Catford, R.A. Bark, P.V. Drumm, K.T. Keoghan
1986Fr09	PYLBB	173,	485	M. Fritschi, E. Holzschuh, W. Kündig, J.W. Petersen, R.E. Pixley, H. Stüssi, and PrvCom AHW
1986Ga19	PRVCA	34,	1663	C.A. Gagliardi, D.R. Semon, R.E. Tribble, L.A. Van Ausdeln
1986Gi07	PRLTA	56,	1874	R.L. Gill, R.F. Casten, D.D. Warner, A. Piotrowski, H. Mach, J.C. Hill, K.K. Wohn, J.A. Winger, R. Moreh
1986Gi08	NUPAB	453,	1	K.-L. Gippert, E. Runte, W.-D. Schmidt-Ott, P. Tidemand-Petersson, N. Kaffrell, P. Peuser, R. Kirchner, O. Klepper, W. Kurcewicz, P.O. Larsson, E. Roeckl, D. Schardt, K. Rykaczewski
1986Go10	ZPAAD	324,	117	H. Göktürk, B. Ekstrom, E. Lund, B. Fogelberg
1986Gr01	PRLTA	56,	819	G.L. Greene, E.G. Kessler,Jr., R.D. Deslattes, H. Börner

1986Ha22	NUPAB	455,	231	A.M.I. Hague, R.F. Casten, I. Förster, A. Gelberg, R. Rascher, R. Richter, P. von Brentano, G. Barreau, H.G. Börner, S.A. Kerr, K. Schreckenbach, D.D. Warner
1986Hi08	PRVCA	34,	2312	J.C. Hill, F.K. Wohn, K. Leininger, J.A. Winger, M.E. Nieland, R.L. Gill, A. Piotrowski, R.F. Petry, J.D. Goulden
1986Ho03	NUPAB	451,	141	K. Honkanen, C.J. Herrlander, B. Fant, T. Lonnroth
1986Hu01	PRLTA	56,	313	E.K. Hulet, J.F. Wild, R.J. Dougan, R.W. Lougheed, J.H. Landrum, A.D. Dougan, M. Schädel, R.L. Hahn, P.A. Baisden, C.M. Henderson, R.J. Dupzyk, K. Sümmerer, G.R. Bethune
1986Hu05	PRVCA	34,	1394	E.K. Hulet, R.W. Lougheed, J.F. Wild, R.J. Dougan, K.J. Moody, R.L. Hahn, C.M. Henderson, R.J. Dupzyk, G.R. Bethune
1986Ja13	NUPAB	458,	225	H.C. Jain, P. Carle, A. Kallberg, L.O. Norlin, K.-G. Rensfelt, U. Rosengard, B. Fant
1986Ka38	JUPSA	55,	3014	H. Kawakami, S. Shibita, J. Tanaka, T. Toriyama, S. Noguchi, M. Mushano, K. Hisatake
1986Ka43	NUPAB	460,	437	N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Gelder, D. De Frenne, K. Heyde, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh, W.A. Sterrenburg, K. Wolfsberg
1986Ke03	NUPAB	452,	173	J.G. Keller, K.-H. Schmidt, F.P. Heßberger, G. Münzenberg, W. Reisdorf, H.-G. Clerc, C.-C. Sahm, and PrvCom K.-H. Schmidt to AHW November 1992
1986Ke14	NIMAE	249,	366	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1986Ko19	ZPAAD	324,	271	P.J.J. Kok, J.B.M. de Haas, K. Abrahams, H. Postma, W.J. Huiskamp
1986Lo16	JCOMA	122,	461	R.W. Lougheed, E.K. Hulet, R.J. Dougan, J.F. Wild, R.J. Dupzyk, C.M. Henderson, K.J. Moody, R.L. Hahn, K. Summerer, G. Bethune
1986Ma12	PRLTA	56,	1547	H. Mach, A. Piotrowski, R.L. Gill, R.F. Casten, D.D. Warner
1986Ma40	PRVCA	34,	729	L.G. Mann, R.G. Lanier, G.L. Struble, R.A. Naumann, R.T. Kouzes
1986Ma42	PRVCA	34,	1117	H. Mach, R.L. Gill, D.D. Warner, A. Piotrowski, R. Moreh
1986Mc14	ZPAAD	325,	27	J. McNeill, R. Broda, Y.H. Chung, P.J. Daly, Z.W. Grabowski, H. Helppi, M. Kortelahti, R.V.F. Janssens, T.L. Khoo, R.D. Lawson, D.C. Radford, J. Blomqvist
1986Mi08	PRVCA	33,	1736	C. Miehé, Ph. Dessagne, P. Baumann, A. Huck, G. Klotz, A. Knipper, G. Walter, C. Richard-Serre
1986Mi14	PRVCA	33,	2204	D. Miljanic, S. Blagus, M. Zadro
1986Ok03	IJARA	37,	521	K. Okano, Y. Kawase, Y. Funakoshi, I. Fujiwara
1986Pr03	NUPAB	455,	1	P.T. Prokofjev, V.A. Bondarenko, T.V. Guseva, N.D. Kramer, L.I. Simonova, J.J. Tambergs, K. Schreckenbach, W.F. Davidson, J.A. Pinston, D.D. Warner, P.H.M. van Assche, A.M.J. Spits
1986Pr05	ZPAAD	325,	321	W.V. Prestwich, T.J. Kennett, J.S. Tsai
1986Re11	ZPAAD	325,	127	N. Redon, T. Ollivier, R. Beraud, A. Charvet, R. Duffait, A. Emsallem, J. Honkanen, M. Meyer, J. Genevey, A. Gizon, N. Idrissi
1986ReZS	BNL-NCS-37699 157			P.L. Reeder, R.A. Warner, M.D. Edmiston, R.L. Gill, A. Piotrowski
1986ReZU	P-Chicago		171	P.L. Reeder, R.A. Warner, M.D. Edmiston, R.L. Gill, A. Piotrowski
1986Ru04	ZPAAD	324,	27	B. Rubio, A. Ercan, G. de Angelis, P. Kleinheinz, J.L. Tain, B. Brinkmoeller, D. Paul, J. Meissburger, L.G. Mann, D.J. Decman, T.N. Massey, G.L. Struble, H.J. Scheerer, J. Blomqvist
1986Ru05	ZPAAD	324,	119	E. Runte, T. Hild, W.-D. Schmidt-Ott, U.J. Schrewe, P. Tidemand-Petersson, R. Michaelsen
1986Ry04	NIMAE	253,	47	A. Rytz, R.A.P. Wiltshire, M. King
1986Sc04	PRLTA	56,	1051	G. Schutz, E. Hagn, P. Kienle, E. Zech
1986Sc16	NUPAB	454,	267	H.H. Schmidt, T. von Egidy, H.J. Scheerer, P. Hungerford, H.G. Börner, S.A. Kerr, K. Schreckenbach, R.F. Casten, W.R. Kane, D.D. Warner, A. Chalupka, M.K. Balodis, T.V. Guseva, P.T. Prokofjev, J.J. Tambergs
1986Sc21	NUPAB	457,	182	P. Schmalbrock, T.R. Donoghue, M. Wiescher, V. Wijekumar, C.P. Browne, A.A. Rollefson, C. Rolfs, A. Vlieks
1986Sc25	JPHGB	12,	411	H.H. Schmidt, W. Stöffl, T. von Egidy, P. Hungerford, H.J. Scheerer, K. Schreckenbach, H.G. Börner, D.D. Warner, R.E. Chrien, R.C. Greenwood, C.W. Reich
1986Se04	PYLBB	173,	397	K.K. Seth, S. Iversen, M. Kaletka, D. Barlow, A. Saha, R. Soundranayagam
1986Sm05	ZPAAD	324,	283	R.J. Smith, P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, B.R. Fulton, R.A. Cunningham

1986To12	PYLBB	178,	150	K.S. Toth, Y.A. Ellis-Akovali, J.M. Nitschke, P.A. Wilmarth, P.K. Lemmertz, D.M. Moltz, F.T. Avignone III
1986Ts04	CJPHA	64,	1569	J.S. Tsai, W.V. Prestwich, T.J. Kennett
1986Va08	PRVCA	33,	1141	G. Vandenput, P.H.M. van Assche, L. Jacobs, J.M. van den Cruyce, R.K. Smither, K. Schreckenbach, T. von Egidy, D. Breitig, H.A. Baader, H.R. Koch
1986Ve.A	P-Charkov		107	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, V.A. Sergienko
1986Ve.B	P-Charkov		138	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, Yu. Ya. Sergeev, V.A. Sergienko, V.I. Tichonov
1986Vi09	PRLTA	57,	3253	D.J. Vieira, J.M. Wouters, K. Vaziri, R.H. Krauss,Jr., H. Wollnik, G.W. Butler, F.K. Wohn, A.H. Wapstra
1986Wa17	RAEFB	94,	27	R.A. Warner, P.L. Reeder
1986Wi16	NUPAB	460,	501	Ch. Winter, B. Krusche, K.P. Lieb, H.H. Schmidt, T. von Egidy, P. Hungerford, F. Hoyler, H.G. Börner
1986Wo01	PRVCA	33,	677	F.K. Wohn, J.C. Hill, C.B. Howard, K. Sistemich, R.F. Petry, R.L. Gill, H. Mach, A. Piotrowski
1986Wo07	PYLBB	182,	297	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, B.R. Fulton, R.A. Cunningham, P.V. Drumm, L.K. Fifield
1986Ya17	PYLBB	181,	169	S. Yasumi, M. Ando, H. Maezawa, H. Kitamura, T. Ohta, F. Ochiai, A. Mikuni, M. Maruyama, M. Fujioka, K. Ishii, T. Shinozuka, K. Sera, T. Omori, G. Izawa, M. Yagi, K. Masumoto, K. Shima, T. Mukoyama, Y. Inagaki, I. Sugai, A. Masuda, O. Kawakami
1986Ze03	ZPAAD	325,	451	P. Zeyen, K. Euler, V. Grafen, C. Gunther, M. Marten-Tolle, P. Schuler, R. Tolle

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1987Ah05	NUPAB	472,	285	I. Ahmad, J.E. Gindler, A.M. Friedman, R.R. Chasman, T. Ishii
1987Aj.A	PrvCom	AHW	Jul	F. Ajzenberg-Selove
1987Ba52	NUPAB	472,	445	M.K. Balodis, P.T. Prokofjev, N.D. Kramer, L.I. Simonova, K. Schreckenbach, W.F. Davidson, J.A. Pinston, P. Hungerford, H.H. Schmidt, H.J. Scheerer, T. von Egidy, P.H.M. van Assche, A.M.J. Spits, R.F. Casten, W.R. Kane, D.D. Warner, J. Kern
1987Bo07	PRLTA	58,	2019	S. Boris, A. Golutvin, L. Laptin, V. Lubimov, V. Nagovizin, V. Nozik, E. Novikov, V. Soloshenko, I. Tihomirov, E. Tretjakov, N. Myasoedov
1987Bo21	PHSTB	36,	218	M.J.G. Borge, P. Dessagne, G.T. Ewan, P.G. Hansen, A. Huck, B. Jonson, G. Klotz, A. Knipper, S. Mattsson, G. Nyman, C. Richard-Serre, K. Riisager, G. Walter, ISOLDE
1987Bo24	NUPAB	470,	13	M. Bogdanović, R. Brissot, G. Barreau, K. Schreckenbach, S. Kerr, H.G. Börner, I.A. Kondurov, Yu. E. Loginov, V.V. Martynov, P.A. Sushkov, H. Seyfarth, T. von Egidy, P. Hungerford, H.H. Schmidt, H.J. Scheerer, A. Chalupka, W. Kane, G. Alaga
1987Bo29	HYIND	34,	25	W. Borchers, R. Neugart, E.W. Otten, H.T. Duong, G. Ulm, K. Wendt, ISOLDE, and 89Ot.1
1987Bo59	HYIND	38,	793	G. Bollen, P. Dabkiewicz, P. Egelhof, T. Hilberath, H. Kalinowsky, F. Kern, H. Schnatz, L. Schweikhard, H. Stolzenberg, R.B. Moore, H.J. Kluge, G.M. Temmer, G. Ulm
1987Br05	NUPAB	465,	221	A. Bruce, D. Hicks, D.D. Wagner
1987Br14	ZPAAD	327,	403	R. Broda, P.J. Daly, J. McNeill, R.V.F. Janssens, D.C. Radford
1987Br33	JPHGB	13,	1565	V.B. Brudanin, T. Vylov, Ch. Briançon, V.M. Gorojankin, K.Y. Gromov, A. Marinov, A.P. Novgorodov, V.N. Pokrovski, N.I. Rukhadze
1987Br.B	AnRpt Julich		9	B. Brinkmoeller, H.P. Morsch, R. Siebert, P. Decowski, M. Rogge, P. Turek
1987Bu.A	BAPSA	32,	1063	B. Budick, Hong Lin
1987Ca23	HYIND	34,	77	P. Carle, S. Egnell, L.O. Norlin, K.-G. Rensfelt, U. Rosengard, B. Fant, H.C. Jain, K. Johansson
1987Ch.A	AnRpt Daresb		7	R. Chapman, J.L. Durell, J.N. Mo, P.J. Woods, B.R. Fulton, R.A. Cunningham, P.V. Drumm, L.K. Fifield
1987Ci.A	P-Leuven		S103	J.A. Cizewski, G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, and PrvCom AHW

1987Co08	NUPAB	465,	240	G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, J.A. Cizewski, and PrvCom AHW December 1988
1987Co19	NUPAB	468,	1	A. Coc, C. Thibault, F. Touchard, H.T. Duong, P. Juncar, S. Liberman, J. Pinard, M. Carre, J. Lerme, J.L. Vialle, S. Buttgenbach, A.C. Mueller, A. Pesnelle, and the ISOLDE Collaboration
1987De04	ZPAAD	326,	155	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1987De33	JPHGB	13,	1283	C.T.A.M. De Laat, P. Polak, A. Taal, J. Konijn, W. Lourens, A.H. Wapstra
1987De.A	AnRpt Leuven		47	P. Dendooven, M. Huyse, G. Reusen, J. Wouters, P. Van Duppen, I. Ahmad, R. Holzmann, R.V.F. Janssens
1987DuZU	P-Rosseau		344	J.P. Dufour, R. Del Moral, F. Hubert, D. Jean, M.S. Pravikoff, A. Fleury, H. Delagrange, A. Mueller, K.-H. Schmidt, E. Hanelt, K. Summerer
1987Eb01	ZPAAD	326,	121	J. Eberz, U. Dinger, G. Huber, H. Lochmann, R. Menges, G. Ulm, R. Kirchner, O. Klepper, T.U. Kuhl, D. Marx
1987El02	JPHGB	13,	93	A.M.Y. El-Lawindy, J.D. Burrows, P.A. Butler, J.R. Cresswell, V. Holliday, G.D. Jones, R. Tanner, R. Wadsworth, D.L. Watson, K.A. Connell, J. Simpsom, C. Lauterbach, J.R. Mines
1987El09	PRVCA	36,	1529	Y.A. Ellis-Akovali, K.S. Toth, H.K. Carter, C.R. Bingham, I.C. Girit, M.O. Kortelahti
1987Fa15	NUPAB	475,	338	B. Fant, T. Weckstrom, H.C. Jain, L.O. Norlin, K.-G. Rensfelt, P. Carle, U. Rosengard
1987Fa.A	P-Rosseau		675	T. Faestermann, A. Gillitzer, K. Hartel, W. Henning, P. Kienle
1987Fo20	NUPAB	475,	301	B. Fogelberg, A.M. Bruce, D.D. Warner
1987Ga.A	P-Yurmala		86	N. Ganbaatar, G.V. Veselov, K.A. Mezilev, V.G. Kalinnikov
1987Ge01	JPHGB	13,	69	W. Gelletly, J.R. Larysz, H.G. Börner, R.F. Casten, W.F. Davidson, W. Mampe, K. Schreckenbach, D.D. Warner
1987Gi05	PYLBB	192,	39	A. Gillibert, W. Mittig, L. Bianchi, A. Cunsolo, B. Fernandez, A. Foti, J. Gastebois, C. Gregoire, Y. Schutz, C. Stephan
1987Gi07	NUPAB	473,	717	C. Giusti, F.D. Pacati
1987Go25	PZETA	45,	205	M.G. Gornov, Y.B. Gurov, V.P. Koptev, P.V. Morokhov, K.O. Oganesyan, B.P. Osipenko, V.A. Pechkurov, V.I. Savel'ev, F.M. Sergeev, A.A. Khomutov, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov
1987Gr12	PRVCA	35,	1965	R.C. Greenwood, R.A. Anderl, J.D. Cole, H. Willmes
1987Gr18	ZPAAD	327,	383	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber, H.R. Faust, H. Weikard
1987Gr.A	P-Rosseau		30	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber
1987Gr.B	VHDPG	PG,	81,89	M. Graefenstedt, et al
1987Ha.A	AnRpt Tohoku		43	H. Hama, et al
1987Ha.B	P-Rosseau		650	H. Hama, M. Yoshii, K. Taguchi, T. Ishimatsu, T. Shinozuka, M. Fujioka
1987He10	EULEE	3,	895	F.P. Heßberger, S. Hofmann, G. Münzenberg, A.B. Quint, K. Sümmerer, P. Armbruster
1987He14	PRVCA	36,	1504	D.W. Hetherington, R.L. Graham, M.A. Lone, J.S. Geiger, G.E. Lee-Whiting
1987He21	NUPAB	474,	484	K. Heiguchi, S. Mitarai, B.J. Min, T. Kuroyanagi
1987He28	NUPAB	474,	77	R.G. Helmer, M.A. Lee, C.W. Reich, I. Ahmad
1987Ho.A	AnRpt LBL		39	M.A.C. Hotchkis, J.E. Reiff, D.J. Vieira, F. Blönnigen, T.F. Lang, D.M. Moltz, X. Xu, J. Cerny
1987Ju04	ARISE	38,	839	S.M. Judge, P. Christmas, P. Cross, D. Smith, W.D. Hamilton, and PrvCom AHW February 1989
1987Ka29	NUPAB	470,	141	N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Gelder, D. De Frenne, K. Heyde, S. Borjesson, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh, W.A. Sterrenburg, K. Wolfsberg
1987Ka.A	AnRpt RCNP		86	K. Katori, H. Miyatake, A. Higashi, A. Shinohara, N. Ikeda, I. Katayama, S. Morinobu
1987Ke09	CJPHA	65,	1111	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1987Ke.A	P-Leuven		S571	J. Kern, H.G. Börner, G.G. Colvin, S. Drissi, T. von Egidy, M. Kalanga, J.-L. Salici
1987Ko34	NUPAB	472,	419	V.T. Koslowsky, J.C. Hardy, E. Hagberg, R.E. Azuma, G.C. Ball, E.T.H. Clifford, W.G. Davies, H. Schmeing, U.J. Schrewe, K.S. Sharma
1987Li.A	P-Rosseau		521	C.F. Liang, P. Paris, Ch. Briançon
1987Lu06	ZPAAD	328,	487	S. Lunardi, P.J. Daly, F. Soramel, C. Signorini, B. Fornal, G. Fortuna, A.M. Stefanini, R. Broda, W. Meczynski, J. Blomqvist

1987Me08	ZPAAD	327,	171	F. Meissner, W.-D. Schmidt-ott, L. Ziegeler
1987Mi10	PRVCA	36,	420	G.J. Miller, J.C. McGeorge, I. Anthony, R.O. Owens
1987Mo06	PRVCA	35,	1275	D.M. Moltz, A.C. Betker, J.P. Sullivan, R.H. Burch, C.A. Gagliardi, R.E. Tribble, K.S. Toth, F.T. Avignone III
1987Mu15	ZPAAD	328,	49	G. Münzenberg, P. Armbruster, G. Berthes, H. Folger, F.P. Heßberger, S. Hofmann, J. Keller, K. Poppensieker, A.B. Quint, W. Reisdorf, K.-H. Schmidt, H.-J. Schött, K. Sümmerer, I. Zychor, M.E. Leino, R. Hingmann, U. Gollerthan, E. Hanelt
1987NeZZ	BAPSA	32,	1119	B.M.K. Nefkens, S.D. Adrian, D.B. Barlow, P. Dibernardo, A.D. Eichon, R.S. Kessler, J. Labrenz, C. Maruyama, C. Pillai, J.W. Price, J.A. Wightman, W.J. Briscoe, M.F. Taragin, D.F. Ottewell
1987Pe06	PRVCA	35,	1617	K.I. Pearce, N.M. Clarke, R.J. Griffiths, P.J. Simmonds, A.C. Dodd, D. Barker, J.B.A. England, M.C. Mannion, C.A. Ogilvie
1987PfZX	P-Birmingham		75	B. Pfeiffer, K.-L. Kratz, H. Gabelmann, W. Ziegert, V. Harms, B. Leist
1987Pr09	ZPAAD	328,	501	H. Prade, J. Doring, W. Enghardt, L. Funke, L. Kaubler
1987Ra04	NUPAB	464,	349	V. Rahkonen, T. Lonnroth
1987Ra06	PRVCA	36,	303	M.S. Rapaport, C.F. Liang, P. Paris, and PrvCom GAu July 1988
1987Ra12	NIMBE	26,	72	H.L. Ravn
1987Ru05	ZPAAD	328,	373	E. Runte, F. Meissner, V. Freystein, T. Hild, H. Salewski, W.-D. Schmidt-Ott, R. Michaelsen
1987Sa53	JUPSA	56,	3881	H.S. Sahota, T. Iwashita, B.S. Grewal
1987Sc.A	P-Rosseau		477	D. Schardt, R. Barden, R. Kirchner, O. Klepper, A. Płochocki, E. Roeckl, P. Kleinheinz, M. Piiparinen, B. Rubio, K. Zuber, C.F. Liang, P. Paris, A. Huck, G. Walter, G. Marguier, H. Gabelmann, J. Blomqvist
1987Se04	NUPAB	464,	381	P.B. Semmes, R.A. Braga, R.W. Fink, J.L. Wood, J.D. Cole
1987Se05	PRLTA	58,	1930	K.K. Seth, M. Artuso, D. Barlow, S. Iversen, M. Kaletka, H. Nann, B. Parker, R. Soundranayagam
1987Se.A	P-Rosseau		324	K.K. Seth
1987Sp02	PRVAA	35,	679	P.T. Springer, C.L. Bennett, P.A. Baisden
1987Sp09	NUPAB	474,	359	L. Spanier, K. Aleklett, B. Ekström, B. Fogelberg
1987Sp.A	P-Leuven		S559	A.M.J. Spits, S.J. Robinson
1987St04	ZPAAD	326,	139	E. Stiliaris, H.G. Bohlen, X.S. Chen, B. Gebauer, A. Miczaika, W. von Oertzen, W. Weller, T. Wilpert
1987St11	PRVCA	35,	2033	G.S.F. Stephans, H.T. Fortune, L.C. Bland, M. Carchidi, R. Gilman, G.P. Gilfoyle, J.W. Sweet
1987St.A	P-Rosseau		489	J. Styczen, P. Kleinheinz, W. Starzecki, B. Rubio, G. de Angelis, H.J. Hahn, C.F. Liang, P. Paris, R. Reinhardt, P. von Brentano, J. Blomqvist
1987To02	PRVCA	35,	310	K.S. Toth, D.C. Sousa, J.M. Nitschke, P.A. Wilmarth
1987To09	PRVCA	35,	2330	K.S. Toth, D.M. Moltz, F. Blönnigen, F.T. Avignone,III
1987Va09	PRVCA	35,	1861	P. Van Duppen, E. Coenen, K. Deneffe, M. Huyse, J.L. Wood
1987Va20	NUPAB	469,	531	L. Van Elmbt, J. Deutsch, R. Prieels, and NUPAB 493(1989)611
1987Ve.A	P-Yurmala		146	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, V.A. Sergienko
1987Vi01	NUPAB	463,	605	K. Vierinen
1987We03	ZDACE	4,	227	K. Wendt, S.A. Ahmad, W. Klempt, R. Neugart, E.W. Otten, H.H. Stroke, and the ISOLDE Collaboration
1987Wh01	PRVCA	35,	81	D.H. White, H.G. Börner, R.W. Hoff, K. Schreckenbach, W.F. Davidson, T. von Egidy, D.D. Warner, P. Jeuch, G. Barreau, W.R. Kane, M.L. Stelts, R.E. Chrien, R.F. Casten, R.G. Lanier, R.W. Lougheed, R.T. Kouzes, R.A. Naumann, R. Dewberry
1987Wi15	NUPAB	473,	129	Ch. Winter, B. Krusche, K.P. Lieb, T. Weber, G. Hlawatsch, T. von Egidy, F. Hoyler
1987Zi02	NUPAB	466,	280	F. Zijderhand, R.C. Makkus, C. van der Leun

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1988Ah02	NUPAB	483,	244	S.A. Ahmad, W. Klempt, R. Neugart, E.W. Otten, P.-G. Reinhard, G. Ulm, K. Wendt, ISOLDE

1988Ax01	PYLBB	210,	249	H. Axelsson, M. Cronqvist, A. De Rújula, P.G. Hansen, L. Johannsen, B. Jonson, R.A. Naumann, G. Nyman, J.W. Petersen, H.L. Ravn, K. Riisager, J.A. Scircle, ISOLDE
1988Ay01	PYLBB	201,	211	J. Äystö, P. Taskinen, M. Yoshii, J. Honkanen, P. Jauho, H. Penttilä, C.N. Davids
1988Ay02	NUPAB	480,	104	J. Äystö, C.N. Davids, J. Hattula, J. Honkanen, P. Jauho, R. Julin, S. Juutinen, J. Kumpalainen, T. Loenroth, A. Pakkanen, A. Passoja, H. Penttilä, P. Taskinen, E. Verho, A. Virtanen, M. Yoshi
1988Ba10	ZPAAD	329,	319	R. Barden, R. Kirchner, O. Klepper, A. Płochocki, G.-E. Rathke, E. Roeckl, K. Rykaczewski, D. Schardt, J. Żylicz
1988Ba42	ZPAAD	330,	341	D. Barnéoud, J. Blachot, J. Genevey, A. Gizon, R. Béraud, R. Duffait, A. Emsallem, M. Meyer, N. Redon, D. Rolando-Eugio
1988Be39	PRVCA	38,	2329	I. Berkes, R. Hassani, M. Massaq
1988Be.A	P-StMalo		A1	R. Béraud, R. Duffait, A. Emsallem, M. Meyer, N. Redon, D. Rolando-Eugio, D. Barnéoud, J. Blachot, J. Genevey, A. Gizon
1988Bh05	PRVCA	37,	2894	R.K. Bhowmik, A. Chakrabarti, S.K. Saha, S.K. Basu, B. Sethi
1988Bo06	NUPAB	477,	89	U. Bosch, W.-D. Schmidt-Ott, E. Runte, P. Tidemand-Petersson, P. Koschel, F. Meissner, R. Kirchner, O. Klepper, E. Roeckl, K. Rykaczewski, D. Schardt
1988Bo20	ZPAAD	330,	227	H.G. Bohlen, B. Gebauer, D. Kolbert, W. von Oertzen, E. Stiliaris, M. Wilpert, T. Wilpert
1988Bo28	ZPAAD	331,	21	V.R. Bom, R.W. Hollander, E. Coenen, K. Deneffe, P. Van Duppen, M. Huyse
1988Bu08	NUPAB	483,	221	D.G. Burke, G. Løvhøiden, T.F. Thorsteinsen
1988Bu12	PRVCA	38	1365	R.H. Burch,Jr., C.A. Gagliardi, R.E. Tribble
1988Ca21	NUPAB	489,	347	W.N. Catford, L.K. Fifield, T.R. Ophel, N.A. Orr, D.C. Weisser, C.L. Woods
1988Cl04	JPHGB	14,	1399	N.M. Clarke, P.R. Hayes, M.B. Becha, K.I. Pearce, R.J. Griffiths, J.B.A. England, L. Zybert, C.N. Pinder, G.M. Field, R.S. Mackintosh
1988Co18	JPHGB	14,	1411	G.G. Colvin, S.J. Robinson, F. Hoyler
1988De03	NUPAB	476,	316	H.P.L. De Esch, C. van der Leun
1988Du09	PYLBB	206,	195	J.P. Dufour, R. Del Moral, F. Hubert, D. Jean, M.S. Pravikoff, A. Fleury, A.C. Mueller, K.-H. Schmidt, K. Sümmerer, E. Hanelt, J. Frehaut, M. Beau, G. Giraudet
1988Fi04	NUPAB	484,	117	L.K. Fifield, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, P.J. Woods, B.R. Fulton, R.A. Cunningham, P.V. Drumm
1988Fo05	PYLBB	209,	173	B. Fogelberg, Ye Zongyuan, L. Spanier
1988Fu10	JUPSA	57,	2976	Y. Fukuchi, T. Komatsubara, H. Sakamoto, T. Aoki, K. Furuno
1988Gi04	PRVCA	37,	2600	M. Girod, Ph. Dessagne, M. Bernas, M. Langevin, F. Pougheon, P. Roussel
1988Gr30	RAACA	43,	223	K.E. Gregorich, R.A. Henderson, D.M. Lee, M.J. Nurmia, R.M. Chasteler, H.L. Hall, D.A. Bennett, C.M. Gannett, R.B. Chadwick, J.D. Leyba, D.C. Hoffman, G. Herrmann
1988Ha12	JPHGB	14,	S283	S.S. Hanna
1988HaZB	P-Rosseau		650	H. Hama, M. Yoshii, K. Taguchi, T. Ishimatsu, T. Shinozuka, M. Fujioka
1988Ho.B	VHDPG	6,	67	S. Hofmann, P. Armbruster, G. Berthes, F. Heßberger, G. Münzenberg, K. Poppensieker, T. Faestermann, A. Gillitzer, W. Kurcewicz, I. Zychor
1988Hu07	ZPAAD	330,	121	M. Huyse, P. del Marmol, E. Coenen, K. Deneffe, P. Van Duppen, J. Vanhorenbeeck
1988Ka14	ZPAAD	330,	55	T. Karlewski, N. Hildebrand, M. Brügger, N. Kaffrell, N. Trautmann, G. Herrmann
1988Ka16	ZPAAD	330,	231	Y. Kawase, K. Okano
1988Ka32	JUPSA	57,	2873	H. Kawakami, S. Kato, F. Naito, K. Nisimura, T. Ohshima, S. Shibata, T. Suzuki, K. Ukai, N. Morikawa, N. Nogawa, T. Nagafuchi, H. Taketani, M. Iwahashi, K. Hisatake, Y. Fukushima, T. Matsuda, T. Taniguchi
1988Ke09	CJPHA	66,	947	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1988Kl03	PRVCA	38,	295	N. Klay, F. Kappeler
1988Ku14	NUPAB	484,	264	T. Kuroyanagi, S. Mitarai, B.J. Min, H. Tomura, Y. Haruta, K. Heiguchi, S. Suematsu, Y. Onizuka
1988Li11	NUPAB	481,	477	W.J. Lin, O.K. Manuel, G.L. Cumming, D. Krstic, R.I. Thorpe
1988Ma.A	P-BadHonnef		391	H. Mach, E.K. Warburton, R.L. Gill, R.F. Casten, A. Wolf, Z. Berant, J.A. Winger, K. Sistemich, G. Molnár, S.M. Yates
1988Mi13	PRVCA	38,	895	L.W. Mitchell, P.H. Fisher

1988Mo18	PRVCA	38,	737	M.F. Mohar, E. Adamides, W. Benenson, C. Bloch, B.A. Brown, J. Clayton, E. Kashy, M. Lowe, J.A. Nolen,Jr., W.E. Ormand, J. van der Plicht, B. Sherrill, J. Stevenson, J.S. Winfield
1988Mu08	ZPAAD	330,	63	A.C. Mueller, D. Bazin, W.D. Schmidt-Ott, R. Anne, D. Guerreau, D. Guillemaud-Mueller, M.G. Saint-Laurent, V. Borrel, J.C. Jacmart, F. Pougheon, A. Richard
1988Ni02	PRVCA	37,	2694	J.M. Nitschke, P.A. Wilmarth, J. Gilat, K.S. Toth, F.T. Avignone III
1988No02	PRVCA	37,	860	E.B. Norman, K.T. Lesko, A.E. Champagne
1988Or01	NUPAB	477,	523	N.A. Orr, W.N. Catford, L.K. Fifield, T.R. Ophel, D.C. Weisser, C.L. Woods and erratum Nucl. Phys. A485(1988)734.
1988Or.A	Th.-Canberra			N.A. Orr
1988Pa12	NUPAB	484,	155	M. Pautrat, J.M. Lagrange, J.S. Dionisio, Ch. Vieu, J. Vanhorenbeeck
1988Pe13	PRVCA	38,	931	H. Penttilä, P. Taskinen, P. Jauho, V. Koponen, C.N. Davids, J. Äystö
1988Qu.A	AnRpt GSI		16	A.B. Quint, W. Morawek, K.-H. Schmidt, P. Armbruster, F.P. Heßberger, S. Hofmann, G. Münzenberg, W. Reisdorf, H. Stelzer, H.-G. Clerc, C.-C. Sahm
1988Sa06	ZPAAD	329,	169	H. Salewski, W.-D. Schmidt-Ott
1988Sa18	PRVCA	37,	2371	J.-L. Salicio, S. Drissi, M. Gasser, J. Kern, H.G. Börner, G.G. Colvin, K. Schreckenbach, R.W. Hoff, R.W. Lougheed
1988Sc.A	VHDPG	6,	113	D. Schardt, R. Barden, R. Kirchner, O. Klepper, E. Roeckl,P. Kleinheinz, B. Rubio, A. Huck, G. Walter
1988Si22	JUPSA	57,	3762	K. Singh, T.S. Gill, K. Singh
1988St10	NUPAB	482,	692	A.E. Stuchbery, G.D. Dracoulis, A.P. Byrne, S.J. Poletti, A.R. Poletti
1988St.A	P-BadHonnef		239	M.L. Stolzenwald, S. Brant, H. Ohm, K. Sistemich, G. Lhersonneau
1988Vi02	PRVCA	38,	1509	K.S. Vierinen, A.A. Shihab-Eldin, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler, R.B. Firestone, K.S. Toth
1988We14	PYLBB	211,	272	S.A. Wells, D.E. Evans, J.A.R. Griffith, D.A. Eastham, J. Groves, J.R.H. Smith, D.W.L. Tolfree, D.D. Warner, J. Billowes, I.S. Grant, P.M. Walker
1988Wi05	ZPAAD	329,	503	P.A. Wilmarth, J.M. Nitschke, K. Vierinen, K.S. Toth, M. Kortelahti
1988Wo02	NUPAB	476,	392	C.L. Woods, W.N. Catford, L.K. Fifield, N.A. Orr, R.J. Sadleir
1988Wo07	NUPAB	484,	145	C.L. Woods, W.N. Catford, L.K. Fifield, N.A. Orr
1988Wo09	ZPAAD	331,	229	J.M. Wouters, R.H. Kraus,Jr., D.J. Vieira, G.W. Butler, K.E.G. Lobner

1989

1989Ab05	JRNCD	135,	1	A. Abzouzi, M.S. Antony, V.B. Ndocko Ndongue
1989Ab22	JRNCD	135,	455	A. Abzouzi, M.S. Antony, V.B. Ndocko Ndongue
1989Ac01	ZPAAD	332,	375	B. Ackermann, T. Bihn, P.A. Butler, V. Grafen, C. Gunther, J.R. Hughes, G.D. Jones, Ch. Lauterbach, H.J. Maier, M. Marten-Tolle, R. Tolle, R. Wadsworth, D.L. Watson, C.A. White
1989Al33	IANFA	53,	2089	G.D. Alkhazov, B.N. Belyayev, V.D. Domkin, Yu. G. Korobulin, V.V. Lukashevich, V.S. Mukhin
1989An13	YAFIA	50,	619	A.N. Andreyev, D.D. Bogdanov, A.V. Yerimin, A.P. Kabachenko, O.A. Orlova, G.M. Ter-Akopian, V.I. Chepigin
1989An.A	P-Dubna		508	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.A. Orlova, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin, and 89An13
1989Ay.A	P-Dubna		427	J. Äystö, P. Dendooven, P. Jauho, A. Jokinen, J. Parmonen, H. Penttilä, P. Taskinen, M. Leino, K. Eskola
1989Ba22	PYLBB	223,	273	A.S. Barabash, V.V. Kuzminov, V.M. Lobashev, V.M. Novikov, B.M. Ovchinnikov, A.A. Pomansky
1989Ba28	PRVCA	40,	940	S.C. Baker, M.J. Brown, P.H. Barker
1989Ba42	NUPAB	500,	1	E.L. Bakkum, C. van der Leun
1989Bo03	PYLBB	216,	7	W. Borchers, E. Arnold, W. Neu, R. Neugart, K. Wendt, G. Ulm, and the ISOLDE Collaboration
1989Bo.A	PrvCom	GAu	Dec	H.G. Bohlen
1989Bu09	ZPAAD	333,	131	D.G. Burke, H. Folger, H. Gabelmann, E. Hagebø, P. Hill, P. Hoff, O. Jonsson, N. Kaffrell, W. Kurcewicz, G. Løvhøiden, K. Nybø, G. Nyman, H. Ravn, K. Riisager, J. Rogowski, K. Steffensen, T.F. Thorsteinsen, ISOLDE
1989Bu.A	Th.-Bordeaux			J. Busto PrvCom of F. Leccia 1988
1989Ca25	NUPAB	503,	263	W.N. Catford, L.K. Fifield, N.A. Orr, C.L. Woods

1989Ch01	PRVCA	39,	248	A.E. Champagne, R.T. Kouzes, A.B. McDonald, M.M. Lowry, D.R. Benton, K.P. Coulter, Z.Q. Mao
1989Cl02	NUPAB	493,	293	E.T.H. Clifford, E. Hagberg, J.C. Hardy, H. Schmeing, R.E. Azuma, H.C. Evans, V.T. Koslowsky, U.J. Schrewe, K.S. Sharma, I.S. Towner
1989Dr03	NUPAB	496,	530	P.V. Drumm, L.K. Fifield, R.A. Bark, M.A.C. Hotchkis, C.L. Woods
1989Fi01	PRVCA	39,	219	R.B. Firestone, J.M. Nitschke, P.A. Wilmarth, K. Vierinen, J. Gilat, K.S. Toth, Y.A. Akovali
1989Go19	PRVCA	40,	2793	S.J. Goldstein, M.T. Murrell, R.W. Williams
1989Gr03	NUPAB	491,	373	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber, ISOLDE
1989Gr23	ZPAAD	334,	239	M. Graefenstedt, P. Jürgens, U. Keyser, F. Münnich, F. Schreiber, K. Balog, T. Winkelmann, H.R. Faust
1989Gu03	ZPAAD	332,	189	D. Guillemaud-Mueller, Y.E. Penionzhkevich, R. Anne, A.G. Artukh, D. Bazin, V. Borrel, C. Détraz, D. Guerreau, B.A. Gvozdev, J.C. Jacmart, D.X. Jiang, A.M. Kalinin, V.V. Kamanin, V.B. Kutner, M. Lewitowicz, S.M. Lukyanov, A.C. Mueller, N. Hoai Chau, F. Pougheon, A. Richard, M.G. Saint-Laurent, W.D. Schmidt-Ott (see also 93Po.A)
1989Ha27	NUPAB	500,	90	Y. Hatsukawa, T. Ohtsuki, K. Sueki, H. Nakahara, I. Kohno, M. Magara, N. Shinohara, H.L. Hall, R.A. Henderson, C.M. Gannett, J.A. Leyba, R.B. Chadwick, K.E. Gregorich, D. Lee, M.J. Nurmia, D.C. Hoffman
1989Ha.A	PENUC	III,	99	J.C. Hardy, E. Hagberg
1989He03	NIMAE	274,	522	F.P. Heßberger, S. Hofmann, G. Münzenberg, K.-H. Schmidt, P. Armbruster, R. Hingmann
1989He11	NUPAB	494,	1	D.W. Hetherington, A. Alousi, R.B. Moore
1989He13	ZPAAD	333,	111	F.P. Heßberger, H. Gäggeler, P. Armbruster, W. Brüchle, H. Folger, S. Hofmann, D. Jost, J.V. Kratz, M.E. Leino, G. Münzenberg, V. Ninov, M. Schädel, U. Scherer, K. Sümmerer, A. Türler, D. Ackermann
1989Hi04	NUPAB	492,	237	T. Hild, W.-D. Schmidt-Ott, V. Freystein, F. Meissner, E. Runte, H. Salewski, R. Michaelsen
1989Ho08	ZPAAD	332,	407	P. Hoff, B. Ekström, B. Fogelberg PrvCom of L. Spanier et al to ref.
1989Ho12	ZPAAD	333,	107	S. Hofmann, P. Armbruster, G. Berthes, T. Faestermann, A. Gillitzer, F.P. Heßberger, W. Kurcewicz, G. Münzenberg, K. Poppensieker, H.J. Schött, I. Zychor
1989Ho13	NUPAB	496,	462	J. Honkanen, V. Koponen, P. Taskinen, J. Aysto, K. Eskola, S. Messelt, K. Ogawa
1989Ho15	NUPAB	500,	111	C. Hofmeyr
1989Hu03	PRVCA	39,	997	H. Huck, A. Jech, G. Marti, M.L. Perez, J.J. Rossi, H.M. Sofia
1989Hu09	PRVCA	40,	770	E.K. Hulet, J.F. Wild, R.J. Dougan, R.W. Lougheed, J.H. Landrum, A.D. Dougan, P.A. Baisden, C.M. Henderson, R.J. Dupzyk, R.L. Hahn, M. Schädel, K. Sümmerer, G.R. Bethune
1989Hu10	PRVCA	40,	1384	H. Huck, A. Jech, G. Marti, M.L. Perez, J.J. Rossi, H.M. Sofia
1989Je07	NUPAB	503,	77	C. Jeanperrin, L.H. Rosier, B. Ramstein, E.I. Obiajunwa
1989Jo.A	AnRpt JYFL		81	A. Jokinen, J. Äystö, C.N. Davids, K. Eskola, P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, P. Taskinen
1989Ka04	PRVCA	39,	818	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, T. Nomura, Y. Fuchi, S. Ohkawa, T. Miyachi, K. Iwata, T. Suehiro, Y. Yoshida
1989Ki11	NUPAB	496,	429	S.W. Kikstra, C. van der Leun, S. Raman, E.T. Jurney, I.S. Towner
1989Ko07	ZPAAD	332,	229	M.O. Kortelahti, H.K. Carter, R.A. Braga, R.W. Fink, B.D. Kern
1989Ko22	ZPAAD	333,	339	V. Koponen, J. Äystö, J. Honkanen, P. Jauho, H. Penttilä, J. Suhonen, P. Taskinen, K. Rykaczewski, J. Żylicz, C.N. Davids
1989Ku08	NUPAB	494,	203	H. Kudo, T. Nomura, K. Sueki, M. Magara, N. Yoshida
1989Le16	NUPAB	496,	477	M. Lewitowicz, Yu. E. Penionzhkevich, A.G. Artukh, A.M. Kalinin, V.V. Kamanin, S.M. Lukyanov, Nguyen Hoai Chau, A.C. Mueller, D. Guillemaud-Mueller, R. Anne, D. Bazin, C. Détraz, D. Guerreau, M.G. Saint-Laurent, V. Borrel, J.C. Jacmart, F. Pougheon, A. Richard, W.D. Schmidt-Ott
1989Lo07	NUPAB	494,	157	G. Løvhøiden, T.F. Thorsteinsen, E. Andersen, M.F. Kiziltan, D.G. Burke
1989Ma05	JPGPE	15,	173	A.M. Mandal, S.K. Saha, S.M. Sahakundu, A.P. Patro
1989Me02	ZPAAD	332,	153	F. Meissner, W.-D. Schmidt-Ott, V. Freystein, T. Hild, E. Runte, H. Salewski, R. Michaelsen
1989Mi03	PRVCA	39,	992	Ch. Miehé, Ph. Dessagne, P. Baumann, A. Huck, G. Klotz, A. Knipper, G. Walter, G. Marguier

1989Mi16	NUPAB	501,	437	S. Michaelsen, Ch. Winter, K.P. Lieb, B. Krusche, S. Robinson, T. von Egidy
1989Mi17	NUPAB	501,	557	H. Miyatake, T. Nomura, S. Kubono, J. Tanaka, M. Oyaizu, H. Okawa, N. Ikeda, K. Sueki, H. Kudo, K. Morita, T. Shinozuka
1989Mu09	ZPAAD	333,	163	G. Münzenberg, P. Armbruster, S. Hofmann, F.P. Heßberger, H. Folger, J.G. Keller, V. Ninov, K. Poppensieker, A.B. Quint, W. Reisdorf, K.-H. Schmidt, J.R.H. Schneider, H.J. Schött, K. Sümmerer, I. Zychor, M.E. Leino, D. Ackermann, U. Gollerthan, E. Hanelt, W. Morawek, D. Vermeulen, Y. Fujita, T. Schwab
1989Mu16	NUPAB	502,	571	G. Münzenberg
1989Ok.A	NEANDC(J)-140/U			K. Okano, Y. Kawase
1989Or03	NUPAB	491,	443	N.A. Orr, W.N. Catford, L.K. Fifield, M.A.C. Hotchkis, T.R. Ophel, D.C. Weisser, C.L. Woods
1989Or04	NUPAB	491,	457	N.A. Orr, L.K. Fifield, W.N. Catford, C.L. Woods
1989Ot.A	THISc	8,	517	E.W. Otten
1989Po09	NUPAB	499,	495[	184Ir] M.G. Porquet, C. Bourgeois, P. Kilcher, B. Roussière, J. Sauvage, H. Dautet, J.K.P. Lee, ISOCELE
1989Po10	NUPAB	500,	287	F. Pougheon, V. Borrel, J.C. Jacmart, R. Anne, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, D. Bazin, R. Del Moral, J.P. Dufour, F. Hubert, M.S. Pravikoff, G. Audi, E. Roeckl, B.A. Brown
1989Po21	RADKA	31,	3	Yu. S. Popov, N. Yu. Nezgovorov, G.A. Timofeev
1989Pr.A	PENUC	II,	205	P.B. Price, S.W. Barwick
1989Re04	PRVCA	40,	368	A. Redondo, R.G.H. Robertson
1989Ri03	NUPAB	499,	221	R. Richter, I. Förster, A. Gelberg, A.M.I. Haque, P. von Brentano, R.F. Casten, H.G. Börner, G.G. Colvin, K. Schreckenbach, G. Barreau, S.A. Kerr, H.H. Schmidt, P. Hungerford, H.J. Scheerer, T. von Egidy, R. Rascher
1989Ro04	PYLBB	221	6	N. Roy, K.H. Maier, A. Aprahamian, J.A. Becker, D.J. Decman, E.A. Henry, L.G. Mann, R.A. Meyer, W. Stoeffl, G.L. Struble
1989Ry02	ZPAAD	332,	275	K. Rykaczewski, A. Płochocki, I.S. Grant, H. Gabelmann, R. Barden, D. Schardt, J. Żylicz, G. Nyman, ISOLDE
1989Sa01	JPGPE	15,	73	S.K. Saha, S.M. Sahakundu
1989Sa11	NUPAB	494,	36	S.L. Sakharov, I.A. Kondurov, Yu. E. Loginov, V.V. Martynov, A.A. Radionov, P.A. Sushkov, Yu. L. Khazov, A.I. Egorov, V.K. Isupov, H.G. Börner, F. Hoyler, S. Kerr, K. Schreckenbach, G. Hlawatsch, T. von Egidy, H. Lindner
1989Sc24	NUPAB	501,	86	H. Schölermann, R. Böttger
1989Sc26	NDSAA	57,	515	M.R. Schmorak
1989Sc31	NUPAB	504,	1	H.H. Schmidt, P. Hungerford, T. von Egidy, H.J. Scheerer, H.G. Börner, S.A. Kerr, K. Schreckenbach, F. Hoyler, G.G. Colvin, A.M. Bruce, R.F. Casten, D.D. Warner, I.L. Kugava, V.A. Bondarenko, N.D. Kramer, P.T. Prokofjef, A. Chalupka
1989Sh10	NIMAE	275,	123	K.S. Sharma, H. Schmeing, H.C. Evans, E. Hagberg, J.C. Hardy, V.T. Koslowsky
1989Si04	PRVDA	39,	1825	J.J. Simpson, A. Hime
1989Sm06	SAPHD	12,	74	J.J.A. Smit, Z.H.J. Pretorius, F.B. Waanders, J.P.L. Reinecke, J. Keilonen
1989St05	PRVCA	39,	1503	S.T. Staggs, R.G.H. Robertson, D.L. Wark, P.P. Nguyen, J.F. Wilkerson, T.J. Bowles
1989St06	PRVCA	39,	1963	C.A. Stone, S.H. Faller, W.B. Walters
1989Su12	ZPAAD	333,	281	X. Sun, U. Rosengard, H. Grawe, H. Haas, H. Kluge, A. Kuhnert, K.H. Maier
1989Su.A	BAPSA	34,	1819	B. Sur, E.B. Norman, K.T. Lesko, E. Browne, R.M. Larimer, H.L. Hall, J.D. Leyba, D.C. Hoffman
1989Ta11	ZPAAD	333,	29	J.L. Tain, B. Rubio, P. Kleinheinz, D. Schardt, R. Barden, J. Blomqvist
1989To01	PRVCA	39,	1150	K.S. Toth, D.M. Moltz, J.D. Robertson
1989Va05	PRVCA	39,	1528	J. Vanhorenbeeck, E. Coenen, P. Decrock, P. Dendooven, K. Deneffe, M. Huyse, G. Reusen, P. Van Duppen, J. Wauters, P. del Marmol
1989Vi02	PRVCA	39,	1972	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler, A.A. Shihab-Eldin, R.B. Firestone, K.S. Toth, Y.A. Akovali
1989Vi04	NUPAB	499,	1	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.B. Firestone, J. Gilat
1989Wa10	PRVCA	39,	1647	S. Wang, D. Snowden-Ifft, P.B. Price, K.J. Moody, E.K. Hulet
1989Wa11	NUPAB	493,	224	K. Wallmeroth, G. Bollen, A. Dohn, P. Egelhof, U. Kronert, M.J.G. Borge, J. Campos, A. Rodriguez Yunta, K. Heyde, C. de Coster, J.L. Wood, H.-J. Kluge

1989Wi01	ZPAAD	332,	33	G. Winter, J. Döring, L. Funke, L. Kaubler, R. Schwengner, H. Prade
1989Wi05	NUPAB	491,	395	Ch. Winter, B. Krusche, K.P. Lieb, S. Michaelsen, G. Hlawatsch, H. Linder, T. von Egidy, F. Hoyler, R.F. Casten
1989Wi11	PRVCA	39,	1976	J.A. Winger, J.C. Hill, F.K. Wohn, E.K. Warburton, R.L. Gill, A. Piotrowski, D.S. Brenner
1989Yu01	PRVCA	39,	256	S. Yuan, T. Zhang, S. Xu, W. Li, L. Zhang, M. Liu, X. Ou, W. Li
1989Zh04	PRVCA	39,	1985	Z. Zhao, M. Gai, B.J. Lund, S.L. Rugari, D. Mikolas, B.A. Brown, J.A. Nolen,Jr., M. Samuel
1989Zl.A	PrvCom	GAu	May	I. Žlimen

1990

1990Ab02	JRNCD	144,	359	A. Abzouzi, M.S. Antony, A. Hachem, V.B. Ndocko Ndongue
1990Aj01	NUPAB	506,	1	F. Ajzenberg-Selove, and PrvCom AHW
1990Ak01	PRVCA	41,	1126	Y.A. Akovali, K.S. Toth, A.L. Goodman, J.M. Nitschke, P.A. Wilmarth, D.M. Moltz, M.N. Rao, D.C. Sousa
1990Ak04	PRVCA	42,	1130	Y.A. Akovali, K.S. Toth, C.R. Bingham, M.B. Kassim, M. Zhang, H.K. Carter, W.D. Hamilton, J. Kormicki
1990Al34	ZPAAD	337,	257	G.D. Alkhazov, A.E. Barzakh, V.A. Bolshakov, V.P. Denisov, V.S. Ivanov, Yu. Ya. Sergeev, I. Ya. Chubukov, V.I. Tikhonov, V.S. Letokhov, V.I. Mishin, S.K. Sekatsky, V.N. Fedoseyev
1990Al43	RAACA	51,	145	T. Altzitzoglou, J. Rogowski, M. Skalberg, J. Alstad, G. Herrmann, N. Kaffrell, G. Skarnemark, W. Talbert, N. Trautmann
1990Am04	PZETA	51,	607	A.I. Amelin, M.G. Gornow, Yu. B. Gurov, A.I. Ilin, V.P. Koplev, P.V. Morokhov, K.O. Oganesyan, V.A. Pechkurov, V.I. Saveliev, E.M. Sergeyev, B.A. Chern'yshev, R.R. Shafigulin, A.V. Shishkov
1990Am05	YAFIA	52,	1231	A.I. Amelin, M.G. Gornov, Y.B. Gurov, A.L. Il'in, P.V. Morokhov, V.A. Pechkurov, V.I. Savelev, F.M. Sergeev, S.A. Smirnov, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov
1990An19	ZPAAD	337,	229	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin
1990An22	ZPAAD	337,	231	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin, O.N. Malyshev
1990An31	JRNCD	142,	203	R.A. Anderl, R.C. Greenwood
1990Ba02	PRVCA	41,	246	P.H. Barker, G.D. Leonard
1990Be13	ZPAAD	336,	41	M. Bernas, P. Armbruster, J.P. Bocquet, R. Brissot, H. Faust, Ch. Kozhuharov, J.L. Sida
1990Be.A	PrvCom	AHW	Jun	C.E. Bemis
1990Be.B	P-Leningrad		132	E.A. Belomytseva, G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.G. Polyakov, A.V. Popov, Yu. Ya. Sergeev, V.A. Sergienko, V.I. Tichonov
1990Bo24	NUPAB	515,	21	M.J.G. Borge, H. Gabelmann, L. Johannsen, B. Jonson, G. Nyman, K. Riisager, O. Tengblad, ISOLDE
1990Bo39	YAFIA	52,	358	D.D. Bogdanov, V.P. Bugrov, S.G. Kadmenskiĭ
1990Bo52	IANFA	54,	1787	S.T. Boneva, E.V. Vasileva, V.D. Kulik, L.K. Khem, Yu. P. Popov, A.M. Sukhovoi, V.A. Khitrov,Yu. V. Kholnov
1990Bu17	PRVCA	42,	499	D.G. Burke, P.E. Garrett, Tao Qu, R.A. Naumann
1990Bu28	YAFIA	52,	305	E. Bukhner, I.N. Vishnevsky, F.A. Danevich, Yu. G. Zdesenko, H.V. Klapdor, B.N. Kropivyansky, V.N. Kuts, A. Piepke, V.I. Tretyak, G. Heusser, J. Schneider, H. Strecker
1990Ch34	PRVCA	42,	1171	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, K.S. Vierinen, P.A. Wilmarth
1990Ch37	PRVCA	42,	1796	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, K.S. Vierinen, P.A. Wilmarth
1990De03	NUPAB	507,	447	M.J.A. De Voigt, R. Kaczarowski, H.J. Riezebos, R.F. Noorman, J.C. Bacelar, M.A. Deleplanque, R.M. Diamond, F.S. Stephens
1990De43	NUPAB	519,	529	C. Détraz, R. Anne, P. Bricault, D. Guillemaud-Mueller, M. Lewitowicz, A.C. Mueller, Yu Hu Zhang, V. Borrel, J.C. Jacmart, F. Pougheon, A. Richard, D. Bazin, J.P. Dufour, A. Fleury, F. Hubert, M.S. Pravikoff
1990Dy04	PYLBB	245,	343	G.R. Dyck, M.H. Sidky, J.G. Hykawy, C.A. Lander, K.S. Sharma, R.C. Barber, H.E. Duckworth
1990En02	NUPAB	510,	209	P.M. Endt, C. Alderliesten, F. Zijderhand, A.A. Wolters, A.G.M. van Hees

1990En08	NUPAB	521,	1	P.M. Endt
1990Fa03	PHSTB	41,	652	B. Fant, T. Weckstrom, A. Kallberg
1990Fo03	PRVCA	41,	R1890	B. Fogelberg, B. Ekstrom, L. Sihver, G. Rudstam
1990Fo07	ZPAAD	337,	251	B. Fogelberg, Y. Zongyuan, B. Ekström, E. Lund, K. Aleklett, L. Sihver
1990Ge12	ZDACE	17,	119	Ch. Gerz, D. Wilsdorf, G. Werth
1990Gr10	ZPAAD	336,	247	M. Graefenstedt, P. Jürgens, U. Keyser, F. Münnich, F. Schreiber, K. Balog, T. Winkelmann, H.R. Faust, B. Pfeiffer
1990Ha02	PRVCA	41,	618	H.L. Hall, K.E. Gregorich, R.A. Henderson, C.M. Gannett, R.B. Chadwick, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, S.A. Kreek, D.M. Lee, M.J. Nurmia, D.C. Hoffman, C.E.A. Palmer, P.A. Baisden
1990Ha28	PRVCA	42,	1480	H.L. Hall, K.E. Gregorich, R.A. Henderson, C.M. Gannett, R.B. Chadwick, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, S.A. Kreek, N.J. Hannink, D.M. Lee, M.J. Nurmia, D.C. Hoffman, C.E.A. Palmer, P.A. Baisden
1990He11	PRVCA	41,	2325	M. Hellström, B. Fogelberg, L. Spanier, H. Mach
1990Ho02	PRVCA	41,	484	R.W. Hoff, S. Drissi, J. Kern, W. Strassmann, H.G. Börner, K. Schreckenbach, G. Barreau, W.D. Ruhter, L.G. Mann, D.H. White, J.H. Landrum, R.J. Dupzyk, R.F. Casten, W.R. Kane, D.D. Warner
1990Ho03	PRVCA	41,	631	D.C. Hoffman, D.M. Lee, K.E. Gregorich, M.J. Nurmia, R.B. Chadwick, K.B. Chen, K.R. Czerwinski, C.M. Gannett, H.L. Hall, R.A. Henderson, B. Kadkhodayan, S.A. Kreek, J.D. Leyba
1990Ho10	NUPAB	512,	189	F. Hoyler, J. Jolie, G.G. Colvin, H.G. Börner, K. Schreckenbach, P. Van Isacker, P. Fettweis, H. Göktürk, J.C. Dehaes, R.F. Casten, D.D. Warner, A.M. Bruce
1990Is02	PRVCA	41,	1272	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Is03	ZPAAD	335,	173	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Is06	ZPAAD	335,	243	M.C.P. Isaac, V.R. Vanin, O.A.M. Helene
1990Is07	PRVCA	42,	207	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Is09	CJPHA	68,	1237	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Ka01	PRVCA	41,	1276	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, K. Iwata, T. Suehiro, Y. Yoshida, O. Nitoh
1990Ka10	PRVCA	41,	2004	S. Kato, S. Kubono, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, T. Suehiro, Y. Yoshida
1990Ka19	PRVCA	42,	563	S. Kato, S. Kubono, M.H. Tanaka, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, T. Suehiro, Y. Yoshida
1990Ka21	NUPAB	514,	173	A. Kaerts, P.H.M. van Assche, S.A. Kerr, F. Hoyler, H.G. Börner, R.F. Casten, D.D. Warner
1990Ka27	PRVCA	42,	1918	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyashi, T. Suehiro, Y. Yoshida
1990Ki07	NUPAB	512,	425	S.W. Kikstra, C. van der Leun, P.M. Endt, J.G.L. Booten, A.G.M. van Hees, A.A. Wolters
1990Ko25	PRVCA	42,	1267	M.O. Kortelahti, B.D. Kern, R.A. Braga, R.W. Fink, I.C. Girit, R.L. Mlekodaj
1990Le03	ZPAAD	335,	117	M. Lewitowicz, R. Anne, A.G. Artukh, D. Bazin, A.V. Belozyorov, P. Bricault, C. Détraz, D. Guillemaud-Mueller, J.C. Jacmart, E. Kashy, A. Latimier, S.M. Lukyanov, A.C. Mueller, Yu. E. Penionzhkevich, F. Pougheon, A. Richard, W.D. Schmidt-Ott, Y. Zhang
1990Li14	NUCIA	103,	553	Sr. Little Flower, B.R.S. Babu, P. Venkataramaiah, H. Sanjeeviah
1990Li28	HYIND	59,	161	P. Lievens, R.E. Silverans, L. Vermeeren, E. Arnold, W. Borchers, W. Neu, R. Neugart, K. Wendt, F. Buchinger, E.B. Ramsay, G. Ulm
1990Li40	NIMAE	297,	217	H. Lindner, H. Trieb, T. von Egidy, H. Hiller, J. Klora, U. Mayerhofer, A. Walter, A.H. Wapstra
1990Ma03	PRVCA	41,	226	H. Mach, E.K. Warburton, R.L. Gill, R.F. Casten, J.A. Becker, B.A. Brown, J.A. Winger
1990Ma14	NUPAB	509,	413	A. Maj, H. Grawe, H. Kluge, A. Kuhnert, K.H. Maier, J. Recht, N. Roy, H. Hubel, M. Guttormsen
1990Me08	PRVCA	41,	2921	J.T. Meek, W.G. Millen, G.W. Stockton, R.T. Kouzes
1990Mu06	NUPAB	513,	1	A.C. Mueller, D. Guillemaud-Mueller, J.C. Jacmart, E. Kashy, F. Pougheon, A. Richard, A. Staudt, H.V. Klapdor-Kleingrothaus, M. Lewitowicz, R. Anne, P. Bricault, C. Détraz, Yu. E. Penionzhkevich, A.G. Artukh, A.V. Belozyorov, S.M. Lukyanov, D. Bazin, W.D. Schmidt-Ott
1990Ne.A	PrvCom		Gizon	R. Neugart

1990Ne.B	P-Monterey			Zs. Netmeth, Karlsruhe
1990NeZY	PrvCom			R. Neugart
1990Ni05	ZPAAD	336,	473	V. Ninov, F.P. Heßberger, P. Armbruster, S. Hofmann, G. Münzenberg, M. Leino, Y. Fujita, D. Ackermann, W. Morawek, A. Lüttgen
1990Og01	PYLBB	235,	35	A.A. Ogloblin, N.I. Venikov, S.K. Lisin, S.V. Pirozhkov, V.A. Pchelin, Yu. F. Rodionov, V.M. Semochkin, V.A. Shabrov, I.K. Shvetsov, V.M. Shubko, S.P. Tretyakova, V.L. Mikheev
1990Pe10	PHSTB	T32,	38	H. Penttila, J. Aysto, P. Jauho, A. Jokinen, J.M. Parmonen, P. Taskinen, K. Eskola, M. Leino, P. Dendooven, C.N. Davids
1990Pi05	NUPAB	510,	301	Š. Piskoř, W. Schäferlingová
1990Po13	IANFA	54,	852	A.V. Potempa, V.P. Afanasjev, Ya. Vavryshchuk, K. Ya. Gromov, V.G. Kalinnikov, N. Yu. Kovotskii, V.V. Kuznetsov, M. Lewandowski, Ya. A. Saidimov, M. Yakhim, Zh. Sereter, V.I. Fominykh, V. Charnadski, Yu. V. Yushkevich, M. Yanistki, A. Yasinski
1990Pr02	CJPHA	68,	261	W.V. Prestwich, T.J. Kennett, and erratum CJPHA 68,1352
1990Re08	ZPAAD	336,	381	G. Reusen, V.R. Bom, P. Decrock, P. Dendooven, M. Huyse, R.W. Hollander, P. Van Duppen, J. Vanhorenbeeck, J. Wauters
1990Ru02	JPGPE	16,	255	E. Ruchowska, J. Żylicz, C.F. Liang, P. Paris, Ch. Briançon
1990Sa32	ZPAAD	337,	161	H. Salewski, K. Becker, W.-D. Schmidt-Ott, T. Hild, F. Meissner, E. Runte, R. Michaelsen
1990Sa.A	Th.-Gottingen			H. Salewski
1990Se17	FZKAA	22,	183	H. Seyfarth, H.H. Guven, B. Kardon, G. Lhersonneau, K. Sistemich, S. Brant, N. Kaffrell, P. Maier-Komor, H.K. Vonach, V. Paar, D. Vorkapic, R.A. Meyer
1990Sh15	IMPAE	5,	2821	R.K. Sheline, C.F. Liang, P. Paris
1990Sh.A	AnRpt LBL		114	A.A. Shihab-Eldin, P.A. Wilmarth, K.S. Vierinen, J.M. Nitschke, R.M. Chasteler, R.B. Firestone
1990St13	ZPAAD	336,	369	U. Stöhlker, A. Blönnigen, W. Lippert, H. Wollnik
1990St25	PRLTA	65,	3104	H. Stolzenberg, St. Becker, G. Bollen, F. Kern, H.-J. Kluge, Th. Otto, G. Savard, L. Schweikhard, G. Audi, R.B. Moore
1990St29	ZPAAD	337,	371	M. Steinmayer, K.E.G. Lobner, L. Corradi, U. Lenz, P.R. Pascholati, U. Quade, K. Rudolph, W.K. Schomburg, S.J. Skorka
1990Ta07	ZPAAD	335,	477	I. Tago, Y. Kawase, K. Okano
1990Ta30	NUPAB	520,	317c	N. Tajima
1990Tu01	ZPAAD	337,	361	X.L. Tu, X.G. Zhou, D.J. Vieira, J.M. Wouters, Z.Y. Zhou, H.L. Seifert, V.G. Lind
1990Wa22	NIMAE	292,	671	A.H. Wapstra
1990We01	PRVCA	41,	778	D. Weselka, P. Hille, A. Chalupka
1990Wi12	PRVCA	42,	954	J.A. Winger, J.C. Hill, F.K. Wohn, E.K. Warburton, R.L. Gill, A. Piotrowski, R.B. Schuhmann, D.S. Brenner
1990Zh.A	GANIL-T-9002			Y.H. Zhang

1991

1991An10	ZPAAD	338,	363	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, G.M. Ter-Akopian, A.V. Yeremin
1991Ba06	NUPAB	523,	261	M.K. Balodis, N.D. Kramer, P.T. Prokofjev, A.V. Afanasjev, T.V. Guseva, J.J. Tambergs, K. Schreckenbach, W.F. Davidson, D.D. Warner, J.A. Pinston, P.H.M. van Assche, A.M.J. Spits
1991Be25	NUPAB	533,	113	A. Ben Braham, C. Bourgeois, P. Kilcher, F. Le Blanc, B. Roussière, J. Sauvage, A.J. Kreiner, M.G. Porquet, ISOCELE
1991Bi04	PRVCA	44,	1208	C.R. Bingham, M.B. Kassim, M. Zhang, Y.A. Akovali, K.S. Toth, W.D. Hamilton, H.K. Carter, J. Kormicki, J. von Schwarzenberg, M.M. Jarrio
1991Bl05	PRVCA	44,	325	S. Blagus, D. Miljanic, M. Zadro, G. Calvi, M. Lattuada, F. Riggi, C. Spitaleri, C. Blyth, O. Karban
1991Bo02	PRVCA	43,	335	J.G.L. Booten, A.G.M. van Hees, P.W.M. Glaudemans, R. Wervelman
1991Bo32	NUPAB	531,	353	V. Borrel, J.C. Jacmart, F. Pougheon, R. Anne, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, D. Bazin, R. Del Moral, J.P. Dufour, F. Hubert, M.S. Pravikoff, E. Roeckl

1991Bo35	NUPAB	534,	255	H.G. Börner, R.F. Casten, I. Förster, D. Lieberz, P. von Brentano, S.J. Robinson, T. von Egidy, G. Hlawatsch, H. Lindner, P. Geltenbort, F. Hoyler, H. Faust, G. Colvin, W.R. Kane, M. MacPhail
1991Bo.B	P-Niigata		83	H.G. Bohlen
1991Br17	ZPAAD	339,	495	T. Brohm, H.-G. Clerc, U. Gollerthan, W. Schwab, K.-H. Schmidt, R.S. Simon
1991Bu12	PRLTA	67,	2626	B. Budick, J. Chen, H. Lin
1991Du07	ZPAAD	341,	39	S.B. Dutta, R. Kirchner, O. Klepper, T.U. Kuhl, D. Marx, G.D. Sprouse, R. Menges, U. Dinger, G. Huber, S. Schroder
1991Fi03	PRVCA	43,	1066	R.B. Firestone, J. Gilat, J.M. Nitschke, P.A. Wilmarth, K.S. Vierinen
1991Ge02	ZPAAD	338,	405	J. Genevey, A. Gizon, G. Marguier, C. Richard-Serre, A. Knipper, P. Paris, C.F. Liang, B. Weiss, ISOLDE, ISOCELE
1991Go19	NUPAB	531,	613	M.G. Gornov, Yu. B. Gurov, P.V. Morokhov, V.A. Pechkurov, V.I. Savelyev, F.M. Sergeev, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov, V.P. Koptev, K.O. Oganesyan, B.P. Osipenco
1991Gr12	NUPAB	530,	401	J.C. Griffin, R.A. Braga, R.W. Fink, J.L. Wood, H.K. Carter, R.L. Mlekodaj, C.R. Bingham, E. Coenen, M. Huyse, P. Van Duppen
1991Gr13	PRVCA	44,	1728	V. Grafen, B. Ackermann, H. Baltzer, T. Bihn, C. Günther, J. de Boer, N. Gollwitzer, G. Graw, R. Hertenberger, H. Kader, A. Levon, A. Lösch
1991Ha31	EULEE	15,	491	D. Hagena, G. Werth
1991He04	ZPAAD	338,	7	K. Heiguchi, T. Hosoda, T. Komatsubara, T. Nomura, K. Furuno, R. Nakatani, S. Mitarai, T. Kuroyanagi
1991He21	ZPAAD	340,	225	F. Heine, T. Faestermann, A. Gillitzer, J. Homolka, M. Köpf, W. Wagner, see also 92He. A
1991Hi02	PRVCA	43,	2591	J.C. Hill, D.D. Schwellenbach, F.K. Wohn, J.A. Winger, R.L. Gill, H. Ohm, K. Sistemich
1991Hi.A	AnRpt LBL		69	M.M. Hindi, K.L. Wedding, E.B. Norman, K.T. Lesko, B. Sur, R.-M. Larimer, M.T.F. da Cruz, K.R. Czerwinski
1991Ho05	JPGPE	17,	145	T.H. Hoare, P.A. Butler, G.D. Jones, M. Loiselet, O. Naviliat-Cuncic, J. Vervier, M. Dahlinger, A.M.Y. El-Lawindy, R. Wadsworth, D.L. Watson
1991Ho08	CZYPA	41,	525	J. Honzatko, K. Konecny, Z. Kosina
1991Hy01	PRLTA	67,	1708	J.G. Hykawy, J.N. Nxumalo, P.P. Unger, C.A. Lander, R.C. Barber, K.S. Sharma, R.D. Peters, H.E. Duckworth
1991Io02	NUPAB	531,	112	M. Ionescu-Bujor, A. Iordachescu, G. Pascovici
1991Is01	PRVCA	43,	1086	M.A. Islam, T.J. Kennett, W.V. Prestwich
1991Is02	CJPHA	69,	658	M.A. Islam, T.J. Kennett, W.V. Prestwich
1991Jo11	ZPAAD	340,	21	A. Jokinen, J. Äystö, P. Dendooven, K. Eskola, Z. Janas, P.P. Jauho, M.E. Leino, J.M. Parmonen, H. Penttilä, K. Rykaczewski, P. Taskinen
1991Ka41	PYLBB	256,	105	H. Kawakami, S. Kato, T. Ohshima, S. Shibata, K. Ukai, N. Morikawa, N. Nogawa, K. Haga, T. Nagafuchi, M. Shigeta, Y. Fukushima, T. Taniguchi
1991Ke06	NIMAE	300,	67	H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, R.S. Simon, P. Kleinheinz, C.F. Liang, P. Paris
1991Ke08	ZPAAD	339,	355	H. Keller, R. Barden, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, I.S. Grant, A. Płochocki, K. Rykaczewski, J. Szerypo, J. Żylicz, ISOLDE
1991Ke10	NUPAB	534,	77	J. Kern, A. Raemy, W. Beer, J.-Cl. Dousse, W. Schwitz, M.K. Balodis, P.T. Prokofjev, N.D. Kramer, L.I. Simonova, R.W. Hoff, D.G. Gardner, M.A. Gardner, R.F. Casten, R.L. Gill, R. Eder, T. von Egidy, E. Hagn, P. Hungerford, H.J. Scheerer, H.H. Schmidt, E. Zech, A. Chalupka, A.V. Murzin, V.A. Libman, I.V. Kononenko, C. Coceva, P. Giacobbe, I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov, S. Brant, V. Paar
1991Ke11	ZPAAD	340,	363	H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, R.S. Simon, P. Kleinheinz, R. Menegazzo, C.F. Liang, P. Paris, K. Rykaczewski, J. Żylicz, and Thesis H. Keller THD report GSI-91-6 February 1991
1991Ki04	NUPAB	529,	39	S.W. Kikstra, Z. Guo, C. van der Leun, P.M. Endt, S. Raman, T.A. Walkiewicz, J.W. Starner, E.T. Jurney, I.S. Towner
1991Kl02	PRVCA	44,	2801	N. Klay, F. Kaeppeler, H. Beer, G. Schatz, H. Börner, F. Hoyler, S.J. Robinson, K. Schreckenbach, B. Krusche, U. Mayerhofer, G. Hlawatsch, H. Lindner, T. von Egidy, W. Andrejtscheff, P. Petkov
1991Ko.A	P-Minsk		117	I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov
1991Ko.B	P-Niigata		187	T. Kobayashi

1991Kr15	ZPAAD	340,	419	K.-L. Kratz, H. Gabelmann, P. Möller, B. Pfeiffer, H.L. Ravn, A. Wöhr, ISOLDE
1991Kr.A	AnRpt LBL		57	S.A. Kreek, et al
1991Ku12	NUPAB	534	367	I. Kurniawan, T. Aoki, T. Komatsubara, T. Hosoda, M. Yamanouchi
1991Le09	PRVCA	44,	336	M. Leino, P.P. Jauho, J. Aysto, P. Decrock, P. Dendooven, K. Eskola, M. Huyse, A. Jokinen, J.M. Parmonen, H. Penttila, G. Reusen, P. Taskinen, P. Van Duppen, J. Wauters
1991Le15	ZPAAD	340,	107	M. Lewandowski, A.W. Potempa, V.I. Fominikh, K.Y. Gromov, M. Janicki, J.V. Juschkevich, V.G. Kalinnikov, N.J. Kotovskij, V.V. Kuznetsov, N. Raschkova, J.A. Sajdimov, J. Wawryszczuk
1991Li05	PYLBB	256,	141	P. Lievens, R.E. Silverans, L. Vermeeren, W. Borchers, W. Neu, R. Neugart, K. Wendt, F. Buchinger, E. Arnold, and the ISOLDE Collaboration
1991Ly01	PRVCA	44,	764	J.E. Lynn, E.T. Jurney, S. Raman
1991Ma65	ZPAAD	341,	1	U. Mayerhofer, T. von Egidy, J. Jolie, H.G. Börner, G. Colvin, S. Judge, B. Kruschke, S.J. Robinson, K. Schreckenbach, S. Brant, V. Paar
1991Me05	ZPAAD	339,	315	F. Meissner, W.-D. Schmidt-Ott, K. Becker, U. Bosch-Wicke, U. Ellmers, H. Salewski, R. Michaelsen
1991Mi08	ZPAAD	338,	371	S. Michaelsen, K.P. Lieb, S.J. Robinson
1991Mi15	NUPAB	530,	211	B.J. Min, S. Suematsu, S. Mitarai, T. Kuroyanagi, K. Heiguchi, M. Matsuzaki
1991No07	JPGPE	17,	s291	E.B. Norman, B. Sur, K.T. Lesko, M.M. Hindi, R.-M. Larimer, T,R. Ho, J.T. Witort, P.N. Luke, W.L. Hansen, E.E. Haller
1991Om01	ZPAAD	338,	241	J.P. Omtvedt, P. Hoff, M. Hellstrom, L. Spanier, B. Fogelberg
1991Or01	PYLBB	258,	29	N.A. Orr, W. Mittig, L.K. Fifield, M. Lewitowicz, E. Plagnol, Y. Schutz, W.L. Zhan, L. Bianchi, A. Gillibert, A.V. Belozyorov, S.M. Lukyanov, Yu. E. Penionzhkevich, A.C.C. Villari, A. Cunsolo, A. Foti, G. Audi, C. Stephan, L. Tassan-Got, and PrvCom GAu December 1990, and erratum PYLBB 271(1991)468
1991Pa05	ZPAAD	338,	295	R.D. Page, P.J. Woods, S.J. Bennett, M. Freer, B.R. Fulton, R.A. Cunningham, J. Groves, M.A.C. Hotchkis, A.N. James
1991Pe04	ZPAAD	338,	291	H. Penttilä, J. Äystö, K. Eskola, Z. Janas, P.P. Jauho, A. Jokinen, M.E. Leino, J.M. Parmonen, P. Taskinen
1991Pe10	PRVCA	44,	935	H. Penttilä, P.P. Jauho, J. Äystö, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, J. Wauters
1991Ra01	PRVCA	43,	521	S. Raman, T.A. Walkiewicz, S. Kahane, E.T. Jurney, J. Sa, Z. Gacsi, J.L. Weil, K. Allaart, G. Bonsignori, J.F. Shriner,Jr.
1991Re02	PRVCA	44,	1435	P.L. Reeder, R.A. Warner, W.K. Hensley, D.J. Vieira, J.M. Wouters
1991Re.A	PrvCom	GAu	Sep	G. Reusen, M. Huyse
1991Ro07	PRLTA	67,	957	R.G.H. Robertson, T.J. Bowles, G.J. Stephenson,Jr., D.L. Wark, J.F. Wilkerson, D.A. Knapp
1991Ro.A	P-PacGrove		440	S.J. Robinson, H.G. Börner, S. Judge, J. Jolie, P. Schillebeeckx
1991Ry01	ADNDA	47,	205	A. Rytz
1991Sh19	PRVCA	44,	2439	K.S. Sharma, E. Hagberg, G.R. Dyck, J.C. Hardy, V.T. Koslowsky, H. Schmeing, R.C. Barber, S. Yuan, W. Perry, M. Watson
1991Su09	PRLTA	66,	2444	B. Sur, E.B. Norman, K.T. Lesko, M.M. Hindi, R.-M. Larimer, P.N. Luke, W.L. Hansen, E.E. Haller
1991TaZX	AnRpt UTTAC		25	K. Takahashi, H. Sugawara, K. Heiguchi, T. Komatsubara, T. Hayakawa, S. Ohki, J. Lu, K. Furuno
1991To08	PRVCA	44,	1868	K.S. Toth, K.S. Vierinen, M.O. Kortelahti, D.C. Sousa, J.M. Nitschke, P.A. Wilmarth
1991To09	ZPAAD	340,	343	K.S. Toth, K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler
1991Tu02	PRLTA	67,	3211	A.L. Turkevich, T.E. Economou, G.A. Cowan
1991Va04	NUPAB	529,	268	P. Van Duppen, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, J. Wauters
1991Wa21	ZPAAD	339,	533	J. Wauters, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen
1991Wa.A	PrvCom	AHW		A.H. Wapstra
1991Zh24	PYLBB	260,	285	X.G. Zhou, X.L. Tu, J.M. Wouters, D.J. Vieira, K.E.G. Lobner, H.L. Seifert, Z.Y. Zhou, G.W. Butler
1991Zl01	PRLTA	67,	560	I. Žlimen, A. Ljubičić, S. Kaučić, B.A. Logan

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1992Al.A	B-Bernkastel		PC2	D.V. Aleksandrov, Yu. A. Glukhov, E. Yu. Nikolskii, B.G. Novatskii, A.A. Ogloblin, D.N. Stepanov
1992Al.B	B-Bernkastel		PA6	G.D. Alkhazov, B.N. Belyaev, V.D. Domkin, Yu. G. Korobulin, V.V. Lukashevich, V.S. Mukhin, Yu. A. Suchilin, V.G. Khlopin
1992An04	ZPAAD	342,	123	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, R.N. Sagajdak, G.M. Ter-Akopian, A.V. Yeremin
1992An19	JRNCD	166,	63	M.S. Antony, D. Oster, A. Hachem
1992An.A	P-Bernkastel		759	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, M. Florek, A.P. Kabachenko, O.N. Malyshev, S. Saro, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1992Ay02	PRLTA	69,	1167	J. Äystö, A. Astier, T. Enqvist, K. Eskola, Z. Janas, A. Jokinen, K.-L. Kratz, M. Leino, H. Penttilä, B. Pfeiffer, J. Żylicz
1992Ba01	PRVCA	45,	69	D. Bazin, R. Del Moral, J.P. Dufour, A. Fleury, F. Hubert, M.S. Pravikoff, R. Anne, P. Bricault, C. Détraz, M. Lewitowicz, Y. Zheng, D. Guillemaud-Mueller, J.C. Jacmart, A.C. Mueller, F. Pougheon, A. Richard
1992Ba28	ZPAAD	342,	125	K. Balog, M. Graefenstedt, M. Groß, P. Jürgens, U. Keyser, F. Münnich, T. Otto, F. Schreiber, T. Winkelmann, J. Wulff, ISOLDE
1992Ba.A	P-Bernkastel		777	P.H. Barker, S.A. Brindhaban
1992Be17	ZPAAD	341,	155	M.R. Beitins, S.T. Boneva, V.A. Khitrov, L.A. Malov, Y.P. Popov, P.T. Prokofjev, G.L. Rezvaya, L.I. Simonova, A.M. Sukhovoj, E.V. Vasilieva
1992Bo02	NUPAB	536,	260	R. Böttger, H. Schölermann
1992Bo05	NUPAB	539,	249	M.J.G. Borge, D.G. Burke, H. Gietz, P. Hill, N. Kaffrell, W. Kurcewicz, G. Løvhøiden, S. Mattsson, R.A. Naumann, K. Nybø, G. Nyman, T.F. Thorsteinsen, ISOLDE
1992Bo21	ZPAAD	342,	267	A. Bouldjedri, R. Duffait, R. Beraud, A. Emsallem, N. Redon, A. Gizon, J. Genevey, D. Barneoud, J. Blachot
1992Bo28	JMOPE	39,	257	G. Bollen, H.-J. Kluge, Th. Otto, G. Savard, L. Schweikhard, H. Stolzenberg, G. Audi, R.B. Moore, G. Rouleau, ISOLDE, and PrvCom GAu November 1991
1992Bo37	ZPAAD	344,	135	V. Borrel, R. Anne, D. Bazin, C. Borcea, G.G. Chubarian, R. Del Moral, C. Détraz, S. Dogny, J.P. Dufour, L. Faux, A. Fleury, L.K. Fifield, D. Guillemaud-Mueller, F. Hubert, E. Kashy, M. Lewitowicz, C. Marchand, A.C. Mueller, F. Pougheon, M.S. Pravikoff, M.G. Saint-Laurent, O. Sorlin
1992Bo.B	PrvCom	AHW	Apr	R. Böttger
1992Bo.D	P-Bernkastel		743	V.A. Bolshakov, A.G. Dernjatin, K.A. Mezilev, Yu. N. Novikov, A.V. Popov, Yu. Ya. Sergeev, V.I. Tikhonov, V.A. Sergienko, G.V. Veselov
1992Br06	PRLTA	68,	1671	R. Broda, R.H. Mayer, I.G. Bearden, Ph. Benet, P.J. Daly, Z.W. Grabowski, M.P. Carpenter, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, E.F. Moore, S. Lunardi, J. Blomqvist
1992Br17	NUPAB	542,	1	A.M. Bruce, W. Gelletly, G.G. Colvin, P. Van Isacker, D.D. Warner
1992Bu10	ZPAAD	342,	403	D. Bucurescu, M.S. Rapaport, C.F. Liang, P. Paris, G. Cata-Danil
1992Bu12	NUPAB	550,	179	D.G. Burke, P.E. Garrett
1992Bu13	PRVCA	46,	1267	B. Budick, J. Chen, H. Lin
1992Ch09	PRVCA	45,	1720	W.-T. Chou, E.K. Warburton
1992Ch27	PRLTA	69,	3151	M. Chen, D.A. Imel, T.J. Radcliffe, H. Henrikson, F. Boehm
1992Co23	PYLBB	295,	143	E. Cosulich, G. Gallinaro, F. Gatti, S. Vitale
1992Cz.A	LBL-32		233	K.R. Czerwinski (thesis)
1992Da14	ZPAAD	343,	161	B. Dasmahapatra, S. Bhattacharya
1992Do10	PRVCA	46,	2127	J. Döring, G. Winter, L. Funke, B. Cederwall, F. Lidén, A. Johnson, A. Atac, J. Nyberg, G. Sletten, M. Sugawara
1992El07	PRVCA	46,	1535	S.R. Elliott, A.A. Hahn, M.K. Moe, M.A. Nelson, M.A. Vient
1992Ga15	NUPAB	550,	1	P.E. Garret, D.G. Burke
1992Ge08	PRLTA	68,	3412	H. Geissel, K. Beckert, F. Bosch, H. Eickhoff, B. Franczak, B. Franzke, M. Jung, O. Klepper, R. Moshammer, G. Münzenberg, F. Nickel, F. Nolden, U. Schaaf, C. Scheidenberger, P. Spädtke, M. Steck, K. Sümmerer, A. Magel
1992Go10	PRVCA	46,	833	J. Görres, M. Wiescher, K. Scheller, D.J. Morrissey, B.M. Sherrill, D. Bazin, J.A. Winger

1992Gr02	PRVCA	45,	1058	K.E. Gregorich, H.L. Hall, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, S.A. Kreek, B.A. Khadkodayan, M.J. Nurmia, D.M. Lee, D.C. Hoffman
1992Gr06	NIMAE	311,	512	M. Groß, P. Jürgens, U. Keyser, S. Kluge, M. Mehrtens, S. Müller, F. Münnich, J. Wulff
1992Gr09	ZPAAD	341,	247	H. Grawe, P. Hoff, J.P. Omtvedt, K. Steffensen, R. Eder, H. Haas, H. Ravn, ISOLDE
1992Gr.A	P-Bernkastel		77	M. Groß, P. Jürgens, S. Kluge, M. Mehrtens, S. Müller, F. Münnich, J. Wulff, see also 87Gr18
1992Gu03	NUPAB	540,	117	Z. Guo, C. Alderliesten, C. van der Leun, P.M. Endt
1992Ha03	PRVCA	45,	900	F.X. Hartmann
1992Ha10	PRVCA	45,	1609	E. Hagberg, X.J. Sun, V.T. Koslowsky, H. Schmeing, J.C. Hardy
1992Ha15	NIMAE	313,	237	F.X. Hartmann, R.A. Naumann
1992Ha21	ZPAAD	343,	7	A. Harder, S. Michaelsen, A. Jungclaus, K.P. Lieb, A.P. Williams, H.G. Börner, M. Trautmannsheimer
1992Ha22	PRVCA	46,	1873	T.M. Hamilton, K.E. Gregorich, D.M. Lee, K.R. Czerwinski, N.J. Hannink, C.D. Kacher, B. Kadkhodayan, S.A. Kreek, M.J. Nurmia, M.R. Lane, M.P. Neu, A. Türler, D.C. Hoffman
1992He.A	P-Bernkastel		331	F. Heine, T. Faestermann, A. Gillitzer, H.J. Körner
1992Hi07	ZPAAD	342,	1	Th. Hilberath, St. Becker, G. Bollen, H.-J. Kluge, U. Kronert, G. Passler, J. Rikovska, R. Wyss, and the ISOLDE Collaboration
1992Ho09	PYLBB	287,	381	E. Holzschuh, M. Fritschi, W. Kündig
1992Hu04	PRVCA	46,	1209	M. Huyse, P. Decrock, P. Dendooven, G. Reusen. P. Van Duppen, J. Wauters
1992Id01	ZPAAD	341,	427	N. Idrissi, A. Gizon, J. Genevey, P. Paris, V. Barci, D. Barnéoud, J. Blachot, D. Bucurescu, R. Duffait, J. Gizon, C.F. Liang, B. Weiss
1992Iv.A	Th.-Pennsylvania			R.A. Ivie Master's Thesis
1992Jo05	NUPAB	549,	420	A. Jokinen, J. Äystö, P.P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, K. Eskola, Z. Janas
1992Ju01	PRLTA	69,	2164	M. Jung, F. Bosch, K. Beckert, H. Eickhoff, H. Folger, B. Franzke, A. Gruber, P. Kienle, O. Klepper, W. Koenig, C. Kozhuharov, R. Mann, R. Moshammer, F. Nolden, U. Schaaf, G. Soff, P. Spädtke, M. Steck, T. Stöhlker, K. Sümmerer
1992Ka08	RAACA	56,	1	B. Kadkhodayan, R.A. Henderson, H.L. Hall, J.D. Leyba, K.R. Czerwinski, S.A. Kreek, N.J. Hannink, K.E. Gregorich, D.M. Lee, M.J. Nurmia, D.C. Hoffman
1992Ka29	PYLBB	287,	45	H. Kawakami, S. Kato, T. Ohshima, C. Rosenfeld, H. Sakamoto, T. Sato, S. Shibata, J. Shirai, Y. Sugaya, T. Suzuki, K. Takahashi, T. Tsukamoto, K. Ueno, K. Ukai, S. Wilson, Y. Yonezawa
1992Ke06	PHSTB	46,	575	J. Kern, T. Engel, D. Hagena, G. Werth
1992Kr01	PRVCA	45,	1064	J.V. Kratz, M.K. Gober, H.P. Zimmermann, M. Schädel, W. Brüchle, E. Schimpf, K.E. Gregorich, A. Türler, N.J. Hannink, K.R. Czerwinski, B. Kadkhodayan, D.M. Lee, M.J. Nurmia, D.C. Hoffman, H. Gäggeler, D. Jost, J. Kovacs, U.W. Scherer, A. Weber
1992Kr.A	AnRpt LBL		58	S.A. Kreek, et al
1992Ku02	NUPAB	537,	153	S. Kubono, Y. Funatsu, N. Ikeda, M. Yasue, T. Nomura, Y. Fuchi, H. Kawashima, S. Kato, H. Miyatake, H. Orihara, T. Kajino
1992Le09	JPGPE	18,	1177	V.S. Letokhov, V.I. Mishin, S.K. Sekatsky, V.N. Fedoseyev, G.D. Alkhazov, A.E. Barzakh, V.P. Denisov, V.E. Starodubsky
1992Li09	ZPAAD	341,	401	C.F. Liang, P. Paris, A. Gizon, V. Barci, D. Barneou, R. Béraud, J. Blachot, Ch. Briançon, J. Genevey, R.K. Sheline, and PrvCom GAu September 1992
1992Lo.B	UCRL-JC-109951			R.W. Lougheed, et al
1992Me07	ZPAAD	341,	475	R. Menges, U. Dinger, N. Boos, G. Huber, S. Schroder, S. Dutta, R. Kirchner, O. Klepper, T. Kuhl, D. Marx, G.D. Sprouse
1992Me10	ZPAAD	343,	283	F. Meissner, H. Salewski, W.-D. Schmidt-Ott, U. Bosch-Wicke, R. Michaelsen
1992Mo03	PRVCA	45,	1392	K.J. Moody, E.K. Hulet, P.B. Price
1992Mo13	PRVCA	46,	R6	T. Morikawa, M. Oshima, T. Sekine, Y. Hatsukawa, S. Ichikawa, H. Iimura, A. Osa, M. Shibata, A. Taniguchi
1992Mo15	ZPAAD	342,	273	D.M. Moltz, J.C. Batchelder, T.F. Lang, T.J. Ognibene, J. Cerny, P.E. Haustein, P.L. Reeder
1992Mu12	ZPAAD	342,	393	J. Mukai, A. Odahara, R. Nakatani, Y. Haruta, H. Tomura, B.J. Min, K. Heiguchi, S. Suematsu, S. Mitarai, T. Kuroyanagi

1992Os04	ZPAAD	343,	489	A.N. Ostrowski, H.G. Bohlen, A.S. Demyanova, B. Gebauer, R. Kalpakchieva, Ch. Langner, H. Lenske, M. von Lucke-Petsch, W. von Oertzen, A.A. Ogloblin, Y.E. Penionzhkevich, M. Wilpert, Th. Wilpert
1992Os07	NIMBE	70,	551	A. Osa, T. Ikuta, A. Taniguchi, H. Yamamoto, K. Kawade, S. Ichikawa, Y. Kawase
1992Ot.A	PrvCom	GAu	Mar	E.W. Otten
1992Pa05	PRLTA	68,	1287	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1992PeZX	Th.-Jyvaskyla			H. Penttilä
1992Pl01	ZPAAD	342,	43	A. Płochocki, K. Rykaczewski, T. Batsch, J. Szerypo, J. Żylicz, R. Barden, O. Klepper, E. Roeckl, D. Schardt, H. Gabelmann, P. Hill, H. Ravn, T. Thorsteinsen, I.S. Grant, H. Grawe, P. Manakos, L.D. Skouras, ISOLDE
1992Po14	BRSPE	56,	666	A.V. Potempa, K. Ya. Gromov, J. Wawryszczuk, V.G. Kalinnikov, V.V. Kuznetsov, M. Levandovsky, J. Saraatar, Ya. Saidimov, V.I. Fominykh, Yu. V. Yushkevich, M.B. Yuldashev
1992Pr03	ZPAAD	342,	23	M. Przewloka, A. Przewloka, P. Wächter, H. Wollnik
1992Pr04	ZPAAD	342,	27	M. Przewloka, A. Przewloka, P. Wächter, H. Wollnik
1992Ra18	PRVCA	46,	2241	S. Raman, J.L. Campbell, A. Prindle, R. Gunnink, J.C. Palathingal
1992Ra19	PRVCA	46,	972	S. Raman, E.T. Jurney, J.W. Starner, J.E. Lynn
1992Sa03	NUPAB	540,	83	J. Sauvage, C. Bourgeois, P. Kilcher, F. Le Blanc, B. Roussière, M.I. Macias-Marques, F. Bragança Gil, M.G. Porquet, H. Dautet, ISOCELE
1992Sc16	NUPAB	545,	646	W.-D. Schmidt-Ott, H. Salewski, F. Meissner, U. Bosch-Wicke, P. Koschel, V. Kunze, R. Michaelsen
1992Sh.A	P-Bernkastel		31	K.S. Sharma, P. Unger, G.R. Dyck, R.C. Barber, E. Hagberg, J.G. Hykawy, V.T. Koslowsky, J.C. Hardy, H. Schmeing, G. Savard, W. Perry, M. Watson, and PrvCom AHW October 1992
1992Sp.A	PrvCom		92Ch09	L. Spanier, B. Fogelberg, M. Hellström
1992Th06	NUPAB	548,	71	K. Theine, A.P. Byrne, H. Hubel, M. Murzel, R. Chapman, D. Clarke, F. Khazaie, J.C. Lisle, J.N. Mo, J.D. Garrett, H. Ryde, R. Wyss
1992To02	PRVCA	45,	856	K.S. Toth, H.J. Kim, J.W. McConnell, C.R. Bingham, D.C. Sousa
1992Ul.A	PrvCom	AHW	Mar	S. Ulbig
1992Va.A	P-Bernkastel		3	R.S. Van Dyck,Jr., D.L. Farnham, P.B. Schwinberg
1992Wa06	PRVCA	45,	1597	T.A. Walkiewicz, S. Raman, E.T. Jurney, J.W. Starner, J.E. Lynn
1992Wa20	PRLTA	69,	1737	T.F. Wang, E.A. Henry, J.A. Becker, A. Kuhnert, M.A. Stoyer, S.W. Yates, M.J. Brinkman, J.A. Cizewski, A.O. Macchiavelli, F.S. Stephens, M.A. Deleplanque, R.M. Diamond, J.E. Draper, F.A. Azaiez, W.H. Kelly, W. Korten, E. Rubel, Y.A. Akovali
1992Wo03	ARISE	43,	551	D.H. Woods, S.A. Woods, M.J. Woods, J.L. Makepeace, C.W.A. Downey, D. Smith, A.S. Munster, S.E.M. Lucas, H. Sharma
1992Wu09	ZPAAD	344,	205	S. Wüstenbecker, H.W. Becker, H. Ebbing, W.H. Schulte, M. Berheide, M. Buschmann, C. Rolfs, G.E. Mitchell, J.S. Schweitzer
1992Xu04	PRVCA	46,	510	S.-W. Xu, J.-S. Guo, S.-G. Yuan, M.-Q. Liu, E. Hagberg, V.T. Koslowsky, J.C. Hardy, G. Dyck, H. Schmeing, and erratum PRVCA 46(1992)2644

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1993Ab11	PYLBB	316,	26	H. Abele, G. Helm, U. Kania, C. Schmidt, J. Last, D. Dubbers
1993Al03	ZPAAD	344,	425	G.D. Alkhazov, L.H. Batist, A.A. Bykov, F.V. Moroz, S. Yu. Orlov, V.K. Tarasov, V.D. Wittmann
1993An07	ZPAAD	345,	247	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, R.N. Sagaidak, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1993An11	PYLBB	312,	49	A.N. Andreyev, D.D. Bogdanov, S. Saro, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1993An19	NIMAE	330,	125	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, V.A. Gorshkov, K.V. Mikhailov, A.P. Kabachenko, G.S. Popeko, S. Daro, G.M. Ter-Akopian, A.V. Yeremin
1993As02	PRVCA	47,	2954	K. Ashktorab, J.W. Jänecke, F.D. Becchetti, D.A. Roberts
1993Ba12	PRVCA	47,	2038	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, M.W. Rowe, J. Cerny
1993Ba61	PRVCA	48,	2593	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, M.W. Rowe, R.J. Tighe, J. Cerny
1993Be21	PRVCA	48,	R1	G.E. Berman, M.L. Pitt, F.P. Calaprice, M.M. Lowry

1993Be46	ZPAAD	346,	325	P. Bednarczyk, G. de Angelis, P. Spolaore, D. Ackermann, J. Rico, D. Bazzacco, S. Lunardi, L. Müller, C. Rossi Alvarez, F. Scarlassara, G.F. Segato, F. Soramel
1993Bo01	NUPAB	551,	54	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, V.A. Khitrov, Yu. V. Kholnov, Le Hong Khiem, Yu. P. Popov, A.M. Sukhovoj, S. Brant, V. Paar, V. Lopac
1993Bo03	ZPAAD	344,	381	H.G. Bohlen, B. Gebauer,M. von Lucke-Petsch, W. von Oertzen, A.N. Ostrowski, M. Wilpert, Th. Wilpert, H. Lenske, D.V. Alexandrov, A.S. Demyanova, E. Nikolskii, A.A. Korsheninnikov, A.A. Ogloblin, R. Kalpakchieva, Y.E. Penionzhkevich, Š. Piskoř
1993Bo20	NUPAB	556,	115	R. Bonetti, C. Chiesa, A. Guglielmetti, C. Migliorino, A. Cesana, M. Terrani
1993Bo.A	AnRpt GSI		65	F. Bosch, M. Jung
1993BoZK	P-Bernkastel		743	V.A. Bolshakov, A.G. Dernyatin, K.A. Mezilev, Yu. N. Novikov, A.V. Popov, Yu. Ya. Sergeev, V.I. Tikhonov, V.A. Sergienko, G.V. Veselov
1993Bu02	PRVCA	47,	131	D.G. Burke, P.C. Sood, P.E. Garrett, Tao Qu, R.K. Sheline, R.W. Hoff
1993Ch21	PRVCA	48,	109	R.E. Chrien, B.K.S. Koene, M.L. Stelts, R.A. Meyer, S. Brant, V. Paar, V. Lopac
1993Di03	PRVCA	47,	2916	D.E. DiGregorio, S. Gil, H. Huck, E.R. Batista, A.M.J. Ferrero, A.O. Gattone
1993Dm02	ARISE	44,	1097	S.N. Dmitriev, Yu. Ts. Oganessian, G.V. Buklabov, Yu. P. Kharitonov, A.F. Novgorodov, L.I. Salamatin, G. Ya. Starodub, S.V. Shishkin, Yu. V. Yushkevich, D. Newton
1993Do05	PRVCA	47,	2560	J. Döring, J.W. Holcomb, T.D. Johnson, M.A. Riley, S.L. Tabor, P.C. Womble, G. Winter
1993Fe14	JUPSA	62,	3343	A. Ferragut, Y. Gono, T. Murakami, T. Morikawa, Y.H. Zhang, K. Morita, A. Yoshida, M. Oshima, H. Kusakari, M. Sugawara, M. Ogawa, M. Nakajima, S. Mitarai, A. Odahara, E. Ideguchi, T. Shizuma, M. Kidera, J.C. Kim, S.-J. Chae, B.-J. Min, H. Kumagai
1993Go37	PRVAA	47,	3433	M.V. Gorshkov, G.M. Alber, L. Schweikhard, A.G. Marshall
1993Go38	IJMPD	128,	47	M.V. Gorshkov, S. Guan, A.G. Marshall
1993Gr17	NIMAE	337,	106	R.C. Greenwood, M.H. Putnam
1993Gr.C	AnRpt Berkeley		76	K.E. Gregorich, C.D. Kacher, M.F. Mohar, D.M. Lee, M.R. Lane, E.R. Sylwester, D.C. Hoffman, M. Schädel, W. Brüchle, J.V. Kratz, R. Günther and AnRpt GSI p.14
1993Ha05	ZPAAD	345,	143	A. Harder, S. Michaelsen, K.P. Lieb, A.P. Williams
1993Ho.A	AnRpt GSI		64	S. Hofmann, V. Ninov, F.P. Heßberger, H. Folger, G. Münzenberg, H.J. Schött, P. Armbruster, A.N. Andreyev, A.G. Popeko, A.V. Yeremin, M.E. Leino, R. Janik, S. Saro, M. Veselsky, and PrvCom AHW September 1995
1993Ja03	NUPAB	552,	340	Z. Janas, J. Äystö, K. Eskola, P.P. Jauho, A. Jokinen, J. Kownacki, M. Leino, J.M. Parmonen, H. Penttilä, J. Szerypo, J. Żylicz
1993Je06	PHSTB	48,	399	R. Jertz, D. Beck, G. Bollen, J. Emmes, H.-J. Kluge, E. Schark, S. Schwarz, T. Schwarz, L. Schweikhard, P. Senne C. Carlberg, I. Bergström, H. Borgenstrand, G. Rouleau, R. Schuch, F. Söderberg
1993Ka12	PRVCA	47,	2452	A. Kawashima, K. Takahashi, A. Masuda
1993Ko25	NUPAB	557,	419c	T. Komatsubara, K. Furuno, T. Hosoda, J. Mukai, T. Hayakawa, T. Morikawa, Y. Iwata, N. Kato, J. Espino, J. Gascon, N. Gjorup, G.B. Hagemann, H.J. Jensen, D. Jerrestam, J. Nyberg, G. Sletten, B. Cederwall, P.O. Tjom
1993Li10	NUCIA	106,	163	Sr. Little Flower, B.R.S. Babu, K. Neelakandan, R.N. Mukherjee, B.B. Baliga
1993Li18	PYLBB	312,	46	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Li34	PRVCA	48,	2151	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Li40	PRVCA	48,	3113	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Ma50	NUPAB	565,	543	G. Mairle, M. Seeger, H. Reinhardt, T. Kihm, K.T. Knöpfle, Chen Lin Wen
1993Ma.A	PrvCom	GAu	Feb	A.G. Marshall
1993Mi04	NUPAB	552,	232	S. Michaelsen, A. Harder, K.P. Lieb, G. Graw, R. Hertenberger, D. Hofer, P. Schiemenz, E. Zanotti, H. Lenske, A. Weigel, H.H. Wolter, S.J. Robinson, A.P. Williams
1993Mo01	PRLTA	70,	394	J.L. Mortara, I. Ahmad, K.P. Coulter, S.J. Freedman, B.K. Fujikawa, J.P. Greene, J.P. Schiffer, W.H. Trzaska, A.R. Zeuli

1993Mo18	NUPAB	563,	21	K.J. Moody, R.W. Lougheed, J.F. Wild, R.J. Dougan, E.K. Hulet, R.W. Hoff, C.M. Henderson, R.J. Dupzyk, R.L. Hahn, K. Sümmerer, G.D. O'Kelley, G.R. Bethune
1993Ni05	PRVCA	47,	1929	D. Nisius, B. Fornal, I.G. Bearden, R. Broda, R.H. Mayer, Z.W. Grabowski, P.J. Daly, C.N. Davids, I. Ahmad, B.B. Back, K. Bindra, M.P. Carpenter, W. Chung, D. Henderson, R.G. Henry, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, Y. Liang, F. Soramel, A.V. Ramayya
1993Nx01	PYLBB	302,	13	J.N. Nxumalo, J.G. Hykawy, P. P Unger, C.A. Lander, R.C. Barber, K.S. Sharma, H.E. Duckworth
1993Nx02	PYLBB	312,	388	J.N. Nxumalo, J.G. Hykawy, K.J. Aarts, R.C. Barber, K.S. Sharma, H.E. Duckworth
1993Oh02	PRVDA	47,	4840	T. Ohshima, H. Sakamoto, T. Sato, J. Shirai, T. Tsukamoto, Y. Sugaya, K. Takahashi, T. Suzuki, C. Rosenfeld, S. Wilson, K. Ueno, Y. Yonezawa, H. Kawakami, S. Kato, S. Shibata, K. Ukai
1993Os06	NIMAE	332,	169	A. Osa, T. Ikuta, M. Shibata, M. Miyachi, H. Yamamoto, K. Kawade, Y. Kawase, S. Ichikawa
1993Pe11	NUPAB	561,	416	H. Penttilä, T. Enqvist, P.P. Jauho, A. Jokinen, M. Leino, J.M. Parmonen, J. Äystö, K. Eskola
1993Po.A	PrvCom	GAu	Dec	F. Pougheon
1993Qu03	ZPAAD	346,	119	A.B. Quint, W. Reisdorf, K.-H. Schmidt, P. Armbruster, F.P. Heßberger, S. Hofmann, J. Keller, G. Münzenberg, H. Stelzer, H.-G. Clerc, W. Morawek, C.-C. Sahm
1993Ru01	ADNDA	53,	1	G. Rudstam, K. Aleklett, L. Sihver
1993Sa14	JPGPE	19,	603	S.K. Saha, R. Guin
1993Sc16	ZPAAD	345,	265	D. Schardt, K. Riisager
1993Se04	PRVCA	47,	1933	P.J. Sellin, P.J. Woods, T. Davinson, N.J. Davis, K. Livingston, R.D. Page, A.C. Shotter, S. Hofmann, A.N. James
1993Se09	ZPAAD	346,	323	P.J. Sellin, P.J. Woods, T. Davinson, N.J. Davis, A.N. James, K. Livingston, R.D. Page, A.C. Shotter
1993Sh07	JPGPE	19,	617	R.K. Sheline, J. Kvasil, C.F. Liang, P. Paris
1993Sh23	ARISE	44,	923	M. Shibata, M. Asai, T. Ikuta, H. Yamamoto, J. Ruan, K. Okano, K. Aoki, K. Kawade
1993Si05	NIMAE	330,	195	M.H. Sidky, J.G. Hyckawy, G.R. Dyck, R.C. Barber, K.S. Sharma, C.A. Lander, H.E. Duckworth
1993Sp.A	AnRpt JYFL		95	A.M. Spits, P.H.M. Van Assche, H.G. Borner, W.F. Davidson, D.D. Warner, K. Schreckenbach, G.G. Colvin, R.C. Greenwood, C.W. Reich, P.O. Lipas, J. Suhonen, P. Sinkko, A. Backlin
1993Th04	ARISE	44,	707	J.L. Thompson, A.R. Cartwright
1993To02	PRVCA	47,	1804	K.S. Toth, D.C. Sousa, P.A. Wilmarth, J.M. Nitschke, K.S. Vierin
1993To04	PRVCA	48,	436	K.S. Toth, D.C. Sousa, J.M. Nitschke, K.S. Vierinen, P.A. Wilmarth
1993Va04	PRLTA	70,	2888	R.S. Van Dyck,Jr., D.L. Farnham, P.B. Schwinberg
1993Va19	PZETA	57,	631	S.I. Vasilev, A.A. Klimenko, S.B. Osetrov, A.A. Pomansky, A.A. Smolnikov
1993Va.C	PrvCom	GAu	May	R.S. Van Dyck,Jr., D.L. Farnham, P.B. Schwinberg
1993Wa03	ZPAAD	345,	21	J. Wauters, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, R. Kirchner, O. Klepper, E. Roeckl
1993Wa04	PRVCA	47,	1447	J. Wauters, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, P. Lievens, ISOLDE
1993Wa.A	AnRpt GSI		63	J. Wauters, N. Bijnens, P. Dendooven, M. Huyse, H.Y. Hwang, H. Folger, R. Kirchner, O. Klepper, G. Reusen, J. Schwarzenberg, P. Van Duppen, E. Roeckl
1993We03	PYLBB	300,	210	Ch. Weinheimer, M. Przyrembel, H. Backe, H. Barth, J. Bonn, B. Degen, Th. Edling, H. Fischer, L. Fleischmann, J.U. Grooß, R. Haid, A. Hermanni, G. Kube, P. Leiderer, Th. Loeken, A. Moltz, R.B. Moore, A. Osipowicz, E.W. Otten, A. Picard, M. Schrader, M. Steininger
1993Wi03	PYLBB	299,	214	J.A. Winger, D. Bazin, W. Benenson, G.M. Crawley, D.J. Morrissey, N.A. Orr, R. Pfaff, B.M. Sherrill, M. Steiner, M. Thoennessen, S.J. Yennello, B.M. Young
1993Wi05	PRLTA	70,	1759	F.E. Wietfeldt, Y.D. Chan, M.T.F. da Cruz, A. García, R.-M. Larimer, K.T. Lesko, E.B. Norman,R.G. Stokstad, I. Žlimen

1993Wi18	PRVCA	48,	3097	J.A. Winger, D.P. Bazin, W. Benenson, G.M. Crawley, D.J. Morrissey, N.A. Orr, R. Pfaff, B.M. Sherrill, M. Thoennessen, S.J. Yennello, B.M. Young
1993Wo04	PRVCA	47,	2546	P.C. Womble, J. Döring, T. Glasmacher, J.W. Holcomb, G.D. Johns, T.D. Johnson, T.J. Petters, M.A. Riley, V.A. Wood, S.L. Tabor, P. Semmes
1993YeZX	Th.-Surrey			K.C. Yeung University of Surrey 1993
1993Yo07	PRLTA	71,	4124	B.M. Young, W. Benenson, M. Fauerbach, J.H. Kelley, R. Pfaff, B.M. Sherrill, M. Steiner, J.S. Winfield, T. Kubo, M. Hellström, N.A. Orr, J. Stetson, J.A. Winger, S.J. Yennello

1994

1994Ah03	NUPAB	576,	246	I. Ahmad, J.E. Gindler, M.P. Carpenter, D.J. Henderson, E.F. Moore, R.V.F. Janssens, I.G. Bearden, C.C. Foster
1994An01	NUPAB	568,	323	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, Yu. A. Muzychka, B.I. Pustylnik, G.M. Ter-Akopian, A.V. Yeremin
1994An02	ZPAAD	347,	225	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, A.G. Popeko, R.N. Sagaidak, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1994Ba06	PRVCA	49,	1221	V. Banerjee, A. Banerjee, G.S.N. Murthy, R.P. Sharma, S.K. Pardha Saradhi, A. Chakrabarti
1994Ba50	PRVCA	50,	1180	P. Baumann, M. Bounajma, A. Huck, G. Klotz, A. Knipper, G. Walter, G. Marguier, C. Richard-Serre, H. Ravn, E. Hagebø, P. Hoff, K. Steffensen
1994Be24	PYLBB	331,	19	M. Bernas, S. Czajkowski, P. Armbruster, H. Geissel, Ph. Dessagne, C. Donzaud, H.-R. Faust, E. Hanelt, A. Heinz, M. Heese, C. Kozhuharov, Ch. Miehé, G. Münzenberg, M. Pfützner, C. Röhl, K.-H. Schmidt, W. Schwab, C. Stéphan, K. Sümmerer, L. Tassan-Got, B. Voss
1994Bl10	PRVCA	50,	2398	B. Blank, S. Andriamonje, R. Del Moral, J.P. Dufour, A. Fleury, T. Josso, M.S. Pravikoff, S. Czajkowski, Z. Janas, A. Piechaczek, E. Roeckl, K.-H. Schmidt, K. Sümmerer, W. Trinder, M. Weber, T. Brohm, A. Grewe, E. Hanelt, A. Heinz, A. Junghans, C. Rohl, S. Steinhauser, B. Voss, M. Pfützner
1994Bo28	NUPAB	576,	21	R. Bonetti, C. Chiesa, A. Guglielmetti, C. Migliorino, P. Monti, A.L. Pasinetti, H.L. Ravn
1994Br11	PRVCA	49,	2401	S.A. Brindhaban, P.H. Barker
1994Br37	NIMAE	340,	436	S.A. Brindhaban, P.H. Barker, M.J. Keeling, W.B. Wood
1994Bu18	ZPAAD	349,	3	D. Bucurescu, D. Barnéoud, R. Béraud, G. Cata-Danil, T. von Egidy, A. Emsallem, J. Genevey, A. Gizon, J. Gizon, C.F. Liang, P. Paris, C.A. Ur, B. Weiss
1994Cz02	ZPAAD	348,	267	S. Czajkowski, M. Bernas, P. Armbruster, H. Geissel, C. Kozhuharov, G. Münzenberg, D. Vieira, Ph. Dessagne, Ch. Miehé, E. Hanelt, G. Audi, J.K.P. Lee
1994Do08	PRVCA	49,	1867	M. Dombsky, L. Buchmann, J.M. D'Auria, U. Giesen, K.P. Jackson, J.D. King, E. Korkmaz, R.G. Korteling, P. McNeely, J. Powell, G. Roy, M. Trinczek, J. Vincent
1994Fa06	PRVCA	49,	2440	L. Faux, M.S. Pravikoff, S. Andriamonje, B. Blank, R. Del Moral, J.-P. Dufour, A. Fleury, C. Marchand, K.-H. Schmidt, K. Sümmerer, T. Brohm, H.-G. Clerc, A. Grewe, E. Hanelt, B. Voss, C. Ziegler
1994Fo08	PRVCA	50,	1355	H.T. Fortune, G.-B. Liu, D.E. Alburger
1994Fo14	PRLTA	73,	2413	B. Fogelberg, M. Hellström, D. Jerrestam, H. Mach, J. Blomqvist, A. Kerek, L.O. Norlin, J.P. Omtvedt
1994Gi07	PRVCA	50,	2612	R.L. Gill
1994Go.A	PrvCom	AHW	Jul	M.V. Gorshkov
1994Gr07	PRVCA	49,	2971	P. Grabmayer, A. Mondry, G.J. Wagner, P. Woldt, G.P.A. Berg, J. Lisantti, D.W. Miller, H. Nann, E.J. Stephenson
1994Gr08	PRLTA	72,	1423	K.E. Gregorich, M.R. Lane, M.F. Mohar, D.M. Lee, C.D. Kacher, E.R. Sylwester, D.C. Hoffman
1994Ha.A	Th.-Mainz			H. Hartmann
1994He08	PRVCA	49,	1845	R.G. Helmer, C.W. Reich
1994Hi04	PRVCA	49,	3289	M.M. Hindi, R.L. Kozub, S.J. Robinson
1994Hi05	PRVCA	50,	728	M.M. Hindi, A.E. Champagne, M.T.F. da Cruz, R.-M. Larimer, K.T. Lesko, E.B. Norman, B. Sur

1994Hy01	PRVCA	50,	1249	J.G. Hykawy, R.C. Barber, K.S. Sharma, K.J. Aarts, J.N. Nxumalo, H.E. Duckworth
1994Ib01	ZPAAD	350,	9	F. Ibrahim, P. Kilcher, B. Roussière, J. Sauvage, J. Genevey, A. Gizon, A. Knipper, G. Marguier, D. Barnéoud, R. Béraud, G. Cata-Danil, J. Blachot, I. Deloncle, R. Duffait, A. Emsallem, D. Hojman, A.J. Kreiner, F. Le Blanc, J. Libert, J. Oms
1994It.A	P-Tokai		185	S. Itoh, M. Yasuda, H. Yamamoto, T. Iida, A. Takahashi, K. Kawade
1994Jo.A	Th.-Jyvaskyla			A. Jokinen
1994Ko16	PYLBB	326,	31	A.A. Korsheninnikov, K. Yoshida, D.V. Aleksandrov, N. Aoi, Y. Doki, N. Inabe, M. Fujimaki, T. Kobayashi, H. Kumagai, C.-B. Moon, E. Yu. Nikolskii, M.M. Obuti, A.A. Ogloblin, A. Ozawa, S. Shimoura, T. Suzuki, I. Tanihata, Y. Watanabe, M. Yanokura
1994Ko.A	AnRpt AECL		3-1	V.T. Koslowsky, E. Hagberg, G. Savard, M.J. Watson, J.C. Hardy
1994Kr03	PRVCA	49,	1859	S.A. Kreek, H.L. Hall, K.E. Gregorich, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, M.P. Neu, C.D. Kacher, T.M. Hamilton, M.R. Lane, E.R. Sylwester, A. Türler, D.M. Lee, M.J. Nurmia, D.C. Hoffman
1994Kr13	PRVCA	50,	2288	S.A. Kreek, H.L. Hall, K.E. Gregorich, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, M.P. Neu, C.D. Kacher, T.M. Hamilton, M.R. Lane, E.R. Sylwester, A. Türler, D.M. Lee, M.J. Nurmia, D.C. Hoffman
1994La22	PRLTA	73,	624	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, G.V. Buklanov, B.N. Gikal, S. Iliev, A.N. Mezentsev, A.N. Polyakov, I.M. Sedykh, I.V. Shirokovsky, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.E. Zhuchko, R.W. Lougheed, K.J. Moody, J.F. Wild, E.K. Hulet, J.H. McQuaid
1994Le05	ZPAAD	348,	151	M. Leino, J. Uusitalo, T. Enqvist, K. Eskola, A. Jokinen, K. Loberg, W.H. Trzaska, J. Äystö
1994Le22	NUPAB	576,	267	A.I. Levon, J. de Boer, G. Graw, R. Hertenberger, D. Hofer, J. Kvasil, A. Lösch, E. Müller-Zanotti, M. Würkner, H. Baltzer, V. Grafen, C. Günther
1994Li12	PRVCA	49,	2230	C.F. Liang, R.K. Sheline, P. Paris, M. Hussonois, J.F. Ledu, D.B. Isabelle
1994Li20	PRVCA	49,	3098	S. Lin, S.A. Brindhaban, P.H. Barker
1994Ma14	PRVCA	49,	1755	P.V. Magnus, E.G. Adelberger, A. García
1994Mu02	NUPAB	568,	202	J. Mukai, A. Odahara, H. Tomura, S. Suematsu, S. Mitarai, T. Kuroyanagi, D. Jerrestam, J. Nyberg, G. Sletten, A. Atac, S.E. Arnell, H.A. Roth, Ö. Skeppstedt
1994Ob01	NUPAB	573,	467	S. Oberstedt, J.P. Theobald, H. Weigmann, J.A. Wartena, C. Burkholz
1994Os04	PYLBB	338,	13	A.N. Ostrowski, H.G. Bohlen, B. Gebauer, S.M. Grimes, R. Kalpakchieva, Th. Kirchner, T.N. Massey, W. von Oertzen, Th. Stolla, M. Wilpert, Th. Wilpert
1994Ot01	NUPAB	567,	281	T. Otto, G. Bollen, G. Savard, L. Schweikhard, H. Stolzenberg, G. Audi, R.B. Moore, G. Rouleau, J. Szerypo, Z. Patyk, ISOLDE
1994Pa11	PRVCA	49,	3312	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1994Pa12	PRLTA	72,	1798	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1994Pa37	NUPAB	580,	173	G. Passler, J. Rikovska, E. Arnold, H.-J. Kluge, L. Monz, R. Neugart, H. Ravn, K. Wendt, ISOLDE
1994Po26	IANFA	58,	41	A.V. Potempa, G.V. Veselov, V.A. Sergienko, K. Ya. Gromov, S.V. Evtisov, V.G. Kalinnikov, V.V. Kuznetsov, Zh. Sereeter, V.I. Fominykh, M.B. Yuldashev
1994Ru19	PLSSA	42,	227	W. Rühm, B. Schneck, K. Knie, G. Korschinek, L. Zerle, E. Nolte, D. Weselka, H. Vonach
1994Sa31	PRVCA	50,	1170	C. Sáenz, E. Cerezo, E. Garcia, A. Morales, J. Morales, R. Nunez-Lagos, A. Ortiz de Solorzano, J. Puimedon, A. Salinas, M.L. Sarsa, J.A. Villar, A. Klimenko, V. Kuzminov, N. Metlinsky, V. Novikov, A. Pomansky, B. Pritychenko
1994Sc01	PRVCA	49,	46	K.W. Scheller, J. Gorres, J.G. Ross, M. Wiescher, R. Harkewicz, D.J. Morrissey, B.M. Sherrill, M. Steiner, N.A. Orr, J.A. Winger
1994Sc44	ARISE	45,	955	E. Schonfeld, U. Schotzig, E. Gunther, H. Schrader
1994Se12	ZPAAD	349,	25	H.L. Seifert, J.M. Wouters, D.J. Vieira, H. Wollnik, X.G. Zhou, X.L. Tu, Z.Y. Zhou, G.W. Butler
1994Sh02	PRVCA	49,	725	R.K. Sheline, C.F. Liang, P. Paris, A. Gizon, V. Barci

1994Sh07	ZPAAD	348,	25	T. Shizuma, M. Kidera, E. Ideguchi, A. Odahara, H. Tomura, S. Suematsu, T. Kuroyanagi, Y. Gono, S. Mitarai, J. Mukai, T. Komatsubara, K. Furuno, K. Heiguchi
1994Ti03	PRVCA	49,	2871	R.J. Tighe, D.M. Moltz, J.C. Batchelder, T.J. Ognibene, M.W. Rowe, J. Cerny
1994To10	PRVCA	50,	518	K.S. Toth
1994Wa05	NUPAB	568,	397	P.M. Walker, G.D. Dracoulis, A.P. Byrne, B. Fabricius, T. Kibédi, A.E. Stuchbery, N. Rowley
1994Wa17	PRVCA	50,	487	C. Wagemans, S. Druyts, P. Geltenbort
1994Wa23	PRVCA	50,	2768	J. Wauters, N. Bijnens, H. Folger, M. Huyse, H.Y. Hwang, R. Kirchner, J. von Schwarzenberg, P. Van Duppen
1994WaZU	P-Seyssins		182	W.B. Walters, C.A. Stone
1994We02	ZPAAD	347,	185	C. Wennemann, W.-D. Schmidt-Ott, T. Hild, K. Krumbholz, V. Kunze, F. Meissner, H. Keller, R. Kirchner, E. Roeckl
1994Ya07	PYLBB	334,	229	S. Yasumi, H. Maezawa, K. Shima, Y. Inagaki, T. Mukoyama, T. Mizogawa, K. Sera, S. Kishimoto, M. Fujioka, K. Ishii, T. Omori, G. Izawa, O. Kawakami
1994Ye08	NIMAE	350,	608	A.V. Yeremin, A.N. Andreyev, D.D. Bogdanov, G.M. Ter-Akopian, V.I. Chepigin, V.A. Gorshkov, A.P. Kabachenko, O.N. Malyshev, A.G. Popeko, R.N. Sagaidak, S. Sharo, E.N. Voronkov, A.V. Taranenko, A. Yu. Lavrentjev
1994Yo01	PRVCA	49,	279	B.M. Young, W. Benenson, J.H. Kelley, N.A. Orr, R. Pfaff, B.M. Sherrill, M. Steiner, M. Thoennessen, J.S. Winfield, J.A. Winger, S.J. Yennello, A. Zeller
1994Zh02	PRVCA	49,	R592	L. Zhang, G. Jin, J. Zhao, W. Yang, Y. Yang, Z. Zhao, J. Zheng, X. Sun, J. Wang, Z. Li, Z. Qin, G. Guo, Y. Luo, J. Żylicz, J.Y. Zhang

