The AME2026 Atomic Mass Evaluation *

(II). Tables, graphs, and references

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Abstract This is the second of two papers presenting the results of the Atomic Mass Evaluation, AME2026. The recommended atomic masses and their uncertainties are derived from the evaluation and least-squares adjustment of the experimental input data described in Part I, supplemented by estimates based on trends in the mass surface. The tables and graphs supersede those of AME2020. The atomic mass table is followed by a table showing the influences of experimental data on primary nuclides, a table of nuclear reaction and decay energies, and graphs of two-neutron separation energies, two-proton separation energies, and α-decay energies. A complete list of references to the input data used in the AME2026 and NUBASE2026 evaluations is provided at the end of this paper.

Keywords: atomic mass evaluation, atomic mass table, separation and reaction energies, least-squares adjustment, trends in the mass surface

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1 Introduction

This paper presents the recommended atomic masses and derived quantities of the AME2026 evaluation. Part I [1] describes the selection and evaluation of the experimental input data, the least-squares adjustment, and the estimation of masses based on trends in the mass surface (TMS). The present tables and graphs replace those of AME2020 [2, 3].

Table I lists atomic masses and their uncertainties. Table II presents the influences of experimental data on the masses of primary nuclides. Table III provides 12 combinations of masses corresponding to nuclear reaction and decay energies. The accompanying graphs show two-neutron separation energies and α-decay energies as a function of neutron number, and two-proton separation energies as a function of proton number. These graphs are considered the most illustrative for revealing systematic trends in the mass surface and for deriving estimates of unknown masses.

References for the AME2026 and NUBASE2026 [4] evaluations are compiled at the end of this paper.

As described in Part I, the evaluation includes data available to the evaluators through the end of June 2026. The final mass-adjustment calculations were performed on 24 October 2026. All uncertainties are quoted as one standard deviation (1σ). Values estimated from the TMS and their associated uncertainties are marked with '#' to distinguish them from experimentally determined values.

2 Atomic mass table

Table I gives atomic masses expressed as mass excess in keV, binding energy per nucleon, β-decay energy, and total atomic mass in unified atomic mass units. Its organization follows the earlier AME editions [2, 3, 5–11]. The tabulated masses refer to neutral atoms in their electronic and nuclear ground states. Measurements on ions

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are converted to this convention using the electron mass and the appropriate electronic binding energies, as discussed in Part I.

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

$$M_N(A,Z) = M_A(A,Z) - Z \times m_e + B_e(Z)/c^2, \quad (1)$$

where m_e is the electron mass and $B_e(Z)$ is the total binding energy of the atomic electrons. The ionization energy correction is generally much smaller than the mass uncertainty. For the small number of very precise mass measurements, corrections for the first and second ionization energies can be applied without significant loss of accuracy. The same applies to the uncertainty in the electron mass, m_e; see Table A in Part I [1].

For a positive ion with charge state q, the conversion instead involves the sum of the first q ionization energies. These corrections and their uncertainties are included whenever they are relevant to the precision of the measurement. In particular, a measurement of a highly charged ion requires the binding energies of all removed electrons.

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. For example, Table I gives a mass-excess uncertainty of 0.015 keV for ^{238}U. At this level of precision, the uncertainty in the calculated total electronic binding energy must be taken into account when converting an ionic mass to a neutral mass. Thus, the approximate expression below should therefore not be assumed to preserve the full precision of the evaluated atomic mass. An approximate formula for B_e can be found in the review of Lunney, Pearson, and Thibault [12]:

$$B_e(Z) = 14.4381\, Z^{2.39} + 1.55468 \times 10^{-6}\, Z^{5.35}\,\text{eV}. \quad (2)$$

Atomic masses are given in mass units and derived quantities in energy units. We use the 'unified atomic mass unit', denoted by 'u', which is defined as one-twelfth of the atomic mass of a ^{12}C atom in its electronic and nuclear ground states and in its rest frame of reference. The mass excess of a nuclide with mass number A and proton number Z is defined as

$$ME(A,Z) = [M_A(A,Z) - A\,\text{u}]c^2. \quad (3)$$

Energy values are expressed in electron-volts following the SI convention described in Part I, Section 2. Consistent with Part I and the evaluation output, the conversion factor is $1\,\text{u} = 931\,494.103\,72(29)\,\text{keV}/c^2$, adopted from CODATA2022 [13].

The standard printing format of Table I does not retain all digits needed for the most precisely known masses. Table A gives additional digits for the neutron and 16 nuclides with mass-excess uncertainties below 1 eV. Table B gives selected covariance matrices for use in propagating uncertainties of linear combinations of precise mass values. The units are $\mu\text{u} = 10^{-6}$ u for the atomic masses in Table A and $\text{nu}^2 = (10^{-9}\,\text{u})^2$ for the covariances in Table B.

Table A. High-precision mass values in AME2026.

Nuclide	Mass excess (keV)	Uncertainty (keV)	Atomic mass (μu)	Uncertainty (μu)
n	8071.318071	0.000440	1008664.915901	0.000472
^{1}H	7288.971083	0.000008	1007825.031907	0.000008
^{2}H	13135.722914	0.000013	2014101.777844	0.000013
^{3}H	14949.810991	0.000025	3016049.281398	0.000026
^{3}He	14931.218921	0.000022	3016029.321990	0.000024
^{4}He	2424.916361	0.000038	4002603.254655	0.000041
^{13}C	3125.009226	0.000269	13003354.835220	0.000288
^{14}N	2863.416733	0.000260	14003074.004142	0.000280
^{15}N	101.438084	0.000582	15000108.898257	0.000625
^{16}O	−4737.002394	0.000412	15994914.619024	0.000442
^{17}O	−808.764308	0.000659	16999131.755849	0.000707
^{18}O	−782.816339	0.000642	17999159.612137	0.000689
^{19}F	−1487.445229	0.000835	18998403.161949	0.000897
^{20}Ne	−7041.938201	0.000074	19992440.168786	0.000080
^{28}Si	−21492.797293	0.000556	27976926.534256	0.000596
^{29}Si	−21895.081803	0.000599	28976494.664094	0.000643
^{31}P	−24440.544748	0.000844	30973761.997365	0.000906

Table B. Covariance matrices for selected precisely known light nuclides in nu^2, where 1 nu$=10^{-9}$ u. Only the lower triangles are printed; the matrices are symmetric.

	n	^{1}H	^{2}H	^{4}He	^{13}C	^{14}N	^{15}N	^{16}O	^{28}Si
n	0.22302790								
^{1}H	0.00001701	0.00006020							
^{2}H	0.00008879	0.00007725	0.00016615						
^{4}He	0.00005009	0.00004727	0.00009742	0.00168256					
^{13}C	0.00005962	0.00018339	0.00024608	0.00014989	0.08312943				
^{14}N	0.00007726	0.00024540	0.00032589	0.00019871	0.07579275	0.07817151			
^{15}N	0.00009371	0.00018057	0.00027494	0.00016549	0.01426012	0.01360610	0.39101914		
^{16}O	0.00016191	0.00051023	0.00067871	0.00041376	0.08894264	0.09077953	0.02039575	0.19546899	
^{28}Si	0.00014099	0.00043475	0.00058034	0.00035367	0.10405374	0.09820323	0.04834069	0.14500135	0.35565066

	n	^{1}H	^{2}H	^{3}H	^{3}He	^{16}O	^{20}Ne	^{23}Na	^{28}Si
n	0.22302790								
^{1}H	0.00001701	0.00006020							
^{2}H	0.00008879	0.00007725	0.00016615						
^{3}H	0.00008363	0.00010864	0.00019240	0.00069261					
^{3}He	0.00007378	0.00009584	0.00016972	0.00046664	0.00055600				
^{16}O	0.00016191	0.00051023	0.00067871	0.00093976	0.00082902	0.19546899			
^{20}Ne	0.00000024	0.00000030	0.00000054	0.00000067	0.00000059	0.00001690	0.00639102		
^{23}Na	0.00004675	0.00000036	0.00000048	0.00000067	0.00000059	0.00002785	0.00000006	3.78072930	
^{28}Si	0.00014099	0.00043475	0.00058034	0.00080235	0.00070780	0.14500135	0.00001552	0.00006414	0.35565066

3 Influences on primary nuclides

Table II lists the primary nuclides, together with up to three experimental input data having the largest *influences* on each adjusted mass. It complements the information given in the main table (Part I, Table I), which presents the *significance* and principal *influence* of each input datum. In other words, the flow-of-information matrix **F**, defined in Part I, Section 4.3, is here displayed along its columns, complementing the row-wise presentation in Part I, Table I.

4 Nuclear reaction and decay energies

Linear combinations of neighboring atomic masses determine the energy balances of nuclear reactions and decays, and reveal local trends in the mass surface. Table III gives 12 such combinations and their uncertainties: S_{2n}, S_{2p}, Q_α, $Q^-_{2\beta}$, $Q_{\varepsilon p}$, $Q_{\beta^- n}$, S_n, S_p, $Q^-_{4\beta}$, $Q_{d,\alpha}$, $Q_{p,\alpha}$, and $Q_{n,\alpha}$. The conventions for decay energies are described in Appendix C of Part I.

The accompanying explanation of Table III provides relations for deriving 28 additional reaction energies. When combining tabulated quantities, their correlations must be included to obtain the correct uncertainty. Neglecting covariances can either overestimate or underestimate an uncertainty, depending on their signs.

For a linear combination of masses, $q=\sum_i a_i m_i$, the variance is

$$\sigma_q^2=\sum_{i,j} a_i a_j C_{ij}, \tag{4}$$

where $C_{ij}=\mathrm{cov}(m_i,m_j)$. The diagonal elements C_{ii} are the mass variances. Covariances have units of mass squared and should not be confused with the dimensionless correlation coefficients $\rho_{ij}=C_{ij}/(\sigma_i\sigma_j)$. If q is converted to an energy, the variance must be converted to the corresponding energy units as well.

For combinations involving the most precisely known masses, uncertainties can be obtained from the variances and covariances listed in Table B. As an example, one can consider the mass difference between ^{3}H and ^{3}He. Table A gives

$$m(^3\mathrm{H})-m(^3\mathrm{He})=19.959\,408\ \mu\mathrm{u}, \tag{5}$$

using the adjusted mass values. Neglecting their covariance would give

$$\sigma_{\mathrm{uncorr}}=\sqrt{0.00069261+0.00055600}\simeq 0.03534\ \mathrm{nu}. \tag{6}$$

Including the covariance gives instead

$$\begin{aligned}\sigma_{\mathrm{diff}}&=\big[0.00069261+0.00055600\\&\qquad-2\times(0.00046664)\big]^{1/2}\\&\simeq 0.01776\ \mathrm{nu}.\end{aligned} \tag{7}$$

The corresponding energy for $^{3}\mathrm{H}\to{}^{3}\mathrm{He}$ is approximately 18.592 07(2) keV. Thus, accounting for the covariance substantially reduces the uncertainty.

Covariances for other cases are available on the AMDC website [14].

5 Graphs of separation and decay energies

All the information contained in the mass table (Table I) and in the nuclear reaction and separation en-

ergy table (Table III) can be displayed in plots of 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. [5]. The even–even mass sheet lies lowest and the odd–odd highest, with the even–odd and the odd–even between them. These sheets are nearly parallel over much of the mass surface. Finite differences between masses on the same sheet reduce the dominant pairing staggering and make local trends easier to identify. In this context, a *derivative* denotes a specified finite difference between neighboring masses, rather than a continuous derivative. The following three quantities are displayed:

1. Two-neutron separation energies S_{2n} as a function of N, with lines connecting isotopes of the same element (Figs. 1–9);

2. Two-proton separation energies S_{2p} as a function of Z, with lines connecting isotones (nuclides with the same neutron number) (Figs. 10–17);

3. α-decay energies Q_α as a function of N, with lines connecting isotopes of the same element (Figs. 18–26).

These graphs can be useful in assessing interpolation and short-range extrapolation from the Tms. Systematic departures from smooth trends can reflect shell or subshell closures, or changes in deformation. An isolated irregularity violating the general smooth trends may be seriously questioned. The treatment of irregular masses is described in Part I, Section 5.

6 List of references

A complete list of references related to the input data used in the Ame2026 and the Nubase2026 evaluations is presented at the end of this paper. Individual references are given using the "Nuclear Science References" (Nsr) database keynumbers and identified by the corresponding CODEN-style codes [15]. The exception is *European Physical Journal A*, for which we use the identifier 'EPJAA' rather than 'ZAANE' [15]. When an official Nsr keynumber is not available for a peer-reviewed article, a provisional key with a numerical suffix is assigned, for example, *2024Ko.1*. References to abstracts, preprints, private communications, conference proceedings, theses, and reports are assigned keys with a letter suffix, for example, *2024Ko.A*. For references with more than three authors, only the first three authors are shown in the printed version (complete author lists are provided in the accompanying electronic reference file on the Amdc website). All references are listed at the end of Part II, under 'References used in the Ame2026 and the Nubase2026 evaluations'.

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Table I. The 2026 Atomic Mass Table

EXPLANATION OF TABLE

N	Neutron number.
Z	Proton number.
A	Mass number $A = N + Z$.
Elt.	Chemical symbol of the element.

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

Mass excess Mass excess, $M - A$u, expressed in keV, together with its one-standard-deviation uncertainty.
In cases where the furthest-left significant digit in the uncertainty was larger than 3, values and uncertainties were rounded, 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 are not derived exclusively from experimental data but rely at least partly on the TMS (see Part I, Section 5, p. 120002-21).

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

\# in place of decimal point: see above.
a in place of uncertainty : uncertainty smaller than 0.5 eV. Values with full precision are available in ASCII format at the AMDC website.

Beta-decay energy Decay direction, 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.

Atomic mass Atomic mass M and its uncertainty in μu.

\# in place of decimal point: see above.

Table I. The 2026 Atomic Mass Table (Explanation of Table on p. 120003-5)

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		7288.97108	0.00001	0.0	0.0		*	1 007825.03191	0.00001
1	1	2	H		13135.72291	0.00001	1112.283	*a*		*	2 014101.77784	0.00001
2	1	3	H		14949.81099	0.00003	2827.265	*a*	β^-	18.592 *a*	3 016049.28140	0.00003
1	2		He		14931.21892	0.00002	2572.680	*a*		*	3 016029.32199	0.00002
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		2424.91636	0.00004	7073.915	*a*		*	4 002603.25465	0.00004
1	3		Li	-p	25320	210	1150	50	β^+	22900 210	4 027190	230
4	1	5	H	-nn	32940	90	1327	17	β^-	21710 90	5 035360	90
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	41820	240	970	40	β^-	24230 240	6 044900	250
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	49180#	1000#	930#	140#	β^-	23110# 1000#	7 052800#	1080#
5	2		He	-n	26073	7	4123.1	1.0	β^-	11166 7	7 027991	8
4	3		Li		14907.105	0.004	5606.440	0.001		*	7 016003.434	0.004
3	4		Be		15769.061	0.023	5371.540	0.003	β^+	861.956 0.022	7 016928.782	0.024
2	5		B	-p	27677	26	3559	4	β^+	11908 26	7 029712	27
6	2	8	He		31609.71	0.10	3924.518	0.013	β^-	10663.90 0.11	8 033934.42	0.11
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	7062.435	0.004		*	8 005305.10	0.04
3	5		B		22921.6	1.0	4717.15	0.12	β^+	17979.9 1.0	8 024607.4	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^-	13606.48 0.19	9 026790.19	0.20
5	4		Be		11348.425	0.003	6462.672	*a*		*	9 012183.0340	0.0030
4	5		B	–	12416.5	0.9	6257.07	0.10	β^+	1068.0 0.9	9 013329.6	1.0
3	6		C		28911.0	2.1	4337.42	0.24	β^+	16494.6 2.3	9 031037.3	2.3
2	7		N	-p	45100	210	2451	23	β^+	16190 210	9 048420	230
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		12607.46	0.05	6497.633	0.005	β^-	556.85 0.05	10 013534.67	0.05
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		38480	180	3676	18	β^+	22780 180	10 041310	190
8	3	11	Li	x	40728.3	0.6	4155.38	0.06	β^-	20550.6 0.8	11 043723.6	0.7
7	4		Be	x	20177.6	0.6	5952.50	0.05	β^-	11509.9 0.6	11 021661.6	0.6
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	31912.6	2.0	4890.37	0.17	β^+	14574.5 2.2	12 034259.6	2.1

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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		3125.00923	0.00027	7469.850	*a*		*		13 003354.83522	0.00029
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		39830	70	5003	5	β^-	16170	70	14 042760	70
9	5		B		23665	21	6101.6	1.5	β^-	20645	21	14 025405	23
8	6		C		3019.893	0.004	7520.320	*a*	β^-	156.476	0.004	14 003241.989	0.004
7	7		N		2863.41673	0.00026	7475.615	*a*		*		14 003074.00414	0.00028
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		49624	20	4554.4	1.3	β^-	20667	29	15 053274	21
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	56820	80	4325	5	β^-	19700	80	16 060990	80
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		-4737.0024	0.0004	7976.207	*a*		*		15 994914.6190	0.0004
7	9		F		10675	5	6964.0	0.3	β^+	15412	5	16 011460	6
6	10		Ne	-pp	24016	12	6081.4	0.8	β^+	13341	13	16 025782	13
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		-808.7643	0.0007	7750.729	*a*		*		16 999131.7558	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	x	16500.4	0.4	6640.500	0.021	β^+	14548.7	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	7341.259	0.020	β^+	4444.5	0.6	18 005708.7	0.4
7	11		Na	-p	25169	20	6194.9	1.1	β^+	19852	20	18 027020	21
6	12		Mg	x	42030	30	5214.8	1.9	β^+	16860	40	18 045120	40
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	15855	16	6948.6	0.9	β^-	12522	17	19 017021	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		-1487.4452	0.0008	7779.019	*a*		*		18 998403.1619	0.0009
9	10		Ne	+3n	1752.04	0.16	7567.344	0.008	β^+	3239.49	0.16	19 001880.89	0.17
8	11		Na		12929	11	6937.9	0.6	β^+	11177	11	19 013880	11
7	12		Mg	-pp	31872	10	5899.7	0.5	β^+	18943	15	19 034216	11

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	7024.475	0.030	19 999981.25	0.03
10	10		Ne		-7041.93820	0.00007	8032.241	*a*		*		19 992440.16879	0.00008
9	11		Na		6850.5	1.1	7298.50	0.06	β^+	13892.5	1.1	20 007354.3	1.2
8	12		Mg		17477.7	1.9	6728.03	0.09	β^+	10627.1	2.2	20 018763.0	2.0
7	13		Al	x	41940#	200#	5466#	10#	β^+	24460#	200#	20 045020#	220#
16	5	21	B	-nn	78380	560	4153	27	β^-	32740#	630#	21 084150	600
15	6		C	x	45640#	300#	5674#	14#	β^-	20410#	330#	21 049000#	320#
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 993846.68	0.04
10	11		Na		-2184.86	0.04	7765.558	0.002	β^+	3546.919	0.018	20 997654.45	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		26050	14	6346.5	0.7	β^+	15146	14	21 027966	15
7	14		Si	x	49870#	200#	5175#	10#	β^+	23820#	200#	21 053540#	220#
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		-8024.7302	0.0024	8080.466	*a*		*		21 991385.0982	0.0026
11	11		Na		-5181.40	0.13	7915.663	0.006	β^+	2843.33	0.13	21 994437.54	0.14
10	12		Mg		-400.00	0.16	7662.765	0.007	β^+	4781.40	0.17	21 999570.58	0.18
9	13		Al	-ep	18092.49	0.27	6786.636	0.012	β^+	18492.5	0.3	22 019423.09	0.29
8	14		Si	x	31830	50	6126.8	2.5	β^+	13730	50	22 034170	60
17	6	23	C	x	64170#	500#	5077#	22#	β^-	27450#	650#	23 068890#	540#
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	-5154.06	0.10	7955.257	0.004	β^-	4375.79	0.10	22 994466.89	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		23363	5	6579.32	0.24	β^+	16615	5	23 025081	6
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	-5951.7	0.5	7993.326	0.021	β^-	2466.2	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 985041.690	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	x	10754	4	7166.87	0.16	β^+	10803	4	24 011545	4
9	15		P	x	32410#	300#	6232#	12#	β^+	21660#	300#	24 034790#	320#
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^-	13360	100	25 012170	100
15	10		Ne	x	-2024	8	7839.3	0.3	β^-	7334	8	24 997827	9
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	19310#	400#	6830#	16#	β^+	15480#	400#	25 020730#	430#
9	16		S	x	40650#	300#	5945#	12#	β^+	21340#	500#	25 043640#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	18210	110	26 020050	110
16	10		Ne		460	7	7752.71	0.28	β^-	7321	8	26 000494	8
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^+	4004.41	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	10997	10	7197.0	0.4	β^+	18138	10	26 011806	11
10	16		S	x	26680#	200#	6564#	8#	β^+	15680#	200#	26 028640#	220#
19	8	27	O	-3n	43800	170	6217	6	β^-	18670	210	27 047030	180
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	x	-670.7	0.6	7661.522	0.022	β^+	11713.8	0.6	26 999280.0	0.6
11	16		S	x	17437	24	6961.9	0.9	β^+	18107	24	27 018719	26
20	8	28	O	-4n	51250	170	6017	6	β^-	17850	210	28 055020	180
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		-21492.7973	0.0006	8447.744	*a*		*		27 976926.5343	0.0006
13	15		P		-7147.8	1.2	7907.48	0.04	β^+	14345.0	1.2	27 992326.5	1.2
12	16		S	x	4181	12	7475.0	0.4	β^+	11328	12	28 004488	13
11	17		Cl	-p	26930#	300#	6635#	11#	β^+	22750#	300#	28 028910#	320#
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	x	-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	-n	-21895.0818	0.0006	8448.636	*a*		*		28 976494.6641	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	13730#	100#	7139#	3#	β^+	16820#	100#	29 014740#	110#
11	18		Ar	-pp	36120#	200#	6340#	7#	β^+	22390#	230#	29 038770#	220#
21	9	30	F	-n	48690	530	6213	18	β^-	25410	590	30 052270	570
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	-24432.963	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	4560	30	7476.0	1.1	β^+	18620	30	30 004890	30
12	18		Ar	-pp	21180	80	6896.0	2.7	β^+	16620	90	30 022740	90

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	12245.3	2.6	7398.70	0.08	β^-	15371	4	31 013145.9	2.8
19	12		Mg	x	-3125.8	2.4	7869.31	0.08	β^-	11825	3	30 996644.3	2.6
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		-24440.5447	0.0008	8481.168	*a*		*		30 973761.9974	0.0009
15	16		S	–	-19042.56	0.23	8281.802	0.008	β^+	5397.99	0.23	30 979556.98	0.25
14	17		Cl	––	-7035	3	7869.21	0.11	β^+	12008	3	30 992448	4
13	18		Ar	x	11294	13	7252.7	0.4	β^+	18329	13	31 012125	14
12	19		K	x	32700#	400#	6537#	13#	β^+	21410#	400#	31 035110#	430#
22	10	32	Ne	x	37000#	500#	6671#	16#	β^-	18450#	500#	32 039720#	540#
21	11		Na	x	18549	5	7222.74	0.17	β^-	19378	6	32 019913	6
20	12		Mg		-829.1	1.6	7803.85	0.05	β^-	10270	7	31 999109.9	1.7
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		-26015.5374	0.0013	8493.130	*a*		*		31 972071.1733	0.0014
15	17		Cl		-13334.1	1.2	8072.39	0.04	β^+	12681.4	1.2	31 985685.2	1.2
14	18		Ar	x	-2200.4	1.8	7700.01	0.06	β^+	11133.8	2.1	31 997637.8	1.9
13	19		K	x	21130#	300#	6947#	9#	β^+	23330#	300#	32 022680#	320#
23	10	33	Ne	x	46130#	600#	6436#	18#	β^-	22530#	600#	33 049520#	640#
22	11		Na	x	23599	4	7095.42	0.13	β^-	18639	5	33 025334	5
21	12		Mg		4959.8	2.1	7636.53	0.07	β^-	13457	7	33 005324.5	2.3
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		-26585.8585	0.0014	8497.630	*a*		*		32 971458.9084	0.0015
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	7370#	200#	7398#	6#	β^+	16750#	200#	33 007910#	220#
13	20		Ca	x	29800#	400#	6694#	12#	β^+	22430#	450#	33 031990#	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		8316.4	2.2	7550.60	0.07	β^-	11314	3	34 008928.0	2.4
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	-p	-1487	17	7677.9	0.5	β^+	16891	17	33 998403	18
14	20		Ca	x	14200#	300#	7193#	9#	β^+	15690#	300#	34 015240#	320#
24	11	35	Na	-n	37830#	670#	6745#	19#	β^-	22300#	670#	35 040610#	720#
23	12		Mg		15529	6	7359.39	0.17	β^-	15753	9	35 016672	6
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^-	167.321	0.026	34 969032.32	0.04
18	17		Cl		-29013.53	0.04	8520.279	0.001		*		34 968852.70	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	+nn	4780	110	7488	3	β^+	15950	110	35 005130	110
14	21		Sc	x	25700#	400#	6868#	11#	β^+	20920#	410#	35 027590#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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 967080.70	0.20
19	17		Cl		-29522.01	0.04	8521.932	0.001	β^-	709.54	0.04	35 968306.82	0.04
18	18		Ar		-30231.543	0.027	8519.910	0.001		*		35 967545.106	0.029
17	19		K		-17417.1	0.3	8142.222	0.009	β^+	12814.4	0.3	35 981301.9	0.4
16	20		Ca	x	-6484	6	7816.78	0.16	β^+	10934	6	35 993040	6
15	21		Sc	x	15500#	300#	7184#	8#	β^+	21980#	300#	36 016640#	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	-26896.42	0.20	8459.936	0.005	β^-	4865.14	0.20	36 971125.50	0.21
20	17		Cl		-31761.56	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	-p	3500	410	7533	11	β^+	16630	410	37 003750	440
15	22		Ti	x	23350#	400#	6975#	11#	β^+	19850#	570#	37 025070#	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#	540#	38 036580#	540#
25	13		Al	x	16470#	200#	7370#	5#	β^-	20640#	230#	38 017680#	220#
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 968010.40	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		-22058.51	0.19	8240.043	0.005	β^+	6742.26	0.06	37 976319.22	0.21
17	21		Sc	-p	-4656	14	7761.5	0.4	β^+	17402	14	37 995001	15
16	22		Ti	x	10380#	300#	7345#	8#	β^+	15040#	300#	38 011140#	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 968008.1	1.9
21	18		Ar	+	-33242	5	8562.60	0.13	β^-	565	5	38 964313	5
20	19		K		-33807.200	0.004	8557.026	*a*		*		38 963706.480	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	2100#	200#	7576#	5#	β^+	16270#	200#	39 002250#	220#
16	23		V	x	20720#	400#	7079#	10#	β^+	18620#	450#	39 022240#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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		-35039.9042	0.0019	8595.260	*a*	β^-	-1504.40	0.06	39 962383.1175	0.0020
21	19		K		-33535.50	0.06	8538.091	0.001	β^-	1310.89	0.06	39 963998.16	0.06
20	20		Ca		-34846.394	0.012	8551.304	*a*		*		39 962590.860	0.013
19	21		Sc	–	-20523.3	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	11120#	300#	7343#	7#	β^+	20110#	310#	40 011940#	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		-35559.553	0.004	8576.073	*a*		*		40 961825.252	0.004
21	20		Ca		-35137.93	0.05	8546.708	0.001	β^+	421.63	0.05	40 962277.89	0.06
20	21		Sc		-28642.49	0.08	8369.201	0.002	β^+	6495.44	0.10	40 969251.03	0.08
19	22		Ti	x	-15716	16	8034.8	0.4	β^+	12926	16	40 983128	17
18	23		V	x	-130#	200#	7636#	5#	β^+	15590#	200#	40 999860#	220#
17	24		Cr	x	19000#	400#	7150#	10#	β^+	19130#	450#	41 020400#	430#
29	13	42	Al	x	41990#	500#	6829#	12#	β^-	24490#	580#	42 045080#	540#
28	14		Si	x	17500#	300#	7394#	7#	β^-	16410#	320#	42 018790#	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^-	3525.65	0.11	41 962402.30	0.11
22	20		Ca		-38547.684	0.013	8616.574	*a*		*		41 958617.361	0.013
21	21		Sc		-32121.35	0.05	8444.939	0.001	β^+	6426.33	0.05	41 965516.31	0.05
20	22		Ti		-25104.71	0.23	8259.249	0.005	β^+	7016.64	0.22	41 973048.98	0.24
19	23		V	x	-8220#	200#	7839#	5#	β^+	16880#	200#	41 991180#	210#
18	24		Cr	x	6260#	300#	7475#	7#	β^+	14480#	360#	42 006720#	320#
30	13	43	Al	x	48270#	600#	6712#	14#	β^-	23360#	720#	43 051820#	640#
29	14		Si	x	24910#	400#	7237#	9#	β^-	19410#	500#	43 026740#	430#
28	15		P	x	5500#	300#	7671#	7#	β^-	17700#	300#	43 005900#	320#
27	16		S	x	-12195	5	8063.83	0.12	β^-	11919	5	42 986908	5
26	17		Cl	x	-24114.5	1.8	8322.82	0.04	β^-	7895	6	42 974112.0	1.9
25	18		Ar	x	-32010	5	8488.24	0.12	β^-	4566	5	42 965636	6
24	19		K	-4n	-36575.4	0.4	8576.221	0.010	β^-	1833.9	0.4	42 960734.7	0.4
23	20		Ca		-38409.28	0.16	8600.675	0.004		*		42 958765.95	0.17
22	21		Sc	-p	-36188.5	1.9	8530.84	0.04	β^+	2220.7	1.9	42 961150.0	2.0
21	22		Ti		-29306	4	8352.58	0.08	β^+	6883	4	42 968539	4
20	23		V	x	-17905	25	8069.3	0.6	β^+	11401	26	42 980778	27
19	24		Cr	x	-2090#	200#	7683#	5#	β^+	15820#	200#	42 997760#	220#
18	25		Mn	x	16120#	400#	7242#	9#	β^+	18210#	450#	43 017310#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	30230#	500#	7135#	11#	β^-	18680#	640#	44 032450#	540#
29	15		P	x	11550#	400#	7542#	9#	β^-	20750#	400#	44 012400#	430#
28	16		S	x	-9204	5	7996.02	0.12	β^-	11246	12	43 990119	6
27	17		Cl		-20450	10	8233.83	0.24	β^-	12223	11	43 978046	11
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^-	5687.0	0.4	43 961587.0	0.5
24	20		Ca		-41468.482	0.013	8658.171	*a*		*		43 955481.755	0.014
23	21		Sc	-p	-37816.4	1.7	8557.39	0.04	β^+	3652.0	1.7	43 959402.4	1.9
22	22		Ti	$-\alpha$	-37548.6	0.7	8533.521	0.016	β^+	267.9	1.9	43 959689.9	0.8
21	23		V		-23804	5	8203.37	0.12	β^+	13744	5	43 974445	5
20	24		Cr	x	-13420	50	7949.6	1.2	β^+	10380	50	43 985590	60
19	25		Mn	x	6300#	300#	7484#	7#	β^+	19720#	300#	44 006760#	320#
31	14	45	Si	x	37550#	600#	6993#	13#	β^-	21000#	780#	45 040310#	640#
30	15		P	x	16550#	500#	7443#	11#	β^-	19890#	580#	45 017770#	540#
29	16		S	x	-3340#	300#	7867#	7#	β^-	14900#	300#	44 996410#	320#
28	17		Cl		-18240	4	8181.10	0.08	β^-	11531	4	44 980418	4
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^-	4196.3	0.5	44 960691.5	0.6
25	20		Ca		-40811.98	0.17	8630.541	0.004	β^-	260.3	0.7	44 956186.53	0.18
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	-19478	10	8086.91	0.23	β^+	12408	11	44 979089	11
20	25		Mn	x	-5100#	300#	7750#	7#	β^+	14380#	300#	44 994530#	320#
19	26		Fe	-pp	13630#	200#	7316#	4#	β^+	18730#	360#	45 014630#	220#
32	14	46	Si	x	43360#	400#	6891#	9#	β^-	20330#	640#	46 046550#	430#
31	15		P	x	23030#	500#	7316#	11#	β^-	22390#	640#	46 024720#	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^-	7723.9	0.7	45 961981.6	0.8
26	20		Ca		-43137.790	0.014	8668.945	*a*	β^-	-1376.2	0.7	45 953689.680	0.015
25	21		Sc	-n	-41761.6	0.7	8622.021	0.015	β^-	2366.7	0.7	45 955167.0	0.7
24	22		Ti		-44128.29	0.09	8656.463	0.002		*		45 952626.34	0.09
23	23		V		-37075.92	0.13	8486.143	0.003	β^+	7052.37	0.09	45 960197.37	0.14
22	24		Cr	x	-29477.2	2.6	8303.95	0.06	β^+	7598.7	2.6	45 968354.9	2.8
21	25		Mn	x	-12420	90	7916.1	1.9	β^+	17060	90	45 986670	90
20	26		Fe	x	710#	300#	7614#	7#	β^+	13130#	310#	46 000760#	320#
32	15	47	P	x	28980#	600#	7205#	13#	β^-	21780#	720#	47 031110#	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^-	6630.1	1.4	46 961661.6	1.5
27	20		Ca		-42342.05	0.10	8639.299	0.002	β^-	1992.9	1.0	46 954543.94	0.11
26	21		Sc		-44334.9	1.0	8665.055	0.022	β^-	602.7	1.0	46 952404.5	1.1
25	22		Ti		-44937.63	0.08	8661.233	0.002		*		46 951757.47	0.08
24	23		V		-42007.09	0.11	8582.235	0.002	β^+	2930.54	0.09	46 954903.54	0.12
23	24		Cr		-34561	5	8407.16	0.10	β^+	7446	5	46 962897	5
22	25		Mn	x	-22562	16	8135.2	0.4	β^+	11999	17	46 975778	18
21	26		Fe	x	-6930#	200#	7786#	4#	β^+	15630#	200#	46 992560#	220#
20	27		Co	x	9600#	300#	7418#	6#	β^+	16530#	360#	47 010310#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	18040#	500#	47 995410#	540#
30	18		Ar	+	-22324	4	8243.03	0.08	β^-	9960	4	47 976034	4
29	19		K	x	-32284.5	0.8	8434.233	0.016	β^-	11940.4	0.8	47 965341.2	0.8
28	20		Ca		-44224.874	0.014	8666.692	*a*	β^-	278.7	0.5	47 952522.648	0.015
27	21		Sc		-44503.5	0.5	8656.198	0.011	β^-	3989.4	0.5	47 952223.5	0.5
26	22		Ti		-48492.97	0.07	8723.013	0.002		*		47 947940.66	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		-29290.7	2.8	8274.07	0.06	β^+	13531	8	47 968555.2	3.0
22	26		Fe	x	-18010	90	8022.7	1.9	β^+	11280	90	47 980670	100
21	27		Co	x	1210#	200#	7606#	4#	β^+	19220#	220#	48 001300#	220#
20	28		Ni	-pp	16570#	300#	7270#	6#	β^+	15360#	360#	48 017790#	320#
33	16	49	S	-n	20390#	580#	7400#	12#	β^-	19650#	710#	49 021890#	630#
32	17		Cl	x	740#	400#	7785#	8#	β^-	17710#	400#	49 000790#	430#
31	18		Ar	+	-16974	4	8130.34	0.08	β^-	12637	4	48 981777	4
30	19		K	x	-29611.5	0.8	8372.275	0.016	β^-	11688.5	0.8	48 968210.7	0.9
29	20		Ca	-n	-41299.95	0.07	8594.849	0.001	β^-	5262.5	2.3	48 955662.68	0.07
28	21		Sc		-46562.5	2.3	8686.28	0.05	β^-	2001.6	2.3	48 950013.2	2.4
27	22		Ti		-48564.03	0.08	8711.163	0.002		*		48 947864.37	0.08
26	23		V	–	-47962.2	0.8	8682.914	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 959613.3	2.4
23	26		Fe	x	-24672	8	8159.70	0.17	β^+	12948	9	48 973514	9
22	27		Co	x	-9720#	100#	7839#	2#	β^+	14950#	100#	48 989570#	110#
21	28		Ni	x	7800#	300#	7465#	6#	β^+	17520#	320#	49 008370#	320#
33	17	50	Cl	x	7700#	400#	7651#	8#	β^-	20870#	400#	50 008270#	430#
32	18		Ar	x	-13168	8	8053.04	0.17	β^-	12560	11	49 985863	9
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^-	6894.8	2.5	49 952187.4	2.7
28	22		Ti		-51431.89	0.08	8755.723	0.002	β^-	-2208.63	0.06	49 944785.60	0.09
27	23		V		-49223.26	0.09	8695.904	0.002	β^-	1038.12	0.06	49 947156.66	0.10
26	24		Cr		-50261.38	0.09	8701.019	0.002		*		49 946042.19	0.10
25	25		Mn		-42626.90	0.11	8532.683	0.002	β^+	7634.48	0.07	49 954238.14	0.12
24	26		Fe	x	-34475.9	2.7	8354.02	0.05	β^+	8151.0	2.7	49 962988.6	2.9
23	27		Co	x	-17590	130	8000.6	2.5	β^+	16890	130	49 981120	140
22	28		Ni	x	-3880#	200#	7711#	4#	β^+	13710#	240#	49 995840#	220#
34	17	51	Cl	x	14290#	700#	7530#	14#	β^-	20780#	810#	51 015340#	750#
33	18		Ar	x	-6490#	400#	7922#	8#	β^-	16020#	400#	50 993030#	430#
32	19		K	x	-22506	5	8221.16	0.11	β^-	13826	5	50 975838	6
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^-	6482.7	2.6	50 953568.8	2.7
29	22		Ti	-n	-49733.1	0.5	8708.993	0.010	β^-	2470.1	0.5	50 946609.4	0.5
28	23		V		-52203.12	0.09	8742.085	0.002		*		50 943957.65	0.10
27	24		Cr		-51450.73	0.16	8711.993	0.003	β^+	752.39	0.15	50 944765.37	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		-27377	5	8193.95	0.10	β^+	12812	6	50 970609	6
23	28		Ni	x	-11850#	200#	7874#	4#	β^+	15530#	200#	50 987280#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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#	810#	52 024000#	750#
34	18		Ar	x	-1380#	400#	7827#	8#	β^-	15820#	400#	51 998520#	430#
33	19		K	x	-17198	6	8116.18	0.11	β^-	17069	6	51 981538	6
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^-	8955	4	51 956496	3
30	22		Ti		-49478.8	1.8	8691.84	0.03	β^-	1964.3	1.8	51 946882.3	1.9
29	23		V	-n	-51443.04	0.16	8714.569	0.003	β^-	3976.49	0.16	51 944773.62	0.17
28	24		Cr		-55419.54	0.11	8775.995	0.002		*		51 940504.68	0.12
27	25		Mn	–	-50711.41	0.13	8670.409	0.002	β^+	4708.12	0.06	51 945559.06	0.14
26	26		Fe		-48332.12	0.18	8609.609	0.003	β^+	2379.29	0.15	51 948113.33	0.19
25	27		Co		-34348	4	8325.64	0.07	β^+	13984	4	51 963126	4
24	28		Ni	x	-22474.8	1.7	8082.26	0.03	β^+	11873	4	51 975872.4	1.8
23	29		Cu	x	-2500#	400#	7683#	8#	β^+	19980#	400#	51 997320#	430#
35	18	53	Ar	x	6790#	500#	7677#	9#	β^-	19110#	500#	53 007290#	540#
34	19		K	x	-12322	6	8023.34	0.11	β^-	17070	40	52 986772	7
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		-55287.67	0.11	8760.211	0.002		*		52 940646.25	0.12
28	25		Mn		-54690.3	0.3	8734.178	0.007	β^+	597.4	0.3	52 941287.6	0.4
27	26		Fe		-50946.7	1.2	8648.784	0.024	β^+	3743.5	1.3	52 945306.4	1.3
26	27		Co		-42658.6	1.3	8477.644	0.024	β^+	8288.1	0.4	52 954204.1	1.4
25	28		Ni	x	-29614	6	8216.75	0.11	β^+	13045	6	52 968208	6
24	29		Cu	x	-13700#	300#	7902#	6#	β^+	15910#	300#	52 985290#	320#
36	18	54	Ar	x	12560#	500#	7578#	9#	β^-	17970#	500#	54 013480#	540#
35	19		K	x	-5414	13	7896.30	0.24	β^-	19706	18	53 994188	14
34	20		Ca	x	-25119	12	8246.73	0.22	β^-	9320	21	53 973033	13
33	21		Sc	x	-34439	18	8404.8	0.3	β^-	11303	22	53 963028	19
32	22		Ti		-45742	14	8599.66	0.25	β^-	4156	16	53 950894	15
31	23		V		-49899	8	8662.15	0.14	β^-	7037	8	53 946432	8
30	24		Cr		-56935.48	0.13	8777.969	0.003	β^-	-1377.2	1.0	53 938877.25	0.14
29	25		Mn	-p	-55558.3	1.0	8737.978	0.019	β^-	695.7	1.1	53 940355.7	1.1
28	26		Fe		-56254.0	0.4	8736.373	0.007		*		53 939608.9	0.4
27	27		Co		-48009.4	0.4	8569.208	0.007	β^+	8244.55	0.09	53 948459.8	0.4
26	28		Ni	x	-39283.6	2.3	8393.13	0.04	β^+	8725.8	2.4	53 957827.3	2.5
25	29		Cu	x	-21740#	200#	8054#	4#	β^+	17540#	200#	53 976660#	220#
24	30		Zn	-pp	-6417	20	7755.5	0.4	β^+	15320#	200#	53 993111	22
36	19	55	K	x	300#	500#	7796#	9#	β^-	18950#	530#	55 000320#	540#
35	20		Ca	x	-18650	160	8125.9	2.9	β^-	12180	160	54 979980	170
34	21		Sc		-30833	22	8333.2	0.4	β^-	10993	21	54 966899	23
33	22		Ti		-41826	5	8518.86	0.10	β^-	7312	9	54 955098	6
32	23		V	+	-49138	7	8637.58	0.12	β^-	5972	7	54 947248	7
31	24		Cr		-55110.42	0.23	8731.938	0.004	β^-	2601.4	0.4	54 940836.53	0.25
30	25		Mn		-57711.8	0.3	8765.012	0.006		*		54 938043.8	0.3
29	26		Fe		-57480.7	0.4	8746.586	0.007	β^+	231.09	0.18	54 938291.9	0.4
28	27		Co		-54029.4	0.4	8669.609	0.008	β^+	3451.4	0.3	54 941997.1	0.5
27	28		Ni	–	-45335.3	0.7	8497.311	0.013	β^+	8694.0	0.6	54 951330.5	0.8
26	29		Cu	x	-31807	25	8237.1	0.5	β^+	13528	25	54 965854	27
25	30		Zn	x	-14810#	200#	7914#	4#	β^+	17000#	200#	54 984100#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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#	400#	7663#	7#	β^-	21490#	470#	56 008570#	430#
36	20		Ca	x	-13510	250	8033	4	β^-	12010	360	55 985500	270
35	21		Sc	x	-25520	260	8234	5	β^-	13890	260	55 972610	280
34	22		Ti		-39406	7	8467.65	0.12	β^-	6855	9	55 957696	7
33	23		V		-46261	6	8576.08	0.10	β^-	9024	6	55 950337	6
32	24		Cr		-55284.5	0.6	8723.250	0.011	β^-	1626.4	0.6	55 940649.6	0.6
31	25		Mn	-n	-56911.0	0.4	8738.323	0.006	β^-	3695.61	0.21	55 938903.6	0.4
30	26		Fe		-60606.6	0.3	8790.346	0.006		*		55 934936.2	0.3
29	27		Co		-56039.9	0.5	8694.828	0.009	β^+	4566.6	0.4	55 939838.6	0.5
28	28		Ni		-53907.1	0.4	8642.771	0.008	β^+	2132.9	0.4	55 942128.4	0.5
27	29		Cu	x	-38626	4	8355.92	0.08	β^+	15281	4	55 958533	5
26	30		Zn	x	-25630#	200#	8110#	4#	β^+	13000#	200#	55 972490#	220#
25	31		Ga	x	-4890#	300#	7726#	5#	β^+	20740#	360#	55 994750#	320#
38	19	57	K	x	14130#	500#	7563#	9#	β^-	20690#	640#	57 015170#	540#
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^-	9980	210	56 963070	220
34	23		V		-44380	7	8534.23	0.12	β^-	8145	7	56 952356	7
33	24		Cr		-52524.9	1.8	8663.40	0.03	β^-	4961.3	2.4	56 943612.2	2.0
32	25		Mn		-57486.2	1.5	8736.713	0.026	β^-	2695.3	1.5	56 938286.1	1.6
31	26		Fe		-60181.4	0.3	8770.272	0.006		*		56 935392.6	0.3
30	27		Co		-59345.1	0.5	8741.874	0.009	β^+	836.3	0.4	56 936290.4	0.6
29	28		Ni		-56083.4	0.6	8670.926	0.010	β^+	3261.7	0.6	56 939792.0	0.6
28	29		Cu		-47308.4	0.5	8503.254	0.009	β^+	8775.0	0.4	56 949212.3	0.6
27	30		Zn	x	-32690#	100#	8233#	2#	β^+	14620#	100#	56 964910#	110#
26	31		Ga	x	-16090#	300#	7928#	5#	β^+	16600#	320#	56 982730#	320#
39	19	58	K	x	21930#	600#	7437#	10#	β^-	23460#	780#	58 023540#	640#
38	20		Ca	x	-1530#	500#	7828#	9#	β^-	13950#	540#	57 998360#	540#
37	21		Sc	x	-15480	190	8055	3	β^-	15960	190	57 983380	200
36	22		Ti		-31442	4	8316.68	0.08	β^-	8864	8	57 966245	5
35	23		V		-40306	6	8456.01	0.11	β^-	11689	7	57 956730	7
34	24		Cr		-51995.3	2.4	8644.06	0.04	β^-	3833	4	57 944180.8	2.6
33	25		Mn		-55827.8	2.5	8696.65	0.04	β^-	6326.9	2.6	57 940066.4	2.7
32	26		Fe		-62154.7	0.4	8792.243	0.006	β^-	-2308.0	1.1	57 933274.2	0.4
31	27		Co		-59846.7	1.2	8738.962	0.020	β^-	381.6	1.1	57 935751.9	1.2
30	28		Ni		-60228.3	0.4	8732.052	0.007		*		57 935342.3	0.4
29	29		Cu		-51667.3	0.6	8570.960	0.010	β^+	8561.0	0.4	57 944532.9	0.6
28	30		Zn		-42265	29	8395.4	0.5	β^+	9402	29	57 954630	30
27	31		Ga	x	-24050#	200#	8068#	3#	β^+	18220#	200#	57 974180#	220#
26	32		Ge	x	-8580#	300#	7788#	5#	β^+	15470#	360#	57 990790#	320#
40	19	59	K	x	28750#	700#	7332#	12#	β^-	22940#	920#	59 030860#	750#
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^-	11920#	300#	58 972220#	320#
36	23		V		-37801.8	2.9	8407.04	0.05	β^-	10314.1	3.0	58 959418	3
35	24		Cr		-48115.9	0.7	8568.599	0.011	β^-	7409.4	2.3	58 948345.5	0.7
34	25		Mn		-55525.3	2.2	8680.92	0.04	β^-	5139.1	2.3	58 940391.2	2.4
33	26		Fe		-60664.4	0.4	8754.765	0.006	β^-	1564.9	0.4	58 934874.1	0.4
32	27		Co		-62229.3	0.4	8768.028	0.007		*		58 933194.1	0.5
31	28		Ni		-61156.3	0.4	8736.582	0.006	β^+	1073.01	0.19	58 934346.0	0.4
30	29		Cu		-56357.9	0.5	8641.993	0.009	β^+	4798.4	0.4	58 939497.3	0.6
29	30		Zn		-47215.1	0.8	8473.771	0.013	β^+	9142.8	0.6	58 949312.5	0.8
28	31		Ga	x	-33960#	100#	8236#	2#	β^+	13260#	100#	58 963540#	110#
27	32		Ge	x	-16850#	400#	7933#	7#	β^+	17110#	410#	58 981910#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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#	760#	60 011810#	750#
39	21		Sc	x	-4550#	300#	7873#	5#	β^-	17550#	380#	59 995120#	320#
38	22		Ti	x	-22100	240	8153	4	β^-	10960	300	59 976280	260
37	23		V	x	-33060	170	8322.4	2.9	β^-	13850	170	59 964510	190
36	24		Cr	x	-46908.5	1.1	8540.188	0.019	β^-	6059.5	2.6	59 949641.7	1.2
35	25		Mn	x	-52968.0	2.3	8628.14	0.04	β^-	8445	4	59 943136.6	2.5
34	26		Fe	-nn	-61413	3	8755.84	0.06	β^-	237	3	59 934071	4
33	27		Co	-n	-61649.9	0.4	8746.760	0.007	β^-	2822.81	0.21	59 933816.1	0.5
32	28		Ni		-64472.7	0.4	8780.768	0.006		*		59 930785.7	0.4
31	29		Cu	–	-58344.7	1.6	8665.595	0.027	β^+	6128.0	1.6	59 937364.4	1.7
30	30		Zn		-54173.9	0.6	8583.043	0.010	β^+	4170.8	1.6	59 941841.9	0.6
29	31		Ga		-40015	13	8334.03	0.22	β^+	14159	13	59 957042	14
28	32		Ge	x	-27730#	200#	8116#	3#	β^+	12290#	200#	59 970230#	220#
27	33		As	x	-6850#	200#	7755#	3#	β^+	20880#	280#	59 992650#	220#
41	20	61	Ca	x	19010#	800#	7503#	13#	β^-	18510#	890#	61 020410#	860#
40	21		Sc	x	500#	400#	7794#	7#	β^-	16680#	600#	61 000540#	430#
39	22		Ti	x	-16180	450	8054	7	β^-	14000	510	60 982630	480
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^-	3977.2	2.7	60 936746.2	2.8
34	27		Co	p2n	-62897.7	0.8	8756.144	0.014	β^-	1323.7	0.8	60 932476.5	0.9
33	28		Ni		-64221.5	0.4	8765.019	0.006		*		60 931055.4	0.4
32	29		Cu	p2n	-61983.8	1.0	8715.511	0.016	β^+	2237.7	1.0	60 933457.6	1.0
31	30		Zn		-56355.9	1.1	8610.425	0.019	β^+	5627.9	1.5	60 939499.4	1.2
30	31		Ga	x	-47127	11	8446.30	0.17	β^+	9229	11	60 949408	11
29	32		Ge	x	-34030#	100#	8219#	2#	β^+	13100#	100#	60 963470#	110#
28	33		As	x	-17980#	200#	7943#	3#	β^+	16050#	220#	60 980700#	220#
41	21	62	Sc	x	7310#	390#	7688#	6#	β^-	19510#	560#	62 007850#	420#
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 934059	20
34	28		Ni		-66746.0	0.4	8794.548	0.007		*		61 928345.3	0.5
33	29		Cu	–	-62787.1	0.6	8718.076	0.010	β^+	3958.9	0.5	61 932595.3	0.7
32	30		Zn		-61167.6	0.6	8679.338	0.010	β^+	1619.5	0.7	61 934333.9	0.7
31	31		Ga		-51986.6	0.6	8518.637	0.010	β^+	9181.1	0.4	61 944190.1	0.7
30	32		Ge	x	-42290	40	8349.6	0.6	β^+	9700	40	61 954600	40
29	33		As	x	-25320#	200#	8063#	3#	β^+	16970#	200#	61 972820#	220#
28	34		Se	x	-10370#	300#	7810#	5#	β^+	14950#	360#	61 988870#	320#
42	21	63	Sc	x	13070#	400#	7603#	6#	β^-	18930#	640#	63 014030#	430#
41	22		Ti	x	-5860#	500#	7891#	8#	β^-	15880#	610#	62 993710#	540#
40	23		V	x	-21740	340	8131	5	β^-	14460	340	62 976660	370
39	24		Cr	x	-36204	18	8347.95	0.29	β^-	10683	18	62 961133	19
38	25		Mn	x	-46887	4	8505.10	0.06	β^-	8748	5	62 949665	4
37	26		Fe		-55636	3	8631.55	0.05	β^-	6216	19	62 940273	4
36	27		Co		-61851	19	8717.79	0.29	β^-	3661	19	62 933600	20
35	28		Ni		-65512.4	0.4	8763.488	0.007	β^-	66.977	0.015	62 929669.5	0.5
34	29		Cu		-65579.4	0.4	8752.133	0.007		*		62 929597.6	0.5
33	30		Zn		-62213.1	1.6	8686.282	0.025	β^+	3366.3	1.5	62 933211.5	1.7
32	31		Ga	x	-56547.1	1.3	8583.927	0.021	β^+	5666.0	2.0	62 939294.2	1.4
31	32		Ge		-46971	14	8419.51	0.22	β^+	9576	14	62 949574	15
30	33		As	x	-33730#	100#	8197#	2#	β^+	13240#	100#	62 963790#	110#
29	34		Se	x	-18000#	200#	7935#	3#	β^+	15730#	220#	62 980680#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	17250#	400#	63 982480#	430#
40	24		Cr	x	-33573	26	8302.5	0.4	β^-	9416	26	63 963958	28
39	25		Mn	x	-42989	4	8437.42	0.06	β^-	11981	5	63 953849	4
38	26		Fe		-54970	4	8612.39	0.06	β^-	4822	20	63 940988	4
37	27		Co	+	-59792	20	8675.5	0.3	β^-	7307	20	63 935811	21
36	28		Ni		-67098.6	0.5	8777.457	0.007	β^-	-1674.63	0.21	63 927966.7	0.5
35	29		Cu		-65424.0	0.4	8739.066	0.007	β^-	579.8	0.6	63 929764.5	0.5
34	30		Zn		-66003.8	0.6	8735.902	0.010		*		63 929142.0	0.7
33	31		Ga		-58832.8	1.4	8611.630	0.022	β^+	7171.0	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		-39630	30	8287.1	0.5	β^+	14690	30	63 957460	30
30	34		Se	x	-27460#	200#	8085#	3#	β^+	12170#	200#	63 970520#	220#
43	22	65	Ti	x	5210#	700#	7726#	11#	β^-	17320#	860#	65 005590#	750#
42	23		V	x	-12110#	500#	7981#	8#	β^-	16100#	500#	64 987000#	540#
41	24		Cr	x	-28210	40	8216.4	0.7	β^-	12760	40	64 969720	50
40	25		Mn	x	-40967	4	8400.68	0.06	β^-	10250	5	64 956020	4
39	26		Fe		-51217	4	8546.34	0.06	β^-	7968	4	64 945016	4
38	27		Co	x	-59185.2	2.1	8656.88	0.03	β^-	5940.1	2.1	64 936462.1	2.2
37	28		Ni	-n	-65125.3	0.5	8736.235	0.008	β^-	2138.1	0.7	64 930085.1	0.5
36	29		Cu		-67263.5	0.6	8757.093	0.010		*		64 927789.7	0.7
35	30		Zn		-65911.8	0.6	8724.262	0.010	β^+	1351.7	0.4	64 929240.8	0.7
34	31		Ga		-62657.3	0.8	8662.157	0.012	β^+	3254.5	0.6	64 932734.6	0.9
33	32		Ge		-56478.2	2.1	8555.06	0.03	β^+	6179.1	2.3	64 939368.1	2.3
32	33		As	x	-46830	40	8394.6	0.6	β^+	9650	40	64 949720	40
31	34		Se	x	-33420#	100#	8176#	2#	β^+	13410#	110#	64 964120#	110#
30	35		Br	x	-17450#	500#	7919#	8#	β^+	15970#	510#	64 981270#	540#
44	22	66	Ti	x	10080#	700#	7658#	11#	β^-	16380#	860#	66 010820#	750#
43	23		V	x	-6300#	500#	7894#	8#	β^-	18840#	540#	65 993240#	540#
42	24		Cr	x	-25140#	200#	8168#	3#	β^-	11610#	200#	65 973010#	210#
41	25		Mn		-36750	10	8331.80	0.16	β^-	13316	11	65 960547	11
40	26		Fe		-50067	4	8521.71	0.06	β^-	6342	14	65 946251	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^-	251.8	1.5	65 929139.3	1.5
37	29		Cu		-66258.1	0.7	8731.470	0.010	β^-	2640.8	0.9	65 928869.0	0.7
36	30		Zn		-68898.9	0.7	8759.628	0.011		*		65 926034.0	0.8
35	31		Ga	–	-63723.4	1.1	8669.358	0.017	β^+	5175.5	0.8	65 931590.1	1.2
34	32		Ge	x	-61607.0	2.4	8625.44	0.04	β^+	2116.4	2.7	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	-41980	60	8304.4	0.9	β^+	10040	60	65 954930	70
31	35		Br	x	-24500#	400#	8028#	6#	β^+	17480#	400#	65 973700#	430#
44	23	67	V	x	-1740#	600#	7829#	9#	β^-	17530#	630#	66 998130#	640#
43	24		Cr	x	-19270#	200#	8079#	3#	β^-	14600#	200#	66 979310#	220#
42	25		Mn	x	-33870	40	8285.0	0.6	β^-	12140	40	66 963640	40
41	26		Fe	x	-46015	10	8454.51	0.15	β^-	9307	12	66 950601	11
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		-67319.4	0.9	8737.457	0.013	β^-	560.7	0.8	66 927729.7	1.0
37	30		Zn		-67880.1	0.8	8734.149	0.011		*		66 927127.8	0.8
36	31		Ga		-66879.0	1.2	8707.530	0.018	β^+	1001.1	1.1	66 928202.5	1.3
35	32		Ge		-62673	4	8633.08	0.06	β^+	4206	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	-46552	19	8369.11	0.29	β^+	10036	19	66 950025	21
32	35		Br	x	-33030#	300#	8156#	4#	β^+	13520#	300#	66 964540#	320#
31	36		Kr	-pp	-17150#	100#	7907#	2#	β^+	15880#	320#	66 981590#	110#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
45	23	68	V	x	4570#	600#	7739#	9#	β^-	20260#	670#	68 004910#	640#
44	24		Cr	x	-15690#	300#	8026#	4#	β^-	13330#	300#	67 983160#	320#
43	25		Mn	x	-29020	30	8210.5	0.4	β^-	15080	30	67 968850	30
42	26		Fe	x	-44101	6	8420.73	0.08	β^-	7551	6	67 952656	6
41	27		Co	x	-51652.4	0.9	8520.275	0.013	β^-	11811	3	67 944548.8	1.0
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^-	4440.0	1.8	67 929610.9	1.7
38	30		Zn		-70007.1	0.8	8755.681	0.011		*		67 924844.3	0.8
37	31		Ga	–	-67086.0	1.4	8701.218	0.021	β^+	2921.1	1.2	67 927980.3	1.5
36	32		Ge	x	-66978.8	1.9	8688.137	0.028	β^+	107.2	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	-38760#	250#	8239#	4#	β^+	15430#	250#	67 958390#	270#
32	36		Kr	x	-26890#	500#	8053#	7#	β^+	11870#	560#	67 971130#	540#
45	24	69	Cr	x	-9630#	400#	7939#	6#	β^-	15890#	450#	68 989660#	430#
44	25		Mn	x	-25520#	200#	8158#	3#	β^-	13980#	200#	68 972600#	220#
43	26		Fe	x	-39504	11	8349.04	0.16	β^-	10863	18	68 957591	12
42	27		Co	IT	-50367	14	8495.14	0.21	β^-	9612	15	68 945929	15
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	0.011	β^-	910.0	1.3	68 926550.4	0.8
38	31		Ga		-69327.9	1.1	8724.581	0.016		*		68 925573.5	1.2
37	32		Ge	–	-67100.7	1.3	8680.965	0.018	β^+	2227.2	0.6	68 927964.4	1.3
36	33		As	x	-63136.8	2.9	8612.18	0.04	β^+	3964	3	68 932220	3
35	34		Se	x	-56434.8	1.5	8503.709	0.022	β^+	6702	3	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	-32580#	300#	8135#	4#	β^+	13680#	300#	68 965020#	320#
46	24	70	Cr	x	-5640#	400#	7884#	6#	β^-	14810#	500#	69 993950#	430#
45	25		Mn	x	-20450#	300#	8084#	4#	β^-	16600#	300#	69 978050#	320#
44	26		Fe	x	-37053	12	8310.06	0.17	β^-	9456	12	69 960222	13
43	27		Co	x	-46508.8	1.9	8433.966	0.028	β^-	12705.1	2.9	69 950070.8	2.1
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^-	6588.6	1.9	69 932392.1	1.2
40	30		Zn		-69565.0	1.5	8729.812	0.022	β^-	-654.8	1.4	69 925318.9	1.6
39	31		Ga		-68910.2	1.1	8709.282	0.016	β^-	1651.8	1.4	69 926021.8	1.2
38	32		Ge		-70562.0	0.8	8721.702	0.012		*		69 924248.6	0.9
37	33		As	x	-64334.0	1.4	8621.554	0.020	β^+	6228.0	1.6	69 930934.6	1.5
36	34		Se		-61928.9	1.4	8576.019	0.019	β^+	2405.1	1.9	69 933516.6	1.5
35	35		Br	x	-51934#	16#	8422#	0#	β^+	9995#	16#	69 944247#	17#
34	36		Kr	x	-41320	140	8259.3	2.0	β^+	10610#	140#	69 955640	150
47	24	71	Cr	x	740#	500#	7796#	7#	β^-	17360#	640#	71 000790#	540#
46	25		Mn	x	-16620#	400#	8030#	6#	β^-	15310#	410#	70 982160#	430#
45	26		Fe	x	-31930#	100#	8235#	1#	β^-	12440#	480#	70 965720#	110#
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^-	4615.1	2.1	70 932676.8	1.6
41	30		Zn		-67326.3	1.5	8689.006	0.021	β^-	2812.8	1.7	70 927722.3	1.6
40	31		Ga		-70139.1	0.8	8717.604	0.011		*		70 924702.6	0.9
39	32		Ge		-69906.6	0.8	8703.311	0.011	β^+	232.47	0.09	70 924952.2	0.9
38	33		As	–	-67893	4	8663.93	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	x	-56502	5	8481.46	0.08	β^+	6644	6	70 939342	6
35	36		Kr	x	-46056	24	8323.3	0.3	β^+	10446	25	70 950557	26
34	37		Rb	x	-32080#	200#	8115#	3#	β^+	13980#	200#	70 965560#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
48	24	72	Cr	x	5570#	600#	7733#	8#	β^-	16740#	780#	72 005980#	640#
47	25		Mn	x	-11170#	500#	7955#	7#	β^-	18080#	540#	71 988010#	540#
46	26		Fe	x	-29250#	200#	8195#	3#	β^-	11050#	360#	71 968600#	210#
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^-	442.7	2.3	71 926842.8	2.3
41	31		Ga		-68588.2	0.8	8687.089	0.011	β^-	3997.7	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	–	-68242.32	0.11	8660.552	0.002	β^+	4343.59	0.07	71 926738.86	0.11
38	34		Se	x	-67868.2	2.0	8644.490	0.027	β^+	374.1	2.0	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	-38100#	200#	8198#	3#	β^+	15840#	200#	71 959100#	220#
48	25	73	Mn	x	-6700#	600#	7895#	8#	β^-	17290#	670#	72 992810#	640#
47	26		Fe	x	-23990#	300#	8121#	4#	β^-	13650#	420#	72 974250#	320#
46	27		Co	x	-37640#	300#	8298#	4#	β^-	12470#	300#	72 959590#	320#
45	28		Ni		-50107.8	1.5	8457.647	0.021	β^-	8880.0	0.5	72 946207.1	1.7
44	29		Cu		-58987.7	1.5	8568.573	0.021	β^-	6605.7	2.4	72 936674.1	1.6
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		-63642	5	8568.03	0.07	β^+	4585	9	72 931677	6
37	36		Kr	x	-56552	7	8460.18	0.09	β^+	7090	8	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#
49	25	74	Mn	x	-470#	600#	7813#	8#	β^-	20190#	720#	73 999500#	640#
48	26		Fe	x	-20660#	400#	8076#	5#	β^-	12640#	570#	73 977820#	430#
47	27		Co	x	-33300#	400#	8236#	5#	β^-	15150#	400#	73 964250#	430#
46	28		Ni		-48448.0	2.8	8430.00	0.04	β^-	7562	6	73 947988.9	3.0
45	29		Cu		-56010	5	8521.61	0.07	β^-	9747	6	73 939871	6
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		-73422.452	0.013	8725.201	*a*	β^-	-2562.4	1.7	73 921177.760	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		-72213.212	0.015	8687.716	*a*		*		73 922475.933	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	-40970	30	8223.2	0.4	β^+	10950	30	73 956020	30
50	25	75	Mn	x	4800#	600#	7747#	8#	β^-	19500#	780#	75 005150#	640#
49	26		Fe	x	-14700#	500#	7996#	7#	β^-	15560#	640#	74 984220#	540#
48	27		Co	x	-30260#	400#	8193#	5#	β^-	13790#	400#	74 967520#	430#
47	28		Ni		-44047	6	8366.54	0.08	β^-	10423	6	74 952714	6
46	29		Cu		-54470.2	0.7	8495.080	0.010	β^-	8213.3	1.4	74 941523.8	0.8
45	30		Zn		-62683.5	1.2	8594.159	0.016	β^-	5777.1	1.3	74 932706.5	1.2
44	31		Ga	x	-68460.6	0.7	8660.757	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^-	1178.55	0.07	74 922858.37	0.06
42	33		As		-73035.53	0.04	8700.892	0.001		*		74 921593.14	0.04
41	34		Se	-n	-72169.49	0.07	8678.914	0.001	β^+	866.03	0.08	74 922522.87	0.08
40	35		Br	x	-69107	4	8627.65	0.06	β^+	3062	4	74 925811	5
39	36		Kr		-64324.5	2.5	8553.45	0.03	β^+	4783	5	74 930944.8	2.7
38	37		Rb	x	-57218.7	1.2	8448.276	0.016	β^+	7105.8	2.7	74 938573.2	1.3
37	38		Sr	x	-46273	10	8291.90	0.13	β^+	10946	10	74 950324	11
36	39		Y	x	-32290#	300#	8095#	4#	β^+	13980#	300#	74 965340#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	14840#	780#	75 988630#	640#
49	27		Co	x	-25430#	500#	8128#	7#	β^-	16570#	540#	75 972700#	540#
48	28		Ni	x	-42000#	200#	8336#	3#	β^-	9010#	200#	75 954910#	220#
47	29		Cu	x	-51011.5	2.0	8443.994	0.027	β^-	11291.6	2.5	75 945236.9	2.2
46	30		Zn		-62303.0	1.5	8582.274	0.019	β^-	3993.6	2.4	75 933114.9	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		-73212.899	0.018	8705.236	*a*	β^-	-920.20	0.05	75 921402.724	0.019
43	33		As		-72292.70	0.05	8682.835	0.001	β^-	2959.26	0.05	75 922390.60	0.06
42	34		Se		-75251.960	0.016	8711.478	*a*		*		75 919213.702	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		-54256	9	8394.04	0.12	β^+	6223	9	75 941753	9
37	39		Y	x	-38720#	300#	8179#	4#	β^+	15540#	300#	75 958430#	320#
51	26	77	Fe	x	-3140#	600#	7848#	8#	β^-	18770#	850#	76 996630#	640#
50	27		Co	x	-21910#	600#	8082#	8#	β^-	15340#	670#	76 976480#	640#
49	28		Ni	x	-37250#	300#	8271#	4#	β^-	11610#	300#	76 960010#	320#
48	29		Cu		-48862.7	1.2	8411.249	0.015	β^-	9926.5	2.3	76 947543.7	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^-	2702.14	0.10	76 923549.84	0.06
44	33		As		-73915.01	0.08	8695.962	0.001	β^-	684.46	0.07	76 920648.97	0.09
43	34		Se		-74599.48	0.05	8694.691	0.001		*		76 919914.17	0.05
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	x	-46908	4	8284.26	0.05	β^+	10896	9	76 949642	4
37	40		Zr	x	-32220#	400#	8083#	5#	β^+	14690#	400#	76 965410#	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		-44787	6	8354.64	0.07	β^-	12696	6	77 951919	6
48	30		Zn		-57483.2	1.9	8507.380	0.025	β^-	6220.9	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	8673.87	0.13	β^-	4209	10	77 921828	10
44	34		Se		-77025.92	0.17	8717.807	0.002	β^-	-3574	4	77 917309.28	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 920366.4	0.3
41	37		Rb	x	-66935	3	8558.35	0.04	β^+	7243	3	77 928142	3
40	38		Sr		-63171	6	8500.06	0.07	β^+	3764	7	77 932183	6
39	39		Y	x	-52335	3	8351.10	0.04	β^+	10836	7	77 943816	4
38	40		Zr	x	-41410#	400#	8201#	5#	β^+	10930#	400#	77 955550#	430#
52	27	79	Co	x	-9500#	700#	7924#	9#	β^-	18660#	860#	78 989800#	750#
51	28		Ni	x	-28160#	500#	8150#	6#	β^-	14250#	510#	78 969770#	540#
50	29		Cu	x	-42410	100	8320.9	1.3	β^-	11020	100	78 954470	110
49	30		Zn		-53432.0	1.8	8450.579	0.022	β^-	9116.4	2.1	78 942638.4	1.9
48	31		Ga		-62548.4	1.2	8556.073	0.015	β^-	6923.9	1.4	78 932851.5	1.3
47	32		Ge	x	-69472.3	0.7	8633.814	0.009	β^-	4164	5	78 925418.4	0.8
46	33		As	+p	-73636	5	8676.62	0.07	β^-	2281	5	78 920949	6
45	34		Se	-n	-75917.43	0.22	8695.592	0.003	β^-	150.5	1.0	78 918499.29	0.24
44	35		Br		-76068.0	0.9	8687.594	0.012		*		78 918337.7	1.0
43	36		Kr	–	-74442	3	8657.11	0.04	β^+	1626	3	78 920083	4
42	37		Rb		-70802.9	2.0	8601.142	0.025	β^+	3639	4	78 923990.0	2.1
41	38		Sr		-65474.9	2.5	8523.80	0.03	β^+	5328	3	78 929709.8	2.7
40	39		Y	x	-57988.5	0.4	8419.128	0.005	β^+	7486.4	2.5	78 937746.7	0.5
39	40		Zr	x	-46805.5	2.3	8267.668	0.029	β^+	11183.0	2.4	78 949752.2	2.5
38	41		Nb	x	-32800#	500#	8080#	6#	β^+	14010#	500#	78 964790#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
53	27	80	Co	x	-2300#	700#	7836#	9#	β^-	20940#	860#	79 997530#	750#
52	28		Ni	x	-23240#	500#	8088#	6#	β^-	13440#	580#	79 975050#	540#
51	29		Cu	x	-36680#	300#	8246#	4#	β^-	14970#	300#	79 960620#	320#
50	30		Zn		-51652.2	2.2	8423.591	0.027	β^-	7571	4	79 944549.1	2.3
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	-72214	3	8651.28	0.04	β^-	5545	3	79 922475	4
46	34		Se		-77759.4	0.9	8710.813	0.011	β^-	-1870.5	0.3	79 916521.9	1.0
45	35		Br		-75888.9	0.9	8677.653	0.012	β^-	2004.2	1.1	79 918529.9	1.0
44	36		Kr		-77893.1	0.7	8692.926	0.009		*		79 916378.3	0.7
43	37		Rb		-72173.6	1.7	8611.653	0.021	β^+	5719.5	1.8	79 922518.4	1.8
42	38		Sr	x	-70311	3	8578.60	0.04	β^+	1862	4	79 924518	4
41	39		Y	x	-61148	6	8454.28	0.08	β^+	9163	7	79 934355	7
40	40		Zr	x	-54355.9	1.5	8359.593	0.019	β^+	6792	6	79 941646.6	1.6
39	41		Nb	x	-39000#	400#	8158#	5#	β^+	15360#	400#	79 958130#	430#
53	28	81	Ni	x	-16090#	500#	8000#	6#	β^-	15820#	580#	80 982730#	540#
52	29		Cu	x	-31910#	300#	8185#	4#	β^-	14290#	300#	80 965740#	320#
51	30		Zn		-46202	4	8351.95	0.05	β^-	11425	5	80 950400	5
50	31		Ga		-57627	3	8483.35	0.04	β^-	8665	4	80 938135	3
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^-	3855.6	2.8	80 922132.3	2.8
47	34		Se		-76388.9	0.9	8685.998	0.011	β^-	1588.1	1.3	80 917993.1	1.0
46	35		Br		-77977.0	1.0	8695.946	0.012		*		80 916288.2	1.0
45	36		Kr		-77696.2	1.1	8682.820	0.013	β^+	280.9	0.5	80 916589.7	1.2
44	37		Rb		-75457	5	8645.51	0.06	β^+	2240	5	80 918994	5
43	38		Sr	x	-71528	3	8587.35	0.04	β^+	3928	6	80 923211	3
42	39		Y		-65719.1	2.5	8505.98	0.03	β^+	5809	4	80 929447.7	2.7
41	40		Zr	x	-57556	10	8395.55	0.13	β^+	8163	11	80 938211	11
40	41		Nb	x	-46360#	400#	8248#	5#	β^+	11200#	400#	80 950230#	430#
39	42		Mo	x	-32200#	300#	8063#	4#	β^+	14160#	500#	80 965430#	320#
54	28	82	Ni	x	-10720#	500#	7935#	6#	β^-	15010#	640#	81 988490#	540#
53	29		Cu	x	-25730#	400#	8108#	5#	β^-	16580#	400#	81 972380#	430#
52	30		Zn		-42313.7	2.8	8301.11	0.03	β^-	10617	3	81 954574	3
51	31		Ga		-52930.9	2.3	8421.052	0.028	β^-	12483.2	2.5	81 943176.3	2.5
50	32		Ge		-65414.1	0.9	8563.745	0.011	β^-	4692.4	2.5	81 929775.0	1.0
49	33		As		-70106.6	2.4	8611.429	0.029	β^-	7487.3	2.4	81 924737.5	2.5
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		-80591.796	0.006	8710.675	*a*		*		81 913481.153	0.006
45	37		Rb	IT	-76188	3	8647.43	0.04	β^+	4404	3	81 918209	3
44	38		Sr		-76013	4	8635.76	0.05	β^+	175	5	81 918396	4
43	39		Y	x	-68064	5	8529.28	0.07	β^+	7949	7	81 926930	6
42	40		Zr		-63615.4	1.3	8465.483	0.016	β^+	4449	6	81 931706.1	1.4
41	41		Nb	x	-52314.4	2.2	8318.125	0.027	β^+	11301.0	2.6	81 943838.2	2.4
40	42		Mo	x	-41040#	300#	8171#	4#	β^+	11280#	300#	81 955940#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
54	29	83	Cu	x	-20390#	500#	8044#	6#	β^-	15920#	500#	82 978110#	540#
53	30		Zn	+	-36311	17	8226.02	0.20	β^-	12947	17	82 961019	18
52	31		Ga		-49257.6	2.5	8372.581	0.030	β^-	11719	3	82 947119.8	2.6
51	32		Ge	x	-60976.5	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		-79990.645	0.009	8695.730	*a*		*		82 914126.515	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		-65916.5	0.6	8488.458	0.008	β^+	6289	19	82 929235.7	0.7
42	41		Nb		-57649	3	8379.43	0.04	β^+	8267	3	82 938111	3
41	42		Mo	x	-46300#	300#	8233#	4#	β^+	11350#	300#	82 950300#	320#
40	43		Tc	x	-32000#	500#	8052#	6#	β^+	14300#	580#	82 965650#	540#
55	29	84	Cu	x	-13720#	500#	7965#	6#	β^-	18110#	540#	83 985270#	540#
54	30		Zn	x	-31830#	200#	8171#	2#	β^-	12260#	200#	83 965830#	220#
53	31		Ga	x	-44089	7	8307.46	0.09	β^-	14059	8	83 952669	8
52	32		Ge		-58148.2	2.2	8465.522	0.026	β^-	7705	3	83 937575.4	2.3
51	33		As		-65853.5	2.5	8547.938	0.030	β^-	10095	3	83 929303.3	2.7
50	34		Se		-75948.4	1.8	8658.802	0.022	β^-	1818.7	2.4	83 918466.0	1.9
49	35		Br	2p−n	-77767.1	1.6	8671.139	0.019	β^-	4672.2	1.6	83 916513.6	1.7
48	36		Kr		-82439.347	0.004	8717.447	*a*	β^-	-2680.5	2.2	83 911497.726	0.004
47	37		Rb		-79758.9	2.2	8676.223	0.026	β^-	890.4	2.2	83 914375.3	2.3
46	38		Sr		-80649.23	0.04	8677.509	0.001		*		83 913419.49	0.04
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	−	-54137	22	8324.63	0.27	β^+	7057	22	83 941882	24
41	43		Tc	x	-38430#	400#	8128#	5#	β^+	15710#	400#	83 958740#	430#
56	29	85	Cu	x	-7930#	600#	7898#	7#	β^-	17170#	630#	84 991490#	640#
55	30		Zn	x	-25100#	200#	8090#	2#	β^-	14620#	200#	84 973050#	210#
54	31		Ga		-39723	12	8253.32	0.14	β^-	13398	12	84 957355	12
53	32		Ge		-53121	3	8401.74	0.04	β^-	10076	3	84 942972	3
52	33		As	x	-63197.3	1.0	8511.080	0.012	β^-	9217.9	1.8	84 932155.0	1.1
51	34		Se		-72415.1	1.5	8610.322	0.018	β^-	6162	3	84 922259.2	1.6
50	35		Br		-78577.1	3.0	8673.61	0.03	β^-	2903	4	84 915644	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		-82167.342	0.005	8697.442	*a*		*		84 911789.735	0.005
47	38		Sr		-81103.2	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	-45990#	400#	8217#	5#	β^+	11520#	400#	84 950630#	430#
41	44		Ru	x	-31900#	500#	8042#	6#	β^+	14090#	640#	84 965750#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
56	30	86	Zn	x	-20060#	300#	8032#	3#	β^-	13710#	300#	85 978460#	320#
55	31		Ga	x	-33769	19	8181.97	0.22	β^-	15828	19	85 963747	20
54	32		Ge	x	-49596.8	1.1	8356.919	0.013	β^-	9367.6	1.8	85 946755.6	1.2
53	33		As		-58964.4	1.4	8456.748	0.017	β^-	11538.5	1.6	85 936699.1	1.5
52	34		Se		-70502.9	0.7	8581.819	0.009	β^-	5134.5	1.5	85 924312.1	0.8
51	35		Br		-75637.3	1.3	8632.425	0.016	β^-	7628.4	1.3	85 918800.0	1.4
50	36		Kr		-83265.677	0.004	8712.030	*a*	β^-	-518.67	0.20	85 910610.624	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		-84523.101	0.005	8708.457	*a*		*		85 909260.724	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 925781	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	-40900#	400#	8147#	5#	β^+	10670#	500#	85 956090#	430#
57	30	87	Zn	x	-12600#	400#	7946#	5#	β^-	16270#	450#	86 986470#	430#
56	31		Ga	x	-28870#	200#	8124#	2#	β^-	14720#	290#	86 969010#	220#
55	32		Ge	x	-43590#	210#	8285#	2#	β^-	12030#	210#	86 953200#	230#
54	33		As		-55617.9	2.0	8413.852	0.023	β^-	10807.1	2.6	86 940291.7	2.1
53	34		Se		-66425.0	1.8	8529.079	0.020	β^-	7467	4	86 928689.9	1.9
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 909180.528	0.007
49	38		Sr		-84880.078	0.005	8705.236	*a*		*		86 908877.493	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	-73875	7	8551.76	0.08	β^+	5473	8	86 920692	7
45	42		Mo		-66884.0	2.1	8462.415	0.024	β^+	6991	7	86 928197.1	2.2
44	43		Tc	x	-57690	4	8347.74	0.05	β^+	9194	5	86 938067	5
43	44		Ru	x	-45950#	400#	8204#	5#	β^+	11740#	400#	86 950670#	430#
57	31	88	Ga	x	-22390#	300#	8050#	3#	β^-	17130#	420#	87 975960#	320#
56	32		Ge	x	-39520#	300#	8236#	3#	β^-	11160#	300#	87 957570#	320#
55	33		As	++	-50682	3	8353.87	0.04	β^-	13201.4	2.4	87 945591	3
54	34		Se		-63883.1	2.4	8494.991	0.027	β^-	6834.0	0.9	87 931418.7	2.5
53	35		Br		-70717.0	2.3	8563.760	0.027	β^-	8974	4	87 924082.2	2.5
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		-82609.02	0.16	8681.116	0.002	β^-	5312.61	0.16	87 911315.57	0.17
50	38		Sr		-87921.630	0.006	8732.596	*a*		*		87 905612.253	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	-54250	19	8296.62	0.21	β^+	7420	19	87 941760	20
43	45		Rh	x	-37930#	400#	8102#	5#	β^+	16320#	400#	87 959280#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
58	31	89	Ga	x	-16880#	300#	7988#	3#	β^-	16160#	500#	88 981880#	320#
57	32		Ge	x	-33040#	400#	8161#	4#	β^-	13650#	400#	88 964530#	430#
56	33		As	x	-46688	4	8305.81	0.05	β^-	12303	4	88 949879	5
55	34		Se		-58990.8	2.9	8435.26	0.03	β^-	9284	3	88 936671	3
54	35		Br		-68275.3	2.7	8530.79	0.03	β^-	8261	3	88 926703.5	2.9
53	36		Kr	x	-76535.8	2.1	8614.816	0.024	β^-	5177	4	88 917835.4	2.3
52	37		Rb		-81712.9	2.9	8664.20	0.03	β^-	4496.1	2.9	88 912278	3
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		-84877.7	2.8	8673.38	0.03	β^+	2833.5	2.8	88 908880.1	3.0
48	41		Nb	++	-80601	7	8616.54	0.08	β^+	4277	8	88 913471	8
47	42		Mo		-75017	3	8545.01	0.03	β^+	5584	7	88 919466	3
46	43		Tc		-67393	3	8450.56	0.03	β^+	7623.7	2.6	88 927651	3
45	44		Ru	x	-58369	24	8340.38	0.27	β^+	9024	24	88 937338	26
44	45		Rh	-p	-46360#	200#	8197#	2#	β^+	12010#	200#	88 950230#	220#
59	31	90	Ga	x	-9850#	400#	7911#	4#	β^-	18620#	640#	89 989430#	430#
58	32		Ge	x	-28470#	500#	8109#	6#	β^-	12520#	540#	89 969440#	540#
57	33		As	x	-40990#	210#	8240#	2#	β^-	14890#	210#	89 956000#	230#
56	34		Se	++	-55882	4	8396.67	0.05	β^-	8118	5	89 940008	5
55	35		Br		-63999.9	2.7	8478.182	0.030	β^-	10960.1	2.8	89 931293.3	2.9
54	36		Kr		-74960.1	1.7	8591.269	0.019	β^-	4397	4	89 919527.1	1.8
53	37		Rb		-79357	4	8631.43	0.04	β^-	6593	4	89 914806	4
52	38		Sr		-85950.8	1.4	8696.002	0.016	β^-	546.1	1.4	89 907728.1	1.6
51	39		Y		-86496.9	0.4	8693.378	0.004	β^-	2275.5	0.4	89 907141.8	0.4
50	40		Zr		-88772.39	0.10	8709.968	0.001		*		89 904698.93	0.10
49	41		Nb		-82662	3	8633.38	0.03	β^+	6110	3	89 911258	3
48	42		Mo		-80172.7	2.9	8597.03	0.03	β^+	2490	3	89 913931	3
47	43		Tc		-70724.5	1.0	8483.357	0.011	β^+	9448.2	3.0	89 924074.2	1.1
46	44		Ru		-64886.2	1.9	8409.795	0.021	β^+	5838.2	1.8	89 930341.8	2.1
45	45		Rh	–	-51350#	200#	8251#	2#	β^+	13540#	200#	89 944880#	220#
44	46		Pd	x	-40650#	400#	8123#	4#	β^+	10700#	450#	89 956360#	430#
59	32	91	Ge	x	-21500#	500#	8032#	5#	β^-	15000#	580#	90 976920#	540#
58	33		As	x	-36500#	300#	8189#	3#	β^-	13770#	300#	90 960820#	320#
57	34		Se	x	-50267.3	2.3	8331.400	0.026	β^-	10839.8	2.8	90 946035.9	2.5
56	35		Br		-61107.0	1.9	8441.921	0.020	β^-	9866.5	2.8	90 934398.9	2.0
55	36		Kr		-70973.6	2.1	8541.747	0.023	β^-	6787.2	2.9	90 923806.7	2.2
54	37		Rb	x	-77760.8	2.1	8607.735	0.023	β^-	5884.6	2.3	90 916520.4	2.2
53	38		Sr		-83645.4	1.0	8663.804	0.011	β^-	2706.2	2.1	90 910203.0	1.1
52	39		Y	+	-86351.6	1.9	8684.945	0.020	β^-	1544.1	1.9	90 907297.8	2.0
51	40		Zr		-87895.70	0.08	8693.316	0.001		*		90 905640.09	0.09
50	41		Nb		-86638.3	2.9	8670.90	0.03	β^+	1257.4	2.9	90 906990	3
49	42		Mo		-82217	5	8613.71	0.06	β^+	4422	6	90 911737	6
48	43		Tc		-75987.4	2.0	8536.664	0.022	β^+	6229	5	90 918424.2	2.1
47	44		Ru		-68238.6	1.8	8442.915	0.020	β^+	7748.9	2.2	90 926742.9	2.0
46	45		Rh	––	-58456	7	8326.82	0.08	β^+	9782	7	90 937244	8
45	46		Pd	–	-46220#	300#	8184#	3#	β^+	12240#	300#	90 950390#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
60	32	92	Ge	x	-16390#	500#	7977#	5#	β^-	13990#	640#	91 982400#	540#
59	33		As	x	-30380#	400#	8121#	4#	β^-	16240#	450#	91 967390#	430#
58	34		Se	x	-46620#	200#	8289#	2#	β^-	9620#	200#	91 949950#	210#
57	35		Br		-56237	5	8384.96	0.05	β^-	12533	5	91 939627	5
56	36		Kr		-68769.6	2.6	8512.678	0.028	β^-	6002	5	91 926172.8	2.8
55	37		Rb		-74771	5	8569.41	0.05	β^-	8096	4	91 919730	5
54	38		Sr		-82867	3	8648.91	0.04	β^-	1949	9	91 911038	4
53	39		Y		-84817	9	8661.59	0.10	β^-	3643	9	91 908946	10
52	40		Zr		-88459.12	0.08	8692.679	0.001	β^-	-2005.7	1.8	91 905035.24	0.09
51	41		Nb		-86453.4	1.8	8662.374	0.019	β^-	355.2	1.8	91 907188.5	1.9
50	42		Mo		-86808.59	0.16	8657.731	0.002		*		91 906807.15	0.17
49	43		Tc		-78927.4	2.6	8563.563	0.029	β^+	7881.2	2.6	91 915267.9	2.8
48	44		Ru		-74301.6	2.1	8504.778	0.023	β^+	4625.8	2.9	91 920233.9	2.3
47	45		Rh		-62993.8	2.6	8373.364	0.028	β^+	11307.8	2.0	91 932373.4	2.7
46	46		Pd	−−	-54645	25	8274.11	0.27	β^+	8349	25	91 941336	27
45	47		Ag	x	-38230#	400#	8087#	4#	β^+	16420#	400#	91 958960#	430#
60	33	93	As	x	-25500#	400#	8068#	4#	β^-	15200#	500#	92 972630#	430#
59	34		Se	x	-40700#	300#	8223#	3#	β^-	12190#	530#	92 956310#	320#
58	35		Br	x	-52890	430	8346	5	β^-	11250	430	92 943220	460
57	36		Kr	x	-64136.0	2.5	8458.109	0.027	β^-	8483	8	92 931147.2	2.7
56	37		Rb		-72619	8	8540.92	0.09	β^-	7466	9	92 922040	9
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		-87122.1	0.5	8671.622	0.005	β^-	90.8	1.5	92 906470.6	0.5
52	41		Nb		-87212.9	1.5	8664.186	0.016		*		92 906373.1	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		-77215.6	2.0	8531.451	0.021	β^+	6390.5	2.2	92 917105.6	2.1
48	45		Rh		-69013.6	2.5	8434.844	0.027	β^+	8202	3	92 925910.9	2.7
47	46		Pd	–	-59085	7	8319.67	0.07	β^+	9928	7	92 936569	7
46	47		Ag	x	-46400#	400#	8175#	4#	β^+	12690#	400#	92 950190#	430#
61	33	94	As	x	-19000#	400#	7999#	4#	β^-	17600#	570#	93 979600#	430#
60	34		Se	x	-36600#	400#	8178#	4#	β^-	11050#	450#	93 960710#	430#
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^-	-900.2	1.5	93 906312.52	0.18
53	41		Nb		-86369.1	1.5	8648.902	0.016	β^-	2045.0	1.5	93 907278.9	1.6
52	42		Mo		-88414.11	0.13	8662.334	0.001		*		93 905083.56	0.14
51	43		Tc	–	-84158	4	8608.73	0.04	β^+	4256	4	93 909653	4
50	44		Ru		-82584	3	8583.66	0.03	β^+	1574	5	93 911343	3
49	45		Rh		-72910	3	8472.43	0.03	β^+	9674	5	93 921728	3
48	46		Pd		-66099	4	8391.64	0.04	β^+	6811	5	93 929040	4
47	47		Ag	–	-52400#	400#	8238#	4#	β^+	13700#	400#	93 943750#	430#
46	48		Cd	x	-40700#	500#	8105#	5#	β^+	11700#	640#	93 956310#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
62	33	95	As	x	-13650#	400#	7943#	4#	β^-	16480#	640#	94 985350#	430#
61	34		Se	x	-30130#	500#	8108#	5#	β^-	13720#	580#	94 967650#	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^-	9734	27	94 939711	20
58	37		Rb		-65893	20	8460.23	0.21	β^-	9230	20	94 929261	22
57	38		Sr		-75123	5	8549.14	0.06	β^-	6104	5	94 919352	6
56	39		Y		-81226.2	1.0	8605.157	0.011	β^-	4433.8	1.3	94 912800.1	1.1
55	40		Zr		-85660.0	0.9	8643.593	0.009	β^-	1126.3	1.0	94 908040.2	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		-87711.88	0.12	8648.721	0.001		*		94 905837.43	0.13
52	43		Tc		-86015.95	0.18	8622.634	0.002	β^+	1695.92	0.13	94 907658.08	0.19
51	44		Ru		-83457	9	8587.46	0.10	β^+	2559	9	94 910405	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 924888	3
48	47		Ag	x	-59743.2	1.4	8313.138	0.015	β^+	10223	3	94 935863.0	1.5
47	48		Cd	–	-46890#	400#	8170#	4#	β^+	12850#	400#	94 949660#	430#
62	34	96	Se	x	-25800#	500#	8063#	5#	β^-	12410#	580#	95 972300#	540#
61	35		Br	x	-38210#	300#	8184#	3#	β^-	14890#	300#	95 958980#	320#
60	36		Kr		-53101	9	8331.07	0.09	β^-	8253	10	95 942994	10
59	37		Rb		-61354	3	8408.90	0.03	β^-	11564	9	95 934133	4
58	38		Sr		-72918	8	8521.21	0.09	β^-	5412	9	95 921719	9
57	39		Y		-78330	4	8569.43	0.05	β^-	7108	4	95 915909	5
56	40		Zr		-85438.86	0.11	8635.328	0.001	β^-	163.97	0.10	95 908277.61	0.12
55	41		Nb		-85602.83	0.15	8628.887	0.002	β^-	3192.06	0.11	95 908101.58	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		-86080.32	0.13	8609.412	0.001		*		95 907588.98	0.14
51	45		Rh	+	-79689.0	2.8	8534.687	0.030	β^+	6391.3	2.8	95 914450	3
50	46		Pd		-76192.4	2.5	8490.114	0.026	β^+	3496.6	1.4	95 918204.1	2.7
49	47		Ag		-64656.4	0.8	8361.798	0.009	β^+	11536.0	2.5	95 930588.5	0.9
48	48		Cd	x	-55681	30	8260.2	0.3	β^+	8975	30	95 940220	30
47	49		In	x	-38450#	500#	8073#	5#	β^+	17230#	500#	95 958720#	540#
63	34	97	Se	x	-19100#	500#	7994#	5#	β^-	14910#	640#	96 979500#	540#
62	35		Br	x	-34000#	400#	8140#	4#	β^-	13490#	400#	96 963500#	430#
61	36		Kr		-47490	30	8270.6	0.3	β^-	11030	30	96 949010	30
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		-82936.70	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		-87544.74	0.16	8635.093	0.002		*		96 906016.86	0.17
54	43		Tc	–	-87219.93	0.26	8623.679	0.003	β^+	324.81	0.20	96 906365.56	0.28
53	44		Ru	-n	-86120.5	2.8	8604.279	0.028	β^+	1099.4	2.8	96 907545.8	3.0
52	45		Rh	+	-82562	3	8559.53	0.04	β^+	3559	4	96 911366	4
51	46		Pd		-77806.9	1.6	8502.441	0.016	β^+	4755	3	96 916470.8	1.7
50	47		Ag		-70935.2	1.4	8423.533	0.015	β^+	6871.7	0.7	96 923847.9	1.5
49	48		Cd		-60512	12	8308.02	0.12	β^+	10423	11	96 935037	12
48	49		In	x	-47690#	400#	8168#	4#	β^+	12820#	400#	96 948800#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
63	35	98	Br	x	-28050#	400#	8078#	4#	β^-	16200#	400#	97 969890#	430#
62	36		Kr	x	-44250	50	8235.4	0.5	β^-	10120	50	97 952500	60
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^-	5871	4	97 928693	3
59	39		Y		-72293.5	1.9	8497.665	0.020	β^-	8988	9	97 922389.7	2.1
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		-88116.02	0.17	8635.170	0.002	β^-	-1683	3	97 905403.56	0.18
55	43		Tc		-86433	3	8610.01	0.03	β^-	1797	3	97 907210	4
54	44		Ru	−−	-88229.69	0.18	8620.363	0.002		*		97 905281.53	0.20
53	45		Rh	–	-83180	10	8560.85	0.10	β^+	5050	10	97 910703	11
52	46		Pd		-81321	5	8533.90	0.05	β^+	1859	11	97 912698	5
51	47		Ag		-73076	26	8441.79	0.26	β^+	8245	26	97 921549	28
50	48		Cd		-67661	11	8378.54	0.11	β^+	5416	26	97 927363	12
49	49		In	–	-53930#	300#	8230#	3#	β^+	13730#	300#	97 942100#	320#
48	50		Sn	x	-41000#	500#	8091#	5#	β^+	12930#	590#	97 955990#	540#
64	35	99	Br	x	-23300#	400#	8030#	4#	β^-	15250#	450#	98 974980#	430#
63	36		Kr	x	-38550#	200#	8176#	2#	β^-	12570#	200#	98 958620#	220#
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	8578.98	0.12	β^-	3635	12	98 911610	13
57	42		Mo		-85970.18	0.22	8607.799	0.002	β^-	1359.1	0.4	98 907707.22	0.24
56	43		Tc		-87329.3	0.4	8613.625	0.004	β^-	295.88	0.16	98 906248.1	0.4
55	44		Ru		-87625.2	0.3	8608.711	0.003		*		98 905930.5	0.4
54	45		Rh		-85555	15	8579.90	0.15	β^+	2070	15	98 908152	16
53	46		Pd		-82181	5	8537.92	0.05	β^+	3374	15	98 911775	5
52	47		Ag		-76709	3	8474.74	0.04	β^+	5472	6	98 917649	4
51	48		Cd		-69931.6	1.5	8398.378	0.015	β^+	6778	3	98 924925.3	1.6
50	49		In		-61421	7	8304.51	0.07	β^+	8510	7	98 934061	7
49	50		Sn	–	-48020#	500#	8161#	5#	β^+	13400#	500#	98 948450#	540#
65	35	100	Br	x	-17100#	400#	7969#	4#	β^-	17610#	500#	99 981640#	430#
64	36		Kr	x	-34710#	300#	8137#	3#	β^-	11550#	300#	99 962740#	320#
63	37		Rb		-46262	12	8244.47	0.12	β^-	13555	14	99 950336	13
62	38		Sr		-59818	7	8372.20	0.07	β^-	7505	11	99 935783	7
61	39		Y		-67323	8	8439.43	0.08	β^-	9050	11	99 927726	9
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		-86192.90	0.29	8604.661	0.003	β^-	-170.5	1.0	99 907468.1	0.3
57	43		Tc	-n	-86022.4	1.1	8595.133	0.011	β^-	3204.8	1.0	99 907651.1	1.1
56	44		Ru		-89227.2	0.3	8619.358	0.003		*		99 904210.6	0.4
55	45		Rh		-85591	18	8575.17	0.18	β^+	3636	18	99 908114	19
54	46		Pd		-85216	13	8563.59	0.13	β^+	375	22	99 908517	14
53	47		Ag		-78138	5	8485.00	0.05	β^+	7077	14	99 916115	5
52	48		Cd		-74194.7	1.6	8437.738	0.016	β^+	3944	5	99 920348.7	1.8
51	49		In		-64177.9	2.2	8329.747	0.022	β^+	10016.8	2.7	99 931102.2	2.3
50	50		Sn	–	-57150	240	8251.6	2.4	β^+	7030	240	99 938650	260
49	51		Sb	x	-37250#	400#	8045#	4#	β^+	19900#	470#	99 960010#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
66	35	101	Br	x	-11900#	400#	7918#	4#	β^-	16680#	640#	100 987230#	430#
65	36		Kr	x	-28580#	500#	8075#	5#	β^-	13960#	500#	100 969320#	540#
64	37		Rb	x	-42538	17	8205.88	0.17	β^-	12786	19	100 954333	18
63	38		Sr		-55324	8	8324.73	0.08	β^-	9731	11	100 940607	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^-	5730	9	100 921458	9
60	41		Nb	x	-78891	4	8534.83	0.04	β^-	4629	4	100 915307	4
59	42		Mo	-n	-83519.82	0.30	8572.915	0.003	β^-	2825	24	100 910337.8	0.3
58	43		Tc	+	-86344	24	8593.13	0.24	β^-	1614	24	100 907305	26
57	44		Ru		-87957.9	0.4	8601.364	0.004		*		100 905573.3	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		-68547	3	8370.44	0.03	β^+	7290	4	100 926412	4
51	50		Sn		-59889.9	0.9	8276.986	0.009	β^+	8657	4	100 935705.6	1.0
50	51		Sb	x	-46800#	500#	8140#	5#	β^+	13090#	500#	100 949760#	540#
66	36	102	Kr	x	-24150#	500#	8032#	5#	β^-	13090#	500#	101 974070#	540#
65	37		Rb	x	-37242	27	8152.65	0.27	β^-	14930	40	101 960019	29
64	38		Sr		-52172	27	8291.35	0.26	β^-	9000	27	101 943991	28
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^-	1013	12	101 910294	9
59	43		Tc		-84573	9	8570.66	0.09	β^-	4533	9	101 909207	10
58	44		Ru		-89106.3	0.4	8607.426	0.004	β^-	-2323	6	101 904340.5	0.4
57	45		Rh	–	-86783	6	8576.98	0.06	β^-	1120	6	101 906834	7
56	46		Pd		-87902.8	0.4	8580.287	0.004		*		101 905632.5	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	–	-64820	16	8323.30	0.16	β^+	5875	16	101 930413	18
51	51		Sb	x	-51100#	400#	8181#	4#	β^+	13720#	400#	101 945140#	430#
50	52		Te	x	-37750#	300#	8043#	3#	β^+	13350#	500#	101 959470#	320#
67	36	103	Kr	x	-17700#	500#	7970#	5#	β^-	15350#	500#	102 981000#	540#
66	37		Rb	x	-33050	30	8111.1	0.3	β^-	14170	40	102 964520	30
65	38		Sr	x	-47220	29	8241.13	0.28	β^-	11240	30	102 949310	30
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^-	7219	10	102 927204	10
62	41		Nb	x	-75028	4	8488.33	0.04	β^-	5926	10	102 919454	4
61	42		Mo	x	-80954	9	8538.27	0.09	β^-	3650	13	102 913092	10
60	43		Tc	+p	-84605	10	8566.11	0.09	β^-	2662	10	102 909173	10
59	44		Ru		-87267.0	0.4	8584.364	0.004	β^-	764.5	2.3	102 906315.0	0.5
58	45		Rh		-88031.5	2.3	8584.191	0.022		*		102 905494.3	2.5
57	46		Pd	-n	-87456.8	0.9	8571.015	0.008	β^+	574.7	2.4	102 906111.3	0.9
56	47		Ag	x	-84803	4	8537.65	0.04	β^+	2654	4	102 908961	4
55	48		Cd		-80651.8	1.8	8489.756	0.017	β^+	4151	4	102 913416.7	1.9
54	49		In		-74632	9	8423.72	0.09	β^+	6019	9	102 919879	10
53	50		Sn		-67125.7	2.7	8343.244	0.026	β^+	7507	9	102 927937.6	2.9
52	51		Sb	x	-56670#	300#	8234#	3#	β^+	10460#	300#	102 939160#	320#
51	52		Te	x	-42600#	200#	8090#	2#	β^+	14070#	360#	102 954270#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
67	37	104	Rb	x	-27450#	200#	8057#	2#	β^-	15960#	200#	103 970530#	210#
66	38		Sr	x	-43410	30	8202.9	0.3	β^-	10580	40	103 953400	40
65	39		Y	x	-53996	16	8297.13	0.15	β^-	11722	18	103 942033	17
64	40		Zr	x	-65718	9	8402.32	0.09	β^-	6094	9	103 929449	10
63	41		Nb		-71811.9	1.1	8453.392	0.011	β^-	8532	9	103 922906.8	1.2
62	42		Mo	x	-80344	9	8527.91	0.09	β^-	2234	9	103 913747	10
61	43		Tc	x	-82578.4	2.2	8541.871	0.021	β^-	5518.1	2.5	103 911348.4	2.4
60	44		Ru		-88096.5	1.2	8587.407	0.012	β^-	-1137.3	2.6	103 905424.5	1.3
59	45		Rh	-n	-86959.2	2.3	8568.948	0.022	β^-	2435.0	2.6	103 906645.5	2.5
58	46		Pd		-89394.2	1.2	8584.840	0.012		*		103 904031.4	1.3
57	47		Ag	–	-85116	4	8536.18	0.04	β^+	4279	4	103 908625	4
56	48		Cd		-83968.4	1.7	8517.623	0.016	β^+	1147	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		-71626	4	8383.90	0.04	β^+	4556	7	103 923106	5
53	51		Sb		-59338	12	8258.23	0.12	β^+	12288	13	103 936298	13
52	52		Te	$-\alpha$	-49520	250	8156.3	2.4	β^+	9820	250	103 946830	270
51	53		I	x	-31720#	500#	7978#	5#	β^+	17800#	560#	103 965950#	540#
68	37	105	Rb	x	-22800#	300#	8013#	3#	β^-	15080#	300#	104 975520#	320#
67	38		Sr	x	-37890	40	8149.0	0.4	β^-	12680#	200#	104 959330	50
66	39		Y	x	-50570#	200#	8262#	2#	β^-	10890#	200#	104 945710#	210#
65	40		Zr	x	-61458	12	8358.60	0.12	β^-	8457	13	104 934022	13
64	41		Nb	x	-69915	4	8431.69	0.04	β^-	7417	4	104 924943	4
63	42		Mo	x	-77332.7	1.8	8494.882	0.017	β^-	4863	9	104 916979.9	1.9
62	43		Tc	x	-82196	9	8533.75	0.08	β^-	3739	9	104 911759	9
61	44		Ru		-85935.3	1.2	8561.908	0.012	β^-	1915.7	2.3	104 907744.7	1.3
60	45		Rh		-87851.0	2.5	8572.702	0.023	β^-	566.2	2.2	104 905688.1	2.6
59	46		Pd		-88417.2	1.1	8570.644	0.010		*		104 905080.3	1.2
58	47		Ag		-87071	5	8550.37	0.04	β^+	1346	5	104 906525	5
57	48		Cd		-84333.9	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		-73339	4	8397.24	0.04	β^+	6302	11	104 921267	4
54	51		Sb	$+\alpha$	-64015	22	8300.99	0.21	β^+	9324	22	104 931277	23
53	52		Te	$-\alpha$	-52396	3	8182.877	0.030	β^+	11620	22	104 943751	3
52	53		I	x	-39200#	400#	8050#	4#	β^+	13200#	400#	104 957920#	430#
69	37	106	Rb	x	-16800#	400#	7957#	4#	β^-	17200#	450#	105 981960#	430#
68	38		Sr	x	-34000#	200#	8112#	2#	β^-	11790#	360#	105 963500#	220#
67	39		Y	x	-45790#	300#	8215#	3#	β^-	12790#	300#	105 950840#	320#
66	40		Zr	x	-58582	5	8328.76	0.05	β^-	7620	5	105 937109	5
65	41		Nb		-66202.1	1.2	8393.261	0.012	β^-	9926	9	105 928929.1	1.3
64	42		Mo	x	-76128	9	8479.52	0.09	β^-	3608	9	105 918273	10
63	43		Tc	x	-79736.2	1.9	8506.179	0.018	β^-	6587	6	105 914399.7	2.0
62	44		Ru		-86323	5	8560.94	0.05	β^-	39.40	0.21	105 907328	6
61	45		Rh		-86362	5	8553.93	0.05	β^-	3544	5	105 907286	6
60	46		Pd		-89906.8	1.1	8579.987	0.010	β^-	-2964.9	2.8	105 903481.0	1.1
59	47		Ag		-86942	3	8544.635	0.028	β^-	189.5	2.8	105 906664	3
58	48		Cd		-87131.4	1.0	8539.043	0.010		*		105 906460.5	1.1
57	49		In	–	-80607	12	8470.11	0.12	β^+	6524	12	105 913464	13
56	50		Sn		-77352	5	8432.03	0.04	β^+	3255	13	105 916959	5
55	51		Sb	x	-66473	7	8322.01	0.07	β^+	10879	9	105 928638	8
54	52		Te	$-\alpha$	-58105	19	8235.68	0.18	β^+	8368	20	105 937622	20
53	53		I	x	-43860#	400#	8094#	4#	β^+	14240#	400#	105 952910#	430#
52	54		Xe	x	-30160#	300#	7957#	3#	β^+	13700#	500#	105 967620#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
69	38	107	Sr	x	-28000#	300#	8055#	3#	β^-	13970#	420#	106 969940#	320#
68	39		Y	x	-41970#	300#	8178#	3#	β^-	11830#	360#	106 954940#	320#
67	40		Zr	x	-53800#	200#	8282#	2#	β^-	9920#	200#	106 942240#	220#
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^-	6206	12	106 922120	10
64	43		Tc	x	-78751	8	8492.90	0.08	β^-	5113	12	106 915458	9
63	44		Ru	-nn	-83863	8	8533.37	0.08	β^-	3000	15	106 909969	9
62	45		Rh	+p	-86864	12	8554.10	0.11	β^-	1508	12	106 906748	13
61	46		Pd		-88371.9	1.1	8560.888	0.011	β^-	37.49	0.09	106 905128.9	1.2
60	47		Ag		-88409.4	1.2	8553.926	0.011		*		106 905088.6	1.2
59	48		Cd		-86990.8	1.6	8533.356	0.015	β^+	1418.6	1.9	106 906611.6	1.7
58	49		In		-83567	10	8494.05	0.09	β^+	3424	10	106 910287	10
57	50		Sn	x	-78512	5	8439.49	0.05	β^+	5055	11	106 915714	6
56	51		Sb		-70653	4	8358.73	0.04	β^+	7859	7	106 924151	4
55	52		Te		-60694	5	8258.34	0.05	β^+	9959	6	106 934843	5
54	53		I	x	-49430#	300#	8146#	3#	β^+	11260#	300#	106 946940#	320#
53	54		Xe	x	-35000#	200#	8004#	2#	β^+	14430#	360#	106 962430#	220#
70	38	108	Sr	x	-23700#	400#	8015#	4#	β^-	13080#	570#	107 974560#	430#
69	39		Y	x	-36780#	400#	8129#	4#	β^-	13970#	500#	107 960520#	430#
68	40		Zr	x	-50750#	300#	8251#	3#	β^-	8800#	300#	107 945520#	320#
67	41		Nb	x	-59545	8	8325.66	0.08	β^-	11204	12	107 936075	9
66	42		Mo	x	-70749	9	8422.16	0.09	β^-	5174	13	107 924048	10
65	43		Tc	x	-75924	8	8462.82	0.08	β^-	7736	9	107 918493	9
64	44		Ru	++	-83659.7	1.1	8527.211	0.010	β^-	1313.1	1.1	107 910187.6	1.1
63	45		Rh	+	-84972.8	1.5	8532.125	0.014	β^-	4551.3	1.1	107 908778.0	1.6
62	46		Pd		-89524.0	1.1	8567.022	0.010	β^-	-1914.6	1.6	107 903892.0	1.1
61	47		Ag	-n	-87609.5	1.2	8542.051	0.011	β^-	1642.8	1.6	107 905947.4	1.2
60	48		Cd		-89252.3	1.1	8550.018	0.010		*		107 904183.8	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 929381	6
55	53		I		-52814	12	8176.41	0.11	β^+	12968	13	107 943302	13
54	54		Xe	$-\alpha$	-42320	270	8072.0	2.5	β^+	10490	270	107 954570	290
53	55		Cs	x	-23870#	400#	7894#	4#	β^+	18450#	480#	107 974370#	430#
70	39	109	Y	x	-32480#	400#	8089#	4#	β^-	13050#	500#	108 965130#	430#
69	40		Zr	x	-45530#	300#	8202#	3#	β^-	11250#	360#	108 951120#	320#
68	41		Nb		-56780	200	8298.0	1.8	β^-	9880	200	108 939040	210
67	42		Mo	x	-66659	11	8381.42	0.10	β^-	7624	15	108 928438	12
66	43		Tc	x	-74284	9	8444.19	0.09	β^-	6456	13	108 920253	10
65	44		Ru	-4n	-80739	9	8496.23	0.08	β^-	4260	10	108 913323	9
64	45		Rh		-84999	4	8528.14	0.04	β^-	2607	4	108 908750	4
63	46		Pd		-87606.3	1.1	8544.881	0.010	β^-	1112.6	1.1	108 905950.8	1.1
62	47		Ag		-88718.9	0.4	8547.911	0.003		*		108 904756.3	0.4
61	48		Cd		-88504.3	1.5	8538.764	0.014	β^+	214.6	1.5	108 904986.7	1.6
60	49		In		-86491.6	2.6	8513.122	0.024	β^+	2012.7	2.9	108 907147.4	2.8
59	50		Sn		-82630	8	8470.52	0.07	β^+	3861	8	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 927304	5
56	53		I	-p	-57672	7	8220.02	0.06	β^+	10043	8	108 938086	7
55	54		Xe	$-\alpha$	-45754	8	8103.49	0.07	β^+	11919	10	108 950881	9
54	55		Cs	x	-31730#	300#	7968#	3#	β^+	14020#	300#	108 965940#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
71	39	110	Y	x	-26900#	700#	8038#	6#	β^-	15100#	810#	109 971120#	750#
70	40		Zr	x	-42000#	400#	8169#	4#	β^-	10190#	450#	109 954910#	430#
69	41		Nb	x	-52190#	200#	8254#	2#	β^-	12350#	200#	109 943970#	220#
68	42		Mo	x	-64536	24	8359.29	0.22	β^-	6499	26	109 930718	26
67	43		Tc	x	-71035	9	8411.27	0.08	β^-	9037	9	109 923740	10
66	44		Ru	++	-80072.8	0.6	8486.314	0.005	β^-	2632.4	0.5	109 914038.3	0.6
65	45		Rh		-82705.2	0.8	8503.132	0.007	β^-	5625.6	0.5	109 911212.3	0.8
64	46		Pd		-88330.8	0.6	8547.162	0.005	β^-	-874.0	0.5	109 905173.0	0.6
63	47		Ag	-n	-87456.8	0.4	8532.104	0.003	β^-	2891.21	0.11	109 906111.3	0.4
62	48		Cd		-90348.0	0.4	8551.276	0.003		*		109 903007.4	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	8358.11	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	$-\alpha$	-51808	21	8158.24	0.19	β^+	8660	70	109 944382	23
55	55		Cs	x	-36440#	300#	8011#	3#	β^+	15370#	300#	109 960880#	320#
54	56		Ba	x	-22850#	400#	7881#	4#	β^+	13590#	500#	109 975470#	430#
72	39	111	Y	x	-22000#	700#	7995#	6#	β^-	14480#	920#	110 976380#	750#
71	40		Zr	x	-36480#	600#	8118#	5#	β^-	12480#	670#	110 960840#	640#
70	41		Nb	x	-48960#	300#	8223#	3#	β^-	10970#	300#	110 947440#	320#
69	42		Mo		-59932	5	8315.23	0.04	β^-	9084	3	110 935660	5
68	43		Tc		-69016	4	8390.01	0.04	β^-	7763	4	110 925908	5
67	44		Ru		-76779	4	8452.90	0.04	β^-	5523	5	110 917575	5
66	45		Rh		-82301	4	8495.60	0.04	β^-	3684	4	110 911646	5
65	46		Pd	-n	-85985.8	0.7	8521.749	0.006	β^-	2229.7	1.6	110 907690.4	0.8
64	47		Ag	+	-88215.5	1.5	8534.788	0.013	β^-	1036.8	1.4	110 905296.8	1.6
63	48		Cd		-89252.3	0.3	8537.081	0.003		*		110 904183.7	0.4
62	49		In		-88394.6	0.4	8522.306	0.003	β^+	857.64	0.18	110 905104.4	0.4
61	50		Sn	+n	-85939	5	8493.13	0.05	β^+	2456	5	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	$-\alpha$	-54559	10	8182.24	0.09	β^+	10395	11	110 941428	11
56	55		Cs	x	-42900#	200#	8070#	2#	β^+	11660#	200#	110 953950#	220#
55	56		Ba	x	-28180#	300#	7930#	3#	β^+	14720#	360#	110 969750#	320#
72	40	112	Zr	x	-32420#	700#	8081#	6#	β^-	11510#	760#	111 965200#	750#
71	41		Nb	x	-43930#	300#	8177#	3#	β^-	13540#	300#	111 952840#	320#
70	42		Mo	+	-57467	8	8291.03	0.07	β^-	7789	6	111 938307	8
69	43		Tc		-65256	5	8353.60	0.04	β^-	10366	4	111 929945	5
68	44		Ru		-75622	5	8439.16	0.04	β^-	3981	5	111 918817	5
67	45		Rh		-79603.0	1.5	8467.723	0.013	β^-	6718	7	111 914542.7	1.6
66	46		Pd		-86321	7	8520.72	0.06	β^-	263	7	111 907330	7
65	47		Ag	+	-86584.8	0.3	8516.090	0.003	β^-	3990.16	0.22	111 907047.4	0.3
64	48		Cd		-90574.91	0.23	8544.731	0.002	β^-	-2585	4	111 902763.84	0.25
63	49		In		-87990	4	8514.67	0.04	β^-	665	4	111 905539	5
62	50		Sn		-88655.10	0.26	8513.619	0.002		*		111 904824.84	0.28
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	-46454	11	8101.90	0.09	β^+	13572	13	111 950130	11
56	56		Ba	x	-35650#	300#	7998#	3#	β^+	10800#	300#	111 961730#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
73	40	113	Zr	x	-26340#	300#	8027#	3#	β^-	13870#	500#	112 971720#	320#
72	41		Nb	x	-40210#	400#	8143#	4#	β^-	12340#	450#	112 956830#	430#
71	42		Mo	x	-52550#	200#	8246#	2#	β^-	10260#	200#	112 943590#	220#
70	43		Tc		-62811	3	8329.460	0.029	β^-	9064	4	112 932570	4
69	44		Ru	x	-71874.6	1.5	8402.746	0.013	β^-	6895	7	112 922839.5	1.6
68	45		Rh		-78770	7	8456.84	0.06	β^-	4821	9	112 915437	7
67	46		Pd		-83591	7	8492.58	0.06	β^-	3369	7	112 910262	7
66	47		Ag		-86960.4	2.7	8515.478	0.024	β^-	2083.0	2.7	112 906644.2	2.9
65	48		Cd		-89043.36	0.23	8526.988	0.002	β^-	323.80	0.26	112 904408.03	0.24
64	49		In		-89367.16	0.19	8522.930	0.002		*		112 904060.41	0.20
63	50		Sn	IT	-88327.91	0.19	8506.810	0.002	β^+	1039.251	0.027	112 905176.10	0.20
62	51		Sb	–	-84417	17	8465.27	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	-51764	9	8148.62	0.08	β^+	10439	11	112 944429	9
57	56		Ba	x	-39710#	200#	8035#	2#	β^+	12060#	200#	112 957370#	220#
74	40	114	Zr	x	-22080#	400#	7990#	4#	β^-	12730#	640#	113 976300#	430#
73	41		Nb	x	-34810#	500#	8095#	4#	β^-	14870#	580#	113 962630#	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^-	5440	4	113 924614	4
69	45		Rh		-75661.1	0.7	8426.191	0.006	β^-	7829	7	113 918774.5	0.7
68	46		Pd	x	-83490	7	8488.01	0.06	β^-	1433	7	113 910369	7
67	47		Ag	x	-84923.4	1.2	8493.713	0.011	β^-	5091.7	1.2	113 908831.0	1.3
66	48		Cd		-90015.02	0.25	8531.514	0.002	β^-	-1445.2	0.4	113 903364.90	0.27
65	49		In		-88569.8	0.3	8511.975	0.003	β^-	1989.9	0.3	113 904916.4	0.3
64	50		Sn		-90559.737	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	$-\alpha$	-45791	28	8088.68	0.25	β^+	8900	90	113 950840	30
74	41	115	Nb	x	-30720#	500#	8060#	4#	β^-	13640#	640#	114 967020#	540#
73	42		Mo	x	-44360#	400#	8171#	3#	β^-	11440#	450#	114 952380#	430#
72	43		Tc	x	-55800#	200#	8264#	2#	β^-	10260#	200#	114 940100#	220#
71	44		Ru	x	-66054.7	2.9	8346.374	0.025	β^-	8165	6	114 929087	3
70	45		Rh		-74219	5	8410.57	0.05	β^-	6202	5	114 920322	6
69	46		Pd		-80421.4	1.4	8457.696	0.012	β^-	4527.9	2.9	114 913664.1	1.5
68	47		Ag	IT	-84949.3	2.5	8490.266	0.022	β^-	3135.6	2.5	114 908803.2	2.7
67	48		Cd		-88084.91	0.30	8510.729	0.003	β^-	1451.44	0.30	114 905437.0	0.3
66	49		In		-89536.358	0.012	8516.547	*a*	β^-	497.489	0.010	114 903878.771	0.013
65	50		Sn		-90033.848	0.015	8514.070	*a*		*		114 903344.694	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	-49160#	200#	8118#	2#	β^+	10540#	230#	114 947230#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
75	41	116	Nb	x	-25230#	500#	8012#	4#	β^-	15980#	710#	115 972910#	540#
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^-	6661	4	115 931219	4
71	45		Rh		-70730.1	1.8	8377.564	0.016	β^-	9102.9	1.8	115 924068.1	1.9
70	46		Pd	++	-79833.03	0.18	8449.293	0.002	β^-	2710.5	2.2	115 914295.72	0.19
69	47		Ag		-82543.6	2.2	8465.915	0.019	β^-	6168.9	2.2	115 911385.8	2.4
68	48		Cd		-88712.48	0.16	8512.351	0.001	β^-	-462.72	0.27	115 904763.24	0.17
67	49		In	-n	-88249.76	0.22	8501.618	0.002	β^-	3276.21	0.24	115 905259.99	0.24
66	50		Sn		-91525.97	0.09	8523.117	0.001		*		115 901742.84	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	-54640#	200#	8165#	2#	β^+	7400#	220#	115 941340#	220#
59	57		La	-p	-41150#	200#	8042#	2#	β^+	13490#	280#	115 955830#	220#
76	41	117	Nb	x	-21040#	300#	7977#	3#	β^-	14650#	580#	116 977410#	320#
75	42		Mo	x	-35690#	500#	8096#	4#	β^-	12450#	640#	116 961690#	540#
74	43		Tc	x	-48140#	400#	8195#	3#	β^-	11390#	410#	116 948320#	430#
73	44		Ru	x	-59530	60	8285.9	0.5	β^-	9370	60	116 936100	70
72	45		Rh	x	-68897	9	8359.28	0.08	β^-	7526	12	116 926036	10
71	46		Pd	x	-76423	7	8416.91	0.06	β^-	5765	8	116 917957	8
70	47		Ag	IT	-82187.5	2.1	8459.500	0.018	β^-	4230.8	2.4	116 911768.0	2.3
69	48		Cd	-n	-86418.4	1.0	8488.974	0.009	β^-	2525.8	2.4	116 907226.1	1.1
68	49		In		-88944.2	2.2	8503.875	0.019	β^-	1453.3	2.2	116 904514.5	2.3
67	50		Sn		-90397.46	0.14	8509.610	0.001		*		116 902954.34	0.15
66	51		Sb		-88640	8	8487.90	0.07	β^+	1758	8	116 904842	9
65	52		Te		-85095	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	-66470	40	8271.7	0.4	β^+	7720	40	116 928640	50
61	56		Ba	εp	-57460	250	8188.0	2.1	β^+	9010	250	116 938320	270
60	57		La	-p	-46530#	200#	8088#	2#	β^+	10930#	320#	116 950050#	220#
76	42	118	Mo	x	-32270#	500#	8066#	4#	β^-	11020#	640#	117 965360#	540#
75	43		Tc	x	-43290#	400#	8153#	3#	β^-	13890#	450#	117 953530#	430#
74	44		Ru	x	-57180#	200#	8264#	2#	β^-	7810#	200#	117 938620#	220#
73	45		Rh	x	-64994	5	8323.76	0.04	β^-	10394	6	117 930226	5
72	46		Pd		-75388.4	2.5	8405.220	0.021	β^-	4153	4	117 919067.2	2.7
71	47		Ag	x	-79541.9	3.0	8433.789	0.025	β^-	7149	4	117 914608	3
70	48		Cd	x	-86690.4	2.0	8487.740	0.017	β^-	586.4	2.7	117 906934.0	2.1
69	49		In	+	-87276.8	1.9	8486.079	0.016	β^-	4375.7	1.9	117 906304.5	2.0
68	50		Sn		-91652.53	0.06	8516.531	0.001		*		117 901606.97	0.06
67	51		Sb	–	-87995.9	3.0	8478.913	0.025	β^+	3656.6	3.0	117 905533	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	-62260#	200#	8228#	2#	β^+	6150#	200#	117 933160#	220#
61	57		La	x	-49980#	300#	8117#	3#	β^+	12280#	360#	117 946340#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
77	42	119	Mo	x	-26440#	300#	8017#	3#	β^-	13590#	580#	118 971620#	320#
76	43		Tc	x	-40030#	500#	8125#	4#	β^-	12240#	580#	118 957030#	540#
75	44		Ru	x	-52270#	300#	8221#	3#	β^-	10550#	300#	118 943880#	320#
74	45		Rh	x	-62823	9	8303.40	0.08	β^-	8787	10	118 932557	10
73	46		Pd	IT	-71609	4	8370.66	0.03	β^-	7041	5	118 923124	4
72	47		Ag		-78650.9	2.1	8423.255	0.018	β^-	5412.9	2.8	118 915564.8	2.3
71	48		Cd	x	-84063.8	1.9	8462.168	0.016	β^-	3646.9	2.8	118 909753.9	2.0
70	49		In		-87710.6	2.0	8486.239	0.017	β^-	2354.1	2.1	118 905838.8	2.2
69	50		Sn		-90064.7	0.5	8499.447	0.005		*		118 903311.6	0.6
68	51		Sb		-89475	7	8487.92	0.06	β^+	589	7	118 903944	8
67	52		Te	–	-87182	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	-44050#	500#	8060#	4#	β^+	10970#	580#	118 952710#	540#
77	43	120	Tc	x	-35000#	500#	8083#	4#	β^-	14720#	640#	119 962430#	540#
76	44		Ru	x	-49720#	400#	8199#	3#	β^-	8890#	400#	119 946620#	430#
75	45		Rh	x	-58610	60	8266.4	0.5	β^-	11670	60	119 937080	60
74	46		Pd		-70279.7	2.3	8357.082	0.019	β^-	5394	4	119 924551.7	2.5
73	47		Ag	x	-75674.0	2.7	8395.515	0.023	β^-	8283	5	119 918760.7	2.9
72	48		Cd	x	-83957	4	8458.02	0.03	β^-	1752	5	119 909868	4
71	49		In	x	-85709	3	8466.103	0.026	β^-	5389	3	119 907987	3
70	50		Sn		-91097.9	0.9	8504.489	0.007	β^-	-2681	7	119 902202.4	1.0
69	51		Sb	–	-88417	7	8475.63	0.06	β^-	945	7	119 905080	8
68	52		Te		-89362.5	1.7	8476.989	0.014		*		119 904065.4	1.8
67	53		I	–	-83748	15	8423.68	0.13	β^+	5615	15	119 910093	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	-57800#	300#	8181#	2#	β^+	11090#	420#	119 937950#	320#
62	58		Ce	x	-49730#	500#	8108#	4#	β^+	8070#	580#	119 946610#	540#
78	43	121	Tc	x	-31540#	500#	8054#	4#	β^-	13090#	640#	120 966140#	540#
77	44		Ru	x	-44630#	400#	8156#	3#	β^-	11620#	740#	120 952090#	430#
76	45		Rh	x	-56250	620	8245	5	β^-	9930	620	120 939610	670
75	46		Pd		-66181.8	2.5	8320.854	0.021	β^-	8222	9	120 928950.9	2.7
74	47		Ag	x	-74404	9	8382.34	0.07	β^-	6670	9	120 920124	9
73	48		Cd	x	-81073.8	1.9	8430.997	0.016	β^-	4771.2	2.3	120 912963.7	2.1
72	49		In	x	-85845.0	1.2	8463.963	0.010	β^-	3351.7	1.5	120 907841.6	1.3
71	50		Sn		-89196.8	0.9	8485.197	0.008	β^-	403.0	2.5	120 904243.4	1.0
70	51		Sb		-89599.8	2.5	8482.063	0.020		*		120 903810.7	2.6
69	52		Te		-88544	26	8466.87	0.21	β^+	1056	26	120 904944	28
68	53		I		-86246	5	8441.41	0.04	β^+	2298	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	-62380#	300#	8218#	2#	β^+	8370#	330#	120 933030#	320#
63	58		Ce	x	-52690#	400#	8132#	3#	β^+	9690#	500#	120 943440#	430#
62	59		Pr	-p	-41550#	500#	8033#	4#	β^+	11140#	640#	120 955390#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
79	43	122	Tc	x	-26310#	500#	8011#	4#	β^-	15480#	710#	121 971760#	540#
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^-	6604	20	121 930632	21
75	47		Ag	x	-71220	5	8353.69	0.04	β^-	9392	6	121 923542	6
74	48		Cd		-80612.4	2.3	8424.267	0.019	β^-	2942	4	121 913459.0	2.5
73	49		In	x	-83555	3	8441.971	0.027	β^-	6386	4	121 910300	4
72	50		Sn		-89940.4	1.3	8487.900	0.010	β^-	-1605.5	2.1	121 903445.1	1.4
71	51		Sb		-88334.8	2.5	8468.327	0.020	β^-	1979.1	2.1	121 905168.7	2.6
70	52		Te		-90313.9	1.3	8478.137	0.010		*		121 903044.0	1.4
69	53		I	–	-86080	5	8437.02	0.04	β^+	4234	5	121 907589	6
68	54		Xe	x	-85355	11	8424.66	0.09	β^+	725	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#
79	44	123	Ru	x	-36550#	500#	8089#	4#	β^-	12640#	640#	122 960760#	540#
78	45		Rh	x	-49190#	400#	8185#	3#	β^-	11110#	470#	122 947190#	430#
77	46		Pd	x	-60300	250	8268.9	2.0	β^-	9310	250	122 935270	270
76	47		Ag	x	-69603	4	8338.254	0.029	β^-	7811	5	122 925278	4
75	48		Cd	x	-77414.3	2.7	8395.396	0.022	β^-	5984.3	2.9	122 916892.3	2.9
74	49		In	x	-83398.6	1.1	8437.689	0.009	β^-	4416.4	2.0	122 910468.0	1.2
73	50		Sn		-87815.0	1.7	8467.234	0.014	β^-	1408.6	1.1	122 905726.7	1.8
72	51		Sb		-89223.5	1.3	8472.325	0.010		*		122 904214.6	1.4
71	52		Te		-89171.6	1.3	8465.542	0.010	β^+	51.91	0.07	122 904270.3	1.4
70	53		I		-87943	4	8449.195	0.030	β^+	1228	3	122 905589	4
69	54		Xe		-85249	10	8420.93	0.08	β^+	2695	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#
63	60		Nd	x	-38900#	700#	8006#	6#	β^+	11330#	810#	122 958240#	750#
80	44	124	Ru	x	-33590#	600#	8065#	5#	β^-	11120#	720#	123 963940#	640#
79	45		Rh	x	-44710#	400#	8148#	3#	β^-	13580#	500#	123 952000#	430#
78	46		Pd	x	-58290#	300#	8251#	2#	β^-	7910#	300#	123 937420#	320#
77	47		Ag	x	-66200	7	8308.65	0.06	β^-	10500	7	123 928932	7
76	48		Cd		-76699.4	2.6	8387.018	0.021	β^-	4211	4	123 917659.8	2.8
75	49		In	x	-80910	3	8414.669	0.026	β^-	7321	3	123 913139	4
74	50		Sn		-88231.3	1.3	8467.398	0.010	β^-	-611.53	0.16	123 905279.9	1.4
73	51		Sb	-n	-87619.7	1.3	8456.157	0.010	β^-	2905.07	0.13	123 905936.4	1.4
72	52		Te		-90524.8	1.3	8473.276	0.010	β^-	-3159.6	1.9	123 902817.6	1.4
71	53		I	–	-87365.2	2.2	8441.486	0.018	β^-	302.9	1.9	123 906209.6	2.4
70	54		Xe		-87668.1	1.3	8437.619	0.010		*		123 905884.5	1.4
69	55		Cs	x	-81741	9	8383.51	0.07	β^+	5927	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#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
81	44	125	Ru	x	-28370#	500#	8023#	4#	β^-	13460#	710#	124 969540#	540#
80	45		Rh	x	-41830#	500#	8124#	4#	β^-	11880#	640#	124 955090#	540#
79	46		Pd	x	-53710#	400#	8213#	3#	β^-	10560#	400#	124 942340#	430#
78	47		Ag		-64268	4	8291.298	0.029	β^-	9080	5	124 931006	4
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^-	5481.1	2.2	124 913673.8	1.9
75	50		Sn	-n	-85893.4	1.3	8445.527	0.010	β^-	2362.3	2.1	124 907789.6	1.4
74	51		Sb	+	-88255.7	2.5	8458.166	0.020	β^-	766.7	2.1	124 905253.6	2.7
73	52		Te		-89022.4	1.3	8458.041	0.010		*		124 904430.5	1.4
72	53		I	–	-88836.7	1.3	8450.296	0.010	β^+	185.77	0.06	124 904629.9	1.4
71	54		Xe		-87200.0	1.3	8430.944	0.011	β^+	1636.7	0.4	124 906386.9	1.4
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#
64	61		Pm	x	-36150#	500#	7979#	4#	β^+	11920#	640#	124 961190#	540#
81	45	126	Rh	x	-37200#	500#	8087#	4#	β^-	14300#	640#	125 960060#	540#
80	46		Pd	x	-51500#	400#	8194#	3#	β^-	9220#	450#	125 944710#	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^-	8200	8	125 916468	5
76	50		Sn		-86010	6	8443.48	0.05	β^-	380	30	125 907665	7
75	51		Sb	–	-86390	30	8440.27	0.24	β^-	3680	30	125 907260	30
74	52		Te		-90064.8	1.3	8463.245	0.010	β^-	-2154	4	125 903311.4	1.4
73	53		I		-87911	4	8439.942	0.030	β^-	1235	4	125 905624	4
72	54		Xe		-89146.389	0.011	8443.538	*a*		*		125 904297.420	0.012
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	-60400#	200#	8184#	2#	β^+	10420#	200#	125 935160#	210#
66	60		Nd	x	-53380#	300#	8122#	2#	β^+	7020#	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^-	13170#	780#	126 963790#	640#
81	46		Pd	x	-46900#	500#	8157#	4#	β^-	11750#	540#	126 949650#	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^-	8150	6	126 926203	7
78	49		In		-76891.3	1.2	8374.911	0.010	β^-	6578	9	126 917453.8	1.3
77	50		Sn		-83470	9	8420.55	0.07	β^-	3229	10	126 910392	10
76	51		Sb		-86699	5	8439.82	0.04	β^-	1582	5	126 906925	5
75	52		Te		-88281.1	1.3	8446.114	0.010	β^-	702	4	126 905226.3	1.4
74	53		I		-88984	4	8445.485	0.028		*		126 904472	4
73	54		Xe		-88321	4	8434.11	0.03	β^+	662.3	2.0	126 905183	4
72	55		Cs		-86240	6	8411.56	0.04	β^+	2081	6	126 907417	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	-64650#	200#	8217#	2#	β^+	7330#	200#	126 930600#	210#
67	60		Nd	x	-55910#	300#	8142#	2#	β^+	8740#	360#	126 939980#	320#
66	61		Pm	x	-45310#	400#	8052#	3#	β^+	10600#	500#	126 951360#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
83	45	128	Rh	x	-27340#	300#	8010#	2#	β^-	16820#	580#	127 970650#	320#
82	46		Pd	x	-44160#	500#	8135#	4#	β^-	10550#	580#	127 952590#	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^-	9129	11	127 920353.6	1.4
78	50		Sn		-83319	11	8416.64	0.09	β^-	1289	12	127 910553	12
77	51		Sb	x	-84607.8	2.1	8420.600	0.017	β^-	4386.0	2.3	127 909169.8	2.3
76	52		Te		-88993.8	0.7	8448.754	0.006	β^-	-1255	4	127 904461.2	0.8
75	53		I		-87738	4	8432.834	0.028	β^-	2122	4	127 905809	4
74	54		Xe		-89860.536	0.009	8443.301	*a*		*		127 903530.751	0.010
73	55		Cs		-85932	5	8406.50	0.04	β^+	3929	5	127 907748	6
72	56		Ba		-85368.6	1.6	8395.984	0.013	β^+	563	6	127 908353.0	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	-60640#	200#	8178#	2#	β^+	5690#	200#	127 934900#	220#
67	61		Pm	x	-48220#	300#	8075#	2#	β^+	12420#	360#	127 948230#	320#
66	62		Sm	x	-39150#	500#	7998#	4#	β^+	9070#	580#	127 957970#	540#
83	46	129	Pd	x	-37610#	600#	8084#	5#	β^-	14260#	720#	128 959620#	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^-	7758.1	2.7	128 921808.5	2.1
79	50		Sn		-80592.9	1.8	8392.834	0.014	β^-	4000.6	2.3	128 913479.9	1.9
78	51		Sb	+	-84593.6	1.4	8417.782	0.011	β^-	2411.3	1.2	128 909185.1	1.5
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		-88696.072	0.005	8431.390	*a*		*		128 904780.855	0.006
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	-32630#	300#	8045#	2#	β^-	13270#	520#	129 964970#	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^-	10223.1	2.2	129 924952.3	1.9
80	50		Sn		-80129.6	1.2	8386.797	0.009	β^-	2154	14	129 913977.3	1.3
79	51		Sb		-82283	14	8397.35	0.11	β^-	5070	14	129 911665	15
78	52		Te		-87352.961	0.011	8430.325	*a*	β^-	-417	3	129 906222.744	0.012
77	53		I	-n	-86936	3	8421.101	0.024	β^-	2944	3	129 906670	3
76	54		Xe		-89880.476	0.009	8437.731	*a*	β^-	-2981	8	129 903509.346	0.010
75	55		Cs		-86900	8	8408.78	0.06	β^-	357	8	129 906709	9
74	56		Ba		-87256.72	0.29	8405.513	0.002		*		129 906326.1	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	-34010#	500#	7954#	4#	β^+	13690#	640#	129 963490#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
85	46	131	Pd	x	-25720#	300#	7993#	2#	β^-	15030#	580#	130 972390#	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^-	9254.0	2.9	130 926972.8	2.4
81	50		Sn		-77278.3	1.9	8362.623	0.015	β^-	4704.0	2.7	130 917038.3	2.0
80	51		Sb		-81982.3	2.1	8392.560	0.016	β^-	3228.7	2.1	130 911988.3	2.2
79	52		Te	-n	-85211.02	0.06	8411.234	0.001	β^-	2230.30	0.20	130 908522.21	0.07
78	53		I	+	-87441.32	0.20	8422.287	0.002	β^-	972.26	0.20	130 906127.89	0.21
77	54		Xe		-88413.576	0.007	8423.737	*a*		*		130 905084.127	0.008
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	-86678.9	0.4	8398.551	0.003	β^+	1376.7	0.5	130 906946.4	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#
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^-	11930	70	131 945820	60
83	49		In		-62400	30	8253.63	0.24	β^-	14150	30	131 933010	30
82	50		Sn		-76546.5	2.0	8354.873	0.015	β^-	3087.2	2.1	131 917823.9	2.1
81	51		Sb		-79633.7	0.8	8372.334	0.006	β^-	5554	4	131 914509.7	0.9
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	0.006
77	55		Cs		-87152.7	1.0	8405.588	0.008	β^-	1282.4	1.5	131 906437.7	1.1
76	56		Ba		-88435.1	1.1	8409.376	0.008		*		131 905061.0	1.1
75	57		La		-83720	40	8367.76	0.28	β^+	4710	40	131 910120	40
74	58		Ce		-82469	20	8352.33	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	-55000#	300#	8121#	2#	β^+	6630#	340#	131 940960#	320#
69	63		Eu	x	-42200#	400#	8018#	3#	β^+	12800#	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^-	13540#	200#	132 952610#	220#
84	49		In	x	-57680	40	8216.8	0.3	β^-	13200	40	132 938080	40
83	50		Sn		-70873.9	1.9	8310.089	0.014	β^-	8047.0	2.2	132 923913.8	2.0
82	51		Sb		-78920.9	1.1	8364.711	0.008	β^-	4012.2	1.2	132 915274.9	1.1
81	52		Te		-82933.1	0.5	8388.995	0.004	β^-	2935.7	1.0	132 910967.7	0.6
80	53		I	++	-85868.8	0.9	8405.186	0.007	β^-	1774.8	2.6	132 907816.1	0.9
79	54		Xe	+	-87643.6	2.4	8412.648	0.018	β^-	427.4	2.4	132 905910.7	2.6
78	55		Cs		-88070.944	0.008	8409.979	*a*		*		132 905451.958	0.009
77	56		Ba		-87553.7	1.0	8400.207	0.007	β^+	517.2	1.0	132 906007.2	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	-57000#	300#	8135#	2#	β^+	8410#	300#	132 938810#	320#
70	63		Eu	x	-47240#	300#	8056#	2#	β^+	9760#	420#	132 949290#	320#
69	64		Gd	x	-36060#	500#	7966#	4#	β^+	11180#	580#	132 961290#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
86	48	134	Cd	x	-39300#	300#	8084#	2#	β^-	12560#	300#	133 957810#	320#
85	49		In	x	-51860	40	8172.2	0.3	β^-	14580	40	133 944330	50
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		-88125.835	0.009	8413.699	*a*	β^-	-1234.669	0.018	133 905393.030	0.010
79	55		Cs		-86891.166	0.016	8398.647	*a*	β^-	2058.78	0.21	133 906718.501	0.018
78	56		Ba		-88949.95	0.20	8408.173	0.002		*		133 904508.31	0.22
77	57		La	x	-85219	20	8374.49	0.15	β^+	3731	20	133 908514	21
76	58		Ce		-84831	20	8365.76	0.15	β^+	387	29	133 908930	22
75	59		Pr	x	-78528	20	8312.88	0.15	β^+	6303	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	-61300#	200#	8167#	1#	β^+	5460#	200#	133 934190#	210#
71	63		Eu	x	-49620#	300#	8074#	2#	β^+	11680#	360#	133 946730#	320#
70	64		Gd	x	-41530#	400#	8008#	3#	β^+	8090#	500#	133 955420#	430#
87	48	135	Cd	x	-32820#	400#	8036#	3#	β^-	14180#	450#	134 964770#	430#
86	49		In	x	-47000#	200#	8136#	1#	β^-	13630#	200#	134 949540#	220#
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		-87581.9	0.3	8401.339	0.003	β^-	268.69	0.29	134 905977.0	0.4
79	56		Ba		-87850.60	0.19	8397.534	0.001		*		134 905688.51	0.21
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	-70070	90	8236.9	0.7	β^+	6140	90	134 924780	100
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^-	15100#	300#	135 956020#	320#
86	50		Sn	x	-56074	29	8196.00	0.21	β^-	8433	30	135 939800	30
85	51		Sb		-64507	6	8252.25	0.04	β^-	9918	6	135 930749	6
84	52		Te		-74424.8	2.3	8319.427	0.017	β^-	5126	5	135 920101.7	2.5
83	53		I	IT	-79551	4	8351.36	0.03	β^-	6879	4	135 914599	5
82	54		Xe		-86429.172	0.007	8396.189	*a*	β^-	-79.0	0.5	135 907214.473	0.008
81	55		Cs	+	-86350.2	0.5	8389.856	0.004	β^-	2536.8	0.4	135 907299.3	0.5
80	56		Ba		-88887.02	0.19	8402.756	0.001	β^-	-2850	50	135 904575.86	0.20
79	57		La	x	-86040	50	8376.1	0.4	β^-	470	50	135 907630	60
78	58		Ce		-86508.49	0.28	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^+	4350	70	135 928276	13
73	63		Eu	x	-56100#	200#	8121#	1#	β^+	10710#	200#	135 939770#	210#
72	64		Gd	x	-49200#	300#	8065#	2#	β^+	6900#	360#	135 947180#	320#
71	65		Tb	x	-35900#	500#	7961#	4#	β^+	13300#	580#	135 961460#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
88	49	137	In	x	-35830#	400#	8053#	3#	β^-	14280#	400#	136 961540#	430#
87	50		Sn	x	-50110	10	8151.56	0.07	β^-	9904	12	136 946205	11
86	51		Sb		-60014	6	8218.14	0.04	β^-	9290	6	136 935573	6
85	52		Te		-69303.8	2.1	8280.236	0.015	β^-	7058.3	2.2	136 925599.4	2.3
84	53		I	x	-76362.1	0.5	8326.046	0.004	β^-	6021.3	0.5	136 918021.9	0.5
83	54		Xe	-n	-82383.42	0.10	8364.287	0.001	β^-	4162.30	0.28	136 911557.77	0.11
82	55		Cs		-86545.71	0.26	8388.958	0.002	β^-	1175.63	0.17	136 907089.36	0.28
81	56		Ba		-87721.34	0.20	8391.828	0.002		*		136 905827.27	0.21
80	57		La	+	-87140.8	1.6	8381.880	0.012	β^+	580.5	1.6	136 906450.5	1.8
79	58		Ce		-85918.7	0.3	8367.249	0.002	β^+	1222.1	1.6	136 907762.5	0.3
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	-51400#	300#	8081#	2#	β^+	8750#	300#	136 944820#	320#
72	65		Tb	x	-41080#	400#	8000#	3#	β^+	10320#	500#	136 955900#	430#
88	50	138	Sn	x	-45442	21	8117.15	0.15	β^-	8940	70	137 951216	23
87	51		Sb	x	-54380	70	8176.3	0.5	β^-	11320	70	137 941620	70
86	52		Te		-65696	4	8252.579	0.027	β^-	6268	4	137 929472	4
85	53		I		-71963.5	0.5	8292.326	0.004	β^-	8008.7	2.8	137 922744.0	0.5
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		-88261.75	0.20	8393.422	0.002	β^-	-1748.4	0.3	137 905247.12	0.21
81	57		La		-86513.4	0.4	8375.083	0.003	β^-	1052.5	0.4	137 907124.1	0.4
80	58		Ce		-87565.8	0.5	8377.040	0.003		*		137 905994.2	0.5
79	59		Pr	–	-83129	10	8339.22	0.07	β^+	4437	10	137 910758	11
78	60		Nd	x	-82018	12	8325.50	0.09	β^+	1111	15	137 911950	13
77	61		Pm		-74913	12	8268.35	0.09	β^+	7105	17	137 919577	13
76	62		Sm	x	-71498	12	8237.93	0.09	β^+	3416	17	137 923244	13
75	63		Eu	x	-61750	28	8161.62	0.20	β^+	9750	30	137 933710	30
74	64		Gd	x	-55800#	200#	8113#	1#	β^+	5950#	200#	137 940100#	220#
73	65		Tb	x	-43600#	300#	8019#	2#	β^+	12200#	360#	137 953190#	320#
72	66		Dy	x	-34930#	500#	7950#	4#	β^+	8670#	590#	137 962500#	540#
89	50	139	Sn	x	-39310#	200#	8073#	1#	β^-	10570#	280#	138 957800#	220#
88	51		Sb	x	-49880#	200#	8143#	1#	β^-	10330#	200#	138 946450#	220#
87	52		Te	x	-60205	4	8211.772	0.025	β^-	8265	4	138 935367	4
86	53		I	x	-68469.9	2.0	8265.602	0.014	β^-	7174.7	2.9	138 926494.5	2.1
85	54		Xe	x	-75644.6	2.1	8311.590	0.015	β^-	5056	4	138 918792.2	2.3
84	55		Cs	+	-80701	3	8342.339	0.023	β^-	4213	3	138 913364	3
83	56		Ba	-n	-84913.86	0.20	8367.019	0.002	β^-	2308.6	0.6	138 908841.22	0.22
82	57		La		-87222.4	0.6	8377.999	0.004		*		138 906362.9	0.7
81	58		Ce		-86957.8	2.1	8370.467	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	-57600#	200#	8125#	1#	β^+	7800#	200#	138 938160#	210#
74	65		Tb	x	-48130#	300#	8052#	2#	β^+	9470#	360#	138 948330#	320#
73	66		Dy	x	-37810#	500#	7972#	4#	β^+	10320#	580#	138 959410#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
90	50	140	Sn	x	-34490#	200#	8038#	1#	β^-	9660#	360#	139 962970#	220#
89	51		Sb	x	-44150#	300#	8102#	2#	β^-	12220#	300#	139 952600#	320#
88	52		Te		-56367	14	8183.36	0.10	β^-	7270	50	139 939487	15
87	53		I	x	-63630	50	8229.7	0.3	β^-	9350	50	139 931690	50
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^-	6219	10	139 917284	9
84	56		Ba		-83268	8	8353.15	0.06	β^-	1044	8	139 910608	9
83	57		La		-84312.1	0.6	8355.020	0.004	β^-	3762.7	1.3	139 909487.2	0.7
82	58		Ce		-88074.8	1.3	8376.309	0.009		*		139 905447.8	1.4
81	59		Pr	–	-84687	6	8346.52	0.04	β^+	3388	6	139 909085	7
80	60		Nd	x	-84257	3	8337.864	0.023	β^+	430	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	–	-66800#	100#	8196#	1#	β^+	8660#	100#	139 928290#	110#
76	64		Gd	x	-61782	28	8154.98	0.20	β^+	5010#	110#	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	-29430#	500#	7907#	4#	β^+	13400#	640#	139 968410#	540#
91	50	141	Sn	x	-27900#	200#	7992#	1#	β^-	11530#	360#	140 970050#	220#
90	51		Sb	x	-39430#	300#	8068#	2#	β^-	11240#	320#	140 957670#	320#
89	52		Te	x	-50670#	100#	8142#	1#	β^-	9240#	100#	140 945600#	110#
88	53		I	x	-59912	4	8202.15	0.03	β^-	8285	5	140 935681	5
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		-79733	5	8326.08	0.04	β^-	3198	7	140 914404	6
84	57		La		-82930	4	8343.209	0.029	β^-	2501	4	140 910971	4
83	58		Ce		-85431.7	1.3	8355.400	0.009	β^-	583.9	1.2	140 908285.4	1.4
82	59		Pr		-86015.5	1.4	8353.992	0.010		*		140 907658.6	1.5
81	60		Nd	–	-84192	3	8335.514	0.022	β^+	1823.0	2.8	140 909616	3
80	61		Pm	x	-80523	14	8303.94	0.10	β^+	3670	14	140 913555	15
79	62		Sm		-75938	7	8265.87	0.05	β^+	4585	16	140 918478	8
78	63		Eu		-69926	13	8217.69	0.09	β^+	6011	14	140 924931	14
77	64		Gd	x	-63224	20	8164.61	0.14	β^+	6702	23	140 932126	21
76	65		Tb	x	-54540	110	8097.5	0.7	β^+	8680	110	140 941450	110
75	66		Dy	x	-45410#	300#	8027#	2#	β^+	9130#	320#	140 951250#	320#
74	67		Ho	-p	-34360#	400#	7943#	3#	β^+	11050#	500#	140 963110#	430#
91	51	142	Sb	x	-33450#	300#	8026#	2#	β^-	13100#	360#	141 964090#	320#
90	52		Te	x	-46550#	200#	8113#	1#	β^-	8250#	200#	141 950030#	220#
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^-	5289	7	141 929973.1	2.9
87	55		Cs		-70519	6	8264.91	0.04	β^-	7321	7	141 924295	7
86	56		Ba		-77839	6	8310.95	0.04	β^-	2186	8	141 916436	6
85	57		La		-80025	6	8320.83	0.04	β^-	4509	6	141 914090	7
84	58		Ce		-84534.2	2.4	8347.079	0.017	β^-	-746.9	2.5	141 909248.8	2.6
83	59		Pr		-83787.3	1.4	8336.310	0.010	β^-	2164.3	1.3	141 910050.6	1.5
82	60		Nd		-85951.6	1.1	8346.042	0.008		*		141 907727.1	1.1
81	61		Pm		-81142	24	8306.66	0.17	β^+	4810	24	141 912891	25
80	62		Sm		-78983.3	1.7	8285.950	0.012	β^+	2158	24	141 915208.0	1.9
79	63		Eu	–	-71310	30	8226.41	0.21	β^+	7670	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	–	-49980#	730#	8060#	5#	β^+	6580#	200#	141 946350#	780#
75	67		Ho	x	-37280#	400#	7965#	3#	β^+	12700#	830#	141 959980#	430#
74	68		Er	x	-28200#	500#	7895#	4#	β^+	9080#	640#	141 969730#	540#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
91	52	143	Te	x	-40530#	200#	8070#	1#	β^-	10260#	280#	142 956490#	220#
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^-	7472	9	142 935370	5
88	55		Cs		-67675	8	8243.67	0.05	β^-	6255	9	142 927348	8
87	56		Ba		-73930	5	8281.94	0.04	β^-	4242	9	142 920633	6
86	57		La		-78172	7	8306.13	0.05	β^-	3436	8	142 916079	8
85	58		Ce		-81607.7	2.4	8324.686	0.017	β^-	1462.0	1.9	142 912390.5	2.5
84	59		Pr		-83069.7	1.7	8329.439	0.012	β^-	934.2	1.4	142 910821.0	1.8
83	60		Nd		-84003.9	1.1	8330.500	0.007		*		142 909818.1	1.1
82	61		Pm		-82962.3	2.9	8317.746	0.020	β^+	1041.6	2.7	142 910936	3
81	62		Sm		-79518.8	2.6	8288.194	0.019	β^+	3443	4	142 914633.0	2.8
80	63		Eu	x	-74241	11	8245.82	0.08	β^+	5278	11	142 920299	12
79	64		Gd	–	-68230	200	8198.3	1.4	β^+	6010	200	142 926750	220
78	65		Tb	x	-60444	30	8138.39	0.21	β^+	7790	200	142 935110	30
77	66		Dy	x	-52169	13	8075.05	0.09	β^+	8280	30	142 943994	14
76	67		Ho	x	-42050#	300#	7999#	2#	β^+	10120#	300#	142 954860#	320#
75	68		Er	x	-31300#	400#	7918#	3#	β^+	10750#	500#	142 966400#	430#
92	52	144	Te	x	-36220#	300#	8040#	2#	β^-	9110#	360#	143 961120#	320#
91	53		I	x	-45330#	200#	8098#	1#	β^-	11540#	200#	143 951340#	220#
90	54		Xe	x	-56872	5	8172.88	0.04	β^-	6400	21	143 938945	6
89	55		Cs		-63273	20	8211.90	0.14	β^-	8497	20	143 932074	22
88	56		Ba		-71770	6	8265.47	0.04	β^-	3080	14	143 922952	6
87	57		La	x	-74850	13	8281.43	0.09	β^-	5584	13	143 919646	14
86	58		Ce	+	-80433.5	2.8	8314.772	0.019	β^-	318.6	0.8	143 913651.1	3.0
85	59		Pr	+	-80752.2	2.6	8311.552	0.018	β^-	2997.4	2.4	143 913309.0	2.8
84	60		Nd		-83749.6	1.1	8326.935	0.007	β^-	-2331.8	2.6	143 910091.1	1.1
83	61		Pm		-81417.8	2.8	8305.308	0.020	β^-	549.5	2.7	143 912594	3
82	62		Sm		-81967.3	1.3	8303.692	0.009		*		143 912004.5	1.4
81	63		Eu		-75620	11	8254.18	0.07	β^+	6347	11	143 918819	12
80	64		Gd	x	-71760	28	8221.94	0.19	β^+	3860	30	143 922960	30
79	65		Tb	IT	-62367	28	8151.28	0.19	β^+	9390	40	143 933050	30
78	66		Dy	x	-56570	7	8105.59	0.05	β^+	5797	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	-22300#	400#	7851#	3#	β^+	14310#	450#	143 976060#	430#
93	52	145	Te	x	-30010#	300#	7998#	2#	β^-	11120#	420#	144 967780#	320#
92	53		I	x	-41130#	300#	8069#	2#	β^-	10360#	300#	144 955850#	320#
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	7	8234.80	0.05	β^-	5323	13	144 927518	8
88	57		La	x	-72839	11	8266.11	0.08	β^-	4226	20	144 921804	12
87	58		Ce		-77065	17	8289.86	0.12	β^-	2562	18	144 917267	18
86	59		Pr		-79628	7	8302.14	0.05	β^-	1806	7	144 914516	8
85	60		Nd		-81433.6	1.1	8309.199	0.007		*		144 912577.5	1.2
84	61		Pm		-81269.1	2.7	8302.670	0.019	β^+	164.4	2.5	144 912754.0	2.9
83	62		Sm		-80653.1	1.3	8293.025	0.009	β^+	616.1	2.5	144 913415.4	1.4
82	63		Eu		-77993.3	3.0	8269.287	0.021	β^+	2659.8	2.7	144 916271	3
81	64		Gd	x	-72927	20	8228.95	0.14	β^+	5066	20	144 921710	21
80	65		Tb	x	-65881	28	8174.96	0.19	β^+	7050	30	144 929270	30
79	66		Dy	x	-58243	7	8116.89	0.04	β^+	7638	29	144 937474	7
78	67		Ho	x	-49120	7	8048.58	0.05	β^+	9122	10	144 947267	8
77	68		Er	x	-39250#	200#	7975#	1#	β^+	9870#	200#	144 957860#	220#
76	69		Tm	-p	-27580#	200#	7889#	1#	β^+	11670#	280#	144 970390#	210#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
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^-	4354.8	2.4	145 930363.2	1.9
89	57		La	x	-69221.1	1.7	8239.998	0.011	β^-	6416	13	145 925688.1	1.8
88	58		Ce		-75638	12	8278.59	0.09	β^-	1066	28	145 918800	13
87	59		Pr		-76703	29	8280.53	0.20	β^-	4224	29	145 917660	30
86	60		Nd		-80927.5	1.1	8304.103	0.007	β^-	-1472	4	145 913120.8	1.2
85	61		Pm	+	-79456	4	8288.666	0.029	β^-	1542.0	3.0	145 914701	5
84	62		Sm		-80997.9	3.0	8293.869	0.020		*		145 913045	3
83	63		Eu		-77119	6	8261.94	0.04	β^+	3879	6	145 917209	6
82	64		Gd		-76088	4	8249.519	0.027	β^+	1031	7	145 918317	4
81	65		Tb		-67770	40	8187.2	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 952419	7
77	69		Tm	-p	-31070#	200#	7914#	1#	β^+	13260#	200#	145 966650#	220#
76	70		Yb	x	-21270#	400#	7842#	3#	β^+	9800#	450#	145 977170#	430#
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^-	8382	9	146 944262	9
91	56		Ba	x	-60302.0	2.0	8183.499	0.014	β^-	6367	3	146 935263.2	2.2
90	57		La	x	-66668.8	2.6	8221.488	0.018	β^-	5367	4	146 928428.1	2.8
89	58		Ce	x	-72036	3	8252.676	0.021	β^-	3444	4	146 922666	3
88	59		Pr	x	-75479.3	2.9	8270.780	0.020	β^-	2669	3	146 918970	3
87	60		Nd		-78148.3	1.1	8283.614	0.007	β^-	894.6	0.6	146 916104.3	1.2
86	61		Pm		-79042.9	1.1	8284.377	0.008	β^-	224.99	0.29	146 915144.0	1.2
85	62		Sm		-79267.9	1.1	8280.586	0.007		*		146 914902.4	1.2
84	63		Eu		-77546.4	2.5	8263.553	0.017	β^+	1721.5	2.3	146 916750.5	2.7
83	64		Gd		-75358.6	1.7	8243.348	0.012	β^+	2187.8	2.5	146 919099.2	1.9
82	65		Tb		-70743	8	8206.63	0.05	β^+	4616	8	146 924054	8
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	-46556	20	8026.12	0.13	β^+	9201	20	146 950020	21
78	69		Tm		-35975	7	7948.82	0.05	β^+	10581	21	146 961380	7
77	70		Yb	x	-24870#	400#	7868#	3#	β^+	11110#	400#	146 973300#	430#
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^-	5154	3	147 938223.0	1.6
91	57		La	x	-62698.5	2.7	8193.647	0.018	β^-	7692	9	147 932690.4	2.9
90	58		Ce		-70390	8	8240.33	0.06	β^-	2091	19	147 924433	9
89	59		Pr		-72481	17	8249.18	0.11	β^-	4928	17	147 922188	18
88	60		Nd		-77409.4	1.9	8277.187	0.013	β^-	-542	6	147 916897.6	2.1
87	61		Pm	+p	-76868	6	8268.24	0.04	β^-	2470	6	147 917479	6
86	62		Sm		-79337.9	1.1	8279.645	0.007		*		147 914827.3	1.1
85	63		Eu		-76298	10	8253.82	0.07	β^+	3040	10	147 918091	11
84	64		Gd		-76271.1	1.3	8248.351	0.009	β^+	27	10	147 918119.6	1.4
83	65		Tb		-70533	12	8204.29	0.08	β^+	5738	12	147 924280	13
82	66		Dy		-67857	9	8180.93	0.06	β^+	2675	9	147 927152	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	-30400#	300#	7907#	2#	β^+	8370#	300#	147 967360#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
95	54	149	Xe	x	-33000#	300#	8009#	2#	β^-	10410#	300#	148 964570#	320#
94	55		Cs	x	-43408	21	8073.86	0.14	β^-	9422	22	148 953400	23
93	56		Ba	x	-52829.9	2.4	8131.844	0.016	β^-	7380.2	2.8	148 943284.8	2.6
92	57		La	x	-60210.1	1.5	8176.125	0.010	β^-	6464.0	1.9	148 935361.8	1.6
91	58		Ce	x	-66674.1	1.2	8214.257	0.008	β^-	4382.7	1.7	148 928422.5	1.3
90	59		Pr	x	-71056.8	1.3	8238.421	0.008	β^-	3320.1	2.3	148 923717.4	1.4
89	60		Nd	-n	-74376.9	1.9	8255.453	0.013	β^-	1689.4	2.5	148 920153.1	2.1
88	61		Pm		-76066.3	2.1	8261.541	0.014	β^-	1071.6	1.9	148 918339.5	2.2
87	62		Sm		-77137.9	0.9	8263.482	0.006		*		148 917189.1	1.0
86	63		Eu		-76443	4	8253.568	0.026	β^+	695	4	148 917935	4
85	64		Gd		-75129	3	8239.496	0.022	β^+	1314	4	148 919346	3
84	65		Tb		-71490	4	8209.828	0.024	β^+	3638	4	148 923252	4
83	66		Dy		-67699	9	8179.13	0.06	β^+	3792	9	148 927322	9
82	67		Ho		-61639	11	8133.21	0.08	β^+	6060	11	148 933828	12
81	68		Er	IT	-53604	24	8074.03	0.16	β^+	8035	25	148 942454	26
80	69		Tm	x	-43820	50	8003.1	0.3	β^+	9790	60	148 952960	50
79	70		Yb	x	-33330#	200#	7927#	1#	β^+	10490#	210#	148 964220#	210#
78	71		Lu	-p	-21190#	300#	7841#	2#	β^+	12140#	360#	148 977250#	320#
96	54	150	Xe	x	-28990#	300#	7983#	2#	β^-	9270#	300#	149 968880#	320#
95	55		Cs	x	-38257	23	8039.50	0.16	β^-	11633	24	149 958930	25
94	56		Ba	x	-49890	6	8111.84	0.04	β^-	6423	6	149 946441	6
93	57		La		-56312.4	1.9	8149.442	0.013	β^-	8554.3	2.8	149 939546.2	2.0
92	58		Ce		-64866.7	2.1	8201.255	0.014	β^-	3442.1	2.4	149 930362.7	2.2
91	59		Pr	+	-68308.8	1.2	8218.987	0.008	β^-	5373.2	0.8	149 926667.5	1.3
90	60		Nd		-73682.0	0.9	8249.593	0.006	β^-	-83	20	149 920899.1	0.9
89	61		Pm	+	-73599	20	8243.83	0.13	β^-	3454	20	149 920988	21
88	62		Sm		-77053.3	0.9	8261.637	0.006	β^-	-2259	6	149 917279.8	0.9
87	63		Eu		-74794	6	8241.36	0.04	β^-	972	4	149 919705	7
86	64		Gd		-75766	6	8242.62	0.04		*		149 918662	6
85	65		Tb		-71107	7	8206.35	0.05	β^+	4658	8	149 923663	8
84	66		Dy		-69311	4	8189.161	0.028	β^+	1796	8	149 925591	5
83	67		Ho		-61943	13	8134.82	0.08	β^+	7369	13	149 933502	14
82	68		Er		-57825	12	8102.15	0.08	β^+	4118	12	149 937923	13
81	69		Tm	x	-46500	90	8021.4	0.6	β^+	11330	90	149 950080	90
80	70		Yb	x	-38640	40	7963.80	0.30	β^+	7860	100	149 958520	50
79	71		Lu	-p	-24770#	200#	7866#	1#	β^+	13870#	200#	149 973410#	210#
96	55	151	Cs	x	-34473	26	8014.65	0.17	β^-	10520	30	150 962992	28
95	56		Ba	x	-44995	21	8079.16	0.14	β^-	8534	22	150 951696	23
94	57		La		-53528.3	1.5	8130.487	0.010	β^-	7691.0	1.8	150 942535.0	1.6
93	58		Ce		-61219.3	1.1	8176.240	0.007	β^-	5557.8	1.4	150 934278.3	1.2
92	59		Pr		-66777.2	1.0	8207.866	0.007	β^-	4168.1	1.4	150 928311.8	1.1
91	60		Nd		-70945.3	0.9	8230.288	0.006	β^-	2453.6	1.6	150 923837.1	0.9
90	61		Pm		-73398.9	1.3	8241.356	0.009	β^-	1179.6	1.6	150 921203.1	1.4
89	62		Sm		-74578.5	0.9	8243.987	0.006	β^-	76.44	0.07	150 919936.7	0.9
88	63		Eu		-74654.9	0.9	8239.312	0.006		*		150 919854.7	0.9
87	64		Gd		-74190.7	2.9	8231.057	0.019	β^+	464.2	2.8	150 920353	3
86	65		Tb		-71625	4	8208.886	0.027	β^+	2565	4	150 923107	4
85	66		Dy		-68755	3	8184.694	0.021	β^+	2871	5	150 926189	3
84	67		Ho		-63623	8	8145.53	0.05	β^+	5132	8	150 931698	8
83	68		Er		-58248	11	8104.75	0.07	β^+	5375	13	150 937468	12
82	69		Tm		-50768	15	8050.03	0.10	β^+	7480	18	150 945498	16
81	70		Yb		-41310	110	7982.2	0.7	β^+	9460	110	150 955650	110
80	71		Lu	-p	-30110	40	7902.84	0.30	β^+	11200	110	150 967680	50

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
97	55	152	Cs	x	-29130#	300#	7980#	2#	β^-	12590#	300#	151 968730#	320#
96	56		Ba	x	-41720	40	8057.55	0.25	β^-	7470	40	151 955210	40
95	57		La		-49191	5	8101.56	0.03	β^-	9690	5	151 947192	5
94	58		Ce		-58880.8	2.0	8160.165	0.013	β^-	4892.4	2.3	151 936788.9	2.1
93	59		Pr		-63773.2	2.7	8187.204	0.018	β^-	6366.3	2.4	151 931536.7	2.9
92	60		Nd		-70139	4	8223.941	0.024	β^-	1109	17	151 924702	4
91	61		Pm		-71249	17	8226.09	0.11	β^-	3515	17	151 923511	19
90	62		Sm		-74764.1	0.8	8244.072	0.005	β^-	-1873.8	0.6	151 919737.5	0.9
89	63		Eu		-72890.3	0.9	8226.597	0.006	β^-	1818.1	0.6	151 921749.1	0.9
88	64		Gd		-74708.4	0.8	8233.411	0.005		*		151 919797.2	0.9
87	65		Tb	–	-70720	40	8202.01	0.26	β^+	3990	40	151 924080	40
86	66		Dy		-70120	5	8192.929	0.030	β^+	600	40	151 924723	5
85	67		Ho		-63600	12	8144.89	0.08	β^+	6519	13	151 931722	13
84	68		Er		-60498	9	8119.34	0.06	β^+	3102	9	151 935052	9
83	69		Tm		-51720	60	8056.4	0.4	β^+	8780	60	151 944480	60
82	70		Yb		-46070	40	8014.10	0.29	β^+	5650	70	151 950550	50
81	71		Lu	x	-33300#	200#	7925#	1#	β^+	12770#	200#	151 964250#	210#
97	56	153	Ba	x	-36470#	200#	8023#	1#	β^-	9560#	200#	152 960850#	220#
96	57		La	x	-46031	19	8080.71	0.12	β^-	8680	19	152 950584	20
95	58		Ce		-54711.0	2.2	8132.331	0.014	β^-	6838.4	2.8	152 941265.3	2.4
94	59		Pr		-61549.5	1.9	8171.913	0.012	β^-	5776.0	1.8	152 933923.9	2.0
93	60		Nd		-67325.4	1.7	8204.551	0.011	β^-	3351.5	2.6	152 927723.2	1.9
92	61		Pm		-70677	3	8221.342	0.020	β^-	1884	3	152 924125	3
91	62		Sm		-72561.2	0.8	8228.545	0.005	β^-	808.1	0.6	152 922102.4	0.9
90	63		Eu		-73369.3	0.9	8228.713	0.006		*		152 921234.9	0.9
89	64		Gd		-72884.0	0.8	8220.428	0.005	β^+	485.2	0.6	152 921755.8	0.9
88	65		Tb		-71315	4	8205.059	0.025	β^+	1569	4	152 923440	4
87	66		Dy		-69145	4	8185.760	0.026	β^+	2170.4	1.9	152 925770	4
86	67		Ho	$-\alpha$	-65014	5	8153.65	0.03	β^+	4131	6	152 930205	5
85	68		Er		-60472	9	8118.85	0.06	β^+	4542	10	152 935081	9
84	69		Tm		-53965	11	8071.21	0.07	β^+	6506	11	152 942066	12
83	70		Yb	x	-47100	50	8021.25	0.30	β^+	6860	50	152 949430	50
82	71		Lu	$+\alpha$	-38170	40	7957.76	0.29	β^+	8930	60	152 959020	50
81	72		Hf	x	-27300#	300#	7882#	2#	β^+	10870#	300#	152 970690#	320#
98	56	154	Ba	x	-32920#	300#	8001#	2#	β^-	8510#	360#	153 964660#	320#
97	57		La	x	-41430#	200#	8051#	1#	β^-	10640#	200#	153 955520#	220#
96	58		Ce	x	-52069.0	2.6	8114.778	0.017	β^-	5932	4	153 944101.6	2.8
95	59		Pr		-58001.2	2.5	8148.219	0.016	β^-	7579.1	2.7	153 937733.1	2.7
94	60		Nd		-65580.3	1.0	8192.354	0.006	β^-	2723.6	2.1	153 929596.6	1.0
93	61		Pm	–	-68303.9	2.3	8204.959	0.015	β^-	4152.5	2.5	153 926672.7	2.5
92	62		Sm		-72456.4	1.1	8226.843	0.007	β^-	-716.3	1.0	153 922214.9	1.2
91	63		Eu		-71740.1	0.9	8217.112	0.006	β^-	1967.3	0.7	153 922983.8	1.0
90	64		Gd		-73707.4	0.8	8224.806	0.005	β^-	-3550	50	153 920871.8	0.9
89	65		Tb	–	-70160	50	8196.68	0.29	β^-	240	50	153 924680	50
88	66		Dy		-70395	7	8193.14	0.05		*		153 924427	8
87	67		Ho	$-\alpha$	-64641	8	8150.69	0.05	β^+	5755	10	153 930605	9
86	68		Er		-62607	5	8132.40	0.03	β^+	2034	9	153 932789	5
85	69		Tm	$-\alpha$	-54424	13	8074.19	0.08	β^+	8183	13	153 941574	14
84	70		Yb		-49925	13	8039.90	0.08	β^+	4499	13	153 946403	13
83	71		Lu	$+\alpha$	-39610	50	7967.8	0.3	β^+	10310	50	153 957480	50
82	72		Hf	x	-32640#	300#	7917#	2#	β^+	6970#	300#	153 964960#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
99	56	155	Ba	x	-27400#	400#	7965#	3#	β^-	10430#	500#	154 970590#	430#
98	57		La	x	-37830#	300#	8028#	2#	β^-	9790#	300#	154 959390#	320#
97	58		Ce	x	-47616	6	8085.77	0.04	β^-	7812	6	154 948882	6
96	59		Pr		-55427.8	1.8	8131.120	0.012	β^-	6842.5	2.9	154 940495.8	1.9
95	60		Nd	+	-62270.3	2.8	8170.218	0.018	β^-	4667.1	2.1	154 933150	3
94	61		Pm		-66937.4	1.8	8195.281	0.012	β^-	3254.7	1.8	154 928139.8	2.0
93	62		Sm		-70192.0	1.1	8211.231	0.007	β^-	1628.1	1.1	154 924645.7	1.2
92	63		Eu		-71820.1	1.0	8216.687	0.006	β^-	251.2	0.8	154 922897.9	1.0
91	64		Gd		-72071.3	0.8	8213.261	0.005		*		154 922628.2	0.9
90	65		Tb		-71256.4	0.8	8202.956	0.005	β^+	814.95	0.18	154 923503.1	0.9
89	66		Dy		-69161.8	2.1	8184.395	0.013	β^+	2094.6	1.9	154 925751.8	2.2
88	67		Ho		-66044	16	8159.23	0.11	β^+	3118	16	154 929099	18
87	68		Er		-62214	6	8129.48	0.04	β^+	3830	17	154 933210	6
86	69		Tm		-56626	9	8088.38	0.06	β^+	5588	10	154 939210	10
85	70		Yb		-50484	11	8043.70	0.07	β^+	6142	14	154 945803	12
84	71		Lu		-42539	14	7987.40	0.09	β^+	7945	18	154 954333	16
83	72		Hf	x	-34310#	300#	7929#	2#	β^+	8230#	300#	154 963170#	320#
82	73		Ta	-p	-23900#	300#	7857#	2#	β^+	10410#	420#	154 974350#	320#
99	57	156	La	x	-32950#	400#	7997#	3#	β^-	11550#	450#	155 964630#	430#
98	58		Ce	x	-44500#	200#	8066#	1#	β^-	6950#	200#	155 952230#	220#
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^-	3964.8	1.8	155 935370.4	1.4
95	61		Pm		-64166.9	1.2	8176.727	0.008	β^-	5192	8	155 931114.0	1.3
94	62		Sm		-69359	8	8205.00	0.05	β^-	725	7	155 925540	8
93	63		Eu		-70084	3	8204.627	0.022	β^-	2452	3	155 924762	4
92	64		Gd		-72536.4	0.8	8215.332	0.005	β^-	-2445	4	155 922129.0	0.9
91	65		Tb		-70092	4	8194.647	0.024	β^-	439	4	155 924753	4
90	66		Dy		-70530.4	0.8	8192.443	0.005		*		155 924282.5	0.9
89	67		Ho	–	-65540	40	8155.43	0.25	β^+	4990	40	155 929640	40
88	68		Er		-64210	25	8141.90	0.16	β^+	1330	50	155 931067	26
87	69		Tm		-56829	13	8089.57	0.08	β^+	7381	26	155 938992	14
86	70		Yb		-53264	9	8061.70	0.06	β^+	3565	11	155 942819	10
85	71		Lu	$-\alpha$	-43580	60	7994.6	0.4	β^+	9680	60	155 953210	60
84	72		Hf		-37620	40	7951.36	0.28	β^+	5970	70	155 959620	50
83	73		Ta	-p	-26000#	300#	7872#	2#	β^+	11620#	300#	155 972090#	320#
82	74		W	x	-17300#	100#	7811#	1#	β^+	8700#	320#	155 981430#	110#
100	57	157	La	x	-29020#	300#	7972#	2#	β^-	10690#	420#	156 968850#	320#
99	58		Ce	x	-39710#	300#	8035#	2#	β^-	8730#	300#	156 957370#	320#
98	59		Pr	x	-48435	3	8085.817	0.020	β^-	8059	4	156 948003	3
97	60		Nd	x	-56494.3	2.1	8132.168	0.014	β^-	5803	7	156 939350.9	2.3
96	61		Pm		-62297	7	8164.14	0.04	β^-	4381	8	156 933122	8
95	62		Sm		-66677	4	8187.063	0.028	β^-	2783	6	156 928419	5
94	63		Eu		-69460	4	8199.805	0.027	β^-	1365	4	156 925431	5
93	64		Gd		-70824.9	0.8	8203.514	0.005		*		156 923966.3	0.9
92	65		Tb		-70764.7	0.8	8198.147	0.005	β^+	60.19	0.12	156 924030.9	0.9
91	66		Dy		-69425	5	8184.63	0.03	β^+	1339	5	156 925469	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		-58715	20	8101.47	0.13	β^+	4700	30	156 936966	21
87	70		Yb		-53427	10	8062.80	0.06	β^+	5288	20	156 942644	11
86	71		Lu		-46432	11	8013.26	0.07	β^+	6995	12	156 950153	12
85	72		Hf	$-\alpha$	-38800	50	7959.66	0.29	β^+	7630	50	156 958350	50
84	73		Ta	IT	-29390	50	7894.76	0.29	β^+	9410	60	156 968450	50
83	74		W	x	-19690#	400#	7828#	3#	β^+	9700#	400#	156 978860#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
101	57	158	La	x	-23890#	400#	7940#	3#	β^-	12360#	570#	157 974350#	430#
100	58		Ce	x	-36250#	400#	8014#	3#	β^-	7900#	450#	157 961080#	430#
99	59		Pr	x	-44150#	200#	8059#	1#	β^-	9690#	200#	157 952600#	220#
98	60		Nd	x	-53835.1	1.3	8114.953	0.008	β^-	5271.4	1.6	157 942205.6	1.4
97	61		Pm		-59106.5	0.9	8143.365	0.005	β^-	6145	5	157 936546.5	0.9
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^-	3420.5	2.2	157 927782.2	2.2
94	64		Gd		-70691.0	0.8	8201.829	0.005	β^-	-1219.3	1.0	157 924110.1	0.9
93	65		Tb		-69471.7	1.2	8189.160	0.007	β^-	935.9	2.4	157 925419.1	1.2
92	66		Dy		-70407.6	2.3	8190.132	0.015		*		157 924414.4	2.5
91	67		Ho	–	-66188	27	8158.47	0.17	β^+	4220	27	157 928944	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		-56011	8	8079.21	0.05	β^+	2692	26	157 939870	9
87	71		Lu	$-\alpha$	-47209	14	8018.55	0.09	β^+	8802	16	157 949319	15
86	72		Hf		-42096	13	7981.23	0.08	β^+	5113	14	157 954808	14
85	73		Ta	$+\alpha$	-31060	50	7906.4	0.3	β^+	11030	50	157 966650	50
84	74		W	$-\alpha$	-23600#	300#	7854#	2#	β^+	7460#	300#	157 974660#	320#
101	58	159	Ce	x	-31100#	400#	7982#	3#	β^-	9670#	500#	158 966610#	430#
100	59		Pr	x	-40770#	300#	8037#	2#	β^-	8950#	300#	158 956230#	320#
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 939287	11
97	62		Sm		-62208	6	8157.49	0.04	β^-	3836	7	158 933217	6
96	63		Eu		-66044	4	8176.702	0.027	β^-	2519	4	158 929099	5
95	64		Gd		-68562.9	0.8	8187.624	0.005	β^-	970.5	0.7	158 926394.7	0.9
94	65		Tb		-69533.4	1.0	8188.807	0.006		*		158 925352.9	1.0
93	66		Dy		-69168.6	1.0	8181.593	0.006	β^+	364.735	0.021	158 925744.4	1.0
92	67		Ho	–	-67331.0	2.9	8165.115	0.018	β^+	1837.6	2.7	158 927717	3
91	68		Er	–	-64563	3	8142.783	0.022	β^+	2768.5	2.0	158 930689	4
90	69		Tm	x	-60570	28	8112.75	0.18	β^+	3992	28	158 934980	30
89	70		Yb	x	-55835	18	8078.05	0.11	β^+	4740	30	158 940059	19
88	71		Lu	x	-49710	40	8034.60	0.24	β^+	6130	40	158 946640	40
87	72		Hf	$-\alpha$	-42834	11	7986.44	0.07	β^+	6870	40	158 954016	12
86	73		Ta	IT	-34433	15	7928.69	0.10	β^+	8401	19	158 963035	16
85	74		W	$-\alpha$	-25430#	300#	7867#	2#	β^+	9000#	300#	158 972700#	320#
84	75		Re	IT	-14710#	310#	7795#	2#	β^+	10720#	430#	158 984200#	330#
102	58	160	Ce	x	-27250#	400#	7958#	2#	β^-	8950#	570#	159 970750#	430#
101	59		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	-63493.5	0.9	8160.103	0.006	β^-	4449.5	1.4	159 931837.0	1.0
96	64		Gd		-67943.0	1.0	8183.023	0.006	β^-	-105.7	1.0	159 927060.2	1.1
95	65		Tb		-67837.2	1.0	8177.472	0.006	β^-	1835.5	1.0	159 927173.7	1.0
94	66		Dy		-69672.7	0.7	8184.055	0.004		*		159 925203.3	0.7
93	67		Ho	–	-66383	15	8158.60	0.09	β^+	3290	15	159 928735	16
92	68		Er		-66064	24	8151.72	0.15	β^+	318	29	159 929077	26
91	69		Tm		-60300	30	8110.83	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	-50300	40	8038.50	0.25	β^+	7870	40	159 946010	40
88	72		Hf		-45937	9	8006.37	0.06	β^+	4360	40	159 950685	10
87	73		Ta	$-\alpha$	-35680	70	7937.3	0.4	β^+	10260	70	159 961700	80
86	74		W		-29130	40	7891.52	0.28	β^+	6550	80	159 968730	50
85	75		Re	$-\alpha$	-16880#	300#	7810#	2#	β^+	12250#	300#	159 981880#	320#
84	76		Os	$-\alpha$	-7600#	100#	7747#	1#	β^+	9280#	320#	159 991840#	110#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
102	59	161	Pr	x	-32490#	500#	7986#	3#	β^-	9740#	540#	160 965120#	540#
101	60		Nd	x	-42230#	200#	8042#	1#	β^-	7860#	200#	160 954660#	220#
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		-61791	10	8148.98	0.06	β^-	3716	10	160 933664	11
97	64		Gd	-n	-65507.0	1.4	8167.199	0.009	β^-	1955.5	1.4	160 929675.3	1.5
96	65		Tb		-67462.5	1.1	8174.486	0.007	β^-	593.3	1.1	160 927576.0	1.2
95	66		Dy		-68055.8	0.7	8173.311	0.004		*		160 926939.1	0.7
94	67		Ho		-67196.6	2.1	8163.115	0.013	β^+	859.2	2.1	160 927861.5	2.3
93	68		Er	+n	-65202	9	8145.86	0.05	β^+	1995	9	160 930003	9
92	69		Tm	x	-61899	28	8120.49	0.17	β^+	3303	29	160 933550	30
91	70		Yb	x	-57836	15	8090.40	0.09	β^+	4060	30	160 937911	16
90	71		Lu	x	-52562	28	8052.78	0.17	β^+	5270	30	160 943570	30
89	72		Hf		-46317	23	8009.13	0.15	β^+	6250	40	160 950277	25
88	73		Ta	$+\alpha$	-38801	24	7957.59	0.15	β^+	7520	30	160 958346	26
87	74		W	$-\alpha$	-30450	50	7900.87	0.29	β^+	8350	50	160 967310	50
86	75		Re		-20640	40	7835.06	0.28	β^+	9810	60	160 977840	50
85	76		Os	$-\alpha$	-10200#	400#	7765#	2#	β^+	10440#	400#	160 989050#	430#
102	60	162	Nd	x	-39010#	300#	8022#	2#	β^-	7030#	360#	161 958120#	320#
101	61		Pm	x	-46040#	200#	8061#	1#	β^-	8340#	200#	161 950570#	220#
100	62		Sm		-54379	4	8107.575	0.022	β^-	4344	4	161 941622	4
99	63		Eu		-58723.3	1.4	8129.561	0.008	β^-	5558	4	161 936958.0	1.5
98	64		Gd	-nn	-64282	4	8159.043	0.024	β^-	1314	4	161 930991	4
97	65		Tb		-65595.4	1.9	8162.323	0.012	β^-	2586.1	2.0	161 929580.5	2.1
96	66		Dy		-68181.5	0.7	8173.457	0.004	β^-	-2141	3	161 926804.2	0.7
95	67		Ho		-66041	3	8155.414	0.019	β^-	294	3	161 929102	3
94	68		Er		-66334.5	0.7	8152.398	0.005		*		161 928787.0	0.8
93	69		Tm	–	-61478	26	8117.59	0.16	β^+	4857	26	161 934001	28
92	70		Yb	x	-59823	15	8102.54	0.09	β^+	1660	30	161 935778	16
91	71		Lu	x	-52820	50	8054.49	0.29	β^+	7000	50	161 943290	50
90	72		Hf		-49170	9	8027.13	0.06	β^+	3650	50	161 947214	10
89	73		Ta	$-\alpha$	-39780	60	7964.3	0.4	β^+	9390	60	161 957300	70
88	74		W		-33993	13	7923.78	0.08	β^+	5790	60	161 963507	14
87	75		Re	$+\alpha$	-22400	50	7847.37	0.29	β^+	11600	50	161 975960	50
86	76		Os	$-\alpha$	-14410#	300#	7793#	2#	β^+	7990#	300#	161 984530#	320#
103	60	163	Nd	x	-34080#	400#	7992#	2#	β^-	8880#	500#	162 963410#	430#
102	61		Pm	x	-42960#	300#	8042#	2#	β^-	7640#	300#	162 953880#	320#
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	8155.634	0.025	β^-	1785	4	162 930653	4
97	66		Dy		-66381.2	0.7	8161.786	0.004		*		162 928736.9	0.7
96	67		Ho		-66378.3	0.7	8156.969	0.004	β^+	2.863	0.001	162 928740.0	0.7
95	68		Er		-65168	5	8144.742	0.028	β^+	1211	5	162 930040	5
94	69		Tm	–	-62729	6	8124.98	0.03	β^+	2439.0	3.0	162 932658	6
93	70		Yb	x	-59295	15	8099.12	0.09	β^+	3433	16	162 936344	16
92	71		Lu	x	-54791	28	8066.68	0.17	β^+	4500	30	162 941180	30
91	72		Hf		-49291	26	8028.14	0.16	β^+	5500	40	162 947084	28
90	73		Ta	$-\alpha$	-42530	40	7981.89	0.23	β^+	6760	50	162 954340	40
89	74		W	$-\alpha$	-34890	60	7930.2	0.4	β^+	7640	70	162 962540	60
88	75		Re	$+\alpha$	-25996	14	7870.83	0.09	β^+	8890	60	162 972092	15
87	76		Os	$-\alpha$	-16340#	300#	7807#	2#	β^+	9660#	300#	162 982460#	320#
86	77		Ir	x	-5310#	400#	7734#	2#	β^+	11030#	500#	162 994300#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
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^-	3863.0	2.0	163 933327.6	2.0
98	66		Dy		-65967.9	0.7	8158.715	0.004	β^-	-987.2	1.4	163 929180.5	0.7
97	67		Ho		-64980.8	1.4	8147.925	0.008	β^-	962.1	1.4	163 930240.3	1.5
96	68		Er		-65942.9	0.7	8149.021	0.004		*		163 929207.4	0.7
95	69		Tm		-61909	25	8119.65	0.15	β^+	4034	25	163 933538	27
94	70		Yb	x	-61014	15	8109.42	0.09	β^+	895	29	163 934499	16
93	71		Lu	x	-54642	28	8065.80	0.17	β^+	6370	30	163 941340	30
92	72		Hf		-51819	15	8043.82	0.09	β^+	2820	30	163 944370	17
91	73		Ta	x	-43283	28	7987.00	0.17	β^+	8540	30	163 953530	30
90	74		W		-38233	10	7951.44	0.06	β^+	5049	30	163 958955	10
89	75		Re	$-\alpha$	-27420	60	7880.7	0.4	β^+	10810	60	163 970560	60
88	76		Os		-20220	40	7832.07	0.27	β^+	7200	70	163 978290	50
87	77		Ir	$-\alpha$	-7480#	320#	7750#	2#	β^+	12740#	320#	163 991970#	340#
104	61	165	Pm	x	-34670#	500#	7992#	3#	β^-	8840#	540#	164 962780#	540#
103	62		Sm	x	-43510#	200#	8041#	1#	β^-	7220#	200#	164 953290#	220#
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		-60588.9	1.5	8130.326	0.009	β^-	3023.7	1.7	164 934955.2	1.7
99	66		Dy	-n	-63612.6	0.7	8143.910	0.004	β^-	1285.7	0.7	164 931709.1	0.7
98	67		Ho		-64898.3	0.8	8146.961	0.005		*		164 930328.8	0.8
97	68		Er		-64521.6	0.9	8139.937	0.005	β^+	376.6	1.0	164 930733.2	1.0
96	69		Tm		-62930.2	1.6	8125.550	0.010	β^+	1591.4	1.5	164 932441.7	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		-45846	13	8003.04	0.08	β^+	5790	30	164 950783	14
91	74		W		-38862	26	7955.97	0.16	β^+	6984	29	164 958280	28
90	75		Re	$+\alpha$	-30682	23	7901.65	0.14	β^+	8180	30	164 967062	25
89	76		Os	$-\alpha$	-21690	50	7842.42	0.28	β^+	8990	50	164 976710	50
88	77		Ir	-p	-11470	60	7775.7	0.4	β^+	10220	70	164 987690	60
87	78		Pt	$-\alpha$	-320#	400#	7703#	2#	β^+	11150#	400#	164 999660#	430#
105	61	166	Pm	x	-29500#	500#	7962#	3#	β^-	10840#	580#	165 968330#	540#
104	62		Sm	x	-40340#	300#	8022#	2#	β^-	6410#	320#	165 956690#	320#
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^-	4776.0	1.7	165 937939.7	1.6
100	66		Dy	-n	-62584.8	0.8	8137.281	0.005	β^-	485.8	0.8	165 932812.5	0.8
99	67		Ho		-63070.6	0.8	8135.495	0.005	β^-	1853.9	0.8	165 932290.9	0.8
98	68		Er		-64924.5	0.3	8141.950	0.002		*		165 930300.7	0.3
97	69		Tm	–	-61887	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		-41889	9	7974.90	0.06	β^+	4209	29	165 955030	10
91	75		Re	$-\alpha$	-31780	80	7909.3	0.5	β^+	10110	80	165 965880	90
90	76		Os		-25425	13	7866.30	0.08	β^+	6350	80	165 972705	14
89	77		Ir	-p	-13250	50	7788.24	0.28	β^+	12180	50	165 985780	50
88	78		Pt	$-\alpha$	-4690#	300#	7732#	2#	β^+	8560#	300#	165 994960#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
105	62	167	Sm	x	-35420#	400#	7993#	2#	β^-	8350#	450#	166 961980#	430#
104	63		Eu	x	-43770#	200#	8038#	1#	β^-	7010#	200#	166 953010#	220#
103	64		Gd		-50776	5	8075.54	0.03	β^-	5108	6	166 945490	6
102	65		Tb		-55883.4	1.8	8101.443	0.011	β^-	4031	3	166 940006.7	1.9
101	66		Dy		-59914.6	3.0	8120.897	0.018	β^-	2364	6	166 935679	3
100	67		Ho	p2n	-62279	5	8130.37	0.03	β^-	1011	5	166 933141	5
99	68		Er		-63289.57	0.27	8131.737	0.002		*		166 932055.85	0.29
98	69		Tm		-62543.2	1.3	8122.583	0.008	β^+	746.4	1.3	166 932857.1	1.3
97	70		Yb		-60590	4	8106.203	0.024	β^+	1953	4	166 934954	4
96	71		Lu	x	-57518	30	8083.12	0.18	β^+	3070	30	166 938250	30
95	72		Hf	x	-53468	28	8054.19	0.17	β^+	4050	40	166 942600	30
94	73		Ta	x	-48351	28	8018.86	0.17	β^+	5120	40	166 948090	30
93	74		W		-42225	16	7977.49	0.10	β^+	6130	30	166 954670	18
92	75		Re	$+\alpha$	-34800#	40#	7928#	0#	β^+	7430#	50#	166 962640#	50#
91	76		Os	$-\alpha$	-26480	80	7873.8	0.5	β^+	8320#	90#	166 971570	90
90	77		Ir		-17066	14	7812.79	0.08	β^+	9410	80	166 981679	15
89	78		Pt	$-\alpha$	-6750#	310#	7746#	2#	β^+	10310#	310#	166 992750#	330#
106	62	168	Sm	x	-31810#	400#	7972#	2#	β^-	7510#	500#	167 965850#	430#
105	63		Eu	x	-39320#	300#	8012#	2#	β^-	8850#	300#	167 957790#	320#
104	64		Gd	x	-48171	6	8060.01	0.03	β^-	4576	7	167 948286	6
103	65		Tb	x	-52747	5	8082.594	0.027	β^-	5739	5	167 943374	5
102	66		Dy		-58485.5	2.9	8112.095	0.017	β^-	1528	4	167 937213	3
101	67		Ho		-60013.0	2.4	8116.531	0.014	β^-	2976.5	2.4	167 935573.4	2.5
100	68		Er		-62989.55	0.25	8129.592	0.002	β^-	-1677.1	1.7	167 932377.94	0.27
99	69		Tm		-61312.5	1.7	8114.952	0.010	β^-	267.7	1.7	167 934178.4	1.8
98	70		Yb		-61580.198	0.026	8111.889	*a*		*		167 933890.942	0.028
97	71		Lu		-57050	40	8080.26	0.24	β^+	4530	40	167 938760	40
96	72		Hf	x	-55361	28	8065.55	0.17	β^+	1690	50	167 940570	30
95	73		Ta	x	-48394	28	8019.43	0.17	β^+	6970	40	167 948050	30
94	74		W		-44894	13	7993.94	0.08	β^+	3500	30	167 951804	14
93	75		Re	$-\alpha$	-35660#	100#	7934#	1#	β^+	9240#	110#	167 961720#	110#
92	76		Os		-29993	10	7895.93	0.06	β^+	5670#	100#	167 967802	10
91	77		Ir	$-\alpha$	-18520	70	7823.0	0.4	β^+	11470	70	167 980120	80
90	78		Pt	$-\alpha$	-10810	40	7772.41	0.27	β^+	7710	80	167 988400	50
89	79		Au	x	2530#	400#	7688#	2#	β^+	13340#	400#	168 002720#	430#
106	63	169	Eu	x	-35910#	400#	7992#	2#	β^-	7980#	450#	168 961450#	430#
105	64		Gd	x	-43890#	200#	8035#	1#	β^-	6480#	200#	168 952880#	220#
104	65		Tb	x	-50368	9	8068.45	0.06	β^-	5149	9	168 945927	10
103	66		Dy		-55516.8	1.5	8094.288	0.009	β^-	3272	4	168 940400.3	1.6
102	67		Ho	x	-58789	4	8109.022	0.023	β^-	2132	4	168 936887	4
101	68		Er	-n	-60921.48	0.29	8117.010	0.002	β^-	353.3	0.8	168 934598.1	0.3
100	69		Tm		-61274.7	0.7	8114.471	0.004		*		168 934218.9	0.8
99	70		Yb	-n	-60375.86	0.15	8104.523	0.001	β^+	898.9	0.8	168 935183.85	0.17
98	71		Lu	–	-58083	3	8086.325	0.018	β^+	2293.0	3.0	168 937645	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		-44921	15	7994.56	0.09	β^+	5370	30	168 951775	17
94	75		Re	$+\alpha$	-38417	10	7951.44	0.06	β^+	6504	19	168 958758	11
93	76		Os	$-\alpha$	-30723	26	7901.29	0.15	β^+	7694	28	168 967017	28
92	77		Ir	$+\alpha$	-22094	23	7845.60	0.14	β^+	8630	30	168 976281	25
91	78		Pt	$-\alpha$	-12410	50	7783.65	0.28	β^+	9690	50	168 986680	50
90	79		Au	x	-1640#	300#	7715#	2#	β^+	10770#	300#	168 998240#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
107	63	170	Eu	x	-31020#	400#	7964#	2#	β^-	9830#	500#	169 966700#	430#
106	64		Gd	x	-40850#	300#	8017#	2#	β^-	5860#	360#	169 956150#	320#
105	65		Tb	x	-46710#	200#	8047#	1#	β^-	7010#	200#	169 949860#	220#
104	66		Dy	x	-53715	7	8083.55	0.04	β^-	2549	10	169 942335	7
103	67		Ho	x	-56264	8	8093.94	0.05	β^-	3843	8	169 939598	8
102	68		Er		-60106.8	1.1	8111.949	0.006	β^-	-311.5	1.6	169 935472.7	1.2
101	69		Tm		-59795.4	0.7	8105.515	0.004	β^-	968.5	0.7	169 935807.0	0.8
100	70		Yb		-60763.932	0.010	8106.610	*a*		*		169 934767.239	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		-47290	13	8008.94	0.08	β^+	2850	30	169 949232	14
95	75		Re		-38903	11	7955.00	0.06	β^+	8388	17	169 958236	12
94	76		Os		-33927	10	7921.13	0.06	β^+	4976	15	169 963578	10
93	77		Ir	$-\alpha$	-23080	80	7852.7	0.5	β^+	10840	80	169 975220	90
92	78		Pt		-16293	14	7808.20	0.08	β^+	6790	80	169 982509	15
91	79		Au	-p	-3650	50	7729.21	0.28	β^+	12650	50	169 996080	50
90	80		Hg	$-\alpha$	5510#	300#	7671#	2#	β^+	9150#	310#	170 005910#	320#
107	64	171	Gd	x	-36210#	400#	7990#	2#	β^-	7560#	500#	170 961130#	430#
106	65		Tb	x	-43770#	300#	8030#	2#	β^-	6400#	300#	170 953010#	320#
105	66		Dy	x	-50174	11	8062.78	0.07	β^-	4434	13	170 946136	12
104	67		Ho	x	-54609	7	8084.13	0.04	β^-	3108	7	170 941375	8
103	68		Er		-57717.1	1.1	8097.737	0.007	β^-	1492.2	1.1	170 938038.1	1.2
102	69		Tm		-59209.4	0.4	8101.888	0.002	β^-	97.5	0.4	170 936436.1	0.4
101	70		Yb		-59306.821	0.013	8097.883	*a*		*		170 936331.513	0.014
100	71		Lu		-57828.8	1.7	8084.664	0.010	β^+	1478.0	1.7	170 937918.2	1.8
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		-34428	16	7924.94	0.10	β^+	6820	30	170 963040	18
94	77		Ir	$-\alpha$	-26410	40	7873.49	0.22	β^+	8020	40	170 971650	40
93	78		Pt	$-\alpha$	-17450	80	7816.5	0.5	β^+	8960	90	170 981270	90
92	79		Au	-p	-7556	17	7754.07	0.10	β^+	9890	80	170 991889	18
91	80		Hg	$-\alpha$	3340#	310#	7686#	2#	β^+	10900#	310#	171 003590#	330#
108	64	172	Gd	x	-32890#	400#	7971#	2#	β^-	6800#	570#	171 964690#	430#
107	65		Tb	x	-39690#	400#	8006#	2#	β^-	8070#	500#	171 957390#	430#
106	66		Dy	x	-47760#	300#	8049#	2#	β^-	3860#	360#	171 948730#	320#
105	67		Ho	x	-51620#	200#	8067#	1#	β^-	4860#	200#	171 944580#	210#
104	68		Er		-56482	4	8090.402	0.023	β^-	891	5	171 939364	4
103	69		Tm		-57373	5	8091.03	0.03	β^-	1882	5	171 938407	6
102	70		Yb		-59255.453	0.011	8097.429	*a*		*		171 936386.658	0.012
101	71		Lu		-56736.6	2.0	8078.237	0.012	β^+	2518.8	2.0	171 939090.7	2.2
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		-41560	40	7971.79	0.21	β^+	7540	50	171 955390	40
96	76		Os		-37243	13	7942.16	0.07	β^+	4320	40	171 960018	13
95	77		Ir	$-\alpha$	-27240#	100#	7879#	1#	β^+	10000#	110#	171 970750#	110#
94	78		Pt		-21104	10	7839.23	0.06	β^+	6140#	110#	171 977344	11
93	79		Au	$-\alpha$	-9170	70	7765.3	0.4	β^+	11930	70	171 990160	80
92	80		Hg	$-\alpha$	-860	50	7712.42	0.26	β^+	8310	80	171 999080	50

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
109	64	173	Gd	x	-27940#	400#	7943#	2#	β^-	8500#	570#	172 970010#	430#
108	65		Tb	x	-36440#	400#	7988#	2#	β^-	7300#	570#	172 960880#	430#
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		-57551.236	0.011	8087.428	*a*		*		172 938216.210	0.012
102	71		Lu		-56881.6	1.1	8079.034	0.006	β^+	669.7	1.1	172 938935.1	1.2
101	72		Hf	$--$	-55391	3	8065.895	0.018	β^+	1491	3	172 940536	3
100	73		Ta	x	-52397	28	8044.06	0.16	β^+	2994	28	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		-37442	15	7944.05	0.09	β^+	6110	30	172 959805	16
96	77		Ir		-30266	10	7898.05	0.06	β^+	7176	18	172 967508	11
95	78		Pt	$-\alpha$	-21915	26	7845.26	0.15	β^+	8350	28	172 976473	28
94	79		Au	$+\alpha$	-12827	23	7788.21	0.13	β^+	9090	30	172 986230	24
93	80		Hg	$-\alpha$	-2600	50	7724.60	0.27	β^+	10220	50	172 997200	50
92	81		Tl	x	8600#	400#	7655#	2#	β^+	11210#	400#	173 009230#	430#
109	65	174	Tb	x	-31970#	400#	7963#	2#	β^-	8920#	570#	173 965680#	430#
108	66		Dy	x	-40890#	400#	8010#	2#	β^-	4980#	500#	173 956100#	430#
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		-56944.522	0.011	8083.848	*a*	β^-	-1373.7	1.1	173 938867.544	0.011
103	71		Lu		-55570.8	1.1	8071.457	0.006	β^-	273.4	2.0	173 940342.3	1.2
102	72		Hf		-55844.3	1.8	8068.532	0.010		*		173 940048.7	1.9
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 957064	11
97	77		Ir	$+\alpha$	-30787	11	7902.04	0.06	β^+	9208	15	173 966949	12
96	78		Pt	$-\alpha$	-25319	10	7866.12	0.06	β^+	5468	15	173 972819	11
95	79		Au	$-\alpha$	-14000#	100#	7797#	1#	β^+	11320#	100#	173 984970#	100#
94	80		Hg	$-\alpha$	-6634	15	7749.75	0.09	β^+	7370#	100#	173 992878	16
93	81		Tl	x	6520#	300#	7670#	2#	β^+	13160#	300#	174 007000#	320#
110	65	175	Tb	x	-28490#	400#	7944#	2#	β^-	8120#	570#	174 969420#	430#
109	66		Dy	x	-36610#	400#	7985#	2#	β^-	6690#	570#	174 960700#	430#
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	-n	-54695.55	0.07	8070.925	0.001	β^-	470.7	0.4	174 941281.91	0.08
104	71		Lu		-55166.2	0.4	8069.144	0.003		*		174 940776.6	0.5
103	72		Hf		-54481.5	1.8	8060.761	0.010	β^+	684.8	1.8	174 941511.7	1.9
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		-40101	10	7960.70	0.06	β^+	5188	30	174 956950	11
98	77		Ir		-33392	11	7917.90	0.06	β^+	6708	15	174 964152	12
97	78		Pt		-25825	16	7870.19	0.09	β^+	7568	20	174 972276	18
96	79		Au	$-\alpha$	-17400	40	7817.59	0.22	β^+	8420	40	174 981320	40
95	80		Hg	$-\alpha$	-7950	80	7759.1	0.5	β^+	9450	90	174 991460	90
94	81		Tl	x	2240#	200#	7696#	1#	β^+	10190#	220#	175 002410#	220#
93	82		Pb	x	14340#	300#	7623#	2#	β^+	12100#	360#	175 015400#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
110	66	176	Dy	x	-33280#	400#	7967#	2#	β^-	6110#	640#	175 964270#	430#
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		-53491.325	0.013	8064.085	*a*	β^-	-108.5	0.4	175 942574.704	0.014
105	71		Lu		-53382.9	0.4	8059.024	0.002	β^-	1193.2	0.4	175 942691.1	0.4
104	72		Hf		-54576.0	0.4	8061.358	0.002		*		175 941410.2	0.4
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		-42132	11	7972.87	0.06	β^+	2930	30	175 954770	12
99	77		Ir		-33864	8	7921.45	0.05	β^+	8268	14	175 963646	9
98	78		Pt		-28934	13	7888.99	0.07	β^+	4930	15	175 968938	13
97	79		Au	$-\alpha$	-18390#	100#	7825#	1#	β^+	10550#	110#	175 980260#	110#
96	80		Hg		-11781	11	7782.64	0.06	β^+	6600#	110#	175 987353	12
95	81		Tl	-p	600	80	7707.8	0.5	β^+	12380	80	176 000650	90
94	82		Pb	x	9670#	200#	7652#	1#	β^+	9070#	220#	176 010380#	220#
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	-50986.41	0.22	8049.974	0.001	β^-	1398.0	0.5	176 945263.84	0.24
106	71		Lu		-52384.4	0.4	8053.453	0.003	β^-	496.6	0.8	176 943763.0	0.5
105	72		Hf		-52881.1	0.8	8051.838	0.005		*		176 943229.9	0.9
104	73		Ta	–	-51715	3	8040.831	0.018	β^+	1166.0	3.0	176 944482	3
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	$+\alpha$	-41957	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		-29367	15	7892.47	0.09	β^+	6681	25	176 968474	16
98	79		Au		-21543	10	7843.85	0.05	β^+	7824	18	176 976873	10
97	80		Hg	$-\alpha$	-12750	60	7789.8	0.4	β^+	8790	60	176 986310	70
96	81		Tl	IT	-3335	21	7732.14	0.12	β^+	9420	70	176 996420	23
95	82		Pb	x	7850#	200#	7665#	1#	β^+	11190#	200#	177 008430#	220#
111	67	178	Ho	x	-32000#	500#	7957#	3#	β^-	8260#	780#	177 965650#	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		-50338.4	1.9	8042.058	0.011	β^-	2097.3	2.0	177 945959.5	2.1
106	72		Hf		-52435.7	0.9	8049.446	0.005		*		177 943708.0	0.9
105	73		Ta	IT	-50550#	50#	8034#	0#	β^+	1890#	50#	177 945730#	60#
104	74		W	–	-50407	15	8029.26	0.09	β^+	140#	50#	177 945885	16
103	75		Re		-45645	20	7998.11	0.11	β^+	4762	25	177 950998	22
102	76		Os		-43545	14	7981.92	0.08	β^+	2100	25	177 953253	15
101	77		Ir		-36255	19	7936.57	0.10	β^+	7289	23	177 961078	20
100	78		Pt		-31997	10	7908.25	0.06	β^+	4259	21	177 965650	11
99	79		Au	x	-22303	10	7849.39	0.06	β^+	9694	14	177 976057	11
98	80		Hg	$-\alpha$	-16317	11	7811.37	0.06	β^+	5986	15	177 982483	11
97	81		Tl	$-\alpha$	-4560#	100#	7741#	1#	β^+	11760#	100#	177 995110#	100#
96	82		Pb	$-\alpha$	3580	20	7690.80	0.11	β^+	8140#	100#	178 003843	21

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
111	68	179	Er	x	-36080#	500#	7976#	3#	β^-	5820#	640#	178 961270#	540#
110	69		Tm	x	-41900#	400#	8004#	2#	β^-	4890#	400#	178 955020#	430#
109	70		Yb	x	-46790	27	8026.77	0.15	β^-	2269	27	178 949768	29
108	71		Lu		-49060	5	8035.077	0.028	β^-	1404	5	178 947332	5
107	72		Hf		-50463.3	0.9	8038.549	0.005		*		178 945825.4	0.9
106	73		Ta		-50357.8	0.9	8033.589	0.005	β^+	105.6	0.4	178 945938.7	1.0
105	74		W		-49296	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	7979.49	0.09	β^+	3564	29	178 953816	17
102	77		Ir		-38081	10	7947.52	0.05	β^+	4940	18	178 959118	11
101	78		Pt		-32268	8	7910.68	0.04	β^+	5813	12	178 965359	8
100	79		Au		-24986	10	7865.62	0.06	β^+	7282	13	178 973176	11
99	80		Hg		-16971	17	7816.48	0.09	β^+	8015	20	178 981781	18
98	81		Tl	$-\alpha$	-8270	40	7763.49	0.22	β^+	8700	40	178 991120	40
97	82		Pb	$-\alpha$	2070	80	7701.4	0.4	β^+	10340	90	179 002220	90
112	68	180	Er	x	-33180#	500#	7960#	3#	β^-	4990#	640#	179 964380#	540#
111	69		Tm	x	-38170#	400#	7983#	2#	β^-	6640#	400#	179 959020#	430#
110	70		Yb	x	-44812	25	8016.03	0.14	β^-	1860	80	179 951892	27
109	71		Lu	+	-46680	70	8022.0	0.4	β^-	3100	70	179 949890	80
108	72		Hf		-49779.8	0.9	8034.934	0.005	β^-	-843.8	1.7	179 946559.2	0.9
107	73		Ta		-48936.0	1.6	8025.899	0.009	β^-	700.5	1.7	179 947465.1	1.7
106	74		W		-49636.5	0.9	8025.445	0.005		*		179 946713.0	0.9
105	75		Re		-45838	20	7999.99	0.11	β^+	3799	20	179 950791	22
104	76		Os		-44356	16	7987.42	0.09	β^+	1481	26	179 952382	17
103	77		Ir	x	-37978	22	7947.63	0.12	β^+	6379	27	179 959229	23
102	78		Pt		-34431	10	7923.58	0.06	β^+	3547	24	179 963037	11
101	79		Au		-25626	5	7870.324	0.026	β^+	8804	11	179 972489	5
100	80		Hg		-20251	12	7836.11	0.07	β^+	5376	13	179 978260	13
99	81		Tl	$-\alpha$	-9260#	110#	7771#	1#	β^+	11000#	110#	179 990060#	110#
98	82		Pb	$-\alpha$	-1937	12	7725.68	0.07	β^+	7320#	110#	179 997920	13
97	83		Bi	x	11900#	300#	7644#	2#	β^+	13840#	300#	180 012780#	320#
112	69	181	Tm	x	-35440#	500#	7969#	3#	β^-	6060#	500#	180 961950#	540#
111	70		Yb	x	-41500	25	7998.03	0.14	β^-	3300	130	180 955448	27
110	71		Lu	x	-44800	130	8011.9	0.7	β^-	2610	130	180 951910	140
109	72		Hf	-n	-47403.3	0.9	8022.005	0.005	β^-	1036.2	1.7	180 949110.5	0.9
108	73		Ta		-48439.5	1.5	8023.407	0.008		*		180 947998.1	1.6
107	74		W	-n	-48234.2	0.9	8017.951	0.005	β^+	205.2	1.7	180 948218.4	1.0
106	75		Re	4n	-46517	13	8004.14	0.07	β^+	1717	13	180 950061	13
105	76		Os		-43550	25	7983.43	0.14	β^+	2967	28	180 953247	27
104	77		Ir	$+\alpha$	-39475	9	7956.59	0.05	β^+	4075	27	180 957622	9
103	78		Pt		-34382	14	7924.13	0.08	β^+	5093	16	180 963090	15
102	79		Au	$-\alpha$	-27871	20	7883.84	0.11	β^+	6511	24	180 970079	21
101	80		Hg		-20657	15	7839.66	0.09	β^+	7214	25	180 977823	17
100	81		Tl		-12799	9	7791.92	0.05	β^+	7858	18	180 986260	10
99	82		Pb	$-\alpha$	-3080	60	7733.9	0.3	β^+	9720	60	180 996700	70
98	83		Bi	x	7740#	200#	7670#	1#	β^+	10820#	210#	181 008310#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
113	69	182	Tm	x	-31330#	500#	7947#	3#	β^-	7720#	500#	181 966370#	540#
112	70		Yb		-39054	26	7985.00	0.14	β^-	2880#	200#	181 958074	28
111	71		Lu	x	-41930#	200#	7997#	1#	β^-	4120#	200#	181 954990#	220#
110	72		Hf	-nn	-46050	6	8014.84	0.03	β^-	381	6	181 950563	7
109	73		Ta		-46431.1	1.5	8012.635	0.008	β^-	1815.1	1.5	181 950154.2	1.6
108	74		W		-48246.2	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		-36169	13	7934.76	0.07	β^+	2883	25	181 961171	14
103	79		Au		-28306	19	7887.26	0.10	β^+	7863	23	181 969612	20
102	80		Hg		-23578	10	7856.98	0.05	β^+	4728	21	181 974688	10
101	81		Tl	$-\alpha$	-13331	11	7796.38	0.06	β^+	10247	15	181 985688	12
100	82		Pb	$-\alpha$	-6829	12	7756.35	0.06	β^+	6502	16	181 992669	12
99	83		Bi	x	6200#	300#	7680#	2#	β^+	13030#	300#	182 006660#	320#
114	69	183	Tm	x	-28340#	400#	7931#	2#	β^-	6780#	400#	182 969580#	430#
113	70		Yb	x	-35115	25	7963.95	0.14	β^-	4600	80	182 962302	27
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	-45294.0	1.5	8006.742	0.008	β^-	1071.7	1.5	182 951374.9	1.7
109	74		W		-46365.7	0.7	8008.324	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		-43670	50	7985.02	0.27	β^+	2140	50	182 953120	50
106	77		Ir		-40211	21	7961.87	0.11	β^+	3450	50	182 956832	22
105	78		Pt		-35774	14	7933.34	0.08	β^+	4438	25	182 961596	15
104	79		Au		-30191	9	7898.56	0.05	β^+	5583	17	182 967589	10
103	80		Hg		-23805	7	7859.39	0.04	β^+	6385	12	182 974444	8
102	81		Tl		-16588	9	7815.68	0.05	β^+	7218	12	182 982192	10
101	82		Pb	$-\alpha$	-7615	17	7762.37	0.09	β^+	8973	19	182 991825	18
100	83		Bi	x	2470#	110#	7703#	1#	β^+	10090#	110#	183 002650#	120#
99	84		Po	x	13600#	300#	7638#	2#	β^+	11130#	320#	183 014600#	320#
115	69	184	Tm	x	-23950#	300#	7908#	2#	β^-	8370#	300#	183 974290#	320#
114	70		Yb	x	-32320	40	7949.33	0.20	β^-	4080#	200#	183 965310	40
113	71		Lu	x	-36400#	200#	7967#	1#	β^-	5040#	200#	183 960920#	220#
112	72		Hf	+	-41440	30	7990.39	0.17	β^-	1340	30	183 955520	30
111	73		Ta	+	-42777	7	7993.42	0.04	β^-	2928	7	183 954077	8
110	74		W		-45705.5	0.7	8005.078	0.004	β^-	-1486	4	183 950933.1	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		-39634	11	7959.33	0.06	β^+	4618	11	183 957451	12
106	78		Pt		-37333	15	7942.57	0.08	β^+	2302	18	183 959922	16
105	79		Au	IT	-30319	22	7900.19	0.12	β^+	7014	27	183 967452	24
104	80		Hg		-26345	10	7874.35	0.05	β^+	3973	24	183 971717	10
103	81		Tl		-16881	10	7818.66	0.05	β^+	9465	14	183 981878	11
102	82		Pb		-11052	13	7782.73	0.07	β^+	5829	16	183 988135	14
101	83		Bi	$-\alpha$	1210#	150#	7712#	1#	β^+	12260#	150#	184 001300#	160#
100	84		Po	x	9390#	200#	7663#	1#	β^+	8180#	250#	184 010080#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
115	70	185	Yb	x	-28130#	200#	7927#	1#	β^-	5730#	360#	184 969800#	220#
114	71		Lu	x	-33860#	300#	7954#	2#	β^-	4460#	310#	184 963650#	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^-	1993	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		-43819.1	0.8	7991.010	0.004		*		184 952958.3	0.9
109	76		Os		-42805.9	0.8	7981.305	0.004	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	-31870	7	7909.50	0.04	β^+	4818	27	184 965786	8
105	80		Hg		-26184	14	7874.54	0.07	β^+	5686	15	184 971890	15
104	81		Tl	IT	-19756	21	7835.57	0.11	β^+	6428	25	184 978791	22
103	82		Pb	$-\alpha$	-11538	16	7786.91	0.09	β^+	8218	26	184 987614	17
102	83		Bi		-2156	13	7731.97	0.07	β^+	9382	21	184 997685	14
101	84		Po	x	7850#	200#	7674#	1#	β^+	10010#	200#	185 008430#	220#
100	85		At	x	19690#	300#	7605#	2#	β^+	11840#	360#	185 021140#	320#
116	70	186	Yb	x	-25090#	300#	7912#	2#	β^-	5220#	420#	185 973070#	320#
115	71		Lu	x	-30310#	300#	7936#	2#	β^-	6110#	300#	185 967460#	320#
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		-28540	12	7888.26	0.06	β^+	3175	24	185 969361	12
105	81		Tl		-19898	15	7837.60	0.08	β^+	8642	19	185 978639	16
104	82		Pb	$-\alpha$	-14682	11	7805.35	0.06	β^+	5216	18	185 984238	12
103	83		Bi	$-\alpha$	-3150	17	7739.14	0.09	β^+	11532	20	185 996618	18
102	84		Po	$-\alpha$	4099	19	7695.96	0.10	β^+	7249	26	186 004400	21
101	85		At	x	17800#	200#	7618#	1#	β^+	13700#	200#	186 019110#	220#
117	70	187	Yb	x	-20640#	300#	7889#	2#	β^-	6830#	420#	186 977840#	320#
116	71		Lu	x	-27470#	300#	7921#	2#	β^-	5530#	360#	186 970510#	320#
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^-	2.469	0.001	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		-36686	24	7941.17	0.13	β^+	2860	40	186 960616	26
108	79		Au		-33030	22	7917.44	0.12	β^+	3656	27	186 964541	24
107	80		Hg		-28119	13	7886.99	0.07	β^+	4911	26	186 969813	14
106	81		Tl	$+\alpha$	-22447	8	7852.48	0.04	β^+	5672	15	186 975903	9
105	82		Pb		-14987	5	7808.402	0.027	β^+	7459	10	186 983911	5
104	83		Bi	$-\alpha$	-6384	10	7758.21	0.05	β^+	8603	11	186 993147	11
103	84		Po	$-\alpha$	2789	23	7704.97	0.12	β^+	9173	25	187 002994	24
102	85		At	x	13700#	200#	7642#	1#	β^+	10910#	200#	187 014710#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	-23700#	400#	7902#	2#	β^-	7130#	500#	187 974560#	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^-	349.0	3.0	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	7973.865	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		-30199	7	7899.04	0.04	β^+	2173	7	187 967580	7
107	81		Tl	x	-22336	30	7853.05	0.16	β^+	7860	30	187 976020	30
106	82		Pb	$-\alpha$	-17812	10	7824.82	0.05	β^+	4520	30	187 980878	11
105	83		Bi	$-\alpha$	-7194	10	7764.19	0.06	β^+	10618	14	187 992277	11
104	84		Po	$-\alpha$	-550	17	7724.68	0.09	β^+	6644	20	187 999410	18
103	85		At	-p	12160#	300#	7653#	2#	β^+	12710#	300#	188 013050#	320#
118	71	189	Lu	x	-20590#	300#	7886#	2#	β^-	6560#	420#	188 977900#	320#
117	72		Hf	x	-27150#	300#	7917#	2#	β^-	4810#	360#	188 970850#	320#
116	73		Ta	x	-31960#	200#	7938#	1#	β^-	3680#	200#	188 965690#	220#
115	74		W		-35640	30	7953.59	0.17	β^-	2340	30	188 961740	40
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 958146.0	0.7
112	77		Ir		-38453	11	7956.04	0.06	β^+	533	11	188 958719	12
111	78		Pt		-36471	10	7941.41	0.05	β^+	1982	13	188 960846	10
110	79		Au	x	-33582	20	7921.99	0.11	β^+	2889	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 980843	15
106	83		Bi	$-\alpha$	-10062	21	7780.99	0.11	β^+	7782	25	188 989198	22
105	84		Po	$-\alpha$	-1418	22	7731.11	0.12	β^+	8640	30	188 998477	24
104	85		At	x	8600#	200#	7674#	1#	β^+	10020#	200#	189 009230#	220#
119	71	190	Lu	x	-16690#	400#	7867#	2#	β^-	8110#	570#	189 982080#	430#
118	72		Hf	x	-24800#	400#	7905#	2#	β^-	3920#	450#	189 973380#	430#
117	73		Ta	x	-28720#	200#	7922#	1#	β^-	5680#	200#	189 969170#	220#
116	74		W		-34390	30	7947.64	0.16	β^-	1190	30	189 963080	30
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 958445.5	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		-31373	16	7907.03	0.08	β^+	1461	16	189 966320	17
109	81		Tl	$+\alpha$	-24366	7	7866.03	0.04	β^+	7006	17	189 973842	8
108	82		Pb	$-\alpha$	-20417	13	7841.13	0.07	β^+	3949	14	189 978081	13
107	83		Bi		-10611	15	7785.40	0.08	β^+	9806	19	189 988609	16
106	84		Po	$-\alpha$	-4564	13	7749.46	0.07	β^+	6047	20	189 995100	14
105	85		At	$-\alpha$	7190	60	7683.5	0.3	β^+	11750	70	190 007720	70
119	72	191	Hf	x	-21000#	300#	7886#	2#	β^-	5520#	420#	190 977460#	320#
118	73		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	7938.727	0.022	β^+	1011	4	190 961676	4
112	79		Au		-33798	5	7924.682	0.026	β^+	1900	6	190 963716	5
111	80		Hg		-30593	22	7903.80	0.12	β^+	3205	23	190 967157	24
110	81		Tl	$+\alpha$	-26283	7	7877.14	0.04	β^+	4310	23	190 971784	8
109	82		Pb	$+\alpha$	-20293	7	7841.69	0.04	β^+	5990	10	190 978215	7
108	83		Bi		-13239	7	7800.66	0.04	β^+	7053	10	190 985787	8
107	84		Po		-5069	7	7753.79	0.04	β^+	8170	10	190 994558	8
106	85		At	$-\alpha$	3863	16	7702.93	0.08	β^+	8932	18	191 004147	17

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
120	72	192	Hf	x	-18500#	400#	7874#	2#	β^-	4600#	570#	191 980140#	430#
119	73		Ta	x	-23100#	400#	7894#	2#	β^-	6520#	450#	191 975200#	430#
118	74		W	x	-29620#	200#	7924#	1#	β^-	2060#	210#	191 968200#	220#
117	75		Re		-31680	40	7930.69	0.23	β^-	4210	40	191 966000	50
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^-	1452.8	2.3	191 962602.4	1.4
114	78		Pt		-36288.4	2.6	7942.491	0.013		*		191 961042.8	2.8
113	79		Au		-32765	14	7920.07	0.07	β^+	3523	14	191 964825	15
112	80		Hg	x	-32013	16	7912.07	0.08	β^+	753	21	191 965633	17
111	81		Tl	x	-25870	30	7876.02	0.16	β^+	6140	40	191 972230	30
110	82		Pb		-22552	6	7854.649	0.030	β^+	3320	30	191 975789	6
109	83		Bi	$-\alpha$	-13530	30	7803.61	0.16	β^+	9020	30	191 985470	30
108	84		Po	$-\alpha$	-8067	11	7771.06	0.06	β^+	5470	30	191 991340	11
107	85		At	$-\alpha$	2926	28	7709.72	0.14	β^+	10994	30	192 003142	30
120	73	193	Ta	x	-20720#	400#	7883#	2#	β^-	5470#	450#	192 977760#	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	7938.134	0.007		*		192 962923.8	1.4
115	78		Pt		-34479.7	1.4	7933.787	0.007	β^+	56.63	0.30	192 962984.6	1.5
114	79		Au		-33405	9	7924.17	0.04	β^+	1075	9	192 964138	9
113	80		Hg		-31063	16	7907.98	0.08	β^+	2342	14	192 966653	17
112	81		Tl	x	-27476	7	7885.34	0.03	β^+	3586	17	192 970503	7
111	82		Pb		-22229	10	7854.10	0.05	β^+	5247	12	192 976136	11
110	83		Bi		-15885	8	7817.17	0.04	β^+	6345	13	192 982947	8
109	84		Po	$-\alpha$	-8326	15	7773.95	0.08	β^+	7559	16	192 991062	16
108	85		At	$-\alpha$	-69	22	7727.12	0.11	β^+	8256	26	192 999925	23
107	86		Rn	$-\alpha$	9047	25	7675.83	0.13	β^+	9120	30	193 009712	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^+	2548.1	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		-24211	16	7865.43	0.08	β^+	2727	22	193 974009	18
111	83		Bi	$+\alpha$	-16023	5	7819.195	0.027	β^+	8188	17	193 982799	6
110	84		Po	$-\alpha$	-11005	13	7789.30	0.07	β^+	5018	14	193 988185	14
109	85		At		-726	18	7732.28	0.09	β^+	10279	22	193 999220	20
108	86		Rn	$-\alpha$	5723	17	7695.00	0.09	β^+	6450	25	194 006144	18
107	87		Fr	x	17870#	300#	7628#	2#	β^+	12150#	300#	194 019180#	320#
122	73	195	Ta	x	-14600#	300#	7853#	2#	β^-	6140#	420#	194 984330#	320#
121	74		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		-32567.0	1.1	7921.378	0.006	β^+	226.8	1.0	194 965037.8	1.2
115	80		Hg		-31014	23	7909.40	0.12	β^+	1553	23	194 966705	25
114	81		Tl		-28156	11	7890.73	0.06	β^+	2859	26	194 969774	12
113	82		Pb		-23740	5	7864.076	0.027	β^+	4415	12	194 974514	6
112	83		Bi		-18026	5	7830.758	0.027	β^+	5715	7	194 980649	6
111	84		Po	x	-11118	6	7791.32	0.03	β^+	6908	8	194 988064	7
110	85		At	$-\alpha$	-3473	10	7748.10	0.05	β^+	7645	11	194 996272	10
109	86		Rn	$-\alpha$	5050	50	7700.39	0.27	β^+	8520	50	195 005420	60
108	87		Fr	x	14450#	200#	7648#	1#	β^+	9400#	210#	195 015510#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	-1507.1	2.6	195 964954.7	0.5
117	79		Au		-31137.4	2.6	7914.849	0.013	β^-	688.0	3.0	195 966572.6	2.7
116	80		Hg		-31825.4	2.9	7914.367	0.015		*		195 965834	3
115	81		Tl	x	-27497	12	7888.29	0.06	β^+	4329	12	195 970481	13
114	82		Pb		-25345	8	7873.32	0.04	β^+	2152	15	195 972791	9
113	83		Bi		-18001.8	0.9	7831.864	0.005	β^+	7343	8	195 980674.3	1.0
112	84		Po		-13469	5	7804.745	0.027	β^+	4533	5	195 985541	6
111	85		At	$-\alpha$	-3910	30	7752.00	0.15	β^+	9560	30	195 995800	30
110	86		Rn	$-\alpha$	1974	14	7717.97	0.07	β^+	5890	30	196 002120	15
109	87		Fr	x	13490#	200#	7655#	1#	β^+	11520#	200#	196 014480#	220#
123	74	197	W	x	-14870#	400#	7853#	2#	β^-	5480#	500#	196 984040#	430#
122	75		Re	x	-20350#	300#	7877#	2#	β^-	4700#	320#	196 978150#	320#
121	76		Os	x	-25050#	100#	7897#	1#	β^-	3170#	100#	196 973110#	110#
120	77		Ir		-28224	11	7908.80	0.06	β^-	2196	11	196 969700	12
119	78		Pt		-30419.8	0.5	7915.971	0.003	β^-	720.0	0.5	196 967343.1	0.6
118	79		Au		-31139.7	0.5	7915.655	0.003		*		196 966570.1	0.6
117	80		Hg		-30540	3	7908.638	0.016	β^+	600	3	196 967214	3
116	81		Tl	$+\alpha$	-28355	14	7893.58	0.07	β^+	2185	14	196 969560	15
115	82		Pb		-24746	5	7871.284	0.024	β^+	3609	14	196 973434	5
114	83		Bi	$+\alpha$	-19683.3	1.9	7841.615	0.010	β^+	5062	5	196 978869.1	2.0
113	84		Po		-13393	10	7805.71	0.05	β^+	6290	10	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^+	7865	18	197 001621	17
110	87		Fr	$-\alpha$	10260	60	7673.75	0.29	β^+	8750	60	197 011010	60
124	74	198	W	x	-12600#	300#	7843#	2#	β^-	4390#	500#	197 986470#	320#
123	75		Re	x	-16990#	400#	7861#	2#	β^-	6680#	400#	197 981760#	430#
122	76		Os	x	-23674	28	7890.59	0.14	β^-	2090	40	197 974590	30
121	77		Ir	x	-25760	25	7897.17	0.13	β^-	4144	25	197 972346	27
120	78		Pt		-29903.6	2.1	7914.149	0.011	β^-	-322.8	2.1	197 967897.2	2.2
119	79		Au		-29580.8	0.5	7908.567	0.003	β^-	1373.6	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		-26069	9	7878.98	0.04	β^+	1460	11	197 972014	9
115	83		Bi		-19357.3	1.4	7841.129	0.007	β^+	6711	9	197 979219.1	1.5
114	84		Po		-15476	16	7817.58	0.08	β^+	3881	16	197 983385	18
113	85		At		-6709	5	7769.345	0.025	β^+	8768	17	197 992798	5
112	86		Rn	$-\alpha$	-1231	13	7737.73	0.07	β^+	5478	14	197 998678	14
111	87		Fr	$-\alpha$	9568	27	7679.24	0.14	β^+	10800	30	198 010272	29
110	88		Ra	x	16500#	400#	7640#	2#	β^+	6930#	400#	198 017710#	430#
124	75	199	Re	x	-14730#	400#	7850#	2#	β^-	5470#	410#	198 984190#	430#
123	76		Os	x	-20200#	100#	7874#	1#	β^-	4200#	100#	198 978320#	110#
122	77		Ir	x	-24400	27	7891.21	0.14	β^-	2989	27	198 973806	29
121	78		Pt	-n	-27388.3	2.2	7902.299	0.011	β^-	1705.5	2.1	198 970597.5	2.3
120	79		Au		-29093.7	0.5	7906.938	0.003	β^-	452.4	0.6	198 968766.6	0.6
119	80		Hg		-29546.1	0.5	7905.280	0.003		*		198 968280.9	0.5
118	81		Tl	x	-28059	28	7893.88	0.14	β^+	1487	28	198 969880	30
117	82		Pb	$+\alpha$	-25231	7	7875.73	0.03	β^+	2828	29	198 972913	7
116	83		Bi		-20798	11	7849.52	0.05	β^+	4433	13	198 977673	11
115	84		Po		-15241	6	7817.669	0.028	β^+	5557	12	198 983638	6
114	85		At		-8823	5	7781.488	0.027	β^+	6418	8	198 990528	6
113	86		Rn	$-\alpha$	-1561	7	7741.06	0.04	β^+	7262	9	198 998324	8
112	87		Fr	$-\alpha$	6769	14	7695.27	0.07	β^+	8330	16	199 007267	15
111	88		Ra	x	15620#	300#	7647#	2#	β^+	8850#	300#	199 016770#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
125	75	200	Re	x	-11000#	300#	7833#	1#	β^-	7520#	420#	199 988190#	320#
124	76		Os	x	-18520#	300#	7867#	1#	β^-	3060#	300#	199 980120#	320#
123	77		Ir	x	-21577	17	7878.00	0.08	β^-	5022	26	199 976836	18
122	78		Pt	-nn	-26599	20	7899.20	0.10	β^-	604	21	199 971445	22
121	79		Au	+pn	-27203	5	7898.304	0.025	β^-	2301	5	199 970797	5
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		-26252	10	7881.82	0.05	β^+	795	12	199 971817	11
117	83		Bi	$+\alpha$	-20358	11	7848.43	0.05	β^+	5895	15	199 978145	12
116	84		Po		-16938	8	7827.42	0.04	β^+	3419	14	199 981816	8
115	85		At		-8981.6	1.4	7783.729	0.007	β^+	7956	8	199 990357.8	1.5
114	86		Rn	$-\alpha$	-4001	6	7754.912	0.029	β^+	4981	6	199 995705	6
113	87		Fr	$-\alpha$	6130	30	7700.33	0.15	β^+	10130	30	200 006590	30
112	88		Ra	x	12630#	200#	7664#	1#	β^+	6500#	200#	200 013560#	220#
111	89		Ac	x	24530#	400#	7601#	2#	β^+	11900#	450#	200 026330#	430#
126	75	201	Re	x	-8100#	300#	7820#	1#	β^-	6550#	420#	200 991300#	320#
125	76		Os	x	-14650#	300#	7848#	1#	β^-	5420#	300#	200 984270#	320#
124	77		Ir	x	-20073	21	7871.48	0.11	β^-	3746	22	200 978451	23
123	78		Pt		-23819	6	7886.224	0.028	β^-	2582	6	200 974429	6
122	79		Au		-26401	3	7895.178	0.016	β^-	1262	3	200 971657	3
121	80		Hg		-27662.8	0.6	7897.562	0.003		*		200 970302.7	0.7
120	81		Tl		-27182	14	7891.28	0.07	β^+	481	14	200 970819	15
119	82		Pb		-25273	12	7877.89	0.06	β^+	1910	18	200 972869	13
118	83		Bi	$+\alpha$	-21430	12	7854.87	0.06	β^+	3843	17	200 976994	13
117	84		Po		-16521	5	7826.563	0.024	β^+	4908	13	200 982264	5
116	85		At		-10785.6	1.0	7794.134	0.005	β^+	5736	5	200 988421.2	1.1
115	86		Rn	$-\alpha$	-4107	10	7757.02	0.05	β^+	6678	10	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 012814	22
112	89		Ac	x	21400#	300#	7618#	1#	β^+	9460#	300#	201 022970#	320#
126	76	202	Os	x	-12650#	400#	7840#	2#	β^-	4300#	500#	201 986420#	430#
125	77		Ir	x	-16950#	300#	7857#	1#	β^-	5740#	300#	201 981800#	320#
124	78		Pt	x	-22692	25	7881.56	0.12	β^-	1666	26	201 975639	27
123	79		Au	+pn	-24358	5	7885.936	0.025	β^-	2987	5	201 973850	5
122	80		Hg		-27345.4	0.6	7896.851	0.003		*		201 970643.5	0.7
121	81		Tl		-25981.5	1.7	7886.226	0.008	β^+	1364.0	1.8	201 972107.8	1.8
120	82		Pb		-25941	4	7882.152	0.019	β^+	41	4	201 972151	4
119	83		Bi		-20751	14	7852.59	0.07	β^+	5190	15	201 977723	15
118	84		Po		-17943	9	7834.81	0.04	β^+	2809	16	201 980738	9
117	85		At		-10673.4	1.8	7794.951	0.009	β^+	7269	9	201 988541.6	2.0
116	86		Rn		-6278	17	7769.32	0.08	β^+	4396	17	201 993261	18
115	87		Fr	$-\alpha$	3101	6	7719.014	0.030	β^+	9379	18	202 003329	6
114	88		Ra	$-\alpha$	9074	15	7685.57	0.07	β^+	5973	16	202 009742	16
113	89		Ac	x	20360#	200#	7626#	1#	β^+	11290#	200#	202 021860#	220#
127	76	203	Os	x	-6980#	400#	7813#	2#	β^-	7970#	570#	202 992510#	430#
126	77		Ir	x	-14950#	400#	7848#	2#	β^-	4900#	400#	202 983950#	430#
125	78		Pt	x	-19852	19	7868.50	0.09	β^-	3291	19	202 978688	20
124	79		Au		-23143	3	7880.865	0.015	β^-	2128	3	202 975154	3
123	80		Hg		-25271.1	1.3	7887.492	0.006	β^-	491.7	1.3	202 972870.4	1.4
122	81		Tl		-25762.8	0.4	7886.060	0.002		*		202 972342.5	0.4
121	82		Pb		-24788	6	7877.40	0.03	β^+	975	6	202 973389	7
120	83		Bi	$+\alpha$	-21525	13	7857.48	0.06	β^+	3262	14	202 976892	14
119	84		Po		-17310	5	7832.861	0.023	β^+	4215	14	202 981416	5
118	85		At		-12163	11	7803.65	0.05	β^+	5148	12	202 986943	11
117	86		Rn		-6186	6	7770.355	0.029	β^+	5977	12	202 993359	6
116	87		Fr		876	6	7731.71	0.03	β^+	7063	9	203 000941	7
115	88		Ra	$-\alpha$	8600	10	7689.81	0.05	β^+	7724	12	203 009233	10
114	89		Ac	$-\alpha$	17577	21	7641.73	0.11	β^+	8977	23	203 018869	23

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	-9850#	400#	7824#	2#	β^-	8290#	400#	203 989430#	430#
126	78		Pt	x	-18140	10	7861.10	0.05	β^-	2499	10	203 980526	10
125	79		Au	x	-20638.8	2.6	7869.521	0.013	β^-	4051.3	2.7	203 977843.3	2.8
124	80		Hg		-24690.1	0.5	7885.545	0.002	β^-	-342.6	0.5	203 973494.1	0.5
123	81		Tl		-24347.50	0.24	7880.031	0.001	β^-	763.73	0.18	203 973861.89	0.26
122	82		Pb		-25111.23	0.17	7879.940	0.001		*		203 973041.99	0.18
121	83		Bi	$+\alpha$	-20646	9	7854.22	0.04	β^+	4465	9	203 977836	10
120	84		Po		-18342	10	7839.09	0.05	β^+	2304	14	203 980309	11
119	85		At		-11862	11	7803.49	0.05	β^+	6480	15	203 987265	12
118	86		Rn		-7967	8	7780.56	0.04	β^+	3895	13	203 991447	8
117	87		Fr		610.5	1.1	7734.677	0.005	β^+	8577	8	204 000655.4	1.2
116	88		Ra	$-\alpha$	6061	9	7704.12	0.04	β^+	5450	9	204 006507	10
115	89		Ac	$-\alpha$	16670	30	7648.30	0.17	β^+	10610	40	204 017890	40
114	90		Th	x	23920#	400#	7609#	2#	β^+	7250#	400#	204 025680#	430#
128	77	205	Ir	x	-6020#	500#	7807#	2#	β^-	7200#	580#	204 993540#	540#
127	78		Pt	x	-13220#	300#	7838#	1#	β^-	5850#	300#	204 985810#	320#
126	79		Au	x	-19070	14	7862.85	0.07	β^-	3219	14	204 979528	15
125	80		Hg		-22289	4	7874.737	0.018	β^-	1534	4	204 976072	4
124	81		Tl		-23822.3	0.5	7878.402	0.003		*		204 974425.7	0.6
123	82		Pb		-23771.56	0.12	7874.338	0.001	β^+	50.7	0.5	204 974480.18	0.13
122	83		Bi		-21066	5	7857.325	0.023	β^+	2705	5	204 977384	5
121	84		Po		-17521	10	7836.22	0.05	β^+	3545	11	204 981190	11
120	85		At	$+\alpha$	-12985	12	7810.27	0.06	β^+	4536	16	204 986060	13
119	86		Rn		-7710	5	7780.724	0.024	β^+	5275	13	204 991723	5
118	87		Fr		-1307.3	1.2	7745.675	0.006	β^+	6403	5	204 998596.6	1.3
117	88		Ra	$-\alpha$	5804	23	7707.17	0.11	β^+	7111	23	205 006231	24
116	89		Ac	$-\alpha$	14054	18	7663.11	0.09	β^+	8250	29	205 015087	19
115	90		Th	x	22930#	300#	7616#	1#	β^+	8880#	300#	205 024620#	320#
128	78	206	Pt	x	-9700#	300#	7822#	1#	β^-	4750#	300#	205 989590#	320#
127	79		Au	x	-14453	8	7841.45	0.04	β^-	6481	11	205 984484	9
126	80		Hg		-20934	8	7869.12	0.04	β^-	1320	8	205 977526	8
125	81		Tl		-22253.9	0.5	7871.725	0.003	β^-	1533.0	0.5	205 976109.5	0.6
124	82		Pb		-23786.91	0.11	7875.369	0.001		*		205 974463.71	0.12
123	83		Bi	–	-20030	8	7853.33	0.04	β^+	3757	8	205 978497	8
122	84		Po	$-\alpha$	-18189	4	7840.598	0.019	β^+	1841	9	205 980473	4
121	85		At		-12440	14	7808.89	0.07	β^+	5749	14	205 986645	15
120	86		Rn		-9134	9	7789.05	0.04	β^+	3306	16	205 990195	9
119	87		Fr		-1325	4	7747.342	0.019	β^+	7809	9	205 998577	4
118	88		Ra		3562	17	7719.82	0.08	β^+	4888	17	206 003824	18
117	89		Ac	$-\alpha$	13468	15	7667.93	0.07	β^+	9906	23	206 014459	16
116	90		Th	x	20000#	200#	7632#	1#	β^+	6530#	200#	206 021470#	220#
129	78	207	Pt	x	-4510#	400#	7798#	2#	β^-	6590#	500#	206 995160#	430#
128	79		Au	x	-11100#	300#	7826#	1#	β^-	5350#	300#	206 988080#	320#
127	80		Hg	x	-16446	6	7848.412	0.029	β^-	4585	6	206 982344	7
126	81		Tl	x	-21031.5	0.7	7866.784	0.003	β^-	1421.9	0.7	206 977421.8	0.7
125	82		Pb		-22453.37	0.05	7869.873	*a*		*		206 975895.31	0.06
124	83		Bi		-20055.4	2.1	7854.509	0.010	β^+	2398.0	2.1	206 978469.6	2.3
123	84		Po		-17147	7	7836.68	0.03	β^+	2909	7	206 981592	7
122	85		At	$+\alpha$	-13228	12	7813.97	0.06	β^+	3919	14	206 985799	13
121	86		Rn		-8634	5	7787.997	0.023	β^+	4593	13	206 990731	5
120	87		Fr		-2849	18	7756.27	0.08	β^+	5785	18	206 996941	19
119	88		Ra		3536	15	7721.64	0.07	β^+	6385	23	207 003796	16
118	89		Ac	$-\alpha$	11150	60	7681.1	0.3	β^+	7610	60	207 011970	70
117	90		Th	$-\alpha$	19353	24	7637.67	0.11	β^+	8200	70	207 020776	25
116	91		Pa	x	28730#	400#	7589#	2#	β^+	9380#	400#	207 030840#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	-790#	400#	7782#	2#	β^-	5430#	500#	207 999150#	430#
129	79		Au	x	-6220#	300#	7804#	1#	β^-	7060#	300#	207 993320#	320#
128	80		Hg	x	-13275	17	7834.24	0.08	β^-	3481	17	207 985749	18
127	81		Tl	x	-16755.5	0.5	7847.210	0.003	β^-	4994.4	0.5	207 982012.2	0.6
126	82		Pb		-21749.925	0.013	7867.460	*a*		*		207 976650.496	0.014
125	83		Bi	+n	-18871.0	2.0	7849.857	0.010	β^+	2878.9	2.0	207 979741.2	2.2
124	84		Po	$-\alpha$	-17470.9	1.3	7839.365	0.006	β^+	1400.1	2.4	207 981244.2	1.4
123	85		At	$+\alpha$	-12470	9	7811.56	0.04	β^+	5001	9	207 986613	10
122	86		Rn		-9657	10	7794.27	0.05	β^+	2813	13	207 989633	11
121	87		Fr		-2668	11	7756.91	0.05	β^+	6989	15	207 997136	12
120	88		Ra	$-\alpha$	1731	9	7732.00	0.04	β^+	4399	14	208 001858	10
119	89		Ac	$-\alpha$	10754	10	7684.86	0.05	β^+	9023	14	208 011544	11
118	90		Th	$-\alpha$	16695	18	7652.54	0.09	β^+	5941	21	208 017922	19
117	91		Pa	x	27650#	300#	7596#	1#	β^+	10960#	300#	208 029680#	320#
130	79	209	Au	x	-2680#	400#	7788#	2#	β^-	5920#	410#	208 997120#	430#
129	80		Hg	x	-8600#	100#	7813#	0#	β^-	5050#	100#	208 990770#	110#
128	81		Tl	$+\alpha$	-13647	3	7833.407	0.016	β^-	3962	3	208 985350	4
127	82		Pb	x	-17608.1	0.3	7848.618	0.002	β^-	651.3	0.8	208 981096.9	0.4
126	83		Bi		-18259.4	0.8	7847.991	0.004		*		208 980397.7	0.8
125	84		Po	$-\alpha$	-16367.4	1.4	7835.195	0.007	β^+	1892.0	1.6	208 982428.9	1.5
124	85		At		-12884	5	7814.786	0.023	β^+	3483	5	208 986168	5
123	86		Rn		-8941	10	7792.18	0.05	β^+	3943	11	208 990401	11
122	87		Fr		-3783	11	7763.75	0.05	β^+	5158	15	208 995939	12
121	88		Ra	$-\alpha$	1858	6	7733.019	0.027	β^+	5641	13	209 001995	6
120	89		Ac	$-\alpha$	8850	60	7695.83	0.26	β^+	6990	60	209 009500	60
119	90		Th	IT	16270#	100#	7657#	0#	β^+	7420#	120#	209 017460#	110#
118	91		Pa	x	25080#	200#	7611#	1#	β^+	8820#	230#	209 026930#	220#
131	79	210	Au	x	2390#	400#	7766#	2#	β^-	7690#	450#	210 002570#	430#
130	80		Hg	x	-5300#	200#	7799#	1#	β^-	3950#	200#	209 994310#	220#
129	81		Tl	$+\alpha$	-9248	12	7813.59	0.06	β^-	5481	12	209 990072	12
128	82		Pb		-14729.4	0.8	7835.970	0.004	β^-	63.36	0.19	209 984187.4	0.9
127	83		Bi		-14792.7	0.8	7832.546	0.004	β^-	1161.7	0.8	209 984119.3	0.8
126	84		Po		-15954.46	0.13	7834.353	0.001		*		209 982872.19	0.14
125	85		At	$-\alpha$	-11973	8	7811.67	0.04	β^+	3981	8	209 987146	8
124	86		Rn	$-\alpha$	-9605	5	7796.666	0.022	β^+	2369	9	209 989689	5
123	87		Fr		-3344	13	7763.13	0.06	β^+	6261	14	209 996410	14
122	88		Ra	$-\alpha$	441	9	7741.38	0.04	β^+	3785	16	210 000474	10
121	89		Ac		8700	60	7698.34	0.27	β^+	8250	60	210 009340	60
120	90		Th	$-\alpha$	14057	18	7669.09	0.08	β^+	5360	60	210 015091	19
119	91		Pa	$-\alpha$	24338	21	7616.40	0.10	β^+	10281	28	210 026128	23
131	80	211	Hg	x	-500#	200#	7777#	1#	β^-	5580#	210#	210 999460#	220#
130	81		Tl	x	-6080	40	7799.79	0.20	β^-	4410	40	210 993480	50
129	82		Pb		-10492.71	0.19	7817.007	0.001	β^-	1363.4	0.8	210 988735.62	0.21
128	83		Bi	$-\alpha$	-11856.1	0.8	7819.760	0.004	β^-	577.8	1.0	210 987272.0	0.9
127	84		Po	$-\alpha$	-12433.9	0.5	7818.791	0.002		*		210 986651.7	0.6
126	85		At	$-\alpha$	-11648.0	2.5	7811.359	0.012	β^+	785.9	2.5	210 987495.3	2.7
125	86		Rn	$-\alpha$	-8757	7	7793.95	0.03	β^+	2892	7	210 990600	7
124	87		Fr		-4141	12	7768.36	0.06	β^+	4616	14	210 995555	13
123	88		Ra		832	5	7741.086	0.024	β^+	4973	13	211 000894	5
122	89		Ac		7140	50	7707.47	0.24	β^+	6310	50	211 007670	60
121	90		Th		13920	50	7671.66	0.25	β^+	6770	70	211 014940	60
120	91		Pa	$-\alpha$	22060	80	7629.4	0.4	β^+	8140	90	211 023680	80
119	92		U	x	30530#	400#	7586#	2#	β^+	8470#	410#	211 032780#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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	2950#	300#	7762#	1#	β^-	4500#	360#	212 003170#	320#
131	81		Tl	$+\alpha$	-1550#	200#	7780#	1#	β^-	6000#	200#	211 998340#	220#
130	82		Pb		-7554.0	0.3	7804.344	0.002	β^-	569.4	0.5	211 991890.5	0.4
129	83		Bi	$-\alpha$	-8123.4	0.5	7803.340	0.003	β^-	2247.4	0.6	211 991279.2	0.6
128	84		Po	$-\alpha$	-10370.81	0.11	7810.250	0.001	β^-	-1741.8	2.1	211 988866.48	0.12
127	85		At	$-\alpha$	-8629.0	2.1	7798.344	0.010	β^-	32	4	211 990736.4	2.3
126	86		Rn	$-\alpha$	-8660.9	2.9	7794.804	0.014		*		211 990702	3
125	87		Fr		-3516	9	7766.85	0.04	β^+	5145	9	211 996225	9
124	88		Ra		-200	10	7747.51	0.05	β^+	3316	13	211 999785	11
123	89		Ac		7299	22	7708.45	0.10	β^+	7499	24	212 007835	23
122	90		Th	$-\alpha$	12114	10	7682.05	0.05	β^+	4815	24	212 013005	11
121	91		Pa	$-\alpha$	21590	60	7633.66	0.28	β^+	9480	60	212 023180	60
120	92		U	x	27890#	300#	7600#	1#	β^+	6300#	310#	212 029940#	320#
133	80	213	Hg	x	8030#	300#	7740#	1#	β^-	6250#	300#	213 008620#	320#
132	81		Tl	x	1784	27	7765.43	0.13	β^-	4987	28	213 001915	29
131	82		Pb	$+\alpha$	-3203	7	7785.17	0.03	β^-	2030	7	212 996561	7
130	83		Bi		-5233.48	0.29	7791.030	0.001	β^-	1413.1	2.7	212 994381.6	0.3
129	84		Po	$-\alpha$	-6646.5	2.6	7793.991	0.012		*		212 992864.7	2.8
128	85		At	$-\alpha$	-6580	5	7790.008	0.022	β^+	66	5	212 992936	5
127	86		Rn	$-\alpha$	-5697	3	7782.189	0.015	β^+	883	6	212 993884	3
126	87		Fr		-3555	5	7768.457	0.022	β^+	2143	6	212 996184	5
125	88		Ra		346	10	7746.47	0.05	β^+	3900	11	213 000371	11
124	89		Ac		6140	12	7715.59	0.05	β^+	5795	15	213 006592	13
123	90		Th	$-\alpha$	12120	9	7683.85	0.04	β^+	5979	15	213 013011	10
122	91		Pa	$-\alpha$	19660	60	7644.79	0.27	β^+	7540	60	213 021100	60
121	92		U	x	27440#	200#	7605#	1#	β^+	7780#	210#	213 029460#	220#
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		-184.3	1.6	7772.401	0.008	β^-	1018	11	213 999802.2	1.8
131	83		Bi		-1202	11	7773.50	0.05	β^-	3269	11	213 998710	12
130	84		Po		-4470.9	0.8	7785.121	0.004	β^-	-1091	4	213 995200.3	0.9
129	85		At		-3380	4	7776.367	0.018	β^-	941	10	213 996371	4
128	86		Rn	$-\alpha$	-4321	9	7777.11	0.04		*		213 995361	10
127	87		Fr	$-\alpha$	-960	8	7757.75	0.04	β^+	3361	12	213 998970	9
126	88		Ra	$-\alpha$	92	5	7749.178	0.024	β^+	1051	10	214 000098	6
125	89		Ac		6433	14	7715.89	0.06	β^+	6341	14	214 006906	15
124	90		Th	$-\alpha$	10692	10	7692.33	0.05	β^+	4259	17	214 011479	11
123	91		Pa	$-\alpha$	19390	80	7648.0	0.4	β^+	8700	80	214 020820	80
122	92		U	$-\alpha$	25178	26	7617.33	0.12	β^+	5790	80	214 027030	27
135	80	215	Hg	x	17000#	400#	7701#	2#	β^-	6970#	500#	215 018250#	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	5	7761.719	0.025	β^-	2171	5	215 001749	6
131	84		Po		-541.8	0.6	7768.177	0.003	β^-	712	4	214 999418.3	0.6
130	85		At	$-\alpha$	-1254	4	7767.849	0.017		*		214 998654	4
129	86		Rn	$-\alpha$	-1169	5	7763.818	0.024	β^+	84	6	214 998745	5
128	87		Fr	$-\alpha$	317	7	7753.26	0.03	β^+	1487	9	215 000341	7
127	88		Ra	$-\alpha$	2531	7	7739.33	0.03	β^+	2214	10	215 002717	8
126	89		Ac	$-\alpha$	6030	12	7719.42	0.06	β^+	3499	14	215 006474	13
125	90		Th	$-\alpha$	10922	6	7693.024	0.030	β^+	4892	14	215 011725	7
124	91		Pa	$-\alpha$	17810	80	7657.4	0.4	β^+	6880	80	215 019120	80
123	92		U	$-\alpha$	24930	80	7620.6	0.4	β^+	7120	110	215 026760	80

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	4096	11	216 006306	12
132	84		Po		1777.94	0.27	7758.841	0.001	β^-	-473	3	216 001908.69	0.29
131	85		At	$-\alpha$	2251	3	7753.028	0.014	β^-	2002	6	216 002417	3
130	86		Rn	$-\alpha$	250	5	7758.673	0.023		*		216 000268	5
129	87		Fr	$-\alpha$	2970	4	7742.455	0.019	β^+	2721	6	216 003189	4
128	88		Ra	$-\alpha$	3290	8	7737.35	0.04	β^+	320	9	216 003532	9
127	89		Ac	$-\alpha$	8150	9	7711.23	0.04	β^+	4860	12	216 008749	10
126	90		Th	$-\alpha$	10297	11	7697.67	0.05	β^+	2148	14	216 011055	12
125	91		Pa	$-\alpha$	17829	23	7659.18	0.11	β^+	7532	26	216 019141	25
124	92		U	$-\alpha$	23067	19	7631.30	0.09	β^+	5240	30	216 024764	21
123	93		Np	x	33050#	400#	7581#	2#	β^+	9980#	400#	216 035480#	430#
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^-	2846	19	217 009372	19
133	84		Po	$+\alpha$	5884	6	7741.359	0.029	β^-	1492	6	217 006317	7
132	85		At		4392.4	0.9	7744.627	0.004	β^-	727	4	217 004715.5	0.9
131	86		Rn	$-\alpha$	3666	4	7744.372	0.018		*		217 003935	4
130	87		Fr	$-\alpha$	4314	6	7737.779	0.029	β^+	648	7	217 004631	7
129	88		Ra	$-\alpha$	5888	7	7726.92	0.03	β^+	1574	9	217 006321	8
128	89		Ac		8702	10	7710.35	0.05	β^+	2813	12	217 009342	11
127	90		Th	$-\alpha$	12206	11	7690.60	0.05	β^+	3504	14	217 013103	11
126	91		Pa	$-\alpha$	17054	12	7664.65	0.06	β^+	4848	16	217 018308	13
125	92		U	$-\alpha$	22970#	80#	7634#	0#	β^+	5920#	80#	217 024660#	90#
124	93		Np	x	31080#	300#	7593#	1#	β^+	8110#	310#	217 033370#	320#
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^-	4861	27	218 014188	29
134	84		Po		8355.4	1.6	7731.536	0.008	β^-	256	12	218 008969.9	1.8
133	85		At	$-\alpha$	8099	11	7729.12	0.05	β^-	2883	12	218 008695	12
132	86		Rn		5216.4	2.0	7738.757	0.009	β^-	-1842	4	218 005600.1	2.1
131	87		Fr	$-\alpha$	7059	4	7726.718	0.019	β^-	414	11	218 007578	4
130	88		Ra	$-\alpha$	6644	10	7725.03	0.04		*		218 007133	10
129	89		Ac	$-\alpha$	10850	60	7702.14	0.27	β^+	4210	60	218 011650	60
128	90		Th	$-\alpha$	12379	9	7691.55	0.04	β^+	1530	60	218 013289	9
127	91		Pa	$-\alpha$	18649	18	7659.20	0.08	β^+	6270	20	218 020021	19
126	92		U	$-\alpha$	21892	13	7640.73	0.06	β^+	3242	22	218 023502	14
125	93		Np	x	30720#	200#	7597#	1#	β^+	8830#	200#	218 032980#	220#
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^-	2286	16	219 013614	17
134	85		At		10395.8	2.9	7720.198	0.013	β^-	1566.6	2.9	219 011160	3
133	86		Rn		8829.2	0.6	7723.779	0.003	β^-	209	4	219 009478.6	0.6
132	87		Fr	$-\alpha$	8620	4	7721.162	0.019		*		219 009254	4
131	88		Ra	$-\alpha$	9394	6	7714.057	0.027	β^+	774	7	219 010084	6
130	89		Ac	$-\alpha$	11570	50	7700.55	0.24	β^+	2180	50	219 012420	60
129	90		Th	$-\alpha$	14469	9	7683.74	0.04	β^+	2900	50	219 015533	10
128	91		Pa	$-\alpha$	18580	70	7661.4	0.3	β^+	4110	70	219 019950	70
127	92		U	$-\alpha$	23296	13	7636.28	0.06	β^+	4710	70	219 025010	14
126	93		Np	$-\alpha$	29410	80	7604.8	0.4	β^+	6120	80	219 031580	80