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1995Al31	PZETA	62,	18	D.V. Aleksandrov, E. Yu. Nikolsky, B.G. Novatsky, D.N. Stepanov, V. Buryan, V. Kroga, Ya. Novak
1995Am.A	P-Arles		537	F. Ameil, P. Armbruster, M. Bernas, S. Czajkowski, P. Dessagne, C. Donzaud, H. Geissel, A. Grewe, E. Hanelt, A. Heinz, Z. Janas, M. de Jong, C. Kozhuharov, Ch. Miehé, W. Schwab, S. Steinhäuser, and GSI-Nachrichten 11-95
1995Ap.A	PrvCom	GAu	May	A. Aprahamian, D.S. Brenner, R. Gill, A. Piotrowski, R.F. Casten
1995Ba28	PRLTA	74,	3569	D. Bazin, B.A. Brown, J. Brown, M. Fauerbach, M. Hellström, S.E. Hirzebruch, J.H. Kelley, R.A. Kryger, D.J. Morrissey, R. Pfaff, C.F. Powell, B.M. Sherrill, M. Thoennessen
1995Ba75	PRVCA	52,	1807	J.C. Batchelder, K.S. Toth, D.M. Moltz, T.J. Ognibene, M.W. Rowe, C.R. Bingham, E.F. Zganjar, B.E. Zimmerman
1995Bi01	PRVCA	51,	125	C.R. Bingham, M.B. Kassim, M. Zhang, Y.A. Akovali, K.S. Toth, W.D. Hamilton, H.K. Carter, J. Kormicki, J. von Schwarzenberg, M.M. Jarrio
1995Bi17	PRLTA	75,	4571	N. Bijnens, P. Decrock, S. Franchoo, M. Gaelens, M. Huyse, H.-Y. Hwang, I. Reusen, J. Szerypo, J. von Schwarzenberg, J. Wauters, J.G. Correia, A. Jokinen, P. Van Duppen, ISOLDE
1995Bi.A	P-Arles		545	C.R. Bingham, J.D. Richards, B.E. Zimmerman, Y.A. Akovali, W.B. Walters, J. Rikovska, P. Joshi, E.F. Zganjar, M. Lindroos, O. Tengblad, P. Van Duppen, ISOLDE, and PrvCom GAu June 1995
1995Bl05	NUPAB	588,	171c	B. Blank, S. Andriamonje, T. Brohm, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, A. Grewe, R. Grzywacz, E. Hanelt, A. Heinz, Z. Janas, T. Josso, A. Junghans, M. Lewitowicz, A. Musquere, A. Piechaczek, M.S. Pravikoff, M. Pfutzner, E. Roeckl, C. Rohl, J.E. Sauvestre, K.-H. Schmidt, S. Steinhauser, K. Summerer, W. Trinder, B. Voss, M. Weber
1995Bl23	PYLBB	364,	8	B. Blank, S. Andriamonje, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, A. Grewe, R. Grzywacz, A. Heinz, Z. Janas, A. Junghans, M. Lewitowicz, A. Musquére, M.S. Pravikoff, M. Pfützner, J.-E. Sauvestre
1995Bo03	NUPAB	582,	1	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, A.M. Sukhovoj, V.A. Khitrov, Yu. P. Popov, S. Brant, V. Paar
1995Bo05	NUPAB	584,	279	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, A.M. Sukhovoj, V.A. Khitrov, Yu. P. Popov, S. Brant, V. Paar, Lj. Šimičic

1995Bo10	NUPAB	583,	775c	H.G. Bohlen, B. Gebauer, Th. Kirchner, M. von Lucke-Petsch, W. von Oertzen, A.N. Ostrowski, Ch. Seyfert, Th. Stolla, M. Wilpert, Th. Wilpert, S.M. Grimes, T.N. Massey, R. Kalpakchieva, Y.E. Penionzhkevich, D.V. Alexandrov, I. Mukha, A.A. Ogloblin, C. Détraz
1995Bo18	PRVCA	51,	2530	R. Bonetti, C. Chiesa, A. Guglielmetti, R. Matheoud, G. Poli, V.L. Mikheev, S.P. Tretyakova
1995Bo.B	P-StPetersbg			H.G. Bohlen, B. Gebauer, M. von Lucke-Petsch, W. von Oertzen, A.N. Ostrowski, Ch. Seyfert, Th. Stolla, M. Wilpert, Th. Wilpert, R. Kalpakchieva, Yu. E. Penionzhkevich, S.M. Grimes, T.N. Massey, I. Mukha, D.V. Alexandrov, A.A. Ogloblin, H. Lenske
1995Br10	PRLTA	74,	868	R. Broda, B. Fornal, W. Królas, T. Pawłat, D. Bazzacco, S. Lunardi, C. Rossi-Alvarez, R. Menegazzo, G. de Angelis, P. Bednarczyk, J. Rico, D. De Acuña, P.J. Daly, R.H. Mayer, M. Sferrazza, H. Grawe, K.H. Maier, R. Schubart
1995Br24	NUPAB	595,	481	J.B. Breitenbach, J.L. Wood, M. Jarrio, R.A. Braga, H.K. Carter, J. Kormicki, P.B. Semmes
1995Bu11	NUPAB	587,	475	D. Bucurescu, D. Barnéoud, Gh. Cata-Danil, T. von Egidy, J. Genevey, A. Gizon, J. Gizon, C.F. Liang, P. Paris, B. Weiss, S. Brant, V. Paar, R. Pezer
1995Ca27	NUPAB	592,	89	H. Carlsson, R.A. Bark, L.P. Ekstrom, A. Nordlund, H. Ryde, G.B. Hagemann, S.J. Freeman, H.J. Jensen, T. Lonnroth, M.J. Piiparinen, H. Schnack-Petersen, F. Ingebretsen, P.O. Tjom
1995Ch74	BRSPE	59,	1854	V.G. Chumin, S.S. Eliseev, K. Ya. Gromov, Yu. V. Norseev, V.I. Fominykh, V.V. Tsupko-Sitnikov
1995Cz.A	P-Arles		553	S. Czajkowski, F. Ameil, P. Armbruster, M. Bernas, P. Dessagne, C. Donzaud, C. Engelmann, H.-R. Faust, H. Geissel, E. Hanelt, A. Heinz, M. Hesse, C. Kozhuharov, C. Miehé, G. Münzenberg, M. Pfützner, C. Röhl, K.-H. Schmidt, W. Schwab, C. Stéphan, K. Sümmerer, L. Tassan-Got, B. Voss
1995Da14	ZPAAD	351,	225	M. Daszewski, Z. Janas, W. Kurcewicz, B. Szweryn
1995Da.A	P-Arles		263	C.N. Davids, P.J. Woods, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, S.J. Freeman, M. Freer, D.J. Henderson, R.J. Irvine, R.D. Page, H.T. Penttilä, A.V. Ramayya, D. Seweryniak, K.S. Toth, W.B. Walters, A.H. Wuosmaa, B.E. Zimmerman, and PrvCom GAu June 1995
1995Di08	PHSTT	59,	144	F. DiFilippo, V. Natarajan, M. Bradley, F. Palmer, D.E. Pritchard
1995Fa.A	AnRpt GSI		21	T. Faestermann, J. Friese, H. Geissel, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Munzenberg, J. Reinhold, R. Schneider, K. Summerer, K. Zeitelhack
1995Fe12	ZPAAD	353,	9	V.N. Fedoseyev, Y. Jading, O.C. Jonsson, R. Kirchner, K.-L. Kratz, M. Krieg, E. Kugler, J. Lettry, T. Mehren, V.I. Mishin, H.L. Ravn, T. Rauscher, H.L. Ravn, F. Scheerer, O. Tengblad, P. Van Duppen, A. Wohr, ISOLDE
1995Ga04	NUPAB	581,	267	P.E. Garrrett, D.G. Burke
1995Ga16	PRVCA	51,	3487	A. García, E.G. Adelberger, P.V. Magnus, H.E. Swanson, F.E. Wietfeldt, O. Tengblad, ISOLDE
1995Ga.A	P-Arles		595	A. Gadea, B. Rubio, J.L. Tain, J. Bea, L. Garcia-Raffi, J. Rico, L. Batist, V. Wittmann, A. Bykov, F. Moroz, H. Keller, R. Kirchner, E. Roeckl
1995Ge06	NUPAB	592,	307	R. Georgii, T. von Egidy, J. Klora, H. Lindner, U. Mayerhofer, J. Ott, W. Schauer, P. von Neumann-Cosel, A. Richter, C. Schlegel, R. Schulz, V.A. Khitrov, A.M. Sukhovoj, A.V. Vojnov, J. Berzins, V. Bondarenko, P. Prokofjevs, L.J. Simonova, M. Grinberg, Ch. Stojanov
1995Ge14	YAFIA	58,	1170	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, V.V. Kobychev, B.N. Kropivyansky, V.N. Kuts, A.S. Nikolaiko, V.I. Tretyak and 02Tr04
1995Gh04	NUPAB	583,	861c	A. Ghiorso, D. Lee, L.P. Somerville, W. Loveland, J.M. Nitschke, W. Ghiorso, G.T. Seaborg, P. Wilmarth, R. Leres, A. Wydler, M. Nurmia, K. Gregorich, R. Gaylord, T. Hamilton, N.J. Hannink, D.C. Hoffman, C. Jarzynski, C. Kacher, B. Kadkhodayan, S. Kreek, M. Lane, A. Lyon, M.A. McMahan, M. Neu, T. Sikkeland, W.J. Swiatecki, A. Türler, J.T. Walton, S. Yashita
1995Gj01	NUPAB	582,	369	N.L. Gjorup, P.M. Walker, G. Sletten, M.A. Bentley, B. Fabricius, J.F. Sharpey-Schafer
1995Go30	ZPAAD	353,	233	M. Górska, H. Grawe, D. Foltescu, D.B. Fossan, R. Grzywacz, J. Heese, K.H. Maier, M. Rejmund, H. Roth, R. Schubart, O. Skeppstedt, K. Spohr

1995Gu01	NUPAB	583,	867c	A. Guglielmetti, B. Blank, R. Bonetti, Z. Janas, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, A. Płochocki, G. Poli, P.B. Price, E. Roeckl, K. Schmidt, J. Szerypo, A.J. Westphal
1995Hi02	PRVCA	51,	1736	T. Hild, W.-D. Schmidt-Ott, V. Kunze, F. Meissner, C. Wennemann, H. Grawe
1995Hi12	PRVCA	52,	2236	T. Hild, W.-D. Schmidt-Ott, V. Kunze, F. Meissner, H. Salewski, K.S. Toth, R. Michaelsen
1995Hi14	JPGPE	21,	639	K.-H. Hiddemann, H. Daniel, O. Schwentker
1995Ho03	ZPAAD	350,	277	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro, R. Janik, M. Leino
1995Ho04	ZPAAD	350,	281	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro, R. Janik, M. Leino
1995Ho26	RAACA	70,	93	S. Hofmann
1995Ho.B	PrvCom	GAu	Mar	S. Hofmann, V. Ninov, F.P. Heßberger, and GSI Annual report 1995
1995Ho.C	P-Arles		571	S. Hofmann, F.P. Heßberger, H. Folger, V. Ninov, A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, A.G. Popeko, G.M. Ter-Akopian, A.V. Yeremin, S. Saro
1995Ik03	JUPSA	64,	3244	T. Ikuta, A. Taniguchi, H. Yamamoto, K. Kawade, Y. Kawase
1995Ir01	PRLTA	75,	4182	H. Irnich, H. Geissel, F. Nolden, K. Beckert, F. Bosch, H. Eickhoff, B. Franzke, Y. Fujita, M. Hausmann, H.C. Jung, O. Klepper, C. Kozhuharov, G. Kraus, A. Magel, G. Münzenberg, F. Nickel, T. Radon, H. Reich, B. Schlitt, W. Schwab, M. Steck, K. Sümmerer, T. Suzuki, H. Wollnik
1995Ji15	PRVAA	52,	157	W.G. Jin, M. Wakasugi, T.T. Inamura, T. Murayama, T. Wakui, H. Katsuragawa, T. Ariga, T. Ishizuka, I. Sugai
1995Jo02	NUPAB	584,	489	A. Jokinen, T. Enqvist, P.P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, J. Äystö, K. Eskola
1995Jo.A	P-Arles		499	A. Jokinen, et al
1995Ka.A	B-Arles		PD22	V.G. Kalinnikov, B.P. Osipenko, F. Pražak, A.A. Solnyshkin, V.I. Stegailov, P. Čaloun, S.E. Zaparov
1995Ke04	NUPAB	586,	219	M. Keim, E. Arnold, W. Borchers, U. Georg, A. Klein, R. Neugart, L. Vermeeren, R.E. Silverans, P. Lievens
1995Ke05	ZPAAD	352,	1	H. Keller, R. Kirchner, B. Rubio, J.L. Tain, Th. Dörfler, W.-D. Schmidt-Ott, E. Roeckl
1995Ko54	RAACA	68,	155	A. Koua Aka, V. Barci, G. Ardisson, R. Righetti, J.F. Le Du, D. Trubert
1995Kr03	PRLTA	74,	860	R.A. Kryger, A. Azhari, M. Hellström, J.H. Kelley, T. Kubo, R. Pfaff, E. Ramakrishnan, B.M. Sherrill, M. Thoennessen, S. Yokoyama, R.J. Charity, J. Dempsey, A. Kirov, N. Robertson, D.G. Sarantites, L.G. Sobotka, J.A. Winger
1995Kr04	ZPAAD	351,	11	K. Krumbholz, W.-D. Schmidt-Ott, T. Hild, V. Kunze, F. Meissner, C. Wennemann, H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, K. Rykaczewski
1995Kr.A	ISOLDE-News		01	K.-L. Kratz
1995La09	NUPAB	588,	501	Yu. A. Lazarev, I.V. Shirokovsky, V.K. Utyonkov, S.P. Tretyakova, V.B. Kutner
1995La20	PRLTA	75,	1903	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, Yu. S. Tsyganov, V.K. Utyonkov, F. Sh. Abdullin, S. Iliev, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, B.N. Gikal, V.B. Kutner, A.N. Mezentsev, I.M. Sedykh, D.V. Vakatov, R.W. Lougheed, J.F. Wild, K.J. Moody, E.K. Hulet
1995Le04	PRVCA	51,	1047	M.J. Leddy, S.J. Freeman, J.L. Durell, A.G. Smith, S.J. Warburton, D.J. Blumenthal, C.N. Davids, C.J. Lister, H.T. Penttilä
1995Le15	APOBB	26,	309	M. Leino, J. Äystö, T. Enqvist, A. Jokinen, M. Nurmia, A. Ostrowski, W.H. Trzaska, J. Uusitalo, K. Eskola, P. Armbruster, V. Ninov
1995Le19	PRVCA	51,	2770	Y.S. Lee, M. Kobayashi, T. Hukotome, T. Horiguchi, H. Inoue
1995Le.A	P-Arles		505	M. Leino, T. Enqvist, W.H. Trzaska, J. Uusitalo, K. Eskola, P. Armbruster, V. Ninov, and PrvCom GAu June 1995
1995Lh04	ZPAAD	352,	293	G. Lhersonneau, H. Gabelmann, B. Pfeiffer, K.-L. Kratz, ISOLDE
1995Me03	PRVCA	51,	1558	F. Meissner, T. Hild, V. Kunze, W.-D. Schmidt-Ott, C. Wennemann, P.C. Sood, R. Kirchner, E. Roeckl, K. Rykaczewski
1995Me16	PHSTT	56,	272	K.A. Mezilev, Yu. N. Novikov, A.V. Popov, B. Fogelberg, L. Spanier

1995Mo14	ZPAAD	352,	7	K. Morita, Y.H. Pu, J. Feng, M.G. Hies, K.O. Lee, A. Yoshida, S.C. Jeong, S. Kubono, T. Nomura, Y. Tagaya, M. Wada, M. Kurokawa, T. Motobayashi, H. Ogawa, T. Uchibori, K. Sueki, T. Ishizuka, K. Uchiyama, Y. Fujita, H. Miyatake, T. Shimoda, T. Shinozuka, H. Kudo, Y. Nagai, S.A. Shin
1995Mo26	NUPAB	588,	203c	D.J. Morrissey, and the A1200 Group
1995Ni05	ZPAAD	351,	125	V. Ninov, F.P. Heßberger, S. Hofmann, H. Folger, A.V. Yeremin, A.G. Popeko, A.N. Andreyev, S. Saro
1995Ni.A	P-Arles		571	V. Ninov, F.P. Heßberger, H. Folger, S. Hofmann, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Ŝaro, and Abstracts PD19
1995No.A	P-Arles		363	T. Nomura
1995Ok02	ZPAAD	351,	243	K. Okano, A. Taniguchi, S. Yamada, T. Sharshar, M. Shibata, K. Yamauchi
1995Om01	PRLTA	75,	3090	J.P. Omtvedt, H. Mach, B. Fogelberg, D. Jerrestam, M. Hellstrom, L. Spanier, K.I. Erokhina, V.I. Isakov
1995Os03	NUPAB	588,	185	A. Osa, M. Asai, M. Koizumi, T. Sekine, S. Ichikawa, Y. Kojima, H. Yamamoto, K. Kawade
1995Oz02	NUPAB	592,	244	A. Ozawa, G. Raimann, R.N. Boyd, F.R. Chloupek, M. Fujimaki, K. Kimura, H. Kitagawa, T. Kobayashi, J.J. Kolata, S. Kubono, I. Tanihata, Y. Watanabe, K. Yoshida
1995Pe12	NUPAB	588,	259c	Yu. E. Penionzhkevich
1995Pf04	ZPAAD	353,	1	B. Pfeiffer, G. Lhersonneau, H. Gabelmann, K.-L. Kratz, ISOLDE
1995Pi03	NUPAB	584,	509	A. Piechaczek, M.F. Mohar, R. Anne, V. Borrel, B.A. Brown, J.M. Corre, D. Guillemaud-Mueller, R. Hue, H. Keller, S. Kubono, V. Kunze, M. Lewitowicz, P. Magnus, A.C. Mueller, T. Nakamura, M. Pfützner, E. Roeckl, K. Rykaczewski, M.G. Saint-Laurent, W.-D. Schmidt-Ott, O. Sorlin
1995Po01	PRVCA	51,	519	K.R. Pohl, D.F. Winchell, J.W. Arrison, D.P. Balamuth
1995Re.A	P-Arles		587	P.L. Reeder, Y. Kim, W.K. Hensley, H.S. Miley, R.A. Warner, Z.Y. Zhou, D.J. Vieira, J.M. Wouters, H.L. Seifert, and PrvCom GAu June 1995
1995Ry03	PRVCA	52,	2310	K. Rykaczewski, R. Anne, G. Auger, D. Bazin, C. Borcea, V. Borrel, J.M. Corre, T. Dörfler, A. Fomichov, R. Grzywacz, D. Guillemaud-Mueller, R. Hue, M. Huyse, Z. Janas, H. Keller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, Yu. Penionzhkevich, M. Pfützner, F. Pougheon, M.G. Saint-Laurent, K. Schmidt, W.D. Schmidt-Ott, O. Sorlin, J. Szerypo, O. Tarasov, J. Wauters, J. Żylicz
1995Sa42	NUPAB	592,	221	J. Sauvage, D. Hojman, F. Ibrahim, B. Roussière, P. Kilcher, F. Le Blanc, J. Oms, J. Libert, ISOCELE
1995Sc28	NUPAB	588,	191c	R. Schneider, T. Faestermann, J. Friese, R. Gernhauser, H. Geissel, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Münzenberg, J. Reinhold, K. Sümmerer, K. Zeitelhack
1995Sc33	PHSTT	56,	67	R. Schneider, T. Faestermann, J. Friese, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, J. Reinhold, K. Zeitelhack, H. Geissel, G. Münzenberg, K. Sümmerer
1995Si30	ARISE	46,	865	H. Siegert
1995So03	NUPAB	583,	763c	O. Sorlin, D. Guillemaud-Mueller, R. Anne, L. Axelsson, D. Bazin, W. Böhmer, V. Borrel, Y. Jading, H. Keller, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, T. Mehren, A.C. Mueller, Yu. E. Penionzhkevich, F. Pougheon, M.G. Saint-Laurent, V.S. Salamatin, S. Shoedder, A. Wöhr
1995So11	PRVCA	52,	88	P.C. Sood, A. Gizon, D.G. Burke, B. Singh, C.F. Liang, R.K. Sheline, M.J. Martin, R.W. Hoff
1995St26	PRLTA	75,	3237	W. Stoeffl, D.J. Decman
1995Sy01	PRVCA	51,	2765	I. Sykora, K. Janko, P.P. Povinec
1995Sz01	NUPAB	584,	221	J. Szerypo, M. Huyse, G. Reusen, P. Van Duppen, Z. Janas, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, E. Roeckl, D. Schardt, K. Schmidt, R. Grzywacz, M. Pfützner, A. Płochocki, K. Rykaczewski, J. Żylicz, G.D. Alkhazov, L. Batist, A. Bykov, V. Wittmann, B.A. Brown
1995Tr02	PYLBB	348,	331	W. Trinder, E.G. Adelberger, B.A. Brown, Z. Janas, H. Keller, K. Krumbholz, V. Kunze, P. Magnus, F. Meissner, A. Piechaczek, M. Pfützner, E. Roeckl, K. Rykaczewski, W.-D. Schmidt-Ott, M. Weber
1995Uu01	PRVCA	52,	113	J. Uusitalo, T. Enqvist, M. Leino, W.H. Trzaska, K. Eskola, P. Armbruster, V. Ninov
1995Va38	PHSTT	59,	134	R.S. Van Dyck,Jr., D.L. Farnham, P.B. Schwinberg

1995Ve08	BRSPE	59,	1851	G.V. Veselov, V.A. Sergienko, A.V. Potempa, K. Ya. Gromov, V.G. Kalinnikov, N. Yu. Kotovsky, V.I. Fominykh, M.B. Yuldashev
1995Wi20	PRVCA	52,	1028	F.E. Wietfeldt, E.B. Norman, Y.D. Chan, M.T.F. da Cruz, A. García, E.E. Haller, W.L. Hansen, M.M. Hindi, R.-M. Larimer, K.T. Lesko, P.N. Luke, R.G. Stockstad, B. Sur, I. Žlimen
1995Ya21	JUPSA	64,	3707	S. Yamada, T. Sharshar, K. Aoki, K. Okano
1995Za01	PRVCA	51,	98	N.V. Zamfir, R.L. Gill, D.S. Brenner, R.F. Casten, A. Wolf
1995Zh10	NUPAB	586,	483	K. Zhao, J.S. Lilley, P.V. Drumm, D.D. Warner, R.A. Cunningham, J.N. Mo
1995Zh36	ZPAAD	353,	3	X. Zhou, Y. Guo, X. Sun, X. Lei, X. Chen, Z. Liu, Y. Zhang, H. Jin, Y. Luo, S.X. Wen, G.J. Yuan, G.S. Li, C.X. Yang
1995Zi03	PRLTA	75,	1719	M. Zinser, F. Humbert, T. Nilsson, W. Schwab, T. Blaich, M.J.G. Borge, L.V. Chulkov, H. Eickhoff, T.W. Elze, H. Emling, B. Franzke, H. Freiesleben, H. Geissel, K. Grimm, D. Guillemaud-Mueller, P.G. Hansen, R. Holzmann, H. Irnich, B. Jonson, J.G. Keller, O. Klepper, H. Klingler, J.V. Kratz, R. Kulessa, D. Lambrecht, Y. Leifels, A. Magel, M. Mohar, A.C. Mueller, G. Münzenberg, F. Nickel, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, B.M. Sherrill, H. Simon, K. Stelzer, J. Stroth, O. Tengblad, W. Trautmann, E. Wajda, E. Zude, preprint GSI-95-03

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1996An21	BRSPE	60,	119	A.N. Andreyev, A.G. Popeko, A.V. Eremin, S. Hofmann, F. Heßberger, H. Folger, V. Ninov, S. Saro
1996Ax01	PRVCA	54,	1511	L. Axelsson, M.J.G. Borge, S. Fayans, V.Z. Goldberg, S. Grévy, D. Guillemaud-Mueller, B. Jonson, K.-M. Källman, T. Lönnroth, M. Lewitowicz, P. Mangård, K. Markenroth, I. Martel, A.C. Mueller, I. Mukha, T. Nilsson, G. Nyman, N.A. Orr, K. Riisager, G.V. Rogatchev, M.-G. Saint-Laurent, I.N. Serikov, O. Sorlin, O. Tengblad, F. Wenander, J.S. Winfield, R. Wolski
1996Ba24	YAFIA	59,	197	A.S. Barabash, R.R. Saakyan and 02Tr04
1996Ba35	PRVCA	54,	949	J.C. Batchelder, K.S. Toth, E.F. Zganjar, D.M. Moltz, C.R. Bingham, T.J. Ognibene, J. Powell, M.W. Rowe
1996Bi07	PRVCA	54,	R20	C.R. Bingham, K.S. Toth, J.C. Batchelder, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, C.N. Davids, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters, P.J. Woods, B.E. Zimmerman
1996Bl11	PRVCA	54,	572	B. Blank, S. Andriamonje, F. Boué, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, K.-H. Schmidt, E. Hanelt, N.A. Orr
1996Bl21	PRLTA	77,	2893	B. Blank, S. Czajkowski, F. Davi, R. Del Moral, J.P. Dufour, A. Fleury, C. Marchand, M.S. Pravikoff, J. Benlliure, F. Boue, R. Collatz, A. Heinz, M. Hellström, Z. Hu, E. Roeckl, M. Shibata, K. Sümmerer, Z. Janas, M. Karny, M. Pfützner, M. Lewitowicz
1996Bo37	PRLTA	77,	5190	F. Bosch, T. Faestermann, J. Friese, F. Heine, P. Kienle, E. Wefers, K. Zeitelhack, K. Beckert, B. Franzke, O. Klepper, C. Kozhuharov, G. Menzel, R. Moshammer, F. Nolden, H. Reich, B. Schlitt, M. Steck, T. Stöhlker, T. Winkler, K. Takahashi
1996By.A	P-Moscow		71	V.A. Bystrov, I.N. Izosimov, V.G. Kalinnikov, N. Yu. Kotovsky, M. Yu. Myakushin, A.A. Rimsky-Korsakov, A.A. Solnyshkin, M.B. Yuldashev
1996Ch32	PRLTA	77,	2400	M. Chartier, G. Auger, W. Mittig, A. Lepine-Szilly, L.K. Fifield, J.M. Casandjian, M. Chabert, J. Ferme, A. Gillibert, M. Lewitowicz, M. MacCormick, M.H. Moscatello, O.H. Odland, N.A. Orr, G. Politi, C. Spitaels, A.C.C. Villari
1996Da06	PRLTA	76,	592	C.N. Davids, P.J. Woods, H.T. Penttilä, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, K.S. Toth, W.B. Walters, B.E. Zimmerman
1996De60	YAFIA	59,	2117	A.V. Derbin, A.I. Egorov, V.N. Muratova, S.V. Baklanov and 02Tr04
1996Do23	PRVCA	54,	2894	T. Dörfler, W.-D. Schmidt-Ott, T. Hild, T. Mehren, W. Böhmer, P. Möller, B. Pfeiffer, T. Rauscher, K.-L. Kratz, O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, R. Anne, M. Lewitowicz, A. Ostrowsky, M. Robinson, M.G. Saint-Laurent
1996Dr07	NUPAB	601,	234	S. Drissi, S. Andre, D. Barnéoud, C. Foin, J. Genevey, J. Kern

1996En01	ZPAAD	354,	1	T. Enqvist, K. Eskola, A. Jokinen, M. Leino, W.H. Trzaska, J. Uusitalo, V. Ninov, P. Armbruster
1996En02	ZPAAD	354,	9	T. Enqvist, P. Armbruster, K. Eskola, M. Leino, V. Ninov, W.H. Trzaska, J. Uusitalo
1996Fa09	NUPAB	602,	167	L. Faux, S. Andriamonje, B. Blank, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, T. Josso, M.S. Pravikoff, A. Piechaczek, E. Roeckl, K.-H. Schmidt, K. Sümmerer, W. Trinder, M. Weber, T. Brohm, A. Grewe, E. Hanelt, A. Heinz, A. Junghans, C. Rohl, S. Steinhauser, B. Voss, Z. Janas, M. Pfützner
1996FaZZ	GSI-96-1		21	T. Faestermann, J. Friese, H. Geissel, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Munzenberg, J. Reinhold, R. Schneider, K. Summerer, K. Zeitelhack
1996Ga30	NUPAB	611,	68	P.E. Garrett, N. Warr, H. Baltzer, S. Boehmsdorff, D.G. Burke, M. Deleze, S. Drissi, J. Groger, C. Gunther, J. Kern, S.J. Mannanal, J. Manns, U. Muller, J.-P. Vorlet, T. Weber
1996Gi08	NUPAB	605,	301	A. Gizon, J. Genevey, D. Bucurescu, Gh. Cata-Danil, J. Gizon, J. Inchaouh, D. Barnéoud, T. von Egidy, C.F. Liang, B.M. Nyako, P. Paris, I. Penev, A. Płochocki, E. Ruchowska, C.A. Ur, B. Weiss, L. Zolnai
1996Go06	JPGPE	22,	377	V.M. Gorozhankin, V.G. Kalinnikov, A. Kovalik, A.A. Solnyshkin, A.F. Novgorodov, N.A. Lebedev, N. Yu. Kotovskij, E.A. Yakushev, M.A. Mahmoud, M. Rysavy
1996He25	ZPAAD	356,	229	M. Hellström, Z. Hu, A. Weber, M. Hencheck, M.J. Balbes, R.N. Boyd, D. Cano-Ott, R. Collatz, A. Guglielmetti, Z. Janas, M. Karny, R. Kirchner, J. Morford, D.J. Morrissey, G. Raimann, E. Roeckl, K. Schmidt, J. Szerypo
1996Hi14	PRVCA	54,	2709	M.M. Hindi, R.L. Kozub
1996Ho12	PRVCA	54,	78	R.W. Hoff, H.G. Borner, K. Schreckenbach, G.G. Colvin, F. Hoyler, W. Schauer, T. von Egidy, R. Georgii, J. Ott, S. Schrunder, R.F. Casten, R.L. Gill, M. Balodis, P. Prokofjevs, L. Simonova, J. Kern, V.A. Khitrov, A.M. Sukhovoj, O. Bersillon, S. Joly, G. Graw, D. Hofer, B. Valnion
1996Ho13	ZPAAD	354,	229	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, S. Saro, R. Janik, M. Leino
1996Ho16	PRLTA	77,	1020	P. Hoff, P. Baumann, A. Huck, A. Knipper, G. Walter, G. Marguier, B. Fogelberg, A. Lindroth, H. Mach, M. Sanchez-Vega, R.B.E. Taylor, P. Van Duppen, A. Jokinen, M. Lindroos, M. Ramdane, W. Kurcewicz, B. Jonson, G. Nyman, Y. Jading, K.-L. Kratz, A. Wohr, G. Løvhøiden, T.F. Thorsteinsen, J. Blomqvist, ISOLDE
1996Hw03	NIMAE	383,	447	H.Y. Hwang, C.B. Lee, T.S. Park, H.J. Kim
1996Ik01	PRVCA	54,	2043	H. Ikezoe, T. Ikuta, S. Hamada, Y. Nagame, I. Nishinaka, K. Tsukada, Y. Oura, T. Ohtsuki
1996Ki23	HYIND	103,	49	P. Kienle
1996Kl.A	AnRpt JYFL		30	I. Klöckl, K.-L. Kratz, G. Lhersonneau, P. Pfeiffer, S. Schoedder, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, J. Persson, K. Peräjärvi, J.C. Wang, J. Äystö
1996Ko13	PRVCA	54,	R459	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi, S. Bayer, G.J. Lane
1996Ko17	NUPAB	601,	195	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, M. Dasgupta, T. Kibédi, G.J. Lane
1996La11	PRVCA	53,	2893	M.R. Lane, K.E. Gregorich, D.M. Lee, M.F. Mohar, M. Hsu, C.D. Kacher, B. Kadkhodayan, M.P. Neu, N.J. Stoyer, E.R. Sylwester, J.C. Yang, D.C. Hoffman
1996La12	PRVCA	54,	620	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, Yu. S. Tsyganov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, B.N. Gikal, V.B. Kutner, A.N. Mezentsev, K. Subotic, J.F. Wild, R.W. Lougheed, K.J. Moody
1996Le09	ZPAAD	355,	157	M. Leino, J. Uusitalo, R.G. Allatt, P. Armbruster, T. Enqvist, K. Eskola, S. Hofmann, S. Hurskanen, A. Jokinen, V. Ninov, R.D. Page, W.H. Trzaska
1996Lh03	PRVCA	54,	1117	G. Lhersonneau, P. Dendooven, S. Hankonen, A. Honkanen, M. Huhta, R. Julin, S. Juutinen, M. Oinonen, H. Penttila, A. Savelius, S. Tormanen, J. Aysto, P.A. Butler, J.F.C. Cocks, P.M. Jones, J.F. Smith
1996Lh04	PRVCA	54,	1592	G. Lhersonneau, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, H. Penttilä, J. Äystö, J. Kurpeta, J.R. Persson, A. Popov

1996Li05	ZPAAD	354,	153	C.F. Liang, P. Paris, A. Płochocki, E. Ruchowska, A. Gizon, D. Barnéoud, J. Genevey, G. Cata, R.K. Sheline
1996Li37	PRVCA	54,	2304	C.F. Liang, P. Paris, R.K. Sheline, P. Alexa, A. Gizon
1996Ma72	RAACA	72,	39	M. Magara, N. Shinohara, Y. Hatsukawa, K. Tsukada, H. Imura, S. Utsuda, S.-I. Ichikawa, T. Suzuki, Y. Nagame, Y. Kobayashi, M. Oshima, T. Horichuchi
1996Me09	PRLTA	77,	458	T. Mehren, B. Pfeiffer, S. Schoedder, K.-L. Kratz, M. Huhta, P. Dendooven, A. Honkanen, G. Lhersonneau, M. Oinonen, J.-M. Parmonen, H. Penttilä, A. Popov, V. Rubchenya, J. Äystö
1996Mu19	PYLBB	367,	65	I. Mukha, M.J.G. Borge, D. Guillemaud-Mueller, P. Hornshøj, F. Humbert, B. Jonson, T.E. Leth, G. Martinez Pinedo, T. Nilsson, G. Nyman, K. Riisager, G. Schrieder, M.H. Smedberg, O. Tengblad, K. Wilhelmsen Rolander, ISOLDE
1996Ni09	ZPAAD	356,	11	V. Ninov, F.P. Heßberger, S. Hofmann, H. Folger, G. Münzenberg, P. Armbruster, A.V. Yeremin, A.G. Popeko, M. Leino, S. Saro
1996Od01	ZPAAD	354,	231	A. Odahara, Y. Gono, S. Mitarai, T. Shizuma, E. Ideguchi, J. Mukai, H. Tomura, B.J. Min, S. Suematsu, T. Kuroyanagi, K. Heiguchi, T. Komatsubara, K. Furuno
1996Os04	JUPSA	65,	928	A. Osa, T. Ikuta, K. Kawade, H. Yamamoto, S. Ichikawa
1996Pa01	PRVCA	53,	660	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter, and PrvCom AHW August 1996
1996Ra04	PRVCA	53,	616	S. Raman, E.K. Warburton, J.W. Starner, E.T. Jurney, J.E. Lynn, P. Tikkanen, J. Keinonen
1996Ra16	PRVCA	53,	2732	S. Raman, J.B. McGrory, E.T. Jurney, J.W. Starner and erratum PRVCA 54, 2786
1996Ri12	PRVCA	54,	2041	J.D. Richards, C.R. Bingham, Y.A. Akovali, J.A. Becker, E.A. Henry, P. Joshi, J. Kormicki, P.F. Mantica, K.S. Toth, J. Wauters, E.F. Zganjar
1996Ry.B	AnRpt JYFL		33	K. Rykaczewski
1996Se01	PRVCA	53,	96	D.R. Semon, M.C. Allen, H. Dejbakhsh, C.A. Gagliardi, S.E. Hale, J. Jiang, L. Trache, R.E. Tribble, S.J. Yennello, H.M. Xu, X.G. Zhou, B.A. Brown
1996Sh27	JUPSA	65,	3172	M. Shibata, A. Odahara, S. Mitarai, Y. Gono, M. Kidera, K. Miyazaki, T. Kuroyanagi
1996Sm.A	SCIEA	271,	1099	M.L. Smoliar, R.J. Walker, J.W. Morgan
1996Ta18	PRVCA	54,	2926	R.B.E. Taylor, S.J. Freeman, J.L. Durell, M.J. Leddy, A.G. Smith, D.J. Blumenthal, M.P. Carpenter, C.N. Davids, C.J. Lister, R.V.F. Janssens, D. Seweryniak
1996To01	PRVCA	53,	2513	K.S. Toth, J.C. Batchelder, C.R. Bingham, L.F. Conticchio, W.B. Walters, C.N. Davids, D.J. Henderson, R. Herman, H. Penttilä, J.D. Richards, A.H. Wuosmaa, B.E. Zimmerman
1996To05	ZPAAD	355,	345	Y. Toh, K. Okano, A. Taniguchi, S. Yamada, Y. Kawase
1996To08	ZPAAD	355,	225	K.S. Toth, J.C. Batchelder, D.M. Moltz, J.D. Robertson
1996Ur02	PRVCA	54,	945	W. Urban, W.R. Phillips, J.L. Durell, M.A. Jones, M. Leddy, C.J. Pearson, A.G. Smith, B.J. Varley, I. Ahmad, L.R. Morss, M. Bentaleb, E. Lubkiewicz, N. Schulz
1996Wa33	PRVCA	54,	2916	P.M. Wallace, E.G. Bilpuch, C.R. Bybee, G.E. Mitchell, E.F. Moore, J.D. Shriner, J.F. Shriner,Jr., G.A. Vavrina, C.R. Westerfeldt
1996WaZX	AnRpt Tohoku		25	A. Watanabe, T. Shinozuka, M. Fujita, Y. Kanai, T. Kohda, M. Fujioka
1996Wo.A	P-Amsterdam		D14	A. Wöhr, V. Fedoseyev, Y. Jading, A. Jokinen, T. Kautzsch, I. Klöckl, K.-L. Kratz, V.I. Mishin, H.-L. Ravn, P. Van Duppen, W.B. Walters, ISOLDE
1996Ya12	JUPSA	65,	3390	S. Yamada, A. Taniguchi, Y. Toh, K. Okano
1996Ya.A	P-Kyoto		51	K. Yamauchi, Y. Kojima, H. Sakane, Y. Tsurita, H. Yamamoto, K. Kawade, A. Taniguchi, Y. Kawase, K. Okano, J.Z. Ruan and report KURRI-KR3 p. 51

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1997An09	ZPAAD	358,	63	A.N. Andreyev, N. Bijnens, T. Enqvist, M. Huyse, P. Kuusiniemi, M. Leino, W.H. Trzaska, J. Uusitalo, P. Van Duppen
1997As05	PRVCA	56,	3045	M. Asai, T. Sekine, A. Osa, M. Koizumi, Y. Kojima, M. Shibata, H. Yamamoto, K. Kawade
1997Ba21	ZPAAD	357,	121	J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters, P.J. Woods, J. Wauters, E.F. Zganjar

1997Ba25	PRVCA	55,	2142	J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, D. Seweryniak, J. Wauters, J.L. Wood, E.F. Zganjar
1997Ba26	PRVCA	55,	2279	V. Barci, G. Ardisson, D. Trubert, M. Hussonnois
1997Ba35	ZPAAD	357,	351	A.S. Barabash, R. Gurriaran, F. Hubert, Ph. Hubert, V.I. Umatov
1997Be70	PYLBB	415,	111	M. Bernas, C. Engelmann, P. Armbruster, S. Czajkowski, F. Ameil, C. Bockstiegel, Ph. Dessagne, C. Donzaud, H. Geissel, A. Heinz, Z. Janas, C. Kozhuharov, Ch. Miehé, G. Münzenberg, M. Pfützner, W. Schwab, C. Stephan, K. Sümmerer, L. Tassan-Got, B. Voss
1997Bl03	NUPAB	615,	52	B. Blank, F. Boué, S. Andriamonje, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, N.A. Orr, K.-H. Schmidt, E. Hanelt
1997Bl04	ZPAAD	357,	247	B. Blank, F. Boué, S. Andriamonje, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, E. Hanelt, N.A. Orr, K.-H. Schmidt
1997Bo10	NUPAB	616,	254c	H.G. Bohlen, W. von Oertzen, Th. Stolla, R. Kalpakchieva, B. Gebauer, M. Wilpert, Th. Wilpert, A.N. Ostrowski, S.M. Grimes, T.N. Massey
1997Ch53	BRSPE	61,	1606	V.G. Chumin, J.K. Jabber, K.V. Kalyapkin, S.A. Kudrya, V.V. Tsupko-Sitnikov, K. Ya. Gromov, V.I. Fominykh, T.A. Furyaev
1997Cz02	NUPAB	616,	278c	S. Czajkowski, S. Andriamonje, B. Blank, F. Boue, R. Del Moral, J.P. Dufour, A. Fleury, E. Hanelt, N.A. Orr, P. Pourre, M.S. Pravikoff, K.-H. Schmidt
1997Da07	PRVCA	55,	2255	C.N. Davids, P.J. Woods, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, S.J. Freeman, D.J. Henderson, R.J. Irvine, R.D. Page, H.T. Penttilä, D. Seweryniak, K.S. Toth, W.B. Walters, B.E. Zimmerman
1997Dr03	NUPAB	614,	137	S. Drissi, P.A. Tercier, H.G. Börner, M. Délèze, F. Hoyler, S. Judge, J. Kern, S.J. Mannanal, G. Mouze, K. Schreckenbach, J.P. Vorlet, N. Warr, A. Williams, C. Ythier
1997Ga12	PYLBB	398,	415	F. Gatti, P. Meunier, C. Salvo, S. Vitale
1997Ge15	BRSPE	61,	1719	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, V.V. Kobychev, B.N. Kropivyansky, V.N. Kuts, V.V. Muzalevsky, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretiak
1997Gi07	ZPAAD	358,	369	A. Gizon, J. Genevey, Gh. Cata-Danil, D. Barnéoud, R. Béraud, A. Emsallem, C. Foin, J. Gizon, C.F. Liang, P. Paris, I. Penev, A. Płochocki, B. Weiss
1997Gr02	PRVCA	55,	1126	R. Grzywacz, R. Anne, G. Auger, C. Borcea, J.M. Corre, T. Dorfler, A. Fomichov, S. Grevy, H. Grawe, D. Guillemaud-Mueller, M. Huyse, Z. Janas, H. Keller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, N. Orr, A. Ostrowski, Yu. Penionzhkevich, A. Piechaczek, F. Pougheon, K. Rykaczewski, M.G. Saint-Laurent, W.D. Schmidt-Ott, O. Sorlin, J. Szerypo, O. Tarasov, J. Wauters, J. Żylicz
1997Gu32	YTHLD	19,	180	J. Guo, K. Zhao, X. Lu, Y. Cheng, T. Li, C. Fu, S. Li
1997Ha30	ZPAAD	358,	15	T. Hayakawa, T. Komatsubara, J. Lu, J. Mukai, K. Furuno
1997He29	ZPAAD	359,	415	F.P. Heßberger, S. Hofmann, V. Ninov, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro
1997Hi06	NUPAB	620,	317	B. Hinfurtner, G. Seewald, E. Hagan, E. Zech, I.S. Towner
1997Ho12	NUPAB	621,	689	A. Honkanen, P. Dendooven, M. Huhta, G. Lhersonneau, P.O. Lipas, M. Oinonen, J.-M. Parmonen, H. Penttilä, K. Peräjärvi, T. Siiskonen, J. Äystö
1997Ho14	ZPAAD	358,	377	S. Hofmann, F.P. Heßberger, V. Ninov, P. Armbruster, G. Münzenberg, C. Stodel, A.G. Popeko, A.V. Yeremin, S. Saro, M. Leino
1997Ir01	PRVCA	55,	1621	R.J. Irvine, C.N. Davids, P.J. Woods, D.J. Blumenthal, L.T. Brown, L.F. Conticchio, T. Davinson, D.J. Henderson, J.A. Mackenzie, H.T. Penttilä, D. Seweryniak, W.B. Walters
1997Is13	NIMAE	395,	210	T. Ishii, M. Itoh, M. Ishii, A. Makishima, M. Ogawa, I. Hossain, T. Hayakawa, T. Kohno
1997Ja12	NUPAB	627,	119	Z. Janas, A. Płochocki, J. Szerypo, R. Collatz, Z. Hu, H. Keller, R. Kirchner, O. Klepper, E. Roeckl, K. Schmidt, R. Bonetti, A. Guglielmetti, G. Poli, A. Piechaczek
1997Ju02	PRVCA	56,	118	E.T. Jurney, J.W. Starner, J.E. Lynn, S. Raman
1997Ka07	ZPAAD	356,	363	D. Kast, A. Jungclaus, A. Harder, K.P. Lieb, D. Rudolph, R. Schubart, H. Grawe, D. Foltescu, H.A. Roth, O. Skeppstedt, I. Bearden, T. Shizuma
1997Ko13	NUPAB	617,	91	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi, S. Bayer
1997Ko46	NUPAB	624,	293	V.T. Koslowsky, E. Hagberg, J.C. Hardy, H. Schmeing, I.S. Towner

1997Ko65	NIMAE	401,	289	V.T. Koslowsky, E. Hagberg, J.C. Hardy, G. Savard, H. Schmeing, K.S. Sharma, X.J. Sun
1997Li12	PRVCA	55,	2768	C.F. Liang, P. Paris, R.K. Sheline
1997Li23	PRVCA	56,	2324	C.F. Liang, P. Paris, R.K. Sheline
1997Li25	ZPAAD	359,	1	W. Liu, M. Hellström, R. Collatz, J. Benlliure, L. Chulkov, D. Cortina Gil, F. Farget, H. Grawe, Z. Hu, N. Iwasa, M. Pfützner, A. Piechaczek, R. Raabe, I. Reusen, E. Roeckl, G. Vancraeynest, A. Wöhr
1997Lo.A	PrvCom	GAu	May	R.W. Lougheed
1997Mi03	PRVCA	55,	1555	S. Mitsuoka, H. Ikezoe, T. Ikuta, Y. Nagame, K. Tsukada, I. Nishinaka, Y. Oura, Y.L. Zhao
1997Mo35	NUPAB	627,	222	D.J. Morrissey, K.N. McDonald, D. Bazin, B.A. Brown, R. Harkewicz, N.A. Orr, B.M. Sherrill, G.A. Souliotis, M. Steiner, J.A. Winger, S.J. Yennello, B.M. Young, S. Lukyanov, G. Chubarian, Yu. Ts. Oganessian
1997Mu02	ZPAAD	356,	367	J. Mukai, N. Hashimoto, T. Saitoh, M. Matsuda, T. Hayakawa, J. Lu, T. Komatsubara, K. Furuno
1997Mu08	PRVCA	55,	2267	U. Müller, P. Sevenich, K. Freitag, C. Günther, P. Herzog, G.D. Jones, C. Kliem, J. Manns, T. Weber, B. Will, ISOLDE
1997No.A	AnRpt Riken		74	M. Notani, N. Aoi, N. Fukuda, E. Ideguchi, M. Ishihara, H. Iwasaki, H. Ogawa, T. Kubo, S.M. Lukyanov, T. Nakamura, Yu. E. Penionzhkevich, H. Sakurai, T. Teranishi, Y.X. Watanabe, K. Yoneda, A. Yoshida
1997Oi01	PRVCA	56,	745	M. Oinonen, A. Jokinen, J. Äystö, P. Baumann, F. Didierjean, A. Honkanen, A. Huck, M. Huyse, A. Knipper, G. Marguier, Yu. Novikov, A. Popov, M. Ramdhane, D.M. Seliverstov, P. Van Duppen, G. Walter, ISOLDE
1997Pr02	NUPAB	614,	183	P. Prokofjevs, L. Simonova, J. Berzins, V. Bondarenko, M. Balodis, A.V. Afanasjev, M. Beitins, M. Kessler, T. von Egidy, T. Koerbitz, R. Georgii, J. Ott, W. Schauer, V.O. Nesterenko, N.A. Bonch-Osmolovskaja
1997Pu01	ZPAAD	357,	3	Y.H. Pu, K. Morita, M.G. Hies, K.O. Lee, A. Yoshida, T. Nomura, Y. Tagaya, T. Motobayashi, M. Kurokawa, H. Minemura, T. Uchibori, T. Ariga, K. Sueki, S.A. Shin
1997Ro26	IEIMA	46,	560	S. Röttger, A. Paul, U. Keyser
1997Sa14	NUPAB	616,	311c	H. Sakurai, N. Aoi, D. Beaumel, N. Fukuda, M. Hirai, E. Ideguchi, M. Ishihara, H. Iwasaki, T. Kishida, T. Kubo, H. Kumagai, S.M. Lukyanov, T. Nakamura, M. Notani, Yu. Ts. Oganessian, Yu. E. Penionzhkevich, T. Teranishi, Y. Watanabe, Y. Watanabe, K. Yoneda, A. Yoshida
1997Sc30	NUPAB	624,	185	K. Schmidt, P.C. Divari, Th. W. Elze, R. Grzywacz, Z. Janas, I.P. Johnstone, M. Karny, H. Keller, R. Kirchner, O. Klepper, A. Płochocki, E. Roeckl, K. Rykaczewski, L.D. Skouras, J. Szerypo, J. Żylicz
1997Sc.B	Th.-Heidelberg			B. Schlitt
1997Sh09	PRVCA	55,	1162	R.K. Sheline, C.F. Liang, P. Paris, A. Gizon
1997Sh37	ZPAAD	359,	229	T. Shizuma, G. Sletten, R.A. Bark, N.L. Gjorup, H.J. Jensen, S. Mitarai, M. Piiparinen, J. Wrzesinski
1997Su06	NUPAB	616,	341c	K. Sümmerer, R. Schneider, T. Faestermann, J. Friese, H. Geissel, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Münzenberg, J. Reinhold, K. Zeitelhack
1997Sz04	ZPAAD	359,	117	J. Szerypo, R. Grzywacz, Z. Janas, M. Karny, M. Pfützner, A. Płochocki, K. Rykaczewski, J. Żylicz, M. Huyse, G. Reusen, J. Schwarzenberg, P. Van Duppen, A. Woehr, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, E. Roeckl, K. Schmidt, L. Batist, A. Bykov, V. Wittman, B.A. Brown
1997Ta10	PRVCA	56,	142	S.L. Tabor, J. Döring, G.D. Johns, R.A. Kaye, G.N. Sylvan, C.J. Gross, Y.A. Akovali, C. Baktash, D.W. Stracener, P.F. Hua, M. Korolija, D.R. LaFosse, D.G. Sarantites, F.E. Durham, I.Y. Lee, A. Macchiavelli, W. Rathbun, A. Vander Molen
1997Ta22	PYLBB	409,	64	O. Tarasov, R. Allatt, J.C. Angélique, R. Anne, C. Borcea, Z. Dlouhy, C. Donzaud, S. Grevy, D. Guillemaud-Mueller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, F. Nowacki, Yu. Oganessian, N.A. Orr, A.N. Ostrowski, R.D. Page, Yu. Penionzhkevich, F. Pougheon, A. Reed, M.G. Saint-Laurent, W. Schwab, E. Sokol, O. Sorlin, W. Trinder, J.S. Winfield

1997Te07	PYLBB	407,	110	T. Teranishi, S. Shimoura, Y. Ando, M. Hirai, N. Iwasa, T. Kikuchi, S. Moriya, T. Motobayashi, H. Murakami, T. Nakamura, T. Nishio, H. Sakurai, T. Uchibori, Y. Watanabe, Y. Yanagisawa, M. Ishihara
1997Tr05	NUPAB	620,	191	W. Trinder, E.G. Adelberger, B.A. Brown, Z. Janas, H. Keller, K. Krumbholz, V. Kunze, P. Magnus, F. Meissner, A. Piechaczek, M. Pfützner, E. Roeckl, K. Rykaczewski, W.-D. Schmidt-Ott, M. Weber
1997Uu01	ZPAAD	358,	375	J. Uusitalo, M. Leino, R.G. Allatt, T. Enqvist, K. Eskola, P.T. Greenlees, S. Hurskanen, A. Keenan, H. Kettunen, P. Kuusiniemi, R.D. Page, W.H. Trzaska
1997Wa04	ZPAAD	357,	39	J. Wawryszczuk, M.B. Yuldashev, K. Ya. Gromov, V.I. Fominykh, Zh. Sereeter, V.G. Kalinnikov, N. Yu. Kotovsky, K.V. Kalyapkin, A.W. Potempa, I.N. Izosimov, M. Yu. Myakushin, A.A. Rimsky-Korsakov, T.M. Muminov
1997Wa05	PRVCA	55,	1192	J. Wauters, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, L.F. Conticchio, C.N. Davids, T. Davinson, R.J. Irvine, D. Seweryniak, K.S. Toth, W.B. Walters, P.J. Woods, E.F. Zganjar
1997Wi15	PRVCA	56,	1626	P.A. Wilk, K.E. Gregorich, M.B. Hendricks, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strells, E.R. Sylwester, D.C. Hoffman
1997Xu01	PRVCA	55,	R553	X.J. Xu, W.X. Huang, R.C. Ma, Z.D. Gu, Y.F. Yang, Y.Y. Wang, C.F. Dong, L.L. Xu
1997Za07	PRLTA	79,	4306	K. Zaerpoor, Y.D. Chan, D.E. DiGregorio, M.R. Dragowsky, M.M. Hindi, M.C.P. Isaac, K.S. Krane, R.M. Larimer, A.O. Macchiavelli, R.W. Macleod, P. Mincinovic, E.B. Norman
1997Zi04	NUPAB	619,	151	M. Zinser, F. Humbert, T. Nilsson, W. Schwab, H. Simon, T. Aumann, M.J.G. Borge, L.V. Chulkov, J. Cub, Th. W. Elze, H. Emling, H. Geissel, D. Guillemaud-Mueller, P.G. Hansen, R. Holzmann, H. Irnich, B. Jonson, J.V. Kratz, R. Kulessa, Y. Leifels, H. Lenske, A. Magel, A.C. Mueller, G. Münzenberg, F. Nickel, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, K. Stelzer, J. Stroth, A. Surowiec, O. Tengblad, E. Wajda, E. Zude
				1998
1998Ag.A	P-Bellaire		809	J. Agramunt, A. Algora, L. Batist, R. Borcea, D. Cano-Ott, R. Collatz, A. Gadea, J. Gerl, M. Gierlik, M. Gorska, O. Guilbaud, H. Grawe, M. Hellström, Z. Hu, Z. Janas, M. Karny, R. Kirchner, P. Kleinheinz, W. Liu, T. Martinez, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, K. Ryckaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, EUROBALL
1998Am04	EPJAA	1,	275	F. Ameil, M. Bernas, P. Armbruster, S. Czajkowski, P. Dessagne, H. Geissel, E. Hanelt, C. Kozhuharov, C. Miehé, C. Donzaud, A. Grewe, A. Heinz, Z. Janas, M. de Jong, W. Schwab, S. Steinhäuser
1998Ar10	NUPAB	636,	209	R. Arnold, C. Augier, J. Baker, A. Barabash, D. Blum, V. Brudanin, A.J. Caffrey, J.E. Campagne, E. Caurier, D. Dassié, V. Egorov, R. Eschbach, T. Filipova, R. Gurriaran, J.L. Guyonnet, F. Hubert, Ph. Hubert, S. Jullian, I. Kisel, O. Kochetov, V.N. Kornoukhov, V. Kovalenko, D. Lalanne, F. Laplanche, F. Leccia, I. Linck, C. Longuemare, Ch. Marquet, F. Mauger, P. Mennrath, H.W. Nicholson, I. Pilugin, F. Piquemal, O. Purtov, J.-L. Reyss, X. Sarazin, F. Scheibling, J. Suhonen, C.S. Sutton, G. Szklarz, V. Timkin, R. Torres, V.I. Tretyak, V. Umatov, I. Vanyushin, A. Vareille, Yu. Vasilyev, Ts. Vylov, V. Zerkin,
1998At04	ARISE	49,	1175	M.R.P. Attie, M.F. Koskinas, M.S. Dias, K.A. Fonseca
1998Ax02	NUPAB	634,	475	L. Axelsson, J. Äystö, M.J.G. Borge, L.M. Fraile, H.O.U. Fynbo, A. Honkanen, P. Hornshøj, A. Jokinen, B. Jonson, P.O. Lipas, I. Martel, I. Mukha, T. Nilsson, G. Nyman, B. Petersen, K. Riisager, M.H. Smedberg, O. Tengblad, ISOLDE, and PrvCom GAu December 1997, and erratum NUPAB 641,529
1998Az01	PRVCA	57,	628	A. Azhari, T. Baumann, J.A. Brown, M. Hellström, J.H. Kelley, R.A. Kryger, D.J. Millener, H. Madani, E. Ramakrishnan, D.E. Russ, T. Suomijarvi, M. Thoennessen, S. Yokoyama
1998Ba13	PRVCA	57,	1042	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, K.S. Toth, T. Davinson, J.A. McKenzie, P.J. Woods, T.N. Ginter, C.J. Gross, J.W. McConnell, E.F. Zganjar, J.H. Hamilton, W.B. Walters, C. Baktash, J. Greene, J.F. Mas, W.T. Milner, S.D. Paul, D. Shapira, X.J. Xu, C.H. Yu

1998Ba83	PRVCA	58,	2571	P.H. Barker, P.A. Amundsen
1998Ba85	NUPAB	641,	133	M. Balodis, P. Prokofjevs, N. Krāmere, L. Simonova, J. Bērzinš, T. Krasta, J. Kern, A. Raemy, J.C. Dousse, W. Schwitz, J.A. Cizewski, G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, R. Georgii, T. von Egidy, J. Klora, H. Lindner, U. Mayerhofer, A. Walter, A.V. Murzin, V.A. Libman, I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov, S. Brant, V. Paar, V. Lopac
1998Ba.A	P-Bellaire		90	Y. Bai, D.J. Vieira, H.L. Seifert, J.M. Wouters, and PrvCom AHW June 1998
1998Ba.B	P-Bellaire		264	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, K.S. Toth, T. Davinson, T.N. Ginter, C.J. Gross, R. Grzywacz, Z. Janas, M. Karny, S.H. Kim, B.D. MacDonald, J.F. Mas, J.W. McConnell, A. Piechaczek, J.J. Ressler, R.C. Slinger, J. Szerypo, W.B. Walters, W. Weintraub, P.J. Woods, C.-H. Yu, E.F. Zganjar
1998Be19	PRVCA	57,	2740	T. Belgya, B. Fazekas, Zs. Kasztovszky, Zs. Revay, G. Molnar, M. Yeh, P.E. Garrett, S.W. Yates
1998Be28	NUPAB	636,	419	A.V. Belozyorov, R. Kalpakchieva, Yu. E. Penionzhkevich, Z. Dlouhy, S. Piskor, J. Vincour, H.G. Bohlen, M. von Lucke-Petsch, A.N. Ostrowski, D.V. Alexandrov, E. Yu. Nikolsky, B.G. Novatsky, D.N. Stepanov
1998Bh04	PRVCA	58,	1247	M. Bhattacharya, A. García, M.M. Hindi, E.B. Norman, C.E. Ortiz, N.I. Kaloskamis, C.N. Davids, O. Civitarese, J. Suhonen
1998Bh12	PRVCA	58,	3677	M. Bhattacharya, A. García, N.I. Kaloskamis, E.G. Adelberger, H.E. Swanson, R. Anne, M. Lewitowicz, M.G. Saint-Laurent, W. Trindler, C. Donzaud, D. Guillemaud-Mueller, S. Leenhardt, A.C. Mueller, F. Pougheon, O. Sorlin
1998Bi.A	P-Bellaire		474	C.R. Bingham, J.C. Batchelder, J.A. Cizewski, C.N. Davids, R.J. Irvine, W. Reviol, D. Sewerniak, K.S. Toth, W.B. Walters, J. Wauters, J.L. Wood, X.J. Xu, J. Uusitalo, E.F. Zganjar
1998Bo30	NUPAB	642,	419	R. Böttger, H. Schölermann
1998Ch20	NUPAB	637,	3	M. Chartier, W. Mittig, N.A. Orr, J.-C. Angélique, G. Audi, J.-M. Casandjian, A. Cunsolo, C. Donzaud, A. Foti, A. Lépine-Szily, M. Lewitowicz, S. Lukyanov, M. MacCormick, D.J. Morrissey, A.N. Ostrowski, B.M. Sherril, C. Stéphan, T. Suomijärvi, L. Tassan-Got, D.J. Vieira, A.C.C. Villari, J.M. Wouters
1998Co27	EPJAA	3,	17	J.F.C. Cocks, M. Muikku, W. Korten, R. Wadsworth, S. Chmel, J. Domscheit, P.T. Greenlees, K. Helariutta, I. Hibbert, M. Houry, D. Jenkins, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, M. Leino, Y. Le Coz, R. Lucas, E. Mergel, R.D. Page, A. Savelius, W. Trzaska
1998Cz01	NUPAB	628,	537	C. Czajkowski, S. Andriamonje, B. Blank, F. Boué, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, E. Hanelt, K.-H. Schmidt, N.A. Orr
1998Da03	PRLTA	80,	1849	C.N. Davids, P.J. Woods, D. Seweryniak, A.A. Sonzogni, J.C. Batchelder, C.R. Bingham, T. Davinson, D.J. Henderson, R.J. Irvine, G.L. Poli, J. Uusitalo, W.B. Walters
1998Dr09	PRVCA	58,	1837	G.D. Dracoulis, A.P. Byrne, S.M. Mullins, T. Kibédi, F.G. Kondev, P.M. Davidson
1998En.A	PrvCom	AHW	Aug	T. Enqvist, et al (PrvCom of H. Geissel)
1998Es02	PRVCA	57,	417	K. Eskola, P. Kuusiniemi, M. Leino, J.F.C. Cocks, T. Enqvist, S. Hurskanen, H. Kettunen, W.H. Trzaska, J. Uusitalo, R,G. Allat, P.T. Greenlees, R.D. Page
1998Fo06	PRVCA	58,	749	B.D. Foy, D.S. Brenner, C.N. Davids, D. Seweryniak, D. Blumenthal, R.L. Gill, N.V. Zamfir, D.D. Warner, C.J. Barton
1998Ga50	NUPBB	s66,	203	M. Galeazzi
1998Ge13	EPJAA	3,	225	U. Georg, W. Borchers, M. Keim, A. Klein, P. Lievens, R. Neugart, M. Neuroth, P.M. Rao, Ch. Schulz, ISOLDE
1998Gr12	PYLBB	429,	247	R. Grzywacz, S. Andriamonje, B. Blank, F. Boué, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, H. Grawe, A. Grewe, A. Heinz, Z. Janas, A.R. Junghans, M. Karny, M. Lewitowicz, A. Musquère, M. Pfützner, M.-G. Porquet, M.S. Pravikoff, J.-E. Sauvestre, K. Sümmerer
1998Gr14	PRLTA	81,	766	R. Grzywacz, R. Béraud, C. Borcea, A. Emsallem, M. Glogowski, H. Grawe, D. Guillemaud-Mueller, M. Hjorth-Jensen, M. Houry, M. Lewitowicz, A.C. Mueller, A. Nowak, A. Płochocki, M. Pfützner, K. Rykaczewski, M.G. Saint-Laurent, J.-E. Sauvestre, M. Schaefer, O. Sorlin, J. Szerypo, W. Trinder, S. Viteritti, J. Winfield
1998Gr.B	P-Bellaire		430	R. Grzywacz

1998Gu10	PRVCA	58,	116	V. Guimarães, S. Kubono, N. Ikeda, I. Katayama, T. Nomura, M.H. Tanaka, Y. Fuchi, H. Kawashima, S. Kato, H. Toyokawa, C.C. Yun, T. Niizeki, T. Kubo, M. Ohura, M. Hosaka
1998Ha36	PRVCA	58,	821	P.D. Harty, N.S. Bowden, P.H. Barker, P.A. Amundsen
1998He.B	Th.-Boulder			T.P. Heavner
1998Ho13	RPPHA	61,	639	S. Hofmann
1998HoZP	APCPC	447,	220	M. Houry, W. Korten, Y. Le Coz, R. Lucas, Ch. Theisen, G. Barreau, T.P. Doan, M. Aiche, M.M. Aleonard, J.F. Chemin, J.N. Scheurer, G. Belier, V. Meot, Th. Ethvignot, J. Durell, D. Grimwood, W.R. Phillips, A. Roach, A.G. Smith, B.J. Varley, I. Deloncle, M.G. Porquet, A. Astier, S. Perries, N. Redon
1998Ic02	PRVCA	58,	1329	S. Ichikawa, K. Tsukada, I. Nishinaka, Y. Hatsukawa, H. Iimura, K. Hata, Y. Nagame, M. Asai, Y. Kojima, T. Hirose, M. Shibata, K. Kawade, Y. Oura
1998Ik01	PRVCA	57,	2804	T. Ikuta, H. Ikezoe, S. Mitsuoka, I. Nishinaka, K. Tsukuda, Y. Nagame, J. Lu, T. Kuzumaki
1998Ik02	EPJAA	2,	379	H. Ikezoe, T. Ikuta, S. Mitsuoka, Y. Nagame, I. Nishinaka, K. Tsukada, T. Ohtsuki, T. Kuzumaki, J. Lu
1998Is06	EPJAA	2,	173	S. Issmer, M. Fruneau, J.A. Pinston, M. Asghar, D. Barnéoud, J. Genevey, Th. Kerscher, K.E.G. Löbner
1998Is11	PRLTA	81,	4100	T. Ishii, M. Asai, I. Hossain, P. Kleinheinz, M. Ogawa, A. Makishima, S. Ichikawa, M. Itoh, M. Ishii, J. Blomqvist
1998Jo18	EPJAA	3,	271	A. Jokinen, M. Oinonen, J. Äystö, P. Baumann, P. Dendooven, F. Didierjean, V. Fedoseyev, A. Huck, Y. Jading, A. Knipper, M. Koizumi, U. Köster, J. Lettry, P.O. Lipas, W. Liu, V. Mishin, M. Ramdhane, H. Ravn, E. Roeckl, V. Sebastian, G. Walter, ISOLDE
1998Jo.A	PrvCom	AHW	Mar	T. Johansson, I. Bergström, et al
1998Ka42	NUPAB	640,	3	M. Karny, L. Batist, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, R. Grzywacz, A. Guglielmetti, M. Hellström, Z. Hu, Z. Janas, R. Kirchner, F. Moroz, A. Piechaczek, A. Płochocki, E. Roeckl, B. Rubio, K. Rykaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, A. Wöhr
1998Ka.A	AnRpt GSI		22	M. Karny, L. Batist, D. Cano, R. Collatz, A. Gadea, M. Gierlik, R. Grzywacz, A. Guglielmetti, M. Hellström, Z. Hu, Z. Janas, R. Kirchner, F. Moroz, A. Piechaczek, A. Płochocki, E. Roeckl, B. Rubio, K. Rykaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, A. Wöhr
1998Ki20	PYLBB	443,	82	S.L. King, J. Simpson, R.D. Page, N. Amzal, T. Bäck, B. Cederwall, J.F.C. Cocks, D.M. Cullen, P.T. Greenlees, M.K. Harder, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, R. Lemmon, M. Muikku, A. Savelius, J. Uusitalo, P. Van Isacker
1998Ko09	NUPAB	632,	473	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi
1998Ko27	NUPAB	636,	367	T. Kobayashi, K. Sueki, M. Ebihara, M. Imamura, H. Nakahar
1998Ko66	JUPSA	67,	3405	Y. Kojima, M. Asai, A. Osa, M. Koizumi, T. Sekine, M. Shibata, H. Yamamoto, K. Kawade, T. Tachibana
1998Ku17	EPJAA	2,	241	J. Kurpeta, G. Lhersonneau, J.C. Wang, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, H. Penttilä, K. Peräjärvi, J.R. Persson, A. Płochocki, J. Äystö
1998Le15	EPJAA	2,	9	A.I. Levon, J. de Boer, M. Loewe, M. Würkner, T. Czosnyka, J. Iwanicki, P.J. Napiorkowski
1998Li50	PYLBB	440,	246	M. Lipoglavšek, D. Seweryniak, C.N. Davids, C. Fahlander, M. Górska, R.V.F. Janssens, J. Nyberg, J. Uusitalo, W.B. Walters, I. Ahmad, J. Blomqvist, M.P. Carpenter, J.A. Cizewski, S.M. Fischer, H. Grawe, G. Hackman, M. Huhta, C.J. Lister, D. Nisius, G. Poli, P. Reiter, J. Ressler, J. Schwartz, A. Sonzogni
1998Lu08	EPJAA	2,	149	X. Lu, J. Guo, K. Zhao, Y. Cheng, Y. Ma, Z. Li, S. Li, M. Ruan
1998Mo30	EPJAA	3,	99	T. Morek, K. Starosta, Ch. Droste, D. Fossan, G. Lane, J. Sears, J. Smith, P. Vaska
1998No.A	P-Bellaire		359	M. Notani, N. Aoi, N. Fukuda, H. Iwasaki, K. Yoneda, H. Ogawa, T. Teranishi, S.M. Lukyanov, Yu. E. Penionzhkevich, T. Nakamura, H. Sakurai, E. Ideguchi, A. Yoshida, Y. Watanabe, T. Kubo, M. Ishihara
1998NoZW	APCPC	455,	359	M. Notani, N. Aoi, N. Fukuda, H. Iwasaki, K. Yoneda, H. Ogawa, T. Teranishi, S.M. Lukyanov, Yu. E. Penionzhkevich, T. Nakamura, H. Sakurai, E. Ideguchi, A. Yoshida, Y. Watanabe, T. Kubo, M. Ishihara

1998Oi02	NIMAE	416,	485	M. Oinonen, R. Béraud, G. Canchel, E. Chabanat, P. Dendooven, A. Emsallem, S. Hankonen, A. Honkanen, J. Huikari, A. Jokinen, G. Lhersonneau, Ch. Miehé, A. Nieminen, Yu. Novikov, H. Penttilä, K. Peräjärvi, A. Popov, D.M. Seliverstov, J.C. Wang, J. Äystö
1998Pf02	PYLBB	444,	32	M. Pfützner, P. Armbruster, T. Baumann, J. Benlliure, M. Bernas, W.N. Catford, D. Cortina-Gil, J.M. Daugas, H. Geissel, M. Górska, H. Grawe, R. Grzywacz, M. Hellström, N. Iwasa, Z. Janas, A.R. Junghans, M. Karny, S. Leenhardt, M. Lewitowicz, A.C. Mueller, F. de Oliveira, P.H. Regan, M. Rejmund, K. Rykaczewski, K. Sümmerer
1998Po.A	PrvCom	GAu	Mar	F. Pougheon
1998Ra15	PYLBB	432,	22	M. Ramdhane, P. Baumann, A. Knipper, G. Walter, Z. Janas, A. Płochocki, J. Äystö, P. Dendooven, A. Jokinen, M. Oinonen, H. Penttilä, W. Liu, M. Gorska, H. Grawe, Z. Hu, R. Kirchner, O. Klepper, E. Roeckl, Y. Fujita, B.A. Brown
1998Ru04	PRVCA	58,	771	D. Rupnik, E.F. Zganjar, J.L. Wood, P.B. Semmes, P.F. Mantica
1998Sa60	ZAANE	3,	197	T.R. Saitoh, N. Hashimoto, G. Sletten, R.A. Bark, S. Tormanen, M. Bergstrom, K. Furuno, K. Furutaka, G.B. Hagemann, T. Hayakawa, T. Komatsubara, A. Maj, S. Mitarai, M. Oshima, J. Sampson, T. Shizuma, P.G. Varmette
1998Sc19	PRVCA	57,	2205	M. Schafer, W.-D. Schmidt-Ott, T. Dorfler, T. Hild, T. Pfeiffer, R. Collatz, H. Geissel, M. Hellstrom, Z. Hu, H. Irnich, N. Iwasa, M. Pfutzner, E. Roeckl, M. Shibata, B. Pfeiffer, K. Asahi, H. Izumi, H. Ogawa, H. Sato, H. Ueno, H. Okuno
1998Sh21	ARISE	49,	1481	M. Shibata, Y. Satoh, S. Itoh, H. Yamamoto, K. Kawade, Y. Kasugai, Y. Ikeda
1998Si12	ARISE	49,	1397	H. Siegert, H. Schrader, U. Schötzig
1998So03	NUPAB	632,	205	O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, W. Böhmer, K.-L. Kratz, T. Mehren, P. Möller, B. Pfeiffer, T. Rauscher, M.G. Saint-Laurent, R. Anne, M. Lewitowicz, A. Ostrowski, T. Dörfler, W.-D. Schmidt-Ott
1998St24	NUPAB	641,	401	A.E. Stuchbery, G.D. Dracoulis, T. Kibedi, A.P. Byrne, B. Fabricius, A.R. Poletti, G.J. Lane, A.M. Baxter
1998Su16	EPJAA	2,	237	M. Sugawara, H. Kusakari, T. Murakami, T. Kohno
1998To14	PRVCA	58,	1310	K.S. Toth, X.-J. Xu, C.R. Bingham, J.C. Batchelder, L.F. Conticchio, W.B. Walters, L.T. Brown, C.N. Davids, R.J. Irvine, D. Seweryniak, J. Wauters, E.F. Zganjar
1998Tu01	PRVCA	57,	1648	A. Türler, R. Dressler, B. Eichler, H.W. Gäggeler, D.T. Jost, M. Schädel, W. Brüchle, K.E. Gregorich, N. Trautmann, S. Taut
1998Ut02	PRVCA	57,	2731	S. Utku, J.G. Ross, N.P.T. Bateman, D.W. Bardayan, A.A. Chen, J. Görres, A.J. Howard, C. Iliadis, P.D. Parker, M.S. Smith, R.B. Vogelaar, M. Wiescher, K. Yildiz; erratum Phys. Rev. C58, 1354 (1998)
1998Vi06	PYLBB	437,	264	S.M. Vincent, P.H. Regan, D.D. Warner, R.A. Bark, D. Blumenthal, M.P. Carpenter, C.N. Davids, W. Gelletly, R.V.F. Janssens, C.D. O'Leary, C.J. Lister, J. Simpson, D. Seweryniak, T. Saitoh, J. Schwartz, S. Törmänen, O. Juillet, F. Nowacki, P. Van Isacker
1998Wa.A	PrvCom	AHW	Feb	A.H. Wapstra
1998Wh01	PRVCA	57,	1112	D.H. White, R.W. Hoff, H.G. Börner, K. Schreckenbach, F. Hoyler, G. Colvin, I. Ahmad, A.M. Friedman, J.R. Erskine
1998Wh02	PYLBB	425,	239	C. Wheldon, R. D'Alarcao, P. Chowdhury, P.M. Walker, E. Seabury, I. Ahmad, M.P. Carpenter, D.M. Cullen, G. Hackman, R.V.F. Janssens, T.L. Khoo, D. Nisius, C.J. Pearson, P. Reiter
1998Wi.A	P-Bellaire		606	J.A. Winger, H.H. Yousif, W.C. Ma, V. Ravikumar, W. Lui, S.K. Phillips, R.B. Piercey, P.F. Mantica, B. Pritychenko, R.M. Ronningen, M. Steiner
1998WiZX	P-Sanibel		311	J.A. Winger, P.F. Mantica, R.M. Ronningen
1998Wu01	PRLTA	80,	2085	A.H. Wuosmaa, I. Ahmad, S.M. Fischer, J.P. Greene, G. Hackman, V. Nanal, G. Savard, J.P. Schiffer, P. Wilt, S.M. Austin, B.A. Brown, S.J. Freedman, J.J. Connell
1998Zh03	EPJAA	1,	1	Y.H. Zhang, Q.Z. Zhao, S.F. Zhu, H.S. Xu, X.H. Zhou, Y.X. Guo, X.G. Lei, J. Lu, Q.B. Gou, H.J. Jin, Z. Liu, Y.X. Luo, X.F. Sun, Y.T. Zhu
1998Zh09	NUPAB	628,	386	C.T. Zhang, P. Bhattacharyya, P.J. Daly, Z.W. Grabowski, R.H. Mayer, M. Sferrazza, R. Broda, B. Fornal, W. Królas, T. Pawlat, D. Bazzacco, S. Lunardi, C. Rossi Alvarez, G. de Angelis

1998Zh19	EPJAA	2,	5	L. Zhang, J.H. Zhao, J.W. Zheng, J.C. Wang, Z. Qin, Y.F. Yang, C. Zhang, G.M. Jin, G.H. Guo, Y.F. Du, T.R. Guo, T.Q. Wang, B. Guo, J.F. Tain
1998Zh22	PRVCA	58,	156	L. Zhang, J. Zhao, J. Zheng, J. Wang, Z. Qin, Y. Yang, C. Zhang, G. Jin, G. Guo, Y. Du, T. Guo, T. Wang, B. Guo, J. Tian, Y. Lou

1999

1999Al20	PYLBB	457,	253	A. Alessandrello, J.W. Beeman, C. Brofferio, O. Cremonesi, E. Fiorini, A. Giuliani, E.E. Haller, B. Margesin, A. Monfardini, A. Nucciotti, M. Pavan, G. Pessina, G. Pignatel, E. Previtali, L. Zanotti, M. Zen
1999Am05	NUPAB	651,	3	F. Ames, G. Audi, D. Beck, G. Bollen, M. de Saint Simon, R. Jertz, H.-J. Kluge, A. Kohl, M. König, D. Lunney, I. Martel, R.B. Moore, T. Otto, Z. Patyk, H. Raimbault-Hartmann, G. Rouleau, G. Savard, E. Schark, S. Schwarz, L. Schweikhard, H. Stolzenberg, J. Szerypo, ISOLDE
1999An10	PRLTA	82,	1819	A.N. Andreyev, M. Huyse, P. Van Duppen, J.F.C. Cocks, K. Helariutta, H. Kettunen, P. Kuusiniemi, M. Leino, W.H. Trzaska, K. Eskola, R. Wyss
1999An36	APOBB	30,	1255	A.N. Andreyev, N. Bijnens, J.F. Cocks, K. Eskola, K. Helariutta, M. Huyse, H. Kettunen, P. Kuusiniemi, M. Leino, W.H. Trzaska, P. Van Duppen, R. Wyss
1999An52	EPJAA	6,	381	A.N. Andreyev, D. Ackermann, P. Cagarda, J. Gerl, F. Heßberger, S. Hofmann, M. Huyse, A. Keenan, H. Kettunen, A. Kleinbohl, A. Lavrentiev, M. Leino, B. Lommel, M. Matos, G. Münzenberg, C. Moore, C.D. O'Leary, R.D. Page, S. Reshitko, S. Saro, C. Schlegel, H. Schaffner, M. Taylor, P. Van Duppen, L. Weissman, R. Wyss
1999Ar25	NUPAB	658,	299	R. Arnold, C. Augier, J. Baker, A. Barabash, D. Blum, V. Brudanin, A.J. Caffrey, J.E. Campagne, E. Caurier, D. Dassié, V. Egorov, T. Filipova, R. Gurriaran, J.L. Guyonnet, F. Hubert, Ph. Hubert, S. Jullian, I. Kisel, O. Kochetov, V.N. Kornoukhov, V. Kovalenko, D. Lalanne, F. Laplanche, F. Leccia, I. Linck, C. Longuemare, Ch. Marquet, F. Mauger, H.W. Nicholson, I. Pilugin, F. Piquemal, J.-L. Reyss, X. Sarazin, F. Scheibling, J. Suhonen, C.S. Sutton, G. Szklarz, V. Timkin, R. Torres, V.I. Tretyak, V. Umatov, I. Vanyushin, A. Vareille, Yu. Vasilyev, Ts. Vylov
1999As03	PRVCA	59,	3060	M. Asai, S. Ichikawa, K. Tsukada, M. Sakama, M. Shibata, Y. Kojima, A. Osa, I. Nishinaka,Y. Nagame, K. Kawade, T. Tachibana
1999Ba45	EPJAA	5,	49	J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, R.J. Irvine, D. Sewerniak, W.B. Walters, J. Wauters, E.F. Zganjar, J.L. Wood, C. De Coster, B. Decroix, K. Heyde
1999Ba65	PRVCA	60,	024304	V. Barci, G. Ardison, D. Trubert, M. Hussonnois
1999Be63	NUPAB	660,	87	J. Benlliure, K.-H. Schmidt, D. Cortina-Gil, T. Enqvist, F. Farget, A. Heinz, A.R. Junghans, J. Pereira, J. Taieb
1999Be64	NUPBB	563,	97	P. Belli, R. Bernabei, C.J. Dai, F. Grianti, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prosperi, V.I. Tretyak, Yu. G. Zdesenko
1999Bi14	PRVCA	59,	2984	C.R. Bingham, J. Batchelder, K. Rykaczewski, K.S. Toth, C.-H. Yu, T.N. Ginter, C.J. Gross, R. Grzywacz, M. Karny, S.H. Kim, B.D. MacDonald, J.F. Mas, J.W. McConnell, P.B. Semmes, J. Szerypo, W. Weintraub, E.F. Zganjar
1999Bo26	PPNPD	42,	17	H.G. Bohlen, A. Blazevic, B. Gebauer, W. von Oertzen, S. Thummerer, R. Kalpakchieva, S.M. Grimes, T.N. Massey
1999Br47	PRLTA	83,	4510	M.P. Bradley, J.V. Porto, S. Rainville, J.K. Thompson, D.E. Pritchard, and PrvCom GAu Nov 1999
1999Ca21	EPJAA	5,	1	G. Canchell, R. Béraud, E. Chabanat, E. Emsallem, N. Redon, P. Dendooven, J. Huikari, A. Jokinen, V. Kolhinen, G. Lhersonneau, M. Oinonen, A. Nieminen, H. Penttilä, K. Peräjärvi, J.C. Wang
1999Ca46	PRLTA	83,	4506	C. Carlberg, T. Fritioff, I. Bergström
1999Co13	JPGPE	25,	839	J.F.C. Cocks, and the JUROSPHERE Collaboration
1999Da09	PRVCA	59,	1227	R. D'Alarcao, P. Chowdhury, E.H. Seabury, P.M. Walker, C. Wheldon, I. Ahmad, M.P. Carpenter, G. Hackman, R.V.F. Janssens, T.L. Khoo, C.J. Lister, D. Nisius, P. Reiter, D. Seweryniak, I. Wiedenhoever
1999Da18	NUPAB	657,	219	P.M. Davidson, G.D. Dracoulis, T. Kibedi, A.P. Byrne, S.S. Anderssen, A.M. Baxter, B. Fabricius, G.J. Lane, A.E. Stuchbery

1999Da.A	GANIL-T9905			J.-M. Daugas Thesis
1999Dl01	JPGPE	25,	859	Z. Dlouhý, Yu. Penionzhkevich, R. Anne, D. Baiborodin, C. Borcea, A. Fomichev, D. Guillemaud-Mueller, R. Kalpakchieva, M. Lewitowicz, S. Lukyanov, A.C. Mueller, Yu. Oganessian, R.D. Page, A. Reed, M.G. Saint-Laurent, E. Sokol, N. Skobelev, O. Sorlin, O. Tarasov, V. Toneev, W. Trinder
1999Dr09	PRVCA	59,	3433	R. Dressler, B. Eichler, D.T. Jost, D. Piguet, A. Tuerler, Ch. Duehlmann, R. Eichler, H.W. Gaeggeler, M. Gaertner, M. Schaedel, S. Taut, A.B. Yakushev
1999Dr13	JPGPE	25,	1839	O. Dragoun, A. Spalek, M. Rysavy, A. Kovalik, E.A. Yakushev, V. Brabec, A.F. Novgorodov, N. Dragounova, J. Rizek
1999Fe10	EPJAA	6,	235	X.C. Feng, Y.X. Guo, X.H. Zhou, X.F. Sun, X.G. Lei, W.X. Huang, J.J. He, Z. Liu, Y.H. Zhang, S.F. Zhu, Y.X. Luo, S.X. Wen, G.J. Yuan, X.G. Wu
1999Fo01	PRLTA	82,	1823	B. Fogelberg, K.A. Mezilev, H. Mach, V.I. Isakov, J. Slivova
1999Fo.A	PrvCom	GAu	Oct	K. Foehl
1999Ga41	EPJAA	6,	59	Z.G. Gan, Z. Qin, J.S. Guo, L.J. Shi, H.Y. Liu, T.R. Guo, X.G. Lei, R.C. Ma, W.X. Huang, S.G. Yuan, X.Q. Zhang, G.M. Jin
1999Ga.A	B-Seeheim		O34	H.W. Gäggeler, R. Dressler, A. Türler, D.T. Jost, B. Eichler, H.R. von Gunten
1999Ge01	PRVCA	59,	82	J. Genevey, F. Ibrahim, J.A. Pinston, H. Faust, T. Friedrichs, M. Gross, S. Oberstedt
1999Ge02	PRVCA	59,	598	E.A. George, L.D. Knutson
1999Gi14	NUPAB	658,	97	J. Gizon, A. Gizon, J. Timár, Gh. Cata-Danil, B.M. Nyakó, L. Zolnai, A.J. Boston, D.T. Joss, E.S. Paul, A.T. Semple, N.J. O'Brien, C.M. Parry, D. Bucurescu, S. Brant, V. Paar
1999Gr28	EPJAA	6,	269	P.T. Greenlees, P. Kuusiniemi, N. Amzal, A. Andreyev, P.A. Butler, K.J. Cann, J.F.C. Cocks, O. Dorvaux, T. Enqvist, P. Fallon, B. Gall, M. Guttormsen, D. Hawcroft, K. Helariutta, F.P. Heßberger, F. Hoellinger, G.D. Jones, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, M. Leino, S. Messelt, M. Muikku, S. Ødegård, R.D. Page, A. Savelius, A. Schiller, S. Siem, W.H. Trzaska, T. Tveter, J. Uusitalo
1999Ha05	PRLTA	82,	1391	M. Hannawald, T. Kautsch, A. Wöhr, W.B. Walters, K.-L. Kratz, V.N. Fedoseyev, V.L. Mishin, W. Böhmer, B. Pfeiffer, V. Sebastian, Y. Jading, U. Köster, J. Lettry, H.L. Ravn, ISOLDE
1999He11	JPGPE	25,	877	F.P. Heßberger
1999Ho01	NUPAB	645,	331	J. Honzátko, I. Tomandl, V. Bondarenko, D. Bucurescu, T. von Egidy, J. Ott, W. Schauer, H.-F. Wirth, C. Doll, A. Gollwitzer, G. Graw, R. Hertenberger, B.D. Valnion see also 98Ho16
1999Ho09	PYLBB	451,	247	E. Holzschuh, W. Kündig, L. Palermo, H. Stüssi, P. Wenk
1999Ho28	PRVCA	60,	057301	F. Hoellinger, B.J.P. Gall, N. Schulz, N. Amzahl, P.A. Butler, P.T. Greenlees, D. Hawcroft. J.F.C. Cocks, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, D. Savelius
1999Hu05	PRVCA	59,	2402	W.X. Huang, R.C. Ma, S.W. Xu, X.J. Xu, J.S. Guo, X.F. Sun, Y.X. Xie, Z.K. Li, Y.X. Ge, Y.Y. Wang, C.F. Wang, T.M. Zhang, G.M. Jin. Y.X. Luo
1999Hu10	PRVCA	60,	024315	Z. Hu, L. Batist, J. Agramunt, A. Algora, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, M. Gierlik, M. Górska, H. Grawe, M. Hellström, Z. Janas, M. Karny, R. Kirchner, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, M. Shibata, T. Szerypo, J.L. Tain, V. Wittmann
1999Io02	PRVCA	60,	024316	M. Ionescu-Bujor, A. Iordachescu, F. Brandolini, M. De Poli, N.H. Medina, P. Pavan, M.N. Rao, C. Rossi Alvarez
1999Ja02	PRLTA	82,	295	Z. Janas, C. Chandler, B. Blank, P.H. Regan, A.M. Bruce, W.N. Catford, N. Curtis, S. Czajkowski, Ph. Dessagne, A. Fleury, W. Gelletly, J. Giovinazzo, R. Grzywacz, M. Lewitowicz, C. Longour, C. Marchand , C. Miehé, N.A. Orr, R.D. Page, C.J. Pearson, M.S. Pravikoff, A.T. Reed, M.G. Saint-Laurent, J.A. Sheikh, S.M. Vincent, R. Wadsworth, D.D. Warner, J.S. Winfield
1999Ke05	PYLAA	255,	221	E.G. Kessler,Jr., M.S. Dewey, R.D. Deslattes, A. Henins, H.G. Börner, M. Jentschel, C. Doll, H. Lehmann
1999La06	NUPAB	648,	64	J.M. Lagrange, M. Pautrat, J.S. Dionisio, Ch. Vieu, J. Vanhorenbeeck
1999La14	PRVCA	59,	3086	C.A. Laue, K.E. Gregorich, R. Sudowe, M.B. Hendricks, J.L. Adams, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman

1999Le52	PRVCA	60,	054310	F. Le Blanc, D. Lunney, J. Obert, J. Oms, J.C. Putaux, B. Roussière, J. Sauvage, S. Zemlyanoi, J. Pinard, L. Cabaret, H.T. Duong, G. Huber, M. Krieg, V. Sebastian, J.E. Crawford, J.K.P. Lee, M. Girod, S. Péru, J. Genevey, J. Lettry, ISOLDE
1999Le67	NUPAB	654,	683c	S. Leenhardt, F. Azaiez, O. Sorlin, M. Belleguic, C. Bourgeois, C. Donzaud, J. Duprat, S. Grevy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, I. Deloncle, J. Kiener, M.G. Porquet, J.M. Daugas, M. Lewitowicz, F. de Oliveira, M.G. Saint-Laurent, J. Winfield, J.C. Angelique, N. Orr, A. Gillibert, F. Marie, C. Borcea, Yu.-E. Penionzhkevich, Yu. Sobolev, R. Beraud, G. Canchel, E. Chabanat, A. Emsallem, C. Longour, J.E. Sauvestre
1999Lh01	PRVCA	60,	014315	G. Lhersonneau, J.C. Wang, S. Hankonen, P. Dendooven, P. Jones, R. Julin, J. Äystö
1999Mo30	NUPAB	657,	251	C.-B. Moon, S.J. Chae, T. Komatsubara, T. Shizuma, Y. Sasaki, H. Ishiyama, T. Jumatsu, K. Furuno
1999Na27	PRLTA	83,	1112	T. Nakamura, N. Fukuda, T. Kobayashi, N. Aoi, H. Iwasaki, T. Kubo, A. Mengoni, M. Notani, H. Otsu, H. Sakurai, S. Shimoura, T. Teranishi, Y.X. Watanabe, K. Yoneda, M. Ishihara
1999Ni03	PRLTA	83,	1104	V. Ninov, K.E. Gregorich, W. Loveland, A. Ghiorso, D.C. Hoffman, D.M. Lee, H. Nitsche, W.J. Swiatecki, U.W. Kirbach, C.A. Laue, J.L. Adams, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, P.A. Wilk
1999Og03	PYLBB	451,	11	H. Ogawa, K. Asahi, K. Sakai, A. Yoshimi, M. Tsuda, Y. Uchiyama, T. Suzuki, K. Suzuki, N. Kurokawa, M. Adachi, H. Izumi, H. Ueno, T. Shimoda, S. Tanimoto, N. Takahashi, W.-D. Schmidt-Ott, M. Schäfer, S. Fukuda, A. Yoshida, M. Notani, T. Kubo, H. Okuno, H. Sato, N. Aoi, K. Yoneda, H. Iwasaki, N. Fukuda, N. Fukunishi, M. Ishihara, H. Miyatake
1999Og07	NATUA	400,	242	Yu. Ts. Oganessian, A.V. Yeremin, A.G. Popeko, S. L Bogomolov, G.V. Buklanov, M.L. Chelnokov, V.I. Chepigin, B.N. Gikal, V.A. Gorshkov, G.G. Gulbekian, M.G. Itkis, A.P. Kabachenko, A. Yu. Lavrentev, O.N. Malyshev, J. Rohac, R.N. Sagaidak, S. Hofmann, S. Saro, G. Giardina, K. Morita
1999Og10	PRLTA	83,	3154	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, K. Subotic, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Lougheed
1999Og.B	B-Seeheim		O5	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, K. Subotik, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, R.W. Lougheed, and email
1999Oi01	EPJAA	5,	151	M. Oinonen, P. Baumann, P. Dendooven, Y. Fujita, M. Górska, H. Grawe, Z. Hu, Z. Janas, A. Jokinen, R. Kirchner, O. Klepper, A. Knipper, W. Liu, H. Penttilä, A. Płochocki, M. Ramdhane, E. Roeckl, G. Walter, J. Äystö
1999Pi08	NPBSE	77,	352	F. Piquemal, NEMO
1999Po09	PRVCA	59,	2979	G.L. Poli, C.N. Davids, P.J. Woods, D. Seweryniak, J.C. Batchelder, L.T. Brown, C.R. Bingham, M.P. Carpenter, L.F. Conticchio, T. Davinson, J. de Boer, S. Hamada, D.J. Henderson, R.J. Irvine, R.V.F. Janssens, H.J. Maier, L. Müller, F. Soramel, K.S. Toth, W.B. Walters, J. Wauters
1999Pr10	PRVCA	60,	054307	J.I. Prisciandaro, P.F. Mantica, A.M. Oros-Peusquens, D.W. Anthony, M. Huhta, P.A. Lofy, R.M. Ronningen
1999Re06	PRVCA	59,	2416	I. Reusen, I. Reusen, A. Andreyev, J. Andrzejewski, N. Bijnens, S. Franchoo, M. Huyse, Yu. Kudryavtsev, K. Kruglov, W.F. Mueller, A. Piechaczek, R. Raabe, K. Rykaczewski, J. Szerypo, P. Van Duppen, L. Vermeeren, J. Wauters, A. Wöhr
1999Re16	PRVCA	60,	024311	A.T. Reed, O. Tarasov, R.D. Page, D. Guillemaud-Mueller, Yu. E. Penionzhkevich, R.G. Allatt, J.C. Angélique, R. Anne, C. Borcea, V. Burjan, W.N. Catford, Z. Dlouhý, C. Donzaud, S. Grévy, M. Lewitowicz, S.M. Lukyanov, F.M. Marqués, G. Martinez, A.C. Mueller, P.J. Nolan, J. Novák, N.A. Orr, F. Pougheon, P.H. Regan, M.G. Saint-Laurent, T. Siiskonen, E. Sokol, O. Sorlin, J. Suhonen, W. Trinder, S.M. Vincent

1999Ry04	PRVCA	60,	011301	K. Rykaczewski, J.C. Batchelder, C.R. Bingham, T. Davinson, T.N. Ginter, C.J. Gross, R. Grzywacz, M. Karny, B.D. MacDonald, J.F. Mas, J.W. McConnell, A. Piechacczek, R.C. Slinger, K.S. Toth, W.B. Walters, P.J. Woods, E.F. Zganjar, B. Barmore, L. Gr. Ixaru, A.T. Kruppa, W. Nazarewicz, M. Rizea, T. Vertse
1999Sa06	PYLBB	448,	180	H. Sakurai, S.M. Lukyanov, M. Notani, N. Aoi, D. Beaumel, N. Fukuda, M. Hirai, E. Ideguchi, N. Imai, M. Ishihara, H. Iwasaki, T. Kubo, K. Kusaka, H. Kumagai, T. Nakamura, H. Ogawa, Yu. E. Penionzhkevich, T. Teranishi, Y.X. Watanabe, K. Yoneda, A. Yoshida
1999Sa.A	P-Bormio			F. Sarazin, et al, and PrvCom to D. Lunney March 1999
1999Sa.D	B-Seeheim		PW4	M. Sakama, K. Tsukuda, M. Asai, S. Ichikawa, Y. Oura, A. Osa, M. Shibata, I. Nishinaka, Y. Nagame, M. Ebihara, K. Kawade, H. Nakahara and poster
1999Se14	PRVCA	60,	031304	D. Seweryniak, J. Uusitalo, M.P. Carpenter, D. Nisius, C.N. Davids, C.R. Bingham, L.T. Brown, I. Conticchio, D.J. Henderson, R.V.F. Janssens, W.B. Walters, J. Wauters, P.J. Woods
1999Sh03	PRVCA	59,	101	R.K. Sheline, P. Alexa, C.F. Liang, P. Paris
1999Sm07	EPJAA	5,	43	M.B. Smith, R. Chapman, J.F.C. Cocks, O. Dorvaux, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, Y. Le Coz, M. Leino, D.J. Middleton, M. Muikku, P. Nieminen, P. Rahkila, A. Savelius, K.-M. Spohr
1999So08	PRVCA	59,	1324	D. Sohler, J. Cederkall, M. Lipoglavsek, Zs. Dombradi, M. Gorska, J. Persson, D. Seweryniak, I. Ahmad, A. Atac, R.A. Bark, J. Blomqvist, M.P. Carpenter, B. Cederwall, C.N. Davids, C. Fahlander, S.M. Fischer, H. Grawe, G. Hackman, R.V.F. Janssens, A. Johnson, A. Kerek, W. Klamra, J. Kownacki, C.J. Lister, S. Mitarai, D. Nisius, L.-O. Norlin, J. Nyberg, G. Poli, P. Reiter, J.J. Ressler, H.A. Roth, J. Schwartz, G. Sletten, J. Uusitalo, W.B. Walters, M. Weiszflog
1999So17	PRLTA	83,	1116	A.A. Sonzogni, C.N. Davids, P.J. Woods, D. Seweryniak, M.P. Carpenter, J.J. Ressler, J. Schwartz, J. Uusitalo, W.B. Walters
1999So20	NUPAB	660,	3	O. Sorlin, C. Donzaud, L. Axelsson, M. Belleguic, R. Béraud, C. Borcea, G. Canchel, E. Chabanat, J.M. Daugas, A. Emsallem, D. Guillemaud-Mueller, K.-L. Kratz, S. Leenhardt, M. Lewitowicz, C. Longour, M.J. Lopez, F. de Oliveira Santos, L. Petizon, B. Pfeiffer, F. Pougheon, M.G. Saint-Laurent, J.E. Sauvestre, and erratum Nucl. Phys. A669 (2000) 351
1999Ta20	EPJAA	5,	123	Y. Tagaya, S. Hashimoto, K. Morita, Y.H. Pu, T. Ariga, K. Ohta, T. Minemura, I. Hisinaga, T. Motobayashi, T. Nomura
1999To04	EPJAA	4,	233	Y. Toh, S. Yamada, A. Taniguchi, Y. Kawase
1999To11	PRVCA	60,	011302	K.S. Toth, C.R. Bingham, J.C. Batchelder, L.T. Brown, L.F. Contecchio, C.N. Davids, R.J. Irvine, D. Sewerniak, D.M. Moltz, W.B. Walters, J. Wauters, E.F. Zganjar
1999Tr04	PYLBB	459,	67	W. Trinder, J.C. Angélique, R. Anne, J. Äystö, C. Borcea, J.M. Daugas, D. Guillemaud-Mueller, S. Grévy, R. Grzywacz, A. Jokinen, M. Lewitowicz, M.J. Lopez, F. de Oliveira, A.N. Ostrowski, T. Siiskonen, M.G. Saint-Laurent
1999Uu01	PRVCA	59,	2975	J. Uusitalo, C.N. Davids, P.J. Woods, D. Sewernyak, A.A. Sonzogni, J.C. Batchelder, C.R. Bingham, T. Davinson, J. de Boer, D.J. Henderson, H.J. Maier, J. Ressler, R. Slinger, W.B. Walters
1999Wa09	PYLBB	454,	1	J.C. Wang, P. Dendooven, M. Hannawald, A. Honkanen, M. Huhta, A. Jokinen, K.-L. Kratz, G. Lhersonneau, M. Oinonen, H. Penttilä, K. Peräjärvi, B. Pfeiffer, J. Äystö
1999Xi03	EPJAA	5,	341	Y. Xie, S. Xu, Z. Li, Y. Yu, Q. Pan, C. Wang, T. Zhang, G. Long, Y. Li
1999Xi04	EPJAA	6,	239	Y. Xie, S. Xu, Z. Li, Y. Yu, Q. Pan, C. Wang, T. Zhang
1999Ya.A	P-Dubna		118	E.A. Yakushev, V.M. Gorozhankin, O. Dragoun, A. Kovalik, A.F. Novgorodov, M. Rysavy, A. Shpalek
1999YoZW	AnRpt RIKEN		78	K. Yoneda, H. Sakurai, N. Aoi, N. Fukuda, T. Gomi, E. Ideguchi, N. Imai, H. Iwasaki, T. Kubo, Z. Liu, S.M. Lukyanov, T. Nakamura, M. Notani, H. Ogawa, Y.E. Penionzhkevich, W.-D. Schmidt-Ott, S. Shimoura, E. Sokol, Y.X. Watanabe, A. Yoshida, X. Zhou, M. Ishihara

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2000Ah02	PRVCA	61,	044301	I. Ahmad, R.R. Chasman, P.R. Fields
2000An14	NATUA	405,	430	A.N. Andreyev, M. Huyse, P. Van Duppen, L. Weissman, D. Ackermann, J. Gerl, F.P. Heßberger, S. Hofmann, A. Kleinböhl, G. Münzenberg, S. Reshitko, C. Schlegel, H. Schaffner, P. Cagarda, M. Matos, S. Saro, A. Keenan, C. Moore, C.D. O'Leary, R.D. Page, M. Taylor, H. Kettunen, M. Leino, A. Lavrentiev, R. Wyss, K. Heyde
2000As.A	AnRpt JAERI		13	M. Asai, K. Tsukada, S. Ichikawa, H. Haba, A. Osa, Y. Nagame, S. Goto, M. Sakama, Y. Kojima, M. Shibata, K. Akiyama, A. Toyoshima
2000Bb01	PRVCA	62,	054302	P.H. Barker, M.S. Wu
2000Be42	EPJAA	8,	307	D. Beck, F. Ames, G. Audi, G. Bollen, F. Herfurth, H.-J. Kluge, A. Kohl, M. König, D. Lunney, I. Martel, R.B. Moore, H. Raimbault-Hartmann, E. Schark, S. Schwarz, M. de Saint Simon, J. Szerypo, ISOLDE
2000Bo24	NUPAB	673,	85	V. Bondarenko, T. von Egidy, J. Honzátko, I. Tomandl, D. Bucurescu, N. Mărginean, J. Ott, W. Schauer, H.-F. Wirth, C. Doll
2000By02	EPJAA	7,	41	A.P. Byrne, A.M. Baxter, G.D. Dracoulis, S.M. Mullins, T. Kibedi, T.R. McGoram, K. Helariutta, J.F.C. Cocks, P. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, P. Rahkila, A. Savelius
2000Ca.A	Th.-Valencia			Cano-Ott
2000Ch07	PRVCA	61,	044309	C. Chandler, P.H. Regan, B. Blank, C.J. Pearson, A.M. Bruce, W.N. Catford, N. Curtis, S. Czajkowski, Ph. Dessagne, A. Fleury, W. Gelletly, J. Giovinazzo, R. Grzywacz, Z. Janas, M. Lewitowicz, C. Marchand, Ch. Miehe, N.A. Orr, R.D. Page, M.S. Pravikoff, A.T. Reed, M.G. Saint-Laurent, S.M. Vincent, R. Wadsworth, D.D. Warner, J.S. Winfield, F. Xu
2000Da07	PYLBB	476,	213	J.M. Daugas, R. Grzywacz, M. Lewitowicz, L. Achouri, J.C. Angélique, D. Baiborodin, K. Bennaceur, R. Bentida, R. Béraud, C. Borcea, C. Bingham, W.N. Catford, A. Emsallem, G. de France, H. Grawe, K.L. Jones, R.C. Lemmon, M.J. Lopez Jimenez, F. Nowacki, F. de Oliveira Santos, M. Pfützner, P.H. Regan, K. Rykaczewski, J.E. Sauvestre, M. Sawicka, G. Sletten, M. Stanoiu
2000Do10	JRNBA	105,	43	J. Döring, A. Aprahamian, M. Wiescher
2000Ei05	NATUA	407,	63	R. Eichler, W. Bruchle, R. Dressler, Ch. E. Dullmann, B. Eichler, H.W. Gaggeler, K.E. Gregorich, D.C. Hoffman, S. Hubener, D.T. Jost, U.W. Kirbach, C.A. Laue, V.M. Lavanchy, H. Nitsche, J.B. Patin, D. Piguet, M. Schadel, D.A. Shaughnessy, D.A. Strellis, S. Taut, L. Tobler, Y.S. Tsyganov, A. Turler, A. Vahle, P.A. Wilk, A.B. Yakushev
2000Fy01	NUPAB	677,	38	H.O.U. Fynbo, M.J.G. Borge, L. Axelsson, J. Äystö, U.C. Bergmann, L.M. Fraile, A. Honkanen, P. Hornshøj, Y. Jading, A. Jokinen, B. Jonson, I. Martel, I. Mukha, T. Nilsson, G. Nyman, M. Oinonen, I. Piqueras, K. Riisager, T. Siiskonen, M.H. Smedberg, O. Tengblad, J. Thaysen, F. Wenander, ISOLDE
2000Ge01	NUPAB	662,	3	L. Genilloud, H.G. Börner, F. Corminboeuf, Ch. Doll, S. Drissi, M. Jentschel, J. Jolie, J. Kern, H. Lehmann, N. Warr, and erratum NUPAB 669(2000)407
2000Ge07	PYLBB	480,	77	T. Gehrmann
2000Ge09	PRVCA	61,	064310	E. Gete, L. Buchmann, R.E. Azuma, D. Anthony, N. Bateman, J.C. Chow, J.M. D'Auria, M. Dombsky, U. Giesen, C. Iliadis, K.P. Jackson, J.D. King, D.F. Measday, A.C. Morton
2000Ge18	EPJAA	9,	191	J. Genevey, J.A. Pinston, H. Faust, C. Foin, S. Oberstedt, M. Rejmund
2000Gi01	PRVCA	61,	014308	T.N. Ginter, J.C. Batchelder, C.R. Bingham, C.J. Gross, R. Grzywacz, J.H. Hamilton, Z. Janas, M. Karny, S.H. Kim, J.F. Mas, J.W. McConnell, A. Piechaczek, A.V. Ramayya, K. Rykaczewski, P.B. Semmes, J. Szerypo, K.S. Toth, R. Wadsworth, C.-H. Yu, E.F. Zganjar
2000Ha55	PRVCA	62,	054301	M. Hannawald, K.-L. Kratz, B. Pfeiffer, W.B. Walters, V.N. Fedoseyev, V.I. Mishin, W.F. Mueller, H. Schatz, J. Van Roosbroeck, U. Köster, V. Sebastian, H.L. Ravn, ISOLDE
2000He17	EPJAA	8,	521	F.P. Heßberger, S. Hofmann, D. Ackermann, V. Ninov, M. Leino, S. Saro, A. Andreyev, A. Lavrentev, A.G. Popeko, A.V. Yeremin, and erratum EPJAA 9(2000)433

2000Hi08	PRVCA	61,	055501	M.M. Hindi, R.-M. Larimer, E.B. Norman, G.A. Rech
2000Ho13	PYLBB	482,	1	E. Holzschuh, L. Palermo, H. Stussi, P. Wenk
2000Ho19	RAACA	88,	139	A. Hohn, H.H. Coenen, S.M. Qaim
2000Ho27	PACHA	72,	1525	N.E. Holden, D.C. Hoffman
2000Hu17	PRVCA	62,	064315	Z. Hu, L. Batist, J. Agramunt, A. Algora, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, M. Gierlik, M. Górska, H. Grawe, M. Hellström, Z. Janas, M. Karny, R. Kirchner, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann
2000Io02	PRVCA	62,	014306	M. Ionescu-Bujor, A. Iordachescu, D. Bucurescu
2000Je09	PRVCA	62,	021302	D.G. Jenkins, M. Muikku, P.T. Greenlees, K. Hauschild, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, N.S. Kelsall, H. Kettunen, P. Kuusiniemi, M. Leino, C.J. Moore, P. Nieminen, C.D. O'Leary, R.D. Page, P. Rakhila, W. Reviol, M.J. Taylor, J. Uusitalo, R. Wadsworth
2000Jo18	EPJAA	9,	9	A. Jokinen, J.C. Wang, J. Äystö, P. Dendooven, S. Nummela, J. Huikari, V. Kolhinen, A. Nieminen, K. Peräjärvi, S. Rinta-Antila
2000Ka21	EPJAA	7,	451	R. Kalpakchieva, H.G. Bohlen, W. von Oertzen, B. Gebauer, M. von Lucke-Petsch, T.N. Massey, A.N. Ostrowski, Th. Stolla, M. Wilpert, Th. Wilpert
2000Ke09	EPJAA	8,	31	M. Keim, U. Georg, A. Klein, R. Neugart, M. Neuroth, S. Wilbert, P. Lievens, L. Vermeeren, B.A. Brown, and the ISOLDE Collaboration
2000Ko15	EPJAA	7,	167	A. Korgul, W. Urban, T. Rzaca-Urban, M. Rejmund, J.L. Durell, M.J. Leddy, M.A. Jones, W.R. Phillips, A.G. Smith, B.J. Varley, N. Schulz, M. Bentaleb, E. Lubkiewicz, I. Ahmad, L.R. Morss
2000Ko16	PRVCA	61,	044323	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, I. Wiedenhöver, M. Alcorta, L.T. Brown, C.N. Davids, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Siem, A.A. Sonzogni, J. Uusitalo, P. Bhattacharyya, S.M. Fischer, W. Reviol, L.L. Riedinger, R. Nouicer
2000Ko48	PRVCA	62,	044305	F.G. Kondev, R.V.F. Janssens, M.P. Carpenter, K. Abu Saleem, I. Ahmad, M. Alcorta, H. Amro, P. Bhattacharyya, L.T. Brown, J. Caggiano, C.N. Davids, S.M. Fischer, A. Heinz, B. Herskind, R.A. Kaye, T.L. Khoo, T. Lauritsen, C.J. Lister, W.C. Ma, R. Nouicer, J. Ressler, W. Reviol, L.L. Riedinger, D.G. Sarantites, D. Seweryniak, S. Siem, A. Sonzogni, J. Uusitalo, P.G. Varmette, I. Wiedenhöver
2000KoZH	Th.-Munchen			U. Koster
2000Kr18	HYIND	129,	185	K. Kratz, B. Pfeiffer, F. Thielemann, W.B. Walters
2000Kr.A	PrvCom	GAu	Jun	K.-L. Kratz, B. Pfeiffer
2000Ku06	EPJAA	7,	49	J. Kurpeta, A. Andreyev, J. Äystö, A.-H. Evensen, M. Huhta, M. Huyse, A. Jokinen, M. Karny, E. Kugler, J. Lettry, A. Nieminen, A. Płochocki, M. Ramdhane, H.L. Ravn, K. Rykaczewski, J. Szerypo, P. Van Duppen, G. Walter, A. Wohr, ISOLDE
2000Ku25	YAFIA	63,	1365	V.V. Kuzminov, N. Ja. Osetrova
2000La25	PRVCA	61,	067603	C.A. Laue, K.E. Gregorich, R. Sudowe, J.L. Adams, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2000La34	PRVCA	62,	064307	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, Yu. S. Tsyganov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, A.N. Mezentsev, K. Subotic, K.J. Moody, N.J. Stoyer, J.F. Wild, R.W. Lougheed
2000La36	EPJAA	9,	307	M. Lach, P. Bednarczyk, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, M. Leino, W. Meczynski, M. Muikku, P. Nieminen, P. Rahkila, J. Styczen, J. Uusitalo
2000Li08	EPJAA	7,	1	Z. Li, S. Xu, Y. Xie, T. Zhang, R. Ma, J. Du, Y. Guo, Y. Ge, C. Wang, B. Guo, J. Xing
2000Li37	PRVCA	62,	047303	C.F. Liang, P. Paris, R.K. Sheline

2000Ma62	PRVCA	62,	034308	K. Markenroth, L. Axelsson, S. Baxter, M.J.G. Borge, C. Donzaud, S. Fayans, H.O.U. Fynbo, V.Z. Goldberg, S. Grévy, D. Guillemaud-Mueller, B. Jonson, K.-M. Källman, S. Leenhardt, M. Lewitowicz, T. Lönnroth, P. Manngøard, I. Martel, A.C. Mueller, I. Mukha, T. Nilsson, G. Nyman, N.A. Orr, K. Riisager, G.V. Rogachev, M.-G. Saint-Laurent, I.N. Serikov, N.B. Shul'gina, O. Sorlin, M. Steiner, O. Tengblad, M. Thoennessen, E. Tryggestad, W.H. Trzaska, F. Wenander, J.S. Winfield, R. Wolski
2000Ma65	EPJAA	8,	295	O.N. Malyshev, A.V. Belozerov, M.L. Chelnokov, V.I. Chepigin, V.A. Gorshkov, A.P. Kabachenko, A.G. Popeko, J. Rohach, R.N. Sagaidak, A.V. Yeremin, S.I. Mulgin, S.V. Zhdanov
2000Ma95	PRVCA	62,	057303	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters
2000Me.A	PrvCom	AHW	Sep	K.A. Mezilev, B. Fogelberg, V.I. Isakov, H. Mach
2000Mu10	PRVCA	61,	054308	W.F. Mueller, B. Bruyneel, S. Franchoo, M. Huyse, J. Kurpeta, K. Kruglov, Y. Kudryavtsev, N.V.S.V. Prasad, R. Raabe, I. Reusen, P. Van Duppen, J. Van Roosbroeck, L. Vermeeren, L. Weissman, Z. Janas, M. Karny, T. Kszczot, A. Płochocki, K.-L. Kratz, B. Pfeiffer, H. Grawe, U. Köster, P. Thirolf, W.B. Walters
2000Ni02	PRVCA	61,	034309	K. Nishio, H. Ikezoe, S. Mitsuoka, J. Lu
2000Oi02	PRVCA	61,	035801	M. Oinonen, J. Äystö, A. Jokinen, P. Baumann, F. Didierjean, A. Huck, A. Knipper, M. Ramdhane, G. Walter, M. Huyse, P. Van Duppen, G. Marguier, Yu. Novikov, A. Popov, D.M. Seliverstov, H. Schatz, ISOLDE
2000Ol01	PRLTA	84,	4056	J.M. Oliveira, Jr., A. Lépine-Szily, H.G. Bohlen, A.N. Ostrowski, R. Lichtenthäler, A. Di Pietro, A.M. Laird, G.F. Lima, L. Maunoury, F. de Oliveira Santos, P. Roussel-Chomaz, H. Savajols, W. Trinder, A.C.C. Villari, A. de Vismes
2000Pe28	PYLBB	492,	1	K. Peräjärvi, T. Siiskonen, A. Honkanen, P. Dendooven, A. Jokinen, P.O. Lipas, M. Oinonen, H. Penttilä, J. Äystö
2000Pi03	PRVCA	61,	024312	J.A. Pinston, C. Foin, J. Genevey, R. Béraud, E. Chabanat, H. Faust, S. Oberstedt, B. Weiss
2000Po26	PYLBB	491,	225	Zs. Podolyák, P.H. Regan, M. Pfutzner, J. Gerl, M. Hellström, M. Caamano, P. Mayet, Ch. Schlegel, A. Aprahamian, J. Benlliure, A.M. Bruce, P.A. Butler, D. Cortina Gil, D.M. Cullen, J. Doring, T. Enqvist, F. Rejmund, C. Fox, J. Garces Narro, H. Geissel, W. Gelletly, J. Giovinazzo, M. Gorska, H. Grawe, R. Grzywacz, A. Kleinbohl, W. Korten, M. Lewitowicz, R. Lucas, H. Mach, M. Mineva, C.D. O'Leary, F. de Oliveira, C.J. Pearson, M. Rejmund, M. Sawicka, H. Schaffner, K. Schmidt, Ch. Theisen, P.M. Walker, D.D. Warner, C. Wheldon, H.J. Wollersheim, S.C. Wooding, F.R. Xu
2000Ra23	NUPAB	677,	75	T. Radon, H. Geissel, G. Münzenberg, B. Franzke, Th. Kerscher, F. Nolden, Yu. N. Novikov, Z. Patyk, C. Scheidenberger, F. Attallah, K. Beckert, T. Beha, F. Bosch, H. Eickhoff, M. Falch, Y. Fujita, M. Hausmann, F. Herfurth, H. Irnich, H.C. Jung, O. Klepper, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Löbner, F. Nickel, H. Reich, W. Schwab, B. Schlitt, M. Steck, K. Sümmerer, T. Winkler, H. Wollnik
2000Re03	PRLTA	84,	2104	J.J. Ressler, A. Piechaczek, W.B. Walters, A. Aprahamian, M. Wiescher, J.C. Batchelder, C.R. Bingham, D.S. Brenner, T.N. Ginter, C.J. Gross, R. Grzywacz, D. Kulp, B. MacDonald, W. Reviol, J. Rikovska, K. Rykaczewski, J.A. Winger, E.F. Zganjar
2000Ri14	PRLTA	85,	1392	J. Rikovska, T. Giles, N.J. Stone, K. van Esbroeck, G. White, A. Wöhr, M. Veskovic, I.S. Towner, P.F. Mantica, J.I. Prisciandaro, D.J. Morrissey, V.N. Fedoseyev, V.I. Mishin, U. Köster, W.B. Walters, NICOLE, ISOLDE
2000Sa21	PRLTA	84,	5062	F. Sarazin, H. Savajols, W. Mittig, F. Nowacki, N.A. Orr, Z. Ren, P. Roussel-Chomaz, G. Auger, D. Baiborodin, A.V. Belozyorov, C. Borcea, E. Caurier, Z. Dlouhý, A. Gillibert, A.S. Lalleman, M. Lewitowicz, S.M. Lukyanov, F. de Oliveira, Y.E. Penionzhkevich, D. Ridikas, H. Sakuraï, O. Tarasov, A. de Vismes
2000Sa52	EPJAA	9,	303	M. Sakama, K. Tsukada, M. Asai, S. Ichikawa, H. Haba, S. Goto, Y. Oura, I. Nishinaka, Y. Nagame, M. Shibata, Y. Kojima, K. Kawade, M. Ebihara, H. Nakahara

2000Sh10	PRVCA	61,	044609	D.A. Shaughnessy, J.L. Adams, K.E. Gregorich, M.R. Lane, C.A. Laue, D.M. Lee, C.A. McGrath, J.B. Patin, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2000Si02	ARISE	52,	467	G. Sibbens, B. Denecke
2000Sm06	JPGPE	26,	787	M.B. Smith, R. Chapman, J.F.C. Cocks, K.-M. Spohr, O. Dorvaux, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, Y. Le Coz, M. Leino, D.J. Middleton, M. Muikku, P. Nieminen, P. Rahkila, A. Savelius
2000So11	PHSTT	88,	153	G.A. Souliotis
2000Sy01	RAACA	88,	837	E.R. Sylwester, K.E. Gregorich, D.M. Lee, B. Kadkhodayan, A. Turler, J.L. Adams, C.D. Kacher, M.R. Lane, C.A. Laue, C.A. McGrath, D.A. Shaughnessy, D.A. Strellis, P.A. Wilk, D.C. Hoffman
2000We.A	AnRpt GSI		10	E. Wefers, T. Faestermann, R. Schneider, A. Stolz, K. Sümerrer, J. Friese, H. Geissel, M. Hellström, P. Kienle, H.-J. Körner, M. Münch, G. Münzenberg, P. Thirolf, H. Weick
2000Wh04	PRVCA	62,	057301	C. Wheldon, P.M. Walker, P. Chowdhury, I. Shestakova, R. D'Alarcao, I. Ahmad, M.P. Carpenter, D.M. Cullen, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, C.J. Pearson, Zs. Podolyák, D. Seweryniak, I. Wiedenhoever
2000Wi15	PRLTA	85,	2697	P.A. Wilk, K.E. Gregorich, A. Türler, C.A. Laue, R. Eichler, V. Ninov, J.L. Adams, U.W. Kirbach, M.R. Lane, D.M. Lee, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, H. Nitsche, D.C. Hoffman
2000Xu08	EPJAA	8,	435	S. Xu, Y. Xie, Y. Yu, Z. Li, Q. Pan, C. Wang, J. Xing, T. Zhang
2000Ye02	JPGPE	26,	839	G. Yeandle, J. Billowes, P. Campbell, E.C.A. Cochrane, P. Dendooven, D.E. Evans, D.H. Forest, J.A.R. Griffith, J. Huikari, A. Jokinen, I.D. Moore, A. Nieminen, K. Peräjärvi, G. Tungate, J. Äystö
2000Zh47	PRVCA	62,	057302	C.T. Zhang, P. Bhattacharyya, P.J. Daly, Z.W. Grabowski, R. Broda, B. Fornal, J. Blomqvist

2001

2001AsZY	AnRpt JAERI		13	M. Asai, K. Tsukada, S. Ichikawa, H. Haba, A. Osa, Y. Nagame, S. Goto, M. Sakama, Y. Kojima, M. Shibata, K. Akiyama, A. Toyoshima
2001Ba06	PRVCA	63,	024302	P.H. Barker
2001Ba12	PRLTA	86,	1454	G.C. Ball, S. Bishop, J.A. Behr, G.C. Boisvert, P. Bricault, J. Cerny, J.M. D'Auria, M. Dombsky, J.C. Hardy, V. Iacob, J.R. Leslie, T. Lindner, J.A. Macdonald, H.-B. Mak, D.M. Moltz, J. Powell, G. Savard, I.S. Towner
2001Be51	NUPAB	692,	427	U.C. Bergmann, M.J.G. Borge, R. Boutami, L.M. Fraile, H.O.U. Fynbo, P. Hornshøj, B. Jonson, K. Markenroth, I. Martel, I. Mukha, T. Nilsson, G. Nyman, A. Oberstedt, Y. Prezado Alonso, K. Riisager, H. Simon, O. Tengblad, F. Wenander, K. Wilhelmsen Rolander, ISOLDE
2001Be53	EPJAA	11,	279	U.C. Bergmann, M.J.G. Borge, J. Cederkäll, C. Forssén, E. Fumero, H.O.U. Fynbo, H. Gausemel, H. Jeppesen, B. Jonson, K. Markenroth, T. Nilsson, G. Nyman, K. Riisager, H. Simon, O. Tengblad, L. Weissman, F. Wenander, K. Wilhelmsen Rolander, ISOLDE
2001Be81	GCACA	65,	111	F. Begemann, K.R. Ludwig, G.W. Lugmair, K. Min, L.E. Nyquist, P.J. Patchett, P.R. Renne, C.-Y. Shih, I.M. Villa, R.J. Walker
2001Bo11	NUPAB	686,	64	R. Bonetti, C. Carbonini, A. Guglielmetti, M. Hussonnois, D. Trubert, C. Le Naour
2001Bo54	NUPAB	695,	69	R. Borcea, J. Äystö, E. Caurier, P. Dendooven, J. Döring, M. Gierlik, M. Górska, H. Grawe, M. Hellström, Z. Janas, A. Jokinen, M. Karny, R. Kirchner, M. La Commara, K. Langanke, G. Martínez-Pinedo, P. Mayet, A. Nieminen, F. Nowacki, H. Penttilä, A. Płochocki, M. Rejmund, E. Roeckl, C. Schlegel, K. Schmidt, R. Schwengner, M. Sawicka, and erratum NUPAB 703(2002)889
2001Bo59	HYIND	132,	215	G. Bollen, F. Ames, G. Audi, D. Beck, J. Dilling, O. Engels, S. Henry, F. Herfurth, A. Kellerbauer, H.-J. Kluge, A. Kohl, E. Lamour, D. Lunney, R.B. Moore, M. Oinonen, C. Scheidenberger, S. Schwarz, G. Sikler, J. Szerypo, C. Weber, ISOLDE
2001Br20	PRVCA	64,	014311	E. Browne, E.B. Norman, R.D. Canaan, D.C. Glasgow, J.M. Keller, J.P. Young
2001Br27	EPJDD	15,	181	S. Brunner, T. Engel, A. Schmitt, G. Werth

2001Ca37	PRVCA	64,	025802	J.A. Caggiano, D. Bazin, W. Benenson, B. Davids, R. Ibbotson, H. Scheit, B.M. Sherrill, M. Steiner, J. Yurkon, A.F. Zeller, B. Blank, M. Chartier, J. Greene, J.A. Nolen, Jr., A.H. Wuosmaa, M. Bhattacharya, A. García, M. Wiescher
2001Ca60	EPJAA	12,	377	G. Canchel, L. Achouri, J. Äystö, R. Béraud, B. Blank, E. Chabanat, S. Czajkowski, P. Dendooven, A. Emsallem, J. Giovinazzo, J. Honkanen, A. Jokinen, M. Lewitowicz, C. Longour, F. de Oliveira Santos, K. Peräjärvi, M. Staniou, J.C. Thomas
2001Ca.B	AnRpt GSI		15	P. Cagarda,, S. Antalic, D. Ackermann, F.P. Heßberger, S. Hofmann, B. Kindler, J. Kojouharova, B. Lommel, R. Mann, A.G. Popeko, Š. Šáro, J. Uusitalo, A.V. Yeremin
2001Ch31	PYLBB	505,	21	L. Chen, B. Blank, B.A. Brown, M. Chartier, A. Galonsky, P.G. Hansen, M. Thoennessen
2001Da22	NUPAB	694,	375	F.A. Danevich, V.V. Kobychev, O.A. Ponkratenko, V.I. Tretyak, Yu. G. Zdesenko
2001Do08	PRLTA	86,	4259	G. Douysset, T. Fritioff, C. Carlberg, I. Bergström, M. Björkhage
2001Dr05	PRVCA	63,	061302	G.D. Dracoulis, T. Kibédi, A.P. Byrne, A.M. Baxter, S.M. Mullins, R.A. Bark
2001Fo08	PRLTA	87,	212501	B. Fornal, R. Broda, K.H. Maier, J. Wrzesinski, G.J. Lane, M. Cromaz, A.O. Macchiavelli, R.M. Clark, K. Vetter, A.P. Byrne, G.D. Dracoulis, M.P. Carpenter, R.V.F. Janssens, I. Wiedenhoever, M. Rejmund, J. Blomqvist
2001Fr18	EPJDD	15,	141	T. Fritioff, C. Carlberg, G. Douysset, R. Schuch, I. Bergström
2001Ga01	PRVCA	63,	014302	M. Galeazzi, F. Fontanelli, F. Gatti, S. Vitale
2001Ga20	EPJAA	10,	21	Z.G. Gan, Z. Qin, H.M. Fan, X.G. Lei, Y.B. Xu, J.J. He, H.Y. Liu, X.L. Wu, J.S. Guo, X.H. Zhou, S.G. Yuan, G.M. Jin
2001Ga24	PRVCA	63,	044307	J. Garcés Narro, C. Longour, P.H. Regan, B. Blank, C.J. Pearson, M. Lewitowicz, C. Miehé, W. Gelletly, D. Appelbe, L. Axelsson, A.M. Bruce, W.N. Catford, C. Chandler, R.M. Clark, D.M. Cullen, S. Czajkowski, J.M. Daugas, P. Dessagne, A. Fleury, L. Frankland, J. Giovinazzo, B. Greenhalgh, R. Grzywacz, M. Harder, K.L. Jones, N. Kelsall, T. Kszczot, R.D. Page, A.T. Reed, O. Sorlin, R. Wadsworth
2001Ga59	EPJAA	11,	413	M. Gaelens, J. Andrzejewski, J. Camps, P. Decrock, M. Huyse, K. Kruglov, W.F. Mueller, A. Piechaczek, N. Severijns, J. Szerypo, G. Vancraeynest, P. Van Duppen, J. Wauters
2001Ge07	PRVCA	63,	054315	J. Genevey, J.A. Pinston, C. Foin, M. Rejmund, R.F. Casten, H. Faust, S. Oberstedt
2001Gi01	EPJAA	10,	73	J. Giovinazzo, B. Blank, C. Borcea, M. Chartier, S. Czajkowski, G. de France, R. Grzywacz, Z. Janas, M. Lewitowicz, F. de Oliveira Santos, M. Pfützner, M.S. Pravikoff, J.C. Thomas
2001Gi17	EPJAA	12,	309	A. Gizon, J. Genevey, C.F. Liang, P. Paris, D. Barnéoud, J. Inchaouh, I. Penev, A. Płochocki
2001Gr07	NUPAB	682,	41c	R. Grzywacz, C.H. Yu, Z. Janas, S.D. Paul, J.C. Batchelder, C.R. Bingham, T.N. Ginter, C.J. Gross, J. McConnell, M. Lipoglavsek, A. Piechaczek, D.C. Radford, J.J. Ressler, K. Rykaczewski, J. Shergur, W.B. Walters, E.F. Zganjar, C. Baktash, M.P. Carpenter, R.V.F. Janssens, C.E. Svensson, J.C. Waddington, D. Ward, E. Dragulescu
2001Ha39	NUPAB	688,	578c	M. Hannawald, V.N. Fedoseyev, U. Koster, K.-L. Kratz, V.I. Mishin, W.F. Mueller, H.L. Ravn, J. Van Roosbroeck, H. Schatz, V. Sebastian, W.B. Walters, ISOLDE
2001Ha46	PRLTA	87,	072501	K. Hauschild, M. Rejmund, H. Grawe, E. Caurier, F. Nowacki, F. Becker, Y. Le Coz, W. Korten, J. Döring, M. Górska, K. Schmidt, O. Dorvaux, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, M. Muikku, P. Nieminen, P. Rahkila, J. Uusitalo, F. Azaiez, M. Belleguic
2001Ha66	HYIND	132,	291	M. Hausmann, J. Stadlmann, F. Attallah, K. Beckert, P. Beller, F. Bosch, H. Eickhoff, M. Falch, B. Franczak, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Lobner, G. Munzenberg, N. Nankov, F. Nolden, Yu. N. Novikov, T. Ohtsubo, T. Radon, H. Schatz, C. Scheidenberger, M. Steck, Z. Sun, H. Weick, H. Wollnik
2001He29	PRLTA	87,	142501	F. Herfurth, J. Dilling, A. Kellerbauer, G. Audi, D. Beck, G. Bollen, H.-J. Kluge, D. Lunney, R.B. Moore, C. Scheidenberger, S. Schwarz, G. Sikler, J. Szerypo, ISOLDE

2001He35	EPJAA	12,	57	F.P. Heßberger, S. Hofmann, D. Ackermann, V. Ninov, M. Leino, G. Münzenberg, S. Saro, A. Lavrentev, A.G. Popeko, A.V. Yeremin, Ch. Stodel and PrvCom
2001He36	PRVAA	64,	062504	T.P. Heavner, S.R. Jefferts, G.H. Dunn
2001He.A	AnRpt GSI		3	F.P. Heßberger, S. Hofmann, D. Ackermann
2001Hi06	PRVCA	63,	065502	M.M. Hindi, B.O. Faircloth, R.L. Kozub, K.R. Czerwinski, R.-M. Larimer, E.B. Norman, B. Sur, I. Žlimen
2001Ho06	EPJAA	10,	5	S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, P. Cagarda, S. Ćwiok, B. Kindler, J. Kojouharova, B. Lommel, R. Mann, G. Münzenberg, A.G. Popeko, S. Saro, H.J. Schött, A.V. Yeremin
2001Ke05	APOBB	32,	989	H. Kettunen, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, J. Uusitalo
2001Ke06	PRVCA	63,	044315	H. Kettunen, J. Uusitalo, M. Leino, P. Jones, K. Eskola, P.T. Greenlees, K. Helariutta, R. Julin, S. Juutinen, H. Kankaanpaa, P. Kuusiniemi, M. Muikku, P. Nieminen, P. Rahkila
2001Ke14	PRAMC	56,	735	S.L. Keshava, K. Gopala, P. Venkataramaiah
2001Ki13	PPNPD	46,	73	P. Kienle, T. Faestermann, J. Friese, H.-J. Körner, M. Münch, R. Schneider, A. Stolz, E. Wefers, H. Geissel, G. Münzenberg, C. Schlegel, K. Sümmerer, H. Weick, M. Hellström, P. Thirolf
2001Kl13	MPLAE	16,	2409	H.V. Klapdor-Kleingrothaus, A. Dietz, H.L. Harney, I.V. Krivosheina
2001Ko07	NIMAE	458,	656	Y. Kojima, M. Shibata, H. Uno, K. Kawade, A. Taniguchi, Y. Kawase, K. Shizuma
2001Ko44	PYLBB	512,	268	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, K. Abu Saleem, I. Ahmad, H. Amro, J.A. Cizewski, M. Danchev, C.N. Davids, D.J. Hartley, A. Heinz, T.L. Khoo, T. Lauritsen, C.J. Lister, W.C. Ma, G.L. Poli, J. Ressler, W. Reviol, L.L. Riedinger, D. Seweryniak, M.B. Smith, I. Wiedenhöver and PrvCom AHW August 2001
2001Ko52	PRLTA	87,	092501	A.A. Korsheninnikov, M.S. Golovkov, I. Tanihata, A.M. Rodin, A.S. Fomichev, S.I. Sidorchuk, S.V. Stepantsov, M.L. Chelnokov, V.A. Gorshkov, D.D. Bogdanov, R. Wolski, G.M. Ter-Akopian, Yu. Ts. Oganessian, W. Mittig, P. Roussel-Chomaz, H. Savajols, E.A. Kuzmin, E. Yu. Nikolsky, A.A. Ogloblin
2001Ko.B	PrvCom	AHW	Aug	F.G. Kondev
2001Ku07	APOBB	32,	1009	P. Kuusiniemi, J.F.C. Cocks, K. Eskola, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, A. Keenan, H. Kettunen, M. Leino, M. Muikku, P. Nieminen, P. Rahkila, J. Uusitalo
2001La09	NUPAB	682,	71c	G.J. Lane, R. Broda, B. Fornal, A.P. Byrne, G.D. Dracoulis, J. Blomqvist, R.M. Clark, M. Cromaz, M.A. Deleplanque, R.M. Diamond, P. Fallon, R.V.F. Janssens, I.Y. Lee, A.O. Macchiavelli, K.H. Maier, M. Rejmund, F.S. Stephens, C.E. Svensson, K. Vetter, D. Ward, I. Wiedenhover, J. Wrzesinski
2001La31	HYIND	132,	315	A.S. Lalleman, G. Auger, W. Mittig, M. Chabert, M. Chartier, J. Ferme, A. Gillibert, A. Lepine-Szily, M. Lewitowicz, M.H. Moscatello, N.A. Orr, G. Politi, F. Sarazin, H. Savajols, P. Van Isacker, A.C.C. Villari
2001Lh01	PRVCA	63,	034316	G. Lhersonneau, A. Wohr, B. Pfeiffer, K.-L. Kratz, and the ISOLDE Collaboration
2001Li17	PRVCA	63,	047307	K. Lindenberg, F. Neumann, D. Galaviz, T. Hartmann, P. Mohr, K. Vogt, S. Volz, A. Zilges
2001Li44	PRVCA	64,	034310	C.F. Liang, P. Paris, R.K. Sheline
2001Lu17	PRVCA	64,	054311	D. Lunney, G. Audi, H. Doubre, S. Henry, C. Monsanglant, M. de Saint Simon, C. Thibault, C. Toader, C. Borcea, G. Bollen, ISOLDE
2001Lu20	HYIND	132,	299	D. Lunney, C. Monsanglant, G. Audi, G. Bollen, C. Borcea, H. Doubre, C. Gaulard, S. Henry, M. de Saint Simon, C. Thibault, C. Toader, N. Vieira, ISOLDE
2001Ma08	PRVCA	63,	024613	V. Maddalena, T. Aumann, D. Bazin, B.A. Brown, J.A. Caggiano, B. Davids, T. Glasmacher, P.G. Hansen, R.W. Ibbotson, A. Navin, B.V. Pritychenko, H. Scheit, B.M. Sherrill, M. Steiner, J.A. Tostevin, J. Yurkon
2001Ma69	PRVCA	64,	031303	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, A. Heinz, G.L. Poli, J.J. Ressler, K. Schmidt, D. Seweryniak, M.B. Smith, A.A. Sonzogni, J. Uusitalo, W.B. Walters

2001Ma96	EPJAA	12,	269	C. Mazzocchi, Z. Janas, J. Döring, M. Axiotis, L. Batist, R. Borcea, D. Cano-Ott, E. Caurier, G. de Angelis, E. Farnea, A. Faßbender, A. Gadea, H. Grawe, A. Jungclaus, M. Kapica, R. Kirchner, J. Kurcewicz, S.M. Lenzi, T. Martínez, I. Mukha, E. Nácher, D.R. Napoli, E. Roeckl, B. Rubio, R. Schwengner, J.L. Tain, C.A. Ur
2001Mi22	EPJAA	11,	9	M.N. Mineva, M. Hellström, M. Bernas, J. Gerl, H. Grawe, M. Pfützner, P.H. Regan, M. Rejmund, D. Rudolph, F. Becker, C.R. Bingham, T. Enqvist, B. Fogelberg, H. Gausemel, H. Geissel, J. Genevey, M. Górska, R. Grzywacz, K. Hauschild, Z. Janas, I. Kojouharov, Y. Kopatch, A. Korgul, W. Korten, J. Kurcewicz, M. Lewitowicz, R. Lucas, H. Mach, S. Mandal, P. Mayet, C. Mazzocchi, J.A. Pinston, Zs. Podolyàk, H. Schaffner, Ch. Schlegel, K. Schmidt, K. Sümmerer, H.J. Wollersheim
2001No07	EPJAA	11,	257	Yu. N. Novikov, H. Schatz, P. Dendooven, R. Béraud, Ch. Miehé, A.V. Popov, D.M. Seliverstov, G.K. Vorobjev, P. Baumann, M.J.G. Borge, G. Canchel, Ph. Dessagne, A. Emsallem, W. Huang, J. Huikari, A. Jokinen, A. Knipper, V. Kolhinen, A. Nieminen, M. Oinonen, H. Penttilä, K. Peräjärvi, I. Piqueras, S. Rinta-Antila, J. Szerypo, Y. Wang, J. Äystö
2001Nu01	PRVCA	63,	044316	S. Nummela, P. Baumann, E. Caurier, P. Dessagne, A. Jokinen, A. Knipper, G. Le Scornet, C. Miehe, F. Nowacki, M. Oinonen, Z. Radivojevic, M. Ramdhane, G. Walter, J. Äystö, ISOLDE
2001Og01	PRVCA	63,	011301	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, O.V. Ivanov, G.V. Buklanov, K. Subotic, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Lougheed, C.A. Laue, Ye. A. Karelin, A.N. Tatarinov
2001Og08	PRVCA	64,	054606	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, K. Subotic, O.V. Ivanov, A.N. Voinov, V.I. Zagrebaev, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Lougheed
2001Oi04	PYLBB	511,	145	M. Oinonen, J. Äystö, P. Baumann, J. Cederkall, S. Courtin, P. Dessagne, S. Franchoo, H. Fynbo, M. Gorska, J. Huikari, A. Jokinen, A. Knipper, U. Köster, G. Le Scornet, C. Miehe, A. Nieminen, T. Nilsson, Yu. Novikov, K. Perajarvi, E. Poirier, A. Popov, D.M. Seliverstov, T. Siiskonen, H. Simon, O. Tengblad, P. Van Duppen, G. Walter, L. Weissman, K. Wilhelmsen Rolander, ISOLDE
2001Pa52	HYIND	132,	189	A. Paul, S. Röttger, A. Zimbal, U. Keyser
2001Pe14	YAFIA	64,	1197	Yu. E. Penionzhkevich
2001Po05	PRVCA	63,	044304	G.L. Poli, C.N. Davids, P.J. Woods, D. Seweryniak, M.P. Carpenter, J.A. Cizewski, T. Davinson, A. Heinz, R.V.F. Janssens, C.J. Lister, J.J. Ressler, A.A. Sonzogni, J. Uusitalo, W.B. Walters
2001Ro35	HYIND	132,	153	E. Roeckl
2001Ro.B	B-Aulanko		PH23	M.W. Rowe, J.C. Batchelder, T.N. Ginter, K.E. Gregorich, F.Q. Guo, F.P. Heßberger, V. Ninov, J. Powell, K.S. Toth, X.J. Xu, J. Cerny
2001Ry01	NUPAB	682,	270c	K.P. Rykaczewski, R.K. Grzywacz, M. Karny, J.W. McConnell, M. Momayezi, J. Wahl, Z. Janas, J.C. Batchelder, C.R. Bingham, D. Hartley, M.N. Tantawy, C.J. Gross, T.N. Ginter, J.H. Hamilton, W.D. Kulp, M. Lipoglavsek, A. Piechaczek, E.F. Zganjar, W.B. Walters, J.A. Winger
2001Sc41	NUPAB	693,	533	S. Schwarz, F. Ames, G. Audi, D. Beck, G. Bollen, C. De Coster, J. Dilling, O. Engels, R. Fossion, J.-E. Garcia Ramos, S. Henry, F. Herfurth, K. Heyde, A. Kellerbauer, H.-J. Kluge, A. Kohl, E. Lamour, D. Lunney, I. Martel, R.B. Moore, M. Oinonen, H. Raimbault-Hartmann, C. Scheidenberger, G. Sikler, J. Szerypo, C. Weber, ISOLDE
2001Sh09	PRVCA	63,	037603	D.A. Shaughnessy, K.E. Gregorich, M.R. Lane, C.A. Laue, D.M. Lee, C.A. McGrath, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2001Sh36	PRVCA	64,	054307	I. Shestakova, G. Mukherjee, P. Chowdhury, R. D'Alarcao, C.J. Pearson, Zs. Podolyák, P.M. Walker, C. Wheldon, D.M. Cullen, I. Ahmad, M.P. Carpenter, M.P. Carpenter, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, D. Seweryniak, I. Wiedenhoever

2001So02	PRVCA	63,	031304	F. Soramel, A. Guglielmetti, L. Stroe, L. Müller, R. Bonetti, G.L. Poli, F. Malerba, E. Bianchi, A. Andrighetto, J.Y. Guo, Z.C. Li, E. Maglione, F. Scarlassara, C. Signorini, Z.H. Liu, M. Ruan, M. Ivascu, C. Broude, P. Bednarczyk, L.S. Ferreira
2001St.A	AnRpt GSI		7	A. Stolz, T. Faestermann, R. Schneider, K. Suemmerer, E. Wefers, J. Friese, H. Geissel, J. Gerl, M. Hellstroem, P. Kienle, H.-J. Koerner, M.N. Mineva, M. Muench, G. Muenzenberg, C. Schlegel, R.S. Simon, P. Thirolf, H. Weick, K. Zeitelhack
2001Ta23	PYLBB	515,	255	S. Takeuchi, S. Shimoura, T. Motobayashi, H. Akiyoshi, Y. Ando, N. Aoi, Zs. Fülöp, T. Gomi, Y. Higurashi, M. Hirai, N. Iwasa, H. Iwasaki, Y. Iwata, H. Kobayashi, M. Kurokawa, Z. Liu, T. Minemura, S. Ozawa, H. Sakurai, M. Serata, T. Teranishi, K. Yamada, Y. Yanagisawa, M. Ishihara
2001Th01	PRVCA	63,	014308	M. Thoennessen, S. Yokoyama, P.G. Hansen
2001To06	PRVCA	63,	034314	B.E. Tomlin, C.J. Barton, N.V. Zamfir, M.A. Caprio, R.L. Gill, R. Krücken, J.R. Novak, J.R. Cooper, K.E. Zyromski, G. Cata-Danil, C.W. Beausang, A. Wolf, N.A. Pietralla, H. Newman, J. Cederkall, B. Liu, Z. Wang, R.F. Casten, D.S. Brenner
2001Va33	HYIND	132,	163	R.S. Van Dyck, Jr., S.L. Zafonte, P.B. Schwinberg
2001Va.A	PrvCom	AHW	Oct	R.S. Van Dyck,Jr.
2001Va.B	AnRpt GSI		14	K. Van de Vel, A.N. Andreyev, D. Ackermann, S. Antalic, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, B. Kindsller, I. Kozhoukharov, M. Leino, B. Lommel, G. Muenzenberg, C. Moore, R.D. Page, C. Schlegel, P. Van Duppen
2001Wa04	PRVCA	63,	024309	Y. Wang, P. Dendooven, J. Huikari, A. Jokinen, V.S. Kolhinen, G. Lhersonneau, A. Nieminen, S. Nummela, H. Penttilä, K. Peräjärvi, S. Rinta-Antila, J. Szerypo, J.C. Wang, J. Äystö
2001Wa50	HYIND	132,	323	C. Wagemans, J. Wagemans, G. Goeminne
2001Wh02	JPGPE	27,	L13	C. Wheldon, P.M. Walker, P. Chowdhury, I. Shestakova, R. D'Alarcao, I. Ahmad, M.P. Carpenter, D.M. Cullen, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, C.J. Pearson, Zs. Podolyák, D. Seweryniak, I. Wiedenhoever
2001Wi17	PRVCA	64,	024308	M.E. Wieser, J.R. De Laeter
2001Xu05	EPJAA	11,	375	S.W. Xu, Z.K. Li, Y.X. Xie, X.D. Wang, B. Guo, C.G. Leng, Y. Yu
2001Ze.A	Th.-Orsay			T. Zerguerras

2002

2002Aa.A	MPLAE to be pd			C.E. Aalseth, F.T. Avignone III, A. Barabash, F. Boehm, R.L. Brodzinski, J.I. Collar, P.J. Doe, H. Ejiri, S.R. Elliott, E. Fiorini, R.J. Gaitskell, G. Gratta, R. Hazama, K. Kazkaz, G.S. King III, R.T. Kouzes, H.S. Miley, M.K. Moe, A. Morales, J. Morales, A. Piepke, R.G.H. Robertson, W. Tornow, P. Vogel, R.A. Warner, J.F. Wilkerson arXiv:hep-ex/0202018 v1 7 Feb 2002
2002An15	EPJAA	14,	63	A.N. Andreyev, K. Van de Vel, A. Barzakh, A. De Smet, H. De Witte, D.V. Fedorov,V.N. Fedoseyev, S. Franchoo, M. Górska, M. Huyse, Z. Janas, U. Köster, W. Kurcewicz, J. Kurpeta, V.I. Mishin, K. Partes, A. Płochocki, P. Van Duppen, L. Weissman
2002An19	PRVCA	66,	014313	A.N. Andreyev, M. Huyse, K. Van de Vel, P. Van Duppen, O. Dorvaux, P. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, P. Rahkila, J. Uusitalo, R. Wyss, K. Hauschild, Y. Le Coz
2002As08	JNRSA	3,	187	M. Asai, M. Sakama, K. Tsukada, S. Ichikawa, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, K. Akiyama, A. Toyoshima, Y. Kojima, Y. Oura, H. Nakahara, M. Shibata, K. Kawade
2002At01	NUPAB	701,	561c	F. Attallah, M. Hausmann, Y.A. Litvinov, T. Radon, J. Stadlmann, K. Beckert, F. Bosch, M. Falch, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, K.E.G. Löbner, G. Munzenberg, F. Nolden, Y.N. Novikov, Z. Patyk, W. Quint, H. Schatz, C. Scheidenberger, B. Schlitt, M. Steck, K. Sümmerer, H. Weick, H. Wollnik
2002Be64	PHSTB	66,	201	I. Bergström, T. Fritioff, R. Schuch, J. Schönfelder

2002Be74	PYLBB	546,	23	R. Bernabei, P. Belli, F. Cappella, R. Cerulli, F. Montecchia, A. Incicchitti, D. Prosperi, C.J. Dai
2002Bf02	NIMAE	487,	618	I. Bergström, C. Carlberg, T. Fritioff, G. Douysset, J. Schönfelder, R. Schuch
2002Bl17	EPJAA	15,	121	B. Blank
2002Bo11	NIMAE	480,	696	S.B. Borzakov, R.E. Chrien, H. Faikow-Stanczyk, Yu. V. Grigoriev, Ts. Ts. Panteleev,S. Pospisil, L.M. Smotritsky, S.A. Telezhnikov
2002Bo41	NUPAB	709,	3	V. Bondarenko, J. Berzins, P. Prokofjevs, L. Simonova, T. von Egidy, J. Honzátko, I. Tomandl, P. Alexa, H.-F. Wirth, U. Köster, Y. Eisermann, A. Metz, G. Graw, R. Hertenberger, L. Rubacek
2002Ca37	PRLTA	89,	082501	P. Campbell, H.L. Thayer, J. Billowes, P. Dendooven, K.T. Flanagan, D.H. Forest, J.A.R. Griffith, J. Huikari, A. Jokinen, R. Moore, A. Nieminen, G. Tungate, S. Zemlyanoi, J. Äystö
2002Cl.A	P-Aulanko		39	J.A. Clark, R.C. Barber, C. Boudreau, F. Buchinger, J.A. Caggiano, J.E. Crawford, H. Fukutani, S. Gulick, J.C. Hardy, A. Heinz, J.K.P. Lee, M. Maier, R.B. Moore, G. Savard, J. Schwarz, D. Sewerniak, K.S. Sharma, G. Sprouse, J. Vaz, J.C. Wang
2002Di12	EPJAA	13,	281	I. Dillmann, M. Hannawald, U. Köster, V.N. Fedoseyev, A. Wöhr, B. Pfeiffer, D. Fedorov, J. Shergur, L. Weissman, W.B. Walters, K.-L. Kratz
2002Do19	PRVCA	66,	064321	D.J. Dobson, S.J. Freeman, P.T. Greenlees, A.N. Qadir, S. Juutinen, J.L. Durell, T. Enqvist, P. Jones, R. Julin, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, P. Nieminen, P. Rahkila, S.D. Robinson, J. Uusitalo, B.J. Varley
2002Fa13	EPJAA	15,	185	T. Faestermann, R. Schneider, A. Stolz, K. Sümmerer, E. Wefers, J. Friese, H. Geissel, M. Hellström, P. Kienle, H.-J. Körner, M. Mineva, M. Münch, G. Münzenberg, C. Schlegel, K. Schmidt, P. Thirolf, H. Weick, K. Zeitelhack
2002Ga12	NUPAB	700,	117	E. Garrido, D.V. Fedorov, A.S. Jensen
2002Ge07	PRVCA	65,	034322	J. Genevey, J.A. Pinston, C. Foin, M. Rejmund, H. Faust, B. Weiss
2002Ge16	JPGPE	28,	2993	G. Georgiev, G. Neyens, M. Hass, D.L. Balabanski, C. Bingham, C. Borcea, N. Coulier, R. Coussement, J.M. Daugas, G. De France, F. de Oliveira Santos, M. Gorska, H. Grawe, R. Grzywacz, M. Lewitowicz, H. Mach, I. Matea, R.D. Page, M. Pfützner, Yu. E. Penionzhkevich, Z. Podolyák, P.H. Regan, K. Rykaczewski, M. Sawicka, N.A. Smirnova, Y.G. Sobolev, M. Stanoiu, S. Teughels, K. Vyvey
2002Gi02	NUPAB	699,	103c	P. Giubellino
2002Gi09	PRLTA	89,	102501	J. Giovinazzo, B. Blank, M. Chartier, S. Czajkowski, A. Fleury, M.J. Lopez Jimenez, M.S. Pravikoff, J.-C. Thomas, F. de Oliveira Santos, M. Lewitowicz, V. Maslov, M. Stanoiu, R. Grzywacz, M. Pfützner, C. Borcea, B.A. Brown
2002He01	PRVCA	65,	014303	R.-D. Herzberg, N. Amzal, F. Becker, P.A. Butler, A.J.C. Chewter, J.F.C. Cocks, O. Dorvaux, K. Eskola, J. Gerl, P.T. Greenlees, N.J. Hammond, K. Hauschild, K. Helariutta, F. Hessberger, M. Houry, G.D. Jones, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, T.L. Khoo, W. Korten, P. Kuusiniemi, Y. Le Coz, M. Leino, C.J. Lister, R. Lucas, M. Muikku, P. Nieminen, R.D. Page, P. Rahkila, P. Reiter, Ch. Schlegel, C. Scholey, O. Stezowski, Ch. Theisen, W.H. Trzaska, J. Uusitalo, H.J. Wollersheim
2002He23	EPJAA	15,	17	F. Herfurth, A. Kellerbauer, F. Ames, G. Audi, D. Beck, K. Blaum, G. Bollen, O. Engels, H.-J. Kluge, D. Lunney, R.B. Moore, M. Oinonen, E. Sauvan, C. Scheidenberger, S. Schwarz, G. Sikler, C. Weber, ISOLDE
2002He29	EPJAA	15,	335	F.P. Heßberger, S. Hofmann, I. Kojouharov, D. Ackermann, S. Antalic, P. Cagarda, B. Kindler, B. Lommel, R. Mann, A.G. Popeko, S. Saro, J. Uusitalo, A.V. Yeremin
2002He.A	P-Aulanko		337	F.P. Heßberger, S. Hofmann, D. Ackermann
2002Ho11	EPJAA	14,	147	S. Hofmann, F.P. Heßberger, D. Ackermann, G. Münzenberg, S. Antalic, P. Cagarda, B. Kindler, J. Kojouharova, M. Leino, B. Lommel, R. Mann, A.G. Popeko, S. Reshitko, S. Śaro, J. Uusitalo, A.V. Yeremin
2002Hu14	EPJAA	15,	329	A. Hürstel, M. Rejmund, E. Bouchez, P.T. Greenlees, K. Hauschild, S. Juutinen, H. Kettunen, W. Korten, Y. Le Coz, P. Nieminen, Ch. Theisen, A.N. Andreyev, F. Becker, T. Enqvist, P.M. Jones, R. Julin, H. Kankaanpää, A. Keenan, P. Kuusiniemi, M. Leino, A-P. Leppänen, M. Muikku, J. Pakarinen, P. Rahkila, J. Uusitalo

2002Iz01	FECLA	111,	36	I.N. Izosimov, A.A. Kazimov, A.A. Solnyshkin
2002Je09	PRVCA	66,	011301	D.G. Jenkins, A.N. Andreyev, R.D. Page, M.P. Carpenter, R.V.F. Janssens, C.J. Lister, F.G. Kondev, T. Enqvist, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, A.-P. Leppännen, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo, C.D. O'Leary, P. Raddon, A. Simons, R. Wadsworth, D.T. Joss
2002Je11	NUPAB	709,	119	H. Jeppesen, U.C. Bergmann, M.J.G. Borge, J. Cederkäll, V.N. Fedoseyev, H.O.U. Fynbo, V.Y. Hansper, B. Jonson, K. Markenroth, V.I. Mishin, T. Nilsson, G. Nyman, K. Riisager, O. Tengblad, K. Wilhelmsen Rolander, ISOLDE
2002Jo09	EPJDR	4,	A3	A. Jokinen, A. Nieminen, J. Äystö, R. Borcea, E. Caurier, P. Dendooven, M. Gierlik, M. Górska, H. Grawe, M. Hellström, M. Karny, Z. Janas, R. Kirchner, M. La Commara, G. Martinez-Pinedo, P. Mayet, H. Penttilä, A. Płochocki, M. Rejmund, E. Roeckl, M. Sawicka, C. Schlegel, K. Schmidt, R. Schwengner
2002Ke.A	Th.-Heidelberg			A. Kellerbauer
2002Ke.C	PrvCom	NDG	May	H. Kettunen
2002Ko09	PYLBB	528,	221	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, C.J. Lister, K. Abu Saleem, I. Ahmad, H. Amro, J. Caggiano, C.N. Davids, A. Heinz, B. Herskind, T.L. Khoo, T. Lauritsen, W.C. Ma, J.J. Ressler, W. Reviol, L.L. Riedinger, D.G. Sarantites, D. Seweryniak, S. Siem, A.A. Sonzogni, P.G. Varmette, I. Wiedenhöver
2002La18	NUPAB	708,	167	M. La Commara, K. Schmidt, H. Grawe, J. Döring, R. Borcea, S. Galanopoulos, M. Górska, S. Harissopulos, M. Hellström, Z. Janas, R. Kirchner, C. Mazzocchi, A.N. Ostrowski, C. Plettner, G. Rainovski, E. Roeckl
2002Le16	PRVCA	65,	054318	A. Lépine-Szily, J.M. Oliveira,Jr, V.R. Vanin, A.N. Ostrowski, R. Lichtenthäler, A. Di Pietro, V. Guimaraes, A.M. Laird, I. Mannoury, G.F. Lima, F. de Oliveira Santos, P. Roussel-Chomaz, H. Savajois, W. Trindler, A.C.C. Villari, A. de Vismes
2002Le.A	PrvCom	GAu	Jun	Lettre électronique de l'In2p3
2002Li24	PRVCA	65,	044618	G.F. Lima, A. Lépine-Szily, G. Audi, W. Mittig, M. Chartier, N.A. Orr, R. Lichtenthaler, J.-C. Angélique, J.-M. Casandjian, A. Cunsolo, C. Donzaud, A. Foti, A. Gillibert, M. Lewitowicz, S. Lukyanov, M. MacCormick, D.J. Morrissey, A.N. Ostrowski, B.M. Sherrill, C. Stéphan, T. Suomijärvi, L. Tassan-Got, D.J. Vieira, A.C.C. Villari, J.M. Wouters
2002Lo13	PRVCA	66,	025803	M.J. López Jiménez, B. Blank, M. Chartier, S. Czajkowski, P. Dessagne, G. de France, J. Giovinazzo, D. Karamanis, M. Lewitowicz, V. Maslov, C. Miehé, P.H. Regan, M. Stanoiu, M. Wiescher
2002Lu15	EPJAA	15,	315	R. Lucas, M.-G. Porquet, Ts. Venkova, I. Deloncle, M. Houry, Ch. Theisen, A. Astier, A. Bauchet, S. Lalkovski, G. Barreau, N. Buforn, T.P. Doan, L. Donadille, O. Dorvaux, J. Durell, Th. Ethvignot, B.P.J. Gall, D. Grimwood, W. Korten, Y. Le Coz, M. Meyer, A. Minkova, A. Prévost, N. Redon, A. Roach, N. Schulz, A.G. Smith, O. Stézowski, B.J. Varley
2002Ma19	PYLBB	532,	29	C. Mazzocchi, Z. Janas, L. Batist, V. Belleguic, J. Döring, M. Gierlik, M. Kapica, R. Kirchner, G.A. Lalazissis, H. Mahmud, E. Roeckl, P. Ring, K. Schmidt, P.J. Woods, J. Żylicz
2002Ma61	EPJAA	15,	85	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, A. Heinz, J.J. Ressler, K. Schmidt, D. Seweryniak, J. Shergur, A.A. Sonzogni, W.B. Walters
2002Me07	PRLTA	88,	102501	M. Meister, K. Markenroth, D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, W. Dostal, B. Eberlein, Th. W. Elze, H. Emling, C. Forssén, H. Geissel, M. Hellström, R. Holzmann, B. Jonson, J.V. Kratz, R. Kulessa, Y. Leifels, A. Leistenschneider, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, O. Tengblad, M.V. Zhukov
2002Mo19	NUPAB	706,	15	A.C. Morton, J.C. Chow, J.D. King, R.N. Boyd, N.P.T. Bateman, L. Buchmann, J.M. D'Auria, T. Davinson, M. Dombsky, W. Galster, E. Gete, U. Giesen, C. Iliadis, K.P. Jackson, J. Powell, G. Roy, A. Shotter
2002Mo29	PYLBB	544,	274	A.C. Morton, P.F. Mantica, B.A. Brown, A.D. Davies, D.E. Groh, P.T. Hosmer, S.N. Liddick, J.I. Prisciandaro, H. Schatz, M. Steiner, A. Stolz
2002Mo31	PYLBB	547,	200	R. Moore, A.M. Bruce, P. Dendooven, J. Billowes, P. Campbell, A. Ezwam, K.T. Flanagan, D.H. Forest, J. Huikari, A. Jokinen, A. Nieminen, H.L. Thayer, G. Tungate, S. Zemlyanoi, J. Äystö

2002Mo.B	P-Aizu		140	Morimoto
2002Mu.A	AnRpt ANL,		51	G. Mukherjee et al
2002Ni10	PRLTA	89,	039901	V. Ninov, K.E. Gregorich, W. Loveland, A. Ghiorso, D.C. Hoffman, D.M. Lee, H. Nitsche, W.J. Swiatecki, U.W. Kirbach, C.A. Laue, J.L. Adams, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, P.A. Wilk
2002No11	PYLBB	542,	49	M. Notani, H. Sakurai, N. Aoi, Y. Yanagisawa, A. Saito, N. Imai, T. Gomi, M. Miura, S. Michimasa, H. Iwasaki, N. Fukuda, M. Ishihara, T. Kubo, S. Kubono, H. Kumagai, S.M. Lukyanov, T. Motobayashi, T.K. Onishi, Yu. E. Penionzhkevich, S. Shimoura, T. Teranishi, K. Ue, V. Ugryumov, A. Yoshida
2002Oi02	NUPAB	701,	613c	M. Oinonen, J. Aysto, U. Koster, J. Huikari, A. Jokinen, A. Nieminen, K. Perajarvi, P. Baumann, F. Didierjean, A. Huck, A. Knipper, M. Ramdhane, G. Walter, M. Huyse, P. Van Duppen, G. Marguier, Yu. Novikov, A. Popov, D.M. Seliverstov, H. Schatz, and the ISOLDE Collaboration
2002Pa.A	LBL-49593			J.B. Patin as cited by 2006Gr24
2002Pe15	EPJAA	14,	439	C.M. Petrache, G. Lo Bianco, P.G. Bizzeti, A.M. Bizzeti-Sona, D. Bazzacco, S. Lunardi, M. Nespolo, G. de Angelis, P. Spolaore, N. Blasi, S. Brant, V. Krstić, D. Vretenar
2002Pf01	PRVCA	65,	064604	M. Pfützner, P.H. Regan, P.M. Walker, M. Caamano, J. Gerl, M. Hellström, P. Mayet, K.-H. Schmidt, Zs. Podolyak, M.N. Mineva, A. Aprahamian, J. Benlliure, A.M. Bruce, P.A. Butler, D. Cortina Gil, D.M. Cullen, J. Döring, T. Enqvist, C. Fox, J. Garces Narro, H. Geissel, W. Gelletly, J. Giovinazzo, M. Gorska, H. Grawe, R. Grzywacz, A. Kleinbohl, W. Korten, M. Lewitowicz, R. Lucas, H. Mach, C.D. O'Leary, F. De Oliveira, C.J. Pearson, F. Rejmund, M. Rejmund, M. Sawicka, H. Schaffner, Ch. Schlegel, K. Schmidt, Ch. Theisen, F. Vives, D.D. Warner, C. Wheldon, H.J. Wollersheim, S. Wooding
2002Pf02	EPJAA	14,	279	M. Pfützner, E. Badura, C. Bingham, B. Blank, M. Chartier, H. Geissel, J. Giovinazzo, L.V. Grigorenko, R. Grzywacz, M. Hellström, Z. Janas, J. Kurcewicz, A.S. Lalleman, C. Mazzocchi, I. Mukha, G. Münzenberg, C. Plettner, E. Roeckl, K.P. Rykaczewski, K. Schmidt, R.S. Simon, M. Stanoiu, J.-C. Thomas
2002Pf04	PNEND	41,	39	B. Pfeiffer, K. Kratz, P. Moller
2002Pl01	NUPAB	699,	312c	W. Plessas, S. Boffi, L. Ya. Glozman, W. Klink, M. Radici, R.F. Wagenbrunn
2002Pl03	PRVCA	66,	044319	Plettner,C. , L. Batisit, J. Doering, A. Blazhev, H. Grawe, V. Belleguic, C.R. Bingham. R. Borcea, M. Gierlik, M. Goerska, N. Harringyon, Z. Janas, M. Karny, R. Kirchner, C. Mazzocchi, P. Munro, E. Roeckl, K. Schmidt, R. Schwengner
2002Py01	PRLTA	88,	122501	M.C. Pyle, A. García, E. Tatar, J. Cox, B.K. Nayak, S. Triambak, B. Laughman, A. Komives, L.O. Lamm, J.E. Rolon, T. Finnessy, L.D. Knutson, P.A. Voytas
2002Py02	NIMAE	488,	381	Yu. V. Pyatkov, V.G. Tishchenko, V.V. Pashkevich, V.A. Maslov, D.V. Kamanin, I.V. Kljuev, W.H. Trzaska
2002Ra23	NUPAB	706,	3	H. Raimbault-Hartmann, G. Audi, D. Beck, G. Bollen, M. de Saint Simon, H.-J. Kluge, M. König, R.B. Moore, S. Schwarz, G. Savard, J. Szerypo, ISOLDE
2002Ro17	PRVCA	65,	054310	M.W. Rowe, J.C. Batchelder, T.N. Ginter, K.E. Gregorich, F.Q. Guo, F.P. Heßberger, V. Ninov, J. Powell, K.S. Toth, X.J. Xu, J. Cerny
2002Ro25	NUPAB	704,	200c	E. Roeckl
2002Sh02	PRVCA	65,	024612	D.A. Shaughnessy, K.E. Gregorich, J.L. Adams, M.R. Lane, C.A. Laue, D.M. Lee, C.A. McGrath, V. Ninov, J.B. Patin, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2002Sh08	PRVCA	65,	034313	J. Shergur, B.A. Brown, V. Fedoseyev, U. Köster, K.-L. Kratz, D. Seweryniak, W.B. Walters, A. Wöhr, D. Fedorov, M. Hannawald, M. Hjorth-Jensen, V. Mishin, B. Pfeiffer, J.J. Ressler, H.O.U. Fynbo, P. Hoff, H. Mach, T. Nilsson, K. Wilhelmsen-Rolander, H. Simon, A. Bickley, ISOLDE
2002Sh16	JUPSA	71,	1401	M. Shibata, T. Shindou, A. Taniguchi, Y. Kojima, K. Kawade, S.-I. Ichikawa, Y. Kawase
2002Sh43	PTPSA	146,	60	B.-M. Sherrill
2002Sh.A	AnRpt JAERI		26	M. Shibata, T. Shindou, Y. Kojima, M. Asai, K. Tsukada, S. Ichikawa, H. Haba, Y. Nagame, K. Kawade
2002Sh.B	P-Aulanko		479	M. Shibata, T. Shindou, K. Kawade, V. Kojima, A. Taniguchi, Y. Kawase, S. Ichikawa

2002Sh.C	AnRpt JAERI		45	N. Shinohara, Yu. N. Novikov, G. Münzenberg, H. Wollnik, Y. Hatsukawa, M. Asai, K. Tsukada, A. Osa, M. Oshima, H. Haba, S. Ichikawa, Y. Nagame, A.V. Popov, D.M. Seliverstov and PrvCom to 2008Qi03
2002So.A	PrvCom	GAu	Oct	O. Sorlin
2002Tr04	ADNDA	80,	83	V.I. Tretyak, Yu. G. Zdesenko
2002Tu05	EPJAA	15,	271	A. Türler "Heavy-element chemistry - Status and perspectives"
2002Va13	PRVCA	65,	064301	K. Van de Vel, A.N. Andreyev, M. Huyse, P. Van Duppen, J.F.C. Cocks, O. Dorvaux, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, K. Eskola, R. Wyss
2002We07	PRVCA	65,	044321	L. Weissman, J. Cederkall, J. Äystö, H. Fynbo, L. Fraile, V. Fedoseyev, S. Franchoo, A. Jokinen, U. Köster, G. Martinez-Pinedo, T. Nilsson, M. Oinonen, K. Peräjärvi, M.D. Seliverstov, ISOLDE
2002Zd02	PYLBB	546,	206	Yu. G. Zdesenko, F.A. Danevich, V.I. Tretyak

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2003Ah07	PRVCA	68,	044306	I. Ahmad, R.R. Chasman, J.P. Greene, F.G. Kondev, E.F. Moore, E. Browne, C.E. Porter, L.K. Felker
2003Al02	PRVCA	67,	014323	A. Alessandrello, C. Arnaboldi, C. Brofferio, S. Capelli, O. Cremonesi, E. Fiorini, A. Nucciotti, M. Pavan, G. Pessina, S. Pirro, E. Previtali, M. Sisti, M. Vanzini, L. Zanotti, A. Giuliani, M. Pedretti, C. Bucci, C. Pobes
2003An26	EPJAA	18,	39	A.N. Andreyev, D. Ackermann, S. Antalic, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, A. Keenan, H. Kettunen, A. Kleinböhl, B. Kindler, I. Kojouharov, A. Lavrentiev, C.D. O'Leary, M. Leino, B. Lommel, M. Matos, C.J. Moore, G. Münzenberg, R.D. Page, S. Reshitko, S. Saro, H. Schaffner, C. Schlegel, M.J. Taylor, K. Van de Vel, P. Van Duppen, L. Weissman, K. Heyde
2003An27	EPJAA	18,	55	A.N. Andreyev, D. Ackermann, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, B. Lommel, G. Münzenberg, R.D. Page, K. Van de Vel, P. Van Duppen, K. Heyde
2003Ar36	PRLTA	91,	161802	C. Arnaboldi, C. Brofferio, O. Cremonesi, E. Fiorini, C. Lo Bianco, L. Martensson, A. Nucciotti, M. Pavan, G. Pessina, S. Pirro, E. Previtali, M. Sisti, A. Giuliani, B. Margesin, M. Zen
2003Ba18	PRVCA	67,	034310	C.J. Barton, D.S. Brenner, N.V. Zamfir, M.A. Caprio, A. Aprahamian, M.C. Wiescher, C.W. Beausang, Z. Berant, R.F. Casten, J.R. Cooper, R.L. Gill, R. Krücken, J.R. Novak, N. Pietralla, M. Shawcross, A. Teymurazyan, A. Wolf
2003Ba20	EPJAA	16,	489	T. Bäck, B. Cederwall, K. Lagergren, R. Wyss, A. Johnson, D. Karlgren, P. Greenlees, D. Jenkins, P. Jones, D.T. Joss, R. Julin, S. Juutinen, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, A.-P. Leppänen, M. Muikku, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo
2003Ba39	NUPAB	720,	245	L. Batist, J. Döring, I. Mukha, C. Plettner, C.R. Bingham, R. Borcea, M. Gierlik, H. Grawe, K. Hauschild, Z. Janas, I.P. Johnstone, M. Karny, M. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, F. Moroz, J. Pavan, A. Płochocki, E. Roeckl, B. Salvachúa, K. Schmidt, R. Schwengner, L.D. Skouras, S.L. Tabor, M. Wiedeking
2003Ba49	PRVCA	67,	064316	D.K. Barillari, J.V. Vaz, R.C. Barber, K.S. Sharma
2003Ba.A	PrvCom	GAu	Apr	C. Bachelet
2003Be02	EPJDD	22,	41	I. Bergström, M. Björkhage, K. Blaum, H. Bluhme, T. Fritioff, Sz. Nagy, R. Schuch
2003Be05	NUPAB	714,	21	U.C. Bergmann, C.A. Diget, K. Riisager, L. Weissman, G. Auböck, J. Cederkäll, L.M. Fraile, H.O.U. Fynbo, H. Gausemel, H. Jeppesen, U. Köster, K.-L. Kratz, P. Möller, T. Nilsson, B. Pfeiffer, H. Simon, K. Van de Vel, J. Äystö, ISOLDE
2003Be18	EPJAA	16,	447	A.V. Belozerov, M.L. Chelnokov, V.I. Chepigin, T.P. Drobina, V.A. Gorshkov, A.P. Kabachenko, O.N. Malyshev, I.M. Merkin, Yu. Ts. Oganessian, A.G. Popeko, R.N. Sagaidak, A.I. Svirikhin, A.V. Yeremin, G. Berek, I. Brida, Š. Šáro
2003Bi05	PRVCA	67,	065801	I. Bikit, N. Zikić-Todorović, J. Slivka, M. Vesković, M. Krmar, Lj. Čonkić, J. Puzović, I.V. Aničin

2003Bl17	PRLTA	91,	260801	K. Blaum, G. Audi, D. Beck, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, E. Sauvan, S. Schwarz
2003Bo25	NUPAB	726,	175	V. Bondarenko, A.V. Afanasjev, F. Bečvář, J. Honzátko, M.-E. Montero-Cabrera, I. Kuvaga, S.J. Robinson, A.M.J. Spits, S.A. Telezhnikov
2003Ce01	PYLBB	556,	14	S. Cebrián, N. Coron, G. Dambier, P. de Marcillac, E. García, I.G. Irastorza, J. Leblanc, A. Morales, J. Morales, A. Ortiz de Solórzano, J. Puimedón, M.L. Sarsa, J.A. Villar
2003Da05	PRVCA	67,	014310	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychev, S.S. Nagorny, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S. Yu. Zdesenko, Yu. G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzig
2003Da09	NUPAB	717,	129	F.A. Danevich, A.S. Georgadze, V.V. Kobychev, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S.Y. Zdesenko, Y.G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzig
2003Da24	PRVCA	68,	035501	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychev, B.N. Kropivyansky, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S. Yu. Zdesenko, Yu. G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzig
2003De11	NATUA	422,	876	P. de Marcillac, N. Coron, G. Dambier, J. Leblanc, J.-P. Moalic
2003Di06	PRLTA	91,	162503	I. Dillmann, K.-L. Kratz, A. Wöhr, O. Arndt, B.A. Brown, P. Hoff, M. Hjorth-Jensen, U. Köster, A.N. Ostrowski, B. Pfeiffer, D. Seweryniak, J. Shergur, W.B. Walters, ISOLDE
2003Fr08	PHSTB	67,	276	T. Fritioff, G. Douysset
2003Fu10	NUPAB	718,	688c	Zs. Fülöp, L. Bartha, Gy. Gyürky, E. Somorjai, S. Kubono, H. Kudo, D. Kaji
2003Ge04	PRVCA	67,	054312	J. Genevey, J.A. Pinston, H.R. Faust, R. Orlandi, A. Scherillo, G.S. Simpson,, I.S. Tsekhanovich, A. Covello, A. Gargano, W. Urban
2003Gi05	PRVCA	67,	064609	T.N. Ginter, K.E. Gregorich, W. Loveland, D.M. Lee, U.W. Kirbach, R. Sudowe, C.M. Folden III, J.B. Patin, N. Seward, P.A. Wilk, P.M. Zielinski, K. Aleklett, R. Eichler, H. Nitsche, D.C. Hoffman
2003Gi06	NUPAB	724,	313	M. Gierlik, A. Płochocki, M. Karny, W. Urban, Z. Janas, L. Batist, F. Moroz, R. Collatz, M. Górska, H. Grawe, M. Hellström, Z. Hu, R. Kirchner, W. Liu, M. Rejmund, E. Roeckl, M. Shibata, J. Agramunt, A. Algora, A. Gadea, B. Rubio, J.L. Tain, D. Cano-Ott, S. Harissopulos
2003Gi10	PRVCA	68,	034330	T.N. Ginter, J.C. Batchelder, C.R. Bingham, C.J. Gross, R. Grzywacz, J.H. Hamilton, Z. Janas, M. Karny, A. Piechaczek, A.V. Ramayya, K.P. Rykaczewski, W.B. Walters, E.F. Zganjar
2003Go11	PYLBB	566,	70	M.S. Golovkov, Yu. Ts. Oganessian, D.D. Bogdanov, A.S. Fomichev, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepantsov, G.M. Ter-Akopian, R. Wolski, V.A. Gorshkov, M.L. Chelnokov, M.G. Itkis, E.M. Kozulin, A.A. Bogatchev, N.A. Kondratiev, I.V. Korzyukov, A.A. Yukhimchuk, V.V. Perevozchikov, Yu. I. Vinogradov, S.K. Grishechkin, A.M. Demin, S.V. Zlatoustovsky, A.V. Kuryakin, S.V. Fil'chagin, R.I. Il'kayev, F. Hanappe, T. Materna, L. Stuttge, A.H. Ninane, A.A. Korsheninnikov, E. Yu. Nikolskii, I. Tanihata, P. Roussel-Chomaz, W. Mittig, N. Alamanos, V. Lapoux, E.C. Pollacco, L. Nalpas
2003Gr13	NUPAB	724,	14	C. Granja, S. Pospíšil, J. Kubašta, S.A. Telezhnikov
2003Gr27	NUPAB	729,	679	C. Granja, S. Pospíšil, S.A. Telezhnikov, R.E. Chrien
2003Gu06	PRVCA	67,	064601	V. Guimarães, S. Kubono, F.C. Barker, M. Hosaka, S.C. Jeong, I. Katayama, T. Miyachi, T. Nomura, M.H. Tanaka, Y. Fuchi, H. Kawashima, S. Kato, C.C. Yun, K. Ito, H. Orihara, T. Terakawa, T. Kishida, Y. Pu, S. Hamada, M. Hirai, H. Miyatake
2003Ha20	PRLTA	91,	082501	J.C. Hardy, V.E. Iacob, M. Sanchez-Vega, R.G. Neilson, A. Azhari, C.A. Gagliardi, V.E. Mayes, X. Tang, L. Trache, R.E. Tribble
2003He06	EPJAA	16,	365	F.P. Heßberger, S. Hofmann, D. Ackermann
2003Hu01	EPJAA	16,	359	J. Huikari, M. Oinonen, A. Algora, J. Cederkäll, S. Courtin, P. Dessagne, L. Fraile, S. Franchoo, H. Fynbo, W.X. Huang, A. Jokinen, A. Knipper, F. Marechal, C. Miehé, E. Nacher, K. Peräjärvi, E. Poirier, L. Weissman, J. Äystö, ISOLDE

2003Hw03	PRVCA	67,	054304	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, D. Fong, C.J. Beyer, P.M. Gore Y.X. Luo, J.O. Rasmussen, S.C. Wu, I.Y. Lee, C.M. Folden III, P. Fallon, P. Zielinski, K.E. Gregorich, A.O. Macchiavelli, M.A. Stoyer, S.J. Asztalos, T.N. Ginter, S.J. Zhu, J.D. Cole, G.M. Ter-Akopian, Yu. Ts. Oganessian, R. Donangelo
2003Hy02	PRVCA	68,	015501	B.C. Hyman, V.E. Iacob, A. Azhari, C.A. Gagliardi, J.C. Hardy, V.E. Mayes, R.G. Neilson, M. Sanchez-Vega, X. Tang, L. Trache, R.E. Tribble
2003Ke04	EPJAA	16,	457	H. Kettunen, T. Enqvist, M. Leino, K. Eskola, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Koivisto, P. Kuusiniemi, M. Muikku, P. Nieminen, P. Rahkila, J. Uusitalo
2003Ke08	EPJAA	17,	537	H. Kettunen, T. Enqvist, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, P. Kuusiniemi, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo
2003Ki08	NUPAB	723,	499	H. Kiel, D. Münstermann, K. Zuber
2003Ko.A	Th.-Jyvaskyla			V. Kolhinen
2003Kr20	RAACA	91,	59	J.V. Kratz, A. Nähler, U. Rieth, A. Kronenberg, B. Kuczewski, E. Strub, W. Brüchle, M. Schädel, B. Schausten, A. Türler, H.W. Gäggeler, D.T. Jost, K.E. Gregorich, H. Nitsche, C. Laue, R. Sudowe, P.A. Wilk
2003Ku25	EPJAA	18,	5	J. Kurpeta, A. Płochocki, A.N. Andreyev, J. Äystö, A. De Smet, H. De Witte, A.-H. Evensen, V. Fedoseyev, S. Franchoo, M. Górska, M. Huhta, M. Huyse, Z. Janas, A. Jokinen, M. Karny, E. Kugler, W. Kurcewicz, U. Köster, J. Lettry, A. Nieminen, K. Partes, M. Ramdhane, H.L. Ravn, K. Rykaczewski, J. Szerypo, K. Van de Vel, P. Van Duppen, L. Weissman, G. Walter, A. Wöhr, ISOLDE
2003LaZZ	APCPC	656,	386	G.J. Lane, A.P. Byrne, G.D. Dracoulis
2003Le26	NUPAB	722,	512	A. Lepine-Szily, J.M. Oliveira, D. Galante, G. Amadio, V. Vanin, R. Lichtenthaler, V. Guimaraes, G.F. Lima, H.G. Bohlen, A.N. Ostrowski, A. Di Pietro, A.M. Laird, L. Maunoury, F. de Oliveira Santos, P. Roussel-Chomaz, H. Savajols, W. Trinder, A.C.C. Villari, A. de Vismes
2003Li42	PYLBB	573,	80	Yu. A. Litvinov, F. Attallah, K. Beckert, F. Bosch, D. Boutin, M. Falch, B. Franzke, H. Geissel, M. Hausmann, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, K.E.G. Löbner, G. Münzenberg, F. Nolden, Yu. N. Novikov, Z. Patyk, T. Radon, C. Scheidenberger, J. Stadlmann, M. Steck, M.B. Trzhaskovskaya, H. Wollnik
2003Li.A	PrvCom	GAu	Jul	Y. Litvinov, Ch. Scheidenberger
2003Li.B	PrvCom	GAu	Aug	Y. Litvinov
2003Ma02	PRVCA	67,	014311	P.F. Mantica, A.C. Morton, B.A. Brown, A.D. Davies, T. Glasmacher, D.E. Groh, S.N. Liddick, D.J. Morrissey, W.F. Mueller, H. Schatz, A. Stolz, S.L. Tabor, M. Honma, M. Horoi, T. Otsuka
2003Ma34	EPJAA	17,	519	C. Mazzocchi, E. Badura, C. Bingham, B. Blank, M. Chartier, H. Geissel, J. Giovinazzo, E. Grodner, R. Grzywacz, M. Hellström, Z. Janas, J. Kurcewicz, A.S. Lalleman, I. Mukha, G. Münzenberg, M. Pfützner, C. Plettner, E. Roeckl, K.P. Rykaczewski, K. Schmidt, R.S. Simon, M. Stanoiu, J.-C. Thomas
2003Me11	NUPAB	723,	13	M. Meister, L.V. Chulkov, H. Simon, T. Aumann, M.J.G. Borge, Th. W. Elze, H. Emling, H. Geissel, M. Hellström, B. Jonson, J.V. Kratz, R. Kulessa, Y. Leifels, K. Markenroth, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, V. Pribora, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, O. Tengblad
2003Mi02	JRNCD	255,	63	T. Mitsugashira, M. Hara, T. Ohtsuki, H. Yuki, K. Takamiya, Y. Kasamatsu, A. Shinohara, H. Kikunaga, T. Nakanishi
2003Mo36	NUPAB	728,	350	C.-B. Moon, T. Komatsubara, T. Shizuma, Y. Sasaki, K. Furuno, C.S. Lee
2003Ni10	PRVCA	68,	064305	K. Nishio, H. Ikezoe, S. Mitsuoka, K. Satou, C.J. Lin
2003Pe23	PRVCA	68,	034607	W.A. Peters, T. Baumann, D. Bazin, B.A. Brown, R.R.C. Clement, N. Frank, P. Heckman, B.A. Luther, F. Nunes, J. Seitz, A. Stolz, M. Thoennessen, E. Tryggestad
2003Pi03	EPJAA	16,	313	I. Piqueras, M.J.G. Borge, Ph. Dessagne, J. Giovinazzo, A. Huck, A. Jokinen, A. Knipper, C. Longour, G. Marguier, M. Ramdhane, V. Rauch, O. Tengblad, G. Walter, Ch. Miehé, ISOLDE

2003Pi08	PRVCA	67,	051305	A. Piechaczek, E.F. Zganjar, G.C. Ball, P. Bricault, J.M. D'Auria, J.C. Hardy, D.F. Hodgson, V. Iacob, P. Klages, W.D. Kulp, J.R. Leslie, M. Lipoglavsek, J.A. Macdonald, H.-B. Mak, D.M. Moltz, G. Savard, J. von Schwarzenberg, C.E. Svensson, I.S. Towner, J.L. Wood
2003Ro21	PRVCA	68,	054301	A.P. Robinson, C.N. Davids, G. Mukherjee, D. Seweryniak, S. Sinha, P. Wilt, P.J. Woods
2003Sa02	EPJAA	16,	51	M. Sawicka, J.M. Daugas, H. Grawe, S. Ćwiok, D.L. Balabanski, R. Béraud, C. Bingham, C. Borcea, M. La Commara, G. de France, G. Georgiev, M. Górska, R. Grzywacz, M. Hass, M. Hellström, Z. Janas, M. Lewitowicz, H. Mach, I. Matea, G. Neyens, C. O'Leary, F. de Oliveira Santos, R.D. Page, M. Pfützner, Zs. Podolyák, K. Rykaczewski, M. Stanoiu, J. Żylicz
2003So02	EPJAA	16,	55	O. Sorlin, C. Donzaud, F. Nowacki, J.C. Angélique, F. Azaiez, C. Bourgeois, V. Chiste, Z. Dlouhy, S. Grévy, D. Guillemaud-Mueller, F. Ibrahim, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, J. Mrazek, Yu.-E. Penionzhkevich, F. de Oliveira Santos, B. Pfeiffer, F. Pougheon, A. Poves, M.G. Saint-Laurent, M. Stanoiu
2003So21	NUPAB	719,	193c	O. Sorlin, C. Donzaud, F. Azaiez, C. Bourgeois, L. Gaudefroy, F. Ibrahim, D. Guillemaud-Mueller, F. Pougheon, M. Lewitowicz, F. de Oliveira Santos, M.G. Saint-Laurent, M. Stanoiu, S.M. Lukyanov, Yu. E. Penionzhkevich, J.C. Angélique, S. Grévy, K.-L. Kratz, B. Pfeiffer, F. Nowacki, Z. Dlouhy, J. Mrasek
2003To03	PRVCA	67,	035503	N.R. Tolich, P.H. Barker, P.D. Harty, P.A. Amundsen
2003To08	NUPAB	717,	149	I. Tomandl, T. von Egidy, J. Honzatko, V. Bondarenko, H.-F. Wirth, D. Bucurescu, V.Y. Ponomarev, G. Graw, R. Hertenberger, Y. Eisermann, S. Raman
2003Tu05	EPJAA	17,	505	A. Türler, Ch. E. Düllmann, H.W. Gäggeler, U.W. Kirbach, A.B. Yakushev, M. Schädel, W. Bruchle, R. Dressler, K. Eberhardt, B. Eichler, R. Eichler, T.N. Ginter, F. Glaus, K.E. Gregorich, D.C. Hoffman, E. Jäger, D.T. Jost, D.M. Lee, H. Nitsche, J.B. Patin, V. Pershina, D. Piguet, Z. Qin, B. Schausten, E. Schimpf, H.-J. Schött, S. Soverna, R. Sudowe, P. Thörle, S.N. Timokhin, N. Trautmann, A. Vahle, G. Wirth, P.M. Zielinski
2003Va16	PRVCA	68,	054311	K. Van de Vel, A.N. Andreyev, D. Ackermann, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, I. Kojouharov, M. Leino, B. Lommel, G. Münzenberg, C. Moore, R.D. Page, S. Saro, P. Van Duppen, R. Wyss
2003Va.A	PrvCom	GAu	Aug	R.S. Van Dyck, Jr.
2003Vo03	NUPAB	714,	355	T. von Egidy, C. Doll, J. Jolie, N.V. Warr, J. Kern, M. Crittin, L. Genilloud
2003Wa13	PRVCA	67,	064303	Y. Wang, S. Rinta-Antila, P. Dendooven, J. Huikari, A. Jokinen, V.S. Kolhinen, G. Lhersonneau, A. Nieminen, S. Nummela, H. Penttilä, K. Peräjärvi, J. Szerypo, J.C. Wang, J. Äystö
2003Wi02	NUPAB	716,	3	H.-F. Wirth, T. von Egidy, I. Tomandl, J. Honzátko, D. Bucurescu, N. Mrginean, V. Yu. Ponomarev, R. Hertenberger, Y. Eisermann, G. Graw
2003Xu04	EPJAA	16,	347	S.W. Xu, Y.X. Xie, Z.K. Li, X.D. Wang, B. Guo, C.G. Leng, C.F. Wang, Y. Yu
2003Yo02	PRVCA	67,	014316	K. Yoneda, N. Aoi, H. Iwasaki, H. Sakurai, H. Ogawa, T. Nakamura, W.-D. Schmidt-Ott, M. Schäfer, M. Notani, N. Fukuda, E. Ideguchi, T. Kishida, S.S. Yamamoto, M. Ishihara
				2004
2004Al04	PRVCA	69,	024320	S.D. Al-Garni, P.H. Regan, P.M. Walker, E. Roeckl, R. Kirchner, F.R. Xu, L. Batist, A. Blazhev, R. Borcea, D.M. Cullen, J. Döring, H.M. El-Masri, J. Garces Narro, H. Grawe, M. La Commara, C. Mazzocchi, I. Mukha, C.J. Pearson, C. Plettner, K. Schmidt, W.D. Schmidt-Ott, Y. Shimbara, C. Wheldon, R. Wood, S.C. Wooding
2004An07	PRVCA	69,	054308	A.N. Andreyev, D. Ackermann, F.P. Heßberger, K. Heyde, S. Hofmann, M. Huyse, D. Karlgren, I. Kojouharov, B. Kindler, B. Lommel, G. Münzenberg, R.D. Page, K. Van de Vel, P. Van Duppen, W.B. Walters, R. Wyss
2004As12	EPJAA	22,	411	M. Asai, M. Sakama, K. Tsukada, S. Ichikawa, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, Y. Kojima, Y. Oura, H. Nakahara, M. Shibata, K. Kawade
2004Ba78	PRVCA	70,	024302	P.H. Barker, I.C. Barnett, G.J. Baxter, A.P. Byrne

2004Ba.A	PrvCom	GAu	Jul	C. Bachelet
2004Bl03	PRVCA	69,	015502	B. Blank, G. Savard, J. Döring, A. Blazhev, G. Canchel, M. Chartier, D. Henderson, Z. Janas, R. Kirchner, I. Mukha, E. Roeckl, K. Schmidt, J. Żylicz
2004Bl16	EULEE	67,	586	K. Blaum, D. Beck, G. Bollen, P. Delahaye, C. Guenaut, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2004Bl20	NUPAB	746,	305c	K. Blaum, G. Audi, D. Beck, G. Bollen, C. Guénaut, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, D. Rodríguez, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2004Br19	EPJAA	20,	145	R. Broda, B. Fornal, W. Krolas, T. Pawlat, J. Wrzesinski, D. Bazzacco, G. de Angelis, S. Lunardi, C. Rossi Alvarez
2004Cl03	PRLTA	92,	192501	J.A. Clark, G. Savard, K.S. Sharma, J. Vaz, J.C. Wang, Z. Zhou, A. Heinz, B. Blank, F. Buchinger, J.E. Crawford, S. Gulick, J.K.P. Lee, A.F. Levand, D. Seweryniak, G.D. Sprouse, W. Trimble
2004Co26	PRVCA	70,	064606	C. Cozzini, G. Angloher, C. Bucci, F. von Feilitzsch, D. Hauff, S. Henry, Th. Jagemann, J. Jochum, H. Kraus, B. Majorovits, V. Mikhailik, J. Ninkovic, F. Petricca, W. Potzel, F. Pröbst, Y. Ramachers, W. Rau, M. Razeti, W. Seidel, M. Stark, L. Stodolsky, A.J.B. Tolhurst, W. Westphal, H. Wulandari
2004Da04	PRVCA	69,	011302	C.N. Davids, P.J. Woods, H. Mahmud, T. Davinson, A. Heinz, J.J. Ressler, K. Schmidt, D. Seweryniak, J. Shergur, A.A. Sonzogni, W.B. Walters
2004De16	PRVCA	69,	044305	H. De Witte, A.N. Andreyev, I.N. Borzov, E. Caurier, J. Cederkäll, A. De Smet, S. Eeckhaudt, D.V. Fedorov, V.N. Fedosseev, S. Franchoo, M. Górska, H. Grawe, G. Huber, M. Huyse, Z. Janas, U. Köster, W. Kurcewicz, J. Kurpeta, A. Płochocki, K. Van de Vel, P. Van Duppen, L. Weissman
2004De40	EPJAA	21,	243	S. Dean, M. Gorska, F. Aksouh, H. de Witte, M. Facina, M. Huyse, O. Ivanov, K. Krouglov, Yu. Kudryavtsev, I. Mukha, D. Smirnov, J.-C. Thomas, K. Van de Vel, J. Van de Walle, P. Van Duppen, J. Van Roosbroeck
2004Di18	EPJAA	22,	163	J. Dilling, F. Herfurth, A. Kellerbauer, G. Audi, G. Bollen, H.-J. Kluge, R.B. Moore, C. Scheidenberger, S. Schwarz, G. Sikler, ISOLDE
2004Fo06	PRVCA	70,	34312	B. Fogelberg, H. Gausemel, K.A. Mezilev, P. Hoff, H. Mach, M. Sanchez-Vega, A. Lindroth, E. Ramstrom, J. Genevey, J.A. Pinston, M. Rejmund
2004Fo08	PRLTA	93,	212702	C.M. Folden III, K.E. Gregorich, Ch. E. Düllmann, H. Mahmud, G.K. Pang, J.M. Schwantes, R. Sudowe, P.M. Zielinski, H. Nitsche, D.C. Hoffman
2004Fu.A	P-Santa Fe		1454	K. Furutaka, H. Harada, S. Raman, AIP Conf. Proc. 769, 1454 (2005)
2004Ga24	PRVCA	69,	054307	H. Gausemel, B. Fogelberg, T. Engeland, M. Hjorth-Jensen, P. Hoff, H. Mach, K.A. Mezilev, J.P. Omtvedt
2004Ga29	EPJAA	20,	385	Z.G. Gan, J.S. Guo, X.L. Wu, Z. Qin, H.M. Fan, X.G. Lei, H.Y. Liu, B. Guo, H.G. Xu, R.F. Chen, C.F. Dong, F.M. Zhang, H.L. Wang, C.Y. Xie, Z.Q. Feng, Y. Zhen, L.T. Song, P. Luo, H.S. Xu, X.H. Zhou, G.M. Jin, Z. Ren
2004Ga44	PRVCA	70,	037301	H. Gausemel, K.A. Mezilev, B. Fogelberg, P. Hoff, H. Mach, E. Ramström
2004Gl04	PRVCA	69,	024617	K.A. Gladnishki, Zs. Podolyák, P.H. Regan, J. Gerl, M. Hellström, Y. Kopatch, S. Mandal, M. Górska, R.D. Page, H.J. Wollersheim, A. Banu, G. Benzoni, H. Boardman, M. La Commara, J. Ekman, C. Fahlander, H. Geissel, H. Grawe, E. Kaza, A. Korgul, M. Matos, M.N. Mineva, C.J. Pearson, C. Plettner, D. Rudolph, Ch. Scheidenberger, K.-H. Schmidt, V. Shishkin, D. Sohler, K. Sümmerer, J.J. Valiente-Dobón, P.M. Walker, H. Weick, M. Winkler, O. Yordanov
2004Go03	PRVCA	69,	024602	V.Z. Goldberg, G.V. Rogachev, W.H. Trzaska, J.J. Kolata, A. Andreyev, C. Angulo, M.J.G. Borge, S. Cherubini, G. Chubarian, G. Crowley, P. Van Duppen, M. Gorska, M. Gulino, M. Huyse, P. Jesinger, K.-M. Källman, M. Lattuada, T. Lönnroth, M. Mutterer, R. Raabe, S. Romano, M.V. Rozhkov, B.B. Skorodumov, C. Spitaleri, O. Tengblad, A. Tumino
2004Go15	PRVCA	69,	031302	V.Z. Goldberg, G.G. Chubarian, G. Tabacaru, L. Trache, R.E. Tribble, A. Aprahamian, G.V. Rogachev, B.B. Skorodumov, X.D. Tang
2004Go38	PRVCA	70,	014309	J. TM. Goon, D.J. Hartley, L.L. Riedinger, M.P. Carpenter, F.G. Kondev, R.V.F. Janssens, K.H. Abu Saleem, I. Ahmad, H. Amro, J.A. Cizewski, C.N. Davids, M. Danchev, T.L. Khoo, A. Heinz, T. Lauritsen, W.C. Ma, G.L. Poli, J. Ressler, W. Reviol, D. Seweryniak, M.B. Smith, I. Wiedenhover, J. Zhang
2004GoZZ	Th.-Knoxville			J. TM. Goon

2004Gr20	PYLBB	594,	252	S. Gŕevy, J.C. Angélique, P. Baumann, C. Borcea, A. Buta, G. Canchel, W.N. Catford, S. Courtin, J.M. Daugas, F. de Oliveira, P. Dessagne, Z. Dlouhy, A. Knipper, K.L. Kratz, F.R. Lecolley, J.L. Lecouey, G. Lhersonneau, M. Lewitowicz, E. Liénard, S. Lukyanov, F. Maréchal, C. Miehé, J. Mrazek, F. Negoita, N.A. Orr, D. Pantelica, Y. Penionzhkevich, J. Péter, B. Pfeiffer, S. Pietri, E. Poirier, O. Sorlin, M. Stanoiu, I. Stefan, C. Stodel, C. Timis
2004He25	EPJAA	22,	253	F.P. Heßberger, S. Hofmann, I. Kojouharov, D. Ackermann
2004He28	EPJAA	22,	417	F.P. Heßberger, S. Hofmann, D. Ackermann, P. Cagarda, R.-D. Herzberg, I. Kojouharov, P. Kuusiniemi, M. Leino, R. Mann
2004Hw02	PRVCA	69,	057301	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, D. Fong, C.J. Beyer, P.M. Gore, E.F. Jones, Y.X. Luo, J.O. Rasmussen, S.J. Zhu, S.C. Wu, I.Y. Lee, P. Fallon, M.A. Stoyer, S.J. Asztalos, T.N. Ginter, J.D. Cole, G.M. Ter-Akopian, R. Donangelo
2004Io01	PRVCA	70,	034305	M. Ionescu-Bujor, A. Iordachescu, D.L. Balabanski, S. Chmel, G. Neyens, G. Baldsiefen, D. Bazzacco, F. Brandolini, D. Bucurescu, M. Danchev, M. De Poli, G. Georgiev, A. Görgen, H. Haas, H. Hubel, G. Ilie, N. Marginean, R. Menegazzo, P. Pavan, G. Rainovski, R.V. Ribas, C. Rossi Alvarez, C.A. Ur, K. Vyvey, S. Frauendorf
2004Iz02	YAFIA	67,	1901	N. Izosimov, A.A. Kazimov, V.G. Kalinnikov, A.A. Solnyshkin, J. Suhonen
2004Jo12	PRVCA	70,	017302	D.T. Joss, K. Lagergren, D.E. Appelbe, C.J. Barton, J. Simpson, B. Cederwall, B. Hadinia, R. Wyss, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, C. Scholey, J. Uusitalo, R.D. Page, E.S. Paul, D.R. Wiseman
2004Ka38	PRVCA	70,	014310	M. Karny, L. Batist, D. Jenkins, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, A. Korgul, E. Roeckl, J. Zylicz
2004Ke06	PRVCA	69,	054323	H. Kettunen, T. Enqvist, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, P. Kuusiniemi, M. Leino, A.-P. Leppanen, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo
2004Ke10	PRLTA	93,	072502	A. Kellerbauer, G. Audi, D. Beck, K. Blaum, G. Bollen, B.A. Brown, P. Delahaye, C. Guénaut, F. Herfurth, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian and PrvCom GAu September 2003
2004Kl03	PYLBB	578,	54	H.V. Klapdor-Kleingrothaus, I.V. Krivosheina, A. Dietz, O. Chkvorets
2004Ko.A	P-Santa Fe		225	F.G. Kondev
2004Ku24	EPJAA	22,	429	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, I. Kojouharov
2004Le12	NUPAB	734,	331	A. Lépine-Szily, J.M. Oliveira, D. Galante, G. Amadio, R. Lichtenthäler, H.G. Bohlen, A.N. Ostrowski, A. Blazevic, C. Borcea, V. Guimarães, V. Lapoux, G. Lima, F. de Oliveira Santos, N.A. Orr, P. Roussel-Chomaz, Th. Stolla, J.S. Winfield
2004Li28	CZYPA	54,	189	C.F. Liang, P. Paris, R.K. Sheline, P. Alexa
2004Li75	PRVCA	70,	064303	S.N. Liddick, P.F. Mantica, R. Broda, B.A. Brown, M.P. Carpenter, A.D. Davies, B. Fornal, T. Glasmacher, D.E. Groh, M. Honma, M. Horoi, R.V.F. Janssens, T. Mizusaki, D.J. Morrissey, A.C. Morton, W.F. Mueller, T. Otsuka, J. Pavan, H. Schatz, A. Stolz, S.L. Tabor, B.E. Tomlin, M. Wiedeking
2004Ma.A	Th.-Giessen			M. Matoš
2004Mo15	NUPAB	734,	188	K. Moody, for the Dubna-Livermore Collaboration
2004Mo26	JUPSA	73,	1738	K. Morita, K. Morimoto, D. Kaji, H. Haba, E. Ideguchi, J.C. Peter, R. Kanungo, K. Katori, H. Koura, H. Kudo, T. Ohnishi, A. Ozawa, T. Suda, K. Sueki, I. Tanihata, H. Xu, A.V. Yeremin, A. Yoneda, A. Yoshida, Y.L. Zhao, T. Zheng, S. Goto, F. Tokanai
2004Mo40	EPJAA	21,	257	K. Morita, K. Morimoto, D. Kaji, H. Haba, E. Ideguchi, R. Kanungo, K. Katori, H. Koura, H. Kudo, T. Ohnishi, A. Ozawa, T. Suda, K. Sueki, I. Tanihata, H. Xu, A.V. Yeremin, A. Yoneda, A. Yoshida, Y.-L. Zhao, T. Zheng
2004MoZU	PrvCom	NDG		K. Morita (to be published in Proc. EXON 2004)
2004Mu26	PRLTA	93,	150801	M. Mukherjee, A. Kellerbauer, D. Beck, K. Blaum, G. Bollen, F. Carrel, P. Delahaye, J. Dilling, S. George, C. Guénaut, F. Herfurth, A. Herlert, H.-J. Kluge, U. Köster, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian

2004Mu30	PRVCA	70,	044311	I. Mukha, L. Batist, E. Roeckl, H. Grawe, J. Doring, A. Blazhev, C.R. Hoffman, Z. Janas, R. Kirchner, M. La Commara, S. Dean, C. Mazzocchi, C. Plettner, S.L. Tabor, M. Wiedeking
2004Mu32	NUPAB	746,	66	I. Mukha, L. Batist, F. Becker, A. Blazhev, W. Brüchle, J. Döring, M. Gorska, H. Grawe, T. Faestermann, C. Hoffman, Z. Janas, A. Jungclaus, M. Karny, M. Kavatsyuk,O. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, A. Plochocki, E. Roeckl, M. Romoli, M. Schädel, R. Schwengner, S.L. Tabor, M. Wiedeking, and the GSI ISOL Collaboration
2004Na.A	Th.-Valencia			E. Nácher
2004Og03	PRVCA	69,	021601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, R.W. Lougheed
2004Og05	NUPAB	734,	109	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, R.W. Lougheed
2004Og07	PRVCA	69,	054607	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, R.W. Lougheed
2004Og12	PRVCA	70,	064609	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, P.A. Wilk, R.W. Lougheed, R.I. Ilkaev, S.P. Vesnovskii, and erratum PRVCA 71(2005)029902
2004Pe17	EPJAA	21,	7	K. Perajarvi, J. Cerny, L.M. Fraile, A. Jokinen, A. Kankainen, U. Koster, J. Aysto, and the ISOLDE Collaboration
2004Ra23	PRVCA	70,	044318	S. Raman, X. Ouyang, M.A. Islam, J.W. Starner, E.T. Jurney, J.E. Lynn, G. Martínez-Pinedo
2004Ra28	PRVCA	70,	064308	P.M. Raddon, D.G. Jenkins, C.D. O'Leary, A.J. Simons, R. Wadsworth, A.N. Andreyev, R.D. Page, M.P. Carpenter, F.G. Kondev, T. Enqvist, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo, D.T. Joss
2004Ra33	SCIEA	303,	334	S. Rainville, J.K. Thompson, D.E. Pritchard
2004Re04	PRVCA	69,	034331	J.J. Ressler, C.W. Beausang, H. Ai, H. Amro, M.A. Caprio, R.F. Casten, A.A. Hecht, S.D. Langdown, E.A. McCutchan, D.A. Meyer, P.H. Regan, M.J.S. Sciacchitano, A. Yamamoto, N.V. Zamfir
2004Ri12	PRVCA	70,	11301	S. Rinta-Antila, S. Kopecky, V.S. Kolhinen, J. Hakala, J. Huikari, A. Jokinen, A. Nieminen, J. Äystö, J. Szerypo
2004Ro32	PRLTA	93,	161104	D. Rodríguez, V.S. Kolhinen, G. Audi, J. Äystö, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Jokinen, A. Kellerbauer, H.-J. Kluge, M. Oinonen, H. Schatz, E. Sauvan, S. Schwarz
2004Sa05	PRVCA	69,	014308	M. Sakama, M. Asai, K. Tsukada, S. Ichikawa, I. Nishinaka, Y. Nagame, H. Haba, S. Goto, M. Shibata, K. Kawade, Y. Kojima, Y. Oura, M. Ebihara, H. Nakahara
2004Sa53	PRVCA	70,	042501	G. Savard, J.A. Clark, F. Buchinger, J.E. Crawford, S. Gulick, J.C. Hardy, A.A. Hecht, V.E. Iacob, J.K.P. Lee, A.F. Levand, B.F. Lundgren, N.D. Scielzo, K.S. Sharma, I. Tanihata, I.S. Towner, W. Trimble, J.C. Wang, Y. Wang, Z. Zhou

2004Sa59	EPJAA	22,	455	M. Sawicka, I. Matea, H. Grawe, R. Grzywacz, M. Pfützner, M. Lewitowicz, J.M. Daugas, B.A. Brown, A. Lisetskiy, F. Becker, G. Bélier, C. Bingham, R. Borcea, E. Bouchez, A. Buta, E. Dragulescu, G. de France, G. Georgiev, J. Giovinazzo, F. Hammache, F. Ibrahim, P. Mayet, V. Méot, F. Negoita, F. de Oliveira Santos, O. Perru, O. Roig, K. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, O. Sorlin, M. Stanoiu, I. Stefan, C. Stodel, Ch. Theisen, D. Verney, J. Zylicz
2004Sc03	ARISE	60,	263	R. Schon, G. Winkler, W. Kutschera
2004Sc04	ARISE	60,	317	H. Schrader
2004Sc42	PRVCA	70,	054318	A. Scherillo, J. Genevey, J.A. Pinston, A. Covello, H. Faust, A. Gargano, R. Orlandi, G.S. Simpson, I. Tsekhanovich, N. Warr
2004Sh04	PRVDA	69,	017302	M. Sher, I. Turan
2004St05	PYLBB	586,	27	J. Stadlmann, M. Hausmann, F. Attallah, K. Beckert, P. Beller, F. Bosch, H. Eickhoff, M. Falch, B. Franczak, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Löbner, M. Matoš, G. Münzenberg, N. Nankov, F. Nolden, Yu. N. Novikov, T. Ohtsubo, T. Radon, H. Schatz, C. Scheidenberger, M. Steck, H. Weick, H. Wollnik
2004St18	NUPAB	738,	43	S.V. Stepantsov, M.S. Golovkov, A.S. Fomichev, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, G.M. Ter-Akopian, M.L. Chelnokov, V.A. Gorshkov, Yu. Ts. Oganessian, R. Wolski, A.A. Korsheninnikov, E. Yu. Nikolskii, I. Tanihata
2004Th09	EPJAA	21,	419	J.C. Thomas, L. Achouri, J. Äystö, R. Beraud, B. Blank, G. Canchel, S. Czajkowski, P. Dendooven, A. Ensallem, J. Giovinazzo, N. Guillet, J. Honkanen, A. Jokinen, A. Laird, M. Lewitowicz, C. Longour, F. de Oliveira Santos, K. Peräjärvi, M. Stanoiu
2004Th17	NATUA	430,	58	J.K. Thompson, S. Rainville, D.E. Pritchard
2004Ti06	NUPAB	745,	155	D.R. Tilley, J.H. Kelley, J.L. Godwin, D.J. Millener, J.E. Purcell, C.G. Sheu, H.R. Weller
2004To03	PRVCA	69,	014312	I. Tomandl, J. Novák, V. Burjan, S. Raman, T. von Egidy, H.-F. Wirth, U. Köster, W. Schauer, J.W. Starner, E.T. Jurney, G. Graw, R. Hertenberger, A. Gollwitzer, B. Valnion, A. Metz
2004Ur04	EPJAA	22,	157	W. Urban, A. Zlomaniec, G. Simpson, J.A. Pinston, J. Kurpeta, T. Rzaca-Urban, J.L. Durell, A.G. Smith, B.J. Varley, N. Schulz, I. Ahmad
2004Va03	PRVCA	69,	024316	J.J. Valiente-Dobón, P.H. Regan, C. Wheldon, C.Y. Wu, N. Yoshinaga, K. Higashiyama, J.F. Smith, D. Cline, R.S. Chakrawarthy, R. Chapman, M. Cromaz, P. Fallon, S.J. Freeman, A. Görgen, W. Gelletly, A. Hayes, H. Hua, S.D. Langdown, I.Y. Lee, X. Liang, A.O. Macchiavelli, C.J. Pearson, Zs. Podolyák, G. Sletten, R. Teng, D. Ward, D.D. Warner, A.D. Yamamoto
2004Va07	PRLTA	92,	112501	J. Van Roosbroeck, C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, J. Cederkall, P. Delahaye, A. De Maesschalck, H. De Witte, D. Fedorov, V.N. Fedoseyev, S. Franchoo, H.O.U. Fynbo, M. Górska, F. Herfurth, K. Heyde, M. Huyse, A. Kellerbauer, H.-J. Kluge, U. Köster, K. Kruglov, D. Lunney, V.I. Mishin, W.F. Mueller, Sz. Nagy, S. Schwarz, L. Schweikhard, N.A. Smirnova, K. Van de Vel, P. Van Duppen, A. Van Dyck, W.B. Walters, L. Weissman, C. Yazidjian
2004Va14	PRLTA	92,	220802	R.S. Van Dyck, Jr., S.L. Zafonte, S. Van Liew, D.B. Pinegar, P.B. Schwinber
2004Wa26	PRVCA	70,	034314	W.B. Walters, B.E. Tomlin, P.F. Mantica, B.A. Brown, J. Rikovska Stone, A.D. Davies, A. Estrade, P.T. Hosmer, N. Hoteling, S.N. Liddick, T.J. Mertzimekis, F. Montes, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, D. Seweryniak, H. Schatz, J. Shergur, A. Stolz
2004Wo07	PRVCA	69,	051302	P.J. Woods, P. Munro, D. Seweryniak, C.N. Davids, T. Davinson, A. Heinz, H. Mahmud, F. Sarazin, J. Shergur, W.B. Walters, A. Woehr
2004Wo16	NUPAB	742,	349	A. Wöhr, A. Aprahamian, P. Boutachkov, J.L. Galache, J. Gorres, M. Shawcross, A. Teymurazyan, M.C. Wiescher, D.S. Brenner, C.N. Davids, S.M. Fischer, A.M. Heinz, R.V.F. Janssens, D. Seweryniak
2004Xu08	JUPSA	73,	2588	Y. Xu, W. Yang, S. Yuan, Y. Niu, H. Ding, X. Wang, L. Zhao, P. Wang, H. Li
2004Ze05	EPJAA	20,	389	T. Zerguerras, B. Blank, Y. Blumenfeld, T. Suomijärvi, D. Beaumel, B.A. Brown, M. Chartier, M. Fallot, J. Gio vinazzo, C. Jouanne, V. Lapoux, I. Lhenry-Yvon, W. Mittig, P. Roussel-Chomaz, H. Savajols, J.A. Scarpaci, A. Shrivastava, M. Thoennessen

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2005Ah03	PRVCA	71,	054305	I. Ahmad, F.G. Kondev, E.F. Moore, M.P. Carpenter, R.R. Chasman, J.P. Greene, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, R.W. Hoff, J.E. Evans, R.W. Lougheed, C.E. Porter, L.K. Felker
2005As05	PRLTA	95,	102502	M. Asai, K. Tsukada, M. Sakama, S. Ichikawa, T. Ishii, Y. Nagame, I. Nishinaka, K. Akiyama, A. Osa, Y. Oura, K. Sueki, M. Shibata
2005Ba51	PRVCA	71,	054302	A.M. Baxter, A.P. Byrne, G.D. Dracoulis, P.M. Davidson, T. Kibédi, R.V.F. Janssens, M.P. Carpenter, C.N. Davids, T.L. Khoo, T. Lauritsen
2005Ba64	PRVCA	72,	017301	A.E. Barzakh, D.V. Fedorov, A.M. Ionan, V.S. Ivanov, F.V. Moroz, K.A. Mezilev, S. Yu. Orlov, V.N. Panteleev, Yu. M. Volkov
2005Ba94	PRVCA	72,	044306	J.C. Batchelder, J.-C. Bilheux, C.R. Bingham, H.K. Carter, D. Fong, P.E. Garrett, R. Grzywacz, J.H. Hamilton, D.J. Hartley, J.K. Hwang, W. Krolas, W.D. Kulp, Y. Larochelle, A. Piechaczek, A.V. Ramayya, K.P. Rykaczewski, E.H. Spejewski, D.W. Stracener, M.N. Tantawy, J.A. Winger, J.L. Wood, E.F. Zganjar
2005Bb02	EPJAA	25,	s149	J.C. Batchelder, M. Tantawy, C.R. Bingham, M. Danchev, D.J. Fong, T.N. Ginter, C.J. Gross, R. Grzywacz, K. Hagino, J.H. Hamilton, M. Karny, W. Krolas, C. Mazzocchi, A. Piechaczek, A.V. Ramayya, K.P. Rykaczewski, A. Stolz, J.A. Winger, C.-H. Yu, E.F. Zganjar
2005Bi24	NIMBE	241,	185	C.R. Bingham, M.N. Tantawy, J.C. Batchelder, M. Danchev, T.N. Ginter, C.J. Gross, D.J. Fong, R. Grzywacz, K. Hagino, J.H. Hamilton, M. Karny, W. Krolas, C. Mazzocchi, A. Piechaczek, A.V. Ramayya, K. Rykaczewski, A. Stolz, J.A. Winger, C.-H. Yu, E.F. Zganjar
2005Bl15	PRLTA	94,	232501	B. Blank, A. Bey, G. Canchel, C. Dossat, A. Fleury, J. Giovinazzo, I. Matea, N. Adimi, F. de Oliveira, I. Stefan, G. Georgiev, S. Grévy, J.C. Thomas, C. Borcea, D. Cortina, M. Caamano, M. Stanoiu, F. Aksouh, B.A. Brown, F.C. Barker, W.A. Richter
2005Ca02	EPJAA	23,	201	M. Caamano, P.M. Walker, P.H. Regan, M. Pfutzner, Zs. Podolyák, J. Gerl, M. Hellstrom, P. Mayet, M.N. Mineva, A. Aprahamian, J. Benlliure, A.M. Bruce, P.A. Butler, D. Cortina Gil, D.M. Cullen, J. Doring, T. Enqvist, C. Fox, J. Garces Narro, H. Geissel, W. Gelletly, J. Giovinazzo, M. Gorska, H. Grawe, R. Grzywacz, A. Kleinbohl, W. Korten, M. Lewitowicz, R. Lucas, H. Mach, C.D. O'Leary, F. de Oliveira, C.J. Pearson, F. Rejmund, M. Rejmund, M. Sawicka, H. Schaffner, C. Schlegel, K. Schmidt, K.-H. Schmidt, P.D. Stevenson, Ch. Theisen, F. Vives, D.D. Warner, C. Wheldon, H.J. Wollersheim, S. Wooding, F. Xu, O. Yordanov
2005Ca03	NUPAB	748,	333	C.M. Cattadori, M. De Deo, M. Laubenstein, L. Pandola, V.I. Tretyak
2005Ca06	EPJAA	23,	409	G. Canchel, B. Blank, M. Chartier, F. Delalee, P. Dendooven, C. Dossat, J. Giovinazzo, J. Huikari, A.S. Lalleman, M.J. Lopez Jimenez, V. Madec, J.L. Pedroza, H. Penttila, J.C. Thomas
2005Ca.A	AnRpt ANL,		51	M.P. Carpenter et al
2005Ch65	PRVCA	72,	054309	A. Chakraborty, Krishichayan, S.S. Ghugre, R. Goswami, S. Mukhopadhyay, N.S. Pattabiraman, S. Ray, A.K. Sinha, S. Sarkar, P.V. Madhusudhana Rao, U. Garg, S.K. Basu, M.B. Chatterjee, M.S. Sarkar, L. Chaturvedi, A. Dhal, R.K. Sinha, I.M. Govil, R.K. Bhowmik, A. Jhingan, N. Madhavan, S. Muralithar, S. Nath, R.P. Singh, P. Sugathan
2005De01	EPJAA	23,	243	H. De Witte, A.N. Andreyev, S. Dean, S. Franchoo, M. Huyse, O. Ivanov, U. Köster, W. Kurcewicz, J. Kurpeta, A. Płochocki, K. Van de Vel, J. Van de Walle, P. Van Duppen
2005Do20	PRVCA	72,	054315	C. Dossat, A. Bey, B. Blank, G. Canchel, A. Fleury, J. Giovinazzo, I. Matea, F. de Oliveira Santos, G. Georgiev, S. Grévy, I. Stefan, J.C. Thomas, N. Adimi, C. Borcea, D. Cortina Gil, M. Caamano, M. Stanoiu, F. Aksouh, B.A. Brown, L.V. Grigorenko
2005Dr05	PRVCA	71,	044326	G.D. Dracoulis, G.J. Lane, F.G. Kondev, A.P. Byrne, T. Kibédi, H. Watanabe, I. Ahmad, M.P. Carpenter, S.J. Freeman, R.V.F. Janssens, N.J. Hammond, T. Lauritsen, C.J. Lister, G. Mukherjee, D. Seweryniak, P. Chowdhury, S.K. Tandel

2005El10	PRVCA	72,	054306	H.M. El-Masri, P.M. Walker, G.D. Dracoulis, T. Kibédi, A.P. Byrne, A.M. Bruce, J.N. Orce, A. Emmanouilidis, D.M. Cullen, C. Wheldon, F.R. Xu
2005Fr.A	IPNO-DRE-NS		5	S. Franchoo, N. Barre, B. Roussiere, J. Sauvage
2005Fu01	ZAANE	24,	249	T. Fukuchi, Y. Gono, A. Odahara, S. Tanaka, M. Inoue, Y. Wakabayashi, T. Sasaki, M. Kibe, N. Hokoiwa, T. Shinozuka, M. Fujita, A. Yamazaki, T. Sonoda, C.S. Lee, Y.K. Kwon, J.Y. Moon, J.H. Lee
2005Ga01	EPJAA	23,	41	L. Gaudefroy, O. Sorlin, C. Donzaud, J.C. Angelique, F. Azaiez, C. Bourgeois, V. Chiste, Z. Dlouhy, S. Grevy, D. Guillemaud-Mueller, F. Ibrahim, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, I. Matea, J. Mrazek, F. Nowacki, F. de Oliveira Santos, Yu.-E. Penionzhkevich, B. Pfeiffer, F. Pougheon, M.G. Saint-Laurent, M. Stanoiu
2005Ga20	PYLBB	619,	88	A. Gadea, S.M. Lenzi, D.R. Napoli, M. Axiotis, C.A. Ur, G. Martínez-Pinedo, M. Górska, E. Roeckl, E. Caurier, F. Nowacki, G. de Angelis, L. Batist, R. Borcea, F. Brandolini, D. Cano-Ott, J. Döring, C. Fahlander, E. Farnea, H. Grawe, M. Hellström, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, E. Nácher, C. Plettner, A. Płochocki, B. Rubio, K. Schmidt, R. Schwengner, J.L. Tain, J. Żylicz
2005Ga.B	Th.-Orsay Sept			L. Gaudefroy
2005Gi15	JPGPE	31,	s1509	J. Giovinazzo
2005Gr32	EPJAA	25,	s145	R. Grzywacz, M. Karny, K.P. Rykaczewski, J.C. Batchelder, C.R. Bingham, D. Fong, C.J. Gross, W. Krolas, C. Mazzocchi, A. Piechaczek, M.N. Tantawy, J.A. Winger, E.F. Zganjar
2005Gu25	PRVCA	72,	034312	F.Q. Guo, J. Powell, D.W. Lee, D. Leitner, M.A. McMahan, D.M. Moltz, J.P. O'Neil, K. Perajarvi, L. Phair, C.A. Ramsey, X.J. Xu, J. Cerny
2005Gu27	JPGPE	31,	s1765	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2005Gu37	EPJAA	25,	s35	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2005He26	EPJAA	25,	s17	F. Herfurth, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, S. George, C. Guénaut, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, M. Mukherjee, S. Rahaman, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2005He27	EPJAA	26,	233	F.P. Heßberger, S. Antalic, B. Streicher, S. Hofmann, D. Ackermann, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, S. Saro, B. Sulignano
2005He.A	PrvCom	GAu	Aug	A. Herlert
2005Ho15	NUPAB	756,	249	J. Honzátko, V. Bondarenko, I. Tomandl, T. von Egidy, H.-F. Wirth, D. Bucurescu, V. Yu. Ponomarev, N. Mărginean, R. Hertenberger, Y. Eisermann, G. Graw, L. Rubáček
2005Hu.A	PrvCom	GAu	Jul	M. Huyse
2005Hy04	JPGPE	31,	s1885	B. Hyland, D. Melconian, G.C. Ball, J.R. Leslie, C.E. Svensson, P. Bricault, E. Cunningham, M. Dombsky, G.F. Grinyer, G. Hackman, K. Koopmans, F. Sarazin, M.A. Sch
2005Ic02	PRVCA	71,	067302	S. Ichikawa, M. Asai, K. Tsukada, H. Haba, Y. Nagame, M. Shibata, M. Sakama, Y. Kojima
2005Ja03	EPJAA	23,	197	Z. Janas, C. Mazzocchi, L. Batist, A. Blazhev, M. Górska, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, A. Korgul, M. La Commara, K. Miernik, I. Mukha, A. Plochocki, E. Roeckl, K. Schmid
2005Ja06	EPJAA	23,	401	Z. Janas, L. Batist, J. Doring, M. Gierlik, R. Kirchner, J. Kurcewicz, H. Mahmud, C. Mazzocchi, A. Plochocki, E. Roeckl, K. Schmidt, P.J. Woods, J. Żylicz
2005Ja10	EPJAA	24,	205	Z. Janas, L. Batist, R. Borcea, J. Doring, M. Gierlik, M. Karny, R. Kirchner, M. La Commara, S. Mandal, C. Mazzocchi, F. Moroz, S. Orlov, A. Płochocki, E. Roeckl, J. Żylicz
2005Ka34	EPJAA	25,	211	O. Kavatsyuk, M. Kavatsyuk, L. Batist, A. Banu, F. Becker, A. Blazhev, W. Brüchle, J. Döring, T. Faestermann, M. Górska, H. Grawe, Z. Janas, A. Jungclaus, M. Karny, R. Kirchner, M. La Commara, S. Mandal, C. Mazzocchi, I. Mukha, S. Muralithar, C. Plettner, A. Płochocki, E. Roeckl, M. Romoli, M. Schädel, R. Schwengner, J. Żylicz

2005Ka39	EPJAA	25,	355	A. Kankainen, G.K. Vorobjev, S.A. Eliseev, W. Huang, J. Huikari, A. Jokinen, A. Nieminen, Yu. N. Novikov, H. Penttilä, A.V. Popov, S. Rinta-Antila, H. Schatz, D.M. Seliverstov, Yu. P. Suslov, J. Äystö
2005Ka46	EPJAA	25,	s129	A. Kankainen, S.A. Eliseev, T. Eronen, S.P. Fox, U. Hager, J. Hakala, W. Huang, J. Huikari, D. Jenkins, A. Jokinen, S. Kopecky, I. Moore, A. Nieminen, Yu. N. Novikov, H. Penttila, A.V. Popov, S. Rinta-Antila, H. Schatz, D.M. Seliverstov, G.K. Vorobjev, Y. Wang, J. Aysto, and the IS403 Collaboration
2005Kr20	EPJAA	25,	s633	K.-L. Kratz, B. Pfeiffer, O. Arndt, S. Hennrich, A. Wöhr, ISOLDE
2005Ku06	EPJAA	23,	417	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, I. Kojouharov
2005Ku31	EPJAA	25,	397	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, B. Sulignano, I. Kojouharov, R. Mann
2005Ku.A	P-Debrecen		73	T. Kurtukian Nieto, J. Benlliure, K.-H. Schmidt, E. Casarejos, D. Cortina-Gil, M. Fernandez-Ordonez, J. Pereira, L. Audouin, B. Blank, F. Becker, J. Giovinazzo, D. Henzlova, B. Jurado, F. Rejmund, O. Yordanov
2005La01	PYLBB	606,	34	G.J. Lane, K.H. Maier, A.P. Byrne, G.D. Dracoulis, R. Broda, B. Fornal, M.P. Carpenter, R.M. Clark, M. Cromaz, R.V.F. Janssens, A.O. Macchiavelli, I. Wiedenhover, K. Vetter
2005Le34	PRVCA	72,	034305	F. Le Blanc, L. Cabaret, E. Cottereau, J.E. Crawford, S. Essabaa, J. Genevey, R. Horn, G. Huber, J. Lassen, J.K.P. Lee, G. Le Scornet, J. Lettry, J. Obert, J. Oms, A. Ouchrif, J. Pinard, H. Ravn, B. Roussière, J. Sauvage, D. Verney
2005Le42	EPJAA	25,	s183	A.-P. Leppänen, J. Uusitalo, S. Eeckhaudt, T. Enqvist, K. Eskola, T. Grahn, F.P. Heßberger, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, P. Nieminen, J. Pakarinen, J. Perkowski, P. Rahkila, C. Scholey, G. Sletten
2005Li17	NIMAE	543,	591	Z. Liu, J. Kurcewicz, P.J. Woods, C. Mazzocchi, F. Attallah, E. Badura, C.N. Davids, T. Davinson, J. Döring, H. Geissel, M. Górska, R. Grzywacz, M. Hellström, Z. Janas, M. Karny, A. Korgul, I. Mukha, M. Pfützner, C. Plettner, A. Robinson, E. Roeckl, K. Rykaczewski, K. Schmidt, D. Seweryniak, H. Weick
2005Li24	NUPAB	756,	3	Yu. A. Litvinov, H. Geissel, T. Radon, F. Attallah, G. Audi, K. Beckert, F. Bosch, M. Falch, B. Franzke, M. Hausmann, M. Hellström, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, K.E.G. Löbner, G. Münzenberg, F. Nolden, Yu. N. Novikov, W. Quint, Z. Patyk, H. Reich, C. Scheidenberger, B. Schlitt, M. Steck, K. Sümmerer, L. Vermeeren, M. Winkler, Th. Winkler, H. Wollnik
2005Li47	PRVCA	72,	047301	Z. Liu, P.J. Woods, K. Schmidt, H. Mahmud, P.S.L. Munro, A. Blazhev, J. Doring, H. Grawe, M. Hellstrom, R. Kirchner, Z.K. Li, C. Mazzocchi, I. Mukha, C. Plettner, E. Roeckl, M. La Commara
2005Li53	PRVCA	72,	054321	S.N. Liddick, P.F. Mantica, R. Broda, B.A. Brown, M.P. Carpenter, A.D. Davies, B. Fornal, M. Horoi, R.V.F. Janssens, A.C. Morton, W.F. Mueller, J. Pavan, H. Schatz, A. Stolz, S.L. Tabor, B.E. Tomlin, M. Wiedeking
2005Li60	PRVCA	72,	064327	Z.H. Li, Y.L. Ye, H. Hua, D.X. Jiang, Y.M. Zhang, F.R. Xu, Q.Y. Hu, G.L. Zhang, Z.Q. Chen, T. Zheng, C.E. Wu, J.L. Lou, X.Q. Li, D.Y. Pang, S. Wang, C. Li, H.S. Xu, Z.Y. Sun, L.M. Duan, Z.G. Hu, R.J. Hu, H.G. Xu, R.S. Mao, Y. Wang, X.H. Yuan, H. Gao, L.J. Wu, H.R. Qi, T.H. Huang, F. Fu, F. Jia, Q. Gao, X.L. Ding, J.L. Han, X.Y. Zhang
2005Ma59	PYLBB	622,	45	C. Mazzocchi, R. Grzywacz, J.C. Batchelder, C.R. Bingham, D. Fong, J.H. Hamilton, J.K. Hwang, M. Karny, W. Krolas, S.N. Liddick, A.F. Lisetskiy, A.C. Morton, P.F. Mantica, W.F. Mueller, K.P. Rykaczewski, M. Steiner, A. Stolz, J.A. Winger
2005Ma95	EPJAA	25,	s93	C. Mazzocchi, R. Grzywacz, J.C. Batchelder, C.R. Bingham, D. Fong, J.H. Hamilton, J.K. Hwang, M. Karny, W. Krolas, S.N. Liddick, A.C. Morton, P.F. Mantica, W.F. Mueller, K.P. Rykaczewski, M. Steiner, A. Stolz, J.A. Winger
2005Ma.A	PrvCom	GAu	Oct	M. Martin
2005Mu15	PRLTA	95,	022501	I. Mukha, E. Roeckl, J. Döring, L. Batist, A. Blazhev, H. Grawe, C.R. Hoffman, M. Huyse, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, S.L. Tabor, P. Van Duppen, M. Wiedeking

2005Og02	PRVCA	72,	034611	Yu. Ts. Oganessian, V.K. Utyonkov, S.N. Dmitriev, Yu. V. Lobanov, M.G. Itkis, A.N. Polyakov, Yu. S. Tsyganov, A.N. Mezentsev, A.V. Yeremin, A.A. Voinov, E.A. Sokol, G.G. Gulbekian, S.L. Bogomolov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, S.V. Shishkin, V.I. Chepygin, G.K. Vostokin, N.V. Aksenov, M. Hussonnois, K. Subotic, V.I. Zagrebaev, K.J. Moody, J.B. Patin, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, P.A. Wilk, R.W. Lougheed, H.W. Gäggeler, D. Schumann, H. Bruchertseifer, R. Eichler
2005Oh08	PRLTA	95,	052501	T. Ohtsubo, F. Bosch, H. Geissel, L. Maier, C. Scheidenberger, F. Attallah, K. Beckert, P. Beller, D. Boutin, T. Faestermann, B. Franczak, B. Franzke, M. Hausmann, M. Hellstrom, E. Kaza, P. Kienle, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, M. Matos, G. Munzenberg, F. Nolden, Yu. N. Novikov, M. Portillo, T. Radon, J. Stadlmann, M. Steck, T. Stohlker, K. Summerer, K. Takahashi, H. Weick, M. Winkler, T. Yamaguchi
2005On03	PRVCA	72,	024308	T.K. Onishi, A. Gelberg, H. Sakurai, K. Yoneda, N. Aoi, N. Imai, H. Baba, P. von Brentano, N. Fukuda, Y. Ichikawa, M. Ishihara, H. Iwasaki, D. Kameda, T. Kishida, A.F. Lisetskiy, H.J. Ong, M. Osada, T. Otsuka, M.K. Suzuki, K. Ue, Y. Utsuno, H. Watanabe
2005Pa31	PRVCA	71,	055804	A. Parikh, J.A. Caggiano, C. Deibel, J.P. Greene, R. Lewis, P.D. Parker, C. Wrede
2005Pi13	PRVCA	71,	064327	J.A. Pinston, J. Genevey, R. Orlandi, A. Scherillo, G.S. Simpson, I. Tsekhanovich, W. Urban, H. Faust, N. Warr
2005Po03	EPJAA	24,	39	M.-G. Porquet, Ts. Venkova, R. Lucas, A. Astier, A. Bauchet, I. Deloncle, A. Prevost, F. Azaiez, G. Barreau, A. Bogachev, N. Buforn, A. Buta, D. Curien, T.P. Doan, L. Donadille, O. Dorvaux, G. Duchene, J. Durell, Th. Ethvignot, B.P.J. Gall, D. Grimwood, M. Houry, F. Khalfallah, W. Korten, S. Lalkovski, Y. Le Coz, M. Meyer, A. Minkova, I. Piqueras, N. Redon, A. Roach, M. Rousseau, N. Schulz, A.G. Smith, O. Stezowski, Ch. Theisen, B.J. Varley
2005Po10	NUPAB	756,	83	A.R. Poletti, A.P. Byrne, G.D. Dracoulis, T. Kibedi, P.M. Davidson
2005Ra34	NATUA	438,	1096	S. Rainville, J.K. Thompson, E.G. Myers, J.M. Brown, M.S. Dewey, E.G. Kessler,Jr., R.D. Deslattes, H.G. Börner, M. Jentschel, P. Mutti, D.E. Pritchard
2005Re02	PRVCA	71,	014302	J.J. Ressler, C.W. Beausang, H. Ai, H. Amro, M. Babilon, J.A. Caggiano, R.F. Casten, G. Gurdal, A. Heinz, R.O. Hughes, E.A. McCutchan, D.A. Meyer, C. Plettner, J. Qian, M.J.S. Sciacchitano, N.J. Thomas, E. Williams, N.V. Zamfir
2005Ri17	JPHGB	31,	s1949	S. Rigby, D.M. Cullen, D.T. Scholes, C. Scholey, P. Rahkila, S. Eeckhaudt, T. Grahn, P. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A. Leppänen, P. Nieminen, M. Nyman, J. Pakarinen, J. Uusitalo
2005Ro19	PRLTA	95,	032502	A.P. Robinson, P.J. Woods, D. Seweryniak, C.N. Davids, M.P. Carpenter, A.A. Hecht, D. Peterson, S. Sinha, W.B. Walters, S. Zhu
2005Ro40	EPJAA	25,	s155	A.P. Robinson, C.N. Davids, D. Seweryniak, P.J. Woods, B. Blank, M.P. Carpenter, T. Davinson, S.J. Freeman, N. Hammond, N. Hoteling, R.V.F. Janssens, T.L. Khoo, Z. Liu, G. Mukherjee, C. Scholey, J. Shergur, S. Sinha, A.A. Sonzogni, W.B. Walters, A. Woehr
2005Sa44	PRLTA	95,	102501	G. Savard, F. Buchinger, J.A. Clark, J.E. Crawford, S. Gulick, J.C. Hardy, A.A. Hecht, J.K.P. Lee, A.F. Levand, N.D. Scielzo, H. Sharma, K.S. Sharma, I. Tanihata, A.C.C. Villari, Y. Wang
2005Sc22	JPGPE	31,	s1719	C. Scholey, M. Sandzelius, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, M. Leino, A.-P. Leppanen, P. Nieminen, M. Nyman, J. Perkowski, J. Pakarinen, P. Rahkila, P.M. Rahkila, J. Uusitalo, K. Van de Vel, B. Cederwall, B. Hadinia, K. Lagergren, D.T. Joss, D.E. Appelbe, C.J. Barton, J. Simpson, D.D. Warner, I.G. Darby, R.D. Page, E.S. Paul, D. Wiseman
2005Sh24	PRVCA	71,	064323	J. Shergur, D.J. Dean, D. Seweryniak, W.B. Walters, A. Wöhr, P. Boutachkov, C.N. Davids, I. Dillmann, A. Juodagalvis, G. Mukherjee, S. Sinha, A. Teymurazyan, I. Zartova
2005Sh38	PRVAA	72,	022510	W. Shi, M. Redshaw, E.G. Myers, and PrvCom GAu February 2006
2005Sh52	EPJAA	25,	s45	K.S. Sharma, J. Vaz, R.C. Barber, F. Buchinger, J.A. Clark, J.E. Crawford, H. Fukutani, J.P. Greene, S. Gulick, A. Heinz, J.K.P. Lee, G. Savard, Z. Zhou, J.C. Wang

2005Si34	NUPAB	763,	45	G. Sikler, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, M. Oinonen, C. Scheidenberger, S. Schwarz, J. Szerypo, C. Weber, and erratum NUPAB 768(2006)160
2005St29	PYLBB	627,	32	A. Stolz, T. Baumann, N.H. Frank, T.N. Ginter, G.W. Hitt, E. Kwan, M. Mocko, W. Peters, A. Schiller, C.S. Sumithrarachchi, M. Thoennessen
2005Th03	PRVCA	71,	021302	J.S. Thomas, D.W. Bardayan, J.C. Blackmon, J.A. Cizewski, U. Greife, C.J. Gross, M.S. Johnson, K.L. Jones, R.L. Kozub, J.F. Liang, R.J. Livesay, Z. Ma, B.H. Moazen, C.D. Nesaraja, D. Shapira, M.S. Smith
2005Th.A	P-Cadarache		131	J.-C. Thomas, et al
2005Ti11	JPGPE	31,	s1965	C. Timis, J.C. Angelique, A. Buta, N.L. Achouri, D. Baiborodin, P. Baumann, C. Borcea, S. Courtin, P. Dessagne, Z. Dlouhy, J.M. Daugas, S. Grevy, D. Guillemaud-Mueller, A. Knipper, F.R. Lecolley, J.L. Lecouey, M. Lewitowicz, E. Lienard, S.M. Lukyanov, F.M. Marques, C. Miehe, J. Mrazek, F. Negoita, F. Nowacki, F. de Oliveira, N.A. Orr, J. Peter, S. Pietri, Yu. E. Penionzhkevich, E. Poirier, M. Stanoiu, G. Walter
2005Tr13	EPJAA	25,	s101	V. Tripathi, S.L. Tabor, P.F. Mantica, C.R. Hoffman, M. Wiedeking, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin, A. Volya
2005Ue01	PYLBB	615,	186	H. Ueno, D. Kameda, G. Kijima, K. Asahi, A. Yoshimi, H. Miyoshi, K. Shimada, G. Kato, D. Nagae, S. Emori, T. Haseyama, H. Watanabe, M. Tsukui
2005Uu02	PRVCA	71,	024306	J. Uusitalo, M. Leino, T. Enqvist, K. Eskola, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, H. Kettunen, H. Koivisto, P. Kuusiniemi, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, C. Scholey
2005Va04	EPJAA	24,	57	K. Van de Vel, A.N. Andreyev, D. Ackermann, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, I. Kojouharov, M. Leino, B. Lommel, G. Münzenberg, C. Moore, R.D. Page, S. Saro, P. Van Duppen, R. Wyss
2005Va19	PRVCA	71,	054307	J. Van Roosbroeck, H. De Witte, M. Gorska, M. Huyse, K. Kruglov, D. Pauwels, J.-Ch. Thomas, K. Van de Vel, P. Van Duppen, S. Franchoo, J. Cederkall, V.N. Fedoseyev, H. Fynbo, U. Georg, O. Jonsson, U. Koster, L. Weissman, W.F. Mueller, V.I. Mishin, D. Fedorov, A. De Maesschalck, N.A. Smirnova, K. Heyde
2005WaZY	APCPC	764,	335	W.B. Walters, M.A. Stoyer, J. Shergur, N. Hoteling, J.J. Ressler, J. Rikovska, K.-L. Kratz, A. Wohr, B. Pfeiffer, O. Arndt, P.F. Mantica, B. Tomlin, H. Schatz, F. Montes, B.A. Brown, D. Seweryniak, H. Ravn, V. Fedoseyev, U. Koster, C.Y. Wu, D. Cline, H. Hua, A.B. Hayes, R. Teng, and the ISOLDE Collaboration
2005We11	PYLAA	347,	81	C. Weber, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz
2005Xi06	PRVCA	72,	044302	C.Y. Xie, X.H. Zhou, Y.H. Zhang, Y.X. Guo, X.G. Lei, Y. Zheng, M.L. Liu, L.T. Song, H.L. Wang, W.T. Guo, H.P. Yu, L.H. Zhu, X.G. Wu, F.R. Xu
2005Xu04	PRVCA	71,	054318	S.W. Xu, Z.K. Li, Y.X. Xie, Q.Y. Pan, W.X. Huang, X.D. Wang, Y. Yu, Y.B. Xing, N.C. Shu, Y.S. Chen, F.R. Xu, K. Wang
2005Zl01	PRVCA	72,	067302	A. Zlomaniec, H. Faust, J. Genevey, J.A. Pinston, T. Rzaca-Urban, G.S. Simpson, I. Tsekhanovich, W. Urban

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2006Ac04	EPJAA	27,	287	N.L. Achouri, F. de Oliveira Santos, M. Lewitowicz, B. Blank, J. Aÿstö, G. Canchel, S. Czajkowski, P. Dendooven, A. Emsallem, J. Giovinazzo, N. Guillet, A. Jokinen, A.M. Laird, C. Longour, K. Peräjärvi, N. Smirnova, M. Stanoiu, J.-C. Thomas
2006Ah06	PRLTA	97,	202303	J. Ahrens, and the GDH and A2 Collaborations
2006Al03	GCACA	70,	1261	F. Albarede, E.E. Scherer, J. Blichert-Toft, M. Rosing, A. Simionovici, M. Bizzarro
2006An04	PRVCA	73,	024317	A.N. Andreyev, S. Antalic, D. Ackermann, S. Franchoo, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, P. Kuusiniemi, S.R. Lesher, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, R.D. Page, J.J. Ressler, B. Streicher, S. Saro, B. Sulignano, P. Van Duppen, D.R. Wiseman

2006An11	PRVCA	73,	044324	A.N. Andreyev, S. Antalic, D. Ackermann, S. Franchoo, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, P. Kuusiniemi, S.R. Lesher, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, R.D. Page, J.J. Ressler, B. Streicher, S. Saro, B. Sulignano, P. Van Duppen, D. Wiseman, R. Wyss
2006An36	PRVCA	74,	064303	A.N. Andreyev, S. Antalic, M. Huyse, P. Van Duppen, D. Ackermann, L. Bianco, D.M. Cullen, I.G. Darby, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, I. Kojouharov, B. Kindler, A.-P. Leppänen, B. Lommel, R. Mann, G. Münzenberg, J. Pakarinen, R.D. Page, J.J. Ressler, S. Saro, B. Streicher, B. Sulignano, J. Thomson, R. Wyss
2006As03	PRVCA	73,	067301	M. Asai, K. Tsukada, S. Ichikawa, M. Sakama, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, Y. Kojima, Y. Oura, M. Shibata
2006Ba09	PRVCA	73,	024308	J.E. Bastin, R.-D. Herzberg, P.A. Butler, G.D. Jones, R.D. Page, D.G. Jenkins, N. Amzal, P.M.T. Brew, N.J. Hammond, R.D. Humphreys, P.J.C. Ikin, T. Page, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, A.P. Leppänen, M. Muikku, P. Nieminen, P. Rahkila, C. Scholey, J. Uusitalo, E. Bouchez, A. Chatillon, A. Hürstel, W. Korten, Y. Le Coz, Ch. Theisen, D. Ackermann, J. Gerl, K. Helariutta, F.P. Hessberger, Ch. Schlegel, H.J. Wollersheim, M. Lach, A. Maj, W. Meczynski, J. Styczen, T.L. Khoo, C.J. Lister, A.V. Afanasjev, H.J. Maier, P. Reiter, P. Bednarczyk, K. Eskola, K. Hauschild
2006Ba33	PRVCA	73,	064306	P.H. Barker, A.P. Byrne
2006Ba55	EPJAA	29,	175	L. Batist, A. Blazhev, J. Doring, H. Grawe, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, I. Mukha, C. Plettner, E. Roeckl, M. Romoli
2006Be33	PRVCA	74,	024603	T. Belgya
2006Bo11	PRLTA	96,	152501	G. Bollen, D. Davies, M. Facina, J. Huikari, E. Kwan, P.A. Lofy, D.J. Morrissey, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz, C. Sumithrarachchi, T. Sun, L. Weissman
2006Bo33	PHSTT	125,	180	M.J.T. Borge, R. Boutami, L.M. Fraile, K. Gulda, W. Kurcewicz, H. Mach, T. Martinez, B. Rubio, O. Tengblad
2006Bu12	PRVCA	74,	025501	J.T. Burke, P.A. Vetter, S.J. Freedman, B.K. Fujikawa, W.T. Winter
2006Ca05	PRVCA	73,	014319	E. Casarejos, C. Angulo, P.J. Woods, F.C. Barker, P. Descouvemont, M. Aliotta, T. Davinson, P. Demaret, M. Gaelens, P. Leleux, Z. Liu, M. Loiselet, A.S. Murphy, A. Ninane, I.A. Roberts, G. Ryckewaert, J.S. Schweitzer, F. Vanderbist
2006Ch10	PRVCA	73,	024306	R.S. Chakrawarthy, P.M. Walker, J.J. Ressler, E.F. Zganjar, G.C. Ball, M.B. Smith, A.N. Andreyev, S.F. Ashley, R.A.E. Austin, D. Bandyopadhyay, J.A. Becker, J.J. Carroll, D.S. Cross, D. Gohlke, J.J. Daoud, P.E. Garrett, G.F. Grinyer, G. Hackman, G.A. Jones, R. Kanungo, W.D. Kulp, Y. Litvinov, A.C. Morton, W.J. Mills, C.J. Pearson, R. Propri, C.E. Svensson, R. Wheeler, S.J. Williams
2006Ch52	EPJAA	30,	397	A. Chatillon, Ch. Theisen, P.T. Greenlees, G. Auger, J.E. Bastin, E. Bouchez, B. Bouriquet, J.M. Casandjian, R. Cee, E. Clément, R. Dayras, G. de France, R. de Tourreil, S. Eeckhaudt, A. Görgen, T. Grahn, S. Grévy, K. Hauschild, R.-D. Herzberg, P.J.C. Ikin, G.D. Jones, P. Jones, R. Julin, S. Juutinen, H. Kettunen, A. Korichi, W. Korten, Y. Le Coz, M. Leino, A. Lopez-Martens, S.M. Lukyanov, Yu. E. Penionzhkevich, J. Perkowski, A. Pritchard, P. Rahkila, M. Rejmund, J. Saren, C. Scholey, S. Siem, M.G. Saint-Laurent, C. Simenel, Yu. G. Sobolev, Ch. Stodel, J. Uusitalo, A. Villari, M. Bender, P. Bonche, P.-H. Heenen
2006De21	PRVCA	73,	044303	M.S. Dewey, E.G. Kessler Jr., R.D. Deslattes, H.G. Börner, M. Jentschel, C. Doll, P. Mutti
2006De36	PRVCA	74,	034331	P. Delahaye, G. Audi, K. Blaum, F. Carrel, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard, C. Yazidjian
2006Dv01	PRLTA	97,	242501	J. Dvorak, W. Brüchle, M. Chelnokov, R. Dressler, Ch. E. Düllmann, K. Eberhardt, V. Gorshkov, E. Jäger, R. Krücken, A. Kuznetsov, Y. Nagame, F. Nebel, Z. Novackova, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, B. Wierczinski, A. Yakushev, A. Yeremin
2006Er03	PYLBB	636,	191	T. Eronen, V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I. Moore, H. Penttilä, S. Rahaman, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö, A. Bey, B. Blank, G. Canchel, C. Dossat, J. Giovinazzo, I. Matea, N. Adimi

2006Er08	PRLTA	97,	232501	T. Eronen, V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I. Moore, H. Penttilä, S. Rahaman, J. Rissanen, A. Saastamoinen, T. Sonoda, J. Äystö, J.C. Hardy, V.S. Kolhinen
2006Fi.A	IAEA-Library		45	R.B. Firestone, S.M. Mughabghab, G.L. Molnar in Database of prompt gamma rays from slow neutron capture for elemental analysis - Vienna : International Atomic Energy Agency, 2006.
2006Fo02	PRVCA	73,	014611	C.M. Folden III, S.L. Nelson, Ch. E. Düllmann, J.M. Schwantes, R. Sudowe, P.M. Zielinski, K.E. Gregorich, H. Nitsche, D.C. Hoffman
2006Fu06	PRVCA	73,	067303	T. Fukuchi, S. Tanaka, T. Sasaki, Y. Gono, A. Odahara, T. Morikawa, M. Shibata, H. Watanabe, S. Motomura, T. Tsutsumi, O. Kashiyama, K. Saitoh, Y. Wakabayashi, T. Kishida, S. Kubono, M. Ishihara
2006Ga04	NUPAB	766,	52	C. Gaulard, G. Audi, C. Bachelet, D. Lunney, M. de Saint Simon, C. Thibault, N. Vieira
2006Ga28	PRLTA	97,	092501	L. Gaudefroy, O. Sorlin, D. Beaumel, Y. Blumenfeld, Z. Dombrádi, S. Fortier, S. Franchoo, M. Gélin, J. Gibelin, S. Grévy, F. Hammache, F. Ibrahim, K.W. Kemper, K.-L. Kratz, S.M. Lukyanov, C. Monrozeau, L. Nalpas, F. Nowacki, A.N. Ostrowski, T. Otsuka, Yu.-E. Penionzhkevich, J. Piekarewicz, E.C. Pollacco, P. Roussel-Chomaz, E. Rich, J.A. Scarpaci, M.G. Saint-Laurent, D. Sohler, M. Stanoiu, T. Suzuki, E. Tryggestad, D. Verney
2006Ge05	PRVCA	73,	037308	J. Genevey, R. Guglielmini, R. Orlandi, J.A. Pinston, A. Scherillo, G. Simpson, I. Tsekhanovich, N. Warr, J. Jolie
2006Gr24	PRVCA	74,	044611	K.E. Gregorich, J.M. Gates, Ch. E. Düllmann, R. Sudowe, S.L. Nelson, M.A. Garcia, I. Dragojević, C.M. Folden III, S.H. Neumann, D.C. Hoffman, H. Nitsche
2006Ha03	PRLTA	96,	042504	U. Hager, T. Eronen, J. Hakala, A. Jokinen, V.S. Kolhinen, S. Kopecky, I. Moore, A. Nieminen, M. Oinonen, S. Rinta-Antila, J. Szerypo, J. Äystö
2006Ha17	NIMAE	560,	388	K. Hauschild, A.V. Yeremin, O. Dorvaux, A. Lopez-Martens A.V. Belozerov, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, S.A. Garcia-Santamaria, V.A. Gorshkov, F. Hanappe, A.P. Kabachenko, A. Korichi, O.N. Malyshev, Yu. Ts. Oganessian, A.G. Popeko, N. Rowley, A.V. Shutov, L. Stuttgé, A.I. Svirikhin
2006Ha62	IMSPF	251,	119	P.A. Hausladen, J.R. Beene, A. Galindo-Uribarri, Y. Larochelle, J.F. Liang, P.E. Mueller, D. Shapira, D.W. Stracener, J. Thomas, R.L. Varner, H. Wollnik
2006He19	NATUA	442,	896	R.D. Herzberg, P.T. Greenlees, P.A. Butler, G.D. Jones, M. Venhart, I.G. Darby, S. Eeckhaudt, K. Eskola, T. Grahn, C. Gray-Jones, F.P. Heßberger, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, W. Korten, M. Leino, A.-P. Leppänen, S. Moon, M. Nyman, R.D. Page, J. Pakarinen, A. Pritchard, P. Rahkila, J. Sarén, C. Scholey, A. Steer, Y. Sun, Ch. Theisen, J. Uusitalo
2006He20	EPJAA	29,	165	F.P. Heßberger,S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, B. Sulignano, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2006He27	EPJAA	30,	561	F.P. Heßberger, S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, B. Sulignano, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2006He29	IMSPF	251,	131	A. Herlert, S. Baruah, K. Blaum, P. Delahaye, M. Dworschak, S. George, C. Guenaut, U. Hager, F. Herfurth, A. Kellerbauer, M. Marie-Jeanne, S. Schwarz, L. Schweikhard, C. Yazidjian
2006Hw01	PRVCA	73,	044316	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, Y.X. Luo, A.V. Daniel, G.M. Ter-Akopian, J.D. Cole, S.J. Zhu
2006Ia03	PRVCA	74,	045810	V.E. Iaco, Y. Zhai, T. Al-Abdullah, C. Fu, J.C. Hardy, N. Nica, H.I. Park, G. Tabacaru, L. Trache, R.E. Tribble
2006Ia05	PRVCA	74,	055502	V.E. Iacob, J.C. Hardy, J.F. Brinkley, C.A. Gagliardi, V.E. Mayes, N. Nica, M. Sanchez-Vega, G. Tabacaru, L. Trache, R.E. Tribble
2006Jo10	PYLBB	641,	34	D.T. Joss, I.G. Darby, R.D. Page, J. Uusitalo, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, J. Pakarinen, P. Rahkila, J. Sarén, C. Scholey, A. Steer, A.J. Cannon, P.D. Stevenson, J.S. Al-Khalili, S. Ertürk, M. Venhart, B. Gall, B. Hadinia, J. Simpson