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	3768	14	220 015433	15
134	86		Rn		10607.62	0.25	7717.275	0.001	β^-	-869	4	220 011387.75	0.27
133	87		Fr	$-\alpha$	11477	4	7709.767	0.016	β^-	1207	7	220 012321	4
132	88		Ra	$-\alpha$	10270	6	7711.698	0.029		*		220 011025	7
131	89		Ac	$-\alpha$	13743	6	7692.355	0.027	β^+	3473	9	220 014754	6
130	90		Th	$-\alpha$	14688	14	7684.50	0.06	β^+	945	15	220 015768	15
129	91		Pa	$-\alpha$	20294	11	7655.47	0.05	β^+	5606	18	220 021786	12
128	92		U	$-\alpha$	22910#	100#	7640#	0#	β^+	2620#	100#	220 024600#	110#
127	93		Np	$-\alpha$	30520	60	7601.87	0.26	β^+	7610#	120#	220 032760	60
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	$+\alpha$	14472	5	7701.392	0.024	β^-	1197	5	221 015536	6
134	87		Fr		13275.2	0.7	7703.267	0.003	β^-	304	4	221 014251.5	0.7
133	88		Ra	$-\alpha$	12971	4	7701.104	0.020		*		221 013925	5
132	89		Ac	$-\alpha$	14520	50	7690.54	0.23	β^+	1550	50	221 015590	50
131	90		Th	$-\alpha$	16939	8	7676.07	0.03	β^+	2420	50	221 018185	8
130	91		Pa	$-\alpha$	20370	60	7656.98	0.27	β^+	3430	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^-	4582	16	222 022494	17
136	86		Rn		16370.7	1.6	7694.505	0.007	β^-	-7	8	222 017574.7	1.7
135	87		Fr	x	16378	7	7690.95	0.03	β^-	2058	9	222 017583	8
134	88		Ra		14320	4	7696.696	0.018		*		222 015373	4
133	89		Ac	$-\alpha$	16621	5	7682.806	0.021	β^+	2301	6	222 017843	5
132	90		Th	$-\alpha$	17200	10	7676.67	0.05	β^+	579	11	222 018465	11
131	91		Pa	$-\alpha$	22070	90	7651.2	0.4	β^+	4870	90	222 023690	90
130	92		U	$-\alpha$	24220	12	7638.00	0.05	β^+	2150	90	222 026001	13
129	93		Np	$-\alpha$	31270	40	7602.70	0.17	β^+	7050	40	222 033570	40
128	94		Pu	x	34850#	300#	7583#	1#	β^+	3580#	300#	222 037410#	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^-	2008	8	223 021889	8
136	87		Fr		18382.1	0.9	7683.667	0.004	β^-	1149.0	0.8	223 019734.0	1.0
135	88		Ra		17233.1	0.6	7685.311	0.003		*		223 018500.5	0.6
134	89		Ac	$-\alpha$	17828	4	7679.134	0.019	β^+	595	4	223 019139	5
133	90		Th	$-\alpha$	19386	7	7668.64	0.03	β^+	1558	8	223 020811	8
132	91		Pa	$-\alpha$	22340	80	7651.9	0.3	β^+	2950	80	223 023980	80
131	92		U	$-\alpha$	26056	17	7631.71	0.08	β^+	3720	80	223 027973	18
130	93		Np	$-\alpha$	30660	80	7607.6	0.4	β^+	4600	80	223 032910	90
129	94		Pu	x	36120#	300#	7580#	1#	β^+	5460#	310#	223 038780#	320#
128	95		Am	x	42820#	300#	7546#	1#	β^+	6700#	420#	223 045970#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	2927	11	224 023348	12
136	88		Ra		18821.49	0.29	7679.943	0.001	β^-	-1407	4	224 020205.7	0.3
135	89		Ac	$-\alpha$	20229	4	7670.167	0.016	β^-	236	9	224 021717	4
134	90		Th	$-\alpha$	19993	8	7667.73	0.04		*		224 021463	9
133	91		Pa	$-\alpha$	23862	8	7646.96	0.03	β^+	3869	11	224 025616	8
132	92		U	$-\alpha$	25741	15	7635.08	0.07	β^+	1879	17	224 027634	16
131	93		Np	$-\alpha$	32030	30	7603.50	0.14	β^+	6290	30	224 034390	30
130	94		Pu	x	35110#	300#	7586#	1#	β^+	3080#	300#	224 037690#	320#
129	95		Am	x	43630#	400#	7545#	2#	β^+	8520#	500#	224 046840#	430#
141	84	225	Po	x	34580#	300#	7626#	1#	β^-	4280#	360#	225 037120#	320#
140	85		At	x	30300#	200#	7641#	1#	β^-	3770#	200#	225 032530#	220#
139	86		Rn		26534	11	7654.36	0.05	β^-	2713	16	225 028486	12
138	87		Fr		23821	12	7662.94	0.05	β^-	1827	12	225 025573	13
137	88		Ra		21993.6	1.7	7667.584	0.008	β^-	358.2	2.3	225 023611.1	1.9
136	89		Ac		21635.4	1.5	7665.699	0.007		*		225 023226.5	1.6
135	90		Th	$-\alpha$	22317	5	7659.192	0.022	β^+	682	5	225 023958	5
134	91		Pa	$-\alpha$	24340	50	7646.73	0.22	β^+	2020	50	225 026130	50
133	92		U	$-\alpha$	27369	10	7629.79	0.04	β^+	3030	50	225 029382	10
132	93		Np	$-\alpha$	31620	90	7607.4	0.4	β^+	4250	90	225 033940	100
131	94		Pu	x	36470#	300#	7582#	1#	β^+	4850#	310#	225 039150#	320#
130	95		Am	x	42480#	400#	7552#	2#	β^+	6010#	500#	225 045600#	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^-	3854	6	226 029545	7
138	88		Ra		23666.3	1.6	7661.969	0.007	β^-	-642	3	226 025406.8	1.7
137	89		Ac		24308.1	2.9	7655.668	0.013	β^-	1111	4	226 026096	3
136	90		Th		23197	4	7657.122	0.018		*		226 024903	4
135	91		Pa	$-\alpha$	26033	11	7641.11	0.05	β^+	2836	12	226 027947	12
134	92		U	$-\alpha$	27325	11	7631.93	0.05	β^+	1293	16	226 029335	12
133	93		Np	$-\alpha$	32740	110	7604.5	0.5	β^+	5410	110	226 035140	110
132	94		Pu	$-\alpha$	35557	27	7588.59	0.12	β^+	2820	110	226 038172	29
131	95		Am	x	43280#	300#	7551#	1#	β^+	7720#	300#	226 046460#	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^-	2506	6	227 031865	6
139	88		Ra	-n	27176.2	1.6	7648.310	0.007	β^-	1326.9	1.8	227 029174.9	1.7
138	89		Ac		25849.3	0.9	7650.709	0.004	β^-	44.7	0.8	227 027750.4	0.9
137	90		Th		25804.6	0.6	7647.460	0.003		*		227 027702.4	0.6
136	91		Pa	$-\alpha$	26833	5	7639.481	0.021	β^+	1029	5	227 028807	5
135	92		U	$-\alpha$	29045	8	7626.29	0.03	β^+	2212	9	227 031181	8
134	93		Np	$-\alpha$	32580	80	7607.3	0.3	β^+	3540	80	227 034980	80
133	94		Pu	$-\alpha$	36800	26	7585.23	0.11	β^+	4220	80	227 039507	28
132	95		Am	x	42270#	200#	7558#	1#	β^+	5470#	200#	227 045380#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	4443	7	228 035839	7
140	88		Ra	$+\alpha$	28941.6	1.7	7642.423	0.007	β^-	45.5	0.6	228 031070.1	1.8
139	89		Ac	$-$	28896.0	1.8	7639.191	0.008	β^-	2129.4	1.8	228 031021.2	1.9
138	90		Th		26766.6	0.4	7645.099	0.002		*		228 028735.2	0.4
137	91		Pa	$-\alpha$	28918	4	7632.231	0.017	β^+	2152	4	228 031045	4
136	92		U	$-\alpha$	29217	13	7627.49	0.05	β^+	299	13	228 031366	13
135	93		Np	$-\alpha$	33820#	100#	7604#	0#	β^+	4610#	100#	228 036310#	110#
134	94		Pu	$-\alpha$	36106	23	7590.41	0.10	β^+	2280#	100#	228 038761	25
133	95		Am	x	43020#	300#	7557#	1#	β^+	6910#	300#	228 046180#	320#
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 038292	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		29586.1	1.4	7634.648	0.006		*		229 031762.0	1.5
138	91		Pa		29896.1	2.7	7629.878	0.012	β^+	310	3	229 032094.8	2.9
137	92		U	$-\alpha$	31218	6	7620.691	0.025	β^+	1322	6	229 033513	6
136	93		Np	$-\alpha$	33780	80	7606.1	0.3	β^+	2570	80	229 036270	80
135	94		Pu	$-\alpha$	37390	60	7586.90	0.26	β^+	3610	100	229 040140	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^-	2977	16	230 036327	17
140	90		Th		30861.3	0.5	7631.003	0.002	β^-	-1311.2	2.8	230 033130.9	0.5
139	91		Pa		32172.4	2.9	7621.901	0.012	β^-	558	4	230 034539	3
138	92		U	$-\alpha$	31614	4	7620.925	0.018		*		230 033940	4
137	93		Np	$-\alpha$	35240	50	7601.78	0.24	β^+	3620	60	230 037830	60
136	94		Pu	$-\alpha$	36929	14	7591.02	0.06	β^+	1690	60	230 039645	15
135	95		Am	$-\alpha$	42940#	230#	7561#	1#	β^+	6010#	230#	230 046100#	240#
134	96		Cm	x	46420#	300#	7543#	1#	β^+	3480#	380#	230 049830#	320#
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^-	1948	13	231 038393	14
141	90		Th		33814.6	0.5	7620.124	0.002	β^-	390.6	1.0	231 036301.5	0.6
140	91		Pa		33424.0	1.0	7618.428	0.004		*		231 035882.1	1.1
139	92		U	$-\alpha$	33805.8	1.8	7613.388	0.008	β^+	381.8	1.9	231 036292.1	1.9
138	93		Np	$-\alpha$	35630	50	7602.12	0.22	β^+	1820	50	231 038250	50
137	94		Pu	$-\alpha$	38309	22	7587.12	0.09	β^+	2680	60	231 041126	23
136	95		Am	$-\alpha$	42390#	90#	7566#	0#	β^+	4080#	100#	231 045510#	100#
135	96		Cm	x	47320#	300#	7541#	1#	β^+	4930#	310#	231 050800#	320#
134	97		Bk	x	53370#	200#	7512#	1#	β^+	6050#	360#	231 057300#	220#
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^-	3706	13	232 042034	14
142	90		Th		35448.1	0.9	7615.028	0.004	β^-	-494	7	232 038055.1	1.0
141	91		Pa	+	35942	7	7609.53	0.03	β^-	1337	7	232 038586	8
140	92		U		34605.2	0.4	7611.917	0.002		*		232 037150.2	0.4
139	93		Np	$-$	37360#	100#	7597#	0#	β^+	2750#	100#	232 040100#	110#
138	94		Pu	$-\alpha$	38358	16	7589.00	0.07	β^+	1000#	100#	232 041179	17
137	95		Am	$-\alpha$	43340#	220#	7564#	1#	β^+	4980#	220#	232 046530#	240#
136	96		Cm	$-\alpha$	46270#	200#	7548#	1#	β^+	2930#	300#	232 049670#	220#
135	97		Bk	x	53790#	300#	7512#	1#	β^+	7520#	360#	232 057750#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

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^-	2575	13	233 044346	14
143	90		Th		38733.0	0.9	7602.888	0.004	β^-	1244.5	1.1	233 041581.6	1.0
142	91		Pa		37488.6	0.8	7604.871	0.004	β^-	568.6	1.1	233 040245.6	0.9
141	92		U		36920.0	0.9	7603.954	0.004		*		233 039635.2	0.9
140	93		Np	$-\alpha$	37950	50	7596.18	0.22	β^+	1030	50	233 040740	50
139	94		Pu	$-\alpha$	40060	50	7583.77	0.23	β^+	2110	70	233 043000	60
138	95		Am	$-\alpha$	43160#	90#	7567#	0#	β^+	3100#	110#	233 046330#	100#
137	96		Cm	$-\alpha$	47290	60	7546.01	0.27	β^+	4130#	110#	233 050770	70
136	97		Bk	$-\alpha$	52890#	230#	7519#	1#	β^+	5600#	240#	233 056780#	250#
147	87	234	Fr	x	53130#	200#	7553#	1#	β^-	6200#	200#	234 057040#	220#
146	88		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	$+\alpha$	40613.6	2.1	7596.853	0.009	β^-	271.4	1.1	234 043600.5	2.3
143	91		Pa	IT	40342.1	2.4	7594.670	0.010	β^-	2197.0	2.5	234 043309.1	2.6
142	92		U		38145.1	0.5	7600.715	0.002		*		234 040950.5	0.5
141	93		Np	$-$	39955	8	7589.64	0.04	β^+	1810	8	234 042893	9
140	94		Pu	$-\alpha$	40349	7	7584.608	0.028	β^+	394	11	234 043317	7
139	95		Am	$-\alpha$	44400#	160#	7564#	1#	β^+	4050#	160#	234 047670#	170#
138	96		Cm	$-\alpha$	46719	17	7550.70	0.07	β^+	2320#	160#	234 050155	18
137	97		Bk	$-\alpha$	53460#	230#	7519#	1#	β^+	6750#	230#	234 057400#	250#
148	87	235	Fr	x	56250#	300#	7542#	1#	β^-	5120#	360#	235 060390#	320#
147	88		Ra	x	51130#	200#	7561#	1#	β^-	3770#	200#	235 054890#	220#
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^-	1726	19	235 047255	14
144	91		Pa		42292	13	7588.40	0.06	β^-	1373	13	235 045402	14
143	92		U		40919.0	0.4	7590.914	0.002		*		235 043928.4	0.5
142	93		Np		41043.2	0.9	7587.057	0.004	β^+	124.2	0.8	235 044061.7	1.0
141	94		Pu	$-\alpha$	42182	20	7578.88	0.09	β^+	1139	20	235 045284	22
140	95		Am	$-\alpha$	44630	50	7565.15	0.22	β^+	2450	60	235 047910	60
139	96		Cm	$-\alpha$	47865	30	7548.04	0.13	β^+	3240	60	235 051390	30
138	97		Bk	$-\alpha$	52720#	110#	7524#	0#	β^+	4850#	120#	235 056600#	120#
137	98		Cf	x	58420#	300#	7496#	1#	β^+	5700#	320#	235 062720#	320#
148	88	236	Ra	x	53940#	300#	7551#	1#	β^-	2720#	300#	236 057910#	320#
147	89		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		42444.9	0.4	7586.484	0.002	β^-	-930	50	236 045566.5	0.5
143	93		Np	IT	43370	50	7579.23	0.21	β^-	480	50	236 046560	50
142	94		Pu		42897.2	0.4	7577.937	0.002		*		236 046052.1	0.4
141	95		Am	$-\alpha$	46040#	120#	7561#	1#	β^+	3140#	120#	236 049420#	130#
140	96		Cm	$-\alpha$	47850	17	7550.32	0.07	β^+	1810#	120#	236 051369	18
139	97		Bk	$-\alpha$	53460#	300#	7523#	1#	β^+	5610#	300#	236 057400#	320#
138	98		Cf	$-\alpha$	57200#	280#	7504#	1#	β^+	3730#	410#	236 061400#	310#
149	88	237	Ra	x	58350#	400#	7535#	2#	β^-	4330#	450#	237 062640#	430#
148	89		Ac	x	54020#	200#	7550#	1#	β^-	4070#	200#	237 057990#	220#
147	90		Th	x	49955	16	7563.44	0.07	β^-	2419	20	237 053629	17
146	91		Pa		47536	12	7570.35	0.05	β^-	2145	12	237 051032	13
145	92		U		45390.5	0.6	7576.101	0.003	β^-	520.0	0.5	237 048728.7	0.7
144	93		Np		44870.5	0.4	7574.994	0.002		*		237 048170.4	0.5
143	94		Pu		45090.7	1.3	7570.764	0.006	β^+	220.2	1.3	237 048406.8	1.4
142	95		Am	$-\alpha$	46570#	60#	7561#	0#	β^+	1480#	60#	237 049990#	60#
141	96		Cm	$-\alpha$	49250	70	7546.6	0.3	β^+	2690#	100#	237 052880	80
140	97		Bk	$-\alpha$	53080#	220#	7527#	1#	β^+	3830#	230#	237 056990#	240#
139	98		Cf	$-\alpha$	57940	80	7503.4	0.4	β^+	4850#	240#	237 062200	90
138	99		Es	x	64300#	400#	7473#	2#	β^+	6370#	410#	237 069030#	430#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu	
149	89	238	Ac	x	58100#	200#	7535#	1#	β^-	5660# 300#	238 062370#	220#
148	90		Th	$+\alpha$	52440#	220#	7555#	1#	β^-	1550# 220#	238 056300#	240#
147	91		Pa	x	50894	16	7558.34	0.07	β^-	3586 16	238 054637	17
146	92		U		47308.370	0.015	7570.124	*a*	β^-	-145.1 0.5	238 050787.621	0.016
145	93		Np	-n	47453.5	0.5	7566.227	0.002	β^-	1290.1 0.4	238 050943.4	0.5
144	94		Pu		46163.3	0.5	7568.360	0.002		*	238 049558.4	0.5
143	95		Am	$-\alpha$	48420	60	7555.58	0.25	β^+	2260 60	238 051980	60
142	96		Cm	$-\alpha$	49445	12	7548.00	0.05	β^+	1020 60	238 053081	13
141	97		Bk	$-\alpha$	54160#	260#	7525#	1#	β^+	4710# 260#	238 058140#	280#
140	98		Cf	x	57160#	300#	7509#	1#	β^+	3010# 390#	238 061370#	320#
139	99		Es	x	64500#	400#	7475#	2#	β^+	7340# 500#	238 069240#	430#
150	89	239	Ac	x	61170#	200#	7524#	1#	β^-	4670# 360#	239 065670#	220#
149	90		Th	x	56500#	300#	7540#	1#	β^-	3160# 360#	239 060660#	320#
148	91		Pa	x	53340#	200#	7550#	1#	β^-	2760# 200#	239 057260#	210#
147	92		U	-n	50573.31	0.17	7558.560	0.001	β^-	1261.3 0.8	239 054292.67	0.19
146	93		Np		49312.0	0.8	7560.564	0.003	β^-	723.5 0.8	239 052938.6	0.8
145	94		Pu		48588.5	0.4	7560.318	0.002		*	239 052161.9	0.5
144	95		Am	$-\alpha$	49389.9	1.8	7553.691	0.007	β^+	801.4 1.7	239 053022.2	1.9
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^+	3110# 260#	239 058240#	220#
141	98		Cf	$-\alpha$	58050	70	7507.62	0.29	β^+	3800# 220#	239 062320	70
140	99		Es	$-\alpha$	63650#	230#	7481#	1#	β^+	5590# 240#	239 068330#	250#
150	90	240	Th	x	59230#	400#	7531#	2#	β^-	2220# 450#	240 063590#	430#
149	91		Pa	x	57010#	200#	7537#	1#	β^-	4310# 200#	240 061200#	220#
148	92		U		52703.9	1.1	7551.819	0.005	β^-	391 17	240 056580.0	1.2
147	93		Np		52313	17	7550.19	0.07	β^-	2187 17	240 056160	18
146	94		Pu		50125.7	0.4	7556.042	0.002		*	240 053812.1	0.4
145	95		Am	+n	51509	14	7547.02	0.06	β^+	1383 14	240 055297	15
144	96		Cm		51720.0	0.7	7542.879	0.003	β^+	211 14	240 055523.7	0.8
143	97		Bk	$-\alpha$	55560#	230#	7524#	1#	β^+	3840# 230#	240 059650#	250#
142	98		Cf	$-\alpha$	57986	17	7510.25	0.07	β^+	2430# 230#	240 062251	19
141	99		Es	$-\alpha$	64200#	310#	7481#	1#	β^+	6210# 310#	240 068920#	330#
151	90	241	Th	x	63730#	400#	7515#	2#	β^-	3990# 500#	241 068420#	430#
150	91		Pa	x	59740#	300#	7528#	1#	β^-	3500# 300#	241 064130#	320#
149	92		U	x	56240	40	7539.32	0.19	β^-	1840 50	241 060370	50
148	93		Np		54399	29	7543.70	0.12	β^-	1443 29	241 058400	30
147	94		Pu		52955.5	0.4	7546.438	0.002	β^-	22.27 0.03	241 056850.0	0.4
146	95		Am		52933.2	0.4	7543.284	0.002		*	241 056826.1	0.4
145	96		Cm		53700.7	1.2	7536.853	0.005	β^+	767.5 1.2	241 057650.1	1.3
144	97		Bk	$+\alpha$	55970#	180#	7524#	1#	β^+	2270# 180#	241 060090#	190#
143	98		Cf	$-\alpha$	59180	70	7507.6	0.3	β^+	3210# 190#	241 063540	80
142	99		Es	$-\alpha$	63770#	220#	7485#	1#	β^+	4580# 230#	241 068460#	240#
141	100		Fm	x	69200#	300#	7460#	1#	β^+	5430# 370#	241 074290#	320#
151	91	242	Pa	x	63760#	300#	7514#	1#	β^-	5060# 310#	242 068450#	320#
150	92		U	x	58700	90	7531.4	0.4	β^-	1150 120	242 063010	100
149	93		Np		57540	80	7532.9	0.3	β^-	2830 80	242 061780	80
148	94		Pu		54717.3	0.6	7541.327	0.003	β^-	-749.5 0.6	242 058741.5	0.7
147	95		Am	-n	55466.9	0.4	7534.997	0.002	β^-	663.0 0.4	242 059546.1	0.4
146	96		Cm		54803.9	0.5	7534.503	0.002		*	242 058834.4	0.5
145	97		Bk	IT	57740#	100#	7519#	0#	β^+	2940# 100#	242 061990#	110#
144	98		Cf	$-\alpha$	59386	13	7509.10	0.05	β^+	1640# 100#	242 063754	14
143	99		Es	$-\alpha$	64740#	260#	7484#	1#	β^+	5350# 260#	242 069500#	280#
142	100		Fm	$-\alpha$	68400#	360#	7465#	1#	β^+	3660# 440#	242 073430#	390#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
152	91	243	Pa	x	66870#	400#	7503#	2#	β^-	4390#	450#	243 071790#	430#
151	92		U	x	62480#	200#	7518#	1#	β^-	2570#	200#	243 067080#	220#
150	93		Np	+p	59914	10	7525.34	0.04	β^-	2162	10	243 064321	11
149	94		Pu		57752.0	2.3	7531.019	0.010	β^-	575.5	2.4	243 061999.3	2.5
148	95		Am		57176.5	0.6	7530.168	0.002		*		243 061381.5	0.6
147	96		Cm	$-\alpha$	57182.2	1.1	7526.925	0.004	β^+	5.8	1.2	243 061387.7	1.2
146	97		Bk	$-\alpha$	58689	4	7517.504	0.018	β^+	1507	5	243 063005	5
145	98		Cf	$+\alpha$	60991	19	7504.81	0.08	β^+	2302	19	243 065476	20
144	99		Es	$-\alpha$	64750#	210#	7486#	1#	β^+	3760#	210#	243 069510#	220#
143	100		Fm	$-\alpha$	69170	90	7464.7	0.4	β^+	4420#	220#	243 074250	90
152	92	244	U	x	65220#	300#	7509#	1#	β^-	1820#	320#	244 070020#	320#
151	93		Np	x	63400#	100#	7513#	0#	β^-	3610#	100#	244 068060#	110#
150	94		Pu		59794.4	0.5	7524.863	0.002	β^-	-85.0	1.2	244 064192.0	0.5
149	95		Am	+	59879.5	1.1	7521.308	0.004	β^-	1427.3	1.0	244 064283.3	1.2
148	96		Cm		58452.2	0.4	7523.951	0.002		*		244 062751.0	0.4
147	97		Bk	$-\alpha$	60713	14	7511.48	0.06	β^+	2260	14	244 065178	15
146	98		Cf		61475.8	1.5	7505.147	0.006	β^+	763	14	244 065997.0	1.6
145	99		Es	$-\alpha$	65990#	250#	7483#	1#	β^+	4510#	250#	244 070840#	270#
144	100		Fm	$-\alpha$	69000#	200#	7468#	1#	β^+	3010#	320#	244 074080#	220#
143	101		Md	$-\alpha$	75720#	320#	7437#	1#	β^+	6720#	380#	244 081290#	350#
153	92	245	U	x	69500#	400#	7494#	2#	β^-	3440#	450#	245 074610#	430#
152	93		Np	x	66060#	200#	7505#	1#	β^-	2890#	200#	245 070920#	220#
151	94		Pu	-n	63167	13	7513.33	0.05	β^-	1266	14	245 067812	14
150	95		Am	$+\alpha$	61900.7	1.5	7515.303	0.006	β^-	895.8	1.5	245 066453.1	1.6
149	96		Cm		61004.8	0.5	7515.766	0.002		*		245 065491.4	0.5
148	97		Bk	$-\alpha$	61812.6	1.5	7509.276	0.006	β^+	807.8	1.5	245 066358.6	1.6
147	98		Cf		63384.1	2.2	7499.669	0.009	β^+	1571.5	2.6	245 068045.7	2.4
146	99		Es	$+\alpha$	66310#	180#	7485#	1#	β^+	2920#	180#	245 071180#	190#
145	100		Fm	$-\alpha$	70090#	110#	7466#	0#	β^+	3780#	210#	245 075240#	120#
144	101		Md	$-\alpha$	75180#	240#	7442#	1#	β^+	5090#	270#	245 080710#	260#
154	92	246	U	x	72570#	300#	7484#	1#	β^-	2590#	420#	246 077910#	320#
153	93		Np	x	69980#	300#	7491#	1#	β^-	4590#	300#	246 075130#	320#
152	94		Pu		65389	15	7506.56	0.06	β^-	409#	22#	246 070198	16
151	95		Am	IT	64979#	25#	7505#	0#	β^-	2362#	25#	246 069758#	27#
150	96		Cm		62617.7	1.0	7511.468	0.004		*		246 067222.9	1.1
149	97		Bk	–	63970	60	7502.80	0.24	β^+	1350	60	246 068670	60
148	98		Cf		64090.6	1.1	7499.121	0.005	β^+	120	60	246 068804.1	1.2
147	99		Es		67910	20	7480.42	0.08	β^+	3819	21	246 072904	22
146	100		Fm	$-\alpha$	70191	14	7467.96	0.06	β^+	2281	25	246 075353	15
145	101		Md	$-\alpha$	76050#	260#	7441#	1#	β^+	5860#	260#	246 081640#	280#
155	92	247	U	x	77140#	300#	7468#	1#	β^-	4190#	500#	247 082810#	320#
154	93		Np	x	72950#	400#	7481#	2#	β^-	3710#	450#	247 078320#	430#
153	94		Pu	x	69240#	200#	7493#	1#	β^-	2090#	220#	247 074330#	220#
152	95		Am	+	67150#	100#	7499#	0#	β^-	1620#	100#	247 072090#	110#
151	96		Cm		65530	4	7501.946	0.015	β^-	39	6	247 070349	4
150	97		Bk	$-\alpha$	65491	5	7498.935	0.020		*		247 070307	5
149	98		Cf	$+\alpha$	66109	14	7493.26	0.06	β^+	618	15	247 070971	15
148	99		Es	IT	68558	6	7480.183	0.024	β^+	2449	15	247 073600	6
147	100		Fm	$+\alpha$	71671	10	7464.41	0.04	β^+	3113	12	247 076942	11
146	101		Md	$-\alpha$	75950#	210#	7444#	1#	β^+	4280#	210#	247 081540#	220#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
156	92	248	U	x	80350#	300#	7457#	1#	β^-	3250#	420#	248 086260#	320#
155	93		Np	x	77100#	300#	7467#	1#	β^-	5300#	360#	248 082770#	320#
154	94		Pu	x	71800#	200#	7485#	1#	β^-	1250#	280#	248 077080#	220#
153	95		Am	+	70550#	200#	7487#	1#	β^-	3170#	200#	248 075740#	220#
152	96		Cm		67381.1	0.5	7496.776	0.002	β^-	-698	29	248 072336.5	0.5
151	97		Bk		68079	29	7490.81	0.12	β^-	841	29	248 073090	30
150	98		Cf		67239	5	7491.041	0.020		*		248 072184	5
149	99		Es	$-\alpha$	70300#	50#	7476#	0#	β^+	3060#	50#	248 075470#	60#
148	100		Fm		71897	8	7465.95	0.03	β^+	1600#	50#	248 077184	9
147	101		Md	$-\alpha$	77010#	260#	7442#	1#	β^+	5120#	260#	248 082680#	280#
146	102		No	$-\alpha$	81010#	280#	7423#	1#	β^+	3990#	390#	248 086960#	300#
157	92	249	U	x	85180#	300#	7440#	1#	β^-	4730#	420#	249 091440#	320#
156	93		Np	x	80450#	300#	7456#	1#	β^-	4450#	420#	249 086360#	320#
155	94		Pu	x	76000#	300#	7471#	1#	β^-	2900#	420#	249 081590#	320#
154	95		Am	x	73100#	300#	7479#	1#	β^-	2370#	300#	249 078480#	320#
153	96		Cm	-n	70739.0	0.6	7485.598	0.002	β^-	892.4	0.8	249 075941.4	0.6
152	97		Bk	+	69846.6	0.6	7486.040	0.002	β^-	123.6	0.4	249 074983.4	0.6
151	98		Cf		69723.0	0.4	7483.394	0.002		*		249 074850.7	0.4
150	99		Es	$-\alpha$	71210#	30#	7474#	0#	β^+	1490#	30#	249 076450#	30#
149	100		Fm		73518	6	7461.868	0.025	β^+	2310#	30#	249 078925	7
148	101		Md		77140	160	7444.2	0.6	β^+	3620	160	249 082810	170
147	102		No	$-\alpha$	81830#	110#	7422#	0#	β^+	4690#	200#	249 087850#	120#
155	95	250	Am	x	76860#	400#	7467#	2#	β^-	3880#	400#	250 082510#	430#
154	96		Cm	-nn	72978	10	7478.99	0.04	β^-	25	10	250 078345	11
153	97		Bk		72952.8	2.7	7475.956	0.011	β^-	1781.7	2.5	250 078318.0	2.8
152	98		Cf		71171.1	1.0	7479.954	0.004		*		250 076405.3	1.1
151	99		Es	–	73230#	100#	7469#	0#	β^+	2060#	100#	250 078610#	110#
150	100		Fm		74079	5	7462.061	0.021	β^+	850#	100#	250 079528	6
149	101		Md		78485	10	7441.31	0.04	β^+	4406	11	250 084257	11
148	102		No	$-\alpha$	81620#	200#	7426#	1#	β^+	3130#	200#	250 087620#	220#
147	103		Lr	x	88180#	300#	7396#	1#	β^+	6560#	360#	250 094670#	320#
155	96	251	Cm	+	76644	23	7466.74	0.09	β^-	1420	20	251 082281	24
154	97		Bk	+	75224	11	7469.28	0.04	β^-	1093	10	251 080757	11
153	98		Cf	$-\alpha$	74131	4	7470.515	0.015		*		251 079583	4
152	99		Es	$-\alpha$	74513	5	7465.878	0.020	β^+	382	6	251 079993	6
151	100		Fm		75959	14	7457.00	0.06	β^+	1446	15	251 081545	15
150	101		Md		78947	4	7441.979	0.015	β^+	2988	15	251 084753	4
149	102		No		82850.2	2.0	7423.312	0.008	β^+	3903	4	251 088943.4	2.1
148	103		Lr	$-\alpha$	87770#	210#	7401#	1#	β^+	4920#	210#	251 094220#	220#
156	96	252	Cm	x	79060#	300#	7460#	1#	β^-	530#	360#	252 084870#	320#
155	97		Bk	+	78520#	200#	7459#	1#	β^-	2500#	200#	252 084300#	220#
154	98		Cf		76022.9	0.5	7465.394	0.002	β^-	-1220	29	252 081614.0	0.5
153	99		Es		77243	29	7457.45	0.12	β^-	426	29	252 082920	30
152	100		Fm	$-\alpha$	76817	5	7456.032	0.020		*		252 082467	5
151	101		Md	x	80470	90	7438.4	0.4	β^+	3650	90	252 086390	100
150	102		No		82870	9	7425.80	0.04	β^+	2400	90	252 088965	10
149	103		Lr	$-\alpha$	88600#	260#	7400#	1#	β^+	5730#	260#	252 095120#	280#
148	104		Rf	x	93140#	300#	7379#	1#	β^+	4540#	400#	252 099990#	320#
157	96	253	Cm	x	82930#	300#	7447#	1#	β^-	1920#	470#	253 089030#	320#
156	97		Bk	$-\alpha$	81010#	360#	7451#	1#	β^-	1720#	360#	253 086970#	390#
155	98		Cf	$-\alpha$	79290	4	7454.876	0.014	β^-	279	4	253 085121	4
154	99		Es	$-\alpha$	79010.7	0.6	7452.887	0.002		*		253 084821.5	0.6
153	100		Fm	$-\alpha$	79345.8	1.1	7448.470	0.004	β^+	335.1	1.1	253 085181.2	1.2
152	101		Md	$-\alpha$	81210#	30#	7438#	0#	β^+	1860#	30#	253 087180#	30#
151	102		No		84358	7	7422.475	0.027	β^+	3150#	30#	253 090562	7
150	103		Lr		88490	160	7403.0	0.6	β^+	4140	160	253 095000	170
149	104		Rf	$-\alpha$	93710#	110#	7379#	0#	β^+	5220#	200#	253 100600#	120#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
157	97	254	Bk	x	84520#	300#	7440#	1#	β^-	3190#	300#	254 090740#	320#
156	98		Cf	$-\alpha$	81330	11	7449.27	0.04	β^-	-665	12	254 087311	12
155	99		Es		81994.8	2.7	7443.573	0.011	β^-	1091.5	2.3	254 088025.0	2.9
154	100		Fm		80903.3	1.4	7444.790	0.006		*		254 086853.3	1.5
153	101		Md	–	83450#	100#	7432#	0#	β^+	2550#	100#	254 089590#	110#
152	102		No		84733.1	1.5	7423.552	0.006	β^+	1280#	100#	254 090964.7	1.6
151	103		Lr		89734	5	7400.782	0.018	β^+	5001	5	254 096334	5
150	104		Rf	$-\alpha$	93250#	280#	7384#	1#	β^+	3520#	280#	254 100110#	300#
149	105		Db	x	100230#	300#	7353#	1#	β^+	6980#	410#	254 107600#	320#
157	98	255	Cf	+	84810#	200#	7438#	1#	β^-	720#	200#	255 091040#	220#
156	99		Es	$-\alpha$	84086	11	7437.84	0.04	β^-	289	10	255 090270	12
155	100		Fm	$-\alpha$	83797	4	7435.900	0.015		*		255 089960	4
154	101		Md	$-\alpha$	84844	5	7428.725	0.021	β^+	1047	7	255 091084	6
153	102		No		86812	14	7417.94	0.06	β^+	1968	15	255 093196	15
152	103		Lr		89932.6	1.7	7402.634	0.007	β^+	3121	14	255 096546.6	1.9
151	104		Rf		94326	13	7382.34	0.05	β^+	4393	13	255 101263	14
150	105		Db	$-\alpha$	99580#	210#	7359#	1#	β^+	5250#	210#	255 106900#	230#
158	98	256	Cf	$-\alpha$	87040#	310#	7432#	1#	β^-	-130#	330#	256 093440#	340#
157	99		Es	+	87170#	100#	7428#	0#	β^-	1700#	100#	256 093580#	110#
156	100		Fm	$-\alpha$	85473.1	2.0	7431.834	0.008		*		256 091759.2	2.1
155	101		Md	$-\alpha$	87467	30	7420.99	0.12	β^+	1993	30	256 093900	30
154	102		No	$-\alpha$	87823	7	7416.543	0.027	β^+	357	30	256 094282	8
153	103		Lr	x	91737	6	7398.197	0.022	β^+	3914	9	256 098484	6
152	104		Rf	$-\alpha$	94221	18	7385.44	0.07	β^+	2484	19	256 101150	19
151	105		Db	$-\alpha$	100360#	260#	7358#	1#	β^+	6140#	260#	256 107750#	280#
158	99	257	Es	$-\alpha$	89480#	410#	7422#	2#	β^-	910#	410#	257 096060#	440#
157	100		Fm	$-\alpha$	88578	4	7422.240	0.014		*		257 095093	4
156	101		Md	$-\alpha$	88992.7	1.1	7417.584	0.004	β^+	414	4	257 095537.6	1.2
155	102		No	$-\alpha$	90247	6	7409.658	0.024	β^+	1255	6	257 096884	7
154	103		Lr	$-\alpha$	92640#	30#	7397#	0#	β^+	2390#	30#	257 099450#	40#
153	104		Rf	$-\alpha$	95870	8	7381.69	0.03	β^+	3230#	30#	257 102920	9
152	105		Db		100130	160	7362.1	0.6	β^+	4260	160	257 107500	170
151	106		Sg	$-\alpha$	105830#	170#	7337#	1#	β^+	5700#	230#	257 113620#	180#
159	99	258	Es	x	92700#	400#	7412#	2#	β^-	2290#	450#	258 099520#	430#
158	100		Fm	$-\alpha$	90420#	200#	7418#	1#	β^-	-1280#	200#	258 097060#	220#
157	101		Md	$-\alpha$	91691	3	7409.659	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	$-\alpha$	96354	13	7382.49	0.05	β^+	1570#	100#	258 103440	14
153	105		Db		101647	11	7358.94	0.04	β^+	5293	17	258 109123	12
152	106		Sg	$-\alpha$	105350#	410#	7342#	2#	β^+	3700#	410#	258 113090#	440#
159	100	259	Fm	$-\alpha$	93700#	280#	7407#	1#	β^-	140#	300#	259 100590#	300#
158	101		Md	$-\alpha$	93560#	100#	7405#	0#		*		259 100440#	110#
157	102		No	$-\alpha$	94076	6	7399.985	0.024	β^+	520#	100#	259 100995	7
156	103		Lr	$-\alpha$	95850#	70#	7390#	0#	β^+	1780#	70#	259 102900#	80#
155	104		Rf	$-\alpha$	98287	18	7377.68	0.07	β^+	2430#	70#	259 105515	20
154	105		Db	$-\alpha$	102030#	40#	7360#	0#	β^+	3740#	40#	259 109530#	40#
153	106		Sg	$-\alpha$	106516	15	7339.87	0.06	β^+	4490#	40#	259 114349	16
152	107		Bh	x	112300#	300#	7315#	1#	β^+	5780#	300#	259 120560#	320#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
160	100	260	Fm	$-\alpha$	95770#	440#	7402#	2#	β^-	-770#	540#	260 102810#	470#
159	101		Md	$-\alpha$	96540#	320#	7396#	1#	β^-	940#	370#	260 103640#	340#
158	102		No	$-\alpha$	95600#	200#	7397#	1#		*		260 102630#	220#
157	103		Lr	$-\alpha$	98290#	150#	7383#	1#	β^+	2690#	250#	260 105520#	160#
156	104		Rf	$-\alpha$	99150#	200#	7377#	1#	β^+	860#	250#	260 106440#	220#
155	105		Db	$-\alpha$	103660#	40#	7357#	0#	β^+	4520#	210#	260 111290#	50#
154	106		Sg	$-\alpha$	106553	18	7342.54	0.07	β^+	2890#	50#	260 114390	20
153	107		Bh	$-\alpha$	113190#	270#	7314#	1#	β^+	6640#	270#	260 121510#	290#
160	101	261	Md	$-\alpha$	98660#	510#	7391#	2#	β^-	220#	550#	261 105910#	550#
159	102		No	$-\alpha$	98440#	200#	7388#	1#		*		261 105680#	220#
158	103		Lr	$-\alpha$	99610#	200#	7381#	1#	β^+	1160#	280#	261 106930#	220#
157	104		Rf	$-\alpha$	101290#	50#	7371#	0#	β^+	1680#	210#	261 108740#	60#
156	105		Db	$-\alpha$	104280#	110#	7357#	0#	β^+	2990#	120#	261 111950#	110#
155	106		Sg	$-\alpha$	108008	17	7339.76	0.07	β^+	3730#	110#	261 115952	18
154	107		Bh	$-\alpha$	113060	180	7317.4	0.7	β^+	5050	180	261 121370	190
153	108		Hs	x	119020#	400#	7292#	2#	β^+	5960#	440#	261 127770#	430#
161	101	262	Md	$-\alpha$	101670#	450#	7382#	2#	β^-	1580#	580#	262 109140#	480#
160	102		No	$-\alpha$	100090#	360#	7385#	1#		*		262 107450#	390#
159	103		Lr	$-\alpha$	102140#	200#	7374#	1#	β^+	2050#	410#	262 109650#	220#
158	104		Rf	$-\alpha$	102390#	220#	7370#	1#	β^+	260#	300#	262 109920#	240#
157	105		Db	$-\alpha$	106250#	140#	7352#	1#	β^+	3860#	270#	262 114070#	150#
156	106		Sg	$-\alpha$	108379	20	7341.14	0.08	β^+	2130#	140#	262 116349	21
155	107		Bh	$-\alpha$	114330#	150#	7315#	1#	β^+	5950#	150#	262 122740#	160#
154	108		Hs	x	118650#	300#	7296#	1#	β^+	4320#	340#	262 127380#	320#
161	102	263	No	$-\alpha$	103130#	490#	7376#	2#		*		263 110710#	530#
160	103		Lr	$-\alpha$	103710#	220#	7371#	1#	β^+	580#	540#	263 111330#	240#
159	104		Rf	$-\alpha$	104750#	150#	7364#	1#	β^+	1050#	270#	263 112460#	160#
158	105		Db	$-\alpha$	107110#	170#	7352#	1#	β^+	2360#	230#	263 114990#	180#
157	106		Sg	$-\alpha$	110120	60	7337.31	0.24	β^+	3000#	180#	263 118210	70
156	107		Bh	$-\alpha$	114530#	300#	7318#	1#	β^+	4420#	310#	263 122950#	320#
155	108		Hs	$-\alpha$	119670	80	7295.0	0.3	β^+	5140#	310#	263 128480	90
162	102	264	No	$-\alpha$	105010#	590#	7371#	2#	β^-	-1420#	730#	264 112730#	630#
161	103		Lr	$-\alpha$	106430#	440#	7363#	2#	β^-	370#	570#	264 114260#	470#
160	104		Rf	$-\alpha$	106060#	360#	7361#	1#		*		264 113860#	390#
159	105		Db	$-\alpha$	109270#	250#	7346#	1#	β^+	3210#	440#	264 117310#	270#
158	106		Sg	$-\alpha$	110780#	280#	7338#	1#	β^+	1510#	380#	264 118930#	300#
157	107		Bh	$-\alpha$	115950#	160#	7315#	1#	β^+	5170#	320#	264 124480#	170#
156	108		Hs	$-\alpha$	119569	27	7298.35	0.10	β^+	3620#	160#	264 128363	29
162	103	265	Lr	$-\alpha$	108310#	550#	7359#	2#		*		265 116280#	590#
161	104		Rf	$-\alpha$	108680#	360#	7354#	1#	β^+	370#	660#	265 116670#	390#
160	105		Db	$-\alpha$	110430#	220#	7345#	1#	β^+	1750#	420#	265 118550#	240#
159	106		Sg	$-\alpha$	112700#	60#	7333#	0#	β^+	2260#	230#	265 120980#	60#
158	107		Bh	$-\alpha$	116370#	240#	7316#	1#	β^+	3670#	250#	265 124930#	260#
157	108		Hs	$-\alpha$	120903	23	7296.24	0.09	β^+	4530#	240#	265 129795	24
156	109		Mt	$-\alpha$	126600#	440#	7272#	2#	β^+	5700#	440#	265 135910#	470#
163	103	266	Lr	$-\alpha$	111660#	540#	7349#	2#	β^-	1540#	680#	266 119870#	580#
162	104		Rf	$-\alpha$	110120#	410#	7351#	2#		*		266 118220#	440#
161	105		Db	$-\alpha$	112750#	280#	7339#	1#	β^+	2630#	500#	266 121040#	300#
160	106		Sg	$-\alpha$	113620#	250#	7332#	1#	β^+	870#	370#	266 121970#	260#
159	107		Bh	$-\alpha$	118110#	160#	7313#	1#	β^+	4490#	290#	266 126790#	180#
158	108		Hs	$-\alpha$	121149	25	7298.22	0.10	β^+	3050#	170#	266 130059	27
157	109		Mt	$-\alpha$	127750#	150#	7270#	1#	β^+	6600#	160#	266 137150#	170#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
163	104	267	Rf	$-\alpha$	113440#	580#	7342#	2#		*		267 121780#	620#
162	105		Db	$-\alpha$	114110#	370#	7336#	1#	β^+	670#	690#	267 122500#	400#
161	106		Sg	$-\alpha$	115730#	160#	7327#	1#	β^+	1620#	410#	267 124250#	170#
160	107		Bh	$-\alpha$	118770#	260#	7313#	1#	β^+	3030#	310#	267 127500#	280#
159	108		Hs	$-\alpha$	122580	60	7295.77	0.24	β^+	3810#	270#	267 131590	70
158	109		Mt	$-\alpha$	127830#	500#	7273#	2#	β^+	5250#	510#	267 137230#	540#
157	110		Ds	$-\alpha$	133880	90	7247.6	0.4	β^+	6050#	510#	267 143720	100
164	104	268	Rf	$-\alpha$	115480#	660#	7337#	2#	β^-	-1680#	850#	268 123970#	710#
163	105		Db	$-\alpha$	117160#	530#	7328#	2#	β^-	370#	710#	268 125770#	570#
162	106		Sg	$-\alpha$	116790#	470#	7326#	2#		*		268 125380#	500#
161	107		Bh	$-\alpha$	120720#	390#	7309#	1#	β^+	3930#	610#	268 129600#	420#
160	108		Hs	$-\alpha$	122970#	300#	7297#	1#	β^+	2250#	490#	268 132010#	320#
159	109		Mt	$-\alpha$	129140#	220#	7271#	1#	β^+	6170#	370#	268 138640#	230#
158	110		Ds	$-\alpha$	133650#	300#	7251#	1#	β^+	4510#	370#	268 143480#	320#
164	105	269	Db	$-\alpha$	119220#	620#	7323#	2#		*		269 127990#	670#
163	106		Sg	$-\alpha$	119650#	360#	7318#	1#	β^+	440#	720#	269 128450#	390#
162	107		Bh	$-\alpha$	121590#	370#	7308#	1#	β^+	1930#	520#	269 130530#	400#
161	108		Hs	$-\alpha$	124530#	80#	7294#	0#	β^+	2950#	380#	269 133690#	90#
160	109		Mt	$-\alpha$	129320#	310#	7274#	1#	β^+	4780#	320#	269 138830#	330#
159	110		Ds	$-\alpha$	134840	30	7250.14	0.11	β^+	5520#	310#	269 144750	30
165	105	270	Db	$-\alpha$	122400#	580#	7314#	2#	β^-	980#	740#	270 131400#	620#
164	106		Sg	$-\alpha$	121420#	460#	7314#	2#		*		270 130350#	490#
163	107		Bh	$-\alpha$	124290#	290#	7301#	1#	β^+	2870#	540#	270 133430#	310#
162	108		Hs	$-\alpha$	125110#	250#	7295#	1#	β^+	820#	380#	270 134310#	270#
161	109		Mt	$-\alpha$	130710#	190#	7271#	1#	β^+	5600#	310#	270 140320#	210#
160	110		Ds	$-\alpha$	134690	40	7253.73	0.14	β^+	3980#	200#	270 144600	40
165	106	271	Sg	$-\alpha$	124510#	580#	7306#	2#		*		271 133670#	620#
164	107		Bh	$-\alpha$	125900#	380#	7298#	1#	β^+	1390#	690#	271 135160#	410#
163	108		Hs	$-\alpha$	127670#	170#	7288#	1#	β^+	1770#	410#	271 137060#	180#
162	109		Mt	$-\alpha$	131140#	330#	7273#	1#	β^+	3470#	370#	271 140790#	350#
161	110		Ds	$-\alpha$	135870	70	7252.39	0.25	β^+	4730#	340#	271 145870	70
166	106	272	Sg	$-\alpha$	126450#	690#	7302#	3#		*		272 135750#	740#
165	107		Bh	$-\alpha$	128890#	530#	7290#	2#	β^+	2440#	870#	272 138370#	570#
164	108		Hs	$-\alpha$	128990#	470#	7286#	2#	β^+	100#	710#	272 138470#	500#
163	109		Mt	$-\alpha$	133490#	490#	7267#	2#	β^+	4510#	680#	272 143310#	530#
162	110		Ds	$-\alpha$	136120#	420#	7254#	2#	β^+	2630#	650#	272 146130#	460#
161	111		Rg	$-\alpha$	142760#	220#	7227#	1#	β^+	6640#	480#	272 153260#	230#
167	106	273	Sg	x	129760#	400#	7292#	1#		*		273 139300#	430#
166	107		Bh	$-\alpha$	130720#	660#	7286#	2#	β^+	960#	770#	273 140340#	700#
165	108		Hs	$-\alpha$	131730#	370#	7279#	1#	β^+	1010#	750#	273 141420#	400#
164	109		Mt	$-\alpha$	134780#	420#	7265#	2#	β^+	3050#	560#	273 144700#	460#
163	110		Ds	$-\alpha$	138210#	100#	7250#	0#	β^+	3430#	440#	273 148380#	110#
162	111		Rg	$-\alpha$	142900#	400#	7230#	1#	β^+	4690#	410#	273 153410#	430#
167	107	274	Bh	$-\alpha$	133760#	580#	7278#	2#	β^-	380#	740#	274 143600#	620#
166	108		Hs	$-\alpha$	133380#	470#	7276#	2#		*		274 143190#	500#
165	109		Mt	$-\alpha$	137340#	370#	7259#	1#	β^+	3960#	600#	274 147440#	400#
164	110		Ds	$-\alpha$	138970#	390#	7250#	1#	β^+	1630#	540#	274 149190#	420#
163	111		Rg	$-\alpha$	144610#	210#	7227#	1#	β^+	5650#	440#	274 155250#	230#
168	107	275	Bh	x	135780#	600#	7273#	2#		*		275 145770#	640#
167	108		Hs	$-\alpha$	136400#	580#	7268#	2#	β^+	620#	830#	275 146430#	620#
166	109		Mt	$-\alpha$	138820#	380#	7256#	1#	β^+	2420#	690#	275 149030#	410#
165	110		Ds	$-\alpha$	141330#	340#	7244#	1#	β^+	2510#	520#	275 151720#	370#
164	111		Rg	$-\alpha$	145340#	450#	7227#	2#	β^+	4010#	560#	275 156030#	480#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	*Z*	*A*	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
169	107	276	Bh	x	138950#	600#	7265#	2#	β^-	830#	940#	276 149170#	640#
168	108		Hs	$-\alpha$	138130#	720#	7265#	3#		*		276 148280#	770#
167	109		Mt	$-\alpha$	141470#	530#	7250#	2#	β^+	3340#	900#	276 151870#	570#
166	110		Ds	$-\alpha$	142310#	470#	7244#	2#	β^+	850#	710#	276 152780#	510#
165	111		Rg	$-\alpha$	147400#	630#	7223#	2#	β^+	5080#	790#	276 158240#	680#
164	112		Cn	x	150420#	500#	7209#	2#	β^+	3020#	810#	276 161480#	540#
170	107	277	Bh	x	141130#	600#	7260#	2#		*		277 151510#	640#
169	108		Hs	$-\alpha$	141220#	450#	7256#	2#	β^+	90#	750#	277 151610#	480#
168	109		Mt	$-\alpha$	143080#	660#	7247#	2#	β^+	1850#	800#	277 153600#	710#
167	110		Ds	$-\alpha$	144900#	370#	7238#	1#	β^+	1820#	760#	277 155550#	400#
166	111		Rg	$-\alpha$	148330#	470#	7222#	2#	β^+	3430#	600#	277 159240#	500#
165	112		Cn	$-\alpha$	152260#	110#	7205#	0#	β^+	3930#	480#	277 163460#	120#
171	107	278	Bh	x	144440#	400#	7251#	1#	β^-	1320#	500#	278 155060#	430#
170	108		Hs	x	143120#	300#	7253#	1#		*		278 153650#	320#
169	109		Mt	$-\alpha$	145920#	590#	7240#	2#	β^+	2800#	660#	278 156650#	630#
168	110		Ds	$-\alpha$	146140#	510#	7236#	2#	β^+	220#	780#	278 156890#	550#
167	111		Rg	$-\alpha$	150610#	370#	7217#	1#	β^+	4470#	630#	278 161680#	400#
166	112		Cn	$-\alpha$	152610#	440#	7207#	2#	β^+	2010#	580#	278 163840#	470#
165	113		Nh	$-\alpha$	159030#	220#	7181#	1#	β^+	6420#	490#	278 170730#	240#
171	108	279	Hs	x	146410#	600#	7244#	2#		*		279 157180#	640#
170	109		Mt	$-\alpha$	147660#	670#	7236#	2#	β^+	1240#	900#	279 158510#	720#
169	110		Ds	$-\alpha$	148880#	590#	7229#	2#	β^+	1230#	890#	279 159830#	630#
168	111		Rg	$-\alpha$	151770#	390#	7216#	1#	β^+	2890#	700#	279 162940#	420#
167	112		Cn	$-\alpha$	154680#	400#	7203#	1#	β^+	2910#	560#	279 166060#	430#
166	113		Nh	x	159380#	600#	7183#	2#	β^+	4700#	720#	279 171100#	640#
172	108	280	Hs	x	148420#	600#	7239#	2#	β^-	-2130#	900#	280 159340#	640#
171	109		Mt	$-\alpha$	150550#	670#	7229#	2#	β^-	230#	1000#	280 161620#	720#
170	110		Ds	$-\alpha$	150320#	750#	7227#	3#		*		280 161380#	800#
169	111		Rg	$-\alpha$	154200#	540#	7210#	2#	β^+	3880#	920#	280 165540#	570#
168	112		Cn	$-\alpha$	155430#	510#	7203#	2#	β^+	1230#	740#	280 166860#	550#
167	113		Nh	x	161140#	400#	7180#	1#	β^+	5710#	650#	280 172990#	430#
172	109	281	Mt	$-\alpha$	152460#	670#	7225#	2#		*		281 163670#	720#
171	110		Ds	$-\alpha$	153160#	460#	7220#	2#	β^+	710#	810#	281 164430#	490#
170	111		Rg	$-\alpha$	155520#	770#	7209#	3#	β^+	2360#	900#	281 166960#	830#
169	112		Cn	$-\alpha$	157740#	370#	7198#	1#	β^+	2220#	860#	281 169340#	400#
168	113		Nh	x	161810#	300#	7181#	1#	β^+	4070#	480#	281 173710#	320#
173	109	282	Mt	$-\alpha$	155530#	450#	7217#	2#	β^-	790#	570#	282 166960#	480#
172	110		Ds	$-\alpha$	154730#	360#	7217#	1#		*		282 166110#	390#
171	111		Rg	$-\alpha$	158080#	600#	7203#	2#	β^+	3350#	700#	282 169710#	640#
170	112		Cn	$-\alpha$	158710#	550#	7198#	2#	β^+	630#	810#	282 170390#	590#
169	113		Nh	$-\alpha$	163810#	380#	7177#	1#	β^+	5100#	670#	282 175860#	410#
173	110	283	Ds	$-\alpha$	157700#	630#	7210#	2#		*		283 169300#	680#
172	111		Rg	$-\alpha$	159580#	680#	7201#	2#	β^+	1880#	930#	283 171320#	730#
171	112		Cn	$-\alpha$	161280#	600#	7192#	2#	β^+	1700#	900#	283 173140#	640#
170	113		Nh	$-\alpha$	164710#	410#	7177#	1#	β^+	3440#	720#	283 176830#	440#
174	110	284	Ds	x	159390#	500#	7207#	2#		*		284 171120#	540#
173	111		Rg	$-\alpha$	162270#	700#	7194#	2#	β^+	2880#	860#	284 174200#	750#
172	112		Cn	$-\alpha$	162420#	760#	7191#	3#	β^+	150#	1040#	284 174360#	820#
171	113		Nh	$-\alpha$	166880#	540#	7172#	2#	β^+	4460#	930#	284 179150#	580#
170	114		Fl	$-\alpha$	168580#	510#	7164#	2#	β^+	1700#	740#	284 180970#	550#

Table I. The 2026 Atomic Mass Table (continued, Explanation of Table on p. 120003-5)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μu	
174	111	285	Rg	x	163930#	600#	7191#	2#		*		285 175990#	640#
173	112		Cn	$-\alpha$	165060#	470#	7185#	2#	β^+	1130#	760#	285 177190#	500#
172	113		Nh	$-\alpha$	167960#	780#	7172#	3#	β^+	2900#	910#	285 180310#	830#
171	114		Fl	$-\alpha$	170760#	380#	7159#	1#	β^+	2810#	860#	285 183320#	410#
175	111	286	Rg	$-\alpha$	166740#	450#	7185#	2#	β^-	310#	590#	286 179010#	490#
174	112		Cn	$-\alpha$	166440#	370#	7183#	1#		*		286 178680#	400#
173	113		Nh	$-\alpha$	170300#	600#	7167#	2#	β^+	3860#	710#	286 182820#	640#
172	114		Fl	$-\alpha$	171460#	550#	7160#	2#	β^+	1170#	810#	286 184070#	590#
171	115		Mc	$-\alpha$	177100#	380#	7138#	1#	β^+	5640#	670#	286 190120#	410#
175	112	287	Cn	$-\alpha$	169290#	640#	7176#	2#		*		287 181740#	680#
174	113		Nh	$-\alpha$	171660#	710#	7165#	2#	β^+	2360#	950#	287 184280#	760#
173	114		Fl	$-\alpha$	173860#	600#	7155#	2#	β^+	2210#	930#	287 186650#	640#
172	115		Mc	$-\alpha$	177840#	410#	7138#	1#	β^+	3980#	730#	287 190920#	440#
176	112	288	Cn	x	170900#	700#	7174#	2#		*		288 183470#	750#
175	113		Nh	x	174180#	700#	7160#	2#	β^+	3280#	990#	288 186990#	750#
174	114		Fl	$-\alpha$	174900#	760#	7154#	3#	β^+	720#	1040#	288 187770#	820#
173	115		Mc	$-\alpha$	179880#	540#	7134#	2#	β^+	4980#	930#	288 193110#	580#
172	116		Lv	$-\alpha$	182240#	510#	7123#	2#	β^+	2360#	750#	288 195640#	550#
176	113	289	Nh	x	175750#	500#	7157#	2#		*		289 188680#	540#
175	114		Fl	$-\alpha$	177420#	470#	7149#	2#	β^+	1670#	690#	289 190460#	510#
174	115		Mc	$-\alpha$	180890#	780#	7134#	3#	β^+	3470#	910#	289 194190#	840#
173	116		Lv	$-\alpha$	184250#	380#	7120#	1#	β^+	3360#	870#	289 197800#	410#
177	113	290	Nh	$-\alpha$	178420#	540#	7151#	2#		*		290 191540#	580#
176	114		Fl	$-\alpha$	178720#	380#	7148#	1#	β^+	300#	660#	290 191860#	400#
175	115		Mc	$-\alpha$	183130#	600#	7130#	2#	β^+	4410#	710#	290 196600#	640#
174	116		Lv	$-\alpha$	184880#	550#	7121#	2#	β^+	1750#	820#	290 198480#	590#
177	114	291	Fl	$-\alpha$	181420#	640#	7141#	2#		*		291 194760#	690#
176	115		Mc	$-\alpha$	184380#	740#	7129#	3#	β^+	2960#	970#	291 197940#	790#
175	116		Lv	$-\alpha$	187180#	610#	7116#	2#	β^+	2800#	950#	291 200940#	650#
174	117		Ts	$-\alpha$	191920#	510#	7097#	2#	β^+	4740#	790#	291 206030#	550#
177	115	292	Mc	$-\alpha$	186820#	730#	7123#	2#		*		292 200550#	780#
176	116		Lv	$-\alpha$	188120#	760#	7116#	3#	β^+	1310#	1050#	292 201960#	820#
175	117		Ts	$-\alpha$	193780#	620#	7094#	2#	β^+	5660#	980#	292 208030#	660#
177	116	293	Lv	$-\alpha$	190520#	480#	7111#	2#		*		293 204530#	510#
176	117		Ts	$-\alpha$	194620#	780#	7095#	3#	β^+	4100#	910#	293 208930#	840#
175	118		Og	$-\alpha$	198700#	490#	7078#	2#	β^+	4090#	920#	293 213320#	520#
177	117	294	Ts	$-\alpha$	196740#	600#	7091#	2#		*		294 211210#	650#
176	118		Og	$-\alpha$	199170#	550#	7080#	2#	β^+	2440#	820#	294 213820#	590#
177	118	295	Og	$-\alpha$	201300#	640#	7076#	2#		*		295 216110#	680#

Table II. Influences on primary nuclides

EXPLANATION OF TABLE

This table gives for each of the 1493 primary nuclides the up to three most important contributing data and their *influences* ($\times 100$) on its mass, as given by the flow-of-information matrix.

Nuclide	Nuclidic name (primaries only)			
Influence	*Influence* ($\times 100$) brought to the determination of the mass of the nuclide, by the piece of data represented by the equation in following column			
Equation	K^m, Cs^m, Cs^n, In^p, Tl^q: higher isomers, see NUBASE.	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	86.3	H_2-D	4.6	^{3}He−H D	3.8	H D−C
^{2}H	59.8	D_6-C	11.6	H_2-D	8.2	^{3}He−H D
^{3}H	56.5	^{3}H−^{3}He	43.5	^{3}H−H D		
^{3}He	45.4	$^3He_4-C$	32.3	^{3}He−H D	22.3	^{3}H−^{3}He
^{4}He	73.0	$^4He_5-C$	23.2	D_2-^4He	3.7	H_2 D−^{4}He
^{6}He	100.0	^{6}He−$^7Li_{.857}$				
^{6}Li	100.0	$^6Li_2-C$				
^{7}Li	99.7	^{7}Li−H_7	0.2	^{10}Be−$^7Li_{1.429}$	0.1	^{7}Li(n,γ)^{8}Li
^{7}Be	90.2	^{7}Be−^{7}Li	9.8	^{7}Li(p,n)^{7}Be		
^{8}He	100.0	^{8}He−$^7Li_{1.143}$				
^{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	99.8	^{6}Li(^{3}He,n)^{8}B	0.2	^{8}B^i(IT)^{8}B		
^{8}B^i	86.2	^{11}B(^{3}He,^{6}He)^{8}B^i	13.8	^{8}B^i(IT)^{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	99.9	^{9}Be−u	0.1	^{9}Be(n,γ)^{10}Be		
^{9}C	100.0	^{7}Be(^{3}He,n)^{9}C				
^{10}Be	82.8	^{9}Be(n,γ)^{10}Be	17.2	^{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		
^{10}N	80.0	^{10}N(p)^{9}C	20.0	^{10}B(^{14}N,^{14}B)^{10}N		
^{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		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{11}C	100.0	^{11}C−^{14}N$_{.786}$				
^{11}C^{i}	50.0	^{9}Be(^{3}He,n)^{11}C^{i}	50.0	^{11}B(^{3}He,t)^{11}C^{i}		
^{12}Be	79.3	^{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}		
^{12}N	100.0	^{14}N(p,t)^{12}N				
^{13}C	75.2	^{13}C H−^{14}N	24.8	^{13}C$_2$ H$_2$−^{28}Si	0.3	^{136}Xe−^{13}C$_3$ O$_6$
^{14}Be	72.3	^{15}Be(γ,n)^{14}Be	27.7	^{14}Be−u		
^{14}B	99.8	^{14}C(^{7}Li,^{7}Be)^{14}B	0.2	^{10}B(^{14}N,^{14}B)^{10}N		
^{14}C	79.9	^{14}C H$_2$−N D	20.1	C D$_2$−^{14}C H$_2$		
^{14}N	74.3	N$_2$−C O	21.3	^{13}C H−^{14}N	1.6	^{14}N$_{10}$−^{132}Xe
^{14}O	100.0	^{14}O−^{14}N				
^{15}Be	98.3	^{15}Be(γ,3n)^{12}Be	1.7	^{15}Be(γ,n)^{14}Be		
^{15}B	88.4	^{18}O(^{48}Ca,^{51}V)^{15}B	11.6	^{16}B(γ,n)^{15}B		
^{15}N	61.0	C D H−^{15}N	25.5	^{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	39.3	^{16}O−H$_{16}$	31.8	O$_2$−^{31}P H	10.2	^{32}S−O$_2$
^{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	84.1	^{17}O$_2$−^{28}Si D$_3$	15.9	^{17}O−^{16}O H		
^{17}F	100.0	^{16}O(p,γ)^{17}F				
^{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	99.8	^{18}Ne−^{22}Ne$_{.818}$	0.2	^{22}Mg^{i}(α)^{18}Ne		
^{19}F	86.4	^{13}C D$_3$−^{19}F	13.6	^{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	99.9	^{20}Ne−u	0.1	^{20}Ne$_2$−^{40}Ar		
^{20}Na	100.0	^{20}Ne(^{3}He,t)^{20}Na−^{36}Ar()^{36}K				
^{20}Mg	100.0	^{20}Mg−^{23}Na$_{.870}$				
^{21}Ne	100.0	^{20}Ne(n,γ)^{21}Ne				
^{21}Na	100.0	^{21}Na−^{21}Ne				
^{21}Al	98.7	^{21}Al(p)^{20}Mg	1.3	^{21}Al^{p}(IT)^{21}Al		
^{21}Al^{p}	82.9	^{21}Al^{p}−u	17.1	^{21}Al^{p}(IT)^{21}Al		
^{22}Ne	100.0	^{22}Ne−u				
^{22}Na	42.9	^{22}Na−^{23}Na$_{.957}$	19.3	^{22}Mg−^{22}Na	18.5	^{22}Na−^{22}Ne
^{22}Mg	49.5	^{22}Mg−^{23}Na$_{.957}$	39.3	^{22}Mg−^{22}Na	11.2	^{22}Mg−^{39}K$_{.564}$
^{22}Mg^{i}	42.7	^{22}Mg^{i}(α)^{18}Ne	33.6	^{22}Mg^{i}(p)^{21}Na	23.7	^{22}Mg^{i}(2p)^{20}Ne
^{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		
^{23}Si	88.3	^{23}Si−^{23}Na	11.7	^{23}Si−u		
^{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	95.8	^{24}Al−^{23}Na$_{1.043}$	4.2	^{24}Mg(^{3}He,t)^{24}Al−^{36}Ar()^{36}K		
^{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
^{26}F	92.6	^{26}F−u	7.4	^{27}F(γ,n)^{26}F		
^{26}Ne	84.1	^{26}Ne−^{12}C ^{14}N	15.9	^{26}Ne−u		
^{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		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{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$_{1.174}$	11.5	^{27}Al(p,γ)^{28}Si		
^{28}Si	56.7	C$_2$ H$_4$−^{28}Si	29.1	^{13}C$_2$ H$_2$−^{28}Si	4.5	^{15}N$_2$−^{28}Si H$_2$
^{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}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	62.7	^{31}P−^{28}Si H$_3$	37.3	O$_2$−^{31}P H		
^{32}Mg	75.4	^{32}Mg−^{32}S	24.6	^{32}Mg−O$_2$		
^{32}S	57.4	^{32}S−C$_2$ D$_4$	42.6	^{32}S−O$_2$		
^{32}Cl	100.0	^{32}S(^{3}He,t)^{32}Cl−^{36}Ar()^{36}K				
^{33}Mg	90.3	^{33}Mg−O$_{2.062}$	9.7	^{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}Mg	59.8	^{34}Mg−^{1}H$_2$ ^{16}O$_2$	29.7	^{34}Mg−^{10}B ^{12}C$_2$	10.5	^{34}Mg−^{39}K$_{.872}$
^{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}Mg	73.0	^{35}Mg−^{35}Cl	27.0	^{35}Mg−^{11}B ^{12}C$_2$		
^{35}S	71.3	^{35}S(β^-)^{35}Cl	28.7	^{34}S(n,γ)^{35}S		
^{35}S^i	67.1	^{36}S(p,d)^{35}S^i	32.9	^{37}Cl(p,^{3}He)^{35}S^i		
^{35}Cl	55.9	C$_3$−^{35}Cl H	19.6	^{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	90.2	^{36}K−^{39}K$_{.923}$	9.8	^{24}Mg(^{3}He,t)^{24}Al−^{36}Ar()^{36}K		
^{37}Cl	85.6	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	34.9	^{20}Ne$_2$−^{40}Ar	33.8	C$_3$ H$_4$−^{40}Ar	25.9	C$_2$ D$_8$−^{40}Ar
^{40}K	60.9	^{39}K(n,γ)^{40}K	39.1	^{40}K(n,γ)^{41}K		
^{40}Ca	66.0	^{48}Ca−^{40}Ca$_{1.200}$	34.0	^{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	87.5	^{40}Ca(n,γ)^{41}Ca	12.5	^{41}Ca(p,γ)^{42}Sc^r−^{40}Ca()^{41}Sc^r		
^{41}Sc	68.2	^{40}Ca(p,γ)^{41}Sc	31.8	^{41}Sc^r(IT)^{41}Sc		
^{41}Sc^r	57.8	^{41}Sc^r(IT)^{41}Sc	42.2	^{41}Ca(p,γ)^{42}Sc^r−^{40}Ca()^{41}Sc^r		
^{42}Ca	100.0	^{42}Ca−^{40}Ca$_{1.050}$				
^{42}Sc	66.1	^{42}Sc−^{42}Ca	18.7	^{42}Sc^m−^{42}Sc	10.3	^{42}Sc^r(IT)^{42}Sc

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{42}Sc^{m}$	62.2	$^{42}Sc^{m}-^{42}Ca$	36.5	$^{42}Sc^{m}-^{42}Sc$	1.3	$^{42}Ti-^{42}Scm$
$^{42}Sc^{r}$	64.6	$^{42}Sc^{r}(IT)^{42}Sc$	35.4	$^{41}Ca(p,\gamma)^{42}Sc^{r}-^{40}Ca()^{41}Sc^{r}$		
^{42}Ti	49.2	$^{42}Ti-^{42}Sc$	39.1	$^{42}Ti-^{42}Sc^{m}$	11.6	$^{42}Ti-^{42}Ca$
^{43}Ca	84.5	$^{42}Ca(n,\gamma)^{43}Ca$	15.4	$^{43}Ca(n,\gamma)^{44}Ca$	0.1	$^{43}Ca(^{3}He,d)^{44}Sci$
$^{43}Ca^{i}$	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	85.0	$^{43}Ti-u$	15.0	$^{40}Ca(\alpha,n)^{43}Ti$		
$^{43}V^{i}$	88.8	$^{43}V^{i}(2p)^{41}Sc$	11.2	$^{43}V^{i}(p)^{42}Ti$		
^{44}Cl	56.2	$^{44}Cl-^{39}K_{1.128}$	43.8	$^{44}Cl-^{12}C\ ^{14}N\ ^{1}H_{2}\ ^{16}O$		
^{44}Ca	100.0	$^{44}Ca-^{40}Ca_{1.100}$				
$^{44}Sc^{i}$	75.8	$^{44}Ca(^{3}He,t)^{44}Sc^{i}$	24.2	$^{43}Ca(^{3}He,d)^{44}Sc^{i}$		
^{44}V	58.0	$^{44}V-u$	42.0	$^{44}V-^{32}S$		
$^{44}V^{m}$	63.6	$^{44}V^{m}-^{32}S$	36.4	$^{44}V^{m}-u$		
^{45}Cl	100.0	$^{45}Cl-^{28}Si\ ^{16}O\ ^{1}H$				
^{45}Ca	99.3	$^{44}Ca(n,\gamma)^{45}Ca$	0.7	$^{45}Ca(\beta^{-})^{45}Sc$		
^{45}Sc	88.1	$^{45}Sc(p,\gamma)^{46}Ti$	10.9	$^{45}Ca(\beta^{-})^{45}Sc$	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	100.0	$^{46}Ca-^{40}Ca_{1.150}$				
$^{46}Sc^{i}$	69.2	$^{46}Ca(^{3}He,t)^{46}Sc^{i}$	30.8	$^{48}Ti(p,^{3}He)^{46}Sc^{i}$		
^{46}Ti	94.2	$^{46}Ti-^{48}Ti_{.958}$	5.7	$^{46}Ti(^{3}He,t)^{46}V-^{47}Ti()^{47}V$	5.7	$^{46}Ti(p,\gamma)^{47}V$
^{46}V	86.8	$^{46}V-^{46}Ti$	13.1	$^{46}Ti(^{3}He,t)^{46}V-^{47}Ti()^{47}V$	0.1	$^{46}Ti(^{3}He,t)^{46}V-^{48}Ti()^{48}Vxi$
^{47}Ca	99.8	$^{46}Ca(n,\gamma)^{47}Ca$	0.2	$^{47}Ca(\beta^{-})^{47}Sc$		
^{47}Sc	73.4	$^{47}Ca(\beta^{-})^{47}Sc$	26.6	$^{47}Sc(\beta^{-})^{47}Ti$		
^{47}Ti	60.8	$^{47}Ti(n,\gamma)^{48}Ti$	36.9	$^{47}Ti-^{48}Ti_{.979}$	2.2	$^{46}Ti(^{3}He,t)^{46}V-^{47}Ti()^{47}V$
^{47}V	85.6	$^{46}Ti(p,\gamma)^{47}V$	14.4	$^{46}Ti(^{3}He,t)^{46}V-^{47}Ti()^{47}V$		
^{47}Cr	55.9	$^{47}Cr-u$	32.7	$^{48}Mn^{i}(p)^{47}Cr$	11.4	$^{50}Cr(^{3}He,^{6}He)^{47}Cr$
^{48}Ca	65.5	$^{48}Ca-C_{4}$	33.8	$^{48}Ca-^{40}Ca_{1.200}$	0.7	$^{48}Ti-^{48}Ca$
^{48}Sc	56.2	$^{48}Sc-^{48}Ti$	43.8	$^{48}Ca-^{48}Sc$		
^{48}Ti	76.1	$^{48}Ti-^{48}Ca$	11.0	$^{48}Ti-N\ ^{18}O\ O$	7.0	$^{51}V-^{48}Ti_{1.063}$
^{48}V	89.6	$^{48}V^{i}(IT)^{48}V$	10.4	$^{48}V(\beta^{+})^{48}Ti$		
$^{48}V^{i}$	99.5	$^{46}Ti(^{3}He,t)^{46}V-^{48}Ti()^{48}V^{i}$	0.5	$^{48}V^{i}(IT)^{48}V$		
^{48}Mn	91.8	$^{48}Mn-u$	8.2	$^{48}Mn^{i}(IT)^{48}Mn$		
$^{48}Mn^{i}$	91.0	$^{48}Mn^{i}(IT)^{48}Mn$	9.0	$^{48}Mn^{i}(p)^{47}Cr$		
^{49}Sc	50.2	$^{48}Ca(p,\gamma)^{49}Sc$	29.3	$^{49}Sc-u$	20.6	$^{49}Sc(\beta^{-})^{49}Ti$
^{49}Ti	67.4	$^{48}Ti(n,\gamma)^{49}Ti$	20.5	$^{49}Ti-^{48}Ti_{1.021}$	12.1	$^{49}Ti(n,\gamma)^{50}Ti$
^{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	48.3	$^{49}Ti(n,\gamma)^{50}Ti$	45.2	$^{50}Ti-^{48}Ti_{1.042}$	6.5	$^{50}V-^{50}Ti$
^{50}V	28.9	$^{50}V-^{50}Cr$	25.9	$^{50}V(n,\gamma)^{51}V$	25.1	$^{50}V-^{48}Ti_{1.042}$
$^{50}V^{i}$	100.0	$^{46}Ti(^{3}He,t)^{46}V-^{50}Ti()^{50}V^{i}$				
^{50}Cr	62.5	$^{50}Cr-^{48}Ti_{1.042}$	33.3	$^{50}V-^{50}Cr$	3.7	$^{50}Cr(n,\gamma)^{51}Cr$
^{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}V	51.4	$^{51}V-^{48}Ti_{1.063}$	30.8	$^{50}V(n,\gamma)^{51}V$	14.1	$^{51}V-u$
^{51}Cr	50.8	$^{50}Cr(n,\gamma)^{51}Cr$	35.6	$^{51}V(p,n)^{51}Cr$	7.3	$^{51}Cr-^{39}K_{1.308}$
^{51}Mn	93.4	$^{50}Cr(p,\gamma)^{51}Mn$	6.6	$^{54}Fe(p,\alpha)^{51}Mn$		
^{51}Co	78.2	$^{51}Co-^{14}N_{2}$	21.8	$^{51}Co-u$		
^{52}Sc	100.0	$^{52}Sc-^{33}S\ ^{19}F$				

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{52}Ti	64.0	^{52}Ti−u	36.0	^{52}Ti−^{39}K$_{1.333}$		
^{52}Cr	77.3	^{52}Cr−^{48}Ti$_{1.083}$	20.2	^{52}Cr(n,γ)^{53}Cr	1.2	^{52}Cr(p,γ)^{53}Mn
^{52}Fe	99.5	^{52}Fe−^{52}Cr	0.5	^{53}Co^{m}(p)^{52}Fe		
^{52}Co	68.6	^{52}Co−u	31.4	^{52}Co−^{52}Cr		
^{52}Co^{m}	69.7	^{52}Co^{m}−u	30.3	^{52}Co^{m}−^{52}Cr		
^{53}Sc	100.0	^{53}Sc−^{34}S ^{19}F				
^{53}Cr	56.3	^{53}Cr−^{48}Ti$_{1.104}$	25.5	^{52}Cr(n,γ)^{53}Cr	18.2	^{53}Cr(n,γ)^{54}Cr
^{53}Mn	84.2	^{52}Cr(p,γ)^{53}Mn	15.8	^{56}Fe(p,α)^{53}Mn		
^{53}Fe	55.1	^{54}Fe(d,t)^{53}Fe	26.7	^{53}Co^{m}−^{53}Fe	18.1	^{53}Co−^{53}Fe
^{53}Co	75.6	^{53}Co−^{53}Fe	24.4	^{53}Co^{m}−^{53}Co		
^{53}Co^{m}	58.8	^{53}Co^{m}(p)^{52}Fe	24.6	^{53}Co^{m}−^{53}Fe	16.7	^{53}Co^{m}−^{53}Co
^{54}Ti	74.4	^{54}Ti−u	25.6	^{54}Ti−^{54}Cr		
^{54}V	54.3	^{54}V−^{54}Cr	25.4	^{54}Cr(t,^{3}He)^{54}V	20.3	^{54}V−u
^{54}Cr	52.1	^{54}Cr−^{48}Ti$_{1.125}$	47.9	^{53}Cr(n,γ)^{54}Cr		
^{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	67.8	^{54}Fe(n,γ)^{55}Fe	18.7	^{54}Fe(p,γ)^{55}Co	11.2	^{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}Sc	87.7	^{55}Sc−^{55}Ti	12.3	^{55}Sc−^{55}Cr		
^{55}Ti	93.3	^{55}Ti−u	6.0	^{55}Ti−^{55}Cr	0.7	^{55}Sc−^{55}Ti
^{55}Cr	100.0	^{54}Cr(n,γ)^{55}Cr				
^{55}Mn	56.8	^{55}Mn(p,γ)^{56}Fe	19.0	^{55}Mn−^{85}Rb$_{.647}$	12.3	^{55}Fe(ε)^{55}Mn
^{55}Fe	78.5	^{55}Fe(ε)^{55}Mn	21.5	^{54}Fe(n,γ)^{55}Fe		
^{55}Co	55.0	^{54}Fe(p,γ)^{55}Co	33.3	^{56}Ni−^{55}Co$_{1.018}$	11.7	^{58}Ni(p,α)^{55}Co
^{56}Ti	88.6	^{56}Ti−N$_4$	11.4	^{56}Ti−^{56}Cr		
^{56}V	83.8	^{56}V−N$_4$	16.2	^{56}V−^{56}Cr		
^{56}Cr	99.8	^{56}Cr−^{56}Fe	0.2	^{56}V−^{56}Cr	0.1	^{56}Ti−^{56}Cr
^{56}Fe	31.8	^{55}Mn(p,γ)^{56}Fe	31.4	^{56}Fe−^{85}Rb$_{.659}$	15.2	^{56}Fe(n,γ)^{57}Fe
^{56}Co	51.0	^{56}Co−^{58}Ni$_{.966}$	49.0	^{56}Ni−^{56}Co		
^{56}Ni	39.7	^{56}Ni−^{56}Fe	26.8	^{56}Ni−^{55}Co$_{1.018}$	17.9	^{56}Ni−^{56}Co
^{57}V	59.1	^{57}V−^{57}Cr	20.5	^{57}V−^{40}Ar O H	20.5	^{57}V−u
^{57}Cr	98.2	^{57}Cr−^{85}Rb$_{.671}$	1.8	^{57}V−^{57}Cr		
^{57}Mn	49.4	^{57}Mn−^{85}Rb$_{.671}$	33.3	^{57}Mn−^{39}K$_{1.462}$	17.3	^{55}Mn(t,p)^{57}Mn
^{57}Fe	84.6	^{56}Fe(n,γ)^{57}Fe	9.1	^{57}Fe(n,γ)^{58}Fe	5.3	^{57}Fe−^{58}Ni$_{.983}$
^{57}Co	33.1	^{60}Ni(p,α)^{57}Co	28.5	^{56}Fe(p,γ)^{57}Co	28.4	^{58}Fe(p,γ)^{59}Co−^{56}Fe()^{57}Co
^{57}Ni	50.1	^{57}Ni−^{58}Ni$_{.983}$	49.9	^{57}Cu−^{57}Ni		
^{57}Cu	47.8	^{57}Cu−^{56}Ni$_{1.018}$	28.5	^{57}Cu−^{57}Fe	23.7	^{57}Cu−^{57}Ni
^{58}Ti	100.0	^{58}Ti H−^{19}F O				
^{58}V	52.1	^{58}V−H$_2$ ^{32}S	47.9	^{58}V H−^{19}F O		
^{58}Cr	65.5	^{58}Cr−^{85}Rb$_{.682}$	24.8	^{58}Cr−H$_2$ ^{32}S	9.7	^{58}Cr H−^{19}F O
^{58}Mn	88.4	^{58}Mn−^{39}K$_{1.487}$	11.6	^{58}Mn−H$_2$ ^{32}S		
^{58}Fe	84.0	^{57}Fe(n,γ)^{58}Fe	11.7	^{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	28.5	^{58}Ni(n,γ)^{59}Ni	28.1	^{57}Fe−^{58}Ni$_{.983}$	25.3	^{56}Fe−^{58}Ni$_{.966}$
^{58}Cu	90.2	^{58}Cu−^{58}Ni	9.8	^{59}Zn−^{58}Cu$_{1.017}$		
^{58}Zn	65.9	^{58}Zn−u	34.1	^{58}Ni(π^{+},π^{-})^{58}Zn		
^{59}V	74.3	^{59}V O H−^{32}S$_2$	19.1	^{59}V−^{19}F O	6.7	^{59}V−^{59}Cr
^{59}Cr	99.0	^{59}Cr−^{85}Rb$_{.694}$	0.7	^{59}Mn−^{59}Cr	0.3	^{59}V−^{59}Cr
^{59}Mn	91.4	^{59}Mn−^{39}K$_{1.513}$	8.6	^{59}Mn−^{59}Cr		
^{59}Fe	87.3	^{58}Fe(n,γ)^{59}Fe	12.7	^{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	70.9	^{58}Ni(n,γ)^{59}Ni	25.0	^{59}Ni(n,γ)^{60}Ni	4.1	^{59}Co(p,n)^{59}Ni

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{59}Cu	62.5	^{58}Ni(p,γ)^{59}Cu	30.3	^{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$_{1.017}$	0.1	^{60}Ga^{i}(p)^{59}Zn
^{60}Ni	74.4	^{59}Ni(n,γ)^{60}Ni	21.4	^{60}Ni(n,γ)^{61}Ni	4.0	^{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	65.0	^{60}Zn−^{58}Ni$_{1.034}$	35.0	^{60}Zn−^{59}Cu$_{1.017}$		
^{60}Ga	73.6	^{60}Ga^{i}(IT)^{60}Ga	26.4	^{60}Ga−u		
^{60}Ga^{i}	73.7	^{60}Ga^{i}(p)^{59}Zn	26.3	^{60}Ga^{i}(IT)^{60}Ga		
^{61}Ni	78.3	^{60}Ni(n,γ)^{61}Ni	21.7	^{61}Ni(n,γ)^{62}Ni		
^{61}Zn	79.0	^{61}Zn−^{42}Ca ^{19}F	15.8	^{61}Zn−^{85}Rb$_{.718}$	5.2	^{61}Zn−C$_5$ H
^{62}Ni	66.1	^{61}Ni(n,γ)^{62}Ni	16.3	^{62}Ni(p,γ)^{63}Cu	14.3	^{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	38.8	^{63}Fe−u	35.1	^{63}Fe−^{39}K$_{1.615}$	13.1	^{63}Fe−H C$_2$ F$_2$
^{63}Co	86.2	^{64}Ni(t,α)^{63}Co	13.8	^{63}Co(β^-)^{63}Ni		
^{63}Ni	55.4	^{63}Ni(β^-)^{63}Cu	33.3	^{62}Ni(n,γ)^{63}Ni	11.3	^{63}Ni(n,γ)^{64}Ni
^{63}Cu	43.0	^{63}Ni(β^-)^{63}Cu	37.4	^{62}Ni(p,γ)^{63}Cu	9.9	^{63}Cu(n,γ)^{64}Cu
^{63}Zn	72.7	^{64}Zn(d,t)^{63}Zn	27.3	^{63}Cu(p,n)^{63}Zn		
^{63}Ge	98.6	^{63}Ge−u	1.4	^{64}As^{i}(p)^{63}Ge		
^{64}Fe	52.8	H C$_2$ F$_2$−^{64}Fe$_{.984}$	47.2	^{64}Fe−u		
^{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	86.5	^{63}Ni(n,γ)^{64}Ni	13.5	^{64}Ni−^{85}Rb$_{.753}$		
^{64}Cu	90.0	^{63}Cu(n,γ)^{64}Cu	10.0	^{64}Cu(β^-)^{64}Zn		
^{64}Zn	43.7	^{64}Zn(n,γ)^{65}Zn	32.0	^{64}Cu(β^-)^{64}Zn	16.9	^{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}		
^{64}As	91.6	^{64}As^{i}(IT)^{64}As	8.5	^{64}As−u		
^{64}As^{i}	91.5	^{64}As^{i}(p)^{63}Ge	8.5	^{64}As^{i}(IT)^{64}As		
^{65}Fe	55.3	O$_2$−^{65}Fe$_{.492}$	44.7	^{65}Fe−u		
^{65}Cu	42.9	^{65}Cu(p,n)^{65}Zn	33.4	^{65}Cu−^{85}Rb$_{.765}$	10.2	^{65}Cu(p,α)^{62}Ni
^{65}Zn	54.1	^{64}Zn(n,γ)^{65}Zn	45.9	^{65}Cu(p,n)^{65}Zn		
^{65}Ga	58.9	^{64}Zn(p,γ)^{65}Ga	32.2	^{65}Ga−^{85}Rb$_{.765}$	8.9	^{65}Ga−^{65}Cu
^{65}Ge	57.5	^{65}Ge ^{1}H−^{12}C$_5$ ^{1}H$_2$	28.7	^{65}Ge O H−^{85}Rb$_{.965}$	13.8	^{65}Ge H−^{85}Rb$_{.776}$
^{66}Mn	84.5	^{66}Mn−^{85}Rb$_{.776}$	15.5	^{66}Mn−u		
^{66}Fe	85.5	^{66}Fe−^{28}Si F$_2$	14.5	^{66}Fe−u		
^{66}Cu	89.9	^{65}Cu(n,γ)^{66}Cu	10.1	^{66}Cu−^{85}Rb$_{.776}$		
^{66}Zn	65.5	^{66}Zn(p,α)^{63}Cu	34.5	^{66}Zn(n,γ)^{67}Zn		
^{67}Cu	54.5	^{67}Cu−^{85}Rb$_{.788}$	45.5	^{67}Cu(β^-)^{67}Zn		
^{67}Zn	63.2	^{66}Zn(n,γ)^{67}Zn	23.4	^{67}Cu(β^-)^{67}Zn	11.7	^{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}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}−^{84}Kr$_{.821}$		
^{69}Ga	56.8	^{69}Ga−^{85}Rb$_{.812}$	43.2	^{69}Ga(n,γ)^{70}Ga		
^{70}Zn	55.0	^{70}Zn(p,n)^{70}Ga	39.3	^{70}Zn(n,γ)^{71}Zn	5.7	^{70}Zn ^{35}Cl−^{68}Zn ^{37}Cl
^{70}Ga	56.2	^{69}Ga(n,γ)^{70}Ga	27.6	^{70}Ga−^{85}Rb$_{.824}$	16.2	^{70}Zn(p,n)^{70}Ga
^{70}Ge	86.0	^{70}Ge(n,γ)^{71}Ge	14.0	^{70}Ge(p,α)^{67}Ga		
^{70}Se	73.1	^{70}Se−^{13}C F$_3$	26.9	^{70}Se−u		
^{71}Zn	60.6	^{70}Zn(n,γ)^{71}Zn	39.4	^{71}Zn^{m}(IT)^{71}Zn		
^{71}Zn^{m}	60.6	^{71}Zn^{m}(IT)^{71}Zn	39.4	^{71}Zn^{m}−^{85}Rb$_{.835}$		
^{71}Ga	53.3	^{71}Ga−^{85}Rb$_{.835}$	33.1	^{71}Ga(n,γ)^{72}Ga	12.2	^{71}Ga−^{71}Ge

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{71}Ge	77.3	^{71}Ga−^{71}Ge	13.8	^{70}Ge(n,γ)^{71}Ge	9.0	^{71}Ge(ε)^{71}Ga
^{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}Ni	59.5	^{73}Ni−^{73}Cu	40.5	^{73}Ni−^{72}Ge$_{1.014}$		
^{73}Cu	46.6	^{73}Cu−^{72}Ge$_{1.014}$	38.2	^{73}Ni−^{73}Cu	15.2	^{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	51.8	^{73}Br ^{27}Al−^{85}Rb$_{1.176}$	48.2	^{73}Br−u		
^{74}Ni	64.6	^{74}Ni−^{84}Kr$_{.881}$	35.4	^{74}Ni−^{39}K$_{1.897}$		
^{74}Cu	73.5	^{74}Cu−^{85}Rb$_{.871}$	26.5	^{74}Cu−^{39}K$_{1.897}$		
^{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}Ni	84.7	^{75}Ni−^{39}K$_{1.923}$	15.3	^{75}Ni−^{84}Kr$_{.893}$		
^{75}Cu	90.5	^{75}Cu−^{85}Rb$_{.882}$	9.5	^{75}Cu−^{72}Ge$_{1.042}$		
^{75}Zn	70.5	^{75}Zn^{m}(IT)^{75}Zn	29.5	^{75}Zn−^{85}Rb$_{.882}$		
^{75}Zn^{m}	70.6	^{75}Zn^{m}−^{85}Rb$_{.882}$	29.4	^{75}Zn^{m}(IT)^{75}Zn		
^{75}As	85.7	^{75}As−^{76}Ge$_{.987}$	14.3	^{75}As(n,γ)^{76}As		
^{75}Kr	90.6	^{75}Kr−u	9.4	^{75}Kr−^{85}Rb$_{.882}$		
^{76}Zn	61.1	^{76}Zn−^{85}Rb$_{.894}$	38.9	^{76}Zn−^{88}Rb$_{.864}$		
^{76}Ge	99.5	^{76}Ge−^{76}Se	0.5	^{75}As−^{76}Ge$_{.987}$		
^{76}As	54.8	^{76}As−^{76}Se	45.2	^{75}As(n,γ)^{76}As		
^{76}Se	100.0	^{76}Se−^{84}Kr	0.1	^{77}Se−^{76}Se$_{1.013}$		
^{76}Kr	84.0	^{76}Kr−^{85}Rb$_{.894}$	16.0	^{80}Kr(α,^{6}He)^{78}Kr−^{78}Kr()^{76}Kr		
^{76}Sr	93.6	^{76}Sr−u	6.4	^{76}Sr ^{19}F−^{85}Rb$_{1.118}$		
^{77}Cu	93.7	^{77}Cu−^{85}Rb$_{.906}$	6.3	^{77}Cu−^{84}Kr$_{.917}$		
^{77}Zn	77.9	^{77}Zn−^{85}Rb$_{.906}$	22.1	^{77}Zn−^{88}Rb$_{.875}$		
^{77}As	99.9	^{77}As−^{77}Se	0.1	^{80}Se(p,α)^{77}As		
^{77}Se	50.5	^{77}Se−^{76}Se$_{1.013}$	49.2	^{76}Se(n,γ)^{77}Se	0.3	^{77}Se(n,γ)^{78}Se
^{78}Cu	58.1	^{78}Cu−^{84}Kr$_{.929}$	16.6	^{78}Cu−^{78}Zn	11.8	^{78}Cu−^{85}Rb$_{.918}$
^{78}Zn	50.8	^{78}Zn−^{88}Rb$_{.886}$	47.6	^{78}Zn−^{85}Rb$_{.918}$	1.6	^{78}Cu−^{78}Zn
^{78}Ga	88.3	^{78}Ga−^{85}Rb$_{.918}$	11.7	^{78}Ga−^{88}Rb$_{.886}$		
^{78}Se	96.1	^{77}Se(n,γ)^{78}Se	3.3	^{78}Kr−^{78}Se	0.6	^{80}Se(p,t)^{78}Se
^{78}Kr	89.0	^{78}Kr−^{78}Se	10.7	^{78}Kr−^{86}Kr$_{.907}$	0.3	^{80}Kr(α,^{6}He)^{78}Kr−^{78}Kr()^{76}Kr
^{78}Sr	58.0	^{78}Sr−^{85}Rb$_{.918}$	42.0	^{78}Sr−^{39}K$_{2}$		
^{79}Zn	43.1	^{79}Zn−^{88}Rb$_{.898}$	31.4	^{79}Zn−^{84}Kr$_{.940}$	20.6	^{79}Zn−^{85}Rb$_{.929}$
^{79}Zn^{m}	40.3	^{79}Zn^{m}−^{84}Kr$_{.940}$	34.0	^{79}Zn^{m}−^{79}Ga	25.8	^{79}Zn^{m}−u
^{79}Ga	56.6	^{79}Ga−^{85}Rb$_{.929}$	40.6	^{79}Ga−^{88}Rb$_{.898}$	2.1	^{79}Zn−^{79}Ga
^{79}Br	88.6	^{79}Br(n,γ)^{80}Br	5.4	^{91}Br−^{79}Br ^{12}C	3.4	^{79}Br−^{79}Rb
^{79}Rb	83.1	^{79}Rb−^{85}Rb$_{.929}$	16.9	^{79}Br−^{79}Rb		
^{79}Sr	91.2	^{79}Sr−u	8.8	^{79}Sr−^{85}Rb$_{.929}$		
^{80}Zn	60.4	^{80}Zn−^{85}Rb$_{.941}$	29.5	^{80}Zn−^{80}Rb	10.2	^{80}Zn−^{88}Rb$_{.909}$
^{80}Se	32.0	^{82}Se ^{35}Cl−^{80}Se ^{37}Cl	22.4	^{80}Se(n,γ)^{81}Se	17.7	^{80}Se(p,t)^{78}Se
^{80}Br	88.8	^{80}Se(p,n)^{80}Br	11.2	^{79}Br(n,γ)^{80}Br		
^{80}Kr	45.1	^{80}Kr−^{86}Kr$_{.930}$	18.9	^{80}Kr−^{85}Rb$_{.941}$	8.1	^{81}Se−^{80}Kr$_{1.013}$
^{80}Rb	84.7	^{80}Rb−^{85}Rb$_{.941}$	15.3	^{80}Zn−^{80}Rb		
^{81}Zn	75.8	^{81}Zn−^{85}Rb$_{.953}$	24.2	^{81}Zn−^{81}Ga		
^{81}Ga	89.8	^{81}Ga−^{88}Rb$_{.920}$	10.2	^{81}Zn−^{81}Ga		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{81}As	73.8	^{81}As−^{88}Rb$_{.920}$	26.2	^{82}Se(d,^{3}He)^{81}As		
^{81}Se	74.7	^{80}Se(n,γ)^{81}Se	15.7	^{81}Se−^{80}Kr$_{1.013}$	9.6	^{82}Se(p,d)^{81}Se
^{81}Br	94.3	^{81}Br(n,γ)^{82}Br	5.2	^{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		
^{81}Y	78.9	^{81}Y−u	21.1	^{81}Y O−^{97}Mo		
^{82}Zn	85.3	^{82}Zn−^{85}Rb$_{.965}$	14.7	^{82}Zn−^{82}Ga		
^{82}Ga	90.8	^{82}Ga−^{88}Rb$_{.932}$	9.2	^{82}Zn−^{82}Ga		
^{82}Ge	82.7	^{82}Ge−^{82}Kr	17.3	^{82}Ge−^{88}Rb$_{.932}$		
^{82}As	59.5	^{82}As−^{82}Kr	40.5	^{82}As−^{88}Rb$_{.932}$		
^{82}Se	91.7	^{82}Se−^{82}Kr	4.8	^{82}Se ^{35}Cl−^{80}Se ^{37}Cl	1.3	^{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	50.4	^{101}In−^{82}Sr ^{19}F	30.1	^{82}Sr−^{85}Rb$_{.965}$	16.7	^{84}Sr(p,t)^{82}Sr
^{82}Zr	71.6	^{82}Zr−^{85}Rb$_{.965}$	28.4	^{82}Zr O−^{87}Rb$_{1.126}$		
^{83}Ga	88.0	^{83}Ga−^{88}Rb$_{.943}$	12.0	^{83}Ga−u		
^{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		
^{83}Zr	99.3	^{83}Zr−^{41}K$_{2.024}$	0.7	^{83}Nb−^{83}Zr		
^{83}Nb	80.1	^{83}Nb−^{41}K$_{2.024}$	19.9	^{83}Nb−^{83}Zr		
^{84}Ge	53.1	^{84}Ge−u	46.9	^{84}Ge−^{88}Rb$_{.955}$		
^{84}As	62.6	^{84}As−^{88}Rb$_{.955}$	37.4	^{84}As−u		
^{84}Se	84.9	^{84}Se−^{88}Rb$_{.955}$	15.1	^{84}Se−u		
^{84}Kr	20.9	^{84}Kr−N$_6$	19.8	^{86}Kr−^{84}Kr$_{1.024}$	14.6	^{86}Kr−^{84}Kr
^{84}Rb	70.7	^{84}Rb(β^+)^{84}Kr	29.3	^{84}Rb(β^-)^{84}Sr		
^{84}Sr	100.0	^{84}Sr−^{84}Kr				
^{84}Y	81.6	^{84}Y O−^{97}Mo$_{1.031}$	18.4	^{84}Y(β^+)^{84}Sr		
^{85}Ga	90.4	^{85}Ga−^{85}Rb	9.6	^{85}Ga−u		
^{85}Ge	65.4	^{85}Ge−^{88}Rb$_{.966}$	34.6	^{85}Ge−^{84}Kr H		
^{85}Se	66.3	^{85}Se−^{84}Kr H	33.7	^{85}Se−^{88}Rb$_{.966}$		
^{85}Br	93.0	^{85}Br−^{88}Rb$_{.966}$	7.0	^{85}Br−^{84}Kr H		
^{85}Rb	65.9	^{86}Kr−^{85}Rb	34.1	^{85}Rb−^{84}Kr		
^{85}Sr	87.7	^{85}Rb(^{3}He,t)^{85}Sr	12.3	^{84}Sr(d,p)^{85}Sr		
^{86}As	82.6	^{86}As−^{86}Kr	17.4	^{86}As−^{88}Rb$_{.977}$		
^{86}Se	91.4	^{86}Se−^{86}Kr	8.6	^{86}Se−^{88}Rb$_{.977}$		
^{86}Br	81.0	^{86}Br−^{86}Kr	19.0	^{86}Br−^{88}Rb$_{.977}$		
^{86}Kr	26.7	^{86}Kr−N$_6$	15.9	^{129}Xe$_2$−^{86}Kr$_3$	11.5	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}As	56.7	^{87}As−^{86}Kr H	43.3	^{87}As−^{88}Rb$_{.989}$		
^{87}Se	62.4	^{87}Se−^{88}Rb$_{.989}$	37.6	^{87}Se−^{86}Kr H		
^{87}Rb	80.8	^{87}Rb−^{86}Kr	18.9	^{87}Rb−C$_6$ H$_{14}$	0.1	^{90}Zr−^{87}Rb$_{1.034}$
^{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	71.6	^{87}Mo$_{1.069}$−C$_7$ H$_9$	28.4	^{87}Mo−^{85}Rb$_{1.024}$		
^{88}Se	51.0	^{88}Se−^{88}Br	49.0	^{88}Se−^{88}Rb		
^{88}Br	54.5	^{88}Br−^{88}Rb	45.5	^{88}Se−^{88}Br		
^{88}Rb	96.1	^{87}Rb(n,γ)^{88}Rb	0.4	^{82}Ge−^{88}Rb$_{.932}$	0.3	^{86}Se−^{88}Rb$_{.977}$
^{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

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{88}Nb	66.7	^{88}Nb O−^{98}Mo$_{1.061}$	33.3	^{88}Nb(β^+)^{88}Zr		
^{89}Se	62.0	^{89}Se−^{88}Rb$_{1.011}$	38.0	^{89}Se−^{89}Rb		
^{89}Br	69.7	^{89}Br−^{88}Rb$_{1.011}$	30.3	^{89}Br−^{89}Rb		
^{89}Rb	37.7	^{89}Br−^{89}Rb	34.5	^{89}Se−^{89}Rb	16.0	^{89}Rb(β^-)^{89}Sr
^{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	84.6	^{89}Zr(β^+)^{89}Y	15.4	^{90}Zr(d,t)^{89}Zr		
^{89}Mo	60.5	^{89}Mo−^{85}Rb$_{1.047}$	39.5	^{89}Mo−^{89}Tc		
^{89}Tc	62.4	^{89}Tc−^{85}Rb$_{1.047}$	37.6	^{89}Mo−^{89}Tc		
^{90}Br	63.2	^{90}Br−^{88}Rb$_{1.023}$	36.8	^{90}Br−^{90}Kr		
^{90}Kr	84.4	^{90}Kr−^{85}Rb$_{1.059}$	10.7	^{90}Br−^{90}Kr	4.8	^{90}Rb−^{90}Kr
^{90}Rb	65.2	^{90}Rb−^{90}Kr	20.6	^{90}Rb−^{85}Rb$_{1.059}$	14.2	^{90}Rb(β^-)^{90}Sr
^{90}Sr	98.2	^{90}Sr(β^-)^{90}Y	1.8	^{90}Rb(β^-)^{90}Sr		
^{90}Y	99.9	^{89}Y(n,γ)^{90}Y	0.1	^{90}Sr(β^-)^{90}Y		
^{90}Zr	41.2	^{90}Zr−^{87}Rb$_{1.034}$	38.8	^{90}Zr(n,γ)^{91}Zr	20.0	^{90}Zr−u
^{90}Nb	60.4	^{90}Nb(β^+)^{90}Zr	34.8	^{90}Mo(β^+)^{90}Nb	4.9	^{90}Nb−^{90}Tc
^{90}Mo	44.4	^{90}Mo−C$_7$ H$_6$	28.1	^{90}Mo−^{90}Tc	27.5	^{90}Mo(β^+)^{90}Nb
^{90}Tc	92.5	^{90}Tc−^{86}Kr$_{1.047}$	4.8	^{90}Ru−^{90}Tc	2.3	^{90}Mo−^{90}Tc
^{90}Ru	77.0	^{90}Ru−^{90}Tc	23.0	^{90}Ru−^{85}Rb$_{1.059}$		
^{91}Br	72.5	^{91}Br−^{79}Br ^{12}C	27.5	^{91}Br−^{88}Rb$_{1.034}$		
^{91}Kr	86.2	^{91}Kr−^{85}Rb$_{1.071}$	13.8	^{91}Kr−^{79}Br ^{12}C		
^{91}Sr	99.6	^{91}Sr−^{85}Rb$_{1.071}$	0.4	^{92}Rb(β^-n)^{91}Sr		
^{91}Zr	40.9	^{91}Zr(n,γ)^{92}Zr	23.9	^{90}Zr(n,γ)^{91}Zr	22.3	^{91}Zr−^{87}Rb$_{1.046}$
^{91}Nb	97.6	^{91}Zr(p,n)^{91}Nb	2.4	^{91}Mo(β^+)^{91}Nb		
^{91}Mo	45.6	^{91}Mo−C$_7$ H$_7$	30.0	^{91}Mo−^{91}Tc	16.5	^{92}Mo(p,d)^{91}Mo
^{91}Tc	30.9	^{91}Tc−C$_7$ H$_7$	28.0	^{91}Ru−^{91}Tc	22.9	^{91}Tc−^{94}Mo$_{.968}$
^{91}Ru	35.0	^{91}Ru−C$_7$ H$_7$	25.0	^{91}Ru−^{85}Rb$_{1.071}$	22.6	^{91}Ru−^{91}Tc
^{92}Br	54.3	^{92}Br−^{78}Se ^{12}C H$_2$	45.7	^{92}Br−^{88}Rb$_{1.045}$		
^{92}Kr	90.6	^{92}Kr−^{85}Rb$_{1.082}$	9.4	^{92}Kr−^{78}Se ^{12}C H$_2$		
^{92}Rb	56.9	^{92}Rb(β^-)^{92}Sr	32.7	^{92}Rb−^{85}Rb$_{1.082}$	10.2	^{92}Rb(β^-n)^{91}Sr
^{92}Sr	83.7	^{92}Sr−^{85}Rb$_{1.082}$	13.5	^{92}Rb(β^-)^{92}Sr	2.8	^{92}Sr(β^-)^{92}Y
^{92}Y	57.8	^{92}Y(β^-)^{92}Zr	28.9	^{92}Sr(β^-)^{92}Y	13.3	^{94}Zr(d,α)^{92}Y
^{92}Zr	55.8	^{91}Zr(n,γ)^{92}Zr	25.5	^{92}Zr−u	18.7	^{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	43.1	^{92}Tc−^{85}Rb$_{1.082}$	28.8	^{92}Tc$_{.989}$−C$_7$ H$_7$	28.1	^{92}Tc−^{92}Ru
^{92}Ru	45.0	^{92}Ru−^{85}Rb$_{1.082}$	21.7	^{92}Rh−^{92}Ru	17.3	^{92}Ru$_{1.011}$−C$_7$ H$_9$
^{92}Rh	59.8	^{92}Rh−^{92}Ru	34.0	^{92}Rh−^{85}Rb$_{1.082}$	6.2	^{92}Rh−u
^{93}Rb	72.5	^{93}Rb−^{85}Rb$_{1.094}$	27.1	^{93}Rb(β^-)^{93}Sr	0.4	^{95}Rb−^{97}Rb$_{.490}$ ^{93}Rb$_{.511}$
^{93}Sr	66.0	^{93}Sr−^{85}Rb$_{1.094}$	23.5	^{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	2.3	^{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	68.1	^{93}Ru−C$_7$ H$_9$	24.6	^{93}Ru−^{85}Rb$_{1.094}$	7.3	^{93}Ru−^{93}Rh
^{93}Rh	48.7	^{93}Rh−C$_7$ H$_9$	39.6	^{93}Rh−^{85}Rb$_{1.094}$	11.8	^{93}Ru−^{93}Rh
^{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	53.4	^{94}Mo−^{95}Mo$_{0.989}$	20.5	^{94}Mo(n,γ)^{95}Mo	15.2	^{94}Mo−^{87}Rb$_{1.080}$
^{94}Ru	56.2	^{94}Ru−^{85}Rb$_{1.106}$	43.8	^{94}Ru−C$_7$ H$_{10}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{94}Rh	56.9	^{94}Rh−^{85}Rb$_{1.106}$	34.6	^{94}Rh−C$_7$ H$_{10}$	8.5	^{94}Rh−^{94}Pd
^{94}Pd	86.4	^{94}Pd−^{94}Mo	13.6	^{94}Rh−^{94}Pd		
^{95}Rb	51.5	^{95}Rb(β^-)^{95}Sr	25.4	^{95}Rb−^{96}Rb$_{.742}$ ^{92}Rb$_{.258}$	12.6	^{94}Rb−^{95}Rb$_{.660}$ ^{92}Rb$_{.341}$
^{95}Sr	34.3	^{95}Sr−^{85}Rb$_{1.118}$	34.3	^{95}Sr−^{97}Zr$_{.979}$	29.5	^{95}Sr(β^-)^{95}Y
^{95}Y	99.3	^{95}Y−^{85}Rb$_{1.118}$	0.7	^{95}Sr(β^-)^{95}Y		
^{95}Zr	91.8	^{94}Zr(n,γ)^{95}Zr	8.2	^{95}Zr(β^-)^{95}Nb		
^{95}Nb	97.4	^{95}Nb(β^-)^{95}Mo	2.6	^{95}Zr(β^-)^{95}Nb		
^{95}Mo	65.4	^{95}Mo(n,γ)^{96}Mo	14.8	^{94}Mo−^{95}Mo$_{0.989}$	11.9	^{95}Mo−u
^{95}Tc	100.0	^{95}Tc−^{95}Mo				
^{95}Ru	90.0	^{96}Ru(p,d)^{95}Ru	10.0	^{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	80.9	^{96}Kr−u	19.1	^{96}Kr−^{85}Rb$_{1.129}$		
^{96}Rb	99.7	^{96}Rb−^{88}Rb$_{1.091}$	0.3	^{95}Rb−^{96}Rb$_{.742}$ ^{92}Rb$_{.258}$		
^{96}Sr	81.9	^{96}Sr−^{97}Zr$_{.990}$	18.1	^{96}Sr(β^-)^{96}Y		
^{96}Y	48.5	^{96}Y^m(IT)^{96}Y	47.3	^{96}Y−^{97}Zr$_{.990}$	4.1	^{96}Sr(β^-)^{96}Y
^{96}Y^m	51.2	^{96}Y^m(IT)^{96}Y	48.8	^{96}Y^m−^{97}Zr$_{.990}$		
^{96}Zr	51.5	^{96}Zr−u	29.9	^{96}Zr−^{96}Mo	12.9	^{96}Zr−^{87}Rb$_{1.103}$
^{96}Nb	62.7	^{96}Zr−^{96}Nb	37.3	^{96}Nb−^{96}Mo		
^{96}Mo	45.3	^{96}Zr−^{96}Mo	30.8	^{95}Mo(n,γ)^{96}Mo	15.3	^{96}Mo(n,γ)^{97}Mo
^{96}Ru	100.0	^{96}Ru−^{96}Mo				
^{96}Pd	38.1	^{96}Ag−^{96}Pd	34.8	^{96}Pd−^{94}Mo$_{1.021}$	27.1	^{96}Ru−^{96}Pd
^{96}Ag	97.2	^{96}Ag−^{96}Mo	2.8	^{96}Ag−^{96}Pd		
^{97}Kr	75.5	^{97}Kr−^{39}K$_{2.487}$	18.9	^{97}Kr−u	5.6	^{97}Kr−^{86}Kr$_{1.128}$
^{97}Rb	87.0	^{97}Rb−^{85}Rb$_{1.141}$	13.0	^{97}Rb−^{88}Rb$_{1.102}$		
^{97}Sr	86.8	^{97}Sr−^{85}Rb$_{1.141}$	13.2	^{97}Sr−^{97}Zr		
^{97}Zr	99.7	^{96}Zr(n,γ)^{97}Zr	0.2	^{104}Nb−^{97}Zr$_{1.072}$		
^{97}Nb	50.0	^{97}Zr(β^-)^{97}Nb	50.0	^{97}Nb(β^-)^{97}Mo		
^{97}Mo	43.1	^{96}Mo(n,γ)^{97}Mo	23.6	^{97}Mo−u	20.1	^{97}Mo−^{87}Rb$_{1.115}$
^{97}Pd	89.4	^{97}Ag−^{97}Pd	10.3	^{97}Pd−^{85}Rb$_{1.141}$	0.3	^{97}Cd−^{97}Pd
^{97}Ag	91.2	^{97}Ag−^{97}Mo	8.8	^{97}Ag−^{97}Pd		
^{97}Cd	77.3	^{97}Cd−^{97}Pd	22.7	^{97}Cd−u		
^{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}Y	94.0	^{98}Y^n−^{98}Y	6.0	^{98}Y−^{97}Zr$_{1.010}$		
^{98}Y^n	94.8	^{98}Y^n−u	5.2	^{98}Y^n−^{98}Y		
^{98}Zr	82.2	^{98}Zr−^{97}Zr$_{1.010}$	17.8	^{96}Zr(t,p)^{98}Zr		
^{98}Mo	85.2	^{97}Mo(n,γ)^{98}Mo	12.1	^{98}Mo−u	2.5	^{98}Mo(n,γ)^{99}Mo
^{98}Tc	59.4	^{99}Tc(p,d)^{98}Tc	29.2	^{97}Mo(^{3}He,d)^{98}Tc	11.4	^{98}Mo(p,n)^{98}Tc
^{98}Pd	99.6	^{98}Pd−^{85}Rb$_{1.153}$	0.4	^{98}Ag(β^+)^{98}Pd		
^{98}Ag	47.9	^{98}Ag−^{85}Rb$_{1.153}$	38.6	^{98}Cd(ε)^{98}Ag	13.5	^{98}Ag(β^+)^{98}Pd
^{98}Cd	95.6	^{98}Cd−u	4.4	^{98}Cd(ε)^{98}Ag		
^{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	95.6	^{98}Mo(n,γ)^{99}Mo	4.4	^{99}Mo(β^-)^{99}Tc		
^{99}Tc	87.7	^{99}Tc(β^-)^{99}Ru	12.1	^{99}Mo(β^-)^{99}Tc	0.3	^{99}Tc(p,d)^{98}Tc
^{99}Ru	89.8	^{99}Ru(n,γ)^{100}Ru	10.2	^{99}Tc(β^-)^{99}Ru		
^{99}Rh	52.6	^{99}Pd(β^+)^{99}Rh	40.8	^{99}Rh−^{99}Cd	6.6	^{99}Rh(β^+)^{99}Ru
^{99}Pd	80.9	^{99}Pd−^{96}Mo$_{1.031}$	16.7	^{99}Pd−^{99}Cd	2.4	^{99}Pd(β^+)^{99}Rh
^{99}Ag	68.9	^{99}Ag−^{99}Cd	31.1	^{99}Ag−^{85}Rb$_{1.165}$		
^{99}Cd	93.1	^{99}Cd−^{85}Rb$_{1.165}$	4.3	^{99}Ag−^{99}Cd	1.5	^{99}Pd−^{99}Cd
^{99}In	77.4	^{99}In−^{99}Cd	22.6	^{99}In−u		
^{100}Rb	62.3	^{100}Rb−u	37.7	^{100}Rb−^{85}Rb$_{1.176}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{100}Sr	55.1	^{100}Sr−^{97}Zr$_{1.031}$	44.9	^{100}Sr−^{85}Rb$_{1.176}$		
^{100}Y	50.3	^{100}Y−^{97}Zr$_{1.031}$	49.7	^{100}Y^{m}_^{100}Y		
^{100}Y^{m}	50.3	^{100}Y^{m}_^{97}Zr$_{1.031}$	49.7	^{100}Y^{m}_^{100}Y		
^{100}Zr	76.4	^{100}Zr−^{97}Zr$_{1.031}$	23.6	^{100}Zr−u		
^{100}Mo	60.9	^{100}Mo−u	30.0	^{100}Mo−^{87}Rb$_{1.149}$	9.0	^{100}Mo−^{100}Ru
^{100}Ru	88.2	^{100}Mo−^{100}Ru	10.1	^{99}Ru(n,γ)^{100}Ru	1.6	^{100}Ru(n,γ)^{101}Ru
^{100}Rh	82.1	^{100}Rh(β^{+})^{100}Ru	17.9	^{100}Rh−u		
^{100}Pd	47.1	^{100}Pd−^{100}Cd	28.6	^{102}Pd(p,t)^{100}Pd	24.4	^{96}Ru(^{16}O,^{12}C)^{100}Pd
^{100}Ag	87.4	^{100}Ag−^{85}Rb$_{1.176}$	12.6	^{100}Ag−^{100}Cd		
^{100}Cd	95.8	^{100}Cd−^{85}Rb$_{1.176}$	2.4	^{100}In−^{100}Cd	1.4	^{100}Ag−^{100}Cd
^{100}In	95.6	^{100}In−^{85}Rb$_{1.176}$	4.4	^{100}In−^{100}Cd		
^{101}Sr	92.1	^{101}Sr−^{85}Rb$_{1.188}$	7.9	^{101}Sr−u		
^{101}Zr	80.0	^{101}Zr−^{97}Zr$_{1.041}$	20.0	^{101}Zr−u		
^{101}Ru	97.5	^{100}Ru(n,γ)^{101}Ru	2.5	^{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		
^{101}In	54.8	^{101}In−^{85}Rb$_{1.188}$	21.8	^{101}In−^{82}Sr ^{19}F	12.7	^{101}In−u
^{101}In^{m}	84.5	^{101}In^{m}−^{82}Sr ^{19}F	15.5	^{101}In^{m}(IT)^{101}In		
^{101}Sn	99.4	^{101}Sn−^{50}Ti$_{2.020}$	0.6	^{101}Sn−^{101}In		
^{102}Sr	84.4	^{102}Sr−u	15.6	^{102}Sr−^{85}Rb$_{1.200}$		
^{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	79.8	^{104}Ru(d,α)^{102}Tc	20.2	^{100}Mo(^{3}He,p)^{102}Tc		
^{102}Ru	97.5	^{101}Ru(n,γ)^{102}Ru	1.3	^{102}Ru(n,γ)^{103}Ru	0.9	^{106}Nb−^{102}Ru$_{1.039}$
^{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	98.5	^{102}Ru(n,γ)^{103}Ru	1.5	^{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	82.8	^{103}Cd−^{85}Rb$_{1.212}$	13.5	^{103}Cd−^{96}Mo$_{1.073}$	3.4	^{103}Sn−^{103}Cd
^{103}In	76.8	^{103}In−^{85}Rb$_{1.212}$	12.9	^{103}In−u	10.2	^{103}In(β^{+})^{103}Cd
^{103}Sn	91.1	^{103}Sn−u	7.9	^{103}Sn−^{103}Cd	0.9	^{107}Te(α)^{103}Sn
^{104}Nb	41.4	^{104}Nb−^{133}Cs$_{.782}$	40.8	^{104}Nb−^{52}Cr$_{2.000}$	17.7	^{104}Nb−^{97}Zr$_{1.072}$
^{104}Nb^{m}	93.6	^{104}Nb^{m}−^{52}Cr$_{2.000}$	6.4	^{104}Nb^{m}−^{133}Cs$_{0.782}$		
^{104}Ru	79.9	^{104}Ru−^{104}Pd	13.8	^{104}Ru(d,t)^{103}Ru−^{148}Gd()^{147}Gd	6.0	^{104}Ru(n,γ)^{105}Ru
^{104}Pd	79.9	^{104}Pd(n,γ)^{105}Pd	20.1	^{104}Ru−^{104}Pd		
^{104}Cd	89.3	^{104}Cd−^{85}Rb$_{1.224}$	10.7	^{104}Cd−^{96}Mo$_{1.083}$		
^{104}Sn	53.5	^{104}Sn−^{87}Rb$_{1.195}$	42.4	^{104}Sn−u	4.1	^{108}Te(α)^{104}Sn
^{104}Sb	71.5	^{108}I(α)^{104}Sb	28.5	^{104}Sb−u		
^{105}Ru	93.9	^{104}Ru(n,γ)^{105}Ru	1.8	^{105}Ru(β^{-})^{105}Rh	1.5	^{112}Ru−^{105}Ru$_{1.067}$
^{105}Rh	69.9	^{105}Rh(β^{-})^{105}Pd	30.1	^{105}Ru(β^{-})^{105}Rh		
^{105}Pd	86.6	^{105}Pd(n,γ)^{106}Pd	13.0	^{104}Pd(n,γ)^{105}Pd	0.3	^{105}Rh(β^{-})^{105}Pd
^{105}Ag	90.9	^{105}Cd(β^{+})^{105}Ag	9.1	^{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	52.4	^{105}Sn−^{87}Rb$_{1.207}$	32.6	^{105}Sn−^{85}Rb$_{1.235}$	9.6	^{105}Sn−u
^{106}Nb	90.9	^{106}Nb−u	9.1	^{106}Nb−^{102}Ru$_{1.039}$		
^{106}Ru	61.9	^{106}Ru(β^{-})^{106}Rh	38.1	^{106}Ru−^{105}Ru$_{1.010}$		
^{106}Rh	61.9	^{106}Rh(β^{-})^{106}Pd	38.1	^{106}Ru(β^{-})^{106}Rh		
^{106}Pd	63.2	^{106}Cd−^{106}Pd	18.2	^{106}Pd−u	12.4	^{105}Pd(n,γ)^{106}Pd
^{106}Ag	81.1	^{106}Ag(ε)^{106}Pd	12.4	^{105}Pd(^{3}He,d)^{106}Ag	6.5	^{107}Ag(p,d)^{106}Ag

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{106}Cd	39.2	^{106}Cd−^{85}Rb$_{1.247}$	36.6	^{106}Cd−^{106}Pd	24.2	^{106}Cd−u
^{106}Sn	44.9	^{106}Sn−^{87}Rb$_{1.218}$	34.3	^{106}Sn−^{85}Rb$_{1.247}$	13.2	^{106}Sn−u
^{107}Pd	92.4	^{106}Pd(n,γ)^{107}Pd	7.6	^{107}Pd(β^-)^{107}Ag		
^{107}Ag	92.3	^{107}Pd(β^-)^{107}Ag	6.9	^{107}Cd(β^+)^{107}Ag	0.5	^{107}Ag(p,t)^{105}Ag
^{107}Cd	84.3	^{107}Cd−^{85}Rb$_{1.259}$	15.2	^{107}Cd(β^+)^{107}Ag	0.5	^{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
^{107}Te	96.6	^{107}Te(α)^{103}Sn	3.4	^{108}I(p)^{107}Te		
^{108}Pd	37.2	^{108}Pd−^{108}Cd	36.2	^{108}Pd−u	26.6	^{108}Pd(n,γ)^{109}Pd
^{108}Cd	48.5	^{108}Pd−^{108}Cd	25.8	^{108}Cd−^{85}Rb$_{1.271}$	23.6	^{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	93.5	^{108}Te−^{87}Rb$_{1.241}$	6.5	^{108}Te(α)^{104}Sn		
^{108}I	74.3	^{108}I(p)^{107}Te	25.7	^{108}I(α)^{104}Sb		
^{109}Nb	78.9	^{109}Nb−^{133}Cs$_{.820}$	21.1	^{109}Nb−u		
^{109}Rh	64.3	^{110}Pd(d,^{3}He)^{109}Rh	35.7	^{109}Rh−^{120}Sn$_{.908}$		
^{109}Pd	73.0	^{108}Pd(n,γ)^{109}Pd	27.0	^{109}Pd(β^-)^{109}Ag		
^{109}Ag	96.5	^{109}Ag−^{110}Cd$_{.991}$	2.4	^{109}Pd(β^-)^{109}Ag	1.1	^{109}Cd(ε)^{109}Ag
^{109}Cd	71.6	^{109}Cd−^{85}Rb$_{1.282}$	24.5	^{109}Cd(ε)^{109}Ag	3.9	^{109}In(β^+)^{109}Cd
^{109}In	86.7	^{108}Cd(^{3}He,d)^{109}In−^{110}Cd()^{111}In	13.3	^{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$_{.820}$	7.5	^{109}Te(α)^{105}Sn
^{110}Rh	90.8	^{110}Rh−^{110}Pd	9.2	^{110}Rh−^{110}Rh^m		
^{110}Rh^m	82.2	^{110}Rh^m−^{110}Pd	13.1	^{110}Rh^m−^{133}Cs$_{.827}$	4.8	^{110}Rh−^{110}Rhm
^{110}Pd	65.1	^{110}Pd−^{110}Cd	25.1	^{110}Pd−u	8.8	^{110}Rh^m−^{110}Pd
^{110}Cd	75.4	^{110}Cd(n,γ)^{111}Cd	11.1	^{110}Cd−u	10.0	^{110}Pd−^{110}Cd
^{110}Te	83.8	^{110}Te−^{133}Cs$_{.827}$	16.2	^{110}Te(α)^{106}Sn		
^{111}Mo	68.0	^{111}Mo−^{111}Tc	32.0	^{111}Mo−^{133}Cs$_{.835}$		
^{111}Tc	37.1	^{111}Ru−^{111}Tc	23.5	^{111}Rh−^{111}Tc	21.9	^{111}Mo−^{111}Tc
^{111}Ru	43.6	^{111}Ru ^{40}Ar−^{151}Pr	35.6	^{111}Ru−^{111}Tc	20.8	^{111}Ru−^{105}Ru$_{1.057}$
^{111}Rh	39.9	^{111}Rh ^{40}Ar−^{151}Pr	38.3	^{111}Rh−^{120}Sn$_{.925}$	21.8	^{111}Rh−^{111}Tc
^{111}Cd	79.4	^{111}Cd(n,γ)^{112}Cd	20.6	^{110}Cd(n,γ)^{111}Cd		
^{111}In	99.9	^{111}In−^{111}Cd	0.1	^{108}Cd(^{3}He,d)^{109}In−^{110}Cd()^{111}In		
^{111}I	70.0	^{111}I−^{87}Rb$_{1.276}$	30.0	^{111}I(α)^{107}Sb		
^{112}Tc	67.3	^{112}Tc−^{102}Ru$_{1.098}$	32.7	^{112}Ru−^{112}Tc		
^{112}Ru	38.0	^{112}Ru−^{112}Tc	36.7	^{112}Ru ^{40}Ar−^{152}Pr	25.2	^{112}Ru−^{105}Ru$_{1.067}$
^{112}Rh	72.5	^{112}Rh−^{85}Rb$_{1.318}$	27.5	^{112}Rh^m−^{112}Rh		
^{112}Rh^m	84.5	^{112}Rh^m−^{112}Sn	11.5	^{112}Rh^m−^{133}Cs$_{.842}$	4.0	^{112}Rh^m−^{112}Rh
^{112}Pd	89.3	^{112}Pd−^{120}Sn$_{.933}$	10.7	^{110}Pd(t,p)^{112}Pd		
^{112}Cd	41.7	^{113}In−^{112}Cd$_{1.009}$	33.4	^{113}Cd−^{112}Cd$_{1.009}$	11.0	^{112}Sn−^{112}Cd
^{112}In	50.0	^{112}Cd(p,n)^{112}In	50.0	^{112}In(β^-)^{112}Sn		
^{112}Sn	85.7	^{112}Sn−^{112}Cd	4.1	^{114}Rh^n−^{112}Sn$_{1.018}$	3.9	^{114}Rh^m−^{112}Sn$_{1.018}$
^{113}Tc	96.4	^{113}Tc−^{129}Xe$_{.876}$	3.6	^{113}Rh−^{113}Tc		
^{113}Rh	83.8	^{113}Rh−^{120}Sn$_{.942}$	16.2	^{113}Rh−^{113}Tc		
^{113}Pd	90.5	^{113}Pd−^{120}Sn$_{.942}$	9.5	^{113}Pd ^{40}Ar−^{153}Nd		
^{113}Ag	65.9	^{113}Ag^m(IT)^{113}Ag	34.1	^{113}Ag−^{113}Cd		
^{113}Ag^m	65.9	^{113}Ag^m−^{133}Cs$_{.850}$	34.1	^{113}Ag^m(IT)^{113}Ag		
^{113}Cd	51.1	^{113}Cd−^{115}In$_{.983}$	28.6	^{113}Cd−^{112}Cd$_{1.009}$	15.0	^{113}Cd(n,γ)^{114}Cd
^{113}In	75.1	^{113}In−^{115}In$_{.983}$	18.9	^{113}In−^{112}Cd$_{1.009}$	6.0	^{113}In(n,γ)^{114}In
^{113}Xe	82.2	^{113}Xe−^{133}Cs$_{.850}$	17.8	^{113}Xe(α)^{109}Te		
^{114}Rh	80.8	^{114}Rh−^{112}Sn$_{1.018}$	12.7	^{114}Rh−^{85}Rb$_{1.341}$	6.5	^{114}Rh−^{133}Cs$_{.857}$

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{114}Rh^{m}$	50.7	$^{114}Rh^{m}-^{112}Sn_{1.018}$	25.8	$^{114}Rh^{m}-^{85}Rb_{1.341}$	23.5	$^{114}Rh^{n}-^{114}Rhm$
$^{114}Rh^{n}$	49.7	$^{114}Rh^{n}-^{112}Sn_{1.018}$	27.5	$^{114}Rh^{n}-^{85}Rb_{1.341}$	22.8	$^{114}Rh^{n}-^{114}Rhm$
^{114}Cd	80.3	$^{113}Cd(n,\gamma)^{114}Cd$	13.8	$^{114}Cd(d,p)^{115}Cd$	5.9	$^{116}Cd\ ^{35}Cl-^{114}Cd\ ^{37}Cl$
^{114}In	82.0	$^{113}In(n,\gamma)^{114}In$	18.0	$^{114}In(\beta^{-})^{114}Sn$		
^{114}Sn	99.9	$^{114}Sn(n,\gamma)^{115}Sn$	0.1	$^{114}In(\beta^{-})^{114}Sn$		
^{114}Sb	68.1	$^{114}Sb-u$	31.9	$^{114}Sn(p,n)^{114}Sb$		
^{115}Rh	50.6	$^{115}Rh-^{120}Sn_{.958}$	49.4	$^{115}Rh\ ^{40}Ar-^{155}Pm$		
^{115}Pd	63.5	$^{115}Pd-^{133}Cs_{.865}$	36.5	$^{115}Pd^{m}(IT)^{115}Pd$		
$^{115}Pd^{m}$	63.2	$^{115}Pd^{m}(IT)^{115}Pd$	36.8	$^{115}Pd^{m}-^{133}Cs_{.865}$		
^{115}Cd	79.0	$^{115}Cd-^{115}In$	21.0	$^{114}Cd(d,p)^{115}Cd$		
^{115}In	99.9	$^{115}In-^{129}Xe$	0.1	$^{115}In-^{115}Sn$		
^{115}Sn	99.9	$^{115}In-^{115}Sn$	0.1	$^{115}Sn(n,\gamma)^{116}Sn$		
^{116}Rh	71.3	$^{116}Rh-^{133}Cs_{.872}$	15.8	$^{116}Rh^{m}-^{116}Rh$	12.9	$^{116}Rh-^{116}Cd$
$^{116}Rh^{m}$	68.6	$^{116}Rh^{m}-^{116}Rh$	31.4	$^{116}Rh^{m}-^{116}Cd$		
^{116}Ag	52.8	$^{116}Ag^{n}(IT)^{116}Ag$	47.2	$^{116}Ag-^{133}Cs_{.872}$		
$^{116}Ag^{n}$	53.1	$^{116}Ag^{n}-^{133}Cs_{.872}$	46.9	$^{116}Ag^{n}(IT)^{116}Ag$		
^{116}Cd	97.6	$^{116}Cd-^{116}Sn$	2.2	$^{116}Cd\ ^{35}Cl-^{114}Cd\ ^{37}Cl$	0.1	$^{116}Rh^{m}-^{116}Cd$
^{116}Sn	95.6	$^{115}Sn(n,\gamma)^{116}Sn$	3.5	$^{116}Sn(n,\gamma)^{117}Sn$	0.8	$^{116}Cd-^{116}Sn$
^{116}Sb	75.0	$^{116}Sn(p,n)^{116}Sb$	25.0	$^{115}Sn(^{3}He,d)^{116}Sb-^{120}Sn()^{121}Sb$		
^{116}Te	97.4	$^{116}Te-u$	2.6	$^{116}I(\beta^{+})^{116}Te$		
^{116}I	45.1	$^{116}I(\beta^{+})^{116}Te$	40.9	$^{116}I-u$	14.0	$^{116}Xe(\beta^{+})^{116}I$
^{116}Xe	99.6	$^{116}Xe-^{133}Cs_{.872}$	0.4	$^{116}Xe(\beta^{+})^{116}I$		
^{117}In	69.6	$^{117}In-^{117}Sn^{m}$	18.9	$^{117}In(\beta^{-})^{117}Sn$	11.5	$^{120}Sn(t,\alpha)^{119}In-^{118}Sn()^{117}In$
^{117}Sn	92.3	$^{117}Sn(n,\gamma)^{118}Sn$	7.7	$^{116}Sn(n,\gamma)^{117}Sn$		
$^{117}Sn^{m}$	100.0	$^{117}Sn^{m}(IT)^{117}Sn$				
^{117}Sb	71.2	$^{116}Sn(^{3}He,d)^{117}Sb$	17.8	$^{117}Sn(p,n)^{117}Sb$	11.0	$^{117}Te(\beta^{+})^{117}Sb$
^{117}Te	50.7	$^{117}Te(\beta^{+})^{117}Sb$	46.4	$^{117}Te-u$	2.9	$^{117}I(\beta^{+})^{117}Te$
^{117}I	88.5	$^{117}I-u$	11.5	$^{117}I(\beta^{+})^{117}Te$		
^{118}Pd	61.4	$^{118}Pd-^{120}Sn_{.983}$	38.6	$^{118}Pd-^{129}Xe_{.915}$		
$^{118}In^{m}$	53.0	$^{118}In^{m}-^{118}Sn$	47.0	$^{118}In^{n}(IT)^{118}In^{m}$		
$^{118}In^{n}$	53.0	$^{118}In^{n}-^{118}Sn$	47.0	$^{118}In^{n}(IT)^{118}In^{m}$		
^{118}Sn	98.8	$^{118}Sn-u$	1.2	$^{117}Sn(n,\gamma)^{118}Sn$		
$^{119}Pd^{m}$	89.1	$^{119}Pd^{m}-^{133}Cs_{.895}$	10.9	$^{119}Pd^{m}-^{120}Sn_{.992}$		
^{119}Ag	67.9	$^{119}Ag^{m}(IT)^{119}Ag$	32.1	$^{119}Ag-^{133}Cs_{.895}$		
$^{119}Ag^{m}$	68.0	$^{119}Ag^{m}-^{133}Cs_{.895}$	32.0	$^{119}Ag^{m}(IT)^{119}Ag$		
^{119}In	90.2	$^{119}In-^{133}Cs_{.895}$	9.8	$^{120}Sn(t,\alpha)^{119}In-^{118}Sn()^{117}In$		
^{119}Sn	95.7	$^{118}Sn(n,\gamma)^{119}Sn$	4.2	$^{120}Sn(d,t)^{119}Sn$	0.1	$^{119}Sb(\varepsilon)^{119}Sn$
^{119}Sb	48.8	$^{118}Sn(^{3}He,d)^{119}Sb$	33.8	$^{119}Sb(\varepsilon)^{119}Sn$	17.4	$^{119}Sb-u$
^{119}Xe	86.2	$^{119}Xe-^{133}Cs_{.895}$	13.8	$^{119}Xe-u$		
^{120}Pd	68.8	$^{120}Pd-^{120}Sn$	31.2	$^{120}Pd-^{129}Xe_{.930}$		
^{120}Sn	21.5	$^{112}Sn-^{120}Sn_{.933}$	20.9	$^{115}Sn-^{120}Sn_{.958}$	18.3	$^{129}Xe-^{120}Sn_{1.075}$
^{120}Te	98.7	$^{122}Te(p,t)^{120}Te-^{132}Ba()^{130}Ba$	1.2	$^{122}Te(p,t)^{120}Te-^{144}Sm()^{142}Sm$		
^{121}Pd	55.2	$^{121}Pd-^{129}Xe_{.938}$	44.8	$^{121}Pd-^{133}Cs_{.910}$		
^{121}Sn	94.9	$^{120}Sn(n,\gamma)^{121}Sn$	5.1	$^{122}Sn(d,t)^{121}Sn$		
^{121}Sb	95.7	$^{121}Sb(n,\gamma)^{122}Sb$	4.2	$^{115}Sn(^{3}He,d)^{116}Sb-^{120}Sn()^{121}Sb$	0.1	$^{121}Te(\beta^{+})^{121}Sb$
^{121}Te	73.6	$^{121}Te(\beta^{+})^{121}Sb$	26.4	$^{121}I(\beta^{+})^{121}Te$		
^{121}I	99.4	$^{120}Te(^{3}He,d)^{121}I$	0.6	$^{121}I(\beta^{+})^{121}Te$		
^{121}Xe	85.0	$^{121}Xe-^{133}Cs_{.910}$	15.0	$^{121}Cs(\beta^{+})^{121}Xe$		
^{121}Cs	46.0	$^{121}Cs(\beta^{+})^{121}Xe$	37.7	$^{121}Cs-^{133}Cs_{.910}$	16.3	$^{121}Cs-u$
^{122}Cd	72.4	$^{122}Cd-^{130}Xe_{.938}$	27.6	$^{122}Cd-^{133}Cs_{.917}$		
$^{122}In^{n}$	53.7	$^{122}In^{n}-^{133}Cs_{.917}$	46.3	$^{122}In^{n}-^{85}Rb_{1.435}$		
^{122}Sn	86.6	$^{122}Sn-^{122}Te$	13.2	$^{122}Sn(d,t)^{121}Sn$	0.2	$^{122}Sn(n,\gamma)^{123}Sn$

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{122}Sb	67.7	^{122}Sb(β^-)^{122}Te	28.0	^{123}Sb(γ,n)^{122}Sb	4.3	^{121}Sb(n,γ)^{122}Sb
^{122}Te	85.8	^{122}Te(n,γ)^{123}Te	13.2	^{122}Sn$-^{122}$Te	0.6	^{122}Sb(β^-)^{122}Te
^{122}Cs	56.8	^{122}Cs$-^{133}$Cs$_{.917}$	43.2	^{122}Cs$-$u		
^{123}Sn	90.4	^{122}Sn(n,γ)^{123}Sn	9.6	^{124}Sn(d,t)^{123}Sn		
^{123}Sb	99.7	^{123}Te$-^{123}$Sb	0.3	^{123}Sb(γ,n)^{122}Sb		
^{123}Te	85.6	^{123}Te(n,γ)^{124}Te	14.1	^{122}Te(n,γ)^{123}Te	0.3	^{123}Te$-^{123}$Sb
^{123}I	96.4	^{122}Te(^{3}He,d)^{123}I	3.6	^{123}Xe(β^+)^{123}I		
^{123}Xe	62.0	^{123}Xe$-^{133}$Cs$_{.925}$	38.0	^{123}Xe(β^+)^{123}I		
^{124}Cd	68.0	^{124}Cd$-^{130}$Xe$_{.954}$	32.0	^{124}Cd$-^{133}$Cs$_{.932}$		
^{124}Sn	41.8	^{124}Sn$-^{129}$Xe$_{.961}$	30.5	^{124}Sn$-^{120}$Sn$_{1.033}$	26.8	^{124}Sn$-^{124}$Te
^{124}Te	73.1	^{124}Sn$-^{124}$Te	14.2	^{123}Te(n,γ)^{124}Te	12.1	^{124}Te(n,γ)^{125}Te
^{124}Xe	99.4	^{124}Xe$-^{124}$Te	0.6	^{124}Xe(n,γ)^{125}Xe		
^{125}Ag	78.9	^{125}Ag$-^{133}$Cs$_{.940}$	21.1	^{125}Ag^m(IT)^{125}Ag		
^{125}Ag^m	78.6	^{125}Ag^m(IT)^{125}Ag	21.4	^{125}Ag$^m-^{133}$Cs$_{.940}$		
^{125}Te	87.8	^{124}Te(n,γ)^{125}Te	12.2	^{125}Te(n,γ)^{126}Te		
^{125}Xe	99.4	^{124}Xe(n,γ)^{125}Xe	0.6	^{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}Sn	63.7	^{126}Sn ^{14}N$_2-^{154}$Nd	36.3	^{124}Sn(t,p)^{126}Sn		
^{126}Te	87.8	^{125}Te(n,γ)^{126}Te	8.9	^{128}Te ^{35}Cl$-^{126}$Te ^{37}Cl	1.8	^{126}I(β^+)^{126}Te
^{126}I	52.0	^{126}I(β^+)^{126}Te	48.0	^{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	99.7	^{127}In$-^{133}$Cs$_{.955}$	0.3	^{127}In(β^-)^{127}Sn		
^{127}Sn	65.9	^{127}Sn ^{34}S$-^{133}$Cs$_{1.211}$	20.5	^{127}In(β^-)^{127}Sn	13.7	^{127}Sn(β^-)^{127}Sb
^{127}Sb	96.2	^{127}Sb(β^-)^{127}Te	3.8	^{127}Sn(β^-)^{127}Sb		
^{127}Te	98.5	^{126}Te(n,γ)^{127}Te	1.3	^{127}Te(β^-)^{127}I	0.2	^{127}Sb(β^-)^{127}Te
^{127}I	35.4	^{127}I(γ,n)^{126}I	24.1	^{127}Te(β^-)^{127}I	20.8	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	76.3	^{128}Sn(β^-)^{128}Sb^m	23.7	^{128}Sn$-$u		
^{128}Sb^m	99.1	^{128}Sb$^m-^{133}$Cs$_{.962}$	0.9	^{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	87.0	^{127}I(n,γ)^{128}I	13.0	^{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	100.0	^{130}Ba(p,t)^{128}Ba$-^{144}$Sm()^{142}Sm				
^{129}In	53.4	^{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	36.7	^{129}In$^m-^{130}$Xe$_{.992}$		
^{129}Sn	50.0	^{129}Sn$-^{133}$Cs$_{.970}$	50.0	^{129}Sn^m(IT)^{129}Sn		
^{129}Sn^m	50.0	^{129}Sn$^m-^{133}$Cs$_{.970}$	50.0	^{129}Sn^m(IT)^{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	26.0	^{132}Xe$-^{129}$Xe	15.7	C$_{10}$ H$_{10}-^{129}$Xe	13.6	^{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		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{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	57.7	^{130}Sn−^{133}Cs$_{.977}$	30.5	^{130}Sn−^{130}Xe	11.7	^{130}Sn^{m}(IT)^{130}Sn
^{130}Sn^{m}	88.3	^{130}Sn^{m}(IT)^{130}Sn	11.7	^{130}Sn^{m}−^{133}Cs$_{.977}$		
^{130}Sb	90.1	^{130}Sn(β^{-})^{130}Sb	9.9	^{130}Sb(β^{-})^{130}Te		
^{130}Te	77.5	^{130}Te−^{129}Xe	22.5	^{130}Te−^{130}Xe		
^{130}Xe	49.6	^{130}Xe−^{129}Xe	37.9	^{132}Xe−^{130}Xe	12.5	^{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	99.9	^{130}Ba−^{130}Xe	0.1	^{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$_{.985}$		
^{131}In^{m}	88.3	^{131}In^{m}−^{133}Cs$_{.985}$	11.7	^{131}In^{m}−^{130}Xe$_{1.008}$		
^{131}In^{n}	83.5	^{131}In^{n}−u	16.5	^{131}In^{n}(β^{-})^{131}Sn		
^{131}Sn	94.7	^{131}Sn−^{133}Cs$_{.985}$	5.3	^{131}Sn(β^{-})^{131}Sb		
^{131}Sb	93.7	^{131}Sb−^{130}Xe$_{1.008}$	6.3	^{131}Sn(β^{-})^{131}Sb		
^{131}Xe	51.6	^{131}Xe−^{132}Xe$_{.992}$	48.4	^{131}Xe−^{129}Xe$_{1.016}$		
^{131}Ce	95.7	^{131}Ce−u	4.3	^{131}Pr(β^{+})^{131}Ce		
^{131}Pr	81.2	^{131}Pr−u	9.5	^{131}Nd(β^{+})^{131}Pr	9.3	^{131}Pr(β^{+})^{131}Ce
^{131}Nd	97.0	^{131}Nd−u	3.0	^{131}Nd(β^{+})^{131}Pr		
^{132}In	71.2	^{132}In−u	28.8	^{132}In(β^{-})^{132}Sn		
^{132}Sn	61.0	^{132}Sn−^{133}Cs$_{.992}$	38.9	^{132}Sn−^{132}Xe	0.1	^{132}In(β^{-})^{132}Sn
^{132}Sb	77.1	^{132}Sb−^{133}Cs$_{.992}$	13.5	^{132}Sb^{m}−^{132}Sb	9.4	^{132}Sb−^{130}Xe$_{1.015}$
^{132}Sb^{m}	78.7	^{132}Sb^{m}−^{133}Cs$_{.992}$	21.3	^{132}Sb^{m}−^{132}Sb		
^{132}Te	75.8	^{132}Te−^{130}Xe$_{1.015}$	24.2	^{132}Te(β^{-})^{132}I		
^{132}I	51.6	^{132}Te(β^{-})^{132}I	48.4	^{132}I(β^{-})^{132}Xe		
^{132}Xe	34.9	^{132}Xe−C_{10} H_{10}	18.0	^{132}Xe−^{129}Xe	14.3	^{132}Xe−C_3 O_6
^{132}Cs	73.2	^{132}Cs−^{133}Cs$_{.992}$	26.8	^{133}Cs(γ,n)^{132}Cs		
^{132}Ba	98.9	^{132}Ba(n,γ)^{133}Ba	1.1	^{122}Te(p,t)^{120}Te−^{132}Ba()^{130}Ba		
^{132}La	66.1	^{132}La(β^{+})^{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	91.7	^{133}Sb−^{133}Cs	8.3	^{133}Sb−^{130}Xe$_{1.023}$		
^{133}Te	50.1	^{133}Te−^{133}Cs	49.9	^{133}Te^{m}(IT)^{133}Te		
^{133}Te^{m}	50.1	^{133}Te^{m}−^{133}Cs	49.9	^{133}Te^{m}(IT)^{133}Te		
^{133}Cs	45.2	^{133}Cs−^{132}Xe	44.2	^{133}Cs−^{129}Xe	10.5	^{133}Cs−C_3 O_6
^{133}Ba	99.0	^{133}Ba(ε)^{133}Cs	1.0	^{132}Ba(n,γ)^{133}Ba		
^{134}Te	71.0	^{134}Te−^{130}Xe$_{1.031}$	20.6	^{134}Te−^{136}Xe$_{.985}$	8.5	^{134}Te(β^{-})^{134}I
^{134}I	58.8	^{134}I−^{133}Cs$_{1.008}$	41.2	^{134}Te(β^{-})^{134}I		
^{134}Xe	100.0	^{134}Xe−^{132}Xe$_{1.015}$				
^{134}Cs	99.9	^{133}Cs(n,γ)^{134}Cs	0.1	^{134}Cs(β^{-})^{134}Ba		
^{134}Ba	73.8	^{134}Ba(n,γ)^{135}Ba	26.2	^{134}Cs(β^{-})^{134}Ba		
^{134}Ce	53.3	^{134}Ce−u	46.7	^{134}Ce O−^{142}Sm$_{1.056}$		
^{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(β^{-})^{135}Xe		
^{135}Xe	66.9	^{135}Xe(β^{-})^{135}Cs	33.1	^{135}I(β^{-})^{135}Xe		
^{135}Cs	88.6	^{135}Cs−^{135}Ba	11.2	^{134}Cs(n,γ)^{135}Cs	0.2	^{135}Xe(β^{-})^{135}Cs
^{135}Ba	75.2	^{135}Ba(n,γ)^{136}Ba	21.4	^{134}Ba(n,γ)^{135}Ba	3.4	^{135}Cs−^{135}Ba
^{135}La	88.9	^{135}La(β^{+})^{135}Ba	11.1	^{135}Ce(β^{+})^{135}La		
^{135}Ce	86.5	^{135}Ce(β^{+})^{135}La	13.5	^{135}Ce−u		
^{136}Sb	84.7	^{136}Sb−^{130}Xe$_{1.046}$	15.3	^{136}Sb−^{133}Cs$_{1.023}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{136}Te	62.8	^{136}Te−^{130}Xe$_{1.046}$	24.1	^{136}Te−^{136}Xe	13.1	^{136}Te−^{133}Cs$_{1.023}$
^{136}Xe	80.0	^{136}Xe−^{13}C$_3$ O$_6$	20.0	^{136}Xe−^{28}Si$_4$ D$_{12}$		
^{136}Ba	40.3	^{136}Ba−u	24.0	^{135}Ba(n,γ)^{136}Ba	18.6	^{136}Ba(n,γ)^{137}Ba
^{136}Ce	100.0	^{136}Ce−^{136}Ba				
^{136}Pr	67.2	^{136}Pr−^{133}Cs$_{1.023}$	32.8	^{136}Pr(β^+)^{136}Ce		
^{137}Sb	90.5	^{137}Sb−^{136}Xe$_{1.007}$	9.5	^{137}Sb−^{137}Cs		
^{137}Te	69.8	^{137}Te−^{130}Xe$_{1.054}$	30.2	^{137}Te−^{133}Cs$_{1.030}$		
^{137}Cs	100.0	^{137}Cs(β^-)^{137}Ba				
^{137}Ba	79.4	^{136}Ba(n,γ)^{137}Ba	20.6	^{137}Ba(n,γ)^{138}Ba		
^{137}Ce	100.0	^{136}Ce(n,γ)^{137}Ce				
^{137}Pr	66.1	^{137}Pr(β^+)^{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(β^+)^{137}Nd
^{137}Pm^m	65.2	^{137}Pm^m(β^+)^{137}Nd	34.8	^{137}Sm(β^+)^{137}Pm^m		
^{137}Sm	53.5	^{137}Sm−^{133}Cs$_{1.030}$	36.3	^{137}Sm−u	10.2	^{137}Sm(β^+)^{137}Pmm
^{138}Te	74.8	^{138}Te−^{130}Xe$_{1.062}$	25.2	^{138}Te−^{133}Cs$_{1.038}$		
^{138}I	61.9	^{138}I−^{130}Xe$_{1.062}$	38.1	^{138}I−^{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(β^-)^{138}Ba	49.3	^{138}Cs−^{133}Cs$_{1.038}$		
^{138}Ba	78.7	^{137}Ba(n,γ)^{138}Ba	19.8	^{138}Ba−^{136}Xe$_{1.015}$	0.9	^{138}La−^{138}Ba
^{138}La	81.6	^{138}La−^{138}Ba	18.4	^{138}La−^{138}Ce		
^{138}Ce	53.1	^{138}La−^{138}Ce	37.7	^{138}Ce−^{138}Ba	9.2	^{138}Ce−^{136}Xe$_{1.015}$
^{138}Pr^m	66.1	^{138}Pr^m(β^+)^{138}Ce	33.9	^{138}Pr^m−u		
^{138}Pm	82.1	^{138}Pm−^{133}Cs$_{1.038}$	17.9	^{138}Pm−u		
^{139}La	94.4	^{139}La−^{136}Xe$_{1.022}$	5.6	^{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	79.5	^{140}Cs−^{133}Cs$_{1.053}$	20.5	^{140}Cs(β^-)^{140}Ba		
^{140}Ba	40.2	^{140}Ba−^{133}Cs$_{1.053}$	32.2	^{140}Ba(β^-)^{140}La	20.8	^{140}Cs(β^-)^{140}Ba
^{140}La	94.4	^{139}La(n,γ)^{140}La	5.5	^{140}La(β^-)^{140}Ce	0.1	^{140}Ba(β^-)^{140}La
^{140}Ce	37.8	^{140}La(β^-)^{140}Ce	30.6	^{140}Ce O−^{133}Cs$_{1.173}$	27.5	^{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$_{1.060}$	8.0	^{141}Cs(β^-)^{141}Ba
^{141}La	96.1	^{141}La(β^-)^{141}Ce	3.9	^{141}Ba(β^-)^{141}La		
^{141}Ce	72.4	^{140}Ce(n,γ)^{141}Ce	27.3	^{141}Ce(β^-)^{141}Pr	0.4	^{141}La(β^-)^{141}Ce
^{141}Pr	50.7	^{141}Ce(β^-)^{141}Pr	49.3	^{141}Pr(n,γ)^{142}Pr		
^{141}Sm	35.0	^{144}Sm(^{3}He,^{6}He)^{141}Sm	30.0	^{141}Sm−^{133}Cs$_{1.060}$	29.9	^{141}Sm^m(IT)^{141}Sm
^{141}Sm^m	70.0	^{141}Sm^m(IT)^{141}Sm	30.0	^{141}Sm^m−^{133}Cs$_{1.060}$		
^{141}Eu	81.4	^{141}Eu−^{133}Cs$_{1.060}$	18.6	^{141}Eu(β^+)^{141}Sm		
^{142}Cs	38.6	^{142}Cs−^{136}Xe$_{1.044}$	34.2	^{142}Cs(β^-)^{142}Ba	27.1	^{142}Cs−^{133}Cs$_{1.068}$
^{142}Ba	43.3	^{142}Ba−u	29.9	^{142}Ba−^{133}Cs$_{1.068}$	22.2	^{142}Cs(β^-)^{142}Ba
^{142}La	94.0	^{142}La(β^-)^{142}Ce	6.0	^{142}Ba(β^-)^{142}La		
^{142}Ce	79.2	^{142}Ce(n,γ)^{143}Ce	20.0	^{140}Ce(t,p)^{142}Ce	0.8	^{142}La(β^-)^{142}Ce
^{142}Pr	50.6	^{141}Pr(n,γ)^{142}Pr	49.4	^{142}Pr(β^-)^{142}Nd		
^{142}Nd	83.5	^{142}Nd(n,γ)^{143}Nd	15.7	^{142}Pr(β^-)^{142}Nd	0.5	^{146}Sm(α)^{142}Nd
^{142}Pm	88.6	^{142}Pm−u	11.4	^{142}Sm(β^+)^{142}Pm		
^{142}Sm	97.6	^{122}Te(p,t)^{120}Te−^{144}Sm()^{142}Sm	0.7	^{148}Eu−^{142}Sm$_{1.042}$	0.7	^{149}Dy−^{142}Sm$_{1.049}$
^{143}Cs	91.3	^{143}Cs−^{133}Cs$_{1.075}$	8.7	^{143}Cs(β^-)^{143}Ba		
^{143}Ba	82.1	^{143}Ba−u	13.6	^{143}Ba−^{133}Cs$_{1.075}$	4.4	^{143}Cs(β^-)^{143}Ba

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{143}La	81.8	^{143}La−u	18.2	^{143}La(β^-)^{143}Ce		
^{143}Ce	77.7	^{143}Ce(β^-)^{143}Pr	20.8	^{142}Ce(n,γ)^{143}Ce	1.6	^{143}La(β^-)^{143}Ce
^{143}Pr	90.8	^{143}Pr(β^-)^{143}Nd	9.2	^{143}Ce(β^-)^{143}Pr		
^{143}Nd	70.3	^{143}Nd(n,γ)^{144}Nd	16.5	^{142}Nd(n,γ)^{143}Nd	10.6	^{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	42.6	^{144}Cs−^{133}Cs$_{1.083}$	37.9	^{144}Cs(β^-)^{144}Ba	19.5	^{144}Cs−^{145}Cs$_{.662}$ ^{142}Cs$_{.338}$
^{144}Ba	81.2	^{144}Ba−u	16.8	^{144}Ba−^{133}Cs$_{1.083}$	2.0	^{144}Cs(β^-)^{144}Ba
^{144}Nd	44.4	^{148}Sm(α)^{144}Nd	29.6	^{143}Nd(n,γ)^{144}Nd	20.8	^{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	86.4	^{144}Sm−^{144}Nd	6.8	^{144}Sm(n,γ)^{145}Sm	3.7	^{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}Ce	88.8	^{145}Ce−u	11.2	^{145}Ce(β^-)^{145}Pr		
^{145}Pr	49.1	^{145}Pr(β^-)^{145}Nd	49.1	^{146}Nd(d,^{3}He)^{145}Pr	1.8	^{145}Ce(β^-)^{145}Pr
^{145}Nd	74.9	^{144}Nd(n,γ)^{145}Nd	25.1	^{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
^{145}Sm	92.4	^{144}Sm(n,γ)^{145}Sm	2.9	^{149}Gd(α)^{145}Sm	2.6	^{145}Sm(ε)^{145}Pm
^{145}Eu	90.9	^{144}Sm(^{3}He,d)^{145}Eu	9.1	^{149}Tb(α)^{145}Eu		
^{146}Ce	95.1	^{146}Ce−u	4.9	^{146}Ce(β^-)^{146}Pr		
^{146}Pr	55.4	^{146}Ce(β^-)^{146}Pr	28.2	^{146}Pr−u	16.4	^{146}Pr(β^-)^{146}Nd
^{146}Nd	74.3	^{145}Nd(n,γ)^{146}Nd	24.2	^{146}Nd(n,γ)^{147}Nd	1.5	^{148}Nd ^{35}Cl−^{146}Nd ^{37}Cl
^{146}Sm	46.2	^{146}Sm(α)^{142}Nd	30.5	^{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	18.4	^{146}Eu−^{133}Cs$_{1.098}$
^{146}Gd	87.6	^{148}Gd(p,t)^{146}Gd−^{65}Cu()^{63}Cu	8.4	^{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−^{85}Rb$_{1.718}$	50.0	^{146}Ho−^{133}Cs$_{1.098}$		
^{146}Er	60.5	^{146}Er−^{85}Rb$_{1.718}$	39.5	^{147}Tm(p)^{146}Er		
^{147}Nd	75.2	^{146}Nd(n,γ)^{147}Nd	13.9	^{147}Nd(β^-)^{147}Pm	10.4	^{147}Nd−^{12}C$_6$ ^{1}H$_6$
^{147}Pm	82.2	^{147}Pm(β^-)^{147}Sm	17.8	^{147}Nd(β^-)^{147}Pm		
^{147}Sm	70.8	^{147}Sm(n,γ)^{148}Sm	15.7	^{149}Sm ^{35}Cl−^{147}Sm ^{37}Cl	11.6	^{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	79.5	^{148}Gd(p,d)^{147}Gd−^{148}Sm()^{147}Sm	12.5	^{104}Ru(d,t)^{103}Ru−^{148}Gd()^{147}Gd	6.3	^{147}Gd(β^+)^{147}Eu
^{147}Tb	47.8	^{147}Tb−^{133}Cs$_{1.105}$	25.9	^{147}Tb(β^+)^{147}Gd	17.4	^{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	56.4	^{147}Tm(p)^{146}Er	43.6	^{147}Tm−^{85}Rb$_{1.729}$		
^{148}Ce	89.4	^{148}Ce−u	10.6	^{148}Ce ^{40}Ar$_2$−^{152}Pr$_{1.500}$		
^{148}Pr	56.6	^{148}Pr−u	43.4	^{148}Pr(β^-)^{148}Nd		
^{148}Nd	60.7	^{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	34.1	^{148}Sm(α)^{144}Nd	28.4	^{150}Sm ^{35}Cl−^{148}Sm ^{37}Cl	21.7	^{147}Sm(n,γ)^{148}Sm
^{148}Eu	50.8	^{148}Eu−^{133}Cs$_{1.113}$	39.0	^{148}Eu−^{142}Sm$_{1.042}$	10.3	^{148}Eu(α)^{144}Pm
^{148}Gd	96.3	^{148}Gd(α)^{144}Sm	2.5	^{148}Gd(p,d)^{147}Gd−^{148}Sm()^{147}Sm	0.7	^{148}Gd(p,t)^{146}Gd−^{65}Cu()^{63}Cu
^{148}Tb	73.2	^{148}Dy(β^+)^{148}Tb	17.9	^{152}Ho(α)^{148}Tb	8.9	^{148}Tb(β^+)^{148}Gd
^{148}Dy	77.8	^{148}Dy−^{133}Cs$_{1.113}$	16.6	^{152}Er(α)^{148}Dy	5.6	^{148}Dy(β^+)^{148}Tb
^{149}Pm	87.0	^{149}Pm(β^-)^{149}Sm	13.0	^{148}Nd(^{3}He,d)^{149}Pm		
^{149}Sm	84.9	^{149}Sm(n,γ)^{150}Sm	7.3	^{148}Sm(n,γ)^{149}Sm	6.7	^{149}Sm ^{35}Cl−^{147}Sm ^{37}Cl
^{149}Eu	56.4	^{151}Eu(p,t)^{149}Eu	29.5	^{149}Gd(ε)^{149}Eu	14.1	^{149}Eu(ε)^{149}Sm
^{149}Gd	52.8	^{149}Gd(α)^{145}Sm	21.1	^{153}Dy(α)^{149}Gd	17.9	^{149}Gd(ε)^{149}Eu
^{149}Tb	85.6	^{149}Tb(α)^{145}Eu	10.5	^{149}Tb(β^+)^{149}Gd	3.9	^{149}Dy(β^+)^{149}Tb
^{149}Dy	41.7	^{149}Dy(β^+)^{149}Tb	33.6	^{149}Dy−^{142}Sm$_{1.049}$	13.3	^{153}Er(α)^{149}Dy
^{149}Ho	61.7	^{153}Tm(α)^{149}Ho	25.8	^{149}Ho(β^+)^{149}Dy	12.6	^{149}Ho−u

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{150}La	56.2	^{150}La−u	29.9	^{150}La−^{133}Cs$_{1.128}$	13.9	^{150}La ^{1}H−^{151}Pr
^{150}Ce	51.8	^{150}Ce−^{12}C$_6$ ^{1}H$_6$	48.2	^{150}Ce ^{1}H−^{151}Pr		
^{150}Nd	67.9	^{150}Nd−^{150}Sm	29.4	^{150}Nd(n,γ)^{151}Nd	2.7	^{150}Nd(^{3}He,d)^{151}Pm
^{150}Sm	50.3	^{150}Sm(n,γ)^{151}Sm	31.0	^{150}Nd−^{150}Sm	9.9	^{149}Sm(n,γ)^{150}Sm
^{150}Eu	53.2	^{150}Eu(β^-)^{150}Gd	46.8	^{151}Eu(p,d)^{150}Eu		
^{150}Gd	39.4	^{150}Gd(α)^{146}Sm	37.8	^{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	90.4	^{150}Dy(α)^{146}Gd	6.0	^{154}Er(α)^{150}Dy	2.1	^{150}Er−^{150}Dy
^{150}Ho	43.1	^{150}Ho−^{133}Cs$_{1.128}$	35.6	^{150}Er(β^+)^{150}Ho	21.3	^{150}Ho(ε)^{150}Dy
^{150}Er	32.1	^{150}Er(β^+)^{150}Ho	29.4	^{150}Er−^{150}Dy	19.8	^{150}Er−u
^{151}La	70.8	^{151}La−^{12}C$_6$ ^{1}H$_6$	26.6	^{151}La−^{133}Cs$_{1.135}$	2.6	^{151}La ^{1}H−^{152}Pr
^{151}Ce	69.8	^{151}Ce−^{12}C$_6$ ^{1}H$_6$	16.3	^{151}Ce−^{133}Cs$_{1.135}$	13.9	^{151}Ce−^{151}Pr
^{151}Pr	74.3	^{151}Pr−^{12}C$_6$ ^{1}H$_6$	12.6	^{151}Ce−^{151}Pr	6.7	^{150}Ce ^{1}H−^{151}Pr
^{151}Nd	70.4	^{150}Nd(n,γ)^{151}Nd	29.6	^{151}Nd−^{12}C$_6$ ^{1}H$_6$		
^{151}Pm	93.0	^{151}Pm−^{12}C$_6$ ^{1}H$_6$	7.0	^{150}Nd(^{3}He,d)^{151}Pm		
^{151}Sm	49.2	^{150}Sm(n,γ)^{151}Sm	30.2	^{151}Sm(n,γ)^{152}Sm	20.6	^{151}Sm(β^-)^{151}Eu
^{151}Eu	79.1	^{151}Sm(β^-)^{151}Eu	20.1	^{151}Eu(n,γ)^{152}Eu	0.3	^{151}Gd(ε)^{151}Eu
^{151}Gd	85.4	^{151}Gd(ε)^{151}Eu	14.6	^{151}Tb(β^+)^{151}Gd		
^{151}Tb	51.7	^{151}Tb(β^+)^{151}Gd	48.3	^{151}Tb(α)^{147}Eu		
^{151}Dy	96.3	^{151}Dy(α)^{147}Gd	2.1	^{155}Er(α)^{151}Dy	1.1	^{151}Er−^{151}Dy
^{151}Ho	90.6	^{151}Ho(α)^{147}Tb	9.4	^{155}Tm(α)^{151}Ho		
^{151}Er	44.7	^{151}Er−u	29.8	^{155}Yb(α)^{151}Er	25.4	^{151}Er−^{151}Dy
^{151}Tm	84.1	^{155}Lu(α)^{151}Tm	15.9	^{151}Tm−^{151}Dy		
^{151}Yb	87.7	^{151}Yb−^{151}Er	12.3	^{151}Yb(εp)^{150}Er		
^{152}La	75.9	^{152}La−^{12}C$_6$ ^{1}H$_6$	24.1	^{152}La−^{133}Cs$_{1.143}$		
^{152}Ce	73.6	^{152}Ce−u	13.5	^{152}Ce ^{1}H−^{153}Nd	13.0	^{152}Ce−^{152}Pr
^{152}Pr	69.2	^{152}Ce−^{152}Pr	9.8	^{152}Pr−u	9.6	^{151}La ^{1}H−^{152}Pr
^{152}Nd	99.3	^{152}Nd−^{152}Pr	0.7	^{152}Nd(β^-)^{152}Pm		
^{152}Pm	73.2	^{152}Nd(β^-)^{152}Pm	19.1	^{152}Pm(β^-)^{152}Sm	7.7	^{152}Pm−^{152}Pr
^{152}Sm	54.8	^{152}Gd−^{152}Sm	23.8	^{151}Sm(n,γ)^{152}Sm	10.4	^{152}Eu(β^+)^{152}Sm
^{152}Eu	79.2	^{151}Eu(n,γ)^{152}Eu	13.9	^{152}Eu(β^+)^{152}Sm	6.9	^{152}Eu(n,γ)^{153}Eu
^{152}Gd	57.1	^{152}Gd(n,γ)^{153}Gd	42.9	^{152}Gd−^{152}Sm		
^{152}Dy	99.9	^{152}Dy(α)^{148}Gd	0.1	^{152}Tm−^{152}Dy		
^{152}Ho	81.8	^{152}Ho(α)^{148}Tb	18.2	^{156}Tm(α)^{152}Ho		
^{152}Er	82.5	^{152}Er(α)^{148}Dy	17.5	^{156}Yb(α)^{152}Er		
^{152}Tm	66.0	^{152}Tm−u	19.9	^{152}Tm−^{152}Dy	14.1	^{152}Tm^m(IT)^{152}Tm
^{152}Tm^m	77.0	^{152}Tm^m(IT)^{152}Tm	23.0	^{152}Yb(β^+)^{152}Tm^m		
^{152}Yb	92.6	^{152}Yb−^{136}Ce O	7.4	^{152}Yb(β^+)^{152}Tm^m		
^{153}Ce	70.5	^{153}Ce−u	17.9	^{153}Ce−^{153}Nd	11.7	^{153}Ce ^{1}H−^{154}Nd
^{153}Pr	59.9	^{153}Pr−u	40.1	^{153}Pr−^{153}Nd		
^{153}Nd	28.6	^{153}Pr−^{153}Nd	14.2	^{153}Nd−^{80}Kr$_{1.913}$	12.7	^{153}Nd−u
^{153}Pm	97.6	^{153}Pm−^{153}Nd	2.4	^{154}Sm(t,α)^{153}Pm		
^{153}Sm	97.7	^{152}Sm(n,γ)^{153}Sm	2.3	^{153}Sm−^{153}Nd		
^{153}Eu	92.7	^{152}Eu(n,γ)^{153}Eu	7.3	^{153}Eu(n,γ)^{154}Eu		
^{153}Gd	57.8	^{153}Gd(n,γ)^{154}Gd	41.7	^{152}Gd(n,γ)^{153}Gd	0.5	^{153}Tb(β^+)^{153}Gd
^{153}Tb	58.6	^{153}Tb(β^+)^{153}Gd	41.4	^{153}Dy(β^+)^{153}Tb		
^{153}Dy	52.1	^{153}Dy(β^+)^{153}Tb	47.9	^{153}Dy(α)^{149}Gd		
^{153}Er	86.3	^{153}Er(α)^{149}Dy	13.7	^{157}Yb(α)^{153}Er		
^{153}Tm	62.1	^{157}Lu^m(α)^{153}Tm	37.9	^{153}Tm(α)^{149}Ho		
^{154}Pr	94.1	^{154}Pr−u	5.9	^{154}Pr ^{1}H−^{155}Pm		
^{154}Nd	90.5	^{154}Nd−^{82}Kr$_{1.878}$	6.9	^{154}Sm−^{154}Nd	2.1	^{153}Ce ^{1}H−^{154}Nd

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{154}Sm	64.4	^{154}Sm ^{35}Cl−^{152}Sm ^{37}Cl	16.9	^{154}Sm−^{154}Gd	9.7	^{154}Sm(n,γ)^{155}Sm
^{154}Eu	91.3	^{153}Eu(n,γ)^{154}Eu	7.1	^{154}Eu(β^-)^{154}Gd	0.9	^{154}Eu(n,γ)^{155}Eu
^{154}Gd	53.2	^{154}Gd(n,γ)^{155}Gd	40.2	^{153}Gd(n,γ)^{154}Gd	4.1	^{154}Eu(β^-)^{154}Gd
^{154}Dy	81.7	^{154}Dy(α)^{150}Gd	17.5	^{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	91.7	^{154}Er(α)^{150}Dy	8.3	^{158}Yb(α)^{154}Er		
^{154}Yb	81.1	^{154}Yb(α)^{150}Er	11.1	^{158}Hf(α)^{154}Yb	7.8	^{154}Yb−^{138}Ce O
^{155}Pr	71.5	^{155}Pr−^{12}C$_6$ ^{1}H$_6$	28.5	^{155}Pr−^{155}Pm		
^{155}Pm	48.9	^{155}Sm−^{155}Pm	29.1	^{155}Pr−^{155}Pm	5.9	^{155}Pm−u
^{155}Sm	89.7	^{154}Sm(n,γ)^{155}Sm	10.3	^{155}Sm−^{155}Pm		
^{155}Eu	98.9	^{154}Eu(n,γ)^{155}Eu	1.1	^{158}Gd(t,α)^{157}Eu−^{156}Gd()^{155}Eu		
^{155}Gd	51.9	^{155}Gd(n,γ)^{156}Gd	45.5	^{154}Gd(n,γ)^{155}Gd	2.5	^{159}Tb ^{35}Cl$_2$−^{155}Gd ^{37}Cl$_2$
^{155}Tb	99.9	^{155}Tb−^{155}Gd	0.1	^{155}Dy(β^+)^{155}Tb		
^{155}Dy	99.6	^{155}Dy(β^+)^{155}Tb	0.4	^{155}Ho(β^+)^{155}Dy		
^{155}Ho	65.9	^{155}Ho(β^+)^{155}Dy	34.1	^{155}Ho−u		
^{155}Er	90.5	^{155}Er(α)^{151}Dy	4.8	^{155}Yb−^{155}Er	4.7	^{155}Tm−^{155}Er
^{155}Tm	86.4	^{155}Tm(α)^{151}Ho	13.6	^{155}Tm−^{155}Er		
^{155}Yb	69.4	^{155}Yb(α)^{151}Er	24.4	^{155}Yb−^{155}Er	6.1	^{155}Yb−^{155}Eu
^{155}Lu	84.4	^{159}Ta^m(α)^{155}Lu	15.6	^{155}Lu(α)^{151}Tm		
^{156}Pm	65.6	^{156}Pm^m(IT)^{156}Pm	30.5	^{156}Pm−u	3.9	^{156}Pm−^{80}Kr$_{1.950}$
^{156}Pm^m	65.7	^{156}Pm^m−u	34.3	^{156}Pm^m(IT)^{156}Pm		
^{156}Sm	73.8	^{156}Sm(β^-)^{156}Eu	16.7	^{156}Sm−u	9.5	^{154}Sm(t,p)^{156}Sm
^{156}Eu	68.8	^{154}Eu(t,p)^{156}Eu	27.3	^{156}Eu(β^-)^{156}Gd	3.9	^{156}Sm(β^-)^{156}Eu
^{156}Gd	54.8	^{156}Gd(n,γ)^{157}Gd	47.8	^{155}Gd(n,γ)^{156}Gd	0.4	^{156}Dy−^{156}Gd
^{156}Tb	100.0	^{155}Gd(α,t)^{156}Tb−^{158}Gd()^{159}Tb				
^{156}Dy	99.6	^{156}Dy−^{156}Gd	0.4	^{156}Dy(d,p)^{157}Dy		
^{156}Er	77.4	^{156}Er−u	22.6	^{156}Tm(β^+)^{156}Er		
^{156}Tm	72.4	^{156}Tm(α)^{152}Ho	22.3	^{156}Tm−^{156}Yb	5.2	^{156}Tm(β^+)^{156}Er
^{156}Yb	78.4	^{156}Yb(α)^{152}Er	18.4	^{160}Hf(α)^{156}Yb	3.2	^{156}Tm−^{156}Yb
^{156}Hf	65.3	^{156}Hf(α)^{152}Yb	34.7	^{156}Hf^m(IT)^{156}Hf		
^{156}Hf^m	62.9	^{156}Hf^m(IT)^{156}Hf	37.1	^{156}Hf^m(α)^{152}Yb		
^{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	67.8	^{158}Gd(t,α)^{157}Eu−^{156}Gd()^{155}Eu	32.2	^{160}Gd(t,α)^{159}Eu−^{158}Gd()^{157}Eu		
^{157}Gd	46.1	^{157}Gd(n,γ)^{158}Gd	43.4	^{156}Gd(n,γ)^{157}Gd	6.5	^{159}Tb ^{35}Cl−^{157}Gd ^{37}Cl
^{157}Tb	96.2	^{157}Tb(ε)^{157}Gd	3.8	^{156}Gd(α,t)^{157}Tb−^{158}Gd()^{159}Tb		
^{157}Dy	51.9	^{156}Dy(d,p)^{157}Dy	47.2	^{158}Dy(d,t)^{157}Dy	0.8	^{157}Ho(β^+)^{157}Dy
^{157}Ho	70.5	^{157}Ho−u	21.8	^{157}Ho(β^+)^{157}Dy	7.7	^{157}Er(β^+)^{157}Ho
^{157}Er	90.0	^{157}Er−u	10.0	^{157}Er(β^+)^{157}Ho		
^{157}Tm	50.2	^{157}Tm−u	49.8	^{157}Tm−^{157}Yb		
^{157}Yb	79.4	^{157}Yb(α)^{153}Er	11.0	^{157}Lu−^{157}Yb	6.9	^{157}Tm−^{157}Yb
^{157}Lu	69.2	^{157}Lu^m(IT)^{157}Lu	15.7	^{157}Lu−^{157}Yb	15.1	^{157}Lu−u
^{157}Lu^m	36.9	^{157}Lu^m(α)^{153}Tm	33.1	^{161}Ta^m(α)^{157}Lu^m	30.0	^{157}Lu^m(IT)^{157}Lu
^{158}Pm	71.1	^{158}Pm−u	28.9	^{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(β^-)^{158}Eu		
^{158}Gd	53.4	^{157}Gd(n,γ)^{158}Gd	24.3	^{158}Pm−^{158}Gd	7.0	^{160}Gd ^{35}Cl−^{158}Gd ^{37}Cl
^{158}Tb	39.9	^{157}Gd(α,t)^{158}Tb−^{158}Gd()^{159}Tb	39.8	^{159}Tb(d,t)^{158}Tb−^{164}Dy()^{163}Dy	17.7	^{158}Gd(d,t)^{157}Gd−^{159}Tb()^{158}Tb
^{158}Dy	63.4	^{160}Dy(p,t)^{158}Dy	17.5	^{160}Dy ^{35}Cl−^{158}Dy ^{37}Cl	13.9	^{158}Tb(β^-)^{158}Dy
^{158}Er	81.4	^{158}Er−u	18.6	^{158}Tm(β^+)^{158}Er		
^{158}Tm	81.4	^{158}Tm−u	18.6	^{158}Tm(β^+)^{158}Er		
^{158}Yb	71.3	^{158}Yb(α)^{154}Er	14.6	^{158}Yb−^{142}Sm$_{1.113}$	14.1	^{162}Hf(α)^{158}Yb

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{158}Hf	88.5	^{158}Hf(α)^{154}Yb	11.5	^{162}W(α)^{158}Hf		
^{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	36.2	^{160}Gd(t,α)^{159}Eu−^{158}Gd()^{157}Eu	21.4	^{159}Eu−u	21.4	^{159}Eu−^{86}Kr$_{1.849}$
^{159}Gd	93.9	^{158}Gd(n,γ)^{159}Gd	6.1	^{159}Gd(β^-)^{159}Tb		
^{159}Tb	19.6	^{159}Tb ^{35}Cl−^{157}Gd ^{37}Cl	17.5	^{159}Gd(β^-)^{159}Tb	14.2	^{159}Dy−^{159}Tb
^{159}Dy	85.8	^{159}Dy−^{159}Tb	14.2	^{161}Dy(p,t)^{159}Dy		
^{159}Ta^m	85.0	^{163}Re^m(α)^{159}Ta^m	15.0	^{159}Ta^m(α)^{155}Lu		
^{160}Gd	42.2	^{160}Gd ^{35}Cl−^{158}Gd ^{37}Cl	32.8	^{160}Gd(α,t)^{161}Tb−^{158}Gd()^{159}Tb	23.8	^{160}Gd−^{160}Dy
^{160}Tb	87.8	^{159}Tb(n,γ)^{160}Tb	8.0	^{161}Dy(t,α)^{160}Tb	4.2	^{160}Tb(n,γ)^{161}Tb
^{160}Dy	92.5	^{160}Dy(n,γ)^{161}Dy	6.8	^{160}Gd−^{160}Dy	0.6	^{160}Dy(p,t)^{158}Dy
^{160}Er	94.7	^{160}Er−u	5.3	^{160}Tm(β^+)^{160}Er		
^{160}Tm	89.9	^{160}Tm−u	10.1	^{160}Tm(β^+)^{160}Er		
^{160}Hf	80.4	^{160}Hf(α)^{156}Yb	19.6	^{164}W(α)^{160}Hf		
^{160}W	100.0	^{160}W(α)^{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	79.7	^{160}Tb(n,γ)^{161}Tb	20.3	^{160}Gd(α,t)^{161}Tb−^{158}Gd()^{159}Tb		
^{161}Dy	81.6	^{161}Dy(n,γ)^{162}Dy	7.4	^{160}Dy(n,γ)^{161}Dy	4.4	^{161}Dy(p,t)^{159}Dy
^{161}Ho	100.0	^{160}Dy(^{3}He,d)^{161}Ho−^{164}Dy()^{165}Ho				
^{161}Hf	70.3	^{161}Hf−u	17.6	^{161}Hf(α)^{157}Yb	12.0	^{165}W(α)^{161}Hf
^{161}Ta^m	60.2	^{161}Ta^m(α)^{157}Lu^m	39.8	^{165}Re^m(α)^{161}Ta^m		
^{161}Re	79.2	^{161}Re(p)^{160}W	20.8	^{161}Re^m(IT)^{161}Re		
^{161}Re^m	78.2	^{161}Re^m(IT)^{161}Re	21.8	^{165}Ir^m(α)^{161}Re^m		
^{162}Sm	50.9	^{162}Sm−^{136}Xe$_{1.191}$	49.1	^{162}Sm−^{84}Kr$_{1.929}$		
^{162}Eu	82.3	^{162}Eu−^{84}Kr$_{1.929}$	17.7	^{162}Eu^m−^{162}Eu		
^{162}Eu^m	48.0	^{162}Eu^m−^{84}Kr$_{1.929}$	36.2	^{162}Eu^m−^{133}Cs$_{1.218}$	15.8	^{162}Eu^m−^{162}Eu
^{162}Tb	59.9	^{162}Tb−u	40.1	^{163}Dy(t,α)^{162}Tb		
^{162}Dy	100.0	^{162}Dy(n,γ)^{163}Dy	18.3	^{161}Dy(n,γ)^{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		
^{162}Hf	81.1	^{162}Hf(α)^{158}Yb	18.9	^{166}W(α)^{162}Hf		
^{162}W	88.1	^{162}W(α)^{158}Hf	11.9	^{166}Os(α)^{162}W		
^{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	43.7	^{163}Ho−^{163}Dy	30.7	^{163}Dy O−C$_{15}$	24.3	^{163}Dy(n,γ)^{164}Dy
^{163}Ho	58.2	^{163}Ho−^{163}Dy	24.1	^{163}Ho O−C$_{15}$	19.2	^{162}Dy(^{3}He,d)^{163}Ho−^{164}Dy()^{165}Ho
^{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	84.2	^{163}Hf−u	15.8	^{167}W(α)^{163}Hf		
^{163}Re^m	85.8	^{167}Ir^m(α)^{163}Re^m	14.2	^{163}Re^m(α)^{159}Ta^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	75.2	^{163}Dy(n,γ)^{164}Dy	19.4	^{162}Dy(^{3}He,d)^{163}Ho−^{164}Dy()^{165}Ho	5.0	^{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	69.3	^{168}W(α)^{164}Hf	30.7	^{164}Hf−u		
^{164}W	79.7	^{164}W(α)^{160}Hf	20.3	^{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$_{1.213}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{165}Ho	50.4	^{165}Ho(n,γ)^{166}Ho	35.4	^{162}Dy(^{3}He,d)^{163}Ho−^{164}Dy()^{165}Ho	8.4	^{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	77.6	^{169}Re^m(α)^{165}Ta	22.4	^{165}Ta−u		
^{165}W	84.9	^{165}W−u	15.1	^{165}W(α)^{161}Hf		
^{165}Re^m	58.7	^{165}Re^m(α)^{161}Ta^m	41.3	^{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	50.4	^{166}Ho(β^-)^{166}Er	49.6	^{165}Ho(n,γ)^{166}Ho		
^{166}Er	95.6	^{166}Er(n,γ)^{167}Er	4.4	^{166}Ho(β^-)^{166}Er		
^{166}W	78.0	^{166}W(α)^{162}Hf	11.4	^{166}W−u	10.6	^{170}Os(α)^{166}W
^{166}Os	87.4	^{166}Os(α)^{162}W	8.9	^{167}Ir(p)^{166}Os	3.7	^{170}Pt(α)^{166}Os
^{167}Gd	81.5	^{167}Gd−^{84}Kr$_{1.988}$	18.5	^{167}Gd−^{136}Xe$_{1.228}$		
^{167}Tb	63.9	^{167}Tb−^{84}Kr$_{1.988}$	21.9	^{167}Tb−^{136}Xe$_{1.228}$	14.2	^{167}Tb−^{133}Cs$_{1.256}$
^{167}Dy	54.4	^{167}Dy−^{82}Kr$_{2.037}$	45.6	^{167}Dy−^{133}Cs$_{1.256}$		
^{167}Er	96.1	^{167}Er(n,γ)^{168}Er	3.1	^{166}Er(n,γ)^{167}Er	0.8	^{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	39.0	^{171}Os(α)^{167}W	34.2	^{167}W^m(IT)^{167}W	21.0	^{171}Os^m(α)^{167}W
^{167}W^m	65.5	^{167}W^m(IT)^{167}W	34.5	^{167}W^m−u		
^{167}Ir	67.2	^{167}Ir(p)^{166}Os	32.8	^{167}Ir^m(IT)^{167}Ir		
^{167}Ir^m	60.8	^{167}Ir^m(IT)^{167}Ir	25.6	^{171}Au^m(α)^{167}Ir^m	13.6	^{167}Ir^m(α)^{163}Rem
^{168}Dy	51.1	^{168}Dy−^{133}Cs$_{1.263}$	48.9	^{168}Dy−^{84}Kr$_2$		
^{168}Ho	52.2	^{168}Ho−^{84}Kr$_2$	47.8	^{168}Ho^m(IT)^{168}Ho		
^{168}Ho^m	52.2	^{168}Ho^m−^{84}Kr$_2$	47.8	^{168}Ho^m(IT)^{168}Ho		
^{168}Er	95.5	^{168}Yb−^{168}Er	3.1	^{167}Er(n,γ)^{168}Er	0.7	^{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	100.0	^{168}Yb−^{172}Yb$_{.977}$				
^{168}Lu	51.0	^{168}Lu(β^+)^{168}Yb	49.0	^{168}Lu−u		
^{168}W	62.2	^{172}Os(α)^{168}W	20.6	^{168}W−u	17.2	^{168}W(α)^{164}Hf
^{168}Os	78.3	^{168}Os(α)^{164}W	21.7	^{172}Pt(α)^{168}Os		
^{169}Dy	92.8	^{169}Dy−^{84}Kr$_{2.012}$	7.2	^{169}Dy−^{133}Cs$_{1.271}$		
^{169}Tm	65.6	^{169}Tm(n,γ)^{170}Tm	12.4	^{170}Er(α,t)^{171}Tm−^{168}Er()^{169}Tm	8.0	^{169}Tm ^{35}Cl−^{167}Er ^{37}Cl
^{169}W	69.4	^{173}Os(α)^{169}W	30.6	^{169}W−u		
^{169}Re^m	78.5	^{173}Ir(α)^{169}Re^m	21.5	^{169}Re^m(α)^{165}Ta		
^{169}Ir^m	57.7	^{169}Ir^m(α)^{165}Re^m	42.3	^{173}Au^m(α)^{169}Ir^m		
^{170}Er	65.9	^{170}Er(α,t)^{171}Tm−^{168}Er()^{169}Tm	26.5	^{170}Er(n,γ)^{171}Er	6.7	^{170}Er ^{35}Cl−^{168}Er ^{37}Cl
^{170}Tm	66.8	^{170}Tm(β^-)^{170}Yb	33.2	^{169}Tm(n,γ)^{170}Tm		
^{170}Yb	47.7	^{170}Yb−^{129}Xe$_{1.318}$	42.7	^{170}Yb−^{132}Xe$_{1.288}$	9.6	^{170}Yb−^{172}Yb$_{.988}$
^{170}W	78.0	^{174}Os(α)^{170}W	22.0	^{170}W−u		
^{170}Re	82.5	^{174}Ir^m(α)^{170}Re	17.5	^{170}Re−u		
^{170}Os	88.6	^{170}Os(α)^{166}W	11.4	^{170}Os−u		
^{170}Pt	80.6	^{170}Pt(α)^{166}Os	19.4	^{171}Au^m(p)^{170}Pt		
^{171}Er	71.3	^{170}Er(n,γ)^{171}Er	28.7	^{171}Er(β^-)^{171}Tm		
^{171}Tm	99.3	^{171}Tm(β^-)^{171}Yb	0.5	^{170}Er(α,t)^{171}Tm−^{168}Er()^{169}Tm	0.2	^{171}Er(β^-)^{171}Tm
^{171}Yb	100.0	^{171}Yb−^{129}Xe$_{1.326}$				
^{171}Lu	68.2	^{170}Yb(α,t)^{171}Lu−^{174}Yb()^{175}Lu	31.8	^{171}Lu(β^+)^{171}Yb		
^{171}Os	48.1	^{171}Os^m(IT)^{171}Os	26.3	^{175}Pt(α)^{171}Os	25.7	^{171}Os(α)^{167}W
^{171}Os^m	52.0	^{171}Os^m(IT)^{171}Os	34.2	^{171}Os^m−u	13.9	^{171}Os^m(α)^{167}W
^{171}Au^m	57.1	^{171}Au^m(p)^{170}Pt	42.9	^{171}Au^m(α)^{167}Ir^m		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{172}Er	87.9	^{170}Er(t,p)^{172}Er	12.1	^{172}Er(β^-)^{172}Tm		
^{172}Tm	70.3	^{172}Er(β^-)^{172}Tm	29.7	^{172}Tm(β^-)^{172}Yb		
^{172}Yb	59.7	^{172}Yb$-^{132}$Xe$_{1.303}$	14.2	^{170}Yb$-^{172}$Yb$_{.988}$	13.8	^{174}Yb$-^{172}$Yb$_{1.012}$
^{172}Lu	100.0	^{171}Yb(α,t)^{172}Lu$-^{174}$Yb()^{175}Lu				
^{172}Re	51.9	^{172}Re$-$u	48.1	^{176}Ir(α)^{172}Re		
^{172}Os	64.1	^{176}Pt(α)^{172}Os	35.9	^{172}Os(α)^{168}W		
^{172}Pt	75.4	^{172}Pt(α)^{168}Os	24.6	^{176}Hg(α)^{172}Pt		
^{173}Yb	55.8	^{173}Yb$-^{129}$Xe$_{1.341}$	44.2	^{173}Yb$-^{132}$Xe$_{1.311}$		
^{173}Lu	100.0	^{172}Yb(α,t)^{173}Lu$-^{174}$Yb()^{175}Lu				
^{173}Os	43.6	^{177}Pt(α)^{173}Os	28.8	^{173}Os$-$u	27.6	^{173}Os(α)^{169}W
^{173}Ir	88.9	^{177}Au(α)^{173}Ir	11.1	^{173}Ir(α)^{169}Re^m		
^{173}Au^m	56.7	^{173}Au^m(α)^{169}Ir^m	43.3	^{177}Tl^m(α)^{173}Au^m		
^{174}Yb	61.7	^{174}Yb$-^{129}$Xe$_{1.349}$	28.3	^{174}Yb$-^{132}$Xe$_{1.318}$	10.1	^{174}Yb$-^{172}$Yb$_{1.012}$
^{174}Lu	100.0	^{173}Yb(α,t)^{174}Lu$-^{174}$Yb()^{175}Lu				
^{174}Hf	75.9	^{176}Hf ^{35}Cl$-^{174}$Hf ^{37}Cl	12.2	^{176}Hf(p,t)^{174}Hf	12.0	^{174}Hf(n,γ)^{175}Hf
^{174}Os	75.4	^{178}Pt(α)^{174}Os	13.1	^{174}Os$-$u	11.5	^{174}Os(α)^{170}W
^{174}Ir^m	83.7	^{178}Au^n(α)^{174}Ir^m	16.3	^{174}Ir^m(α)^{170}Re		
^{175}Lu	98.5	^{175}Lu(n,γ)^{176}Lu	1.5	^{170}Yb(α,t)^{171}Lu$-^{174}$Yb()^{175}Lu		
^{175}Hf	87.5	^{174}Hf(n,γ)^{175}Hf	12.5	^{177}Hf(p,t)^{175}Hf		
^{175}Os	87.4	^{179}Pt(α)^{175}Os	12.6	^{175}Os$-$u		
^{175}Ir	85.1	^{179}Au(α)^{175}Ir	14.9	^{175}Ir$-$u		
^{175}Pt	73.3	^{175}Pt(α)^{171}Os	26.7	^{179}Hg(α)^{175}Pt		
^{176}Yb	58.8	^{176}Yb$-^{129}$Xe$_{1.364}$	21.6	^{176}Yb$-^{132}$Xe$_{1.333}$	19.6	^{176}Yb$-^{172}$Yb$_{1.023}$
^{176}Lu	28.0	^{176}Lu$-^{176}$Yb	26.1	^{176}Lu(β^+)^{176}Yb	20.0	^{176}Lu(β^-)^{176}Hf
^{176}Hf	73.0	^{176}Yb$-^{176}$Hf	12.6	^{176}Lu(β^-)^{176}Hf	12.5	^{176}Lu$-^{176}$Hf
^{176}Os	84.7	^{180}Pt(α)^{176}Os	15.3	^{176}Os$-$u		
^{176}Ir	90.0	^{180}Au(α)^{176}Ir	8.7	^{176}Ir$-$u	1.4	^{176}Ir(α)^{172}Re
^{176}Pt	64.5	^{180}Hg(α)^{176}Pt	35.5	^{176}Pt(α)^{172}Os		
^{176}Hg	69.6	^{176}Hg(α)^{172}Pt	30.4	^{177}Tl^m(p)^{176}Hg		
^{177}Lu	95.7	^{176}Lu(n,γ)^{177}Lu	4.2	^{177}Lu(β^-)^{177}Hf	0.1	^{179}Hf(t,α)^{178}Lu$-^{178}$Hf()^{177}Lu
^{177}Hf	69.9	^{177}Lu(β^-)^{177}Hf	27.9	^{177}Hf(n,γ)^{178}Hf	2.2	^{177}Hf(p,t)^{175}Hf
^{177}Pt	54.9	^{177}Pt(α)^{173}Os	29.0	^{177}Pt$-$u	16.1	^{181}Hg(α)^{177}Pt
^{177}Au	52.7	^{181}Tl(α)^{177}Au	37.1	^{177}Au^m(IT)^{177}Au	10.2	^{177}Au(α)^{173}Ir
^{177}Au^m	62.6	^{177}Au^m(IT)^{177}Au	37.4	^{181}Tl(α)^{177}Au^m		
^{177}Tl^m	59.1	^{177}Tl^m(p)^{176}Hg	40.9	^{177}Tl^m(α)^{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,α)^{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		
^{178}Hf	71.1	^{177}Hf(n,γ)^{178}Hf	28.9	^{178}Hf(n,γ)^{179}Hf		
^{178}Re	53.2	^{178}Re$-$u	46.8	^{178}Re$-^{178}$Hf		
^{178}Os	76.2	^{182}Pt(α)^{178}Os	23.8	^{178}Os$-$u		
^{178}Ir	55.3	^{182}Au(α)^{178}Ir	44.7	^{178}Ir$-$u		
^{178}Pt	63.5	^{182}Hg(α)^{178}Pt	23.7	^{178}Pt(α)^{174}Os	12.8	^{178}Pt$-$u
^{178}Au^n	87.0	^{178}Au$^n-^{133}$Cs$_{1.338}$	13.0	^{178}Au^n(α)^{174}Ir^m		
^{179}Lu	100.0	^{180}Hf(t,α)^{179}Lu$-^{178}$Hf()^{177}Lu				
^{179}Hf	70.9	^{178}Hf(n,γ)^{179}Hf	24.2	^{179}Hf(n,γ)^{180}Hf	2.5	^{181}Ta ^{35}Cl$-^{179}$Hf ^{37}Cl
^{179}Ta	97.1	^{179}Ta(ε)^{179}Hf	2.9	^{181}Ta(p,t)^{179}Ta		
^{179}W	93.6	^{180}W(d,t)^{179}W	6.4	^{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	87.7	^{183}Au(α)^{179}Ir	12.3	^{179}Ir$-$u		
^{179}Pt	93.2	^{183}Hg(α)^{179}Pt	6.8	^{179}Pt(α)^{175}Os		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{179}Au	73.1	^{183}Tl$^{m}(\alpha)^{179}$Au	13.8	^{179}Au$(\alpha)^{175}$Ir	13.1	^{179}Au−u
^{179}Hg	72.8	^{179}Hg$(\alpha)^{175}$Pt	27.2	^{179}Hg−^{208}Pb$_{.861}$		
^{180}Hf	75.2	^{179}Hf(n,γ)^{180}Hf	24.8	^{180}W−^{180}Hf		
^{180}Ta	50.6	^{180}Ta^{m}(IT)^{180}Ta	40.5	^{180}Ta^{m}−^{180}Ta	8.8	^{181}Ta(γ,n)^{180}Ta
^{180}Ta^{m}	98.2	^{180}Ta^{m}(n,γ)^{181}Ta	1.0	^{180}Ta^{m}(IT)^{180}Ta	0.8	^{180}Ta^{m}−^{180}Ta
^{180}W	73.0	^{180}W−^{180}Hf	27.0	^{180}W$(\alpha)^{176}$Hf		
^{180}Re	91.4	^{180}Re−u	8.6	^{180}Re−^{85}Rb$_{2.118}$		
^{180}Os	68.3	^{184}Pt$(\alpha)^{180}$Os	31.7	^{180}Os−u		
^{180}Pt	74.6	^{184}Hg$(\alpha)^{180}$Pt	12.9	^{180}Pt−u	12.5	^{180}Pt$(\alpha)^{176}$Os
^{180}Au	92.9	^{180}Au−^{133}Cs$_{1.353}$	4.0	^{184}Tl$(\alpha)^{180}$Au	3.1	^{180}Au$(\alpha)^{176}$Ir
^{180}Hg	36.9	^{180}Hg−^{208}Pb$_{.865}$	34.8	^{180}Hg$(\alpha)^{176}$Pt	28.3	^{184}Pb$(\alpha)^{180}$Hg
^{181}Ta	30.5	^{181}Ta(n,γ)^{182}Ta	25.9	^{183}W ^{35}Cl−^{181}Ta ^{37}Cl	25.6	^{181}Ta O−^{202}Tl$_{.975}$
^{181}Os	64.0	^{181}Os−u	36.0	^{185}Pt$(\alpha)^{181}$Os		
^{181}Pt	52.0	^{185}Hg$(\alpha)^{181}$Pt	48.0	^{181}Pt−u		
^{181}Hg	82.8	^{181}Hg$(\alpha)^{177}$Pt	17.2	^{181}Hg−^{208}Pb$_{.870}$		
^{181}Tl	78.7	^{181}Tl−^{133}Cs$_{1.361}$	12.3	^{185}Bi$(\alpha)^{181}$Tl	5.3	^{181}Tl$(\alpha)^{177}$Au
^{182}Yb	61.0	^{182}Yb−^{163}Dy ^{19}F	39.0	^{182}Yb−^{182}W		
^{182}Ta	69.4	^{181}Ta(n,γ)^{182}Ta	30.6	^{182}Ta$(\beta^{-})^{182}$W		
^{182}W	100.0	^{182}W(n,γ)^{183}W	3.3	^{182}Ta$(\beta^{-})^{182}$W		
^{182}Os	60.6	^{182}Os−u	39.4	^{186}Pt$(\alpha)^{182}$Os		
^{182}Ir	56.3	^{182}Ir−u	43.7	^{186}Au$(\alpha)^{182}$Ir		
^{182}Pt	56.8	^{186}Hg$(\alpha)^{182}$Pt	21.9	^{182}Pt−u	21.2	^{182}Pt$(\alpha)^{178}$Os
^{182}Au	44.5	^{182}Au−u	43.7	^{182}Au$(\alpha)^{178}$Ir	11.8	^{186}Tl$(\alpha)^{182}$Au
^{182}Hg	55.0	^{182}Hg−^{208}Pb$_{.875}$	32.8	^{182}Hg$(\alpha)^{178}$Pt	12.1	^{182}Hg−u
^{183}W	72.9	^{183}W(n,γ)^{184}W	15.6	^{183}W O−C$_2$ ^{35}Cl$_5$	11.4	^{199}Hg−^{183}W O
^{183}Os	76.4	^{183}Os−u	23.6	^{183}Ir$(\beta^{+})^{183}$Os		
^{183}Ir	54.2	^{183}Ir−u	30.5	^{183}Ir−^{183}W	12.1	^{187}Au$(\alpha)^{183}$Ir
^{183}Pt	28.9	^{187}Hg$(\alpha)^{183}$Pt	25.0	^{187}Hg$^{m}(\alpha)^{183}$Pt	23.4	^{183}Pt$(\alpha)^{179}$Os
^{183}Au	77.2	^{187}Tl$^{m}(\alpha)^{183}$Au	11.5	^{183}Au−u	11.3	^{183}Au$(\alpha)^{179}$Ir
^{183}Hg	62.2	^{187}Pb$(\alpha)^{183}$Hg	31.9	^{183}Hg−^{208}Pb$_{.880}$	5.9	^{183}Hg$(\alpha)^{179}$Pt
^{183}Tl	81.1	^{183}Tl−^{133}Cs$_{1.376}$	18.9	^{183}Tl^{m}(IT)^{183}Tl		
^{183}Tl^{m}	81.1	^{183}Tl^{m}(IT)^{183}Tl	18.9	^{183}Tl$^{m}(\alpha)^{179}$Au		
^{184}W	28.2	^{184}W−u	26.0	^{183}W(n,γ)^{184}W	15.6	^{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	30.8	^{184}Os−^{184}W	24.4	^{184}Os−u
^{184}Ir	84.1	^{184}Ir−^{184}W	15.9	^{184}Ir−u		
^{184}Pt	46.6	^{188}Hg$(\alpha)^{184}$Pt	27.8	^{184}Pt−u	25.6	^{184}Pt$(\alpha)^{180}$Os
^{184}Hg	28.9	^{184}Hg−^{208}Pb$_{.885}$	26.1	^{184}Hg−^{204}Pb$_{.902}$	23.2	^{184}Hg−u
^{184}Tl	79.1	^{184}Tl$(\alpha)^{180}$Au	20.9	^{184}Tl−^{133}Cs$_{1.383}$		
^{184}Pb	70.4	^{184}Pb$(\alpha)^{180}$Hg	29.6	^{185}Bi(p)^{184}Pb		
^{185}W	84.5	^{184}W(n,γ)^{185}W	15.5	^{185}W$(\beta^{-})^{185}$Re		
^{185}Re	38.6	^{185}Os$(\varepsilon)^{185}$Re	28.2	^{185}W$(\beta^{-})^{185}$Re	27.6	^{185}Re(n,γ)^{186}Re
^{185}Os	50.8	^{184}Os(n,γ)^{185}Os	49.2	^{185}Os$(\varepsilon)^{185}$Re		
^{185}Pt	60.3	^{185}Pt$(\alpha)^{181}$Os	39.7	^{185}Pt−u		
^{185}Hg	45.3	^{185}Hg$(\alpha)^{181}$Pt	25.5	^{185}Hg−^{208}Pb$_{.889}$	15.2	^{189}Pb$(\alpha)^{185}$Hg
^{185}Bi	63.1	^{185}Bi$(\alpha)^{181}$Tl	36.9	^{185}Bi(p)^{184}Pb		
^{186}W	54.6	^{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$(\beta^{-})^{186}$Os		
^{186}Os	39.4	^{186}Os(n,γ)^{187}Os	39.4	^{186}Os−^{190}Pt$_{.979}$	21.2	^{186}Re$(\beta^{-})^{186}$Os
^{186}Pt	60.6	^{186}Pt−u	39.4	^{186}Pt$(\alpha)^{182}$Os		
^{186}Au	56.3	^{186}Au−u	43.7	^{186}Au$(\alpha)^{182}$Ir		
^{186}Hg	56.3	^{186}Hg−^{204}Pb$_{.912}$	26.3	^{186}Hg$(\alpha)^{182}$Pt	17.3	^{186}Hg−u

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{186}Tl	76.2	^{186}Tl−^{133}Cs$_{1.398}$	16.9	^{190}Bi(α)^{186}Tl	6.9	^{186}Tl(α)^{182}Au
^{186}Tl^{n}	65.7	^{190}Bi^{m}(α)^{186}Tl^{n}	34.3	^{186}Tl^{n}−^{133}Cs$_{1.398}$		
^{187}W	54.7	^{187}W(β^-)^{187}Re	45.3	^{186}W(n,γ)^{187}W		
^{187}Re	51.7	^{187}Re−^{187}Os	35.9	^{187}Re(β^-)^{187}Os	8.3	^{187}W(β^-)^{187}Re
^{187}Os	57.5	^{187}Os(n,γ)^{188}Os	30.3	^{186}Os(n,γ)^{187}Os	6.1	^{187}Re−^{187}Os
^{187}Pt	74.1	^{187}Pt−u	25.9	^{187}Au(β^+)^{187}Pt		
^{187}Au	64.1	^{187}Au−u	21.0	^{187}Au(β^+)^{187}Pt	14.8	^{187}Au(α)^{183}Ir
^{187}Hg	47.6	^{187}Hg−^{208}Pb$_{.899}$	19.7	^{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^{m}	85.9	^{191}Bi(α)^{187}Tl^{m}	14.1	^{187}Tl^{m}(α)^{183}Au		
^{187}Pb	85.8	^{187}Pb−^{133}Cs$_{1.406}$	14.2	^{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	59.1	^{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	19.2	^{188}Hg−^{208}Pb$_{.904}$	5.9	^{188}Hg−u
^{189}W	66.8	^{189}W−u	33.2	^{189}W−^{190}Os$_{.995}$		
^{189}Os	78.9	^{189}Os(n,γ)^{190}Os	21.1	^{188}Os(n,γ)^{189}Os		
^{189}Ir	55.5	^{191}Ir(p,t)^{189}Ir	24.7	^{189}Pt(β^+)^{189}Ir	19.8	^{189}Ir−^{190}Os$_{.995}$
^{189}Pt	74.9	^{190}Pt(p,d)^{189}Pt	16.0	^{189}Pt(β^+)^{189}Ir	9.0	^{189}Pt−^{190}Os$_{.995}$
^{189}Hg	65.0	^{189}Hg−u	35.0	^{189}Hg^{m}(IT)^{189}Hg		
^{189}Hg^{m}	92.1	^{189}Hg^{m}−^{208}Pb$_{.909}$	7.9	^{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	55.6	^{190}W−u	25.5	^{190}W−^{190}Os	19.0	^{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	18.3	^{189}Os(n,γ)^{190}Os
^{190}Pt	53.3	^{190}Pt−^{194}Pt$_{.979}$	32.6	^{190}Os−^{190}Pt	13.7	^{186}Os−^{190}Pt$_{.979}$
^{190}Hg	70.7	^{190}Hg−^{208}Pb$_{.913}$	29.3	^{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}		
^{190}Bi	82.5	^{190}Bi(α)^{186}Tl	17.5	^{194}At(α)^{190}Bi		
^{190}Bi^{m}	66.2	^{194}At(α)^{190}Bi^{m}	33.8	^{190}Bi^{m}(α)^{186}Tl^{n}		
^{191}Os	99.4	^{190}Os(n,γ)^{191}Os	0.6	^{191}Os(β^-)^{191}Ir		
^{191}Ir	89.6	^{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	68.0	^{191}Hg−^{208}Pb$_{.918}$	22.0	^{191}Hg−u	10.1	^{191}Hg(β^+)^{191}Au
^{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$_{1.436}$	12.6	^{191}Bi(α)^{187}Tl^{m}		
^{191}Po	93.9	^{191}Po(α)^{187}Pb	6.1	^{191}Po(α)^{187}Pb^{m}		
^{192}Re	60.8	^{192}Re−^{190}Os$_{1.011}$	39.2	^{192}Re−u		
^{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	2.6	^{192}Ir(β^-)^{192}Pt
^{192}Pt	86.8	^{192}Ir(β^-)^{192}Pt	12.7	^{192}Pt(p,t)^{190}Pt	3.0	^{192}Pt(p,d)^{191}Pt−^{194}Pt()^{193}Pt
^{192}Au	80.0	^{192}Au(β^+)^{192}Pt	20.0	^{192}Au−^{190}Os$_{1.011}$		
^{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		
^{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$_{.928}$		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{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	63.1	^{194}Pt−u	26.8	^{194}Pt(n,γ)^{195}Pt	5.3	^{190}Os−^{194}Pt$_{.979}$
^{194}Pb	64.6	^{198}Po(α)^{194}Pb	35.4	^{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}		
^{194}At	67.8	^{194}At(α)^{190}Bi	32.2	^{194}At(α)^{190}Bi^{m}		
^{195}Pt	72.0	^{194}Pt(n,γ)^{195}Pt	27.9	^{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	56.2	^{199}Bi^{m}(α)^{195}Tl	22.0	^{195}Tl−u	21.8	^{195}Tl−^{133}Cs$_{1.466}$
^{195}Pb	99.2	^{195}Pb^{m}(IT)^{195}Pb	0.8	^{199}Po(α)^{195}Pb		
^{195}Pb^{m}	99.2	^{199}Po^{m}(α)^{195}Pb^{m}	0.8	^{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^{m}	93.8	^{195}Po^{m}−^{133}Cs$_{1.466}$	6.2	^{195}Po^{m}(α)^{191}Pb^{m}		
^{196}Pt	70.7	^{195}Pt(n,γ)^{196}Pt	29.0	^{196}Pt(n,γ)^{197}Pt	0.3	^{196}Au(β^{+})^{196}Pt
^{196}Au	38.5	^{197}Au(γ,n)^{196}Au	25.6	^{198}Hg(d,α)^{196}Au	22.8	^{196}Au(β^{-})^{196}Hg
^{196}Hg	54.2	^{198}Hg ^{35}Cl−^{196}Hg ^{37}Cl	33.5	^{196}Au(β^{-})^{196}Hg	12.3	^{196}Hg(n,γ)^{197}Hg
^{196}Pb	76.6	^{200}Po(α)^{196}Pb	23.4	^{196}Pb−^{208}Pb$_{.942}$		
^{196}Bi	80.3	^{196}Bi−u	10.1	^{200}At^{m}(α)^{196}Bi	9.5	^{200}At(α)^{196}Bi
^{196}Bi^{m}	54.9	^{196}Bi^{m}−u	45.1	^{200}At^{m}(α)^{196}Bi^{m}		
^{196}Po	84.1	^{196}Po−^{133}Cs$_{1.474}$	15.9	^{196}Po(α)^{192}Pb		
^{197}Ir	67.4	^{197}Ir−u	32.6	^{198}Pt(t,α)^{197}Ir		
^{197}Pt	65.0	^{196}Pt(n,γ)^{197}Pt	34.2	^{197}Pt(β^{-})^{197}Au	0.7	^{198}Pt(p,d)^{197}Pt
^{197}Au	62.8	^{197}Au(n,γ)^{198}Au	35.7	^{197}Pt(β^{-})^{197}Au	0.8	^{198}Pt−^{197}Au$_{1.005}$
^{197}Hg	84.7	^{196}Hg(n,γ)^{197}Hg	15.3	^{199}Hg(p,t)^{197}Hg		
^{197}Pb	86.3	^{197}Pb^{m}(IT)^{197}Pb	13.7	^{201}Po(α)^{197}Pb		
^{197}Pb^{m}	73.3	^{197}Pb^{m}−^{133}Cs$_{1.481}$	13.5	^{197}Pb^{m}(IT)^{197}Pb	13.3	^{201}Po^{m}(α)^{197}Pbm
^{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	53.1	^{198}Pt−^{197}Au$_{1.005}$	46.2	^{198}Pt(p,d)^{197}Pt	0.7	^{198}Pt(t,α)^{197}Ir
^{198}Au	43.8	^{198}Au(β^{-})^{198}Hg	36.5	^{197}Au(n,γ)^{198}Au	19.7	^{198}Au(n,γ)^{199}Au
^{198}Hg	66.8	^{198}Hg−u	21.8	^{198}Au(β^{-})^{198}Hg	11.0	^{200}Hg ^{35}Cl−^{198}Hg ^{37}Cl
^{198}Pb	74.0	^{202}Po(α)^{198}Pb	26.0	^{198}Pb−^{208}Pb$_{.952}$		
^{198}Bi	100.0	^{198}Bi−u				
^{198}Bi^{n}	99.1	^{198}Bi^{n}(IT)^{198}Bi	0.9	^{202}At^{n}(α)^{198}Bi^{n}		
^{198}Po	54.0	^{198}Po−^{208}Pb$_{.952}$	35.3	^{198}Po(α)^{194}Pb	10.7	^{202}Rn(α)^{198}Po
^{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	80.1	^{198}Au(n,γ)^{199}Au	19.9	^{199}Au(β^{-})^{199}Hg		
^{199}Hg	34.3	^{199}Hg(n,γ)^{200}Hg	33.3	^{199}Hg−C$_2$ ^{35}Cl$_5$	17.0	^{199}Au(β^{-})^{199}Hg
^{199}Bi	38.3	^{203}At(α)^{199}Bi	33.8	^{199}Bi^{m}(IT)^{199}Bi	27.9	^{199}Bi−u
^{199}Bi^{m}	63.7	^{199}Bi^{m}(IT)^{199}Bi	36.3	^{199}Bi^{m}(α)^{195}Tl		
^{199}Po	99.1	^{199}Po(α)^{195}Pb	0.9	^{203}Rn(α)^{199}Po		
^{199}Po^{m}	99.3	^{199}Po^{m}−^{133}Cs$_{1.496}$	0.7	^{199}Po^{m}(α)^{195}Pb^{m}		
^{199}At	89.0	^{199}At(α)^{195}Bi	11.0	^{203}Fr(α)^{199}At		
^{200}Au^{m}	72.6	^{200}Au^{m}−u	27.4	^{200}Au^{m}(β^{-})^{200}Hg		
^{200}Hg	63.9	^{199}Hg(n,γ)^{200}Hg	16.1	^{200}Hg ^{35}Cl−^{198}Hg ^{37}Cl	11.9	^{204}Hg ^{35}Cl$_2$−^{200}Hg ^{37}Cl$_2$
^{200}Pb	84.0	^{204}Pb(α,^{8}He)^{200}Pb	16.0	^{204}Po(α)^{200}Pb		
^{200}Po	77.6	^{204}Rn(α)^{200}Po	22.4	^{200}Po(α)^{196}Pb		
^{200}At	72.0	^{200}At(α)^{196}Bi	28.0	^{204}Fr(α)^{200}At		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{200}At^{m}	54.3	^{200}At^{m}−u	26.2	^{200}At^{m}(α)^{196}Bi^{m}	15.4	^{200}At^{m}(α)^{196}Bi
^{200}At^{n}	95.7	^{200}At^{n}(IT)^{200}At^{m}	4.3	^{204}Fr^{n}(α)^{200}At^{n}		
^{201}Pt	98.7	^{201}Pt−u	1.3	^{201}Pt(β^-)^{201}Au		
^{201}Au	99.6	^{202}Hg(d,^{3}He)^{201}Au−^{206}Pb()^{205}Tl	0.4	^{201}Pt(β^-)^{201}Au		
^{201}Hg	67.7	^{201}Hg(n,γ)^{202}Hg	32.3	^{201}Hg ^{35}Cl−^{199}Hg ^{37}Cl		
^{201}Tl	88.7	^{203}Tl(p,t)^{201}Tl	11.3	^{201}Pb(β^+)^{201}Tl		
^{201}Pb	92.0	^{205}Po(α)^{201}Pb	8.0	^{201}Pb(β^+)^{201}Tl		
^{201}Po	36.2	^{201}Po(α)^{197}Pb	35.8	^{201}Po^{m}(IT)^{201}Po	28.0	^{205}Rn(α)^{201}Po
^{201}Po^{m}	63.4	^{201}Po^{m}(IT)^{201}Po	36.6	^{201}Po^{m}(α)^{197}Pb^{m}		
^{201}At	86.1	^{201}At−u	13.9	^{205}Fr(α)^{201}At		
^{202}Hg	31.2	^{201}Hg(n,γ)^{202}Hg	23.5	^{202}Hg ^{35}Cl−^{200}Hg ^{37}Cl	23.1	^{206}Pb ^{35}Cl$_2$−^{202}Hg ^{37}Cl$_2$
^{202}Tl	69.5	^{202}Tl−^{203}Tl$_{.995}$	30.5	^{181}Ta O−^{202}Tl$_{.975}$		
^{202}Pb	85.6	^{202}Pb−^{133}Cs$_{1.519}$	14.4	^{204}Pb(p,t)^{202}Pb		
^{202}Bi	74.9	^{206}At(α)^{202}Bi	25.1	^{202}Bi−u		
^{202}Po	74.4	^{206}Rn(α)^{202}Po	25.6	^{202}Po(α)^{198}Pb		
^{202}At	94.8	^{202}At(α)^{198}Bi	5.2	^{202}At^{n}(IT)^{202}At		
^{202}At^{n}	94.7	^{202}At^{n}(IT)^{202}At	5.3	^{202}At^{n}(α)^{198}Bi^{n}		
^{202}Rn	89.2	^{202}Rn(α)^{198}Po	10.8	^{206}Ra(α)^{202}Rn		
^{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	96.6	^{203}Hg(β^-)^{203}Tl	3.4	^{202}Hg(d,p)^{203}Hg−^{204}Hg()^{205}Hg		
^{203}Tl	93.2	^{203}Tl(n,γ)^{204}Tl	5.4	^{205}Tl ^{35}Cl−^{203}Tl ^{37}Cl	1.1	^{202}Tl−^{203}Tl$_{.995}$
^{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	70.6	^{203}Po−^{133}Cs$_{1.526}$	29.4	^{207}Rn(α)^{203}Po		
^{203}At	61.6	^{203}At(α)^{199}Bi	20.8	^{203}At−^{208}Pb$_{.976}$	14.4	^{203}At−u
^{203}Rn	99.0	^{203}Rn(α)^{199}Po	1.0	^{207}Ra(α)^{203}Rn		
^{203}Fr	84.5	^{203}Fr(α)^{199}At	15.5	^{203}Fr−^{133}Cs$_{1.526}$		
^{204}Hg	78.4	^{204}Hg−u	11.1	^{204}Hg ^{35}Cl$_2$−^{200}Hg ^{37}Cl$_2$	10.5	^{204}Hg ^{35}Cl−^{202}Hg ^{37}Cl
^{204}Tl	95.9	^{204}Tl(β^-)^{204}Pb	2.9	^{205}Tl(d,t)^{204}Tl	1.2	^{203}Tl(n,γ)^{204}Tl
^{204}Pb	98.6	^{204}Pb(n,γ)^{205}Pb	1.4	^{204}Tl(β^-)^{204}Pb		
^{204}Po	83.8	^{204}Po(α)^{200}Pb	16.2	^{208}Rn(α)^{204}Po		
^{204}At	80.5	^{208}Fr(α)^{204}At	19.5	^{204}At−u		
^{204}Rn	78.5	^{204}Rn−^{208}Pb$_{.981}$	21.5	^{204}Rn(α)^{200}Po		
^{204}Fr	85.0	^{204}Fr−u	15.0	^{204}Fr(α)^{200}At		
^{204}Fr^{m}	94.3	^{204}Fr^{m}−u	5.7	^{204}Fr^{n}(IT)^{204}Fr^{m}		
^{204}Fr^{n}	91.0	^{204}Fr^{n}(IT)^{204}Fr^{m}	9.0	^{204}Fr^{n}(α)^{200}At^{n}		
^{205}Hg	51.9	^{204}Hg(d,p)^{205}Hg	48.1	^{202}Hg(d,p)^{203}Hg−^{204}Hg()^{205}Hg		
^{205}Tl	61.0	^{205}Tl(d,t)^{204}Tl	13.7	^{205}Tl ^{35}Cl−^{203}Tl ^{37}Cl	13.0	^{205}Tl(^{3}He,d)^{206}Pb
^{205}Pb	99.6	^{205}Pb(n,γ)^{206}Pb	0.4	^{204}Pb(n,γ)^{205}Pb		
^{205}Bi	54.3	^{209}At(α)^{205}Bi	45.7	^{205}Bi(β^+)^{205}Pb		
^{205}Po	75.4	^{209}Rn(α)^{205}Po	19.2	^{205}Po−u	5.4	^{205}Po(α)^{201}Pb
^{205}Rn	69.0	^{205}Rn(α)^{201}Po	31.0	^{205}Rn−^{208}Pb$_{.986}$		
^{205}Fr	78.2	^{205}Fr−u	21.8	^{205}Fr(α)^{201}At		
^{206}Hg	86.1	^{206}Hg−^{133}Cs$_{1.549}$	13.9	^{210}Pb(α)^{206}Hg		
^{206}Tl	89.5	^{205}Tl(n,γ)^{206}Tl	10.5	^{210}Bi(α)^{206}Tl		
^{206}Pb	99.3	^{206}Pb(n,γ)^{207}Pb	0.5	^{206}Pb ^{35}Cl$_2$−^{202}Hg ^{37}Cl$_2$	0.1	^{205}Pb(n,γ)^{206}Pb
^{206}At	53.9	^{210}Fr(α)^{206}At	23.4	^{206}At−u	22.7	^{206}At(α)^{202}Bi
^{206}Rn	37.5	^{206}Rn−^{133}Cs$_{1.549}$	37.5	^{206}Rn−^{208}Pb$_{.990}$	25.0	^{206}Rn(α)^{202}Po
^{206}Fr	99.9	^{206}Fr(α)^{202}At	0.1	^{210}Ac(α)^{206}Fr		
^{206}Ra	88.6	^{206}Ra(α)^{202}Rn	11.4	^{206}Ra−u		
^{207}Pb	99.8	^{207}Pb(n,γ)^{208}Pb	0.2	^{206}Pb(n,γ)^{207}Pb		
^{207}Bi	97.4	^{209}Bi(p,t)^{207}Bi	2.6	^{207}Po(β^+)^{207}Bi		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{207}Po	58.8	^{207}Po(α)^{203}Pb	41.2	^{207}Po(β^+)^{207}Bi		
^{207}Rn	68.0	^{207}Rn(α)^{203}Po	32.0	^{211}Ra(α)^{207}Rn		
^{207}Fr	88.2	^{207}Fr−^{133}Cs$_{1.556}$	9.4	^{207}Fr(α)^{203}At	2.3	^{211}Ac(α)^{207}Fr
^{207}Ra	93.8	^{207}Ra−u	6.2	^{207}Ra(α)^{203}Rn		
^{208}Pb	99.9	^{208}Pb−^{132}Xe$_{1.576}$	0.1	^{220}Rn−^{208}Pb$_{1.058}$		
^{208}Rn	83.4	^{208}Rn(α)^{204}Po	16.6	^{212}Ra(α)^{208}Rn		
^{208}Fr	78.3	^{208}Fr−^{133}Cs$_{1.564}$	18.6	^{208}Fr(α)^{204}At	3.1	^{212}Ac(α)^{208}Fr
^{209}Bi	90.2	^{209}Bi(n,γ)^{210}Bi	9.5	^{209}Bi(α)^{205}Tl	0.3	^{209}Bi(p,t)^{207}Bi
^{209}At	58.8	^{213}Fr(α)^{209}At	41.2	^{209}At(α)^{205}Bi		
^{209}Rn	76.1	^{213}Ra(α)^{209}Rn	23.9	^{209}Rn(α)^{205}Po		
^{209}Fr	61.8	^{209}Fr−^{226}Ra$_{.925}$	38.2	^{213}Ac(α)^{209}Fr		
^{210}Pb	98.9	^{210}Pb(β^-)^{210}Bi	1.0	^{214}Po(α)^{210}Pb	0.1	^{210}Pb(α)^{206}Hg
^{210}Bi	52.2	^{210}Bi(β^-)^{210}Po	37.1	^{210}Bi(α)^{206}Tl	9.7	^{209}Bi(n,γ)^{210}Bi
^{210}Po	99.8	^{210}Po(α)^{206}Pb	0.2	^{210}Bi(β^-)^{210}Po		
^{210}Fr	42.6	^{210}Fr(α)^{206}At	35.9	^{210}Fr−^{226}Ra$_{.929}$	21.6	^{214}Ac(α)^{210}Fr
^{210}Ac	86.7	^{210}Ac(α)^{206}Fr	13.3	^{210}Ac−u		
^{211}Pb	97.1	^{211}Pb−^{133}Cs$_{1.586}$	2.9	^{215}Po(α)^{211}Pb		
^{211}Fr	73.6	^{211}Fr−^{133}Cs$_{1.586}$	26.4	^{211}Fr−^{226}Ra$_{.934}$		
^{211}Ra	59.1	^{211}Ra(α)^{207}Rn	40.9	^{211}Ra−^{133}Cs$_{1.586}$		
^{211}Ac	72.6	^{211}Ac(α)^{207}Fr	27.4	^{211}Ac−u		
^{211}Th	61.4	^{211}Th(α)^{207}Ra	38.6	^{211}Th^m(IT)^{211}Th		
^{211}Th^m	61.0	^{211}Th^m(IT)^{211}Th	39.0	^{211}Th^m(α)^{207}Ra		
^{212}Pb	80.5	^{212}Pb−^{220}Rn$_{.964}$	19.5	^{216}Po(α)^{212}Pb		
^{212}Fr	88.7	^{212}Fr−^{133}Cs$_{1.594}$	11.3	^{212}Fr−^{226}Ra$_{.938}$		
^{212}Ra	83.0	^{212}Ra(α)^{208}Rn	17.0	^{212}Ra−u		
^{212}Ac	85.4	^{212}Ac−u	14.6	^{212}Ac(α)^{208}Fr		
^{213}Bi	97.6	^{213}Bi−^{133}Cs$_{1.602}$	2.4	^{217}At(α)^{213}Bi		
^{213}Fr	46.2	^{213}Fr−^{133}Cs$_{1.602}$	39.3	^{213}Fr(α)^{209}At	14.5	^{213}Fr−u
^{213}Ra	77.0	^{213}Ra−^{133}Cs$_{1.602}$	23.0	^{213}Ra(α)^{209}Rn		
^{213}Ac	58.4	^{213}Ac(α)^{209}Fr	41.6	^{213}Ac−u		
^{214}Pb	99.5	^{218}Po(α)^{214}Pb	0.5	^{214}Pb(β^-)^{214}Bi		
^{214}Bi	69.0	^{214}Bi(β^-)^{214}Po	31.0	^{214}Pb(β^-)^{214}Bi		
^{214}Po	99.0	^{214}Po(α)^{210}Pb	0.8	^{218}Rn(α)^{214}Po	0.1	^{214}Bi(β^-)^{214}Po
^{214}At	84.1	^{214}At(α)^{210}Bi	15.9	^{218}Fr^m(α)^{214}At		
^{214}At^n	76.0	^{214}At^n(α)^{210}Bi	24.0	^{218}Fr^m(α)^{214}At^n		
^{214}Ac	77.9	^{214}Ac(α)^{210}Fr	22.2	^{214}Ac−u		
^{215}Bi	86.5	^{219}At(α)^{215}Bi	13.5	^{215}Bi−^{133}Cs$_{1.617}$		
^{215}Po	54.1	^{219}Rn(α)^{215}Po	45.9	^{215}Po(α)^{211}Pb		
^{216}Po	96.3	^{220}Rn(α)^{216}Po	3.7	^{216}Po(α)^{212}Pb		
^{217}At	69.0	^{217}At(α)^{213}Bi	31.0	^{221}Fr(α)^{217}At		
^{217}Ac	74.3	^{217}Ac(α)^{213}Fr	25.7	^{217}Ac^m(IT)^{217}Ac		
^{217}Ac^m	74.3	^{217}Ac^m(IT)^{217}Ac	25.7	^{217}Ac^m(α)^{213}Fr		
^{218}Po	99.5	^{222}Rn(α)^{218}Po	0.5	^{218}Po(α)^{214}Pb		
^{218}Rn	94.4	^{218}Rn(α)^{214}Po	5.6	^{222}Ra(α)^{218}Rn		
^{218}Fr^m	72.8	^{218}Fr^m(α)^{214}At	27.2	^{218}Fr^m(α)^{214}At^n		
^{219}At	82.9	^{223}Fr(α)^{219}At	13.7	^{219}At−^{133}Cs$_{1.647}$	3.4	^{219}At(α)^{215}Bi
^{219}Rn	38.8	^{219}Rn(α)^{215}Po	38.6	^{219}Rn−^{133}Cs$_{1.647}$	13.9	^{219}Rn−^{85}Rb$_{2.576}$
^{220}Rn	54.2	^{220}Rn−^{208}Pb$_{1.058}$	44.0	^{220}Rn−^{133}Cs$_{1.654}$	1.8	^{224}Ra(α)^{220}Rn
^{221}Fr	84.9	^{221}Fr−^{133}Cs$_{1.662}$	14.0	^{221}Fr(α)^{217}At	1.2	^{225}Ac(α)^{221}Fr
^{222}Rn	99.6	^{226}Ra(α)^{222}Rn	0.4	^{222}Rn(α)^{218}Po		
^{222}Ra	67.2	^{222}Ra(α)^{218}Rn	32.8	^{226}Th(α)^{222}Ra		
^{223}Rn	58.3	^{223}Rn−^{133}Cs$_{1.677}$	41.7	^{223}Rn−u		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{223}Fr	98.6	^{227}Ac(α)^{223}Fr	1.4	^{223}Fr(α)^{219}At		
^{223}Ra	90.1	^{223}Ra(α)^{219}Rn	9.9	^{227}Th(α)^{223}Ra		
^{224}Rn	56.6	^{224}Rn−u	43.4	^{224}Rn−^{133}Cs$_{1.684}$		
^{224}Ra	97.5	^{224}Ra(α)^{220}Rn	2.5	^{228}Th(α)^{224}Ra		
^{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	99.7	^{229}Th(α)^{225}Ra	0.3	^{225}Fr(β^-)^{225}Ra		
^{225}Ac	93.3	^{225}Ac(α)^{221}Fr	6.7	^{229}Pa(α)^{225}Ac		
^{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	98.3	^{230}Th(α)^{226}Ra	0.4	^{226}Ra(α)^{222}Rn	0.4	^{209}Fr−^{226}Ra$_{.925}$
^{226}Ac	87.2	^{230}Pa(α)^{226}Ac	12.8	^{226}Ac(β^-)^{226}Th		
^{226}Th	65.8	^{226}Th(α)^{222}Ra	34.2	^{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	71.9	^{227}Ac(β^-)^{227}Th	26.7	^{231}Pa(α)^{227}Ac	1.3	^{227}Ac(α)^{223}Fr
^{227}Th	89.8	^{227}Th(α)^{223}Ra	10.2	^{227}Ac(β^-)^{227}Th		
^{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	96.1	^{228}Th(α)^{224}Ra	3.9	^{230}Th(p,t)^{228}Th−^{232}Th()^{230}Th		
^{229}Fr	70.2	^{229}Fr−^{133}Cs$_{1.722}$	17.0	^{229}Fr−^{238}U$_{.962}$	12.8	^{229}Fr−u
^{229}Th	88.9	^{233}U(α)^{229}Th	10.9	^{230}Th(d,t)^{229}Th	0.2	^{229}Th(α)^{225}Ra
^{229}Pa	73.3	^{231}Pa(p,t)^{229}Pa	26.7	^{229}Pa(α)^{225}Ac		
^{230}Fr	87.7	^{230}Fr−^{133}Cs$_{1.729}$	12.3	^{230}Fr−u		
^{230}Th	69.3	^{230}Th(p,t)^{228}Th−^{232}Th()^{230}Th	16.6	^{234}U(α)^{230}Th	12.4	^{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	85.1	^{230}Th(n,γ)^{231}Th	10.0	^{235}U(α)^{231}Th	4.9	^{231}Th(β^-)^{231}Pa
^{231}Pa	55.9	^{231}Pa(α)^{227}Ac	22.3	^{231}Th(β^-)^{231}Pa	19.1	^{235}Np(α)^{231}Pa
^{232}Ra	57.1	^{232}Ra−^{133}Cs$_{1.744}$	42.9	^{232}Ra−u		
^{232}Th	68.6	^{236}U(α)^{232}Th	19.7	^{230}Th(p,t)^{228}Th−^{232}Th()^{230}Th	7.0	^{232}Th(n,γ)^{233}Th
^{232}U	100.0	^{232}U(α)^{228}Th				
^{233}Ra	70.5	^{233}Ra−^{133}Cs$_{1.752}$	29.5	^{233}Ra−u		
^{233}Th	92.9	^{232}Th(n,γ)^{233}Th	7.1	^{233}Th(β^-)^{233}Pa		
^{233}Pa	86.2	^{237}Np(α)^{233}Pa	8.6	^{233}Pa(β^-)^{233}U	5.2	^{233}Th(β^-)^{233}Pa
^{233}U	84.3	^{233}U O$_2$−^{208}Pb$_{1.274}$	9.3	^{233}Pa(β^-)^{233}U	3.7	^{233}U(α)^{229}Th
^{234}U	65.0	^{234}U(n,γ)^{235}U	21.4	^{238}Pu(α)^{234}U	13.7	^{234}U(α)^{230}Th
^{235}Pa	90.8	^{235}Pa−u	9.2	^{235}Pa−^{133}Cs$_{1.767}$		
^{235}U	43.5	^{239}Pu(α)^{235}U	33.3	^{235}U(n,γ)^{236}U	15.4	^{234}U(n,γ)^{235}U
^{235}Np	84.2	^{235}Np(ε)^{235}U	15.8	^{235}Np(α)^{231}Pa		
^{236}U	82.9	^{240}Pu(α)^{236}U	17.8	^{235}U(n,γ)^{236}U	1.2	^{236}U(n,γ)^{237}U
^{236}Pu	100.0	^{236}Pu(α)^{232}U				
^{237}Pa	91.2	^{237}Pa−u	8.8	^{237}Pa−^{133}Cs$_{1.782}$		
^{237}U	84.2	^{236}U(n,γ)^{237}U	15.8	^{241}Pu(α)^{237}U		
^{237}Np	98.2	^{241}Am(α)^{237}Np	1.8	^{237}Np(α)^{233}Pa		
^{237}Pu	93.1	^{241}Cm(α)^{237}Pu	6.9	^{237}Pu(α)^{233}U		
^{238}U	100.0	^{238}U−^{132}Xe$_{1.803}$				
^{238}Pu	68.2	^{238}Pu(α)^{234}U	31.5	^{238}Pu(n,γ)^{239}Pu	0.2	^{242}Cm(α)^{238}Pu
^{239}Np	50.5	^{243}Am(α)^{239}Np	49.5	^{239}Np(β^-)^{239}Pu		
^{239}Pu	50.9	^{239}Pu(n,γ)^{240}Pu	23.8	^{239}Pu(α)^{235}U	11.0	^{239}Pu O−^{208}Pb$_{1.226}$
^{240}U	99.8	^{244}Pu(α)^{240}U	0.2	^{240}U(β^-)^{240}Np^m		
^{240}Np	67.9	^{240}Np^m(IT)^{240}Np	32.1	^{240}Np(β^-)^{240}Pu		

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{240}Np^{m}$	42.5	$^{240}Np^{m}(\beta^{-})^{240}Pu$	42.4	$^{240}U(\beta^{-})^{240}Np^{m}$	15.1	$^{240}Np^{m}(IT)^{240}Np$
^{240}Pu	75.5	$^{240}Pu(n,\gamma)^{241}Pu$	17.4	$^{239}Pu(n,\gamma)^{240}Pu$	7.0	$^{240}Pu(\alpha)^{236}U$
^{240}Cm	99.9	$^{240}Cm(\alpha)^{236}Pu$	0.1	$^{244}Cf(\alpha)^{240}Cm$		
^{241}Np	91.4	$^{241}Np-^{133}Cs_{1.812}$	8.6	$^{241}Np(\beta^{-})^{241}Pu$		
^{241}Pu	41.1	$^{241}Pu(\beta^{-})^{241}Am$	24.3	$^{240}Pu(n,\gamma)^{241}Pu$	22.5	$^{245}Cm(\alpha)^{241}Pu$
^{241}Am	58.7	$^{241}Pu(\beta^{-})^{241}Am$	20.4	$^{241}Am\ O-^{208}Pb_{1.236}$	18.8	$^{241}Am\ O-^{238}U\ O_2$
^{241}Cm	93.6	$^{241}Cm(\varepsilon)^{241}Am$	5.7	$^{241}Cm(\alpha)^{237}Pu$	0.7	$^{245}Cf(\alpha)^{241}Cm$
^{242}Np	85.9	$^{242}Np-^{133}Cs_{1.820}$	14.1	$^{242}Np(\beta^{-})^{242}Pu$		
^{242}Pu	56.3	$^{241}Pu(n,\gamma)^{242}Pu$	35.9	$^{242}Pu(\alpha)^{238}U$	6.3	$^{246}Cm(\alpha)^{242}Pu$
^{242}Cm	99.8	$^{242}Cm(\alpha)^{238}Pu$	0.2	$^{246}Cf(\alpha)^{242}Cm$		
^{243}Pu	57.1	$^{242}Pu(n,\gamma)^{243}Pu$	21.3	$^{244}Pu(d,t)^{243}Pu$	10.9	$^{247}Cm(\alpha)^{243}Pu$
^{243}Am	46.6	$^{243}Am\ O-^{238}U\ O_2$	36.9	$^{243}Am\ O-^{208}Pb_{1.245}$	15.9	$^{243}Am(\alpha)^{239}Np$
^{244}Pu	43.2	$^{248}Cm(\alpha)^{244}Pu$	33.4	$^{244}Pu\ O-^{208}Pb_{1.250}$	22.7	$^{244}Pu\ O_2-^{238}U\ O_2$
^{244}Cm	100.0	$^{244}Cm(\alpha)^{240}Pu$				
^{244}Cf	99.4	$^{244}Cf(\alpha)^{240}Cm$	0.6	$^{248}Fm(\alpha)^{244}Cf$		
^{245}Cm	50.6	$^{245}Cm(\alpha)^{241}Pu$	49.4	$^{249}Cf(\alpha)^{245}Cm$		
^{245}Cf	97.7	$^{245}Cf(\alpha)^{241}Cm$	2.3	$^{249}Fm(\alpha)^{245}Cf$		
^{246}Pu	55.6	$^{244}Pu(t,p)^{246}Pu$	44.4	$^{246}Pu(\beta^{-})^{246}Am^{m}$		
$^{246}Am^{m}$	55.5	$^{246}Am^{m}(\beta^{-})^{246}Cm$	44.5	$^{246}Pu(\beta^{-})^{246}Am^{m}$		
^{246}Cm	80.9	$^{246}Cm(\alpha)^{242}Pu$	18.0	$^{246}Cm\ O-^{208}Pb_{1.260}$	1.0	$^{246}Cm(d,p)^{247}Cm$
^{246}Cf	98.9	$^{246}Cf(\alpha)^{242}Cm$	1.1	$^{250}Fm(\alpha)^{246}Cf$		
^{246}Es	96.8	$^{246}Es^{p}(IT)^{246}Es$	3.2	$^{246}Es-u$		
$^{246}Es^{p}$	96.8	$^{250}Md(\alpha)^{246}Es^{p}$	3.2	$^{246}Es^{p}(IT)^{246}Es$		
^{247}Cm	59.5	$^{247}Cm(\alpha)^{243}Pu$	20.4	$^{248}Cm(d,t)^{247}Cm$	20.1	$^{246}Cm(d,p)^{247}Cm$
^{248}Cm	50.2	$^{248}Cm(\alpha)^{244}Pu$	35.3	$^{248}Cm\ O-^{208}Pb_{1.269}$	14.3	$^{248}Cm\ O-^{238}U\ O_2$
^{248}Bk	65.4	$^{248}Bk^{m}(IT)^{248}Bk$	34.6	$^{252}Es(\alpha)^{248}Bk$		
$^{248}Bk^{m}$	88.9	$^{248}Bk^{m}(\beta^{-})^{248}Cf$	11.1	$^{248}Bk^{m}(IT)^{248}Bk$		
^{248}Cf	99.3	$^{248}Cf(\alpha)^{244}Cm$	0.7	$^{248}Bk^{m}(\beta^{-})^{248}Cf$		
^{248}Fm	78.4	$^{248}Fm(\alpha)^{244}Cf$	21.6	$^{252}No(\alpha)^{248}Fm$		
^{249}Cf	39.6	$^{249}Cf\ O-^{238}U\ O_2$	36.6	$^{249}Cf-^{208}Pb_{1.197}$	23.8	$^{249}Cf(\alpha)^{245}Cm$
^{249}Fm	77.3	$^{249}Fm(\alpha)^{245}Cf$	22.7	$^{253}No(\alpha)^{249}Fm$		
^{249}Md	52.3	$^{249}Md-u$	47.7	$^{253}Lr(\alpha)^{249}Md$		
^{250}Bk	100.0	$^{254}Es^{m}(\alpha)^{250}Bk$				
$^{250}Bk^{n}$	98.7	$^{250}Bk^{n}(IT)^{250}Bk$	1.3	$^{254}Es(\alpha)^{250}Bk^{n}$		
^{250}Cf	100.0	$^{250}Cf(\alpha)^{246}Cm$				
^{250}Fm	56.8	$^{254}No(\alpha)^{250}Fm$	43.2	$^{250}Fm(\alpha)^{246}Cf$		
^{250}Md	80.6	$^{250}Md^{q}(IT)^{250}Md$	18.6	$^{254}Lr(\alpha)^{250}Md$	0.7	$^{250}Md(\alpha)^{246}Esp$
$^{250}Md^{q}$	81.1	$^{254}Lr(\alpha)^{250}Md^{q}$	18.9	$^{250}Md^{q}(IT)^{250}Md$		
^{251}Fm	88.4	$^{255}No(\alpha)^{251}Fm$	11.6	$^{251}Fm-u$		
^{251}Md	72.0	$^{255}Lr^{m}(\alpha)^{251}Md$	28.0	$^{255}Lr(\alpha)^{251}Md$		
^{251}No	79.1	$^{251}No-^{133}Cs_{1.887}$	20.9	$^{251}No^{m}-^{251}No$		
$^{251}No^{m}$	79.1	$^{251}No^{m}-^{133}Cs_{1.887}$	20.9	$^{251}No^{m}-^{251}No$		
^{252}Cf	100.0	$^{252}Cf(\alpha)^{248}Cm$				
^{252}Es	65.4	$^{252}Es(\alpha)^{248}Bk$	34.6	$^{252}Es(\varepsilon)^{252}Cf$		
^{252}No	70.7	$^{252}No(\alpha)^{248}Fm$	29.3	$^{252}No-^{133}Cs_{1.895}$		
^{253}No	67.8	$^{253}No(\alpha)^{249}Fm$	32.2	$^{253}No-^{133}Cs_{1.902}$		
^{253}Lr	52.3	$^{253}Lr(\alpha)^{249}Md$	47.7	$^{257}Db(\alpha)^{253}Lr$		
^{254}Es	91.3	$^{254}Es(\alpha)^{250}Bk$	8.7	$^{254}Es(\alpha)^{250}Bk^{n}$		
$^{254}Es^{m}$	100.0	$^{254}Es^{m}(\beta^{-})^{254}Fm$				
^{254}Fm	100.0	$^{254}Fm(\alpha)^{250}Cf$				
^{254}No	98.0	$^{254}No-^{133}Cs_{1.910}$	2.0	$^{254}No(\alpha)^{250}Fm$		
^{254}Lr	51.0	$^{254}Lr^{m}-^{254}Lr$	48.8	$^{254}Lr-^{133}Cs_{1.910}$	0.1	$^{254}Lr(\alpha)^{250}Mdq$

Table II. Influences on primary nuclides (continued, Explanation of Table on page 120003-78)

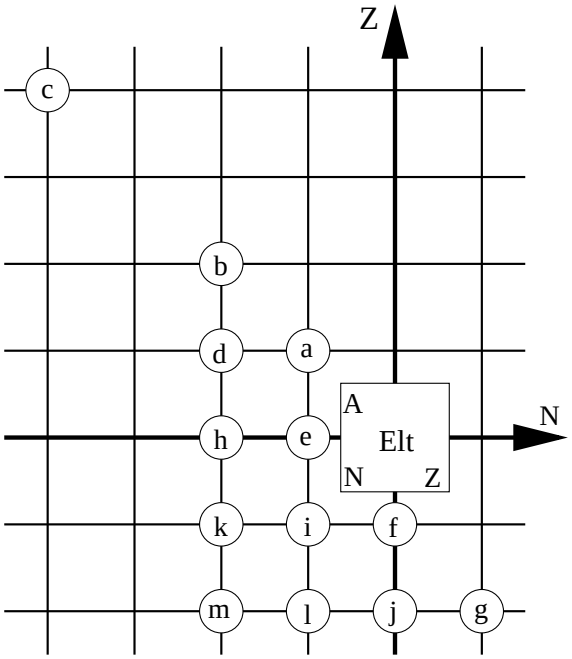
Nuclide	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{254}Lr^{m}$	84.2	$^{254}Lr^{m}-^{133}Cs_{1.910}$	15.8	$^{254}Lr^{m}-^{254}Lr$		
$^{254}Lr^{p}$	99.9	$^{254}Lr^{p}(IT)^{254}Lr$	0.1	$^{258}Db(\alpha)^{254}Lr^{p}$		
^{255}No	88.8	$^{255}No-^{133}Cs_{1.917}$	11.2	$^{255}No(\alpha)^{251}Fm$		
^{255}Lr	95.3	$^{255}Lr-^{133}Cs_{1.917}$	4.7	$^{255}Lr(\alpha)^{251}Md$		
$^{255}Lr^{m}$	94.8	$^{255}Lr^{m}-^{133}Cs_{1.917}$	5.2	$^{255}Lr^{m}(\alpha)^{251}Md$		
^{255}Rf	100.0	$^{255}Rf(\alpha)^{251}No$				
$^{255}Rf^{m}$	99.8	$^{255}Rf^{m}(IT)^{255}Rf$	0.2	$^{259}Sg^{m}(\alpha)^{255}Rf^{m}$		
^{257}Db	52.2	$^{257}Db(\alpha)^{253}Lr$	47.8	$^{257}Db-^{85}Rb_{3.024}$		
^{258}Db	96.3	$^{258}Db(\alpha)^{254}Lr^{p}$	3.7	$^{258}Db(\alpha)^{254}Lr$		
$^{259}Sg^{m}$	86.0	$^{259}Sg^{m}(\alpha)^{255}Rf^{m}$	14.0	$^{259}Sg^{m}(\alpha)^{255}Rf$		

Table III. Nuclear-reaction and separation energies

EXPLANATION OF TABLE

We present, for all nuclides for which such data can be derived, 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):

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



A	Mass number.
Elt.	Chemical symbol of the element
Z	Atomic number.
2224.57 0.04	2224.57 $\pm$ 0.04 keV. The uncertainties are derived from the adjusted masses and the covariance matrices. For the most precise very light nuclides the precisions are often better than 5 eV and could not be given conveniently in this table. In Table B, the covariance matrices for these nuclides allows easy derivation.

$*$	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. 120002-21).
a	in place of uncertainty : uncertainty smaller than 5 eV.

Other reaction energies can be derived from the given data with the help of the following relations (all numerical constants and their standard uncertainties below are in keV):

$$
\begin{array}{lcl}
Q(\gamma,\mathrm{p}) & = & -\,S(\mathrm{p}) \\
Q(\gamma,\mathrm{n}) & = & -\,S(\mathrm{n}) \\
Q(\gamma,2\mathrm{p}) & = & -\,S(2\mathrm{p}) \\
Q(\gamma,\mathrm{pn}) & = & Q(\mathrm{d},\alpha) - 26071.09571 \pm 0.00044 \\
Q(\gamma,\mathrm{d}) & = & Q(\mathrm{d},\alpha) - 23846.52947 \pm 0.00004 \\
Q(\gamma,2\mathrm{n}) & = & -\,S(2\mathrm{n}) \\
Q(\gamma,\mathrm{t}) & = & Q(\mathrm{p},\alpha) - 19813.86571 \pm 0.00005 \\
Q(\gamma,{}^3\mathrm{He}) & = & Q(\mathrm{n},\alpha) - 20577.62063 \pm 0.00044 \\
Q(\gamma,\alpha) & = & Q(\alpha)
\end{array}
$$

$$
\begin{array}{lcl}
Q(\mathrm{p},\mathrm{n}) & = & Q(\beta^-) - 782.34699 \pm 0.00044 \\
Q(\mathrm{p},2\mathrm{p}) & = & -\,S(\mathrm{p}) \\
Q(\mathrm{p},\mathrm{pn}) & = & -\,S(\mathrm{n}) \\
Q(\mathrm{p},\mathrm{d}) & = & -\,S(\mathrm{n}) + 2224.56624 \pm 0.00044 \\
Q(\mathrm{p},2\mathrm{n}) & = & Q(\beta^-\mathrm{n}) - 782.34699 \pm 0.00044 \\
Q(\mathrm{p},\mathrm{t}) & = & -\,S(2\mathrm{n}) + 8481.79623 \pm 0.00088 \\
Q(\mathrm{p},{}^3\mathrm{He}) & = & Q(\mathrm{d},\alpha) - 18353.05439 \pm 0.00004
\end{array}
$$

$$
\begin{array}{lcl}
Q(\mathrm{n},2\mathrm{p}) & = & Q(\varepsilon\mathrm{p}) + 782.34699 \pm 0.00044 \\
Q(\mathrm{n},\mathrm{np}) & = & -\,S(\mathrm{p}) \\
Q(\mathrm{n},\mathrm{d}) & = & -\,S(\mathrm{p}) + 2224.56624 \pm 0.00044 \\
Q(\mathrm{n},2\mathrm{n}) & = & -\,S(\mathrm{n}) \\
Q(\mathrm{n},\mathrm{t}) & = & Q(\mathrm{d},\alpha) - 17589.29947 \pm 0.00044 \\
Q(\mathrm{n},{}^3\mathrm{He}) & = & -\,S(2\mathrm{p}) + 7718.04132 \pm 0.00044
\end{array}
$$

$$
\begin{array}{lcl}
Q(\mathrm{d},\mathrm{pn}) & = & 0 - 2224.56624 \pm 0.00044 \\
Q(\mathrm{d},\mathrm{t}) & = & -\,S(\mathrm{n}) + 6257.22999 \pm 0.00044 \\
Q(\mathrm{d},{}^3\mathrm{He}) & = & -\,S(\mathrm{p}) + 5493.47508 \pm 0.00002
\end{array}
$$

$$
\begin{array}{lcl}
Q({}^3\mathrm{He},\mathrm{t}) & = & Q(\beta^-) - 18.59207 \pm 0.00002 \\
Q({}^3\mathrm{He},\alpha) & = & -\,S(\mathrm{n}) + 20577.62063 \pm 0.00044
\end{array}
$$

$$
Q(\mathrm{t},\alpha) = -\,S(\mathrm{p}) + 19813.86571 \pm 0.00005
$$

Table III. Nuclear-reaction and separation energies (Explanation of Table on p. 120003-108)

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	−250	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	−810	250	*		−5500#	2020#	*		*		*	
	He	2	1710	20	22640	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	710#	1030#	*		21510#	1000#	*		*		*	
	He	2	−410	7	23040	240	*		3840	90	6320	100	*	
	Li	3	7251.09	*a*	9973.96	0.05	*		14387	20	17346.24	*a*	−4070	100
	Be	4	10677	5	5606.79	0.02	*		14800	50	−4690	210	18990.55	0.02
	B	5	27710#	2000#	−2013	25	*		1250#	2000#	*		8000	210
8	He	2	2535	7	24860#	1000#	−3455	18	500	240	3530	90	*	
	Li	3	2032.62	0.05	12416	7	*		14064.52	0.07	14579	20	−6350	90
	Be	4	18898.71	0.04	17254.40	0.04	*		1565.60	0.04	−1870	50	−643	20
	B	5	12827	26	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	2460#	1010#	3980	240	*	
	Li	3	4062.22	0.19	13943.77	0.21	−20150	210	9593	7	12226.86	0.19	−11220	240
	Be	4	1664.57	0.04	16886.35	0.05	*		7152.13	0.01	2125.60	*a*	−597.27	0.05
	B	5	18576.5	1.3	−185.8	0.9	*		7358.2	0.9	−1095	6	3976.0	0.9
	C	6	14225	18	1299.5	2.4	*		11945	26	−13550#	2000#	16182	6
	N	7	*		−2750	210	*		*		*		3430#	2010#
10	He	2	−190	100	*		33500	90	*		4880#	1010#	*	
	Li	3	−26	13	15170	50	−5430	180	12154	13	11844	15	−10490#	1000#
	Be	4	6812.28	0.05	19636.41	0.19	*		2372.47	0.07	2564.41	0.05	−7819	7
	B	5	8437.2	0.9	6586.78	0.01	*		17819.74	0.04	1145.61	0.03	2789.91	0.01
	C	6	21283.7	2.1	4006.8	0.9	*		3487.9	1.0	−7114	26	5576.01	0.07
	N	7	14690	280	−2280	180	*		14130	180	*		16450	180
11	Li	3	396	13	15760	90	16363	5	10500	50	13982.6	0.6	*	
	Be	4	501.2	0.6	20164	13	−27560	60	5933.5	0.6	4095.9	0.6	−5785.7	0.6
	B	5	11454.22	0.02	11228.73	0.05	*		8030.09	0.01	8590.09	0.04	−6631.69	0.05
	C	6	13120.59	0.09	8690.18	0.06	*		8943.7	0.9	−7408.2	1.0	11354.13	0.07
	N	7	22190	180	−1378	5	*		6165	5	−5835	19	7090	5
	O	8	*		−1970	190	*		13350	220	*		18320	60
12	Li	3	−210	30	*		31670	30	10520	100	12940	60	*	
	Be	4	3171.2	2.0	22939.4	2.0	−6834.8	2.8	2736	13	4986.9	1.9	−10210	50
	B	5	3369.6	1.3	14097.2	1.4	*		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	−5702.02	*a*
	N	7	15099	5	600.3	1.0	*		12350.2	1.0	−6708.9	2.4	10568.0	1.3
	O	8	23900	60	−258	5	*		4140	180	−8330	210	8648.0	2.9

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
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	−1850	90	*		*		21260	100	*		22450	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	−1060	260	*		*		27730	240	*		22520	240
	He	2	975.46	0.05	*		*		−783	5	*		−2160	50
	Li	3	27380	210	25110	100	−1473.76	*a*	−33230#	2000#	−26140	90	−31120#	2000#
	Be	4	*		−1372	5	*		*		−145	21	*	
	B	5	*		−7420#	2010#	*		*		28350#	2000#	*	
7	H	1	−100#	1000#	*		*		34280#	1000#	*		23520#	1000#
	He	2	1301	21	*		*		10304	7	*		3915	7
	Li	3	12910	50	32610	90	−2467.62	*a*	−12770	26	−34200	240	−11539	5
	Be	4	37510#	2000#	10040	20	−1587.08	0.02	*		−9112.01	0.06	−39620#	2000#
	B	5	*		−1420	60	−3420#	2000#	*		6301	26	*	
8	He	2	2125.02	0.12	*		*		26668.04	0.11	*		8631.29	0.10
	Li	3	9283.71	0.05	35450	240	−6100	100	−1975.8	1.0	−35530#	1000#	−2894.57	0.05
	Be	4	29576	5	27228.36	0.06	91.84	0.04	−30123	18	−28420	7	−30807	26
	B	5	40540#	2000#	5743.2	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	38810#	1000#	−10410	90	12538.4	0.9	*		11941.91	0.19
	Be	4	20563.27	0.02	29303	7	−2308	20	−17562.6	2.1	−27550.25	0.10	−19644.5	1.0
	B	5	31403	26	17068.6	0.9	−1690	50	−32690	210	−15818.3	0.9	−30719	18
	C	6	*		1436.0	2.1	−10650#	2000#	*		16680.4	2.1	*	
	N	7	*		−2850	210	*		*		14890	210	*	
10	He	2	−1440	90	*		*		36590	90	*		16170	90
	Li	3	4036	13	*		−11190	240	21002	13	*		13633	13
	Be	4	8476.84	0.06	33580.19	0.11	−7409.55	0.07	−3091.21	0.09	−35620	50	−7880.3	0.9
	B	5	27013.6	1.0	23473.14	0.05	−4461.19	0.01	−26430	180	−20193.27	0.19	−24931.8	2.1
	C	6	35508	18	3820.94	0.08	−5101	5	*		−2938.72	0.07	−37480	210
	N	7	*		−980	180	−11270#	2010#	*		18770	180	*	
11	Li	3	369.3	0.6	*		−10880#	1000#	32060.6	0.6	*		20049.5	0.6
	Be	4	7313.4	0.6	35340	50	−8320	7	9528.2	0.6	−36310	90	55.7	0.6
	B	5	19891.4	0.9	30865.14	0.19	−8664.31	0.01	−15698	5	−31674	13	−15102.28	0.07
	C	6	34404.3	2.1	15276.97	0.06	−7544.58	0.06	−37090	60	−9247.04	0.08	−35900	180
	N	7	36880	210	2629	5	−5736	26	*		5026	5	*	
	O	8	*		−4250	60	*		*		24750	60	*	
12	Li	3	190	30	*		*		35640	30	*		20760	30
	Be	4	3672.3	1.9	38700	90	−8956.8	1.9	25077.8	1.9	*		8338.8	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	27185.41	0.05	−7366.59	0.04	−31912.6	2.0	−27466.6	0.6	−32437	5
	N	7	37280	180	9290.5	1.0	−8008.5	1.4	*		1381.4	1.0	−38470	60
	O	8	*		−1636.0	2.0	−5577	18	*		13974.2	2.0	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		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#	7095.1	1.2	8818.5	1.0	−10844	13
	C	6	4946.31	*a*	17533.4	1.3	*		5168.11	0.01	−4061.55	0.01	−3836.05	0.05
	N	7	20063.9	1.0	1943.49	0.27	*		5406.89	0.28	−5489.14	0.28	−1058.73	0.27
	O	8	16869	10	1512	10	*		9461	11	−10500	180	13063	10
	F	9	*		−2830#	500#	*		5000#	500#	*		9200#	530#
14	Be	4	1900	70	24440	100	31830	70	1530	80	3970	70	*	
	B	5	969	21	17284	24	−8300	50	9298	21	8351	21	−11417	21
	C	6	8176.43	*a*	20831.0	1.0	*		361.3	1.3	−783.76	0.01	−11511.3	0.6
	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	*		10760	40	−10910	70	13250	40
15	Be	4	−1720	70	*		46769	20	3350	70	5480	40	*	
	B	5	2778	30	18170	70	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	−10482	14	4875	14
	Ne	10	*		−960	80	*		8900#	510#	*		13950	70
16	Be	4	880	70	*		61550	80	*		4700	100	*	
	B	5	−83	15	19800	30	26437	25	7990	70	8317	27	−14220	70
	C	6	4250	4	22552	21	−10322	13	740	21	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	24270	70	−160	18	*		2760	40	−13150#	500#	6547	15
17	B	5	1470	210	20390	220	41760	200	4800	210	8750	220	*	
	C	6	734	18	23370	30	4531	17	2785	27	2231	27	−13160	70
	N	7	5885	15	13113	15	−26850	60	8708	15	9714	15	−10148	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	−1192.03	0.25	4734.69	0.25
	Ne	10	15587	12	1464	5	*		10644	14	−10600	40	14139.1	0.4
	Na	11	*		−3410	60	*		5220	90	*		8400	70
18	B	5	−5	5	*		50920	200	5690	220	7030	210	*	
	C	6	4180	30	26090	210	19600	30	−1480	40	830	40	−19060	40
	N	7	2828	24	15208	25	−12056	27	10130	19	8104	19	−10198	28
	O	8	8045.37	*a*	15942	15	−42810	30	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	17620	60	−1380	20	*		11864	23	−10180	70	14249	24
	Mg	12	*		−20	70	*		*		*		7460	70
19	B	5	90	560	*		61260	530	*		7820	530	*	
	C	6	580	90	26670	230	30660	100	−590	230	170	100	−18760	120
	N	7	5329	25	16350	30	2926	19	5534	24	7025	17	−15610	30
	O	8	3955.6	2.6	17069	19	−28540	10	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	*		10511.15	0.29	−4059	5	12135.45	0.16
	Na	11	20311	23	−323	11	*		7140	11	−6222	16	7901	12
	Mg	12	18230	40	586	22	*		7860	60	*		13503	16

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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	31630.6	0.6	−10648.33	*a*	−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	−34638.5	2.0
	O	8	40770	60	2112	10	−8221	10	*		15826	10	*	
	F	9	*		−3090#	500#	−5500#	540#	*		17400#	500#	*	
14	Be	4	1390	70	*		−11790	120	36810	70	*		15200	70
	B	5	5847	21	39920	40	−11813	25	20801	21	−40610	70	12468	21
	C	6	13122.74	*a*	36635.8	1.9	−12012.49	0.05	−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	40047.5	2.0	6570.16	0.03	−10115.81	0.07	*		−2406.20	0.03	−42090#	500#
	F	9	*		−50	40	−8940	180	*		19330	40	*	
15	Be	4	177	22	*		*		39751	20	*		17889	29
	B	5	3747	21	42600	70	−14196	21	28856	21	*		17866	21
	C	6	9394.5	0.8	38364	10	−12729.4	1.0	7017.5	0.9	−37250	70	−1061.6	0.8
	N	7	21386.68	0.27	31038.5	1.0	−10991.19	0.01	−16465	14	−30852	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	−840	30	*		*		43120	80	*		19790	80
	B	5	2700	30	*		−14320	40	31428	25	*		19167	25
	C	6	5468	4	40720	70	−13809	4	18431	4	−43219	20	5521	4
	N	7	13322.1	2.3	32559	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*	−28753	12	−21899.1	0.8	−29375	14
	F	9	37430	40	6766	5	−9088	5	*		3285	5	−37610	70
	Ne	10	*		−1430	12	−10322	12	*		13871	12	*	
17	B	5	1380	210	*		−15690	220	35850	200	*		21950	200
	C	6	4984	17	43171	26	−15052	20	21841	17	−43070	80	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	−30135	12
	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	46480	80	−17340	80	25700	30	*		8980	30
	N	7	8713	19	38580	30	−12976	28	12240	19	−37890	200	5851	19
	O	8	12188.45	*a*	29055	4	−6227.63	*a*	−6100.4	0.4	−29104	17	−10805.84	0.25
	F	9	25945	5	19388.7	2.3	−4415.2	0.5	−24296	20	−14286	15	−23698.6	0.6
	Ne	10	34841	12	4523.3	0.4	−5115.1	0.4	−36710	30	−1162.6	0.4	−37470	60
	Na	11	*		84	21	−9220	50	*		15929	20	*	
	Mg	12	*		−3440	40	*		*		18240	30	*	
19	B	5	90	560	*		*		43920	530	*		26780	530
	C	6	4760	100	*		−19640	100	29080	100	*		11230	100
	N	7	8158	22	42440	200	−15527	27	17342	16	−43230	200	8566	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	12017.14	0.16	−3528.5	0.5	−30120	10	−4754.11	0.16	−31489	20
	Na	11	37930	60	3600	11	−6062	18	*		4767	11	−37170	40
	Mg	12	*		−794	10	−10770	70	*		19266	10	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		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	19348	16	−13681.5	2.1	1394	19	790	15	−11589	17
	F	9	6601.34	0.03	10639.3	2.6	−41960#	200#	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	22466	10	2741	11	*		3019	20	−12380	60	6623.6	1.9
	Al	13	*		−2780#	200#	*		10620#	200#	*		12870#	210#
21	B	5	−910	240	*		78430	560	*		*		*	
	C	6	−70#	380#	31050#	620#	51380#	300#	−3420#	610#	−1290#	360#	*	
	N	7	4610	160	19560	270	27420	130	3530	170	5180	140	−20910	240
	O	8	3806	12	20990	80	−2842	12	2918	20	−187	22	−11210	30
	F	9	8101.5	1.8	11132.7	2.0	−26098	14	7330	3	5599.3	1.8	−7514	19
	Ne	10	6761.16	0.04	13003.29	0.05	−55600#	200#	6466.47	0.04	−1740.8	0.5	697.44	0.04
	Na	11	17106.7	1.1	2431.90	0.04	*		6773.90	0.16	−2638.4	0.4	2588.4	0.5
	Mg	12	14645.1	2.0	3235.6	1.3	*		8685	11	−9402	20	11232.7	0.8
	Al	13	23960#	200#	−1284	14	*		4889	17	−11110	40	6527	24
	Si	14	*		−640#	280#	*		*		*		13490#	200#
22	C	6	100#	380#	32060	600	61640	230	−5080	590	−1290	570	*	
	N	7	1540	250	21170#	370#	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	−15299	12	9708	12	4325	13	−7415	21
	Ne	10	10364.27	0.04	15266.1	1.8	−39850	50	2703.54	0.03	−1673.23	*a*	−5711.2	2.6
	Na	11	11067.85	0.14	6738.59	0.14	*		12571.34	0.13	−2069.39	0.21	1952.45	0.13
	Mg	12	19375.2	0.8	5504.11	0.17	*		3460.3	1.1	−8465	11	3494.36	0.23
	Al	13	16029	14	100.3	0.8	*		11325.6	1.9	−8916	10	10810	11
	Si	14	26110#	210#	1510	60	*		600#	210#	*		5600	50
23	C	6	−2490#	550#	*		69330#	500#	−3500#	750#	−370#	740#	*	
	N	7	3120	470	24180	480	46250	420	1790#	520#	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	−28517	5	5604.4	1.8	−272.54	0.11	−3303.8	0.9
	Na	11	12419.77	0.13	8794.09	*a*	*		6912.74	0.04	2376.14	*a*	−3865.99	0.03
	Mg	12	13144.99	0.17	7581.25	0.14	*		7422.00	0.05	−7460.1	1.1	7214.67	0.03
	Al	13	19415.7	0.4	140.9	0.4	*		6555.0	0.8	−5865.5	1.9	5543.9	1.2
	Si	14	16540	50	2018	5	*		8024	15	−13710#	200#	11532	6
24	N	7	−2150#	580#	24520#	640#	55360#	400#	4040#	460#	6160#	500#	−25800#	690#
	O	8	4190	200	25510	450	32430	160	−2550	270	−1870	210	−21500#	340#
	F	9	3810	100	14370	160	7590	100	8970	110	4350	100	−12040	170
	Ne	10	8868.9	0.5	16530	30	−16705	4	1966	12	−1040.0	1.9	−8367	12
	Na	11	6959.36	0.02	10552.81	0.10	−40830#	300#	10317.64	0.02	2177.94	0.04	−2723.9	1.8
	Mg	12	16531.22	0.03	11692.69	0.01	*		1958.63	0.13	−6884.66	0.04	−2555.39	0.04
	Al	13	14868.2	0.4	1864.11	0.23	*		11062.00	0.28	−6088.6	0.8	7782.45	0.23
	Si	14	20681	7	3283	4	*		3372	4	−10432	15	5496	4
	P	15	*		−1760#	300#	*		11290#	310#	−12600#	360#	12010#	300#
25	N	7	−970#	640#	*		65340#	500#	2520#	710#	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	4143	8	16860	100	−5851	13	5400	30	47	15	−5660	60
	Na	11	9011.2	1.2	10695.1	1.3	−28670#	400#	6507.1	1.2	3531.0	1.2	−6505	12
	Mg	12	7330.52	0.05	12063.85	0.05	−53840#	300#	7047.88	0.05	−3147.33	0.14	478.35	0.05
	Al	13	16938.48	0.24	2271.37	0.06	*		7268.51	0.07	−3651.91	0.18	1911.83	0.15
	Si	14	14998	11	3413	10	*		7790	10	−9401	10	9874	10
	P	15	21170#	500#	−1270#	400#	*		6660#	400#	−7650#	400#	6860#	400#
	S	16	*		−950#	420#	*		*		*		14470#	310#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
20	B	5	−1470	580	*		*		47640	550	*		28920	560
	C	6	3560	230	*		−21740	240	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	−23161	16	−9840.82	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	34462	20	8600.5	1.2	−6250	5	−35090#	200#	1049.0	1.1	−33093	10
	Mg	12	40690	30	2417.9	1.9	−8963	12	*		8436.7	1.9	*	
	Al	13	*		−2190#	200#	*		*		21720#	200#	*	
21	B	5	−2470	190	*		*		53150	570	*		32810	600
	C	6	2910#	320#	*		*		37580#	300#	*		15810#	310#
	N	7	6770	140	49120	540	−20910	240	25280	130	−51460	560	13360	130
	O	8	11414	12	38930	100	−15395	21	13794	12	−36730	230	8	12
	F	9	14702.8	1.8	30481	17	−10343	15	2137.3	1.8	−29100	80	−1077.0	1.8
	Ne	10	23626.46	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	15275.36	0.04	−6561.48	0.25	−28235	14	−9456.37	0.05	−27733.9	1.9
	Mg	12	37111	10	5426.1	0.8	−8021.5	0.8	−38970#	200#	10656.8	0.8	−39110#	200#
	Al	13	*		1457	18	−11090	60	*		11911	14	*	
	Si	14	*		−3420#	200#	*		*		25100#	200#	*	
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#	310#	1260	60
	F	9	13332	12	33550	80	−12745	22	7975	12	−29730	130	454	12
	Ne	10	17125.43	*a*	26398.8	0.9	−9666.83	*a*	−7624.73	0.16	−23376	12	−13911.19	0.04
	Na	11	28174.6	1.1	19741.88	0.14	−8479.4	0.5	−23273.9	0.3	−12422.8	1.8	−24156.6	0.8
	Mg	12	34020.3	1.9	7936.01	0.16	−8142.5	0.4	−32230	50	−1957.19	0.17	−34522	14
	Al	13	39990#	200#	3336.0	1.1	−9502	20	*		12988.38	0.28	−39850#	200#
	Si	14	*		230	50	−12630	60	*		13630	50	*	
23	C	6	−2390#	580#	*		*		49550#	520#	*		24340#	540#
	N	7	4650	440	56240	700	−25470	670	33440	420	*		19370	420
	O	8	9580	120	45600#	320#	−20220	160	19780	120	−46280	260	3760	120
	F	9	12810	30	36520	140	−14990	40	12820	30	−35770	210	3240	30
	Ne	10	15564.91	0.11	27794	12	−10911.8	2.6	319.62	0.11	−21730	60	−8043.98	0.17
	Na	11	23487.63	0.04	24060.2	1.8	−10467.32	*a*	−16277.9	0.3	−19612	12	−17201.17	0.16
	Mg	12	32520.2	0.8	14319.83	0.05	−9650.63	0.16	−28837	5	−4737.92	0.03	−31637.49	0.27
	Al	13	35445	14	5645.0	0.3	−8606	11	*		4640.5	0.4	−33150	50
	Si	14	42650#	200#	2119	5	−10934	11	*		16474	5	*	
24	N	7	970#	450#	*		−24890#	680#	39390#	410#	*		24250#	420#
	O	8	6930	170	49690	280	−21430	280	24450	160	−52960#	530#	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	19379.14	0.13	25789	12	−10825.35	0.03	−8369.09	0.23	−18990	30	−11015.54	0.04
	Mg	12	29676.21	0.16	20486.79	0.01	−9316.56	0.01	−24687	4	−16068.49	0.10	−28753.0	0.3
	Al	13	34283.9	0.4	9445.35	0.26	−9324.3	1.1	−32460#	300#	2192.07	0.23	−31483	5
	Si	14	37220	50	3424	4	−9149	4	*		8939	4	*	
	P	15	*		260#	300#	−11950#	360#	*		18370#	300#	*	
25	N	7	−3120#	660#	*		−24830#	750#	44650#	510#	*		29410#	530#
	O	8	3430	210	51420#	530#	−20740#	340#	29350	170	*		11710	190
	F	9	8090	100	39960	430	−16320	170	20690	100	−42890#	410#	9210	100
	Ne	10	13012	8	31220	120	−12511	14	11169	8	−27810	170	−1677	8
	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	22616.66	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	−28230#	400#	−7787.04	0.07	−27741	4
	Si	14	35678	11	5277	10	−9501	10	−36820#	300#	10472	10	−36650#	300#
	P	15	*		2020#	400#	−9170#	400#	*		12070#	400#	*	
	S	16	*		−2710#	300#	−11650#	360#	*		22610#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	530#
	F	9	730	140	15940	200	30880	110	10890	200	8920	160	−12400	430
	Ne	10	5587	11	18160	100	7601	7	3630	100	2040	30	−8510	120
	Na	11	5574	4	12126	9	−17858	11	9802	4	3157	4	−4500	30
	Mg	12	11093.08	0.04	14145.7	1.2	−42890#	200#	2914.16	0.03	−1820.63	0.03	−5414.08	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	3979.08	0.11
	P	15	16380#	400#	119	14	*		10954	11	−7502	12	9896	10
	S	16	22040#	360#	−80#	450#	*		4980#	360#	*		8960#	200#
27	O	8	−1070	50	*		58390	170	−1470#	530#	1730#	440#	*	
	F	9	1610	60	16820	200	42330	120	8520	200	11500	200	−16160#	420#
	Ne	10	1480	90	18910	140	19440	90	6430	130	4370	130	−5800	190
	Na	11	6728	5	13267	8	−4847	4	7217	9	5298	4	−7420	100
	Mg	12	6443.37	0.04	15015	4	−32023	24	5482.0	1.2	−1304.64	0.05	−2988.5	0.5
	Al	13	13058.05	0.08	8271.29	0.06	*		6706.72	0.07	1600.77	0.05	−3132.56	0.05
	Si	14	13314.82	0.15	7463.34	0.13	*		7242.27	0.13	−7471.64	0.25	7195.47	0.11
	P	15	19739	10	818.7	0.6	*		6213	10	−6560	4	5024.5	0.6
	S	16	17320#	200#	850	26	*		8840#	400#	−10110#	300#	12329	25
28	O	8	620	70	*		66270	170	*		130#	530#	*	
	F	9	−199	6	17690	210	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	6159	10	9262	13	5899	13	−6680	100
	Mg	12	8504.67	0.27	16791	4	−19200	12	2552	4	−798.1	1.2	−7350	8
	Al	13	7725.17	0.01	9553.10	0.07	−43780#	300#	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	14548.4	1.3	2052.3	1.2	*		10704.0	1.2	−6111	10	7414.6	1.2
	S	16	21327	27	2438	12	*		3894	16	−10270#	400#	6000	16
	Cl	17	*		−2200#	300#	*		10960#	360#	−8860#	430#	13260#	500#
29	F	9	1320	540	18390	550	58360	530	7060	550	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	7084	10	−10350	110
	Mg	12	3663.7	0.4	16913	10	−7518	13	5616	4	1112	4	−5426	7
	Al	13	9428.4	0.3	10476.8	0.4	−31940#	100#	7089.6	0.3	2870.8	0.3	−5701	4
	Si	14	8473.60	*a*	12333.33	0.05	−58010#	200#	6012.59	0.05	−4820.89	0.07	−34.14	0.03
	P	15	17876.4	1.2	2749.0	0.4	*		6142.5	0.4	−4947.8	0.4	903.7	0.4
	S	16	15346	18	3236	13	*		8287	13	−9228	17	9693	13
	Cl	17	21270#	320#	−2260#	100#	*		7000#	100#	−8090#	220#	8380#	100#
	Ar	18	*		−1900#	360#	*		*		*		15080#	280#
30	F	9	−470	70	*		64560	530	8150	560	9750	560	*	
	Ne	10	3190	290	24160	580	47710	250	590	280	3010	280	−14880	310
	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	−20420	30	9866.6	2.0	3586.5	1.9	−4700	4
	Si	14	10609.20	0.02	13514.2	0.3	−45610	80	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	−8524.5	0.6	3971.65	0.23
	Cl	17	17240#	110#	−364	29	*		11090	30	−8010	40	10880	30
	Ar	18	23010#	220#	−160#	130#	*		4960#	310#	*		9390	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
26	O	8	−18	5	*		−21380	280	34200	170	*		15260	190
	F	9	5010	140	42840#	420#	−15520	230	25540	110	−44600#	510#	12630	110
	Ne	10	9731	7	32620	170	−11250	60	16675	7	−34160	170	1747	7
	Na	11	14586	4	28980	100	−12079	13	5349	4	−25480	100	−1739	4
	Mg	12	18423.60	0.03	24840.8	0.5	−10614.73	0.03	−9073.54	0.11	−21480	8	−15369.89	0.06
	Al	13	28303.96	0.24	18370.18	0.07	−9453.65	0.15	−23207	10	−10141.3	1.2	−24109	10
	Si	14	34037	4	7785.36	0.11	−9165.91	0.20	−33820#	200#	−1237.19	0.10	−34520#	400#
	P	15	37560#	300#	3532	10	−9520	10	*		12624	10	−37730#	300#
	S	16	*		−1350#	200#	−7570#	210#	*		15560#	200#	*	
27	O	8	−330	50	*		−22790#	530#	36750	190	*		17060	200
	F	9	2340	150	45430#	520#	−14010	440	30650	120	*		16600	120
	Ne	10	7070	90	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	27141	8	−11857.45	0.11	−2202.09	0.12	−22336	7	−10447.78	0.07
	Al	13	24423.53	0.08	22417.0	1.2	−10091.93	0.05	−16526.2	0.6	−17625	4	−18127.18	0.12
	Si	14	32354	10	13769.67	0.12	−9335.75	0.11	−29821	24	−3458.93	0.11	−31453	10
	P	15	36120#	400#	6332.7	0.6	−9843.7	0.7	*		4250.5	0.6	−35420#	200#
	S	16	39360#	300#	969	26	−8351	25	*		17289	24	*	
28	O	8	−450	50	*		*		39950	210	*		18050	210
	F	9	1410	60	*		−15960#	420#	34390	120	*		18280	150
	Ne	10	5300	130	37940	210	−9630	210	26320	130	−39790	210	8750	130
	Na	11	10270	11	34240	110	−10960	100	15862	10	−33410	120	5527	10
	Mg	12	14948.04	0.26	30058	7	−11493.2	0.6	6472.85	0.26	−29360	90	−5894.40	0.27
	Al	13	20783.22	0.08	24568	4	−10857.74	0.05	−9702.9	1.2	−18622	4	−12537.53	0.10
	Si	14	30494.43	0.11	19856.20	0.03	−9984.14	0.01	−25673	12	−14195.17	0.05	−28893.4	0.6
	P	15	34288	10	9515.6	1.2	−9523.9	1.2	−34070#	300#	2760.1	1.2	−32656	24
	S	16	38640#	200#	3256	12	−8998	13	*		9276	12	*	
	Cl	17	*		−1350#	300#	−7910#	430#	*		20310#	300#	*	
29	F	9	1130	540	*		−18260#	730#	37470	530	*		20780	540
	Ne	10	4790	170	39980	230	−11350	220	29010	150	−40140	230	11320	150
	Na	11	7945	8	37030	120	−11080	100	20888	7	−38010	120	9629	7
	Mg	12	12168.4	0.3	32240	90	−11014	8	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	−22818.6	1.2
	P	15	32424.8	0.7	14333.9	0.4	−10461.8	0.4	−30680#	100#	−7391.1	0.4	−29205	12
	S	16	36674	28	5288	13	−9347	16	−39210#	200#	11109	13	−38090#	300#
	Cl	17	*		180#	100#	−8010#	410#	*		13590#	100#	*	
	Ar	18	*		−4100#	200#	−6960#	360#	*		24650#	200#	*	
30	F	9	850	540	*		*		40220	530	*		22220	550
	Ne	10	4160	280	42550	310	−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	−11767	7	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	−10643.34	0.04	−10373.71	0.21	−21109.6	0.3	−15551.4	0.4
	P	15	29195.7	1.2	17928.08	0.08	−10415.64	0.09	−24760	30	−9282.1	0.4	−25178	13
	S	16	34382	12	7144.40	0.21	−9343.17	0.23	−35240	80	546.86	0.21	−35860#	100#
	Cl	17	38510#	300#	2870	30	−8860	30	*		14220	30	−39630#	200#
	Ar	18	*		−2420	80	−7930#	220#	*		16980	80	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
31	F	9	−80#	120#	*		71790#	540#	*		10460#	560#	*	
	Ne	10	170	130	24800	590	54130	270	1740	590	2640	290	−14420	320
	Na	11	4301	5	18320	250	36685.9	2.6	4560	150	5810	130	−15510	120
	Mg	12	2315.8	2.7	18889	5	15916.7	2.4	4905	8	2727	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	−34243	13	5969.5	0.3	−1234.26	0.07	−2282.69	0.26
	P	15	12311.01	0.07	7296.55	0.02	−57140#	400#	8165.34	*a*	1916.31	*a*	−1943.42	0.05
	S	16	13054.6	0.3	6130.67	0.24	*		8621.1	0.4	−7030.7	1.2	8096.64	0.23
	Cl	17	19660	30	264	3	*		6771	13	−6351	13	5760	4
	Ar	18	17960	80	550	30	*		8280#	100#	−10770#	300#	12760	18
	K	19	*		−4230#	410#	*		7300#	450#	*		11420#	500#
32	Ne	10	2250#	570#	27130#	730#	61080#	500#	−980#	730#	1710#	730#	*	
	Na	11	1768	6	19920	270	42854	5	5980	250	5010	150	−15960	530
	Mg	12	5774.6	2.9	20363	3	25186.5	1.6	1407	5	1355	8	−13580	150
	Al	13	4220	8	15263	8	2235	7	8493	7	4377	7	−8133	10
	Si	14	9200.0	0.3	16415.9	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	−45430#	300#	10838.89	0.05	2454.26	0.04	−450.7	0.3
	S	16	15044.30	0.23	8863.96	*a*	*		4896.13	0.07	−4198.6	0.4	1525.95	*a*
	Cl	17	14371	4	1580.6	1.2	*		11435.9	1.2	−5376	13	9265.1	1.2
	Ar	18	21566	13	2455	4	*		3950	30	−11070#	100#	6540	13
	K	19	19640#	500#	−2550#	300#	*		10660#	310#	−10120#	360#	13050#	320#
33	Ne	10	−1060#	780#	*		66650#	600#	−0#	800#	2300#	800#	*	
	Na	11	3021	7	20690#	500#	49936	4	3130	270	5180	250	−19450	530
	Mg	12	2282.5	2.7	20878	6	31545.6	2.1	3425	3	1349	5	−12670	250
	Al	13	5469	10	14957	7	12506	7	5339	7	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	−33710#	200#	7322.5	1.1	2959.7	1.1	−4826.8	2.2
	S	16	8641.64	*a*	9569.95	0.04	−56390#	400#	8565.49	*a*	−1520.95	0.07	3493.51	0.02
	Cl	17	15740.5	1.2	2276.8	0.4	*		8750.0	0.5	−2080.0	0.4	4843.9	0.4
	Ar	18	15255.3	1.8	3339.1	1.2	*		8361	3	−9080	30	10321.4	0.5
	K	19	21830#	360#	−2280#	200#	*		6790#	200#	−8940#	220#	8460#	200#
	Ca	20	*		−1380#	500#	*		7810#	570#	*		14270#	410#
34	Ne	10	1360#	790#	*		72830#	510#	*		860#	740#	*	
	Na	11	−10	600	21740#	850#	56230	600	5390#	780#	5360	660	−19520#	800#
	Mg	12	4715	3	22571	5	38248.1	2.2	478	6	935	3	−17220	270
	Al	13	2572	7	15246	3	21442.5	2.1	8542.3	2.7	4992	3	−9597	3
	Si	14	7548.7	1.1	18783	7	−1613.4	0.8	1818	7	−176.9	2.4	−11219.5	2.5
	P	15	6282.7	1.4	11323.3	1.1	−23061	17	10239.8	0.9	3264.4	0.8	−3951.6	2.4
	S	16	11417.15	0.04	10883.3	1.1	−44130#	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	−533.48	0.24	5646.86	0.05
	Ar	18	17065.3	0.4	4663.9	0.4	*		5666.7	1.2	−6480	3	6310.66	0.25
	K	19	16930#	200#	−608	17	*		11424	17	−7918	21	11194	17
	Ca	20	23670#	500#	460#	360#	*		3780#	420#	−13640#	500#	8550#	300#
35	Na	11	1920#	300#	22300#	840#	62690#	670#	2410#	900#	5700#	840#	*	
	Mg	12	858	6	23440	600	44376	6	2641	7	1845	8	−15820#	500#
	Al	13	5297	8	15829	8	28790	7	5527	8	5469	8	−13126	9
	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	−33620	110	8201.9	1.1	322.72	0.06	877.9	0.3
	Cl	17	12644.76	0.05	6370.81	0.04	−54710#	400#	8283.14	0.04	1866.06	0.04	937.75	0.05
	Ar	18	12740.3	0.7	5896.2	0.7	*		8666.9	0.8	−4849.1	1.3	8614.7	0.7
	K	19	17757	17	83.6	0.5	*		8922.2	0.7	−4108.5	1.8	7807.6	1.3
	Ca	20	17500#	320#	1030	110	*		8120#	230#	−11490#	320#	12620	110
	Sc	21	*		−4210#	500#	*		6610#	570#	*		10220#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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	*		−15050	320	34310	270	*		14640	270
	Na	11	6577	8	42480	530	−15310	120	27196	3	−43740	530	13055.4	2.9
	Mg	12	8656.1	2.4	36100	150	−12600	90	19823.2	2.4	−33690	250	4667	3
	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	−3906.48	0.24	−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	11725.42	0.23	−9082.97	0.26	−30337	13	−1898.56	0.23	−31670	30
	Cl	17	36910#	100#	4660	3	−8789	3	−39740#	400#	5877	3	−36280	80
	Ar	18	40960#	200#	189	18	−8567	28	*		18065	13	*	
	K	19	*		−4390#	410#	*		*		20850#	400#	*	
32	Ne	10	2420#	560#	*		−16680#	530#	37830#	500#	*		16680#	500#
	Na	11	6069	7	44720	530	−17280	120	29648	9	−45580#	540#	13603	6
	Mg	12	8090.3	2.1	38690	250	−14550	130	23248.6	1.6	−39300	270	6050.3	2.8
	Al	13	11378	7	34152	9	−12536	13	13206	7	−30634	8	3778	7
	Si	14	15787.36	0.30	29774.3	1.3	−11482.7	0.4	1937.85	0.30	−28240.8	2.4	−7708.46	0.30
	P	15	20246.66	0.08	23018.7	1.9	−9879.07	0.06	−10970.7	1.2	−16643.1	2.2	−13333.64	0.24
	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	34040	30	7711.2	1.2	−8611.2	1.6	−34460#	300#	3817.4	1.2	−32700	13
	Ar	18	39520	80	2719.0	1.8	−8806	12	*		9553.2	1.8	−42970#	400#
	K	19	*		−1990#	300#	−8220#	430#	*		20880#	300#	*	
33	Ne	10	1190#	660#	*		*		41170#	600#	*		19510#	600#
	Na	11	4789	5	47820#	540#	−18980	530	32096	8	*		16357	5
	Mg	12	8057	3	40800	270	−15860	150	25474.1	2.3	−39330#	500#	7988	7
	Al	13	9689	7	35321	7	−13602	10	17840	7	−34335	9	7509	7
	Si	14	13707.9	0.7	31966.4	2.5	−12326.9	0.8	6071.5	0.7	−26974.2	1.8	−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	23685.94	0.23	18214.76	0.04	−7115.69	*a*	−17201.6	0.4	−9797.14	0.30	−21323.0	1.2
	Cl	17	30111	3	11140.7	0.4	−6475.4	0.5	−28370#	200#	−3987.4	0.4	−26874.3	1.8
	Ar	18	36821	13	4919.7	0.5	−8715	13	−39190#	400#	9342.3	0.4	−38590#	300#
	K	19	41470#	450#	170#	200#	−8780#	220#	*		13420#	200#	*	
	Ca	20	*		−3930#	400#	−8740#	450#	*		24710#	400#	*	
34	Ne	10	300#	100#	*		*		44530#	510#	*		21170#	510#
	Na	11	3010	600	*		−19440	800	34680	600	*		18650	600
	Mg	12	6997.2	2.8	43260#	500#	−17390	250	28308.1	2.4	−45100#	600#	8742	7
	Al	13	8041	7	36124	6	−13897	5	21551.1	2.3	−33885	5	9445.4	2.2
	Si	14	12056.6	0.9	33740.5	1.8	−13535.2	1.5	9940.0	0.8	−32240.4	2.3	−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	27248.6	1.2	14713.15	0.06	−6664.15	0.08	−22953	17	−5391.7	1.1	−23127.1	0.4
	Ar	18	32320.6	1.8	6940.70	0.08	−6743.95	0.22	−32580#	300#	918.60	0.08	−33820#	200#
	K	19	38760#	300#	2731	17	−8470	40	*		12227	17	−39360#	400#
	Ca	20	*		−1820#	300#	−9400#	310#	*		16300#	300#	*	
35	Na	11	1910#	670#	*		−21440#	860#	38060#	670#	*		21440#	670#
	Mg	12	5573	6	45180#	600#	−18080	270	29920	40	−44600#	510#	10456	6
	Al	13	7869	10	38400	9	−14894	8	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	−6429.6	0.7	−27820	110	−404.6	0.7	−29631	17
	K	19	34690#	200#	4747.5	0.6	−6563	3	−36870#	400#	5978.2	0.5	−33440#	300#
	Ca	20	41170#	410#	420	110	−8940	110	*		15870	110	*	
	Sc	21	*		−3750#	450#	−9430#	570#	*		19900#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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	3220	690	24740#	960#	51040	690	−590	910	1650	690	−20100#	910#
	Al	13	1900	150	16870	150	35470	150	8340	150	5850	150	−12000	150
	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	−24181	6	4595.4	0.8	537.3	1.1	−4503.4	0.7
	Cl	17	8579.79	0.01	7964.77	0.03	−45020#	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	1658.8	0.8	*		11672.0	0.3	−3168.8	0.5	9232.6	0.5
	Ca	20	19330	110	2600	6	*		5715	18	−8990#	200#	8547	6
	Sc	21	18270#	500#	−3440#	320#	*		12010#	420#	−9440#	500#	13780#	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	4990	180	6360	180	−16220	630
	Si	14	2210	130	19810	190	24380	110	4360	110	1290	110	−9240	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	10310.87	0.06	8386.39	0.19	−35260	410	7795.46	0.07	3034.19	0.07	−1566.5	0.8
	Ar	18	8787.46	0.21	8714.65	0.21	−54300#	400#	8776.65	0.21	−1643.54	0.21	4630.41	0.21
	K	19	15454.4	0.3	1857.63	0.09	*		8957.9	0.7	−1557.85	0.12	5286.29	0.11
	Ca	20	14724	6	3007.9	0.7	*		8747.6	0.8	−6785	17	10888.6	0.6
	Sc	21	20080#	510#	−2690	410	*		9430	420	−5840#	510#	10630	410
	Ti	22	*		−560#	500#	*		8360#	570#	*		14800#	500#
38	Na	11	−700#	200#	*		76530#	720#	*		*		*	
	Mg	12	2210#	860#	26350#	850#	60940#	500#	−1120#	850#	1110#	840#	*	
	Al	13	1410#	270#	19030#	730#	46270#	200#	6800#	720#	5800#	200#	−15720#	700#
	Si	14	5670	150	21270	210	30540	100	590	180	920	110	−14050	100
	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	10190.67	0.21	−25142	14	11576.82	0.20	3912.14	0.11	706.1	1.9
	Ar	18	11838.46	0.28	10242.24	0.20	−45090#	300#	5517.98	0.20	−837.25	0.20	−222.22	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	4547.28	0.22	*		6069.4	0.4	−6021.6	0.5	6635.2	0.7
	Sc	21	16220	410	−1191	14	*		12538	15	−4570	110	12163	14
	Ti	22	21040#	500#	410#	510#	*		5590#	420#	−10460#	500#	11250#	320#
39	Na	11	−0#	200#	*		82750#	750#	*		*		*	
	Mg	12	−630#	100#	26420#	880#	65940#	520#	350#	860#	1740#	860#	*	
	Al	13	3050#	360#	19870#	590#	51290#	300#	3990#	760#	5970#	750#	−18770#	750#
	Si	14	1580	170	21440#	240#	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	−35340#	200#	9230	5	1144	5	3068	5
	K	19	13077.76	0.20	6381.34	0.19	−54530#	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	17588	28	−597	24	*		9674	24	−2825	25	8891	24
	Ti	22	16350#	360#	530#	200#	*		9320#	460#	−8540#	360#	14230#	200#
	V	23	*		−3050#	500#	*		8080#	570#	*		10870#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
36	Na	11	1920#	340#	*		*		39950#	700#	*		22300#	690#
	Mg	12	4080	690	47040#	860#	−19040#	850#	32820	690	*		12530	690
	Al	13	7190	150	40310	620	−15020	150	26200	150	−39170#	690#	12270	150
	Si	14	8590	70	35330	70	−14030	70	18230	70	−35250	70	4350	70
	P	15	11845	13	31831	13	−11577	15	9271	13	−27316	15	524	13
	S	16	16875.08	0.19	25250.4	0.8	−9011.4	0.4	−432.59	0.19	−23560	40	−9721.93	0.19
	Cl	17	21224.56	0.05	19551.2	0.8	−7642.05	0.05	−12104.9	0.3	−11953.2	1.9	−14546.0	0.7
	Ar	18	27995.89	0.08	14877.80	0.05	−6640.92	0.03	−23748	6	−8674.31	0.05	−27130.0	0.5
	K	19	32072	17	7555.0	0.3	−6507.9	1.1	−32920#	300#	4307.4	0.3	−30260	110
	Ca	20	36830#	300#	2683	6	−6708	6	*		9275	6	−40260#	400#
	Sc	21	*		−2410#	300#	−8050#	420#	*		19380#	300#	*	
37	Na	11	840#	150#	*		*		43330#	710#	*		24680#	970#
	Mg	12	3460	700	*		−20340#	920#	34780	710	*		14190	710
	Al	13	6110	180	42600#	690#	−16210	180	28810	180	−43380#	710#	14170	190
	Si	14	8320	120	36680	110	−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	4051.26	0.28	−21750	70	−5445.73	0.20
	Cl	17	18890.66	0.06	21481.7	1.9	−7849.1	1.1	−6961.36	0.11	−18799	13	−9601.33	0.06
	Ar	18	24043.0	0.7	16679.42	0.21	−6786.74	0.21	−17811.6	0.7	−7572.52	0.27	−21601.9	0.4
	K	19	29769.9	0.5	10364.61	0.10	−6221.8	0.4	−28300	410	−2567.17	0.10	−26388	6
	Ca	20	34050	110	4666.7	0.9	−6176.7	0.8	−36490#	400#	9806.5	0.6	−36710#	300#
	Sc	21	38350#	570#	−90	410	−6300#	460#	*		13620	410	*	
	Ti	22	*		−4000#	410#	−8880#	570#	*		22540#	400#	*	
38	Na	11	140#	290#	*		*		45440#	740#	*		25620#	1000#
	Mg	12	2450#	850#	*		−21190#	720#	38240#	510#	*		16190#	530#
	Al	13	5620#	250#	44010#	720#	−17640#	630#	31090#	210#	−43950#	720#	14970#	230#
	Si	14	7880	130	39130	700	−14910	100	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	16418.75	0.10	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	−7208.06	0.20	−12656.32	0.06	−15107.38	0.28	−17985.95	0.22
	K	19	27526.3	0.4	13856.70	0.20	−6785.59	0.20	−24145	14	−4328.18	0.20	−23736.0	0.7
	Ca	20	31718	6	6404.91	0.20	−6105.13	0.21	−32440#	300#	1600.21	0.28	−33630	410
	Sc	21	36300#	300#	1817	14	−5594	22	*		12855	14	−36080#	400#
	Ti	22	*		−2290#	300#	−6250#	420#	*		16230#	300#	*	
39	Na	11	−700#	280#	*		*		48490#	800#	*		27830#	900#
	Mg	12	1580#	870#	*		*		40460#	530#	*		18230#	550#
	Al	13	4460#	350#	46220#	750#	−18770#	730#	34260#	320#	−47710#	780#	17590#	320#
	Si	14	7250	180	40470	710	−15630	140	25480	140	−39040#	520#	8870	150
	P	15	9920	120	37160	210	−14980	110	17030	110	−36530#	230#	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	16623.58	0.05	−7218.59	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	−29380#	200#	143.1	0.6	−30698	14
	Sc	21	33810	410	3950	24	−5425	24	−34890#	400#	7339	24	−32620#	300#
	Ti	22	37390#	450#	−660#	200#	−5100#	230#	*		16870#	200#	*	
	V	23	*		−2650#	570#	−7410#	570#	*		18090#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	240#	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	−2497.08	0.20
	K	19	7799.62	0.06	7582	5	−44660#	300#	11890.13	0.20	2276.24	0.21	3872.46	0.08
	Ca	20	15635.0	0.6	8328.17	0.01	*		4665.18	0.20	−5182.14	0.09	1747.69	0.21
	Sc	21	14422	24	529.6	2.9	*		12246.0	2.8	−2523.2	2.9	9923.3	2.8
	Ti	22	19160#	210#	2110	70	*		6370	70	−7620	420	9790	70
	V	23	17670#	500#	−1730#	360#	*		11450#	420#	−7370#	500#	13270#	510#
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#	360#	−15230#	590#
	P	15	4910	150	17940	170	30580	120	3410	180	4050	160	−15800#	230#
	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	−17352	16	7443.5	1.8	1594.7	0.4	−560	7
	K	19	10095.37	0.06	7808.62	*a*	−35430#	200#	8393	5	4019.33	0.19	−115.03	0.10
	Ca	20	8362.85	0.05	8891.40	0.08	−54140#	400#	9380.08	0.05	−1473.11	0.20	5223.31	0.20
	Sc	21	16190.5	2.8	1085.06	0.07	*		9351.0	0.6	−1719.93	0.21	5804.68	0.21
	Ti	22	14790	70	2482	16	*		9168	29	−6196	21	11989	16
	V	23	19320#	360#	−1570#	210#	*		8480#	280#	−5650#	360#	10170#	200#
	Cr	24	*		−590#	500#	*		8990#	570#	*		14270#	500#
42	Al	13	670#	640#	23400#	710#	66820#	500#	3150#	710#	4080#	720#	−22340#	900#
	Si	14	3770#	420#	24380#	500#	51920#	300#	−610#	420#	870#	420#	−19630#	590#
	P	15	2000	150	19400#	320#	36110	100	6140	150	3640	170	−14750#	320#
	S	16	6700	5	19950	120	20909.9	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	−26800#	200#	10728.68	0.11	3084	5	424.6	1.7
	Ca	20	11481.08	0.05	10277.10	0.01	−44810#	300#	5698.62	0.06	123.57	0.01	341	5
	Sc	21	11550.18	0.08	4272.40	0.07	*		13435.85	0.05	25.4	0.6	7332.25	0.05
	Ti	22	17460	16	3751.20	0.24	*		6129.4	2.8	−6068	24	7824.4	0.6
	V	23	16160#	280#	−210#	200#	*		11480#	210#	−5460#	280#	11600#	200#
	Cr	24	20810#	500#	900#	360#	*		5850#	420#	−9600#	500#	9810#	360#
43	Al	13	1790#	780#	*		72390#	600#	880#	780#	3580#	780#	*	
	Si	14	660#	500#	24370#	640#	56920#	400#	1030#	570#	950#	500#	−18990#	640#
	P	15	3660#	320#	19290#	420#	42080#	300#	3010#	420#	4700#	320#	−17670#	420#
	S	16	2629	6	20580	100	26214	5	3500	120	810	80	−12220	120
	Cl	17	7350	60	13766	3	12074.1	2.6	5605	4	3587	4	−10330	80
	Ar	18	5658	8	14470	60	−2704	6	6010	70	410	30	−3526	7
	K	19	9624.7	0.4	9442	6	−18670	25	7202.9	0.5	3328.6	0.4	−3370	30
	Ca	20	7932.91	0.16	10676.21	0.19	−36320#	200#	7861.08	0.16	−9.72	0.17	2277.03	0.16
	Sc	21	12138.5	1.9	4929.8	1.9	−52310#	400#	9660.2	1.9	3521.9	1.9	2993.4	1.9
	Ti	22	12272	4	4473	4	*		10047	4	−3918	5	11187	4
	V	23	17760#	200#	90	25	*		8521	30	−4050	70	8264	26
	Cr	24	16420#	360#	1160#	280#	*		8750#	280#	−8350#	360#	12550#	210#
	Mn	25	*		−2570#	500#	*		7830#	570#	*		10650#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	360#	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#	220#	−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	−6800.68	0.19	−193.51	0.01	−19170	50	−9304.02	*a*
	K	19	20877.38	0.20	18315.32	0.11	−6438.41	0.07	−13012.2	2.8	−11024.2	1.7	−14324.1	0.6
	Ca	20	28930.52	0.19	14709.51	0.20	−7039.77	0.03	−25850	70	−8893	5	−28745	24
	Sc	21	32010	14	6300.5	2.8	−5531.1	2.8	−31640#	300#	5994.9	2.8	−30690#	200#
	Ti	22	35520#	310#	1510	70	−4930	70	*		11000	70	−37790#	410#
	V	23	*		−1200#	300#	−6810#	420#	*		18000#	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	−6917.07	0.08	−15290	30	−8784.48	0.01
	Ca	20	23997.8	0.6	16474	5	−6615.16	0.21	−19422	16	−7386.99	0.05	−22685.9	2.8
	Sc	21	30612	24	9413.23	0.08	−6267.20	0.12	−28510#	200#	−2395.96	0.09	−27720	70
	Ti	22	33960#	200#	3011	16	−5005	16	−34720#	400#	11841	16	−34910#	300#
	V	23	36990#	450#	540#	200#	−6050#	460#	*		13100#	200#	*	
	Cr	24	*		−2320#	450#	−6780#	570#	*		20700#	410#	*	
42	Al	13	2970#	580#	*		−22340#	870#	40900#	510#	*		20720#	580#
	Si	14	4310#	320#	46630#	580#	−19000#	590#	35140#	300#	−47890#	580#	14410#	320#
	P	15	6910	130	42310#	320#	−17800#	220#	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	−2900.68	0.12	−15000	70	−7955.43	0.12
	Ca	20	19843.93	*a*	18085.72	0.01	−6257.77	0.20	−13442.97	0.23	−12769.1	0.3	−17976.51	0.07
	Sc	21	27740.6	2.8	13163.79	0.08	−5745.50	0.20	−23900#	200#	−3850.77	0.05	−24477	16
	Ti	22	32250	70	4836.26	0.23	−5471.13	0.30	−31360#	300#	2744.24	0.23	−33050#	200#
	V	23	35480#	360#	2280#	200#	−5990#	200#	*		13130#	200#	−35290#	450#
	Cr	24	*		−680#	310#	−6550#	420#	*		14690#	300#	*	
43	Al	13	2460#	720#	*		−24130#	960#	42770#	670#	*		22700#	670#
	Si	14	4430#	500#	47770#	640#	−20290#	650#	37110#	400#	*		15750#	410#
	P	15	5660#	320#	43670#	500#	−18420#	420#	29610#	300#	−43780#	580#	15070#	300#
	S	16	9330	6	39970#	300#	−16940	140	19814	7	−36980#	300#	4560	60
	Cl	17	12950	70	33710	120	−13760	110	12460.9	1.8	−32500	100	2237	6
	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	−386.9	1.9	−19030	60	−6099.0	0.4
	Ca	20	19413.99	0.17	19919.7	0.4	−7592	5	−9103	4	−11276	6	−14359.24	0.17
	Sc	21	23688.7	1.9	15206.9	1.9	−4806.3	1.9	−18283	25	−8455.5	1.9	−19155.1	1.9
	Ti	22	29732	16	8746	4	−4448	4	−27220#	200#	1953	4	−29160#	200#
	V	23	33920#	200#	3841	25	−6160	30	−34030#	400#	6927	25	−32240#	300#
	Cr	24	37230#	450#	950#	200#	−6620#	280#	*		15730#	200#	*	
	Mn	25	*		−1670#	450#	−7030#	570#	*		17050#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
44	Si	14	2750#	640#	25330#	780#	62900#	500#	−1050#	710#	500#	640#	−22220#	710#
	P	15	2020#	500#	20650#	570#	47330#	400#	4760#	500#	3210#	500#	−17390#	570#
	S	16	5080	7	21990#	300#	32264	5	410	100	640	120	−16760#	300#
	Cl	17	4407	11	15544	12	17366	11	7898	11	3422	11	−9820	120
	Ar	18	8735	6	15847.8	2.4	4875.3	1.7	2870	60	−500	70	−8018	4
	K	19	7277.4	0.6	11061	5	−11977	5	9352	6	2150.1	0.5	−2830	70
	Ca	20	11130.52	0.16	12182.1	0.4	−28050	50	4264.36	0.11	−1044.88	0.01	−2754.6	0.3
	Sc	21	9699.2	2.6	6696.1	1.7	−44120#	300#	11442.1	1.7	2185.5	1.7	3389.5	1.7
	Ti	22	16314	4	8649.0	2.0	*		5283.6	0.7	−4042.0	0.7	3235.8	0.7
	V	23	13970	26	1787	6	*		12011	5	−3224	16	10485	5
	Cr	24	19400#	210#	2810	60	*		5510#	200#	−8430#	210#	7940	50
	Mn	25	17890#	500#	−1100#	360#	*		10750#	420#	−7840#	500#	12080#	360#
45	Si	14	750#	780#	*		67320#	600#	−10#	850#	430#	780#	*	
	P	15	3070#	640#	20970#	710#	53170#	500#	2350#	640#	3910#	580#	−19790#	710#
	S	16	2210#	300#	22180#	500#	37470#	300#	1870#	420#	430#	320#	−15190#	420#
	Cl	17	5861	11	16325	6	22832	4	4666	6	4262	5	−13690	100
	Ar	18	5168.9	1.7	16609	10	9239.5	1.0	5054.5	1.8	−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	12319.5	0.5	−21334	10	6474.2	0.4	−925.89	0.20	−743	6
	Sc	21	11327.2	1.9	6892.8	0.7	−35970#	300#	8047.8	0.7	2339.4	0.7	−403.9	0.7
	Ti	22	9533.0	1.1	8482.8	1.9	−52640#	200#	7889.1	2.0	−2024.9	0.8	5183.8	0.8
	V	23	16154	5	1626.8	1.1	*		8130	4	−1917.7	0.9	5881.3	0.9
	Cr	24	14130	50	2963	12	*		9138	28	−6390#	200#	11273	10
	Mn	25	19470#	420#	−1030#	300#	*		7700#	360#	−6500#	420#	8770#	360#
	Fe	26	*		−40#	360#	*		8220#	450#	*		13020#	360#
46	Si	14	2260#	720#	*		73130#	400#	*		−50#	720#	*	
	P	15	1590#	710#	21810#	780#	58440#	500#	3510#	710#	2980#	640#	−19590#	780#
	S	16	4090#	500#	23200#	640#	43780#	400#	−200#	570#	0#	500#	−18620#	570#
	Cl	17	3570	100	17680#	320#	28030	100	6180	100	3320	100	−13590#	320#
	Ar	18	8071.8	2.4	18820	4	14357.0	2.3	1390	11	−792.7	2.9	−11929	5
	K	19	6869.6	0.9	12932.1	0.9	1662.0	0.7	7970.1	1.7	1460	5	−5653.1	1.9
	Ca	20	10397.12	0.17	13811.1	0.5	−13660.6	2.6	3354.5	0.4	−1698.3	0.4	−5482	5
	Sc	21	8760.64	0.10	8238.6	0.7	−29340	90	10417.7	0.7	1511.7	0.7	460.2	0.8
	Ti	22	13189.3	0.8	10344.9	0.7	−44840#	300#	4399.0	1.8	−3075.7	1.9	−72.61	0.18
	V	23	13260.8	0.9	5354.6	0.8	*		11183.5	0.7	−2906	4	4759.0	1.9
	Cr	24	18070	11	4879.8	2.7	*		5038	6	−6708	26	5475	4
	Mn	25	15390#	310#	230	90	*		11710	100	−5460#	220#	11130	90
	Fe	26	20990#	360#	1480#	420#	*		5120#	420#	−10550#	500#	8450#	360#
47	P	15	2120#	780#	21670#	720#	64690#	600#	2140#	850#	3610#	780#	*	
	S	16	1510#	570#	23120#	640#	49540#	400#	1360#	640#	520#	570#	−17380#	640#
	Cl	17	3920#	220#	17510#	450#	34760#	200#	4470#	360#	4490#	200#	−15480#	450#
	Ar	18	3667.3	2.6	18920	100	19570.4	1.2	3584	4	−53	11	−10517	5
	K	19	8369.4	1.6	13229.7	2.7	6295.1	1.4	4769.6	1.5	1825.3	2.1	−9615	11
	Ca	20	7275.58	0.10	14217.1	0.7	−7781	5	4984.4	0.5	−1696.5	0.4	−4022.4	1.6
	Sc	21	10644.6	1.2	8486.1	1.0	−21773	17	7187.9	1.0	1997.6	1.0	−2907.0	1.1
	Ti	22	8880.66	0.06	10465.0	0.7	−38010#	200#	6845.5	0.7	−2257.1	1.7	2177.25	0.08
	V	23	13002.49	0.11	5167.77	0.07	−51610#	300#	7714.0	0.8	405.5	0.7	1455.8	1.8
	Cr	24	13155	5	4774	5	*		8036	5	−5893	7	8634	5
	Mn	25	18220	90	374	17	*		7627	20	−4280	50	6888	17
	Fe	26	15710#	360#	1800#	220#	*		8880#	360#	−8370#	360#	12140#	210#
	Co	27	*		−1600#	420#	*		6680#	360#	*		8950#	420#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
44	Si	14	3410#	580#	*		−21750#	710#	39430#	500#	*		16660#	580#
	P	15	5690#	410#	45020#	640#	−19700#	500#	32000#	400#	−44010#	720#	15670#	400#
	S	16	7709	6	41280#	300#	−17300	120	23469	5	−41400#	400#	6839	6
	Cl	17	11760	60	36120	100	−14740	80	15331	10	−33240#	300#	3488	12
	Ar	18	14393	6	29613	3	−12260	4	8795.2	1.6	−27767	5	−4169.2	1.6
	K	19	16902.1	0.4	25530	60	−10650	30	2034.9	1.8	−18956.0	1.8	−5443.5	0.4
	Ca	20	19063.43	*a*	21624	6	−8853.49	0.01	−3919.9	0.7	−16748	5	−13351.3	1.9
	Sc	21	21837.7	1.7	17372.3	1.8	−6705.9	1.7	−14012	5	−8530.0	1.8	−16582	4
	Ti	22	28586.5	0.7	13578.8	0.7	−5127.1	0.7	−24130	50	−6428.3	0.7	−27715	25
	V	23	31730#	200#	6261	5	−5706	6	−30100#	300#	5095	5	−29790#	200#
	Cr	24	35820#	300#	2900	50	−6850	90	*		8590	50	−37610#	400#
	Mn	25	*		60#	360#	−7250#	420#	*		16920#	300#	*	
45	Si	14	3500#	720#	*		−22980#	780#	40890#	670#	*		17930#	720#
	P	15	5090#	580#	46300#	780#	−20470#	640#	34790#	500#	*		17680#	500#
	S	16	7290#	300#	42830#	500#	−18970#	420#	26430#	300#	−40860#	580#	9040#	300#
	Cl	17	10268	4	38320#	300#	−15690	120	18375	4	−37080#	400#	6362	4
	Ar	18	13904	5	32153	5	−13187	4	11041.2	0.5	−27856	5	−2060.6	0.7
	K	19	16182.9	0.7	27079.1	1.8	−11730	70	4456.7	0.8	−23454	10	−3218.5	0.5
	Ca	20	18545.35	0.23	23380	5	−10169.4	0.4	−1801.7	0.8	−15427.7	1.6	−11066.9	1.8
	Sc	21	21026.4	2.0	19074.9	0.8	−7937.7	0.7	−9185.9	0.6	−12579.8	0.8	−11595.1	1.0
	Ti	22	25847	4	15178.9	0.9	−6297.2	0.8	−19532	11	−4830.7	0.8	−23277	5
	V	23	30124	25	10275.8	2.0	−5668.9	0.9	−26790#	300#	−1359.0	1.9	−26540	50
	Cr	24	33530#	200#	4750	11	−6187	19	−33110#	200#	10782	11	−33850#	300#
	Mn	25	37360#	500#	1770#	300#	−7390#	360#	*		11420#	300#	*	
	Fe	26	*		−1143	15	−7790#	450#	*		19760#	210#	*	
46	Si	14	3010#	640#	*		*		42720#	570#	*		18740#	640#
	P	15	4660#	640#	*		−21390#	710#	36770#	510#	*		18300#	580#
	S	16	6300#	400#	44170#	640#	−19290#	500#	30410#	400#	−44200#	720#	10810#	400#
	Cl	17	9430	100	39860#	410#	−17250	140	21680	100	−37570#	510#	7960	100
	Ar	18	13240.6	2.8	35145	6	−14558	4	13366.5	2.3	−33720#	300#	−1226.9	2.4
	K	19	15775.1	0.8	29542	11	−13010	60	6347.7	1.0	−24463	4	−2673.3	0.7
	Ca	20	17811.94	*a*	25042.5	1.6	−11140	6	990.50	0.09	−20656.0	0.5	−10136.8	0.7
	Sc	21	20087.8	1.9	20558.1	0.8	−9164.5	0.7	−4685.7	0.7	−12435.0	0.8	−10822.7	0.5
	Ti	22	22722.3	0.7	17237.75	0.09	−8005.52	0.09	−14651.1	2.6	−10605.27	0.19	−20313.2	0.9
	V	23	29414	5	13837.4	1.8	−7379.48	0.14	−24660	90	−3292.6	0.7	−25669	10
	Cr	24	32200	50	6506.6	2.7	−6797.4	2.6	−30190#	300#	2244.1	2.7	−32450#	300#
	Mn	25	34860#	310#	3190	90	−6620#	210#	*		12180	90	−34120#	220#
	Fe	26	*		450#	300#	−7980#	420#	*		12900#	300#	*	
47	P	15	3710#	780#	*		−21720#	850#	38560#	630#	*		20270#	720#
	S	16	5600#	500#	44930#	720#	−20130#	570#	32570#	400#	−43450#	570#	12860#	410#
	Cl	17	7480#	200#	40710#	540#	−17510#	360#	26130#	200#	−39900#	540#	12120#	200#
	Ar	18	11739.1	1.3	36610#	300#	−15597	5	16974.8	1.2	−33300#	400#	1975.3	1.4
	K	19	15239.0	1.5	32050	4	−14022.4	2.3	8622.9	1.7	−29270	100	−645.5	1.4
	Ca	20	17672.70	0.20	27149.2	0.5	−12757	5	2595.58	0.13	−19859.8	2.3	−8651.7	0.7
	Sc	21	19405.2	1.2	22297.2	1.2	−10184.4	1.1	−2327.8	1.0	−16210.0	1.3	−8278.0	1.0
	Ti	22	22070.0	0.8	18703.59	0.19	−8953.27	0.18	−10377	5	−9088.81	0.08	−15933.03	0.12
	V	23	26263.3	0.9	15512.7	0.7	−8243.5	1.9	−19445	16	−7534.4	0.7	−20601.2	2.6
	Cr	24	31225	12	10129	5	−7680	6	−27630#	200#	2278	5	−30210	90
	Mn	25	33610#	300#	5254	16	−7080	30	−32160#	300#	7225	16	−31340#	300#
	Fe	26	36700#	280#	2030#	200#	−7270#	280#	*		15260#	200#	*	
	Co	27	*		−120#	420#	−8950#	500#	*		14730#	310#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
48	S	16	2880#	640#	23880#	780#	56620#	500#	70#	710#	700#	710#	−19510#	780#
	Cl	17	2770#	540#	18770#	640#	40220#	500#	5790#	640#	3920#	580#	−15180#	710#
	Ar	18	5028	4	20030#	200#	26169	4	2120	100	780	5	−13340#	300#
	K	19	4643.8	1.6	14206.2	1.4	12193.5	1.2	8197.6	2.5	2350.4	0.9	−8398	4
	Ca	20	9954.14	0.10	15801.9	1.4	−1404	7	1899.9	0.7	−2745.2	0.5	−8807.7	0.5
	Sc	21	8239.9	1.1	9450.5	0.5	−15212.9	2.8	9345.1	0.5	1172.5	0.5	−2241.5	0.7
	Ti	22	11626.66	0.03	11447.0	1.0	−30480	90	3979.5	0.7	−2556.6	0.7	−2034.59	0.19
	V	23	10542.3	1.0	6829.4	1.0	−45690#	200#	10361.1	1.0	−603.7	1.3	2240.7	1.2
	Cr	24	16332	9	8103	7	−59390#	300#	4965	7	−6071	7	1835	7
	Mn	25	14800	17	2019	5	*		10897	4	−4949	11	8242.2	2.9
	Fe	26	19150#	220#	2740	90	*		5120	130	−8050#	310#	7120	90
	Co	27	16460#	360#	−850#	280#	*		11210#	360#	−7560#	280#	11960#	360#
	Ni	28	*		320#	430#	*		*		*		8590#	360#
49	S	16	70#	300#	*		61690#	580#	2120#	840#	2230#	770#	−17320#	710#
	Cl	17	3050#	640#	18940#	640#	47300#	400#	4250#	570#	4960#	570#	−16640#	640#
	Ar	18	2722	5	19980#	500#	31590	4	3320#	200#	1620	100	−11970#	400#
	K	19	5398.3	1.1	14576	4	18350.7	1.1	6466.6	1.5	5023.8	2.5	−10230	100
	Ca	20	5146.40	0.07	16304.4	0.8	4032.4	2.2	5122.8	1.4	−1022.0	0.7	−5882.3	2.3
	Sc	21	10130.2	2.3	9626.6	2.3	−8943	3	6490.4	2.3	1439.4	2.3	−5502.1	2.4
	Ti	22	8142.38	0.02	11349.5	0.5	−23892	8	6481.7	1.0	−1938.3	0.7	220.16	0.07
	V	23	11555.5	1.3	6758.2	0.8	−38240#	100#	7686.3	0.8	1030.2	0.8	−554.1	1.1
	Cr	24	10582	8	8143.3	2.4	−53130#	300#	7385.5	2.2	−3392.4	2.2	4442.3	2.2
	Mn	25	16401	4	2088	8	*		7652	5	−3279	3	5102.4	2.2
	Fe	26	14730	90	2670	9	*		8601	18	−7390	90	10452	9
	Co	27	19000#	220#	−1000#	140#	*		7920#	220#	−5570#	320#	8340#	130#
	Ni	28	16840#	430#	700#	360#	*		8910#	420#	*		12740#	420#
50	Cl	17	1110#	570#	19980#	710#	52240#	400#	6020#	640#	5360#	570#	−15630#	720#
	Ar	18	4265	9	21200#	400#	38264	8	1820#	500#	1280#	200#	−14720#	400#
	K	19	4188	8	16042	9	23495	8	7307	9	4503	8	−10500#	200#
	Ca	20	6360.6	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	2669.0	2.5	−3178.7	2.9
	Ti	22	10939.17	0.03	12158.4	2.3	−16956.0	2.7	3782.5	0.5	−2232.9	1.0	−3443.44	0.13
	V	23	9332.4	0.8	7948.20	0.06	−31630	130	9980.52	0.05	578.43	0.06	758.1	1.0
	Cr	24	13000.3	2.2	9588.2	0.8	−46380#	200#	4927.4	1.0	−3390.24	0.10	322.65	0.06
	Mn	25	13078.3	2.2	4583.5	2.2	*		10905	7	−3202	5	5026.59	0.12
	Fe	26	17876	9	4145	4	*		5526	4	−7050	17	5731	5
	Co	27	15940#	160#	210	130	*		11130	160	−5800#	240#	10620	130
	Ni	28	19750#	360#	1450#	220#	*		5620#	280#	−8620#	360#	8700#	280#
51	Cl	17	1480#	810#	*		57540#	700#	4610#	910#	6760#	860#	*	
	Ar	18	1390#	400#	21480#	570#	43240#	400#	3480#	570#	2660#	640#	−13230#	640#
	K	19	4850	9	16627	10	29697	5	5179	7	4682	7	−12580#	500#
	Ca	20	4814.4	1.7	17893	8	15118.4	0.5	3990.0	1.0	816.2	0.9	−8362	4
	Sc	21	6785	4	10950.1	3.0	4992.8	2.5	8760.4	2.5	5838.6	2.5	−5319.5	2.6
	Ti	22	6372.5	0.5	12484.9	2.6	−9543.9	1.5	7540.2	2.3	−365.5	0.7	138.2	0.5
	V	23	11051.18	0.06	8060.20	0.06	−24826	5	7071.72	0.06	1153.91	0.06	−2053.2	0.5
	Cr	24	9260.67	0.15	9516.44	0.15	−39600#	200#	7222.3	0.8	−2108.7	1.0	2688.64	0.15
	Mn	25	13687.61	0.30	5270.79	0.29	*		7800.0	2.2	−558	7	1881.2	1.0
	Fe	26	13785	3	4851.3	1.4	*		8141.6	2.6	−6034	3	8279	7
	Co	27	17860	130	190	6	*		8005	10	−4500	90	7560	6
	Ni	28	16040#	280#	1550#	240#	*		8580#	220#	−8200#	280#	11810#	220#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	45550#	640#	−20270#	710#	34710#	500#	*		13900#	540#
	Cl	17	6690#	510#	41890#	710#	−18260#	640#	28000#	500#	−40550#	780#	13020#	500#
	Ar	18	8696	4	37540#	400#	−15545	6	21901	4	−36810#	400#	5316	4
	K	19	13013.2	1.1	33130	100	−14259	11	12219.1	0.9	−29990#	200#	1986.2	0.8
	Ca	20	17229.72	*a*	29031.6	2.3	−13976.5	1.6	4268.10	0.07	−26146.6	1.2	−7961.3	1.0
	Sc	21	18884.5	0.8	23667.5	0.9	−11147.0	0.7	−25.5	1.1	−16080.5	1.5	−7637.2	0.5
	Ti	22	20507.32	0.06	19933.12	0.07	−9449.41	0.07	−5672	7	−13439.89	0.12	−14557.20	0.08
	V	23	23544.7	1.0	17294.3	1.2	−9086.5	2.0	−15187.4	2.9	−7432.1	1.4	−17988	5
	Cr	24	29487	8	13271	7	−7698	7	−24810	90	−5173	7	−28330	18
	Mn	25	33020	90	6792.7	2.8	−7911	6	−30500#	200#	5427.5	2.8	−30430#	200#
	Fe	26	34860#	310#	3110	90	−7010	110	−34580#	320#	9260	90	−35680#	310#
	Co	27	*		950#	220#	−7520#	360#	*		16480#	200#	*	
	Ni	28	*		−1283	23	*		*		16210#	360#	*	
49	S	16	2950#	710#	*		−19580#	840#	37370#	580#	*		16600#	770#
	Cl	17	5820#	450#	42820#	720#	−18240#	640#	30350#	400#	*		14990#	400#
	Ar	18	7750	4	38750#	400#	−16060#	300#	24325	4	−36650#	500#	7239	4
	K	19	10042.2	1.6	34610#	200#	−13796	4	16951.0	2.4	−32620#	500#	6542.1	0.8
	Ca	20	15100.54	0.12	30510.6	1.2	−13954.1	0.5	7264.08	0.10	−26265	4	−4867.7	0.5
	Sc	21	18370.2	2.5	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	20799.92	0.13	−10176.96	0.19	−3231.7	2.2	−11628.13	0.07	−12157.3	1.0
	V	23	22097.7	0.8	18205.2	1.3	−9314.8	1.1	−10342.2	2.4	−10747.6	1.0	−13212	7
	Cr	24	26914	5	14972.7	2.2	−8747.0	2.4	−20661	9	−4128.4	2.2	−24113	4
	Mn	25	31200	17	10190.8	2.2	−8158.4	2.4	−27900#	100#	−430.9	2.4	−27680	90
	Fe	26	33880#	200#	4689	10	−7618	13	−32470#	300#	10861	11	−33950#	200#
	Co	27	35460#	320#	1740#	100#	−7050#	320#	*		12280#	100#	−34360#	320#
	Ni	28	*		−150#	360#	−8260#	360#	*		18520#	310#	*	
50	Cl	17	4160#	640#	*		−17760#	640#	33430#	400#	*		16600#	400#
	Ar	18	6987	9	40140#	500#	−16230#	400#	26421	9	−40850#	580#	8372	9
	K	19	9586	8	36030#	500#	−14420	100	18809	8	−33760#	400#	7501	8
	Ca	20	11507.0	1.6	31843	4	−12242.9	2.8	11842.7	1.6	−29904	4	−1098.1	2.8
	Sc	21	16176.2	2.6	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	21784.96	0.08	−10719.01	0.08	−1170.51	0.06	−17420.91	0.10	−11541.0	0.8
	V	23	20887.9	1.0	19297.7	0.5	−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	−15785.5	2.7	−8986.32	0.06	−20712.8	2.2
	Mn	25	29478.9	2.8	12726.8	1.0	−7975.90	0.14	−25040	130	−1953.7	0.8	−26027	8
	Fe	26	32610	90	6232	8	−7424	4	−30600#	200#	3568	4	−32830#	100#
	Co	27	34940#	240#	2880	130	−7600	150	*		12740	130	−33460#	330#
	Ni	28	36590#	360#	450#	220#	−7010#	360#	*		13500#	200#	*	
51	Cl	17	2590#	810#	*		−17120#	920#	36800#	700#	*		19390#	700#
	Ar	18	5660#	400#	41460#	710#	−16120#	570#	29840#	400#	*		11170#	400#
	K	19	9037	5	37820#	400#	−15350#	200#	20744	6	−37500#	400#	9012	6
	Ca	20	11175.0	0.5	33936	4	−13390.0	1.3	13400.7	0.7	−30453	8	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	17311.7	0.5	23011.1	0.5	−9815.9	0.5	1717.7	0.5	−17432.8	1.7	−8581.1	0.5
	V	23	20383.6	0.8	20218.6	2.3	−10293.1	1.0	−3959.92	0.30	−14955.0	2.5	−10013.05	0.07
	Cr	24	22261.0	2.2	17464.64	0.15	−8938.01	0.15	−11261.5	1.4	−7307.81	0.15	−16895.14	0.16
	Mn	25	26765.9	2.2	14859.0	0.9	−8661.0	0.3	−20866	5	−6308.91	0.30	−21838.6	2.7
	Fe	26	31660	8	9434.8	2.6	−8053	5	−28340#	200#	2783.2	1.4	−30670	130
	Co	27	33800#	100#	4335	6	−7240	17	*		7961	5	−31570#	200#
	Ni	28	35790#	360#	1760#	200#	−7340#	280#	*		15340#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	560#	22960#	810#	48100#	400#	1630#	560#	2750#	560#	−16120#	710#
	K	19	2763	8	18000#	400#	34245	6	6681	10	4641	7	−12290#	400#
	Ca	20	6005.3	0.8	19049	5	21153.3	0.7	2172	8	209.3	1.0	−11645	4
	Sc	21	5345	4	11480	3	10188	3	9776	3	5640	3	−5266	3
	Ti	22	7817.0	1.9	13517	3	−1146.7	1.8	5769	3	1947.7	2.9	−2532.4	1.8
	V	23	7311.24	0.13	8999.0	0.5	−17095	4	10699.65	0.14	1985.04	0.14	765.8	2.3
	Cr	24	12040.12	0.17	10505.39	0.10	−32944.8	1.7	4514.53	0.09	−2593.3	0.8	−1209.10	0.08
	Mn	25	10539.5	0.3	6549.66	0.18	−48210#	400#	10260.77	0.11	−515.0	2.2	2897.2	0.8
	Fe	26	16214.3	1.4	7377.9	0.3	*		5005.59	0.18	−5848.1	2.2	2646.6	2.2
	Co	27	15042	7	1448	4	*		10839	5	−4812	9	8918	4
	Ni	28	18700#	200#	2386	6	*		5830	130	−7890#	100#	7843	9
	Cu	29	*		−2060#	450#	*		12090#	450#	−5440#	500#	12870#	410#
53	Ar	18	−100#	640#	22860#	860#	53670#	500#	3210#	860#	3960#	640#	*	
	K	19	3195	8	18230#	400#	39530	7	4880#	400#	5711	10	−14380#	400#
	Ca	20	3190	40	19480	40	25900	40	3830	40	1200	40	−10570	40
	Sc	21	6317	18	11792	18	15921	18	8274	18	5684	18	−7395	19
	Ti	22	5474	3	13647	4	4065	3	7080	4	2520	4	−1646	3
	V	23	8480	3	9662	4	−9193	3	8592	3	4444	3	−1668	4
	Cr	24	7939.45	0.10	11133.59	0.16	−25674	6	7626.26	0.10	−1200.35	0.10	1790.62	0.09
	Mn	25	12050.2	0.3	6559.7	0.3	−40990#	300#	7471.3	0.4	435.2	0.3	179.4	0.3
	Fe	26	10685.9	1.2	7524.3	1.2	*		8007.3	1.3	−3455.8	1.2	4961.0	1.2
	Co	27	16382	4	1615.5	1.3	*		8241.4	1.9	−3319	3	5614.7	1.3
	Ni	28	15210	6	2555	7	*		8474	8	−7160	130	10509	6
	Cu	29	19270#	500#	−1490#	300#	*		8860#	360#	−4960#	360#	9540#	330#
54	Ar	18	2300#	710#	*		58300#	500#	910#	860#	3130#	860#	*	
	K	19	1163	14	19490#	500#	44485	15	6680#	400#	5940#	400#	−14060#	700#
	Ca	20	3800	50	20087	14	31816	12	2789	13	2251	13	−12980#	400#
	Sc	21	3741	25	12340	50	21119	18	10538	18	6757	18	−6286	19
	Ti	22	6932	14	14262	22	10512	14	5492	14	2372	14	−3764	14
	V	23	6118	8	10306	8	−1889	8	10291	8	4698	8	−1002	8
	Cr	24	9719.13	0.10	12373	3	−17651.9	2.3	5218.37	0.18	131.69	0.12	−1556.0	0.5
	Mn	25	8939.3	1.1	7559.6	1.0	−33820#	200#	10572.0	1.0	756.5	1.0	2291.2	1.0
	Fe	26	13378.5	1.2	8852.7	0.5	−49837	20	5168.3	0.4	−3146.7	0.5	843.2	0.4
	Co	27	13422.1	1.3	4351.7	1.2	*		11033.5	0.4	−2956.2	1.5	5880.2	0.5
	Ni	28	17741	6	3914.0	2.7	*		5775	4	−7042	6	6552.0	2.7
	Cu	29	16110#	360#	−590#	200#	*		11450#	200#	−5030#	280#	11280#	200#
	Zn	30	*		10#	300#	*		6790#	400#	*		11080#	200#
55	K	19	2360#	500#	19550#	710#	49440#	500#	4220#	710#	6540#	640#	−16410#	860#
	Ca	20	1600	160	20530	160	36460	160	4380	160	3410	160	−11620#	430#
	Sc	21	4465	28	13003	25	26879	22	9270	50	8297	22	−7989	22
	Ti	22	4155	15	14676	19	15654	5	7654	19	3561	6	−1914	6
	V	23	7311	10	10685	15	4891	7	8454	7	5205	7	−2968	7
	Cr	24	6246.26	0.19	12501	8	−9775.1	0.8	7452	3	1196.68	0.26	14.8	1.8
	Mn	25	10224.9	1.1	8065.3	0.3	−25905	25	8286.6	0.3	2571.8	0.3	−622.4	0.4
	Fe	26	9298.09	0.19	9211.4	1.1	−42670#	200#	7920.3	0.5	−1905.3	0.4	3585.2	0.4
	Co	27	14091.3	0.3	5064.38	0.30	*		7628.2	1.3	−833.2	0.5	2328.4	0.4
	Ni	28	14123.0	2.4	4614.9	0.7	*		8034.1	1.4	−6123	4	8643.2	0.7
	Cu	29	18140#	200#	−188	25	*		8518	25	−4468	25	8188	25
	Zn	30	16460#	200#	360#	280#	*		9600#	360#	−7450#	450#	13310#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	*		*		39560#	700#	*		20780#	810#
	Ar	18	4350#	400#	*		−16190#	640#	32890#	400#	*		13060#	400#
	K	19	7612	10	39480#	400#	−15340#	500#	23326	6	−38780#	700#	11063	6
	Ca	20	10819.7	1.7	35676	9	−14367	4	15212.5	1.9	−35070#	400#	912.8	2.6
	Sc	21	12129	4	29374	8	−10664	3	10919	3	−25306	6	1138	3
	Ti	22	14189.5	1.8	24467.5	2.4	−7678.8	1.8	5940.7	1.8	−20435.4	1.9	−5347.0	1.8
	V	23	18362.42	0.14	21483.9	2.5	−9364.4	0.5	−731.63	0.17	−15481.7	2.5	−8063.63	0.20
	Cr	24	21300.79	0.10	18565.59	0.09	−9351.48	0.08	−7087.41	0.14	−12975.4	0.5	−15247.7	0.3
	Mn	25	24227.15	0.13	16066.10	0.11	−8658.3	1.0	−16363	4	−5797.27	0.12	−18593.5	1.4
	Fe	26	29998.9	2.7	12648.68	0.17	−7936	7	−25857.4	1.7	−4170.37	0.22	−29026	5
	Co	27	32900	130	6299	4	−7482	5	−31850#	400#	6606	4	−30570#	200#
	Ni	28	34740#	200#	2577	3	−6890	90	*		10425.5	2.2	*	
	Cu	29	*		−510#	420#	−6130#	450#	*		17590#	400#	*	
53	Ar	18	2860#	640#	*		−16030#	770#	36180#	500#	*		15920#	500#
	K	19	5958	8	41190#	700#	−15490#	400#	26448	19	−41970#	700#	13873	6
	Ca	20	9200	40	37480#	400#	−14840	40	17490	40	−35300#	400#	3060	40
	Sc	21	11662	18	30841	19	−11583	18	13082	18	−28861	19	2638	18
	Ti	22	13291.0	2.9	25127.1	2.9	−8006.4	2.9	8406.2	2.9	−19904.1	3.0	−3509.7	2.9
	V	23	15791	3	23179	4	−7714	4	2838	3	−18617	4	−4504	3
	Cr	24	19979.57	0.17	20132.5	0.5	−9148.55	0.09	−4340.9	1.2	−13097.8	1.8	−12647.57	0.12
	Mn	25	22589.7	0.4	17065.1	0.3	−9153.0	0.9	−12031.6	1.3	−10536.2	0.4	−14429.5	0.4
	Fe	26	26900.2	1.9	14073.9	1.3	−8039.3	2.5	−21333	6	−2816.2	1.2	−24670	4
	Co	27	31424	6	8993.4	1.3	−7463.6	2.6	−28960#	300#	763.8	1.3	−28255.2	2.1
	Ni	28	33910#	200#	4002	6	−7367	10	*		11429	6	−35190#	400#
	Cu	29	*		900#	300#	−6410#	320#	*		13360#	300#	*	
54	Ar	18	2200#	640#	*		*		37680#	500#	*		16810#	500#
	K	19	4359	14	42350#	700#	−15540#	400#	29025	22	*		15900	50
	Ca	20	6996	12	38320#	400#	−14376	15	20623	18	−39200#	500#	5579	21
	Sc	21	10058	18	31819	19	−11136	19	15460	19	−29406	19	4371	18
	Ti	22	12406	14	26054	14	−8578	14	11193	14	−23640	50	−1962	14
	V	23	14598	8	23953	8	−7786	8	5660	8	−18418	19	−2682	8
	Cr	24	17658.58	0.12	22034.6	1.8	−7928.51	0.11	−681.5	0.4	−17343.0	2.9	−10316.5	0.4
	Mn	25	20989.5	1.0	18693.2	1.0	−8760.0	1.0	−7548.9	1.1	−10995	3	−12682.9	1.6
	Fe	26	24064.5	0.4	15412.4	0.4	−8417.5	0.4	−16970.4	2.4	−8255.3	0.4	−21666.7	1.3
	Co	27	29804	4	11875.9	0.4	−7807.4	0.4	−26270#	200#	−608.1	0.5	−26467	6
	Ni	28	32951.5	2.9	5529.4	2.3	−7233	4	−32867	20	4374.2	2.6	−33660#	300#
	Cu	29	35380#	450#	1970#	200#	−6580#	240#	*		13630#	200#	*	
	Zn	30	*		−1480	20	−4960#	200#	*		15908	21	*	
55	K	19	3520#	500#	*		−16420#	860#	31130#	500#	*		17350#	500#
	Ca	20	5410	170	40020#	530#	−14590#	430#	23180	160	−38500#	530#	7720	160
	Sc	21	8206	28	33089	22	−10752	22	18305	23	−32708	25	6838	26
	Ti	22	11088	6	27020	40	−7919	6	13284	5	−23996	13	1	9
	V	23	13429	7	24947	19	−8313	7	8574	7	−21988	19	−274	7
	Cr	24	15965.39	0.21	22806.9	2.9	−7802.3	0.5	2370.3	0.4	−16657	14	−7623.4	1.0
	Mn	25	19164.2	0.4	20438	3	−7933.6	0.3	−3682.5	0.3	−15102	8	−9529.19	0.25
	Fe	26	22676.6	1.2	16771.0	0.4	−8454.9	0.4	−12145.4	0.7	−7834.2	0.4	−17542.64	0.21
	Co	27	27513.4	1.3	13917.0	0.5	−8211.1	0.5	−22222	25	−5760.1	1.1	−22817.1	2.4
	Ni	28	31864	6	8966.5	1.4	−7571.1	1.6	−30530#	200#	3629.7	0.6	−31670#	200#
	Cu	29	34250#	300#	3726	25	−6855	25	*		8913	25	−33460	30
	Zn	30	*		−230#	200#	−5390#	280#	*		17190#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
56	K	19	390#	640#	*		54240#	400#	6130#	640#	6050#	640#	*	
	Ca	20	2930	300	21100#	560#	41770	250	2610	250	3680	250	−14660#	560#
	Sc	21	2750	260	14150	310	31400	260	10310	260	8740	260	−7550	260
	Ti	22	5651	9	15862	23	21200	7	5744	19	4228	19	−4370	40
	V	23	5194	9	11724	8	9779	6	10192	15	5485	6	−1845	19
	Cr	24	8245.4	0.6	13435	7	−1377.5	0.6	5325	8	1431	3	−2756.7	2.9
	Mn	25	7270.44	0.13	9089.5	0.4	−18285	4	10735.3	0.4	3240.8	0.4	587	3
	Fe	26	11197.14	0.23	10183.70	0.16	−34980#	200#	5662.5	1.1	−1052.2	0.4	327.5	0.3
	Co	27	10081.9	0.5	5848.2	0.4	−51150#	300#	10924.8	0.5	−229.2	1.3	4296.7	0.6
	Ni	28	16643.0	0.7	7166.6	0.3	*		4813.2	0.4	−6384.4	1.3	2686.1	1.3
	Cu	29	14890	25	580	4	*		11368	5	−4148	7	9679	5
	Zn	30	18890#	280#	1110#	200#	*		6820#	280#	−7070#	360#	9630#	200#
	Ga	31	*		−2630#	360#	*		12240#	300#	*		14460#	420#
57	K	19	1920#	640#	*		58510#	500#	*		6430#	710#	*	
	Ca	20	1120#	470#	21830#	570#	45970#	400#	3850#	640#	3720#	400#	−13470#	640#
	Sc	21	3940	320	15160	310	36110	180	7980	240	8600	180	−10320	180
	Ti	22	3070	210	16170	330	25780	210	7140	210	4900	210	−3640	210
	V	23	6191	9	12263	10	14965	7	8157	9	6226	15	−4295	19
	Cr	24	5311.7	1.9	13553	6	3558.5	1.9	7324	7	2238	8	−1136	14
	Mn	25	8646.5	1.5	9490.6	1.6	−10177.7	1.6	8335.1	1.5	4313.4	1.5	−1941	8
	Fe	26	7646.17	0.02	10559.43	0.21	−27490#	100#	8241.22	0.16	240.9	1.1	2400.5	0.3
	Co	27	11376.5	0.6	6027.5	0.4	−43260#	300#	8846.5	0.5	1772.9	0.5	1859.6	1.1
	Ni	28	10247.6	0.5	7332.4	0.6	*		8656.8	0.6	−3209.9	0.6	5817.0	0.6
	Cu	29	16754	4	690.3	0.4	*		8737.7	0.8	−3160.8	2.4	6347.4	0.5
	Zn	30	15130#	220#	1350#	100#	*		9830#	100#	−6090#	220#	12240#	100#
	Ga	31	19270#	420#	−2250#	360#	*		9430#	360#	−4810#	300#	11300#	360#
58	K	19	270#	780#	*		62240#	600#	*		*		*	
	Ca	20	3040#	640#	22950#	710#	50470#	500#	1200#	640#	3030#	710#	*	
	Sc	21	2170	260	16210#	440#	40350	190	8740	310	8030	250	−10130#	540#
	Ti	22	5110	210	17350	180	30712	4	4780	260	4255	22	−7150	160
	V	23	3997	9	13190	210	19541	6	9811	9	6384	8	−3827	22
	Cr	24	7542	3	14904	7	8233.0	2.4	4976	6	2007	7	−4523	6
	Mn	25	6413.0	3.0	10592	3	−4160.5	2.6	10167.5	2.6	4146.6	2.5	−1043	7
	Fe	26	10044.59	0.18	11957.5	1.5	−19890	29	5467.07	0.28	421.20	0.24	−1397.9	0.4
	Co	27	8573.0	1.2	6954.3	1.1	−35800#	200#	11470.6	1.1	2498.1	1.1	3511.5	1.1
	Ni	28	12216.2	0.5	8172.2	0.4	−51650#	300#	6522.4	0.4	−1334.9	0.4	2898.8	0.3
	Cu	29	12430.2	0.6	2872.9	0.7	*		12950.6	0.6	−1467.9	0.8	8008.5	0.6
	Zn	30	17650#	100#	2246	29	*		7072	30	−5590	40	8717	29
	Ga	31	16030#	360#	−1350#	220#	*		12290#	280#	−4380#	280#	13400#	200#
	Ge	32	*		−220#	420#	*		7020#	420#	*		11880#	360#
59	K	19	1250#	920#	*		66550#	700#	*		*		*	
	Ca	20	730#	780#	23410#	850#	53930#	600#	2390#	780#	2690#	720#	*	
	Sc	21	3420	310	16590#	560#	44700	250	6440#	470#	7540	350	−13160#	470#
	Ti	22	2510#	300#	17690#	360#	34790#	300#	6210#	350#	4500#	400#	−6720#	390#
	V	23	5567	7	13648	5	24427.5	2.9	7310	210	6468	8	−6640	260
	Cr	24	4191.9	2.5	15099	6	13040.4	0.8	6975	7	3009	6	−3063	7
	Mn	25	7769	3	10819	3	832.6	2.3	7710.4	2.9	4623.3	2.3	−3618	6
	Fe	26	6581.01	0.11	12125.5	2.6	−13449.3	0.7	7532.6	1.5	1110.63	0.29	266.5	0.6
	Co	27	10453.9	1.1	7363.6	0.4	−28270#	100#	8662.9	0.3	3241.3	0.3	328.1	0.4
	Ni	28	8999.28	0.05	8598.5	1.1	−44310#	400#	8899.6	0.4	−252.3	0.4	5096.70	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	13021	29	2836.8	0.7	*		10804.1	0.8	−3725	4	12338.3	0.8
	Ga	31	17980#	220#	−1020#	100#	*		9440#	140#	−3470#	220#	10310#	100#
	Ge	32	16340#	500#	90#	450#	*		9950#	500#	−7100#	500#	14430#	450#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
56	K	19	2750#	400#	*		−16800#	810#	33500#	480#	*		18560#	430#
	Ca	20	4530	250	40650#	560#	−14560#	470#	25900	250	*		9250	250
	Sc	21	7220	260	34680	260	−10740	260	20750	260	−33110#	560#	8240	260
	Ti	22	9806	15	28865	14	−7565	7	15878	7	−28040	160	1661	10
	V	23	12505	9	26400	19	−8162	6	10650	6	−22717	22	778	6
	Cr	24	14491.7	0.6	24120	14	−8230.7	1.9	5322.0	0.5	−20747	6	−5644.0	0.5
	Mn	25	17495.3	1.1	21590	8	−7892.8	0.4	−871.0	0.5	−15062	7	−7501.54	0.22
	Fe	26	20495.24	0.28	18249.0	0.3	−7611.9	0.3	−6699.5	0.3	−12785.1	0.4	−14648.5	0.3
	Co	27	24173.2	0.5	15059.6	1.1	−7753.4	0.5	−17414	4	−5617.1	0.4	−18775.9	0.7
	Ni	28	30766.1	2.4	12231.0	0.4	−7999.8	0.5	−28280#	200#	−3715.3	0.4	−30171	25
	Cu	29	33030#	200#	5194	4	−6703	6	−33740#	300#	8114	4	−31890#	200#
	Zn	30	35360#	200#	920#	200#	−5580#	200#	*		12420#	200#	*	
	Ga	31	*		−2270#	360#	−4820#	500#	*		19630#	300#	*	
57	K	19	2310#	710#	*		*		35510#	530#	*		19570#	560#
	Ca	20	4050#	430#	*		−15780#	640#	27840#	450#	*		10890#	480#
	Sc	21	6690	180	36260#	530#	−11480	180	23000	180	−36650#	440#	9960	180
	Ti	22	8720	210	30330	260	−7440	210	18120	210	−28180	320	3790	210
	V	23	11385	9	28125	23	−8036	19	13106	7	−26150	260	2833	7
	Cr	24	13557.1	1.9	25276	6	−8068	3	7656.5	1.9	−20408	7	−3685.2	1.9
	Mn	25	15917.0	1.5	22926	7	−8059	3	1858.9	1.6	−18514	6	−4950.9	1.5
	Fe	26	18843.32	0.23	19648.9	0.4	−7318.7	0.3	−4098.0	0.5	−12185.9	0.5	−12212.8	0.4
	Co	27	21458.3	0.5	16211.2	0.5	−7079.7	0.6	−12036.7	0.6	−9723.1	0.5	−13509.3	0.5
	Ni	28	26890.7	0.8	13180.6	0.5	−7561.6	1.3	−23390#	100#	−2765.8	0.5	−25529	4
	Cu	29	31644	25	7857.0	0.5	−7074.7	1.4	−31220#	300#	1442.6	0.5	−29750#	200#
	Zn	30	34020#	220#	1930#	100#	−5500#	100#	*		13930#	100#	−35870#	320#
	Ga	31	*		−1140#	300#	−4810#	420#	*		15250#	300#	*	
58	K	19	2190#	720#	*		*		37410#	630#	*		20420#	720#
	Ca	20	4160#	560#	*		−16520#	710#	29910#	500#	*		11780#	530#
	Sc	21	6110	320	38040#	440#	−12490	190	24830	190	−36900#	540#	10850	280
	Ti	22	8179	8	32510	250	−8748	13	20553	5	−32170#	400#	4867	8
	V	23	10188	9	29370	260	−8292	19	15522	7	−26220	180	4148	7
	Cr	24	12853.4	2.5	27167	7	−8678	14	10159.4	2.4	−24880	210	−2580.4	2.8
	Mn	25	15059.5	2.6	24145	6	−8354	8	4018.9	2.8	−18737	7	−3717.7	2.6
	Fe	26	17690.76	0.18	21448.1	0.5	−7644.1	0.4	−1926.4	0.3	−16918.8	1.9	−10880.9	0.5
	Co	27	19949.4	1.2	17513.7	1.1	−6713.4	1.5	−8179.4	1.2	−9649.5	1.9	−11834.7	1.2
	Ni	28	22463.9	0.3	14199.69	0.25	−6399.3	0.4	−17963	29	−7335.86	0.25	−20991.2	0.4
	Cu	29	29184	4	10205.3	0.6	−6082.8	0.6	−27620#	200#	388.8	0.6	−27050#	100#
	Zn	30	32780#	200#	2936	29	−5406	29	−33690#	300#	6529	29	−34250#	300#
	Ga	31	35300#	360#	0#	200#	−4740#	280#	*		15970#	200#	*	
	Ge	32	*		−2470#	360#	−4590#	300#	*		16820#	320#	*	
59	K	19	1520#	860#	*		*		39580#	740#	*		22210#	860#
	Ca	20	3770#	720#	*		*		31690#	670#	*		13220#	630#
	Sc	21	5590	310	39540#	560#	−13550#	560#	26970	250	−40050#	650#	12540	250
	Ti	22	7620#	360#	33900#	500#	−9650#	340#	22240#	300#	−31640#	580#	6360#	300#
	V	23	9564	7	31000	180	−9394	22	17723	4	−29610	190	6122	4
	Cr	24	11733.6	2.0	28290	210	−8714	6	12548.5	0.8	−23963	4	−359.4	2.6
	Mn	25	14181.7	2.7	25723	7	−8812	7	6704.0	2.3	−22508	7	−1441.9	2.3
	Fe	26	16625.60	0.21	22717.4	1.9	−7978.9	0.4	491.9	0.3	−15958.1	2.4	−8889.0	1.1
	Co	27	19026.8	0.4	19321.1	1.6	−6942.4	0.3	−5871.4	0.4	−13690.4	2.6	−10072.29	0.20
	Ni	28	21215.5	0.5	15552.80	0.25	−6100.4	0.3	−13941.2	0.7	−6290.6	0.3	−17560.3	0.4
	Cu	29	25192.1	0.6	11590.8	0.6	−4753.4	0.5	−22400#	100#	−3800.1	1.2	−22164	29
	Zn	30	30670#	100#	5709.7	0.8	−4304.7	1.0	−30370#	400#	5724.2	0.7	−31240#	200#
	Ga	31	34010#	320#	1230#	100#	−4580#	100#	*		10420#	100#	−33450#	320#
	Ge	32	*		−1260#	410#	−4470#	450#	*		18130#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	990#	57910#	700#	−220#	920#	1730#	860#	*	
	Sc	21	1790#	390#	17650#	670#	48420#	300#	7690#	580#	6870#	500#	−13030#	580#
	Ti	22	4290#	380#	18560	350	39310	240	4090	310	4140	300	−9890#	470#
	V	23	3330	170	14470#	350#	28590	170	9090	170	6210	270	−6030	250
	Cr	24	6863.9	1.3	16396	3	17564.2	1.2	4108	6	2336	7	−6860	210
	Mn	25	5514	3	12141.0	2.4	5376.8	2.8	9738	3	4421.0	3.0	−2941	7
	Fe	26	8820	3	13176	4	−7239	3	5126	4	938	4	−3241	4
	Co	27	7491.92	0.07	8274.5	0.4	−21635	13	11215.6	0.4	3395.6	0.3	1482.7	1.6
	Ni	28	11387.73	0.05	9532.38	0.20	−36740#	200#	6084.8	1.1	−263.6	0.4	1355.14	0.26
	Cu	29	10058.1	1.6	4477.4	1.6	−51490#	200#	12594.4	1.6	2602.7	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	14130#	100#	89	13	*		12960	30	−2460#	100#	12939	13
	Ge	32	18950#	450#	1060#	220#	*		7030#	280#	−6780#	360#	10610#	220#
	As	33	*		−2710#	450#	*		12440#	360#	*		14890#	360#
61	Ca	20	60#	1060#	*		61510#	800#	970#	1060#	1940#	1000#	*	
	Sc	21	3020#	500#	17790#	810#	52240#	400#	5400#	720#	6900#	640#	−15780#	720#
	Ti	22	2150	510	18920#	540#	42740	450	5360	510	4160	490	−9000#	670#
	V	23	5190	290	15370	340	32720	230	6410#	380#	6130	230	−9050	300
	Cr	24	3659.3	2.2	16730	170	21725.0	1.9	6016	3	2674	7	−5408	5
	Mn	25	6846	3	12122.6	2.6	10241.7	2.5	7084.6	2.4	5117	3	−5790	7
	Fe	26	5579	4	13242	3	−2564.6	2.8	7316	3	1771	4	−1279	4
	Co	27	9319.2	0.8	8774	3	−15771	11	8477.5	0.8	4121.0	0.8	−1423.5	2.7
	Ni	28	7820.11	0.05	9860.57	0.22	−30190#	100#	8718.61	0.21	489.3	1.1	3579.6	0.3
	Cu	29	11710.4	1.8	4800.1	1.0	−44000#	200#	9883.3	1.0	3108.5	1.0	3509.3	1.5
	Zn	30	10253.4	1.3	5300.2	2.0	*		10712.8	1.3	175.4	1.3	9518.8	1.2
	Ga	31	15183	17	242	11	*		10799	11	0	30	10187	11
	Ge	32	14370#	220#	1300#	100#	*		10640#	140#	−5120#	220#	13880#	100#
	As	33	19200#	280#	−2460#	280#	*		9580#	450#	−4540#	360#	11720#	280#
62	Sc	21	1260#	560#	18990#	890#	55830#	390#	7020#	800#	6370#	720#	−15790#	800#
	Ti	22	4090#	600#	19990#	570#	46680#	400#	3060#	500#	3490#	470#	−12360#	720#
	V	23	3110	350	16320	520	36210	260	7600	360	5530#	400#	−8740	360
	Cr	24	6427	4	17960	230	25893	3	2920	170	1813	4	−9330#	300#
	Mn	25	4853	7	13316	7	14263	7	9095	7	4456	7	−5076	7
	Fe	26	8029	4	14425	4	2289.6	2.9	4801	4	1511	4	−5115.8	2.9
	Co	27	6598	19	9792	19	−9437	19	10699	19	4105	19	−252	19
	Ni	28	10595.8	0.3	11137.2	0.7	−24460	40	5614.7	0.4	347.4	0.4	−435.2	0.4
	Cu	29	8874.6	1.1	5854.6	0.6	−37470#	200#	12396.4	0.6	3233.3	0.6	5088.6	0.6
	Zn	30	12883.0	1.3	6472.8	1.1	−50800#	300#	7887.9	1.7	54.3	0.7	5635.1	0.5
	Ga	31	12931	11	2919.6	1.3	*		12898.1	0.7	92.6	0.9	10017.7	0.7
	Ge	32	16330#	110#	2450	40	*		8440	40	−3470#	110#	10570	40
	As	33	15410#	280#	−1420#	220#	*		13120#	280#	−3610#	450#	14290#	220#
	Se	34	*		−320#	360#	*		7190#	360#	*		12130#	500#
63	Sc	21	2310#	560#	*		59960#	400#	4770#	890#	6930#	810#	*	
	Ti	22	1730#	640#	20460#	640#	49780#	500#	4350#	640#	3550#	580#	−11210#	860#
	V	23	4600	430	16830#	530#	40110	340	5150	560	5220	420	−11540#	450#
	Cr	24	3423	18	18280	260	29308	18	4680	240	1720	180	−8460	240
	Mn	25	6434	8	13323	5	18692	4	6320	4	4885	4	−8180	170
	Fe	26	4829	4	14401	7	6578	4	6817	4	2196	4	−3081	4
	Co	27	8498	26	10262	19	−5304	19	7780	19	4426	19	−3237	19
	Ni	28	6837.77	0.06	11377	19	−18541	14	8096.1	0.7	1001.5	0.4	1547	3
	Cu	29	10863.6	0.5	6122.40	0.06	−31850#	100#	9352.9	0.3	3757.3	0.3	1716.9	0.4
	Zn	30	9116.8	1.6	6715.0	1.6	−44210#	200#	10481.5	1.6	995.6	2.2	7906.0	1.6
	Ga	31	12631.9	1.5	2668.5	1.4	*		10519.7	1.7	2490.8	1.4	7444.0	2.1
	Ge	32	12750	40	2274	14	*		10866	17	−2092	19	12849	14
	As	33	16480#	220#	−1270#	110#	*		11010#	140#	−1140#	220#	11930#	100#
	Se	34	15700#	360#	−30#	280#	*		10690#	280#	−6290#	280#	15380#	280#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
60	Ca	20	3610#	860#	*		*		33100#	740#	*		13760#	740#
	Sc	21	5210#	360#	41060#	670#	−14960#	500#	28510#	350#	−40590#	760#	13260#	420#
	Ti	22	6800	240	35150#	560#	−11010	350	24810	240	−35200#	650#	7630	240
	V	23	8900	170	32160	260	−9970	310	19910	170	−29520	300	6990	170
	Cr	24	11055.9	2.7	30044	5	−9927	7	14504	4	−28320#	300#	545.4	2.5
	Mn	25	13283	3	27240	7	−9132	6	8681.9	2.4	−22455	4	−374.9	2.4
	Fe	26	15401	3	23995	4	−8553	3	3060	3	−20586	3	−7255	3
	Co	27	17945.8	1.1	20400.0	2.6	−7163.8	0.4	−3305.2	1.6	−13413.6	2.3	−8564.92	0.21
	Ni	28	20387.01	0.07	16895.9	0.3	−6291.04	0.26	−10298.8	0.4	−11097.3	0.3	−16186.1	0.4
	Cu	29	22820.1	1.6	13075.9	1.9	−4729.7	1.6	−18329	13	−3404.4	1.6	−19200.9	1.7
	Zn	30	28051	29	8523.5	0.4	−2691.8	0.5	−26440#	200#	−306.6	0.4	−28290#	100#
	Ga	31	32110#	200#	2926	13	−3814	14	−33170#	200#	9054	13	−31240#	400#
	Ge	32	35290#	360#	40#	200#	−4530#	280#	*		12200#	200#	*	
	As	33	*		−2620#	280#	−4390#	360#	*		19820#	220#	*	
61	Ca	20	2940#	1000#	*		*		35190#	920#	*		15490#	860#
	Sc	21	4810#	470#	42830#	810#	−16060#	640#	30680#	460#	*		14530#	470#
	Ti	22	6440#	540#	36570#	750#	−12050#	600#	26320	450	−34470#	830#	8810	480
	V	23	8520	230	33930	340	−11220	300	21570	230	−32920#	380#	8660	230
	Cr	24	10523.3	2.0	31200#	300#	−10520	210	16424	3	−27690	240	2400.1	3.0
	Mn	25	12360	3	28518	4	−9787	7	11155.6	2.5	−25970	170	1599	4
	Fe	26	14398.8	2.6	25382.6	2.7	−8821	3	5301.0	2.6	−19301.0	2.8	−5341.9	2.6
	Co	27	16811.1	0.8	21950.4	2.4	−7836.5	1.7	−913.9	1.2	−17218.7	2.5	−6496.4	0.8
	Ni	28	19207.84	0.07	18135.0	0.3	−6464.97	0.26	−7865.5	1.2	−10098	3	−13948.1	1.6
	Cu	29	21768.6	1.0	14332.5	1.0	−5063.7	1.0	−14857	11	−7622.9	1.0	−15881.2	1.1
	Zn	30	25283.5	1.4	9777.6	1.2	−2697.5	1.3	−22330#	100#	827.8	1.2	−24412	13
	Ga	31	29310#	100#	5347	11	−2243	11	−29150#	200#	3929	11	−27470#	200#
	Ge	32	33320#	410#	1390#	100#	−3770#	140#	*		12860#	100#	−35250#	220#
	As	33	*		−1400#	220#	−4320#	360#	*		14750#	200#	*	
62	Sc	21	4280#	490#	*		−17050#	720#	32520#	470#	*		15420#	600#
	Ti	22	6240#	470#	37780#	810#	−13090#	640#	28650#	400#	−38500#	890#	9910#	460#
	V	23	8300	320	35240#	400#	−12160	330	23310	260	−33000#	480#	9210	260
	Cr	24	10087	4	33330	240	−11835	6	18025	4	−31960	450	2818	4
	Mn	25	11699	7	30040	170	−10643	9	12900	20	−25640	240	2325	7
	Fe	26	13608	4	26548	3	−9308	4	7867.9	2.8	−23671	3	−4051.7	2.9
	Co	27	15917	19	23034	19	−8021	19	1363	19	−16971	19	−5274	19
	Ni	28	18415.9	0.3	19911	3	−7016.2	0.4	−5578.4	0.4	−15114.4	2.6	−12833.5	1.0
	Cu	29	20585.0	1.7	15715.1	0.6	−5365.3	1.2	−10800.5	0.7	−7178.3	0.9	−14502.4	1.3
	Zn	30	23136.4	0.7	11272.9	0.5	−3364.2	0.5	−18880	40	−4235.1	0.5	−22112	11
	Ga	31	28114	13	8219.8	1.7	−2744.2	0.7	−26670#	200#	2708.3	1.1	−26030#	100#
	Ge	32	30700#	200#	2690	40	−2450	50	−31920#	300#	6780	40	−32380#	200#
	As	33	34610#	280#	−120#	200#	−3700#	280#	*		14520#	200#	*	
	Se	34	*		−2780#	360#	−4220#	420#	*		16370#	320#	*	
63	Sc	21	3570#	570#	*		−18110#	810#	34810#	530#	*		17200#	570#
	Ti	22	5820#	670#	39450#	940#	−14100#	780#	30340#	500#	*		11280#	570#
	V	23	7710	410	36820#	530#	−13340	420	25150	340	−36340#	520#	11040	340
	Cr	24	9850	18	34600	450	−12750#	300#	19432	18	−31290#	400#	4249	19
	Mn	25	11288	4	31290	230	−11510	5	14964	19	−28960	260	3920	5
	Fe	26	12858	4	27717	4	−9945	3	9877	3	−22072	5	−2283	19
	Co	27	15096	19	24687	19	−8751	19	3728	19	−20616	20	−3176	19
	Ni	28	17433.6	0.3	21169.9	2.6	−7273.0	0.4	−3299.3	1.5	−13923.3	2.8	−10796.7	0.5
	Cu	29	19738.2	1.0	17259.6	0.7	−5775.0	0.4	−9032.3	1.4	−11444	19	−12483.1	0.4
	Zn	30	21999.8	1.9	12569.6	1.6	−3481.8	1.6	−15242	14	−2756.1	1.5	−18297.9	1.6
	Ga	31	25563	11	9141.2	1.6	−2614.1	1.4	−22820#	100#	−1049.0	1.5	−22330	40
	Ge	32	29080#	100#	5193	14	−2181	14	−28970#	200#	6907	14	−29720#	200#
	As	33	31890#	220#	1180#	100#	−2200#	140#	*		10970#	100#	−31430#	320#
	Se	34	*		−1450#	220#	−3580#	450#	*		17000#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	720#	53490#	600#	1920#	720#	2880#	720#	−14840#	1000#
	V	23	2650#	530#	17750#	640#	43470#	400#	6590#	570#	4720#	600#	−11170#	570#
	Cr	24	5440	30	19120	340	33526	26	2350	270	1470	240	−11750	450
	Mn	25	4173	5	14074	18	22435	4	8574	5	4372	4	−7170	230
	Fe	26	7406	5	15372	5	11034	4	4265	7	1636	4	−6827	4
	Co	27	6012	27	11445	20	−959	20	9797	20	3993	20	−2403	20
	Ni	28	9657.47	0.20	12536	19	−12783	4	5036	19	663.2	0.7	−2531.7	2.7
	Cu	29	7915.87	0.02	7200.50	0.03	−25800	30	12032.83	0.06	3661.6	0.3	3120.2	0.7
	Zn	30	11862.0	1.5	7713.3	0.6	−38540#	200#	7494.1	0.8	844.1	0.7	3864.1	0.7
	Ga	31	10357.0	1.9	3908.6	2.1	*		13045.7	1.5	2387.2	1.8	8797.5	1.6
	Ge	32	15415	14	5057	4	*		8382	4	−2325	11	7687	4
	As	33	13970#	110#	−57	30	*		13370	50	−730#	110#	13150	30
	Se	34	17530#	280#	1020#	220#	*		8570#	280#	−4620#	280#	12220#	220#
65	Ti	22	1380#	920#	*		56430#	700#	2850#	810#	2760#	800#	*	
	V	23	3860#	640#	17920#	780#	47080#	500#	4460#	710#	4950#	640#	−13770#	640#
	Cr	24	2710	50	19180#	400#	36920	40	4240	340	1870	270	−10360#	400#
	Mn	25	6050	5	14683	26	26296	4	5947	18	4749	5	−10110	260
	Fe	26	4319	5	15517	5	14694	4	6380	5	2171	8	−4718	5
	Co	27	7465	20	11504	4	3472.1	2.2	7161	4	4557	3	−5015	7
	Ni	28	6098.08	0.14	12622	20	−8647.1	2.2	7437	19	1163	19	−600.9	2.8
	Cu	29	9910.8	0.7	7453.8	0.7	−20430	40	8959.8	0.7	4346.6	0.7	−193	19
	Zn	30	7979.33	0.17	7776.8	0.7	−32490#	100#	10378.4	0.7	1739.3	0.8	6480.6	0.7
	Ga	31	11895.9	1.6	3942.5	0.6	−45210#	500#	10266.6	1.6	3374.4	0.9	5776.2	0.9
	Ge	32	10234	4	4934.4	2.6	*		10779.7	2.5	372.4	2.2	10335.8	2.2
	As	33	15280	50	−200	40	*		10850	40	320	50	10800	40
	Se	34	14030#	220#	1080#	110#	*		11020#	140#	−3240#	220#	14520#	110#
	Br	35	*		−2720#	540#	*		11260#	540#	−2220#	580#	13520#	540#
66	Ti	22	3200#	990#	*		60150#	700#	*		1870#	810#	*	
	V	23	2260#	710#	18800#	860#	50110#	500#	5890#	780#	4420#	710#	−13720#	640#
	Cr	24	5000#	200#	20320#	540#	40870#	200#	1890#	450#	1460#	390#	−13630#	540#
	Mn	25	3854	11	15830	50	29508	10	7533	28	4318	21	−9360	340
	Fe	26	6921	5	16388	5	18832	4	3633	5	1684	5	−8216	18
	Co	27	5295	14	12480	14	7315	14	9272	14	4091	14	−3875	14
	Ni	28	8952.3	1.5	14110.1	2.5	−4399.3	2.8	4497	20	709	19	−4724	4
	Cu	29	7065.93	0.09	8421.7	0.7	−14233	6	11551.3	0.7	4118.4	0.7	1239	19
	Zn	30	11058.4	0.9	8924.4	0.9	−26920	60	7235.9	0.7	1544.6	0.7	2259.9	0.7
	Ga	31	9137.4	1.3	5100.6	1.2	−39220#	400#	12991.2	1.2	3353.8	1.9	7502.4	1.1
	Ge	32	13200	3	6238.7	2.5	*		7936.5	2.8	−195.9	2.8	6252.5	2.9
	As	33	13260	40	2836	6	*		13001	7	−190	15	10168	6
	Se	34	16630#	120#	2440	70	*		8350	70	−3390#	120#	10640	60
	Br	35	15120#	640#	−1630#	410#	*		13670#	450#	−1640#	450#	14880#	410#
67	V	23	3520#	780#	19110#	920#	53580#	600#	3760#	920#	4600#	850#	*	
	Cr	24	2200#	280#	20260#	540#	44470#	200#	3550#	540#	1910#	450#	−12140#	630#
	Mn	25	5190	40	16020#	200#	33450	40	5050	60	4560	50	−11910#	400#
	Fe	26	4019	10	16553	14	21865	10	5663	10	1838	10	−6795	28
	Co	27	6985	15	12544	7	11557	7	6606	7	4512	7	−6686	7
	Ni	28	5808	3	14623	14	−1069	5	6153	4	913	20	−3127	5
	Cu	29	9132.6	1.1	8602.0	1.7	−10732.1	1.0	8516.8	0.9	4643.3	0.9	−1881	20
	Zn	30	7052.48	0.23	8911.0	0.9	−21328	19	10094.2	0.9	2408.0	0.7	4864.9	0.7
	Ga	31	11226.9	1.4	5269.0	1.1	−33850#	300#	9743.6	1.3	3988.9	1.3	4191.4	1.2
	Ge	32	9138	5	6239	4	−45520#	100#	10695	4	1023	5	8977	4
	As	33	12633	6	2269.2	2.5	*		10601.8	2.2	2592	4	7891.9	1.5
	Se	34	12640	60	1815	20	*		10990	40	−2060	40	13410	20
	Br	35	16600#	500#	−1660#	310#	*		11100#	320#	−710#	360#	12240#	300#
	Kr	36	*		−60#	410#	*		11010#	510#	*		15960#	220#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	32090#	600#	*		12190#	690#
	V	23	7250#	480#	38210#	560#	−14190#	500#	26670#	400#	−36680#	570#	11810#	400#
	Cr	24	8863	26	35950#	400#	−13900	240	21397	26	−35000#	500#	5243	26
	Mn	25	10608	7	32350	260	−12360	170	16803	20	−28540	340	4575	5
	Fe	26	12234	5	28695	5	−10486	4	12129	4	−26055	18	−1190	19
	Co	27	14511	27	25846	21	−9249	20	5632	20	−20194	20	−2351	20
	Ni	28	16495.24	0.21	22798.5	2.8	−8111	3	−1094.8	0.7	−18752	3	−9590.49	0.20
	Cu	29	18779.5	0.5	18578	19	−6199.0	0.4	−6591.2	1.5	−10862	19	−11282.1	1.5
	Zn	30	20978.8	0.8	13835.7	0.6	−3956.0	0.7	−11688	4	−7780.3	0.6	−17528.0	1.5
	Ga	31	22988.8	1.6	10623.6	1.6	−2913.0	2.2	−19210	30	−542.3	1.5	−19933	14
	Ge	32	28170	40	7726	4	−2567	4	−26860#	200#	609	4	−28660#	100#
	As	33	30450#	200#	2220	30	−2040	30	*		9630	30	−29700#	200#
	Se	34	33230#	360#	−250#	200#	−2160#	280#	*		12220#	200#	*	
65	Ti	22	5070#	860#	*		−16230#	1060#	33420#	700#	*		13460#	810#
	V	23	6510#	610#	39760#	640#	−15040#	640#	28860#	500#	*		13390#	500#
	Cr	24	8150	50	36930#	500#	−14450	450	23010	40	−34020#	600#	6710	40
	Mn	25	10223	5	33810	340	−13220	230	18218	4	−31940#	400#	5931	5
	Fe	26	11724	5	29591	18	−11146	4	13908	4	−24933	26	503	20
	Co	27	13477	19	26876	4	−9868	3	8078.3	2.2	−23485	4	−157.9	2.1
	Ni	28	15755.55	0.25	24068	3	−8629.7	2.7	786.4	0.7	−17445	4	−7772.71	0.25
	Cu	29	17826.7	0.7	19990	19	−6790.6	1.0	−4606.2	0.7	−14760	20	−9331.0	0.4
	Zn	30	19841.3	1.5	14977.3	0.7	−4115.2	0.7	−9433.6	2.2	−6102.2	0.7	−15150.4	1.5
	Ga	31	22252.8	1.5	11655.8	0.8	−3098.4	0.9	−15830	40	−4522.3	0.8	−16413	4
	Ge	32	25649	14	8843.0	2.7	−2547.2	2.4	−23060#	100#	2236.6	2.2	−24920	30
	As	33	29240#	110#	4860	40	−2130	40	−29380#	500#	4710	40	−27440#	200#
	Se	34	31560#	220#	1030#	100#	−1820#	140#	*		13610#	100#	*	
	Br	35	*		−1700#	510#	−1900#	540#	*		14890#	500#	*	
66	Ti	22	4580#	920#	*		*		35220#	730#	*		14120#	860#
	V	23	6120#	640#	*		−16040#	640#	30450#	500#	*		13840#	500#
	Cr	24	7710#	200#	38240#	630#	−15370#	450#	24930#	200#	−37640#	730#	7760#	200#
	Mn	25	9904	11	35010#	400#	−13960	260	19658	17	−31930#	500#	6396	11
	Fe	26	11240	5	31072	26	−11639	5	15939	4	−29150	40	1047	4
	Co	27	12759	24	27997	14	−10309	15	9850	14	−22730	14	645	14
	Ni	28	15050.4	1.5	25614	4	−9553	3	2892.6	1.6	−22078	4	−6814.2	1.5
	Cu	29	16976.8	0.7	21044	20	−7259	19	−2534.7	1.2	−14361.8	2.2	−8417.6	0.4
	Zn	30	19037.8	0.9	16378.3	0.7	−4577.8	0.7	−7291.9	2.5	−11062.5	0.7	−14312.9	1.0
	Ga	31	21033.3	1.8	12877.4	1.1	−3361.2	1.2	−11698	6	−3748.9	1.2	−15316.5	2.4
	Ge	32	23434	4	10181.2	2.5	−2864.3	2.5	−19620	60	−2984.2	2.5	−22850	40
	As	33	28540	30	7770	6	−2463	6	−27530#	400#	3343	6	−26680#	100#
	Se	34	30670#	210#	2240	60	−2120	70	*		7210	60	−32600#	500#
	Br	35	*		−550#	400#	−1610#	450#	*		15040#	400#	*	
67	V	23	5780#	780#	*		−17240#	720#	32130#	600#	*		15330#	630#
	Cr	24	7200#	210#	39060#	730#	−15840#	540#	26750#	200#	−36640#	730#	9410#	200#
	Mn	25	9050	40	36340#	500#	−14560	340	21450	40	−34860#	500#	8120	40
	Fe	26	10940	10	32380	50	−12236	20	17728	10	−28160#	200#	2322	17
	Co	27	12279	7	28932	7	−10860	7	11998	7	−25860	12	2613	7
	Ni	28	14760.0	2.9	27103	5	−10532	4	4137.4	3.0	−20965	5	−5555.9	3.0
	Cu	29	16198.5	1.1	22712.1	2.3	−7893	19	−440.4	1.3	−18200	14	−6491.8	0.8
	Zn	30	18110.9	0.9	17332.7	0.7	−4792.5	0.7	−5207	4	−9162.7	1.6	−12228.0	0.8
	Ga	31	20364.3	1.4	14193.4	1.3	−3724.5	1.2	−10291.7	1.3	−7909.9	1.3	−13343.2	2.7
	Ge	32	22338	5	11340	4	−2885	5	−16122	20	−1063	4	−18720	7
	As	33	25900	40	8507.9	0.9	−2465.0	1.4	−23560#	300#	−152.8	1.2	−22680	60
	Se	34	29270#	100#	4651	19	−2005	24	−29400#	100#	7767	19	−30120#	400#
	Br	35	31720#	580#	780#	300#	−1720#	320#	*		11710#	300#	*	
	Kr	36	*		−1690	17	−1580#	220#	*		17540#	120#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
68	V	23	1760#	850#	*		56220#	600#	5200#	920#	4220#	920#	*	
	Cr	24	4490#	360#	21240#	670#	47770#	300#	1320#	580#	1280#	580#	−15250#	760#
	Mn	25	3220	50	17040#	200#	36547	30	6830#	200#	4050	50	−11260#	500#
	Fe	26	6157	11	17520	40	25906	6	3360	12	1730	7	−10250	50
	Co	27	4402	7	12927	10	15433.5	1.3	9125	4	4429	4	−5039	4
	Ni	28	7792	4	15431	7	3515	4	3656	14	585	4	−6600	5
	Cu	29	6319.0	1.8	9113	3	−6672.5	2.4	11150.1	2.1	4422.4	1.7	−735.4	2.6
	Zn	30	10198.32	0.04	9976.7	0.8	−15817.6	0.9	6961.8	0.9	2120.5	0.9	764.7	0.7
	Ga	31	8278.3	1.6	6494.9	1.2	−28320#	250#	12523.7	1.2	3689.9	1.5	5823.9	1.5
	Ge	32	12377	5	7388.8	2.2	−40090#	500#	7455.4	2.2	542.5	2.0	4579.4	2.0
	As	33	10378.6	1.9	3510	5	*		13423	3	2447.7	2.8	9409.2	2.0
	Se	34	15709	19	4891.2	0.7	*		8546	6	−2490	40	7935.2	2.2
	Br	35	13800#	390#	−500#	250#	*		13930#	260#	−480#	270#	13720#	250#
	Kr	36	17810#	510#	1150#	580#	*		8320#	640#	−4580#	710#	12180#	510#
69	Cr	24	2010#	500#	21490#	720#	50350#	400#	2830#	720#	1530#	640#	−14060#	810#
	Mn	25	4570#	200#	17120#	360#	40220#	200#	4460#	280#	4480#	280#	−13570#	540#
	Fe	26	3474	12	17770	30	28914	11	5080	40	2110	15	−8720#	200#
	Co	27	6786	14	13555	15	18961	14	6359	17	4564	15	−7970	18
	Ni	28	4586	5	15615	4	7122	4	6054	7	1294	14	−4265	5
	Cu	29	8240.5	2.1	9561	3	−2599	3	8717	3	5134.1	2.0	−3681	14
	Zn	30	6482.15	0.03	10139.8	1.8	−11983.1	1.7	9612.3	0.8	2704.2	0.9	3234.8	1.6
	Ga	31	10313.2	1.8	6609.8	1.3	−23070	40	9263.0	1.3	4435.1	1.3	2576.6	1.3
	Ge	32	8193.3	2.3	7303.7	1.9	−34520#	300#	10489.0	1.7	1486.7	1.7	7444.6	1.5
	As	33	12314	3	3447	3	*		10247	5	3334	4	6233	3
	Se	34	10316.6	1.6	4829.2	2.4	*		10863.3	1.6	454	6	10818.7	2.8
	Br	35	15570#	250#	−640	40	*		11000	50	590	70	11410	40
	Kr	36	13760#	580#	1110#	390#	*		11160#	420#	−3220#	500#	15050#	310#
70	Cr	24	4080#	570#	*		53570#	400#	500#	720#	970#	720#	*	
	Mn	25	3000#	360#	18110#	500#	42530#	300#	5950#	420#	3680#	360#	−13060#	670#
	Fe	26	5620	16	18820#	200#	32512	12	2680	30	1680	40	−12140#	200#
	Co	27	4213	14	14294	11	22401.5	1.8	8303	6	4370	10	−6990	40
	Ni	28	7307	4	16136	14	11348.1	2.3	3149.4	2.3	972	7	−7553	10
	Cu	29	5311.5	1.8	10287	4	1357.6	1.8	11198	3	5630	3	−2008	7
	Zn	30	9218.4	1.7	11117.8	2.1	−7636.1	2.0	6712.8	2.2	2618.4	1.8	−176	3
	Ga	31	7653.65	0.17	7781.3	1.3	−16976#	16#	11807.6	1.3	3833.9	1.3	4055.5	1.4
	Ge	32	11532.6	1.5	8523.1	1.4	−29240	140	7234.8	1.6	1181.0	1.2	2964.5	1.0
	As	33	9269	3	4522.2	1.9	*		13355.6	2.3	3203	5	8191.4	1.8
	Se	34	13565.4	2.0	6081	3	*		7676.5	2.3	−477.6	1.4	6391	5
	Br	35	13750#	50#	2788#	16#	*		12966#	16#	−518#	25#	10300#	16#
	Kr	36	16810#	330#	2350	150	*		8150#	290#	−3430#	330#	10880	140
71	Cr	24	1690#	640#	*		56150#	500#	*		1030#	780#	*	
	Mn	25	4240#	500#	18270#	570#	46090#	400#	3720#	570#	3930#	500#	−15540#	720#
	Fe	26	2950#	100#	18770#	320#	35400#	100#	4300#	220#	1950#	100#	−10590#	320#
	Co	27	5930	470	14610	470	25770	470	5840	470	4600	470	−9700	470
	Ni	28	4264	3	16186.5	3.0	14500.4	2.4	5671	14	1110.2	2.4	−5659	6
	Cu	29	7806.1	1.8	10786.2	2.6	5182	4	7978	4	5617	3	−5412.3	1.7
	Zn	30	5832.60	0.04	11638.9	1.9	−4180	3	9120.7	2.1	3104.8	2.2	1784	3
	Ga	31	9300.2	1.4	7863.0	1.7	−13637	5	8989.6	1.0	4732.0	1.0	1074.4	1.8
	Ge	32	7415.94	0.11	8285.4	1.4	−23851	24	10132.1	1.4	2043.4	1.6	5746.9	1.0
	As	33	11631	4	4620	4	−35810#	200#	9918	4	3950	5	4839	4
	Se	34	9289	3	6102	3	*		10701	4	612	3	9479	3
	Br	35	12640#	17#	1863	6	*		10643	6	2551	5	8038	6
	Kr	36	12810	140	1411#	29#	*		10910	50	−2430#	250#	13780	24
	Rb	37	*		−1950#	240#	*		11210#	360#	−330#	540#	12330#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
68	V	23	5270#	780#	*		*		33590#	600#	*		15770#	630#
	Cr	24	6690#	360#	40350#	760#	−16640#	670#	28410#	300#	*		10110#	300#
	Mn	25	8410	30	37300#	500#	−15130#	400#	22633	30	−34570#	600#	8920	30
	Fe	26	10177	7	33540#	200#	−12953	27	19363	6	−32120#	200#	3150	9
	Co	27	11387	14	29480	10	−11088	4	13914.6	1.8	−25070	40	4019	3
	Ni	28	13600	3	27975	5	−10919	5	6543	3	−24738	10	−4216	3
	Cu	29	15451.6	1.7	23736	14	−8200	20	1518.9	2.1	−17534	7	−5758.3	1.8
	Zn	30	17250.80	0.24	18578.7	1.6	−5333.4	0.7	−3028.3	2.0	−13553.3	3.0	−11199.4	1.1
	Ga	31	19505.2	1.5	15405.8	1.5	−4086.9	1.4	−8191.4	2.3	−7055.6	1.5	−12484	4
	Ge	32	21514	3	12657.8	2.0	−3399.9	2.0	−12789.3	1.9	−6387.7	2.0	−18462.9	1.9
	As	33	23012	6	9749.1	2.1	−2486.7	2.3	−20130#	250#	695.5	2.2	−20414	19
	Se	34	28350	60	7160.4	2.5	−2299	4	−27300#	500#	1195	4	−29230#	300#
	Br	35	30410#	470#	1320#	250#	−1560#	250#	*		10540#	250#	−29680#	270#
	Kr	36	*		−510#	500#	−1860#	540#	*		12370#	500#	*	
69	Cr	24	6500#	450#	*		−17270#	810#	29870#	400#	*		11320#	400#
	Mn	25	7790#	200#	38350#	630#	−15840#	540#	24850#	200#	−37380#	630#	10510#	200#
	Fe	26	9632	15	34810#	200#	−13720	50	20475	12	−31100#	300#	4077	11
	Co	27	11188	16	31070	40	−11824	15	15369	14	−28640	30	5026	15
	Ni	28	12379	5	28542	10	−11186	5	8439	4	−23167	7	−2483	4
	Cu	29	14559.5	1.7	24992	7	−8975.9	2.5	3591.7	1.8	−21372.8	1.7	−3800.5	1.6
	Zn	30	16680.47	0.05	19253.1	3.0	−5717.5	0.7	−1317.2	1.5	−12243	3	−9403.2	1.2
	Ga	31	18591.6	1.6	16586.5	1.4	−4489.3	1.3	−6191	3	−11049.8	1.9	−10420.4	2.2
	Ge	32	20570	4	13798.6	1.5	−3613.9	1.4	−10666.0	1.9	−4382.6	1.5	−16277.5	2.2
	As	33	22692.2	2.9	10836	3	−2904.4	3.0	−16880	40	−3340	3	−17018.6	2.9
	Se	34	26026	19	8339	5	−2381.5	2.6	−23860#	300#	3255.1	2.4	−25740#	250#
	Br	35	29370#	300#	4250	40	−1850	60	*		5350	40	−27440#	500#
	Kr	36	31570#	320#	610#	300#	−1590#	320#	*		14320#	300#	*	
70	Cr	24	6090#	500#	*		−18140#	810#	31410#	400#	*		11810#	450#
	Mn	25	7570#	300#	39600#	670#	−16580#	580#	26060#	300#	*		10980#	300#
	Fe	26	9095	13	35940#	300#	−14340#	200#	22161	12	−34710#	400#	5243	19
	Co	27	10999.0	2.1	32067	30	−12183	10	16467.6	2.2	−28280#	200#	5399	4
	Ni	28	11893	4	29691	6	−11572	4	10351.1	2.6	−26999	11	−1549.0	2.6
	Cu	29	13552.0	1.9	25901.9	1.4	−8993	14	5933.8	1.6	−19899	14	−2629.8	1.3
	Zn	30	15700.6	1.7	20679	3	−5983.6	2.1	997.0	1.7	−16875	4	−8308.4	1.4
	Ga	31	17966.9	1.8	17921.1	1.9	−5077.1	1.3	−4576.2	1.8	−10463.0	1.8	−9880.8	0.6
	Ge	32	19725.8	2.0	15132.9	1.0	−4088.0	1.0	−8633.1	1.6	−9433.1	1.0	−15497	3
	As	33	21582.1	2.3	11826.0	2.0	−3035.5	1.8	−12400#	16#	−2295.1	1.8	−15970.5	2.0
	Se	34	23882.0	1.4	9528.0	2.3	−2746.7	2.8	−20610	140	−2117.1	1.8	−23740	40
	Br	35	29310#	250#	7617#	16#	−2334#	17#	*		3914#	16#	−27430#	300#
	Kr	36	30570#	520#	1710	140	−1760	150	*		7820	140	*	
71	Cr	24	5770#	640#	*		*		32670#	510#	*		13120#	580#
	Mn	25	7240#	450#	*		−17300#	720#	27750#	610#	*		12360#	400#
	Fe	26	8570#	100#	36880#	410#	−15090#	220#	23480#	100#	−33580#	410#	6510#	100#
	Co	27	10150	470	33430#	510#	−12920	470	18340	470	−31210#	550#	6770	470
	Ni	28	11570	4	30480	11	−11816	10	11920.0	2.7	−25642	12	−501.2	2.5
	Cu	29	13117.5	2.0	26922	14	−9814	7	7427.9	1.7	−23491.4	2.4	−1217.5	2.1
	Zn	30	15051.0	1.7	21926	4	−6009	3	2580.3	1.7	−15401.4	2.6	−6487.4	1.4
	Ga	31	16953.8	1.4	18980.8	1.6	−5244.6	1.2	−2246	4	−14451.7	1.4	−7648.41	0.14
	Ge	32	18948.5	1.5	16066.7	1.0	−4451.5	1.0	−6760.1	2.9	−7630.6	1.7	−13644.0	1.6
	As	33	20899	5	13143	4	−3439	4	−11391	7	−6272	4	−14036	4
	Se	34	22854	3	10624	3	−2898	5	−17090	24	126.5	2.9	−19284#	16#
	Br	35	26390	40	7944	6	−2340	5	−24420#	200#	543	6	−23250	140
	Kr	36	29620#	300#	4199	24	−1930	30	*		8584	24	*	
	Rb	37	*		400#	210#	−1480#	360#	*		12570#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
72	Cr	24	3240#	780#	*		59800#	600#	*		*		*	
	Mn	25	2620#	640#	19200#	710#	48610#	500#	5180#	640#	3320#	640#	*	
	Fe	26	5390#	220#	19920#	450#	38900#	200#	1910#	360#	1130#	280#	−13970#	450#
	Co	27	4000#	550#	15660#	320#	28290#	300#	7460#	300#	4070#	300#	−9130#	360#
	Ni	28	6891	3	17150	470	18359.8	2.2	2993.5	3.0	1005	14	−9076	11
	Cu	29	5143.2	2.0	11665.7	2.6	8459.3	1.4	10141.7	2.6	5060	4	−3770	14
	Zn	30	8890.5	2.6	12723.3	2.6	−277.3	2.9	5541.7	2.4	2454.8	2.6	−2520	4
	Ga	31	6520.48	0.19	8550.9	1.7	−9526.5	1.3	11687.6	1.7	4693.7	1.0	2794.4	1.6
	Ge	32	10750.6	0.8	9735.8	0.8	−18645	8	7035.1	1.1	1606.0	1.1	1478.4	0.8
	As	33	8420	4	5624.7	0.8	−30140#	200#	13030.5	0.8	3722.5	1.3	6732.0	1.1
	Se	34	12793	3	7264	5	*		7176.6	2.4	133	3	4878.9	2.3
	Br	35	10631	5	3204.2	3.0	*		13577.9	1.7	2237.1	1.8	9721	3
	Kr	36	15956	25	4727	10	*		8704#	18#	−2820	40	8141	8
	Rb	37	14090#	280#	−670#	200#	*		13930#	240#	−660#	360#	13810#	210#
73	Mn	25	3600#	780#	19560#	850#	52290#	600#	3270#	780#	3800#	720#	*	
	Fe	26	2810#	360#	20110#	580#	41600#	300#	3340#	500#	1320#	420#	−12700#	500#
	Co	27	5410#	420#	15680#	360#	32060#	300#	5000#	320#	4280#	300#	−11540#	420#
	Ni	28	3953.0	2.7	17100#	300#	21189.8	1.5	4970	470	1265.1	2.5	−7408	12
	Cu	29	7276.0	2.1	12050.6	2.7	11965	4	7129.3	2.7	5090.2	2.6	−6832.6	2.5
	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	−6057	5	8337.7	2.3	4729.7	2.3	−1076.6	2.0
	Ge	32	6782.94	0.05	9998.3	0.8	−14746	7	9552.4	0.8	2476.7	1.1	3913.9	1.5
	As	33	10782	4	5656	4	−24940	40	9665	4	4473	4	3604	4
	Se	34	8431	8	7274	7	−36280#	400#	10377	9	971	8	7981	7
	Br	35	12652	5	3063	6	*		10215	6	3151	5	6338	5
	Kr	36	10682	10	4779	7	*		10661	9	246#	17#	11023	7
	Rb	37	15980#	200#	−640	40	*		10760	50	170	150	11570#	40#
	Sr	38	*		1140#	450#	*		10840#	450#	*		15020#	420#
74	Mn	25	1840#	850#	*		55540#	600#	4680#	850#	3660#	780#	*	
	Fe	26	4740#	500#	21250#	720#	45100#	400#	1220#	640#	820#	570#	−15750#	640#
	Co	27	3730#	500#	16600#	500#	34750#	400#	6660#	450#	3490#	410#	−11030#	570#
	Ni	28	6412	3	18100#	300#	24974.4	2.8	2560#	300#	790	470	−10870#	100#
	Cu	29	5093	5	13191	5	14850	6	8927	6	4261	6	−5990	470
	Zn	30	8235	3	14058.0	2.9	6456.5	2.5	4737.1	2.9	1818.5	2.9	−4704	3
	Ga	31	6422	3	9745	4	−2761	7	10807	4	4141	3	308	3
	Ge	32	10196.24	0.06	11012.1	1.7	−11090.6	2.0	5876.6	0.8	1580.7	0.8	−449.8	1.5
	As	33	7979	4	6851.5	1.7	−18944	3	12436.7	1.7	3910.6	1.9	4925.4	1.9
	Se	34	12057	7	8549	4	−31240	30	6739.91	0.11	544	4	3339.8	0.8
	Br	35	9717	8	4350	9	*		13291	6	2722	6	8251	7
	Kr	36	13851	7	5979	6	*		7440.7	2.3	−965	6	6461	3
	Rb	37	13980	40	2653	7	*		12735	9	−996	24	10233	6
	Sr	38	17090#	400#	2250	50	*		7840#	200#	−4030#	200#	10730	40
75	Mn	25	2810#	850#	*		59270#	600#	*		4090#	850#	*	
	Fe	26	2110#	640#	21520#	780#	47980#	500#	2710#	780#	1330#	710#	−14620#	780#
	Co	27	5030#	570#	16890#	570#	38200#	400#	4440#	500#	3850#	450#	−13440#	640#
	Ni	28	3670	6	18040#	400#	27810	6	4300#	300#	1120#	300#	−9150#	200#
	Cu	29	6532	5	13311.2	2.9	18565.3	0.7	6348.3	1.7	4619.9	2.3	−8520#	300#
	Zn	30	4998.1	2.8	13963	5	9486.0	1.2	7015.0	1.9	1963.5	1.8	−2811.0	2.5
	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	−7532.5	2.5	8553.2	1.7	1595.3	0.8	1934.9	2.1
	As	33	10246.8	1.7	6902.05	0.04	−15816.8	1.2	8972.81	0.07	4414.44	0.09	1199.1	0.8
	Se	34	8027.60	0.07	8598.4	1.7	−25896	10	9494	4	936.88	0.13	6062.82	0.10
	Br	35	11890	7	4183	4	−36820#	300#	9831	9	3625	5	4782	4
	Kr	36	10064	3	6325	6	*		10028	6	−398.7	2.7	9190	3
	Rb	37	13374	3	2175.8	2.3	*		10044	7	1586	8	7489.5	1.6
	Sr	38	13370	30	1646	10	*		10450	40	−3310#	200#	13314	13
	Y	39	*		−1390#	300#	*		10370#	500#	*		11460#	360#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
72	Cr	24	4930#	720#	*		*		34820#	630#	*		14120#	720#
	Mn	25	6860#	580#	*		−18160#	780#	29130#	580#	*		12690#	510#
	Fe	26	8340#	200#	38190#	450#	−15990#	360#	24980#	200#	−37280#	540#	7050#	510#
	Co	27	9930#	300#	34430#	420#	−13710#	300#	19480#	300#	−30970#	500#	7040#	300#
	Ni	28	11155	3	31751	12	−12550	6	13919	3	−29590#	100#	413.7	2.7
	Cu	29	12949.3	1.8	27852.2	2.4	−10555.5	1.7	8805.2	1.6	−22700	470	−528.0	2.1
	Zn	30	14723.1	2.6	23510	3	−7107	4	4440.4	2.1	−20028	3	−6077.7	2.3
	Ga	31	15820.7	1.4	20189.8	1.4	−5446.1	1.8	−345.9	0.8	−13166.1	1.7	−6752.95	0.21
	Ge	32	18166.6	0.8	17598.9	1.5	−5003.8	0.8	−4717.7	2.0	−12548.6	1.5	−12764	4
	As	33	20051.0	1.4	13910.0	1.1	−3581.3	1.4	−9180.6	1.0	−5392.2	0.8	−13167.1	2.8
	Se	34	22082.0	2.4	11884.1	2.1	−3314.3	2.7	−13928	8	−5250.6	2.1	−19437	6
	Br	35	23270#	16#	9305.7	1.7	−2592.1	2.1	−20960#	200#	1542	4	−21077	24
	Kr	36	28760	140	6590	8	−2176	8	*		1917	8	−29930#	200#
	Rb	37	*		740#	200#	−1760#	320#	*		11110#	200#	*	
73	Mn	25	6220#	720#	*		*		30940#	670#	*		14480#	630#
	Fe	26	8200#	320#	39310#	580#	−16790#	500#	26120#	300#	−36850#	670#	8240#	420#
	Co	27	9410#	550#	35600#	500#	−14550#	360#	21350#	300#	−33760#	580#	8520#	300#
	Ni	28	10844.2	2.7	32760#	100#	−13029	11	15485.7	2.4	−28150#	200#	1603.9	2.1
	Cu	29	12419.2	2.1	29200	470	−11046	14	10711.6	2.3	−25980#	300#	1086.5	2.6
	Zn	30	14409.8	2.4	24765.1	2.9	−8040	4	5704.1	1.9	−18656.3	2.9	−5076.5	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	17533.6	0.8	18549.2	1.5	−5304.6	0.8	−3070	7	−10441.0	2.1	−11126.53	0.09
	As	33	19202	6	15392	4	−4050	4	−7311	6	−9653	4	−11156	4
	Se	34	21224	8	12899	7	−3552	8	−11676	10	−2930	7	−17237	7
	Br	35	23282	8	10327	7	−2930	6	−17630	40	−2689	5	−17773	10
	Kr	36	26638	25	7983	7	−2542	7	−24600#	400#	4027	7	−26520#	200#
	Rb	37	30080#	200#	4090	40	−2180	60	*		5760	40	*	
	Sr	38	*		470#	400#	−1800#	500#	*		14700#	400#	*	
74	Mn	25	5440#	780#	*		*		32830#	720#	*		15450#	670#
	Fe	26	7550#	450#	40810#	720#	−17440#	570#	27790#	400#	*		8910#	500#
	Co	27	9140#	500#	36710#	640#	−15280#	500#	22710#	400#	−33890#	720#	8740#	400#
	Ni	28	10365	4	33780#	200#	−13820	12	17309	4	−31750#	300#	2468	3
	Cu	29	12369	5	30290#	300#	−11926	6	12040	6	−25660#	300#	1513	6
	Zn	30	13754	3	26109	3	−8968	3	7665.7	2.5	−22937.9	3.0	−4129	3
	Ga	31	15604	3	22845	3	−7498	3	2810	3	−16351	3	−4823.4	3.0
	Ge	32	16979.18	0.07	19854.9	2.1	−6282.4	1.5	−1209.24	0.01	−15118.0	1.9	−10541	4
	As	33	18760.4	1.7	16849.8	1.9	−4374.8	2.0	−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	−16642	5
	Br	35	22369	6	11624	6	−3379	6	−13372	7	−1624	7	−16808	9
	Kr	36	24534	8	9041.6	2.8	−2827.9	2.4	−21360	30	−1393	8	−24390	40
	Rb	37	29960#	200#	7432	3	−2407#	16#	*		4437	6	−28040#	400#
	Sr	38	*		1610	30	−2070	140	*		8290	30	*	
75	Mn	25	4640#	850#	*		*		35060#	720#	*		17390#	720#
	Fe	26	6850#	580#	*		−17860#	710#	29350#	500#	*		10530#	640#
	Co	27	8760#	500#	38140#	720#	−16070#	570#	24210#	400#	−37080#	720#	10120#	400#
	Ni	28	10082	6	34640#	300#	−14540#	100#	18636	6	−30680#	400#	3891	8
	Cu	29	11625.1	1.7	31410#	300#	−12530	470	13990.4	1.0	−28460#	400#	3215.2	2.6
	Zn	30	13232.7	2.2	27153.7	1.9	−9702.2	2.5	9173.5	1.2	−21524	3	−2705	3
	Ga	31	14903.9	1.8	24050.9	1.7	−8174.4	1.6	4574.9	0.7	−19740	5	−3109.5	0.7
	Ge	32	16702.08	0.07	20841.5	1.9	−6955.6	1.5	312.52	0.09	−13389.2	2.5	−9068.2	1.7
	As	33	18225	4	17914.1	1.7	−5321.4	0.8	−3929	4	−12274.9	3.0	−8893.63	0.04
	Se	34	20085	7	15449.90	0.09	−4687.8	0.8	−7845.0	2.5	−6036.01	0.07	−14953	6
	Br	35	21608	7	12732	6	−3639	6	−11888	4	−5536	5	−14846	5
	Kr	36	23915	7	10675	8	−3603	4	−18052	10	599.7	2.5	−20480	4
	Rb	37	27350	40	8155	5	−3141	6	−24930#	300#	780	6	−24320	30
	Sr	38	30470#	400#	4299	12	−2642	26	*		8770	10	*	
	Y	39	*		860#	300#	−2640#	360#	*		12340#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
76	Fe	26	3960#	780#	22680#	850#	51710#	600#	590#	850#	970#	850#	*	
	Co	27	3240#	640#	18020#	710#	40870#	500#	5940#	640#	3420#	580#	−13080#	780#
	Ni	28	6020#	200#	19030#	450#	31210#	200#	2010#	450#	500#	360#	−12360#	360#
	Cu	29	4612.6	2.2	14253	6	21281.2	2.1	8147	3	3960.3	2.6	−7730#	300#
	Zn	30	7690.8	1.9	15121.8	1.6	12948.9	1.5	4417	5	1548.7	2.1	−6548.9	2.1
	Ga	31	5907.3	2.1	10902.1	2.3	3992	10	10171	3	4160.8	2.7	−1662.5	2.5
	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	7328.49	0.05	7724.70	0.08	−11813.6	0.9	11840.56	0.06	3868.89	0.08	3053.0	1.7
	Se	34	11153.79	0.07	9505.41	0.04	−20996	9	6318.9	1.7	565	4	1691.97	0.06
	Br	35	9253	10	5409	9	−31570#	300#	12635	9	2802	12	6310	10
	Kr	36	12761	5	7196	6	*		6985	7	−508	7	4860	8
	Rb	37	11331.7	1.5	3443.5	2.7	*		12563.6	2.2	937	7	8809	5
	Sr	38	16055	13	4327	9	*		8370	9	−3380	40	7942	11
	Y	39	14500#	420#	−260#	300#	*		12960#	300#	−1910#	500#	12940#	300#
77	Fe	26	620#	850#	*		55650#	600#	2770#	850#	2190#	850#	*	
	Co	27	4550#	780#	18610#	850#	44080#	600#	3500#	780#	3610#	720#	−15800#	850#
	Ni	28	3320#	360#	19110#	580#	33960#	300#	3720#	500#	910#	500#	−10940#	500#
	Cu	29	5922.6	2.4	14150#	200#	25052.3	1.2	5895	6	4449	3	−9920#	400#
	Zn	30	4557.5	2.5	15066.7	2.8	15810.3	2.0	6391.8	2.1	2084	6	−4695	3
	Ga	31	7767	3	10978.3	2.8	7242	4	7402.0	2.7	4628	3	−4336	6
	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	9693.63	0.10	7991.08	0.08	−9084.5	1.3	8652.77	0.10	4371.49	0.09	−219.0	3.0
	Se	34	7418.83	0.04	9595.75	0.07	−16796	8	9146.86	0.06	1124.6	1.7	4469.38	0.05
	Br	35	11017	10	5271.8	2.8	−26327	5	9645.5	2.8	3842.5	2.8	3272	3
	Kr	36	9227	4	7169	10	−37950#	400#	9648	5	−17	6	7690.2	2.0
	Rb	37	12422.7	1.6	3106	4	*		10204.8	2.8	2365.4	2.4	6104	6
	Sr	38	11618	12	4613	8	*		10126	8	−1023	8	10175	8
	Y	39	16260#	300#	−60	10	*		10076	11	−1070	30	10655	5
	Zr	40	*		790#	500#	*		10780#	500#	*		14400#	400#
78	Co	27	1480#	920#	19470#	920#	48380#	700#	5980#	920#	4240#	860#	−14470#	920#
	Ni	28	5700#	500#	20260#	720#	36980#	400#	1260#	640#	240#	570#	−14530#	640#
	Cu	29	3996	6	14830#	300#	28030	11	7920#	200#	4124	8	−8880#	400#
	Zn	30	6765.3	2.8	15909.4	2.3	19542.7	1.9	4239.1	2.8	1851.1	2.1	−7790	6
	Ga	31	5783.1	2.6	12203.9	2.2	9748	4	9309.7	1.8	3843.5	1.6	−3587.5	1.3
	Ge	32	8721	4	13159	4	2316	4	5145	4	1463	4	−3532	4
	As	33	6973	10	8893	10	−5881	10	11107	10	3904	10	1290	10
	Se	34	10497.76	0.17	10399.88	0.18	−13855	6	5977.58	0.18	873.66	0.18	477.46	0.18
	Br	35	8289	5	6142	4	−21117	5	12511	4	3581	4	5230	4
	Kr	36	12080.1	2.0	8232.4	2.8	−32770#	400#	6822	9	−207	4	3637.6	0.3
	Rb	37	10176	3	4055	4	*		12789	5	2253	4	7818	5
	Sr	38	13439	10	5630	6	*		8019	6	−1089	6	6800	6
	Y	39	13498	5	1820	9	*		12632	9	−1198	10	10530	3
	Zr	40	17260#	570#	1790#	400#	*		8020#	500#	−4260#	500#	10510#	400#
79	Co	27	2250#	990#	*		53050#	700#	4350#	920#	5950#	920#	*	
	Ni	28	1350#	640#	20130#	860#	41310#	500#	4460#	780#	2130#	710#	−11920#	780#
	Cu	29	5690	110	14820#	410#	31230	110	5550#	320#	4460#	230#	−11330#	510#
	Zn	30	4020.1	2.6	15934	6	22485.4	1.8	6141.5	2.1	2443.5	2.7	−5790#	200#
	Ga	31	6915.6	1.6	12354.1	2.3	13519.6	1.5	6951.6	2.3	4618.7	1.9	−5890.5	2.4
	Ge	32	5682	4	13057.2	1.3	4970	4	7230.9	2.5	1688.4	2.1	−1522.9	1.6
	As	33	8890	11	9063	6	−2833	6	8288	5	4441	5	−1693	6
	Se	34	6962.83	0.13	10390	10	−10442.5	2.5	8708.38	0.23	1239.32	0.22	2941.87	0.22
	Br	35	10687	4	6331.0	1.0	−18079.4	1.0	9242.3	0.9	4048.0	0.9	1871.1	0.9
	Kr	36	8335	3	8279	5	−27637	4	9503	4	711	10	6456	3
	Rb	37	11939	4	3913.6	2.0	−38000#	500#	10077.3	2.8	3075	4	5133	10
	Sr	38	10375	6	5828	4	*		10066.4	2.8	−131.8	2.7	9185	5
	Y	39	13725	3	2106	6	*		10526	8	1132	9	8136.9	1.0
	Zr	40	13470#	400#	1760	4	*		10813	4	−3220#	300#	13097	9
	Nb	41	*		−1320#	640#	*		10130#	640#	*		11570#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
76	Fe	26	6070#	720#	*		−18590#	850#	31410#	630#	*		11600#	720#
	Co	27	8270#	640#	39540#	780#	−16690#	710#	25580#	500#	−37520#	780#	10550#	500#
	Ni	28	9700#	200#	35920#	450#	−15180#	280#	20300#	200#	−34590#	540#	4400#	200#
	Cu	29	11145	6	32290#	400#	−13140#	300#	15285.2	2.8	−28040#	400#	3600.7	2.4
	Zn	30	12688.9	2.9	28433	3	−10501.9	2.7	10909.9	1.5	−25545	6	−1913.7	1.6
	Ga	31	14390	4	24865	6	−8938.6	2.4	5996.0	2.0	−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	−17818.4	1.2	−8248.69	0.04
	As	33	17575.3	1.7	18821.0	3.0	−6129.4	0.8	−2004	9	−11121.0	0.7	−8194.53	0.09
	Se	34	19181.38	0.02	16407.45	0.02	−5090.97	0.08	−6238	4	−10683.96	0.05	−14216	4
	Br	35	21144	11	14007	9	−4472	9	−9810	9	−4543	9	−14036	10
	Kr	36	22825	4	11378	4	−3570	4	−14757	10	−4133	4	−19866	4
	Rb	37	24706	3	9769	6	−3842.3	1.4	−21760#	300#	1339	4	−22277	10
	Sr	38	29430	30	6503	9	−2741	12	*		2779	9	−30040#	300#
	Y	39	*		1380#	300#	−3050#	360#	*		11210#	300#	*	
77	Fe	26	4580#	780#	*		*		34110#	670#	*		14220#	780#
	Co	27	7790#	720#	41290#	850#	−17630#	850#	26950#	600#	*		12020#	630#
	Ni	28	9350#	300#	37130#	580#	−15690#	420#	21540#	300#	−33950#	670#	5690#	300#
	Cu	29	10535.2	1.4	33180#	400#	−13650#	300#	17129.6	2.7	−30720#	500#	5369.0	1.9
	Zn	30	12248.3	2.3	29320	6	−11106.4	2.5	12423.7	2.0	−24080#	200#	−563.9	2.8
	Ga	31	13674.3	2.5	26100.1	2.5	−9429.6	2.9	7922.7	2.4	−22270	3	−850.8	2.4
	Ge	32	15498.53	0.07	23107.3	1.2	−8044.4	1.9	3386.60	0.07	−16198.8	1.5	−6991.49	0.07
	As	33	17022.12	0.09	20032.3	0.7	−6640.6	1.7	−680.2	2.8	−14907.3	2.0	−6734.37	0.08
	Se	34	18572.62	0.09	17320.44	0.07	−5726.86	0.07	−4430.0	2.0	−8675.55	0.04	−12382	9
	Br	35	20270	5	14777.2	2.8	−4707	5	−8404	3	−8231.1	2.8	−12292	5
	Kr	36	21988	3	12577.9	2.0	−4367	8	−12366	8	−2206.5	2.0	−17761.7	2.2
	Rb	37	23754.4	1.8	10301	4	−3613	5	−17923	4	−1830	9	−18645	9
	Sr	38	27673	13	8057	8	−3677	10	−25580#	400#	3921	9	−27150#	300#
	Y	39	30760#	300#	4267	4	−3320	40	*		6282	4	*	
	Zr	40	*		530#	400#	−2700#	570#	*		14750#	400#	*	
78	Co	27	6030#	860#	*		−17280#	920#	29470#	700#	*		13860#	760#
	Ni	28	9020#	450#	38870#	720#	−16650#	570#	22600#	400#	−39030#	720#	5910#	400#
	Cu	29	9918	6	33940#	500#	−13910#	400#	18917	6	−30170#	600#	5931	6
	Zn	30	11322.8	2.4	30060#	200#	−11460	3	14379	4	−27520#	300#	438	3
	Ga	31	13550.1	2.2	27270.6	2.3	−10119	5	9113	10	−22130.3	1.6	−562.5	1.1
	Ge	32	14792	4	24137	4	−8530	4	5164	4	−20362	4	−6018	4
	As	33	16667	10	21098	10	−7192	10	635	10	−14113	10	−6289	10
	Se	34	17916.60	0.17	18390.96	0.17	−6028.38	0.17	−2847.67	0.26	−13102.02	0.18	−11862.4	2.8
	Br	35	19306	10	15737	4	−5017	4	−6517	5	−6826	4	−11354	4
	Kr	36	21307	4	13504.2	0.3	−4390.0	0.3	−11007	6	−6867.8	0.3	−17419.1	1.3
	Rb	37	22599	3	11224	10	−4072	7	−14601	5	−990	4	−17203	9
	Sr	38	25058	10	8735	7	−3264	6	−21760#	400#	−291	6	−24335	7
	Y	39	29760#	300#	6434	3	−2844	4	*		5207	4	−28190#	400#
	Zr	40	*		1730#	400#	−2870#	400#	*		9110#	400#	*	
79	Co	27	3730#	920#	*		−16730#	920#	32910#	710#	*		17310#	810#
	Ni	28	7050#	580#	39600#	780#	−15890#	710#	25270#	500#	*		8560#	500#
	Cu	29	9690	100	35080#	610#	−14570#	410#	20140	100	−34380#	710#	7000	100
	Zn	30	10785.5	2.7	30760#	300#	−11810	6	16040.3	1.9	−25840#	400#	2200.7	2.1
	Ga	31	12698.7	2.7	28263.6	1.7	−10503.1	1.4	11088	5	−25050	6	1242	4
	Ge	32	14402.1	0.7	25261.0	2.1	−9213.7	1.4	6445.1	0.7	−19278.1	2.1	−4727	10
	As	33	15864	5	22222	6	−7600	5	2432	5	−17221	5	−4681	5
	Se	34	17460.60	0.21	19282.51	0.22	−6485.38	0.23	−1475	3	−11344	4	−10537	4
	Br	35	18975.8	3.0	16730.9	0.9	−5457.4	0.9	−5265.1	2.1	−10540	10	−9961.0	1.0
	Kr	36	20415	4	14421	3	−4698	3	−8967	4	−4705	3	−15578	5
	Rb	37	22115.0	2.3	12146	3	−4121	5	−12814.4	2.0	−4640	4	−15703	6
	Sr	38	23814	8	9883	3	−3575	4	−18669	3	1414.4	2.5	−21211	4
	Y	39	27223	4	7736.0	1.4	−3194.8	1.3	−25190#	500#	1658	3	−24650#	400#
	Zr	40	30730#	400#	3580	8	−2957	10	*		9077	6	*	
	Nb	41	*		470#	500#	−2930#	580#	*		12250#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
80	Co	27	870#	990#	*		56920#	700#	*		5700#	920#	*	
	Ni	28	3150#	710#	21030#	860#	46300#	500#	2790#	860#	3530#	780#	−14450#	780#
	Cu	29	2340#	320#	15810#	580#	35540#	300#	8910#	500#	5440#	420#	−9120#	670#
	Zn	30	6291.5	2.8	16530	110	26107.2	2.3	3846	6	2074.6	2.5	−8760#	300#
	Ga	31	4747	3	13081	3	16665	3	8970	3	4430	3	−4715	3
	Ge	32	8134.3	2.2	14275.9	2.4	8357.8	2.2	4879.6	2.3	1321	3	−5099.7	2.8
	As	33	6650	6	10031	3	−41	4	10359	5	3863	3	−576	4
	Se	34	9913.3	0.9	11412	5	−7448	4	5768	10	1019.7	0.9	−900.1	0.9
	Br	35	7892.27	0.13	7260.5	1.0	−14741	6	11847.8	0.9	3574.6	0.9	3672.5	0.9
	Kr	36	11522	4	9114.1	1.1	−23537.3	1.6	6270	4	205.7	2.9	2352.8	0.7
	Rb	37	9442.0	2.6	5020	4	−33170#	400#	12715.4	1.7	2859.9	2.6	6708	3
	Sr	38	12908	4	6798	4	*		7335	5	−617	4	5504	4
	Y	39	11231	6	2962	7	*		12734	8	1519	10	9329	6
	Zr	40	15621.7	2.8	3656.3	1.5	*		8690	4	−2584	4	9094	8
	Nb	41	14270#	640#	−520#	400#	*		13120#	570#	−1920#	570#	13550#	400#
81	Ni	28	920#	710#	21080#	860#	50200#	500#	4120#	860#	4100#	860#	*	
	Cu	29	3300#	420#	15960#	580#	40620#	300#	6960#	580#	7830#	500#	−10940#	760#
	Zn	30	2621	5	16810#	300#	30187	4	6920	110	3449	7	−5680#	400#
	Ga	31	6475	4	13264	4	20350	3	6516	4	4720	4	−7194	7
	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	7649.8	2.7	4193	4	−3182.8	2.8
	Se	34	6700.8	0.3	11464	3	−4861	3	7958	5	1292	10	1120	4
	Br	35	10159.4	1.4	7506.6	1.3	−12257.9	2.7	8651.2	1.0	3912.9	1.0	486	10
	Kr	36	7874.4	1.2	9096.2	1.4	−20140	10	9082.6	1.4	620	4	4976.1	1.1
	Rb	37	11354	5	4852	5	−29100#	400#	9696	6	3586	5	3642	6
	Sr	38	9288	5	6643	4	−39330#	300#	9986	4	271	5	8297	3
	Y	39	12642	7	2697	4	*		10467	4	2316	6	6863	4
	Zr	40	11272	10	3697	12	*		11143	10	−357	11	11261	12
	Nb	41	15430#	570#	−710#	400#	*		11160#	400#	−90#	570#	11620#	400#
	Mo	42	*		490#	500#	*		11310#	580#	*		14860#	500#
82	Ni	28	2700#	710#	*		54700#	500#	2290#	860#	3650#	860#	*	
	Cu	29	1890#	500#	16930#	640#	44380#	400#	8220#	640#	7290#	640#	−10580#	810#
	Zn	30	4183	5	17690#	300#	35280.2	2.9	5080#	300#	4960	110	−8510#	500#
	Ga	31	3375	4	14018	5	24567.8	2.5	9432	3	5365.2	2.9	−4880	110
	Ge	32	7193.7	2.3	15076	3	15177.7	0.9	4520	3	1998.3	1.5	−6335.7	2.0
	As	33	5645	4	11104	3	6081	4	10140	3	4229.8	2.5	−1911.8	2.7
	Se	34	9276.3	0.9	12349.5	2.7	−1581	4	5331	3	906	5	−2475.2	0.9
	Br	35	7592.94	0.12	8398.7	1.3	−9435	6	10971.5	1.3	3282.8	1.0	1784	5
	Kr	36	10966.9	1.1	9903.7	1.0	−16976.4	1.3	6007.9	0.9	340.2	0.9	972.04	0.22
	Rb	37	8803	6	5781	3	−23873	4	12416	3	3118	5	5527	3
	Sr	38	12556	5	7846	6	−34970#	300#	6871	4	−346	5	4075	5
	Y	39	10416	6	3825	6	*		12958	6	2275	6	8385	6
	Zr	40	14130	10	5185.3	2.8	*		8244	6	−762.8	1.4	7505.9	2.8
	Nb	41	14030#	400#	2047	10	*		12752.3	2.7	−645	3	11320.6	2.3
	Mo	42	16910#	420#	1970#	500#	*		8670#	500#	−3380#	580#	11410#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
80	Co	27	3120#	990#	*		*		34380#	760#	*		17790#	860#
	Ni	28	4500#	640#	*		−15080#	780#	28410#	500#	*		11100#	510#
	Cu	29	8040#	300#	35940#	760#	−13680#	580#	22540#	300#	−34470#	760#	8680#	300#
	Zn	30	10311.6	2.9	31350#	400#	−12080#	200#	17883.1	3.0	−30780#	500#	2824.9	2.5
	Ga	31	11662	3	29015	6	−10637	4	12991	4	−24100	110	2177.3	3.0
	Ge	32	13816	4	26630.1	2.8	−9657.2	2.5	8224.0	2.2	−23392.3	2.7	−3971	6
	As	33	15540	10	23088	3	−8343	4	3675	3	−16955	4	−4368	3
	Se	34	16876.1	0.9	20475	4	−6971.4	0.9	133.7	1.1	−15576.0	1.1	−9762.7	0.3
	Br	35	18579	4	17650	10	−6021.1	0.9	−3715.3	2.0	−9542	5	−9518	3
	Kr	36	19857.5	0.8	15445.1	0.7	−5066.1	0.7	−7582	4	−9264.7	0.7	−15161.5	2.1
	Rb	37	21381	4	13299	4	−4309	9	−11025	6	−3394.6	2.0	−14770	3
	Sr	38	23283	7	10711	3	−3723	5	−15956	4	−3158	5	−20394	3
	Y	39	24956	7	8791	7	−3094	6	−22150#	400#	2366	7	−22414	7
	Zr	40	29090#	400#	5763	6	−2524	9	*		3830.1	2.9	−29630#	500#
	Nb	41	*		1240#	400#	−2700#	500#	*		11700#	400#	*	
81	Ni	28	4070#	710#	*		−15380#	780#	30110#	500#	*		12520#	580#
	Cu	29	5650#	320#	36990#	760#	−12430#	670#	25720#	300#	−36900#	760#	11670#	300#
	Zn	30	8913	5	32620#	500#	−11380#	300#	20090	5	−30250#	500#	4950	5
	Ga	31	11221	3	29800	110	−11189	3	14906	4	−28240#	300#	3837	4
	Ge	32	12962.0	2.2	27437.6	2.7	−9927.4	2.8	10097.2	2.3	−21928.5	3.0	−2149	4
	As	33	15040	6	24562.9	2.9	−8966	4	5443.7	2.8	−20599	4	−2845.3	2.8
	Se	34	16614.1	1.0	21494.5	1.2	−7600.9	0.9	1307.3	1.4	−14142.5	2.3	−8571.3	0.5
	Br	35	18051.7	1.4	18919	5	−6486.9	1.0	−2520	5	−13052	3	−8155.2	1.2
	Kr	36	19397	4	16356.7	1.1	−5521.6	1.1	−6168	3	−7225.8	1.4	−13593.9	2.0
	Rb	37	20796	5	13967	5	−4647	6	−9738	5	−6857	5	−13216	6
	Sr	38	22196	4	11664	5	−3784	4	−13972	11	−924	3	−18451	7
	Y	39	23873.2	2.5	9494	3	−3313.5	2.8	−19360#	400#	−834	3	−19434.5	2.9
	Zr	40	26894	11	6659	11	−2178	13	−25360#	300#	5466	11	−26630#	400#
	Nb	41	29700#	640#	2950#	400#	−1880#	400#	*		7500#	400#	*	
	Mo	42	*		−30#	300#	−2400#	500#	*		14870#	300#	*	
82	Ni	28	3620#	710#	*		*		31590#	500#	*		13120#	580#
	Cu	29	5190#	500#	38010#	810#	−12830#	810#	27200#	400#	*		12400#	400#
	Zn	30	6804	4	33650#	500#	−9860#	400#	23100.4	3.0	−33510#	500#	7242	4
	Ga	31	9850	4	30830#	300#	−10569	6	17176	3	−28310#	300#	5289	3
	Ge	32	12021.4	2.3	28339.9	2.4	−10355.8	2.1	12179.7	1.0	−26501	4	−952.1	2.8
	As	33	14035	4	25461	4	−8827.4	2.6	7392.1	2.6	−19769	4	−1789.0	2.5
	Se	34	15977.1	0.9	22636.5	2.1	−8157	4	2997.9	0.5	−18591.1	2.1	−7688.2	1.1
	Br	35	17752.4	1.3	19862	3	−7107	10	−1311	3	−12254.3	2.8	−7873.8	0.5
	Kr	36	18841.3	0.7	17410.4	0.9	−5990.79	0.17	−4579	4	−11491.9	0.9	−13206	5
	Rb	37	20157	3	14877	3	−5161	5	−8124	6	−5500	3	−12731	4
	Sr	38	21844	5	12698	4	−4260	4	−12398	4	−5606	4	−18365	5
	Y	39	23059	8	10468	6	−3554	6	−15750	6	104	7	−18579	12
	Zr	40	25402.1	2.0	7882	4	−2869	6	−22580#	300#	624	3	−25330#	400#
	Nb	41	29460#	400#	5744	7	−2404	4	*		6116	3	−28190#	300#
	Mo	42	*		1260#	300#	−2060#	500#	*		9230#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
83	Cu	29	2730#	640#	16960#	710#	49280#	500#	6410#	710#	7710#	710#	−12440#	860#
	Zn	30	2068	17	17870#	400#	39030	17	6310#	300#	5230#	300#	−7420#	500#
	Ga	31	4398	3	14233	4	29756	5	7655	5	7259	3	−6930#	300#
	Ge	32	3633.6	2.6	15335	3	19014.2	2.4	7361	4	3111	4	−3678	3
	As	33	7634	4	11544.2	2.9	9401	4	7333	3	4730	3	−4799	4
	Se	34	5818	3	12523	4	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	9781.0	1.0	−14074.2	0.6	8697.2	1.0	762.3	0.9	3415.1	0.9
	Rb	37	10954	4	5767.8	2.3	−21421	4	9336.3	2.6	3686.5	2.4	2464.7	2.5
	Sr	38	8856	8	7899	7	−30500#	300#	9370	8	240	7	6742	7
	Y	39	12213	19	3481	19	−40210#	500#	10033	19	2970	19	5614	19
	Zr	40	10372.4	1.5	5141	6	*		10513.4	2.6	96	6	10041	4
	Nb	41	13406	4	1323	3	*		10618	11	1571	4	9145	7
	Mo	42	13330#	420#	1280#	300#	*		10770#	500#	−2440#	500#	13700#	300#
	Tc	43	*		−1750#	580#	*		10910#	580#	*		12650#	640#
84	Cu	29	1400#	710#	*		52130#	500#	7710#	710#	7230#	710#	*	
	Zn	30	3590#	200#	18730#	540#	44120#	200#	4610#	450#	4940#	360#	−10090#	540#
	Ga	31	2903	8	15067	18	33678	7	8936	8	6977	9	−6530#	300#
	Ge	32	5243	3	16180	3	24291.2	2.2	5494	3	4343	4	−6300	5
	As	33	4256	4	12166	3	13905	3	10271.4	2.7	5302	3	−2580	4
	Se	34	8679	4	13568	3	4700.8	1.8	4868.9	3.0	1449	3	−4010.3	2.7
	Br	35	6825	4	9716	3	−3873	5	10537.6	1.7	3485.8	1.8	413	3
	Kr	36	10520.02	0.01	10715	4	−11018	5	5770.1	1.0	401.7	1.0	−404.0	0.9
	Rb	37	8760	3	7057.2	2.2	−18565.0	2.2	11543.7	2.2	2801.4	2.4	3864.6	2.4
	Sr	38	11923	7	8867.6	2.3	−26512	22	6249	3	−329	5	2693.3	1.1
	Y	39	9760	19	4386	8	−35470#	400#	12830	6	2498	5	7209	7
	Zr	40	13577	6	6505	19	*		7353	8	−839	6	5753	6
	Nb	41	11616	3	2566.3	0.8	*		13132.3	1.4	1227	10	10171.6	2.5
	Mo	42	15910#	300#	3777	23	*		8888	22	−2910#	400#	9066	25
	Tc	43	14500#	640#	−580#	500#	*		13320#	500#	−1370#	500#	13580#	570#
85	Cu	29	2280#	780#	*		55270#	600#	*		7650#	780#	*	
	Zn	30	1340#	280#	18670#	540#	47320#	200#	6000#	540#	5490#	450#	−8730#	540#
	Ga	31	3706	14	15180#	200#	38854	12	7298	20	7455	12	−8350#	400#
	Ge	32	3044	4	16321	8	28359	4	6847	4	4674	4	−5161	4
	As	33	5415.0	2.7	12338.0	2.4	18970.1	1.0	8490.0	2.6	7080.9	1.4	−4619.9	2.5
	Se	34	4538.0	2.4	13850.6	2.9	8688	3	7965	3	2555.5	2.8	−1354.6	1.8
	Br	35	8881	3	9918	3	−735	19	7474	4	3881	3	−2824	4
	Kr	36	7112.3	2.0	11002.2	2.6	−8305	7	8244	4	882.4	2.2	1759.9	2.1
	Rb	37	10479.8	2.2	7016.97	*a*	−15888	4	8534.11	0.01	3288.51	0.01	977.7	1.0
	Sr	38	8525.3	2.8	8633	4	−23593	16	8678	4	−51	4	5135.0	2.8
	Y	39	12019	19	4482	19	−31850#	400#	9666	20	3035	19	3992	19
	Zr	40	9825	8	6570	8	−41280#	500#	9741	20	−247	8	8484	8
	Nb	41	13157	4	2147	7	*		10348	4	2200	4	7431	7
	Mo	42	11444	27	3605	16	*		10850	16	−331	16	11752	16
	Tc	43	15630#	570#	−860#	400#	*		11020#	500#	−90#	500#	11970#	400#
	Ru	44	*		760#	640#	*		10810#	710#	*		14790#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
83	Cu	29	4620#	580#	*		−13320#	860#	28870#	500#	*		13850#	500#
	Zn	30	6251	18	34800#	500#	−10580#	500#	24666	17	−32880#	500#	8549	17
	Ga	31	7773	4	31930#	300#	−9270	110	20412	4	−30820#	400#	8085.2	2.6
	Ge	32	10827	3	29352	5	−9969	3	14364	4	−25952	4	1059	3
	As	33	13279	4	26620	4	−9546	3	9344	5	−24027	4	−146.8	2.8
	Se	34	15094	3	23627	4	−8293	3	4650	3	−17215	3	−5913	3
	Br	35	17179	4	21058	5	−7803	7	57	4	−16196	4	−6493	4
	Kr	36	18437.1	1.1	18179.7	0.9	−6498.13	0.22	−3193	7	−9685.7	0.5	−11874	3
	Rb	37	19757	5	15671.6	2.5	−5427.6	2.5	−6865	19	−8861.0	2.5	−11129	5
	Sr	38	21412	8	13679	7	−4780	8	−10881	7	−3495	7	−16805	9
	Y	39	22629	19	11327	19	−3828	19	−14556	19	−3307	19	−16662	19
	Zr	40	24503	10	8966	3	−2866.5	2.6	−19620#	300#	2808	4	−21673.4	2.3
	Nb	41	27430#	400#	6508	4	−2086	3	−25650#	500#	3126	6	−24680#	300#
	Mo	42	30240#	420#	3320#	300#	−1920#	300#	*		10030#	300#	*	
	Tc	43	*		220#	640#	−1630#	710#	*		13030#	500#	*	
84	Cu	29	4130#	640#	*		−13850#	860#	30370#	500#	*		14520#	500#
	Zn	30	5660#	200#	35690#	540#	−11020#	540#	26320#	200#	*		9360#	200#
	Ga	31	7301	8	32940#	400#	−9830#	300#	21765	8	−30990#	500#	8816	8
	Ge	32	8876.7	2.4	30412	4	−8921	3	17800.3	2.8	−29126	17	3450	4
	As	33	11890	3	27501	3	−9055	4	11913.6	3.0	−23885	4	1416	4
	Se	34	14497.2	1.9	25112.2	2.0	−8838.0	2.7	6490.9	1.8	−22261	3	−5006	4
	Br	35	16411.1	1.9	22238.5	2.9	−7978	4	1991.7	2.7	−15387	3	−5847.8	1.6
	Kr	36	17990.19	*a*	19423.4	0.5	−7104.9	0.9	−1790.12	0.04	−14388	3	−11440.0	2.3
	Rb	37	19714	4	16838.2	2.4	−6294.9	2.4	−5864	5	−8034	4	−11033	7
	Sr	38	20779	4	14635.38	0.04	−5181.0	0.7	−9227	5	−7947.56	0.04	−16515	19
	Y	39	21973	7	12285	5	−4146	5	−12701	4	−2113	5	−16049	4
	Zr	40	23949	6	9986	7	−3535	6	−17285	23	−1913	9	−21844	6
	Nb	41	25022.1	2.3	7708	6	−2471	6	−22760#	400#	3723	19	−22970#	300#
	Mo	42	29240#	300#	5099	22	−2206	22	*		4491	22	−30210#	500#
	Tc	43	*		690#	400#	−1860#	570#	*		11930#	400#	*	
85	Cu	29	3680#	780#	*		*		31790#	600#	*		15830#	630#
	Zn	30	4930#	200#	*		−11440#	540#	28020#	200#	*		10920#	200#
	Ga	31	6608	12	33910#	500#	−10240#	300#	23474	12	−33290#	500#	10354	12
	Ge	32	8287	4	31388	17	−9344	5	19294	3	−28580#	200#	4661	4
	As	33	9670.5	3.0	28517.6	2.7	−7995	3	15380	3	−26397	7	4679.9	2.1
	Se	34	13217	3	26016.6	2.9	−8548.3	2.6	9065.2	2.5	−21555.9	2.6	−2719.3	2.2
	Br	35	15706	5	23486	4	−8469	4	3590.2	3.0	−20013	4	−4209.1	3.0
	Kr	36	17632.3	2.0	20718	4	−7516.4	2.2	−377	3	−12820.9	2.7	−9792.8	2.9
	Rb	37	19239.3	2.3	17732	4	−6615.2	1.0	−4325	19	−11689.2	1.6	−9589.43	0.04
	Sr	38	20448	7	15690.5	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	23401	6	10956	9	−4072	7	−15665	17	185	6	−20053	6
	Nb	41	24773	5	8652	19	−2986	5	−20290#	400#	326	6	−20214	23
	Mo	42	27350#	300#	6171	16	−2378	19	−25610#	500#	6623	17	−27150#	400#
	Tc	43	30130#	640#	2920#	400#	−2050#	570#	*		7920#	400#	*	
	Ru	44	*		180#	580#	−2130#	580#	*		14950#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
86	Zn	30	3030#	360#	19420#	670#	50440#	300#	4370#	580#	5190#	580#	*	
	Ga	31	2117	22	15960#	200#	41868	19	8770#	200#	7406	25	−7730#	500#
	Ge	32	4547	3	17163	12	33668.9	1.1	5203	7	4524.8	2.7	−7640	17
	As	33	3838.5	1.8	13132	3	23782.6	1.5	9894.6	2.6	6876.1	2.8	−4060.4	2.8
	Se	34	6159.0	1.7	14594.6	1.3	14020.2	0.7	6061.5	2.6	4030.6	2.9	−3880.0	2.5
	Br	35	5132	3	10511.2	2.0	3646	14	11021.9	2.2	4567	3	−322	3
	Kr	36	9856.7	2.0	11977.5	3.0	−5297	4	5212.3	1.6	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	11491.2	2.8	9644.73	0.01	−20412.2	2.9	5946.6	2.2	−588.4	2.3	1113.94	0.01
	Y	39	9512	24	5469	14	−27710#	300#	12077	14	2379	16	5434	14
	Zr	40	12865	7	7416	19	−37070#	400#	6636	6	−899	19	4475	8
	Nb	41	10926	7	3248	8	*		12998	8	1646	6	8718	19
	Mo	42	14672	16	5120	5	*		7793.7	3.0	−1598	4	7452	3
	Tc	43	13650#	500#	1350#	300#	*		13280#	300#	−410#	420#	11730#	300#
	Ru	44	17070#	640#	2200#	570#	*		8240#	570#	−4040#	640#	11050#	500#
87	Zn	30	610#	500#	*		53830#	400#	6040#	720#	5980#	640#	*	
	Ga	31	3170#	200#	16100#	360#	45020#	200#	6940#	280#	7820#	280#	−9500#	540#
	Ge	32	2070#	210#	17110#	210#	37120#	210#	6840#	210#	5360#	210#	−6110#	290#
	As	33	4724.8	2.4	13310.0	2.3	28979.9	2.0	8214	4	7394.3	2.9	−5883	8
	Se	34	3993.4	1.9	14749.6	2.3	18455.1	1.8	7483.1	2.0	4293	3	−2630.4	2.8
	Br	35	6326	3	10678	3	9127	3	9234	4	6921	4	−2392	4
	Kr	36	5515.17	0.25	12361.2	1.4	−1362	4	8578.4	3.0	1921.6	1.6	885.3	1.8
	Rb	37	9922.12	0.20	8621.10	0.01	−10723	7	7593.3	2.0	2705.60	0.01	−1184.3	1.6
	Sr	38	8428.30	0.01	9422.05	0.20	−17996.1	2.1	7998.07	0.01	−257.1	2.2	3205.67	*a*
	Y	39	11807	14	5784.3	1.1	−25328	4	8796	3	2494.9	1.1	2386.9	2.4
	Zr	40	9449	5	7353	15	−33400#	400#	9206	19	−589	6	6948	4
	Nb	41	12812	9	3194	8	*		10012	9	2411	9	5666	8
	Mo	42	10844	4	5039	6	*		10106	5	−826.1	2.1	10184	6
	Tc	43	14190#	300#	868	5	*		10531	16	1311	23	9150	4
	Ru	44	13120#	570#	1670#	500#	*		10750#	570#	−2660#	570#	13830#	400#
88	Ga	31	1590#	360#	17080#	500#	48330#	300#	8380#	420#	7570#	360#	−8810#	670#
	Ge	32	4000#	370#	17940#	360#	40170#	300#	4960#	300#	5070#	300#	−8770#	360#
	As	33	3135	4	14380#	210#	31927	3	9626	3	7303	4	−5312	12
	Se	34	5529.4	2.9	15554	3	24038.6	2.4	5792.1	2.8	4178.3	2.6	−5116	4
	Br	35	4897	4	11581.0	2.9	13582.0	2.8	10496.6	2.5	6562.2	2.8	−1873.4	2.6
	Kr	36	7053.1	2.6	13089	4	3938	6	6656.8	2.9	3750	4	−1630	3
	Rb	37	6082.54	0.16	9188.46	0.29	−6440	60	11367.46	0.16	3735.4	2.0	1614.5	3.0
	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	−29379	19	6365	15	−923	20	3121	6
	Nb	41	10370	60	4110	60	−38240#	400#	12510	60	1870	60	7320	60
	Mo	42	13874	4	6101	8	*		7158	7	−1543	6	6135	7
	Tc	43	12052	6	2075	5	*		13151	5	704	16	10256	6
	Ru	44	16370#	400#	3849	19	*		8030#	300#	−3400#	400#	8906	24
	Rh	45	*		−730#	570#	*		13680#	570#	−1170#	640#	13710#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
86	Zn	30	4370#	360#	*		−11770#	580#	29540#	300#	*		11590#	300#
	Ga	31	5823	20	34630#	500#	−10460#	400#	25195	19	−33130#	600#	11281	19
	Ge	32	7591.3	2.4	32350#	200#	−9708	3	20906.0	1.3	−31790#	200#	5529.1	1.5
	As	33	9253.5	2.9	29453	7	−8458.4	2.7	16672.9	2.0	−26530	12	5379.4	2.1
	Se	34	10697.0	2.0	26932.6	2.3	−7513.6	1.2	12762.8	0.7	−24671	3	3	3
	Br	35	14012.8	2.1	24361.7	2.8	−7955.7	2.7	7109.7	1.4	−19729.0	1.7	−2228.3	2.4
	Kr	36	16968.97	*a*	21895.2	1.8	−8096.7	0.5	1257.42	*a*	−18139.5	1.5	−9169.65	*a*
	Rb	37	19130.8	2.2	19557.8	1.6	−7673.3	1.0	−3464	14	−11458.8	3.0	−9715.1	2.8
	Sr	38	20016.51	0.04	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	11898	4	−4381	5	−13858	5	−4155	5	−19761	5
	Nb	41	24083	6	9818	7	−3495	8	−17560#	300#	1419	20	−19696	17
	Mo	42	26117	23	7267	6	−2920	3	−23210#	400#	1775	7	−26190#	400#
	Tc	43	29280#	500#	4950#	300#	−1680#	300#	*		7420#	300#	−27740#	580#
	Ru	44	*		1340#	400#	−2290#	500#	*		9320#	400#	*	
87	Zn	30	3640#	450#	*		*		30990#	450#	*		13100#	400#
	Ga	31	5290#	200#	35520#	630#	−10900#	540#	26750#	200#	*		12660#	200#
	Ge	32	6610#	210#	33070#	290#	−9700#	210#	22840#	210#	−30820#	370#	7300#	210#
	As	33	8563.3	2.2	30473	12	−8785	3	18274	4	−29138	19	6813.6	2.1
	Se	34	10152.5	2.3	27882	3	−7873.4	3.0	14284.6	1.8	−24117.1	2.1	1141.0	2.2
	Br	35	11457	4	25272	3	−6647	4	10706	3	−22216	3	1303	3
	Kr	36	15371.8	2.0	22872.3	1.5	−7794	3	4170.55	0.25	−17495.7	0.8	−6033.8	0.3
	Rb	37	18573.10	0.01	20598.6	3.0	−8009	4	−1579.4	1.1	−16249.4	1.3	−8146.02	0.01
	Sr	38	19919.5	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	−12463	5	−2113	4	−18284	7
	Nb	41	23737	8	10610	20	−4094	20	−16184	8	−1880	16	−17835	7
	Mo	42	25517	16	8287	7	−3392.4	2.2	−20930#	400#	3796	4	−23390#	300#
	Tc	43	27840#	400#	5988	6	−2466	5	*		4155	7	−24860#	400#
	Ru	44	30190#	640#	3020#	400#	−2080#	500#	*		10870#	400#	*	
88	Ga	31	4760#	300#	*		−11100#	580#	28290#	300#	*		13130#	370#
	Ge	32	6070#	300#	34040#	420#	−10110#	360#	24360#	300#	−34210#	500#	8030#	300#
	As	33	7860	4	31491	19	−9018	8	20035.4	2.2	−29100#	200#	7672	4
	Se	34	9522.8	2.5	28864.2	2.6	−8160	3	15808	4	−27580#	210#	1937	4
	Br	35	11222.3	2.7	26330.6	2.7	−7288	3	11892.0	2.3	−22388	3	1921.2	2.4
	Kr	36	12568.3	2.6	23766.4	2.7	−6168	3	8230.3	2.6	−20555	3	−3164.8	2.6
	Rb	37	16004.66	0.25	21549.6	1.3	−7266.8	1.6	1690.0	1.5	−16006	3	−5800.26	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	−6965.1	2.6	−8130	60	−6990.2	1.5	−13023	4
	Zr	40	21802	6	13684	5	−5405	5	−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	−18436	19	−628	6	−23068	6
	Tc	43	26240#	300#	7114	7	−2901	4	−23740#	400#	4915	8	−23790#	400#
	Ru	44	29490#	400#	4717	19	−2538	29	*		5345	19	*	
	Rh	45	*		940#	500#	−1930#	570#	*		12470#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
89	Ga	31	2560#	420#	*		51400#	300#	6430#	500#	8050#	420#	*	
	Ge	32	1590#	500#	17940#	500#	43500#	400#	6540#	450#	5590#	400#	−7330#	500#
	As	33	4077	5	14460#	300#	35025	3	7610#	210#	7773	4	−7272	19
	Se	34	3179	4	15598	4	27218.2	2.9	7338	4	4838	3	−3748	3
	Br	35	5630	4	11681	4	19435.9	2.7	8861	3	7091.6	2.8	−3664	3
	Kr	36	4916	3	13108	3	8342	4	8067	4	3965.6	2.5	−386.5	2.3
	Rb	37	7175.2	2.9	9311	4	−1112	8	9707.4	2.9	6416.8	2.9	−429	3
	Sr	38	6358.72	0.09	10888.98	0.18	−11192	3	9099.58	0.09	1402.03	0.22	2703.05	0.09
	Y	39	11483.5	1.5	7078.5	0.3	−20318	3	7879.7	0.3	1676.0	0.3	682.2	0.4
	Zr	40	9320	6	7868	3	−26508	24	8852	3	−731	14	5291.8	2.8
	Nb	41	12500	60	4261	9	−34240#	200#	9457	9	2232	8	4328	16
	Mo	42	10402	5	6130	60	*		9569	7	−1019	6	8599	5
	Tc	43	13794	5	1995	5	*		10202	4	1582	4	7387	6
	Ru	44	12190	30	3988	25	*		10031	25	−1940#	300#	11388	24
	Rh	45	16500#	450#	−600#	200#	*		10300#	450#	−600#	450#	10860#	360#
90	Ga	31	1040#	500#	*		54150#	400#	*		7620#	560#	*	
	Ge	32	3500#	640#	18880#	580#	46490#	500#	4630#	580#	5260#	540#	−10220#	640#
	As	33	2370#	210#	15240#	450#	38370#	210#	9240#	370#	7460#	300#	−6470#	290#
	Se	34	4962	5	16483	6	30069	4	5511	5	4600	5	−6650#	210#
	Br	35	3796	4	12298	4	22497.0	2.7	10594	4	7289	3	−2736	3
	Kr	36	6495.6	2.7	13974	3	13812.3	1.7	6467.8	2.9	3796	4	−2888.7	2.5
	Rb	37	5716	5	10111	4	3305	5	11045	5	6216	4	181	5
	Sr	38	7813.1	1.4	11527	3	−5778	3	7369.1	1.5	3511.1	1.4	405.2	1.5
	Y	39	6857.03	0.10	7576.8	0.4	−15772.4	1.0	12135.5	0.4	3247.2	0.4	3747.3	0.4
	Zr	40	11966.0	2.8	8350.2	0.4	−23886.2	1.9	6237.5	1.5	−889.9	1.1	1754.09	0.10
	Nb	41	10132	8	5073	4	−31320#	200#	11677	6	1549	5	6003	3
	Mo	42	13227	4	6861	8	−39520#	400#	6710	60	−1434	7	4821	5
	Tc	43	11403	3	2997	3	*		12673	4	1023.6	2.3	8796	7
	Ru	44	14588	24	4782	4	*		7495	5	−2332	5	7644.2	2.8
	Rh	45	13060#	280#	270#	200#	*		13620#	200#	−530#	450#	11990#	200#
	Pd	46	*		1580#	450#	*		7990#	570#	*		10950#	570#
91	Ge	32	1100#	710#	18940#	640#	49480#	500#	6090#	580#	5760#	580#	*	
	As	33	3580#	370#	15320#	580#	41260#	300#	7250#	500#	7880#	420#	−8460#	420#
	Se	34	2457	5	16570#	210#	33378.1	2.6	7131	5	5278	4	−5100#	300#
	Br	35	5178	3	12514	5	25244.5	2.6	8595	3	7640.1	3.0	−4779	4
	Kr	36	4084.8	2.7	14263	3	16922.1	2.1	8012	3	4608	3	−1444	3
	Rb	37	6475	4	10089.7	2.7	8878	4	9485.8	3.0	6795	3	−1397	3
	Sr	38	5765.9	1.8	11577	4	−1429	5	8778	3	3827.7	1.0	1692.3	2.8
	Y	39	7926.0	1.9	7689.8	2.4	−10364.2	2.7	10568.3	1.9	6434.1	1.9	1903.9	1.9
	Zr	40	7194.63	0.09	8687.8	0.4	−19657.1	1.8	10526.3	0.3	1267.4	1.5	5672.34	0.08
	Nb	41	12047	4	5154.9	2.9	−28182	8	8950	4	1855	6	3307	3
	Mo	42	10115	6	6843	6	−36000#	300#	9095	9	−1180	60	7059	8
	Tc	43	13334.3	2.2	3104	4	*		9740	4	1563	4	5830	60
	Ru	44	11423.7	2.7	4803.1	2.1	*		9865	4	−1704	4	10094	4
	Rh	45	15180#	200#	859	8	*		10624	25	658	20	8860	8
	Pd	46	13640#	500#	2160#	360#	*		10860#	360#	−3420#	500#	13680#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
89	Ga	31	4150#	360#	*		−11370#	670#	29810#	300#	*		14570#	420#
	Ge	32	5590#	450#	35020#	570#	−10370#	450#	25950#	400#	*		9570#	400#
	As	33	7212	5	32400#	200#	−9389	12	21588	4	−31590#	300#	9124	5
	Se	34	8708	3	29980#	210#	−8295	4	17545	4	−26760#	300#	3655	4
	Br	35	10526	4	27235	3	−7502.9	2.9	13437.6	2.8	−24883	4	3345	4
	Kr	36	11968.9	2.2	24688.8	2.8	−6545.6	2.6	9673.2	2.1	−19942	3	−1998.1	2.1
	Rb	37	13257.7	2.9	22399	4	−5561	4	5998.3	2.9	−18285	4	−1862.6	2.9
	Sr	38	17471.59	0.09	20077.44	0.26	−7153.6	2.0	−1331.4	2.8	−13806.7	2.6	−9981.3	1.5
	Y	39	20835.4	1.2	17691.3	0.3	−7968.8	0.3	−7110	7	−12391.1	0.4	−12154	5
	Zr	40	21673	5	14575.5	2.8	−6199	4	−9861	4	−4245.0	2.8	−16780	60
	Nb	41	22869	10	12161	8	−5184	20	−13208	7	−3591	8	−15986	8
	Mo	42	24275	4	10248	5	−4266	7	−16647	24	1323	6	−21418	5
	Tc	43	25846	5	8096	7	−3538	5	−21030#	200#	1490	60	−21214	19
	Ru	44	28560#	400#	6063	24	−3285	29	*		7028	25	−28510#	400#
	Rh	45	*		3250#	200#	−2800#	450#	*		8020#	200#	*	
90	Ga	31	3600#	500#	*		*		31140#	450#	*		15120#	560#
	Ge	32	5090#	580#	*		−10830#	580#	27410#	500#	*		10150#	500#
	As	33	6450#	210#	33180#	370#	−9650#	210#	23010#	210#	−31400#	370#	9930#	210#
	Se	34	8141	5	30940#	300#	−8710	4	19078	4	−30130#	400#	4322	5
	Br	35	9426	4	27896	4	−7460	3	15357	4	−24601	5	4465	3
	Kr	36	11411	3	25655.0	2.9	−6882.1	1.9	10990.7	2.2	−23258	3	−1318	3
	Rb	37	12891	4	23218	4	−6145	4	7140	4	−18371	5	−1220	4
	Sr	38	14171.8	1.4	20837.4	3.0	−5110.0	1.4	2821.6	1.4	−16703.9	2.6	−6310.9	1.4
	Y	39	18340.5	1.5	18465.8	0.4	−6174.8	0.4	−3835	3	−12073.0	2.9	−9690.5	2.8
	Zr	40	21286	5	15428.70	0.10	−6674.20	0.10	−8599.7	2.9	−9852.33	0.13	−16243	7
	Nb	41	22630	60	12941	3	−5804	14	−11938	3	−2240	3	−15717	4
	Mo	42	23629	5	11122	6	−4629	5	−15286	3	−2584	4	−20851	4
	Tc	43	25197	4	9130	60	−4015	6	−19380#	200#	2588	8	−20426	24
	Ru	44	26779	19	6778	4	−3200	4	−24240#	400#	2842	4	−26600#	200#
	Rh	45	29560#	450#	4250#	200#	−2200#	360#	*		8760#	200#	*	
	Pd	46	*		980#	400#	−2180#	570#	*		10430#	400#	*	
91	Ge	32	4600#	640#	*		−11320#	640#	28770#	500#	*		11420#	540#
	As	33	5960#	300#	34200#	420#	−10060#	360#	24610#	300#	−33940#	500#	11310#	300#
	Se	34	7419	4	31810#	400#	−9100#	210#	20706	3	−29090#	500#	5661	4
	Br	35	8974	3	28997	5	−7914.1	2.7	16653.7	2.5	−27410#	210#	5781.7	2.5
	Kr	36	10580.4	3.0	26561	4	−6973.5	2.7	12671.8	2.3	−22381	5	312	4
	Rb	37	12191	4	24063	3	−6294	4	8590.8	2.8	−21050	3	118.7	2.5
	Sr	38	13579.0	1.0	21687.5	2.4	−5360.8	1.1	4250.3	1.0	−15974.3	2.0	−5219.8	1.1
	Y	39	14783.0	1.9	19217	3	−4178.7	1.9	287	3	−14283	4	−5650.5	1.9
	Zr	40	19160.7	2.8	16264.61	0.12	−5440.53	0.08	−5679	5	−9233.9	1.4	−13305	3
	Nb	41	22180	8	13505.1	2.9	−6045	3	−10651	4	−7430.4	2.9	−14537	4
	Mo	42	23342	6	11917	6	−5294	7	−13978	5	−733	5	−19563	5
	Tc	43	24737	4	9964	8	−4538	7	−17531	7	−614	4	−19172.5	2.8
	Ru	44	26012	24	7800	4	−3779.4	2.8	−22020#	300#	4645	3	−24960#	200#
	Rh	45	28240#	200#	5641	8	−3191	8	*		4979	7	−25880#	400#
	Pd	46	*		2430#	300#	−2690#	500#	*		11380#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
92	Ge	32	2970#	710#	*		52380#	500#	4170#	640#	5350#	580#	*	
	As	33	1950#	500#	16170#	640#	44390#	400#	8800#	640#	7520#	570#	−7860#	500#
	Se	34	4430#	200#	17410#	360#	36250#	200#	5080#	290#	4930#	200#	−7940#	450#
	Br	35	3201	5	13259	5	28579	10	10356	6	7618	5	−3903	6
	Kr	36	5867	3	14952	3	19689.5	2.6	5941	4	4370	4	−4132	4
	Rb	37	5082	5	11087	5	11682	5	10899	5	6628	5	−850	6
	Sr	38	7293	3	12395	4	3941	3	7201	5	3710	4	−685	4
	Y	39	6536	9	8460	9	−5889	9	11845	9	6257	9	2543	10
	Zr	40	8634.74	0.03	9396.5	1.9	−14157.5	2.1	8748.6	0.4	4116.1	0.3	3396.31	0.13
	Nb	41	7886	3	5846.7	1.8	−23460	3	13029.8	1.8	3288	3	6904.2	1.8
	Mo	42	12663	5	7459.2	2.9	−32163	25	6564	3	−1343	7	3715.5	2.8
	Tc	43	11011	3	4000	6	−40700#	400#	11956	4	953	4	7320	8
	Ru	44	14134.4	2.8	5603.2	2.9	*		7133.6	2.4	−2044	4	6362	4
	Rh	45	12609	8	2044	3	*		12603	3	240	24	10046	4
	Pd	46	16500#	300#	3478	26	*		7410#	200#	−3420#	200#	9370	30
	Ag	47	*		−700#	500#	*		13130#	570#	*		13780#	450#
93	As	33	3190#	570#	16390#	640#	47120#	400#	6710#	640#	7840#	640#	−10000#	560#
	Se	34	2150#	360#	17610#	500#	39390#	300#	6510#	420#	5160#	370#	−6580#	580#
	Br	35	4720	430	13560#	480#	31340	430	8090	430	7860	430	−6250#	480#
	Kr	36	3438	4	15188	5	22986.1	2.6	7682	3	4728	4	−2608	5
	Rb	37	5919	9	11139	8	14593	8	9065	8	7205	8	−2973	8
	Sr	38	5290	8	12603	9	6721	8	8386	8	4136	8	521	8
	Y	39	7482	14	8649	11	−621	11	10129	11	6588	11	777	11
	Zr	40	6734.3	0.4	9595	9	−9906.5	2.0	9940.2	1.9	4238.8	0.6	4475.1	1.5
	Nb	41	8830.9	2.0	6042.8	1.5	−18199.3	2.9	11393.6	1.5	6423.5	1.5	4930.4	1.5
	Mo	42	8069.81	0.09	7642.7	1.8	−27722	7	10542.1	2.9	719	3	7611.71	0.20
	Tc	43	12750.0	2.8	4086.5	1.0	−37210#	400#	9321	5	1431	3	4702	3
	Ru	44	10985.3	2.9	5577	3	*		9482.6	2.8	−1627.1	2.2	8603	4
	Rh	45	14091	4	2001	3	*		9936	3	737	3	7357.3	2.7
	Pd	46	12511	26	3380	7	*		10082	10	−2880#	200#	11447	7
	Ag	47	16240#	570#	−960#	400#	*		10530#	500#	−890#	570#	10590#	450#
94	As	33	1570#	570#	*		49560#	400#	8100#	640#	7360#	640#	*	
	Se	34	3970#	500#	18390#	570#	42250#	400#	4490#	570#	4770#	500#	−9450#	640#
	Br	35	2830#	480#	14240#	360#	34700#	200#	9680#	280#	7480#	200#	−5500#	360#
	Kr	36	5283	12	15750	430	25922	12	5600	13	4623	12	−5434	12
	Rb	37	4015	8	11716	3	17806.3	2.5	10918	3	7274.8	2.9	−1809.4	2.8
	Sr	38	6831	8	13515	8	9568.4	1.7	6637	5	3779.1	2.7	−2225.8	2.7
	Y	39	6196	12	9555	10	1807	8	11227	7	6158	6	1056	7
	Zr	40	8218.5	0.5	10331	10	−4686	3	8258	9	3946.3	1.9	2022.4	1.0
	Nb	41	7227.54	0.08	6536.0	1.5	−13459	4	12800.8	1.5	6390.6	1.5	5628.8	2.4
	Mo	42	9678.34	0.22	8490.2	1.5	−22316	4	8750.1	1.8	3088.3	2.9	5127.99	0.15
	Tc	43	8623	4	4640	4	−31760#	400#	13361	4	2923	7	8127	5
	Ru	44	13439	4	6266	3	−41880#	500#	7055	4	−1732	4	5279	6
	Rh	45	11968	4	2983	4	*		12102	4	193	4	8724	4
	Pd	46	15085	8	4374	5	*		7606	5	−2778	8	7786	4
	Ag	47	14070#	570#	600#	400#	*		12960#	400#	−1320#	500#	11700#	400#
	Cd	48	*		1590#	640#	*		8240#	640#	*		11160#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
92	Ge	32	4070#	710#	*		*		30230#	540#	*		12030#	580#
	As	33	5530#	450#	35110#	560#	−10410#	500#	25860#	400#	*		11820#	400#
	Se	34	6880#	200#	32730#	540#	−9530#	360#	22150#	200#	−32410#	540#	6410#	200#
	Br	35	8380	5	29830#	210#	−7980	6	18534	7	−27030#	300#	6665	5
	Kr	36	9952	3	27466	5	−7311	3	14098	4	−25791	3	920	3
	Rb	37	11557	6	25349	5	−6479	5	10045	10	−20953	5	803	5
	Sr	38	13059	4	22485	4	−5601	4	5592	3	−19183	4	−4587	4
	Y	39	14462	9	20037	10	−4632	9	1637	9	−14345	9	−4992	9
	Zr	40	15829.37	0.10	17086.3	1.4	−2962.40	0.08	−1650.53	0.18	−12102.7	1.0	−9892.1	2.9
	Nb	41	19934	4	14534.4	1.8	−4579.3	2.3	−7526	3	−7390.8	2.6	−12308	6
	Mo	42	22778.5	2.9	12614.15	0.18	−5605	5	−12507.0	2.2	−6201.86	0.18	−18892.5	2.0
	Tc	43	24345.6	2.8	10843	4	−5180	60	−15934	3	422	4	−18760	3
	Ru	44	25558.0	2.9	8707	4	−4040	4	−19656	25	626	6	−23916	8
	Rh	45	27790#	200#	6847.3	2.7	−3748	5	−24760#	400#	5705	3	−24850#	300#
	Pd	46	30140#	400#	4337	25	−2820	30	*		6304	25	*	
	Ag	47	*		1460#	450#	−2730#	570#	*		12940#	400#	*	
93	As	33	5140#	500#	*		−11050#	500#	27390#	590#	*		13050#	450#
	Se	34	6570#	300#	33780#	580#	−10080#	500#	23440#	300#	−31590#	580#	7470#	300#
	Br	35	7930	430	30970#	530#	−8630	430	19730	430	−29800#	590#	7810	430
	Kr	36	9305	3	28447	3	−7570	4	15950	8	−24800#	200#	2564	5
	Rb	37	11001	8	26090	8	−6769	8	11608	13	−23671	9	2176	9
	Sr	38	12583	8	23690	8	−5975	8	7036	8	−18605	8	−3341	12
	Y	39	14018	11	21044	11	−4939	11	2986	11	−16745	12	−3839	10
	Zr	40	15369.1	0.4	18054.7	1.1	−3338.0	0.5	−315.0	0.5	−11544	3	−8740.1	1.8
	Nb	41	16717	3	15439.3	2.4	−1926.6	1.5	−3606.8	1.8	−9685	9	−8475.6	1.5
	Mo	42	20733	5	13489.33	0.20	−4354.3	2.8	−9591.4	2.0	−5636.93	0.20	−15951.0	2.6
	Tc	43	23761.4	2.2	11546	3	−5430	8	−14592.5	2.7	−4441.7	2.1	−17375.8	2.4
	Ru	44	25119.7	2.7	9577	6	−4624	4	−18130	7	2304.0	2.0	−22293	3
	Rh	45	26700	8	7604	3	−4045	4	−22610#	400#	2625	4	−22440	25
	Pd	46	29010#	300#	5425	7	−3141	25	*		7928	7	−28930#	400#
	Ag	47	*		2520#	400#	−2460#	450#	*		9310#	400#	*	
94	As	33	4770#	570#	*		−11580#	560#	28650#	450#	*		13620#	500#
	Se	34	6120#	450#	34780#	640#	−10550#	640#	24750#	400#	*		8220#	590#
	Br	35	7560#	200#	31850#	450#	−9080#	290#	20910#	200#	−29440#	450#	8420#	200#
	Kr	36	8721	12	29300#	200#	−7891	13	17498	12	−27940#	300#	3200	14
	Rb	37	9934	5	26904	5	−6988	3	13789	7	−22960	430	3452	8
	Sr	38	12121	4	24654	3	−6310.6	2.4	8423.6	1.7	−21999	3	−2690	11
	Y	39	13678	11	22158	8	−5419	7	4018	7	−17021	10	−3301	6
	Zr	40	14952.85	0.18	18980	3	−3743.5	1.5	1144.77	0.21	−14473	8	−8127.7	1.5
	Nb	41	16058.4	2.0	16131	9	−2297.2	1.5	−2211	4	−9431	11	−7633.4	1.5
	Mo	42	17748.15	0.20	14532.93	0.15	−2066.64	0.16	−5831	3	−8581.0	0.5	−12879.3	1.0
	Tc	43	21373	5	12283	4	−3921	5	−11248	5	−4234	4	−15014	5
	Ru	44	24425	4	10353	3	−4836	4	−16485	5	−3065	3	−21641	4
	Rh	45	26059	4	8560	4	−4610	3	−20510#	400#	3407	3	−21896	8
	Pd	46	27596	26	6375	5	−3637	4	−25400#	500#	3828	4	−27770#	400#
	Ag	47	30310#	570#	3980#	400#	−3480#	450#	*		9330#	400#	*	
	Cd	48	*		630#	500#	−2470#	640#	*		11100#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
95	As	33	2720#	570#	*		52240#	400#	*		7610#	640#	*	
	Se	34	1600#	640#	18420#	640#	44990#	500#	6080#	640#	5110#	640#	−8090#	710#
	Br	35	4270#	360#	14540#	500#	37380#	300#	7560#	420#	7640#	360#	−7820#	500#
	Kr	36	2882	22	15800#	200#	29501	19	7440	430	4942	19	−3890#	200#
	Rb	37	5402	20	11834	24	20893	20	8954	20	7741	20	−4010	21
	Sr	38	4348	6	13849	6	12589	5	8208	10	4513	7	−707	6
	Y	39	6946	6	9669.5	2.0	4789.7	1.0	9570	8	6505	3	−808	5
	Zr	40	6462.0	0.9	10598	6	−2203	10	9278	11	4021	9	2854	3
	Nb	41	8488.5	1.6	6805.9	0.5	−8446	4	11046.7	0.7	6536.9	0.5	3677	9
	Mo	42	7369.09	0.05	8631.7	1.5	−17746	3	10211.8	1.5	3605.6	1.8	6393.64	0.15
	Tc	43	9929	4	4890.81	0.14	−26272.7	1.4	11501.94	0.25	5656.69	0.24	6083.8	1.8
	Ru	44	8945	10	6588	10	−36560#	400#	10860	10	334	10	8998	9
	Rh	45	13502	5	3046	5	*		9586	4	825	4	6233	5
	Pd	46	11939	5	4345	4	*		9758	4	−2108	4	9982	4
	Ag	47	15420#	400#	934	4	*		10053	7	−234	25	8897.0	2.9
	Cd	48	14270#	640#	1780#	570#	*		10220#	570#	−3800#	570#	13400#	400#
96	Se	34	3740#	710#	19440#	640#	47120#	500#	3910#	640#	4560#	640#	*	
	Br	35	2430#	420#	15370#	580#	40120#	300#	9100#	500#	7350#	420#	−7060#	500#
	Kr	36	5013	21	16540#	300#	32338	9	5260#	200#	4650	430	−6760#	300#
	Rb	37	3533	20	12484	19	24248	3	10704	13	7646	4	−2820	430
	Sr	38	5867	10	14314	22	15877	8	6355	9	4565	12	−3136	9
	Y	39	5176	4	10497	7	7491	7	11226	5	6619	9	−65	9
	Zr	40	7850.2	0.9	11501.6	1.0	641.46	0.09	7623	6	3652	10	293	8
	Nb	41	6887.9	0.5	7231.8	0.9	−5913.8	2.8	12377.31	0.22	6383.3	0.5	4271	10
	Mo	42	9154.34	0.05	9297.6	0.5	−12602.5	2.5	8285.1	1.5	3282.1	1.5	3973.6	0.5
	Tc	43	7877	5	5399	5	−21165	5	13303	5	5849	5	7038	5
	Ru	44	10694	9	7353.34	0.15	−30399	30	8789	4	2389.9	1.0	6373.16	0.22
	Rh	45	9420	5	3521	10	−41240#	500#	13605	4	2391	3	9563	3
	Pd	46	14298	4	5141	5	*		7428	4	−2315	3	6670	3
	Ag	47	12984.5	1.6	1979	3	*		12153	4	−707	7	10003.6	2.6
	Cd	48	16860#	400#	3227	30	*		7430#	400#	−4420#	400#	9050	30
	In	49	*		−1150#	640#	*		12960#	710#	*		13600#	640#
97	Se	34	1370#	710#	*		49490#	500#	5270#	640#	4770#	640#	*	
	Br	35	3860#	500#	15490#	640#	42120#	400#	6840#	640#	7460#	570#	−9350#	570#
	Kr	36	2460	30	16570#	300#	35440	30	7070#	300#	5020#	200#	−5250#	400#
	Rb	37	5236	4	12707	9	27084	5	8351	19	7693	12	−5220#	200#
	Sr	38	3734	9	14515	5	18964	3	8023	20	4846	4	−1586	13
	Y	39	5856	8	10486	11	11104	7	9718	9	7594	7	−1906	7
	Zr	40	5569.15	0.04	11895	4	3183.8	2.8	9000.3	1.0	4279	6	1555.4	1.7
	Nb	41	8071	4	7453	4	−3041	5	10768	4	6531	4	2395	8
	Mo	42	6821.16	0.16	9230.88	0.19	−9737.8	1.5	9952.3	0.5	3688.5	1.5	5371.00	0.23
	Tc	43	9470	5	5714.01	0.26	−16284.7	1.4	11202.75	0.26	6058.23	0.27	4795.6	1.5
	Ru	44	8111.5	2.8	7588	6	−25608	12	10606.3	2.8	2902	5	7940.0	2.8
	Rh	45	10944	4	3771	3	−34870#	400#	11606	10	4886	5	7243	5
	Pd	46	9685.8	2.9	5407	3	*		11245	4	−33	4	10423	4
	Ag	47	14350.1	1.7	2031.8	2.9	*		9742	3	27	4	7621	4
	Cd	48	12900	30	3145	12	*		9942	12	−3250#	400#	11233	12
	In	49	17310#	640#	−700#	400#	*		9910#	570#	−2130#	640#	10360#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
95	As	33	4290#	570#	*		*		30200#	500#	*		14880#	570#
	Se	34	5580#	580#	*		−11060#	710#	26030#	500#	*		9450#	540#
	Br	35	7100#	530#	32930#	500#	−9780#	420#	22040#	300#	−32140#	500#	9430#	300#
	Kr	36	8166	19	30040#	300#	−8317	19	18964	19	−26850#	400#	4333	19
	Rb	37	9416	22	27580	430	−7211	20	15333	20	−25530#	200#	4881	20
	Sr	38	11180	9	25565	6	−6574	6	10537	6	−21064	13	−843	8
	Y	39	13142	11	23185	8	−5890.4	2.3	5560.0	1.1	−19952.4	2.3	−2028.2	1.0
	Zr	40	14680.5	1.0	20152	8	−4439.5	1.3	2051.9	0.9	−14103.3	1.9	−7362.2	1.7
	Nb	41	15716.0	1.6	17137	11	−2859.6	1.9	−770.3	0.5	−11724	6	−6443.5	0.5
	Mo	42	17047.43	0.22	15167.7	0.5	−2241.10	0.15	−4255	9	−7731.51	0.20	−11625	4
	Tc	43	18552.5	1.0	13381.0	1.5	−1802.5	2.9	−7675	4	−6935.8	1.5	−11504	3
	Ru	44	22384	10	11228	9	−3665	11	−13491	10	−2332	9	−18619	10
	Rh	45	25470	5	9312	4	−4778	4	−18597	4	−1472	6	−20313	6
	Pd	46	27023	8	7328	4	−4152	4	−23070#	400#	5329	4	−25640#	400#
	Ag	47	29490#	400#	5307.6	2.8	−3712	7	*		5878	4	−27120#	500#
	Cd	48	*		2390#	400#	−3100#	500#	*		11920#	400#	*	
96	Se	34	5350#	640#	*		−11830#	710#	27300#	500#	*		9980#	580#
	Br	35	6700#	360#	33790#	500#	−10260#	500#	23140#	300#	−31850#	500#	9880#	300#
	Kr	36	7896	15	31080#	400#	−8910#	200#	19817	12	−30260#	500#	4721	22
	Rb	37	8934	4	28280#	200#	−7542	6	16976	5	−24790#	300#	5697	6
	Sr	38	10215	9	26148	15	−6574	9	12521	8	−24048	20	237	8
	Y	39	12122	8	24346	5	−5984	6	7272	4	−19726	21	−742	4
	Zr	40	14312.16	0.20	21171.1	1.7	−4997	3	3356.03	0.07	−17605	5	−6723.9	0.5
	Nb	41	15376.3	1.5	17829	6	−3211	9	219	5	−11665.6	1.0	−5962.28	0.12
	Mo	42	16523.42	0.07	16103.50	0.20	−2760.69	0.15	−2714.57	0.05	−10423.9	0.9	−10850.26	0.14
	Tc	43	17806	7	14030	5	−1793	5	−6133	6	−6324	5	−10436	11
	Ru	44	19639	3	12244.16	0.08	−1696.65	0.20	−9887.9	2.5	−5657.42	0.07	−15811	4
	Rh	45	22922	4	10109	5	−3187	4	−15032.6	2.9	−962.1	2.8	−17794	4
	Pd	46	26236	5	8187	4	−4316	3	−20511	30	−24	10	−24520.5	2.8
	Ag	47	28400#	400#	6324	3	−4087.5	2.7	−26210#	500#	6395	4	−25830#	400#
	Cd	48	31120#	500#	4160	30	−3460	40	*		6996	30	*	
	In	49	*		630#	640#	−2650#	640#	*		14000#	500#	*	
97	Se	34	5110#	710#	*		*		28400#	500#	*		11040#	580#
	Br	35	6290#	500#	34930#	570#	−10930#	570#	24520#	400#	*		11030#	400#
	Kr	36	7480	40	31940#	500#	−9220#	300#	21090	30	−28980#	500#	5790	30
	Rb	37	8769	20	29250#	300#	−8050	430	17596	7	−27600#	300#	6328	9
	Sr	38	9601	6	27000	19	−6870	4	14356	3	−22769	10	1678	6
	Y	39	11032	7	24800	21	−5921	10	9487	8	−22050	7	1252	7
	Zr	40	13419.3	0.9	22392	5	−5276	8	4608.04	0.17	−17307	8	−5405.18	0.11
	Nb	41	14959	4	18955	4	−3801	11	1617	4	−14561	6	−4879	4
	Mo	42	15975.50	0.17	16462.7	0.9	−2847.5	0.5	−1424.2	2.8	−9394.85	0.17	−9794	5
	Tc	43	17346.61	0.29	15011.6	0.6	−2431.9	1.5	−4658	3	−8906.07	0.28	−9210.93	0.27
	Ru	44	18806	10	12986.6	2.8	−1738.3	2.8	−8314	3	−4614.6	2.8	−14503	4
	Rh	45	20364	5	11124	3	−1381	4	−11627	3	−4029	6	−14441	4
	Pd	46	23984	3	8928	10	−3016.2	2.5	−17295	11	984.4	1.6	−21221.9	1.8
	Ag	47	27334.6	2.0	7173	4	−4346.5	2.9	−23250#	400#	1465	3	−23326	30
	Cd	48	29760#	400#	5124	12	−3852	13	*		8391	12	−30130#	500#
	In	49	*		2520#	400#	−3720#	570#	*		9680#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
98	Br	35	2120#	570#	16240#	640#	44240#	400#	8460#	640#	6940#	640#	−8750#	570#
	Kr	36	4830	60	17540#	400#	37030	50	4670#	300#	4470#	300#	−8470#	500#
	Rb	37	3921	16	14170	30	29155	17	9443	18	6654	25	−4870#	300#
	Sr	38	5913	5	15192	4	21694	3	5643	5	4335	20	−4617	19
	Y	39	4249	7	11002	4	14140	4	11336	9	7693	6	−754	20
	Zr	40	6416	8	12455	11	6948	8	7759	10	4809	9	−513	10
	Nb	41	5993	7	7877	5	−345	11	12625	5	6999	5	3348	5
	Mo	42	8642.60	0.06	9802	4	−6795	5	8197.62	0.20	3534.3	0.5	3190.4	0.9
	Tc	43	7285	3	6177	3	−13357	26	13073	3	6143	3	6000	3
	Ru	44	10180.5	2.8	8298.74	0.23	−20569	11	8303	5	2650.31	0.23	5128.58	0.19
	Rh	45	8689	11	4349	10	−29250#	300#	13611	10	5141	14	8482	10
	Pd	46	11585	5	6048	6	−40320#	500#	9079	6	1884	6	7783	11
	Ag	47	10212	26	2558	26	*		13827	26	1754	26	10911	26
	Cd	48	15220	16	4015	11	*		7706	11	−3053	11	7952	11
	In	49	14310#	500#	710#	300#	*		12460#	300#	−2170#	500#	11460#	300#
	Sn	50	*		600#	640#	*		8160#	710#	*		11540#	640#
99	Br	35	3320#	570#	*		47340#	400#	6500#	640#	7360#	640#	*	
	Kr	36	2370#	210#	17790#	450#	39070#	200#	6160#	450#	4520#	360#	−7100#	540#
	Rb	37	4823	17	14160	50	31214	13	7080	30	6844	10	−7270#	300#
	Sr	38	4167	6	15438	17	23452	5	6711	5	3700	6	−3771	10
	Y	39	6422	7	11510	7	16686	7	8648	7	7139	11	−3643	7
	Zr	40	4406	13	12612	11	10009	11	9210	12	5578	11	948	13
	Nb	41	6882	13	8342	15	3220	19	11312	12	7968	12	1642	13
	Mo	42	5925.48	0.15	9735	5	−3789	5	10343	4	4496.71	0.25	5115.08	0.23
	Tc	43	8967	3	6502.3	0.4	−10620	4	10926.2	0.4	6329.6	0.4	3919.9	0.4
	Ru	44	7466.8	0.4	8481	3	−17693.6	1.6	10305.5	0.4	3060	5	6816.1	0.3
	Rh	45	10447	18	4615	15	−24134	16	11276	15	5389	15	5913	16
	Pd	46	8931	7	6290	11	−34160#	500#	11092	6	2372	5	9546	5
	Ag	47	11704	26	2677	6	*		11808	4	4347	4	8626	5
	Cd	48	10342	11	4144	26	*		11714.4	2.1	−411.2	1.7	11907.2	2.9
	In	49	15560#	300#	1050	13	*		9802	13	−880	30	8881	7
	Sn	50	15090#	710#	1380#	580#	*		10380#	640#	−4710#	710#	13310#	500#
100	Br	35	1870#	570#	*		50220#	400#	*		6860#	640#	*	
	Kr	36	4230#	360#	18700#	500#	41660#	300#	4050#	500#	4160#	500#	−9970#	580#
	Rb	37	3212	13	15000#	200#	33529	14	8700	50	6090	30	−6620#	400#
	Sr	38	5370	8	15985	8	26375	7	5262	18	3566	7	−6680	30
	Y	39	4750	10	12093	9	18700	8	9810	9	6122	9	−3157	8
	Zr	40	6827	13	13018	10	12854	8	6632	8	4607	11	−2146	9
	Nb	41	5527	14	9464	13	5800	20	12201	12	8010	8	1971	10
	Mo	42	8294.0	0.4	11147	12	−977	13	8043	5	4274	4	2390.2	0.3
	Tc	43	6764.4	1.0	7341.2	1.1	−7884	5	12804.4	1.1	6386.4	1.1	5227	4
	Ru	44	9673.33	0.03	9186.86	0.16	−15032.5	1.7	7917	3	2856.8	0.4	3963.9	0.4
	Rh	45	8107	23	5255	18	−21413	18	13350	18	5394	18	7275	18
	Pd	46	11106	14	6949	20	−28070	240	8675	16	2210	13	6551	13
	Ag	47	9500	6	3246	7	−40890#	400#	13893	7	4533	5	10070	6
	Cd	48	12334.4	2.2	4774	4	*		9592	26	1604.6	2.2	9258.6	2.3
	In	49	10828	7	1535.2	2.7	*		14194	11	1198	12	12403.7	2.6
	Sn	50	17200#	560#	3020	240	*		7490#	380#	−4590#	470#	9010	240
	Sb	51	*		−3480#	640#	*		14460#	640#	*		16090#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
98	Br	35	5980#	500#	*		−11470#	570#	26320#	400#	*		11370#	400#
	Kr	36	7290	50	33020#	500#	−10080#	400#	22170	50	−32440#	500#	6200	50
	Rb	37	9157	16	30740#	300#	−9140#	200#	17924	16	−27660#	400#	6140	16
	Sr	38	9647	9	27899	10	−7500	13	14859	9	−26220	30	1622	7
	Y	39	10106	5	25517	4	−6155.6	2.8	11231	5	−21063.3	2.7	2571.9	1.9
	Zr	40	11986	8	22941	12	−4861	9	6834	8	−19990	9	−3750	9
	Nb	41	14064	5	19772	7	−3598	8	2909	6	−14698	8	−4051	5
	Mo	42	15463.77	0.17	17255.10	0.18	−3271.61	0.24	113.67	0.07	−12468.30	0.18	−8967.42	0.21
	Tc	43	16754	6	15408	3	−2489	4	−3253	11	−8119	5	−8384	4
	Ru	44	18292.01	0.19	14012.74	0.19	−2240.50	0.19	−6909	5	−7973.92	0.09	−13739	3
	Rh	45	19634	10	11936	11	−1447	11	−10104	28	−3249	10	−13444	10
	Pd	46	21271	5	9819	5	−1162	6	−13660	12	−2490	5	−18457	5
	Ag	47	24562	26	7965	26	−2591	26	−19150#	300#	2197	26	−20635	28
	Cd	48	28120	30	6046	11	−3987	12	−26660#	500#	2857	11	−28040#	400#
	In	49	31620#	580#	3850#	300#	−3960#	500#	*		9720#	300#	*	
	Sn	50	*		−100#	500#	−2730#	710#	*		12220#	500#	*	
99	Br	35	5440#	570#	*		−12080#	570#	27820#	400#	*		12880#	400#
	Kr	36	7200#	200#	34030#	540#	−10850#	540#	23970#	200#	*		7750#	200#
	Rb	37	8745	4	31700#	400#	−9700#	300#	19523	8	−30360#	400#	7230	5
	Sr	38	10080	6	29600	30	−8785	19	15098	12	−25560	50	1704	5
	Y	39	10671	9	26703	7	−7176	21	11691	14	−23564	17	2567	11
	Zr	40	10823	10	23614	11	−4919	12	8354	11	−18483	11	−2163	12
	Nb	41	12875	13	20798	14	−3534	12	4994	12	−17331	12	−2291	12
	Mo	42	14568.08	0.16	17611.43	0.23	−2735.1	0.9	1655.0	0.4	−11977	8	−7608	3
	Tc	43	16252.0	0.4	16304	4	−2968.0	0.6	−1774	15	−11094	5	−7171.0	0.4
	Ru	44	17647.3	2.8	14658.4	0.4	−2338.3	0.3	−5444	5	−6798.2	0.4	−12516	10
	Rh	45	19136	15	12913	15	−1964	15	−8846	15	−6411	15	−12306	16
	Pd	46	20517	5	10639	5	−1149	11	−12250	5	−1240	5	−17176	26
	Ag	47	21917	4	8725	5	−794	5	−15288	8	−818	11	−17120	11
	Cd	48	25562	12	6702.7	2.2	−2391	3	−21910#	500#	4100	5	−24070#	300#
	In	49	29870#	400#	5064	7	−4103	7	*		4366	27	−28490#	500#
	Sn	50	*		2090#	500#	−3550#	640#	*		12350#	500#	*	
100	Br	35	5190#	570#	*		*		29160#	400#	*		13380#	450#
	Kr	36	6600#	300#	*		−11330#	580#	25110#	300#	*		8340#	300#
	Rb	37	8036	20	32790#	400#	−10480#	300#	21061	14	−30250#	400#	8185	13
	Sr	38	9538	8	30150	50	−9141	11	16555	11	−28560#	200#	2755	10
	Y	39	11172	8	27532	18	−8393	9	12468	11	−23491	9	2222	13
	Zr	40	11234	12	24528	9	−5879	12	9820	8	−21143	9	−2109	15
	Nb	41	12409	9	22076	8	−3886	9	6231	8	−16436	10	−1892	8
	Mo	42	14219.5	0.3	19489	8	−3178.9	0.3	3034.32	0.17	−15865	11	−6934.89	0.23
	Tc	43	15732	4	17076	5	−2844.5	1.1	−431	18	−10976	12	−6468.5	1.0
	Ru	44	17140.2	0.4	15689.1	0.4	−2857.2	0.3	−4012	13	−10546.0	0.4	−11743	15
	Rh	45	18554	21	13736	18	−2194	19	−7453	19	−5551	18	−11481	19
	Pd	46	20037	14	11564	13	−1560	13	−11021	13	−4879	13	−16578	13
	Ag	47	21205	26	9536	11	−874	5	−13961	5	128	16	−16278	5
	Cd	48	22677	11	7452	5	−427.2	3.0	−17050	240	698	5	−20845	7
	In	49	26390#	300#	5680	26	−1946.4	2.3	−26930#	400#	5243	4	−24230#	500#
	Sn	50	32290#	560#	4070	240	−3890	240	*		5490	240	*	
	Sb	51	*		−2100#	500#	−1230#	640#	*		16880#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
101	Br	35	2870#	570#	*		53160#	400#	*		*		*	
	Kr	36	1940#	580#	18770#	640#	44580#	500#	5430#	640#	4330#	640#	*	
	Rb	37	4347	21	15120#	300#	36353	17	6720#	200#	6570	50	−8840#	400#
	Sr	38	3578	11	16351	15	28196	8	6508	9	3909	18	−5430	50
	Y	39	5803	11	12526	10	21290	25	8175	9	6232	8	−5039	18
	Zr	40	4860	12	13127	12	14797	8	8194	11	3997	9	−1092	9
	Nb	41	7171	9	9808	9	8521	7	9436	11	7254	9	−951	4
	Mo	42	5398.24	0.07	11018	8	1912	5	9526	12	4869	5	3408	8
	Tc	43	8393	24	7440	24	−5010	24	10337	24	6636	24	2827	25
	Ru	44	6802.04	0.23	9224.5	1.0	−12121.5	1.5	10082.20	0.28	3339	3	5804.5	0.4
	Rh	45	9893	19	5474	6	−18866	7	10924	6	5681	6	4667	7
	Pd	46	8288	14	7130	19	−25542	5	10834	16	2612	11	8444	5
	Ag	47	11267	7	3408	14	−34530#	500#	11558	7	4851	7	7492	11
	Cd	48	9713.1	2.2	4987	5	*		11584	4	2104	26	11131	5
	In	49	12440	4	1641	4	*		12096	4	3978	11	10176	26
	Sn	50	10810	240	3001.0	2.4	*		12242	7	−1100#	300#	13417	11
	Sb	51	17620#	640#	−3060#	560#	*		11930#	710#	−940#	710#	12780#	580#
102	Kr	36	3640#	710#	19540#	640#	47430#	500#	3660#	640#	4020#	640#	*	
	Rb	37	2780	30	15950#	500#	39056	27	8180#	300#	6170#	200#	−8290#	400#
	Sr	38	4920	28	16920	30	31388	28	4800	29	3813	27	−7980#	200#
	Y	39	4189	8	13138	9	23401	10	9356	8	6210	6	−4405	6
	Zr	40	6492	12	13816	11	17525	9	6452	12	3926	11	−3416	10
	Nb	41	5478	5	10426	9	10485	7	10785	9	6182	11	−8	7
	Mo	42	8112	8	11959	9	4342	8	6941	12	3638	15	−298	13
	Tc	43	6300	26	8343	9	−2327	12	12330	9	6261	9	3408	15
	Ru	44	9219.64	0.05	10051	24	−9446.6	1.7	7627.0	1.0	3087.12	0.29	2510.3	0.4
	Rh	45	7442	9	6114	6	−16088	8	13155	6	5706	6	6193	6
	Pd	46	10542	5	7779	6	−23083	16	8399	18	2517	15	5368.83	0.24
	Ag	47	8984	9	4104	9	−31150#	400#	13680	15	4799	9	8955	17
	Cd	48	11894.6	2.2	5614	5	−41910#	300#	9190	5	1914	4	8168	5
	In	49	10220	6	2147	5	*		14211	5	4101	5	11661	6
	Sn	50	13001	17	3562	17	*		10069	17	1465	18	10758	17
	Sb	51	12370#	640#	−1500#	400#	*		16760#	470#	1790#	640#	15970#	400#
	Te	52	*		−1760#	580#	*		10210#	500#	*		15920#	580#
103	Kr	36	1620#	710#	*		50110#	500#	4910#	640#	4270#	640#	*	
	Rb	37	3880	40	16190#	500#	41980	30	6240#	500#	6520#	300#	−10300#	400#
	Sr	38	3120	40	17270	40	33730	30	6030	30	3910	30	−6860#	300#
	Y	39	5356	12	13574	29	26148	15	7577	14	6224	13	−6549	16
	Zr	40	4299	13	13925	10	19458	9	7957	12	4378	12	−2345	12
	Nb	41	6802	5	10736	10	13003	5	8843	9	6208	9	−2059	9
	Mo	42	5465	12	11945	10	6502	9	8648	10	3701	12	1065	12
	Tc	43	8102	13	8333	13	198	10	9626	10	6452	10	833	12
	Ru	44	6232.05	0.15	9982	9	−6615.2	1.8	9788	24	3619.5	1.1	4572.3	0.3
	Rh	45	9320	7	6214.2	2.3	−13399	9	10637.2	2.3	6059.7	2.3	3637.3	2.5
	Pd	46	7625.3	0.8	7963	6	−20331.1	2.8	10666	6	2998	18	7416.8	0.8
	Ag	47	10627	9	4189	4	−28130#	300#	11340	6	5277	13	6435	19
	Cd	48	9063.4	2.4	5694	8	−38050#	200#	11393	5	2351	5	10210	13
	In	49	12009	10	2262	9	*		11915	9	4426	9	9152	10
	Sn	50	10377	17	3720	5	*		12132	4	1916	3	12715	3
	Sb	51	13640#	500#	−860#	300#	*		13930#	300#	5340#	380#	13150#	300#
	Te	52	12920#	360#	−1210#	450#	*		14910#	540#	−490#	450#	20190#	310#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
101	Br	35	4740#	570#	*		*		30640#	400#	*		14740#	500#
	Kr	36	6170#	540#	*		−11910#	710#	26740#	500#	*		9610#	500#
	Rb	37	7560	17	33810#	400#	−10960#	400#	22517	18	−32730#	400#	9208	18
	Sr	38	8948	9	31350#	200#	−10260	30	17837	12	−27900#	300#	3928	11
	Y	39	10554	10	28512	8	−8961	7	13837	8	−26082	14	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	−18857	9	−770	4
	Mo	42	13692.3	0.4	20481	11	−3008.0	0.3	4438.12	0.29	−14436	8	−5568.7	1.0
	Tc	43	15158	24	18587	27	−3167	24	1068	25	−13842	25	−5189	24
	Ru	44	16475.36	0.24	16565.7	0.4	−2838.1	0.4	−2526	5	−9054.01	0.29	−10438	18
	Rh	45	18000	16	14661	6	−2617	6	−6078	8	−8679	6	−10268	14
	Pd	46	19394	7	12385	5	−1737	5	−9596	5	−3494	5	−15365	7
	Ag	47	20768	6	10357	16	−1197	6	−12788	6	−3032	19	−15211	5
	Cd	48	22047.5	2.1	8233	5	−454.5	2.2	−15946.6	1.8	2090	13	−19729.9	2.6
	In	49	23268	8	6415	5	−36	4	−21750#	500#	2303	6	−19470	240
	Sn	50	28010#	500#	4536.2	1.8	−1803	12	*		7015.9	1.9	−30710#	400#
	Sb	51	*		−40#	500#	−1540#	640#	*		10090#	500#	*	
102	Kr	36	5580#	580#	*		*		28020#	500#	*		10320#	500#
	Rb	37	7123	30	34720#	400#	−11620#	400#	23930	28	−32630#	400#	10010	28
	Sr	38	8498	27	32040#	300#	−10350	60	19409	28	−30880#	500#	4811	27
	Y	39	9992	9	29489	13	−9229	17	15126	5	−25924	17	3917	9
	Zr	40	11351	12	26342	11	−7584	9	11979	12	−23547	12	−761	10
	Nb	41	12650	8	23553	8	−6430	3	8275	9	−18532	8	−849.8	2.5
	Mo	42	13511	8	21766	12	−4704	12	5545	8	−17689	12	−5288	25
	Tc	43	14694	9	19360	12	−3474	10	2210	11	−12971	10	−4687	9
	Ru	44	16021.68	0.24	17491.31	0.29	−3415.2	0.4	−1203.48	0.04	−12875.41	0.30	−9765	6
	Rh	45	17335	19	15339	6	−2775	7	−4536	10	−7728	25	−9422	8
	Pd	46	18830	13	13253.50	0.24	−2098.0	0.4	−8243.1	1.7	−7233.81	0.06	−14640	5
	Ag	47	20251	9	11234	20	−1492	13	−11552	9	−2123	10	−14482	8
	Cd	48	21607.7	2.3	9022	13	−764	5	−14840	17	−1517	5	−19184	4
	In	49	22660	5	7134	7	−44	26	−19600#	400#	3351	7	−18876	5
	Sn	50	23810	240	5203	17	416	20	−27070#	300#	3728	17	−26090#	500#
	Sb	51	29990#	570#	1500#	400#	410#	500#	*		10160#	400#	*	
	Te	52	*		−4820#	380#	830#	590#	*		14850#	300#	*	
103	Kr	36	5260#	710#	*		*		29520#	500#	*		11470#	500#
	Rb	37	6650	40	35730#	400#	−12170#	400#	25410	30	*		11050	40
	Sr	38	8040	30	33220#	500#	−11100#	200#	20590	30	−30360#	500#	5881	29
	Y	39	9545	13	30497	20	−9761	12	16571	12	−28504	29	5053	14
	Zr	40	10791	12	27063	12	−7715	10	13145	13	−22926	28	418	10
	Nb	41	12280	5	24552	8	−6810	8	9576	10	−21145	6	461	9
	Mo	42	13577	9	22371	12	−5763	14	6313	9	−16662	13	−4452	13
	Tc	43	14403	26	20291	10	−4694	15	3427	10	−15595	10	−3570	10
	Ru	44	15451.69	0.16	18325.1	0.3	−3721.7	0.5	189.8	0.8	−10995	8	−8555	6
	Rh	45	16762	6	16265	24	−3127.1	2.3	−3229	5	−10747	9	−8200.1	2.3
	Pd	46	18167	5	14076.8	0.8	−2256.5	0.8	−6805.0	2.0	−5639.5	0.8	−13281	8
	Ag	47	19611	6	11968	7	−1672	15	−10170	10	−5309	8	−13214	4
	Cd	48	20958.0	2.3	9798	5	−896	5	−13526	3	−38.0	1.8	−18028	5
	In	49	22228	10	7876	10	−348	10	−17960#	300#	325	12	−17884	19
	Sn	50	23378.5	2.8	5867	3	381	3	−24530#	200#	5245	3	−24100#	400#
	Sb	51	26010#	580#	2700#	300#	2330#	300#	*		6740#	300#	−26990#	420#
	Te	52	*		−2710#	200#	3000#	540#	*		14930#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
104	Rb	37	2470#	200#	17040#	540#	44360#	200#	7410#	540#	5990#	540#	−9900#	450#
	Sr	38	4260	40	17650	50	36930	30	4540	40	3990	40	−9190#	500#
	Y	39	3610	19	14060	30	28583	16	8890	30	6192	18	−5811	23
	Zr	40	5980	13	14549	15	22379	9	6166	10	4201	12	−4747	12
	Nb	41	4855	4	11292	9	15147.3	2.6	10480	9	6213	8	−1111	7
	Mo	42	7461	13	12604	10	9050	9	6665	9	3411	10	−1537	12
	Tc	43	6045	10	8913	9	2537	5	11693	9	5805.5	2.3	1959	4
	Ru	44	8900.8	1.3	10781	9	−4128.1	2.1	7188	9	3112	24	1069.7	1.2
	Rh	45	6998.96	0.08	6981.2	2.3	−10776	6	12857.9	2.3	5862.8	2.3	5032	24
	Pd	46	10008.7	1.5	8651.6	2.6	−17768	5	8100	7	2882	6	4210.1	1.3
	Ag	47	8384	6	4948	4	−25777	13	13498	4	5181	6	7943	7
	Cd	48	11387.9	2.4	6455	4	−34450	250	8989	8	2230	5	7110	5
	In	49	9622	11	2820	6	−44460#	500#	14188	6	4518	6	10798	8
	Sn	50	12572	5	4283	10	*		9779	6	1784	6	9857	5
	Sb	51	10740#	300#	−499	12	*		16193	21	5416	12	14855	13
	Te	52	15000#	320#	140#	390#	*		12290#	470#	2140#	560#	16010	250
	I	53	*		−3590#	540#	*		16740#	580#	*		20730#	710#
105	Rb	37	3420#	360#	*		47110#	300#	5610#	580#	6210#	580#	*	
	Sr	38	2550	50	17720#	200#	39450	40	5870	50	4220	50	−8090#	500#
	Y	39	4650#	200#	14450#	200#	31630#	200#	7360#	200#	6470#	200#	−7680#	200#
	Zr	40	3812	15	14752	20	24477	12	7710	16	4579	13	−3639	29
	Nb	41	6175	4	11487	10	17936	5	8604	10	6530	10	−3096	6
	Mo	42	5060	9	12809.8	2.1	11084.4	2.1	8407	4	3830	3	−105	9
	Tc	43	7689	9	9141	13	4875	10	9469	13	6229	12	−251	9
	Ru	44	5910.09	0.11	10645.8	2.5	−1601.4	1.9	9380	9	3502	9	3272	8
	Rh	45	8963	3	7043.5	2.3	−8210	11	10126.8	2.5	6119.3	2.5	2369	9
	Pd	46	7094.3	0.7	8747.0	2.5	−15078	4	10325.2	2.5	3230	6	6335.5	1.1
	Ag	47	10027	6	4966	5	−23056	22	11097	5	5696	5	5358	8
	Cd	48	8436.8	2.2	6507	4	−31938	3	11180	4	2777	8	9215.3	1.4
	In	49	11529	12	2961	10	−40440#	400#	11722	10	4883	10	8253	13
	Sn	50	9784	6	4445	7	*		12004	10	2220	6	11967	4
	Sb	51	12749	25	−322	22	*		13821	22	5669	27	12326	22
	Te	52	10940	250	346	13	*		14990#	300#	3570#	400#	18071	17
	I	53	15550#	640#	−3030#	470#	*		14110#	450#	3410#	500#	17550#	570#
106	Rb	37	2070#	500#	*		49400#	400#	*		5760#	640#	*	
	Sr	38	4190#	210#	18490#	360#	42130#	200#	4160#	280#	3910#	200#	−10660#	540#
	Y	39	3290#	360#	15190#	300#	33950#	300#	8330#	300#	6290#	300#	−7100#	300#
	Zr	40	5195	13	15300#	200#	27741	7	6124	17	4739	12	−5716	29
	Nb	41	4358	4	12033	12	20160	5	10226	9	6471	9	−2099	11
	Mo	42	6867	9	13502	10	13779	9	6395	9	3765	10	−2673	13
	Tc	43	5611	9	9692.4	2.6	7206	4	11319	9	6082	9	939	4
	Ru	44	8459	5	11416	10	808	5	6966	6	3146	11	278	11
	Rh	45	6583	6	7716	5	−5755	13	12445	5	5769	5	3889	11
	Pd	46	9560.98	0.28	9344.8	2.2	−12554	5	7763.1	2.5	2988.8	2.5	3006.6	1.1
	Ag	47	7942	5	5813.7	2.8	−20469	8	13163.1	2.9	5379	3	6736	4
	Cd	48	10868.9	1.7	7349	5	−29027	19	8695	4	2535	4	5971.7	1.4
	In	49	9038	16	3563	12	−36750#	400#	14072	12	4908	12	9842	13
	Sn	50	12085	6	5001	11	−47190#	300#	9541	7	2144	10	8946	5
	Sb	51	10529	23	423	8	*		15864	9	5516	8	13806	12
	Te	52	13780	19	1378	29	*		11944	23	3430#	300#	14667	19
	I	53	12730#	570#	−1250#	400#	*		16370#	470#	3600#	450#	18460#	500#
	Xe	54	*		−1750#	500#	*		12270#	580#	*		18090#	360#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
104	Rb	37	6350#	200#	*		−12780#	450#	26550#	200#	*		11700#	200#
	Sr	38	7380	40	33840#	500#	−11130#	300#	22310	30	−33000#	500#	6970	30
	Y	39	8965	16	31330	30	−10158	20	17816	16	−28240	40	5742	18
	Zr	40	10279	13	28123	28	−8325	12	14626	13	−25790	30	1240	10
	Nb	41	11656.2	2.8	25217	4	−6914	8	10766.5	2.5	−20644	11	1071	9
	Mo	42	12926	12	23340	13	−6396	12	7752	9	−19824	13	−3811	13
	Tc	43	14148	9	20858	3	−5212	8	4381	3	−14839	5	−3382.7	2.3
	Ru	44	15132.9	1.3	19114	8	−4328.5	1.2	1297.71	0.04	−14431	9	−8136.3	2.6
	Rh	45	16319	7	16964	9	−3361.7	2.5	−1844	5	−9644	10	−7573.7	2.4
	Pd	46	17634.1	1.3	14865.9	1.3	−2591.9	1.3	−5425.8	2.1	−9416.2	1.3	−12663	4
	Ag	47	19011	9	12910	8	−1949	19	−8933	7	−4373	5	−12535	5
	Cd	48	20451.3	2.4	10643.6	1.7	−1178	13	−12342	5	−3800.6	1.9	−17407	9
	In	49	21630	7	8514	10	−469	7	−16844	14	1331	7	−17128	6
	Sn	50	22949	17	6545	5	143	5	−22100	250	1737	5	−23030#	300#
	Sb	51	24380#	400#	3221	13	2415	13	−27620#	500#	8005	15	−24810#	200#
	Te	52	27920#	390#	−720	250	5200	80	*		10310	250	*	
	I	53	*		−4800#	640#	3110#	640#	*		17660#	580#	*	
105	Rb	37	5900#	300#	*		−13330#	500#	27770#	360#	*		12540#	300#
	Sr	38	6810	50	34770#	500#	−11730#	500#	23570	50	*		8040	50
	Y	39	8260#	200#	32100#	200#	−10460#	200#	19350#	200#	−30410#	280#	7080#	200#
	Zr	40	9792	15	28820	30	−8559	15	15874	12	−25340	30	2282	12
	Nb	41	11030	6	26036	12	−7285	8	12281	10	−23209	16	2357	10
	Mo	42	12521	9	24102	9	−6597	9	8602.5	2.2	−18904	9	−2825.6	2.9
	Tc	43	13734	13	21746	10	−5730	9	5655	9	−17673	9	−2171	9
	Ru	44	14810.9	1.3	19559	9	−4840.4	1.3	2481.9	0.7	−12880	9	−7047.4	2.6
	Rh	45	15962	3	17824	10	−3931	24	−780	5	−12562	3	−6528.1	2.3
	Pd	46	17103.0	1.4	15728.1	1.1	−2884.1	1.1	−4083.3	1.8	−7609.7	0.7	−11373	4
	Ag	47	18411	6	13618	5	−2084	7	−7431	11	−7401	5	−11174	5
	Cd	48	19824.7	2.3	11455.0	1.6	−1327	5	−10995	4	−2228.7	1.8	−16223	6
	In	49	21151	14	9416	11	−731	11	−15625	24	−1814	11	−16086	11
	Sn	50	22356	5	7265	4	73	4	−20943	5	3340	4	−22072	13
	Sb	51	23490#	300#	3961	24	2106	22	−24820#	400#	4878	23	−22560	250
	Te	52	25940#	200#	−152	4	5069	3	*		11942	5	−28750#	500#
	I	53	*		−2890#	500#	5180#	640#	*		12850#	400#	*	
106	Rb	37	5490#	450#	*		*		28990#	500#	*		13010#	400#
	Sr	38	6730#	200#	*		−12280#	540#	24580#	200#	*		8500#	280#
	Y	39	7940#	300#	32920#	360#	−10970#	300#	20410#	300#	−30280#	420#	7600#	300#
	Zr	40	9007	11	29750	30	−8835	27	17546	10	−27990	40	3262	6
	Nb	41	10532.9	1.7	26785	16	−7454	4	13534.0	2.2	−22920#	200#	3059.3	2.2
	Mo	42	11927	13	24988	13	−6971	13	10195	11	−21959	15	−2003	13
	Tc	43	13300.4	2.9	22502.2	2.2	−5863	3	6626	6	−17110	4	−1872.2	2.2
	Ru	44	14369	5	20557	11	−5187	10	3584	5	−16279	6	−6543	6
	Rh	45	15546	6	18362	6	−4214	10	579	6	−11455	10	−6017	5
	Pd	46	16655.3	0.7	16388.3	0.7	−3225.5	1.1	−2775.39	0.10	−11260.6	0.7	−10907	5
	Ag	47	17969	5	14561	4	−2584	7	−6334	12	−6380	4	−10679	3
	Cd	48	19305.7	2.0	12315.2	0.7	−1653.6	1.1	−9779	5	−6003.25	0.30	−15562	10
	In	49	20567	14	10070	13	−786	15	−14134	14	−825	13	−15340	13
	Sn	50	21869	6	7962	5	−118	5	−19248	20	−307	5	−21408	22
	Sb	51	23278	14	4869	9	1797	9	−22610#	400#	5878	13	−22149	8
	Te	52	24720	250	1056	19	4290	9	−27950#	300#	7945	19	−26980#	400#
	I	53	28280#	640#	−900#	400#	4820#	570#	*		12870#	400#	*	
	Xe	54	*		−4790#	390#	5170#	420#	*		14950#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
107	Sr	38	2070#	360#	18490#	500#	44540#	300#	5510#	420#	4310#	360#	*	
	Y	39	4250#	420#	15260#	360#	36780#	300#	6630#	300#	6310#	300#	−8870#	360#
	Zr	40	3290#	200#	15300#	360#	30060#	200#	7480#	280#	5060#	200#	−4740#	200#
	Nb	41	5593	8	12430	9	23140	14	8445	15	6858	12	−4082	18
	Mo	42	4488	13	13632	9	15827	9	8081	10	4131	9	−1181	13
	Tc	43	7086	9	9912	12	9659	8	9293	9	6457	12	−1292	8
	Ru	44	5612	10	11416	9	3127	9	9044	12	3579	9	2127	12
	Rh	45	8572	13	7829	13	−3297	15	9783	12	6097	12	1361	12
	Pd	46	6536.4	0.5	9298	5	−9860	5	10189.9	2.3	3451.3	2.6	5371.0	0.9
	Ag	47	9538.8	2.9	5791.5	0.5	−17756	4	10718.6	0.6	5848.9	0.9	4196.2	2.6
	Cd	48	7930.6	1.8	7338	3	−26297	5	10791	5	2989	4	8049.8	1.9
	In	49	11031	16	3725	10	−34140#	300#	11478	10	5265	10	7195	11
	Sn	50	9231	7	5194	13	−43510#	200#	11839	12	2534	8	11103	6
	Sb	51	12251	9	590	6	*		13397	6	5837	6	11176	7
	Te	52	10660	20	1509	9	*		14032	22	3508	12	16579	7
	I	53	13640#	500#	−1390#	300#	*		13680#	300#	4960#	390#	15560#	300#
	Xe	54	12910#	360#	−1570#	450#	*		14910#	450#	1580#	540#	20170#	320#
108	Sr	38	3770#	500#	*		47050#	400#	3810#	570#	3970#	500#	*	
	Y	39	2880#	500#	16070#	500#	39140#	400#	7930#	450#	5970#	400#	−8330#	500#
	Zr	40	5020#	360#	16070#	420#	32910#	300#	5750#	420#	4680#	360#	−7220#	300#
	Nb	41	3893	11	13030#	200#	25427	8	9748	10	6777	15	−3330#	200#
	Mo	42	6276	13	14315	12	18775	9	6164	9	4030	10	−3645	15
	Tc	43	5244	12	10668	13	11686	8	10915	12	6273	9	−362	9
	Ru	44	7868	8	12198	8	5592.6	0.8	6787.3	2.1	3400	9	−680.6	2.1
	Rh	45	6181	12	8398	9	−853	9	12061	6	5826.6	2.0	2870	9
	Pd	46	9223.5	1.6	9949	12	−7454	5	7549	5	3191.0	2.7	2057.6	1.6
	Ag	47	7271.41	0.17	6526.55	0.19	−15164	6	13008.2	0.5	5671.8	0.6	5887.9	2.3
	Cd	48	10332.8	2.0	8131.8	1.6	−23471	6	8400	3	2683	5	4811.3	1.5
	In	49	8624	13	4418	9	−31306	15	13723	9	5078	9	8598	10
	Sn	50	11629	8	5792	11	−39750	270	9248	13	2435	12	7910	6
	Sb	51	9863	7	1222	8	−48580#	400#	15618	7	5758	7	12842	12
	Te	52	13159	7	2417	7	*		11402	9	3098	21	13204	7
	I	53	11460#	300#	−591	11	*		16002	22	4446	12	16848	25
	Xe	54	15390#	330#	180#	400#	*		12250#	480#	1740#	480#	15720	270
	Cs	55	*		−3840#	450#	*		17000#	500#	*		20980#	570#
109	Y	39	3770#	570#	16070#	570#	41800#	400#	6230#	500#	6380#	450#	−10030#	570#
	Zr	40	2850#	420#	16040#	500#	35210#	300#	7150#	420#	5130#	420#	−5880#	360#
	Nb	41	5310	200	13320#	360#	28220	200	7730#	280#	6670	200	−5340#	360#
	Mo	42	3981	14	14403	14	20947	11	7775	14	4407	11	−2431	12
	Tc	43	6431	13	10823	13	14435	9	8972	13	6708	13	−2435	9
	Ru	44	5151	9	12105	12	7765	9	8722	12	3861	9	1035	13
	Rh	45	8098	4	8629	4	1492	5	9575	9	6188	7	383	4
	Pd	46	6153.58	0.15	9922.5	1.1	−4976	8	9968	12	3620	5	4363	5
	Ag	47	9180.8	1.2	6483.8	1.1	−12468	5	10363.8	1.2	6052.0	1.1	3290	5
	Cd	48	7323.4	1.8	8183.8	1.9	−20789	5	10615.9	1.9	3302	3	7048.9	1.8
	In	49	10443	9	4528.3	2.5	−28819	7	11210	3	5503.9	2.8	6097	4
	Sn	50	8632	10	5800	12	−36876	11	11648	13	2841	15	10148	8
	Sb	51	11877	8	1470	8	−44520#	300#	12972	7	5965	7	10003	13
	Te	52	10005	7	2559	7	*		13649	6	3622	9	15283	6
	I	53	12930	14	−820	4	*		13732	8	5296	20	14447	10
	Xe	54	11500	270	229	14	*		14390#	300#	2970#	400#	17997	21
	Cs	55	15930#	500#	−3300#	400#	*		13980#	360#	3290#	420#	17780#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
107	Sr	38	6260#	300#	*		−12730#	580#	25800#	360#	*		9720#	420#
	Y	39	7540#	360#	33750#	420#	−11350#	300#	21750#	300#	−32460#	500#	8540#	300#
	Zr	40	8490#	200#	30490#	210#	−9010#	200#	18750#	200#	−27090#	280#	4330#	200#
	Nb	41	9951	9	27730#	200#	−7691	14	15027	12	−25220#	300#	4333	12
	Mo	42	11355	9	25665	15	−7161	13	11318	12	−21252	10	−880	9
	Tc	43	12697	12	23413	9	−6147	9	8113	15	−19838	8	−499	10
	Ru	44	14071	8	21108	9	−5334	12	4509	8	−15024	12	−5572	10
	Rh	45	15155	12	19245	15	−4684	15	1546	12	−14416	12	−5028	12
	Pd	46	16097.4	0.6	17014.6	0.9	−3529.8	1.2	−1381.1	1.9	−9338	5	−9501.3	2.9
	Ag	47	17481	5	15136.3	2.3	−2802.8	2.6	−4842	10	−9336	5	−9349.2	0.5
	Cd	48	18799.5	2.1	13151.5	1.9	−1958.9	1.8	−8479	6	−4372.9	1.8	−14455	12
	In	49	20069	14	11074	11	−1189	10	−12914	11	−3914	10	−14286	11
	Sn	50	21316	7	8756	5	−285	6	−17818	7	1330	5	−20110	9
	Sb	51	22780	22	5591	11	1554	10	−21220#	300#	2665	13	−20620	19
	Te	52	24441	6	1933	6	4007	4	−25690#	200#	9370	7	−24910#	400#
	I	53	26370#	500#	−10#	300#	4820#	420#	*		9760#	300#	−27340#	420#
	Xe	54	*		−2820#	200#	5180#	280#	*		15820#	200#	*	
108	Sr	38	5840#	450#	*		*		27050#	500#	*		10200#	500#
	Y	39	7130#	500#	34560#	570#	−11760#	450#	22770#	400#	*		8950#	450#
	Zr	40	8310#	300#	31330#	360#	−9760#	300#	20000#	300#	−30040#	420#	4900#	300#
	Nb	41	9486	8	28330#	300#	−7975	18	16378	12	−24860#	300#	4928	12
	Mo	42	10764	13	26745	10	−7457	13	12910	9	−24240#	200#	−70	12
	Tc	43	12330	9	24299	9	−6537	9	9049	9	−19489	12	−132	12
	Ru	44	13479	5	22110	9	−5741	9	5864.34	0.04	−18404	9	−4867	12
	Rh	45	14753	6	19814.5	2.4	−4819.3	2.7	2636.7	1.9	−13511	9	−4672.2	1.9
	Pd	46	15759.8	1.5	17779	5	−3852.5	1.6	−271.8	0.8	−12950	8	−9186.0	1.6
	Ag	47	16810.2	2.9	15825	5	−3075.2	2.6	−3490	9	−8035	12	−8690.0	1.9
	Cd	48	18263.4	1.5	13923.4	1.5	−2283.0	1.6	−7182	5	−8169.3	1.6	−13757	10
	In	49	19655	15	11756	9	−1429	10	−11674	10	−2999	9	−13679	10
	Sn	50	20860	7	9516	5	−526	6	−16288	8	−2368	6	−19488	7
	Sb	51	22115	9	6416	13	1312	8	−19631	13	3833	11	−19823	7
	Te	52	23819	20	3007	7	3420	7	−23460	270	5442	8	−24420#	300#
	I	53	25100#	400#	919	14	4099	5	−28940#	400#	10550	13	−25890#	200#
	Xe	54	28300#	400#	−1210	270	4780	90	*		11080	270	*	
	Cs	55	*		−5410#	570#	5430#	640#	*		18270#	500#	*	
109	Y	39	6650#	500#	*		−12100#	500#	24300#	450#	*		10200#	500#
	Zr	40	7870#	360#	32110#	420#	−10070#	300#	21130#	300#	−29120#	500#	5940#	300#
	Nb	41	9200	200	29390#	360#	−8640#	280#	17500	200	−27290#	450#	5900	200
	Mo	42	10257	14	27440#	200#	−7626	16	14080	14	−23200#	300#	1193	14
	Tc	43	11676	12	25138	12	−6793	10	10716	10	−22027	12	1305	9
	Ru	44	13019	12	22772	13	−5831	9	6867	9	−17279	13	−3838	9
	Rh	45	14278	13	20826	9	−5228	10	3720	4	−16365	9	−3547	4
	Pd	46	15377.0	1.6	18321	8	−4096.0	1.6	898.0	1.8	−11235.58	0.15	−8068.1	1.6
	Ag	47	16452.2	1.2	16433	12	−3292.9	2.5	−2227.3	2.7	−11035.1	1.6	−7538.0	1.1
	Cd	48	17656.2	2.2	14710.3	1.9	−2512.0	1.8	−5874	8	−6269.2	1.8	−12456	9
	In	49	19067	10	12660.2	2.9	−1845	5	−10241	6	−6171.1	2.9	−12493	6
	Sn	50	20261	10	10217	8	−721	8	−14915	9	−667	8	−18256	10
	Sb	51	21740	7	7262	11	965	12	−18579	9	580	10	−18541	8
	Te	52	23164	7	3781	7	3199	6	−21962	9	7065	7	−22973	13
	I	53	24390#	300#	1597	8	3918	21	−25940#	300#	7484	9	−23420	270
	Xe	54	26900#	200#	−362	9	4217	7	*		12739	10	−29960#	400#
	Cs	55	*		−3120#	420#	5050#	500#	*		13790#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
110	Y	39	2490#	810#	*		44140#	700#	7510#	810#	5970#	760#	*	
	Zr	40	4540#	500#	16810#	570#	38070#	400#	5490#	570#	4830#	500#	−8350#	500#
	Nb	41	3480#	280#	13950#	360#	30520#	200#	9270#	360#	6480#	280#	−4570#	360#
	Mo	42	5948	27	15040	200	23795	24	5720	26	4052	26	−5090#	200#
	Tc	43	4823	13	11665	14	16421	9	10425	13	6374	13	−1665	12
	Ru	44	7405	9	13078	9	10275.2	0.5	6562	8	3542	8	−1881	9
	Rh	45	5777	4	9255	9	3765	12	11665.3	1.3	6022	8	1692	8
	Pd	46	8795.9	1.2	10621	4	−2489	14	7352.7	1.6	3397	12	1179	8
	Ag	47	6809.20	0.10	7139.5	1.1	−10007	6	12778.0	1.1	5779.2	1.2	5053	12
	Cd	48	9915.0	1.5	8918.07	0.04	−18118	7	7972.3	1.2	2925.4	1.2	3670.3	1.2
	In	49	8050	12	5255	12	−26000	60	13493	12	5385	12	7586	12
	Sn	50	11283	16	6639	14	−34034	25	8988	16	2589	17	6795	14
	Sb	51	9270	8	2108	10	−41010#	300#	15331	8	5927	8	11764	11
	Te	52	12585	8	3268	8	−49380#	400#	10927	9	3288	8	11929	8
	I	53	10870	60	40	60	*		16020	60	5090	60	15830	60
	Xe	54	14125	23	1424	22	*		11717	24	2490#	300#	14533	22
	Cs	55	12780#	420#	−2030#	300#	*		16590#	400#	3420#	360#	18640#	420#
	Ba	56	*		−1590#	500#	*		11730#	570#	*		17800#	450#
111	Y	39	3170#	990#	*		47020#	700#	*		6560#	810#	*	
	Zr	40	2550#	720#	16870#	920#	40300#	600#	6710#	720#	5160#	720#	−7130#	720#
	Nb	41	4840#	360#	14250#	500#	33340#	300#	7280#	420#	6650#	420#	−6530#	500#
	Mo	42	3468	25	15030#	200#	26053	5	7560	200	4477	10	−3540#	300#
	Tc	43	6052	10	11769	25	19200	5	8354	12	6597	10	−3824	9
	Ru	44	4777	4	13032	10	12474	4	8216	10	4009	9	−383	10
	Rh	45	7668	4	9518	4	6093	4	9149	10	6222	4	−731	9
	Pd	46	5726.3	0.4	10569.6	0.6	−47	5	9724	4	3851.0	1.7	3320.3	1.2
	Ag	47	8830.0	1.4	7173.6	1.5	−7379	9	10101.6	1.8	6172.6	1.8	2403.7	2.1
	Cd	48	6975.60	0.17	9084.46	0.20	−15665	6	10177.43	0.17	3221.2	1.2	5918.2	1.1
	In	49	9996	12	5335.61	0.24	−23441	5	10820.5	1.5	5721.7	1.1	4861.2	1.2
	Sn	50	8168	15	6758	13	−31380	11	11264	6	3045	10	8960	5
	Sb	51	11458	11	2284	16	−37940#	200#	12504	12	6097	10	8929	12
	Te	52	9429	9	3427	9	−45410#	300#	13374	8	3722	8	14129	8
	I	53	12560	60	13	8	*		13472	6	5692	7	13138	7
	Xe	54	10823	23	1380	60	*		13824	12	3119	14	16869	11
	Cs	55	14530#	360#	−1620#	200#	*		13570#	200#	4290#	330#	15560#	200#
	Ba	56	13400#	500#	−970#	420#	*		14260#	420#	550#	500#	19790#	400#
112	Zr	40	4010#	920#	17710#	990#	43200#	700#	5190#	990#	4930#	810#	*	
	Nb	41	3040#	420#	14740#	670#	35670#	300#	8780#	500#	6460#	420#	−5800#	500#
	Mo	42	5606	9	15800#	300#	28855	10	5430#	200#	4180	200	−6290#	300#
	Tc	43	4311	6	12613	7	21329	5	9991	25	6267	12	−2830	200
	Ru	44	6914	6	13895	6	14953	5	6124	10	3526	10	−3316	12
	Rh	45	5373	4	10113	5	8387	5	11180.6	1.6	6000	9	327	10
	Pd	46	8407	7	11309	8	2334	7	7095	7	3542	8	64	11
	Ag	47	6440.6	1.5	7887.9	0.7	−4986	18	12456.9	0.6	5885.6	1.1	4061	4
	Cd	48	9393.94	0.28	9648.4	1.4	−13007	8	7592.7	0.3	3008.1	0.3	2677.8	1.1
	In	49	7667	4	6027	4	−20927	11	13069	4	5378	5	6375	4
	Sn	50	10788	5	7549.4	0.4	−28629	8	8526	12	2700.6	2.6	5495.6	1.5
	Sb	51	8834	20	2949	19	−35145	21	14954	23	5895	20	10539	18
	Te	52	12051	11	4020	12	−41920#	300#	10593	10	3548	10	10709	12
	I	53	10181	11	765	12	*		15877	12	5516	11	14834	12
	Xe	54	13539	13	2361	10	*		11150	60	2510	7	13336	9
	Cs	55	11630#	200#	−816	4	*		16065	24	4164	13	16865	13
	Ba	56	15540#	420#	40#	360#	*		11500#	420#	940#	420#	15750#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
110	Y	39	6260#	810#	*		−12520#	810#	25290#	730#	*		10560#	760#
	Zr	40	7390#	500#	32880#	570#	−10430#	450#	22540#	400#	*		6710#	450#
	Nb	41	8790#	200#	29990#	450#	−8820#	360#	18850#	200#	−27000#	450#	6400#	200#
	Mo	42	9929	26	28360#	300#	−8378	25	15537	24	−26300#	300#	1676	26
	Tc	43	11254	12	26068	12	−7258	9	11670	9	−21540	200	1633	13
	Ru	44	12555.7	1.2	23901	9	−6370	9	8258.06	0.04	−20702	11	−3145	4
	Rh	45	13875.1	1.7	21360	9	−5393.9	2.0	4751.6	0.7	−15711	9	−3170.2	1.3
	Pd	46	14949.4	1.2	19249.1	1.2	−4433	5	2017.2	0.5	−14881	9	−7683.2	0.5
	Ag	47	15990.0	1.2	17062.0	1.6	−3519	5	−987	12	−9747	4	−7023.8	1.5
	Cd	48	17238.4	1.1	15401.9	1.1	−2866.1	1.1	−4506	14	−10030.7	1.1	−11927.7	2.7
	In	49	18493	14	13438	12	−1953	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	1753	7	−17806	7
	Te	52	22591	9	4738	8	2698	8	−20422	22	3112	10	−22628	9
	I	53	23800	60	2600	60	3580	60	−24030#	310#	8490	60	−22790	60
	Xe	54	25630	270	604	22	3872	9	−28960#	400#	8619	22	−28150#	300#
	Cs	55	28710#	500#	−1800#	300#	5000#	500#	*		13940#	300#	*	
	Ba	56	*		−4890#	480#	4890#	500#	*		15610#	400#	*	
111	Y	39	5660#	810#	*		*		26960#	760#	*		11930#	810#
	Zr	40	7090#	670#	*		−10900#	670#	23450#	600#	*		7640#	630#
	Nb	41	8320#	360#	31060#	500#	−9420#	420#	20060#	300#	−29350#	760#	7500#	300#
	Mo	42	9416	12	28980#	300#	−8560#	200#	16846	5	−25220#	400#	3032	10
	Tc	43	10875	10	26810	200	−7717	9	13285	5	−24120#	200#	2986	4
	Ru	44	12182	10	24697	12	−6659	10	9207	4	−19532	25	−2145	4
	Rh	45	13445	6	22596	10	−5976	9	5914	4	−18555	10	−2042	4
	Pd	46	14522.2	1.2	19825	9	−4547	8	3266.5	0.7	−13202.0	0.4	−6600.3	0.7
	Ag	47	15639.2	1.4	17794	4	−3777	12	179.2	1.4	−12799.3	1.6	−5938.8	1.4
	Cd	48	16890.6	1.5	16223.9	1.1	−3305.3	1.2	−3314	5	−8210.4	0.5	−10854	12
	In	49	18045.7	2.6	14253.68	0.25	−2410.2	1.2	−7558	9	−8226.82	0.26	−10624	14
	Sn	50	19451	10	12012	6	−1373	6	−12351	8	−2880	5	−16560	8
	Sb	51	20728	10	8923	9	305	13	−15883	10	−1656	15	−16678	11
	Te	52	22015	8	5535	10	2500	8	−19028	12	4966	15	−21190	60
	I	53	23424	8	3281	7	3275	5	−22050#	200#	5207	8	−21217	22
	Xe	54	24948	13	1422	11	3710	8	−26380#	300#	10381	12	−26190#	300#
	Cs	55	27310#	360#	−200#	200#	4110#	360#	*		10280#	210#	−28120#	450#
	Ba	56	*		−3000#	300#	4400#	360#	*		16340#	300#	*	
112	Zr	40	6560#	810#	*		−11150#	810#	25050#	700#	*		8470#	760#
	Nb	41	7880#	360#	31610#	760#	−9580#	500#	21330#	300#	−29220#	760#	7930#	300#
	Mo	42	9074	25	30050#	400#	−9140#	300#	18155	8	−28280#	600#	3478	9
	Tc	43	10363	10	27640#	200#	−8136	9	14347	5	−23590#	300#	3451	6
	Ru	44	11692	5	25664	25	−7297	10	10700	8	−22978	7	−1392	6
	Rh	45	13040.4	1.7	23146	9	−6104	9	6981.7	1.5	−17876	5	−1688.5	1.7
	Pd	46	14133	7	20827	7	−5087	7	4254	7	−16832	8	−6177	7
	Ag	47	15270.6	0.4	18457.5	0.8	−4036.9	1.6	1405	4	−11572	4	−5403.8	0.4
	Cd	48	16369.5	0.3	16822.0	0.6	−3475.8	1.1	−1919.81	0.13	−11878.1	0.7	−10251.6	0.3
	In	49	17663	12	15111	4	−2806	4	−6391	18	−7064	4	−10123	7
	Sn	50	18956	14	12885.0	0.3	−1827.8	1.1	−11088	8	−6691.8	0.3	−15890	9
	Sb	51	20292	19	9707	21	96	20	−14536	21	−493	18	−16083	19
	Te	52	21481	11	6303	16	2078	10	−17541	12	1082	10	−20685	10
	I	53	22740	60	4192	12	2957	12	−20609	15	6484	14	−20576	14
	Xe	54	24361	23	2375	11	3330	6	−24380#	300#	6272	10	−25200#	200#
	Cs	55	26160#	300#	560	60	3935	15	*		11211	12	−26350#	300#
	Ba	56	28940#	500#	−1580#	300#	4250#	400#	*		11620#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
113	Zr	40	1990#	760#	*		45540#	300#	6370#	760#	5420#	760#	*	
	Nb	41	4350#	500#	15080#	810#	38560#	400#	6980#	720#	6650#	570#	−7660#	810#
	Mo	42	3160#	200#	15910#	360#	31040#	200#	7120#	360#	4500#	280#	−4900#	450#
	Tc	43	5626	6	12633	8	24149	4	7832	6	6589	24	−4980#	200#
	Ru	44	4324	5	13908	5	17168.8	1.5	7852	5	4025	9	−1692	24
	Rh	45	7238	7	10437	8	10598	7	8720	8	6167	7	−2088	11
	Pd	46	5341	9	11277	7	4737	7	9421	8	3978	7	2128	7
	Ag	47	8446.9	2.7	7928	7	−2544	17	9736.3	2.8	6234.5	2.8	1391.2	2.8
	Cd	48	6539.77	0.21	9747.6	0.3	−10696	28	9882.9	1.5	3277.5	0.4	4933.9	0.6
	In	49	9448	4	6081.22	0.23	−18248	8	10595.9	0.3	5844.9	0.4	3736.0	0.4
	Sn	50	7744.13	0.26	7627	4	−26124	7	10777.5	0.4	3006	12	7666.5	0.4
	Sb	51	10889	25	3051	17	−32652	19	12233	18	6289	22	7700	21
	Te	52	8851	29	4040	30	−38640#	200#	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	15672	9
	Cs	55	13382	14	−972.8	2.2	*		13505	13	4907	23	14350	60
	Ba	56	12130#	360#	550#	200#	*		13900#	280#	1600#	360#	17750#	200#
114	Zr	40	3810#	500#	*		48140#	400#	*		4790#	810#	*	
	Nb	41	2670#	640#	15760#	580#	40850#	500#	8320#	860#	6530#	780#	−7160#	860#
	Mo	42	5200#	360#	16760#	500#	33810#	300#	4960#	420#	4140#	420#	−7550#	670#
	Tc	43	3860	430	13340#	480#	26320	430	9580	430	6200	430	−3990#	530#
	Ru	44	6418	4	14699	5	19794	4	5746	6	3659	6	−4642	6
	Rh	45	4963	7	11075.5	1.6	12908.8	0.7	10671	5	5982	4	−999	4
	Pd	46	7971	10	12010	9	7069	7	6823	7	3675	8	−1065	8
	Ag	47	6034.3	3.0	8621	7	−427	20	12109	7	5926.5	1.4	3024	4
	Cd	48	9042.98	0.13	10343.6	2.7	−8125	24	7280.5	0.3	3064.5	1.5	1617.2	0.7
	In	49	7274.00	0.25	6815.4	0.4	−15931	20	12715.9	0.3	5546.5	0.4	5292.1	1.5
	Sn	50	10303.15	0.19	8481.55	0.19	−23474	11	8141	4	2699.0	0.4	4339.0	0.3
	Sb	51	8151	26	3458	20	−29810	90	14869	20	6306	20	9544	20
	Te	52	11610	40	4762	30	−36100	40	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	4740	90	15910	90
	Ba	56	14150#	200#	1315	29	*		11370	30	1970#	200#	14415	30
115	Nb	41	3980#	710#	15930#	640#	43500#	500#	6330#	580#	6560#	860#	*	
	Mo	42	2750#	500#	16840#	640#	36060#	400#	6560#	570#	4440#	500#	−6290#	810#
	Tc	43	5270#	480#	13410#	360#	29150#	200#	7470#	280#	6530#	200#	−6220#	360#
	Ru	44	3905	5	14740	430	22030.2	2.9	7467	4	4065	5	−2941	8
	Rh	45	6630	5	11287	6	15317	5	8366	5	6266	7	−3317	7
	Pd	46	5002	7	12049.3	1.6	9612.5	1.4	9059	7	4045.7	2.1	847	5
	Ag	47	8097.3	2.8	8748	7	2054	16	9352	7	6236	7	300.1	2.9
	Cd	48	6141.2	0.3	10450.5	1.2	−6022	28	9586.3	2.7	3363.9	0.4	3883	7
	In	49	9037.84	0.30	6810.31	0.25	−13199	29	10217.81	0.23	5902.61	0.23	2694.8	0.3
	Sn	50	7545.43	0.03	8752.98	0.30	−21377	12	10044.12	0.19	2820	4	6187.46	0.23
	Sb	51	10578	25	3733	16	−27300#	100#	12035	16	6516	16	6633	17
	Te	52	8240	40	4860	30	−32900#	200#	13060	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	11440#	200#	1760#	220#	*		13320#	200#	2160#	200#	16510#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
113	Zr	40	6000#	670#	*		*		26210#	360#	*		9520#	420#
	Nb	41	7390#	500#	32790#	810#	−10150#	570#	22600#	400#	*		9190#	400#
	Mo	42	8760#	200#	30650#	630#	−9450#	360#	19320#	200#	−27420#	730#	4630#	200#
	Tc	43	9938	5	28430#	300#	−8450	200	15959	7	−26170#	300#	4739	6
	Ru	44	11238	5	26520	5	−7640	11	11716	7	−21697	8	−342.9	2.1
	Rh	45	12611	8	24332	8	−6911	11	8191	7	−20803	8	−520	9
	Pd	46	13748	7	21390	8	−5277	11	5452	7	−15258	8	−5077	7
	Ag	47	14888	3	19237	5	−4386	5	2406.8	2.7	−14646	3	−4456.8	2.7
	Cd	48	15933.7	0.3	17635.5	0.7	−3862.0	1.1	−715.45	0.26	−10011	7	−9124	4
	In	49	17115.1	0.4	15729.6	1.5	−3073.2	0.4	−4950	17	−10071.4	0.3	−8783.38	0.26
	Sn	50	18532	5	13653.6	0.4	−2248.5	1.5	−9981	28	−5041.97	0.23	−14800	18
	Sb	51	19723	19	10600	17	−350	17	−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	−19165	12
	Xe	54	23787	12	3194	9	3087	8	−22490#	200#	8075	11	−23821	13
	Cs	55	25010#	200#	1389	10	3483	8	*		8010	13	−24190#	300#
	Ba	56	27670#	360#	−270#	200#	3620#	200#	*		13030#	200#	*	
114	Zr	40	5800#	810#	*		*		27600#	500#	*		10060#	570#
	Nb	41	7020#	580#	*		−10340#	860#	23790#	660#	*		9670#	540#
	Mo	42	8360#	300#	31840#	760#	−10110#	500#	20540#	300#	−30630#	420#	5060#	300#
	Tc	43	9490	430	29250#	530#	−8840#	480#	17060	430	−25680#	590#	5200	430
	Ru	44	10742	6	27332	9	−8110	24	13269	8	−24960#	200#	477	7
	Rh	45	12200.7	1.6	24983	5	−7051	9	9262.3	1.4	−20139	3	−142	7
	Pd	46	13312	9	22447	8	−5843	7	6525	7	−18905	7	−4601	7
	Ag	47	14481.2	1.3	19898.3	1.9	−4643.1	1.4	3646.5	1.2	−13443	7	−3951.3	1.2
	Cd	48	15582.75	0.25	18272	7	−4109.1	0.6	544.71	0.25	−13713	7	−8719.18	0.28
	In	49	16722	4	16563.0	0.4	−3538.0	0.5	−4073	20	−8898.4	2.7	−8313.25	0.25
	Sn	50	18047.28	0.26	14562.77	0.23	−2636.6	0.4	−8670	24	−8805.35	0.23	−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	−21300	30	3970	30	−23393	14
	Cs	55	24370	90	2200	90	3360	60	*		9140	90	−23050#	220#
	Ba	56	26280#	300#	342	29	3592	19	*		9124	29	*	
115	Nb	41	6650#	640#	*		−11150#	860#	25080#	540#	*		10890#	580#
	Mo	42	7950#	450#	32600#	500#	−10300#	720#	21700#	400#	−29570#	570#	6170#	590#
	Tc	43	9130#	200#	30170#	450#	−9260#	360#	18420#	200#	−28280#	540#	6350#	200#
	Ru	44	10323	3	28080#	200#	−8547	6	14367	3	−23660#	300#	1535.0	3.0
	Rh	45	11592	8	25986	6	−7628	7	10730	6	−22910	430	1200	9
	Pd	46	12973	7	23124.7	2.1	−6068	5	7663.5	1.4	−17489	4	−3569.3	1.9
	Ag	47	14132	4	20758	7	−5073	5	4587.1	2.5	−16577.2	2.6	−3005.6	2.5
	Cd	48	15184.2	0.3	19072	7	−4524.0	0.8	1948.93	0.30	−11883	7	−7586.4	0.4
	In	49	16311.84	0.19	17153.9	2.7	−3745.8	1.5	−2533	16	−11902.0	1.2	−7047.94	0.03
	Sn	50	17848.58	0.19	15568.43	0.23	−3206.5	0.3	−7971	28	−7307.80	0.25	−13609	20
	Sb	51	18729	23	12214	16	−1034	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	−19500#	200#	5944	27	−22040	90
	Cs	55	24080#	100#	3160#	100#	2830#	100#	*		5650#	100#	−21980#	110#
	Ba	56	25590#	280#	1530#	200#	2980#	200#	*		10640#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
116	Nb	41	2580#	710#	*		45500#	500#	7560#	640#	5970#	580#	*	
	Mo	42	4920#	640#	17780#	710#	38620#	500#	4310#	710#	3860#	640#	−9220#	580#
	Tc	43	3490#	360#	14140#	500#	31330#	300#	9180#	420#	6200#	360#	−5360#	500#
	Ru	44	6086	5	15560#	200#	24644	4	5240	430	3606	5	−5870#	200#
	Rh	45	4582	6	11964	3	17519.6	1.8	10202	4	6008.5	2.3	−2273	4
	Pd	46	7483.0	1.4	12903	5	11692.94	0.15	6538.9	0.7	3801	7	−2312.0	1.5
	Ag	47	5666	3	9411.2	2.6	4279	6	11658	7	5911	7	1872	7
	Cd	48	8698.9	0.3	11052.2	2.5	−3449	24	6921.7	1.2	3111.9	2.7	525	7
	In	49	6784.72	0.22	7453.8	0.4	−10830	80	12476.1	0.3	5657.7	0.3	4357.0	2.7
	Sn	50	9563.44	0.09	9278.58	0.09	−18479	13	7754.7	0.3	2705.24	0.21	3163.79	0.24
	Sb	51	7890	17	4077	5	−24780#	100#	14448	5	6370	5	8191	5
	Te	52	11270	40	5549	29	−30620#	200#	9940	30	4017	30	8711	24
	I	53	9150	80	2650	80	−36270#	210#	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	13550#	280#	2230#	230#	*		10760#	220#	1990#	200#	13210#	200#
	La	57	*		−724	9	*		15360#	200#	3430#	280#	16260#	200#
117	Nb	41	3880#	580#	*		47860#	300#	*		5900#	500#	*	
	Mo	42	2550#	710#	17750#	710#	40730#	500#	5740#	710#	3990#	710#	−7960#	640#
	Tc	43	5000#	500#	14220#	640#	34050#	400#	6930#	570#	6410#	500#	−7680#	640#
	Ru	44	3530	60	15600#	310#	26890	60	6980#	210#	3940	440	−4200#	310#
	Rh	45	6238	9	12117	10	20047	9	7869	9	6189	9	−4650	430
	Pd	46	4661	7	12982	8	13975	7	8507	9	4102	7	−555	8
	Ag	47	7715	3	9643.5	2.2	6452	9	8944.6	2.6	6167	7	−880.1	2.2
	Cd	48	5777.2	1.0	11163.8	2.5	−1323	13	9241.7	2.7	3369.0	1.6	2718	7
	In	49	8765.8	2.2	7520.7	2.2	−8506	26	9851.5	2.2	5934.9	2.2	1625.6	2.5
	Sn	50	6942.80	0.16	9436.67	0.26	−16212	10	9849.71	0.14	3036.4	0.3	5263.97	0.29
	Sb	51	9889	10	4403	8	−22170	40	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	−33910#	200#	12340	40	6320	40	9700	30
	Xe	54	9210	17	4050	80	*		12860	30	3318	23	13351	27
	Cs	55	12500#	110#	710	40	*		12900	40	5480	40	11820	50
	Ba	56	10890#	320#	2700#	270#	*		12950#	270#	2090	260	15270	250
	La	57	13460#	280#	−818.7	2.6	*		13340#	280#	4120#	200#	13800#	220#
118	Mo	42	4650#	710#	18520#	580#	43120#	500#	3670#	710#	3310#	710#	*	
	Tc	43	3220#	570#	14890#	640#	36250#	400#	8630#	640#	5930#	570#	−6920#	640#
	Ru	44	5730#	210#	16330#	450#	29510#	200#	4750#	360#	3480#	280#	−7170#	450#
	Rh	45	4168	10	12760	60	22283	5	9786	6	5925	6	−3550#	200#
	Pd	46	7037	8	13781	9	16264.1	2.5	6053	3	3695	6	−3687	4
	Ag	47	5426	4	10408	8	8454	4	11002.0	3.0	5744	3	324	6
	Cd	48	8343.4	2.2	11791.9	2.9	1001	18	6563.9	3.0	3123	3	−622.7	2.4
	In	49	6404.0	2.9	8147.4	2.1	−6306	20	12146.4	1.9	5672.1	1.9	3319	3
	Sn	50	9326.39	0.13	9997.3	2.2	−13573	10	7308.04	0.23	2747.88	0.06	2078.8	0.3
	Sb	51	7428	9	4887.4	3.0	−19587	13	14240.9	3.0	6902.0	3.0	7186.9	3.0
	Te	52	10667	23	6341	20	−25430#	200#	9842	19	4176	24	7989	18
	I	53	8600	30	3165	24	−30990#	300#	15000	30	5960	30	11679	25
	Xe	54	11965	15	4929	28	*		10050	80	3120	30	9630	30
	Cs	55	10010	40	1513	16	*		15348	18	5111	18	13570	30
	Ba	56	12870#	320#	3080#	210#	*		10490#	220#	2300#	230#	12040#	200#
	La	57	11520#	360#	−190#	390#	*		15370#	360#	4040#	360#	15370#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
116	Nb	41	6560#	710#	*		*		25980#	580#	*		11060#	640#
	Mo	42	7670#	580#	33710#	640#	−11220#	860#	22860#	500#	*		6520#	540#
	Tc	43	8760#	530#	30980#	580#	−9710#	420#	19520#	300#	−27780#	580#	6770#	300#
	Ru	44	9990	5	28970#	300#	−9027	9	15764	4	−27000#	400#	2079	6
	Rh	45	11211.7	1.9	26710	430	−7899	5	11813.4	2.9	−22220#	200#	1619.9	2.3
	Pd	46	12485	7	24190	4	−6636	5	8879.45	0.08	−21067.3	2.9	−2955.1	2.5
	Ag	47	13762.8	2.5	21460.4	2.3	−5365.5	2.7	5706.2	2.3	−15613	6	−2530.0	2.3
	Cd	48	14840.09	0.29	19800	7	−4816	7	2813.49	0.13	−15580.1	1.4	−7247.44	0.16
	In	49	15822.6	0.4	17904.3	1.2	−4089.9	0.4	−1428	5	−10589.4	2.5	−6287.23	0.22
	Sn	50	17108.87	0.10	16088.89	0.27	−3375.97	0.25	−6262	24	−10730.0	0.3	−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	−18410#	200#	1730	30	−21420#	100#
	Cs	55	23500#	130#	3980#	100#	2600#	100#	−20900#	220#	7010#	100#	−20950#	220#
	Ba	56	24990#	200#	2130#	200#	2960#	200#	*		6730#	200#	*	
	La	57	*		1040#	220#	2880#	200#	*		11260#	230#	*	
117	Nb	41	6460#	580#	*		*		27100#	500#	*		12100#	580#
	Mo	42	7470#	640#	*		−11770#	580#	23840#	500#	*		7450#	580#
	Tc	43	8490#	450#	32000#	640#	−10360#	570#	20760#	400#	−30200#	640#	7860#	400#
	Ru	44	9610	60	29750#	410#	−9400#	210#	16900	60	−25610#	500#	3130	60
	Rh	45	10820	10	27680#	200#	−8511	9	13291	9	−24970#	300#	2865	9
	Pd	46	12144	8	24946	8	−6973	8	9996	7	−19643	8	−1951	8
	Ag	47	13381	3	22546	6	−5843	7	6757	3	−18746.4	2.8	−1546.4	2.2
	Cd	48	14476.1	1.1	20574.9	1.7	−5252	7	3979.1	1.0	−13874.3	1.0	−6239.9	1.0
	In	49	15550.5	2.2	18573	3	−4409	3	−305	9	−13690	3	−5489.5	2.2
	Sn	50	16506.24	0.14	16890.5	0.3	−3779.01	0.26	−5302	13	−8973.95	0.21	−11647	5
	Sb	51	17779	18	13681	8	−1697	8	−8201	27	−7679	8	−11447	26
	Te	52	19180	30	9640	13	808	13	−10910	17	−858	13	−15750	80
	I	53	20240	40	8010	30	1550	30	−13970	50	−905	26	−15463	29
	Xe	54	21671	16	6701	30	1737	30	−16730	250	3789	26	−20210#	100#
	Cs	55	22910#	110#	4710	50	2230	40	−19940#	210#	3660	90	−19900#	210#
	Ba	56	24440#	320#	3380	250	2320	250	*		8300	250	−24380#	320#
	La	57	*		1410#	230#	2810#	200#	*		8220#	220#	*	
118	Mo	42	7200#	710#	*		−12620#	640#	24910#	540#	*		7800#	640#
	Tc	43	8220#	500#	32640#	640#	−10910#	640#	21700#	400#	−29540#	500#	8170#	410#
	Ru	44	9250#	200#	30550#	540#	−9920#	360#	18210#	200#	−28780#	540#	3650#	200#
	Rh	45	10406	5	28360#	300#	−8820	430	14548	6	−24140#	400#	3357	9
	Pd	46	11698.0	2.5	25897	4	−7592	4	11302	3	−23150	60	−1272	3
	Ag	47	13141	4	23390	3	−6306	3	7735	4	−17934	9	−1195	3
	Cd	48	14120.6	2.0	21435.4	2.0	−5625	7	4962.1	2.0	−17557	8	−5817.6	2.9
	In	49	15169.7	1.9	19311.2	2.9	−4778.4	2.2	719	4	−12378.3	2.8	−4950.7	1.9
	Sn	50	16269.20	0.11	17518.00	0.17	−4062.42	0.26	−3961	18	−12523.1	1.0	−11084	8
	Sb	51	17316	6	14324.1	3.0	−1851.0	3.0	−7025	20	−6341	4	−10972	14
	Te	52	18570	30	10743	18	444	18	−9612	21	−4583	18	−15320	30
	I	53	19690	80	8727	20	1101	28	−12562	24	379	21	−14857	22
	Xe	54	21175	17	7393	26	1386	27	−15820#	200#	−273	17	−19680	40
	Cs	55	22510#	100#	5570	80	1805	24	−18430#	300#	4740	29	−19020	250
	Ba	56	23760#	280#	3790#	200#	2400#	200#	*		4640#	200#	−23800#	280#
	La	57	24980#	360#	2520#	320#	2280#	310#	*		9200#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
119	Mo	42	2240#	580#	*		45170#	300#	5310#	420#	3650#	580#	*	
	Tc	43	4810#	640#	15050#	710#	38620#	500#	6370#	710#	6050#	710#	−9150#	710#
	Ru	44	3160#	360#	16270#	500#	31790#	300#	6580#	500#	3810#	420#	−5420#	580#
	Rh	45	5900	11	12930#	200#	24888	10	7410	60	6110	10	−5960#	300#
	Pd	46	4292	5	13904	6	18455	4	7998	10	3985	4	−1894	5
	Ag	47	7180	4	10551	3	10824	7	8483	8	6046.2	2.1	−2274.3	2.8
	Cd	48	5444.6	2.7	11811	4	3119	8	8834.6	2.9	3343.9	2.9	1415.7	1.9
	In	49	8505.1	2.8	8309.1	2.8	−3933	22	9418.6	2.3	5865.9	2.0	479	3
	Sn	50	6483.5	0.5	10076.8	1.9	−11270	10	9590.3	2.2	3049.1	0.6	4294.2	0.6
	Sb	51	9551	8	5112	7	−17170	16	11633	7	6915	7	4421	7
	Te	52	7562	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	−34740#	500#	12355	28	3490	80	12116	26
	Cs	55	11967	19	1515	17	*		12591	17	5606	19	10760	80
	Ba	56	10400#	280#	3470	200	*		12590	200	2320#	220#	14100	200
	La	57	13110#	420#	50#	360#	*		13150#	390#	4480#	360#	12670#	320#
	Ce	58	*		1360#	580#	*		13190#	540#	1960#	540#	16240#	540#
120	Tc	43	3040#	710#	15850#	580#	40670#	500#	7980#	710#	5550#	710#	−8310#	580#
	Ru	44	5520#	500#	16980#	640#	34240#	400#	4280#	570#	3280#	570#	−8390#	640#
	Rh	45	3860	60	13630#	310#	27100	60	9280#	210#	5780	90	−4830#	400#
	Pd	46	6742	5	14746	10	20818.2	2.2	5425	5	3481	9	−5110	60
	Ag	47	5094	3	11354	5	12743	8	10425	4	5613	8	−1131	9
	Cd	48	7965	4	12595	4	5405	4	6295	5	3094	4	−1888	8
	In	49	6070	4	8934	4	−1962	15	11692	4	5573	3	2125	4
	Sn	50	9104.5	1.0	10676.2	2.2	−8925	12	6889.8	2.1	2710.4	2.4	966.9	1.3
	Sb	51	7013	10	5642	7	−14529	12	13946	7	6844	7	6173	8
	Te	52	10252	7	7176	7	−20470	300	9344	3	4141	9	6681.3	1.7
	I	53	8041	26	3854	17	−25950#	300#	14654	24	6212	20	10538	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	2440	300	10940	300
	La	57	10850#	420#	500#	360#	*		15170#	360#	4520#	390#	14310#	300#
	Ce	58	13750#	710#	2000#	580#	*		10960#	580#	1670#	540#	13380#	560#
121	Tc	43	4610#	710#	*		42860#	500#	5610#	580#	5590#	710#	*	
	Ru	44	2980#	570#	16920#	640#	36440#	400#	6110#	640#	3530#	570#	−6710#	640#
	Rh	45	5710	620	13820#	740#	29590	620	6730#	690#	5790#	650#	−7310#	740#
	Pd	46	3973	3	14860	60	23014.9	2.7	7352	10	3676	6	−3360#	200#
	Ag	47	6801	9	11413	9	15196	9	7917	9	5849	9	−3763	10
	Cd	48	5188	4	12689	3	7470	26	8287.8	2.9	3332	4	−39	3
	In	49	8207	3	9177	4	401	5	8929.5	2.3	5709.5	2.3	−657	3
	Sn	50	6170.2	0.3	10776	3	−6716	10	9224.7	2.2	2944.1	2.1	3140.1	2.2
	Sb	51	9254	8	5790.9	2.4	−12497	15	11175.7	2.5	6916.8	2.5	3323	3
	Te	52	7252	26	7415	27	−17800	140	11642	27	4316	26	8755	26
	I	53	10570	16	4172	4	−23870#	300#	11647	9	6309	19	7396	6
	Xe	54	8380	16	6022	18	−29790#	400#	12008	24	3354	22	10857	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	12650#	420#	780#	420#	*		12920#	360#	4740#	360#	11680#	300#
	Ce	58	11030#	640#	2180#	500#	*		13040#	500#	2150#	500#	15220#	450#
	Pr	59	*		−890	10	*		13210#	710#	*		14080#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
119	Mo	42	6890#	580#	*		*		25830#	420#	*		8780#	500#
	Tc	43	8030#	640#	33570#	580#	−11730#	710#	22790#	500#	*		9080#	540#
	Ru	44	8890#	310#	31160#	580#	−10340#	500#	19340#	300#	−27290#	580#	4650#	300#
	Rh	45	10069	13	29260#	400#	−9450#	200#	15828	10	−26820#	400#	4494	10
	Pd	46	11329	8	26660	60	−7980	5	12454	4	−21720#	200#	−139	5
	Ag	47	12606	3	24332	9	−6856	6	9059.8	2.9	−20946	5	−31.7	2.9
	Cd	48	13788.0	2.2	22219	8	−6067.3	2.4	6000.9	2.0	−15964	3	−4858.2	2.7
	In	49	14909.0	2.8	20101.0	3.0	−5186	3	1765	7	−15458	4	−4129.4	2.0
	Sn	50	15809.9	0.6	18224.3	1.2	−4404.7	0.6	−2882	7	−10663.2	2.0	−10140	3
	Sb	51	16978	11	15109	7	−2364	7	−5698	23	−9487	7	−9855	20
	Te	52	18229	15	11363	7	427	7	−8388	13	−2819	7	−14283	21
	I	53	19480	30	9716	23	801	27	−11473	26	−3071	22	−13770	24
	Xe	54	20752	15	8277	17	843	30	−14200	200	1608	21	−18456	16
	Cs	55	21980	50	6444	29	1610	30	−17290#	300#	1377	24	−18120#	200#
	Ba	56	23270	320	4980	200	1640	200	−20540#	540#	6200	200	−22680#	360#
	La	57	24630#	360#	3130#	300#	2260#	320#	*		6100#	300#	*	
	Ce	58	*		1170#	560#	2680#	540#	*		10920#	540#	*	
120	Tc	43	7850#	640#	*		−12190#	710#	23610#	500#	*		9200#	580#
	Ru	44	8680#	450#	32030#	640#	−10940#	640#	20560#	400#	−30570#	500#	5030#	400#
	Rh	45	9760	60	29900#	400#	−9830#	300#	17060	60	−25870#	500#	4920	60
	Pd	46	11034	3	27680#	200#	−8636	4	13678	4	−25300#	300#	300	3
	Ag	47	12275	4	25258	6	−7369	3	10035	4	−20140	10	318	3
	Cd	48	13410	4	23147	4	−6549	4	7140	4	−19637	5	−4318	4
	In	49	14575	4	20745	4	−5591	4	2708	8	−14347	4	−3716	3
	Sn	50	15588.0	0.9	18985.4	2.1	−4810.3	0.9	−1735.3	1.7	−14323.1	2.1	−9694	7
	Sb	51	16564	8	15718	7	−2592	7	−4670	17	−7996	7	−9306	10
	Te	52	17814	18	12288.0	1.7	−261.5	1.7	−7190	12	−6586.8	1.8	−13656	22
	I	53	18919	25	10330	15	650	16	−9859	18	−1561	17	−13024	18
	Xe	54	20236	16	9059	22	666	27	−13280	300	−2279	14	−17939	18
	Cs	55	21622	16	7496	22	1110	80	−16090#	300#	2600	24	−17370	200
	Ba	56	22770#	360#	5390	300	1730	300	−19160#	580#	2620	300	−21940#	420#
	La	57	23960#	420#	3970#	300#	1820#	320#	*		7220#	300#	−21820#	580#
	Ce	58	*		2050#	540#	2490#	540#	*		7570#	540#	*	
121	Tc	43	7650#	710#	*		−12930#	580#	24710#	800#	*		10110#	640#
	Ru	44	8500#	500#	32770#	500#	−11370#	640#	21550#	400#	*		5910#	400#
	Rh	45	9570	620	30800#	800#	−10540#	740#	18150	620	−28540#	800#	5960	620
	Pd	46	10715	5	28490#	300#	−9080	60	14892	3	−23750#	400#	1421	4
	Ag	47	11895	9	26159	13	−7932	12	11441	9	−23080	60	1482	9
	Cd	48	13152.7	2.7	24042	4	−7076	8	8122.9	2.2	−18083	3	−3436	4
	In	49	14277.1	2.4	21772.1	2.4	−6082.4	2.5	3754.8	2.7	−17460.0	3.0	−2818.5	1.5
	Sn	50	15274.7	1.1	19710.9	2.1	−5203.3	1.4	−653	26	−12528	4	−8851	7
	Sb	51	16267	7	16467	3	−3081	3	−3354	5	−11180	4	−8308.6	2.4
	Te	52	17504	27	13057	26	−571	26	−6063	28	−4735	26	−12867	30
	I	53	18611	22	11349	8	−31	10	−9144	15	−5118	9	−12145	13
	Xe	54	19829	15	9877	13	190	17	−11740	140	−407	10	−16664	14
	Cs	55	20940	20	7903	26	911	29	−14720#	300#	−644	21	−16290	300
	Ba	56	22300	250	6530	140	1020	140	−18060#	430#	4140	140	−21020#	330#
	La	57	23500#	420#	4650#	300#	1660#	300#	−20830#	580#	4220#	300#	−20720#	580#
	Ce	58	24780#	640#	2680#	450#	2340#	470#	*		8910#	500#	*	
	Pr	59	*		1110#	580#	2560#	540#	*		8960#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
122	Tc	43	2840#	710#	*		44920#	500#	*		5000#	580#	*	
	Ru	44	5220#	640#	17530#	710#	38830#	500#	3930#	710#	3110#	710#	−9690#	580#
	Rh	45	3700#	690#	14540#	500#	31680#	300#	8550#	500#	5260#	420#	−6200#	580#
	Pd	46	6506	20	15660	620	25324	20	4710	60	3071	22	−6700#	300#
	Ag	47	4888	10	12327	6	17115	6	9770	6	5253	7	−2751	11
	Cd	48	7610	3	13498	9	9701.5	2.6	5772	4	2903	3	−3357	5
	In	49	5781	3	9770	4	2525	6	11113	5	5373	4	743	4
	Sn	50	8814.9	1.3	11384.3	1.8	−4585	11	6480	3	2634.3	2.4	−230.2	2.3
	Sb	51	6806.37	0.13	6427.1	2.5	−10190	30	13473.8	2.4	6593.9	2.5	5022	3
	Te	52	9842	26	8003.1	2.1	−15705	28	8814	7	4025	7	5397.2	1.4
	I	53	7905	7	4825	26	−21540#	300#	13993	5	5966	9	9042	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	10230#	420#	1090#	330#	*		15060#	420#	4910#	360#	13410#	300#
	Ce	58	13260#	570#	2780#	500#	*		10640#	500#	2010#	500#	12360#	450#
	Pr	59	11300#	710#	−620#	640#	*		15660#	710#	4140#	710#	15890#	580#
123	Ru	44	2840#	710#	17530#	710#	40860#	500#	5700#	710#	3310#	710#	*	
	Rh	45	5380#	500#	14700#	640#	34210#	400#	6150#	570#	5390#	570#	−8540#	640#
	Pd	46	3750	250	15710#	390#	27520	250	6660	670	3180	260	−4930#	470#
	Ag	47	6455	6	12276	20	19620	4	7289	4	5540	4	−5340	60
	Cd	48	4873	4	13483	6	11757.3	3.0	7700	9	3124	4	−1488	4
	In	49	7915	3	10075.2	2.6	4545	4	8386.1	2.2	5423	4	−2078.2	2.9
	Sn	50	5945.9	1.1	11549	4	−2566	10	8740.8	2.1	2758	4	1789	4
	Sb	51	8960.0	2.1	6572.16	0.15	−8180	12	10684.0	1.3	6738.4	1.3	2132	3
	Te	52	6929.01	0.08	8125.8	2.1	−13517	12	11139.0	2.1	4110	7	7572.6	1.2
	I	53	9935	6	4918	3	−19290#	200#	11311	26	6283	4	6120	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	−36760#	700#	12158	19	3098	16	12164	17
	La	57	12180#	360#	1330#	200#	*		12810#	240#	5100#	360#	10880#	200#
	Ce	58	10480#	500#	3030#	420#	*		12810#	420#	2380#	420#	14250#	420#
	Pr	59	13520#	640#	−360#	570#	*		13170#	570#	4360#	640#	13220#	500#
	Nd	60	*		1410#	860#	*		13360#	860#	*		16480#	860#
124	Ru	44	5110#	780#	*		43110#	600#	3430#	780#	2820#	780#	*	
	Rh	45	3590#	570#	15450#	640#	36200#	400#	7780#	640#	4780#	570#	−7520#	640#
	Pd	46	6070#	390#	16390#	500#	29940#	300#	4300#	420#	2820#	690#	−8010#	500#
	Ag	47	4667	8	13190	250	21420	7	9127	21	4846	7	−4300	620
	Cd	48	7356	4	14385	4	13825.4	2.9	5232	6	2568	9	−4871	4
	In	49	5583	3	10785	4	6455	4	10413	4	5027	4	−860	9
	Sn	50	8487.6	1.1	12121.7	1.7	−563.19	0.16	6034	3	2477.8	1.8	−1511.0	2.3
	Sb	51	6467.50	0.06	7093.7	1.1	−5879	9	13031.44	0.16	6441.1	1.3	3871.7	1.8
	Te	52	9424.48	0.09	8590.22	0.12	−11435	13	8520.8	2.1	3939.0	2.1	4318.4	1.3
	I	53	7493	4	5482.5	1.9	−17110	60	13659.5	1.9	6043	26	7881.0	2.8
	Xe	54	10491	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#	2330#	420#	11480#	330#
	Pr	59	10990#	570#	150#	500#	*		15430#	570#	4400#	570#	14880#	500#
	Nd	60	14000#	860#	1890#	640#	*		10660#	710#	1590#	710#	13510#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
122	Tc	43	7450#	710#	*		*		25570#	580#	*		10250#	640#
	Ru	44	8200#	640#	*		−11940#	710#	22840#	500#	*		6400#	800#
	Rh	45	9410#	310#	31460#	580#	−11010#	500#	19340#	300#	−27630#	580#	6230#	300#
	Pd	46	10479	20	29470#	400#	−9860#	200#	15996	20	−27280#	400#	1716	21
	Ag	47	11689	6	27180	60	−8651	7	12334	6	−22260	620	1782	6
	Cd	48	12798	4	24911	3	−7649	3	9328.0	2.6	−21720	3	−2838.7	2.6
	In	49	13988	4	22459	4	−6438	4	4780	4	−16440	9	−2429	3
	Sn	50	14985.1	1.3	20561	4	−5674.8	2.3	373.58	0.11	−16155.5	2.3	−8411.9	2.1
	Sb	51	16060	8	17204	4	−3483	3	−2255	5	−9778.8	2.7	−7862	26
	Te	52	17094.0	1.1	13794.0	1.3	−1086.3	1.3	−4959	11	−8406.2	1.3	−12139	5
	I	53	18475	16	12241	9	−509	6	−7940	30	−3769	5	−11670	11
	Xe	54	19325	16	10570	11	−89	21	−10750	30	−4100	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	−20300#	300#
	La	57	22890#	420#	5230#	300#	1440#	300#	−19760#	580#	5270#	300#	−19930#	500#
	Ce	58	24290#	640#	3560#	500#	1960#	450#	*		5580#	430#	−24390#	640#
	Pr	59	*		1560#	580#	2780#	580#	*		10310#	580#	*	
123	Ru	44	8060#	640#	*		−12530#	580#	23750#	560#	*		7260#	580#
	Rh	45	9080#	740#	32230#	640#	−11590#	640#	20410#	400#	−30170#	640#	7360#	400#
	Pd	46	10260	250	30250#	470#	−10450#	390#	17120	250	−25810#	560#	2850	250
	Ag	47	11342	9	27930	620	−9206	10	13795	4	−25010#	300#	2938	4
	Cd	48	12483	3	25810	4	−8230	5	10401	3	−20087	20	−1931	4
	In	49	13696.2	1.6	23573	9	−7172.6	2.4	5825.0	1.7	−19467	5	−1529.5	1.7
	Sn	50	14760.9	1.7	21319.1	2.6	−6176.2	2.6	1356.6	1.1	−14491.6	2.9	−7551.5	2.4
	Sb	51	15766.4	2.1	17956.5	1.8	−3937.9	2.4	−1280	3	−12958	3	−6980.93	0.10
	Te	52	16771	26	14552.8	1.3	−1531.9	1.4	−3923	10	−6520.24	0.14	−11163	5
	I	53	17840	6	12921	4	−893	8	−6900	13	−6897	4	−10660	12
	Xe	54	18910	14	11283	28	−491	12	−9594	15	−2224	10	−15180	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	22410#	360#	6130#	200#	1230#	200#	−18420#	450#	2210#	200#	−18850#	450#
	Ce	58	23740#	500#	4120#	330#	1880#	360#	−21390#	760#	7030#	300#	−23580#	580#
	Pr	59	24820#	640#	2430#	500#	2370#	500#	*		7020#	500#	*	
	Nd	60	*		790#	810#	2730#	860#	*		11690#	810#	*	
124	Ru	44	7950#	780#	*		*		24700#	670#	*		7530#	720#
	Rh	45	8970#	500#	32980#	640#	−12140#	640#	21490#	400#	*		7520#	470#
	Pd	46	9820#	300#	31090#	580#	−11000#	500#	18410#	300#	−29030#	580#	3240#	300#
	Ag	47	11122	9	28900#	300#	−10010	60	14711	8	−24300#	400#	3143	7
	Cd	48	12230	3	26661	20	−8845	3	11531.8	2.9	−23690	250	−1372.2	2.8
	In	49	13498	5	24268	6	−7661	4	6709	3	−18596	5	−1167	4
	Sn	50	14433.53	0.19	22196.8	2.6	−6699	4	2293.54	0.08	−18105.9	3.0	−7079.03	0.14
	Sb	51	15427.5	2.1	18643	3	−4335	3	−254.5	1.9	−11510.1	1.7	−6519.41	0.09
	Te	52	16353.50	0.12	15162.38	0.17	−1851.8	1.2	−2856.74	0.13	−9998.8	1.1	−10653	3
	I	53	17428	5	13608.3	2.8	−1373	7	−5624	9	−5430.6	1.9	−10188	10
	Xe	54	18456	11	11932.07	0.18	−730.4	1.1	−8578	13	−5785.40	0.16	−14696	12
	Cs	55	19740	30	10239	11	−418	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#	2220#	500#	*		8210#	450#	−22320#	810#
	Nd	60	*		1530#	640#	2480#	710#	*		8170#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
125	Ru	44	2850#	780#	*		44980#	500#	*		2800#	710#	*	
	Rh	45	5190#	640#	15530#	780#	38580#	500#	5430#	710#	4820#	710#	−9880#	710#
	Pd	46	3490#	500#	16290#	570#	32180#	400#	6190#	570#	3030#	500#	−6280#	640#
	Ag	47	6140	8	13270#	300#	23988	4	6740	250	5212	20	−6740#	300#
	Cd	48	4720	4	14437	7	15674	3	6966	5	2736	6	−3086	20
	In	49	7573	4	11002	3	8424.4	2.2	7713	3	5064.1	2.9	−3546	6
	Sn	50	5733.50	0.20	12272	4	1306.6	0.5	8215.9	1.7	2525	4	365.4	2.6
	Sb	51	8707.3	2.1	7313.5	2.1	−4166	8	10270.0	2.4	6548.7	2.1	945	4
	Te	52	6568.97	0.03	8691.70	0.14	−9353	11	10911.90	0.12	4176.4	2.1	6564.31	0.17
	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	−37610#	500#	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#
	Pm	61	*		−1390#	710#	*		13460#	860#	*		14280#	710#
126	Rh	45	3440#	710#	16120#	710#	40610#	500#	7100#	780#	4210#	710#	*	
	Pd	46	5860#	570#	16960#	640#	34510#	400#	3920#	570#	2550#	570#	−9300#	640#
	Ag	47	4520#	200#	14300#	450#	25670#	200#	8280#	360#	4440#	320#	−5880#	450#
	Cd	48	6979	4	15277	4	17809.1	2.6	4655	7	2212	4	−6310	250
	In	49	5468	5	11750	5	10102	6	9601	5	4469	5	−2560	6
	Sn	50	8187	6	12886	7	3137	6	5612	7	2253	7	−2949	7
	Sb	51	6200	30	7780	30	−2040	30	12550	30	6290	30	2660	30
	Te	52	9113.69	0.08	9098.0	2.1	−7395	13	8265.71	0.16	4022.78	0.14	3396.6	1.1
	I	53	7146	4	6177	4	−12940	90	13325	4	6125	4	6959	4
	Xe	54	10017.7	1.3	7598.7	1.3	−18326	28	8929.6	2.2	3661	4	5671.6	1.3
	Cs	55	8332	13	4440	10	−23950#	200#	14028	10	5762	14	9239	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	10400#	360#	1030#	280#	*		15230#	360#	4750#	360#	13900#	280#
	Nd	60	13380#	500#	2600#	420#	*		10480#	500#	1710#	500#	12550#	420#
	Pm	61	11670#	710#	−1030#	640#	*		15790#	710#	4010#	860#	16130#	640#
127	Rh	45	4600#	780#	*		43160#	600#	5350#	780#	4720#	850#	*	
	Pd	46	3470#	640#	16990#	710#	36570#	500#	5640#	710#	2670#	640#	−7660#	780#
	Ag	47	6000#	280#	14440#	450#	28050#	200#	5770#	450#	4500#	360#	−8290#	450#
	Cd	48	4557	7	15310#	200#	19540	6	6237	7	2322	9	−4810#	300#
	In	49	7153	4	11924.5	2.6	12092	4	7168	3	4672.2	2.9	−5045	7
	Sn	50	5531	11	12949	10	4852	10	7653	9	2305	10	−1124	9
	Sb	51	8380	30	7978	8	−459	8	9905	5	6396	5	−142	6
	Te	52	6287.65	0.18	9180	30	−5463	11	10685.4	2.1	4202.63	0.24	5596.50	0.22
	I	53	9144.0	2.7	6208	4	−11088	26	10750	4	6405	4	4283	4
	Xe	54	7246	4	7699	3	−16342	29	11226	4	3908	4	7850	4
	Cs	55	9961	12	4383	6	−21590#	200#	11671	6	6292	6	6772	6
	Ba	56	8219	17	5756	15	−26910#	300#	11983	14	3787	15	10497	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	12320#	280#	1120#	200#	*		12720#	280#	5130#	360#	11260#	200#
	Nd	60	10600#	420#	2800#	360#	*		12870#	420#	2110#	500#	14650#	420#
	Pm	61	13630#	640#	−780#	500#	*		13470#	570#	4380#	640#	13490#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
125	Ru	44	7960#	710#	*		*		25340#	640#	*		8270#	640#
	Rh	45	8780#	640#	*		−12710#	710#	22440#	500#	*		8390#	580#
	Pd	46	9560#	470#	31740#	640#	−11510#	570#	19640#	400#	−27410#	720#	4420#	400#
	Ag	47	10807	5	29660#	400#	−10440	620	16144	4	−26850#	400#	4360	4
	Cd	48	12076	4	27630	250	−9591	4	12545	3	−22350#	300#	−509	4
	In	49	13156.4	2.1	25387	4	−8434	9	7843	3	−21502	7	−252.4	2.2
	Sn	50	14221.1	1.2	23057.1	3.0	−7244.5	2.3	3129.01	0.22	−16483.0	2.9	−6345.03	0.25
	Sb	51	15174.8	2.1	19435.1	2.7	−4835.6	2.8	580.9	2.1	−14634	4	−5802.3	2.1
	Te	52	15993.45	0.10	15785.4	1.1	−2250.6	1.3	−1822.4	0.4	−8080.17	0.09	−9728.6	1.9
	I	53	17036	3	14191.08	0.13	−1661.8	2.1	−4747	8	−8505.93	0.15	−9239.94	0.15
	Xe	54	18094	10	12606.3	0.4	−1081	26	−7531	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	8998	15	387	15	−13010#	200#	710	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#	1890#	420#	−21920#	580#	4900#	310#	−21310#	580#
	Nd	60	25310#	810#	2360#	500#	2200#	570#	*		9560#	500#	*	
	Pm	61	*		500#	640#	2980#	710#	*		9710#	640#	*	
126	Rh	45	8630#	640#	*		−13320#	710#	23520#	540#	*		8440#	640#
	Pd	46	9350#	500#	32490#	720#	−12150#	640#	20760#	400#	−30420#	640#	4700#	400#
	Ag	47	10660#	200#	30590#	450#	−11270#	360#	17090#	200#	−26180#	540#	4560#	200#
	Cd	48	11699	3	28540#	300#	−10064	20	13754	7	−25840#	400#	85.3	2.9
	In	49	13042	5	26188	8	−9014	7	8580	30	−20831	6	13	4
	Sn	50	13921	6	23888	7	−7822	7	4055	6	−19950	7	−5825	7
	Sb	51	14910	30	20060	30	−5260	30	1520	30	−13260	30	−5440	30
	Te	52	15682.66	0.09	16411.51	0.12	−2549.38	0.19	−918.4	1.3	−11460.36	0.23	−9299.46	0.10
	I	53	16688	4	14869	4	−2001	4	−3560	11	−6944	4	−8782	4
	Xe	54	17621.0	1.3	13199.5	1.3	−1257.4	1.3	−6476	12	−7412.9	1.3	−13128	8
	Cs	55	18752	14	11563	11	−696	12	−9380	90	−2803	10	−12753	15
	Ba	56	19723	18	9580	13	260	17	−11850	30	−2759	13	−16982	29
	La	57	20860	110	7810	90	750	100	−14570#	220#	1830	90	−16390#	220#
	Ce	58	22050#	300#	6310	30	1360	40	−17440#	300#	1560	30	−20820#	300#
	Pr	59	23390#	450#	4720#	200#	1720#	360#	−20650#	540#	6070#	200#	−20400#	450#
	Nd	60	24690#	580#	3040#	420#	2070#	500#	*		5990#	360#	−25300#	580#
	Pm	61	*		1180#	640#	2610#	710#	*		11030#	580#	*	
127	Rh	45	8040#	780#	*		*		24920#	630#	*		9700#	720#
	Pd	46	9330#	640#	33110#	710#	−12780#	710#	21840#	500#	*		5750#	540#
	Ag	47	10520#	200#	31400#	540#	−11880#	450#	18240#	200#	−28740#	540#	5540#	200#
	Cd	48	11536	7	29610#	400#	−10870	250	14729	11	−24530#	400#	997	7
	In	49	12621.6	2.1	27201	4	−9713	4	9808	5	−23460#	200#	1047	7
	Sn	50	13719	9	24700	10	−8480	9	4811	9	−18503	9	−5150	30
	Sb	51	14586	5	20865	5	−5725	5	2285	6	−16179	7	−4705	5
	Te	52	15401.34	0.20	16965.66	0.29	−2891.1	1.2	40	4	−9561	6	−8442	4
	I	53	16290	4	15306	4	−2185	4	−2744	6	−9890	30	−7909	4
	Xe	54	17264	4	13877	4	−1575	4	−5503	12	−5545	4	−12042	11
	Cs	55	18293	10	11981	6	−722	7	−8344	27	−5618	6	−11642	14
	Ba	56	19292	16	10196	11	6	15	−10840	30	−961	11	−15920	90
	La	57	20280	40	8384	27	723	29	−13250#	200#	−834	28	−15150	40
	Ce	58	21460#	200#	6890	30	1250	30	−16070#	300#	3400	30	−19650#	200#
	Pr	59	22720#	360#	5470#	200#	1580#	280#	−19340#	450#	3030#	220#	−19340#	360#
	Nd	60	23980#	500#	3830#	360#	1950#	420#	*		7620#	300#	−24230#	580#
	Pm	61	25300#	640#	1820#	500#	2500#	570#	*		7800#	450#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
128	Rh	45	1680#	670#	*		46850#	300#	*		5890#	580#	*	
	Pd	46	5330#	710#	17720#	780#	39160#	500#	3750#	710#	2530#	710#	−10140#	710#
	Ag	47	4130#	360#	15100#	580#	29900#	300#	7500#	500#	3860#	500#	−7230#	580#
	Cd	48	6568	9	15880#	200#	21756	6	4190#	200#	1894	7	−7880#	400#
	In	49	5370.2	1.8	12738	6	13548	4	8776.4	2.7	4022	3	−4276	4
	Sn	50	7921	15	13717	11	6542	11	5201	12	1957	11	−4324	12
	Sb	51	5980	5	8427	9	1324	6	12113	7	6149.7	2.5	1450.9	2.8
	Te	52	8784.0	1.4	9584	5	−3625.2	1.8	8100	30	4126.0	2.6	2546.0	1.4
	I	53	6826.13	0.05	6746	4	−9110	50	13037	4	6148	4	6164	4
	Xe	54	9611	4	8166	4	−14327	28	8761	4	3840.2	1.3	4808.3	1.3
	Cs	55	7763	8	4899	7	−19600	30	13925	5	6132	6	8551	6
	Ba	56	10622	11	6417	6	−24730#	200#	9693	10	3585	8	7477.8	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	9750#	200#	1640	40	*		15200	40	5190#	200#	13080	40
	Nd	60	12800#	360#	3280#	280#	*		10470#	280#	2290#	360#	11660#	280#
	Pm	61	10980#	500#	−400#	420#	*		15870#	420#	4710#	500#	15500#	420#
	Sm	62	*		1130#	640#	*		11310#	710#	1870#	710#	14570#	640#
129	Pd	46	1520#	780#	17560#	670#	42980#	600#	6830#	850#	4450#	780#	*	
	Ag	47	5230#	500#	15000#	640#	32720#	400#	5740#	640#	4490#	570#	−9020#	640#
	Cd	48	3955	8	15700#	300#	23883	5	6240#	200#	2460#	200#	−5980#	400#
	In	49	6716.1	2.4	12886	7	15672	4	6617	7	4285	3	−6470#	200#
	Sn	50	5345	11	13691.8	2.2	8103.1	1.8	7009.1	2.2	2080	5	−2690.8	2.9
	Sb	51	8057.1	2.6	8564	11	2905	5	9587	9	6280	7	−1138	4
	Te	52	6082.41	0.08	9686.0	2.3	−1944	11	10405	5	4250	30	4651	6
	I	53	8840	5	6802	3	−7184	22	10485	3	6422	3	3530	30
	Xe	54	6906.85	0.01	8247	4	−12409	28	10998	4	4079	4	7015.2	1.3
	Cs	55	9639	7	4927	5	−17730	30	11533	6	6511	5	6058	6
	Ba	56	7764	11	6418	12	−22690#	200#	11890	12	4154	15	9732	11
	La	57	10770	60	3244	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	9810#	280#	3330#	200#	*		12990#	280#	2890#	280#	14090#	200#
	Pm	61	13030#	420#	−170#	360#	*		13440#	420#	5060#	420#	12870#	360#
	Sm	62	11250#	710#	1400#	580#	*		13690#	640#	2280#	710#	16700#	580#
130	Pd	46	3090#	670#	*		47500#	300#	5420#	420#	5960#	670#	*	
	Ag	47	2100#	580#	15580#	740#	36390#	420#	8970#	660#	5870#	660#	−6520#	740#
	Cd	48	6067	23	16540#	400#	26235	22	4300#	300#	2400#	200#	−8570#	500#
	In	49	5143.0	2.7	14073	6	17030	4	8043	7	3699	6	−5610#	200#
	Sn	50	7608.0	2.2	14583.7	2.3	9750.9	1.2	4771.3	1.8	1625.7	1.7	−5742	6
	Sb	51	5761	14	8979	14	4616	16	11746	18	6050	17	254	14
	Te	52	8419.4	0.7	10048.4	1.4	−96.24	0.29	7965.7	2.1	4210	5	1763	9
	I	53	6500.33	0.04	7220	3	−5309	26	12768	3	6209	3	5409	6
	Xe	54	9255.72	0.01	8662	3	−10458	28	8569	4	3967	4	4047.1	1.3
	Cs	55	7472	10	5493	8	−15720	60	13672	8	6286	9	7730	9
	Ba	56	10267	11	7047	5	−20660	28	9386	5	3847	6	6711	4
	La	57	8380	30	3856	28	−26160#	200#	14452	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	−37160#	510#	15070	70	5670	70	12370	70
	Nd	60	12290#	200#	4110	40	*		10450	40	2920#	200#	11030	40
	Pm	61	10360#	360#	380#	280#	*		15880#	280#	5310#	360#	14830#	280#
	Sm	62	13440#	640#	1810#	500#	*		11230#	500#	2470#	570#	13860#	500#
	Eu	63	*		−1028	15	*		15850#	710#	*		16940#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
128	Rh	45	6280#	580#	*		*		27370#	420#	*		11490#	580#
	Pd	46	8800#	640#	*		−13000#	780#	23080#	500#	*		6420#	540#
	Ag	47	10130#	360#	32090#	580#	−12430#	500#	19480#	300#	−28270#	670#	5960#	300#
	Cd	48	11125	7	30320#	400#	−11370#	300#	16081	13	−27630#	500#	1582	7
	In	49	12523	4	28050#	200#	−10415	7	10417.7	2.5	−22830#	200#	1208	9
	Sn	50	13452	13	25641	12	−9044	12	5675	11	−21867	13	−4691	12
	Sb	51	14360	30	21376	5	−6122	4	3131	4	−15005.5	2.5	−4398.0	2.5
	Te	52	15071.6	1.4	17562	6	−3187.5	1.4	866.7	0.7	−12813	9	−8081	4
	I	53	15970.1	2.7	15930	30	−2544	4	−1807	6	−8328	6	−7488.5	2.0
	Xe	54	16856.78	0.01	14373.7	1.3	−1760.7	1.3	−4491.9	1.6	−8868.4	1.3	−11692	6
	Cs	55	17724	12	12599	7	−991	6	−7310	50	−4237	6	−11185	13
	Ba	56	18841	13	10800.2	1.6	−125.5	2.1	−9835	28	−4336	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	−14890#	200#	−0	30	−18960#	200#
	Pr	59	22070#	200#	5940	100	1500	60	−18110#	300#	4280	40	−18490#	300#
	Nd	60	23400#	360#	4400#	200#	1850#	360#	−21490#	540#	4050#	200#	−23400#	450#
	Pm	61	24610#	580#	2400#	360#	2510#	500#	*		9140#	360#	*	
	Sm	62	*		350#	580#	3260#	710#	*		9470#	580#	*	
129	Pd	46	6850#	780#	*		−11670#	780#	25510#	600#	*		9030#	670#
	Ag	47	9360#	450#	32720#	720#	−12470#	640#	20970#	400#	−31820#	500#	7300#	400#
	Cd	48	10524	8	30800#	500#	−11840#	400#	17471	6	−26250#	500#	2997	5
	In	49	12086.2	2.3	28760#	200#	−10992	4	11758.7	2.4	−25410#	300#	2413	11
	Sn	50	13266	9	26430	6	−9670	3	6411.9	1.9	−20644	7	−4056.4	2.8
	Sb	51	14037	5	22280.2	1.9	−6606.2	2.3	3914	3	−17692.4	1.7	−3671.1	1.2
	Te	52	14866.4	1.4	18113	9	−3536.4	1.4	1691.2	0.7	−10975	11	−7338	4
	I	53	15666	5	16386	6	−2676	4	−1008	6	−11188	4	−6718	3
	Xe	54	16517	4	14992.9	1.3	−2098.5	1.3	−3635	11	−6991.2	0.7	−10836	5
	Cs	55	17402	7	13093	6	−1087	5	−6176	22	−7050	6	−10202	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#	1792	28	−18030	40
	Pr	59	21270#	200#	6460	40	1560	40	−16590#	300#	1560	60	−17210#	200#
	Nd	60	22610#	360#	4970#	200#	1860#	280#	−20050#	540#	5870#	200#	−22230#	360#
	Pm	61	24010#	500#	3110#	360#	2470#	420#	*		5860#	300#	−22100#	580#
	Sm	62	*		1000#	580#	3320#	640#	*		11020#	540#	*	
130	Pd	46	4610#	580#	*		*		28490#	300#	*		11170#	500#
	Ag	47	7330#	300#	33140#	520#	−11120#	660#	24010#	420#	*		9150#	420#
	Cd	48	10022	23	31540#	500#	−12040#	400#	19012	22	−30800#	600#	3646	22
	In	49	11859.1	2.2	29770#	300#	−11610#	200#	12377	14	−25330#	400#	2615.1	2.5
	Sn	50	12953	11	27469	7	−10298.8	2.6	7223.3	1.2	−24296	5	−3607.4	1.9
	Sb	51	13818	14	22671	14	−6899	15	4653	15	−16737	14	−3350	14
	Te	52	14501.8	0.7	18612	11	−3768	6	2527.51	0.01	−14049.0	1.8	−6917	3
	I	53	15340	5	16906	4	−2970	30	−36	9	−9632	3	−6311	3
	Xe	54	16162.58	0.01	15464.6	0.7	−2240.6	1.3	−2623.76	0.29	−10164.6	0.7	−10453	5
	Cs	55	17111	10	13739	9	−1414	9	−5272	27	−5682	9	−9910	13
	Ba	56	18030.7	1.5	11974.13	0.29	−535.25	0.29	−7834	28	−5849.62	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	22100#	200#	5640	40	1800	40	−18900#	400#	2400	40	−21490#	300#
	Pm	61	23390#	360#	3720#	200#	2510#	280#	−21460#	540#	7020#	200#	−21210#	540#
	Sm	62	24690#	640#	1640#	450#	3260#	500#	*		7390#	450#	*	
	Eu	63	*		370#	580#	3310#	710#	*		11880#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
131	Pd	46	1160#	420#	*		51560#	300#	*		6490#	420#	*	
	Ag	47	2920#	660#	15410#	580#	41230#	500#	7570#	780#	8270#	710#	−7760#	580#
	Cd	48	2165	29	16600#	430#	29999	19	7370#	400#	4360#	300#	−5410#	500#
	In	49	6189.2	2.8	14196	22	19416.9	2.2	5809	6	4078	7	−7670#	300#
	Sn	50	5220.0	2.3	14660.8	2.6	11135.2	1.9	6267.3	2.7	1775.8	2.3	−4394	7
	Sb	51	7770	14	9141.7	2.4	6073.2	2.1	9321.4	2.7	6201	12	−2145.8	2.5
	Te	52	5929.38	0.06	10217	14	1467.9	0.4	10093.3	1.4	4260.8	2.1	3754	11
	I	53	8576	3	7377.33	0.20	−3672	28	10274.4	0.7	6416.5	0.7	2812.9	2.2
	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	3802	28	−24000#	200#	12002	30	6463	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#	5730#	280#	12210#	200#
	Sm	62	10650#	570#	2100#	450#	*		13610#	500#	2800#	500#	16010#	450#
	Eu	63	13520#	640#	−947	5	*		13580#	640#	4550#	640#	14400#	500#
132	Ag	47	1720#	710#	15970#	580#	45230#	500#	8940#	580#	8070#	780#	*	
	Cd	48	3320	60	17000#	500#	34720	60	6140#	430#	6270#	400#	−7210#	600#
	In	49	2450	30	14480	40	23300	30	9430	40	5590	30	−4880#	400#
	Sn	50	7339.5	2.7	15811.1	3.0	12732.4	2.0	4070.8	2.7	1152.4	2.8	−7778	6
	Sb	51	5722.7	2.2	9644.4	2.1	7519.0	1.3	11206.7	1.5	5823.2	2.0	−1152.5	2.1
	Te	52	8048	3	10495	4	3247	4	7806	15	4269	4	1051	4
	I	53	6334	4	7781	4	−1980	40	12360	4	6165	4	4536	4
	Xe	54	8936.72	0.01	9126.63	0.20	−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	9827.5	1.1	7668.5	1.1	−17009	24	9175	8	3928	5	5907.4	1.1
	La	57	8030	50	4330	40	−22100#	150#	14240	40	6200	40	9420	40
	Ce	58	10830	40	5990	30	−27470#	300#	9870	30	3718	30	8238	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	12790#	500#	2520#	360#	*		11180#	360#	3040#	420#	13020#	360#
	Eu	63	10810#	570#	−790#	570#	*		16210#	570#	4990#	640#	16630#	500#
133	Ag	47	2750#	710#	*		49840#	500#	7350#	580#	8410#	580#	*	
	Cd	48	1750#	210#	17030#	540#	38790#	200#	7320#	540#	6620#	470#	−5860#	360#
	In	49	3350	50	14500	70	28190	40	8240	50	8300	50	−6130#	430#
	Sn	50	2398.7	2.7	15760	30	16770	3	7861.3	2.9	3896.7	2.6	−4110	22
	Sb	51	7358.5	1.4	9663.3	2.2	9150.1	1.1	9068.3	2.2	6072.8	1.6	−3368.0	2.1
	Te	52	5816	4	10588.3	1.0	4620.6	1.1	9760.1	2.1	4214	14	2843.0	1.3
	I	53	8237	4	7970	4	−374	28	10053.0	0.9	6348.2	0.9	2061	14
	Xe	54	6435.9	2.4	9229	5	−5225	17	10508.5	2.4	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	7690.0	1.4	−15220	50	11212.7	1.0	4210	8	7973.2	1.0
	La	57	9840	50	4348	28	−20090	60	11895	28	6626	28	7052	29
	Ce	58	8020	26	5980	40	−25420#	300#	12060	30	4070	30	10485	16
	Pr	59	10780	30	2757	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	10070#	420#	2660#	330#	*		13480#	360#	3330#	360#	15240#	300#
	Eu	63	13110#	500#	−480#	420#	*		13760#	500#	5330#	500#	13880#	360#
	Gd	64	*		1150#	640#	*		14120#	640#	2820#	710#	17290#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
131	Pd	46	4250#	670#	*		*		29490#	300#	*		12110#	520#
	Ag	47	5020#	640#	*		−9450#	780#	27270#	500#	*		12300#	500#
	Cd	48	8232	20	32180#	600#	−10740#	500#	22067	19	−29870#	300#	6623	19
	In	49	11332.1	3.0	30730#	400#	−11800#	200#	13958	3	−29420#	420#	4033.9	2.5
	Sn	50	12828.0	2.6	28734	6	−10962	6	7932.7	1.9	−23450	22	−3066	14
	Sb	51	13531.4	2.5	23725.4	2.9	−7516.0	2.4	5459.0	2.1	−19364.8	2.7	−2700.7	2.1
	Te	52	14348.8	0.7	19196.0	1.8	−4166	9	3202.55	0.06	−12370.4	1.2	−6346	3
	I	53	15077	3	17425.7	1.4	−3167	5	614.26	0.26	−12447	14	−5632.16	0.20
	Xe	54	15860.14	0.01	15986.6	0.7	−2557.3	1.3	−1734.7	0.4	−8349.59	0.01	−9585	8
	Cs	55	16699	5	14126	3	−1497	4	−4286	28	−8408	3	−8870.2	0.3
	Ba	56	17761	11	12560.8	0.4	−783	4	−6970	30	−4087.4	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#	2460#	280#	−20310#	450#	4120#	210#	−20140#	450#
	Sm	62	24090#	640#	2480#	450#	3210#	500#	*		9030#	400#	−24340#	640#
	Eu	63	*		860#	500#	3420#	570#	*		8720#	450#	*	
132	Ag	47	4650#	660#	*		−9490#	580#	28000#	500#	*		12740#	500#
	Cd	48	5490	60	32410#	310#	−8730#	500#	26080	60	−32040#	310#	9490	60
	In	49	8640	30	31080#	430#	−10110#	300#	17230	30	−28940#	500#	6810	30
	Sn	50	12559.6	2.3	30007	22	−11733	7	8642	4	−28624	19	−2635.5	2.9
	Sb	51	13493	14	24305.2	2.0	−7868.5	1.6	6070	4	−18898.3	2.4	−2494.0	0.8
	Te	52	13978	3	19637	4	−4294	12	4091	3	−15199	4	−5818	3
	I	53	14910	5	17998	15	−3521	5	1449	4	−11010	5	−5361	4
	Xe	54	15541.14	0.01	16503.96	0.01	−2710.1	0.7	−843.9	1.1	−11356.92	0.06	−9294.72	0.18
	Cs	55	16396	8	14794	3	−1839	4	−3430	40	−7000.3	1.1	−8545.1	1.1
	Ba	56	17321.0	1.1	13132.6	1.1	−999.5	1.1	−5966	20	−7310.5	1.1	−12737	28
	La	57	18240	40	11400	40	−220	40	−8500	50	−2960	40	−12090	50
	Ce	58	19190	30	9791	20	474	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	−16430#	300#	990	40	−19730#	200#
	Pm	61	22300#	250#	5030#	160#	2280#	150#	−19430#	430#	5380#	160#	−19420#	430#
	Sm	62	23440#	500#	2980#	300#	3220#	360#	*		5480#	300#	−23610#	500#
	Eu	63	24330#	640#	1310#	450#	3590#	500#	*		10280#	450#	*	
133	Ag	47	4470#	710#	*		*		28600#	500#	*		13310#	500#
	Cd	48	5070#	200#	33000#	360#	−8960#	630#	26730#	200#	*		10190#	200#
	In	49	5800	40	31510#	500#	−8230#	400#	21240	40	−30570#	500#	10800	40
	Sn	50	9738.2	2.7	30240	19	−10177	6	12059.2	2.0	−27700	60	688.5	2.1
	Sb	51	13081.2	2.3	25474.5	2.5	−8510.9	2.2	6947.9	1.4	−23810	30	−1804	4
	Te	52	13864.7	0.5	20232.7	2.0	−4765.0	1.9	4710.5	2.5	−13675.5	2.0	−5301	4
	I	53	14570.1	0.9	18464.4	2.2	−3700.2	1.7	2202.2	0.9	−13524.0	1.2	−4661.1	0.9
	Xe	54	15372.6	2.4	17010.5	2.4	−3063.6	2.5	−89.9	2.6	−9744	4	−8562.2	2.6
	Cs	55	16158.01	0.18	15207.57	0.20	−1989	3	−2577	28	−9656	4	−7707.2	1.1
	Ba	56	17017.4	1.1	13718.1	1.0	−1282.5	1.0	−5135	16	−5563.7	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	−15330#	300#	2850	50	−18780#	160#
	Pm	61	21780#	210#	5680	70	1940	60	−18170#	300#	2530	60	−18480#	300#
	Sm	62	22860#	500#	3810#	300#	2950#	360#	−20940#	580#	7140#	300#	−22870#	500#
	Eu	63	23920#	500#	2040#	360#	3520#	420#	*		7100#	330#	*	
	Gd	64	*		360#	640#	3850#	710#	*		11650#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
134	Cd	48	3230#	360#	17510#	580#	43230#	300#	5810#	580#	6310#	580#	−7930#	420#
	In	49	2250	60	15010#	210#	32190	40	9320	70	8220	50	−5460#	500#
	Sn	50	3631	4	16040	40	21692	3	6680	30	6455	4	−5576	19
	Sb	51	3169	3	10434	4	12872	3	13238	4	8123	4	−348	4
	Te	52	7672.0	2.8	10901.8	2.9	6416.2	2.8	7810.8	2.9	4313	3	391	3
	I	53	6246	5	8399	5	1175	21	11856	6	6032	5	3585	5
	Xe	54	8553.6	2.4	9546.0	0.9	−3295	20	8288	4	4179.54	0.20	2731.59	0.06
	Cs	55	6891.54	0.01	6536.6	2.4	−8363	20	13098.61	0.02	6386.47	0.02	6196.56	0.20
	Ba	56	9467.6	1.0	8167.98	0.21	−13304	12	8913.6	1.1	3969.68	0.27	5110.03	0.21
	La	57	7800	30	4954	20	−18450	50	13927	20	6324	20	8483	20
	Ce	58	10484	26	6630	30	−23530#	200#	9600	40	3800	30	7494	20
	Pr	59	8662	24	3399	26	−28910#	300#	14652	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	12370#	360#	3180#	200#	*		11040#	250#	3340#	280#	12120#	200#
	Eu	63	10460#	420#	−90#	420#	*		16090#	420#	5520#	500#	15800#	360#
	Gd	64	13540#	640#	1580#	500#	*		11380#	570#	2800#	570#	14400#	570#
135	Cd	48	1590#	500#	*		44910#	400#	6970#	640#	6440#	640#	*	
	In	49	3220#	210#	14990#	360#	36780#	200#	7850#	280#	8330#	210#	−6950#	540#
	Sn	50	2270	4	16070	40	25781	5	7760	40	6630	30	−4520	60
	Sb	51	3743	4	10546	4	17891.6	2.7	11894	3	11720	3	−1640	30
	Te	52	3266	3	10999	4	10121.8	1.7	11902.9	2.0	6769.0	1.9	4464.2	2.6
	I	53	7807	5	8534	3	2864	10	9864.7	2.1	6273	4	1501.0	2.2
	Xe	54	6359	4	9659	6	−1797	11	10166	4	4154	5	4421	5
	Cs	55	8762.1	0.3	6745.0	0.3	−6646	12	10772.5	2.4	6561.1	0.3	3768	4
	Ba	56	6971.97	0.10	8248.40	0.19	−11637	19	10931.15	0.19	4166.2	1.1	7074.78	0.19
	La	57	9496	22	4982	9	−16570	90	11621	9	6656	9	6156	9
	Ce	58	7856	23	6687	22	−21760	150	11589	30	3970	40	9465	10
	Pr	59	10479	24	3394	24	−26790#	200#	12193	20	6398	24	8430	40
	Nd	60	8638	22	4975	28	−31960#	400#	12435	23	3880	30	11902	28
	Pm	61	11380	100	1710	90	−37020#	410#	12970	100	6220	90	10800	90
	Sm	62	9630#	250#	3380	160	*		13260	160	3630#	220#	14210	160
	Eu	63	12600#	360#	140#	280#	*		13560#	360#	5720#	360#	13130#	250#
	Gd	64	10790#	570#	1920#	500#	*		13700#	500#	2820#	570#	16400#	500#
	Tb	65	*		−1188	7	*		13720#	640#	*		14790#	570#
136	In	49	2040#	360#	15440#	500#	38580#	300#	9040#	420#	8030#	360#	−6240#	580#
	Sn	50	3513	29	16360#	200#	30355	29	6490	50	6470	50	−6290#	200#
	Sb	51	2888	6	11164	7	21843	6	12638	7	11231	6	−1180	40
	Te	52	4767.4	2.9	12023	3	14462.2	2.3	10305	4	9360.1	2.5	2095.5	3.0
	I	53	3843	5	9111	5	6490	50	13694	5	8247	4	5017	4
	Xe	54	8087	4	9939.0	2.1	79.32	0.28	8325	5	4303.7	0.9	2150.3	0.5
	Cs	55	6839.6	0.5	7226	4	−5010	11	12486.5	0.5	6157.4	2.4	5165.0	1.0
	Ba	56	9107.74	0.04	8594.09	0.29	−9688	12	8714.95	0.19	4047.98	0.19	4403.0	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	6691.6	1.0
	Pr	59	8476	16	4013	15	−25240#	200#	14202	23	5942	20	9800	30
	Nd	60	11057	22	5552	17	−30000#	300#	10040	24	3602	17	8865	20
	Pm	61	9160	110	2240	70	−35270#	510#	15190	70	6030	80	12420	70
	Sm	62	12020	160	4030	90	*		10660	40	3460	50	11170	50
	Eu	63	10020#	280#	530#	250#	*		15910#	280#	5760#	360#	14950#	200#
	Gd	64	13020#	500#	2340#	360#	*		11130#	420#	2900#	420#	13450#	420#
	Tb	65	10920#	640#	−1060#	640#	*		16340#	640#	5020#	710#	16980#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
134	Cd	48	4980#	310#	*		−9090#	420#	27130#	300#	*		10310#	300#
	In	49	5600	50	32030#	500#	−8380#	430#	22160	40	−30060#	500#	10950	40
	Sn	50	6030	4	30550	60	−7741	23	16100	4	−29580#	200#	4416	3
	Sb	51	10528	3	26200	30	−6537	4	10024	6	−23630	40	843	3
	Te	52	13488	4	20565	3	−4829	3	5592.1	2.7	−18949	3	−4736.3	2.9
	I	53	14483	6	18988	5	−4185	15	2848	5	−12412	5	−4471	5
	Xe	54	14989.50	0.01	17516	3	−3197.79	0.01	824.11	0.21	−12481.7	0.5	−8126.21	0.01
	Cs	55	15881.1	1.0	15766	4	−2380	3	−1673	20	−8311.3	0.9	−7408.8	1.0
	Ba	56	16657.5	1.1	14248.92	0.20	−1494.39	0.21	−4119	20	−8595.3	2.4	−11527	28
	La	57	17640	40	12644	20	−744	22	−6691	28	−4437	20	−10872	26
	Ce	58	18504	29	10974	20	1	20	−9185	24	−4566	20	−14965	24
	Pr	59	19440	40	9380	40	670	30	−11760	50	−320	30	−14270	50
	Nd	60	20363	27	7755	24	1350	30	−14350#	200#	−517	20	−18310	50
	Pm	61	21280#	160#	6110	50	1990	80	−17140#	300#	3880	40	−17840#	300#
	Sm	62	22440#	360#	4450#	200#	2870#	200#	−19770#	450#	3740#	200#	−22140#	360#
	Eu	63	23560#	500#	2570#	340#	3420#	360#	*		8500#	300#	−21630#	580#
	Gd	64	*		1110#	500#	3750#	570#	*		8180#	500#	*	
135	Cd	48	4820#	450#	*		−9530#	500#	27810#	400#	*		10960#	400#
	In	49	5470#	200#	32500#	540#	−8680#	540#	22690#	200#	*		11360#	200#
	Sn	50	5901	4	31070#	200#	−7845	19	17097	4	−28620#	300#	5315	4
	Sb	51	6912.1	2.8	26590	40	−4091	3	14089	3	−25120	40	4772	4
	Te	52	10938.4	1.8	21432.8	2.6	−2875.4	2.6	8685	4	−18584	4	−1757	5
	I	53	14053.0	2.2	19436.2	2.3	−4221.8	2.9	3802.7	2.1	−17049	4	−3724.7	2.1
	Xe	54	14912	4	18058	4	−3627	4	1437	4	−11169	5	−7593	4
	Cs	55	15653.6	0.3	16291.1	0.9	−2565.5	0.4	−938	9	−10827	5	−6703.3	0.3
	Ba	56	16439.5	1.0	14785.0	2.4	−1861.94	0.19	−3234	10	−7013.73	0.19	−10703	20
	La	57	17292	29	13150	9	−1013	9	−5708	15	−7041	9	−9884	22
	Ce	58	18341	19	11641	10	−362	10	−8403	22	−2955	10	−14160	23
	Pr	59	19141	17	10020	30	410	30	−10860	90	−3006	23	−13361	17
	Nd	60	20020	50	8373	25	1070	40	−13360	160	1329	28	−17520	50
	Pm	61	20810	100	6710	90	1800	100	−15920#	220#	1170	90	−16840#	220#
	Sm	62	22000#	340#	5100	160	2490	160	−18610#	430#	5500	160	−21310#	340#
	Eu	63	23050#	360#	3320#	200#	3200#	280#	−21100#	450#	5330#	200#	−20690#	450#
	Gd	64	24330#	640#	1830#	500#	3610#	570#	*		9760#	450#	*	
	Tb	65	*		400#	500#	3990#	570#	*		9280#	500#	*	
136	In	49	5260#	300#	*		−9000#	580#	23540#	300#	*		11590#	300#
	Sn	50	5783	29	31350#	300#	−8030	70	18351	29	−30540#	400#	5545	29
	Sb	51	6631	7	27230	40	−4530	30	15044	7	−24800#	200#	5151	6
	Te	52	8034	4	22569	4	−303	3	12004.3	2.3	−21082	4	1283	3
	I	53	11650	7	20110	5	−2342	4	6800	4	−17149	5	−1209	6
	Xe	54	14445.97	0.01	18473.4	2.7	−3666	3	2457.85	0.19	−15989.4	1.7	−6918.6	0.3
	Cs	55	15601.7	0.5	16885	5	−3072	4	−310	50	−9860.0	2.1	−6570.9	0.4
	Ba	56	16079.71	0.11	15339.13	0.19	−2032.96	0.19	−2378.53	0.21	−9763	4	−10315	9
	La	57	16960	60	13720	50	−1310	50	−4700	50	−5740	50	−9490	50
	Ce	58	17820	20	12136.49	0.24	−498.3	1.1	−7309	12	−5946.87	0.22	−13644	12
	Pr	59	18955	23	10700	23	−40	40	−10180	70	−1986	15	−13198	22
	Nd	60	19695	17	8946	24	845	24	−12388	17	−1872	16	−17200	90
	Pm	61	20540	80	7220	70	1640	70	−15070#	210#	2480	70	−16380	170
	Sm	62	21650#	200#	5742	17	2190	27	−17610#	300#	2114	23	−20730#	200#
	Eu	63	22620#	360#	3910#	200#	3100#	250#	−20200#	540#	6680#	220#	−19920#	450#
	Gd	64	23810#	500#	2480#	360#	3380#	420#	*		6370#	340#	−24220#	500#
	Tb	65	*		860#	580#	3880#	640#	*		10960#	540#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
137	In	49	2930#	500#	*		40530#	400#	7700#	570#	8330#	500#	*	
	Sn	50	2110	30	16430#	300#	32273	10	7600#	200#	6610	40	−5160#	300#
	Sb	51	3578	8	11229	30	26532	6	11329	7	11284	7	−2510	40
	Te	52	2950	3	12086	6	18417.6	2.1	11097	3	9579	4	2776	4
	I	53	4883	4	9226.2	2.3	10778.7	1.7	12077.5	1.8	11035.7	2.8	3303	3
	Xe	54	4025.56	0.10	10122	4	3535.3	0.3	12106.6	2.1	6524	5	5796.7	2.7
	Cs	55	8266.8	0.5	7405.51	0.26	−3344	8	10578	4	6444.18	0.26	3144	5
	Ba	56	6905.64	0.07	8660.1	0.5	−8137	12	10571.37	0.30	4033.88	0.20	6050.89	0.20
	La	57	9170	50	5542.8	1.6	−13068	13	11420.6	1.6	6673.2	1.6	5396.8	1.6
	Ce	58	7481.53	0.16	7170	50	−17927	29	11436	9	4164	20	8677.64	0.28
	Pr	59	9933	14	3982	8	−23056	9	12125	13	6493	22	7663	22
	Nd	60	8456	17	5533	16	−28180#	300#	12063	17	3808	23	10894	24
	Pm	61	10980	70	2163	18	−32990#	400#	12852	23	6438	18	10102	24
	Sm	62	9250	30	4120	70	*		12790	90	3640	50	13300	30
	Eu	63	12120#	200#	624	13	*		13420	150	6020#	200#	12260	40
	Gd	64	10270#	420#	2590#	360#	*		13460#	360#	3080#	420#	15550#	360#
	Tb	65	13250#	640#	−830#	500#	*		13880#	570#	5310#	570#	14190#	500#
138	Sn	50	3403	23	16900#	400#	34530	21	6240#	300#	6420#	200#	−6980#	400#
	Sb	51	2440	70	11560	70	28510	70	12400	70	11120	70	−1730#	210#
	Te	52	4464	4	12971	7	22566	4	9522	7	8858	5	583	5
	I	53	3672.7	0.7	9948.7	2.2	14549.8	0.6	13172.1	2.3	10629.3	1.8	3373.2	2.7
	Xe	54	5660.1	2.8	10899.1	2.8	7593.6	2.8	10289	5	8671	3	3403	3
	Cs	55	4413	9	7793	9	242	14	14253	9	8390	10	6539	9
	Ba	56	8611.72	0.04	9005.01	0.18	−6244	12	8799.2	0.5	4184.21	0.30	3798	4
	La	57	7443.9	1.7	6081.0	0.3	−11600	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	17	6105	14	−26220#	200#	10033	16	3782	17	8245	16
	Pm	61	8912	18	2618	17	−31310#	300#	14997	17	6164	22	11669	17
	Sm	62	11580	30	4714	18	−36570#	500#	10380	70	3440	90	10362	22
	Eu	63	9675	28	1050	40	*		15770	30	5970	160	13970	90
	Gd	64	12470#	360#	2940#	200#	*		11010#	280#	3210#	280#	12700#	250#
	Tb	65	10590#	500#	−510#	420#	*		16310#	420#	5510#	500#	16190#	360#
	Dy	66	*		1140#	640#	*		11680#	710#	2990#	640#	14970#	640#
139	Sn	50	1940#	200#	*		36340#	200#	7230#	450#	6520#	360#	*	
	Sb	51	3570#	210#	11730#	200#	30820#	200#	10940#	200#	11060#	200#	−3260#	360#
	Te	52	2580	5	13110	70	24709	4	10520	7	9166	7	1515	29
	I	53	4577.7	2.0	10063	4	18752.5	2.0	11544.7	2.9	10819	3	1683	6
	Xe	54	3744	4	10970.0	2.2	11313.2	3.0	11428.3	2.2	8770	5	4427	3
	Cs	55	5885	10	8018	4	4128	5	12393	3	10592	3	4496	5
	Ba	56	4723.43	0.04	9316	9	−2897	28	12342.66	0.18	6300.4	0.5	7161.71	0.20
	La	57	8780.4	0.7	6249.7	0.6	−9721	14	11209.7	0.6	6528.6	0.6	4774.2	0.8
	Ce	58	7463.3	2.1	7733.4	2.1	−14578	11	10893.8	2.7	3940	50	7575.6	2.1
	Pr	59	9771	11	4552	4	−19431	14	11801	4	6544	4	6860	50
	Nd	60	8070	30	6177	29	−24420#	200#	11896	29	4188	30	10138	28
	Pm	61	10659	18	2772	18	−29370#	300#	12794	18	6562	18	9486	18
	Sm	62	8954	16	4756	16	−34570#	500#	12403	17	3650	70	12465	16
	Eu	63	11720	30	1189	18	*		13300	30	6277	18	11410	70
	Gd	64	9870#	280#	3140#	200#	*		13260#	200#	3360#	280#	14860#	200#
	Tb	65	12600#	420#	−380#	360#	*		13980#	420#	5930#	420#	13620#	360#
	Dy	66	10950#	710#	1500#	580#	*		13980#	640#	2950#	710#	17040#	580#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
137	In	49	4970#	450#	*		−9180#	640#	24180#	400#	*		12170#	400#
	Sn	50	5620	10	31870#	400#	−8400#	200#	19194	10	*		6326	12
	Sb	51	6466	7	27590#	200#	−4760	40	16348	6	−26330#	300#	6340	6
	Te	52	7717.6	2.7	23249	4	−854.8	2.8	13079.7	2.1	−20519	29	2176	5
	I	53	8725.5	2.1	21249.7	2.7	133.9	1.2	10183.6	0.6	−19144	6	1995.8	0.5
	Xe	54	12113	4	19232.6	1.7	−1875.3	0.5	5337.93	0.22	−15247.6	2.3	−4104.5	0.5
	Cs	55	15106.4	0.3	17344.5	2.1	−3101.8	0.9	595.1	1.6	−14284	4	−5730.01	0.19
	Ba	56	16013.38	0.08	15886	4	−2502.7	2.4	−1802.64	0.27	−8581.14	0.20	−9760	50
	La	57	16640	10	14136.8	1.6	−1494.8	1.6	−3939	8	−8079.6	1.7	−8703.6	1.6
	Ce	58	17445	10	12646.05	0.27	−789.9	1.0	−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	20140	90	7715	18	1440	18	−13927	14	−21	17	−15333	18
	Sm	62	21280	160	6360	30	1920	50	−16590#	300#	3920	30	−19960#	200#
	Eu	63	22140#	200#	4650	90	2840	50	−19070#	400#	3730	70	−19020#	300#
	Gd	64	23290#	500#	3120#	340#	3170#	420#	*		8120#	300#	−23570#	580#
	Tb	65	24170#	570#	1510#	450#	3730#	500#	*		7730#	450#	*	
138	Sn	50	5510	40	*		−8570#	300#	20254	21	*		6500	22
	Sb	51	6020	70	27990#	310#	−4950	80	17580	70	−25840#	410#	6850	70
	Te	52	7414	4	24200	29	−1687	5	14276	5	−22875	11	2595	4
	I	53	8556	4	22035	6	−369	3	10923	9	−19239	6	2348.6	0.5
	Xe	54	9685.7	2.8	20125	4	137	4	8289.5	2.8	−17957	4	−1497.8	2.8
	Cs	55	12679	9	17914	10	−1268	10	3626	9	−13814	9	−3237	9
	Ba	56	15517.36	0.08	16410.52	0.20	−2560.83	0.20	−695.9	0.4	−13167.31	0.22	−9192.3	1.6
	La	57	16620	50	14741.1	0.6	−2047.1	0.4	−3385	10	−7256.6	0.4	−8666.0	0.4
	Ce	58	17200.0	0.5	13256.7	0.4	−1040.8	0.5	−5548	12	−7133.4	0.4	−12435	8
	Pr	59	17931	15	11670	50	−335	22	−8215	15	−3277	10	−11616	15
	Nd	60	18961	17	10088	12	388	24	−10520	17	−3388	12	−16017	18
	Pm	61	19890	70	8151	16	1190	24	−13160	30	999	14	−14990	30
	Sm	62	20830	17	6876	17	1724	17	−15700#	200#	797	17	−19423	13
	Eu	63	21790#	200#	5160	70	2590	50	−18150#	300#	5030	30	−18420#	300#
	Gd	64	22740#	360#	3570#	200#	3080#	280#	−20870#	540#	4900#	200#	−22790#	450#
	Tb	65	23840#	580#	2080#	360#	3600#	420#	*		9260#	300#	*	
	Dy	66	*		310#	590#	4170#	640#	*		9180#	590#	*	
139	Sn	50	5340#	200#	*		−8920#	450#	20900#	200#	*		7000#	210#
	Sb	51	6010#	200#	28630#	450#	−5300#	280#	18590#	200#	*		7750#	200#
	Te	52	7044	4	24673	11	−1998	5	15440	4	−22052	21	3687	4
	I	53	8250.5	2.0	23034	6	−1204	3	12231	4	−21380	70	3431	3
	Xe	54	9403.8	2.1	20919	3	−340.7	2.7	9269.3	2.2	−17238	4	−829	9
	Cs	55	10298	3	18917	3	653	4	6521	3	−16026	3	−511	3
	Ba	56	13335.15	0.06	17108.39	0.23	−925	4	2043.9	2.1	−12230.6	2.8	−6471.8	0.3
	La	57	16224.3	1.7	15254.7	0.7	−2065.4	0.7	−2394	4	−11624	9	−7727.9	0.8
	Ce	58	17181.7	2.1	13814.4	2.1	−1532.1	2.1	−4941	28	−5985.0	2.1	−11900	10
	Pr	59	17770	9	12266	4	−610	10	−7328	14	−5604	4	−10882	12
	Nd	60	18576	30	10676	28	174	29	−9637	30	−1740	28	−15175	30
	Pm	61	19571	19	8877	16	1010	18	−12103	19	−1661	17	−14075	18
	Sm	62	20530	30	7374	16	1408	22	−14780#	200#	2349	16	−18702	30
	Eu	63	21395	14	5903	19	2250	90	−17270#	300#	2226	18	−17670#	200#
	Gd	64	22340#	360#	4190#	200#	2830#	250#	−19790#	540#	6610#	200#	−22070#	360#
	Tb	65	23190#	500#	2560#	300#	3590#	360#	*		6330#	300#	−21270#	590#
	Dy	66	*		990#	580#	4020#	640#	*		10700#	540#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
140	Sn	50	3250#	280#	*		38500#	200#	*		6200#	450#	*	
	Sb	51	2340#	360#	12130#	360#	32900#	300#	12000#	300#	10820#	300#	−2670#	500#
	Te	52	4234	15	13780#	200#	26901	17	8720	70	8510	16	−611	17
	I	53	3240	50	10720	50	20680	50	12770	50	10530	50	2030	50
	Xe	54	5413	3	11806	3	15088.4	2.7	9687.9	2.4	8239.7	2.4	1964	3
	Cs	55	4420	9	8694	8	7637	10	13633	9	10198	8	4959	8
	Ba	56	6426	8	9856	9	989	9	10329	12	8141	8	4761	8
	La	57	5161.00	0.02	6687.2	0.6	−6100	24	14660.4	0.6	8273.3	0.6	7880.0	0.7
	Ce	58	9188.3	2.4	8141.4	1.3	−12619	13	9149.3	1.3	3930.0	2.1	5292.9	1.3
	Pr	59	7929	7	5018	6	−17890#	100#	13590	6	6096	6	8100	6
	Nd	60	10312	28	6718	5	−22475	28	9582	11	3809	9	7308	3
	Pm	61	8782	28	3480	40	−27730	800	14517	27	6236	27	10636	26
	Sm	62	11147	17	5244	18	−32630#	400#	10168	17	3481	18	9774	17
	Eu	63	9470#	100#	1710#	100#	−37370#	510#	15410#	100#	6060#	110#	12920#	100#
	Gd	64	12250#	200#	3670	30	*		10680	40	3228	28	11860	40
	Tb	65	10420#	850#	170#	820#	*		16030#	830#	5780#	850#	15310	800
	Dy	66	13090#	640#	1990#	500#	*		11480#	500#	3110#	570#	14220#	500#
	Ho	67	*		−1094	10	*		16210#	710#	*		17300#	640#
141	Sn	50	1480#	280#	*		40300#	200#	*		*		*	
	Sb	51	3350#	420#	12230#	360#	35050#	300#	10590#	360#	10880#	300#	*	
	Te	52	2370#	100#	13810#	320#	29060#	100#	9920#	220#	8580#	120#	420#	100#
	I	53	4350	50	10834	15	23018	6	11004	6	10648	6	110	70
	Xe	54	3282	4	11850	50	17234	3	10983	3	8630.3	2.9	3145	5
	Cs	55	5499	12	8780	9	11538	9	11878	9	10359	10	3132	9
	Ba	56	4535	10	9972	10	4460	6	11679	6	8019	11	5886	6
	La	57	6690	4	6951	9	−2407	15	12694	4	10195	4	5603	10
	Ce	58	5428.15	0.10	8408.5	1.3	−9494	7	12501.6	1.3	5945.8	1.3	8476.5	1.3
	Pr	59	9400	6	5229.7	1.2	−16089	13	11653.1	2.5	6414.4	1.5	6144.2	1.5
	Nd	60	8007	5	6795	7	−20968	20	11347	5	3800	10	9020	3
	Pm	61	10382	28	3555	14	−25980	110	12200	30	6359	18	8252	17
	Sm	62	8553	14	5015	25	−30530#	300#	12274	15	3840	14	11727	14
	Eu	63	11200#	100#	1759	18	−35560#	400#	13165	17	6435	17	10634	17
	Gd	64	9510	30	3720#	100#	*		12885	24	3390	30	13920	23
	Tb	65	12130	810	50	110	*		13770#	220#	6120#	230#	12860	110
	Dy	66	10650#	500#	2220#	850#	*		13430#	420#	3050#	420#	16040#	360#
	Ho	67	13010#	640#	−1177	6	*		14160#	640#	5430#	640#	14880#	500#
142	Sb	51	2090#	420#	12840#	360#	37070#	300#	11750#	360#	10720#	360#	*	
	Te	52	3950#	220#	14410#	360#	31290#	200#	8310#	360#	8190#	280#	−1590#	280#
	I	53	2962	7	11420#	100#	25222	8	12275	15	10266	6	720#	200#
	Xe	54	5104	4	12606	5	19305	4	9120	50	8104	3	622	4
	Cs	55	4113	11	9611	7	13268	7	13178	7	9990	7	3597	7
	Ba	56	6178	8	10651	11	8112	6	9921	10	7726	6	3452	6
	La	57	5166	7	7581	8	1117	24	13954	10	9753	6	6322	7
	Ce	58	7173.9	2.4	8893	5	−5550.9	2.6	10488.7	2.4	7552.3	2.4	6026.0	2.4
	Pr	59	5843.15	0.08	5644.7	1.2	−12480	30	14998.3	1.2	8034.5	2.5	9081.5	1.5
	Nd	60	9830	3	7225.1	1.3	−18992	28	9446	6	3741	4	6652.6	2.3
	Pm	61	8690	27	4238	24	−24580	700	13826	24	5740	40	9333	24
	Sm	62	11117	7	5749	14	−29000#	730#	9940	24	3382	14	8680	28
	Eu	63	9460	30	2660	30	−34030#	400#	14860	30	5930	30	11840	30
	Gd	64	11810	30	4320	30	−38760#	500#	10550#	110#	3300	30	11067	30
	Tb	65	10090	710	620	700	*		15930	700	5900#	730#	14480	700
	Dy	66	12640#	790#	2730#	740#	*		11210#	1080#	3020#	790#	13270#	750#
	Ho	67	10990#	570#	−840#	500#	*		16260#	570#	5390#	640#	16500#	500#
	Er	68	*		1130#	640#	*		11940#	710#	*		15260#	710#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
140	Sn	50	5190#	200#	*		*		21880#	200#	*		7320#	280#
	Sb	51	5910#	310#	*		−5610#	420#	19490#	300#	*		7980#	300#
	Te	52	6814	15	25503	25	−2720	30	16619	15	−24350#	200#	4031	15
	I	53	7810	50	23830	80	−1550	50	13420	50	−21040#	210#	3940	50
	Xe	54	9157	4	21868	4	−987	3	10282	9	−20070	4	−357	4
	Cs	55	10306	12	19664	8	76	9	7262	8	−15869	8	−207	8
	Ba	56	11149	8	17874	9	736	8	4806	8	−14913	9	−4117	8
	La	57	13941.4	0.7	16003	9	−386.8	0.8	375	6	−10900	3	−5425.6	2.0
	Ce	58	16651.6	1.4	14391.0	1.3	−1612.7	1.3	−3818	4	−10449.9	1.3	−11317	4
	Pr	59	17701	12	12751	6	−1070	50	−6475	25	−4753	6	−10741	28
	Nd	60	18382	12	11269	3	−174	3	−8801	13	−4588	4	−14828	14
	Pm	61	19441	27	9661	26	703	27	−11420#	100#	−672	24	−13903	27
	Sm	62	20101	17	8016	17	1318	17	−13670	30	−730	30	−18129	18
	Eu	63	21190#	110#	6460#	100#	1940#	120#	−16310#	810#	3420#	100#	−17270#	220#
	Gd	64	22130#	200#	4860	30	2600	30	−18950#	400#	3309	30	−21720#	300#
	Tb	65	23020#	860#	3310	800	3190#	820#	−21060#	940#	7630	800	−20740#	940#
	Dy	66	24040#	640#	1610#	450#	3950#	500#	*		7480#	450#	*	
	Ho	67	*		410#	580#	4050#	710#	*		11410#	580#	*	
141	Sn	50	4730#	280#	*		*		22770#	220#	*		8180#	360#
	Sb	51	5690#	360#	*		−6030#	500#	20480#	300#	*		8870#	300#
	Te	52	6610#	100#	25940#	220#	−2980#	100#	17530#	100#	−23470#	220#	4890#	110#
	I	53	7585	5	24610#	200#	−2323	7	14565	10	−23050#	300#	5003	5
	Xe	54	8695	4	22570	5	−1318	4	11535	6	−19119	15	781	9
	Cs	55	9919	10	20585	9	−540	9	8453	10	−18130	50	720	12
	Ba	56	10961	5	18666	6	226	5	5699	5	−14035	6	−3492	5
	La	57	11851	4	16807	5	1190	4	3085	4	−13170	9	−2927	4
	Ce	58	14616.5	2.4	15095.7	1.3	−135.2	1.3	−1239	3	−9452	8	−8816	6
	Pr	59	17329	4	13371.0	1.5	−1299.6	2.2	−5493	14	−8992.4	1.5	−9830	4
	Nd	60	18318	28	11813	4	−699	3	−8255	8	−3407	3	−14052	24
	Pm	61	19165	19	10272	14	254	16	−10597	19	−3125	15	−13138	19
	Sm	62	19700	13	8499	28	1221	14	−12713	21	1031	8	−17210#	100#
	Eu	63	20671	18	7003	19	1722	18	−15390	110	997	27	−16220	30
	Gd	64	21770#	200#	5422	23	2340	30	−17810#	300#	4943	23	−20810	800
	Tb	65	22550#	320#	3720	110	3180	110	−20180#	410#	4970#	150#	−19780#	410#
	Dy	66	23740#	580#	2390#	360#	3570#	420#	*		9080#	300#	−24050#	580#
	Ho	67	*		810#	500#	4290#	570#	*		8830#	900#	*	
142	Sb	51	5440#	420#	*		*		21350#	300#	*		9150#	320#
	Te	52	6330#	200#	26640#	280#	−3530#	200#	18680#	200#	−25940#	280#	5290#	200#
	I	53	7310	50	25230#	300#	−2850	70	15716	8	−22660#	300#	5323	6
	Xe	54	8386	4	23440	15	−1959	5	12610	6	−21850#	100#	1176	10
	Cs	55	9612	10	21460	50	−980	6	9506	9	−17896	8	1142	8
	Ba	56	10714	10	19431	6	−292	6	6695	6	−16931	6	−2980	7
	La	57	11856	6	17553	10	437	11	3762	6	−12837	11	−2665	6
	Ce	58	12602.1	2.4	15844	9	1302.6	2.4	1417.4	2.2	−12091	6	−6590.0	2.5
	Pr	59	15243	6	14053.2	1.5	301.1	1.5	−2646	24	−8146	4	−7666.2	2.8
	Nd	60	17837	3	12454.8	1.4	−810.7	1.2	−6968.3	1.4	−7809.0	1.4	−13500	14
	Pm	61	19070	30	11033	24	−438	26	−9830	40	−2415	24	−13275	25
	Sm	62	19670	13	9304	4	610	12	−12024	28	−2080	3	−17128	13
	Eu	63	20660#	110#	7680	40	1180	30	−14750	700	1920	30	−16160	40
	Gd	64	21320	40	6080	30	2110	30	−16980#	730#	1689	29	−20490	110
	Tb	65	22220	1060	4340#	710#	2770	700	−19280#	810#	6080	700	−19220#	760#
	Dy	66	23290#	830#	2780#	730#	3400#	760#	−21780#	880#	5960#	730#	−23690#	830#
	Ho	67	24000#	640#	1380#	900#	3900#	500#	*		9970#	410#	*	
	Er	68	*		−50#	640#	4310#	710#	*		9920#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
143	Te	52	2050#	280#	14370#	360#	33400#	200#	9610#	360#	8480#	360#	−390#	280#
	I	53	4060#	200#	11530#	280#	27380#	200#	10590#	220#	10440#	200#	−990#	360#
	Xe	54	3045	5	12689	7	21405	5	10420	6	8300	50	1811	15
	Cs	55	5227	10	9734	8	15395	8	11233	8	10176	8	1610	50
	Ba	56	4162	8	10700	8	10074	6	11258	11	7984	10	4703	6
	La	57	6218	10	7621	9	4791	8	12272	9	9961	11	4525	11
	Ce	58	5144.80	0.09	8872	6	−2089	3	12034	5	7568.4	2.4	7307	9
	Pr	59	7353.7	1.9	5824.4	1.9	−8828	11	13072.8	1.9	9869.2	1.9	6888.8	1.8
	Nd	60	6123.57	0.07	7505.5	1.3	−15770	200	12722.4	1.3	5547	6	9717.3	1.4
	Pm	61	9892	24	4299.6	2.7	−22518	30	11941	4	6159	4	7371	7
	Sm	62	8606.8	2.6	5666	24	−27350	13	11715	14	3557	24	10385	4
	Eu	63	11000	30	2547	11	−32190#	300#	12407	13	6079	17	9617	27
	Gd	64	9340	200	4210	200	−36930#	450#	12410	200	3430#	220#	12870	200
	Tb	65	11960	700	770	40	*		13490	40	6200	40	12000#	110#
	Dy	66	10260#	730#	2900	700	*		13080	110	3180	800	15260	30
	Ho	67	12840#	500#	−640#	790#	*		14070#	420#	5650#	500#	14080#	850#
	Er	68	11170#	640#	1310#	570#	*		13780#	570#	2990#	640#	17180#	570#
144	Te	52	3760#	360#	*		35550#	300#	7940#	420#	8070#	420#	−2670#	360#
	I	53	2610#	280#	12090#	280#	29520#	200#	11930#	280#	10200#	220#	−250#	360#
	Xe	54	4741	7	13370#	200#	23561	6	8641	7	7904	7	−560#	100#
	Cs	55	3669	21	10359	21	17479	20	12668	20	9789	20	2286	21
	Ba	56	5911	8	11384	9	11980	6	9460	9	7572	11	2074	6
	La	57	4749	15	8209	14	6568	13	13701	14	9747	14	5274	16
	Ce	58	6897	3	9551	8	1533.8	2.7	10302	7	7361	5	4945	6
	Pr	59	5753.8	2.8	6433	3	−5132	11	14493	3	9543.5	2.8	7825	5
	Nd	60	7817.04	0.05	7968.9	1.4	−11990	28	10748.5	1.3	7130.0	1.3	7328.4	1.4
	Pm	61	6526.8	1.5	4702.8	2.6	−19050	28	15244.7	2.6	7639	4	10244.2	3.0
	Sm	62	10519.8	2.3	6293.9	2.7	−25397	7	9885	24	3420	14	7872	3
	Eu	63	9450	15	3390	11	−31010	14	14074	11	5182	13	10550	18
	Gd	64	11600	200	4810	30	−35150#	200#	10260	40	3030	30	9825	29
	Tb	65	9990	40	1420	200	−40070#	400#	15300	40	5720	30	13210	30
	Dy	66	12472	15	3410	30	*		10700	700	2830	110	12301	21
	Ho	67	10630#	300#	−270	16	*		16080#	730#	5670#	300#	15580	110
	Er	68	13380#	450#	1850#	360#	*		11380#	450#	2620#	450#	14450#	360#
	Tm	69	*		−1712	16	*		16610#	640#	*		17710#	570#
145	Te	52	1860#	420#	*		37510#	300#	*		8300#	420#	*	
	I	53	3870#	360#	12200#	420#	31710#	300#	10110#	360#	10280#	360#	−2030#	420#
	Xe	54	2692	12	13450#	200#	25572	20	10010#	200#	8174	12	700#	200#
	Cs	55	4853	22	10471	11	19573	12	10859	10	10039	9	395	10
	Ba	56	3818	9	11533	21	13917	7	10869	10	7867	10	3360	8
	La	57	6061	17	8358	13	8430	12	11802	13	9864	13	3326	13
	Ce	58	4703	17	9505	21	3588	17	11817	18	7824	18	6421	18
	Pr	59	6947	7	6483	7	−1634	8	12691	7	9771	7	6044	9
	Nd	60	5755.26	0.23	7970.4	2.4	−8506	20	12347.0	1.4	7217.8	1.4	8747.1	2.2
	Pm	61	7922.7	1.5	4808.5	2.5	−15388	28	13445.5	2.5	9546.5	2.5	8164.6	2.9
	Sm	62	6757.10	0.30	6524.3	2.7	−22410	7	13020.0	2.7	5353	24	10945.0	0.8
	Eu	63	10445	11	3315.0	2.7	−28873	8	12236	4	5854.0	2.9	8795	24
	Gd	64	9240	30	4596	23	−33680#	200#	12025	23	3250	40	11703	20
	Tb	65	11580	40	1410	40	−38300#	200#	13060	200	5940	40	11080	40
	Dy	66	9744	10	3164	29	*		12910	30	3180	700	14363	29
	Ho	67	12582	11	−161	10	*		13760	15	5720#	730#	13090	700
	Er	68	10710#	280#	1930#	200#	*		13510#	360#	2890#	450#	16380#	760#
	Tm	69	13360#	450#	−1736	7	*		14430#	450#	5480#	540#	15340#	450#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
143	Te	52	6000#	220#	27210#	280#	−3650#	280#	19670#	200#	*		6200#	200#
	I	53	7020#	200#	25940#	360#	−3340#	280#	16890#	200#	−24630#	360#	6370#	200#
	Xe	54	8148	5	24110#	100#	−2423	6	13727	7	−20940#	200#	2245	8
	Cs	55	9340	12	22340	9	−1630	8	10497	11	−20161	9	2093	9
	Ba	56	10340	8	20311	6	−710	6	7678	6	−15989	6	−1976	8
	La	57	11384	8	18272	12	104	8	4898	7	−14942	10	−1709	8
	Ce	58	12318.7	2.4	16453	6	881.2	2.4	2396.2	2.2	−11057	6	−5891.7	2.5
	Pr	59	13196.8	1.9	14717	4	1727.8	1.8	−107	3	−10334	6	−5189.4	1.4
	Nd	60	15954	3	13150.2	1.4	529.0	2.3	−4485.1	2.4	−6758.6	2.2	−10934	24
	Pm	61	18582	14	11524.7	3.0	−559	5	−8721	11	−6463.9	3.0	−12050.3	3.0
	Sm	62	19724	8	9904	4	73	28	−11290	200	−856.2	2.4	−16280	30
	Eu	63	20458	17	8296	18	835	17	−13800	30	−389	26	−15350	30
	Gd	64	21150	200	6870	200	1720	200	−16060	200	3460	200	−19740	730
	Tb	65	22050	110	5100	30	2530	30	−18400#	300#	3580	40	−18540#	730#
	Dy	66	22900#	300#	3523	24	3010#	200#	−20870#	400#	7500	30	−22960#	400#
	Ho	67	23830#	500#	2090#	320#	3660#	420#	*		7220#	760#	−21920#	580#
	Er	68	*		470#	500#	4090#	640#	*		11390#	830#	*	
144	Te	52	5810#	360#	*		−4160#	360#	20650#	300#	*		6500#	360#
	I	53	6670#	200#	26460#	360#	−3610#	360#	17940#	200#	*		6800#	200#
	Xe	54	7785	6	24900#	200#	−2930	15	14898	8	−23630#	200#	2731	9
	Cs	55	8896	21	23048	21	−2060	50	11577	24	−19770#	200#	2586	21
	Ba	56	10073	8	21118	6	−1208	6	8664	6	−18856	7	−1670	9
	La	57	10967	14	18909	14	−225	15	5903	13	−14464	15	−1313	13
	Ce	58	12042	3	17172	6	410	9	3316.1	2.5	−13792	6	−5435.1	2.9
	Pr	59	13107.5	2.8	15305	7	1135.0	2.7	666	4	−9869	8	−4819.6	2.4
	Nd	60	13940.61	0.09	13793.3	2.2	1900.3	1.4	−1782.3	0.8	−9430.9	2.2	−8858.6	2.7
	Pm	61	16419	24	12208.4	3.0	844	7	−5798	11	−5637.0	3.0	−9970	4
	Sm	62	19126.6	1.2	10593.6	0.8	−135	4	−10208	28	−5252.4	0.8	−15797	11
	Eu	63	20450	30	9056	26	167	27	−13252	30	54	11	−15460	200
	Gd	64	20940	40	7354	28	1270	30	−15189	29	470	28	−19390	40
	Tb	65	21950	700	5630	40	2000#	110#	−17758	29	4590	30	−18270	30
	Dy	66	22730#	730#	4189	29	2787	29	−19960#	200#	4370	200	−22590#	300#
	Ho	67	23470#	400#	2630	700	3450	800	−22310#	400#	8550	30	−21380#	400#
	Er	68	24550#	540#	1210#	750#	3800#	450#	*		8270#	200#	*	
	Tm	69	*		−400#	570#	4700#	640#	*		12460#	500#	*	
145	Te	52	5620#	360#	*		−4540#	360#	21480#	300#	*		7250#	360#
	I	53	6480#	360#	*		−4130#	420#	18920#	300#	*		7670#	300#
	Xe	54	7433	12	25540#	200#	−3250#	100#	16023	13	−22560#	300#	3708	23
	Cs	55	8522	12	23840#	200#	−2567	10	12785	15	−22010#	200#	3644	11
	Ba	56	9729	9	21891	8	−1744	8	9549	18	−17933	9	−738	15
	La	57	10810	13	19742	14	−787	15	6788	13	−16855	23	−477	12
	Ce	58	11600	17	17713	18	242	18	4368	17	−12584	18	−4384	17
	Pr	59	12701	7	16034	10	878	8	1642	7	−12067	15	−3949	7
	Nd	60	13572.30	0.24	14403.8	2.2	1573.2	1.4	−780.5	0.9	−8289.0	2.6	−8087.1	2.7
	Pm	61	14449.5	2.1	12777.4	2.9	2321.4	2.9	−3276	4	−7806	3	−7373.2	2.5
	Sm	62	17276.9	2.3	11227.1	0.8	1115	3	−7726	20	−4192.4	0.8	−13105	11
	Eu	63	19895	11	9609	4	105	14	−12112	28	−3865	4	−14305	28
	Gd	64	20840	200	7986	20	586	21	−14685	21	1751	20	−18630	30
	Tb	65	21580	40	6220	30	1620	30	−16761	29	2450	30	−17382	29
	Dy	66	22216	15	4590	200	2557	21	−18990#	200#	6228	29	−21704	11
	Ho	67	23220#	300#	3250	30	3000	110	−21540#	200#	5958	29	−20580#	200#
	Er	68	24090#	450#	1660#	200#	3740#	360#	*		10030#	200#	−25020#	450#
	Tm	69	*		110#	360#	4360#	450#	*		9740#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
146	I	53	2480#	420#	12820#	420#	33680#	300#	11390#	420#	9850#	360#	*	
	Xe	54	4533	27	14110#	300#	27683	27	8090#	200#	7700#	200#	−1780#	200#
	Cs	55	3327	10	11106	12	21393	29	12273	6	9757	5	1130#	200#
	Ba	56	5421	7	12101	9	16061.2	2.1	9117	20	7673	8	983	5
	La	57	4453	11	8994	7	10235	5	13260	6	9573	6	4100	8
	Ce	58	6644	21	10087	17	5360	13	9923	18	7398	14	3939	14
	Pr	59	5147	30	6930	30	416	29	14441	29	9769	29	7115	30
	Nd	60	7565.23	0.09	8589	7	−4840	4	10535.5	2.4	7006.3	1.4	6326.7	2.2
	Pm	61	6258	5	5311	4	−11690	50	15004	4	9412	4	9260	4
	Sm	62	8416.2	2.9	7018	4	−18443	7	11131	4	6828	4	8652.3	2.8
	Eu	63	7197	7	3755	6	−25881	9	15559	6	7264	6	11490	7
	Gd	64	11232	20	5383	5	−31766	8	10243	11	3018	12	9078	4
	Tb	65	9960	50	2130	50	−36700#	210#	14710	50	5330	210	12120	50
	Dy	66	12384	9	3963	29	−41290#	400#	10523	29	2750	30	11320	200
	Ho	67	10189	10	285	9	*		16043	10	5795	15	14850	30
	Er	68	13140#	200#	2491	10	*		10998	11	2590#	300#	13494	15
	Tm	69	11550#	280#	−896	6	*		16250#	280#	5100#	450#	16630#	360#
	Yb	70	*		980#	450#	*		11740#	570#	*		15680#	570#
147	I	53	3730#	420#	*		35470#	300#	9520#	420#	9880#	420#	*	
	Xe	54	2520#	200#	14150#	360#	29640#	200#	9440#	360#	7800#	280#	−530#	360#
	Cs	55	4681	9	11254	26	23559	9	10284	14	9816	10	−940#	200#
	Ba	56	3507.0	2.7	12281	4	17846.4	2.3	10463	9	7835	20	2217	6
	La	57	5519	3	9092	3	12374.1	2.8	11558	8	9965	6	2250	20
	Ce	58	4470	13	10104	4	7232	3	11514	12	7678	13	5381	6
	Pr	59	6848	29	7131	13	2067	4	12297	17	9818	4	5017	13
	Nd	60	5292.19	0.09	8734	29	−2789.7	1.4	12190	7	7467.9	2.4	7931.6	2.6
	Pm	61	7658	4	5404.4	0.6	−8300	8	13101.5	0.6	9570.8	0.5	7355.7	2.5
	Sm	62	6341.3	2.8	7101	4	−15072	9	12712.1	2.6	7013.9	2.7	10128.1	0.5
	Eu	63	8499	6	3837	4	−21789	6	13817.5	2.4	9285.0	2.4	9518	3
	Gd	64	7342	4	5529	6	−28803	20	13345.5	3.0	5125	11	12255.1	1.2
	Tb	65	11050	50	1944	8	−34768	10	12895	21	5881	29	10523	13
	Dy	66	9712	11	3720	50	−39330#	400#	12396	29	3035	29	13210	29
	Ho	67	12590	8	491	8	*		13196	8	5677	9	12257	28
	Er	68	10305	21	2606	21	*		13275	21	2918	21	15661	21
	Tm	69	12980#	200#	−1058.2	2.7	*		13990#	200#	5500#	200#	14281	11
	Yb	70	11670#	570#	1090#	450#	*		13420#	450#	2290#	570#	17380#	450#
148	Xe	54	4320#	360#	14740#	420#	31740#	300#	7600#	420#	7350#	420#	−2990#	420#
	Cs	55	3062	16	11800#	200#	25570	21	11755	28	9446	17	−130#	300#
	Ba	56	5314.3	2.5	12914	9	19864.5	2.4	8476	3	7374	9	−405	11
	La	57	4101	4	9685	3	14169	6	12879	3	9682	8	3002	9
	Ce	58	6426	9	11010	9	8948	8	9542	9	7313	14	2773	11
	Pr	59	5073	17	7735	17	3817	20	13867	21	9448	24	6004	20
	Nd	60	7332.4	1.7	9219	3	−1138.4	1.8	10004	29	7082	7	5302	17
	Pm	61	5896	6	6009	6	−6335	13	14770	6	9430	6	8406	9
	Sm	62	8141.29	0.27	7583.9	0.4	−11480	9	10829	4	6795.3	2.6	7742.1	0.5
	Eu	63	6823	10	4319	10	−18310	80	15411	10	9219	10	10617	10
	Gd	64	8983.8	1.2	6013.7	2.4	−24792	10	11559	6	6586.3	2.7	10028.4	0.3
	Tb	65	7861	14	2463	12	−31768	16	16266	13	7258	23	13107	12
	Dy	66	11733	12	4403	12	−37460#	300#	10620	50	2887	29	10716	22
	Ho	67	10310	80	1080	80	*		15270	80	5120	80	13540	90
	Er	68	12995	22	3011	11	*		10470	12	2505	13	12410	12
	Tm	69	10862	12	−502	22	*		16268	12	5350#	200#	16001	13
	Yb	70	13600#	500#	1720#	300#	*		11380#	360#	2050#	360#	14500#	360#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
146	I	53	6350#	360#	*		−4520#	420#	19770#	300#	*		7880#	300#
	Xe	54	7225	25	26310#	300#	−3830#	200#	16911	24	−25230#	300#	4028	26
	Cs	55	8180	20	24560#	200#	−2932	6	13911	3	−21470#	300#	4135	8
	Ba	56	9239	6	22572	6	−2062	3	10771	13	−20662	11	−98	11
	La	57	10514	13	20526	20	−1127	7	7482	29	−16456	9	−227	17
	Ce	58	11347	13	18446	14	−223	14	5290	12	−15410	14	−4081	14
	Pr	59	12094	29	16430	30	897	29	2753	29	−11150	30	−3341	29
	Nd	60	13320.49	0.24	15071.9	2.6	1181.9	2.2	70.5	2.8	−11151	17	−7729.6	2.5
	Pm	61	14181	5	13282	5	1906	4	−2337	7	−7117	8	−6874	4
	Sm	62	15173.3	2.8	11826.3	2.8	2528.8	2.8	−4910	5	−6853.4	2.8	−11076	4
	Eu	63	17642	12	10279	6	1598	24	−9350	50	−3139	6	−12263	21
	Gd	64	20471	28	8698	4	471	4	−13533	8	−2723	4	−18278	28
	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	3449	29	2900	700	−20170#	200#	7354	29	−20060#	200#
	Er	68	23860#	200#	2330	10	3230#	730#	−23050#	400#	6632	9	−24810#	200#
	Tm	69	24910#	450#	1030#	200#	3790#	450#	*		10770#	200#	*	
	Yb	70	*		−760#	450#	4510#	640#	*		10690#	450#	*	
147	I	53	6210#	420#	*		*		20720#	300#	*		8680#	300#
	Xe	54	7050#	200#	26970#	360#	−4290#	280#	17900#	200#	*		4840#	200#
	Cs	55	8008	12	25370#	300#	−3560#	200#	14749	9	−23670#	300#	4875	9
	Ba	56	8928	7	23387	11	−2524	5	11734	4	−19636	24	847.8	2.6
	La	57	9972	12	21192	9	−1419	8	8811	4	−18647	4	897	13
	Ce	58	11113	17	19097	8	−531	6	6113	3	−14459	4	−3404	29
	Pr	59	11994	8	17218	12	267	8	3564	3	−13547	3	−2623	3
	Nd	60	12857.42	0.12	15661	17	1034.5	2.2	1119.6	0.5	−9800	12	−6764	4
	Pm	61	13916.4	2.6	13993	7	1601.9	1.5	−1496.5	2.3	−9629	29	−6116.3	2.9
	Sm	62	14757.5	1.0	12412.3	0.5	2311.1	0.5	−3909.3	1.4	−5629.4	0.5	−10220	6
	Eu	63	15696	4	10855	3	2991	3	−6803	8	−5379	5	−9530	4
	Gd	64	18574	20	9283.5	1.2	1735.3	2.0	−11163	9	−1650	3	−15660	40
	Tb	65	21005	29	7328	8	1073	13	−14986	9	−913	10	−16259	10
	Dy	66	22096	11	5847	22	1610	200	−17640	21	4603	10	−21029	11
	Ho	67	22780	9	4454	28	2260	30	−19782	8	4720	50	−19507	8
	Er	68	23450#	200#	2891	21	3188	24	−21690#	400#	8710	21	−23560#	200#
	Tm	69	24540#	200#	1432	10	3650#	300#	*		7975	9	−22780#	400#
	Yb	70	*		200#	450#	4010#	570#	*		12160#	400#	*	
148	Xe	54	6840#	300#	*		−4850#	420#	18900#	300#	*		5200#	300#
	Cs	55	7743	13	25950#	300#	−4010#	200#	15788	13	−23000#	300#	5320	13
	Ba	56	8821.3	2.3	24168	24	−3098	6	12845	9	−22430#	200#	1053	3
	La	57	9620	3	21966	4	−1851	20	9783	17	−18067	9	1266	4
	Ce	58	10895	15	20102	9	−1045	10	7019	9	−17377	9	−2982	9
	Pr	59	11920	30	17838	17	−57	21	4386	18	−13102	17	−2404	17
	Nd	60	12624.6	1.7	16350	13	599	3	1928.4	1.7	−12663	4	−6437.9	1.7
	Pm	61	13555	7	14743	29	1459	6	−570	11	−8677	6	−5671	6
	Sm	62	14482.5	2.8	12988.3	0.5	1986.8	0.4	−3066.8	0.9	−8478.5	0.5	−9862.8	2.3
	Eu	63	15322	12	11420	11	2695	10	−5765	16	−4544	10	−9011	10
	Gd	64	16326	4	9851.1	2.8	3271.29	0.03	−8414	9	−4292.2	0.9	−13599	8
	Tb	65	18910	50	7992	13	2662	16	−12540	80	−275	12	−14408	15
	Dy	66	21445	11	6348	10	1477	29	−16378	13	212	9	−20172	10
	Ho	67	22900	80	4800	100	1950	90	−19230	80	5460	80	−19510	90
	Er	68	23300	12	3502	12	2666	13	−21080#	300#	5428	14	−23576	12
	Tm	69	23840#	200#	2105	12	3420	13	*		9703	11	−21970#	400#
	Yb	70	25270#	500#	660#	300#	3780#	360#	*		8870#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
149	Xe	54	2420#	420#	*		33670#	300#	8910#	420#	7400#	420#	*	
	Cs	55	4568	25	12050#	300#	27649	21	9700#	200#	9410	30	−2220#	300#
	Ba	56	3356.3	2.8	13208	13	21547	3	9801	9	7345	4	771	24
	La	57	5583	3	9954.1	2.1	15856.2	2.6	10802.7	2.5	9520.3	2.3	747	3
	Ce	58	4355	8	11264.6	3.0	10463.8	1.5	10705.6	2.9	7411.1	2.1	3838.6	2.1
	Pr	59	6647	17	7956	8	5386	4	11690	3	9445	12	3810.7	2.1
	Nd	60	5038.79	0.07	9184	17	752	4	11813	3	7190	29	6907	13
	Pm	61	7270	6	5945.9	2.5	−4576	4	12792.8	2.0	9725.2	2.0	6283	29
	Sm	62	5871.4	0.9	7559	6	−9439	9	12615.8	0.9	7182	4	9436.0	0.9
	Eu	63	8216	11	4394	4	−14804	12	13536	4	9419	5	8659	6
	Gd	64	6929	3	6120	10	−21525	24	13128	4	6854	7	11516	4
	Tb	65	9029	12	2508	3	−27670	50	14579	4	9461	5	11275	7
	Dy	66	7913	12	4455	14	−34370#	200#	13755	12	4930	50	14035	9
	Ho	67	11720	80	1070	12	−40450#	300#	13268	14	5780	13	11770	50
	Er	68	10196	26	2900	90	*		12864	25	2499	25	14598	25
	Tm	69	13120	50	−370	50	*		13450	50	5370	50	13070	50
	Yb	70	11000#	360#	1850#	200#	*		13360#	200#	2600#	280#	16640#	200#
	Lu	71	*		−1923	20	*		14390#	500#	4950#	500#	15520#	360#
150	Xe	54	4060#	420#	*		35880#	300#	*		7070#	420#	*	
	Cs	55	2920	30	12550#	300#	30052	23	11100#	300#	9010#	200#	−1410#	300#
	Ba	56	5131	6	13771	22	23792	6	7732	14	6894	10	−1840#	200#
	La	57	4173.6	2.4	10771	3	17287	20	11943.4	2.4	8853.7	2.8	1254	9
	Ce	58	6264.0	2.4	11945.6	2.6	12186.7	2.2	8543	3	6666	3	1081.7	2.9
	Pr	59	5323.3	1.7	8923.7	1.7	6485	6	12792	8	8591	3	4006.4	2.9
	Nd	60	7376.4	1.9	9914.2	1.5	2084	6	9510	17	6661	3	4000	3
	Pm	61	5604	20	6511	20	−2492	21	14521	20	9413	20	7526	20
	Sm	62	7986.8	0.4	8276.0	1.9	−7742	4	10525	6	6853.6	0.9	6741.4	0.9
	Eu	63	6422	7	4945	6	−12851	14	15255	6	9338	6	9895	6
	Gd	64	8708	7	6611	7	−17941	14	11243	12	6645	6	9149	6
	Tb	65	7688	8	3267	8	−24610	90	15875	7	9116	7	12086	8
	Dy	66	9684	10	5110	5	−30680	40	11932	13	6296	8	11694	4
	Ho	67	8375	17	1533	15	−37170#	200#	16626	15	7117	16	14447	15
	Er	68	12292	27	3475	17	*		10880	80	2797	13	12018	15
	Tm	69	10750	100	180	90	*		15690	90	4920	90	14900	90
	Yb	70	13380#	200#	2110	70	*		10840	50	2200	50	13570	50
	Lu	71	11650#	360#	−1269.6	2.3	*		16340#	360#	4960#	450#	16850#	200#
151	Cs	55	4290	30	12770#	300#	32305	26	9240#	300#	9040#	300#	*	
	Ba	56	3176	22	14030	30	25950	21	9120	30	6780	25	−700#	300#
	La	57	5287.3	2.4	10928	6	19870.5	2.0	10012.3	2.8	8880.6	2.1	−971	13
	Ce	58	4424.0	2.3	12196.0	2.2	13359.1	1.4	9701.5	1.9	6343.2	2.9	1972.0	1.8
	Pr	59	6539.7	1.6	9199.4	2.1	7877.7	1.3	10607.7	1.6	8477	8	1567.7	2.9
	Nd	60	5334.56	0.10	9925.4	0.8	3245.5	2.8	10822.3	1.5	6400	17	5091	8
	Pm	61	7871	20	7005.8	1.6	−1774	4	11688.8	2.3	8874.6	2.3	4729	17
	Sm	62	5596.44	0.11	8268	20	−5824	3	12198.7	1.9	7153	6	8477.4	1.9
	Eu	63	7932	6	4890.53	0.13	−11032	8	13193.8	0.4	9547.0	0.9	7859	6
	Gd	64	6497	7	6686	7	−15943	11	12963	5	6972	10	10793.5	2.9
	Tb	65	8590	8	3149	7	−20857	15	14214	5	9510	4	10319	11
	Dy	66	7515	5	4937	8	−27450	110	13447	4	6642	12	13162.8	2.9
	Ho	67	9752	15	1601	9	−33520	50	14787	12	9098	12	12556	14
	Er	68	8495	17	3594	17	*		14102	16	4610	80	15256	14
	Tm	69	12340	90	232	9	*		13546	28	5575	18	12870	90
	Yb	70	10740	110	2100	140	*		13220	120	2320	110	15820	110
	Lu	71	13410#	200#	−1241.0	1.8	*		13930#	200#	5160#	300#	14310	50