2006Ka48	EPJAA	29,	271	A. Kankainen, L. Batist, S.A. Eliseev, V.-V. Elomaa, T. Eronen, U. Hager, J. Hakala, A. Jokinen, I. Moore, Yu. N. Novikov, H. Penttilä, K. Peräjärvi, A.V. Popov, S. Rahaman, S. Rinta-Antila, P. Ronkanen, A. Saastamoinen, D.M. Seliverstov, T. Sonoda, G.K. Vorobjev, J. Äystö
2006Ka74	IMSPF	251,	138	M. Kavatsyuk, L. Batist, M. Karny, E. Roeckl
2006KeZZ	GSI-2006-1		154	R. Kessler, K.-L. Kratz, J. Pereira Conca, H. Schatz, for the E040 Collaboration
2006Ko25	NIMAE	564,	275	Y. Kojima, M. Shibata, A. Taniguchi, Y. Kawase, R. Doi, A. Nagao, K. Shizuma
2006Ku26	EPJAA	30,	551	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Antalic, S. Hofmann, K. Nishio, B. Sulignano, I. Kojouharov, R. Mann
2006La16	PRVCA	74,	024316	K. Lagergren, D.T. Joss, R. Wyss, B. Cederwall, C.J. Barton, S. Eeckhaudt, T. Grahn, P.T. Greenlees, B. Hadinia, P.M. Jones, R. Julin, S. Juutinen, D. Karlgren, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, M. Nyman, R.D. Page, J. Pakarinen, E.S. Paul, P. Rahkila, C. Scholey, J. Simpson, J. Uusitalo, D.R. Wiseman
2006Le29	EPJAA	28,	301	A.-P. Leppanen, J. Uusitalo, P.T. Greenlees, R.-D. Herzberg, N. Amzal, F. Becker, P.A. Butler, A.J.C. Chewter, J.F.C. Cocks, O. Dorvaux, S. Eeckhaudt, K. Eskola, J. Gerl, T. Grahn, N.J. Hammond, K. Hauschild, K. Helariutta, F.P. Hessberger, M. Houry, G.D. Jones, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, T.L. Khoo, W. Korten, P. Kuusiniemi, Y. Le Coz, M. Leino, C.J. Lister, R. Lucas, M. Muikku, P. Nieminen, M. Nyman, R.D. Page, J. Pakarinen, P. Rahkila, P. Reiter, J. Saren, Ch. Schlegel, C. Scholey, O. Stezowski, Ch. Theisen, W.H. Trzaska, H.J. Wollersheim
2006Le.A	Th.-Canberra			A.B.F. Lee
2006Li41	PRLTA	97,	082501	S.N. Liddick, R. Grzywacz, C. Mazzocchi, R.D. Page, K.P. Rykaczewski, J.C. Batchelder, C.R. Bingham, I.G. Darby, G. Drafta, C. Goodin, C.J. Gross, J.H. Hamilton, A.A. Hecht, J.K. Hwang, S. Ilyushkin, D.T. Joss, A. Korgul, W. Królas, K. Lagergren, K. Li, M.N. Tantawy, J. Thomson, J.A. Winger
2006Lo12	PRVCA	74,	044303	A. Lopez-Martens, K. Hauschild, A.V. Yeremin, A.V. Belozerov, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, D. Curien, O. Dorvaux, B. Gall, V.A. Gorshkov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khalfallah, A. Korichi, A.C. Larsen, O.N. Malyshev, A. Minkova, Yu. Ts. Oganessian, A.G. Popeko, M. Rousseau, N. Rowley, R.N. Sagaidak, S. Sharo, A.V. Shutov, S. Siem, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen
2006Lu19	IMSPF	251,	286	D. Lunney, N. Vieira, G. Audi, C. Gaulard, M. de Saint Simon, C. Thibault
2006Ma.A	PrvCom	GAu	Jul	M. Martin
2006Me03	PRVCA	73,	024307	D.A. Meyer, C.W. Beausang, J.J. Ressler, H. Ai, H. Amro, M. Babilon, R.F. Casten, C.R. Fitzpatrick, G. Gurdal, A. Heinz, E.A. McCutchan, C. Plettner, J. Qian, N.J. Thomas, V. Werner, E. Williams, N.V. Zamfir, J. Zhang
2006Me04	PRVCA	73,	024318	T.J. Mertzimekis, P.F. Mantica, A.D. Davies, S.N. Liddick, B.E. Tomlin
2006Mo07	PRVCA	73,	035801	F. Montes, A. Estrade, P.T. Hosmer, S.N. Liddick, P.F. Mantica, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, H. Schatz, A. Stolz, B.E. Tomlin, O. Arndt, K.-L. Kratz, B. Pfeiffer, P. Reeder, W.B. Walters, A. Aprahamian, A. Wohr
2006Mu03	NATUA	439,	298	I. Mukha, E. Roeckl, L. Batist, A. Blazhev, J. Döring, H. Grawe, L. Grigorenko, M. Huyse, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, S.L. Tabor, P. Van Duppen
2006Na13	PRLTA	96,	163004	Sz. Nagy, T. Fritioff, M. Suhonen, R. Schuch, K. Blaum, M. Björkhage, I. Bergström also arXiv:1209. 5281v1 24 Sep 2012
2006Na18	EPJDD	39,	1	Sz. Nagy, T. Fritioff, A. Solders, R. Schuch, M. Björkhage, I. Bergström
2006Na49	EULEE	74,	404	Sz. Nagy, T. Fritioff, M. Björkhage, I. Bergström, R. Schuch
2006Ni10	EPJAA	29,	281	K. Nishio, S. Hofmann, F.P. Hessberger, D. Ackermann, S. Antalic, V.F. Comas, Z. Gan, S. Heinz, J.A. Heredia, H. Ikezoe, J. Khuyagbaatar, B. Kindler, I. Kojouharov, P. Kuusiniemi, B. Lommel, R. Mann, M. Mazzocco, S. Mitsuoka, Y. Nagame, T. Ohtsuki, A.G. Popeko, S. Saro, H.J. Schott, B. Sulignano, A. Svirikhin, K. Tsukada, K. Tsuruta, A.V. Yeremin

2006Og05	PRVCA	74,	044602	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, R.N. Sagaidak, I.V. Shirokovsky, Yu. S. Tsyganov, A.A. Voinov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, K. Subotic, V.I. Zagrebaev, G.K. Vostokin, M.G. Itkis, K.J. Moody, J.B. Patin, D.A. Shaughnessy, M.A. Stoyer, N.J. Stoyer, P.A. Wilk, J.M. Kenneally, J.H. Landrum, J.F. Wild, R.W. Lougheed
2006Pe16	PRVCA	74,	014313	F. Perrot, F. Maréchal, C. Jollet, Ph. Dessagne, J.-C. Angélique, G. Ban, P. Baumann, F. Benrachi, U. Bergmann, C. Borcea, A. Buta, J. Cederkall, S. Courtin, J.-M. Daugas, L.M. Fraile, S. Grévy, A. Jokinen, F.R. Lecolley, E. Liénard, G. Le Scornet, V. Méot, Ch. Miehé, F. Negoita, N.A. Orr, S. Pietri, E. Poirier, M. Ramdhane, O. Roig, I. Stefan, W. Wang
2006Pe17	PRVCA	74,	014316	D. Peterson, B.B. Back, R.V.F. Janssens, T.L. Khoo, C.J. Lister, D. Seweryniak, I. Ahmad, M.P. Carpenter, C.N. Davids, A.A. Hecht, C.L. Jiang, T. Lauritsen, X. Wang, S. Zhu, F.G. Kondev, A. Heinz, J. Qian, R. Winkler, P. Chowdhury, S.K. Tandel, U.S. Tandel
2006Pe20	EPJAA	28,	307	O. Perru, D. Verney, F. Ibrahim, O. Bajeat, C. Bourgeois, F. Clapier, E. Cottereau, C. Donzaud, S. Du, M. Ducourtieux, S. Essabaa, S. Gales, D. Guillemaud-Mueller, O. Hubert, C. Lau, H. Lefort, F. Le Blanc, A.C. Mueller, J. Obert, N. Pauwels, J.C. Potier, F. Pougheon, J. Proust, B. Roussiere, J. Sauvage, O. Sorlin
2006Ph01	PRVCA	74,	027302	A.A. Phillips, C. Andreoiu, G.C. Ball, D. Bandyopadhyay, J.A. Behr, T.E. Chupp, P. Finlay, P.E. Garrett, G.F. Grinyer, G. Hackman, M.E. Hayden, B. Hyland, S.R. Nuss-Warren, M.R. Pearson, M.A. Schumaker, M.B. Smith, C.E. Svensson, E.R. Tardiff, J.J. Valiente-Dobón, T. Warner
2006Pi14	PRVCA	74,	064304	J.A. Pinston, W. Urban, Ch. Droste, T. Rzaca-Urban, J. Genevey, G. Simpson, J.L. Durell, A.G. Smith, B.J. Varley, I. Ahmad
2006Qi03	YWPIF	23,	400	Z. Qin, X.L. Wu, H.J. Ding, W. Wu, W.X. Huang, X.G. Lei, Y.B. Xu, X.H. Yuan, B. Guo, W.F. Yang, Z.G. Gan, H.M. Fan, J.S. Guo, H.S. Xu, G.Q. Xiao
2006Re19	IMSPF	251,	125	M. Redshaw, J. McDaniel, W. Shi, E.G. Myers, and PrvCom GAu February 2006
2006Ri15	IMSPF	251,	300	R. Ringle, P. Schury, T. Sun, G. Bollen, D. Davies, J. Huikari, E. Kwan, D.J. Morrissey, A. Prinke, J. Savory, S. Schwarz, C. Sumithrarachchi
2006Ro11	NUPAB	769,	1	D. Rodríguez, G. Audi, J. Äystö, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Jokinen, A. Kellerbauer, H.-J. Kluge, V.S. Kolhinen, M. Oinonen, E. Sauvan, S. Schwarz
2006Sa56	IMSPF	251,	252	G. Savard, J.C. Wang, K.S. Sharma, H. Sharma, J.A. Clark, C. Boudreau, F. Buchinger, J.E. Crawford, J.P. Greene, S. Gulick, A.A. Hecht, J.K.P. Lee, A.F. Levand, N.D. Scielzo, W. Trimble, J. Vaz, B.J. Zabransky
2006Se08	PRVCA	73,	061301	D. Seweryniak, K. Starosta, C.N. Davids, S. Gros, A.A. Hecht, N. Hoteling, T.L. Khoo, K. Lagergren, G. Lotay, D. Peterson, A. Robinson, C. Vaman, W.B. Walters, P.J. Woods, S. Zhu
2006Sk03	PRVCA	73,	044301	F. Skaza, V. Lapoux, N. Keeley, N. Alamanos, E.C. Pollacco, F. Auger, A. Drouart, A. Gillibert, D. Beaumel, E. Becheva, Y. Blumenfeld, F. Delaunay, L. Giot, K.W. Kemper, L. Nalpas, A. Obertelli, A. Pakou, R. Raabe, P. Roussel-Chomaz, J.-L. Sida, J.-A. Scarpaci, S. Stepantsov, R. Wolski
2006Su12	PRVCA	74,	024322	C.S. Sumithrarachchi, D.W. Anthony, P.A. Lofy, D.J. Morrissey
2006Ta08	PRVCA	73,	024316	M.N. Tantawy, C.R. Bingham, K.P. Rykaczewski, J.C. Batchelder, W. Królas, M. Danchev, D. Fong, T.N. Ginter, C.J. Gross, R. Grzywacz, K. Hagino, J.H. Hamilton, D.J. Hartley, M. Karny, K. Li, C. Mazzocchi, A. Piechaczek, A.V. Ramayya, K. Rykaczewski,D. Shapira, A. Stolz, J.A. Winger, C.-H. Yu, E.F. Zganjar
2006Ta13	PRVCA	73,	044306	S.K. Tandel, P. Chowdhury, E.H. Seabury, I. Ahmad, M.P. Carpenter, S.M. Fischer, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, Y.R. Shimizu
2006Ta19	PRLTA	97,	082502	S.K. Tandel, T.L. Khoo, D. Seweryniak, G. Mukherjee, I. Ahmad, B. Back, R. Blinstrup, M.P. Carpenter, J. Chapman, P. Chowdhury, C.N. Davids, A.A. Hecht, A. Heinz, P. Ikin, R.V.F. Janssens, F.G. Kondev, T. Lauritsen, C.J. Lister, E.F. Moore, D. Peterson, P. Reiter, U.S. Tandel, X. Wang, S. Zhu

2006Th07	PRVCA	74,	034329	P. Thakur, V. Kumar, A.K. Bhati, S.C. Bedi, R.P. Singh, R.K. Bhowmik, A.E. Stuchbery
2006Tr02	PRVCA	73,	054303	V. Tripathi, S.L. Tabor, C.R. Hoffman, M. Wiedeking, A. Volya, P.F. Mantica, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin, T. Otsuka, Y. Utsuno
2006Tr10	PRVCA	74,	054306	S. Triambak, A. Garcia, D. Melconian, M. Mella, O. Biesel
2006Va22	IMSPF	251,	231	R.S. Van Dyck, Jr., D.B. Pinegar, S. Van Liew, S.L. Zafonte
2006Vo09	PRVCA	74,	034319	T. von Egidy, H.-F. Wirth, I. Tomandl, J. Honzátko
2006Wa10	CPLEE	23,	808	Y.-B. Wang, P. Dendooven, J. Huikari, A. Jokinen, V.S. Kolhinen, G. Lhersonneau, A. Nieminen, S. Nummela, H. Penttila, K. Perajarvi, S. Rinta-Antila, J. Szerypo, J.C. Wang, J. Aysto
2006Wh02	PRVCA	74,	027303	C. Wheldon, J.J. Valiente-Dobón, P.H. Regan, C.J. Pearson, C.Y. Wu, J.F. Smith, A.O. Macchiavelli, D. Cline, R.S. Chakrawarthy, R. Chapman, M. Cromaz, P. Fallon, S.J. Freeman, W. Gelletly, A. Görgen, A.B. Hayes, H. Hua, S.D. Langdown, I.Y. Lee, X. Liang, Zs. Podolyák, G. Sletten, R. Teng, D. Ward, D.D. Warner, A.D. Yamamoto
2006Wi10	PRVCA	73,	044318	J.A. Winger, P.F. Mantica, R.M. Ronningen
2006Xu07	EPJAA	29,	161	S.W. Xu, Y.X. Xie, Z.K. Li, F.R. Xu, H.L. Liu, Y.B. Xing, B. Guo, J.P. Xing, C.F. Wang

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2007Ag02	NIMAE	571,	663	S.K. Aggarwal, D. Alamelu, P.M. Shah, N.N. Mirashi
2007Be16	PRLTA	98,	142501	B.R. Beck, J.A. Becker, P. Beiersdorfer, G.V. Brown, K.J. Moody, J.B. Wilhelmy, F.S. Porter, C.A. Kilbourne, R.L. Kelley
2007Be48	NUPAB	789,	15	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, A. d'Angelo, A. Incicchitti, V.V. Kobychev, S.S. Nagorny, S. Nisi, F. Nozzoli, D. Prosperi, V.I. Tretyak, S.S. Yurchenko
2007Be61	PRVCA	76,	064603	P. Belli, R. Bernabei, N. Bukilic, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, J.R. de Laeter, A. Incicchitti, V.V. Kobychev, S.S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prosperi, V.I. Tretyak, S.S. Yurchenko
2007Bl09	EPJAA	31,	267	B. Blank, C. Borcea, G. Canchel, C.-E. Demonchy, F. de Oliveira Santos, C. Dossat, J. Giovinazzo, S. Grevy, L. Hay, P. Hellmuth, S. Leblanc, I. Matea, J.-L. Pedroza, L. Perrot, J. Pibernat, A. Rebii, L. Serani, J.C. Thomas
2007Bo50	EPJST	150,	337	G. Bollen, C. Bachelet, M. Block, D.A. Davies, M. Facina, C.M. Folden III, C. Guénaut, J. Huikari, E. Kwan, A. Kwiatowski, D.J. Morrissey, G. Pang, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz, C. Sumithrarachchi, T. Sun
2007Ca26	APOBB	38,	1271	L.S. Caceres, M. Gorska, A. Jungclaus, P.H. Regan, A.B. Garnsworthy, S. Pietri, Zs. Podolyak, D. Rudolph, S.J. Steer, H. Grawe, D.L. Balabanski, F. Becker, P. Bednarczyk, G. Benzoni, B. Blank, C. Brandau, A.M. Bruce, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombradi, P. Doornenbal, E. Estevez, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, A. Heinz, R. Hoischen, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, I. Kojouharov, F.G. Kondev, T. Kurtukian-Nieto, N. Kurz, S. Lalkowski, L. Liu, A. Maj, S. Myalski, F. Montes, M. Pfutzner, W. Prokopowicz, T. Saito, H. Schaffner, S. Schwertel, T. Shizuma, A.J. Simons, S. Tashenov, P.M. Walker, E. Werner-Malento, O. Wieland, H.J. Wollersheim
2007Ch07	PYLBB	645,	133	B. Cheal, M.D. Gardner, M. Avgoulea, J. Billowes, M.L. Bissell, P. Campbell, T. Eronen, K.T. Flanagan, D.H. Forest, J. Huikari, A. Jokinen, B.A. Marsh, I.D. Moore, A. Nieminen, H. Penttilä, S. Rinta-Antila, B. Tordoff, G. Tungate, J. Äystö
2007Cl01	PRVCA	75,	032801	J.A. Clark, K.S. Sharma, G. Savard, A.F. Levand, J.C. Wang, Z. Zhou, B. Blank, F. Buchinger, J.E. Crawford, S. Gulick, J.K.P. Lee, D. Seweryniak, W. Trimble
2007DaZU	P-Lisbon		3	C.N. Davids

2007Do17	NUPAB	792,	18	C. Dossat, N. Adimi, F. Aksouh, F. Becker, A. Bey, B. Blank, C. Borcea, R. Borcea, A. Boston, M. Caamano, G. Canchel, M. Chartier, D. Cortina, S. Czajkowski, G. de France, F. de Oliveira Santos, A. Fleury, G. Georgiev, J. Giovinazzo, S. Grévy, R. Grzywacz, M. Hellström, M. Honma, Z. Janas, D. Karamanis, J. Kurcewicz, M. Lewitowicz, M.J. López Jiménez, C. Mazzocchi, I. Matea, V. Maslov, P. Mayet, C. Moore, M. Pfützner, M.S. Pravikoff, M. Stanoiu, I. Stefan, J.C. Thomas
2007Ei02	NUPAB	787,	373c	R. Eichler, N.V. Aksenov, A.V. Belozerov, G.A. Bozhikov, V.I. Chepigin, R. Dressler, S.N. Dmitriev, H.W. Gäggeler, V.A. Gorshkov, F. Haenssler, M.G. Itkis, V. Ya. Lebedev, A. Laube, O.N. Malyshev, Yu. Ts. Oganessian, O.V. Petruschkin, D. Piguet, P. Rasmussen, S.V. Shishkin, A.V. Shutov, A.I. Svirikhin, E.E. Tereshatov, G.K. Vostokin, M. Wegrzecki, A.V. Yeremin
2007Fo02	PRVCA	75,	054308	B. Fogelberg, K.A. Mezilev, V.I. Isakov, K.I. Erokhina, H. Mach, E. Ramström, H. Gausemel
2007Ge07	PRLTA	98,	162501	S. George, S. Baruah, B. Blank, K. Blaum, M. Breitenfeldt, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kretzschmar, D. Lunney, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2007Go24	PRVCA	76,	021605	M.S. Golovkov, L.V. Grigorenko, A.S. Fomichev, A.V. Gorshkov, V.A. Gorshkov, S.A. Krupko, Yu. Ts. Oganessian, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepantsov, G.M. Ter-Akopian, R. Wolski, A.A. Korsheninnikov, E. Yu. Nikolskii, V.A. Kuzmin, B.G. Novatskii, D.N. Stepanov, P. Roussel-Chomaz, W. Mittig
2007Gr17	NUPAB	787,	507c	P.T. Greenlees, on behalf of the JUROGAM and GREAT Collaborations
2007Gr18	PRVCA	76,	025503	G.F. Grinyer, M.B. Smith, C. Andreoiu, A.N. Andreyev, G.C. Ball, P. Bricault, R.S. Chakrawarthy, J.J. Daoud, P. Finlay, P.E. Garrett, G. Hackman, B. Hyland, J.R. Leslie, A.C. Morton, C.J. Pearson, A.A. Phillips, M.A. Schumaker, C.E. Svensson, J.J. Valiente-Dobon, S.J. Williams, E.F. Zganjar
2007Gu09	PRVCA	75,	044303	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, J. Libert, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2007Ha20	PRVCA	75,	064302	U. Hager, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, S. Rahaman, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ha32	NUPAB	793,	20	U. Hager, A. Jokinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Kankainen, S. Rahaman, J. Rissanen, I.D. Moore, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ha45	PRVCA	76,	044312	B. Hadinia, B. Cederwall, D.T. Joss, R. Wyss, R.D. Page, C. Scholey, A. Johnson, K. Lagergren, E. Ganioglu, K. Andgren, T. Bäck, D.E. Appelbe, C.J. Barton, S. Eeckhaudt, T. Grahn, P. Greenlees, P. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Lepänen, R.J. Liotta, P. Nieminen, J. Pakarinen, J. Perkowski, P. Rahkila, M. Sandzelius, J. Simpson, J. Uusitalo, K. Van de Vel, D.D. Warner, D.R. Wiseman
2007Ha57	EPJAA	34,	363	H. Hayashi, Y. Akita, O. Suematsu, M. Shibata, M. Asai, T.K. Sato, S. Ichikawa, I. Nishinaka, Y. Nagame, A. Osa, K. Tsukada, T. Ishii, Y. Kojima, A. Taniguchi
2007Ho18	EPJAA	32,	251	S. Hofmann, D. Ackermann, S. Antalic, H.G. Burkhard, V.F. Comas, R. Dressler, Z. Gan, S. Heinz, J.A. Heredia, F.P. Heßberger, J. Khuyagbaatar, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, A.G. Popeko, S. Saro, H.J. Schott, B. Streicher, B. Sulignano, J. Uusitalo, M. Venhart, A.V. Yeremin
2007Io03	PYLBB	650,	141	M. Ionescu-Bujor, A. Iordachescu, N. Marginean, C.A. Ur, D. Bucurescu, G. Suliman, D.L. Balabanski, F. Brandolini, S. Chmel, P. Detistov, K.A. Gladnishki, H. Hubel, S. Mallion, R. Marginean, N.H. Medina, D.R. Napoli, G. Neyens, P. Pavan, R.V. Ribas, C. Rusu, K. Turzo, N. Vermeulen
2007Je07	EPJAA	32,	31	H.B. Jeppesen, J. Byskov-Nielsen, P. Wright, J.G. Correia, L.M. Fraile, H.O.U. Fynbo, K. Johnston, K. Riisager
2007Ju03	PYLBB	649,	43	B. Jurado, H. Savajols, W. Mittig, N.A. Orr, P. Roussel-Chomaz, D. Baiborodin, W.N. Catford, M. Chartier, C.E. Demonchy, Z. Dlouhý, A. Gillibert, L. Giot, A. Khouaja, A. Lépine-Szily, S. Lukyanov, J. Mrazek, Y.E. Penionzhkevich, S. Pita, M. Rousseau, A.C. Villari

2007Ju05	PRLTA	99,	132501	A. Jungclaus, L. Cáceres, M. Górska, M. Pfützner, S. Pietri, E. Werner-Malento, H. Grawe, K. Langanke, G. Martinez-Pinedo, F. Nowacki, A. Poves, J.J. Cuenca-Garcia, D. Rudolph, Z. Podolyák, P.H. Regan, P. Detistov, S. Lalkovski, V. Modamio, J. Walker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, J. Jolie, A. Khaplanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G.S. Simpson, S.J. Steer, S. Tashenov, O. Wieland
2007Ju06	PRVCA	76,	054306	D.S. Judson, A.M. Bruce, T. Kibedi, G.D. Dracoulis, A.P. Byrne, G.J. Lane, K.H. Maier, C.-B. Moon, P. Nieminen, J.N. Orce, M.J. Taylor
2007Ke09	PRVCA	76,	045504	A. Kellerbauer, G. Audi, D. Beck, K. Blaum, G. Bollen, C. Guénaut, F. Herfurth, A. Herlert, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2007Kh22	EPJAA	34,	355	J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, H.G. Burkhard, S. Heinz, B. Kindler, A.F. Lisetskiy, B. Lommel, R. Mann, K. Nishio, H.J. Schött, B. Sulignano
2007Ku30	PRVCA	76,	054320	J. Kurcewicz, W. Czarnacki, M. Karny, M. Kasztelan, M. Kisieliński, A. Korgul, W. Kurcewicz, J. Kurpeta, S. Lewandowski, P. Majorkiewicz, H. Penttilä, A. Płochocki, B. Roussiére, O. Steczkiewicz, A. Wojtasiewicz
2007Le14	PRVCA	75,	054307	A.-P. Leppänen, J. Uusitalo, M. Leino, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, P. Nieminen, J. Pakarinen, P. Rahkila, C. Scholey, G. Sletten
2007Li71	PRLTA	99,	262501	Yu. A. Litvinov, F. Bosch, H. Geissel, J. Kurcewicz, Z. Patyk, N. Winckler, L. Batist, K. Beckert, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, B. Fabian, T. Faestermann, A. Fragner, L. Grigorenko, E. Haettner, S. Hess, P. Kienle, R. Knöbel, C. Kozhuharov, S.A. Litvinov, L. Maier, M. Mazzocco, F. Montes, G. Münzenberg, A. Musumarra, C. Nociforo, F. Nolden, M. Pfützner, W.R. Plaß, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, S. Torilov, M. Trassinelli, B. Sun, H. Weick, M. Winkler
2007Lo11	EPJAA	32,	245	A. Lopez-Martens, K. Hauschild, A.V. Yeremin, O. Dorvaux, A.V. Belozerov, Ch. Briancon, M.L. Chelnokov, V.I. Chepigin, D. Curien, P. Desesquelles, B. Gall, V.A. Gorshkov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khalfallah, A. Korichi, A.C. Larsen, O.N. Malyshev, A. Minkova, Yu. Ts. Oganessian, A.G. Popeko, M. Rousseau, N. Rowley, R.N. Sagaidak, S. Sharo, A.V. Shutov, S. Siem, L. Stuttge, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen
2007Ma35	PRLTA	98,	212501	C. Mazzocchi, R. Grzywacz, S.N. Liddick, K.P. Rykaczewski, H. Schatz, J.C. Batchelder, C.R. Bingham, C.J. Gross, J.H. Hamilton, J.K. Hwang, S. Ilyushkin, A. Korgul, W. Krolas, K. Li, R.D. Page, D. Simpson, J.A. Winger
2007Ma92	EPJAA	34,	341	A. Martín, D. Ackermann, G. Audi, K. Blaum, M. Block, A. Chaudhuri, Z. Di, S. Eliseev, R. Ferrer, D. Habs, F. Herfurth, F.P. Heßberger, S. Hofmann, H.-J. Kluge, M. Mazzocco, M. Mukherjee, J.B. Neumayr, Yu. Novikov, W. Plaß, S. Rahaman, C. Rauth, D. Rodríguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, G. Vorobjev, C. Weber
2007Mi36	PRVCA	76,	041304	K. Miernik, W. Dominik, Z. Janas, M. Pfutzner, C.R. Bingham, H. Czyrkowski, M. Cwiok, I.G. Darby, R. Dabrowski, T. Ginter, R. Grzywacz, M. Karny, A. Korgul, W. Kusmierz, S.N. Liddick, M. Rajabali, K. Rykaczewski, A. Stolz
2007Mi40	PRLTA	99,	192501	K. Miernik, W. Dominik, Z. Janas, M. Pfutzner, L. Grigorenko, C.R. Bingham, H. Czyrkowski, M. Cwiok, I.G. Darby, R. Dabrowski, T. Ginter, R. Grzywacz, M. Karny, A. Korgul, W. Kusmierz, S.N. Liddick, M. Rajabali, K. Rykaczewski, A. Stolz
2007Mu15	PRLTA	99,	182501	I. Mukha, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, L. Grigorenko, J. Hoffmann, O. Kiselev, A. Korsheninnikov, N. Kurz, Yu. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfutzner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, H. Weick, P.J. Woods

2007My02	APOBB	38,	1277	S. Myalski, M. Kmiecik, A. Maj, P.H. Regan, A.B. Garnsworthy, S. Pietri, D. Rudolph, Zs. Podolyák, S.J. Steer, F. Becker, P. Bednarczyk, J. Gerl, M. Gorska, H. Grawe, I. Kojouharov, H. Schaffner, H.J. Wollersheim, W. Prokopowicz, J. Grebosz, G. Benzoni, B. Blank, C. Brandau, A.M. Bruce, L. Caceres, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombradi, P. Doornenbal, E. Estevez, H. Geissel, W. Gelletly, A. Heinz, R. Hoischen, G. Ilie, G.A. Jones, A. Jungclaus, A. Kelic, F.G. Kondev, T. Kurtukian-Nieto, N. Kurz, S. Lalkovski, Z. Liu, F. Montes, M. Pfutzner, T. Saito, T. Shizuma, A.J. Simons, S. Schwertel, S. Tachenov, P.M. Walker, E. Werner-Malento, O. Wieland
2007Og01	JPHGB	34,	R165	Y. Oganessian
2007Og02	PRVCA	76,	011601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, R.N. Sagaidak, I.V. Shirokovsky, Yu. S. Tsyganov, A.A. Voinov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, V.G. Subbotin, A.M. Sukhov, K. Subotic, V.I. Zagrebaev, G.K. Vostokin, M.G. Itkis, R.A. Henderson, J.M. Kenneally, J.H. Landrum, K.J. Moody, D.A. Shaughnessy, M.A. Stoyer, N.J. Stoyer, P.A. Wilk
2007Ok05	PRVCA	76,	044315	Y. Oktem, D.L. Balabanski, B. Akkus, C.W. Beausang, M. Bostan, R.B. Cakirli, R.F. Casten, M. Danchev, M. Djongolov, M.N. Erduran, S. Erturk, K.A. Gladnishki, G. Gurdal, J. Tm. Goon, D.J. Hartley, A.A. Hecht, R. Krucken, N. Nikolov, J.R. Novak, G. Rainovski, L.L. Riedinger, I. Yigitoglu, N.V. Zamfir, O. Zeidan
2007Pa27	PRVCA	75,	061302	R.D. Page, L. Bianco, I.G. Darby, J. Uusitalo, D.T. Joss, T. Grahn, R.-D. Herzberg, J. Pakarinen, J. Thomson, S. Eeckhaudt, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, P. Rahkila, J. Sarén, C. Scholey, A. Steer, M.B. Gómez Hornillos, J.S. Al-Khalili, A.J. Cannon, P.D. Stevenson, S. Ertürk, B. Gall, B. Hadinia, M. Venhart, J. Simpson
2007Ra23	EPJAA	32,	87	S. Rahaman, U. Hager, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ra27	EPJAA	34,	5	S. Rahaman, J. Hakala, V.-V. Elomaa, T. Eronen, U. Hager, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2007Ra37	EPJST	150,	329	C. Rauth, D. Ackermann, G. Audi, M. Block, A. Chaudhuri, S. Eliseev, F. Herfurth, F.P. Heßberger, S. Hofmann, H.-J. Kluge, A. Martín, G. Marx, M. Mukherjee, J.B. Neumayr, W.R. Plaß, S. Rahaman, D. Rodríguez, L. Schweikhard, P.G. Thirolf, G. Vorobjev, C. Weber, and the SHIPTRAP Collaboration
2007Re03	PRLTA	98,	053003	M. Redshaw, E. Wingfield, J. McDaniel, E.G. Myers
2007Ri01	EPJAA	31,	1	S. Rinta-Antila, T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, A. Jokinen, P. Karvonen, H. Penttilä, J. Rissanen, T. Sonoda, A. Saastamoinen, J. Äystö
2007Ri08	PRVCA	75,	055503	R. Ringle, T. Sun, G. Bollen, D. Davies, M. Facina, J. Huikari, E. Kwan, D.J. Morrissey, A. Prinke, J. Savory, P. Schury, S. Schwarz, C.S. Sumithrarachchi and Prvcom GAu Nov 2009
2007Sa33	PRVCA	75,	054321	M. Sandzelius, C. Scholey, B. Cederwall, E. Ganioglu, K. Andgren, D.E. Appelbe, C.J. Barton, T. Bäck, S. Eeckhaudt, T. Grahn, P.T. Greenlees, B. Hadinia, A. Johnson, P.M. Jones, D.T. Joss, R. Julin, S. Juutinen, H. Kettunen, K. Lagergren, M. Leino, A.-P. Leppänen, P. Nieminen, R.D. Page, J. Pakarinen, J. Perkowski, P. Rahkila, J. Simpson, J. Uusitalo, K. Van de Vel, D.D. Warner, D.R. Wiseman, R. Wyss
2007Sa36	PRLTA	99,	022501	M. Sandzelius, B. Hadinia, B. Cederwall, K. Andgren, E. Ganioglu, I.G. Darby, M.R. Dimmock, S. Eeckhaudt, T. Grahn, P.T. Greenlees, E. Ideguchi, P.M. Jones, D.T. Joss, R. Julin, S. Juutinen, A. Khaplanov, M. Leino, L. Nelson, M. Niikura, M. Nyman, R.D. Page, J. Pakarinen, E.S. Paul, M. Petri, P. Rahkila, J. Saren, C. Scholey, J. Sorri, J. Uusitalo, R. Wadsworth, R. Wyss
2007Sc24	PRVCA	75,	055801	P. Schury, C. Bachelet, M. Block, G. Bollen, D.A. Davies, M. Facina, C.M. Folden III, C. Guénaut, J. Huikari, E. Kwan, A. Kwiatkowski, D.J. Morrissey, R. Ringle, G.K. Pang, A. Prinke, J. Savory, H. Schatz, S. Schwarz, C.S. Sumithrarachchi, T. Sun, and erratum PRVCA 80(2009)029905

2007Se06	PRLTA	99,	082502	D. Seweryniak, B. Blank, M.P. Carpenter, C.N. Davids, T. Davinson, S.J. Freeman, N. Hammond, N. Hoteling, R.V.F. Janssens, T.L. Khoo, Z. Liu, G. Mukherjee, A. Robinson, C. Scholey, S. Sinha, J. Shergur, K. Starosta, W.B. Walters, A. Woehr, P.J. Woods
2007Sh05	EPJAA	31,	171	M. Shibata, O. Suematsu, Y. Kojima, K. Kawade, A. Taniguchi, Y. Kawase
2007Sh34	PYLBB	654,	87	S. Shimoura, S. Ota, K. Demichi, N. Aoi, H. Baba, Z. Elekes, T. Fukuchi, T. Gomi, K. Hasegawa, E. Ideguchi, M. Ishihara, N. Iwasa, H. Iwasaki, S. Kanno, S. Kubono, K. Kurita, M. Kurokawa, Y.U. Matsuyama, S. Michimasa, K. Miller, T. Minemura, T. Motobayashi, T. Murakami, M. Notani, A. Odahara, A. Saito, H. Sakurai, E. Takeshita, S. Takeuchi, M. Tamaki, T. Teranishi, K. Yamada, Y. Yanagisawa, I. Hamamoto
2007Sh42	EPJAA	34,	1	T. Shizuma, T. Ishii, H. Makii, T. Hayakawa, S. Shigematsu, M. Matsuda, E. Ideguchi, Y. Zheng, M. Liu, T. Morikawa
2007Si24	NUPAB	791,	267	H. Simon, M. Meister, T. Aumann, M.J.G. Borge, L.V. Chulkov, U. Datta Pramanik, Th. W. Elze, H. Emling, C. Forssen, H. Geissel, M. Hellstrom, B. Jonson, J.V. Kratz, R. Kulessa, Y. Leifels, K. Markenroth, G. Munzenberg, F. Nickel, T. Nilsson, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, O. Tengblad, M.V. Zhukov
2007Si27	PRVCA	76,	041303	G.S. Simpson, J.C. Angelique, J. Genevey, J.A. Pinston, A. Covello, A. Gargano, U. Köster, R. Orlandi, A. Scherillo
2007St12	APOBB	38,	1561	B. Streicher, S. Antalic, S. Saro, M. Venhart, F.P. Heßberger, S. Hofmann, D. Ackermann, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, B. Sulignano, P. Kuusiniemi
2007St18	NUPAB	787,	388c	N.J. Stoyer, J.H. Landrum, P.A. Wilk, K.J. Moody, J.M. Kenneally, D.A. Shaughnessy, M.A. Stoyer, J.F. Wild, R.W. Lougheed, S.N. Dmitriev, Yu. Ts. Oganessian, S.V. Shishkin, N.V. Aksenov, E.E. Tereshatov, G.A. Bozhikov, G.K. Vostokin, V.K. Utyonkov, A.A. Yeremin
2007Su05	PRVCA	75,	024305	C.S. Sumithrarachchi, D.J. Morrissey, B.A. Brown, A.D. Davies, D.A. Davies, M. Fancina, E. Kwan, P.F. Mantica, M. Portillo, Y. Shimbara, J. Stoker, R.R. Weerasiri
2007Su07	EPJAA	31,	393	B. Sun, Yu. A. Litvinov, P.M. Walker, K. Beckert, P. Beller, F. Bosch, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H. Geissel, R. Knöbel, C. Kozhuharov, J. Kurcewicz, S.A. Litvinov, M. Mazzocco, J. Meng, C. Nociforo, F. Nolden, W.R. Plass, C. Scheidenberger, M. Steck, H. Weick, M. Winkler
2007Su19	EPJAA	33,	327	B. Sulignano, S. Heinz, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2007Tr08	PRVCA	76,	021301	V. Tripathi, S.L. Tabor, P.F. Mantica, Y. Utsuno, P. Bender, J. Cook, C.R. Hoffman, S. Lee, T. Otsuka, J. Pereira, M. Perry, K. Pepper, J.S. Pinter, J. Stoker, A. Volya, D. Weisshaar
2007Wa09	PRVCA	75,	037302	S. Wang, Y. Liu, Y. Ma, T. Komatsubara, Y. Zhang
2007Ya08	PRVCA	76,	024308	C. Yazidjian, G. Audi, D. Beck, K. Blaum, S. George, C. Guénaut, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard
				2008
2008Ah02	PRVCA	77,	054302	I. Ahmad, F.G. Kondev, Z.M. Koenig, Wm. C. McHarris, S.W. Yates
2008Ak03	PYLBB	666,	430	Yu. Aksyutina, H.T. Johansson, P. Adrich, F. Aksouh, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, M. Hellström, G. Ickert, K.L. Jones, B. Jonson, A. Kliemkiewicz, J.V. Kratz, R. Kulessa, M. Lantz, T. LeBleis, A.O. Lindahl, K. Mahata, M. Matos, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, M. Pantea, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Sümmerer, O. Tengblad, W. Walus, H. Weick, M.V. Zhukov

2008An05	PRVCA	77,	054303	K. Andgren, B. Cederwall, J. Uusitalo, A.N. Andreyev, S.J. Freeman, P.T. Greenlees, B. Hadinia, U. Jakobsson, A. Johnson, P.M. Jones, D.T. Joss, S. Juutinen, R. Julin, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, R.D. Page, P. Rahkila, M. Sandzelius, P. Sapple, J. Sarén, C. Scholey, J. Simpson, J. Sorri, J. Thomson, R. Wyss
2008An11	PRVCA	78,	044328	K. Andgren, U. Jakobsson, B. Cederwall, J. Uusitalo, T. Bäck, S.J. Freeman, P.T. Greenlees, B. Hadinia, A. Hugues, A. Johnson, P.M. Jones, D.T. Joss, S. Juutinen, R. Julin, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, R.D. Page, P. Rahkila, M. Sandzelius, P. Sapple, J. Sarén, C. Scholey, J. Simpson, J. Sorri, J. Thomson, R. Wyss
2008An16	EPJAA	38,	219	S. Antalic, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, Š. Šáro, B. Streicher, B. Sulignano, M. Venhart
2008Ba53	PRLTA	101,	252501	D. Bazin, F. Montes, A. Becerril, G. Lorusso, A. Amthor, T. Baumann, H. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P. Mantica, M. Matos, R. Meharchand, K. Minamisono, G. Perdikakis, J. Pereira, J. Pinter, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2008Ba54	PRLTA	101,	262501	S. Baruah, G. Audi, K. Blaum, M. Dworschak, S. George, C. Guénaut, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, H. Schatz, L. Schweikhard, C. Yazidjian
2008Bh08	PRVCA	77,	065503	M. Bhattacharya, D. Melconian, A. Komives, S. Triambak, A. García, E.G. Adelberger, B.A. Brown, M.W. Cooper, T. Glasmacher, V. Guimaraes, P.F. Mantica, A.M. Oros-Peusquens, J.I. Prisciandaro, M. Steiner, H.E. Swanson, S.L. Tabor, M. Wiedeking
2008Bi15	NIMAE	597,	189	L. Bianco, R.D. Page, D.T. Joss, J. Simpson, B. Cederwall, M.B. Gomez Hornillos, P.T. Greenlees, B. Hadinia, U. Jakobsson, P.M. Jones, R. Julin, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, E.S. Paul, M. Petri, P. Peura, A. Puurunen, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Saren, C. Scholey, J. Thomson, J. Uusitalo
2008Bl05	PRLTA	100,	132501	M. Block, C. Bachelet, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz
2008Bo26	NUPAB	811,	28	V. Bondarenko, I. Tomandl, H.-F. Wirth, J. Honzatko, A.M. Sukhovoj, L.A. Malov, L.I. Simonova, R. Hertenberger, T. von Egidy, J. Berzins
2008Br.A	PrvCom	GAu	Dec	M. Breitenfeldt
2008Br.C	PrvCom	GAu	Mar	M. Brodeur
2008Br.D	PrvCom	GAu	Aug	M. Brodeur
2008Ca22	PRVCA	78,	044001	M. Caamano, D. Cortina-Gil, W. Mittig, H. Savajols, M. Chartier, C.E. Demonchy, B. Fernandez, M.B. Gomez Hornillos, A. Gillibert, B. Jurado, O. Kiselev, R. Lemmon, A. Obertelli, F. Rejmund, M. Rejmund, P. Roussel-Chomaz, R. Wolski
2008Ch07	NUPAB	801,	101	G. Christian, W.A. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P.L. Cole, D. Denby, P.A. DeYoung, J.E. Finck, N. Frank, A. Fritsch, C. Hall, A.M. Hayes, J. Hinnefeld, C.R. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla, P.V. Pancella, G. Peaslee, W.F. Rogers, A. Schiller, M.J. Strongman, M. Thoennessen, L.O. Wagner
2008Ch28	PRVCA	78,	054307	R.J. Charity, S.A. Komarov, L.G. Sobotka, J. Clifford, D. Bazin, A. Gade, J. Lee, S.M. Lukyanov, W.G. Lynch, M. Mocko, S.P. Lobastov, A.M. Rogers, A. Sanetullaev, M.B. Tsang, M.S. Wallace, R.G.T. Zegers, S. Hudan, C. Metelko, M.A. Famiano, A.H. Wuosmaa, M.J. van Goethem
2008Ch.A	Th.-Giessen			Lixin Chen
2008De29	PRVCA	78,	044303	D.H. Denby, P.A. DeYoung, T. Baumann, D. Bazin, E. Breitbach, J. Brown, N. Frank, A. Gade, C.C. Hall, J. Hinnefeld, C.R. Hoffman, R. Howes, R.A. Jenson, B. Luther, S.M. Mosby, C.W. Olson, W.A. Peters, A. Schiller, A. Spyrou, M. Thoennessen
2008Dr05	PRVCA	78,	024605	I. Dragojevic, K.E. Gregorich, Ch. E. Düllmann, M.A. Garcia, J.M. Gates, S.L. Nelson, L. Stavsetra, R. Sudowe, H. Nitsche
2008Du09	PRVCA	77,	064320	Ch. E. Düllmann, A. Türler and erratum PRVCA 78(2008)029901

2008Dv02	PRLTA	100,	132503	J. Dvorak, W. Brüchle, M. Chelnokov, Ch. E. Düllmann, Z. Dvorakova, K. Eberhardt, E. Jäger, R. Krücken, A. Kuznetsov, Y. Nagame, F. Nebel, K. Nishio, R. Perego, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, R. Schuber, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, B. Wierczinski, A. Yakushev, A. Yeremin
2008Dw01	PRLTA	100,	072501	M. Dworschak, G. Audi, K. Blaum, P. Delahaye, S. George, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard, C. Yazidjian and PrvCom GAu May 2007
2008Ea01	PRVCA	77,	024303	M.C. Eastman, K.S. Krane
2008Er04	PRLTA	100,	132502	T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, J.C. Hardy, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rahaman, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber, J. Äystö
2008Fa11	PRVCA	78,	022801	J. Fallis, J.A. Clark, K.S. Sharma, G. Savard, F. Buchinger, S. Caldwell, J.E. Crawford, C.M. Deibel, J.L. Fisker, S. Gulick, A.A. Hecht, D. Lascar, J.K.P. Lee, A.F. Levand, G. Li, B.F. Lundgren, A. Parikh, S. Russell, M. Scholte-van de Vorst, N.D. Scielzo, R.E. Segel, H. Sharma, S. Sinha, M. Sternberg, T. Sun, I. Tanihata, J. Van Schelt, J.C. Wang, Y. Wang, C. Wrede, Z. Zhou
2008Fe02	EPJAA	35,	167	M. Ferraton, R. Bourgain, C.M. Petrache, D. Verney, F. Ibrahim, N. de Séréville, S. Franchoo, M. Lebois, C. Phan Viet, L. Sagui, I. Stefan, J.F. Clavelin, M. Vilmay
2008Fi.A	PrvCom	BPf	Oct	R.B. Firestone
2008Fu04	JPGPE	35,	014041	Y. Fujita, B. Rubio, T. Adachi, F. Molina, A. Algora, G.P.A. Berg, P. von Brentano, J. Buscher, T. Cocolios, D. De Frenne, C. Fransen, H. Fujita, K. Fujita, W. Gelletly, K. Hatanaka, M. Huyse, O. Ivanov, Y. Kudryavtsev, E. Jacobs, D. Jordan, K. Nakanishi, A. Negret, D. Pauwels, A.B. Perez-Cerdan, N. Pietralla, Z. Podolyak, L. Popescu, R. Raabe, Y. Sakemi, M. Sawicka, Y. Shimbara, Y. Shimizu, T. Shizuma, Y. Tameshige, A. Tamii, P. Van den Bergh, J. Van de Walle, P. Van Duppen, M. Yosoi, K.O. Zell
2008Ga04	PYLBB	660,	326	A.B. Garnsworthy, P.H. Regan, L. Cáceres, S. Pietri, Y. Sun, D. Rudolph, M. Górska, Zs. Podolyák, S.J. Steer, R. Hoischen, A. Heinz, F. Becker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, H. Grawe, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tachenov, E. Werner-Malento, H.J. Wollersheim, G. Benzoni, B.B. Blank, C. Brandau, A.M. Bruce, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombrádi, E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, A. Jungclaus, M. Kmiecik, F.G. Kondev, T. Kurtukian-Nieto, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, M. Pfützner, S. Schwertel, T. Shizuma, A.J. Simons, P.M. Walker, O. Wieland, F.R. Xu
2008Ga08	PRVCA	77,	034603	J.M. Gates, M.A. Garcia, K.E. Gregorich, Ch. E. Düllmann, I. Dragojević, J. Dvorak, R. Eichler, C.M. Folden III, W. Loveland, S.L. Nelson, G.K. Pang, L. Stavsetra, R. Sudowe, A. Türler, H. Nitsche
2008Ga25	PRVCA	78,	034604	J.M. Gates, S.L. Nelson, K.E. Gregorich, I. Dragojevic, Ch. E. Dullmann, P.A. Ellison, C.M. Folden III, M.A. Garcia, L. Stavsetra, R. Sudowe, D.C. Hoffman, H. Nitsche
2008Ga.A	PrvCom		08Bh08	A. Garcia et al at ISOLDE
2008Ge07	PRLTA	101,	252502	W. Geithner, T. Neff, G. Audi, K. Blaum, P. Delahaye, H. Feldmeier, S. George, C. Guenaut, F. Herfurth, A. Herlert, S. Kappertz, M. Keim, A. Kellerbauer, H.-J. Kluge, M. Kowalska, P. Lievens, D. Lunney, K. Marinova, R. Neugart, L. Schweikhard, S. Wilbert, C. Yazidjian and PrvCom from A. Herlert February 2005
2008Ge08	EULEE	82,	50005	S. George, G. Audi, B. Blank, K. Blaum, M. Breitenfeldt, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kretzschmar, D. Lunney, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2008Go23	PRVCA	78,	014311	M.B. Gómez Hornillos, M. Chartier, W. Mittig, A. Lépine-Szily, L. Caballero, C.E. Demonchy, G. Georgiev, N.A. Orr, G. Politi, M. Rousseau, P. Roussel-Chomaz, A.C.C. Villari
2008Go.A	AnRpt GSI		140	A. Gorshkov et al

2008Gr03	PRVCA	77,	015501	G.F. Grinyer, P. Finlay, C.E. Svensson, G.C. Ball, J.R. Leslie, R.A.E. Austin, D. Bandyopadhyay, A. Chaffey, R.S. Chakrawarthy, P.E. Garrett, G. Hackman, B. Hyland, R. Kanungo, K.G. Leach, C.M. Mattoon, A.C. Morton, C.J. Pearson, A.A. Phillips, J.J. Ressler, F. Sarazin, H. Savajols, M.A. Schumaker, J. Wong
2008Gr17	PRVCA	78,	021303	P.T. Greenlees, R.-D. Herzberg, S. Ketelhut, P.A. Butler, P. Chowdhury, T. Grahn, C. Gray-Jones, G.D. Jones, P. Jones, R. Julin, S. Juutinen, T.-L. Khoo, M. Leino, S. Moon, M. Nyman, J. Pakarinen, P. Rahkila, D. Rostron, J. Sarén, C. Scholey, J. Sorri, S.K. Tandel, J. Uusitalo, M. Venhart
2008Ha12	PRVCA	77,	047305	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, O. Dorvaux, A.V. Belozerov, M.L. Chelnokov, V.I. Chepigin, B. Gall, V.A. Gorshkov, M. Guttormsen, P. Jones, A.P. Kabachenko, A. Khouaja, A.C. Larsen, O.N. Malyshev, A. Minkova, H.T. Nyhus, Yu. Ts. Oganessian, D. Pantelica, A.G. Popeko, F. Rotaru, S. Saro, A.V. Shutov, S. Siem, A.I. Svirikhin, N.U.H. Syed
2008Ha23	PRLTA	101,	052502	J. Hakala, S. Rahaman, V.-V. Elomaa, T. Eronen, U. Hager, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber, J. Äystö
2008Ha31	PRVCA	78,	021302	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, O. Dorvaux, S. Antalic, A.V. Belozerov, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, D. Curien, B. Gall, A. Görgen, V.A. Gorshkov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khalfallah, A.C. Larsen, O.N. Malyshev, A. Minkova, A.G. Popeko, M. Rousseau, N. Rowley, S. Saro, A.V. Shutov, S. Siem, L. Stuttgè, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen, M. Venhart
2008Ha.A	PrvCom	BPf	Sep	P.A. Hausladen
2008Hi05	PRVCA	77,	034305	T.A. Hinners, V. Tripathi, S.L. Tabor, A. Volya, P.C. Bender, C.R. Hoffman, S. Lee, M. Perry, P.F. Mantica, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin
2008Ho03	PRLTA	100,	152502	C.R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears, E. Mosby, S. Mosby, J. Reith, B. Rizzo, W.F. Rogers, G. Peaslee, W.A. Peters, A. Schiller, M.J. Scott, S.L. Tabor, M. Thoennessen, P.J. Voss, T. Williams
2008Ia01	PRVCA	77,	045501	V.E. Iacob, J.C. Hardy, V. Golovko, J. Goodwin, N. Nica, H.I. Park, L. Trache, R.E. Tribble
2008Jo03	PRVCA	77,	034311	G.A. Jones, S.J. Williams, P.M. Walker, Zs. Podolyák, S. Zhu, M.P. Carpenter, J.J. Carroll, R.S. Chakrawarthy, P. Chowdhury, I.J. Cullen, G.D. Dracoulis, A.B. Garnsworthy, G. Hackman, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, G.J. Lane, Z. Liu, D. Seweryniak, N.J. Thompson
2008Jo04	PRVCA	77,	064316	E.K. Johansson, D. Rudolph, L.-L. Andersson, D.A. Torres, I. Ragnarsson, C. Andreoiu, C. Baktash, M.P. Carpenter, R.J. Charity, C.J. Chiara, J. Ekman, C. Fahlander, C. Hoel, O.L. Pechenaya, W. Reviol, R. du Rietz, D.G. Sarantites, D. Seweryniak, L.G. Sobotka, C.H. Yu, S. Zhu
2008Kh10	EPJAA	37,	177	J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, D. Ackermann, H.G. Burkhard, S. Heinz, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, J. Maurer, K. Nishio, Yu. Novikov
2008Kn.A	Th.-GSI			Knöbel
2008Lo06	CPLEE	25,	1992	J.-L. Lou, Z.-H. Li, Y.-L. Ye, D.-X. Jiang, H. Hua, X.-Q. Li, S.-Q. Zhang, T. Zheng, Y.-C. Ge, Z. Kong, L.-H. Lv, C. Li, F. Lu, F.-Y. Fan, Z.-Y. Li, Z.-X. Cao, L.-Y. Ma, Faisal, H.-S. Xu, Z.-G. Hu, M. Wang, X.-G. Lei, L.-M. Duan, Z.-G. Xiao, W.-L. Zhan, G.-Q. Xiao, T.-H. Huang, F. Fu, X.-H. Zhang, C. Zheng, Y.-H. Yu, X.-L. Tu, Y.-P. Zhang, Y.-Y. Yang, H.-B. Zhang, B. Tang, Y.-L. Tian, Y.-Z. Ou, M.-R. Huang, Z.-G. Xu, K. Yue, Q. Gao

2008Lo07	PRVCA	77,	064313	R.L. Lozeva, G.S. Simpson, H. Grawe, G. Neyens, L.A. Atanasova, D.L. Balabanski, D. Bazzacco, F. Becker, P. Bednarczyk, G. Benzoni, N. Blasi, A. Blazhev, A. Bracco, C. Brandau, L. Cáceres, F. Camera, S.K. Chamoli, F.C.L. Crespi, J.-M. Daugas, P. Detistov, M. De Rydt, P. Doornenbal, C. Fahlander, E. Farnea, G. Georgiev, J. Gerl, K.A. Gladnishki, M. Górska, J. Grebosz, M. Hass, R. Hoischen, G. Ilie, M. Ionescu-Bujor, A. Iordachescu, J. Jolie, A. Jungclaus, M. Kmiecik, I. Kojouharov, N. Kurz, S.P. Lakshmi, G. Lo Bianco, S. Mallion, A. Maj, D. Montanari, O. Perru, M. Pfützner, S. Pietri, J.A. Pinston, Zs. Podolyák, W. Prokopowicz, D. Rudolph, G. Rusev, T.R. Saitoh, A. Saltarelli, H. Schaffner, R. Schwengner, S. Tashenov, K. Turzó, J.J. Valiente-Dobón, N. Vermeulen, J. Walker, E. Werner-Malento, O. Wieland, H.-J. Wollersheim
2008Ma01	PRVCA	77,	014313	P.F. Mantica, R. Broda, H.L. Crawford, A. Damaske, B. Fornal, A.A. Hecht, C. Hoffman, M. Horoi, N. Hoteling, R.V.F. Janssens, J. Pereira, J.S. Pinter, J.B. Stoker, S.L. Tabor, T. Sumikama, W.B. Walters, X. Wang, S. Zhu
2008Ma39	EPJAA	37,	151	I. Matea, J. Souin, J. Äystö, B. Blank, P. Delahaye, V.-V. Elomaa, T. Eronen, J. Giovinazzo, U. Hager, J. Hakala, J. Huikari, A. Jokinen, A. Kankainen, I.D. Moore, J.-L. Pedroza, S. Rahaman, J. Rissanen, J. Ronkainen, A. Saastamoinen, T. Sonoda, C. Weber
2008Mo09	NUPAB	805	172c	K. Morita
2008Mu05	EPJAA	35,	31	M. Mukherjee, D. Beck, K. Blaum, G. Bollen, P. Delahaye, J. Dilling, S. George, C. Guénaut, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, U. Köster, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2008Mu13	PRVCA	77,	061303	I. Mukha, L. Grigorenko, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, J. Hofmann, O. Kiselev, A. Korsheninnikov, N. Kurz, Yu. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, H. Weick, P.J. Woods
2008Ne01	PRLTA	100,	022501	S.L. Nelson, K.E. Gregorich, I. Dragojević, M.A. Garcia, J.M. Gates, R. Sudowe, H. Nitsche
2008Ne08	PRVCA	78,	024606	S.L. Nelson, C.M. Folden III, K.E. Gregorich, I. Dragojević, Ch. E. Düllmann, R. Eichler, M.A. Garcia, J.M. Gates, R. Sudowe, H. Nitsche
2008Os02	NIMBE	266,	4394	A. Osa, S.-i. Ichikawa, M. Matsuda, T.K. Sato, S.-C. Jeong
2008Pa33	PRVCA	78,	041307	D. Pauwels, O. Ivanov, N. Bree, J. Büscher, T.E. Cocolios, J. Gentens, M. Huyse, A. Korgul, Yu. Kudryavtsev, R. Raabe, M. Sawicka, I. Stefanescu, J. Van de Walle, P. Van den Bergh, P. Van Duppen, W.B. Walters
2008Qi03	RAACA	96,	455	Z. Qin, W. Brüchle, D. Ackermann, K. Eberhardt, F.P. Heßberger, E. Jäger, J.V. Kratz, P. Kuusiniemi, D. Liebe, G. Münzenberg, D. Nayak, Yu. N. Novikov, M. Schädel, B. Schausten, E. Schimpf, A. Semchenkov, B. Sulignano, P. Thörle, X.L. Wu and PrvCom from 2002Sh. C
2008Ra09	PYLBB	662,	111	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, J. Julin, A. Kankainen, A. Saastamoinen, J. Suhonen, C. Weber, J. Aÿstö
2008Re16	PRLTA	100,	093002	M. Redshaw, J. McDaniel, E.G. Myers
2008Ri05	PRVCA	78,	034304	S.V. Rigby, D.M. Cullen, P.J.R. Mason, D.T. Scholes, C. Scholey, P. Rahkila, S. Eeckhaudt, T. Grahn, P. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, M. Nyman, J. Pakarinen, J. Uusitalo
2008Ro21	PRVCA	78,	034308	A.P. Robinson, T.L. Khoo, I. Ahmad, S.K. Tandel, F.G. Kondev, T. Nakatsukasa, D. Seweryniak, M. Asai, B.B. Back, M.P. Carpenter, P. Chowdhury, C.N. Davids, S. Eeckhaudt, J.P. Greene, P.T. Greenlees, S. Gros, A. Heinz, R.-D. Herzberg, R.V.F. Janssens, G.D. Jones, T. Lauritsen, C.J. Lister, D. Peterson, J. Qian, U.S. Tandel, X. Wang, S. Zhu
2008Ru09	PRVCA	78,	021301	D. Rudolph, R. Hoischen, M. Hellström, S. Pietri, Zs. Podolyák, P.H. Regan, A.B. Garnsworthy, S.J. Steer, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, J. Gerl, M. Górska, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, L.-L. Andersson, L. Atanasova, D.L. Balabanski, M.A. Bentley, A. Blazhev, C. Brandau, J.R. Brown, C. Fahlander, E.K. Johansson, A. Jungclaus, S.M. Lenzi

2008Ry03	PRLTA	101,	012501	V.L. Ryjkov, M. Brodeur, T. Brunner, M. Smith, R. Ringle, A. Lapierre, F. Ames, P. Bricault, M. Dombsky, P. Delheij, D. Lunney, M.R. Pearson, J. Dilling
2008Sm03	PRLTA	101,	202501	M. Smith, M. Brodeur, T. Brunner, S. Ettenauer, A. Lapierre, R. Ringle, V.L. Ryjkov, F. Ames, P. Bricault, G.W.F. Drake, P. Delheij, D. Lunney, F. Sarazin, J. Dilling
2008Sm.A	Th.-Vancouver			M.J. Smith
2008So20	PRVAA	78,	012514	A. Solders, I. Bergström, Sz. Nagy, M. Suhonen, R. Schuch
2008Su14	EPJAA	36,	243	G. Suliman, D. Bucurescu, R. Hertenberger, H.-F. Wirth, T. Faestermann, R. Krücken, T. Behrens, V. Bildstein, K. Eppinger, C. Hinke, M. Mahgoub, P. Meierbeck, M. Reithner, S. Schwertel, N. Chauvin
2008Su19	NUPAB	812,	1	B. Sun, R. Knöbel, Yu. A. Litvinov, H. Geissel, J. Meng, K. Beckert, F. Bosch, D. Boutin, C. Brandau, L. Chen, I.J. Cullen, C. Dimopoulou, B. Fabian, M. Hausmann, C. Kozhuharov, S.A. Litvinov, M. Mazzocco, F. Montes, G. Münzenberg, A. Musumarra, S. Nakajima, C. Nociforo, F. Nolden, T. Ohtsubo, A. Ozawa, Z. Patyk, W.R. Plaß, C. Scheidenberger, M. Steck, T. Suzuki, P.M. Walker, H. Weick, N. Winckler, M. Winkler, T. Yamaguchi
2008Tr04	PRVCA	77,	034310	V. Tripathi, S.L. Tabor, P. Bender, C.R. Hoffman, S. Lee, K. Pepper, M. Perry, P.F. Mantica, J.M. Cook, J. Pereira, J.S. Pinter, J.B. Stoker, D. Weisshaar, Y. Utsuno, T. Otsuka
2008VaZV	P-Moscow		87	Yu. A. Vaganov, V.M. Gorozhankin, V.G. Kalinnikov, V.I. Stegailov, Yu. V. Yushkevich
2008We02	NUPAB	803,	1	C. Weber, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz
2008We10	PRVCA	78,	054310	C. Weber, V.-V. Elomaa, R. Ferrer, C. Fröhlich, D. Ackermann, J. Äystö, G. Audi, L. Batist, K. Blaum, M. Block, A. Chaudhuri, M. Dworschak, S. Eliseev, T. Eronen, U. Hager, J. Hakala, F. Herfurth, F.P. Heßberger, S. Hofmann, A. Jokinen, A. Kankainen, H.-J. Kluge, K. Langanke, A. Martín, G. Martínez-Pinedo, M. Mazzocco, I.D. Moore, J.B. Neumayr, Yu. N. Novikov, H. Penttilä, W.R. Plaß, A.V. Popov, S. Rahaman, T. Rauscher, C. Rauth, J. Rissanen, D. Rodríguez, A. Saastamoinen, C. Scheidenberger, L. Schweikhard, D.M. Seliverstov, T. Sonoda, F.-K. Thielemann, P.G. Thirolf, G.K. Vorobjev
				2009
2009Ak03	PYLBB	679,	191	Yu. Aksyutina, H.T. Johansson, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulessa, C. Langer, M. Lantz, T. LeBleis, A.O. Lindahl, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Summerer, O. Tengblad, H. Weick, M.V. Zhukov
2009Al29	PRVCA	80,	061302	N. Al-Dahan, Zs. Podolyák, P.H. Regan, M. Górska, H. Grawe, K.H. Maier, J. Gerl, S.B. Pietri, H.J. Wollersheim, N. Alkhomashi, A.Y. Deo, A.M.D. Bacelar, G. Farrelly, S.J. Steer, A.M. Bruce, P. Boutachkov, C. Domingo-Pardo, A. Algora, J. Benlliure, A. Bracco, E. Calore, E. Casarejos, I.J. Cullen, P. Detistov, Zs. Dombrádi, M. Doncel, F. Farinon, W. Gelletly, H. Geissel, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, S. Leoni, F. Molina, D. Montanari, A.I. Morales, A. Musumarra, D.R. Napoli, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, B. Rubio, D. Rudolph, H. Schaffner, P. Strmen, I. Szarka, T. Swan, J.S. Thomas, J.J. Valiente-Dobón, S. Verma, P.M. Walker, H. Weick
2009Al30	PRVCA	80,	064308	N. Alkhomashi, P.H. Regan, Zs. Podolyák, S. Pietri, A.B. Garnsworthy, S.J. Steer, J. Benlliure, E. Caserejos, R.F. Casten, J. Gerl, H.J. Wollersheim, J. Grebosz, G. Farrelly, M. Górska, I. Kojouharov, H. Schaffner, A. Algora, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, A.M. Denis Bacelar, I.J. Cullen, L. Cáceres, P. Doornenbal, M.E. Estevez, Y. Fujita, W. Gelletly, R. Hoischen, R. Kumar, N. Kurz, S. Lalkovski, Z. Liu, C. Mihai, F. Molina, A.I. Morales, D. Mücher, W. Prokopowicz, B. Rubio, Y. Shi, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.M. Walker, P.J. Woods, F.R. Xu

2009An11	PRVCA	79,	064320	A.N. Andreyev, S. Antalic, D. Ackermann, L. Bianco, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, K. Nishio, R.D. Page, J.J. Ressler, P. Sapple, B. Streicher, S. Saro, B. Sulignano, J. Thomson, P. Van Duppen, M. Venhart
2009An14	PRVCA	80,	024302	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, Š. Šáro, P. Van Duppen, M. Venhart, H.V. Watkins
2009An17	PRVCA	80,	044334	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Hessberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, S. Saro, P. Van Duppen, M. Venhart, H.V. Watkins
2009An20	PRVCA	80,	054322	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antilla, P.J. Sapple, S. Saro, P. Van Duppen, M. Venhart, H.V. Watkins
2009Ar04	APOBB	40,	437	O. Arndt, S. Hennrich, N. Hoteling, C.J. Jost, B.E. Tomlin, J. Shergur, K.-L. Kratz, P.F. Mantica, B.A. Brown, R.V.F. Janssens, W.B. Walters, B. Pfeiffer, A. Wohr, S. Zhu, R. Broda, M.P. Carpenter, B. Fornal, A.A. Hecht, W. Krolas, T. Lauritsen, T. Pawlat, J. Pereira, D. Seweryniak, I. Stefanescu, J.R. Stone, J. Wrzesinski
2009Ba06	PRVCA	79,	024311	P.H. Barker, K.K.H. Leung, A.P. Byrne
2009Ba52	PRVCA	80,	054318	J.C. Batchelder, J.L. Wood, P.E. Garrett, K.L. Green, K.P. Rykaczewski, J.-C. Bilheux, C.R. Bingham, H.K. Carter, D. Fong, R. Grzywacz, J.H. Hamilton, D.J. Hartley, J.K. Hwang, W. Krolas, W.D. Kulp, Y. Larochelle, A. Piechaczek, A.V. Ramayya, E.H. Spejewski, D.W. Stracener, M.N. Tantawy, J.A. Winger, E.F. Zganjar
2009Bo.A	PrvCom	GAu	Aug	C. Borgmann
2009Br09	PRVCA	80,	035805	M. Breitenfeldt, G. Audi, D. Beck, K. Blaum, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kowalska, D. Lunney, S. Naimi, D. Neidherr, H. Schatz, S. Schwarz, L. Schweikhard
2009Br10	PRVCA	80,	044318	M. Brodeur, T. Brunner, C. Champagne, S. Etternauer, M. Smith, A. Lapierre, R. Ringle, V.L. Ryjkov, G. Audi, P. Delheij, D. Lunney, J. Dilling
2009Br.A	PrvCom	GAu	Jun	M. Brodeur
2009Bu.A	PrvCom	GAu	Mar	D. Bucurescu
2009Ce04	PRLTA	103,	152502	J. Cerny, D.M. Moltz, D.W. Lee, K. Peräjärvi, B.R. Barquest, L.E. Grossman, W. Jeong, C.C. Jewett
2009Ch08	PRLTA	102,	122503	L. Chen, Yu. A. Litvinov, W.R. Plaß, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, R.B. Cakirli, J.J. Carroll, R.F. Casten, R.S. Chakrawarthy, D.M. Cullen, I.J. Cullen, B. Franzke, H. Geissel, J. Gerl, M. Górska, G.A. Jones, A. Kishada, R. Knöbel, C. Kozhuharov, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Münzenberg, F. Nolden, T. Ohtsubo, Z. Patyk, Zs. Podolyák, R. Propri, S. Rigby, N. Saito, T. Saito, C. Scheidenberger, M. Shindo, M. Steck, P. Ugorowski, P.M. Walker, S. Williams, H. Weick, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2009Ch09	PYLBB	674,	23	F.C. Charlwood, K. Baczynska, J. Billowes, P. Campbell, B. Cheal, T. Eronen, D.H. Forest, A. Jokinen, T. Kessler, I.D. Moore, H. Penttilä, R. Powis, M. Rüffer, A. Saastamoinen, G. Tungate, J. Äystö
2009Ch25	PRLTA	102,	222501	B. Cheal, K. Baczynska, J. Billowes, P. Campbell, F.C. Charlwood, T. Eronen, D.H. Forest, A. Jokinen, T. Kessler, I.D. Moore, M. Reponen, S. Rothe, M. Ruffer, A. Saastamoinen, G. Tungate, J. Aysto
2009Cr02	PRVCA	79,	054320	H.L. Crawford, P.F. Mantica, J.S. Berryman, R. Broda, B. Fornal, C.R. Hoffman, N. Hoteling, R.V.F. Janssens, S.M. Lenzi, J. Pereira, J.B. Stoker, S.L. Tabor, W.B. Walters, X. Wang, S. Zhu

2009Cu02	PRVCA	80,	024303	D.M. Cullen, P.J.R. Mason, S.V. Rigby, C. Scholey, S. Eeckhaudt, T. Grahn, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A.M. Kishada, M. Leino, A.-P. Leppanen, K. Mäntyniemi, P. Nieminen, M. Nyman, J. Pakarinen, P. Peura, P. Rahkila, J. Sarén, J. Sorri, J. Uusitalo, B.J. Varley, M. Venhart
2009Da03	NUPAB	818,	264	J.V. Dawson, C. Reeve, J.R. Wilson, K. Zuber, M. Junker, C. Gössling, T. Köttig, D. Münstermann, S. Rajek, O. Schulz
2009Dr02	PRVCA	79,	011602	I. Dragojević, K.E. Gregorich, Ch. E. Düllmann, J. Dvorak, P.A. Ellison, J.M. Gates, S.L. Nelson, L. Stavsetra, H. Nitsche
2009Dr03	PRVCA	79,	031302	G.D. Dracoulis, G.J. Lane, T. Kibédi, P. Nieminen
2009Dr04	PRVCA	79,	054313	G.D. Dracoulis, P.M. Davidson, G.J. Lane, A.P. Byrne, T. Kibédi, P. Nieminen, H. Watanabe, A.N. Wilson
2009Dr06	PRVCA	79,	061303	G.D. Dracoulis, G.J. Lane, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu
2009Dr08	EPJAA	40,	127	G.D. Dracoulis, P.M. Davidson, G.J. Lane, A.P. Byrne, T. Kibédi, P. Nieminen, A.N. Wilson, H. Watanabe
2009Dr12	PRVCA	80,	054320	G.D. Dracoulis, G.J. Lane, A.P. Byrne, P.M. Davidson, T. Kibédi, P.H. Nieminen, H. Watanabe, A.N. Wilson, H.L. Liu, F.R. Xu
2009El07	PRLTA	102,	252501	V.-V. Elomaa, G.K. Vorobjev, A. Kankainen, L. Batist, S. Eliseev, T. Eronen, J. Hakala, A. Jokinen, I.D. Moore, Yu. N. Novikov, H. Penttilä, A. Popov, S. Rahaman, J. Rissanen, A. Saastamoinen, H. Schatz, D.M. Seliverstov, C. Weber, J. Äystö
2009El08	EPJAA	40,	1	V.-V. Elomaa, T. Eronen, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I.D. Moore, S. Rahaman, J. Rissanen, V. Rubchenya, C. Weber, J. Äystö
2009Er02	PRVCA	79,	032802	T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, T. Kessler, I.D. Moore, S. Rahaman, J. Rissanen, C. Weber, J. Äystö
2009Er07	PRLTA	103,	252501	T. Eronen, V.-V. Elomaa, J. Hakala, J.C. Hardy, A. Jokinen, I.D. Moore, M. Reponen, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2009Fa15	EPJAA	42,	339	T. Faestermann, R. Hertenberger, H.-F. Wirth, R. Krücken, M. Mahgoub, P. Maier-Komor
2009Fa.A	PrvCom	GAu	Mar	T. Faestermann
2009Fi03	PANUE	72,	580	I.N. Filikhin, V.M. Suslov, B. Vlahovic
2009Fl03	PRLTA	103,	142501	K.T. Flanagan, P. Vingerhoets, M. Avgoulea, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, M. De Rydt, V.N. Fedosseev, D.H. Forest, Ch. Geppert, U. Köster, M. Kowalska, J. Krämer, K.L. Kratz, A. Krieger, E. Mané, B.A. Marsh, T. Materna, L. Mathieu, P.L. Molkanov, R. Neugart, G. Neyens, W. Nörtershäuser, M.D. Seliverstov, O. Serot, M. Schug, M.A. Sjoedin, J.R. Stone, N.J. Stone, H.H. Stroke, G. Tungate, D.T. Yordanov, Yu. M. Volkov
2009Fo02	PRVCA	79,	027602	C.M. Folden III, I. Dragojevic, Ch. E. Düllmann, R. Eichler, M.A. Garcia, J.M. Gates, S.L. Nelson, R. Sudowe, K.E. Gregorich, D.C. Hoffman, H. Nitsche
2009Fo05	PRVCA	79,	064318	C.M. Folden III, A.S. Nettleton, A.M. Amthor, T.N. Ginter, M. Hausmann, T. Kubo, W. Loveland, S.L. Manikonda, D.J. Morrissey, T. Nakao, M. Portillo, B.M. Sherrill, G.A. Souliotis, B.F. Strong, H. Takeda, O.B. Tarasov
2009Fu05	EPJAA	39,	49	T. Fukuchi, T. Hori, T. Masue, K. Tajiri, A. Sato, T. Furukawa, A. Odahara, T. Shimoda, Y. Wakabayashi, Y. Gono, T. Suzuki, M. Ukai, T. Wakui, A. Yamazaki, Y. Miyashita, N. Sato, M. Tateoka, M. Ohguma, T. Shinozuka, T. Koike, K. Shirotori, Y. Miura, S. Kinoshita, Y. Ma, Y.Y. Fu, H. Tamura
2009Fu15	IMPEE	18,	2134	Y. Fujita, B. Rubio, W. Gelletly, B. Blank, T. Adachi, A. Algora, P. Ascher, R.B. Cakirli, G. de France, J. Giovinazzo, S. Grevy, H. Fujita, L. Kucuk, M. Marques, F. Molina, Y. Oktem, F. de Oliveira Santos, L. Perrot, R. Raabe, P.C. Srivastava, G. Susoy, A. Tamii, H.-C. Thomas
2009Ga05	PRLTA	102,	092501	L. Gaudefroy, J.M. Daugas, M. Hass, S. Grevy, Ch. Stodel, J.C. Thomas, L. Perrot, M. Girod, B. Rosse, J.C. Angelique, D.L. Balabanski, E. Fiori, C. Force, G. Georgiev, D. Kameda, V. Kumar, R.L. Lozeva, I. Matea, V. Meot, P. Morel, B.S. Nara Singh, F. Nowacki, G. Simpson
2009Ga24	NUPAB	826,	1	C. Gaulard, C. Bachelet, G. Audi, C. Guénaut, D. Lunney, M. de Saint Simon, M. Sewtz, C. Thibault

2009Ga40	PRVCA	80,	064303	A.B. Garnsworthy, P.H. Regan, S. Pietri, Y. Sun, F.R. Xu, D. Rudolph, M. Górska, L. Cáceres, Zs. Podolyák, S.J. Steer, R. Hoischen, A. Heinz, F. Becker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, H. Grawe, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopwicz, T. Saito, H. Schaffner, S. Tachenov, E. Werner-Malento, H.J. Wollersheim, G. Benzoni, B. Blank, C. Brandau, A.M. Bruce, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombrádi, E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, A. Jungclaus, M. Kmiecik, F.G. Kondev, T. Kurtukian-Nieto, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, M. Pfützner, S. Schwertel, T. Shizuma, A.J. Simons, P.M. Walker, O. Wieland
2009Go16	PRVCA	79,	064314	M.B. Gomez Hornillos, D. O'Donnell, J. Simpson, D.T. Joss, L. Bianco, B. Cederwall, T. Grahn, P.T. Greenlees, B. Hadinia, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, R.D. Page, E.S. Paul, M. Petri, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Saren, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo
2009Go29	PRVCA	80,	045501	J.R. Goodwin, V.V. Golovko, V.E. Iacob, J.C. Hardy
2009Go40	PYLBB	672,	313	M. Górska, L. Cáceres, H. Grawe, M. Pfützner, A. Jungclaus, S. Pietri, E. Werner-Malento, Z. Podolyák, P.H. Regan, D. Rudolph, P. Detistov, S. Lalkovski, V. Modamio, J. Walker, T. Beck, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H. Weick, H.-J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellstrom, G. Ilie, A. Khaplanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G.S. Simpson, S.J. Steer, S. Tashenov, O. Wieland, Zs. Dombrádi, P. Reiter, D. Sohler
2009Gr06	APOBB	40,	447	C.J. Gross, J.A. Winger, S.V. Ilyushkin, K.P. Rykaczewski, S.N. Liddick, I.G. Darby, R.K. Grzywacz, C.R. Bingham, D. Shapira, C. Mazzocchi, S. Padgett, M.M. Rajabali, L. Cartegni, E.F. Zganjar, A. Piechaczek, J.C. Batchelder, J.H. Hamilton, C.T. Goodin, A. Korgul, W. Krolas
2009Gu11	PRVCA	79,	054317	L. Gu, S.J. Zhu, J.H. Hamilton, A.V. Ramayya, J.K. Hwang, S.H. Liu, J.G. Wang, Y.X. Luo, J.O. Rasmussen, I.Y. Lee, X.L. Che, H.B. Ding, K. Li, Q. Xu, Y.Y. Yang, W.C. Ma
2009Gu17	PPNUE	40,	558	Yu. B. Gurov, S.V. Lapushkin, B.A. Chernyshev, V.G. Sandukovsky
2009Gy01	NUPAB	828,	1	Gy. Gyürky, G. Rastrepina, Z. Elekes, J. Farkas, Zs. Fülöp, G.G. Kiss, E. Somorjai, T. Szücs
2009Ha42	PRVCA	80,	064310	B. Hadinia, B. Cederwall, R.D. Page, M. Sandzelius, C. Scholey, K. Andgren, T. Bäck, E. Ganioğlu, M.B. Gómez Hornillos, T. Grahn, P.T. Greenlees, E. Ideguchi, U. Jakobsson, A. Johnson, P.M. Jones, R. Julin, J. Juutinen, S. Ketelhut, A. Khaplanov, M. Leino, M. Niikura, M. Nyman, I. Özgür, E.S. Paul, P. Peura, P. Rahkila, J. Sarén, J. Sorri, J. Uusitalo, R. Wyss
2009Ha.B	NIMAE	606,	484	H. Hayashi, M. Shibata,I. Miyazaki, O. Suematsu, Y. Kojima, K. Kawade, A. Taniguchi
2009He20	EPJAA	41,	145	F.P. Heßberger, S. Hofmann, B. Streicher, B. Sulignano, S. Antalic, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, A.G. Popeko, Š. Šáro, J. Uusitalo, A.V. Yeremin
2009He22	PRVCA	80,	064305	M. He, H. Shen, G. Shi, X. Yin, W. Tian, S. Jiang
2009He23	EPJAA	42,	333	R.-D. Herzberg, S. Moon, S. Eeckhaudt, P.T. Greenlees, P.A. Butler, T. Page, A.V. Afanasjev, N. Amzal, J.E. Bastin, F. Becker, M. Bender, B. Bruyneel, J.F.C. Cocks, I.G. Darby, O. Dorvaux, K. Eskola, J. Gerl, T. Grahn, C. Gray-Jones, N.J. Hammond, K. Hauschild, P.-H. Heenen, K. Helariutta, A. Herzberg, F. Hessberger, M. Houry, A. Hurstel, R.D. Humphreys, G.D. Jones, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, T.L. Khoo, W. Korten, P. Kuusiniemi, Y. LeCoz, M. Leino, A.-P. Leppänen, C.J. Lister, R. Lucas, M. Muikku, P. Nieminen, M. Nyman, R.D. Page, T. Page, J. Pakarinen, A. Pritchard, P. Rahkila, P. Reiter, M. Sandzelius, J. Saren, Ch. Schlegel, C. Scholey, Ch. Theisen, W.H. Trzaska, J. Uusitalo, A. Wiens, H.J. Wollersheim

2009Hy01	PYLBB	678,	459	S. Hyldegaard, C. Forssen, C. Aa. Diget, M. Alcorta, F.C. Barker, B. Bastin, M.J.G. Borge, R. Boutami, S. Brandenburg, J. Buscher, P. Dendooven, P. Van Duppen, T. Eronen, S. Fox, B.R. Fulton, H.O.U. Fynbo, J. Huikari, M. Huyse, H.B. Jeppesen, A. Jokinen, B. Jonson, K. Jungmann, A. Kankainen, O. Kirsebom, M. Madurga, I. Moore, P. Navratil, T. Nilsson, G. Nyman, G.J.G. Onderwater, H. Penttila, K. Perajarvi, R. Raabe, K. Riisager, S. Rinta-Antila, A. Rogachevskiy, A. Saastamoinen, M. Sohani, O. Tengblad, E. Traykov, J.P. Vary, Y. Wang, K. Wilhelmsen, H.W. Wilschut, J. Aysto
2009Il01	PRVCA	80,	054304	S.V. Ilyushkin, J.A. Winger, C.J. Gross, K.P. Rykaczewski, J.C. Batchelder, L. Cartegni, I.G. Darby, C. Goodin, R. Grzywacz, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, C. Mazzocchi, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, E.F. Zganjar
2009In01	PRVCA	79,	034313	T.T. Inamura, H. Haba
2009Je01	PRVCA	79,	031303	H.B. Jeppesen, I. Dragojević, R.M. Clark, K.E. Gregorich, M.N. Ali, J.M. Allmond, C.W. Beausang, D.L. Bleuel, M. Cromaz, M.A. Deleplanque, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, J.P. Greene, S. Gros, I.Y. Lee, H.L. Liu, A.O. Macchiavelli, S.L. Nelson, H. Nitsche, J.R. Pavan, L. Stavsetra, F.S. Stephens, M. Wiedeking, R. Wyss, F.R. Xu
2009Je02	PRVCA	80,	034324	H.B. Jeppesen, R.M. Clark, K.E. Gregorich, A.V. Afanasjev, M.N. Ali, J.M. Allmond, C.W. Beausang, M. Cromaz, M.A. Deleplanque, I. Dragojevic, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, S. Gros, I.Y. Lee, A.O. Macchiavelli, S.L. Nelson, H. Nitsche, L. Stavsetra, F.S. Stephens, M. Wiedeking
2009Je05	PRVCA	80,	054303	D.G. Jenkins
2009Ka30	PRVCA	80,	045809	L.W. Kastens, S.B. Cahn, A. Manzur, D.N. McKinsey
2009Ke.A	PrvCom	GAu	Nov	J. Ketelaer
2009Ki14	PRVCA	80,	034315	H. Kikunaga, Y. Kasamatsu, H. Haba, T. Mitsugashira, M. Hara, K. Takamiya, T. Ohtsuki, A. Yokoyama, T. Nakanishi, A. Shinohara
2009Ko19	PRVCA	80,	014304	F.G. Kondev, G.D. Dracoulis, G.J. Lane, I. Ahmad, A.P. Byrne, M.P. Carpenter, P. Chowdhury, R.V.F. Janssens, T. Kibédi, T. Lauritsen, C.J. Lister, D. Seweryniak, S.K. Tandel, S. Zhu
2009Ko35	EPJAA	42,	351	M. Kowalska, S. Naimi, J. Agramunt, A. Algora, G. Audi, D. Beck, B. Blank, K. Blaum, Ch. Böhm, M. Breitenfeldt, E. Estevez, L.M. Fraile, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, D. Lunney, E. Minaya-Ramirez, D. Neidherr, B. Olaizola, K. Riisager, M. Rosenbusch, B. Rubio, S. Schwarz, L. Schweikhard, U. Warring
2009Ku19	PRVCA	80,	035502	T. Kurtukian Nieto, J. Souin, T. Eronen, L. Audirac, J. Äystö, B. Blank, V.-V. Elomaa, J. Giovinazzo, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, T. Kessler, I.D. Moore, H. Penttilä, S. Rahaman, M. Reponen, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber
2009Ku28	NUPAB	827,	587c	T. Kurtukian-Nieto, J. Benlliure, K.-H. Schmidt, L. Audouin, F. Becker, B. Blank, I.N. Borzov, E. Casarejos, M. Fernández-Ordóñez, J. Giovinazzo, D. Henzlova, B. Jurado, K. Langanke, G. Martínez-Pinedo, J. Pereira, F. Rejmund, O. Yordanov
2009Kw02	PRVCA	80,	051302	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, C.M. Campbell, D.L. Lincoln, D.J. Morrissey, G.K. Pang, A.M. Prinke, J. Savory, S. Schwarz, C.M. Folden III, D. Melconian, S.K.L. Sjue, M. Block
2009La17	PRVCA	80,	024321	G.J. Lane, G.D. Dracoulis, A.P. Byrne, R.O. Hughes, H. Watanabe, F.G. Kondev, C.J. Chiara, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, D. Seweryniak, S. Zhu, P. Chowdhury, I. Stefanescu
2009Le02	PYLBB	672,	6	J.-L. Lecouey, N.A. Orr, F.M. Marqués, N.L. Achouri, J.-C. Angélique, B.A. Brown, F. Carstoiu, W.N. Catford, N.M. Clarke, M. Freer, B.R. Fulton, S. Grévy, F. Hanappe, K.L. Jones, M. Labiche, R.C. Lemmon, A. Ninane, E. Sauvan, K.M. Spohr, L. Stuttgé
2009Le03	PRVCA	79,	014318	A.I. Levon, G. Graw, Y. Eisermann, R. Hertenberger, J. Jolie, N. Yu. Shirikova, A.E. Stuchbery, A.V. Sushkov, P.G. Thirolf, H.-F. Wirth, N.V. Zamfir
2009Le26	PRVCA	80,	044308	M. Lebois, D. Verney, F. Ibrahim, S. Essabaa, F. Azaiez, M.C. Mhamed, E. Cottereau, P.V. Cuong, M. Ferraton, K. Flanagan, S. Franchoo, D. Guillemaud-Mueller, F. Hammache, C. Lau, F. Le Blanc, J.-F. Le Du, J. Libert, B. Mouginot, C. Petrache, B. Roussiere, L. Sagui, N. de Sereville, I. Stefan, B. Tastet

2009Le.A	PrvCom	GAu	May	A.I. Levon
2009Li51	PRVCA	80,	054315	Z.H. Li, J.L. Lou, Y.L. Ye, H. Hua, D.X. Jiang, X.Q. Li, S.Q. Zhang, T. Zheng, Y.C. Ge, Z. Kong, L.H. Lv, C. Li, F. Lu, F.Y. Fan, Z.Y. Li, Z.X. Cao, L.Y. Ma, Q. Faisal, H.S. Xu, Z.G. Hu, M. Wang, X.G. Lei, L.M. Duan, Z.G. Xiao, W.L. Zhan, G.Q. Xiao, T.H. Huang, F. Fu, X.H. Zhang, C. Zheng, Y.H. Yu, X.L. Tu, Y.P. Zhang, Y.Y. Yang, H.B. Zhang, B. Thang, Y.L. Tian, Z. Ouang, M.R. Huang, Z.G. Xu, K. Yue, Q. Gao
2009Mo12	JUPSA	78,	064201	K. Morita, K. Morimoto, D. Kaji, H. Haba, K. Ozeki, Y. Kudou, N. Sato, T. Sumita, A. Yoneda, T. Ichikawa, Y. Fujimori, S. Goto, E. Ideguchi, Y. Kasamatsu, K. Katori, Y. Komori, H. Koura, H. Kudo, K. Ooe, A. Ozawa, F. Tokanai, K. Tsukada, T. Yamaguchi, A. Yoshida
2009Mo23	PRLTA	103,	122502	B.J. Mount, M. Redshaw, E.G. Myers
2009Mu17	EPJAA	42,	421	I. Mukha, For the S271 Collaboration
2009Na.A	PrvCom	GAu	Nov	S. Naimi
2009Ne02	PRVCA	79,	027605	S.L. Nelson, K.E. Gregorich, I. Dragojevic, J. Dvorak, P.A. Ellison, M.A. Garcia, J.M. Gates, L. Stavsetra, M.N. Ali, H. Nitsche
2009Ne03	PRLTA	102,	112501	D. Neidherr, G. Audi, D. Beck, K. Blaum, Ch. Böhm, M. Breitenfeldt, R.B. Cakirli, R.F. Casten, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, E. Noah, L. Penescu, M. Rosenbusch, S. Schwarz, L. Schweikhard, T. Stora
2009Ne11	PRVCA	80,	044323	D. Neidherr, R.B. Cakirli, G. Audi, D. Beck, K. Blaum, Ch. Böhm, M. Breitenfeldt, R.F. Casten, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, M. Rosenbusch, S. Schwarz, L. Schweikhard
2009Od01	PRVCA	79,	051304	D. O'Donnell, J. Simpson, C. Scholey, T. Back, P.T. Greenlees, U. Jakobsson, P. Jones, D.T. Joss, D.S. Judson, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, R.D. Page, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Saren, J. Thomson, J. Uusitalo, H.V. Watkins
2009Pa16	PRVCA	79,	044309	D. Pauwels, O. Ivanov, N. Bree, J. Buscher, T.E. Cocolios, M. Huyse, Yu. Kudryavtsev, R. Raabe, M. Sawicka, J. Van de Walle, P. Van Duppen, A. Korgul, I. Stefanescu, A.A. Hecht, N. Hoteling, A. Wohr, W.B. Walters, R. Broda, B. Fornal, W. Krolas, T. Pawlat, J. Wrzesinski, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, J.R. Stone, X. Wang
2009Pa25	PRVCA	79,	064323	S. Pascu, Gh. Cata-Danil, D. Bucurescu, N. Marginean, N.V. Zamfir, G. Graw, A. Gollwitzer, D. Hofer, B.D. Valnion
2009Pa35	PRVCA	80,	034307	N. Patronis, H. De Witte, M. Gorska, M. Huyse, K. Kruglov, D. Pauwels, K. Van de Vel, P. Van Duppen, J. Van Roosbroeck, J.-C. Thomas, S. Franchoo, J. Cederkall, V.N. Fedoseyev, H. Fynbo, U. Georg, O. Jonsson, U. Köster, T. Materna, L. Mathieu, O. Serot, L. Weissman, W.F. Mueller, V.I. Mishin, D. Fedorov
2009Pe06	PRVCA	79,	035806	J. Pereira, S. Hennrich, A. Aprahamian, O. Arndt, A. Becerril, T. Elliot, A. Estrade, D. Galaviz, R. Kessler, K.-L. Kratz, G. Lorusso, P.F. Mantica, M. Matos, P. Möller, F. Montes, B. Pfeiffer, H. Schatz, F. Schertz, L. Schnorrenberger, E. Smith, A. Stolz, M. Quinn, W.B. Walters, A. Wöhr
2009Pe31	EPJAA	42,	379	J. Perkowski, J. Andrzejewski, J. Srebrny, A.M. Bruce, Ch. Droste, E. Grodner, M. Kisieliński, A. Korman, M. Kowalczyk, J. Kownacki, A. Król, J. Marganiec, J. Mierzejewski, T. Morek, K. Sobczak, W.H. Trzaska, M. Zielińska
2009Qi04	PRVCA	79,	064319	J. Qian, A. Heinz, T.L. Khoo, R.V.F. Janssens, D. Peterson, D. Seweryniak, I. Ahmad, M. Asai, B.B. Back, M.P. Carpenter, A.B. Garnsworthy, J.P. Greene, A.A. Hecht, C.L. Jiang, F.G. Kondev, T. Lauritsen, C.J. Lister, A. Robinson, G. Savard, R. Scott, R. Vondrasek, X. Wang, R. Winkler, S. Zhu
2009Ra11	PRLTA	103,	042501	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, C. Weber, J. Äystö
2009Ra33	PRVCA	80,	054307	R. Raabe, J. Buscher, J. Ponsaers, F. Aksouh, M. Huyse, O. Ivanov, S.R. Lesher, I. Mukha, D. Pauwels, M. Sawicka, D. Smirnov, I. Stefanescu, J. Van de Walle, P. Van Duppen, C. Angulo, J. Cabrera, N. de Sereville, I. Martel, A.M. Sanchez-Benitez, C. Aa. Diget
2009Re03	PRVAA	79,	012506	M. Redshaw, B.J. Mount, E.G. Myers
2009Re07	PRLTA	102,	212502	M. Redshaw, B.J. Mount, E.G. Myers, F.T. Avignone III
2009Re15	PRVAA	79,	012507	M. Redshaw, B.J. Mount, E.G. Myers

2009Ri03	PYLBB	675,	170	R. Ringle, M. Brodeur, T. Brunner, S. Ettenauer, M. Smith, A. Lapierre, V.L. Ryjkov, P. Delheij, G.W.F. Drake, J. Lassen, D. Lunney, J. Dilling
2009Ri12	PRVCA	80,	064321	R. Ringle, C. Bachelet, M. Block, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A.M. Prinke, J. Savory, P. Schury, S. Schwarz, C.S. Sumithrarachchi
2009Ru08	PRLTA	103,	072502	G. Rugel, T. Faestermann, K. Knie, G. Korschinek, M. Poutivtsev, D. Schumann, N. Kivel, I. Günther-Leopold, R. Weinreich, M. Wohlmuther
2009Sa09	EPJAA	39,	33	J. Sauvage, J. Genevey, B. Roussière, S. Franchoo, A.N. Andreyev, N. Barré, J.-F. Clavelin, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, L.M. Fraile, X. Grave, G. Huber, M. Huyse, H.B. Jeppesen, U. Köster, P. Kunz, S.R. Lesher, B.A. Marsh, I. Mukha, J. Oms, M. Seliverstov, I. Stefanescu, K. Van de Vel, J. Van de Walle, P. Van Duppen, Yu. M. Volkov
2009Sa12	PRLTA	102,	132501	J. Savory, P. Schury, C. Bachelet, M. Block, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, E. Kwan, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A. Prinke, R. Ringle, H. Schatz, S. Schwarz, C.S. Sumithrarachchi
2009Sa27	PRVCA	79,	064315	M. Sandzelius, E. Ganioglu, B. Cederwall, B. Hadinia, K. Andgren, T. Back, T. Grahn, P. Greenlees, U. Jakobsson, A. Johnson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, P. Peura, P. Rahkila, J. Saren, C. Scholey, J. Uusitalo, R. Wyss
2009Sa38	PRVCA	80,	044330	A. Saastamoinen, T. Eronen, A. Jokinen, V.-V. Elomaa, J. Hakala, A. Kankainen, I.D. Moore, S. Rahaman, J. Rissanen, C. Weber, J. Äystö, L. Trache
2009Sc19	PRVCA	80,	025501	N.D. Scielzo, S. Caldwell, G. Savard, J.A. Clark, C.M. Deibel, J. Fallis, S. Gulick, D. Lascar, A.F. Levand, G. Li, J. Mintz, E.B. Norman, K.S. Sharma, M. Sternberg, T. Sun, J. Van Schelt
2009Se13	EPJAA	41,	315	M.D. Seliverstov, A.N. Andreyev, N. Barre, A.E. Barzakh, S. Dean, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, L.M. Fraile, S. Franchoo, J. Genevey, G. Huber, M. Huyse, U. Koster, P. Kunz, S.R. Lesher, B.A. Marsh, I. Mukha, B. Roussiere, J. Sauvage, I. Stefanescu, K. Van de Vel, P. Van Duppen, Yu. M. Volkov
2009Sh17	EPJAA	39,	263	T. Shizuma, T. Ishii, H. Makii, T. Hayakawa, M. Matsuda
2009Si21	PRVCA	80,	024304	G.S. Simpson, W. Urban, J. Genevey, R. Orlandi, J.A. Pinston, A. Scherillo, A.G. Smith, J.F. Smith, I. Ahmad, J.P. Greene
2009Si35	PRVCA	80,	064608	E.C. Simpson, J.A. Tostevin, Zs. Podolyák, P.H. Regan, S.J. Steer
2009St04	PRVCA	79,	015803	J.B. Stoker, P.F. Mantica, D. Bazin, A. Becerril, J.S. Berryman, H.L. Crawford, A. Estrade, C.J. Guess, G.W. Hitt, G. Lorusso, M. Matos, K. Minamisono, F. Montes, J. Pereira, G. Perdikakis, H. Schatz, K. Smith, R.G.T. Zegers
2009St16	IMPEE	18,	1002	S.J. Steer, Zs. Podolyák, S. Pietri, M. Górska, G.F. Farrelly, P.H. Regan, D. Rudolph, A.B. Garnsworthy, R. Hoischen, J. Gerl, H.J. Wollersheim, H. Grawe, K.H. Maier, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, H. Geissel, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tashenov, A. Heinz, T. Kurtukiannieto, G. Benzoni, M. Pfützner, A. Jungclaus, D.L. Balabanski, C. Brandau, A. Brown, A.M. Bruce, W.N. Catford, I.J. Cullen, Zs. Dombrádi, M.E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, F.G. Kondev, R. Krücken, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, S. Schwertel, T. Shizuma, P.M. Walker, E. Werner-Malento, O. Wieland
2009St21	PRLTA	103,	132502	L. Stavsetra, K.E. Gregorich, J. Dvorak, P.A. Ellison, I. Dragojević, M.A. Garcia, H. Nitsche
2009St28	EPJAA	42,	407	I. Stefanescu, W.B. Walters, P.F. Mantica, B.A. Brown, A.D. Davies, A. Estrade, P.T. Hosmer, N. Hoteling, S.N. Liddick, W.D.M. Rae, T.J. Mertzimekis, F. Montes, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, D. Seweryniak, H. Schatz, J. Shergur, A. Stolz, J.R. Stone, B.E. Tomlin
2009Su14	PRLTA	103,	152503	D. Suzuki, H. Iwasaki, D. Beaumel, L. Nalpas, E. Pollacco, M. Assie, H. Baba, Y. Blumenfeld, N. De Sereville, A. Drouart, S. Franchoo, A. Gillibert, J. Guillot, F. Hammache, N. Keeley, V. Lapoux, F. Marechal, S. Michimasa, X. Mougeot, I. Mukha, H. Okamura, H. Otsu, A. Ramus, P. Roussel-Chomaz, H. Sakurai, J.-A. Scarpaci, O. Sorlin, I. Stefan, M. Takechi
2009Ta24	PRVCA	80,	034609	O.B. Tarasov, M. Portillo, A.M. Amthor, T. Baumann, D. Bazin, A. Gade, T.N. Ginter, M. Hausmann, N. Inabe, T. Kubo, D.J. Morrissey, A. Nettleton, J. Pereira, B.M. Sherrill, A. Stolz, M. Thoennessen

2009Ur04	PRVCA	80,	037301	W. Urban, J.A. Pinston, G.S. Simpson, A.G. Smith, J.F. Smith, T. Rząca-Urban, I. Ahmad
2009Wa02	PRVCA	79,	024306	H. Watanabe, G.J. Lane, G.D. Dracoulis, T. Kibédi, A.P. Byrne, P. Nieminen, R.O. Hughes, F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury, C.-B. Moon
2009Wa11	PRVCA	79,	064311	H. Watanabe, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P. Nieminen, F.G. Kondev, K. Ogawa, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury
2009Wa24	EPJAA	42,	163	H. Watanabe, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P. Nieminen, F.G. Kondev, K. Ogawa, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury
2009Wi03	PRLTA	102,	142502	J.A. Winger, S.V. Ilyushkin, K.P. Rykaczewski, C.J. Gross, J.C. Batchelder, C. Goodin, R. Grzywacz, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, C. Mazzocchi, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, E.F. Zganjar, I.N. Borzov
2009Wi09	PYLBB	679,	36	N. Winckler, H. Geissel, Yu. A. Litvinov, K. Beckert, F. Bosch, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H.G. Essel, B. Fabian, T. Faestermann, A. Fragner, E. Haettner, S. Hess, P. Kienle, R. Knöbel, C. Kozhuharov, S.A. Litvinov, M. Mazzocco, F. Montes, G. Münzenberg, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plaß, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, S. Yu. Torilov, M. Trassinelli, B. Sun, H. Weick, M. Winkler
2009Wi10	PRLTA	103,	122501	J.S.E. Wieslander, J. Suhonen, T. Eronen, M. Hult, V.-V. Elomaa, A. Jokinen, G. Marissens, M. Misiaszek, M.T. Mustonen, S. Rahaman, C. Weber, J. Äystö

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2010Ac.A	AnRpt GSI			D. Ackermann et al
2010Ad03	PRVCA	81,	024311	N. Adimi, R. Dominguez-Reyes, M. Alcorta, A. Bey, B. Blank, M.J.G. Borge, F. de Oliveira Santos, C. Dossat, H.O.U. Fynbo, J. Giovinazzo, H.H. Knudsen, M. Madurga, I. Matea, A. Perea, K. Summerer, O. Tengblad, J.C. Thomas
2010Al24	PRVCA	82,	041602	H. Alvarez-Pol, J. Benlliure, E. Casarejos, L. Audouin, D. Cortina-Gil, T. Enqvist, B. Fernandez-Dominguez, A.R. Junghans, B. Jurado, P. Napolitani, J. Pereira, F. Rejmund, K.-H. Schmidt, O. Yordanov
2010An01	JPGPE	37,	035102	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, Š. Šáro, P. Van Duppen, M. Venhart, H.V. Watkins
2010An02	PRVCA	81,	011901	N.G. Antoniou, F.K. Diakonos, A.S. Kapoyannis
2010An08	EPJAA	43,	35	S. Antalic, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, Š. Šáro
2010An13	PRLTA	105,	252502	A.N. Andreyev, J. Elseviers, M. Huyse, P. Van Duppen, S. Antalic, A. Barzakh, N. Bree, T.E. Cocolios, V.F. Comas, J. Diriken, D. Fedorov, V. Fedosseev, S. Franchoo, J.A. Heredia, O. Ivanov, U. Köster, B.A. Marsh, P. Van den Bergh, J. Van De Walle, K. Nishio, R.D. Page, N. Patronis, M. Seliverstov, I. Tsekhanovich, M. Venhart, S. Vermote, M. Veselsky, C. Wagemans, T. Ichikawa, A. Iwamoto, P. Möller, A.J. Sierk
2010Ar07	NUPAB	847,	168	J. Argyriades, for the NEMO-3 Collaboration
2010As.A	AnRpt JAEA		21	M. Asai, K. Tsukada, N. Sato, T.K. Sato, A. Toyoshima, T. Ishii, Y. Nagame (JAEA-Review 2010-056)
2010Ba31	JPGPE	37,	105103	K. Baczynska, J. Billowes, P. Campbell, F.C. Charlwood, B. Cheal, T. Eronen, D.H. Forest, A. Jokinen, T. Kessler, I.D. Moore, M. Rüffer, G. Tungate, J. Äystö
2010Ba43	PRVCA	82,	045501	G.C. Ball, G. Boisvert, P. Bricault, R. Churchman, M. Dombsky, T. Lindner, J.A. Macdonald, E. Vandervoort, S. Bishop, J.M. D'Auria, J.C. Hardy, V.E. Iacob, J.R. Leslie, H.-B. Mak
2010Ba48	NUPAB	847,	121	M. Balodis, I. Tomandl, V. Bondarenko, L. Simonova, T. Krasta, J. Bērziņš

2010Be16	PRVCA	81,	064325	J.S. Berryman, R.M. Clark, K.E. Gregorich, J.M. Allmond, D.L. Bleuel, M. Cromaz, I. Dragojević, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, S. Gros, I.Y. Lee, A.O. Macchiavelli, H. Nitsche, S. Paschalis, M. Petri, J. Qian, M.A. Stoyer, M. Wiedeking
2010Bi03	PYLBB	690,	15	L. Bianco, R.D. Page, I.G. Darby, D.T. Joss, J. Simpson, J.S. Al-Khalili, A.J. Cannon, B. Cederwall, S. Eeckhaudt, S. Ertürk, B. Gall, M.B. Gómez Hornillos, T. Grahn, P.T. Greenlees, B. Hadinia, K. Heyde, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, A.-P. Leppänen, M. Nyman, D. O'Donnell, E.S. Paul, M. Petri, P. Peura, A. Puurunen, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Sarén, C. Scholey, N.A. Smirnova, A.N. Steer, P.D. Stevenson, E.B. Suckling, J. Thomson, J. Uusitalo, M. Venhart
2010Bl09	EPJAA	44,	363	B. Blank, C. Borcea, G. Canchel, C.-E. Demonchy, F. de Oliveira Santos, C. Dossat, J. Giovinazzo, S. Grevy, L. Hay, P. Hellmuth, S. Leblanc, I. Matea, J.-L. Pedroza, L. Perrot, J. Pibernat, A. Rebii, L. Serani, J.C. Thomas
2010Bo.A	PrvCom	WgM	Sep	C. Boehm
2010Br02	PRVCA	81,	034313	M. Breitenfeldt, Ch. Borgmann, G. Audi, S. Baruah, D. Beck, K. Blaum, Ch. Böhm, R.B. Cakirli, R.F. Casten, P. Delahaye, M. Dworschak, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, D. Neidherr, M. Rosenbusch, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2010Br15	PRVCA	82,	044312	A.M. Bruce, S. Lalkovski, A.M.D. Bacelar, M. Górska, S. Pietri, Zs. Podolyák, Y. Shi, P.M. Walker, F.R. Xu, P. Bednarczyk, L. Cáceres, E. Casarejos, I.J. Cullen, P. Doornenbal, G.F. Farrelly, A.B. Garnsworthy, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, C. Hinke, G. Ilie, G. Jaworski, I. Kojouharov, N. Kurz, S. Myalski, M. Palacz, W. Prokopowicz, P.H. Regan, H. Schaffner, S. Steer, S. Tashenov, H.J. Wollersheim
2010Ch16	PRLTA	104,	252502	B. Cheal, E. Mané, J. Billowes, M.L. Bissell, K. Blaum, B.A. Brown, F.C. Charlwood, K.T. Flanagan, D.H. Forest, C. Geppert, M. Honma, A. Jokinen, M. Kowalska, A. Krieger, J. Krämer, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, M. Schug, H.H. Stroke, P. Vingerhoets, D.T. Yordanov, M. Záková
2010Ch18	NIMBE	268,	192	J. Chmeleff, F. von Blanckenburg, K. Kossert, D. Jakob
2010Ch19	PYLBB	691,	234	L. Chen, W.R. Plaß, H. Geissel, R. Knöbel, C. Kozhuharov, Yu. A. Litvinov, Z. Patyk, C. Scheidenberger, K. Siegień-Iwaniuk, B. Sun, H. Weick, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, J.J. Carroll, D.M. Cullen, I.J. Cullen, B. Franzke, J. Gerl, M. Górska, G.A. Jones, A. Kishada, J. Kurcewicz, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Münzenberg, F. Nolden, T. Ohtsubo, Zs. Podolyák, R. Propri, S. Rigby, N. Saito, T. Saito, M. Shindo, M. Steck, P. Ugorowski, P.M. Walker, S. Williams, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2010Cl01	PYLBB	690,	19	R.M. Clark, K.E. Gregorich, J.S. Berryman, M.N. Ali, J.M. Allmond, C.W. Beausang, M. Cromaz, M.A. Deleplanque, I. Dragojevic, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, S. Gros, H.B. Jeppesen, D. Kaji, I.Y. Lee, A.O. Macchiavelli, K. Morimoto, H. Nitsche, S. Paschalis, M. Petri, L. Stavsetra, F.S. Stephens, H. Watanabe, M. Wiedeking
2010Co01	PRVCA	81,	014314	T.E. Cocolios, A.N. Andreyev, B. Bastin, N. Bree, J. Buscher, J. Elseviers, J. Gentens, M. Huyse, Yu. Kudryavtsev, D. Pauwels, T. Sonoda, P. Van den Bergh, P. Van Duppen
2010Co13	JPGPE	37,	125130	T.E. Cocolios, A.N. Andreyev, S. Antalic, A. Barzakh, B. Bastin, J. Büscher, I.G. Darby, W. Dexters, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, E. Mane, B.A. Marsh, P. Molkanov, R.D. Page, M.D. Seliverstov, A.M. Sjoedin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart, S. Zemlyanoy
2010Cr02	PRVCA	82,	014311	H.L. Crawford, R.V.F. Janssens, P.F. Mantica, J.S. Berryman, R. Broda, M.P. Carpenter, N. Cieplicka, B. Fornal, G.F. Grinyer, N. Hoteling, B.P. Kay, T. Lauritsen, K. Minamisono, I. Stefanescu, J.B. Stoker, W.B. Walters, S. Zhu

2010Da06	PRVCA	81,	034304	J.M. Daugas, T. Faul, H. Grawe, M. Pfützner, R. Grzywacz, M. Lewitowicz, N.L. Achouri, J.C. Angélique, D. Baiborodin, R. Béntida, R. Béraud, C. Borcea, C.R. Bingham, W.N. Catford, A. Emsallem, G. de France, K.L. Grzywacz, R.C. Lemmon, M.J. Lopez Jimenez, F. de Oliveira Santos, P.H. Regan, K. Rykaczewski, J.E. Sauvestre, M. Sawicka, M. Stanoiu
2010Da17	PRLTA	105,	162502	I.G. Darby, R.K. Grzywacz, J.C. Batchelder, C.R. Bingham, L. Cartegni, C.J. Gross, M. Hjorth-Jensen, D.T. Joss, S.N. Liddick, W. Nazarewicz, S. Padgett, R.D. Page, T. Papenbrock, M.M. Rajabali, J. Rotureau, K.P. Rykaczewski
2010Dr02	PRVCA	81,	054313	G.D. Dracoulis, G.J. Lane, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu
2010Dr05	PRVCA	82,	034317	G.D. Dracoulis, G.J. Lane, R.O. Hughes, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu, P. Chowdhury
2010Du06	PRLTA	104,	252701	Ch. E. Düllmann, M. Schädel, A. Yakushev, A. Türler, K. Eberhardt, J.V. Kratz, D. Ackermann, L.-L. Andersson, M. Block, W. Brüchle, J. Dvorak, H.G. Essel, P.A. Ellison, J. Even, J.M. Gates, A. Gorshkov, R. Graeger, K.E. Gregorich, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J. Krier, N. Kurz, S. Lahiri, D. Liebe, B. Lommel, M. Maiti, H. Nitsche, J.P. Omtvedt, E. Parr, D. Rudolph, J. Runke, B. Schausten, E. Schimpf, A. Semchenkov, J. Steiner, P. Thörle-Pospiech, J. Uusitalo, M. Wegrzecki, N. Wiehl
2010Dw01	PRVCA	81,	064312	M. Dworschak, M. Block, D. Ackermann, G. Audi, K. Blaum, C. Droese, S. Eliseev, T. Fleckenstein, E. Haettner, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, J. Ketter, H.-J. Kluge, G. Marx, M. Mazzocco, Yu. N. Novikov, W.R. Plaß, A. Popeko, S. Rahaman, D. Rodríguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, G.K. Vorobyev, M. Wang, C. Weber
2010El06	PRLTA	105,	182701	P.A. Ellison, K.E. Gregorich, J.S. Berryman, D.L. Bleuel, R.M. Clark, I. Dragojević, J. Dvorak, P. Fallon, C. Fineman-Sotomayor, J.M. Gates, O.R. Gothe, I.Y. Lee, W.D. Loveland, J.P. McLaughlin, S. Paschalis, M. Petri, J. Qian, L. Stavsetra, M. Wiedeking, H. Nitsche
2010El11	PYLBB	693,	426	S. Eliseev, Ch. Böhm, D. Beck, K. Blaum, M. Breitenfeldt, V.N. Fedosseev, S. George, F. Herfurth, A. Herlert, H.-J. Kluge, M. Kowalska, D. Lunney, S. Naimi, D. Neidherr, Yu. N. Novikov, M. Rosenbusch, L. Schweikhard, S. Schwarz, M. Seliverstov, K. Zuber
2010Et01	PRVCA	81,	024314	S. Ettenauer, M. Brodeur, T. Brunner, A.T. Gallant, A. Lapierre, R. Ringle, M.R. Pearson, P. Delheij, J. Lassen, D. Lunney, J. Dilling
2010Fe01	PRVCA	81,	044318	R. Ferrer, M. Block, C. Bachelet, B.R. Barquest, G. Bollen, C.M. Campbell, M. Facina, C.M. Folden III, C.M. Folden, C. Guénaut, A.A. Kwiatkowski, D.L. Lincoln, D.J. Morrissey, G.K. Pang, A.M. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz
2010Fi02	PRVCA	81,	029801	L.V. Filkov, V.L. Kashevarov
2010Fl01	PRVCA	82,	027309	X. Flechard, E. Lienard, O. Naviliat-Cuncic, D. Rodriguez, M.A.G. Alvarez, G. Ban, B. Carniol, D. Etasse, J.M. Fontbonne, A.M. Lallena, J. Praena
2010Go16	PYLBB	692,	307	V.Z. Goldberg, B.T. Roeder, G.V. Rogachev, G.G. Chubarian, E.D. Johnson, C. Fu, A.A. Alharbi, M.L. Avila, A. Banu, M. McCleskey, J.P. Mitchell, E. Simmons, G. Tabacaru, L. Trache, R.E. Tribble
2010Gr04	PRVCA	81,	061601	R. Graeger, D. Ackermann, M. Chelnokov, V. Chepigin, Ch. E. Düllmann, J. Dvorak, J. Even, A. Gorshkov, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J.V. Kratz, J. Krier, A. Kuznetsov, B. Lommel, K. Nishio, H. Nitsche, J.P. Omtvedt, O. Petrushkin, D. Rudolph, J. Runke, F. Samadani, M. Schädel, B. Schausten, A. Türler, A. Yakushev, Q. Zhi
2010Ha04	PRVCA	81,	021302	C.C. Hall, E.M. Lunderberg, P.A. DeYoung, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, B.A. Brown, J. Brown, G. Christian, D.H. Denby, J. Finck, N. Frank, A. Gade, J. Hinnefeld, C.R. Hoffman, B. Luther, S. Mosby, W.A. Peters, A. Spyrou, M. Thoennessen
2010Ha38	NIMAE	613,	79	H. Hayashi, Y. Kojima, M. Shibata, K. Kawade

2010He10	EPJAA	43,	55	F.P. Heßberger, S. Antalic, B. Sulignano, D. Ackermann, S. Heinz, S. Hofmann, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, Š. Šáro, B. Streicher, J. Uusitalo, M. Venhart, A.V. Yeremin
2010He11	EPJAA	43,	175	F.P. Heßberger, S. Antalic, D. Ackermann, S. Heinz, S. Hofmann, J. Khuyagbaatar, B. Kindler, I. Kojouharov, B. Lommel, R. Mann
2010He25	EPJAA	46,	337	J.A. Heredia, A.N. Andreyev, S. Antalic, S. Hofmann, D. Ackermann, V.F. Comas, S. Heinz, F.P. Heßberger, B. Kindler, J. Khuyagbaatar, B. Lommel, R. Mann
2010Ho12	PRVCA	82,	025806	P. Hosmer, H. Schatz, A. Aprahamian, O. Arndt, R.R.C. Clement, A. Estrade, K. Farouqi, K.-L. Kratz, S.N. Liddick, A.F. Lisetskiy, P.F. Mantica, P. Möller, W.F. Mueller, F. Montes, A.C. Morton, M. Ouellette, E. Pellegrini, J. Pereira, B. Pfeiffer, P. Reeder, P. Santi, M. Steiner, A. Stolz, B.E. Tomlin, W.B. Walters, A. Wohr
2010Ia01	PRVCA	82,	035502	V.E. Iacob, J.C. Hardy, A. Banu, L. Chen, V.V. Golovko, J. Goodwin, V. Horvat, N. Nica, H.I. Park, L. Trache, R.E. Tribble
2010Il01	PYLBB	687,	305	G. Ilie, G. Neyens, G.S. Simpson, J. Jolie, A. Blazhev, H. Grawe, R.L. Lozeva, N. Vermeulen, L. Atanasova, D.L. Balabanski, F. Becker, P. Bednarczyk, C. Brandau, L. Caceres, S.K. Chamoli, J.M. Daugas, P. Doornenbal, J. Gerl, M. Górska, J. Grebosz, M. Hass, M. Ionescu-Bujor, A. Jungclaus, M. Kmiecik, I. Kojouharov, N. Kurz, A. Maj, S. Mallion, O. Perru, M. Pfützner, Zs. Podolyák, W. Prokopowicz, M. De Rydt, T.R. Saito, H. Schaffner, K. Turzó, J. Walker, E. Werner-Malento, H.J. Wollersheim
2010Ja05	PRVCA	82,	044302	U. Jakobsson, J. Uusitalo, S. Juutinen, M. Leino, P. Nieminen, K. Andgren, B. Cederwall, P.T. Greenlees, B. Hadinia, P. Jones, R. Julin, S. Ketelhut, A. Khaplanov, M. Nyman, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri
2010Jo06	NUPAB	842,	15	H.T. Johansson, Yu. Aksyutina, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulessa, C. Langer, M. Lantz, T. LeBleis, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Sümmerer, O. Tengblad, H. Weick, M.V. Zhukov
2010Jo07	NUPAB	847,	66	H.T. Johansson, Yu. Aksyutina, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulessa, C. Langer, M. Lantz, T. LeBleis, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, N.B. Shulgina, H. Simon, K. Sümmerer, O. Tengblad, H. Weick, M.V. Zhukov
2010Ka26	PRVCA	82,	034311	A. Kankainen, V.-V. Elomaa, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, T. Kessler, V.S. Kolhinen, I.D. Moore, S. Rahaman, M. Reponen, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2010Ka29	NUPAB	842,	1	D. Kanjilal, S. Bhattacharya, A. Goswami, R. Kshetri, R. Raut, S. Saha, R.K. Bhowmik, J. Gehlot, S. Muralithar, R.P. Singh, G. Jnaneswari, G. Mukherjee, B. Mukherjee
2010Ka30	PRVCA	82,	052501	A. Kankainen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, V.S. Kolhinen, M. Reponen, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2010Ke09	EPJDD	58,	47	J. Ketelaer, T. Beyer, K. Blaum, M. Block, K. Eberhardt, F. Herfurth, C. Smorra, Sz. Nagy
2010Kh06	EPJAA	46,	59	J. Khuyagbaatar, F.P. Heßberger, S. Hofmann, D. Ackermann, V.S. Comas, S. Heinz, J.A. Heredia, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, K. Nishio, A. Yakushev
2010Ko15	PYLBB	684,	17	V.S. Kolhinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, M. Kortelainen, J. Suhonen, J. Äystö

2010Ko17	PYLBB	690,	245	Y. Kondo, T. Nakamura, Y. Satou, T. Matsumoto, N. Aoi, N. Endo, N. Fukuda, T. Gomi, Y. Hashimoto, M. Ishihara, S. Kawai, M. Kitayama, T. Kobayashi, Y. Matsuda, N. Matsui, T. Motobayashi, T. Nakabayashi, T. Okumura, H.J. Ong, T.K. Onishi, K. Ogata, H. Otsu, H. Sakurai, S. Shimoura, M. Shinohara, T. Sugimoto, S. Takeuchi, M. Tamaki, Y. Togano, Y. Yanagisawa
2010Ko19	NIMBE	268,	187	G. Korschinek, A. Bergmaier, T. Faestermann, U.C. Gerstmann, K. Knie, G. Rugel, A. Wallner, I. Dillmann, G. Dollinger, Ch. Lierse von Gostomski, K. Kossert, M. Maiti, M. Poutivtsev, A. Remmert
2010Ko28	PRVCA	82,	022501	V.S. Kolhinen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, A. Kankainen, I.D. Moore, J. Rissanen, A. Saastamoinen, J. Suhonen, J. Äystö
2010Ku02	APOBB	41,	525	J. Kurcewicz, F. Bosch, H. Geissel, Yu. A. Litvinov, N. Winckler, K. Beckert, P. Beller, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H.G. Essel, B. Fabian, T. Faestermann, A. Fragner, B. Franzke, E. Haettner, M. Hausmann, S. Hess, P. Kienle, R. Knöbel, C. Kozhuharov, S.A. Litvinov, L. Maier, M. Mazzocco, F. Montes, A. Musumarra, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plass, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, B. Sun, K. Takahashi, S. Torilov, M. Trassinelli, H. Weick, M. Winkler
2010Ku25	PRVCA	82,	064318	J. Kurpeta, J. Rissanen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, P. Karvonen, I.D. Moore, H. Penttilä, A. Plochocki, S. Rahaman, S. Rinta-Antila, J. Ronkainen, A. Saastamoinen, T. Sonoda, J. Szerypo, W. Urban, Ch. Weber, J. Äystö
2010Kw02	PRVCA	81,	058501	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, C.M. Campbell, R. Ferrer, A.E. Gehring, D.L. Lincoln, D.J. Morrissey, G.K. Pang, J. Savory, S. Schwarz
2010La16	PRVCA	82,	051304	G.J. Lane, G.D. Dracoulis, F.G. Kondev, R.O. Hughes, H. Watanabe, A.P. Byrne, M.P. Carpenter, C.J. Chiara, P. Chowdhury, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, D. Seweryniak, I. Stefanescu, S. Zhu
2010La.A	PrvCom	GAu	Mar	Alain Lapierre
2010Li13	PRVCA	81,	045803	W.H. Lippincott, S.B. Cahn, D. Gastler, L.W. Kastens, E. Kearns, D.N. McKinsey, J.A. Nikkel
2010Lo14	ARISE	68,	1454	M. Loidl, M. Rodrigues, B. Censier, S. Kowalski, X. Mougeot, P. Cassette, T. Branger, D. Lacour
2010Ma08	PRVCA	81,	024302	P.J.R. Mason, D.M. Cullen, C. Scholey, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, P. Peura, A. Puurunen, P. Rahkila, P. Ruotsalainen, J. Sorri, J. Saren, J. Uusitalo, F.R. Xu
2010Ma20	PRVCA	81,	047301	F. Ma, X.H. Zhou, Y. Zheng, S.W. Xu, Y.X. Xie, L. Chen, X.G. Lei, Y.X. Guo, Y.H. Zhang, Z.K. Li, Y.H. Qiang, S. Guo, H.X. Wang, H.B. Zhou, B. Ding, G.S. Li, N.T. Zhang
2010Ma27	CPLEE	27,	062104	F. Ma, X.H. Zhou, Y. Zheng, S.W. Xu, Y.X. Xie, L. Chen, Y.H. Zhang, Z.K. Li, Y.H. Qiang, X.G. Lei, Y.X. Guo, S. Guo, B. Ding, H.X. Wang, G.S. Li, H.B. Zhou
2010Mc04	PRVCA	82,	024603	P.M. McCowan, R.C. Barber
2010Mo03	PRVCA	81,	032501	B.J. Mount, M. Redshaw, E.G. Myers
2010Mo09	PRVCA	81,	054304	V. Modamio, A. Jungclaus, A. Algora, D. Bazzacco, D. Escrig, L.M. Fraile, S. Lenzi, N. Marginean, T. Martinez, D.R. Napoli, R. Schwengner, C.A. Ur
2010Mo29	PRVAA	81,	064501	B.J. Mount, H.S.P. Müller, M. Redshaw, E.G. Myers
2010Mo30	PRVAA	82,	042513	B.J. Mount, M. Redshaw, E.G. Myers
2010Mu12	PRVCA	82,	054315	I. Mukha, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, I.A. Egorova, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, L. Grigorenko, J. Hofmann, O. Kiselev, A. Korsheninnikov, N. Kurz, Yu. A. Litvinov, E. Litvinova, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, N.K. Timofeyuk, H. Weick, P.J. Woods
2010Mu13	PRVCA	82,	054316	G. Mukherjee, P. Chowdhury, F.G. Kondev, P.M. Walker, G.D. Dracoulis, R. D'Alarcao, I. Shestakova, K. Abu Saleem, I. Ahmad, M.P. Carpenter, A. Heinz, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, I. Wiedenhoever, D.M. Cullen, C. Wheldon, D.L. Balabanski, M. Danchev, T.M. Goon, D.J. Hartley, L.L. Riedinger, O. Zeidan, M.A. Riley, R.A. Kaye, G. Sletten