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
149	Xe	54	6740#	360#	*		−5420#	420#	19830#	300#	*		5840#	300#
	Cs	55	7630	23	26790#	300#	−4700#	300#	16803	21	*		6066	21
	Ba	56	8671	3	25010#	200#	−3761	11	13844.2	2.7	−21470#	300#	1797	4
	La	57	9684	3	22868	9	−2581	9	10846.7	2.0	−20588	13	2109	9
	Ce	58	10781	3	20950.0	2.4	−1583	7	7702.8	2.3	−16418.1	1.9	−2264	17
	Pr	59	11720	3	18965.9	2.9	−642	11	5009.5	2.4	−15647.3	3.0	−1718.7	2.3
	Nd	60	12371.2	1.7	16919	4	263	17	2761.0	1.9	−11276	9	−5580	6
	Pm	61	13166.1	2.0	15165	4	1136	7	377	4	−10874	17	−4799.8	2.0
	Sm	62	14012.6	0.9	13567.5	0.9	1870.7	0.9	−2009	3	−7017.4	1.9	−8911	10
	Eu	63	15039	4	11978	4	2401	5	−4953	5	−6864	7	−8243	4
	Gd	64	15913	3	10439	3	3099	3	−7430	9	−3080	3	−12667	12
	Tb	65	16890	8	8522	4	4077.9	2.2	−9852	12	−2481	10	−11704	9
	Dy	66	19645	12	6918	9	2803	22	−14095	22	1283	9	−17780	80
	Ho	67	22024	12	5474	14	1820	30	−17820	50	1605	15	−18231	15
	Er	68	23190	30	3985	26	2214	25	−20270#	200#	6965	25	−22910	26
	Tm	69	23990	50	2640	50	2880	50	−22630#	310#	6890	100	−21490#	300#
	Yb	70	24600#	450#	1350#	200#	3500#	280#	*		10860#	200#	*	
	Lu	71	*		−210#	300#	3970#	360#	*		10290#	300#	*	
150	Xe	54	6480#	420#	*		*		20900#	300#	*		6350#	300#
	Cs	55	7488	27	*		−5140#	300#	18056	23	*		6502	23
	Ba	56	8488	6	25820#	300#	−4360	25	14977	6	−24180#	300#	2249	6
	La	57	9757	3	23979	13	−3427	3	11996.4	2.2	−20194	22	2290.4	2.2
	Ce	58	10619	9	21899.7	2.6	−2425.3	2.7	8815.3	2.2	−19326	3	−1881.2	2.4
	Pr	59	11970	17	20188.3	3.0	−1512.6	2.1	5291	20	−15387.7	1.9	−2003.2	2.0
	Nd	60	12415.2	1.9	17870	8	−469	12	3371.33	0.19	−14296.9	1.5	−5687.0	1.9
	Pm	61	12874	21	15696	26	680	30	1195	21	−9832	20	−4533	20
	Sm	62	13858.1	0.9	14221.9	1.9	1449.2	0.9	−1288	6	−9965.4	1.9	−8682	4
	Eu	63	14638	12	12504	8	2237	7	−3687	9	−6017	6	−7736	7
	Gd	64	15637	6	11006	6	2808	6	−6454	7	−5917	6	−12346	7
	Tb	65	16717	14	9387	12	3587	5	−9164	15	−1953	8	−11480	11
	Dy	66	17597	10	7618	4	4351.2	1.5	−11487	13	−1472	5	−15744	12
	Ho	67	20090	80	5988	17	3400	50	−15440	90	2259	13	−16410	27
	Er	68	22488	16	4545	15	2305	14	−19190	50	2585	15	−22080	50
	Tm	69	23880	90	3090	120	2310	90	−21730#	220#	7850	90	−21240#	220#
	Yb	70	24380#	300#	1740	50	3260	50	*		7680	50	−25520#	300#
	Lu	71	*		580#	200#	3870#	280#	*		11760#	210#	*	
151	Cs	55	7210	30	*		−5700#	300#	19056	26	*		7346	27
	Ba	56	8308	22	26570#	300#	−5020#	200#	16225	21	−23290#	300#	3246	22
	La	57	9460.9	2.1	24699	21	−4033	9	13248.8	1.8	−22561	23	3267.0	2.6
	Ce	58	10687.9	1.6	22967.4	2.6	−3342.3	2.3	9725.9	1.4	−18619	6	−981.9	1.6
	Pr	59	11863.0	1.6	21145.0	1.8	−2533.3	2.8	6621.7	1.7	−17753.8	2.1	−1166.5	1.4
	Nd	60	12711.0	1.9	18849.1	1.5	−1334	3	3633.21	0.24	−13367.5	2.3	−5417	20
	Pm	61	13475.2	2.4	16920.0	1.8	−344	3	1256.0	1.6	−12379.1	1.8	−4416.8	1.6
	Sm	62	13583.2	0.4	14779.5	1.9	1144.9	0.9	−387.7	2.8	−8185.42	0.22	−7856	6
	Eu	63	14354	4	13166.5	1.9	1963.1	0.9	−3030	4	−8345	20	−6961	6
	Gd	64	15205	4	11630.8	2.8	2652.3	2.9	−5436	4	−4426.3	2.8	−11155	8
	Tb	65	16277	5	9760	5	3496	4	−8002	9	−4120	7	−10385	6
	Dy	66	17199	9	8204	4	4179.0	2.6	−10507	11	−278	7	−14883	13
	Ho	67	18127	14	6710	9	4695.0	1.8	−12855	16	195	11	−13870	15
	Er	68	20787	26	5127	14	3523	14	−16940	100	3775	12	−19820	90
	Tm	69	23090	50	3707	18	2564	15	−20660	50	3886	15	−20200	50
	Yb	70	24120#	230#	2280	110	2820	110	*		9230	110	−24610#	230#
	Lu	71	25060#	300#	870	70	3440	50	*		9100	100	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
152	Cs	55	2730#	300#	*		34640#	300#	10570#	420#	8730#	420#	*	
	Ba	56	4790	40	14530	50	28420	40	7250	40	6550	40	−3070#	300#
	La	57	3734	5	11485	22	22058	18	11410	8	8503	6	−137	22
	Ce	58	5732.8	2.3	12641.4	2.5	15883.3	2.2	8142.4	2.7	6193.3	2.5	−405	3
	Pr	59	5067.3	2.9	9842.8	3.0	9117.1	2.9	11804	3	7764.9	3.0	2083	3
	Nd	60	7266	4	10651	4	4569	4	8880	4	5781	4	2181	4
	Pm	61	5921	18	7592	17	−530	40	13144	17	7992	18	5454	18
	Sm	62	8256.9	0.6	8654.2	1.6	−4644	5	9546	20	6166.3	2.0	5259.2	1.9
	Eu	63	6306.71	0.10	5600.80	0.12	−9290	12	14873.86	0.16	9111.6	0.4	8822.4	1.9
	Gd	64	8589.0	2.8	7342.5	0.6	−14210	9	10796	6	6599	4	8075.9	0.7
	Tb	65	7160	40	3820	40	−19000	70	15760	40	9270	40	11370	40
	Dy	66	9436	5	5783	6	−24050	40	11698	9	6235	5	10655	5
	Ho	67	8049	14	2135	12	−30300#	200#	16422	13	8962	14	13536	12
	Er	68	10322	14	4164	12	*		12155	15	6004	12	12847	12
	Tm	69	9020	60	760	60	*		16820	60	6750	60	15570	60
	Yb	70	12830	110	2590	50	*		11140	100	2610	70	13180	50
	Lu	71	11270#	200#	−720#	220#	*		16050#	200#	4890#	280#	16160#	200#
153	Ba	56	2820#	200#	14630#	360#	30860#	200#	8710#	200#	6650#	200#	−1830#	360#
	La	57	4912	19	11600	40	24646	19	9675	28	8723	19	−2128	30
	Ce	58	3901.5	2.9	12809	5	17850.1	2.3	9528.1	2.6	6465.4	2.9	825	6
	Pr	59	5848	3	9957.6	2.6	11819.8	2.0	10380.7	2.2	8181.3	2.8	409.3	2.7
	Nd	60	5257	4	10841	3	5558.6	1.9	10162.6	2.0	5847.4	2.1	3187.7	2.7
	Pm	61	7499	18	7826	5	638	5	10979	3	7869	3	3278	3
	Sm	62	5868.40	0.13	8601	17	−3417	4	11548.5	1.6	5902	20	6767.3	0.6
	Eu	63	8550.28	0.12	5894.1	0.6	−8355	5	11920.01	0.17	8548.14	0.20	5876	20
	Gd	64	6246.95	0.13	7282.7	0.6	−12412	9	12481.7	0.6	6774	6	9815.7	0.6
	Tb	65	8670	40	3896	4	−17350	12	13587	5	9315	7	9125	7
	Dy	66	7096	6	5720	40	−22040	50	13192	6	6827	8	12267	7
	Ho	67	9485	13	2183	7	−26840	50	14452	6	9162	6	11740	9
	Er	68	8045	12	4160	14	−33170#	300#	13862	12	6335	15	14486	10
	Tm	69	10320	60	756	12	*		14993	16	8723	17	13624	17
	Yb	70	9110	60	2670	70	*		14380	50	4260	100	16370	50
	Lu	71	12940#	200#	−606	10	*		13850	110	5330	60	13970	100
	Hf	72	*		1290#	360#	*		13520#	300#	2340#	360#	16980#	300#
154	Ba	56	4520#	360#	*		32660#	300#	6920#	420#	6420#	300#	*	
	La	57	3470#	200#	12250#	280#	26870#	200#	11000#	200#	8430#	200#	−1310#	200#
	Ce	58	5429	3	13327	19	20387.4	2.8	7832	6	6323	3	−1428	22
	Pr	59	4523	3	10579	3	13738.9	2.7	11590	3	8082.2	2.8	1173.5	2.9
	Nd	60	6326.2	2.0	11319.8	2.1	8127.1	1.2	8903.7	2.9	6060.9	1.4	1285.4	1.5
	Pm	61	5698	4	8267.5	2.9	1850	50	12546	4	7505.4	2.5	4119.7	2.5
	Sm	62	7966.6	0.8	9068	3	−2061	7	9503	18	5806.5	1.7	4135.3	1.0
	Eu	63	6442.20	0.24	6468.0	0.7	−7099	8	13734.7	0.6	7702.38	0.29	7305.1	1.6
	Gd	64	8894.72	0.16	7627.1	0.6	−11101	5	9893.7	0.6	5811.5	0.6	6517.4	0.6
	Tb	65	6910	50	4560	50	−15730	50	15260	50	8900	50	10140	50
	Dy	66	9322	8	6369	8	−20470	15	11030	40	6094	8	9442	8
	Ho	67	7698	10	2785	9	−25030	50	16190	9	8978	9	12631	9
	Er	68	10206	10	4882	7	−29970#	300#	11705	13	5880	9	11794	6
	Tm	69	8530	17	1241	16	*		16785	16	8688	17	14846	15
	Yb	70	10890	50	3249	17	*		12510	60	5707	9	13969	17
	Lu	71	9510	70	−204	14	*		17170	60	6560	120	16800	50
	Hf	72	13410#	420#	1760#	300#	*		11370#	360#	2330#	300#	14320#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
152	Cs	55	7020#	300#	*		*		20060#	300#	*		7790#	300#
	Ba	56	7970	40	27310#	300#	−5490#	300#	17160	40	*		3740	40
	La	57	9021	5	25512	24	−4705	14	14583	6	−22007	27	3957	5
	Ce	58	10156.7	2.9	23569	6	−3760.8	2.5	11259	3	−21175	22	−175.0	2.3
	Pr	59	11607.0	3.0	22039	3	−3500	4	7476	17	−17534	3	−899.2	2.9
	Nd	60	12600	4	19851	4	−2174	9	4625	4	−16209	4	−4812	4
	Pm	61	13792	27	17518	18	−1192	24	1642	17	−11761	18	−4742	17
	Sm	62	13853.4	0.6	15660.0	0.6	220.4	1.9	−55.69	0.17	−11107.8	0.6	−8180.5	0.6
	Eu	63	14239	6	13869	20	1553	6	−2170	40	−6780.4	1.6	−6770.9	2.8
	Gd	64	15086	6	12233.0	0.6	2204.5	1.0	−4589	5	−7418.9	0.6	−11154	4
	Tb	65	15750	40	10500	40	3150	40	−7120	40	−3350	40	−10040	40
	Dy	66	16951	6	8932	7	3726	4	−9622	10	−3218	5	−14568	9
	Ho	67	17800	17	7071	14	4507.4	1.3	−11880	60	736	13	−13424	16
	Er	68	18816	15	5765	10	4934.3	1.6	−14430	40	967	9	−17802	17
	Tm	69	21360	100	4360	60	3850	100	−18420#	200#	4610	60	−18480	120
	Yb	70	23570	60	2820	50	2990	50	*		4890	50	−24030	60
	Lu	71	24670#	280#	1380#	210#	3040#	200#	*		10180#	200#	*	
153	Ba	56	7620#	200#	*		−5900#	360#	18240#	200#	*		4650#	200#
	La	57	8645	19	26140	30	−5048	28	15519	19	−24190#	300#	4779	19
	Ce	58	9634.3	2.4	24294	22	−4306	3	12614.4	2.6	−20280	40	991	3
	Pr	59	10914.9	2.1	22599.1	2.4	−3764.3	2.4	9127	3	−19648	5	519	4
	Nd	60	12522.8	1.9	20684.0	2.0	−3076.3	2.1	5235.7	1.9	−15733.6	2.5	−4148	18
	Pm	61	13421	3	18478	3	−2045	3	2692	3	−14193	4	−3984	3
	Sm	62	14125.3	0.6	16193.9	0.6	−609.2	1.9	322.86	0.25	−9711	4	−7742.2	0.6
	Eu	63	14856.99	0.16	14548.3	1.6	272.1	1.9	−2054	4	−9410	17	−6732.2	0.6
	Gd	64	14835.9	2.8	12883.5	0.6	1829.0	0.7	−3739	4	−5408.91	0.22	−10240	40
	Tb	65	15832	6	11238	4	2703	5	−6301	6	−5714	4	−9266	6
	Dy	66	16533	5	9532	5	3559	4	−8673	10	−1725	4	−13615	13
	Ho	67	17534	9	7967	6	4052	4	−11049	12	−1580	40	−12587	10
	Er	68	18366	14	6295	9	4802.3	1.4	−13370	50	2359	10	−16820	60
	Tm	69	19340	18	4920	14	5248.4	1.5	−15790	50	2346	15	−15970	50
	Yb	70	21940	110	3430	50	4080	50	−19800#	300#	6110	50	−21880#	200#
	Lu	71	24210	60	1980	50	3220	70	*		6260	70	*	
	Hf	72	*		570#	320#	3610#	360#	*		11480#	300#	*	
154	Ba	56	7340#	300#	*		−6360#	420#	19150#	300#	*		5040#	300#
	La	57	8380#	200#	26880#	360#	−5600#	200#	16570#	200#	*		5210#	200#
	Ce	58	9331	3	24930	40	−4604	6	13511.3	2.8	−22890#	200#	1409	3
	Pr	59	10371	4	23389	6	−4114	3	10303	3	−19259	19	1253	3
	Nd	60	11583	4	21277.5	2.2	−3138.6	2.3	6876.1	1.4	−18158.3	2.3	−2975	3
	Pm	61	13198	18	19109	4	−2420.0	2.6	3436.2	2.5	−14043.4	3.0	−3814.1	2.4
	Sm	62	13835.0	0.8	16895	4	−1199.3	1.0	1251.0	0.8	−12420.0	2.0	−7158.5	1.0
	Eu	63	14992.48	0.27	15069	17	−566	20	−1580	50	−8352	3	−6927.4	0.7
	Gd	64	15141.67	0.21	13521.28	0.27	921.0	0.6	−3312	7	−8435.23	0.30	−10464	4
	Tb	65	15580	60	11850	50	2210	50	−5520	50	−4080	50	−9080	50
	Dy	66	16418	9	10265	7	2945	5	−7789	9	−4800	7	−13453	9
	Ho	67	17183	15	8500	40	4041	4	−10217	15	−615	9	−12240	12
	Er	68	18251	10	7065	6	4279.8	2.6	−12681	13	−751	6	−16713	12
	Tm	69	18850	60	5401	18	5093.8	2.6	−14810	50	3301	14	−15390	50
	Yb	70	20000	50	4005	15	5474.3	1.7	−17290#	300#	3257	15	−19830	50
	Lu	71	22450#	200#	2470	80	4460	100	*		7070	50	−20380#	300#
	Hf	72	*		1150#	300#	3570#	300#	*		7180#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
155	Ba	56	2550#	500#	*		34870#	400#	*		6600#	500#	*	
	La	57	4470#	360#	12200#	420#	29110#	300#	9350#	360#	8750#	300#	−3050#	420#
	Ce	58	3618	7	13480#	200#	22576	6	9126	20	6439	8	−250	40
	Pr	59	5498	3	10648	3	16392.3	2.0	9994.0	2.8	8317.0	2.7	−591	5
	Nd	60	4761.3	3.0	11558	4	9801.0	2.8	9990	3	6367	4	2257	3
	Pm	61	6704.8	2.9	8646.0	2.0	4319.0	1.8	11098.8	2.5	8066	4	2482	3
	Sm	62	5806.97	0.27	9177.1	2.5	−1030.3	2.1	11196	3	5921	18	5594	4
	Eu	63	8151.3	0.4	6652.7	1.1	−5776	16	11451.9	0.8	7808.0	0.8	5075	17
	Gd	64	6435.24	0.18	7620.2	0.7	−9857	6	12008.7	0.7	5683.0	0.6	8339.1	0.3
	Tb	65	9170	50	4837.94	0.25	−14630	9	12338.4	0.3	8316.1	0.3	7280.3	0.7
	Dy	66	6838	8	6290	50	−18678	11	12864	4	6420	40	11193.0	1.9
	Ho	67	9474	18	2937	18	−23505	22	13812	17	8940	17	10320	40
	Er	68	7679	7	4862	10	−27900#	300#	13511	7	6250	13	13552	7
	Tm	69	10273	16	1308	10	−32730#	300#	14556	13	8736	13	12621	15
	Yb	70	8630	17	3349	17	*		14192	16	6100	60	15661	14
	Lu	71	11000	50	−98	8	*		15280	50	8390	50	14830	60
	Hf	72	9740#	420#	1990#	300#	*		14570#	300#	3850#	360#	17400#	300#
	Ta	73	*		−1453	15	*		14110#	420#	*		15050#	360#
156	La	57	3190#	500#	12840#	570#	31220#	400#	10680#	500#	8380#	450#	*	
	Ce	58	4960#	200#	13960#	360#	24860#	200#	7640#	280#	6400#	200#	−2380#	280#
	Pr	59	4092.8	2.1	11122	6	18635	4	11330.5	2.8	8125.8	2.4	228	19
	Nd	60	6003	3	12063.3	2.2	12334.2	1.5	8509.9	2.8	6211.4	2.3	155.3	2.5
	Pm	61	5300.9	2.2	9186	3	5925	4	12124.2	1.6	8022.6	2.1	3029.0	2.2
	Sm	62	7239	8	9711	8	1171	8	9655	8	6182	8	3612	8
	Eu	63	6335	3	7181	3	−4540	40	13083	3	7341	3	6239	5
	Gd	64	8536.35	0.07	8005.2	0.8	−8326	25	9914.6	0.7	5696.9	0.7	5671.2	0.4
	Tb	65	6907	4	5309	4	−13263	14	14326	4	7656	4	8924	4
	Dy	66	9440.0	1.9	6563.00	0.21	−17267	9	10340	50	5649	4	8000.00	0.27
	Ho	67	7570	40	3670	40	−21950	70	15570	40	8470	40	11420	40
	Er	68	10068	25	5456	30	−26590	50	11141	26	5668	25	10581	25
	Tm	69	8274	16	1904	14	−30830#	300#	16489	14	8507	15	13831	14
	Yb	70	10851	14	3927	13	−35960#	100#	11871	16	5566	12	12854	12
	Lu	71	9120	60	390	60	*		17050	60	8380	70	16030	60
	Hf	72	11380#	300#	2370	50	*		12710	70	5420	9	15130	60
	Ta	73	10180#	420#	−1020	4	*		17350#	420#	6160#	420#	17820#	300#
	W	74	*		690#	320#	*		*		*		15650#	320#
157	La	57	4140#	500#	*		33280#	300#	9090#	500#	8760#	420#	*	
	Ce	58	3280#	360#	14050#	500#	26970#	300#	8830#	420#	6590#	360#	−1140#	420#
	Pr	59	5057	3	11220#	200#	21025	5	9892	7	8498	4	−1360#	200#
	Nd	60	4363.5	2.5	12333.9	2.4	14330.6	2.3	9644.4	2.8	6371	3	1221	3
	Pm	61	6201	7	9384	7	8468	7	10684	8	8147	7	1351	7
	Sm	62	5389	9	9799	5	2748	7	10971	5	6491	5	4549	5
	Eu	63	7448	5	7390	9	−2627	24	11443	4	7860	4	4490	5
	Gd	64	6359.86	0.15	8030	3	−7411	27	11706.0	0.8	5779.3	0.7	7277.9	0.9
	Tb	65	8744	4	5517.32	0.19	−12049	20	12017.42	0.20	7806.75	0.27	6621.8	0.7
	Dy	66	6966	5	6623	6	−15998	11	12542	5	5600	50	9928	5
	Ho	67	9360	50	3592	23	−20401	26	13040	24	8426	25	8970	50
	Er	68	7270	40	5160	50	−24620	50	13340	30	6091	28	12628	28
	Tm	69	9958	24	1790	30	−29320	50	14209	21	8755	20	11572	21
	Yb	70	8235	13	3887	16	−33740#	400#	13910	14	5861	16	14826	11
	Lu	71	10920	60	457	12	*		14763	16	8357	17	13638	17
	Hf	72	9250	60	2500	70	*		14450	50	5676	14	16770	50
	Ta	73	11460#	300#	−935	10	*		15630#	300#	8110#	300#	15860	70
	W	74	10460#	410#	980#	500#	*		14920#	500#	*		18600#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
155	Ba	56	7070#	450#	*		*		20220#	400#	*		5960#	450#
	La	57	7940#	300#	*		−5780#	300#	17600#	300#	*		6170#	300#
	Ce	58	9047	6	25720#	200#	−5046	22	14654	7	−21990#	300#	2314	6
	Pr	59	10021.0	2.6	23975	19	−4324.4	2.3	11509.5	2.0	−21290#	200#	2081.2	2.0
	Nd	60	11088	3	22137	4	−3476	3	7921.7	2.8	−17490	4	−2038	4
	Pm	61	12403	4	19965.9	2.6	−2585.1	2.1	4882.7	1.9	−16225	3	−2552.3	1.8
	Sm	62	13773.5	0.8	17444.6	2.0	−1671.7	1.0	1879.3	0.9	−11900.7	1.4	−6523.2	1.0
	Eu	63	14593.5	0.5	15721	3	−846.2	1.6	−563.7	0.8	−10805.2	2.5	−6184.0	0.8
	Gd	64	15329.95	0.24	14088.1	0.3	82.2	0.6	−2909.6	1.9	−6903.9	0.8	−9980	50
	Tb	65	16084	4	12465.1	0.7	973.6	0.7	−5213	16	−6805.2	0.7	−8932	7
	Dy	66	16160	4	10855.7	1.9	2604	3	−6948	6	−2743.3	1.9	−12592	8
	Ho	67	17172	17	9307	17	3157	17	−9418	19	−3170	50	−11508	17
	Er	68	17885	10	7647	7	4116	5	−11730	12	892	9	−15862	14
	Tm	69	18803	14	6190	10	4572	5	−14087	17	726	12	−14772	15
	Yb	70	19520	50	4590	14	5339.1	2.1	−16170#	300#	4834	12	−18940	50
	Lu	71	20510	50	3151	18	5804.3	2.3	−18640#	300#	4596	15	−17970#	300#
	Hf	72	23150#	420#	1780#	300#	4570#	320#	*		8330#	300#	*	
	Ta	73	*		300#	300#	3780#	300#	*		8420#	300#	*	
156	La	57	7660#	450#	*		−6250#	500#	18500#	400#	*		6600#	400#
	Ce	58	8570#	200#	26160#	360#	−5210#	200#	15700#	200#	−24390#	450#	2860#	200#
	Pr	59	9590.7	2.7	24600#	200#	−4684	5	12717.6	1.6	−20910#	300#	2749.7	3.0
	Nd	60	10764.4	1.6	22711.0	2.9	−3746.2	2.4	9157	8	−19875	6	−1336.1	2.2
	Pm	61	12005.6	2.6	20743.6	2.8	−2819	3	5917	4	−16028.1	2.2	−2046.2	1.6
	Sm	62	13046	8	18357	8	−1645	9	3177	8	−14378	8	−5611	8
	Eu	63	14486	3	16358	4	−1260	18	8	5	−10436	4	−6084	3
	Gd	64	14971.59	0.19	14657.9	0.8	−197.2	0.3	−2005.95	0.10	−9633.3	0.9	−9351.30	0.19
	Tb	65	16080	50	12930	4	374	4	−4550	40	−5561	4	−9001	4
	Dy	66	16278	7	11400.95	0.22	1753.05	0.30	−6320	25	−5748.06	0.12	−12558	16
	Ho	67	17040	40	9960	60	2750	60	−8710	40	−1570	40	−11400	40
	Er	68	17746	25	8393	26	3485	25	−10947	26	−2338	25	−15656	26
	Tm	69	18548	18	6766	15	4347	7	−13240	60	1926	21	−14416	17
	Yb	70	19481	16	5235	10	4810	3	−15650	40	1661	11	−18796	17
	Lu	71	20120	80	3740	60	5710.4	2.2	−17580#	310#	5750	60	−17350#	310#
	Hf	72	21120#	300#	2270	50	6026	3	−20320#	110#	5580	50	−21790#	300#
	Ta	73	*		970#	300#	4870#	360#	*		9250#	300#	*	
	W	74	*		−760#	320#	*		*		9720#	320#	*	
157	La	57	7330#	420#	*		*		19420#	300#	*		7410#	360#
	Ce	58	8240#	300#	26890#	500#	−5670#	360#	16790#	300#	*		3670#	300#
	Pr	59	9150	4	25180#	300#	−4829	19	13862	8	−22770#	400#	3696	3
	Nd	60	10367	4	23456	6	−4208	3	10183	5	−19280#	200#	−398.7	2.5
	Pm	61	11502	7	21447	7	−3172	7	7163	8	−18137	7	−1009	10
	Sm	62	12628	5	18985	5	−1777	5	4147	5	−13764	5	−4665	6
	Eu	63	13783	4	17101	5	−1208	5	1304	4	−12582	4	−4995	4
	Gd	64	14896.21	0.16	15210.8	0.9	−688.7	0.4	−1400	5	−8755	8	−8804	4
	Tb	65	15650.97	0.27	13522.6	0.8	179.6	0.7	−3932	23	−7970	3	−8305.62	0.22
	Dy	66	16406	5	11932	5	1034	5	−6012	27	−4178	5	−11960	40
	Ho	67	16932	29	10155	23	2057	24	−8120	30	−4030	24	−10690	30
	Er	68	17342	27	8830	27	3306	27	−9987	28	−172	27	−14656	30
	Tm	69	18232	22	7250	26	3874	20	−12283	22	−460	40	−13523	22
	Yb	70	19086	15	5791	11	4620	6	−14630	50	3494	26	−17910	60
	Lu	71	20036	18	4384	15	5108.3	2.8	−17040	50	3108	16	−16890	50
	Hf	72	20630#	300#	2890	50	5880	3	−19110#	400#	7180	50	−20870#	300#
	Ta	73	21640#	300#	1430	50	6355	6	*		6900	70	−20160#	110#
	W	74	*		−40#	500#	5190#	500#	*		10640#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
158	La	57	2940#	500#	*		35220#	400#	*		8370#	570#	*	
	Ce	58	4610#	500#	14520#	500#	29000#	400#	7410#	570#	6440#	500#	−3210#	570#
	Pr	59	3790#	200#	11730#	360#	23120#	200#	11060#	280#	8330#	200#	−670#	360#
	Nd	60	5412.2	2.5	12689	3	16855.9	1.5	8325.0	1.7	6456.8	2.2	−573	6
	Pm	61	4881	7	9901.2	2.3	10365.1	1.3	11806.4	1.6	8027.8	2.9	1967.7	2.0
	Sm	62	6646	6	10244	8	5156	5	9626	5	6550	5	2665	6
	Eu	63	5881	5	7882	5	−1083	27	12800	8	7785.6	2.3	5313.3	2.7
	Gd	64	7937.39	0.06	8520	4	−5387	25	10104	3	5993.2	0.8	5147.5	0.9
	Tb	65	6778.2	1.0	5935.7	1.0	−10768	25	13775.5	1.0	7463.7	1.0	7994.9	1.2
	Dy	66	9053	5	6931.8	2.4	−14396	8	10395	4	5712.9	2.4	7310.2	2.4
	Ho	67	7430	40	4051	27	−18980	30	15053	27	7838	27	10715	27
	Er	68	9960	40	5760	30	−23208	28	10950	50	5600	30	9504	25
	Tm	69	8060	30	2580	40	−27640	50	16220	40	8375	26	12990	30
	Yb	70	10655	13	4585	21	−32410#	300#	11529	15	5479	12	11849	10
	Lu	71	8848	18	1071	17	*		16765	17	8139	18	15063	17
	Hf	72	11370	50	2953	17	*		12200	60	5307	8	14035	17
	Ta	73	9740	70	−448	13	*		17260	60	8110#	300#	17120	50
	W	74	11980#	500#	1500#	300#	*		13110#	420#	5159	15	16350#	420#
159	Ce	58	2920#	570#	14500#	570#	31110#	400#	8630#	500#	6710#	570#	*	
	Pr	59	4690#	360#	11810#	500#	25270#	300#	9650#	420#	8600#	360#	−2170#	500#
	Nd	60	3960	30	12860#	200#	18839	30	9422	30	6589	30	420#	200#
	Pm	61	5519	10	10008	10	12979	10	10651	10	8512	10	542	10
	Sm	62	5027	8	10390	6	6961	6	10800	9	6823	6	3641	6
	Eu	63	6845	5	8081	6	1287	5	11344	6	8180	9	3769	4
	Gd	64	5943.21	0.08	8581.4	2.2	−4000	3	11608	4	6385	3	6443	8
	Tb	65	8133.0	0.6	6131.3	0.7	−8963	28	12002.4	0.7	7867.1	0.7	6197	3
	Dy	66	6832.4	2.4	6985.9	0.6	−13334	18	12306.9	0.7	5787	4	9014.2	0.7
	Ho	67	9215	27	4212	4	−17620	40	12805	6	8063.5	2.8	8407	4
	Er	68	7330	25	5664	27	−21729	12	12981	24	5840	40	11614	3
	Tm	69	9940	40	2560	40	−26140	30	13550	40	8500	40	10620	50
	Yb	70	7895	19	4420	30	−30400#	300#	13591	26	5858	22	14020	30
	Lu	71	10570	40	990	40	−34990#	310#	14430	40	8420	40	12770	40
	Hf	72	8809	17	2914	18	*		14309	16	5610	60	16076	15
	Ta	73	11440	50	−374	9	*		15080	50	8050	50	14800	60
	W	74	9900#	420#	1660#	300#	*		14670#	300#	5431	6	17830#	300#
	Re	75	*		−1600#	50#	*		15690#	500#	7450#	320#	16930#	430#
160	Ce	58	4220#	570#	*		32980#	400#	7350#	570#	6630#	500#	*	
	Pr	59	3500#	500#	12390#	570#	27290#	400#	10760#	570#	8370#	500#	−1530#	500#
	Nd	60	5070	60	13240#	300#	21220	50	8140#	210#	6570	50	−1370#	300#
	Pm	61	4412	10	10460	30	14942.6	2.3	11651.3	2.4	8463.7	3.0	1187	4
	Sm	62	6097	6	10968	10	9439.6	2.1	9584.2	2.1	6928	7	1907.5	2.9
	Eu	63	5521	4	8575	6	2889	15	12469	5	8048	5	4450	7
	Gd	64	7451.4	0.7	9188	4	−1879	24	10038.3	2.3	6381	4	4381	5
	Tb	65	6375.21	0.13	6563.3	0.7	−7530	30	13564.6	0.7	7851.7	0.7	7269	4
	Dy	66	8575.4	1.0	7428.3	1.0	−11510	6	10509.7	1.2	5956.1	0.9	6798.6	0.9
	Ho	67	7123	15	4503	15	−16090	40	14736	15	7907	16	10028	15
	Er	68	9573	24	6022	24	−20128	26	10830	40	5630	30	9007	25
	Tm	69	7800	40	3030	30	−24630	80	15710	40	7970	40	12180	40
	Yb	70	10400	18	4882	28	−29040	40	11251	26	5416	21	10897	27
	Lu	71	8660	50	1750	40	−33420#	300#	16430	40	8000	40	14070	40
	Hf	72	11174	15	3520	40	−38330#	100#	11983	17	5359	12	13137	13
	Ta	73	9310	70	130	70	*		17130	70	7990	80	16400	70
	W	74	11760#	300#	1980	50	*		12650	70	5131	9	15320	60
	Re	75	10240#	430#	−1267	7	*		17440#	420#	7680#	500#	18160#	300#
	Os	76	*		180#	320#	*		*		*		17730#	410#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
158	La	57	7080#	570#	*		*		20260#	450#	*		7750#	500#
	Ce	58	7890#	450#	*		−5760#	500#	17590#	400#	*		4110#	400#
	Pr	59	8840#	200#	25780#	450#	−5150#	280#	14960#	200#	−22420#	360#	4270#	200#
	Nd	60	9775.6	1.8	23910#	200#	−4191.0	2.9	11417	5	−21420#	300#	390	7
	Pm	61	11082.3	1.5	22235.2	1.3	−3530.2	2.7	8163.9	2.2	−17961	3	−500	5
	Sm	62	12035	9	19627	5	−2096	5	5439	5	−16046	5	−3863	6
	Eu	63	13329	4	17681.5	2.4	−1391	3	2201.2	2.3	−12263	7	−4516.9	2.2
	Gd	64	14297.25	0.16	15910	8	−659.5	0.9	−283.4	2.4	−11303	5	−7997.58	0.14
	Tb	65	15522	4	13966	3	−156.4	1.2	−3284	27	−7300	4	−8118	5
	Dy	66	16019.8	2.4	12449.1	2.4	875.0	2.4	−5104	25	−6871.6	2.4	−11646	24
	Ho	67	16790	50	10674	27	1550	50	−7480	40	−2712	27	−10850	40
	Er	68	17240	40	9351	25	2667	26	−9293	26	−3167	26	−14660	30
	Tm	69	18017	28	7740	50	3513	27	−11494	29	840	30	−13347	27
	Yb	70	18890	12	6379	26	4171	7	−13915	15	114	28	−17650	14
	Lu	71	19770	60	4958	19	4790	5	−16150	50	4218	24	−16480	50
	Hf	72	20620	50	3410	16	5404.7	2.7	−18490#	300#	4042	16	−20770	50
	Ta	73	21200#	300#	2060	80	6124	4	*		8080	50	−19440#	400#
	W	74	22450#	320#	560#	300#	6612.5	2.6	*		7910#	300#	*	
159	Ce	58	7530#	500#	*		−6130#	570#	18620#	400#	*		4980#	450#
	Pr	59	8480#	300#	26330#	420#	−5370#	420#	15790#	300#	−24170#	500#	4990#	300#
	Nd	60	9372	30	24590#	300#	−4530	30	12480	30	−20760#	400#	1311	30
	Pm	61	10400	12	22697	11	−3551	10	9490	11	−19690#	200#	626	11
	Sm	62	11673	7	20291	6	−2362	7	6355	6	−15661	6	−3008	6
	Eu	63	12726	4	18325	8	−1531	5	3490	4	−14226	4	−3424	4
	Gd	64	13880.59	0.11	16463	5	−795.7	0.9	605.7	0.7	−10600	5	−7162.5	1.0
	Tb	65	14911.3	0.7	14651	4	−138.2	1.1	−2202.3	2.7	−9551.9	2.3	−7197.1	2.4
	Dy	66	15886	5	12921.6	0.7	477.8	0.7	−4606	3	−5766.6	0.7	−11052	27
	Ho	67	16641	24	11144.2	2.8	1500.5	2.8	−6761	28	−5148.3	2.8	−10099	25
	Er	68	17291	27	9715	6	2174	4	−8727	18	−1444	4	−13931	25
	Tm	69	18000	30	8320	40	3050	30	−10860	50	−1670	40	−12631	29
	Yb	70	18551	20	7000	30	3954	18	−13001	21	2180	30	−16697	22
	Lu	71	19420	40	5570	40	4490	40	−15280	40	1710	50	−15680	40
	Hf	72	20180	50	3985	15	5225.1	2.7	−17400#	300#	5888	14	−19840	50
	Ta	73	21180	50	2579	19	5681	6	−19720#	310#	5487	16	−18900#	300#
	W	74	21890#	500#	1210#	300#	6451	4	*		9370#	300#	*	
	Re	75	*		−100#	310#	6760#	60#	*		9060#	310#	*	
160	Ce	58	7140#	570#	*		*		19470#	400#	*		5450#	500#
	Pr	59	8190#	450#	26890#	570#	−5680#	570#	16700#	400#	*		5450#	400#
	Nd	60	9030	50	25050#	400#	−4650#	210#	13510	50	−22910#	400#	1760	50
	Pm	61	9930.7	2.2	23320#	200#	−3870.3	2.3	10598.8	2.2	−19410#	300#	1242	6
	Sm	62	11124	5	20976.0	2.4	−2456.0	2.4	7709.8	2.2	−17798	30	−2261	5
	Eu	63	12365.6	2.2	18964.9	1.3	−1751.5	1.5	4343.8	1.3	−14228	10	−3001.9	1.2
	Gd	64	13394.6	0.7	17269	5	−1009	8	1729.8	1.0	−13024	6	−6480.9	1.0
	Tb	65	14508.2	0.7	15144.7	2.3	−178	3	−1455	15	−9082	4	−6739.94	0.14
	Dy	66	15407.8	2.2	13559.7	0.9	438.7	0.9	−3608	24	−8398.8	0.9	−10413.0	2.9
	Ho	67	16340	30	11489	15	1284	15	−6080	40	−4138	15	−9892	15
	Er	68	16900	30	10235	24	2041	24	−7901	25	−4185	24	−13570	40
	Tm	69	17740	40	8690	40	2810	50	−10010	50	−260	30	−12540	40
	Yb	70	18295	10	7437	26	3622	25	−12227	11	−890	7	−16530	40
	Lu	71	19230	40	6170	50	4110	40	−14620	80	2990	50	−15530	40
	Hf	72	19984	16	4503	12	4902.0	2.6	−16810	50	2609	20	−19575	18
	Ta	73	20760	90	3050	70	5480	50	−18800#	310#	6740	80	−18310#	310#
	W	74	21670#	300#	1610	50	6066	5	−21520#	110#	6420	50	−22480#	310#
	Re	75	*		390#	300#	6698	4	*		10270#	300#	*	
	Os	76	*		−1420#	320#	7271	13	*		10540#	320#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
161	Pr	59	4360#	640#	12530#	640#	29300#	500#	9320#	640#	8620#	640#	−2950#	640#
	Nd	60	3580#	210#	13320#	450#	23280#	200#	9250#	360#	6780#	280#	−330#	450#
	Pm	61	5263	9	10650	50	17376	9	10350	30	8613	9	−290#	200#
	Sm	62	4510	7	11066	7	11384	7	10593	12	7299	7	2810	7
	Eu	63	6369	10	8847	11	5405	11	11127	12	8324	11	2962	10
	Gd	64	5635.4	1.0	9302.6	1.7	−305	9	11248	4	6627.5	2.5	5391	5
	Tb	65	7696.6	0.5	6808.5	1.0	−5564	28	11811.2	0.9	8092.5	0.9	5454.3	2.3
	Dy	66	6454.39	0.08	7507.5	1.0	−10220	15	12188.4	1.0	6279.9	1.1	8281.6	0.9
	Ho	67	8885	15	4812.8	2.1	−14634	28	12682.9	2.3	8075	3	7921.5	2.4
	Er	68	7209	26	6108	17	−18884	25	12840	9	5850	28	10852	9
	Tm	69	9670	40	3120	40	−23100	40	13375	28	8270	40	9940	40
	Yb	70	7744	16	4820	40	−27380	50	13450	30	5731	29	13114	29
	Lu	71	10340	50	1688	28	−31920	50	13980	30	8313	29	11790	40
	Hf	72	8452	25	3310	50	−36120#	400#	14100	40	5756	27	15340	25
	Ta	73	11200	70	153	23	*		14744	26	8159	27	14055	28
	W	74	9400	60	2060	80	*		14690	50	5475	12	17290	50
	Re	75	11830#	300#	−1197	5	*		15510#	300#	7830#	300#	16070	70
	Os	76	10660#	410#	610#	500#	*		15230#	500#	*		19050#	500#
162	Nd	60	4850#	360#	13810#	580#	25270#	300#	7900#	500#	6620#	420#	−2260#	500#
	Pm	61	4030#	200#	11100#	280#	19560#	200#	11400#	210#	8550#	200#	380#	360#
	Sm	62	5779	8	11581	10	13802	4	9226	4	7039	11	990	30
	Eu	63	5003	10	9340	7	7318	3	12220.7	2.4	8348	6	3477	10
	Gd	64	6846	4	9779	11	2053	4	9923	4	6626	6	3572	7
	Tb	65	6204.2	2.2	7377.3	2.4	−4118	26	13058.4	2.2	7831.6	2.1	6095	5
	Dy	66	8196.99	0.06	8007.9	1.1	−8359	15	10366.6	1.0	6215.9	1.0	6027.8	0.9
	Ho	67	6916	4	5274	3	−13220	50	14343	3	7992	3	9139	3
	Er	68	9204	9	6426.9	2.2	−17165	9	10759	15	5860.6	2.9	8480.5	1.0
	Tm	69	7650	40	3565	27	−21700	70	15300	40	7949	26	11500	26
	Yb	70	10058	21	5210	30	−25830	20	11190	40	5610	30	10386	15
	Lu	71	8330	50	2270	50	−30420	70	16050	50	7880	50	13400	50
	Hf	72	10924	25	3896	29	−34760#	300#	11840	40	5400	40	12312	20
	Ta	73	9050	70	750	70	*		16870	60	7920	60	15580	70
	W	74	11610	50	2481	27	*		12390	70	5304	9	14488	17
	Re	75	9830	70	−765	11	*		17440	60	7900#	300#	17680	50
	Os	76	12290#	500#	1060#	300#	*		13180#	420#	5170#	50#	16670#	420#
163	Nd	60	3140#	500#	*		27310#	400#	9120#	640#	6980#	570#	−1180#	570#
	Pm	61	4990#	360#	11240#	420#	21640#	300#	9980#	360#	8630#	300#	−1110#	500#
	Sm	62	4292	8	11850#	200#	15782	7	10198	12	7159	8	1770	50
	Eu	63	5921.9	1.6	9484	4	9804.5	1.1	10809	7	8523.4	2.2	1967.2	2.2
	Gd	64	5178	4	9954.3	1.6	3779	5	11114	10	6968.9	1.2	4491.0	2.1
	Tb	65	7072	4	7603	6	−1867	7	11622	4	8211	4	4544	4
	Dy	66	6271.01	0.05	8074.8	2.0	−7086	15	11792.2	1.1	6320.1	1.0	7208.2	1.0
	Ho	67	8409	3	5485.79	0.05	−11587	28	12388.31	0.08	8158.49	0.11	7105.3	1.0
	Er	68	6905	5	6416	6	−15876	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	−24410	60	13310	30	5870	40	12415	29
	Lu	71	10040	50	2260	30	−28800	30	13760	30	8236	28	11160	40
	Hf	72	8193	27	3760	50	−32960#	300#	13980	40	5870	50	14518	26
	Ta	73	10830	70	650	40	−37220#	400#	14490	40	8270	40	13410	60
	W	74	8970	60	2400	90	*		14620	60	5650	90	16690	60
	Re	75	11670	50	−708	6	*		15170	50	7990	50	15330	70
	Os	76	10000#	420#	1230#	300#	*		15010#	300#	5406	10	18440#	300#
	Ir	77	*		−1810#	500#	*		15600#	570#	7160#	410#	17210#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
161	Pr	59	7860#	580#	*		−5900#	580#	17600#	500#	*		6160#	500#
	Nd	60	8650#	200#	25710#	450#	−4950#	360#	14440#	200#	−22270#	450#	2590#	200#
	Pm	61	9675	14	23900#	300#	−4077	10	11705	14	−21180#	400#	2075	9
	Sm	62	10607	9	21530	30	−2602	7	8835	7	−17240	50	−1250	7
	Eu	63	11890	11	19815	14	−1919	13	5671	10	−16186	11	−1920	10
	Gd	64	13086.8	1.2	17877	6	−1255	5	2548.8	1.4	−12562.8	2.4	−5741.1	1.4
	Tb	65	14071.8	0.6	15997	4	−427	4	−266.0	2.3	−11258.0	1.4	−5861.1	1.1
	Dy	66	15029.8	1.0	14070.9	0.9	344.2	0.9	−2854	9	−7401.8	1.0	−9744	15
	Ho	67	16008	4	12241.1	2.3	1143.3	2.3	−5298	28	−6648.3	2.3	−9204	24
	Er	68	16782	9	10611	9	1799	10	−7366	17	−2818	9	−12970	30
	Tm	69	17470	40	9146	28	2510	40	−9340	40	−2800	30	−11807	28
	Yb	70	18143	23	7851	15	3150	30	−11519	28	940	29	−15610	40
	Lu	71	19000	50	6570	40	3730	30	−13760	40	450	40	−14697	29
	Hf	72	19626	26	5060	29	4685	25	−15870	50	4557	24	−18710	70
	Ta	73	20511	28	3670	40	5206	23	−18160	50	4210	50	−17750	50
	W	74	21160#	300#	2190	50	5923	4	−20260#	400#	8200	50	−21640#	300#
	Re	75	22070#	310#	780	50	6328	7	*		7750	80	−21110#	110#
	Os	76	*		−660#	500#	7069	11	*		11640#	400#	*	
162	Nd	60	8430#	300#	26340#	500#	−5190#	500#	15370#	300#	*		3010#	300#
	Pm	61	9290#	200#	24420#	450#	−4320#	280#	12680#	200#	−20840#	540#	2560#	200#
	Sm	62	10289	4	22230	50	−2969	4	9903	5	−19440#	200#	−659	11
	Eu	63	11372.5	1.6	20406.6	2.5	−2041.7	1.6	6872.1	2.4	−15926	9	−1287.6	2.0
	Gd	64	12481	4	18626	4	−1455	6	3900	4	−14899	8	−4890	4
	Tb	65	13900.8	2.1	16679.9	2.1	−749.8	2.8	445	4	−11093	11	−5610.9	2.0
	Dy	66	14651.38	0.10	14816.4	1.0	84.6	0.9	−1846.96	0.30	−9963.4	1.4	−9056.2	2.1
	Ho	67	15801	15	12782	3	1006	3	−4563	26	−5867	3	−8911	9
	Er	68	16413	24	11239.7	0.3	1648.1	2.3	−6512	15	−5567.7	0.3	−12507	28
	Tm	69	17320	40	9670	30	2290	40	−8660	50	−1570	26	−11710	30
	Yb	70	17802	16	8336	29	3056	29	−10653	17	−1910	17	−15330	30
	Lu	71	18670	60	7090	60	3460	50	−13040	80	1790	50	−14570	50
	Hf	72	19376	13	5585	10	4416	5	−15177	15	1377	17	−18440	26
	Ta	73	20240	90	4060	70	5010	60	−17380	80	5500	70	−17400	80
	W	74	21010	50	2634	16	5678.2	2.4	−19580#	300#	5036	27	−21420	50
	Re	75	21660#	300#	1300	90	6240	5	*		9120	50	−20270#	400#
	Os	76	22950#	320#	−140#	300#	6767.8	2.9	*		8750#	300#	*	
163	Nd	60	7990#	450#	*		−5410#	570#	16520#	400#	*		3890#	450#
	Pm	61	9020#	300#	25050#	580#	−4620#	420#	13610#	300#	*		3350#	300#
	Sm	62	10070	10	22950#	200#	−3300	30	10789	7	−18880#	300#	52	7
	Eu	63	10925	10	21065	9	−2445	10	8022	4	−17820#	200#	−364	4
	Gd	64	12024.2	1.6	19295	7	−1606	6	4992.6	1.0	−14299	4	−3864.5	2.1
	Tb	65	13276	4	17383	11	−977	6	1782	4	−13162	4	−4486	4
	Dy	66	14468.00	0.08	15452.1	1.4	−243.2	0.9	−1213	5	−9389	4	−8412	3
	Ho	67	15324.4	2.1	13493.7	1.1	730.1	1.0	−3650	5	−8071.9	2.0	−8115.1	0.3
	Er	68	16109	10	11690	5	1576	5	−5872	16	−4275	5	−11761	26
	Tm	69	16973	28	10110	6	2177	6	−7937	28	−3977	6	−10977	16
	Yb	70	17602	21	8672	17	2842	15	−10004	30	−250	15	−14550	50
	Lu	71	18370	40	7470	40	3350	40	−12260	50	−600	40	−13693	29
	Hf	72	19120	30	6033	30	4120	30	−14400	60	3242	30	−17580	70
	Ta	73	19880	40	4550	50	4749	5	−16540	40	3000	60	−16610	40
	W	74	20580	70	3150	60	5520	60	−18550#	310#	6990	60	−20560	70
	Re	75	21500	50	1773	28	6012	8	−20690#	400#	6490	60	−19660#	300#
	Os	76	22280#	500#	460#	300#	6673	7	*		10370#	300#	*	
	Ir	77	*		−750#	400#	6980#	500#	*		9800#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
164	Pm	61	3470#	500#	11570#	570#	23750#	400#	11360#	500#	8730#	450#	−220#	640#
	Sm	62	5397	8	12260#	300#	18043	4	8830#	200#	7025	10	−50#	200#
	Eu	63	4729.6	2.3	9922	8	11748.6	2.5	11858	4	8304	7	2501	9
	Gd	64	6376.4	1.3	10408.8	1.3	6249.2	1.2	9740.4	1.7	6962	10	2625	7
	Tb	65	5580	4	8005.4	2.0	−196	25	12887	4	8266.1	2.3	5333	11
	Dy	66	7658.11	0.07	8661	4	−4954	15	10338.2	2.0	6358.6	1.1	5185.5	1.4
	Ho	67	6673.8	1.4	5888.6	1.4	−10338	28	13911.5	1.4	7939.1	1.4	8128.1	1.7
	Er	68	8846	5	6853.55	0.13	−14124	15	10809	3	6117.7	2.1	7759.33	0.15
	Tm	69	7252	26	4030	25	−18630	40	15136	25	8157	26	10934	25
	Yb	70	9790	21	5574	16	−22780	18	11170	30	5750	30	9834	17
	Lu	71	7920	40	2640	30	−27220	70	15890	30	8060	30	12900	40
	Hf	72	10599	30	4320	30	−31600	50	11710	50	5610	30	11663	22
	Ta	73	8820	50	1280	40	−35800#	320#	16598	29	7900	40	14930	40
	W	74	11410	60	2990	40	*		12260	60	5431	23	13730	25
	Re	75	9500	60	−180	80	*		17280	60	7890	80	17020	60
	Os	76	11960#	300#	1510	50	*		12890	70	5282	6	15880	60
	Ir	77	10240#	510#	−1560#	100#	*		17640#	440#	7580#	510#	18800#	320#
165	Pm	61	4380#	640#	*		25920#	500#	10120#	640#	9200#	580#	*	
	Sm	62	3660#	200#	12440#	450#	20100#	200#	10160#	360#	7390#	280#	1150#	360#
	Eu	63	5568	6	10093	7	14169	5	10581	9	8514	6	960#	200#
	Gd	64	4903.4	1.6	10582.6	2.4	7995.9	1.6	10758.8	1.6	7061.6	1.9	3500	4
	Tb	65	6555.2	2.4	8184.1	1.8	2341.3	2.3	11510.5	1.7	8557	4	3780.8	2.1
	Dy	66	5715.96	0.05	8796.6	2.0	−3317	27	11694	4	6846.8	2.0	6315	4
	Ho	67	7988.8	1.1	6219.3	0.7	−8456	27	12193.7	0.7	8147.3	0.7	6343.5	2.0
	Er	68	6650.1	0.6	6829.8	1.5	−12886	28	12567.5	0.6	6383	3	9306.2	0.6
	Tm	69	9093	25	4276.3	1.5	−17085	13	12948	5	8268.4	1.5	8757	3
	Yb	70	7350	30	5680	40	−21430	40	13144	27	6050	40	11686	27
	Lu	71	9870	40	2720	30	−25760	40	13560	30	8240	30	10680	40
	Hf	72	7890	30	4280	40	−29950	50	13870	40	6050	50	13830	30
	Ta	73	10630	30	1315	19	−34380	60	14157	29	8188	16	12620	50
	W	74	8699	27	2870	40	−38540#	400#	14380	50	5780	70	15955	27
	Re	75	11330	60	−263	22	*		14920	60	8175	26	14740	70
	Os	76	9540	60	1560	80	*		15020	50	5570	10	17950	50
	Ir	77	12060#	320#	−1460	40	*		15580#	310#	7810#	310#	16570	80
	Pt	78	*		120#	510#	*		15700#	570#	*		19740#	500#
166	Pm	61	2900#	710#	*		28310#	500#	*		9440#	640#	*	
	Sm	62	4900#	360#	12960#	580#	22250#	300#	8730#	500#	7480#	420#	−610#	500#
	Eu	63	4090#	100#	10530#	220#	16320#	100#	11890#	100#	8720#	100#	1860#	320#
	Gd	64	5916.5	2.1	10931	5	10553.5	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	9284.9	1.7	−991	7	10231.0	2.0	6875	4	4450.2	1.1
	Ho	67	6243.64	0.02	6747.0	0.7	−7050	30	13608.2	0.7	8174.6	0.7	7172	4
	Er	68	8474.1	0.9	7315.2	0.8	−11065	28	10767.1	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	−19705	12	11026	26	5999	9	9220	8
	Lu	71	7650	40	3010	40	−24240	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	−32850	50	16430	30	8060	40	14340	40
	W	74	11099	27	3332	16	−37200#	300#	12105	29	5510	40	13049	27
	Re	75	9170	80	210	80	*		17170	80	7980	100	16400	90
	Os	76	11810	50	2032	27	*		12710	60	5435	5	15110	60
	Ir	77	9850	80	−1152	8	*		17680	60	7950#	300#	18390	50
	Pt	78	12450#	500#	510#	310#	*		13500#	440#	5480#	500#	17290#	420#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
164	Pm	61	8460#	450#	*		−4590#	570#	14870#	400#	*		4170#	400#
	Sm	62	9689	5	23490#	300#	−3630	50	11768	4	−21140#	400#	577	4
	Eu	63	10651.5	2.5	21770#	200#	−2762.4	2.9	8872.8	2.8	−17560#	300#	85.1	2.2
	Gd	64	11555	4	19893	4	−1885.4	2.2	6274.3	1.2	−16383	7	−3169	4
	Tb	65	12652.2	2.7	17959.6	2.3	−1036.5	2.1	2875.8	2.3	−12820.1	2.1	−3795.1	2.0
	Dy	66	13929.11	0.08	16264	4	−449.9	1.0	−25.08	0.11	−11868.3	1.0	−7660.97	0.07
	Ho	67	15083	3	13963.3	2.3	431.6	1.6	−3072	25	−7674	4	−7884	5
	Er	68	15751.0	0.3	12339.34	0.14	1304.94	0.17	−4929	15	−6850.69	0.13	−11285	5
	Tm	69	16570	40	10446	25	2049	29	−7270	40	−2820	25	−10685	29
	Yb	70	17334	21	9257	15	2626	29	−9194	22	−3135	16	−14290	30
	Lu	71	17960	50	7740	40	3240	40	−11360	40	797	28	−13420	40
	Hf	72	18792	18	6575	22	3919	16	−13586	18	187	22	−17360	40
	Ta	73	19650	70	5040	50	4590	50	−15860	70	4220	40	−16460	60
	W	74	20383	16	3641	13	5278.4	2.0	−18010	50	3769	27	−20309	17
	Re	75	21170	80	2220	90	5830	50	−19940#	320#	7820	70	−19160#	310#
	Os	76	21950#	300#	810	50	6479	5	*		7380	70	−22980#	400#
	Ir	77	*		−340#	320#	6970#	100#	*		11220#	320#	*	
165	Pm	61	7850#	580#	*		−4610#	710#	16060#	500#	*		5180#	500#
	Sm	62	9050#	200#	24010#	450#	−3710#	280#	13020#	200#	*		1650#	200#
	Eu	63	10298	5	22350#	300#	−3067	11	9860	5	−19660#	400#	893	5
	Gd	64	11279.8	1.5	20504	7	−2279	7	7086.8	1.5	−15889	4	−2492.1	2.3
	Tb	65	12135	4	18593.0	1.8	−1222	11	4309.4	1.7	−14645.7	2.6	−2692.2	1.7
	Dy	66	13374.07	0.09	16801.9	1.0	−530.5	1.4	909.1	0.6	−11207.9	1.2	−6703.1	1.4
	Ho	67	14662.6	0.7	14880	4	139.3	1.2	−1968.1	1.7	−10082.3	2.0	−7026.7	0.7
	Er	68	15497	5	12718.4	0.6	1109.2	0.6	−4226	27	−5842.7	0.6	−10684	25
	Tm	69	16344	6	11129.8	1.5	1841.4	2.6	−6488	27	−5238.4	2.0	−9988	15
	Yb	70	17140	30	9706	27	2481	28	−8660	40	−1641	27	−13720	40
	Lu	71	17790	40	8291	27	3030	40	−10597	30	−1820	40	−12690	30
	Hf	72	18490	40	6920	30	3780	30	−12770	40	2090	30	−16420	40
	Ta	73	19450	40	5630	30	4290	30	−15164	27	1510	30	−15684	16
	W	74	20110	60	4150	40	5030	30	−17170	50	5670	30	−19510	60
	Re	75	20828	27	2720	40	5694	6	−19210	60	5310	40	−18530	50
	Os	76	21500#	300#	1380	70	6335	6	−21370#	400#	9250	50	−22280#	320#
	Ir	77	22300#	400#	50	60	6750	40	*		8660	80	*	
	Pt	78	*		−1440#	500#	7453	14	*		12610#	400#	*	
166	Pm	61	7280#	640#	*		*		17250#	510#	*		5940#	540#
	Sm	62	8560#	300#	*		−3750#	420#	14030#	300#	*		2320#	300#
	Eu	63	9660#	100#	22970#	410#	−3130#	220#	11060#	100#	−19370#	510#	1710#	100#
	Gd	64	10819.9	1.9	21024	4	−2417	4	8213.8	1.8	−18150#	200#	−1853.4	2.2
	Tb	65	11846.4	2.4	19154.6	2.5	−1510.4	2.0	5261.8	1.7	−14369	5	−2267.5	1.6
	Dy	66	12759.5	0.4	17469.0	1.3	−728	4	2339.7	0.8	−13348.0	1.5	−5757.8	0.8
	Ho	67	14232.5	1.1	15543.5	2.0	99.9	2.0	−1184	12	−9770.7	1.7	−6620.3	1.0
	Er	68	15124.2	0.7	13534.5	0.7	832.1	0.7	−3330	7	−8600.8	0.7	−10065.6	1.7
	Tm	69	16120	28	11484	12	1729	12	−5870	30	−4277	12	−9663	29
	Yb	70	16723	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	−11970	29	−850	40	−16080	30
	Ta	73	18960	40	6030	40	4300	50	−14320	90	3060	40	−15310	40
	W	74	19798	13	4647	18	4856	4	−16464	16	2458	29	−19279	25
	Re	75	20500	100	3070	90	5570	50	−18530	90	6780	80	−18160	90
	Os	76	21350	50	1770	16	6143	3	−20730#	300#	6148	29	−22030	60
	Ir	77	21910#	320#	410	80	6722	6	*		10140	50	−21000#	400#
	Pt	78	*		−950#	300#	7292	7	*		9710#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
167	Sm	62	3150#	500#	13210#	640#	24500#	400#	9960#	640#	7810#	570#	*	
	Eu	63	5090#	220#	10720#	360#	18510#	200#	10450#	280#	9020#	200#	240#	450#
	Gd	64	4476	5	11320#	100#	12514	5	10664	7	7320	6	2796	7
	Tb	65	6145.9	2.3	8801.4	2.4	6659.8	2.2	11353.2	2.2	8674.4	2.0	2995.2	2.7
	Dy	66	5401	3	9395	3	675	5	11385	3	7054	3	5425	3
	Ho	67	7280	5	6983	5	−4760	30	12045	5	8553	5	5473	5
	Er	68	6436.43	0.18	7508.0	0.8	−9822	28	12319.5	0.8	6555.3	1.4	8324.8	0.7
	Tm	69	8728	12	4907.7	1.2	−14192	28	12689.3	1.5	8263.7	1.4	8084.0	1.8
	Yb	70	7067	8	5992	12	−18365	17	13051	4	6183	25	10999	4
	Lu	71	9570	40	3210	30	−22720#	50#	13490	40	8360	30	10040	40
	Hf	72	7680	40	4740	40	−26990	80	13690	40	6040	40	13190	30
	Ta	73	10320	40	1780	40	−31290	30	14000	40	8330	30	11940	40
	W	74	8407	19	3420	30	−35470#	310#	14331	21	5920	30	15241	23
	Re	75	11090#	90#	200#	50#	*		14780#	50#	8300#	50#	14130#	50#
	Os	76	9130	80	1990	110	*		14910	80	5810	100	17400	80
	Ir	77	11890	50	−1070	4	*		15340	50	8020	50	16000	60
	Pt	78	10130#	430#	790#	310#	*		15430#	310#	5590#	120#	19110#	310#
168	Sm	62	4460#	570#	*		26680#	400#	8400#	640#	7720#	640#	*	
	Eu	63	3620#	360#	11190#	500#	20690#	300#	11730#	420#	9050#	360#	990#	580#
	Gd	64	5467	8	11690#	200#	14818	6	9290#	100#	7422	8	990#	200#
	Tb	65	4935	5	9260	7	8566	5	12335	5	8643	5	3629	7
	Dy	66	6642	4	9891	3	3094.7	2.9	10034	3	6967	3	3687	3
	Ho	67	5806	6	7387	4	−2960	40	13282.6	2.5	8463.6	2.4	6222.2	2.8
	Er	68	7771.29	0.12	8000	5	−7629	28	10791.8	0.8	6772.8	0.8	6269.4	0.7
	Tm	69	6840.6	1.8	5311.9	1.7	−12919	28	14322.8	1.7	8073.2	1.9	9232.2	1.8
	Yb	70	9062	4	6326.0	1.3	−16686	13	11017	12	6214.1	1.6	8587.8	0.9
	Lu	71	7600	50	3750	40	−21390#	110#	15260	40	8110	50	11530	40
	Hf	72	9960	40	5130	40	−25368	30	11370	40	5950	40	10580	40
	Ta	73	8110	40	2220	40	−29880	80	16180	40	8110	40	13690	40
	W	74	10740	21	3830	30	−34090	50	11910	30	5816	17	12390	30
	Re	75	8930#	110#	720#	110#	−38190#	410#	16940#	100#	8070#	110#	15830#	110#
	Os	76	11580	80	2490#	50#	*		12500	80	5553	22	14515	28
	Ir	77	9520	70	−670	110	*		17620	70	8040	90	17810	80
	Pt	78	12120#	310#	1030	50	*		13150	60	5530	40	16530	60
	Au	79	*		−1990#	500#	*		17930#	500#	7710#	570#	19650#	400#
169	Eu	63	4660#	500#	11390#	570#	22880#	400#	10220#	570#	9290#	500#	−770#	640#
	Gd	64	3790#	200#	11860#	360#	17030#	200#	10590#	280#	7720#	220#	2100#	360#
	Tb	65	5693	10	9486	11	10906	9	11118	11	8867	9	2030#	100#
	Dy	66	5103	3	10059	5	4859.1	1.5	11077.4	2.3	7156.1	2.1	4500.6	2.2
	Ho	67	6848	5	7593	5	−706	5	11836	5	8660	4	4666	4
	Er	68	6003.25	0.15	8197.4	2.4	−6205	28	12068	5	7013.2	0.8	7309.7	0.8
	Tm	69	8033.6	1.5	5574.2	0.8	−10984	28	12725.6	0.8	8513.8	0.8	7442.3	1.0
	Yb	70	6866.98	0.15	6352.4	1.7	−15455	15	12878.1	1.3	6375	12	10195.0	0.4
	Lu	71	9110	40	3792	3	−19666	11	13218	5	8375	8	9450	12
	Hf	72	7430	40	4960	50	−23990	40	13510	40	6170	40	12524	29
	Ta	73	9970	40	2220	40	−28200	40	13890	40	8430	40	11380	40
	W	74	8098	20	3820	30	−32510	50	14140	30	6040	30	14580	30
	Re	75	10830#	100#	812	15	−36780#	300#	14519	19	8336	14	13327	30
	Os	76	8802	28	2350#	110#	*		14790#	50#	5920	80	16812	28
	Ir	77	11650	70	−609	22	*		15100	80	8195	26	15330	80
	Pt	78	9670	60	1180	90	*		15370	50	5706	9	18660	50
	Au	79	12240#	500#	−1880#	300#	*		15820#	430#	7920#	420#	17260#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
167	Sm	62	8050#	450#	*		−3760#	570#	15360#	400#	*		3260#	410#
	Eu	63	9180#	200#	23680#	540#	−3240#	360#	12110#	200#	−21560#	540#	2530#	200#
	Gd	64	10393	5	21840#	200#	−2601	9	9139	6	−17730#	300#	−1038	5
	Tb	65	11437.2	2.4	19732	6	−1734.5	2.0	6395	5	−16420#	100#	−1369.9	2.0
	Dy	66	12445	3	17967	3	−951	3	3375.0	3.0	−12833	3	−4915	3
	Ho	67	13523	5	16268	5	−108	7	264	5	−11759	5	−5426	5
	Er	68	14910.6	0.9	14254.9	0.7	666.7	0.7	−2700	4	−7993.8	0.8	−9474	12
	Tm	69	15755.6	1.9	12222.9	1.4	1410.2	1.4	−5025	30	−6761.6	1.4	−9020	7
	Yb	70	16437	27	10646	4	2153	6	−7122	28	−2955	4	−12640	30
	Lu	71	17220	40	9166	30	2790	30	−9170	40	−2920	30	−11730	40
	Hf	72	17970	40	7750	40	3400	30	−11240	30	837	29	−15440	40
	Ta	73	18650	30	6490	40	4020	40	−13550#	50#	380	40	−14534	29
	W	74	19510	30	5170	30	4641	29	−15740	80	4350	30	−18520	80
	Re	75	20260#	50#	3530#	50#	5313#	22#	−17730#	50#	4010#	50#	−17440#	50#
	Os	76	20930	90	2200	80	5980	60	−19730#	320#	8120	80	−21300	90
	Ir	77	21740	60	962	27	6504.9	2.6	*		7420	80	−20450#	300#
	Pt	78	22580#	500#	−360#	310#	7160	60	*		11380#	310#	*	
168	Sm	62	7610#	500#	*		*		16360#	400#	*		3890#	450#
	Eu	63	8720#	320#	24400#	580#	−3390#	500#	13420#	300#	*		3380#	300#
	Gd	64	9943	6	22410#	300#	−2671	7	10314	6	−20040#	400#	−359	6
	Tb	65	11081	5	20580#	100#	−1940	5	7266	5	−16270#	200#	−904	5
	Dy	66	12043.4	3.0	18693	3	−1217	3	4504.1	2.9	−14999	6	−4278	6
	Ho	67	13085.1	2.5	16782.2	2.8	−333	3	1299.5	2.9	−11418.6	3.0	−4794.8	2.4
	Er	68	14207.73	0.21	14982.7	0.8	553.5	0.7	−1409.35	0.25	−10363.9	3.0	−8517.7	1.3
	Tm	69	15568	12	12819.8	1.8	1243.4	2.1	−4260	40	−6323	5	−8794	4
	Yb	70	16129	7	11233.7	0.3	1937.8	0.7	−6220	28	−5579.59	0.27	−12134	30
	Lu	71	17170	50	9740	40	2440	50	−8650	50	−1790	40	−11650	50
	Hf	72	17640	40	8344	29	3230	30	−10470	30	−2060	28	−15080	40
	Ta	73	18440	40	6950	40	3820	40	−12740#	110#	1840	40	−14240	30
	W	74	19148	16	5610	30	4500	11	−14901	16	1280	30	−18170#	50#
	Re	75	20020#	130#	4140#	110#	5200#	100#	−17140#	130#	5400#	110#	−17250#	130#
	Os	76	20710	16	2682	14	5815.8	2.7	−19190	50	4943	19	−20998	17
	Ir	77	21410	90	1320	110	6480	50	−21050#	410#	8990#	80#	−19840#	320#
	Pt	78	22260#	300#	−40	50	6990	3	*		8380	90	*	
	Au	79	*		−1200#	400#	7590#	510#	*		12310#	400#	*	
169	Eu	63	8290#	450#	*		−3670#	640#	14460#	400#	*		4190#	400#
	Gd	64	9260#	200#	23050#	450#	−2810#	280#	11630#	200#	−19370#	450#	790#	200#
	Tb	65	10628	9	21180#	200#	−2064	11	8421	10	−18330#	300#	46	10
	Dy	66	11745	3	19319	5	−1415.9	2.0	5404.7	1.6	−14635	6	−3575.1	2.8
	Ho	67	12653	6	17484	4	−625	4	2486	4	−13331	6	−3871	4
	Er	68	13774.54	0.19	15584.8	3.0	266.2	0.7	−545.6	0.3	−9725.0	2.9	−7680.3	1.7
	Tm	69	14874.2	1.0	13574	5	1198.6	1.0	−3192	3	−8550.7	2.5	−7765.9	0.7
	Yb	70	15928	4	11664.2	0.3	1720.9	0.9	−5659	28	−4675.28	0.29	−11400	40
	Lu	71	16708	30	10118	3	2422	3	−7792	28	−4059	3	−10794	28
	Hf	72	17390	40	8705	28	3150	40	−9800	30	−426	28	−14390	40
	Ta	73	18080	40	7350	40	3730	40	−11874	30	−530	50	−13470	30
	W	74	18839	23	6030	30	4290	30	−14200	30	3150	30	−17330#	110#
	Re	75	19760#	50#	4644	30	5004	11	−16323	25	2688	30	−16496	14
	Os	76	20390	80	3080	30	5713	3	−18320	50	6882	29	−20280	80
	Ir	77	21171	27	1880#	50#	6162	4	−20450#	300#	6280#	110#	−19360	50
	Pt	78	21800#	310#	510	90	6858	5	*		10300	50	−23010#	400#
	Au	79	*		−850#	300#	7400#	300#	*		9590#	310#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
170	Eu	63	3180#	570#	*		25240#	400#	11500#	570#	9260#	570#	*	
	Gd	64	5030#	360#	12230#	500#	19260#	300#	9180#	420#	7780#	360#	220#	500#
	Tb	65	4410#	200#	10110#	280#	13090#	200#	12170#	200#	8930#	200#	2710#	280#
	Dy	66	6269	7	10635	11	7049	7	9743	8	7033	7	2707	8
	Ho	67	5546	9	8036	8	1042	19	12933	8	8515	8	5266	8
	Er	68	7256.7	1.1	8607	4	−3853	28	10617.0	2.6	7036	5	5454	3
	Tm	69	6591.98	0.17	6162.9	0.8	−9658	28	13905.0	0.7	8358.2	0.8	8130	5
	Yb	70	8459.39	0.15	6778.2	0.7	−13474	13	11259.3	1.7	6643.3	1.3	8172.04	0.27
	Lu	71	7295	17	4219	17	−18404	20	14985	17	8148	17	10883	17
	Hf	72	9610	40	5460	28	−22327	30	11510	50	6130	40	9983	28
	Ta	73	7920	40	2710	40	−27060	90	15930	40	8190	40	13030	40
	W	74	10440	20	4290	30	−30998	19	11810	30	5920	30	11820	30
	Re	75	8557	15	1271	19	−35260	50	16702	17	8186	20	15095	30
	Os	76	11275	28	2799	14	−39430#	300#	12440#	100#	5730#	50#	13944	19
	Ir	77	9060	80	−350	90	*		17620	80	8260	110	17360#	90#
	Pt	78	11960	50	1487	27	*		12940	70	5637	4	15830	80
	Au	79	10080#	300#	−1472	12	*		17870	70	7970#	310#	19070	50
	Hg	80	*		140#	420#	*		13690#	500#	*		17910#	430#
171	Gd	64	3430#	500#	12480#	570#	21510#	400#	10420#	570#	7980#	500#	1250#	570#
	Tb	65	5130#	360#	10210#	420#	15440#	300#	10830#	360#	9270#	300#	1200#	420#
	Dy	66	4531	13	10750#	200#	9132	11	10905	15	7436	12	3643	12
	Ho	67	6416	11	8183	10	3220	8	11619	8	8741	8	3785	9
	Er	68	5681.6	0.3	8742	8	−2286	29	11783	4	7159.9	2.6	6415	3
	Tm	69	7485.3	0.8	6391.5	1.1	−7489	28	12422.9	0.5	8644.2	0.4	6450.0	2.4
	Yb	70	6614.21	0.01	6800.4	0.7	−12221	28	12678.7	0.7	6869.7	1.7	9329.13	0.25
	Lu	71	8594	17	4353.9	1.7	−16579	28	13257.8	1.7	8615.4	1.7	9130.0	2.4
	Hf	72	7250	40	5410	30	−21000	30	13362	29	6480	50	11795	29
	Ta	73	9650	40	2760	40	−25310	50	13710	40	8500	40	10970	50
	W	74	7870	30	4240	40	−29640	80	13920	40	6170	40	13920	40
	Re	75	10419	30	1250	30	−33690	30	14380	30	8510	30	12790	40
	Os	76	8572	19	2814	20	−37770#	310#	14700	19	6090#	110#	16113	21
	Ir	77	11400	90	−230	40	*		15020	50	8440	40	14890#	110#
	Pt	78	9230	80	1650	110	*		15360	80	5930	110	18190	80
	Au	79	11980	50	−1448	10	*		15560	50	8110	50	16610	70
	Hg	80	10240#	430#	300#	310#	*		15690#	430#	5670#	500#	19790#	310#
172	Gd	64	4750#	570#	*		23590#	400#	8840#	570#	7890#	570#	*	
	Tb	65	3990#	500#	10770#	570#	17680#	400#	11870#	500#	9060#	450#	1870#	570#
	Dy	66	5660#	300#	11280#	420#	11500#	300#	9660#	360#	7470#	300#	1780#	360#
	Ho	67	5080#	200#	8730#	200#	5120#	200#	12810#	200#	8760#	200#	4400#	200#
	Er	68	6836	4	9162	8	−80	25	10493	9	7171	6	4681	4
	Tm	69	6235	5	6945	5	−6043	28	13445	5	8412	5	7063	7
	Yb	70	8019.95	0.01	7335.1	0.4	−10158	28	11250.7	0.7	6883.3	0.7	7312.43	0.29
	Lu	71	6979.1	2.6	4718.8	2.0	−15180	40	14738.1	2.0	8503.3	2.1	10184.5	2.2
	Hf	72	9040	40	5862	24	−19159	27	11615	30	6545	25	9620	24
	Ta	73	7680	40	3190	40	−24090#	110#	15630	40	8250	40	12399	28
	W	74	10080	40	4670	40	−27993	30	11750	40	6060	40	11270	40
	Re	75	8380	50	1760	50	−32390	80	16440	40	8230	40	14380	50
	Os	76	10886	21	3280	30	−36390	50	12370	17	6038	15	13324	20
	Ir	77	8900#	110#	100#	110#	*		17400#	110#	8350#	110#	16820#	110#
	Pt	78	11730	80	1980	40	*		12690	80	5854	21	15266	28
	Au	79	9690	70	−990	110	*		17830	70	8100	90	18570	80
	Hg	80	12270#	310#	590	50	*		13500	70	5650#	300#	17200	60

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
170	Eu	63	7840#	500#	*		−3950#	640#	15690#	450#	*		4800#	450#
	Gd	64	8820#	300#	23620#	500#	−2940#	420#	12870#	300#	*		1450#	300#
	Tb	65	10110#	200#	21970#	360#	−2390#	220#	9550#	200#	−18090#	450#	740#	200#
	Dy	66	11372	7	20121	9	−1769	7	6392	7	−17110#	200#	−2997	8
	Ho	67	12393	8	18095	9	−880	8	3532	8	−13184	12	−3414	8
	Er	68	13259.9	1.1	16199	3	53.0	1.4	657.1	1.1	−11879.0	1.9	−6903.4	1.6
	Tm	69	14625.6	1.5	14360.3	2.5	850.3	1.0	−2489	17	−8295	4	−7490.9	0.7
	Yb	70	15326.37	0.03	12352.32	0.25	1735.6	0.3	−4510	28	−7131.42	0.29	−10752	3
	Lu	71	16400	40	10572	17	2156	20	−7170	30	−3320	17	−10660	30
	Hf	72	17040	40	9252	28	2915	29	−8960	30	−3167	28	−14030	40
	Ta	73	17890	40	7670	50	3460	40	−11235	30	656	28	−13290	30
	W	74	18539	18	6510	30	4140	30	−13363	16	140	30	−16945	17
	Re	75	19390#	100#	5087	30	4770	30	−15820	80	4099	30	−16251	28
	Os	76	20077	14	3611	16	5536.9	2.7	−17634	16	3705	18	−19904	25
	Ir	77	20710	110	2000#	130#	6272	10	−19430	90	8050	80	−18750	90
	Pt	78	21630	50	878	17	6707	3	−21800#	300#	7142	29	−22720#	300#
	Au	79	22320#	400#	−290	90	7177	15	*		11160	50	*	
	Hg	80	*		−1730#	310#	7770	30	*		10630#	310#	*	
171	Gd	64	8460#	450#	*		−3220#	570#	13960#	400#	*		2430#	450#
	Tb	65	9540#	300#	22430#	500#	−2430#	360#	10840#	300#	−20040#	500#	1870#	300#
	Dy	66	10800	11	20860#	200#	−1824	12	7543	11	−16610#	300#	−1982	14
	Ho	67	11962	8	18818	12	−1150	8	4601	7	−15190#	200#	−2573	7
	Er	68	12938.3	1.1	16778.3	1.9	−227	3	1589.7	1.1	−11291	7	−5993.1	1.6
	Tm	69	14077.3	0.8	14998	4	645	5	−1380.5	1.7	−10235	8	−6516.7	0.4
	Yb	70	15073.60	0.15	12963.28	0.29	1557.84	0.27	−3875	29	−6488.9	1.1	−10072	17
	Lu	71	15889	3	11132.1	1.8	2289.4	2.1	−6109	28	−5322.4	1.8	−9646	28
	Hf	72	16860	40	9633	29	2734	29	−8350	40	−1956	29	−13360	40
	Ta	73	17570	40	8215	28	3370	40	−10470	40	−1700	30	−12500	30
	W	74	18310	30	6950	40	3960	40	−12660	30	1880	40	−16255	30
	Re	75	18976	30	5540	40	4680	40	−14840	50	1600	40	−15395	30
	Os	76	19850	30	4085	23	5372.3	2.4	−16980	80	5573	21	−19420	80
	Ir	77	20460	40	2570	40	5960#	21#	−18860	40	5200	40	−18190	40
	Pt	78	21180	90	1300	80	6607	3	−20790#	320#	9190	80	−21870	90
	Au	79	22060#	300#	39	28	7085	11	*		8240	80	−21130#	300#
	Hg	80	*		−1170#	310#	7668	15	*		12340#	310#	*	
172	Gd	64	8180#	500#	*		−3510#	570#	14870#	500#	*		2810#	500#
	Tb	65	9120#	450#	23250#	570#	−2790#	500#	11930#	450#	*		2410#	400#
	Dy	66	10190#	300#	21490#	420#	−2010#	300#	8720#	300#	−18840#	500#	−1220#	300#
	Ho	67	11500#	200#	19490#	280#	−1300#	200#	5750#	200#	−15140#	360#	−1970#	200#
	Er	68	12518	4	17345	8	−421	5	2773	4	−13597	12	−5344	4
	Tm	69	13720	6	15687	9	215	6	−636	6	−10053	9	−6138	5
	Yb	70	14634.16	0.01	13726.5	1.1	1309.18	0.25	−2853	24	−8827.3	1.1	−9497.9	1.7
	Lu	71	15573	17	11519.2	2.2	2150.9	2.6	−5407	28	−4816.2	2.1	−9377	29
	Hf	72	16290	40	10216	24	2753	24	−7310	40	−4384	24	−12750	40
	Ta	73	17330	40	8600	30	3290	50	−9770	50	−790	28	−12320	40
	W	74	17950	30	7420	40	3840	40	−11850	30	−950	40	−15920	40
	Re	75	18800	40	6000	50	4410	50	−14320#	110#	2870	50	−15200	40
	Os	76	19459	16	4531	18	5226	4	−16139	16	2550	30	−18900	40
	Ir	77	20300#	130#	2920#	110#	5991	10	−18070#	130#	6720#	110#	−17870#	130#
	Pt	78	20954	17	1755	14	6464	4	−20250	50	6035	19	−21619	20
	Au	79	21670	90	670	110	6923	10	*		9950	80	−20580#	320#
	Hg	80	22510#	310#	−860	50	7524	6	*		9300	90	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
173	Gd	64	3120#	570#	*		25710#	450#	*		7950#	570#	*	
	Tb	65	4820#	570#	10840#	570#	19820#	400#	10480#	570#	9270#	500#	230#	570#
	Dy	66	4050#	500#	11340#	570#	13810#	400#	10740#	500#	7830#	450#	2760#	500#
	Ho	67	5800#	360#	8880#	420#	7530#	300#	11540#	300#	9230#	300#	3010#	360#
	Er	68	5240#	200#	9320#	280#	1740#	200#	11670#	200#	7470#	200#	5710#	200#
	Tm	69	6954	7	7063	6	−3860	28	12172	5	8715	5	5654	9
	Yb	70	6367.10	0.01	7467	5	−8824	28	12368.9	0.4	7108.2	0.7	8202.0	1.1
	Lu	71	8216.3	2.2	4915.1	1.1	−13328	28	13136.1	1.1	8746.4	1.1	8560.2	1.3
	Hf	72	7060	25	5943	4	−17949	15	13149	4	6779	17	11020	3
	Ta	73	9140	40	3280	40	−22131	30	13750	40	8720	40	10560	30
	W	74	7700	40	4690	40	−26810	40	13700	40	6270	40	13170	40
	Re	75	10070	50	1750	40	−30730	40	14240	40	8600	30	12230	40
	Os	76	8270	20	3170	40	−34840	50	14520	30	6325	18	15495	20
	Ir	77	11100#	110#	312	14	−38870#	400#	14873	19	8525	14	14283	15
	Pt	78	8883	28	1960#	110#	*		15210	50	6030	90	17658	28
	Au	79	11730	80	−988	21	*		15330	80	8330	26	15900	80
	Hg	80	9820	70	720	90	*		15660	50	5906	13	19330	50
	Tl	81	*		−2170#	400#	*		15970#	500#	7960#	500#	17890#	400#
174	Tb	65	3600#	570#	11320#	570#	21900#	400#	11630#	570#	9100#	570#	*	
	Dy	66	5220#	570#	11740#	570#	16060#	400#	9510#	570#	7740#	500#	970#	570#
	Ho	67	4590#	420#	9420#	500#	9700#	300#	12600#	420#	9170#	300#	3550#	420#
	Er	68	6370#	360#	9890#	420#	3900#	300#	10380#	360#	7520#	300#	3870#	300#
	Tm	69	5680	40	7500#	200#	−2120	50	13330	40	8720	40	6390	50
	Yb	70	7464.60	0.01	7977	4	−6717	28	11139	5	7128.9	0.4	6419.0	1.1
	Lu	71	6760.6	1.4	5308.6	1.1	−11898	28	14395.4	1.1	8600.0	1.1	9284.9	1.1
	Hf	72	8525	4	6251.7	2.0	−15850	10	11603.1	2.7	6848.6	2.4	9108.9	1.8
	Ta	73	7420	40	3639	28	−20950	30	15370	40	8550	40	11734	28
	W	74	9570	40	5120	40	−24908	30	11810	40	6360	40	10850	40
	Re	75	8190	40	2230	40	−29670#	100#	16130	40	8280	40	13690	40
	Os	76	10624	18	3730	30	−33360	18	12270	40	6120	30	12738	30
	Ir	77	8592	15	634	19	−37310#	300#	17167	17	8505	20	16110	30
	Pt	78	11475	28	2342	14	*		12630#	110#	5960	40	14755	19
	Au	79	9250#	100#	−620#	100#	*		17810#	100#	8310#	120#	18060#	100#
	Hg	80	12100	50	1097	27	*		13250	70	5785	11	16460	80
	Tl	81	10150#	500#	−1840#	300#	*		18090#	300#	8050#	430#	19720#	300#
175	Tb	65	4590#	570#	*		23820#	400#	10160#	570#	9260#	570#	*	
	Dy	66	3790#	570#	11930#	570#	18090#	400#	10540#	570#	7950#	570#	1930#	570#
	Ho	67	5500#	500#	9700#	570#	11870#	400#	11150#	570#	9320#	500#	2040#	570#
	Er	68	4770#	500#	10070#	500#	5830#	400#	11410#	500#	7830#	450#	4750#	500#
	Tm	69	6520	70	7650#	300#	100	60	12050#	200#	9040	50	4960#	200#
	Yb	70	5822.35	0.07	8120	40	−5063	28	12271	4	7542	5	7433	4
	Lu	71	7666.7	1.0	5510.7	0.4	−9878	28	13095.8	0.4	8953.3	0.4	7853	5
	Hf	72	6708.5	0.4	6199.6	2.1	−14381	10	13110.9	2.1	7119.2	2.7	10420.4	1.8
	Ta	73	8740	40	3853	28	−19016	30	13693	28	8860	40	9974	28
	W	74	7480	40	5180	40	−23810	30	13470	40	6560	40	12420	40
	Re	75	9690	40	2350	40	−27880	50	14150	40	8670	40	11690	40
	Os	76	8177	14	3716	30	−32150	80	14164	30	6320	40	14643	30
	Ir	77	10677	15	687	15	−35630#	200#	14760	18	8715	17	13810	40
	Pt	78	8577	19	2327	20	−40170#	300#	15152	19	6280#	110#	17064	21
	Au	79	11470#	100#	−630	40	*		15220	50	8560	40	15490#	110#
	Hg	80	9390	80	1240#	130#	*		15590	80	6080	110	18800	80
	Tl	81	12350#	360#	−1590#	200#	*		15560#	210#	7960#	210#	17060#	210#
	Pb	82	*		−530#	420#	*		16450#	500#	*		20840#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
173	Gd	64	7870#	570#	*		*		15800#	570#	*		3680#	570#
	Tb	65	8810#	500#	*		−2950#	570#	12910#	500#	*		3250#	500#
	Dy	66	9710#	400#	22110#	570#	−2280#	450#	9910#	450#	−18140#	570#	−190#	450#
	Ho	67	10880#	300#	20160#	420#	−1410#	300#	6910#	300#	−16950#	500#	−940#	300#
	Er	68	12080#	200#	18060#	200#	−560#	200#	3900#	200#	−13180#	360#	−4350#	200#
	Tm	69	13189	4	16225	9	108	6	625	5	−11930#	200#	−5072	4
	Yb	70	14387.05	0.01	14412.0	1.1	945.33	0.29	−2160	3	−8358	4	−8885.9	2.0
	Lu	71	15195.3	1.9	12250.1	1.1	1968.3	1.3	−4485	28	−6797	6	−8551	24
	Hf	72	16102	29	10662	3	2560	3	−6663	28	−3424	3	−12132	28
	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	−15240	50
	Re	75	18450	40	6410	40	4310	40	−13288	30	490	40	−14380	30
	Os	76	19156	22	4930	30	5055	6	−15530	30	4370	30	−18270#	110#
	Ir	77	20000	40	3594	30	5726	5	−17439	25	4000	40	−17233	14
	Pt	78	20610	80	2070	30	6383	4	−19310	50	8039	29	−20820	80
	Au	79	21414	28	990	40	6842	3	−21430#	400#	7130#	110#	−20040	50
	Hg	80	22090#	310#	−260	90	7378	4	*		11210	50	*	
	Tl	81	*		−1580#	400#	7820#	500#	*		10480#	410#	*	
174	Tb	65	8420#	570#	*		−3370#	570#	13900#	500#	*		3700#	570#
	Dy	66	9270#	500#	22580#	570#	−2470#	500#	11060#	500#	−20240#	570#	390#	500#
	Ho	67	10390#	360#	20760#	500#	−1590#	360#	8000#	300#	−16720#	500#	−290#	360#
	Er	68	11610#	300#	18770#	420#	−660#	300#	5000#	300#	−15500#	500#	−3770#	300#
	Tm	69	12630	50	16820#	200#	−30	50	1710	40	−11800#	300#	−4380	40
	Yb	70	13831.70	0.01	15040	4	737.4	1.1	−1100.2	1.8	−10580#	200#	−8134.3	1.1
	Lu	71	14976.9	2.2	12776	6	1799.6	1.3	−3830	28	−6604	5	−8251	3
	Hf	72	15585	24	11166.8	1.8	2494.7	1.8	−5617	28	−5582.0	1.8	−11519	28
	Ta	73	16550	40	9582	28	3140	30	−8070	40	−2148	28	−11080	40
	W	74	17270	40	8400	40	3600	40	−10232	30	−2125	28	−14740	40
	Re	75	18260	50	6920	40	4040	40	−12890	30	1430	40	−14300	30
	Os	76	18894	16	5475	30	4871	10	−14676	14	1444	30	−17800	14
	Ir	77	19690#	110#	3810	40	5691	15	−16780#	100#	5480	30	−16943	28
	Pt	78	20358	15	2654	16	6183	3	−18684	18	4834	18	−20563	25
	Au	79	20980#	120#	1340#	140#	6650#	50#	−20520#	320#	8970#	100#	−19470#	110#
	Hg	80	21920	50	109	18	7233	6	*		7990	30	−23310#	400#
	Tl	81	*		−1110#	310#	7740#	300#	*		12060#	300#	*	
175	Tb	65	8190#	570#	*		*		14810#	570#	*		4330#	570#
	Dy	66	9010#	570#	23250#	570#	−2830#	570#	12040#	570#	*		1190#	500#
	Ho	67	10090#	500#	21440#	570#	−1960#	500#	9010#	400#	−18620#	570#	580#	500#
	Er	68	11140#	450#	19490#	570#	−900#	400#	6040#	400#	−15050#	570#	−2860#	400#
	Tm	69	12200	50	17540#	300#	−130	50	2860	50	−13730#	300#	−3440	50
	Yb	70	13286.95	0.07	15620#	200#	596.7	1.1	−214.1	1.8	−10040#	300#	−7196.0	1.1
	Lu	71	14427.3	1.0	13488	4	1618.2	0.6	−2758	28	−8590	40	−7393.3	1.8
	Hf	72	15233	4	11508.2	1.8	2400.4	1.8	−4849	28	−4825.9	1.8	−10812	28
	Ta	73	16150	40	10105	28	2995	28	−7120	40	−4127	28	−10250	40
	W	74	17050	40	8820	28	3370	40	−9532	30	−1077	28	−14030	40
	Re	75	17880	40	7470	40	4010	40	−11896	30	−840	40	−13365	30
	Os	76	18802	18	5951	30	4561	30	−14276	19	2838	30	−17385	15
	Ir	77	19269	15	4417	30	5433	30	−15990	40	2992	30	−16145	15
	Pt	78	20050	30	2961	22	6178.0	2.2	−17870	80	6881	19	−19890#	100#
	Au	79	20720	40	1720	40	6583.4	2.7	−19640#	200#	6090	40	−18840	40
	Hg	80	21490	90	610	80	7072	5	−22290#	310#	10080	80	−22540#	310#
	Tl	81	22500#	450#	−490#	200#	7370#	200#	*		8950#	220#	*	
	Pb	82	*		−2370#	300#	8580#	430#	*		13690#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
176	Dy	66	4740#	570#	12080#	570#	20210#	400#	9400#	570#	8020#	570#	310#	570#
	Ho	67	4160#	640#	10070#	640#	13990#	500#	12210#	640#	9210#	640#	2700#	640#
	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	6867.09	0.07	8470	50	−2850	28	11080	40	7629	4	5810#	200#
	Lu	71	6287.96	0.15	5976.3	0.4	−8320	28	14272.5	0.4	9032.4	0.4	8520	4
	Hf	72	8165.9	1.8	6698.8	0.4	−12444	11	11705.6	1.1	7169.6	1.1	8621.6	0.4
	Ta	73	7030	40	4170	30	−17500	30	15190	30	8890	30	11160	30
	W	74	9080	40	5520	40	−21710	30	11810	40	6620	40	10396	28
	Re	75	7850	40	2720	40	−26680#	110#	15880	40	8530	40	12980	40
	Os	76	10103	15	4130	30	−30351	15	12250	30	6290	30	12240	30
	Ir	77	8543	14	1052	13	−34470	80	16842	13	8442	17	15337	29
	Pt	78	11181	21	2831	17	−38600#	200#	12564	17	6196	14	14154	20
	Au	79	9050#	110#	−150#	110#	*		17650#	110#	8390#	110#	17530#	110#
	Hg	80	11900	80	1670	40	*		12930#	100#	5910	21	15781	28
	Tl	81	9710#	220#	−1265	18	*		17950	80	8070	90	19080	90
	Pb	82	12740#	360#	−140#	280#	*		13860#	360#	5930#	450#	17920#	210#
177	Ho	67	4960#	710#	10290#	640#	16110#	500#	11040#	640#	9470#	640#	1340#	640#
	Er	68	4300#	640#	10760#	710#	10020#	500#	11150#	640#	7880#	590#	3680#	640#
	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	7072.88	0.16	6182.1	0.4	−6115	28	13021.9	0.4	9424.1	0.4	7130	40
	Hf	72	6376.3	0.8	6787.2	0.8	−10924	15	12996.0	0.8	7553.8	1.3	9709.9	0.8
	Ta	73	8420	30	4428	3	−15668	20	13477	4	8993	4	9502	3
	W	74	7130	40	5630	40	−20340	30	13420	40	6900	40	11789	28
	Re	75	9280	40	2920	40	−24726	30	14070	40	8820	40	11120	40
	Os	76	7896	18	4180	30	−29200	60	14040	30	6580	30	13920	30
	Ir	77	10255	21	1205	23	−32712	29	14764	22	8811	22	13270	30
	Pt	78	8504	20	2792	17	−37220#	200#	14737	19	6284	19	16274	18
	Au	79	11230#	110#	−102	14	*		14993	19	8640	14	14890	15
	Hg	80	9040	60	1660#	120#	*		15360	70	6110#	110#	18210	60
	Tl	81	12010	80	−1157	19	*		15330	80	8164	26	16310#	100#
	Pb	82	9890#	280#	40#	220#	*		16320#	280#	6190#	360#	20130#	200#
178	Ho	67	3790#	710#	*		18340#	500#	11990#	640#	9470#	640#	2140#	640#
	Er	68	5470#	780#	11270#	780#	12180#	600#	9840#	780#	7900#	720#	2000#	720#
	Tm	69	4740#	360#	8670#	590#	6310#	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	6641.0	2.0	−4693	20	13863.7	1.9	9221.2	1.9	7620	50
	Hf	72	7625.93	0.18	7340.2	0.8	−8891	14	11658.0	0.8	7594.6	0.8	7906.3	0.9
	Ta	73	6910#	50#	4960#	50#	−14290#	60#	14740#	50#	8800#	50#	10260#	50#
	W	74	8780	30	5981	15	−18411	18	11670	30	6870	30	9720	15
	Re	75	7450	30	3230	30	−23342	23	15710	30	8850	30	12410	30
	Os	76	9659	20	4560	30	−27228	17	12230	30	6610	30	11730	30
	Ir	77	8279	27	1588	24	−31700#	100#	16587	22	8709	21	14680	30
	Pt	78	10701	18	3238	22	−35577	22	12578	13	6260	15	13750	14
	Au	79	8831	14	225	18	*		17342	16	8386	19	16736	15
	Hg	80	11630	60	2063	14	*		12780#	110#	5950	40	15154	20
	Tl	81	9290#	100#	−910#	110#	*		17930#	100#	8260#	130#	18490#	100#
	Pb	82	12340#	200#	374	29	*		13690	80	6200#	200#	17180	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
176	Dy	66	8530#	570#	*		−2820#	570#	13350#	570#	*		1950#	570#
	Ho	67	9660#	580#	22000#	640#	−2130#	640#	9980#	510#	−18190#	640#	1190#	640#
	Er	68	10820#	500#	20320#	570#	−1300#	500#	6860#	400#	−17310#	570#	−2390#	400#
	Tm	69	11650	110	18080#	320#	−180#	220#	4010	100	−13360#	410#	−2750	100
	Yb	70	12689.44	0.01	16120#	300#	566	4	1084.7	0.4	−12130#	400#	−6396.4	0.4
	Lu	71	13954.7	1.0	14100	40	1565	5	−2020	30	−8360	50	−6972.7	1.8
	Hf	72	14874.4	1.7	12209.5	0.4	2254.5	0.4	−3934	28	−7169.5	0.4	−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	−11199	29	60	40	−13034	30
	Os	76	18280	15	6480	30	4540	30	−13198	17	210	30	−16811	15
	Ir	77	19219	14	4769	29	5270	40	−15480#	110#	4136	29	−16110	18
	Pt	78	19758	16	3517	16	5883.9	1.8	−17153	17	3877	16	−19600	40
	Au	79	20530#	140#	2180#	110#	6432	4	−18990#	130#	7720#	110#	−18510#	130#
	Hg	80	21289	18	1040	15	6898	6	−21450#	200#	6755	20	−22090#	200#
	Tl	81	22060#	310#	−30#	130#	7350	110	*		10720	90	−21810#	310#
	Pb	82	*		−1730#	200#	8100#	210#	*		10330#	220#	*	
177	Ho	67	9120#	640#	22370#	640#	−2270#	640#	11290#	540#	*		2280#	640#
	Er	68	10350#	640#	20830#	640#	−1540#	640#	8130#	500#	−16870#	640#	−1560#	510#
	Tm	69	11400#	210#	18850#	450#	−640#	360#	4820#	200#	−15470#	540#	−2150#	200#
	Yb	70	12433.49	0.23	16910#	400#	240#	200#	1894.7	0.9	−11650#	400#	−5674.9	0.5
	Lu	71	13360.84	0.22	14650	50	1447	4	−669	3	−10300	100	−5879.7	0.4
	Hf	72	14542.2	1.9	12763.4	0.8	2245.3	0.8	−3179	28	−6678.7	0.8	−9590	30
	Ta	73	15449	28	11127	3	2742	3	−5446	28	−5621	3	−9145	28
	W	74	16210	40	9798	28	3264	28	−7740	30	−2415	28	−12710	40
	Re	75	17120	40	8440	40	3700	40	−10220	30	−2190	40	−12210	30
	Os	76	17999	18	6900	30	4350	30	−12590	21	1400	30	−16164	17
	Ir	77	18798	23	5340	30	5080	30	−14504	22	1730	30	−15185	23
	Pt	78	19684	22	3844	18	5650	4	−16610	60	5476	19	−19050#	110#
	Au	79	20280	40	2729	14	6297.9	2.9	−18208	23	5032	13	−17833	15
	Hg	80	20950	100	1510	60	6740	60	−20600#	210#	8890	60	−21430	100
	Tl	81	21720#	200#	510	40	7067	7	*		7760#	110#	−21080#	200#
	Pb	82	22630#	360#	−1220#	220#	8030#	210#	*		12340#	200#	*	
178	Ho	67	8750#	710#	*		−2460#	640#	12240#	580#	*		2790#	710#
	Er	68	9770#	720#	21560#	720#	−1800#	720#	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#	2759	7	−14110#	500#	−5364	7
	Lu	71	13098.2	1.9	15550	100	1100	40	210#	50#	−10060#	200#	−5528.7	2.0
	Hf	72	14002.3	0.8	13522.3	0.9	2083.9	0.9	−2028	15	−8738.2	0.9	−8792	3
	Ta	73	15330#	60#	11740#	50#	2600#	50#	−4900#	60#	−5450#	50#	−8920#	60#
	W	74	15910	30	10409	15	3012	15	−6863	20	−4815	15	−12210	30
	Re	75	16720	30	8860	40	3670	30	−9390	28	−1219	21	−11760	25
	Os	76	17556	17	7480	30	4260	30	−11548	17	−1130	30	−15569	24
	Ir	77	18534	20	5770	30	4990	30	−13952	21	2720	30	−14960	24
	Pt	78	19205	16	4443	15	5573.0	2.1	−15680	15	2671	18	−18525	14
	Au	79	20060#	110#	3017	13	6059	4	−17750#	100#	6455	22	−17620	60
	Hg	80	20679	15	1961	16	6577.1	2.8	−19897	22	5761	18	−21053	24
	Tl	81	21300#	130#	750#	140#	7020	10	*		9700#	100#	−20480#	220#
	Pb	82	22230#	200#	−783	23	7789	13	*		9050	70	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
179	Er	68	3890#	780#	11370#	710#	14380#	500#	10910#	710#	8180#	710#	2850#	640#
	Tm	69	5730#	500#	8930#	720#	8460#	400#	11670#	640#	9590#	570#	3140#	640#
	Yb	70	5185	28	9840#	300#	2510	30	11490#	200#	7440	100	5490#	400#
	Lu	71	6792	5	6671	8	−2475	25	12638	5	9296	5	5960	100
	Hf	72	6098.99	0.08	7413.9	2.0	−7443	16	12631.9	0.8	7783.6	0.8	8674.4	0.9
	Ta	73	7880#	50#	5211.1	0.4	−12277	10	13234.1	0.5	9082.3	0.9	8671.5	0.9
	W	74	6959	21	6040#	50#	−17027	16	13130	15	6930	30	10927	15
	Re	75	9010	30	3466	29	−21598	27	13830	40	8920	40	10430	40
	Os	76	7547	21	4664	26	−26049	23	13960	30	6910	30	13270	30
	Ir	77	9897	21	1825	17	−29810	40	14587	18	8915	15	12628	30
	Pt	78	8343	13	3302	20	−34340	80	14490	21	6460	11	15510	13
	Au	79	10754	15	278	14	*		15092	18	8812	16	14524	13
	Hg	80	8725	20	1957	19	*		15283	19	6280#	110#	17609	21
	Tl	81	11780#	100#	−760	40	*		15200	70	8380	40	15760#	110#
	Pb	82	9580	80	660#	130#	*		16120	80	6331	19	19500	80
180	Er	68	5170#	710#	*		16600#	500#	9530#	710#	7960#	710#	*	
	Tm	69	4340#	570#	9380#	640#	10770#	400#	12800#	720#	9550#	640#	3760#	640#
	Yb	70	6090	40	10200#	400#	4824	25	10140#	300#	7620#	200#	3690#	500#
	Lu	71	5690	70	7180	80	−840	70	13710	70	9170	70	6540#	210#
	Hf	72	7387.75	0.15	8009	5	−5423	16	11269.4	2.0	7468.7	0.8	6853.0	0.9
	Ta	73	6649.5	1.8	5761.6	1.7	−10958	22	14210.5	1.7	8809.1	1.7	9094.9	1.6
	W	74	8412	15	6567.7	0.5	−15206	10	11620#	50#	6943	3	8890.9	0.4
	Re	75	7320	30	3831	25	−20211	21	15281	25	8730	30	11524	21
	Os	76	9407	22	5061	29	−24106	20	12000	26	6780	30	10990	30
	Ir	77	7968	24	2246	27	−28720#	110#	16278	26	8843	26	13940	40
	Pt	78	10234	13	3639	14	−32493	16	12536	21	6481	22	13173	18
	Au	79	8712	11	647	9	−37530#	300#	17081	11	8604	16	16067	20
	Hg	80	11351	21	2554	16	*		12763	16	6156	14	14762	20
	Tl	81	9060#	110#	−430#	110#	*		17770#	110#	8360#	120#	17930#	110#
	Pb	82	12080	80	960	40	*		13330#	100#	6262	20	16460	60
	Bi	83	*		−2540#	310#	*		19030#	300#	8910#	360#	20880#	300#
181	Tm	69	5340#	640#	9550#	710#	13000#	500#	11350#	710#	9690#	780#	2210#	710#
	Yb	70	4760	40	10620#	400#	6734	25	11110#	400#	7610#	300#	4410#	600#
	Lu	71	6190	140	7270	130	1720	130	12700	130	9740	130	5090#	330#
	Hf	72	5694.80	0.07	8020	70	−3853	25	12367	5	7799.2	2.1	7920	7
	Ta	73	7574.8	0.4	5948.7	1.7	−8965	9	12734.7	1.7	8860.3	1.7	7545.3	2.5
	W	74	6669.02	0.16	6587.2	1.7	−13852	14	12834.3	0.5	7180#	50#	9847.9	0.4
	Re	75	8751	24	4170	13	−18646	24	13489	19	8754	20	9680#	50#
	Os	76	7265	30	5000	30	−22892	30	13750	40	6960	30	12504	30
	Ir	77	9569	23	2408	18	−26676	13	14256	18	8934	16	11817	22
	Pt	78	8023	17	3693	26	−31300	60	14410	17	6738	23	14809	19
	Au	79	10316	21	730	22	−35610#	200#	15108	21	8990	22	14031	27
	Hg	80	8478	20	2320	16	*		15039	19	6510	19	16986	18
	Tl	81	11620#	110#	−163	14	*		14883	19	8382	14	15150	14
	Pb	82	9210	60	1110#	120#	*		15900	70	6340#	110#	18880	60
	Bi	83	12230#	360#	−2390#	200#	*		16380#	220#	9020#	200#	17940#	220#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
179	Er	68	9360#	710#	*		−1900#	640#	10710#	500#	*		90#	580#
	Tm	69	10470#	450#	20200#	640#	−1030#	570#	7160#	400#	−17190#	640#	−300#	400#
	Yb	70	11947	27	18510#	500#	−560#	400#	3673	27	−13820#	600#	−4523	27
	Lu	71	12818	5	16070#	200#	830	50	1298	5	−12110#	300#	−4695	5
	Hf	72	13724.92	0.19	14054.9	0.9	1807.3	0.9	−1168	15	−8075	7	−7990#	50#
	Ta	73	14785	3	12551.3	0.9	2383.5	0.9	−3773	25	−7308.3	2.1	−8022	15
	W	74	15740	30	10992	15	2761	15	−6275	21	−4149	15	−11722	25
	Re	75	16460	40	9447	25	3400	40	−8503	27	−3330#	60#	−11111	28
	Os	76	17206	21	7900	30	4190	30	−10752	17	98	22	−14836	24
	Ir	77	18176	22	6390	30	4782	30	−13095	14	275	23	−14155	14
	Pt	78	19044	17	4889	16	5407	7	−15297	18	3988	16	−18037	13
	Au	79	19586	14	3516	22	5982	3	−16720	40	3981	21	−16740	15
	Hg	80	20360	60	2182	22	6428.9	2.6	−19040	80	7737	19	−20480#	100#
	Tl	81	21080	40	1300	40	6709.1	2.6	*		6740	40	−19920	40
	Pb	82	21920#	220#	−250	100	7596	5	*		11100	80	*	
180	Er	68	9060#	780#	*		−2320#	640#	11630#	500#	*		650#	640#
	Tm	69	10070#	500#	20750#	640#	−1210#	640#	8510#	410#	*		550#	400#
	Yb	70	11278	26	19130#	600#	−610#	400#	4967	25	−16020#	500#	−3824	26
	Lu	71	12480	70	17010#	310#	270	120	2260	70	−12070#	410#	−4280	70
	Hf	72	13486.74	0.17	14681	7	1286.6	0.9	−143.25	0.28	−10278	27	−7493.3	0.4
	Ta	73	14530#	50#	13175.5	2.5	2022.0	1.6	−3098	21	−7165	5	−7712	15
	W	74	15372	15	11778.8	0.3	2514.6	0.9	−5280	16	−6462.2	0.3	−11123	25
	Re	75	16335	29	9870#	60#	3100	40	−7860	30	−2769	20	−10888	26
	Os	76	16954	21	8527	22	3860	30	−9926	19	−2350	21	−14347	19
	Ir	77	17865	29	6910	30	4660	40	−12351	22	1320	30	−13781	23
	Pt	78	18576	14	5464	17	5276	5	−14180	16	1301	18	−17516	14
	Au	79	19466	11	3949	19	5812	7	−16370#	110#	5165	11	−16727	17
	Hg	80	20076	16	2832	16	6258.6	2.1	−18313	17	4729	15	−20050	40
	Tl	81	20840#	140#	1530#	110#	6704	6	−21160#	320#	8440#	110#	−19400#	130#
	Pb	82	21660	23	198	16	7419	5	*		7745	21	*	
	Bi	83	*		−1880#	320#	8870#	310#	*		12880#	300#	*	
181	Tm	69	9680#	640#	*		−1590#	710#	9360#	520#	*		1300#	500#
	Yb	70	10850	40	20000#	500#	−1070#	500#	5903	25	−15610#	500#	−2890	80
	Lu	71	11880	130	17480#	420#	350#	240#	3640	130	−13920#	420#	−3090	130
	Hf	72	13082.55	0.17	15191	27	1158.2	0.9	831.0	0.3	−9880	25	−6538.6	1.7
	Ta	73	14224.3	1.7	13958	5	1520.0	1.6	−1922	13	−9050	70	−6874.3	1.7
	W	74	15081	15	12348.8	0.4	2221.9	0.4	−4684	25	−5743.4	0.3	−10468	20
	Re	75	16076	28	10738	13	2773	13	−7043	15	−4870	13	−10232	20
	Os	76	16672	30	8832	29	3730	40	−9168	29	−1202	25	−13640	30
	Ir	77	17537	13	7468	26	4369	29	−11604	22	−926	22	−13116	13
	Pt	78	18256	16	5939	21	5150	5	−13724	21	2686	21	−16827	14
	Au	79	19028	23	4368	22	5751.4	2.9	−15072	22	2817	29	−15692	24
	Hg	80	19829	23	2967	17	6284	4	−17580	60	6484	18	−19470#	110#
	Tl	81	20670	40	2391	14	6319	3	−20540#	200#	5538	10	−18933	15
	Pb	82	21290	100	690	60	7251	8	*		9880	60	−23050#	310#
	Bi	83	*		−1430#	200#	8650#	200#	*		9710#	230#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
182	Tm	69	3960#	710#	*		15100#	500#	12560#	710#	9610#	710#	*	
	Yb	70	5630	40	10900#	500#	9192	26	9830#	400#	7710#	400#	2670#	500#
	Lu	71	5200#	240#	7720#	200#	3520#	230#	13590#	200#	9720#	200#	5620#	450#
	Hf	72	6718	6	8540	130	−1441	23	11340	70	7874	8	6387	28
	Ta	73	6062.94	0.11	6316.8	1.7	−7379	21	14059.5	1.7	8896.3	1.7	8275	5
	W	74	8083.3	1.1	7095.7	1.5	−12077	13	11400.6	1.5	6975.6	1.2	7863.6	1.1
	Re	75	7000	100	4500	100	−17140	100	14900	100	8710	100	10560	100
	Os	76	9130	30	5381	25	−21031	24	11939	30	6840	30	10333	26
	Ir	77	7648	23	2790	30	−25720	24	16015	26	8833	26	13180	30
	Pt	78	9858	19	3983	16	−29340	18	12519	25	6776	16	12498	20
	Au	79	8507	27	1214	23	−34510#	300#	16835	21	8826	20	15421	21
	Hg	80	10992	18	2996	22	*		12759	11	6272	14	14336	12
	Tl	81	8604	15	−37	19	*		17630	17	8504	20	17301	15
	Pb	82	11820	60	1319	15	*		13140#	110#	6300	40	15788	20
	Bi	83	9610#	360#	−1990#	310#	*		18850#	300#	8990#	310#	20120#	300#
183	Tm	69	5080#	640#	*		16950#	400#	*		9700#	640#	*	
	Yb	70	4130	40	11070#	500#	11251	25	11040#	500#	7920#	400#	3710#	500#
	Lu	71	5860#	220#	7950	80	6090	80	12490	80	9960	80	4100#	410#
	Hf	72	5310	30	8640#	200#	380	60	12220	130	8260	80	7170	40
	Ta	73	6934.18	0.20	6533	6	−5083	21	12820.1	1.7	9349.9	1.7	7030	70
	W	74	6190.84	0.04	7223.6	1.5	−10592	14	12784.6	1.5	7434.3	1.5	9060.5	1.1
	Re	75	8430	100	4852	8	−15619	12	13135	8	8691	8	8773	8
	Os	76	7130	50	5510	110	−19860	50	13560	50	7040	50	11620	50
	Ir	77	9231	29	2891	30	−23623	23	14050	30	9009	26	11273	29
	Pt	78	7676	19	4011	25	−28159	22	14412	17	7068	26	14229	21
	Au	79	9956	21	1311	16	−32660#	110#	14902	17	9104	14	13433	24
	Hg	80	8298	12	2788	20	−37410#	300#	14777	21	6685	9	16272	12
	Tl	81	11328	15	299	13	*		14780	18	8527	15	14685	10
	Pb	82	8857	21	1572	21	*		15895	19	6510#	110#	18282	21
	Bi	83	11800#	320#	−2010#	110#	*		16260#	130#	9270#	110#	17370#	150#
	Po	84	*		−110#	420#	*		16570#	360#	6560#	420#	21180#	300#
184	Tm	69	3680#	500#	*		18830#	300#	*		*		*	
	Yb	70	5270	40	11270#	400#	13390	40	9720#	500#	7990#	500#	*	
	Lu	71	4760#	220#	8570#	200#	7820#	200#	13370#	200#	9960#	200#	4690#	540#
	Hf	72	6220	40	9010	90	2820	30	11200#	200#	8220	130	5710	40
	Ta	73	5555	7	6780	30	−3143	13	13983	9	9490	7	7670	130
	W	74	7411.11	0.13	7700.5	1.5	−8373	15	11436.4	1.5	7598.0	1.5	7344.2	1.1
	Re	75	6481	9	5143	4	−13901	23	14737	4	8878	4	9866	4
	Os	76	8660	50	5732	8	−17907	10	11900	100	7129	13	9628.0	1.2
	Ir	77	7494	23	3260	50	−22753	15	15686	24	8780	28	12530	17
	Pt	78	9630	20	4410	25	−26281	19	12430	26	7006	17	11864	29
	Au	79	8199	24	1834	26	−31530#	150#	16561	26	8927	26	14803	24
	Hg	80	10611	12	3444	13	−35740#	200#	12672	21	6390	22	13683	17
	Tl	81	8364	14	365	12	*		17408	14	8641	18	16637	22
	Pb	82	11508	21	1753	16	*		12990	17	6611	14	15252	20
	Bi	83	9330#	180#	−1540#	150#	*		18750#	150#	9150#	160#	19660#	150#
	Po	84	12280#	360#	370#	230#	*		13900#	360#	6520#	280#	18120#	210#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
182	Tm	69	9300#	640#	*		−1760#	710#	10600#	540#	*		2100#	500#
	Yb	70	10380	40	20450#	500#	−1220#	600#	6996	27	*		−2330	130
	Lu	71	11400#	210#	18340#	450#	−120#	360#	4500#	200#	−13780#	540#	−2600#	200#
	Hf	72	12413	6	15816	26	1202	9	2196	6	−11839	26	−5682	6
	Ta	73	13637.8	0.4	14330	70	1482.4	2.5	−980	100	−8920	130	−6268.2	1.7
	W	74	14752.3	1.1	13044.3	1.1	1764.6	1.1	−3637	22	−8131.9	1.1	−9800	13
	Re	75	15750	100	11090	100	2680#	120#	−6390	100	−4300	100	−9970	110
	Os	76	16395	27	9551	22	3373	27	−8440	25	−3664	22	−13206	23
	Ir	77	17220	30	7792	29	4169	29	−10745	28	177	24	−12741	25
	Pt	78	17881	16	6391	20	4951	5	−12591	16	92	29	−16369	24
	Au	79	18823	19	4907	29	5524	4	−14975	22	3879	21	−15720	24
	Hg	80	19470	16	3726	14	5994	4	−16749	15	3515	17	−18851	13
	Tl	81	20220#	110#	2283	12	6547	5	−19530#	300#	7251	23	−18320	60
	Pb	82	21034	17	1156	17	7063	5	*		6539	19	−22640#	200#
	Bi	83	21840#	420#	−880#	320#	8330#	310#	*		11710#	300#	*	
183	Tm	69	9040#	640#	*		*		11380#	410#	*		2640#	400#
	Yb	70	9760	40	*		−1460#	500#	8170	40	*		−1260#	200#
	Lu	71	11060	150	18850#	510#	−240#	410#	5580	80	−15680#	510#	−1740	80
	Hf	72	12020	30	16360	40	1080	40	3080	30	−11520	40	−4920	30
	Ta	73	12997.12	0.23	15070	130	1341	5	516	8	−10650#	200#	−5119.1	1.5
	W	74	14274.1	1.1	13540.4	1.1	1672.7	1.1	−2700	50	−7605	6	−8990	100
	Re	75	15435	15	11948	8	2123	8	−5599	22	−6668	8	−9272	23
	Os	76	16260	60	10010	50	3200	50	−7890	50	−2710	50	−12690	50
	Ir	77	16879	22	8272	24	3950	30	−10021	23	−2050	100	−12114	24
	Pt	78	17534	20	6801	29	4822	9	−11968	16	1547	26	−15538	23
	Au	79	18462	22	5294	13	5465.3	2.9	−13603	13	1572	23	−14684	14
	Hg	80	19291	17	4002	15	6038.0	2.8	−16191	19	5075	15	−18545	13
	Tl	81	19931	13	3295	22	5973	6	−19060#	110#	4430	21	−17830	15
	Pb	82	20680	60	1535	23	6931	5	−21220#	300#	8675	20	−21890#	300#
	Bi	83	21410#	230#	−690#	110#	8320#	120#	*		8510#	110#	*	
	Po	84	*		−2100#	310#	9110#	310#	*		13140#	300#	*	
184	Tm	69	8760#	580#	*		*		12450#	360#	*		3090#	300#
	Yb	70	9410	50	*		−1560#	500#	9120	50	*		−670	90
	Lu	71	10610#	280#	19650#	540#	−660#	450#	6380#	200#	−15350#	450#	−1190#	200#
	Hf	72	11530	30	16960	40	950	40	4270	30	−13610	40	−4210	30
	Ta	73	12489	7	15430#	200#	1470	70	1443	8	−10350	80	−4483	7
	W	74	13601.94	0.14	14233	6	1649.4	1.1	−1452.9	0.7	−9710	30	−7967	8
	Re	75	14920	100	12367	4	2291	4	−4586	12	−6215	4	−8630	50
	Os	76	15786	22	10584.3	0.7	2959.0	1.2	−6920	15	−5175.9	0.7	−12113	21
	Ir	77	16725	24	8770	100	3778	23	−9316	25	−1114	14	−11932	18
	Pt	78	17306	20	7301	26	4599	8	−10987	18	−960	50	−15213	18
	Au	79	18155	29	5840	30	5234	5	−13438	24	2600	30	−14584	23
	Hg	80	18910	14	4754	16	5660	4	−15294	16	2139	17	−17829	13
	Tl	81	19692	15	3152	21	6321	9	−18090#	150#	6021	14	−17337	20
	Pb	82	20365	17	2051	16	6774	3	−20440#	200#	5465	14	−21590#	110#
	Bi	83	21130#	330#	40#	150#	8040#	100#	*		10510#	150#	−20460#	330#
	Po	84	*		−1640#	200#	8900#	200#	*		9720#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
185	Yb	70	3880#	200#	11470#	360#	15260#	200#	10920#	450#	8070#	540#	*	
	Lu	71	5530#	360#	8830#	300#	9960#	300#	11970#	300#	10060#	300#	3120#	580#
	Hf	72	4950	70	9210#	210#	4490	60	12110	100	8480#	210#	6380	70
	Ta	73	6688	16	7250	30	−1060	30	12600	30	9520	15	6180#	200#
	W	74	5753.74	0.05	7900	7	−6700	26	12616.9	1.5	7907.2	1.5	8308	6
	Re	75	7671	4	5402.6	0.7	−11949	7	13257.4	0.7	9291.2	0.7	8258.4	1.6
	Os	76	6624.66	0.27	5875	4	−16622	14	13715	8	7500	100	11086.7	0.7
	Ir	77	8770	30	3372	28	−20580	30	14040	60	9140	40	10760	110
	Pt	78	7427	30	4343	28	−25150	30	14230	30	7230	30	13570	30
	Au	79	9623	23	1826	16	−29714	15	14614	16	9163	15	12828	22
	Hg	80	7910	17	3154	26	−34030#	200#	14717	17	6987	23	15631	19
	Tl	81	10946	23	699	23	−39450#	300#	14760	22	8686	23	14197	28
	Pb	82	8557	21	1946	19	*		15761	19	6658	20	17687	19
	Bi	83	11440#	150#	−1607	13	*		16170	22	9537	18	16822	18
	Po	84	9610#	280#	650#	250#	*		16090#	230#	6510#	360#	20330#	200#
	At	85	*		−3010#	360#	*		16800#	420#	*		19140#	420#
186	Yb	70	5030#	360#	*		17420#	300#	9570#	420#	8110#	500#	*	
	Lu	71	4520#	420#	9470#	360#	11620#	300#	12720#	300#	9670#	300#	3680#	500#
	Hf	72	6180	80	9850#	300#	6580	50	10690#	210#	8160	100	4340	60
	Ta	73	5280	60	7580	90	560	60	13540	70	9540	70	6750	100
	W	74	7192.0	1.2	8403	14	−4644	22	10980	7	7649.4	1.9	6420	30
	Re	75	6179.59	0.05	5828.4	0.7	−10212	21	14489.0	0.7	9302.4	0.7	9013.0	1.6
	Os	76	8265.4	0.9	6469.9	0.8	−14460	12	11931	4	7674	8	9012.1	0.9
	Ir	77	6910	30	3655	17	−19274	22	15791	17	9360	50	12284	18
	Pt	78	9250	30	4820	40	−23182	24	12481	24	7211	30	11450	50
	Au	79	7916	22	2320	30	−28565	27	16329	26	8923	25	14143	29
	Hg	80	10427	18	3959	14	−32639	22	12490	25	6515	15	12880	18
	Tl	81	8213	25	1003	20	−37700#	200#	17158	17	8772	16	15939	17
	Pb	82	11216	20	2215	23	*		12909	15	6770	14	14770	13
	Bi	83	9065	21	−1099	23	*		18613	21	9329	24	19084	19
	Po	84	11820#	200#	1034	23	*		13600#	150#	6490#	110#	17360	26
	At	85	9960#	360#	−2660#	280#	*		19120#	280#	9060#	360#	20980#	230#
187	Yb	70	3620#	420#	*		19260#	300#	*		8170#	420#	*	
	Lu	71	5230#	420#	9670#	420#	13750#	300#	11370#	360#	9710#	300#	2130#	420#
	Hf	72	4650#	210#	9980#	360#	8220#	200#	11570#	360#	8260#	280#	4960#	200#
	Ta	73	6360	80	7760	80	2650	60	12140	90	9410	60	5150#	210#
	W	74	5466.76	0.04	8590	60	−3218	24	12201	14	7737	7	7180	30
	Re	75	7360.5	0.9	5996.9	1.1	−8186	22	12882.2	0.9	9353.0	0.9	7207	7
	Os	76	6290.3	0.5	6580.6	0.9	−13100	13	13310.9	0.9	7865	4	10132.9	0.9
	Ir	77	8450	30	3838	28	−17103	29	13967	28	9567	28	10317	28
	Pt	78	6890	30	4802	29	−21699	25	14360	40	7812	27	13213	24
	Au	79	9390	30	2450	30	−26646	24	14370	30	9166	27	12250	25
	Hg	80	7651	17	3693	25	−30908	26	14462	15	7064	26	14860	20
	Tl	81	10620	17	1196	14	−36150#	200#	14448	16	8763	13	13518	24
	Pb	82	8376	12	2378	15	*		15479	21	6758	11	17005	11
	Bi	83	11305	20	−1009	15	*		15864	19	9532	16	16143	14
	Po	84	9381	30	1350	28	*		15656	26	6440#	150#	19487	26
	At	85	12170#	280#	−2310#	200#	*		16560#	280#	9170#	280#	18140#	250#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
185	Yb	70	9160#	200#	*		*		10190#	210#	*		200#	280#
	Lu	71	10290#	310#	20100#	500#	−850#	580#	7540#	300#	−17200#	420#	−490#	300#
	Hf	72	11180	70	17780	70	760	70	5070	60	−13290	70	−3610	60
	Ta	73	12243	14	16260	80	980	130	2425	14	−12280#	200#	−3760	14
	W	74	13164.84	0.14	14680	30	1590.4	1.1	−582.0	0.7	−9240	30	−7239	4
	Re	75	14152	8	13103.1	1.6	2195.5	1.6	−3484	28	−8331	7	−7637.8	0.5
	Os	76	15280	50	11018.2	0.7	3003.4	1.2	−6118	26	−4389.4	0.7	−11243	11
	Ir	77	16270	30	9104	29	3760	30	−8466	29	−3405	28	−11070	30
	Pt	78	17057	29	7600	60	4437	10	−10504	29	275	26	−14440	30
	Au	79	17822	12	6237	22	5180	5	−12114	22	475	13	−13596	12
	Hg	80	18521	15	4988	20	5773	4	−14646	21	3860	20	−17374	17
	Tl	81	19311	23	4143	23	5690	5	−17600	25	3270	30	−16775	24
	Pb	82	20065	24	2310	18	6695	5	−19390#	200#	7519	19	−20820#	150#
	Bi	83	20770#	110#	146	16	8218	12	−21850#	300#	7436	17	−19620#	200#
	Po	84	21890#	360#	−890#	200#	8500#	210#	*		11610#	200#	*	
	At	85	*		−2640#	320#	9530#	360#	*		11190#	330#	*	
186	Yb	70	8910#	300#	*		*		11330#	300#	*		700#	420#
	Lu	71	10050#	360#	20940#	420#	−1410#	580#	8300#	310#	*		−60#	310#
	Hf	72	11130	60	18680	60	200	60	6080	50	−15580#	210#	−3100	50
	Ta	73	11970	60	16790#	210#	900#	210#	3320	60	−12040#	310#	−3290	60
	W	74	12945.8	1.2	15650	30	1116	6	491.4	1.2	−11480	60	−6760.9	1.2
	Re	75	13850	4	13728	7	2078.8	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	15681	20	9530	17	3850	100	−7457	27	−2642	17	−10560	30
	Pt	78	16674	26	8190	22	4320	18	−9325	25	−2347	22	−14066	23
	Au	79	17540	30	6659	24	4912	14	−11817	26	1330	30	−13602	25
	Hg	80	18337	15	5785	19	5204	10	−13858	16	859	28	−16855	24
	Tl	81	19160	18	4157	27	5984	23	−16748	22	4683	16	−16432	22
	Pb	82	19773	17	2915	15	6471	5	−18781	22	4213	17	−20598	17
	Bi	83	20500#	150#	847	20	7756	12	−20950#	200#	9317	27	−19070#	200#
	Po	84	21430#	200#	−573	23	8503	15	*		8348	25	−23660#	300#
	At	85	*		−2010#	250#	9180#	360#	*		12670#	200#	*	
187	Yb	70	8650#	360#	*		*		12360#	360#	*		1600#	420#
	Lu	71	9750#	420#	*		−1560#	500#	9430#	310#	*		880#	300#
	Hf	72	10820#	210#	19450#	280#	−310#	200#	6900#	200#	−15200#	360#	−2460#	210#
	Ta	73	11640	60	17610#	310#	400	100	4320	60	−13880#	310#	−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	1652.5	1.7	−1667	28	−9900	60	−6287.8	0.5
	Os	76	14555.7	0.9	12409.0	0.9	2721.8	0.9	−4533	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	8458	24	4560	60	−8567	27	−975	24	−13040	30
	Au	79	17303	24	7270	40	4756	28	−10584	24	−1147	28	−12562	25
	Hg	80	18078	19	6009	29	5229	14	−13132	14	2456	25	−16293	19
	Tl	81	18833	22	5155	11	5319	8	−16063	13	1979	23	−15836	14
	Pb	82	19592	17	3381	15	6393	6	−17776	23	6264	13	−19909	18
	Bi	83	20370	17	1206	23	7779	4	−20080#	200#	6225	18	−18554	22
	Po	84	21200#	200#	251	28	7979	15	*		10182	25	−23080#	200#
	At	85	22130#	360#	−1280#	200#	8800#	230#	*		9560#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
188	Lu	71	4300#	500#	10350#	500#	15320#	400#	12100#	500#	9290#	450#	*	
	Hf	72	5900#	360#	10650#	420#	10310#	300#	10190#	420#	7890#	420#	2950#	360#
	Ta	73	5090#	210#	8200#	280#	4440#	200#	13230#	210#	9270#	210#	5600#	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	−6645.5	2.8	14202.6	1.1	9235.1	0.9	8024	14
	Os	76	7989.60	0.15	7209.73	0.15	−10939	7	11500.9	0.9	7545.8	0.9	7897.0	0.9
	Ir	77	6867	29	4415	9	−16010	30	15366	9	9325	9	11121	9
	Pt	78	9206	25	5561	28	−20009	11	12062	17	7379	28	10631	5
	Au	79	7412	23	2974	24	−25177	11	16204	22	9181	26	13611	28
	Hg	80	10151	15	4457	23	−29649	18	12227	22	6535	10	12136	27
	Tl	81	7960	30	1510	30	−34490#	300#	16910	30	8710	30	15180	30
	Pb	82	10896	11	2654	13	*		12797	18	6808	23	14019	17
	Bi	83	8882	14	−504	12	*		18199	15	9207	19	18208	23
	Po	84	11410	28	1455	20	*		13311	24	6470	17	16634	23
	At	85	9610#	360#	−2080#	300#	*		18770#	300#	9170#	360#	19960#	300#
189	Lu	71	4960#	500#	*		17390#	300#	10760#	420#	9360#	420#	*	
	Hf	72	4390#	420#	10740#	500#	11840#	300#	11030#	420#	8020#	420#	3590#	420#
	Ta	73	6120#	280#	8420#	360#	6490#	200#	11750#	280#	9330#	210#	4000#	360#
	W	74	5050	30	9020#	200#	830	30	11960	60	7830	70	6430	60
	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	8180	15	4605	11	−13837	14	13476	11	9411	11	9120	11
	Pt	78	6722	11	5415	13	−18627	17	13789	30	7565	19	12175	10
	Au	79	9282	20	3050	21	−23520	29	13810	30	9147	30	11237	26
	Hg	80	7500	30	4540	30	−28210	40	14110	40	6950	40	13880	40
	Tl	81	10350	30	1706	11	−33220#	200#	14214	15	8788	14	12745	23
	Pb	82	8104	17	2800	30	*		15313	16	6918	20	16342	18
	Bi	83	10939	23	−461	23	*		15636	21	9484	24	15482	25
	Po	84	8940	28	1513	24	*		15676	24	6596	28	18910	25
	At	85	11630#	360#	−1860#	200#	*		16520#	200#	9370#	200#	17400#	200#
190	Lu	71	4170#	500#	*		18890#	400#	*		8820#	500#	*	
	Hf	72	5720#	500#	11500#	500#	13910#	400#	9610#	570#	7530#	500#	1490#	500#
	Ta	73	4830#	280#	8860#	360#	8030#	200#	12820#	360#	9140#	280#	4400#	360#
	W	74	6820	40	9720#	200#	2910	30	10230#	200#	7360	60	4250#	200#
	Re	75	5675	9	7230	30	−2750	6	13796	6	9185	5	6960	60
	Os	76	7792.34	0.19	8018	8	−7335	16	11019.9	0.5	7372.8	0.5	6842.6	1.2
	Ir	77	6372	11	5055.8	1.2	−12387	7	15094.5	1.3	9329.5	1.3	10109.3	1.3
	Pt	78	8906	10	6142	11	−16889	13	11749	9	7107	28	9558.9	0.6
	Au	79	7323	20	3651	10	−22223	15	15698	6	8716	24	12362	28
	Hg	80	9820	40	5080	25	−26809	20	11709	16	6522	27	10960	29
	Tl	81	7821	11	2030	30	−31560	60	16543	10	8617	15	14310	24
	Pb	82	10644	19	3090	15	*		12630	30	6893	15	13348	18
	Bi	83	8620	26	56	20	*		17912	18	9240	16	17482	17
	Po	84	11217	26	1791	25	*		13341	17	6684	16	16070	14
	At	85	9480#	210#	−1320	70	*		18450	70	9260	70	19220	70
191	Hf	72	4270#	500#	11600#	500#	15400#	300#	10300#	420#	7560#	500#	*	
	Ta	73	5870#	360#	9010#	500#	10190#	300#	11340#	420#	9170#	420#	2830#	500#
	W	74	4850	50	9750#	210#	4520	40	11490#	210#	7600#	210#	5300#	300#
	Re	75	6839	11	7240	30	−552	11	12000	30	9182	11	5210#	200#
	Os	76	5758.73	0.11	8101	5	−5802	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	−15405	8	13466	12	7511	10	11086	4
	Au	79	9036	6	3780	5	−20558	9	13384	11	8887	7	10193	11
	Hg	80	7291	27	5048	23	−25524	23	13700	30	6643	22	12875	23
	Tl	81	9988	10	2199	17	−30146	18	14050	30	8780	10	11735	8
	Pb	82	7947	14	3216	10	*		15034	11	6910	30	15552	10
	Bi	83	10700	17	111	15	*		15316	16	9436	13	14740	30
	Po	84	8576	15	1747	16	*		15704	22	6989	13	18389	12
	At	85	11400	70	−1138	21	*		15992	27	9277	23	16704	19