2010Na13	PRLTA	105,	032502	S. Naimi, G. Audi, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, S. George, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, D. Lunney, D. Neidherr, M. Rosenbusch, S. Schwarz, L. Schweikhard, K. Zuber
2010Na17	PRVCA	82,	034323	F. Naqvi, M. Górska, L. Cáceres, A. Jungclaus, M. Pfützner, H. Grawe, F. Nowacki, K. Sieja, S. Pietri, E. Werner-Malento, P.H. Regan, D. Rudolf, Z. Podolyák, J. Jolie, K. Andgren, T. Beck, P. Bednarczyk, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, P. Detistov, Zs. Dombrádi, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, A. Khaplanov, I. Kojouharov, M. Kmiecik, N. Kurz, S. Lalkovski, A. Maj, S. Mandal, V. Modamio, F. Montes, S. Myalski, W. Prokopowicz, P. Reiter, H. Schaffner, G. Simpson, D. Sohler, S.J. Steer, S. Tashenov, J. Walker, O. Wieland, H.J. Wollersheim
2010Ni10	PRVCA	81,	064606	E. Yu. Nikolskii, A.A. Korsheninnikov, H. Otsu, H. Suzuki, K. Yoneda, H. Baba, K. Yamada, Y. Kondo, N. Aoi, A.S. Denikin, M.S. Golovkov, A.S. Fomichev, S.A. Krupko, M. Kurokawa, E.A. Kuzmin, I. Martel, W. Mittig, T. Motobayashi, T. Nakamura, M. Niikura, S. Nishimura, A.A. Ogloblin, P. Roussel-Chomaz, A. Sanchez-Benitez, Y. Satou, S.I. Sidorchuk, T. Suda, S. Takeuchi, K. Tanaka, G.M. Ter-Akopian, Y. Togano, M. Yamaguchi
2010Ni14	PRVCA	82,	024611	K. Nishio, S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, Y. Aritomo, V.F. Comas, Ch. E. Düllmann, A. Gorshkov, R. Graeger, K. Hagino, S. Heinz, J.A. Heredia, K. Hirose, H. Ikezoe, J. Khuyagbaatar, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, S. Mitsuoka, Y. Nagame, I. Nishinaka, T. Ohtsuki, A.G. Popeko, S. Saro, M. Schädel, A. Türler, Y. Watanabe, A. Yakushev, A.V. Yeremin
2010Og01	PRLTA	104,	142502	Yu. Ts. Oganessian, F. Sh. Abdullin, P.D. Bailey, D.E. Benker, M.E. Bennett, S.N. Dmitriev, J.G. Ezold, J.H. Hamilton, R.A. Henderson, M.G. Itkis, Yu. V. Lobanov, A.N. Mezentsev, K.J. Moody, S.L. Nelson, A.N. Polyakov, C.E. Porter, A.V. Ramayya, F.D. Riley, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, R. Sudowe, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin, P.A. Wilk
2010Oh02	JUPSA	79,	073201	T. Ohnishi, T. Kubo, K. Kusaka, A. Yoshida, K. Yoshida, M. Ohtake, N. Fukuda, H. Takeda, D. Kameda, K. Tanaka, N. Inabe, Y. Yanagisawa, Y. Gono, H. Watanabe, H. Otsu, H. Baba, T. Ichihara, Y. Yamaguchi, M. Takechi, S. Nishimura, H. Ueno, A. Yoshimi, H. Sakurai, T. Motobayashi, T. Nakao, Y. Mizoi, M. Matsushita, K. Ieki, N. Kobayashi, K. Tanaka, Y. Kawada, N. Tanaka, S. Deguchi, Y. Satou, Y. Kondo, T. Nakamura, K. Yoshinaga, C. Ishii, H. Yoshii, Y. Miyashita, N. Uematsu, Y. Shiraki, T. Sumikama, J. Chiba, E. Ideguchi, A. Saito, T. Yamaguchi, I. Hachiuma, T. Suzuki, T. Moriguchi, A. Ozawa, T. Ohtsubo, M.A. Famiano, H. Geissel, A.S. Nettleton, O.B. Tarasov, D.P. Bazin, B.M. Sherrill, S.L. Manikonda, J.A. Nolen
2010Pa33	PRVCA	82,	064314	S. Padgett, M. Madurga, R. Grzywacz, I.G. Darby, S.N. Liddick, S.V. Paulauskas, L. Cartegni, C.R. Bingham, C.J. Gross, K. Rykaczewski, D. Shapira, D.W. Stracener, A.J. Mendez II, J.A. Winger, S.V. Ilyushkin, A. Korgul, W. Królas, E. Zganjar, C. Mazzocchi, S. Liu, J.H. Hamilton, J.C. Batchelder, M.M. Rajabali
2010Ra12	PRVCA	82,	011303	P. Rahkila, D.G. Jenkins, J. Pakarinen, C. Gray-Jones, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, H. Koivisto, M. Leino, P. Nieminen, M. Nyman, P. Papadakis, S. Paschalis, M. Petri, P. Peura, O.J. Roberts, T. Ropponen, P. Ruotsalainen, J. Saren, C. Scholey, J. Sorri, A.G. Tuff, J. Uusitalo, R. Wadsworth, M. Bender, P.-H. Heenen
2010RaZY	PrvCom			Rajabali, 11/7/2010
2010Re01	PRVCA	81,	014301	J.J. Ressler, J.A. Caggiano, C.J. Francy, P.N. Peplowski, J.M. Allmond, C.W. Beausang, L.A. Bernstein, D.L. Bleuel, J.T. Burke, P. Fallon, A.A. Hecht, D.V. Jordan, S.R. Lesher, M.A. McMahan, T.S. Palmer, L. Phair, N.D. Scielzo, P.G. Swearingen, G.A. Warren, M. Wiedeking

2010Re07	PRLTA	105,	172501	M.W. Reed, I.J. Cullen, P.M. Walker, Yu. A. Litvinov, K. Blaum, F. Bosch, C. Brandau, J.J. Carroll, D.M. Cullen, A.Y. Deo, B. Detwiller, C. Dimopoulou, G.D. Dracoulis, F. Farinon, H. Geissel, E. Haettner, M. Heil, R.S. Kempley, R. Knöbel, C. Kozhuharov, J. Kurcewicz, N. Kuzminchuk, S. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, W.R. Plass, A. Prochazka, C. Scheidenberger, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, H. Weick, N. Winckler, M. Winkler, P.J. Woods, T. Yamaguchi
2010Ru07	EPJAA	44,	31	C. Rusu, D. Bucurescu, N. Marginean, M. Ionescu-Bujor, A. Iordachescu, G. Cata-Danil, I. Cata-Danil, D. Deleanu, D. Filipescu, D. Ghita, T. Glodariu, M. Ivascu, C. Mihai, R. Marginean, S. Pascu, T. Sava, L. Stroe, G. Suliman, N.V. Zamfir
2010Sc02	PRVCA	81,	014306	C. Scholey, K. Andgren, L. Bianco, B. Cederwall, I.G. Darby, S. Eeckhaudt, S. Ertürk, M.B. Gomez Hornillos, T. Grahn, P.T. Greenlees, B. Hadinia, E. Ideguchi, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, P. Nieminen, M. Niikura, M. Nyman, D. O'Donnell, R.D. Page, J. Pakarinen, P. Rahkila, J. Sarén, M. Sandzelius, J. Simpson, J. Sorri, J. Thomson, J. Uusitalo, M. Venhart
2010Se16	PRVCA	82,	067301	G.W. Severin, L.D. Knutson, P.A. Voytas, E.A. George
2010Si03	PRVCA	81,	024313	G.S. Simpson, W. Urban, J.A. Pinston, J.C. Angelique, I. Deloncle, H.R. Faust, J. Genevey, U. Köster, T. Materna, R. Orlandi, A. Scherillo, A.G. Smith, J.F. Smith, T. Rzaca-Urban, I. Ahmad, J.P. Greene
2010Sp02	PYLBB	683,	129	A. Spyrou, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, E. Breitbach, J. Brown, G. Christian, A. DeLine, P.A. DeYoung, J.E. Finck, N. Frank, S. Mosby, W.A. Peters, A. Russel, A. Schiller, M.J. Strongman, M. Thoennessen
2010St14	EPJAA	45,	275	B. Streicher, F.P. Heßberger, S. Antalic, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, Š. Šáro, B. Sulignano, J. Uusitalo, M. Venhart
2010St.A	AnRpt GSI		151	K. Straub et al
2010Ta04	PRLTA	104,	062701	K. Tanaka, T. Yamaguchi, T. Suzuki, T. Ohtsubo, M. Fukuda, D. Nishimura, M. Takechi, K. Ogata, A. Ozawa, T. Izumikawa, T. Aiba, N. Aoi, H. Baba, Y. Hashizume, K. Inafuku, N. Iwasa, K. Kobayashi, M. Komuro, Y. Kondo, T. Kubo, M. Kurokawa, T. Matsuyama, S. Michimasa, T. Motobayashi, T. Nakabayashi, S. Nakajima, T. Nakamura, H. Sakurai, R. Shinoda, M. Shinohara, H. Suzuki, E. Takeshita, S. Takeuchi, Y. Togano, K. Yamada, T. Yasuno, M. Yoshitake
2010Vi07	PRVCA	82,	064311	P. Vingerhoets, K.T. Flanagan, M. Avgoulea, J. Billowes, M.L. Bissell, K. Blaum, B.A. Brown, B. Cheal, M. De Rydt, D.H. Forest, Ch. Geppert, M. Honma, M. Kowalska, J. Krämer, A. Krieger, E. Mané, R. Neugart, G. Neyens, W. Nörtershäuser, T. Otsuka, M. Schug, H.H. Stroke, G. Tungate, D.T. Yordanov
2010Wa02	CPLEE	27,	022301	H.-L. Wang, L.-T. Song, W.-J. Zhao, Z.-X. Liu, Y.-H. Zhang, X.-H. Zhou, Y.-X. Guo, X.-G. Lei
2010Wa42	PRVCA	82,	064317	F. Wauters, B. Verstichel, M. Breitenfeldt, V. De Leebeeck, V. Yu. Kozlov, I. Kraev, S. Roccia, G. Soti, M. Tandecki, E. Traykov, S. Van Gorp, D. Zakoucky, N. Severijns
2010Wi03	PRVCA	81,	044303	J.A. Winger, K.P. Rykaczewski, C.J. Gross, R. Grzywacz, J.C. Batchelder, C. Goodin, J.H. Hamilton, S.V. Ilyushkin, A. Korgul, W. Królas, S.N. Liddick, C. Mazzocchi, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, E.F. Zganjar, J. Dobaczewski
2010Wr01	PRVCA	81,	055503	C. Wrede, J.A. Clark, C.M. Deibel, T. Faestermann, R. Hertenberger, A. Parikh, H.-F. Wirth, S. Bishop, A.A. Chen, K. Eppinger, A. García, R. Krücken, O. Lepyoshkina, G. Rugel, K. Setoodehnia and PrvCom WgM April 2011
2010Xu12	EPJAA	46,	55	S.W. Xu, Y.X. Xie, F. Ma, X.H. Zhou, Z.K. Li, Y. Zheng, L. Chen, X.G. Lei, Y.H. Zhang, H.L. Lui, F.R. Xu

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2011Ac.A	AnRpt GSI		208	D. Ackermann, F.P. Heßberger, S. Antalic, M. Block, H.-G. Burkhard, V.F. Comas, P. Greenlees, S. Heinz, S. Hofmann, S. Ketelhut, J. Khuyagbaatar, B. Kindler, I. Kojouharov, M. Mazzocco, M. Leino, B. Lommel, R. Mann, J. Maurer, A.G. Popeko, J. Sorri, J. Uusitalo, A.V. Yeremin
2011An13	EPJAA	47,	62	S. Antalic, F.P. Heßberger, D. Ackermann, S. Heinz, S. Hofmann, Z. Kalaninova, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, Š. Šáro, B. Streicher, B. Sulignano, M. Venhart
2011Ar18	PRVCA	84,	061307	O. Arndt, K.-L. Kratz, W.B. Walters, K. Farouqi, U. Köster, V. Fedosseev, S. Hennrich, C.J. Jost, A. Wöhr, A.A. Hecht, B. Pfeiffer, J. Shergur, N. Hoteling
2011As03	PRVCA	83,	014315	M. Asai, K. Tsukada, H. Haba, Y. Ishii, T. Ichikawa, A. Toyoshima, T. Ishii, Y. Nagame, I. Nishinaka, Y. Kojima, K. Sueki
2011As08	PRLTA	107,	102502	P. Ascher, L. Audirac, N. Adimi, B. Blank, C. Borcea, B.A. Brown, I. Companis, F. Delalee, C.E. Demonchy, F. de Oliveira Santos, J. Giovinazzo, S. Grevy, L.V. Grigorenko, T. Kurtukian-Nieto, S. Leblanc, J.-L. Pedroza, L. Perrot, J. Pibernat, L. Serani, P.C. Srivastava, J.-C. Thomas
2011As.A	AnRpt RIKEN	44	-22	M. Asai, H. Haba, N. Sato, Y. Kasamatsu, D. Kaji, K. Morimoto, K. Morita
2011Av01	JPGPE	38,	025104	M. Avgoulea, Yu. P. Gangrsky, K.P. Marinova, S.G. Zemlyanoi, S. Fritzsche, D. Iablonskyi, C. Barbieri, E.C. Simpson, P.D. Stevenson, J. Billowes, P. Campbell, B. Cheal, B. Tordoff, M.L. Bissell, D.H. Forest, M.D. Gardner, G. Tungate, J. Huikari, A. Nieminen, H. Penttila, J. Aysto
2011Be02	JPGPE	38,	015103	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, F. Nozzoli, V.I. Tretyak
2011Be08	PRVCA	83,	034603	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, M. Laubenstein, S.S. Nagorny, S. Nisi, O.G. Polischuk, V.I. Tretyak
2011Be34	PRVCA	84,	041303	A.D. Becerril, G. Lorusso, A.M. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2011Be39	JPGPE	38,	115107	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobychev, D.V. Poda, V.I. Tretyak
2011Be53	PACHA	83,	397	M. Berglund, M.E. Wieser
2011Bo09	NUPAB	856,	1	V. Bondarenko, I. Tomandl, J. Honzatko, H.-F. Wirth, T. von Egidy
2011Bo23	PRVCA	84,	044311	P. Boutachkov, M. Górska, H. Grawe, A. Blazhev, N. Braun, T.S. Brock, Z. Liu, B.S. Nara Singh, R. Wadsworth, S. Pietri, C. Domingo-Pardo, I. Kojouharov, L. Cáceres, T. Engert, F. Farinon, J. Gerl, N. Goel, J. Grbosz, R. Hoischen, N. Kurz, C. Nociforo, A. Prochazka, H. Schaffner, S.J. Steer, H. Weick, H.-J. Wollersheim, T. Faestermann, Zs. Podolyák, D. Rudolph, A. Atac, L. Bettermann, K. Eppinger, F. Finke, K. Geibel, A. Gottardo, C. Hinke, G. Ilie, H. Iwasaki, J. Jolie, R. Krücken, E. Merchán, J. Nyberg, M. Pfützner, P.H. Regan, P. Reiter, S. Rinta-Antila, C. Scholl, P.-A. Söderström, N. Warr, P.J. Woods, F. Nowacki, K. Sieja
2011Br01	PRVCA	82,	061309	T.S. Brock, for the RISING Collaboration
2011Br12	PRVCA	84,	014330	R. Broda, K.H. Maier, B. Fornal, J. Wrzesiński, B. Szpak, M.P. Carpenter, R.V.F. Janssens, W. Królas, T. Pawłat, S. Zhu
2011Ch32	PRVCA	84,	014320	R.J. Charity, J.M. Elson, J. Manfredi, R. Shane, L.G. Sobotka, B.A. Brown, Z. Chajecki, D. Coupland, H. Iwasaki, M. Kilburn, J. Lee, W.G. Lynch, A. Sanetullaev, M.B. Tsang, J. Winkelbauer, M. Youngs, S.T. Marley, D.V. Shetty, A.H. Wuosmaa, T.K. Ghosh, M.E. Howard
2011Da01	PYLBB	695,	78	I.G. Darby, R.D. Page, D.T. Joss, J. Simpson, L. Bianco, R.J. Cooper, S. Eeckhaudt, S. Erturk, B. Gall, T. Grahn, P.T. Greenlees, B. Hadinia, P.M. Jones, D.S. Judson, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppanen, M. Nyman, P. Rahkila, J. Saren, C. Scholey, A.N. Steer, J. Uusitalo, M. Venhart

2011Da08	PRVCA	83,	054312	J.M. Daugas, I. Matea, J.-P. Delaroche, M. Pfutzner, M. Sawicka, F. Becker, G. Belier, C.R. Bingham, R. Borcea, E. Bouchez, A. Buta, E. Dragulescu, G. Georgiev, J. Giovinazzo, M. Girod, H. Grawe, R. Grzywacz, F. Hammache, F. Ibrahim, M. Lewitowicz, J. Libert, P. Mayet, V. Meot, F. Negoita, F. de Oliveira Santos, O. Perru, O. Roig, K. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, O. Sorlin, M. Stanoiu, I. Stefan, Ch. Stodel, Ch. Theisen, D. Verney, J. Zylicz
2011Da12	PRVCA	83,	064320	I.G. Darby, R.D. Page, D.T. Joss, L. Bianco, T. Grahn, D.S. Judson, J. Simpson, S. Eeckhaudt, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, P. Rahkila, J. Sarén, C. Scholey, A.N. Steer, J. Uusitalo, M. Venhart, S. Ertürk, B. Gall, B. Hadinia
2011El02	PRLTA	106,	052504	S. Eliseev, C. Roux, K. Blaum, M. Block, C. Droese, F. Herfurth, H.-J. Kluge, M.I. Krivoruchenko, Yu. N. Novikov, E. Minaya-Ramirez, L. Schweikhard, V.M. Shabaev, F. Simkovic, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011El04	PRVCA	83,	038501	S. Eliseev, D. Nesterenko, K. Blaum, M. Block, C. Droese, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, K. Zuber
2011El05	PRVCA	84,	012501	S. Eliseev, M. Goncharov, K. Blaum, M. Block, C. Droese, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011El08	PRLTA	107,	152501	S. Eliseev, C. Roux, K. Blaum, M. Block, C. Droese, F. Herfurth, M. Kretzschmar, M.I. Krivoruchenko, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, F. Simkovic, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011Er02	PRVCA	83,	055501	T. Eronen, D. Gorelov, J. Hakala, J.C. Hardy, A. Jokinen, A. Kankainen, V.S. Kolhinen, I.D. Moore, H. Penttilä, M. Reponen, J. Rissanen, A. Saastamoinen, J. Äystö two errata Phys. Rev. C 83(2011)069901 and Phys. Rev. C 84(2011)059905
2011Es03	PRVCA	84,	034304	M.E. Estevez Aguado, A. Algora, B. Rubio, J. Bernabeu, E. Nacher, J.L. Tain, A. Gadea, J. Agramunt, K. Burkard, W. Huller, J. Doring, R. Kirchner, I. Mukha, C. Plettner, E. Roeckl, H. Grawe, R. Collatz, M. Hellstrom, D. Cano-Ott, M. Karny, Z. Janas, M. Gierlik, A. Płochocki, K. Rykaczewski, L. Batist, F. Moroz, V. Wittman, A. Blazhev, J.J. Valiente, C. Espinoza
2011Es06	PRLTA	107,	172503	A. Estradé, M. Matoš, H. Schatz, A.M. Amthor, D. Bazin, M. Beard, A. Becerril, E.F. Brown, R. Cyburt, T. Elliot, A. Gade, D. Galaviz, S. George, S.S. Gupta, W.R. Hix, R. Lau, G. Lorusso, P. Möller, J. Pereira, M. Portillo, A.M. Rogers, D. Shapira, E. Smith, A. Stolz, M. Wallace, M. Wiescher
2011Fa10	PRVCA	84,	045807	J. Fallis, J.A. Clark, K.S. Sharma, G. Savard, F. Buchinger, S. Caldwell, A. Chaudhuri, J.E. Crawford, C.M. Deibel, S. Gulick, A.A. Hecht, D. Lascar, J.K.P. Lee, A.F. Levand, G. Li, B.F. Lundgren, A. Parikh, S. Russell, M. Scholte-van de Vorst, N.D. Scielzo, R.E. Segel, H. Sharma, S. Sinha, M.G. Sternberg, T. Sun, I. Tanihata, J. Van Schelt, J.C. Wang, Y. Wang, C. Wrede, Z. Zhou
2011Fi01	PRLTA	106,	032501	P. Finlay, S. Ettenauer, G.C. Ball, J.R. Leslie, C.E. Svensson, C. Andreoiu, R.A.E. Austin, D. Bandyopadhyay, D.S. Cross, G. Demand, M. Djongolov, P.E. Garrett, K.L. Green, G.F. Grinyer, G. Hackman, K.G. Leach, C.J. Pearson, A.A. Phillips, C.S. Sumithrarachchi, S. Triambak, S.J. Williams
2011Fo08	IMPEE	20,	1491	A.S. Fomichev, I.G. Mukha, S.V. Stepantsov, L.V. Grigorenko, E.V. Litvinova, V. Chudoba, I.A. Egorova, M.S. Golovkov, A.V. Gorshkov, V.A. Gorshkov, G. Kaminski, S.A. Krupko, Yu. L. Parfenova, S.I. Sidorchuk, R.S. Slepnev, G.M. Ter-Akopian, R. Wolski, M.V. Zhukov
2011Fo15	PRVCA	84,	054310	N. Fotiades, M. Devlin, R.O. Nelson, J.A. Cizewski, R. Krucken, R.M. Clark, P. Fallon, I.Y. Lee, A.O. Macchiavelli, W. Younes
2011Ga19	PRVCA	83,	054618	J.M. Gates, Ch. E. Düllmann, M. Schädel, A. Yakushev, A. Türler, K. Eberhardt, J.V. Kratz, D. Ackermann, L.-L. Andersson, M. Block, W. Brüchle, J. Dvorak, H.G. Essel, P.A. Ellison, J. Even, U. Forsberg, J. Gellanki, A. Gorshkov, R. Graeger, K.E. Gregorich, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J. Krier, N. Kurz, S. Lahiri, D. Liebe, B. Lommel, M. Maiti, H. Nitsche, J.P. Omtvedt, E. Parr, D. Rudolph, J. Runke, H. Schaffner, B. Schausten, E. Schimpf, A. Semchenkov, J. Steiner, P. Thörle-Pospiech, J. Uusitalo, M. Wegrzecki, N. Wiehl

2011Go23	PRVCA	84,	028501	M. Goncharov, K. Blaum, M. Block, C. Droese, S. Eliseev, F. Herfurth, E. Minaya Ramirez, Yu. N. Novikov, L. Schweikhard, K. Zuber
2011Go37	JPCSD	312,	052008	M.B. Gomez Hornillos, J. Rissanen, J.L. Tain, A. Algora, D. Cano-Ott, J. Agramunt, V. Gorlychev, R. Caballero, T. Martinez, L. Achouri, J. Aysto, G. Cortes, V.V. Elomaa, T. Eronen, A. Garcia, J. Hakala, A. Jokinen, P. Karvonen, V.S. Kolhinen, I. Moore, M. Parlog, H. Penttila, Z. Podolyak, C. Pretel, M. Reponen, V. Sonnenschein, E. Valencia
2011Gr01	JPGPE	38,	015101	P. Granholm, T. Lönnroth, J. Suhonen, J. Bergman, K.-M. Källman, J.-O. Lill, M. Norrby, E. Ydrefors, P. Tikkanen
2011Ha08	PRLTA	106,	122501	E. Haettner, D. Ackermann, G. Audi, K. Blaum, M. Block, S. Eliseev, T. Fleckenstein, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, J. Ketter, H.-J. Kluge, G. Marx, M. Mazzocco, Yu. N. Novikov, W.R. Plaß, S. Rahaman, T. Rauscher, D. Rodríguez, H. Schatz, C. Scheidenberger, L. Schweikhard, B. Sun, P.G. Thirolf, G. Vorobjev, M. Wang, C. Weber
2011Ha13	PRVCA	83,	034602	H. Haba, D. Kaji, H. Kikunaga, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, T. Sumita, A. Yoneda, Y. Kasamatsu, Y. Komori, K. Ooe, A. Shinohara
2011Ha48	EPJAA	47,	129	J. Hakala, R. Rodríguez-Guzmán, V.-V. Elomaa, T. Eronen, A. Jokinen, V.S. Kolhinen, I.D. Moore, H. Penttilä, M. Reponen, J. Rissanen, A. Saastamoinen, J. Äystö
2011He10	EPJAA	47,	75	F. Herfurth, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, M. Dworschak, S. George, C. Guénaut, A. Kellerbauer, D. Lunney, M. Mukherjee, S. Rahaman, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2011Hi19	RAACA	s1,	109	K. Hirose, H. Kikunaga, T. Ohtsuki
2011Hi.A	P-Leuven		200	C. Hinke
2011Ho02	JPGPE	38,	035104	R. Hoischen, D. Rudolph, H.L. Ma, P. Montuenga, M. Hellström, S. Pietri, Zs. Podolyák, P.H. Regan, A.B. Garnsworthy, S.J. Steer, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, J. Gerl, M. Górska, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, L.-L. Andersson, L. Atanasova, D.L. Balabanski, M.A. Bentley, A. Blazhev, C. Brandau, J.R. Brown, C. Fahlander, E.K. Johansson, A. Jungclaus
2011Ho21	PRVCA	84,	064903	H. Holopainen, S.S. Rasanen, K.J. Eskola
2011Ic06	JPCSD	312,	092031	Y. Ichikawa, T.K. Onishi, D. Suzuki, H. Iwasaki, T. Kubo, V. Naik, A. Chakrabarti, N. Aoi, B.A. Brown, N. Fukuda, S. Kubono, T. Motobayashi, T. Nakabayashi, T. Nakamura, T. Nakao, T. Okumura, H.J. Ong, H. Suzuki, M.K. Suzuki, T. Teranishi, K.N. Yamada, H. Yamaguchi, H. Sakurai
2011Il01	PRVCA	83,	014322	S.V. Ilyushkin, J.A. Winger, K.P. Rykaczewski, C.J. Gross, J.C. Batchelder, L. Cartegni, I.G. Darby, R. Grzywacz, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, C. Mazzocchi, T. Mendez, S. Padgett, M.M. Rajabali, D. Shapira, D.W. Stracener, E.F. Zganjar
2011Ke03	PRVCA	84,	014311	J. Ketelaer, G. Audi, T. Beyer, K. Blaum, M. Block, R.B. Cakirli, R.F. Casten, C. Droese, M. Dworschak, K. Eberhardt, M. Eibach, F. Herfurth, E. Minaya-Ramirez, Sz. Nagy, D. Neidherr, W. Nörtershäuser, C. Smorra, M. Wang
2011Ki16	PRVCA	84,	014316	H. Kikunaga, T. Suzuki, M. Nomura, T. Mitsugashira, A. Shinohara
2011Ko01	ARISE	69,	500	K. Kossert, O. Nahle, P.E. Warwick, H. Wershofen, I.W. Croudace
2011Ko03	PYLBB	697,	116	V.S. Kolhinen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, J. Äystö
2011Ko36	PRVCA	84,	034320	U. Köster, N.J. Stone, K.T. Flanagan, J. Rikovska Stone, V.N. Fedosseev, K.L. Kratz, B.A. Marsh, T. Materna, L. Mathieu, P.L. Molkanov, M.D. Seliverstov, O. Serot, A.M. Sjödin, Yu. M. Volkov
2011Ko.B	PrvCom	GAu	Nov	F.G. Kondev
2011Kr.A	PrvCom	GAu	May	S. Kreim preliminary
2011Ku16	PRVCA	84,	044304	J. Kurpeta, W. Urban, A. Płochocki, J. Rissanen, J.A. Pinston, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttilä, A. Saastamoinen, C. Weber, J. Äystö
2011Li28	PYLBB	702,	24	Z. Liu, D. Seweryniak, P.J. Woods, C.N. Davids, M.P. Carpenter, T. Davinson, R.V.F. Janssens, R.D. Page, A.P. Robinson, J. Shergur, S. Sinha, X.D. Tang, F.R. Xu, S. Zhu

2011Li50	PRVCA	84,	061305	S.N. Liddick, S. Suchyta, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, M. Bolla, M.P. Carpenter, L. Cartegni, C.J. Chiara, H.L. Crawford, I.G. Darby, R. Grzywacz, G. Gurdal, S. Ilyushkin, N. Larson, M. Madurga, E.A. McCutchan, D. Miller, S. Padgett, S.V. Paulauskas, J. Pereira, M.M. Rajabali, K. Rykaczewski, S. Vinnikova, W.B. Walters, S. Zhu
2011Lo01	PYLBB	694,	316	R.L. Lozeva, D.L. Balabanski, G. Georgiev, J.-M. Daugas, S. Péru, G. Audi, S. Cabaret, T. Faul, M. Ferraton, E. Fiori, C. Gaulard, F. Ibrahim, P. Morel, L. Risegari, D. Verney, D.T. Yordanov
2011Lo06	NUPAB	852,	15	A. Lopez-Martens, T. Wiborg-Hagen, K. Hauschild, M.L. Chelnokov, V.I. Chepigin, D. Curien, O. Dorvaux, G. Drafta, B. Gall, A. Görgen, M. Guttormsen, A.V. Isaev, I.N. Izosimov, A.P. Kabachenko, D.E. Katrasev, T. Kutsarova, A.N. Kuznetsov, A.C. Larsen, O.N. Malyshev, A. Minkova, S. Mullins, H.T. Nyhus, D. Pantelica, J. Piot, A.G. Popeko, S. Saro, N. Scintee, S. Siem, N.U.H. Syed, E.A. Sokol, A.I. Svirikhin, A.V. Yeremin
2011Lo09	PYLBB	699,	141	G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, R.H. Cyburt, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2011Lo.A	PrvCom	GAu	dec	A. Lopez-Martens
2011Ma66	PRLTA	107,	212502	E. Mane, A. Voss, J.A. Behr, J. Billowes, T. Brunner, F. Buchinger, J.E. Crawford, J. Dilling, S. Ettenauer, C.D.P. Levy, O. Shelbaya, M.R. Pearson
2011Mo18	PRVCA	84,	011601	A.I. Morales, J. Benlliure, J. Agramunt, A. Algora, N. Alkhomashi, H. Alvarez-Pol, P. Boutachkov, A.M. Bruce, L.S. Caceres, E. Casarejos, A.M.D. Bacelar, P. Doornenbal, D. Dragosavac, G. Farrelly, A. Gadea, W. Gelletly, J. Gerl, M. Gorska, J. Grebosz, I. Kojouharov, F. Molina, D. Perez-Loureiro, S. Pietri, Z. Podolyak, P.H. Regan, B. Rubio, H. Shaffner, S.J. Steer, S. Tashenov, S. Verma, H.J. Wollersheim
2011Mo27	KPSJA	59,	1525	C.-B. Moon, G.D. Dracoulis, R.A. Bark, A.P. Byrne, P.A. Davidson, T. Kibédi, G.J. Lane, A.N. Wilson
2011Na34	PRLTA	107,	172502	B.S. Nara Singh, Z. Liu, R. Wadsworth, H. Grawe, T.S. Brock, P. Boutachkov, N. Braun, A. Blazhev, M. Górska, S. Pietri, D. Rudolph, C. Domingo-Pardo, S.J. Steer, A. Atac, L. Bettermann, L. Cáceres, K. Eppinger, T. Engert, T. Faestermann, F. Farinon, F. Finke, K. Geibel, J. Gerl, R. Gernhäuser, N. Goel, A. Gottardo, J. Grebosz, C. Hinke, R. Hoischen, G. Ilie, H. Iwasaki, J. Jolie, A. Kaskas, I. Kojouharov, R. Krücken, N. Kurz, E. Mérchan, C. Nociforo, J. Nyberg, M. Pfützner, A. Prochazka, Zs. Podolyák, P.H. Regan, P. Reiter, S. Rinta-Antila, C. Scholl, H. Schaffner, P.-A. Söderström, N. Warr, H. Weick, H.-J. Wollersheim, P.J. Woods, F. Nowacki, K. Sieja
2011Ni01	PRLTA	106,	052502	S. Nishimura, Z. Li, H. Watanabe, K. Yoshinaga, T. Sumikama, T. Tachibana, K. Yamaguchi, M. Kurata-Nishimura, G. Lorusso, Y. Miyashita, A. Odahara, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, J. Chiba, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krücken, S. Kubono, T. Nakano, H.J. Ong, S. Ota, Zs. Podolyák, H. Sakurai, H. Scheit, K. Steiger, D. Steppenbeck, K. Sugimoto, S. Takano, A. Takashima, K. Tajiri, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, H. Yamaguchi
2011Og04	PRVCA	83,	054315	Yu. Ts. Oganessian, F. Sh. Abdullin, P.D. Bailey, D.E. Benker, M.E. Bennett, S.N. Dmitriev, J.G. Ezold, J.H. Hamilton, R.A. Henderson, M.G. Itkis, Yu. V. Lobanov, A.N. Mezentsev, K.J. Moody, S.L. Nelson, A.N. Polyakov, C.E. Porter, A.V. Ramayya, F.D. Riley, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, R. Sudowe, A.M. Sukhov, R. Taylor, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin, P.A. Wilk
2011Pa38	PRVCA	84,	065502	H.I. Park, J.C. Hardy, V.E. Iacob, A. Banu, L. Chen, V.V. Golovko, J. Goodwin, V. Horvat, N. Nica, E. Simmons, L. Trache, R.E. Tribble

2011Pa.A	P-Leuven		158	D. Pauwels, D. Radulov, I.G. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, U. Köster, B.A. Marsh, L.-A. Popescu, M.D. Seliverstov, A.M. Sjoedin, P. Van den Bergh, J. Van de Walle, P. Van Duppen, M. Venhart, W.B. Walters, K. Wimmer
2011Pe29	PRVCA	84,	054311	A.B. Pérez-Cerdán, B. Rubio, W. Gelletly, A. Algora, J. Agramunt, K. Burkard, W. Hüller, E. Nácher, P. Sarriguren, L. Caballero, F. Molina, L.M. Fraile, E. Reillo, M.J.G. Borge, Ph. Dessagne, A. Jungclaus, M.-D. Salsac
2011Pi05	PRVCA	83,	044328	S. Pietri, A. Jungclaus, M. Górska, H. Grawe, M. Pfützner, L. Cáceres, P. Detistov, S. Lalkovski, V. Modamio, Z. Podolyák, P.H. Regan, D. Rudolph, J. Walker, E. Werner-Malento, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, A. Khaplanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G. Simpson, S.J. Steer, S. Tashenov, O. Wieland
2011Po01	PRVCA	83,	014306	M. Pomorski, K. Miernik, W. Dominik, Z. Janas, M. Pfützner, C.R. Bingham, H. Czyrkowski, M. Cwiok, I.G. Darby, R. Dabrowski, T. Ginter, R. Grzywacz, M. Karny, A. Korgul, W. Kuśmierz, S.N. Liddick, M. Rajabali, K. Rykaczewski, A. Stolz
2011Po09	PRVCA	83,	061306	M. Pomorski, M. Pfützner, W. Dominik, R. Grzywacz, T. Baumann, J.S. Berryman, H. Czyrkowski, R. Dabrowski, T. Ginter, J. Johnson, G. Kamiński, A. Kuźniak, N. Larson, S.N. Liddick, M. Madurga, C. Mazzocchi, S. Mianowski, K. Miernik, D. Miller, S. Paulauskas, J. Pereira, K.P. Rykaczewski, A. Stolz, S. Suchyta
2011Ra24	PYLBB	703,	412	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, C. Weber, J. Äystö
2011Ri01	PRVCA	83,	011301	J. Rissanen, J. Kurpeta, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, I.D. Moore, P. Karvonen, A. Płochocki, L. Próchniak, H. Penttilä, S. Rahaman, M. Reponen, A. Saastamoinen, J. Szerypo, W. Urban, C. Weber, J. Äystö
2011Ro01	PYLBB	694,	322	S. Roy, S. Chattopadhyay, P. Datta, S. Pal, S. Bhattacharya, R.K. Bhowmik, A. Goswami, H.C. Jain, R. Kumar, S. Muralithar, D. Negi, R. Palit, R.P. Singh
2011Ro18	PRLTA	106,	252503	A.M. Rogers, M.A. Famiano, W.G. Lynch, M.S. Wallace, F. Amorini, D. Bazin, R.J. Charity, F. Delaunay, R.T. de Souza, J. Elson, A. Gade, D. Galaviz, M.-J. van Goethem, S. Hudan, J. Lee, S. Lobastov, S. Lukyanov, M. Matoš, M. Mocko, H. Schatz, D. Shapira, L.G. Sobotka, M.B. Tsang, G. Verde
2011Ro20	PRVCA	83,	064311	A.P. Robinson, T.L. Khoo, D. Seweryniak, I. Ahmad, M. Asai, B.B. Back, M.P. Carpenter, P. Chowdhury, C.N. Davids, J. Greene, P.T. Greenlees, K. Hauschild, A. Heinz, R.-D. Herzberg, R.V.F. Janssens, D.G. Jenkins, G.D. Jones, S. Ketelhut, F.G. Kondev, T. Lauritsen, C.J. Lister, A. Lopez-Martens, P. Marley, E. McCutchan, P. Papadakis, D. Peterson, J. Qian, D. Rostron, U. Shirwadkar, I. Stefanescu, S.K. Tandel, X. Wang, S. Zhu
2011Ro47	PRVCA	84,	051306	A.M. Rogers, J. Giovinazzo, C.J. Lister, B. Blank, G. Canchel, J.A. Clark, G. de France, S. Grevy, S. Gros, E.A. McCutchan, F. de Oliveira Santos, G. Savard, D. Seweryniak, I. Stefan, J.-C. Thomas
2011Ru.A	P-Leuven		367	M. Rudigier, A. Blazhev, J. Jolie, J.M. Regis, N. Warr, C. Fransen, T. Materna, U. Köster, G. Simpson, M. Hackstein, M. Pfeiffer, T. Thomas
2011Sa15	PRVCA	83,	045808	A. Saastamoinen, L. Trache, A. Banu, M.A. Bentley, T. Davinson, J.C. Hardy, V.E. Iaco, M. McCleskey, B.T. Roeder, E. Simmons, G. Tabacaru, R.E. Tribble, P.J. Woods, J. Aysto
2011Sa41	JUPSA	80,	094201	N. Sato, H. Haba, T. Ichikawa, D. Kaji, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, T. Sumita, A. Yoneda, E. Ideguchi, H. Koura, A. Ozawa, T. Shinozuka, T. Yamaguchi, A. Yoshida
2011Sc22	PRVCA	84,	024611	R.J. Scott, G.J. O'Keefe, M.N. Thompson, R.P. Rassool
2011Si32	JPCSD	267,	012031	G.S. Simpson, A. Scherillo, J. Genevey, R. Orlandi, J.A. Pinston, I.S. Tsekhanovich, N. Warr, A. Covello, A. Gargano
2011So11	EPJAA	47,	40	J. Souin, T. Eronen, P. Ascher, L. Audirac, J. Äystö, B. Blank, V.-V. Elomaa, J. Giovinazzo, J. Hakala, A. Jokinen, V.S. Kolhinen, P. Karvonen, I.D. Moore, S. Rahaman, J. Rissanen, A. Saastamoinen, J.C. Thomas

2011St21	PRVCA	84,	044313	S.J. Steer, Zs. Podolyák, S. Pietri, M. Górska, H. Grawe, K.H. Maier, P.H. Regan, D. Rudolph, A.B. Garnsworthy, R. Hoischen, J. Gerl, H.J. Wollersheim, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, H. Geissel, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopwicz, T. Saito, H. Schaffner, S. Tashenov, A. Heinz, M. Pfützner, T. Kurtukian-Nieto, G. Benzoni, A. Jungclaus, D.L. Balabanski, M. Bowry, C. Brandau, A. Brown, A.M. Bruce, W.N. Catford, I.J. Cullen, Zs. Dombrádi, M.E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, F.G. Kondev, R. Krücken, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, S. Schwertel, T. Shizuma, P.M. Walker, E. Werner-Malento, O. Wieland
2011Su11	PRLTA	106,	202501	T. Sumikama, K. Yoshinaga, H. Watanabe, S. Nishimura, Y. Miyashita, K. Yamaguchi, K. Sugimoto, J. Chiba, Z. Li, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krucken, S. Kubono, G. Lorusso, T. Nakano, M. Kurata-Nishimura, A. Odahara, H.J. Ong, S. Ota, Zs. Podolyák, H. Sakurai, H. Scheit, K. Steiger, D. Steppenbeck, S. Takano, A. Takashima, K. Tajiri, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, H. Yamaguchi
2011Sw02	PRVCA	83,	034322	T.P.D. Swan, P.M. Walker, Zs. Podolyák, M.W. Reed, G.D. Dracoulis, G.J. Lane, T. Kibédi, M.L. Smith
2011Sz01	PRVCA	83,	064315	B. Szpak, K.H. Maier, A.S. Smolkowska, B. Fornal, R. Broda, M.P. Carpenter, N. Cieplicka, R.V.F. Janssens, W. Królas, T. Pawlat, J. Wrzesinski, S. Zhu
2011Ti10	PRVCA	84,	044302	J. Timar, K. Starosta, I. Kuti, D. Sohler, D.B. Fossan, T. Koike, E.S. Paul, A.J. Boston, H.J. Chantler, M. Descovich, R.M. Clark, M. Cromaz, P. Fallon, I.Y. Lee, A.O. Macchiavelli, C.J. Chiara, R. Wadsworth, A.A. Hecht, D. Almehed, S. Frauendorf
2011To04	PRVCA	83,	044326	I. Tomandl, J. Honzatko, T. von Egidy, H.-F. Wirth, T. Faestermann, V. Yu. Ponomarev, S. Pasic, R. Hertenberger, Y. Eisermann, G. Graw
2011To.A	PrvCom	GAu	Aug	I. Towner, S. Ettenauer
2011Tu02	PRLTA	106,	112501	X.L. Tu, H.S. Xu, M. Wang, Y.H. Zhang, Yu. A. Litvinov, Y. Sun, H. Schatz, X.H. Zhou, Y.J. Yuan, J.W. Xia, G. Audi, K. Blaum, C.M. Du, P. Geng, Z.G. Hu, W.X. Huang, S.L. Jin, L.X. Liu, Y. Liu, X. Ma, R.S. Mao, B. Mei, P. Shuai, Z.Y. Sun, H. Suzuki, S.W. Tang, J.S. Wang, S.T. Wang, G.Q. Xiao, X. Xu, T. Yamaguchi, Y. Yamaguchi, X.L. Yan, J.C. Yang, R.P. Ye, Y.D. Zang, H.W. Zhao, T.C. Zhao, X.Y. Zhang, W.L. Zhan
2011Tu09	NIMAE	654,	213	X.L. Tu, M. Wang, Yu. A. Litvinov, Y.H. Zhang, H.S. Xu, Z.Y. Sun, G. Audi, K. Blaum, C.M. Du, W.X. Huang, Z.G. Hu, P. Geng, S.L. Jin, L.X. Liu, Y. Liu, B. Mei, R.S. Mao, X.W. Ma, H. Suzuki, P. Shuai, Y. Sun, S.W. Tang, J.S. Wang, S.T. Wang, G.Q. Xiao, X. Xu, J.W. Xia, J.C. Yang, R.P. Ye, T. Yamaguchi, X.L. Yan, Y.J. Yuan, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, X.Y. Zhang, X.H. Zhou, W.L. Zhan
2011Ve01	PYLBB	695,	82	M. Venhart, A.N. Andreyev, J.L. Wood, S. Antalic, L. Bianco, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, R.D. Page, P. Peura, P. Rahkila, J. Sarén, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo
2011Ve03	EPJAA	47,	20	M. Venhart, F.P. Heßberger, D. Ackermann, S. Antalic, C. Gray-Jones, P.T. Greenlees, S. Heinz, R.-D. Herzberg, S. Hofmann, S. Ketelhut, B. Kindler, I. Kojouharov, M. Leino, B. Lommel, R. Mann, P. Papadakis, D. Rostron, D. Rudolph, Š. Šáro, B. Sulignano
2011Ve.A	PrvCom	FGK	Jan	Martin Venhart
2011Vi03	PYLBB	703,	34	P. Vingerhoets, K.T. Flanagan, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, M. De Rydt, D.H. Forest, Ch. Geppert, M. Honma, M. Kowalska, J. Kramer, K. Kreim, A. Krieger, R. Neugart, G. Neyens, W. Nortershauser, J. Papuga, T.J. Procter, M.M. Rajabali, R. Sanchez, H.H. Stroke, D.T. Yordanov

2011Wa03	PYLBB	696,	186	H. Watanabe, T. Sumikama, S. Nishimura, K. Yoshinaga, Z. Li, Y. Miyashita, K. Yamaguchi, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, J. Chiba, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krucken, S. Kubono, G. Lorusso, T. Nakano, M. Kurata-Nishimura, A. Odahara, H.J. Ong, S. Ota, Zs. Podolyák, H. Sakurai, H. Scheit, Y. Shi, K. Steiger, D. Steppenbeck, K. Sugimoto, K. Tajiri, S. Takano, A. Takashima, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, F.R. Xu, H. Yamaguchi
2011Wa26	PYLBB	704,	270	H. Watanabe, K. Yamaguchi, A. Odahara, T. Sumikama, S. Nishimura, K. Yoshinaga, Z. Li, Y. Miyashita, K. Sato, L. Próchniak, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, J. Chiba, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, N. Hinohara, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krücken, S. Kubono, G. Lorusso, T. Nakano, T. Nakatsukasa, M. Kurata-Nishimura, H.J. Ong, S. Ota, Zs. Podolyák, H. Sakurai, H. Scheit, K. Steiger, D. Steppenbeck, K. Sugimoto, K. Tajiri, S. Takano, A. Takashima, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, H. Yamaguchi
2011Ya25	PYLBB	697,	90	M.T. Yamashita, R.S. Marques de Carvalho, T. Frederico, L. Tomio

2012

2012Ac04	PTPSA	196,	255	D. Ackermann
2012Al05	PRVCA	85,	034301	N. Al-Dahan, P.H. Regan, Zs. Podolyák, P.M. Walker, N. Alkhomashi, G.D. Dracoulis, G. Farrelly, J. Benlliure, S.B. Pietri, R.F. Casten, P.D. Stevenson, W. Gelletly, S.J. Steer, A.B. Garnsworthy, E. Casarejos, J. Gerl, H.J. Wollersheim, J. Grebosz, M. Górska, I. Kojouharov, H. Schaffner, A. Algora, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, I.J. Cullen, A.M.D. Bacelar, A.Y. Deo, M.E. Estevez, Y. Fujita, R. Hoischen, R. Kumar, S. Lalkovski, Z. Liu, P.J. Mason, C. Mihai, F. Molina, D. Mücher, B. Rubio, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.J. Woods and Pub. Note PRVCA 85, 039904
2012An08	ARISE	70,	1985	E. Andreotti, M. Hult, G. Marissens, R. Gonzalez de Orduna, P. Vermaercke
2012An12	EPJAA	48,	140	B. Ananthanarayan, D. Das, I. Sentitemsu Imsong
2012As05	PRVCA	85,	054316	A. Astier, M.-G. Porquet, Ch. Theisen, D. Verney, I. Deloncle, M. Houry, R. Lucas, F. Azaiez, G. Barreau, D. Curien, O. Dorvaux, G. Duchene, B.J.P. Gall, N. Redon, M. Rousseau, O. Stezowski
2012At01	EPJAA	48,	22	D.R. Atanasov, N. Winckler, D. Balabanski, L. Batist, F. Bosch, D. Boutin, C. Brandau,C. Dimopoulou, H.G. Essel, T. Faestermann, H. Geissel, I. Hachiuma, S. Hess, T. Izumikawa, P. Kienle, R. Knöbel, C. Kozhuharov, J. Kurcewicz, N. Kuzminchuk, S.A. Litvinov, Yu. A. Litvinov, R.S. Mao, R. Märtin, M. Mazzocco, G. Münzenberg, K. Namihira, F. Nolden, T. Ohtsubo, Z. Patyk, R. Reuschl, M.S. Sanjari, C. Scheidenberger, D. Shubina, U. Spillmann, M. Steck, Th. Stöhlker, B. Sun, T. Suzuki, M. Trassinelli, I.I. Tupitsyn, H. Weick, M. Winkler, D.F.A. Winters, T. Yamaguchi
2012Au03	PRLTA	109,	032505	M. Auger, for the EXO Collaboration
2012Au08	EPJAA	48,	179	L. Audirac, P. Ascher, B. Blank, C. Borcea, B.A. Brown, G. Canchel, C.E. Demonchy,F. de Oliveira Santos, C. Dossat, J. Giovinazzo, S. Grévy, L. Hay, J. Huikari, S. Leblanc, I. Matea, J.-L. Pedroza, L. Perrot, J. Pibernat, L. Serani, C. Stodel, J.-C. Thomas
2012Ba32	PRVCA	86,	014311	A.E. Barzakh, L. Kh. Batist, D.V. Fedorov, V.S. Ivanov, K.A. Mezilev, P.L. Molkanov, F.V. Moroz, S. Yu. Orlov, V.N. Panteleev, Yu. M. Volkov
2012Ba58	PRVCA	86,	064311	J.C. Batchelder, N.T. Brewer, R.E. Goans, R. Grzywacz, B.O. Griffith, C. Jost, A. Korgul, S.H. Liu, S.V. Paulauskas, E.H. Spejewski, D.W. Stracener
2012Be14	PRVCA	85,	044610	P. Belli, R. Bernabei, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, E.N. Galashov, A. Incicchitti, V.V. Kobychev, M. Laubenstein, V.M. Mokina, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, V.N. Shlegel, Yu. G. Stenin, J. Suhonen, V.I. Tretyak, Ya. V. Vasiliev

2012Be24	ARISE	70,	1894	M.-M. Be, P. Cassette, M.C. Lepy, M.-N. Amiot, K. Kossert, O.J. Nahle, O. Ott, C. Wanke, P. Dryak, G. Ratel, M. Sahagia, A. Luca, A. Antohe, L. Johansson, J. Keightley, A. Pearce
2012Be28	PYLBB	715,	293	G. Benzoni, A.I. Morales, J.J. Valiente-Dobón, A. Gottardo, A. Bracco, F. Camera, F.C.L. Crespi, A.M. Corsi, S. Leoni, B. Million, R. Nicolini, O. Wieland, A. Gadea, S. Lunardi, P. Boutachkov, A.M. Bruce, M. Górska, J. Grebosz, S. Pietri, Zs. Podolyák, M. Pfützner, P.H. Regan, H. Weick, J. Alcántara Núnez, A. Algora, N. Al-Dahan, G. de Angelis, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, M. Bunce, E. Casarejos, M.L. Cortes, A.M.D. Bacelar, A.Y. Deo, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, E. Farnea, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, S. Klupp, I. Kojouharov, N. Kurz, S. Mandal, R. Menegazzo, D. Mengoni, D.R. Napoli, F. Naqvi, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, D. Rudolph, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, H.-J. Wollersheim
2012Bo.A	PrvCom	May	Lunney	Ch. Borgmann
2012Br03	PRLTA	108,	052504	M. Brodeur, T. Brunner, C. Champagne, S. Ettenauer, M.J. Smith, A. Lapierre, R. Ringle, V.L. Ryjkov, S. Bacca, P. Delheij, G.W.F. Drake, D. Lunney, A. Schwenk, J. Dilling
2012Ca03	PRVCA	85,	014312	L. Cartegni, C. Mazzocchi, R. Grzywacz, I.G. Darby, S.N. Liddick, K.P. Rykaczewski, J.C. Batchelder, L. Bianco, C.R. Bingham, E. Freeman, C. Goodin, C.J. Gross, A. Guglielmetti, D.T. Joss, S.H. Liu, M. Mazzocco, S. Padgett, R.D. Page, M.M. Rajabali, M. Romoli, P.J. Sapple, J. Thomson, H.V. Watkins
2012Ca05	PYLBB	707,	46	Z.X. Cao, Y.L. Ye, J. Xiao, L.H. Lv, D.X. Jiang, T. Zheng, H. Hua, Z.H. Li, X.Q. Li, Y.C. Ge, J.L. Lou, R. Qiao, Q.T. Li, H.B. You, R.J. Chen, D.Y. Pang, H. Sakurai, H. Otsu, M. Nishimura, S. Sakaguchi, H. Baba, Y. Togano, K. Yoneda, C. Li, S. Wang, H. Wang, K.A. Li, T. Nakamura, Y. Nakayama, Y. Kondo, S. Deguchi, Y. Satou, K. Tshoo
2012Ch02	PRLTA	108,	032501	G. Christian, N. Frank, S. Ash, T. Baumann, D. Bazin, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, G.F. Grinyer, A. Grovom, J.D. Hinnefeld, E.M. Lunderberg, B. Luther, M. Mosby, S. Mosby, T. Nagi, G.F. Peaslee, W.F. Rogers, J.K. Smith, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen, M. Warren, D. Weisshaar, A. Wersal
2012Ch16	PRLTA	108,	162501	R. Chevrier, J.M. Daugas, L. Gaudefroy, Y. Ichikawa, H. Ueno, M. Hass, H. Haas, S. Cottenier, N. Aoi, K. Asahi, D.L. Balabanski, N. Fukuda, T. Furukawa, G. Georgiev, H. Hayashi, H. Iijima, N. Inabe, T. Inoue, M. Ishihara, Y. Ishii, D. Kameda, T. Kubo, T. Nanao, G. Neyens, T. Ohnishi, M.M. Rajabali, K. Suzuki, H. Takeda, M. Tsuchiya, N. Vermeulen, H. Watanabe, A. Yoshimi
2012Ch19	NUPAB	882,	71	L. Chen, W.R. Plaß, H. Geissel, R. Knöbel, C. Kozhuharov, Yu. A. Litvinov, Z. Patyk, C. Scheidenberger, K. Siegień-Iwaniuk, B. Sun, H. Weick, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, J.J. Carroll, D.M. Cullen, I.J. Cullen, B. Franzke, J. Gerl, M. Górska, G.A. Jones, A. Kishada, J. Kurcewicz, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Munzenberg, F. Nolden, T. Ohtsubo, Zs. Podolyák, R. Propri, S. Rigby, N. Saito, T. Saito, M. Shindo, M. Steck, P.M. Walker, S. Williams, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2012Ch30	ARISE	70,	1871	V.P. Chechev
2012Ch40	PRVCA	86,	041307	R.J. Charity, L.G. Sobotka, K. Hagino, D. Bazin, M.A. Famiano, A. Gade, S. Hudan, S.A. Komarov, Jenny Lee, S.P. Lobastov, S.M. Lukyanov, W.G. Lynch, C. Metelko, M. Mocko, A.M. Rogers, H. Sagawa, A. Sanetullaev, M.B. Tsang, M.S. Wallace, M.J. van Goethem, A.H. Wuosmaa
2012Ch51	JPCSD	381,	012071	B. Cheal, J. Billowes, M.L. Bissell, K. Blaum, F.C. Charlwood, K.T. Flanagan, D.H. Forest, Ch. Geppert, M. Kowalska, K. Kreim, A. Krieger, J. Krämer, K.M. Lynch, E. Mané, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, T.J. Procter, M.M. Rajabali, H.H. Stroke, P. Vingerhoets, D.T. Yordanov, M. Žáková
2012Ch.A	PrvCom	May	Lunney	Ankur Chaudhuri

2012Ci05	PRVCA	86,	054322	N. Cieplicka, K.H. Maier, B. Fornal, B. Szpak, R.V.F. Janssens, M. Alcorta, R. Broda, M.P. Carpenter, C.J. Chiara, C.R. Hoffman, B.P. Kay, F.G. Kondev, W. Krolas, T. Lauritsen, C.J. Lister, E.A. McCutchan, T. Pawlat, A.M. Rogers, D. Seweryniak, N. Sharp, W.B. Walters, J. Wrzesinski, S. Zhu
2012Da04	PRVCA	85,	064301	A.Y. Dauenhauer, K.S. Krane
2012Da16	EPJAA	48,	157	F.A. Danevich, E. Andreotti, M. Hult, G. Marissens, V.I. Tretyak, A. Yuksel
2012Di03	PRVCA	85,	031301	A. Dijon, E. Clément, G. de France, G. de Angelis, G. Duchêne, J. Dudouet, S. Franchoo, A. Gadea, A. Gottardo, T. Hüyük, B. Jacquot, A. Kusoglu, D. Lebhertz, G. Lehaut, M. Martini, D.R. Napoli, F. Nowacki, S. Péru, A. Poves, F. Recchia, N. Redon, E. Sahin, C. Schmitt, M. Sferrazza, K. Sieja, O. Stezowski, J.J. Valiente-Dobón, A. Vancraeyenest, Y. Zheng
2012Dr01	NUPAB	875,	1	C. Droese, K. Blaum, M. Block, S. Eliseev, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, I.I. Tupitsyn, S. Wycech, K. Zuber, N.A. Zubova
2012Dr02	PYLBB	709,	59	G.D. Dracoulis, G.J. Lane, A.P. Byrne, H. Watanabe, R.O. Hughes, N. Palalani, F.G. Kondev, M. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu, P. Chowdhury, Y. Shi, F.R. Xu
2012Dr.A	PrvCom	FGK		G.D. Dracoulis
2012Fa07	ARISE	70,	2328	Fang Kaihong, Wang Dawei, Yang Shaobo, Zhao Jiangtao, Peng Haibo, Wang Qiang, Wang Tieshan
2012Fi01	PRLTA	108,	062502	D. Fink, J. Barea, D. Beck, K. Blaum, Ch. Bohm, Ch. Borgmann, M. Breitenfeldt, F. Herfurth, A. Herlert, J. Kotila, M. Kowalska, S. Kreim, D. Lunney, S. Naimi, M. Rosenbusch, S. Schwarz, L. Schweikhard, F. Simkovic, J. Stanja, K. Zuber and PrvCom WgM March 2012
2012Fl05	JPGPE	39,	125101	K.T. Flanagan, J. Billowes, P. Campbell, B. Cheal, G.D. Dracoulis, D.H. Forest, M.D. Gardner, J. Huikari, A. Jokinen, B.A. Marsh, R. Moore, A. Nieminen, H. Penttilä, H.L. Thayer, G. Tungate, J. Äystö
2012Fo04	PRVCA	85,	027303	H.T. Fortune, R. Sherr
2012Fo09	NIMAE	687,	1	C.M. Folden III, M.C. Alfonso, D.A. Mayorov, K.R. Lawrence, A.A. Alharbi, E. Berdugo, P.J. Cammarata, A.C. Raphelt, B.T. Roeder, T.A. Werke
2012Ga15	PRVCA	85,	044311	A.T. Gallant, M. Brodeur, T. Brunner, U. Chowdhury, S. Ettenauer, V.V. Simon, E. Mané, M.C. Simon, C. Andreoiu, P. Delheij, G. Gwinner, M.R. Pearson, R. Ringle, J. Dilling
2012Ga17	PRVCA	85,	045504	A. Gando, Y. Gando, H. Hanakago, H. Ikeda, K. Inoue, R. Kato, M. Koga, S. Matsuda, T. Mitsui, T. Nakada, K. Nakamura, A. Obata, A. Oki, Y. Ono, I. Shimizu, J. Shirai, A. Suzuki, Y. Takemoto, K. Tamae, K. Ueshima, H. Watanabe, B.D. Xu, S. Yamada, H. Yoshida, A. Kozlov, S. Yoshida, T.I. Banks, J.A. Detwiler, S.J. Freedman, B.K. Fujikawa, K. Han, T. O'Donnell, B.E. Berger, Y. Efremenko, H.J. Karwowski, D.M. Markoff, W. Tornow, S. Enomoto, M.P. Decowski (KamLAND-Zen Collaboration)
2012Ga29	PRLTA	109,	032506	A.T. Gallant, J.C. Bale, T. Brunner, U. Chowdhury, S. Ettenauer, A. Lennarz, D. Robertson, V.V. Simon, A. Chaudhuri, J.D. Holt, A.A. Kwiatkowski, E. Mané, J. Menéndez, B.E. Schultz, M.C. Simon, C. Andreoiu, P. Delheij, M.R. Pearson, H. Savajols, A. Schwenk, J. Dilling
2012Ga45	PRLTA	109,	202503	L. Gaudefroy, W. Mittig, N.A. Orr, S. Varet, M. Chartier, P. Roussel-Chomaz, J.P. Ebran, B. Fernández-Domínguez, G. Frémont, P. Gangnant, A. Gillibert, S. Grévy, J.F. Libin, V.A. Maslov, S. Paschalis, B. Pietras, Yu.-E. Penionzhkevich, C. Spitaels, A.C.C. Villari

2012Go19	PRLTA	109,	162502	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, R. Nicolini, A. Gadea, S. Lunardi, P. Boutachkov, A.M. Bruce, M. Górska, J. Grebosz, S. Pietri, Zs. Podolyák, M. Pfützner, P.H. Regan, H. Weick, J. Alcántara Núnez, A. Algora, N. Al-Dahan, G. de Angelis, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, A. Bracco, M. Bunce, F. Camera, E. Casarejos, M.L. Cortes, F.C.L. Crespi, A. Corsi, A.M.D. Bacelar, A.Y. Deo, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, E. Farnea, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, S. Klupp, I. Kojouharov, N. Kurz, S.M. Lenzi, S. Leoni, Mandal, R. Menegazzo, D. Mengoni, B. Million, A.I. Morales, D.R. Napoli, F. Naqvi, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, D. Rudolph, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, O. Wieland, H-J. Wollersheim, F. Nowacki, E. Maglione, A.P. Zuker
2012Gr12	PRLTA	109,	012501	P.T. Greenlees, J. Rubert, J. Piot, B.J.P. Gall, L.L. Andersson, M. Asai, Z. Asfari, D.M. Cox, F. Dechery, O. Dorvaux, T. Grahn, K. Hauschild, G. Henning, A. Herzan, R.-D. Herzberg, F.P. Heßberger, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, T.-L. Khoo, M. Leino, J. Ljungvall, A. Lopez-Martens, R. Lozeva, P. Nieminen, J. Pakarinen, P. Papadakis, E. Parr, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, D. Seweryniak, J. Sorri, B. Sulignano, Ch. Theisen, J. Uusitalo, M. Venhart
2012Gu14	PRVCA	86,	014323	S. Guo, Y.H. Zhang, X.H. Zhou, M.L. Liu, Y.X. Guo, Y.H. Qiang, Y.D. Fang, X.G. Lei, F. Ma, M. Oshima, Y. Toh, M. Koizumi, A. Osa, A. Kimura, Y. Hatsukawa, M. Sugawara, H. Kusakari
2012Gy01	ARISE	70,	278	Gy. Gyurky, J. Farkas, Z. Halasz, T. Szucs
2012Ha05	PRVCA	85,	024611	H. Haba, D. Kaji, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, R. Sakai, T. Sumita, A. Yoneda, Y. Kasamatsu, Y. Komori, A. Shinohara, H. Kikunaga, H. Kudo, K. Nishio, K. Ooe, N. Sato, K. Tsukada
2012Ha25	PRLTA	109,	032501	J. Hakala, J. Dobaczewski, D. Gorelov, T. Eronen, A. Jokinen, A. Kankainen, V.S. Kolhinen, M. Kortelainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2012He09	EPJAA	48,	75	F.P. Heßberger, S. Antalic, D. Ackermann, Z. Kalaninova, S. Heinz, S. Hofmann, B. Streicher, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, Š. Šáro, B. Sulignano, M. Venhart
2012He11	PRVCA	86,	014605	G.Z. He, S. Jiang, Z.Y. Zhou, M. He, W.Z. Tian, J.L. Zhang, L.J. Diao, H. Li
2012Hi07	NATUA	486,	342	C.B. Hinke, M. Böhmer, P. Boutachkov, T. Faestermann, H. Geissel, J. Gerl, R. Gernhäuser, M. Górska, A. Gottardo, H. Grawe, J.L. Grębosz, R. Krücken, N. Kurz, Z. Liu, L. Maier, F. Nowacki, S. Pietri, Zs. Podolyák, K. Sieja, K. Steiger, K. Straub, H. Weick, H.-J. Wollersheim, P.J. Woods, N. Al-Dahan, N. Alkhomashi, A. Ataç, A. Blazhev, N.F. Braun, I.T. Çeliković, T. Davinson, I. Dillmann, C. Domingo-Pardo, P.C. Doornenbal, G. de France, G.F. Farrelly, F. Farinon, N. Goel, T.C. Habermann, R. Hoischen, R. Janik, M. Karny, A. Kaşkaş, I.M. Kojouharov, Th. Kröll, Y. Litvinov, S. Myalski, F. Nebel, S. Nishimura, C. Nociforo, J. Nyberg, A.R. Parikh, A. Procházka, P.H. Regan, C. Rigollet, H. Schaffner, C. Scheidenberger, S. Schwertel, P.-A. Söderström, S.J. Steer, A. Stolz, P. Strmeň
2012Ho12	EPJAA	48,	62	S. Hofmann, S. Heinz, R. Mann, J. Maurer, J. Khuyagbaatar, D. Ackermann, S. Antalic, W. Barth, M. Block, H.G. Burkhard, V.F. Comas, L. Dahl, K. Eberhardt, J. Gostic, R.A. Henderson, J.A. Heredia, F.P. Heßberger, J.M. Kenneally, B. Kindler, I. Kojouharov, J.V. Kratz, R. Lang, M. Leino, B. Lommel, K.J. Moody, G. Münzenberg, S.L. Nelson, K. Nishio, A.G. Popeko, J. Runke, Š. Šáro, D.A. Shaughnessy, M.A. Stoyer, P. Thörle-Pospiech, K. Tinschert, N. Trautmann, J. Uusitalo, P.A. Wilk, A.V. Yeremin
2012Hu10	PRVCA	86,	054314	R.O. Hughes, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P.H. Nieminen, H. Watanabe, M.P. Carpenter, P. Chowdhury, R.V.F. Janssens, F.G. Kondev, T. Lauritsen, D. Seweryniak, S. Zhu
2012Ja11	PRVCA	86,	011304	M.F. Jager, R.J. Charity, J.M. Elson, J. Manfredi, H. Mohammad, L.G. Sobotka, M. McCleskey, R.G. Pizzone, B.T. Roeder, A. Spiridon, E. Simmons, L. Trache, M. Kurokawa

2012Ka12	EPJAA	48,	49	A. Kankainen, Yu. N. Novikov, M. Oinonen, L. Batist, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, P. Karvonen, M. Reponen, J. Rissanen, A. Saastamoinen, G. Vorobjev, C. Weber, J. Äystö
2012Ka13	EPJAA	48,	47	A. Kankainen, V.S. Kolhinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Saastamoinen, J. Äystö
2012Ka36	PRVCA	86,	054319	D. Kameda, T. Kubo, T. Ohnishi, K. Kusaka, A. Yoshida, K. Yoshida, M. Ohtake, N. Fukuda, H. Takeda, K. Tanaka, N. Inabe, Y. Yanagisawa, Y. Gono, H. Watanabe, H. Otsu, H. Baba, T. Ichihara, Y. Yamaguchi, M. Takechi, S. Nishimura, H. Ueno, A. Yoshimi, H. Sakurai, T. Motobayashi, T. Nakao, Y. Mizoi, M. Matsushita, K. Ieki, N. Kobayashi, K. Tanaka, Y. Kawada, N. Tanaka, S. Deguchi, Y. Satou, Y. Kondo, T. Nakamura, K. Yoshinaga, C. Ishii, H. Yoshii, Y. Miyashita, N. Uematsu, Y. Shiraki, T. Sumikama, J. Chiba, E. Ideguchi, A. Saito, T. Yamaguchi, I. Hachiuma, T. Suzuki, T. Moriguchi, A. Ozawa, T. Ohtsubo, M.A. Famiano, H. Geissel, A.S. Nettleton, O.B. Tarasov, D. Bazin, B.M. Sherrill, S.L. Manikonda, J.A. Nolen
2012Ke01	NUPAB	880,	88	J.H. Kelley, E. Kwan, J.E. Purcell, C.G. Sheu, H.R. Weller
2012Ki16	SCIEA	335,	1614	N. Kinoshita, M. Paul, Y. Kashiv, P. Collon, C.M. Deibel, B. DiGiovine, J.P. Greene, D.J. Henderson, C.L. Jiang, S.T. Marley, T. Nakanishi, R.C. Pardo, K.E. Rehm, D. Robertson, R. Scott, C. Schmitt, X.D. Tang, R. Vondrasek, A. Yokoyama
2012Kn01	PRLTA	108,	122502	A. Knecht, R. Hong, D.W. Zumwalt, B.G. Delbridge, A. García, P. Müller, H.E. Swanson, I.S. Towner, S. Utsuno, W. Williams, C. Wrede
2012Ko29	PRVCA	86,	024307	A. Korgul, K.P. Rykaczewski, J.A. Winger, S.V. Ilyushkin, C.J. Gross, J.C. Batchelder, C.R. Bingham, I.N. Borzov, C. Goodin, R. Grzywacz, J.H. Hamilton, W. Królas, S.N. Liddick, C. Mazzocchi, C. Nelson, F. Nowacki, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, K. Sieja, E.F. Zganjar
2012Ko43	PRLTA	109,	232501	Z. Kohley, J. Snyder, T. Baumann, G. Christian, P.A. DeYoung, J.E. Finck, R.A. Haring-Kaye, M. Jones, E. Lunderberg, B. Luther, S. Mosby, A. Simon, J.K. Smith, A. Spyrou, S.L. Stephenson, M. Thoennessen
2012Kr05	PRVCA	85,	044319	K.S. Krane
2012Kr07	ARISE	70,	1649	K.S. Krane
2012Ku06	PRVCA	85,	027302	J. Kurpeta, W. Urban, T. Materna, H. Faust, U. Köster, J. Rissanen, T. Rzaca-Urban, C. Mazzocchi, A.G. Smith, J.F. Smith, J.P. Greene, I. Ahmad
2012Ku26	PYLBB	717,	371	J. Kurcewicz, F. Farinon, H. Geissel, S. Pietri, C. Nociforo, A. Prochazka, H. Weick, J.S. Winfield, A. Estradé, P.R.P. Allegro, A. Bail, G. Bélier, J. Benlliure, G. Benzoni, M. Bunce, M. Bowry, R. Caballero-Folch, I. Dillmann, A. Evdokimov, J. Gerl, A. Gottardo, E. Gregor, R. Janik, A. Kelić-Heil, R. Knöbel, T. Kubo, Yu. A. Litvinov, E. Merchan, I. Mukha, F. Naqvi, M. Pfützner, M. Pomorski, Zs. Podolyák, P.H. Regan, B. Riese, M.V. Ricciardi, C. Scheidenberger, B. Sitar, P. Spiller, J. Stadlmann, P. Strmen, B. Sun, I. Szarka, J. Taieb, S. Terashima, J.J. Valiente-Dobon, M. Winkler, Ph. Woods
2012La05	PRVCA	85,	024317	A. Lapierre, M. Brodeur, T. Brunner, S. Ettenauer, P. Finlay, A.T. Gallant, V.V. Simon, P. Delheij, D. Lunney, R. Ringle, H. Savajols, J. Dilling
2012La.A	P-Argonne			G.J. Lane
2012LaZT	JPCSD	366,	012029	S. Lalkovski, A.M. Bruce, A.M.D. Bacelar, M. Gorska, S. Pietri, Zs. Podolyak, P. Bednarczyk, L. Caceres, E. Casarejos, I.J. Cullen, P. Doornenbal, G.F. Farrelly, A.B. Garnsworthy, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, C. Hinke, G. Ilie, G. Jaworski, S. Kisyov, I. Kojouharov, N. Kurz, S. Myalski, M. Palacz, W. Prokopowicz, P.H. Regan, H. Schaffner, S. Steer, S. Tashenov, P.M. Walker, H.J. Wollersheim, M. Zhekova
2012Li02	PRVCA	85,	014328	S.N. Liddick, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, M. Bolla, L. Cartegni, H.L. Crawford, I.G. Darby, R. Grzywacz, S. Ilyushkin, N. Larson, M. Madurga, D. Miller, S. Padgett, S. Paulauskas, M.M. Rajabali, K. Rykaczewski, S. Suchyta
2012Lo08	PRVCA	86,	014313	G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, R.H. Cyburt, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers

2012Lu01	NUPAB	874,	32	Y.X. Luo, J.O. Rasmussen, C.S. Nelson, J.H. Hamilton, A.V. Ramayya, J.K. Hwang, S.H. Liu, C. Goodin, N.J. Stone, S.J. Zhu, N.T. Brewer, Ke Li, I.Y. Lee, G.M. Ter-Akopian, A.V. Daniel, M.A. Stoyer, R. Donangelo, W.C. Ma, J.D. Cole
2012Lu07	PRLTA	108,	142503	E. Lunderberg, P.A. DeYoung, Z. Kohley, H. Attanayake, T. Baumann, D. Bazin, G. Christian, D. Divaratne, S.M. Grimes, A. Haagsma, J.E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G.F. Peaslee, A. Schiller, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen
2012Ma03	APOBB	43,	247	T. Malkiewicz, G.S. Simpson, W. Urban, J. Genevey, J.A. Pinston, I. Ahmad, J.P. Greene, U. Koster, T. Materna, M. Ramdhane, T. Rzaca-Urban, A.G. Smith, G. Thiamova
2012Ma30	ARISE	70,	2270	M. Marouli, S. Pommé, J. Paepen, R. Van Ammel, V. Jobbágy, A. Dirican, G. Suliman, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Ma37	PRLTA	109,	112501	M. Madurga, R. Surman, I.N. Borzov, R. Grzywacz, K.P. Rykaczewski, C.J. Gross, D. Miller, D.W. Stracener, J.C. Batchelder, N.T. Brewer, L. Cartegni, J.H. Hamilton, J.K. Hwang, S.H. Liu, S.V. Ilyushkin, C. Jost, M. Karny, A. Korgul, W. Królas, A. Kuźniak, C. Mazzocchi, A.J. Mendez II, K. Miernik, W. Padgett, S.V. Paulauskas, A.V. Ramayya, J.A. Winger, M. Wolińska-Cichocka, E.F. Zganjar
2012Ma63	JINST	7,	P08029	L. Mathieu, O. Serot, T. Materna, A. Bail, U. Koster, H. Faust, O. Litaize, E. Dupont, C. Jouanne, A. Letourneau, S. Panebianco
2012Ma.A	P-Argonne			M. Madurga et al
2012Me04	EPJAA	48,	20	G. Meierhofer, P. Grabmayr, L. Canella, P. Kudejova, J. Jolie, N. Warr
2012Mi27	SCIEA	337,	1207	E. Minaya-Ramirez, D. Ackermann, K. Blaum, M. Block, C. Droese, C.E. Dullmann, M. Dworschak, M. Eibach, S. Eliseev, E. Haettner, F. Herfurth, F.P. Hessberger, S. Hofmann, J. Ketelaer, G. Marx, M. Mazzocco, D. Nesterenko, Y.N. Novikov, W.R. Plaß, D. Rodriguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, C. Weber
2012Mo25	JUPSA	81,	103201	K. Morita, K. Morimoto, D. Kaji, H. Haba, K. Ozeki, Y. Kudou, T. Sumita, Y. Wakabayashi, A. Yoneda, K. Tanaka, S. Yamaki, R. Sakai, T. Akiyama, S.-i. Goto, H. Hasebe, M. Huang, T. Huang, E. Ideguchi, Y. Kasamatsu, K. Katori, Y. Kariya, H. Kikunaga, H. Koura, H. Kudo, A. Mashiko, K. Mayama, S.-ic. Mitsuoka, T. Moriya, M. Murakami, H. Murayama, S. Namai, A. Ozawa, N. Sato, K. Sueki, M. Takeyama, F. Tokanai, T. Yamaguchi, A. Yoshida
2012Mo.A	PrvCom		Moon	C.B. Moon, G.D. Dracoulis, R.A. Bark, A.P. Byrne, P.A. Davidson, T. Kibédi, G.J. Lane, A.N. Wilson
2012Mu05	PRVCA	85,	044325	I. Mukha, L. Grigorenko, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, J. Hofmann, O. Kiselev, A. Korsheninnikov, N. Kurz, Yu. A. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, C. Scheidenberger, M. Stanoiu, K. Sümmerer, H. Weick, P.J. Woods
2012Na15	PRVCA	86,	014325	S. Naimi, G. Audi, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya Ramirez, D. Neidherr, M. Rosenbusch, L. Schweikhard, R.N. Wolf, K. Zuber
2012Ne10	PRVCA	86,	044313	D.A. Nesterenko, K. Blaum, M. Block, C. Droese, S. Eliseev, F. Herfurth, E. Minaya Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, M.V. Smirnov, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2012No08	PHSTT	150,	014028	C. Nociforo, F. Farinon, A. Musumarra, F. Bosch, D. Boutin, A. Del Zoppo, P. Figuera, M. Fisichella, H. Geissel, R. Knöbel, I. Kojouharov, C. Kozhuharov, T. Kuboki, J. Kurcewicz, Yu. A. Litvinov, M. Mazzocco, Y. Motizuki, F. Nolden, T. Ohstubo, Y. Ohkuma, Z. Patyk, M.G. Pellegriti, S. Pietri, Z. Podolyák, A. Prochazka, M.S. Sanjari, C. Scheidenberger, V. Scuderi, B. Sun, T. Suzuki, D. Torresi, H. Weick, J.S. Winfield, N. Winckler, M. Winkler, H.J. Wollersheim, T. Yamaguchi

2012Od01	PRVCA	85,	054315	D. O'Donnell, R.D. Page, C. Scholey, L. Bianco, L. Capponi, R.J. Carroll, I.G. Darby, L. Donosa, M. Drummond, F. Ertugral, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, A. Lopez-Martens, K. Mulholland, P. Nieminen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Saren, B. Saygi, J. Simpson, J. Sorri, A. Thornthwaite, J. Uusitalo
2012Og02	PRLTA	108,	022502	Yu. Ts. Oganessian, F. Sh. Abdullin, S.N. Dmitriev, J.M. Gostic, J.H. Hamilton, R.A. Henderson, M.G. Itkis, K.J. Moody, A.N. Polyakov, A.V. Ramayya, J.B. Roberto, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin
2012Og06	PRLTA	109,	162501	Yu. Ts. Oganessian, F. Sh. Abdullin, C. Alexander, J. Binder, R.A. Boll, S.N. Dmitriev, J. Ezold, K. Felker, J.M. Gostic, R.K. Grzywacz, J.H. Hamilton, R.A. Henderson, M.G. Itkis, K. Miernik, D. Miller, K.J. Moody, A.N. Polyakov, A.V. Ramayya, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.V. Shumeiko, M.A. Stoyer, N.J. Stoyer, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin
2012Os04	JUPSA	81,	084201	M. Oshima, T. Kin, S. Nakamura, M. Honma, F. Minato, T. Hayakawa, K.Y. Hara, A. Kimura, M. Koizumi, H. Harada, J. Goto, Y. Murakami
2012Pa07	PRVCA	85,	035501	H.I. Park, J.C. Hardy, V.E. Iacob, L. Chen, J. Goodwin, N. Nica, E. Simmons, L. Trache, R.E. Tribble
2012Pa39	PRVCA	86,	064318	D. Pauwels, D. Radulov, W.B. Walters, I.G. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, U. Koster, B.A. Marsh, L. Popescu, M.D. Seliverstov, A.M. Sjodin, P. Van den Bergh, J. Van de Walle, P. Van Duppen, M. Venhart, K. Wimmer
2012Po03	APOBB	43,	267	M. Pomorski, M. Pfützner, W. Dominik, R. Grzywacz, T. Baumann, J. Berryman, H. Czyrkowski, R. Dabrowski, T. Ginter, L. Grigorenko, J. Johnson, G. Kamiński, A. Kuźniak, N. Larson, S.N. Liddick, M. Madurga, C. Mazzocchi, S. Mianowski, K. Miernik, D. Miller, S. Palauskas, J. Pereira, K.P. Rykaczewski, A. Stolz, S. Suchyta
2012Po12	ARISE	70,	1900	S. Pommé, T. Altzitzoglou, R. Van Ammel, G. Suliman, M. Marouli, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Po13	ARISE	70,	1913	S. Pommé, G. Suliman, M. Marouli, R. Van Ammel, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Po14	ARISE	70,	2608	S. Pomme, M. Marouli, G. Suliman, H. Dikmen, R. Van Ammel, V. Jobbagy, A. Dirican, H. Stroh, J. Paepen, F. Bruchertseifer, C. Apostolidis, A. Morgenstern
2012Pr11	PRVCA	86	034329	T.J. Procter, J. Billowes, M.L. Bissell, K. Blaum, F.C. Charlwood, B. Cheal, K.T. Flanagan, D.H. Forest, S. Fritzsche, Ch. Geppert, H. Heylen, M. Kowalska, K. Kreim, A. Krieger, J. Krämer, K.M. Lynch, E. Mané, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, M.M. Rajabali, H.H. Stroke, P. Vingerhoets, D.T. Yordanov, M. Žáková
2012Qu01	PRVCA	85,	035807	M. Quinn, A. Aprahamian, J. Pereira, R. Surman, O. Arndt, T. Baumann, A. Becerril, T. Elliot, A. Estrade, D. Galaviz, T. Ginter, M. Hausmann, S. Hennrich, R. Kessler, K.-L. Kratz, G. Lorusso, P.F. Mantica, M. Matos, F. Montes, B. Pfeiffer, M. Portillo, H. Schatz, F. Schertz, L. Schnorrenberger, E. Smith, A. Stolz, W.B. Walters, A. Wöhr
2012Ra10	PRVCA	85,	034326	M.M. Rajabali, R. Grzywacz, S.N. Liddick, C. Mazzocchi, J.C. Batchelder, T. Baumann, C.R. Bingham, I.G. Darby, T.N. Ginter, S.V. Ilyushkin, M. Karny, W. Królas, P.F. Mantica, K. Miernik, M. Pfützner, K.P. Rykaczewski, D. Weisshaar, J.A. Winger
2012Ra34	PRVAA	86,	050502	R. Rana, M. Höcker, E.G. Myers
2012Re05	PRVCA	85,	035802	R. Reifarth, S. Dababneh, M. Heil, F. Kappeler, R. Plag, K. Sonnabend, E. Uberseder
2012Re17	PRVCA	86,	041306	M. Redshaw, G. Bollen, M. Brodeur, S. Bustabad, D.L. Lincoln, S.J. Novario, R. Ringle, S. Schwarz

2012Re19	PRVCA	86,	054321	M.W. Reed, P.M. Walker, I.J. Cullen, Yu. A. Litvinov, D. Shubina, G.D. Dracoulis, K. Blaum, F. Bosch, C. Brandau, J.J. Carroll, D.M. Cullen, A.Y. Deo, B. Detwiler, C. Dimopoulou, G.X. Dong, F. Farinon, H. Geissel, E. Haettner, M. Heil, R.S. Kempley, R. Knöbel, C. Kozhuharov, J. Kurcewicz, N. Kuzminchuk, S. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, W.R. Plaß, Zs. Podolyák, A. Prochazka, C. Scheidenberger, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, H. Weick, N. Winckler, M. Winkler, P.J. Woods, F.R. Xu, T. Yamaguchi
2012Re.A	PrvCom	GAu	May	M. Reed
2012Re.B	PrvCom	FGK	Jun	P.H. Regan
2012Ri08	PRVCA	86,	047301	L.A. Riley, P. Adrich, N. Ahsan, T.R. Baugher, D. Bazin, B.A. Brown, J.M. Cook, P.D. Cottle, C. Aa. Diget, A. Gade, T. Glasmacher, K.E. Hosier, K.W. Kemper, A. Ratkiewicz, K.P. Siwek, J.A. Tostevin, A. Volya, D. Weisshaar
2012Ro25	PRLTA	109,	092503	F. Rotaru, F. Negoita, S. Grévy, J. Mrazek, S. Lukyanov, F. Nowacki, A. Poves, O. Sorlin, C. Borcea, R. Borcea, A. Buta, L. Cáceres, S. Calinescu, R. Chevrier, Zs. Dombrádi, J.M. Daugas, D. Lebhertz, Y. Penionzhkevich, C. Petrone, D. Sohler, M. Stanoiu, J.C. Thomas
2012Si07	PRLTA	108,	202502	S.I. Sidorchuk, A.A. Bezbakh, V. Chudoba, I.A. Egorova, A.S. Fomichev, M.S. Golovkov, A.V. Gorshkov, V.A. Gorshkov, L.V. Grigorenko, P. Jaløuvková, G. Kaminski, S.A. Krupko, E.A. Kuzmin, E. Yu. Nikolskii, Yu. Ts. Oganessian, Yu. L. Parfenova, P.G. Sharov, R.S. Slepnev, S.V. Stepantsov, G.M. Ter-Akopian, R. Wolski, A.A. Yukhimchuk, S.V. Filchagin, A.A. Kirdyashkin, I.P. Maksimkin, O.P. Vikhlyantsev
2012Si10	PRVCA	85,	064308	V.V. Simon, T. Brunner, U. Chowdhury, B. Eberhardt, S. Ettenauer, A.T. Gallant, E. Mane, M.C. Simon, P. Delheij, M.R. Pearson, G. Audi, G. Gwinner, D. Lunney, H. Schatz, J. Dilling
2012Si23	JPCSD	375,	042011	L. Simard, on behalf of the NEMO-3 collaboration
2012Sm01	PRVCA	85,	027601	C. Smorra, T. Beyer, K. Blaum, M. Block, Ch. E. Düllmann, K. Eberhardt, M. Eibach, S. Eliseev, Sz. Nagy, W. Nörtershäuser, D. Renisch
2012Sm07	PRVCA	86,	044604	C. Smorra, T.R. Rodríguez, T. Beyer, K. Blaum, M. Block, Ch. E. Dullmann, K. Eberhardt, M. Eibach, S. Eliseev, K. Langanke, G. Martínez-Pinedo, Sz. Nagy, W. Nörtershäuser, D. Renisch, V.M. Shabaev, I.I. Tupitsyn, N.A. Zubova
2012So10	JPGPE	39,	095107	P.C. Sood, R. Gowrishankar, K. Vijay Sai
2012Sp01	PRLTA	108,	102501	A. Spyrou, Z. Kohley, T. Baumann, D. Bazin, B.A. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, E. Lunderberg, S. Mosby, W.A. Peters, A. Schiller, J.K. Smith, J. Snyder, M.J. Strongman, M. Thoennessen, A. Volya
2012St.A	P-Argonne			M.A. Stoyer
2012Su11	ARISE	70,	1907	G. Suliman, S. Pommé, M. Marouli, R. Van Ammel, V. Jobbágy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Su22	PRVCA	86,	044318	B. Sulignano, Ch. Theisen, J.-P. Delaroche, M. Girod, J. Ljungvall, D. Ackermann, S. Antalic, O. Dorvaux, A. Drouart, B. Gall, A. Gorgen, P.T. Greenlees, K. Hauschild, R.-D. Herzberg, F.P. Hessberger, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, W. Korten, M. Leino, A. Lopez-Martens, M. Nyman, A. Obertelli, J. Pakarinen, P. Papadakis, E. Parr, P. Peura, J. Piot, P. Rahkila, D. Rostron, P. Ruotsalainen, J. Saren, C. Scholey, J. Sorri, J. Uusitalo, M. Venhart, M. Zielinska
2012Sv02	EPJAA	48,	121	A.I. Svirikhin, A.V. Andreev, V.N. Dushin, M.L. Chelnokov, V.I. Chepigin, M. Gupta, A.V. Isaev, I.N. Izosimov, D.E. Katrasev, A.N. Kuznetsov, O.N. Malyshev, S. Mullins, A.G. Popeko, E.A. Sokol, A.V. Yeremin
2012Sw01	PRVCA	85,	024313	T.P.D. Swan, P.M. Walker, Zs. Podolyák, M.W. Reed, G.D. Dracoulis, G.J. Lane, T. Kibédi, M.L. Smith
2012Ta18	PRVCA	86,	044310	M.J. Taylor, G.A. Alharshan, D.M. Cullen, M.G. Procter, N.M. Lumley, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A. Lopez-Martens, P. Nieminen, J. Partanen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri, S. Stolze, J. Uusitalo, F.R. Xu, Z.J. Bai
2012Ta.B	RPCHD	81,	1669	V.T. Takau, M.N. Thompson, R.J. Scott, R.P. Rassool, G.J. O'Keefe

2012Th13	PRVCA	86,	064315	A. Thornthwaite, D. O'Donnell, R.D. Page, D.T. Joss, C. Scholey, L. Bianco, L. Capponi, R.J. Carroll, I.G. Darby, L. Donosa, M.C. Drummond, F. Ertuğral, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, A. Lopez-Martens, K. Mullholland, P. Nieminen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, B. Sayğı, J. Simpson, J. Sorri, J. Uusitalo
2012Tr06	PRLTA	109,	042301	S. Triambak, P. Finlay, C.S. Sumithrarachchi, G. Hackman, G.C. Ball, P.E. Garrett, C.E. Svensson, D.S. Cross, A.B. Garnsworthy, R. Kshetri, J.N. Orce, M.R. Pearson, E.R. Tardiff, H. Al-Falou, R.A.E. Austin, R. Churchman, M.K. Djongolov, R. D'Entremont, C. Kierans, L. Milovanovic, S. O'Hagan, S. Reeve, S.K.L. Sjue, S.J. Williams
2012Va02	PRVCA	85,	045805	J. Van Schelt, D. Lascar, G. Savard, J.A. Clark, S. Caldwell, A. Chaudhuri, J. Fallis, J.P. Greene, A.F. Levand, G. Li, K.S. Sharma, M.G. Sternberg, T. Sun, B.J. Zabransky
2012Ve04	EPJAA	48,	101	M. Venhart, A.N. Andreyev, S. Antalic, L. Bianco, P.T. Greenlees, U. Jakobsson, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, R.D. Page, P. Peura, P. Rahkila, J. Sarén, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo
2012Vi10	NATUA	488,	357	R. Vincent, S. Klyatskaya, M. Ruben, W. Wernsdorfer, F. Balestro
2012Wa10	PRVCA	85,	034329	P.T. Wady, J.F. Smith, E.S. Paul, B. Hadinia, C.J. Chiara, M.P. Carpenter, C.N. Davids, A.N. Deacon, S.J. Freeman, A.N. Grint, R.V.F. Janssens, B.P. Kay, T. Lauritsen, C.J. Lister, B.M. McGuirk, M. Petri, A.P. Robinson, D. Seweryniak, D. Steppenbeck, S. Zhu
2012We08	JPCSD	337,	012018	L. Weissman, U. Bergmann, J. Cederkall, L. Fraile, S. Franchoo, H.O.U. Fynbo, T. Fritioff, U. Koster, O. Arnd, I. Dillman, O. Hallmann, K.-L. Kratz, B. Pfeiffer, A. Wohr, L. Gaudefroy, O. Sorlin
2012Zh04	CPLEE	29,	012502	Z.Y. Zhang, Z.G. Gan, L. Ma, M.H. Huang, T.H. Huang, X.L. Wu, G.B. Jia, G.S. Li, L. Yu, Z.Z. Ren, S.G. Zhou, Y.H. Zhang, X.H. Zhou, H.S. Xu, H.Q. Zhang, G.Q. Xiao, W.L. Zhang
2012Zh34	PRLTA	109,	102501	Y.H. Zhang, H.S. Xu, Yu. A. Litvinov, X.L. Tu, X.L. Yan, S. Typel, K. Blaum, M. Wang, X.H. Zhou, Y. Sun, B.A. Brown, Y.J. Yuan, J.W. Xia, J.C. Yang, G. Audi, X.C. Chen, G.B. Jia, Z.G. Hu, X.W. Ma, R.S. Mao, B. Mei, P. Shuai, Z.Y. Sun, S.T. Wang, G.Q. Xiao, X. Xu, T. Yamaguchi, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, W. Zhang, W.L. Zhan
				2013
2013Ag11	PRLTA	111,	122503	M. Agostini, for the GERDA Collaboration
2013Ah03	PRVCA	87,	054328	I. Ahmad, J.P. Greene, F.G. Kondev, S. Zhu, M.P. Carpenter, R.V.F. Janssens, R.A. Boll, J.G. Ezold, S.M. Van Cleve, E. Browne
2013Ak02	PRVCA	87,	064316	Yu. Aksyutina, T. Aumann, K. Boretzky, M.J.G. Borge, C. Caesar, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, H.O.U. Fynbo, H. Geissel, G. Ickert, H.T. Johansson, B. Jonson, R. Kulessa, C. Langer, T. LeBleis, K. Mahata, G. Munzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, D. Rossi, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Summerer, O. Tengblad, H. Weick, M.V. Zhukov
2013Al14	PRVCA	88,	034301	T. Al Kalanee, J. Gibelin, P. Roussel-Chomaz, N. Keeley, D. Beaumel, Y. Blumenfeld, B. Fernández-Domínguez, C. Force, L. Gaudefroy, A. Gillibert, J. Guillot, H. Iwasaki, S. Krupko, V. Lapoux, W. Mittig, X. Mougeot, L. Nalpas, E. Pollacco, K. Rusek, T. Roger, H. Savajols, N. de Séréville, S. Sidorchuk, D. Suzuki, I. Strojek, N.A. Orr
2013An03	PRVCA	87,	014317	A.N. Andreyev, S. Antalic, D. Ackermann, L. Bianco, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, M. Huyse, Z. Kalaninová, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, K. Nishio, R.D. Page, J.J. Ressler, B. Streicher, S. Saro, B. Sulignano, P. Van Duppen

2013An10	PRVCA	87,	054311	A.N. Andreyev, V. Liberati, S. Antalic, D. Ackermann, A. Barzakh, N. Bree, T.E. Cocolios, J. Diriken, J. Elseviers, D. Fedorov, V.N. Fedosseev, D. Fink, S. Franchoo, S. Heinz, F.P. Hessberger, S. Hofmann, M. Huyse, O. Ivanov, J. Khuyagbaatar, B. Kindler, U. Koster, J.F.W. Lane, B. Lommel, R. Mann, B. Marsh, P. Molkanov, K. Nishio, R.D. Page, N. Patronis, D. Pauwels, D. Radulov, S. Saro, M. Seliverstov, M. Sjodin, I. Tsekhanovich, P. Van den Bergh, P. Van Duppen, M. Venhart, M. Veselsky
2013An13	PRLTA	110,	242502	A.N. Andreyev, M. Huyse, P. Van Duppen, C. Qi, R.J. Liotta, S. Antalic, D. Ackermann, S. Franchoo, F.P. Heßberger, S. Hofmann, I. Kojouharov, B. Kindler, P. Kuusiniemi, S.R. Lesher, B. Lommel, R. Mann, K. Nishio, R.D. Page, B. Streicher, Š. Šáro, B. Sulignano, D. Wiseman, R.A. Wyss
2013As02	PRVCA	87,	014332	M. Asai, K. Tsukada, M. Sakama, H. Haba, T. Ichikawa, Y. Ishii, A. Toyoshima, T. Ishii, I. Nishinaka, Y. Nagame, Y. Kasamatsu, M. Shibata, Y. Kojima, H. Hayashi
2013Ba29	PYLBB	723,	302	A.M.D. Bacelar, A.M. Bruce, Zs. Podolyák, N. Al-Dahan, M. Górska, S. Lalkovski, S. Pietri, M.V. Ricciardi, A. Algora, N. Alkhomashi, J. Benlliure, P. Boutachkov, A. Bracco, E. Calore, E. Casarejos, I.J. Cullen, A.Y. Deo, P. Detistov, Zs. Dombradi, C. Domingo-Pardo, M. Doncel, F. Farinon, G.F. Farrelly, H. Geissel, W. Gelletly, J. Gerl, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Leoni, F. Molina, D. Montanari, A.I. Morales, A. Musumarra, D.R. Napoli, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, P.H. Regan, B. Rubio, D. Rudolph, K.-H. Schmidt, H. Schaffner, S.J. Steer, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, J.J. Valiente-Dobón, S. Verma, P.M. Walker, H. Weick, H.J. Wollersheim
2013Ba41	PRVCA	88,	024315	A.E. Barzakh, L. Kh. Batist, D.V. Fedorov, V.S. Ivanov, K.A. Mezilev, P.L. Molkanov, F.V. Moroz, S. Yu. Orlov, V.N. Panteleev, Yu. M. Volkov
2013Be07	EPJAA	49,	24	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Di Marco, A. Incicchitti, G.P. Kovtun, N.G. Kovtun, M. Laubenstein, D.V. Poda, O.G. Polischuk, A.P. Shcherban, V.I. Tretyak
2013Be09	PRVCA	87,	034607	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, G.P. Kovtun, N.G. Kovtun, M. Laubenstein, D.V. Poda, O.G. Polischuk, A.P. Shcherban, D.A. Solopikhin, J. Suhonen, V.I. Tretyak
2013Be16	EPJAA	49,	50	J.W. Beeman, F. Bellini, L. Cardani, N. Casali, S. Di Domizio, E. Fiorini, L. Gironi, S.S. Nagorny, S. Nisi, F. Orio, L. Pattavina, G. Pessina, G. Piperno, S. Pirro, E. Previtali, C. Rusconi, C. Tomei, M. Vignati
2013Be31	EPJAA	49,	92	G. Bellini, for the Borexino Collaboration
2013Bi14	PRVCA	88,	067301	M. Birch, J. Flegenheimer, Z. Schaedig, B. Singh, M. Thoennessen
2013Bu12	PRVCA	88,	022501	S. Bustabad, G. Bollen, M. Brodeur, D.L. Lincoln, S.J. Novario, M. Redshaw, R. Ringle, S. Schwarz, A.A. Valverde
2013Bu17	PRVCA	88,	035502	S. Bustabad, G. Bollen, M. Brodeur, D.L. Lincoln, S.J. Novario, M. Redshaw, R. Ringle, S. Schwarz
2013Ca18	PRVCA	88,	034313	C. Caesar, for the R3B Collaboration
2013Ch12	PRLTA	110,	122502	L. Chen, P.M. Walker, H. Geissel, Yu. A. Litvinov, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, J.J. Carroll, D.M. Cullen, I.J. Cullen, B. Franzke, J. Gerl, M. Górska, G.A. Jones, A. Kishada, R. Knöbel, C. Kozhuharov, J. Kurcewicz, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Münzenberg, F. Nolden, T. Ohtsubo, Z. Patyk, W.R. Plaß, Zs. Podolyák, S. Rigby, N. Saito, T. Saito, C. Scheidenberger, E.C. Simpson, M. Shindo, M. Steck, B. Sun, S.J. Williams, H. Weick, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2013Ch49	PRVCA	88,	054317	A. Chaudhuri, C. Andreoiu, T. Brunner, U. Chowdhury, S. Ettenauer, A.T. Gallant, G. Gwinner, A.A. Kwiatkowski, A. Lennarz, D. Lunney, T.D. Macdonald, B.E. Schultz, M.C. Simon, V.V. Simon, J. Dilling
2013Ch51	NIMAE	728,	81	L. Chen, J.C. Hardy, M. Bencomo, V. Horvat, N. Nica, H.I. Park
2013Da16	PYLBB	726,	665	H.M. David, P.J. Woods, G. Lotay, D. Seweryniak, M. Albers, M. Alcorta, M.P. Carpenter, C.J. Chiara, T. Davinson, D.T. Doherty, C.R. Hoffman, R.V.F. Janssens, T. Lauritsen, A.M. Rogers, S. Zhu

2013De20	PRVCA	87,	067303	H. De Witte, S. Eeckhaudt, A.N. Andreyev, I.N. Borzov, J. Cederkäll, A. De Smet, D.V. Fedorov, V.N. Fedoseyev, S. Franchoo, M. Górska, H. Grawe, G. Huber, M. Huyse, Z. Janas, U. Köster, W. Kurcewicz, J. Kurpeta, A. Płochocki, K. Van de Vel, P. Van Duppen, L. Weissman
2013Dr01	PRVCA	87,	014326	G.D. Dracoulis, G.J. Lane, H. Watanabe, R.O. Hughes, N. Palalani, F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu, P. Chowdhury, W.Y. Liang, Y. Shi, F.R. Xu
2013Dr04	EPJAA	49,	13	C. Droese, D. Ackermann, L.-L. Andersson, K. Blaum, M. Block, M. Dworschak, M. Eibach, S. Eliseev, U. Forsberg, E. Haettner, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, G. Marx, E. Minaya Ramirez, D. Nesterenko, Yu. N. Novikov, W.R. Plaß, D. Rodríguez, D. Rudolph, C. Scheidenberger, L. Schweikhard, S. Stolze, P.G. Thirolf, C. Weber
2013Dr05	PYLBB	720,	330	G.D. Dracoulis, G.J. Lane, A.P. Byrne, H. Watanabe, R.O. Hughes, F.G. Kondev, M. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu, P. Chowdhury, Y. Shi, F.R. Xu
2013Dr06	PRVCA	87,	054309	M.C. Drummond, D.T. Joss, R.D. Page, J. Simpson, D. O'Donnell, K. Andgren, L. Bianco, B. Cederwall, I.G. Darby, S. Eeckhaudt, M.B. Gomez-Hornillos, T. Grahn, P.T. Greenlees, B. Hadinia, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A.-P. Leppänen, M. Leino, M. Nyman, J. Pakarinen, P. Rahkila, M. Sandzelius, P.J. Sapple, J. Sarén, B. Saygi, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo, M. Venhart
2013El01	PRLTA	110,	082501	S. Eliseev, K. Blaum, M. Block, C. Droese, M. Goncharov, E. Minaya Ramirez, D.A. Nesterenko, Yu. N. Novikov, L. Schweikhard
2013El08	PRVCA	88,	044321	J. Elseviers, A.N. Andreyev, M. Huyse, P. Van Duppen, S. Antalic, A. Barzakh, N. Bree, T.E. Cocolios, V.F. Comas, J. Diriken, D. Fedorov, V.N. Fedosseev, S. Franchoo, L. Ghys, J.A. Heredia, O. Ivanov, U. Köster, B.A. Marsh, K. Nishio, R.D. Page, N. Patronis, M.D. Seliverstov, I. Tsekhanovich, P. Van den Bergh, J. Van De Walle, M. Venhart, S. Vermote, M. Veselský, C. Wagemans
2013Fi08	PRVCA	88,	011303	M. Fisichella, A. Musumarra, F. Farinon, C. Nociforo, A. Del oppo, P. Figuera, M. La Cognata, M.G. Pellegriti, V. Scuderi, D. Torresi, E. Strano
2013Fl09	PRLTA	111,	212501	K.T. Flanagan, K.M. Lynch, J. Billowes, M.L. Bissell, I. Budinčević, T.E. Cocolios, R.P. de Groote, S. De Schepper, V.N. Fedosseev, S. Franchoo, R.F. Garcia Ruiz, H. Heylen, B.A. Marsh, G. Neyens, T.J. Procter, R.E. Rossel, S. Rothe, I. Strashnov, H.H. Stroke, K.D.A. Wendt
2013Fr13	PYLBB	722,	233	D. Frekers, M.C. Simon, C. Andreoiu, J.C. Bale, M. Brodeur, T. Brunner, A. Chaudhuri, U. Chowdhury, J.R.C. López-Urrutia, P. Delheij, H. Ejiri, S. Ettenauer, A.T. Gallant, V. Gavrin, A. Grossheim, M.N. Harakeh, F. Jang, A.A. Kwiatkowski, J. Lassen, A. Lennarz, M. Luichtl, T. Ma, T.D. Macdonald, E. Mané, D. Robertson, B.E. Schultz, V.V. Simon, A. Teigelhöfer, J. Dilling
2013Ga07	PRLTA	110,	062502	A. Gando, for the KamLAND-Zen Collaboration
2013Go10	PYLBB	725,	292	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, A. Gadea, S. Lunardi, P. Boutachkov, A.M. Bruce, M. Górska, J. Grebosz, S. Pietri, Zs. Podolyák, M. Pfützner, P.H. Regan, H. Weick, J. Alcántara Núnez, A. Algora, N. Al-Dahan, G. de Angelis, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, A. Bracco, M. Bunce, F. Camera, E. Casarejos, M.L. Cortes, F.C.L. Crespi, A. Corsi, A.M.D. Bacelar, A.Y. Deo, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, E. Farnea, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, P.R. John, S. Klupp, I. Kojouharov, N. Kurz, S.M. Lenzi, S. Leoni, S. Mandal, R. Menegazzo, D. Mengoni, B. Million, V. Modamio, A.I. Morales, D.R. Napoli, F. Naqvi, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, D. Rudolph, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, O. Wieland, H.-J. Wollersheim
2013Gr03	PRVCA	87,	045502	G.F. Grinyer, G.C. Ball, H. Bouzomita, S. Ettenauer, P. Finlay, A.B. Garnsworthy, P.E. Garrett, K.L. Green, G. Hackman, J.R. Leslie, C.J. Pearson, E.T. Rand, C.S. Sumithrarachchi, C.E. Svensson, J.C. Thomas, S. Triambak, S.J. Williams
2013Ho22	PRVAA	88,	052502	M. Höcker, R. Rana, E.G. Myers

2013Hu08	PRVCA	88,	014311	R.O. Hughes, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P. Nieminen, H. Watanabe, M.P. Carpenter, P. Chowdhury, R.V.F. Janssens, F.G. Kondev, T. Lauritsen, D. Seweryniak, S. Zhu
2013It01	PRVCA	88,	011306	Y. Ito, P. Schury, M. Wada, S. Naimi, T. Sonoda, H. Mita, F. Arai, A. Takamine, K. Okada, A. Ozawa, H. Wollnik
2013Ja06	PRVCA	87,	054320	U. Jakobsson, S. Juutinen, J. Uusitalo, M. Leino, K. Auranen, T. Enqvist, P.T. Greenlees, K. Hauschild, P. Jones, R. Julin, S. Ketelhut, P. Kuusiniemi, M. Nyman, P. Peura, P. Rahkila, P. Ruotsalainen, J. Sarén, C. Scholey, J. Sorri
2013Jo06	PRVCA	88,	044619	J.G. Johansen, V. Bildstein, M.J.G. Borge, M. Cubero, J. Diriken, J. Elseviers, L.M. Fraile, H.O.U. Fynbo, L.P. Gaffney, R. Gernhauser, B. Jonson, G.T. Koldste, J. Konki, T. Kroll, R. Krucken, D. Mucher, T. Nilsson, K. Nowak, J. Pakarinen, V. Pesudo, R. Raabe, K. Riisager, M. Seidlitz, O. Tengblad, H. Tornqvist, D. Voulot, N. Warr, F. Wenander, K. Wimmer, H. De Witte
2013Ka08	PRVCA	87,	024307	A. Kankainen, J. Hakala, T. Eronen, D. Gorelov, A. Jokinen, V.S. Kolhinen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2013Ka16	PRVCA	87,	044335	Z. Kalaninová, A.N. Andreyev, S. Antalic, F.P. Heßberger, D. Ackermann, B. Andel, M.C. Drummond, S. Hofmann, M. Huyse, B. Kindler, J.F.W. Lane, V. Liberati, B. Lommel, R.D. Page, E. Rapisarda, K. Sandhu, Š. Šáro, A. Thornthwaite, P. Van Duppen
2013Ko03	PRVCA	87,	011304	Z. Kohley, E. Lunderberg, P.A. DeYoung, A. Volya, T. Baumann, D. Bazin, G. Christian, N.L. Cooper, N. Frank, A. Gade, C. Hall, J. Hinnefeld, B. Luther, S. Mosby, W.A. Peters, J.K. Smith, J. Snyder, A. Spyrou, M. Thoennessen
2013Ko10	PRLTA	110,	152501	Z. Kohley, T. Baumann, D. Bazin, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, M. Jones, E. Lunderberg, B. Luther, S. Mosby, T. Nagi, J.K. Smith, J. Snyder, A. Spyrou, M. Thoennessen
2013Kr15	NIMBE	317,	492	S. Kreim, D. Atanasov, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, T.E. Cocolios, D. Fink, S. George, A. Herlert, A. Kellerbauer, U. Köster, M. Kowalska, D. Lunney, V. Manea, E. Minaya Ramirez, S. Naimi, D. Neidherr, T. Nicol, R.E. Rossel, M. Rosenbusch, L. Schweikhard, J. Stanja, F. Wienholtz, R.N. Wolf, K. Zuber
2013La02	PRVCA	87,	014318	J.F.W. Lane, A.N. Andreyev, S. Antalic, D. Ackermann, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, H. Kettunen, A. Kleinböhl, B. Kindler, I. Kojouharov, M. Leino, B. Lommel, G. Münzenberg, K. Nishio, R.D. Page, Š. Šáro, H. Schaffner, M.J. Taylor, P. Van Duppen
2013La11	PRVCA	87,	034308	S. Lalkovski, A.M. Bruce, A. Jungclaus, M. Górska, M. Pfützner, L. Cáceres, F. Naqvi, S. Pietri, Zs. Podolyák, G.S. Simpson, K. Andgren, P. Bednarczyk, T. Beck, J. Benlliure, G. Benzoni, E. Casarejos, B. Cederwall, F.C.L. Crespi, J.J. Cuenca-García, I.J. Cullen, A.M.D. Bacelar, P. Detistov, P. Doornenbal, G.F. Farrelly, A.B. Garnsworthy, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, B. Hadinia, M. Hellström, C. Hinke, R. Hoischen, G. Ilie, G. Jaworski, J. Jolie, A. Khaplanov, S. Kisyov, M. Kmiecik, I. Kojouharov, R. Kumar, N. Kurz, A. Maj, S. Mandal, V. Modamio, F. Montes, S. Myalski, M. Palacz, W. Prokopowicz, P. Reiter, P.H. Regan, D. Rudolph, H. Schaffner, D. Sohler, S.J. Steer, S. Tashenov, J. Walker, P.M. Walker, H. Weick, E. Werner-Malento, O. Wieland, H.J. Wollersheim, M. Zhekova
2013La23	PRVCA	88,	015501	A.T. Laffoley, C.E. Svensson, C. Andreoiu, R.A.E. Austin, G.C. Ball, B. Blank, H. Bouzomita, D.S. Cross, A. Diaz Varela, R. Dunlop, P. Finlay, A.B. Garnsworthy, P.E. Garrett, J. Giovinazzo, G.F. Grinyer, G. Hackman, B. Hadinia, D.S. Jamieson, S. Ketelhut, K.G. Leach, J.R. Leslie, E. Tardiff, J.C. Thomas, C. Unsworth
2013La25	PRVCA	88,	024302	S. Lalkovski, A.M. Bruce, A.M.D. Bacelar, M. Górska, S. Pietri, Zs. Podolyák, P. Bednarczyk, L. Caceres, E. Casarejos, I.J. Cullen, P. Doornenbal, G.F. Farrelly, A.B. Garnsworthy, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, C. Hinke, G. Ilie, D. Ivanova, G. Jaworski, S. Kisyov, I. Kojouharov, N. Kurz, N. Minkov, S. Myalski, M. Palacz, P. Petkov, W. Prokopowicz, P.H. Regan, H. Schaffner, S. Steer, S. Tashenov, P.M. Walker, H.J. Wollersheim
2013Li01	PRLTA	110,	012501	D.L. Lincoln, J.D. Holt, G. Bollen, M. Brodeur, S. Bustabad, J. Engel, S.J. Novario, M. Redshaw, R. Ringle, S. Schwarz

2013Li04	PRVCA	87,	014325	S.N. Liddick, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, B.A. Brown, L. Cartegni, H.L. Crawford, I.G. Darby, R. Grzywacz, S. Ilyushkin, M. Hjorth-Jensen, N. Larson, M. Madurga, D. Miller, S. Padgett, S.V. Paulauskas, M.M. Rajabali, K. Rykaczewski, S. Suchyta
2013Li49	PRVCA	88,	044322	V. Liberati, A.N. Andreyev, S. Antalic, A. Barzakh, T.E. Cocolios, J. Elseviers, D. Fedorov, V.N. Fedoseev, M. Huyse, D.T. Joss, Z. Kalaninová, U. Köster, J.F.W. Lane, B. Marsh, D. Mengoni, P. Molkanov, K. Nishio, R.D. Page, N. Patronis, D. Pauwels, D. Radulov, M. Seliverstov, M. Sjödin, I. Tsekhanovich, P. Van den Bergh, P. Van Duppen, M. Venhart, M. Veselsky
2013Ma13	ARISE	74,	123	M. Marouli, G. Suliman, S. Pommé, R. Van Ammel, V. Jobbágy, H. Stroh, H. Dikmen, J. Paepen, A. Dirican, F. Bruchertseifer, C. Apostolidis, A. Morgenstern
2013Ma15	NDSBA	114,	397	A. MacDonald, B. Karamy, K. Setoodehnia, B. Singh
2013Ma22	PRVCA	87,	034315	C. Mazzocchi, K.P. Rykaczewski, A. Korgul, R. Grzywacz, P. Baczyk, C. Bingham, N.T. Brewer, C.J. Gross, C. Jost, M. Karny, M. Madurga, A.J. Mendez II, K. Miernik, D. Miller, S. Padgett, S.V. Paulauskas, D.W. Stracener, M. Wolińska-Cichocka, I.N. Borzov
2013Ma81	PRVCA	88,	054322	V. Manea, D. Atanasov, D. Beck, K. Blaum, C. Borgmann, R.B. Cakirli, T. Eronen, S. George, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, Yu. A. Litvinov, D. Lunney, D. Neidherr, M. Rosenbusch, L. Schweikhard, F. Wienholtz, R.N. Wolf, K. Zuber
2013Ma87	PRVCA	88,	064320	C. Mazzocchi, R. Surman, R. Grzywacz, J.C. Batchelder, C.R. Bingham, D. Fong, J.H. Hamilton, J.K. Hwang, M. Karny, W. Królas, S.N. Liddick, P.F. Mantica, A.C. Morton, W.F. Mueller, K.P. Rykaczewski, M. Steiner, A. Stolz, J.A. Winger, I.N. Borzov
2013Ma.A	PrvCom	Apr	Lunney	Vladimir Manea
2013Mi13	PRVCA	88,	014309	K. Miernik, K.P. Rykaczewski, R. Grzywacz, C.J. Gross, D.W. Stracener, J.C. Batchelder, N.T. Brewer, L. Cartegni, A. Fijalkowska, J.H. Hamilton, J.K. Hwang, S.V. Ilyushkin, C. Jost, M. Karny, A. Korgul, W. Królas, S.H. Liu, M. Madurga, C. Mazzocchi, A.J. Mendez II, D. Miller, S.W. Padgett, S.V. Paulauskas, A.V. Ramayya, R. Surman, J.A. Winger, M. Wolinska-Cichocka, E.F. Zganjar
2013Mo12	NUPAB	909,	69	S. Mosby, N.S. Badger, T. Baumann, D. Bazin, M. Bennett, J. Brown, G. Christian, P.A. DeYoung, J.E. Finck, M. Gardner, J.D. Hinnefeld, E.A. Hook, E.M. Lunderberg, B. Luther, D.A. Meyer, M. Mosby, G.F. Peaslee, W.F. Rogers, J.K. Smith, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen
2013Mo20	PRVCA	88,	014319	A.I. Morales, J. Benlliure, M. Górska, H. Grawe, S. Verma, P.H. Regan, Zs. Podolyák, S. Pietri, R. Kumar, E. Casarejos, A. Algora, N. Alkhomashi, H. Álvarez-Pol, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, L.S. Cáceres, I.J. Cullen, A.M.D. Bacelar, P. Doornenbal, M.E. Estévez Aguado, G. Farrelly, Y. Fujita, A.B. Garnsworthy, W. Gelletly, J. Gerl, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, Z. Liu, C. Mihai, F. Molina, D. Mücher, W. Prokopowicz, B. Rubio, H. Schaffner, S.J. Steer, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.M. Walker, H.J. Wollersheim, P.J. Woods
2013Mu08	PRVCA	88,	024618	M. Murakami, S. Goto, H. Murayama, T. Kojima, H. Kudo, D. Kaji, K. Morimoto, H. Haba, Y. Kudou, T. Sumita, R. Sakai, A. Yoneda, K. Morita, Y. Kasamatsu, H. Kikunaga, T.K. Sato
2013Ny01	PRVCA	88,	054320	M. Nyman, S. Juutinen, I. Darby, S. Eeckhaudt, T. Grahn, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Ketelhut, H. Kettunen, M. Leino, P. Nieminen, P. Peura, P. Rahkila, J. Sarén, C. Scholey, J. Sorri, J. Uusitalo, T. Enqvist
2013Og01	PRVCA	87,	014302	Yu. Ts. Oganessian, F. Sh. Abdullin, S.N. Dmitriev, J.M. Gostic, J.H. Hamilton, R.A. Henderson, M.G. Itkis, K.J. Moody, A.N. Polyakov, A.V. Ramayya, J.B. Roberto, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, N.J. Stoyer, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin

2013Og03	PRVCA	87,	034605	Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, S.N. Dmitriev, R. Graeger, R.A. Henderson, M.G. Itkis, Yu. V. Lobanov, A.N. Mezentsev, K.J. Moody, S.L. Nelson, A.N. Polyakov, M.A. Ryabinin, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, N.J. Stoyer, V.G. Subbotin, K. Subotic, A.M. Sukhov, Yu. S. Tsyganov, A. Türler, A.A. Voinov, G.K. Vostokin, P.A. Wilk, A. Yakushev
2013Og04	PRVCA	87,	054621	Yu. Ts. Oganessian, F. Sh. Abdullin, C. Alexander, J. Binder, R.A. Boll, S.N. Dmitriev, J. Ezold, K. Felker, J.M. Gostic, R.K. Grzywacz, J.H. Hamilton, R.A. Henderson, M.G. Itkis, K. Miernik, D. Miller, K.J. Moody, A.N. Polyakov, A.V. Ramayya, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.V. Shumeiko, M.A. Stoyer, N.J. Stoyer, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin
2013Ol06	PRVCA	88,	044306	B. Olaizola, L.M. Fraile, H. Mach, A. Aprahamian, J.A. Briz, J. Cal-González, D. Ghita, U. Köster, W. Kurcewicz, S.R. Lesher, D. Pauwels, E. Picado, A. Poves, D. Radulov, G.S. Simpson, J.M. Udías
2013Pa11	PRLTA	110,	172503	J. Papuga, M.L. Bissell, K. Kreim, K. Blaum, B.A. Brown, M. De Rydt, R.F. Garcia Ruiz, H. Heylen, M. Kowalska, R. Neugart, G. Neyens, W. Nörtershäuser, T. Otsuka, M.M. Rajabali, R. Sánchez, Y. Utsuno, D.T. Yordanov
2013Pr01	PRVCA	87,	014308	M.G. Procter, D.M. Cullen, M.J. Taylor, J. Pakarinen, K. Auranen, T. Bäck, T. Braunroth, B. Cederwall, A. Dewald, T. Grahn, P.T. Greenlees, U. Jakobsson, R. Julin, S. Juutinen, A. Herzán, J. Konki, M. Leino, R. Liotta, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandelius, J. Sarén, C. Scholey, J. Sorri, S. Stolze, J. Uusitalo, C. Qi
2013Ra17	PRVCA	88,	014307	D. Radulov, C.J. Chiara, I.G. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, U. Köster, B.A. Marsh, D. Pauwels, L. Popescu, M.D. Seliverstov, A.M. Sjödin, P. Van den Bergh, P. Van Duppen, M. Venhart, W.B. Walters, K. Wimmer
2013Re18	PRVCA	88,	041302	F. Recchia, C.J. Chiara, R.V.F. Janssens, D. Weisshaar, A. Gade, W.B. Walters, M. Albers, M. Alcorta, V.M. Bader, T. Baugher, D. Bazin, J.S. Berryman, P.F. Bertone, B.A. Brown, C.M. Campbell, M.P. Carpenter, J. Chen, H.L. Crawford, H.M. David, D.T. Doherty, C.R. Hoffman, F.G. Kondev, A. Korichi, C. Langer, N. Larson, T. Lauritsen, S.N. Liddick, E. Lunderberg, A.O. Macchiavelli, S. Noji, C. Prokop, A.M. Rogers, D. Seweryniak, S.R. Stroberg, S. Suchyta, S. Williams, K. Wimmer, S. Zhu
2013Ri07	PRVCA	88,	044313	J. Rissanen, R.M. Clark, K.E. Gregorich, J.M. Gates, C.M. Campbell, H.L. Crawford, M. Cromaz, N.E. Esker, P. Fallon, U. Forsberg, O. Gothe, I.-Y. Lee, H.L. Liu, A.O. Machiavelli, P. Mudder, H. Nitsche, G. Pang, A. Rice, D. Rudolph, M.A. Stoyer, A. Wiens, F.R. Xu
2013Ro.A	PrvCom	GAu	May	Marco Rosenbusch
2013Ru07	PRVCA	87,	064317	M. Rudigier, G.S. Simpson, J.M. Daugas, A. Blazhev, C. Fransen, G. Gey, M. Hackstein, J. Jolie, U. Köster, T. Malkiewicz, T. Materna, M. Pfeiffer, M. Ramdhane, J.-M. Régis, W. Rother, T. Thomas, N. Warr, D. Wilmsen, J. Le Bloas, N. Pillet
2013Ru10	PRVCA	88,	024320	P. Ruotsalainen, C. Scholey, R. Julin, K. Hauschild, K. Kaneko, B.S. Nara Singh, R. Wadsworth, D.G. Jenkins, T.S. Brock, P.T. Greenlees, J. Henderson, U. Jakobsson, P. Jones, S. Juutinen, S. Ketelhut, M. Leino, N.M. Lumley, P.J.R. Mason, P. Nieminen, M. Nyman, I. Paterson, P. Peura, M.G. Procter, P. Rahkila, J. Sarén, J. Sorri, J. Uusitalo
2013Ru11	PRLTA	111,	112502	D. Rudolph, U. Forsberg, P. Golubev, L.G. Sarmiento, A. Yakushev, L.-L. Andersson, A. Di Nitto, Ch. E. Düllmann, J.M. Gates, K.E. Gregorich, C.J. Gross, F.P. Heßberger, R.-D. Herzberg, J. Khuyagbaatar, J.V. Kratz, K. Rykaczewski, M. Schädel, S. øAberg, D. Ackermann, M. Block, H. Brand, B.G. Carlsson, D. Cox, X. Derkx, K. Eberhardt, J. Even, C. Fahlander, J. Gerl, E. Jäger, B. Kindler, J. Krier, I. Kojouharov, N. Kurz, B. Lommel, A. Mistry, C. Mokry, H. Nitsche, J.P. Omtvedt, P. Papadakis, I. Ragnarsson, J. Runke, H. Schaffner, B. Schausten, P. Thörle-Pospiech, T. Torres, T. Traut, N. Trautmann, A. Türler, A. Ward, D.E. Ward, N. Wiehl