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
188	Lu	71	9530#	500#	*		−2180#	500#	10210#	450#	*		1230#	450#
	Hf	72	10550#	300#	20320#	420#	−940#	300#	7840#	300#	−17480#	420#	−2010#	310#
	Ta	73	11450#	210#	18180#	360#	70#	280#	5110#	200#	−13730#	360#	−2080#	200#
	W	74	12302	3	16820	50	340	30	2469	3	−12960#	200#	−5523	3
	Re	75	13232.2	0.9	14990	60	1336	7	−672	9	−9410	60	−5869.18	0.04
	Os	76	14279.9	0.5	13206.6	1.1	2143.3	0.9	−3316	5	−8522.2	1.1	−9659	28
	Ir	77	15315	19	10996	9	3450	10	−5974	10	−4417	9	−9730	26
	Pt	78	16099	22	9399	5	4007	5	−7622	9	−3891	5	−12862	23
	Au	79	16799	21	7777	17	4838	11	−10030	30	−111	28	−12324	13
	Hg	80	17801	13	6912	23	4709	15	−12387	12	−802	25	−15823	11
	Tl	81	18580	30	5200	40	5560	40	−15140	30	3400	40	−15420	30
	Pb	82	19272	15	3850	15	6109	3	−17262	20	3018	16	−19499	14
	Bi	83	20187	20	1874	18	7262	3	−19350#	300#	7964	13	−18055	25
	Po	84	20791	26	445	20	8077	11	*		7148	18	−22320#	200#
	At	85	21790#	360#	−730#	300#	8520#	330#	*		11250#	300#	*	
189	Lu	71	9260#	420#	*		*		11370#	360#	*		2170#	420#
	Hf	72	10290#	360#	21090#	420#	−1450#	360#	8490#	300#	*		−1310#	360#
	Ta	73	11210#	210#	19070#	360#	−530#	360#	6020#	200#	−15550#	450#	−1360#	200#
	W	74	11880	30	17220#	200#	250	70	3340	30	−12100#	300#	−4700	30
	Re	75	12905	8	15660	60	990	16	474	14	−11360#	200#	−4913	8
	Os	76	13910.4	0.5	13660.7	1.2	1976.2	0.9	−2515	10	−7608	3	−8713	9
	Ir	77	15050	30	11815	11	2941	11	−4871	23	−6725	11	−8704	12
	Pt	78	15928	26	9830	10	3910	10	−6840	30	−2623	10	−12171	10
	Au	79	16690	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	18312	12	6164	24	4829	11	−14554	22	466	9	−14876	13
	Pb	82	19000	15	4303	19	5915	4	−16426	26	5065	16	−18722	17
	Bi	83	19821	23	2194	22	7268.7	2.8	−18660#	200#	4990	40	−17584	27
	Po	84	20350	30	1009	23	7694	15	*		9104	24	−21650#	300#
	At	85	21240#	280#	−410#	200#	8330#	200#	*		8510#	200#	*	
190	Lu	71	9130#	570#	*		*		12030#	450#	*		2390#	500#
	Hf	72	10110#	500#	*		−2140#	500#	9600#	400#	*		−910#	450#
	Ta	73	10950#	280#	19600#	450#	−840#	360#	6860#	200#	−15420#	360#	−1150#	200#
	W	74	11870	30	18140#	300#	−400	60	4310	30	−14530#	300#	−4490	30
	Re	75	12709	5	16250#	200#	600	60	1170	5	−10910#	200#	−4668	5
	Os	76	13713.2	0.5	14618	3	1375.9	1.2	−1401.3	0.4	−10350	30	−8326	11
	Ir	77	14551	9	12314.7	1.3	2748.8	1.5	−3920	4	−6063	8	−8354	10
	Pt	78	15628	5	10747.1	0.6	3268.6	0.6	−5934	16	−5608.7	0.5	−11796	20
	Au	79	16605	4	9067	10	3914	17	−8467	8	−1669	12	−11280	30
	Hg	80	17317	17	8130	17	4067	27	−10955	20	−2190	18	−14828	18
	Tl	81	18170	30	6573	8	4924	22	−13755	17	1927	21	−14593	16
	Pb	82	18748	16	4797	14	5698	5	−15853	18	1920	30	−18426	24
	Bi	83	19559	18	2850	30	6862	3	−17800	70	6716	17	−17264	27
	Po	84	20157	21	1330	17	7693	7	*		5991	19	−21240#	200#
	At	85	21110#	310#	190	70	7910	60	*		9960	70	*	
191	Hf	72	9990#	420#	*		−2780#	420#	10180#	300#	*		−350#	360#
	Ta	73	10700#	360#	20510#	420#	−1480#	420#	7830#	300#	−17120#	500#	−200#	300#
	W	74	11680	50	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	15330	30	1083.9	1.2	−697	4	−9290	30	−7712.9	1.2
	Ir	77	14398	11	13308	8	2082.8	1.2	−2911	5	−8415	5	−7473.6	1.2
	Pt	78	15369	10	11289	4	3096	4	−5105	23	−4279	4	−10936	5
	Au	79	16359	21	9922	12	3327	28	−7515	9	−4333	5	−10497	16
	Hg	80	17110	40	8699	24	3670	30	−10300	23	−575	22	−14298	23
	Tl	81	17809	11	7279	21	4322	24	−13043	10	−738	8	−13937	15
	Pb	82	18591	16	5240	30	5401	15	−15224	10	3791	17	−17753	16
	Bi	83	19320	22	3201	11	6782	4	−17103	18	3838	10	−16747	15
	Po	84	19793	23	1803	16	7493	5	*		8059	14	−20330	60
	At	85	20880#	200#	652	26	7822	14	*		7185	22	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
192	Hf	72	5570#	500#	*		17380#	400#	8900#	570#	6950#	500#	*	
	Ta	73	4650#	500#	9390#	500#	11740#	400#	12410#	570#	8910#	500#	3140#	500#
	W	74	6520#	210#	10390#	360#	6670#	200#	9810#	280#	7200#	280#	3180#	360#
	Re	75	5400	50	7790	60	1090	50	13430	50	8830	60	5930#	210#
	Os	76	7558.4	2.2	8821	10	−3870	16	10412	4	6961	8	5410	30
	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	6868.5	2.3	−13736	6	11176.0	2.3	7029	11	8344.8	2.5
	Au	79	7039	15	4356	14	−19230	30	15252	14	8570	17	11334	18
	Hg	80	9491	27	5504	16	−23946	19	11532	16	6433	25	10105	18
	Tl	81	7660	30	2570	40	−28800	40	16210	40	8620	40	13360	40
	Pb	82	10330	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	2117	13	*		13255	18	6859	23	15424	18
	At	85	9010	30	−706	28	*		18200	30	9210	40	18640	30
193	Ta	73	5690#	570#	9510#	570#	13820#	400#	10990#	500#	8940#	570#	1620#	570#
	W	74	4640#	280#	10380#	450#	8290#	200#	11040#	360#	7390#	280#	4260#	450#
	Re	75	6630	60	7900#	200#	3170	40	11660	60	9030	50	4140#	200#
	Os	76	5583.42	0.20	9010	40	−2332	16	11667	10	7053	4	6650	30
	Ir	77	7771.99	0.20	5942.9	2.4	−7060	7	12569.7	1.2	9035.6	1.2	6693	5
	Pt	78	6262.6	2.3	6933.0	0.4	−12250	10	12940.0	0.4	7138.0	0.5	9874.6	1.2
	Au	79	8711	17	4406	9	−17520	12	13004	10	8766	9	8995	9
	Hg	80	7121	22	5586	21	−22737	21	13446	16	6635	16	11890	16
	Tl	81	9680	30	2753	17	−27407	23	13827	23	8760	17	11004	8
	Pb	82	7749	12	3650	30	−31276	27	14765	13	7001	13	14790	19
	Bi	83	10420	30	622	9	*		15119	10	9397	15	14128	10
	Po	84	8330	18	2080	30	*		15625	16	7149	21	17738	19
	At	85	11070	30	−709	24	*		15710	23	9359	25	16188	26
	Rn	86	*		1170	40	*		15894	30	6720	70	19257	28
194	Ta	73	4480#	640#	*		15400#	500#	12080#	640#	8730#	580#	*	
	W	74	6290#	360#	10980#	500#	10350#	300#	9400#	500#	6970#	420#	2240#	420#
	Re	75	5100#	200#	8360#	280#	4950#	200#	13070#	280#	8780#	210#	4910#	360#
	Os	76	7112	3	9490	40	−251	4	9950	40	6779	10	4390	40
	Ir	77	6066.79	0.11	6426.3	2.4	−5594	14	14061.4	2.4	8727.5	1.2	7465	10
	Pt	78	8351.7	1.3	7512.8	1.3	−10549	16	10786.3	1.2	6812.8	1.2	7281.5	0.5
	Au	79	6878	9	5021.3	2.5	−16189	6	14787	3	8350	5	10143.3	2.4
	Hg	80	9193	16	6068	9	−21179	13	11292	14	6478	6	9161	5
	Tl	81	7532	15	3164	21	−26211	23	15786	21	8519	26	12507	15
	Pb	82	10053	19	4024	18	−29934	23	12370	40	6936	18	12028	28
	Bi	83	8210	9	1083	12	−33890#	300#	17240	8	9134	9	15906	9
	Po	84	10751	19	2410	15	*		13240	30	7098	15	14934	15
	At	85	8728	28	−310	23	*		18052	21	9207	20	18160	20
	Rn	86	11390	30	1496	27	*		13510	30	6724	23	16439	18
	Fr	87	*		−1530#	300#	*		*		*		19650#	300#
195	Ta	73	5540#	580#	*		17090#	300#	*		8760#	500#	*	
	W	74	4400#	420#	10900#	580#	12050#	300#	10690#	500#	7220#	500#	3410#	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	7030	70	5750#	210#
	Ir	77	7231.86	0.06	6546.1	2.0	−3537	11	12412.9	2.4	9054.1	2.4	5630	40
	Pt	78	6105.09	0.12	7551.1	1.3	−9054	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	8585.4	2.7	7915.0	1.6
	Hg	80	6902	23	6091	23	−19896	24	13101	25	6615	27	10920	23
	Tl	81	9289	18	3261	11	−24683	15	13618	19	8721	19	10256	18
	Pb	82	7601	17	4092	15	−28790	50	14447	9	7000	30	13919	16
	Bi	83	10074	7	1104	17	−32480#	200#	14914	12	9390	8	13490	30
	Po	84	8184	14	2384	8	*		15477	10	7280	30	17080	8
	At	85	10818	21	−244	16	*		15564	17	9459	14	15710	30
	Rn	86	8740	50	1510	50	*		15830	60	6990	60	18760	50
	Fr	87	11490#	360#	−1440#	200#	*		16110#	200#	*		17170#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
192	Hf	72	9840#	570#	*		*		11120#	450#	*		−50#	500#
	Ta	73	10520#	450#	20990#	570#	−1830#	570#	8580#	400#	*		10#	400#
	W	74	11370#	200#	19400#	450#	−1220#	360#	6260#	200#	−15910#	360#	−3340#	200#
	Re	75	12230	40	17530#	210#	−190#	210#	3160	40	−12450#	300#	−3350	40
	Os	76	13317.1	2.2	16070	30	361	4	406	3	−12000	40	−7244.8	2.4
	Ir	77	14224.7	0.4	13830	5	1756.3	1.2	−2070	14	−7774	10	−7209	4
	Pt	78	15124.5	2.5	12158.5	2.5	2424.0	2.5	−4276	16	−7182.1	2.5	−10562	6
	Au	79	16074	15	10590	14	3155	17	−6890	30	−3346	14	−10244	26
	Hg	80	16783	22	9284	16	3383	16	−9461	17	−3604	16	−13801	17
	Tl	81	17650	30	7620	30	4070	30	−12340	40	640	30	−13650	30
	Pb	82	18277	14	5757	17	5222	5	−14485	12	752	23	−17384	9
	Bi	83	19070	30	3750	30	6377	4	−16460	40	5460	30	−16540	30
	Po	84	19646	17	2228	16	7320	3	*		4937	13	−20002	19
	At	85	20410	70	1040	30	7696	26	*		8877	29	*	
193	Ta	73	10340#	500#	*		−2560#	500#	9510#	400#	*		830#	450#
	W	74	11160#	210#	19770#	360#	−1470#	360#	7210#	200#	−14980#	450#	−2590#	210#
	Re	75	12020	40	18290#	300#	−700#	200#	4300	40	−14420#	400#	−2420	40
	Os	76	13141.8	2.2	16800	40	−180	30	1085.2	2.4	−11060#	200#	−6630.1	2.4
	Ir	77	13970.11	0.23	14764	10	1018	8	−1131	9	−10150	40	−6319.2	2.3
	Pt	78	14924	4	12662.4	1.2	2082.2	1.2	−3417	16	−5886.3	2.4	−9786	14
	Au	79	15750	10	11274	9	2624	14	−5929	11	−5858	9	−9463	18
	Hg	80	16613	27	9942	16	2984	18	−8833	19	−2063	16	−13260	40
	Tl	81	17336	10	8256	8	3681	21	−11592	10	−2000	16	−12996	9
	Pb	82	18079	12	6214	25	4970	30	−13904	18	2495	19	−16770	30
	Bi	83	18788	11	4180	11	6307	5	−15815	23	2700	30	−15889	13
	Po	84	19399	16	2611	16	7094	4	−17372	29	6937	16	−19320	30
	At	85	20075	27	1408	23	7568	7	*		6180	40	*	
	Rn	86	*		462	26	8040	12	*		9825	27	*	
194	Ta	73	10170#	640#	*		−2870#	640#	10130#	540#	*		990#	540#
	W	74	10930#	360#	20490#	500#	−2040#	500#	8030#	300#	*		−2250#	300#
	Re	75	11730#	210#	18740#	450#	−970#	280#	5270#	200#	−13830#	450#	−1940#	200#
	Os	76	12695	3	17390#	200#	−470	30	2324.9	2.4	−13530#	200#	−5970.2	2.0
	Ir	77	13838.78	0.23	15430	40	626	5	−319.8	2.5	−9590	40	−6123.4	0.3
	Pt	78	14614.4	2.5	13455.7	2.3	1522.8	0.5	−2576.1	2.9	−8654.7	2.3	−9426	9
	Au	79	15589	14	11954.3	2.4	2116.7	2.5	−5274	14	−4964.6	2.5	−9221	16
	Hg	80	16314	16	10474	4	2697.6	3.0	−7973	17	−4993	3	−12779	7
	Tl	81	17210	30	8750	20	3471	14	−10914	15	−822	16	−12780	17
	Pb	82	17802	17	6776	23	4737	16	−13206	21	−437	23	−16398	18
	Bi	83	18630	30	4730	30	5918	5	−15297	19	4164	9	−15769	15
	Po	84	19081	17	3031	14	6987	3	−16729	21	3935	16	−19007	25
	At	85	19800	30	1770	40	7460	14	−18600#	300#	7869	20	−17840	30
	Rn	86	*		788	20	7862	10	*		6760	22	*	
	Fr	87	*		−370#	300#	8260#	310#	*		10650#	300#	*	
195	Ta	73	10020#	500#	*		*		10960#	420#	*		1740#	420#
	W	74	10690#	360#	*		−2170#	420#	8770#	310#	*		−1550#	360#
	Re	75	11470#	300#	19420#	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	−1779	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	11113	23	2259	23	−7274	24	−3543	23	−12148	27
	Tl	81	16822	13	9329	14	3217	12	−10130	12	−3233	11	−12016	20
	Pb	82	17654	12	7256	16	4428	23	−12622	8	1155	6	−15789	7
	Bi	83	18284	9	5127	9	5832	5	−14553	11	1623	15	−15092	14
	Po	84	18935	16	3467	12	6749.9	2.8	−16170	50	5804	18	−18463	19
	At	85	19546	24	2166	12	7342	6	−17920#	200#	5261	11	−17267	19
	Rn	86	20140	60	1200	50	7690	50	*		8770	50	−20890#	300#
	Fr	87	*		60#	200#	8160#	200#	*		7890#	200#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
196	W	74	6070#	500#	11430#	500#	13910#	400#	9100#	640#	6840#	570#	*	
	Re	75	4870#	420#	8910#	420#	8780#	300#	12760#	420#	8690#	360#	4010#	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	−7300	8	10598.0	1.3	6755.8	1.3	6396.3	2.3
	Au	79	6641.7	2.8	5632.5	2.6	−13135.6	2.7	14333.5	2.6	8206.3	2.9	9045.3	2.9
	Hg	80	8882	23	6547	3	−18357	6	11097	4	6444	9	8301	3
	Tl	81	7412	16	3771	26	−23580	30	15398	12	8430	20	11555	15
	Pb	82	9676	10	4478	14	−27319	16	12304	16	6996	10	11364	17
	Bi	83	8048	5	1550	5	−31490#	200#	16920	16	9092	10	15121	7
	Po	84	10422	8	2732	8	*		13265	8	7280	9	14407	12
	At	85	8510	30	80	30	*		17800	30	9280	30	17620	30
	Rn	86	11150	50	1842	17	*		13412	23	6908	26	15946	20
	Fr	87	9030#	280#	−1150#	210#	*		18480#	200#	9310#	200#	19210#	200#
197	W	74	4200#	570#	*		15550#	400#	10440#	500#	7120#	640#	*	
	Re	75	6060#	420#	8900#	500#	10790#	300#	11100#	420#	8920#	420#	2430#	580#
	Os	76	4840#	110#	9980#	320#	5490#	100#	11220#	320#	7070#	220#	5010#	320#
	Ir	77	6860	40	7240	40	131	18	12000	60	9075	12	4680#	200#
	Pt	78	5846.55	0.26	8270	40	−5674	5	11983.3	1.3	6976.1	1.3	7661.8	2.4
	Au	79	8073.7	2.5	5784.2	0.5	−11456.4	2.0	12364.9	0.5	8484.4	0.5	7038.4	1.4
	Hg	80	6785.6	1.5	6691	3	−17147	10	12738	3	6536	4	9867	3
	Tl	81	8930	18	3819	14	−22000	16	13370	27	8693	14	9503	14
	Pb	82	7472	9	4538	13	−26256	17	14121	12	7056	15	13085	6
	Bi	83	9752.9	2.1	1628	8	−29940	60	14768	6	9392	17	12901	14
	Po	84	7996	11	2680	10	*		15343	11	7494	11	16464	19
	At	85	10510	30	175	10	*		15474	10	9514	15	15314	10
	Rn	86	8536	21	1870	30	*		15693	19	7100	24	18162	21
	Fr	87	11310#	210#	−990	60	*		15920	80	9400	60	16630	60
198	W	74	5800#	500#	*		17300#	300#	*		6860#	420#	*	
	Re	75	4710#	500#	9410#	570#	12590#	400#	12460#	570#	8610#	500#	3260#	500#
	Os	76	6700#	100#	10610#	300#	7280	28	9400#	300#	6750#	300#	2710#	300#
	Ir	77	5607	28	8000#	100#	1769	26	13230	50	8620	60	5450#	300#
	Pt	78	7555.2	2.1	8969	12	−3835	9	10240	40	6652.8	2.4	5250	60
	Au	79	6512.36	0.09	6450.0	0.5	−10223.5	1.5	13774.5	0.5	8077.1	0.5	7757.9	1.4
	Hg	80	8486	3	7103.6	0.5	−15478	16	10893.9	2.5	6476.8	1.2	7485.9	0.6
	Tl	81	7245	16	4278	8	−20820	9	15007	8	8350	24	10685	8
	Pb	82	9394	10	5003	16	−24838	16	12139	15	6951	14	10592	25
	Bi	83	7745.3	2.3	1900	5	−28925	27	16698	8	9247	5	14445	11
	Po	84	10155	19	3082	17	−31980#	400#	13236	16	7413	17	13910	17
	At	85	8425	9	605	11	*		17471	7	9273	8	16963	7
	Rn	86	10812	21	2165	16	*		13390	30	7106	17	15533	15
	Fr	87	8760	60	−770	30	*		18300	30	9380	60	18687	29
	Ra	88	*		1050#	400#	*		13720#	450#	6910#	450#	17100#	400#
199	Re	75	5810#	570#	9420#	500#	14360#	400#	10850#	570#	8870#	570#	*	
	Os	76	4600#	100#	10500#	410#	9350#	100#	10860#	320#	7020#	320#	4190#	410#
	Ir	77	6710	40	8010	40	3660	40	11360#	100#	8740	50	3610#	300#
	Pt	78	5556.0	0.5	8918	25	−2157	7	11547	12	6910	40	6530	40
	Au	79	7584.28	0.06	6479.1	2.1	−8296	11	12036.8	0.5	8414.8	0.5	5990	40
	Hg	80	6663.1	0.6	7254.3	0.6	−14305	6	12304.4	0.6	6455.3	2.6	8744.8	0.7
	Tl	81	8602	29	4394	28	−19236	28	13191	28	8630	28	8724	28
	Pb	82	7234	11	4992	10	−23670	10	13834	15	7129	14	12240	7
	Bi	83	9512	11	2018	14	−27567	17	14659	12	9411	13	12345	16
	Po	84	7836	17	3173	6	−30860#	300#	15153	6	7625	6	15750	10
	At	85	10186	7	636	17	*		15281	11	9510	8	14825	5
	Rn	86	8401	15	2141	9	*		15505	11	7220	30	17554	9
	Fr	87	10870	30	−711	19	*		15970	21	9659	20	16330	30
	Ra	88	8950#	500#	1240#	300#	*		16080#	310#	6990#	360#	19290#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	*		−2670#	570#	9540#	400#	*		−1250#	500#
	Re	75	11240#	360#	19810#	580#	−1680#	500#	7080#	300#	−15050#	420#	−920#	310#
	Os	76	11980	40	18450#	300#	−1080#	200#	4370	40	−14830#	300#	−4660	40
	Ir	77	13050	40	16750#	200#	−190	60	1700	40	−11160#	300#	−4710	40
	Pt	78	14027.07	0.17	14787.3	2.4	812.9	2.3	−819.1	2.9	−10420	60	−8148.8	1.0
	Au	79	15068	3	13183.6	2.9	1273.3	2.8	−3641	12	−6734.1	2.9	−8194	23
	Hg	80	15784	4	11643.2	2.9	2038	4	−6481	8	−6320.5	2.9	−11741	11
	Tl	81	16702	18	9863	12	2844	19	−9495	12	−2219	12	−11828	13
	Pb	82	17276	18	7739	8	4243	17	−11876	10	−1619	24	−15390	10
	Bi	83	18121	5	5642	14	5450	30	−14090	30	2865	11	−14955	6
	Po	84	18606	14	3836	17	6658.2	2.4	−15443	15	2982	8	−18068	11
	At	85	19330	40	2470	30	7196.4	2.7	−17400#	200#	6820	30	−17030	60
	Rn	86	19891	22	1598	19	7617	9	*		5803	15	−20550#	200#
	Fr	87	20520#	360#	360#	200#	8140#	200#	*		9670#	200#	*	
197	W	74	10270#	500#	*		*		10180#	410#	*		−580#	500#
	Re	75	10930#	420#	20330#	420#	−2060#	500#	7870#	300#	*		−150#	300#
	Os	76	11680#	110#	18890#	320#	−1290#	220#	5370#	100#	−13600#	410#	−3690#	110#
	Ir	77	12674	12	17240#	300#	−420	40	2916	11	−13150#	300#	−3651	11
	Pt	78	13768.53	0.29	15490	60	549.7	2.3	120	3	−9430	40	−7353.7	2.6
	Au	79	14715.3	1.1	14025.4	1.4	971.6	1.4	−2785	14	−8990	40	−7385.7	2.9
	Hg	80	15668	23	12324	3	1515	3	−5794	6	−5184	3	−11114	13
	Tl	81	16342	18	10366	14	2625	16	−8672	14	−4507	14	−11082	16
	Pb	82	17148	7	8309	24	3892	16	−11353	11	−209	6	−14815	5
	Bi	83	17800	6	6106	11	5368	7	−13328	8	524	12	−14286	6
	Po	84	18418	12	4231	11	6411	3	−14903	19	4663	13	−17550	30
	At	85	19025	13	2908	10	7104	3	−16610	60	4358	8	−16401	16
	Rn	86	19680	50	1950	17	7411	7	*		7690	17	−20050#	200#
	Fr	87	20340#	210#	850	60	7900	50	*		6880	60	*	
198	W	74	10000#	500#	*		*		11070#	300#	*		−320#	420#
	Re	75	10770#	500#	*		−2290#	640#	8770#	400#	*		−10#	410#
	Os	76	11540	50	19510#	400#	−1690#	300#	6230	28	−16090#	400#	−3520	30
	Ir	77	12470	50	17980#	300#	−920#	200#	3821	25	−12700#	300#	−3411	25
	Pt	78	13401.7	2.1	16200	40	107	3	1050.7	2.1	−12140#	100#	−6835.2	2.1
	Au	79	14586.0	2.5	14720	40	526.0	1.4	−2052	8	−8646	11	−7112	3
	Hg	80	15271.6	2.9	12887.8	0.6	1380.8	0.6	−4886	9	−7823.6	0.6	−10671	14
	Tl	81	16175	14	10969	8	2258	8	−8171	8	−3678	8	−10854	9
	Pb	82	16867	12	8821	9	3690	9	−10592	19	−2818	9	−14457	9
	Bi	83	17498.2	1.7	6439	12	5155	14	−12649	5	1709	14	−14036	10
	Po	84	18150	17	4710	18	6309.7	1.4	−14245	21	1980	17	−17192	18
	At	85	18940	30	3285	5	6889.4	1.9	−16277	28	5686	5	−16290	17
	Rn	86	19348	19	2340	14	7349	4	−17730#	400#	4873	17	−19560	60
	Fr	87	20070#	200#	1100	40	7869	20	*		8634	29	*	
	Ra	88	*		50#	400#	8350#	400#	*		7700#	400#	*	
199	Re	75	10520#	500#	*		−2550#	500#	9670#	400#	*		870#	400#
	Os	76	11290#	140#	19910#	410#	−1890#	320#	7190#	100#	−14890#	320#	−2510#	100#
	Ir	77	12318	29	18630#	300#	−1260#	300#	4694	27	−14700#	400#	−2567	27
	Pt	78	13111.2	2.1	16920#	100#	−300	60	2157.9	2.2	−11003	28	−5878.8	2.1
	Au	79	14096.64	0.11	15448	11	173.6	1.4	−1034	28	−10623	25	−6210.7	0.5
	Hg	80	15149	3	13704.3	0.7	822.8	0.7	−4315	7	−6931.5	2.1	−10089	8
	Tl	81	15850	30	11498	28	2083	28	−7262	30	−5768	28	−10062	29
	Pb	82	16628	8	9270	8	3358	24	−9990	9	−1566	7	−13945	7
	Bi	83	17257	11	7021	17	4933	7	−11975	12	−558	13	−13393	20
	Po	84	17991	11	5073	7	6074.3	1.9	−13680	9	3539	10	−16604	7
	At	85	18611	10	3718	6	6777.3	1.2	−15593	15	3245	6	−15664	14
	Rn	86	19214	18	2746	12	7132	4	−17180#	300#	6626	18	−19200	28
	Fr	87	19630	60	1454	16	7817	10	*		6189	15	−17800#	400#
	Ra	88	*		470#	300#	8150#	300#	*		9560#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
200	Re	75	4340#	500#	*		16200#	300#	12310#	420#	8730#	500#	*	
	Os	76	6390#	320#	11080#	500#	10990#	300#	9190#	500#	6700#	420#	2000#	500#
	Ir	77	5250	30	8670#	100#	5470	18	12810	30	8340#	100#	4420#	300#
	Pt	78	7282	20	9490	30	−347	22	9870	30	6489	23	4100#	100#
	Au	79	6180	5	7103	5	−6845	12	13412	5	8081	5	6668	13
	Hg	80	8028.52	0.11	7698.6	0.6	−12565	8	10788.2	0.6	6500.4	0.6	6562.8	0.7
	Tl	81	7059	29	4790	6	−18066	6	14618	6	8356	7	9739	6
	Pb	82	9092	12	5482	30	−22251	12	11988	12	6967	17	9934	10
	Bi	83	7631	15	2415	13	−26490	30	16422	14	9252	12	13644	17
	Po	84	9768	10	3429	13	−29570#	200#	13130	8	7609	8	13454	9
	At	85	8230	6	1030	6	−33510#	400#	17206	16	9275	10	16348.1	2.3
	Rn	86	10511	9	2466	8	*		13419	8	7219	10	15039	11
	Fr	87	8710	30	−410	30	*		18080	30	9490	30	18140	30
	Ra	88	11060#	360#	1430#	200#	*		13770#	200#	7240#	210#	16770#	200#
	Ac	89	*		−1620#	500#	*		18740#	570#	*		19920#	400#
201	Re	75	5170#	420#	*		18300#	300#	*		9360#	420#	*	
	Os	76	4210#	420#	10940#	420#	13010#	300#	10790#	500#	7210#	500#	3600#	420#
	Ir	77	6567	27	8850#	300#	7110	26	10840#	100#	8470	40	2560#	400#
	Pt	78	5292	21	9531	18	1454	13	11291	28	6804	26	5501	29
	Au	79	7270	6	7091	20	−4971	13	11698	4	8366	4	5005	25
	Hg	80	6230.8	0.6	7749	5	−11141	5	12141.7	0.8	6782.0	0.8	7887.1	2.2
	Tl	81	8206	15	4968	14	−16397	14	13075	14	8636	14	8045	14
	Pb	82	7092	16	5514	13	−21165	16	13500	30	7120	14	11328	12
	Bi	83	9143	16	2467	16	−25018	15	14512	14	9503	15	11745	14
	Po	84	7655	9	3453	12	−28458	21	14987	12	7700	5	15194	10
	At	85	9875.3	1.7	1136	8	−32190#	300#	15166	6	9555	16	14218.1	1.7
	Rn	86	8178	12	2415	10	*		15427	11	7465	11	17015	19
	Fr	87	10620	30	−300	11	*		15861	12	9684	16	15944	10
	Ra	88	8770#	200#	1490	40	*		15878	25	7230	30	18814	24
	Ac	89	11200#	500#	−1480#	360#	*		16490#	420#	9770#	500#	17480#	300#
202	Os	76	6070#	500#	11840#	500#	14700#	400#	9060#	500#	6940#	570#	*	
	Ir	77	4950#	300#	9590#	420#	9030#	300#	12280#	420#	8110#	320#	3430#	500#
	Pt	78	6944	26	9910	30	3249	25	9600	30	6570	40	3150#	100#
	Au	79	6028	6	7828	8	−3607	15	12951	21	7894	5	5688	27
	Hg	80	7753.92	0.12	8233	3	−9403	9	10568	5	6612.4	0.8	5689.2	2.2
	Tl	81	6871	14	5607.6	1.8	−15308.0	2.5	14232.7	1.7	8428.7	1.7	8758.7	1.7
	Pb	82	8739	13	6048	15	−19663	17	11817	7	6983	28	9252	4
	Bi	83	7393	19	2767	18	−23853	15	16212	17	9344	16	12950	30
	Po	84	9493	10	3802	15	−27017	17	13126	14	7719	14	12935	11
	At	85	7959.1	2.1	1441	5	−31030#	200#	16975	8	9432	6	15771	11
	Rn	86	10242	19	2781	17	*		13415	17	7410	17	14610	17
	Fr	87	8559	11	80	12	*		17813	8	9527	10	17571	8
	Ra	88	10934	25	1803	18	*		13650	30	7169	20	16282	17
	Ac	89	9110#	360#	−1130#	200#	*		18440#	280#	9600#	360#	19240#	200#
203	Os	76	2400#	570#	*		18290#	400#	11830#	500#	8880#	500#	*	
	Ir	77	6070#	500#	9590#	570#	10810#	400#	10410#	500#	8430#	500#	1700#	500#
	Pt	78	5233	30	10190#	300#	4934	17	10930	27	6587	23	4310#	300#
	Au	79	6856	6	7740	25	−1618	13	11386	6	8319	20	4080	17
	Hg	80	5996.9	1.4	8202	5	−7961	5	11841	3	6796	5	6974	20
	Tl	81	7852.6	1.6	5706.3	0.7	−13600	11	12610.9	0.7	8604.6	0.6	7086	5
	Pb	82	6918	7	6095	7	−18601	9	13105	16	7124	9	10362	6
	Bi	83	8845	19	2873	13	−22402	14	14458	18	9591	16	11169	14
	Po	84	7439	10	3848	15	−25910	11	14830	13	7911	12	14588	11
	At	85	9561	11	1509	14	−29739	24	15069	12	9639	13	13841	15
	Rn	86	7980	18	2802	6	*		15310	6	7659	6	16398	10
	Fr	87	10296	9	135	18	*		15695	12	9741	9	15504	6
	Ra	88	8545	18	1790	11	*		15722	13	7330	30	18247	11
	Ac	89	10850#	200#	−1213	26	*		16351	29	9810#	200#	17090	40

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
200	Re	75	10150#	500#	*		*		10580#	300#	*		1130#	320#
	Os	76	10980#	300#	20490#	420#	−2200#	500#	8080#	300#	*		−2190#	300#
	Ir	77	11960	30	19170#	400#	−1640#	300#	5626	18	−14140#	400#	−2260	17
	Pt	78	12838	20	17500	30	−750	40	2905	20	−13690#	100#	−5576	20
	Au	79	13764	5	16021	26	−190	40	−155	8	−10092	27	−5728	5
	Hg	80	14691.6	0.6	14177.7	2.1	716.3	0.7	−3251	10	−9404.0	2.2	−9515	28
	Tl	81	15661	9	12044	6	1665	6	−6690	12	−5243	6	−9887	9
	Pb	82	16326	13	9876	10	3148	10	−9314	13	−3995	10	−13525	15
	Bi	83	17143	11	7407	13	4714	16	−11376	11	410	30	−13188	12
	Po	84	17604	18	5447	12	5981.7	1.8	−12937	10	1004	10	−16186	10
	At	85	18416	5	4202.3	2.0	6595.2	1.2	−15120	30	4527	11	−15492	8
	Rn	86	18912	15	3102	17	7043.4	2.1	−16630#	200#	3952	8	−18841	15
	Fr	87	19580	40	1730	30	7623	4	−18400#	400#	7670	30	−17560#	300#
	Ra	88	20010#	450#	720#	200#	8230#	200#	*		6900#	200#	*	
	Ac	89	*		−380#	400#	8620#	450#	*		10470#	400#	*	
201	Re	75	9510#	500#	*		*		11970#	300#	*		2340#	420#
	Os	76	10590#	320#	*		−2200#	500#	9170#	300#	*		−1140#	300#
	Ir	77	11820	30	19920#	400#	−2150#	300#	6328	22	−16360#	300#	−1545	29
	Pt	78	12574	6	18200#	100#	−1190#	100#	3844	6	−12590#	300#	−4688	8
	Au	79	13450	3	16580	27	−602	12	781	14	−12113	17	−4969	3
	Hg	80	14259.3	0.6	14852.5	2.2	332.0	0.8	−2390	12	−8353	20	−8687	6
	Tl	81	15270	30	12666	14	1533	14	−5753	19	−7269	15	−9002	17
	Pb	82	16184	14	10305	12	2842	12	−8751	13	−3058	12	−12987	16
	Bi	83	16774	16	7950	30	4500	6	−10644	12	−1671	13	−12563	14
	Po	84	17423	7	5868	8	5799.5	1.2	−12414	11	2442	11	−15611	5
	At	85	18105	5	4566	11	6472.8	1.6	−14374	9	2283	11	−14856	6
	Rn	86	18689	13	3444	12	6860.7	2.3	−16044	23	5542	13	−18310	30
	Fr	87	19323	16	2166	11	7519	4	−17810#	300#	5281	9	−17110#	200#
	Ra	88	19830#	300#	1080	22	8002	12	*		8648	21	−20670#	400#
	Ac	89	*		−50#	300#	8720#	310#	*		7980#	300#	*	
202	Os	76	10280#	500#	*		−2470#	500#	10040#	400#	*		−650#	400#
	Ir	77	11520#	300#	20530#	420#	−2390#	500#	7410#	300#	−16140#	420#	−1200#	300#
	Pt	78	12240	30	18760#	300#	−1440	40	4653	25	−15330#	300#	−4362	25
	Au	79	13298	7	17359	18	−1024	26	1623	5	−11575	22	−4767	5
	Hg	80	13984.7	0.6	15325	20	133.2	2.2	−1405	4	−10815	6	−8234	14
	Tl	81	15077	6	13357	5	1174.4	1.7	−5230	14	−6869	4	−8780	12
	Pb	82	15831	11	11015	4	2589	4	−7998	9	−5567	4	−12582	13
	Bi	83	16536	18	8282	15	4353	16	−10078	14	−858	20	−12301	15
	Po	84	17147	12	6269	13	5701.0	1.3	−11665	19	41	15	−15228	9
	At	85	17834.4	2.3	4894	11	6259.0	1.2	−13775	6	3467	12	−14637	10
	Rn	86	18420	17	3918	18	6773.8	1.8	−15352	22	2955	17	−17938	19
	Fr	87	19180	30	2495	6	7385	3	−17260#	200#	6598	6	−16907	21
	Ra	88	19700#	200#	1503	16	7880	7	*		5893	18	−20400#	300#
	Ac	89	20310#	450#	350#	200#	8370#	200#	*		9480#	200#	*	
203	Os	76	8470#	500#	*		*		12870#	400#	*		1900#	500#
	Ir	77	11020#	400#	21430#	500#	−2650#	570#	8190#	400#	*		−330#	400#
	Pt	78	12177	17	19780#	300#	−2080#	100#	5417	16	−14490#	400#	−3567	17
	Au	79	12885	4	17649	22	−1169	27	2619	3	−13480#	300#	−3869	3
	Hg	80	13750.9	1.4	16030	6	−307.7	2.5	−483	7	−9868	25	−7360.9	2.1
	Tl	81	14723	14	13940	3	906.1	0.7	−4238	13	−8693	5	−7893	4
	Pb	82	15658	14	11703	6	2334	6	−7477	8	−4731	6	−12108	15
	Bi	83	16238	18	8921	19	4110	30	−9362	17	−2833	13	−11654	15
	Po	84	16932	7	6616	13	5496	5	−11124	8	1341	6	−14708	5
	At	85	17520	11	5311	16	6210.1	0.8	−13039	12	1299	18	−13957	20
	Rn	86	18221	12	4243	8	6629.9	2.1	−14786	11	4467	10	−17359	8
	Fr	87	18855	11	2916	6	7275	4	−16700	22	4261	6	−16269	16
	Ra	88	19479	23	1871	14	7736	6	*		7589	19	−19830#	200#
	Ac	89	19970#	300#	590	23	8382	16	*		7186	22	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
204	Ir	77	2970#	570#	10160#	570#	14500#	400#	13510#	570#	9660#	500#	3900#	500#
	Pt	78	6358	18	10480#	400#	6971	9	9520#	300#	6797	23	2160#	300#
	Au	79	5567	4	8074	16	7	10	12764	25	8044	6	5080	22
	Hg	80	7490.4	1.4	8836	3	−6348	10	10379	5	6575	3	4775	6
	Tl	81	6656.04	0.29	6365.4	1.3	−12485	11	13708.8	0.7	8179.4	0.7	7700	3
	Pb	82	8395	6	6637.4	0.3	−17144	8	11581.0	1.7	6935	14	8198.0	0.7
	Bi	83	7192	16	3147	11	−21257	9	16006	10	9491	15	12183	17
	Po	84	9103	11	4106	16	−24403	13	13120	17	7951	16	12577	16
	At	85	7771	15	1841	12	−28530	40	16791	14	9523	12	15214	16
	Rn	86	9852	10	3093	13	−31890#	400#	13417	8	7683	8	14201	9
	Fr	87	8337	6	492	6	*		17599	17	9582	10	17042.5	1.5
	Ra	88	10610	13	2104	11	*		13670	11	7336	13	15815	13
	Ac	89	8980	40	−780	40	*		18300	40	9590	40	18720	40
	Th	90	*		950#	400#	*		14270#	450#	7380#	500#	17630#	400#
205	Ir	77	4240#	640#	*		17800#	500#	11670#	640#	11490#	640#	*	
	Pt	78	3150#	300#	10660#	500#	10550#	300#	12440#	500#	8600#	420#	5080#	500#
	Au	79	6545	9	8262	12	1953	9	11452	18	8443	26	3480#	300#
	Hg	80	5670	4	8938	5	−4767	11	11566	5	6934	6	6050	25
	Tl	81	7546.1	0.5	6421.1	0.7	−10837	12	12159.6	1.4	8387.2	0.8	6182	5
	Pb	82	6731.66	0.11	6713.04	0.21	−16062	5	12702.0	0.4	7074.0	1.7	9220.3	0.7
	Bi	83	8491	10	3244	5	−19759	5	14432	8	9739	6	10562	5
	Po	84	7250	14	4164	14	−23325	25	14715	16	8094	17	14066	11
	At	85	9194	16	1932	16	−27039	21	15036	13	9821	15	13412	18
	Rn	86	7814	9	3137	12	−30640#	300#	15164	12	7827	5	15879	10
	Fr	87	9989.1	1.7	629	8	*		15590	6	9834	17	15012.5	2.2
	Ra	88	8328	24	2096	23	*		15638	24	7567	24	17728	28
	Ac	89	10680	40	−704	20	*		16164	20	9844	23	16599	19
	Th	90	9060#	500#	1030#	300#	*		16060#	300#	7430#	360#	19500#	300#
206	Pt	78	4550#	420#	10970#	580#	14090#	300#	10860#	500#	10120#	500#	2930#	500#
	Au	79	3411	11	8520#	300#	5577	11	14398	12	10265	18	6140#	400#
	Hg	80	6717	8	9110	11	−2745	9	10416	8	7073	8	4566	18
	Tl	81	6502.92	0.12	7254	4	−9814	14	13147.1	0.7	7881.3	1.4	6536	3
	Pb	82	8086.66	0.06	7253.6	0.5	−14653	9	11271.40	0.21	6839.9	0.4	7130.6	1.3
	Bi	83	7035	9	3547	8	−18704	9	15792	8	9622	10	11380	8
	Po	84	8739	11	4412	6	−21751	17	13168	10	8200	13	12245	8
	At	85	7526	18	2207	17	−25908	20	16613	17	9735	14	14732	19
	Rn	86	9495	10	3437	15	−29130#	200#	13440	14	7893	14	13823	10
	Fr	87	8089	4	904	6	*		17353	9	9725	7	16484	11
	Ra	88	10313	28	2419	17	*		13663	17	7550	18	15395	18
	Ac	89	8657	23	−375	27	*		18118	17	9732	18	18238	16
	Th	90	11000#	360#	1340#	200#	*		14040#	200#	7290#	200#	17050#	200#
207	Pt	78	2880#	500#	*		17940#	400#	12220#	640#	10200#	570#	*	
	Au	79	4720#	300#	8690#	420#	8960#	300#	12830#	420#	11900#	300#	4400#	500#
	Hg	80	3583	10	9282	10	701	9	13378	10	9057	7	7340	11
	Tl	81	6848.9	0.9	7386	8	−7804	12	11968	4	8522.7	0.8	5254	3
	Pb	82	6737.78	0.10	7488.5	0.5	−13819	5	12079.7	0.5	6758.18	0.23	7883.1	0.5
	Bi	83	8097	8	3557.5	2.1	−17206	18	14427.0	2.1	9919.9	2.1	9938.5	2.1
	Po	84	7029	8	4406	10	−20683	16	14630	8	8363	11	13611	7
	At	85	8859	18	2328	13	−24380	60	15004	16	9979	16	13065	15
	Rn	86	7572	10	3484	14	−27987	24	15062	13	8092	12	15354	11
	Fr	87	9595	18	1004	19	−31580#	400#	15572	18	9982	19	14660	21
	Ra	88	8097	22	2427	15	*		15554	15	7790	15	17150	16
	Ac	89	10390	60	−300	70	*		16060	70	9950	60	16190	60
	Th	90	8720#	200#	1404	28	*		16010	29	7550	40	18939	25
	Pa	91	*		−1440#	450#	*		16510#	500#	9670#	570#	17710#	400#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
204	Ir	77	9040#	500#	*		−1280#	500#	10790#	400#	*		1930#	400#
	Pt	78	11591	27	20070#	400#	−2050#	300#	6550	9	−18450#	400#	−3068	10
	Au	79	12423	6	18270#	300#	−1487	17	3708.4	3.0	−12980#	400#	−3439	3
	Hg	80	13487.3	0.7	16576	25	−516	20	421.1	0.5	−12125	16	−6998.7	0.6
	Tl	81	14508.7	1.7	14567	5	430	5	−3701	9	−8493	3	−7631	6
	Pb	82	15313	4	12343.7	0.7	1967.2	0.5	−6769	10	−7129.1	1.3	−11657	13
	Bi	83	16037	17	9243	9	3976	11	−8784	14	−2172	9	−11407	10
	Po	84	16542	13	6979	11	5484.8	1.3	−10375	13	−844	12	−14251	15
	At	85	17332	11	5689	18	6070.2	1.2	−12473	11	2374	17	−13747	12
	Rn	86	17832	18	4602	12	6546.2	1.8	−14028	12	2055	9	−16915	10
	Fr	87	18633	6	3294.0	2.1	7167.2	1.5	−16060	30	5484	11	−16061	10
	Ra	88	19156	17	2239	19	7637	7	−17860#	400#	4958	11	−19587	23
	Ac	89	19840#	200#	1010	30	8107	15	*		8500	30	*	
	Th	90	*		−270#	400#	8870#	450#	*		8030#	400#	*	
205	Ir	77	7210#	640#	*		−350#	580#	13090#	500#	*		4050#	500#
	Pt	78	9510#	300#	20820#	500#	−1000#	420#	9070#	300#	*		−650#	300#
	Au	79	12112	9	18740#	400#	−1465	23	4709	8	−16550#	400#	−2494	8
	Hg	80	13160	4	17013	16	−894	7	1483	4	−11437	10	−6012	4
	Tl	81	14202.1	0.5	15257	3	154	3	−2756	5	−10472	3	−6782.4	0.5
	Pb	82	15127	6	13078.4	1.3	1466.4	0.7	−6250	10	−6370.4	0.5	−11197	9
	Bi	83	15684	14	9881	5	3691	15	−8081	13	−4008	5	−10795	11
	Po	84	16354	11	7312	12	5326	7	−9811	11	301	10	−13730	15
	At	85	16965	16	6038	18	6019.6	1.7	−11678	12	372	15	−13090	14
	Rn	86	17666	8	4978	7	6386.4	1.8	−13514	23	3343	11	−16392	5
	Fr	87	18326	6	3722	11	7053.4	1.4	−15361	18	3266	11	−15440	9
	Ra	88	18939	25	2588	24	7486	20	−17130#	300#	6482	24	−18930	40
	Ac	89	19666	28	1401	19	8040	15	*		6154	18	−17940#	400#
	Th	90	*		250#	300#	8570#	300#	*		9580#	300#	*	
206	Pt	78	7700#	300#	*		530#	500#	11230#	300#	*		1340#	300#
	Au	79	9957	9	19180#	400#	70#	300#	7801	8	−15720#	500#	−236	9
	Hg	80	12387	8	17372	12	−667	26	2853	8	−15000#	300#	−5183	8
	Tl	81	14049.0	0.5	16193	3	−320	5	−2224	8	−10430	8	−6553.6	0.5
	Pb	82	14818.32	0.12	13674.7	0.5	1133.6	0.6	−5598	4	−8787	4	−10792	5
	Bi	83	15526	12	10260	8	3527	8	−7590	15	−3496	8	−10580	13
	Po	84	15989	11	7656	4	5327.0	1.3	−9055	9	−1706	4	−13275	13
	At	85	16720	17	6372	16	5887	5	−11115	14	1337	14	−12801	14
	Rn	86	17309	12	5369	13	6384.1	1.6	−12696	19	1099	13	−15898	9
	Fr	87	18078	4	4041	12	6923	3	−14793	15	4371	13	−15200	23
	Ra	88	18641	19	3049	19	7415	4	−16440#	200#	3984	18	−18563	25
	Ac	89	19340	40	1720	15	7942	14	*		7487	15	−17530#	300#
	Th	90	20060#	450#	640#	200#	8500#	200#	*		6910#	200#	*	
207	Pt	78	7430#	500#	*		40#	570#	11940#	400#	*		1870#	400#
	Au	79	8130#	300#	19660#	580#	1430#	500#	9930#	300#	*		1760#	300#
	Hg	80	10300	7	17800#	300#	983	17	6007	6	−14040#	300#	−2264	6
	Tl	81	13351.8	0.8	16496	8	−313	3	−976.1	2.2	−13867	8	−5315.9	0.7
	Pb	82	14824.44	0.11	14743	4	392.8	1.3	−5306	7	−8808	8	−10495	8
	Bi	83	15132	5	10811.1	2.1	3282.5	2.1	−6828	13	−5090.5	2.1	−9938	5
	Po	84	15768	12	7953	7	5215.9	2.5	−8513	8	−649	7	−12778	15
	At	85	16385	17	6740	13	5872	3	−10379	21	−487	15	−12165	15
	Rn	86	17067	7	5691	11	6251.2	1.6	−12171	15	2266	6	−15381	6
	Fr	87	17684	18	4442	21	6889	20	−14000	70	2302	22	−14483	24
	Ra	88	18410	27	3332	15	7298	16	−15817	28	5381	17	−18003	21
	Ac	89	19050	70	2120	60	7850	60	−17580#	410#	5190	60	−16920#	210#
	Th	90	19720#	300#	1030	30	8328	21	*		8502	29	*	
	Pa	91	*		−100#	400#	8730#	400#	*		7970#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
208	Pt	78	4350#	570#	*		20960#	400#	*		10090#	640#	*	
	Au	79	3190#	420#	9000#	500#	12650#	300#	14190#	420#	11860#	420#	5450#	580#
	Hg	80	4900	18	9460#	300#	4196	17	11889	18	10702	18	5590#	300#
	Tl	81	3795.4	0.9	7598	6	−4286	9	14889	8	10397	4	8004	8
	Pb	82	7367.87	0.05	8007.4	0.7	−12093	10	11214.7	0.5	6936.4	0.5	6185	4
	Bi	83	6886.9	2.7	3706.6	2.0	−16203	11	15626.7	2.0	9764.6	2.0	10597.7	2.0
	Po	84	8395	7	4704.5	2.5	−19202	9	13269	8	8459	5	11947.0	1.3
	At	85	7314	15	2612	11	−23224	14	16430	10	9915	13	14243	10
	Rn	86	9094	11	3718	16	−26351	21	13494	17	8193	16	13511	14
	Fr	87	7890	21	1322	12	−30320#	300#	17177	14	9906	12	15964	16
	Ra	88	9877	17	2709	20	*		13767	10	7902	9	15087	10
	Ac	89	8470	60	72	18	*		17902	20	9814	25	17707	10
	Th	90	10730	30	1740	70	*		13937	23	7505	25	16537	29
	Pa	91	9150#	500#	−1010#	300#	*		18360#	360#	9590#	420#	19240#	300#
209	Au	79	4530#	500#	9180#	570#	15580#	400#	12540#	570#	11880#	500#	*	
	Hg	80	3400#	100#	9670#	320#	7770#	100#	13210#	320#	10720#	100#	6750#	320#
	Tl	81	4962	3	7661	17	−762	6	13510	7	12152	8	6453	9
	Pb	82	3929.5	0.3	8141.6	0.6	−8667	10	14134.1	0.7	9509.8	0.6	8972	8
	Bi	83	7459.8	1.9	3798.5	0.8	−14477	12	14904.8	0.8	10391.5	0.8	9640.8	0.8
	Po	84	6967.8	1.9	4785.4	2.4	−18225	6	14398.8	2.5	8526	8	13065.9	1.4
	At	85	8486	10	2702	5	−21730	60	14973	8	10169	6	12792	9
	Rn	86	7356	14	3760	13	−25210#	100#	14998	16	8363	17	14894	11
	Fr	87	9186	16	1415	15	−28860#	200#	15562	12	10215	14	14303	18
	Ra	88	7944	11	2763	12	*		15418	18	8047	7	16638	10
	Ac	89	9980	60	170	60	*		16020	60	10150	60	15820	60
	Th	90	8500#	110#	1780#	100#	*		15830#	120#	7660#	100#	18350#	110#
	Pa	91	10640#	360#	−1100#	200#	*		16440#	200#	9940#	280#	17260#	200#
210	Au	79	3000#	570#	*		17180#	400#	13890#	570#	11770#	570#	*	
	Hg	80	4770#	220#	9910#	450#	10650#	200#	11630#	360#	10660#	360#	4860#	450#
	Tl	81	3673	12	7940#	100#	2725	14	14737	20	12062	13	7500#	300#
	Pb	82	5192.6	0.9	8372	3	−5124	5	12737.0	1.0	11166.1	1.0	7363	6
	Bi	83	4604.64	0.08	4473.6	0.8	−11449	13	17668.0	0.8	12524.7	0.8	11885.1	1.0
	Po	84	7658.4	1.4	4984.0	0.8	−16396	9	13627.3	2.0	8965.0	2.1	12145.32	0.12
	At	85	7160	9	2895	8	−20670	60	16208	8	10037	10	13728	8
	Rn	86	8735	11	4010	7	−23662	18	13576	10	8487	13	13188	8
	Fr	87	7632	18	1692	17	−27682	25	17024	17	10154	14	15530	18
	Ra	88	9488	11	3065	15	*		13820	14	8155	20	14722	10
	Ac	89	8220	80	450	60	*		17680	60	10020	60	17190	60
	Th	90	10280#	110#	2080	60	*		14015	20	7770	70	16167	23
	Pa	91	8810#	200#	−780#	110#	*		18355	28	9850	30	18830	70
211	Hg	80	3270#	280#	10180#	450#	11930#	200#	12890#	450#	10580#	360#	5940#	450#
	Tl	81	4900	40	8070#	210#	5570	40	13230#	110#	12060	50	5790#	300#
	Pb	82	3834.6	0.8	8534	12	−1736	7	13865	3	11126.9	0.6	8428	17
	Bi	83	5134.7	1.1	4415.7	1.1	−7715	12	16462.9	0.9	14757.9	0.8	10545.8	1.0
	Po	84	4550.8	0.5	4930.1	0.9	−13266	5	16536.3	0.9	11301.1	2.1	14962.4	0.5
	At	85	7746	8	2982.5	2.5	−18790	50	15430.2	2.8	10686.9	2.8	12869	3
	Rn	86	7223	8	4072	10	−22670	50	14839	8	8578	11	14361	7
	Fr	87	8868	18	1825	13	−26200	80	15511	16	10380	16	13976	15
	Ra	88	7680	10	3113	14	−29700#	400#	15326	13	8364	12	16135	11
	Ac	89	9620	80	590	50	*		16000	50	10280	50	15460	50
	Th	90	8210	50	2070	80	*		15780	80	8030	50	17830	50
	Pa	91	10350	80	−710	80	*		16500#	130#	10230	80	16950	80
	U	92	*		1100#	400#	*		16160#	450#	7740#	500#	19480#	400#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
208	Pt	78	7230#	500#	*		*		12490#	400#	*		2240#	500#
	Au	79	7910#	300#	*		1210#	500#	10540#	300#	*		2160#	300#
	Hg	80	8483	18	18150#	300#	2440	19	8475	17	−16050#	400#	−315	17
	Tl	81	10644.3	0.8	16880	8	1459	3	2115.4	2.1	−12950#	300#	−2373.5	0.5
	Pb	82	14105.66	0.11	15394	8	515.3	0.5	−4279.0	1.3	−12593	6	−9765.8	2.1
	Bi	83	14984	8	11195.1	2.0	3051.6	2.0	−6401	9	−5128.5	2.1	−9795	7
	Po	84	15425	4	8262.0	1.3	5215.4	1.3	−7814	10	−2306.5	1.3	−12314	12
	At	85	16173	16	7018	12	5751.1	2.2	−9802	14	296	9	−11907	10
	Rn	86	16666	13	6046	11	6260.7	1.7	−11388	14	201	12	−14879	20
	Fr	87	17485	11	4806	17	6769.7	2.6	−13421	15	3271	16	−14275	18
	Ra	88	17974	19	3713	13	7273	5	−14964	20	3076	10	−17490	60
	Ac	89	18857	18	2499	11	7718	10	−16900#	300#	6314	20	−16671	26
	Th	90	19450#	200#	1446	25	8209	16	*		5869	23	−20110#	400#
	Pa	91	*		400#	300#	8560#	300#	*		9210#	310#	*	
209	Au	79	7720#	500#	*		920#	640#	10970#	400#	*		2520#	400#
	Hg	80	8300#	100#	18670#	410#	2200#	320#	9010#	100#	−15100#	410#	90#	100#
	Tl	81	8758	3	17130#	300#	3042	9	4613	3	−14720#	300#	32	3
	Pb	82	11297.4	0.3	15740	6	2255	4	−1240.7	1.4	−11622	17	−6808.5	2.0
	Bi	83	14346.7	2.0	11805.9	1.0	3137.9	0.8	−5375	5	−8792.8	0.9	−8859.8	1.5
	Po	84	15363	7	8492.0	1.4	4979.2	1.4	−7426	10	−1906.5	1.4	−11969	9
	At	85	15799	13	7407	5	5756.9	2.0	−9101	12	−1302	5	−11299	11
	Rn	86	16449	11	6372	12	6155.4	2.0	−10799	11	1241	10	−14345	15
	Fr	87	17076	21	5133	17	6777	4	−12630	60	1398	15	−13585	15
	Ra	88	17821	16	4086	7	7143.1	2.7	−14410#	100#	4226	12	−16967	12
	Ac	89	18450	80	2880	60	7730	60	−16230#	210#	4230	60	−15920	60
	Th	90	19230#	110#	1850#	100#	8040#	110#	*		7250#	100#	−19460#	320#
	Pa	91	19790#	450#	650#	210#	8600#	200#	*		7040#	200#	*	
210	Au	79	7530#	500#	*		*		11640#	400#	*		2920#	410#
	Hg	80	8170#	200#	19090#	450#	1980#	360#	9430#	200#	*		280#	200#
	Tl	81	8635	12	17610#	300#	2780	14	5545	12	−13860#	400#	289	12
	Pb	82	9122.1	0.8	16033	17	3780	8	1225.1	0.8	−13420#	100#	−4541.28	0.20
	Bi	83	12064.4	1.9	12615.1	0.9	5036.2	0.8	−2819	8	−8435	3	−6496.6	1.6
	Po	84	14626.2	1.3	8782.47	0.13	5407.53	0.07	−6349	5	−5635.3	0.4	−11141	5
	At	85	15646	12	7680	8	5631.2	1.0	−8630	15	−1003	8	−11104	13
	Rn	86	16091	11	6712	5	6159.0	2.2	−10046	10	−527	5	−13893	12
	Fr	87	16819	17	5452	16	6671	5	−12040	60	2251	14	−13273	15
	Ra	88	17432	13	4480	14	7150	3	−13616	20	2094	14	−16480	60
	Ac	89	18200	60	3210	60	7600	60	−15640	60	5190	60	−15640#	120#
	Th	90	18780	25	2251	20	8070	5	*		4910	19	−19090#	200#
	Pa	91	19460#	300#	993	24	8445	15	*		8200	60	*	
211	Hg	80	8040#	220#	*		1590#	450#	9990#	200#	*		680#	200#
	Tl	81	8570	40	17980#	400#	2600#	300#	5780	40	−15760#	400#	580	40
	Pb	82	9027.2	0.4	16470#	100#	3529	6	1941.2	0.5	−12480#	200#	−3771.3	0.8
	Bi	83	9739.3	1.1	12787	4	6750.4	0.5	−208.1	2.6	−9897	12	−3973.0	0.8
	Po	84	12209.1	1.5	9403.7	0.6	7594.6	0.5	−3677	7	−4993.5	0.9	−8532	8
	At	85	14906	5	7966.6	2.4	5982.4	1.3	−7507	12	−4144.3	2.4	−10114	5
	Rn	86	15958	12	6967	7	5965.5	1.4	−9589	8	−91	7	−13484	15
	Fr	87	16500	17	5834	13	6662	3	−11280	50	544	14	−12653	15
	Ra	88	17168	8	4805	11	7041.8	2.9	−13080	50	3148	7	−15940	60
	Ac	89	17850	80	3650	50	7570	50	−14910	90	3200	50	−14990	50
	Th	90	18490#	120#	2520	50	7950	50	−16610#	400#	6190	50	−18490	60
	Pa	91	19170#	210#	1370	90	8480	40	*		6070	90	*	
	U	92	*		310#	410#	8750#	400#	*		9180#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
212	Hg	80	4620#	360#	*		13320#	300#	11270#	500#	10490#	500#	*	
	Tl	81	3540#	210#	8340#	280#	7080#	200#	14460#	280#	11910#	220#	6780#	450#
	Pb	82	5132.6	0.4	8760	40	1107.0	3.0	12405	12	10957	3	6690#	100#
	Bi	83	4338.6	1.0	4919.6	0.6	−4607	9	17316.8	1.0	14348.8	0.6	11170	3
	Po	84	6008.2	0.5	5803.7	0.8	−10171	10	15132.7	0.8	12752.7	0.8	12883.7	0.3
	At	85	5052	3	3484.1	2.2	−15928	22	18036.3	2.1	12602.5	2.5	15276.8	2.0
	Rn	86	7976	7	4302	4	−20775	11	14023	8	9087	6	13353	3
	Fr	87	7447	15	2049	11	−25110	60	16800	10	10289	13	15015	10
	Ra	88	9104	11	3348	16	−28090#	300#	13855	17	8447	15	14387	14
	Ac	89	7920	60	823	22	*		17568	24	10305	23	16728	25
	Th	90	9870	50	2320	50	*		14130	60	8130	60	15902	12
	Pa	91	8540	100	−380	80	*		18240	60	10190#	120#	18390	80
	U	92	10710#	500#	1460#	310#	*		14260#	300#	7670#	360#	17270#	320#
213	Hg	80	2990#	420#	*		14680#	300#	*		10500#	500#	*	
	Tl	81	4740#	200#	8460#	300#	8364	27	13000#	200#	11950#	200#	5040#	400#
	Pb	82	3720	7	8940#	200#	2494	7	13590	40	10909	13	7740#	200#
	Bi	83	5181.4	0.6	4968.5	0.4	−1679	5	15970.0	0.4	14360.0	0.8	9661	12
	Po	84	4347.0	2.6	5812.1	2.7	−6992	10	15920.4	2.8	13010.3	2.8	13729.2	2.8
	At	85	6023	5	3499	5	−12721	13	16564	5	14238	5	13859	5
	Rn	86	5108	4	4357	4	−17817	10	16661	4	11140	8	15904	3
	Fr	87	8110	10	2183	6	−23210	60	15913	8	10914	7	14065	9
	Ra	88	7526	14	3427	13	−27090#	200#	15197	15	8554	17	15597	11
	Ac	89	9230	25	949	15	*		16019	13	10563	15	15131	18
	Th	90	8065	14	2468	24	*		15690	50	8290	60	17325	13
	Pa	91	10000	80	−250	60	*		16450	80	10460	60	16610	80
	U	92	8520#	360#	1440#	210#	*		16100#	210#	7970#	200#	19030#	200#
214	Hg	80	4330#	500#	*		16240#	400#	*		*		*	
	Tl	81	3390#	200#	8860#	360#	9850#	200#	14230#	360#	11830#	280#	*	
	Pb	82	5053	7	9257	27	4137	9	12080#	200#	10760	40	5960#	200#
	Bi	83	4040	11	5288	13	−242	14	17063	11	14155	11	10520	40
	Po	84	5895.7	2.8	6526.4	0.9	−4562	5	14363.3	1.0	12249.2	1.1	11668.2	0.8
	At	85	4871	6	4023	5	−9813	14	17702	4	13918	4	14122	4
	Rn	86	6695	10	5030	10	−15013	14	15019	9	12191	9	13759	9
	Fr	87	5476	10	2551	9	−20350	80	18412	9	12661	11	16335	9
	Ra	88	8325	11	3643	7	−25087	26	14318	10	9096	13	14494	8
	Ac	89	7779	18	1202	17	*		17344	17	10465	14	16220	18
	Th	90	9499	14	2737	16	*		14105	24	8410	50	15506	12
	Pa	91	8340	100	20	80	*		17990	80	10340	90	17900	90
	U	92	10330#	200#	1770	60	*		14300	70	7990	80	16910	60
215	Hg	80	2840#	570#	*		17540#	400#	*		*		*	
	Tl	81	4510#	360#	9030#	500#	11280#	300#	12710#	420#	11940#	420#	*	
	Pb	82	3540	50	9410#	200#	5510	50	13270	60	10760#	210#	7040#	310#
	Bi	83	5240	12	5476	6	1312	9	15543	9	14047	5	8830#	200#
	Po	84	4142.2	1.0	6629	11	−3073	7	15402.5	0.6	12445.6	0.8	12658.5	0.7
	At	85	5945	5	4072	4	−7284	13	16104	5	13981	4	12516	4
	Rn	86	4920	10	5078	6	−12091	8	16122	7	12324	6	14848	5
	Fr	87	6794	11	2651	11	−17490	80	16725	8	13842	8	14593	7
	Ra	88	5632	9	3798	11	−22400	80	16796	9	10911	11	16838	8
	Ac	89	8474	18	1350	13	*		16395	16	11094	16	15193	15
	Th	90	7842	12	2800	15	*		15492	13	8487	23	16768	12
	Pa	91	9660	110	180	80	*		16400	80	10560	80	16150	80
	U	92	8320	80	1750	110	*		15980	100	8200	100	18460	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
212	Hg	80	7890#	360#	*		1320#	500#	10500#	300#	*		960#	300#
	Tl	81	8450#	200#	18520#	450#	2240#	360#	6570#	200#	*		870#	200#
	Pb	82	8967.2	0.9	16830#	200#	3296	17	2816.9	0.4	−14340#	200#	−3769.2	0.9
	Bi	83	9473.3	0.9	13453	12	6207.26	0.03	505.6	2.2	−9330	40	−3760.8	0.7
	Po	84	10558.99	0.17	10219.4	0.8	8954.20	0.11	−1709.9	2.9	−7167.08	0.22	−6794.1	2.5
	At	85	12798	8	8414.2	2.0	7817.1	0.6	−5113	9	−4061.8	2.3	−7944	7
	Rn	86	15199	5	7284.4	2.9	6385.1	2.6	−8461	11	−3516.0	3.0	−12592	12
	Fr	87	16315	16	6121	12	6529.0	1.6	−10815	24	843	9	−12420	10
	Ra	88	16784	14	5173	11	7031.7	1.7	−12314	14	1268	12	−15410	50
	Ac	89	17540	60	3935	26	7541	24	−14290	60	4150	25	−14690	60
	Th	90	18086	20	2906	14	7958	5	−15780#	300#	3992	11	−18010	80
	Pa	91	18890	60	1680	80	8410	60	*		7160	80	−17010#	400#
	U	92	*		750#	300#	8770#	300#	*		6690#	300#	*	
213	Hg	80	7610#	360#	*		*		11230#	300#	*		1510#	360#
	Tl	81	8280	50	*		2040#	400#	7017	27	*		1266	27
	Pb	82	8853	7	17280#	200#	2970#	100#	3444	7	−13440#	300#	−3151	7
	Bi	83	9520.0	0.9	13730	40	5988	3	1347	5	−10970#	200#	−2934.0	0.3
	Po	84	10355.3	2.7	10731.8	2.6	8536.7	2.6	−949	4	−6381.5	2.7	−6089	3
	At	85	11075	5	9302	5	9254	5	−3026	7	−5746	5	−5991	6
	Rn	86	13083	7	7841	3	8245.2	2.9	−6043	10	−2616	3	−10253	9
	Fr	87	15557	13	6485	5	6904.7	1.3	−9695	13	−2215	5	−11426	11
	Ra	88	16629	11	5476	12	6861.7	2.3	−11774	13	1718	10	−15024	24
	Ac	89	17150	50	4297	17	7498	4	−13520	60	2368	15	−14045	16
	Th	90	17940	50	3291	10	7837	7	−15320#	200#	5031	14	−17540	60
	Pa	91	18540	90	2060	80	8384	12	*		5070	60	−16300#	310#
	U	92	19230#	450#	1050#	210#	8750#	230#	*		8040#	200#	*	
214	Hg	80	7320#	500#	*		*		11960#	400#	*		1920#	400#
	Tl	81	8130#	280#	*		1650#	450#	7670#	200#	*		1600#	200#
	Pb	82	8772.9	1.7	17710#	300#	2690#	200#	4286.7	1.8	−15500#	300#	−3022.1	1.7
	Bi	83	9221	11	14230#	200#	5621	3	2178	12	−10275	29	−2627	11
	Po	84	10242.7	0.8	11494.9	0.9	7833.54	0.06	−150	9	−8557	7	−5962	5
	At	85	10894	4	9835	4	8988	4	−2420	9	−5436	4	−5754	5
	Rn	86	11803	10	8528	9	9208	9	−4413	10	−4963	9	−8838	10
	Fr	87	13586	12	6909	9	8589	4	−7393	16	−1668	10	−9377	13
	Ra	88	15851	11	5825	6	7271.6	2.4	−10601	12	−1500	6	−14120	13
	Ac	89	17008	26	4629	16	7351.9	2.5	−12960	80	2699	14	−13758	16
	Th	90	17564	15	3686	15	7826	5	−14486	28	3058	14	−17040	60
	Pa	91	18340	100	2480	80	8270	50	*		5960	80	−16120#	220#
	U	92	18850#	300#	1514	27	8696	18	*		5769	27	*	
215	Hg	80	7170#	500#	*		*		12660#	400#	*		2460#	450#
	Tl	81	7900#	300#	*		*		8400#	300#	*		2140#	300#
	Pb	82	8600	50	18270#	310#	2420#	210#	4880	50	−14720#	400#	−2530	50
	Bi	83	9280	5	14733	28	5280	40	2883	7	−12120#	200#	−1971	6
	Po	84	10037.9	2.7	11917	7	7526.0	0.6	627	5	−7646.5	1.7	−5233	4
	At	85	10816	6	10598	4	8178	4	−1571	8	−7341	12	−5004	10
	Rn	86	11615	6	9101	6	8840	5	−3700	9	−3987	5	−8281	10
	Fr	87	12271	8	7680	8	9540	7	−5713	14	−3592	8	−7846	9
	Ra	88	13957	12	6350	8	8862.4	2.3	−8391	10	−437	12	−11973	15
	Ac	89	16253	17	4993	13	7746	3	−11780	80	−299	15	−12733	16
	Th	90	17340	11	4002	12	7665	4	−14010	80	3541	8	−16540	80
	Pa	91	17990	100	2910	80	8240	60	*		4080	80	−15440	80
	U	92	18650#	220#	1770	80	8590	60	*		6950	80	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
216	Hg	80	4150#	570#	*		19140#	400#	*		*		*	
	Tl	81	3230#	420#	9420#	500#	12620#	300#	13810#	500#	11700#	420#	*	
	Pb	82	4900#	210#	9810#	360#	7260#	200#	11760#	280#	10590#	200#	5130#	360#
	Bi	83	3826	12	5760	50	2904	12	16769	11	13941	13	9737	29
	Po	84	5751.5	0.6	7140	5	−1512	8	13691	11	11875.5	0.4	10627	7
	At	85	4566	5	4496	3	−5898	10	17433	3	13762	4	13131	3
	Rn	86	6652	7	5786	6	−10048	12	14340	6	11694	7	12542	6
	Fr	87	5418	8	3149	6	−14859	23	18002	10	13532	5	15197	6
	Ra	88	7312	11	4317	11	−19778	21	14960	12	11709	9	14633	9
	Ac	89	5952	15	1670	12	−24900#	400#	18769	11	12668	13	17351	10
	Th	90	8696	13	3022	17	*		14575	17	9021	16	15598	15
	Pa	91	8050	80	382	24	*		17848	25	10574	25	17335	26
	U	92	9930	80	2030	80	*		14390	80	8270	60	16594	21
	Np	93	*		−830#	410#	*		18580#	400#	10470#	450#	19040#	400#
217	Tl	81	4280#	500#	9550#	570#	14270#	400#	12370#	570#	11750#	570#	*	
	Pb	82	3320#	360#	9900#	420#	8600#	300#	12940#	420#	10660#	360#	6140#	500#
	Bi	83	5215	21	6070#	200#	4416	19	15100	60	13778	18	7910#	200#
	Po	84	3965	6	7279	13	−4	9	14966	8	11950	13	11715	6
	At	85	5930	3	4674.5	0.9	−4309	10	15645.1	1.0	13727.4	1.2	11241	11
	Rn	86	4655	6	5875	5	−8540	11	15630	5	11910	5	13783	4
	Fr	87	6728	7	3225	8	−12740	14	16194	8	13499	11	13340	7
	Ra	88	5473	11	4371	8	−17080#	80#	16282	10	11712	11	15856	12
	Ac	89	7519	14	1877	13	−22380#	300#	16882	12	13474	11	15308	13
	Th	90	6163	15	3233	14	*		16886	16	10637	17	17761	12
	Pa	91	8847	26	532	17	*		16843	14	11226	16	16268	18
	U	92	8170#	80#	2150#	80#	*		15880#	110#	8440#	110#	17920#	80#
	Np	93	10040#	500#	−720#	300#	*		16860#	310#	10770#	300#	17340#	310#
218	Tl	81	3020#	570#	*		15610#	400#	13500#	570#	11580#	570#	*	
	Pb	82	4700#	420#	10320#	500#	10410#	300#	11470#	420#	10460#	420#	4280#	500#
	Bi	83	3590	30	6330#	300#	6158	27	16420#	200#	13740	60	8830#	300#
	Po	84	5600	6	7664	18	1711	10	13192	11	11590	6	9660	50
	At	85	4365	11	5074	13	−2750	60	17032	11	13505	11	12116	13
	Rn	86	6520	4	6465.0	2.2	−7162	9	13676	4	11334	4	11404.6	2.1
	Fr	87	5327	7	3896	6	−11591	18	17520	6	13092	7	13959	6
	Ra	88	7315	12	4959	12	−15247	16	14385	11	11191	12	13460	11
	Ac	89	5920	60	2330	60	−19870#	210#	18270	60	13190	60	16180	60
	Th	90	7898	14	3612	13	*		14940	13	11212	15	15494	11
	Pa	91	6476	22	845	21	*		19063	21	12591	19	18265	22
	U	92	9150#	80#	2451	18	*		14773	26	8950	80	16616	14
	Np	93	8430#	360#	−460#	220#	*		18360#	200#	10660#	220#	18560#	220#
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	3745	16	7820	30	3288	17	14662	24	11671	19	10820#	200#
	At	85	5775	12	5249	3	−1170	50	15223	7	13481.9	2.9	10168	12
	Rn	86	4458.5	2.1	6559	11	−5640	9	15147.6	1.0	11442	3	12697.7	0.6
	Fr	87	6510	6	3885	5	−9960	70	15665	6	13234	6	12015	5
	Ra	88	5322	11	4954	7	−13903	15	15791	9	11287	7	14790	8
	Ac	89	7350	80	2360	50	−17840	90	16390	50	13140	50	14240	50
	Th	90	5981	13	3670	60	*		16478	14	11183	13	16825	12
	Pa	91	8140	70	1080	70	*		17090	70	13150	70	16080	70
	U	92	6666	19	2642	22	*		16953	18	10331	27	18646	17
	Np	93	9380#	220#	−230	80	*		17150#	110#	11210	80	17230	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	2140#	360#	5730#	200#	−16780#	450#	−2190#	200#
	Bi	83	9067	16	15170#	200#	5000#	200#	3623	12	−11450#	300#	−1655	11
	Po	84	9893.8	0.8	12615.7	1.7	6906.98	0.25	1528	5	−9850	50	−5040	4
	At	85	10511	5	11125	12	7950	3	−719	5	−6667	6	−4651	6
	Rn	86	11572	10	9857	5	8195	5	−3040	9	−6498	5	−8139	9
	Fr	87	12213	9	8228	5	9174	3	−5179	10	−3065	5	−7632	8
	Ra	88	12944	9	6967	12	9526	7	−7008	14	−2830	9	−10812	15
	Ac	89	14426	16	5469	12	9240.8	2.9	−9680	25	543	12	−10844	11
	Th	90	16538	15	4372	12	8072	4	−12770	22	477	13	−15580	80
	Pa	91	17710	80	3181	27	8106	7	−15220#	400#	4510	26	−15170	80
	U	92	18250	30	2203	22	8529	16	*		4857	20	*	
	Np	93	*		920#	410#	9040#	400#	*		7960#	410#	*	
217	Tl	81	7510#	500#	*		*		9930#	400#	*		3080#	450#
	Pb	82	8230#	310#	19320#	500#	1810#	420#	6380#	300#	−15950#	500#	−1690#	300#
	Bi	83	9042	19	15880#	300#	4520	30	4338	18	−13430#	300#	−1119	18
	Po	84	9717	6	13040	50	6662.1	2.4	2218	7	−8920#	200#	−4439	7
	At	85	10497	4	11815	6	7201.0	0.9	79	6	−8771	11	−3928	5
	Rn	86	11308	6	10371	4	7887.2	2.9	−2223	8	−5401	4	−7376	6
	Fr	87	12146	9	9011	7	8469	4	−4388	12	−5226	7	−7047	10
	Ra	88	12785	10	7520	9	9161	6	−6317	13	−1650	9	−10333	12
	Ac	89	13471	16	6193	12	9832	9	−8352	16	−1557	11	−9667	15
	Th	90	14859	12	4903	13	9435	4	−10770#	80#	1627	13	−13695	25
	Pa	91	16890	80	3554	18	8489	4	−14030#	300#	1615	16	−14085	23
	U	92	18100#	110#	2530#	80#	8430#	80#	*		5380#	80#	−18150#	410#
	Np	93	*		1300#	310#	9000#	310#	*		5960#	300#	*	
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#	5117	29	−12730#	400#	−739	28
	Po	84	9565.2	1.7	13730#	200#	6114.75	0.09	3139.0	2.6	−11190#	300#	−4108.4	1.9
	At	85	10295	12	12353	16	6876.1	2.6	1041	12	−7920	21	−3638	12
	Rn	86	11176	5	11139.5	2.0	7262.4	1.8	−1428	10	−7957	7	−7169	6
	Fr	87	12054	6	9771	5	8013.7	1.4	−3790	60	−4623	4	−6901	8
	Ra	88	12788	13	8183	11	8540	3	−5735	13	−4310	10	−10129	14
	Ac	89	13440	60	6700	60	9390	60	−7800	60	−750	60	−9420	60
	Th	90	14061	14	5489	12	9862	7	−9513	15	−799	11	−12747	15
	Pa	91	15323	29	4078	20	9791	12	−12070#	200#	2658	20	−12390#	80#
	U	92	17318	23	2984	17	8774	7	*		2397	17	−17260#	300#
	Np	93	18470#	450#	1690#	200#	8900#	220#	*		6380#	200#	*	
219	Pb	82	7780#	500#	*		1200#	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#	−3489	20
	At	85	10139	3	12912	18	6342	5	1776	5	−10109	27	−2892	4
	Rn	86	10979	4	11633	6	6946.14	0.29	−564	6	−6815.2	1.7	−6301	4
	Fr	87	11837	7	10350	4	7448.6	1.8	−2950	50	−6768	12	−6096	11
	Ra	88	12637	9	8850	7	8138	3	−5075	11	−3112	6	−9530	60
	Ac	89	13280	50	7320	50	8830	50	−7010	90	−2780	50	−8880	50
	Th	90	13879	14	5997	12	9513	6	−8828	16	536	13	−12252	20
	Pa	91	14610	70	4700	70	10130	70	−10830	110	440	90	−11380	70
	U	92	15820#	80#	3487	17	9950	12	*		3629	16	−15500#	200#
	Np	93	17810#	310#	2220	80	9183	13	*		3480	80	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	4994	19	12760	30	11398	25	8650#	300#
	At	85	4091	14	5595	21	633	15	16731	14	13356	15	11292	23
	Rn	86	6292.9	0.6	7077.2	2.9	−4080	14	13219	11	11079.2	0.9	10370	6
	Fr	87	5214	5	4641	4	−8817	12	16971	4	12676	5	12731	4
	Ra	88	7195	9	5639	8	−12640#	100#	13922	8	10820	9	12251	7
	Ac	89	5900	50	2940	8	−16780	60	17810	11	12719	9	15075	9
	Th	90	7852	16	4170	50	*		14550	60	10850	17	14446	15
	Pa	91	6360	70	1464	14	*		18626	14	12952	15	17238	15
	U	92	8460#	100#	2960#	120#	*		14970#	100#	10720#	100#	16350#	100#
	Np	93	6970	100	70	60	*		19340	60	12410#	100#	19110	60
221	Bi	83	4830#	420#	7220#	500#	10930#	300#	14290#	500#	13440#	420#	6140#	500#
	Po	84	3561	26	8480#	300#	6803	20	14170#	200#	11420	30	9790#	300#
	At	85	5664	20	5770	23	2260	50	14812	21	13291	14	9210	30
	Rn	86	4207	5	7193	15	−2467	9	14787	6	11237	13	11763	6
	Fr	87	6273	4	4621.4	0.7	−7100	60	15156.7	0.9	12922.8	2.1	10822	11
	Ra	88	5370	8	5795	6	−11550	70	15062	6	10776	6	13401	5
	Ac	89	7290	50	3040	50	−15390#	210#	15840	50	12740	50	13110	50
	Th	90	5820	16	4093	10	−18990#	300#	16080	50	10950	60	15942	12
	Pa	91	7990	60	1600	60	*		16620	60	12860	60	15170	80
	U	92	6460#	120#	3060	70	*		16650	100	10730	70	17790	70
	Np	93	8680#	210#	290#	220#	*		17330#	200#	12880#	200#	16910#	200#
	Pu	94	*		1880#	310#	*		17230#	310#	10070#	360#	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	4332	16	16400	24	13136	22	10280#	200#
	Rn	86	6173	6	7701	14	−829	10	12706	14	10839	3	9336	16
	Fr	87	4968	7	5383	9	−5690	90	16481	7	12413	7	11629	8
	Ra	88	6723	6	6244	4	−9900	12	13553	5	10564	6	11137	4
	Ac	89	5970	50	3639	6	−14650	40	17062	8	12091	7	13647	6
	Th	90	7811	13	4610	50	−17650#	300#	14167	12	10490	50	13452	12
	Pa	91	6380	110	2160	90	*		18090	90	12460	90	16150	100
	U	92	8370	70	3440	60	*		14637	16	10500	70	15397	15
	Np	93	6710#	200#	530	80	*		19070#	110#	12840	40	18340	80
	Pu	94	9150#	420#	2350#	360#	*		15040#	310#	10300#	310#	17200#	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	5600	15	14365	24	13029	23	8120#	300#
	Rn	86	4052	8	7852	18	1004	11	14318	16	10878	16	10773	19
	Fr	87	6067	8	5277.6	1.8	−3950	80	14621	5	12638.5	0.9	9653	14
	Ra	88	5158	4	6434	7	−8823	17	14668.8	0.9	10620	4	12271.9	0.6
	Ac	89	6864	6	3781	6	−12830	80	15568	6	12422	8	11997	6
	Th	90	5885	12	4524	8	−16730#	300#	15570	50	10507	9	14762	10
	Pa	91	7800	120	2150	80	−20480#	310#	16110	80	12510	80	14240	80
	U	92	6235	21	3300	90	*		16390	60	10627	20	17015	22
	Np	93	8690	90	850	80	*		16850	110	12610#	130#	16010	80
	Pu	94	6800#	420#	2440#	300#	*		16920#	360#	10460#	310#	18850#	320#
	Am	95	*		−680#	420#	*		17600#	420#	*		17950#	310#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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	9235	18	14940#	300#	5330#	200#	4656	18	−12650#	400#	−3204	18
	At	85	9866	18	13420	30	6077	18	2899	14	−9230#	200#	−2525	14
	Rn	86	10751.4	2.0	12325.7	1.6	6404.77	0.10	338	6	−9363	16	−6084	4
	Fr	87	11724	5	11200	12	6800.9	1.8	−2266	7	−6208	5	−5988	7
	Ra	88	12517	12	9524	7	7595	4	−4418	15	−5848	6	−9370	50
	Ac	89	13250	60	7894	7	8348	4	−6551	13	−2166	7	−8797	11
	Th	90	13833	16	6534	17	8973	11	−8220#	100#	−1995	15	−11970	70
	Pa	91	14498	21	5140	60	9719	6	−10230	60	1440	50	−11074	17
	U	92	15120#	100#	4040#	100#	10190#	100#	*		1150#	100#	−14570#	130#
	Np	93	16340#	210#	2710	60	10260	50	*		4650	90	*	
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	3508	14	−11470#	300#	−1896	14
	Rn	86	10500	5	12787	17	6163	3	1501	7	−8081	18	−5076	6
	Fr	87	11487	4	11698.6	3.0	6457.8	0.9	−1250	50	−8390	14	−5066	6
	Ra	88	12565	7	10436	4	6880.4	2.0	−3969	9	−4926	4	−8843	7
	Ac	89	13190	70	8670	50	7780	50	−5850	80	−4240	50	−8240	50
	Th	90	13672	12	7032	10	8626.1	2.4	−7580	70	−619	10	−11426	13
	Pa	91	14350	90	5770	80	9250	60	−9540#	210#	−660	60	−10610#	120#
	U	92	14920	70	4530	70	9890	70	−11410#	310#	2540	70	−14070	90
	Np	93	15650#	220#	3250#	210#	10430#	200#	*		2330#	200#	*	
	Pu	94	*		1950#	300#	10530#	310#	*		5730#	320#	*	
222	Bi	83	8150#	420#	*		2820#	500#	8000#	300#	*		1110#	300#
	Po	84	8920	40	16220#	400#	4430#	300#	6120	40	*		−2370	40
	At	85	9565	21	14580#	300#	5310	30	4575	18	−10540#	300#	−1590	17
	Rn	86	10379.5	1.6	13471	18	5590.4	0.3	2051	4	−10692	20	−4975.8	1.7
	Fr	87	11242	8	12576	16	5854	14	−243	9	−7694	16	−4664	9
	Ra	88	12093	8	10866	4	6678	4	−2880	11	−7441	7	−8280	50
	Ac	89	13265	7	9434	6	7137.4	2.0	−5450	90	−3943	5	−8390	9
	Th	90	13631	17	7648	12	8130.5	2.8	−7020	16	−3060	11	−11250	60
	Pa	91	14370	90	6250	90	8790	60	−9200	100	260	100	−10520	110
	U	92	14840#	100#	5046	18	9416	8	−10630#	300#	−9	14	−13760#	200#
	Np	93	15390	70	3600	40	10200	30	*		3610	70	−12730#	300#
	Pu	94	*		2640#	320#	10530#	300#	*		3040#	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#	−1014	14
	Rn	86	10225	9	13962	21	5283	18	3157	8	−9390	40	−4060	11
	Fr	87	11035.7	1.1	12979	14	5561.4	2.8	554	4	−9860	16	−4009	4
	Ra	88	11880	4	11817	5	5978.98	0.21	−2152	7	−6426.6	1.7	−7459	5
	Ac	89	12840	50	10025	4	6783.2	1.0	−4510	80	−5839	9	−7443	11
	Th	90	13696	10	8163	8	7567	4	−6671	19	−2223	8	−10760	90
	Pa	91	14180	100	6760	90	8340	60	−8320	110	−1570	80	−9950	80
	U	92	14610	70	5461	19	9163	15	−10060#	300#	1568	20	−13290	40
	Np	93	15400#	220#	4290	100	9650	40	−12160#	310#	1300	120	−12260#	310#
	Pu	94	15950#	420#	2980#	310#	10400#	300#	*		4610#	300#	*	
	Am	95	*		1670#	360#	10980#	310#	*		4260#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	11090#	200#	11670#	360#	10570#	360#	*	
	At	85	3788	26	6660#	200#	7482	23	15940	50	12801	30	9160#	300#
	Rn	86	6016	13	8272	17	2452	13	12203	19	10526	17	8318	22
	Fr	87	4705	11	5930	14	−2113	13	16089	11	12141	12	10612	18
	Ra	88	6482.9	0.7	6849.6	0.9	−6919	15	13154	7	10410.4	0.7	9996	5
	Ac	89	5670	6	4293	4	−11800	30	16620	5	12122	6	12600	4
	Th	90	7464	11	5124	9	−15120#	300#	14083	9	10330	50	12668	9
	Pa	91	6550	80	2813	10	−19770#	400#	17373	13	11786	11	14980	50
	U	92	8387	23	3880	80	*		14380	90	10230	60	14448	17
	Np	93	6700	90	1310	30	*		18520	30	12380	80	17310	70
	Pu	94	9080#	420#	2840#	310#	*		14550#	300#	10070#	360#	16240#	310#
	Am	95	7260#	500#	−220#	500#	*		19490#	500#	12570#	500#	19370#	450#
225	Po	84	3400#	360#	9780#	500#	12590#	300#	13050#	500#	10490#	420#	*	
	At	85	5480#	200#	6900#	280#	8660#	200#	13930#	280#	12680#	200#	7000#	360#
	Rn	86	3982	15	8466	25	4217	12	13817	18	10445	19	9690	40
	Fr	87	5999	16	5913	15	−520	50	14142	14	12314	12	8514	20
	Ra	88	4899.2	1.8	7044	11	−5375	10	14322.3	2.0	10480	8	11269.3	2.4
	Ac	89	6665	4	4475.1	1.6	−9980	90	15113.1	1.6	12180	4	10904	8
	Th	90	5747	10	5201	6	−14150#	300#	15200	6	10560	7	13644	6
	Pa	91	7590	50	2940	50	−18140#	400#	15660	50	12000	50	13360	50
	U	92	6443	18	3782	12	*		15740	80	10160	90	15816	14
	Np	93	8490	100	1410	90	*		16270	90	12260	90	15190	130
	Pu	94	6710#	420#	2850#	300#	*		16520#	310#	10060#	300#	17900#	300#
	Am	95	9220#	570#	−80#	500#	*		17070#	500#	12490#	500#	16850#	400#
226	Po	84	5100#	500#	*		13880#	400#	11190#	570#	10170#	570#	*	
	At	85	3710#	360#	7210#	420#	10350#	300#	15460#	360#	12450#	360#	8070#	500#
	Rn	86	5858	15	8840#	200#	5550	11	11747	25	10183	17	7320#	200#
	Fr	87	4371	13	6303	13	1488	13	15786	12	11995	10	9739	15
	Ra	88	6398.6	2.3	7443	12	−3659	11	12629	11	10148.3	1.8	8923	8
	Ac	89	5399	3	4975	3	−8430	110	16197.4	2.9	11939.0	3.0	11572	3
	Th	90	7191	6	5727	4	−12359	27	13679	6	10233	6	11610	4
	Pa	91	6380	50	3573	12	−17250#	300#	16751	14	11511	13	13851	12
	U	92	8115	15	4300	50	*		14175	13	9850	80	13586	13
	Np	93	6950	140	1920	110	*		17700	110	11540	110	16040	130
	Pu	94	8990#	300#	3350	100	*		14230	40	9760	90	15150	30
	Am	95	7270#	500#	480#	420#	*		18880#	420#	12020#	420#	18270#	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#	200#	10039	26	8620#	200#
	Fr	87	5909	9	6354	12	2849	8	13859	13	12101	11	7618	23
	Ra	88	4561.43	0.27	7633	6	−1869	8	14066	12	10292	11	10378	10
	Ac	89	6530	3	5106.0	1.8	−6730	80	14566.5	2.0	11891.9	0.9	9747	11
	Th	90	5464	4	5792.4	3.0	−10996	26	14880.1	1.6	10440	4	12629.5	0.7
	Pa	91	7271	12	3653	6	−15440#	200#	15227	7	11704	9	12251	6
	U	92	6351	13	4276	14	*		15420	50	10048	11	14699	11
	Np	93	8230	130	2030	80	*		15920	80	11700	80	14370	80
	Pu	94	6830	40	3220	110	*		15890	100	9630	40	16710	30
	Am	95	9080#	360#	580#	200#	*		16510#	360#	12020#	360#	15880#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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	10068	10	14620	40	4757	20	3624	10	−11920#	200#	−4008	10
	Fr	87	10772	13	13782	19	4948	18	1520	12	−8968	18	−3556	11
	Ra	88	11641	4	12127.2	1.6	5788.96	0.15	−1171	8	−8857	8	−7078	4
	Ac	89	12535	6	10727	8	6326.9	0.7	−3633	8	−5442	4	−7228	8
	Th	90	13349	13	8905	9	7298	5	−5748	17	−4529	8	−10420	80
	Pa	91	14350	90	7337	9	7694	4	−8170	30	−1256	9	−10266	19
	U	92	14621	19	6037	18	8628	7	−9370#	300#	−934	17	−12990	80
	Np	93	15380	50	4610	90	9315	29	−11600#	400#	2410	80	−12160#	300#
	Pu	94	15880#	420#	3690#	300#	9770#	320#	*		1770#	300#	−15780#	420#
	Am	95	*		2220#	400#	10690#	400#	*		5680#	410#	*	
225	Po	84	8640#	360#	*		*		8050#	300#	*		−1200#	300#
	At	85	9270#	200#	16520#	450#	3680#	360#	6480#	200#	−14060#	450#	−220#	200#
	Rn	86	9998	14	15120#	200#	4335	23	4541	11	−10670#	200#	−3286	16
	Fr	87	10704	12	14185	18	4613	18	2185	12	−11179	25	−3072	12
	Ra	88	11382.1	1.8	12974	8	5097	5	−324	5	−7740	10	−6307	4
	Ac	89	12335	5	11324.7	1.8	5935.3	1.4	−2700	50	−7402	11	−6429	8
	Th	90	13211	9	9494	5	6921.4	2.1	−5052	11	−3793	5	−9616	9
	Pa	91	14140	90	8070	50	7390.6	1.7	−7280	100	−3180	50	−9470	50
	U	92	14830	20	6595	12	8005	6	−9100#	300#	87	13	−12740	30
	Np	93	15180	120	5300	120	8820	70	−10860#	410#	470	90	−11570#	310#
	Pu	94	15790#	420#	4160#	300#	9530#	310#	*		3440#	300#	−15230#	500#
	Am	95	16480#	500#	2760#	410#	10150#	450#	*		3160#	400#	*	
226	Po	84	8500#	450#	*		*		8800#	400#	*		−820#	450#
	At	85	9190#	300#	16990#	500#	3290#	420#	7140#	300#	*		60#	300#
	Rn	86	9841	14	15740#	200#	3840	40	5081	11	−13120#	300#	−3145	16
	Fr	87	10371	13	14768	23	4143	17	3212	7	−10070#	200#	−2544	6
	Ra	88	11297.8	1.6	13357	10	4870.70	0.25	469	4	−10157	11	−6040.4	2.2
	Ac	89	12063	5	12018	12	5505	8	−1725	12	−6802	12	−6080	6
	Th	90	12939	9	10202	4	6452.5	1.0	−4128	12	−6086	4	−9210	50
	Pa	91	13971	13	8774	12	6987	10	−6700	110	−2892	11	−9408	15
	U	92	14558	19	7246	14	7701	4	−8231	29	−2281	12	−12360	90
	Np	93	15440	110	5700	110	8240	60	−10550#	320#	1110	120	−11810#	320#
	Pu	94	15700#	300#	4760	30	8912	24	*		899	29	−15000#	400#
	Am	95	16490#	500#	3330#	300#	9580#	300#	*		4370#	310#	*	
227	Po	84	8440#	500#	*		*		9400#	400#	*		−450#	500#
	At	85	9010#	360#	*		2770#	500#	7750#	300#	*		610#	300#
	Rn	86	9791	18	16270#	300#	3380#	200#	5710	14	−11950#	400#	−2706	15
	Fr	87	10281	13	15200#	200#	3830	15	3833	6	−12270#	300#	−2055	6
	Ra	88	10960.0	2.4	13936	11	4362	8	1371.6	1.7	−8860	11	−5203	3
	Ac	89	11928.7	1.7	12549	12	5042.27	0.14	−984	5	−8960	6	−5419	4
	Th	90	12655	5	10766.9	1.8	6146.60	0.10	−3241	8	−5150.7	1.7	−8299	11
	Pa	91	13650	50	9380	5	6580.4	2.1	−5750	80	−4764	6	−8563	12
	U	92	14466	12	7850	9	7235	3	−7755	27	−1441	9	−11760	110
	Np	93	15180	120	6340	90	7819	12	−9690#	210#	−740	80	−11050	80
	Pu	94	15810#	300#	5147	28	8319	19	*		2186	28	−14550#	300#
	Am	95	16350#	450#	3930#	220#	9190#	220#	*		2250#	230#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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#	12980#	400#	15040#	570#	12160#	500#	*	
	Rn	86	5714	23	9480#	300#	8477	18	11290#	300#	9810#	200#	6310#	300#
	Fr	87	4370	9	6791	16	4466	8	15348	12	11714	13	8730#	200#
	Ra	88	6306.0	2.2	8030	6	−276	13	12132	6	9985	12	8054	11
	Ac	89	5024.6	2.0	5569.2	2.3	−4930#	100#	15940.5	2.2	11766.5	2.5	10722	12
	Th	90	7109.3	0.7	6371.6	0.9	−9339	23	13169.4	2.9	9995.3	1.6	10419.4	1.8
	Pa	91	5986	6	4175	4	−14100#	300#	16432	6	11465	6	12929	4
	U	92	7899	15	4905	13	*		13895	17	9740	50	12547	13
	Np	93	6830#	130#	2510#	100#	*		17210#	100#	11320#	100#	15130#	110#
	Pu	94	8770	30	3760	80	*		14080	110	9350	90	14384	25
	Am	95	7320#	360#	1070#	300#	*		18170#	300#	11410#	420#	17050#	310#
229	At	85	5060#	570#	*		14200#	400#	13320#	570#	12210#	570#	*	
	Rn	86	3952	22	9810#	400#	9776	13	12640#	300#	9570#	300#	7460#	400#
	Fr	87	5787	8	6864	18	5772	6	13493	15	11785	12	6660#	300#
	Ra	88	4451	16	8111	17	1344	16	13590	17	9905	17	9461	19
	Ac	89	6277	12	5541	12	−3090	80	14225	12	11888	12	8816	14
	Th	90	5251.8	1.5	6598.9	2.3	−7810	60	14447.7	1.7	10142	3	11566.2	2.1
	Pa	91	7094	5	4159.5	2.7	−12280	110	14802.3	2.7	11563	5	11234	4
	U	92	6071	14	4990	7	*		15095	7	10049	13	13667	7
	Np	93	8110#	130#	2720	80	*		15450	80	11320	80	13400	80
	Pu	94	6790	60	3720#	120#	*		15520	100	9520	120	15710	60
	Am	95	8910#	320#	1220	110	*		16090	110	11490	110	15090	150
230	Rn	86	5260#	200#	10010#	450#	11310#	200#	11000#	450#	9600#	360#	5540#	450#
	Fr	87	4253	8	7165	15	7314	7	14954	19	11465	16	7700#	300#
	Ra	88	6117	19	8441	11	2902	11	11843	12	9698	12	7277	17
	Ac	89	4923	20	6013	22	−1400	60	15608	16	11526	16	9802	17
	Th	90	6796.2	1.5	7118	12	−6067	14	12676.0	1.6	9876.0	1.0	9331.4	1.5
	Pa	91	5795	4	4703	3	−10770#	230#	16116.6	2.9	11231.8	2.9	11969.5	3.0
	U	92	7674	7	5571	5	−14810#	300#	13407	6	9645	6	11456	4
	Np	93	6620	100	3270	60	*		16730	60	11050	60	14050	60
	Pu	94	8530	60	4140	80	*		13820#	100#	9210	80	13530	16
	Am	95	7310#	250#	1740#	230#	*		17550#	230#	11000#	230#	16010#	240#
	Cm	96	*		3050#	320#	*		14110#	420#	9010#	360#	15270#	300#
231	Rn	86	3690#	360#	*		12740#	300#	12370#	500#	9530#	500#	*	
	Fr	87	5478	10	7380#	200#	8657	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	11685	13	8025	15
	Th	90	5117.98	0.20	7313	16	−4494	22	13835	12	9782.6	1.7	10519.4	1.5
	Pa	91	6819.7	3.0	4726.2	1.0	−8970#	90#	14548.7	1.7	11521.4	1.0	10174.4	2.0
	U	92	5880	5	5656	3	−13510#	300#	14621	3	9752	4	12685.6	1.8
	Np	93	7680	70	3280	50	−17740#	210#	15120	50	11270	50	12350	50
	Pu	94	6691	26	4220	60	*		15240	80	9350#	100#	14738	25
	Am	95	8620#	250#	1830#	90#	*		15710#	110#	11150#	100#	14210#	140#
	Cm	96	7170#	420#	2910#	380#	*		15850#	320#	9160#	420#	16860#	300#
	Bk	97	*		340#	360#	*		*		*		16000#	360#
232	Fr	87	4079	16	7770#	300#	10131	16	14610#	200#	11574	19	6830#	400#
	Ra	88	5791	15	8873	12	5892	9	11721	11	9693	10	6781	16
	Ac	89	4680	18	6351	17	1800#	100#	15349	17	11457	20	9132	14
	Th	90	6437.8	0.6	7604	13	−2910	16	12321	16	9622	12	8533	15
	Pa	91	5553	8	5161	7	−7400#	220#	15792	7	11220	8	10899	14
	U	92	7272.0	1.8	6107.8	1.0	−11670#	200#	13143.6	2.9	9573.1	2.7	10665.4	1.5
	Np	93	6340#	110#	3740#	100#	−16440#	320#	16450#	100#	11000#	100#	13110#	100#
	Pu	94	8022	27	4560	50	*		13830	60	9440	80	12787	17
	Am	95	7120#	240#	2260#	230#	*		17120#	220#	10810#	230#	15200#	240#
	Cm	96	9120#	360#	3410#	220#	*		14040#	300#	8960#	230#	14530#	210#
	Bk	97	7650#	360#	820#	420#	*		18080#	420#	*		17260#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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#	6302	18	−14330#	400#	−2510	19
	Fr	87	10279	9	15850#	300#	3248	23	4488	7	−11340#	300#	−1863	7
	Ra	88	10867.4	2.1	14384	11	4072	10	2174.9	1.7	−11233	14	−4979.0	1.8
	Ac	89	11555	3	13202	6	4723	11	−22	4	−8075	6	−4979.9	1.9
	Th	90	12573	4	11477.6	1.6	5520.22	0.22	−2451	13	−7698.6	1.6	−8138	5
	Pa	91	13257	12	9968	5	6264.5	1.5	−4910#	100#	−4220	4	−8198	9
	U	92	14251	17	8558	13	6800	9	−6889	26	−3876	13	−11430	80
	Np	93	15050#	150#	6790#	100#	7540#	100#	−9200#	320#	−300#	100#	−11050#	100#
	Pu	94	15590	40	5797	26	7940	18	*		−228	25	−14240#	200#
	Am	95	16400#	420#	4290#	320#	8560#	300#	*		3150#	310#	*	
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#	200#	4978	13	−13500#	400#	−1345	5
	Ra	88	10757	16	14902	21	3603	19	2976	16	−9970	23	−4405	16
	Ac	89	11302	12	13570	13	4444	17	794	12	−9983	14	−4148	12
	Th	90	12361.1	1.5	12168.0	2.1	5167.6	1.0	−1631	6	−6644.4	2.2	−7404	4
	Pa	91	13080	5	10531.1	2.7	5835.8	2.9	−3890	80	−6289	3	−7393	13
	U	92	13970	10	9165	6	6476	3	−6170	60	−2838	6	−10680#	100#
	Np	93	14940	110	7630	80	7020	60	−8400	130	−2420	80	−10390	80
	Pu	94	15550	70	6230	60	7600	60	*		890	60	−13700#	310#
	Am	95	16230#	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	10568	10	15305	20	3344	15	3655	10	−12135	17	−4245	16
	Ac	89	11200	16	14124	17	3893	17	1666	16	−9119	17	−3819	16
	Th	90	12048.0	0.5	12658.3	1.5	4770.0	1.5	−753	4	−8990	15	−7106.2	2.7
	Pa	91	12889	5	11302	3	5439.4	0.7	−3060	60	−5806	12	−7117	6
	U	92	13746	13	9730	4	5992.5	0.5	−5314	15	−5261	4	−10240	80
	Np	93	14730#	110#	8260	60	6780	50	−7700#	230#	−1950	60	−10230	80
	Pu	94	15320	27	6867	19	7178	9	−9490#	300#	−1578	15	−13320	110
	Am	95	16220#	380#	5460#	250#	7780#	200#	*		1870#	240#	*	
	Cm	96	*		4270#	300#	8440#	300#	*		1740#	310#	*	
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	4402	11	−11240#	200#	−3693	19
	Ac	89	11070	18	14483	14	3655	14	2339	13	−11013	15	−3170	13
	Th	90	11914.2	1.5	13325	15	4213.5	1.6	8.8	1.8	−7991	10	−6429.1	2.8
	Pa	91	12614.7	2.6	11844	12	5149.8	0.8	−2200	50	−7703	16	−6262	4
	U	92	13554	6	10358.3	2.3	5576.3	1.7	−4503	22	−4344.4	1.8	−9500	60
	Np	93	14300	90	8850	50	6370	50	−6760#	110#	−3830	50	−9370	50
	Pu	94	15230	60	7487	23	6839	20	−9010#	300#	−595	22	−12700#	230#
	Am	95	15930#	140#	5970#	120#	7380#	50#	−10980#	220#	−130#	110#	−12100#	310#
	Cm	96	*		4650#	310#	8100#	300#	*		3100#	300#	*	
	Bk	97	*		3390#	230#	8680#	280#	*		3140#	300#	*	
232	Fr	87	9557	15	*		1770#	400#	6918	19	*		−215	18
	Ra	88	10162	14	16250#	200#	2829	20	5049	9	−13340#	300#	−3337	16
	Ac	89	10827	21	14910	15	3345	15	3212	15	−10215	15	−2731	13
	Th	90	11555.8	0.6	13646	10	4081.6	1.4	842.9	1.0	−10057	11	−6047.2	1.3
	Pa	91	12373	8	12474	17	4621	8	−1410#	100#	−7110	15	−5935	8
	U	92	13152	4	10834.0	0.5	5413.63	0.09	−3753	16	−6498.4	0.6	−9090	50
	Np	93	14020#	110#	9400#	100#	6010#	100#	−5980#	250#	−3360#	100#	−9030#	100#
	Pu	94	14713	22	7834	17	6716	10	−7910#	200#	−2737	16	−12100#	100#
	Am	95	15740#	320#	6470#	230#	7090#	200#	−10450#	370#	420#	230#	−12050#	370#
	Cm	96	16290#	360#	5240#	200#	7740#	200#	*		670#	200#	−15170#	280#
	Bk	97	*		3730#	380#	8350#	420#	*		4110#	310#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

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	7414	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	7710	13	−1330	50	13681	13	9759	16	9863	10
	Pa	91	6525	7	5248.5	1.0	−5670#	90#	14384.8	0.9	11491.4	0.8	9297	16
	U	92	5756.5	0.9	6311	7	−10370	60	14206.8	1.3	9611.6	3.0	11705.1	1.0
	Np	93	7480#	110#	3950	50	−14940#	240#	14850	50	11200	50	11420	50
	Pu	94	6370	60	4590#	110#	*		15140	70	9690	80	14090	50
	Am	95	8250#	240#	2490#	100#	*		15560#	100#	11090#	100#	13570#	110#
	Cm	96	7050#	210#	3340#	230#	*		15610#	110#	9210#	240#	16010	70
	Bk	97	8980#	380#	670#	310#	*		16280#	380#	11330#	380#	15590#	330#
234	Fr	87	3860#	200#	*		12790#	200#	*		11440#	360#	*	
	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	6190.7	2.3	7983	13	264	7	12170	13	9715	13	8044	12
	Pa	91	5217.7	2.5	5679.8	2.6	−4060#	160#	15604.9	2.6	11391.6	2.5	10226	13
	U	92	6846.2	1.0	6632.4	0.8	−8574	17	12914	7	9585.2	1.0	9976.9	0.5
	Np	93	6060	50	4254	8	−13510#	230#	16061	8	11013	9	12177	8
	Pu	94	7780	50	4890	50	*		13710#	100#	9590	50	12190	7
	Am	95	6830#	190#	2950#	170#	*		16750#	160#	10960#	160#	14420#	170#
	Cm	96	8640	70	3730#	100#	*		14090#	220#	9190#	100#	14057	28
	Bk	97	7490#	330#	1120#	240#	*		17900#	310#	11010#	380#	16720#	250#
235	Fr	87	4950#	360#	*		13960#	300#	*		*		*	
	Ra	88	3870#	200#	9290#	280#	10210#	200#	12920#	200#	9920#	200#	*	
	Ac	89	5555	20	6862	16	6314	14	13734	16	11724	17	6931	20
	Th	90	4667	13	8112	19	1836	24	13421	18	9727	18	9167	16
	Pa	91	6121	14	5610	13	−2340	50	14270	13	11708	13	8784	19
	U	92	5297.41	0.23	6712.1	2.4	−6946	30	14141.3	0.8	9841	7	11117.3	0.8
	Np	93	6983	8	4390.9	0.9	−11680#	110#	14834.0	1.2	11302.1	1.0	10747	7
	Pu	94	6239	21	5062	22	−16240#	300#	14950	50	9690#	100#	13223	20
	Am	95	7840#	170#	3010	50	*		15280	80	11130	50	12920#	110#
	Cm	96	6930	30	3820#	160#	*		15420#	100#	9390#	230#	15150	30
	Bk	97	8820#	260#	1290#	120#	*		16140#	130#	11310#	230#	15030#	250#
	Cf	98	*		2330#	380#	*		16250#	380#	9490#	420#	17800#	360#
236	Ra	88	5260#	360#	9600#	420#	11500#	300#	11520#	360#	9880#	300#	*	
	Ac	89	4210	40	7200#	200#	7850	60	15000	40	11750	40	7950	40
	Th	90	5834	19	8391	20	3358	14	12125	20	9811	19	7568	16
	Pa	91	5030	19	5973	19	−700#	120#	15431	14	11465	14	9672	19
	U	92	6545.40	0.25	7136	13	−5405	17	12813.6	2.4	9820.4	0.7	9358.3	0.8
	Np	93	5740	50	4830	50	−10090#	300#	15940	50	11320	50	11530	50
	Pu	94	7356	20	5434.9	1.0	−14300#	280#	13653	8	9810	50	11623.7	0.9
	Am	95	6660#	130#	3440#	120#	*		16400#	120#	10840#	130#	13740#	130#
	Cm	96	8090	30	4070	60	*		14160#	160#	9560#	100#	13440	60
	Bk	97	7330#	320#	1690#	300#	*		17460#	300#	11040#	310#	15950#	320#
	Cf	98	9300#	410#	2810#	310#	*		14440#	370#	9170#	370#	15550#	290#
237	Ra	88	3660#	500#	*		12960#	400#	12810#	500#	10080#	450#	*	
	Ac	89	5270#	200#	7210#	360#	9150#	200#	13600#	280#	11950#	200#	6540#	280#
	Th	90	4371	21	8550	40	4864	16	13309	21	9978	21	8671	18
	Pa	91	5870	19	6009	19	970#	60#	14229	18	11786	13	8341	19
	U	92	5125.8	0.5	7232	14	−3860	70	13809	13	9912.4	2.5	10423.3	2.2
	Np	93	6570	50	4863.44	0.19	−8210#	220#	14662.25	0.28	11589.4	0.3	10174.7	2.4
	Pu	94	5877.9	1.4	5570	50	−12840	80	14758.3	1.5	10000	8	12591.9	1.3
	Am	95	7540#	130#	3620#	60#	−17730#	400#	15100#	60#	11080#	60#	12260#	60#
	Cm	96	6670	80	4070#	140#	*		15340	90	9720#	180#	14550	70
	Bk	97	8450#	370#	2060#	220#	*		15930#	220#	11230#	220#	14330#	270#
	Cf	98	7330#	300#	2820#	310#	*		15930#	140#	9340#	250#	16860	90
	Es	99	*		180#	490#	*		16590#	500#	*		16490#	460#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

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	5601	9	*		−2892	16
	Ac	89	10597	18	15350	15	3215	14	3819	13	−12054	19	−2211	13
	Th	90	11224.2	0.6	14061	11	3746	15	1813.1	1.2	−9053	9	−5281	7
	Pa	91	12078.1	1.2	12852	13	4374	12	−460	50	−8955	13	−5187.9	0.9
	U	92	13028.5	2.0	11472.6	1.0	4908.9	1.2	−3140	50	−5817.1	1.2	−8510#	100#
	Np	93	13820	70	10050	50	5630	50	−5210#	110#	−5280	50	−8480	50
	Pu	94	14390	60	8320	50	6420	50	−7230	80	−1840	50	−11350#	230#
	Am	95	15380#	130#	7050#	110#	6950#	50#	−9730#	250#	−1490#	140#	−11190#	220#
	Cm	96	16170#	310#	5600	70	7474	20	*		1640	70	−14570#	310#
	Bk	97	16630#	310#	4080#	250#	8280#	210#	*		2260#	320#	*	
234	Fr	87	9090#	200#	*		*		8290#	200#	*		720#	200#
	Ra	88	9709	12	*		2340#	200#	6317	9	*		−2449	16
	Ac	89	10456	19	15810	20	2930	15	4499	14	−11368	24	−1963	14
	Th	90	10977.1	2.3	14461	9	3672	11	2468.5	2.2	−11009	9	−4946.3	2.3
	Pa	91	11743	8	13390	13	4079	16	387	9	−8255	13	−4649.1	2.6
	U	92	12602.7	0.6	11880.9	0.8	4858.9	0.5	−2204	7	−7876.9	0.8	−7870	50
	Np	93	13540#	100#	10565	11	5358	9	−4450#	160#	−4823	8	−8180	50
	Pu	94	14151	17	8834	7	6310	5	−6370	18	−3859	7	−10880#	100#
	Am	95	15080#	280#	7530#	190#	6740#	150#	−9060#	280#	−840#	170#	−10960#	170#
	Cm	96	15700#	200#	6217	23	7365	9	*		−630	60	−14240#	230#
	Bk	97	16470#	380#	4450#	320#	8100	50	*		3020#	250#	*	
235	Fr	87	8810#	300#	*		*		8890#	300#	*		1250#	300#
	Ra	88	9350#	200#	*		2160#	360#	7110#	200#	*		−1780#	200#
	Ac	89	10094	19	16141	24	2852	16	5065	19	−13060#	200#	−1328	14
	Th	90	10858	13	14894	16	3376	17	3099	13	−10202	16	−4396	13
	Pa	91	11339	13	13594	19	4104	19	1249	13	−9838	19	−3924	13
	U	92	12143.6	0.9	12392.0	0.8	4679.5	0.5	−1263	20	−6983.6	2.2	−7107	8
	Np	93	13050	50	11023.3	1.1	5194.3	1.2	−3580	50	−6587.9	2.6	−7378	7
	Pu	94	14020	60	9316	20	5951	20	−5680	40	−3252	20	−10290#	160#
	Am	95	14670#	110#	7900	70	6576	13	−8090#	130#	−2620	50	−10160	60
	Cm	96	15570	70	6770	60	7132	20	−10560#	300#	230	30	−13670#	230#
	Bk	97	16310#	260#	5020#	150#	7900#	70#	*		1030#	200#	*	
	Cf	98	*		3450#	310#	8680#	420#	*		4410#	300#	*	
236	Ra	88	9130#	300#	*		*		7690#	300#	*		−1490#	300#
	Ac	89	9760	40	16490#	200#	2720	40	5890	40	−12320#	300#	−870	40
	Th	90	10501	14	15253	16	3333	17	3810	14	−12160#	200#	−4108	19
	Pa	91	11151	14	14085	20	3755	19	1960	50	−9312	20	−3656	14
	U	92	11842.8	0.3	12746.6	2.2	4571.9	0.8	−452.3	0.6	−8862	13	−6669.6	0.9
	Np	93	12720	50	11550	50	5010	50	−2660#	130#	−6210	50	−6880	50
	Pu	94	13595	7	9825.8	0.6	5867.15	0.08	−4953	17	−5310.7	0.6	−9800	50
	Am	95	14510#	200#	8500#	120#	6260	60	−7430#	320#	−2300#	120#	−9900#	120#
	Cm	96	15011	24	7077	18	7067	5	−9350#	280#	−1621	27	−12940#	120#
	Bk	97	16140#	380#	5510#	340#	7700#	200#	*		1550#	310#	−13030#	420#
	Cf	98	*		4100#	280#	8500#	200#	*		2040#	290#	*	
237	Ra	88	8920#	450#	*		*		8400#	400#	*		−940#	400#
	Ac	89	9480#	200#	16810#	360#	2680#	200#	6490#	200#	*		−310#	200#
	Th	90	10205	21	15750#	200#	3196	18	4565	16	−11270#	300#	−3450	21
	Pa	91	10899	18	14399	19	3803	18	2665	12	−10970	40	−2981	12
	U	92	11671.2	0.5	13205	13	4232.5	0.9	299.8	1.4	−8154	14	−6050	50
	Np	93	12315.4	0.9	12000	13	4957.0	0.7	−1700#	60#	−7752	14	−6098.1	0.6
	Pu	94	13234	20	10406.3	1.3	5745.8	1.5	−4160	70	−4643.2	1.3	−9020#	120#
	Am	95	14200#	80#	9050#	60#	6200#	30#	−6510#	230#	−4090#	80#	−9350#	60#
	Cm	96	14750	80	7510	80	6770	50	−8680	110	−930	70	−12280#	310#
	Bk	97	15780#	250#	6120#	230#	7500#	200#	−11220#	460#	−240#	250#	−12190#	360#
	Cf	98	16630#	310#	4510	90	8220	50	*		2800	90	*	
	Es	99	*		3000#	420#	8990#	460#	*		3550#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
238	Ac	89	3990#	280#	7540#	450#	10650#	200#	14870#	360#	11830#	280#	7500#	360#
	Th	90	5590#	220#	8870#	300#	6280#	220#	11930#	220#	9950#	220#	6960#	300#
	Pa	91	4713	20	6350	22	2470	60	15350	21	11740	21	9183	21
	U	92	6153.4	0.6	7516	12	−2136	12	12685	14	9880	13	8937	13
	Np	93	5488.32	0.20	5226.0	0.5	−6700#	260#	15719.33	0.28	11398.5	0.3	10808	13
	Pu	94	6998.6	1.3	5996.1	0.4	−11000#	300#	13500	50	9984.2	0.9	10890.71	0.28
	Am	95	6220#	80#	3960	60	−16080#	400#	16240	60	11100	60	13020	60
	Cm	96	7880	80	4410#	60#	*		14120#	120#	9680	50	12909	24
	Bk	97	7000#	340#	2390#	270#	*		17020#	260#	11150#	260#	15170#	260#
	Cf	98	8850#	310#	3210#	370#	*		14410#	420#	9310#	320#	14940#	300#
	Es	99	7870#	570#	720#	410#	*		18020#	490#	10940#	500#	17430#	420#
239	Ac	89	5000#	280#	*		11860#	200#	13530#	450#	12090#	360#	*	
	Th	90	4010#	370#	8890#	360#	7910#	300#	13190#	360#	10140#	300#	8210#	420#
	Pa	91	5630#	200#	6390#	290#	3950#	200#	14090#	200#	11950#	200#	7760#	200#
	U	92	4806.38	0.17	7610	16	−570	150	13748	12	10103	14	9965	14
	Np	93	6212.7	0.8	5285.3	0.8	−4940#	210#	14632.4	0.9	11731.2	0.8	9624	14
	Pu	94	5646.1	0.3	6153.9	0.3	−9470	70	14428.88	0.26	10080	50	11790.00	0.24
	Am	95	7100	60	4062.4	1.7	−14260#	230#	15010.1	2.2	11356.7	1.8	11660	50
	Cm	96	6370	150	4560	160	*		15290#	160#	9980#	190#	13900	150
	Bk	97	7970#	330#	2480#	210#	*		15710#	220#	11270#	210#	13860#	240#
	Cf	98	7180#	310#	3390#	270#	*		15680#	230#	9450#	310#	15850	70
	Es	99	8930#	460#	810#	380#	*		16420#	250#	11310#	370#	15830#	380#
240	Th	90	5340#	500#	9230#	450#	9100#	400#	11840#	450#	10070#	450#	6530#	570#
	Pa	91	4400#	280#	6780#	360#	5500#	200#	15280#	300#	11920#	200#	8640#	280#
	U	92	5940.7	1.1	7920#	200#	984.0	1.3	12521	16	10032	13	8395	16
	Np	93	5071	17	5550	17	−3250#	230#	15715	17	11786	17	10423	21
	Pu	94	6534.18	0.22	6475.3	0.8	−7860	17	13383.01	0.24	10119.26	0.13	10381.6	0.5
	Am	95	5952	14	4369	14	−12690#	310#	16056	14	11282	14	12285	14
	Cm	96	7500	150	4958.9	1.9	*		14010	60	10020#	60#	12275.7	1.5
	Bk	97	6760#	310#	2880#	280#	*		16830#	230#	11170#	240#	14640#	240#
	Cf	98	8140	70	3560#	210#	*		14540#	260#	9770#	220#	14380	80
	Es	99	7520#	390#	1140#	320#	*		17750#	430#	11130#	320#	16760#	380#
241	Th	90	3570#	570#	*		10780#	400#	13270#	450#	10500#	450#	*	
	Pa	91	5340#	360#	6780#	500#	6810#	300#	13950#	420#	12160#	370#	7290#	360#
	U	92	4540	40	8060#	210#	2540	40	13610#	200#	10210	50	9440#	220#
	Np	93	5990	30	5594	29	−1580#	180#	14536	29	11954	29	9150	30
	Pu	94	5241.52	0.03	6646	17	−6230	70	14354.2	0.8	10366.06	0.24	11293.5	0.4
	Am	95	6647	14	4481.45	0.04	−10830#	220#	15055.47	0.23	11633.9	0.4	11126.13	0.23
	Cm	96	6090.5	1.4	5097	14	−15500#	300#	15021.6	2.1	10140	60	13183.8	1.2
	Bk	97	7660#	290#	3040#	180#	*		15540#	230#	11390#	180#	13200#	190#
	Cf	98	6870	80	3670#	240#	*		15640#	220#	9890#	270#	15390	80
	Es	99	8500#	380#	1510#	220#	*		16420#	230#	11470#	370#	15260#	340#
	Fm	100	*		2290#	430#	*		16270#	380#	9560#	500#	17690#	420#
242	Pa	91	4050#	420#	7260#	500#	8290#	300#	15240#	500#	12120#	420#	8240#	360#
	U	92	5610	100	8330#	310#	3890	90	12400#	220#	10220#	220#	7840#	310#
	Np	93	4930	80	5980	90	−200#	130#	15550	80	11830	80	9850#	210#
	Pu	94	6309.4	0.6	6970	29	−4669	13	13116	17	10269.4	0.9	9790.4	0.6
	Am	95	5537.64	0.10	4777.57	0.11	−9270#	260#	16052.01	0.11	11742.39	0.25	11801.2	0.8
	Cm	96	6968.2	1.2	5418.3	0.4	−13590#	360#	14006	14	10278.0	1.7	11861.7	0.3
	Bk	97	6300#	200#	3250#	100#	*		16730#	100#	11460#	180#	14000#	100#
	Cf	98	7870	80	3880#	180#	*		14540#	230#	10000#	210#	13890	150
	Es	99	7100#	340#	1730#	270#	*		17470#	260#	11550#	270#	16130#	330#
	Fm	100	8880#	470#	2660#	420#	*		14910#	470#	9620#	430#	15990#	370#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
238	Ac	89	9260#	200#	*		2550#	280#	7210#	200#	*		70#	200#
	Th	90	9960#	220#	16080#	370#	3090#	220#	5130#	220#	−13200#	460#	−3170#	220#
	Pa	91	10583	21	14900	40	3628	21	3441	16	−10420#	200#	−2568	16
	U	92	11279.2	0.4	13525	14	4269.9	2.1	1145.0	0.5	−9936	16	−5633.4	0.4
	Np	93	12060	50	12458	14	4686.4	2.4	−970	60	−7371	12	−5708.5	1.3
	Pu	94	12876.6	0.6	10859.5	0.4	5593.30	0.19	−3281	12	−6516.1	0.6	−8480#	60#
	Am	95	13760#	130#	9530	80	6040	60	−5730#	260#	−3740	60	−8900	90
	Cm	96	14548	21	8031	12	6670	10	−7720#	300#	−2935	12	−11710#	220#
	Bk	97	15450#	390#	6460#	280#	7330#	200#	−10350#	480#	300#	260#	−11850#	270#
	Cf	98	16180#	410#	5270#	300#	8020#	300#	*		620#	310#	−15210#	500#
	Es	99	*		3540#	500#	8610#	460#	*		4130#	460#	*	
239	Ac	89	8990#	280#	*		2500#	360#	7830#	280#	*		660#	300#
	Th	90	9600#	300#	16430#	500#	2950#	360#	5930#	300#	*		−2470#	300#
	Pa	91	10340#	200#	15260#	280#	3560#	200#	4030#	200#	−12050#	280#	−2040#	200#
	U	92	10959.8	0.6	13960	16	4131	13	1984.8	0.5	−9160#	220#	−4951.5	0.5
	Np	93	11701.1	0.8	12802	12	4595	13	−77.9	1.9	−8871	16	−4922.6	0.8
	Pu	94	12644.8	1.3	11379.9	0.5	5244.60	0.21	−2560	150	−6008.8	0.4	−7900	60
	Am	95	13320#	60#	10058.5	1.7	5921.8	1.5	−4860#	210#	−5352.5	1.7	−8126	12
	Cm	96	14250	170	8520	150	6540	150	−6910	170	−2310	150	−11080#	300#
	Bk	97	14970#	300#	6890#	220#	7200#	200#	−9390#	310#	−1460#	220#	−10980#	360#
	Cf	98	16020	110	5780	100	7760	60	*		1320	70	−14520#	410#
	Es	99	16800#	460#	4020#	320#	8500#	200#	*		2200#	340#	*	
240	Th	90	9350#	460#	*		2870#	500#	6530#	400#	*		−2180#	450#
	Pa	91	10030#	200#	15670#	280#	3360#	200#	4700#	200#	−11450#	280#	−1630#	200#
	U	92	10747.1	1.1	14320#	220#	4024	14	2578.3	1.2	−11090#	300#	−4679.4	1.4
	Np	93	11284	17	13159	23	4554	22	804	22	−8310#	200#	−4347	17
	Pu	94	12180.3	0.3	11760.6	0.4	5255.82	0.14	−1594.3	0.8	−7736.6	0.4	−7335.6	1.7
	Am	95	13060	60	10522	14	5710	50	−4050#	230#	−5092	14	−7710	150
	Cm	96	13867	12	9021.3	0.9	6397.8	0.6	−6266	17	−4157.5	0.8	−10600#	210#
	Bk	97	14740#	350#	7440#	240#	7100#	200#	−8640#	390#	−1120#	230#	−10560#	240#
	Cf	98	15320#	300#	6036	21	7711	4	*		−450	150	−13730#	230#
	Es	99	16450#	510#	4540#	400#	8310	70	*		2660#	370#	*	
241	Th	90	8910#	500#	*		2960#	570#	7490#	400#	*		−1350#	450#
	Pa	91	9740#	360#	16010#	360#	3300#	360#	5340#	300#	*		−1040#	300#
	U	92	10480	40	14840#	300#	3860	50	3280	40	−10280#	400#	−4150	50
	Np	93	11056	29	13520#	200#	4440	30	1466	29	−9900#	200#	−3798	29
	Pu	94	11775.70	0.23	12195.8	0.4	5140.1	0.5	−745.3	1.2	−7037.4	1.2	−6625	14
	Am	95	12599.3	1.7	10956.8	0.8	5637.81	0.12	−3040#	180#	−6668	17	−6858.1	0.8
	Cm	96	13590	150	9465.7	1.2	6185.2	0.6	−5480	70	−3713.9	1.2	−9930#	230#
	Bk	97	14420#	270#	8000#	180#	6980#	190#	−7790#	280#	−2830#	180#	−10080#	180#
	Cf	98	15010	100	6540	170	7505	3	−10020#	310#	170	70	−13090#	320#
	Es	99	16020#	320#	5070#	300#	8258	15	*		920#	320#	*	
	Fm	100	*		3430#	310#	8840#	310#	*		3930#	300#	*	
242	Pa	91	9390#	360#	*		3240#	360#	6220#	310#	*		−550#	300#
	U	92	10150	90	15110#	410#	3830#	200#	3980	90	−12320#	410#	−3770	100
	Np	93	10910	80	14050#	210#	4220	80	2080	80	−9490#	310#	−3480	80
	Pu	94	11551.0	0.6	12564.5	1.3	4984.1	0.6	−86.5	0.7	−8810	40	−6287.2	0.6
	Am	95	12185	14	11424	17	5588.49	0.25	−2280#	100#	−6221	29	−6305.2	1.2
	Cm	96	13058.7	0.9	9899.7	0.4	6215.64	0.08	−4583	13	−5440.6	0.4	−9240#	180#
	Bk	97	13960#	250#	8340#	100#	6900#	120#	−7000#	280#	−2480#	100#	−9510#	130#
	Cf	98	14742	22	6911	13	7517	4	−9010#	360#	−1603	13	−12450#	220#
	Es	99	15600#	400#	5400#	350#	8160	20	*		1480#	310#	−12530#	400#
	Fm	100	*		4170#	360#	8810#	200#	*		1920#	370#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
243	Pa	91	4960#	500#	*		9690#	400#	13850#	570#	12500#	570#	*	
	U	92	4290#	220#	8570#	360#	5300#	200#	13450#	360#	10330#	280#	8900#	450#
	Np	93	5700	80	6070	90	1225	11	14390	50	12074	10	8550#	200#
	Pu	94	5036.7	2.3	7080	80	−3239	19	14064	29	10304	17	10694.5	2.6
	Am	95	6361.7	0.7	4829.8	0.8	−7570#	210#	14931.8	0.7	11914.9	0.7	10510	17
	Cm	96	5692.9	1.0	5573.6	1.0	−11990	90	14959.9	1.0	10537	14	12703.0	1.0
	Bk	97	7130#	100#	3404	4	*		15699	5	11833	4	12827	14
	Cf	98	6467	23	4040#	100#	*		15730#	180#	10290#	230#	14917	19
	Es	99	8060#	330#	1930#	210#	*		16280#	220#	11630#	210#	14840#	310#
	Fm	100	7300#	370#	2860#	270#	*		16110#	240#	9830#	320#	16830	90
244	U	92	5330#	360#	8940#	500#	6770#	300#	12170#	420#	10340#	420#	7140#	500#
	Np	93	4590#	100#	6370#	220#	2690#	100#	15420#	140#	12030#	110#	9310#	320#
	Pu	94	6028.9	2.3	7409	10	−1681.4	1.6	12960	80	10260	29	9200	40
	Am	95	5368.3	1.2	5161.5	2.5	−6110#	250#	15872.9	1.2	11788.1	1.0	11127	29
	Cm	96	6801.4	1.0	6013.3	0.7	−10550#	200#	13696.12	0.11	10383.05	0.05	11143.12	0.04
	Bk	97	6048	15	3759	14	−15010#	320#	16620	14	11876	14	13426	14
	Cf	98	7586	19	4502	5	*		14440#	100#	10370#	180#	13421.5	2.0
	Es	99	6830#	330#	2290#	260#	*		17310#	250#	11670#	270#	15660#	310#
	Fm	100	8240#	220#	3040#	290#	*		14970#	330#	10100#	300#	15460#	210#
	Md	101	*		740#	330#	*		18040#	480#	11390#	440#	17600#	390#
245	U	92	3790#	500#	*		8500#	400#	13340#	570#	10600#	500#	*	
	Np	93	5410#	220#	6450#	360#	4250#	200#	14290#	280#	12230#	220#	7950#	360#
	Pu	94	4699	13	7520#	100#	−218	14	13963	17	10490	80	10120	90
	Am	95	6050.1	1.8	5182.7	1.6	−4410#	180#	14859.5	2.8	12047.4	1.6	10000	80
	Cm	96	5518.7	0.4	6163.6	1.1	−9090#	110#	14539.1	0.7	10402.0	0.4	11933.9	0.7
	Bk	97	6971	14	3928.5	1.4	−13370#	240#	15341.2	1.7	11872.8	1.4	11992.2	1.4
	Cf	98	6163.0	2.7	4618	15	*		15406	5	10510#	100#	14226.7	2.2
	Es	99	7750#	310#	2460#	180#	*		16030#	180#	11790#	180#	14210#	200#
	Fm	100	6980#	230#	3190#	280#	*		16050#	230#	10210#	280#	16350#	110#
	Md	101	8610#	400#	1110#	320#	*		16720#	260#	11650#	430#	16090#	350#
246	U	92	5000#	500#	*		9950#	300#	*		10560#	500#	*	
	Np	93	4150#	360#	6810#	500#	6010#	310#	15470#	420#	12360#	360#	8760#	500#
	Pu	94	5849	20	7960#	200#	1298	15	12700#	100#	10338	18	8560#	200#
	Am	95	4993#	25#	5476#	28#	−2930#	30#	15896#	25#	12091#	25#	10711#	27#
	Cm	96	6458.4	1.0	6571.9	1.8	−7573	14	13449.0	1.4	10305.3	1.1	10512.1	2.4
	Bk	97	5920	60	4330	60	−12080#	260#	16230	60	11650	60	12440	60
	Cf	98	7364.9	2.4	5011.0	1.8	*		14089	14	10265	5	12554.7	1.4
	Es	99	6470#	180#	2763	21	*		17145	21	11783	28	14867	21
	Fm	100	7970#	110#	3410#	180#	*		14910#	250#	10310#	210#	14846	23
	Md	101	7200#	350#	1330#	280#	*		17760#	330#	11750#	270#	16950#	330#
247	U	92	3500#	420#	*		11610#	300#	*		*		*	
	Np	93	5100#	500#	6910#	500#	7460#	400#	14160#	570#	12590#	500#	*	
	Pu	94	4220#	200#	8030#	360#	3130#	200#	13890#	280#	10700#	220#	9670#	360#
	Am	95	5900#	100#	5530#	100#	−1410#	100#	14690#	100#	12220#	100#	9400#	140#
	Cm	96	5159	4	6739#	25#	−6142	11	14340	4	10514	4	11382	4
	Bk	97	6550	60	4416	5	−10460#	210#	15197	5	11903	5	11258	5
	Cf	98	6052	14	5150	60	*		15008	14	10261	20	13304	14
	Es	99	7423	21	2821	6	*		15885	6	11946	6	13492	16
	Fm	100	6591	17	3527	23	*		16070#	180#	10550#	250#	15842	11
	Md	101	8170#	330#	1530#	210#	*		16580#	240#	11820#	290#	15610#	330#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
243	Pa	91	9010#	500#	*		3280#	450#	6960#	400#	*		100#	410#
	U	92	9900#	210#	15830#	450#	3560#	360#	4730#	200#	*		−3140#	210#
	Np	93	10630	30	14400#	300#	4150#	200#	2738	10	−11130#	300#	−2874	10
	Pu	94	11346.1	2.3	13060	40	4753.8	2.3	569.7	2.5	−8230	90	−5786.2	2.3
	Am	95	11899.3	0.7	11800	29	5439.5	0.7	−1513	4	−7660	80	−5698.7	0.7
	Cm	96	12661.1	1.6	10351.2	1.0	6168.8	1.0	−3809	19	−4824.1	1.2	−8630#	100#
	Bk	97	13430#	180#	8822	4	6874	4	−6060#	210#	−4067	4	−8769	14
	Cf	98	14340	80	7288	19	7420	150	−8180	90	−1102	19	−11820#	260#
	Es	99	15160#	300#	5800#	270#	8072	10	*		−280#	230#	−11720#	410#
	Fm	100	16180#	310#	4590	110	8690	50	*		2490	90	*	
244	U	92	9620#	310#	*		3570#	500#	5430#	300#	*		−2770#	300#
	Np	93	10290#	130#	14940#	320#	3970#	220#	3520#	100#	−10760#	410#	−2420#	100#
	Pu	94	11065.5	0.8	13480	90	4665.6	1.0	1342.3	0.6	−9980#	200#	−5453.4	0.7
	Am	95	11730.0	1.0	12240	80	5142	17	−833	14	−7324	10	−5374.1	1.4
	Cm	96	12494.3	0.4	10843.1	0.6	5901.60	0.03	−3023.6	1.6	−6588.8	2.3	−8308	4
	Bk	97	13170#	100#	9332	14	6779	4	−5280#	250#	−3753	14	−8349	24
	Cf	98	14053	13	7906.0	1.6	7331.0	1.4	−7530#	200#	−2995.4	1.9	−11350#	210#
	Es	99	14890#	360#	6330#	270#	8000#	100#	−9730#	410#	10#	250#	−11250#	270#
	Fm	100	15540#	410#	4960#	200#	8590#	200#	*		720#	200#	*	
	Md	101	*		3600#	410#	9100#	90#	*		3680#	380#	*	
245	U	92	9120#	450#	*		3350#	570#	6330#	400#	*		−1970#	410#
	Np	93	10000#	200#	15390#	450#	3890#	360#	4160#	200#	*		−1810#	200#
	Pu	94	10728	14	13890#	200#	4510	50	2162	13	−9340#	300#	−4784	13
	Am	95	11418.5	1.6	12592	10	5077	29	88.0	2.1	−8790#	100#	−4622.8	1.5
	Cm	96	12320.1	1.1	11325.1	2.4	5624.4	0.4	−2379.3	2.2	−6078.6	0.7	−7779	14
	Bk	97	13019	5	9941.8	1.6	6454.5	1.4	−4500#	180#	−5355.8	1.7	−7734.5	2.1
	Cf	98	13749	19	8376.1	2.4	7258.5	1.8	−6710#	110#	−2357.0	2.2	−10680#	250#
	Es	99	14590#	270#	6960#	180#	7909	3	−8870#	300#	−1690#	180#	−10770#	270#
	Fm	100	15220#	140#	5480#	110#	8480#	80#	*		1330#	110#	−13700#	340#
	Md	101	*		4150#	320#	8990#	100#	*		1900#	350#	*	
246	U	92	8790#	420#	*		*		7180#	300#	*		−1560#	360#
	Np	93	9560#	320#	*		3800#	420#	5000#	300#	*		−1260#	300#
	Pu	94	10548	15	14410#	300#	4270	90	2771	15	−11400#	400#	−4583	15
	Am	95	11043#	25#	13000#	100#	5010#	80#	1010#	70#	−8370#	200#	−4097#	25#
	Cm	96	11977.1	1.0	11754.7	1.1	5475.4	0.8	−1472.9	1.4	−7838	13	−7266.2	1.7
	Bk	97	12890	60	10490	60	6080	60	−3940	60	−5220	60	−7490	60
	Cf	98	13527.9	1.9	8939.6	1.1	6861.8	1.0	−6100	14	−4203.2	1.1	−10290#	180#
	Es	99	14220#	260#	7381	25	7740#	100#	−8140#	260#	−1192	21	−10250#	110#
	Fm	100	14950#	200#	5863	14	8379	5	*		−482	14	−13060#	240#
	Md	101	15810#	410#	4520#	360#	8885	20	*		2450#	310#	*	
247	U	92	8500#	500#	*		*		7900#	360#	*		−910#	420#
	Np	93	9250#	450#	*		3660#	570#	5800#	410#	*		−510#	400#
	Pu	94	10070#	200#	14840#	450#	4340#	280#	3710#	200#	−10620#	360#	−3810#	200#
	Am	95	10890#	100#	13490#	220#	4810#	100#	1660#	100#	−10120#	320#	−3540#	100#
	Cm	96	11618	4	12215	14	5353	3	−580	15	−7148	15	−6510	60
	Bk	97	12464	5	10988	5	5890	5	−3067	8	−6777#	25#	−6671	5
	Cf	98	13417	14	9473	14	6502	14	−5562	18	−3797	14	−9872	25
	Es	99	13890#	180#	7832	6	7444	7	−7400#	210#	−2700	60	−9704	15
	Fm	100	14560#	110#	6291	11	8255	21	*		292	11	−12450#	260#
	Md	101	15370#	320#	4930#	270#	8780	13	*		760#	210#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
248	U	92	4860#	420#	*		12970#	300#	*		*		*	
	Np	93	3920#	500#	7330#	420#	9020#	300#	15240#	420#	12460#	500#	*	
	Pu	94	5510#	280#	8440#	450#	4560#	200#	12530#	360#	10600#	280#	7950#	450#
	Am	95	4670#	220#	5980#	280#	250#	210#	15870#	200#	12250#	200#	10140#	280#
	Cm	96	6220	4	7060#	100#	−4516	8	13113#	25#	10344.5	1.6	9861	13
	Bk	97	5483	30	4739	30	−8930#	260#	16173	29	11939	29	11825	29
	Cf	98	6942	15	5541	7	−13770#	280#	13980	60	10290	5	11880	5
	Es	99	6330#	50#	3100#	50#	*		16920#	50#	11780#	50#	14130#	50#
	Fm	100	7846	13	3950	10	*		14698	22	10450#	180#	14159	9
	Md	101	7010#	330#	1950#	260#	*		17530#	260#	11790#	280#	16350#	310#
	No	102	*		2240#	350#	*		15670#	380#	10690#	370#	16560#	300#
249	U	92	3240#	420#	*		14440#	300#	*		*		*	
	Np	93	4720#	420#	7190#	420#	10600#	300#	14020#	420#	12740#	420#	*	
	Pu	94	3870#	360#	8390#	420#	6280#	300#	13760#	500#	10880#	420#	9080#	420#
	Am	95	5520#	360#	5990#	360#	1900#	300#	14580#	360#	12580#	300#	8770#	420#
	Cm	96	4713.37	0.25	7100#	200#	−2779	6	14300#	100#	10624#	25#	10997	15
	Bk	97	6304	29	4823.5	0.8	−7290	160	15028	4	12092.9	1.1	10514#	25#
	Cf	98	5587	5	5645	29	−12110#	110#	14943	5	10620	60	12751.7	1.0
	Es	99	7160#	60#	3320#	30#	*		15810#	30#	11980#	30#	12890#	70#
	Fm	100	6450	10	4070#	50#	*		15671	8	10473	21	15074	6
	Md	101	7950#	310#	2050	160	*		16180	160	11810	160	14880	160
	No	102	7240#	310#	2470#	280#	*		16590#	240#	10650#	280#	17290#	110#
250	Am	95	4320#	500#	6430#	500#	3630#	410#	15770#	450#	12490#	450#	9560#	570#
	Cm	96	5832	10	7420#	300#	−1102	11	13140#	200#	10690#	100#	9380#	200#
	Bk	97	4965.1	2.7	5075.2	2.7	−5532	10	16282.5	2.7	12287	4	11450#	100#
	Cf	98	6623.2	1.1	5964.4	1.1	−10440#	200#	13802	29	10544	5	11288	4
	Es	99	6050#	100#	3790#	100#	−14950#	320#	16700#	100#	11980#	100#	13380#	100#
	Fm	100	7510	8	4420#	30#	*		14490#	50#	10385	8	13616	15
	Md	101	6730	160	2322	12	*		17299	13	11678	14	15573	12
	No	102	8290#	230#	2810#	260#	*		15310#	330#	10530#	290#	15590#	200#
	Lr	103	*		940#	320#	*		17890#	410#	*		17870#	370#
251	Cm	96	4405	25	7510#	400#	686	27	14250#	300#	10960#	200#	10490#	200#
	Bk	97	5800	11	5042	15	−3723	11	15196	11	12707	11	10320#	200#
	Cf	98	5111	4	6110	5	−8719	4	14996	4	10916	30	12397	4
	Es	99	6780#	100#	3947	5	−13250#	210#	15501	5	12138	7	12080	30
	Fm	100	6192	15	4560#	100#	*		15460#	30#	10530#	50#	14367	15
	Md	101	7609	11	2421	6	*		16140	7	11914	9	14300#	50#
	No	102	6840#	200#	2924	10	*		16420	160	10700#	260#	16600	8
	Lr	103	8480#	370#	1140#	290#	*		16650#	240#	11630#	350#	16400#	330#
252	Cm	96	5660#	300#	*		2240#	300#	12910#	500#	10820#	420#	8700#	420#
	Bk	97	4770#	200#	5410#	200#	−1940#	220#	16260#	200#	12650#	200#	11070#	360#
	Cf	98	6180	4	6490	11	−6847	9	13780.9	2.7	11040.4	0.8	10930.32	0.25
	Es	99	5341	30	4177	30	−11360#	260#	16783	29	12384	29	13043	29
	Fm	100	7213	15	4985	7	−16330#	300#	14300#	100#	10470#	30#	12741	5
	Md	101	6550	90	2780	90	*		17100	90	11810	90	14910#	100#
	No	102	8051	9	3366	10	*		15096	13	10600	160	14998	11
	Lr	103	7240#	330#	1540#	260#	*		17700#	330#	11630#	280#	17110#	310#
	Rf	104	*		1910#	360#	*		15670#	420#	*		16960#	320#
253	Cm	96	4200#	420#	*		3580#	300#	*		10930#	500#	*	
	Bk	97	5590#	410#	5340#	470#	−200#	360#	15080#	360#	12900#	360#	9800#	540#
	Cf	98	4804	4	6520#	200#	−5068	8	14776	11	11201	4	11958	11
	Es	99	6304	29	4301.2	0.8	−9480	160	15590	4	12703.7	1.1	11704.3	2.7
	Fm	100	5543	5	5186	29	−14360#	110#	15544	5	10980#	100#	13821.1	1.5
	Md	101	7330#	100#	2900#	30#	*		15960#	30#	11990#	30#	13630#	110#
	No	102	6584	11	3400	90	*		16122	8	10737	12	15925	9
	Lr	103	8180#	310#	1670	160	*		16350	160	11740#	260#	15660	160
	Rf	104	7500#	320#	2180#	280#	*		16650#	240#	10390#	320#	17740#	230#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
248	U	92	8360#	420#	*		*		8550#	360#	*		−670#	500#
	Np	93	9020#	420#	*		*		6550#	360#	*		−210#	360#
	Pu	94	9730#	200#	15350#	360#	4150#	360#	4420#	200#	−12630#	360#	−3420#	220#
	Am	95	10570#	200#	14010#	360#	4730#	220#	2470#	200#	−9690#	450#	−3050#	200#
	Cm	96	11379.3	1.1	12586	15	5161.71	0.25	142	5	−9150#	200#	−6181	5
	Bk	97	12030	70	11480#	40#	5775	29	−2220#	60#	−6360#	100#	−6100	30
	Cf	98	12995	5	9957	5	6362	5	−4658	10	−5580	6	−9391	8
	Es	99	13750#	60#	8250#	80#	7160#	50#	−6720#	270#	−2480#	50#	−9440#	50#
	Fm	100	14437	16	6772	8	7996	8	−9110#	280#	−1502	17	−12130#	210#
	Md	101	15180#	370#	5470#	260#	8600#	60#	*		1170#	260#	*	
	No	102	*		3760#	280#	9580#	200#	*		2050#	280#	*	
249	U	92	8110#	420#	*		*		9180#	420#	*		10#	420#
	Np	93	8650#	500#	*		*		7340#	420#	*		580#	360#
	Pu	94	9380#	360#	15720#	420#	4080#	500#	5260#	300#	−11640#	420#	−2620#	360#
	Am	95	10190#	310#	14420#	500#	4620#	360#	3260#	300#	−11290#	420#	−2350#	300#
	Cm	96	10933	4	13080#	200#	5148	13	1016.0	0.7	−8350#	200#	−5412	29
	Bk	97	11787	5	11880#	100#	5521.0	1.4	−1360#	30#	−7990#	200#	−5463	5
	Cf	98	12529	14	10385	4	6293.2	0.4	−3795	6	−4947.1	0.6	−8650#	50#
	Es	99	13490#	30#	8860#	30#	6970#	30#	−5930#	160#	−4160#	40#	−8760#	30#
	Fm	100	14295	12	7169	16	7709	6	−8320#	110#	−1009	8	−11570#	260#
	Md	101	14960#	260#	6000	160	8410#	70#	*		−450#	170#	−11940#	330#
	No	102	*		4420#	110#	9318	25	*		2650#	110#	*	
250	Am	95	9830#	450#	14820#	500#	4460#	500#	3910#	400#	−10880#	500#	−1950#	400#
	Cm	96	10546	10	13400#	200#	5164	18	1807	10	−10310#	300#	−4940	10
	Bk	97	11269	30	12180#	200#	5549#	25#	−270#	100#	−7440#	300#	−4841.5	2.7
	Cf	98	12210	5	10787.9	1.1	6128.51	0.19	−2908	5	−6856.9	1.1	−8110#	30#
	Es	99	13220#	110#	9430#	100#	6830#	120#	−5260#	100#	−3910#	100#	−8360#	100#
	Fm	100	13960	10	7737	7	7564	5	−7540#	200#	−2932	5	−11130	160
	Md	101	14670#	260#	6390#	50#	8151	18	−9700#	300#	−10#	30#	−11420#	110#
	No	102	15530#	350#	4860#	200#	9000#	200#	*		810#	200#	*	
	Lr	103	*		3410#	400#	9710#	400#	*		3750#	340#	*	
251	Cm	96	10237	23	13930#	300#	4980#	200#	2513	22	*		−4380	23
	Bk	97	10765	11	12460#	300#	5650#	100#	711	12	−8930#	400#	−4018	11
	Cf	98	11734	4	11186	4	6177.0	0.9	−1827	15	−6135	11	−7170#	100#
	Es	99	12840#	30#	9911	5	6597.1	1.0	−4434	6	−5729	6	−7638	7
	Fm	100	13702	16	8342	14	7424.5	1.0	−6891	14	−2501	14	−10598	17
	Md	101	14330	160	6840#	30#	7964	5	−8820#	210#	−1570#	100#	−10740#	200#
	No	102	15130#	110#	5246	6	8754	10	*		1482	6	−13400#	300#
	Lr	103	*		3950#	260#	9388	18	*		1990#	210#	*	
252	Cm	96	10070#	300#	*		4830#	360#	3030#	300#	*		−4240#	300#
	Bk	97	10570#	200#	12920#	450#	5550#	280#	1280#	200#	*		−3680#	200#
	Cf	98	11290.8	1.1	11533	10	6216.95	0.04	−794	5	−7910	23	−6561	5
	Es	99	12130#	100#	10288	30	6738.6	0.5	−3220	100	−5270	30	−6790	30
	Fm	100	13405	7	8932	5	7153.7	1.0	−6053	10	−4603	6	−10201	6
	Md	101	14160	90	7340#	140#	7740#	110#	−8140#	280#	−1330	90	−10450	90
	No	102	14890#	200#	5787	10	8549	5	−10270#	300#	−377	17	−12970#	210#
	Lr	103	15720#	400#	4460#	260#	9164	17	*		2370#	260#	*	
	Rf	104	*		3050#	360#	9710#	410#	*		3000#	300#	*	
253	Cm	96	9860#	300#	*		4510#	420#	3640#	300#	*		−3660#	360#
	Bk	97	10360#	360#	*		5480#	200#	2000#	360#	*		−3090#	360#
	Cf	98	10984	5	11933	23	6126	4	−56	4	−7060#	300#	−6024	30
	Es	99	11645	5	10792	11	6739.24	0.05	−2200#	30#	−6800#	200#	−5878	5
	Fm	100	12756	14	9364	4	7197.9	1.0	−5012	7	−3966.1	1.2	−9190	90
	Md	101	13880#	30#	7890#	30#	7572	8	−7290#	160#	−3330#	40#	−9740#	30#
	No	102	14635	7	6179	16	8415	4	−9350#	110#	252	9	−12320#	260#
	Lr	103	15420#	260#	5030	160	8930	8	*		740	190	−12720#	340#
	Rf	104	*		3720#	110#	9452	15	*		3550#	110#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
254	Bk	97	4560#	470#	5700#	420#	1070#	310#	16180#	420#	12740#	300#	*	
	Cf	98	6031	12	6970#	360#	−3403	11	13520#	200#	10969	15	10332	25
	Es	99	5087.3	2.7	4584	4	−7740	5	16682.7	2.7	12727	5	12417	11
	Fm	100	6513.8	1.8	5396.4	1.5	−12350#	280#	14371	29	11254	5	12418	4
	Md	101	5820#	110#	3180#	100#	−16780#	320#	17350#	100#	12360#	100#	14590#	100#
	No	102	7696	7	3760#	30#	*		14980	90	10650	4	14421	14
	Lr	103	6830	160	1913	8	*		17575	10	11748	5	16434	6
	Rf	104	8530#	310#	2530#	330#	*		15360#	390#	10350#	350#	16050#	280#
	Db	105	*		770#	320#	*		17800#	420#	*		18110#	370#
255	Cf	98	4600#	200#	7010#	360#	−2010#	200#	14510#	410#	11150#	280#	11400#	360#
	Es	99	5980	11	4533	16	−5847	11	15507	11	12927	11	11210#	200#
	Fm	100	5178	4	5487	5	−10529	13	15497	4	11418	30	13420	4
	Md	101	6680#	100#	3348	6	−14730#	210#	16209	6	12891	7	13248	30
	No	102	5992	14	3930#	100#	*		16320#	30#	11210	90	15641	15
	Lr	103	7873	5	2089.5	2.3	*		16285	7	11926	9	15110	90
	Rf	104	7000#	280#	2698	13	*		16540	160	10590#	260#	17102	16
	Db	105	8720#	370#	960#	360#	*		16580#	240#	11300#	370#	16620#	340#
256	Cf	98	5840#	370#	*		−780#	310#	13230#	430#	10900#	480#	9760#	430#
	Es	99	4980#	100#	4920#	220#	−4560#	100#	16550#	100#	12750#	100#	11810#	370#
	Fm	100	6395	4	5902	11	−8748	18	14189	3	11326.4	2.0	11830	4
	Md	101	5450	30	3619	30	−12900#	260#	17274	30	12985	30	14102	30
	No	102	7060	16	4310	9	*		15080#	100#	11480#	30#	14124	7
	Lr	103	6267	6	2364	15	*		17715	6	12243	9	16180#	30#
	Rf	104	8176	22	3001	18	*		15198	18	10590	160	15509	19
	Db	105	7290#	340#	1250#	260#	*		17820#	390#	11520#	290#	17520#	310#
257	Es	99	5760#	420#	4850#	520#	−3160#	410#	15390#	460#	13020#	410#	10610#	510#
	Fm	100	4966	4	5880#	100#	−7291	9	15204	11	11448	5	12895	12
	Md	101	6545	30	3769.4	2.2	−11140	160	15907	4	12953.5	1.8	12644.3	2.9
	No	102	5647	9	4510	30	−15590#	170#	16114	8	11660#	100#	14990	6
	Lr	103	7170#	30#	2470#	30#	*		16540#	40#	12770#	30#	14830#	110#
	Rf	104	6423	19	3157	10	*		16648	8	10999	9	16783	8
	Db	105	8300#	310#	1380	160	*		16520	160	11750#	330#	16050	160
	Sg	106	*		1820#	310#	*		16970#	270#	10470#	340#	18230#	330#
258	Es	99	4850#	570#	*		−2080#	410#	16370#	510#	12760#	450#	*	
	Fm	100	6240#	200#	6360#	460#	−5940#	200#	13950#	220#	11190#	200#	11260#	280#
	Md	101	5373	3	4176	5	−9956	12	16929	4	12758	5	13252	11
	No	102	6840#	100#	4800#	100#	−13870#	420#	14720#	100#	11500#	100#	13330#	100#
	Lr	103	5930#	110#	2750#	100#	*		17670#	100#	12840#	100#	15590#	100#
	Rf	104	7587	15	3580#	40#	*		15328	14	11286	13	15189	19
	Db	105	6560	160	1512	14	*		18137	21	12185	17	17361	11
	Sg	106	8560#	450#	2080#	440#	*		15690#	490#	10630#	470#	16670#	410#
259	Fm	100	4790#	350#	6290#	490#	−4590#	280#	14930#	500#	11390#	300#	12310#	420#
	Md	101	6200#	100#	4140#	220#	−8470#	110#	15690#	100#	12950#	100#	12030#	140#
	No	102	5470#	100#	4904	7	−12440	16	15794	6	11470	30	14249	7
	Lr	103	7000#	120#	2910#	120#	−16450#	310#	16320#	70#	12890#	70#	14030#	80#
	Rf	104	6138	22	3790#	100#	*		16360#	40#	11414	19	16110	20
	Db	105	7690#	40#	1620#	40#	*		16870#	40#	12670#	40#	15940#	40#
	Sg	106	6900#	410#	2420	19	*		17090	160	11020#	260#	17941	23
	Bh	107	*		330#	510#	*		17180#	340#	*		17580#	400#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
254	Bk	97	10140#	360#	*		5240#	500#	2530#	300#	*		−2840#	300#
	Cf	98	10836	11	12300#	300#	5927	5	426	11	−8890#	300#	−5752	11
	Es	99	11391	30	11110#	200#	6617.1	0.5	−1460#	100#	−6300#	360#	−5422.3	2.9
	Fm	100	12057	5	9697.6	1.5	7307.3	1.0	−3829.8	2.1	−5676	4	−8370#	30#
	Md	101	13160#	140#	8370#	100#	7800#	140#	−6280#	100#	−2850#	100#	−8980#	100#
	No	102	14280	9	6662	5	8229	5	−8520#	280#	−1901.7	1.8	−11830	160
	Lr	103	15010#	260#	5310	90	8824	9	−10500#	300#	1240#	30#	−12050#	110#
	Rf	104	16040#	410#	4200#	280#	9210#	200#	*		1600#	280#	*	
	Db	105	*		2950#	400#	9630#	420#	*		4450#	340#	*	
255	Cf	98	10630#	200#	12700#	360#	5740#	200#	1010#	200#	*		−5260#	200#
	Es	99	11068	11	11500#	360#	6436.3	1.3	−759	12	−7730#	300#	−4889	11
	Fm	100	11692	4	10071	5	7240.6	0.5	−3015	15	−4822	12	−7730#	100#
	Md	101	12500#	30#	8744	5	7906.3	1.8	−5088	6	−4439	6	−7960	6
	No	102	13689	16	7112	14	8428.2	3.0	−7514	19	−1380	14	−10994	15
	Lr	103	14700	160	5850#	30#	8561	4	−9650#	210#	−810#	100#	−11390#	280#
	Rf	104	15530#	110#	4610	14	9051	12	*		2304	13	−13980#	300#
	Db	105	*		3490#	270#	9390	50	*		2560#	210#	*	
256	Cf	98	10430#	320#	*		5560#	100#	1570#	310#	*		−5120#	320#
	Es	99	10960#	100#	11930#	310#	6230#	220#	−290#	100#	*		−4700#	100#
	Fm	100	11572.8	2.4	10435	11	7025.3	1.9	−2350	7	−6620#	200#	−7443	6
	Md	101	12130#	100#	9106	30	7798.6	2.3	−4270	30	−3910	30	−7420	30
	No	102	13053	7	7658	7	8581	5	−6398	19	−3263	8	−10181	7
	Lr	103	14140	7	6290#	100#	8850	90	−8630#	260#	−396	8	−10660	14
	Rf	104	15170#	280#	5090	18	8926	15	*		120	23	−13430#	210#
	Db	105	16010#	400#	3950#	260#	9340	30	*		3140#	260#	*	
257	Es	99	10750#	410#	*		6050#	200#	490#	410#	*		−4060#	410#
	Fm	100	11361	5	10810#	200#	6863.7	0.9	−1669	7	−5750#	310#	−6959	30
	Md	101	11994	6	9671	11	7557.1	0.9	−3650#	30#	−5470#	100#	−6902	7
	No	102	12707	15	8128	7	8477	6	−5622	10	−2515	6	−9561	8
	Lr	103	13430#	30#	6780#	30#	9010	12	−7490#	170#	−2120#	50#	−9650#	40#
	Rf	104	14599	15	5520	16	9087	4	−9960#	170#	758	11	−12570#	260#
	Db	105	15590#	270#	4380	160	9215	10	*		1110	160	*	
	Sg	106	*		3070#	170#	9700#	120#	*		4320#	170#	*	
258	Es	99	10610#	410#	*		5750#	500#	1010#	400#	*		−3950#	400#
	Fm	100	11200#	200#	11200#	370#	6660#	200#	−1060#	220#	*		−6650#	200#
	Md	101	11918	30	10060#	100#	7271.3	1.9	−3090#	100#	−5080#	410#	−6628	7
	No	102	12490#	100#	8570#	100#	8150#	100#	−4880#	100#	−4390#	100#	−9230#	110#
	Lr	103	13100#	100#	7260#	110#	8904	19	−6860#	100#	−1500#	100#	−9160#	100#
	Rf	104	14010	22	6047	15	9196	13	−8990#	410#	−1182	14	−11850	160
	Db	105	14860#	260#	4668	12	9488	10	*		1720#	40#	−12260#	170#
	Sg	106	*		3450#	410#	9670#	300#	*		2190#	410#	*	
259	Fm	100	11020#	280#	*		6470#	200#	−380#	280#	*		−6060#	280#
	Md	101	11580#	100#	10500#	420#	7050#	100#	−2290#	120#	−6430#	410#	−5990#	140#
	No	102	12314	9	9081	7	7854	5	−4211	19	−3630#	200#	−8780#	100#
	Lr	103	12930#	80#	7720#	70#	8580#	70#	−6170#	80#	−3130#	70#	−8570#	70#
	Rf	104	13725	20	6538	19	9050	12	−8229	24	−480#	100#	−11431	21
	Db	105	14250#	170#	5190#	50#	9670#	40#	−10270#	300#	−50#	110#	−11390#	410#
	Sg	106	15460#	170#	3932	17	9765	8	*		2873	20	*	
	Bh	107	*		2410#	340#	10300#	370#	*		3360#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
260	Fm	100	6010#	520#	*		−3380#	480#	13770#	590#	11150#	600#	*	
	Md	101	5090#	330#	4450#	420#	−7130#	320#	16830#	370#	12820#	320#	12700#	520#
	No	102	6550#	200#	5250#	220#	−10960#	200#	14620#	200#	11470#	200#	12670#	200#
	Lr	103	5640#	160#	3080#	150#	−14900#	310#	17520#	180#	12900#	150#	14940#	150#
	Rf	104	7210#	200#	3990#	210#	*		15080#	220#	11370#	200#	14550#	200#
	Db	105	6430#	60#	1910#	50#	*		18020#	40#	12660#	40#	16670#	50#
	Sg	106	8034	24	2760#	40#	*		15617	22	11280	160	16330	20
	Bh	107	7180#	400#	620#	270#	*		18560#	490#	12220#	320#	18700#	310#
261	Md	101	5950#	600#	4400#	670#	−5630#	520#	15670#	580#	13110#	550#	11600#	650#
	No	102	5230#	280#	5380#	370#	−9570#	200#	15590#	220#	11620#	200#	13680#	280#
	Lr	103	6750#	250#	3280#	280#	−13450#	270#	16240#	200#	12990#	220#	13560#	200#
	Rf	104	5930#	210#	4280#	160#	−17730#	400#	16150#	90#	11370#	110#	15460#	110#
	Db	105	7450#	120#	2150#	230#	*		16710#	110#	12790#	110#	15150#	150#
	Sg	106	6616	25	2940#	50#	*		16690#	40#	11225	20	17300	21
	Bh	107	8200#	320#	780	180	*		17250	180	12580#	450#	17060	180
	Hs	108	*		1460#	480#	*		17430#	500#	*		19320#	570#
262	Md	101	5060#	680#	*		−4590#	470#	16610#	620#	12830#	530#	*	
	No	102	6430#	410#	5860#	620#	−8290#	360#	14260#	480#	11390#	370#	12040#	460#
	Lr	103	5540#	280#	3600#	280#	−12200#	250#	17250#	280#	12920#	200#	14220#	220#
	Rf	104	6970#	230#	4500#	300#	−16260#	370#	14820#	270#	11400#	240#	13960#	220#
	Db	105	6100#	180#	2330#	150#	*		17820#	250#	12830#	140#	16050#	160#
	Sg	106	7701	26	3190#	110#	*		15430#	50#	11220#	40#	15738	27
	Bh	107	6800#	230#	970#	150#	*		18490#	150#	12680#	150#	17950#	160#
	Hs	108	8440#	500#	1700#	350#	*		16170#	400#	11210#	420#	17780#	300#
263	No	102	5040#	610#	5830#	660#	−6990#	490#	15180#	710#	11450#	580#	13010#	660#
	Lr	103	6500#	300#	3670#	430#	−10830#	380#	15970#	300#	12970#	300#	12810#	390#
	Rf	104	5710#	270#	4670#	250#	−14920#	170#	15860#	250#	11330#	210#	14800#	250#
	Db	105	7210#	220#	2570#	280#	*		16530#	180#	12830#	260#	14470#	220#
	Sg	106	6340	70	3430#	160#	*		16540#	120#	11320#	80#	16610#	210#
	Bh	107	7870#	340#	1140#	300#	*		17230#	300#	12840#	300#	16510#	310#
	Hs	108	7050#	310#	1950#	170#	*		17330	190	11350#	280#	18770	80
264	No	102	6190#	770#	*		−5770#	660#	14050#	740#	11220#	780#	*	
	Lr	103	5340#	490#	3980#	660#	−9520#	460#	17050#	570#	12850#	480#	13420#	670#
	Rf	104	6760#	390#	4930#	420#	−13510#	360#	14640#	410#	11320#	410#	13270#	410#
	Db	105	5910#	300#	2770#	290#	*		17590#	330#	12840#	250#	15310#	320#
	Sg	106	7400#	290#	3620#	330#	*		15240#	320#	11360#	300#	15140#	290#
	Bh	107	6650#	340#	1460#	170#	*		18280#	160#	12800#	160#	17310#	190#
	Hs	108	8180	80	2250#	300#	*		15950#	150#	11370	180	17210	30
265	Lr	103	6190#	700#	3990#	810#	−8060#	600#	15900#	730#	13090#	660#	12290#	710#
	Rf	104	5460#	510#	5040#	570#	−12230#	360#	15680#	420#	11410#	410#	14240#	510#
	Db	105	6910#	330#	2920#	420#	−16170#	490#	16390#	270#	12900#	320#	13940#	300#
	Sg	106	6160#	290#	3870#	260#	*		16300#	180#	11310#	160#	15950#	230#
	Bh	107	7650#	280#	1700#	370#	*		16970#	250#	12860#	240#	15760#	280#
	Hs	108	6740	40	2330#	160#	*		17080#	300#	11440#	150#	18170	30
	Mt	109	*		250#	440#	*		17640#	440#	12820#	530#	17920#	460#
266	Lr	103	4720#	770#	*		−6440#	560#	17360#	800#	13400#	730#	*	
	Rf	104	6630#	550#	5480#	690#	−11030#	410#	14400#	600#	11280#	470#	12650#	640#
	Db	105	5750#	360#	3220#	460#	−15000#	320#	17400#	460#	12860#	320#	14690#	360#
	Sg	106	7150#	250#	4100#	330#	*		15060#	350#	11370#	300#	14510#	290#
	Bh	107	6340#	290#	1880#	170#	*		18030#	330#	12850#	180#	16640#	230#
	Hs	108	7830	30	2510#	240#	*		15910#	160#	11480#	300#	16680	70
	Mt	109	6920#	460#	440#	160#	*		18890#	160#	12940#	170#	18870#	340#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
260	Fm	100	10790#	480#	*		6300#	300#	170#	480#	*		−5870#	450#
	Md	101	11300#	320#	10740#	510#	6940#	300#	−1750#	350#	*		−5610#	320#
	No	102	12020#	220#	9400#	280#	7700#	200#	−3550#	280#	−5390#	350#	−8330#	210#
	Lr	103	12640#	180#	7980#	150#	8400#	140#	−5380#	150#	−2560#	180#	−8070#	150#
	Rf	104	13350#	200#	6910#	220#	8900#	200#	−7410#	200#	−2220#	200#	−10950#	200#
	Db	105	14130#	40#	5700#	110#	9500#	40#	−9530#	270#	520#	80#	−10920#	50#
	Sg	106	14940#	410#	4379	23	9907	5	*		977	26	−13820#	300#
	Bh	107	*		3040#	270#	10400	60	*		3870#	270#	*	
261	Md	101	11050#	520#	*		6750#	300#	−950#	550#	*		−5010#	550#
	No	102	11780#	200#	9840#	350#	7440#	200#	−2850#	210#	−4610#	480#	−7920#	250#
	Lr	103	12390#	210#	8530#	220#	8190#	200#	−4680#	230#	−4220#	370#	−7610#	280#
	Rf	104	13140#	60#	7360#	50#	8620#	50#	−6720#	60#	−1600#	210#	−10440#	70#
	Db	105	13890#	110#	6150#	130#	9220#	100#	−8780#	210#	−1290#	180#	−10340#	110#
	Sg	106	14650	23	4857	25	9714	15	−11010#	400#	1570#	200#	−13250#	270#
	Bh	107	15380#	350#	3550#	180#	10500	70	*		2110#	180#	*	
	Hs	108	*		2070#	400#	10760#	430#	*		5180#	400#	*	
262	Md	101	11010#	550#	*		6540#	200#	−470#	490#	*		−4850#	490#
	No	102	11650#	410#	10250#	570#	7250#	300#	−2300#	420#	*		−7590#	410#
	Lr	103	12290#	250#	8980#	370#	8020#	200#	−4120#	250#	−3810#	550#	−7230#	210#
	Rf	104	12900#	300#	7780#	300#	8490#	200#	−5990#	230#	−3340#	300#	−9960#	250#
	Db	105	13550#	150#	6610#	200#	9050#	100#	−8080#	210#	−640#	250#	−9830#	140#
	Sg	106	14317	27	5350#	200#	9600	15	−10270#	300#	−200#	60#	−12750	180
	Bh	107	15000#	310#	3910#	160#	10260#	150#	*		2760#	190#	−12760#	430#
	Hs	108	*		2480#	300#	10880#	510#	*		3350#	300#	*	
263	No	102	11460#	530#	*		7000#	400#	−1630#	510#	*		−7080#	530#
	Lr	103	12050#	300#	9530#	560#	7720#	200#	−3410#	280#	−5250#	500#	−6760#	320#
	Rf	104	12680#	160#	8270#	250#	8250#	150#	−5360#	170#	−2630#	390#	−9570#	210#
	Db	105	13310#	200#	7070#	260#	8830#	150#	−7420#	350#	−2310#	260#	−9340#	170#
	Sg	106	14040	70	5760#	80#	9400	60	−9560	100	430#	230#	−12290#	160#
	Bh	107	14670#	350#	4330#	320#	10080#	300#	*		990#	330#	−12190#	430#
	Hs	108	15490#	410#	2910	80	10730	80	*		4010	80	*	
264	No	102	11220#	690#	*		6820#	400#	−1050#	690#	*		−6770#	630#
	Lr	103	11850#	480#	9810#	630#	7470#	300#	−2840#	500#	*		−6390#	460#
	Rf	104	12470#	420#	8610#	510#	8040#	300#	−4720#	460#	−4350#	610#	−9120#	400#
	Db	105	13120#	290#	7440#	320#	8560#	200#	−6680#	290#	−1720#	330#	−8910#	260#
	Sg	106	13740#	280#	6190#	360#	9210#	200#	−8790#	280#	−1260#	320#	−11820#	410#
	Bh	107	14530#	220#	4880#	210#	9860#	150#	*		1550#	230#	−11800#	180#
	Hs	108	15220#	300#	3390	30	10591	20	*		2160	70	*	
265	Lr	103	11540#	590#	*		7230#	200#	−2120#	590#	*		−5820#	660#
	Rf	104	12220#	390#	9030#	610#	7810#	300#	−4020#	370#	−3620#	690#	−8670#	440#
	Db	105	12820#	280#	7850#	320#	8400#	100#	−5940#	330#	−3290#	490#	−8420#	360#
	Sg	106	13560#	90#	6640#	160#	8979	29	−8210#	60#	−660#	370#	−11320#	170#
	Bh	107	14300#	380#	5320#	290#	9660#	210#	−10230#	500#	−190#	340#	−11270#	240#
	Hs	108	14910	80	3790	70	10470	15	*		2830#	280#	*	
	Mt	109	*		2510#	530#	11120#	400#	*		3370#	470#	*	
266	Lr	103	10910#	690#	*		7570#	300#	−1090#	610#	*		−5090#	650#
	Rf	104	12080#	550#	9460#	720#	7610#	200#	−3490#	480#	*		−8380#	470#
	Db	105	12660#	380#	8260#	520#	8190#	200#	−5350#	330#	−2850#	620#	−8020#	290#
	Sg	106	13310#	370#	7020#	440#	8800#	100#	−7530#	250#	−2350#	440#	−10820#	340#
	Bh	107	13990#	230#	5750#	300#	9430#	80#	−9650#	220#	380#	280#	−10870#	160#
	Hs	108	14560	40	4210#	280#	10346	16	*		1160#	70#	−13530#	440#
	Mt	109	*		2780#	220#	10996	25	*		4090#	280#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
267	Rf	104	4760#	710#	5510#	790#	−9140#	580#	15840#	790#	11870#	720#	14080#	820#
	Db	105	6710#	470#	3300#	560#	−13720#	630#	16140#	520#	12910#	520#	13320#	580#
	Sg	106	5960#	290#	4310#	330#	−18140#	190#	16010#	280#	11330#	300#	15320#	400#
	Bh	107	7410#	310#	2140#	360#	*		16780#	270#	12850#	390#	15140#	360#
	Hs	108	6640	70	2820#	180#	*		16920#	250#	11490#	170#	17440#	290#
	Mt	109	8000#	520#	610#	500#	*		17630#	500#	13120#	500#	17520#	530#
	Ds	110	*		1160#	180#	*		17980#	450#	*		19950	100
268	Rf	104	6040#	880#	*		−7490#	730#	14520#	850#	12030#	860#	*	
	Db	105	5020#	650#	3570#	780#	−11980#	570#	17740#	670#	13340#	640#	14490#	760#
	Sg	106	7020#	500#	4610#	600#	−16870#	560#	14750#	550#	11220#	520#	13760#	590#
	Bh	107	6120#	470#	2310#	420#	*		17810#	460#	12890#	390#	15930#	450#
	Hs	108	7680#	310#	3090#	400#	*		15570#	340#	11460#	380#	15920#	310#
	Mt	109	6760#	550#	730#	230#	*		18700#	220#	13100#	220#	18420#	320#
	Ds	110	8290#	320#	1460#	590#	*		16610#	340#	11910#	530#	18400#	300#
269	Db	105	6010#	820#	3550#	910#	−10100#	700#	16490#	850#	13960#	750#	13200#	820#
	Sg	106	5210#	590#	4790#	640#	−15190#	370#	16250#	520#	11770#	460#	15180#	550#
	Bh	107	7200#	540#	2490#	600#	*		16560#	410#	12830#	450#	14480#	470#
	Hs	108	6510#	310#	3470#	400#	*		16480#	280#	11290#	180#	16560#	260#
	Mt	109	7900#	380#	940#	430#	*		17450#	320#	13030#	310#	16860#	350#
	Ds	110	6890#	300#	1590#	220#	*		17720#	500#	11950#	160#	19330	40
270	Db	105	4890#	850#	*		−8310#	610#	17630#	880#	13820#	810#	*	
	Sg	106	6310#	590#	5090#	770#	−13270#	460#	14970#	700#	12170#	590#	13630#	740#
	Bh	107	5370#	470#	2650#	470#	*		18210#	550#	13420#	330#	15830#	470#
	Hs	108	7490#	260#	3760#	450#	*		15110#	460#	11210#	360#	15030#	300#
	Mt	109	6680#	360#	1110#	210#	*		18450#	360#	13000#	200#	17590#	330#
	Ds	110	8220	50	1910#	310#	*		16260#	220#	11730#	500#	17760	80
271	Sg	106	4980#	740#	5170#	810#	−11360#	580#	16010#	850#	12220#	780#	14690#	880#
	Bh	107	6460#	480#	2810#	590#	*		16960#	530#	13980#	600#	14390#	650#
	Hs	108	5510#	300#	3910#	330#	*		16800#	410#	11820#	420#	16530#	500#
	Mt	109	7640#	380#	1260#	410#	*		17320#	340#	13040#	450#	16070#	510#
	Ds	110	6890	80	2130#	200#	*		17270#	320#	11600#	230#	18550#	310#
272	Sg	106	6140#	900#	*		−9670#	810#	14760#	900#	12100#	930#	*	
	Bh	107	5090#	650#	2920#	790#	−13880#	580#	18180#	700#	14100#	650#	15310#	820#
	Hs	108	6760#	500#	4210#	600#	*		15410#	550#	12260#	600#	14980#	590#
	Mt	109	5720#	590#	1470#	520#	*		19090#	550#	13820#	500#	17550#	620#
	Ds	110	7820#	430#	2310#	540#	*		16120#	470#	11670#	530#	17240#	430#
	Rg	111	*		400#	230#	*		18780#	220#	12790#	220#	19100#	380#
273	Sg	106	4760#	800#	*		−8450#	410#	*		12230#	700#	*	
	Bh	107	6230#	840#	3020#	950#	−12180#	770#	16920#	870#	14170#	800#	13970#	870#
	Hs	108	5330#	600#	4450#	650#	*		16540#	530#	12300#	470#	15960#	590#
	Mt	109	6780#	650#	1490#	630#	*		17820#	460#	14530#	490#	16140#	510#
	Ds	110	5980#	440#	2570#	500#	*		17780#	340#	12370#	220#	18750#	270#
	Rg	111	7940#	450#	510#	580#	*		17740#	400#	13070#	400#	17840#	440#
274	Bh	107	5030#	870#	3290#	700#	−10850#	620#	18020#	900#	14110#	820#	*	
	Hs	108	6420#	600#	4630#	810#	*		15210#	710#	12350#	600#	14520#	740#
	Mt	109	5510#	560#	1680#	520#	*		19070#	600#	14530#	410#	17080#	530#
	Ds	110	7320#	400#	3100#	580#	*		16190#	630#	12690#	510#	16940#	420#
	Rg	111	6360#	450#	890#	230#	*		19200#	470#	13600#	220#	19120#	390#
275	Bh	107	6050#	830#	*		−9560#	750#	16730#	720#	14190#	920#	*	
	Hs	108	5060#	750#	4650#	820#	*		16390#	870#	12380#	790#	15600#	900#
	Mt	109	6600#	530#	1860#	610#	*		17800#	530#	14700#	610#	15580#	660#
	Ds	110	5710#	520#	3300#	510#	*		17260#	550#	12700#	600#	17990#	580#
	Rg	111	7350#	490#	920#	590#	*		17840#	460#	14080#	620#	17490#	660#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	$S(2n)$		$S(2p)$		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
267	Rf	104	11380#	680#	*		7890#	300#	−2290#	600#	*		−7380#	640#
	Db	105	12470#	440#	8780#	660#	7980#	300#	−4660#	460#	−4840#	660#	−7580#	450#
	Sg	106	13110#	170#	7520#	400#	8560#	50#	−6840#	170#	−1680#	440#	−10440#	230#
	Bh	107	13750#	350#	6240#	350#	9230#	200#	−9060#	570#	−1270#	390#	−10450#	260#
	Hs	108	14470	70	4700#	90#	10038	13	−11300	110	1670#	250#	−13250#	170#
	Mt	109	14920#	670#	3120#	560#	10870#	400#	*		2430#	530#	*	
	Ds	110	*		1610	100	11780	50	*		5440	100	*	
268	Rf	104	10790#	780#	*		8040#	300#	−1310#	810#	*		−6710#	760#
	Db	105	11740#	600#	9080#	760#	8300#	300#	−3560#	660#	*		−6650#	550#
	Sg	106	12970#	530#	7920#	630#	8300#	300#	−6180#	560#	−3940#	740#	−10050#	540#
	Bh	107	13530#	420#	6610#	480#	9020#	300#	−8420#	450#	−680#	540#	−9930#	390#
	Hs	108	14320#	300#	5230#	390#	9760#	100#	−10690#	430#	−60#	340#	−12930#	580#
	Mt	109	14750#	270#	3540#	270#	10770#	150#	*		3090#	340#	−12810#	240#
	Ds	110	*		2070#	300#	11660#	300#	*		3790#	310#	*	
269	Db	105	11040#	730#	*		8480#	300#	−2370#	730#	*		−5640#	780#
	Sg	106	12220#	400#	8370#	680#	8550	50	−4880#	370#	−3110#	760#	−9140#	530#
	Bh	107	13320#	460#	7100#	530#	8730#	300#	−7730#	490#	−2860#	650#	−9450#	480#
	Hs	108	14190#	100#	5780#	180#	9410#	60#	−10300#	90#	460#	480#	−12680#	230#
	Mt	109	14650#	590#	4030#	410#	10520#	200#	*		1310#	500#	−12410#	430#
	Ds	110	15180	100	2320	70	11510	30	*		4580#	300#	*	
270	Db	105	10900#	780#	*		8310#	200#	−1890#	640#	*		−5330#	680#
	Sg	106	11510#	660#	8630#	810#	8870#	200#	−3690#	520#	*		−8240#	590#
	Bh	107	12570#	490#	7450#	600#	9110	60	−6420#	350#	−2220#	690#	−8310#	300#
	Hs	108	14000#	390#	6250#	530#	9070	40	−9580#	250#	−1830#	440#	−12270#	400#
	Mt	109	14570#	290#	4590#	430#	10180#	100#	*		1830#	420#	−12200#	190#
	Ds	110	15110#	300#	2850#	300#	11117	28	*		2870#	90#	*	
271	Sg	106	11280#	680#	*		8650#	50#	−3160#	600#	*		−7850#	650#
	Bh	107	11830#	530#	7890#	730#	9370	50	−5240#	500#	−3780#	690#	−7280#	450#
	Hs	108	13000#	190#	6560#	400#	9520#	40#	−8200#	180#	−1040#	490#	−11110#	250#
	Mt	109	14320#	450#	5020#	500#	9950#	200#	*		−440#	440#	−11620#	330#
	Ds	110	15110	70	3240#	110#	10870	18	*		3470#	260#	*	
272	Sg	106	11110#	830#	*		8550#	200#	−2530#	840#	*		−7520#	790#
	Bh	107	11550#	610#	8090#	780#	9300	50	−4610#	720#	*		−6860#	560#
	Hs	108	12270#	530#	7010#	660#	9772	21	−7140#	630#	−2820#	740#	−10230#	570#
	Mt	109	13360#	530#	5380#	570#	10350#	300#	−9270#	540#	300#	620#	−10450#	500#
	Ds	110	14710#	430#	3570#	490#	10730#	300#	*		1160#	460#	*	
	Rg	111	*		2520#	290#	11197	13	*		4330#	400#	*	
273	Sg	106	10900#	700#	*		*		−1970#	540#	*		−7200#	670#
	Bh	107	11320#	760#	*		9080#	200#	−4060#	780#	*		−6330#	810#
	Hs	108	12090#	400#	7360#	680#	9650	50	−6480#	380#	−2010#	780#	−9830#	610#
	Mt	109	12500#	540#	5700#	570#	10770#	200#	−8120#	580#	−1390#	680#	−9410#	600#
	Ds	110	13800#	120#	4040#	190#	11250#	50#	*		1940#	480#	−12620#	240#
	Rg	111	*		2820#	520#	11160#	250#	*		2120#	630#	*	
274	Bh	107	11270#	790#	*		8940	60	−3580#	690#	*		−6040#	690#
	Hs	108	11740#	660#	7640#	840#	9540#	100#	−5580#	610#	−3660#	620#	−9470#	630#
	Mt	109	12290#	610#	6120#	650#	10630#	230#	−7270#	420#	−670#	750#	−8940#	380#
	Ds	110	13300#	580#	4600#	610#	11430#	300#	*		−50#	540#	−12000#	560#
	Rg	111	14290#	300#	3460#	530#	11480	90	*		2540#	470#	*	
275	Bh	107	11090#	890#	*		*		−3040#	710#	*		−5680#	760#
	Hs	108	11470#	690#	7940#	700#	9460	50	−4930#	670#	*		−9010#	690#
	Mt	109	12110#	570#	6480#	760#	10490	60	−6520#	590#	−2230#	690#	−8220#	550#
	Ds	110	13030#	360#	4980#	500#	11230#	300#	*		660#	580#	−11360#	400#
	Rg	111	13710#	600#	4020#	620#	11770#	300#	*		710#	580#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
276	Bh	107	4900#	850#	*		−8450#	870#	*		14060#	720#	*	
	Hs	108	6350#	920#	4940#	940#	−12290#	880#	15070#	920#	12270#	970#	14010#	820#
	Mt	109	5420#	660#	2220#	790#	*		18790#	710#	14600#	650#	16390#	840#
	Ds	110	7090#	580#	3790#	610#	*		15680#	600#	12400#	630#	16230#	600#
	Rg	111	6010#	780#	1220#	720#	*		19140#	740#	14050#	640#	18260#	760#
	Cn	112	*		2210#	670#	*		16520#	540#	12380#	640#	17860#	510#
277	Bh	107	5890#	850#	*		−7200#	760#	*		*		*	
	Hs	108	4970#	850#	5020#	750#	−11040#	460#	16160#	750#	12330#	730#	*	
	Mt	109	6460#	850#	2340#	980#	*		17390#	880#	14560#	810#	14960#	880#
	Ds	110	5490#	600#	3860#	650#	*		16790#	530#	12420#	520#	17160#	600#
	Rg	111	7140#	790#	1280#	660#	*		17710#	580#	14220#	610#	16630#	600#
	Cn	112	6230#	510#	2430#	640#	*		17630#	460#	12510#	240#	18940#	410#
278	Bh	107	4760#	720#	*		−6170#	550#	*		*		*	
	Hs	108	6180#	540#	5300#	670#	−9490#	530#	14880#	670#	12200#	670#	*	
	Mt	109	5230#	890#	2600#	740#	−13110#	630#	18500#	930#	14380#	830#	15780#	840#
	Ds	110	6830#	630#	4230#	840#	*		15380#	740#	12190#	640#	15390#	770#
	Rg	111	5790#	600#	1580#	530#	*		19000#	600#	14140#	510#	17440#	540#
	Cn	112	7720#	450#	3000#	640#	*		15930#	770#	12140#	630#	16930#	560#
	Nh	113	*		520#	250#	*		19320#	550#	*		19340#	500#
279	Hs	108	4780#	670#	5320#	720#	−8270#	720#	15990#	850#	12330#	850#	*	
	Mt	109	6330#	890#	2750#	740#	−11720#	900#	17140#	810#	14390#	980#	14350#	900#
	Ds	110	5330#	780#	4320#	830#	*		16520#	880#	12280#	790#	16410#	930#
	Rg	111	6900#	540#	1650#	640#	*		17590#	540#	14320#	610#	15960#	660#
	Cn	112	6000#	590#	3210#	550#	*		17070#	620#	12150#	750#	18020#	620#
	Nh	113	7720#	640#	520#	740#	*		17830#	610#	13820#	780#	17630#	870#
280	Hs	108	6070#	850#	*		−7010#	790#	14690#	720#	12150#	850#	*	
	Mt	109	5180#	950#	3160#	900#	−10600#	780#	18140#	740#	14190#	810#	15060#	900#
	Ds	110	6640#	950#	4620#	1000#	*		15110#	950#	12110#	1000#	14740#	870#
	Rg	111	5650#	660#	1980#	790#	*		18770#	740#	14160#	650#	16760#	850#
	Cn	112	7330#	650#	3630#	640#	*		15530#	630#	11970#	690#	16180#	630#
	Nh	113	6310#	720#	830#	560#	*		19240#	590#	13750#	420#	18460#	620#
281	Mt	109	6160#	950#	3250#	900#	−9360#	740#	16750#	900#	14200#	740#	13660#	780#
	Ds	110	5230#	880#	4670#	810#	*		16220#	810#	12110#	750#	15690#	550#
	Rg	111	6740#	940#	2090#	1080#	*		17350#	970#	14250#	930#	15250#	970#
	Cn	112	5760#	630#	3750#	650#	*		16680#	540#	12000#	530#	17250#	630#
	Nh	113	7400#	500#	910#	590#	*		17840#	500#	14060#	530#	16850#	480#
282	Mt	109	5000#	810#	*		−8290#	590#	17820#	750#	13980#	750#	*	
	Ds	110	6500#	580#	5010#	760#	*		14900#	760#	11940#	760#	13960#	700#
	Rg	111	5510#	980#	2370#	750#	*		18470#	960#	14060#	840#	16070#	900#
	Cn	112	7100#	660#	4100#	950#	*		15230#	770#	11800#	670#	15480#	800#
	Nh	113	6070#	480#	1220#	530#	*		19090#	640#	13990#	550#	17690#	540#
283	Ds	110	5100#	730#	5120#	770#	*		15950#	920#	12020#	920#	14930#	870#
	Rg	111	6570#	900#	2440#	770#	*		17130#	820#	14120#	1010#	14680#	950#
	Cn	112	5510#	810#	4100#	840#	*		16460#	980#	11940#	800#	16600#	960#
	Nh	113	7170#	560#	1290#	680#	*		17680#	550#	14150#	650#	16160#	670#
284	Ds	110	6380#	810#	*		−9180#	720#	14580#	670#	11800#	840#	*	
	Rg	111	5380#	980#	2720#	940#	*		18250#	790#	13970#	840#	15460#	970#
	Cn	112	6930#	970#	4450#	1020#	*		15040#	970#	11760#	1090#	14900#	890#
	Nh	113	5910#	680#	1690#	800#	*		18870#	770#	14000#	660#	17000#	940#
	Fl	114	*		3430#	650#	*		15470#	640#	11630#	590#	16480#	630#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
276	Bh	107	10960#	830#	*		*		−2520#	800#	*		−5520#	830#
	Hs	108	11400#	860#	*		9250#	200#	−4190#	860#	*		−8760#	820#
	Mt	109	12020#	650#	6870#	790#	10155	17	−5930#	830#	−1600#	800#	−7930#	630#
	Ds	110	12800#	610#	5650#	660#	10904	28	−8110#	690#	−1380#	750#	−11090#	650#
	Rg	111	13360#	670#	4520#	730#	11480#	400#	*		1290#	740#	*	
	Cn	112	*		3130#	630#	11870#	660#	*		1800#	610#	*	
277	Bh	107	10790#	850#	*		*		−1950#	890#	*		−5070#	940#
	Hs	108	11320#	730#	*		9040#	200#	−3670#	580#	*		−8310#	700#
	Mt	109	11880#	770#	7280#	890#	9930#	100#	−5250#	810#	−3160#	890#	−7310#	810#
	Ds	110	12580#	510#	6080#	690#	10740#	40#	−7360#	390#	−520#	810#	−10570#	730#
	Rg	111	13150#	650#	5070#	610#	11120#	200#	*		−430#	710#	−10160#	690#
	Cn	112	*		3650#	360#	11620	60	*		2660#	480#	*	
278	Bh	107	10650#	720#	*		*		−1480#	710#	*		−4860#	600#
	Hs	108	11150#	780#	*		*		−3020#	590#	*		−8030#	730#
	Mt	109	11690#	790#	7610#	840#	9730#	100#	−4690#	700#	−2500#	840#	−7050#	700#
	Ds	110	12320#	690#	6560#	880#	10330#	200#	−6470#	670#	−2370#	680#	−10260#	690#
	Rg	111	12930#	740#	5440#	650#	10840	50	−8430#	440#	240#	760#	−9720#	390#
	Cn	112	13950#	670#	4280#	640#	11220#	200#	*		430#	570#	*	
	Nh	113	*		2940#	670#	11990	80	*		3410#	520#	*	
279	Hs	108	10950#	750#	*		*		−2470#	840#	*		−7580#	840#
	Mt	109	11570#	940#	8050#	900#	9450#	300#	−4120#	780#	−4070#	780#	−6560#	840#
	Ds	110	12160#	690#	6920#	740#	10060#	90#	−5800#	710#	−1530#	660#	−9790#	690#
	Rg	111	12700#	610#	5880#	770#	10530#	70#	−7610#	720#	−1430#	710#	−8910#	590#
	Cn	112	13720#	410#	4790#	540#	10930#	200#	*		1260#	650#	−12420#	460#
	Nh	113	*		3530#	760#	11620#	750#	*		1490#	710#	*	
280	Hs	108	10840#	670#	*		*		−1900#	960#	*		−7310#	900#
	Mt	109	11520#	890#	8470#	780#	9170#	300#	−3650#	860#	*		−6410#	890#
	Ds	110	11960#	910#	7380#	810#	9770#	200#	−5110#	910#	−3380#	960#	−9530#	840#
	Rg	111	12550#	650#	6300#	790#	10310#	50#	−6940#	670#	−750#	860#	−8560#	670#
	Cn	112	13330#	670#	5290#	720#	10690#	200#	*		−740#	780#	−12020#	790#
	Nh	113	14030#	460#	4040#	550#	11320#	750#	*		2080#	560#	*	
281	Mt	109	11340#	950#	*		8900#	300#	−3070#	1020#	*		−5940#	1000#
	Ds	110	11860#	740#	7830#	760#	9520#	100#	−4580#	590#	−2540#	760#	−9100#	700#
	Rg	111	12390#	870#	6710#	1020#	10020#	400#	−6290#	830#	−2310#	1020#	−7980#	930#
	Cn	112	13090#	550#	5720#	700#	10420	50	*		130#	840#	−11470#	550#
	Nh	113	13710#	670#	4540#	490#	11060#	560#	*		330#	610#	*	
282	Mt	109	11160#	810#	*		8660#	200#	−2560#	750#	*		−5710#	640#
	Ds	110	11730#	830#	8270#	700#	9190#	200#	−3980#	660#	*		−8860#	850#
	Rg	111	12260#	800#	7040#	900#	9740#	100#	−5730#	710#	−1660#	900#	−7730#	700#
	Cn	112	12860#	750#	6180#	930#	10150#	200#	*		−1740#	710#	−11170#	630#
	Nh	113	13470#	550#	4960#	650#	10780	50	*		1000#	860#	*	
283	Ds	110	11610#	780#	*		8860#	200#	−3580#	870#	*		−8460#	870#
	Rg	111	12090#	1030#	7450#	950#	9500#	100#	−5130#	790#	−3230#	810#	−7210#	870#
	Cn	112	12610#	700#	6470#	750#	9970#	110#	*		−750#	700#	−10610#	710#
	Nh	113	13240#	510#	5390#	880#	10510#	120#	*		−660#	720#	*	
284	Ds	110	11480#	620#	*		8550#	780#	−3020#	910#	*		−8260#	840#
	Rg	111	11960#	920#	7830#	830#	9300#	200#	−4610#	880#	*		−7080#	920#
	Cn	112	12440#	940#	6890#	840#	9670#	150#	−6160#	920#	−2570#	990#	−10370#	870#
	Nh	113	13080#	660#	5790#	800#	10250	50	*		10#	870#	*	
	Fl	114	*		4720#	750#	10721	17	*		10#	790#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p. 120003-108)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		Q(d,α)		Q(p,α)		Q(n,α)	
285	Rg	111	6410#	920#	2750#	780#	*		16940#	870#	14060#	700#	14050#	750#
	Cn	112	5430#	900#	4500#	840#	*		16190#	830#	11840#	760#	15970#	590#
	Nh	113	6990#	940#	1750#	1090#	*		17390#	980#	14110#	950#	15520#	980#
	Fl	114	5880#	640#	3400#	660#	*		16760#	560#	11820#	530#	17700#	670#
286	Rg	111	5260#	750#	*		−10360#	590#	18060#	670#	13910#	780#	*	
	Cn	112	6690#	600#	4780#	710#	*		14880#	790#	11720#	770#	14380#	740#
	Nh	113	5730#	980#	2050#	760#	*		18590#	970#	13890#	850#	16360#	910#
	Fl	114	7370#	670#	3780#	950#	*		15300#	770#	11620#	680#	15830#	810#
	Mc	115	*		950#	540#	*		19240#	640#	*		18030#	560#
287	Cn	112	5220#	740#	4740#	780#	*		16070#	880#	11890#	950#	15540#	810#
	Nh	113	6710#	930#	2070#	800#	*		17310#	850#	14100#	1040#	15030#	1000#
	Fl	114	5670#	810#	3720#	850#	*		16620#	980#	11850#	800#	17090#	970#
	Mc	115	7330#	560#	910#	690#	*		17790#	560#	14130#	660#	16620#	680#
288	Cn	112	6460#	950#	*		−11340#	870#	14870#	830#	11830#	920#	*	
	Nh	113	5550#	1000#	2400#	950#	*		18460#	790#	13990#	840#	15900#	920#
	Fl	114	7030#	970#	4040#	1040#	*		15320#	970#	11810#	1090#	15500#	900#
	Mc	115	6030#	680#	1270#	810#	*		19130#	770#	13980#	660#	17570#	950#
	Lv	116	*		2890#	660#	*		15850#	640#	*		17120#	640#
289	Nh	113	6500#	860#	2440#	860#	*		17170#	810#	14180#	630#	14650#	670#
	Fl	114	5560#	900#	4050#	850#	*		16470#	850#	11980#	760#	16630#	600#
	Mc	115	7070#	950#	1310#	1090#	*		17730#	980#	14290#	950#	16240#	980#
	Lv	116	6060#	640#	2920#	660#	*		17120#	560#	12010#	540#	18430#	670#
290	Nh	113	5400#	740#	*		*		18230#	890#	13990#	840#	*	
	Fl	114	6770#	610#	4320#	630#	*		15250#	790#	11930#	800#	15070#	740#
	Mc	115	5830#	980#	1570#	770#	*		18940#	970#	14130#	850#	17120#	930#
	Lv	116	7440#	670#	3290#	950#	*		15710#	770#	11900#	690#	16660#	820#
291	Fl	114	5370#	740#	4290#	840#	*		16380#	810#	12100#	950#	16170#	950#
	Mc	115	6820#	950#	1630#	830#	*		17680#	880#	14340#	1060#	15850#	1020#
	Lv	116	5770#	820#	3240#	850#	*		17000#	990#	12160#	810#	17920#	970#
	Ts	117	*		250#	750#	*		18380#	640#	14540#	720#	17680#	740#
292	Mc	115	5640#	1030#	1890#	970#	*		18810#	820#	14260#	870#	16710#	880#
	Lv	116	7130#	970#	3550#	1060#	*		15700#	970#	12100#	1090#	16350#	900#
	Ts	117	6210#	800#	690#	860#	*		19610#	830#	14390#	730#	18540#	990#
293	Lv	116	5670#	900#	3590#	870#	*		16850#	880#	12250#	770#	17450#	610#
	Ts	117	7230#	990#	790#	1090#	*		18150#	990#	14600#	960#	17130#	980#
	Og	118	*		2360#	790#	*		17500#	700#	*		19470#	740#
294	Ts	117	5950#	980#	1070#	770#	*		19330#	970#	14420#	850#	18000#	950#
	Og	118	7600#	740#	2730#	960#	*		16110#	830#	12120#	750#	17640#	820#
295	Og	118	5940#	840#	2720#	880#	*		17400#	1010#	12390#	890#	18830#	990#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on p.120003-108)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon\mathrm{p})$		$Q(\beta^-\mathrm{n})$	
285	Rg	111	11790#	910#	*		9050#	900#	−4030#	980#	*		−6560#	970#
	Cn	112	12360#	760#	7220#	790#	9470#	100#	−5710#	600#	−1630#	690#	−9890#	710#
	Nh	113	12900#	880#	6200#	1030#	10010	60	*		−1600#	1050#	−8690#	930#
	Fl	114	*		5090#	710#	10600	50	*		1060#	850#	*	
286	Rg	111	11670#	830#	*		8790	70	−3550#	750#	*		−6380#	650#
	Cn	112	12120#	850#	7540#	630#	9280#	100#	−5030#	660#	*		−9590#	860#
	Nh	113	12720#	800#	6550#	920#	9790	50	−6800#	710#	−920#	850#	−8540#	710#
	Fl	114	13250#	750#	5530#	940#	10325	20	*		−880#	720#	*	
	Mc	115	*		4350#	660#	10860	50	*		1850#	870#	*	
287	Cn	112	11910#	790#	*		9170	80	−4570#	870#	*		−9080#	870#
	Nh	113	12450#	1050#	6850#	930#	9650#	200#	−6190#	820#	−2380#	840#	−7880#	900#
	Fl	114	13040#	710#	5770#	760#	10160	50	*		140#	710#	−11310#	710#
	Mc	115	*		4690#	880#	10710	50	*		260#	730#	*	
288	Cn	112	11680#	790#	*		9080#	860#	−4000#	1040#	*		−8830#	1000#
	Nh	113	12260#	920#	7140#	830#	9490#	990#	−5700#	880#	*		−7750#	920#
	Fl	114	12700#	940#	6110#	850#	10064	9	−7340#	920#	−1680#	990#	−11010#	870#
	Mc	115	13360#	660#	4990#	810#	10580	50	*		940#	890#	*	
	Lv	116	*		3800#	750#	11240	50	*		1090#	790#	*	
289	Nh	113	12050#	870#	*		9400#	780#	−5140#	930#	*		−7230#	910#
	Fl	114	12590#	760#	6450#	790#	9940	70	−6830#	610#	−770#	850#	−10540#	720#
	Mc	115	13100#	880#	5350#	1050#	10500	50	*		−580#	1050#	−9430#	930#
	Lv	116	*		4190#	710#	11060	50	*		2060#	850#	*	
290	Nh	113	11910#	890#	*		9250#	300#	−4710#	810#	*		−7070#	720#
	Fl	114	12330#	850#	6760#	800#	9860	30	−6160#	670#	*		−10240#	860#
	Mc	115	12890#	810#	5630#	920#	10410	40	*		90#	780#	−9190#	710#
	Lv	116	13500#	760#	4600#	940#	10990	70	*		180#	730#	*	
291	Fl	114	12140#	800#	*		9700	60	−5760#	880#	*		−9780#	880#
	Mc	115	12650#	1070#	5950#	890#	10300#	200#	−7540#	890#	−1330#	910#	−8570#	920#
	Lv	116	13210#	720#	4820#	770#	10890	90	*		1170#	710#	*	
	Ts	117	*		3540#	930#	11650#	300#	*		1500#	790#	*	
292	Mc	115	12460#	940#	6180#	910#	10210#	200#	−6960#	950#	*		−8430#	950#
	Lv	116	12900#	940#	5180#	850#	10791	12	*		−590#	1000#	−11870#	920#
	Ts	117	*		3930#	860#	11470#	300#	*		2110#	960#	*	
293	Lv	116	12800#	770#	5480#	800#	10680	60	−8190#	680#	*		−11330#	780#
	Ts	117	13440#	930#	4340#	1070#	11310	40	*		510#	1070#	*	
	Og	118	*		3050#	780#	12030#	300#	*		3290#	900#	*	
294	Ts	117	13180#	860#	4660#	940#	11180	40	*		*		−10040#	770#
	Og	118	*		3530#	940#	11870	30	*		1370#	730#	*	
295	Og	118	13540#	800#	3790#	800#	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.

Filled circles represent values based on experimental data; open circles represent values relying on the TMS estimates (see Part I, Section 5).

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

Other types of graphs are available on the AMDC website.

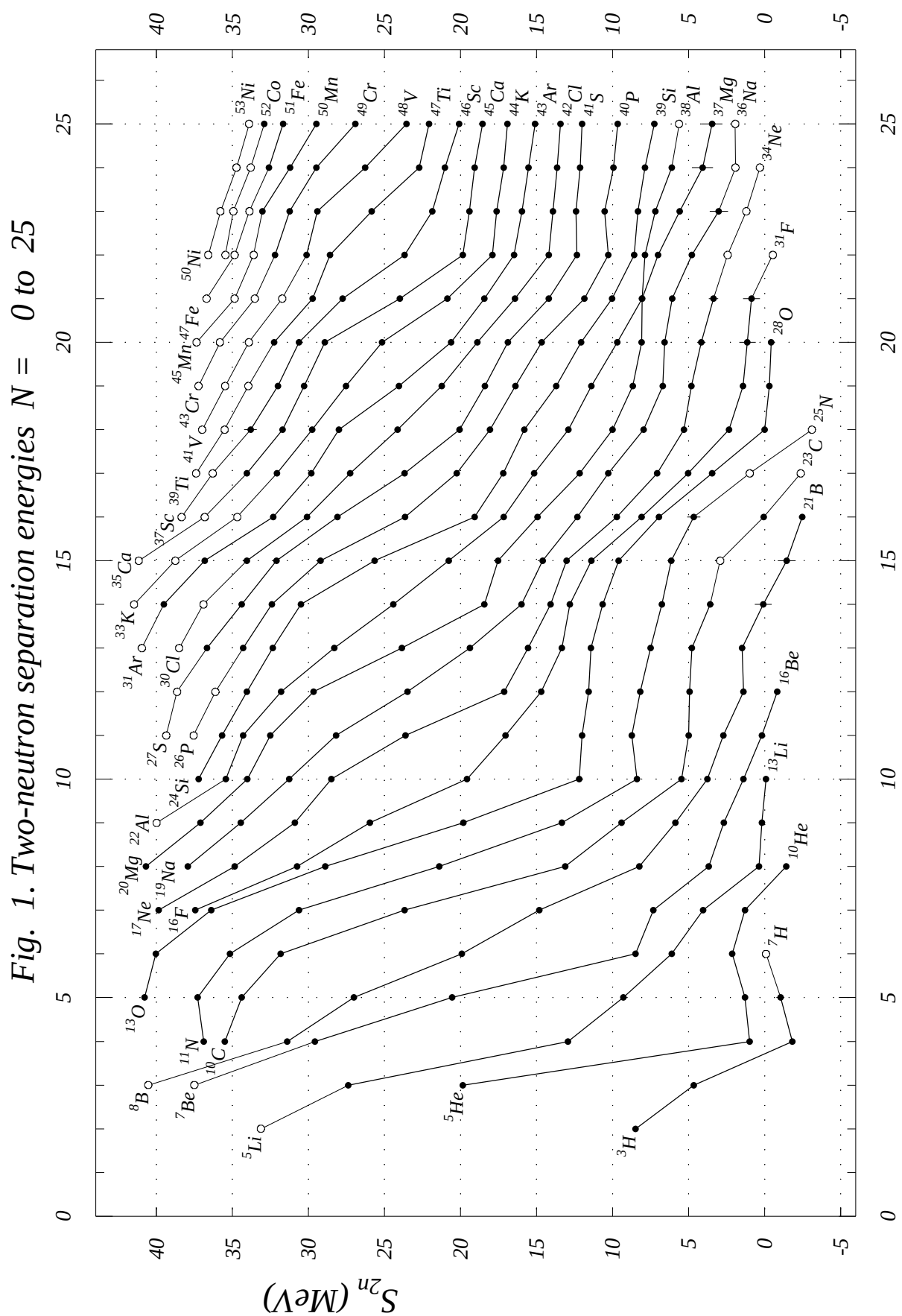


Fig. 1. Two-neutron separation energies N = 0 to 25

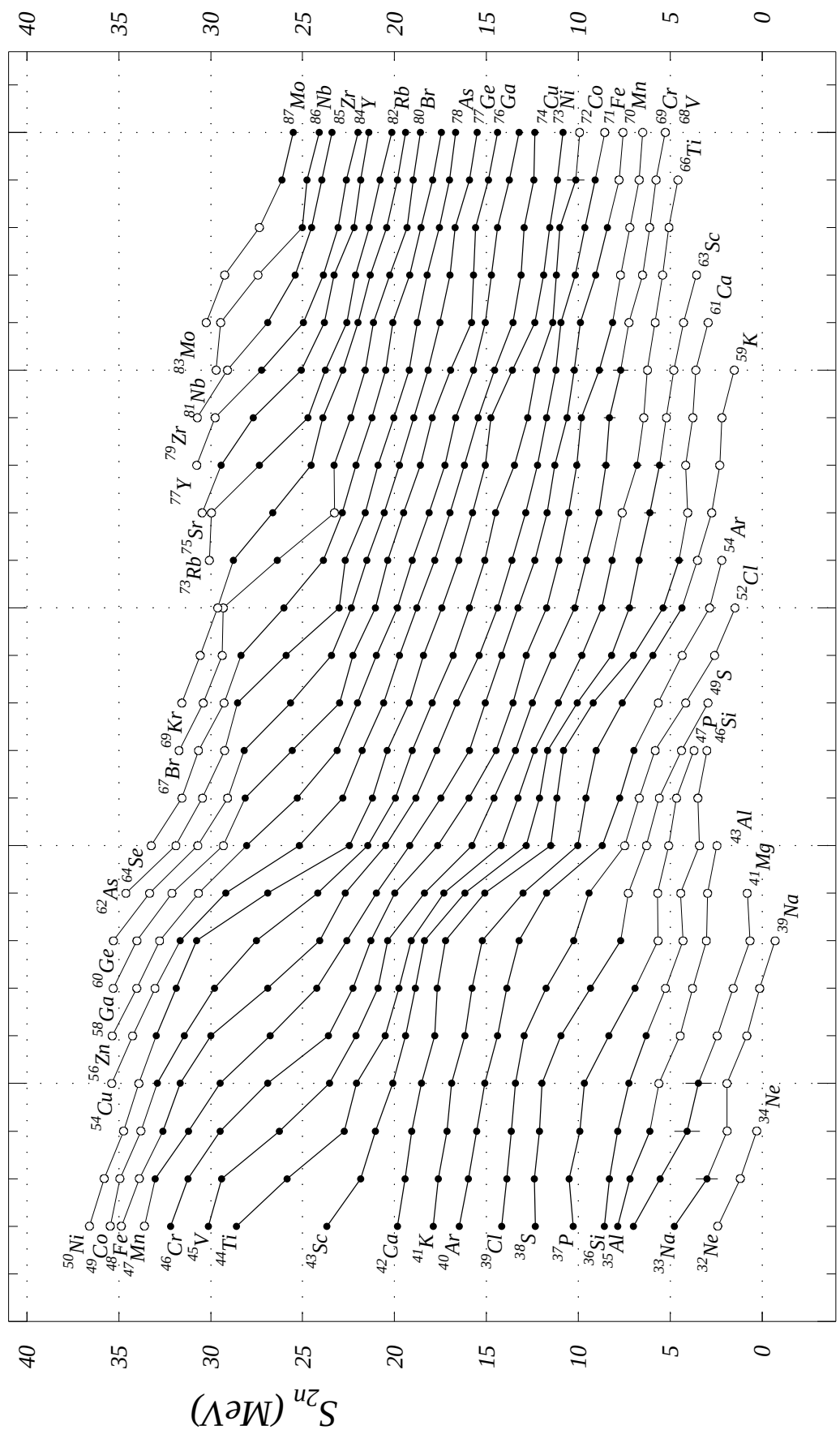


Fig. 2. Two-neutron separation energies N = 22 to 45

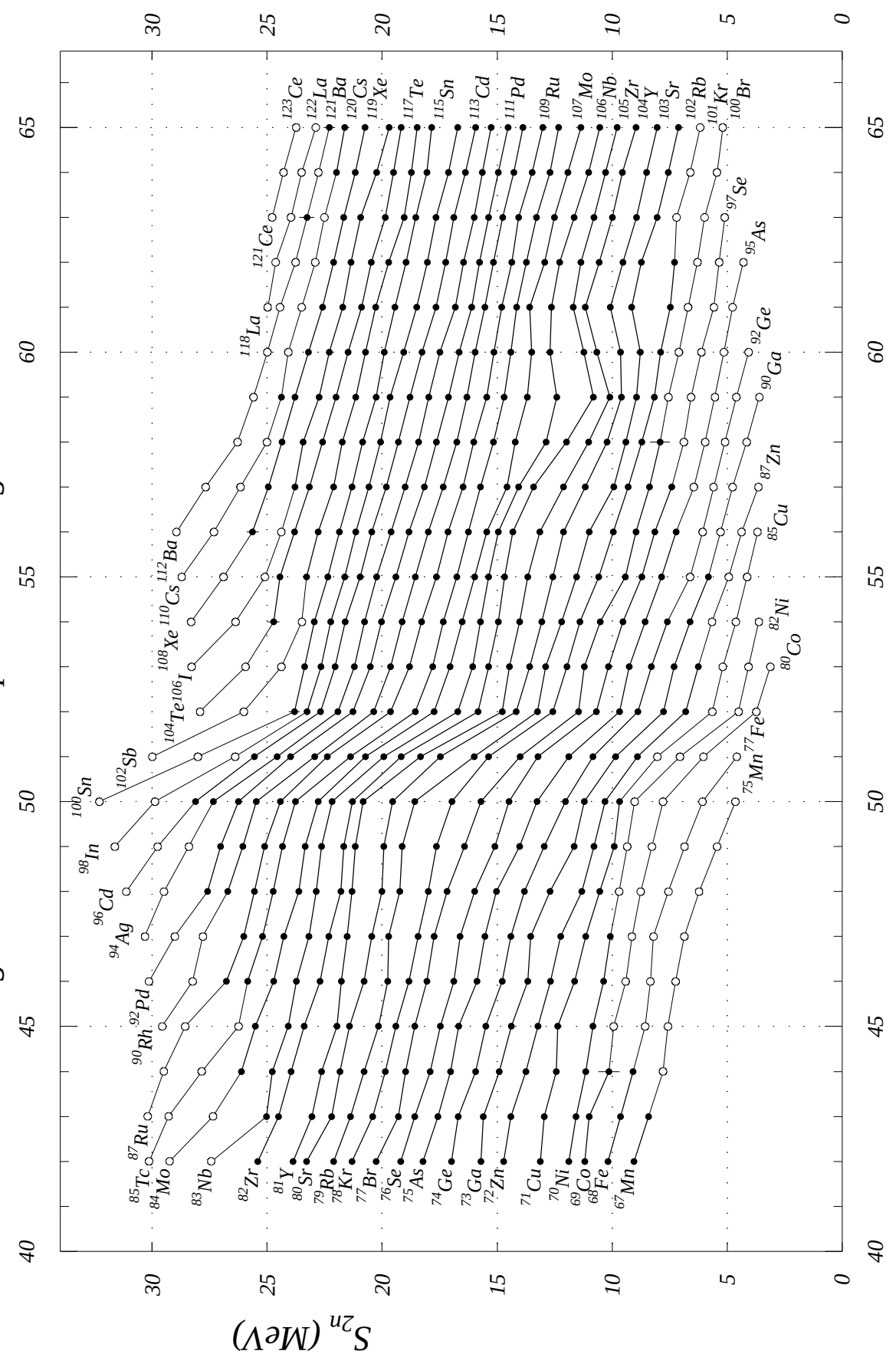


Fig. 3. Two-neutron separation energies N = 42 to 65

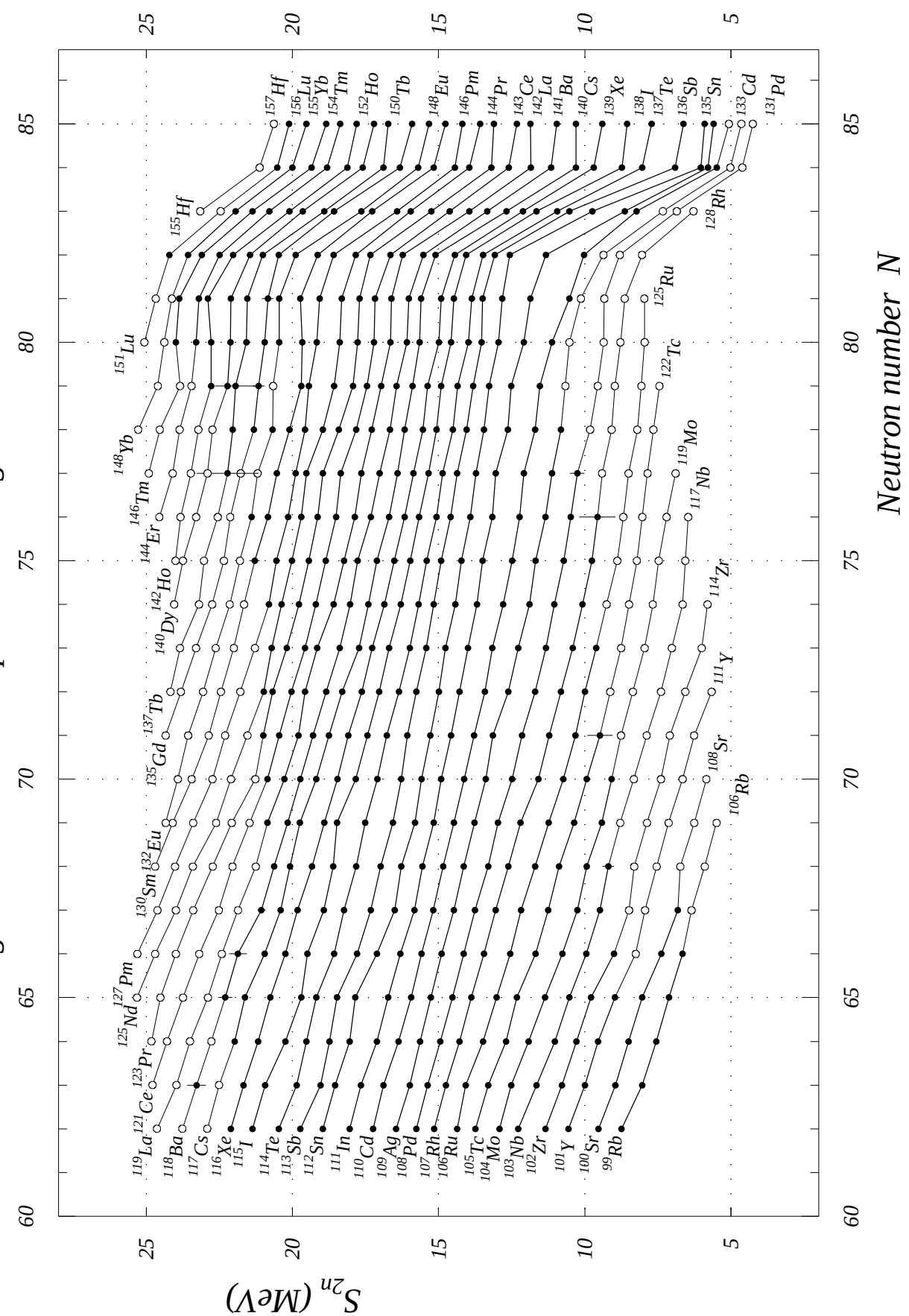


Fig. 4. Two-neutron separation energies N = 62 to 85

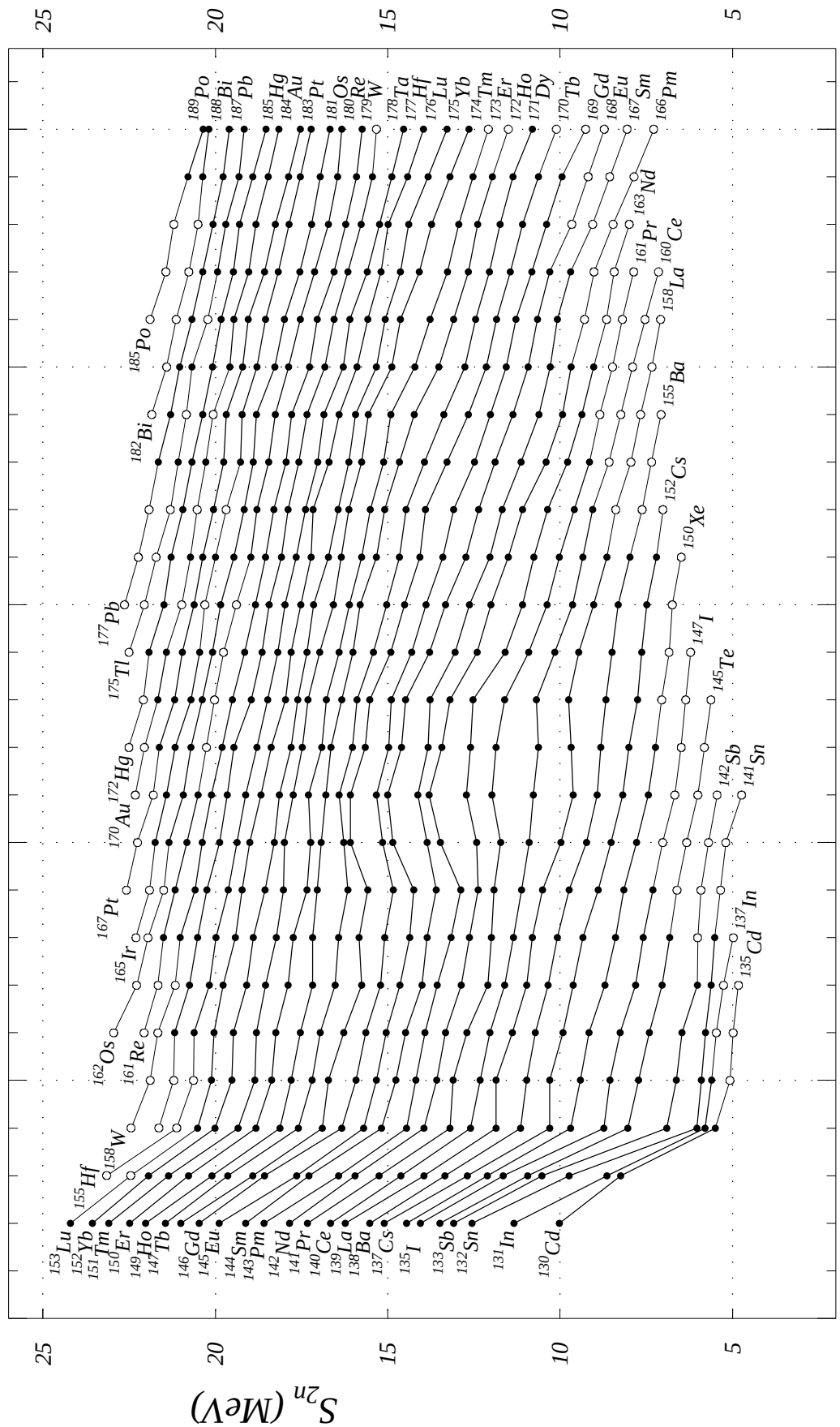


Fig. 5. Two-neutron separation energies N = 82 to 105

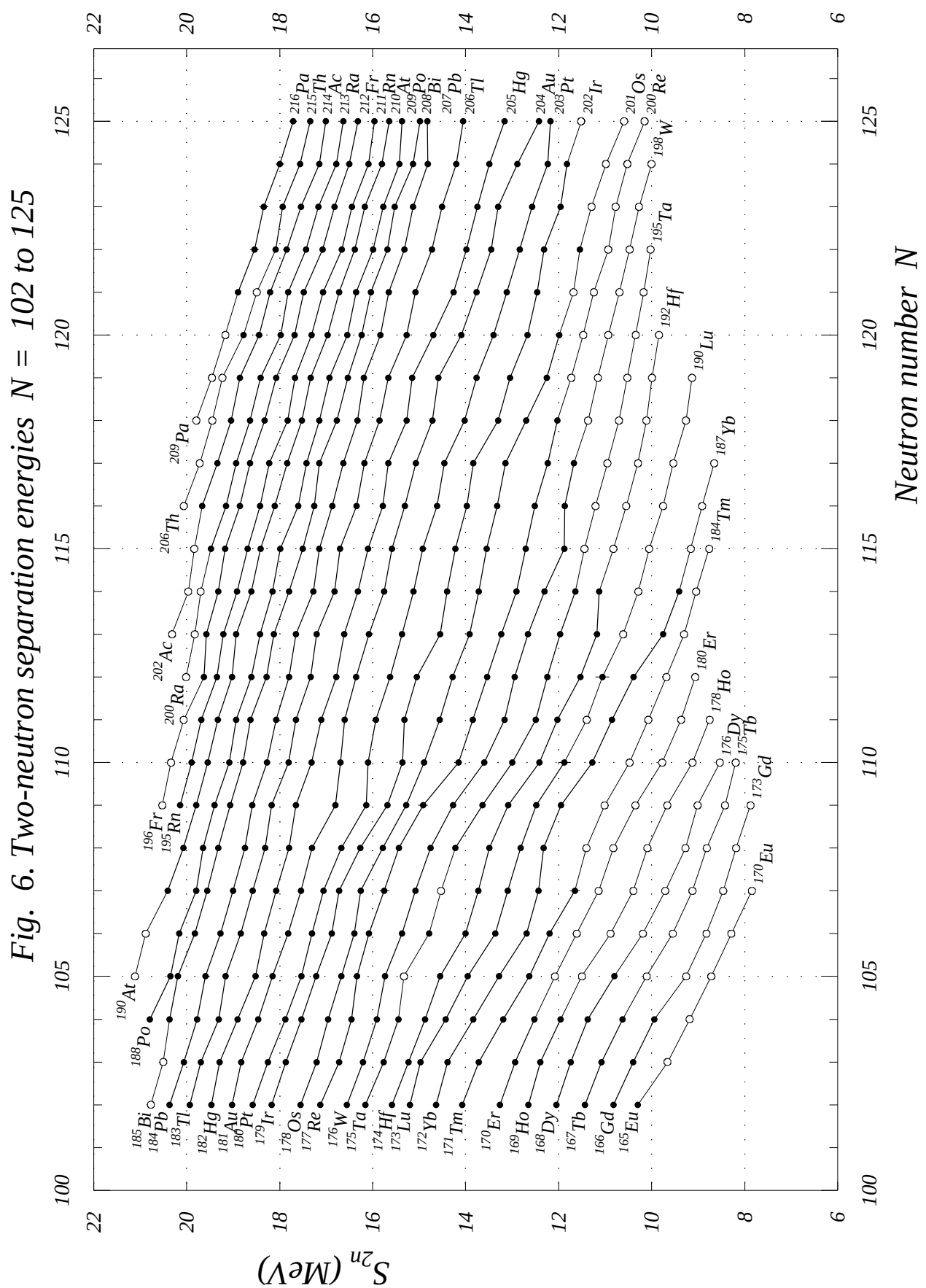


Fig. 6. Two-neutron separation energies N = 102 to 125

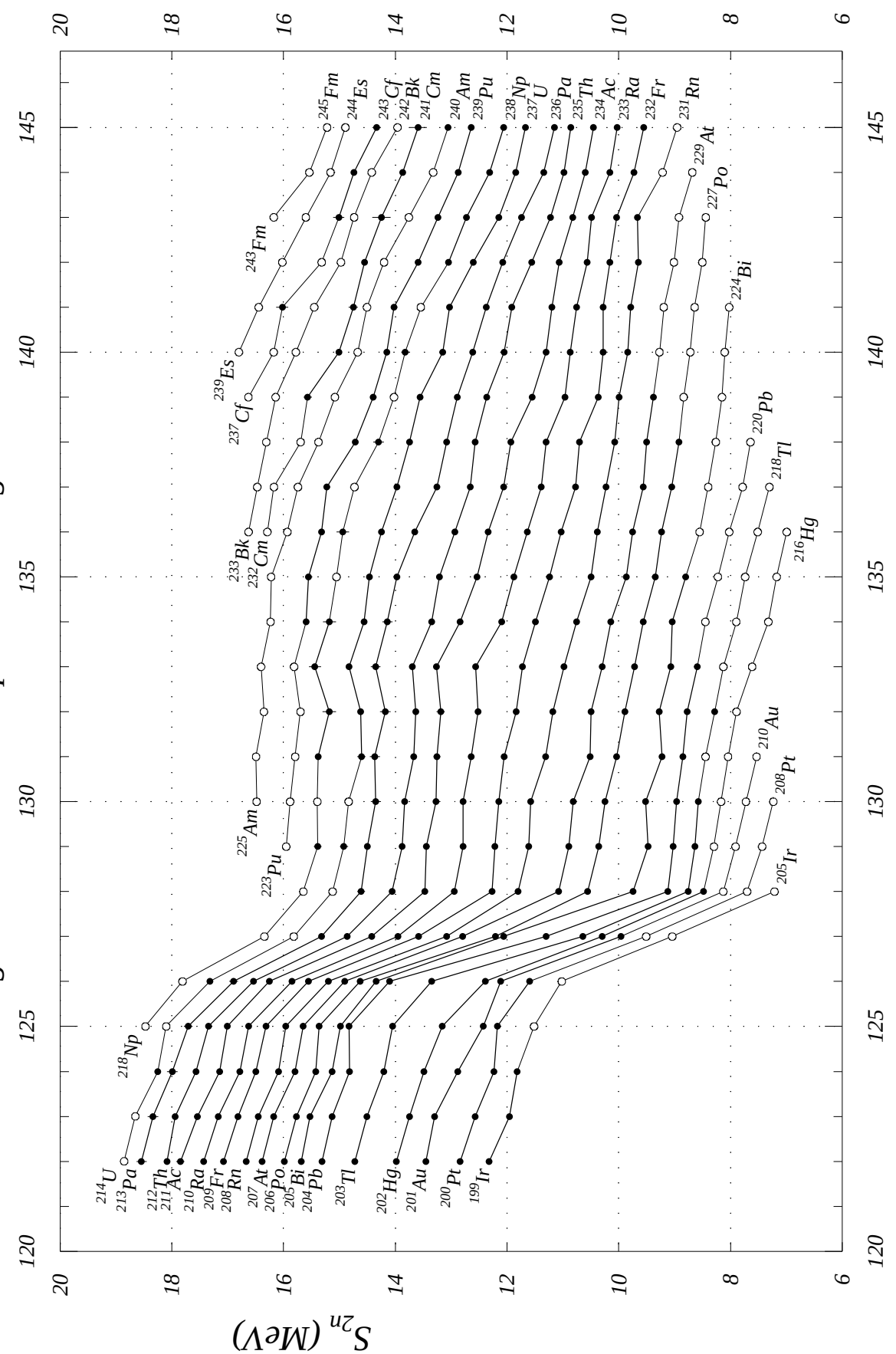


Fig. 7. Two-neutron separation energies N = 122 to 145

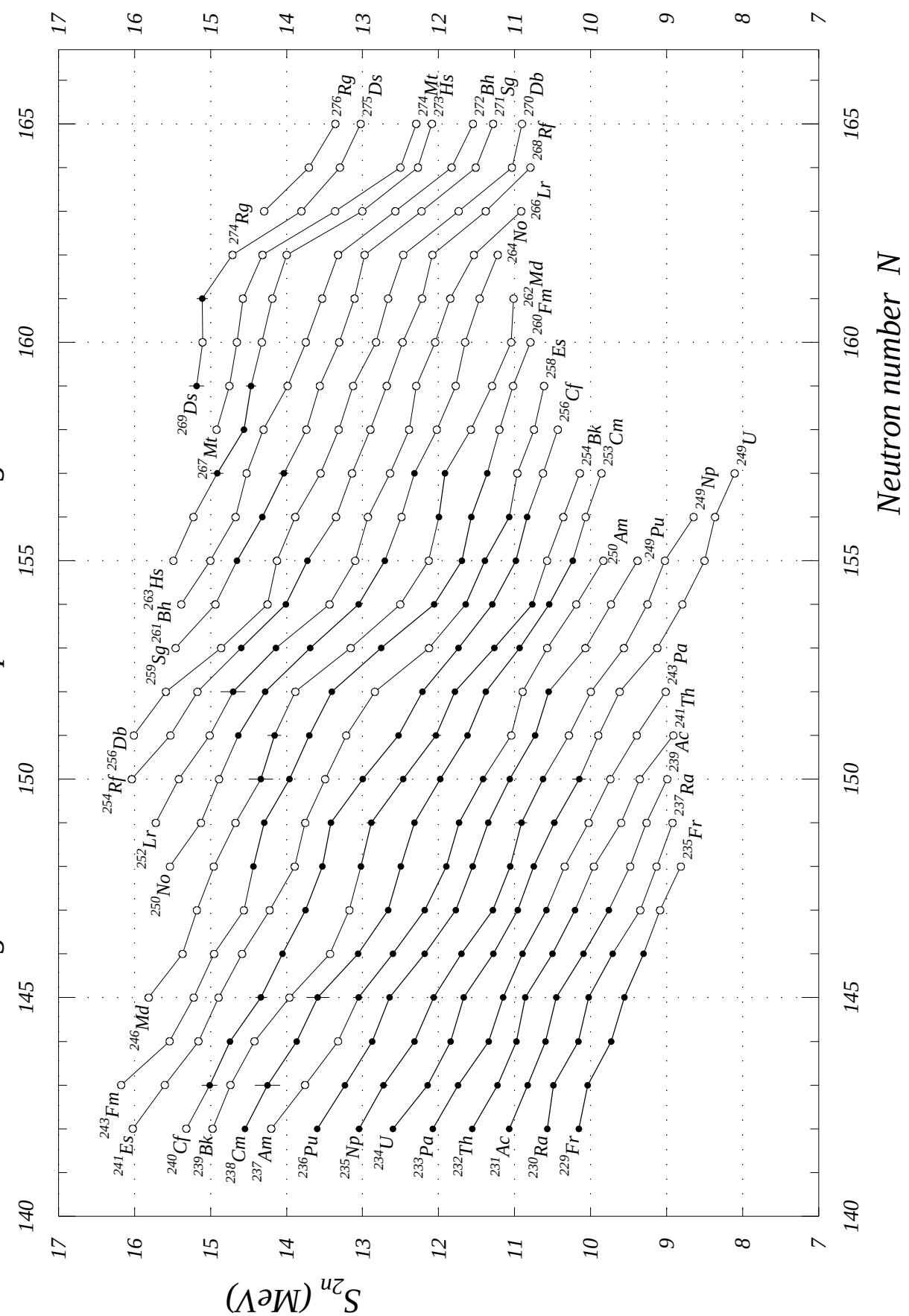


Fig. 8. Two-neutron separation energies N = 142 to 165

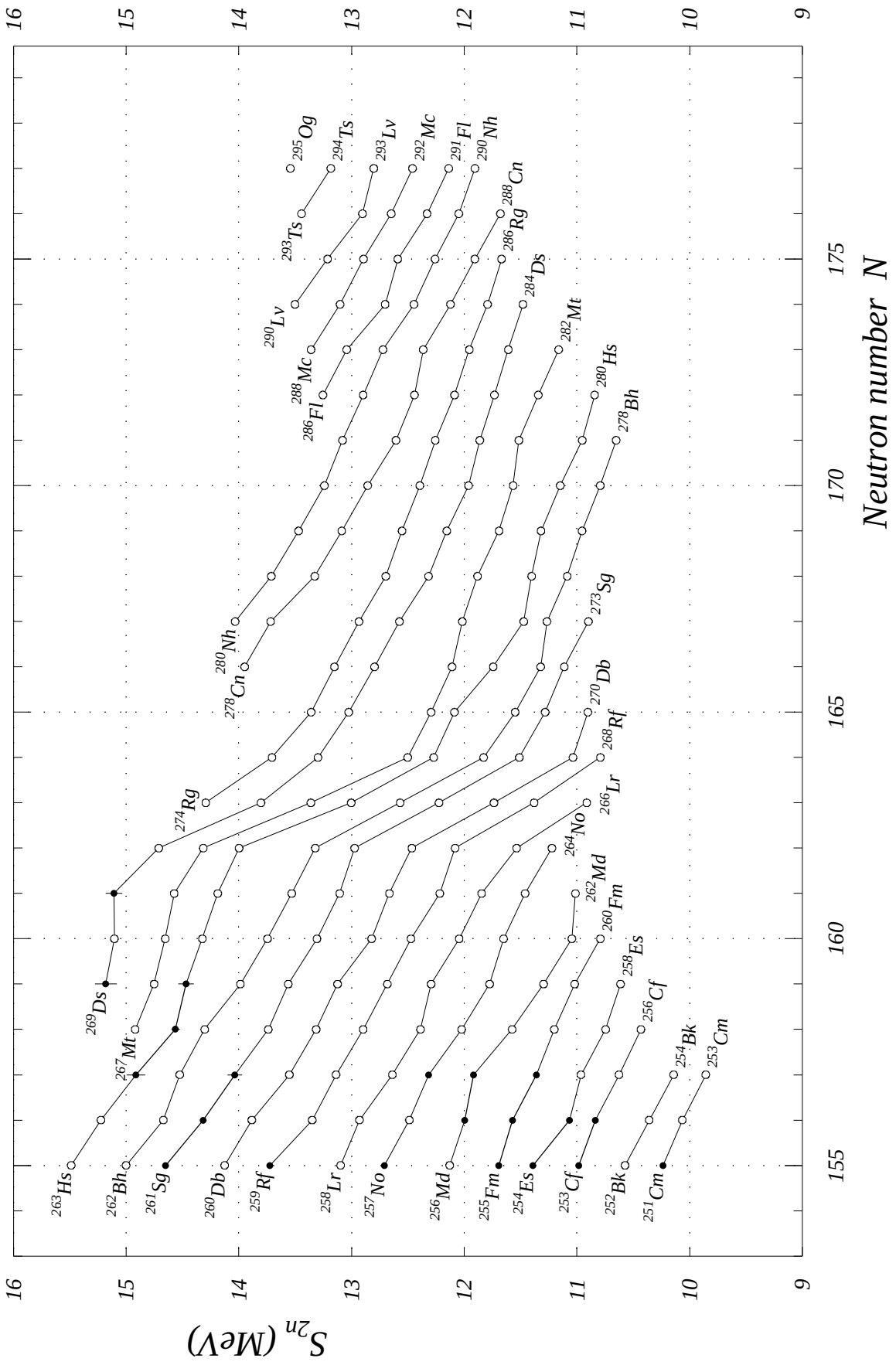


Fig. 9. Two-neutron separation energies N = 155 to 178

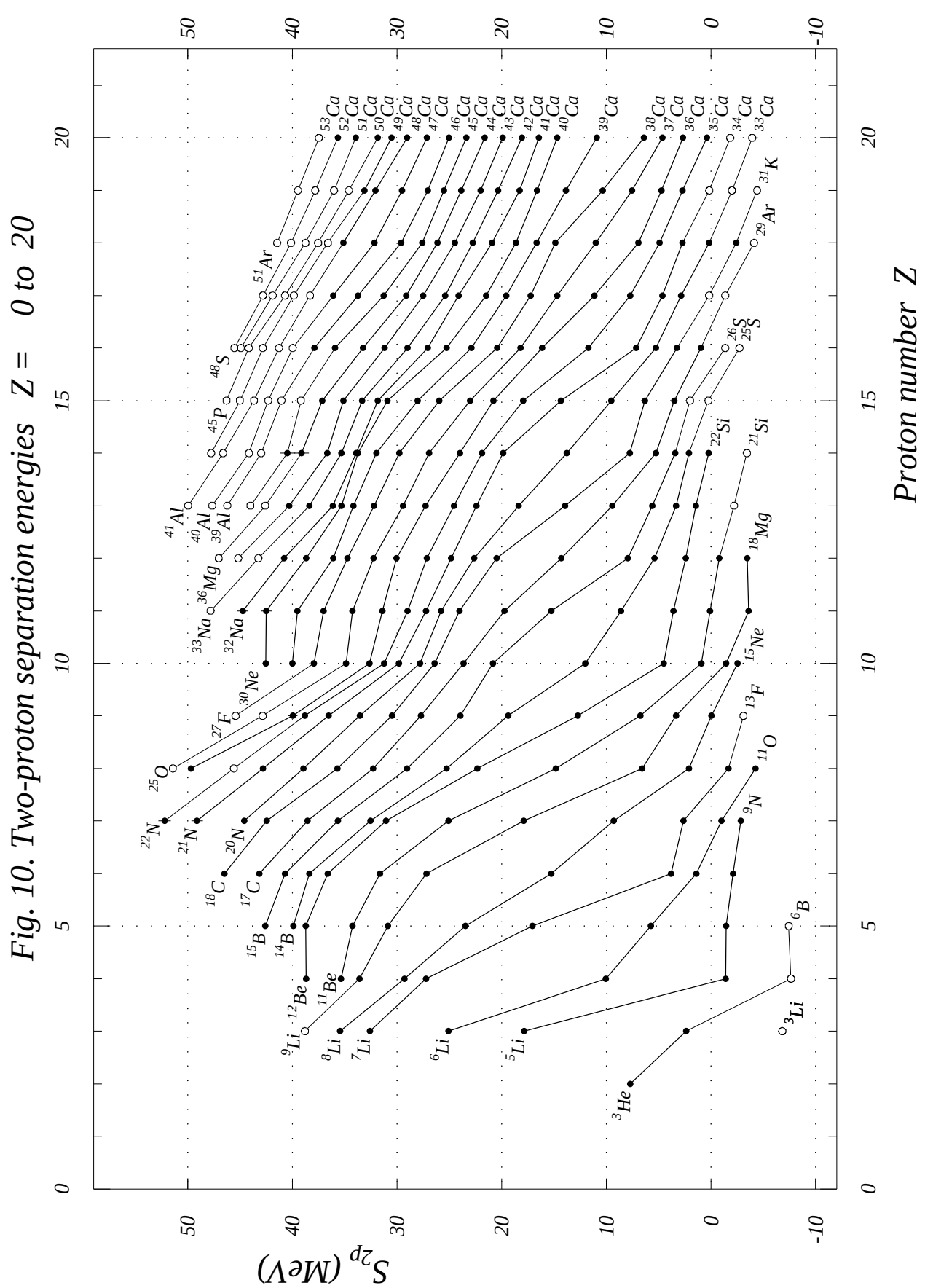


Fig. 10. Two-proton separation energies Z = 0 to 20

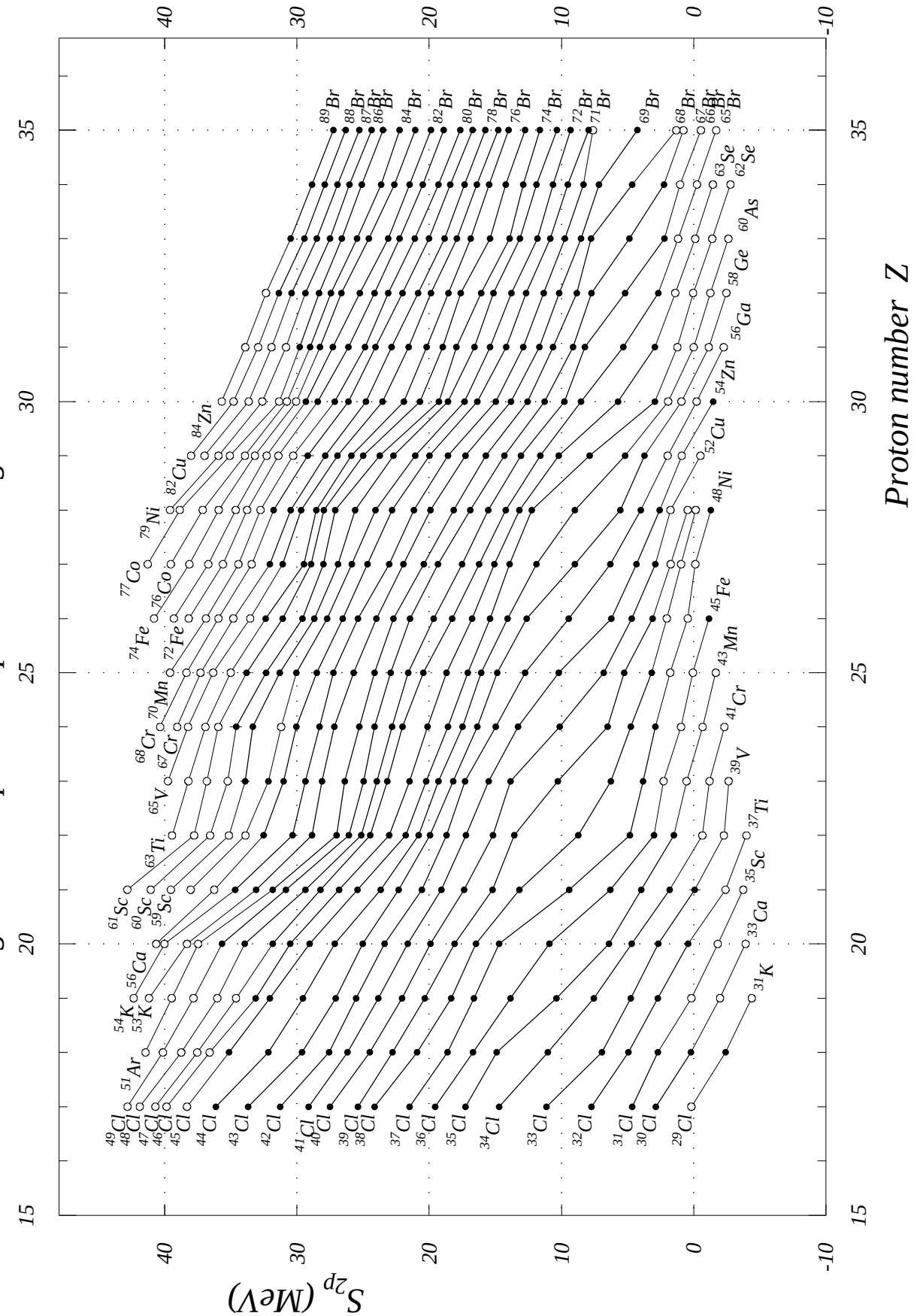


Fig. 11. Two-proton separation energies Z = 17 to 35

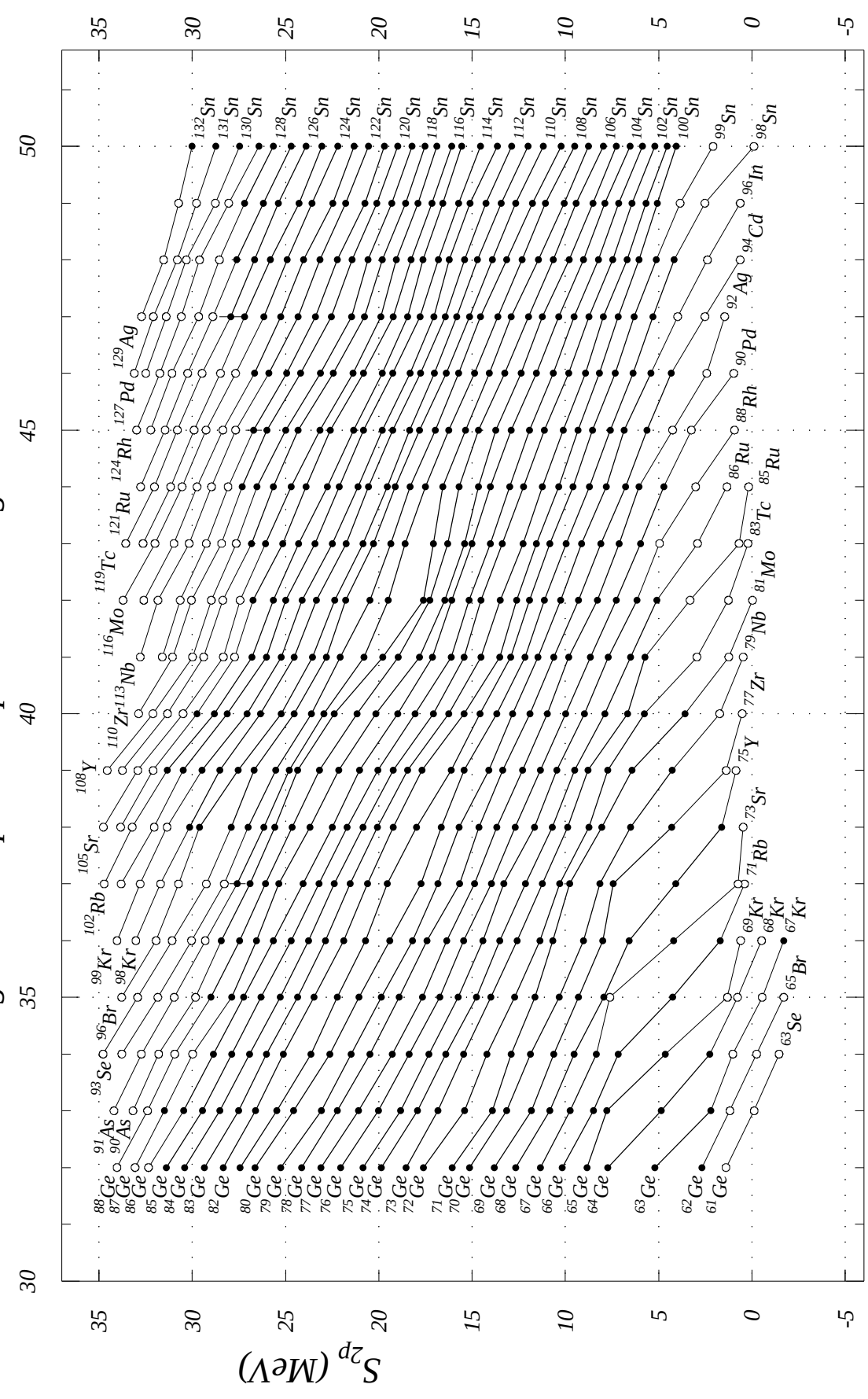


Fig. 12. Two-proton separation energies Z = 32 to 50

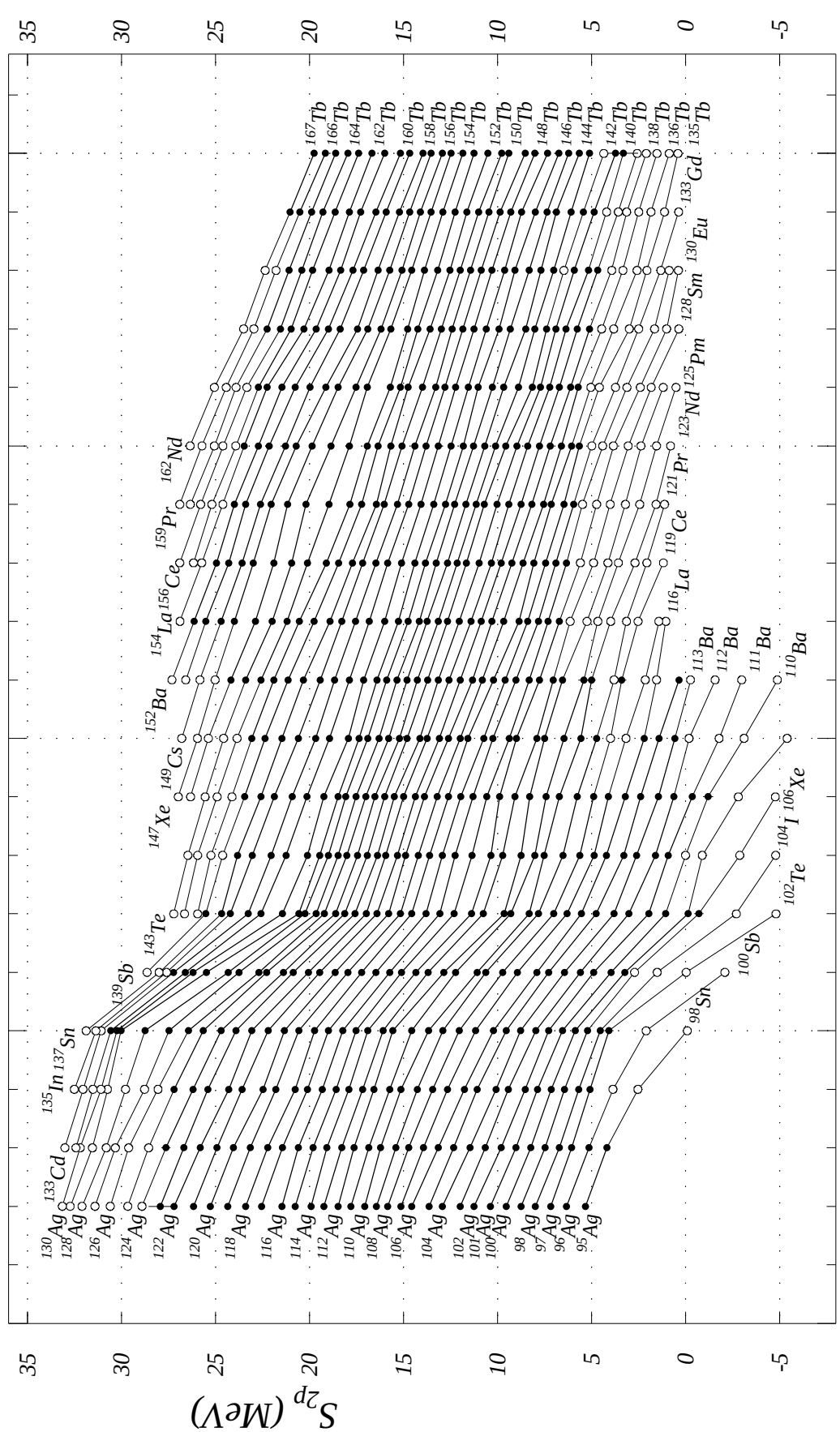


Fig. 13. Two-proton separation energies Z = 47 to 65

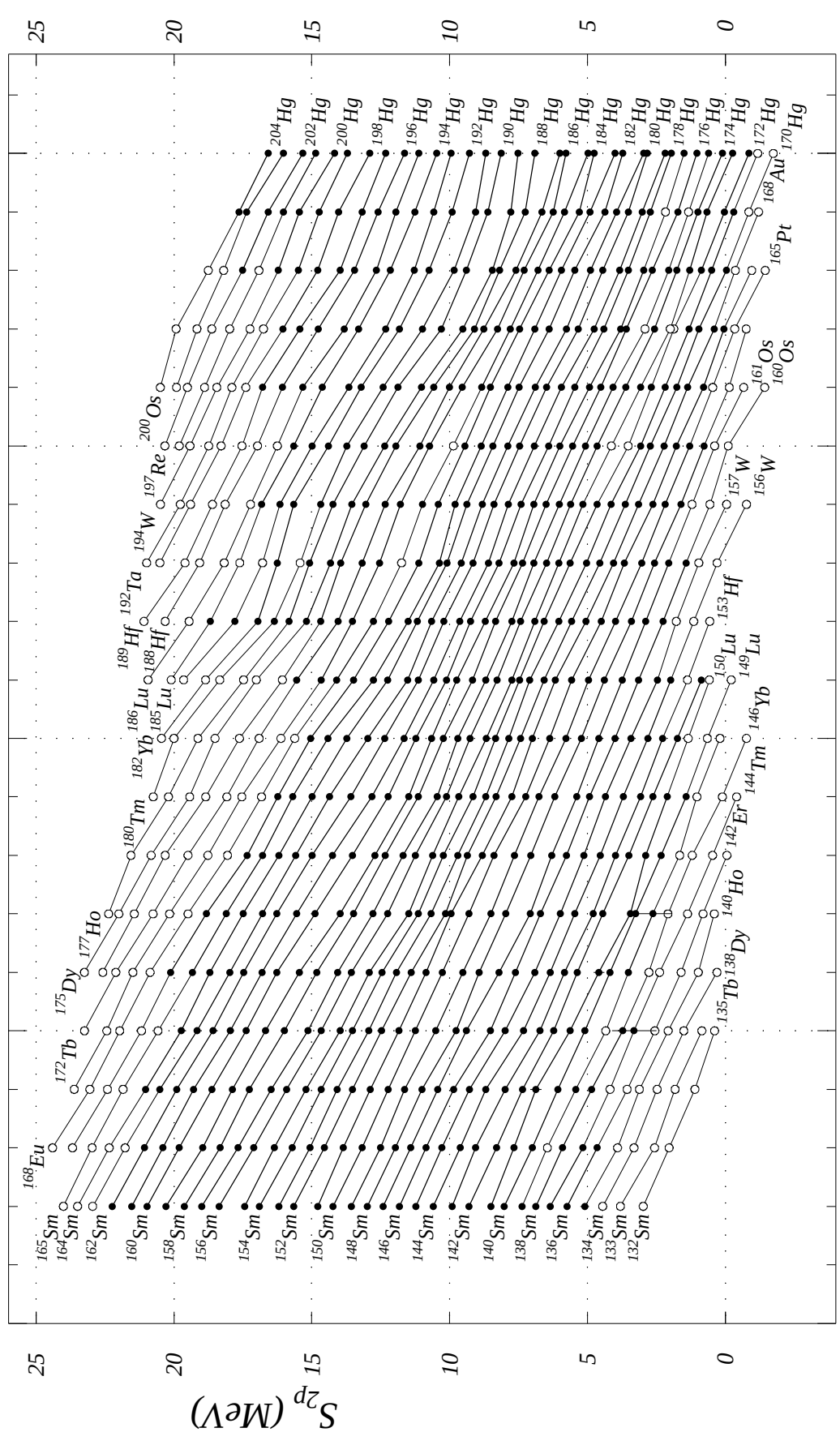


Fig. 14. Two-proton separation energies Z = 62 to 80

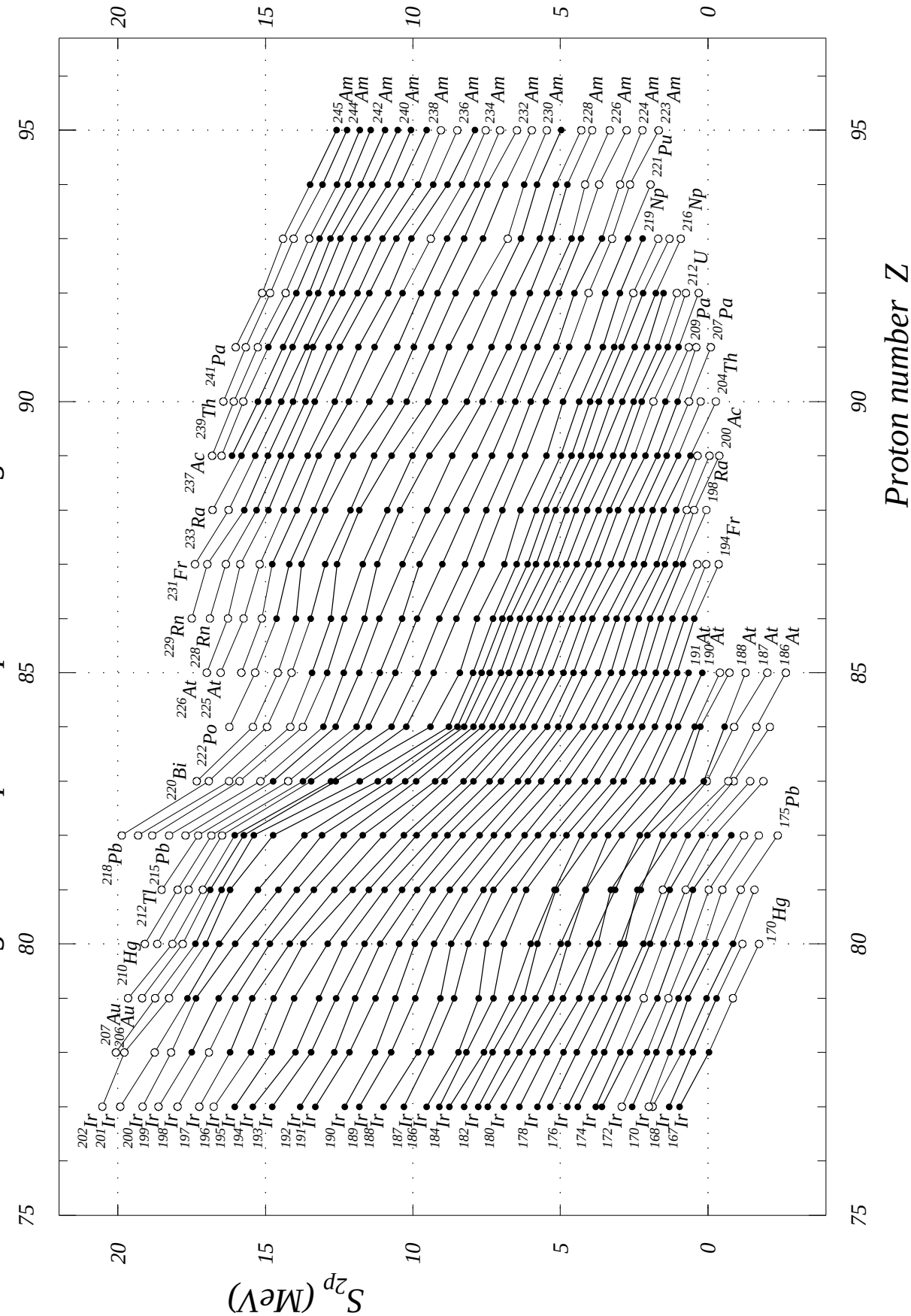


Fig. 15. Two-proton separation energies Z = 77 to 95

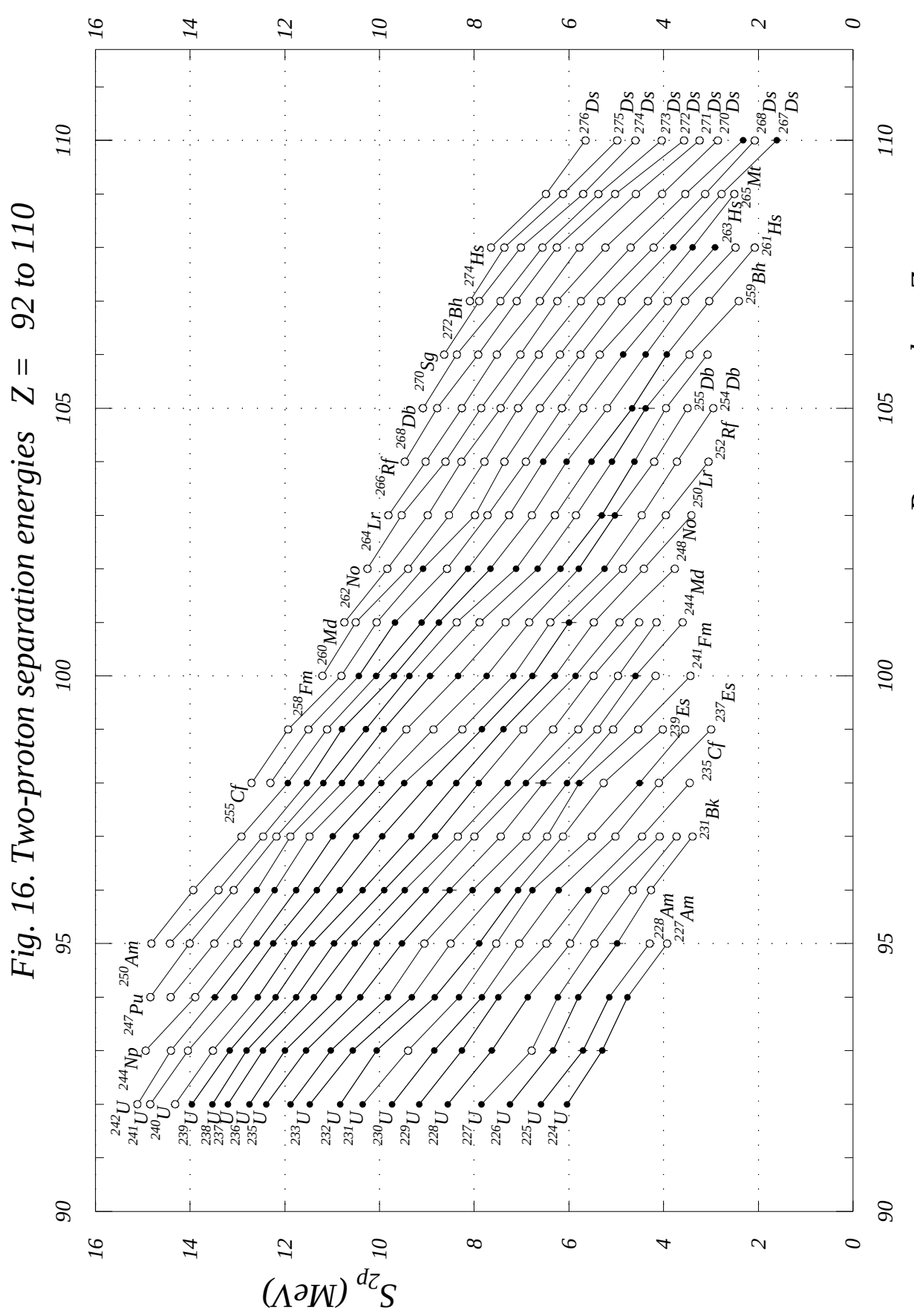


Fig. 16. Two-proton separation energies Z = 92 to 110

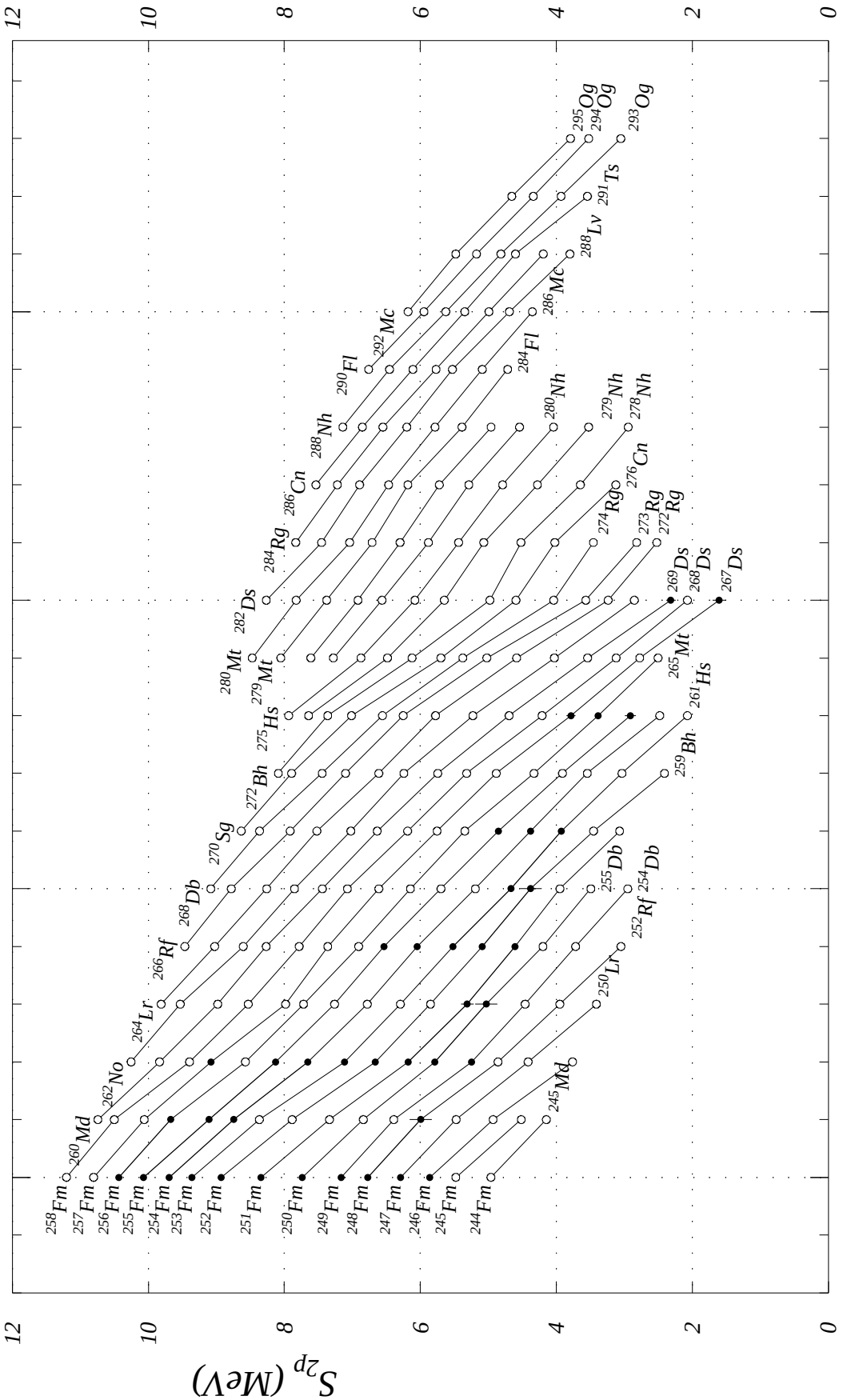
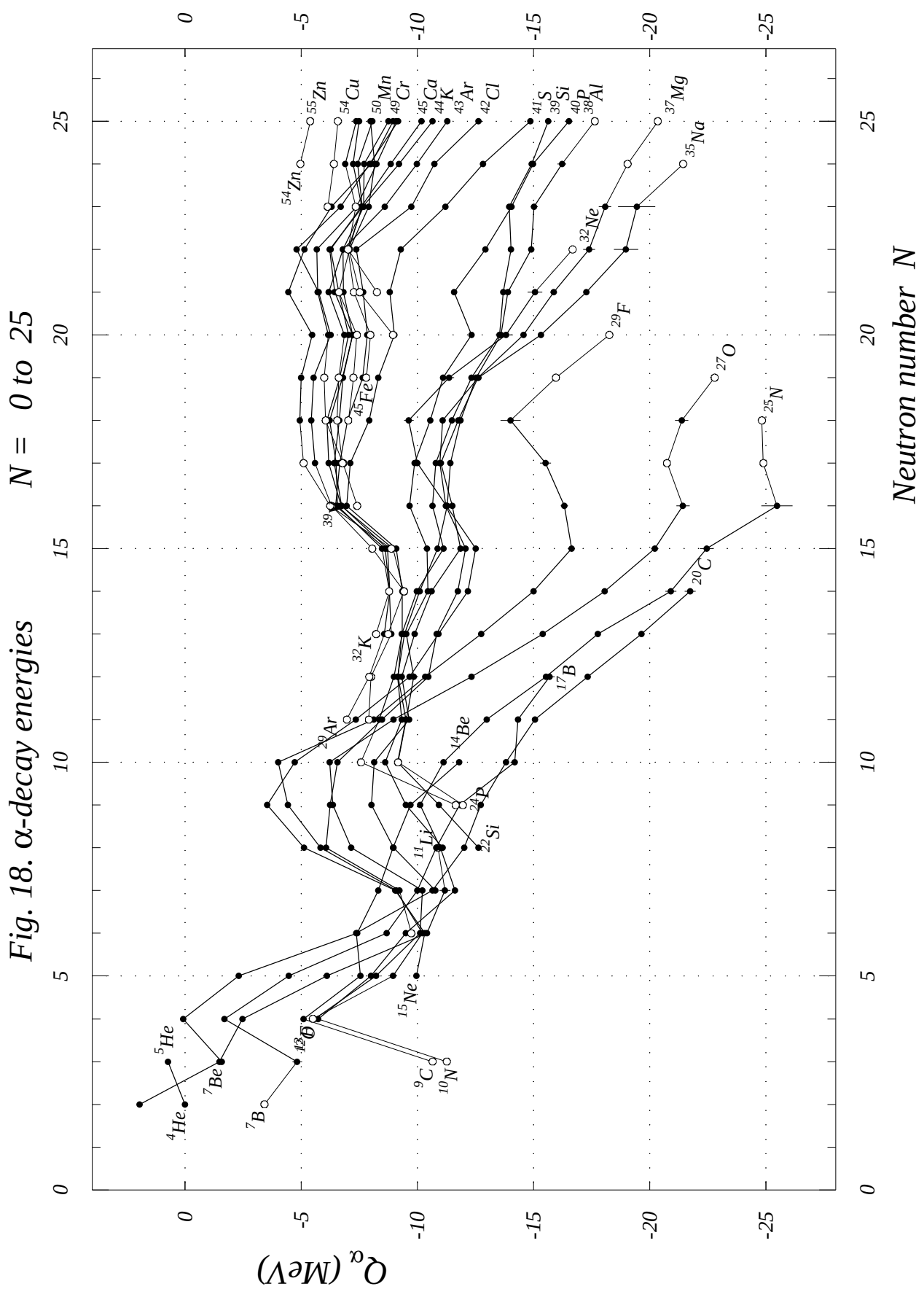
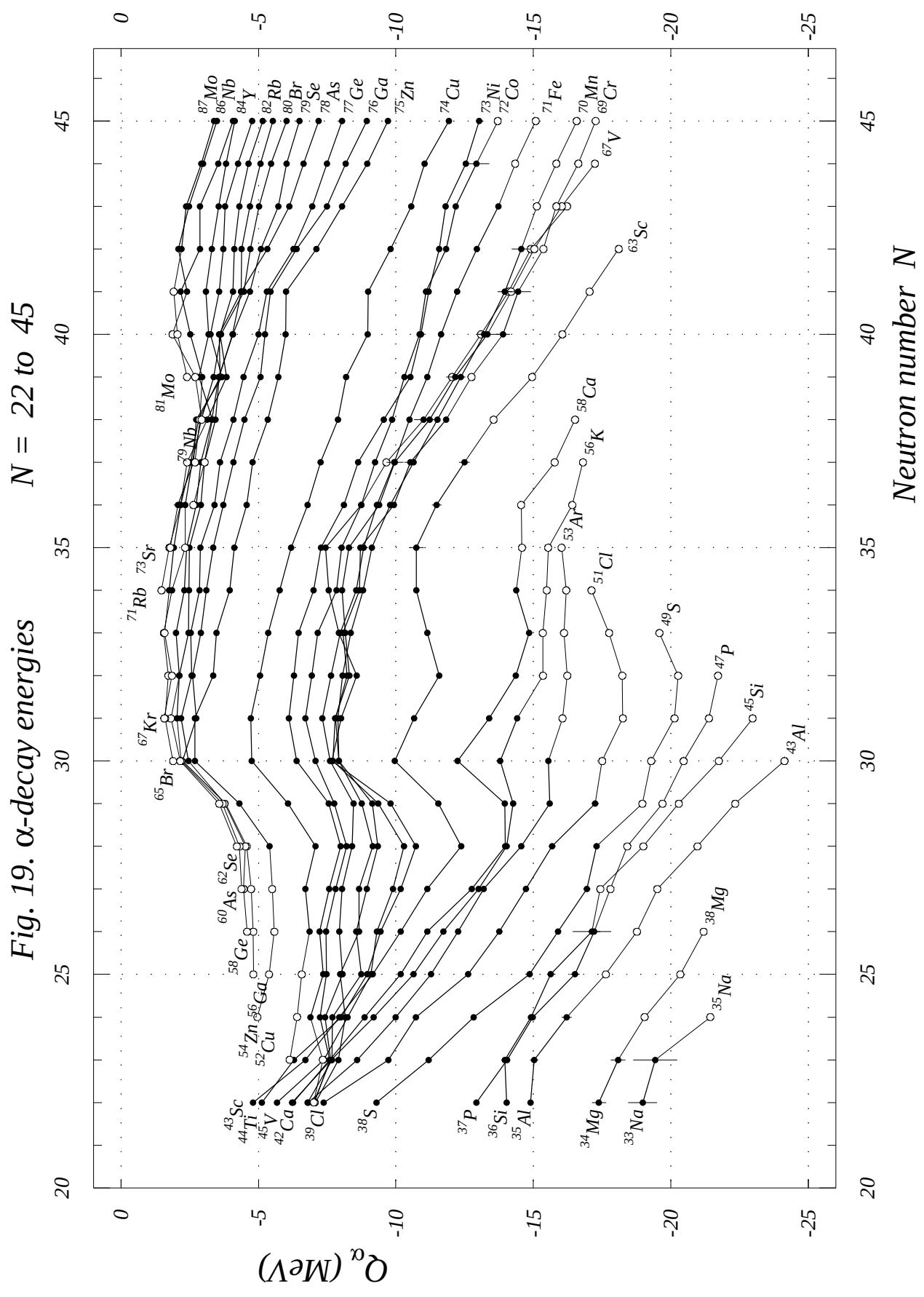
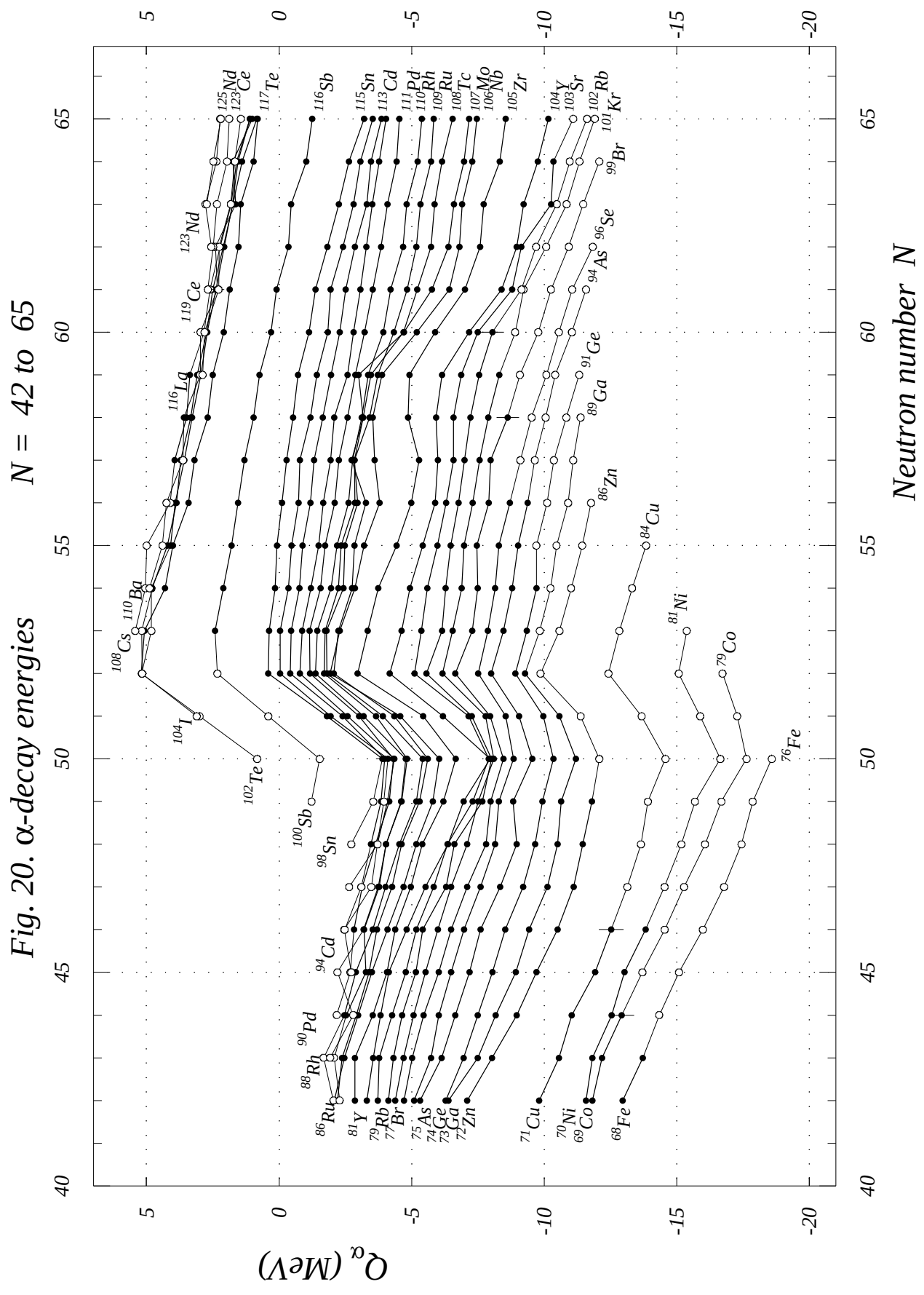
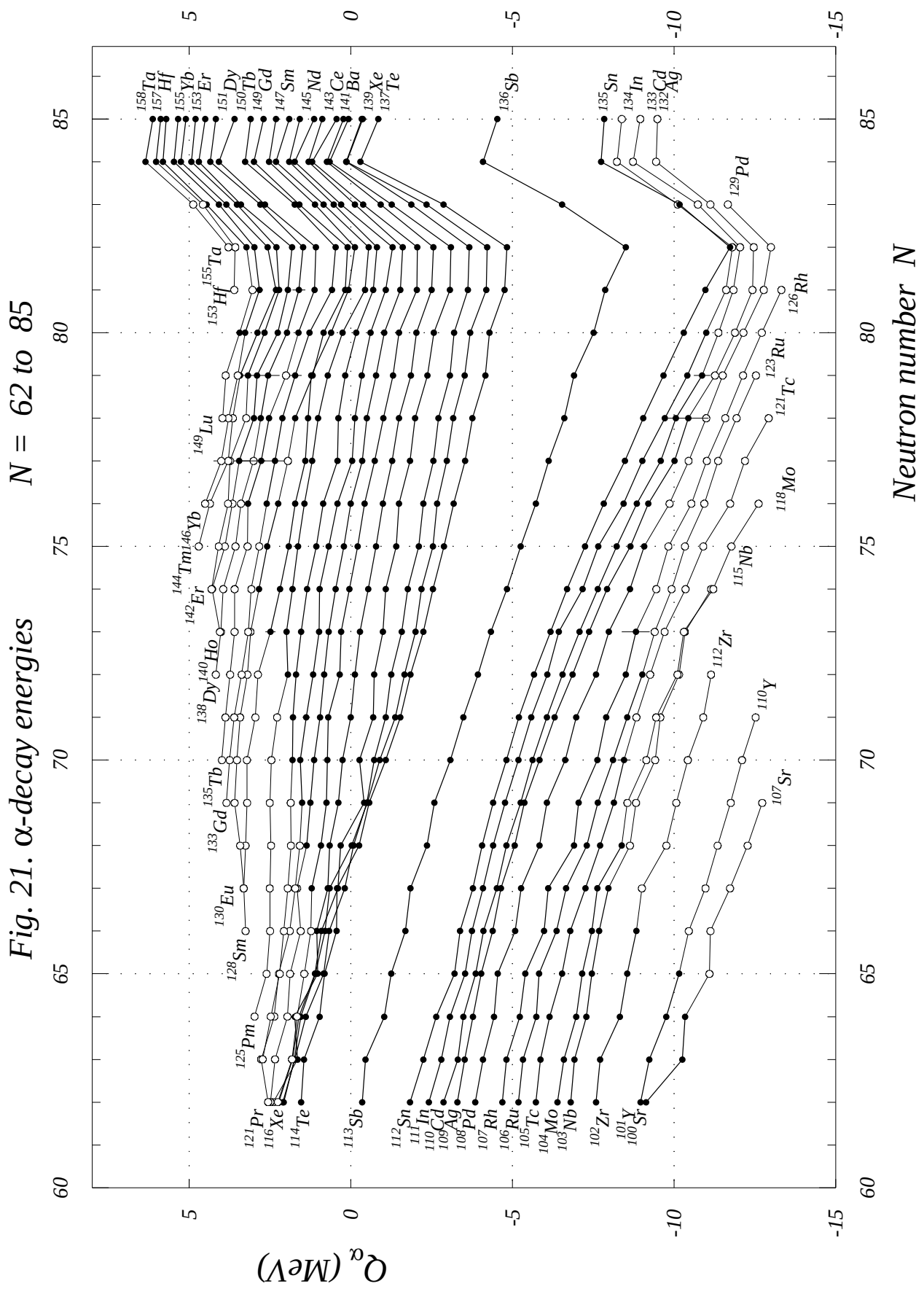