2013RuZX	Th.-Cologne			M. Rudigier
2013Rz01	PRVCA	87,	031305	T. Rzaca-Urban, W. Urban, A.G. Smith, I. Ahmad, A. Syntfeld-Kažuch
2013Sa43	EPJAA	49,	109	J. Sauvage, B. Roussiére, J. Genevey, S. Franchoo, A.N. Andreyev, N. Barré, A. Ben Braham, C. Bourgeois, J.-F. Clavelin, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, L.M. Fraile, X. Grave, G. Huber, M. Huyse, P. Kilcher, U. Köster, P. Kunz, S.R. Lesher, B.A. Marsh, I. Mukha, J. Oms, M.G. Porquet, M. Seliverstov, I. Stefanescu, K. Van de Vel, P. Van Duppen, YU.M. Volkov, A. Wojtasiewicz
2013Sa65	PRVCA	88,	064611	P. Salvador-Castineira, T. Brys, R. Eykens, F.-J. Hambsch, A. Moens, S. Oberstedt, G. Sibbens, D. Vanleeuw, M. Vidali, C. Pretel
2013Se03	PYLBB	719,	362	M.D. Seliverstov, T.E. Cocolios, W. Dexters, A.N. Andreyev, S. Antalic, A.E. Barzakh, B. Bastin, J. Büscher, I.G. Darby, D.V. Fedorov, V.N. Fedoseyev, K.T. Flanagan, S. Franchoo, S. Fritzsche, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, B.A. Marsh, P.L. Molkanov, R.D. Page, A.M. Sjodin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart, S.G. Zemlyanoy
2013Sh30	PRVCA	88,	024310	D. Shubina, R.B. Cakirli, Yu. A. Litvinov, K. Blaum, C. Brandau, F. Bosch, J.J. Carroll, R.F. Casten, D.M. Cullen, I.J. Cullen, A.Y. Deo, B. Detwiler, C. Dimopoulou, F. Farinon, H. Geissel, E. Haettner, M. Heil, R.S. Kempley, C. Kozhuharov, R. Knöbel, J. Kurcewicz, N. Kuzminchuk, S.A. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plass, A. Prochazka, M.W. Reed, M.S. Sanjari, C. Scheidenberger, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, P.M. Walker, H. Weick, N. Winckler, M. Winkler, P.J. Woods, T. Yamaguchi, C. Zhou
2013Sn02	PRVCA	88,	031303	J. Snyder, T. Baumann, G. Christian, R.A. Haring-Kaye, P.A. DeYoung, Z. Kohley, B. Luther, M. Mosby, S. Mosby, A. Simon, J.K. Smith, A. Spyrou, S. Stephenson, M. Thoennessen
2013St25	PRVCA	88,	054304	J. Stanja, Ch. Borgmann, J. Agramunt, A. Algora, D. Beck, K. Blaum, Ch. Böhm, M. Breitenfeldt, T.E. Cocolios, L.M. Fraile, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, D. Lunney, V. Manea, E. Minaya Ramirez, S. Naimi, D. Neidherr, M. Rosenbusch, L. Schweikhard, G. Simpson, F. Wienholtz, R.N. Wolf, K. Zuber
2013Su04	JUPSA	82,	024202	T. Sumita, K. Morimoto, D. Kaji, H. Haba, K. Ozeki, R. Sakai, A. Yoneda, A. Yoshida, H. Hasebe, K. Katori, N. Sato, Y. Wakabayashi, S.-i. Mitsuoka, S.-i. Goto, M. Murakami, Y. Kariya, F. Tokanai, K. Mayama, M. Takeyama, T. Moriya, E. Ideguchi, T. Yamaguchi, H. Kikunaga, J. Chiba, K. Morita
2013Su07	PRVCA	87,	024312	J. Su, W.P. Liu, N.C. Shu, S.Q. Yan, Z.H. Li, B. Guo, W.Z. Huang, S. Zeng, E.T. Li, S.J. Jin, X. Liu, Y.B. Wang, G. Lian, Y.J. Li, Y.S. Chen, X.X. Bai, J.S. Wang, Y.Y. Yang, R.F. Chen, S.W. Xu, J. Hu, S.Z. Chen, S.B. Ma, J.L. Han, P. Ma, Q. Hu, J.B. Ma, X.G. Cao, S.L. Jin, Z. Bai, K. Yang, F.D. Shi, W. Zhang, Z. Chen, L.X. Liu, Q.Y. Lin, X.S. Yan, X.H. Zhang, F. Fu, J.J. He, X.Q. Li, C. He, M.S. Smith
2013Su13	ARISE	77,	32	G. Suliman, S. Pommé, M. Marouli, R. Van Ammel, H. Stroh, V. Jobbágy, J. Paepen, A. Dirican, F. Bruchertseifer, C. Apostolidis, A. Morgenstern
2013Su23	NIMBE	317,	756	H. Suzuki, T. Kubo, N. Fukuda, N. Inabe, D. Kameda, H. Takeda, K. Yoshida, K. Kusaka, Y. Yanagisawa, M. Ohtake, H. Sato, Y. Shimizu, H. Baba, M. Kurokawa, T. Ohnishi, K. Tanaka, O.B. Tarasov, D. Bazin, D.J. Morrissey, B.M. Sherrill, K. Ieki, D. Murai, N. Iwasa, A. Chiba, Y. Ohkoda, E. Ideguchi, S. Go, R. Yokoyama, T. Fujii, D. Nishimura, H. Nishibata, S. Momota, M. Lewitowicz, G. DeFrance, I. Celikovic, K. Steiger
2013Ta14	PRVCA	87,	054612	O.B. Tarasov, M. Portillo, D.J. Morrissey, A.M. Amthor, L. Bandura, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, G. Chubarian, N. Fukuda, A. Gade, T.N. Ginter, M. Hausmann, N. Inabe, T. Kubo, J. Pereira, B.M. Sherrill, A. Stolz, C. Sumithrarachchi, M. Thoennessen, D. Weisshaar
2013Tr09	PRLTA	111,	262501	V. Tripathi, S.L. Tabor, A. Volya, S.N. Liddick, P.C. Bender, N. Larson, C. Prokop, S. Suchyta, P.-L. Tai, J.M. VonMoss

2013Ue01	PRVCA	87,	034316	H. Ueno, H. Miyatake, Y. Yamamoto, S. Tanimoto, T. Shimoda, N. Aoi, K. Asahi, E. Ideguchi, M. Ishihara, H. Izumi, T. Kishida, T. Kubo, S. Mitsuoka, Y. Mizoi, M. Notani, H. Ogawa, A. Ozawa, M. Sasaki, T. Shirakura, N. Takahashi, K. Yoneda
2013Uj01	PRLTA	110,	032501	P. Ujic, F. de Oliveira Santos, M. Lewitowicz, N.L. Achouri, M. Assié, B. Bastin, C. Borcea, R. Borcea, A. Buta, A. Coc, G. de France, O. Kamalou, J. Kiener, A. Lepailleur, V. Meot, A. Pautrat, M.G. Saint Laurent, O. Sorlin, M. Stanoiu, V. Tatischeff
2013Uu01	PRVCA	87,	064304	J. Uusitalo, J. Sarén, S. Juutinen, M. Leino, S. Eeckhaudt, T. Grahn, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Ketelhut, A.-P. Leppänen, M. Nyman, J. Pakarinen, P. Rahkila, C. Scholey, A. Semchenkov, J. Sorri, A. Steer, M. Venhart
2013Va10	PRVCA	87,	064303	A. Vancraeyenest, C.M. Petrache, D. Guinet, P.T. Greenlees, U. Jakobsson, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, P. Peura, P. Rahkila, P. Ruotsalainen, J. Saren, C. Scholey, J. Sorri, J. Uusitalo, P. Jones, C. Ducoin, P. Lautesse, C. Mancuso, N. Redon, O. Stezowski, P. Désesquelles, R. Leguillon, A. Korichi, T. Zerrouki, D. Curien, A. Takashima
2013Va12	PRLTA	111,	061102	J. Van Schelt, D. Lascar, G. Savard, J.A. Clark, P.F. Bertone, S. Caldwell, A. Chaudhuri, A.F. Levand, G. Li, G.E. Morgan, R. Orford, R.E. Segel, K.S. Sharma, M.G. Sternberg
2013Ve03	PRVCA	87,	054307	D. Verney, B. Tastet, K. Kolos, F. Le Blanc, F. Ibrahim, M.C. Mhamed, E. Cottereau, P.V. Cuong, F. Didierjean, G. Duchêne, S. Essabaa, M. Ferraton, S. Franchoo, L.H. Khiem, C. Lau, J.-F. Le Du, I. Matea, B. Mouginot, M. Niikura, B. Roussière, I. Stefan, D. Testov, J.-C. Thomas
2013Vo10	PRLTA	111,	122501	A. Voss, M.R. Pearson, J. Billowes, F. Buchinger, B. Cheal, J.E. Crawford, A.A. Kwiatkowski, C.D.P. Levy, O. Shelbaya
2013Wa24	PRLTA	111,	152501	H. Watanabe, G. Lorusso, S. Nishimura, Z.Y. Xu, T. Sumikama, P.-A. Söderström, P. Doornenbal, F. Browne, G. Gey, H.S. Jung, J. Taprogge, Zs. Vajta, J. Wu, A. Yagi, H. Baba, G. Benzoni, K.Y. Chae, F.C.L. Crespi, N. Fukuda, R. Gernhäuser, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.K. Kim, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, C.-B. Moon, A. Montaner-Pizá, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, D. Nishimura, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, H. Sakurai, H. Schaffner, G.S. Simpson, K. Steiger, H. Suzuki, H. Takeda, A. Wendt, K. Yoshinaga
2013Wi06	NATUA	498,	346	F. Wienholtz, D. Beck, K. Blaum, Ch. Borgmann, M. Breitenfeldt, R.B. Cakirli, S. George, F. Herfurth, J.D. Holt, M. Kowalska, S. Kreim, D. Lunney, V. Manea, J. Menendez, D. Neidherr, M. Rosenbusch, L. Schweikhard, A. Schwenk, J. Simonis, J. Stanja, K. Zuber
2013Wo05	IMSPF	349,	123	R.N. Wolf, F. Wienholtz, D. Atanasov, D. Beck, K. Blaum, Ch. Borgmann, F. Herfurth, M. Kowalska, S. Kreim, Yu. A. Litvinov, D. Lunney, V. Manea, D. Neidherr, M. Rosenbusch, L. Schweikhard, J. Stanja, K. Zuber and PrvCom GAu January 2015
2013Wo06	PRLTA	110,	041101	R.N. Wolf, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, N. Chamel, S. Goriely, F. Herfurth, M. Kowalska, S. Kreim, D. Lunney, V. Manea, E. Minaya Ramirez, S. Naimi, D. Neidherr, M. Rosenbusch, L. Schweikhard, J. Stanja, F. Wienholtz, K. Zuber
2013Wr01	PRVCA	87,	031303	C. Wrede, S.K.L. Sjue, A. García, H.E. Swanson, I. Ahmad, A. Algora, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, V.S. Kolhinen, I.D. Moore, H. Penttilä, M. Reponen, J. Rissanen, A. Saastamoinen, J. Äystö
2013Ya03	APJLA	766,	8	X.L. Yan, H.S. Xu, Yu. A. Litvinov, Y.H. Zhang, H. Schatz, X.L. Tu, K. Blaum, X.H. Zhou, B.H. Sun, J.J. He, Y. Sun, M. Wang, Y.J. Yuan, J.W. Xia, J.C. Yang, G. Audi, G.B. Jia, Z.G. Hu, X.W. Ma, R.S. Mao, B. Mei, P. Shuai, Z.Y. Sun, S.T. Wang, G.Q. Xiao, X. XU, T. Yamaguchi, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, W. Zhang, W.L. Zhan
2013Yo02	PRLTA	110,	192501	D.T. Yordanov, D.L. Balabanski, J. Bieroń, M.L. Bissell, K. Blaum, I. Budinčević * 1, S. Fritzsche, N. Frömmgen, G. Georgiev, Ch. Geppert, M. Hammen, M. Kowalska, K. Kreim, A. Krieger, R. Neugart, W. Nörtershäuser, J. Papuga, S. Schmidt

2014

2014Ag12	NDSBA	120,	74	J. Agramunt, A.R. García, A. Algora, J. Äystö, R. Caballero-Folch, F. Calviño, D. Cano-Ott, G. Cortés, C. Domingo-Pardo, T. Eronen, W. Gelletly, M.B. Gómez Hornillos, J. Hakala, A. Jokinen, D. Jordan, A. Kankainen, V. Kolkinen, T. Martínez, P.J. Mason, I. Moore, H. Penttilä, Zs. Podolyák, M. Reponen, A. Riego, J. Rissanen, B. Rubio, A. Saastamoinen, J.L. Tain, E. Valencia
2014Al03	PRVCA	89,	015502	J.B. Albert, and The EXO Collaboration
2014An10	PRVCA	90,	044312	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, J. Elseviers, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, B. Kindler, B. Lommel, R. Mann, R.D. Page, P. Van Duppen, M. Venhart
2014As01	EPJAA	50,	2	A. Astier, M.-G. Porquet, Ts. Venkova, Ch. Theisen, G. Duchene, F. Azaiez, G. Barreau, D. Curien, I. Deloncle, O. Dorvaux, B.J.P. Gall, M. Houry, R. Lucas, N. Redon, M. Rousseau, O. Stezowski
2014As02	PRVCA	89,	034310	A. Astier, T. Konstantinopoulos, M.-G. Porquet, M. Houry, R. Lucas, Ch. Theisen
2014Au03	PRVCA	90,	024310	K. Auranen, J. Uusitalo, S. Juutinen, U. Jakobsson, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, R. Julin, J. Konki, M. Leino, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri, S. Stolze
2014Ba18	PRVCA	89,	054321	J.C. Batchelder, N.T. Brewer, C.J. Gross, R. Grzywacz, J.H. Hamilton, M. Karny, A. Fijalkowska, S.H. Liu, K. Miernik, S.W. Padgett, S.V. Paulauskas, K.P. Rykaczewski, A.V. Ramayya, D.W. Stracener, M. Wolinska-Cichocka
2014Bo26	PRVCA	90,	044307	Ch. Böhm, Ch. Borgmann, G. Audi, D. Beck, K. Blaum, M. Breitenfeldt, R.B. Cakirli, T.E. Cocolios, S. Eliseev, S. George, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, D. Lunney, V. Manea, E. Minaya Ramirez, S. Naimi, D. Neidherr, M. Rosenbusch, L. Schweikhard, J. Stanja, M. Wang, R.N. Wolf, K. Zuber
2014Br06	PRLTA	112,	212301	L.J. Broussard, H.O. Back, M.S. Boswell, A.S. Crowell, P. Dendooven, G.S. Giri, C.R. Howell, M.F. Kidd, K. Jungmann, W.L. Kruithof, A. Mol, C.J.G. Onderwater, R.W. Pattie, Jr., P.D. Shidling, M. Sohani, D.J. van der Hoek, A. Rogachevskiy, E. Traykov, O.O. Versolato, L. Willmann, H.W. Wilschut, A.R. Young
2014Br15	PRVCA	90,	027304	K.W. Brown, W.W. Buhro, R.J. Charity, J.M. Elson, W. Reviol, L.G. Sobotka, Z. Chajecki, W.G. Lynch, J. Manfredi, R. Shane, R.H. Showalter, M.B. Tsang, D. Weisshaar, J.R. Winkelbauer, S. Bedoor, A.H. Wuosmaa
2014Br19	PRLTA	113,	232501	K.W. Brown, R.J. Charity, L.G. Sobotka, Z. Chajecki, L.V. Grigorenko, I.A. Egorova, Yu. L. Parfenova, M.V. Zhukov, S. Bedoor, W.W. Buhro, J.M. Elson, W.G. Lynch, J. Manfredi, D.G. McNeel, W. Reviol, R. Shane, R.H. Showalter, M.B. Tsang, J.R. Winkelbauer, A.H. Wuosmaa
2014Bu06	PRVCA	90,	014317	I. Budinčević * 1, J. Billowes, M.L. Bissell, T.E. Cocolios, R.P. de Groote, S. De Schepper, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, H. Heylen, K.M. Lynch, B.A. Marsh, G. Neyens, T.J. Procter, R.E. Rossel, S. Rothe, I. Strashnov, H.H. Stroke, K.D.A. Wendt
2014Ca03	PRLTA	112,	092501	R.J. Carroll, R.D. Page, D.T. Joss, J. Uusitalo, I.G. Darby, K. Andgren, B. Cederwall, S. Eeckhaudt, T. Grahn, C. Gray-Jones, P.T. Greenlees, B. Hadinia, P.M. Jones, R. Julin, S. Juutinen, M. Leino, A.-P. Leppänen, M. Nyman, D. O'Donnell, J. Pakarinen, P. Rahkila, M. Sandzelius, J. Sarén, C. Scholey, D. Seweryniak, J. Simpson
2014Ca13	JPGPE	40,	075101	N. Casali, S.S. Nagorny, F. Orio, L. Pattavina, J.W. Beeman, F. Bellini, L. Cardani, I. Dafinei, S. Di Domizio, M.L. Di Vacri, L. Gironi, M.B. Kosmyna, B.P. Nazarenko, S. Nisi, G. Pessina, G. Piperno, S. Pirro, C. Rusconi, A.N. Shekhovtsov, C. Tomei, M. Vignati
2014Ch47	PRVCA	90,	044302	J. Chen, I. Ahmad, J.P. Greene, F.G. Kondev

2014Cr02	PRVCA	89,	041303	H.L. Crawford, P. Fallon, A.O. Macchiavelli, R.M. Clark, B.A. Brown, J.A. Tostevin, D. Bazin, N. Aoi, P. Doornenbal, M. Matsushita, H. Scheit, D. Steppenbeck, S. Takeuchi, H. Baba, C.M. Campbell, M. Cromaz, E. Ideguchi, N. Kobayashi, Y. Kondo, G. Lee, I.Y. Lee, J. Lee, K. Li, S. Michimasa, T. Motobayashi, T. Nakamura, S. Ota, S. Paschalis, M. Petri, T. Sako, H. Sakurai, S. Shimoura, M. Takechi, Y. Togano, H. Wang, K. Yoneda
2014De41	PYLBB	738,	453	M. Del Santo, Z. Meisel, D. Bazin, A. Becerril, B.A. Brown, H. Crawford, R. Cyburt, S. George, G.F. Grinyer, G. Lorusso, P.F. Mantica, F. Montes, J. Pereira, H. Schatz, K. Smith, M. Wiescher
2014Di08	PYLBB	736,	533	J. Diriken, N. Patronis, A.N. Andreyev, S. Antalic, V. Bildstein, A. Blazhev, I.G. Darby, H. De Witte, J. Eberth, J. Elseviers, V.N. Fedosseev, F. Flavigny, Ch. Fransen, G. Georgiev, R. Gernhauser, H. Hess, M. Huyse, J. Jolie, Th. Kröll, R. Krücken, R. Lutter, B.A. Marsh, T. Mertzimekis, D. Muecher, F. Nowacki, R. Orlandi, A. Pakou, R. Raabe, G. Randisi, P. Reiter, T. Roger, M. Seidlitz, M. Seliverstov, K. Sieja, C. Sotty, H. Tornqvist, J. Van De Walle, P. Van Duppen, D. Voulot, N. Warr, F. Wenander, K. Wimmer
2014Dr02	PRVCA	89,	064309	M.C. Drummond, D. O'Donnell, R.D. Page, D.T. Joss, L. Capponi, D.M. Cox, I.G. Darby, L. Donosa, F. Filmer, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A. Lopez-Martens, A.K. Mistry, P. Nieminen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, B. Saygi, C. Scholey, J. Simpson, J. Sorri, A. Thornthwaite, J. Uusitalo
2014Ei01	PRVCA	89,	064318	M. Eibach, T. Beyer, K. Blaum, M. Block, Ch. E. Düllmann, K. Eberhardt, J. Grund, Sz. Nagy, H. Nitsche, W. Nörtershäuser, D. Renisch, K.P. Rykaczewski, F. Schneider, C. Smorra, J. Vieten, M. Wang, K. Wendt
2014Fe01	PYLBB	728,	191	R. Ferrer, N. Bree, T.E. Cocolios, I.G. Darby, H. De Witte, W. Dexters, J. Diriken, J. Elseviers, S. Franchoo, M. Huyse, N. Kesteloot, Yu. Kudryavtsev, D. Pauwels, D. Radulov, T. Roger, H. Savajols, P. Van Duppen, M. Venhart
2014Fi01	PRVCA	89,	014617	R.B. Firestone, Zs. Revay, T. Belgya
2014Ga20	PRLTA	113,	082501	A.T. Gallant, M. Brodeur, C. Andreoiu, A. Bader, A. Chaudhuri, U. Chowdhury, A. Grossheim, R. Klawitter, A.A. Kwiatkowski, K.G. Leach, A. Lennarz, T.D. Macdonald, B.E. Schultz, J. Lassen, H. Heggen, S. Raeder, A. Teigelhöfer, B.A. Brown, A. Magilligan, J.D. Holt, J. Menéndez, J. Simonis, A. Schwenk, J. Dilling
2014Gr10	PRLTA	113,	092501	E. Grodner, A. Gadea, P. Sarriguren, S.M. Lenzi, J. Grebosz, J.J. Valiente-Dobon, A. Algora, M. Gorska, P.H. Regan, D. Rudolph, G. de Angelis, J. Agramunt, N. Alkhomashi, L. Amon Susam, D. Bazzacco, J. Benlliure, G. Benzoni, P. Boutachkov, A. Bracco, L. Caceres, R.B. Cakirli, F.C.L. Crespi, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, P. Doornenbal, E. Farnea, E. Ganioglu, W. Gelletly, J. Gerl, A. Gottardo, T. Huyuk, N. Kurz, S. Leoni, D. Mengoni, F. Molina, A.I. Morales, R. Orlandi, Y. Oktem, R.D. Page, D. Perez, S. Pietri, Zs. Podolyak, A. Poves, B. Quintana, S. Rinta-Antila, B. Rubio, B.S. Nara Singh, A.N. Steer, S. Verma, R. Wadsworth, O. Wieland, H.J. Wollersheim
2014Ha04	PRVCA	89,	024618	H. Haba, M. Huang, D. Kaji, J. Kanaya, Y. Kudou, K. Morimoto, K. Morita, M. Murakami, K. Ozeki, R. Sakai, T. Sumita, Y. Wakabayashi, A. Yoneda, Y. Kasamatsu, Y. Kikutani, Y. Komori, K. Nakamura, A. Shinohara, H. Kikunaga, H. Kudo, K. Nishio, A. Toyoshima, K. Tsukada
2014Ha38	NIMAE	747,	41	H. Hayashi, M. Shibata, M. Asai, A. Osa, T.K. Sato, M. Koizumi, A. Kimura, M. Oshima
2014He29	PRVCA	90,	051303	J. Henderson, D.G. Jenkins, K. Kaneko, P. Ruotsalainen, P. Sarriguren, K. Auranen, M.A. Bentley, P.J. Davies, A. Gorgen, T. Grahn, P.T. Greenlees, A. Hay, T.W. Henry, A. Herzan, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, C. McPeake, S. Milne, A.J. Nichols, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, E. Sahin, M. Sandzelius, J. Saren, C. Scholey, M. Siciliano, L. Sinclair, J. Sorri, S. Stolze, J. Uusitalo, R. Wadsworth, M. Zielinska
2014Hu02	PRVCA	89,	014606	A.M. Hurst, R.B. Firestone, B.W. Sleaford, N.C. Summers, Zs. Révay, L. Szentmiklósi, M.S. Basunia, T. Belgya, J.E. Escher, M. Krticka

2014Io01	PRVCA	90,	014323	M. Ionescu-Bujor, A. Iordachescu, N. Marginean, R. Lica, D. Bucurescu, F. Brandolini, D. Deleanu, D. Filipescu, I. Gheorghe, D. Ghita, T. Glodariu, R. Marginean, N.H. Medina, C. Mihai, A. Negret, L. Stroe, C.A. Ur
2014Is04	PRVCA	89,	044324	L.W. Iskra, R. Broda, R.V.F. Janssens, J. Wrzesinski, B. Szpak, C.J. Chiara, M.P. Carpenter, B. Fornal, N. Hoteling, F.G. Kondev, W. Krolas, T. Lauritsen, T. Pawlat, D. Seweryniak, I. Stefanescu, W.B. Walters, S. Zhu
2014Ka22	PRVCA	89,	051302	A. Kankainen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, V.S. Kolhinen, M. Reponen, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2014Ka23	PRVCA	89,	054312	Z. Kalaninová, S. Antalic, A.N. Andreyev, F.P. Heßberger, D. Ackermann, B. Andel, L. Bianco, S. Hofmann, M. Huyse, B. Kindler, B. Lommel, R. Mann, R.D. Page, P.J. Sapple, J. Thomson, P. Van Duppen, M. Venhart
2014Kh04	PRLTA	112,	172501	J. Khuyagbaatar, A. Yakushev, C.E. Düllmann, D. Ackermann, L.-L. Andersson, M. Asai, M. Block, R.A. Boll, H. Brand, D.M. Cox, M. Dasgupta, X. Derkx, A. Di Nitto, K. Eberhardt, J. Even, M. Evers, C. Fahlander, U. Forsberg, J.M. Gates, N. Gharibyan, P. Golubev, K.E. Gregorich, J.H. Hamilton, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, D.J. Hinde, J. Hoffmann, R. Hollinger, A. Hübner, E. Jäger, B. Kindler, J.V. Kratz, J. Krier, N. Kurz, M. Laatiaoui, S. Lahiri, R. Lang, B. Lommel, M. Maiti, K. Miernik, S. Minami, A. Mistry, C. Mokry, H. Nitsche, J.P. Omtvedt, G.K. Pang, P. Papadakis, D. Renisch, J. Roberto, D. Rudolph, J. Runke, K.P. Rykaczewski, L.G. Sarmiento, M. Schädel, B. Schausten, A. Semchenkov, D.A. Shaughnessy, P. Steinegger, J. Steiner, E.E. Tereshatov, P. Thörle-Pospiech, K. Tinschert, T. Torres De Heidenreich, N. Trautmann, A. Türler, J. Uusitalo, D.E. Ward, M. Wegrzecki, N. Wiehl, S.M. Van Cleve, V. Yakusheva
2014Ko14	PRLTA	112,	242501	N. Kobayashi, T. Nakamura, Y. Kondo, J.A. Tostevin, Y. Utsuno, N. Aoi, H. Baba, R. Barthelemy, M.A. Famiano, N. Fukuda, N. Inabe, M. Ishihara, R. Kanungo, S. Kim, T. Kubo, G.S. Lee, H.S. Lee, M. Matsushita, T. Motobayashi, T. Ohnishi, N.A. Orr, H. Otsu, T. Otsuka, T. Sako, H. Sakurai, Y. Satou, T. Sumikama, H. Takeda, S. Takeuchi, R. Tanaka, Y. Togano, K. Yoneda
2014Ko17	PRVCA	89,	064315	G.T. Koldste, B. Blank, M.J.G. Borge, J.A. Briz, M. Carmona-Gallardo, L.M. Fraile, H.O.U. Fynbo, J. Giovinazzo, B.D. Grann, J.G. Johansen, A. Jokinen, B. Jonson, T. Kurturkian-Nieto, J.H. Kusk, T. Nilsson, A. Perea, V. Pesudo, E. Picado, K. Riisager, A. Saastamoinen, O. Tengblad, J.-C. Thomas, J. Van de Walle
2014Kr04	PYLBB	731,	97	K. Kreim, M.L. Bissell, J. Papuga, K. Blaum, M. De Rydt, R.F. Garcia Ruiz, S. Goriely, H. Heylen, M. Kowalska, R. Neugart, G. Neyens, W. Nortershauser, M.M. Rajabali, R. Sanchez Alarcon, H.H. Stroke, D.T. Yordanov
2014Kr09	PRVCA	90,	024301	S. Kreim, D. Beck, K. Blaum, Ch. Borgmann, M. Breitenfeldt, T.E. Cocolios, A. Gottberg, F. Herfurth, M. Kowalska, Yu. A. Litvinov, D. Lunney, V. Manea, T.M. Mendonca, S. Naimi, D. Neidherr, M. Rosenbusch, L. Schweikhard, Th. Stora, F. Wienholtz, R.N. Wolf, K. Zuber and PrvCom GAu February 2015
2014Ku23	EPJAA	50,	135	T. Kurtukian-Nieto, J. Benlliure, K.-H. Schmidt, L. Audouin, F. Becker, B. Blank, I.N. Borzov, E. Casarejos, F. Farget, M. Ferández-Ordóñez, J. Giovinazzo, D. Henzlova, B. Jurado, K. Langanke, G. Martínez-Pinedo, J. Pereira, O. Yordanov
2014Ku.A	RSINA	85,	053305	Peter Kunz, Corina Andreoiu, Pierre Bricault, Marik Dombsky, Jens Lassen, Andrea Teigelhöfer, Henning Heggen, Fiona Wong
2014Kw04	PRVCA	89,	045502	A.A. Kwiatkowski, T. Brunner, J.D. Holt, A. Chaudhuri, U. Chowdhury, M. Eibach, J. Engel, A.T. Gallant, A. Grossheim, M. Horoi, A. Lennarz, T.D. Macdonald, M.R. Pearson, B.E. Schultz, M.C. Simon, R.A. Senkov, V.V. Simon, K. Zuber, J. Dilling
2014Le20	PRLTA	113,	082502	A. Lennarz, A. Grossheim, K.G. Leach, M. Alanssari, T. Brunner, A. Chaudhuri, U. Chowdhury, J.R.C. Lopez-Urrutia, A.T. Gallant, M. Holl, A.A. Kwiatkowski, J. Lassen, T.D. Macdonald, B.E. Schultz, S. Seeraji, M.C. Simon, C. Andreoiu, J. Dilling, D. Frekers
2014Lo10	EPJAA	50,	132	A. Lopez-Martens, K. Hauschild, K. Rezynkina, O. Dorvaux, B. Gall, F. Déchery, H. Faure, A.V. Yeremin, M.L. Chelnokov, V.I. Chepigin, A.V. Isaev, I.N. Izosimov, D.E. Katrasev, A.N. Kuznetsov, A.A. Kuznetsova, O.N. Malyshev, A.G. Popeko, E.A. Sokol, A.I. Svirikhin, J. Piot, J. Rubert

2014Lu07	PRVCA	89,	044326	Y.X. Luo, J.O. Rasmussen, J.H. Hamilton, A.V. Ramayya, E. Wang, Y.X. Liu, C.F. Jiao, W.Y. Liang, F.R. Xu, Y. Sun, S. Frauendorf, J.K. Hwang, S.H. Liu, S.J. Zhu, N.T. Brewer, I.Y. Lee, G.M. Ter-Akopian, Yu. Oganessian, R. Donangelo, W.C. Ma
2014Ly01	PRXHA	4,	011055	K.M. Lynch, J. Billowes, M.L. Bissell, I. Budinčević * 1, T.E. Cocolios, R.P. De Groote, S. De Schepper, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, H. Heylen, B.A. Marsh, G. Neyens, T.J. Procter, R.E. Rossel, S. Rothe, I. Strashnov, H.H. Stroke, K.D.A. Wendt
2014Ma21	PRVCA	89,	044318	T.D. Macdonald, B.E. Schultz, J.C. Bale, A. Chaudhuri, U. Chowdhury, D. Frekers, A.T. Gallant, A. Grossheim, A.A. Kwiatkowski, A. Lennarz, M.C. Simon, V.V. Simon, J. Dilling
2014Mo02	PRVCA	89,	014324	A.I. Morales, G. Benzoni, A. Gottardo, J.J. Valiente-Dobón, N. Blasi, A. Bracco, F. Camera, F.C.L. Crespi, A. Corsi, S. Leoni, B. Million, R. Nicolini, O. Wieland, A. Gadea, S. Lunardi, M. Górska, P.H. Regan, Zs. Podolyák, M. Pfützner, S. Pietri, P. Boutachkov, H. Weick, J. Grebosz, A.M. Bruce, J. Alcántara Núñez, A. Algora, N. Al-Dahan, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, M. Bunce, E. Casarejos, M.L. Cortes, A.M.D. Bacelar, A.Y. Deo, G. de Angelis, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, E. Farnea, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, S. Klupp, I. Kojouharov, N. Kurz, S. Mandal, R. Menegazzo, D. Mengoni, D.R. Napoli, F. Naqvi, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, D. Rudolph, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, H.-J. Wollersheim
2014Mo15	PRLTA	113,	022702	A.I. Morales, J. Benlliure, T. Kurtukián-Nieto, K.-H. Schmidt, S. Verma, P.H. Regan, Z. Podolyák, M. Górska, S. Pietri, R. Kumar, E. Casarejos, N. Al-Dahan, A. Algora, N. Alkhomashi, H. Álvarez-Pol, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, L.S. Cáceres, I.J. Cullen, A.M.D. Bacelar, P. Doornenbal, M.E. Estévez Aguado, G. Farrelly, Y. Fujita, A.B. Garnsworthy, W. Gelletly, J. Gerl, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, Z. Liu, C. Mihai, F. Molina, D. Mücher, B. Rubio, H. Shaffner, S.J. Steer, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.M. Walker, H.J. Wollersheim, P.J. Woods
2014Mu.A	JCAPBP	5,	018	A. Münster, M. v. Sivers, G. Angloher, A. Bento, C. Bucci, L. Canonica, A. Erb, F. v. Feilitzsch, P. Gorla, A. Gütlein, D. Hauff, J. Jochum, H. Kraus, J.-C. Lanfranchi, M. Laubenstein, J. Loebell, Y. Ortigoza, F. Petricca, W. Potzel, F. Pröbst, J. Puimedon, F. Reindl, S. Roth, K. Rottler, C. Sailer, K. Schäffner, J. Schieck, S. Scholl, S. Schönert, W. Seidel, L. Stodolsky, C. Strandhagen, R. Strauss, A. Tanzke, M. Uffinger, A. Ulrich, I. Usherov, S. Wawoczny, M. Willers, M. Wüstrich and A. Zöller
2014Na10	PRLTA	112,	142501	T. Nakamura, N. Kobayashi, Y. Kondo, Y. Satou, J.A. Tostevin, Y. Utsuno, N. Aoi, H. Baba, N. Fukuda, J. Gibelin, N. Inabe, M. Ishihara, D. Kameda, T. Kubo, T. Motobayashi, T. Ohnishi, N.A. Orr, H. Otsu, T. Otsuka, H. Sakurai, T. Sumikama, H. Takeda, E. Takeshita, M. Takechi, S. Takeuchi, Y. Togano, K. Yoneda
2014Ne15	PRVCA	90,	042501	D.A. Nesterenko, S. Eliseev, K. Blaum, M. Block, S. Chenmarev, A. Dörr, C. Droese, P.E. Filianin, M. Goncharov, E. Minaya Ramirez, Yu. N. Novikov, L. Schweikhard, V.V. Simon
2014NiZZ	P-Florence		02072	D. Nishimura, M. Fukuda, T. Sakai, M. Tanaka, K. Abe, J. Chiba, S. Fukuda, H. Furuki, A. Homma, H. Hotaka, N. Ichihashi, N. Inaba, K. Iwamoto, T. Izumikawa, Y. Kamisho, K. Kanbe, N. Kikukawa, A. Kitagawa, J. Kouno, M. Nagashima, Y. Nakamura, I. Nishizuka, K. Matsuta, M. Mihara, S. Miyazawa, Y. Morita, J. Ono, T. Ohtsubo, K. Sato, S. Sato, D. Sera, S. Suzuki, S. Suzuki, T. Suzuki, M. Takechi, K. Tashiro, M. Wakabayashi, D. Watanabe, M. Yaguchi, T. Yamaguchi, S. Yamaki, S. Yasumoto, K. Yoshinaga, Y. Zhu

2014Or04	PRLTA	112,	222501	S.E.A. Orrigo, B. Rubio, Y. Fujita, B. Blank, W. Gelletly, J. Agramunt, A. Algora, P. Ascher, B. Bilgier, L. Cáceres, R.B. Cakirli, H. Fujita, E. Ganioglu, M. Gerbaux, J. Giovinazzo, S. Grévy, O. Kamalou, H.C. Kozer, L. Kucuk, T. Kurtukian-Nieto, F. Molina, L. Popescu, A.M. Rogers, G. Susoy, C. Stodel, T. Suzuki, A. Tamii, J.C. Thomas
2014Pa11	JPGPE	41,	055103	A. Pastore, D. Davesne, J. Navarro
2014Pa45	PRVCA	90,	034321	J. Papuga, M.L. Bissell, K. Kreim, C. Barbieri, K. Blaum, M. De Rydt, T. Duguet, R.F. Garcia Ruiz, H. Heylen, M. Kowalska, R. Neugart, G. Neyens, W. Nörtershäuser, M.M. Rajabali, R. Sánchez, N. Smirnova, V. Somà, D.T. Yordanov
2014Pe02	PRVCA	89,	024316	P. Peura, C. Scholey, D.T. Joss, S. Juutinen, R. Julin, T. Bäck, B. Cederwall, P.T. Greenlees, U. Jakobsson, P. Jones, D.S. Judson, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, D. O'Donnell, R.D. Page, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Sarén, J. Simpson, J. Thomson, J. Uusitalo, H.V. Watkins
2014Pe22	EPSLA	391,	69	S.T.M. Peters, C. Munker, H. Becker, T. Schulz
2014Po02	ARISE	87,	315	S. Pommé, E. García-Torano, M. Marouli, M.T. Crespo, V. Jobbágy, R. Van Ammel, J. Paepen, H. Stroh
2014Po05	PRVCA	90,	014311	M. Pomorski, M. Pfützner, W. Dominik, R. Grzywacz, A. Stolz, T. Baumann, J.S. Berryman, H. Czyrkowski, R. Dabrowski, A. Fijalkowska, T. Ginter, J. Johnson, G. Kaminski, N. Larson, S.N. Liddick, M. Madurga, C. Mazzocchi, S. Mianowski, K. Miernik, D. Miller, S. Paulauskas, J. Pereira, K.P. Rykaczewski, S. Suchyta
2014Ra07	PRVCA	89,	034320	G. Randisi, A. Leprince, H. Al Falou, N.A. Orr, F.M. Marqués, N.L. Achouri, J.-C. Angélique, N. Ashwood, B. Bastin, T. Bloxham, B.A. Brown, W.N. Catford, N. Curtis, F. Delaunay, M. Freer, E. de Góes Brennand, P. Haigh, F. Hanappe, C. Harlin, B. Laurent, J.-L. Lecouey, A. Ninane, N. Patterson, D. Price, L. Stuttgé, J.S. Thomas
2014Ra20	JPGPE	41,	115104	M.M. Rajabali, R. Grzywacz, S.N. Liddick, C. Mazzocchi, J.C. Batchelder, T. Baumann, C.R. Bingham, I.G. Darby, T.N. Ginter, S.V. Ilyushkin, M. Karny, W. Królas, P.F. Mantica, K. Miernik, M. Pfützner, K.P. Rykaczewski, D. Weisshaar, J.A. Winger
2014Ri01	PYLBB	732,	305	K. Riisager, O. Forstner, M.J.G. Borge, J.A. Briz, M. Carmona-Gallardo, L.M. Fraile, H.O.U. Fynbo, T. Giles, A. Gottberg, A. Heinz, J.G. Johansen, B. Jonson, J. Kurcewicz, M.V. Lund, T. Nilsson, G. Nyman, E. Rapisarda, P. Steier, O. Tengblad, R. Thies, S.R. Winkler
2014Ro14	NDSBA	120,	41	A.M. Rogers, J. Giovinazzo, C.J. Lister, B. Blank, G. Canchel, J.A. Clark, G. de France, S. Grevy, S. Gros, E.A. McCutchan, F. de Oliveira Santos, G. Savard, D. Seweryniak, I. Stefan, J.-C. Thomas
2014Sa46	PYLBB	736,	137	A. Sanetullaev, M.B. Tsang, W.G. Lynch, Jenny Lee, D. Bazin, K.P. Chan, D. Coupland, V. Henzl, D. Henzlova, M. Kilburn, A.M. Rogers, Z.Y. Sun, M. Youngs, R.J. Charity, L.G. Sobotka, M. Famiano, S. Hudan, D. Shapira, W.A. Peters, C. Barbieri, M. Hjorth-Jensen, M. Horoi, T. Otsuka, T. Suzuki, Y. Utsuno
2014Sc09	PRVCA	90,	012501	B.E. Schultz, M. Brodeur, C. Andreoiu, A. Bader, A. Chaudhuri, U. Chowdhury, A.T. Gallant, A. Grossheim, R. Klawitter, A.A. Kwiatkowski, K.G. Leach, A. Lennarz, T.D. Macdonald, J. Lassen, H. Heggen, S. Raeder, A. Teigelhöfer, J. Dilling
2014Se07	PRVCA	89,	034323	M.D. Seliverstov, T.E. Cocolios, W. Dexters, A.N. Andreyev, S. Antalic, A.E. Barzakh, B. Bastin, J. Büscher, I.G. Darby, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, B.A. Marsh, P.L. Molkanov, R.D. Page, A.M. Sjödin, I. Stefan, P. Van Duppen, M. Venhart, S.G. Zemlyanoy
2014Se12	PRVCA	89,	057302	G.W. Severin, L.D. Knutson, P.A. Voytas, E.A. George
2014Sh14	PYLBB	735,	327	P. Shuai, H.S. Xu, X.L. Tu, Y.H. Zhang, B.H. Sun, M. Wang, Yu. A. Litvinov, K. Blaum, X.H. Zhou, J.J. He, Y. Sun, K. Kaneko, Y.J. Yuan, J.W. Xia, J.C. Yang, G. Audi, X.L. Yan, X.C. Chen, G.B. Jia, Z.G. Hu, X.W. Ma, R.S. Mao, B. Mei, Z.Y. Sun, S.T. Wang, G.Q. Xiao, X. Xu, T. Yamaguchi, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, W. Zhang, W.L. Zhan

2014Sh25	PRVCA	90,	032501	P.D. Shidling, D. Melconian, S. Behling, B. Fenker, J.C. Hardy, V.E. Iacob, E. McCleskey, M. McCleskey, M. Mehlman, H.I. Park, B.T. Roeder
2014SmZZ	Th.-NotreDame			K.I. Smith, University of Notre Dame
2014Su07	PRVCA	89,	034317	S. Suchyta, S.N. Liddick, C.J. Chiara, W.B. Walters, M.P. Carpenter, H.L. Crawford, G.F. Grinyer, G. Gürdal, A. Klose, E.A. McCutchan, J. Pereira, S. Zhu
2014Ta10	PRLTA	112,	162502	A. Takamine, M. Wada, K. Okada, T. Sonoda, P. Schury, T. Nakamura, Y. Kanai, T. Kubo, I. Katayama, S. Ohtani, H. Wollnik, H.A. Schuessler
2014Ta29	PYLBB	738,	223	J. Taprogge, A. Jungclaus, H. Grawe, S. Nishimura, Z.Y. Xu, P. Doornenbal, G. Lorusso, E. Nácher, G.S. Simpson, P.-A. Söderström, T. Sumikama, H. Baba, F. Browne, N. Fukuda, R. Gernhäuser, G. Gey, N. Inabe, T. Isobe, H.S. Jung, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, Z. Li, H. Sakurai, H. Schaffner, K. Steiger, H. Suzuki, H. Takeda, Zs. Vajta, H. Watanabe, J. Wu, A. Yagi, K. Yoshinaga, G. Benzoni, S. Bönig, K.Y. Chae, L. Coraggio, A. Covello, J.-M. Daugas, F. Drouet, A. Gadea, A. Gargano, S. Ilieva, F.G. Kondev, T. Kröll, G.J. Lane, A. Montaner-Pizá, K. Moschner, D. Mücher, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, A. Wendt
2014Ta.A	JPCSD	533,	012043	J. Taprogge, A. Jungclaus, G. Simpson
2014TeZY	IPNO-T-13-07			D. Testov
2014Un01	ARISE	87,	92	M.P. Unterweger, R. Fitzgerald
2014Va04	PRVCA	89,	064310	Z. Varga, A. Nicholl, K. Mayer
2014Wa09	PRLTA	112,	132502	F. Wamers, J. Marganiec, F. Aksouh, Yu. Aksyutina, H. Alvarez-Pol, T. Aumann, S. Beceiro Novo, K. Boretzky, M.J.G. Borge, M. Chartier, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, H. Emling, O. Ershova, L.M. Fraile, H.O.U. Fynbo, D. Galaviz, H. Geissel, M. Heil, D.H.H. Hoffmann, H.T. Johansson, B. Jonson, C. Karagiannis, O.A. Kiselev, J.V. Kratz, R. Kulessa, N. Kurz, C. Langer, M. Lantz, T. Le Bleis, R. Lemmon, Yu. A. Litvinov, K. Mahata, C. Muntz, T. Nilsson, C. Nociforo, G. Nyman, W. Ott, V. Panin, S. Paschalis, A. Perea, R. Plag, R. Reifarth, A. Richter, C. Rodriguez-Tajes, D. Rossi, K. Riisager, D. Savran, G. Schrieder, H. Simon, J. Stroth, K. Summerer, O. Tengblad, H. Weick, C. Wimmer, M.V. Zhukov
2014Wa26	PRLTA	113,	042502	H. Watanabe, G. Lorusso, S. Nishimura, T. Otsuka, K. Ogawa, Z.Y. Xu, T. Sumikama, P.-A. Söderström, P. Doornenbal, Z. Li, F. Browne, G. Gey, H.S. Jung, J. Taprogge, Zs. Vajta, J. Wu, A. Yagi, H. Baba, G. Benzoni, K.Y. Chae, F.C.L. Crespi, N. Fukuda, R. Gernhäuser, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.K. Kim, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, C.-B. Moon, A. Montaner-Pizá, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, D. Nishimura, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, H. Sakurai, H. Schaffner, G.S. Simpson, K. Steiger, H. Suzuki, H. Takeda, A. Wendt, K. Yoshinaga
2014Xu07	PRLTA	113,	032505	Z.Y. Xu, S. Nishimura, G. Lorusso, F. Browne, P. Doornenbal, G. Gey, H.-S. Jung, Z. Li, M. Niikura, P.-A. Söderström, T. Sumikama, J. Taprogge, Zs. Vajta, H. Watanabe, J. Wu, A. Yagi, K. Yoshinaga, H. Baba, S. Franchoo, T. Isobe, P.R. John, I. Kojouharov, S. Kubono, N. Kurz, I. Matea, K. Matsui, D. Mengoni, P. Morfouace, D.R. Napoli, F. Naqvi, H. Nishibata, A. Odahara, E. Sahin, H. Sakurai, H. Schaffner, I.G. Stefan, D. Suzuki, R. Taniuchi, V. Werner
2014Xu.A	JUPSC	1,	013035	Z.Y. Xu, S. Nishimura, G. Lorusso, P. Doornenbal, T. Sumikama, P.-A. Söderström, H. Watanabe, H. Baba, F. Brown, G. Gey, T. Isobe, P. John, H.-S. Jung, Z. Li, K. Matsui, D. Mengoni, D.R. Napoli, M. Niikura, H. Nishibata, A. Odahara, E. Sahin, H. Sakurai, I.G. Stefan, J. Taprogge, Z. Vajta, J. Wu, A. Yagi, K. Yoshinaga, and the EURICA Collaboration
2014XuZZ	Th.-Tokyo			Z. Xu
2014Ya19	JPGPE	41,	105104	H. Yang, L. Ma, Z. Zhang, L. Yu, G. Jia, M. Huang, Z. Gan, T. Huang, G. Li, X. Wu, Y. Fang, Z. Wang, B. Gao, W. Hua
2014Ya28	PRVAA	90,	052516	X. Yang, T. Furukawa, T. Wakui, T. Fujita, K. Imamura, Y. Mitsuya, M. Hayasaka, Y. Ichikawa, Y. Ishibashi, H. Shirai, T. Suzuki, Y. Ebara, A. Hatakeyama, M. Wada, T. Sonoda, Y. Ito, T. Kobayashi, S. Nishimura, Mizuki Kurata-Nishimura, Y. Kondo, K.-I. Yoneda, S. Kubono, Y. Ohshiro, H. Ueno, T. Shinozuka, T. Shimoda, K. Asahi, Y. Matsuo

2014Ya.A	PrvCom	HWJ	Jul	XinLiang Yan
2014Zh03	PRVCA	89,	014308	Z.Y. Zhang, Z.G. Gan, L. Ma, L. Yu, H.B. Yang, T.H. Huang, G.S. Li, Y.L. Tian, Y.S. Wang, X.X. Xu, X.L. Wu, M.H. Huang, C. Luo, Z.Z. Ren, S.G. Zhou, X.H. Zhou, H.S. Xu, G.Q. Xiao

2015

2015Ah03	PRVCA	91,	044310	I. Ahmad, J.P. Greene, F.G. Kondev, S. Zhu
2015Ah04	PRVCA	92,	024313	I. Ahmad, R.R. Chasman, J.P. Greene, F.G. Kondev, S. Zhu
2015Ak02	PRVCA	91,	031301	A. Akber, M.W. Reed, P.M. Walker, Yu. A. Litvinov, G.J. Lane, T. Kibédi, K. Blaum, F. Bosch, C. Brandau, J.J. Carroll, D.M. Cullen, I.J. Cullen, A.Y. Deo, B. Detwiler, C. Dimopoulou, G.D. Dracoulis, F. Farinon, H. Geissel, E. Haettner, M. Heil, R.S. Kempley, R. Knöbel, C. Kozhuharov, J. Kurcewicz, N. Kuzminchuk, S. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, W.R. Plaß, Zs. Podolyák, A. Prochazka, C. Scheidenberger, D. Shubina, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, H. Weick, N. Winckler, M. Winkler, P.J. Woods, T. Yamaguchi
2015An05	EPJAA	51,	41	S. Antalic, F.P. Heßberger, D. Ackermann, S. Heinz, S. Hofmann, B. Kindler, J. Khuyagbaatar, B. Lommel, R. Mann
2015At03	PRLTA	115,	232501	D. Atanasov, P. Ascher, K. Blaum, R.B. Cakirli, T.E. Cocolios, S. George, S. Goriely, F. Herfurth, H.-T. Janka, O. Just, M. Kowalska, S. Kreim, D. Kisler, Y.A. Litvinov, D. Lunney, V. Manea, D. Neidherr, M. Rosenbusch, L. Schweikhard, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2015Au01	PRVCA	91,	024324	K. Auranen, J. Uusitalo, S. Juutinen, U. Jakobsson, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzán, R. Julin, J. Konki, M. Leino, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri, S. Stolze
2015Ba11	NUPAB	935,	52	A.S. Barabash
2015Ba49	PYLBB	750,	176	C. Babcock, H. Heylen, J. Billowes, M.L. Bissell, K. Blaum, P. Campbell, B. Cheal, R.F. Garcia Ruiz, C. Geppert, W. Gins, M. Kowalska, K. Kreim, S.M. Lenzi, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, D.T. Yordanov
2015Be07	PYLBB	743,	526	E. Bellotti, C. Broggini, G. Di Carlo, M. Laubenstein, R. Menegazzo
2015Be13	ARISE	102,	74	D.E. Bergeron, R. Fitzgerald
2015Be23	RAACA	103,	619	M.-M. Be, H. Isnard, P. Cassette, X. Mougeot, V. Lourenco, T. Altzitzoglou, S. Pomme, A. Rozkov, P. Auerbach, J. Sochorova, T. Dziel, R. Dersch, K. Kossert, O. Nahle, M. Krivosik, J. Ometakova, G. Stadelmann, A. Nonell, F. Chartier
2015Be32	PYLBB	751,	107	G. Benzoni, A.I. Morales, H. Watanabe, S. Nishimura, L. Coraggio, N. Itaco, A. Gargano, F. Browne, R. Daido, P. Doornenbal, Y. Fang, G. Lorusso, Z. Patel, S. Rice, L. Sinclair, P.-A. Söderström, T. Sumikama, J. Wu, Z.Y. Xu, R. Yokoyama, H. Baba, R. Avigo, F.L. Bello Garrote, N. Blasi, A. Bracco, F. Camera, S. Ceruti, F.C.L. Crespi, G. de Angelis, M.-C. Delattre, Zs. Dombradi, A. Gottardo, T. Isobe, I. Kuti, K. Matsui, B. Melon, D. Mengoni, T. Miyazaki, V. Modamio-Hoybjor, S. Momiyama, D.R. Napoli, M. Niikura, R. Orlandi, H. Sakurai, E. Sahin, D. Sohler, R. Taniuchi, J. Taprogge, Zs. Vajta, J.J. Valiente-Dobón, O. Wieland, M. Yalcinkaya
2015Bi05	NDSBA	128,	131	M. Birch, B. Singh, I. Dillmann, D. Abriola, T.D. Johnson, E.A. McCutchan, A.A. Sonzogni
2015Bl02	EPJAA	51,	8	B. Blank, J.-C. Thomas, P. Ascher, L. Audirac, A. Bacquias, L. Cáceres, G. Canchel, L. Daudin, F. de Oliveira Santos, F. Didierjean, M. Gerbaux, J. Giovinazzo, S. Grévy, T. Kurtukian Nieto, I. Matea, F. Munoz, M. Roche, L. Serani, N. Smirnova, J. Souin

2015Ca09	PRVCA	92,	014327	L. Cáceres, A. Lepailleur, O. Sorlin, M. Stanoiu, D. Sohler, Zs. Dombrádi, S.K. Bogner, B.A. Brown, H. Hergert, J.D. Holt, A. Schwenk, F. Azaiez, B. Bastin, C. Borcea, R. Borcea, C. Bourgeois, Z. Elekes, Zs. Fülöp, S. Grévy, L. Gaudefroy, G.F. Grinyer, D. Guillemaud-Mueller, F. Ibrahim, A. Kerek, A. Krasznahorkay, M. Lewitowicz, S.M. Lukyanov, J. Mrázek, F. Negoita, F. de Oliveira, Yu.-E. Penionzhkevich, Zs. Podolyák, M.G. Porquet, F. Rotaru, P. Roussel-Chomaz, M.G. Saint-Laurent, H. Savajols, G. Sletten, J.C. Thomas, J. Timàr, C. Timis, Zs. Vajta
2015CaZM	Th.-Chicago			S. Caldwell
2015Ch56	PRVCA	92,	044308	R. Chapman, A. Hodsdon, M. Bouhelal, F. Haas, X. Liang, F. Azaiez, Z.M. Wang, B.R. Behera, M. Burns, E. Caurier, L. Corradi, D. Curien, A.N. Deacon, Zs. Dombrádi, E. Farnea, E. Fioretto, A. Gadea, F. Ibrahim, A. Jungclaus, K. Keyes, V. Kumar, S. Lunardi, N. Marginean, G. Montagnoli, D.R. Napoli, F. Nowacki, J. Ollier, D. O'Donnell, A. Papenberg, G. Pollarolo, M.-D. Salsac, F. Scarlassara, J.F. Smith, K.M. Spohr, M. Stanoiu, A.M. Stefanini, S. Szilner, M. Trotta, D. Verney
2015Ch57	PRVCA	92,	044330	J. Chen, F.G. Kondev, I. Ahmad, M.P. Carpenter, J.P. Greene, R.V.F. Janssens, S. Zhu, D. Ehst, V. Makarashvili, D. Rotsch, N.A. Smith
2015Ch58	PRVCA	92,	045803	U. Chowdhury, K.G. Leach, C. Andreoiu, A. Bader, M. Brodeur, A. Chaudhuri, A.T. Gallant, A. Grossheim, G. Gwinner, R. Klawitter, A.A. Kwiatkowski, A. Lennarz, T.D. Macdonald, J. Pearkes, B.E. Schultz, J. Dilling
2015Co02	ARISE	99,	46	S.M. Collins, A.K. Pearce, K.M. Ferreira, A.J. Fenwick, P.H. Regan, J.D. Keightley
2015Co11	ARISE	104,	203	S.M. Collins, S. Pomme, S.M. Jerome, K.M. Ferreira, P.H. Regan, A.K. Pearce
2015Cv01	ARISE	104,	160	A. Cvetinovic, A. Likar, M. Lipoglavsek, A. Mihelic, T. Petrovic, J. Vesic, B. Vodenik
2015Cz01	PRVCA	92,	014328	M. Czerwinski, T. Rzaca-Urban, W. Urban, P. Baczyk, K. Sieja, B.M. Nyakó, J. Timár, I. Kuti, T.G. Tornyi, L. Atanasova, A. Blanc, M. Jentschel, P. Mutti, U. Köster, T. Soldner, G. de France, G.S. Simpson, C.A. Ur
2015Da12	PRLTA	115,	132502	H.M. David, J. Chen, D. Seweryniak, F.G. Kondev, J.M. Gates, K.E. Gregorich, I. Ahmad, M. Albers, M. Alcorta, B.B. Back, B. Baartman, P.F. Bertone, L.A. Bernstein, C.M. Campbell, M.P. Carpenter, C.J. Chiara, R.M. Clark, M. Cromaz, D.T. Doherty, G.D. Dracoulis, N.E. Esker, P. Fallon, O.R. Gothe, J.P. Greene, P.T. Greenlees, D.J. Hartley, K. Hauschild, C.R. Hoffman, S.S. Hota, R.V.F. Janssens, T.L. Khoo, J. Konki, J.T. Kwarsick, T. Lauritsen, A.O. Macchiavelli, P.R. Mudder, C. Nair, Y. Qiu, J. Rissanen, A.M. Rogers, P. Ruotsalainen, G. Savard, S. Stolze, A. Wiens, S. Zhu
2015De22	PYLBB	748,	199	H.M. Devaraja, S. Heinz, O. Beliuskina, V. Comas, S. Hofmann, C. Hornung, G. Münzenberg, K. Nishio, D. Ackermann, Y.K. Gambhir, M. Gupta, R.A. Henderson, F.P. Heßberger, J. Khuyagbaatar, B. Kindler, B. Lommel, K.J. Moody, J. Maurer, R. Mann, A.G. Popeko, D.A. Shaughnessy, M.A. Stoyer, A.V. Yeremin
2015De28	PRLTA	115,	132501	R.P. de Groote, I. Budincevic, J. Billowes, M.L. Bissell, T.E. Cocolios, G.J. Farooq-Smith, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, H. Heylen, R. Li, K.M. Lynch, B.A. Marsh, G. Neyens, R.E. Rossel, S. Rothe, H.H. Stroke, K.D.A. Wendt, S.G. Wilkins, X. Yang
2015Di03	PYLBB	744,	137	T. Dickel, W.R. Plaß, S. Ayet San Andres, J. Ebert, H. Geissel, E. Haettner, C. Hornung, I. Miskun, S. Pietri, S. Purushothaman, M.P. Reiter, A.-K. Rink, C. Scheidenberger, H. Weick, P. Dendooven, M. Diwisch, F. Greiner, F. Heiße, R. Knöbel, W. Lippert, I.D. Moore, I. Pohjalainen, A. Prochazka, M. Ranjan, M. Takechi, J.S. Winfield, X. Xu
2015Do01	ARISE	96,	83	S.F. Dorsett, K.S. Krane
2015Ei01	PRVCA	92,	045502	M. Eibach, G. Bollen, M. Brodeur, K. Cooper, K. Gulyuz, C. Izzo, D.J. Morrissey, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, A.A. Valverde, A.C.C. Villari
2015El03	PRLTA	115,	062501	S. Eliseev, K. Blaum, M. Block, S. Chenmarev, H. Dorrer, Ch. E. Düllmann, C. Enss, P.E. Filianin, L. Gastaldo, M. Goncharov, U. Köster, F. Lautenschläger, Yu. N. Novikov, A. Rischka, R.X. Schüssler, L. Schweikhard, A. Türler

2015Et01	PRVCA	91,	064317	A. Étilé, D. Verney, N.N. Arsenyev, J. Bettane, I.N. Borzov, M.C. Mhamed, P.V. Cuong, C. Delafosse, F. Didierjean, C. Gaulard, N. Van Giai, A. Goasduff, F. Ibrahim, K. Kolos, C. Lau, M. Niikura, S. Roccia, A.P. Severyukhin, D. Testov, S. Tusseau-Nenez, V.V. Voronov
2015Fi07	PRXHA	5,	011018	D.A. Fink, T.E. Cocolios, A.N. Andreyev, S. Antalic, A.E. Barzakh, B. Bastin, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, L. Ghys, A. Gottberg, M. Huyse, N. Imai, T. Kron, N. Lecesne, K.M. Lynch, B.A. Marsh, D. Pauwels, E. Rapisarda, S.D. Richter, R.E. Rossel, S. Rothe, M.D. Seliverstov, A.M. Sjödin, C. Van Beveren, P. Van Duppen, K.D.A. Wendt
2015Fl01	PRVCA	91,	034310	F. Flavigny, D. Pauwels, D. Radulov, I.J. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, V.S. Ivanov, U. Köster, B.A. Marsh, T. Otsuka, L. Popescu, R. Raabe, M.D. Seliverstov, N. Shimizu, A.M. Sjödin, Y. Tsunoda, P. Van den Bergh, P. Van Duppen, J. Van de Walle, M. Venhart, W.B. Walters, K. Wimmer
2015Ga24	PRVCA	92,	021301	J.M. Gates, K.E. Gregorich, O.R. Gothe, E.C. Uribe, G.K. Pang, D.L. Bleuel, M. Block, R.M. Clark, C.M. Campbell, H.L. Crawford, M. Cromaz, A. Di Nitto, Ch. E. Düllmann, N.E. Esker, C. Fahlander, P. Fallon, R.M. Farjadi, U. Forsberg, J. Khuyagbaatar, W. Loveland, A.O. Macchiavelli, E.M. May, P.R. Mudder, D.T. Olive, A.C. Rice, J. Rissanen, D. Rudolph, L.G. Sarmiento, J.A. Shusterman, M.A. Stoyer, A. Wiens, A. Yakushev, H. Nitsche
2015Ga38	EPJAA	51,	136	L.P. Gaffney, J. Van de Walle, B. Bastin, V. Bildstein, A. Blazhev, N. Bree, J. Cederkäll, I. Darby, H. De Witte, D. DiJulio, J. Diriken, V.N. Fedosseev, Ch. Fransen, R. Gernhäuser, A. Gustafsson, H. Hess, M. Huyse, N. Kesteloot, Th. Kröll, R. Lutter, B.A. Marsh, P. Reiter, M. Seidlitz, P. Van Duppen, D. Voulot, N. Warr, F. Wenander, K. Wimmer, K. Wrzosek-Lipska
2015Gl03	PRVCA	92,	042501	B.E. Glassman, D. Pérez-Loureiro, C. Wrede, J. Allen, D.W. Bardayan, M.B. Bennett, B.A. Brown, K.A. Chipps, M. Febbraro, C. Fry, M.R. Hall, O. Hall, S.N. Liddick, P. O'Malley, W. Ong, S.D. Pain, S.B. Schwartz, P. Shidling, H. Sims, P. Thompson, H. Zhang
2015Gr05	PRVCA	91,	032501	J. Grinyer, G.F. Grinyer, M. Babo, H. Bouzomita, P. Chauveau, P. Delahaye, M. Dubois, R. Frigot, P. Jardin, C. Leboucher, L. Maunoury, C. Seiffert, J.C. Thomas, E. Traykov
2015Gr14	PRVCA	92,	045503	J. Grinyer, G.F. Grinyer, M. Babo, H. Bouzomita, P. Chauveau, P. Delahaye, M. Dubois, R. Frigot, P. Jardin, C. Leboucher, L. Maunoury, C. Seiffert, J.C. Thomas, E. Traykov
2015Gu09	PRVCA	91,	055501	K. Gulyuz, J. Ariche, G. Bollen, S. Bustabad, M. Eibach, C. Izzo, S.J. Novario, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, A.A. Valverde
2015He27	PRVCA	92,	044310	A. Herzán, S. Juutinen, K. Auranen, T. Grahn, P.T. Greenlees, K. Hauschild, U. Jakobsson, P. Jones, R. Julin, S. Ketelhut, M. Leino, A. Lopez-Martens, P. Nieminen, M. Nyman, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri, J. Uusitalo
2015He28	PRVCA	92,	044311	H. Heylen, C. Babcock, J. Billowes, M.L. Bissell, K. Blaum, P. Campbell, B. Cheal, R.F. Garcia Ruiz, Ch. Geppert, W. Gins, M. Kowalska, K. Kreim, S.M. Lenzi, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, D.T. Yordanov
2015Hu02	PRVCA	91,	024322	P. Humby, A. Simon, C.W. Beausang, T.J. Ross, R.O. Hughes, J.T. Burke, R.J. Casperson, J. Koglin, S. Ota, J.M. Allmond, M. McCleskey, E. McCleskey, A. Saastamoinen, R. Chyzh, M. Dag, K. Gell, T. Tarlow, G. Vyas
2015Hu07	PRVCA	92,	034615	A.M. Hurst, R.B. Firestone, L. Szentmiklósi, B.W. Sleaford, M.S. Basunia, T. Belgya, J.E. Escher, M. Krticka, Zs. Révay, N.C. Summers
2015Ka24	PRVCA	92,	014321	Z. Kalaninová, S. Antalic, F.P. Heßberger, D. Ackermann, B. Andel, B. Kindler, M. Laatiaoui, B. Lommel, J. Maurer
2015KaZX	JUPSC	6,	030106	D. Kaji, K. Morimoto, Y. Wakabayashi, M. Takeyama, M. Asai

2015Kh09	PRLTA	115,	242502	J. Khuyagbaatar, A. Yakushev, Ch. E. Düllmann, D. Ackermann, L.-L. Andersson, M. Block, H. Brand, D.M. Cox, J. Even, U. Forsberg, P. Golubev, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, J. Hoffmann, A. Hübner, E. Jäger, J. Jeppsson, b. Kindler, J.V. Kratz, J. Krier, N. Kurz, B. Lommel, M. Maiti, S. Minami, A.K. Mistry, C.M. Mrosek, I. Pysmenetska, D. Rudolph, L.G. Sarmiento, H. Schaffner, M. Schädel, B. Schausten, J. Steiner, T. Torres De Heidenreich, J. Uusitalo, M. Wegrzecki, N. Wiehl, V. Yakusheva
2015Ko06	ARISE	95,	143	K. Kossert, K. Bokeloh, R. Dersch, O. Nahle
2015Ko09	ARISE	99,	59	K. Kossert
2015Ko14	ADNDA	103-104	50	F.G. Kondev, G.D. Dracoulis, T. Kibedi
2015Ko19	PRVCA	92,	054318	A. Korgul, K.P. Rykaczewski, R. Grzywacz, C.R. Bingham, N.T. Brewer, A.A. Ciemny, C.J. Gross, C. Jost, M. Karny, M. Madurga, C. Mazzocchi, A.J. Mendez II, K. Miernik, D. Miller, S. Padgett, S.V. Paulauskas, D.W. Stracener, M. Wolinska-Cichocka
2015Ko23	JUPSA	84,	054201	Y. Kojima, K. Kosuga, Y. Shima, A. Taniguchi, H. Hayashi, M. Shibata and PrvCom SNa March 2016
2015Kr02	ARISE	97,	12	K.S. Krane
2015Kr07	ARISE	105,	278	K.S. Krane
2015La19	PRVCA	92,	025502	A.T. Laffoley, C.E. Svensson, C. Andreoiu, G.C. Ball, P.C. Bender, H. Bidaman, V. Bildstein, B. Blank, D.S. Cross, G. Deng, A. Diaz Varela, M.R. Dunlop, R. Dunlop, A.B. Garnsworthy, P.E. Garrett, J. Giovinazzo, G.F. Grinyer, J. Grinyer, G. Hackman, B. Hadinia, D.S. Jamieson, B. Jigmeddorj, D. Kisliuk, K.G. Leach, J.R. Leslie, A.D. MacLean, D. Miller, B. Mills, M. Moukaddam, A.J. Radich, M.M. Rajabali, E.T. Rand, J.C. Thomas, J. Turko, C. Unsworth, P. Voss
2015Le14	PRVCA	92,	044320	P. Lee, C.-B. Moon, C.S. Lee, A. Odahara, R. Lozeva, A. Yagi, S. Nishimura, P. Doornenbal, G. Lorusso, P.-A. Söderström, T. Sumikama, H. Watanabe, T. Isobe, H. Baba, H. Sakurai, F. Browne, R. Daido, Y. Fang, H. Nishibata, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, D. Murai, F.L. Bello Garrote, J.M. Daugas, F. Didierjean, E. Ideguchi, T. Ishigaki, H.S. Jung, T. Komatsubara, Y.K. Kwon, S. Morimoto, M. Niikura, I. Nishizuka, K. Tshoo
2015Le17	PRVCA	92,	054309	A. Lepailleur, K. Wimmer, A. Mutschler, O. Sorlin, J.C. Thomas, V. Bader, C. Bancroft, D. Barofsky, B. Bastin, T. Baugher, D. Bazin, V. Bildstein, C. Borcea, R. Borcea, B.A. Brown, L. Caceres, A. Gade, L. Gaudefroy, S. Grevy, G.F. Grinyer, H. Iwasaki, E. Khan, T. Kroll, C. Langer, A. Lemasson, O. Llidoo, J. Lloyd, E. Lunderberg, F. Negoita, F. de Oliveira Santos, G. Perdikakis, F. Recchia, T. Redpath, T. Roger, F. Rotaru, S. Saenz, M.-G. Saint-Laurent, D. Smalley, D. Sohler, M. Stanoiu, S.R. Stroberg, M. Vandebrouck, D. Weisshaar, A. Westerberg
2015Li20	PRVCA	91,	064309	A.A. Lis, C. Mazzocchi, W. Dominik, Z. Janas, M. Pfützner, M. Pomorski, L. Acosta, S. Baraeva, E. Casarejos, J. Duénas-Díaz, V. Dunin, J.M. Espino, A. Estrade, F. Farinon, A. Fomichev, H. Geissel, A. Gorshkov, G. Kaminski, O. Kiselev, R. Knöbel, S. Krupko, M. Kuich, Yu. A. Litvinov, G. Marquinez-Durán, I. Martel, I. Mukha, C. Nociforo, A.K. Ordúz, S. Pietri, A. Prochazka, A.M. Sánchez-Benítez, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y. Tanaka, H. Weick, J.S. Winfield
2015Li24	PRVCA	92,	014326	H.J. Li, B. Cederwall, T. Bäck, C. Qi, M. Doncel, U. Jakobsson, K. Auranen, S. Bönig, M.C. Drummond, T. Grahn, P. Greenlees, A. Herzán, R. Julin, S. Juutinen, J. Konki, T. Kröll, M. Leino, C. McPeake, D. O'Donnell, R.D. Page, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, B. Saygi, C. Scholey, J. Sorri, S. Stolze, M.J. Taylor, A. Thornthwaite, J. Uusitalo, Z.G. Xiao
2015Li33	PRVCA	92,	024319	S.N. Liddick, W.B. Walters, C.J. Chiara, R.V.F. Janssens, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, M.P. Carpenter, L. Cartegni, J. Chen, H.L. Crawford, I.G. Darby, R. Grzywacz, J. Harker, C.R. Hoffman, S. Ilyushkin, F.G. Kondev, N. Larson, M. Madurga, D. Miller, S. Padgett, S.V. Paulauskas, M.M. Rajabali, K. Rykaczewski, D. Seweryniak, S. Suchyta, S. Zhu

2015Lo04	PRLTA	114,	192501	G. Lorusso, S. Nishimura, Z.Y. Xu, A. Jungclaus, Y. Shimizu, G.S. Simpson, P.-A. Söderström, H. Watanabe, F. Browne, P. Doornenbal, G. Gey, H.S. Jung, B. Meyer, T. Sumikama, J. Taprogge, Zs. Vajta, J. Wu, H. Baba, G. Benzoni, K.Y. Chae, F.C.L. Crespi, N. Fukuda, R. Gernhäuser, N. Inabe, T. Isobe, T. Kajino, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, A. Montaner-Pizá, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, H. Sakurai, H. Schaffner, P. Schury, S. Shibagaki, K. Steiger, H. Suzuki, H. Takeda, A. Wendt, A. Yagi, K. Yoshinaga
2015Lo08	PRVCA	92,	024304	R. Lozeva, A. Odahara, C.-B. Moon, S. Nishimura, P. Doornenbal, H. Naïdja, F. Nowacki, P.-A. Söderström, T. Sumikama, G. Lorusso, J. Wu, Z.Y. Xu, H. Baba, F. Browne, R. Daido, J.-M. Daugas, F. Didierjean, Y. Fang, T. Isobe, I. Kojouharov, N. Kurz, Z. Patel, S. Rice, H. Sakurai, H. Schaffner, L. Sinclair, H. Watanabe, A. Yagi, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, D. Murai, F.L. Bello Garrote, E. Ideguchi, T. Ishigaki, H.S. Jung, T. Komatsubara, Y.K. Kwon, S. Morimoto, M. Niikura, H. Nishibata, I. Nishizuka, T. Shimoda, K. Tshoo
2015Lu12	EPJAA	51,	113	M.V. Lund, M.J.G. Borge, J.A. Briz, J. Cederkäll, H.O.U. Fynbo, J.H. Jensen, B. Jonson, K.L. Laursen, T. Nilsson, A. Perea, V. Pesudo, K. Riisager, O. Tengblad
2015Lu13	PYLBB	750,	356	M.V. Lund, M.J.G. Borge, J.A. Briz, J. Cederkäll, H.O.U. Fynbo, J.H. Jensen, B. Jonson, K.L. Laursen, T. Nilsson, A. Perea, V. Pesudo, K. Riisager, O. Tengblad
2015Ma30	PRVCA	91,	045504	S. Malbrunot-Ettenauer, T. Brunner, U. Chowdhury, A.T. Gallant, V.V. Simon, M. Brodeur, A. Chaudhuri, E. Mané, M.C. Simon, C. Andreoiu, G. Audi, J.R.C. López-Urrutia, P. Delheij, G. Gwinner, A. Lapierre, D. Lunney, M.R. Pearson, R. Ringle, J. Ullrich, J. Dilling
2015Ma37	PRVCA	91,	051302	L. Ma, Z.Y. Zhang, Z.G. Gan, H.B. Yang, L. Yu, J. Jiang, J.G. Wang, Y.L. Tian, Y.S. Wang, S. Guo, B. Ding, Z.Z. Ren, S.G. Zhou, X.H. Zhou, H.S. Xu, G.Q. Xiao
2015Ma54	PRVCA	92,	041302	A. Matta, D. Beaumel, H. Otsu, V. Lapoux, N.K. Timofeyuk, N. Aoi, M. Assié, H. Baba, S. Boissinot, R.J. Chen, F. Delaunay, N. de Sereville, S. Franchoo, P. Gangnant, J. Gibelin, F. Hammache, Ch. Houarner, N. Imai, N. Kobayashi, T. Kubo, Y. Kondo, Y. Kawada, L.H. Khiem, M. Kurata-Nishimura, E.A. Kuzmin, J. Lee, J.F. Libin, T. Motobayashi, T. Nakamura, L. Nalpas, E. Yu. Nikolskii, A. Obertelli, E.C. Pollacco, E. Rindel, Ph. Rosier, F. Saillant, T. Sako, H. Sakurai, A.M. Sánchez-Benitez, J-A. Scarpaci, I. Stefan, D. Suzuki, K. Takahashi, M. Takechi, S. Takeuchi, H. Wang, R. Wolski, K. Yoneda
2015Ma60	PRVCA	92,	054304	D.A. Matters, N. Fotiades, J.J. Carroll, C.J. Chiara, J.W. McClory, T. Kawano, R.O. Nelson, M. Devlin
2015Ma61	PRVCA	92,	054317	C. Mazzocchi, K.P. Rykaczewski, R. Grzywacz, P. Baczyk, C.R. Bingham, N.T. Brewer, C.J. Gross, C. Jost, M. Karny, A. Korgul, M. Madurga, A.J. Mendez II, K. Miernik, D. Miller, S. Padgett, S.V. Paulauskas, A.A. Sonzogni, D.W. Stracener, M. Wolinska-Cichocka
2015Ma.A	PrvCom	GAu	Jan	V. Manea
2015Me01	PRLTA	114,	022501	Z. Meisel, S. George, S. Ahn, J. Browne, D. Bazin, B.A. Brown, J.F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matos, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers
2015Me08	PRLTA	115,	162501	Z. Meisel, S. George, S. Ahn, D. Bazin, B.A. Brown, J. Browne, J.F. Carpino, H. Chung, A.L. Cole, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matos, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers
2015Me.A	Th.-Michigan			Z. Meisel

2015Mo01	PRVCA	91,	014301	F. Molina, B. Rubio, Y. Fujita, W. Gelletly, J. Agramunt, A. Algora, J. Benlliure, P. Boutachkov, L. Cáceres, R.B. Cakirli, E. Casarejos, C. Domingo-Pardo, P. Doornenbal, A. Gadea, E. Ganioglu, M. Gascón, H. Geissel, J. Gerl, M. Górska, J. Grebosz, R. Hoischen, R. Kumar, N. Kurz, I. Kojouharov, L. Amon Susam, H. Matsubara, A.I. Morales, Y. Oktem, D. Pauwels, D. Pérez-Loureiro, S. Pietri, Zs. Podolyák, W. Prokopowicz, D. Rudolph, H. Schaffner, S.J. Steer, J.L. Tain, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, S. Verma, H-J. Wollersheim
2015Mo20	EULEE	111,	52001	A.I. Morales, G. Benzoni, N. Al-Dahan, S. Vergani, Zs. Podolyák, P.H. Regan, T.P.D. Swan, J.J. Valiente-Dobón, A. Bracco, P. Boutachkov, F.C.L. Crespi, J. Gerl, M. Górska, S. Pietri, P.M. Walker, H.-J. Wollersheim
2015Mo25	NUPAB	944,	30	K. Morita
2015Mo.A	PrvCom	HWJ	Nov	M. Mougeot
2015Mu13	PRLTA	115,	202501	I. Mukha, L.V. Grigorenko, X. Xu, L. Acosta, E. Casarejos, A.A. Ciemny, W. Dominik, J. Duènas-Dìaz, V. Dunin, J.M. Espino, A. Estradè, F. Farinon, A. Fomichev, H. Geissel, T.A. Golubkova, A. Gorshkov, Z. Janas, G. Kaminski, O. Kiselev, R. Knöbel, S. Krupko, M. Kuich, Yu. A. Litvinov, G. Marquinez-Durán, I. Martel, C. Mazzocchi, C. Nociforo, A.K. Ordúz, M. Pfützner, S. Pietri, M. Pomorski, A. Prochazka, S. Rymzhanova, A.M. Sánchez-Benìtez, C. Scheidenberger, P. Sharov, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y.K. Tanaka, H. Weick, M. Winkler, J.S. Winfield, M.V. Zhukov
2015My03	PRLTA	114,	013003	E.G. Myers, A. Wagner, H. Kracke, B.A. Wesson
2015NiZZ	JUPSC	6,	030062	I. Nishizuka, T. Sumikama, F. Browne, A.M. Bruce, S. Nishimura, P. Doornenbal, G. Lorusso, Z. Patel, S. Rice, L. Sinclair, P.-A. Söderström, H. Watanabe, J. Wu, Z.Y. Xu, A. Yagi, H. Baba, N. Chiga, R. Carrol, R. Daido, F. Didierjean, Y. Fang, N. Fukuda, G. Gey, E. Ideguchi, N. Inabe, T. Isobe, D. Kameda, I. Kojouharov, N. Kurz, T. Kubo, S. Lalkovski, Z. Li, R. Lozeva, H. Nishibata, A. Odahara, Zs. Podolyák, P.H. Regan, O.J. Roberts, H. Sakurai, H. Schaffner, G.S. Simpson, H. Suzuki, H. Takeda, M. Tanaka, J. Taprogge, V. Werner, O. Wieland
2015Ny02	EPJAA	51,	31	M. Nyman, S. Juutinen, D.M. Cullen, I. Darby, S. Eeckhaudt, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, P. Jones, R. Julin, H. Kettunen, M. Leino, A.-P. Leppanen, P. Nieminen, J. Pakarinen, P. Rahkila, M. Sandzelius, J. Saren, C. Scholey, J. Uusitalo
2015Og05	NUPAB	944,	62	Yu. Ts. Oganessian, V.K. Utyonkov
2015Pf01	PRVCA	92,	014316	M. Pfützner, W. Dominik, Z. Janas, C. Mazzocchi, M. Pomorski, A.A. Bezbakh, M.J.G. Borge, K. Chrapkiewicz, V. Chudoba, R. Frederickx, G. Kaminski, M. Kowalska, S. Krupko, M. Kuich, J. Kurcewicz, A.A. Lis, M.V. Lund, K. Miernik, J. Perkowski, R. Raabe, G. Randisi, K. Riisager, S. Sambi, O. Tengblad, F. Wenander
2015Pr10	PRVCA	92,	061302	C.J. Prokop, B.P. Crider, S.N. Liddick, A.D. Ayangeakaa, M.P. Carpenter, J.J. Carroll, J. Chen, C.J. Chiara, H.M. David, A.C. Dombos, S. Go, J. Harker, R.V.F. Janssens, N. Larson, T. Lauritsen, R. Lewis, S.J. Quinn, F. Recchia, D. Seweryniak, A. Spyrou, S. Suchyta, W.B. Walters, S. Zhu
2015Ro10	PRLTA	114,	202501	M. Rosenbusch, P. Ascher, D. Atanasov, C. Barbieri, D. Beck, K. Blaum, Ch. Borgmann, M. Breitenfeldt, R.B. Cakirli, A. Cipollone, S. George, F. Herfurth, M. Kowalska, S. Kreim, D. Lunney, V. Manea, P. Navrátil, D. Neidherr, L. Schweikhard, V. Somà, J. Stanja, F. Wienholtz, R.N. Wolf, K. Zuber
2015Ru02	PRVCA	91,	041304	R.F. Garcia Ruiz, M.L. Bissell, K. Blaum, N. Frommgen, M. Hammen, J.D. Holt, M. Kowalska, K. Kreim, J. Menendez, R. Neugart, G. Neyens, W. Nortershauser, F. Nowacki, J. Papuga, A. Poves, A. Schwenk, J. Simonis, D.T. Yordanov
2015Ru09	PRVCA	92,	034328	E. Ruchowska, H. Mach, M. Kowal, J. Skalski, W.A. Plociennik, B. Fogelberg
2015Sc13	EPJAA	51,	89	F. Schneider, T. Beyer, K. Blaum, M. Block, S. Chenmarev, H. Dorrer, Ch. E. Düllmann, K. Eberhardt, M. Eibach, S. Eliseev, J. Grund, U. Köster, Sz. Nagy, Yu. N. Novikov, D. Renisch, A. Türler, K. Wendt

2015Sh16	PRVCA	91,	047304	Y.P. Shen, W.P. Liu, J. Su, N.T. Zhang, L. Jing, Z.H. Li, Y.B. Wang, B. Guo, S.Q. Yan, Y.J. Li, S. Zeng, G. Lian, X.C. Du, L. Gan, X.X. Bai, J.S. Wang, Y.H. Zhang, X.H. Zhou, X.D. Tang, J.J. He, Y.Y. Yang, S.L. Jin, P. Ma, J.B. Ma, M.R. Huang, Z. Bai, Y.J. Zhou, W.H. Ma, J. Hu, S.W. Xu, S.B. Ma, S.Z. Chen, L.Y. Zhang, B. Ding, Z.H. Li
2015So23	PRVCA	92,	051305	P.-A. Söderström, S. Nishimura, Z.Y. Xu, K. Sieja, V. Werner, P. Doornenbal, G. Lorusso, F. Browne, G. Gey, H.S. Jung, T. Sumikama, J. Taprogge, Zs. Vajta, H. Watanabe, J. Wu, H. Baba, Zs. Dombradi, S. Franchoo, T. Isobe, P.R. John, Y.-K. Kim, I. Kojouharov, N. Kurz, Y.K. Kwon, Z. Li, I. Matea, K. Matsui, G. Martínez-Pinedo, D. Mengoni, P. Morfouace, D.R. Napoli, M. Niikura, H. Nishibata, A. Odahara, K. Ogawa, N. Pietralla, E. Sahin, H. Sakurai, H. Schaffner, D. Sohler, I.G. Stefan, D. Suzuki, R. Taniuchi, A. Yagi, K. Yoshinaga
2015St09	IMPEE	24,	1550043	C. Stengl, H. Wilsenach, K. Zuber
2015St14	EPJAA	51,	117	K. Steiger, S. Nishimura, Z. Li, R. Gernhäuser, Y. Utsuno, R. Chen, T. Faestermann, C. Hinke, R. Krücken, M. Kurata-Nishimura, G. Lorusso, Y. Miyashita, N. Shimizu, K. Sugimoto, T. Sumikama, H. Watanabe, K. Yoshinaga
2015Su01	CPLEE	32,	012301	L.-J. Sun, C.-J. Lin, X.-X. Xu, J.-S. Wang, H.-M. Jia, F. Yang, Y.-Y. Yang, L. Yang, P.-F. Bao, H.-Q. Zhang, s.-L. Jin, Z.-D. Wu, N.-T. Zhang, S.-Z. Chen, J.-B. Ma, P. Ma, N.-R. Ma, Z.-H. Liu
2015Su15	NIMAE	804,	1	L.J. Sun, X.X. Xu, C.J. Lin, J.S. Wang, D.Q. Fang, Z.H. Li, Y.T. Wang, J. Li, L. Yang, N.R. Ma, K. Wang, H.L. Zang, H.W. Wang, C. Li, C.Z. Shi, M.W. Nie, X.F. Li, H. Li, J.B. Ma, P. Ma, S.L. Jin, M.R. Huang, Z. Bai, J.G. Wang, F. Yang, H.M. Jia, H.Q. Zhang, Z.H. Liu, P.F. Bao, D.X. Wang, Y.Y. Yang, Y.J. Zhou, W.H. Ma, J. Chen
2015Ta12	PRVCA	91,	044322	M.J. Taylor, D.M. Cullen, M.G. Procter, A.J. Smith, A. McFarlane, V. Twist, G.A. Alharshan, L.S. Ferreira, E. Maglione, K. Auranen, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, R. Julin, S. Juutinen, S. Ketelhut, J. Konki, M. Leino, A. Lopez-Martens, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, J. Sorri, S. Stolze, J. Uusitalo, M. Doncel
2015Ta13	PRVCA	91,	054324	J. Taprogge, A. Jungclaus, H. Grawe, S. Nishimura, P. Doornenbal, G. Lorusso, G.S. Simpson, P.-A. Söderström, T. Sumikama, Z.Y. Xu, H. Baba, F. Browne, N. Fukuda, R. Gernhäuser, G. Gey, N. Inabe, T. Isobe, H.S. Jung, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, Z. Li, H. Sakurai, H. Schaffner, K. Steiger, H. Suzuki, H. Takeda, Zs. Vajta, H. Watanabe, J. Wu, A. Yagi, K. Yoshinaga, G. Benzoni, S. Bönig, K.Y. Chae, L. Coraggio, A. Covello, J.-M. Daugas, F. Drouet, A. Gadea, A. Gargano, S. Ilieva, F.G. Kondev, T. Kröll, G.J. Lane, A. Montaner-Pizá, K. Moschner, D. Mücher, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, A. Wendt
2015Ut02	PRVCA	92,	034609	V.K. Utyonkov, N.T. Brewer, Yu. Ts. Oganessian, K.P. Rykaczewski, F. Sh. Abdullin, S.N. Dmitriev, R.K. Grzywacz, M.G. Itkis, K. Miernik, A.N. Polyakov, J.B. Roberto, R.N. Sagaidak, I.V. Shirokovsky, M.V. Shumeiko, Yu. S. Tsyganov, A.A. Voinov, V.G. Subbotin, A.M. Sukhov, A.V. Sabelnikov, G.K. Vostokin, J.H. Hamilton, M.A. Stoyer, S.Y. Strauss
2015Va05	PRVCA	91,	037301	A.A. Valverde, G. Bollen, K. Cooper, M. Eibach, K. Gulyuz, C. Izzo, D.J. Morrissey, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, A.C.C. Villari
2015Va08	PRLTA	114,	232502	A.A. Valverde, G. Bollen, M. Brodeur, R.A. Bryce, K. Cooper, M. Eibach, K. Gulyuz, C. Izzo, D.J. Morrissey, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, A.C.C. Villari
2015Va10	PRVCA	92,	014325	C. Van Beveren, A.N. Andreyev, A.E. Barzakh, T.E. Cocolios, D. Fedorov, V.N. Fedosseev, R. Ferrer, M. Huyse, U. Köster, J. Lane, V. Liberati, K.M. Lynch, B.A. Marsh, T.J. Procter, D. Radulov, E. Rapisarda, K. Sandhu, M.D. Seliverstov, P. Van Duppen, M. Venhart, M. Veselsky
2015Vo05	PRVCA	91,	044307	A. Voss, F. Buchinger, B. Cheal, J.E. Crawford, J. Dilling, M. Kortelainen, A.A. Kwiatkowski, A. Leary, C.D.P. Levy, F. Mooshammer, M.L. Ojeda, M.R. Pearson, T.J. Procter, W. Al Tamimi

2015Wa02	PYLBB	740,	243	P.T. Wady, J.F. Smith, B. Hadinia, D.M. Cullen, S.J. Freeman, I.G. Darby, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppanen, B.M. McGuirk, P. Nieminen, M. Nyman, R.D. Page, J. Pakarinen, E.S. Paul, P. Rahkila, S.V. Rigby, C. Scholey, J. Uusitalo, R. Wadsworth
2015Wa06	PRLTA	114,	041101	A. Wallner, M. Bichler, K. Buczak, R. Dressler, L.K. Fifield, D. Schumann, J.H. Sterba, S.G. Tims, G. Wallner, W. Kutschera
2015Wa28	PRVCA	92,	034317	E.H. Wang, A. Lemasson, J.H. Hamilton, A.V. Ramayya, J.K. Hwang, J.M. Eldridge, A. Navin, M. Rejmund, S. Bhattacharyya, S.H. Liu, N.T. Brewer, Y.X. Luo, J.O. Rasmussen, H.L. Liu, H. Zhou, Y.X. Liu, H.J. Li, Y. Sun, F.R. Xu, S.J. Zhu, G.M. Ter-Akopian, Yu. Ts. Oganessian, M. Caamano, E. Clément, O. Delaune, F. Farget, G. de France, B. Jacquot
2015Wi02	NIMAE	769,	65	K. Wimmer, D. Barofsky, D. Bazin, L.M. Fraile, J. Lloyd, J.R. Tompkins, S.J. Williams
2015Wi.A	PrvCom	GAu	Jan	F. Wienholtz
2015Wr02	PRVCA	92,	044327	J. Wrzesinski, G.J. Lane, K.H. Maier, R.V.F. Janssens, G.D. Dracoulis, R. Broda, A.P. Byrne, M.P. Carpenter, R.M. Clark, M. Cromaz, B. Fornal, T. Lauritsen, A.O. Macchiavelli, M. Rejmund, B. Szpak, K. Vetter, S. Zhu
2015Xu14	CPCHC	39,	104001	X. Xu, M. Wang, Y.-H. Zhang, H.-S. Xu, P. Shuai, X.-L. Tu, Y.A. Litvinov, X.-H. Zhou, B.-H. Sun, Y.-J. Yuan, J.-W. Xia, J.-C. Yang, K. Blaum, R.-J. Chen, X.-C. Chen, C.-Y. Fu, Z. Ge, Z.-G. Hu, W.-J. Huang, D.-W. Liu, Y.-H. Lam, X.-W. Ma, R.-S. Mao, T. Uesaka, G.-Q. Xiao, Y.-M. Xing, T. Yamaguchi, Y. Yamaguchi, Q. Zeng, X.-L. Yan, H.-W. Zhao, T.-C. Zhao, W. Zhang, W.-L. Zhan
2015Ya13	EPJAA	51,	88	H.B. Yang, Z.Y. Zhang, J.G. Wang, Z.G. Gan, L. Ma, L. Yu, J. Jiang, Y.L. Tian, B. Ding, S. Guo, Y.S. Wang, T.H. Huang, M.D. Sun, K.L. Wang, S.G. Zhou, Z.Z. Ren, X.H. Zhou, H.S. Xu, G.Q. Xiao
2015YaZW	JUPSC	6,	030019	A. Yagi, A. Odahara, R. Daido, Y. Fang, H. Nishibata, R. Lozeva, C.-B. Moon, S. Nishimura, P. Doornenbal, G. Lorusso, P.-A. Söderström, T. Sumikama, H. Watanabe, T. Isobe, H. Baba, H. Sakurai, F. Browne, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, D. Murai, F.L. Bello Garrote, J.M. Daugas, F. Didierjean, E. Ideguchi, T. Ishigaki, H.S. Jung, T. Komatsubara, Y.K. Kwon, C.S. Lee, P.S. Lee, S. Morimoto, M. Niikura, I. Nishizuka, T. Shimoda, K. Tshoo
2015YoZX	JUPSC	6,	030021	R. Yokoyama, E. Ideguchi, G. Simpson, M. Tanaka, S. Nishimura, P. Doornnbal, P.-A. Söderström, G. Lorusso, Z. Xu, J. Wu, T. Sumikama, N. Aoi, H. Baba, F. Bello, F. Browne, R. Daido, Y. Fang, N. Fukuda, G. Gey, S. Go, N. Inabe, T. Isobe, D. Kameda, K. Kobayashi, M. Kobayashi, T. Komatsubara, T. Kubo, I. Kuti, Z. Li, M. Matsushita, S. Michimasa, C.-B. Moon, H. Nishibata, I. Nishizuka, A. Odahara, Z. Patel, S. Rice, E. Sahin, L. Sinclair, H. Suzuki, H. Takeda, J. Taprogge, Z. Vajta, H. Watanabe, A. Yagi
2015Za13	MTRGA	52,	280	S.L. Zafonte, R.S. Van Dyck Jr
2015ZaZY	JPCSD	630,	012011	G.S. Zahn, F.A. Genezini

2016

2016Ab03	PYLBB	759,	64	K. Abe, for the XMASS Collaboration
2016Ag03	NIMAE	807,	69	J. Agramunt, J.L. Tain, M.B. Gómez Hornillos, A.R. Garcia, F. Albiol, A. Algora, R. Caballero-Folch, F. Calvino, D. Cano-Ott, G. Cortés, C. Domingo-Pardo, T. Eronen, W. Gelletly, D. Gorelov, V. Gorlychev, H. Hakala, A. Jokinen, M.D. Jordan, A. Kankainen, V. Kolhinen, L. Kucuk, T. Martinez, P.J.R. Mason, I. Moore, H. Penttilä, Zs. Podolyák, C. Pretel, M. Reponen, A. Riego, J. Rissanen, B. Rubio, A. Saastamoinen, A. Tarifeno-Saldivia, E. Valencia
2016Ai01	ARISE	110,	59	P.M. Aitken-Smith, S.M. Collins
2016Al03	PRLTA	116,	072501	M. Alanssari, D. Frekers, T. Eronen, L. Canete, J. Dilling, M. Haaranen, J. Hakala, M. Holl, M. Jeskovský, A. Jokinen, A. Kankainen, J. Koponen, A.J. Mayer, I.D. Moore, D.A. Nesterenko, I. Pohjalainen, P. Povinec, J. Reinikainen, S. Rinta-Antila, P.C. Srivastava, J. Suhonen, R.I. Thompson, A. Voss, M.E. Wieser

2016Al10	PRVCA	93,	044325	M.F. Alshudifat, R. Grzywacz, M. Madurga, C.J. Gross, K.P. Rykaczewski, J.C. Batchelder, C. Bingham, I.N. Borzov, N.T. Brewer, L. Cartegni, A. Fijalkowska, J.H. Hamilton, J.K. Hwang, S.V. Ilyushkin, C. Jost, M. Karny, A. Korgul, W. Krolas, S.H. Liu, C. Mazzocchi, A.J. Mendez, K. Miernik, D. Miller, S.W. Padgett, S.V. Paulauskas, A.V. Ramayya, D.W. Stracener, R. Surman, J.A. Winger, M. Wolinska-Cichocka, E.F. Zganjar
2016Al28	PPNUE	47,	986	E.N. Alexeyev, Yu. M. Gavrilyuk, A.M. Gangapshev, V.V. Kazalov, V.V. Kuzminov, S.I. Panasenko, S.S. Ratkevich
2016Al30	IMSPF	406,	1	M. Alanssari, D. Frekers, T. Eronen, L. Canete, J. Hakala, M. Holl, A. Jokinen, A. Kankainen, J. Koponen, I.D. Moore, D.A. Nesterenko, I. Pohjalainen, J. Reinikainen, S. Rinta-Antila, A. Voss
2016An10	PRVCA	93,	064316	B. Andel, A.N. Andreyev, S. Antalic, F.P. Hessberger, D. Ackermann, S. Hofmann, M. Huyse, Z. Kalaninova, B. Kindler, I. Kojouharov, P. Kuusiniemi, B. Lommel, K. Nishio, R.D. Page, B. Sulignano, P. Van Duppen
2016An14	JPGPE	43,	095202	G. Angloher, M. Bauer, P. Bauer, I. Bavykina, A. Bento, C. Bucci, L. Canonica, C. Ciemniak, X. Defay, G. Deuter, A. Er, F. v. Feilitzsch, N. Ferreiro Iachellini, P. Gorla, A. Gutlein, D. Hauff, P. Huff, C. Isaila, J. Jochum, M. Kiefer, M. Kimmerle, H. Kluck, H. Kraus, J.-C. Lanfranchi, J. Loebell, A. Munster, C. Pagliarone, F. Petricca, S. Pfister, W. Potzel, F. Probst, F. Reindl, S. Roth, K. Rottler, C. Sailer, K. Schaffner, J. Schieck, J. Schmaler, S. Scholl, S. Schonert, W. Seidel, M. v. Sivers, L. Stodolsky, C. Strandhagen, R. Strauss, A. Tanzke, V. Tretyak, H.H. Trinh Thi, C. Turkoglu, M. Uffinger, A. Ulrich, I. Usherov, S. Wawoczny, M. Willers, M. Wustrich, A. Zoller
2016As01	NUPAB	946,	171	K. Asakura, A. Gando, Y. Gando, T. Hachiya, S. Hayashida, H. Ikeda, K. Inoue, K. Ishidoshiro, T. Ishikawa, S. Ishio, M. Koga, S. Matsuda, T. Mitsui, D. Motoki, K. Nakamura, S. Obara, M. Otani, T. Oura, I. Shimizu, Y. Shirahata, J. Shirai, A. Suzuki, H. Tachibana, K. Tamae, K. Ueshima, H. Watanabe, B.D. Xu, H. Yoshida, A. Kozlov, Y. Takemoto, S. Yoshida, K. Fushimi, T.I. Banks, B.E. Berger, B.K. Fujikawa, T. O'Donnell, L.A. Winslow, Y. Efremenko, H.J. Karwowski, D.M. Markoff, W. Tornow, J.A. Detwiler, S. Enomoto, M.P. Decowski
2016Ba42	PRVCA	94,	024334	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, P.L. Molkanov, F.V. Moroz, S. Yu. Orlov, V.N. Panteleev, M.D. Seliverstov, Yu. M. Volkov
2016Ba60	PRVCA	94,	054301	H. Badran, C. Scholey, K. Auranen, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, M. Mallaburn, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, M. Sandzelius, J. Saren, J. Sorri, S. Stolze, J. Uusitalo
2016Ba65	IMPEE	25,	1650107	T. Bayram, Se. Akkoyun, S. Uruk, H. Dapo, F. Dulger, I. Boztosun
2016Be11	PRVCA	93,	045502	P. Belli, R. Bernabei, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Di Marco, A. Incicchitti, M. Laubenstein, V.M. Mokina, D.V. Poda, O.G. Polischuk, V.I. Tretyak, I.A. Tupitsyna
2016Bi08	PRVCA	93,	064318	M.L. Bissell, T. Carette, K.T. Flanagan, P. Vingerhoets, J. Billowes, K. Blaum, B. Cheal, S. Fritzsche, M. Godefroid, M. Kowalska, J. Kramer, R. Neugart, G. Neyens, W. Nortershauser, D.T. Yordanov
2016Bl05	PRVCA	93,	061301	B. Blank, T. Goigoux, P. Ascher, M. Gerbaux, J. Giovinazzo, S. Grevy, T. Kurtukian Nieto, C. Magron, J. Agramunt, A. Algora, V. Guadilla, A. Montaner-Piza, A.I. Morales, S.E.A. Orrigo, B. Rubio, D.S. Ahn, P. Doornenbal, N. Fukuda, N. Inabe, G. Kiss, T. Kubo, S. Kubono, S. Nishimura, V.H. Phong, H. Sakurai, Y. Shimizu, P.-A. Soderstrom, T. Sumikama, H. Suzuki, H. Takeda, J. Wu, Y. Fujita, M. Tanaka, W. Gelletly, P. Aguilera, F. Molina, F. Diel, D. Lubos, G. de Angelis, D. Napoli, C. Borcea, A. Boso, R.B. Cakirli, E. Ganioglu, J. Chiba, D. Nishimura, H. Oikawa, Y. Takei, S. Yagi, K. Wimmer, G. de France, S. Go

2016Bo19	PYLBB	760,	273	G. Bocchi, S. Leoni, B. Fornal, G. Colo, P.F. Bortignon, S. Bottoni, A. Bracco, C. Michelagnoli, D. Bazzacco, A. Blanc, G. de France, M. Jentschel, U. Koster, P. Mutti, J.-M. Regis, G. Simpson, T. Soldner, C.A. Ur, W. Urban, L.M. Fraile, R. Lozeva, B. Belvito, G. Benzoni, A. Bruce, R. Carroll, N. Cieplicka-Orynczak, F.C.L. Crespi, F. Didierjean, J. Jolie, W. Korten, T. Kroll, S. Lalkovski, H. Mach, N. Marginean, B. Melon, D. Mengoni, B. Million, A. Nannini, D. Napoli, B. Olaizola, V. Paziy, Zs. Podolyak, P.H. Regan, N. Saed-Samii, B. Szpak, V. Vedia
2016Br01	PRVCA	93,	025503	M. Brodeur, C. Nicoloff, T. Ahn, J. Allen, D.W. Bardayan, F.D. Becchetti, Y.K. Gupta, M.R. Hall, O. Hall, J. Hu, J.M. Kelly, J.J. Kolata, J. Long, P. O'Malley, B.E. Schultz
2016Ca15	PRVCA	93,	034307	R.J. Carroll, R.D. Page, D.T. Joss, D. O'Donnell, J. Uusitalo, I.G. Darby, K. Andgren, K. Auranen, S. Bonig, B. Cederwall, M. Doncel, M.C. Drummond, S. Eeckhaudt, T. Grahn, C. Gray-Jones, P.T. Greenlees, B. Hadinia, A. Herzan, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, J. Konki, T. Kroll, M. Leino, A.-P. Leppanen, C. McPeake, M. Nyman, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, J. Revill, P. Ruotsalainen, M. Sandzelius, J. Saren, B. Saygi, C. Scholey, D. Seweryniak, J. Simpson, J. Sorri, S. Stolze, M.J. Taylor, A. Thornthwaite
2016Ca22	EPJAA	52,	124	L. Canete, A. Kankainen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, V.S. Kolhinen, J. Koponen, I.D. Moore, J. Reinikainen, S. Rinta-Antila
2016Ca33	PRVCA	94,	024314	L. Capponi, J.F. Smith, P. Ruotsalainen, C. Scholey, P. Rahkila, K. Auranen, L. Bianco, A.J. Boston, H.C. Boston, D.M. Cullen, X. Derkx, M.C. Drummond, T. Grahn, P.T. Greenlees, L. Grocutt, B. Hadinia, U. Jakobsson, D.T. Joss, R. Julin, S. Juutinen, M. Labiche, M. Leino, K.G. Leach, C. McPeake, K.F. Mulholland, P. Nieminen, D. O'Donnell, E.S. Paul, P. Peura, M. Sandzelius, J. Saren, B. Saygi, J. Sorri, S. Stolze, A. Thornthwaite, M.J. Taylor, J. Uusitalo
2016Ca43	JLTPA	184,	952	N. Casali, A. Dubovik, S. Nagorny, S. Nisi, F. Orio, L. Pattavina, S. Pirro, K. Schäffner, I. Tupitsyna, A. Yakubovskaya
2016Ce02	PRLTA	116,	162501	I. Celikovic, M. Lewitowicz, R. Gernhäuser, R. Krücken, S. Nishimura, H. Sakurai, D.S. Ahn, H. Baba, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, G. de France, P. Doornenbal, T. Faestermann, Y. Fang, N. Fukuda, J. Giovinazzo, N. Goel, M. Górska, S. Ilieva, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, Y.-K. Kim, Y.K. Kwon, I. Kojouharov, T. Kubo, N. Kurz, G. Lorusso, D. Lubos, K. Moschner, D. Murai, I. Nishizuka, J. Park, Z. Patel, M. Rajabali, S. Rice, H. Schaffner, Y. Shimizu, L. Sinclair, P.-A. Söderström, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, Z. Wang, H. Watanabe, J. Wu, Z. Xu
2016Ch11	PRVCA	93,	034610	P.A. Chodash, J.T. Burke, E.B. Norman, S.C. Wilks, R.J. Casperson, S.E. Fisher, K.S. Holliday, J.R. Jeffries, M.A. Wakeling
2016Ci01	EPJAA	52,	89	A.A. Ciemny, W. Dominik, T. Ginter, R. Grzywacz, Z. Janas, M. Kuich, C. Mazzocchi, K. Miernik, M. Pfutzner, M. Pomorski, D. Bazin, T. Baumann, A. Bezbakh, B.P. Crider, M. Cwiok, S. Go, G. Kaminski, K. Kolos, A. Korgul, E. Kwan, S.N. Liddick, S.V. Paulauskas, J. Pereira, K.P. Rykaczewski, C. Sumithrarachchi, Y. Xiao
2016Co01	ARISE	108,	143	S.M. Collins, A.V. Harms, P.H. Regan
2016De15	PYLBB	758,	26	F. de Grancey, A. Mercenne, F. de Oliveira Santos, T. Davinson, O. Sorlin, J.C. Angelique, M. Assie, E. Berthoumieux, R. Borcea, A. Buta, I. Celikovic, V. Chudoba, J.M. Daugas, G. Dumitru, M. Fadil, S. Grevy, J. Kiener, A. Lefebvre-Schuhl, N. Michel, J. Mrazek, F. Negoita, J. Okolowicz, D. Pantelica, M.G. Pellegriti, L. Perrot, M. Ploszajczak, G. Randisi, I. Ray, O. Roig, F. Rotaru, M.G. Saint Laurent, N. Smirnova, M. Stanoiu, I. Stefan, C. Stodel, K. Subotic
2016De29	PRVCA	94,	054311	D.M. Debenham, M.A. Bentley, P.J. Davies, T. Haylett, D.G. Jenkins, P. Joshi, L.F. Sinclair, R. Wadsworth, P. Ruotsalainen, J. Henderson, K. Kaneko, K. Auranen, H. Badran, T. Grahn, P. Greenlees, A. Herzaan, U. Jakobsson, J. Konki, R. Julin, S. Juutinen, M. Leino, J. Sorri, J. Pakarinen, P. Papadakis, P. Peura, J. Partanen, P. Rahkila, M. Sandzelius, J. Saren, C. Scholey, S. Stolze, J. Uusitalo, H.M. David, G. de Angelis, W. Korten, G. Lotay, M. Mallaburn, E. Sahin
2016Do05	PRVCA	93,	064317	A.C. Dombos, D.-L. Fang, A. Spyrou, S.J. Quinn, A. Simon, B.A. Brown, K. Cooper, A.E. Gehring, S.N. Liddick, D.J. Morrissey, F. Naqvi, C.S. Sumithrarachchi, R.G.T. Zegers

2016Do10	ARISE	119,	101	T. Domingo, K. Starosta, A. Chester, J. Williams
2016Du10	PRLTA	116,	172501	M.R. Dunlop, C.E. Svensson, G.C. Ball, G.F. Grinyer, J.R. Leslie, C. Andreoiu, R.A.E. Austin, T. Ballast, P.C. Bender, V. Bildstein, A. Diaz Varela, R. Dunlop, A.B. Garnsworthy, P.E. Garrett, G. Hackman, B. Hadinia, D.S. Jamieson, A.T. Laffoley, A.D. MacLean, D.M. Miller, W.J. Mills, J. Park, A.J. Radich, M.M. Rajabali, E.T. Rand, C. Unsworth, A. Valencik, Z.M. Wang, E.F. Zganjar
2016Du13	PRVCA	93,	062801	R. Dunlop, V. Bildstein, I. Dillmann, A. Jungclaus, C.E. Svensson, C. Andreoiu, G.C. Ball, N. Bernier, H. Bidaman, P. Boubel, C. Burbadge, R. Caballero-Folch, M.R. Dunlop, L.J. Evitts, F. Garcia, A.B. Garnsworthy, P.E. Garrett, G. Hackman, S. Hallam, J. Henderson, S. Ilyushkin, D. Kisliuk, R. Krucken, J. Lassen, R. Li, E. MacConnachie, A.D. MacLean, E. McGee, M. Moukaddam, B. Olaizola, E. Padilla-Rodal, J. Park, O. Paetkau, C.M. Petrache, J.L. Pore, A.J. Radich, P. Ruotsalainen, J. Smallcombe, J.K. Smith, S.L. Tabor, A. Teigelhofer, J. Turko, T. Zidar
2016Eb03	PRVCA	94,	024603	J. Ebert, M. Fritts, D. Gehre, C. Gossling, C. Hagner, N. Heidrich, R. Klingenberg, K. Kroninger, C. Nitsch, C. Oldorf, T. Quante, S. Rajek, H. Rebber, K. Rohatsch, J. Tebrugge, R. Temminghoff, R. Theinert, J. Timm, B. Wonsak, S. Zatschler, K. Zuber, for the COBRA Collaboration
2016Ei01	PRVCA	94,	015502	M. Eibach, G. Bollen, K. Gulyuz, C. Izzo, M. Redshaw, R. Ringle, R. Sandler, A.A. Valverde
2016Fe11	NCAOB	8,	14520	R. Ferrer, A. Barzakh, B. Bastin, R. Beerwerth, M. Block, P. Creemers, H. Grawe, R. de Groote, P. Delahaye, X. Flechard, S. Franchoo, S. Fritzsche, L.P. Gaffney, L. Ghys, W. Gins, C. Granados, R. Heinke, L. Hijazi, M. Huyse, T. Kron, Yu. Kudryavtsev, M. Laatiaoui, N. Lecesne, M. Loiselet, F. Lutton, I.D. Moore, Y. Martinez, E. Mogilevskiy, P. Naubereit, J. Piot, S. Raeder, S. Rothe, H. Savajols, S. Sels, V. Sonnenschein, J-C. Thomas, E. Traykov, C. Van Beveren, P. Van den Bergh, P. Van Duppen, K. Wendt, A. Zadvornaya
2016Fi01	NIMAE	806,	70	S.W. Finch, W. Tornow
2016Fi07	PYLBB	758,	407	P. Filianin, S. Schmidt, K. Blaum, M. Block, S. Eliseev, F. Giacoppo, M. Goncharov, F. Lautenschlaeger, Yu. Novikov, K. Takahashi
2016Fo10	NUPAB	953,	117	U. Forsberg, D. Rudolph, L.-L. Andersson, A. Di Nitto, Ch. E. Dullmann, C. Fahlander, J.M. Gates, P. Golubev, K.E. Gregorich, C.J. Gross, R.-D. Herzberg, F.P. Hessberger, J. Khuyagbaatar, J.V. Kratz, K. Rykaczewski, L.G. Sarmiento, M. Schadel, A. Yakushev, S. Aberg, D. Ackermann, M. Block, H. Brand, B.G. Carlsson, D. Cox, X. Derkx, J. Dobaczewski, K. Eberhardt, J. Even, J. Gerl, E. Jager, B. Kindler, J. Krier, I. Kojouharov, N. Kurz, B. Lommel, A. Mistry, C. Mokry, W. Nazarewicz, H. Nitsche, J.P. Omtvedt, P. Papadakis, I. Ragnarsson, J. Runke, H. Schaffner, B. Schausten, Y. Shi, P. Thorle-Pospiech, T. Torres, T. Traut, N. Trautmann, A. Turler, A. Ward, D.E. Ward, N. Wiehl
2016Fo16	PYLBB	760,	293	U. Forsberg, D. Rudolph, C. Fahlander, P. Golubev, L.G. Sarmiento, S. Aberg, M. Block, Ch. E. Düllmann, F.P. Hessberger, J.V. Kratz, A. Yakushev
2016Ga24	ARISE	109,	314	E. García-Torano, V. Peyrés, M. Roteta, A.I. Sánchez-Cabezudo, E. Romero, A. Martíinez Ortega
2016Ga33	PRVCA	94,	025505	N.D. Gamage, G. Bollen, M. Eibach, K. Gulyuz, C. Izzo, R.M.E.B. Kandegedara, M. Redshaw, R. Ringle, R. Sandler, A.A. Valverde
2016Ga34	NPAHA	12,	594	R.F. Garcia Ruiz, M.L. Bissell, K. Blaum, A. Ekstrom, N. Frommgen, G. Hagen, M. Hammen, K. Hebeler, J.D. Holt, G.R. Jansen, M. Kowalska, K. Kreim, W. Nazarewicz, R. Neugart, G. Neyens, W. Nortershauser, T. Papenbrock, J. Papuga, A. Schwenk, J. Simonis, K.A. Wendt, D.T. Yordanov
2016Go26	PRLTA	116,	162501	T. Goigoux, P. Ascher, B. Blank, M. Gerbaux, J. Giovinazzo, S. Grevy, T. Kurtukian Nieto, C. Magron, P. Doornenbal, G.G. Kiss, S. Nishimura, P.-A. Soderstrom, V.H. Phong, J. Wu, D.S. Ahn, N. Fukuda, N. Inabe, T. Kubo, S. Kubono, H. Sakurai, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, J. Agramunt, A. Algora, V. Guadilla, A. Montaner-Piza, A.I. Morales, S.E.A. Orrigo, B. Rubio, Y. Fujita, M. Tanaka, W. Gelletly, P. Aguilera, F. Molina, F. Diel, D. Lubos, G. de Angelis, D. Napoli, C. Borcea, A. Boso, R.B. Cakirli, E. Ganioglu, J. Chiba, D. Nishimura, H. Oikawa, Y. Takei, S. Yagi, K. Wimmer, G. de France, S. Go, B.A. Brown

2016Go.1	PYLBB	762,	263	T.A. Golubkova, X.-D. Xu, L.V. Grigorenko, I.G. Mukha, C. Scheidenberger, M.V. Zhukov
2016Gu02	PRLTA	116,	012501	K. Gulyuz, G. Bollen, M. Brodeur, R.A. Bryce, K. Cooper, M. Eibach, C. Izzo, E. Kwan, K. Manukyan, D.J. Morrissey, O. Naviliat-Cuncic, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, A.A. Valverde, A.C.C. Villari
2016Ha36	PRVCA	94,	054329	D.J. Hartley, R.V.F. Janssens, L.L. Riedinger, M.A. Riley, X. Wang, S.L. Miller, A.D. Ayangeakaa, P.F. Bertone, M.P. Carpenter, C.J. Chiara, P. Chowdhury, U. Garg, G. Gurdal, S.S. Hota, F.G. Kondev, T. Lauritsen, W.C. Ma, J. Matta, E.A. McCutchan, S. Mukhopadhyay, E.E. Pedicini, J.R. Vanhoy, S. Zhu
2016He08	EPJAA	52,	192	F.P. Hessberger, S. Antalic, A.K. Mistry, D. Ackermann, B. Andel, M. Block, Z. Kalaninova, B. Kindler, I. Kojouharov, M. Laatiaoui, M. Laatiaoui, B. Lommel, J. Piot, M. Vostinar
2016He09	PRVCA	94,	034312	H. Heylen, M. De Rydt, G. Neyens, M.L. Bissell, L. Caceres, R. Chevrier, J.M. Daugas, Y. Ichikawa, Y. Ishibashi, O. Kamalou, T.J. Mertzimekis, P. Morel, J. Papuga, A. Poves, M.M. Rajabali, C. Stodel, J.C. Thomas, H. Ueno, Y. Utsuno, N. Yoshida, A. Yoshimi
2016He15	EPJAA	52,	328	F.P. Hessberger, S. Antalic, D. Ackermann, B. Andel, M. Block, Z. Kalaninova, B. Kindler, I. Kojouharov, M. Laatiaoui, B. Lommel, A.K. Mistry, J. Piot, M. Vostinar
2016Ho09	EPJAA	52,	180	S. Hofmann, S. Heinz, R. Mann, J. Maurer, G. Munzenberg, S. Antalic, W. Barth, H.G. Burkhard, L. Dahl, K. Eberhardt, R. Grzywacz, J.H. Hamilton, R.A. Henderson, J.M. Kenneally, B. Kindler, I. Kojouharov, R. Lang, B. Lommel, K. Miernik, D. Miller, K.J. Moody, K. Morita, K. Nishio, A.G. Popeko, J.B. Roberto, J. Runke, K.P. Rykaczewski, S. Saro, C. Scheidenberger, H.J. Schott, D.A. Shaughnessy, M.A. Stoyer, P. Thorle-Pospiech, K. Tinschert, N. Trautmann, J. Uusitalo, A.V. Yeremin
2016Ho16	PRVCA	94,	034321	D. Hodge, D.M. Cullen, M.J. Taylor, B.S. Nara Singh, L.S. Ferreira, E. Maglione, J.F. Smith, C. Scholey, P. Rahkila, T. Grahn, T. Braunroth, H. Badran, L. Capponi, A. Girka, P.T. Greenlees, R. Julin, J. Konki, M. Mallaburn, O. Nefodov, G.G. O'Neill, J. Pakarinen, P. Papadakis, J. Partanen, P. Ruotsalainen, M. Sandzelius, J. Saren, M. Smolen, J. Sorri, S. Stolze, J. Uusitalo
2016Ho.A	Th.-Heidelberg			M.J. Höcker
2016Hu.A	B-Bruges			W.J. Huang
2016Id02	PRVCA	94,	064322	E. Ideguchi, G.S. Simpson, R. Yokoyama, Mn. Tanaka, S. Nishimura, P. Doornenbal, G. Lorusso, P.-A. Soderstrom, T. Sumikama, J. Wu, Z.Y. Xu, N. Aoi, H. Baba, F.L. Bello Garrote, G. Benzoni, F. Browne, R. Daido, Y. Fang, N. Fukuda, A. Gottardo, G. Gey, S. Go, N. Inabe, T. Isobe, D. Kameda, K. Kobayashi, M. Kobayashi, I. Kojouharov, T. Komatsubara, T. Kubo, N. Kurz, I. Kuti, Z. Li, M. Matsushita, S. Michimasa, C.-B. Moon, H. Nishibata, I. Nishizuka, A. Odahara, Z. Patel, S. Rice, E. Sahin, H. Sakurai, H. Schaffner, L. Sinclair, H. Suzuki, H. Takeda, J. Taprogge, Zs. Vajta, H. Watanabe, A. Yagi
2016Is03	PRVCA	93,	014303	L.W. Iskra, R. Broda, R.V.F. Janssens, C.J. Chiara, M.P. Carpenter, B. Fornal, N. Hoteling, F.G. Kondev, W. Krolas, T. Lauritsen, T. Pawlat, D. Seweryniak, I. Stefanescu, W.B. Walters, J. Wrzesinski, S. Zhu
2016Ju03	PRVCA	93,	024303	A. Jungclaus, H. Grawe, S. Nishimura, P. Doornenbal, G. Lorusso, G.S. Simpson, P.-A. Soderstrom, T. Sumikama, J. Taprogge, Z.Y. Xu, H. Baba, F. Browne, N. Fukuda, R. Gernhauser, G. Gey, N. Inabe, T. Isobe, H.S. Jung, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, Z. Li, H. Sakurai, H. Schaffner, Y. Shimizu, K. Steiger, H. Suzuki, H. Takeda, Zs. Vajta, H. Watanabe, J. Wu, A. Yagi, K. Yoshinaga, G. Benzoni, S. Bonig, K.Y. Chae, L. Coraggio, J.-M. Daugas, F. Drouet, A. Gadea, A. Gargano, S. Ilieva, N. Itaco, F.G. Kondev, T. Kroll, G.J. Lane, A. Montaner-Piza, K. Moschner, D. Mucher, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyak, A. Wendt
2016Ka13	JUPSA	85,	015002	D. Kaji, K. Morimoto, H. Haba, E. Ideguchi, H. Koura, K. Morita
2016Ka15	PRVCA	93,	041304	A. Kankainen, L. Canete, T. Eronen, J. Hakala, A. Jokinen, J. Koponen, I.D. Moore, D. Nesterenko, J. Reinikainen, S. Rinta-Antila, A. Voss, J. Aysto

2016Kl04	PRVCA	93,	045807	R. Klawitter, A. Bader, M. Brodeur, U. Chowdhury, A. Chaudhuri, J. Fallis, A.T. Gallant, A. Grossheim, A.A. Kwiatkowski, D. Lascar, K.G. Leach, A. Lennarz, T.D. Macdonald, J. Pearkes, S. Seeraji, M.C. Simon, V.V. Simon, B.E. Schultz, J. Dilling
2016Kn02	PYLBB	754,	288	R. Knöbel, M. Diwisch, F. Bosch, D. Boutin, L. Chen, C. Dimopoulou, A. Dolinskii, B. Franczak, B. Franzke, H. Geissel, M. Hausmann, C. Kozhuharov, J. Kurcewicz, S.A. Litvinov, G. Martinez-Pinedo, M. Matos, M. Mazzocco, G. Münzenberg, S. Nakajima, C. Nociforo, F. Nolden, T. Ohtsubo, A. Ozawa, Z. Patyk, W.R. Plaß, C. Scheidenberger, J. Stadlmann, M. Steck, B. Sun, T. Suzuki, P.M. Walker, H. Weick, M.-R. Wu, M. Winkler, T. Yamaguchi
2016Kn03	EPJAA	52,	138	R. Knöbel, M. Diwisch, H. Geissel, Yu. A. Litvinov, Z. Patyk, W.R. Plaß, C. Scheidenberger, B. Sun, H. Weick, F. Bosch, D. Boutin, L. Chen, C. Dimopoulou, A. Dolinskii, B. Franczak, B. Franzke, M. Hausmann, C. Kozhuharov, J. Kurcewicz, S.A. Litvinov, M. Matos, M. Mazzocco, G. Münzenberg, S. Nakajima, C. Nociforo, F. Nolden, T. Ohtsubo, A. Ozawa, J. Stadlmann, M. Steck, T. Suzuki, P.M. Walker, M. Winkler, T. Yamaguchi
2016Ko05	PRVCA	93,	014613	N. Kobayashi, T. Nakamura, Y. Kondo, J.A. Tostevin, N. Aoi, H. Baba, R. Barthelemy, M.A. Famiano, N. Fukuda, N. Inabe, M. Ishihara, R. Kanungo, S. Kim, T. Kubo, G.S. Lee, H.S. Lee, M. Matsushita, T. Motobayashi, T. Ohnishi, N.A. Orr, H. Otsu, T. Sako, H. Sakurai, Y. Satou, T. Sumikama, H. Takeda, S. Takeuchi, R. Tanaka, Y. Togano, K. Yoneda
2016Ko11	PRLTA	116,	102503	Y. Kondo, T. Nakamura, R. Tanaka, R. Minakata, S. Ogoshi, N.A. Orr, N.L. Achouri, T. Aumann, H. Baba, F. Delaunay, P. Doornenbal, N. Fukuda, J. Gibelin, J.W. Hwang, N. Inabe, T. Isobe, D. Kameda, D. Kanno, S. Kim, N. Kobayashi, T. Kobayashi, T. Kubo, S. Leblond, J. Lee, F.M. Marqués, T. Motobayashi, D. Murai, T. Murakami, K. Muto, T. Nakashima, N. Nakatsuka, A. Navin, S. Nishi, H. Otsu, H. Sato, Y. Satou, Y. Shimizu, H. Suzuki, K. Takahashi, H. Takeda, S. Takeuchi, Y. Togano, A.G. Tuff, M. Vandebrouck, K. Yoneda
2016Ko24	PRVCA	93,	064324	A. Korgul, K.P. Rykaczewski, R.K. Grzywacz, C.R. Bingham, N.T. Brewer, C.J. Gross, A.A. Ciemny, C. Jost, M. Karny, M. Madurga, C. Mazzocchi, A.J. Mendez, K. Miernik, D. Miller, S. Padgett, S.V. Paulauskas, M. Piersa, D.W. Stracener, M. Stryjczyk, M. Wolinska-Cichocka, E.F. Zganjar
2016Ko45	NCAOB	7,	10246	F. Köhler, K. Blaum, M. Block, S. Chenmarev, S. Eliseev, D.A. Glazov, M. Goncharov, J. Hou, A. Kracke, D.A. Nesterenko, Y.N. Novikov, W. Quint, E. Minaya Ramirez, V.M. Shabaev, S. Sturm, A.V. Volotka, G. Werth
2016Ko.A	P-Adelaide		Sept	F.G. Kondev
2016Ko.B	PrvCom	FGK	Oct	F.G. Kondev
2016Kr06	ARISE	115,	32	K.S. Krane
2016Ku11	PRVCA	93,	054313	A. Kusoglu, G. Georgiev, C. Sotty, D.L. Balabanski, A. Goasduff, Y. Ishii, Y. Abe, K. Asahi, M. Bostan, R. Chevrier, M. Chikamori, J.M. Daugas, T. Furukawa, H. Nishibata, Y. Ichikawa, Y. Ishibashi, R. Lozeva, H. Miyatake, D. Nagae, T. Nanao, M. Niikura, T. Niwa, S. Okada, A. Ozawa, Y. Saito, H. Shirai, H. Ueno, D.T. Yordanov, N. Yoshida
2016Kw.A	PrvCom	GAu	Apr	A.A. Kwiatkowski
2016Le16	JPGPE	43,	115201	B. Lehnert, E. Andreotti, D. Degering, M. Hult, M. Laubenstein, T. Wester, K. Zuber
2016Lo01	PRVCA	93,	014316	R. Lozeva, H. Naïdja, F. Nowacki, J. Dudek, A. Odahara, C.-B. Moon, S. Nishimura, P. Doornenbal, J.-M. Daugas, P.-A. Söderström, T. Sumikama, G. Lorusso, J. Wu, Z.Y. Xu, H. Baba, F. Browne, R. Daido, Y. Fang, T. Isobe, I. Kojouharov, N. Kurz, Z. Patel, S. Rice, H. Sakurai, H. Schaffner, L. Sinclair, H. Watanabe, A. Yagi, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, D. Murai, F.L. Bello Garrote, F. Didierjean, E. Ideguchi, T. Ishigaki, H.S. Jung, T. Komatsubara, Y.K. Kwon, P. Lee, C.S. Lee, S. Morimoto, M. Niikura, H. Nishibata, I. Nishizuka
2016Lu13	EPJAA	52,	304	M.V. Lund, and the IDS Collaboration
2016Lu16	ARISE	109,	146	A. Luca, M. Sahagia, M.-R. Ioan, A. Antohe, B.L. Savu