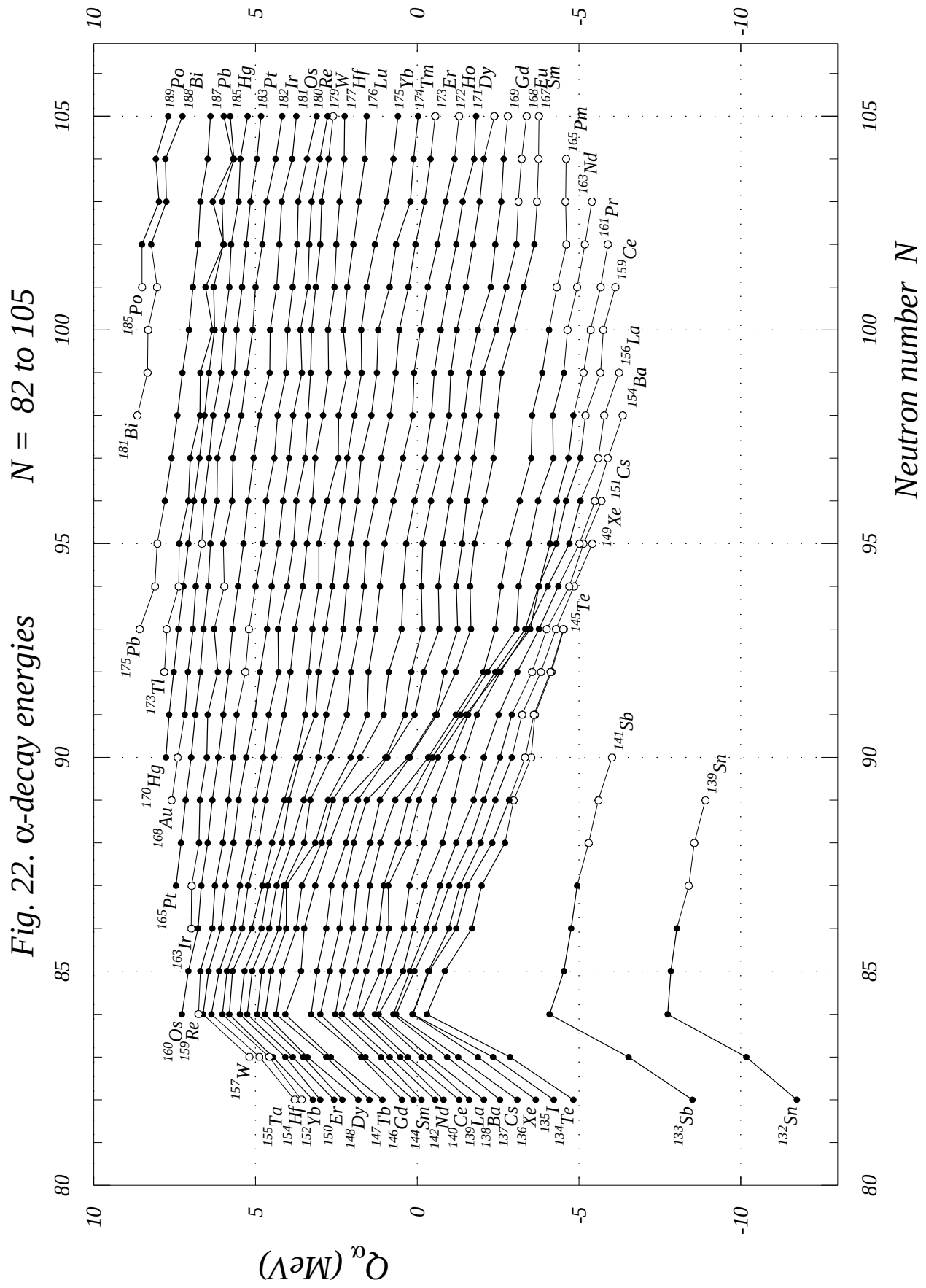
Fig. 17. Two-proton separation energies $Z = 100$ to 118

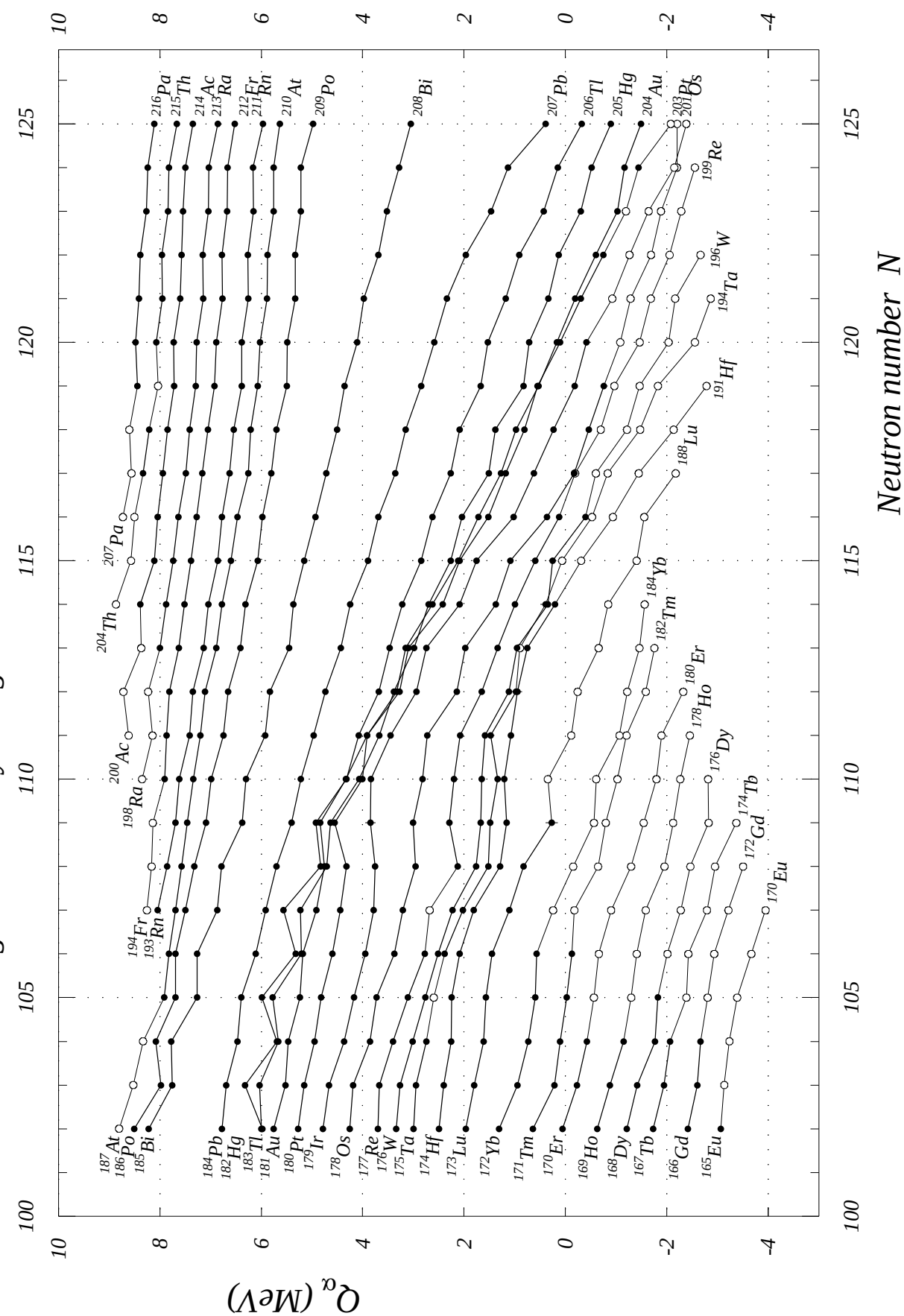

Fig. 18. α-decay energies
N = 0 to 25
Neutron number N
Qα (MeV)
0
5
10
15
20
25
-5
-10
-15
-20
-25
4He
5He
7Be
7B
9C
10N
15Ne
11Li
22Si
24P
29Ar
32K
14Be
17B
20C
25N
27O
29F
32Ne
35Na
37Mg
38Al
40P
39Si
41S
42Cl
43Ar
44K
45Ca
45Fe
49Cr
50Mn
54Cu
54Zn
55Zn

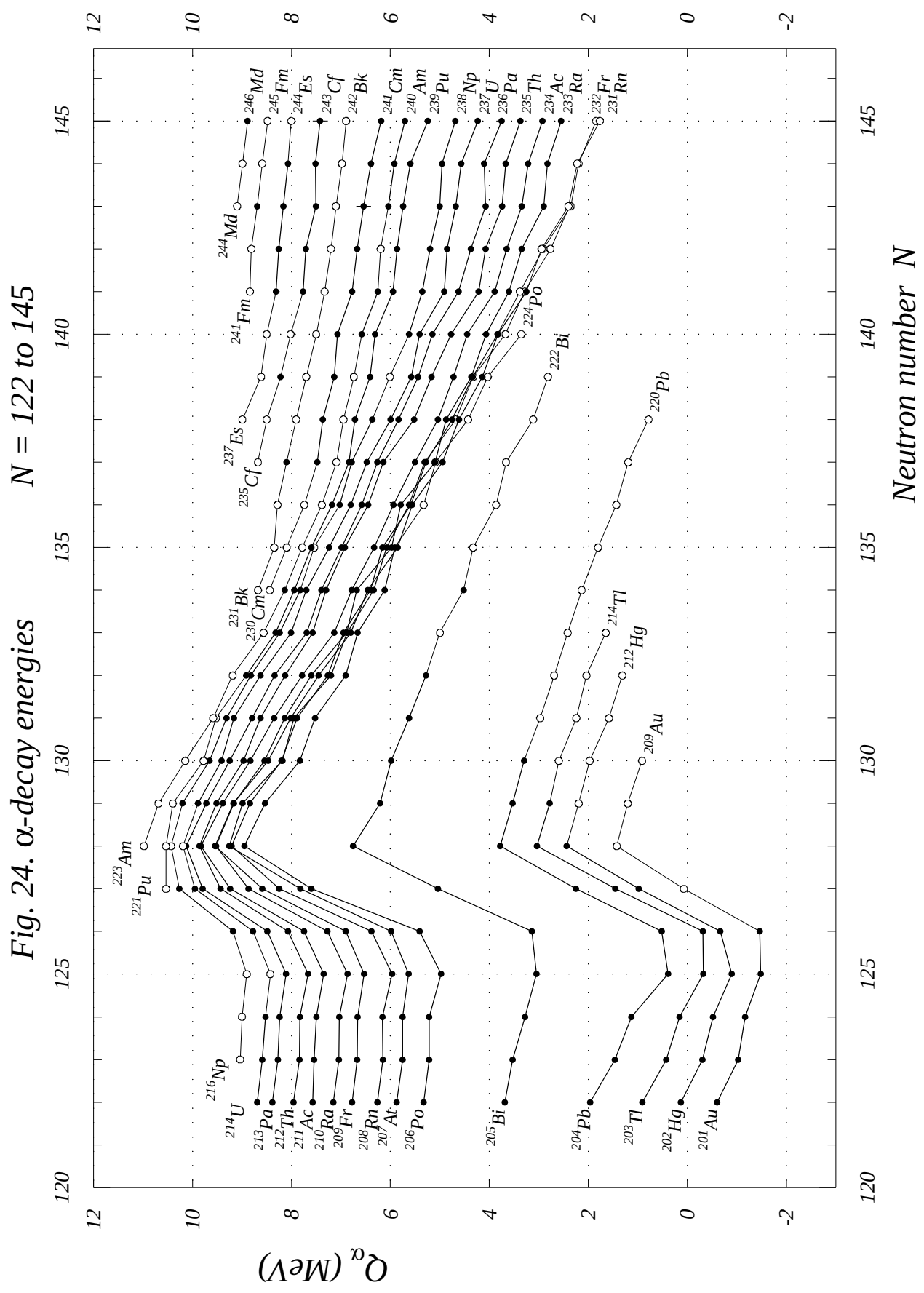

Fig. 19. α-decay energies
N = 22 to 45
Neutron number N
Q_α (MeV)
0
-5
-10
-15
-20
-25
20
25
30
35
40
45
^{87}Mo
^{86}Nb
^{84}Y
^{82}Rb
^{80}Br
^{79}Se
^{78}As
^{77}Ge
^{76}Ga
^{75}Zn
^{74}Cu
^{73}Ni
^{72}Co
^{71}Fe
^{70}Mn
^{69}Cr
^{67}V
^{63}Sc
^{58}Ca
^{56}K
^{53}Ar
^{51}Cl
^{49}S
^{47}P
^{45}Si
^{43}Al
^{38}Mg
^{35}Na
^{81}Mo
^{79}Nb
^{73}Sr
^{71}Rb
^{67}Kr
^{65}Br
^{62}Se
^{60}As
^{58}Ge
^{56}Ga
^{54}Zn
^{52}Cu
^{45}V
^{44}Ti
^{43}Sc
^{42}Ca
^{39}Cl
^{38}S
^{37}P
^{36}Si
^{35}Al
^{34}Mg
^{33}Na

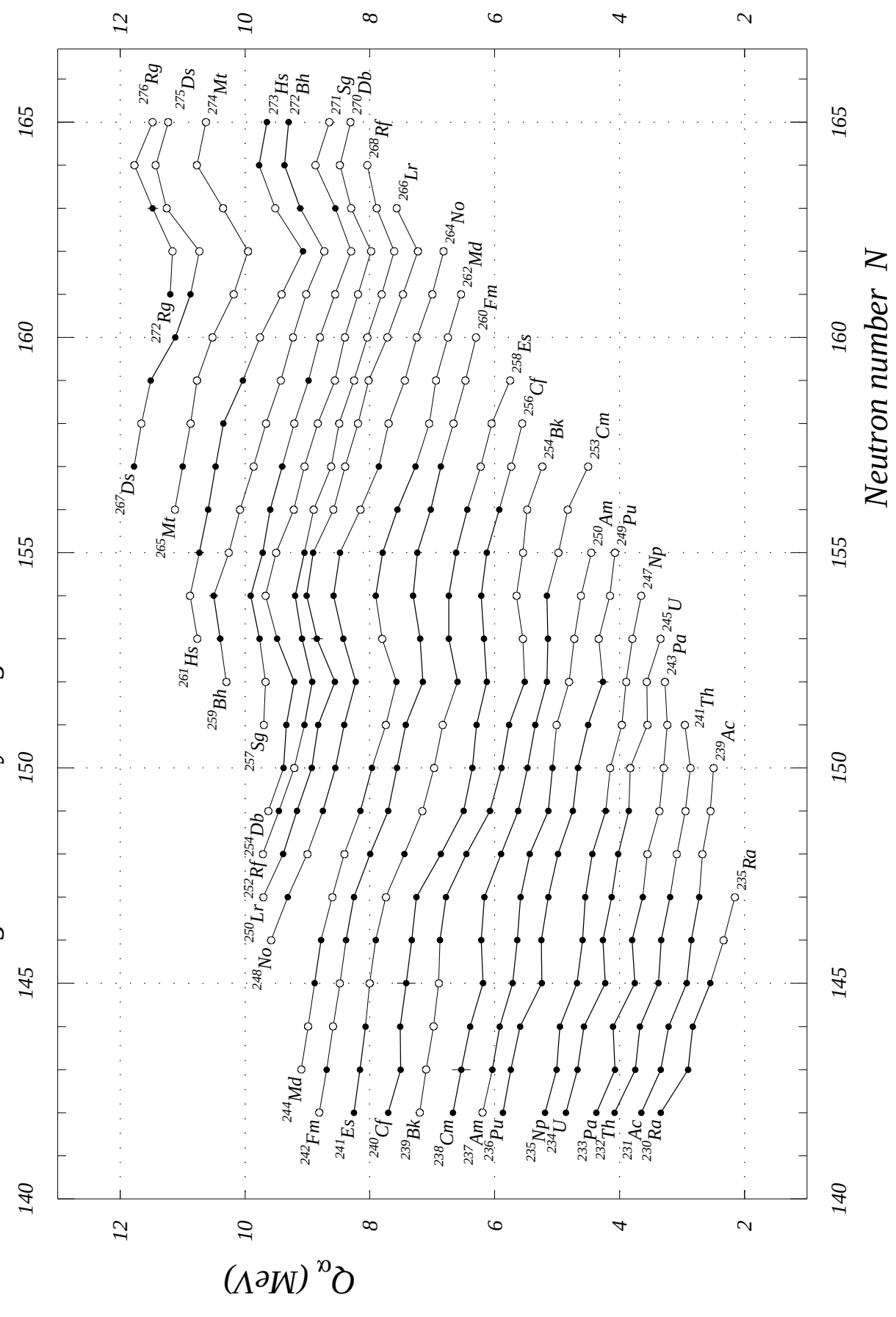

Fig. 20. α-decay energies
N = 42 to 65
Neutron number N
Q_α (MeV)
40
45
50
55
60
65
5
0
-5
-10
-15
-20
125Nd
123Ce
117Te
116Sb
115Sn
113Cd
111Pd
110Rh
109Ru
108Tc
107Mo
106Nb
105Zr
104Y
103Sr
102Rb
101Kr
99Br
123Nd
119Ce
116La
96Se
94As
91Ge
89Ga
86Zn
84Cu
81Ni
79Co
76Fe
110Ba
108Cs
104I
102Te
100Sb
98Sn
94Cd
90Pd
88Rh
86Ru
81Y
79Rb
77Br
75As
74Ge
73Ga
72Zn
71Cu
70Ni
69Co
68Fe

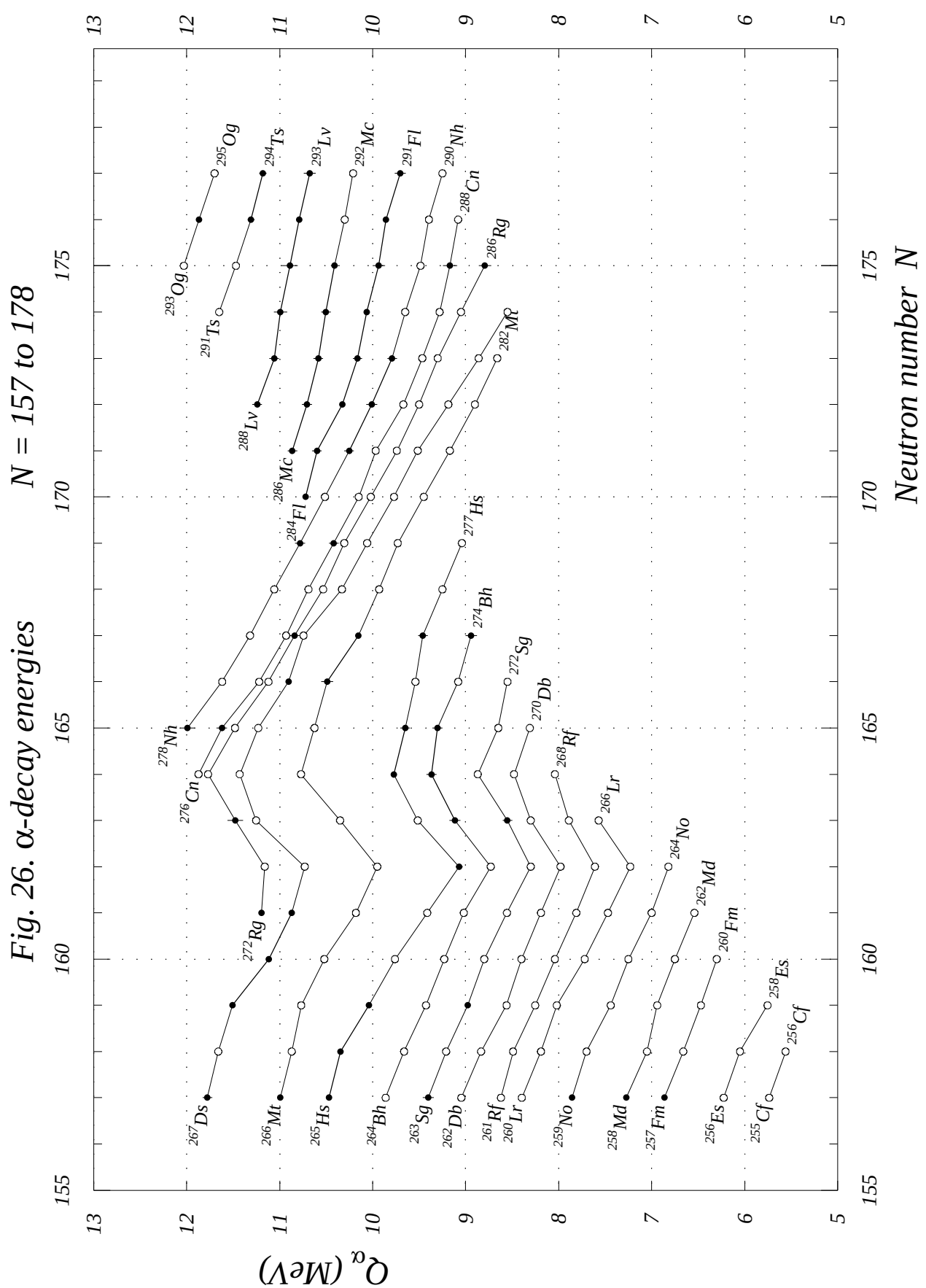

Fig. 21. α-decay energies
N = 62 to 85
Neutron number N
Q_α (MeV)
60
65
70
75
80
85
5
0
-5
-10
-15
158Ta
157Hf
155Yb
153Er
151Dy
150Tb
149Gd
147Sm
145Nd
143Ce
141Ba
139Xe
137Te
136Sb
135Sn
134In
133Cd
132Ag
129Pd
155Ta
153Hf
149Lu
146Yb
144Tm
142Er
140Ho
138Dy
135Tb
133Gd
130Eu
128Sm
125Pm
121Pr
116Xe
114Te
113Sb
112Sn
111In
110Cd
109Ag
108Pd
107Rh
106Ru
105Tc
104Mo
103Nb
102Zr
101Y
100Sr
126Rh
123Ru
121Tc
118Mo
115Nb
112Zr
110Y
107Sr


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
^{189}Po
^{188}Bi
^{187}Pb
^{185}Hg
^{183}Pt
^{182}Ir
^{181}Os
^{180}Re
^{179}W
^{177}Hf
^{176}Lu
^{175}Yb
^{174}Tm
^{173}Er
^{172}Ho
^{171}Dy
^{169}Gd
^{168}Eu
^{167}Sm
^{165}Pm
^{163}Nd
^{161}Pr
^{159}Ce
^{156}La
^{154}Ba
^{151}Cs
^{149}Xe
^{145}Te
^{141}Sb
^{139}Sn
^{185}Po
^{181}Bi
^{175}Pb
^{173}Tl
^{170}Hg
^{168}Au
^{165}Pt
^{163}Ir
^{160}Os
^{159}Re
^{157}W
^{155}Ta
^{154}Hf
^{152}Yb
^{150}Er
^{148}Dy
^{147}Tb
^{146}Gd
^{144}Sm
^{142}Nd
^{140}Ce
^{139}La
^{138}Ba
^{137}Cs
^{136}Xe
^{135}I
^{134}Te
^{133}Sb
^{132}Sn


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
^{201}Os
^{199}Re
^{196}W
^{194}Ta
^{191}Hf
^{188}Lu
^{184}Yb
^{182}Tm
^{180}Er
^{178}Ho
^{176}Dy
^{174}Tb
^{172}Gd
^{170}Eu
^{207}Pa
^{204}Th
^{200}Ac
^{198}Ra
^{194}Fr
^{193}Rn
^{187}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
Q_α (MeV)
Neutron number N
120
125
130
135
140
145
12
10
8
6
4
2
0
-2
^{246}Md
^{245}Fm
^{244}Es
^{243}Cf
^{242}Bk
^{241}Cm
^{240}Am
^{239}Pu
^{238}Np
^{237}U
^{236}Pa
^{235}Th
^{234}Ac
^{233}Ra
^{232}Fr
^{231}Rn
^{244}Md
^{241}Fm
^{237}Es
^{235}Cf
^{231}Bk
^{230}Cm
^{224}Po
^{222}Bi
^{220}Pb
^{214}Tl
^{212}Hg
^{209}Au
^{223}Am
^{221}Pu
^{216}Np
^{214}U
^{213}Pa
^{212}Th
^{211}Ac
^{210}Ra
^{209}Fr
^{208}Rn
^{207}At
^{206}Po
^{205}Bi
^{204}Pb
^{203}Tl
^{202}Hg
^{201}Au


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
^{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
^{254}Bk
^{253}Cm
^{250}Am
^{249}Pu
^{247}Np
^{245}U
^{243}Pa
^{241}Th
^{239}Ac
^{235}Ra
^{267}Ds
^{272}Rg
^{265}Mt
^{261}Hs
^{259}Bh
^{257}Sg
^{254}Db
^{252}Rf
^{250}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


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
^{288}Lv
^{293}Lv
^{286}Mc
^{292}Mc
^{284}Fl
^{291}Fl
^{290}Nh
^{288}Cn
^{286}Rg
^{282}Mt
^{278}Nh
^{277}Hs
^{276}Cn
^{274}Bh
^{272}Rg
^{272}Sg
^{270}Db
^{268}Rf
^{267}Ds
^{266}Mt
^{266}Lr
^{265}Hs
^{264}Bh
^{264}No
^{263}Sg
^{262}Md
^{262}Db
^{260}Fm
^{261}Rf
^{260}Lr
^{259}No
^{258}Es
^{258}Md
^{256}Cf
^{257}Fm
^{256}Es
^{255}Cf

References used in the AME2026 and the NUBASE2026 evaluations

LIST OF REFERENCES

REGULAR JOURNALS (CODEN identifiers) AND BOOKS

AAFPA		Annales Academiae Scientiarum Fennicae, series A VI (Finland)
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)
AJLEE		The Astrophysical Journal Letters
AMAFA	1903-45	Arkiv foer Matematik, Astronomi och Fysik, ISSN-0365-4133
ANCHA		Analytical Chemistry
ANCHA		Analytical Chemistry
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
APHPF		Acta Physica Hungarica New Series: Heavy Ion Physics (Hungary)
APJLA	1988-...	Astrophysical Journal Letters
APNYA	1957-...	Annals of Physics
APOBB	1970-...	Acta Physica Polonica Section B
APPCD		Applied Physics B (APPCDL)
APPOA	...-1969	Acta Physica Polonica
APPYJ		Astroparticle Physics Journal
APSVC		Acta Physica Slovaca (Slovakia)
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)
ARSFA		Anales de la Real Sociedad Espanola de Fisica y Quimica, Serie A: Fisica
ASJOA		The Astrophysical Journal (USA)
ATKEA		Atomkernenergie (Germany)
ATKOA		Atomki Kozlemenyek (Hungary)
ATOMC		Atoms (Since 2013, ISSN 2218-2004) published by MDPI
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
BSRSA		Bulletin de la Société Royale des Sciences de Liege (Belgium)
CHDBA	1966-...	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences, serie B (France)
CHGEA		Chemical Geology
CHJPB		Acta Physica Sinica (Beijing)
CJCHA		Canadian Journal of Chemistry
CJPHA	1950-...	Canadian Journal of Physics, Full coden: CJPHAD
CJREA	1929-35	Canadian Journal of Research
CNRAA	1935-50	Canadian Journal of Research, Section A: Physical Sciences, ISSN:0366-7383, Full coden CNRAAU
CNRBA	1935-50	Canadian Journal of Research, Section B: Physical Sciences, ISSN:0366-7391, Full coden CNRBAX
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
EGCEA		Economic Geology
EPJAA	1998-...	European Physical Journal A (replaces ZPAAD)
EPJCC	1988-...	European Physical Journal C (replaces ZPCFD)
EPJDD	1998-...	European Physical Journal D
EPJDR	1999-...	European Physical Journal Direct
EPJNN		European Physical Journal N: Nuclear Sciences and Technologies
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)
FIZBE		Fizika (Croatia) B
FRPHY		Frontiers in Physics (ISSN:296-424X)
FZKAA		Fizika (Croatia)
GCACA		Geochimica et Cosmochimica Acta (Elsevier, USA)
HHYF9		Journal of Nuclear and Radiochemistry (China)
HEPNP		High Energy Physics and Nuclear Physics (China)
HLTPA		Health Physics (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)
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)
IMSPF	1998-...	International Journal of Mass Spectrometry
INUCA	1947-60	Inorganic Nuclear Chemistry Letters (Great Britain)
JACSA	1879-...	Journal of the American Chemical Society
JALCE		Journal of Alloys and Compounds
a JCAPB	2003-...	Journal of Cosmology and Astroparticle Physics
JCOMA	...-1991	Journal of the Less Common Metals (Switzerland)
JCPSA		Journal of Chemical Physics (USA)
JERAE	1984-...	Journal of Environmental Radioactivity (Elsevier Ltd.)
JINCA	...-1981	Journal of Inorganic and Nuclear Chemistry (USA)
JINST		Journal of Instrumentation
JJAPA	1962-81	Japanese Journal of Applied Physics
JJAPB	2008-...	Japanese Journal of Applied Physics
JJGBD		Journal of Geophysical Research, B
JLCRD	1960-...	Journal of Labelled Compounds and Radiopharmaceuticals
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)

JNSTA	1964-...	Journal of Nuclear Science and Technology (Abingdon, United Kingdom)
JOGLA	1947-...	Journal of Glaciology
JOPQA	1961-98	Journal de Physique (France)
JOPQS		Journal de Physique (France) Suppl. Colloques
JOSAA	1917-83	Journal of the Optical Society of America
JPAGB		Journal of Physics, A (Great Britain)
JPBAB		Journal of Physics B: Atomic, Molecular and Optical Physics (London, Great Britain)
JPCHA		Journal of Physical Chemistry (USA)
JPCRB		Journal of Physical and Chemical Reference Data (USA)
JPCSC		Journal of Physics Communications (Part of IOP Science)
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)
JPSLB	...-1985	Journal de Physique Lettres (France)
JRACB		Journal of Radioanalytical Chemistry (Hungary)
JRNBA		Journal of Research of the National Institute of Standards and Technology
JRNCD		Journal Radioanal. Nuclear Chemistry
JTPHE		Journal of Experimental and Theoretical Physics Letters
JTPLA		Journal of Experimental and Theoretical Physics
JUPSA		Journal of the Physical Society of Japan
JUPSC		Japanese Physical Society Conference Proceedings
KDVSA		Det Kongelige Danske Videnskabernes Selskab, Matematisk-Fysiske Meddelelser
KFKKA		KFKI Közlemények (Hungary)
KERNA		Kernenergie (Germany)
KPSJA		Journal of the Korean Physical Society
KURAA		Kyoto University, Research Reactor Institute : Annual Report
MGFFA		Magyar Fizikai Folyoirat (Hungary)
MOLEF		Molecules
MPHYA		Medical Physics (The International Journal of Medical Physics Research and Practice)
MPLAE		Modern Physics Letters section A (World Scientific Publishing, Singapore)
MTRGA		Metrologia
NAAKA	1958-...	Nachrichten der Akademie der Wissenschaften in Goettingen, Mathematisch-Physikalische Klasse, 2
NACOP		Communications Physics
NATUA		Nature (Great Britain)
NATWA	...-2014	Naturwissenschaften (German, The Science of Nature)
NCAOB	2016-	Nature Communications
NCBUC	1955-99	Nuovo Cimento B (Italy) ISSN:2037-4895, Full coden:NCBUCM
NCCUA	1955-99	Nuovo Cimento C (Italy) ISSN:2037-4909, Full coden:NCCUAP
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)
NDTSB		Nuclear Data, Section B (USA)
NIMAE	1986-...	Nuclear Instruments and Methods in Physics Research A (Netherlands)
NIMBE	1983-...	Nuclear Instruments and Methods in Physics Research B (Netherlands)
NPAEA		Nuclear Physics and Atomic Energy (Nucl. Phys. At. Energy)
NPAHA	2005-	Nature Physics (full coden NPAHAX)
NPBSE		Nuclear Physics, section B (Proceedings Supplements) (Netherlands)
NPHE2		The Nuclear Properties of the Heavy Elements, Vol.II, Prentice-Hall, Inc., Englewood Cliffs, N.J. (1964)
NSABA	1948-76	Nuclear Science Abstracts

NSENA		Nuclear Science and Engineering (American Nuclear Society, USA)
NSETE		Nuclear Science and Techniques (China)
NSETE		Nuclear Science and Techniques (China)
NUCIA	...-1969	Nuovo Cimento (Italy)
NUCLA	1953-67	Nucleonics (USA)
NUIMA	...-1985	Nuclear Instruments and Methods (Netherlands)
NUINA	1957-58	Nuclear Instruments
NUKLA		Nukleonika (Poland)
NUPAB	1967-...	Nuclear Physics, section A (Netherlands)
NUPBB	1967-...	Nuclear Physics, section B (Netherlands)
NUPHA	1957-66	Nuclear Physics (Netherlands)
NUTED		Nuclear Techniques (He Jishu) (China)
NUTYB	1971-...	Nuclear Technology
OPSPA	1956-...	Optika i Spektroskopiya
PACHA		Pure and Applied Chemistry
PANUE	2006-18	Physics of Atomic Nuclei (Former Title: Soviet Journal of Nuclear Physics)
PCHDA		Physics in Canada, Canadian Association of Physicists (CAP) Congress
PCPSA		Proceedings Cambridge Philosophical Society
PCRYA	1959-64	Progress in Cryogenics
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)
PSSAB		Physica Status Solidi (a): Applied Research (Germany, DR)
PRAMC		Pramana, Journal of Physics (India)
PRLAA		Proceedings of the Royal Society of London,Series A
PRLTA		Physical Review Letters (USA)
PRRHA		Physical Review Research (USA) [e-ISSN / ISSN-L: 2643-1564]
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
PTBTT		Physikalisch-Technische Bundesanstalt
PTEP.	2013-...	Progress of Theoretical and Experimental Physics
PTPSA	-12	Progress in Theoretical Physics (Kyoto), Suppl.
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		Radiocarbon (USA)
RAACA		Radiochimica Acta (Germany)
RADKA		Radiokhimiya (Russia)
RAEFB		Radiation Effects and Defects in Solids (Great Britain)
RBFSA		Revista Brasiliera de Fisica
RDIOE		Radiochemistry - Radiokhimiya (USA)
RMAFA		Revista de la Union Matematica Argentina (Argentina)
RMPHA		Reviews of Modern Physics (USA)
RMXFA		Revista Mexicana de Física
RPCHD		Radiation Physics and Chemistry
RPHAA	1966-90	Revue de Physique Appliquée (Paris)
RPPHA		Reports on Progress in Physics (Great Britain)
RRPQA		Revue Roumaine de Physique (Romania)
RRALA	1969-83	Radiochemical and Radioanalytical Letters (Hungary) , ISSN:0079-9483, full coden:RRALAZ
RSINA	1948	Review of Scientific Instruments
SAPHD		South African Journal of Physics
SCIEA		Science (American Association for the Advancement of Science)
SCEFA		Studii si Cercetari de Fizica (Romania)
SHIBA		Shitsuryo Bunseki (Mass Spectrometry, Japan)
SPIPA	1922-91	Scientific Papers of the Institute of Physical and Chemical Research (Japan)
SRCEC	2011-...	Scientific Reports
TFSOA		Transactions of the Faraday Society (Great Britain)
THISc		Treatise on Heavy-Ion Science, ed. by D.A. Bromley, Plenum Press, 1989
UAINA		Untersuchungen an angereicherten Isotopen auf naturliche alphastrahlung; Forschungsberichte des Landes Nordrhein-Westfalen (1966)
UFZHA		Ukrains'kii Fizicheskii Zhurnal
UNIGE		MPDI-universe
VDPEA		Verhandlungen der Deutschen Physikalischen Gesellschaft
VHDPG		Verhandlungen der Deutschen Physikalischen Gesellschaft
VLUMA	1954-55	Vestnik Leningradskogo Universiteta, Seriya Matematiki, Fiziki i Khimii
XNBSA		National Bureau of Standards Special Publication (XNBSAV)
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)
ZEELA		Zeitschrift für Elektrochemie (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 RCH Mon	Private communication to R. Chakma 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
CYRIC-	Cyclotron and Radioisotope Center at Tohoku University
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
IISN-	Institut Interuniversitaire des Sciences Nucl/'eaires (Brussels)
INS-	Institute for Nuclear Study (INS) at the University of Tokyo, now replaced by Center for Nuclear Study (CNS)
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
IKOAR	Instituut voor Kernphysisch Onderzoek (IKO) Progress Report 1970/1971
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-Antalya	2015	Proc.NUBA Conference Series 1: Nuclear Physics and Astrophysics, Antalya, Turkey, 15-21 September (2014)
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-Baku	1988	Proc.38th Ann.Conf.Nucl.Spectrosc.Struct.At.Nuclei, Baku (1988)
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
P-Bernkastel	1992	Abstracts AMCO-9 and NUFAST-6
P-Bernkastel	1993	Proc.6th Intern.Conf.on Nuclei Far from Stability and 9th Intern.Conf.on Atomic Masses and Fundamental Constants, Bernkastel-Kues, Germany, 19-24 July, 1992
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-Brighton	2026	IOP Nuclear Physics Conference, University of Brighton, Apr 13-15, 2026
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-Casta	2001	Proc. 5th Int. Conf. Dynamical Aspects of Nuclear Fission
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-Delhi	1974	Bull.Int.Conf.Gamma-Ray Transition Probabilities, Delhi
P-Dubna	1961	Repts. Third Conf. Neutron-deficient Isotopes
P-Dubna	1968	Proc. International Symposium on Nuclear Structure
P-Dubna	1976	Proc.Int.School-Sem. on Reactions of Heavy Ions with Nuclei, Synthesis of New Elements, Sept 23 - Oct 4, 1975, Dubna, JINR-D7-9734
P-Florence	1977	Proc. Intern. Conf. Nuclear Physics FlorenceProc.Int.Conf. on Medium-Light Nuclei, Florence, Italy, 1977
P-Dubna	1989	Int. School-Seminar on Heavy-Ion Physics
P-Dubna	1999	Proc.49th Ann.Conf.Nucl.Spectrosc.Struct.At.Nuclei
P-Florence	1977	Proc. Intern. Conf. Nuclear Physics FlorenceProc.Int.Conf. on Medium-Light Nuclei, Florence, Italy, 1977
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-Geneva	1955	Proc.U.N.Intern.Conf.Peaceful Uses Atomic Energy, Geneva (1955)
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
B-Houston	1970	Amer.Chem.Soc.Abstr., 159th Annual Meeting (held in Houston, Texas, Feb-Mar 1970)
P-Houston	1990	Proc. Conf on Chemical Research XXXIV Fifty Years with Transuranium Elements, Houston, Texas, October 22-23, (1990)
P-IsleofKos	2006	Proc.Frontiers in Nuclear Structure, Astrophysics, and Reactions, Isle of Kos, Greece, 12-17 Sept. (2005)
P-Kiev	1977	Proc. Conf. Neutron Physics
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-Mito	1988	Proc.Int.Conf on Nuclear Data for Science and Technology, Mito, Japan, May 30-June 3 (1988)
P-Nice	2008	Proc.Intern.Conf.Nuclear Data for Science and Technology, Nice, France, April 22-27 (2007)
P-Paris	1963	Proc.Intern.Congr. Quantum Electronics, 3rd, Paris, France, (1963)
P-Monterey	1990	Proc. Xth Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Montreal	1969	Intern. Conf. Properties Nucl. States, Montreal, Canada
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	2003	Proc.Conf.on Nucl.Physics (53rd Ann.Conf.Nucl.Spectrosc.At.Nuclei), Moscow (2003)
P-Moscow	2008	Program of 58th USSR Conference on Nuclear Spectroscopy
P-Munich	1973	Proc. Int. Conf. Nucl. Phys.
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-Osaka	1972	Int.Conf.Nuclear Moments and Nuclear Structure, Osaka, Japan (1972)
P-Ottawa	1992	Proc.Int.Conf.Nuclear Structure at High Angular Momentum, Ottawa, (1992); AECL-10613 (1992)
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	1964	Compt.Rend.Congr.Intern.Phys.Nucl., Paris, P.Gugenberger, Ed., Centre National de la Recherche Scientifique, Paris (1964)
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-Salzburg	1965	Proc. Symp. on Phys. and Chem. of Fission; IAEA, Vienna, Vol.1-2 (1965)
P-Rehovot	1971	Proc. Int. Conf. Hyperfine Interactions in Excited Nuclei, Rehovot and Jerusalem, Israel (1970)
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
P-Sarov	2006	56th International Conf. "Nucleus-2006" on Problems of Nuclear Spectroscopy and Structure of Atomic Nucleus, Sarov (2006)
B-Seeheim	1999	1st Int. Conf. Chemistry and Physics of the Transactinide Elements (TAN'99)
P-StAndrews	2000	Proc.2nd Intern.Conf Fission and Properties of Neutron-Rich Nuclei, St Andrews, Scotland, June 28-July 3, (1999)
P-StMalo	1988	Proc. 3rd Int. Conf. Nucleus-Nucleus Collisions
P-StPetersbg	1995	Low Energy Nuclear Dynamics, EPS XV Nucl. Phys. Div.

P-StPetersbg	2005	LV National Conference on Nuclear Physics "Frontiers in the Physics of Nucleus", St.-Petersburg (2005)
P-StPetersbg	2020	Nucleus-2020, 12-17 Oct. 2020
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-Tbilisi	1973	Program and Theses, Proceedings of the 23rd Annual Conference on Nuclear Spectroscopy and Structure of Atomic Nuclei
P-Teddington	1972	Proc. 4th Int. Conf. Atomic Masses and Fundamental Constants
P-Targoviste	2002	3rd Int.Balkan Workshop on Applied Physics,Targoviste, Romania (2002)
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-Vienna	1966	Proc. Symp. Standardization of Radionuclides, Vienna, Austria (1966)
P-Vienna	1967	Delayed Fission Neutrons, Panel Proc.Series, IAEA Vienna (1967)
P-Vienna	1969	Proc. 2nd Symp. Phys. Chem. Fission, Intern.At.En.Agency, Vienna (1969)
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

Before 1948

1927De01	PRLAA	115,	483	D.M. Dennison
1928Ba01	ZEPYA	47,	174	E. Back, S. Goudsmit
1928Or01	ZEPYA	49,	315	L.S. Ornstein, W.R. van Wijk
1929Ga01	APJLA	69,	77	H.G. Gale, G.S. Monk
1929Mu01	TFSOA	25,	634	R.S. Mulliken
1930Br01	NATUA	125,	414	T.L. deBruin
1930Cu02	COREA	190,	1289	M. Curie, S. Cotelle
1930Ha01	PHRVA	35,	789	A. Harvey, F.A. Jenkins
1930He02	ZEPYA	64,	151	K. Hedfeld, R. Mecke
1930Wh01	PHRVA	35,	208	H.E. White, R. Ritschl
1931Cu01	RMPHA	3,	427	M. Curie, A. Debierne, A.S. Eve, et al.
1931Me01	PHRVA	38,	1258	W.F. Meggers, A.S. King, R.F. Bacher
1931Mu02	ZEPYA	72,	793	K. Murakawa
1931Sc01	ZEPYA	67,	433	H. Schuler, J.E. Keyston
1931Sc02	ZEPYA	70,	1	H. Schuler, J.E. Keyston
1931Sc03	ZEPYA	72,	423	H. Schuler, J.E. Keyston
1931So01	PHMAA	12,	939	F. Soddy
1931Ze01	NATUA	128,	637	P. Zeeman, J.G. Gisolf, T.L. deBruin
1932Ba01	ZEPYA	79,	206	J.S. Badami
1932Gr03	PHRVA	42,	44	L.P. Granath
1932Ja02	ZEPYA	75,	223	D.A. Jackson
1932Ja04	ZEPYA	75,	229	D.A. Jackson
1932Ko01	ZEPYA	75,	363	H. Kopfermann
1932Ko02	PHRVA	40,	718	A.F. Kovarik, N.I. Adams
1932Mu06	SPIPA	18,	304	K. Murakawa
1932Ri02	ZEPYA	79,	1	R. Ritschl
1932To01	PRLAA	137,	541	S. Tolansky
1932To02	PRLAA	136,	585	S. Tolansky
1933As01	PHRVA	44,	919	M.F. Ashley
1933Ca02	NATUA	131,	204	J.S. Campbell
1933Ca04	ZEPYA	84,	393	J.S. Campbell
1933Gi02	NATUA	132,	566	J.H. Gisolf, P. Zeeman
1933Gr03	PHRVA	44,	935	L.P. Granath, C.M. Van Atta
1933Ja03	ZEPYA	80,	59	D.A. Jackson
1933Jo02	PPSOA	45,	625	E.G. Jones
1933Jo04	PHRVA	43,	761	J. Joffe, H.C. Urey
1933Ko01	ZEPYA	83,	417	H. Kopfermann
1933Le02	PHRVA	43,	837	G.N. Lewis, M.F. Ashley
1933Mc01	PHRVA	44,	949	E. McMillan, N.S. Grace
1933Sc03	NATWA	21,	660	H. Schuler, H. Westmeyer
1934An02	PHRVA	45,	685	O.E. Anderson
1934Ba01	PHRVA	46,	806	S.S. Ballard
1934Cr03	CJREA	10,	693	M.F. Crawford, S. Bateson
1934El02	PHRVA	46,	583	A. Ellett, N.P. Heydenburg
1934Jo01	PRLAA	144,	587	E.G. Jones
1934Ko01	ZEPYA	92,	82	H. Kopfermann, E. Rasmussen
1934Ko02	ZEPYA	87,	460	H. Kopfermann, E. Rindal
1934Le01	PRLAA	145,	235	W.B. Lewis, B.V. Bowden
1934Mu03	PHRVA	46,	95	G.M. Murphy, H. Johnston
1934Pa01	NATWA	22,	136	F. Paschen, I.S. Campbell
1934Ra01	PHRVA	46,	707	I.I. Rabi, V.W. Cohen

1934Sc01	NATWA	22,	758	H. Schuler, T. Schmidt
1934Sc03	NATWA	22,	838	H. Schuler, T. Schmidt
1934Sc04	NATWA	22,	511	H. Schuler, H. Gollnow
1934To01	PRLAA	144,	574	S. Tolansky
1935Fo03	PHRVA	48,	746	M. Fox, I.I. Rabi
1935Ko05	ZEPYA	94,	58	H. Kopfermann, E. Rasmussen
1935Mi08	PHRVA	47,	739	S. Millman
1935Mo07	PHRVA	47,	256A	K.R. More
1935Sc01	ZEPYA	94,	457	H. Schuler, T. Schmidt
1935Sc02	NATWA	23,	69	H. Schuler, T. Schmidt
1935Sc04	ZEPYA	98,	430	H. Schuler, T. Schmidt
1935Sc.A				R. Schiedt in Österr. Akad. d. Wiss. , Sitzungsberichte d. mathem.-naturw. Kl. , Abt. IIa, 144 Bd. , Heft 5 und 6, 192.
1935Ve01	PISAA	2,	203	B. Venkatesachar, L. Sibaiya
1936Ja01	ZEPYA	100,	513	B. Jaeckel
1936Ko04	ZEPYA	98,	624	H. Kopfermann, E. Rasmussen
1936Ko05	ZEPYA	103,	485	H. Kopfermann, H. Kruger
1936Ma03	PHRVA	49,	921	J.H. Manley
1936Mi01	PHRVA	50,	220	S. Millman, M. Fox
1936Sc07	ZEPYA	100,	113	H. Schuler, T. Schmidt
1937Ba08	PHRVA	52,	836	R.F. Bacher, D.H. Tomboulian
1937Be09	PHRVA	52,	1127	A.N. Benson, R.A. Sawyer
1937Ja01	PRLAA	158,	372	D.A. Jackson, H. Kuhn
1937Ja02	NATUA	140,	276	D.A. Jackson, H. Kuhn
1937Ly07	ZEPYA	104,	434	J.M. Lyshede, E. Rasmussen
1937Ma06	PHRVA	51,	19	J.H. Manley, S. Millman
1937Sc09	PHRVA	52,	1250	J. Schwinger
1937Sn02	PHRVA	52,	1007	A.H. Snell
1937St01	PHRVA	52,	901	D.W. Stewart, J.L. Lawson, J.M. Cork
1937To03	PRLAA	158,	110	S. Tolansky, E. Lee
1938Bu04	PHRVA	54,	1025	J.H. Buck
1938Fe02	PRLAA	165,	530	N. Feather, E. Bretscher
1938He05	ZEPYA	108,	232	M. Heyden, H. Kopfermann
1938He06	ZEPYA	108,	739	M. Heyden, R. Ritschl
1938Ko02	ZEPYA	109,	349	H. Korsching
1938Mi05	PHRVA	53,	384	S. Millman, I.I. Rabi, J.R. Zacharias
1938Sc10	ZEPYA	111,	165	H. Schuler, J. Roig, H. Korsching
1938St05	PHRVA	54,	1021	C.V. Strain
1939Ab02	PHRVA	56,	1	P.H. Abelson
1939Bo05	ZEPYA	112,	45	W. Bothe, W. Gentner
1939De01	PHRVA	55,	113	L.A. Delsasso, L.N. Ridenour, R. Sherr, et al.
1939Du01	NATUA	144,	152	J.V. Dunworth
1939El03	PHRVA	55,	170	R.M. Elliott, J. Wulff
1939Ha12	PHRVA	56,	30	D.R. Hamilton
1939Kr11	ZEPYA	111,	467	H. Kruger
1939Li02	PHRVA	55,	457	J.J. Livingood, G.T. Seaborg
1939Li10	NATWA	27,	421	C. Lieber
1939Mi08	PHRVA	56,	303	S. Millman, P. Kusch
1939Ro03	NATUA	144,	248	J. Rotblat
1939Sa02	PHRVA	55,	31	R. Sagane
1939Sa11	CJREA	17,	103	B.W. Sargent
1939Sc14	ZEPYA	113,	1	H. Schuler, H. Gollnow
1939St01	PHRVA	56,	629	D.W. Stewart
1940Cr06	PHRVA	58,	481	E.C. Creutz, L.A. Delsasso, R.B. Sutton, et al.

1940Du05	PHRVA	58,	7	L.A. DuBridge, J. Marshall
1940Gl05	PHRVA	58,	1	G.N. Glasoe, J. Steigman
1940Kr08	PCPSA	36,	490	R.S. Krishnan, E.A. Nahum
1940St03	NATWA	28,	817	F. Strassmann, O. Hahn
1940Wa01	PHRVA	57,	163	H. Walke
1940Wi08	ZEPYA	116,	547	H. Wittke
1940Wo10	JCPSA	8,	351	R.W. Wood, G.H. Dieke
1941Cu.A	NBS A-80			L.F. Curtis, L.L. Stockman, B.W. Brown
1941Fa04	PHRVA	60,	619	K. Fajans, A.F. Voigt
1941Gr03	PHRVA	59,	322	A.V. Grosse, E.T. Booth, J.R. Dunning
1941Ha14	PHRVA	60,	75	R.H. Hay
1941He02	PHRVA	59,	902	A.C. Helmholz, C. Percher, P.R. Stout
1941Ro01	PRLAA	177,	260	J. Rotblat
1942Ha07	PHRVA	61,	459	T.C. Hardy, S. Millman
1942Ma03	ZEPYA	119,	602	W. Maurer, W. Ramm
1942Wa04	PRLAA	181,	183	A.G. Ward
1943He01	JPCHA	47,	469	R.H. Hendricks, L.C. Bryner, M.D. Thomas, et al.
1943Ja01	KDVSA	20,	11	J.C. Jacobsen, Th. Sigurgeirsson
1943Ma03	PHRVA	64,	147	C.E. Mandeville
1945Hi04	PHRVA	67,	313	C.T. Hibdon, M.L. Pool
1945Hi05	PHRVA	67,	289	C.T. Hibdon, M.L. Pool, J.D. Kurbatov
1946Bo25	ZENAA	1,	179	W. Bothe
1946Co10	PHRVA	70,	979	D.K. Coles, W.E. Good
1946Gr06	NATUA	158,	163	W.E. Grummitt, G. Wilkinson
1946Ke05	RMPHA	18,	323	J.B.M. Kellogg, S. Millman
1946Me01	AMAFA	33,	1	L. Meitner
1946Re10	PHRVA	70,	431	A.F. Reid, J.R. Dunning
1947Bl31	PHRVA	71,	373	F. Bloch, A.C. Graves, M. Packard, et al.
1947Bl32	PHRVA	71,	551	F. Bloch, A.C. Graves, M. Packard, et al.
1947En03	PHRVA	72,	253	A.C. English, T.E. Cranshaw, P. Demers, et al.
1947Go01	PHRVA	71,	288	L.J. Goodman, M.L. Pool
1947Me27	PHRVA	72,	451	W.W. Meeks, R.A. Fisher
1947Sl14	AMAFA	33,	No.17	H. Slatis
1947Sn07	PHRVA	72,	545	A.H. Snell, J.S. Levinger, E.P. Meiners, et al.
1947To16	PHRVA	71,	644	C.H. Townes, A.N. Holden, J. Bardeen, et al.

1948

1948Ar06	PHRVA	74,	1263A	O.H. Arroe
1948Da08	PHRVA	74,	1245A	B.P. Dailey, K. Rusinov, R.G. Shulman, et al.
1948Fe09	PPSOA	61,	466	N. Feather, J. Kyles, R.W. Pringle
1948Gh01	PHRVA	74,	695	A. Ghiorso, W.W. Meinke, G.T. Seaborg
1948Hi21	PCPSA	44,	440	J.M. Hill
1948Je21	PHRVA	74,	355	F.A. Jenkins
1948Kn23	PHRVA	74,	1540	G.B. Knight, R.L. Macklin
1948Ko30	ZEPYA	124,	685	H. Kopfermann, D. Meyer
1948Li03	PHRVA	73,	1202	M. Lindner, I. Perlman
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
1948Mc31	PHRVA	74,	1315	D.A. McCown, L.L. Woodward, M.L. Pool
1948Mc32	PHRVA	74,	1311	D.A. McCown, L.L. Woodward, M.L. Pool
1948Mo19	PHRVA	74,	220	E.E. Motta, G.E. Boyd
1948Mo33	PHRVA	74,	1536	D.L. Mock, B.C. Waddell, L.W. Fagg, et al.
1948No02	PHRVA	73,	350	L.D. Norris, M.G. Inghram

1948Sa18	PHRVA	74,	1264	D. Saxon
1948St42	PHRVA	74,	591	M.H. Studier, E.K. Hyde
1948St.A	PrvCom		58St50	K. Street, Jr., A. Ghiorso, D.A. Orth, et al.
1948To08	PHRVA	73,	1214	F.S. Tomkins
1948To10	PHRVA	74,	1113	C.H. Townes, A.N. Holden, F.R. Merritt
1948To13	PHRVA	74,	626	C.H. Townes, S. Geschwind
1948Wi02	PHRVA	74,	1733	G. Wilkinson, H.G. Hicks
1948Wo07	PHRVA	74,	761	L.L. Woodward, D.A. McCown, M.L. Pool
1948Ya02	PHRVA	74,	696	L. Yaffe, J.M. Grunlund
1948Yu01	PHRVA	74,	34	F.-C. Yu, J.D. Kurbatov
1948Za02	PHRVA	74,	682	D.J. Zaffarano, B.D. Kern, A.C.G. Mitchell

1949

1949An11	PHRVA	76,	1460	H.L. Anderson
1949Ar06	PHRVA	76,	873	O.H. Arroe, J.E. Mack
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, et al.
1949Bu09	PPSOA	62,	253	D.E. Bunyan, A. Lundby, W. Walker
1949Ch35	PHRVA	76,	586	C.Y. Chao, C.C. Lauritsen, A.V. Tollestrup
1949Co12	PHRVA	76,	703	V.W. Cohen, W.S. Koski, T. Wentink, Jr.
1949Cr17	PHRVA	76,	1528	M.F. Crawford, N. Olson
1949Cr18	PHRVA	76,	1527	M.F. Crawford, F.M. Kelly, A.L. Schawlow, et al.
1949Cr31	CNRAA	27,	156	M.F. Crawford, J. Levinson
1949Da01	PHRVA	76,	1068	L. Davis, Jr., D.E. Nagle, J.R. Zacharias
1949Da14	PHRVA	76,	1076	L. Davis, Jr., B.T. Feld, C.W. Zabel, et al.
1949Di31	PHRVA	76,	283	G.H. Dieke, F.S. Tomkins
1949Do24	PHRVA	76,	1529	A.E. Douglas, G. Herzberg
1949Du15	PHRVA	76,	1272	R.B. Duffield, L.M. Langer
1949Fe18	PHRVA	76,	1888	L. Feldman, L. Lidofsky, P. Macklin, et al.
1949Gi28	PHRVA	75,	1014	O.R. Gilliam, H.D. Edwards, W. Gordy
1949Go20	PHRVA	76,	628	R.H. Goeckermann, I. Perlman
1949Gu02	PHRVA	75,	767	M. Gurevich
1949Ha52	CNRBA	27,	545	R.C. Hawkings, R.F. Hunter, W.B. Mann, et al.
1949Hi10	PHRVA	76,	358	R.A. Hinshaw, M.L. Pool
1949Hi27	PHRVA	75,	324	R.D. Hill, G. Scharff-Goldhaber, G. Friedlander
1949Hy03	NNES-14B-1435			E.K. Hyde
1949Ja01	NNES-14B-1604			R.A. James, A.E. Florin, H.H. Hopkins, Jr., et al.
1949JaZZ	ANL-4286		42	A.H. Jaffey, A. Hirsch
1949Jo07	PHRVA	76,	885	W.M. Jones
1949Ki26	PHRVA	76,	1561	C.A. Kienberger
1949Ko13	PHRVA	76,	279	J. Koch, O. Kofoed-Hansen, P. Kristensen, et al.
1949Ko21	PHRVA	76,	1417	J. Koch, E. Rasmussen
1949La06	PHRVA	76,	641	L.M. Langer, H.C. Price, Jr.
1949Le05	PHRVA	76,	606	J.C. Lee, M.L. Pool
1949Le15	PHRVA	76,	1086	H. Lew
1949Li09	PHRVA	76,	149	R. Livingston, O.R. Gilliam, W. Gordy
1949Ma47	PHRVA	76,	1002	J.E. Mack, O.H. Arroe
1949Ma57	PHRVA	76,	1719	K.C. Mann, D. Rankin, P.N. Kaykin
1949Os01	NNES-14B-1397			D.W. Osborne, R.C. Thompson, Q. Van Winkle
1949Pa17	ORNL-336		42	G.W. Parker, G.E. Creek, G.M. Hebert, et al.
1949Pa.A	ORNL-499		45	G.W. Parker, G.E. Creek, G.M. Hebert, et al.
1949Pa.B	ORNL-336		42	G.W. Parker, G.E. Creek, G.M. Hebert, et al.

1949Pe04	NNES-14B-1651			I. Perlman, P.R. O'Connor, L.O. Morgan
1949Pe08	NNES-14B-1424			S. Peterson, A. Ghiorso
1949St07	PHRVA	75,	827	M.W.P. Strandberg, T. Wentink, Jr., A.G. Hill
1949St17	HPACA	22,	167	R.M. Steffen, O. Huber, F. Humbel
1949Su03	PHRVA	75,	1473	N. Sugarman
1949Su14	JCPSA	17,	11	N. Sugarman
1949To09	PHRVA	76,	700	C.H. Townes, J.M. Mays, B.P. Dailey
1949To10	PHRVA	76,	691	C.H. Townes, L.C. Aamodt
1949To16	PHRVA	76,	428	A.V. Tollestrup, C.C. Lauritsen, W.A. Fowler
1949To17	JCPSA	17,	782	C.H. Townes, B.P. Dailey
1949To23	PHRVA	75,	1947	A.V. Tollestrup, F.A. Jenkins, W.A. Fowler, et al.
1949Va01	PHRVA	75,	100	F. W. Van Name, Jr.
1949Va02	JACSA	71,	2585	Q. Van Winkle, R.G. Larson, L.I. Katzin
1949Wi03	PHRVA	75,	1370	G. Wilkinson, H.G. Hicks
1949Wi08	PHRVA	75,	1019	G. Wilkinson
1949Wi11	PHRVA	75,	696	G. Wilkinson, H.G. Hicks
1949Wu15	PHRVA	76,	692	C.S. Wu, C.H. Townes, L. Feldman

1950

1950Ag01	PHRVA	77,	655	H.M. Agnew
1950An05	PHRVA	77,	142	D.L. Anderson, M.L. Pool
1950Ar51	PHRVA	79,	836	O.H. Arroe
1950Bi20	PHRVA	77,	416	G.R. Bishop, R. Wilson, H. Halban
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
1950Br75	NATWA	37,	397	P. Brix, H. Kopfermann, W. v. Siemens
1950Br78	PHRVA	78,	812	H. Brown, V. Perez-Mendez
1950Bu19	PHRVA	77,	403	S.B. Burson, K.W. Blair, D. Saxon
1950Bu32	JCPSA	18,	97	W.H. Burgus, J.W. Kennedy
1950Ca01	PHRVA	80,	904	A.G.W. Cameron, L. Katz
1950Ch11	PHRVA	79,	582	T.C. Chu
1950Ch53	PHRVA	79,	108	C.Y. Chao, A.V. Tollestrup, W.A. Fowler, et al.
1950Cr26	CJREA	28,	558	M.F. Crawford, A.L. Schawlow, F.M. Kelly, et al.
1950Fo08	PHRVA	78,	744	G.R. Fowles
1950Fr10	PHRVA	80,	30	G. Friedlander, M.L. Perlman, D.E. Alburger, et al.
1950Fr53	PHRVA	79,	410	M.S. Freedman, A.H. Jaffey, F. Wagner, Jr.
1950Fr58	PHRVA	79,	897	M.S. Freedman, D.W. Engelkemeir
1950Fu63	PPSOA	63,	1044	E.W. Fuller
1950Ge05	PHRVA	78,	174	S. Geschwind, H. Minden, C.H. Townes
1950Go10	PHRVA	78,	512	W. Gordy, H. Ring, A.B. Burg
1950Ha52	PHRVA	79,	435	F. Hagemann, L.I. Katzin, M.H. Studier, et al.
1950Ha58	PHRVA	79,	409	R.W. Hayward
1950Ha65	PHRVA	79,	541	R.W. Hayward
1950Ha67	PHRVA	79,	888	M. Hamermesh, E. Eisner
1950Ho02	NNES	9,	642	E.J. Hoagland, N. Sugarman
1950Hu27	PHRVA	77,	726	D.J. Hugheas, C. Eggler, D.E. Alburger
1950Jo53	PHRVA	79,	896	S. Johansson
1950Ke11	PHRVA	79,	242	B.H. Ketelle, C.M. Nelson, G.E. Boyd
1950Ko09	PHRVA	77,	722	J. Koch, E. Rasmussen
1950Ku69	PPSOA	63,	830	H. Kuhn, G.K. Woodgate
1950La04	PHRVA	77,	798	L.M. Langer, J.W. Motz, H.C. Price, Jr.
1950Le06	PHRVA	78,	204	E.C. Levinthal

1950Ma14	PHRVA	78,	363	L.B. Magnusson, S.G. Thompson, G.T. Seaborg
1950Ma76	PHRVA	80,	977	E.A. Martell, W.F. Libby
1950Me21	HPACA	23,	299	H. Medicus, P. Preiswerk, P. Scherrer
1950Me55	PHRVA	79,	19	J.Y. Mei, A.C.G. Mitchell, C.M. Huddleston
1950Mi52	PHRVA	79,	781	J.W. Mihelich, R.D. Hill
1950Mo56	PHRVA	80,	309	R.C. Mobley, R.A. Laubenstein
1950Na09	PHRVA	77,	398	R.A. Naumann, F.L. Reynolds, I. Perlman
1950Ne52	ORNL-828			C.M. Nelson, B.H. Ketelle, G.E. Boyd
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
1950Po66	PHRVA	79,	685	R.V. Pound
1950Pr51	PHRVA	79,	35	W.G. Proctor
1950Ri59	PHRVA	80,	524	H.T. Richards, R.V. Smith, C.P. Browne
1950Si02	NNES	9,	549	J.M. Siegel, L. Glendenin
1950Sl17	NNES	9,	928	N.R. Sleight, W.H. Sullivan
1950St61	PHRVA	79,	530	K. Street, Jr., A. Ghiorso, G.T. Seaborg
1950St89	PHRVA	80,	99	B.J. Stover
1950Su29	NNES	9,	1953	W.H. Sullivan, N.R. Sleight, E.M. Gladrow
1950Th52	PHRVA	80,	781	S.G. Thompson, A. Ghiorso, G.T. Seaborg
1950Vo02	PHRVA	79,	734	G. von Dardel
1950We03	PHRVA	78,	202	M.T. Weiss, M.W.P. Strandberg, R.B. Lawrance, et al.
1950Wi13	PHRVA	79,	815	G. Wilkinson, H.G. Hicks
1950Ze55	ORNL-286		48	H. Zeldes, A.R. Brosi, G.W. Parker, et al.

1951

1951Al08	PHRVA	81,	1067	F. Alder, F.C. Yu
1951Ar29	Th.-Copenhagen			H. Arroe, PhD Thesis, Nordisk Bogtrykkeri
1951Bl09	PPSOA	64,	204	B. Bleaney, H.E.D. Scovil
1951Bl30	PRLAA	205,	336	B. Bleaney, D.J.E. Ingram
1951Bl31	HPACA	24,	245	J.P. Blaser, F. Boehm, P. Marmier, et al.
1951Bl38	PRLAA	208,	143	B. Bleaney, D.J.E. Ingram
1951Bl43	PPSOA	64,	601	B. Bleaney, D.J.E. Ingram, H.E.D. Scovil
1951Bl74	PPSOA	64,	1135	B. Bleaney, K.D. Bowers
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, et al.
1951Br87	PHRVA	84,	292	H.N. Brown, W.L. Bendel, F.J. Shore, et al.
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
1951Co19	NATUA	167,	779	S.G. Cohen
1951Co34	PHRVA	84,	596	J.M. Cork, A.E. Stoddard, C.E. Branyan, et al.
1951Du03	PHRVA	81,	203	R.B. Duffield, L.M. Langer
1951Du19	PHRVA	84,	1065	R.B. Duffield, L.M. Langer
1951Fl17	ZENAA	6,	559	A. Flammersfeld
1951Fr05	PHRVA	81,	741	S. Fried, A.H. Jaffey, N.F. Hall, et al.
1951Fr19	PHRVA	84,	231	G. Friedlander, D.E. Alburger
1951Ha50	PHRVA	83,	672	J. Hatton, B.V. Rollin, E.F.W. Seymour
1951Ho30	PHRVA	83,	1068	R.W. Hoff, J.O. Rasmussen, S.G. Thompson
1951Ho42	UCRL-1396			J.M. Hollander
1951Hu38	PHRVA	84,	289	C.M. Huddleston, A.B. Smith
1951Hu39	PHRVA	84,	366	E.K. Hulet, S.G. Thompson, A. Ghiorso, et al.

1951Hy24	PHRVA	82,	944	E.K. Hyde, G.D. O'Kelley
1951Ja09	PHRVA	84,	785	A.H. Jaffey, H. Diamond, A. Hirsch, et al.
1951Je01	PHRVA	81,	143	E.N. Jensen, R.T. Nichols, J. Clement
1951Jo21	PHRVA	83,	1249	C.M. Johnson, W. Gordy, R. Livingston
1951Ka16	PHRVA	82,	688	S. Katcoff, O.A. Schaeffer, J.M. Hastings
1951Kl55	PHRVA	83,	212	E.D. Klema, G.C. Phillips
1951Ko17	AFYSA	3,	47	E. Kondaiah
1951Ku41	PPSOA	64,	1090	H. Kuhn, G.K. Woodgate
1951Li26	PHRVA	83,	512	C.W. Li, W. Whaling, W.A. Fowler, et al.
1951Li29	PHRVA	82,	122	C.W. Li, W. Whaling
1951Lo24	PHRVA	81,	798	C.C. Loomis, M.W.P. Strandberg
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.
1951Pr02	PHRVA	81,	20	W.G. Proctor, F.C. Yu
1951Ro22	PHRVA	84,	887	H. Roderick, W.E. Meyerhof, L.G. Mann
1951Ro50	PHRVA	83,	349	J.M. Robson
1951Sc07	PHRVA	81,	157	N.A. Schuster, G.E. Pake
1951Sc17	PHRVA	81,	886	N.A. Schuster, G.E. Pake
1951Sc56	PHRVA	84,	158	R.P. Schuman, A. Camilli
1951Sh89	PHRVA	83,	688	F.J. Shore, W.L. Bendel, R.A. Becker
1951Ta05	PHRVA	81,	461	S.I. Taimuty
1951To19	PHRVA	84,	168	F.S. Tomkins, M. Fred, W.F. Meggers
1951Ve05	PHYSA	17,	637	N.F. Verster, G.J. Nijgh, R. van Lieshout, et al.
1951We11	PHRVA	81,	948	T. Wentink, Jr., W.S. Koski, V.W. Cohen
1951Wh05	PHRVA	81,	150	W. Whaling, C.W. Li
1951Wi26	PHRVA	84,	731	R.M. Williamson, C.P. Browne, D.S. Craig, et al.

1952

1952Al06	PHRVA	85,	734	D.E. Alburger
1952Ba63	PPSOA	65,	952	J.M. Baker, B. Bleaney
1952Be55	AFYSA	5,	191	I. Bergström
1952Be78	IANFA	16,	314	E.Y. Berlovich
1952Bi12	PHRVA	85,	753A	A.C. Birge
1952Bo21	PPSOA	65,	368	G.S. Bogle, H.E.D. Scovil
1952Bo30	PHRVA	86,	1051	G.E. Boyd, Q.V. Larson, G.W. Parker
1952Bo66	PPSOA	65,	860	K.D. Bowers
1952Bu72	NATWA	39,	575	H. v. Buttlar
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
1952Dr18	PHRVA	88,	683	B. Dropesky, E.O. Wiig
1952Es07	PHRVA	85,	532	J.R. Eshbach, R.E. Hillger, M.W.P. Strandberg
1952Fa14	PHRVA	87,	252	C.Y. Fan
1952Fe16	PHRVA	87,	1091	L. Feldman, C.S. Wu
1952Fl20	PHRVA	88,	642	E.H. Fleming, Jr., A. Ghiorso, B.B. Cunningham
1952Fr23	PPSOA	65,	911	J.H. Fremlin, M.C. Walters, and 95Tr07 and 02Tr04
1952Fu04	PHRVA	86,	347	S.C. Fultz, M.L. Pool
1952Ge26	PHRVA	85,	474	S. Geschwind, R. Gunther-Mohr, G. Silvey
1952Gh27	PHRVA	87,	163	A. Ghiorso, G.H. Higgins, A.E. Larsh, et al.
1952Gi04	PHRVA	85,	716A	D.A. Gilbert
1952Gr19	PPSOA	65,	951	J.H.E. Griffiths, J. Owen

1952Ha44	PHRVA	88,	876	J.R. Haskins, J.E. Duval, L.S. Cheng, et al.
1952Hi63	Th.-Berkeley			G.H. Higgins, PhD Thesis, University of California, UCRL-1796
1952Hi.A	Th.-Berkeley			G.H. Higgins
1952Ja18	PHRVA	87,	676	V. Jaccarino, B. Bederson, H.H. Stroke
1952Je05	PHRVA	85,	478	C.D. Jeffries, H. Loeliger, H.H. Staub
1952Je11	PHRVA	86,	803	G.H. Jenks, F.H. Sweeton
1952Ka41	PHRVA	85,	368	M.I. Kalkstein, W.F. Libby
1952Ka44	PHRVA	87,	886	S. Katcoff
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)
1952Me13	PHRVA	85,	429	W.W. Meinke, A. Ghiorso, G.T. Seaborg
1952Me53	PHRVA	88,	1360	F.R. Metzger
1952Mi26	PHRVA	86,	607A	S.L. Miller, M. Kotani, C.H. Townes
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
1952Mu40	PHRVA	87,	1048	K. Murakawa, S. Suwa
1952Or03	Th.-Berkeley			D.A. Orth, PhD Thesis,University of California, UCRL-1059
1952Ra13	COREA	234,	1275	P. Radvanyi
1952Ro16	PHRVA	86,	863	D. Rose, G. Hinman, L.G. Lang
1952Ru10	PHRVA	86,	775	W.C. Rutledge, J.M. Cork, S.B. Burson
1952Sc09	PHRVA	85,	873	W.A. Schoenfeld, R.W. Duborg, W.M. Preston, et al.
1952Sc11	PHRVA	85,	1046	C.L. Scoville, S.C. Fultz, M.L. Pool
1952Sc15	PHRVA	86,	248	G. Schrank, J.R. Richardson
1952Sh42	PHRVA	87,	523	R. Sher, H.J. Kouts, K.W. Downes
1952Sm13	PHRVA	86,	98	A.B. Smith
1952Sm41	PHRVA	87,	454	A.B. Smith, A.C.G. Mitchell, R.S. Caird
1952St56	ZEPYA	132,	429	A. Steudel
1952Wa12	PHRVA	86,	561	A.H. Wapstra
1952Wi26	PHRVA	85,	687	R.G. Winter
1952Ze01	PHRVA	86,	811	H. Zeldes, B.H. Ketelle, A.R. Brosi, et al.

1953

1953Al47	PHRVA	92,	514	D.E. Alburger, M.H.L. Pryce
1953Am08	PHRVA	91,	68	D.P. Ames, M.E. Bunker, L.M. Langer, et al.
1953An01	PHRVA	90,	656	C.E. Anderson, G.W. Wheeler, W.W. Watson
1953As.A	Th.-Berkeley			F. Asaro
1953Ba48	CJPHA	31,	714	R.M. Bartholomew, F. Brown, W.D. Howell, et al.
1953Ba60	ANPHA	8,	441	R. Ballini
1953Ba81	IANFA	17,	437	A.A. Bashilov, N.M. Antoneva, B.S. Dzelepov, et al.
1953Ba82	IANFA	17,	468	A.A. Bashilov, N.M. Antoneva, D.C. Broder, et al.
1953Be19	PHMAA	44,	33	E.H. Bellamy, K.F. Smith
1953Be42	PHRVA	90,	888	W.L. Bendel, F.J. Shore, H.N. Brown, et al.
1953Bl28	JPRAA	14,	135	J. Blaise, H. Cantrel
1953Bl44	PHRVA	90,	464	E. Bleuler, J.W. Blue, S.A. Chowdary, et al.
1953Bu63	PHRVA	91,	1219	J.P. Butler, J.S. Adams
1953Co02	PRLAA	216,	242	E.R. Collins, C.D. MacKenzie, C.A. Ramm
1953Co14	PHRVA	91,	74	B.L. Cohen
1953Co24	PHRVA	91,	76	J.M. Cork, J.M. LeBlanc, W.H. Nester, et al.
1953Cr15	PHRVA	90,	995	B. Crasemann
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, et al.
1953Do18	PHRVA	92,	369	D.L. Douglas, A.C. McWherter, R.P. Schuman
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
1953Fr01	PHRVA	89,	318	M. Fred, F.S. Tomkins
1953Gl32	PHRVA	90,	320	N.W. Glass, L.K. Jensen, J.R. Richardson
1953Gl.A	ANL-5000		55	L.E. Glendenin, E.P. Steinberg
1953Ha09	JUPSA	8,	110	T. Hayashi, Y. Ishizaki, I. Kumabe
1953Ha50	PHRVA	92,	1532	W.A. Hardy, G. Silvey, C.H. Townes, et al.
1953Ha66	CJPHA	31,	278	J.A. Harvey
1953He57	PRYCA	47,	127A	A. Henrikson, S.W. Breckon, J.S. Foster
1953Hu60	Th.-Berkeley			E.K. Hulet, PhD Thesis, University of California, UCRL-2283
1953Hu85	PHRVA	89,	878	E.K. Hulet, S.G. Thompson, A. Ghiorso
1953Hy83	PHRVA	90,	267	E.K. Hyde, A. Ghiorso
1953Je06	PHRVA	90,	1130	C.D. Jeffries
1953Je16	PHRVA	92,	1262	C.D. Jeffries
1953Jo20	CJPHA	31,	1136	F.A. Johnson
1953Ka11	CJPHA	31,	250	L. Katz, R.G. Baker, R. Montalbetti
1953Ke38	JCPSA	21,	1802	T.K. Keenan, R.A. Penneman, B.B. McInteer
1953Ke49	PHRVA	92,	303	K.G. Kessler, R.E. Trees
1953Ki41	PHRVA	92,	109	C. Kikuchi, M.H. Sirvetz, V.W. Cohen
1953Kn23	PHRVA	91,	889	J.D. Knight, M.E. Bunker, B. Warren, et al.
1953Kn50	PHRVA	92,	539	W.D. Knight
1953Ky19	PPSOA	66,	519	J. Kyles, C.G. Campbell, W.J. Henderson
1953Li01	PHRVA	90,	387	L. Lidofsky, E. Alperovitch, C.S. Wu
1953Li24	PHRVA	92,	1271	R. Livingston, B.M. Benjamin, J.T. Cox, et al.
1953Ma23	PHRVA	90,	330	L. Marquez
1953Ma26	PPSOA	66,	608	P. Marin, G.R. Bishop, H. Halban
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
1953Ra02	PHRVA	89,	33	J.O. Rasmussen, Jr., S.G. Thompson, A. Ghiorso
1953Sa11	CJPHA	31,	235	B.W. Sargent, L. Yaffe, A.P. Gray
1953Sa26	COREA	236,	1249	M. Sakai, P. Hubert
1953Sc39	PHRVA	91,	883	R.B. Schwartz, M.L. Perlman, W. Bernstein
1953Sh48	PHRVA	91,	1203	F.J. Shore, W.L. Bendel, H.N. Brown, et al.
1953Si61	ANPYA	13,	136	W. Von Siemens
1953St31	PHYSA	19,	279	P.H. Stoker, Ong Ping Hok
1953St42	NCIAA	10,	1219	P. Stahelin, P. Preiswerk
1953Wa05	PHRVA	89,	502	F. Wagner, Jr., M.S. Freedman, D.W. Engelkemeir, et al.
1953Wa40	PHRVA	92,	1248	H.J. Watters, J.F. Ragan, Jr.
1953We01	PHRVA	90,	377A	G. Weinreich, V.W. Hughes
1953We51	PHRVA	89,	923	H.E. Weaver, Jr.
1953Wh39	PHRVA	92,	1256	R.L. White, C.H. Townes
1953Yo03	JUPSA	8,	435	Y. Yoshizawa
1953Yu04	COREA	237,	1077	T. Yuasa

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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, et al.
1954Be10	PHRVA	93,	1073	W. Bernstein, S.S. Markowitz, S. Katcoff
1954Be84	PHRVA	96,	83	A.I. Berman, K.L. Brown
1954Bl07	PRLAA	221,	170	B. Bleaney, J.M. Daniels, M.A. Grace, et al.
1954Bl72	PHMAA	45,	991	B. Bleaney, P.M. Llewellyn, M.H.L. Pryce, et al.
1954Bl73	PHMAA	45,	992	B. Bleaney, P.M. Llewellyn, M.H.L. Pryce, et al.
1954Bo24	PHRVA	93,	113	G. Boyd
1954Bo39	PHRVA	94,	1078	F.I. Boley
1954Br12	CJPHA	32,	223	S.W. Breckon, A. Henrikson, W.M. Martin, et al.
1954Br37	PPSOA	67,	397	W.D. Brodie
1954Br96	PHRVA	96,	1372	H.N. Brown, R.A. Becker
1954Co08	PHRVA	93,	1059	J.M. Cork, M.K. Brice, G.D. Hickman, et al.
1954Co70	PHRVA	94,	117	B.L. Cohen
1954Da05	PHRVA	93,	159	S.P. Davis
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, et al.
1954Fi14	PHRVA	94,	209	P.R. Fields, M.H. Studier, J.F. Mech, et al.
1954Fl41	PHRVA	94,	1392	P.C. Fletcher, W.A. Yager, G.L. Pearson, et al.
1954Gi04	PHRVA	93,	124	L.P. Gillon, K. Gopalakrishnan, A. deShalit, et al.
1954Gr19	PHRVA	94,	794	R.L. Graham, J. Walker
1954Ha16	PHRVA	94,	968	T.H. Handley, E.L. Olson
1954Ha39	HPACA	27,	259	K. Halbach
1954Ha60	PHRVA	96,	817A	G.R. Hagee, M.L. Curtis, G.R. Grove
1954Ha68	PHRVA	96,	1003	T.H. Handley, E.L. Olsen
1954Hu61	PHRVA	96,	548	J.R. Huizenga, C.M. Stevens
1954Ja16	PHRVA	96,	649	A. Javan, A. Englebrecht
1954Ka33	PHRVA	96,	730	M.I. Kalkstein, J.M. Hollander
1954Ke14	PPSOA	67,	450	F.M. Kelly, H. Kuhn, A. Pery
1954Ke35	PHRVA	96,	1050	V. Keshishian, H.W. Kruse, R.J. Klotz, et al.
1954Ki11	PHRVA	94,	1610	J.G. King, V. Jaccarino
1954Ki23	RMPHA	26,	327	R.W. King
1954Kl36	PHRVA	96,	1620	R.M. Kline, D.J. Zaffarano
1954Ko07	ZENAA	9,	104	L. Koester
1954Kr52	ANPYA	15,	124	K. Krebs, H. Nelkowski
1954Le08	PHRVA	93,	155	M.R. Lee, R. Katz
1954Le40	PHRVA	95,	1356	A. Lemonick, F.M. Pipkin
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
1954Lo36	PHRVA	95,	291	H.R. Loeliger, L.R. Sarles
1954Ma54	PHRVA	95,	708	H.B. Mathur, E.K. Hyde
1954Ma62	ARSFA	50,	95	E.R. Mayquez
1954Ma75	PHRVA	96,	126	H.B. Mathur, E.K. Hyde
1954Ma98	PHRVA	96,	1576	L.B. Magnusson, M.H. Studier, P.R. Fields, et al.
1954Mi01	PHRVA	93,	1422	M.C. Michel, D.H. Templeton
1954Mi60	AFYSA	7,	89	C. Mileikowsky
1954Mi61	AFYSA	8,	117	C. Mileikowsky
1954Mi89	PHRVA	96,	996	C. Mileikowsky, K. Ahnlund
1954Mu15	PHRVA	93,	1232	K. Murakawa

1954Mu91	PHRVA	96,	1543	K. Murakawa
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, et al.
1954Nu27	PHYSA	20,	571	R.H. Nussbaum, A.H. Wapstra, R. van Lieshout, et al.
1954Og01	JCPSA	22,	147	R.A. Ogg, Jr., J.D. Ray
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., et al.
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
1954Ro03	PHRVA	93,	256	G.B. Rossi, W.B. Jones, J.M. Hollander, et al.
1954Ro34	PHRVA	96,	543	V. Royden
1954Sa22	PHRVA	94,	642	B. Saraf
1954Sm96				Priv. Comm. , quoted by 1954PL30
1954Sp32	PHRVA	94,	1292	F.N. Spiess
1954St90	PHRVA	96,	983	C.P. Stanford, T.E. Stephenson, S. Bernstein
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
1954Ty33	PHRVA	96,	773	H. Tyren, P.A. Tove
1954Va01	JOSAA	44,	87	K.L. Vander Sluis, J.R. McNally, Jr.
1954Va06	PHYSA	20,	461	M. van den Berg, P.F.A. Klinkenberg
1954Wi08	PHRVA	93,	1428	G.A. Williams, D.W. McCall, H.S. Gutowsky
1954Wi26	PPSOA	67,	949	M.M. Winn
1954Wo07	PHRVA	93,	954A	E.C. Woodward, Jr.
1954Wo23	PHRVA	95,	761	C. Wong
1954Yt03	ZEELA	58,	630	C. Ythier, G. Herrmann
1954Za05	IANFA	18,	563	P.P. Zarubin
1954Zi02	PHYSA	20,	727	W.L. Zijp, S. Tom, G.J. Sizoo

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1955Aa06	PHRVA	98,	1224	L.C. Aamodt, P.C. Fletcher
1955Aa23	PHRVA	98,	1317	L.C. Aamodt, P.C. Fletcher
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
1955At32	PHYSA	21,	740	A.H.W. Aten, Jr., G.D. De Feyfer, M.J. Sterk, et al.
1955Ba04	PPSOA	68,	1090	J.M. Baker, B. Bleaney
1955Ba93	CJPHA	33,	43	R.M. Bartholomew, A.W. Boyd, F. Brown, et al.
1955Ba.A	P-Moscow		251	S.A. Baranov, K.N. Shlyagin
1955Be12	PHMAA	46,	65	K.E. Bergkvist, I. Bergstrom, C.J. Herrlander, et al.
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
1955Bl16	PPSOA	68,	55	B. Bleaney, W. Low
1955Bl23	PHRVA	100,	1324	J.W. Blue, E. Bleuler
1955Bl51	PPSOA	68,	937	B. Bleaney
1955Bo56	RPPHA	18,	304	K.D. Bowers, J. Owen
1955Br02	JINCA	1,	254	C.P. Browne, D.C. Hoffman, W.T. Crane, et al.

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
1955Ca48	PHMAA	46,	1287	C.F.M. Cacho, M.A. Grace, C.E. Johnson, et al.
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
1955Dr35	PHMAA	46,	1337	R.W.P. Drever, A. Moljk
1955Dr43	IANFA	19,	324	G.M. Drabkin, V.I. Orlov, L.I. Rusinov
1955Em20	NATUA	175,	34	E.W. Emery, J.E.S. Bradley, N. Veall
1955En07	PHRVA	99,	135	D. Engelkemeir, L.B. Magnusson
1955En16	JINCA	1,	345	D.W. Engelkemeir, P.R. Fields, S. Fried, et al.
1955Fa33	PHRVA	99,	1440	B. Farrelly, L. Koerts, N. Benczer, et al.
1955Fi37	JINCA	1,	262	P.R. Fields, M.H. Studier, A.M. Friedman, et al.
1955Gi04	PHRVA	98,	1194A	D.A. Gilbert, V.W. Cohen
1955Go31	PHRVA	99,	192	L.S. Goodman, S. Wexler
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
1955He81	ZENAA	10,	146	G. Herrmann, F. Strassmann
1955Jo02	PHRVA	97,	1031	J.T. Jones, Jr., E.N. Jensen
1955Jo09	PHRVA	99,	1645	M.W. Johns, B.C. Chidley, I.R. Williams
1955Ka40	DANKA	103,	49	N.I. Kaliteevskii, M.P. Chaika
1955Ki28	PHRVA	99,	1393	J.D. Kington, J.K. Bair, H.O. Cohn, et al.
1955Ko13	PHRVA	98,	46	A.F. Kovarik, N.I. Adams
1955Ko14	PHRVA	98,	1230	L. Koerts, P. Macklin, B. Farrelly, et al.
1955Ko36	ZETFA	28,	471	L.A. Korostyleva, A.R. Striganov, N.M. Iashin
1955Li49	ZEPYA	141,	476	K.H. Lindenberger
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, et al.
1955Ma40	COREA	240,	291	N. Marty
1955Ma62	JPRAA	16,	458	N. Marty
1955Ma63	HPACA	28,	193	D. Maeder, P. Stahelin
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, et al.
1955Mc17	PHRVA	97,	93	C.L. McGinnis
1955Mi90	PHRVA	100,	1390	J.P. Mize, M.E. Bunker, J.W. Starner
1955Mo68	JINCA	1,	274	F.F. Momyer, Jr., E.K. Hyde
1955Mo69	JINCA	1,	267	F.F. Momyer, Jr., F. Asaro, E.K. Hyde
1955Mu19	PHRVA	97,	1007	J.J. Murray, F. Boehm, F. Marmier, et al.
1955Mu45	PHRVA	98,	1285	K. Murakawa
1955Mu78	JUPSA	10,	919	K. Murakawa
1955Ne01	PHRVA	97,	1092	W.E. Nervik, G.T. Seaborg
1955Ni09	PHRVA	98,	42	J.B. Niday
1955Nu11	PHYSA	21,	77	R.H. Nussbaum, A.H. Wapstra, M.J. Sterk, et al.
1955On05	PHYSA	21,	676	Ong Ping Hok, P. Kramer
1955Pa50	AFYSA	9,	571	R.T. Pauli
1955Pa53	P-Geneva	14,	96	G.W. Parker, W.J. Martin, G.E. Creek, et al.
1955Pe24	PHRVA	98,	262	I. Perlman, F. Stephens, F. Asaro
1955Po17	PHYSA	21,	233	O.J. Poppema, M.J. Steenland, J.A. Beun, et al.
1955Po43	PHMAA	46,	1165	A.J. Poe
1955Pr29	PHRVA	98,	1324	R.J. Prestwood, H.L. Smith, C.I. Browne, et al.
1955Ra13	ZEPYA	141,	160	E. Rasmussen, V. Middelboe

1955Ra27	PHRVA	99,	42	J.O. Rasmussen, H. Slatis, T.O. Passel
1955Ra46	KDVSA	13,	30	E. Rasmussen, V. Middelboe
1955Ro05	PHRVA	97,	97	H. Roderick, O. Lonsjo, W.E. Meyerhof
1955Ro21	ACSAA	9,	57	M.A. Rollier, E. Saeland, A. Morpurgo, et al.
1955Sc09	PHRVA	99,	810	A.W. Schardt, J.P. Welker
1955Sc81	JINCA	1,	342	H. Schmied, R.W. Fink, B.L. Robinson
1955Sm42	PHRVA	98,	1258	W.G. Smith, J.M. Hollander
1955So31	PHRVA	99,	613A	P.B. Sogo, C.D. Jeffries
1955Su38	ANCHA	27,	921	A.D. Suttle, Jr., W.F. Libby
1955Th01	AFYSA	9,	137	S. Thulin
1955To11	JPRAA	16,	115	J. Tobailem, J. Robert
1955Va07	JOSAA	45,	65	K.L. Vander Sluis, J.R. McNally, Jr.
1955Va16	JOSAA	45,	1087	K.L. Vander Sluis, P.M. Griffin
1955Wh42	PHYSA	21,	841	J.C. Wheatley, W.J. Huiskamp, A.N. Diddens, et al.

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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
1956Ba69	PPSOA	69,	353	J.M. Baker, B. Bleaney, P.M. Llewellyn, et al.
1956Ba95	JNCEA	3,	132	S.A. Baranov, K.N. Shlyagin
1956Be12	PHRVA	101,	149	W.C. Beggs, B.L. Robinson, R.W. Fink
1956Be18	PHRVA	101,	1027	N. Benczer, B. Farrelly, L. Koerts, et al.
1956Be24	ZENAA	11,	956	H.G. Bennewitz, W. Paul, P. Toschek
1956Bi30	NUCIA	4,	758	A. Bisi, S. Terrani, L. Zappa
1956Bl10	PHRVA	104,	202	N.C. Blais, W.W. Watson
1956Br48	JCPSA	24,	751	L.C. Brown, D. Williams
1956Br93	PHRVA	103,	917	A.R. Brosi, B.H. Ketelle
1956Bu92	PHRVA	103,	634	J.P. Butler, T.A. Eastwood, T.L. Collins, et al.
1956Ch08	PHRVA	101,	1389	R.L. Christensen, D.R. Hamilton, A. Lemonick, et al.
1956Ch67	PHRVA	104,	1314	A. Chetham-Strode, L.W. Holm
1956Ch77	Th.-Berkeley			A. Chetham-Strode, Jr., PhD Thesis, University of California, UCRL-3322
1956Ch.A	Th.-Berkeley			A. Chetham-Strode, Jr. UCRL-3322
1956Co13	PHRVA	101,	1042	J.M. Cork, M.K. Brice, D.W. Martin, et al.
1956Co21	PPSOA	69,	282	A.H. Cooke, J.G. Park
1956Da06	ZENAA	11,	212	H. Daniel, R. Nierhaus
1956Do08	PHRVA	101,	1001	W. Dobrowolski, R.V. Jones, C.D. Jeffries
1956Do41	PHRVA	104,	1059	R.A. Douglas, J.W. Broer, R. Chiba, et al.
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
1956Ga46	ZENAA	11,	679	O.O. Gatti, J. Flegenheimer
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
1956Ho46	PHRVA	102,	805	R.W. Hoff, J.L. Olsen, L.G. Mann

1956Ho52	PHRVA	104,	101	J.P. Hobson, J.C. Hubbs, W.A. Nierenberg, et al.
1956Ho66	PHRVA	104,	368	D.D. Hoppes, R.W. Hayward
1956Hu26	PHRVA	102,	292	C.A. Hutchison, Jr., P.M. Llewellyn, E. Wong, et al.
1956Hu69	PHRVA	104,	757	J.C. Hubbs, W.A. Nierenberg, H.A. Shugart, et al.
1956Hu70	PHRVA	104,	715	J.C. Hubbs, G.M. Grosof
1956Jo05	CJPHA	34,	69	M.W. Johns, C.V. McMullen, I.R. Williams, et al.
1956Jo06	PHRVA	102,	738	R.V. Jones, W. Dobrowolski, C.D. Jeffries
1956Jo20	PHRVA	102,	831	N.R. Johnson, R.K. Sheline, R. Wolfgang
1956Jo34	PHRVA	103,	704	W. John, Jr.
1956Ka53	OPSPA	1,	809	N.I. Kaliteevskii, M.P. Chaika
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, et al.
1956Ko67	ZETFA	31,	771	L.M. Kondratev, G.I. Novikova, Y.P. Sobolev, et al.
1956La24	ANPHA	1,	152	J. Laberrigue-Frolow
1956Lo29	PHRVA	103,	1309	W. Low
1956Ma14	PHRVA	101,	283	J.B. Marion, R.A. Chapman
1956Ma27	PHRVA	102,	457	D.W. Martin, J.M. Cork, S.B. Burson
1956Ma32	PHRVA	102,	1097	L.B. Magnusson, A.M. Friedman, D. Engelkemeir, et al.
1956Ma87	PHRVA	104,	1028	J. Marion, F.B. Hagedorn
1956Mc60	NUCLA	14,	65	L.D. McIsaac, E.C. Freiling
1956Mc95	CJCHA	34,	1742	C.C. McMullen, B.D. Pate, R.H. Tomlinson, et al.
1956Ni14	BAPSA	1,	343	W.A. Nierenberg, J.S. Hubbs, H.A. Shugart, et al.
1956Ni16	PHRVA	104,	1380	W.A. Nierenberg, H.A. Shugart, H.B. Silsbee, et al.
1956Nu02	PHRVA	101,	905	R.H. Nussbaum, A.H. Wapstra, W.A. Bruil, et al.
1956Nu12	PHMAB	1,	587	P.B. Nutter
1956Ok02	PHRVA	101,	1059	G.D. O'Kelley, N.H. Lazar, E. Eichler
1956Ok06	PHRVA	102,	233	G.D. O'Kelley, N.H. Lazar, E. Eichler
1956Ow04	PHRVA	102,	591	J. Owen, I.M. Ward
1956Pe38	PHRVA	104,	740	J.R. Penning, H.R. Maltrud, J.C. Hopkins, et al.
1956Po16	ZENAA	11,	143	W. Porschen, W. Riezler
1956Po28	PHRVA	103,	921	F.T. Porter, M.S. Freedman, T.B. Novey, et al.
1956Ru45	Th.-Uppsala			G. Rudstam Thesis
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, et al.
1956Sm96	PHRVA	104,	706	F.B. Smith, N.B. Gove, R.W. Henry, et al.
1956Sp21	PHRVA	101,	1725	D.R. Speck
1956Sp22	PHRVA	101,	1831	D.R. Speck, F.A. Jenkins
1956Th11	PHRVA	102,	195	M.T. Thieme, E. Bleuler
1956Th18	NATUA	178,	484	R. Thorne
1956Tu17	PHRVA	103,	1000	W. Turchinetz, R.W. Pringle
1956Va14	PHRVA	103,	656	D.M. Van Patter, C.P. Swann, W.C. Porter, et al.
1956Wa24	PHRVA	102,	816	R.G. Waddell, E.N. Jensen
1956Wo09	CJPHA	34,	256	J.R. Wolfson
1956Wo27	PPSOA	69,	581	G.K. Woodgate, R.W. Hellwarth
1956Zi05	DANKA	109,	283	A.G. Zimin, N.M. Iashin

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1957Aa04	JINCA	5,	105	P. Aagaard, G. Andersson, J.O. Burgman, et al.
1957Ab05	PHRVA	108,	58	M. Abraham, R. Kedzie, C.D. Jeffries

1957Ah19	AFYSA	11,	379	K. Ahnlund
1957Al35	AFYSA	12,	319	T. Alvager, G. Oelsner
1957Am47	PHRVA	106,	553	S. Amiel, A. Chetham-Strode, Jr., G.R. Choppin, et al.
1957Ap46	JINCA	5,	23	D.J. Apers, P.C. Capron, L.J. Gilly
1957As65	AFYSA	12,	237	B. Astrom
1957As.A	BAPSA	2,	393	F. Asaro, S.G. Thompson, F.S. Stephens, Jr., et al.
1957Ba08	ZENAA	12,	520	G. Baro, P. Rey
1957Be39	OPSPA	3,	322	V.B. Belyanin
1957Be44	PHRVA	107,	737	E.M. Bernstein, H.W. Lewis
1957Be46	NUPHA	2,	593	J. Beydon, R. Chaminade, M. Crut, et al.
1957Bi84	PHRVA	108,	1025	H. Bichsel, T.W. Bonner
1957Bj56	NUPHA	4,	313	S. Bjornholm, O. Nathan, O.B. Nielsen, et al.
1957Bl66	JPRAA	18,	318	J. Blaise, S. Gerstenkorn, M. Louvegnies
1957Bo96	PHRVA	106,	983	H. Bosch, H. Munczek
1957Br26	PHRVA	105,	1929	E. Brun, J. Oeser, H.H. Staub
1957Br32	PHRVA	107,	189	G.O. Brink, J.C. Hubbs, W.A. Nierenberg, et al.
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
1957Do38	PHRVA	108,	60	W. Dobrov, C.D. Jeffries
1957Do40	PHRVA	105,	1307	P.B. Dorain, C.A. Hutchison, Jr., E. Wong
1957Dz60	IANFA	21,	962	B.S. Dzhelepov, B.K. Preobrazhenskii, I.M. Rogachev, et al.
1957Dz64	IANFA	21,	978	B.S. Dzelepov, O.E. Kraft, V.B. Zhinkina
1957Ea01	PHRVA	107,	1635	T.A. Eastwood, J.P. Butler, M.J. Cabell, et al.
1957Fe32	PHRVA	107,	1462	G. Feher, C.S. Fuller, E.A. Gere
1957Fr.A	PrvCom		58St50	M.S. Freedman, D.W. Engelkemeir, F.T. Porter, et al.
1957Ga10	PHRVA	108,	108	C.J. Gallagher, Jr., M. Sweeney, J.O. Rasmussen
1957Ga15	PHRVA	107,	1628	D.G. Gardner, W.W. Meinke
1957Ga16	DANKA	113,	1243	N.S. Garifyanov, M.M. Zaripov, B.M. Kozyrev
1957Gl20	PHMAB	2,	49	R.N. Glover, D.E. Watt
1957Go23	PHRVA	108,	1524	L.S. Goodman, S. Wexler
1957Gr47	PHRVA	105,	1570	H.G. Graetzer, A.B. Robbins
1957Ha08	CJPHA	35,	258	B.G. Harvey, H.G. Jackson, T.A. Eastwood, et al.
1957Ha99	PHRVA	108,	735	F.B. Hagedorn
1957He39	PHRVA	105,	1011	R.L. Heath
1957He43	NUPHA	3,	161	C.J. Herrlander, T.R. Gerholm
1957Ho66	JINCA	4,	143	D.C. Hoffman, G.P. Ford, F.O. Lawrence
1957Hu80	PHYSA	23,	605	W.J. Huiskamp, A.N. Diddens, J.C. Severiens, et al.
1957Hu86	PHRVA	105,	1928	J.C. Hubbs, W.A. Nierenberg, H.A. Shugart, et al.
1957Je.A	PrvCom	NDG	Jun	E.N. Jensen
1957Jo24	PISAA	45,	390	M.C. Joshi, B.N. Subba Rao, B.V. Thosar
1957Ke13	PHRVA	108,	54	R.W. Kedzie, M. Abraham, C.D. Jeffries
1957Ke67	PHRVA	107,	1044	G.R. Keepin, T.F. Wimett, R.K. Zeigler
1957Ki22	PHRVA	105,	1339	O.G. Kistner, A. Schwarzschild, B.M. Rustadt, et al.
1957Kn.A	PrvCom	NDG	Apr	J.D. Knight
1957Le21	JNCEA	4,	38	R.B. Leachman, H.W. Schmitt
1957Le27	COREA	244,	1358	C. Levi, L. Papineau
1957Ma19	DANKA	112,	623	A.A. Manenkov, A.M. Prokhorov, P.S. Trukhliaev, et al.
1957Ma24	BAPSA	2,	383	L.L. Marino, W.B. Ewbank, W.A. Nierenberg, et al.
1957Ma55	ZETFA	33,	1116	A.A. Manenkov, A.A. Prokhorov
1957Mi01	PHRVA	106,	1232	J.W. Mihelich, B. Harmatz

1957Mi63	ANPHA	2,	116	A. Michalowicz
1957Mi67	PHRVA	108,	989	J.W. Mihelich, B. Harmatz, T.H. Handley
1957Na03	NUPHA	4,	125	O. Nathan
1957Ni09	BAPSA	2,	200	W.A. Nierenberg, H.A. Shugart, H.B. Silsbee
1957Nu20	PHRVA	105,	1272	R.H. Nussbaum, S.K. Suri
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
1957Pe12	PHRVA	105,	647	J.R. Penning, F.H. Schmidt
1957Pe19	PHRVA	107,	776	G.J. Perlow, A.F. Stehney
1957Ra04	PHRVA	107,	141	J.O. Rasmussen, F.L. Canavan, J.M. Hollander
1957Ri43	ZENAA	12,	665	W. Riezler, G. Kauw
1957Ro54	CJPHA	35,	649	J.C. Roy, T.P. Kohman
1957Ru65	ORNL-2293			H.T. Russell
1957Sh46	NUPHA	4,	395	V.S. Shirley, W.G. Smith, J.O. Rasmussen
1957Sm73	PHRVA	107,	1314	W.G. Smith, R.L. Robinson, J.H. Hamilton, et al.
1957Th10	PHRVA	106,	1228	T.D. Thomas, R. Vandenbosch, R.A. Glass, et al.
1957Th11	BSRSA	26,	29	H. Thiry
1957Th37	Th.-Berkeley			T.D. Thomas, PhD Thesis, University of California, UCRL-3791
1957To22	NUINA	1,	95	P.A. Tove
1957Va03	PHRVA	107,	171	D.M. Van Patter, M.A. Rothman, W.C. Porter, et al.
1957Va08	PHYSA	23,	753	B. Van Nooijen, J. Konijn, A. Heyligers, et al.
1957Wa01	PHRVA	105,	639	E.K. Warburton, J.N. McGruer
1957We13	PHRVA	107,	1535	J.E. Wertz, P. Auzins, R.A. Weeks, et al.
1957We17	BAPSA	2,	31	M.M. Weiss, R.I. Walter, O.R. Gilliam, et al.
1957Wo35	BAPSA	2,	383	J.L. Worcester, W.A. Nierenberg, R. Marrus, et al.
1957Wo46	PPSOA	70,	485	G.K. Woodgate, J.S. Martin
1957Wr37	NSENA	2,	427	H.W. Wright, E.I. Wyatt, S.A. Reynolds, et al.
1957Yo04	PHRVA	108,	72	T.E. Young, G.C. Phillips, R.R. Spencer

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1958Ab18	PHRVA	112,	553	M. Abraham, C.D. Jeffries, R.W. Kedzie, et al.
1958Al90	PHRVA	111,	228	J.M. Alexander, U. Schindewolf, C.D. Coryell
1958Al92	PHRVA	111,	1137	R.G. Albridge, J.C. Hubbs, R. Marrus
1958Al99	PHRVA	112,	1998	D.E. Alburger, S. Ofer, M. Goldhaber
1958An35	IANFA	22,	895	N.M. Antoneva, A.A. Bashilov, B.S. Dzhelepov, et al.
1958An36	IANFA	22,	906	N.M. Antoneva, A.A. Bashilov, B.S. Dzhelepov, et al.
1958Ar56	AFYSA	13,	501	E. Arbman, J. Brude, T.R. Gerholm
1958Ar59	IANFA	22,	817	P.M. Aron, A.V. Kalyamin, A.N. Murin, et al.
1958Ba35	PRLAA	245,	156	J.M. Baker, B. Bleaney
1958Be41	CJPHA	36,	73	R.H. Betts, O.F. Dahlinger, D.M. Munro
1958Bi41	PHRVA	112,	1089	H. Bichsel
1958Bl59	ANPHA	3,	1019	J. Blaise
1958Br88	HPACA	31,	335	J. Brunner, J. Halter, P. Scherrer
1958Da12	CJPHA	36,	997	J.M. Daniels, J.L.G. Lemarche, M.A.R. LeBlanc
1958Da21	PHYSA	24,	S69	J.W.T. Dabbs, L.D. Roberts, G.W. Parker
1958Du78	PHRVA	110,	1076	K.L. Dunning, J.W. Butler, R.O. Bondelid
1958Du80	PHRVA	112,	1958	R.B. Duffield, S.H. Vegors, Jr.
1958Ea06	JINCA	6,	261	T.A. Eastwood, R.P. Schuman
1958El44	PHRVA	112,	1200	A.J. Elwyn, H.H. Landon, S. Oleksa, et al.
1958Ew84	PHRVA	110,	595	W.B. Ewbank, W.A. Nierenberg, H.A. Shugart, et al.
1958Ew85	BAPSA	3,	370	W.B. Ewbank, L.L. Marino, W.A. Nierenberg, et al.
1958Fe16	PHRVA	112,	1238	J.M. Ferguson
1958Fl39	PHRVA	110,	536	P.C. Fletcher, E. Ambler

1958Fo47	CJPHA	36,	555	J.S. Foster, J.W. Hilborn, L. Yaffe
1958Ga16	PRLTA	1,	74	H.L. Garvin, T.M. Green, E. Lipworth, et al.
1958Ga18	PHRVA	111,	534	H.L. Garvin, T.M. Green, E. Lipworth
1958Ga20	PRLTA	1,	292	H.L. Garvin, T.M. Green, E. Lipworth
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, et al.
1958Gr07	IANFA	22,	194	E.P. Grigorev, A.V. Zolotavin, I.I. Kuzmin, et al.
1958Gr92	PHMAB	3,	456	M.A. Grace, C.E. Johnson, R.G. Scurlock, et al.
1958Gu09	IISN- 2			G. Gueben, J. Govaerts
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
1958Hu11	PHRVA	110,	287	J.C. Hubbs, R. Marrus
1958Hu14	PHRVA	110,	534	J.C. Hubbs, R. Marrus, J.L. Worcester
1958Hu17	JCPSA	29,	754	C.A. Hutchison, Jr., E. Wong
1958Hu70	PHRVA	109,	390	J.C. Hubbs, R. Marrus, W.A. Nierenberg, et al.
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
1958Ka10	BAPSA	3,	209	J.V. Kane, R. Sher, E.V. Weinstock
1958Ka95	JINCA	7,	189	S. Katcoff, D.C. Williams
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
1958Le73	Th.-Berkeley			R.M. Lessler,
1958Li45	PRLTA	1,	473	I. Lindgren, C.M. Johansson, S. Axensten
1958Lo62	PHRVA	110,	842	W. Low, P.M. Llewellyn
1958Lu64	PRLTA	1,	295	G.W. Ludwig, H.H. Woodbury, R.O. Carlson
1958Ma21	BAPSA	3,	186	L.L. Marino, G.O. Brink, W.B. Ewbank, et al.
1958Ma35	BAPSA	3,	319	L.L. Marino, W.B. Ewbank, H.A. Shugart, et al.
1958Ma43	PHRVA	111,	286	L.L. Marino, W.B. Ewbank, W.A. Nierenberg, et al.
1958Mc64	PHRVA	111,	1636	M.T. McEllistrem, H.J. Martin, D.W. Miller, et al.
1958Mi85	NUPHA	7,	296	M.V. Mihailovic, B. Povh
1958Na15	CJPHA	36,	1409	S.V. Nablo, M.W. Johns, A. Artna, et al.
1958Ni27	PHRVA	112,	186	W.A. Nierenberg, H.A. Shugart, H.B. Silsbee, et al.
1958Ni28	NUPHA	9,	528	G.J. Nijgh, A.H. Wapstra, L.T.M. Ornstein, et al.
1958No30	AFYSA	14,	85	T. Novakov, R. Stockendal, M. Schmorak, et al.
1958Nu41	NUPHA	8,	139	M.J. Nurmia, R.W. Fink
1958Pa11	PRLAA	245,	118	J.G. Park
1958Pe17	PHRVA	110,	381	M.L. Perlman, J.P. Welker, M. Wolfsberg
1958Ph40	PRLTA	1,	215	L. Phillips, R. Gatti, A. Chesne, et al.
1958Pi43	PHRVA	109,	1423	F.M. Pipkin, J.W. Culvahouse
1958Pi45	PHRVA	112,	935	F.M. Pipkin
1958Po59	PHYSA	24,	157	H. Postma, W.J. Huiskamp, A.R. Miedema, et al.
1958Po79	PHRVA	112,	1954	N.T. Porile
1958Re10	PHRVA	109,	465	J.B. Reynolds, R.L. Christensen, D.R. Hamilton, et al.
1958Ri23	ZENAA	13,	904	W. Riezler, G. Kauw
1958Ro09	PHRVA	109,	1255	R.L. Robinson, L.M. Langer
1958Ro62	PHRVA	112,	481	R.L. Robinson, L.M. Langer
1958Se49	JRNBA	60,	447	H.H. Seliger, W.B. Mann, L.M. Cavallo
1958Se71	IANFA	22,	198	V.A. Sergienko
1958St34	ZEPYA	152,	599	A. Steudel
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
1958To32	JINCA	7,	1	K.S. Toth
1958Wa.A	P-Paris		910	R.J. Walen, G. Bastin
1958Wi42	PHRVA	112,	1950	R.G. Wille, R.W. Fink
1958Wo52	PRLTA	1,	16	H.H. Woodbury, G.W. Ludwig
1958Yt22	NUPHA	9,	108	C. Ythier, R.K. Girgis, R.A. Ricci, et al.

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1959Ac28	PHRVA	114,	137	W.T. Achor, W.E. Phillips, J.I. Hopkins, et al.
1959Al06	PHRVA	116,	939	D.E. Alburger, A. Gallmann, D.H. Wilkinson
1959Al10	PHRVA	116,	134	J.S. Allen, R.L. Burman, W.B. Herrmannsfeldt, et al.
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, et al.
1959Ax98	AFYSA	15,	463	S. Axensten, C.M. Johansson, I. Lindgren
1959Ba13	PPSOA	73,	513	F. De S. Barros, P.D. Forsyth, A.A. Jaffe, et al.
1959Ba22	JINCA	9,	105	R.F. Barnes, D.J. Henderson, A.L. Harkness, et al.
1959Be72	PHRVA	115,	108	N. Benczer-Koller, A. Schwarzschild, C.S. Wu
1959Bh95	NUPHA	12,	356	S.K. Bhattacherjee, B. Sahai, C.V.K. Baba
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, et al.
1959Br65	PHRVA	113,	239	A.R. Brosi, B.H. Ketelle, H.C. Thomas, et al.
1959Br74	NUPHA	12,	662	C.P. Browne
1959Bu20	PHRVA	116,	143	M.E. Bunker, B.J. Dropesky, J.D. Knight, et al.
1959Ca12	NUCLA	17,	86	J.P. Cali, L.F. Lowe
1959Ch24	BAPSA	4,	151	W.J. Childs, L.S. Goodman, L.J. Kieffer
1959Co52	PRLTA	2,	305	V.W. Cohen, J. Schwartz, R. Novick
1959Co56	SCIEA	129,	1360	R.D. Cooper, E.S. Cotton
1959Co63	PPSOA	74,	161	R.D. Connor, I.L. Fairweather
1959Co68	PRLTA	3,	429	D. Connor
1959Cr80	Th.-Stanford			F.P. Cranston, Thesis, Stanford University
1959Cu86	PHRVA	114,	1600	J.B. Cumming
1959Dr.A	BAPSA	4,	57	B.J. Dropesky, D.C. Hoffman, W.R. Daniels
1959Ei31	Th.-Columbus			J.A. Eisele, PhD Thesis, Ohio State University
1959Ew88	Th.-California			W.B. Ewbank, Thesis, Univ. California (1959); UCRL-8756 (1959)
1959Ew89	PHRVA	115,	614	W.B. Ewbank, L.L. Marino, W.A. Nierenberg, et al.
1959Fe99	CJPHA	37,	660	A.J. Ferguson, H.E. Gove
1959Fl40	PHRVA	116,	744	K.F. Flynn, L.E. Glendenin
1959Ga12	PHRVA	116,	393	H.L. Garvin, T.M. Green, E. Lipworth, et al.
1959Gh.A	UCRL- 8714			A. Ghiorso
1959Gi46	NUPHA	13,	473	R.K. Girgis, R.A. Ricci, R. van Lieshout, et al.
1959Gi50	NUPHA	12,	204	R.K. Girgis, R. van Lieshout
1959Gi54	PHRVA	115,	1271	J.E. Gindler, J. Gray, Jr., J.R. Huizenga
1959Gi58	JINCA	12,	8	J.E. Gindler, R.K. Sjoblom
1959Go68	PHRVA	113,	246	C.R. Gossett, J.W. Butler
1959Gr92	BAPSA	4,	250	T.M. Green, H. Garvin, E. Lipworth, et al.
1959Gr93	IANFA	23,	191	E.P. Grigorev, A.V. Zolotavin, B. Kratsik
1959Ha09	PHRVA	114,	1082	B. Harmatz, T.H. Handley, J.W. Mihelich
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

1959Ho02	JNCEA	8,	224	R.W. Hoff, E.K. Hulet, M.C. Michel
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, et al.
1959Ka97	VLUMA	3,	51	N.I. Kaliteevskii, M.P. Chaika
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, et al.
1959Ko64	IANFA	23,	1455	V.I. Kochevanov, R.A. Kuznetsov, A.N. Murin, et al.
1959Ku79	PHYSA	25,	600	J. Kuperus, P.J.M. Smulders, P.M. Endt
1959Li21	BAPSA	4,	11	E. Lipworth, H.L. Garvin, T.M. Green
1959Li50	AFYSA	15,	445	I. Lindgren, C.M. Johansson
1959Ma19	Th.-California			L.L. Marino
1959Me68	PPSOA	74,	693	R.E. Meads, J.E.G. McIldowie
1959Me82	PHRVA	115,	130	A.C. Melissinos, S.P. Davis
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, et al.
1959Os37	JINCA	9,	96	R.G. Osmond, M.J. Owers
1959Pe26	PHRVA	116,	734	F.R. Petersen, V.J. Ehlers, W.B. Ewbank, et al.
1959Pe27	ZETFA	37,	1558	V.P. Perelygin, E.D. Donets, G.N. Flerov
1959Pe28	PHRVA	113,	1269	G.J. Perlow, A.F. Stehney
1959Po64	PHRVA	115,	989	A. Poularikas, R.W. Fink
1959Po77	PHRVA	114,	1286	F.T. Porter, P.P. Day
1959Ri34	ZENAA	14,	196	W. Riezler, G. Kauw
1959Ri35	NUPHA	10,	360	R.A. Ricci, R. van Lieshout
1959Ri38	NUCIA	11,	156	R.A. Ricci, R.K. Girgis, R. van Lieshout
1959Ro53	CJPHA	37,	385	J.P. Roy, L.P. Roy
1959Sc35	JINCA	12,	1	R.P. Schuman, P. Goris
1959Sh63	PHRVA	114,	858	J.E. Sherwood, S.J. Ovenshine
1959Sh64	BAPSA	4,	386	J.E. Sherwood, S.J. Ovenshine, G.W. Parker
1959St28	BAPSA	4,	99	J.W. Starner
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
1959Un01	PHRVA	115,	1687	J.P. Unik, J.O. Rasmussen
1959Va02	PHRVA	115,	115	S.E. Vandenbosch, H. Diamond, R.K. Sjoblom, et al.
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, et al.

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1960Al20	JPRAA	21,	751	G. Albouy, M.M. Gusakow, N. Poffe
1960Al33	JINCA	15,	222	J. Alstad, A.C. Pappas
1960An04	ZETFA	38,	372	S.F. Antonova, S.S. Vasilenko, M.G. Kaganskii, et al.
1960Ar05	CJPHA	38,	1577	A. Artna, M.E. Law
1960As06	P-Kingston		581	F. Asaro, S.G. Thompson, F.S. Stephens, et al.
1960Au03	PHRVA	120,	2072	L.S. August, J.F. Friichtenicht
1960Ba06	PHRVA	117,	519	R.W. Bauer, M. Deutsch
1960Ba17	NUPHA	15,	566	G. Backstrom, O. Bergman, J. Burde, et al.
1960Ba30	IANFA	24,	817	A.S. Basina, V.A. Morozov
1960Ba32	IANFA	24,	807	A.S. Basina, B.S. Dzhelepov, V.A. Chikhladze
1960Ba43	IANFA	24,	1079	V.I. Baranov, K. Ya. Gromov, B.S. Dzhelepov, et al.
1960Ba44	IANFA	24,	1035	S.A. Baranov, A.G. Zelenkov, V.M. Kulakov

1960Ba49	CJCHA	38,	2147	A.P. Baerg, R.M. Bartholomew, R.H. Betts
1960Be36	NUIMA	8,	151	I. Bergstrom, E.C.O. Bonacalza, A. Jech, et al.
1960Bo07	NUPHA	15,	239	E. Bodenstedt, E. Matthias, H.J. Korner, et al.
1960Bo08	JACSA	82,	809	G.E. Boyd, Q.V. Larson, E.E. Motta
1960Bo21	PHRVA	120,	889	R.O. Bondelid, C.A. Kennedy, J.W. Butler
1960Bo29	IANFA	24,	283	N.A. Bonch-Osmolovskaya, B.S. Dzhelepov, O.E. Kraft
1960Br11	CJCHA	38,	194	M. Bresesti, J.C. Roy
1960Bu06	JINCA	12,	228	L.R. Bunney, J.O. Abriam, E.M. Scadden
1960Bu22	JINCA	16,	10	F.D.S. Butement, G.G.J. Boswell
1960Bu27	JINCA	15,	205	F.D.S. Butement, P. Glentworth
1960Ca03	NUPHA	20,	509	A. Cabezas, I. Lindgren, E. Lipworth, et al.
1960Ca05	PHRVA	118,	233	A. Cabezas, E. Lipworth, R. Marrus, et al.
1960Ch08	PHRVA	118,	1578	W.J. Childs, L.S. Goodman
1960Ch13	PHRVA	120,	2138	W.J. Childs, L.S. Goodman, L.J. Kieffer
1960Ch15	PRLAA	259,	377	C.J.S. Chapman, M.A. Grace, J.M. Gregory, et al.
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
1960Di03	PHRVA	119,	2000	H. Diamond, P.R. Fields, C.S. Stevens, et al.
1960Dr03	NUPHA	16,	357	B.J. Dropesky, A.W. Schardt, T.T. Shull
1960Du11	NYO-9504		85	R.A. Dudley
1960Dz02	IANFA	24,	802	B.S. Dzelepov, I.F. Uchevatkin, S.A. Shestopalova
1960Ew06	PHRVA	120,	1406	W.B. Ewbank, L.L. Marino, W.A. Nierenberg, et al.
1960Fe03	ANPHA	5,	181	L. Feuvrais
1960Fe08	PHMAB	5,	1309	P.C.B. Fernando, G.K. Rochester, K.F. Smith
1960Fo01	PPSOA	75,	291	P.D. Forsyth, F. De S. Barros, A.A. Jaffe, et al.
1960Fo15	JINCA	15,	210	J.H. Forrest, S.J. Lyle, G.R. Martin, et al.
1960Fr04	PHRVA	120,	1436	J.M. Freeman
1960Ga12	NUPHA	19,	140	H.L. Garvin, E. Lipworth
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
1960Gl01	JINCA	13,	181	R.A. Glass, R.J. Carr, W.M. Gibson
1960Gr15	IANFA	24,	841	E.P. Grigorev, O.V. Larionov, M.K. Nikitin, et al.
1960Gu05	AFYSA	17,	337	R.K. Gupta
1960Ha26	PHRVA	119,	772	J.H. Hamilton, L.M. Langer, W.G. Smith
1960Ha34	JUPSA	15,	2175	A. Hashizume, T. Takahashi, Y. Tendow, et al.
1960He09	PHRVA	119,	788	R.G. Helmer, S.B. Burson
1960Hi03	PPSOA	75,	444	S. Hinds, R. Middleton
1960Ho10	ZEPYA	160,	201	K.W. Hoffmann, I.Y. Krause, W.D. Schmidt-Ott, et al.
1960Ho16	NAAKA		273	K.W. Hoffmann
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, et al.
1960Je03	NUPHA	19,	654	B.S. Jensen, O.B. Nielsen, O. Skilbreit
1960Jo12	PHRVA	120,	2108	C.E. Johnson, J.F. Schooley, D.A. Shirley
1960Ju01	NUPHA	15,	108	B. Jung, G. Andersson
1960Ka14	PHRVA	119,	1953	W.R. Kane, G.T. Emery, G. Scharff-Goldhaber, et al.
1960Ka20	JUPSA	15,	2140	T. Katoh, M. Nozawa, Y. Yoshizawa, et al.
1960Kl02	PHYSA	26,	103	P.F.A. Klinkenberg, F.S. Tomkins
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, et al.
1960Ku06	JUPSA	15,	2179	T. Kuroyanagi

1960Ky01	Th.-Berkeley			R.-T. Kyi, PhD Thesis, University of California, UCRL-9109
1960La04	PHRVA	119,	1308	L.M. Langer, D.R. Smith
1960Le03	PHRVA	118,	263	R.M. Lessler, M.C. Michel
1960Li03	AFYSA	16,	506A	I. Lindgren, C.M. Johansson-Olsmats, S. Axensten
1960Li11	PHRVA	119,	1053	E. Lipworth, T.M. Green, H.L. Garvin, et al.
1960Lo01	PHRVA	118,	1608	W. Low
1960Lu07	ZENAA	15,	939	G. Luhrs, C. Mayer-Boricke
1960Ma21	PPSOA	76,	56	B.E.F. Macefield, J.H. Towle
1960Ma28	IANFA	24,	1109	T.B. Malysheva, B.A. Khotin, A.K. Lavrukhina, et al.
1960Ma30	PHRVA	120,	1429	R. Marrus, W.A. Nierenberg, J. Winocur
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, et al.
1960Mo09	BAPSA	5,	338	R.B. Moore
1960Mo.A	BAPSA	5,	338	R.B. Moore
1960Mu07	PPSOA	75,	929	J. Muto, F. De S. Barros, A.A. Jaffe
1960Na14	NUPHA	21,	340	H. Narasimhaiah, M.L. Pool
1960Ne03	PHRVA	117,	1510	J.O. Newton
1960Nu02	PHRVA	120,	1815	H. Nutley, J.B. Gerhard
1960Pe09	BAPSA	5,	343	F.R. Petersen, H.A. Shugart
1960Pi06	PHRVA	119,	755	W.R. Pierson, C.D. Coryell
1960Po01	AnRpt Arkansas		4	A. Poularikas, R.W. Fink, D.G. Gardner
1960Pr05	NUPHA	15,	326	I.L. Preiss, R.W. Fink
1960Pr07	PHRVA	118,	113	W.W. Pratt, R.G. Cochran
1960Ri09	PHYSA	26,	1014	R.A. Ricci, R. van Lieshout, H.J. van den Bold
1960Ro27	P-Kingston		884	L.D. Roberts, F.J. Walter, J.W.T. Dabbs, et al.
1960Sc14	NUPHA	21,	55	W. Schneider
1960Sc19	NSENA	7,	477	L.C. Schmid, W.P. Stinson
1960Se05	NUPHA	16,	138	O.J. Segaert, J. Demuynck, A.M. Hoogenboom, et al.
1960So02	IANFA	24,	1484	A.A. Sorokin, A. Bedesku, M.V. Klimentovskaya, et al.
1960Sp08	NUPHA	21,	310	R.R. Spencer, G.C. Phillips, T.E. Young
1960St21	AFYSA	17,	579	R. Stockendal
1960Ta12	PPSOA	75,	772	I.J. Taylor, F. De S. Barros, P.D. Forsyth, et al.
1960Ta19	NUPHA	21,	133	K. Takahashi, H. Morinaga
1960To10	JINCA	14,	1	K.S. Toth, S. Bjornholm, M.H. Jorgensen, et al.
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
1960Wi10	PHRVA	118,	242	R.G. Wille, R.W. Fink
1960Yu01	NUPHA	16,	119	H. Yuta, H. Morinaga
1960Za07	RADKA	2,	451	N.G. Zaitseva, M.Y. Kuznetsova, I.Y. Levenberg, et al.
1960Ze02	PHRVA	120,	1723	B. Zeidman, J.L. Yntema, B.J. Raz

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1961Am02	PHRVA	123,	1793	O. Ames, A.M. Bernstein, M.H. Brennan, et al.
1961An02	AFYSA	18,	385	G. Andersson, R. Ringh
1961Ar05	NUPHA	22,	341	E. Arbman, I.B. Haller
1961Ar15	CJPHA	39,	1817	A. Artna, M.W. Johns

1961Ax01	PHRVA	121,	1630	J.D. Axe, H.J. Stapleton, C.D. Jeffries
1961Ax02	AFYSA	19,	461	S. Axensten, C.M. Olsmats
1961Ax04	AFYSA	20,	473	S. Axensten, G. Liljegren, I. Lindgren
1961Ba43	ZETFA	41,	1484	K.A. Baskova, S.S. Vasilev, N.S. Chang, et al.
1961Ba44	ZETFA	41,	1733	S.A. Baranov, V.M. Kulakov, P.S. Samoilov, et al.
1961Be13	PHRVA	123,	2100	E.H. Beckner, R.L. Bramblett, G.C. Phillips, et al.
1961Be15	PHRVA	122,	1576	G.B. Beard, W.H. Kelly
1961Be20	ZETFA	40,	91	A. Bedesku, O.M. Kalinkina, K.P. Mitrofanov, et al.
1961Be41	NUPHA	28,	570	G.B. Beard, W.H. Kelly
1961Bj02	JINCA	21,	193	S. Bjornholm, H.L. Nielsen, O.B. Nielsen, et al.
1961Bl07	JPRAA	22,	417	J. Blaise, J. Bauche, S. Gerstenkorn, et al.
1961Bo13	PHRVA	124,	213	H.H. Bolotin, A.C. Li, A. Schwarzschild
1961Bo.B	P-Dubna			N.A. Bonch-Osmolovskaya, B.S. Dzelepov, O.E. Kraft
1961Bu04	PHRVA	121,	1770	J.W. Butler, R.O. Bondelid
1961Ca01	JINCA	17,	12	W.T. Carnall, S. Fried, A.L. Harkness
1961Ca07	PHRVA	122,	1796	A.Y. Cabezas, I. Lindgren, R. Marrus
1961Ca12	NUPHA	27,	415	C. Carter-Waschek, B. Linder
1961Ch05	PHRVA	122,	891	W.J. Childs, L.S. Goodman, L.J. Kieffer
1961Ch06	PHRVA	122,	591	W.J. Childs, L.S. Goodman
1961Ch10	PHRVA	122,	1302	R.L. Christensen, D.R. Hamilton, H.G. Bennewitz, et al.
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, et al.
1961Do02	PPSOA	77,	1219	T. Dobrowolski, J. Young
1961Du02	PHRVA	123,	1321	K.L. Dunning, J.W. Butler
1961El02	NUPHA	23,	131	J.S. Eldridge, W.S. Lyon
1961Er04	AFYSA	20,	209	P. Erman, Z. Sujkowski
1961Fi05	AFYSA	19,	323	R.W. Fink, G. Andersson, J. Kantele
1961Fo05	AFYSA	19,	353	W. Forsling, T. Alvager
1961Ga05	PHRVA	122,	1590	C.J. Gallagher, Jr., H.L. Nielsen, O.B. Nielsen
1961Ga16	ZETFA	41,	337	N.S. Garifyanov, E.I. Semenova
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, et al.
1961Gr42	UCRL-10023		47	R.D. Griffioen, R.D. Macfarlane
1961Gu02	AFYSA	18,	443	R.K. Gupta, J. Svedberg, G. Andersson
1961Gu08	ZEPYA	165,	356	G. Guthohrlein, H. Kopfermann, G. Noldeke, et al.
1961Ha17	PHRVA	123,	184	L. Haskin, R. Vandenbosch
1961Ha37	JCPSA	35,	1521	W. Hayes, J.W. Twidell
1961Ha39	PHRVA	124,	1879	R.L. Hahn, J.M. Miller
1961He09	PHRVA	123,	903	R.L. Heath, J.E. Cline, C.W. Reich, et al.
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, et al.
1961Je04	PCRYA	3,	129	C.D. Jeffries
1961Jh03	NUCIA	20,	1067	S. Jha, R.K. Gupta, H.G. Devare, et al.
1961Jo08	PHRVA	122,	1546	N.R. Johnson, E. Eichler, G.D. O'Kelley, et al.

1961Jo15	PHRVA	124,	157	R.C. Jopson, H. Mark, C.S. Swift, et al.
1961Ju05	AFYSA	17,	429	B. Jung, T. Svedberg
1961Ka23	IANFA	25,	111	N.I. Kaliteevskii, M.F. Chaika, I. Kh. Pacheva, et al.
1961Ki02	CJPHA	39,	230	H.J. King, J.A. Cameron, H.K. Eastwood, et al.
1961Ki05	JINCA	18,	8	H.W. Kirby
1961Kn02	APNYA	6,	211	A. Knipper
1961Ko11	IANFA	25,	237	G.E. Kocharov, G.A. Korolev
1961Kr01	ZEPYA	165,	99	H. Krehbiel, U. Meyer-Berkhout
1961Ku07	ZEPYA	165,	402	H. Kuiper
1961Ku08	JUPSA	16,	2363	T. Kuroyanagi
1961Ku09	JUPSA	16,	2369	T. Kuroyanagi
1961Ku10	JUPSA	16,	2393	T. Kuroyanagi, H. Yuta, K. Takahashi, et al.
1961La02	JINCA	17,	1	R.M. Latimer, G.E. Gordon, T.D. Thomas
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
1961Ma18	JINCA	19,	9	R.D. Macfarlane
1961Ma27	PHRVA	124,	1904	R. Marrus, J. Winocur
1961Ma42	NUPHA	23,	90	R. Marrus, W.A. Nierenberg, J. Winocur
1961Ni02	PHRVA	122,	172	R.T. Nichols, R.E. McAdams, E.N. Jensen
1961Nu01	NATUA	190,	427	M. Nurmia, P. Kauranen, M. Karras, et al.
1961Oz01	COREA	253,	2944	Y. Ozias, H. Roux, P. Boivinet, et al.
1961Pe23	ZETFA	41,	1780	K.A. Petrzhak, M.I. Yakunin
1961Ra06	PHRVA	122,	168	L.A. Rayburn
1961Re06	JINCA	18,	13	I. Rezanka, J. Frana, M. Vobecky, et al.
1961Ri02	NUPHA	24,	494	R. Rikmenspoel, C.M. Van Patter
1961Ri06	NATUA	192,	444	E.W.T. Richards, A. Ridgeley, N.J. Atherton, et al.
1961Ro04	PHRVA	122,	1863	R.L. Robinson, E. Eichler, N.R. Johnson
1961Ro12	PHRVA	123,	1349	E.L. Robinson, O.E. Johnson
1961Ro14	ZENAA	16,	577	H. Rodenbusch, G. Herrmann
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, et al.
1961Ry05	HPACA	34,	960	A. Rytz, H.H. Staub, H. Winckler
1961Sa11	PHRVA	123,	855	D. Sadeh
1961Sc09	PHRVA	122,	1871	A.W. Schardt
1961Sc11	PHRVA	123,	893	A.W. Schardt, A. Goodman
1961Se08	IANFA	25,	848	I.P. Selinov, V.L. Chikhladze, D.E. Khulelidze
1961Sh17	PRLTA	7,	446	R.K. Sheline, T. Sikkeland, R.N. Chanda
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
1961Sn01	BAPSA	6,	224	J.L. Snider, M. Posner, A.M. Bernstein, et al.
1961St18	PHRVA	124,	1455	H.J. Stapleton, C.D. Jeffries, D.A. Shirley
1961St20	TID-14880		1409	G. Stetter
1961Ta08	JUPSA	16,	1664	K. Takahashi, T. Kuroyanagi, H. Yuta, et al.
1961Th01	BAPSA	6,	50	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, et al.
1961Va30	ZETFA	41,	303	N.A. Vartanov, Yu. A. Ryukhin, I.P. Selinov, et al.
1961Vo06	IANFA	25,	1188	Yu. M. Volkov, A.P. Komar, G.A. Korolev, et al.
1961Wa04	PHRVA	121,	224	J.C. Walker, D.L. Harris
1961Wa16	IJARA	11,	68	D.E. Watt, D. Ramsden, H.W. Wilson
1961We11	PHRVA	124,	527	H.I. West, Jr., L.G. Mann, R.J. Nagle
1961Wy01	NSENA	11,	74	E.I. Wyatt, S.A. Reynolds, T.H. Handley, et al.
1961Ya01	PHRVA	121,	600	S.S. Yamamoto, F.E. Steigert
1961Zy02	APPOA	20,	321	J. Żylicz, Z. Preibisz, S. Chojnacki, et al.

1962

1962Ab03	RMAFA	21,	104	S. Abecasis, H. Bosch, M.C. Caracoche, et al.
1962Al04	BAPSA	7,	239	S.S. Alpert, B. Budick, E. Lipworth, et al.
1962An05	ZENAA	17,	238	G. Andersson-Lindstrom
1962Ar05	PRLTA	9,	405	P.E. Argan, G. Bendiscioli, A. Piazzoli, et al.
1962At01	CJPHA	40,	194	R.W. Attree, M.J. Cabell, R.L. Cushing, et al.
1962Ax02	AFYSA	22,	392	S. Axensten, G. Liljegren, I. Lindgren, et al.
1962Ba23	PRLTA	9,	16	R.C. Barber, L.A. Cambey, J.H. Ormrod, et al.
1962Ba24	CJPHA	40,	1496	R.C. Barber, R.L. Bishop, L.A. Cambey, et al.
1962Ba26	PHRVA	127,	583	R.K. Bardin, C.A. Barnes, W.A. Fowler, et al.
1962Ba28	NUPHA	33,	347	B. Basu, A.P. Patro
1962Ba32	AFYSA	21,	65	E. Bashandy, M.S. El-Nesr
1962Be29	PHLTA	2,	332	D. Berenyi
1962Bi14	NUPHA	37,	529	J.K. Bienlein, F. Pleasonton
1962Bj01	NUPHA	30,	488	S. Bjornholm, O.B. Nielsen
1962Bo12	PHRVA	127,	217	N.A. Bonner, W. Goishi, W.H. Hutchin, et al.
1962Bo22	IANFA	26,	975	N.A. Bonch-Osmolovskaya, K. Ya. Gromov, B.S. Dzelepov, et al.
1962Bo25	AFYSA	22,	111	E.C.O. Bonacalza, P. Thieberger, I. Bergström
1962Br15	PHRVA	125,	1323	H.W. Brandhorst, Jr., J.W. Cobble
1962Br30	PRLTA	9,	166	E. Brun, J.J. Kraushaar, W.L. Pierce, et al.
1962Bu16	PHRVA	127,	844	M.E. Bunker, B.J. Dropesky, J.D. Knight, et al.
1962Bu21	Th.-Berkeley			B. Budick, PhD Thesis, Univ. California, UCRL-10245
1962Ca10	PHRVA	126,	1004	A.Y. Cabezas, I.P.K. Lindgren, R. Marrus, et al.
1962Ch13	PHRVA	127,	572	Y.W. Chan, W.B. Ewbank, W. Nierenberg, et al.
1962Ch21	ZETFA	43,	453	V.L. Chikhladze, D.E. Khulelidze, R.A. Ryukhin
1962Co08	PHRVA	126,	1506	D. Connor, Tung Tsang
1962Cr04	NUPHA	34,	580	J.G. Cramer, Jr., C.M. Class
1962Da03	NUPHA	31,	293	H. Daniel
1962Do07	PHMAB	7,	1223	P.W. Dougan, K.W.D. Ledingham, R.W.P. Drever
1962Dr01	JINCA	24,	1301	B.J. Dropesky, C.J. Orth
1962Dz04	IANFA	26,	1030	B.S. Dzhelepov, G.S. Katykhin, V.K. Maidanyuk, et al.
1962Ea02	NATUA	195,	271	L.G. Earwaker, J.G. Jenkin, E.W. Titterton
1962Eh01	PHRVA	125,	2008	V.J. Ehlers, W.A. Nierenberg, H.A. Shugart
1962Ei02	NUPHA	35,	625	E. Eichler, G.D. O'Kelley, R.L. Robinson, et al.
1962El02	NUPHA	31,	128	M.S. El-Nesr, E. Bashandy
1962Ew01	NUPHA	29,	153	G.T. Ewan, R.L. Graham, J.S. Geiger
1962Fe02	NUPHA	33,	272	P.F. Fettweis, E.C. Campbell
1962Fl03	PPSOA	79,	10	F.C. Flack, J.E. Johnson
1962Fr04	PHRVA	127,	1262	K. Fritze, T.J. Kennett
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

1962Gr17	PHMAB	7,	1087	M.A. Grace, C.E. Johnson, R.G. Scurlock, et al.
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
1962Ho05	PHRVA	125,	1619	D.L. Horrocks, A.L. Harkness
1962Ho14	PHRVA	128,	2748	D.A. Howe, L.M. Langer, E.H. Spejewaki, et al.
1962In01	NUPHA	38,	50	H. Inoue, J. Ruan, S. Yasukawa, et al.
1962Ja10	NUPHA	38,	121	J.F.W. Jansen, S. Hultberg, P.F.A. Goudsmit, et al.
1962Ju06	PHRVA	128,	1733	B.R. Judd, C.A. Lovejoy, D.A. Shirley
1962Ka08	NUPHA	32,	25	T. Katoh, M. Nozawa, Y. Yoshizawa
1962Ka23	NUPHA	36,	394	T. Katoh, M. Nozawa, Y. Yoshizawa, et al.
1962Ka27	AAFPA	6,	96	P. Kauranen
1962Kh05	IANFA	26,	1036	D.E. Khulelidze, V.L. Chikhladze, N.A. Vartenov, et al.
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, et al.
1962Li03	NUPHA	31,	584	E.W.A. Lingeman, K.E.G. Lobner, G.J. Nijgh, et al.
1962Li06	NUPHA	32,	151	I. Lindgren
1962Lo01	NUPHA	30,	452	C.A. Lovejoy, D.A. Shirley
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
1962Ma41	IANFA	26,	125	T.V. Malysheva, L.P. Moskaleva, G.M. Chernov, et al.
1962Ma58	COO-225		92	C.W. Mays, D.R. Atherton, R.D. Lloyd, et al.
1962Mc05	BAPSA	7,	30	B.R. McGarvey
1962Mo06	PHYSA	28,	63	S. Monaro, G.B. Vingiani, R.A. Ricci, et al.
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
1962Ol04	AFYSA	22,	237	I.U. Olsson, I. Karlen, A.H. Turnbull, et al.
1962Pa05	PHRVA	127,	1258	A.P. Patro, B. Basu
1962Pe01	PHRVA	125,	284	F.R. Peterson, H.A. Shugart
1962Pe07	PHRVA	126,	252	F.R. Petersen, H.A. Shugart
1962Pe08	HPACA	35,	175	C.F. Perdrisat, J.H. Brunner, H.J. Leisi
1962Pe15	PHRVA	127,	917	I. Perlman, F. Asaro, A. Ghiorso, et al.
1962Pe21	PHRVA	128,	1740	F.R. Petersen, H.A. Shugart
1962Pi02	PHRVA	127,	1708	W.R. Pierson, H.C. Griffin, C.D. Coryell
1962Pr06	NUPHA	36,	441	H.J. Prask, J.J. Reidy, E.G. Funk, Jr., et al.
1962Pr09	JINCA	24,	589	I.L. Preiss, P.M. Strudler
1962Pu01	NUPHA	36,	1	D.J. Pullen, A.E. Litherland, S. Hinds, et al.
1962Re03	PHRVA	127,	192	C.W. Reich, R.P. Schuman, J.R. Berreth, et al.
1962Re04	ZETFA	42,	408	V.V. Remaev, V.T. Gritsyna, A.P. Klyucharev
1962Ru05	NUPHA	36,	431	J. Ruan, Y. Yoshizawa, Y. Koh
1962Sc04	PHRVA	125,	1641	C.F. Schwerdtfeger, E.G. Funk, Jr., J.W. Mihelich
1962Sc09	NUPHA	35,	168	C.F. Schwerdtfeger, H.J. Prask, 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
1962Sp03	PPSOA	79,	787	I.J. Spalding, K.F. Smith
1962Th12	AFYSA	22,	127	P. Thieberger
1962Uh01	AFYSA	21,	35	J. Uhler, G.H. Neumann, O. Melin, et al.
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, et al.
1962Va27	IANFA	26,	1495	S.S. Vasilev, L.Y. Shavtvalov

1962Wa03	PHRVA	125,	233	E.L. Waters, A.H. Maki
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, et al.
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, et al.
1963As02	NUPHA	45,	49	G. Astner, I. Bergstrom, L. Eriksson, et al.
1963Ba20	CJPHA	41,	696	R.C. Barber, R.L. Bishop, W. McLatchie, et al.
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, et al.
1963Ba47	CJPHA	41,	1482	R.C. Barber, W. McLatchie, R.L. Bishop, et al.
1963Ba52	PHRVA	132,	1763	F.J. Bartis
1963Be38	APAHA	16,	101	D. Berenyi
1963Bi03	NUPHA	41,	21	K.M. Bisgard, P. Dahl, P. Hornshoj, et al.
1963Bi12	CJPHA	41,	1532	R.L. Bishop, R.C. Barber, W. McLatchie, et al.
1963Bj01	NUPHA	42,	469	S. Bjornholm, F. Boehm, A.B. Knutsen, et al.
1963Bj02	NUPHA	42,	642	S. Bjornholm, O.B. Nielsen
1963Bl25	P-Paris 1,		595	B. Bleaney
1963Bo07	PHRVA	130,	1078	R.O. Bondelid, J.W. Butler
1963Bo14	PHYSA	29,	277	P. Born, C. Bobeldijk, W.A. Oost, et al.
1963Bo17	PHYSA	29,	535	P. Born, A. Veefkind, W.H. Elsenaar, et al.
1963Bu14	PHRVA	132,	723	B. Budick, R. Marrus
1963By02	PHRVA	132,	1181	F.W. Byron, Jr., M.N. McDermott, R. Novick
1963Ca03	PHRVA	129,	1782	D.C. Camp, L.M. Langer
1963Ca05	CJPHA	41,	823	J.A. Cameron, R.G. Summers-Gill
1963Ca06	PHRVA	132,	2239	T.A. Carlson
1963Ch03	NUCIA	27,	86	G. Chilosi, P. Cuzzocrea, G.B. Vingiani, et al.
1963Ch12	PHRVA	131,	245	W.J. Childs, L.S. Goodman
1963Co17	PHRVA	131,	700	E.D. Commins, H.R. Feldman
1963Co22	PRLTA	10,	347	E.D. Commins, D.A. Dobson
1963Cr06	PHRVA	132,	1681	B. Crasemann, G.T. Emery, W.R. Kane, et al.
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
1963De38	JTPHE	45,	1344	A.G. Demin, Y.P. Kushakevich, E.A. Makoveev, et al.
1963Di05	JINCA	25,	143	H. Diamond, J.E. Gindler
1963Di10	NUPHA	45,	632	R.M. Diamond, F.S. Stephens
1963Do07	PHRVA	132,	2600	I. Dostrovsky, S. Katcoff, R.W. Stoenner
1963Do13	NUPHA	49,	449	W.M. Doyle, R. Marrus
1963Dr01	BAPSA	8,	377	B.J. Dropesky, C.J. Orth
1963Dz07	ZETFA	45,	1360	B.S. Dzelepov, R.B. Ivanov, V.G. Nedovesov, et al.
1963Ei10	MLM-1155		12	J.F. Eichelberger, G.R. Grove, L.V. Jones, et al.
1963Em02	PHRVA	129,	2597	G.T. Emery, W.R. Kane, M. McKeown, et al.
1963Fr02	PHRVA	129,	1752	A.M. Friedman, J. Milsted, O. Skilbreid
1963Fr04	PHRVA	131,	772	A.M. Friedman, J. Milsted
1963Fu12	ZFK-PHA-8			L. Funke, K.H. Kaun, G. Muller, et al.
1963Fu17	KERNA	6,	152	L. Funke, K. Hohmuth, H. Jungclaussen, et al.
1963Ga09	PHRVA	131,	1759	B.R. Gasten

1963Ge02	NUPHA	40,	177	K.N. Geller
1963Gi07	NUPHA	42,	86	W.B. Gilboy, J.H. Towle
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
1963Gr10	PHRVA	130,	1100	R.W. Grant, D.A. Shirley
1963Gr22	CJCHA	41,	2533	G.R. Grant, L. Yaffe
1963Gu04	PHRVA	131,	301	R. Gunnink
1963Ha07	PHRVA	129,	1601	J.N. Haag, D.A. Shirley, D.H. Templeton
1963Ha30	NUPHA	45,	417	P.G. Hansen, K. Wilsky, S. Bjornholm
1963Hi02	PHRVA	129,	2227	M. Hillman
1963Ho05	PHRVA	129,	1712	D.J. Horen, W.H. Kelly, L. Yaffe
1963Ho15	JINCA	25,	1196	D.C. Hoffman
1963Ho17	CJCHA	41,	2194	S. Hontzeas, L. Yaffe
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, et al.
1963Ja12	PHLTA	6,	69	J. Jaenecke
1963Jo03	PHRVA	129,	1737	N.R. Johnson
1963Jo04	NUPHA	41,	167	C.H. Johnson, F. Pleasonton, T.A. Carlson
1963Jo09	PHRVA	130,	2042	W.B. Jones
1963Ka04	NUPHA	43,	187	J. Kantele, R.W. Fink
1963Ka21	PHLTA	6,	98	M. Karras, J. Kantele
1963Ka34	JJAPA	2,	399	T. Kaminishi, C. Kojima
1963Ko08	PHRVA	130,	1503	P.F.M. Koehler, L. Slack, N.B. Gove
1963Ko21	ZETFA	45,	1	A.V. Kogan, V.D. Kulkov, L.P. Nikitin, et al.
1963Kr04	CZYPA	13,	79	B. Kracik, Z. Miligui, V. Brabec, et al.
1963Ku22	NUPHA	48,	675	T. Kuroyanagi, T. Tamura
1963La06	PHRVA	132,	324	L.M. Langer, D.E. Wortman
1963Lo07	P-Jer	1,	167	W. Low, U. Ranon
1963Ly02	JINCA	25,	1079	W.S. Lyon
1963Ma18	PHRVA	131,	2176	R.D. Macfarlane, R.D. Griffioen
1963Ma21	NUPHA	42,	582	J.M. Matuszek, Jr., T.T. Sugihara
1963Ma27	NUPHA	44,	309	B.E.F. Macefield, R. Middleton, D.J. Pullen
1963Ma41	NUPHA	49,	239	S. Malmskog
1963Ma48	IANFA	27,	1264	T.V. Malysheva, L.N. Nikityuk, B.A. Khotin, et al.
1963Mc02	CJPHA	41,	180	W.J. McDonald, E. Buchhols, R.N.H. Haslam
1963Mc11	PHRVA	131,	707	M.N. McDermott, R. Novick
1963Me06	NUPHA	46,	233	D.G. Megli, T.T. Thwaites
1963Me08	NUPHA	48,	90	M.K. Mehta, W.E. Hunt, H.S. Plendl, et al.
1963Mi17	NUPHA	49,	315	K. Miyano, T. Kuroyanagi
1963Ne05	PHRVA	129,	1723	J.W. Nelson, E.B. Carter, G.E. Mitchell, et al.
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
1963Ph01	JINCA	25,	1085	L. Phillips, R.C. Gatti, R. Brandt, et al.
1963Pl01	CZYPA	13,	23	Z. Plajner, L. Maly, N. Eissa, et al.
1963Pr02	PHRVA	129,	1284	I.L. Preiss, P.M. Strudler, R. Wolfgang
1963Pr13	BAPMA	11,	691	Z. Preibisz, K. Pawlak, K. Stryczniewicz
1963Ra14	CJCHA	41,	2516	C.L. Rao, L. Yaffe
1963Ra15	CJCHA	41,	2544	G.V.S. Rayudu, L. Yaffe

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
1963Ru03	PHRVA	129,	826	S.L. Ruby, Y. Hazoni, M. Pasternak
1963Ry01	AFYSA	23,	171	H. Ryde, L. Persson, K. Oelsner-Ryde
1963Ry04	NUPHA	43,	229	A. Rytz, H.H. Staub, H. Winkler, et al.
1963Sa14	JOPQA	24,	407	A. Santoni, A. Caruette, J. Valentin
1963Sc15	PHRVA	132,	2650	F. Schima, E.G. Funk, Jr., J.W. Mihelich
1963Sc27	NUPHA	49,	55	C.F. Schwerdtfeger, A.V. Ramayya, A.C.G. Mitchell
1963St06	NUPHA	41,	524	W.A. Stensland, A.F. Voigt
1963Su.A	Th.-Berkeley			V.B. Subrahmanyam, PhD Thesis, University of California, UCRL-11082
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
1963Ve13	APAHA	16,	261	A. Veres
1963Wa08	PHRVA	130,	1926	R.T. Wagner, E.R. Shunk, R.B. Day
1963We19	IJARA	14,	628	A.J. Weiss, M. Hillman
1963Wi02	NYO-10063		34	E.T. Williams
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, et al.
1963Ya05	CJCHA	41,	1951	L. Yaffe, J.M. Alexander, E.K. Hyde
1963Yo07	NUPHA	46,	78	Y. Yoshizawa, H. Okamura, S. Iwata, et al.
1963Zy01	NUPHA	42,	330	J. Żylicz, Z. Sujkowski, J. Jastrzebski, et al.

1964

1964Ag.A	P-Tbilis		63	V.K. Ageev, K.Y. Gromov, B.S. Dzelepov, et al.
1964Al29	AFYSA	26,	235	N.H. Albins
1964An02	JINCA	26,	1117	R.L. Andelin
1964An12	JOPQA	25,	673	S. Andre, P. Depommier
1964An13	DANKA	159,	1252	N.M. Antoneva, B.S. Dzhelepov, G.S. Katykhin, et al.
1964Ar17	AFYSA	26,	153	S.E. Arnell
1964Ar24	AENGA	16,	368	P.M. Aron, O.I. Kostochkin, K.A. Petrzhak, et al.
1964As01	PLRBA	133,	291	F. Asaro, S. Bjornholm, I. Perlman
1964Aw02	JUPSA	19,	606	Y. Awaya, Y. Tendow
1964Ba03	CJPHA	42,	391	R.C. Barber, W. McLatchie, R.L. Bishop, et al.
1964Ba13	NUPHA	52,	125	H. Bakhru, S.K. Mukherjee
1964Ba15	PRLTA	12,	597	R.C. Barber, H.E. Duckworth, B.G. Hogg, et al.
1964Ba36	PLRBA	136,	603	E.L. Bahn, Jr., B.D. Pate, R.D. Fink, et al.
1964Ba46	ZETFA	47,	1162	K.A. Baskova, S.S. Vasilev, M.A. Khamo-LEILA, et al.
1964Be10	NUPHA	50,	657	U. Bertelsen, G.T. Ewan, H.L. Nielsen
1964Be24	PLRBA	136,	B27	A.M. Bernstein, R.A. Haberstroh, D.R. Hamilton, et al.
1964Bj02	PLRBA	136,	1348	J.H. Bjerregaard, H.R. Blieden, O. Hansen, et al.
1964Bl11	NUPHA	55,	331	K.J. Blinowska, P.G. Hansen, H.L. Nielsen, et al.
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
1964Bo28	PHLTA	13,	330	E. Bodenstedt, C. Gunther, J. Radeloff, et al.
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, et al.
1964Bu02	JINCA	26,	1	F.D.S. Butement, V.J. Robinson
1964Bu05	JINCA	26,	491	F.D.S. Butement, V.J. Robinson, S.M. Qaim
1964Bu09	PLRBA	135,	B1281	B. Budick, I. Maleh, R. Marrus
1964Bu10	PLRBA	136,	1	S.B. Burson, E.B. Shera, T. Gedayloo, et al.
1964Bu12	JINCA	26,	1491	F.D.S. Butement, S.M. Qaim
1964By01	PLRBA	134,	A47	F.W. Byron, Jr., M.N. McDermott, R. Novick, et al.
1964By03	PLRBA	136,	B1654	F.W. Byron, Jr., M.N. McDermott, R. Novick, et al.
1964Ca15	NUPHA	59,	475	J.A. Cameron, I.A. Campbell, J.P. Compton, et al.
1964Ch06	PLRBA	133,	B1138	Y.W. Chan, W.B. Ewbank, W.A. Nierenberg, et al.
1964Ch17	NUPHA	55,	577	P. Christmas
1964Ch19	PRLTA	13,	665	L.F. Chase, Jr., H.A. Grench, R.E. McDonald, et al.
1964Cl01	CJPHA	42,	213	W.B. Clarke, H.G. Thode
1964Co11	PLRBA	135,	383	B.L. Cohen, R. Patell, A. Prakash, et al.
1964Da11	NUPHA	55,	643	E.A. Davis, T.W. Bonner, D.M. Worley, Jr., et al.
1964Da15	NUPHA	56,	147	H. Daniel, J. Huefner, T. Lorenz, et al.
1964Da16	PLRBA	136,	1240	H. Daniel, G. Th. Kaschl, H. Schmitt, et al.
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
1964Do02	JINCA	26,	209	I. Dostrovsky, S. Katcoff, R.W. Stoenner
1964Ea05	NUPHA	58,	328	T.A. Eastwood, F. Brown, I.H. Crocker
1964Eg01	OPSPA	16,	549	V.N. Egorov
1964Ej05	NUPHA	59,	625	H. Ejiri, Y. Nogami, Y. Nakajima, et al.
1964Er02	PLRBA	133,	370	J.R. Erskine, W.W. Buechner
1964Er06	PLRBA	135,	110	J.R. Erskine
1964Fa05	IDO-16977		26	K.T. Faler
1964Fi01	PrvCom	NDG	Jan	R.W. Fink
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, et al.
1964Ge08	AnRpt Curie		47	C. Gerschel, M. Pautrat, R. Ricci, et al.
1964Gi04	RAACA	3,	115	C. Gil-Montalbo
1964Go08	PLRBA	134,	297	K.P. Gopinathan, M.G. Joshi
1964Gr04	PHRVA	133,	1373	R.D. Griffioen, R.D. Macfarlane
1964Gr11	AAFPA	6,	145	G. Graeffe, K. Valli, J. Aaltonen
1964Gu08	P-Paris 2,		703	I. Gulyas, B. Kardon, D. Kiss
1964Ha06	NUPHA	56,	1	B. Harmatz, T.H. Handley
1964Ha19	AFYSA	25,	333	R. Hardell, S. Malmskog, L. Persson
1964Ha29	PHYSA	30,	1802	J.H. Hamilton, K.E.G. Lobner, A.R. Sattler, et al.
1964He08	BAPSA	9,	562	J. Hess, W. Weyhmann, B. Greenebaum, et al.
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
1964Ho31	NUPHA	51,	363	M. Honda, D. Lal
1964Hu09	IJARA	15,	97	E.E. Hughes, W.B. Mann
1964Hy02	NPHE2			E.K. Hyde, I. Perlman, G.T. Seaborg
1964Jo03	PHLTA	8,	61	H.S. Johansen, M. Jorgensen, O.B. Nielsen, et al.
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, et al.
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
1964Le07	PLRBA	134,	B322	H.R. Lewis, Jr., R.A. Naumann, J.M. Prospero, et al.
1964Le09	JOPQA	25,	326	J. Lehmann
1964Le10	PLRBA	134,	752	J.C. Legg, E. Rost
1964Li06	AFYSA	25,	107	G. Liljegren, I. Lindgren, L. Sanner, et al.
1964Li10	NUPHA	59,	504	P. Lipnik, G. Pralong, J.W. Sunier
1964Lo02	NUPHA	58,	49	K.E.G. Lobner
1964Lo04	PHLTA	12,	33	K.E.G. Lobner
1964Ma19	NUPHA	53,	449	R.D. Macfarlane, D.W. Seegmiller
1964Ma30	CJPHA	42,	1700	K.C. Mann, F.A. Payne, R.P. Chaturvedi
1964Ma35	PHLTA	9,	174	E. Matt, H. Pfander, H. Rieseberg, et al.
1964Ma36	CZYPA	14,	240	L. Maly, Z. Plajner, J. Jursik, et al.
1964Ma45	PLRBA	136,	B941	R.D. Macfarlane
1964Ma.A	P-Vienna		279	J.B. Marion
1964Ma.B	P-Vienna		305	M. Mazari, A. Jaidar, G. Lopez, et al.
1964Mc06	PLRBA	134,	B25	M.N. McDermott, R. Novick, B.W. Perry, et al.
1964Mc07	CJPHA	42,	926	W. McLatchie, R.C. Barber, R.L. Bishop, et al.
1964Mc11	PHLTA	10,	330	W. McLatchie, R.C. Barber, H.E. Duckworth, et al.
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, et al.
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
1964Re03	PHLTA	8,	257	O. Redi, H.H. Stroke
1964Ro04	PHLTA	8,	266	G.K. Rochester, K.F. Smith
1964Ro17	PLRBA	136,	664	B. Rosner
1964Sa12	NUPHA	53,	457	R.C. Salgo, H.H. Staub, H. Winkler, et al.
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, et al.
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, et al.

1964Te02	JINCA	26,	1129	G.P. Tercho, J.A. Marinsky
1964Th05	NUPHA	60,	35	K.S. Thorne, E. Kashy
1964Th07	JINCA	26,	1341	P.E. Thoresen, F. Asaro, I. Perlman
1964To02	PrvCom	NDG	Aug	F.S. Tomkins
1964To04	PLRBA	136,	1233	K.S. Toth, T.H. Handley, E. Newman, et al.
1964To05	NUPHA	60,	614	W.J. Tomlinson , H.H. Stroke
1964Va03	NUPHA	50,	113	D.M. Van Patter, S.M. Shafroth
1964Va05	PHLTA	9,	164	R. van Lieshout, S. Monaro, G.B. Vingiani, et al.
1964Va20	AAFPA	6,	165	K. Valli
1964Ve02	NUPHA	57,	451	E. Veje, C. Droste, O. Hansen, et al.
1964Wa14	NUPHA	54,	519	C. Watson, C.F. Moore, R.K. Sheline
1964We06	PLRBA	134,	257	P. Weinzierl, E. Ujlaki, G. Preinreich, et al.
1964Wi07	PLRBA	135,	289	D.C. Williams, R.A. Naumann
1964Wo05	RAACA	3,	206	G.K. Wolf, F. Lux, H.-J. Born
1964Yn03	PLRBA	134,	976	J.L. Yntema, G.R. Satchler

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1965Al10	PLRBA	138,	B1356	D. Ali, I. Maleh, R. Marrus
1965Al16	NUPHA	71,	441	D. Ali
1965Am01	PLRBA	137,	B1157	O. Ames, E.A. Phillips, S.S. Glickstein
1965An05	AFYSA	28,	37	G. Andersson, G. Rudstam, G. Sorensen
1965An07	NP-15663			S.C. Anspach, L.M. Cavallo, S.B. Garfinkel, et al.
1965AnZZ	Th.-California			J.-M. An, Thesis, Univ. California (1965); UCRL-16324
1965Ba29	PLRBA	140,	904	J.B. Ball, R.F. Sweet
1965Ba48	IANFA	29,	2255	Ts. Vylov, V.M. Gorodzankin, K. Ya. Gromov, et al.
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
1965Bj01	NUPHA	73,	593	S. Bjornholm, J. Borggreen, H.J. Frahm, et al.
1965Bj03	PLRBA	140,	B816	S. Bjornholm, J. Borggreen, H.J. Frahm, et al.
1965Bl06	AFYSA	28,	415	P.H. Blichert-Toft
1965Bl13	PLRBA	140,	1567	A.G. Blair, D.D. Armstrong
1965Bo42	NUPHA	63,	438	M. Bormann, E. Fretwurst, P. Schehka, et al.
1965Br10	NUPHA	64,	481	E. Bruninx
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
1965Br32	COREA	261,	2629	J.-P. Briand, P. Chevallier
1965Br34	NUPHA	74,	438	J. Brzosko, P. Decowski, K. Siwek-Diament, et al.
1965Bu03	JINCA	27,	907	F.D.S. Butement, S.M. Quaim
1965Bu07	NUPHA	65,	561	J. Burde, M. Rakavi, G. Adam
1965Bu08	JINCA	27,	1729	F.D.S. Butement, S.M. Qaim
1965Ca12	PRLAA	283,	379	I.A. Campbell, N.J. Stone, B.G. Turrell
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
1965Cu05	PLRBA	140,	A1181	J.W. Culvahouse, L.V. Holroyd, J.L. Kolopus
1965Da01	NUPHA	63,	145	H. Daniel, M. Kuntze, B. Martin, et al.
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
1965Do09	YAFIA	2,	1015	E.D. Donets, V.A. Shchegolev, V.A. Ermakov
1965Do10	AENGA	19,	109	E.D. Donets, V.A. Shchegolev, V.A. Ermakov
1965Do11	BAPSA	10,	445	B.M. Dodsworth, H.A. Shugart
1965Du02	COREA	261,	98	J.C. Duperrin, A. Guizon-Juillard
1965Eb01	NUPHA	61,	479	T.G. Ebrey, P.R. Gray
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, et al.
1965Ev05	PLRBA	138,	B1017	J.S. Evans, R.A. Naumann
1965Fa01	JINCA	27,	25	K.T. Faler
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, et al.
1965Go05	PLRBA	137,	1466	S. Gorodetsky, A. Gallmann, R. Rebmeister
1965Gr18	PLRBA	139,	B880	T.A. Griffy, D.U.L. Yu
1965Gr28	IANFA	29,	194	K.Y. Gromov, I. Mahunka, M. Mahunka, et al.
1965Gr35	YAFIA	2,	783	K.Y. Gromov, Z.T. Zhelev, V. Zvolska, et al.
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, et al.
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, et al.
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
1965Jo10	NUPHA	69,	131	N.R. Johnson, W.M. Bishop
1965Jo13	NUPHA	72,	617	N.R. Johnson, K. Wilsky, P.G. Hansen, et al.
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, et al.
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
1965Le04	NUPHA	62,	337	W.H.G. Lewin, J. Bezemer, C.W.E. van Eijk
1965Le06	NUPHA	63,	263	H. Leutz, K. Schneckenberger, H. Wennige
1965Le07	NUPHA	65,	337	W.H.G. Lewin, J. Lettinga, B. van Nooijen, et al.
1965Le08	COREA	260,	3037	C.-F. Leang
1965Le15	ZEPYA	187,	151	H. Leutz, G. Schulz, H. Wenninger
1965Ma07	PHLTA	14,	46	A. Marinov, J.R. Erskine
1965Ma12	PRLTA	14,	114	R.D. Macfarlane, A. Siivola
1965Ma19	PLRBA	138,	B766	I. Maleh
1965Ma27	PLRBA	139,	B532	E. Matthias, S.S. Rosenblum, D.A. Shirley
1965Ma34	PLRBA	140,	B264	E. Matthias, D.A. Shirley, J.S. Evans, et al.
1965Ma51	IANFA	29,	1121	I. Mahunka, T. Fenyes
1965Ma56	NUPHA	67,	73	J.H.E. Mattauch, W. Thiele, A.H. Wapstra
1965Mc01	CJPHA	43,	1	R. McPherson, J.C. Hardy
1965Mc03	PLRBA	137,	B250	A.L. McCarthy, B.L. Cohen, L.H. Goldman
1965Mc09	PLRBA	140,	1513	R. McPherson, R.A. Easterlund, A.M. Poskanzer, et al.
1965Me02	JINCA	27,	33	D. Metta, H. Diamond, R.F. Barnes, et al.
1965Me11	PHYSA	31,	1774	P. Meyers, K.E.G. Lobner

1965Me12	PHLTA	19,	133	R. Messlinger, H. Morinaga, C. Signorini
1965Mi08	NUPHA	71,	299	J. Milsted, A.M. Friedman, C.M. Stevens
1965Mo05	NUPHA	61,	613	S. Morinobu, T. Hirose, K. Hisatake
1965Mo07	JINCA	27,	493	P.E. Moreland, Jr., D. Heymann
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
1965Nu02	PHLTA	14,	136	M. Nurmia, R.W. Fink
1965Nu03	AAFPA	167,	1	M. Nurmia, D. Giessing, W. Sievers, et al.
1965Nu04	UCRL-16580		80	M. Nurmia, K. Valli, E.K. Hyde
1965Og01	NUPHA	66,	119	I. Ogawa, T. Doke, M. Miyajima, et al.
1965Pa08	NUPHA	72,	326	H. Paul
1965Pa14	P-Sal	2,	243	P. Patzelt, G. Herrmann
1965Pe18	AFYSA	29,	423	H. Pettersson, O. Berhman, C. Bergman
1965Ph02	PLRBA	138,	B773	E.A. Phillips, O. Ames, S.S. Glickstein
1965Ph04	PLRBA	140,	B555	E.A. Phillips, W. Happer, J.D. McCullen
1965Pl01	NUPHA	73,	131	H.S. Plendl, L.J. Defelice, R.K. Sheline
1965Pr03	NUPHA	67,	302	W.V. Prestwich, T.J. Kennett
1965Pr08	RAACA	4,	79	S.G. Prussin, W.W. Meinke
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, et al.
1965Ro13	PLRBA	140,	B820	M.M. Robertson, J.E. Mack, V.W. Cohen
1965Ru05	NUPHA	69,	471	F. Ruddy, B.D. Pate
1965Ry01	NUPHA	70,	369	A. Rytz
1965Sa22	AFYSA	30,	540	L. Sanner, R. Djay, J.O. Jonsson, et al.
1965Sc19	PLRBA	140,	1496	F. Schima, T. Katoh
1965Si06	NUPHA	64,	161	A. Siivola, G. Graeffe
1965Si14	PLRBA	140,	B277	T. Sikkeland, A. Ghiorso, R. Latimer, et al.
1965Sm01	PLRBA	137,	A330	W.W. Smith
1965St06	PLRBA	137,	772	G.L. Struble, J. Kern, R.K. Sheline
1965St08	NUPHA	64,	209	T. Stenstrom, B. Jung
1965St09	SCIEA	148,	1325	R.W. Stoenner, O.A. Schaeffer, S. Katcoff
1965St18	PCHDA	21,	42	G.M. Stinson, R.G. Summers-Gill
1965Ta01	NUPHA	62,	305	T. Tamura
1965Te02	PLRBA	139,	B1125	J.K. Temperley, D.K. McDaniels, D.O. Wells
1965To05	BAPSA	10,	589	W.R. Tolbert, E.V. Shrum, E.T. Hutcheson, et al.
1965Va02	NUPHA	63,	241	B. Van Nooijen, W. Lourens, H. van Krugten, et al.
1965Wa14	PLRBA	140,	882	W.N. Wang, E.J. Winhold
1965We02	PLRBA	138,	A161	G.A. Westenbarger, D.A. Shirley
1965Wh03	PLRBA	137,	B477	M.B. White, S.S. Alpert, S. Penselin, et al.
1965Wi05	JINCA	27,	487	J. Wing, M.A. Wahlgren, C.M. Stevens, et al.
1965Wi08	PHLTA	15,	143	E.T. Williams, P.G. Hansen, J. Lipperts, et al.
1965Za01	PLRBA	137,	1479	C.D. Zafiratos, F. Ajzenberg-Selove, F.S. Dietrich

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1966Ad03	AFYSA	31,	549	K.E. Adelroth, I. Lindgren, R. Djay, et al.
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, et al.
1966An01	NUPHA	77,	401	W.C. Anderson, L.T. Dillman, J.J. Kraushaar
1966An10	CHDBA	262,	214	S. Andre, P. Depommier

1966Ar02	PHLTA	21,	335	A.J. Armini, J.W. Sunier, R.M. Polichar, et al.
1966Ar05	PHRVA	146,	869	N.K. Aras, G.D. O'Kelley, G. Chilosi
1966As12	PrvCom	NDG		F. Asaro, I. Perlman
1966Au04	NUPHA	81,	441	R.L. Auble, W.H. Kelly
1966Av03	IANFA	30,	542	M.P. Avotina, E.P. Grigorev, B.S. Dzelepov, et al.
1966Ba06	PHRVA	142,	719	H. Bakhru, S.K. Mukherjee
1966Ba07	YAFIA	4,	1108	S.A. Baranov, Y.F. Rodionov, V.M. Kulakov, et al.
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
1966Bi03	IANFA	30,	217	L.P. Bilibin, G. Aurov, A.A. Lbov
1966Bj01	NUPHA	86,	145	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
1966Bj02	NUPHA	85,	593	J.H. Bjerregaard, O. Nathan, S. Hinds, et al.
1966Bl04	NUPHA	76,	45	L.M. Blau, W.P. Alford, D. Cline, et al.
1966Bl05	PHRVA	143,	911	J. Blok, D.A. Shirley
1966Bl15	PHRVA	151,	930	A.G. Blair, D.D. Armstrong
1966Bl17	PHRVA	143,	78	J. Blok, D.A. Shirley, N.J. Stone
1966Bo20	NUPHA	86,	187	B.E. Bonner, G. Rickards, D.L. Bernard, et al.
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, et al.
1966Br18	PHRVA	149,	767	D.G. Burke, B. Zeidman, B. Elbek, et al.
1966Bu08	NUPHA	85,	481	J. Burde, R.M. Diamond, F.S. Stephens
1966Bu16	KDVSA	35,	#2	D.G. Burke, B. Zeidman, B. Elbek, et al.
1966Ca04	PPSOA	87,	927	J.A. Cameron, J.P. Compton, R.A.G. Lines, et al.
1966Ca09	NUPHA	82,	471	R.C. Catura, J.R. Richardson
1966Ca10	NUPHA	85,	317	M.J. Canty, W.F. Davidson, R.D. Connor
1966Ch02	PHRVA	141,	15	W.J. Childs, L.S. Goodman
1966Ch05	PHRVA	144,	1020	Y.W. Chan, V.J. Ehlers, W.A. Nierenberg
1966ClZZ	BAPSA	11,	102	D.D. Clark, W.G. Winn
1966Co13	PHRVA	141,	1106	R.G. Cornwell, W. Happer, Jr., J.D. McCullen
1966Co19	PHRVA	148,	1157	R.G. Cornwell, J.D. McCullen
1966Cr09	ANPYA	17,	1	T. Cretzu, K. Hohmuth, G. Winter, et al.
1966Da04	NUPHA	76,	97	H. Daniel, G.T. Kaschl
1966Da06	PHRVA	147,	845	W.R. Daniels, D.C. Hoffman
1966Da07	PHRVA	147,	861	S.P. Davis, T. Aung, H. Kleiman
1966Da09	NUPHA	84,	37	J.M. D'auria, I.L. Preiss
1966Da11	Th.-California			O.B. Dabbousi, Thesis, Univ. California (1966); UCRL-16998 (1966)
1966De11	NUPHA	83,	289	E.Y. De Aisenberg, J.F. Suarez
1966Do01	PHRVA	142,	638	B.M. Dodsworth, H.A. Shugart
1966Do02	PHRVA	146,	734	W.E. Dorenbusch, T.A. Belote, O. Hansen
1966Do04	AENGA	20,	223	E.D. Donets, V.A. Shchegolev, V.A. Ermakov
1966Do06	NUPHA	81,	390	W.E. Dorenbusch, O. Hansen, D.J. Pullen, et al.
1966Ea01	PHRVA	141,	1132	W. Easley, N. Edelstein, M.P. Klein, et al.
1966Ei01	PHRVA	146,	899	E. Eichler, J.W. Chase, N.R. Johnson, et al.
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, et al.
1966Fr11	RAACA	5,	192	A.M. Friedman, J. Milsted, D. Metta, et al.
1966Fu05	NUPHA	84,	461	L. Funke, H. Graber, K.-H. Kaun, et al.
1966Fu08	NUPHA	84,	424	L. Funke, H. Graber, K.-H. Kaun, et al.
1966Fu09	NUPHA	86,	345	L. Funke, H. Graber, K.-H. Kaun, et al.

1966Ga03	NUPHA	76,	353	R. Gaeta, M.A. Vigon
1966Ga06	PHLTA	20,	669	J. Gastebois, M. Berloutaud, J.M. Lagat, et al.
1966Ga08	PHRVA	147,	753	A. Gallmann, P. Fintz, J.B. Nelson, et al.
1966Gl02	NUPHA	86,	279	K.M. Glibert, H.T. Easterday
1966Go07	JINCA	28,	937	G. Goldstein
1966Go10	JINCA	28,	285	G. Goldstein, J.A. Dean
1966GoZZ	Th.-Tennessee			C.F. Goeking, Jr.
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, et al.
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
1966He04	PHRVA	143,	923	R.G. Helmer, L.D. McIsaac
1966He10	NUPHA	88,	561	P.V. Hewka, C.H. Holbrow, R. Middleton
1966Hi01	PHLTA	21,	328	S. Hinds, J.H. Bjerregaard, O. Hansen, et al.
1966Hi06	NUPHA	84,	651	S. Hinds, R. Middleton
1966Hs01	NUPHA	80,	657	S.T. Hsue, L.M. Langer, E.H. Spejewski, et al.
1966Hu20	JINCA	28,	2771	J.B. Hursh
1966Ja12	PHRVA	151,	956	A.D. Jackson, Jr., J.S. Evans, R.A. Naumann, et al.
1966Ju02	NUPHA	86,	405	J. Jursik, V. Zvolska
1966Ka23	UAINA	1640		G. Kauw
1966Ka24	KFKKA	14,	85	B. Kardon, D. Kiss
1966Ki02	PHRVA	144,	1022	O.C. Kistner
1966Ki06	CJPHA	44,	2661	J.E. Kitching, M.W. Johns
1966Kl02	NUPHA	79,	27	H. Klein, H. Leutz
1966Ku10	JTPHE	50,	330	R.N. Kuzmin, N.S. Ibraimov, V.S. Zhdanov
1966Ku13	YAFIA	4,	279	V.I. Kuznetsov, N.K. Skobelev, G.N. Flerov
1966La04	NUPHA	78,	1	T. Lauritsen, F. Ajzenberg-Selove
1966La11	JOPQA	27,	116	P. Lagarde, J. Treherne, A. Gizon, et al.
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, et al.
1966Ma05	ZENAA	21,	63	J.D. Macdougall, W.M. McLatchie, S. Whineray, et al.
1966Ma18	PHLTA	21,	661	N. Mangelson, M. Reed, C.C. Lu, et al.
1966Ma49	IANFA	30,	1185	E.P. Mazets, Y.V. Sergeenkov
1966Ma51	IANFA	30,	1375	I. Mahunka, L. Tron, T. Fenyes, et al.
1966Ma60	RMPHA	38,	660	J. Marion
1966Mc11	PHRVA	150,	1033	L.D. McIsaac, R.G. Helmer
1966Mc12	CJPHA	44,	3033	C.C. McMullen, K. Fritze, R.H. Tomlinson
1966Mc13	NUPHA	88,	257	J.H. McNally
1966Mo06	PHRVA	141,	1166	C.F. Moore, P. Richard, C.E. Watson, et al.
1966MoZZ	CEA-R-2900			E. Monnand
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, et al.
1966Or01	PHRVA	148,	1226	C.J. Orth
1966Pa06	CJPHA	44,	1029	P.J. Pan, Y.S. Horowitz, R.B. Moore, et al.
1966Pa18	NUPHA	85,	504	P.B. Parks, P.M. Beard, E.G. Bilpuch, et al.
1966Pa20	PHLTA	23,	269	B. Parsa, G.E. Gordon
1966Pe10	NUPHA	83,	33	H. Pettersson, G. Backstrom, C. Bergman
1966Pl02	NUPHA	82,	401	Z. Plajner, V. Brabec, O. Dragoun
1966Po04	PHRVA	146,	774	F.T. Porter, M.S. Freedman, F. Wagner, Jr., et al.
1966Qa01	NUPHA	84,	411	S.M. Qaim

1966Qa02	NUPHA	88,	285	S.N. Qaim
1966Ra03	PHRVA	142,	768	P.V. Rao, B. Crasemann
1966Ra29	PHRVA	144,	859	R.E. Rand, R. Frosch, M.R. Yearian
1966Re02	PHLTA	20,	40	W. Reichart, H.H. Staub, H. Stussi, et al.
1966Re04	PHRVA	141,	1123	J. Reader
1966Re06	BAPSA	11,	82	O. Redi
1966Re07	PHRVA	147,	781	P.L. Reeder, A.M. Poskanzer, R.A. Esterlund, et al.
1966Rg01	PHRVA	148,	1192	Research-Group, Combined Radioactivity Group LRL-LASL-UCRL-ANL
1966Ri01	NUPHA	75,	381	P. Riehs
1966Ri03	JINCA	28,	266	B.F. Rider, J.P. Peterson, Jr., C.P. Ruiz
1966Ri09	NUPHA	86,	167	G. Rickards, B.E. Bonner, G.C. Phillips
1966Ry01	NUPHA	80,	241	H. Ryde, G.D. Symons, S. Szymanski
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, et al.
1966Sh14	PHLTA	22,	648	W.N. Shelton, C.E. Watson
1966Sh16	PHRVA	151,	1011	R.K. Sheline, W.N. Shelton, T. Udagawa, et al.
1966Si08	NUPHA	84,	385	A. Siivola
1966Si09	RAACA	5,	223	M.D. Silbert, R.H. Tomlinson
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, et al.
1966Va26	IJARA	17,	41	R. Vaninbroukx, G. Grosse
1966Va.A	UCRL-16580		85	K. Valli, E.K. Hyde
1966Vo05	ZEPYA	195,	343	H. Vonach, H. Munzer, P. Hille
1966Wa23	NDTSB	1,	#5	A.H. Wapstra, N.B. Gove
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
1966Wi18	NUAPA	2,	256	E.T. Williams, C.D. Coryell
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, et al.

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1967Ab07	P-Kharkov		30	I.A. Abrams, L.L. Pelekis
1967Ad03	PHRVA	159,	985	I. Adam, K.S. Toth, R.A. Meyer
1967Ah02	PHRVA	164,	1537	I. Ahmad, A.M. Friedman, R.F. Barnes, et al.
1967Al08	NUPAB	98,	323	A.M. Aldridge, H.S. Plendl, J.P. Aldridge,III
1967Am01	PYLBB	24,	402	I. Amarel, R. Bernas, R. Foucher, et al.
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
1967At03	PHRVA	163,	314	U. Atzmony, E.R. Bauminger, D. Lebenbaum, et al.
1967Ba01	NUPAB	91,	465	V.A. Balalaev, B.S. Dzelepov, L.N. Moskvin, et al.
1967Ba15	PHRVA	155,	1319	P.D. Barnes, J.R. Comfort, C.D. Bockelman
1967Ba27	AFYSA	34,	495	A. Backlin, S.G. Malmskog, H. Solhed
1967Ba32	PHRVA	159,	920	P.D. Barnes, J.R. Comfort, C.D. Bockelman, et al.
1967Ba34	PHRVA	160,	1011	A. Backlin, A. Suarez, O.W.B. Schult, et al.

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, et al.
1967Ba51	CHDBA	265,	863	G. Bastin-Scoffier
1967Ba.A	P-Gatlinburg		261	C.A. Barnes, E.G. Adelsberger, D.C. Hensley, et al.
1967Be46	NUPAB	104,	241	G. Berzins, W.H. Kelly, G. Graeffe, et al.
1967Bh01	NUPAB	90,	696	S.K. Bhattacherjee, S.K. Mitra, H.C. Jain, et al.
1967Bi04	NUPAB	97,	203	L. Birstein, C. Drory, A.A. Jaffe, et al.
1967Bj01	NUPAB	94,	457	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
1967Bj02	PHRVA	155,	1229	J.H. Bjerregaard, O. Hansen
1967Bj03	NUPAB	95,	513	S. Bjornholm, J. Borggreen, L. Westgaard, et al.
1967Bj05	PHRVA	160,	889	J.H. Bjerregaard, O. Hansen, G.R. Satchler
1967Bj06	NUPAB	103,	33	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
1967Bl17	PHRVA	159,	926	A.E. Blaugrund, R.E. Holland, F.J. Lynch
1967Bl19	PYLBB	25,	215	R. Bloch, R.E. Pixley, P. Truol
1967Bl27	RAACA	8,	200	H.-J. Bleyl, H. Munzel, G. Pfennig
1967Bo23	PYLBB	25,	402	J. Borggreen, Y.P. Gangrsky, G. Sletten, et al.
1967Bo41	YAFIA	6,	893	D.D. Bogdanov, S. Darotsi, V.A. Karnaukhov, et al.
1967Br10	NUPAB	101,	163	G. Brown, J.G.B. Haigh, F.R. Hudson, et al.
1967Br12	NUPAB	96,	318	H.F. Brinckmann, C. Heiser, W.D. Fromm
1967Bu09	NUPAB	97,	593	M.E. Bunker, D.C. Hoffman, C.J. Orth, et al.
1967Ca18	NUPAB	104,	35	M.J. Canty, R.D. Connor
1967Ce01	ZEPYA	205,	174	R. Cesareo, L. Frevert, A. Flammersfeld
1967Ch05	NUPAB	94,	417	P. Charoenkwan, J.R. Richardson
1967Ch16	NUPAB	102,	481	P.R. Christensen, B. Herskind, R.R. Borchers, et al.
1967Ch28	IANFA	31,	146	V.G. Chumin, Z.T. Zhelev, K.Y. Gromov, et al.
1967Co15	PHRVA	157,	1065	J.R. Comfort, C.K. Bockelman, P.D. Barnes
1967Co20	NUPAB	100,	545	T.W. Conlon
1967Co26	NUPAB	104,	213	T.W. Conlon, R.A. Naumann, A.L. McCarthy
1967Co31	NUIMA	48,	125	O.L. Cordes, J.E. Cline, C.W. Reich
1967Da10	CJPHA	45,	2295	W.F. Davidson, C.R. Cothern, R.D. Connor
1967Da11	NCBUC	50,	345	N.L. Da Costa, C.V. De Barros Leite, A.G. De Pinho, et al.
1967DaZY	Th.-Yale			J.M. D'Auria
1967De02	NUPAB	94,	673	M.E. De Lopez, M. Mazari, T.A. Belote, et al.
1967De15	JNCEA	21,	833	A.J. De Ruytter, P. Pelfer
1967Di02	JINCA	29,	601	H. Diamond, R.K. Sjoblom, R.F. Barnes, et al.
1967Do03	NUPAB	102,	681	W.E. Dorenbusch, J. Rapaport, T.A. Belote
1967Dr02	AENGA	22,	127	V.A. Druin, G.N. Akapev, A.G. Demin, et al.
1967Dz02	IANFA	31,	568	B.S. Dzelepov, R.B. Ivanov, M.A. Mikhailov, et al.
1967EaZZ	Th.-California			W.C. Easley, Thesis, Univ. California (1967); UCRL-17699 (1967)
1967Eh02	ZEPYA	207,	268	D. Ehrlich
1967Er02	P-Winnipeg		622	J.R. Erskine, A.M. Friedman, T.H. Braid, et al.
1967Es02	PHRVA	156,	1094	R.A. Esterlund, R. McPherson, A.M. Poskanzer, et al.
1967Es06	AAFPA	6,	261	K. Eskola
1967Fi04	PYLBB	24,	340	P.R. Fields, R.F. Barnes, R.K. Sjoblom, et al.
1967Fl05	YAFIA	5,	1186	G.N. Flerov, S.M. Polikhanov, V.L. Mikheev, et al.
1967Fl08	NUPAB	102,	443	G.N. Flerov, A.A. Pleve, S.M. Polikanov, et al.
1967Fl15	AENGA	22,	342	G.N. Flerov, S.M. Polikanov, V.L. Mikheev, et al.
1967Fo04	PHRVA	155,	1248	C.M. Fou, R.W. Zurmuhle, J.M. Joyce
1967Fr02	NUPAB	94,	366	J. Frana, I. Rezanka, Z. Plajner, et al.
1967Fr16	RAACA	7,	59	K. Fritze, K. Griffiths
1967Ga08	PHRVA	161,	1152	G.J. Garrett, A.D. Jackson, Jr., O. Ames
1967Ga19	JINCA	29,	2839	H. Gauvin, L. Sauvage
1967Gh01	PRLTA	18,	401	A. Ghiorso, T. Sikkeland, M.J. Nurmia
1967Gi01	NUPAB	91,	292	V. Gillet, E.A. Sanderson

1967Gl05	PrvCom	NDG	Dec	G.I. Gleason
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, et al.
1967Gr02	NUPAB	A94,	157	H.A. Grench, K.L. Coop, H.O. Menlove, et al.
1967Gr12	NUPAB	99,	585	K.Y. Gromov, V.V. Kuznetsov, M.Y. Kuznetsova, et al.
1967Gr21	NUPAB	103,	209	A. Graue, E. Jastad, J.R. Lien, et al.
1967Gu04	PHRVA	153,	1297	C. Gunther, D.R. Parsignault
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
1967Gu14	YAFIA	6,	657	A.D. Gulko, S.S. Trostin, A. Hudoklin
1967Ha03	NUPAB	90,	573	S.K. Haynes, M. Velinsky, L.J. Velinsky
1967Ha04	PYLBB	24,	95	P.G. Hansen, H.L. Nielsen, K. Wilsky, et al.
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
1967He23	RAACA	7,	10	E. Herrmann, G. Pfrepper, D. Christov
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, et al.
1967Hu05	ZEPYA	203,	435	E. Huster, H. Verbeek
1967Hu07	CHDBA	265,	162	K. Hubenthal, J. Berthier, J.-C. Hocquenghem, et al.
1967Hu09	CHDBA	265,	579	K. Hubenthal, E. Monnand, A. Moussa
1967Il01	YAFIA	6,	1117	V.I. Ilyushchenko, M.B. Miller, V.L. Mikheev, et al.
1967Iv03	RRPQA	12,	829	E.A. Ivanov
1967Iv04	RRPQA	12,	885	E.A. Ivanov
1967Jo03	PHRVA	153,	1169	R.R. Johnson, N.M. Hintz
1967Jo06	NUPAB	98,	278	A. Johansson, B. Nyman, G. Malmsten, et al.
1967Jo18	P-Winnipeg		793	W.H. Johnson, M.C. Hudson, R.A. Britten, et al.
1967JoZX	P-Vienna		567	K.C. Jordan, B.C. Blanke
1967Ka01	NUPAB	90,	23	V.A. Karnaukhov, G.M. Ter-Akopyan, L.S. Vertogradov, et al.
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
1967Ko02	NUPAB	91,	439	J. Konijn, R. Van Lieshout, J.P. Deutsch, et al.
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, et al.
1967Mc10	NUPAB	98,	577	M.F. McCann, G.M. Lewis, K.M. Smith
1967Mc17	BAPSA	12,	132	M.N. McDermott, N.S. Laulainen
1967Me19	PHRVA	156,	1340	M.P. Menon, M.Y. Cuypers

1967Mi02	NUPAB	94,	261	R.G. Miller, R.W. Kavanagh
1967Mi03	AENGA	22,	90	V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller, et al.
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, et al.
1967Mo12	NUPAB	99,	652	J.A. Moragues, P. Reyes-Suter, T. Suter
1967Mo13	NUPAB	100,	45	Y. Motavalledi-Nobar, J. Berthier, J. Blachot, et al.
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, et al.
1967Mu16	PHRVA	159,	1039	G. Muehllehner, A.S. Poltorak, W.C. Parkinson, et al.
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, et al.
1967Nu01	PYLBB	26,	78	M. Nurmia, T. Sikkeland, R. Silva, et al.
1967Oa01	PYLBB	24,	142	N.S. Oakey, R.D. McFarlane
1967Ob04	NUPAB	104,	609	B.J. O'Brien, W.E. Dorenbusch, T.A. Belote, et al.
1967Od01	PHRVA	158,	957	F.H. O'Donnel, C.P. Browne
1967Or02	PRLTA	19,	128	C.J. Orth, W.R. Daniels, B.H. Erkkila, et al.
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
1967Pi04	PHRVA	159,	951	W.R. Pierson
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
1967Pr13	Th.-California			M.H. Prior, Thesis, Univ. California (1967); UCRL-17472
1967Ra08	PHRVA	154,	1028	P.V. Rao, R.W. Fink
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
1967Re06	BAPSA	12,	474	O. Redi, M.A. Graber
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, et al.
1967Sc01	NUPAB	96,	337	S.O. Schriber, M.W. Johns
1967Sc05	PHRVA	154,	1146	O.W.B. Schult, M.E. Bunker, D.W. Hafemeister, et al.
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, et al.
1967Sc33	BAPSA	12,	1046	S.G. Schmelling, H.A. Shugart
1967Se10	PHRVA	164,	1450	K.K. Seth, J.A. Biggerstaff, P.D. Miller, et al.
1967Si02	NUPAB	92,	475	A. Siivola
1967Si07	PYLBB	24,	331	T. Sikkeland, A. Ghiorso
1967Si08	PYLBB	24,	333	T. Sikkeland, A. Ghiorso, J. Maly, et al.
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, et al.
1967Sp09	P-Winnipeg		657	A. Sperduto
1967St01	NUPAB	91,	513	T. Stovall, D. Vinciguerra, M. Bernheim
1967St14	YAFIA	5,	1205	G.L. Struble, R.K. Sheline
1967St22	CJPHA	45,	3393	G.M. Stinson, N.P. Archer, J.C. Waddington, et al.
1967St24	NUPAB	104,	67	M.M. Stautberg, R.R. Johnson, J.J. Kraushaar, et al.

1967St30	P-Winnipeg		495	H.H. Staub
1967Su03	PYLBB	25,	130	K. Sugimoto, K. Nakai, K. Matuda, et al.
1967Su05	PHRVA	163,	1091	J.W. Sunier, A.J. Armini, R.M. Polichar, et al.
1967Su09	P-Tokyo		196	K. Sugimoto, K. Nakai, K. Matuda, et al.
1967Ta04	JUPSA	22,	664	H. Taneichi, K. Shoda
1967Ta05	JUPSA	23,	153	I. Takemoto, T. Iwashita, S. Kageyama
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
1967Tr12	JOSAA	57,	1452	W. Traub, F.L. Roesler, M.M. Robertson, et al.
1967Va01	NUPAB	91,	157	D. Varga, D. Berenyi, C. Ujhelyi, et al.
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, et al.
1967Wa09	NUPAB	97,	641	A.H. Wapstra
1967Wa23	PHRVA	164,	1545	T.E. Ward, H. Ihochi, M. Karras, et al.
1967Wa27	PHYSA	37,	273	A.H. Wapstra, P.F.A. Goudsmit
1967Wh03	PHRVA	160,	997	C.A. Whitten, Jr., L.C. McIntyre
1967Wi08	NUPAB	103,	433	C.A. Wiedner, A. Heusler, J. Solf, et al.
1967Wi14	PHRVA	163,	1094	S. Wirjoamidjojo, B.D. Kern
1967Wi19	NUIMA	52,	77	J.B. Willet, E.H. Spejewski
1967Wo01	JOSAA	57,	550	E.F. Worden, E.K. Hulet, R. Lougheed, et al.
1967Yt03	PHYSA	34,	559	C. Ythier, J.C. Meyer, J. Konijn, et al.
1967Yu01	NUPAB	94,	442	H.P. Yule

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1968Ab14	IANFA	32,	749	A.A. Abdurazakov, J. Vrzal, K. Ya. Gromov, et al.
1968Ab17	IANFA	32,	793	L.N. Abesalashvili, K.Y. Gromov, Z.T. Zhelev, et al.
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, et al.
1968Ah01	NUPAB	119,	27	I. Ahmad, A.M. Friedman, J.P. Unik
1968An03	NUPAB	110,	289	S. Antman, H. Petterson, Y. Grunditz
1968An05	PHRVA	169,	978	H.R. Andrews, T.F. Knott, B. Greenebaum, et al.
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, et al.
1968Ba73	JOPQS	1,C1	181	G. Bastin, C.F. Leang, R.J. Walen
1968BaZX	P-Asilomar		902	J.A. Barclay, W.D. Brewer, E. Matthias, et al.
1968Be02	NUPAB	106,	296	J.E. Benn, E.B. Dally, H.H. Muller, et al.

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
1968Be19	PYLBB	26,	721	H.J. Besch, U. Kopf, E.-W. Otten, et al.
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
1968Be47	NCBUC	58,	232	F. Bella, M. Alessio, P. Fratelli
1968Be64	AFYSA	37,	213	V. Berg, K. Fransson, C.E. Bemis
1968Be.A	BAPSA	13,	1430	M.J. Bennet, R.K. Sheline
1968Bj01	NUPAB	107,	241	J.H. Bjerregaard, O. Hanson, O. Nathan, et al.
1968Bj02	NUPAB	110,	1	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
1968Bj03	NUPAB	113,	484	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
1968Bj04	YAFIA	8,	459	S. Bjornholm, I. Borggreen, Y.P. Gangrskii, et al.
1968Bj05	NUPAB	118,	241	S. Bjornholm, J. Dubois, B. Elbek
1968Bl13	RAACA	9,	173	H.-J. Bleyl, H. Munzel, G. Pfennig
1968Bo21	PRLTA	21,	233	L.M. Bollinger, G.E. Thomas
1968Bo25	NUPAB	115,	309	M. Bormann, A. Behrend, I. Riehle, et al.
1968Bo28	ATKOA	10,	112	P. Bornemisza-Pauspertl, J. Karolyi, G. Peto
1968Br04	JINCA	30,	19	D. Brown, S.N. Dixon, K.M. Glover, et al.
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, et al.
1968Ca10	PrvCom	NDG		B.R. Casserberg
1968Ca12	NUPAB	115,	417	H.K. Carter, J.H. Hamilton, J.J. Pinajian
1968Ca14	PrvCom	NDG		B.R. Casserberg
1968CaZX	Th.-Princeton			B.R. Casserberg, PhD Thesis, Princeton University, PUC-937-321
1968Ch03	NUPAB	107,	645	A. Chetham-Strode, Jr., R.J. Silva, J.R. Tarrant, et al.
1968Ch20	NUPAB	119,	305	R. Chapman, S. Hinds, A.E. Macgregor
1968Ch30	PHRVA	175,	1523	Y.Y. Chu, E.M. Franz, G. Friedlander
1968Ch38	BAPSA	13,	1650	A.Y.J. Chong, M.H. Prior, H.A. Shugart
1968ChZZ	BAPSA	13,	895	Y.W. Chan, V.W. Cohen, H.B. Silsbee
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, et al.
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
1968De01	NUPAB	106,	337	A.G. Demin, T. Fenyes, I. Mahunka, et al.
1968De17	YAFIA	8,	255	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1968De19	JINCA	30,	2873	P. del Marmol
1968De27	ZEPYA	216,	103	I. Dernedde
1968Di09	JINCA	30,	2553	H. Diamond, J.J. Hines, R.K. Sjoblom, et al.
1968Do12	PHRVA	175,	1446	K.W. Dolan, D.K. Daniels
1968Ea04	PHRVA	170,	1083	W.C. Easley, J.A. Barclay, D.A. Shirley
1968Ed01	JCPSA	48,	2110	N. Edelstein, W. Easley
1968Ek01	PYLBB	26,	146	C. Ekstrom, I. Lindgren, H. Nyqvist, et al.
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, et al.
1968Fi01	NUPAB	111,	338	E. Fincke, U. Jahnke
1968Fi03	JINCA	30,	1345	P.R. Fields, I. Ahmad, R.K. Sjoblom, et al.
1968Fi04	PHRVA	173,	1078	H.J. Fischbeck
1968Fl05	YAFIA	7,	239	G.N. Flerov, A.G. Demin, V.A. Druin, et al.

1968Fu07	NUPAB	118,	97	L. Funcke, W. Andrejtscheff, H. Graber, et al.
1968Fu11	JUPSA	25,	946	S. Fukumoto, T. Matsuo, H. Matsuda
1968Ga04	IANFA	32,	1644	Y.F. Gangrskii, B.N. Markov, S.M. Polikanov, et al.
1968Ga08	PrvCom	NDG		G.J. Garrett
1968Ga28	PRLTA	20,	1310	G. Gamow
1968GaZY	P-Vienna		167	H. Gauvin
1968Go10	NUPAB	115,	113	J.D. Goss, F.L. Riffle, D.R. Parsignault, et al.
1968Go12	P-Dubna		54	N.A. Golovkov, R.B. Ivanov, Y.V. Norseev, et al.
1968Go13	P-Dubna		27	N.A. Golovkov, So Ki Kvan, V.G. Chumin
1968Go30	IJARA	19,	795	I.W. Goodier, F.H. Hughes, M.J. Woods
1968Go34	APPOA	34,	511	M. Gonsior, G.I. Lizurei, G. Nevodnichanskii, et al.
1968Go.A	BAPSA	13,	1452	K.P. Gopinathan, W. Rubinson
1968Go.B	P-Dubna		54	N.A. Golovkov, R.B. Ivanov, Y.V. Norseev, et al.
1968Gr01	NUPAB	106,	193	B. Greenebaum, A.D. Jackson, Jr., R.A. Naumann
1968Gr09	NUPAB	113,	353	T.B. Grandy, W.J. McDonald, W.K. Dawson, et al.
1968Gr14	PYLBB	27,	274	R.C. Greenwood
1968Gr16	NUPAB	120,	493	A. Graue, E. Hvidsen, J.R. Lien, et al.
1968Gr17	NUPAB	120,	513	A. Graue, L. Herland, J.R. Lien, et al.
1968Gu.A	JINR-P6-4079			L. Gueth, S. Gueth, E. Daroczy, et al.
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, et al.
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, et al.
1968Ho22	AFYSA	37,	1	G. Holm
1968Hs01	NUPAB	109,	423	S.T. Hsue, M.U. Kim, L.M. Langer, et al.
1968Hs02	NUPAB	117,	686	S.T. Hsue, M.U. Kim, L.M. Langer, et al.
1968Hu05	PHRVA	167,	1064	H.C. Hudson, W.H. Johnson, Jr.
1968Io01	RRPQA	13,	911	A. Iordachescu, G. Pascovici, D. Plostinaru
1968Ja05	PHRVA	175,	65	A.D. Jackson, Jr., E.H. Rogers, Jr., G.J. Garrett
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
1968Jo19	AFYSA	37,	317	J.O. Jonsson, M. Olsmats, L. Sanner, et al.
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
1968Kn02	PHRVA	170,	1051	T.F. Knott, H.R. Andrews, B. Greenebaum, et al.
1968Ko06	YAFIA	8,	227	V.A. Korolev, G.D. Alkhazov, A.A. Vorobev, et al.
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, et al.
1968Lo15	YAFIA	8,	849	Y.V. Lobanov, V.A. Durin
1968Ma12	ZEPYA	210,	13	W. Mannhart, H.K. Vonach
1968Ma35	PHRVA	174,	1485	M.A.J. Mariscotti, W. Gelletly, J.A. Moragues, et al.
1968Ma42	YAFIA	7,	473	V.I. Matvienko, A.V. Kogan, K.A. Petrzhak
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, et al.
1968Mc12	PYLBB	27,	443	R.L. McGrath, J.C. Hardy, J. Cerny
1968Me07	JINCA	30,	361	J.W.T. Meadows, V.A. Mode
1968Mi08	NUPAB	119,	609	W. Michaelis, F. Weller, H. Schmidt, et al.
1968Mo21	PHRVA	175,	1516	P.A. Moore, P.J. Riley, C.M. Jones, et al.
1968Mu04	CJPHA	46,	177	A.R. Mufti, J.A. Cameron, J.C. Waddington, et al.
1968My.A	P-Debreccen		102	B. Mysek, Z. Sujkowski, B. Kotlinska
1968Ne02	JINCA	30,	15	D.R. Nethaway, M.C. Missimer
1968Pa03	NUPAB	110,	674	B. Parsa, G.E. Gordon, W.B. Walters
1968Pa24	PHRVA	165,	1273	J.A. Panontin, N.T. Porile, A.A. Caretto, Jr.
1968Pe01	NUPAB	108,	124	H. Petterson, S. Antman, Y. Grunditz
1968Pe13	PHRVA	174,	1441	R.F. Petry, R.A. Naumann, J.S. Evans
1968PfZZ	P-Asilomar		871	L. Pfeiffer, J.C. Wells, L. Madansky
1968Ph01	PHRVA	169,	917	E.A. Phillips and A.D. Jackson Jr.
1968Ph02	PrvCom	NDG		E.A. Phillips
1968Pi03	JOPQA	29,	257	R.A. Pinston, E. Monnand, A. Moussa
1968Ra27	NCBUC	57,	389	O. Rahmouni
1968Re04	NSENA	32,	46	S.A. Reynolds, J.F. Emery, E.I. Wyatt
1968Re12	JINCA	30,	2887	K. Rengan, H.C. Griffin
1968ReZZ	ORNL-4343		76	S.A. Reynolds
1968Ri07	PHRVA	170,	1157	F.A. Rickey, R.K. Sheline
1968Ri15	NUIMA	64,	181	A.I.M. Ritchie
1968Ro08	PrvCom	NDG		R.G.H. Robertson
1968Ro09	PHRVA	170,	1013	J.E. Robertshaw, S. Mecca, A. Sperduto, et al.
1968Ro12	PrvCom	NDG		G.K. Rochester
1968RoZZ	Th-Missouri			M.F. Roche
1968Sa08	NUPAB	118,	361	K. Sakai, P.J. Daly
1968Sa09	NUPAB	118,	409	R. Santo, R. Stock, J.H. Bjerregaard, et al.
1968Sa13	NUPAB	121,	65	C. Samour, H.E. Jackson, J. Julien, et al.
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, et al.
1968Sc24	RAACA	10,	20	E. Schwarzbach, H. Munzel
1968Sc26	BAPSA	13,	1650	S.G. Schmelling, H.A. Shugart
1968Sc27	NUPAB	119,	131	N.E. Scott, J.W. Cobble, P.J. Daly
1968Se05	CHDBA	266,	633	H. Sergolle
1968Sh12	PHRVA	170,	1108	E.B. Shera, M.E. Bunker, R.K. Sheline, et al.
1968Si01	NUPAB	109,	231	A. Siivola
1968Sk01	AENGA	24,	65	N.K. Skobelev, B.A. Grozdev, V.A. Druin
1968Sn01	NUPAB	113,	581	R.E. Snyder, G.B. Beard
1968Sp01	NUPAB	113,	395	R. Spilling, H. Gruppelaar, H.F. de Vries, et al.
1968St09	NUPAB	113,	265	E.P. Steinberg, A.F. Stehney, C. Stearns, et al.
1968St16	PHRVA	172,	1243	N.J. Stone, R.B. Frankel, D.A. Shirley
1968Su02	PRLTA	21,	237	A.W. Sunyar, G. Scharff-Goldhaber, M. McKeown
1968Su05	JUPSA	25,	1258	K. Sugimoto, K. Nakai, K. Matuda, et al.
1968Ta05	NUPAB	115,	193	T. Tamura
1968Ta13	NUIMA	61,	58	M. Tatcher, H. Lindeman
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, et al.
1968Tr07	ZENAA	23,	2127	N. Trautmann, R. Denig, N. Karfeel, et al.
1968Va03	PHRVA	166,	1131	P.A. Vanden Bout, A. Dymanus, V.J. Ehlers, et al.

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
1968Wa12	NUPAB	115,	529	D. Ward, M. Neiman
1968We02	NUPAB	109,	561	H. Wenniger, J. Stiewe, H. Leutz
1968We10	PHRVA	172,	1266	H.V. Weiss, J.M. Fresco, W.L. Reichert
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, et al.
1968Wi25	ATKEA	13,	383	P. Wille
1968WiZY	Th.-Cornell			W.G. Winn, PhD Thesis, Cornell University, NYO-3664-6
1968Wo01	NUPAB	107,	332	A.C. Wolff, M.A. Meyer, P.M. Endt
1968Wo02	NUPAB	112,	156	J.L. Wolfson, A.J. Collier
1968Wo06	JINCA	30,	1373	E.J. Woodhouse, T.H. Norris
1968Wo08	NUPAB	116,	387	G.K. Wolf
1968Wo09	PYLBB	28,	77	S.S.M. Wong, W.G. Davies
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, et al.

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1969Ac02	ZEPYA	228,	329	H. Ackermann, D. Dubbers, J. Mertens, et al.
1969AdZY	Th.-Paris			B. Ader
1969Aj03	PHRVA	188,	1813	F. Ajzenberg-Selove
1969Ak01	IANFA	33,	104	M.R. Akhmed, K.A. Baskova, S.S. Vasilev, et al.
1969Al20	AENGA	27,	41	B.M. Aleksandrov, M.A. Bak, V.V. Berdikov, et al.
1969Am01	JINCA	31,	577	I. Amarel, H. Gauvin, A. Johnson
1969An18	PYLBB	30,	160	S. Andre, P. Liaud, F. Perales, et al.
1969Ar22	IANFA	33,	1232	R. Arlt, Z. Malek, G. Muziol, et al.
1969Ar23	IANFA	33,	1218	R. Arlt, Z. Malek, G. Musiol, et al.
1969Ar.A	P-Studsvik			S.E. Arnell, R. Hardell, O. Skeppstedt, et al.
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
1969Be50	PYLBB	30,	412	M. Bernheim, R. Riskalla, T. Stovall, et al.
1969Be69	PHRVA	187,	1618	G. Berzins, M.E. Bunker, J.W. Starner
1969Be74	NUIMA	76,	77	E. Beck
1969Bj01	NUPAB	131,	481	J.H. Bjerregaard, O. Hansen, O. Nathan, et al.
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
1969Bo11	NUPAB	130,	195	M. Bormann, B. Lammers
1969Bo15	ZEPYA	223,	473	I. Borchert
1969Bo25	NUPAB	134,	541	I. Boca, N. Martalogu, M. Sezon, et al.
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, et al.
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
1969Bu07	PANUE	9,	389	V.R. Burmistrov, V.A. Shilin
1969Bu14	IJARA	20,	393	L. Burkinshaw, D.H. Marshall, C.B. Oxby
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., et al.
1969Ce01	PRLTA	22,	612	J. Cerny, E.A. Mendelson, Jr., G.J. Wozniak, et al.
1969Ch18	PYLBB	29,	652	J. Chaumont, E. Roeckl, Y. Nir-El, et al.
1969Ch32	PHRVA	187,	1529	Y.Y. Chu, E.M. Franz, G. Friedlander
1969Co03	NUPAB	129,	10	M. Conjeaud, S. Harar, E. Thuriere
1969Cu09	JPAGB	2,	658	C.J. Cussens, G.K. Rochester, K.F. Smith
1969Da15	PHRVA	181,	1618	J.W. Dawson, R.K. Sheline, E.T. Jurney
1969De19	YAFIA	10,	433	R.A. Demirkhanov, V.V. Dorokhov
1969De23	INUCA	5,	699	A. De Volpi, K.G. Porges
1969De27	PYLBB	30,	639	P. De Wit, C. Van der Leun
1969Do01	NUPAB	133,	146	W.E. Dorenbusch, T.A. Belote, J. Rapaport
1969Do11	ZENAA	24,	1196	L.C.M. do Amaral, C.F. de Barros Leite, J.M.F. Jeronymo, et al.
1969Ek01	NUPAB	135,	289	C. Ekstrom, T. Noreland, M. Olsmats, et al.
1969El06	P-Vienna		457	A.J. Elwyn, A.T.G. Ferguson
1969Fa01	NUPAB	123,	616	K.T. Faler, R.R. Spencer, R.A. Harlan
1969Fl02	ZEPYA	225,	164	D. Flothman, W. Wiesner, R. Lohken, et al.
1969Fl04	PHRVA	185,	1591	K.F. Flynn, L.E. Glendenin
1969Fr01	NUPAB	127,	33	A.M. Friedman, I. Ahmad, J. Milsted, et al.
1969Fr08	NUPAB	132,	593	J.M. Freeman, J.G. Jenkin, G. Murray, et al.
1969Fr22	ANPYA	23,	168	V.R. Friedrich, M. Kiesling, G. Otto
1969Fu09	JUPSA	27,	1380	N. Fujiwara
1969Fu11	NDSAA	5,	433	G.H. Fuller, V.W. Cohen
1969Ga17	RAACA	11,	158	R. Gasteiger, G. Hohlein, W. Weinlander
1969Ge07	PHRVA	181,	1682	W. Gelletly, J.A. Moragues, M.A.J. Mariscotti, et al.
1969Ge11	CHDBA	269,	220	C. Gerschel, N. Perrin
1969Gh01	PRLTA	22,	1317	A. Ghiorso, M. Nurmia, J. Harris, et al.
1969Go23	IANFA	33,	1622	N.A. Golovkov, S. Guetch, B.S. Dzelepov, et al.
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, et al.
1969Gr28	CHDBA	269,	652	B. Grennberg, A. Rytz
1969Gr31	YAFIA	10,	681	L.V. Groshev, V.N. Dvoretskii, A.M. Demidov, et al.
1969GuZW	UCID-15439			R. Gunnink, J.B. Niday, R.P. Anderson, et al.
1969Ha03	PYLBB	28,	415	P.G. Hansen, P. Hornshoj, H.L. Nielsen, et al.
1969Ha08	NUPAB	125,	477	J. Hattula, E. Liukkonen, J. Kantele
1969Ha11	NUPAB	127,	71	O. Hansen, O. Nathan, R. Chapman, et al.
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, et al.
1969He16	NUPAB	137,	157	R. Hess, F.C. Roehmer, F. Gassmann, et al.
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
1969Hu03	JINCA	31,	19	C.A. Hughes
1969HuZY	P-Montreal		91	S.G. Hussein, A.R. Pierce, R.G.H. Robertson, et al.
1969Jo16	NUPAB	133,	213	K.H. Johansen, B. Bengtson, P.G. Hansen, et al.
1969Ka06	JUPSA	26,	1071	T. Katoh, T. Morii, H. Inoue, et al.
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
1969Kl08	PRLTA	23,	652	R. Klapisch, C. Thibault-Philippe, C. Detraz, et al.
1969Ko10	ZEPYA	226,	297	U. Kopf, H.J. Besch, E.W. Otten, et al.
1969Ku03	ZEPYA	222,	144	E. Kuhlmann, K.E.G. Lobner
1969Ku07	NUPAB	133,	554	T. Kuroyanagi, T. Tamura
1969La05	PHRVA	177,	1606	N.S. Laulainen, M.N. McDermott
1969La06	PHRVA	177,	1615	N.S. Laulainen, M.N. McDermott
1969La11	PHRVA	178,	1919	R.G. Lanier, R.K. Sheline, H.F. Mahlein, et al.
1969La14	NUPAB	139,	481	N.L. Lark, G. Sletten, J. Pedersen, et al.
1969La15	PHRVA	180,	1015	I.M. Ladenbauer-Bellis, H. Bakhru
1969La33	PHRVA	187,	1739	I.M. Ladenbauer-Bellis, H. Bakhru, A. Luzzati
1969La34	IJARA	20,	868	F. Lagoutine, J. Legrand, Y. Le Gallic
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, et al.
1969Ly06	NUPAB	135,	97	L.L. Lynn, W.E. Dorenbusch, T.A. Belote, et al.
1969Ma21	NUPAB	132,	339	K.W. Marlow, A. Faas
1969Mc05	NUPAB	127,	531	M. McDonnel, M.K. Ramaswami
1969Me01	JINCA	31,	1245	D.N. Metta, H. Diamond, F.R. Kelly
1969Me11	ZEPYA	226,	1	V. Metag, R. Repnow, P. Von Brentano, et al.
1969Mi08	JINCA	31,	1561	J. Milsted, E.P. Horwitz, A.M. Friedman, et al.
1969Mi10	PHRVA	177,	1455	R.C. Minehart, L. Coulson, W.F. Grubb, III, et al.
1969Mo13	PHRVA	180,	1105	J.A. Moragues, M.A.J. Mariscotti, W. Gelletly, et al.
1969Mo16	NUPAB	134,	321	E. Monnand, J. Blachot, A. Moussa
1969Na03	PHRVA	178,	1968	T. Nagarajan, M. Ravindranath, K.V. Reddy, et al.
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
1969NeZW	UCRL-18667		59	M. Neiman, D. Ward
1969Oh01	PHRVA	177,	1695	H. Ohnuma, J.R. Erskine, J.A. Nolen, Jr., et al.
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, et al.
1969PhZZ	BAPSA	14,	944	E.A. Phillips, B.R. Casserberg, W.G. Unruh
1969Pi08	NUPAB	133,	124	J.A. Pinston, F. Schussler, A. Moussa
1969Pr06	PHRVA	180,	945	W.V. Prestwich, G.E. Thomas
1969Pr07	PHRVA	181,	1665	M.H. Prior, A. Dymanus, H.A. Shugart, et al.
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, et al.
1969Re04	PHYSA	40,	567	E.R. Reddingius, H. Postma
1969Re06	NUPAB	129,	273	P.G.E. Reid, M. Sott, N.J. Stone
1969Ri04	NUPAB	127,	399	J.C. Ritter, R.E. Larson
1969Ro02	NUPAB	123,	471	E.L. Robinson, R.C. Hagenauer, E. Eichler
1969Ro33	RAACA	11,	104	J. Robert, C.F. Miranda, R. Muxart
1969Ru10	NUKLA	14,	337	E. Rurarz, J. Chorzewski, T. Kozlowski, et al.
1969Ru14	PHRVA	179,	1188	N.G. Runnalls, D.E. Troutner, R.L. Ferguson
1969Sa08	NUPAB	130,	97	D.G. Sarantites, S. Gronemeyer
1969Sa18	NUPAB	135,	657	L. Samuelsson, R. Vukanovic, M. Migahed, et al.
1969Sa34	CJCHA	47,	1667	D.R. Sachdev, L. Yaffe
1969Sc10	ZEPYA	219,	70	W.-D. Schmidt-Ott

1969Sh04	NUPAB	128,	73	M.H. Shapiro, C. Moss, W.M. Denny
1969Sh11	IANFA	33,	38	V.A. Shilin, V.R. Burmistrov, V.N. Levkovskii
1969SlZZ	P-Vienna		461	G. Sletten, S.M. Polikanov
1969St02	PHRVA	178,	2024	R.H. Stokes, P.G. Young
1969St05	PHRVA	179,	1170	S. Stein, A.T. Ramsey
1969St07	PHRVA	178,	1789	R.H. Stokes, P.G. Young
1969St14	NUPAB	137,	585	J.E. Steigerwalt, J.W. Sunier, J.R. Richardson
1969Ta04	PHRVA	177,	1805	W.L. Talbert, Jr., A.B. Tucker, G.M. Day
1969Te01	PHRVA	177,	1595	J. Tenenbaum, R. Moreh, Y. Wand, et al.
1969Tj01	KDVSA	37,	#7	P.O. Tjom, B. Elbek
1969To06	PHRVA	183,	1004	K.S. Toth, R.L. Hahn, M.F. Roche, et al.
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
1969VaZX	P-Vienna		439	R. Vandenbosch, K.L. Wolf
1969Vi02	NUPAB	132,	410	D. Vinciguerra, T. Stovall
1969Vo11	ZEPYA	227,	381	H. Vonach, M. Hille, P. Hille
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
1969We11	PHRVA	188,	1893	H.V. Weiss, N.E. Ballou, J.L. Elzie, et al.
1969WiZX	Th.-California			J.B. Wilhelmy
1969Wi.A	Th.-Berkeley			J.B. Wilhelmy UCRL-18978
1969Wy01	JRACB	2,	287	A. Wyttenbach, H. Dulakas
1969Ya02	NUPAB	130,	456	T. Yamazaki, J. Sato
1969Zo01	NUPAB	124,	15	W.H. Zoller, G.E. Gordon, W.B. Walters
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, et al.
1970Ab15	NUCIA	70,	391	U. Abbondanno, R. Giacomich, L. Granata, et al.
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, et al.
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, et al.
1970Aj01	NUPAB	142,	641	F. Ajzenberg-Selove, G. Igo
1970Ak02	IANFA	34,	777	A.I. Akhmadzhanov, R. Broda, V. Valyus, et al.
1970Al21	PRVCA	2,	1594	D.E. Alburger, G.A.P. Engelbertink
1970An06	ZEPYA	234,	455	A. Antilla, M. Bister, E. Arminen
1970An14	NUPAB	153,	17	M.L. Andersen, S.A. Andersen, O. Nathan, et al.
1970An25	NUPAB	157,	561	T.R. Anfinsen, K. Bjorndal, A. Graue, et al.
1970Ar04	IANFA	34,	409	R. Arlt, G. Beyer, G. Musiol, et al.
1970Ar17	IANFA	34,	754	R. Arlt, G. Baier, G. Musiol, et al.
1970As08	NUPAB	158,	146	J. Ashkenazi, E. Friedman, D. Nir, et al.
1970Ba20	YAFIA	11,	925	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov, et al.
1970Be24	PRVCA	2,	297	R.W. Bercaw, R.E. Warner
1970Be29	NUPAB	150,	282	H. Bertschat, J. Christiansen, H.-E. Mahnke, et al.

1970Be48	NUPAB	157,	520	G.B. Beard, G.E. Thomas
1970Be.A	B-Leysin		353	E. Beck, H. Kugler, H. Schrader, et al.
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, et al.
1970Bo29	PRVCA	2,	1951	L.M. Bollinger, G.E. Thomas
1970BoYV	P-Leysin 1,		383	J. Bonn, E.W. Otten, C. von Platen, et al.
1970Br01	PRVCA	1,	275	T.H. Braid, R.R. Chasman, J.R. Erskine, et al.
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, et al.
1970Bu02	PYLBB	31,	523	S.C. Burnett, H.C. Britt, B.H. Erkkila, et al.
1970Bu19	PRVCA	2,	1513	D.J. Buss, R.K. Smither
1970Ca01	NUPAB	141,	97	P.E. Cavanagh, C.F. Coleman, A.G. Hardacre, et al.
1970Ca09	JINCA	32,	1409	M.J. Cabell, M. Wilkins
1970Ca25	NUPAB	158,	403	L.C. Carraz, J. Blachot, E. Monnand, et al.
1970Ce02	PRLTA	24,	1128	J. Cerny, C.U. Cardinal, H.C. Evans, et al.
1970Ce04	PYLBB	33,	284	J. Cerny, J.E. Esterl, R.A. Gough, et al.
1970Ch02	NUPAB	142,	634	J.C. Chang, G. Schupp, R.R. Hurst
1970Ch05	PRVCA	1,	613	J. Christiansen, H.-E. Mahnke, E. Recknagel, et al.
1970Ch09	PRVCA	1,	1826	Y.Y. Chu, E.M. Franz, G. Friedlander
1970Ch28	NUPAB	156,	276	A. Charvet, R. Duffait, A. Emsallem, et al.
1970Ch29	JOPQA	31,	737	A. Charvet, R. Duffait, A. Emsallem, et al.
1970Ch37	NUIMA	85,	61	N.S. Chen, J.H. Fremlin
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, et al.
1970DaZM	Th.-Berkeley			J.M. Dairiki, PhD Thesis, University of California, UCRL-20412
1970De08	JINCA	32,	705	P. del Marmol, D.C. Perricos
1970De13	RAACA	13,	118	F.W.N. de Boer, P.F.A. Goudsmit, P. Koldewijn, et al.
1970De39	NUPAB	158,	166	F.W.N. De Boer, E.W.A. Lingeman, R. van Lieshout, et al.
1970De46	JOPQA	31,	915	J. Demuynck, L. Dorikens-Vanpraet, M. Dorikens, et al.
1970DeZQ	P-Leysin 1,		517	P. del Marmol, P. Fettweis, D.C. Perricos
1970Do.A	COO-1779-49		47	R. Doebler (Also Thesis Michigan State University)
1970Dr08	YAFIA	12,	268	V.A. Druin
1970Du05	NUPAB	149,	518	G.H. Dulfer, H.E. Beertema, H. Verheul
1970Dz04	PYLBB	33,	302	T.G. Dzubay, A.A. Jaffe, E.J. Ludwig, et al.
1970Ei02	NUPAB	141,	289	J. Eidens, E. Roeckl, P. Armbruster
1970El03	NUPAB	148,	337	A.J. Elwyn, A.T.G. Ferguson
1970El.A	BAPSA	15,	1670	J.L. Ellis, H.E. Hall, Jr.
1970EmZY	ORNL-4466		75	J.F. Emery, S.A. Reynolds, E.I. Wyatt
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, et al.
1970Es03	PYLBB	33,	287	J.E. Esterl, J.C. Hardy, R.G. Sextro, et al.
1970Fa06	NUPAB	146,	549	U. Fanger, D. Heck, W. Michaelis, et al.
1970Fi03	NUPAB	144,	67	E. Fincke, U. Jahnke, B. Schreiber, et al.
1970Fi12	NUPAB	154,	407	P.R. Fields, I. Ahmad, R.F. Barnes, et al.
1970FiZZ	CERN-70-29			M. Finger, R. Foucher, J.P. Husson, et al.
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, et al.
1970Fo09	PYLBB	32,	689	I. Fodor, I. Szentpetery, J. Szucz
1970Ga10	PYLBB	32,	182	Y.P. Gangrsky, B.N. Markov, Y.M. Tsipenyuk
1970Ga32	IANFA	34,	2048	S. Gabrakov, Z. Zhelev, N.G. Zaitseva, et al.
1970Ge03	PRVCA	1,	1052	W. Gelletly, J.A. Moragues, M.A. Mariscotti, et al.
1970Gh01	PYLBB	32,	95	A. Ghiorso, M. Nurmia, K. Eskola, et al.

1970Gh02	PRLTA	24,	1498	A. Ghiorso, M. Nurmia, K. Eskola, et al.
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, et al.
1970Go42	PRVCA	2,	2406	D.J. Gorman, F. Asaro
1970Go45	NUPAB	159,	417	W. Goedbloed, S.C. Goverse, C.P. Gerner, et al.
1970Gr38	PYLBB	33,	474	J.W. Gruter, K. Sistemich, P. Armbruster, et al.
1970Gr46	KDVSA	37,	#12	T. Grotdal, K. Nybø, B. Elbek
1970Gu14	JINCA	32,	3425	M.C. Gupta, R.D. MacFarlane
1970Ha18	NUPAB	148,	249	P.G. Hansen, H.L. Nielsen, K. Wilsky, et al.
1970Ha21	NUPAB	158,	625	T. Hattula, S. Andre, F. Schussler, et al.
1970Ha32	RAACA	13,	132	G. Harbottle
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, et al.
1970HeZH	P-Leysin		985	G. Herrmann, N. Kaffrell, N. Trautmann, et al.
1970HeZX	P-Leysin		985	G. Herrmann, N. Kaffrell, N. Trautmann, et al.
1970Hi06	PRLTA	25,	829	R.A. Hinrichs, R. Sherr, G.M. Crawley, et al.
1970Hi12	PRVCA	2,	2341	A.T. Hirshfeld, D.D. Hoppes
1970HiZW	BAPSA	15,	628	A.T. Hirshfeld, D.D. Hoppes
1970Hn03	JINCA	32,	3137	D.J. Hnatowich, E. Hagebo, A. Kjelberg, et al.
1970Ho01	NUPAB	140,	658	K.J. Hofstetter, T.T. Sugihara
1970HoZN	B-Houston		4	R.W. Hoff, R.W. Lougheed, P.G. Johnson
1970Hu02	ZEPYA	230,	358	H.A.M. Hussein
1970Hu04	PRVCA	1,	1845	H. Hubel, R.A. Naumann, M.L. Andersen, et al.
1970Hu11	NUPAB	151,	634	J. Hudis, E. Hagebo, P. Patzelt
1970Hu18	ANPHA	5,	239	M.G. Huber
1970Ja22	PYLBB	33,	281	K.P. Jackson, C.U. Cardinal, H.C. Evans, et al.
1970Jo02	ZEPYA	230,	291	A. Johansson, B. Svahn, B. Nyman, et al.
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, et al.
1970Jo20	PRVCA	2,	1451	W. John, F.W. Guy, J.J. Wesolowski
1970Jo22	PRVCA	2,	1747	H.D. Jones, R.K. Sheline
1970Jo26	RAACA	13,	176	A.G. Jones, A.H.W. Aten, Jr.
1970Jo27	PHSTB	2,	16	J.O. Jonsson, L. Sanner, B. Wannberg
1970Ju04	PRVCA	2,	2323	E.T. Jurney, R.K. Sheline, E.B. Shera, et al.
1970Ka04	NUPAB	147,	120	M. Karras, T.E. Ward, H. Schoche
1970Ka22	PRLTA	25,	953	W.R. Kane
1970Ka23	JINCA	32,	2817	P.J. Karol
1970KaZV	BMBW-FB-70-19		78	N. Kaffrell, W. Herzog, N. Trautmann
1970Ke01	PYLBB	31,	10	A. Kerek, C.J. Herrlander, A. Luukko, et al.
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, et al.
1970Ki12	JINCA	32,	2823	H.W. Kirby
1970Kl05	ZEPYA	238,	11	H.V. Klapdor, K. Buchholz, F. Kaestner
1970Kl07	YAFIA	12,	460	M.V. Klimentovskaya, N.A. Lebedev, A.A. Sorokin
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, et al.
1970Kr05	JINCA	32,	3713	J.-V. Kratz, G. Herrmann
1970La08	JINCA	32,	2131	J.H. Landrum
1970Le05	YAFIA	11,	483	V.N. Levkovskii, I.V. Kazachevskii

1970Le07	IJARA	21,	139	J. Legrand, F. Lagoutine, J.P. Brethon
1970Li04	AFYSA	40,	197	H. Linusson, R. Hardell, S. Arnell
1970LiZL	P-Leysin 1,		387	I. Lindgren, H. Nyqvist, A. Rosen, et al.
1970LiZY	P-Leysin 1,		387	I. Lindgren, H. Nyqvist, A. Rosen, et al.
1970Lo02	NUPAB	152,	463	W. Lourens, B.O. Ten Brink, A.H. Wapstra
1970LyZZ	ORNL-4636,		24	W.S. Lyon, H.H. Ross, L.C. Bate, et al.
1970Ma05	NUPAB	145,	223	J.D. Macdougall, W. McLatchie, S. Whineray, et al.
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
1970Ma24	APAHA	28,	237	I. Mahunka, L. Tron, T. Fenyes
1970Ma25	NUPAB	149,	593	S. Maripuu
1970Ma31	NUPAB	151,	465	S. Maripuu
1970Ma36	NUPAB	153,	183	S. Maripuu
1970Ma42	PRVCA	2,	1729	H.B. Mak, H. Spinka, H. Winkler
1970Ma47	JUPSA	29,	1116	Z.-IMatumoto, T. Tamura
1970Ma56	IJARA	21,	667	N. Marceau, T.P.A. Kruck, D.B. McConnell, et al.
1970MaZT	P-Leysin 1,		517	P. del Marmol, P. Fettweis, D.C. Perricos
1970Ma.A	P-Leysin		321	M.I. Macias-Marques, R. Foucher, M. Caillau, et al.
1970Mc01	NUPAB	140,	529	D.K. McMillan, B.D. Pate
1970Mc03	NUPAB	145,	244	W. McLatchie, S. Whineray, J.D. Macdougall, et al.
1970Mc06	NUPAB	144,	593	A.B. McDonald, E.G. Adelsberger
1970Me11	PRLTA	25,	533	R. Mendelson, G.J. Wozniak, A.D. Bacher, et al.
1970Mi01	NUPAB	143,	225	W. Michaelis, F. Weller, U. Fanger, et al.
1970Mo08	NUPAB	145,	423	C.E. Moss
1970Mu02	NUPAB	142,	21	G. Murray, W.J.K. White, J.C. Wilmott, et al.
1970Mu03	NUPAB	142,	459	S. Muszynski, S.K. Mark
1970Mu15	PRVCA	2,	655	T.J. Mulligan, R.K. Sheline, M.E. Bunker, et al.
1970Mu16	ZEPYA	237,	313	K.S.N. Murty, B.P. Pathak, S.C. Gujrathi
1970Mu17	NUPAB	158,	183	F. Münnich, A. Kjelberg, D.J. Hnatowich
1970Ni11	PHYSA	50,	259	L. Niesen, W.J. Huiskamp
1970Ob02	NUPAB	153,	593	B.J. O'Brien, G.E. Coote
1970Og01	YAFIA	11,	492	Y.T. Oganesyan, Y.E. Penionzhkevich, So Ki Kvan, et al.
1970Og05	AENGA	28,	393	Y.T. Oganesyan, Y.V. Lobanov, S.P. Tretyakova, et al.
1970Oh05	JUPSA	29,	1435	S. Ohya, T. Tamura, S. Kageyama
1970Ol02	PRVCA	2,	228	A.F. Oluwole, S.G. Schmelling, H.A. Shugart
1970Or.A	DASA-2570			V.J. Orphan, N.C. Rasmussen, T.L. Harper
1970OsZZ	P-Leysin 2,		1093	OSIRIS Collaboration
1970Pa16	PRVCA	1,	1477	B.P. Pathak, K.S.N. Murty, S.K. Mukherjee, et al.
1970Pe04	ZEPYA	233,	260	H. Petterson, S. Antman, Y. Grunditz
1970Pi01	NUPAB	144,	42	J.A. Pinston, F. Schussler
1970Po01	NUPAB	151,	656	S.M. Polikanov, G. Sletten
1970Pr13	PRVCA	2,	1499	W.P. Pratt, Jr., R.I. Schermer, J.R. Sites, et al.
1970Qa03	NUPAB	154,	145	S.M. Qaim
1970Ra14	APAHA	28,	263	K. Raichev, L. Tron
1970Re02	PRVCA	1,	721	P.L. Reeder
1970Re05	NUPAB	147,	183	R. Repnow, V. Metag, J.D. Fox, et al.
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
1970Ro21	NUPAB	154,	283	A. Rosen, C. Ekstrom, H. Nyqvist, et al.
1970Ru.A	P-Leysin		341	G. Rudstam, E. Lund, L. Westgaard, et al.
1970Ry05	JNCEA	24,	419	T.B. Ryves, D.R. Perkins
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, et al.
1970Se14	PHSTB	2,	169	E. Selin
1970Sh05	PRVCA	1,	1835	S. Shastri, H. Bakhru, I.M. Ladenbauer-Bellis
1970Si17	NUPAB	156,	19	J.R. Sites, W.A. Steyert
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
1970Su04	PYLBB	31,	520	K. Sugimoto, A. Mizobuchi, K. Matuda, et al.
1970TaZS	P-Kyoto		548	N.I. Tarantin, A.P. Kabachenko, A.V. Demyanov, et al.
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
1970ToZS	P-Leysin 1,		533	K.S. Toth, R.L. Hahn
1970Ts04	PRVCA	2,	2168	J.F. Tschanz, R.C. Sapp
1970Um01	PRVCA	2,	1378	C.J. Umbarger, K.W. Kemper, J.W. Nelson, et al.
1970Va13	PRVCA	1,	2115	K. Valli, E.K. Hyde, J. Borggreen
1970Va31	NUPAB	157,	385	J. Van Klinken, L.M. Taff, H.T. Dijkstra, et al.
1970Va.A	PrvCom	AHW	Apr	B. Van Nooijen, N.R. Johnson
1970Vi05	SCEFA	22,	795	N. Vilcov
1970Vo04	PRVCA	1,	2066	D. Von Ehrenstein, G.C. Morrison, J.A. Nolen, Jr., et al.
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, et al.
1970Wa35	PHSTB	1,	238	B. Wannberg, J.O. Jonsson, L. Sanner
1970Wa37	PRVCA	2,	2410	T.E. Ward, N.A. Morcos, P.K. Kuroda
1970Wh01	NUPAB	151,	377	S. Whineray, J.D. Macdougall, W. McLatchie, et al.
1970Wh04	PRVCA	1,	1455	C.A. Whitten, Jr., M.C. Mermaz, D.A. Bromley
1970Wi17	PRVCA	2,	1219	R.L. Williams, Jr., L. Pfeiffer, J.C. Wells, Jr., et al.
1970WiZN	UCRL-19530-P178			J.B. Wilhelmy, S.G. Thompson, J.O. Rasmussen, et al.
1970Wo05	NUPAB	146,	33	F.K. Wohn, W.L. Talbert
1970Wo06	PRVCA	1,	2096	K.L. Wolf, R. Vandenbosch, P.A. Russo, et al.
1970Wo08	NUPAB	152,	561	F.K. Wohn, W.L. Talbert, Jr., J.K. Halbig
1970Wo14	JOSAA	60,	1297	E.F. Worden, R.G. Gutmacher, R.W. Lougheed, et al.
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, et al.
1971Ah01	PRVCA	3,	390	I. Ahmad, F.T. Porter, M.S. Freedman, et al.
1971Al01	NUPAB	161,	209	G. Alenius, S.E. Arnell, C. Schale, et al.
1971Al14	PHSTB	3,	55	G. Alenius, S.E. Arnell, C. Schale, et al.
1971Al22	PHSTB	3,	105	G. Alenius, S.E. Arnell, C. Schale, et al.
1971Ar12	NUPAB	166,	241	S.E. Arnell, H. Linusson, Z. Sawa
1971Ar23	NUPAB	169,	209	N.K. Aras, P. Fettweis, G. Chilosi, et al.
1971Ar39	PHSTB	4,	89	S.E. Arnell, R. Hardell, A. Hasselgren, et al.
1971Au06	NUPAB	171,	31	G.F. Auchampaugh, J.A. Farrell, D.W. Bergen
1971Av09	LNPI-11			M.P. Avotina, A.V. Zolotavin
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
1971Ba28	JINCA	33,	589	S. Baba, H. Baba, H. Natsume
1971Ba43	PRVCA	4,	196	J.B. Ball, R.L. Auble, P.G. Roos
1971Ba89	IJARA	22,	777	I.L. Barnes, S.B. Garfinkel, W.B. Mann
1971Ba94	PYLBB	37,	181	F. Bacon, G. Kaindl, H.-E. Mahnke, et al.
1971BaZW	JAERI-1211			S. Baba, H. Baba, H. Umezawa, et al.
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
1971Be37	PHSTB	3,	11	I. Bergstrom, J. Blomqvist, B. Fant, et al.
1971Be41	NUPAB	171,	113	M.J. Bennet, R.K. Sheline, Y. Shida
1971Be61	ZEPYA	247,	383	H. Beuscher, P. Jahn, R.M. Lieder, et al.
1971Be62	YAFIA	14,	685	A.G. Belov, Y.P. Gangrskii, B. Dalkhsuren, et al.
1971Bi.A	UCRL-51060			R.E. Birkett
1971Bo01	NUPAB	160,	337	H.M.W. Booij, E.A. Van Hoek, H. Van der Molen, et al.
1971Bo04	NUPAB	160,	577	J. Bommer, K. Grabisch, H. Kluge, et al.
1971Bo06	NUPAB	162,	407	J. Borggreen, E.K. Hyde
1971Bo30	ZEPYA	244,	338	I. Borchert
1971Bo31	PYLBB	36,	41	J. Bonn, G. Huber, H.J. Kluge, et al.
1971Bo61	RRPQA	16,	473	I. Boca, M. Sezon, I. Vilcov, et al.
1971Br13	JOPQA	32,	101	J.P. Briand, P. Chevallier, A. Touati
1971Br38	PRVCA	4,	1441	H.C. Britt, B.H. Erkkila
1971Br39	PRVCA	4,	1444	H.C. Britt, S.C. Burnett, B.H. Erkkila, et al.
1971BrYH	Th.-Grenoble			R. Brissot
1971Bu08	NUPAB	167,	252	I.F. Bubb, S.I.H. Naqvi, J.L. Wolfson
1971Ca19	PRVCA	4,	130	R.F. Casten, E.R. Flynn, O. Hansen, et al.
1971Ca23	JINCA	33,	1957	M.J. Cabell, M. Wilkins
1971Ca39	NUPAB	177,	401	D.C. Camp, B.P. Foster
1971CaYV	PrvCom	NDG		B.R. Casserberg, E.A. Phillips
1971Ch02	PRVAA	3,	25	W.J. Childs, L.S. Goodman
1971Ch26	JOPQA	32,	359	A. Charvet, D.H. Phuoc, R. Duffait, et al.
1971Ch38	NUPAB	173,	497	E.T. Chulick, P.L. Reeder
1971Ch54	IJARA	22,	715	G.A. Chackett, K.F. Chackett, J.B. Welborn
1971Co08	PRVCA	3,	1352	S. Cochavi, J.M. McDonald, D.B. Fossan
1971Co35	JNCEA	25,	331	H. Conde, M. Holmberg
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
1971De35	RAACA	16,	4	P. del Marmol, P. Fettweis, D.C. Perricos
1971De52	RMXFA	20,	17	H. Del Castillo, R. Roos, A. Tejera, et al.
1971DeXU	IKOAR	I,	11	H. de Vries, G.J.C. Van Niftrik, L. Lapikas
1971Di03	PRLTA	26,	1037	P.F. Dittner, C.E. Bemis, Jr., D.C. Henley, et al.
1971Do01	NUPAB	161,	12	T.A. Doron, M. Blann
1971Do09	ZEPYA	244,	321	M. Dorikens, J. Demuynck, L. Dorikens-Vanpraet
1971Do18	PYLBB	37,	173	W.E. Dorenbusch, J.B. Ball, R.L. Auble, et al.
1971Dr01	YAFIA	13,	251	V.A. Druin, A.G. Demin, Y.P. Kharitonov, et al.
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
1971Ed04	JCPSA	54,	2488	N. Edelstein
1971Ek01	NUPAB	170,	649	C. Ekstrom, M. Olsmats, B. Wannberg
1971El05	NUPAB	170,	209	C. Ellegaard, P.D. Barnes, E.R. Flynn
1971En01	PRVCA	3,	180	G.A.P. Engelbertink, J.W. Olness

1971Er02	NUIMA	92,	45	A. Erlik, J. Felsteiner, H. Lindeman, et al.
1971Es01	PRVCA	4,	632	K. Eskola, P. Eskola, M. Nurmia, et al.
1971Es03	PYLBB	36,	328	G. Eska, E. Hagn, T. Butz, et al.
1971Ev01	CJPHA	49,	402	F. Everling, G.L. Morgan, D.W. Miller, et al.
1971Fi01	NUPAB	160,	460	P.R. Fields, I. Ahmad, A.M. Friedman, et al.
1971Fl02	NUPAB	160,	181	G.N. Flerov, Y.T. Oganesian, Y.V. Lobanov, et al.
1971Fo01	PRVCA	3,	337	H.T. Fortune, G.C. Morrisson, J.A. Nolen, Jr., et al.
1971Fo22	PYLBB	36,	334	B. Fogelberg, A. Backlin, T. Nagarajan
1971FoZA	P-Jer	1,	339	R.A. Fox, P.D. Johnston, C.J. Sanctuary, et al.
1971Fr03	NUPAB	165,	625	A. Frana, A. Spalek, M. Fiser, et al.
1971Ge02	PRVCA	3,	172	H. Genz, J.P. Renier, J.G. Pengra, et al.
1971Ge05	PRVCA	3,	1678	W. Gelletly, W.R. Kane, D.R. MacKenzie
1971Gh01	PRVCA	4,	1850	A. Ghiorso, M. Nurmia, K. Eskola, et al.
1971Gh03	NATUA	229,	603	A. Ghiorso, M. Nurmia, J. Harris, et al.
1971GiZS	Th.-Michigan			G.C. Giesler, Thesis, Mich. State Univ. (1971); Diss. Abstr. Int. 32B, 5091 (1972)
1971Go01	PRVCA	3,	746	D.J. Gorman, F. Asaro
1971Go08	JUPSA	30,	1241	Y. Gono, K. Hiruta
1971Go18	PRVCA	4,	1800	D.R. Goosman, K.W. Jones, E.K. Warburton, et al.
1971Go21	YAFIA	14,	3	K.S. Goncharov, A.P. Klyucharev, S.A. Pisminetskii, et al.
1971Go35	IANFA	35,	2272	N.A. Golovkov, R.B. Ivanov, A. Kolaczkowski, et al.
1971GoYM	P-Canterbury		175	I.W. Goodier, M.J. Woods, A. Williams
1971Gr01	NUPAB	160,	497	A. Graue, J.R. Lien, H. Vinje, et al.
1971Gr04	NUPAB	162,	593	A. Graue, J.R. Lien, L. Rasmussen, et al.
1971Gr17	MTRGA	7,	65	B. Grennberg, A. Rytz
1971Gr22	YAFIA	13,	681	L.V. Groshev, A.M. Demidov, V.F. Leonov, et al.
1971Gr28	YAFIA	13,	1129	L.V. Groshev, L.I. Govor, A.M. Demidov, et al.
1971Gr37	YAFIA	14,	473	L.V. Groshev, A.M. Demidov, V.F. Leonov, et al.
1971Gr42	IANFA	35,	1644	L.V. Groshev, A.M. Demidov, V.F. Leonov, et al.
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
1971Ha03	NUPAB	160,	445	P.G. Hansen, B. Jonson, J. Żylicz, et al.
1971HaXM	JINR-E6-6193			U. Hagemann, W. Neubert, L.K. Peker, et al.
1971He06	CJPHA	49,	1167	L.C. Henry, T.J. Kennett
1971He10	NUPAB	165,	327	D. Heck, U. Fanger, W. Michaelis, et al.
1971He13	NUPAB	168,	449	R.G. Helmer, R.C. Greenwood, C.W. Reich
1971HiZO	P-Rehovot 1,		335	A.T. Hirshfeld, D.D. Hoppes, W.B. Mann, et al.
1971Ho01	NUPAB	163,	277	P. Hornshøj, K. Wilsky, P.G. Hansen, et al.
1971Ho07	PYLBB	34,	591	P. Hornshøj, K. Wilsky, P.G. Hansen, et al.
1971Ho16	NUPAB	169,	641	R.W. Hoff, E.K. Hulet, R.J. Dupzyk, et al.
1971Ho24	PRVCA	4,	1182	M. Honda, M. Imamura
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, et al.
1971Ib01	PHSTB	4,	161	N. Ibrahiem, H. Pettersson
1971In03	JUPSA	30,	884	T. Inamura, A. Hashizume, T. Katou, et al.
1971In04	NUPAB	171,	241	H. Ingwersen, W. Klinger, W. Kreische, et al.
1971Is04	PYLBB	35,	398	M. Ishihara, H. Kawakami, N. Yoshikawa, et al.
1971Ja07	PRVCA	4,	1889	A.H. Jaffey, K.F. Flynn, L.E. Glendenin, et al.
1971Ja09	PRVCA	3,	2489	A.A. Jaffe, G.A. Bissinger, S.M. Shafroth, et al.
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, et al.
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, et al.
1971Ki01	NUPAB	170,	187	C.H. King, P.R. Maurenzig, N. Stein, et al.
1971Ki15	YAFIA	14,	249	B.G. Kiselev, V.N. Levkovskiĭ, O.I. Artem'ev
1971Kr15	PRVCA	4,	1329	K.S. Krane, J.R. Sites, W.A. Steyert
1971Kr19	PRVCA	4,	1942	K.S. Krane, C.E. Olsen, J.R. Sites, et al.
1971Kr22	BMBW-FB-K-71-12		7	K.-L. Kratz
1971La01	CJPHA	49,	54	I.M. Ladenbauer-Bellis, H. Bakhru, R. Bakhru
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, et al.
1971Li02	NUPAB	160,	630	E.W.A. Lingeman, F.W.N. De Boer, P. Koldewijn, et al.
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, et al.
1971Ma32	JINCA	33,	1241	K.W. MacMurdo, R.M. Harbour, R.W. Benjamin
1971Ma36	PYLBB	35,	401	K.H. Maier, J.R. Leigh, F. Puhlhofer, et al.
1971Ma45	NUPAB	172,	298	P. Manfrass, H. Prade, M.R. Beitins, et al.
1971Ma47	NUPAB	174,	343	S. Matsuki, Y. Yoshida, M. Hyakutake, et al.
1971MaXN	REPT LYCEN-7104,PS			4-1,12/18/72
1971Mc19	JINCA	33,	3251	J.E. McCracken, J.R. Stokely, R.D. Baybarz, et al.
1971Mi01	PRVCA	3,	766	M.M. Minor, R.K. Sheline, E.T. Jurney
1971Mi06	JUPSA	30,	311	T. Minamisono, K. Matuda, A. Mizobuchi, et al.
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, et al.
1971Mo03	PRLTA	26,	854	H.T. Motz, E.T. Jurney, E.B. Shera, et al.
1971Mo04	CJPHA	49,	108	R.S. Mowatt, W.H. Walker
1971Mo20	NUPAB	168,	561	N.A. Morcos, T.E. Ward, P.K. Kuroda
1971My01	APOBB	2,	441	B. Myslek, B. Pietrzek, Z. Sujkowski, et al.
1971Na01	PRVCA	3,	247	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Na02	PRVCA	3,	254	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Or04	PRVCA	3,	2402	C.J. Orth, B.J. Dropesky, N.J. Freeman
1971Ot01	NUPAB	164,	69	H. Ottmar, N.M. Ahmed, U. Fanger, et al.
1971OtZZ	P-Jer	2,	363	E.W. Otten
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, et al.
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, et al.
1971Ra17	NUPAB	170,	199	J. Rapaport, T.A. Belote, D.E. Bainum
1971Ra18	PRVCA	4,	601	H.L. Ravn, P. Bogeholt
1971Ra35	NUPAB	177,	307	J. Rapaport, W.E. Dorenbusch, T.A. Belote
1971Re06	NUPAB	163,	161	R.C. Reno, M. Fishbein, C. Hohenemser
1971Re11	ZEPYA	243,	418	R. Repnow, V. Metag, P. von Brentano
1971Ro16	NUPAB	172,	643	B. Rosner, J. Felsteiner, H. Lindeman, et al.
1971Ro19	JINCA	33,	2684	G. Rossner, G. Herrmann

1971Ro21	CJPHA	49,	2227	R.G.H. Robertson, Sung Ho Choh, R.G. Summers-Gill, et al.
1971Ru03	PRVCA	3,	1595	P.A. Russo, R. Vandenbosch, M. Mehta, et al.
1971Ru17	PYLAA	36,	321	S.L. Ruby, R.G. Clark, L.E. Glendenin
1971Sc07	NUPAB	165,	415	L.A. Schaller, J. Kern, B. Michaud
1971Sc.1	JRNCD	9,	55	R. VanSchandevijl, R. VanGrieken, J. Hoste
1971Sh04	ZEPYA	242,	368	W.N. Shelton, R.K. Sheline
1971ShZD	IAEA-R-611-F			S. Shalev
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
1971Ta03	NUPAB	164,	565	L.M. Taff, B.K.S. Koene, J. van Klinken
1971Ta07	PRVCA	4,	517	K. Takehashi, D.L. Swindle, P.K. Kuroda
1971Ta17	NUPAB	173,	465	B. Tamain, B. Pfeiffer, H. Wollnik, et al.
1971Te07	NUPAB	175,	433	J.K. Temperley, J.A. Morrissey, S.L. Bacharach
1971ThZM	BAPSA	16,	1155	J.A. Thomson, R.P. Scharenberg, W.R. Lutz
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
1971To12	NUPAB	178,	69	D.F. Torgerson, N.S. Oakey, R.D. Macfarlane
1971To13	JINCA	33,	3609	L. Tomlinson, M.H. Hurdus
1971ToZR	ORNL-4706,		15	K.S. Toth, R.L. Hahn, M.A. Ijaz
1971Tr02	PYLBB	34,	277	B.L. Tracy, J. Chaumont, R. Klapisch, et al.
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, et al.
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
1971Vo03	ZEPYA	244,	44	C. von Platen, J. Bonn, U. Kopf, et al.
1971Wa05	JINCA	33,	1208	F.W. Walker, T.A. Devito, F.M. Rourke, et al.
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, et al.
1971WiZB	BAPSA	16,	1417	R.L. Williams, Jr., R.C. Haskell, L. Madansky
1971Ya10	PYLBB	37,	369	K. Yagi, K. Sato, Y. Aoki
1971Zi03	PRVCA	4,	1809	M.S. Zisman, B.G. Harvey

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1972Ad01	NUPAB	180,	587	A. Adam, D. Horvath, A. Kiss, et al.
1972Ad14	NUPAB	198,	380	K.-E. Adelroth, C. Ekstrom
1972Ah04	NUPAB	186,	620	I. Ahmad, R.K. Sjoblom, R.F. Barnes, et al.
1972Ah07	JINCA	34,	3335	I. Ahmad, R.F. Barnes, R.K. Sjoblom, et al.
1972Al01	PRVCA	C5,	274	D.E. Alburger
1972Al49	PHSTB	6,	219	G. Albouy, J.M. Lagrange, M. Pautrat, et al.
1972Am01	PRVCA	5,	270	S. Amiel, H. Feldstein, M. Oron, et al.
1972Ba08	CJPHA	50,	34	R.C. Barber, R.L. Bishop, J.O. Meredith, et al.
1972Ba22	PRLTA	28,	720	F. Bacon, G. Kaindl, H.-E. Mahnke, et al.
1972Ba26	PRVCA	5,	1351	T.T. Bardin, J.A. Becker, T.R. Fisher
1972Ba31	NUPAB	184,	609	D. Bachner, H. Kelleter, B. Schmidt, et al.
1972Ba35	PRLTA	28,	1069	G.C. Ball, W.G. Davies, J.S. Forster, et al.
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, et al.
1972Bb24	ZETFA	63,	375	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov, et al.
1972Be11	NUPBB	39,	371	K.-E. Bergkvist
1972Be12	PRVCA	5,	1426	W. Benenson, J. Driesbach, I.D. Proctor, et al.
1972Be44	ZEPYA	252,	349	H. Behrens, M. Kobelt, W.G. Thies, et al.
1972Be51	PRVCA	6,	957	R.R. Betts, H.T. Fortune, D.J. Pullen
1972Be89	IANFA	36,	2490	E.E. Berlovich, Y.S. Blinnikov, P.P. Vaishnis, et al.
1972Bl16	NUPAB	197,	620	J. Bleck, R. Butt, K.H. Lindenberger, et al.
1972Bo09	PYLBB	38,	308	J. Bonn, G. Huber, H.-J. Kluge, et al.
1972Bo46	PRVCA	6,	1322	L.M. Bollinger, G.E. Thomas
1972Bo67	PYLAA	42,	93	L.A. Boatner, R.W. Reynolds, C.B. Finch, et al.
1972Br13	NUPAB	185,	289	M. Brien, J.E. Kitching, J.K.P. Lee, et al.
1972Br31	APOBB	3,	263	R. Broda, M. Rybicka, J. Styczen, et al.
1972Br35	PRVCA	6,	1090	H.C. Britt, B.H. Erkkila, B.B. Back
1972Br53	NUIMA	104,	45	O. Brandstadter, F. Girsig, F. Grass, et al.
1972Bu05	JINCA	34,	1087	F.T. Bunus
1972Ca01	KDVSA	38,	#13	R.F. Casten, P. Kleinheinz, P.J. Daly, et al.
1972Ca07	NUIMA	98,	432	J.L. Campbell, L.A. McNellen
1972Ca10	NUPAB	184,	357	R.F. Casten, E.R. Flynn, O. Hansen, et al.
1972Ca33	NUPAB	198,	289	P.L. Carson, L.C. McIntyre
1972Ce01	NUPAB	188,	666	J. Cerny, R.A. Gough, R.G. Sextro, et al.
1972Ch11	NUPAB	186,	603	R. Chapman, W. McLatchie, J.E. Kitching
1972Ch13	NUPBB	40,	428	Y.Y. Chu, E.M. Franz, G. Friedlander
1972Ch23	PRVCA	6,	628	Y.Y. Chu
1972Ch33	NUPAB	193,	225	H.C. Cheung, J.K.P. Lee, J.E. Kitching, et al.
1972Ch44	NUPAB	197,	490	A. Charvet, R. Chery, D.H. Phuoc, et al.
1972Co18	NUPAB	189,	65	T.W. Conlon
1972Co26	JINCA	34,	2971	K.E. Collins, C.H. Collins, P.A. Kapauan, et al.
1972Cr02	PRVCA	5,	419	D.F. Crisler, H.B. Eldridge, R. Kunselman, et al.
1972Cu07	NUPAB	196,	593	J.C. Cunnane, R. Hochel, C.W. Yates, et al.
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
1972De23	JINCA	34,	1105	M.K. Dewanjee, I.L. Preiss
1972De43	NUPAB	194,	140	P. Del Marmol, P. Fettweis
1972De47	NUPAB	195,	385	P. Debenham, N.H. Hintz
1972De67	JRNCD	10,	125	M. de Bruin, P.J.M. Korthoven
1972DeYN	REPT COO-535-674,P			55,C Detraz,12/1/72
1972Dr06	NUPAB	192,	595	C. Droste, W. Neubert, S. Chojnacki, et al.
1972Dz13	YAFIA	15,	1093	J.D. Dzafar, A.A. Abdullah, N.H. Al Quaraishi, et al.
1972Eh02	PRVCA	6,	618	B. Ehrenberg, S. Amiel
1972Ek01	PYLBB	39,	199	C. Ekstrom, S. Ingelman, B. Wannberg, et al.
1972Ek04	NUPAB	196,	178	C. Ekstrom, S. Ingelman, M. Olsmats, et al.
1972Ek05	PHSTB	6,	181	C. Ekstrom, S. Ingelman, M. Olsmats, et al.
1972El03	CJPHA	50,	674	S.A. Elbakr, C. Glavina, W.K. Dawson, et al.
1972Em01	NSENA	48,	319	J.F. Emery, S.A. Reynolds, E.I. Wyatt, et al.
1972Ep01	PRVCA	5,	1084	R.E. Eppley, R.R. Todd, R.A. Warner, et al.
1972Er05	NUPAB	194,	449	B.R. Erdal, L. Westgaard, J. Żylicz, et al.
1972Es03	PRVCA	5,	942	K. Eskola
1972Ev01	PRVCA	6,	1372	J.L. Evans, J.R. Cooper, D.M. Moore, et al.
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, et al.
1972Fi12	NUPAB	188,	369	M. Finger, R. Foucher, J.P. Husson, et al.
1972Fi14	PYLBB	40,	87	W. Fischer, H. Huhnermann, K. Mandrek, et al.
1972Fi19	ZEPYA	254,	127	W. Fischer, H. Huhnermann, K. Mandrek

1972Fi.A	AnRpt MSUCL		28	R.B. Firestone, K. Kosanke, W.C. McHarris, et al.
1972Fl03	JINCA	34,	1121	K.F. Flynn, A.H. Jaffey, W.C. Bentley, et al.
1972Fl17	PYLBB	42,	49	E.R. Flynn, J.D. Garrett
1972FlZM	PrvCom	NDG		K.F. Flynn
1972Fo25	PHSTB	6,	309	I. Forsblom, T. Weckstrom, T. Sundius, et al.
1972Fu10	NCLTA	4,	430	A. Fubini
1972Ga27	PRLTA	29,	958	H. Gauvin, Y. Le Beyec, M. Lefort, et al.
1972Ga35	AENGA	32,	177	V.Y. Gabeskiriya
1972Ga42	AENGA	33,	829	Y.P. Gangrskii, Nguen Kong Khan, D.D. Pulatov
1972Ge10	CJPHA	50,	1480	J.S. Geiger
1972Gi17	NUIMA	105,	179	H.J. Gils, R. Lohken, W. Wiesner
1972Go03	PRLTA	28,	510	R.A. Gough, R.G. Sextro, J. Cerny
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, et al.
1972Gr19	NUPAB	189,	592	T. Grotdal, J. Limstrand, K. Nybø, et al.
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, et al.
1972GrYM	JUL-879-NP			J.W. Gruter
1972Ha41	NUPAB	191,	497	B. Harmatz, T.H. Handley
1972Ha73	NUPAB	197,	111	U. Hagemann, K.-H. Kaun, W. Neubert, et al.
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
1972He37	ZEPYA	256,	448	W. Herzog
1972He.A	AnRpt Grenoble			M. Hermen, A. Gizon also Thesis Grenoble 1971
1972Ho18	NUPAB	187,	599	P. Hornshøj, K. Wilsky, P.G. Hansen, et al.
1972Ho19	NUPAB	187,	609	P. Hornshøj, K. Wilsky, P.G. Hansen, et al.
1972Hs01	NUPAB	179,	80	T.H. Hsu, R. Fournier, B. Hird, et al.
1972Hu06	NUPAB	189,	264	F.R. Hudson, R.N. Glover
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, et al.
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, et al.
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
1972Kl04	PRLTA	29,	1254	R. Klapisch, C. Thibault, A.M. Poskanzer, et al.
1972Ko35	NUPAB	194,	614	B. Kolk, F. Pleiter, W. Heeringa
1972Ko47	PRVCA	6,	1713	S.E. Koonin, B.I. Persson
1972La14	IJARA	23,	219	F. Lagoutine, J. Legrand, C. Perrot, et al.
1972La20	ZEPYA	253,	16	R. Lasijo, R.K. Sheline, R.D. Griffioen, et al.
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
1972LoZL	P-Budapest		32	A. Lottin, A. Jain
1972Ly01	NUPAB	182,	272	L.L. Lynn, R.C. Schaller, D.A. Barbour, et al.
1972Ma15	PRVCA	5,	1380	J.V. Maher, J.R. Erskine, A.M. Friedman, et al.

1972Ma42	PHSTB	5,	58	C.G. Mattsson, S.E. Arnell, L. Jonsson
1972Ma.A	P-Budapest		90	P. Matusek, H. Ottmar, C. Weitkamp, et al.
1972Mc08	PRVCA	5,	922	D.A. McClure, J.W. Lewis,III
1972Mc25	ZEPYA	255,	335	J.C. McGeorge, D.W. Nix, R.W. Fink, et al.
1972Mc29	IJARA	23,	527	G.W. McBeth, R.A. Winyard
1972Me09	NUPAB	185,	625	M.A. Meyer, J.P.L. Reinecke, D. Reitmann
1972Mi16	HPACA	45,	93	B. Michaud, J. Kern, L. Ribordy, et al.
1972Mi23	NUIMA	104,	11	G.H. Miller, P. Dillard, M. Eckhause, et al.
1972Mi26	JUPSA	33,	1505	K. Miyano, H. Nakharr, G. Gil
1972Mi27	JUPSA	33,	1509	K. Miyano, C. Gil
1972Mo08	PRVCA	5,	1122	C.E. Moss, C. Detraz, C.S. Zaidins, et al.
1972Mo12	PRVCA	5,	1678	R.A. Moyer
1972Mo23	JINR-P13-6427			V.A. Morozov, T.M. Muminov
1972Mo33	NUPAB	195,	192	E. Monnand, R. Brissot, L.C. Carraz, et al.
1972Mu02	PRVCA	5,	95	T. Mukoyama, S. Shimizu
1972Mu03	NUPAB	179,	205	F. Munnich, H. Kugler, H. Schrader, et al.
1972Mu09	PRVCA	6,	1802	T.J. Mulligan, E.R. Flynn, O. Hansen, et al.
1972Mu.A	BAPSA	17,	557	S.F. Mughabghab, G.W. Cole, R.E. Chrien, et al.
1972Na02	NUPAB	182,	84	S. Nagamiya, T. Inamura
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
1972Ni01	PHYSA	57,	1	L. Niesen, W.J. Huiskamp
1972Og03	IJMIB	8,	365	K. Ogata
1972Oh05	JUPSA	32,	1466	H. Ohnuma, T. Suehiro, Y. Ishizaki, et al.
1972Op01	NUPAB	180,	569	A.M.F. Op den Kamp, A.M.J. Spits
1972OtZX	P-Osaka		36	E.W. Otten
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, et al.
1972Pa26	NUPAB	194,	443	D.G. Parkinson, I.A. Fraser, J.C. Lisle, et al.
1972Pe01	NUPAB	178,	449	J. Pedersen, B. Rasmussen
1972Pe05	PRVCA	5,	1443	B.I. Persson, S.E. Koonin
1972Pi07	ZEPYA	252,	206	M. Piiparinen
1972Po04	PRVCA	5,	1738	F.T. Porter, I. Ahmad, M.S. Freedman, et al.
1972PoZS	Th.-Amsterdam			J.C. Post, Thesis, University of Amsterdam
1972PoZU	PrvCom	NDG	Jun	J.K. Poggenburg
1972Pu02	ZEPYA	252,	283	V. Pursiheimo, T. Tuurnala, T. Raunemaa
1972Ra05	PRVCA	5,	453	J. Rapaport, J.B. Ball, R.L. Auble, et al.
1972Ra16	PYLBB	39,	337	H.L. Ravn, S. Sundell, L. Westgaard
1972Ra39	NUPAB	197,	129	D. Rabenstein, D. Harrach, H. Vonach, et al.
1972Ri08	PRVCA	5,	2072	F.A. Rickey, E.T. Jurney, H.C. Britt
1972Sa02	PRVCA	5,	138	E.A. Samworth, E.K. Warburton, G.A.P. Engelbertink
1972Sc08	ZEPYA	249,	286	W.D. Schmidt-Ott, R.W. Fink
1972Sc48	RAACA	18,	123	H.-D. Schussler, G. Herrmann
1972ScYY	BMBW-FBK-72-15		88	F.J. Schweden, N. Kaffrell
1972Sh01	PrvCom	NDG	Jan	D.A. Shirley
1972Sh08	NUPAB	189,	220	R.E. Shamu, E.M. Bernstein, D. Blondin, et al.
1972Sh13	PRVCA	6,	537	E.B. Shera, U. Gruber, B.P.K. Maier, et al.
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, et al.
1972Si28	NUPAB	193,	449	M. Singh, J.W. Sunier, R.M. Devries, et al.

1972Si50	IJOPA	10,	289	J. Singh
1972Sk03	YAFIA	15,	444	N.K. Skobelev
1972Sl03	NUPAB	186,	28	W.F. Slot, G.H. Dulfer, H. Van der Molen, et al.
1972Sv02	PHSTB	5,	23	B. Svahn, C. Bergman, H. Petterson
1972Sw01	NUPAB	185,	561	D.L. Swindle, N.A. Morcos, T.E. Ward, et al.
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, et al.
1972To07	NUPAB	189,	609	J.P. Torres, P. Paris, D. Lecouturier, et al.
1972To19	PRVCA	6,	2297	K.S. Toth, R.L. Hahn, C.R. Bingham, et al.
1972Tr08	RAACA	18,	86	N. Trautmann, N. Kaffrell, H.W. Behlich, et al.
1972Vi10	RRPQA	17,	1031	N. Vilcov, G. Griffith, I. Vilcov, et al.
1972Vi11	RAACA	17,	213	J. Visser, L. Lindner
1972Vo08	PRVCA	6,	266	T. von Egidy, O.W.B. Schult, D. Rabenstein, et al.
1972Vy04	IANFA	36,	718	T. Vylov, I.I. Gromova, V.V. Kuznetsov, et al.
1972Vy07	YAFIA	16,	454	I. Vylkov, N. Vylkov, Y.P. Gangrskii, et al.
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, et al.
1972Wh02	PRVCA	5,	513	D.H. White, R.E. Birkett
1972Wh05	NUPAB	187,	12	D.H. White, R.E. Howe
1972Wi18	NUPAB	191,	166	W. Wiesner, D. Flothman, H.J. Gils, et al.
1972Wo06	NUPAB	181,	289	B. Wolbeck, K. Zioutas
1972Wo07	PYLBB	38,	405	K.L. Wolf, J.P. Unik
1972Za04	PRVCA	6,	506	J.I. Zaitz, R.K. Sheline
1972Zi02	NUPAB	181,	465	J. Zioni, A.A. Jaffe, E. Friedman, et al.

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1973Ab03	PYLAA	44,	527	M.M. Abraham, L.A. Boatner, C.B. Finch, et al.
1973Ab10	IANFA	37,	1967	S.N. Abramovich, B. Ya. Guzhkovskii, A.G. Zvenigorodskii, et al.
1973Ad02	PRVCA	7,	889	E.G. Adelsberger, A.B. McDonald, C.L. Cocke, et al.
1973AfZV	P-Dubna		161	V.P. Afanasev, Ts. Vylov, N.A. Golovkov, et al.
1973AfZY	P-Tbilisi		126	V.P. Afanasev, Ts. Vylov, B.S. Dzhelepov, et al.
1973Ag01	NUPAB	202,	37	P. Aguer, A. Peghaire, C.F. Liang
1973Ah02	PRVCA	8,	737	I. Ahmad, J. Milsted, R.K. Sjoblom, et al.
1973Ah04	NUPAB	208,	287	I. Ahmad, H. Diamond, J.M. Isted, et al.
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, et al.
1973ArZI	INR-1464,		14	J. Araminowicz, J. Dresler
1973Ba11	PRVCA	7,	1654	F. Bacon, G. Kaindl, H.-E. Mahnke, et al.
1973Ba20	IANFA	37,	38	L.M. Bak, V.G. Nedovesov, Y.V. Kholnov, et al.
1973Ba21	IANFA	37,	68	K.A. Baskova, S.S. Vasilev, E.P. Grigorev, et al.
1973Ba22	IANFA	37,	73	K.A. Baskova, S.S. Vasilev, M.A. Mokhsen, et al.
1973Ba34	PRLTA	31,	395	G.C. Ball, J.G. Costa, W.G. Davies, et al.
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, et al.
1973Ba56	PRVCA	8,	1438	J.B. Ball, J.J. Pinajian, J.S. Larsen, et al.
1973Ba72	NUPAB	217,	116	B.B. Back, E.R. Flynn, O. Hansen, et al.

1973Be09	PYLBB	43,	117	W. Benenson, E. Kashy, I.D. Proctor, et al.
1973Be23	PRVCA	8,	210	W. Benenson, E. Kashy, I.D. Proctor
1973Be32	PHSTB	8,	5	I. Bergstrom, J. Blomqvist, A. Filevich, et al.
1973Be33	PRLTA	31,	647	C.E. Bemis, Jr., R.J. Silva, D.C. Hensley, et al.
1973Bi06	PRVCA	7,	2575	C.R. Bingham, D.U. O'Kain, K.S. Toth, et al.
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
1973Br05	PYLBB	43,	386	H.F. Brinckmann, D.D. Clark, N.J.S. Hansen, et al.
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, et al.
1973Br38	ADNDA	12,	407	H.C. Britt
1973Bu02	CJPHA	51,	455	D.G. Burke, J.C. Waddington, D.E. Nelson, et al.
1973Bu17	IANFA	37,	938	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov, et al.
1973Bu18	IANFA	37,	953	V.S. Buttsev, Ts. Vylov, K.Y. Gromov, et al.
1973Bu21	IANFA	37,	1024	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov
1973Ca06	NUPAB	201,	561	P.T. Callaghan, M. Kaplan, N.J. Stone
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, et al.
1973Cl15	JOGLA	12,	411	H.B. Clausen
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
1973DaZL	LYCEN-7301,		55	J. Daniere, R. Rougny
1973De16	PRVCA	7,	2131	J.H. Degnan, G.R. Rao
1973De39	IANFA	37,	998	A.M. Demidov, M.R. Akhmed, M.A. Khalil, et al.
1973Dj01	PRVCA	8,	323	F. Djadali, K. Krien, R.A. Naumann, et al.
1973Dr10	AENGA	35,	279	V.B. Druin, Y.V. Lobanov, D.M. Nadkarni, et al.
1973DrZM	ORNL-4891		23	R.E. Druschel, R.D. Baybarz, J. Halperin
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, et al.
1973Fi02	NUPAB	204,	516	L.K. Fifield, J.W. Noe, D.P. Balamuth, et al.
1973Fi06	NUPAB	208,	269	P.R. Fields, I. Ahmad, R.F. Barnes, et al.
1973Fi12	PRVCA	8,	2203	L.K. Fifield, R.W. Zurmuhle, D.P. Balamuth, et al.
1973Fo15	NUPAB	211,	310	B. Forkman, P. Janecek, G.G. Jonsson, et al.
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
1973Ga08	NUPAB	208,	360	H. Gauvin, R.L. Hahn, Y. Le Beyec, et al.
1973Gh03	PRVCA	7,	2032	A. Ghiorso, K. Eskola, P. Eskola, et al.
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, et al.
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, et al.
1973Gu05	NUPAB	205,	574	H. Guratzsch, A.P. Kabachenko, I.V. Kuznetsov, et al.
1973Gu06	IJARA	24,	87	E. Gunther, K. Knauf, K.F. Walz
1973Ha02	NUPAB	199,	560	S.I. Hayakawa, S.K. Mark, J.K.P. Lee, et al.
1973Ha11	NUPAB	203,	532	J.K. Halbig, F.K. Wohn, W.L. Talbert, Jr., et al.
1973Ha20	NUTYB	17,	280	A. Haccoun, K. Preiss, G. Shani
1973Ha32	PRLTA	31,	323	O. Hausser, W. Witthuhn, T.K. Alexander, et al.
1973He19	NUPAB	211,	1	R.G. Helmer, C.W. Reich
1973Hi01	NUPAB	212,	365	P.F. Hinrichsen, G. Kennedy, T. Paradellis
1973Hi06	PYLBB	45,	244	K. Hiruta, T. Nomura, T. Inamura, et al.
1973Hi.A	HPACA	47,	93	T. Hinderling, H.H. Staub
1973Ho09	NUPAB	211,	165	R. Hochel, P.J. Daly, K.J. Hofstetter
1973Hu01	RRALA	13,	217	E.K. Hulet, J.F. Wild
1973Hu07	PYLBB	46,	361	E. Huenges, H. Rosler, H. Vonach
1973In02	NUPAB	203,	164	H. Ing, J.D. King, R.L. Schulte, et al.
1973In04	PHSTB	7,	24	S. Ingelman, C. Ekstrom, M. Olsmats, et al.
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
1973Jo12	ZEPYA	262,	247	H.W. Jongsma, J.C. de Lange, H. Verheul, et al.
1973JoZL	P-Munich 1,		690	B. Jonson, P.G. Hansen, P. Hornshoj, et al.
1973Ka03	NUPAB	203,	97	N. Kato
1973Ka07	JUPSA	34,	857	K. Kawade, H. Yamamoto, K. Tsuchiya, et al.
1973Ka10	ZENAA	28,	541	N. Kaffrell, N. Trautmann
1973Ka23	PRVCA	8,	414	N. Kaffrell
1973Ka45	RAACA	19,	1	H.M.A. Karim
1973Ki09	PRVCA	8,	1920	B.T. Kim, W.K. Chu, J.C. Glass
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, et al.
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, et al.
1973Ku17	RRALA	15,	29	J.G. Kuhry, G. Bontems
1973La17	PRVCA	7,	2600	H. Lancman, A. Bond
1973La20	PRVCA	8,	715	J.C.F. Lau, J.J. Hogan
1973Le18	MTRGA	9,	14	V.E. Lewis, D. Smith, A. Williams
1973Li01	NUPAB	199,	504	P. Limkilde, G. Sletten
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, et al.
1973Mi05	IJARA	24,	185	B.J. Mijnheer, E. Van den Hauten-Zuidema
1973Mo03	NUPAB	202,	473	M.A. Moinester, G. Finkel, J. Alster, et al.
1973Mo18	JINCA	35,	3659	N.A. Morcos, W.D. James, D.E. Adams, et al.
1973Mo23	PRVCA	8,	1961	A. Moalem, B.H. Wildenthal
1973My02	JINCA	35,	3985	W.A. Myers, R.J. Nagle, Jr.
1973Na03	PRVCA	7,	1222	M.N. Namboodiri, F.H. Ruddy, J.M. Alexander
1973Na35	MGFFA	21,	555	T. Nagy
1973Ne02	JINCA	35,	361	D.A. Newton, S. Sarkar, L. Yaffe, et al.

1973Ne10	ZEPYA	261,	237	R. Neugart
1973No09	NUPAB	217,	253	T. Nomura, K. Hiruta, T. Inamura, et al.
1973Oe02	ZEPYA	259,	263	W. Oelert
1973Ok.A	PrvCom	NDG	Aug	G.D. O'Kelley, C.F. Goeking, L.L. Collins, et al.
1973Oo01	NUPAB	213,	221	M.A. Oothoudt, N.M. Hintz
1973Or03	PRVCA	8,	718	C.J. Orth, W.R. Daniels, D.C. Hoffman, et al.
1973Or06	PRVCA	8,	2364	C.J. Orth, W.R. Daniels, B.J. Dropesky
1973Pa03	NUPAB	201,	449	M. Pautrat, G. Albouy, J.C. David, et al.
1973Pa04	NUPAB	201,	469	M. Pautrat, G. Albouy, J.M. Lagrange, et al.
1973Pa21	PHFEA	8,	345	A. Pakkanen, D.W. Heikkinen
1973PaZV	PrvCom			D.G. Parkinson, I.A. Fraser, J.C. Lisle, et al.
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, et al.
1973Re03	PRVCA	7,	1663	I. Rezanka, I.M. Ladenbauer-Bellis, T. Tamura, et al.
1973Re04	PRVCA	7,	2065	R.J. Reimann, M.N. McDermott
1973Ry01	PYLBB	43,	30	J.S. Ryder, G.J. Clark, J.E. Draper, et al.
1973Sa22	JINCA	35,	2139	G.N. Salaita, P.K. Eapen
1973Sc17	PYLBB	44,	449	H. Schmeing, J.C. Hardy, R.L. Graham, et al.
1973Sc19	JINCA	35,	3055	O. Scheidemann, E. Hagebo
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
1973SeYW	BMFT-FBK-73-22		131	K.-E. Seyb
1973Sh.A	PrvCom	NDG	Jan	E.B. Shera in NDS974
1973Si40	NUPAB	216,	97	R.J. Silva, P.F. Dittner, M.L. Mallory, et al.
1973Sp06	NUPAB	215,	260	A.M.J. Spits, J.A. Akkermans
1973Sr05	EGCEA	68,	252	B. Srinivasan, E.C. Alexander, Jr., R.D. Beaty, et al.
1973Sv01	PHSTB	7,	257	B. Svahn, C. Bergman, A. Johansson, et al.
1973Sz03	RRALA	14,	135	A. Szalay, S. Uray
1973Ta04	JUPSA	34,	848	I. Tanihata, T. Minamisono, A. Mizobuchi, et al.
1973To02	PRVCA	7,	2010	K.S. Toth, R.L. Hahn, C.R. Bingham, et al.
1973Ur01	ATKOA	15,	161	I. Uray
1973Va11	ZEPYA	259,	45	S.Y. Van der Werf
1973Va16	PRVCA	8,	1080	R. Vandenbosch, P.A. Russo, G. Sletten, et al.
1973Ve06	PRVCA	8,	178	J. Vernotte, S. Galès, M. Langevin, et al.
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
1973We08	JINCA	35,	2145	R. Weiss-Reuter, H. Munzel, G. Pfennig
1973Wi06	PRLTA	30,	866	K.H. Willcox, N.A. Jelley, G.J. Wozniak, et al.
1973Wo01	PRVCA	7,	160	F.K. Wohn, J.K. Halbig, W.L. Talbert, Jr., et al.
1973Wo03	PYLBB	43,	25	K.L. Wolf, J.P. Unik
1973Ya02	NUPAB	204,	33	S.W. Yates, P.J. Daly, N.R. Johnson, et al.
1973Za08	ZEPYA	264,	227	J.I. Zaitz, R.K. Sheline, R.D. Griffieon

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1974Aj01	NUPAB	227,	1	F. Ajzenberg-Selove, T. Lauritsen
1974Al03	PRVCA	9,	991	D.E. Alburger
1974Al04	PYLBB	49,	40	M.M. Aleonard, C. Boursiquot, P. Hubert, et al.
1974Al10	YAFIA	19,	949	V.V. Alekseev, O.F. Nemets, Y.S. Stryuk, et al.

1974Al28	IANFA	38,	2103	A.A. Aleksandrov, V.S. Buttsev, T. Vylov, et al.
1974An04	NUPAB	220,	438	W. Andrejtscheff, P. Manfrass, H. Prade, et al.
1974An05	IANFA	38,	48	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, et al.
1974An22	IANFA	38,	1741	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, et al.
1974An23	IANFA	38,	1748	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, et al.
1974An24	IANFA	38,	1757	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, et al.
1974Ap01	PRVCA	9,	310	K.E. Apt, W.B. Walters
1974Ar17	JINCA	36,	1689	P.O. Aronsson, G. Skarnemark, M. Skarestad
1974Ar22	JINCA	36,	2397	P.O. Aronsson, B.E. Johansson, J. Rydberg, et al.
1974Ar25	INUCA	10,	753	P.O. Aronsson, G. Skarnemark, E. Kvale, et al.
1974Ar27	IANFA	38,	1569	R. Arlt, K.Y. Gromov, A. Latuszynski, et al.
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, et al.
1974Ba29	PRVCA	9,	2010	A.R. Barnett, J.S. Lilley
1974Ba82	PRVCA	10,	2636	S.L. Bacharach, P.S. Hoeper, J.A. Morrissey, et al.
1974Ba90	CJPHA	52,	2386	R.C. Barber, J.W. Barnard, D.A. Burrel, et al.
1974BaZB	P-Kharkov		56	N.B. Badalov, Sh. O. Omanov
1974Be07	PRVCA	9,	589	R.R. Betts, H.T. Fortune, D.J. Pullen
1974Be20	PRVCA	9,	2130	W. Benenson, E. Kashy, D.H. Kong, et al.
1974Be.A	ORNL-4967		37	C.E. Bemis, R.J. Silva, D.C. Hensley, et al.
1974Bi08	PRVCA	10,	729	P.K. Bindal, D.H. Youngblood, L. Kozun
1974Bl03	PHSTB	9,	321	J. Blomqvist, S. Borg, A. Kerek, et al.
1974Bo02	NUPAB	218,	621	J. Borggreen, J. Hattula, E. Kashy, et al.
1974Bo05	PRVCA	9,	836	J.D. Bowman, A.M. Poskanzer, R.G. Korteling, et al.
1974Bo26	NUIMA	117,	213	H.E. Bosch, J. Davidson, M.A. Fariolli, et al.
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, et al.
1974Ch17	JPSLB	35,	41	A. Charvet, R. Chery, R. Duffait
1974Ch18	PRVCA	9,	1839	R.E. Chrien, D.I. Garber, J.L. Holm, et al.
1974Ch21	ZEPYA	267,	355	A. Charvet, R. Chery, D.P. Phuoc, et al.
1974Ch38	JPBAB	7,	L262	R.J. Champeau, J.-J. Michel, H. Walther
1974Ch51	JOPQA	35,	1804	A. Charvet, R. Chery, P.H. Do, et al.
1974Ch53	PRVCA	10,	2467	S.K. Chang, M.C. Cheney, N. Sugarman
1974CiZX	P-Budapest		371	N. Cindro
1974ClZX	P-Rochester		221	R.G. Clark, L.E. Glendenin, W.L. Talbert, Jr.
1974Co05	PRVCA	9,	981	R. Colle, R. Kishore
1974Co16	PRVCA	9,	1819	R. Colle, R. Kishore, J.B. Cumming
1974Co27	PRVCA	10,	1236	J.R. Comfort, R.W. Finlay, C.M. McKenna, et al.
1974Co35	NUPAB	233,	185	F. Corvi, M. Stefanon
1974Da02	PRVCA	9,	216	C.N. Davids, D.R. Goosman, D.E. Alburger, et al.
1974De09	NUPAB	225,	317	F.W.N. De Boer, P.F.A. Goudsmit, P. Koldewijn, et al.
1974De22	YAFIA	19,	1161	R.A. Demirkhanov, M.I. Dzkuya, V.V. Dorokhov, et al.
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, et al.
1974De47	NUPAB	236,	349	F.W.N. De Boer, P.F.A. Goudsmit, B.J. Meijer, et al.
1974Di03	PRVCA	10,	1172	M. Diksie, L. Yaffe, D.G. Sarantites
1974Di.A	P-Amsterdam		114	J.S. Dionisio, C. Vieu, V. Berg, et al.
1974Do09	NUPAB	229,	47	G. Doukellis, C. McKenna, R. Finlay, et al.
1974Ek01	NUPAB	226,	219	C. Ekstrom, W. Hogervorst, S. Ingelman, et al.
1974Ek03	PHSTB	10,	301	C. Ekstrom, W. Hogervorst, S. Ingelman, et al.

1974EkZW	PrvCom	NDG		C. Ekstrom
1974EkZX	PrvCom	NDG	Mar	C. Ekstrom
1974Em01	NUPAB	231,	437	A. Emsallem, D.P. Huoc, R. Chery, et al.
1974En09	IANFA	38,	2090	A. Enulescu, I. Piticu, I. Vaviceta
1974Er.A	AnRpt Julich			R. Ermer, W. Delang, P. Gottel, et al.
1974Ev02	NUPAB	230,	109	D. Evers, W. Assmann, K. Rudolph, et al.
1974Fe05	PYLAA	49,	287	J. Ferch, W. Dankwort, H. Gebauer
1974FiZI	P-Delhi		7	P. Fintz, A. Gallmann, G. Guillaume, et al.
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, et al.
1974Ga41				
1974GaZD	P-Rochester		297	D. Galeriu, M. Marinescu, D. Poenaru, et al.
1974Ge05	PRVCA	9,	2363	W. Gelletly, W.R. Kane, D.R. MacKenzie
1974Gh04	PRLTA	33,	1490	A. Ghiorso, J.M. Nitschke, J.R. Alonso, et al.
1974Gi09	NUPAB	233,	81	S. Gilad, S. Cochavi, M.A. Moinester, et al.
1974Gl10	AENGA	37,	78	V.M. Glazov, R.I. Borisova, A.I. Shaviev
1974Go17	PRVCA	10,	756	D.R. Goosman, D.E. Alburger
1974Go18	NUPAB	227,	506	S.C. Goverse, J.C. Klein, J. Kuiper, et al.
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
1974GrYF	LF-59			B. Grapengiesser
1974Gu10	YAFIA	19,	1167	K. Gurach, A.P. Kabachenko, I.V. Kuznetsov, et al.
1974Ha02	PRVCA	9,	252	J.C. Hardy, H. Schmeing, W. Benenson, et al.
1974Ha10	IANFA	38,	2036	J.H. Hamilton, E.H. Spejewski, R.L. Mlekodaj, et al.
1974Ha26	NUPAB	223,	157	J.C. Hardy, H. Schmeing, J.S. Geiger, et al.
1974Ha35	PRLTA	33,	320	J.C. Hardy, G.C. Ball, J.S. Geiger, et al.
1974Ha55	PRVCA	10,	1829	G. Hardie, D. Gloeckner, L. Meyer-Schutzmeister, et al.
1974Ha59	PRLTA	33,	1647	J.C. Hardy, H.R. Andrews, J.S. Geiger, et al.
1974Ho17	PHSTB	9,	317	W. Hogervorst, C. Ekstrom, S. Ingelman, et al.
1974Ho21	PYLBB	51,	345	S.D. Hoath, R.J. Petty, J.M. Freeman, et al.
1974Ho26	NUPAB	230,	365	P. Hornshoj, P.G. Hansen, B. Jonson, et al.
1974Ho27	NUPAB	230,	380	P. Hornshøj, P.G. Hansen, B. Jonson
1974Hr01	NUPAB	219,	381	B. Hrastnik, H. Seyfarth, A.M. Hassan, et al.
1974Hu15	NUIMA	121,	307	E. Huenges, H. Vonach, J. Labetzki
1974Ia01	CJPHA	52,	96	R. Iafigliola, S.C. Gujrathi, B.L. Tracy, et al.
1974Is01	PRVCA	9,	1662	H.A. Ismail, W.H. Moore, J.N. Hallock, et al.
1974Ja10	PYLBB	49,	341	K.P. Jackson, J.C. Hardy, H. Schmeing, et al.
1974Je01	PRVCA	9,	2067	N.A. Jelley, K.H. Wilcox, R.B. Weisenmiller, et al.
1974Jo14	PRVCA	10,	2449	P.L. Jolivette, J.D. Goss, G.L. Marolt, et al.
1974Jo16	MPHYA	1,	280	A.S. Johnston
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, et al.
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
1974Kl07	NUPAB	227,	341	G. Klotz, G. Walter

1974Kn02	PRVCA	9,	1467	J.D. Knight, C.J. Orth, W.T. Leland, et al.
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, et al.
1974Le02	PRVCA	9,	1091	Y. Le Beyec, M. Lefort, J. Livet, et al.
1974Lu03	NUPAB	229,	230	R. Lutter, O. Hausser, D.J. Donahue, et al.
1974Ma09	PRVCA	9,	1633	R.G. Markham, H.W. Fulbright
1974Ma30	JINCA	36,	1687	H. Mabuchi, H. Takahashi, Y. Nakamura, et al.
1974Me15	YAFIA	19,	437	R.J. Metskvarishvili, Z.N. Miminoshvili, M.A. Elizbarashvili
1974MeYP	P-Rochester		317	V. Metag, E. Liukkonen, O. Glomset, et al.
1974Mu10	NUPAB	224,	437	F. Münnich, D. Lode, H. Schrader, et al.
1974Na07	PRVCA	9,	1848	H. Nann, W. Benenson, E. Kashy, et al.
1974NaYW	PrvCom	NDG	Oct	R. Nagle
1974Ne01	PRVCA	9,	674	E. Newman, K.S. Toth, D.C. Hensley, et al.
1974Ne14	ZEPYA	270,	121	W. Neumann, E. Huster
1974NeZI	P-Uppsala		103	R. Neugart, M. Deimling, J. Dietrich, et al.
1974No02	PRVCA	9,	1168	T. Nomura, K. Hiruta, M. Yoshie, et al.
1974No07	NUIMA	115,	189	J.A. Nolen, Jr., G. Hamilton, E. Kashy, et al.
1974NoZR	Th.-Ames			J.H. Norman, Thesis, Iowa State University, IS-T-627
1974Oe03	NUPAB	230,	413	W. Oelert, G. Lindstrom, V. Riech
1974Pe15	NUPAB	235,	205	R.J. Peel, D.R. Dixon, M.W. Hill, et al.
1974PeZS	P-Kharkov		106	I. Penev, K. Zuber, Y. Zuber, et al.
1974Po08	PRVCA	10,	803	F.T. Porter, I. Ahmad, M.S. Freedman, et al.
1974Po17	AENGA	37,	357	V.G. Polyukhov, G.A. Timofeev, P.A. Privalova, et al.
1974Pr15	IANFA	38,	2135	P.T. Prokofev, L.I. Simonov
1974Ra25	YAFIA	20,	617	Y.N. Rakivnenko, A.P. Klyucharev, V.A. Lutsik, et al.
1974Ra31	PHFEA	9,	103	V. Rahkonen, J. Kantele
1974Ra.A	P-Bombay		10	C.N. Rao, B.M. Rao, P.M. Rao, et al.
1974Ri03	PRVCA	9,	1978	K. Rimawi, J.B. Garg, R.E. Chrien, et al.
1974Ri08	NUPAB	228,	461	A. Riccato, P. David
1974RiYE	NEANDC(E)-162U		54	Ch. Ristori, J. Crancon
1974Ro01	PRVCA	9,	149	W.J. Roberts, E.E. Gross, E. Newman
1974Ro11	ZEPYA	266,	65	E. Roeckl, D. Lode, K. Bächmann, et al.
1974Ro12	ZEPYA	266,	123	E. Roeckl, D. Lode, W. Pessar
1974Ro14	PRVCA	9,	1402	R.L. Robinson, H.J. Kim, J.L.C. Ford, Jr.
1974Ro15	NUPAB	222,	621	E. Roeckl, P.F. Dittner, R. Klapisch, et al.
1974Ro16	PRVCA	9,	1801	R.G.H. Robertson, S.M. Austin
1974Ro17	PRLTA	32,	1207	R.G.H. Robertson, S. Martin, W.R. Falk, et al.
1974Ro18	PRVCA	9,	2272	S.J. Rothman, N.L. Peterson, W.K. Chen, et al.
1974Ro21	NUPAB	225,	109	D.C. Robinson, P.H. Barker
1974Ro31	PRVCA	10,	1181	E. Roeckl, P.F. Dittner, C. Détraz, et al.
1974Ro44	PRAMC	3,	186	A. Roy, K.V.K. Iyengar, M.L. Jhingan, et al.
1974Ru05	NUIMA	119,	269	H. Rubinsztein, I. Lindgren, L. Lindstrom, et al.
1974Ru08	NUIMA	120,	333	G. Rudstam, S. Shalev, O.C. Jonsson
1974Ry01	JPAGB	7,	2318	T.B. Ryves, K.J. Zieba
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, et al.
1974Sc26	PRLTA	33,	1343	D.K. Scott, B.G. Harvey, D.L. Hendrie, et al.
1974Se05	PRLTA	33,	233	K.K. Seth, A. Saha, W. Benenson, et al.
1974Se11	NUPAB	234,	130	R.G. Sextro, R.A. Gough, J. Cerny
1974Si18	APOBB	5,	549	J. Sieniawski
1974Sp02	NSENA	53,	326	V. Spiegel

1974Sp04	NUPAB	224,	517	A.M. Spits, J. de Boer
1974SpZS	P-Rochester		285	H.J. Specht, E. Konecny, J. Weber, et al.
1974Su04	PRVCA	10,	853	R.E. Sund, H. Weber, V.V. Verbinski
1974TiZW	P-Amsterdam	1,	83	R.G. Tirzell, L.G. Multhauf, S. Raman
1974To04	ZEPYA	268,	289	F. Tolea, K.R. Baker, W.D. Schmidt-Ott, et al.
1974To07	PRVCA	10,	2550	K.S. Toth, C.R. Bingham, W.D. Schmidt-Ott
1974Ts01	PRVCA	10,	838	C.W. Tse, J.N. Mundy, W.D. McFall
1974Va19	IANFA	38,	695	J. Vandlik, N.G. Zaitseva, Z. Mate, et al.
1974Vo08	IANFA	38,	672	I. Votsilka, K.U. Zibert, B. Kracik, et al.
1974Vy01	IANFA	38,	701	Ts. Vylov, N.A. Golovkov, K.Y. Gromov, et al.
1974Wa08	PRVCA	9,	1396	C.W. Wang, Y.C. Liu, E.K. Lin, et al.
1974Wa14	PRVCA	10,	1983	T.R. Ward, P.F. Haustein, J.B. Cumming, et al.
1974Wi14	PRVCA	10,	1993	D.H. Wilkinson, D.E. Alburger
1974Wi17	PRVCA	10,	2184	B.H. Wildenthal, J.A. Rice, B.M. Preedom
1974WoZW	BAPSA	19,	595	K.L. Wolf, J.W. Meadows
1974Ya07	JUPSA	37,	10	H. Yamamoto, K. Kawade, H. Fukaya, et al.

1975

1975Ad08	IANFA	39,	1681	I. Adam, G. Baier, K.Y. Gromov, et al.
1975Ad09	NUPAB	254,	63	I. Adam, K.Y. Gromov
1975Ag01	NUPAB	249,	239	P. Aguer, C.F. Liang, J. Libert, et al.
1975Ah01	NUPAB	239,	1	I. Ahmad, J. Milsted
1975Ah05	PRVCA	12,	541	I. Ahmad, F.T. Porter, M.S. Freedman, et al.
1975Al23	ZPAAD	273,	405	G. Albrecht, J.W. Hammer
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, et al.
1975Ar31	APOBB	6,	433	R. Arlt, A. Jasinski, W. Neubert, et al.
1975As03	JINCA	37,	1563	M. Asghar, J. Crancon, J.P. Gautheron, et al.
1975As04	NUPAB	247,	359	M. Asghar, J.P. Gautheron, G. Bailleul, et al.
1975Az01	PRVCA	12,	563	G. Azuelos, J.E. Kitching
1975Ba25	YAFIA	21,	230	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, et al.
1975Ba27	ZETFA	68,	8	S.A. Baranov, V.M. Shatinskii
1975Ba35	PRVCA	12,	451	B.P. Bayhurst, J.S. Gilmore, R.J. Prestwood, et al.
1975Ba36	ZEPYA	273,	283	G. Bailleul, J.P. Bocquet, H. Schrader, et al.
1975Ba65	YAFIA	22,	670	S.A. Baranov, V.M. Shatinskii
1975BaYJ	AnRpt CSNSM		35	G. Bastin, C.F. Liang
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, et al.
1975Be28	NUPAB	246,	317	H. Behrens, M. Kobelt, L. Szybisz, et al.
1975Be38	PYLBB	58,	46	W. Benenson, A. Guilchard, E. Kashy, et al.
1975Be.B	P-Paris		54	U. Bertsche, F. Rauch, K. Stelzer
1975Bh01	PRVCA	12,	1457	M.R. Bhat, R.E. Chrien, G.W. Cole, et al.
1975Bl01	PRVCA	11,	939	J.N. Black, W.C. McHarris, W.H. Kelly, et al.
1975Bo11	YAFIA	21,	233	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, et al.
1975Bo14	NUPAB	245,	107	W. Bohne, H. Fuchs, K. Grabisch, et al.
1975Bo29	ZPAAD	273,	373	H.E. Bosch, J. Davidson, V. Silbergleit, et al.
1975Bo52	IANFA	39,	2029	D.D. Bogdanov, I. Voborzhil, A.V. Demyanov, et al.
1975Bo59	RBFSA	5,	215	L.C.S. Boueres, O. Dietsch, T. Polga
1975Br02	PRVCA	11,	546	D. Breitig, R.F. Casten, W.R. Kane, et al.
1975Br16	NUPAB	245,	243	A.R. Brosi, B.H. Ketelle

1975Br29	NCIAA	30,	483	A. Brondi, R. Moro, P. Pelter, et al.
1975Br.A	Th.-Mainz			W. Brüchle
1975Bu01	PRVCA	11,	1401	D.L. Bushnell, J. Hawkins, R. Goebbert, et al.
1975Bu02	CJPHA	53,	948	D.G. Burke, J.M. Balogh, and erratum CJPHA 63(1985)649
1975Bu07	ZPAAD	273,	85	U. Burmester
1975Bu.A	BAPSA	20,	625	M.E. Bunker, B.S. Nielsen, J.W. Starner, et al.
1975Ca03	NUPAB	240,	1	J.L. Campbell, P. O'Brien
1975Ca06	NUPAB	241,	341	C. Cabot, C. Deprun, H. Gauvin, et al.
1975Ca07	NUPAB	242,	221	T. Caldwell, D.J. Pullen, O. Hansen
1975Ca22	PYLBB	57,	335	C. Castaneda, H.A. Smith, Jr., T.E. Ward
1975Ch05	NUPAB	238,	333	A. Charvet, R. Chery, R. Duffait, et al.
1975Ch09	NUPAB	239,	253	J. Christiansen, G. Hempel, H. Ingwersen, et al.
1975Ch11	PRVCA	11,	1237	J. Chao, D.K. Olsen, C. Newson, et al.
1975Ch21	JPHGB	1,	657	R. Chapman, G.D. Dracoulis
1975Co.A	AnRpt CSNSM			Collaboration CSNSM-IPN-Marbourg-Stockholm-Varsovie
1975Cz03	IJARA	26,	417	K.H. Czock, N. Haselberger, F. Reichel
1975Da14	NUPAB	250,	221	J.M. Davidson, T. Taylor, D.A. Hutcheon, et al.
1975De11	ZPAAD	273,	15	M. Deimling, R. Neugart, H. Schweickert
1975De.A	P-Petten		609	J. de Boer
1975De.B	VHDPG	10,	853	F.W.N. De Boer, B.J. Meijer, P.F.A. Goudsmit, et al.
1975Di15	PHSTB	12,	271	W. Dietrich, G.C. Madueme, L. Westerberg, et al.
1975Em04	ZPAAD	275,	157	A. Emsallem, M. Ashgar
1975Em.A	P-Petten		395	A. Emsallem, M. Ashgar
1975ErZT	ANL-75-75,		62	J.R. Erskine, A.M. Friedman, R.R. Chasman, et al.
1975Er.A	PrvCom	NDG	Jul	J.R. Erskine
1975Fe07	RRALA	21,	79	M. Fernandez, S. Bulbulian
1975Fi07	ZPAAD	274,	79	W. Fischer, H. Huhnermann, T. Meier
1975Fl07	ZPAAD	272,	219	D. Flothman, H.J. Gils, W. Wiesner, et al.
1975Fr02	PYLBB	53,	439	J.M. Freeman, R.J. Petty, S.D. Hoath, et al.
1975Fr16	PRVCA	12,	616	E.M. Franz, S. Katcoff
1975Fr.A	P-Paris		126	J.M. Freeman, R.J. Petty, S.H. Hoath, et al.
1975Fr.B	AnRpt AFI		146	K. Fransson, M. af Ugglas, P. Carle
1975Go05	PRVAA	11,	499	L.S. Goodman, H. Diamond, H.E. Stanton
1975Gr32	NUPAB	252,	260	R.C. Greenwood, C.W. Reich, S.H. Vegors, Jr.
1975Gr44	PPNUE	6,	393	K.Y. Gromov, H.-U. Siebert, V.G. Kalinnikov, et al.
1975Gu01	JPHGB	1,	67	S.C. Gujrathi, C. Weiffenbach, J.K.P. Lee
1975Ha21	NUPAB	246,	61	J.C. Hardy, H. Schmeing, J.S. Geiger, et al.
1975Ha43	ZPAAD	274,	335	H.H. Hansen, D. Mouchet
1975He.C	KFK-2223			D. Heck, J.A. Pinston, H. Börner, et al.
1975Ho02	PYLBB	55,	53	P. Hornshøj, K. Wilsky, P.G. Hansen, et al.
1975Ho07	PRLTA	35,	199	K. Hosoyama, Y. Torizuka
1975Ho09	PYLBB	57,	147	P. Hornshøj, P. Tidemand-Petersson, R. Bethoux, et al.
1975Ho14	NUPAB	248,	406	P. Hornshøj, P. Tidemand-Petersson, R. Kaczarowski, et al.
1975Hu02	JINCA	37,	1	M.H. Hurdus, L. Tomlinson
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, et al.
1975Iw.A	AnRpt INS		40	S. Iwata, T. Tamura, K. Komura, et al.
1975Ja10	PRVCA	11,	2114	J. Jänecke, F.D. Becchetti, L.T. Chua, et al.
1975Jo.A	BAPSA	20,	625	O.P. Jolly, D.G. Burke
1975Ka15	JUPSA	38,	314	K. Kawade, H. Yamamoto, Y. Ikeda, et al.
1975Ka18	PRVCA	11,	1959	E. Kashy, W. Benenson, D. Mueller, et al.
1975Ka25	PRVCA	12,	1054	D. Kaiser, W.H. Johnson, Jr.
1975Ka.A	P-Petten		544	B. Kardon, H. Seyfarth, P. Gottel, et al.
1975Ke06	NUPAB	245,	221	P. Kemnitz, L. Funke, H. Sodan, et al.

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, et al.
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, et al.
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, et al.
1975Li14	JUPSA	39,	1	C.Y. Liu, T.H. Hsue, K. Lin, et al.
1975Li22	NUPAB	253,	165	J.R. Lien, J.S. Vaagen, A. Graue
1975LiZH	COO-1265-170		122	J.S. Lilley, M. Franey, J.A. Becker
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, et al.
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, et al.
1975Mo29	NUPAB	252,	477	P. Morgen, J.H. Onsgaard, B.S. Nielsen, et al.
1975Mu08	PYLBB	57,	44	L.G. Multhauf, K.G. Tirsell, S. Raman, et al.
1975Mu09	PRVCA	12,	51	D. Mueller, E. Kashy, W. Benenson, et al.
1975Na.A	P-Petten		566	M.R. Najam, A.F.M. Ishaq, M. Anwar, et al.
1975Ne05	PRVCA	12,	1310	D.R. Nethaway, B. Mendoza, R.S. Newbury
1975No.A	P-Paris		140	J. Nolen
1975Og01	NUPAB	239,	157	Y.T. Oganessian, A.G. Demin, A.S. Iljinov, et al.
1975Og02	NUPAB	239,	353	Y.T. Oganessian, A.S. Iljinov, A.G. Demin, et al.
1975Pa01	PRLTA	34,	212	L. Palffy, J.P. Deutsch, L. Grenacs, et al.
1975Pl06	IJARA	26,	579	J. Plch, J. Zderadicka, O. Dragoun
1975Ra03	JINCA	37,	383	H.L. Ravn, S. Sundell, L. Westgaard, et al.
1975Ra07	NUPAB	242,	189	D. Rabenstein, D. Harrach
1975Ra08	JPHGB	1,	461	C.N. Rao, B.M. Rao, P.M. Rao, et al.
1975Ra09	PRVCA	11,	1735	C.N. Rao, B.M. Rao, K.V. Reddy
1975Re05	PRVCA	11,	1767	I. Rezanka, I.M. Ladenbauer-Bellis, J.O. Rasmussen, et al.
1975Re09	NUPAB	249,	166	W. Reiter, W.H. Breunlich, P. Hille
1975Re10	PRVCA	12,	718	P.L. Reeder, J.F. Wright
1975Ro05	NUPAB	240,	221	C. Rolfs, W.S. Rodney, S. Durrance, et al.
1975Ro10	ZPAAD	272,	369	J. Rodriguez, J. Bonn, G. Huber, et al.
1975Ro16	NUPAB	246,	380	R. Rousille, J.A. Pinston, H. Börner, et al.
1975Ro25	ZEPYA	275,	45	S. Roodbergen, H. Visser, W. Molendijk, et al.
1975Ru03	NUPAB	240,	13	P.A. Russo, J. Pedersen, R. Vandenbosch
1975Ru06	PYLBB	58,	283	H. Rubinsztein, M. Gustafsson
1975Sa06	PRVCA	12,	318	S. Sanyal, R.K. Garg, S.D. Chauhan, et al.
1975Sa18	HYIND	1,	183	C.J. Sanctuary, P.D. Johnston, N.J. Stone
1975Sc07	NUPAB	242,	232	H. Schmeing, J.C. Hardy, R.L. Graham, et al.
1975Sc09	NUPAB	243,	309	E. Schoeters, R. Geerts, R.E. Silverans, et al.
1975Sc20	NUPAB	246,	187	H. Schweickert, J. Dietrich, R. Neugart, et al.
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
1975So03	NUPAB	238,	365	D.C. Sousa, L.L. Riedinger, E.G. Funk, et al.
1975SpZU	AnRpt UoZ		#15	B. Spoelstra, B.J. Meijer, P. Koldewijn, University of Zululand
1975Sq01	NUPAB	242,	62	G.T.A. Squier, W.E. Burcham, J.M. Freedman, et al.
1975St02	PYLBB	53,	432	L.L. Sterna, P.E. Haustein, E.J. Ansaldo, et al.
1975St07	NUPAB	242,	30	H. Strusny, H. Tyrroff, E. Herrmann, et al.
1975St08	CJPHA	53,	922	W.R. Stott, J.C. Waddington, D.G. Burke, et al.
1975St12	CZYPA	25,	626	H. Strusny, H. Tyrroff, E. Herrmann, et al.
1975Ta06	ZPAAD	272,	301	C.W. Tang, A. Pakkanen, Z.C. Mester, et al.
1975Ta12	PRVCA	12,	108	H. Taketani, H.L. Sharma, N.M. Hintz
1975Te01	NUPAB	255,	509	G.M. Ter-Akopyan, A.S. Iljinov, Y.T. Oganessian, et al.
1975Th04	NUPAB	242,	1	R.C. Thompson, J.S. Boyno, J.R. Huizenga, et al.
1975Th06	NUPAB	245,	444	R. Thompson, A. Ikeda, R.K. Sheline
1975Th08	PRVCA	12,	644	C. Thibault, R. Klapisch, C. Rigaud, et al.
1975To03	PRVCA	11,	1370	K.S. Toth, E. Newman, C.R. Bingham, et al.
1975To05	PRVCA	12,	533	K.S. Toth, W.D. Schmidt-Ott, C.R. Bingham, et al.
1975Un.A	P-Paris		81	UNISOR consortium
1975Uy01	NUPAB	241,	135	J. Uyttenhove, K. Heyde, H. Vincx, et al.
1975Va12	ZPAAD	274,	383	J.R. Van Hise, D.C. Camp, R.A. Meyer
1975Va24	PHFEA	10,	133	S. Vaisala, T. Raunemaa, A. Fontell, et al.
1975Va.A	P-Leningrad		156	V.M. Vachte, N.A. Golovkov, B.S. Dzelepov, et al.
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, et al.
1975We03	CJPHA	53,	101	C. Weiffenbach, S.C. Gujrathi, J.K.P. Lee
1975We10	PHSTB	11,	10	T. Westrom, B. Fant, I. Forsblom, et al.
1975We23	ZPAAD	275,	127	L. Westgaard, K. Aleklett, G. Nyman, et al.
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, et al.
1975Wi26	PYLBB	59,	142	K.H. Wilcox, R.B. Weisenmiller, G.J. Wozniak, et al.
1975Ya03	PRVCA	11,	599	S.W. Yates, I. Ahmad, A.M. Friedman, et al.
1975Ya14	PRVCA	12,	1080	S.W. Yates, F.J. Lynch
1975Yo01	NUPAB	243,	143	N. Yoshikawa
1975Yo04	PRVCA	12,	1242	L.E. Young, S.K. Bhattacherjee, R. Brenn, et al.
1975Ze.A	JINR-P6-8929			A. Zelinsky, K. Zuber, Y. Zuber, et al.

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1976Ah01	JINCA	38,	191	H. Ahrens, P. Patzelt, G. Herrmann
1976Ah03	NUPAB	258,	221	I. Ahmad, D.D. Sharma, R.K. Sjoblom
1976Ah06	PRVCA	14,	211	H. Ahrens, N. Kaffrell, N. Trautmann, et al.
1976Ah07	PRVCA	14,	218	I. Ahmad, R.K. Sjoblom, P.R. Fields
1976Aj03	PRVCA	14,	767	F. Ajzenberg-Selove, E.R. Flynn, O. Hansen, et al.
1976Al01	NUPAB	257,	490	M.M. Aleonard, P. Hubert, L. Sarger, et al.
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, et al.
1976An05	PYLBB	61,	234	G. Andersson, M. Ashgar, A. Emsallem, et al.
1976An11	NUPAB	269,	338	V. Andersen, C.J. Christensen, J. Borggreen
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, et al.
1976Be08	PRVCA	13,	1479	W. Benenson, A. Guichard, E. Kashy, et al.

1976Be11	NUPAB	260,	269	G. Beyer, A. Jasinski, O. Knotek, et al.
1976Be12	PRLTA	36,	1128	H. Beuscher, D.R. Zolnowski, D.R. Haenni, et al.
1976Be50	PRVCA	14,	2095	D. Benson, Jr., P. Kleinheinz, R.K. Sheline, et al.
1976BeYM	ORNL-5137		73	C.E. Bemis, D.C. Hensley, P.F. Dittner, et al.
1976BeZY	AnRpt OakRidge		73	C.E. Bemis, Jr., C.E. Bemis, D.C. Hensley, et al.
1976Bi09	PRVCA	14,	1586	C.R. Bingham, L.L. Riedinger, F.E. Turner, et al.
1976Bo09	ZEPYA	276,	203	J. Bonn, G. Huber, H.-J. Kluge, et al.
1976Bo19	ZPAAD	277,	203	M. Bormann, H.-K. Feddersen, H.-H. Holscher, et al.
1976Br08	PRVCA	13,	1194	B.A. Brown, D.B. Fossan, P.M.S. Lesser, et al.
1976Ca10	NUPAB	261,	445	R.F. Casten, D. Burke, O. Hansen
1976Ca24	PRVCA	14,	1439	R.F. Carlton, S. Raman, J.A. Harvey, et al.
1976Ca25	PRVCA	14,	912	R.F. Casten, W.R. Kane, J.R. Erskine, et al.
1976Ch02	PRVCA	13,	578	R.E. Chrien, G.W. Cole, G.C. Slaughter, et al.
1976Ch08	PRVCA	13,	2011	Y.Y. Chu, E.-M. Franz
1976ChZD	CERN-76-13		471	E. Cheifetz, A. Wolf
1976Co06	PRVCA	13,	847	G. Coleman, R.A. Meyer
1976Co24	PRLTA	37,	1185	J.D. Cole, J.H. Hamilton, A.V. Ramayya, et al.
1976Cr03	PYLBB	64,	143	G.M. Crawley, W.F. Steele, J.N. Bishop, et al.
1976Cr.B	JINR-P6-9711			T. Cretzu, V.V. Kuznetsov, G. Luzurej, et al.
1976Da18	NUPAB	269,	477	W.G. Davies, R.M. DeVries, G.C. Ball, et al.
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, et al.
1976Da.D	P-Cargese		262	J.M. D'Auria, L.C. Carraz, P.G. Hansen, et al.
1976Di15	NUIMA	139,	181	J.S. Dionisio, C. Vieu, C.M. Truong, et al.
1976Di.A	AnRpt OakRidge			P.F. Dittner, R.J. Silva, D.C. Hensley, et al.
1976Ed.A	P-Cargese		258	M.D. Edmiston, R.A. Warner, W.C. McHarris, et al.
1976Ek01	PYLBB	60,	146	C. Ekstrom, I. Lindgren, S. Ingelman, et al.
1976Ek02	PHSTB	13,	217	C. Ekstrom
1976Ek03	HYIND	1,	437	C. Ekstrom, G. Wannberg, Y.S. Shishodia
1976EkZX	P-Cargese		193	C. Ekstrom, W. Ingelman, G. Wannberg, et al.
1976El11	PRVCA	14,	583	D. Elmore, W.P. Alford
1976El12	CJPHA	54,	1493	D. Elmore, W.P. Alford
1976Fa.A	AnRpt AECL		25	T. Faestermann, H. Schmeing, J.C. Hardy, et al.
1976Fl02	PRVCA	13,	568	E.R. Flynn, J.D. Sherman, N. Stein, et al.
1976Fl13	NUPAB	267,	359	G.N. Flerov, Y.T. Oganessian, A.A. Pleve, et al.
1976Fo01	PRVCA	13,	1049	S. Fortier, H. Laurent, J.P. Schapira, et al.
1976Fo10	NUPAB	267,	317	B. Fogelberg, Y. Kawase, J. McDonald, et al.
1976Fr13	NUIMA	134,	153	J.M. Freeman
1976FrZO	USIP-76-09			K. Fransson, M. af Ugglas, P. Carle, et al.
1976Fr.A	USIP-76-09			K. Fransson, M. af Ugglas, P. Carle, et al.
1976Ga19	NUPAB	268,	257	S. Galès, S. Fortier, H. Laurent, et al.
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, et al.
1976Ge08	NUPAB	267,	13	H. Genz, A. Richter, B.M. Schmitz, et al.
1976Ge14	PRVCA	14,	1896	R.J. Gehrke, R.G. Helmer, C.W. Reich, et al.
1976Go02	PRVCA	13,	1601	G.M. Gowdy, A.C. Xenoulis, J.L. Wood, et al.
1976Gr06	ZPAAD	277,	395	K.Y. Gromov, M. Honusek, C. Vylov, et al.
1976Gr09	NUPAB	270,	29	R.C. Greenwood, R.J. Gehrke, R.G. Helmer, et al.
1976Gr19	PHSTB	14,	263	T. Grotdal, L. Guldberg, K. Nybø, et al.
1976Gr20	APOBB	7,	507	K.Y. Gromov, D.T. Dzelev, K. Zuber, et al.
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, et al.
1976Ha29	PYLBB	63,	27	J.C. Hardy, J.A. Macdonald, H. Schmeing, et al.

1976Ha36	ZPAAD	278,	183	W. Hartl, J.W. Hammer
1976Ha37	PYLBB	63,	279	O. Hausser, J.R. Beene, A.B. McDonald, et al.
1976Ha39	PRVCA	14,	645	P.E. Haustein, E.M. Franz, S. Katcoff, et al.
1976Ha50	ZPAAD	278,	303	M. v. Hartrott, J. Hadijuana, K. Nishiyama, et al.
1976Ha56	NUPAB	273,	253	O. Hausser, T.K. Alexander, J.R. Beene, et al.
1976HaWO	P-Dubna		197	J.C. Hardy, J.A. Macdonald, H. Schmeing, et al.
1976He03	NDSBA	17,	287	E.A. Henry
1976He04	NUPAB	258,	83	R.G. Helmer, R.J. Gehrke, R.C. Greenwood, et al.
1976He10	ZPAAD	276,	393	W. Herzog, N. Trautmann, R. Denig, et al.
1976He21	PHSTB	14,	138	H.A. Helms, W. Hogervorst, G.J. Zaal, et al.
1976He24	HYIND	2,	399	H.A. Helms, G.J. Zaal, W. Hogervorst, et al.
1976Hi06	PRVCA	13,	2484	J.C. Hill, D.G. Shirk, R.F. Petry, et al.
1976Hi08	CJPHA	54,	1360	C.R. Hirning, D.G. Burke
1976Hi09	NUPAB	263,	460	F. Hintenberger, P. von Rossen, B. Schuller, et al.
1976Hi10	PRLTA	37,	130	G.T. Hickey, D.C. Weisser, J. Cerny, et al.
1976Hi14	JPHGB	2,	L143	G.T. Hickey, G.M. Crawley, D.C. Weisser, et al.
1976Ho13	PYLBB	62,	390	C. Hohle, H. Huhnermann, T. Meier, et al.
1976HoZD	P-Cargese		171	P. Hornshoj, P.G. Hansen, E. Hagberg, et al.
1976Hu01	PRVCA	13,	1786	A. Huck, G.J. Costa, G. Walter, et al.
1976Ij01	PRVCA	14,	264	M.A. Ijaz, J. Lin, E.L. Robinson, et al.
1976In06	PRVCA	14,	254	P.D. Ingalls
1976Jo01	PRVCA	13,	439	P.L. Jolivette, J.D. Goss, J.A. Bieszk, et al.
1976Jo.A	P-Cargese		277	B. Jonson, E. Hagberg, P.G. Hansen, et al.
1976Ka08	NUPAB	260,	141	E.J. Kaptein, H.P. Blok, L. Hulstman, et al.
1976Ka19	NUPAB	266,	346	R. Kamermans, H.W. Jongsma, T.J. Ketel, et al.
1976Ka22	PRVCA	14,	1121	S.B. Kaufman, M.W. Weisfield, E.P. Steinberg, et al.
1976Ka24	PRVCA	14,	1773	E. Kashy, W. Benenson, D. Mueller, et al.
1976Ka50	SHIBA	24,	247	I. Kakatuse, H. Nakabushi, K. Ogata
1976Ke06	ZPAAD	279,	395	G.G. Kennedy, J. Deslauriers, S.C. Gujrathi, et al.
1976Ki12	NUPAB	272,	381	K. Kimura, N. Takagi, M. Tanaka
1976Li09	ZPAAD	277,	273	C.G. Linden, I. Bergstrom, J. Blomqvist, et al.
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, et al.
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, et al.
1976Me06	NUPAB	259,	213	B.J. Meijer, F.W.N. de Boer, P.F.A. Goudsmit
1976Me08	PRVCA	13,	1751	L.R. Medsker
1976Mo30	AENGA	40,	174	V.K. Mozhaev
1976Mo32	NUPAB	272,	82	S. Mordechai, E. Friedman, A.A. Jaffe, et al.
1976Na23	PRVCA	14,	2338	H. Nann, D. Mueller, A. Saha, et al.
1976NeZT	P-Baku		109	V.G. Nedovesov, Y.V. Kholnov, G.E. Shukin
1976NiZZ	P-Cargese		322	Y. Nir-El, S. Amiel
1976Nu01	PRVCA	13,	2017	L.L. Nunnelley, W. Loveland
1976Og02	NUPAB	273,	505	Y.T. Oganessian, A.G. Demin, N.A. Danilov, et al.
1976Ot03	PRVCA	13,	1996	D. Otero, A.N. Proto, F.C. Iglesias
1976Pa11	PRVCA	14,	1573	B.P. Pathak, L. Lesard, L. Nikkinen
1976Pi03	PRVCA	13,	2208	M. Piiparinen, S.K. Saha, P.J. Daly, et al.
1976Pi04	NUPAB	264,	1	J.A. Pinston, R. Rousille, H. Börner, et al.
1976Pi13	NUPAB	270,	61	J.A. Pinston, R. Rousille, H. Börner, et al.
1976Ra07	PRVCA	13,	1609	A.E. Rainis, K.S. Toth, C.R. Bingham
1976Ra16	JPGPE	2,	243	B.M. Rao, C.N. Rao, P.M. Rao, et al.

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, et al.
1976ReZN	P-Cargese		327	P.L. Reeder, J.F. Wright, L.J. Alquist
1976Ro04	PRVCA	13,	1018	R.G.H. Robertson, W. Benenson, E. Kashy, et al.
1976Ru01	PRVCA	13,	321	G. Rudstam, E. Lund
1976Sc13	NUPAB	263,	193	M. Schrader, H. Reiss, G. Rosner, et al.
1976Sc30	JINCA	38,	1757	O. Scheidemann
1976ScZR	PrvCom	NDG	Jun	F. Schussler, J. Blachot, J.P. Bocquet, et al.
1976SeZN	Th.-Grenoble			R. Sellam, Thesis, Univ. Grenoble
1976Sh24	NUIMA	135,	583	J.F. Sharpey-Schafer, A.M. Al Naser, A.H. Behbehani, et al.
1976ShZL	P-Cargese		A87	A.A. Shihab-Eldin, F.M. Nuh, W. Halverson, et al.
1976Sl01	PYLBB	60,	153	G. Sletten, V. Metag, E. Liukkonen
1976Sl06	NUPAB	274,	93	D.N. Slater, W. Booth
1976Sm01	PRVCA	13,	387	H.A. Smith, Jr., M.E. Bunker, J.W. Starner, et al.
1976Sp08	NUPAB	265,	416	R.J. Sparks
1976Sq01	PYLBB	65,	122	G.T.A. Squier, W.E. Burcham, S.D. Hoath, et al.
1976St10	NUPAB	266,	390	O. Straume, G. Løvhøiden, D.G. Burke
1976St11	NUPAB	266,	424	W.F. Steele, P.A. Smith, J.E. Finck, et al.
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, et al.
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, et al.
1976Tu.A	Th.-Berkeley			D.G. Tuggle
1976Va03	PRVCA	13,	372	S. Vaisala, G. Graeffe, J. Heinonen, et al.
1976Vi02	PYLBB	60,	261	D.J. Vieira, D.F. Sherman, M.S. Zisman, et al.
1976Vi.A	P-Cargese		462	C. Vieu, J.S. Dionisio, V. Berg, et al.
1976WeZD	AnRpt-Stockholm		12	2 K. Westerberg, K.-G. Rensfelt, J. Sztarkier, et al.
1976Wi08	PRVCA	13,	2517	D.H. Wilkinson, D.E. Alburger
1976Wi10	PRVCA	14,	229	M.E.J. Wigmans, R.J. Heynis, P.M.A. van der Kam, et al.
1976Ya06	JUPSA	41,	729	H. Yamamoto, C. Ichihara, K. Kawade, et al.
1976Zo01	PRVCA	13,	2024	W.H. Zoller, W.B. Walters, P.W. Gallagher, et al.

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1977Ah03	JINCA	39,	1509	I. Ahmad, F. Wagner, Jr.
1977Aj01	PRVCA	15,	1	F. Ajzenberg-Selove, E.R. Flynn, S. Orbesen, et al.
1977Al09	NUPAB	281,	213	K. Aleklett, E. Lund, G. Nyman, et al.
1977Al11	PRVCA	15,	2174	D.E. Alburger, D.H. Wilkinson
1977Al17	NUPAB	285,	1	K. Aleklett, E. Lund, G. Nyman, et al.
1977ArZZ	P-Kiev	3,	247	R. Arlt, G. Muziol, D. Hoffman
1977Az01	PRVCA	15,	1847	G. Azuelos, J.E. Kitching, K. Ramavataram
1977Ba01	NUPAB	275,	37	P.H. Barker, C.J. Sofield, R.J. Petty, et al.
1977Ba10	CJPHA	55,	200	J.W. Barnard, P. Williams, R.C. Barber, et al.
1977Ba16	NUPAB	279,	199	P.H. Barker, R.E. White, H. Naylor, et al.
1977Ba33	IANFA	41,	101	I.F. Barchuk, G.V. Belykh, V.I. Golyshkin, et al.
1977Ba50	PRVCA	16,	928	D.P. Balamuth, E.G. Adelberger
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, et al.
1977Be13	PRVCA	15,	1187	W. Benenson, D. Mueller, E. Kashy, et al.
1977Be15	ZPAAD	281,	145	D. Benson, Jr., P. Kleinheinz, R.K. Sheline
1977Be23	NUPAB	284,	221	R. Beraud, M. Meyer, M.G. Desthuilliers, et al.

1977Be36	PRVCA	16,	1146	C.E. Bemis, Jr., P.F. Dittner, R.J. Silva, et al.
1977Bh03	ZPAAD	281,	65	T.S. Bhatia, H. Hafner, R. Haupt, et al.
1977Bo02	NUPAB	275,	229	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, et al.
1977Bo09	NUPAB	279,	189	J. Borggreen, J. Pedersen, G. Sletten, et al.
1977Bo28	PYLBB	71,	67	D.D. Bogdanov, J. Vobořil, A.V. Demyanov, et al.
1977Bo31	IANFA	41,	1149	N.A. Bonch-Osmolovskaya, V.M. Gorodzankin, K.Y. Gromov, et al.
1977Bo32	IANFA	41,	1189	B. Bogdan, M. Gasior, T. Kretsu, et al.
1977Bo.A	PrvCom	AHW	Oct	V.R. Bom, D. De Bruin
1977Br12	PRVCA	15,	2044	B.A. Brown, D.B. Fossan
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, et al.
1977Ca23	ZPAAD	283,	221	C. Cabot, S. Della Negra, C. Deprun, et al.
1977Ch06	ZPAAD	280,	149	H.C. Cheung, S.I. Hayakawa, J.E. Kitching, et al.
1977Ch27	RMPHA	49,	833	R.R. Chasman, I. Ahmad, A.M. Friedman, et al.
1977Co08	PRVCA	15,	1685	J.D. Cossairt, R.E. Tribble, R.A. Kenefick
1977Co21	PRVCA	16,	2010	J.D. Cole, A.V. Ramayya, J.H. Hamilton, et al.
1977CoZP	KFK-2504		56	J. Collignon, F. Buchinger, R. Neugart, et al.
1977Cr05	IANFA	41,	2032	T. Cretsu, G. Makarie, A.V. Potempa, et al.
1977Da22	GCACA	41,	1745	D.W. Davis, J. Gray, G.L. Cumming, et al.
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, et al.
1977Ed01	NUIMA	141,	315	M.D. Edmiston, R.A. Warner, W.C. McHarris, et al.
1977Ek02	NUPAB	292,	144	C. Ekstrom, S. Ingelman, G. Wannberg, et al.
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, et al.
1977Fl03	PRVCA	15,	879	E.R. Flynn, J.W. Sunier, F. Ajzenberg-Selove
1977FlZY	JINR-E7-10128			G.N. Flerov
1977Fo02	ZPAAD	281,	89	B. Fogelberg, W. Maup
1977Fo09	PYLBB	70,	408	H.T. Fortune, R. Middleton, M.E. Coburn, et al.
1977FoZR	P-Tokyo		363	B. Fogelberg, P. Carle
1977Fr20	ZPAAD	281,	211	T. Freie, H. Lorenz-Wirba, B. Cleff, et al.
1977Ge03	NUPAB	283,	45	J. Genevey-Rivier, A. Charvet, G. Marguier, et al.
1977Gi11	INUCA	13,	95	J.E. Gindler, L.E. Glendenin
1977Go15	IANFA	41,	1673	K.S. Goncharov, V.A. Kuzmenko, V.V. Remaev
1977GoZH	AnRpt MPIK		49	U. Goerlach, D. Habs, M. Just, et al.
1977Gu02	PRVCA	15,	894	P. Guilbault, D. Ardouin, R. Tamisier, et al.
1977Gu18	PYLBB	72,	166	M. Gustafsson, I. Lindgren, J. Lindgren, et al.
1977Ha05	NUPAB	277,	337	S.I. Hayakawa, J.E. Kitching, J.K.P. Lee, et al.
1977Ha29	PRLTA	39,	792	E. Hagberg, P.G. Hansen, J.C. Hardy, et al.
1977Ha31	PRVCA	16,	1129	D.R. Haenni, T.T. Sugihara
1977Ha32	PRVCA	16,	1559	P.E. Haustein, E.M. Franz, R.F. Petry, et al.
1977Ha48	NUPAB	293,	1	E. Hagberg, P.G. Hansen, J.C. Hardy, et al.
1977Ha49	NUPAB	293,	248	O. H$'$ausser, I.S. Towner, T. Faestermann, et al.
1977He20	HYIND	3,	361	P. Herzog, H.-R. Folle, E. Bodenstedt
1977He26	NUIMA	147,	425	J.C.P. Heggie, Z.E. Zwitkowski
1977Hi06	NUPAB	287,	24	C.R. Hirning, D.G. Burke, E.R. Flynn, et al.
1977Ho02	NUPAB	276,	1	C.L. Hollas, K.A. Aniol, D.W. Gebbie, et al.
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, et al.
1977Is01	ZPAAD	281,	365	A.F.M. Ishaq, S. Robertson, W.V. Prestwich, et al.
1977Je03	PRVCA	15,	1972	C.M. Jensen, W.R.G. Lanier, G.L. Struble, et al.
1977Jo03	PRVCA	15,	915	C.H. Johnson, J.K. Bair, C.M. Jones
1977Ka08	NUPAB	279,	269	K. Kawade, H. Yamamoto, Y. Ikeda, et al.
1977Ka16	JINCA	39,	1714	Y. Kato, K. Miyano
1977Ke03	PRVCA	15,	792	G. Kennedy, J. Deslauriers, S.C. Gujrathi, et al.
1977Kh03	ZPAAD	283,	105	T.A. Khan, W.D. Lauppe, K. Sistemich, et al.
1977Ki11	PYLBB	70,	150	R. Kirchner, O. Klepper, G. Nyman, et al.
1977Ki14	JNSTA	14,	482	Y. Kiso, R. Matsushita, J. Takada, et al.
1977Ko04	PRVCA	15,	1947	J.J. Kolata, M. Oothoudt
1977Ko10	PRVCA	16,	132	R.L. Kozub, B.E. Cooke, J.R. Leslie, et al.
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, et al.
1977Kr04	NUPAB	282,	243	A.J. Kreiner, M. Fenzl, S. Lunardi, et al.
1977Kr14	CZYPA	27,	1099	T. Kracikova, I. Prochazka, Z. Hons, et al.
1977Kr.A	JINR-P6-10748			T. Kretsu, V.V. Kuznetsov, G. Luzurej, et al.
1977Le08	JINCA	39,	927	R.E. Leber, P.E. Haustein, I.M. Ladenbauer-Bellis
1977Li04	ZPAAD	280,	51	C.G. Linden
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, et al.
1977Ma45	GCACA	41,	1521	T. Makino, M. Honda
1977Mc05	NUPAB	281,	325	A.B. McDonald, E.D. Earle, M.A. Lone, et al.
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
1977Me08	NUPAB	282,	77	V. Metag, G. Sletten
1977Mi09	PRVCA	16,	1919	E. Migneco, G. Russo, R. De Leo, et al.
1977Mi.A	KFK-2438			M. Mirkiditsian
1977Mo13	NUPAB	289,	36	S. Mordechai, M.E. Coburn, G.E. Moore, et al.
1977Mu03	PRVCA	15,	1282	D. Mueller, E. Kashy, W. Benenson
1977My02	JINCA	39,	925	W.A. Myers
1977Na05	PRVCA	15,	1448	A.M. Nathan, D.E. Alburger
1977Na17	PRVCA	16,	1566	A.M. Nathan, D.E. Alburger, J.W. Olness, et al.
1977Na24	NUIMA	144,	331	H. Naylor, R.E. White
1977No08	PYLBB	71,	314	J.A. Nolen, T.S. Bhatia, H. Hafner, et al.
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, et al.
1977Pa18	PRVCA	16,	370	R.C. Pardo, C.N. Davids, M.J. Murphy, et al.
1977Pa24	NUPAB	289,	94	M. Paul, A. Murinov, J. Burde, et al.
1977Pe17	PRVCA	16,	1878	F. Pellegrini, P. Guazzoni, D. Sinclair, et al.
1977Pf01	JOPQA	38,	9	B. Pfeiffer, J.P. Bocquet, J.A. Pinston, et al.
1977Pi06	ZPAAD	282,	303	J.A. Pinston, R. Roussille, G. Sadler, et al.
1977Po20	RADKA	19,	507	V.G. Polyukhov, G.A. Timofeev, P.A. Privalova, et al.
1977Pr07	PRVCA	16,	1001	S.G. Prussin, R.G. Lanier, G.L. Struble, et al.
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
1977Re06	PRVCA	15,	2098	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, et al.
1977Ro15	NUPAB	285,	156	C. Roulet, G. Albouy, G. Auger, et al.
1977Ru04	JINCA	39,	753	W. Rudolph, K.-L. Kratz, G. Herrmann
1977Sc21	ZPAAD	283,	43	F. Schussler, J. Blachot, E. Monnand, et al.
1977Sh04	CJPHA	55,	506	S.H. Sharma, K.S. Kozier, J.W. Barnard, et al.
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, et al.
1977Sh12	CJPHA	55,	1360	K.S. Sharma, J.O. Meredith, R.C. Barber, et al.
1977Si05	ZPAAD	281,	169	K. Sistemich, G. Sadler, T.A. Khan, et al.
1977So02	CJPHA	55,	383	F.C.G. Southon, J.O. Meredith, R.C. Barber, et al.
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, et al.
1977Ti03	NCIAA	41,	14	V.K. Tikku, H. Singh, S.K. Mukherjee
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, et al.
1977Tr07	PRVCA	16,	1835	R.E. Tribble, J.D. Cossairt, D.P. May, et al.
1977Tu01	ZPAAD	280,	309	T. Tuurnala, K. Katajanheimo, E. Hammaren
1977Vo02	NUPAB	278,	189	H. Vonach, P. Glässel, E. Huenges, et al.
1977VoZU	P-Kiev 3,		239	P.E. Vorotnikov, V.A. Vukolov, E.A. Koltypin, et al.
1977Vy02	IANFA	41,	1634	Ts. Vylov, N.A. Golovkov, B.S. Dzelepov, et al.
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, et al.
1977Zo02	PRVCA	16,	408	D.R. Zolnowski, T.T. Sugihara

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1978AfZZ	P-Alma-Ata		70	V.P. Afanasev, L. Kh. Batist, E.E. Berlovich, et al.
1978Ah02	PRVCA	17,	2163	I. Ahmad, R.K. Sjoblom, A.M. Friedman, et al.
1978Aj01	PRVCA	17,	960	F. Ajzenberg-Selove, E.R. Flynn, J.W. Sunier, et al.
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, et al.
1978An10	NUPAB	303,	154	K.A. Aniol, D.W. Gebbie, C.L. Hollas, et al.
1978An14	PHSTB	18,	165	G. Andersson, M. Ashgar, A. Emsallem, et al.
1978Ar12	PRVCA	18,	1201	D. Ardouin, C. Lebrun, F. Guilbault, et al.
1978As06	ZPAAD	288,	45	M. Ashgar, A. Emsallem, E. Hagberg, et al.
1978Az01	PRVCA	17,	443	G. Azuelos, G.R. Rao, P. Taras
1978Ba18	ZPAAD	285,	273	H. Bartsch, K. Huber, U. Kneissl, et al.
1978Ba30	IANFA	42,	205	Y.A. Badenko, K.I. Derebshova, V.N. Kushmin, et al.
1978Ba44	PRLTA	41,	738	P.A. Baisden, R.E. Leber, M. Nurmia, et al.
1978Ba.C	P-Alma Ata		123	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, et al.
1978Be22	ZPAAD	285,	405	D. Benson, Jr., P. Kleinheinz, R.K. Sheline, et al.
1978Be26	PRVCA	17,	1939	W. Benenson, E. Kashy, A.G. Ledebuhr, et al.
1978Be61	NUIMA	155,	211	J.A. Becker, R.A. Chalmers, B.A. Watson, et al.
1978Bh02	PYLBB	76,	562	T.S. Bhatia, H. Hafner, J.A. Nolen, Jr., et al.
1978Bo20	NUPAB	303,	145	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, et al.
1978Bo32	NUPAB	307,	421	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, et al.

1978Bo38	HYIND	4,	174	J. Bonn, F. Buchinger, P. Dabkiewicz, et al.
1978BoZT	P-Florence		462	E. Bozek, T. Pawlat, Zb. Stachura, et al.
1978Bo.A	P-Alma Ata		54	D.D. Bogdanov, I. Bobordzil, A.V. Demianov, et al.
1978Br15	ZPAAD	285,	423	R. Broda, M. Ogawa, S. Lunardi, et al.
1978Br25	NUPAB	306,	242	B.A. Brown, O. Hausser, T. Faestermann, et al.
1978Bu18	PRVCA	18,	693	D.G. Burke, G. Løvhøiden, E.R. Flynn, et al.
1978Ca11	ZPAAD	287,	71	C. Cabot, S. Della Negra, C. Deprun, et al.
1978Ch11	PRVCA	17,	2219	R. Chiba, S. Shibazaki, T. Numao, et al.
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, et al.
1978Cr03	ZPAAD	287,	45	J. Crançon, C. Ristori, H. Ohm, et al.
1978Da04	PRVCA	17,	1815	C.N. Davids, D.F. Geesaman, S.L. Tabor, et al.
1978Da07	NUPAB	301,	397	J.M. D'Auria, J.W. Grüter, E. Hagberg, et al.
1978Da09	PYLBB	76,	51	E. Dafni, J.W. Noe, M.H. Rafailovich, et al.
1978De12	ZPAAD	286,	1	H.F. de Vries, P.J. Brussaard
1978De17	NUPAB	302,	41	C. Detraz, D. Guillemaud, G. Huber, et al.
1978De18	NUPAB	302,	186	P. Decowski, W. Benenson, B.A. Brown, et al.
1978De.A	AnRpt Berkeley			R.J. De Meyer, D.P. Stahel, A.N. Bice, et al.
1978Di09	YAFIA	28,	273	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, et al.
1978Do06	ZPAAD	286,	107	P.H. Do, R. Chery, H.G. Börner, et al.
1978Du06	ZPAAD	287,	165	F. Dubbers, L. Funke, P. Kemnitz, et al.
1978Ek02	PHSTB	18,	51	C. Ekstrom, S. Ingelman, G. Wannberg, et al.
1978Ek03	PYLBB	76,	565	C. Ekstrom, G. Wannberg, J. Heinemeier
1978Ek04	NUPAB	311,	269	C. Ekstrom, S. Ingelman, G. Wannberg, et al.
1978Ek05	HYIND	4,	165	C. Ekstrom, S. Ingelman, G. Wannberg, et al.
1978EkZW	PrvCom	NDG	Jul	C. Ekstrom
1978El09	NUPAB	304,	493	T. Elmroth, E. Hagberg, P.G. Hansen, et al.
1978El11	PRVCA	18,	2713	Y.A. Ellis, K.S. Toth, H.K. Carter
1978Fi01	ZPAAD	284,	3	H. Fischer, P. Dabkiewicz, P. Freilinger, et al.
1978Fi02	PRVCA	17,	718	R.B. Firestone, R.A. Warner, W.C. McHarris, et al.
1978Fu06	PRVCA	18,	621	C.B. Fulmer, G. Mariolopoulos, G. Bagieu, et al.
1978Ga07	YAFIA	27,	894	Yu. P. Gangrskii, G.M. Marinescu, M.B. Miller, et al.
1978Ga18	PRVCA	18,	1463	M.L. Gartner, J.C. Hill
1978Ge01	NUPAB	295,	221	C.P. Gerner, J. Van Pelt, O.W. De Ridder, et al.
1978Gi07	JINCA	40,	369	J. Gilat, S. Katcoff
1978Go10	ZPAAD	287,	171	U. Goerlach, D. Habs, M. Just, et al.
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, et al.
1978Gr13	YAFIA	27,	1421	I.I. Gromova, T. Kretsu, V.V. Kuznetsov, et al.
1978Gu02	NUPAB	297,	254	W. Gunther, K. Huber, U. Kneissl, et al.
1978Gu14	ZPAAD	287,	271	H.H. Guven, B. Kardon, H. Seyfarth
1978Ha07	PYLBB	73,	127	O. Hausser, T.K. Alexander, T. Faestermann, et al.
1978Ha08	PYLBB	73,	139	E. Hagberg, P.G. Hansen, P. Hornshøj, et al.
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, et al.
1978Hi06	NUPAB	308,	61	F. Hintenberger, R. Schonhagen, P. von Rossesn, et al.
1978Ho06	PRVCA	17,	2076	R.E. Holland, F.J. Lynch, B.D. Belt
1978HoZZ	PrvCom	NDG	Jan	P. Hornshoj
1978Hu02	NUPAB	294,	177	H. Hubel, A. Kleinrahm, C. Gunther, et al.
1978Hu04	ZPAAD	285,	229	H. Huhnermann, H. Valentin, H. Wagner
1978Hu06	CJPHA	56,	936	H. Huang, B.P. Pathek, J.K.P. Lee
1978Hu11	ZPAAD	288,	107	M. Huyse, K. Cornelis, G. Dumont, et al.

1978Hu12	PRVCA	18,	2342	G. Huber, F. Touchard, S. Buttgenbach, et al.
1978IbZZ	JUL-Spez-15		19	R. Ibowski, W. Scholz, J. Bisplinghoff, et al.
1978Ik02	PYLBB	74,	326	H. Ikegami, T. Yamazaki, S. Morinobu, et al.
1978Ik03	JUPSA	45,	725	Y. Ikeda, H. Yamamoto, K. Kawade, et al.
1978Ja06	JPHGB	4,	579	A.N. James, J.F. Sharpey-Schafer, A.M. Al Naser, et al.
1978Ja14	PRVCA	18,	1840	S.V. Jackson, J.W. Starner, W.R. Daniels, et al.
1978Ka10	JUPSA	44,	25	M. Kanazawa, S. Ohya, T. Tamura, et al.
1978Ka12	PRVCA	17,	1555	R. Kamermans, J. Van Driel, H.P. Blok, et al.
1978Ka16	ZPAAD	286,	57	R. Katajanheimo, T. Tuurnala, E. Hammaren
1978Ke06	PRVCA	17,	1929	G.J. KeKelis, M.S. Zisman, D.K. Scott, et al.
1978Ke10	PRVCA	18,	1938	B.D. Kern, F. Gabbard, R.G. Kruzek, et al.
1978Ki06	NUPAB	302,	159	J.E. Kitching, P.A. Batay-Csorba, C.A. Fields, et al.
1978Ki07	IANFA	42,	823	B.G. Kiselev, Y.Y. Zykov
1978Ko24	NUPAB	307,	71	R.T. Kouzes, D. Mueller
1978Ko27	NUPAB	309,	329	R.T. Kouzes, P. Kutt, D. Mueller, et al.
1978Ko28	PRVCA	18,	1587	R.T. Kouzes, D. Mueller, C. Yu
1978Ko29	ZPAAD	288,	319	E. Koglin, G. Jung, G. Siegert, et al.
1978Kr15	RAACA	25,	1	K.-L. Kratz
1978La21	IJARA	29,	269	F. Lagoutine, J. Legrand, C. Bac
1978LeZA	Table of Isotopes			C.M. Lederer, V.S. Shirley, E. Browne, et al.
1978LiZM	PrvCom	NDG	Oct	R.W. Lide, C.R. Bingham, L.L. Riedinger, et al.
1978Lo07	NUPAB	302,	51	G. Løvhøiden, O. Straume, D.G. Burke
1978Lo13	JINCA	40,	1865	R.W. Lougheed, J.F. Wild, E.K. Hulet, et al.
1978Ma18	JUPSA	44,	1070	Z. Matumoto, T. Tamura
1978Ma23	NUPAB	301,	213	J.W. Maas, E. Somorjai, H.D. Graber, et al.
1978Ma24	NUPAB	301,	237	J.W. Maas, A.J.C. Holvast, A. Baghus, et al.
1978Ma36	JPHGB	4,	1347	D.J. Martin, S.A. Wender
1978Mc03	PRVCA	17,	944	R.J. McDonald, J.E. Draper
1978Me09	PRVCA	17,	1299	L. Meyer-Schutzmeister, A.J. Elwyn, K.E. Rehm, et al.
1978Me15	PRVCA	18,	1148	L. Meyer-Schützmeister, A.J. Elwyn, S.A. Gronemeyer, et al.
1978Mo12	NUPAB	305,	29	L.A. Montestraque, M.C. Cobian Rozak, G. Szaloky, et al.
1978MoYW	CEA-N-2074		27	E. Monnand, J. Blachot, J.P. Bocquet, et al.
1978MoZQ	PrvCom			E. Monnand, J. Blachot, F. Schussler, et al.
1978Mu05	PRVCA	17,	1574	M.J. Murphy, C.N. Davids, E.B. Norman, et al.
1978Na02	PRVCA	17,	830	F. Naulin, C. Détraz, M. Bernas, et al.
1978Na10	JUPSA	45,	740	S. Nakayama, T. Kishimoto, T. Itahashi, et al.
1978Na11	PRVCA	18,	1619	H. Nann, A. Saha, S. Raman
1978Ne04	PRVCA	17,	1409	D.R. Nethaway, A.L. Prindle, R.A. Van Konyenburg
1978No03	PRVCA	17,	2176	E.B. Norman, C.N. Davids, M.J. Murphy, et al.
1978No05	PRVCA	18,	102	E.B. Norman, C.N. Davids
1978No09	PRVCA	18,	2369	G. Nowicki, K. Bekk, S. Goring, et al.
1978Pa11	PRVCA	18,	1249	R.C. Pardo, E. Kashy, W. Benenson, et al.
1978Pa12	PRVCA	18,	1277	I. Paschopoulos, E. Müller, H.J. Körner, et al.
1978Pe04	PRVCA	17,	2197	R.F. Petry, D.G. Shirk, J.C. Hill, et al.
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, et al.
1978Ra03	ZPAAD	284,	357	V. Rahkonen, I. Bergstrom, J. Blomqvist, et al.
1978Ra15	PRVCA	18,	1085	G.R. Rao, G. Azuelos, J.C. Kim, et al.
1978Ra16	PRVCA	18,	1158	S. Raman, R.F. Carlton, G.G. Slaughter, et al.
1978Re01	ZPAAD	284,	403	T.S. Reddy, R. Matthews, K.V. Reddy
1978Re03	PRVCA	17,	2229	O. Redi
1978Ro01	PRVCA	17,	4	R.G. HRobertson, E. Kashy, W. Benenson, et al.
1978Ro03	ZPAAD	284,	407	A. Robertson, T.J. Kennett, W.V. Prestwich
1978Ro14	PRVCA	18,	86	G. Rotbard, L. Larana, M. Vergnes, et al.

1978Ro19	PYLBB	78,	393	E. Roeckl, R. Kirchner, O. Klepper, et al.
1978Ru04	PHSTB	18,	209	H. Rubinsztein, M. Gustavsson
1978Sc26	ZPAAD	288,	189	U.J. Schrewe, W.D. Schmidt-Ott, R.-D. von Dincklage, et al.
1978Sc27	PYLBB	79,	209	B. Schinzler, W. Klempt, S.L. Kaufman, et al.
1978Sc30	ZPAAD	289,	121	W.-D. Schmidt-Ott, A.J. Hautojarvi, U.J. Schrewe
1978Se04	PRVCA	17,	1919	R.R. Sercely, R.J. Peterson, E.R. Flynn
1978Se07	PRLTA	41,	1589	K. Seth, H. Nann, S. Iversen, et al.
1978Sh03	PRVCA	17,	1163	L.L. Shih, J.C. Hill, S.A. Williams
1978Sh11	NUPAB	304,	40	S. Shastry, R.A. Emigh, R.J. Peterson, et al.
1978Si05	ZPAAD	285,	305	K. Sistemich, W.-D. Lauppe, T.A. Khan, et al.
1978So02	PRVCA	17,	816	L.G. Sobotka, H.C. Griffin, E.C. Kao
1978SoZP	LBL-8151		39	L.P. Somerville, M.J. Nurmia, A. Ghiorso, et al.
1978SoZZ	BAPSA	23,	45	L.P. Somerville, M.J. Nurmia, A. Ghiorso, et al.
1978St02	ZPAAD	284,	95	R. Stippler, F. Münnich, H. Schrader, et al.
1978St25	NUIMA	155,	253	H.L. Stelts, R.E. Chrien
1978Su03	ZPAAD	287,	287	K. Sümmerer, N. Kaffrell, H. Otto, et al.
1978Sz04	PRVCA	17,	2253	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, et al.
1978Sz09	JPHGB	4,	L187	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, et al.
1978Ta10	PRVCA	18,	1064	R.W. Tarara, J.P. Zumbro, C.P. Browne
1978TeZY	Th.-Amsterdam			B. ten Brink, Thesis, Vrije University
1978Th02	PYLBB	73,	411	W.-G. Thies, H. Appel, H. Behrens
1978Th04	ZPAAD	287,	323	W. Theis, E. Werner
1978Tu04	PHSTB	18,	31	T. Tuurnala, R. Katajanheimo, O. Heinonen
1978Va04	NUPAB	295,	211	J. Van Pelt, C.P. Gerner, O.W. De Ridder, et al.
1978Ve10	JPSLB	39,	291	L. Vergnes, G. Rotbard, J. Kalifa, et al.
1978Wa16	JPHGB	4,	1655	P.M. Walker, G.D. Dracoulis, A. Johnston, et al.
1978We12	PHSTB	18,	275	T. Weckstrom
1978We14	NUPAB	308,	222	D.C. Weisser, A.F. Zeller, T.R. Ophel, et al.
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, et al.
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
1978Ya08	JINCA	40,	963	S.W. Yates, A.J. Filo
1978Ze04	PRVCA	18,	2122	B. Zeidman, J.A. Nolen, Jr.
1978Zg.A	PrvCom	AHW	Sep	E.F. Zganjar, W.R. Kane, G.J. Smith, et al.

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1979Ad08	IANFA	43,	1089	I.A. Adam, A.V. Budzyak, M. Gonusek, et al.
1979Ah03	PRVCA	20,	290	I. Ahmad, S.W. Yates, R.K. Sjoblom, et al.
1979Aj02	PRVCA	19,	1742	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hanson, et al.
1979Aj03	PRVCA	19,	2068	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hansen, et al.
1979Al04	JPHGB	5,	423	A.M. Al Naser, A.H. Behbehani, P.A. Butler, et al.
1979Al05	ZPAAD	290,	173	K. Aleklett, E. Lund, G. Rudstam
1979Al07	NUPAB	321,	45	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, et al.
1979Al16	ZPAAD	291,	397	G.D. Alkhazov, L.K. Batist, E.Y. Berlovich, et al.
1979Al19	NUPAB	330,	77	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, et al.
1979An36	IANFA	43,	1076	N.M. Antoneva, V.M. Vinogradov, E.P. Grigorev, et al.
1979Ay01	PYLBB	82,	43	J. Äystö, D.M. Moltz, M.D. Cable, et al.
1979Ba02	PRLTA	42,	490	H. Backe, L. Richter, D. Habs, et al.
1979Ba06	ZPAAD	289,	325	J.N. Barkman, J.E. McFee, T.J. Kennett, et al.
1979Ba31	NUPAB	325,	305	G.C. Ball, W.G. Davies, J.S. Forster, et al.

1979Ba67	AENGA	47,	404	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov
1979Be06	ZPAAD	289,	333	H.-H. Behncke, P. Armbruster, F. Folkmann, et al.
1979Be47	ZPAAD	292,	401	E. Bergmann, P. Bopp, J. Kowalski, et al.
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, et al.
1979Bo26	NIMBE	164,	579	H.G. Borner, W.F. Davidson, J. Almeida, et al.
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, et al.
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
1979Ca02	NUPAB	316,	61	R.F. Casten, M.R. MacPhail, W.R. Kane, et al.
1979Ca16	NUIMA	158,	69	L.C. Carraz, S. Sundell, H.L. Ravn, et al.
1979Da04	PRVCA	19,	1463	C.N. Davids, C.A. Gagliardi, M.J. Murphy, et al.
1979Da06	PYLBB	82,	199	P. Dabkiewicz, F. Buchinger, H. Fischer, et al.
1979Da.A	P-Lansing		419	C.N. Davids
1979De02	PRVCA	19,	164	C. Détraz, D. Guillemaud, G. Huber, et al.
1979De19	ZPAAD	291,	207	J. Dembczynski, W. Ertmer, U. Johann, et al.
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, et al.
1979Ek02	PHSTB	19,	516	C. Ekstrom, L. Robertsson, G. Wannberg, et al.
1979El11	ZPAAD	293,	261	K. Elix, H.W. Becker, L. Buchmann, et al.
1979En02	PRVCA	19,	1948	G. Engler, Y. Nir-El, M. Shmid, et al.
1979En03	ZPAAD	291,	87	H. Engel, H. Schneider, K.-D. Schulze
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, et al.
1979Gu03	PRVCA	19,	433	W. Gunther, K. Huber, U. Kneissl, et al.
1979Ha09	ZPAAD	290,	113	H.H. Hansen, E. Cellen, G. Grosse, et al.
1979Ha10	NUPAB	318,	29	E. Hagberg, P.G. Hansen, P. Hornshøj, et al.
1979Ha15	PRLTA	42,	1451	O. Hausser, P. Taras, W. Trautmann, et al.
1979Ha26	PRVCA	19,	2332	P.E. Haustein, H.-C. Hseuh, R.L. Klobuchar, et al.
1979Ha32	PRVCA	20,	345	J.E. Halvarson, W.H. Johnson, Jr.
1979Ha60	NUIMA	167,	289	L. Hannappel, H. Henschel, H. Schneider
1979HiZR	IS-4351		10	J. Hill
1979Ho08	PHSTB	19,	239	J. Honkanen, M. Kortelahti, J. Aysto, et al.
1979Ho10	ZPAAD	291,	53	S. Hofmann, W. Faust, G. Münzenberg, et al.
1979Ho27	NUPAB	330,	429	J. Honkanen, M. Kortelahti, K. Valli, et al.
1979Ik04	NUPAB	329,	84	H. Ikegami, T. Yamazaki, S. Morinobu, et al.
1979Ik06	JUPSA	47,	1039	Y. Ikeda, H. Yamamoto, K. Kawade, et al.
1979Ik07	JUPSA	47,	1389	Y. Ikeda, H. Yamamoto, K. Kawade, et al.
1979Io01	NUPAB	313,	283	V.A. Ionescu, J. Kern, R.F. Casten, et al.
1979Iz02	PYLBB	88,	59	Y. Izawa, C. Yamanaka
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., et al.
1979Ka.B	PrvCom	NDG	Sep	N. Kaffrell
1979Ke02	ZPAAD	289,	407	U. Keyser, H. Berg, F. Münnich, et al.

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, et al.
1979Ko.B	P-Lansing		45	R.T. Kouzes, R. Sherr
1979Kr11	PRLTA	43,	1376	H. Kremmling, P. Dabkiewicz, H. Fischer, et al.
1979Lu01	NUPAB	313,	191	J. Lukasiak, R. Kaczarowski, J. Jastrzebski, et al.
1979Ma37	PYLBB	88,	48	H.-E. Mahnke, T.K. Alexander, H.R. Andrews, et al.
1979McZP	Th.-Ithaca			S.F. McGuire, Thesis, Cornell University
1979Me13	NUPAB	324,	335	T.C. Meyer
1979Mo02	PRLTA	42,	43	D.M. Moltz, J. Äystö, M.D. Cable, et al.
1979Pa14	NUPAB	331,	16	V. Paar
1979Pe01	ZPAAD	289,	219	P. Peuser, H. Otto, M. Weis, et al.
1979Pe17	NUPAB	332,	95	P. Peuser, H. Otto, N. Kaffrell, et al.
1979Pf01	PRVCA	19,	1035	L. Pfeiffer, A.P. Mills, Jr., E.A. Chandross, et al.
1979Pi08	NUPAB	321,	25	J.A. Pinston, W. Mampe, R. Rousille, et al.
1979Pl06	NUPAB	332,	29	A. Płochocki, G.M. Gowdy, R. Kirchner, et al.
1979Pr15	ZENAA	34,	387	H.-J. Probst, C. Alderliesten, P. Jahn
1979PrZU	JUL-Spez-36,		69	H.J. Probst, H. Beuscher, R. Weinreich
1979Ra16	PRVCA	20,	139	M.N. Rao, C.P. Massolo, S. Fortier, et al.
1979Ri09	ZPAAD	290,	311	C. Ristori, J. Crançon, K.D. Wunsch, et al.
1979RuZQ	INDC-107/G+SP		69	G. Rudstam
1979Ry03	ADNDA	23,	507	A. Rytz
1979Ry.A	P-Lansing		249	A. Rytz
1979Sa.A	AnRpt KVI			A. Saha, R.H. Siemsen, J.W. Smits, et al.
1979Sc09	NUPAB	318,	253	K.-H. Schmidt, W. Faust, G. Münzenberg, et al.
1979Sc11	ZPAAD	290,	359	F. Schussler, J. Blachot, E. Monnand, et al.
1979Sc22	NUPAB	326,	65	D. Schardt, R. Kirchner, O. Klepper, et al.
1979Se01	ZPAAD	289,	197	H.A. Selic, G. Sadler, T.A. Khan, et al.
1979Sh03	PRVCA	19,	1324	R.E. Shroy, A.K. Gaigalas, G. Schatz, et al.
1979Sh11	JUPSA	47,	33	T.-A. Shibata, J. Imazato, T. Yamazaki, et al.
1979Si08	CJPHA	57,	358	N.C. Singhal, M.W. Johns
1979Si.A	JLCRD	16,	226	D.J. Silvester, F. Helus, W. Maier-Borst
1979Su01	NUPAB	313,	141	T. Suehiro, J.E. Finck, J.A. Nolen, Jr.
1979Su02	ZPAAD	289,	299	B.N. Subba Rao, J.E. Crawford, S.K. Mark
1979Sw01	NUIMA	159,	407	Z.E. Switkowski, R.J. Petty, J.C.P. Heggie, et al.
1979Ta17	JPHGB	5,	1445	H.W. Taylor, B. Singh
1979Ta22	JUPSA	47,	1735	Y. Tagishi, K. Katori, Y. Toba, et al.
1979Ta.B	BAPSA	24,	836	R.W. Tarara, J.D. Zumbro, C.P. Browne
1979To01	PRVCA	19,	482	K.S. Toth, C.R. Bingham, D.R. Zolnowski, et al.
1979To06	PRVCA	19,	2399	K.S. Toth, M.A. Ijaz, C.R. Bingham, et al.
1979To18	PRVCA	20,	1902	K.S. Toth, Y.A. Ellis, D.C. Sousa, et al.
1979Ve.A	P-Lansing		431	J. Verplancke, D. Vandeplassche, M. Huyse, et al.
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, et al.
1979Wa04	NUPAB	316,	13	D.D. Warner, W.F. Davidson, H.G. Börner, et al.
1979Wa22	JPHGB	5,	1723	D.D. Warner, W.F. Davidson, W. Gelletly
1979We02	NUPAB	313,	385	D. Weber, G.M. Crawley, W. Benenson, et al.
1979We07	PRVCA	20,	115	H. Weigmann, S. Raman, J.A. Harvey, et al.
1979Wi03	PRVCA	19,	1794	K.E. Williams, G.T. Seaborg
1979Ze05	AENGA	47,	405	A.G. Zelenkov, V.A. Pchelin, Y.F. Rodionov, et al.

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1980Ad04	ZPAAD	295,	251	M. Adachi, A. Muroi, T. Matsuzaki, et al.
1980AdZO	JINR-P6-80-207			I. Adam, B.A. Alikov, W. Andrejtscheff, et al.

1980AfZZ	GSI-tr-80/3			V.P. Afanasev, L. Kh. Batist, E.E. Berlovich, et al.
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, et al.
1980Al15	ZPAAD	295,	331	K. Aleklett, P. Hoff, E. Lund, et al.
1980An40	AENGA	49,	332	Yu. P. Antufev, V.M. Mishchenko, A.I. Popov, et al.
1980An.A	P-Berkeley		134	M.S. Antony, A. Huck, G. Klotz, et al.
1980Ba59	IANFA	44,	1056	V.V. Babenko, I.N. Vishnevsky, V.A. Zheltonozhsky, et al.
1980BaZL	NEANDC(E)-212U			G. Battistuzzi, K. Kawade, B.D. Kern, et al.
1980Ba.A	Th.-Utrecht			J.R. Balder
1980BeYG	Th.-Munich			H. Behrens, Thesis, Tech. Univ. Munich
1980Bi01	PRVCA	21,	116	M. Bini, A.M. Bizzeti-Sona, P. Blasi, et al.
1980Bj02	RMPHA	52,	725	S. Bjornholm, J.E. Lynn
1980Bl.A	Th.-Giessen			A. Blönnigen Diplomarbeit
1980Br23	NUPAB	349,	61	R.A. Braga, W.R. Western, J.L. Wood, et al.
1980Bu04	IANFA	44,	79	A.V. Budzyak, T. Kretsu, V.V. Kuznetsov, et al.
1980Bu13	JPHGB	6,	1165	P.A. Butler, R. Daniel, A.D. Irving, et al.
1980Bu15	PRVCA	22,	1180	G.R. Burleson, G.S. Blanpied, G.H. Daw, et al.
1980Ca02	PRVCA	21,	65	R.F. Casten, G.J. Smith, M.R. MacPhail, et al.
1980Da09	CJPHA	58,	891	H. Dautet, G. Bischoff, J.M. D'Auria, et al.
1980Da18	ZPAAD	298,	173	P.J. Daly, P. Kleinheinz, R. Broda, et al.
1980De02	ZPAAD	294,	35	R. Decker, K.D. Wünsch, H. Wollnik, et al.
1980De26	PYLBB	94,	307	C. Detraz, M. Epherre, D. Guillemaud, et al.
1980De35	PRVCA	22,	2163	E. De Geer, G.B. Holm
1980De46	EPSLA	48,	209	D.J. Demaster
1980Di07	PRVCA	21,	2101	A.C. Di Rienzo, H.A. Enge, D.B. Gazes, et al.
1980Dr06	NUPAB	342,	335	G.D. Dracoulis, P.M. Walker
1980Du02	ZPAAD	294,	107	J.P. Dufour, A. Fleury, F. Hubert, et al.
1980Ek02	PHSTB	22,	344	C. Ekstrom, L. Robertsson
1980Ek04	NUPAB	348,	25	C. Ekstrom, L. Robertsson, S. Ingelman, et al.
1980EkZY	PrvCom	NDG	Jul	C. Ekstrom
1980El01	PRLTA	45,	589	D. Elmore, N. Anantaraman, H.W. Fulbright, et al.
1980Er04	ZPAAD	295,	197	A. Ercan, R. Broda, M. Piiparinen, et al.
1980Ew03	ZPAAD	296,	223	G.T. Ewan, E. Hagberg, B. Jonson, et al.
1980Ga07	YAFIA	31,	306	Yu. P. Gangrskii, M.B. Miller, L.V. Mikhailov, et al.
1980Ga16	ZPAAD	296,	81	P.W. Gallagher, E.W. Schneider, W.B. Walters
1980Ge13	IANFA	44,	927	A.M. Geidelman, Yu. S. Egorov, A.V. Lovtsyus, et al.
1980Gi04	PRVCA	21,	2041	J. Gilat, S. Katcoff, L.K. Peker
1980Go11	NUPAB	344,	1	H. Gokturk, N.K. Aras, P. Fettweis, et al.
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)
1980Gu20	NUPAB	350,	1	W. Gunther, K. Huber, U. Kneissl, et al.
1980Ha12	PYLBB	91,	207	J.C. Hardy, H. Schmeing, E. Hagberg, et al.
1980Ha20	PRVCA	22,	247	H.I. Hayakawa, I. Hyman, J.K.P. Lee
1980Ha23	ZPAAD	295,	341	A.J. Hautojarvi, U.J. Schrewe, W.-D. Schmidt-Ott
1980Ha36	PHSTB	22,	439	R. Hanninen, G.U. Din
1980Ho03	PHSTB	21,	129	P. Hoff
1980Ho17	IJARA	31,	153	H. Houtermans, O. Milosevic, F. Reichel
1980Ho29	CZYPA	30,	763	J. Hinzatko, K. Konesny, F. Becvar, et al.
1980Ho33	RAACA	27,	73	J.J. Hogan
1980Hu01	PRVCA	21,	712	A. Huck, G. Klotz, A. Knipper, et al.
1980Is02	CJPHA	58,	168	M.A. Islam, T.J. Kennett, S.A. Kerr, et al.
1980Ja.A	AnRpt KVI		31	J. Jänecke, E.H.L. Aarts, A.G. Drentje, et al.
1980Jo11	NUIMA	178,	581	G.D. Jones, L.P. Ekstrom, F. Kearns, et al.

1980Ka19	PRVCA	22,	997	J. Kalifa, G. Berrier-Ronsin, M. Vergnes, et al.
1980Ka30	ZPAAD	298,	273	K. Kawade, G. Battistuzzi, H. Lawin, et al.
1980KiZT	PrvCom	NDG		M. Kikuchi
1980Ko01	NUPAB	334,	35	J. Kopecky, R.E. Chrien, H. Liou
1980Ko25	CJPHA	58,	1311	K.S. Kozier, K.S. Sharma, R.C. Barber, et al.
1980Kr07	ZPAAD	295,	199	K.L. Kratz, H. Ohm
1980Kr.A	P-Berkeley		135	L. Krauss, I. Linck, A. Poves, et al.
1980Ku11	PRLTA	45,	592	W. Kutschera, W. Henning, M. Paul, et al.
1980Le18	PRVCA	22,	1976	A.G. Ledebuhr, L.H. Harwood, R.G.H. Robertson, et al.
1980Le22	PRVCA	22,	2178	D.A. Lewis, J.C. Hill, F.K. Wohn, et al.
1980LeZN	AnRpt McMaster		56	K. LeNestour, R.G. Summers-Gill, A. Islam, et al.
1980Li07	NUPAB	337,	401	H.I. Liou, R.E. Chrien, J. Kopecky, et al.
1980Li18	ZPAAD	297,	303	C.F. Liang, P. Paris, A. Peghaire, et al.
1980Lo10	PHSTB	22,	203	G. Løvhøiden, D.G. Burke, E.R. Flynn, et al.
1980Lu04	ZPAAD	294,	233	E. Lund, P. Hoff, K. Aleklett, et al.
1980Ma40	PRVCA	22,	2449	W. Mayer, K.E. Rehm, H.J. Körner, et al.
1980Me06	PRVCA	21,	2590	R.A. Meyer, J.E. Fontanilla, N.L. Smith, et al.
1980Me10	PRVCA	22,	750	J.W. Meadows, R.J. Armani, E.L. Callis, et al.
1980Mo26	NUIMA	177,	545	H. Mommsen, I. Perlman, J. Yellin
1980MoZJ	CEA-N2176,		20	E. Monnand, J.A. Pinston, F. Schussler, et al.
1980Mo.A	CEA-N2176,		20	E. Monnand, J.A. Pinston, F. Schussler, et al.
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, et al.
1980Na14	JPSLB	41,	79	F. Naulin, C. Détraz, M. Bernas, et al.
1980Na15	NUIMA	178,	299	H. Nakabushi, I. Katakuse, K. Miseki, et al.
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, et al.
1980Pa07	PYLBB	91,	41	R.C. Pardo, S. Gales, R.M. Ronningen, et al.
1980ReZQ	PNL-SA-8766			P.L. Reeder, R.A. Warner
1980Ro04	ZPAAD	294,	221	E. Roeckl, G.M. Gowdy, R. Kirchner, et al.
1980Sc09	PYLBB	91,	46	U.J. Schrewe, P. Tidemand-Petersson, G.M. Gowdy, et al.
1980Sh06	PYLBB	91,	211	K.S. Sharma, R.J. Ellis, V.P. Derenchuk, et al.
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
1980Te01	NUPAB	338,	24	B.O. Ten Brink, P. van Nes, C. Hoetmer, et al.
1980ToZZ	PrvCom	NDG	Nov	K.S. Toth
1980To.A	PrvCom	NDG	Nov	K.S. Toth
1980Tr04	PRVCA	22,	17	R.E. Tribble, D.M. Tanner, A.F. Zeller
1980Va13	NUPAB	346,	70	A. Van Poelgeest, J. Bron, W.H.A. Hesselink, et al.
1980Ve01	ZPAAD	294,	144	D. Vermeulen, H.-G. Clerc, W. Lang, et al.
1980Ve05	NUPAB	344,	421	R. Vennink, J. Kopecky, P.M. Endt, et al.
1980Vi.A	PrvCom	AHW		V.D. Vitman, F.V. Moroz, Yu. Ya. Sergeev, et al.
1980Vy01	IANFA	44,	67	Ts. Vylov, S. Omanov, V. Csaleksandrov, et al.
1980Wa23	NUPAB	349,	1	P.M. Walker, D. Ward, O. Hausser, et al.
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, et al.
1980Ya.A	AnRpt Berkeley			S. Yashita, M. Leino, A. Ghiorso
1980Ze.A	AnRpt Mainz		1	M. Zendel, N. Trautmann
1980Zo02	PRVCA	21,	2556	D.R. Zolnowski, M.B. Hughes, J. Hunt, et al.

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1981Ad02	NUPAB	356,	129	I. Adam, M. Honusek, Z. Hons, et al.
1981Aj02	PRVCA	24,	1762	F. Ajzenberg-Selove, R.E. Brown, E.R. Flynn, et al.
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, et al.
1981Al20	ZPAAD	302,	241	K. Aleklett, P. Hoff, E. Lund, et al.
1981An11	IJARA	32,	381	O. Ando, K. Miyano
1981Ar13	PYLBB	104,	186	Y. Arai, M. Fujioka, E. Tanaka, et al.
1981Ar.A	JINR-P6-81-524			K.P. Artamonova, A. Budzyak, E.P. Grigorev, et al.
1981Ay01	PRVCA	23,	879	J. Äystö, M.D. Cable, R.F. Parry, et al.
1981Ba40	ZPAAD	302,	329	G.K. Bavaria, J.E. Crawford, S. Calamawy, et al.
1981Ba53	IANFA	45,	727	I.F. Barchuck, V.I. Goyshkin, E.N. Gorban, et al.
1981Ba58	NUPAB	372,	45	P.H. Barker, T.B. Ko, M.J. Scandle
1981Be03	PRVCA	23,	555	C.E. Bemis, Jr., P.F. Dittner, R.L. Ferguson, et al.
1981Be40	PRVCA	24,	756	M. Bernas, J.C. Peng, H. Doubre, et al.
1981Bj01	NUPAB	359,	1	T. Bjornstad, H.A. Gustafsson, P.G. Hansen, et al.
1981Bo29	ZPAAD	302,	51	H. Bohn, E. Endres, T. Faestermann, et al.
1981Bo.B	AnRpt Julich		76	M. Bogdanovic, T.D. MacMahon, H. Seyfarth
1981Br30	RRALA	48,	391	H. Bruchertseifer, B. Eichler
1981Bu.A	P-Samarkand		621	M. Budzinski, K. Ya. Gromov, V.V. Kuznetsov, et al.
1981Ci01	PRVCA	23,	1453	J.A. Cizewski, E.R. Flynn, R.E. Brown, et al.
1981Da06	PRVCA	23,	1612	E. Dafni, H.E. Mahnke, J.W. Noe, et al.
1981De22	ZPAAD	300,	251	S. Della Negra, C. Deprun, D. Jacquet, et al.
1981De25	ZPAAD	301,	165	R. Decker, K.D. Wünsch, H. Wollnik, et al.
1981De38	ZPAAD	303,	151	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1981Dr07	ZPAAD	302,	361	S. Drissi, S. André, J. Genevey, et al.
1981Eb01	ZPAAD	299,	209	I.D.U. Ebong, R.R. Roy
1981Ek03	ZPAAD	302,	181	C. Ekstrom, L. Robertsson
1981El03	PRVCA	23,	480	Y.A. Ellis-Akovali, K.S. Toth, C.R. Bingham, et al.
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, et al.
1981Fi02	NUPAB	363,	311	C.A. Fields, F.W.N. De Boer, J.J. Kraushaar, et al.
1981Fl02	PRVCA	24,	902	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, et al.
1981Fl05	PYLBB	105,	125	E.R. Flynn, R.E. Brown, J.W. Sunier, et al.
1981Fl.A	P-Helsingor		107	E.R. Flynn, R.E. Brown, J.W. Sunier, et al.
1981Fo02	NUPAB	352,	157	B. Fogelberg, K. Heyde, J. Sau
1981Fr07	PRVCA	23,	2234	E-M. Franz, S. Katcoff, P.P. Parekh, et al.
1981Ga36	IANFA	45,	2107	N. Ganbaatar, J. Kormicki, K.A. Mezilev, et al.
1981GaZS	P-Samarkand		104	N. Ganbaatar, Ya. Kormitski, K.A. Mezilev, et al.
1981Ge04	IJARA	32,	377	R.J. Gehrke
1981Gi01	PYLBB	98,	29	F. Girshik, K. Krien, R.A. Naumann, et al.
1981Gi17	NUIMA	186,	243	R.L. Gill, M.L. Stelts, R.E. Chrien, et al.
1981GoZN	P-Helsingor		562	G.M. Gowdy, R.E. Chrien, Y.Y. Chu, et al.
1981Gu04	NUPAB	359,	397	W. Gunther, K. Huber, U. Kneissl, et al.
1981Ha08	NUPAB	357,	356	J.C. Hardy, G.C. Ball, W.G. Davies, et al.
1981Ha33	PYLBB	104,	365	E. Hagn, H. Kleebauer, E. Zech
1981Ha44	NUPAB	371,	349	J.C. Hardy, T. Faestermann, H. Schmeing, et al.
1981He07	PRVCA	23,	1446	H. Helppi, S.K. Saha, P.J. Daly, et al.
1981Hi01	NUPAB	352,	93	F. Hintenberger, P. von Rossen, S. Cierjacks, et al.
1981Ho03	PYLBB	99,	383	D.J. Horen, C.D. Goodman, D.E. Bainum, et al.
1981Ho07	NUPAB	359,	9	P. Hoff
1981Ho10	ZPAAD	299,	281	S. Hofmann, G. Münzenberg, F. Heßberger, et al.

1981Ho17	ZPAAD	300,	289	P. Hoff, K. Aleklett, E. Lund, et al.
1981Ho18	NUIMA	186,	257	P. Hornshøj, H.L. Nielsen, N. Rud, et al.
1981Ho19	NUPAB	366,	109	J. Honkanen, M. Kortelahti, K. Eskola, et al.
1981Ho24	NUPAB	368,	210	P. Hoff, B. Fogelberg
1981Ho.A	P-Helsingor		190	S. Hofmann, G. Münzenberg, W. Faust, et al.
1981Ho.B	PrvCom	AHW	Oct	C. Hofmeyr, D. Warner, H.G. Börner, et al.
1981Hs02	PRVCA	23,	1217	H.-C. Hseuh, E.-M. Franz, P.E. Haustein, et al.
1981Hu03	NUPAB	352,	247	M. Huyse, K. Cornelis, G. Lhersonneau, et al.
1981HuZT	P-Helsingor		378	A. Huck, G. Klotz, A. Knipper, et al.
1981Iw04	JUPSA	50,	3191	T. Iwashita
1981JoZV	P-Helsingor		265	B. Jonson, H. Å. Gustafsson, P.G. Hansen, et al.
1981Jo.B	P-Helsingor		640	B. Jonson, O.B. Nielsen, L. Westgaard, et al.
1981Ka07	PRVCA	23,	1274	R. Kantus, U.J. Schrewe, W.D. Schmidt-Ott, et al.
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, et al.
1981Kr20	PRLTA	47,	1709	A.J. Kreiner, C. Baktash, G. Garcia Bermudez, et al.
1981Ku02	NUPAB	356,	15	W. Kurcewicz, E. Ruchowska, N. Kaffrell, et al.
1981Le23	PRVCA	24,	2370	M.E. Leino, S. Yashita, A. Ghiorso
1981Li12	PRVCA	24,	260	C.J. Lister, P.E. Haustein, D.E. Alburger, et al.
1981Li30	JINCA	43,	3071	M. Lindner, R.J. Dupzyk, R.W. Hoff, et al.
1981LiZM	P-Helsingor	2,709		C.F. Liang, P. Paris, G. Bastin, et al.
1981Lo15	JINCA	43,	2239	R.W. Lougheed, E.K. Hulet, J.F. Wild, et al.
1981Lo.A	P-Grenoble		383	M.A. Lone
1981Lu01	NUPAB	357,	319	A. Luukko, J. Hattula, H. Helppi, et al.
1981Lu07	ZETFA	81,	1158	V.A. Lyubimov, E.G. Novikov, V.Z. Nozik, et al.
1981Ma01	JPHGB	7,	101	G. Marguier, A. Charvet, J. Genevey, et al.
1981Ma30	NUPAB	370,	1	S. Matsuki, N. Sakamoto, K. Ogino, et al.
1981Mi02	NUPAB	356,	317	J. Missimer, L.M. Simons
1981Mi10	IJARA	32,	573	H. Miyahara, T. Gotoh, T. Watanabe
1981Mi11	JPHGB	7,	1433	P. Misaelides, I.C. Malcolm
1981Mi12	ZPAAD	301,	199	P. Misaelides, P. Tidemand-Petersson, U.J. Schrewe, et al.
1981Mu06	ZPAAD	300,	107	G. Münzenberg, S. Hofmann, F.P. Heßberger, et al.
1981Mu12	ZPAAD	302,	7	G. Münzenberg, S. Hofmann, W. Faust, et al.
1981Na15	RAACA	29,	169	H. Nagai, O. Nitoh, M. Honda
1981Na.A	P-Helsingor		376	F. Naulin, C. Détraz, M. Roy-Stephan, et al.
1981Ne06	HYIND	9,	151	R. Neugart, F. Buchinger, W. Klempt, et al.
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, et al.
1981Pa17	ZPAAD	302,	117	A.D. Panagiotou, P.K. Kananis, E.N. Gazis, et al.
1981Po08	NUPAB	359,	180	A.R. Poletti, G.D. Dracoulis, C. Fahlander, et al.
1981Pr06	PRVCA	24,	1346	R.J. Prestwood, D.B. Curtis, J.H. Cappis
1981Ra07	PRVCA	23,	1979	S. Raman, O. Shahal, A.Z. Hussein, et al.
1981Ri04	PRVCA	23,	2342	B.G. Ritchie, K.S. Toth, H.K. Carter, et al.
1981Ro02	PRVCA	23,	973	R.G.H. Robertson, J.A. Nolen, Jr., T. Chapuran, et al.
1981Ru07	NUIMA	186,	365	G. Rudstam, P. Aagaard, P. Hoff, et al.
1981Sa09	PRVCA	23,	1713	T. Saito, T. Toriyama, M. Kanbe, et al.
1981Sc17	NUPAB	368,	153	D. Schardt, T. Batsch, R. Kirchner, et al.
1981Sc21	PRVCA	24,	2695	W.D. Schmidt-Ott, R. Kantus, E. Runte, et al.
1981Se11	PYLBB	103,	409	U. Sennhauser, L. Felawka, T. Kozlowski, et al.
1981Se.A	P-Helsingor		655	K.T. Seth

1981ShZH	P-Helsingor	2,	576	M. Shmid, Y.Y. Chu, G.M. Gowdy, et al.
1981Sj01	PRVCA	23,	272	T.P. Sjoreen, U. Garg, D.B. Fossan
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, et al.
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, et al.
1981Th03	NUPAB	362,	71	B.V. Thirumala Rao, R. Broda, C. Gunther, et al.
1981Th04	PRVCA	23,	2720	C. Thibault, F. Touchard, S. Buttgenbach, et al.
1981Th06	NUPAB	367,	1	C. Thibault, F. Touchard, S. Buttgenbach, et al.
1981ThZV	P-Helsingor	2,	365	C. Thibault, M. Epherre, G. Audi, et al.
1981TiZZ	AnRpt Mainz		34	G. Tittel, N. Kaffrell, N. Trautmann, et al.
1981To02	NUPAB	356,	26	K.S. Toth, Y.A. Ellis-Akovali, D.M. Moltz, et al.
1981Va11	IJARA	32,	589	R. Vaninbroukx, G. Grosse, W. Zehner
1981Va27	IANFA	45,	1861	V.M. Vakhtel, N.A. Golovkov, R.B. Ivanov, et al.
1981Va.B	P-Grenoble		548	C. Van der Leun, P. De Wit, C. Alderliesten, and PrvCom AHW
1981Vo02	PRVCA	23,	1110	H.R. von Gunten, A. Grutter, H.W. Reist, et al.
1981Vo03	NUPAB	365,	26	T. von Egidy, G. Barreau, H.G. Börner, et al.
1981Vo04	NUIMA	186,	307	B. Vosicki, T. Bjornstad, L.C. Carraz, et al.
1981Wa11	NUPAB	362,	1	C. Wagemans, E. Allaert, A. De Clerq, et al.
1981Wa26	IJARA	32,	757	S.L. Waters, G.R. Forse, P.L. Horlock, et al.
1981Wa31	NUIMA	190,	167	C. Wagemans, E. Allaert, G. Barreau, et al.
1981We12	NUPAB	368,	117	H. Weigmann, C. Wagemans, A. Emsallem, et al.
1981Wh03	PYLBB	105,	116	R.E. White, H. Naylor, P.H. Barker, et al.
1981Ya06	JINCA	43,	855	H. Yamamoto, Y. Ikeda, K. Kawade, et al.

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1982Ah01	NUPAB	373,	434	I. Ahmad, E.P. Horwitz
1982Al17	PRVCA	26,	252	D.E. Alburger
1982Al19	NUIMA	197,	383	P.F. AAlkemade, C. Alderliesten, P. De Wit, et al.
1982Al29	PRVCA	26,	1157	K. Aleklett, P. Hoff, E. Lund, et al.
1982Al34	HYIND	12,	289	A.L. Allsop, V.R. Green, N.J. Stone
1982Al.A	LNPI-820			G.D. Alkhazov, N. Ganbaatar, K.Y. Gromov, et al.
1982Al.C	PrvCom	NDG	Dec	D.E. Alburger, J.W. Olness, T.W. Burrows
1982An12	JPHGB	8,	1659	M.S. Antony
1982An15	PRVCA	26,	2194	A. Andl, K. Bekk, S. Goring, et al.
1982An19	PYLBB	113,	72	J.U. Andersen, G.J. Beyer, G. Charpak, et al.
1982Au01	NUPAB	378,	443	G. Audi, M. Epherre, C. Thibault, et al.
1982Ay01	PYLBB	110,	437	J. Aysto, J. Honkanen, K. Vierinen, et al.
1982Ba15	IANFA	46,	63	I.F. Barchuk, V.I. Golyshkin, E.N. Gorban
1982Ba28	NUPAB	380,	189	A. Backlin, G. Hedin, B. Fogelberg, et al.
1982Ba69	IANFA	46,	2077	I.F. Barchuk, V.I. Golyshkin, E.N. Gorbinj
1982Ba75	IANFA	46,	2200	L. Kh. Batist, Yu. S. Blinnikov, N. Ganbaatar, et al.
1982Ba76	JRACB	74,	117	J.D. Baker, R.J. Gehrke, R.C. Greenwood, et al.
1982Be03	NUPAB	376,	131	M. Behar, D. Abriola, A. Filevich, et al.
1982Be20	NCLTA	33,	273	E. Bellotti, E. Fiorini, C. Liguori, et al.
1982Be21	PRVCA	25,	2848	G. Berrier-Ronsin, M. Vergnes, G. Rotbard, et al.
1982Be38	PRVCA	26,	914	J.A. Becker, J.B. Carlson, R.G. Lanier, et al.
1982Be46	NUPAB	389,	158	R. Bengtsson, J.A. Pinston, D. Barneoud, et al.
1982BeZY	BAPSA	27,	DF10	C. Bell, P. Raghavan, Y. Niv, et al.
1982Bo04	PRVCA	25,	941	J.D. Bowman, R.E. Eppley, E.K. Hyde

1982Bo27	NUPAB	386,	308	C. Bourgeois, P. Kilcher, B. Roussiere, et al.
1982Br10	RAACA	30,	1	W. Brüchle, G. Herrmann
1982Br23	PRVCA	26,	2166	D.S. Brenner, M.K. Martel, A. Aprahamian, et al.
1982Bu21	NUIMA	202,	159	F. Buchinger, A.C. Mueller, B. Schinzler, et al.
1982Ca04	PYLBB	109,	419	L.C. Carraz, P.G. Hansen, A. Huck, et al.
1982Ca16	PRVCA	26,	1778	M.D. Cable, J. Honkanen, R.F. Parry, et al.
1982Ch22	PRVCA	26,	1198	C. Chung, W.B. Walters, R. Gill, et al.
1982Ch29	JOPQA	43,	1597	A. Chevallier, J. Chevallier, S. Khazrouni, et al.
1982Cr01	PYLBB	109,	8	G.M. Crawley, W. Benenson, G. Bertsch, et al.
1982De03	PRVCA	25,	146	P. De Gelder, D. De Frenne, E. Jacobs, et al.
1982De06	PRVCA	25,	504	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1982De11	ANPHA	7,	149	S. Della Negra, C. Deprun, D. Jacquet, et al.
1982De36	ZPAAD	307,	305	S. Della Negra, H. Gauvin, D. Jacquet, et al.
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, et al.
1982Di05	NUPAB	378,	273	W.R. Dixon, R.S. Storey, A.F. Bielajew
1982Du06	JOPQA	43,	509	H.T. Duong, P. Juncar, S. Liberman, et al.
1982En03	PRVCA	25,	1830	H.A. Enge, M. Salomaa, A. Sperduto, et al.
1982Ew01	NUPAB	380,	423	G.T. Ewan, E. Hagberg, B. Jonson, et al.
1982Fi10	NUPAB	385,	505	L.K. Fifield, J.L. Durell, M.A.C. Hotchkis, et al.
1982Fl09	PRVCA	25,	2851	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, et al.
1982Fo10	NUPAB	391,	445	B. Fogelberg, P. Hoff
1982FoZZ	PrvCom	NDG	Feb	B. Fogelberg
1982Ga05	PRLTA	48,	914	C.A. Gagliardi, G.T. Garvey, J.R. Wrobel, et al.
1982Ga24	ZPAAD	308,	359	H. Gabelmann, J. Munzel, B. Pfeiffer, et al.
1982Gi.A	Th.-Mainz			H. Gietz
1982Go02	PRLTA	48,	1160	U. Goerlach, D. Habs, V. Metag, et al.
1982GoZU	P-Yamanishi		283	Y. Gono, Y. Itoh, S. Sasagase, et al.
1982Gr07	IJARA	33,	456	A. Grutter
1982Gr10	IJARA	33,	533	A. Grutter
1982Gr.A	P-Amsterdam			K.Y. Gromov, et al
1982Ha22	NUPAB	379,	287	O. Hausser, H.E. Mahnke, T.K. Alexander, et al.
1982Ha32	NUPAB	383,	109	E. Hagberg, J.C. Hardy, H. Schmeing, et al.
1982He06	PRVCA	25,	3193	K. Heyde, J. Sau, E.A. Henry, et al.
1982HeZM	GSI-82-1,		64	F.P. Hessberger, S. Hofmann, G. Munzenberg, et al.
1982Hi04	PRVCA	25,	2710	K.H. Hicks, T.E. Ward, J. Wiggins, et al.
1982Hi14	ZPAAD	309,	27	R. Hingmann, H.-G. Clerc, C.C. Sahm, et al.
1982Ho04	ZPAAD	305,	111	S. Hofmann, W. Reisdorf, G. Münzenberg, et al.
1982Ho07	PRVCA	25,	2232	R.W. Hoff, W.F. Davidson, D.D. Warner, et al.
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, et al.
1982Ka25	ZPAAD	308,	33	K. Kawade, K. Sistemich, G. Battistuzzi, et al.
1982Ka.A	PrvCom	AHW	Jul	W. Kane, et al
1982Ke05	ZPAAD	306,	161	B.D. Kern, K. Sistemich, W.-D. Lauppe, et al.
1982Kl03	ZPAAD	305,	125	O. Klepper, T. Batsch, S. Hofmann, et al.
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, et al.
1982Ku15	ZPAAD	308,	21	W. Kurcewicz, E.F. Zganjar, R. Kirchner, et al.
1982La22	NUIMA	196,	559	R.G. Lanier, L.G. Mann, G.L. Stuble
1982La25	IJARA	33,	711	F. Lagoutine, J. Legrand
1982Li17	ZPAAD	309,	185	C.F. Liang, P. Paris, D. Bucurescu, et al.

1982MaZP	INDC(ARG)-9/G		b17	A.O. Macchiavelli, M. Behar, A. Filevich, et al.
1982Mi14	NATUA	300,	414	J.-F. Minster, J.-L. Birck, C.J. Allègre
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, et al.
1982Mo12	PRVCA	25,	3218	C.L. Morris, H.T. Fortune, L.C. Bland, et al.
1982Mo23	PRVCA	26,	1914	D.M. Moltz, K.S. Toth, R.E. Tribble, et al.
1982Mu08	PRLTA	49,	455	M.J. Murphy, T.J.M. Symons, G.D. Westfall, et al.
1982Na04	PRVCA	25,	1074	F. Naulin, C. Détraz, M. Roy-Stéphan, et al.
1982Na17	RAACA	30,	185	T.M. Nakanishi, M. Honda
1982Ne05	NUPAB	390,	53	A. Neskakis, R.M. Lieder, H. Beuscher, et al.
1982No06	ZPAAD	305,	289	E. Nolte, H. Hick
1982No07	ZPAAD	306,	211	E. Nolte, G. Colombo, S.Z. Gui, et al.
1982No08	ZPAAD	306,	223	E. Nolte, S.Z. Gui, G. Colombo, et al.
1982Oh04	JUPSA	51,	43	M. Ohshima, Z. Matumoto, T. Tamura
1982Ol01	NUPAB	373,	13	J.W. Olness, E.K. Warburton, D.E. Alburger, et al.
1982Pa23	PRVCA	26,	2178	P.P. Parekh, L.K. Peker, S. Katcoff, et al.
1982Pa24	ZPAAD	308,	345	B. Pahlmann, U. Keyser, F. Münnich, et al.
1982Pl05	NUPAB	388,	93	A. Płochocki, J. Żylicz, R. Kirchner, et al.
1982Po14	RADKA	24,	490	V.G. Polyukhov, G.A. Timofeev, V.V. Kalygin, et al.
1982Ra04	PRLTA	48,	982	M.H. Rafailovich, E. Dafni, G. Schatz, et al.
1982Ra13	ZPAAD	305,	359	M.S. Rapaport, G. Engler, A. Gayer, et al.
1982Ra.A	PrvCom	AHW	Nov	A. Raemy, J.C. Dousse, J. Kern, et al.
1982Re08	NUIMA	197,	427	K. Rengan, J. Lin, M. Zendel, et al.
1982Sc03	NUPAB	376,	144	K. Schreckenbach, A.I. Namenson, W.F. Davidson, et al.
1982Sc14	PRVCA	25,	2888	H.H. Schmidt, P. Hungerford, H. Daniel, et al.
1982Sc15	PRVCA	25,	3091	U.J. Schrewe, E. Hagberg, H. Schmeing, et al.
1982Sc25	ZPAAD	308,	183	H.J. Scheerer, D. Pereira, A. Chalupka, et al.
1982So.B	AnRpt Julich		54	F. Soramel-Stanco, R. Julin, B. Rubio, et al.
1982Th01	PRVCA	25,	331	C.E. Thorn, W.F. Piel, Jr., M.J. LeVine, et al.
1982Ti02	NUPAB	376,	421	T.A.A. Tielens, J. Kopecky, F. Stecher-Rasmussen, et al.
1982To02	PYLBB	108,	169	F. Touchard, P. Guimbal, S. Buttgenbach, et al.
1982To14	PYLBB	117,	11	K.S. Toth, Y.A. Ellis-Akovali, D.M. Moltz, et al.
1982To16	JNSTA	19,	765	M. Totsuka, S. Fujita, K. Mio, et al.
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, et al.
1982Vy03	IANFA	46,	834	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, et al.
1982Vy06	IANFA	46,	2066	Ts. Vylov, V.G. Kalinnikov, V.V. Kuznetsov, et al.
1982Vy07	IANFA	46,	2239	Ts. Vylov, V.M. Gorodzhankin, K.Y. Gromov, et al.
1982Vy10	YAFIA	36,	812	Ts. Vylov, V.M. Gorozhankin, K. Ya. Gromov, et al.
1982Wi05	NSENA	81,	396	K. Wisshak, J. Wickenhauser, F. Kappeler, et al.
1982Wi08	PRVCA	26,	1531	J.F. Wild, E.K. Hulet, R.W. Lougheed, et al.
1982Wi.A	Th.-Un.N.Caroln			J.F. Wilkerson
1982Ze05	ZPAAD	308,	227	W.-D. Zeitz, D. Alber, H. Grawe, et al.
1982Zu02	PRVCA	26,	965	J.D. Zumbro, C.P. Browne, J.F. Mateja, et al.
1982Zu04	PRVCA	26,	2668	J.D. Zumbro, A.A. Rollefson, R.W. Tarara, et al.

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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, et al.
1983Al06	ZPAAD	310,	247	G.D. Alkhazov, K.A. Mezilev, Yu. N. Novikov, et al.
1983Al18	PZETA	38,	144	G.D. Alkhazov, A.A. Bykov, V.D. Vitman, et al.
1983Al20	YAFIA	37,	797	D.V. Aleksandrov, E.A. Ganza, Yu. A. Glukhov, et al.

1983Al24	PTB- 93,		315	W.G. Alberts, M. Matzke
1983Al.A	PrvCom	AHW	Jan	G.D. Alkhazov
1983Al.B	P-Moscow		87	G.D. Alkhazov, A.A. Akhmonen, L. Kh. Batist, et al.
1983An15	JPHGB	9,	L245	M.S. Antony, J. Britz, J.B. Buep, et al.
1983Ar15	CJCHA	61,	780	N.K. Aras, C. Chung, S. Faller, et al.
1983Ay01	NUPAB	404,	1	J. Äystö, J. Honkanen, W. Trzaska, et al.
1983Ba32	PRVCA	28,	337	P.A. Baisden, D.H. Sisson, S. Niemeyer, et al.
1983Be03	JPHGB	9,	213	I. Berkes, R. Brenier, G. Marest
1983Be18	NUPAB	399,	131	H. Behrens, P. Christmas
1983Be42	NUPAB	408,	87	G.J. Beyer, A. De Rújula, R.-D. von Dincklage, et al.
1983Be66	AENGA	55,	97	S.N. Belenky, M.D. Skorokhvatov, A.V. Etenko
1983Be.C	PrvCom	GAu	Sep	M. Bernas, et al
1983Bi04	ZPAAD	311,	163	A.M. Bizzeti Sona, P. Blasi, P.A. Mando
1983Bl16	ZPAAD	314,	199	J. Blomqvist, A. Kerek, B. Fogelberg
1983Bo29	PYLBB	130,	167	P.D. Bond, R.F. Casten, D.D. Warner, et al.
1983Bu03	CJPHA	61,	460	D.G. Burke, I. Nowikov, Y.K. Peng, et al.
1983ByZZ	P-Moscow		106	A.A. Bykov, V.D. Vitman, Yu. V. Naumov, et al.
1983Ca04	PRVCA	27,	1310	R.F. Casten, D.D. Warner, G.M. Gowdy, et al.
1983Ca06	PYLBB	123,	25	M.D. Cable, J. Honkanen, R.F. Parry, et al.
1983Ch08	ZPAAD	310,	135	A. Chalupka, H. Vonach, E. Hueges, et al.
1983Ch39	PRVCA	28,	2099	C. Chung, W.B. Walters, D.S. Brenner, et al.
1983Ch47	NUIMA	215,	397	P. Christmas, S.M. Judge, T.B. Ryves, et al.
1983Ci01	PRVCA	27,	1040	J.A. Cizewski, D.G. Burke, E.R. Flynn, et al.
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, et al.
1983De08	ZPAAD	310,	55	D.J. Decman, H. Grawe, H. Kluge, et al.
1983De17	ZPAAD	312,	209	D.J. Decman, R.K. Sheline, Y. Tanaka, et al.
1983De20	NUPAB	401,	397	P. De Gelder, D. De Frenne, K. Heyde, et al.
1983De23	NUPAB	402,	301	C. Detraz, M. Langevin, D. Guillemaud-Mueller, et al.
1983De28	NUPAB	404,	225	M.G. Delfini, J. Kopecky, J.B.M. de Haas, et al.
1983De29	NUPAB	404,	250	M.G. Delfini, J. Kopecky, R.E. Chrien, et al.
1983De47	YAFIA	38,	1105	A.V. Derbin, L.A. Popeko
1983De51	YAFIA	38,	1377	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, et al.
1983Dm04	YAFIA	38,	1394	S.V. Dmitriev, G.A. Otroshchenko, S.M. Solovyev
1983Do11	ZPAAD	313,	207	Zs. Dombrádi, A. Krasznahorkay, J. Gulyás
1983Dr14	NUPAB	411,	17	J. Drexler, R. Heil, K. Huber, et al.
1983En03	NSENA	85,	139	T.R. England, W.B. Wilson, R.E. Schenter, et al.
1983Fe06	ZPAAD	314,	159	P. Fettweiss, J.C. Dehaes
1983Fl05	PRVCA	28,	97	E.R. Flynn, J. van der Plicht, J.B. Wilhelmy, et al.
1983Fl06	PRVCA	28,	575	E.R. Flynn, R.E. Brown, F. Ajzenberg-Selove, et al.
1983Fo.B	PrvCom	AHW	Jun	I. Förster
1983Fr27	PRVCA	28,	1756	D. Frekers, W. Henning, W. Kutschera, et al.
1983Fu21	HYIND	15/16,	1017	M. Fujioka, S. Shibuya, N. Kawamura, et al.
1983Ga05	JPHGB	9,	309	D. Galeriu
1983Ga18	PRVCA	28,	2423	C.A. Gagliardi, G.T. Garvey, J.R. Wrobel, et al.
1983Ga.A	P-Moscow		90	N. Ganbaatar, Ya. Kormitski, K.A. Mezilev, et al.
1983Ge08	NUIMA	211,	89	W. Gelletly
1983Gi04	PRVCA	27,	1732	R.L. Gill, M. Shmid, R.E. Chrien, et al.
1983Gn01	NUPAB	406,	29	B.E. Gnade, R.E. Fink, J.L. Wood
1983Gr01	PYLBB	120,	63	H. Grawe, H. Haas
1983Gr02	PRVCA	27,	1266	R.C. Greenwood, R.J. Gehrke, J.D. Baker, et al.
1983Gr33	HYIND	15/16,	65	H. Grawe, H.H. Bertschat, H. Haas
1983Ha06	NUPAB	395,	152	E. Hagberg, J.C. Hardy, H. Schmeing, et al.
1983Ha15	ZPAAD	312,	251	K. Hardt, Y.K. Agarwal, C. Gunther, et al.

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, et al.
1983Hi12	ZPAAD	313,	141	R. Hingmann, H.-G. Clerc, C.-C. Sahm, et al.
1983Ho08	NUPAB	398,	130	M.A.C. Hotchkis, L.K. Fifield, J.R. Leigh, et al.
1983Ho23	PYLBB	133,	146	J. Honkanen, M.D. Cable, R.F. Parry, et al.
1983Hu11	ZPAAD	313,	325	P. Hungerford, T. von Egidy, H.H. Schmidt, et al.
1983Hu12	ZPAAD	313,	337	P. Hungerford, T. von Egidy, H.H. Schmidt, et al.
1983Hu13	ZPAAD	313,	349	P. Hungerford, T. von Egidy, H.H. Schmidt, et al.
1983Ia02	CJCHA	61,	694	R. Iafigliola, M. Chatterjee, H. Dautet, et al.
1983Jo04	NUPAB	396,	479c	B. Jonson, J.U. Andersen, G.J. Beyer, et al.
1983Ke.A	P-Florence		B118	S.A. Kerr, F. Hoyler, K. Schreckenbach, et al.
1983Ko07	ZPAAD	310,	137	P. Komninos, E. Nolte, P. Blasi
1983Ko22	NUPAB	405,	29	V.T. Koslowsky, E. Hagberg, J.C. Hardy, et al.
1983Kr11	ZPAAD	312,	43	K.-L. Kratz, H. Ohm, A. Schroder, et al.
1983La12	PYLBB	125,	116	M. Langevin, C. Détraz, D. Guillemaud-Mueller, et al.
1983La23	PYLBB	130,	251	M. Langevin, C. Détraz, D. Guillemaud-Mueller, et al.
1983La27	ZPAAD	314,	9	P.O. Larsson, T. Batsch, R. Kirchner, et al.
1983Le.A	Th.-Helsinki			M. Leino (Report HU-P-D37)
1983Li11	PRVCA	28,	2127	C.J. Lister, B.J. Varley, D.E. Alburger, et al.
1983Lo01	PRVCA	27,	180	T. Lonnroth, D. Horn, C. Baktash, et al.
1983MaYQ	P-Geel		272	F.M. Mann, M. Schreiber, R.E. Schenter, et al.
1983Mi20	PYLBB	130,	1	T. Minamisono, K. Takeyama, T. Ishigai, et al.
1983Mi33	NUIMA	218,	430	R. Middleton, J. Klein, G.M. Raisbeck, et al.
1983Mo09	PRVCA	28,	623	S. Mordechai, S. LaFrance, H.T. Fortune
1983Mu12	NUPAB	403,	234	A.C. Mueller, F. Buchinger, W. Klempt, et al.
1983Mu14	PYLBB	127,	291	K. Muto, H. Horie
1983Mu19	ZPAAD	313,	247	J. Munzel, B. Pfeiffer, H. Wollnik
1983Ne13	HYIND	15/16,	181	R. Neugart, K. Wendt, S.A. Ahmad, et al.
1983Ni05	ZPAAD	312,	265	J.M. Nitschke, M.D. Cable, W.-D. Zeitz
1983No14	JJGBD	88,	331	T.L. Norris, A.J. Gancarz, D.J. Rokop, et al.
1983Ny01	NUPAB	408,	127	K. Nybø, T.F. Thorsteinsen, G. Løvhøiden, et al.
1983OgZW	JINR-P7-83-644			Yu. Ts. Oganesyan
1983Og.A	JINR-D7-83-644			Yu. Ts. Oganessian
1983Pa.A	Th.-Berkeley			R.F. Parry DABBB 44,2472(1984)
1983Po14	RADKA	25,	482	Yu. S. Popov, P.A. Privalova, G.A. Timofeev, et al.
1983Po15	RADKA	25,	487	V.G. Polyukhov, G.A. Timofeev, Yu. I. Kurunov, et al.
1983Po16	RADKA	25,	800	Yu. S. Popov, P.A. Privalova, G.A. Timofeev, et al.
1983Pu01	NUPAB	399,	190	G.P. Putt, L.K. Field, M.A.C. Hotchkis, et al.
1983Ra04	PRVCA	27,	1188	S. Raman, E.T. Jurney, D.A. Outlaw, et al.
1983Ra10	JPHGB	9,	555	S. Rastikerdar, C. Garrett, G.S. Foote, et al.
1983Ra25	PRLTA	51,	975	R.S. Raghavan
1983Ra.A	P-Florence		I-1	K.V. Ramaniah, S.B. Reddy, V.V. Rama Murti, et al.
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, et al.
1983Ru06	NUPAB	399,	163	E. Runte, W.-D. Schmidt-Ott, P. Tidemand-Petersson, et al.
1983Ru08	NUPAB	407,	60	J.F.G.A. Ruyl, P.M. Endt
1983Sc18	ZPAAD	310,	295	U.J. Schrewe, E. Hagberg, H. Schmeing, et al.
1983Sc23	PRVCA	28,	435	N. Schulz, A. Chevallier, J. Chevallier, et al.
1983Sc24	ZPAAD	312,	21	J.R.H. Schneider, S. Hofmann, F.P. Heßberger, et al.
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, et al.
1983Sh47	HYIND	14,	315	S. Shibuya, M. Fujioka, N. Kawamura, et al.
1983Si20	PRVCA	28,	2118	B. Singh, A. Kogan, S.K. Mark
1983St15	NUPAB	411,	248	Ch. Stenzel, H. Grawe, H. Haas, et al.
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, et al.
1983To01	PRVCA	27,	889	K.S. Toth
1983To20	NUPAB	411,	209	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, et al.
1983Ts01	PRVCA	27,	2397	J.S. Tsai, T.J. Kennett, W.V. Prestwich
1983Ve06	IANFA	47,	834	G.V. Veselov, N. Ganbaatar, Ya. Kormitski, et al.
1983Ve.A	P-Moscow		99	G.V. Veselov, N. Ganbaatar, K.A. Mezilev, et al.
1983Vi.A	P-Moscow		575	V.D. Vitman, F.V. Moroz, S. Yu. Orlov, et al.
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, et al.
1983We07	ZPAAD	313,	173	B. Weiss, C.F. Liang, P. Paris, et al.
1983Wi14	NUPAB	411,	151	C.A. Wiedner, R. Haupt, W. Saathoff, et al.
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, et al.
1983Wo10	PRLTA	51,	873	F.K. Wohn, J.C. Hill, R.F. Petry, et al.
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, et al.
1984Al18	PRVCA	30,	1005	D.E. Alburger, E.K. Warburton, B.A. Brown
1984Al36	IANFA	48,	834	G.D. Alkhazov, N. Ganbaatar, K. Ya. Gromov, et al.
1984An03	NCIAA	79,	100	M.S. Antony, J. Britz, J.B. Bueb, et al.
1984An17	NCIAA	81,	414	M.S. Antony, J. Britz, J. Bueb, et al.
1984Ar12	NUPAB	420,	193	Y. Arai, E. Tanaka, H. Miyatake, et al.
1984Au14	PYLBB	149,	6	D. Auverlot, P. Bonche, P. Bonche, et al.
1984Ay01	PYLBB	138,	369	J. Äystö, J. Arje, V. Koponen, et al.
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, et al.
1984Be10	NUPAB	413,	363	M. Bernas, Ph. Dessagne, M. Langevin, et al.
1984Be40	PHSTB	30,	164	C. Bengtsson, C. Ekstrom, L. Robertsson, et al.
1984Be42	JPSLB	45,	851	M. Bernas, Ph. Dessagne, M. Langevin, et al.
1984Be.A	PrvCom		84De33	M. Bernas, Ph. Dessagne, M. Langevin, et al.
1984Bh02	NCIAA	79,	471	P. Bhattacharya
1984Bl.A	P-Darmstadt		134	F. Blönnigen, G. Bewersdorf, C. Geisse, et al.
1984Bo.C	P-Knoxville		382	M. Bogdanovic, H. Seyfarth, H.R. Börner, et al.
1984Br24	NUIMA	224,	112	G. Braun, A. Bockisch, W. Neuwirth
1984Br31	RAACA	36,	95	H. Braun, H.O. Denschlag, T. Izak-Biran, et al.
1984Br.A	AnRpt IPN		13	F. Bragança Gil, C. Bourgeois, P. Kilcher, et al.
1984Bu09	NUPAB	415,	93	L. Buchmann, M. Hilgemeier, A. Krauss, et al.
1984Bu14	PRVCA	29,	2339	D.G. Burke
1984Bu23	PRVCA	30,	742	B.L. Burks, R.E. Anderson, Y. Aoki, et al.
1984Ca29	PRVCA	30,	1276	M.D. Cable, J. Honkanen, E.C. Schloemer, et al.

1984Ca32	PRVCA	30,	1671	F. Calaprice, G.T. Ewan, R.-D. von Dincklage, et al.
1984Ch02	PRVCA	29,	592	C. Chung, W.B. Walters, N.K. Aras, et al.
1984Co19	ZPAAD	319,	107	M.D. Cohler, D.L. Watson, R. Wadsworth, et al.
1984Co30	IJARA	35,	1103	B.M. Coursey, J.A.B. Gibson, M.W. Heitzmann, et al.
1984Co.A	P-Darmstadt		272	E. Coenen, K. Deneffe, M. Huyse, et al.
1984Cr01	JPGPE	10,	1133	D.A. Craig, H.W. Taylor
1984Da.A	P-Darmstadt		257	H. Dautet, N. Campeau, J.K.P. Lee, et al.
1984De07	ZPAAD	315,	197	A.G. Demin, S.P. Tretyakova, V.K. Utyonkov, et al.
1984De15	NUPAB	419,	101	J.B.M. De Hass, K. Abrahams, T.A.A. Tielens, et al.
1984De16	NUPAB	419,	165	D.J. Decman, H. Grawe, H. Kluge, et al.
1984De33	NUPAB	426,	399	Ph. Dessagne, M. Bernas, M. Langevin, et al.
1984Du15	ZPAAD	319,	237	J.P. Dufour, S. Beraud-Sudreau, R. Del Moral, et al.
1984Ek01	ZPAAD	316,	239	C. Ekstrom, L. Robertsson
1984El05	PYLBB	141,	306	R.J. Ellis, K.S. Sharma, R.C. Barber, et al.
1984Es01	PRVCA	29,	2160	K. Eskola, P. Eskola, M.M. Fowler, et al.
1984Ew01	ZPAAD	318,	309	G.T. Ewan, P. Hoff, B. Jonson, et al.
1984Fa04	PYLBB	137,	23	T. Faestermann, A. Gillitzer, K. Hartel, et al.
1984Fi02	NUPAB	417,	534	L.K. Fifield, M.A.C. Hotchkis, P.V. Drumm, et al.
1984Fi05	PRVCA	29,	2118	B.W. Filippone, C.N. Davids, R.C. Pardo, et al.
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, et al.
1984Ga.B	BAPSA	29,	1041	Z. Gacsi, Ya. Guyash, T. Kibedi, et al.
1984Gi09	PRVCA	30,	958	R. Gilman, H.T. Fortune, L.C. Bland, et al.
1984Gr.A	P-Darmstadt		170	I.S. Grant, R. Kirchner, O. Klepper, et al.
1984Gu19	NUPAB	426,	37	D. Guillemaud-Mueller, C. Détraz, M. Langevin, et al.
1984Ha20	PYLBB	138,	260	B.J. Hall, R.J. Ellis, G.R. Dyck, et al.
1984Ha27	NUPAB	420,	351	R. Hanninen
1984Ha31	ZPAAD	317,	193	R. Haupt, C.-A. Wiedner, G.J. Wagner, et al.
1984Ha.A	P-Darmstadt		89	W. Hampel, R. Schlotz
1984Ha.B	P-Darmstadt		244	W. Habenicht, L. Spanier, G. Korschinek, et al.
1984He.A	Th.-Montreal			D.W. Hetherington
1984Hi03	PRVCA	29,	1078	J.C. Hill, F.K. Wohn, Z. Berant, et al.
1984Ho02	PRVCA	29,	618	R.W. Hoff, T. von Egidy, R.W. Lougheed, et al.
1984Ho.A	P-Darmstadt		184	S. Hofmann, Y.K. Agarwal, P. Armbruster, et al.
1984Ho.B	Th.-Canberra			M.A.C. Hotchkis
1984Ia.A	P-Darmstadt		141	R. Iafigliola, H. Dautet, S.W. Xu, et al.
1984IcZY	AnRpt JAERI		60	S.-C. Ichikawa, T. Sekine, K. Hata, et al.
1984Is09	KURAA	17,	132	T. Ishii, H. Yamamoto, M. Yoshida, et al.
1984JaZS	ANL 84-24,		79	R.V.F. Janssens, D. Frekers, T.L. Khoo, et al.
1984Ka07	PYLBB	137,	150	I. Katayama, S. Morinobu, M. Fujiwara, et al.
1984Ka10	PRVCA	29,	1693	J. Kantele, W. Stoffl, L.E. Ussery, et al.
1984Ka22	PRVCA	30,	807	S. Kahane, S. Raman, G.G. Slaughter, et al.
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, et al.
1984Kr.B	P-Darmstadt		127	K.-L. Kratz, A. Schröder, H. Ohm, et al.
1984Ku28	NIMBE	5,	430	W. Kutschera, P.J. Billquist, D. Frekers, et al.
1984La02	JPHGB	10,	247	V. Lakshminarayana, T.T. Neo, S.M. Tang, et al.
1984La03	NUPAB	414,	151	M. Langevin, C. Détraz, D. Guillemaud-Mueller, et al.

1984La06	NUPAB	413,	236	R.G. Lanier, R.K. Sheline, G.L. Struble, et al.
1984La.A	P-Darmstadt		652	E. Laegsgaard, J.U. Andersen, G.J. Beyer, et al.
1984Li05	NUPAB	417,	365	Y.-F. Liu, K.J. Moody, D. Lee, et al.
1984Li24	PZETA	39,	529	É.T. Lippmaa, R. Ĭ. Pikver, É.R. Suurmaa, et al.
1984Li.A	AnRpt Berkeley			W.X. Li, K.E. Gregorich, R.B. Welch, et al.
1984Lo16	ZPAAD	319,	149	T. Lonnroth, J. Aysto, J. Arje, et al.
1984Lu02	ZPAAD	315,	295	E. Lund, B. Fogelberg
1984Ma30	NUPAB	422,	167	M.A.J. Mariscotti, A.J. Kreiner, M. Behar, et al.
1984Ma41	NUPAB	427,	205	M.I. Macias-Marques, C. Bourgeois, P. Kilcher, et al.
1984Ma49	ZPAAD	319,	287	W.A. Mayer, W. Henning, R. Holzwarth, et al.
1984Mi02	PRVCA	29,	985	S. Mirzadeh, Y.Y. Chu, S. Katcoff, et al.
1984Mi.A	AnRpt Munich		40	C. Mittag, H. Puchta, F. Riess, et al.
1984Mo22	NUPAB	427,	317	D.M. Moltz, K.S. Toth, F.T. Avignone III, et al.
1984Mu07	ZPAAD	315,	145	G. Münzenberg, W. Reisdorf, S. Hofmann, et al.
1984Mu27	PRLTA	53,	2544	J.A. Musser, J.D. Stevenson
1984Na30	NUIMA	223,	239	T. Nakanishi, M. Yajima, M. Senaga, et al.
1984Ni03	ZPAAD	316,	249	J.M. Nitschke, P.A. Wilmarth, P.K. Lemmertz, et al.
1984Ni16	PZETA	39,	441	E.N. Nikolaev, Yu. I. Neronov, M.V. Gorshkov, et al.
1984No05	NUPAB	423,	197	G.J.L. Nooren, C. van der Leun
1984Og02	ZPAAD	319,	215	Yu. Ts. Oganessian, A.G. Demin, M. Hussonnois, et al.
1984Og03	RAACA	37,	113	Yu. Ts. Oganessian, M. Hussonnois, A.G. Demin, et al.
1984Ox01	ZPAAD	316,	97	K. Oxorn, S.K. Mark
1984Pi03	NUPAB	414,	219	Š. Piskoř, P. Franc, J. Kremenek, et al.
1984Pi.A	Th.-Princeton			L.E. Piilonen
1984Po09	RAACA	35,	23	P. Polak, L. Lindner
1984Pr01	PRVCA	29,	805	R.J. Prestwood, K.W. Thomas, D.R. Nethaway, et al.
1984Pr07	PRVCA	30,	823	R.J. Prestwood, D.B. Curtis, D.J. Rokop, et al.
1984Ra04	PYLBB	135,	29	C. Ramgacharyulu, W. Steffen, A. Richter, et al.
1984Ra09	PRVCA	30,	26	S. Raman, W. Ratynski, E.T. Jurney, et al.
1984Ro.A	BAPSA	29,	1041	G. Rotbard, M. Vergnes, J. Vernotte, et al.
1984Ru06	NUPAB	419,	439	J.F.A.G. Ruyl, J.B.M. de Haas, P.M. Endt, et al.
1984Ru.A	P-Darmstadt		196	B. Rubio, R. Julin, A. Ercan, et al.
1984Ry02	NUIMA	223,	325	A. Rytz, R.A.P. Wiltshire
1984Sc06	ZPAAD	315,	49	U.J. Schrewe, E. Hagberg, H. Schmeing, et al.
1984Sc13	ZPAAD	316,	19	K.-H. Schmidt, C.-C. Sahm, K. Pielenz, et al.
1984Sc18	ZPAAD	317,	305	U.J. Schrewe, E. Voth, U. Bosch, et al.
1984Sc25	JPHGB	10,	1201	N. Schulz, S. Khazrouni, A. Chevallier, et al.
1984ScZQ	GSI-84-3			J. Schneider
1984ScZT	P-Darmstadt		229	D. Schardt, P.O. Larsson, R. Kirchner, et al.
1984Sc.A	GSI-84-3			J. Schneider Thesis
1984Sc.B	P-Darmstadt		203	U.J. Schrewe, P. Tidemand-Petersson, H. Behrens, et al.
1984Sc.C	P-Darmstadt		229	D. Schardt, P.O. Larsson, R. Kirchner, et al.
1984Sh03	ZPAAD	315,	65	K. Shizuma, H. Ahrens, J.P. Bocquet, et al.
1984Sh28	PRVCA	30,	2111	T. Shinozuka, M. Fujioka, H. Miyatake, et al.
1984Sh31	AENGA	56,	245	V.M. Shatinsky
1984Sk01	NUPAB	414,	141	R.T. Skelton, R.W. Kavanagh
1984SmZV	EPRI NP-3436			J.R. Smith, S.D. Reeder, R.J. Gehrke
1984Sz07	RAACA	37,	121	A. Szymanski, G.W.A. Newton, V.J. Robinson, et al.
1984Th04	PRVCA	30,	385	J.H. Thomas, R.L. Rau, R.T. Skelton, et al.
1984Th08	PRVCA	30,	1442	C.E. Thorn, J.W. Olness, E.K. Warburton, et al.
1984To07	PRVCA	30,	712	K.S. Toth, D.M. Moltz, E.C. Schloemer, et al.
1984To09	PRLTA	53,	1623	K.S. Toth, Y.A. Ellis-Akovali, C.R. Bingham, et al.
1984To11	NUPAB	430,	269	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, et al.
1984To13	PSSAB	85,	409	B. Topic, R. Blinc, L.A. Shuvalov

1984Vo01	JPHGB	10,	221	T. von Egidy, H. Daniel, P. Hungerford, et al.
1984Vo07	PRVCA	29,	1243	T. von Egidy, R.W. Hoff, R.W. Lougheed, et al.
1984Ya.A	Th.-Berkeley			S. Yashita

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1985Ab03	NUPAB	437,	324	M.C. Abreu, V. Berg, K. Fransson, et al.
1985Ad10	PRLTA	55,	2129	E.G. Adelberger, P.B. Fernandez, C.A. Gossett, et al.
1985Ad.A	P-Leningrad		93	Dz. Adam, T. Dzelev, D. Zakoutski, et al.
1985Af.A	P-Leningrad		1083	V.P. Afanasiev, Yu. S. Blinnikov, N. Ganbaatar, et al.
1985Ah02	ZPAAD	321,	35	S.A. Ahmad, W. Klempt, C. Ekstrom, et al.
1985Ah.A	P-Bombay			S.A. Ahmad, et al, and 89Ot.1
1985Al02	PRVCA	31,	360	T. Altzitzoglou, R.T. Kouzes, F.W. Loeser, et al.
1985Al08	NUPAB	438,	482	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, et al.
1985Al11	PRLTA	55,	799	T. Altzitzoglou, F. Calaprice, M. Dewey, et al.
1985Al13	PYLBB	157,	350	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, et al.
1985An17	NCIAA	88,	265	M.S. Antony, J. Britz, J.B. Bueb, et al.
1985Ap01	PZETA	42,	233	A.M. Apalikov, S.D. Boris, A.I. Golutvin, et al.
1985Ar19	PRVCA	32,	1855	R. Aryaeinejad, P.M. Walker, R.B. Firestone, et al.
1985Au07	ZPAAD	321,	533	G. Audi, R.L. Graham, J.S. Geiger
1985Ax02	MTRGA	21,	59	E.J. Axton, A.G. Bardell
1985Ay01	PRLTA	55,	1384	J. Äystö, D.M. Moltz, X.J. Xu, et al.
1985Ay02	PRVCA	32,	1700	J. Äystö, X.J. Xu, D.M. Moltz, et al.
1985Ba57	ZPAAD	322,	457	A. Baas-May, J.V. Kratz, N. Trautmann
1985Be17	ZPAAD	320,	693	F.J. Bergmeister, K.P. Lieb, K. Pampus, et al.
1985Be20	PYLBB	156,	159	Z. Berant, R.L. Gill, M.H. Rafailovich, et al.
1985Be22	PHSTB	31,	333	I. Bergstrom, J. Blomqvist, P. Carle, et al.
1985Be24	ZPAAD	321,	435	M. Bernas, M. Langevin, G. Parrot, et al.
1985Be50	PYLBB	162,	87	W. Benenson, K. Beard, C. Bloch, et al.
1985Bj01	NUPAB	443,	283	T. Bjornstad, M.J.G. Borge, P. Dessagne, et al.
1985Bo34	PYLBB	159,	217	S. Boris, A. Golutvin, L. Laptin, et al.
1985Bo46	PRLTA	55,	2269	J.A. Bounds, C.R. Bingham, P. Juncar, et al.
1985Bo49	PYLBB	164,	22	U. Bosch, W.-D. Schmidt-Ott, P. Tidemand-Petersson, et al.
1985Bo58	NUIMA	228,	387	V.R. Bom, P.C. Coops
1985Br03	PYLBB	150,	75	M. Brauner, D. Rychel, R. Gyufko, et al.
1985Br07	ZPAAD	321,	287	R. Broda, P.J. Daly, Z.W. Grabowski, et al.
1985Br08	NUIMA	234,	218	M. Brugger, N. Hildebrand, T. Karlewski, et al.
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, et al.
1985Co06	PRLTA	54,	1783	E. Coenen, K. Deneffe, M. Huyse, et al.
1985Co24	PYLBB	163,	66	A. Coc, C. Thibault, F. Touchard, et al.
1985Co.B	PrvCom	AHW	Dec	G.G. Colvin
1985Cu03	PRVCA	31,	1494	J.B. Cumming, D.E. Alburger
1985Da15	PRVCA	32,	713	N.J. Davis, J.A. Kuehner, A.A. Pilt, et al.
1985De14	NUPAB	436,	311	D.J. Decman, H. Grawe, H. Kluge, et al.
1985De40	CJPHA	63,	966	V.P. Derenchuk, R.J. Ellis, K.S. Sharma, et al.
1985Dr01	NUPAB	437,	253	J. Drexler, R.D. Heil, K. Huber, et al.
1985Dr06	NUPAB	441,	95	P.V. Drumm, L.K. Fifield, R.A. Bark, et al.
1985Dy04	PYLBB	157,	139	G.R. Dyck, R.J. Ellis, K.S. Sharma, et al.
1985El01	NUPAB	435,	34	R.J. Ellis, R.C. Barber, G.R. Dyck, et al.
1985Ev01	PYLBB	153,	25	P.D. Eversheim, F. Hinterberger, S. Kuhn, et al.
1985Fi03	NUPAB	440,	531	L.K. Fifield, C.L. Woods, R.A. Bark, et al.
1985Fi08	NUPAB	437,	141	L.K. Fifield, P.V. Drumm, M.A.C. Hotchkis, et al.
1985Fr01	NUPAB	433,	351	R. Franke, H. Kockskamper, B. Steinheuer, et al.

1985Fu03	NUPAB	435,	7	Y. Fujita, S. Morinobu, I. Katayama, et al.
1985Ge02	JPHGB	11,	1055	W. Gelletly, J.R. Larysz, H.G. Börner, et al.
1985Gy01	PYLBB	150,	335	R. Gyufko, D. Rychel, M. Steck, et al.
1985Ha06	PRVCA	31,	666	W. Hampel, L.P. Remsberg
1985Ha12	PRVCA	31,	1594	F.X. Hartmann, R.A. Naumann
1985He06	ZPAAD	321,	317	F.P. Heßberger, G. Münzenberg, S. Hofmann, et al.
1985He22	ZPAAD	322,	557	F.P. Heßberger, G. Münzenberg, S. Hofmann, et al.
1985He.A	GSI-85-11			F.P. Heßberger
1985Hi02	ZPAAD	320,	531	P. Hill, N. Kaffrell, W. Kurcewicz, et al.
1985Ho21	PYLBB	160,	375	E. Hourani, M. Hussonnois, L. Stab, et al.
1985HoZN	BNL-NCS-36960			N.E. Holden
1985HoZS	AnRpt JYFL		42	J. Honkanen, P. Taskinen, H. Hyvonen, et al.
1985Ho.A	PrvCom	NDG	876	C. Hofmeyr, C. Franklyn, G. Barreau, et al.
1985Hu03	PRVCA	31,	2226	A. Huck, G. Klotz, A. Knipper, et al.
1985HuZY	P-Chicago		258	L. Huyse, E. Coenen, K. Deneffe, et al.
1985IaZZ	Th.-McGill			R. Iafigliola
1985Ka07	PHSTB	31,	125	A. Kallberg
1985Ke02	PRVCA	31,	1505	S.E. Kellogg, E.B. Norman
1985Ke.A	PrvCom	AHW	Jan	T.J. Kennett
1985Kh04	PYLBB	156,	155	S. Khan, Th. Kihm, K.T. Knöpfle, et al.
1985Ko47	NIMBE	12,	325	P.J.J. Kok, K. Abrahams, H. Postma, et al.
1985Kr06	NUPAB	439,	219	B. Krusche, Ch. Winter, K.P. Lieb, et al.
1985La17	IJARA	36,	443	R.M. Lambrecht, S. Mirzadeh
1985Le10	PRVCA	32,	277	R.S. Lee, J.H. Hamilton, A.V. Ramayya, et al.
1985Li02	PRLTA	54,	285	E. Lippmaa, R. Pikver, E. Suurmaa, et al.
1985Ma54	JPHGB	11,	1231	T.D. MacMahon, G.R. Massoumi, T. Mitsunari, et al.
1985Ma57	PYLBB	163,	71	K. Marti, S.V.S. Murty
1985Ma59	PRVCA	32,	2215	J. Markey, F. Boehm
1985Me09	NUPAB	439,	510	R.A. Meyer, E. Monnand, J.A. Pinston, et al.
1985Mu11	ZPAAD	322,	227	G. Münzenberg, S. Hofmann, H. Folger, et al.
1985No03	PRVCA	31,	1937	E.B. Norman
1985Oh06	PYLBB	160,	322	T. Ohi, M. Nakajima, H. Tamura, et al.
1985Pi03	PRVCA	31,	1032	A.A. Pilt, J.A. Cameron, R.B. Schubank, et al.
1985Pi05	PRVCA	31,	2087	W.F. Piel, Jr., T. Chapuran, K. Dybdal, et al.
1985Po06	PYLBB	154,	263	A.R. Poletti, G.D. Dracoulis, A.P. Byrne, et al.
1985Pr01	PRLTA	54,	297	P.B. Price, J.D. Stevenson, S.W. Barwick, et al.
1985Ra28	PYLBB	163,	327	M.H. Rafailovich, S. Vajda, E. Dafni, et al.
1985Re01	PRVCA	31,	1029	P.L. Reeder, R.A. Warner, R.M. Liebsch, et al.
1985Re02	NUPAB	435,	333	J.P.L. Reinecke, F.B. Waanders, P. Oberholzer, et al.
1985Re.A	P-Chicago		171	P.L. Reeder, et al, and 93Ru01
1985Ru05	NUPAB	441,	237	E. Runte, K.-L. Gippert, W.-D. Schmidt-Ott, et al.
1985Ry02	ZPAAD	322,	263	K. Rykaczewski, I.S. Grant, R. Kirchner, et al.
1985Sa15	ZPAAD	321,	255	M. Samri, J.G. Costa, G. Klotz, et al.
1985Sc09	ZPAAD	320,	595	U.J. Schrewe, H. Dornhöfer, E. Runte, et al.
1985Sc16	NUIMA	236,	225	H. Schölermann, B.R.L. Siebert
1985Sh03	PRVCA	31,	875	B. Sherrill, K. Beard, W. Benenson, et al.
1985Si07	PRVCA	31,	1891	J.J. Simpson, W.R. Dixon, R.S. Storey
1985Si25	JPSLB	46,	L1095	C. Signarbieux, G. Simon, J. Trochon, et al.
1985So03	PRVCA	31,	1801	L.P. Somerville, M.J. Nurmia, J.M. Nitschke, et al.
1985St02	PRVCA	32,	582	R.E. Stone, C.E. Bingham, L.L. Riedinger, et al.
1985St16	ZPAAD	322,	83	C. Stenzel, H. Grawe, H. Haas, et al.
1985Ta01	IJARA	36,	89	H.W. Taylor, D.A. Craig, B. Singh, et al.
1985Ta.A	P-Swansea		343	V.L. Talrose, E.N. Nikolaev
1985Ti01	ZPAAD	320,	405	P. Tidemand-Petersson, E. Runte, W.-D. Schmidt-Ott, et al.

1985Ti02	NUPAB	437,	342	P. Tidemand-Petersson, R. Kirchner, O. Klepper, et al.
1985To10	NUPAB	439,	427	Y. Tokunaga, H. Seyfarth, R.A. Meyer, et al.
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, et al.
1985Va03	PYLBB	154,	354	P. Van Duppen, E. Coenen, K. Deneffe, et al.
1985Va.A	JINR-R6-85-22			E.V. Vasileva, et al
1985Vo03	PRVCA	31,	1510	R.-D. von Dincklage, J. Gerl, H.L. Ravn, et al.
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
1985Wa10	PRVCA	31,	1211	E.K. Warburton, C.J. Lister, J.W. Olness, et al.
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, et al.
1985Wo01	PYLBB	150,	79	P.J. Woods, R. Chapman, J.L. Durell, et al.
1985Wo04	NUPAB	437,	454	C.L. Woods, L.K. Fifield, R.A. Bark, et al.
1985Wo07	ZPAAD	321,	119	P.J. Woods, R. Chapman, J.L. Durell, et al.
1985Wo.A	PrvCom	GAu	Feb	P.J. Woods

1986

1986Ad07	IANFA	50,	855	J. Adam, V. Vagner, M. Gonusek, et al.
1986AgZV	P-Kharkov		141	V.A. Ageev, B.N. Belyaev, V. Ya. Golovnya, et al.
1986Ag.A	P-Charkov		98	V.A. Ageev, V.S. Belyavenko, V.A. Dzeltonodzskii, et al.
1986Al10	EPSLA	78,	168	D.E. Alburger, G. Harbottle, E.F. Norton
1986Al32	IANFA	50,	2366	G.D. Alkhazov, A.E. Barzakh, N.B. Buyanov, et al.
1986An06	NUPAB	451,	471	M. Anselment, W. Faubel, S. Goring, et al.
1986An24	PRVCA	34,	1052	M. Anselment, K. Bekk, A. Hanser, et al.
1986Au02	NUPAB	449,	491	G. Audi, A. Coc, M. Epherre, et al.
1986Ba26	PRVCA	34,	362	S.W. Barwick, P.B. Price, H.L. Ravn, et al.
1986Ba72	IANFA	50,	1898	K.A. Baskova, G.I. Borisov, A.B. Vovk, et al.
1986Be35	NUPAB	460,	352	A.V. Belozyorov, C. Borcea, Z. Dlouhy, et al.
1986Be53	UFZHA	31,	1773	V.S. Belyavenko, G.P. Borozenets, I.N. Vishnevsky, et al.
1986Bj01	NUPAB	453,	463	T. Björnstad, M.J.G. Borge, J. Blomqvist, et al.
1986Bo28	ZPAAD	325,	149	V.R. Bom, P.C. Coops, R.W. Hollander, et al.
1986Bo35	ZPAAD	325,	429	M.J.G. Borge, D.G. Burke, F. Calaprice, et al.
1986Bo41	NUPAB	460,	373	M.J.G. Borge, M. Epherre-Rey-Campagnolle, D. Guillemaud-Mueller, et al.
1986Bo46	PHSTB	34,	591	M.J.G. Borge, A. De Rújula, P.G. Hansen, et al.
1986Bu18	PRVCA	34,	2316	B.L. Burks, R.L. Varner, E.J. Ludwig
1986BuZV	P-Kharkov		109	V.P. Bugrov, A.A. Byalko, N.G. Volkov, et al.
1986By01	NUPAB	448,	137	A.P. Byrne, G.D. Dracoulis, C. Fahlander, et al.
1986Ch01	PRVCA	33,	130	T. Chapuran, K. Dybdal, D.B. Fossan, et al.
1986Co12	ZPAAD	324,	485	E. Coenen, K. Deneffe, M. Huyse, et al.
1986Da.A	AnRpt McGill		29	H. Dautet, R. Turcotte, S.K. Mark
1986De04	ZPAAD	323,	101	S. de Barros, S.D. de Magalhaes, H. Wolf, et al.
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
1986Du04	NUPAB	454,	143	R. Duffait, A. Charvet, K. Deneffe, et al.
1986Du07	ZPAAD	324,	487	J.P. Dufour, R. Del Moral, A. Fleury, et al.
1986Du11	NIMAE	248,	267	J.P. Dufour, R. Del Moral, H. Emmermann, et al.
1986Eb01	ZPAAD	323,	119	J. Eberz, U. Dinger, T. Horiguchi, et al.
1986Ed01	NUPAB	451,	46	R. Eder, E. Hagn, E. Zech
1986Ek01	PHSTB	34,	614	B. Ekström, B. Fogelberg, P. Hoff, et al.

1986Ek02	PHSTB	34,	624	C. Ekstrom, L. Robertsson, A. Rosen
1986Fa04	NUPAB	453,	77	B. Fant, T. Weckstrom, V. Rahkonen, et al.
1986Fi06	NUPAB	453,	497	L.K. Fifield, C.L. Woods, W.N. Catford, et al.
1986Fo02	NUPAB	451,	104	B. Fogelberg, C. Stone, R.L. Gill, et al.
1986Fr09	PYLBB	173,	485	M. Fritschi, E. Holzschuh, W. Kündig, et al.
1986Ga19	PRVCA	34,	1663	C.A. Gagliardi, D.R. Semon, R.E. Tribble, et al.
1986Gi07	PRLTA	56,	1874	R.L. Gill, R.F. Casten, D.D. Warner, et al.
1986Gi08	NUPAB	453,	1	K.-L. Gippert, E. Runte, W.-D. Schmidt-Ott, et al.
1986Go10	ZPAAD	324,	117	H. Göktürk, B. Ekstrom, E. Lund, et al.
1986Gr01	PRLTA	56,	819	G.L. Greene, E.G. Kessler, Jr., R.D. Deslattes, et al.
1986Gr11	ZPAAD	324,	15	M. Graefenstedt, U. Keyser, F. Münnich, et al.
1986Ha22	NUPAB	455,	231	A.M.I. Hague, R.F. Casten, I. Förster, et al.
1986He28	JCOMA	122,	445	F.P. Hessberger, G. Munzenberg, S. Hofmann, et al.
1986Hi08	PRVCA	34,	2312	J.C. Hill, F.K. Wohn, K. Leininger, et al.
1986Ho03	NUPAB	451,	141	K. Honkanen, C.J. Herrlander, B. Fant, et al.
1986Hu01	PRLTA	56,	313	E.K. Hulet, J.F. Wild, R.J. Dougan, et al.
1986Hu05	PRVCA	34,	1394	E.K. Hulet, R.W. Lougheed, J.F. Wild, et al.
1986Ja13	NUPAB	458,	225	H.C. Jain, P. Carle, A. Kallberg, et al.
1986Jo08	RAEFB	93,	201	R.T. Jones, J.S. Merritt, A. Okazaki
1986Ka38	JUPSA	55,	3014	H. Kawakami, S. Shibita, J. Tanaka, et al.
1986Ka43	NUPAB	460,	437	N. Kaffrell, P. Hill, J. Rogowski, et al.
1986Ke03	NUPAB	452,	173	J.G. Keller, K.-H. Schmidt, F.P. Heßberger, et al.
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, et al.
1986Kr17	ZPAAD	325,	489	K.-L. Kratz, H. Gabelmann, W. Hillebrandt, et al.
1986La17	NUPAB	455,	149	M. Langevin, A.C. Mueller, D. Guillemaud-Mueller, et al.
1986LhZX	JUL-Spez-344		29	G. Lhersonneau, K. Sistemich
1986Ma12	PRLTA	56,	1547	H. Mach, A. Piotrowski, R.L. Gill, et al.
1986Ma40	PRVCA	34,	729	L.G. Mann, R.G. Lanier, G.L. Struble, et al.
1986Ma42	PRVCA	34,	1117	H. Mach, R.L. Gill, D.D. Warner, et al.
1986Mc14	ZPAAD	325,	27	J. McNeill, R. Broda, Y.H. Chung, et al.
1986Me09	PLRBA	34,	2982	L.A. Mendoza-Zelis, L.C. Damonte, A.G. Bibiloni, et al.
1986Mi08	PRVCA	33,	1736	C. Miehé, Ph. Dessagne, P. Baumann, et al.
1986Mi14	PRVCA	33,	2204	D. Miljanic, S. Blagus, M. Zadro
1986Ne05	ARISE	37,	1155	Zs. Nemeth, L. Lakosi, I. Pavlicsek, et al.
1986Ok03	IJARA	37,	521	K. Okano, Y. Kawase, Y. Funakoshi, et al.
1986Ok07	ANEND	13,	467	K. Okano, Y. Kawase, Y. Funakoshi
1986Pa18	PHSTB	34,	378	M. Pautrat, J.M. Lagrange, A. Virdis, et al.
1986Pr03	NUPAB	455,	1	P.T. Prokofjev, V.A. Bondarenko, T.V. Guseva, et al.
1986Pr05	ZPAAD	325,	321	W.V. Prestwich, T.J. Kennett, J.S. Tsai
1986Re11	ZPAAD	325,	127	N. Redon, T. Ollivier, R. Beraud, et al.
1986Re12	IJARA	37,	973	D. Reher, H.H. Hansen, R. Vaninbroukx, et al.
1986ReZR	PNL-SA-14026			P.L. Reeder, R.A. Warner, R.L. Gill, et al.
1986ReZS	BNL-NCS-37699		157	P.L. Reeder, R.A. Warner, M.D. Edmiston, et al.
1986ReZU	P-Chicago		171	P.L. Reeder, R.A. Warner, M.D. Edmiston, et al.
1986Ru05	ZPAAD	324,	119	E. Runte, T. Hild, W.-D. Schmidt-Ott, et al.
1986Ry04	NIMAE	253,	47	A. Rytz, R.A.P. Wiltshire, M. King
1986Sc04	PRLTA	56,	1051	G. Schutz, E. Hagn, P. Kienle, et al.
1986Sc16	NUPAB	454,	267	H.H. Schmidt, T. von Egidy, H.J. Scheerer, et al.
1986Sc25	JPHGB	12,	411	H.H. Schmidt, W. Stöffl, T. von Egidy, et al.
1986Se04	PYLBB	173,	397	K.K. Seth, S. Iversen, M. Kaletka, et al.
1986Si19	ZPAAD	325,	197	R.S. Simon, K.-H. Schmidt, F.P. Hessberger, et al.
1986Sm05	ZPAAD	324,	283	R.J. Smith, P.J. Woods, R. Chapman, et al.
1986To12	PYLBB	178,	150	K.S. Toth, Y.A. Ellis-Akovali, J.M. Nitschke, et al.

1986Ts04	CJPHA	64,	1569	J.S. Tsai, W.V. Prestwich, T.J. Kennett
1986Va03	NUPAB	449,	579	J.J. Van Ruyven, J. Penninga, W.H.A. Hesselink, et al.
1986Va08	PRVCA	33,	1141	G. Vandenput, P.H.M. van Assche, L. Jacobs, et al.
1986Va27	PRLTA	57,	2641	D. Vandeplassche, E. van Walle, J. Wouters, et al.
1986Ve.A	P-Charkov		107	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, et al.
1986Ve.B	P-Charkov		138	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, et al.
1986Vi09	PRLTA	57,	3253	D.J. Vieira, J.M. Wouters, K. Vaziri, et al.
1986Wa06	PRVCA	33,	1036	W.B. Walters, N.K. Aras, C.A. Stone, et al.
1986Wa17	RAEFB	94,	27	R.A. Warner, P.L. Reeder
1986Wi05	PRVCA	33,	1333	J.S. Winfield, N. Anantaraman, S.M. Austin, et al.
1986Wi15	ZPAAD	325,	485	P.A. Wilmarth, J.M. Nitschke, R.B. Firestone, et al.
1986Wi16	NUPAB	460,	501	Ch. Winter, B. Krusche, K.P. Lieb, et al.
1986Wo01	PRVCA	33,	677	F.K. Wohn, J.C. Hill, C.B. Howard, et al.
1986Wo07	PYLBB	182,	297	P.J. Woods, R. Chapman, J.L. Durell, et al.
1986Ya17	PYLBB	181,	169	S. Yasumi, M. Ando, H. Maezawa, et al.
1986Ze03	ZPAAD	325,	451	P. Zeyen, K. Euler, V. Grafen, et al.

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1987Ah05	NUPAB	472,	285	I. Ahmad, J.E. Gindler, A.M. Friedman, et al.
1987Aj.A	PrvCom	AHW	Jul	F. Ajzenberg-Selove
1987AlZO	P-Yurmala		116	G.D. Alkhazov, A.E. Barzakh, N.B. Buyanov, et al.
1987An02	ZPAAD	326,	493	M. Anselment, K. Bekk, S. Chongkum, et al.
1987Ar22	PYLBB	197,	311	E. Arnold, J. Bonn, R. Gegenwarth, et al.
1987Ba52	NUPAB	472,	445	M.K. Balodis, P.T. Prokofjev, N.D. Kramer, et al.
1987BaYL	AnRpt JAERI		144	S. Baba, T. Sekine, K. Hata, et al.
1987Bo07	PRLTA	58,	2019	S. Boris, A. Golutvin, L. Laptin, et al.
1987Bo21	PHSTB	36,	218	M.J.G. Borge, P. Dessagne, G.T. Ewan, et al.
1987Bo24	NUPAB	470,	13	M. Bogdanović, R. Brissot, G. Barreau, et al.
1987Bo29	HYIND	34,	25	W. Borchers, R. Neugart, E.W. Otten, et al.
1987Bo36	NUPAB	473,	331	V. Borrel, J.C. Jacmart, F. Pougheon, et al.
1987Bo59	HYIND	38,	793	G. Bollen, P. Dabkiewicz, P. Egelhof, et al.
1987Br05	NUPAB	465,	221	A. Bruce, D. Hicks, D.D. Wagner
1987Br14	ZPAAD	327,	403	R. Broda, P.J. Daly, J. McNeill, et al.
1987Br33	JPHGB	13,	1565	V.B. Brudanin, T. Vylov, Ch. Briançon, et al.
1987Br.B	AnRpt Julich		9	B. Brinkmoeller, H.P. Morsch, R. Siebert, et al.
1987Bu11	ZPAAD	327,	361	F. Buchinger, E.B. Ramsay, R.E. Silverans, et al.
1987Bu.A	BAPSA	32,	1063	B. Budick, Hong Lin
1987Ca23	HYIND	34,	77	P. Carle, S. Egnell, L.O. Norlin, et al.
1987Ch.A	AnRpt Daresb		7	R. Chapman, J.L. Durell, J.N. Mo, et al.
1987Ci.A	P-Leuven		S103	J.A. Cizewski, G.G. Colvin, H.G. Börner, et al.
1987Co08	NUPAB	465,	240	G.G. Colvin, H.G. Börner, P. Geltenbort, et al.
1987Co19	NUPAB	468,	1	A. Coc, C. Thibault, F. Touchard, et al.
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, et al.
1987De.A	AnRpt Leuven		47	P. Dendooven, M. Huyse, G. Reusen, et al.
1987Dr01	NUPAB	462,	576	G.D. Dracoulis, C.A. Steed, A.P. Byrne, et al.
1987Dr07	NUPAB	466,	385	S. Drissi, J.-Cl. Dousse, V. Ionescu, et al.
1987Dr08	NUPAB	467,	305	G.D. Dracoulis, A.P. Byrne, A.E. Stuchbery, et al.
1987DuZU	P-Rosseau		344	J.P. Dufour, R. Del Moral, F. Hubert, et al.
1987Eb01	ZPAAD	326,	121	J. Eberz, U. Dinger, G. Huber, et al.
1987Eb02	NUPAB	464,	9	J. Eberz, U. Dinger, G. Huber, et al.
1987El02	JPHGB	13,	93	A.M.Y. El-Lawindy, J.D. Burrows, P.A. Butler, et al.
1987El09	PRVCA	36,	1529	Y.A. Ellis-Akovali, K.S. Toth, H.K. Carter, et al.

1987Fa15	NUPAB	475,	338	B. Fant, T. Weckstrom, H.C. Jain, et al.
1987FaZS	P-Rosseau		K12	T. Faestermann, A. Gillitzer, K. Hartel, et al.
1987Fa.A	P-Rosseau		675	T. Faestermann, A. Gillitzer, K. Hartel, et al.
1987Fo20	NUPAB	475,	301	B. Fogelberg, A.M. Bruce, D.D. Warner
1987GaZF	Th.-Mainz			H. Gabelmann, Thesis, University of Johannes-Gutenberg
1987Ga.A	P-Yurmala		86	N. Ganbaatar, G.V. Veselov, K.A. Mezilev, et al.
1987Ge01	JPHGB	13,	69	W. Gelletly, J.R. Larysz, H.G. Börner, et al.
1987GeZX	P-Rosseau		L11	J. Genevey, A. Gizon, R. Beraud, et al.
1987Gi05	PYLBB	192,	39	A. Gillibert, W. Mittig, L. Bianchi, et al.
1987Gi07	NUPAB	473,	717	C. Giusti, F.D. Pacati
1987Go25	PZETA	45,	205	M.G. Gornov, Y.B. Gurov, V.P. Koptev, et al.
1987Gr12	PRVCA	35,	1965	R.C. Greenwood, R.A. Anderl, J.D. Cole, et al.
1987Gr18	ZPAAD	327,	383	M. Graefenstedt, U. Keyser, F. Münnich, et al.
1987Gr.A	P-Rosseau		30	M. Graefenstedt, U. Keyser, F. Münnich, et al.
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, et al.
1987He10	EULEE	3,	895	F.P. Heßberger, S. Hofmann, G. Münzenberg, et al.
1987He14	PRVCA	36,	1504	D.W. Hetherington, R.L. Graham, M.A. Lone, et al.
1987He21	NUPAB	474,	484	K. Heiguchi, S. Mitarai, B.J. Min, et al.
1987He28	NUPAB	474,	77	R.G. Helmer, M.A. Lee, C.W. Reich, et al.
1987Ho.A	AnRpt LBL		39	M.A.C. Hotchkis, J.E. Reiff, D.J. Vieira, et al.
1987Ja13	ARISE	38,	1087	R. Jacquemin
1987Ju04	ARISE	38,	839	S.M. Judge, P. Christmas, P. Cross, et al.
1987Ka29	NUPAB	470,	141	N. Kaffrell, P. Hill, J. Rogowski, et al.
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, et al.
1987Ko34	NUPAB	472,	419	V.T. Koslowsky, J.C. Hardy, E. Hagberg, et al.
1987La23	EULEE	4,	893	Yu. A. Lazarev, Yu. Ts. Oganessian, I.V. Shirokovsky, et al.
1987Li09	PYLBB	191,	245	C.F. Liang, P. Paris, P. Kleinheinz, et al.
1987Li.A	P-Rosseau		521	C.F. Liang, P. Paris, Ch. Briançon
1987Lo06	PRVCA	35,	1950	M.M. Lowry, R.T. Kouzes, F. Loeser, et al.
1987Lu06	ZPAAD	328,	487	S. Lunardi, P.J. Daly, F. Soramel, et al.
1987LuZX	P-Rosseau		E6	E. Lund, B. Ekstrom, B. Fogelberg, et al.
1987Me06	ZPAAD	327,	119	G. Menzen, K. Sistemich, G. Lhersonneau, et al.
1987Me08	ZPAAD	327,	171	F. Meissner, W.-D. Schmidt-ott, L. Ziegeler
1987Mi10	PRVCA	36,	420	G.J. Miller, J.C. McGeorge, I. Anthony, et al.
1987Mi31	ZETFA	93,	410	V.I. Mishin, S.K. Sekatsky, V.N. Fedoseyev, et al.
1987MiZO	AnRpt INS		37	H. Miyatake, T. Nomura, H. Kawakami, et al.
1987Mo06	PRVCA	35,	1275	D.M. Moltz, A.C. Betker, J.P. Sullivan, et al.
1987Mu15	ZPAAD	328,	49	G. Münzenberg, P. Armbruster, G. Berthes, et al.
1987Pe06	PRVCA	35,	1617	K.I. Pearce, N.M. Clarke, R.J. Griffiths, et al.
1987PfZX	P-Birmingham		75	B. Pfeiffer, K.-L. Kratz, H. Gabelmann, et al.
1987Pr09	ZPAAD	328,	501	H. Prade, J. Doring, W. Enghardt, et al.
1987Ra04	NUPAB	464,	349	V. Rahkonen, T. Lonnroth
1987Ra06	PRVCA	36,	303	M.S. Rapaport, C.F. Liang, P. Paris, et al.
1987Ru05	ZPAAD	328,	373	E. Runte, F. Meissner, V. Freystein, et al.
1987Sa53	JUPSA	56,	3881	H.S. Sahota, T. Iwashita, B.S. Grewal
1987Sc.A	P-Rosseau		477	D. Schardt, R. Barden, R. Kirchner, et al.
1987Se04	NUPAB	464,	381	P.B. Semmes, R.A. Braga, R.W. Fink, et al.
1987Se05	PRLTA	58,	1930	K.K. Seth, M. Artuso, D. Barlow, et al.
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, et al.

1987Sp.A	P-Leuven		S559	A.M.J. Spits, S.J. Robinson
1987St04	ZPAAD	326,	139	E. Stiliaris, H.G. Bohlen, X.S. Chen, et al.
1987St11	PRVCA	35,	2033	G.S.F. Stephans, H.T. Fortune, L.C. Bland, et al.
1987St.A	P-Rosseau		489	J. Styczen, P. Kleinheinz, W. Starzecki, et al.
1987To02	PRVCA	35,	310	K.S. Toth, D.C. Sousa, J.M. Nitschke, et al.
1987To09	PRVCA	35,	2330	K.S. Toth, D.M. Moltz, F. Blönnigen, et al.
1987To12	PRVCA	36,	826	K.S. Toth, J. Gilat, J.M. Nitschke, et al.
1987Va09	PRVCA	35,	1861	P. Van Duppen, E. Coenen, K. Deneffe, et al.
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, et al.
1987Vi01	NUPAB	463,	605	K. Vierinen
1987We03	ZDACE	4,	227	K. Wendt, S.A. Ahmad, W. Klempt, et al.
1987Wh01	PRVCA	35,	81	D.H. White, H.G. Börner, R.W. Hoff, et al.
1987Wi15	NUPAB	473,	129	Ch. Winter, B. Krusche, K.P. Lieb, et al.
1987Wo07	PRVCA	36,	1118	F.K. Wohn, J.C. Hill, J.A. Winger, et al.
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, et al.
1988Aj01	NUPAB	490,	1	F. Ajzenberg-Selove
1988Al04	NUPAB	477,	37	G.D. Alkhazov, A.E. Barzakh, I. Ya. Chubukov, et al.
1988Ax01	PYLBB	210,	249	H. Axelsson, M. Cronqvist, A. De Rújula, et al.
1988Ay01	PYLBB	201,	211	J. Äystö, P. Taskinen, M. Yoshii, et al.
1988Ay02	NUPAB	480,	104	J. Äystö, C.N. Davids, J. Hattula, et al.
1988Ba02	ZPAAD	329,	11	R. Barden, A. Płochocki, D. Schardt, et al.
1988Ba10	ZPAAD	329,	319	R. Barden, R. Kirchner, O. Klepper, et al.
1988Ba42	ZPAAD	330,	341	D. Barnéoud, J. Blachot, J. Genevey, et al.
1988Ba60	ARISE	39,	1131	C. Ballaux, B.M. Coursey, D.D. Hoppes
1988Ba.B	PrvCom	AHW	Aug	P.H. Barker
1988Be39	PRVCA	38,	2329	I. Berkes, R. Hassani, M. Massaq
1988BeYG	P-Rosseau		445	R. Beraud, A. Charvet, R. Duffait, et al.
1988Be.A	P-StMalo		A1	R. Béraud, R. Duffait, A. Emsallem, et al.
1988Bh05	PRVCA	37,	2894	R.K. Bhowmik, A. Chakrabarti, S.K. Saha, et al.
1988Bo06	NUPAB	477,	89	U. Bosch, W.-D. Schmidt-Ott, E. Runte, et al.
1988Bo20	ZPAAD	330,	227	H.G. Bohlen, B. Gebauer, D. Kolbert, et al.
1988Bo28	ZPAAD	331,	21	V.R. Bom, R.W. Hollander, E. Coenen, et al.
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, et al.
1988Ch27	NUPAB	485,	136	P. Chowdhury, B. Fabricius, C. Christensen, et al.
1988Cl04	JPHGB	14,	1399	N.M. Clarke, P.R. Hayes, M.B. Becha, et al.
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, et al.
1988Fi04	NUPAB	484,	117	L.K. Fifield, R. Chapman, J.L. Durell, et al.
1988Fo05	PYLBB	209,	173	B. Fogelberg, Ye Zongyuan, L. Spanier
1988Fu10	JUPSA	57,	2976	Y. Fukuchi, T. Komatsubara, H. Sakamoto, et al.
1988GeZR	P-Rosseau		419	J. Genevey, A. Gizon, N. Idrissi, et al.
1988GeZS	P-Mito		909	A.M. Geidelman, Yu. S. Egorov, N.K. Kuzmenko, et al.
1988Gi04	PRVCA	37,	2600	M. Girod, Ph. Dessagne, M. Bernas, et al.
1988Gr30	RAACA	43,	223	K.E. Gregorich, R.A. Henderson, D.M. Lee, et al.
1988HaZB	P-Rosseau		650	H. Hama, M. Yoshii, K. Taguchi, et al.
1988Ho.B	VHDPG	6,	67	S. Hofmann, P. Armbruster, G. Berthes, et al.

1988Hu03	PYLBB	201,	293	M. Huyse, E. Coenen, K. Deneffe, et al.
1988Hu07	ZPAAD	330,	121	M. Huyse, P. del Marmol, E. Coenen, et al.
1988Hu08	NIMBE	31,	483	M. Huyse, P. Dendooven, K. Deneffe
1988Ka01	ZPAAD	329,	1	R. Katajanheimo, R. Jaderholm, A. Siivola, et al.
1988Ka14	ZPAAD	330,	55	T. Karlewski, N. Hildebrand, M. Brügger, et al.
1988Ka16	ZPAAD	330,	231	Y. Kawase, K. Okano
1988Ka20	PRVCA	38,	1857	O. Kawakami, A. Masuda, M. Fujioka, et al.
1988Ka32	JUPSA	57,	2873	H. Kawakami, S. Kato, F. Naito, et al.
1988Ke03	ZPAAD	330,	37	B.D. Kern, R.L. Mlekodaj, M.O. Kortelahti, et al.
1988Ke09	CJPHA	66,	947	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1988KeZX	ORNL-6420,		133	B.D. Kern, R.A. Braga, G.A. Leander, et al.
1988Kl03	PRVCA	38,	295	N. Klay, F. Kappeler
1988Kr10	ZPAAD	330,	229	K.-L. Kratz, H. Gabelmann, B. Pfeiffer, et al.
1988Ku14	NUPAB	484,	264	T. Kuroyanagi, S. Mitarai, B.J. Min, et al.
1988Li11	NUPAB	481,	477	W.J. Lin, O.K. Manuel, G.L. Cumming, et al.
1988Ma.A	P-BadHonnef		391	H. Mach, E.K. Warburton, R.L. Gill, et al.
1988Mi13	PRVCA	38,	895	L.W. Mitchell, P.H. Fisher
1988Mo18	PRVCA	38,	737	M.F. Mohar, E. Adamides, W. Benenson, et al.
1988Mu08	ZPAAD	330,	63	A.C. Mueller, D. Bazin, W.D. Schmidt-Ott, et al.
1988NeZZ	P-Rosseau		126	R. Neugart, E. Arnold, W. Borchers, et al.
1988Ni02	PRVCA	37,	2694	J.M. Nitschke, P.A. Wilmarth, J. Gilat, et al.
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, et al.
1988Or.A	Th.-Canberra			N.A. Orr
1988Pa12	NUPAB	484,	155	M. Pautrat, J.M. Lagrange, J.S. Dionisio, et al.
1988PaZV	JUL-Spez-442		28	U. Paffrath, H.-J. Wadenpohl, H. Ohm, et al.
1988Pe13	PRVCA	38,	931	H. Penttilä, P. Taskinen, P. Jauho, et al.
1988Qu.A	AnRpt GSI		16	A.B. Quint, W. Morawek, K.-H. Schmidt, et al.
1988Ra06	PRVCA	37,	645	M. Ramdane, P. Baumann, Ph. Dessagne, et al.
1988Ro08	NUPAB	482,	573	U. Rosengard, P. Carle, A. Kallberg, et al.
1988Sa06	ZPAAD	329,	169	H. Salewski, W.-D. Schmidt-Ott
1988Sa18	PRVCA	37,	2371	J.-L. Salicio, S. Drissi, M. Gasser, et al.
1988Sc.A	VHDPG	6,	113	D. Schardt, R. Barden, R. Kirchner, et al.
1988SeZY	P-Baku		131	Yu. A. Selitsky, V.B. Funshtein, V.A. Yakovlev
1988Si22	JUPSA	57,	3762	K. Singh, T.S. Gill, K. Singh
1988St10	NUPAB	482,	692	A.E. Stuchbery, G.D. Dracoulis, A.P. Byrne, et al.
1988St16	NUPAB	486,	374	A.E. Stuchbery, L.D. Wood, H.H. Bolotin, et al.
1988St.A	P-BadHonnef		239	M.L. Stolzenwald, S. Brant, H. Ohm, et al.
1988To03	PRVCA	37,	1196	K.S. Toth, D.C. Sousa, J.M. Nitschke, et al.
1988ToZW	P-Rosseau		718	K.S. Toth, J.M. Nitschke, P.A. Wilmarth, et al.
1988Tu07	ZPAAD	331,	363	A. Turler, H.W. Gaeggeler, D.T. Jost, et al.
1988TuZY	P-Rosseau		473	R. Turcotte, H. Dautet, S.K. Mark, et al.
1988Vi02	PRVCA	38,	1509	K.S. Vierinen, A.A. Shihab-Eldin, J.M. Nitschke, et al.
1988We07	ZPAAD	329,	407	K. Wendt, S.A. Ahmad, C. Ekstrom, et al.
1988We14	PYLBB	211,	272	S.A. Wells, D.E. Evans, J.A.R. Griffith, et al.
1988Wi05	ZPAAD	329,	503	P.A. Wilmarth, J.M. Nitschke, K. Vierinen, et al.
1988Wo02	NUPAB	476,	392	C.L. Woods, W.N. Catford, L.K. Fifield, et al.
1988Wo07	NUPAB	484,	145	C.L. Woods, W.N. Catford, L.K. Fifield, et al.
1988Wo09	ZPAAD	331,	229	J.M. Wouters, R.H. Kraus, Jr., D.J. Vieira, et al.

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1989Ab05	JRNCD	135,	1	A. Abzouzi, M.S. Antony, V.B. Ndocko Ndongue
1989Ab18	JRNCD	137,	381	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, et al.
1989Al19	PYLBB	228,	463	A. Alderson, M. Bentley, C. Broude, et al.
1989Al27	NUPAB	504,	549	G.D. Alkhazov, A.E. Barzakh, I. Ya. Chubukov, et al.
1989Al33	IANFA	53,	2089	G.D. Alkhazov, B.N. Belyayev, V.D. Domkin, et al.
1989An13	YAFIA	50,	619	A.N. Andreyev, D.D. Bogdanov, A.V. Yerimin, et al.
1989An.A	P-Dubna		508	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1989Ar13	PRVCA	40,	2010	J.W. Arrison, D.P. Balamuth, T. Chapuran, et al.
1989Ay.A	P-Dubna		427	J. Äystö, P. Dendooven, P. Jauho, et al.
1989Ba28	PRVCA	40,	940	S.C. Baker, M.J. Brown, P.H. Barker
1989Ba42	NUPAB	500,	1	E.L. Bakkum, C. van der Leun
1989Ba50	PYLBB	228,	458	P. Baumann, A. Huck, G. Klotz, et al.
1989Bo03	PYLBB	216,	7	W. Borchers, E. Arnold, W. Neu, et al.
1989Bo11	ZPAAD	333,	109	M.J.G. Borge, D.G. Burke, H. Gabelmann, et al.
1989Bo.A	PrvCom	GAu	Dec	H.G. Bohlen
1989Bu09	ZPAAD	333,	131	D.G. Burke, H. Folger, H. Gabelmann, et al.
1989Bu.A	Th.-Bordeaux			J. Busto PrvCom of F. Leccia 1988
1989Ca25	NUPAB	503,	263	W.N. Catford, L.K. Fifield, N.A. Orr, et al.
1989Ch01	PRVCA	39,	248	A.E. Champagne, R.T. Kouzes, A.B. McDonald, et al.
1989Cl02	NUPAB	493,	293	E.T.H. Clifford, E. Hagberg, J.C. Hardy, et al.
1989Co21	PRLTA	63,	1674	E.A. Cornell, R.M. Weisskoff, K.R. Boyce, et al.
1989Dr03	NUPAB	496,	530	P.V. Drumm, L.K. Fifield, R.A. Bark, et al.
1989Fi01	PRVCA	39,	219	R.B. Firestone, J.M. Nitschke, P.A. Wilmarth, et al.
1989Ge.A	P-Helsingor		483	J. Genevey, G. Marguier, A. Charvet, et al.
1989Gi06	PRVCA	40,	2249	J. Gilat, J.M. Nitschke, P.A. Wilmarth, et al.
1989Go19	PRVCA	40,	2793	S.J. Goldstein, M.T. Murrell, R.W. Williams
1989Gr03	NUPAB	491,	373	M. Graefenstedt, U. Keyser, F. Münnich, et al.
1989Gr23	ZPAAD	334,	239	M. Graefenstedt, P. Jürgens, U. Keyser, et al.
1989Ha27	NUPAB	500,	90	Y. Hatsukawa, T. Ohtsuki, K. Sueki, et al.
1989HaZO	LBL-27878			H.L. Hall
1989Ha.A	PENUC	III,	99	J.C. Hardy, E. Hagberg
1989He11	NUPAB	494,	1	D.W. Hetherington, A. Alousi, R.B. Moore
1989He13	ZPAAD	333,	111	F.P. Heßberger, H. Gäggeler, P. Armbruster, et al.
1989Hi04	NUPAB	492,	237	T. Hild, W.-D. Schmidt-Ott, V. Freystein, et al.
1989Hi12	NUPAB	504,	467	B. Hinfurtner, E. Hagn, E. Zech
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, et al.
1989Ho13	NUPAB	496,	462	J. Honkanen, V. Koponen, P. Taskinen, et al.
1989Ho15	NUPAB	500,	111	C. Hofmeyr
1989Ho24	PACHA	61,	1483	N.E. Holden
1989Hu03	PRVCA	39,	997	H. Huck, A. Jech, G. Marti, et al.
1989Hu09	PRVCA	40,	770	E.K. Hulet, J.F. Wild, R.J. Dougan, et al.
1989Hu10	PRVCA	40,	1384	H. Huck, A. Jech, G. Marti, et al.
1989HuZU	UCRL-100763			E.K. Hulet
1989Je07	NUPAB	503,	77	C. Jeanperrin, L.H. Rosier, B. Ramstein, et al.
1989Jo02	PRVCA	40,	132	J.K. Johansson, D.G. Popescu, D.D. Rajnauth, et al.
1989Jo.A	AnRpt JYFL		81	A. Jokinen, J. Äystö, C.N. Davids, et al.
1989Ka04	PRVCA	39,	818	S. Kato, S. Kubono, M.H. Tanaka, et al.
1989Ko02	PRVCA	39,	636	M.O. Kortelahti, K.S. Toth, K.S. Vierinen, et al.
1989Ko07	ZPAAD	332,	229	M.O. Kortelahti, H.K. Carter, R.A. Braga, et al.
1989Ko22	ZPAAD	333,	339	V. Koponen, J. Äystö, J. Honkanen, et al.
1989Kr12	NUPAB	503,	113	A. Krasznahorkay, Zs. Dombrádi, J. Timár, et al.
1989Ku08	NUPAB	494,	203	H. Kudo, T. Nomura, K. Sueki, et al.
1989Ku33	RACAA	31,	311	W. Kutschera, I. Ahmad, P.J. Billquist, et al.

1989La07	PHSTB	39,	422	Yu. A. Lazarev, Yu. V. Lobanov, R.N. Sagaidak, et al.
1989Le16	NUPAB	496,	477	M. Lewitowicz, Yu. E. Penionzhkevich, A.G. Artukh, et al.
1989Lo07	NUPAB	494,	157	G. Løvhøiden, T.F. Thorsteinsen, E. Andersen, et al.
1989LoZW	P-Gaithersburg		694	R.W. Lougheed, E.K. Hulet, J.F. Wild, et al.
1989Ma05	JPGPE	15,	173	A.M. Mandal, S.K. Saha, S.M. Sahakundu, et al.
1989Ma54	NUPAB	502,	363c	V.E. Makarenko, Yu. D. Molchanov, G.A. Otroshchenko, et al.
1989Ma57	YAFIA	50,	928	V.E. Makarenko, Yu. D. Molchanov, G.A. Otroshchenko, et al.
1989Mc07	PRLTA	63,	860	J.H. McNeill, J. Blomqvist, A.A. Chishti, et al.
1989McZU	AnRpt UoM		119	J.H. McNeill, M. Campbell, A.A. Chishti, et al.
1989Me02	ZPAAD	332,	153	F. Meissner, W.-D. Schmidt-Ott, V. Freystein, et al.
1989Me13	ZPAAD	334,	525	R. Menegazzo, H. Guven, J. Styczen, et al.
1989Mi03	PRVCA	39,	992	Ch. Miehé, Ph. Dessagne, P. Baumann, et al.
1989Mi17	NUPAB	501,	557	H. Miyatake, T. Nomura, S. Kubono, et al.
1989Mu09	ZPAAD	333,	163	G. Münzenberg, P. Armbruster, S. Hofmann, et al.
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, et al.
1989Or04	NUPAB	491,	457	N.A. Orr, L.K. Fifield, W.N. Catford, et al.
1989Ot.A	THISc	8,	517	E.W. Otten
1989Po09	NUPAB	499,	495[	184Ir] M.G. Porquet, C. Bourgeois, P. Kilcher, et al.
1989Po10	NUPAB	500,	287	F. Pougheon, V. Borrel, J.C. Jacmart, et al.
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, et al.
1989Ro04	PYLBB	221,	6	N. Roy, K.H. Maier, A. Aprahamian, et al.
1989Ry02	ZPAAD	332,	275	K. Rykaczewski, A. Płochocki, I.S. Grant, et al.
1989Sa01	JPGPE	15,	73	S.K. Saha, S.M. Sahakundu
1989Sa11	NUPAB	494,	36	S.L. Sakharov, I.A. Kondurov, Yu. E. Loginov, et al.
1989Sc24	NUPAB	501,	86	H. Schölermann, R. Böttger
1989Sc26	NDSAA	57,	515	M.R. Schmorak
1989Sc30	PRLTA	63,	2196	J. Schirmer, J. Gerl, D. Habs, et al.
1989Sc31	NUPAB	504,	1	H.H. Schmidt, P. Hungerford, T. von Egidy, et al.
1989Sh10	NIMAE	275,	123	K.S. Sharma, H. Schmeing, H.C. Evans, et al.
1989Si04	PRVDA	39,	1825	J.J. Simpson, A. Hime
1989Sm06	SAPHD	12,	74	J.J.A. Smit, Z.H.J. Pretorius, F.B. Waanders, et al.
1989St05	PRVCA	39,	1503	S.T. Staggs, R.G.H. Robertson, D.L. Wark, et al.
1989St06	PRVCA	39,	1963	C.A. Stone, S.H. Faller, W.B. Walters
1989Su12	ZPAAD	333,	281	X. Sun, U. Rosengard, H. Grawe, et al.
1989Su.A	BAPSA	34,	1819	B. Sur, E.B. Norman, K.T. Lesko, et al.
1989Ta11	ZPAAD	333,	29	J.L. Tain, B. Rubio, P. Kleinheinz, et al.
1989To01	PRVCA	39,	1150	K.S. Toth, D.M. Moltz, J.D. Robertson
1989Va05	PRVCA	39,	1528	J. Vanhorenbeeck, E. Coenen, P. Decrock, et al.
1989Vi02	PRVCA	39,	1972	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, et al.
1989Vi04	NUPAB	499,	1	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, et al.
1989Vi.A	PrvCom	GAu	Apr	D. Vieira
1989Wa10	PRVCA	39,	1647	S. Wang, D. Snowden-Ifft, P.B. Price, et al.
1989Wa11	NUPAB	493,	224	K. Wallmeroth, G. Bollen, A. Dohn, et al.
1989Wi01	ZPAAD	332,	33	G. Winter, J. Döring, L. Funke, et al.
1989Wi05	NUPAB	491,	395	Ch. Winter, B. Krusche, K.P. Lieb, et al.
1989Wi11	PRVCA	39,	1976	J.A. Winger, J.C. Hill, F.K. Wohn, et al.
1989Wo02	NIMAE	276,	195	P.J. Woods, S.J. Bennett, M. Freer, et al.
1989Wu01	PRVCA	39,	250	C.Y. Wu, J. Boyle, D. Cline, et al.
1989Yu01	PRVCA	39,	256	S. Yuan, T. Zhang, S. Xu, et al.

1989Zh04	PRVCA	39,	1985	Z. Zhao, M. Gai, B.J. Lund, et al.
1989Zl.A	PrvCom	GAu	May	I. Žlimen

1990

1990Ab02	JRNCD	144,	359	A. Abzouzi, M.S. Antony, A. Hachem, et al.
1990Ab06	JRNCD	145,	361	A. Abzouzi, M.S. Antony, V.B. Ndocko Ndongue, et al.
1990Aj01	NUPAB	506,	1	F. Ajzenberg-Selove, and PrvCom AHW
1990Ak04	PRVCA	42,	1130	Y.A. Akovali, K.S. Toth, C.R. Bingham, et al.
1990Al03	PYLBB	236,	404	K. Aleklett, W. Loveland, M. De Saint-Simon, et al.
1990Al11	PRVCA	41,	2320	D.E. Alburger, G. Harbottle
1990Al34	ZPAAD	337,	257	G.D. Alkhazov, A.E. Barzakh, V.A. Bolshakov, et al.
1990Al36	ZPAAD	337,	367	G.D. Alkhazov, A.E. Barzakh, V.P. Denisov, et al.
1990Al43	RAACA	51,	145	T. Altzitzoglou, J. Rogowski, M. Skalberg, et al.
1990Am04	PZETA	51,	607	A.I. Amelin, M.G. Gornow, Yu. B. Gurov, et al.
1990Am05	YAFIA	52,	1231	A.I. Amelin, M.G. Gornov, Y.B. Gurov, et al.
1990An19	ZPAAD	337,	229	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1990An22	ZPAAD	337,	231	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1990An31	JRNCD	142,	203	R.A. Anderl, R.C. Greenwood
1990As01	PRVCA	41,	358	K. Asahi, K. Matsuta, K. Takeyama, et al.
1990Ba02	PRVCA	41,	246	P.H. Barker, G.D. Leonard
1990Ba31	NUPAB	515,	493	A.M. Baxter, A.P. Byrne, G.D. Dracoulis, et al.
1990Be13	ZPAAD	336,	41	M. Bernas, P. Armbruster, J.P. Bocquet, et al.
1990Be.A	PrvCom	AHW	Jun	C.E. Bemis
1990Be.B	P-Leningrad		132	E.A. Belomytseva, G.V. Veselov, K.A. Mezilev, et al.
1990Bh02	PRVCA	42,	1443	B.S. Bhandari
1990Bo24	NUPAB	515,	21	M.J.G. Borge, H. Gabelmann, L. Johannsen, et al.
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, et al.
1990Bu12	PRVCA	41,	2883	F. Buchinger, E.B. Ramsay, E. Arnold, et al.
1990Bu17	PRVCA	42,	499	D.G. Burke, P.E. Garrett, Tao Qu, et al.
1990Bu28	YAFIA	52,	305	E. Bukhner, I.N. Vishnevsky, F.A. Danevich, et al.
1990Ch34	PRVCA	42,	1171	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, et al.
1990Ch35	YTHLD	12,	65	Y. Chang, B. Zhu, C. Yan, et al.
1990Ch37	PRVCA	42,	1796	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, et al.
1990De03	NUPAB	507,	447	M.J.A. De Voigt, R. Kaczarowski, H.J. Riezebos, et al.
1990De43	NUPAB	519,	529	C. Détraz, R. Anne, P. Bricault, et al.
1990Dy04	PYLBB	245,	343	G.R. Dyck, M.H. Sidky, J.G. Hykawy, et al.
1990Ed01	HYIND	59,	83	R. Eder, I. Berkes, D.E. Brown, et al.
1990Fa03	PHSTB	41,	652	B. Fant, T. Weckstrom, A. Kallberg
1990Fi13	NIMBE	52,	572	D. Fink, J. Klein, R. Middleton
1990Fo03	PRVCA	41,	R1890	B. Fogelberg, B. Ekstrom, L. Sihver, et al.
1990Fo07	ZPAAD	337,	251	B. Fogelberg, Y. Zongyuan, B. Ekström, et al.
1990Ge12	ZDACE	17,	119	Ch. Gerz, D. Wilsdorf, G. Werth
1990Gr10	ZPAAD	336,	247	M. Graefenstedt, P. Jürgens, U. Keyser, et al.
1990Ha02	PRVCA	41,	618	H.L. Hall, K.E. Gregorich, R.A. Henderson, et al.
1990Ha28	PRVCA	42,	1480	H.L. Hall, K.E. Gregorich, R.A. Henderson, et al.
1990HaZY	PrvCom	NDG		H.L. Hall
1990He08	PRVCA	41,	1553	J. Heese, N. Martin, C.J. Gross, et al.
1990He11	PRVCA	41,	2325	M. Hellström, B. Fogelberg, L. Spanier, et al.
1990Ho02	PRVCA	41,	484	R.W. Hoff, S. Drissi, J. Kern, et al.
1990Ho03	PRVCA	41,	631	D.C. Hoffman, D.M. Lee, K.E. Gregorich, et al.
1990Ho10	NUPAB	512,	189	F. Hoyler, J. Jolie, G.G. Colvin, et al.
1990Ho27	NIMBE	52,	544	H.J. Hofmann, G. Bonani, M. Suter, et al.

1990HuZV	P-Houston		279	E.K. Hulet
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, et al.
1990Ka10	PRVCA	41,	2004	S. Kato, S. Kubono, T. Nomura, et al.
1990Ka19	PRVCA	42,	563	S. Kato, S. Kubono, M.H. Tanaka, et al.
1990Ka21	NUPAB	514,	173	A. Kaerts, P.H.M. van Assche, S.A. Kerr, et al.
1990Ka27	PRVCA	42,	1918	S. Kato, S. Kubono, M.H. Tanaka, et al.
1990KaZW	JAERI-M-90-171			K. Kawade, H. Yamamoto, T. Yamada, et al.
1990Ko25	PRVCA	42,	1267	M.O. Kortelahti, B.D. Kern, R.A. Braga, et al.
1990Le03	ZPAAD	335,	117	M. Lewitowicz, R. Anne, A.G. Artukh, et al.
1990Li14	NUCIA	103,	553	Sr. Little Flower, B.R.S. Babu, P. Venkataramaiah, et al.
1990Li28	HYIND	59,	161	P. Lievens, R.E. Silverans, L. Vermeeren, et al.
1990Li40	NIMAE	297,	217	H. Lindner, H. Trieb, T. von Egidy, et al.
1990Ma03	PRVCA	41,	226	H. Mach, E.K. Warburton, R.L. Gill, et al.
1990Ma14	NUPAB	509,	413	A. Maj, H. Grawe, H. Kluge, et al.
1990Ma59	YAFIA	51,	1201	V.E. Makarenko, G.A. Otroshchenko
1990Mc02	ZPAAD	335,	241	J.H. McNeill, J. Blomqvist, A.A. Chishti, et al.
1990Me01	PRVCA	41,	686	R.A. Meyer, R.J. Nagle, S. Brant, et al.
1990Me08	PRVCA	41,	2921	J.T. Meek, W.G. Millen, G.W. Stockton, et al.
1990Mi23	PRLTA	65,	3092	H.S. Miley, F.T. Avignone III, R.L. Brodzinski, et al.
1990Mu06	NUPAB	513,	1	A.C. Mueller, D. Guillemaud-Mueller, J.C. Jacmart, et al.
1990NeZY	PrvCom			R. Neugart
1990Ne.A	PrvCom		Gizon	R. Neugart
1990Ne.B	P-Monterey			Zs. Netmeth, Karlsruhe
1990Ni05	ZPAAD	336,	473	V. Ninov, F.P. Heßberger, P. Armbruster, et al.
1990Og01	PYLBB	235,	35	A.A. Ogloblin, N.I. Venikov, S.K. Lisin, et al.
1990Pe10	PHSTB	T32,	38	H. Penttila, J. Aysto, P. Jauho, et al.
1990Pi05	NUPAB	510,	301	Š. Piskoř, W. Schäferlingová
1990Po13	IANFA	54,	852	A.V. Potempa, V.P. Afanasjev, Ya. Vavryshchuk, et al.
1990Po.A	PrvCom	AHW	Jan	N.A.F.M. Poppelier
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, et al.
1990Ru02	JPGPE	16,	255	E. Ruchowska, J. Żylicz, C.F. Liang, et al.
1990Sa16	PRVCA	41,	2418	K.E. Sale, T.-F. Wang, R.N. Boyd, et al.
1990Sa32	ZPAAD	337,	161	H. Salewski, K. Becker, W.-D. Schmidt-Ott, et al.
1990Sa.A	Th.-Gottingen			H. Salewski
1990Se17	FZKAA	22,	183	H. Seyfarth, H.H. Guven, B. Kardon, et al.
1990Sh.A	AnRpt LBL		114	A.A. Shihab-Eldin, P.A. Wilmarth, K.S. Vierinen, et al.
1990St13	ZPAAD	336,	369	U. Stöhlker, A. Blönnigen, W. Lippert, et al.
1990St25	PRLTA	65,	3104	H. Stolzenberg, St. Becker, G. Bollen, et al.
1990St29	ZPAAD	337,	371	M. Steinmayer, K.E.G. Lobner, L. Corradi, et al.
1990SuZR	AnRpt CYRIC		24	H. Sunaoshi, M. Wada, T. Shinozuka, et al.
1990Ta07	ZPAAD	335,	477	I. Tago, Y. Kawase, K. Okano
1990Tu01	ZPAAD	337,	361	X.L. Tu, X.G. Zhou, D.J. Vieira, et al.
1990Va18	MPLAE	5,	1299	A.A. Vasenko, I.V. Kirpichnikov, V.A. Kuznetsov, et al.
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, et al.
1990Wu01	PRVCA	41,	1600	C.Y. Wu, M. Satteson, K. Wang, et al.
1990Zh.A	GANIL-T-9002			Y.H. Zhang

1991

1991An10	ZPAAD	338,	363	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1991AnZZ	P-Minsk		120	A.N. Andreev, D.D. Bogdanov, A.V. Eremin, et al.
1991Ba06	NUPAB	523,	261	M.K. Balodis, N.D. Kramer, P.T. Prokofjev, et al.
1991Be25	NUPAB	533,	113	A. Ben Braham, C. Bourgeois, P. Kilcher, et al.
1991Be33	PRLTA	67,	3661	M. Bernas, P. Armbruster, S. Czajkowski, et al.
1991Bi04	PRVCA	44,	1208	C.R. Bingham, M.B. Kassim, M. Zhang, et al.
1991Bl05	PRVCA	44,	325	S. Blagus, D. Miljanic, M. Zadro, et al.
1991Bo01	PRVCA	43,	299	A. Bonaccorso, D.M. Brink
1991Bo22	ZPAAD	339,	311	A. Bouldjedri, A. Astier, R. Béraud, et al.
1991Bo32	NUPAB	531,	353	V. Borrel, J.C. Jacmart, F. Pougheon, et al.
1991Bo34	ARISE	42,	692	P. Bode, M.J.J. Ammerlaan, M. Koese
1991Bo35	NUPAB	534,	255	H.G. Börner, R.F. Casten, I. Förster, et al.
1991Bo.B	P-Niigata		83	H.G. Bohlen
1991Br17	ZPAAD	339,	495	T. Brohm, H.-G. Clerc, U. Gollerthan, et al.
1991Bu12	PRLTA	67,	2626	B. Budick, J. Chen, H. Lin
1991Ch.A	NUTED	16,	352	K. Chen, G. Liu, S. Wang, et al.
1991Du07	ZPAAD	341,	39	S.B. Dutta, R. Kirchner, O. Klepper, et al.
1991Fi03	PRVCA	43,	1066	R.B. Firestone, J. Gilat, J.M. Nitschke, et al.
1991Ge02	ZPAAD	338,	405	J. Genevey, A. Gizon, G. Marguier, et al.
1991Go19	NUPAB	531,	613	M.G. Gornov, Yu. B. Gurov, P.V. Morokhov, et al.
1991Gr12	NUPAB	530,	401	J.C. Griffin, R.A. Braga, R.W. Fink, et al.
1991Gr13	PRVCA	44,	1728	V. Grafen, B. Ackermann, H. Baltzer, et al.
1991Ha25	PRVCA	44,	2365	R. Harkewicz, D.J. Morrissey, B.A. Brown, et al.
1991Ha31	EULEE	15,	491	D. Hagena, G. Werth
1991He04	ZPAAD	338,	7	K. Heiguchi, T. Hosoda, T. Komatsubara, et al.
1991He21	ZPAAD	340,	225	F. Heine, T. Faestermann, A. Gillitzer, et al.
1991HeZT	LBL-30798,		65	R.A. Henderson, K.E. Gregorich, H.L. Hall, et al.
1991Hi02	PRVCA	43,	2591	J.C. Hill, D.D. Schwellenbach, F.K. Wohn, et al.
1991Hi.A	AnRpt LBL		69	M.M. Hindi, K.L. Wedding, E.B. Norman, et al.
1991Ho05	JPGPE	17,	145	T.H. Hoare, P.A. Butler, G.D. Jones, et al.
1991Ho08	CZYPA	41,	525	J. Honzatko, K. Konecny, Z. Kosina
1991Hy01	PRLTA	67,	1708	J.G. Hykawy, J.N. Nxumalo, P.P. Unger, et al.
1991Ii02	JUPSA	60,	3585	H. Iimura, M. Shibata, S.-I. Ichikawa, et al.
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, et al.
1991Ka41	PYLBB	256,	105	H. Kawakami, S. Kato, T. Ohshima, et al.
1991Ke06	NIMAE	300,	67	H. Keller, R. Kirchner, O. Klepper, et al.
1991Ke08	ZPAAD	339,	355	H. Keller, R. Barden, R. Kirchner, et al.
1991Ke10	NUPAB	534,	77	J. Kern, A. Raemy, W. Beer, et al.
1991Ke11	ZPAAD	340,	363	H. Keller, R. Kirchner, O. Klepper, et al.
1991Ki04	NUPAB	529,	39	S.W. Kikstra, Z. Guo, C. van der Leun, et al.
1991Kl02	PRVCA	44,	2801	N. Klay, F. Kaeppeler, H. Beer, et al.
1991Kl06	EPSLA	103,	79	J. Klein, D. Fink, R. Middleton, et al.
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, et al.
1991Kr.A	AnRpt LBL		57	S.A. Kreek, et al
1991Ku12	NUPAB	534,	367	I. Kurniawan, T. Aoki, T. Komatsubara, et al.
1991Ku23	YAFIA	54,	8	I.A. Kukushkin, V.E. Makarenko, Yu. D. Molchanov, et al.

1991Le09	PRVCA	44,	336	M. Leino, P.P. Jauho, J. Aysto, et al.
1991Le15	ZPAAD	340,	107	M. Lewandowski, A.W. Potempa, V.I. Fominikh, et al.
1991Li05	PYLBB	256,	141	P. Lievens, R.E. Silverans, L. Vermeeren, et al.
1991Ly01	PRVCA	44,	764	J.E. Lynn, E.T. Jurney, S. Raman
1991Ma64	JPGPE	17,	S221	O.K. Manuel
1991Ma65	ZPAAD	341,	1	U. Mayerhofer, T. von Egidy, J. Jolie, et al.
1991Ma68	HLTPA	61,	511	D.E. Martz, G.H. Langner, Jr., P.R. Johnson
1991Me05	ZPAAD	339,	315	F. Meissner, W.-D. Schmidt-Ott, K. Becker, et al.
1991Mi08	ZPAAD	338,	371	S. Michaelsen, K.P. Lieb, S.J. Robinson
1991Mi15	NUPAB	530,	211	B.J. Min, S. Suematsu, S. Mitarai, et al.
1991No07	JPGPE	17,	s291	E.B. Norman, B. Sur, K.T. Lesko, et al.
1991Om01	ZPAAD	338,	241	J.P. Omtvedt, P. Hoff, M. Hellstrom, et al.
1991Or01	PYLBB	258,	29	N.A. Orr, W. Mittig, L.K. Fifield, et al.
1991Pa05	ZPAAD	338,	295	R.D. Page, P.J. Woods, S.J. Bennett, et al.
1991Pa10	ZPAAD	340,	249	M. Paul, I. Ahmad, W. Kutschera
1991Pe04	ZPAAD	338,	291	H. Penttilä, J. Äystö, K. Eskola, et al.
1991Pe10	PRVCA	44,	935	H. Penttilä, P.P. Jauho, J. Äystö, et al.
1991Ra01	PRVCA	43,	521	S. Raman, T.A. Walkiewicz, S. Kahane, et al.
1991Re01	PRVCA	43,	1981	C.-Y. Ren, M.K. Banerjee
1991Re02	PRVCA	44,	1435	P.L. Reeder, R.A. Warner, W.K. Hensley, et al.
1991Re.A	PrvCom	GAu	Sep	G. Reusen, M. Huyse
1991Ro07	PRLTA	67,	957	R.G.H. Robertson, T.J. Bowles, G.J. Stephenson, Jr., et al.
1991Ro.A	P-PacGrove		440	S.J. Robinson, H.G. Börner, S. Judge, et al.
1991Ru01	PRVCA	43,	1298	S.L. Rugari, R.H. France, B.J. Lund, et al.
1991Ry01	ADNDA	47,	205	A. Rytz
1991Sc33	JPBAB	24,	4831	Ch. Schulz, E. Arnold, W. Borchers, et al.
1991Se01	ZPAAD	338,	245	P.J. Sellin, P.J. Woods, R.D. Page, et al.
1991Sh19	PRVCA	44,	2439	K.S. Sharma, E. Hagberg, G.R. Dyck, et al.
1991Su09	PRLTA	66,	2444	B. Sur, E.B. Norman, K.T. Lesko, et al.
1991Sz03	NUPAB	528,	203	J. Szerypo, D. Bazin, B.A. Brown, et al.
1991TaZX	AnRpt UTTAC		25	K. Takahashi, H. Sugawara, K. Heiguchi, et al.
1991To08	PRVCA	44,	1868	K.S. Toth, K.S. Vierinen, M.O. Kortelahti, et al.
1991To09	ZPAAD	340,	343	K.S. Toth, K.S. Vierinen, J.M. Nitschke, et al.
1991Tu02	PRLTA	67,	3211	A.L. Turkevich, T.E. Economou, G.A. Cowan
1991Va04	NUPAB	529,	268	P. Van Duppen, P. Decrock, P. Dendooven, et al.
1991Wa21	ZPAAD	339,	533	J. Wauters, P. Decrock, P. Dendooven, et al.
1991Wa.A	PrvCom	AHW		A.H. Wapstra
1991Zh24	PYLBB	260,	285	X.G. Zhou, X.L. Tu, J.M. Wouters, et al.
1991Zl01	PRLTA	67,	560	I. Žlimen, A. Ljubičić, S. Kaučić, et al.

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1992Al.A	B-Bernkastel		PC2	D.V. Aleksandrov, Yu. A. Glukhov, E. Yu. Nikolskii, et al.
1992Al.B	B-Bernkastel		PA6	G.D. Alkhazov, B.N. Belyaev, V.D. Domkin, et al.
1992An04	ZPAAD	342,	123	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
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, et al.
1992Ar02	ARISE	43,	1	G.J. Ardisson
1992Ay02	PRLTA	69,	1167	J. Äystö, A. Astier, T. Enqvist, et al.
1992Ba01	PRVCA	45,	69	D. Bazin, R. Del Moral, J.P. Dufour, et al.
1992Ba28	ZPAAD	342,	125	K. Balog, M. Graefenstedt, M. Groß, et al.
1992Ba.A	P-Bernkastel		777	P.H. Barker, S.A. Brindhaban
1992Be17	ZPAAD	341,	155	M.R. Beitins, S.T. Boneva, V.A. Khitrov, et al.
1992BlZW	AnRpt PNPI		63	Yu. S. Blinnikov, V.A. Bolshakov, A.G. Dernyatin, et al.

1992Bo02	NUPAB	536,	260	R. Böttger, H. Schölermann
1992Bo05	NUPAB	539,	249	M.J.G. Borge, D.G. Burke, H. Gietz, et al.
1992Bo21	ZPAAD	342,	267	A. Bouldjedri, R. Duffait, R. Beraud, et al.
1992Bo28	JMOPE	39,	257	G. Bollen, H.-J. Kluge, Th. Otto, et al.
1992Bo37	ZPAAD	344,	135	V. Borrel, R. Anne, D. Bazin, et al.
1992Bo44	NIMBE	70,	69	V.A. Bolshakov, A.G. Dernyatin, K.A. Mezilev, et al.
1992BoZO	P-Bernkastel			V.A. Bolshakov, A.G. Dernyatin, K.A. Mezilev, et al.
1992Bo.B	PrvCom	AHW	Apr	R. Böttger
1992Bo.D	P-Bernkastel		743	V.A. Bolshakov, A.G. Dernjatin, K.A. Mezilev, et al.
1992Br06	PRLTA	68,	1671	R. Broda, R.H. Mayer, I.G. Bearden, et al.
1992Br17	NUPAB	542,	1	A.M. Bruce, W. Gelletly, G.G. Colvin, et al.
1992Bu10	ZPAAD	342,	403	D. Bucurescu, M.S. Rapaport, C.F. Liang, et al.
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, et al.
1992Co11	NIMAE	312,	121	B.M. Coursey, D.B. Golas, D.H. Gray, et al.
1992Co23	PYLBB	295,	143	E. Cosulich, G. Gallinaro, F. Gatti, et al.
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, et al.
1992El07	PRVCA	46,	1535	S.R. Elliott, A.A. Hahn, M.K. Moe, et al.
1992Ga15	NUPAB	550,	1	P.E. Garret, D.G. Burke
1992Ge08	PRLTA	68,	3412	H. Geissel, K. Beckert, F. Bosch, et al.
1992Go10	PRVCA	46,	833	J. Görres, M. Wiescher, K. Scheller, et al.
1992Gr02	PRVCA	45,	1058	K.E. Gregorich, H.L. Hall, R.A. Henderson, et al.
1992Gr06	NIMAE	311,	512	M. Groß, P. Jürgens, U. Keyser, et al.
1992Gr09	ZPAAD	341,	247	H. Grawe, P. Hoff, J.P. Omtvedt, et al.
1992Gr.A	P-Bernkastel		77	M. Groß, P. Jürgens, S. Kluge, et al.
1992Gu03	NUPAB	540,	117	Z. Guo, C. Alderliesten, C. van der Leun, et al.
1992Ha03	PRVCA	45,	900	F.X. Hartmann
1992Ha10	PRVCA	45,	1609	E. Hagberg, X.J. Sun, V.T. Koslowsky, et al.
1992Ha15	NIMAE	313,	237	F.X. Hartmann, R.A. Naumann
1992Ha21	ZPAAD	343,	7	A. Harder, S. Michaelsen, A. Jungclaus, et al.
1992Ha22	PRVCA	46,	1873	T.M. Hamilton, K.E. Gregorich, D.M. Lee, et al.
1992Ha28	NUPAB	549,	327	S. Hatori, H. Miyatake, S. Morinobu, et al.
1992HeZM	P-Ottawa		15	E.A. Henry, J.A. Becker, M.J. Brinkman, et al.
1992HeZV	AnRpt Mainz		28	W. Heller, R. Binder, H. Bruchertseifer, et al.
1992He.A	P-Bernkastel		331	F. Heine, T. Faestermann, A. Gillitzer, et al.
1992Hi07	ZPAAD	342,	1	Th. Hilberath, St. Becker, G. Bollen, et al.
1992Ho09	PYLBB	287,	381	E. Holzschuh, M. Fritschi, W. Kündig
1992Hu04	PRVCA	46,	1209	M. Huyse, P. Decrock, P. Dendooven, et al.
1992HuZW	B-Bernkastel			H. Huhnermann, W. Moller, G. Alkhazov, et al.
1992Ic02	NIMBE	70,	93	S.-I. Ichikawa, T. Sekine, M. Oshima, et al.
1992Id01	ZPAAD	341,	427	N. Idrissi, A. Gizon, J. Genevey, et al.
1992Iv.A	Th.-Pennsylvania			R.A. Ivie Master's Thesis
1992Ja01	PRVCA	45,	613	V.P. Janzen, Z.-M. Liu, M.P. Carpenter, et al.
1992Jo05	NUPAB	549,	420	A. Jokinen, J. Äystö, P.P. Jauho, et al.
1992Ju01	PRLTA	69,	2164	M. Jung, F. Bosch, K. Beckert, et al.
1992Ka08	RAACA	56,	1	B. Kadkhodayan, R.A. Henderson, H.L. Hall, et al.
1992Ka29	PYLBB	287,	45	H. Kawakami, S. Kato, T. Ohshima, et al.
1992KaZM	P-Tokai		364	K. Kawade, H. Yamamoto, A. Tanaka, et al.
1992Ke06	PHSTB	46,	575	J. Kern, T. Engel, D. Hagena, et al.
1992Ke.A	P-Bernkastel		37	H. Keller, N. Zeldes, P. Kleinheinz, et al.

1992Kr01	PRVCA	45,	1064	J.V. Kratz, M.K. Gober, H.P. Zimmermann, et al.
1992Kr.A	AnRpt LBL		58	S.A. Kreek, et al
1992Ku02	NUPAB	537,	153	S. Kubono, Y. Funatsu, N. Ikeda, et al.
1992Le09	JPGPE	18,	1177	V.S. Letokhov, V.I. Mishin, S.K. Sekatsky, et al.
1992Li09	ZPAAD	341,	401	C.F. Liang, P. Paris, A. Gizon, et al.
1992Li11	PRVCA	46,	797	P. Lievens, L. Vermeeren, R.E. Silverans, et al.
1992Lo.B	UCRL-JC-109951			R.W. Lougheed, et al
1992Ma27	ZPAAD	342,	247	R.H. Mayer, B. Fornal, R. Broda, et al.
1992Me07	ZPAAD	341,	475	R. Menges, U. Dinger, N. Boos, et al.
1992Me10	ZPAAD	343,	283	F. Meissner, H. Salewski, W.-D. Schmidt-Ott, et al.
1992Mo03	PRVCA	45,	1392	K.J. Moody, E.K. Hulet, P.B. Price
1992Mo15	ZPAAD	342,	273	D.M. Moltz, J.C. Batchelder, T.F. Lang, et al.
1992Mu12	ZPAAD	342,	393	J. Mukai, A. Odahara, R. Nakatani, et al.
1992Os04	ZPAAD	343,	489	A.N. Ostrowski, H.G. Bohlen, A.S. Demyanova, et al.
1992Os07	NIMBE	70,	551	A. Osa, T. Ikuta, A. Taniguchi, et al.
1992Ot.A	PrvCom	GAu	Mar	E.W. Otten
1992Pa05	PRLTA	68,	1287	R.D. Page, P.J. Woods, R.A. Cunningham, et al.
1992PeZX	Th.-Jyvaskyla			H. Penttilä
1992Pi10	ZPAAD	342,	71	A. Picard, H. Backe, J. Bonn, et al.
1992Pl01	ZPAAD	342,	43	A. Płochocki, K. Rykaczewski, T. Batsch, et al.
1992Po01	JPGPE	18,	L29	M.G. Porquet, G. Bastin, C. Bourgeois, et al.
1992Po14	BRSPE	56,	666	A.V. Potempa, K. Ya. Gromov, J. Wawryszczuk, et al.
1992Pr03	ZPAAD	342,	23	M. Przewloka, A. Przewloka, P. Wächter, et al.
1992Pr04	ZPAAD	342,	27	M. Przewloka, A. Przewloka, P. Wächter, et al.
1992Ra18	PRVCA	46,	2241	S. Raman, J.L. Campbell, A. Prindle, et al.
1992Ra19	PRVCA	46,	972	S. Raman, E.T. Jurney, J.W. Starner, et al.
1992Ro21	HYIND	75,	457	I. Romanski, I. Berkes, D.E. Brown, et al.
1992Sa03	NUPAB	540,	83	J. Sauvage, C. Bourgeois, P. Kilcher, et al.
1992Sc16	NUPAB	545,	646	W.-D. Schmidt-Ott, H. Salewski, F. Meissner, et al.
1992Sc25	HYIND	74,	13	H.A. Schuessler, E.C. Benck, F. Buchinger, et al.
1992Sc.A	P-Bernkastel		627	W.-D. Schmidt-Ott, K. Becker, U. Bosch-Wicke, et al.
1992Sh15	JPBAB	25,	2055	R. Shingal, N.B. Malhi, T.J. Gray
1992Sh32	KURAA	25,	91	T. Sharshar, K. Okano, Y. Kawase, et al.
1992Sh33	AENGA	73,	502	V.T. Shchebolev, N.N. Moiseev, Z.A. Ramendik
1992Sh.A	P-Bernkastel		31	K.S. Sharma, P. Unger, G.R. Dyck, et al.
1992Si02	ARISE	43,	647	B. Singh, H.W. Taylor
1992Sp.A	PrvCom		92Ch09	L. Spanier, B. Fogelberg, M. Hellström
1992St05	ZPAAD	341,	145	M. Steinmayer, K.E.G. Lobner, L. Corradi, et al.
1992St09	NUPAB	548,	159	A.E. Stuchbery, G.D. Dracoulis, T. Kibedi, et al.
1992St16	HYIND	75,	491	N.J. Stone
1992Th06	NUPAB	548,	71	K. Theine, A.P. Byrne, H. Hubel, et al.
1992To02	PRVCA	45,	856	K.S. Toth, H.J. Kim, J.W. McConnell, et al.
1992ToZX	P-Bernkastel			K.S. Toth, C.N. Davids, B.B. Back, et al.
1992To.A	P-Bernkastel		703	K.S. Toth, J.M. Nitschke, D.C. Sousa, et al.
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, et al.
1992Wa20	PRLTA	69,	1737	T.F. Wang, E.A. Henry, J.A. Becker, et al.
1992Wa29	ZPAAD	344,	29	J. Wauters, P. Dendooven, M. Huyse, et al.
1992Wo03	ARISE	43,	551	D.H. Woods, S.A. Woods, M.J. Woods, et al.
1992Wu09	ZPAAD	344,	205	S. Wüstenbecker, H.W. Becker, H. Ebbing, et al.
1992Xu04	PRVCA	46,	510	S.-W. Xu, J.-S. Guo, S.-G. Yuan, et al.
1992Ye04	PRVCA	46,	2620	S.J. Yennello, J.A. Winger, T. Antaya, et al.

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1993Ab11	PYLBB	316,	26	H. Abele, G. Helm, U. Kania, et al.
1993Al03	ZPAAD	344,	425	G.D. Alkhazov, L.H. Batist, A.A. Bykov, et al.
1993An07	ZPAAD	345,	247	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1993An10	ZPAAD	345,	389	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1993An11	PYLBB	312,	49	A.N. Andreyev, D.D. Bogdanov, S. Saro, et al.
1993An19	NIMAE	330,	125	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1993As02	PRVCA	47,	2954	K. Ashktorab, J.W. Jänecke, F.D. Becchetti, et al.
1993Ba12	PRVCA	47,	2038	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, et al.
1993Ba61	PRVCA	48,	2593	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, et al.
1993Be04	PRVCA	47,	806	T. Bernatowicz, J. Brannon, R. Brazzle, et al.
1993Be21	PRVCA	48,	R1	G.E. Berman, M.L. Pitt, F.P. Calaprice, et al.
1993Bl02	NUPAB	554,	45	J. Blomqvist, R. Liotta, L.O. Norlin, et al.
1993Bo01	NUPAB	551,	54	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, et al.
1993Bo03	ZPAAD	344,	381	H.G. Bohlen, B. Gebauer, M. von Lucke-Petsch, et al.
1993Bo20	NUPAB	556,	115	R. Bonetti, C. Chiesa, A. Guglielmetti, et al.
1993BoZK	P-Bernkastel		743	V.A. Bolshakov, A.G. Dernyatin, K.A. Mezilev, et al.
1993Bo.A	AnRpt GSI		65	F. Bosch, M. Jung
1993BrZU	P-Bernkastel		575	J. Breitenbach, R.A. Braga, J.L. Wood, et al.
1993Bu02	PRVCA	47,	131	D.G. Burke, P.C. Sood, P.E. Garrett, et al.
1993Ch10	PRVCA	47,	1462	Y. Chen, E. Kashy, D. Bazin, et al.
1993Ch21	PRVCA	48,	109	R.E. Chrien, B.K.S. Koene, M.L. Stelts, et al.
1993Di03	PRVCA	47,	2916	D.E. DiGregorio, S. Gil, H. Huck, et al.
1993Dm02	ARISE	44,	1097	S.N. Dmitriev, Yu. Ts. Oganessian, G.V. Buklabov, et al.
1993Do05	PRVCA	47,	2560	J. Döring, J.W. Holcomb, T.D. Johnson, et al.
1993Fe14	JUPSA	62,	3343	A. Ferragut, Y. Gono, T. Murakami, et al.
1993Ga09	PRVCA	47,	2910	A. García, Y.-D. Chan, M.T.F. da Cruz, et al.
1993Go37	PRVAA	47,	3433	M.V. Gorshkov, G.M. Alber, L. Schweikhard, et al.
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, et al.
1993Ha05	ZPAAD	345,	143	A. Harder, S. Michaelsen, K.P. Lieb, et al.
1993Ho.A	AnRpt GSI		64	S. Hofmann, V. Ninov, F.P. Heßberger, et al.
1993Ja03	NUPAB	552,	340	Z. Janas, J. Äystö, K. Eskola, et al.
1993Je06	PHSTB	48,	399	R. Jertz, D. Beck, G. Bollen, et al.
1993Ka12	PRVCA	47,	2452	A. Kawashima, K. Takahashi, A. Masuda
1993Ko25	NUPAB	557,	419c	T. Komatsubara, K. Furuno, T. Hosoda, et al.
1993Ko45	JPGPE	19,	1921	A. Kovalik, V.M. Gorozhankin
1993Ko64	RAACA	63,	29	T. Kobayashi, K. Sueki, M. Ebihara, et al.
1993Ku16	YAFIA	56,	13	I.A. Kukushkin, V.E. Makarenko, Yu. D. Molchanov, et al.
1993Li10	NUCIA	106,	163	Sr. Little Flower, B.R.S. Babu, K. Neelakandan, et al.
1993Li18	PYLBB	312,	46	K. Livingston, P.J. Woods, T. Davinson, et al.
1993Li34	PRVCA	48,	2151	K. Livingston, P.J. Woods, T. Davinson, et al.
1993Li40	PRVCA	48,	3113	K. Livingston, P.J. Woods, T. Davinson, et al.
1993Lo.1	JLTPA	93,	239	M.M. Lowry, D. Deptuck, I.C. Girit
1993Ma.A	PrvCom	GAu	Feb	A.G. Marshall
1993Mc03	ZPAAD	344,	369	J.H. McNeill, A.A. Chishti, P.J. Daly, et al.
1993Me13	PRVCA	48,	2089	F. Meissner, H. Salewski, W.-D. Schmidt-Ott, et al.
1993Mi04	NUPAB	552,	232	S. Michaelsen, A. Harder, K.P. Lieb, et al.
1993Mo01	PRLTA	70,	394	J.L. Mortara, I. Ahmad, K.P. Coulter, et al.
1993Mo18	NUPAB	563,	21	K.J. Moody, R.W. Lougheed, J.F. Wild, et al.
1993Ni05	PRVCA	47,	1929	D. Nisius, B. Fornal, I.G. Bearden, et al.
1993Nx01	PYLBB	302,	13	J.N. Nxumalo, J.G. Hykawy, P. P Unger, et al.

1993Nx02	PYLBB	312,	388	J.N. Nxumalo, J.G. Hykawy, K.J. Aarts, et al.
1993Oh02	PRVDA	47,	4840	T. Ohshima, H. Sakamoto, T. Sato, et al.
1993Os06	NIMAE	332,	169	A. Osa, T. Ikuta, M. Shibata, et al.
1993Pe11	NUPAB	561,	416	H. Penttilä, T. Enqvist, P.P. Jauho, et al.
1993Po.A	PrvCom	GAu	Dec	F. Pougheon
1993Qu03	ZPAAD	346,	119	A.B. Quint, W. Reisdorf, K.-H. Schmidt, et al.
1993Ro06	PRVCA	47,	1455	J.D. Robertson, D.M. Moltz, T.F. Lang, et al.
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, et al.
1993Se09	ZPAAD	346,	323	P.J. Sellin, P.J. Woods, T. Davinson, et al.
1993Sh07	JPGPE	19,	617	R.K. Sheline, J. Kvasil, C.F. Liang, et al.
1993Sh23	ARISE	44,	923	M. Shibata, M. Asai, T. Ikuta, et al.
1993Si05	NIMAE	330,	195	M.H. Sidky, J.G. Hyckawy, G.R. Dyck, et al.
1993So06	PRVCA	47,	2941	O. Sorlin, D. Guillemaud-Mueller, A.C. Mueller, et al.
1993Sp.A	AnRpt JYFL		95	A.M. Spits, P.H.M. Van Assche, H.G. Borner, et al.
1993Th04	ARISE	44,	707	J.L. Thompson, A.R. Cartwright
1993To02	PRVCA	47,	1804	K.S. Toth, D.C. Sousa, P.A. Wilmarth, et al.
1993To04	PRVCA	48,	436	K.S. Toth, D.C. Sousa, J.M. Nitschke, et al.
1993To07	PRVCA	48,	R978	K.S. Toth, W. Nazarewicz
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, et al.
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, et al.
1993Wa04	PRVCA	47,	1447	J. Wauters, P. Dendooven, M. Huyse, et al.
1993Wa.A	AnRpt GSI		63	J. Wauters, N. Bijnens, P. Dendooven, et al.
1993We03	PYLBB	300,	210	Ch. Weinheimer, M. Przyrembel, H. Backe, et al.
1993Wi03	PYLBB	299,	214	J.A. Winger, D. Bazin, W. Benenson, et al.
1993Wi05	PRLTA	70,	1759	F.E. Wietfeldt, Y.D. Chan, M.T.F. da Cruz, et al.
1993Wi18	PRVCA	48,	3097	J.A. Winger, D.P. Bazin, W. Benenson, et al.
1993Wo04	PRVCA	47,	2546	P.C. Womble, J. Döring, T. Glasmacher, et al.
1993YeZX	Th.-Surrey			K.C. Yeung University of Surrey 1993
1993Yo07	PRLTA	71,	4124	B.M. Young, W. Benenson, M. Fauerbach, et al.
1993Zh30	NIMAE	335,	443	J.W. Zhou, P. de Marcillac, N. Coron, et al.

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1994Ah03	NUPAB	576,	246	I. Ahmad, J.E. Gindler, M.P. Carpenter, et al.
1994An01	NUPAB	568,	323	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1994An02	ZPAAD	347,	225	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, et al.
1994Ba06	PRVCA	49,	1221	V. Banerjee, A. Banerjee, G.S.N. Murthy, et al.
1994Ba50	PRVCA	50,	1180	P. Baumann, M. Bounajma, A. Huck, et al.
1994Ba54	PRVCA	50,	1807	J.C. Batchelder, R.J. Tighe, D.M. Moltz, et al.
1994Bo28	NUPAB	576,	21	R. Bonetti, C. Chiesa, A. Guglielmetti, et al.
1994Br11	PRVCA	49,	2401	S.A. Brindhaban, P.H. Barker
1994Br37	NIMAE	340,	436	S.A. Brindhaban, P.H. Barker, M.J. Keeling, et al.
1994Bu18	ZPAAD	349,	3	D. Bucurescu, D. Barnéoud, R. Béraud, et al.
1994By01	NUPAB	567,	445	A.P. Byrne, G.J. Lane, G.D. Dracoulis, et al.
1994Cz02	ZPAAD	348,	267	S. Czajkowski, M. Bernas, P. Armbruster, et al.
1994De01	PRVCA	49,	533	C.C. Dey, B.K. Sinha
1994De06	JPGPE	20,	L43	V. Yu. Denisov, G. Royer
1994Do08	PRVCA	49,	1867	M. Dombsky, L. Buchmann, J.M. D'Auria, et al.
1994Fa06	PRVCA	49,	2440	L. Faux, M.S. Pravikoff, S. Andriamonje, et al.

1994Fo08	PRVCA	50,	1355	H.T. Fortune, G.-B. Liu, D.E. Alburger
1994Fo14	PRLTA	73,	2413	B. Fogelberg, M. Hellström, D. Jerrestam, et al.
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, et al.
1994Gr08	PRLTA	72,	1423	K.E. Gregorich, M.R. Lane, M.F. Mohar, et al.
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, et al.
1994Hu18	YAFIA	57,	1165	E.K. Hulet
1994Hy01	PRVCA	50,	1249	J.G. Hykawy, R.C. Barber, K.S. Sharma, et al.
1994Ib01	ZPAAD	350,	9	F. Ibrahim, P. Kilcher, B. Roussière, et al.
1994It.A	P-Tokai		185	S. Itoh, M. Yasuda, H. Yamamoto, et al.
1994Jo.A	Th.-Jyvaskyla			A. Jokinen
1994Ki01	NUPAB	567,	183	T. Kibedi, G.D. Dracoulis, A.P. Byrne, et al.
1994Ko16	PYLBB	326,	31	A.A. Korsheninnikov, K. Yoshida, D.V. Aleksandrov, et al.
1994Ko.A	AnRpt AECL		3-1	V.T. Koslowsky, E. Hagberg, G. Savard, et al.
1994Kr03	PRVCA	49,	1859	S.A. Kreek, H.L. Hall, K.E. Gregorich, et al.
1994Kr13	PRVCA	50,	2288	S.A. Kreek, H.L. Hall, K.E. Gregorich, et al.
1994La22	PRLTA	73,	624	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, et al.
1994Le05	ZPAAD	348,	151	M. Leino, J. Uusitalo, T. Enqvist, et al.
1994Le22	NUPAB	576,	267	A.I. Levon, J. de Boer, G. Graw, et al.
1994Li12	PRVCA	49,	2230	C.F. Liang, R.K. Sheline, P. Paris, et al.
1994Li20	PRVCA	49,	3098	S. Lin, S.A. Brindhaban, P.H. Barker
1994Ma14	PRVCA	49,	1755	P.V. Magnus, E.G. Adelberger, A. García
1994Ma48	PYLBB	336,	308	R.H. Mayer, D.T. Nisius, I.G. Bearden, et al.
1994Me13	ZPAAD	349,	13	R. Menegazzo, P. Kleinheinz, R. Collatz, et al.
1994Mu02	NUPAB	568,	202	J. Mukai, A. Odahara, H. Tomura, et al.
1994Ob01	NUPAB	573,	467	S. Oberstedt, J.P. Theobald, H. Weigmann, et al.
1994Os04	PYLBB	338,	13	A.N. Ostrowski, H.G. Bohlen, B. Gebauer, et al.
1994Ot01	NUPAB	567,	281	T. Otto, G. Bollen, G. Savard, et al.
1994Pa11	PRVCA	49,	3312	R.D. Page, P.J. Woods, R.A. Cunningham, et al.
1994Pa12	PRLTA	72,	1798	R.D. Page, P.J. Woods, R.A. Cunningham, et al.
1994Pa37	NUPAB	580,	173	G. Passler, J. Rikovska, E. Arnold, et al.
1994Po20	NUPAB	580,	43	A.R. Poletti, G.D. Dracoulis, A.P. Byrne, et al.
1994Po26	IANFA	58,	41	A.V. Potempa, G.V. Veselov, V.A. Sergienko, et al.
1994Ru19	PLSSA	42,	227	W. Rühm, B. Schneck, K. Knie, et al.
1994Sc01	PRVCA	49,	46	K.W. Scheller, J. Gorres, J.G. Ross, et al.
1994Sc22	ZPAAD	348,	241	R. Schneider, J. Friese, J. Reinhold, et al.
1994Sc35	ZPAAD	350,	99	K. Schmidt, T.W. Elze, R. Grzywacz, et al.
1994Sc44	ARISE	45,	955	E. Schonfeld, U. Schotzig, E. Gunther, et al.
1994Se12	ZPAAD	349,	25	H.L. Seifert, J.M. Wouters, D.J. Vieira, et al.
1994Sh02	PRVCA	49,	725	R.K. Sheline, C.F. Liang, P. Paris, et al.
1994Sh07	ZPAAD	348,	25	T. Shizuma, M. Kidera, E. Ideguchi, et al.
1994Ti03	PRVCA	49,	2871	R.J. Tighe, D.M. Moltz, J.C. Batchelder, et al.
1994To10	PRVCA	50,	518	K.S. Toth
1994Wa05	NUPAB	568,	397	P.M. Walker, G.D. Dracoulis, A.P. Byrne, et al.
1994Wa17	PRVCA	50,	487	C. Wagemans, S. Druyts, P. Geltenbort
1994Wa23	PRVCA	50,	2768	J. Wauters, N. Bijnens, H. Folger, et al.
1994WaZU	P-Seyssins		182	W.B. Walters, C.A. Stone
1994We02	ZPAAD	347,	185	C. Wennemann, W.-D. Schmidt-Ott, T. Hild, et al.
1994Wi17	JALCE	213/214,	86	J.F. Wild, E.K. Hulet, R.W. Lougheed, et al.
1994Ya07	PYLBB	334,	229	S. Yasumi, H. Maezawa, K. Shima, et al.

1994Ye08	NIMAE	350,	608	A.V. Yeremin, A.N. Andreyev, D.D. Bogdanov, et al.
1994Yo01	PRVCA	49,	279	B.M. Young, W. Benenson, J.H. Kelley, et al.
1994Zh02	PRVCA	49,	R592	L. Zhang, G. Jin, J. Zhao, et al.