2016Ly01	PRVCA	93,	014319	K.M. Lynch, T.E. Cocolios, J. Billowes, M.L. Bissell, I. Budinčević * 1, T. Day Goodacre, R.P. de Groote, G.J. Farooq-Smith, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, H. Heylen, R. Li, B.A. Marsh, G. Neyens, R.E. Rossel, S. Rothe, H.H. Stroke, K.D.A. Wendt, S.G. Wilkins, X. Yang
2016Ma05	PRVCA	93,	014310	C.M. MacDonald, R.J. Cornett, C.R.J. Charles, X.L. Zhao, W.E. Kieser
2016Ma35	PRVCA	93,	054319	D.A. Matters, A.G. Lerch, A.M. Hurst, L. Szentmiklosi, J.J. Carroll, B. Detwiler, Zs. Revay, J.W. McClory, S.R. McHale, R.B. Firestone, B.W. Sleaford, M. Krticka, T. Belgya
2016Ma41	PRVCA	93,	064309	V. Margerin, G.J. Lane, G.D. Dracoulis, N. Palalani, M.L. Smith, A.E. Stuchbery
2016Ma49	JRNCD	309,	535	M. Mazanova, P. Dryak, J. Sochorova, P. Auerbach
2016Ma50	PRLTA	117,	092502	M. Madurga, S.V. Paulauskas, R. Grzywacz, D. Miller, D.W. Bardayan, J.C. Batchelder, N.T. Brewer, J.A. Cizewski, A. Fijalkowska, C.J. Gross, M.E. Howard, S.V. Ilyushkin, B. Manning, M. Matos, A.J. Mendez I-I, K. Miernik, S.W. Padgett, W.A. Peters, B.C. Rasco, A. Ratkiewicz, K.P. Rykaczewski, D.W. Stracener, E.H. Wang, M. Wolinska-Cichocka, E.F. Zganjar
2016Ma.A	PrvCom	GAu	Feb	M. MacCormick
2016Mc09	PRVCA	94,	065806	E. McCleskey, A. Banu, M. McCleskey, T. Davinson, D.T. Doherty, G. Lotay, B.T. Roeder, A. Saastamoinen, A. Spiridon, L. Trache, J.P. Wallace, P.J. Woods, R.E. Tribble
2016Me07	PRVCA	93,	035805	Z. Meisel, S. George, S. Ahn, D. Bazin, B.A. Brown, J. Browne, J.F. Carpino, H. Chung, R.H. Cyburt, A. Estradé, M. Famiano, A. Gade, C. Langer, M. Matos, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Sieja, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers
2016Mi18	PRVCA	94,	024305	K. Miernik, K.P. Rykaczewski, R. Grzywacz, C.J. Gross, M. Madurga, D. Miller, D.W. Stracener, J.C. Batchelder, N.T. Brewer, L. Cartegni, A. Fijalkowska, M. Karny, A. Korgul, W. Krolas, C. Mazzocchi, A.J. Mendez II, S.W. Padgett, S.V. Paulauskas, J.A. Winger, M. Wolinska-Cichocka, E.F. Zganjar
2016Mo07	PRVCA	93,	034328	A.I. Morales, G. Benzoni, H. Watanabe, S. Nishimura, F. Browne, R. Daido, P. Doornenbal, Y. Fang, G. Lorusso, Z. Patel, S. Rice, L. Sinclair, P.-A. Soderstrom, T. Sumikama, J. Wu, Z.Y. Xu, A. Yagi, R. Yokoyama, H. Baba, R. Avigo, F.L. Bello Garrote, N. Blasi, A. Bracco, F. Camera, S. Ceruti, F.C.L. Crespi, G. de Angelis, M.-C. Delattre, Zs. Dombradi, A. Gottardo, T. Isobe, I. Kojouharov, N. Kurz, I. Kuti, K. Matsui, B. Melon, D. Mengoni, T. Miyazaki, V. Modamio-Hoyborg, S. Momiyama, D.R. Napoli, M. Niikura, R. Orlandi, H. Sakurai, E. Sahin, D. Sohler, H. Shaffner, R. Taniuchi, J. Taprogge, Zs. Vajta, J.J. Valiente-Dobon, O. Wieland, M. Yalcinkaya
2016Na02	PRVCA	93,	014308	E. Nacher, B. Rubio, A. Algora, D. Cano-Ott, J.L. Tain, A. Gadea, J. Agramunt, M. Gierlik, M. Karny, Z. Janas, E. Roeckl, A. Blazhev, R. Collatz, J. Doring, M. Hellstrom, Z. Hu, R. Kirchner, I. Mukha, C. Plettner, M. Shibata, K. Rykaczewski, L. Batist, F. Moroz, V. Wittmann, J.J. Valiente-Dobon
2016Ol06	PRVCA	94,	054318	B. Olaizola, H. Mach, L.M. Fraile, J. Benito, M.J.G. Borge, R. Boutami, P.A. Butler, Z. Dlouhy, H.O.U. Fynbo, P. Hoff, S. Hyldegaard, H.B. Jeppesen, A. Jokinen, C. Jollet, A. Korgul, U. Koster, Th. Kroll, W. Kurcewicz, F. Marechal, J. Mrazek, T. Nilsson, W.A. Plociennik, E. Ruchowska, R. Schuber, W. Schwerdtfeger, M. Sewtz, G.S. Simpson, M. Stanoiu, O. Tengblad, P.G. Thirolf, D.T. Yordanov
2016Or03	PRVCA	93,	044336	S.E.A. Orrigo, B. Rubio, Y. Fujita, W. Gelletly, J. Agramunt, A. Algora, P. Ascher, B. Bilgier, B. Blank, L. Caceres, R.B. Cakirli, E. Ganioglu, M. Gerbaux, J. Giovinazzo, S. Grevy, O. Kamalou, H.C. Kozer, L. Kucuk, T. Kurtukian-Nieto, F. Molina, L. Popescu, A.M. Rogers, G. Susoy, C. Stodel, T. Suzuki, A. Tamii, J.C. Thomas
2016Or08	PRVCA	94,	044315	S.E.A. Orrigo, B. Rubio, W. Gelletly, B. Blank, Y. Fujita, J. Giovinazzo, J. Agramunt, A. Algora, P. Ascher, B. Bilgier, L. Caceres, R.B. Cakirli, G. de France, E. Ganioglu, M. Gerbaux, S. Grevy, O. Kamalou, H.C. Kozer, L. Kucuk, T. Kurtukian-Nieto, F. Molina, L. Popescu, A.M. Rogers, G. Susoy, C. Stodel, T. Suzuki, A. Tamii, J.C. Thomas

2016Pa01	PYLBB	753,	182	Z. Patel, Zs. Podolyák, P.M. Walker, P.H. Regan, P.-A. Söderström, H. Watanabe, E. Ideguchi, G.S. Simpson, S. Nishimura, F. Browne, P. Doornenbal, G. Lorusso, S. Rice, L. Sinclair, T. Sumikama, J. Wu, Z.Y. Xu, N. Aoi, H. Baba, F.L. Bello Garrote, G. Benzoni, R. Daido, Zs. Dombrádi, Y. Fang, N. Fukuda, G. Gey, S. Go, A. Gottardo, N. Inabe, T. Isobe, D. Kameda, K. Kobayashi, M. Kobayashi, T. Komatsubara, I. Kojouharov, T. Kubo, N. Kurz, I. Kuti, Z. Li, H.L. Liu, M. Matsushita, S. Michimasa, C.-B. Moon, H. Nishibata, I. Nishizuka, A. Odahara, E. Sahin, H. Sakurai, H. Schaffner, H. Suzuki, H. Takeda, M. Tanaka, J. Taprogge, Zs. Vajta, F.R. Xu, A. Yagi, R. Yokoyama
2016Pa28	PRVCA	94,	014307	E. Parr, J.F. Smith, P.T. Greenlees, M. Smolen, P. Papadakis, K. Auranen, R. Chapman, D.M. Cullen, T. Grahn, L. Grocutt, A. Herzan, R.-D. Herzberg, D. Hodge, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, C. McPeake, D. Mengoni, A.K. Mistry, K.F. Mulholland, G.G. O'Neill, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Saren, M. Scheck, C. Scholey, J. Sorri, S. Stolze, M.J. Taylor, J. Uusitalo
2016Pe14	PRVCA	94,	024319	C. Petrone, J.M. Daugas, G.S. Simpson, M. Stanoiu, C. Plaisir, T. Faul, C. Borcea, R. Borcea, L. Caceres, S. Calinescu, R. Chevrier, L. Gaudefroy, G. Georgiev, G. Gey, O. Kamalou, F. Negoita, F. Rotaru, O. Sorlin, J.C. Thomas
2016Pr06	PRVCA	94,	024311	D. Pramanik, S. Sarkar, M.S. Sarkar, A. Bisoi, S. Ray, S. Dasgupta, A. Chakraborty, Krishichayan, R. Kshetri, I. Ray, S. Ganguly, M.K. Pradhan, M.R. Basu, R. Raut, G. Ganguly, S.S. Ghugre, A.K. Sinha, S.K. Basu, S. Bhattacharya, A. Mukherjee, P. Banerjee, A. Goswami
2016Pr08	PRVCA	94,	064316	Pragati, A.Y. Deo, Zs. Podolyak, P.M. Walker, A. Algora, B. Rubio, J. Agramunt, L.M. Fraile, N. Al-Dahan, N. Alkhomashi, J.A. Briz, M.E. Estevez Aguado, G. Farrelly, W. Gelletly, A. Herlert, U. Koster, A. Maira
2016Qu01	ARISE	109,	172	F.G.A. Quarati, P. Dorenbos, X. Mougeot
2016Re01	PYLBB	752,	296	J. Refsgaard, O.S. Kirsebom, E.A. Dijck, H.O.U. Fynbo, M.V. Lund, M.N. Portela, R. Raabe, G. Randisi, F. Renzi, S. Sambi, A. Sytema, L. Willmann, H.W. Wilschut
2016Re02	PYLBB	752,	311	M.W. Reed, G.J. Lane, G.D. Dracoulis, F.G. Kondev, M.P. Carpenter, P. Chowdhury, S.S. Hota, R.O. Hughes, R.V.F. Janssens, T. Lauritsen, C.J. Lister, N. Palalani, D. Seweryniak, H. Watanabe, S. Zhu, W.G. Jiang, F.R. Xu
2016Re14	PRVCA	94,	024619	F. Renzi, R. Raabe, G. Randisi, D. Smirnov, C. Angulo, J. Cabrera, E. Casarejos, Th. Keutgen, A. Ninane, J.L. Charvet, A. Gillibert, V. Lapoux, L. Nalpas, A. Obertelli, F. Skaza, J.L. Sida, N.A. Orr, S.I. Sidorchuk, R. Wolski, M.J.G. Borge, D. Escrig
2016So13	PYLBB	762,	404	P.-A. Soderstrom, P.M. Walker, J. Wu, H.L. Liu, P.H. Regan, H. Watanabe, P. Doornenbal, Z. Korkulu, P. Lee, J.J. Liu, G. Lorusso, S. Nishimura, V.H. Phong, T. Sumikama, F.R. Xu, A. Yagi, G.X. Zhang, D.S. Ahn, T. Alharbi, H. Baba, F. Browne, A.M. Bruce, R.J. Carroll, K.Y. Chae, Zs. Dombradi, A. Estrade, N. Fukuda, C.J. Griffin, E. Ideguchi, N. Inabe, T. Isobe, H. Kanaoka, S. Kanaya, I. Kojouharov, F.G. Kondev, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, G.J. Lane, E.J. Lee, C.S. Lee, G. Lotay, C.-B. Moon, I. Nishizuka, C.R. Nita, A. Odahara, Z. Patel, Zs. Podolyak, O.J. Roberts, H. Sakurai, H. Schaffner, C.M. Shand, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, J.J. Valiente-Dobon, Z.Y. Xu
2016Su10	PYLBB	756,	323	J. Su, W.P. Liu, N.T. Zhang, Y.P. Shen, Y.H. Lam, N.A. Smirnova, M. MacCormick, J.S. Wang, L. Jing, Z.H. Li, Y.B. Wang, B. Guo, S.Q. Yan, Y.J. Li, S. Zeng, G. Lian, X.C. Du, L. Gan, X.X. Bai, Z.C. Gao, Y.H. Zhang, X.H. Zhou, X.D. Tang, J.J. He, Y.Y. Yang, S.L. Jin, P. Ma, J.B. Ma, M.R. Huang, Z. Bai, Y.J. Zhou, W.H. Ma, J. Hu, S.W. Xu, S.B. Ma, S.Z. Chen, L.Y. Zhang, B. Ding, Z.H. Li, G. Audi
2016Ta23	PRVCA	94,	064304	S.K. Tandel, P. Chowdhury, F.G. Kondev, R.V.F. Janssens, T.L. Khoo, M.P. Carpenter, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu, A. Deacon, S.J. Freeman, N.J. Hammond, G.D. Jones, E.F. Moore, J.F. Smith
2016Te05	PPNLA	13,	370	S.A. Telezhnikov, C. Granja, J. Honzatko, S. Pospisil, I. Tomandl
2016Te09	NIMAE	815,	96	D. Testov, D. Verney, B. Roussiere, J. Bettane, F. Didierjean, K. Flanagan, S. Franchoo, F. Ibrahim, E. Kuznetsova, R. Li, B. Marsh, I. Matea, Yu. Penionzhkevich, H. Pai, V. Smirnov, E. Sokol, I. Stefan, D. Suzuki, J.N. Wilson

2016Tr07	PRVCA	94,	034308	V.L. Truesdale, A.N. Andreyev, L. Ghys, M. Huyse, P. Van Duppen, S. Sels, B. Andel, S. Antalic, A. Barzakh, L. Capponi, T.E. Cocolios, X. Derkx, H. De Witte, J. Elseviers, D.V. Fedorov, V.N. Fedosseev, F.P. Hessberger, Z. Kalaninova, U. Koster, J.F.W. Lane, V. Liberati, K.M. Lynch, B.A. Marsh, S. Mitsuoka, Y. Nagame, K. Nishio, S. Ota, D. Pauwels, L. Popescu, D. Radulov, E. Rapisarda, S. Rothe, K. Sandhu, M.D. Seliverstov, A.M. Sjodin, C. Van Beveren, P. Van den Bergh, Y. Wakabayashi
2016Ub01	PYLBB	754,	323	E. Uberseder, G.V. Rogachev, V.Z. Goldberg, E. Koshchiy, B.T. Roeder, M. Alcorta, G. Chubarian, B. Davids, C. Fu, J. Hooker, H. Jayatissa, D. Melconian, R.E. Tribble
2016Ur03	PRVCA	94,	011302	W. Urban, U. Koster, M. Jentschel, P. Mutti, B. Markisch, T. Rzaca-Urban, Ch. Bernards, Ch. Fransen, J. Jolie, T. Thomas, G.S. Simpson
2016Va01	JPGPE	43,	025102	C. Van Beveren, A.N. Andreyev, A.E. Barzakh, T.E. Cocolios, R.P. de Groote, D. Fedorov, V.N. Fedosseev, R. Ferrer, L. Ghys, M. Huyse, U. Köster, J. Lane, V. Liberati, K.M. Lynch, B.A. Marsh, P.L. Molkanov, T.J. Procter, E. Rapisarda, K. Sandhu, M.D. Seliverstov, P. Van Duppen, M. Venhart, M. Veselský
2016Wa16	PRVCA	93,	054301	Z.M. Wang, A.B. Garnsworthy, C. Andreoiu, G.C. Ball, P.C. Bender, V. Bildstein, D.S. Cross, G. Demand, R. Dunlop, L.J. Evit ts, P.E. Garrett, G. Hackman, B. Hadinia, S. Ketelhut, R. Krucken, K.G. Leach, A.T. Laffoley, D. Miller, M. Moukaddam, J. Pore, A.J. Radich, M.M. Rajabali, C.E. Svensson, A. Tan, E. Tardiff, C. Unsworth, A. Voss, P. Voss
2016Wa19	PYLBB	760,	641	H. Watanabe, G.X. Zhang, K. Yoshida, P.M. Walker, J.J. Liu, J. Wu, P.H. Regan, P.-A. Soderstrom, H. Kanaoka, Z. Korkulu, P.S. Lee, S. Nishimura, A. Yagi, D.S. Ahn, T. Alharbi, H. Baba, F. Browne, A.M. Bruce, R.J. Carroll, K.Y. Chae, Zs. Dombradi, P. Doornenbal, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, T. Isobe, S. Kanaya, I. Kojouharov, F.G. Kondev, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, G.J. Lane, C.S. Lee, E.J. Lee, G. Lorusso, G. Lotay, C.-B. Moon, I. Nishizuka, C.R. Nita, A. Odahara, Z. Patel, V.H. Phong, Zs. Podolyak, O.J. Roberts, H. Sakurai, H. Schaffner, C.M. Shand, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, J.J. Valiente-Dobon, Z.Y. Xu
2016We07	NATUA	533,	47	L. v. d. Wense, B. Seiferle, M. Laatiaoui, J.B. Neumayr, H.-J. Maier, H.-F. Wirth, C. Mokry, J. Runke, Kl. Eberhardt, C.E. Dullmann, N.G. Trautmann, P.G. Thirolf
2016Xu10	PRLTA	117,	182503	X. Xu, P. Zhang, P. Shuai, R.J. Chen, X.L. Yan, Y.H. Zhang, M. Wang, Yu. A. Litvinov, H.S. Xu, T. Bao, X.C. Chen, H. Chen, C.Y. Fu, S. Kubono, Y.H. Lam, D.W. Liu, R.S. Mao, X.W. Ma, M.Z. Sun, X.L. Tu, Y.M. Xing, J.C. Yang, Y.J. Yuan, Q. Zeng, X. Zhou, X.H. Zhou, W.L. Zhan, S. Litvinov, K. Blaum, G. Audi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, B.H. Sun, Y. Sun, A.C. Dai, F.R. Xu
2016Ya02	PRLTA	116,	182502	X.F. Yang, C. Wraith, L. Xie, C. Babcock, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, K.T. Flanagan, R.F. Garcia Ruiz, W. Gins, C. Gorges, L.K. Grob, H. Heylen, S. Kaufmann, M. Kowalska, J. Kraemer, S. Malbrunot-Ettenauer, R. Neugart, G. Neyens, W. Nortershauser, J. Papuga, R. Sanchez, D.T. Yordanov
2016Ya.A	PrvCom	SNa	Apr	A. Yagi updates 2015Ya.1

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2017AgZZ	EPJWC	146,	01004	J. Agramunt, J.L. Tain, F. Albiol, A. Algora, R. Caballero-Folch, F. Calvino, G. Cortes, I. Dillmann, T. Eronen, A.R. Garcia, E. Ganioglu, W. Gelletly, D. Gorelov, V. Guadilla, H. Hakala, A. Jokinen, A. Kankainen, A. Montaner, M. Marta, E. Mendoza, I. Moore, C. Nobs, S. Orrigo, H. Penttila, M. Reponen, S. Rinta-Antila, A. Riego, B. Rubio, A. Saastamoinen, P. Salvador-Castineira, A. Tarifeno-Saldivia, A. Tolosa, E. Valencia
2017Al34	PRVCA	96,	044325	N.A. Althubiti, D. Atanasov, K. Blaum, T.E. Cocolios, T. Day Goodacre, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, S. George, F. Herfurth, K. Heyde, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, D. Neidherr, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber

2017Am01	PRVCA	95,	014330	B.M.S. Amro, C.J. Lister, E.A. McCutchan, W. Loveland, P. Chowdhury, S. Zhu, A.D. Ayangeakaa, J.S. Barrett, M.P. Carpenter, C.J. Chiara, J.P. Greene, J.L. Harker, R.V.F. Janssens, T. Lauritsen, A.A. Sonzogni, W.B. Walters, R. Yanez
2017An16	PRVCA	96,	054327	B. Andel, A.N. Andreyev, S. Antalic, A. Barzakh, N. Bree, T.E. Cocolios, V.F. Comas, J. Diriken, J. Elseviers, D.V. Fedorov, V.N. Fedosseev, S. Franchoo, L. Ghys, J.A. Heredia, M. Huyse, O. Ivanov, U. Köster, V. Liberati, B.A. Marsh, K. Nishio, R.D. Page, N. Patronis, M.D. Seliverstov, I. Tsekhanovich, P. Van den Bergh, J. Van De Walle, P. Van Duppen, M. Venhart, S. Vermote, M. Veselský, C. Wagemans
2017Ap02	PRVCA	95,	024605	E. Aprile, for the XENON Collaboration
2017Ap03	PRVDA	95,	072008	E. Aprile, for the XENON Collaboration
2017Ar01	PRVDA	95,	012007	R. Arnold, for the NEMO-3 Collaboration
2017Ar18	ZCCNE	77,	785	E. Armengaud, C. Augier, A.S. Barabash, J.W. Beeman, T.B. Bekker, F. Bellini, A. Benoit, L. Berge, T. Bergmann, J. Billard, R.S. Boiko, A. Broniatowski, V. Brudanin, P. Camus, S. Capelli, L. Cardani, N. Casali, A. Cazes, M. Chapellier, F. Charlieux, D.M. Chernyak, M. de Combarieu, N. Coron, F.A. Danevich, I. Dafinei, M. De Jesus, L. Devoyon, S. Di Domizio, L. Dumoulin, K. Eitel, C. Enss, F. Ferroni, A. Fleischmann, N. Foerster, J. Gascon, L. Gastaldo, L. Gironi, A. Giuliani, V.D. Grigorieva, M. Gros, L. Hehn, S. Herve, V. Humbert, N.V. Ivannikova, I.M. Ivanov, Y. Jin, A. Juillard, M. Kleifges, V.V. Kobychev, S.I. Konovalov, F. Koskas, V. Kozlov, H. Kraus, V.A. Kudryavtsev, M. Laubenstein, H. Le Sueur, M. Loidl, P. Magnier, E.P. Makarov, M. Mancuso, P. de Marcillac, S. Marnieros, C. Marrache-Kikuchi, S. Nagorny, X-F. Navick, M.O. Nikolaichuk, C. Nones, V. Novati, E. Olivieri, L. Pagnanini, P. Pari, L. Pattavina, M. Pavan, B. Paul, Y. Penichot, G. Pessina, G. Piperno, S. Pirro, O. Plantevin, D.V. Poda, E. Queguiner, T. Redon, M. Rodrigues, S. Rozov, C. Rusconi, V. Sanglard, K. Schaffner, S. Scorza, V.N. Shlegel, B. Siebenborn, O. Strazzer, D. Tcherniakhovski, C. Tomei, V.I. Tretyak, V.I. Umatov, L. Vagneron, Ya. V. Vasiliev, M. Velizquez, M. Vignati, M. Weber, E. Yakushev, A.S. Zolotarova
2017At01	JPGPE	44,	044004	D. Atanasov, D. Beck, K. Blaum, C. Borgmann, R.B. Cakirli, T. Eronen, S. George, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, Y.A. Litvinov, D. Lunney, V. Manea, D. Neidherr, M. Rosenbusch, L. Schweikhard, F. Wienholtz, R.N. Wolf, K. Zuber
2017Au05	PRVCA	95,	044311	K. Auranen, J. Uusitalo, S. Juutinen, H. Badran, F. Defranchi Bisso, D. Cox, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, R. Julin, J. Konki, M. Leino, A. Lightfoot, M. Mallaburn, O. Neuvonen, J. Pakarinen, P. Papadakis, J. Partanen, P. Rahkila, M. Sandzelius, J. Saren, C. Scholey, J. Sorri, S. Stolze
2017Ba04	PRVCA	95,	014324	A.E. Barzakh, A.N. Andreyev, T.E. Cocolios, R.P. de Groote, D.V. Fedorov, V.N. Fedosseev, R. Ferrer, D.A. Fink, L. Ghys, M. Huyse, U. Koster, J. Lane, V. Liberati, K.M. Lynch, B.A. Marsh, P.L. Molkanov, T.J. Procter, E. Rapisarda, S. Rothe, K. Sandhu, M.D. Seliverstov, A.M. Sjodin, C. Van Beveren, P. Van Duppen, M. Venhart, M. Veselsky
2017Ba12	PRVCA	95,	044324	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, P.L. Molkanov, F.V. Moroz, S. Yu. Orlov, V.N. Panteleev, M.D. Seliverstov, Yu. M. Volkov
2017Ba46	PRVCA	96,	064314	H. Badran, C. Scholey, J. Uusitalo, K. Auranen, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, M.J. Mallaburn, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, M. Sandzelius, J. Sarén, J. Sorri, S. Stolze
2017Be21	EPJAA	53,	172	P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, B.N. Kropivyansky, M. Laubenstein, V.M. Mokina, O.G. Polischuk, V.I. Tretyak
2017Br07	PRVCA	95,	044326	K.W. Brown, R.J. Charity, J.M. Elson, W. Reviol, L.G. Sobotka, W.W. Buhro, Z. Chajecki, W.G. Lynch, J. Manfredi, R. Shane, R.H. Showalter, M.B. Tsang, D. Weisshaar, J.R. Winkelbauer, S. Bedoor, A.H. Wuosmaa

2017Br08	PRVCA	95,	064308	R. Broda, R.V.F. Janssens, Ł. W. Iskra, J. Wrzesinski, B. Fornal, M.P. Carpenter, C.J. Chiara, N. Cieplicka-Orynczak, C.R. Hoffman, F.G. Kondev, W. Krolas, T. Lauritsen, Zs. Podolyak, D. Seweryniak, C.M. Shand, B. Szpak, W.B. Walters, S. Zhu, B.A. Brown
2017Br12	PRVCA	96,	024309	F. Browne, A.M. Bruce, T. Sumikama, I. Nishizuka, S. Nishimura, P. Doornenbal, G. Lorusso, P.-A. Soderstrom, H. Watanabe, R. Daido, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, A. Yagi, H. Baba, N. Chiga, R. Carroll, F. Didierjean, Y. Fang, N. Fukuda, G. Gey, E. Ideguchi, N. Inabe, T. Isobe, D. Kameda, I. Kojouharov, N. Kurz, T. Kubo, S. Lalkovski, Z. Li, R. Lozeva, N. Nishibata, A. Odahara, Zs. Podolyak, P.H. Regan, O.J. Roberts, H. Sakurai, H. Schaffner, G.S. Simpson, H. Suzuki, H. Takeda, M. Tanaka, J. Taprogge, V. Werner, O. Wieland
2017Br14	PRVCA	96,	034316	M. Brodeur, A.A. Kwiatkowski, O.M. Drozdowski, C. Andreoiu, D. Burdette, A. Chaudhuri, U. Chowdhury, A.T. Gallant, A. Grossheim, G. Gwinner, H. Heggen, J.D. Holt, R. Klawitter, J. Lassen, K.G. Leach, A. Lennarz, C. Nicoloff, S. Raeder, B.E. Schultz, S.R. Stroberg, A. Teigelhöfer, R. Thompson, M. Wieser, J. Dilling
2017Ca12	PRVCA	95,	064322	R. Caballero-Folch, C. Domingo-Pardo, J. Agramunt, A. Algora, F. Ameil, Y. Ayyad, J. Benlliure, M. Bowry, F. Calvino, D. Cano-Ott, G. Cortes, T. Davinson, I. Dillmann, A. Estrade, A. Evdokimov, T. Faestermann, F. Farinon, D. Galaviz, A.R. Garcia, H. Geissel, W. Gelletly, R. Gernhauser, M.B. Gomez Hornillos, C. Guerrero, M. Heil, C. Hinke, R. Knobel, I. Kojouharov, J. Kurcewicz, N. Kurz, Yu. A. Litvinov, L. Maier, J. Marganiec, M. Marta, T. Martinez, F. Montes, I. Mukha, D.R. Napoli, C. Nociforo, C. Paradela, S. Pietri, Zs. Podolyak, A. Prochazka, S. Rice, A. Riego, B. Rubio, H. Schaffner, Ch. Scheidenberger, K. Smith, E. Sokol, K. Steiger, B. Sun, J.L. Tain, M. Takechi, D. Testov, H. Weick, E. Wilson, J.S. Winfield, R. Wood, P.J. Woods, A. Yeremin
2017Ch18	PRVCA	95,	041302	S. Chen, P. Doornenbal, A. Obertelli, T.R. Rodriguez, G. Authelet, H. Baba, D. Calvet, F. Chateau, A. Corsi, A. Delbart, J.-M. Gheller, A. Giganon, A. Gillibert, V. Lapoux, T. Motobayashi, M. Niikura, N. Paul, J.-Y. Rousse, H. Sakurai, C. Santamaria, D. Steppenbeck, R. Taniuchi, T. Uesaka, T. Ando, T. Arici, A. Blazhev, F. Browne, A.M. Bruce, R. Caroll, L.X. Chung, M.L. Cortes, M. Dewald, B. Ding, F. Flavigny, S. Franchoo, M. Gorska, A. Gottardo, A. Jungclaus, J. Lee, M. Lettmann, B.D. Linh, J. Liu, Z. Liu, C. Lizarazo, S. Momiyama, K. Moschner, S. Nagamine, N. Nakatsuka, C.R. Nita, C. Nobs, L. Olivier, R. Orlandi, Z. Patel, Zs. Podolyak, M. Rudigier, T. Saito, C. Shand, P.-A. Soderstrom, I. Stefan, V. Vaquero, V. Werner, K. Wimmer, Z. Xu
2017Ch36	PRVCA	96,	034301	S. Chakraborty, U. Datta, T. Aumann, S. Beceiro Novo, K. Boretzky, C. Caesar, B.V. Carlson, W.N. Catford, M. Chartier, D. Cortina-Gil, G. De Angelis, P. Diaz Fernandez, H. Emling, O. Ershova, L.M. Fraile, H. Geissel, D. Gonzalez-Diaz, H. Johansson, B. Jonson, N. Kalantar-Nayestanaki, T. Kroll, R. Krucken, C. Langer, T. Le Bleis, Y. Leifels, J. Marganiec, G. Munzenberg, M.A. Najafi, T. Nilsson, C. Nociforo, V. Panin, R. Plag, A. Rahaman, R. Reifarth, M.V. Ricciardi, C. Rigollet, D. Rossi, C. Scheidenberger, H. Scheit, H. Simon, J.T. Taylor, Y. Togano, S. Typel, Y. Utsuno, A. Wagner, F. Wamers, H. Weick, J.S. Winfield
2017Ch51	PYLBB	775,	190	A. Chebboubi, G. Kessedjian, O. Litaize, O. Serot, H. Faust, D. Bernard, A. Blanc, U. Koster, O. Meplan, P. Mutti, C. Sage
2017Da07	PYLBB	767,	474	P.J. Davies, H. Grawe, K. Moschner, A. Blazhev, R. Wadsworth, P. Boutachkov, F. Ameil, A. Yagi, H. Baba, T. Bäck, M. Dewald, P. Doornenbal, T. Faestermann, A. Gengelbach, J. Gerl, R. Gernhäeuser, S. Go, M. Górska, E. Gregor, T. Isobe, D.G. Jenkins, H. Hotaka, J. Jolie, I. Kojouharov, N. Kurz, M. Lewitowicz, G. Lorusso, L. Maier, E. Merchan, F. Naqvi, H. Nishibata, D. Nishimura, S. Nishimura, F. Nowacki, N. Pietralla, H. Schaffner, P.-A. Soderstrom, H.S. Jung, K. Steiger, T. Sumikama, J. Taprogge, P. Thöle, N. Warr, H. Watanabe, V. Werner, Z.Y. Xu, K. Yoshinaga, Y. Zhu
2017Da28	MTRGA	54,	410	G. D'Agostino, M. Di Luzio, G. Mana, M. Oddone

2017De18	PRVCA	96,	014310	A. de Roubin, D. Atanasov, K. Blaum, S. George, F. Herfurth, D. Kisler, M. Kowalska, S. Kreim, D. Lunney, V. Manea, E. Minaya Ramirez, M. Mougeot, D. Neidherr, M. Rosenbusch, L. Schweikhard, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2017De30	PRVCA	96,	041302	R.P. de Groote, J. Billowes, C.L. Binnersley, M.L. Bissell, T.E. Cocolios, T. Day Goodacre, G.J. Farooq-Smith, D.V. Fedorov, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, Á. Koszorús, K.M. Lynch, G. Neyens, F. Nowacki, T. Otsuka, S. Rothe, H.H. Stroke, Y. Tsunoda, A.R. Vernon, K.D.A. Wendt, S.G. Wilkins, Z.Y. Xu, X.F. Yang
2017Du11	PRVCA	96,	045502	M.R. Dunlop, C.E. Svensson, G.C. Ball, J.R. Leslie, C. Andreoiu, N. Bernier, H. Bidaman, V. Bildstein, M. Bowry, C. Burbadge, R. Caballero-Folch, A. Diaz Varela, R. Dunlop, A.B. Garnsworthy, P.E. Garrett, G. Hackman, B. Jigmeddorj, K.G. Leach, A.D. MacLean, B. Olaizola, J. Measures, C. Natzke, Y. Saito, J.K. Smith, J. Turko, T. Zidar
2017Dy01	EPJAA	53,	13	A.B. D'yachkov, V.A. Firsov, A.A. Gorkunov, A.V. Labozin, S.M. Mironov, E.E. Saperstein, S.V. Tolokonnikov, G.O. Tsvetkov, V.Y. Panchenko
2017Er01	PRVCA	95,	025501	T. Eronen, J.C. Hardy, L. Canete, A. Jokinen, J. Hakala, A. Kankainen, V.S. Kolhinen, J. Koponen, I.D. Moore, I.M. Murray, H. Penttil$^{\prime}$a, I. Pohjalainen, O. Poleshchuk, J. Reinikainen, S. Rinta-Antila, N. Soukouti, A. Voss, J. $^{\prime}$Ayst$^{\prime}$o, and erratum PRVCA 102,039902
2017Fa09	PRVCA	96,	044324	G.J. Farooq-Smith, A.R. Vernon, J. Billowes, C.L. Binnersley, M.L. Bissell, T.E. Cocolios, T. Day Goodacre, R.P. de Groote, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, W. Gins, K.M. Lynch, B.A. Marsh, G. Neyens, S. Rothe, H.H. Stroke, S.G. Wilkins, X.F. Yang
2017Fi03	PRVCA	95,	014328	R.B. Firestone, T. Belgya, M. Krticka, F. Becvar, L. Szentmiklosi, I. Tomandl
2017Fi07	PRVCA	96,	025501	P. Finlay, A.T. Laffoley, G.C. Ball, P.C. Bender, M.R. Dunlop, R. Dunlop, G. Hackman, J.R. Leslie, A.D. MacLean, D. Miller, M. Moukaddam, B. Olaizola, N. Severijns, J.K. Smith, D. Southall, C.E. Svensson
2017Fo24	PRVCA	96,	065501	C. Fontbonne, P. Ujić, F. de Oliveira Santos, X. Fléchard, F. Rotaru, N.L. Achouri, V. Girard Alcindor, B. Bastin, F. Boulay, J.B. Briand, A.M. Śanchez-Benítez, H. Bouzomita, C. Borcea, R. Borcea, B. Blank, B. Carniol, I. Çeliković, P. Delahaye, F. Delaunay, D. Etasse, G. Fremont, G. de France, J.M. Fontbonne, G.F. Grinyer, J. Harang, J. Hommet, A. Jevremović, M. Lewitowicz, I. Martel, J. Mrazek, M. Parlog, J. Poincheval, D. Ramos, C. Spitaels, M. Stanoiu, J.C. Thomas, D. Toprek
2017Ga20	PRVCA	96,	024325	A.T. Gallant, M. Alanssari, J.C. Bale, C. Andreoiu, B.R. Barquest, U. Chowdhury, J. Even, A. Finlay, D. Frekers, G. Gwinner, R. Klawitter, B. Kootte, A.A. Kwiatkowski, D. Lascar, K.G. Leach, E. Leistenschneider, A. Lennarz, A.J. Mayer, D. Short, R. Thompson, M. Wieser, D. Lunney, J. Dilling
2017Gr12	PRVCA	96,	014613	S.A. Graves, P.A. Ellison, H.F. Valdovinos, T.E. Barnhart, R.J. Nickles, J.W. Engle
2017Gr18	PRVCA	96,	054331	C. Granados, P. Creemers, R. Ferrer, L.P. Gaffney, W. Gins, R. de Groote, M. Huyse, Yu. Kudryavtsev, Y. Martínez, S. Raeder, S. Sels, C. Van Beveren, P. Van den Bergh, P. Van Duppen, K. Wrzosek-Lipska, A. Zadvornaya, A.E. Barzakh, B. Bastin, P. Delahaye, L. Hijazi, N. Lecesne, F. Luton, J. Piot, H. Savajols, J.-C. Thomas, E. Traykov, R. Beerwerth, S. Fritzsche, M. Block, X. Flechard, S. Franchoo, L. Ghys, H. Grawe, R. Heinke, T. Kron, P. Naubereit, K. Wendt, M. Laatiaoui, I. Moore, V. Sonnenschein, M. Loiselet, E. Mogilevskiy, S. Rothe
2017Gu08	APOBB	48,	601	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, H. Watanabe, P.M. Walker, Zs. Podolyak, S. Nishimura, T.A. Berry, P. Doornenbal, G. Lorusso, T. Isobe, H. Baba, Z.Y. Xu, H. Sakurai, T. Sumikama, W.N. Catford, A.M. Bruce, F. Browne, G.J. Lane, F.G. Kondev, A. Odahara, J. Wu, H.L. Liu, F.R. Xu, Z. Korkulu, P. Lee, J.J. Liu, V.H. Phong, A. Yagi, G.X. Zhang, T. Alharbi, R.J. Carroll, K.Y. Chae, Zs. Dombradi, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, H. Kanaoka, I. Kojouharov, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, E.J. Lee, C.S. Lee, G. Lotay, C.B. Moon, I. Nishizuka, C.R. Nita, Z. Patel, O.J. Roberts, H. Schaffner, C.M. Shand, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, S. Kanaya, J.J. Valiente-Dobon

2017Gu24	RPCHD	140,	493	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, H. Watanabe, P.M. Walker, Zs. Podolyak, S. Nishimura, T.A. Berry, P. Doornenbal, G. Lorusso, T. Isobe, H. Baba, Z.Y. Xu, H. Sakurai, T. Sumikama, W.N. Catford, A.M. Bruce, F. Browne, G.J. Lane, F.G. Kondev, A. Odahara, J. Wu, H.L. Liu, F.R. Xu, Z. Korkulu, P. Lee, J.J. Liu, V.H. Phong, A. Yag, G.X. Zhang, T. Alharbi, R.J. Carroll, K.Y. Chae, Zs. Dombradi, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, H. Kanaoka, I. Kojouharov, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, E.J. Lee, C.S. Lee, G. Lotay, C.-B. Moon, I. Nishizuka, C.R. Nita, Z. Patel, O.J. Roberts, H. Schaffner, C.M. Shand, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, S. Yoshida, J.J. Valiente-Dobon
2017GuZW	EPJWC	146,	10009	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, H. Watanabe, P.M. Walker, Zs. Podolyak, S. Nishimura, T.A. Berry, P. Doornenbal, G. Lorusso, T. Isobe, H. Baba, Z.Y. Xu, H. Sakurai, T. Sumikama, W.N. Catford, A.M. Bruce, F. Browne, G.J. Lane, F.G. Kondev, A. Odahara, J. Wu, H.L. Liu, F.R. Xu, Z. Korkulu, P. Lee, J.J. Liu, V.H. Phong, A. Yagi, G.X. Zhang, T. Alharbi, R.J. Carroll, K.Y. Chae, Zs. Dombradi, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, H. Kanaoka, I. Kojouharov, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, E.J. Lee, C.S. Lee, G. Lotay, C.B. Moon, I. Nishizuka, C.R. Nita, Z. Patel, O.J. Roberts, H. Schaffner, C.M. Shand, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, S. Kanaya, J.J. Valiente-Dobon
2017Ha23	PYLBB	772,	529	R. Han, X.Q. Li, W.G. Jiang, Z.H. Li, H. Hua, S.Q. Zhang, C.X. Yuan, D.X. Jiang, Y.L. Ye, J. Li, Z.H. Li, F.R. Xu, Q.B. Chen, J. Meng, J.S. Wang, C. Xu, Y.L. Sun, C.G. Wang, H.Y. Wu, C.Y. Niu, C.G. Li, C. He, W. Jiang, P.J. Li, H.L. Zang, J. Feng, S.D. Chen, Q. Liu, X.C. Chen, H.S. Xu, Z.G. Hu, Y.Y. Yang, P. Ma, J.B. Ma, S.L. Jin, Z. Bai, M.R. Huang, Y.J. Zhou, W.H. Ma, Y. Li, X.H. Zhou, Y.H. Zhang, G.Q. Xiao, W.L. Zhan
2017Ha33	PRVAA	96,	060501	S. Hamzeloui, J.A. Smith, D.J. Fink, E.G. Myers
2017He08	EPJAA	53,	75	F.P. Heßberger
2017He12	PRVCA	96,	014301	A. Herzáň, S. Juutinen, K. Auranen, T. Grahn, P.T. Greenlees, K. Hauschild, U. Jakobsson, R. Julin, S. Ketelhut, M. Leino, A. Lopez-Martens, T. Lönnroth, P. Nieminen, M. Nyman, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, J.M.K. Slotte, J. Sorri, S. Stolze, J. Uusitalo
2017He14	PRLTA	119,	033001	F. Heiße, F. Kohler-Langes, S. Rau, J. Hou, S. Junck, A. Kracke, A. Mooser, W. Quint, S. Ulmer, G. Werth, K. Blaum, S. Sturm
2017Hi05	PRVCA	96,	014307	Y. Hirayama, M. Mukai, Y.X. Watanabe, M. Ahmed, S.C. Jeong, H.S. Jung, Y. Kakiguchi, S. Kanaya, S. Kimura, J.Y. Moon, T. Nakatsukasa, M. Oyaizu, J.H. Park, P. Schury, A. Taniguchi, M. Wada, K. Washiyama, H. Watanabe, H. Miyatake
2017Ho10	PYLBB	769,	62	J. Hooker, G.V. Rogachev, V.Z. Goldberg, E. Koshchiy, B.T. Roeder, H. Jayatissa, C. Hunt, C. Magana, S. Upadhyayula, E. Uberseder, A. Saastamoinen
2017Hu08	PRVCA	96,	014324	T.H. Huang, W.Q. Zhang, M.D. Sun, Z. Liu, J.G. Wang, X.Y. Liu, B. Ding, Z.G. Gan, L. Ma, H.B. Yang, Z.Y. Zhang, L. Yu, J. Jiang, K.L. Wang, Y.S. Wang, M.L. Liu, Z.H. Li, J. Li, X. Wang, H.Y. Lu, C.J. Lin, L.J. Sun, N.R. Ma, Z.Z. Ren, F.S. Zhang, W. Zou, X.H. Zhou, H.S. Xu, G.Q. Xiao
2017Ja05	PRVCA	95,	034315	L. Janiak, N. Sokolowska, A.A. Bezbakh, A.A. Ciemny, H. Czyrkowski, R. Dabrowski, W. Dominik, A.S. Fomichev, M.S. Golovkov, A.V. Gorshkov, Z. Janas, G. Kaminski, A.G. Knyazev, S.A. Krupko, M. Kuich, C. Mazzocchi, M. Mentel, M. Pfutzner, P. Plucinski, M. Pomorski, R.S. Slepniev, B. Zalewski
2017Ju02	PYLBB	772,	483	A. Jungclaus, H. Grawe, S. Nishimura, P. Doornenbal, G. Lorusso, G.S. Simpson, P.-A. Soderstrom, T. Sumikama, J. Taprogge, Z.Y. Xu, H. Baba, F. Browne, N. Fukuda, R. Gernhauser, G. Gey, N. Inabe, T. Isobe, H.S. Jung, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, Z. Li, H. Sakurai, H. Schaffner, Y. Shimizu, K. Steiger, H. Suzuki, H. Takeda, Zs. Vajta, H. Watanabe, J. Wu, A. Yagi, K. Yoshinaga, G. Benzoni, S. Bonig, K.Y. Chae, L. Coraggio, J.-M. Daugas, F. Drouet, A. Gadea, A. Gargano, S. Ilieva, N. Itaco, F.G. Kondev, T. Kroll, G.J. Lane, A. Montaner-Piza, K. Moschner, D. Mucher, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyak, A. Wendt

2017Ka31	JUPSA	86,	085001	D. Kaji, K. Morimoto, H. Haba, Y. Wakabayashi, M. Takeyama, S. Yamaki, Y. Komori, S. Yanou, S. Goto, K. Morita
2017Ka53	PRVCA	96,	044321	R.M.E.B. Kandegedara, G. Bollen, M. Eibach, N.D. Gamage, K. Gulyuz, C. Izzo, M. Redshaw, R. Ringle, R. Sandler, A.A. Valverde
2017Ka66	JUPSA	86,	034201	D. Kaji, K. Morita, K. Morimoto, H. Haba, M. Asai, K. Fujita, Z. Gan, H. Geissel, H. Hasebe, S. Hofmann, MH. Huang, Y. Komori, L. Ma, J. Maurer, M. Murakami, M. Takeyama, F. Tokanai, T. Tanaka, Y. Wakabayashi, T. Yamaguchi, S. Yamaki, A. Yoshida
2017Ki09	EPJAA	53,	162	Y.H. Kim, A. Lemasson, M. Rejmund, A. Navin, S. Biswas, C. Michelagnoli, I. Stefan, R. Banik, P. Bednarczyk, S. Bhattacharya, S. Bhattacharyya, E. Clement, H.L. Crawford, G. De France, P. Fallon, J. Goupil, B. Jacquot, H.J. Li, J. Ljungvall, A.O. Macchiavelli, A. Maj, L. Menager, V. Morel, R. Palit, R.M. Perez-Vidal, J. Ropert, C. Schmitt
2017Ko02	PYLBB	764,	265	J. Konki, J. Khuyagbaatar, J. Uusitalo, P.T. Greenlees, K. Auranen, H. Badran, M. Block, R. Briselet, D.M. Cox, M. Dasgupta, A. Di Nitto, Ch. E. Dullmann, T. Grahn, K. Hauschild, A. Herzan, R.-D. Herzberg, F.P. Hessberger, D.J. Hinde, R. Julin, S. Juutinen, E. Jager, B. Kindler, J. Krier, M. Leino, B. Lommel, A. Lopez-Martens, D.H. Luong, M. Mallaburn, K. Nishio, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, K. Rezynkina, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, J. Sorri, S. Stolze, B. Sulignano, Ch. Theisen, A. Ward, A. Yakushev, V. Yakusheva
2017Ko16	ARISE	125,	15	K. Kossert
2017Kr01	ARISE	121,	28	K.S. Krane
2017Ku02	NIMBE	395,	39	S. Kumar, U. Singh, M. Oswal, G. Singh, N. Singh, D. Mehta, T. Nandi, G. Lapicki
2017Ku12	EPJAA	53,	134	L. Kucuk, S.E.A. Orrigo, A. Montaner-Piza, B. Rubio, Y. Fujita, W. Gelletly, B. Blank, Y. Oktem, T. Adachi, A. Algora, P. Ascher, R.B. Cakirli, G. de France, H. Fujita, E. Ganioglu, J. Giovinazzo, S. Grevy, F.M. Marques, F. Molina, F. de Oliveira Santos, L. Perrot, R. Raabe, P.C. Srivastava, G. Susoy, A. Tamii, J.C. Thomas
2017Ku23	NUPAB	967,	536	A. Kumar, E. Bianchi, J. Elledge, A. Majumder, G.-Y. Qin, C. Shen
2017La16	PRVCA	96,	044323	D. Lascar, R. Klawitter, C. Babcock, E. Leistenschneider, S.R. Stroberg, B.R. Barquest, A. Finlay, M. Foster, A.T. Gallant, P. Hunt, J. Kelly, B. Kootte, Y. Lan, S.F. Paul, M.L. Phan, M.P. Reiter, B. Schultz, D. Short, J. Simonis, C. Andreoiu, M. Brodeur, I. Dillmann, G. Gwinner, J.D. Holt, A.A. Kwiatkowski, K.G. Leach, J. Dilling
2017Le01	PRVCA	95,	044306	B. Lehnert, M. Hult, G. Lutter, K. Zuber
2017Li03	PRVCA	95,	021301	R. Lică, for the IDS Collaboration
2017Li06	JPGPE	44,	054002	R. Lică, G. Benzoni, A.I. Morales, M.J.G. Borge, L.M. Fraile, H. Mach, M. Madurga, C. Sotty, V. Vedia, H. De Witte, J. Benito, T. Berry, N. Blasi, A. Bracco, F. Camera, S. Ceruti, V. Charviakova, N. Cieplicka-Orynczak, C. Costache, F.C.L. Crespi, J. Creswell, G. Fernandez-Martínez, H. Fynbo, P. Greenlees, I. Homm, M. Huyse, J. Jolie, V. Karayonchev, U. Köster, J. Konki, T. Kröll, J. Kurcewicz, T. Kurtukian-Nieto, I. Lazarus, S. Leoni, M. Lund, N. Marginean, R. Marginean, C. Mihai, R. Mihai, A. Negret, A. Orduz, Z. Patyk, S. Pascu, V. Pucknell, P. Rahkila, J.M. Regis, F. Rotaru, N. Saed-Samii, V. Sánchez-Tembleque, M. Stanoiu, O. Tengblad, M. Thuerauf, A. Turturica, P. Van Duppen, N. Warr
2017Lo09	PRVCA	96,	015502	J. Long, T. Ahn, J. Allen, D.W. Bardayan, F.D. Becchetti, D. Blankstein, M. Brodeur, D. Burdette, B. Frentz, M.R. Hall, J.M. Kelly, J.J. Kolata, P.D. O'Malley, B.E. Schultz, S.Y. Strauss, A.A. Valverde
2017Lo13	PRVCA	96,	034315	Ch. Lorenz, L.G. Sarmiento, D. Rudolph, D.E. Ward, M. Block, F.P. Heßberger, D. Ackermann, L.-L. Andersson, M.L. Cortés, C. Droese, M. Dworschak, M. Eibach, U. Forsberg, P. Golubev, R. Hoischen, I. Kojouharov, J. Khuyagbaatar, D. Nesterenko, I. Ragnarsson, H. Schaffner, L. Schweikhard, S. Stolze, J. Wenzl
2017Lo.1	EULEE	120	22001	G. Lorusso, S.M. Collins, K. Jagan, G.W. Hitt, A.M. Sadek, P.M. Aitken-Smith, D. Bridi, J.D. Keightley

2017Ma18	EPJAA	53,	77	C. Magron, Ph. Alfaurt, B. Blank, L. Daudin, T. Eronen, M. Gerbaux, J. Giovinazzo, D. Gorelov, S. Grevy, H. Guerin, J. Hakala, V.S. Kolhinen, J. Koponen, T. Kurtukian Nieto, I.D. Moore, H. Penttila, I. Pohjalainen, J. Reinikainen, M. Reponen, S. Rinta-Antila, M. Roche, A. de Roubin, N. Smirnova, B. Thomas, A. Voss, L. Xayavong
2017Ma29	PRVCA	95,	054322	V. Manea, P. Ascher, D. Atanasov, A.E. Barzakh, D. Beck, K. Blaum, Ch. Borgmann, M. Breitenfeldt, R.B. Cakirli, T.E. Cocolios, T. Day Goodacre, D.V. Fedorov, V.N. Fedosseev, S. George, F. Herfurth, M. Kowalska, S. Kreim, Yu. A. Litvinov, D. Lunney, B. Marsh, D. Neidherr, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, F. Wienholtz, R.N. Wolf, K. Zuber
2017Ma77	PYLBB	775,	160	A.O. Macchiavelli, H.L. Crawford, P. Fallon, C.M. Campbell, R.M. Clark, M. Cromaz, M.D. Jones, I.Y. Lee, M. Salathe
2017Mi01	EPJAA	53,	24	A.K. Mistry, R.-D. Herzberg, P.T. Greenlees, P. Papadakis, K. Auranen, P.A. Butler, D.M. Cox, A.B. Garnsworthy, T. Grahn, K. Hauschild, U. Jakobsson, D.T. Joss, R. Julin, S. Ketelhut, J. Konki, M. Leino, A. Lopez-Martens, R.D. Page, J. Pakarinen, P. Peura, P. Rahkila, M. Sandzelius, C. Scholey, J. Simpson, D. Seddon, J. Sorri, S. Stolze, J. Thornhill, J. Uusitalo, D. Wells
2017Mo02	PYLBB	765,	328	A.I. Morales, G. Benzoni, H. Watanabe, Y. Tsunoda, T. Otsuka, S. Nishimura, F. Browne, R. Daido, P. Doornenbal, Y. Fang, G. Lorusso, Z. Patel, S. Rice, L. Sinclair, P.-A. Soderstrom, T. Sumikama, J. Wu, Z.Y. Xu, A. Yagi, R. Yokoyama, H. Baba, R. Avigo, F.L. Bello Garrote, N. Blasi, A. Bracco, F. Camera, S. Ceruti, F.C.L. Crespi, G. de Angelis, M.-C. Delattre, Zs. Dombradi, A. Gottardo, T. Isobe, I. Kojouharov, N. Kurz, I. Kuti, K. Matsui, B. Melon, D. Mengoni, T. Miyazaki, V. Modamio-Hoybjor, S. Momiyama, D.R. Napoli, M. Niikura, R. Orlandi, H. Sakurai, E. Sahin, D. Sohler, H. Schaffner, R. Taniuchi, J. Taprogge, Zs. Vajta, J.J. Valiente-Dobon, O. Wieland, M. Yalcinkaya
2017Mo12	PRVCA	95,	044322	B. Moon, C.-B. Moon, P.-A. Soderstrom, A. Odahara, R. Lozeva, B. Hong, F. Browne, H.S. Jung, P. Lee, C.S. Lee, A. Yagi, C. Yuan, S. Nishimura, P. Doornenbal, G. Lorusso, T. Sumikama, H. Watanabe, I. Kojouharov, T. Isobe, H. Baba, H. Sakurai, R. Daido, Y. Fang, H. Nishibata, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, Y. Shimizu, D. Murai, F.L. Bello Garrote, J.M. Daugas, F. Didierjean, E. Ideguchi, T. Ishigaki, S. Morimoto, M. Niikura, I. Nishizuka, T. Komatsubara, Y.K. Kwon, K. Tshoo
2017Mo18	PRVCA	95,	064327	A.I. Morales, A. Algora, B. Rubio, K. Kaneko, S. Nishimura, P. Aguilera, S.E.A. Orrigo, F. Molina, G. de Angelis, F. Recchia, G. Kiss, V.H. Phong, J. Wu, D. Nishimura, H. Oikawa, T. Goigoux, J. Giovinazzo, P. Ascher, J. Agramunt, D.S. Ahn, H. Baba, B. Blank, C. Borcea, A. Boso, P. Davies, F. Diel, Zs. Dombradi, P. Doornenbal, J. Eberth, G. de France, Y. Fujita, N. Fukuda, E. Ganioglu, W. Gelletly, M. Gerbaux, S. Grevy, V. Guadilla, N. Inabe, T. Isobe, I. Kojouharov, W. Korten, T. Kubo, S. Kubono, T. Kurtukian Nieto, N. Kurz, J. Lee, S. Lenzi, J. Liu, T. Lokotko, D. Lubos, C. Magron, A. Montaner-Piza, D.R. Napoli, H. Sakurai, H. Schaffner, Y. Shimizu, C. Sidong, P.-A. Soderstrom, T. Sumikama, H. Suzuki, H. Takeda, Y. Takei, M. Tanaka, S. Yagi
2017Mo19	PRVCA	96,	014325	B. Moon, C.-B. Moon, A. Odahara, R. Lozeva, P.-A. Söderström, F. Browne, C. Yuan, A. Yagi, B. Hong, H.S. Jung, P. Lee, C.S. Lee, S. Nishimura, P. Doornenbal, G. Lorusso, T. Sumikama, H. Watanabe, I. Kojouharov, T. Isobe, H. Baba, H. Sakurai, R. Daido, Y. Fang, H. Nishibata, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, R. Yokoyama, T. Kubo, N. Inabe, H. Suzuki, N. Fukuda, D. Kameda, H. Takeda, D.S. Ahn, Y. Shimizu, D. Murai, F.L. Bello Garrote, J.M. Daugas, F. Didierjean, E. Ideguchi, T. Ishigaki, S. Morimoto, M. Niikura, I. Nishizuka, T. Komatsubara, Y.K. Kwon, K. Tshoo
2017Mo26	PRVCA	96,	034328	S. Momiyama, P. Doornenbal, H. Scheit, S. Takeuchi, M. Niikura, N. Aoi, K. Li, M. Matsushita, D. Steppenbeck, H. Wang, H. Baba, E. Ideguchi, M. Kimura, N. Kobayashi, Y. Kondo, J. Lee, S. Michimasa, T. Motobayashi, N. Shimizu, M. Takechi, Y. Togano, Y. Utsuno, K. Yoneda, H. Sakurai
2017Na22	NIMAE	868,	119	L.J. Nadderd, K.M. Subotic, Yu. S. Tsyganov, J.M. Puzovic, A.N. Polyakov, A.V. Rykhlyuk, D. Manic

2017Ne05	JPGPE	44,	065103	D.A. Nesterenko, A. Kankainen, L. Canete, M. Block, D. Cox, T. Eronen, C. Fahlander, U. Forsberg, J. Gerl, P. Golubev, J. Hakala, A. Jokinen, V.S. Kolhinen, J. Koponen, N. Lalovic, C. Lorenz, I.D. Moore, P. Papadakis, J. Reinikainen, S. Rinta-Antila, D. Rudolph, L.G. Sarmiento, A. Voss, J. Aysto
2017Ni03	PRVCA	95,	034325	N. Nica, J.C. Hardy, V.E. Iacob, H.I. Park, K. Brandenburg, M.B. Trzhaskovskaya
2017Og01	PHSTB	92,	023003	Y.T. Oganessian, A. Sobiczewski, G.M. Ter-Akopian
2017Ol08	JPGPE	44,	125103	B. Olaizola, L.M. Fraile, H. Mach, A. Poves, A. Aprahamian, J.A. Briz, J. Cal-Gonzalez, D. Ghita, U. Koster, W. Kurcewicz, S.R. Lesher, D. Pauwels, E. Picado, D. Radulov, G.S. Simpson, J.M. Udias
2017Os02	PRVCA	95,	055809	K.M. Ostdiek, T.S. Anderson, W.K. Bauder, M.R. Bowers, A.M. Clark, P. Collon, W. Lu, A.D. Nelson, D. Robertson, M. Skulski, R. Dressler, D. Schumann, J.P. Greene, W. Kutschera, M. Paul
2017Pa25	PRVCA	96,	034305	Z. Patel, P.M. Walker, Zs. Podolyak, P.H. Regan, T.A. Berry, P.-A. Soderstrom, H. Watanabe, E. Ideguchi, G.S. Simpson, S. Nishimura, Q. Wu, F.R. Xu, F. Browne, P. Doornenbal, G. Lorusso, S. Rice, L. Sinclair, T. Sumikama, J. Wu, Z.Y. Xu, N. Aoi, H. Baba, F.L. Bello Garrote, G. Benzoni, R. Daido, Zs. Dombradi, Y. Fang, N. Fukuda, G. Gey, S. Go, A. Gottardo, N. Inabe, T. Isobe, D. Kameda, K. Kobayashi, M. Kobayashi, T. Komatsubara, I. Kojouharov, T. Kubo, N. Kurz, I. Kuti, Z. Li, M. Matsushita, S. Michimasa, C.-B. Moon, H. Nishibata, I. Nishizuka, A. Odahara, E. Sahin, H. Sakurai, H. Schaffner, H. Suzuki, H. Takeda, M. Tanaka, J. Taprogge, Zs. Vajta, A. Yagi, R. Yokoyama
2017Pa35	PRVCA	96,	044311	J. Park, R. Krucken, D. Lubos, R. Gernhauser, M. Lewitowicz, S. Nishimura, D.S. Ahn, H. Baba, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, I. Celikovic, G. de France, P. Doornenbal, T. Faestermann, Y. Fang, N. Fukuda, J. Giovinazzo, N. Goel, M. Gorska, H. Grawe, S. Ilieva, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, G. Lorusso, K. Moschner, D. Murai, I. Nishizuka, Z. Patel, M.M. Rajabali, S. Rice, H. Sakurai, H. Schaffner, Y. Shimizu, L. Sinclair, P.-A. Soderstrom, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, Z. Wang, H. Watanabe, J. Wu, Z.Y. Xu
2017Pe03	PRVCA	96,	014306	D. Pérez-Loureiro, C. Wrede, M.B. Bennett, S.N. Liddick, A. Bowe, B.A. Brown, A.A. Chen, K.A. Chipps, N. Cooper, E. McNeice, F. Naqvi, R. Ortez, S.D. Pain, J. Pereira, C. Prokop, S.J. Quinn, J. Sakstrup, M. Santia, S.B. Schwartz, S. Shanab, A. Simon, A. Spyrou, E. Thiagalingam
2017Pe09	PRVCA	96,	014306	D. Pérez-Loureiro, C. Wrede, M.B. Bennett, S.N. Liddick, A. Bowe, B.A. Brown, A.A. Chen, K.A. Chipps, N. Cooper, E. McNeice, F. Naqvi, R. Ortez, S.D. Pain, J. Pereira, C. Prokop, S.J. Quinn, J. Sakstrup, M. Santia, S.B. Schwartz, S. Shanab, A. Simon, A. Spyrou, E. Thiagalingam
2017Pr03	PRVCA	95,	034328	F.M. Prados-Estevez, E.E. Peters, A. Chakraborty, M.G. Mynk, D. Bandyopadhyay, N. Boukharouba, S.N. Choudry, B.P. Crider, P.E. Garrett, S.F. Hicks, A. Kumar, S.R. Lesher, C.J. McKay, M.T. McEllistrem, S. Mukhopadhyay, J.N. Orce, M. Scheck, J.R. Vanhoy, J.L. Wood, S.W. Yates
2017Ra10	PRVCA	95,	054328	B.C. Rasco, K.P. Rykaczewski, A. Fijałkowska, M. Karny, M. Wolińska-Cichocka, R.K. Grzywacz, C.J. Gross, D.W. Stracener, E.F. Zganjar, J.C. Blackmon, N.T. Brewer, K.C. Goetz, J.W. Johnson, C.U. Jost, J.H. Hamilton, K. Miernik, M. Madurga, D. Miller, S. Padgett, S.V. Paulauskas, A.V. Ramayya, E.H. Spejewski
2017Ra15	PRLTA	119,	122501	P.C.-O. Ranitzsch, C. Hassel, M. Wegner, D. Hengstler, S. Kempf, A. Fleischmann, C. Enss, L. Gastaldo, A. Herlert, K. Johnston
2017Ra20	EPJAA	53,	184	A.J. Radich, P.E. Garrett, C. Andreoiu, G.C. Ball, L. Bianco, V. Bildstein, S. Chagnon-Lessard, D.S. Cross, G.A. Demand, A. Diaz Varela, R. Dunlop, P. Finlay, A.B. Garnsworthy, G. Hackman, B. Hadinia, B. Jigmeddorj, A.T. Laffoley, K.G. Leach, E. McGee, J. Michetti-Wilson, J.N. Orce, M.M. Rajabali, E.T. Rand, K. Starosta, C.S. Sumithrarachchi, C.E. Svensson, S. Triambak, Z.M. Wang, S.J. Williams, J. Wong, J. L Wood and S.W. Yates

2017Re10	PRVCA	96,	044323	D. Lascar, R. Klawitter, C. Babcock, E. Leistenschneider, S.R. Stroberg, B.R. Barquest, A. Finlay, M. Foster, A.T. Gallant, P. Hunt, J. Kelly, B. Kootte, Y. Lan, S.F. Paul, M.L. Phan, M.P. Reiter, B. Schultz, D. Short, J. Simonis, C. Andreoiu, M. Brodeur, I. Dillmann, G. Gwinner, J.D. Holt, A.A. Kwiatkowski, K.G. Leach, J. Dilling
2017Sc02	PRVCA	95,	011305	P. Schury, M. Wada, Y. Ito, D. Kaji, F. Arai, M. MacCormick, I. Murray, H. Haba, S. Jeong, S. Kimura, H. Koura, H. Miyatake, K. Morimoto, K. Morita, A. Ozawa, M. Rosenbusch, M. Reponen, P.-A. Soderstrom, A. Takamine, T. Tanaka, H. Wollnik
2017Se01	PRLTA	118,	042501	B. Seiferle, L. v. d. Wense, P.G. Thirolf
2017Su05	PRVCA	95,	014314	L.J. Sun, X.X. Xu, D.Q. Fang, C.J. Lin, J.S. Wang, Z.H. Li, Y.T. Wang, J. Li, L. Yang, N.R. Ma, K. Wang, H.L. Zang, H.W. Wang, C. Li, C.Z. Shi, M.W. Nie, X.F. Li, H. Li, J.B. Ma, P. Ma, S.L. Jin, M.R. Huang, Z. Bai, J.G. Wang, F. Yang, H.M. Jia, H.Q. Zhang, Z.H. Liu, P.F. Bao, D.X. Wang, Y.Y. Yang, Y.J. Zhou, W.H. Ma, J. Chen, Y.G. Ma, Y.H. Zhang, X.H. Zhou, H.S. Xu, G.Q. Xiao, W.L. Zhan
2017Su15	PRVCA	95,	051601	T. Sumikama, S. Nishimura, H. Baba, F. Browne, P. Doornenbal, N. Fukuda, S. Franchoo, G. Gey, N. Inabe, T. Isobe, P.R. John, H.S. Jung, D. Kameda, T. Kubo, Z. Li, G. Lorusso, I. Matea, K. Matsui, P. Morfouace, D. Mengoni, D.R. Napoli, M. Niikura, H. Nishibata, A. Odahara, E. Sahin, H. Sakurai, P.-A. Soderstrom, G.I. Stefan, D. Suzuki, H. Suzuki, H. Takeda, R. Taniuchi, J. Taprogge, Zs. Vajta, H. Watanabe, V. Werner, J. Wu, Z.Y. Xu, A. Yagi, K. Yoshinaga
2017Su18	PYLBB	771,	303	M.D. Sun, Z. Liu, T.H. Huang, W.Q. Zhang, J.G. Wang, X.Y. Liu, B. Ding, Z.G. Gan, L. Ma, H.B. Yang, Z.Y. Zhang, L. Yu, J. Jiang, K.L. Wang, Y.S. Wang, M.L. Liu, Z.H. Li, J. Li, X. Wang, H.Y. Lu, C.J. Lin, L.J. Sun, N.R. Ma, C.X. Yuan, W. Zuo, H.S. Xu, X.H. Zhou, G.Q. Xiao, C. Qi, F.S. Zhang
2017Su31	PRLTA	119,	192503	H. Suzuki, L. Sinclair, P.-A. Soderstrom, G. Lorusso, P. Davies, L.S. Ferreira, E. Maglione, R. Wadsworth, J. Wu, Z.Y. Xu, S. Nishimura, P. Doornenbal, D.S. Ahn, F. Browne, N. Fukuda, N. Inabe, T. Kubo, D. Lubos, Z. Patel, S. Rice, Y. Shimizu, H. Takeda, H. Baba, A. Estrade, Y. Fang, J. Henderson, T. Isobe, D. Jenkins, S. Kubono, Z. Li, I. Nishizuka, H. Sakurai, P. Schury, T. Sumikama, H. Watanabe, V. Werner
2017Sv02	PPNLA	14,	571	A.I. Svirikhin, A.V. Andreev, A.V. Yeremin, I.N. Izosimov, A.V. Isaev, A.N. Kuznetsov, A.A. Kuznetsova, O.N. Malyshev, A.G. Popeko, Y.A. Popov, E.A. Sokol, M.L. Chelnokov, V.I. Chepigin, T.M. Schneidman, B. Gall, O. Dorvaux, P. Brione, K. Hauschild, A. Lopez-Martens, K. Rezynkina, S. Mullins, P. Jones, P. Mosat
2017Tr02	PRVCA	95,	024308	V. Tripathi, R.S. Lubna, B. Abromeit, H.L. Crawford, S.N. Liddick, Y. Utsuno, P.C. Bender, B.P. Crider, R. Dungan, P. Fallon, K. Kravvaris, N. Larson, A.O. Macchiavelli, T. Otsuka, C.J. Prokop, A.L. Richard, N. Shimizu, S.L. Tabor, A. Volya, S. Yoshida
2017Ur03	PRVCA	96,	044333	W. Urban, M. Czerwiński, J. Kurpeta, T. Rzaca-Urban, J. Wiśniewski, T. Materna, Ł. W. Iskra, A.G. Smith, I. Ahmad, A. Blanc, H. Faust, U. Koster, M. Jentschel, P. Mutti, T. Soldner, G.S. Simpson, J.A. Pinston, G. de France, C.A. Ur, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, I.D. Moore, J. Rissanen, A. Saastamoinen, J. Szerypo, C. Weber, J. Äystö
2017Ve01	PRVCA	95,	054320	D. Verney, D. Testov, F. Ibrahim, Yu. Penionzhkevich, B. Roussiere, V. Smirnov, F. Didierjean, K. Flanagan, S. Franchoo, E. Kuznetsova, R. Li, B. Marsh, I. Matea, H. Pai, E. Sokol, I. Stefan, D. Suzuki
2017Ve04	NIMAE	849,	112	M. Venhart, J.L. Wood, A.J. Boston, T.E. Cocolios, L.J. Harkness-Brennan, R.-D. Herzberg, D.T. Joss, D.S. Judson, J. Kliman, V. Matousek, S. Motycak, R.D. Page, A. Patel, K. Petrik, M. Sedak, M. Veselsky
2017Ve05	PRVCA	96,	034311	V. Vedia, V. Paziy, L.M. Fraile, H. Mach, W.B. Walters, A. Aprahamian, C. Bernards, J.A. Briz, B. Bucher, C.J. Chiara, Z. Dlouhý, I. Gheorghe, D. Ghiţă, P. Hoff, J. Jolie, U. Köster, W. Kurcewicz, R. Lică, N. Mărginean, R. Marginean, B. Olaizola, J.-M. Régis, M. Rudigier, T. Sava, G.S. Simpson, M. Stănoiu, L. Stroe

2017Vo01	PRVCA	95,	024316	A. Vogt, B. Birkenbach, P. Reiter, A. Blazhev, M. Siciliano, K. Hadynska-Klek, J.J. Valiente-Dobon, C. Wheldon, E. Teruya, N. Yoshinaga, K. Arnswald, D. Bazzacco, M. Bowry, A. Bracco, B. Bruyneel, R.S. Chakrawarthy, R. Chapman, D. Cline, L. Corradi, F.C.L. Crespi, M. Cromaz, G. de Angelis, J. Eberth, P. Fallon, E. Farnea, E. Fioretto, S.J. Freeman, B. Fu, A. Gadea, K. Geibel, W. Gelletly, A. Gengelbach, A. Giaz, A. Gorgen, A. Gottardo, A.B. Hayes, H. Hess, R. Hirsch, H. Hua, P.R. John, J. Jolie, A. Jungclaus, L. Kaya, W. Korten, I.Y. Lee, S. Leoni, L. Lewandowski, X. Liang, S. Lunardi, A.O. Macchiavelli, R. Menegazzo, D. Mengoni, C. Michelagnoli, T. Mijatovic, G. Montagnoli, D. Montanari, C. Muller-Gatermann, D. Napoli, C.J. Pearson, L. Pellegri, Zs. Podolyak, G. Pollarolo, A. Pullia, M. Queiser, F. Radeck, F. Recchia, P.H. Regan, D. Rosiak, N. Saed-Samii, E. Sahin, F. Scarlassara, D. Schneiders, M. Seidlitz, B. Siebeck, G. Sletten, J.F. Smith, P.-A. Soderstrom, A.M. Stefanini, T. Steinbach, O. Stezowski, S. Szilner, B. Szpak, R. Teng, C. Ur, V. Vandone, D.D. Warner, A. Wiens, C.Y. Wu, K.O. Zell
2017Vo06	PRVCA	96,	024321	A. Vogt, M. Siciliano, B. Birkenbach, P. Reiter, K. Hadyńska-Klek, C. Wheldon, J.J. Valiente-Dobón, E. Teruya, N. Yoshinaga, K. Arnswald, D. Bazzacco, A. Blazhev, A. Bracco, B. Bruyneel, R.S. Chakrawarthy, R. Chapman, D. Cline, L. Corradi, F.C.L. Crespi, M. Cromaz, G. de Angelis, J. Eberth, P. Fallon, E. Farnea, E. Fioretto, C. Fransen, S.J. Freeman, B. Fu, A. Gadea, W. Gelletly, A. Giaz, A. Görgen, A. Gottardo, A.B. Hayes, H. Hess, R. Hetzenegger, R. Hirsch, H. Hua, P.R. John, J. Jolie, A. Jungclaus, V. Karayonchev, L. Kaya, W. Korten, I.Y. Lee, S. Leoni, X. Liang, S. Lunardi, A.O. Macchiavelli, R. Menegazzo, D. Mengoni, C. Michelagnoli, T. Mijatović, G. Montagnoli, D. Montanari, C. Muller-Gatermann, D. Napoli, C.J. Pearson, Zs. Podolyák, G. Pollarolo, A. Pullia, M. Queiser, F. Recchia, P.H. Regan, J.-M. Régis, N. Saed-Samii, E. Şahin, F. Scarlassara, M. Seidlitz, B. Siebeck, G. Sletten, J.F. Smith, P.-A. Söderström, A.M. Stefanini, O. Stezowski, S. Szilner, B. Szpak, R. Teng, C. Ur, D.D. Warner, K. Wolf, C.Y. Wu, K.O. Zell
2017Wa18	PYLBB	770,	83	F. Wang, B.H. Sun, Z. Liu, R.D. Page, C. Qi, C. Scholey, S.F. Ashley, L. Bianco, I.J. Cullen, I.G. Darby, S. Eeckhaudt, A.B. Garnsworthy, W. Gelletly, M.B. Gomez Hornillos, T. Grahn, P.T. Greenlees, D.G. Jenkins, G.A. Jones, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, S. Khan, A. Kishada, M. Leino, M. Niikura, M. Nyman, J. Pakarinen, S. Pietri, Z. Podolyak, P. Rahkila, S. Rigby, J. Saren, T. Shizuma, J. Sorri, S. Steer, J. Thomson, N.J. Thompson, J. Uusitalo, P.M. Walker, S. Williams, H.F. Zhang, W.Q. Zhang, L.H. Zhu
2017We09	EPJAA	53,	153	A. Welker, P. Filianin, N.A.S. Althubiti, D. Atanasov, K. Blaum, T.E. Cocolios, S. Eliseev, F. Herfurth, S. Kreim, D. Lunney, V. Manea, D. Neidherr, Yu. Novikov, M. Rosenbusch, L. Schweikhard, F. Wienholtz, R.N. Wolf, K. Zuber
2017We16	PRLTA	119,	192502	A. Welker, N.A.S. Althubiti, D. Atanasov, K. Blaum, T.E. Cocolios, F. Herfurth, S. Kreim, D. Lunney, V. Manea, M. Mougeot, D. Neidherr, F. Nowacki, A. Poves, M. Rosenbusch, L. Schweikhard, F. Wienholtz, R.N. Wolf, K. Zuber
2017Wi01	PRVCA	95,	034618	H. Wilsenach, K. Zuber, D. Degering, R. Heller, V. Neu
2017Wi11	PRVCA	96,	034317	S.G. Wilkins, K.M. Lynch, J. Billowes, C.L. Binnersley, M.L. Bissell, T.E. Cocolios, T. Day Goodacre, R.P. de Groote, G.J. Farooq-Smith, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, W. Gins, H. Heylen, A. Koszorus, G. Neyens, H.H. Stroke, A.R. Vernon, K.D.A. Wendt, X.F. Yang
2017Wi13	PRVCA	96,	044315	G.L. Wilson, M. Takeyama, A.N. Andreyev, B. Andel, S. Antalic, W.N. Catford, L. Ghys, H. Haba, F.P. Heßberger, M. Huang, D. Kaji, Z. Kalaninova, K. Morimoto, K. Morita, M. Murakami, K. Nishio, R. Orlandi, A.G. Smith, K. Tanaka, Y. Wakabayashi, S. Yamaki
2017Wo02	PRVCA	95,	054308	R.T. Wood, P.M. Walker, G.J. Lane, R.J. Carroll, D.M. Cullen, G.D. Dracoulis, S.S. Hota, T. Kibedi, N. Palalani, Zs. Podolyak, M.W. Reed, K. Schiffl, A.M. Wright

2017Wr01	PYLBB	771,	385	C. Wraith, X.F. Yang, L. Xie, C. Babcock, J. Bieron, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, L. Filippin, R.F. Garcia Ruiz, W. Gins, L.K. Grob, G. Gaigalas, M. Godefroid, C. Gorges, H. Heylen, M. Honma, P. Jonsson, S. Kaufmann, M. Kowalska, J. Kramer, S. Malbrunot-Ettenauer, R. Neugart, G. Neyens, W. Nortershauser, F. Nowacki, T. Otsuka, J. Papuga, R. Sanchez, Y. Tsunoda, D.T. Yordanov
2017Wu03	PRVCA	95,	014310	A.H. Wuosmaa, S. Bedoor, K.W. Brown, W.W. Buhro, Z. Chajecki, R.J. Charity, W.G. Lynch, J. Manfredi, S.T. Marley, D.G. McNeel, A.S. Newton, D.V. Shetty, R.H. Showalter, L.G. Sobotka, M.B. Tsang, J.R. Winkelbauer, R.B. Wiringa
2017Wu04	PRLTA	118,	072701	J. Wu, S. Nishimura, G. Lorusso, P. Moller, E. Ideguchi, P.-H. Regan, G.S. Simpson, P.-A. Soderstrom, P.M. Walker, H. Watanabe, Z.Y. Xu, H. Baba, F. Browne, R. Daido, P. Doornenbal, Y.F. Fang, G. Gey, T. Isobe, P.S. Lee, J.J. Liu, Z. Li, Z. Korkulu, Z. Patel, V. Phong, S. Rice, H. Sakurai, L. Sinclair, T. Sumikama, M. Tanaka, A. Yagi, Y.L. Ye, R. Yokoyama, G.X. Zhang, T. Alharbi, N. Aoi, F.L. Bello Garrote, G. Benzoni, A.M. Bruce, R.J. Carroll, K.Y. Chae, Z. Dombradi, A. Estrade, A. Gottardo, C.J. Griffin, H. Kanaoka, I. Kojouharov, F.G. Kondev, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, G.J. Lane, E.J. Lee, T. Lokotko, G. Lotay, C.-B. Moon, H. Nishibata, I. Nishizuka, C.R. Nita, A. Odahara, Zs. Podolyak, O.J. Roberts, H. Schaffner, C. Shand, J. Taprogge, S. Terashima, Z. Vajta, S. Yoshida
2017Xu01	PYLBB	766,	312	X.X. Xu, C.J. Lin, L.J. Sun, J.S. Wang, Y.H. Lam, J. Lee, D.Q. Fang, Z.H. Li, N.A. Smirnova, C.X. Yuan, L. Yang, Y.T. Wang, J. Li, N.R. Ma, K. Wang, H.L. Zang, H.W. Wang, C. Li, M.L. Liu, J.G. Wang, C.Z. Shi, M.W. Nie, X.F. Li, H. Li, J.B. Ma, P. Ma, S.L. Jin, M.R. Huang, Z. Bai, F. Yang, H.M. Jia, Z.H. Liu, D.X. Wang, Y.Y. Yang, Y.J. Zhou, W.H. Ma, J. Chen, Z.G. Hu, M. Wang, Y.H. Zhang, X.W. Ma, X.H. Zhou, Y.G. Ma, H.S. Xu, G.Q. Xiao, H.Q. Zhang
2017Yo01	PRVCA	95,	034313	R. Yokoyama, S. Go, D. Kameda, T. Kubo, N. Inabe, N. Fukuda, H. Takeda, H. Suzuki, K. Yoshida, K. Kusaka, K. Tanaka, Y. Yanagisawa, M. Ohtake, H. Sato, Y. Shimizu, H. Baba, M. Kurokawa, D. Nishimura, T. Ohnishi, N. Iwasa, A. Chiba, T. Yamada, E. Ideguchi, T. Fujii, H. Nishibata, K. Ieki, D. Murai, S. Momota, Y. Sato, J.W. Hwang, S. Kim, O.B. Tarasov, D.J. Morrissey, B.M. Sherrill, G. Simpson, C.R. Praharaj
2017Yo05	JPGPE	44,	075104	D.T. Yordanov, M.L. Bissell, K. Blaum, M. De Rydt, C. Geppert, J. Kramer, K. Kreim, M. Kowalska, A. Krieger, P. Lievens, R. Neugart, G. Neyens, W. Nortershauser, L.V. Rodriguez, R. Sanchez, P. Vingerhoets
2017Ze02	PRVCA	96,	031303	Q. Zeng, M. Wang, X.H. Zhou, Y.H. Zhang, X.L. Tu, X.C. Chen, X. Xu, Yu. A. Litvinov, H.S. Xu, K. Blaum, R.J. Chen, C.Y. Fu, Z. Ge, W.J. Huang, H.F. Li, J.H. Liu, B. Mei, P. Shuai, M. Si, B.H. Sun, M.Z. Sun, Q. Wang, G.Q. Xiao, Y.M. Xing, T. Yamaguchi, X.L. Yan, J.C. Yang, Y.J. Yuan, Y.D. Zang, P. Zhang, W. Zhang, X. Zhou
2017Zh12	PYLBB	767,	20	P. Zhang, X. Xu, P. Shuai, R.J. Chen, X.L. Yan, Y.H. Zhang, M. Wang, Yu. A. Litvinov, K. Blaum, H.S. Xu, T. Bao, X.C. Chen, H. Chen, C.Y. Fu, J.J. He, S. Kubono, Y.H. Lam, D.W. Liu, R.S. Mao, X.W. Ma, M.Z. Sun, X.L. Tu, Y.M. Xing, J.C. Yang, Y.J. Yuan, Q. Zeng, X. Zhou, X.H. Zhou, W.L. Zhan, S. Litvinov, G. Audi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, B.H. Sun, Y. Sun, F.R. Xu

2018

2018Aa02	PRLTA	120,	132502	C.E. Aalseth, for the Majorana Collaboration
2018Ab02	PRVCA	97,	034312	E.P. Abel, H.K. Clause, J. Fonslet, R.J. Nickles, G.W. Severin
2018Ac08	NIMAE	907,	81	D. Ackermann, A.K. Mistry, F.P. Hessberger, B. Andel, S. Antalic, M. Block, L. Caceres, P. Chhetri, F. Dechery, Ch. Droese, Ch. E. Dullmann, F. Giacoppo, J. Hoffmann, O. Kaleja, O. Kamalou, N. Kurz, J. Khuyagbaatar, R.R. Mandl, T. Murbock, M. Laatiaoui, J. Maurer, P. Mosat, J. Piot, S. Raeder, H. Savajols, O. Sorlin, Ch. Stodel, J.C. Thomas, M. Vostinar, P. Wieczorek, A. Yakushev, Z. Zhang
2018Ag03	PRLTA	120,	132503	M. Agostini, in the GERDA Collaboration
2018Ah01	PRVCA	97,	014324	I. Ahmad, F.G. Kondev, J.P. Greene, S. Zhu

2018Al05	PRLTA	120,	072701	J.B. Albert, for the EXO-200 Collaboration
2018Al14	PRVCA	97,	034327	P. Alexa, M. Ramdhane, G. Thiamova, G.S. Simpson, H.R. Faust, J. Genevey, U. Koster, T. Materna, R. Orlandi, J.A. Pinston, A. Scherillo, Z. Hons
2018Al23	PRVCA	97,	055502	C. Alduino, for the CUORE Collaboration
2018Al32	PPNUE	49,	557	E.N. Alexeev, Yu. M. Gavrilyuk, A.M. Gangapshev, A.M. Gezhaev, V.V. Kazalov, V.V. Kuzminov, S.I. Panasenko, S.S. Ratkevich
2018Au01	PRVCA	97,	024301	K. Auranen, J. Uusitalo, S. Juutinen, H. Badran, F. Defranchi Bisso, D. Cox, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, R. Julin, J. Konki, M. Leino, A. Lightfoot, M.J. Mallaburn, O. Neuvonen, J. Pakarinen, P. Papadakis, J. Partanen, P. Rahkila, M. Sandzelius, J. Saren, C. Scholey, J. Sorri, S. Stolze, Y.K. Wang
2018Au04	PRLTA	121,	182501	K. Auranen, D. Seweryniak, M. Albers, A.D. Ayangeakaa, S. Bottoni, M.P. Carpenter, C.J. Chiara, P. Copp, H.M. David, D.T. Doherty, J. Harker, C.R. Hoffman, R.V.F. Janssens, T.L. Khoo, S.A. Kuvin, T. Lauritsen, G. Lotay, A.M. Rogers, J. Sethi, C. Scholey, R. Talwar, W.B. Walters, P.J. Woods, S. Zhu
2018Az05	PRLTA	120,	232502	O. Azzolini, M.T. Barrera, J.W. Beeman, F. Bellini, M. Beretta, M. Biassoni, C. Brofferio, C. Bucci, L. Canonica, S. Capelli, L. Cardani, P. Carniti, N. Casali, L. Cassina, M. Clemenza, O. Cremonesi, A. Cruciani, A. D'Addabbo, I. Dafinei, S. Di Domizio, F. Ferroni, L. Gironi, A. Giuliani, P. Gorla, C. Gotti, G. Keppel, M. Martinez, S. Morganti, S. Nagorny, M. Nastasi, S. Nisi, C. Nones, D. Orlandi, L. Pagnanini, M. Pallavicini, V. Palmieri, L. Pattavina, M. Pavan, G. Pessina, V. Pettinacci, S. Pirro, S. Pozzi, E. Previtali, A. Puiu, F. Reindl, C. Rusconi, K. Schaffner, C. Tomei, M. Vignati, A. Zolotarova
2018Ba03	PRVCA	97,	014322	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, P.L. Molkanov, F.V. Moroz, S. Yu. Orlov, V.N. Panteleev, M.D. Seliverstov, Yu. M. Volkov
2018Ba08	PRVCA	97,	024312	C. Babcock, R. Klawitter, E. Leistenschneider, D. Lascar, B.R. Barquest, A. Finlay, M. Foster, A.T. Gallant, P. Hunt, B. Kootte, Y. Lan, S.F. Paul, M.L. Phan, M.P. Reiter, B. Schultz, D. Short, C. Andreoiu, M. Brodeur, I. Dillmann, G. Gwinner, A.A. Kwiatkowski, K.G. Leach, J. Dilling
2018Ba44	PRVDA	98,	092007	A.S. Barabash, P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Incicchitti, D.V. Kasperovych, V.V. Kobychev, S.I. Konovalov, M. Laubenstein, D.V. Poda, O.G. Polischuk, V.N. Shlegel, V.I. Tretyak, V.I. Umatov, Ya. V. Vasiliev
2018Ba46	EPJAA	54,	225	S. Barsov, Z. Bagdasarian, S. Dymov, R. Gebel, M. Hartmann, A. Kacharava, I. Keshelashvili, A. Khoukaz, V. Komarov, P. Kulessa, A. Kulikov, A. Lehrach, N. Lomidze, B. Lorentz, G. Macharashvili, D. Mchedlishvili, S. Merzliakov, S. Mikirtychyants, M. Nioradze, D. Prasuhn, F. Rathmann, D. Schroer, V. Serdyuk, V. Shmakova, R. Stassen, H. Stroher, M. Tabidze, A. Taschner, S. Trusov, D. Tsirkov, Yu. Uzikov, Yu. Valdau, C. Wilkin
2018Be03	ARISE	134,	416	D.E. Bergeron, J.T. Cessna, B.E. Zimmerman
2018Be25	JPGPE	45,	095101	P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, A. Incicchitti, B.N. Kropivyansky, M. Laubenstein, S. Nisi, D.V. Poda, O.G. Polischuk, V.I. Tretyak
2018Be29	PRVCA	98,	034612	G. Bélier, J. Aupiais, G. Sibbens, A. Moens, D. Vanleeuw
2018Br13	PRVCA	98,	024317	N.T. Brewer, V.K. Utyonkov, K.P. Rykaczewski, Yu. Ts. Oganessian, F. Sh. Abdullin, R.A. Boll, D.J. Dean, S.N. Dmitriev, J.G. Ezold, L.K. Felker, R.K. Grzywacz, M.G. Itkis, N.D. Kovrizhnykh, D.C. McInturff, K. Miernik, G.D. Owen, A.N. Polyakov, A.G. Popeko, J.B. Roberto, A.V. Sabelnikov, R.N. Sagaidak, I.V. Shirokovsky, M.V. Shumeiko, N.J. Sims, E.H. Smith, V.G. Subbotin, A.M. Sukhov, A.I. Svirikhin, Yu. S. Tsyganov, S.M. Van Cleve, A.A. Voinov, G.K. Vostokin, C.S. White, J.H. Hamilton, M.A. Stoyer
2018Br15	PRVCA	98,	024324	R. Broda, Ł. W. Iskra, R.V.F. Janssens, B.A. Brown, B. Fornal, J. Wrzesiński, N. Cieplicka-Oryńczak, M.P. Carpenter, C.J. Chiara, C.R. Hoffman, F.G. Kondev, G.J. Lane, T. Lauritsen, Zs. Podolyák, D. Seweryniak, W.B. Walters, S. Zhu

2018Ca22	PRVCA	98,	034310	R. Caballero-Folch, I. Dillmann, J. Agramunt, J.L. Taín, A. Algora, J. Äystö, F. Calviño, L. Canete, G. Cortès, C. Domingo-Pardo, T. Eronen, E. Ganioglu, W. Gelletly, D. Gorelov, V. Guadilla, J. Hakala, A. Jokinen, A. Kankainen, V. Kolhinen, J. Koponen, M. Marta, E. Mendoza, A. Montaner-Pizá, I. Moore, C.R. Nobs, S.E.A. Orrigo, H. Penttilä, I. Pohjalainen, J. Reinikainen, A. Riego, S. Rinta-Antila, B. Rubio, P. Salvador-Castiñeira, V. Simutkin, A. Tarifeño-Saldivia, A. Tolosa-Delgado, A. Voss
2018Ch25	PRVCA	97,	054318	R.J. Charity, K.W. Brown, J. Okolowicz, M. Ploszajczak, J.M. Elson, W. Reviol, L.G. Sobotka, W.W. Buhro, Z. Chajecki, W.G. Lynch, J. Manfredi, R. Shane, R.H. Showalter, M.B. Tsang, D. Weisshaar, J.R. Winkelbauer, S. Bedoor, A.H. Wuosmaa
2018Ch31	PYLBB	781,	412	J. Chen, J.L. Lou, Y.L. Ye, Z.H. Li, D.Y. Pang, C.X. Yuan, Y.C. Ge, Q.T. Li, H. Hua, D.X. Jiang, X.F. Yang, F.R. Xu, J.C. Pei, J. Li, W. Jiang, Y.L. Sun, H.L. Zang, Y. Zhang, N. Aoi, E. Ideguchi, H.J. Ong, J. Lee, J. Wu, H.N. Liu, C. Wen, Y. Ayyad, K. Hatanaka, D.T. Tran, T. Yamamoto, M. Tanaka, T. Suzuki
2018Cu02	PRVCA	97,	054327	J.G. Cubiss, A.E. Barzakh, M.D. Seliverstov, A.N. Andreyev, B. Andel, S. Antalic, P. Ascher, D. Atanasov, D. Beck, J. Bieron, K. Blaum, Ch. Borgmann, M. Breitenfeldt, L. Capponi, T.E. Cocolios, T. Day Goodacre, X. Derkx, H. De Witte, J. Elseviers, D.V. Fedorov, V.N. Fedosseev, S. Fritzsche, L.P. Gaffney, S. George, L. Ghys, F.P. Hessberger, M. Huyse, N. Imai, Z. Kalaninova, D. Kisler, U. Koster, M. Kowalska, S. Kreim, J.F.W. Lane, V. Liberati, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, S. Mitsuoka, P.L. Molkanov, Y. Nagame, D. Neidherr, K. Nishio, S. Ota, D. Pauwels, L. Popescu, D. Radulov, E. Rapisarda, J.P. Revill, M. Rosenbusch, R.E. Rossel, S. Rothe, K. Sandhu, L. Schweikhard, S. Sels, V.L. Truesdale, C. Van Beveren, P. Van den Bergh, Y. Wakabayashi, P. Van Duppen, K.D.A. Wendt, F. Wienholtz, B.W. Whitmore, G.L. Wilson, R.N. Wolf, K. Zuber
2018Cu04	PYLBB	786,	355	J.G. Cubiss, A.E. Barzakh, A.N. Andreyev, M. Al Monthery, N. Althubiti, B. Andel, S. Antalic, D. Atanasov, K. Blaum, T.E. Cocolios, T. Day Goodacre, R.P. de Groote, A. de Roubin, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, R. Ferrer, D.A. Fink, L.P. Gaffney, L. Ghys, A. Gredley, R.D. Harding, F. Herfurth, M. Huyse, N. Imai, D.T. Joss, U. Koster, S. Kreim, V. Liberati, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, P. Mosat, D. Neidherr, G.G. O'Neill, R.D. Page, T.J. Procter, E. Rapisarda, M. Rosenbusch, S. Rothe, K. Sandhu, L. Schweikhard, M.D. Seliverstov, S. Sels, P. Spagnoletti, V.L. Truesdale, C. Van Beveren, P. Van Duppen, M. Veinhard, M. Venhart, M. Veselsky, F. Wearing, A. Welker, F. Wienholtz, R.N. Wolf, S.G. Zemlyanoy, K. Zuber
2018Di11	PYLBB	784,	199	A. Di Nitto, J. Khuyagbaatar, D. Ackermann, L.-L. Andersson, E. Badura, M. Block, H. Brand, I. Conrad, D.M. Cox, Ch. E. Dullmann, J. Dvorak, K. Eberhardt, P.A. Ellison, N.E. Esker, J. Even, C. Fahlander, U. Forsberg, J.M. Gates, P. Golubev, O. Gothe, K.E. Gregorich, W. Hartmann, R.D. Herzberg, F.P. Hessberger, J. Hoffmann, R. Hollinger, A. Hubner, E. Jager, B. Kindler, S. Klein, I. Kojouharov, J.V. Kratz, J. Krier, N. Kurz, S. Lahiri, B. Lommel, M. Maiti, R. Mandl, E. Merchan, S. Minami, A.K. Mistry, C. Mokry, H. Nitsche, J.P. Omtvedt, G.K. Pang, D. Renisch, D. Rudolph, J. Runke, L.G. Sarmiento, M. Schadel, H. Schaffner, B. Schausten, A. Semchenkov, J. Steiner, P. Thorle-Pospiech, N. Trautmann, A. Turler, J. Uusitalo, D. Ward, M. Wegrzecki, P. Wieczorek, N. Wiehl, A. Yakushev, V. Yakusheva
2018Es07	JRNCD	318,	515	R.M. Essex, J.L. Mann, R. Colle, L. Laureano-Perez, M.E. Bennett, H. Dion, R. Fitzgerald, A.M. Gaffney, A. Gourgiotis, A. Hubert, K.G.W. Inn, W.S. Kinman, S.P. Lamont, R. Steiner, R.W. Williams
2018Fu08	JUPSA	87,	014202	N. Fukuda, T. Kubo, D. Kameda, N. Inabe, H. Suzuki, Y. Shimizu, H. Takeda, K. Kusaka, Y. Yanagisawa, M. Ohtake, K. Tanaka, K. Yoshida, H. Sato, H. Baba, M. Kurokawa, T. Ohnishi, N. Iwasa, A. Chiba, T. Yamada, E. Ideguchi, S. Go, R. Yokoyama, T. Fujii, H. Nishibata, K. Ieki, D. Murai, S. Momota, D. Nishimura, Y. Sato, J. Hwang, S. Kim, O.B. Tarasov, D.J. Morrissey, G. Simpson

2018Fu11	PRVCA	98,	014315	C.Y. Fu, Y.H. Zhang, X.H. Zhou, M. Wang, Yu. A. Litvinov, K. Blaum, H.S. Xu, X. Xu, P. Shuai, Y.H. Lam, R.J. Chen, X.L. Yan, T. Bao, X.C. Chen, H. Chen, J.J. He, S. Kubono, D.W. Liu, R.S. Mao, X.W. Ma, M.Z. Sun, X.L. Tu, Y.M. Xing, P. Zhang, Q. Zeng, X. Zhou, W.L. Zhan, S. Litvinov, G. Audi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, B.H. Sun, Y. Sun, F.R. Xu
2018Ga04	ARISE	134,	421	E. Garcia-Torano, V. Peyres, M. Roteta, M. Mejuto, A. Sanchez-Cabezudo, E. Romero
2018Ga18	PRVCA	97,	064317	L. Gaudefroy, S. Peru, N. Arnal, J. Aupiais, J.-P. Delaroche, M. Girod, J. Libert
2018Ga37	ARISE	140,	157	E. Garcia-Torano, T. Altzitzoglou, P. Auerbach, M.-M. Be, C. Bobin, P. Cassette, F. Chartier, R. Dersch, M. Fernandez, H. Isnard, K. Kossert, V. Lourenco, O. Nahle, A. Nonell, V. Peyres, S. Pomme, A. Rozkov, A. Sanchez-Cabezudo, J. Sochorova
2018Gr09	PRVCA	98,	044607	J.R. Griswold, C.U. Jost, D.W. Stracener, S.H. Bruffey, D. Denton, M. Garland, L. Heilbronn, S. Mirzadeh
2018Ha19	PRLTA	120,	182502	D.J. Hartley, F.G. Kondev, R. Orford, J.A. Clark, G. Savard, A.D. Ayangeakaa, S. Bottoni, F. Buchinger, M.T. Burkey, M.P. Carpenter, P. Copp, D.A. Gorelov, K. Hicks, C.R. Hoffman, C. Hu, R.V.F. Janssens, J.W. Klimes, T. Lauritsen, J. Sethi, D. Seweryniak, K.S. Sharma, H. Zhang, S. Zhu, Y. Zhu
2018Ha30	PRLTA	121,	102501	M. Hammen, W. Nortershauser, D.L. Balabanski, M.L. Bissell, K. Blaum, I. Budincevic, B. Cheal, K.T. Flanagan, N. Frommgen, G. Georgiev, Ch. Geppert, M. Kowalska, K. Kreim, A. Krieger, W. Nazarewicz, R. Neugart, G. Neyens, J. Papuga, P.-G. Reinhard, M.M. Rajabali, S. Schmidt, D.T. Yordanov
2018Hi07	PRVCA	98,	014321	Y. Hirayama, Y.X. Watanabe, M. Mukai, M. Ahmed, S.C. Jeong, Y. Kakiguchi, S. Kimura, M. Oyaizu, J.H. Park, P. Schury, M. Wada, H. Watanabe, H. Miyatake
2018Hu13	PRVCA	98,	044302	T.H. Huang, W.Q. Zhang, M.D. Sun, Z. Liu, J.G. Wang, X.Y. Liu, B. Ding, Z.G. Gan, L. Ma, H.B. Yang, Z.Y. Zhang, L. Yu, J. Jiang, K.L. Wang, Y.S. Wang, M.L. Liu, Z.H. Li, J. Li, X. Wang, H.Y. Lu, A.H. Feng, C.J. Lin, L.J. Sun, N.R. Ma, D.X. Wang, F.S. Zhang, W. Zuo, X.H. Zhou, H.S. Xu, G.Q. Xiao
2018Ia01	PRVCA	97,	035501	V.E. Iacob, J.C. Hardy, L. Chen, V. Horvat, M. Bencomo, N. Nica, H.I. Park, B.T. Roeder, A. Saastamoinen
2018It04	PRLTA	120,	152501	Y. Ito, P. Schury, M. Wada, F. Arai, H. Haba, Y. Hirayama, S. Ishizawa, D. Kaji, S. Kimura, H. Koura, M. MacCormick, H. Miyatake, J.Y. Moon, K. Morimoto, K. Morita, M. Mukai, I. Murray, T. Niwase, K. Okada, A. Ozawa, M. Rosenbusch, A. Takamine, T. Tanaka, Y.X. Watanabe, H. Wollnik, S. Yamaki
2018Iz01	PRVCA	97,	014309	C. Izzo, G. Bollen, M. Brodeur, M. Eibach, K. Gulyuz, J.D. Holt, J.M. Kelly, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, S.R. Stroberg, C.S. Sumithrarachchi, A.A. Valverde, A.C.C. Villari
2018Ka47	PRVCA	98,	054312	L. Kaya, A. Vogt, P. Reiter, C. Müller-Gatermann, M. Siciliano, L. Coraggio, N. Itaco, A. Gargano, K. Arnswald, D. Bazzacco, B. Birkenbach, A. Blazhev, A. Bracco, B. Bruyneel, L. Corradi, F.C.L. Crespi, G. de Angelis, M. Droste, J. Eberth, E. Farnea, E. Fioretto, C. Fransen, A. Gadea, A. Giaz, A. Görgen, A. Gottardo, K. Hadyńska-Klek, H. Hess, R. Hetzenegger, R. Hirsch, P.R. John, J. Jolie, A. Jungclaus, W. Korten, S. Leoni, L. Lewandowski, S. Lunardi, R. Menegazzo, D. Mengoni, C. Michelagnoli, T. Mijatović, G. Montagnoli, D. Montanari, D. Napoli, Zs. Podolyák, G. Pollarolo, F. Recchia, D. Rosiak, N. Saed-Samii, E. Şahin, F. Scarlassara, M. Seidlitz, P.-A. Söderström, A.M. Stefanini, O. Stezowski, S. Szilner, B. Szpak, C. Ur, J.J. Valiente-Dobón, M. Weinert, K. Wolf, K.O. Zell
2018Ki12	PRLTA	121,	142701	O.S. Kirsebom, O. Tengblad, R. Lica, M. Munch, K. Riisager, H.O.U. Fynbo, M.J.G. Borge, M. Madurga, I. Marroquin, A.N. Andreyev, T.A. Berry, E.R. Christensen, P. Diaz Fernandez, D.T. Doherty, P. Van Duppen, L.M. Fraile, M.C. Gallardo, P.T. Greenlees, L.J. Harkness-Brennan, N. Hubbard, M. Huyse, J.H. Jensen, H. Johansson, B. Jonson, D.S. Judson, J. Konki, I. Lazarus, M.V. Lund, N. Marginean, R. Marginean, A. Perea, C. Mihai, A. Negret, RD. Page, V. Pucknell, P. Rahkila, O. Sorlin, C. Sotty, J.A. Swartz, H.B. Sorensen, H. Tornqvist, V. Vedia, N. Warr, H. De Witte

2018Ki21	IMSPF	430,	134	S. Kimura, Y. Ito, D. Kaji, P. Schury, M. Wada, H. Haba, T. Hashimoto, Y. Hirayama, M. MacCormic, H. Miyatake, J.Y. Moon, K. Morimoto, M. Mukai, I. Murray, A. Ozawa, M. Rosenbusch, H. Schatz, A. Takamine, T. Tanaka, Y.X. Watanabe, H. Wollnik
2018Ko05	PRVCA	97,	024306	J. Konki, B. Sulignano, P.T. Greenlees, Ch. Theisen, K. Auranen, H. Badran, R. Briselet, D.M. Cox, F. Defranchi Bisso, J. Dobaczewski, T. Grahn, A. Herzan, R.-D. Herzberg, R. Julin, S. Juutinen, J. Khuyagbaatar, M. Leino, A. Lightfoot, J. Pakarinen, P. Papadakis, J. Partanen, P. Rahkila, M. Sandzelius, J. Saren, C. Scholey, Y. Shi, M. Smolen, J. Sorri, S. Stolze, J. Uusitalo
2018Ko15	NDSBA	150,	1	F.G. Kondev, S. Juutinen, D.J. Hartley
2018La03	JPGPE	45,	035105	N. Lalovic, for the AGATA Collaboration
2018Le03	PRLTA	120,	062503	E. Leistenschneider, M.P. Reiter, S. Ayet San Andrés, B. Kootte, J.D. Holt, P. Navratil, C. Babcock, C. Barbieri, B.R. Barquest, J. Bergmann, J. Bollig, T. Brunner, E. Dunling, A. Finlay, H. Geissel, L. Graham, F. Greiner, H. Hergert, C. Hornung, C. Jesch, R. Klawitter, Y. Lan, D. Lascar, K.G. Leach, W. Lippert, J.E. McKay, S.F. Paul, A. Schwenk, D. Short, J. Simonis, V. Somà, R. Steinbrügge, S.R. Stroberg, R. Thompson, M.E. Wieser, C. Will, M. Yavor, C. Andreoiu, T. Dickel, I. Dillmann, G. Gwinner, W.R. Plaß, C. Scheidenberger, A.A. Kwiatkowski, J. Dilling
2018Le10	PRVCA	98,	024302	M.C. Lewis, E. Parr, R.D. Page, C. McPeake, D.T. Joss, F.A. Ali, K. Auranen, A.D. Briscoe, L. Capponi, T. Grahn, P.T. Greenlees, J. Henderson, A. Herzáň, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Labiche, M. Leino, P.J.R. Mason, M. Nyman, D. O'Donnell, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, J.P. Revill, P. Ruotsalainen, M. Sandzelius, J. Sarén, B. Sayğı, C. Scholey, J. Simpson, J.F. Smith, M. Smolen, J. Sorri, S. Stolze, A. Thornthwaite, J. Uusitalo
2018Le18	PRLTA	121,	262502	S. Leblond, F.M. Marques, J. Gibelin, N.A. Orr, Y. Kondo, T. Nakamura, J. Bonnard, N. Michel, N.L. Achouri, T. Aumann, H. Baba, F. Delaunay, Q. Deshayes, P. Doornenbal, N. Fukuda, J.W. Hwang, N. Inabe, T. Isobe, D. Kameda, D. Kanno, S. Kim, N. Kobayashi, T. Kobayashi, T. Kubo, J. Lee, R. Minakata, T. Motobayashi, D. Murai, T. Murakami, K. Muto, T. Nakashima, N. Nakatsuka, A. Navin, S. Nishi, S. Ogoshi, H. Otsu, H. Sato, Y. Satou, Y. Shimizu, H. Suzuki, K. Takahashi, H. Takeda, S. Takeuchi, R. Tanaka, Y. Togano, A.G. Tuff, M. Vandebrouck, K. Yoneda
2018Li06	PRVCA	97,	024305	R. Lica, for the IDS Collaboration
2018Ly01	PRVCA	97,	024309	K.M. Lynch, S.G. Wilkins, J. Billowes, C.L. Binnersley, M.L. Bissell, K. Chrysalidis, T.E. Cocolios, T. Day Goodacre, R.P. de Groote, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, W. Gins, R. Heinke, A. Koszorus, B.A. Marsh, P.L. Molkanov, P. Naubereit, G. Neyens, C.M. Ricketts, S. Rothe, C. Seiffert, M.D. Seliverstov, H.H. Stroke, D. Studer, A.R. Vernon, K.D.A. Wendt, X.F. Yang
2018Ma51	PRVCA	98,	024617	A.J. Mayer, M. Wieser, M. Alanssari, D. Frekers, W. Matthews, J. Dilling, R.I. Thompson
2018Mi03	PRVCA	97,	054317	K. Miernik, K.P. Rykaczewski, R. Grzywacz, C.J. Gross, M. Madurga, D. Miller, D.W. Stracener, J.C. Batchelder, N.T. Brewer, A. Korgul, C. Mazzocchi, A.J. Mendez, Y. Liu, S.V. Paulauskas, J.A. Winger, M. Wolinska-Cichocka, E.F. Zganjar
2018Mi08	PRLTA	121,	022506	S. Michimasa, M. Kobayashi, Y. Kiyokawa, S. Ota, D.S. Ahn, H. Baba, G.P.A. Berg, M. Dozono, N. Fukuda, T. Furuno, E. Ideguchi, N. Inabe, T. Kawabata, S. Kawase, K. Kisamori, K. Kobayashi, T. Kubo, Y. Kubota, C.S. Lee, M. Matsushita, H. Miya, A. Mizukami, H. Nagakura, D. Nishimura, H. Oikawa, H. Sakai, Y. Shimizu, A. Stolz, H. Suzuki, M. Takaki, H. Takeda, S. Takeuchi, H. Tokieda, T. Uesaka, K. Yako, Y. Yamaguchi, Y. Yanagisawa, R. Yokoyama, K. Yoshida, S. Shimoura
2018Mi11	APOBB	49,	613	A.K. Mistry, Z. Zhang, F.P. Hessberger, D. Ackermann, B. Andel, S. Antalic, M. Block, P. Chhetri, F. Dechery, C. Droese, Ch. E. Dullmann, F. Giacoppo, J. Hoffmann, O. Kaleja, J. Khuyagbaatar, N. Kurz, M. Laatiaoui, J. Maurer, P. Mosat, J. Piot, S. Raeder, M. Vostinar, A. Yakushev

2018Mo14	PRLTA	120,	232501	M. Mougeot, D. Atanasov, K. Blaum, K. Chrysalidis, T. Day Goodacre, D. Fedorov, V. Fedosseev, S. George, F. Herfurth, J.D. Holt, D. Lunney, V. Manea, B. Marsh, D. Neidherr, M. Rosenbusch, S. Rothe, L. Schweikhard, A. Schwenk, C. Seiffert, J. Simonis, S.R. Stroberg, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2018Mu18	PRVCA	98,	064308	I. Mukha, L.V. Grigorenko, D. Kostyleva, L. Acosta, E. Casarejos, A.A. Ciemny, W. Dominik, J.A. Dueñas, V. Dunin, J.M. Espino, A. Estradé, F. Farinon, A. Fomichev, H. Geissel, A. Gorshkov, Z. Janas, G. Kamiński, O. Kiselev, R. Knöbel, S. Krupko, M. Kuich, Yu. A. Litvinov, G. Marquinez-Durán, I. Martel, C. Mazzocchi, C. Nociforo, A.K. Ordúz, M. Pfützner, S. Pietri, M. Pomorski, A. Prochazka, S. Rymzhanova, A.M. Sánchez-Benítez, C. Scheidenberger, P. Sharov, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y.K. Tanaka, H. Weick, M. Winkler, J.S. Winfield, X. Xu, M.V. Zhukov
2018Mu.1	NIMAE	884,	1	M. Mukai, Y. Hirayama, Y.X. Watanabe, P. Schury, H.S. Jung, M. Ahmed, H. Haba, H. Ishiyama, S.C. Jeong, Y. Kakiguchi, S. Kimura, J.Y. Moon, M. Oyaizu, A. Ozawa, J.H. Park, H. Ueno, M. Wada, H. Miyatake
2018Na20	PRVCA	98,	024319	B.S. Nara Singh, D.M. Cullen, M.J. Taylor, P.C. Srivastava, P. Van Isacker, O. Beeke, B. Dodson, C. Scholey, D. O'Donnell, U. Jakobsson, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Khan, M. Leino, A.-P. Leppanen, S. Eeckhaudt, K. Mantyniemi, J. Pakarinen, P. Peura, P. Rahkila, J. Saren, J. Sorri, J. Uusitalo, M. Venhart
2018Ne09	EPJAA	54,	154	D.A. Nesterenko, T. Eronen, A. Kankainen, L. Canete, A. Jokinen, I.D. Moore, H. Penttilä, S. Rinta-Antila, A. de Roubin, M. Vilen
2018No01	PRVCA	97,	015501	F. Nozzoli
2018On01	PRVCA	98,	065803	W.-J. Ong, A.A. Valverde, M. Brodeur, G. Bollen, M. Eibach, K. Gulyuz, A. Hamaker, C. Izzo, D. Puentes, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, J. Surbrook, A.C.C. Villari, I.T. Yandow
2018Or02	PRLTA	120,	262702	R. Orford, N. Vassh, J.A. Clark, G.C. McLaughlin, M.R. Mumpower, G. Savard, R. Surman, A. Aprahamian, F. Buchinger, M.T. Burkey, D.A. Gorelov, T.Y. Hirsh, J.W. Klimes, G.E. Morgan, A. Nystrom, K.S. Sharma
2018Or.A	Th.-McGill			R. Orford
2018Pa20	PRVCA	97,	051301	J. Park, R. Krucken, D. Lubos, R. Gernhauser, M. Lewitowicz, S. Nishimura, D.S. Ahn, H. Baba, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, I. Celikovic, G. de France, P. Doornenbal, T. Faestermann, Y. Fang, N. Fukuda, J. Giovinazzo, N. Goel, M. Gorska, H. Grawe, S. Ilieva, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, G. Lorusso, K. Moschner, D. Murai, I. Nishizuka, Z. Patel, M.M. Rajabali, S. Rice, H. Sakurai, H. Schaffner, Y. Shimizu, L. Sinclair, P.-A. Soderstrom, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, Z. Wang, H. Watanabe, J. Wu, Z.Y. Xu
2018Pa37	PRVCA	98,	024321	E. Parr, R.D. Page, D.T. Joss, F.A. Ali, K. Auranen, L. Capponi, T. Grahn, P.T. Greenlees, J. Henderson, A. Herzáň, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Labiche, M. Leino, P.J.R. Mason, C. McPeake, D. O'Donnell, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, J.P. Revill, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, J. Simpson, J.F. Smith, M. Smolen, J. Sorri, S. Stolze, A. Thornthwaite, J. Uusitalo
2018Pa45	JRNCD	318,	711	T. Parsons-Davis, J. Wimpenny, C.B. Keller, K. Thomas, K.M. Samperton, P.R. Renne, R. Mundil, K. Moody, K. Knight, M.J. Kristo, R. Williams
2018Pe02	ARISE	134,	142	V. Peyres, E. Garcia-Torano
2018Po07	PRVCA	97,	054310	F. Ponce, E. Swanberg, J. Burke, R. Henderson, S. Friedrich
2018Ra11	PRLTA	120,	232503	S. Raeder, D. Ackermann, H. Backe, R. Beerwerth, J.C. Berengut, M. Block, A. Borschevsky, B. Cheal, P. Chhetri, Ch. E. Dullmann, V.A. Dzuba, E. Eliav, J. Even, R. Ferrer, V.V. Flambaum, S. Fritzsche, F. Giacoppo, S. Gotz, F.P. Hessberger, M. Huyse, U. Kaldor, O. Kaleja, J. Khuyagbaatar, P. Kunz, M. Laatiaoui, F. Lautenschlager, W. Lauth, A.K. Mistry, E. Minaya Ramirez, W. Nazarewicz, S.G. Porsev, M.S. Safronova, U.I. Safronova, B. Schuetrumpf, P. Van Duppen, T. Walther, C. Wraith, A. Yakushev

2018Ra27	NIMAE	911,	79	B.C. Rasco, N.T. Brewer, R. Yokoyama, R. Grzywacz, K.P. Rykaczewski, A. Tolosa-Delgado, J. Agramunt, J.L. Tain, A. Algora, O. Hall, C. Griffin, T. Davinson, V.H. Phong, J. Liu, S. Nishimura, G.G. Kiss, N. Nepal, A. Estrade
2018Re07	PRVCA	97,	054332	K. Rezynkina, A. Lopez-Martens, K. Hauschild, I. Deloncle, S. Peru, P. Brionnet, M.L. Chelnokov, V.I. Chepigin, O. Dorvaux, F. Dechery, H. Faure, B. Gall, A.V. Isaev, I.N. Izosimov, D.E. Katrasev, A.N. Kuznetsov, A.A. Kuznetsova, O.N. Malyshev, A.G. Popeko, Y.A. Popov, E.A. Sokol, A.I. Svirikhin, A.V. Yeremin
2018Re11	PRVCA	98,	024310	M.P. Reiter, S. Ayet San Andres, E. Dunling, B. Kootte, E. Leistenschneider, C. Andreoiu, C. Babcock, B.R. Barquest, J. Bollig, T. Brunner, I. Dillmann, A. Finlay, G. Gwinner, L. Graham, J.D. Holt, C. Hornung, C. Jesch, R. Klawitter, Y. Lan, D. Lascar, J.E. McKay, S.F. Paul, R. Steinbrugge, R. Thompson, J.L. Tracy, M.E. Wieser, C. Will, T. Dickel, W.R. Plass, C. Scheidenberger, A.A. Kwiatkowski, J. Dilling
2018Ro14	PRVCA	97,	064306	M. Rosenbusch, Y. Ito, P. Schury, M. Wada, D. Kaji, K. Morimoto, H. Haba, S. Kimura, H. Koura, M. MacCormick, H. Miyatake, J.Y. Moon, K. Morita, I. Murray, T. Niwase, A. Ozawa, M. Reponen, A. Takamine, T. Tanaka, H. Wollnik
2018Rz01	PRVCA	98,	064315	T. Rzaca-Urban, W. Urban, M. Czerwiński, J. Wiśniewski, A. Blanc, H. Faust, M. Jentschel, P. Mutti, U. Köster, T. Soldner, G. de France, G.S. Simpson, C.A. Ur
2018Sa45	PRVCA	98,	044307	A. Såamark-Roth, L.G. Sarmiento, D. Rudolph, J. Ljungberg, B.G. Carlsson, C. Fahlander, U. Forsberg, P. Golubev, I. Ragnarsson, D. Ackermann, L.-L. Andersson, M. Block, H. Brand, D.M. Cox, A. Di Nitto, Ch. E. Düllmann, K. Eberhardt, J. Even, J.M. Gates, J. Gerl, K.E. Gregorich, C.J. Gross, R.-D. Herzberg, F.P. Hessberger, E. Jager, J. Khuyagbaatar, B. Kindler, I. Kojouharov, J.V. Kratz, J. Krier, N. Kurz, B. Lommel, A. Mistry, C. Mokry, J.P. Omtvedt, P. Papadakis, J. Runke, K. Rykaczewski, M. Schädel, H. Schaffner, B. Schausten, P. Thörle-Pospiech, N. Trautmann, T. Torres, A. Türler, A. Ward, N. Wiehl, A. Yakushev
2018Sa.A	JPCSD	940,	012004	A. Saastamoinen, G.J. Lotay, A. Kankainen, B.T. Roeder, R. Chyzh, M. Dag, E. McCleskey, A. Spiridon and R.E. Tribble
2018Sc05	PYLBB	779,	324	S. Schmidt, J. Billowes, M.L. Bissell, K. Blaum, R.F. Garcia Ruiz, H. Heylen, S. Malbrunot-Ettenauer, G. Neyens, W. Nortershauser, G. Plunien, S. Sailer, V.M. Shabaev, L.V. Skripnikov, I.I. Tupitsyn, A.V. Volotka, X.F. Yang
2018Sh09	ARISE	136,	101	H.A. Shugart, E. Browne, E.B. Norman
2018Sh11	JUPSA	87,	014203	Y. Shimizu, T. Kubo, N. Fukuda, N. Inabe, D. Kameda, H. Sato, H. Suzuki, H. Takeda, K. Yoshida, G. Lorusso, H. Watanabe, G.S. Simpson, A. Jungclaus, H. Baba, F. Browne, P. Doornenbal, G. Gey, T. Isobe, Z. Li, S. Nishimura, P.-A. Soderstrom, T. Sumikama, J. Taprogge, Z. Vajta, J. Wu, Z. Xu, A. Odahara, A. Yagi, H. Nishibata, R. Lozeva, C. Moon, H.S. Jung
2018Sh27	PRVCA	98,	015502	P.D. Shidling, R.S. Behling, B. Fenker, J.C. Hardy, V.E. Iacob, M. Mehlman, H.I. Park, B.T. Roeder, D. Melconian
2018Si28	PRVCA	98,	054307	K. Siegl, K. Kolos, N.D. Scielzo, A. Aprahamian, G. Savard, M.T. Burkey, M.P. Carpenter, P. Chowdhury, J.A. Clark, P. Copp, G.J. Lane, C.J. Lister, S.T. Marley, E.A. McCutchan, A.J. Mitchell, J. Rohrer, M.L. Smith, S. Zhu
2018Sm03	PRLTA	120,	143002	J.A. Smith, S. Hamzeloui, D.J. Fink, E.G. Myers
2018St18	PRVCA	98,	064326	M. Stryjczyk, Y. Tsunoda, I.G. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, U. Köster, B.A. Marsh, T. Otsuka, D. Pauwels, L. Popescu, D. Radulov, M.D. Seliverstov, A.M. Sjödin, P. Van den Bergh, P. Van Duppen, M. Venhart, W.B. Walters, K. Wimmer
2018Sv02	BRSPE	82,	632	A.I. Svirikhin, A.V. Yeremin, A.V. Andreev, I.N. Izosimov, A.V. Isaev, A.N. Kuznetsov, A.A. Kuznetsova, O.N. Malyshev, A.G. Popeko, Y.A. Popov, E.A. Sokol, M.L. Chelnokov, V.I. Chepigin, T.M. Schneidman, B. Gall, O. Dorvaux, P. Brione, K. Hauschild, A. Lopez-Martenz, K. Rezynkina, S. Mullins, P. Jones, P. Mosat, B. Andel, Z. Kalaninova, M.Z. Asfari, N. Yoshihiro, J. Piot, E. Stefanova, D. Tonev

2018Ta17	PRLTA	121,	022501	O.B. Tarasov, D.S. Ahn, D. Bazin, N. Fukuda, A. Gade, M. Hausmann, N. Inabe, S. Ishikawa, N. Iwasa, K. Kawata, T. Komatsubara, T. Kubo, K. Kusaka, D.J. Morrissey, M. Ohtake, H. Otsu, M. Portillo, T. Sakakibara, H. Sakurai, H. Sato, B.M. Sherrill, Y. Shimizu, A. Stolz, T. Sumikama, H. Suzuki, H. Takeda, M. Thoennessen, H. Ueno, Y. Yanagisawa, K. Yoshida
2018Tu03	PRVCA	97,	014321	X.L. Tu, X.C. Chen, J.T. Zhang, P. Shuai, K. Yue, X. Xu, C.Y. Fu, Q. Zeng, X. Zhou, Y.M. Xing, J.X. Wu, R.S. Mao, L.J. Mao, K.H. Fang, Z.Y. Sun, M. Wang, J.C. Yang, Yu. A. Litvinov, K. Blaum, Y.H. Zhang, Y.J. Yuan, X.W. Ma, X.H. Zhou, H.S. Xu
2018Ut02	PRVCA	97,	014320	V.K. Utyonkov, N.T. Brewer, Yu. Ts. Oganessian, K.P. Rykaczewski, F. Sh. Abdullin, S.N. Dmitriev, R.K. Grzywacz, M.G. Itkis, K. Miernik, A.N. Polyakov, J.B. Roberto, R.N. Sagaidak, I.V. Shirokovsky, M.V. Shumeiko, Yu. S. Tsyganov, A.A. Voinov, V.G. Subbotin, A.M. Sukhov, A.V. Karpov, A.G. Popeko, A.V. Sabelnikov, A.I. Svirikhin, G.K. Vostokin, J.H. Hamilton, N.D. Kovrizhnykh, L. Schlattauer, M.A. Stoyer, Z. Gan, W.X. Huang, L. Ma
2018Va01	PRLTA	120,	032701	A.A. Valverde, M. Brodeur, G. Bollen, M. Eibach, K. Gulyuz, A. Hamaker, C. Izzo, W.-J. Ong, D. Puentes, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C.S. Sumithrarachchi, J. Surbrook, A.C.C. Villari, I.T. Yandow
2018Va04	PRVCA	97,	035503	A.A. Valverde, M. Brodeur, T. Ahn, J. Allen, D.W. Bardayan, F.D. Becchetti, D. Blankstein, G. Brown, D.P. Burdette, B. Frentz, G. Gilardy, M.R. Hall, S. King, J.J. Kolata, J. Long, K.T. Macon, A. Nelson, P.D. O'Malley, M. Skulski, S.Y. Strauss, B. Vande Kolk
2018Vi02	PRLTA	120,	262701	M. Vilen, J.M. Kelly, A. Kankainen, M. Brodeur, A. Aprahamian, L. Canete, T. Eronen, A. Jokinen, T. Kuta, I.D. Moore, M.R. Mumpower, D.A. Nesterenko, H. Penttilä, I. Pohjalainen, W.S. Porter, S. Rinta-Antila, R. Surman, A. Voss, J. Äystö
2018Wa05	IMPEE	27,	1850014	K. Wang, D.Q. Fang, Y.T. Wang, X.X. Xu, L.J. Sun, Z. Bai, M.R. Huang, S.L. Jin, C. Li, H. Li, J. Li, X.F. Li, C.J. Lin, J.B. Ma, P. Ma, W.H. Ma, M.W. Nie, C.Z. Shi, H.W. Wang, J.G. Wang, J.S. Wang, L. Yang, Y.Y. Yang, H.Q. Zhang, Y.J. Zhou, Y.G. Ma, W.Q. Shen
2018Wa20	EPJAA	54,	107	Y.-T. Wang, D.-Q. Fang, K. Wang, X.-X. Xu, L.-J. Sun, Z. Bai, P.-F. Bao, X.-G. Cao, Z.-T. Dai, B. Ding, W.-B. He, M.-R. Huang, S.-L. Jin, Y. Li, C.-J. Lin, L.-X. Liu, M. Lv, J.-B. Ma, P. Ma, H.-W. Wang, J.-G. Wang, J.-S. Wang, S.-T. Wang, Y.-Y. Yang, S.-Q. Ye, H.-Q. Zhang, M.-H. Zhao, C.-L. Zhou, Y.-G. Ma, W.-Q. Shen
2018Xi04	PYLBB	781,	358	Y.M. Xing, K.A. Li, Y.H. Zhang, X.H. Zhou, M. Wang, Yu. A. Litvinov, K. Blaum, S. Wanajo, S. Kubono, G. Martinez-Pinedo, A. Sieverding, R.J. Chen, P. Shuai, C.Y. Fu, X.L. Yan, W.J. Huang, X. Xu, X.D. Tang, H.S. Xu, T. Bao, X.C. Chen, B.S. Gao, J.J. He, Y.H. Lam, H.F. Li, J.H. Liu, X.W. Ma, R.S. Mao, M. Si, M.Z. Sun, X.L. Tu, Q. Wang, J.C. Yang, Y.J. Yuan, Q. Zeng, P. Zhang, X. Zhou, W.L. Zhan, S. Litvinov, G. Audi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, C. Frohlich, T. Rauscher, F.-K. Thielemann, B.H. Sun, Y. Sun, A.C. Dai, F.R. Xu
2018Xu04	PRVCA	97,	034305	X.-D. Xu, I. Mukha, L.V. Grigorenko, C. Scheidenberger, L. Acosta, E. Casarejos, V. Chudoba, A.A. Ciemny, W. Dominik, J. Duénas-Díaz, V. Dunin, J.M. Espino, A. Estradé, F. Farinon, A. Fomichev, H. Geissel, T.A. Golubkova, A. Gorshkov, Z. Janas, G. Kaminski, O. Kiselev, R. Knöbel, S. Krupko, M. Kuich, Yu. A. Litvinov, G. Marquinez-Durán, I. Martel, C. Mazzocchi, C. Nociforo, A.K. Ordúz, M. Pfützner, S. Pietri, M. Pomorski, A. Prochazka, S. Rymzhanova, A.M. Sánchez-Benítez, P. Sharov, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y.K. Tanaka, H. Weick, M. Winkler, J.S. Winfield
2018Xu05	PYLBB	782,	619	Z.Y. Xu, H. Heylen, K. Asahi, F. Boulay, J.M. Daugas, R.P. de Groote, W. Gins, O. Kamalou, A. Koszorus, M. Lykiardopoulou, T.J. Mertzimekis, G. Neyens, H. Nishibata, T. Otsuka, R. Orset, A. Poves, T. Sato, C. Stodel, J.C. Thomas, N. Tsunoda, Y. Utsuno, M. Vandebrouck, X.F. Yang
2018Ya01	PYLBB	777,	212	H.B. Yang, L. Ma, Z.Y. Zhang, C.L. Yang, Z.G. Gan, M.M. Zhang, M.H. Huang, L. Yu, J. Jiang, Y.L. Tian, Y.S. Wang, J.G. Wang, Z. Liu, M.L. Liu, L.M. Duan, S.G. Zhou, Z.Z. Ren, X.H. Zhou, H.S. Xu, G.Q. Xiao

2018Ya11	PRVCA	97,	044324	X.F. Yang, Y. Tsunoda, C. Babcock, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, K.T. Flanagan, R.F. Garcia Ruiz, W. Gins, C. Gorges, L.K. Grob, H. Heylen, S. Kaufmann, M. Kowalska, J. Kramer, S. Malbrunot-Ettenauer, R. Neugart, G. Neyens, W. Nörtershauser, T. Otsuka, J. Papuga, R. Sánchez, C. Wraith, L. Xie, D.T. Yordanov
2018Yo07	PRVCA	98,	011303	D.T. Yordanov, D.L. Balabanski, M.L. Bissell, K. Blaum, A. Blazhev, I. Budinčević * 1, N. Frömmgen, Ch. Geppert, H. Grawe, M. Hammen, K. Kreim, R. Neugart, G. Neyens, W. Nörtershauser
2018Zh29	PRVCA	98,	014319	Y.H. Zhang, P. Zhang, X.H. Zhou, M. Wang, Yu. A. Litvinov, H.S. Xu, X. Xu, P. Shuai, Y.H. Lam, R.J. Chen, X.L. Yan, T. Bao, X.C. Chen, H. Chen, C.Y. Fu, J.J. He, S. Kubono, D.W. Liu, R.S. Mao, X.W. Ma, M.Z. Sun, X.L. Tu, Y.M. Xing, Q. Zeng, X. Zhou, W.L. Zhan, S. Litvinov, K. Blaum, G. Audi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, B.H. Sun, Y. Sun, F.R. Xu
				2019
2019Ab04	EPJAA	55,	103	G. Abbas, M. Tahir
2019Ab06	PRVCA	100,	014323	B. Abromeit, V. Tripathi, H.L. Crawford, S.N. Liddick, S. Yoshida, Y. Utsuno, P.C. Bender, B.P. Crider, R. Dungan, P. Fallon, K. Kravvaris, N. Larson, R.S. Lubna, T. Otsuka, C.J. Prokop, A.L. Richard, N. Shimizu, S.L. Tabor, A. Volya
2019Ah04	NIMAE	940,	56	I. Ahmad, F.G. Kondev
2019Ah07	PRLTA	123,	212501	D.S. Ahn, N. Fukuda, H. Geissel, N. Inabe, N. Iwasa, T. Kubo, K. Kusaka, D.J. Morrissey, D. Murai, T. Nakamura, M. Ohtake, H. Otsu, H. Sato, B.M. Sherrill, Y. Shimizu, H. Suzuki, H. Takeda, O.B. Tarasov, H. Ueno, Y. Yanagisawa, K. Yoshida
2019Al24	PRVCA	100,	025501	S.I. Alvis, for the Majorana Collaboration
2019An10	PRVCA	99,	064313	S.A.S. Andres, C. Hornung, J. Ebert, W.R. Plass, T. Dickel, H. Geissel, C. Scheidenberger, J. Bergmann, F. Greiner, E. Haettner, C. Jesch, W. Lippert, I. Mardor, I. Miskun, Z. Patyk, S. Pietri, A. Pihktelev, S. Purushothaman, M.P. Reiter, A.-K. Rink, H. Weick, M.I. Yavor, S. Bagchi, V. Charviakova, P. Constantin, M. Diwisch, A. Finlay, S. Kaur, R. Knobel, J. Lang, B. Mei, I.D. Moore, J.-H. Otto, I. Pohjalainen, A. Prochazka, C. Rappold, M. Takechi, Y.K. Tanaka, J.S. Winfield, X. Xu
2019Ap03	NATUA	568,	532	E. Aprile, for the XENON1T Collaboration
2019Ar04	ZCCNE	79,	440	R. Arnold, for the NEMO-3 Collaboration
2019As04	PRVCA	100,	014304	P. Ascher, N. Althubiti, D. Atanasov, K. Blaum, R.B. Cakirli, S. Grevy, F. Herfurth, S. Kreim, D. Lunney, V. Manea, D. Neidherr, M. Rosenbusch, L. Schweikhard, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2019Au02	PYLBB	792,	187	K. Auranen, D. Seweryniak, M. Albers, A.D. Ayangeakaa, S. Bottoni, M.P. Carpenter, C.J. Chiara, P. Copp, H.M. David, D.T. Doherty, J. Harker, C.R. Hoffman, R.V.F. Janssens, T.L. Khoo, S.A. Kuvin, T. Lauritsen, G. Lotay, A.M. Rogers, C. Scholey, J. Sethi, R. Talwar, W.B. Walters, P.J. Woods, S. Zhu
2019Ay03	PRLTA	123,	082501	Y. Ayyad, B. Olaizola, W. Mittig, G. Potel, V. Zelevinsky, M. Horoi, S. Beceiro Novo, M. Alcorta, C. Andreoiu, T. Ahn, M. Anholm, L. Atar, A. Babu, D. Bazin, N. Bernier, S.S. Bhattacharjee, M. Bowry, R. Caballero-Folch, M. Cortesi, C. Dalitz, E. Dunling, A.B. Garnsworthy, M. Holl, B. Kootte, K.G. Leach, J.S. Randhawa, Y. Saito, C. Santamaria, P. Siuryte, C.E. Svensson, R. Umashankar, N. Watwood, D. Yates
2019Az02	PRLTA	123,	032501	O. Azzolini, J.W. Beeman, F. Bellini, M. Beretta, M. Biassoni, C. Brofferio, C. Bucci, S. Capelli, L. Cardani, P. Carniti, N. Casali, D. Chiesa, M. Clemenza, O. Cremonesi, A. Cruciani, I. Dafinei, S. Di Domizio, F. Ferroni, L. Gironi, A. Giuliani, P. Gorla, C. Gotti, G. Keppel, M. Martinez, S. Nagorny, M. Nastasi, S. Nisi, C. Nones, D. Orlandi, L. Pagnanini, M. Pallavicini, L. Pattavina, M. Pavan, G. Pessina, V. Pettinacci, S. Pirro, S. Pozzi, E. Previtali, A. Puiu, C. Rusconi, K. Schaffner, C. Tomei, M. Vignati, A.S. Zolotarova

2019Az04	PRLTA	123,	262501	O. Azzolini, J.W. Beeman, F. Bellini, M. Beretta, M. Biassoni, C. Brofferio, C. Bucci, S. Capelli, L. Cardani, P. Carniti, N. Casali, D. Chiesa, M. Clemenza, O. Cremonesi, A. Cruciani, I. Dafinei, S. Di Domizio, F. Ferroni, L. Gironi, A. Giuliani, P. Gorla, C. Gotti, G. Keppel, J. Kotila, M. Martinez, S. Nagorny, M. Nastasi, S. Nisi, C. Nones, D. Orlandi, L. Pagnanini, M. Pallavicini, L. Pattavina, M. Pavan, G. Pessina, V. Pettinacci, S. Pirro, S. Pozzi, E. Previtali, A. Puiu, C. Rusconi, K. Schaffner, C. Tomei, M. Vignati, A.S. Zolotarova
2019Ba22	PRVCA	99,	054317	A.E. Barzakh, J.G. Cubiss, A.N. Andreyev, M.D. Seliverstov, B. Andel, S. Antalic, P. Ascher, D. Atanasov, D. Beck, J. Bieroń, K. Blaum, Ch. Borgmann, M. Breitenfeldt, L. Capponi, T.E. Cocolios, T. Day Goodacre, X. Derkx, H. De Witte, J. Elseviers, D.V. Fedorov, V.N. Fedosseev, S. Fritzsche, L.P. Gaffney, S. George, L. Ghys, F.P. Heßberger, M. Huyse, N. Imai, Z. Kalaninová, D. Kisler, U. Köster, M. Kowalska, S. Kreim, J.F.W. Lane, V. Liberati, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, S. Mitsuoka, P.L. Molkanov, Y. Nagame, D. Neidherr, K. Nishio, S. Ota, D. Pauwels, L. Popescu, D. Radulov, E. Rapisarda, J.P. Revill, M. Rosenbusch, R.E. Rossel, S. Rothe, K. Sandhu, L. Schweikhard, S. Sels, V.L. Truesdale, C. Van Beveren, P. Van den Bergh, P. Van Duppen, Y. Wakabayashi, K.D.A. Wendt, F. Wienholtz, B.W. Whitmore, G.L. Wilson, R.N. Wolf, K. Zuber
2019Be27	NUPAB	990,	64	P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, M.L. di Vacri, A. Incicchitti, B.N. Kropivyansky, M. Laubenstein, S. Nisi, D.V. Poda, O.G. Polischuk, V.I. Tretyak
2019Be29	ZAANE	55,	140	P. Belli, R. Bernabei, F.A. Danevich, A. Incicchitti, V.I. Tretyak
2019Bi04	PRVCA	99,	064302	S. Biswas, A. Lemasson, M. Rejmund, A. Navin, Y.H. Kim, C. Michelagnoli, I. Stefan, R. Banik, P. Bednarczyk, S. Bhattacharya, S. Bhattacharyya, E. Clément, H.L. Crawford, G. de France, P. Fallon, G. Frémont, J. Goupil, B. Jacquot, H.J. Li, J. Ljungvall, A. Maj, L. Menager, V. Morel, R. Palit, R.M. Pérez-Vidal, J. Ropert, D. Barrientos, G. Benzoni, B. Birkenbach, A.J. Boston, H.C. Boston, B. Cederwall, J. Collado, D.M. Cullen, P. Désesquelles, C. Domingo-Pardo, J. Dudouet, J. Eberth, V. González, L.J. Harkness-Brennan, H. Hess, A. Jungclaus, W. Korten, M. Labiche, A. Lefevre, R. Menegazzo, D. Mengoni, B. Million, D.R. Napoli, A. Pullia, B. Quintana, D. Ralet, F. Recchia, P. Reiter, F. Saillant, M.D. Salsac, E. Sanchis, O. Stezowski, Ch. Theisen, J.J. Valiente-Dobón, M. Zielińska
2019Br06	PRVCA	99,	024614	R. Briselet, Ch. Theisen, M. Vandebrouck, A. Marchix, M. Airiau, K. Auranen, H. Badran, D. Boilley, T. Calverley, D. Cox, F. Dechery, F. Defranchi Bisso, A. Drouart, B. Gall, T. Goigoux, T. Grahn, P.T. Greenlees, K. Hauschild, A. Herzan, R.D. Herzberg, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, A. Lightfoot, A. Lopez-Martens, A. Mistry, P. Nieminen, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, J. Rubert, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, J. Sorri, S. Stolze, B. Sulignano, J. Uusitalo, A. Ward, M. Zielinska
2019Bu01	PRVCA	99,	015501	D.P. Burdette, M. Brodeur, T. Ahn, J. Allen, D.W. Bardayan, F.D. Becchetti, D. Blankstein, G. Brown, B. Frentz, M.R. Hall, S. King, J.J. Kolata, J. Long, K.T. Macon, A. Nelson, P.D. O'Malley, C. Seymour, M. Skulski, S.Y. Strauss, A.A. Valverde
2019Ch24	PRLTA	122,	212502	Z.Q. Chen, Z.H. Li, H. Hua, H. Watanabe, C.X. Yuan, S.Q. Zhang, G. Lorusso, S. Nishimura, H. Baba, F. Browne, G. Benzoni, K.Y. Chae, F.C.L. Crespi, P. Doornenbal, N. Fukuda, G. Gey, R. Gernhauser, N. Inabe, T. Isobe, D.X. Jiang, A. Jungclaus, H.S. Jung, Y. Jin, D. Kameda, G.D. Kim, Y.K. Kim, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, X.Q. Li, J.L. Lou, G.J. Lane, C.G. Li, D.W. Luo, A. Montaner-Piza, K. Moschner, C.Y. Niu, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Z. Podolyak, T. Sumikama, P.-A. Soderstrom, H. Sakurai, H. Schaffner, G.S. Simpson, K. Steiger, H. Suzuki, J. Taprogge, H. Takeda, Zs. Vajta, H.K. Wang, J. Wu, A. Wendt, C.G. Wang, H.Y. Wu, X. Wang, C.G. Wu, C. Xu, Z.Y. Xu, A. Yagi, Y.L. Ye, K. Yoshinaga
2019Co02	NUPAB	982,	189c	G. Coci, L. Oliva, S. Plumari, S.K. Das, V. Greco

2019Cu02	PRVCA	99,	064317	J.G. Cubiss, A.N. Andreyev, A.E. Barzakh, B. Andel, S. Antalic, T.E. Cocolios, T. Day Goodacre, D.V. Fedorov, V.N. Fedosseev, R. Ferrer, D.A. Fink, L.P. Gaffney, L. Ghys, M. Huyse, Z. Kalaninová, U. Köster, B.A. Marsh, P.L. Molkanov, R.E. Rossel, S. Rothe, M.D. Seliverstov, S. Sels, A.M. Sjödin, M. Stryjczyk, V.L. Truesdale, C. Van Beveren, P. Van Duppen, G.L. Wilson
2019Da02	PRVCA	99,	021302	P.J. Davies, J. Park, H. Grawe, R. Wadsworth, R. Gernhäuser, R. Krücken, F. Nowacki, D.S. Ahn, F. Ameil, H. Baba, T. Bäck, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, I. Çeliković, M. Dewald, P. Doornenbal, T. Faestermann, Y. Fang, G. de France, N. Fukuda, A. Gengelbach, J. Gerl, J. Giovinazzo, S. Go, N. Goel, M. Górska, E. Gregor, H. Hotaka, S. Ilieva, N. Inabe, T. Isobe, D.G. Jenkins, J. Jolie, H.S. Jung, A. Jungclaus, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, M. Lewitowicz, G. Lorusso, D. Lubos, L. Maier, E. Merchan, K. Moschner, D. Murai, F. Naqvi, H. Nishibata, D. Nishimura, S. Nishimura, I. Nishizuka, Z. Patel, N. Pietralla, M.M. Rajabali, S. Rice, H. Sakurai, H. Schaffner, Y. Shimizu, L.F. Sinclair, P.-A. Söderström, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, J. Taprogge, P. Thole, S. Valder, Z. Wang, N. Warr, H. Watanabe, V. Werner, J. Wu, Z.Y. Xu, A. Yagi, K. Yoshinaga, Y. Zhu
2019De11	EPJAA	55,	25	H.M. Devaraja, S. Heinz, O. Beliuskina, S. Hofmann, C. Hornung, G. Munzenberg, D. Ackermann, M. Gupta, Y.K. Gambhir, R.A. Henderson, F.P. Hessberger, A.V. Yeremin, B. Kindler, B. Lommel, J. Maurer, K.J. Moody, K. Nishio, A.G. Popeko, M.A. Stoyer, D.A. Shaughnessy
2019De24	EPJAA	55,	135	H.D. Dearmon, K.S. Krane
2019Do02	PRVCA	99,	015802	A.C. Dombos, A. Spyrou, F. Naqvi, S.J. Quinn, S.N. Liddick, A. Algora, T. Baumann, J. Brett, B.P. Crider, P.A. DeYoung, T. Ginter, J. Gombas, E. Kwan, S. Lyons, W.-J. Ong, A. Palmisano, J. Pereira, C.J. Prokop, D.P. Scriven, A. Simon, M.K. Smith, C.S. Sumithrarachchi
2019Du12	PRVCA	99,	045805	R. Dunlop, C.E. Svensson, C. Andreoiu, G.C. Ball, N. Bernier, H. Bidaman, V. Bildstein, M. Bowry, D.S. Cross, I. Dillmann, M.R. Dunlop, F.H. Garcia, A.B. Garnsworthy, P.E. Garrett, G. Hackman, J. Henderson, J. Measures, D. Mucher, B. Olaizola, K. Ortner, J. Park, C.M. Petrache, J.L. Pore, J.K. Smith, D. Southall, M. Ticu, J. Turko, K. Whitmore, T. Zidar
2019Es04	PRVCA	100,	064309	A. Esmaylzadeh, J.-M. Regis, Y.H. Kim, U. Koster, J. Jolie, V. Karayonchev, L. Knafla, K. Nomura, L.M. Robledo, R. Rodriguez-Guzman
2019Fo10	PRVCA	99,	051302	H.T. Fortune
2019Fr08	HYIND	240,	66	N. Frommgen, W. Nortershauser, M.L. Bissell, K. Blaum, C. Geppert, M. Hammen, M. Kowalska, J. Kramer, K. Kreim, A. Krieger, Y.A. Litvinov, R. Neugart, G. Neyens, J. Papuga, R. Sanchez, D.T. Yordanov
2019Ga11	PRLTA	122,	192501	A. Gando, for the KamLAND-Zen Collaboration
2019Gh11	PRVCA	100,	054310	L. Ghys, A.N. Andreyev, M. Huyse, P. Van Duppen, S. Antalic, A. Barzakh, L. Capponi, T.E. Cocolios, J. Cubiss, X. Derkx, H. De Witte, J. Elseviers, F.P. Hessberger, Z. Kalaninova, U. Koster, J.F.W. Lane, V. Liberati, S. Mitsuoka, Y. Nagame, K. Nishio, S. Ota, D. Pauwels, R.D. Page, L. Popescu, D. Radulov, M.M. Rajabali, E. Rapisarda, K. Sandhu, V.L. Truesdale, P. Van den Bergh, Y. Wakabayashi
2019Gi09	EPJAA	55,	52	A.M. Gicking, K. Takahashi, K.S. Krane
2019Gi11	PRVCA	99,	064310	S.A. Gillespie, A.N. Andreyev, M. Al Monthery, C.J. Barton, S. Antalic, K. Auranen, H. Badran, D. Cox, J.G. Cubiss, D. O'Donnell, T. Grahn, P.T. Greenlees, A. Herzan, E. Higgins, R. Julin, S. Juutinen, J. Klimo, J. Konki, M. Leino, M. Mallaburn, J. Pakarinen, P. Papadakis, J. Partanen, P.M. Prajapati, P. Rahkila, M. Sandzelius, C. Scholey, J. Sorri, S. Stolze, R. Urban, J. Uusitalo, M. Venhart, F. Weaving

2019Go10	PRVCA	99,	054326	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, A.I. Morales, A. Gadea, S. Lunardi, P. Boutachkov, A.M. Bruce, M. Górska, J. Grebosz, S. Pietri, Zs. Podolyák, M. Pfützner, P.H. Regan, D. Rudolph, H. Weick, J. Alcántara Núñez, A. Algora, N. Al-Dahan, G. de Angelis, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, A. Bracco, M. Bunce, F. Camera, E. Casarejos, M.L. Cortes, F.C.L. Crespi, A. Corsi, A.M.D. Bacelar, A.Y. Deo, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, S. Klupp, I. Kojouharov, N. Kurz, S.M. Lenzi, S. Leoni, S. Mandal, R. Menegazzo, D. Mengoni, B. Million, D.R. Napoli, F. Naqvi, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, O. Wieland, H-J. Wollersheim, F. Nowacki, E. Maglione
2019Gy04	ARISE	148,	87	G. Gyurky, Z. Halasz, G.G. Kiss, T. Szucs, Z. Fulop
2019Ha26	PRVCA	100,	024302	G. Häfner, K. Moschner, A. Blazhev, P. Boutachkov, P.J. Davies, R. Wadsworth, F. Ameil, H. Baba, T. Bäck, M. Dewald, P. Doornenbal, T. Faestermann, A. Gengelbach, J. Gerl, R. Gernhäuser, S. Go, M. Górska, H. Grawe, E. Gregor, H. Hotaka, T. Isobe, D.G. Jenkins, J. Jolie, H.S. Jung, I. Kojouharov, N. Kurz, M. Lewitowicz, G. Lorusso, R. Lozeva, E. Merchan, F. Naqvi, H. Nishibata, D. Nishimura, S. Nishimura, N. Pietralla, H. Schaffner, P.-A. Söderstrom, K. Steiger, T. Sumikama, J. Taprogge, P. Thöle, H. Watanbe, N. Warr, V. Werner, Z.Y. Xu, A. Yagi, K. Yoshinaga, Y. Zhu
2019He17	EPJAA	55,	208	F.P. Heßberger
2019He19	PRVAA	100,	022518	F. Heisse, S. Rau, F. Kohler-Langes, W. Quint, G. Werth, S. Sturm, K. Blaum
2019Hi06	PRVCA	100,	014305	J. Hilton, J. Uusitalo, J. Saren, R.D. Page, D.T. Joss, M.A.M. AlAqeel, H. Badran, A.D. Briscoe, T. Calverley, D.M. Cox, T. Grahn, A. Gredley, P.T. Greenlees, R. Harding, A. Herzan, E. Higgins, R. Julin, S. Juutinen, J. Konki, M. Labiche, M. Leino, M.C. Lewis, J. Ojala, J. Pakarinen, P. Papadakis, J. Partanen, P. Rahkila, P. Ruotsalainen, M. Sandzelius, C. Scholey, J. Sorri, L. Sottili, S. Stolze, F. Wearing
2019Hu07	PRVCA	99,	024310	A.M. Hurst, A. Sweet, B.L. Goldblum, R.B. Firestone, M.S. Basunia, L.A. Bernstein, Zs. Révay, L. Szentmiklósi, T. Belgya, J.E. Escher, I. Harsányi, M. Krtička, B.W. Sleaford, J. Vujic
2019Hu15	EPJAA	55,	96	W.J. Huang, D. Atanasov, G. Audi, K. Blaum, R.B. Cakirli, A. Herlert, M. Kowalska, S. Kreim, Yu. A. Litvinov, D. Lunney, V. Manea, M. Mougeot, M. Rosenbusch, L. Schweikhard, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2019Ic02	NPAHA	15,	321	Y. Ichikawa, H. Nishibata, Y. Tsunoda, A. Takamine, K. Imamura, T. Fujita, T. Sato, S. Momiyama, Y. Shimizu, D.S. Ahn, K. Asahi, H. Baba, D.L. Balabanski, F. Boulay, J.M. Daugas, T. Egami, N. Fukuda, C. Funayama, T. Furukawa, G. Georgiev, A. Gladkov, N. Inabe, Y. Ishibashi, T. Kawaguchi, T. Kawamura, Y. Kobayashi, S. Kojima, A. Kusoglu, I. Mukul, M. Niikura, T. Nishizaka, A. Odahara, Y. Ohtomo, T. Otsuka, D. Ralet, G.S. Simpson, T. Sumikama, H. Suzuki, H. Takeda, L.C. Tao, Y. Togano, D. Tominaga, H. Ueno, H. Yamazaki, X.F. Yang
2019Jo03	ARISE	148,	262	G. Jorg
2019Ka04	PRVCA	99,	014301	L. Kaya, A. Vogt, P. Reiter, C. Muller-Gatermann, A. Gargano, L. Coraggio, N. Itaco, A. Blazhev, K. Arnswald, D. Bazzacco, B. Birkenbach, A. Bracco, B. Bruyneel, L. Corradi, F.C.L. Crespi, G. de Angelis, M. Droste, J. Eberth, E. Farnea, E. Fioretto, C. Fransen, A. Gadea, A. Giaz, A. Gorgen, A. Gottardo, K. Hadynska-Klek, H. Hess, R. Hetzenegger, R. Hirsch, P.R. John, J. Jolie, A. Jungclaus, W. Korten, S. Leoni, L. Lewandowski, S. Lunardi, R. Menegazzo, D. Mengoni, C. Michelagnoli, T. Mijatovic, G. Montagnoli, D. Montanari, D. Napoli, Zs. Podolyak, G. Pollarolo, F. Recchia, D. Rosiak, N. Saed-Samii, E. Sahin, M. Siciliano, F. Scarlassara, M. Seidlitz, P.-A. Soderstrom, A.M. Stefanini, O. Stezowski, S. Szilner, B. Szpak, C. Ur, J.J. Valiente-Dobon, M. Weinert, K. Wolf, K.O. Zell
2019Ka30	PRVCA	100,	015502	J. Karthein, D. Atanasov, K. Blaum, M. Breitenfeldt, V. Bondar, S. George, L. Hayen, D. Lunney, V. Manea, M. Mougeot, D. Neidherr, L. Schweikhard, N. Severijns, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber

2019Ka36	PRVCA	100,	024323	L. Kaya, A. Vogt, P. Reiter, M. Siciliano, N. Shimizu, Y. Utsuno, H.-K. Wang, A. Gargano, L. Coraggio, N. Itaco, K. Arnswald, D. Bazzacco, B. Birkenbach, A. Blazhev, A. Bracco, B. Bruyneel, L. Corradi, F.C.L. Crespi, G. de Angelis, M. Droste, J. Eberth, A. Esmaylzadeh, E. Farnea, E. Fioretto, C. Fransen, A. Gadea, A. Giaz, A. Gorgen, A. Gottardo, K. Hadynska-Klek, H. Hess, R. Hirsch, P.R. John, J. Jolie, A. Jungclaus, V. Karayonchev, L. Kornwebel, W. Korten, S. Leoni, L. Lewandowski, S. Lunardi, R. Menegazzo, D. Mengoni, C. Michelagnoli, T. Mijatovic, G. Montagnoli, D. Montanari, C. Muller-Gatermann, D. Napoli, Zs. Podolyak, G. Pollarolo, F. Recchia, J.-M. Regis, N. Saed-Samii, E. Sahin, F. Scarlassara, K. Schomacker, M. Seidlitz, B. Siebeck, P.-A. Soderstrom, A.M. Stefanini, O. Stezowski, S. Szilner, B. Szpak, E. Teruya, C. Ur, J.J. Valiente-Dobon, K. Wolf, K. Yanase, N. Yoshinaga, K.O. Zell
2019Ka48	HYIND	240,	61	J. Karthein, D. Atanasov, K. Blaum, S. Eliseev, P. Filianin, D. Lunney, V. Manea, M. Mougeot, D. Neidherr, Y. Novikov, L. Schweikhard, A. Welker, F. Wienholtz, K. Zuber
2019Kh04	PRVCA	99,	054306	J. Khuyagbaatar, A. Yakushev, Ch. E. Dullmann, D. Ackermann, L.-L. Andersson, M. Asai, M. Block, R.A. Boll, H. Brand, D.M. Cox, M. Dasgupta, X. Derkx, A. Di Nitto, K. Eberhardt, J. Even, M. Evers, C. Fahlander, U. Forsberg, J.M. Gates, N. Gharibyan, P. Golubev, K.E. Gregorich, J.H. Hamilton, W. Hartmann, R.-D. Herzberg, F.P. Hessberger, D.J. Hinde, J. Hoffmann, R. Hollinger, A. Hubner, E. Jager, B. Kindler, J.V. Kratz, J. Krier, N. Kurz, M. Laatiaoui, S. Lahiri, R. Lang, B. Lommel, M. Maiti, K. Miernik, S. Minami, A. Mistry, C. Mokry, H. Nitsche, J.P. Omtvedt, G.K. Pang, P. Papadakis, D. Renisch, J. Roberto, D. Rudolph, J. Runke, K.P. Rykaczewski, L.G. Sarmiento, M. Schadel, B. Schausten, A. Semchenkov, D.A. Shaughnessy, P. Steinegger, J. Steiner, E.E. Tereshatov, P. Thorle-Pospiech, K. Tinschert, T. Torres De Heidenreich, N. Trautmann, A. Turler, J. Uusitalo, D.E. Ward, M. Wegrzecki, N. Wiehl, S.M. Van Cleve, V. Yakusheva
2019Ki.A	RIKAR	53,	33	G.G. Kiss et al.
2019Kl06	PRVCA	99,	061301	A. Klose, K. Minamisono, A.J. Miller, B.A. Brown, D. Garand, J.D. Holt, J.D. Lantis, Y. Liu, B. Maaß, W. Nörtershäuser, S.V. Pineda, D.M. Rossi, A. Schwenk, F. Sommer, C. Sumithrarachchi, A. Teigelhöfer, J. Watkins
2019Ko06	ARISE	145,	12	K. Kossert, O. Nahle
2019Ko18	PRLTA	123,	092502	D. Kostyleva, I. Mukha, L. Acosta, E. Casarejos, V. Chudoba, A.A. Ciemny, W. Dominik, J.A. Duenas, V. Dunin, J.M. Espino, A. Estrade, F. Farinon, A. Fomichev, H. Geissel, A. Gorshkov, L.V. Grigorenko, Z. Janas, G. Kaminski, O. Kiselev, R. Knobel, S. Krupko, M. Kuich, Y.A. Litvinov, G. Marquinez-Duran, I. Martel, C. Mazzocchi, C. Nociforo, A.K. Orduz, M. Pfutzner, S. Pietri, M. Pomorski, A. Prochazka, S. Rymzhanova, A.M. Sanchez-Benitez, C. Scheidenberger, H. Simon, B. Sitar, R. Slepnev, M. Stanoiu, P. Strmen, I. Szarka, M. Takechi, Y.K. Tanaka, H. Weick, M. Winkler, J.S. Winfield, X. Xu, M.V. Zhukov
2019Ko19	PRVCA	100,	034304	A. Koszorus, X.F. Yang, J. Billowes, C.L. Binnersley, M.L. Bissell, T.E. Cocolios, G.J. Farooq-Smith, R.P. de Groote, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, S. Geldhof, W. Gins, A. Kanellakopoulos, K.M. Lynch, G. Neyens, H.H. Stroke, A.R. Vernon, K.D.A. Wendt, S.G. Wilkins
2019KoZX	EPJWC	223,	1028	F.G. Kondev, D.J. Hartley, R. Orford, J. A . Clark, G. Savard, K. Auranen, A.D. Ayangeakaa, S. Bottoni, M.P. Carpenter, P. Copp, K. Hicks, C.R. Hoffman, R.V.F. Janssens, B.P. Kay, T. Lauritsen, T. Li, S.T. Marley, G.E. Morgan, G. Mukherjee, S. Nandi, W. Reviol, J. Sethi, D. Seweryniak, S. Stolze, J. Wu, R. Yadav, S. Zhu
2019Kr02	ARISE	146,	115	K.S. Krane
2019Kr06	PRVCA	99,	054311	K.S. Krane
2019Kr10	PRVCA	100,	014608	Krishichayan, M. Bhike, C.R. Howell, A.P. Tonchev, W. Tornow
2019Kr13	PRVCA	100,	034613	K.S. Krane
2019Ku16	PRVCA	100,	034316	J. Kurpeta, A. Płochocki, W. Urban, A. Abramuk, L. Canete, T. Eronen, A. Fijałkowska, S. Geldhof, K. Gotowicka, A. Jokinen, A. Kankainen, I.D. Moore, D. Nesterenko, H. Penttilä, I. Pohjalainen, M. Pomorski, M. Reponen, S. Rinta-Antila, A. de Roubin, T. Rzaca-Urban, M. Vilén, J. Wiśniewski

2019La09	PRVCA	99,	045501	M. Laubenstein, B. Lehnert, S.S. Nagorny, S. Nisi, K. Zuber
2019Le09	EPJAA	55,	63	J. Lerendegui-Marco, C. Guerrero, T. Belgya, B. Maroti, K. Eberhardt, Ch. E. Dullmann, A.R. Junghans, C. Mokry, J.M. Quesada, J. Runke, P. Thorle-Pospiech
2019Li41	PRVCA	100,	034306	R. Lică, for the IDS Collaboration
2019Lo04	PRVCA	99,	044310	Ch. Lorenz, L.G. Sarmiento, D. Rudolph, P. Golubev, T. Eronen, D.A. Nesterenko, A. Kankainen, L. Canete, D.M. Cox, A. Fernandez, U. Forsberg, A. Jungclaus, I. Kojouharov, N. Kurz, N. Lalović, J. Partanen, M. Reponen, S. Rinta-Antila, A. de Roubin, A. Såamark-Roth, V. Vaquero, M. Vilén
2019Lu08	PRLTA	122,	222502	D. Lubos, J. Park, T. Faestermann, R. Gernhauser, R. Krucken, M. Lewitowicz, S. Nishimura, H. Sakurai, D.S. Ahn, H. Baba, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, I. Çeliković, G. de France, P. Doornenbal, Y. Fang, N. Fukuda, J. Giovinazzo, N. Goel, M. Gorska, S. Ilieva, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, Y.K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, G. Lorusso, K. Moschner, D. Murai, I. Nishizuka, Z. Patel, M.M. Rajabali, S. Rice, H. Schaffner, Y. Shimizu, L. Sinclair, P.-A. Soderstrom, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, Z. Wang, N. Warr, H. Watanabe, J. Wu, Z. Xu
2019Lu.A	PrvCom	HWJ	Jun	D. Lunney
2019Ly02	PRVCA	100,	025806	S. Lyons, A. Spyrou, S.N. Liddick, F. Naqvi, B.P. Crider, A.C. Dombos, D.L. Bleuel, B.A. Brown, A. Couture, L. Crespo Campo, J. Engel, M. Guttormsen, A.C. Larsen, R. Lewis, P. Moller, S. Mosby, M.R. Mumpower, E.M. Ney, A. Palmisano, G. Perdikakis, C.J. Prokop, T. Renstrom, S. Siem, M.K. Smith, S.J. Quinn
2019Ma40	PRLTA	122,	242501	B. Markisch, H. Mest, H. Saul, X. Wang, H. Abele, D. Dubbers, M. Klopf, A. Petoukhov, C. Roick, T. Soldner, D. Werder
2019Mi06	PRVCA	99,	051601	Y. Miyamoto, Y. Aritomo, S. Tanaka, K. Hirose, K. Nishio
2019Mi08	NUPAB	987,	337	A.K. Mistry, J. Khuyagbaatar, F.P. Hessberger, D. Ackermann, B. Andel, S. Antalic, M. Block, P. Chhetri, F. Dechery, C. Droese, Ch. E. Dullmann, F. Giacoppo, J. Hoffmann, O. Kaleja, N. Kurz, M. Laatiaoui, L. Lens, J. Maurer, P. Mosat, J. Piot, S. Raeder, M. Vostinar, A. Yakushev, Z. Zhang
2019Mi18	EPJAA	55,	148	Ivan Miskun, Timo Dickel, Israel Mardor, Christine Hornung, Daler Amanbayev, Samuel Ayet San Andres, Julian Bergmann, Jens Ebert, Hans Geissel, Magdalena Gorska, Florian Greiner, Emma Haettner, Wolfgang R. Plass, Sivaji Purushothaman, Christoph Scheidenberger, Ann-Kathrin Rink, Helmut Weick, Soumya Bagchi, Paul Constantin, Satbir Kaur, Wayne Lippert, Bo Mei, Iain Moore, Jan-Hendrick Otto, Stephane Pietri, Ilkka Pohjalainen, Andrej Prochazka, Christophe Rappold, Moritz P. Reiter, Yoshiki K. Tanaka, John S. Winfield, For the Super-FRS Experiment Collaboration
2019Mo11	PRVCA	99,	034307	K.J. Moody, N. Gharibyan, P.M. Grant, D.A. Shaughnessy, J.D. Despotopulos, S.J. Tumey, T.A. Brown
2019Mo28	PRVCA	100,	024319	B. Moon, C.-B. Moon, G.D. Dracoulis, R.A. Bark, A.P. Byrne, P.A. Davidson, G.J. Lane, T. Kibedi, A.N. Wilson, C. Yuan
2019Mo.B	Th.-York			Monther Hamed AL-Monthery
2019Ne08	IMSPF	435,	204	D.A. Nesterenko, L. Canete, T. Eronen, A. Jokinen, A. Kankainen, Yu. N. Novikov, S. Rinta-Antila, A. de Roubin, M. Vilen
2019Ni04	PRVCA	99,	024322	H. Nishibata, S. Kanaya, T. Shimoda, A. Odahara, S. Morimoto, A. Yagi, H. Kanaoka, M.R. Pearson, C.D.P. Levy, M. Kimura, N. Tsunoda, T. Otsuka
2019Ol02	PRVCA	99,	024321	B. Olaizola, L.M. Fraile, H. Mach, F. Nowacki, A. Poves, A. Aprahamian, J.A. Briz, J. Cal-González, D. Ghiţa, U. Köster, W. Kurcewicz, S.R. Lesher, D. Pauwels, E. Picado, D. Radulov, G.S. Simpson, J.M. Udías
2019Or.A	Th.-McGill			R. Orford

2019Oz03	PYLBB	797,	134800	F.C. Ozturk, B. Akkus, D. Atanasov, H. Beyer, F. Bosch, D. Boutin, C. Brandau, P. Buhler, R.B. Cakirli, R.J. Chen, W.D. Chen, X.C. Chen, I. Dillmann, C. Dimopoulou, W. Enders, H.G. Essel, T. Faestermann, O. Forstner, B.S. Gao, H. Geissel, R. Gernhauser, R.E. Grisenti, A. Gumberidze, S. Hagmann, T. Heftrich, M. Heil, M.O. Herdrich, P.-M. Hillenbrand, T. Izumikawa, P. Kienle, C. Klaushofer, C. Kleffner, C. Kozhuharov, R.K. Knobel, O. Kovalenko, S. Kreim, T. Kuhl, C. Lederer-Woods, M. Lestinsky, S.A. Litvinov, Yu. A. Litvinov, Z. Liu, X.W. Ma, L. Maier, B. Mei, H. Miura, I. Mukha, A. Najafi, D. Nagae, T. Nishimura, C. Nociforo, F. Nolden, T. Ohtsubo, Y. Oktem, S. Omika, A. Ozawa, N. Petridis, J. Piotrowski, R. Reifarth, J. Rossbach, R. Sanchez, M.S. Sanjari, C. Scheidenberger, R.S. Sidhu, H. Simon, U. Spillmann, M. Steck, Th. Stohlker, B.H. Sun, L.A. Susam, F. Suzaki, T. Suzuki, S. Yu. Torilov, C. Trageser, M. Trassinelli, S. Trotsenko, X.L. Tu, P.M. Walker, M. Wang, G. Weber, H. Weick, N. Winckler, D.F.A. Winters, P.J. Woods, T. Yamaguchi, X.D. Xu, X.L. Yan, J.C. Yang, Y.J. Yuan, Y.H. Zhang, X.H. Zhou
2019Pa16	PRVCA	99,	034313	J. Park, R. Krucken, D. Lubos, R. Gernhäuser, M. Lewitowicz, S. Nishimura, D.S. Ahn, H. Baba, B. Blank, A. Blazhev, P. Boutachkov, F. Browne, I. Çeliković, G. de France, P. Doornenbal, T. Faestermann, Y. Fang, N. Fukuda, J. Giovinazzo, N. Goel, M. Górska, H. Grawe, S. Ilieva, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kojouharov, T. Kubo, N. Kurz, Y.K. Kwon, G. Lorusso, K. Moschner, D. Murai, I. Nishizuka, Z. Patel, M.M. Rajabali, S. Rice, H. Sakurai, H. Schaffner, Y. Shimizu, L. Sinclair, P.-A. Söderstrom, K. Steiger, T. Sumikama, H. Suzuki, H. Takeda, Z. Wang, H. Watanabe, J. Wu, Z.Y. Xu
2019Pa27	PRVCA	99,	054307	E. Parr, R.D. Page, D.T. Joss, F.A. Ali, K. Auranen, L. Capponi, T. Grahn, P.T. Greenlees, J. Henderson, A. Herzáň, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Labiche, M. Leino, P.J.R. Mason, C. McPeake, D. O'Donnell, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, J.P. Revill, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Simpson, J.F. Smith, M. Smolen, J. Sorri, S. Stolze, A. Thornthwaite, J. Uusitalo
2019Pa45	PRVCA	100,	044323	E. Parr, J.F. Smith, P.T. Greenlees, K. Auranen, P.A. Butler, R. Chapman, D.M. Cox, D.M. Cullen, L.P. Gaffney, T. Grahn, E.T. Gregor, L. Grocutt, A. Herzan, R.-D. Herzberg, D. Hodge, U. Jakobsson, R. Julin, S. Juutinen, J. Keatings, J. Konki, M. Leino, P.P. McKee, C. McPeake, D. Mengoni, A.K. Mistry, K.F. Mulholland, B.S. Nara Singh, G.G. O'Neill, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Saren, M. Scheck, C. Scholey, M. Siciliano, M. Smolen, J. Sorri, P. Spagnoletti, K.M. Spohr, S. Stolze, M.J. Taylor, J. Uusitalo
2019Ph02	PRVCA	100,	011302	V.H. Phong, G. Lorusso, T. Davinson, A. Estrade, O. Hall, J. Liu, K. Matsui, F. Montes, S. Nishimura, A. Boso, P.H. Regan, R. Shearman, Z.Y. Xu, J. Agramunt, J.M. Allmond, D.S. Ahn, A. Algora, H. Baba, N.T. Brewer, C.G. Bruno, R. Caballero-Folch, F. Calvino, M. Wolińska-Cichocka, G. Cortes, I. Dillmann, C. Domingo-Pardo, A. Gargano, S. Go, C.J. Griffin, R.K. Grzywacz, L. Harkness-Brennan, T. Isobe, A. Jungclaus, D. Kahl, L.H. Khiem, G. Kiss, A. Korgul, S. Kubono, K. Miernik, A.I. Morales, N. Nepal, M. Piersa, Zs. Podolyák, B.C. Rasco, K.P. Rykaczewski, H. Sakurai, Y. Shimizu, D.W. Stacener, T. Sumikama, H. Suzuki, H. Takeda, J.L. Tain, A. Tarifeño-Saldivia, A. Tolosa-Delgado, V. Vaquero, P.J. Woods, R. Yokoyama, C. Yuan
2019Pi04	PRVCA	99,	024304	M. Piersa, for the IDS Collaboration
2019Po06	PRVCA	100,	054327	J.L. Pore, C. Andreoiu, J.K. Smith, A.D. MacLean, A. Chester, J.D. Holt, G.C. Ball, P.C. Bender, V. Bildstein, R. Braid, A. Diaz Varela, R. Dunlop, L.J. Evitts, A.B. Garnsworthy, P.E. Garrett, G. Hackman, S.V. Ilyushkin, B. Jigmeddorj, K. Kuhn, P. Kunz, A.T. Laffoley, K.G. Leach, D. Miller, W.J. Mills, W. Moore, M. Moukaddam, L.N. Morrison, B. Olaizola, E.E. Peters, A.J. Radich, E.T. Rand, F. Sarazin, D. Southall, C.E. Svensson, S.J. Williams, S.W. Yates
2019Re03	PRVCA	99,	044316	J. Refsgaard, J. Buscher, A. Arokiaraj, H.O.U. Fynbo, R. Raabe, K. Riisager
2019Ro12	PRVCA	100,	024320	P. Roy, S.K. Tandel, S. Suman, P. Chowdhury, R.V.F. Janssens, M.P. Carpenter, T.L. Khoo, F.G. Kondev, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu

2019Ru.A	JPCSD1	308,	012018	B. Rubio, P. Aguilera, F. Molina, J. Agramunt, A. Algora, V. Guadilla, A. Montaner-Piza, A.I. Morales, S.E.A. Orrigo, W. Gelletly, B. Blank, P. Ascher, M. Gerbaux, J. Giovinazzo, S. Grevy, T. Kurtukian, C. Magron, J. Chiba, D. Nishimura, H. Oikawa, Y. Takei, S. Yang, D.S. Ahn, P. Doornenbal, N. Fukuda, N. Inabe, G. Kiss, T. Kubo, S. Kubono, S. Nishimura, Y. Shimizu, C. Sidong, P.-A. Soderstrom, T. Sumikama, H. Suzuki, H. Takeda, P. Vi, J. Wu, Y. Fujita, M. Tanaka, F. Diel, D. Lubos, G. de Angelis, D. Napoli, C. Borcea, A. Boso, R.B. Cakirli, E. Ganioglu, G. de France and S. Go
2019Sa36	PRVCA	100,	014308	R. Sandler, G. Bollen, J. Dissanayake, M. Eibach, K. Gulyuz, A. Hamaker, C. Izzo, X. Mougeot, D. Puentes, F.G.A. Quarati, M. Redshaw, R. Ringle, I. Yandow
2019Sa39	PRVCA	100,	024309	R. Sandler, G. Bollen, N.D. Gamage, A. Hamaker, C. Izzo, D. Puentes, M. Redshaw, R. Ringle, I. Yandow
2019Sc11	NUPAB	989,	201	S. Schwarz, B.R. Barquest, G. Bollen, R. Ferrer, A.A. Kwiatkowski, D.L. Lincoln, D.J. Morrissey, R. Ringle, J. Savory
2019Se04	PRVCA	99,	044306	S. Sels, T. Day Goodacre, B.A. Marsh, A. Pastore, W. Ryssens, Y. Tsunoda, N. Althubiti, B. Andel, A.N. Andreyev, D. Atanasov, A.E. Barzakh, M. Bender, J. Billowes, K. Blaum, T.E. Cocolios, J.G. Cubiss, J. Dobaczewski, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, L.P. Gaffney, L. Ghys, P.-H. Heenen, M. Huyse, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, Y. Martinez Palenzuela, T.M. Medonca, P.L. Molkanov, T. Otsuka, J.P. Ramos, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, P. Spagnoletti, C. Van Beveren, P. Van Duppen, M. Veinhard, E. Verstraelen, A. Welker, K. Wendt, F. Wienholtz, R.N. Wolf, A. Zadvornaya
2019Se13	NATUA	573,	243	B. Seiferle, L. von der Wense, P.V. Bilous, I. Amersdorffer, C. Lemell, F. Libisch, S. Stellmer, T. Schumm, C.E. Dullmann, A. Palffy, P.G. Thirolf
2019Se.A	PrvCom	HWJ		T. Segal
2019Sh34	PRVCA	100,	034309	U. Shirwadkar, S.K. Tandel, P. Chowdhury, T.L. Khoo, I. Ahmad, M.P. Carpenter, J.P. Greene, R.V.F. Janssens, F.G. Kondev, T. Lauritsen, C.J. Lister, D. Peterson, D. Seweryniak, X. Wang, S. Zhu
2019Sh38	PRVCA	100,	044304	Y. Shigekawa, Y. Kasamatsu, E. Watanabe, H. Ninomiya, S. Hayami, N. Kondo, Y. Yasuda, H. Haba, A. Shinohara
2019Si33	PRVCA	100,	044311	L. Sinclair, R. Wadsworth, J. Dobaczewski, A. Pastore, G. Lorusso, H. Suzuki, D.S. Ahn, H. Baba, F. Browne, P.J. Davies, P. Doornenbal, A. Estrade, Y. Fang, N. Fukuda, J. Henderson, T. Isobe, D.G. Jenkins, S. Kubono, Z. Li, D. Lubos, S. Nishimura, I. Nishizuka, Z. Patel, S. Rice, H. Sakurai, Y. Shimizu, P. Schury, H. Takeda, P.-A. Soderstrom, T. Sumikama, H. Watanabe, V. Werner, J. Wu, Z.Y. Xu
2019Su14	PRVCA	99,	064312	L.J. Sun, for the RIBLL Collaboration
2019Sz01	NUPAB	986,	213	T.N. Szegedi, G.G. Kiss, I. Öksuz, T. Szcs, Gy. Gyürky, Z. Elekes, E. Somorjai, Zs. Fülöp
2019Ta19	ARISE	153,	108799	M.P. Takacs, K. Kossert, O.J. Nahle
2019To09	NIMAE	925,	133	A. Tolosa-Delgado, for the BRIKEN Collaboration
2019Tr05	NIMAE	922,	143	R. Tripathi, T.N. Nag, S. Sodaye, A. Bhattacharyyaa, P.K. Pujari
2019Ve05	PRVCA	100,	024315	M. Verlinde, S. Kraemer, J. Moens, K. Chrysalidis, J.G. Correia, S. Cottenier, H. De Witte, D.V. Fedorov, V.N. Fedosseev, R. Ferrer, L.M. Fraile, S. Geldhof, C.A. Granados, M. Laatiaoui, T.A.L. Lima, P.-C. Lin, V. Manea, B.A. Marsh, I. Moore, L.M.C. Pereira, S. Raeder, P. Van den Bergh, P. Van Duppen, A. Vantomme, E. Verstraelen, U. Wahl, S.G. Wilkins
2019Vi05	PRVCA	100,	054333	M. Vil/'en, A. Kankainen, P. Bączyk, L. Canete, J. Dobaczewski, T. Eronen, S. Geldhof, A. Jokinen, M. Konieczka, J. Kostensalo, I.D. Moore, D.A. Nesterenko, H. Penttilä, I. Pohjalainen, M. Reponen, S. Rinta-Antila, A. de Roubin, W. Satułla, J. Suhonen
2019Vo03	EPJAA	55,	17	M. Vostinar, F.P. Hessberger, D. Ackermann, B. Andel, S. Antalic, M. Block, Ch. Droese, J. Even, S. Heinz, Z. Kalaninova, I. Kojouharov, M. Laatiaoui, A.K. Mistry, J. Piot, H. Savajols

2019Wa14	PYLBB	792,	263	H. Watanabe, H.K. Wang, G. Lorusso, S. Nishimura, Z.Y. Xu, T. Sumikama, P.-A. Soderstrom, P. Doornenbal, F. Browne, G. Gey, H.S. Jung, J. Taprogge, Zs. Vajta, J. Wu, A. Yagi, H. Baba, G. Benzoni, K.Y. Chae, F.C.L. Crespi, N. Fukuda, R. Gernhauser, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, G.D. Kim, Y.K. Kim, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, C.-B. Moon, A. Montaner-Piza, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, D. Nishimura, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyak, H. Sakurai, H. Schaffner, G.S. Simpson, K. Steiger, Y. Sun, H. Suzuki, H. Takeda, A. Wendt, K. Yoshinaga
2019We03	PRLTA	122,	122501	T.B. Webb, S.M. Wang, K.W. Brown, R.J. Charity, J.M. Elson, J. Barney, G. Cerizza, Z. Chajecki, J. Estee, D.E.M. Hoff, S.A. Kuvin, W.G. Lynch, J. Manfredi, D. McNeel, P. Morfouace, W. Nazarewicz, C.D. Pruitt, C. Santamaria, J. Smith, L.G. Sobotka, S. Sweany, C.Y. Tsang, M.B. Tsang, A.H. Wuosmaa, Y. Zhang, K. Zhu
2019We11	PRVCA	100,	024306	T.B. Webb, R.J. Charity, J.M. Elson, D.E.M. Hoff, C.D. Pruitt, L.G. Sobotka, K.W. Brown, J. Barney, G. Cerizza, J. Estee, G. Jhang, W.G. Lynch, J. Manfredi, P. Morfouace, C. Santamaria, S. Sweany, M.B. Tsang, T. Tsang, S.M. Wang, Y. Zhang, K. Zhu, S.A. Kuvin, D. McNeel, J. Smith, A.H. Wuosmaa, Z. Chajecki
2019Wi04	PYLBB	792,	16	K. Wimmer, F. Recchia, S.M. Lenzi, S. Riccetto, T. Davinson, A. Estrade, C.J. Griffin, S. Nishimura, F. Nowacki, V. Phong, A. Poves, P.-A. Soderstrom, O. Aktas, M. Al-Aqeel, T. Ando, H. Baba, S. Bae, S. Choi, P. Doornenbal, J. Ha, L. Harkness-Brennan, T. Isobe, P.R. John, D. Kahl, G. Kiss, I. Kojouharov, N. Kurz, M. Labiche, K. Matsui, S. Momiyama, D.R. Napoli, M. Niikura, C. Nita, Y. Saito, H. Sakurai, H. Schaffner, P. Schrock, C. Stahl, T. Sumikama, V. Werner, W. Witt, P.J. Woods
2019Wi08	PYLBB	795,	266	K. Wimmer, P. Doornenbal, W. Korten, P. Aguilera, A. Algora, T. Ando, T. Arici, H. Baba, B. Blank, A. Boso, S. Chen, A. Corsi, P. Davies, G. de Angelis, G. de France, D.T. Doherty, J. Gerl, R. Gernhauser, D.G. Jenkins, S. Koyama, T. Motobayashi, S. Nagamine, M. Niikura, A. Obertelli, D. Lubos, B. Rubio, E. Sahin, T.Y. Saito, H. Sakurai, L. Sinclair, D. Steppenbeck, R. Taniuchi, R. Wadsworth, M. Zielinska
2019Wi11	PRVCA	100,	054331	J. Wisniewski, W. Urban, M. Czerwinski, J. Kurpeta, A. Plochocki, M. Pomorski, T. Rzaca-Urban, K. Sieja, L. Canete, T. Eronen, S. Geldhof, A. Jokinen, A. Kankainen, I.D. Moore, D.A. Nesterenko, H. Penttila, I. Pohjalainen, S. Rinta-Antila, A. de Roubin, M. Vilen
2019Xi06	PRVCA	100,	034315	Y. Xiao, S. Go, R. Grzywacz, R. Orlandi, A.N. Andreyev, M. Asai, M.A. Bentley, G. de Angelis, C.J. Gross, P. Hausladen, K. Hirose, S. Hofmann, H. Ikezoe, D.G. Jenkins, B. Kindler, R. Leguillon, B. Lommel, H. Makii, C. Mazzocchi, K. Nishio, P. Parkhurst, S.V. Paulauskas, C.M. Petrache, K.P. Rykaczewski, T.K. Sato, J. Smallcombe, A. Toyoshima, K. Tsukada, K. Vaigneur, R. Wadsworth
2019Xu09	PRVCA	99,	064303	X. Xu, M. Wang, K. Blaum, J.D. Holt, Yu. A. Litvinov, A. Schwenk, J. Simonis, S.R. Stroberg, Y.H. Zhang, H.S. Xu, P. Shuai, X.L. Tu, X.H. Zhou, F.R. Xu, G. Audi, R.J. Chen, X.C. Chen, C.Y. Fu, Z. Ge, W.J. Huang, S. Litvinov, D.W. Liu, Y.H. Lam, X.W. Ma, R.S. Mao, A. Ozawa, B.H. Sun, Y. Sun, T. Uesaka, G.Q. Xiao, Y.M. Xing, T. Yamaguchi, Y. Yamaguchi, X.L. Yan, Q. Zeng, H.W. Zhao, T.C. Zhao, W. Zhang, W.L. Zhan
2019Xu13	PRVCA	100,	051303	X. Xu, J.H. Liu, C.X. Yuan, Y.M. Xing, M. Wang, Y.H. Zhang, X.H. Zhou, Yu. A. Litvinov, K. Blaum, R.J. Chen, X.C. Chen, C.Y. Fu, B.S. Gao, J.J. He, S. Kubono, Y.H. Lam, H.F. Li, M.L. Liu, X.W. Ma, P. Shuai, M. Si, M.Z. Sun, X.L. Tu, Q. Wang, H.S. Xu, X.L. Yan, J.C. Yang, Y.J. Yuan, Q. Zeng, P. Zhang, X. Zhou, W.L. Zhan, S. Litvinov, G. Audi, S. Naimi, T. Uesaka, Y. Yamaguchi, T. Yamaguchi, A. Ozawa, B.H. Sun, K. Kaneko, Y. Sun, F.R. Xu
2019Ya04	EPJAA	55,	8	H.B. Yang, Z.G. Gan, Z.Y. Zhang, M.M. Zhang, M.H. Huang, L. Ma, C.L. Yang
2019Ya18	PRLTA	123,	222501	A. Yamaguchi, H. Muramatsu, T. Hayashi, N. Yuasa, K. Nakamura, M. Takimoto, H. Haba, K. Konashi, M. Watanabe, H. Kikunaga, K. Maehata, N.Y. Yamasaki, K. Mitsuda

2019Yo03	PRVCA	100,	031302	R. Yokoyama, R. Grzywacz, B.C. Rasco, N. Brewer, K.P. Rykaczewski, I. Dillmann, J.L. Tain, S. Nishimura, D.S. Ahn, A. Algora, J.M. Allmond, J. Agramunt, H. Baba, S. Bae, C.G. Bruno, R. Caballero-Folch, F. Calvino, P.J. Coleman-Smith, G. Cortes, T. Davinson, C. Domingo-Pardo, A. Estrade, N. Fukuda, S. Go, C.J. Griffin, J. Ha, O. Hall, L.J. Harkness-Brennan, J. Heideman, T. Isobe, D. Kahl, M. Karny, T. Kawano, L.H. Khiem, T.T. King, G.G. Kiss, A. Korgul, S. Kubono, M. Labiche, I. Lazarus, J. Liang, J. Liu, G. Lorusso, M. Madurga, K. Matsui, K. Miernik, F. Montes, A.I. Morales, P. Morrall, N. Nepal, R.D. Page, V.H. Phong, M. Piersa, M. Prydderch, V.F.E. Pucknell, M.M. Rajabali, B. Rubio, Y. Saito, H. Sakurai, Y. Shimizu, J. Simpson, M. Singh, D.W. Stracener, T. Sumikama, R. Surman, H. Suzuki, H. Takeda, A. Tarifeno-Saldivia, S.L. Thomas, A. Tolosa-Delgado, M. Wolinska-Cichocka, P.J. Woods, X.X. Xu
2019Yo06	HYIND	240,	67	D.T. Yordanov, M. Kowalska, K. Blaum, M. De Rydt, K.T. Flanagan, P. Himpe, P. Lievens, S. Mallion, R. Neugart, G. Neyens, N. Vermeulen, H. Stroke
2019Ze02	ARISE	152,	101	J. Zeng, Y. Gong, X. Guo, Q. Xiang, F. Hao, Y. Xiang, C. Zhang
2019Zh23	PRLTA	122,	192503	Z.Y. Zhang, Z.G. Gan, H.B. Yang, L. Ma, M.H. Huang, C.L. Yang, M.M. Zhang, Y.L. Tian, Y.S. Wang, M.D. Sun, H.Y. Lu, W.Q. Zhang, H.B. Zhou, X. Wang, C.G. Wu, L.M. Duan, W.X. Huang, Z. Liu, Z.Z. Ren, S.G. Zhou, X.H. Zhou, H.S. Xu, Yu. S. Tsyganov, A.A. Voinov, A.N. Polyakov
2019Zh49	PYLBB	799,	135036	G.X. Zhang, H. Watanabe, G.D. Dracoulis, F.G. Kondev, G.J. Lane, P.H. Regan, P.-A. Soderstrom, P.M. Walker, K. Yoshida, H. Kanaoka, Z. Korkulu, P.S. Lee, J.J. Liu, S. Nishimura, J. Wu, A. Yagi, D.S. Ahn, T. Alharbi, H. Baba, F. Browne, A.M. Bruce, M.P. Carpenter, R.J. Carroll, K.Y. Chae, C.J. Chiara, Zs. Dombradi, P. Doornenbal, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, T. Isobe, S. Kanaya, I. Kojouharov, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, T. Lauritsen, C.S. Lee, E.J. Lee, C.J. Lister, G. Lorusso, G. Lotay, E.A. McCutchan, C.-B. Moon, I. Nishizuka, C.R. Nita, A. Odahara, Z. Patel, V.H. Phong, Zs. Podolyak, O.J. Roberts, H. Sakurai, H. Schaffner, D. Seweryniak, C.M. Shand, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, J.J. Valiente-Dobon, Z.Y. Xu, S. Zhu
2019Zh54	PRVCA	100,	064317	M.M. Zhang, Y.L. Tian, Y.S. Wang, X.H. Zhou, Z.Y. Zhang, H.B. Yang, M.H. Huang, L. Ma, C.L. Yang, Z.G. Gan, J.G. Wang, H.B. Zhou, S. Huang, X.T. He, S.Y. Wang, W.Z. Xu, H.W. Li, X.X. Xu, L.M. Duan, Z.Z. Ren, S.G. Zhou, H.S. Xu

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2020An12	PRVCA	102,	014319	B. Andel, A.N. Andreyev, S. Antalic, M. Al Monthery, A. Barzakh, M.L. Bissell, K. Chrysalidis, T.E. Cocolios, J.G. Cubiss, T. Day Goodacre, N. Dubray, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, L.P. Gaffney, R.F. Garcia Ruiz, S. Goriely, C. Granados, R.D. Harding, R. Heinke, S. Hilaire, M. Huyse, J.-F. Lemaitre, K.M. Lynch, B.A. Marsh, P. Molkanov, P. Mosat, S. Peru, C. Raison, S. Rothe, C. Seiffert, M.D. Seliverstov, S. Sels, D. Studer, J. Sundberg, P. Van Duppen
2020Ar04	PRVCA	101,	055501	V. Araujo-Escalona, D. Atanasov, X. Flechard, P. Alfaurt, P. Ascher, B. Blank, L. Daudin, M. Gerbaux, J. Giovinazzo, S. Grevy, T. Kurtukian-Nieto, E. Lienard, G. Quemener, N. Severijns, S. Vanlangendonck, M. Versteegen, D. Zakoucky

2020Ar09	ZCCNE	80,	674	E. Armengaud, C. Augier, A.S. Barabash, F. Bellini, G. Benato, A. Benoit, M. Beretta, L. Berge, J. Billard, Yu. A. Borovlev, Ch. Bourgeois, M. Briere, V. Brudanin, P. Camus, L. Cardani, N. Casali, A. Cazes, M. Chapellier, F. Charlieux, M. de Combarieu, I. Dafinei, F.A. Danevich, M. De Jesus, L. Dumoulin, K. Eitel, E. Elkhoury, F. Ferri, B.K. Fujikawa, J. Gascon, L. Gironi, A. Giuliani, V.D. Grigorieva, M. Gros, E. Guerard, D.L. Helis, H.Z. Huang, R. Huang, J. Johnston, A. Juillard, H. Khalife, M. Kleifges, V.V. Kobychev, Yu. G. Kolomensky, S.I. Konovalov, A. Leder, J. Kotila, P. Loaiza, L. Ma, E.P. Makarov, P. de Marcillac, L. Marini, S. Marnieros, D. Misiak, X.-F. Navick, C. Nones, V. Novati, E. Olivieri, J.L. Ouellet, L. Pagnanini, P. Pari, L. Pattavina, B. Paul, M. Pavan, H. Peng, G. Pessina, S. Pirro, D.V. Poda, O.G. Polischuk, E. Previtali, T. Redon, S. Rozov, C. Rusconi, V. Sanglard, K. Schaffner, B. Schmidt, Y. Shen, V.N. Shlegel, B. Siebenborn, V. Singh, C. Tomei, V.I. Tretyak, V.I. Umatov, L. Vagneron, M. Velazquez, M. Weber, B. Welliver, L. Winslow, M. Xue, E. Yakushev, A.S. Zolotarova
2020Au01	PRVCA	101,	024306	K. Auranen, U. Jakobsson, H. Badran, T. Grahn, P.T. Greenlees, A. Herzan, R. Julin, S. Juutinen, J. Konki, M. Leino, A.-P. Leppanen, G. OŃeill, J. Pakarinen, P. Papadakis, J. Partanen, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, L. Sinclair, J. Sorri, S. Stolze, J. Uusitalo, A. Voss
2020Au04	PRVCA	102,	034305	K. Auranen, J. Uusitalo, H. Badran, T. Grahn, P.T. Greenlees, A. Herzan, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, A.-P. Leppanen, G. OŃeill, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, L. Sinclair, J. Sorri, S. Stolze, A. Voss
2020Ay05	EPJAA	56,	143	Samuel Ayet San Andres, Ali Mollaebrahimi, Timo Dickel, Julian Bergmann, Jens Ebert, Hans Geissel, Florian Greiner, Emma Haettner, Christine Hornung, Nasser Kalantar-Nayestanaki, Ivan Miskun, Wolfgang R. Plass, Sivaji Purushothaman, Ann-Kathrin Rink, Christoph Scheidenberger, Helmut Weick, Soumya Bagchi, Paul Constantin, Andrew Finlay, Satbir Kaur, Wayne Lippert, Israel Mardor, Bo Mei, Iain Moore, Jan-Hendrick Otto, Stephane Pietri, Ilkka Pohjalainen, Andrej Prochazka, Christophe Rappold, Moritz P. Reiter, Yoshiki K. Tanaka, John S. Winfield and for the Super-FRS Experiment Collaboration
2020Ba08	NUPAB	996,	121797	A.S. Barabash, V.B. Brudanin, A.A. Klimenko, S.I. Konovalov, A.V. Rakhimov, E.N. Rukhadze, N.I. Rukhadze, Yu. A. Shitov, I. Stekl, G. Warot, V.I. Umatov
2020Ba17	PRVCA	101,	034308	A.E. Barzakh, D. Atanasov, A.N. Andreyev, M. Al Monthery, N.A. Althubiti, B. Andel, S. Antalic, K. Blaum, T.E. Cocolios, J.G. Cubiss, P. Van Duppen, T. Day Goodacre, A. de Roubin, Yu. A. Demidov, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, D.A. Fink, L.P. Gaffney, L. Ghys, R.D. Harding, D.T. Joss, F. Herfurth, M. Huyse, N. Imai, M.G. Kozlov, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, D. Neidherr, R.D. Page, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2020Ba29	PRVCA	101,	064321	A.E. Barzakh, D. Atanasov, A.N. Andreyev, M. Al Monthery, N.A. Althubiti, B. Andel, S. Antalic, K. Blaum, T.E. Cocolios, J.G. Cubiss, P. Van Duppen, T. Day Goodacre, A. de Roubin, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, D.A. Fink, L.P. Gaffney, L. Ghys, R.D. Harding, M. Huyse, N. Imai, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, D. Neidherr, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2020Ba.A	arXiv:		2009.14451	A.S. Barabash
2020Be16	PRVCA	102,	014328	J. Benito, for the IDS Collaboration
2020Be23	PRVCA	102,	024605	P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, A. Incicchitti, D.V. Kasperovych, V.V. Kobychev, G.P. Kovtun, N.G. Kovtun, M. Laubenstein, D.V. Poda, O.G. Polischuk, A.P. Shcherban, S. Tessalina, V.I. Tretyak

2020Bi06	PRVCA	102,	014326	S. Biswas, A. Lemasson, M. Rejmund, A. Navin, Y.H. Kim, C. Michelagnoli, I. Stefan, R. Banik, P. Bednarczyk, S. Bhattacharya, S. Bhattacharyya, E. Clement, H.L. Crawford, G. de France, P. Fallon, G. Fremont, J. Goupil, B. Jacquot, H.J. Li, J. Ljungvall, A. Maj, L. Menager, V. Morel, R. Palit, R.M. Perez-Vidal, J. Ropert
2020Bi15	NIMAE	964,	163773	J. Bishop, G.V. Rogachev, S. Ahn, E. Aboud, M. Barbui, P. Baron, A. Bosh, E. Delagnes, J. Hooker, C. Hunt, H. Jayatissa, E. Koshchiy, R. Malecek, S.T. Marley, R. O'Dwyer, E.C. Pollacco, C. Pruitt, B.T. Roeder, A. Saastamoinen, L.G. Sobotka, S. Upadhyayula
2020Bo04	PRLTA	124,	112501	F. Boulay, G.S. Simpson, Y. Ichikawa, S. Kisyov, D. Bucurescu, A. Takamine, D.S. Ahn, K. Asahi, H. Baba, D.L. Balabanski, T. Egami, T. Fujita, N. Fukuda, C. Funayama, T. Furukawa, G. Georgiev, A. Gladkov, M. Hass, K. Imamura, N. Inabe, Y. Ishibashi, T. Kawaguchi, T. Kawamura, W. Kim, Y. Kobayashi, S. Kojima, A. Kusoglu, R. Lozeva, S. Momiyama, I. Mukul, M. Niikura, H. Nishibata, T. Nishizaka, A. Odahara, Y. Ohtomo, D. Ralet, T. Sato, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, L.C. Tao, Y. Togano, D. Tominaga, H. Ueno, H. Yamazaki, X.F. Yang, J.M. Daugas
2020Br06	PRVCA	101,	064320	R. Broda, J. Wrzesinski, C. Michelagnoli, S. Lunardi, C. Ur, D. Bazzacco, R. Menegazzo, D. Mengoni, F. Recchia
2020Br.A	JPCSD	1643,	012116	M. Brunet, T.A. Berry, Zs. Podolyák, R.J. Carroll, R. Lica, Ch. Sotty, A.N. Andreyev, M.J.G. Borge, J.G. Cubiss, L.M. Fraile, H.O.U. Fynbo, E. Gamba, P. Greenless, L.J. Harkness-Brennan, M. Huyse, D.S. Judson, J. Konki, J. Kurcewicz, I. Lazarus, M. Madurga, N. Marginean, R. Marginean, I. Marroquin, C. Mihai, E. Nacher, A. Negret, S. Pascu, R.D. Page, A. Perea, J. Phrompao, M. Piersa, V. Pucknell, P. Rahkila, E. Rapisarda, P.H. Regan, F. Rotaru, M. Rudigier, C.M. Shand, R. Shearman, E.C. Simpson, T. Stora, O. Tengblad, P. Van Duppen, V. Vedia, S. Vinals, R. Wadsworth, N. Warr and H. De Witte
2020Bu02	PRVCA	101,	055504	D.P. Burdette, M. Brodeur, D.W. Bardayan, F.D. Becchetti, D. Blankstein, C. Boomershine, L. Caves, S.L. Henderson, J.J. Kolata, B. Liu, J. Long, P.D. O'Malley, S.Y. Strauss
2020Ca01	PRVCA	101,	014313	L. Capponi, J.F. Smith, P. Ruotsalainen, C. Scholey, P. Rahkila, L. Bianco, A.J. Boston, H.C. Boston, D.M. Cullen, X. Derkx, M.C. Drummond, T. Grahn, P.T. Greenlees, L. Grocutt, B. Hadinia, U. Jakobsson, D.T. Joss, R. Julin, S. Juutinen, M. Labiche, M. Leino, K.G. Leach, C. McPeake, K.F. Mulholland, P. Nieminen, D. O'Donnell, E.S. Paul, P. Peura, M. Sandzelius, J. Saren, B. Saygi, J. Sorri, S. Stolze, A. Thornthwaite, M.J. Taylor, J. Uusitalo
2020Ca08	PRVCA	101,	041304	L. Canete, S. Giraud, A. Kankainen, B. Bastin, F. Nowacki, A. Poves, P. Ascher, T. Eronen, V. Alcindor, A. Jokinen, A. Khanam, I.D. Moore, D.A. Nesterenko, F. De Oliveira Santos, H. Penttila, C. Petrone, I. Pohjalainen, A. de Roubin, V.A. Rubchenya, M. Vilen, J. Aysto
2020Ca25	PRLTA	125,	192501	R.J. Carroll, Z. Podolyák, T. Berry, H. Grawe, T. Alexander, A.N. Andreyev, S. Ansari, M.J.G. Borge, M. Brunet, J.R. Creswell, L.M. Fraile, C. Fahlander, H.O.U. Fynbo, E.R. Gamba, W. Gelletly, R.-B. Gerst, M. Gorska, A. Gredley, P.T. Greenlees, L.J. Harkness-Brennan, M. Huyse, S.M. Judge, D.S. Judson, J. Konki, J. Kurcewicz, I. Kuti, S. Lalkovski, I.H. Lazarus, R. Lica, M. Lund, M. Madurga, N. Marginean, R. Marginean, I. Marroquin, C. Mihai, R.E. Mihai, E. Nacher, A. Negret, C. Nita, S. Pascu, R.D. Page, Z. Patel, A. Perea, J. Phrompao, M. Piersa, V. Pucknell, P. Rahkila, E. Rapisarda, P.H. Regan, F. Rotaru, M. Rudigier, C.M. Shand, R. Shearman, S. Stegemann, T. Stora, C. Sotty, O. Tengblad, P. Van Duppen, V. Vedia, R. Wadsworth, P.M. Walker, N. Warr, F. Wearing, H. De Witte
2020Ch42	ARISE	166,	109366	C. Chu, Q. Xiang, J. Zeng, Y. Zhang, X. Guo, F. Hao, G. Hu, J. Zhang, L. Yang, Q. Liu, W. Li, L. Cui, Y. Liu
2020Ci04	PRVCA	101,	034305	A.A. Ciemny, W. Dominik, T. Ginter, R. Grzywacz, Z. Janas, M. Kuich, C. Mazzocchi, M. Pfutzner, M. Pomorski, D. Bazin, T. Baumann, A. Bezbakh, B.P. Crider, M. Cwiok, S. Go, G. Kaminski, K. Kolos, A. Korgul, E. Kwan, S. Liddick, K. Miernik, S.V. Paulauskas, J. Pereira, T. Roginski, K. Rykaczewski, C. Sumithrarachchi, Y. Xiao, H. Schatz, P. Sarriguren

2020Cu02	PRVCA	101,	014314	J.G. Cubiss, R.D. Harding, A.N. Andreyev, N. Althubiti, B. Andel, S. Antalic, A.E. Barzakh, T.E. Cocolios, T. Day Goodacre, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, L.P. Gaffney, L. Ghys, M. Huyse, K.M. Lynch, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, R.E. Rossel, S. Rothe, M.D. Seliverstov, S. Sels, P. Spagnoletti, C. Van Beveren, P. Van Duppen, M. Veinhard, E. Verstraelen, A. Zadvornaya
2020Cu04	PRVCA	102,	044332	J.G. Cubiss, A.N. Andreyev, A.E. Barzakh, V. Manea, M. Al Monthery, N.A. Althubiti, B. Andel, S. Antalic, D. Atanasov, K. Blaum, T.E. Cocolios, T. Day Goodacre, A. de Roubin, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, D.A. Fink, L.P. Gaffney, L. Ghys, R.D. Harding, F. Herfurth, M. Huyse, N. Imai, D.T. Joss, S. Kreim, D. Lunney, K.M. Lynch, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, D. Neidherr, G.G. OŃeill, R.D. Page, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, S. Sels, A. Stott, C. Van Beveren, P. Van Duppen, E. Verstraelen, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2020Cz01	PRVCA	101,	024312	A. Czeszumska, N.D. Scielzo, S.A. Caldwell, J.A. Clark, G. Savard, B.S. Wang, A. Aprahamian, M.T. Burkey, C.J. Chiara, J. Harker, A.F. Levand, S.T. Marley, G. Morgan, J.M. Munson, E.B. Norman, A. Nystrom, R. Orford, S.W. Padgett, A. Perez Galvan, K.S. Sharma, K. Siegl, S.Y. Strauss
2020Da04	EPJAA	56,	5	F.A. Danevich, M. Hult, D.V. Kasperovych, G.P. Kovtun, K.V. Kovtun, G. Lutter, G. Marissens, O.G. Polischuk, S.P. Stetsenko, V.I. Tretyak
2020Da12	PRVCA	102,	024319	F.A. Danevich, M. Hult, D.V. Kasperovych, V.R. Klavdiienko, G. Lutter, G. Marissens, O.G. Polischuk, V.I. Tretyak
2020De20	PRLTA	124,	222503	A. de Roubin, J. Kostensalo, T. Eronen, L. Canete, R.P. de Groote, A. Jokinen, A. Kankainen, D.A. Nesterenko, I.D. Moore, S. Rinta-Antila, J. Suhonen, M. Vilen
2020De21	NPAHA	16,	620	R.P. de Groote, J. Billowes, C.L. Binnersley, M.L. Bissell, T.E. Cocolios, T. Day Goodacre, G.J. Farooq-Smith, D.V. Fedorov, K.T. Flanagan, S. Franchoo, R.F. Garcia Ruiz, W. Gins, J.D. Holt, A. Koszorus, K.M. Lynch, T. Miyagi, W. Nazarewicz, G. Neyens, P.-G. Reinhard, S. Rothe, H.H. Stroke, A.R. Vernon, K.D.A. Wendt, S.G. Wilkins, Z.Y. Xu, X.F. Yang
2020Do.A	arXiv:		2010.14859	J.J. Valiente-Dobón et al.
2020Fe10	ARISE	166,	109294	A.J. Fenwick, S.M. Collins, W.D. Evans, K.M. Ferreira, S.J. Paisey, A.P. Robinson, C. Marshall
2020Fi05	PRLTA	124,	013001	D.J. Fink, E.G. Myers
2020Fo05	PRVCA	101,	064608	N. Fotiades, R.O. Nelson, M. Devlin
2020Fu05	PRVCA	102,	054311	C.Y. Fu, Y.H. Zhang, M. Wang, X.H. Zhou, Yu. A. Litvinov, K. Blaum, H.S. Xu, X. Xu, P. Shuai, Y.H. Lam, R.J. Chen, X.L. Yan, X.C. Chen, J.J. He, S. Kubono, M.Z. Sun, X.L. Tu, Y.M. Xing, Q. Zeng, X. Zhou, W.L. Zhan, S. Litvinov, G. Audi, T. Uesaka, T. Yamaguchi, A. Ozawa, B.H. Sun, Y. Sun, F.R. Xu
2020Ge08	PRVCA	102,	044319	M.S.M. Gerathy, G.J. Lane, A.E. Stuchbery, G.D. Dracoulis, T. Kibeédi, A. Akber, L.J. Bignell, B.J. Coombes, J.T.H. Dowie, T.J. Gray, B.Q. Lee, B.P. McCormick, A.J. Mitchell, N. Palalani
2020Ge.A	Th.-Heidelberg			J. Geist
2020Gi02	APOBB	51,	577	J. Giovinazzo, T. Goigoux, B. Blank, P. Ascher, M. Gerbaux, S. Grevy, T. Kurtukian Nieto, C. Magron, P. Doornenbal, N. Fukuda, N. Inabe, G.G. Kiss, T. Kubo, S. Kubono, S. Nishimura, H. Sakurai, Y. Shimizu, C. Sidong, P.-A. Soderstrom, T. Sumikama, H. Suzuki, H. Takeda, P. Vi, J. Wu, D.S. Ahn, J. Agramunt, A. Algora, V. Guadilla, A. Montaner-Piza, A.I. Morales, S.E.A. Orrigo, B. Rubio, Y. Fujita, M. Tanaka, W. Gelletly, P. Aguilera, F. Molina, F. Diel, D. Lubos, G. De Angelis, D. Napoli, C. Borcea, A. Boso, R.B. Cakirli, E. Ganioglu, J. Chiba, D. Nishimura, H. Oikawa, Y. Takei, S. Yagi, K. Wimmer, G. De France, S. Go, B.A. Brown
2020Go10	PRVCA	102,	044331	S. Go, R. Grzywacz, C. Mazzocchi, S.N. Liddick, M. Alshudifat, J.C. Batchelder, T. Baumann, A.A. Ciemny, T.N. Ginter, C.J. Gross, K. Kolos, A. Korgul, S.V. Paulauskas, C.J. Prokop, M.M. Rajabali, K.P. Rykaczewski, S. Taylor, Y. Xiao

2020Gr08	JPGPE	47,	085104	M.R. Griffiths, C. Wheldon, Tz. Kokalova, A. Turner, S. Pirrie, V. Ziman, N.I. Ashwood, J.D. Malcolm, M. Barr, M. Freer, Th. Faestermann, H-F. Wirth, R. Hertenberger, R. Gernhäuser, R. Krücken
2020Gr.1	NIMAE	972,	164013	J. Grund, M. Asai, K. Blaum, M. Block, S. Chenmarev, Ch. E. Dullmann, K. Eberhardt, S. Lohse, Y. Nagame, Sz. Nagy, P. Naubereit, J.J.W. van de Laar, F. Schneider, T.K. Sato, N. Sato, D. Simonovski, K. Tsukada, K. Wendt
2020Gu04	ARISE	158,	108923	G. Gupta, H. Krishnamoorthy, A. Garai, A. Mazumdar, V. Nanal, A. Shrivastava, R.G. Pillay
2020Ha14	PRVCA	101,	044311	J. Ha, T. Sumikama, F. Browne, N. Hinohara, A.M. Bruce, S. Choi, I. Nishizuka, S. Nishimura, P. Doornenbal, G. Lorusso, P.-A. Soderstrom, H. Watanabe, R. Daido, Z. Patel, S. Rice, L. Sinclair, J. Wu, Z.Y. Xu, A. Yagi, H. Baba, N. Chiga, R. Carroll, F. Didierjean, Y. Fang, N. Fukuda, G. Gey, E. Ideguchi, N. Inabe, T. Isobe, D. Kameda, I. Kojouharov, N. Kurz, T. Kubo, S. Lalkovski, Z. Li, R. Lozeva, H. Nishibata, A. Odahara, Zs. Podolyak, P.H. Regan, O.J. Roberts, H. Sakurai, H. Schaffner, G.S. Simpson, H. Suzuki, H. Takeda, M. Tanaka, J. Taprogge, V. Werner, O. Wieland
2020Ha24	PRVCA	102,	024312	R.D. Harding, A.N. Andreyev, A.E. Barzakh, D. Atanasov, J.G. Cubiss, P. Van Duppen, M. Al Monthery, N.A. Althubiti, B. Andel, S. Antalic, K. Blaum, T.E. Cocolios, T. Day Goodacre, A. de Roubin, G.J. Farooq-Smith, D.V. Fedorov, V.N. Fedosseev, D.A. Fink, L.P. Gaffney, L. Ghys, D.T. Joss, F. Herfurth, M. Huyse, N. Imai, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, B.A. Marsh, Y. Martinez Palenzuela, P.L. Molkanov, D. Neidherr, R.D. Page, A. Pastore, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2020Ha27	PRVCA	102,	024625	H. Haba, F. Fan, D. Kaji, Y. Kasamatsu, H. Kikunaga, Y. Komori, N. Kondo, H. Kudo, K. Morimoto, K. Morita, M. Murakami, K. Nishio, J.P. Omtvedt, K. Ooe, Z. Qin, D. Sato, N. Sato, T.K. Sato, Y. Shigekawa, A. Shinohara, M. Takeyama, T. Tanaka, A. Toyoshima, K. Tsukada, Y. Wakabayashi, Y. Wang, S. Wulff, S. Yamaki, S. Yano, Y. Yasuda, T. Yokokita
2020He.A	arXiv:		2010.06918	H. Heylen et al.
2020Ho03	PYLBB	802,	135200	C. Hornung, D. Amanbayev, I. Dedes, G. Kripko-Koncz, I. Miskun, N. Shimizu, S. Ayet S. Andres, J. Bergmann, T. Dickel, J. Dudek, J. Ebert, H. Geissel, M. Gorska, H. Grawe, F. Greiner, E. Haettner, T. Otsuka, W.R. Plass, S. Purushothaman, A.-Ka. Rink, C. Scheidenberger, H. Weick, S. Bagchi, A. Blazhev, O. Charviakova, D. Curien, A. Finlay, S. Kaur, W. Lippert, J.-H. Otto, Z. Patyk, S. Pietri, Y.K. Tanaka, Y. Tsunoda, J.S. Winfield
2020Ho06	NATUA	580,	52	D.E.M. Hoff, A.M. Rogers, S.M. Wang, P.C. Bender, K. Brandenburg, K. Childers, J.A. Clark, A.C. Dombos, E.R. Doucet, S. Jin, R. Lewis, S.N. Liddick, C.J. Lister, Z. Meisel, C. Morse, W. Nazarewicz, H. Schatz, K. Schmidt, D. Soltesz, S.K. Subedi, S. Waniganeththi
2020Ho10	PRVCA	102,	014310	V. Horvat, E.E. Tereshatov, J.C. Hardy, N. Nica, C.M. Folden, V.E. Iacob, M.B. Trzhaskovskaya
2020Ho17	PRVCA	102,	045810	D.E.M. Hoff, A.M. Rogers, Z. Meisel, P.C. Bender, K. Brandenburg, K. Childers, J.A. Clark, A.C. Dombos, E.R. Doucet, S. Jin, R. Lewis, S.N. Liddick, C.J. Lister, C. Morse, W. Nazarewicz, H. Schatz, K. Schmidt, D. Soltesz, S.K. Subedi, S.M. Wang, S. Waniganeththi
2020Ia01	PRVCA	101,	015504	V.E. Iacob, J.C. Hardy, H.I. Park, M. Bencomo, L. Chen, V. Horvat, N. Nica, B.T. Roeder, A. Saastamoinen
2020Is08	PRVCA	102,	054324	Ł.W. Iskra, S. Leoni, B. Fornal, C. Michelagnoli, F. Kandzia, N. Marginean, M. Barani, S. Bottoni, N. Cieplicka-Orynczak, G. Colombi, C. Costache, F.C.L. Crespi, J. Dudouet, M. Jentschel, Y.H. Kim, U. Koster, R. Lica, R. Marginean, C. Mihai, R.E. Mihai, C.R. Nita, S. Pascu, C. Porzio, D. Reygadas, E. Ruiz-Martinez, A. Turturica
2020Je01	ARISE	155,	108837	S. Jerome, C. Bobin, P. Cassette, R. Dersch, R. Galea, H. Liu, A. Honig, J. Keightley, K. Kossert, J. Liang, M. Marouli, C. Michotte, S. Pomme, S. Rottger, R. Williams, M. Zhang
2020Ju02	PRVCA	102,	034324	A. Jungclaus et al.

2020Ka02	PRVCA	101,	011301	J. Kallunkathariyil, B. Sulignano, P.T. Greenlees, J. Khuyagbaatar, Ch. Theisen, K. Auranen, H. Badran, F. Bisso, P. Brionnet, R. Briselet, A. Drouart, Z. Favier, T. Goigoux, T. Grahn, K. Hauschild, A. Herzan, F.P. Hessberger, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, M. Leino, A. Lightfoot, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, K. Rezynkina, P. Ruotsalainen, M. Sandzelius, J. Saren, C. Scholey, M. Siciliano, J. Sorri, S. Stolze, A.I. Svirikhin, J. Uusitalo, M. Vandebrouck, A. Ward, C. Wraith, M. Zielinska
2020Kh01	NUPAB	994,	121662	J. Khuyagbaatar, A.K. Mistry, D. Ackermann, L.-L. Andersson, M. Block, H. Brand, Ch. E. Dullmann, J. Even, F.P. Hessberger, J. Hoffmann, A. Hubner, E. Jager, B. Kindler, J. Krier, N. Kurz, B. Lommel, B. Schausten, J. Steiner, A. Yakushev, V. Yakusheva
2020Kh08	PRLTA	125,	142504	J. Khuyagbaatar, H.M. Albers, M. Block, H. Brand, R.A. Cantemir, A. Di Nitto, C.E. Dullmann, M. Gotz, S. Gotz, F.P. Hessberger, E. Jager, B. Kindler, J.V. Kratz, J. Krier, N. Kurz, B. Lommel, L. Lens, A. Mistry, B. Schausten, J. Uusitalo, A. Yakushev
2020Kh10	PRVCA	102,	044312	J. Khuyagbaatar, F.P. Hessberger, S. Hofmann, D. Ackermann, H.G. Burkhard, S. Heinz, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, J. Maurer, K. Nishio
2020Ko06	ARISE	156,	109020	K. Kossert, M.P. Takacs, O. Nahle
2020Kr06	ARISE	163,	109191	K.S. Krane
2020Kr09	PRVCA	102,	034307	T. Kron, R. Beerwerth, S. Raeder, S. Fritzsche, R. Heinke, P. Schönberg, M. Trümper, K. Wendt
2020Ku19	NUPAB1	002,	121990	I. Kulikov, A. Algora, D. Atanasov, P. Ascher, K. Blaum, R.B. Cakirli, A. Herlert, W.J. Huang, J. Karthein, Yu. A. Litvinov, D. Lunney, V. Manea, M. Mougeot, L. Schweikhard, A. Welker, F. Wienholtz
2020Ku23	BRSPE	84,	932	A.A. Kuznetsova, A.V. Yeremin, A. Lopez-Martens, K. Hauschild, A.G. Popeko, O.N. Malyshev, V.I. Chepigin, A.I. Svirikhin, A.V. Isaev, Yu. A. Popov, M.L. Chelnokov, O. Dorvaux, B Gall, M.S. Tezekbayeva
2020Le04	NIMAE	959,	163481	O. Lebeda, F.G. Kondev, J. Cervenak
2020Le06	JPGPE	47,	045113	E. Leistenschneider, R. Klawitter, A. Lennarz, M. Alanssari, J.C. Bale, B.R. Barquest, U. Chowdhury, A. Finlay, A.T. Gallant, B. Kootte, D. Lascar, K.G. Leach, A.J. Mayer, D. Short, C. Andreoiu, G. Gwinner, M.E. Wieser, J. Dilling, A.A. Kwiatkowski
2020Le16	PRLTA	125,	192503	J. Lee, for the RIBLL Collaboration
2020Le.A	arXiv:		2006.01302	E. Leistenschneider, E. Dunling, G. Bollen, B.A. Brown, J. Dilling, A. Hamaker, J.D. Holt, A.A. Kwiatkowski, T. Miyagi, W.S. Porter, D. Puentes, M. Redshaw, M.P. Reiter, R. Ringle, R. Sandler, C.S. Sumithrarachchi, A.A. Valverde, I.T. Yandow, the TITAN Collaboration
2020Li05	PRVCA	101,	014611	R. Linares, C.C. Seabra, V.A.B. Zagatto, V. Scarduelli, L. Gasques, L.C. Chamon, B.R. Goncalves, D.R. Mendes, Jr, A. Lepine-Szily
2020Li06	PRVCA	101,	024305	P.F. Liang, L.J. Sun, J. Lee, S.Q. Hou, X.X. Xu, C.J. Lin, C.X. Yuan, J.J. He, Z.H. Li, J.S. Wang, D.X. Wang, H.Y. Wu, Y.Y. Yang, Y.H. Lam, P. Ma, F.F. Duan, Z.H. Gao, Q. Hu, Z. Bai, J.B. Ma, J.G. Wang, F.P. Zhong, C.G. Wu, D.W. Luo, Y. Jiang, Y. Liu, D.S. Hou, R. Li, N.R. Ma, W.H. Ma, G.Z. Shi, G.M. Yu, D. Patel, S.Y. Jin, Y.F. Wang, Y.C. Yu, Q.W. Zhou, P. Wang, L.Y. Hu, X. Wang, H.L. Zang, P.J. Li, Q.Q. Zhao, H.M. Jia, L. Yang, P.W. Wen, F. Yang, G.L. Zhang, M. Pan, X.Y. Wang, H.H. Sun, Z.G. Hu, R.F. Chen, M.L. Liu, W.Q. Yang, Y.M. Zhao
2020Li15	PRLTA	124,	222501	C. Lizarazo, P.-A. Soderstrom, V. Werner, N. Pietralla, P.M. Walker, G.X. Dong, F.R. Xu, T.R. Rodriguez, F. Browne, P. Doornenbal, S. Nishimura, CC. Nija, A. Obertelli, T. Ando, T. Arici, G. Authelet, H. Baba, A. Blazhev, A.M. Bruce, D. Calvet, R.J. Caroll, F. Chateau, S. Chen, L.X. Chung, A. Corsi, M.L. Cortes, A. Delbart, M. Dewald, B. Ding, F. Flavigny, S. Franchoo, J. Gerl, J.-M. Gheller, A. Giganon, A. Gillibert, M. Gorska, A. Gottardo, I. Kojouharov, N. Kurz, V. Lapoux, J. Lee, M. Lettmann, B.D. Linh, J.J. Liu, Z. Liu, S. Momiyama, K. Moschner, T. Motobayashi, S. Nagamine, N. Nakatsuka, M. Niikura, C. Nobs, L. Olivier, Z. Patel, N. Paul, Zs. Podolyak, J.-Y. Rousse, M. Rudigier, T.Y. Saito, H. Sakurai, C. Santamaria, H. Schaffner, C. Shand, I. Stefan, D. Steppenbeck, R. Taniuchi, T. Uesaka, V. Vaquero, K. Wimmer, Z. Xu

2020Li28	PRVCA	102,	024301	J.J. Liu, J. Lee, H. Watanabe, S. Nishimura, G.X. Zhang, J. Wu, P.M. Walker, P.H. Regan, P.-A. Söderström, H. Kanaoka, Z. Korkulu, P.S. Lee, A. Yagi, A.C. Dai, F.R. Xu, D.S. Ahn, T. Alharbi, H. Baba, F. Browne, A.M. Bruce, R.J. Carroll, K.Y. Chae, Zs. Dombradi, P. Doornenbal, A. Estrade, N. Fukuda, C. Griffin, E. Ideguchi, N. Inabe, T. Isobe, S. Kanaya, I. Kojouharov, F.G. Kondev, T. Kubo, S. Kubono, N. Kurz, I. Kuti, S. Lalkovski, G.J. Lane, C.S. Lee, E.J. Lee, G. Lorusso, G. Lotay, C.-B. Moon, I. Nishizuka, C.R. Nita, A. Odahara, Z. Patel, V.H. Phong, Zs. Podolyák, O.J. Roberts, H. Sakurai, H. Schaffner, C.M. Shand, Y. Shimizu, T. Sumikama, H. Suzuki, H. Takeda, S. Terashima, Zs. Vajta, J.J. Valiente-Dobón, Z.Y. Xu
2020Lo01	PRVCA	101,	015501	J. Long, M. Brodeur, M. Baines, D.W. Bardayan, F.D. Becchetti, D. Blankstein, C. Boomershine, D.P. Burdette, A.M. Clark, B. Frentz, S.L. Henderson, J.M. Kelly, J.J. Kolata, B. Liu, K.T. Macon, P.D. O'Malley, A. Pardo, C. Seymour, S.Y. Strauss, B. Vande Kolk
2020Lo13	JPGPE	47,	035106	D.T. Loan, D.T. Khoa, N.H. Phuc
2020Ma09	PRLTA	124,	092502	V. Manea, J. Karthein, D. Atanasov, M. Bender, K. Blaum, T.E. Cocolios, S. Eliseev, A. Herlert, J.D. Holt, W.J. Huang, Y.A. Litvinov, D. Lunney, J. Menendez, M. Mougeot, D. Neidherr, L. Schweikhard, A. Schwenk, J. Simonis, A. Welker, F. Wienholtz, K. Zuber
2020Ma27	PRLTA	125,	032502	L. Ma, Z.Y. Zhang, Z.G. Gan, X.H. Zhou, H.B. Yang, M.H. Huang, C.L. Yang, M.M. Zhang, Y.L. Tian, Y.S. Wang, H.B. Zhou, X.T. He, Y.C. Mao, W. Hua, L.M. Duan, W.X. Huang, Z. Liu, X.X. Xu, Z.Z. Ren, S.G. Zhou, H.S. Xu
2020Ma.A	JRNCD	326,	1785	M. Marouli, S. Pommé, V. Jobbágy, H. Stroh, R. Van Ammel, A. Fankhauser, R. Jakopić, S. Richter, Y. Aregbe, M. Crozet, C. Maillard, C. Rivier, D. Roudil
2020Me06	PRVCA	101,	052801	Z. Meisel, S. George, S. Ahn, D. Bazin, B.A. Brown, J. Browne, J.F. Carpino, H. Chung, R.H. Cyburt, A. Estrade, M. Famiano, A. Gade, C. Langer, M. Matos, W. Mittig, F. Montes, D.J. Morrissey, J. Pereira, H. Schatz, J. Schatz, M. Scott, D. Shapira, K. Smith, J. Stevens, W. Tan, O. Tarasov, S. Towers, K. Wimmer, J.R. Winkelbauer, J. Yurkon, R.G.T. Zegers
2020Mi13	PRLTA	125,	122501	S. Michimasa, M. Kobayashi, Y. Kiyokawa, S. Ota, R. Yokoyama, D. Nishimura, D.S. Ahn, H. Baba, G.P.A. Berg, M. Dozono, N. Fukuda, T. Furuno, E. Ideguchi, N. Inabe, T. Kawabata, S. Kawase, K. Kisamori, K. Kobayashi, T. Kubo, Y. Kubota, C.S. Lee, M. Matsushita, H. Miya, A. Mizukami, H. Nagakura, H. Oikawa, H. Sakai, Y. Shimizu, A. Stolz, H. Suzuki, M. Takaki, H. Takeda, S. Takeuchi, H. Tokieda, T. Uesaka, K. Yako, Y. Yamaguchi, Y. Yanagisawa, K. Yoshida, S. Shimoura
2020Mo10	APOBB	51,	849	P. Mosat, S. Antalic, F.P. Hessberger, D. Ackermann, B. Andel, M. Block, Z. Kalaninova, B. Kindler, M. Laatiaoui, B. Lommel, A.K. Mistry, J. Piot, M. Vostinar
2020Mo11	PRLTA	101,	034310	P. Mosat, F.P. Heßberger, S. Antalic, D. Ackermann, B. Andel, M. Block, S. Hofmann, Z. Kalaninova, B. Kindler, M. Laatiaoui, B. Lommel, A.K. Mistry, J. Piot, M. Vostinar
2020Mo24	JPHGB	47,	045116	K.J. Moody, N. Gharibyan, D.A. Shaughnessy, P.M. Grant, J.M. Gostic, C.J. Cerjan, C.B. Yeamans, J.D. Despotopulos, S.A. Faye
2020Mo25	PRVCA	102,	014301	M. Mougeot, D. Atanasov, C. Barbieri, K. Blaum, M. Breitenfeld, A. de Roubin, T. Duguet, S. George, F. Herfurth, A. Herlert, J.D. Holt, J. Karthein, D. Lunney, V. Manea, P. Navratil, D. Neidherr, M. Rosenbusch, L. Schweikhard, A. Schwenk, V. Soma, A. Welker, F. Wienholtz, R.N. Wolf, K. Zuber
2020Mo32	PRVCA	102,	034325	S. Momiyama, K. Wimmer, D. Bazin, J. Belarge, P. Bender, B. Elman, A. Gade, K.W. Kemper, N. Kitamura, B. Longfellow, E. Lunderberg, M. Niikura, S. Ota, P. Schrock, J.A. Tostevin, D. Weisshaar
2020Mu16	PRVCA	102,	054307	M. Mukai, Y. Hirayama, Y.X. Watanabe, S. Schiffmann, J. Ekman, M. Godefroid, P. Schury, Y. Kakiguchi, M. Oyaizu, M. Wada, S.C. Jeong, J.Y. Moon, J.H. Park, H. Ishiyama, S. Kimura, H. Ueno, M. Ahmed, A. Ozawa, H. Watanabe, S. Kanaya, H. Miyatake
2020Mu.A	JPCSD	1643,	012057	I. Mukul, C. Andreoiu, M. Brodeur, T. Brunner, K. Dietrich, T. Dickel, I. Dillmann, E. Dunling, D. Fusco, G. Gwinner, C. Izzo, A. Jacobs, B. Kootte, Y. Lan, E. Leistenschneider, M. Lykiardopoulou, S.F. Paul, M.P. Reiter, J.L. Tracy Jr, J. Dilling and A.A. Kwiatkowski

2020Ne06	PYLBB	808,	135642	D.A. Nesterenko,A. Kankainen,J. Kostensalo,C.R. Nobs,A.M. Bruce,O. Beliuskina,L. Canete,T. Eronen,E.R. Gamba,S. Geldhof,R. de Groote,A. Jokinen,J. Kurpeta,I.D. Moore,L. Morrison,Zs. Podolyák,I. Pohjalainen,S. Rinta-Antila,A. de Roubin,M. Rudigier,J. Suhonen,M. Vilén,V. Virtanen,J. Äystö"
2020Ne.1	IMSPF	458,	116435	D.A. Nesterenko, R.P. de Groote, T. Eronen, Z. Ge, M. Hukkanen, A. Jokinen, A. Kankainen
2020On01	PRLTA	125,	262701	W.-J. Ong, E.F. Brown, J. Browne, S. Ahn, K. Childers, B.P. Crider, A.C. Dombos, S.S. Gupta, G.W. Hitt, C. Langer, R. Lewis, S.N. Liddick, S. Lyons, Z. Meisel, P. Moller, F. Montes, F. Naqvi, J. Pereira, C. Prokop, D. Richman, H. Schatz, K. Schmidt, A. Spyrou
2020Or02	NIMBE	463,	491	R. Orford, J.A. Clark, G. Savard, A. Aprahamian, F. Buchinger, M.T. Burkey, D.A. Gorelov, J.W. Klimes, G.E. Morgan, A. Nystrom, W.S. Porter, D. Ray, K.S. Sharma
2020Or03	PRVCA	102,	011303	R. Orford, F.G. Kondev, G. Savard, J.A. Clark, W.S. Porter, D. Ray, F. Buchinger, M.T. Burkey, D.A. Gorelov, D.J. Hartley, J.W. Klimes, K.S. Sharma, A.A. Valverde, X.L. Yan
2020Pa26	PRVCA	102,	014329	V. Paziy, L.M. Fraile, H. Mach, B. Olaizola, G.S. Simpson, A. Aprahamian, C. Bernards, J.A. Briz, B. Bucher, C.J. Chiara, Z. Dlouhy, I. Gheorghe, D. Ghita, P. Hoff, J. Jolie, U. Koster, W. Kurcewicz, R. Lica, N. Marginean, R. Marginean, J.-M. Regis, M. Rudigier, T. Sava, M. Stanoiu, L. Stroe, W.B. Walters
2020PaDG	PTEP.	2020,	083C01	Particle Data Group
2020PhZZ	JUPSC	31,	011013	Vi H. Phong, S. Nishimura, A. Estrade, F. Montes, G. Lorusso, T. Davinson, O. Hall, J. Liu
2020Po07	PRLTA	124,	252502	J.L. Pore, J.M. Gates, R. Orford, C.M. Campbell, R.M. Clark, H.L. Crawford, N.E. Esker, P. Fallon, J.A. Gooding, J.T. Kwarsick, A.O. Macchiavelli, C. Morse, D. Rudolph, A. Samark-Roth, C. Santamaria, R.S. Shah, M.A. Stoyer
2020Pu02	PRVCA	101,	064309	D. Puentes, G. Bollen, M. Brodeur, M. Eibach, K. Gulyuz, A. Hamaker, C. Izzo, S.M. Lenzi, M. MacCormick, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, P. Schury, N.A. Smirnova, J. Surbrook, A.A. Valverde, A.C.C. Villari, I.T. Yandow
2020Ra.1	NATUA	585,	43	Sascha Rau, Fabian Heisse, Florian Kohler-Langes, Sangeetha Sasidharan, Raphael Haas, Dennis Renisch, Christoph E. Dullmann, Wolfgang Quint, Sven Sturm, Klaus Blaum
2020Re04	PRVCA	101,	025803	M.P. Reiter, S. Ayet San Andres, S. Nikas, J. Lippuner, C. Andreoiu, C. Babcock, B.R. Barquest, J. Bollig, T. Brunner, T. Dickel, J. Dilling, I. Dillmann, E. Dunling, G. Gwinner, L. Graham, C. Hornung, R. Klawitter, B. Kootte, A.A. Kwiatkowski, Y. Lan, D. Lascar, K.G. Leach, E. Leistenschneider, G. Martinez-Pinedo, J.E. McKay, S.F. Paul, W.R. Plass, L. Roberts, H. Schatz, C. Scheidenberger, A. Sieverding, R. Steinbrugge, R. Thompson, M.E. Wieser, C. Will, D. Welch
2020Re06	PRLTA	124,	152502	A. Reve, O. Sorlin, F.M. Marqués, Y. Kondo, J. Kahlbow, T. Nakamura, N.A. Orr, F. Nowacki, J.A. Tostevin, C.X. Yuan, N.L. Achouri, H. Al Falou, L. Atar, T. Aumann, H. Baba, K. Boretzky, C. Caesar, D. Calvet, H. Chae, N. Chiga, A. Corsi, H.L. Crawford, F. Delaunay, A. Delbart, Q. Deshayes, Z. Dombrádi, C.A. Douma, Z. Elekes, P. Fallon, I. Gasparic, J.-M. Gheller1, J. Gibelin, A. Gillibert, M.N. Harakeh, W. He, A. Hirayama, C.R. Hoffman, M. Holl, A. Horvat, Á. Horváth, J.W. Hwang, T. Isobe, N. Kalantar-Nayestanaki, S. Kawase, S. Kim, K. Kisamori, T. Kobayashi, D. Körper, S. Koyama, I. Kuti, V. Lapoux, S. Lindberg, S. Masuoka, J. Mayer, K. Miki, T. Murakami, M. Najafi, K. Nakano, N. Nakatsuka, T. Nilsson, A. Obertelli, F. de Oliveira Santos, H. Otsu, T. Ozaki, V. Panin, S. Paschalis, D. Rossi, A.T. Saito, T. Saito, M. Sasano, H. Sato, Y. Satou, H. Scheit, F. Schindler, P. Schrock, M. Shikata, Y. Shimizu, H. Simon, D. Sohler, L. Stuh, S. Takeuchi, M. Tanaka, M. Thoennessen, H. Törnqvist, Y. Togano, T. Tomai, J. Tscheuschner, J. Tsubota, T. Uesaka, Z. Yang, M. Yasuda, K. Yoneda (SAMURAI21 collaboration)
2020Ri02	EPJAA	56,	100	K. Riisager, M.J.G. Borge, J.A. Briz, M. Carmona-Gallardo, O. Forstner, L.M. Fraile, H.O.U. Fynbo, A. Garzon-Camacho, J.G. Johansen, B. Jonson, M.V. Lund, J. Lachner, M. Madurga, S. Merchel, E. Nacher, T. Nilsson, P. Steier, O. Tengblad, V. Vedia

2020Ri04	PRLTA	124,	113001	A. Rischka, H. Cakir, M. Door, P. Filianin, Z. Harman, W.J. Huang, P. Indelicato, C.H. Keitel, C.M. Konig, K. Kromer, M. Muller, Y.N. Novikov, R.X. Schussler, C. Schweiger, S. Eliseev, K. Blaum
2020Ro19	PRVCA	102,	051301	L.V. Rodriguez, D.L. Balabanski, M.L. Bissell, K. Blaum, B. Cheal, G. De Gregorio, J. Ekman, R.F. Garcia Ruiz, A. Gargano, G. Georgiev, W. Gins, C. Gorges, H. Heylen, A. Kanellakopoulos, S. Kaufmann, V. Lagaki, S. Lechner, B. Maass, S. Malbrunot-Ettenauer, R. Neugart, G. Neyens, W. Nortershauser, S. Sailer, R. Sanchez, S. Schmidt, L. Wehner, C. Wraith, L. Xie, Z.Y. Xu, X.F. Yang, D.T. Yordanov
2020Sc.1	arXiv:		2006.02605	P. Schury, T. Niwase, M. Wada, P. Brionnet, S. Chen, T. Hashimoto, H. Haba, H. Hirayama, D.S. Hou, S. Iimura, H. Ishiyama, S. Ishizawa, Y. Ito, D. Kaji, S. Kimura, H. Koura, J.J. Liu, H. Miyatake, J.-Y. Moon, K. Morimoto, K. Morita, D. Nagae, M. Rosenbusch, A. Takamine, Y.X. Watanabe, H. Wollnik, W. Xian, S.X. Yan
2020Sh.A	JPCSD	1643,	012208	R. Shearman, G. Lorusso, A. Boso, P.H. Regan, S. Nishimura, Z.Y. Xu, A. Jungclaus, Y. Shimizu, G.S. Simpson, P.-A. Söderström, H. Watanabe, F. Browne, P. Doornenbal, G. Gey, H.S. Jung, B. Meyer, T. Sumikama, J. Taprogge, Zs. Vajta, J. Wu, H. Baba, G. Benzoni, K.Y. Chae, F.C.L. Crespi, N. Fukuda, R. Gernhäuser, N. Inabe, T. Isobe, T. Kajino, D. Kameda, G.D. Kim, Y.-K. Kim, I. Kajouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, A. Montaner-Pizá, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyák, H. Sakurai, H. Schaffner, P. Schury, S. Shibagaki, K. Steiger, H. Suzuki, H. Takeda, A. Wendt, A. Yagi and K. Yoshinaga
2020Si22	PRLTA	125,	142503	T. Sikorsky, J. Geist, D. Hengstler, S. Kempf, L. Gastaldo, C. Enss, C. Mokry, J. Runke, C.E. Dullmann, P. Wobrauschek, K. Beeks, V. Rosecker, J.H. Sterba, G. Kazakov, T. Schumm, A. Fleischmann
2020Sm02	PRVCA	102,	054314	J.K. Smith, A.B. Garnsworthy, J.L. Pore, C. Andreoiu, A.D. MacLean, A. Chester, Z. Beadle, G.C. Ball, P.C. Bender, V. Bildstein, R. Braid, A. Diaz Varela, R. Dunlop, L.J. Evitts, P.E. Garrett, G. Hackman, S.V. Ilyushkin, B. Jigmeddorj, K. Kuhn, A.T. Laffoley, K.G. Leach, D. Miller, W.J. Mills, W. Moore, M. Moukaddam, B. Olaizola, E.E. Peters, A.J. Radich, E.T. Rand, F. Sarazin, C.E. Svensson, S.J. Williams, S.W. Yates
2020Sm.1	HYIND	241,	59	Matthew B. Smith, Tobias Murböck, Eleanor Dunling, Andrew Jacobs, Brian Kootte, Yang Lan, Erich Leistenschneider, David Lunney, Eleni Marina Lykiardopoulou, Ish Mukul, Stefan F. Paul, Moritz P. Reiter, Christian Will, Jens Dilling, and Anna A. Kwiatkowski
2020St11	PRVCA	102,	024322	M. Stryjczyk, for the IDS Collaboration
2020Su02	PYLBB	800,	135096	M.D. Sun, Z. Liu, T.H. Huang, W.Q. Zhang, A.N. Andreyev, B. Ding, J.G. Wang, X.Y. Liu, H.Y. Lu, D.S. Hou, Z.G. Gan, L. Ma, H.B. Yang, Z.Y. Zhang, L. Yu, J. Jiang, K.L. Wang, Y.S. Wang, M.L. Liu, Z.H. Li, J. Li, X. Wang, A.H. Feng, C.J. Lin, L.J. Sun, N.R. Ma, W. Zuo, H.S. Xu, X.H. Zhou, G.Q. Xiao, C. Qi, F.S. Zhang
2020Su06	PYLBB	802,	135215	Y.L. Sun, A. Obertelli, P. Doornenbal, C. Barbieri, Y. Chazono, T. Duguet, H.N. Liu, P. Navratil, F. Nowacki, K. Ogata, T. Otsuka, F. Raimondi, V. Soma, Y. Utsuno, K. Yoshida, N. Achouri, H. Baba, F. Browne, D. Calvet, F. Chateau, S. Chen, N. Chiga, A. Corsi, M.L. Cortes, A. Delbart, J.-M. Gheller, A. Giganon, A. Gillibert, C. Hilaire, T. Isobe, T. Kobayashi, Y. Kubota, V. Lapoux, T. Motobayashi, I. Murray, H. Otsu, V. Panin, N. Paul, W. Rodriguez, H. Sakurai, M. Sasano, D. Steppenbeck, L. Stuhl, Y. Togano, T. Uesaka, K. Wimmer, K. Yoneda, O. Aktas, T. Aumann, L.X. Chung, F. Flavigny, S. Franchoo, I. Gasparic, R.-B. Gerst, J. Gibelin, K.I. Hahn, D. Kim, T. Koiwai, Y. Kondo, P. Koseoglou, J. Lee, C. Lehr, B.D. Linh, T. Lokotko, M. MacCormick, K. Moschner, T. Nakamura, S.Y. Park, D. Rossi, E. Sahin, D. Sohler, P.-A. Soderstrom, S. Takeuchi, H. Tornqvist, V. Vaquero, V. Wagner, S. Wang, V. Werner, X. Xu, H. Yamada, D. Yan, Z. Yang, M. Yasuda, L. Zanetti
2020Su.1	arXiv:		2009.00825	L.J. Sun, M. Friedman, T. Budner, D. Pérez-Loureiro, E. Pollacco, C. Wrede, B.A. Brown, M. Cortesi, C. Fry, B.E. Glassman, J. Heideman, M. Janasik, A. Magilligan, M. Roosa, J. Stomps, J. Surbrook, P. Tiwari

2020Sz02	EPJAA	56,	182	T.N. Szegedi, A. Toth, G.G. Kiss, Gy. Gyurky
2020Ta03	PRLTA	124,	062502	T.L. Tang, B.P. Kay, C.R. Hoffman, J.P. Schiffer, D.K. Sharp, L.P. Gaffney, S.J. Freeman, M.R. Mumpower, A. Arokiaraj, E.F. Baader, P.A. Butler, W.N. Catford, G. de Angelis, F. Flavigny, M.D. Gott, E.T. Gregor, J. Konki, M. Labiche, I.H. Lazarus, P.T. MacGregor, I. Martel, R.D. Page, Zs. Podolyak, O. Poleshchuk, R. Raabe, F. Recchia, J.F. Smith, S.V. Szwec, J. Yang
2020Ur02	PRVCA	102,	024318	W. Urban, T. Rzaca-Urban, J. Wisniewski, J. Kurpeta, A. Plochocki, J.P. Greene, A.G. Smith, G.S. Simpson
2020Vi02	APOBB	51,	587	A. Vitez-Sveiczer, A. Algora, A.I. Morales, B. Rubio, G.G. Kiss, G. De Angelis, R. Recchia, S. Nishimura, J. Agramunt, V. Guadilla, A. Montaner-Piza, S.E.A. Orrigo, A. Horvath, D. Napoli, S. Lenzi, A. Boso, V.H. Phong, J. Wu, P.-A. Soderstrom, T. Sumikama, H. Suzuki, H. Takeda, D.S. Ahn, H. Baba, P. Doornenbal, N. Fukuda, N. Inabe, T. Isobe, T. Kubo, S. Kubono, H. Sakurai, Y. Shimizu, S. Chen, B. Blank, P. Ascher, M. Gerbaux, T. Goigoux, J. Giovinazzo, S. Grevy, T. Kurtukian Nieto, C. Magron, W. Gelletly, Z. Dombradi, Y. Fujita, M. Tanaka, P. Aguilera, F. Molina, J. Eberth, F. Diel, D. Lubos, C. Borcea, E. Ganioglu, D. Nishimura, H. Oikawa, Y. Takei, S. Yagi, W. Korten, G. De France, P. Davies, J. Liu, J. Lee, T. Lokotko, I. Kojouharov, N. Kurz, H. Shaffner
2020Vi03	APOBB	51,	717	S. Vinals, E. Nacher, O. Tengblad, J. Benito, M.J.G. Borge, P. Figuera, L.M. Fraile, H.O.U. Fynbo, A. Gad, J. Jensen, B. Jonson, R. Lica, I. Marroquin, M. Munch, T. Nilsson, J.D. Ovejas, A. Perea, K. Riisager, S. Smain, C. Sotty
2020Vi04	PRVCA	101,	034312	M. Vilen, J.M. Kelly, A. Kankainen, M. Brodeur, A. Aprahamian, L. Canete, R.P. de Groote, A. de Roubin, T. Eronen, A. Jokinen, I.D. Moore, M.R. Mumpower, D.A. Nesterenko, J. O'Brien, A. Pardo Perdomo, H. Penttila, M. Reponen, S. Rinta-Antila, R. Surman
2020Vo07	BRSPE	84,	351	A.A. Voinov, V.K. Utyonkov, Yu. Ts. Oganessian, F. Sh. Abdullin, A.N. Polyakov, Yu. S. Tsyganov, I.V. Shirokovsky, R.N. Sagaidak, V.G. Subbotin, S.N. Dmitriev, M.G. Itkis, M.V. Shumeiko, N.D. Kovrizhnykh, A.V. Sabelnikov, G.K. Vostokin
2020Wa04	PRVCA	101,	025806	B.S. Wang, S.A. Caldwell, N.D. Scielzo, A. Czeszumska, J.A. Clark, G. Savard, A. Aprahamian, M.T. Burkey, C.J. Chiara, J. Harker, A.F. Levand, S.T. Marley, G.E. Morgan, J.M. Munson, E.B. Norman, A. Nystrom, R. Orford, S.W. Padgett, A. Perez Galvan, K.S. Sharma, K. Siegl, S.Y. Strauss
2020Wa12	PRVCA	101,	041305	Y.X. Watanabe, M. Ahmed, Y. Hirayama, M. Mukai, J.H. Park, P. Schury, Y. Kakiguchi, S. Kimura, A. Ozawa, M. Oyaizu, M. Wada, H. Miyatake
2020Wa29	PRLTA	125,	192505	P.M. Walker, Y. Hirayama, G.J. Lane, H. Watanabe, G.D. Dracoulis, M. Ahmed, M. Brunet, T. Hashimoto, S. Ishizawa, F.G. Kondev, Yu. A. Litvinov, H. Miyatake, J.Y. Moon, M. Mukai, T. Niwase, J.H. Park, Zs. Podolyak, M. Rosenbusch, P. Schury, M. Wada, X.Y. Watanabe, W.Y. Liang, F.R. Xu
2020Wa.A	PrvCom	FGK		H. Watanabe
2020We08	PRVCA	101,	044317	T.B. Webb, R.J. Charity, J.M. Elson, D.E.M. Hoff, C.D. Pruitt, L.G. Sobotka, K.W. Brown, J. Barney, G. Cerizza, J. Estee, W.G. Lynch, J. Manfredi, P. Morfouace, C. Santamaria, S. Sweany, M.B. Tsang, T. Tsang, Y. Zhang, K. Zhu, S.A. Kuvin, D. McNeel, J. Smith, A.H. Wuosmaa, Z. Chajecki
2020Wh02	PRVCA	102,	024327	K. Whitmore, C. Andreoiu, F.H. Garcia, K. Ortner, J.D. Holt, T. Miyagi, G.C. Ball, N. Bernier, H. Bidaman, V. Bildstein, M. Bowry, D.S. Cross, M.R. Dunlop, R. Dunlop, A.B. Garnsworthy, P.E. Garrett, J. Henderson, J. Measures, B. Olaizola, J. Park, C.M. Petrache, J.L. Pore, J.K. Smith, D. Southall, C.E. Svensson, M. Ticu, J. Turko, T. Zidar
2020Wu04	PRVCA	101,	042801	J. Wu, S. Nishimura, P. Moller, M.R. Mumpower, R. Lozeva, C.B. Moon, A. Odahara, H. Baba, F. Browne, R. Daido, P. Doornenbal, Y.F. Fang, M. Haroon, T. Isobe, H.S. Jung, G. Lorusso, B. Moon, Z. Patel, S. Rice, H. Sakurai, Y. Shimizu, L. Sinclair, P.-A. Soderstrom, T. Sumikama, H. Watanabe, Z.Y. Xu, A. Yagi, R. Yokoyama, D.S. Ahn, F.L. Bello Garrote, J.M. Daugas, F. Didierjean, N. Fukuda, N. Inabe, T. Ishigaki, D. Kameda, I. Kojouharov, T. Komatsubara, T. Kubo, N. Kurz, K.Y. Kwon, S. Morimoto, D. Murai, H. Nishibata, H. Schaffner, T.M. Sprouse, H. Suzuki, H. Takeda, M. Tanaka, K. Tshoo, Y. Wakabayashi

2020Yo.A	NACOP	3,	1	Deyan T. Yordanov, Liss V. Rodríguez, Dimiter L. Balabanski, Jacek Bieroń, Mark L. Bissell, Klaus Blaum, Bradley Cheal, Jörgen Ekman, Gediminas Gaigalas, Ronald F. Garcia Ruiz, Georgi Georgiev, Wouter Gins, Michel R. Godefroid, Christian Gorges, Zoltán Harman, Hanne Heylen, Per Jönsson, Anastasios Kanellakopoulos, Simon Kaufmann, Christoph H. Keitel, Varvara Lagaki, Simon Lechner, Bernhard Maaß, Stephan Malbrunot-Ettenauer, Witold Nazarewicz, Rainer Neugart, Gerda Neyens, Wilfried Nörtershäuser, Natalia S. Oreshkina, Asimina Papoulia, Pekka Pyykkö", Paul-Gerhard Reinhard, Stefan Sailer, Rodolfo Sánchez, Sacha Schiffmann, Stefan Schmidt, Laura Wehner, Calvin Wraith, Liang Xie, Zhengyu Xu, Xiaofei Yang
2020Za04	PRVCA	101,	054312	C.J. Zachary, N.T. Brewer, J.C. Batchelder, E. Wang, J.H. Hamilton, J.M. Eldridge, B.M. Musangu, A.V. Ramayya, C.J. Gross, K.P. Rykaczewski, R. Grzywacz, A.C. Dai, F.R. Xu, Y.X. Liu, Y. Sun, M. Madurga, D. Miller, D.W. Stracener, C. Jost, E.F. Zganjar, J.A. Winger, M. Karny, S.V. Paulauskas, S.H. Liu, M. Wolinska-Cichocka, S.W. Padgett, A.J. Mendez, K. Miernik, A. Fijalkowska, S.V. Ilyushkin
2020Zh01	PYLBB	800,	135102	M.M. Zhang, H.B. Yang, Z.G. Gan, Z.Y. Zhang, M.H. Huang, L. Ma, C.L. Yang, C.X. Yuan, Y.S. Wang, Y.L. Tian, H.B. Zhou, S. Huang, X.T. He, S.Y. Wang, W.Z. Xu, H.W. Li, X.X. Xu, J.G. Wang, H.R. Yang, L.M. Duan, W.Q. Yang, S.G. Zhou, Z.Z. Ren, X.H. Zhou, H.S. Xu, A.A. Voinov, Yu. S. Tsyganov, A.N. Polyakov, M.V. Shumeiko
				2021
2021Be.A	ARISE	170,	109572	D.E. Bergeron, S.M. Collins, L. Pibida, J.T. Cessna, R. Fitzgerald, B.E. Zimmerman, P. Ivanov, J.D. Keightley, E. Napoli
2021Da02	NUPAB1	002,	122097	S. Das, A. Adhikari, S.S. Alam, S. Sharma, S. Aich, A. Gupta, Y. Sapkota, A. Das, A. Saha, S.K. Dey, D. Pramanik, A. Bisoi, I. Ray, T. Bhattacharjee, C.C. Dey, S. Sarkar, M.S. Sarkar
2021He.A	arXiv:		2101.06076	F.P. Hessberger, M. Block, C. Düllmann, A. Yakushev, M. Leino, J. Uusitalo
2021Kr.A	EPJAA	57,	19	K.S. Krane
2021Pi01	ARISE	167,	109455	L. Pibida, D.E. Bergeron, B. Zimmerman, R. Fitzgerald, J.T. Cessna, L. King
2021Ta01	ARISE	167,	109425	M.P. Takács, K. Kossert
2021Wa.A	PrvCom	FGK		H. Watanabe
2021Wa.B	PRVCA	103,	019902	Y.X. Watanabe, M. Ahmed, Y. Hirayama, M. Mukai, J.H. Park, P. Schury, Y. Kakiguchi, S. Kimura, A. Ozawa, M. Oyaizu, M. Wada, H. Miyatake