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1995Ah04	PRVCA	52,	2240	I. Ahmad, K.E. Rehm, E.P. Kanter, et al.
1995Al31	PZETA	62,	18	D.V. Aleksandrov, E. Yu. Nikolsky, B.G. Novatsky, et al.
1995Am.A	P-Arles		537	F. Ameil, P. Armbruster, M. Bernas, et al.
1995An36	NIMBE	99,	513	B. Antonot, S. Cluzeau, P. Le Tourneur, et al.
1995Ap.A	PrvCom	GAu	May	A. Aprahamian, D.S. Brenner, R. Gill, et al.
1995Ar08	PYLBB	345,	564	V. Artemiev, E. Brakhman, A. Karelin, et al.
1995Ba25	ZPAAD	351,	149	L. Batist, A. Bykov, F. Moroz, et al.
1995Ba28	PRLTA	74,	3569	D. Bazin, B.A. Brown, J. Brown, et al.
1995Ba75	PRVCA	52,	1807	J.C. Batchelder, K.S. Toth, D.M. Moltz, et al.
1995Bi01	PRVCA	51,	125	C.R. Bingham, M.B. Kassim, M. Zhang, et al.
1995Bi17	PRLTA	75,	4571	N. Bijnens, P. Decrock, S. Franchoo, et al.
1995Bi.A	P-Arles		545	C.R. Bingham, J.D. Richards, B.E. Zimmerman, et al.
1995Bl05	NUPAB	588,	171c	B. Blank, S. Andriamonje, T. Brohm, et al.
1995Bl23	PYLBB	364,	8	B. Blank, S. Andriamonje, S. Czajkowski, et al.
1995Bo03	NUPAB	582,	1	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, et al.
1995Bo05	NUPAB	584,	279	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, et al.
1995Bo10	NUPAB	583,	775c	H.G. Bohlen, B. Gebauer, Th. Kirchner, et al.
1995Bo18	PRVCA	51,	2530	R. Bonetti, C. Chiesa, A. Guglielmetti, et al.
1995Bo.B	P-StPetersbg			H.G. Bohlen, B. Gebauer, M. von Lucke-Petsch, et al.
1995Br10	PRLTA	74,	868	R. Broda, B. Fornal, W. Królas, et al.
1995Br24	NUPAB	595,	481	J.B. Breitenbach, J.L. Wood, M. Jarrio, et al.
1995Bu11	NUPAB	587,	475	D. Bucurescu, D. Barnéoud, Gh. Cata-Danil, et al.
1995Ca27	NUPAB	592,	89	H. Carlsson, R.A. Bark, L.P. Ekstrom, et al.
1995Ch74	BRSPE	59,	1854	V.G. Chumin, S.S. Eliseev, K. Ya. Gromov, et al.
1995Cz.A	P-Arles		553	S. Czajkowski, F. Ameil, P. Armbruster, et al.
1995Da14	ZPAAD	351,	225	M. Daszewski, Z. Janas, W. Kurcewicz, et al.
1995Da26	PHSTT	56,	94	P.J. Daly, R.H. Mayer, D. Nisius, et al.
1995Di08	PHSTT	59,	144	F. DiFilippo, V. Natarajan, M. Bradley, et al.
1995Fa.A	AnRpt GSI		21	T. Faestermann, J. Friese, H. Geissel, et al.
1995Fe12	ZPAAD	353,	9	V.N. Fedoseyev, Y. Jading, O.C. Jonsson, et al.
1995Ga04	NUPAB	581,	267	P.E. Garrrett, D.G. Burke
1995Ga16	PRVCA	51,	3487	A. García, E.G. Adelberger, P.V. Magnus, et al.
1995Ga.A	P-Arles		595	A. Gadea, B. Rubio, J.L. Tain, et al.
1995Ge06	NUPAB	592,	307	R. Georgii, T. von Egidy, J. Klora, et al.
1995Ge14	YAFIA	58,	1170	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, et al.
1995Gh04	NUPAB	583,	861c	A. Ghiorso, D. Lee, L.P. Somerville, et al.
1995Go30	ZPAAD	353,	233	M. Górska, H. Grawe, D. Foltescu, et al.
1995Gu01	NUPAB	583,	867c	A. Guglielmetti, B. Blank, R. Bonetti, et al.
1995Ha46	JNSTA	32,	395	H. Harada, S. Nakamura, T. Katoh, et al.
1995Hi02	PRVCA	51,	1736	T. Hild, W.-D. Schmidt-Ott, V. Kunze, et al.
1995Hi12	PRVCA	52,	2236	T. Hild, W.-D. Schmidt-Ott, V. Kunze, et al.
1995Hi14	JPGPE	21,	639	K.-H. Hiddemann, H. Daniel, O. Schwentker
1995Ho03	ZPAAD	350,	277	S. Hofmann, V. Ninov, F.P. Heßberger, et al.
1995Ho04	ZPAAD	350,	281	S. Hofmann, V. Ninov, F.P. Heßberger, et al.
1995Ho24	NIMBE	99,	316	C.R. Howell, H.R. Setze, R.T. Braun, et al.
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, et al.

1995Hu21	PZETA	62,	685	M. Hussonnois, J.F. Le Du, D. Trubert, et al.
1995Id01	ZPAAD	352,	363	E. Ideguchi, Y. Gono, S. Mitarai, et al.
1995Ik03	JUPSA	64,	3244	T. Ikuta, A. Taniguchi, H. Yamamoto, et al.
1995Ir01	PRLTA	75,	4182	H. Irnich, H. Geissel, F. Nolden, et al.
1995ItZY	P-Tokai		185	S. Itoh, M. Yasuda, H. Yamamoto, et al.
1995Ji15	PRVAA	52,	157	W.G. Jin, M. Wakasugi, T.T. Inamura, et al.
1995Jo02	NUPAB	584,	489	A. Jokinen, T. Enqvist, P.P. Jauho, et al.
1995Jo.A	P-Arles		499	A. Jokinen, et al
1995KaZS	P-Arles		D22	V.G. Kalinnikov, B.P. Osipenko, F. Prazak, et al.
1995Ka.A	B-Arles		D22	V.G. Kalinnikov, B.P. Osipenko, F. Pražak, et al.
1995Ke04	NUPAB	586,	219	M. Keim, E. Arnold, W. Borchers, et al.
1995Ke05	ZPAAD	352,	1	H. Keller, R. Kirchner, B. Rubio, et al.
1995KeZZ	Th.-Sao Paulo			G. Kenchian, Thesis, Universidade de Sao Paulo
1995Ko54	RAACA	68,	155	A. Koua Aka, V. Barci, G. Ardisson, et al.
1995Kr03	PRLTA	74,	860	R.A. Kryger, A. Azhari, M. Hellström, et al.
1995Kr04	ZPAAD	351,	11	K. Krumbholz, W.-D. Schmidt-Ott, T. Hild, et al.
1995Kr.A	ISOLDE-News		01	K.-L. Kratz
1995La09	NUPAB	588,	501	Yu. A. Lazarev, I.V. Shirokovsky, V.K. Utyonkov, et al.
1995La20	PRLTA	75,	1903	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, et al.
1995Le04	PRVCA	51,	1047	M.J. Leddy, S.J. Freeman, J.L. Durell, et al.
1995Le15	APOBB	26,	309	M. Leino, J. Äystö, T. Enqvist, et al.
1995Le19	PRVCA	51,	2770	Y.S. Lee, M. Kobayashi, T. Hukotome, et al.
1995Le41	NIMBE	99,	653	M. Leino, J. Aysto, T. Enqvist, et al.
1995Le.A	P-Arles		505	M. Leino, T. Enqvist, W.H. Trzaska, et al.
1995Lh04	ZPAAD	352,	293	G. Lhersonneau, H. Gabelmann, B. Pfeiffer, et al.
1995Ma90	NIMAE	359,	506	T.M. Maddern, L.W. Mitchell
1995Me03	PRVCA	51,	1558	F. Meissner, T. Hild, V. Kunze, et al.
1995Me16	PHSTT	56,	272	K.A. Mezilev, Yu. N. Novikov, A.V. Popov, et al.
1995Mo14	ZPAAD	352,	7	K. Morita, Y.H. Pu, J. Feng, et al.
1995Mo26	NUPAB	588,	203c	D.J. Morrissey, and the A1200 Group
1995Ni05	ZPAAD	351,	125	V. Ninov, F.P. Heßberger, S. Hofmann, et al.
1995Ni.A	P-Arles		571	V. Ninov, F.P. Heßberger, H. Folger, et al.
1995No.A	P-Arles		363	T. Nomura
1995Ok02	ZPAAD	351,	243	K. Okano, A. Taniguchi, S. Yamada, et al.
1995Om01	PRLTA	75,	3090	J.P. Omtvedt, H. Mach, B. Fogelberg, et al.
1995Os03	NUPAB	588,	185	A. Osa, M. Asai, M. Koizumi, et al.
1995Oz02	NUPAB	592,	244	A. Ozawa, G. Raimann, R.N. Boyd, et al.
1995Pe12	NUPAB	588,	259c	Yu. E. Penionzhkevich
1995Pf04	ZPAAD	353,	1	B. Pfeiffer, G. Lhersonneau, H. Gabelmann, et al.
1995Pi03	NUPAB	584,	509	A. Piechaczek, M.F. Mohar, R. Anne, et al.
1995Po01	PRVCA	51,	519	K.R. Pohl, D.F. Winchell, J.W. Arrison, et al.
1995ReZZ	P-Arles		587	P.L. Reeder, Y. Kim, W.K. Hensley, et al.
1995Re.A	P-Arles		587	P.L. Reeder, Y. Kim, W.K. Hensley, et al.
1995Ry03	PRVCA	52,	2310	K. Rykaczewski, R. Anne, G. Auger, et al.
1995Sa42	NUPAB	592,	221	J. Sauvage, D. Hojman, F. Ibrahim, et al.
1995Sc28	NUPAB	588,	191c	R. Schneider, T. Faestermann, J. Friese, et al.
1995Sc33	PHSTT	56,	67	R. Schneider, T. Faestermann, J. Friese, et al.
1995Si30	ARISE	46,	865	H. Siegert
1995So03	NUPAB	583,	763c	O. Sorlin, D. Guillemaud-Mueller, R. Anne, et al.
1995So11	PRVCA	52,	88	P.C. Sood, A. Gizon, D.G. Burke, et al.
1995So.A	P-Arles		603	O. Sorlin, Th. Dorfler, R. Anne, et al.
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, et al.

1995Ti07	NUPAB	595,	1	D.R. Tilley, H.R. Weller, C.M. Cheves, et al.
1995Tr02	PYLBB	348,	331	W. Trinder, E.G. Adelberger, B.A. Brown, et al.
1995Uu01	PRVCA	52,	113	J. Uusitalo, T. Enqvist, M. Leino, et al.
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, et al.
1995Wi20	PRVCA	52,	1028	F.E. Wietfeldt, E.B. Norman, Y.D. Chan, et al.
1995Ya21	JUPSA	64,	3707	S. Yamada, T. Sharshar, K. Aoki, et al.
1995Za01	PRVCA	51,	98	N.V. Zamfir, R.L. Gill, D.S. Brenner, et al.
1995Zh10	NUPAB	586,	483	K. Zhao, J.S. Lilley, P.V. Drumm, et al.
1995Zh36	ZPAAD	353,	3	X. Zhou, Y. Guo, X. Sun, et al.
1995Zi03	PRLTA	75,	1719	M. Zinser, F. Humbert, T. Nilsson, et al.
1995ZiZZ	PrvCom	NDG		B. Zimmerman

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1996Aa02	NPBSE	48,	223	C.E. Aalseth, F.T. Avignone, R.L. Brodzinski, et al.
1996An21	BRSPE	60,	119	A.N. Andreyev, A.G. Popeko, A.V. Eremin, et al.
1996Ax01	PRVCA	54,	1511	L. Axelsson, M.J.G. Borge, S. Fayans, et al.
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, et al.
1996Ba80	PRLTA	77,	5186	A. Balysh, A. De Silva, V.I. Lebedev, et al.
1996Ba.1	CJPHA	74,	263	A.K. Baksi, D.A. Archibald, E. Farrar
1996Bi07	PRVCA	54,	R20	C.R. Bingham, K.S. Toth, J.C. Batchelder, et al.
1996Bl11	PRVCA	54,	572	B. Blank, S. Andriamonje, F. Boué, et al.
1996Bl21	PRLTA	77,	2893	B. Blank, S. Czajkowski, F. Davi, et al.
1996Bo37	PRLTA	77,	5190	F. Bosch, T. Faestermann, J. Friese, et al.
1996Bu03	JPGPE	22,	371	D. Bucurescu, N. Marginean, G. Cata-Danil, et al.
1996By.A	P-Moscow		71	V.A. Bystrov, I.N. Izosimov, V.G. Kalinnikov, et al.
1996Ch32	PRLTA	77,	2400	M. Chartier, G. Auger, W. Mittig, et al.
1996Co25	ARISE	47,	677	R. Colle, B.E. Zimmerman
1996Da06	PRLTA	76,	592	C.N. Davids, P.J. Woods, H.T. Penttilä, et al.
1996De60	YAFIA	59,	2117	A.V. Derbin, A.I. Egorov, V.N. Muratova, et al.
1996Do23	PRVCA	54,	2894	T. Dörfler, W.-D. Schmidt-Ott, T. Hild, et al.
1996Dr07	NUPAB	601,	234	S. Drissi, S. Andre, D. Barnéoud, et al.
1996En01	ZPAAD	354,	1	T. Enqvist, K. Eskola, A. Jokinen, et al.
1996En02	ZPAAD	354,	9	T. Enqvist, P. Armbruster, K. Eskola, et al.
1996Fa09	NUPAB	602,	167	L. Faux, S. Andriamonje, B. Blank, et al.
1996FaZZ	GSI-96-1		21	T. Faestermann, J. Friese, H. Geissel, et al.
1996Ga30	NUPAB	611,	68	P.E. Garrett, N. Warr, H. Baltzer, et al.
1996Ge12	NUPAB	611,	247	J. Genevey, A. Gizon, C. Foin, et al.
1996Gi08	NUPAB	605,	301	A. Gizon, J. Genevey, D. Bucurescu, et al.
1996Go06	JPGPE	22,	377	V.M. Gorozhankin, V.G. Kalinnikov, A. Kovalik, et al.
1996Ha45	NIMBE	114,	131	P. Haas, P. Gartenmann, R. Golser, et al.
1996He25	ZPAAD	356,	229	M. Hellström, Z. Hu, A. Weber, et al.
1996Hi14	PRVCA	54,	2709	M.M. Hindi, R.L. Kozub
1996Ho12	PRVCA	54,	78	R.W. Hoff, H.G. Borner, K. Schreckenbach, et al.
1996Ho13	ZPAAD	354,	229	S. Hofmann, V. Ninov, F.P. Heßberger, et al.
1996Ho16	PRLTA	77,	1020	P. Hoff, P. Baumann, A. Huck, et al.
1996Hw03	NIMAE	383,	447	H.Y. Hwang, C.B. Lee, T.S. Park, et al.
1996Ik01	PRVCA	54,	2043	H. Ikezoe, T. Ikuta, S. Hamada, et al.
1996Ki23	HYIND	103,	49	P. Kienle
1996Kl.A	AnRpt JYFL		30	I. Klöckl, K.-L. Kratz, G. Lhersonneau, et al.
1996Ko13	PRVCA	54,	R459	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, et al.
1996Ko17	NUPAB	601,	195	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, et al.

1996Kr05	PRVCA	53,	1971	R.A. Kryger, A. Azhari, J. Brown, et al.
1996La11	PRVCA	53,	2893	M.R. Lane, K.E. Gregorich, D.M. Lee, et al.
1996La12	PRVCA	54,	620	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, et al.
1996Le09	ZPAAD	355,	157	M. Leino, J. Uusitalo, R.G. Allatt, et al.
1996Lh03	PRVCA	54,	1117	G. Lhersonneau, P. Dendooven, S. Hankonen, et al.
1996Lh04	PRVCA	54,	1592	G. Lhersonneau, P. Dendooven, A. Honkanen, et al.
1996Li05	ZPAAD	354,	153	C.F. Liang, P. Paris, A. Płochocki, et al.
1996Li37	PRVCA	54,	2304	C.F. Liang, P. Paris, R.K. Sheline, et al.
1996Li50	ZPAAD	356,	239	M. Lipoglavšek, M. Górska, J. Nyberg, et al.
1996Ma72	RAACA	72,	39	M. Magara, N. Shinohara, Y. Hatsukawa, et al.
1996Me09	PRLTA	77,	458	T. Mehren, B. Pfeiffer, S. Schoedder, et al.
1996Me22	DABBB	57,	6340	J. Meissner
1996Mu19	PYLBB	367,	65	I. Mukha, M.J.G. Borge, D. Guillemaud-Mueller, et al.
1996Ni09	ZPAAD	356,	11	V. Ninov, F.P. Heßberger, S. Hofmann, et al.
1996Od01	ZPAAD	354,	231	A. Odahara, Y. Gono, S. Mitarai, et al.
1996Og01	PRVCA	54,	1098	T.J. Ognibene, J. Powell, D.M. Moltz, et al.
1996Os04	JUPSA	65,	928	A. Osa, T. Ikuta, K. Kawade, et al.
1996Pa01	PRVCA	53,	660	R.D. Page, P.J. Woods, R.A. Cunningham, et al.
1996Pa03	PRVCA	53,	715	X.-W. Pan, J.-L. Ping, D.H. Feng, et al.
1996Pf01	PRVCA	53,	1753	R. Pfaff, D.J. Morrissey, W. Benenson, et al.
1996Ra04	PRVCA	53,	616	S. Raman, E.K. Warburton, J.W. Starner, et al.
1996Ra16	PRVCA	53,	2732	S. Raman, J.B. McGrory, E.T. Jurney, et al.
1996Ri12	PRVCA	54,	2041	J.D. Richards, C.R. Bingham, Y.A. Akovali, et al.
1996Ro02	PRVCA	53,	1465	M. Robinson, P. Halse, W. Trinder, et al.
1996Ry.B	AnRpt JYFL		33	K. Rykaczewski
1996Se01	PRVCA	53,	96	D.R. Semon, M.C. Allen, H. Dejbakhsh, et al.
1996Sh27	JUPSA	65,	3172	M. Shibata, A. Odahara, S. Mitarai, et al.
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, et al.
1996To01	PRVCA	53,	2513	K.S. Toth, J.C. Batchelder, C.R. Bingham, et al.
1996To05	ZPAAD	355,	345	Y. Toh, K. Okano, A. Taniguchi, et al.
1996To08	ZPAAD	355,	225	K.S. Toth, J.C. Batchelder, D.M. Moltz, et al.
1996Ur02	PRVCA	54,	945	W. Urban, W.R. Phillips, J.L. Durell, et al.
1996Wa33	PRVCA	54,	2916	P.M. Wallace, E.G. Bilpuch, C.R. Bybee, et al.
1996WaZX	AnRpt Tohoku		25	A. Watanabe, T. Shinozuka, M. Fujita, et al.
1996Wo.A	P-Amsterdam		D14	A. Wöhr, V. Fedoseyev, Y. Jading, et al.
1996Ya12	JUPSA	65,	3390	S. Yamada, A. Taniguchi, Y. Toh, et al.
1996Ya.A	P-Kyoto		51	K. Yamauchi, Y. Kojima, H. Sakane, et al.
1996Zh03	ZPAAD	353,	353	X. Zhang, S. Yuan, W. Yang, et al.
1996Zh16	JRNCD	212,	93	S. Zhang, J. Guo, A. Cui, et al.

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1997Al02	PRVCA	55,	474	M. Alston-Garnjost, B.L. Dougherty, R.W. Kenney, et al.
1997An09	ZPAAD	358,	63	A.N. Andreyev, N. Bijnens, T. Enqvist, et al.
1997As05	PRVCA	56,	3045	M. Asai, T. Sekine, A. Osa, et al.
1997Ba21	ZPAAD	357,	121	J.C. Batchelder, K.S. Toth, C.R. Bingham, et al.
1997Ba25	PRVCA	55,	2142	J.C. Batchelder, K.S. Toth, C.R. Bingham, et al.
1997Ba26	PRVCA	55,	2279	V. Barci, G. Ardisson, D. Trubert, et al.
1997Ba35	ZPAAD	357,	351	A.S. Barabash, R. Gurriaran, F. Hubert, et al.
1997Be63	NUPAB	626,	343c	D. Beck, F. Ames, G. Audi, et al.
1997Be70	PYLBB	415,	111	M. Bernas, C. Engelmann, P. Armbruster, et al.
1997Bl03	NUPAB	615,	52	B. Blank, F. Boué, S. Andriamonje, et al.
1997Bl04	ZPAAD	357,	247	B. Blank, F. Boué, S. Andriamonje, et al.

1997Bo10	NUPAB	616,	254c	H.G. Bohlen, W. von Oertzen, Th. Stolla, et al.
1997Ch19	ZPAAD	358,	33	V.G. Chumin, V.I. Fominykh, K. Ya. Gromov, et al.
1997Ch53	BRSPE	61,	1606	V.G. Chumin, J.K. Jabber, K.V. Kalyapkin, et al.
1997Co21	ZPAAD	358,	241	R. Collatz, P. Kleinheinz, B. Rubio, et al.
1997Cz02	NUPAB	616,	278c	S. Czajkowski, S. Andriamonje, B. Blank, et al.
1997Da07	PRVCA	55,	2255	C.N. Davids, P.J. Woods, J.C. Batchelder, et al.
1997De40	PRVCA	56,	2451	A. De Silva, M.K. Moe, M.A. Nelson, et al.
1997Dr03	NUPAB	614,	137	S. Drissi, P.A. Tercier, H.G. Börner, et al.
1997Ga12	PYLBB	398,	415	F. Gatti, P. Meunier, C. Salvo, et al.
1997Ge11	NIMBE	126,	351	H. Geissel, G. Bollen, B. Franzke, et al.
1997Ge15	BRSPE	61,	1719	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, et al.
1997Gi07	ZPAAD	358,	369	A. Gizon, J. Genevey, Gh. Cata-Danil, et al.
1997Gr02	PRVCA	55,	1126	R. Grzywacz, R. Anne, G. Auger, et al.
1997Gu32	YTHLD	19,	180	J. Guo, K. Zhao, X. Lu, et al.
1997Ha04	NUPAB	613,	183	E. Hagberg, I.S. Towner, J.C. Hardy, et al.
1997Ha30	ZPAAD	358,	15	T. Hayakawa, T. Komatsubara, J. Lu, et al.
1997He29	ZPAAD	359,	415	F.P. Heßberger, S. Hofmann, V. Ninov, et al.
1997Hi06	NUPAB	620,	317	B. Hinfurtner, G. Seewald, E. Hagan, et al.
1997Ho12	NUPAB	621,	689	A. Honkanen, P. Dendooven, M. Huhta, et al.
1997Ho14	ZPAAD	358,	377	S. Hofmann, F.P. Heßberger, V. Ninov, et al.
1997Hu15	ZPAAD	359,	349	W.X. Huang, R.C. Ma, X.J. Xu, et al.
1997Ir01	PRVCA	55,	1621	R.J. Irvine, C.N. Davids, P.J. Woods, et al.
1997Is13	NIMAE	395,	210	T. Ishii, M. Itoh, M. Ishii, et al.
1997IwZX	RIKEN-96		50	H. Iwasaki, N. Aoi, D. Beaumel, et al.
1997Ja12	NUPAB	627,	119	Z. Janas, A. Płochocki, J. Szerypo, et al.
1997Ju02	PRVCA	56,	118	E.T. Jurney, J.W. Starner, J.E. Lynn, et al.
1997Ka03	PRVCA	55,	512	H. Kaur, J. Singh, A. Sharme, et al.
1997Ka07	ZPAAD	356,	363	D. Kast, A. Jungclaus, A. Harder, et al.
1997Ko13	NUPAB	617,	91	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, et al.
1997Ko46	NUPAB	624,	293	V.T. Koslowsky, E. Hagberg, J.C. Hardy, et al.
1997Ko65	NIMAE	401,	289	V.T. Koslowsky, E. Hagberg, J.C. Hardy, et al.
1997Ku20	NUPAB	621,	827	W. Kurcewicz, I.S. Grant, K. Gulda, et al.
1997Le22	PRLTA	79,	2213	F. Le Blanc
1997Li12	PRVCA	55,	2768	C.F. Liang, P. Paris, R.K. Sheline
1997Li19	PRVCA	56,	1157	Z. Li, S. Xu, Y. Xie, et al.
1997Li23	PRVCA	56,	2324	C.F. Liang, P. Paris, R.K. Sheline
1997Li25	ZPAAD	359,	1	W. Liu, M. Hellström, R. Collatz, et al.
1997Lo.A	PrvCom	GAu	May	R.W. Lougheed
1997Mi03	PRVCA	55,	1555	S. Mitsuoka, H. Ikezoe, T. Ikuta, et al.
1997Mo35	NUPAB	627,	222	D.J. Morrissey, K.N. McDonald, D. Bazin, et al.
1997Mu02	ZPAAD	356,	367	J. Mukai, N. Hashimoto, T. Saitoh, et al.
1997Mu08	PRVCA	55,	2267	U. Müller, P. Sevenich, K. Freitag, et al.
1997No06	NUPAB	621,	92c	E.B. Norman, E. Browne, Y.D. Chan, et al.
1997No.A	AnRpt Riken		74	M. Notani, N. Aoi, N. Fukuda, et al.
1997Oi01	PRVCA	56,	745	M. Oinonen, A. Jokinen, J. Äystö, et al.
1997Pe26	ZPAAD	359,	373	N. Perrin, C. Bourgeois, A. Korichi, et al.
1997Pr02	NUPAB	614,	183	P. Prokofjevs, L. Simonova, J. Berzins, et al.
1997Pu01	ZPAAD	357,	3	Y.H. Pu, K. Morita, M.G. Hies, et al.
1997Ro26	IEIMA	46,	560	S. Röttger, A. Paul, U. Keyser
1997Sa14	NUPAB	616,	311c	H. Sakurai, N. Aoi, D. Beaumel, et al.
1997Sc30	NUPAB	624,	185	K. Schmidt, P.C. Divari, Th. W. Elze, et al.
1997Sc.B	Th.-Heidelberg			B. Schlitt
1997Sh09	PRVCA	55,	1162	R.K. Sheline, C.F. Liang, P. Paris, et al.
1997Sh37	ZPAAD	359,	229	T. Shizuma, G. Sletten, R.A. Bark, et al.

1997Su06	NUPAB	616,	341c	K. Sümmerer, R. Schneider, T. Faestermann, et al.
1997Sz04	ZPAAD	359,	117	J. Szerypo, R. Grzywacz, Z. Janas, et al.
1997Ta10	PRVCA	56,	142	S.L. Tabor, J. Döring, G.D. Johns, et al.
1997Ta22	PYLBB	409,	64	O. Tarasov, R. Allatt, J.C. Angélique, et al.
1997Te07	PYLBB	407,	110	T. Teranishi, S. Shimoura, Y. Ando, et al.
1997To12	PRVCA	56,	3410	K.S. Toth, D.C. Sousa, J.C. Batchelder, et al.
1997Tr05	NUPAB	620,	191	W. Trinder, E.G. Adelberger, B.A. Brown, et al.
1997Tr11	PYLBB	415,	211	W. Trinder, R. Anne, M. Lewitowicz, et al.
1997Uu01	ZPAAD	358,	375	J. Uusitalo, M. Leino, R.G. Allatt, et al.
1997Wa04	ZPAAD	357,	39	J. Wawryszczuk, M.B. Yuldashev, K. Ya. Gromov, et al.
1997Wa05	PRVCA	55,	1192	J. Wauters, J.C. Batchelder, C.R. Bingham, et al.
1997We13	NIMAE	397,	478	X.-Q. Wen, K. Shizuma, S. Hamanaka, et al.
1997Wi15	PRVCA	56,	1626	P.A. Wilk, K.E. Gregorich, M.B. Hendricks, et al.
1997Wo06	NUPAB	621,	289c	A. Wohr, A. Andreev, N. Bijnens, et al.
1997Xu01	PRVCA	55,	R553	X.J. Xu, W.X. Huang, R.C. Ma, et al.
1997Za03	PRVCA	55,	2697	K. Zaerpoor, Y. Xu, M. Gummin, et al.
1997Za07	PRLTA	79,	4306	K. Zaerpoor, Y.D. Chan, D.E. DiGregorio, et al.
1997Zi04	NUPAB	619,	151	M. Zinser, F. Humbert, T. Nilsson, et al.

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1998Ag.A	P-Bellaire		809	J. Agramunt, A. Algora, L. Batist, et al.
1998Ah03	PRLTA	80,	2550	I. Ahmad, G. Bonino, G.C. Castagnoli, et al.
1998Am04	EPJAA	1,	275	F. Ameil, M. Bernas, P. Armbruster, et al.
1998Ar03	PRVCA	57,	612	G. Ardisson, V. Barci, O. El Samad
1998Ar10	NUPAB	636,	209	R. Arnold, C. Augier, J. Baker, et al.
1998At04	ARISE	49,	1175	M.R.P. Attie, M.F. Koskinas, M.S. Dias, et al.
1998Ax01	NUPAB	628,	345	L. Axelsson, J. Äystö, U.C. Bergmann, et al.
1998Ax02	NUPAB	634,	475	L. Axelsson, J. Äystö, M.J.G. Borge, et al.
1998Az01	PRVCA	57,	628	A. Azhari, T. Baumann, J.A. Brown, et al.
1998Ba13	PRVCA	57,	1042	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, et al.
1998Ba53	JPGPE	24,	1403	V. Banerjee, T. Kubo, A. Chakrabarti, et al.
1998Ba81	PRVCA	58,	2002	D. Bazzacco, F. Brandolini, G. Falconi, et al.
1998Ba83	PRVCA	58,	2571	P.H. Barker, P.A. Amundsen
1998Ba85	NUPAB	641,	133	M. Balodis, P. Prokofjevs, N. Krāmere, et al.
1998Ba.A	P-Bellaire		90	Y. Bai, D.J. Vieira, H.L. Seifert, et al.
1998Ba.B	P-Bellaire		264	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, et al.
1998Be19	PRVCA	57,	2740	T. Belgya, B. Fazekas, Zs. Kasztovszky, et al.
1998Be28	NUPAB	636,	419	A.V. Belozyorov, R. Kalpakchieva, Yu. E. Penionzhkevich, et al.
1998Bh04	PRVCA	58,	1247	M. Bhattacharya, A. García, M.M. Hindi, et al.
1998Bh12	PRVCA	58,	3677	M. Bhattacharya, A. García, N.I. Kaloskamis, et al.
1998Bi06	PRVCA	58,	754	N. Bijnens, P. Decrock, S. Franchoo, et al.
1998Bi.A	P-Bellaire		474	C.R. Bingham, J.C. Batchelder, J.A. Cizewski, et al.
1998Bo30	NUPAB	642,	419	R. Böttger, H. Schölermann
1998Ch20	NUPAB	637,	3	M. Chartier, W. Mittig, N.A. Orr, et al.
1998Co27	EPJAA	3,	17	J.F.C. Cocks, M. Muikku, W. Korten, et al.
1998Cz01	NUPAB	628,	537	C. Czajkowski, S. Andriamonje, B. Blank, et al.
1998Da03	PRLTA	80,	1849	C.N. Davids, P.J. Woods, D. Seweryniak, et al.
1998Dr09	PRVCA	58,	1837	G.D. Dracoulis, A.P. Byrne, S.M. Mullins, et al.
1998En.A	PrvCom	AHW	Aug	T. Enqvist, et al (PrvCom of H. Geissel)
1998Es02	PRVCA	57,	417	K. Eskola, P. Kuusiniemi, M. Leino, et al.
1998Fo04	EPJAA	1,	355	B. Fornal, R. Broda, W. Krolas, et al.
1998Fo05	ARISE	49,	1373	K.A. Fonseca, M.F. Koskinas, M.S. Dias
1998Fo06	PRVCA	58,	749	B.D. Foy, D.S. Brenner, C.N. Davids, et al.

1998Fr15	PRLTA	81,	3100	S. Franchoo, M. Huyse, K. Kruglov, et al.
1998Ga12	EPJAA	1,	391	C. Gautherin, M. Houry, W. Korten, et al.
1998Ga50	NUPBB	s66,	203	M. Galeazzi
1998Ge13	EPJAA	3,	225	U. Georg, W. Borchers, M. Keim, et al.
1998GeZX	APCPC	455,		J. Genevey, J.A. Pinston, H. Faust, et al.
1998Go05	PRLTA	80,	2554	J. Gorres, J. Meissner, H. Schatz, et al.
1998Gr12	PYLBB	429,	247	R. Grzywacz, S. Andriamonje, B. Blank, et al.
1998Gr14	PRLTA	81,	766	R. Grzywacz, R. Béraud, C. Borcea, et al.
1998Gr.B	P-Bellaire		430	R. Grzywacz
1998Gu10	PRVCA	58,	116	V. Guimarães, S. Kubono, N. Ikeda, et al.
1998Ha36	PRVCA	58,	821	P.D. Harty, N.S. Bowden, P.H. Barker, et al.
1998He.B	Th.-Boulder			T.P. Heavner
1998Ho13	RPPHA	61,	639	S. Hofmann
1998HoZP	APCPC	447,	220	M. Houry, W. Korten, Y. Le Coz, et al.
1998Hu20	PRVCA	58,	3187	M. Huhta, P.F. Mantica, D.W. Anthony, et al.
1998Ic02	PRVCA	58,	1329	S. Ichikawa, K. Tsukada, I. Nishinaka, et al.
1998IcZZ	APCPC	455,		S. Ichikawa, K. Tsukada, M. Asai, et al.
1998Ik01	PRVCA	57,	2804	T. Ikuta, H. Ikezoe, S. Mitsuoka, et al.
1998Ik02	EPJAA	2,	379	H. Ikezoe, T. Ikuta, S. Mitsuoka, et al.
1998Is06	EPJAA	2,	173	S. Issmer, M. Fruneau, J.A. Pinston, et al.
1998Is11	PRLTA	81,	4100	T. Ishii, M. Asai, I. Hossain, et al.
1998Jo18	EPJAA	3,	271	A. Jokinen, M. Oinonen, J. Äystö, et al.
1998Jo.A	PrvCom	AHW	Mar	T. Johansson, I. Bergström, et al
1998Ka42	NUPAB	640,	3	M. Karny, L. Batist, B.A. Brown, et al.
1998Ka.A	AnRpt GSI		22	M. Karny, L. Batist, D. Cano, et al.
1998Ki20	PYLBB	443,	82	S.L. King, J. Simpson, R.D. Page, et al.
1998Ko09	NUPAB	632,	473	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, et al.
1998Ko27	NUPAB	636,	367	T. Kobayashi, K. Sueki, M. Ebihara, et al.
1998Ko66	JUPSA	67,	3405	Y. Kojima, M. Asai, A. Osa, et al.
1998Le15	EPJAA	2,	9	A.I. Levon, J. de Boer, M. Loewe, et al.
1998Li46	PRVCA	58,	2677	W. Liu, M. Hellström, R. Collatz, et al.
1998Li50	PYLBB	440,	246	M. Lipoglavšek, D. Seweryniak, C.N. Davids, et al.
1998Lu08	EPJAA	2,	149	X. Lu, J. Guo, K. Zhao, et al.
1998LuZV	AnRpt JAERI		17	J. Lu, H. Ikezoe, T. Ikuta, et al.
1998Mc03	NUPAB	637,	469	T.R. McGoram, G.D. Dracoulis, A.P. Byrne, et al.
1998Mo30	EPJAA	3,	99	T. Morek, K. Starosta, Ch. Droste, et al.
1998Ni19	EPSLA	163,	191	V.N. Nijampurkar, D.K. Rao, F. Oldfield, et al.
1998No06	PRVCA	57,	2010	E.B. Norman, E. Browne, Y.D. Chan, et al.
1998NoZW	APCPC	455,	359	M. Notani, N. Aoi, N. Fukuda, et al.
1998No.A	P-Bellaire		359	M. Notani, N. Aoi, N. Fukuda, et al.
1998Oi02	NIMAE	416,	485	M. Oinonen, R. Béraud, G. Canchel, et al.
1998Pa.1	PRVAA	58,	3537	T. Papp, J.L. Campbell, S. Raman
1998Pf02	PYLBB	444,	32	M. Pfützner, P. Armbruster, T. Baumann, et al.
1998Ra15	PYLBB	432,	22	M. Ramdhane, P. Baumann, A. Knipper, et al.
1998Ru04	PRVCA	58,	771	D. Rupnik, E.F. Zganjar, J.L. Wood, et al.
1998Sa60	ZAANE	3,	197	T.R. Saitoh, N. Hashimoto, G. Sletten, et al.
1998Sc19	PRVCA	57,	2205	M. Schafer, W.-D. Schmidt-Ott, T. Dorfler, et al.
1998Sh21	ARISE	49,	1481	M. Shibata, Y. Satoh, S. Itoh, et al.
1998Si12	ARISE	49,	1397	H. Siegert, H. Schrader, U. Schötzig
1998So03	NUPAB	632,	205	O. Sorlin, V. Borrel, S. Grévy, et al.
1998St24	NUPAB	641,	401	A.E. Stuchbery, G.D. Dracoulis, T. Kibedi, et al.
1998Su16	EPJAA	2,	237	M. Sugawara, H. Kusakari, T. Murakami, et al.
1998Th01	NUPAB	629,	20c	A.W. Thomas
1998To14	PRVCA	58,	1310	K.S. Toth, X.-J. Xu, C.R. Bingham, et al.

1998Ts02	PRVCA	57,	2057	K. Tsukada, S. Ichikawa, Y. Hatsukawa, et al.
1998Tu01	PRVCA	57,	1648	A. Türler, R. Dressler, B. Eichler, et al.
1998Ut02	PRVCA	57,	2731	S. Utku, J.G. Ross, N.P.T. Bateman, et al.
1998Vi06	PYLBB	437,	264	S.M. Vincent, P.H. Regan, D.D. Warner, et al.
1998Wa.A	PrvCom	AHW	Feb	A.H. Wapstra
1998Wh01	PRVCA	57,	1112	D.H. White, R.W. Hoff, H.G. Börner, et al.
1998Wh02	PYLBB	425,	239	C. Wheldon, R. D'Alarcao, P. Chowdhury, et al.
1998WiZV	P-Bellaire		606	J.A. Winger, H.H. Yousif, W.C. Ma, et al.
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, et al.
1998Yu02	PRVCA	57,	1506	S. Yuan, W. Yang, Z. Li, et al.
1998Zh03	EPJAA	1,	1	Y.H. Zhang, Q.Z. Zhao, S.F. Zhu, et al.
1998Zh09	NUPAB	628,	386	C.T. Zhang, P. Bhattacharyya, P.J. Daly, et al.
1998Zh19	EPJAA	2,	5	L. Zhang, J.H. Zhao, J.W. Zheng, et al.
1998Zh22	PRVCA	58,	156	L. Zhang, J. Zhao, J. Zheng, et al.

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1999Ad10	PRLTA	83,	1299	E.G. Adelberger, C. Ortiz, A. Garcia, et al.
1999Al20	PYLBB	457,	253	A. Alessandrello, J.W. Beeman, C. Brofferio, et al.
1999Am05	NUPAB	651,	3	F. Ames, G. Audi, D. Beck, et al.
1999An10	PRLTA	82,	1819	A.N. Andreyev, M. Huyse, P. Van Duppen, et al.
1999An22	JPGPE	25,	835	A.N. Andreyev, N. Bijnens, M. Huyse, et al.
1999An36	APOBB	30,	1255	A.N. Andreyev, N. Bijnens, J.F. Cocks, et al.
1999An52	EPJAA	6,	381	A.N. Andreyev, D. Ackermann, P. Cagarda, et al.
1999Ar25	NUPAB	658,	299	R. Arnold, C. Augier, J. Baker, et al.
1999As03	PRVCA	59,	3060	M. Asai, S. Ichikawa, K. Tsukada, et al.
1999Ba45	EPJAA	5,	49	J.C. Batchelder, K.S. Toth, C.R. Bingham, et al.
1999Ba65	PRVCA	60,	024304	V. Barci, G. Ardison, D. Trubert, et al.
1999Be63	NUPAB	660,	87	J. Benlliure, K.-H. Schmidt, D. Cortina-Gil, et al.
1999Be64	NUPBB	563,	97	P. Belli, R. Bernabei, C.J. Dai, et al.
1999Bi14	PRVCA	59,	2984	C.R. Bingham, J. Batchelder, K. Rykaczewski, et al.
1999Bo26	PPNPD	42,	17	H.G. Bohlen, A. Blazevic, B. Gebauer, et al.
1999Br47	PRLTA	83,	4510	M.P. Bradley, J.V. Porto, S. Rainville, et al.
1999Ca21	EPJAA	5,	1	G. Canchell, R. Béraud, E. Chabanat, et al.
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, et al.
1999Da18	NUPAB	657,	219	P.M. Davidson, G.D. Dracoulis, T. Kibedi, et al.
1999Da.A	GANIL-T9905			J.-M. Daugas Thesis
1999Dl01	JPGPE	25,	859	Z. Dlouhý, Yu. Penionzhkevich, R. Anne, et al.
1999Dr09	PRVCA	59,	3433	R. Dressler, B. Eichler, D.T. Jost, et al.
1999Dr13	JPGPE	25,	1839	O. Dragoun, A. Spalek, M. Rysavy, et al.
1999Fe10	EPJAA	6,	235	X.C. Feng, Y.X. Guo, X.H. Zhou, et al.
1999Fo01	PRLTA	82,	1823	B. Fogelberg, K.A. Mezilev, H. Mach, et al.
1999Fo.A	PrvCom	GAu	Oct	K. Foehl
1999Ga41	EPJAA	6,	59	Z.G. Gan, Z. Qin, J.S. Guo, et al.
1999Ga.A	B-Seeheim		O34	H.W. Gäggeler, R. Dressler, A. Türler, et al.
1999Ge01	PRVCA	59,	82	J. Genevey, F. Ibrahim, J.A. Pinston, et al.
1999Ge02	PRVCA	59,	598	E.A. George, L.D. Knutson
1999Gi14	NUPAB	658,	97	J. Gizon, A. Gizon, J. Timár, et al.
1999Gr28	EPJAA	6,	269	P.T. Greenlees, P. Kuusiniemi, N. Amzal, et al.
1999Ha05	PRLTA	82,	1391	M. Hannawald, T. Kautsch, A. Wöhr, et al.
1999He11	JPGPE	25,	877	F.P. Heßberger

1999He32	EPJAA	6,	289	K. Helariutta, J.F.C. Cocks, T. Enqvist, et al.
1999Ho01	NUPAB	645,	331	J. Honzátko, I. Tomandl, V. Bondarenko, et al.
1999Ho09	PYLBB	451,	247	E. Holzschuh, W. Kündig, L. Palermo, et al.
1999Ho28	PRVCA	60,	057301	F. Hoellinger, B.J.P. Gall, N. Schulz, et al.
1999Hu05	PRVCA	59,	2402	W.X. Huang, R.C. Ma, S.W. Xu, et al.
1999Hu10	PRVCA	60,	024315	Z. Hu, L. Batist, J. Agramunt, et al.
1999Io02	PRVCA	60,	024316	M. Ionescu-Bujor, A. Iordachescu, F. Brandolini, et al.
1999Ja02	PRLTA	82,	295	Z. Janas, C. Chandler, B. Blank, et al.
1999Ke05	PYLAA	255,	221	E.G. Kessler, Jr., M.S. Dewey, R.D. Deslattes, et al.
1999La06	NUPAB	648,	64	J.M. Lagrange, M. Pautrat, J.S. Dionisio, et al.
1999La14	PRVCA	59,	3086	C.A. Laue, K.E. Gregorich, R. Sudowe, et al.
1999Le42	EPJAA	6,	63	M. Leino, H. Kankaanpää, R.-D. Herzberg, et al.
1999Le52	PRVCA	60,	054310	F. Le Blanc, D. Lunney, J. Obert, et al.
1999Le67	NUPAB	654,	683c	S. Leenhardt, F. Azaiez, O. Sorlin, et al.
1999Lh01	PRVCA	60,	014315	G. Lhersonneau, J.C. Wang, S. Hankonen, et al.
1999Li18	PRLTA	82,	4783	A. Lindroth, B. Fogelberg, H. Mach, et al.
1999Li33	EPJAA	5,	351	Z. Li, S. Xu, Y. Xie, et al.
1999Mo30	NUPAB	657,	251	C.-B. Moon, S.J. Chae, T. Komatsubara, et al.
1999Mo40	NPBSE	77,	335	A. Morales
1999Mu17	PRLTA	83,	3613	W.F. Mueller, B. Bruyneel, S. Franchoo, et al.
1999Na27	PRLTA	83,	1112	T. Nakamura, N. Fukuda, T. Kobayashi, et al.
1999Ni03	PRLTA	83,	1104	V. Ninov, K.E. Gregorich, W. Loveland, et al.
1999Ob04	IMSPF	184,	145	F. Oberli, P. Gartenmann, M. Meier, et al.
1999Og03	PYLBB	451,	11	H. Ogawa, K. Asahi, K. Sakai, et al.
1999Og05	EPJAA	5,	63	Yu. Ts. Oganessian, A.V. Yeremin, G.G. Gulbekian, et al.
1999Og07	NATUA	400,	242	Yu. Ts. Oganessian, A.V. Yeremin, A.G. Popeko, et al.
1999Og10	PRLTA	83,	3154	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
1999Og.B	B-Seeheim		O5	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
1999Oi01	EPJAA	5,	151	M. Oinonen, P. Baumann, P. Dendooven, et al.
1999Pa18	NIMAE	423,	337	L. Palermo, E. Holzschuh, W. Kundig, et al.
1999Pi08	NPBSE	77,	352	F. Piquemal, NEMO
1999Po09	PRVCA	59,	2979	G.L. Poli, C.N. Davids, P.J. Woods, et al.
1999Po32	RDIOE	41,	24	Y.S. Popov, N.Y. Nezgovorov, G.A. Timofeev
1999Po33	RDIOE	41,	26	Yu. S. Popov, G.A. Timofeev
1999Pr10	PRVCA	60,	054307	J.I. Prisciandaro, P.F. Mantica, A.M. Oros-Peusquens, et al.
1999Re06	PRVCA	59,	2416	I. Reusen, I. Reusen, A. Andreyev, et al.
1999Re16	PRVCA	60,	024311	A.T. Reed, O. Tarasov, R.D. Page, et al.
1999Ry04	PRVCA	60,	011301	K. Rykaczewski, J.C. Batchelder, C.R. Bingham, et al.
1999Sa06	PYLBB	448,	180	H. Sakurai, S.M. Lukyanov, M. Notani, et al.
1999Sa.D	B-Seeheim		PW4	M. Sakama, K. Tsukuda, M. Asai, et al.
1999Se14	PRVCA	60,	031304	D. Seweryniak, J. Uusitalo, M.P. Carpenter, et al.
1999Sh03	PRVCA	59,	101	R.K. Sheline, P. Alexa, C.F. Liang, et al.
1999Sm07	EPJAA	5,	43	M.B. Smith, R. Chapman, J.F.C. Cocks, et al.
1999So08	PRVCA	59,	1324	D. Sohler, J. Cederkall, M. Lipoglavsek, et al.
1999So17	PRLTA	83,	1116	A.A. Sonzogni, C.N. Davids, P.J. Woods, et al.
1999So20	NUPAB	660,	3	O. Sorlin, C. Donzaud, L. Axelsson, et al.
1999Ta03	PRVCA	59,	673	R.B.E. Taylor, S.J. Freeman, J.L. Durell, et al.
1999Ta20	EPJAA	5,	123	Y. Tagaya, S. Hashimoto, K. Morita, et al.
1999Ta29	EPJAA	6,	119	M. Tanigaki, K. Sekiguchi, M. Fujita, et al.
1999Th09	PYLBB	467,	194	J. Thaysen, L. Axelsson, J. Äystö, et al.
1999To04	EPJAA	4,	233	Y. Toh, S. Yamada, A. Taniguchi, et al.
1999To11	PRVCA	60,	011302	K.S. Toth, C.R. Bingham, J.C. Batchelder, et al.
1999Tr04	PYLBB	459,	67	W. Trinder, J.C. Angélique, R. Anne, et al.
1999Uu01	PRVCA	59,	2975	J. Uusitalo, C.N. Davids, P.J. Woods, et al.

1999Wa09	PYLBB	454,	1	J.C. Wang, P. Dendooven, M. Hannawald, et al.
1999Wi01	PRVCA	59,	528	F.E. Wietfeldt, F.J. Schima, B.M. Coursey, et al.
1999WiZX	PrvCom	NDG		J.A. Winger
1999Xi03	EPJAA	5,	341	Y. Xie, S. Xu, Z. Li, et al.
1999Xi04	EPJAA	6,	239	Y. Xie, S. Xu, Z. Li, et al.
1999Xu05	PRVCA	60,	061302	S.W. Xu, Z.K. Li, Y.X. Xie, et al.
1999Ya10	CPLEE	16,	406	W.-F. Yang, S.-G. Yuan, Y.-B. Xu, et al.
1999Ya.A	P-Dubna		118	E.A. Yakushev, V.M. Gorozhankin, O. Dragoun, et al.
1999YoZW	AnRpt RIKEN		78	K. Yoneda, H. Sakurai, N. Aoi, et al.

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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, et al.
2000As.A	AnRpt JAERI		13	M. Asai, K. Tsukada, S. Ichikawa, et al.
2000Ba16	PRVCA	61,	034304	A.E. Barzakh, I. Ya. Chubukov, D.V. Fedorov, et al.
2000Bb01	PRVCA	62,	054302	P.H. Barker, M.S. Wu
2000Be42	EPJAA	8,	307	D. Beck, F. Ames, G. Audi, et al.
2000Bo24	NUPAB	673,	85	V. Bondarenko, T. von Egidy, J. Honzátko, et al.
2000Br63	PYLBB	495,	63	V.B. Brudanin, N.I. Rukhadze, Ch. Briançon, et al.
2000By02	EPJAA	7,	41	A.P. Byrne, A.M. Baxter, G.D. Dracoulis, et al.
2000Ca.A	Th.-Valencia			Cano-Ott
2000Ch07	PRVCA	61,	044309	C. Chandler, P.H. Regan, B. Blank, et al.
2000Ch56	CHGEA	169,	17	H. Cheng, R.L. Edwards, J. Hoff, et al.
2000Da07	PYLBB	476,	213	J.M. Daugas, R. Grzywacz, M. Lewitowicz, et al.
2000Do10	JRNBA	105,	43	J. Döring, A. Aprahamian, M. Wiescher
2000Ei05	NATUA	407,	63	R. Eichler, W. Bruchle, R. Dressler, et al.
2000Fy01	NUPAB	677,	38	H.O.U. Fynbo, M.J.G. Borge, L. Axelsson, et al.
2000Ga61	HYIND	129,	237	A. Garcia, E.G. Adelberger, C. Ortiz, et al.
2000Ge01	NUPAB	662,	3	L. Genilloud, H.G. Börner, F. Corminboeuf, et al.
2000Ge07	PYLBB	480,	77	T. Gehrmann
2000Ge09	PRVCA	61,	064310	E. Gete, L. Buchmann, R.E. Azuma, et al.
2000Ge18	EPJAA	9,	191	J. Genevey, J.A. Pinston, H. Faust, et al.
2000Gi01	PRVCA	61,	014308	T.N. Ginter, J.C. Batchelder, C.R. Bingham, et al.
2000Gi11	NUPAB	674,	394	J. Giovinazzo, P. Dessagne, C. Miehe
2000Gi12	EPJAA	8,	41	A. Gizon, B. Weiss, P. Paris, et al.
2000Ha55	PRVCA	62,	054301	M. Hannawald, K.-L. Kratz, B. Pfeiffer, et al.
2000HaZL	Th.-Mainz			M.W. Hannawald PhD Thesis
2000He17	EPJAA	8,	521	F.P. Heßberger, S. Hofmann, D. Ackermann, et al.
2000Hi08	PRVCA	61,	055501	M.M. Hindi, R.-M. Larimer, E.B. Norman, et al.
2000Ho13	PYLBB	482,	1	E. Holzschuh, L. Palermo, H. Stussi, et al.
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, et al.
2000IcZZ	P-StAndrews		203	S. Ichikawa, M. Asai, K. Tsukada, et al.
2000Io02	PRVCA	62,	014306	M. Ionescu-Bujor, A. Iordachescu, D. Bucurescu
2000Je09	PRVCA	62,	021302	D.G. Jenkins, M. Muikku, P.T. Greenlees, et al.
2000Jo18	EPJAA	9,	9	A. Jokinen, J.C. Wang, J. Äystö, et al.
2000Ka21	EPJAA	7,	451	R. Kalpakchieva, H.G. Bohlen, W. von Oertzen, et al.
2000Ke09	EPJAA	8,	31	M. Keim, U. Georg, A. Klein, et al.
2000Ko15	EPJAA	7,	167	A. Korgul, W. Urban, T. Rzaca-Urban, et al.
2000Ko16	PRVCA	61,	044323	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, et al.
2000Ko48	PRVCA	62,	044305	F.G. Kondev, R.V.F. Janssens, M.P. Carpenter, et al.
2000KoZH	Th.-Munchen			U. Koster

2000Kr18	HYIND	129,	185	K. Kratz, B. Pfeiffer, F. Thielemann, et al.
2000Kr.A	PrvCom	GAu	Jun	K.-L. Kratz, B. Pfeiffer
2000Ku06	EPJAA	7,	49	J. Kurpeta, A. Andreyev, J. Äystö, et al.
2000Ku25	YAFIA	63,	1365	V.V. Kuzminov, N. Ja. Osetrova
2000La25	PRVCA	61,	067603	C.A. Laue, K.E. Gregorich, R. Sudowe, et al.
2000La34	PRVCA	62,	064307	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, et al.
2000La36	EPJAA	9,	307	M. Lach, P. Bednarczyk, P.T. Greenlees, et al.
2000Le02	PRLTA	84,	899	K.W.D. Legingham, I. Spencer, T. McCanny, et al.
2000Li08	EPJAA	7,	1	Z. Li, S. Xu, Y. Xie, et al.
2000Li37	PRVCA	62,	047303	C.F. Liang, P. Paris, R.K. Sheline
2000Ma62	PRVCA	62,	034308	K. Markenroth, L. Axelsson, S. Baxter, et al.
2000Ma65	EPJAA	8,	295	O.N. Malyshev, A.V. Belozerov, M.L. Chelnokov, et al.
2000Ma95	PRVCA	62,	057303	H. Mahmud, C.N. Davids, P.J. Woods, et al.
2000Me.A	PrvCom	AHW	Sep	K.A. Mezilev, B. Fogelberg, V.I. Isakov, et al.
2000Mo05	EPJAA	7,	45	P. Mohr, C. Hutter, K. Vogt, et al.
2000Mu10	PRVCA	61,	054308	W.F. Mueller, B. Bruyneel, S. Franchoo, et al.
2000Ni02	PRVCA	61,	034309	K. Nishio, H. Ikezoe, S. Mitsuoka, et al.
2000Oi02	PRVCA	61,	035801	M. Oinonen, J. Äystö, A. Jokinen, et al.
2000Ol01	PRLTA	84,	4056	J.M. Oliveira, Jr., A. Lépine-Szily, H.G. Bohlen, et al.
2000Pa40	PYLBB	484,	1	D. Pansegrau, P. Reiter, D. Schwalm, et al.
2000Pe28	PYLBB	492,	1	K. Peräjärvi, T. Siiskonen, A. Honkanen, et al.
2000Pi03	PRVCA	61,	024312	J.A. Pinston, C. Foin, J. Genevey, et al.
2000Po26	PYLBB	491,	225	Zs. Podolyák, P.H. Regan, M. Pfutzner, et al.
2000Ra23	NUPAB	677,	75	T. Radon, H. Geissel, G. Münzenberg, et al.
2000Re03	PRLTA	84,	2104	J.J. Ressler, A. Piechaczek, W.B. Walters, et al.
2000Sa21	PRLTA	84,	5062	F. Sarazin, H. Savajols, W. Mittig, et al.
2000Sa52	EPJAA	9,	303	M. Sakama, K. Tsukada, M. Asai, et al.
2000Sc31	EPJAA	8,	303	K. Schmidt, C. Mazzocchi, R. Borcea, et al.
2000Sh10	PRVCA	61,	044609	D.A. Shaughnessy, J.L. Adams, K.E. Gregorich, et al.
2000Si02	ARISE	52,	467	G. Sibbens, B. Denecke
2000Sm06	JPGPE	26,	787	M.B. Smith, R. Chapman, J.F.C. Cocks, et al.
2000So11	PHSTT	88,	153	G.A. Souliotis
2000Sy01	RAACA	88,	837	E.R. Sylwester, K.E. Gregorich, D.M. Lee, et al.
2000Ti01	EPJAA	7,	7	J. Timar, A. Gizon, P. Paris, et al.
2000Us01	ARISE	52,	585	K. Usman, T.D. MacMahon
2000We.A	AnRpt GSI		10	E. Wefers, T. Faestermann, R. Schneider, et al.
2000Wh04	PRVCA	62,	057301	C. Wheldon, P.M. Walker, P. Chowdhury, et al.
2000Wi15	PRLTA	85,	2697	P.A. Wilk, K.E. Gregorich, A. Türler, et al.
2000Xu08	EPJAA	8,	435	S. Xu, Y. Xie, Y. Yu, et al.
2000Ye02	JPGPE	26,	839	G. Yeandle, J. Billowes, P. Campbell, et al.
2000Zh47	PRVCA	62,	057302	C.T. Zhang, P. Bhattacharyya, P.J. Daly, et al.

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2001An11	EPJAA	10,	129	A.N. Andreyev, D. Ackermann, P. Cagarda, et al.
2001As06	JTPHE	74,	529	V.D. Ashitkov, A.S. Barabash, S.G. Belogurov, et al.
2001AsZY	AnRpt JAERI		13	M. Asai, K. Tsukada, S. Ichikawa, et al.
2001Ba06	PRVCA	63,	024302	P.H. Barker
2001Ba12	PRLTA	86,	1454	G.C. Ball, S. Bishop, J.A. Behr, et al.
2001Ba79	NUPAB	694,	3	S. Bayer, A.P. Byrne, G.D. Dracoulis, et al.
2001Be51	NUPAB	692,	427	U.C. Bergmann, M.J.G. Borge, R. Boutami, et al.
2001Be53	EPJAA	11,	279	U.C. Bergmann, M.J.G. Borge, J. Cederkäll, et al.
2001Be81	GCACA	65,	111	F. Begemann, K.R. Ludwig, G.W. Lugmair, et al.
2001Bh06	PRVCA	64,	054312	P. Bhattacharyya, P.J. Daly, C.T. Zhang, et al.

2001Bo11	NUPAB	686,	64	R. Bonetti, C. Carbonini, A. Guglielmetti, et al.
2001Bo54	NUPAB	695,	69	R. Borcea, J. Äystö, E. Caurier, et al.
2001Bo59	HYIND	132,	215	G. Bollen, F. Ames, G. Audi, et al.
2001Br27	EPJDD	15,	181	S. Brunner, T. Engel, A. Schmitt, et al.
2001Ca37	PRVCA	64,	025802	J.A. Caggiano, D. Bazin, W. Benenson, et al.
2001Ca60	EPJAA	12,	377	G. Canchel, L. Achouri, J. Äystö, et al.
2001Ca.B	AnRpt GSI		15	P. Cagarda, S. Antalic, D. Ackermann, et al.
2001Ch31	PYLBB	505,	21	L. Chen, B. Blank, B.A. Brown, et al.
2001Da22	NUPAB	694,	375	F.A. Danevich, V.V. Kobychev, O.A. Ponkratenko, et al.
2001Do08	PRLTA	86,	4259	G. Douysset, T. Fritioff, C. Carlberg, et al.
2001Dr05	PRVCA	63,	061302	G.D. Dracoulis, T. Kibédi, A.P. Byrne, et al.
2001Fo08	PRLTA	87,	212501	B. Fornal, R. Broda, K.H. Maier, et al.
2001Fr05	NUPAB	686,	71	L.M. Fraile, M.J.G. Borge, H. Mach, et al.
2001Fr18	EPJDD	15,	141	T. Fritioff, C. Carlberg, G. Douysset, et al.
2001Fr21	PRVCA	64,	054308	S. Franchoo, M. Huyse, K. Kruglov, et al.
2001Fu21	JNSTA	38,	1035	K. Furutaka, S. Nakamura, H. Harada, et al.
2001Ga01	PRVCA	63,	014302	M. Galeazzi, F. Fontanelli, F. Gatti, et al.
2001Ga20	EPJAA	10,	21	Z.G. Gan, Z. Qin, H.M. Fan, et al.
2001Ga24	PRVCA	63,	044307	J. Garcés Narro, C. Longour, P.H. Regan, et al.
2001Ga59	EPJAA	11,	413	M. Gaelens, J. Andrzejewski, J. Camps, et al.
2001Ge01	PRVCA	63,	024321	J. Genevey, A. Gizon, P.F. Mantica, et al.
2001Ge07	PRVCA	63,	054315	J. Genevey, J.A. Pinston, C. Foin, et al.
2001Gi01	EPJAA	10,	73	J. Giovinazzo, B. Blank, C. Borcea, et al.
2001Gi17	EPJAA	12,	309	A. Gizon, J. Genevey, C.F. Liang, et al.
2001Gr06	PRVCA	63,	037302	S. Grevy, N.L. Achouri, J.C. Angelique, et al.
2001Gr07	NUPAB	682,	41c	R. Grzywacz, C.H. Yu, Z. Janas, et al.
2001Ha21	NUPAB	686,	591	T. Hashimoto, K. Nakai, Y. Wakasaya, et al.
2001Ha39	NUPAB	688,	578c	M. Hannawald, V.N. Fedoseyev, U. Koster, et al.
2001Ha46	PRLTA	87,	072501	K. Hauschild, M. Rejmund, H. Grawe, et al.
2001Ha66	HYIND	132,	291	M. Hausmann, J. Stadlmann, F. Attallah, et al.
2001He29	PRLTA	87,	142501	F. Herfurth, J. Dilling, A. Kellerbauer, et al.
2001He35	EPJAA	12,	57	F.P. Heßberger, S. Hofmann, D. Ackermann, et al.
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, et al.
2001Ho06	EPJAA	10,	5	S. Hofmann, F.P. Heßberger, D. Ackermann, et al.
2001Ji04	CPLEE	18,	746	S.-S. Jiang, M. He, L.-J. Diao, et al.
2001Ju05	NUPAB	685,	221c	R. Julin
2001Ju09	JPGPE	27,	R109	R. Julin, K. Helariutta, M. Muikku
2001Ke05	APOBB	32,	989	H. Kettunen, P.T. Greenlees, K. Helariutta, et al.
2001Ke06	PRVCA	63,	044315	H. Kettunen, J. Uusitalo, M. Leino, et al.
2001Ke14	PRAMC	56,	735	S.L. Keshava, K. Gopala, P. Venkataramaiah
2001Ki13	PPNPD	46,	73	P. Kienle, T. Faestermann, J. Friese, et al.
2001Ko07	NIMAE	458,	656	Y. Kojima, M. Shibata, H. Uno, et al.
2001Ko44	PYLBB	512,	268	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, et al.
2001Ko45	PRVCA	64,	021302	A. Korgul, H. Mach, B. Fogelberg, et al.
2001Ko52	PRLTA	87,	092501	A.A. Korsheninnikov, M.S. Golovkov, I. Tanihata, et al.
2001Ko.B	PrvCom	AHW	Aug	F.G. Kondev
2001Ku07	APOBB	32,	1009	P. Kuusiniemi, J.F.C. Cocks, K. Eskola, et al.
2001La09	NUPAB	682,	71c	G.J. Lane, R. Broda, B. Fornal, et al.
2001La31	HYIND	132,	315	A.S. Lalleman, G. Auger, W. Mittig, et al.
2001Lh01	PRVCA	63,	034316	G. Lhersonneau, A. Wohr, B. Pfeiffer, et al.
2001Li17	PRVCA	63,	047307	K. Lindenberg, F. Neumann, D. Galaviz, et al.
2001Li44	PRVCA	64,	034310	C.F. Liang, P. Paris, R.K. Sheline

2001Lu17	PRVCA	64,	054311	D. Lunney, G. Audi, H. Doubre, et al.
2001Lu20	HYIND	132,	299	D. Lunney, C. Monsanglant, G. Audi, et al.
2001Ma08	PRVCA	63,	024613	V. Maddalena, T. Aumann, D. Bazin, et al.
2001Ma69	PRVCA	64,	031303	H. Mahmud, C.N. Davids, P.J. Woods, et al.
2001Ma96	EPJAA	12,	269	C. Mazzocchi, Z. Janas, J. Döring, et al.
2001Mi22	EPJAA	11,	9	M.N. Mineva, M. Hellström, M. Bernas, et al.
2001Mu26	PRVCA	64,	044308	M. Muikku, P.T. Greenlees, K. Hauschild, et al.
2001No07	EPJAA	11,	257	Yu. N. Novikov, H. Schatz, P. Dendooven, et al.
2001Nu01	PRVCA	63,	044316	S. Nummela, P. Baumann, E. Caurier, et al.
2001Nu02	PRVCA	64,	054313	S. Nummela, F. Nowacki, P. Baumann, et al.
2001Og01	PRVCA	63,	011301	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2001Og08	PRVCA	64,	054606	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2001Oi04	PYLBB	511,	145	M. Oinonen, J. Äystö, P. Baumann, et al.
2001Pa52	HYIND	132,	189	A. Paul, S. Röttger, A. Zimbal, et al.
2001Pe14	YAFIA	64,	1197	Yu. E. Penionzhkevich
2001Po05	PRVCA	63,	044304	G.L. Poli, C.N. Davids, P.J. Woods, et al.
2001Po.1	RDIOE	43,	549	Yu. S. Popov, L.V. Zakharova, M.N. Markushin, et al.
2001Ro35	HYIND	132,	153	E. Roeckl
2001Ro.B	B-Aulanko		PH23	M.W. Rowe, J.C. Batchelder, T.N. Ginter, et al.
2001Ry01	NUPAB	682,	270c	K.P. Rykaczewski, R.K. Grzywacz, M. Karny, et al.
2001Sc23	ARISE	55,	89	U. Schotzig, H. Schrader, E. Schonfeld, et al.
2001Sc41	NUPAB	693,	533	S. Schwarz, F. Ames, G. Audi, et al.
2001Se03	PRLTA	86,	1458	D. Seweryniak, P.J. Woods, J.J. Ressler, et al.
2001Sh09	PRVCA	63,	037603	D.A. Shaughnessy, K.E. Gregorich, M.R. Lane, et al.
2001Sh12	NUPAB	682,	493c	J. Shergur, M. Hannawald, D. Seweryniak, et al.
2001Sh36	PRVCA	64,	054307	I. Shestakova, G. Mukherjee, P. Chowdhury, et al.
2001So02	PRVCA	63,	031304	F. Soramel, A. Guglielmetti, L. Stroe, et al.
2001St.A	AnRpt GSI		7	A. Stolz, T. Faestermann, R. Schneider, et al.
2001Ta23	PYLBB	515,	255	S. Takeuchi, S. Shimoura, T. Motobayashi, et al.
2001Th01	PRVCA	63,	014308	M. Thoennessen, S. Yokoyama, P.G. Hansen
2001Th16	APHPF	13,	93	P.G. Thirolf, D. Gassmann, D. Habs, et al.
2001To06	PRVCA	63,	034314	B.E. Tomlin, C.J. Barton, N.V. Zamfir, et al.
2001Uu01	APOBB	32,	1015	J. Uusitalo, H. Kettunen, A.N. Andreyev, et al.
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, et al.
2001Wa04	PRVCA	63,	024309	Y. Wang, P. Dendooven, J. Huikari, et al.
2001Wa50	HYIND	132,	323	C. Wagemans, J. Wagemans, G. Goeminne
2001Wa54	HEPNP	25,	971	H.-W. Wang, G.-M. Jin, H.-Y. Wu, et al.
2001Wh02	JPGPE	27,	L13	C. Wheldon, P.M. Walker, P. Chowdhury, et al.
2001Wi17	PRVCA	64,	024308	M.E. Wieser, J.R. De Laeter
2001Xu04	EPJAA	11,	277	S.W. Xu, Y.X. Xie, X.D. Wang, et al.
2001Xu05	EPJAA	11,	375	S.W. Xu, Z.K. Li, Y.X. Xie, et al.
2001Ze.A	Th.-Orsay			T. Zerguerras
2001Zi01	ARISE	54,	623	B.E. Zimmerman, M.P. Unterweger, J.W. Brodack

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2002Ab03	NIMAE	478,	577	A. Abanades
2002Ad34	BRSPE	66,	1521	J. Adam, Yu. A. Vaganov, V. Vagner, et al.
2002Al02	ARISE	56,	447	T. Altzitzoglou, B. Denecke, L. Johansson, et al.
2002An15	EPJAA	14,	63	A.N. Andreyev, K. Van de Vel, A. Barzakh, et al.
2002An19	PRVCA	66,	014313	A.N. Andreyev, M. Huyse, K. Van de Vel, et al.
2002As08	JNRSA	3,	187	M. Asai, M. Sakama, K. Tsukada, et al.

2002At01	NUPAB	701,	561c	F. Attallah, M. Hausmann, Y.A. Litvinov, et al.
2002Be64	PHSTB	66,	201	I. Bergström, T. Fritioff, R. Schuch, et al.
2002Be74	PYLBB	546,	23	R. Bernabei, P. Belli, F. Cappella, et al.
2002Bf02	NIMAE	487,	618	I. Bergström, C. Carlberg, T. Fritioff, et al.
2002Bl08	PRVCA	65,	045801	J.C. Blackmon, S. Raman, J.K. Dickens, et al.
2002Bl17	EPJAA	15,	121	B. Blank
2002Bo11	NIMAE	480,	696	S.B. Borzakov, R.E. Chrien, H. Faikow-Stanczyk, et al.
2002Bo41	NUPAB	709,	3	V. Bondarenko, J. Berzins, P. Prokofjevs, et al.
2002Ca37	PRLTA	89,	082501	P. Campbell, H.L. Thayer, J. Billowes, et al.
2002Ca46	PRVCA	66,	044308	M.A. Cardona, D. Hojman, M.E. Debray, et al.
2002CaZU	P-Casta		398	P. Cagarda, S. Antalic, Š. Šáro, et al.
2002Cl.A	P-Aulanko		39	J.A. Clark, R.C. Barber, C. Boudreau, et al.
2002Cu01	PYLBB	529,	42	D.M. Cullen, M.P. Carpenter, C.N. Davids, et al.
2002Di12	EPJAA	13,	281	I. Dillmann, M. Hannawald, U. Köster, et al.
2002Do19	PRVCA	66,	064321	D.J. Dobson, S.J. Freeman, P.T. Greenlees, et al.
2002Fa13	EPJAA	15,	185	T. Faestermann, R. Schneider, A. Stolz, et al.
2002Fy01	NUPAB	701,	394c	H.O.U. Fynbo, L. Axelsson, J. Aysto, et al.
2002Ga12	NUPAB	700,	117	E. Garrido, D.V. Fedorov, A.S. Jensen
2002Ge07	PRVCA	65,	034322	J. Genevey, J.A. Pinston, C. Foin, et al.
2002Ge16	JPGPE	28,	2993	G. Georgiev, G. Neyens, M. Hass, et al.
2002Gi09	PRLTA	89,	102501	J. Giovinazzo, B. Blank, M. Chartier, et al.
2002Gr01	ARISE	56,	153	A. Grau Malonda, A. Grau Carles
2002Gu33	JNRSA	3,	183	J.S. Guo, Z. Qin, Z.G. Gan, et al.
2002He01	PRVCA	65,	014303	R.-D. Herzberg, N. Amzal, F. Becker, et al.
2002He19	NIMBE	194,	393	M. He, S. Jiang, S. Jiang, et al.
2002He23	EPJAA	15,	17	F. Herfurth, A. Kellerbauer, F. Ames, et al.
2002He29	EPJAA	15,	335	F.P. Heßberger, S. Hofmann, I. Kojouharov, et al.
2002He.A	P-Aulanko		337	F.P. Heßberger, S. Hofmann, D. Ackermann
2002Ho11	EPJAA	14,	147	S. Hofmann, F.P. Heßberger, D. Ackermann, et al.
2002Hu14	EPJAA	15,	329	A. Hürstel, M. Rejmund, E. Bouchez, et al.
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, et al.
2002Je11	NUPAB	709,	119	H. Jeppesen, U.C. Bergmann, M.J.G. Borge, et al.
2002Ji07	NIMAE	489,	195	S. Jiang, M. He, L. Diao, et al.
2002Jo09	EPJDR	4,	A3	A. Jokinen, A. Nieminen, J. Äystö, et al.
2002Ka01	NUPAB	697,	3	M. Kaci, M.-G. Porquet, I. Deloncle, et al.
2002Ka45	JNSTA	39,	705	T. Katoh, S. Nakamura, K. Furutaka, et al.
2002KaZO	P-Targoviste		105	V.G. Kalinnikov, V.I. Stegailov, J. Sereetor, et al.
2002Ke.A	Th.-Heidelberg			A. Kellerbauer
2002Ke.C	PrvCom	NDG	May	H. Kettunen
2002Ko02	ARISE	56,	543	Y. Kojima, M. Asai, M. Shibata, et al.
2002Ko09	PYLBB	528,	221	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, et al.
2002Kr04	PRVCA	65,	031303	W. Krolas, R. Grzywacz, K.P. Rykaczewski, et al.
2002La18	NUPAB	708,	167	M. La Commara, K. Schmidt, H. Grawe, et al.
2002Le16	PRVCA	65,	054318	A. Lépine-Szily, J.M. Oliveira, Jr, V.R. Vanin, et al.
2002Le.A	PrvCom	GAu	Jun	Lettre électronique de l'In2p3
2002Li24	PRVCA	65,	044618	G.F. Lima, A. Lépine-Szily, G. Audi, et al.
2002Lo13	PRVCA	66,	025803	M.J. López Jiménez, B. Blank, M. Chartier, et al.
2002Lu09	JPGPE	28,	L41	S.M. Lukyanov, Yu. E. Penionzhkevich, R. Astabatyan, et al.
2002Lu15	EPJAA	15,	315	R. Lucas, M.-G. Porquet, Ts. Venkova, et al.
2002Lu19	FECLA	115,	86	Yu. S. Lutostansky, S.M. Lukyanov, Yu. E. Penionzhkevich, et al.
2002Ma19	PYLBB	532,	29	C. Mazzocchi, Z. Janas, L. Batist, et al.
2002Ma61	EPJAA	15,	85	H. Mahmud, C.N. Davids, P.J. Woods, et al.
2002Ma.A	Th.-Caen			I. Matea

2002Me07	PRLTA	88,	102501	M. Meister, K. Markenroth, D. Aleksandrov, et al.
2002Mo19	NUPAB	706,	15	A.C. Morton, J.C. Chow, J.D. King, et al.
2002Mo29	PYLBB	544,	274	A.C. Morton, P.F. Mantica, B.A. Brown, et al.
2002Mo31	PYLBB	547,	200	R. Moore, A.M. Bruce, P. Dendooven, et al.
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, et al.
2002No11	PYLBB	542,	49	M. Notani, H. Sakurai, N. Aoi, et al.
2002Oi02	NUPAB	701,	613c	M. Oinonen, J. Aysto, U. Koster, et al.
2002Pa.A	LBL-49593			J.B. Patin as cited by 2006Gr24
2002Pe15	EPJAA	14,	439	C.M. Petrache, G. Lo Bianco, P.G. Bizzeti, et al.
2002Pf01	PRVCA	65,	064604	M. Pfützner, P.H. Regan, P.M. Walker, et al.
2002Pf02	EPJAA	14,	279	M. Pfützner, E. Badura, C. Bingham, et al.
2002Pf04	PNEND	41,	39	B. Pfeiffer, K. Kratz, P. Moller
2002Pl03	PRVCA	66,	044319	C. Plettner, L. Batisit, J. Doering, et al.
2002Py01	PRLTA	88,	122501	M.C. Pyle, A. García, E. Tatar, et al.
2002Py02	NIMAE	488,	381	Yu. V. Pyatkov, V.G. Tishchenko, V.V. Pashkevich, et al.
2002Ra16	NIMAE	481,	464	Z. Radivojevic, P. Baumann, E. Caurier, et al.
2002Ra23	NUPAB	706,	3	H. Raimbault-Hartmann, G. Audi, D. Beck, et al.
2002Re18	PRVCA	65,	057302	G.A. Rech, E. Browne, I.D. Goldman, et al.
2002Ro17	PRVCA	65,	054310	M.W. Rowe, J.C. Batchelder, T.N. Ginter, et al.
2002Ro25	NUPAB	704,	200c	E. Roeckl
2002Sh02	PRVCA	65,	024612	D.A. Shaughnessy, K.E. Gregorich, J.L. Adams, et al.
2002Sh08	PRVCA	65,	034313	J. Shergur, B.A. Brown, V. Fedoseyev, et al.
2002Sh16	JUPSA	71,	1401	M. Shibata, T. Shindou, A. Taniguchi, et al.
2002Sh43	PTPSA	146,	60	B.-M. Sherrill
2002Sh.A	AnRpt JAERI		26	M. Shibata, T. Shindou, Y. Kojima, et al.
2002Sh.B	P-Aulanko		479	M. Shibata, T. Shindou, K. Kawade, et al.
2002Sh.C	AnRpt JAERI		45	N. Shinohara, Yu. N. Novikov, G. Münzenberg, et al.
2002So03	PRLTA	88,	092501	O. Sorlin, S. Leenhardt, C. Donzaud, et al.
2002So.A	PrvCom	GAu	Oct	O. Sorlin
2002Th.1	PPNPD	49,	325	P.G. Thirolf, D. Habs
2002Ti10	NUPAB	708,	3	D.R. Tilley, C.M. Cheves, J.L. Godwin, et al.
2002Tu05	EPJAA	15,	271	A. Türler "Heavy-element chemistry - Status and perspectives"
2002Un02	ARISE	56,	125	M.P. Unterweger
2002Va13	PRVCA	65,	064301	K. Van de Vel, A.N. Andreyev, M. Huyse, et al.
2002We01	PRVCA	65,	014309	T. Wendel, J. Groger, C. Gunther, et al.
2002We03	PRVCA	65,	024315	L. Weissman, U. Köster, R. Catherall, et al.
2002We07	PRVCA	65,	044321	L. Weissman, J. Cederkall, J. Äystö, et al.
2002Ze01	PRVCA	65,	024303	O. Zeidan, D.J. Hartley, L.L. Riedinger, et al.

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2003Ah07	PRVCA	68,	044306	I. Ahmad, R.R. Chasman, J.P. Greene, et al.
2003Al02	PRVCA	67,	014323	A. Alessandrello, C. Arnaboldi, C. Brofferio, et al.
2003An26	EPJAA	18,	39	A.N. Andreyev, D. Ackermann, S. Antalic, et al.
2003An27	EPJAA	18,	55	A.N. Andreyev, D. Ackermann, F.P. Heßberger, et al.
2003Ar02	PYLBB	557,	167	C. Arnaboldi, C. Brofferio, C. Bucci, et al.
2003Ar36	PRLTA	91,	161802	C. Arnaboldi, C. Brofferio, O. Cremonesi, et al.
2003Ax01	APOBB	34,	2231	M. Axiotis, A. Gadea, N. Marginean, et al.
2003Ba18	PRVCA	67,	034310	C.J. Barton, D.S. Brenner, N.V. Zamfir, et al.
2003Ba20	EPJAA	16,	489	T. Bäck, B. Cederwall, K. Lagergren, et al.
2003Ba39	NUPAB	720,	245	L. Batist, J. Döring, I. Mukha, et al.
2003Ba49	PRVCA	67,	064316	D.K. Barillari, J.V. Vaz, R.C. Barber, et al.

2003Ba.A	PrvCom	GAu	Apr	C. Bachelet
2003Be05	NUPAB	714,	21	U.C. Bergmann, C.A. Diget, K. Riisager, et al.
2003Be18	EPJAA	16,	447	A.V. Belozerov, M.L. Chelnokov, V.I. Chepigin, et al.
2003Bi05	PRVCA	67,	065801	I. Bikit, N. Zikić-Todorović, J. Slivka, et al.
2003Bl17	PRLTA	91,	260801	K. Blaum, G. Audi, D. Beck, et al.
2003Bo25	NUPAB	726,	175	V. Bondarenko, A.V. Afanasjev, F. Bečvář, et al.
2003Ce01	PYLBB	556,	14	S. Cebrián, N. Coron, G. Dambier, et al.
2003Da05	PRVCA	67,	014310	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychev, et al.
2003Da09	NUPAB	717,	129	F.A. Danevich, A.S. Georgadze, V.V. Kobychev, et al.
2003Da24	PRVCA	68,	035501	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychev, et al.
2003De11	NATUA	422,	876	P. de Marcillac, N. Coron, G. Dambier, et al.
2003Di06	PRLTA	91,	162503	I. Dillmann, K.-L. Kratz, A. Wöhr, et al.
2003Do09	PRVCA	68,	034306	J. Döring, H. Grawe, K. Schmidt, et al.
2003Fr08	PHSTB	67,	276	T. Fritioff, G. Douysset
2003Fu10	NUPAB	718,	688c	Zs. Fülöp, L. Bartha, Gy. Gyürky, et al.
2003Ge04	PRVCA	67,	054312	J. Genevey, J.A. Pinston, H.R. Faust, et al.
2003Gi05	PRVCA	67,	064609	T.N. Ginter, K.E. Gregorich, W. Loveland, et al.
2003Gi06	NUPAB	724,	313	M. Gierlik, A. Płochocki, M. Karny, et al.
2003Gi10	PRVCA	68,	034330	T.N. Ginter, J.C. Batchelder, C.R. Bingham, et al.
2003Go11	PYLBB	566,	70	M.S. Golovkov, Yu. Ts. Oganessian, D.D. Bogdanov, et al.
2003Gr13	NUPAB	724,	14	C. Granja, S. Pospíšil, J. Kubašta, et al.
2003Gr22	NUPAB	722,	424c	S. Grevy, J. Mrazek, J.C. Angelique, et al.
2003Gr27	NUPAB	729,	679	C. Granja, S. Pospíšil, S.A. Telezhnikov, et al.
2003Gu06	PRVCA	67,	064601	V. Guimarães, S. Kubono, F.C. Barker, et al.
2003Gu12	PRVCA	68,	034311	M. Guttormsen, R. Chankova, M. Hjorth-Jensen, et al.
2003Ha20	PRLTA	91,	082501	J.C. Hardy, V.E. Iacob, M. Sanchez-Vega, et al.
2003He06	EPJAA	16,	365	F.P. Heßberger, S. Hofmann, D. Ackermann
2003Hu01	EPJAA	16,	359	J. Huikari, M. Oinonen, A. Algora, et al.
2003Hw03	PRVCA	67,	054304	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, et al.
2003Hy02	PRVCA	68,	015501	B.C. Hyman, V.E. Iacob, A. Azhari, et al.
2003KaZP	P-Moscow		95	V.G. Kalinnikov, V.P. Volnykh, V.I. Stegailov, et al.
2003KaZR	P-Moscow		54	V.G. Kalinnikov, J. Adam, N.A. Lebedev, et al.
2003Ke04	EPJAA	16,	457	H. Kettunen, T. Enqvist, M. Leino, et al.
2003Ke08	EPJAA	17,	537	H. Kettunen, T. Enqvist, T. Grahn, et al.
2003Ki08	NUPAB	723,	499	H. Kiel, D. Münstermann, K. Zuber
2003Ko66	ARISE	59,	377	K. Kossert
2003Ko.A	Th.-Jyvaskyla			V. Kolhinen
2003Kr20	RAACA	91,	59	J.V. Kratz, A. Nähler, U. Rieth, et al.
2003Ku25	EPJAA	18,	5	J. Kurpeta, A. Płochocki, A.N. Andreyev, et al.
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, et al.
2003Lh01	PRVCA	67,	024303	G. Lhersonneau, Y. Wang, R. Capote, et al.
2003Li42	PYLBB	573,	80	Yu. A. Litvinov, F. Attallah, K. Beckert, et al.
2003Li.B	PrvCom	GAu	Aug	Y. Litvinov
2003Ma02	PRVCA	67,	014311	P.F. Mantica, A.C. Morton, B.A. Brown, et al.
2003Ma34	EPJAA	17,	519	C. Mazzocchi, E. Badura, C. Bingham, et al.
2003Ma56	PRVCA	68,	044311	P.F. Mantica, B.A. Brown, A.D. Davies, et al.
2003Me11	NUPAB	723,	13	M. Meister, L.V. Chulkov, H. Simon, et al.
2003Mo36	NUPAB	728,	350	C.-B. Moon, T. Komatsubara, T. Shizuma, et al.
2003MoZX	RIKAR		89	K. Morimoto, K. Morita, D. Kaji, et al.
2003Ni10	PRVCA	68,	064305	K. Nishio, H. Ikezoe, S. Mitsuoka, et al.
2003Pe23	PRVCA	68,	034607	W.A. Peters, T. Baumann, D. Bazin, et al.
2003Pi03	EPJAA	16,	313	I. Piqueras, M.J.G. Borge, Ph. Dessagne, et al.
2003Pi08	PRVCA	67,	051305	A. Piechaczek, E.F. Zganjar, G.C. Ball, et al.

2003Po08	NIMAE	510,	371	A.G. Popeko, O.N. Malyshev, A.V. Yeremin, et al.
2003Po21	RDIOE	45,	537	Yu. S. Popov, L.V. Zakharova, V.N. Kupriyanov, et al.
2003Ro21	PRVCA	68,	054301	A.P. Robinson, C.N. Davids, G. Mukherjee, et al.
2003Sa02	EPJAA	16,	51	M. Sawicka, J.M. Daugas, H. Grawe, et al.
2003Sa40	PRVCA	68,	044304	M. Sawicka, R. Grzywacz, I. Matea, et al.
2003So02	EPJAA	16,	55	O. Sorlin, C. Donzaud, F. Nowacki, et al.
2003So21	NUPAB	719,	193c	O. Sorlin, C. Donzaud, F. Azaiez, et al.
2003Su30	RAACA	91,	1	K. Sudarshan, S. Sodaye, R. Tripathi, et al.
2003To03	PRVCA	67,	035503	N.R. Tolich, P.H. Barker, P.D. Harty, et al.
2003To08	NUPAB	717,	149	I. Tomandl, T. von Egidy, J. Honzatko, et al.
2003Tu05	EPJAA	17,	505	A. Türler, Ch. E. Düllmann, H.W. Gäggeler, et al.
2003Va16	PRVCA	68,	054311	K. Van de Vel, A.N. Andreyev, D. Ackermann, et al.
2003Va.A	PrvCom	GAu	Aug	R.S. Van Dyck, Jr.
2003Vo03	NUPAB	714,	355	T. von Egidy, C. Doll, J. Jolie, et al.
2003Wa13	PRVCA	67,	064303	Y. Wang, S. Rinta-Antila, P. Dendooven, et al.
2003Wi02	NUPAB	716,	3	H.-F. Wirth, T. von Egidy, I. Tomandl, et al.
2003Wi17	FIZBE	12	33	H. Winnefeld, R. Veith, H.J. Jansch, et al.
2003WiZV	AnRpt	Munich	17	H.F. Wirth, Y. Eisermann, R. Hertenberger, et al.
2003Xu04	EPJAA	16,	347	S.W. Xu, Y.X. Xie, Z.K. Li, et al.
2003Xu08	JRNCD	258,	439	Y. Xu, W. Yang, S. Yuan, et al.
2003Yo02	PRVCA	67,	014316	K. Yoneda, N. Aoi, H. Iwasaki, et al.

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2004Al04	PRVCA	69,	024320	S.D. Al-Garni, P.H. Regan, P.M. Walker, et al.
2004An07	PRVCA	69,	054308	A.N. Andreyev, D. Ackermann, F.P. Heßberger, et al.
2004As12	EPJAA	22,	411	M. Asai, M. Sakama, K. Tsukada, et al.
2004Ba10	JTPHE	79,	10	A.S. Barabash, F. Hubert, Ph. Hubert, et al.
2004Ba78	PRVCA	70,	024302	P.H. Barker, I.C. Barnett, G.J. Baxter, et al.
2004Ba.A	PrvCom	GAu	Jul	C. Bachelet
2004Bl03	PRVCA	69,	015502	B. Blank, G. Savard, J. Döring, et al.
2004Bl16	EULEE	67,	586	K. Blaum, D. Beck, G. Bollen, et al.
2004Bl20	NUPAB	746,	305c	K. Blaum, G. Audi, D. Beck, et al.
2004Br19	EPJAA	20,	145	R. Broda, B. Fornal, W. Krolas, et al.
2004Ch35	PRVCA	70,	014311	A. Chakraborty, Krishichayan, S.S. Ghugre, et al.
2004Cl03	PRLTA	92,	192501	J.A. Clark, G. Savard, K.S. Sharma, et al.
2004Co26	PRVCA	70,	064606	C. Cozzini, G. Angloher, C. Bucci, et al.
2004Da04	PRVCA	69,	011302	C.N. Davids, P.J. Woods, H. Mahmud, et al.
2004De16	PRVCA	69,	044305	H. De Witte, A.N. Andreyev, I.N. Borzov, et al.
2004De24	EPJAA	20,	405	Ph. Dessagne, M.J.G. Borge, J. Giovinazzo, et al.
2004De40	EPJAA	21,	243	S. Dean, M. Gorska, F. Aksouh, et al.
2004Di18	EPJAA	22,	163	J. Dilling, F. Herfurth, A. Kellerbauer, et al.
2004Fo06	PRVCA	70,	34312	B. Fogelberg, H. Gausemel, K.A. Mezilev, et al.
2004Fo08	PRLTA	93,	212702	C.M. Folden III, K.E. Gregorich, Ch. E. Düllmann, et al.
2004Fu.A	P-Santa Fe		1454	K. Furutaka, H. Harada, S. Raman, et al.
2004Ga04	PRVCA	69,	017302	P.E. Garrett, D.E. Archer, J.A. Becker, et al.
2004Ga24	PRVCA	69,	054307	H. Gausemel, B. Fogelberg, T. Engeland, et al.
2004Ga29	EPJAA	20,	385	Z.G. Gan, J.S. Guo, X.L. Wu, et al.
2004Ga44	PRVCA	70,	037301	H. Gausemel, K.A. Mezilev, B. Fogelberg, et al.
2004Gl04	PRVCA	69,	024617	K.A. Gladnishki, Zs. Podolyák, P.H. Regan, et al.
2004Go03	PRVCA	69,	024602	V.Z. Goldberg, G.V. Rogachev, W.H. Trzaska, et al.
2004Go15	PRVCA	69,	031302	V.Z. Goldberg, G.G. Chubarian, G. Tabacaru, et al.
2004Go38	PRVCA	70,	014309	J. TM. Goon, D.J. Hartley, L.L. Riedinger, et al.
2004GoZZ	Th.-Knoxville			J. TM. Goon

2004Gr08	NUPAB	734,	369	S. Grévy, S. Pietri, L. Achouri, et al.
2004Gr20	PYLBB	594,	252	S. Gŕevy, J.C. Angélique, P. Baumann, et al.
2004He25	EPJAA	22,	253	F.P. Heßberger, S. Hofmann, I. Kojouharov, et al.
2004He28	EPJAA	22,	417	F.P. Heßberger, S. Hofmann, D. Ackermann, et al.
2004Hw02	PRVCA	69,	057301	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, et al.
2004Io01	PRVCA	70,	034305	M. Ionescu-Bujor, A. Iordachescu, D.L. Balabanski, et al.
2004Iz02	YAFIA	67,	1901	N. Izosimov, A.A. Kazimov, V.G. Kalinnikov, et al.
2004Jo12	PRVCA	70,	017302	D.T. Joss, K. Lagergren, D.E. Appelbe, et al.
2004Ka38	PRVCA	70,	014310	M. Karny, L. Batist, D. Jenkins, et al.
2004Ke06	PRVCA	69,	054323	H. Kettunen, T. Enqvist, T. Grahn, et al.
2004Ke10	PRLTA	93,	072502	A. Kellerbauer, G. Audi, D. Beck, et al.
2004Ko05	EPJAA	19,	77	Y. Kojima, A. Taniguchi, M. Shibata, et al.
2004Ko09	ARISE	60,	459	K. Kossert, E. Gunther
2004Ko.A	P-Santa Fe		225	F.G. Kondev
2004Ku24	EPJAA	22,	429	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, et al.
2004Le12	NUPAB	734,	331	A. Lépine-Szily, J.M. Oliveira, D. Galante, et al.
2004Li28	CZYPA	54,	189	C.F. Liang, P. Paris, R.K. Sheline, et al.
2004Li75	PRVCA	70,	064303	S.N. Liddick, P.F. Mantica, R. Broda, et al.
2004Lu19	YAFIA	67,	1654	S.M. Lukyanov, Yu. E. Penionzhkevich
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, et al.
2004Mo40	EPJAA	21,	257	K. Morita, K. Morimoto, D. Kaji, et al.
2004MoZU	PrvCom	NDG		K. Morita (to be published in Proc. EXON 2004)
2004Mu26	PRLTA	93,	150801	M. Mukherjee, A. Kellerbauer, D. Beck, et al.
2004Mu30	PRVCA	70,	044311	I. Mukha, L. Batist, E. Roeckl, et al.
2004Mu32	NUPAB	746,	66	I. Mukha, L. Batist, F. Becker, et al.
2004Na.A	Th.-Valencia			E. Nácher
2004Ni06	PRVCA	69,	064326	P. Nieminen, S. Juutinen, A.N. Andreyev, et al.
2004No09	ARISE	60,	767	E.B. Norman, E. Browne, I.D. Goldman, et al.
2004Og03	PRVCA	69,	021601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2004Og05	NUPAB	734,	109	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2004Og07	PRVCA	69,	054607	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2004Og12	PRVCA	70,	064609	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2004Pe17	EPJAA	21,	7	K. Perajarvi, J. Cerny, L.M. Fraile, et al.
2004Pl01	NUPAB	733,	20	C. Plettner, H. Grawe, I. Mukha, et al.
2004Ra23	PRVCA	70,	044318	S. Raman, X. Ouyang, M.A. Islam, et al.
2004Ra28	PRVCA	70,	064308	P.M. Raddon, D.G. Jenkins, C.D. O'Leary, et al.
2004Ra33	SCIEA	303,	334	S. Rainville, J.K. Thompson, D.E. Pritchard
2004Re04	PRVCA	69,	034331	J.J. Ressler, C.W. Beausang, H. Ai, et al.
2004Ri12	PRVCA	70,	11301	S. Rinta-Antila, S. Kopecky, V.S. Kolhinen, et al.
2004Ro32	PRLTA	93,	161104	D. Rodríguez, V.S. Kolhinen, G. Audi, et al.
2004Sa05	PRVCA	69,	014308	M. Sakama, M. Asai, K. Tsukada, et al.
2004Sa53	PRVCA	70,	042501	G. Savard, J.A. Clark, F. Buchinger, et al.
2004Sa59	EPJAA	22,	455	M. Sawicka, I. Matea, H. Grawe, et al.
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, et al.
2004St05	PYLBB	586,	27	J. Stadlmann, M. Hausmann, F. Attallah, et al.
2004St18	NUPAB	738,	43	S.V. Stepantsov, M.S. Golovkov, A.S. Fomichev, et al.
2004Th09	EPJAA	21,	419	J.C. Thomas, L. Achouri, J. Äystö, et al.
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, et al.
2004To03	PRVCA	69,	014312	I. Tomandl, J. Novák, V. Burjan, et al.

2004Va03	PRVCA	69,	024316	J.J. Valiente-Dobón, P.H. Regan, C. Wheldon, et al.
2004Va07	PRLTA	92,	112501	J. Van Roosbroeck, C. Guénaut, G. Audi, et al.
2004Va08	PRVCA	69,	034313	J. Van Roosbroeck, H. De Witte, M. Gorska, et al.
2004Va14	PRLTA	92,	220802	R.S. Van Dyck, Jr., S.L. Zafonte, S. Van Liew, et al.
2004Vo16	PRLTA	93,	172501	C. Vockenhuber, F. Oberli, M. Bichler, et al.
2004Vy01	PRVCA	69,	064318	K. Vyvey, G.D. Dracoulis, A.N. Wilson, et al.
2004Wa26	PRVCA	70,	034314	W.B. Walters, B.E. Tomlin, P.F. Mantica, et al.
2004We09	PRVCA	70,	024304	L. Weissman, O. Arndt, U. Bergmann, et al.
2004Wo07	PRVCA	69,	051302	P.J. Woods, P. Munro, D. Seweryniak, et al.
2004Wo16	NUPAB	742,	349	A. Wöhr, A. Aprahamian, P. Boutachkov, et al.
2004Xu08	JUPSA	73,	2588	Y. Xu, W. Yang, S. Yuan, et al.
2004Ze05	EPJAA	20,	389	T. Zerguerras, B. Blank, Y. Blumenfeld, et al.

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2005Ah03	PRVCA	71,	054305	I. Ahmad, F.G. Kondev, E.F. Moore, et al.
2005Ah09	PRVCA	72,	054308	I. Ahmad, J.P. Greene, E.F. Moore, et al.
2005Am01	ARISE	62,	11	M.N. Amiot, J. Bouchard, M.M. Be, et al.
2005Am04	GCACA	69,	465	Y. Amelin, W.J. Davis
2005An03	PRVCA	71,	011303	L.-L. Andersson, E.K. Johansson, J. Ekman, et al.
2005Ar27	PRLTA	95,	182302	R. Arnold, C. Augier, J. Baker, et al.
2005As01	EPJAA	23,	395	M. Asai, M. Sakama, K. Tsukada, et al.
2005As05	PRLTA	95,	102502	M. Asai, K. Tsukada, M. Sakama, et al.
2005Ba51	PRVCA	71,	054302	A.M. Baxter, A.P. Byrne, G.D. Dracoulis, et al.
2005Ba60	FECLA	125,	21	A.M. Bakalyarov, A. Ya. Balysh, S.T. Belyaev, et al.
2005Ba64	PRVCA	72,	017301	A.E. Barzakh, D.V. Fedorov, A.M. Ionan, et al.
2005Ba94	PRVCA	72,	044306	J.C. Batchelder, J.-C. Bilheux, C.R. Bingham, et al.
2005Bb02	EPJAA	25,	s149	J.C. Batchelder, M. Tantawy, C.R. Bingham, et al.
2005Bi24	NIMBE	241,	185	C.R. Bingham, M.N. Tantawy, J.C. Batchelder, et al.
2005Bl15	PRLTA	94,	232501	B. Blank, A. Bey, G. Canchel, et al.
2005Ca02	EPJAA	23,	201	M. Caamano, P.M. Walker, P.H. Regan, et al.
2005Ca03	NUPAB	748,	333	C.M. Cattadori, M. De Deo, M. Laubenstein, et al.
2005Ca06	EPJAA	23,	409	G. Canchel, B. Blank, M. Chartier, et al.
2005Ca14	JRNCD	263,	599	S.A. Catlow, G.L. Troyer, D.R. Hansen, et al.
2005Ca.A	AnRpt ANL,		51	M.P. Carpenter et al
2005Ch65	PRVCA	72,	054309	A. Chakraborty, Krishichayan, S.S. Ghugre, et al.
2005De01	EPJAA	23,	243	H. De Witte, A.N. Andreyev, S. Dean, et al.
2005Do20	PRVCA	72,	054315	C. Dossat, A. Bey, B. Blank, et al.
2005Dr05	PRVCA	71,	044326	G.D. Dracoulis, G.J. Lane, F.G. Kondev, et al.
2005Dr11	PRVCA	72,	064319	G.D. Dracoulis, G.J. Lane, T.M. Peaty, et al.
2005El10	PRVCA	72,	054306	H.M. El-Masri, P.M. Walker, G.D. Dracoulis, et al.
2005Fr.A	IPNO-DRE-NS		5	S. Franchoo, N. Barre, B. Roussiere, et al.
2005Fu01	ZAANE	24,	249	T. Fukuchi, Y. Gono, A. Odahara, et al.
2005Ga01	EPJAA	23,	41	L. Gaudefroy, O. Sorlin, C. Donzaud, et al.
2005Ga20	PYLBB	619,	88	A. Gadea, S.M. Lenzi, D.R. Napoli, et al.
2005Ga.B	Th.-Orsay Sept			L. Gaudefroy
2005Ge06	PRVCA	71,	064319	W. Geithner, B.A. Brown, K.M. Hilligsøe, et al.
2005Gi15	JPGPE	31,	s1509	J. Giovinazzo
2005Gr30	EPJAA	25,	111	S. Grevy, F. Negoita, I. Stefan, et al.
2005Gr32	EPJAA	25,	s145	R. Grzywacz, M. Karny, K.P. Rykaczewski, et al.
2005Gu25	PRVCA	72,	034312	F.Q. Guo, J. Powell, D.W. Lee, et al.
2005Gu27	JPGPE	31,	s1765	C. Guénaut, G. Audi, D. Beck, et al.
2005Gu37	EPJAA	25,	s35	C. Guénaut, G. Audi, D. Beck, et al.
2005Ha45	PRVCA	72,	024303	S. Harissopulos, J. Döring, M. La Commara, et al.

2005He26	EPJAA	25,	s17	F. Herfurth, G. Audi, D. Beck, et al.
2005He27	EPJAA	26,	233	F.P. Heßberger, S. Antalic, B. Streicher, et al.
2005He.A	PrvCom	GAu	Aug	A. Herlert
2005Ho08	PRLTA	94,	112501	P.T. Hosmer, H. Schatz, A. Aprahamian, et al.
2005Ho15	NUPAB	756,	249	J. Honzátko, V. Bondarenko, I. Tomandl, et al.
2005Hu.A	PrvCom	GAu	Jul	M. Huyse
2005Hw06	EPJAA	25,	463	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, et al.
2005Hy04	JPGPE	31,	s1885	B. Hyland, D. Melconian, G.C. Ball, et al.
2005Ic02	PRVCA	71,	067302	S. Ichikawa, M. Asai, K. Tsukada, et al.
2005Ja03	EPJAA	23,	197	Z. Janas, C. Mazzocchi, L. Batist, et al.
2005Ja06	EPJAA	23,	401	Z. Janas, L. Batist, J. Doring, et al.
2005Ja10	EPJAA	24,	205	Z. Janas, L. Batist, R. Borcea, et al.
2005Ka34	EPJAA	25,	211	O. Kavatsyuk, M. Kavatsyuk, L. Batist, et al.
2005Ka39	EPJAA	25,	355	A. Kankainen, G.K. Vorobjev, S.A. Eliseev, et al.
2005Ka46	EPJAA	25,	s129	A. Kankainen, S.A. Eliseev, T. Eronen, et al.
2005KaZX	StPetersburg		72	V.G. Kalinnikov, Z. Hons, V.I. Stegailov, et al.
2005KaZY	StPetersburg		58	V. G. Kalinnikov, V.I. Stegailov, A.V. Sushkov, et al.
2005Kn02	PRVCA	72,	044312	H.H. Knudsen, H.O.U. Fynbo, M.J.G. Borge, et al.
2005Kr20	EPJAA	25,	s633	K.-L. Kratz, B. Pfeiffer, O. Arndt, et al.
2005Ku06	EPJAA	23,	417	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, et al.
2005Ku31	EPJAA	25,	397	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, et al.
2005Ku.A	P-Debrecen		73	T. Kurtukian Nieto, J. Benlliure, K.-H. Schmidt, et al.
2005La01	PYLBB	606,	34	G.J. Lane, K.H. Maier, A.P. Byrne, et al.
2005Le34	PRVCA	72,	034305	F. Le Blanc, L. Cabaret, E. Cottereau, et al.
2005Le42	EPJAA	25,	s183	A.-P. Leppänen, J. Uusitalo, S. Eeckhaudt, et al.
2005Le.A	Th.-Jyvaskyla			A.-P. Leppanen
2005Li17	NIMAE	543,	591	Z. Liu, J. Kurcewicz, P.J. Woods, et al.
2005Li24	NUPAB	756,	3	Yu.A. Litvinov, H. Geissel, T. Radon, et al.
2005Li47	PRVCA	72,	047301	Z. Liu, P.J. Woods, K. Schmidt, et al.
2005Li53	PRVCA	72,	054321	S.N. Liddick, P.F. Mantica, R. Broda, et al.
2005Li60	PRVCA	72,	064327	Z.H. Li, Y.L. Ye, H. Hua, et al.
2005Lu21	JPGPE	31,	1303	Y.X. Luo, J.O. Rasmussen, I. Stefanescu, et al.
2005Ma59	PYLBB	622,	45	C. Mazzocchi, R. Grzywacz, J.C. Batchelder, et al.
2005Ma90	NIMAE	553,	559	N.L. Maidana, M.N. Takeda, M.S. Dias, et al.
2005Ma95	EPJAA	25,	s93	C. Mazzocchi, R. Grzywacz, J.C. Batchelder, et al.
2005Ma.A	PrvCom	GAu	Oct	M. Martin
2005Mu15	PRLTA	95,	022501	I. Mukha, E. Roeckl, J. Döring, et al.
2005Ne01	PRLTA	94,	022501	G. Neyens, M. Kowalska, D. Yordanov, et al.
2005Og02	PRVCA	72,	034611	Yu. Ts. Oganessian, V.K. Utyonkov, S.N. Dmitriev, et al.
2005Oh08	PRLTA	95,	052501	T. Ohtsubo, F. Bosch, H. Geissel, et al.
2005On03	PRVCA	72,	024308	T.K. Onishi, A. Gelberg, H. Sakurai, et al.
2005Pa31	PRVCA	71,	055804	A. Parikh, J.A. Caggiano, C. Deibel, et al.
2005Pa74	PRVCA	72,	064330	S.W. Padgett, V. Tripathi, S.L. Tabor, et al.
2005Pi13	PRVCA	71,	064327	J.A. Pinston, J. Genevey, R. Orlandi, et al.
2005Po03	EPJAA	24,	39	M.-G. Porquet, Ts. Venkova, R. Lucas, et al.
2005Po10	NUPAB	756,	83	A.R. Poletti, A.P. Byrne, G.D. Dracoulis, et al.
2005Ra34	NATUA	438,	1096	S. Rainville, J.K. Thompson, E.G. Myers, et al.
2005Re02	PRVCA	71,	014302	J.J. Ressler, C.W. Beausang, H. Ai, et al.
2005Ri17	JPHGB	31,	s1949	S. Rigby, D.M. Cullen, D.T. Scholes, et al.
2005Ro19	PRLTA	95,	032502	A.P. Robinson, P.J. Woods, D. Seweryniak, et al.
2005Ro40	EPJAA	25,	s155	A.P. Robinson, C.N. Davids, D. Seweryniak, et al.
2005Sa44	PRLTA	95,	102501	G. Savard, F. Buchinger, J.A. Clark, et al.
2005Sc22	JPGPE	31,	s1719	C. Scholey, M. Sandzelius, S. Eeckhaudt, et al.
2005Se01	PYLBB	605,	72	A. Serebrov, V. Varlamov, A. Kharitonov, et al.

2005Sh24	PRVCA	71,	064323	J. Shergur, D.J. Dean, D. Seweryniak, et al.
2005Sh26	PRVCA	71,	067301	T. Shizuma, T. Hayakawa, S. Mitarai, et al.
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, et al.
2005Si34	NUPAB	763,	45	G. Sikler, G. Audi, D. Beck, et al.
2005St29	PYLBB	627,	32	A. Stolz, T. Baumann, N.H. Frank, et al.
2005Th03	PRVCA	71,	021302	J.S. Thomas, D.W. Bardayan, J.C. Blackmon, et al.
2005Th.A	P-Cadarache		131	J.-C. Thomas, et al
2005Ti11	JPGPE	31,	s1965	C. Timis, J.C. Angelique, A. Buta, et al.
2005Tr13	EPJAA	25,	s101	V. Tripathi, S.L. Tabor, P.F. Mantica, et al.
2005Ue01	PYLBB	615,	186	H. Ueno, D. Kameda, G. Kijima, et al.
2005Uu02	PRVCA	71,	024306	J. Uusitalo, M. Leino, T. Enqvist, et al.
2005Va04	EPJAA	24,	57	K. Van de Vel, A.N. Andreyev, D. Ackermann, et al.
2005Va19	PRVCA	71,	054307	J. Van Roosbroeck, H. De Witte, M. Gorska, et al.
2005WaZY	APCPC	764,	335	W.B. Walters, M.A. Stoyer, J. Shergur, et al.
2005We11	PYLAA	347,	81	C. Weber, G. Audi, D. Beck, et al.
2005Xi06	PRVCA	72,	044302	C.Y. Xie, X.H. Zhou, Y.H. Zhang, et al.
2005Xu04	PRVCA	71,	054318	S.W. Xu, Z.K. Li, Y.X. Xie, et al.
2005Zl01	PRVCA	72,	067302	A. Zlomaniec, H. Faust, J. Genevey, et al.

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2006Ab30	ARISE	64,	1001	K. Abbas, J. Kozempel, M. Bonardi, et al.
2006Ac04	EPJAA	27,	287	N.L. Achouri, F. de Oliveira Santos, M. Lewitowicz, et al.
2006Ah10	PRVCA	74,	065803	I. Ahmad, J.P. Greene, E.F. Moore, et al.
2006Al03	GCACA	70,	1261	F. Albarede, E.E. Scherer, J. Blichert-Toft, et al.
2006An04	PRVCA	73,	024317	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2006An11	PRVCA	73,	044324	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2006An13	APSVC	56,	87	S. Antalic, B. Streicher, F.P. Hessberger, et al.
2006An36	PRVCA	74,	064303	A.N. Andreyev, S. Antalic, M. Huyse, et al.
2006AnZW	P-IsleofKos		134	J.C. Angelique, C. Timis, S. Pietri, et al.
2006As03	PRVCA	73,	067301	M. Asai, K. Tsukada, S. Ichikawa, et al.
2006Ba09	PRVCA	73,	024308	J.E. Bastin, R.-D. Herzberg, P.A. Butler, et al.
2006Ba33	PRVCA	73,	064306	P.H. Barker, A.P. Byrne
2006Ba55	EPJAA	29,	175	L. Batist, A. Blazhev, J. Doring, et al.
2006Be33	PRVCA	74,	024603	T. Belgya
2006Be34	ARISE	64,	1396	M.-M. Be
2006BeZV	arXiv:	0609013		D. Bemmerer, F. Confortola, H. Costantini, et al.
2006Bi14	PRVCA	74,	047301	M.L. Bissell, K. Baczynska, J. Billowes, et al.
2006Bo11	PRLTA	96,	152501	G. Bollen, D. Davies, M. Facina, et al.
2006Bo33	PHSTT	125,	180	M.J.T. Borge, R. Boutami, L.M. Fraile, et al.
2006Bu12	PRVCA	74,	025501	J.T. Burke, P.A. Vetter, S.J. Freedman, et al.
2006Ca05	PRVCA	73,	014319	E. Casarejos, C. Angulo, P.J. Woods, et al.
2006Ca25	ARISE	64,	1425	T. Catterson, D.J. Van Dalsem
2006Ca30	PRVCA	74,	044612	E. Casarejos, J. Benlliure, J. Pereira, et al.
2006Ch10	PRVCA	73,	024306	R.S. Chakrawarthy, P.M. Walker, J.J. Ressler, et al.
2006Ch51	EPJAA	30,	347	X.L. Che, S.J. Zhu, M.L. Li, et al.
2006Ch52	EPJAA	30,	397	A. Chatillon, Ch. Theisen, P.T. Greenlees, et al.
2006De21	PRVCA	73,	044303	M.S. Dewey, E.G. Kessler Jr., R.D. Deslattes, et al.
2006De36	PRVCA	74,	034331	P. Delahaye, G. Audi, K. Blaum, et al.
2006Dv01	PRLTA	97,	242501	J. Dvorak, W. Brüchle, M. Chelnokov, et al.
2006Er08	PRLTA	97,	232501	T. Eronen, V. Elomaa, U. Hager, et al.

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, et al.
2006Fu06	PRVCA	73,	067303	T. Fukuchi, S. Tanaka, T. Sasaki, et al.
2006Ga04	NUPAB	766,	52	C. Gaulard, G. Audi, C. Bachelet, et al.
2006Ga28	PRLTA	97,	092501	L. Gaudefroy, O. Sorlin, D. Beaumel, et al.
2006Ge05	PRVCA	73,	037308	J. Genevey, R. Guglielmini, R. Orlandi, et al.
2006Gr24	PRVCA	74,	044611	K.E. Gregorich, J.M. Gates, Ch. E. Düllmann, et al.
2006Ha03	PRLTA	96,	042504	U. Hager, T. Eronen, J. Hakala, et al.
2006Ha17	NIMAE	560,	388	K. Hauschild, A.V. Yeremin, O. Dorvaux, et al.
2006Ha51	PRVCA	74,	065802	T. Hayakawa, S. Miyamoto, Y. Hayashi, et al.
2006Ha62	IMSPF	251,	119	P.A. Hausladen, J.R. Beene, A. Galindo-Uribarri, et al.
2006He19	NATUA	442,	896	R.D. Herzberg, P.T. Greenlees, P.A. Butler, et al.
2006He20	EPJAA	29,	165	F.P. Heßberger, S. Hofmann, D. Ackermann, et al.
2006He27	EPJAA	30,	561	F.P. Heßberger, S. Hofmann, D. Ackermann, et al.
2006He29	IMSPF	251,	131	A. Herlert, S. Baruah, K. Blaum, et al.
2006Hu15	PRVCA	74,	054311	M. Hult, J. Gasparro, G. Marissens, et al.
2006Hw01	PRVCA	73,	044316	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, et al.
2006Ia03	PRVCA	74,	045810	V.E. Iaco, Y. Zhai, T. Al-Abdullah, et al.
2006Ia05	PRVCA	74,	055502	V.E. Iacob, J.C. Hardy, J.F. Brinkley, et al.
2006Je09	PYLBB	642,	449	H.B. Jeppesen, A.M. Moro, U.C. Bergmann, et al.
2006Jo10	PYLBB	641,	34	D.T. Joss, I.G. Darby, R.D. Page, et al.
2006Ka48	EPJAA	29,	271	A. Kankainen, L. Batist, S.A. Eliseev, et al.
2006Ka74	IMSPF	251,	138	M. Kavatsyuk, L. Batist, M. Karny, et al.
2006KaZX	P-Sarov		82	V.G. Kalinnikov, V.M. Gorozhankin, N.A. Lebedev, et al.
2006KeZZ	GSI-2006-1		154	R. Kessler, K.-L. Kratz, J. Pereira Conca, et al.
2006Ko25	NIMAE	564,	275	Y. Kojima, M. Shibata, A. Taniguchi, et al.
2006Ku26	EPJAA	30,	551	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, et al.
2006La16	PRVCA	74,	024316	K. Lagergren, D.T. Joss, R. Wyss, et al.
2006Le29	EPJAA	28,	301	A.-P. Leppanen, J. Uusitalo, P.T. Greenlees, et al.
2006Le.A	Th.-Canberra			A.B.F. Lee
2006Li41	PRLTA	97,	082501	S.N. Liddick, R. Grzywacz, C. Mazzocchi, et al.
2006Lo12	PRVCA	74,	044303	A. Lopez-Martens, K. Hauschild, A.V. Yeremin, et al.
2006Lu19	IMSPF	251,	286	D. Lunney, N. Vieira, G. Audi, et al.
2006Ma.A	PrvCom	GAu	Jul	M. Martin
2006Me03	PRVCA	73,	024307	D.A. Meyer, C.W. Beausang, J.J. Ressler, et al.
2006Me04	PRVCA	73,	024318	T.J. Mertzimekis, P.F. Mantica, A.D. Davies, et al.
2006Mo07	PRVCA	73,	035801	F. Montes, A. Estrade, P.T. Hosmer, et al.
2006Mu03	NATUA	439,	298	I. Mukha, E. Roeckl, L. Batist, et al.
2006Na13	PRLTA	96,	163004	Sz. Nagy, T. Fritioff, M. Suhonen, et al.
2006Na18	EPJDD	39,	1	Sz. Nagy, T. Fritioff, A. Solders, et al.
2006Na49	EULEE	74,	404	Sz. Nagy, T. Fritioff, M. Björkhage, et al.
2006Ni09	PANUE	69,	1399	K. Nishio, H. Ikezoe, M. Asai, et al.
2006Ni10	EPJAA	29,	281	K. Nishio, S. Hofmann, F.P. Hessberger, et al.
2006Og05	PRVCA	74,	044602	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2006Pe16	PRVCA	74,	014313	F. Perrot, F. Maréchal, C. Jollet, et al.
2006Pe17	PRVCA	74,	014316	D. Peterson, B.B. Back, R.V.F. Janssens, et al.
2006Pe20	EPJAA	28,	307	O. Perru, D. Verney, F. Ibrahim, et al.
2006Ph01	PRVCA	74,	027302	A.A. Phillips, C. Andreoiu, G.C. Ball, et al.
2006Pi14	PRVCA	74,	064304	J.A. Pinston, W. Urban, Ch. Droste, et al.
2006PoZX	P-IsleofKos		114	Zs. Podolyak, J. Gerl, M. Hellstrom, et al.
2006Qi03	YWPIF	23,	400	Z. Qin, X.L. Wu, H.J. Ding, et al.
2006Re09	NIMAE	565,	612	K. Rengan, D. DeVries, H. Griffin

2006Re19	IMSPF	251,	125	M. Redshaw, J. McDaniel, W. Shi, et al.
2006Ri15	IMSPF	251,	300	R. Ringle, P. Schury, T. Sun, et al.
2006Ro11	NUPAB	769,	1	D. Rodríguez, G. Audi, J. Äystö, et al.
2006Sa56	IMSPF	251,	252	G. Savard, J.C. Wang, K.S. Sharma, et al.
2006Se08	PRVCA	73,	061301	D. Seweryniak, K. Starosta, C.N. Davids, et al.
2006Sk03	PRVCA	73,	044301	F. Skaza, V. Lapoux, N. Keeley, et al.
2006St.A	Th.-Bratislava			B. Streich, Comenius University, 2006, unpublished
2006Su12	PRVCA	74,	024322	C.S. Sumithrarachchi, D.W. Anthony, P.A. Lofy, et al.
2006Ta08	PRVCA	73,	024316	M.N. Tantawy, C.R. Bingham, K.P. Rykaczewski, et al.
2006Ta13	PRVCA	73,	044306	S.K. Tandel, P. Chowdhury, E.H. Seabury, et al.
2006Ta19	PRLTA	97,	082502	S.K. Tandel, T.L. Khoo, D. Seweryniak, et al.
2006Th07	PRVCA	74,	034329	P. Thakur, V. Kumar, A.K. Bhati, et al.
2006ToZW	Th.-Michigan			B.E. Tomlin, Thesis, Michigan State University
2006Tr02	PRVCA	73,	054303	V. Tripathi, S.L. Tabor, C.R. Hoffman, et al.
2006Tr10	PRVCA	74,	054306	S. Triambak, A. Garcia, D. Melconian, et al.
2006Va22	IMSPF	251,	231	R.S. Van Dyck, Jr., D.B. Pinegar, S. Van Liew, et al.
2006Ve10	EPJAA	30,	489	D. Verney, L. Cabaret, J.E. Crawford, et al.
2006Vo09	PRVCA	74,	034319	T. von Egidy, H.-F. Wirth, I. Tomandl, et al.
2006Vo12	PRVCA	74,	057303	C. Vockenhuber, M. Bichler, W. Kutschera, et al.
2006Wa10	CPLEE	23,	808	Y.-B. Wang, P. Dendooven, J. Huikari, et al.
2006Wh02	PRVCA	74,	027303	C. Wheldon, J.J. Valiente-Dobón, P.H. Regan, et al.
2006Wi10	PRVCA	73,	044318	J.A. Winger, P.F. Mantica, R.M. Ronningen
2006Xu03	EPJAA	28,	37	S.-W. Xu, Y.-X. Xie, F.-R. Xu, et al.
2006Xu07	EPJAA	29,	161	S.W. Xu, Y.X. Xie, Z.K. Li, et al.

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2007Ag02	NIMAE	571,	663	S.K. Aggarwal, D. Alamelu, P.M. Shah, et al.
2007ArZZ	APCPC	912,		D.A. Artemenkov, T.V. Shchedrina, R. Stanoeva, et al.
2007Ba71	NATUA	449,	1022	T. Baumann, A.M. Amthor, D. Bazin, et al.
2007Be48	NUPAB	789,	15	P. Belli, R. Bernabei, F. Cappella, et al.
2007Be61	PRVCA	76,	064603	P. Belli, R. Bernabei, N. Bukilic, et al.
2007Bi01	ARISE	65,	355	P. Bienvenu, P. Cassette, G. Andreoletti, et al.
2007Bl09	EPJAA	31,	267	B. Blank, C. Borcea, G. Canchel, et al.
2007Bo50	EPJST	150,	337	G. Bollen, C. Bachelet, M. Block, et al.
2007Bu29	NUPAB	794,	149	D.G. Burke, P.E. Garrett, P.C. Sood
2007Ca26	APOBB	38,	1271	L.S. Caceres, M. Gorska, A. Jungclaus, et al.
2007Ch07	PYLBB	645,	133	B. Cheal, M.D. Gardner, M. Avgoulea, et al.
2007Cl01	PRVCA	75,	032801	J.A. Clark, K.S. Sharma, G. Savard, et al.
2007DaZU	P-Lisbon		3	C.N. Davids
2007De09	PRLTA	98,	112502	H. De Witte, A.N. Andreyev, N. Barre, et al.
2007Do17	NUPAB	792,	18	C. Dossat, N. Adimi, F. Aksouh, et al.
2007DoZW	APCPC	961,		C. Dossat, Ch. Theisen, A. Burger, et al.
2007Ei02	NUPAB	787,	373c	R. Eichler, N.V. Aksenov, A.V. Belozerov, et al.
2007Fo02	PRVCA	75,	054308	B. Fogelberg, K.A. Mezilev, V.I. Isakov, et al.
2007Ge07	PRLTA	98,	162501	S. George, S. Baruah, B. Blank, et al.
2007Go24	PRVCA	76,	021605	M.S. Golovkov, L.V. Grigorenko, A.S. Fomichev, et al.
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, et al.
2007Gu09	PRVCA	75,	044303	C. Guénaut, G. Audi, D. Beck, et al.
2007Ha20	PRVCA	75,	064302	U. Hager, V.-V. Elomaa, T. Eronen, et al.
2007Ha32	NUPAB	793,	20	U. Hager, A. Jokinen, V.-V. Elomaa, et al.
2007Ha45	PRVCA	76,	044312	B. Hadinia, B. Cederwall, D.T. Joss, et al.
2007Ha57	EPJAA	34,	363	H. Hayashi, Y. Akita, O. Suematsu, et al.

2007Ho18	EPJAA	32,	251	S. Hofmann, D. Ackermann, S. Antalic, et al.
2007Io03	PYLBB	650,	141	M. Ionescu-Bujor, A. Iordachescu, N. Marginean, et al.
2007Je07	EPJAA	32,	31	H.B. Jeppesen, J. Byskov-Nielsen, P. Wright, et al.
2007Ju03	PYLBB	649,	43	B. Jurado, H. Savajols, W. Mittig, et al.
2007Ju05	PRLTA	99,	132501	A. Jungclaus, L. Cáceres, M. Górska, et al.
2007Ju06	PRVCA	76,	054306	D.S. Judson, A.M. Bruce, T. Kibedi, et al.
2007Ka15	EPJAA	31,	319	O. Kavatsyuk, C. Mazzocchi, Z. Janas, et al.
2007Ke09	PRVCA	76,	045504	A. Kellerbauer, G. Audi, D. Beck, et al.
2007Kh22	EPJAA	34,	355	J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, et al.
2007Ko01	ARISE	65,	335	F.G. Kondev, I. Ahmad, J.P. Greene, et al.
2007Ku30	PRVCA	76,	054320	J. Kurcewicz, W. Czarnacki, M. Karny, et al.
2007Le14	PRVCA	75,	054307	A.-P. Leppänen, J. Uusitalo, M. Leino, et al.
2007Li71	PRLTA	99,	262501	Yu. A. Litvinov, F. Bosch, H. Geissel, et al.
2007Lo05	PRVCA	75,	057302	J.L. Lou, Z.H. Li, Y.L. Ye, et al.
2007Lo11	EPJAA	32,	245	A. Lopez-Martens, K. Hauschild, A.V. Yeremin, et al.
2007Ma35	PRLTA	98,	212501	C. Mazzocchi, R. Grzywacz, S.N. Liddick, et al.
2007Ma82	PRVCA	76,	061301	H. Makii, T. Ishii, M. Asai, et al.
2007Ma92	EPJAA	34,	341	A. Martín, D. Ackermann, G. Audi, et al.
2007Mi36	PRVCA	76,	041304	K. Miernik, W. Dominik, Z. Janas, et al.
2007Mi40	PRLTA	99,	192501	K. Miernik, W. Dominik, Z. Janas, et al.
2007Mu15	PRLTA	99,	182501	I. Mukha, K. Sümmerer, L. Acosta, et al.
2007My02	APOBB	38,	1277	S. Myalski, M. Kmiecik, A. Maj, et al.
2007Ni16	NIMBE	258,	403	K. Nishiizumi, M. Imamura, M.W. Caffee, et al.
2007Ob02	PRLTA	99,	042502	A. Oberstedt, S. Oberstedt, M. Gawrys, et al.
2007Og01	JPHGB	34,	R165	Y. Oganessian
2007Og02	PRVCA	76,	011601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, et al.
2007Ok05	PRVCA	76,	044315	Y. Oktem, D.L. Balabanski, B. Akkus, et al.
2007Pa27	PRVCA	75,	061302	R.D. Page, L. Bianco, I.G. Darby, et al.
2007Ra23	EPJAA	32,	87	S. Rahaman, U. Hager, V.-V. Elomaa, et al.
2007Ra27	EPJAA	34,	5	S. Rahaman, J. Hakala, V.-V. Elomaa, et al.
2007Ra37	EPJST	150,	329	C. Rauth, D. Ackermann, G. Audi, et al.
2007Ri08	PRVCA	75,	055503	R. Ringle, T. Sun, G. Bollen, et al.
2007Rz01	PRVCA	75,	054319	T. Rzaca-Urban, K. Pagowska, W. Urban, et al.
2007Sa33	PRVCA	75,	054321	M. Sandzelius, C. Scholey, B. Cederwall, et al.
2007Sa36	PRLTA	99,	022501	M. Sandzelius, B. Hadinia, B. Cederwall, et al.
2007Sc24	PRVCA	75,	055801	P. Schury, C. Bachelet, M. Block, et al.
2007Se04	PRLTA	99,	022504	D. Seweryniak, M.P. Carpenter, S. Gros, et al.
2007Se06	PRLTA	99,	082502	D. Seweryniak, B. Blank, M.P. Carpenter, et al.
2007Sh05	EPJAA	31,	171	M. Shibata, O. Suematsu, Y. Kojima, et al.
2007Sh34	PYLBB	654,	87	S. Shimoura, S. Ota, K. Demichi, et al.
2007Sh42	EPJAA	34,	1	T. Shizuma, T. Ishii, H. Makii, et al.
2007Si24	NUPAB	791,	267	H. Simon, M. Meister, T. Aumann, et al.
2007Si27	PRVCA	76,	041303	G.S. Simpson, J.C. Angelique, J. Genevey, et al.
2007St12	APOBB	38,	1561	B. Streicher, S. Antalic, S. Saro, et al.
2007St18	NUPAB	787,	388c	N.J. Stoyer, J.H. Landrum, P.A. Wilk, et al.
2007Su05	PRVCA	75,	024305	C.S. Sumithrarachchi, D.J. Morrissey, B.A. Brown, et al.
2007Su07	EPJAA	31,	393	B. Sun, Yu. A. Litvinov, P.M. Walker, et al.
2007Su19	EPJAA	33,	327	B. Sulignano, S. Heinz, F.P. Heßberger, et al.
2007TaZJ	RIKAR		13	K. Takase, D. Kameda, H. Ueno, et al.
2007Th09	PRVCA	76,	011602	P. Thorngren Engblom, S. Negasi Keleta, F. Cappellaro, et al.
2007Tr08	PRVCA	76,	021301	V. Tripathi, S.L. Tabor, P.F. Mantica, et al.
2007Ve08	PRVCA	76,	054312	D. Verney, F. Ibrahim, C. Bourgeois, et al.
2007Wa09	PRVCA	75,	037302	S. Wang, Y. Liu, Y. Ma, et al.
2007Wa45	JUPSA	76,	114202	Y. Wakabayashi, T. Fukuchi, Y. Gono, et al.

2007Ya08	PRVCA	76,	024308	C. Yazidjian, G. Audi, D. Beck, et al.
2007Yo06	PRLTA	99,	212501	D.T. Yordanov, M. Kowalska, K. Blaum, et al.

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2008Ah02	PRVCA	77,	054302	I. Ahmad, F.G. Kondev, Z.M. Koenig, et al.
2008Ak03	PYLBB	666,	430	Yu. Aksyutina, H.T. Johansson, P. Adrich, et al.
2008An05	PRVCA	77,	054303	K. Andgren, B. Cederwall, J. Uusitalo, et al.
2008An11	PRVCA	78,	044328	K. Andgren, U. Jakobsson, B. Cederwall, et al.
2008An16	EPJAA	38,	219	S. Antalic, F.P. Heßberger, S. Hofmann, et al.
2008Ba53	PRLTA	101,	252501	D. Bazin, F. Montes, A. Becerril, et al.
2008Ba54	PRLTA	101,	262501	S. Baruah, G. Audi, K. Blaum, et al.
2008Be22	EPJAA	36,	167	P. Belli, R. Bernabei, F. Cappella, et al.
2008Bh08	PRVCA	77,	065503	M. Bhattacharya, D. Melconian, A. Komives, et al.
2008Bi15	NIMAE	597,	189	L. Bianco, R.D. Page, D.T. Joss, et al.
2008Bl05	PRLTA	100,	132501	M. Block, C. Bachelet, G. Bollen, et al.
2008Bo26	NUPAB	811,	28	V. Bondarenko, I. Tomandl, H.-F. Wirth, et al.
2008Br.C	PrvCom	GAu	Mar	M. Brodeur
2008Br.D	PrvCom	GAu	Aug	M. Brodeur
2008Ca13	JRNCD	276,	813	L. Canella, M.L. Bonardi, F. Groppi, et al.
2008Ca22	PRVCA	78,	044001	M. Caamano, D. Cortina-Gil, W. Mittig, et al.
2008Ch07	NUPAB	801,	101	G. Christian, W.A. Peters, D. Absalon, et al.
2008Ch28	PRVCA	78,	054307	R.J. Charity, S.A. Komarov, L.G. Sobotka, et al.
2008ChZI	Th.-Giessen			Lixin Chen
2008Co01	ARISE	66,	60	R. Colle, B.E. Zimmerman, P. Cassette, et al.
2008De29	PRVCA	78,	044303	D.H. Denby, P.A. DeYoung, T. Baumann, et al.
2008Dr05	PRVCA	78,	024605	I. Dragojevic, K.E. Gregorich, Ch. E. Düllmann, et al.
2008Du02	PANUE	71,	65	S.B. Dubovichenko
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, et al.
2008Dw01	PRLTA	100,	072501	M. Dworschak, G. Audi, K. Blaum, et al.
2008Ea01	PRVCA	77,	024303	M.C. Eastman, K.S. Krane
2008Er04	PRLTA	100,	132502	T. Eronen, V.-V. Elomaa, U. Hager, et al.
2008Fa11	PRVCA	78,	022801	J. Fallis, J.A. Clark, K.S. Sharma, et al.
2008Fe02	EPJAA	35,	167	M. Ferraton, R. Bourgain, C.M. Petrache, et al.
2008Fi.A	PrvCom	BPf	Oct	R.B. Firestone
2008Fo03	PRVCA	77,	024306	N. Fotiades, R.O. Nelson, M. Devlin, et al.
2008Fu04	JPGPE	35,	014041	Y. Fujita, B. Rubio, T. Adachi, et al.
2008Ga04	PYLBB	660,	326	A.B. Garnsworthy, P.H. Regan, L. Cáceres, et al.
2008Ga08	PRVCA	77,	034603	J.M. Gates, M.A. Garcia, K.E. Gregorich, et al.
2008Ga10	PRVCA	77,	044306	A. Gade, P. Adrich, D. Bazin, et al.
2008Ga25	PRVCA	78,	034604	J.M. Gates, S.L. Nelson, K.E. Gregorich, et al.
2008Ga28	PRVCA	78,	044307	P.E. Garrett, K.L. Green, J.L. Wood
2008Ge07	PRLTA	101,	252502	W. Geithner, T. Neff, G. Audi, et al.
2008Ge08	EULEE	82,	50005	S. George, G. Audi, B. Blank, et al.
2008Go23	PRVCA	78,	014311	M.B. Gómez Hornillos, M. Chartier, W. Mittig, et al.
2008Go.A	AnRpt GSI		140	A. Gorshkov et al
2008Gr03	PRVCA	77,	015501	G.F. Grinyer, P. Finlay, C.E. Svensson, et al.
2008Gr17	PRVCA	78,	021303	P.T. Greenlees, R.-D. Herzberg, S. Ketelhut, et al.
2008Ha12	PRVCA	77,	047305	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, et al.
2008Ha23	PRLTA	101,	052502	J. Hakala, S. Rahaman, V.-V. Elomaa, et al.
2008Ha31	PRVCA	78,	021302	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, et al.
2008HaZP	P-Nice		73	T. Hayakawa, S. Miyamoto, Y. Hayashi, et al.
2008Ha.A	PrvCom	BPf	Sep	P.A. Hausladen

2008Hi05	PRVCA	77,	034305	T.A. Hinners, V. Tripathi, S.L. Tabor, et al.
2008Ho03	PRLTA	100,	152502	C.R. Hoffman, T. Baumann, D. Bazin, et al.
2008Ia01	PRVCA	77,	045501	V.E. Iacob, J.C. Hardy, V. Golovko, et al.
2008Jo03	PRVCA	77,	034311	G.A. Jones, S.J. Williams, P.M. Walker, et al.
2008Jo04	PRVCA	77,	064316	E.K. Johansson, D. Rudolph, L.-L. Andersson, et al.
2008Ka16	PYLBB	664,	52	M. Karny, K.P. Rykaczewski, R.K. Grzywacz, et al.
2008KaZQ	RIKAR		17	D. Kameda, K. Takase, H. Ueno, et al.
2008Kh10	EPJAA	37,	177	J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, et al.
2008Kn.A	Th.-GSI			Knöbel
2008Ko05	PRVCA	77,	034307	M. Kowalska, D.T. Yordanov, K. Blaum, et al.
2008Lo06	CPLEE	25,	1992	J.-L. Lou, Z.-H. Li, Y.-L. Ye, et al.
2008Lo07	PRVCA	77,	064313	R.L. Lozeva, G.S. Simpson, H. Grawe, et al.
2008Ma01	PRVCA	77,	014313	P.F. Mantica, R. Broda, H.L. Crawford, et al.
2008Ma39	EPJAA	37,	151	I. Matea, J. Souin, J. Äystö, et al.
2008Me10	NUPAB	809,	275	A.P. Meshik, C.M. Hohenberg, O.V. Pravdivtseva, et al.
2008Mo09	NUPAB	805,	172c	K. Morita
2008Mu05	EPJAA	35,	31	M. Mukherjee, D. Beck, K. Blaum, et al.
2008Ne01	PRLTA	100,	022501	S.L. Nelson, K.E. Gregorich, I. Dragojević, et al.
2008Ne08	PRVCA	78,	024606	S.L. Nelson, C.M. Folden III, K.E. Gregorich, et al.
2008Os02	NIMBE	266,	4394	A. Osa, S.-i. Ichikawa, M. Matsuda, et al.
2008Pa33	PRVCA	78,	041307	D. Pauwels, O. Ivanov, N. Bree, et al.
2008Qi03	RAACA	96,	455	Z. Qin, W. Brüchle, D. Ackermann, et al.
2008Ra09	PYLBB	662,	111	S. Rahaman, V.-V. Elomaa, T. Eronen, et al.
2008Re16	PRLTA	100,	093002	M. Redshaw, J. McDaniel, E.G. Myers
2008ReZZ	PrvCom	NDG		P.L. Reeder
2008Ri05	PRVCA	78,	034304	S.V. Rigby, D.M. Cullen, P.J.R. Mason, et al.
2008Ro21	PRVCA	78,	034308	A.P. Robinson, T.L. Khoo, I. Ahmad, et al.
2008Ru09	PRVCA	78,	021301	D. Rudolph, R. Hoischen, M. Hellström, et al.
2008Ry03	PRLTA	101,	012501	V.L. Ryjkov, M. Brodeur, T. Brunner, et al.
2008Sj01	PRVCA	78,	064317	S.K.L. Sjue, D. Melconian, A. Garcia, et al.
2008Sm03	PRLTA	101,	202501	M. Smith, M. Brodeur, T. Brunner, et al.
2008Sm.A	Th.-Vancouver			M.J. Smith
2008So20	PRVAA	78,	012514	A. Solders, I. Bergström, Sz. Nagy, et al.
2008St20	PRVCA	78,	061302	S.J. Steer, Zs. Podolyak, S. Pietri, et al.
2008Su14	EPJAA	36,	243	G. Suliman, D. Bucurescu, R. Hertenberger, et al.
2008Su19	NUPAB	812,	1	B. Sun, R. Knöbel, Yu. A. Litvinov, et al.
2008Th07	PRVCA	78,	054606	H.V. Thomas, R.A.D. Pattrick, S.A. Crowther, et al.
2008Tr04	PRVCA	77,	034310	V. Tripathi, S.L. Tabor, P. Bender, et al.
2008Tr07	PRLTA	101,	142504	V. Tripathi, S.L. Tabor, P.F. Mantica, et al.
2008Ts03	PRVCA	78,	011301	I. Tsekhanovich, G.S. Simpson, W. Urban, et al.
2008VaZV	P-Moscow		87	Yu. A. Vaganov, V.M. Gorozhankin, V.G. Kalinnikov, et al.
2008We02	NUPAB	803,	1	C. Weber, G. Audi, D. Beck, et al.
2008We10	PRVCA	78,	054310	C. Weber, V.-V. Elomaa, R. Ferrer, et al.

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2009Ak03	PYLBB	679,	191	Yu. Aksyutina, H.T. Johansson, T. Aumann, et al.
2009Al29	PRVCA	80,	061302	N. Al-Dahan, Zs. Podolyák, P.H. Regan, et al.
2009Al30	PRVCA	80,	064308	N. Alkhomashi, P.H. Regan, Zs. Podolyák, et al.
2009An11	PRVCA	79,	064320	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2009An14	PRVCA	80,	024302	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2009An17	PRVCA	80,	044334	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2009An20	PRVCA	80,	054322	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2009Ar04	APOBB	40,	437	O. Arndt, S. Hennrich, N. Hoteling, et al.

2009Ar10	PRVCA	80,	032501	J. Argyriades, R. Arnold, C. Augier, et al.
2009As.A	AnRpt JAEA		37	M. Asai, K. Tsukada, Y. Kasamatsu, et al.
2009Ba06	PRVCA	79,	024311	P.H. Barker, K.K.H. Leung, A.P. Byrne
2009Ba21	PRVCA	79,	045501	A.S. Barabash, Ph. Hubert, A. Nachab, et al.
2009Ba52	PRVCA	80,	054318	J.C. Batchelder, J.L. Wood, P.E. Garrett, et al.
2009Be27	NUPAB	826,	256	P. Belli, R. Bernabei, F. Cappella, et al.
2009Bi07	RAACA	97,	687	P. Bienvenu, L. Ferreux, G. Andreoletti, et al.
2009Bo.A	PrvCom	GAu	Aug	C. Borgmann
2009Br09	PRVCA	80,	035805	M. Breitenfeldt, G. Audi, D. Beck, et al.
2009Br10	PRVCA	80,	044318	M. Brodeur, T. Brunner, C. Champagne, et al.
2009Br.A	PrvCom	GAu	Jun	M. Brodeur
2009Bu.A	PrvCom	GAu	Mar	D. Bucurescu
2009Ca02	PRVCA	79,	011301	L. Cáceres, M. Górska, A. Jungclaus, et al.
2009Ce04	PRLTA	103,	152502	J. Cerny, D.M. Moltz, D.W. Lee, et al.
2009Ch08	PRLTA	102,	122503	L. Chen, Yu. A. Litvinov, W.R. Plaß, et al.
2009Ch09	PYLBB	674,	23	F.C. Charlwood, K. Baczynska, J. Billowes, et al.
2009Ch25	PRLTA	102,	222501	B. Cheal, K. Baczynska, J. Billowes, et al.
2009Cr02	PRVCA	79,	054320	H.L. Crawford, P.F. Mantica, J.S. Berryman, et al.
2009Cu02	PRVCA	80,	024303	D.M. Cullen, P.J.R. Mason, S.V. Rigby, et al.
2009Da03	NUPAB	818,	264	J.V. Dawson, C. Reeve, J.R. Wilson, et al.
2009Dr02	PRVCA	79,	011602	I. Dragojević, K.E. Gregorich, Ch. E. Düllmann, et al.
2009Dr03	PRVCA	79,	031302	G.D. Dracoulis, G.J. Lane, T. Kibédi, et al.
2009Dr04	PRVCA	79,	054313	G.D. Dracoulis, P.M. Davidson, G.J. Lane, et al.
2009Dr06	PRVCA	79,	061303	G.D. Dracoulis, G.J. Lane, F.G. Kondev, et al.
2009Dr08	EPJAA	40,	127	G.D. Dracoulis, P.M. Davidson, G.J. Lane, et al.
2009Dr12	PRVCA	80,	054320	G.D. Dracoulis, G.J. Lane, A.P. Byrne, et al.
2009El07	PRLTA	102,	252501	V.-V. Elomaa, G.K. Vorobjev, A. Kankainen, et al.
2009El08	EPJAA	40,	1	V.-V. Elomaa, T. Eronen, U. Hager, et al.
2009Er02	PRVCA	79,	032802	T. Eronen, V.-V. Elomaa, U. Hager, et al.
2009Er07	PRLTA	103,	252501	T. Eronen, V.-V. Elomaa, J. Hakala, et al.
2009Fa15	EPJAA	42,	339	T. Faestermann, R. Hertenberger, H.-F. Wirth, et al.
2009Fa.A	PrvCom	GAu	Mar	T. Faestermann
2009Fl03	PRLTA	103,	142501	K.T. Flanagan, P. Vingerhoets, M. Avgoulea, et al.
2009Fo02	PRVCA	79,	027602	C.M. Folden III, I. Dragojevic, Ch. E. Düllmann, et al.
2009Fo05	PRVCA	79,	064318	C.M. Folden III, A.S. Nettleton, A.M. Amthor, et al.
2009Fu05	EPJAA	39,	49	T. Fukuchi, T. Hori, T. Masue, et al.
2009Fu15	IMPEE	18,	2134	Y. Fujita, B. Rubio, W. Gelletly, et al.
2009Ga05	PRLTA	102,	092501	L. Gaudefroy, J.M. Daugas, M. Hass, et al.
2009Ga24	NUPAB	826,	1	C. Gaulard, C. Bachelet, G. Audi, et al.
2009Ga40	PRVCA	80,	064303	A.B. Garnsworthy, P.H. Regan, S. Pietri, et al.
2009Go16	PRVCA	79,	064314	M.B. Gomez Hornillos, D. O'Donnell, J. Simpson, et al.
2009Go29	PRVCA	80,	045501	J.R. Goodwin, V.V. Golovko, V.E. Iacob, et al.
2009Go40	PYLBB	672,	313	M. Górska, L. Cáceres, H. Grawe, et al.
2009Gr06	APOBB	40,	447	C.J. Gross, J.A. Winger, S.V. Ilyushkin, et al.
2009Gu11	PRVCA	79,	054317	L. Gu, S.J. Zhu, J.H. Hamilton, et al.
2009Gu17	PPNUE	40,	558	Yu. B. Gurov, S.V. Lapushkin, B.A. Chernyshev, et al.
2009Gy01	NUPAB	828,	1	Gy. Gyürky, G. Rastrepina, Z. Elekes, et al.
2009Ha42	PRVCA	80,	064310	B. Hadinia, B. Cederwall, R.D. Page, et al.
2009Ha.B	NIMAE	606,	484	H. Hayashi, M. Shibata, I. Miyazaki, et al.
2009He20	EPJAA	41,	145	F.P. Heßberger, S. Hofmann, B. Streicher, et al.
2009He22	PRVCA	80,	064305	M. He, H. Shen, G. Shi, et al.
2009He23	EPJAA	42,	333	R.-D. Herzberg, S. Moon, S. Eeckhaudt, et al.
2009Hy01	PYLBB	678,	459	S. Hyldegaard, C. Forssen, C. Aa. Diget, et al.
2009Ic05	PRVCA	80,	044302	Y. Ichikawa, T.K. Onishi, D. Suzuki, et al.

2009Il01	PRVCA	80,	054304	S.V. Ilyushkin, J.A. Winger, C.J. Gross, et al.
2009Je01	PRVCA	79,	031303	H.B. Jeppesen, I. Dragojević, R.M. Clark, et al.
2009Je02	PRVCA	80,	034324	H.B. Jeppesen, R.M. Clark, K.E. Gregorich, et al.
2009Je05	PRVCA	80,	054303	D.G. Jenkins
2009Ka30	PRVCA	80,	045809	L.W. Kastens, S.B. Cahn, A. Manzur, et al.
2009Ke.A	PrvCom	GAu	Nov	J. Ketelaer
2009Ko19	PRVCA	80,	014304	F.G. Kondev, G.D. Dracoulis, G.J. Lane, et al.
2009Ko35	EPJAA	42,	351	M. Kowalska, S. Naimi, J. Agramunt, et al.
2009Ko.A	P-Cologne		199	F.G. Kondev, I. Ahmad, M.P. Carpenter, et al.
2009Kr05	PYLBB	678,	465	J. Kramer, K. Blaum, M. De Rydt, et al.
2009Ku19	PRVCA	80,	035502	T. Kurtukian Nieto, J. Souin, T. Eronen, et al.
2009Ku28	NUPAB	827,	587c	T. Kurtukian-Nieto, J. Benlliure, K.-H. Schmidt, et al.
2009Kw02	PRVCA	80,	051302	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, et al.
2009La17	PRVCA	80,	024321	G.J. Lane, G.D. Dracoulis, A.P. Byrne, et al.
2009Le02	PYLBB	672,	6	J.-L. Lecouey, N.A. Orr, F.M. Marqués, et al.
2009Le03	PRVCA	79,	014318	A.I. Levon, G. Graw, Y. Eisermann, et al.
2009Le26	PRVCA	80,	044308	M. Lebois, D. Verney, F. Ibrahim, et al.
2009Le.A	PrvCom	GAu	May	A.I. Levon
2009Li51	PRVCA	80,	054315	Z.H. Li, J.L. Lou, Y.L. Ye, et al.
2009Ma16	PYLBB	675,	22	P. Maierbeck, R. Gernhauser, R. Krucken, et al.
2009Mo12	JUPSA	78,	064201	K. Morita, K. Morimoto, D. Kaji, et al.
2009Mo17	APOBB	40,	867	A.I. Morales, J. Benlliure, P.H. Regan, et al.
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, et al.
2009Ne03	PRLTA	102,	112501	D. Neidherr, G. Audi, D. Beck, et al.
2009Ne11	PRVCA	80,	044323	D. Neidherr, R.B. Cakirli, G. Audi, et al.
2009Od01	PRVCA	79,	051304	D. O'Donnell, J. Simpson, C. Scholey, et al.
2009Pa16	PRVCA	79,	044309	D. Pauwels, O. Ivanov, N. Bree, et al.
2009Pa25	PRVCA	79,	064323	S. Pascu, Gh. Cata-Danil, D. Bucurescu, et al.
2009Pa35	PRVCA	80,	034307	N. Patronis, H. De Witte, M. Gorska, et al.
2009Pe06	PRVCA	79,	035806	J. Pereira, S. Hennrich, A. Aprahamian, et al.
2009Pe31	EPJAA	42,	379	J. Perkowski, J. Andrzejewski, J. Srebrny, et al.
2009Qi04	PRVCA	79,	064319	J. Qian, A. Heinz, T.L. Khoo, et al.
2009Ra11	PRLTA	103,	042501	S. Rahaman, V.-V. Elomaa, T. Eronen, et al.
2009Ra33	PRVCA	80,	054307	R. Raabe, J. Buscher, J. Ponsaers, et al.
2009Re03	PRVAA	79,	012506	M. Redshaw, B.J. Mount, E.G. Myers
2009Re07	PRLTA	102,	212502	M. Redshaw, B.J. Mount, E.G. Myers, et al.
2009Re15	PRVAA	79,	012507	M. Redshaw, B.J. Mount, E.G. Myers
2009Ri03	PYLBB	675,	170	R. Ringle, M. Brodeur, T. Brunner, et al.
2009Ri12	PRVCA	80,	064321	R. Ringle, C. Bachelet, M. Block, et al.
2009Ru08	PRLTA	103,	072502	G. Rugel, T. Faestermann, K. Knie, et al.
2009Sa09	EPJAA	39,	33	J. Sauvage, J. Genevey, B. Roussière, et al.
2009Sa12	PRLTA	102,	132501	J. Savory, P. Schury, C. Bachelet, et al.
2009Sa27	PRVCA	79,	064315	M. Sandzelius, E. Ganioglu, B. Cederwall, et al.
2009Sa38	PRVCA	80,	044330	A. Saastamoinen, T. Eronen, A. Jokinen, et al.
2009Sc19	PRVCA	80,	025501	N.D. Scielzo, S. Caldwell, G. Savard, et al.
2009Se13	EPJAA	41,	315	M.D. Seliverstov, A.N. Andreyev, N. Barre, et al.
2009Sh17	EPJAA	39,	263	T. Shizuma, T. Ishii, H. Makii, et al.
2009Si21	PRVCA	80,	024304	G.S. Simpson, W. Urban, J. Genevey, et al.
2009St04	PRVCA	79,	015803	J.B. Stoker, P.F. Mantica, D. Bazin, et al.
2009St07	PRVCA	79,	044325	I. Stefanescu, D. Pauwels, N. Bree, et al.
2009St16	IMPEE	18,	1002	S.J. Steer, Zs. Podolyák, S. Pietri, et al.

2009St21	PRLTA	103,	132502	L. Stavsetra, K.E. Gregorich, J. Dvorak, et al.
2009St28	EPJAA	42,	407	I. Stefanescu, W.B. Walters, P.F. Mantica, et al.
2009Su14	PRLTA	103,	152503	D. Suzuki, H. Iwasaki, D. Beaumel, et al.
2009Ta24	PRVCA	80,	034609	O.B. Tarasov, M. Portillo, A.M. Amthor, et al.
2009Ur04	PRVCA	80,	037301	W. Urban, J.A. Pinston, G.S. Simpson, et al.
2009Ve11	IMPEE	18,	1976	D. Verney, M. Lebois, F. Ibahim, et al.
2009Wa02	PRVCA	79,	024306	H. Watanabe, G.J. Lane, G.D. Dracoulis, et al.
2009Wa11	PRVCA	79,	064311	H. Watanabe, G.J. Lane, G.D. Dracoulis, et al.
2009Wa24	EPJAA	42,	163	H. Watanabe, G.J. Lane, G.D. Dracoulis, et al.
2009Wi03	PRLTA	102,	142502	J.A. Winger, S.V. Ilyushkin, K.P. Rykaczewski, et al.
2009Wi09	PYLBB	679,	36	N. Winckler, H. Geissel, Yu. A. Litvinov, et al.
2009Wi10	PRLTA	103,	122501	J.S.E. Wieslander, J. Suhonen, T. Eronen, et al.

2010

2010Ac.A	AnRpt GSI			D. Ackermann et al
2010Ad03	PRVCA	81,	024311	N. Adimi, R. Dominguez-Reyes, M. Alcorta, et al.
2010Al24	PRVCA	82,	041602	H. Alvarez-Pol, J. Benlliure, E. Casarejos, et al.
2010An01	JPGPE	37,	035102	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2010An08	EPJAA	43,	35	S. Antalic, F.P. Heßberger, S. Hofmann, et al.
2010An13	PRLTA	105,	252502	A.N. Andreyev, J. Elseviers, M. Huyse, et al.
2010Ar07	NUPAB	847,	168	J. Argyriades, for the NEMO-3 Collaboration
2010As.A	AnRpt JAEA		21	M. Asai, K. Tsukada, N. Sato, et al.
2010Ba31	JPGPE	37,	105103	K. Baczynska, J. Billowes, P. Campbell, et al.
2010Ba43	PRVCA	82,	045501	G.C. Ball, G. Boisvert, P. Bricault, et al.
2010Ba48	NUPAB	847,	121	M. Balodis, I. Tomandl, V. Bondarenko, et al.
2010Be16	PRVCA	81,	064325	J.S. Berryman, R.M. Clark, K.E. Gregorich, et al.
2010Bi03	PYLBB	690,	15	L. Bianco, R.D. Page, I.G. Darby, et al.
2010Bi.A	CERN-INTC-2010-004			J. Billowes, M.L. Bissell, K. Blaum, et al.
2010Bl09	EPJAA	44,	363	B. Blank, C. Borcea, G. Canchel, et al.
2010Br02	PRVCA	81,	034313	M. Breitenfeldt, Ch. Borgmann, G. Audi, et al.
2010Br15	PRVCA	82,	044312	A.M. Bruce, S. Lalkovski, A.M.D. Bacelar, et al.
2010Ca01	ARISE	68,	122	P. Cassette, F. Chartier, H. Isnard, et al.
2010Ch16	PRLTA	104,	252502	B. Cheal, E. Mané, J. Billowes, et al.
2010Ch18	NIMBE	268,	192	J. Chmeleff, F. von Blanckenburg, K. Kossert, et al.
2010Ch19	PYLBB	691,	234	L. Chen, W.R. Plaß, H. Geissel, et al.
2010Ch50	PRVCA	82,	051302	B. Cheal, J. Billowes, M.L. Bissell, et al.
2010Cl01	PYLBB	690,	19	R.M. Clark, K.E. Gregorich, J.S. Berryman, et al.
2010Co01	PRVCA	81,	014314	T.E. Cocolios, A.N. Andreyev, B. Bastin, et al.
2010Co13	JPGPE	37,	125130	T.E. Cocolios, A.N. Andreyev, S. Antalic, et al.
2010Cr02	PRVCA	82,	014311	H.L. Crawford, R.V.F. Janssens, P.F. Mantica, et al.
2010Da06	PRVCA	81,	034304	J.M. Daugas, T. Faul, H. Grawe, et al.
2010Da17	PRLTA	105,	162502	I.G. Darby, R.K. Grzywacz, J.C. Batchelder, et al.
2010Dr02	PRVCA	81,	054313	G.D. Dracoulis, G.J. Lane, F.G. Kondev, et al.
2010Dr05	PRVCA	82,	034317	G.D. Dracoulis, G.J. Lane, R.O. Hughes, et al.
2010Du06	PRLTA	104,	252701	Ch. E. Düllmann, M. Schädel, A. Yakushev, et al.
2010Dw01	PRVCA	81,	064312	M. Dworschak, M. Block, D. Ackermann, et al.
2010El06	PRLTA	105,	182701	P.A. Ellison, K.E. Gregorich, J.S. Berryman, et al.
2010El11	PYLBB	693,	426	S. Eliseev, Ch. Böhm, D. Beck, et al.
2010Et01	PRVCA	81,	024314	S. Ettenauer, M. Brodeur, T. Brunner, et al.
2010Fe01	PRVCA	81,	044318	R. Ferrer, M. Block, C. Bachelet, et al.
2010Fe02	ARISE	68,	1571	L. Ferreux, M.-C. Lepy, M.-M. Be, et al.
2010Fl01	PRVCA	82,	027309	X. Flechard, E. Lienard, O. Naviliat-Cuncic, et al.
2010Fl02	PRVCA	82,	041302	K.T. Flanagan, P. Vingerhoets, M.L. Bissell, et al.

2010Fo04	PRLTA	105,	102501	C. Force, S. Grevy, L. Gaudefroy, et al.
2010Go16	PYLBB	692,	307	V.Z. Goldberg, B.T. Roeder, G.V. Rogachev, et al.
2010Gr04	PRVCA	81,	061601	R. Graeger, D. Ackermann, M. Chelnokov, et al.
2010Ha04	PRVCA	81,	021302	C.C. Hall, E.M. Lunderberg, P.A. DeYoung, et al.
2010Ha38	NIMAE	613,	79	H. Hayashi, Y. Kojima, M. Shibata, et al.
2010He10	EPJAA	43,	55	F.P. Heßberger, S. Antalic, B. Sulignano, et al.
2010He11	EPJAA	43,	175	F.P. Heßberger, S. Antalic, D. Ackermann, et al.
2010He25	EPJAA	46,	337	J.A. Heredia, A.N. Andreyev, S. Antalic, et al.
2010Ho12	PRVCA	82,	025806	P. Hosmer, H. Schatz, A. Aprahamian, et al.
2010Ia01	PRVCA	82,	035502	V.E. Iacob, J.C. Hardy, A. Banu, et al.
2010Il01	PYLBB	687,	305	G. Ilie, G. Neyens, G.S. Simpson, et al.
2010Ja05	PRVCA	82,	044302	U. Jakobsson, J. Uusitalo, S. Juutinen, et al.
2010Jo06	NUPAB	842,	15	H.T. Johansson, Yu. Aksyutina, T. Aumann, et al.
2010Jo07	NUPAB	847,	66	H.T. Johansson, Yu. Aksyutina, T. Aumann, et al.
2010Jo09	ARISE	68,	2339	G. Jörg, R. Bühnemann, S. Hollas, et al.
2010Ka26	PRVCA	82,	034311	A. Kankainen, V.-V. Elomaa, T. Eronen, et al.
2010Ka29	NUPAB	842,	1	D. Kanjilal, S. Bhattacharya, A. Goswami, et al.
2010Ka30	PRVCA	82,	052501	A. Kankainen, T. Eronen, D. Gorelov, et al.
2010Ke09	EPJDD	58,	47	J. Ketelaer, T. Beyer, K. Blaum, et al.
2010KeZY	Th.-Jyvaskyla			S. Ketelhut
2010Kh06	EPJAA	46,	59	J. Khuyagbaatar, F.P. Heßberger, S. Hofmann, et al.
2010Ko15	PYLBB	684,	17	V.S. Kolhinen, V.-V. Elomaa, T. Eronen, et al.
2010Ko17	PYLBB	690,	245	Y. Kondo, T. Nakamura, Y. Satou, et al.
2010Ko19	NIMBE	268,	187	G. Korschinek, A. Bergmaier, T. Faestermann, et al.
2010Ko28	PRVCA	82,	022501	V.S. Kolhinen, T. Eronen, D. Gorelov, et al.
2010Ku02	APOBB	41,	525	J. Kurcewicz, F. Bosch, H. Geissel, et al.
2010Ku25	PRVCA	82,	064318	J. Kurpeta, J. Rissanen, V.-V. Elomaa, et al.
2010Kw02	PRVCA	81,	058501	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, et al.
2010La16	PRVCA	82,	051304	G.J. Lane, G.D. Dracoulis, F.G. Kondev, et al.
2010La.A	PrvCom	GAu	Mar	Alain Lapierre
2010Le03	PRLTA	104,	112701	J. Lee, M.B. Tsang, D. Bazin, et al.
2010Li13	PRVCA	81,	045803	W.H. Lippincott, S.B. Cahn, D. Gastler, et al.
2010Lo14	ARISE	68,	1454	M. Loidl, M. Rodrigues, B. Censier, et al.
2010Ma08	PRVCA	81,	024302	P.J.R. Mason, D.M. Cullen, C. Scholey, et al.
2010Ma20	PRVCA	81,	047301	F. Ma, X.H. Zhou, Y. Zheng, et al.
2010Ma27	CPLEE	27,	062104	F. Ma, X.H. Zhou, Y. Zheng, et al.
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, et al.
2010Mo29	PRVAA	81,	064501	B.J. Mount, H.S.P. Müller, M. Redshaw, et al.
2010Mo30	PRVAA	82,	042513	B.J. Mount, M. Redshaw, E.G. Myers
2010Mu12	PRVCA	82,	054315	I. Mukha, K. Sümmerer, L. Acosta, et al.
2010Mu13	PRVCA	82,	054316	G. Mukherjee, P. Chowdhury, F.G. Kondev, et al.
2010Na13	PRLTA	105,	032502	S. Naimi, G. Audi, D. Beck, et al.
2010Na17	PRVCA	82,	034323	F. Naqvi, M. Górska, L. Cáceres, et al.
2010Ni10	PRVCA	81,	064606	E. Yu. Nikolskii, A.A. Korsheninnikov, H. Otsu, et al.
2010Ni14	PRVCA	82,	024611	K. Nishio, S. Hofmann, F.P. Heßberger, et al.
2010Og01	PRLTA	104,	142502	Yu. Ts. Oganessian, F. Sh. Abdullin, P.D. Bailey, et al.
2010Oh02	JUPSA	79,	073201	T. Ohnishi, T. Kubo, K. Kusaka, et al.
2010Pa33	PRVCA	82,	064314	S. Padgett, M. Madurga, R. Grzywacz, et al.
2010Pi07	PYLBB	693,	221	A. Pichlmaier, V. Varlamov, K. Schreckenbach, et al.
2010Ra12	PRVCA	82,	011303	P. Rahkila, D.G. Jenkins, J. Pakarinen, et al.
2010RaZY	PrvCom			Rajabali, 11/7/2010
2010Re01	PRVCA	81,	014301	J.J. Ressler, J.A. Caggiano, C.J. Francy, et al.

2010Re07	PRLTA	105,	172501	M.W. Reed, I.J. Cullen, P.M. Walker, et al.
2010Ru07	EPJAA	44,	31	C. Rusu, D. Bucurescu, N. Marginean, et al.
2010Sc02	PRVCA	81,	014306	C. Scholey, K. Andgren, L. Bianco, et al.
2010Se16	PRVCA	82,	067301	G.W. Severin, L.D. Knutson, P.A. Voytas, et al.
2010Si03	PRVCA	81,	024313	G.S. Simpson, W. Urban, J.A. Pinston, et al.
2010Si17	PRVCA	82,	024302	G.S. Simpson, W. Urban, K. Sieja, et al.
2010Sp02	PYLBB	683,	129	A. Spyrou, T. Baumann, D. Bazin, et al.
2010St14	EPJAA	45,	275	B. Streicher, F.P. Heßberger, S. Antalic, et al.
2010St.A	AnRpt GSI		151	K. Straub et al
2010Su03	PRVCA	81,	014302	C.S. Sumithrarachchi, D.J. Morrissey, A.D. Davies, et al.
2010Sv01	EPJAA	44,	393	A.I. Svirikhin, V.N. Dushin, M.L. Chelnokov, et al.
2010Ta04	PRLTA	104,	062701	K. Tanaka, T. Yamaguchi, T. Suzuki, et al.
2010Vi07	PRVCA	82,	064311	P. Vingerhoets, K.T. Flanagan, M. Avgoulea, et al.
2010Vo03	PRVCA	81,	044903	R. Vogt
2010Wa02	CPLEE	27,	022301	H.-L. Wang, L.-T. Song, W.-J. Zhao, et al.
2010Wa42	PRVCA	82,	064317	F. Wauters, B. Verstichel, M. Breitenfeldt, et al.
2010Wi03	PRVCA	81,	044303	J.A. Winger, K.P. Rykaczewski, C.J. Gross, et al.
2010Wr01	PRVCA	81,	055503	C. Wrede, J.A. Clark, C.M. Deibel, et al.
2010Xu12	EPJAA	46,	55	S.W. Xu, Y.X. Xie, F. Ma, et al.
2010Ya01	RAACA	98,	59	J. Yang, S. Zhang, Y. Ding, et al.

2011

2011Ac03	PRLTA	107,	212501	N. Ackerman
2011Ac.A	AnRpt GSI		208	D. Ackermann, F.P. Heßberger, S. Antalic, et al.
2011An03	APOBB	42,	493	Yu. A. Anischenko, A.E. Gegechkori, G.D. Adeev
2011An13	EPJAA	47,	62	S. Antalic, F.P. Heßberger, D. Ackermann, et al.
2011Ar09	PRLTA	107,	062504	R. Arnold, for the NEMO-3 Collaboration
2011Ar18	PRVCA	84,	061307	O. Arndt, K.-L. Kratz, W.B. Walters, et al.
2011As03	PRVCA	83,	014315	M. Asai, K. Tsukada, H. Haba, et al.
2011As08	PRLTA	107,	102502	P. Ascher, L. Audirac, N. Adimi, et al.
2011As.A	AnRpt RIKEN	44	-22	M. Asai, H. Haba, N. Sato, et al.
2011Av01	JPGPE	38,	025104	M. Avgoulea, Yu. P. Gangrsky, K.P. Marinova, et al.
2011Ba55	PANUE	74,	312	A.S. Barabash, V.B. Brudanin, for the NEMO Collaboration
2011Be02	JPGPE	38,	015103	P. Belli, R. Bernabei, F. Cappella, et al.
2011Be08	PRVCA	83,	034603	P. Belli, R. Bernabei, F. Cappella, et al.
2011Be32	EPJAA	47,	91	P. Belli, R. Bernabei, F. Cappella, et al.
2011Be34	PRVCA	84,	041303	A.D. Becerril, G. Lorusso, A.M. Amthor, et al.
2011Be39	JPGPE	38,	115107	P. Belli, R. Bernabei, F. Cappella, et al.
2011Be.A	P-Leuven		195	José Benlliure
2011Bo09	NUPAB	856,	1	V. Bondarenko, I. Tomandl, J. Honzatko, et al.
2011Bo23	PRVCA	84,	044311	P. Boutachkov, M. Górska, H. Grawe, et al.
2011Br01	PRVCA	82,	061309	T.S. Brock, for the RISING Collaboration
2011Br12	PRVCA	84,	014330	R. Broda, K.H. Maier, B. Fornal, et al.
2011Ch32	PRVCA	84,	014320	R.J. Charity, J.M. Elson, J. Manfredi, et al.
2011Da01	PYLBB	695,	78	I.G. Darby, R.D. Page, D.T. Joss, et al.
2011Da08	PRVCA	83,	054312	J.M. Daugas, I. Matea, J.-P. Delaroche, et al.
2011Da12	PRVCA	83,	064320	I.G. Darby, R.D. Page, D.T. Joss, et al.
2011El02	PRLTA	106,	052504	S. Eliseev, C. Roux, K. Blaum, et al.
2011El04	PRVCA	83,	038501	S. Eliseev, D. Nesterenko, K. Blaum, et al.
2011El05	PRVCA	84,	012501	S. Eliseev, M. Goncharov, K. Blaum, et al.
2011El08	PRLTA	107,	152501	S. Eliseev, C. Roux, K. Blaum, et al.
2011Er02	PRVCA	83,	055501	T. Eronen, D. Gorelov, J. Hakala, et al.
2011Es03	PRVCA	84,	034304	M.E. Estevez Aguado, A. Algora, B. Rubio, et al.

2011Es06	PRLTA	107,	172503	A. Estradé, M. Matoš, H. Schatz, et al.
2011Et.A	PrvCom	GAu	Jun	Stephan Ettenauer
2011Fa10	PRVCA	84,	045807	J. Fallis, J.A. Clark, K.S. Sharma, et al.
2011Fi01	PRLTA	106,	032501	P. Finlay, S. Ettenauer, G.C. Ball, et al.
2011Fl06	NPBSE	217,	53	R.L. Flack, and the NEMO-3 Collaboration
2011Fo08	IMPEE	20,	1491	A.S. Fomichev, I.G. Mukha, S.V. Stepantsov, et al.
2011Ga19	PRVCA	83,	054618	J.M. Gates, Ch. E. Düllmann, M. Schädel, et al.
2011Go23	PRVCA	84,	028501	M. Goncharov, K. Blaum, M. Block, et al.
2011Go37	JPCSD	312,	052008	M.B. Gomez Hornillos, J. Rissanen, J.L. Tain, et al.
2011Gr01	JPGPE	38,	015101	P. Granholm, T. Lönnroth, J. Suhonen, et al.
2011Ha08	PRLTA	106,	122501	E. Haettner, D. Ackermann, G. Audi, et al.
2011Ha13	PRVCA	83,	034602	H. Haba, D. Kaji, H. Kikunaga, et al.
2011Ha48	EPJAA	47,	129	J. Hakala, R. Rodríguez-Guzmán, V.-V. Elomaa, et al.
2011Hi05	PRVCA	83,	034321	K. Higashiyama, N. Yoshinaga
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, et al.
2011Ho21	PRVCA	84,	064903	H. Holopainen, S.S. Rasanen, K.J. Eskola
2011Ic06	JPCSD	312,	092031	Y. Ichikawa, T.K. Onishi, D. Suzuki, et al.
2011Il01	PRVCA	83,	014322	S.V. Ilyushkin, J.A. Winger, K.P. Rykaczewski, et al.
2011Ke03	PRVCA	84,	014311	J. Ketelaer, G. Audi, T. Beyer, et al.
2011Ki16	PRVCA	84,	014316	H. Kikunaga, T. Suzuki, M. Nomura, et al.
2011Ko01	ARISE	69,	500	K. Kossert, O. Nahle, P.E. Warwick, et al.
2011Ko03	PYLBB	697,	116	V.S. Kolhinen, T. Eronen, D. Gorelov, et al.
2011Ko36	PRVCA	84,	034320	U. Köster, N.J. Stone, K.T. Flanagan, et al.
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, et al.
2011Le01	PRVCA	83,	014606	J. Lee, M.B. Tsang, D. Bazin, et al.
2011Li28	PYLBB	702,	24	Z. Liu, D. Seweryniak, P.J. Woods, et al.
2011Li50	PRVCA	84,	061305	S.N. Liddick, S. Suchyta, B. Abromeit, et al.
2011Lo01	PYLBB	694,	316	R.L. Lozeva, D.L. Balabanski, G. Georgiev, et al.
2011Lo06	NUPAB	852,	15	A. Lopez-Martens, T. Wiborg-Hagen, K. Hauschild, et al.
2011Lo09	PYLBB	699,	141	G. Lorusso, A. Becerril, A. Amthor, et al.
2011Lo.A	PrvCom	GAu	dec	A. Lopez-Martens
2011Ma45	PRVCA	84,	024303	E. Mané, B. Cheal, J. Billowes, et al.
2011Ma66	PRLTA	107,	212502	E. Mane, A. Voss, J.A. Behr, et al.
2011Ma88	JPCSD	312,	092039	K. Matsuta, D. Nishimura, M. Fukuda, et al.
2011Mo18	PRVCA	84,	011601	A.I. Morales, J. Benlliure, J. Agramunt, et al.
2011Mo27	KPSJA	59,	1525	C.-B. Moon, G.D. Dracoulis, R.A. Bark, et al.
2011Na34	PRLTA	107,	172502	B.S. Nara Singh, Z. Liu, R. Wadsworth, et al.
2011Ni01	PRLTA	106,	052502	S. Nishimura, Z. Li, H. Watanabe, et al.
2011Ni18	EPJAA	47,	155	D. Nishimura, Y. Fujita, M. Fukuda, et al.
2011Pa38	PRVCA	84,	065502	H.I. Park, J.C. Hardy, V.E. Iacob, et al.
2011Pa.A	P-Leuven		158	D. Pauwels, D. Radulov, I.G. Darby, et al.
2011Pe29	PRVCA	84,	054311	A.B. Pérez-Cerdán, B. Rubio, W. Gelletly, et al.
2011Pi05	PRVCA	83,	044328	S. Pietri, A. Jungclaus, M. Górska, et al.
2011Po01	PRVCA	83,	014306	M. Pomorski, K. Miernik, W. Dominik, et al.
2011Po07	ARISE	69,	1267	S. Pommé, J. Paepen, T. Altzitzoglou, et al.
2011Po09	PRVCA	83,	061306	M. Pomorski, M. Pfützner, W. Dominik, et al.
2011Ra24	PYLBB	703,	412	S. Rahaman, V.-V. Elomaa, T. Eronen, et al.
2011Ri01	PRVCA	83,	011301	J. Rissanen, J. Kurpeta, V.-V. Elomaa, et al.
2011Ro01	PYLBB	694,	322	S. Roy, S. Chattopadhyay, P. Datta, et al.
2011Ro18	PRLTA	106,	252503	A.M. Rogers, M.A. Famiano, W.G. Lynch, et al.

2011Ro20	PRVCA	83,	064311	A.P. Robinson, T.L. Khoo, D. Seweryniak, et al.
2011Ro47	PRVCA	84,	051306	A.M. Rogers, J. Giovinazzo, C.J. Lister, et al.
2011Ru.A	P-Leuven		367	M. Rudigier, A. Blazhev, J. Jolie, et al.
2011Sa15	PRVCA	83,	045808	A. Saastamoinen, L. Trache, A. Banu, et al.
2011Sa41	JUPSA	80,	094201	N. Sato, H. Haba, T. Ichikawa, et al.
2011Sa59	PRVCA	84,	054303	P.J. Sapple, R.D. Page, D.T. Joss, et al.
2011SaZM	Th.-Jyvaskyla			A. Saastamoinen, Thesis, University of Jyvaskyla
2011Sc22	PRVCA	84,	024611	R.J. Scott, G.J. O'Keefe, M.N. Thompson, et al.
2011Si32	JPCSD	267,	012031	G.S. Simpson, A. Scherillo, J. Genevey, et al.
2011So11	EPJAA	47,	40	J. Souin, T. Eronen, P. Ascher, et al.
2011Sp01	PRVCA	84,	044309	A. Spyrou, J.K. Smith, T. Baumann, et al.
2011St21	PRVCA	84,	044313	S.J. Steer, Zs. Podolyák, S. Pietri, et al.
2011StZV	Th.-Munchen			K. Straub, Thesis, Technischen Universitat Munchen
2011Su11	PRLTA	106,	202501	T. Sumikama, K. Yoshinaga, H. Watanabe, et al.
2011Sw02	PRVCA	83,	034322	T.P.D. Swan, P.M. Walker, Zs. Podolyák, et al.
2011Sz01	PRVCA	83,	064315	B. Szpak, K.H. Maier, A.S. Smolkowska, et al.
2011Ti10	PRVCA	84,	044302	J. Timar, K. Starosta, I. Kuti, et al.
2011To04	PRVCA	83,	044326	I. Tomandl, J. Honzatko, T. von Egidy, et al.
2011To.A	PrvCom	GAu	Aug	I. Towner, S. Ettenauer
2011Tu02	PRLTA	106,	112501	X.L. Tu, H.S. Xu, M. Wang, et al.
2011Tu09	NIMAE	654,	213	X.L. Tu, M. Wang, Yu. A. Litvinov, et al.
2011Ve01	PYLBB	695,	82	M. Venhart, A.N. Andreyev, J.L. Wood, et al.
2011Ve03	EPJAA	47,	20	M. Venhart, F.P. Heßberger, D. Ackermann, et al.
2011Vi03	PYLBB	703,	34	P. Vingerhoets, K.T. Flanagan, J. Billowes, et al.
2011Vo01	ARISE	69,	705	M. Voltaggio, M. Spadoni
2011Wa03	PYLBB	696,	186	H. Watanabe, T. Sumikama, S. Nishimura, et al.
2011Wa26	PYLBB	704,	270	H. Watanabe, K. Yamaguchi, A. Odahara, et al.
2011Wi09	PRVCA	84,	014329	K. Wimmer, U. Köster, P. Hoff, et al.
2011Ya25	PYLBB	697,	90	M.T. Yamashita, R.S. Marques de Carvalho, T. Frederico, et al.

2012

2012Ac04	PTPSA	196,	255	D. Ackermann
2012Al05	PRVCA	85,	034301	N. Al-Dahan, P.H. Regan, Zs. Podolyák, et al.
2012An08	ARISE	70,	1985	E. Andreotti, M. Hult, G. Marissens, et al.
2012As05	PRVCA	85,	054316	A. Astier, M.-G. Porquet, Ch. Theisen, et al.
2012At01	EPJAA	48,	22	D.R. Atanasov, N. Winckler, D. Balabanski, et al.
2012Au03	PRLTA	109,	032505	M. Auger, for the EXO Collaboration
2012Au08	EPJAA	48,	179	L. Audirac, P. Ascher, B. Blank, et al.
2012Ba12	ARISE	70,	595	B. Ballard, D. Wycoff, E.R. Birnbaum, et al.
2012Ba32	PRVCA	86,	014311	A.E. Barzakh, L. Kh. Batist, D.V. Fedorov, et al.
2012Ba54	EPJAA	48,	155	A. Bacquias, T. Kurtukian-Nieto, P. Ascher, et al.
2012Ba58	PRVCA	86,	064311	J.C. Batchelder, N.T. Brewer, R.E. Goans, et al.
2012Be14	PRVCA	85,	044610	P. Belli, R. Bernabei, R.S. Boiko, et al.
2012Be24	ARISE	70,	1894	M.-M. Be, P. Cassette, M.C. Lepy, et al.
2012Be28	PYLBB	715,	293	G. Benzoni, A.I. Morales, J.J. Valiente-Dobón, et al.
2012Bo.A	PrvCom	May	Lunney	Ch. Borgmann
2012Br03	PRLTA	108,	052504	M. Brodeur, T. Brunner, C. Champagne, et al.
2012Ca03	PRVCA	85,	014312	L. Cartegni, C. Mazzocchi, R. Grzywacz, et al.
2012Ca05	PYLBB	707,	46	Z.X. Cao, Y.L. Ye, J. Xiao, et al.
2012Ch02	PRLTA	108,	032501	G. Christian, N. Frank, S. Ash, et al.
2012Ch16	PRLTA	108,	162501	R. Chevrier, J.M. Daugas, L. Gaudefroy, et al.
2012Ch19	NUPAB	882,	71	L. Chen, W.R. Plaß, H. Geissel, et al.
2012Ch40	PRVCA	86,	041307	R.J. Charity, L.G. Sobotka, K. Hagino, et al.

2012Ch51	JPCSD	381,	012071	B. Cheal, J. Billowes, M.L. Bissell, et al.
2012Ch.A	PrvCom	May	Lunney	Ankur Chaudhuri
2012Ci05	PRVCA	86,	054322	N. Cieplicka, K.H. Maier, B. Fornal, et al.
2012Da04	PRVCA	85,	064301	A.Y. Dauenhauer, K.S. Krane
2012Da16	EPJAA	48,	157	F.A. Danevich, E. Andreotti, M. Hult, et al.
2012Di03	PRVCA	85,	031301	A. Dijon, E. Clément, G. de France, et al.
2012Dr01	NUPAB	875,	1	C. Droese, K. Blaum, M. Block, et al.
2012Dr02	PYLBB	709,	59	G.D. Dracoulis, G.J. Lane, A.P. Byrne, et al.
2012Dr.A	PrvCom	FGK		G.D. Dracoulis
2012Fa07	ARISE	70,	2328	Fang Kaihong, Wang Dawei, Yang Shaobo, et al.
2012Fi01	PRLTA	108,	062502	D. Fink, J. Barea, D. Beck, et al.
2012Fl05	JPGPE	39,	125101	K.T. Flanagan, J. Billowes, P. Campbell, et al.
2012Fo04	PRVCA	85,	027303	H.T. Fortune, R. Sherr
2012Fo09	NIMAE	687,	1	C.M. Folden III, M.C. Alfonso, D.A. Mayorov, et al.
2012Ga15	PRVCA	85,	044311	A.T. Gallant, M. Brodeur, T. Brunner, et al.
2012Ga17	PRVCA	85,	045504	A. Gando, Y. Gando, H. Hanakago, et al.
2012Ga29	PRLTA	109,	032506	A.T. Gallant, J.C. Bale, T. Brunner, et al.
2012Ga45	PRLTA	109,	202503	L. Gaudefroy, W. Mittig, N.A. Orr, et al.
2012Go19	PRLTA	109,	162502	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, et al.
2012Gr12	PRLTA	109,	012501	P.T. Greenlees, J. Rubert, J. Piot, et al.
2012Gu14	PRVCA	86,	014323	S. Guo, Y.H. Zhang, X.H. Zhou, et al.
2012Gy01	ARISE	70,	278	Gy. Gyurky, J. Farkas, Z. Halasz, et al.
2012Ha05	PRVCA	85,	024611	H. Haba, D. Kaji, Y. Kudou, et al.
2012Ha25	PRLTA	109,	032501	J. Hakala, J. Dobaczewski, D. Gorelov, et al.
2012He01	NIMBE	270,	106	A. Hermanne, R.A. Rebeles, F. Tarkanyi, et al.
2012He09	EPJAA	48,	75	F.P. Heßberger, S. Antalic, D. Ackermann, et al.
2012He11	PRVCA	86,	014605	G.Z. He, S. Jiang, Z.Y. Zhou, et al.
2012Hi07	NATUA	486,	342	C.B. Hinke, M. Böhmer, P. Boutachkov, et al.
2012Ho12	EPJAA	48,	62	S. Hofmann, S. Heinz, R. Mann, et al.
2012Hu10	PRVCA	86,	054314	R.O. Hughes, G.J. Lane, G.D. Dracoulis, et al.
2012Ja01	PRVCA	85,	014309	U. Jakobsson, J. Uusitalo, S. Juutinen, et al.
2012Ja11	PRVCA	86,	011304	M.F. Jager, R.J. Charity, J.M. Elson, et al.
2012Jo04	GCACA	88,	51	G. Jörg, Y. Amelin, K. Kossert, et al.
2012Ka12	EPJAA	48,	49	A. Kankainen, Yu. N. Novikov, M. Oinonen, et al.
2012Ka13	EPJAA	48,	47	A. Kankainen, V.S. Kolhinen, V.-V. Elomaa, et al.
2012Ka36	PRVCA	86,	054319	D. Kameda, T. Kubo, T. Ohnishi, et al.
2012Ke01	NUPAB	880,	88	J.H. Kelley, E. Kwan, J.E. Purcell, et al.
2012Ki16	SCIEA	335,	1614	N. Kinoshita, M. Paul, Y. Kashiv, et al.
2012Kn01	PRLTA	108,	122502	A. Knecht, R. Hong, D.W. Zumwalt, et al.
2012Kn02	PRVCA	86,	035506	A. Knecht, R. Hong, D.W. Zumwalt, et al.
2012Ko24	ARISE	70,	2215	K. Kossert, O.J. Nähle, O. Ott, et al.
2012Ko29	PRVCA	86,	024307	A. Korgul, K.P. Rykaczewski, J.A. Winger, et al.
2012Ko43	PRLTA	109,	232501	Z. Kohley, J. Snyder, T. Baumann, et al.
2012Kr05	PRVCA	85,	044319	K.S. Krane
2012Kr07	ARISE	70,	1649	K.S. Krane
2012Ku06	PRVCA	85,	027302	J. Kurpeta, W. Urban, T. Materna, et al.
2012Ku26	PYLBB	717,	371	J. Kurcewicz, F. Farinon, H. Geissel, et al.
2012La05	PRVCA	85,	024317	A. Lapierre, M. Brodeur, T. Brunner, et al.
2012LaZT	JPCSD	366,	012029	S. Lalkovski, A.M. Bruce, A.M.D. Bacelar, et al.
2012La.A	P-Argonne			G.J. Lane
2012Li02	PRVCA	85,	014328	S.N. Liddick, B. Abromeit, A. Ayres, et al.
2012Lo08	PRVCA	86,	014313	G. Lorusso, A. Becerril, A. Amthor, et al.
2012Lu01	NUPAB	874,	32	Y.X. Luo, J.O. Rasmussen, C.S. Nelson, et al.
2012Lu07	PRLTA	108,	142503	E. Lunderberg, P.A. DeYoung, Z. Kohley, et al.

2012Ma03	APOBB	43,	247	T. Malkiewicz, G.S. Simpson, W. Urban, et al.
2012Ma30	ARISE	70,	2270	M. Marouli, S. Pommé, J. Paepen, et al.
2012Ma37	PRLTA	109,	112501	M. Madurga, R. Surman, I.N. Borzov, et al.
2012Ma63	JINST	7,	P08029	L. Mathieu, O. Serot, T. Materna, et al.
2012Ma.A	P-Argonne			M. Madurga et al
2012Me04	EPJAA	48,	20	G. Meierhofer, P. Grabmayr, L. Canella, et al.
2012Mi27	SCIEA	337,	1207	E. Minaya-Ramirez, D. Ackermann, K. Blaum, et al.
2012Mo25	JUPSA	81,	103201	K. Morita, K. Morimoto, D. Kaji, et al.
2012Mu05	PRVCA	85,	044325	I. Mukha, L. Grigorenko, L. Acosta, et al.
2012Na15	PRVCA	86,	014325	S. Naimi, G. Audi, D. Beck, et al.
2012Ne05	ARISE	70,	1990	Y. Nedjadi, C. Bailat, Y. Caffari, et al.
2012Ne10	PRVCA	86,	044313	D.A. Nesterenko, K. Blaum, M. Block, et al.
2012No08	PHSTT	150,	014028	C. Nociforo, F. Farinon, A. Musumarra, et al.
2012Od01	PRVCA	85,	054315	D. O'Donnell, R.D. Page, C. Scholey, et al.
2012Og02	PRLTA	108,	022502	Yu. Ts. Oganessian, F. Sh. Abdullin, S.N. Dmitriev, et al.
2012Og06	PRLTA	109,	162501	Yu. Ts. Oganessian, F. Sh. Abdullin, C. Alexander, et al.
2012Os04	JUPSA	81,	084201	M. Oshima, T. Kin, S. Nakamura, et al.
2012Pa07	PRVCA	85,	035501	H.I. Park, J.C. Hardy, V.E. Iacob, et al.
2012Pa39	PRVCA	86,	064318	D. Pauwels, D. Radulov, W.B. Walters, et al.
2012Pi05	PRVCA	85,	041301	J. Piot, B.J.-P. Gall, O. Dorvaux, et al.
2012Po03	APOBB	43,	267	M. Pomorski, M. Pfützner, W. Dominik, et al.
2012Po12	ARISE	70,	1900	S. Pommé, T. Altzitzoglou, R. Van Ammel, et al.
2012Po13	ARISE	70,	1913	S. Pommé, G. Suliman, M. Marouli, et al.
2012Po14	ARISE	70,	2608	S. Pomme, M. Marouli, G. Suliman, et al.
2012Pr11	PRVCA	86,	034329	T.J. Procter, J. Billowes, M.L. Bissell, et al.
2012Qu01	PRVCA	85,	035807	M. Quinn, A. Aprahamian, J. Pereira, et al.
2012Ra10	PRVCA	85,	034326	M.M. Rajabali, R. Grzywacz, S.N. Liddick, et al.
2012Ra34	PRVAA	86,	050502	R. Rana, M. Höcker, E.G. Myers
2012Re05	PRVCA	85,	035802	R. Reifarth, S. Dababneh, M. Heil, et al.
2012Re17	PRVCA	86,	041306	M. Redshaw, G. Bollen, M. Brodeur, et al.
2012Re19	PRVCA	86,	054321	M.W. Reed, P.M. Walker, I.J. Cullen, et al.
2012Re25	ARISE	70,	2081	E.A. Rezende, A.R. Correia, A. Iwahara, et al.
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, et al.
2012Ro25	PRLTA	109,	092503	F. Rotaru, F. Negoita, S. Grévy, et al.
2012Si07	PRLTA	108,	202502	S.I. Sidorchuk, A.A. Bezbakh, V. Chudoba, et al.
2012Si10	PRVCA	85,	064308	V.V. Simon, T. Brunner, U. Chowdhury, et al.
2012Si23	JPCSD	375,	042011	L. Simard, on behalf of the NEMO-3 collaboration
2012Sl01	EPJAA	48,	12	M. Slezak, D. Venos, O. Lebeda and T. Trojek
2012Sm01	PRVCA	85,	027601	C. Smorra, T. Beyer, K. Blaum, et al.
2012Sm07	PRVCA	86,	044604	C. Smorra, T.R. Rodríguez, T. Beyer, et al.
2012So10	JPGPE	39,	095107	P.C. Sood, R. Gowrishankar, K. Vijay Sai
2012Sp01	PRLTA	108,	102501	A. Spyrou, Z. Kohley, T. Baumann, et al.
2012St10	PRVCA	85,	065503	A. Steyerl, J.M. Pendlebury, C. Kaufman, et al.
2012St.A	P-Argonne			M.A. Stoyer
2012Su11	ARISE	70,	1907	G. Suliman, S. Pommé, M. Marouli, et al.
2012Su22	PRVCA	86,	044318	B. Sulignano, Ch. Theisen, J.-P. Delaroche, et al.
2012Sv02	EPJAA	48,	121	A.I. Svirikhin, A.V. Andreev, V.N. Dushin, et al.
2012Sw01	PRVCA	85,	024313	T.P.D. Swan, P.M. Walker, Zs. Podolyák, et al.
2012Ta18	PRVCA	86,	044310	M.J. Taylor, G.A. Alharshan, D.M. Cullen, et al.
2012Ta.B	RPCHD	81,	1669	V.T. Takau, M.N. Thompson, R.J. Scott, et al.
2012Th13	PRVCA	86,	064315	A. Thornthwaite, D. O'Donnell, R.D. Page, et al.
2012Tr06	PRLTA	109,	042301	S. Triambak, P. Finlay, C.S. Sumithrarachchi, et al.

2012Tr08	JPCSD	337,	012058	L. Trache, A. Banu, J.C. Hardy, et al.
2012Va02	PRVCA	85,	045805	J. Van Schelt, D. Lascar, G. Savard, et al.
2012Ve04	EPJAA	48,	101	M. Venhart, A.N. Andreyev, S. Antalic, et al.
2012Vi10	NATUA	488,	357	R. Vincent, S. Klyatskaya, M. Ruben, et al.
2012Wa10	PRVCA	85,	034329	P.T. Wady, J.F. Smith, E.S. Paul, et al.
2012Wa21	ARISE	70,	1927	S.-l. Wang, T. Bai, Q. Li, et al.
2012We08	JPCSD	337,	012018	L. Weissman, U. Bergmann, J. Cederkall, et al.
2012Zh04	CPLEE	29,	012502	Z.Y. Zhang, Z.G. Gan, L. Ma, et al.
2012Zh34	PRLTA	109,	102501	Y.H. Zhang, H.S. Xu, Yu. A. Litvinov, et al.

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2013Ag11	PRLTA	111,	122503	M. Agostini, for the GERDA Collaboration
2013Ah03	PRVCA	87,	054328	I. Ahmad, J.P. Greene, F.G. Kondev, et al.
2013Ak02	PRVCA	87,	064316	Yu. Aksyutina, T. Aumann, K. Boretzky, et al.
2013Al11	APPYJ	46,	23	E.N. Alexeyev, V.V. Alekseenko, Ju. M. Gavriljuk, et al.
2013Al14	PRVCA	88,	034301	T. Al Kalanee, J. Gibelin, P. Roussel-Chomaz, et al.
2013An03	PRVCA	87,	014317	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2013An10	PRVCA	87,	054311	A.N. Andreyev, V. Liberati, S. Antalic, et al.
2013An13	PRLTA	110,	242502	A.N. Andreyev, M. Huyse, P. Van Duppen, et al.
2013As02	PRVCA	87,	014332	M. Asai, K. Tsukada, M. Sakama, et al.
2013Ba29	PYLBB	723,	302	A.M.D. Bacelar, A.M. Bruce, Zs. Podolyák, et al.
2013Ba41	PRVCA	88,	024315	A.E. Barzakh, L. Kh. Batist, D.V. Fedorov, et al.
2013Be09	PRVCA	87,	034607	P. Belli, R. Bernabei, F. Cappella, et al.
2013Be16	EPJAA	49,	50	J.W. Beeman, F. Bellini, L. Cardani, et al.
2013Be20	PANUE	76,	397	V.A. Belov, E.V. Brakhman, O. Ya. Zeldovich, et al.
2013Be31	EPJAA	49,	92	G. Bellini, for the Borexino Collaboration
2013Bi14	PRVCA	88,	067301	M. Birch, J. Flegenheimer, Z. Schaedig, et al.
2013Bl.A	Th-Orsay			S. Blondel Paris-Sud University
2013Bo18	PRVCA	88,	024611	M. Bowry, Zs. Podolyak, S. Pietri, et al.
2013Bu12	PRVCA	88,	022501	S. Bustabad, G. Bollen, M. Brodeur, et al.
2013Bu17	PRVCA	88,	035502	S. Bustabad, G. Bollen, M. Brodeur, et al.
2013Ca18	PRVCA	88,	034313	C. Caesar, for the R3B Collaboration
2013Ch12	PRLTA	110,	122502	L. Chen, P.M. Walker, H. Geissel, et al.
2013Ch49	PRVCA	88,	054317	A. Chaudhuri, C. Andreoiu, T. Brunner, et al.
2013Ch51	NIMAE	728,	81	L. Chen, J.C. Hardy, M. Bencomo, et al.
2013Ch53	EPSLA	371-372	82	H. Cheng, R.L. Edwards, Ch.-Ch. Shen, et al.
2013Da16	PYLBB	726,	665	H.M. David, P.J. Woods, G. Lotay, et al.
2013De20	PRVCA	87,	067303	H. De Witte, S. Eeckhaudt, A.N. Andreyev, et al.
2013Dr01	PRVCA	87,	014326	G.D. Dracoulis, G.J. Lane, H. Watanabe, et al.
2013Dr04	EPJAA	49,	13	C. Droese, D. Ackermann, L.-L. Andersson, et al.
2013Dr05	PYLBB	720,	330	G.D. Dracoulis, G.J. Lane, A.P. Byrne, et al.
2013Dr06	PRVCA	87,	054309	M.C. Drummond, D.T. Joss, R.D. Page, et al.
2013El01	PRLTA	110,	082501	S. Eliseev, K. Blaum, M. Block, et al.
2013El08	PRVCA	88,	044321	J. Elseviers, A.N. Andreyev, M. Huyse, et al.
2013Fi08	PRVCA	88,	011303	M. Fisichella, A. Musumarra, F. Farinon, et al.
2013Fl09	PRLTA	111,	212501	K.T. Flanagan, K.M. Lynch, J. Billowes, et al.
2013Fo10	JPGPE	40,	055102	H.T. Fortune, R. Sherr
2013Fr13	PYLBB	722,	233	D. Frekers, M.C. Simon, C. Andreoiu, et al.
2013Ga07	PRLTA	110,	062502	A. Gando, for the KamLAND-Zen Collaboration
2013Go10	PYLBB	725,	292	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, et al.
2013Gr03	PRVCA	87,	045502	G.F. Grinyer, G.C. Ball, H. Bouzomita, et al.
2013Ho22	PRVAA	88,	052502	M. Höcker, R. Rana, E.G. Myers
2013Hu08	PRVCA	88,	014311	R.O. Hughes, G.J. Lane, G.D. Dracoulis, et al.

2013It01	PRVCA	88,	011306	Y. Ito, P. Schury, M. Wada, et al.
2013Ja06	PRVCA	87,	054320	U. Jakobsson, S. Juutinen, J. Uusitalo, et al.
2013Jo06	PRVCA	88,	044619	J.G. Johansen, V. Bildstein, M.J.G. Borge, et al.
2013Ka16	PRVCA	87,	044335	Z. Kalaninová, A.N. Andreyev, S. Antalic, et al.
2013KeZZ	IAEA-STI/PUB/1618			M.A. Kellett, A.L. Nichols
2013Ko03	PRVCA	87,	011304	Z. Kohley, E. Lunderberg, P.A. DeYoung, et al.
2013Ko10	PRLTA	110,	152501	Z. Kohley, T. Baumann, D. Bazin, et al.
2013Ko32	PRVCA	88,	047301	K. Kolos, D. Verney, F. Ibrahim, et al.
2013KoZR	EPJWC	63,		F.G. Kondev, M.P. Carpenter, S. Zhu, et al.
2013Kr15	NIMBE	317,	492	S. Kreim, D. Atanasov, D. Beck, et al.
2013La02	PRVCA	87,	014318	J.F.W. Lane, A.N. Andreyev, S. Antalic, et al.
2013La11	PRVCA	87,	034308	S. Lalkovski, A.M. Bruce, A. Jungclaus, et al.
2013La23	PRVCA	88,	015501	A.T. Laffoley, C.E. Svensson, C. Andreoiu, et al.
2013La25	PRVCA	88,	024302	S. Lalkovski, A.M. Bruce, A.M.D. Bacelar, et al.
2013Le03	PRLTA	110,	082502	A. Lepailleur, O. Sorlin, L. Caceres, et al.
2013Le10	PRVCA	87,	034312	B. Lehnert, K. Zuber, E. Andreotti, et al.
2013Li01	PRLTA	110,	012501	D.L. Lincoln, J.D. Holt, G. Bollen, et al.
2013Li04	PRVCA	87,	014325	S.N. Liddick, B. Abromeit, A. Ayres, et al.
2013Li49	PRVCA	88,	044322	V. Liberati, A.N. Andreyev, S. Antalic, et al.
2013Lu10	PRVCA	88,	017604	F. Lu, J. Lee, M.B. Tsang, et al.
2013Ma13	ARISE	74,	123	M. Marouli, G. Suliman, S. Pommé, et al.
2013Ma15	NDSBA	114,	397	A. MacDonald, B. Karamy, K. Setoodehnia, et al.
2013Ma22	PRVCA	87,	034315	C. Mazzocchi, K.P. Rykaczewski, A. Korgul, et al.
2013Ma81	PRVCA	88,	054322	V. Manea, D. Atanasov, D. Beck, et al.
2013Ma87	PRVCA	88,	064320	C. Mazzocchi, R. Surman, R. Grzywacz, et al.
2013Ma.A	PrvCom	Apr	Lunney	Vladimir Manea
2013Mi13	PRVCA	88,	014309	K. Miernik, K.P. Rykaczewski, R. Grzywacz, et al.
2013Mi19	PRLTA	111,	132502	K. Miernik, K.P. Rykaczewski, C.J. Gross, et al.
2013Mo12	NUPAB	909,	69	S. Mosby, N.S. Badger, T. Baumann, et al.
2013Mo20	PRVCA	88,	014319	A.I. Morales, J. Benlliure, M. Górska, et al.
2013Mu08	PRVCA	88,	024618	M. Murakami, S. Goto, H. Murayama, et al.
2013Ny01	PRVCA	88,	054320	M. Nyman, S. Juutinen, I. Darby, et al.
2013Og01	PRVCA	87,	014302	Yu. Ts. Oganessian, F. Sh. Abdullin, S.N. Dmitriev, et al.
2013Og03	PRVCA	87,	034605	Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, et al.
2013Og04	PRVCA	87,	054621	Yu. Ts. Oganessian, F. Sh. Abdullin, C. Alexander, et al.
2013Ol06	PRVCA	88,	044306	B. Olaizola, L.M. Fraile, H. Mach, et al.
2013Pa11	PRLTA	110,	172503	J. Papuga, M.L. Bissell, K. Kreim, et al.
2013Pr01	PRVCA	87,	014308	M.G. Procter, D.M. Cullen, M.J. Taylor, et al.
2013Ra17	PRVCA	88,	014307	D. Radulov, C.J. Chiara, I.G. Darby, et al.
2013Re18	PRVCA	88,	041302	F. Recchia, C.J. Chiara, R.V.F. Janssens, et al.
2013Ri07	PRVCA	88,	044313	J. Rissanen, R.M. Clark, K.E. Gregorich, et al.
2013Ro.A	PrvCom	GAu	May	Marco Rosenbusch
2013Ru07	PRVCA	87,	064317	M. Rudigier, G.S. Simpson, J.M. Daugas, et al.
2013Ru10	PRVCA	88,	024320	P. Ruotsalainen, C. Scholey, R. Julin, et al.
2013Ru11	PRLTA	111,	112502	D. Rudolph, U. Forsberg, P. Golubev, et al.
2013RuZX	Th.-Cologne			M. Rudigier
2013Rz01	PRVCA	87,	031305	T. Rzaca-Urban, W. Urban, A.G. Smith, et al.
2013Sa43	EPJAA	49,	109	J. Sauvage, B. Roussiére, J. Genevey, et al.
2013Se03	PYLBB	719,	362	M.D. Seliverstov, T.E. Cocolios, W. Dexters, et al.
2013Sh30	PRVCA	88,	024310	D. Shubina, R.B. Cakirli, Yu. A. Litvinov, et al.
2013Sn02	PRVCA	88,	031303	J. Snyder, T. Baumann, G. Christian, et al.
2013St25	PRVCA	88,	054304	J. Stanja, Ch. Borgmann, J. Agramunt, et al.
2013StZY	Th.-Munich			K. Steiger
2013Su04	JUPSA	82,	024202	T. Sumita, K. Morimoto, D. Kaji, et al.

2013Su07	PRVCA	87,	024312	J. Su, W.P. Liu, N.C. Shu, et al.
2013Su13	ARISE	77,	32	G. Suliman, S. Pommé, M. Marouli, et al.
2013Su23	NIMBE	317,	756	H. Suzuki, T. Kubo, N. Fukuda, et al.
2013Ta14	PRVCA	87,	054612	O.B. Tarasov, M. Portillo, D.J. Morrissey, et al.
2013Tr09	PRLTA	111,	262501	V. Tripathi, S.L. Tabor, A. Volya, et al.
2013Ue01	PRVCA	87,	034316	H. Ueno, H. Miyatake, Y. Yamamoto, et al.
2013Uj01	PRLTA	110,	032501	P. Ujic, F. de Oliveira Santos, M. Lewitowicz, et al.
2013Uu01	PRVCA	87,	064304	J. Uusitalo, J. Sarén, S. Juutinen, et al.
2013Va10	PRVCA	87,	064303	A. Vancraeyenest, C.M. Petrache, D. Guinet, et al.
2013Va12	PRLTA	111,	061102	J. Van Schelt, D. Lascar, G. Savard, et al.
2013Ve03	PRVCA	87,	054307	D. Verney, B. Tastet, K. Kolos, et al.
2013Vo10	PRLTA	111,	122501	A. Voss, M.R. Pearson, J. Billowes, et al.
2013Wa24	PRLTA	111,	152501	H. Watanabe, G. Lorusso, S. Nishimura, et al.
2013Wi06	NATUA	498,	346	F. Wienholtz, D. Beck, K. Blaum, et al.
2013Wo05	IMSPF	349,	123	R.N. Wolf, F. Wienholtz, D. Atanasov, et al.
2013Wo06	PRLTA	110,	041101	R.N. Wolf, D. Beck, K. Blaum, et al.
2013Wr01	PRVCA	87,	031303	C. Wrede, S.K.L. Sjue, A. García, et al.
2013Ya03	AJLEE	766,	8	X.L. Yan, H.S. Xu, Yu. A. Litvinov, et al.
2013Yo02	PRLTA	110,	192501	D.T. Yordanov, D.L. Balabanski, J. Bieroń, et al.
2013YoZZ	CNS-REP-90		34	R. Yokoyama, D. Kameda, T. Kubo, et al.
2013Za.1	RPCHD	85,	70	G.S. Zahn, J.W.M. Oliva, F.A. Genezini

2014

2014Ag12	NDSBA	120,	74	J. Agramunt, A.R. García, A. Algora, et al.
2014Al03	PRVCA	89,	015502	J.B. Albert, and The EXO Collaboration
2014AlZX	Th.-Liverpool			F.A. Ali, Thesis, Oliver Lodge Laboratory
2014An10	PRVCA	90,	044312	A.N. Andreyev, S. Antalic, D. Ackermann, et al.
2014As01	EPJAA	50,	2	A. Astier, M.-G. Porquet, Ts. Venkova, et al.
2014As02	PRVCA	89,	034310	A. Astier, T. Konstantinopoulos, M.-G. Porquet, et al.
2014Au03	PRVCA	90,	024310	K. Auranen, J. Uusitalo, S. Juutinen, et al.
2014Ba18	PRVCA	89,	054321	J.C. Batchelder, N.T. Brewer, C.J. Gross, et al.
2014Be39	EPJAA	50,	134	P. Belli, R. Bernabei, F. Cappella, et al.
2014BeZZ	EPJWC	66,	02007	G. Benzoni, A.I. Morales
2014Bo26	PRVCA	90,	044307	Ch. Böhm, Ch. Borgmann, G. Audi, et al.
2014Br06	PRLTA	112,	212301	L.J. Broussard, H.O. Back, M.S. Boswell, et al.
2014Br15	PRVCA	90,	027304	K.W. Brown, W.W. Buhro, R.J. Charity, et al.
2014Br19	PRLTA	113,	232501	K.W. Brown, R.J. Charity, L.G. Sobotka, et al.
2014Bu06	PRVCA	90,	014317	I. Budinčević * 1, J. Billowes, M.L. Bissell, et al.
2014Ca03	PRLTA	112,	092501	R.J. Carroll, R.D. Page, D.T. Joss, et al.
2014Ca13	JPGPE	40,	075101	N. Casali, S.S. Nagorny, F. Orio, et al.
2014Ca46	JPGPE	41,	075204	L. Cardani, L. Gironi, N. Ferreiro Iachellini, et al.
2014Ch47	PRVCA	90,	044302	J. Chen, I. Ahmad, J.P. Greene, et al.
2014Cr02	PRVCA	89,	041303	H.L. Crawford, P. Fallon, A.O. Macchiavelli, et al.
2014De41	PYLBB	738,	453	M. Del Santo, Z. Meisel, D. Bazin, et al.
2014Di03	ARISE	87,	126	M.S. Dias, F. Brancaccio, F. Toledo, et al.
2014Di08	PYLBB	736,	533	J. Diriken, N. Patronis, A.N. Andreyev, et al.
2014Do08	NDSBA	120,	44	A.R. Domula, D. Gehre, K. Zuber, et al.
2014Do20	CPCHC	38,	106204	L. Dou, S. Jiang, X.-B. Wang, et al.
2014Dr02	PRVCA	89,	064309	M.C. Drummond, D. O'Donnell, R.D. Page, et al.
2014Ei01	PRVCA	89,	064318	M. Eibach, T. Beyer, K. Blaum, et al.
2014Fe01	PYLBB	728,	191	R. Ferrer, N. Bree, T.E. Cocolios, et al.
2014Fi01	PRVCA	89,	014617	R.B. Firestone, Zs. Revay, T. Belgya
2014Ga20	PRLTA	113,	082501	A.T. Gallant, M. Brodeur, C. Andreoiu, et al.

2014Gh09	PRVCA	90,	041301	L. Ghys, A.N. Andreyev, M. Huyse, et al.
2014Gr10	PRLTA	113,	092501	E. Grodner, A. Gadea, P. Sarriguren, et al.
2014Ha04	PRVCA	89,	024618	H. Haba, M. Huang, D. Kaji, et al.
2014Ha06	PRVCA	89,	034315	M. Haaranen, M. Horoi, J. Suhonen
2014Ha38	NIMAE	747,	41	H. Hayashi, M. Shibata, M. Asai, et al.
2014He29	PRVCA	90,	051303	J. Henderson, D.G. Jenkins, K. Kaneko, et al.
2014Hu02	PRVCA	89,	014606	A.M. Hurst, R.B. Firestone, B.W. Sleaford, et al.
2014Io01	PRVCA	90,	014323	M. Ionescu-Bujor, A. Iordachescu, N. Marginean, et al.
2014Is04	PRVCA	89,	044324	L.W. Iskra, R. Broda, R.V.F. Janssens, et al.
2014Ka22	PRVCA	89,	051302	A. Kankainen, T. Eronen, D. Gorelov, et al.
2014Ka23	PRVCA	89,	054312	Z. Kalaninová, S. Antalic, A.N. Andreyev, et al.
2014Kh04	PRLTA	112,	172501	J. Khuyagbaatar, A. Yakushev, C.E. Düllmann, et al.
2014Ki13	PRVCA	90,	055501	M.F. Kidd, J.H. Esterline, S.W. Finch, et al.
2014Ko14	PRLTA	112,	242501	N. Kobayashi, T. Nakamura, Y. Kondo, et al.
2014Ko17	PRVCA	89,	064315	G.T. Koldste, B. Blank, M.J.G. Borge, et al.
2014Kr04	PYLBB	731,	97	K. Kreim, M.L. Bissell, J. Papuga, et al.
2014Kr09	PRVCA	90,	024301	S. Kreim, D. Beck, K. Blaum, et al.
2014Ku23	EPJAA	50,	135	T. Kurtukian-Nieto, J. Benlliure, K.-H. Schmidt, et al.
2014Ku.A	RSINA	85,	053305	Peter Kunz, Corina Andreoiu, Pierre Bricault, et al.
2014Kw04	PRVCA	89,	045502	A.A. Kwiatkowski, T. Brunner, J.D. Holt, et al.
2014Le02	HYIND	225,	157	A. Lennarz, T. Brunner, C. Andreoiu, et al.
2014Le20	PRLTA	113,	082502	A. Lennarz, A. Grossheim, K.G. Leach, et al.
2014Li17	JRNCD	300,	605	R.M. Lindstrom
2014Li32	PRVCA	90,	014320	R. Lică, N. Marginean, D.G. Ghita, et al.
2014Li50	JRNCD	299,	897	R.M. Lindstrom
2014Lo10	EPJAA	50,	132	A. Lopez-Martens, K. Hauschild, K. Rezynkina, et al.
2014Lu07	PRVCA	89,	044326	Y.X. Luo, J.O. Rasmussen, J.H. Hamilton, et al.
2014Ly01	PRXHA	4,	011055	K.M. Lynch, J. Billowes, M.L. Bissell, et al.
2014Ma21	PRVCA	89,	044318	T.D. Macdonald, B.E. Schultz, J.C. Bale, et al.
2014Mi16	PRVCA	90,	034311	K. Miernik, K.P. Rykaczewski, C.J. Gross, et al.
2014Mo02	PRVCA	89,	014324	A.I. Morales, G. Benzoni, A. Gottardo, et al.
2014Mo15	PRLTA	113,	022702	A.I. Morales, J. Benlliure, T. Kurtukián-Nieto, et al.
2014Mu15	JCAPB	2014,	018	A. Munster, M.V. Sivers, G. Angloher, et al.
2014Na10	PRLTA	112,	142501	T. Nakamura, N. Kobayashi, Y. Kondo, et al.
2014Ne15	PRVCA	90,	042501	D.A. Nesterenko, S. Eliseev, K. Blaum, et al.
2014NiZZ	P-Florence		02072	D. Nishimura, M. Fukuda, T. Sakai, et al.
2014Or04	PRLTA	112,	222501	S.E.A. Orrigo, B. Rubio, Y. Fujita, et al.
2014Pa11	JPGPE	41,	055103	A. Pastore, D. Davesne, J. Navarro
2014Pa45	PRVCA	90,	034321	J. Papuga, M.L. Bissell, K. Kreim, et al.
2014Pe02	PRVCA	89,	024316	P. Peura, C. Scholey, D.T. Joss, et al.
2014Pe22	EPSLA	391,	69	S.T.M. Peters, C. Munker, H. Becker, et al.
2014Pe.A	Th.-Jyvaskyla			P. Peura
2014Po02	ARISE	87,	315	S. Pommé, E. García-Torano, M. Marouli, et al.
2014Po05	PRVCA	90,	014311	M. Pomorski, M. Pfützner, W. Dominik, et al.
2014Ra07	PRVCA	89,	034320	G. Randisi, A. Leprince, H. Al Falou, et al.
2014Ra20	JPGPE	41,	115104	M.M. Rajabali, R. Grzywacz, S.N. Liddick, et al.
2014Ri01	PYLBB	732,	305	K. Riisager, O. Forstner, M.J.G. Borge, et al.
2014Ro14	NDSBA	120,	41	A.M. Rogers, J. Giovinazzo, C.J. Lister, et al.
2014Sa21	RAACA	102,	211	N. Sato, T.K. Sato, M. Asai, et al.
2014Sa46	PYLBB	736,	137	A. Sanetullaev, M.B. Tsang, W.G. Lynch, et al.
2014Sc09	PRVCA	90,	012501	B.E. Schultz, M. Brodeur, C. Andreoiu, et al.
2014Se07	PRVCA	89,	034323	M.D. Seliverstov, T.E. Cocolios, W. Dexters, et al.
2014Se12	PRVCA	89,	057302	G.W. Severin, L.D. Knutson, P.A. Voytas, et al.
2014Sh14	PYLBB	735,	327	P. Shuai, H.S. Xu, X.L. Tu, et al.

2014Sh25	PRVCA	90,	032501	P.D. Shidling, D. Melconian, S. Behling, et al.
2014SmZZ	Th.-NotreDame			K.I. Smith, University of Notre Dame
2014St18	PRVCA	90,	034301	S.R. Stroberg, A. Gade, J.A. Tostevin, et al.
2014Su05	PRVCA	89,	021301	S. Suchyta, S.N. Liddick, Y. Tsunoda, et al.
2014Su07	PRVCA	89,	034317	S. Suchyta, S.N. Liddick, C.J. Chiara, et al.
2014Su11	PRVCA	89,	067303	S. Suchyta, S.N. Liddick, C.J. Chiara, et al.
2014Ta10	PRLTA	112,	162502	A. Takamine, M. Wada, K. Okada, et al.
2014Ta29	PYLBB	738,	223	J. Taprogge, A. Jungclaus, H. Grawe, et al.
2014Ta.A	JPCSD	533,	012043	J. Taprogge, A. Jungclaus, G. Simpson
2014TeZY	IPNO-T-13-07			D. Testov
2014ThZZ	Th.-Liverpool			A.M. Thornthwaite
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, et al.
2014Wa26	PRLTA	113,	042502	H. Watanabe, G. Lorusso, S. Nishimura, et al.
2014Xu07	PRLTA	113,	032505	Z.Y. Xu, S. Nishimura, G. Lorusso, et al.
2014XuZZ	Th.-Tokyo			Z. Xu
2014Xu.A	JUPSC	1,	013035	Z.Y. Xu, S. Nishimura, G. Lorusso, et al.
2014Ya19	JPGPE	41,	105104	H. Yang, L. Ma, Z. Zhang, et al.
2014Ya28	PRVAA	90,	052516	X. Yang, T. Furukawa, T. Wakui, et al.
2014Ya.A	PrvCom	HWJ	Jul	XinLiang Yan
2014YoZZ	CNS-REP-92,		11	R. Yokoyama, D. Kameda, T. Kubo, et al.
2014Zh03	PRVCA	89,	014308	Z.Y. Zhang, Z.G. Gan, L. Ma, et al.

2015

2015Ah03	PRVCA	91,	044310	I. Ahmad, J.P. Greene, F.G. Kondev, et al.
2015Ah04	PRVCA	92,	024313	I. Ahmad, R.R. Chasman, J.P. Greene, et al.
2015Ak02	PRVCA	91,	031301	A. Akber, M.W. Reed, P.M. Walker, et al.
2015Al09	APOBB	46,	601	T. Alexander
2015Al10	PPNUE	46,	157	E.N. Alexeyev, Yu. M. Gavrilyuk, A.M. Gangapshev, et al.
2015An05	EPJAA	51,	41	S. Antalic, F.P. Heßberger, D. Ackermann, et al.
2015Ar07	PYLBB	745,	79	S. Arzumanov, L. Bondarenko, S. Chernyavsky, et al.
2015At03	PRLTA	115,	232501	D. Atanasov, P. Ascher, K. Blaum, et al.
2015Au01	PRVCA	91,	024324	K. Auranen, J. Uusitalo, S. Juutinen, et al.
2015Ba10	PRVCA	91,	024617	D. Banerjee, A. Saha, T. Bhattacharjee, et al.
2015Ba11	NUPAB	935,	52	A.S. Barabash
2015Ba49	PYLBB	750,	176	C. Babcock, H. Heylen, J. Billowes, et al.
2015BaZY	EPJWC	93,	01042	P. Baczyk, M. Czerwiński, A. Korgul, et al.
2015Be07	PYLBB	743,	526	E. Bellotti, C. Broggini, G. Di Carlo, et al.
2015Be11	PRVCA	91,	044605	G. Belier, E.M. Bond, D.J. Vieira, et al.
2015Be13	ARISE	102,	74	D.E. Bergeron, R. Fitzgerald
2015Be23	RAACA	103,	619	M.-M. Be, H. Isnard, P. Cassette, et al.
2015Be32	PYLBB	751,	107	G. Benzoni, A.I. Morales, H. Watanabe, et al.
2015Bi05	NDSBA	128,	131	M. Birch, B. Singh, I. Dillmann, et al.
2015Bl02	EPJAA	51,	8	B. Blank, J.-C. Thomas, P. Ascher, et al.
2015BoZY	P-Antalya		012024	I. Boztosun, H. Dapo, M. Karakoc, et al.
2015Br06	NDSBA	127,	191	E. Browne, J.K. Tuli
2015Ca09	PRVCA	92,	014327	L. Cáceres, A. Lepailleur, O. Sorlin, et al.
2015CaZM	Th.-Chicago			S. Caldwell
2015Ch56	PRVCA	92,	044308	R. Chapman, A. Hodsdon, M. Bouhelal, et al.
2015Ch57	PRVCA	92,	044330	J. Chen, F.G. Kondev, I. Ahmad, et al.
2015Ch58	PRVCA	92,	045803	U. Chowdhury, K.G. Leach, C. Andreoiu, et al.
2015Co02	ARISE	99,	46	S.M. Collins, A.K. Pearce, K.M. Ferreira, et al.

2015Co11	ARISE	104,	203	S.M. Collins, S. Pomme, S.M. Jerome, et al.
2015Cv01	ARISE	104,	160	A. Cvetinovic, A. Likar, M. Lipoglavsek, et al.
2015Cz01	PRVCA	92,	014328	M. Czerwinski, T. Rzaca-Urban, W. Urban, et al.
2015Da12	PRLTA	115,	132502	H.M. David, J. Chen, D. Seweryniak, et al.
2015De22	PYLBB	748,	199	H.M. Devaraja, S. Heinz, O. Beliuskina, et al.
2015De28	PRLTA	115,	132501	R.P. de Groote, I. Budincevic, J. Billowes, et al.
2015Di03	PYLBB	744,	137	T. Dickel, W.R. Plaß, S. Ayet San Andres, et al.
2015Do01	ARISE	96,	83	S.F. Dorsett, K.S. Krane
2015Ei01	PRVCA	92,	045502	M. Eibach, G. Bollen, M. Brodeur, et al.
2015El03	PRLTA	115,	062501	S. Eliseev, K. Blaum, M. Block, et al.
2015Et01	PRVCA	91,	064317	A. Étilé, D. Verney, N.N. Arsenyev, et al.
2015Fi07	PRXHA	5,	011018	D.A. Fink, T.E. Cocolios, A.N. Andreyev, et al.
2015Fl01	PRVCA	91,	034310	F. Flavigny, D. Pauwels, D. Radulov, et al.
2015Fr08	EPJDD	69,	164	N. Frommgen, D.L. Balabanski, M.L. Bissell, et al.
2015Ga38	EPJAA	51,	136	L.P. Gaffney, J. Van de Walle, B. Bastin, et al.
2015Gl03	PRVCA	92,	042501	B.E. Glassman, D. Pérez-Loureiro, C. Wrede, et al.
2015Gr05	PRVCA	91,	032501	J. Grinyer, G.F. Grinyer, M. Babo, et al.
2015Gr14	PRVCA	92,	045503	J. Grinyer, G.F. Grinyer, M. Babo, et al.
2015Gu09	PRVCA	91,	055501	K. Gulyuz, J. Ariche, G. Bollen, et al.
2015He27	PRVCA	92,	044310	A. Herzán, S. Juutinen, K. Auranen, et al.
2015He28	PRVCA	92,	044311	H. Heylen, C. Babcock, J. Billowes, et al.
2015HeZY	Th.-West Lafayette			J. Heim, Purdue University
2015Hu02	PRVCA	91,	024322	P. Humby, A. Simon, C.W. Beausang, et al.
2015Hu07	PRVCA	92,	034615	A.M. Hurst, R.B. Firestone, L. Szentmiklósi, et al.
2015Ka24	PRVCA	92,	014321	Z. Kalaninová, S. Antalic, F.P. Heßberger, et al.
2015KaZX	JUPSC	6,	030106	D. Kaji, K. Morimoto, Y. Wakabayashi, et al.
2015Kh09	PRLTA	115,	242502	J. Khuyagbaatar, A. Yakushev, Ch. E. Düllmann, et al.
2015Ko06	ARISE	95,	143	K. Kossert, K. Bokeloh, R. Dersch, et al.
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, et al.
2015Ko23	JUPSA	84,	054201	Y. Kojima, K. Kosuga, Y. Shima, et al.
2015Kr02	ARISE	97,	12	K.S. Krane
2015Kr07	ARISE	105,	278	K.S. Krane
2015Kw01	PRVCA	92,	061301	A.A. Kwiatkowski, C. Andreoiu, J.C. Bale, et al.
2015La19	PRVCA	92,	025502	A.T. Laffoley, C.E. Svensson, C. Andreoiu, et al.
2015Le14	PRVCA	92,	044320	P. Lee, C.-B. Moon, C.S. Lee, et al.
2015Le17	PRVCA	92,	054309	A. Lepailleur, K. Wimmer, A. Mutschler, et al.
2015Li20	PRVCA	91,	064309	A.A. Lis, C. Mazzocchi, W. Dominik, et al.
2015Li24	PRVCA	92,	014326	H.J. Li, B. Cederwall, T. Bäck, et al.
2015Li33	PRVCA	92,	024319	S.N. Liddick, W.B. Walters, C.J. Chiara, et al.
2015Lo04	PRLTA	114,	192501	G. Lorusso, S. Nishimura, Z.Y. Xu, et al.
2015Lo08	PRVCA	92,	024304	R. Lozeva, A. Odahara, C.-B. Moon, et al.
2015Lu12	EPJAA	51,	113	M.V. Lund, M.J.G. Borge, J.A. Briz, et al.
2015Lu13	PYLBB	750,	356	M.V. Lund, M.J.G. Borge, J.A. Briz, et al.
2015Ma30	PRVCA	91,	045504	S. Malbrunot-Ettenauer, T. Brunner, U. Chowdhury, et al.
2015Ma37	PRVCA	91,	051302	L. Ma, Z.Y. Zhang, Z.G. Gan, et al.
2015Ma54	PRVCA	92,	041302	A. Matta, D. Beaumel, H. Otsu, et al.
2015Ma60	PRVCA	92,	054304	D.A. Matters, N. Fotiades, J.J. Carroll, et al.
2015Me01	PRLTA	114,	022501	Z. Meisel, S. George, S. Ahn, et al.
2015Me08	PRLTA	115,	162501	Z. Meisel, S. George, S. Ahn, et al.
2015Me.A	Th.-Michigan			Z. Meisel
2015Mo01	PRVCA	91,	014301	F. Molina, B. Rubio, Y. Fujita, et al.
2015Mo20	EULEE	111,	52001	A.I. Morales, G. Benzoni, N. Al-Dahan, et al.

2015Mo25	NUPAB	944,	30	K. Morita
2015Mo.A	PrvCom	HWJ	Nov	M. Mougeot
2015Mu13	PRLTA	115,	202501	I. Mukha, L.V. Grigorenko, X. Xu, et al.
2015My03	PRLTA	114,	013003	E.G. Myers, A. Wagner, H. Kracke, et al.
2015NiZZ	JUPSC	6,	030062	I. Nishizuka, T. Sumikama, F. Browne, et al.
2015Og05	NUPAB	944,	62	Yu. Ts. Oganessian, V.K. Utyonkov
2015Pf01	PRVCA	92,	014316	M. Pfützner, W. Dominik, Z. Janas, et al.
2015Pr10	PRVCA	92,	061302	C.J. Prokop, B.P. Crider, S.N. Liddick, et al.
2015Ro10	PRLTA	114,	202501	M. Rosenbusch, P. Ascher, D. Atanasov, et al.
2015Ru02	PRVCA	91,	041304	R.F. Garcia Ruiz, M.L. Bissell, K. Blaum, et al.
2015Ru09	PRVCA	92,	034328	E. Ruchowska, H. Mach, M. Kowal, et al.
2015Sc13	EPJAA	51,	89	F. Schneider, T. Beyer, K. Blaum, et al.
2015Sh16	PRVCA	91,	047304	Y.P. Shen, W.P. Liu, J. Su, et al.
2015So23	PRVCA	92,	051305	P.-A. Söderström, S. Nishimura, Z.Y. Xu, et al.
2015St09	IMPEE	24,	1550043	C. Stengl, H. Wilsenach, K. Zuber
2015St14	EPJAA	51,	117	K. Steiger, S. Nishimura, Z. Li, et al.
2015Su01	CPLEE	32,	012301	L.-J. Sun, C.-J. Lin, X.-X. Xu, et al.
2015Su15	NIMAE	804,	1	L.J. Sun, X.X. Xu, C.J. Lin, et al.
2015Ta12	PRVCA	91,	044322	M.J. Taylor, D.M. Cullen, M.G. Procter, et al.
2015Ta13	PRVCA	91,	054324	J. Taprogge, A. Jungclaus, H. Grawe, et al.
2015Ut02	PRVCA	92,	034609	V.K. Utyonkov, N.T. Brewer, Yu. Ts. Oganessian, et al.
2015Va05	PRVCA	91,	037301	A.A. Valverde, G. Bollen, K. Cooper, et al.
2015Va08	PRLTA	114,	232502	A.A. Valverde, G. Bollen, M. Brodeur, et al.
2015Va10	PRVCA	92,	014325	C. Van Beveren, A.N. Andreyev, A.E. Barzakh, et al.
2015Vi02	GCACA	164,	382	I.M. Villa, P. De Bievre, N.E. Holden, et al.
2015Vo05	PRVCA	91,	044307	A. Voss, F. Buchinger, B. Cheal, et al.
2015Wa02	PYLBB	740,	243	P.T. Wady, J.F. Smith, B. Hadinia, et al.
2015Wa06	PRLTA	114,	041101	A. Wallner, M. Bichler, K. Buczak, et al.
2015Wa28	PRVCA	92,	034317	E.H. Wang, A. Lemasson, J.H. Hamilton, et al.
2015Wi02	NIMAE	769,	65	K. Wimmer, D. Barofsky, D. Bazin, et al.
2015Wi.A	PrvCom	GAu	Jan	F. Wienholtz
2015Wr02	PRVCA	92,	044327	J. Wrzesinski, G.J. Lane, K.H. Maier, et al.
2015Xu14	CPCHC	39,	104001	X. Xu, M. Wang, Y.-H. Zhang, et al.
2015Ya13	EPJAA	51,	88	H.B. Yang, Z.Y. Zhang, J.G. Wang, et al.
2015YaZW	JUPSC	6,	030019	A. Yagi, A. Odahara, R. Daido, et al.
2015YoZX	JUPSC	6,	030021	R. Yokoyama, E. Ideguchi, G. Simpson, et al.
2015Za13	MTRGA	52,	280	S.L. Zafonte, R.S. Van Dyck Jr
2015ZaZY	JPCSD	630,	012011	G.S. Zahn, F.A. Genezini

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2016Ab03	PYLBB	759,	64	K. Abe, for the XMASS Collaboration
2016Ag03	NIMAE	807,	69	J. Agramunt, J.L. Tain, M.B. Gómez Hornillos, et al.
2016Ai01	ARISE	110,	59	P.M. Aitken-Smith, S.M. Collins
2016Ak04	IMPEE	25,	1650045	S. Akkoyun, T. Bayram, F. Dulger, et al.
2016Al03	PRLTA	116,	072501	M. Alanssari, D. Frekers, T. Eronen, et al.
2016Al10	PRVCA	93,	044325	M.F. Alshudifat, R. Grzywacz, M. Madurga, et al.
2016Al28	PPNUE	47,	986	E.N. Alexeyev, Yu. M. Gavrilyuk, A.M. Gangapshev, et al.
2016Al30	IMSPF	406,	1	M. Alanssari, D. Frekers, T. Eronen, et al.
2016An10	PRVCA	93,	064316	B. Andel, A.N. Andreyev, S. Antalic, et al.
2016An14	JPGPE	43,	095202	G. Angloher, M. Bauer, P. Bauer, et al.
2016Ar12	PRVDA	94,	072003	R. Arnold
2016Ar19	PRVDA	93,	112008	R. Arnold
2016As01	NUPAB	946,	171	K. Asakura, A. Gando, Y. Gando, et al.

2016Ba42	PRVCA	94,	024334	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, et al.
2016Ba44	PYLBB	760,	387	C. Babcock, H. Heylen, M.L. Bissell, et al.
2016Ba60	PRVCA	94,	054301	H. Badran, C. Scholey, K. Auranen, et al.
2016Ba65	IMPEE	25,	1650107	T. Bayram, Se. Akkoyun, S. Uruk, et al.
2016Be05	PRLTA	116,	102502	M.B. Bennett, C. Wrede, B.A. Brown, et al.
2016Be11	PRVCA	93,	045502	P. Belli, R. Bernabei, V.B. Brudanin, et al.
2016Bi08	PRVCA	93,	064318	M.L. Bissell, T. Carette, K.T. Flanagan, et al.
2016Bl05	PRVCA	93,	061301	B. Blank, T. Goigoux, P. Ascher, et al.
2016Bo19	PYLBB	760,	273	G. Bocchi, S. Leoni, B. Fornal, et al.
2016Br01	PRVCA	93,	025503	M. Brodeur, C. Nicoloff, T. Ahn, et al.
2016Ca15	PRVCA	93,	034307	R.J. Carroll, R.D. Page, D.T. Joss, et al.
2016Ca22	EPJAA	52,	124	L. Canete, A. Kankainen, T. Eronen, et al.
2016Ca25	PRLTA	117,	012501	R. Caballero-Folch, C. Domingo-Pardo, J. Agramunt, et al.
2016Ca33	PRVCA	94,	024314	L. Capponi, J.F. Smith, P. Ruotsalainen, et al.
2016Ca43	JLTPA	184,	952	N. Casali, A. Dubovik, S. Nagorny, et al.
2016Ce02	PRLTA	116,	162501	I. Celikovic, M. Lewitowicz, R. Gernhäuser, et al.
2016Ch11	PRVCA	93,	034610	P.A. Chodash, J.T. Burke, E.B. Norman, et al.
2016Ci01	EPJAA	52,	89	A.A. Ciemny, W. Dominik, T. Ginter, et al.
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, et al.
2016De29	PRVCA	94,	054311	D.M. Debenham, M.A. Bentley, P.J. Davies, et al.
2016Do05	PRVCA	93,	064317	A.C. Dombos, D.-L. Fang, A. Spyrou, et al.
2016Do10	ARISE	119,	101	T. Domingo, K. Starosta, A. Chester, et al.
2016Dr15	ARISE	109,	160	P. Dryak, J. Sochorova, J. Solc, et al.
2016Du10	PRLTA	116,	172501	M.R. Dunlop, C.E. Svensson, G.C. Ball, et al.
2016Du13	PRVCA	93,	062801	R. Dunlop, V. Bildstein, I. Dillmann, et al.
2016Eb03	PRVCA	94,	024603	J. Ebert, M. Fritts, D. Gehre, et al.
2016Ei01	PRVCA	94,	015502	M. Eibach, G. Bollen, K. Gulyuz, et al.
2016Fa11	PRVCA	94,	054305	G.J. Farooq-Smith, T.E. Cocolios, J. Billowes, et al.
2016Fe11	NCAOB	8,	14520	R. Ferrer, A. Barzakh, B. Bastin, et al.
2016Fi07	PYLBB	758,	407	P. Filianin, S. Schmidt, K. Blaum, et al.
2016Fo10	NUPAB	953,	117	U. Forsberg, D. Rudolph, L.-L. Andersson, et al.
2016Fo16	PYLBB	760,	293	U. Forsberg, D. Rudolph, C. Fahlander, et al.
2016Ga24	ARISE	109,	314	E. García-Torano, V. Peyrés, M. Roteta, et al.
2016Ga30	PRLTA	117,	082503	A. Gando, Y. Gando, T. Hachiya, et al.
2016Ga33	PRVCA	94,	025505	N.D. Gamage, G. Bollen, M. Eibach, et al.
2016Ga34	NPAHA	12,	594	R.F. Garcia Ruiz, M.L. Bissell, K. Blaum, et al.
2016Go26	PRLTA	117,	162501	T. Goigoux, P. Ascher, B. Blank, et al.
2016Go.1	PYLBB	762,	263	T.A. Golubkova, X.-D. Xu, L.V. Grigorenko, et al.
2016Gu02	PRLTA	116,	012501	K. Gulyuz, G. Bollen, M. Brodeur, et al.
2016He08	EPJAA	52,	192	F.P. Hessberger, S. Antalic, A.K. Mistry, et al.
2016He09	PRVCA	94,	034312	H. Heylen, M. De Rydt, G. Neyens, et al.
2016He15	EPJAA	52,	328	F.P. Hessberger, S. Antalic, D. Ackermann, et al.
2016Ho09	EPJAA	52,	180	S. Hofmann, S. Heinz, R. Mann, et al.
2016Ho16	PRVCA	94,	034321	D. Hodge, D.M. Cullen, M.J. Taylor, et al.
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, et al.
2016Is03	PRVCA	93,	014303	L.W. Iskra, R. Broda, R.V.F. Janssens, et al.
2016Ju03	PRVCA	93,	024303	A. Jungclaus, H. Grawe, S. Nishimura, et al.
2016Ka13	JUPSA	85,	015002	D. Kaji, K. Morimoto, H. Haba, et al.
2016Ka15	PRVCA	93,	041304	A. Kankainen, L. Canete, T. Eronen, et al.
2016Kl04	PRVCA	93,	045807	R. Klawitter, A. Bader, M. Brodeur, et al.
2016Kn02	PYLBB	754,	288	R. Knöbel, M. Diwisch, F. Bosch, et al.

2016Kn03	EPJAA	52,	138	R. Knöbel, M. Diwisch, H. Geissel, et al.
2016Ko05	PRVCA	93,	014613	N. Kobayashi, T. Nakamura, Y. Kondo, et al.
2016Ko11	PRLTA	116,	102503	Y. Kondo, T. Nakamura, R. Tanaka, et al.
2016Ko24	PRVCA	93,	064324	A. Korgul, K.P. Rykaczewski, R.K. Grzywacz, et al.
2016Ko45	NCAOB	7,	10246	F. Köhler, K. Blaum, M. Block, et al.
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, et al.
2016Le16	JPGPE	43,	115201	B. Lehnert, E. Andreotti, D. Degering, et al.
2016Lo01	PRVCA	93,	014316	R. Lozeva, H. Naïdja, F. Nowacki, et al.
2016Lu13	EPJAA	52,	304	M.V. Lund, and the IDS Collaboration
2016Lu16	ARISE	109,	146	A. Luca, M. Sahagia, M.-R. Ioan, et al.
2016Ly01	PRVCA	93,	014319	K.M. Lynch, T.E. Cocolios, J. Billowes, et al.
2016Ma05	PRVCA	93,	014310	C.M. MacDonald, R.J. Cornett, C.R.J. Charles, et al.
2016Ma35	PRVCA	93,	054319	D.A. Matters, A.G. Lerch, A.M. Hurst, et al.
2016Ma41	PRVCA	93,	064309	V. Margerin, G.J. Lane, G.D. Dracoulis, et al.
2016Ma49	JRNCD	309,	535	M. Mazanova, P. Dryak, J. Sochorova, et al.
2016Ma50	PRLTA	117,	092502	M. Madurga, S.V. Paulauskas, R. Grzywacz, et al.
2016Ma.A	PrvCom	GAu	Feb	M. MacCormick
2016Mc09	PRVCA	94,	065806	E. McCleskey, A. Banu, M. McCleskey, et al.
2016Me07	PRVCA	93,	035805	Z. Meisel, S. George, S. Ahn, et al.
2016Mi18	PRVCA	94,	024305	K. Miernik, K.P. Rykaczewski, R. Grzywacz, et al.
2016Mo07	PRVCA	93,	034328	A.I. Morales, G. Benzoni, H. Watanabe, et al.
2016Na02	PRVCA	93,	014308	E. Nacher, B. Rubio, A. Algora, et al.
2016Ol06	PRVCA	94,	054318	B. Olaizola, H. Mach, L.M. Fraile, et al.
2016Or03	PRVCA	93,	044336	S.E.A. Orrigo, B. Rubio, Y. Fujita, et al.
2016Or08	PRVCA	94,	044315	S.E.A. Orrigo, B. Rubio, W. Gelletly, et al.
2016Pa01	PYLBB	753,	182	Z. Patel, Zs. Podolyák, P.M. Walker, et al.
2016Pa28	PRVCA	94,	014307	E. Parr, J.F. Smith, P.T. Greenlees, et al.
2016Pa.A	Th.-ANU			N. Palalani, PhD thesis, Australian National University, 2016, unpublished
2016Pe14	PRVCA	94,	024319	C. Petrone, J.M. Daugas, G.S. Simpson, et al.
2016Pr06	PRVCA	94,	024311	D. Pramanik, S. Sarkar, M.S. Sarkar, et al.
2016Pr08	PRVCA	94,	064316	Pragati, A.Y. Deo, Zs. Podolyak, et al.
2016Qu01	ARISE	109,	172	F.G.A. Quarati, P. Dorenbos, X. Mougeot
2016Re01	PYLBB	752,	296	J. Refsgaard, O.S. Kirsebom, E.A. Dijck, et al.
2016Re02	PYLBB	752,	311	M.W. Reed, G.J. Lane, G.D. Dracoulis, et al.
2016Re14	PRVCA	94,	024619	F. Renzi, R. Raabe, G. Randisi, et al.
2016Ri06	BRSPE	80,	880	A.A. Rimskii-Korsakov, V.V. Koltsov, V.V. Karasev
2016So13	PYLBB	762,	404	P.-A. Soderstrom, P.M. Walker, J. Wu, et al.
2016Su10	PYLBB	756,	323	J. Su, W.P. Liu, N.T. Zhang, et al.
2016Su22	YWPIF	33,	230	L. Sun, X. Xu, C. Lin, et al.
2016Ta23	PRVCA	94,	064304	S.K. Tandel, P. Chowdhury, F.G. Kondev, et al.
2016Te05	PPNLA	13,	370	S.A. Telezhnikov, C. Granja, J. Honzatko, et al.
2016Te09	NIMAE	815,	96	D. Testov, D. Verney, B. Roussiere, et al.
2016Tr07	PRVCA	94,	034308	V.L. Truesdale, A.N. Andreyev, L. Ghys, et al.
2016Ub01	PYLBB	754,	323	E. Uberseder, G.V. Rogachev, V.Z. Goldberg, et al.
2016Ur03	PRVCA	94,	011302	W. Urban, U. Koster, M. Jentschel, et al.
2016Va01	JPGPE	43,	025102	C. Van Beveren, A.N. Andreyev, A.E. Barzakh, et al.
2016Va13	ANCHA	88,	2763	Zs. Varga, A. Nicholl, M. Wallenius, et al.
2016Vi01	GCACA	172,	387	I.M. Villa, M.L. Bonardi, P. De Bievre, et al.
2016Wa16	PRVCA	93,	054301	Z.M. Wang, A.B. Garnsworthy, C. Andreoiu, et al.
2016Wa19	PYLBB	760,	641	H. Watanabe, G.X. Zhang, K. Yoshida, et al.

2016Wi.A	AnRpt MSU			J.A. Winger, Mississippi State University (2016); https://doi. org/10. 2172/1248341
2016Xu10	PRLTA	117,	182503	X. Xu, P. Zhang, P. Shuai, et al.
2016Ya02	PRLTA	116,	182502	X.F. Yang, C. Wraith, L. Xie, et al.
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, et al.
2017Al34	PRVCA	96,	044325	N.A. Althubiti, D. Atanasov, K. Blaum, et al.
2017Al38	PRVDA	96,	092001	J.B. Albert, for the EXO-200 Collaboration
2017Al46	EPJCC	77,	13	C. Alduino, K. Alfonso, D.R. Artusa, et al.
2017Am01	PRVCA	95,	014330	B.M.S. Amro, C.J. Lister, E.A. McCutchan, et al.
2017An16	PRVCA	96,	054327	B. Andel, A.N. Andreyev, S. Antalic, et al.
2017Ap03	PRVDA	95,	072008	E. Aprile, for the XENON Collaboration
2017Ar18	ZCCNE	77,	785	E. Armengaud, C. Augier, A.S. Barabash, et al.
2017At01	JPGPE	44,	044004	D. Atanasov, D. Beck, K. Blaum, et al.
2017Au05	PRVCA	95,	044311	K. Auranen, J. Uusitalo, S. Juutinen, et al.
2017Ba04	PRVCA	95,	014324	A.E. Barzakh, A.N. Andreyev, T.E. Cocolios, et al.
2017Ba12	PRVCA	95,	044324	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, et al.
2017Ba46	PRVCA	96,	064314	H. Badran, C. Scholey, J. Uusitalo, et al.
2017Be21	EPJAA	53,	172	P. Belli, R. Bernabei, R.S. Boiko, et al.
2017Br07	PRVCA	95,	044326	K.W. Brown, R.J. Charity, J.M. Elson, et al.
2017Br08	PRVCA	95,	064308	R. Broda, R.V.F. Janssens, Ł. W. Iskra, et al.
2017Br12	PRVCA	96,	024309	F. Browne, A.M. Bruce, T. Sumikama, et al.
2017Br14	PRVCA	96,	034316	M. Brodeur, A.A. Kwiatkowski, O.M. Drozdowski, et al.
2017Br.A	Th.-Strasbourg			P. Brionnet, PhD Thesis, University of Strasbourg, 2017, unpublished
2017Ca12	PRVCA	95,	064322	R. Caballero-Folch, C. Domingo-Pardo, J. Agramunt, et al.
2017Ch18	PRVCA	95,	041302	S. Chen, P. Doornenbal, A. Obertelli, et al.
2017Ch37	PRVCA	96,	034302	X.C. Chen, Q. Zeng, Yu. A. Litvinov, et al.
2017Ch51	PYLBB	775,	190	A. Chebboubi, G. Kessedjian, O. Litaize, et al.
2017Da07	PYLBB	767,	474	P.J. Davies, H. Grawe, K. Moschner, et al.
2017Da28	MTRGA	54,	410	G. D'Agostino, M. Di Luzio, G. Mana, et al.
2017De18	PRVCA	96,	014310	A. de Roubin, D. Atanasov, K. Blaum, et al.
2017De30	PRVCA	96,	041302	R.P. de Groote, J. Billowes, C.L. Binnersley, et al.
2017Du11	PRVCA	96,	045502	M.R. Dunlop, C.E. Svensson, G.C. Ball, et al.
2017Dy01	EPJAA	53,	13	A.B. D'yachkov, V.A. Firsov, A.A. Gorkunov, et al.
2017Er01	PRVCA	95,	025501	T. Eronen, J.C. Hardy, L. Canete, et al.
2017Fa09	PRVCA	96,	044324	G.J. Farooq-Smith, A.R. Vernon, J. Billowes, et al.
2017Fe10	NCAOB	8,	14520	R. Ferrer, A. Barzakh, B. Bastin, et al.
2017FeZZ	EPJWC	146,	08002	K.M. Ferreira, S.M. Collins, A.J. Fenwick
2017Fi03	PRVCA	95,	014328	R.B. Firestone, T. Belgya, M. Krticka, et al.
2017Fi07	PRVCA	96,	025501	P. Finlay, A.T. Laffoley, G.C. Ball, et al.
2017Fo24	PRVCA	96,	065501	C. Fontbonne, P. Ujić, F. de Oliveira Santos, et al.
2017Ga20	PRVCA	96,	024325	A.T. Gallant, M. Alanssari, J.C. Bale, et al.
2017Ga25	PRVCA	96,	044329	A.B. Garnsworthy, M. Bowry, B. Olaizola, et al.
2017GoZT	Th.-Bordeaux			T. Goigoux, PhD Thesis, University of Bordeaux
2017Gr12	PRVCA	96,	014613	S.A. Graves, P.A. Ellison, H.F. Valdovinos, et al.
2017Gr18	PRVCA	96,	054331	C. Granados, P. Creemers, R. Ferrer, et al.
2017Gu08	APOBB	48,	601	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, et al.
2017Gu24	RPCHD	140,	493	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, et al.
2017GuZW	EPJWC	146,	10009	L.A. Gurgi, P.H. Regan, P.-A. Soderstrom, et al.
2017Ha23	PYLBB	772,	529	R. Han, X.Q. Li, W.G. Jiang, et al.
2017Ha33	PRVAA	96,	060501	S. Hamzeloui, J.A. Smith, D.J. Fink, et al.

2017He08	EPJAA	53,	75	F.P. Heßberger
2017He11	EPJAA	53,	123	F.P. Hessberger, D. Ackermann
2017He12	PRVCA	96,	014301	A. Herzáň, S. Juutinen, K. Auranen, et al.
2017He14	PRLTA	119,	033001	F. Heiße, F. Kohler-Langes, S. Rau, et al.
2017Hi05	PRVCA	96,	014307	Y. Hirayama, M. Mukai, Y.X. Watanabe, et al.
2017Ho10	PYLBB	769,	62	J. Hooker, G.V. Rogachev, V.Z. Goldberg, et al.
2017Hu08	PRVCA	96,	014324	T.H. Huang, W.Q. Zhang, M.D. Sun, et al.
2017Ja05	PRVCA	95,	034315	L. Janiak, N. Sokolowska, A.A. Bezbakh, et al.
2017Ju02	PYLBB	772,	483	A. Jungclaus, H. Grawe, S. Nishimura, et al.
2017Ka31	JUPSA	86,	085001	D. Kaji, K. Morimoto, H. Haba, et al.
2017Ka53	PRVCA	96,	044321	R.M.E.B. Kandegedara, G. Bollen, M. Eibach, et al.
2017Ka66	JUPSA	86,	034201	D. Kaji, K. Morita, K. Morimoto, et al.
2017Ki09	EPJAA	53,	162	Y.H. Kim, A. Lemasson, M. Rejmund, et al.
2017Ko02	PYLBB	764,	265	J. Konki, J. Khuyagbaatar, J. Uusitalo, et al.
2017Ko11	PRVCA	95,	044305	A. Korgul, K.P. Rykaczewski, R.K. Grzywacz, et al.
2017Ko16	ARISE	125,	15	K. Kossert
2017Kr01	ARISE	121,	28	K.S. Krane
2017Kr.1	APPCD	123,	15	A. Krieger, W. Nörtershäuser, Ch. Geppert, et al.
2017Ku12	EPJAA	53,	134	L. Kucuk, S.E.A. Orrigo, A. Montaner-Piza, et al.
2017La16	PRVCA	96,	044323	D. Lascar, R. Klawitter, C. Babcock, et al.
2017Le01	PRVCA	95,	044306	B. Lehnert, M. Hult, G. Lutter, et al.
2017Li03	PRVCA	95,	021301	R. Lică, for the IDS Collaboration
2017Li06	JPGPE	44,	054002	R. Lică, G. Benzoni, A.I. Morales, et al.
2017Lo09	PRVCA	96,	015502	J. Long, T. Ahn, J. Allen, et al.
2017Lo13	PRVCA	96,	034315	Ch. Lorenz, L.G. Sarmiento, D. Rudolph, et al.
2017Ma18	EPJAA	53,	77	C. Magron, Ph. Alfaurt, B. Blank, et al.
2017Ma29	PRVCA	95,	054322	V. Manea, P. Ascher, D. Atanasov, et al.
2017Ma77	PYLBB	775,	160	A.O. Macchiavelli, H.L. Crawford, P. Fallon, et al.
2017Mi01	EPJAA	53,	24	A.K. Mistry, R.-D. Herzberg, P.T. Greenlees, et al.
2017Mo02	PYLBB	765,	328	A.I. Morales, G. Benzoni, H. Watanabe, et al.
2017Mo12	PRVCA	95,	044322	B. Moon, C.-B. Moon, P.-A. Soderstrom, et al.
2017Mo18	PRVCA	95,	064327	A.I. Morales, A. Algora, B. Rubio, et al.
2017Mo19	PRVCA	96,	014325	B. Moon, C.-B. Moon, A. Odahara, et al.
2017Mo26	PRVCA	96,	034328	S. Momiyama, P. Doornenbal, H. Scheit, et al.
2017Na22	NIMAE	868,	119	L.J. Nadderd, K.M. Subotic, Yu. S. Tsyganov, et al.
2017Ne05	JPGPE	44,	065103	D.A. Nesterenko, A. Kankainen, L. Canete, et al.
2017Ni03	PRVCA	95,	034325	N. Nica, J.C. Hardy, V.E. Iacob, et al.
2017Og01	PHSTB	92,	023003	Y.T. Oganessian, A. Sobiczewski, G.M. Ter-Akopian
2017Ol08	JPGPE	44,	125103	B. Olaizola, L.M. Fraile, H. Mach, et al.
2017Os02	PRVCA	95,	055809	K.M. Ostdiek, T.S. Anderson, W.K. Bauder, et al.
2017Pa25	PRVCA	96,	034305	Z. Patel, P.M. Walker, Zs. Podolyak, et al.
2017Pa35	PRVCA	96,	044311	J. Park, R. Krucken, D. Lubos, et al.
2017Pe03	PRVCA	95,	014305	J. Perkowski, J. Andrzejewski, Ch. Droste et al.
2017Pe09	PRVCA	96,	014306	D. Pérez-Loureiro, C. Wrede, M.B. Bennett, et al.
2017Pr03	PRVCA	95,	034328	F.M. Prados-Estevez, E.E. Peters, A. Chakraborty, et al.
2017Ra10	PRVCA	95,	054328	B.C. Rasco, K.P. Rykaczewski, A. Fijałkowska, et al.
2017Ra11	JPGPE	44,	074001	E. Rapisarda, A.N. Andreyev, S. Antalic, et al.
2017Ra15	PRLTA	119,	122501	P.C.-O. Ranitzsch, C. Hassel, M. Wegner, et al.
2017Ra20	EPJAA	53,	184	A.J. Radich, P.E. Garrett, C. Andreoiu, et al.
2017Re10	PRVCA	96,	052501	M.P. Reiter, K.G. Leach, O.M. Drozdowski et al.
2017Ri.A	Th.- Darmstadt			A.K. Rink
2017Sc02	PRVCA	95,	011305	P. Schury, M. Wada, Y. Ito, et al.
2017Se01	PRLTA	118,	042501	B. Seiferle, L. v. d. Wense, P.G. Thirolf
2017So26	PRVCA	96,	064619	J. Soter, M. Bhike, S.W. Finch, et al.

2017Sp03	JPGPE	44,	044002	A. Spyrou, A.C. Larsen, S.N. Liddick, et al.
2017Su05	PRVCA	95,	014314	L.J. Sun, X.X. Xu, D.Q. Fang, et al.
2017Su15	PRVCA	95,	051601	T. Sumikama, S. Nishimura, H. Baba, et al.
2017Su18	PYLBB	771,	303	M.D. Sun, Z. Liu, T.H. Huang, et al.
2017Su31	PRLTA	119,	192503	H. Suzuki, L. Sinclair, P.-A. Soderstrom, et al.
2017Sv02	PPNLA	14,	571	A.I. Svirikhin, A.V. Andreev, A.V. Yeremin, et al.
2017Tr02	PRVCA	95,	024308	V. Tripathi, R.S. Lubna, B. Abromeit, et al.
2017Ur03	PRVCA	96,	044333	W. Urban, M. Czerwiński, J. Kurpeta, et al.
2017Ve01	PRVCA	95,	054320	D. Verney, D. Testov, F. Ibrahim, et al.
2017Ve04	NIMAE	849,	112	M. Venhart, J.L. Wood, A.J. Boston, et al.
2017Ve05	PRVCA	96,	034311	V. Vedia, V. Paziy, L.M. Fraile, et al.
2017Vo01	PRVCA	95,	024316	A. Vogt, B. Birkenbach, P. Reiter, et al.
2017Vo06	PRVCA	96,	024321	A. Vogt, M. Siciliano, B. Birkenbach, et al.
2017Wa18	PYLBB	770,	83	F. Wang, B.H. Sun, Z. Liu, et al.
2017We09	EPJAA	53,	153	A. Welker, P. Filianin, N.A.S. Althubiti, et al.
2017We16	PRLTA	119,	192502	A. Welker, N.A.S. Althubiti, D. Atanasov, et al.
2017Wi11	PRVCA	96,	034317	S.G. Wilkins, K.M. Lynch, J. Billowes, et al.
2017Wi13	PRVCA	96,	044315	G.L. Wilson, M. Takeyama, A.N. Andreyev, et al.
2017Wo02	PRVCA	95,	054308	R.T. Wood, P.M. Walker, G.J. Lane, et al.
2017Wr01	PYLBB	771,	385	C. Wraith, X.F. Yang, L. Xie, et al.
2017Wu03	PRVCA	95,	014310	A.H. Wuosmaa, S. Bedoor, K.W. Brown, et al.
2017Wu04	PRLTA	118,	072701	J. Wu, S. Nishimura, G. Lorusso, et al.
2017Xu01	PYLBB	766,	312	X.X. Xu, C.J. Lin, L.J. Sun, et al.
2017Yo01	PRVCA	95,	034313	R. Yokoyama, S. Go, D. Kameda, et al.
2017Yo05	JPGPE	44,	075104	D.T. Yordanov, M.L. Bissell, K. Blaum, et al.
2017Ze02	PRVCA	96,	031303	Q. Zeng, M. Wang, X.H. Zhou, et al.
2017Zh12	PYLBB	767,	20	P. Zhang, X. Xu, P. Shuai, et al.
2017Zh52	HHYF9	39,	218	X.-Y. Zhang, Y.-Q. Ding, X.-F. Wang, et al.

2018

2018Aa02	PRLTA	120,	132502	C.E. Aalseth, for the Majorana Collaboration
2018Ab02	PRVCA	97,	034312	E.P. Abel, H.K. Clause, J. Fonslet, et al.
2018Ac08	NIMAE	907,	81	D. Ackermann, A.K. Mistry, F.P. Hessberger, et al.
2018Ag03	PRLTA	120,	132503	M. Agostini, in the GERDA Collaboration
2018Ah01	PRVCA	97,	014324	I. Ahmad, F.G. Kondev, J.P. Greene, et al.
2018Al05	PRLTA	120,	072701	J.B. Albert, for the EXO-200 Collaboration
2018Al13	PRLTA	120,	132501	C. Alduino, for the CUORE Collaboration
2018Al14	PRVCA	97,	034327	P. Alexa, M. Ramdhane, G. Thiamova, et al.
2018Al20	PRVDA	97,	072007	J.B. Albert
2018Al32	PPNUE	49,	557	E.N. Alexeev, Yu. M. Gavrilyuk, A.M. Gangapshev, et al.
2018Ar06	EPJCC	78,	821	R. Arnold, for the NEMO-3 Collaboration
2018Au01	PRVCA	97,	024301	K. Auranen, J. Uusitalo, S. Juutinen, et al.
2018Au04	PRLTA	121,	182501	K. Auranen, D. Seweryniak, M. Albers, et al.
2018Az05	PRLTA	120,	232502	O. Azzolini, M.T. Barrera, J.W. Beeman, et al.
2018Ba03	PRVCA	97,	014322	A.E. Barzakh, D.V. Fedorov, V.S. Ivanov, et al.
2018Ba08	PRVCA	97,	024312	C. Babcock, R. Klawitter, E. Leistenschneider, et al.
2018Ba44	PRVDA	98,	092007	A.S. Barabash, P. Belli, R. Bernabei, et al.
2018Be03	ARISE	134,	416	D.E. Bergeron, J.T. Cessna, B.E. Zimmerman
2018Be25	JPGPE	45,	095101	P. Belli, R. Bernabei, R.S. Boiko, et al.
2018Be29	PRVCA	98,	034612	G. Bélier, J. Aupiais, G. Sibbens, et al.
2018Br13	PRVCA	98,	024317	N.T. Brewer, V.K. Utyonkov, K.P. Rykaczewski, et al.
2018Br15	PRVCA	98,	024324	R. Broda, Ł. W. Iskra, R.V.F. Janssens, et al.
2018Ca22	PRVCA	98,	034310	R. Caballero-Folch, I. Dillmann, J. Agramunt, et al.

2018Ch23	PRVCA	97,	051601	D. Chattopadhyay, S. Santra, A. Pal, et al.
2018Ch25	PRVCA	97,	054318	R.J. Charity, K.W. Brown, J. Okolowicz, et al.
2018Ch31	PYLBB	781,	412	J. Chen, J.L. Lou, Y.L. Ye, et al.
2018Cu02	PRVCA	97,	054327	J.G. Cubiss, A.E. Barzakh, M.D. Seliverstov, et al.
2018Cu04	PYLBB	786,	355	J.G. Cubiss, A.E. Barzakh, A.N. Andreyev, et al.
2018Di11	PYLBB	784,	199	A. Di Nitto, J. Khuyagbaatar, D. Ackermann, et al.
2018Es07	JRNCD	318,	515	R.M. Essex, J.L. Mann, R. Colle, et al.
2018Ez.1	JTPLA	107,	671	V.F. Ezhov, A.Z. Andreev, G. Ban, et al.
2018Fu08	JUPSA	87,	014202	N. Fukuda, T. Kubo, D. Kameda, et al.
2018Fu11	PRVCA	98,	014315	C.Y. Fu, Y.H. Zhang, X.H. Zhou, et al.
2018Ga04	ARISE	134,	421	E. Garcia-Torano, V. Peyres, M. Roteta, et al.
2018Ga18	PRVCA	97,	064317	L. Gaudefroy, S. Peru, N. Arnal, et al.
2018Ga34	PRLTA	121,	222501	J.M. Gates, G.K. Pang, J.L. Pore, et al.
2018Ga37	ARISE	140,	157	E. Garcia-Torano, T. Altzitzoglou, P. Auerbach, et al.
2018Gr09	PRVCA	98,	044607	J.R. Griswold, C.U. Jost, D.W. Stracener, et al.
2018Ha19	PRLTA	120,	182502	D.J. Hartley, F.G. Kondev, R. Orford, et al.
2018Ha30	PRLTA	121,	102501	M. Hammen, W. Nortershauser, D.L. Balabanski, et al.
2018Hi07	PRVCA	98,	014321	Y. Hirayama, Y.X. Watanabe, M. Mukai, et al.
2018Hu13	PRVCA	98,	044302	T.H. Huang, W.Q. Zhang, M.D. Sun, et al.
2018Ia01	PRVCA	97,	035501	V.E. Iacob, J.C. Hardy, L. Chen, et al.
2018It04	PRLTA	120,	152501	Y. Ito, P. Schury, M. Wada, et al.
2018Iz01	PRVCA	97,	014309	C. Izzo, G. Bollen, M. Brodeur, et al.
2018Ka47	PRVCA	98,	054312	L. Kaya, A. Vogt, P. Reiter, et al.
2018Ki12	PRLTA	121,	142701	O.S. Kirsebom, O. Tengblad, R. Lica, et al.
2018Ki21	IMSPF	430,	134	S. Kimura, Y. Ito, D. Kaji, et al.
2018Ko05	PRVCA	97,	024306	J. Konki, B. Sulignano, P.T. Greenlees, et al.
2018Ko15	NDSBA	150,	1	F.G. Kondev, S. Juutinen, D.J. Hartley
2018Ku13	PRVCA	98,	024318	J. Kurpeta, A. Plochocki, W. Urban, et al.
2018La03	JPGPE	45,	035105	N. Lalovic, for the AGATA Collaboration
2018Le03	PRLTA	120,	062503	E. Leistenschneider, M.P. Reiter, S. Ayet San Andrés, et al.
2018Le10	PRVCA	98,	024302	M.C. Lewis, E. Parr, R.D. Page, et al.
2018Le18	PRLTA	121,	262502	S. Leblond, F.M. Marques, J. Gibelin, et al.
2018Li06	PRVCA	97,	024305	R. Lica, for the IDS Collaboration
2018Lo02	EULEE	120,	22001	G. Lorusso, S.M. Collins, K. Jagan, et al.
2018Ly01	PRVCA	97,	024309	K.M. Lynch, S.G. Wilkins, J. Billowes, et al.
2018Ma51	PRVCA	98,	024617	A.J. Mayer, M. Wieser, M. Alanssari, et al.
2018Ma.1	NPAHA	14,	1163	B.A. Marsh, T.D. Goodacre, S. Sels, et al.
2018Mi03	PRVCA	97,	054317	K. Miernik, K.P. Rykaczewski, R. Grzywacz, et al.
2018Mi08	PRLTA	121,	022506	S. Michimasa, M. Kobayashi, Y. Kiyokawa, et al.
2018Mi11	APOBB	49,	613	A.K. Mistry, Z. Zhang, F.P. Hessberger, et al.
2018Mo04	ARISE	134,	225	X. Mougeot
2018Mo14	PRLTA	120,	232501	M. Mougeot, D. Atanasov, K. Blaum, et al.
2018Mu18	PRVCA	98,	064308	I. Mukha, L.V. Grigorenko, D. Kostyleva, et al.
2018Mu19	NIMAE	884,	1	M. Mukai, Y. Hirayama, Y.X. Watanabe, et al.
2018Na20	PRVCA	98,	024319	B.S. Nara Singh, D.M. Cullen, M.J. Taylor, et al.
2018Ne09	EPJAA	54,	154	D.A. Nesterenko, T. Eronen, A. Kankainen, et al.
2018No01	PRVCA	97,	015501	F. Nozzoli
2018On01	PRVCA	98,	065803	W.-J. Ong, A.A. Valverde, M. Brodeur, et al.
2018On.A	Th.-MSU			W.J. Ong
2018Or02	PRLTA	120,	262702	R. Orford, N. Vassh, J.A. Clark, et al.
2018Or.A	Th.-McGill			R. Orford
2018Pa20	PRVCA	97,	051301	J. Park, R. Krucken, D. Lubos, et al.
2018Pa37	PRVCA	98,	024321	E. Parr, R.D. Page, D.T. Joss, et al.
2018Pa45	JRNCD	318,	711	T. Parsons-Davis, J. Wimpenny, C.B. Keller, et al.

2018Pa53	SCIEA	360,	627	R.W. Pattie, N.B. Callahan, C. Cude-Woods, et al.
2018Po07	PRVCA	97,	054310	F. Ponce, E. Swanberg, J. Burke, et al.
2018Ra11	PRLTA	120,	232503	S. Raeder, D. Ackermann, H. Backe, et al.
2018Ra27	NIMAE	911,	79	B.C. Rasco, N.T. Brewer, R. Yokoyama, et al.
2018Re07	PRVCA	97,	054332	K. Rezynkina, A. Lopez-Martens, K. Hauschild, et al.
2018Re11	PRVCA	98,	024310	M.P. Reiter, S. Ayet San Andres, E. Dunling, et al.
2018Ro14	PRVCA	97,	064306	M. Rosenbusch, Y. Ito, P. Schury, et al.
2018Rz01	PRVCA	98,	064315	T. Rzaca-Urban, W. Urban, M. Czerwiński, et al.
2018Sa45	PRVCA	98,	044307	A. Såamark-Roth, L.G. Sarmiento, D. Rudolph, et al.
2018Sa.A	JPCSD	940,	012004	A. Saastamoinen, G.J. Lotay, A. Kankainen, et al.
2018Sc05	PYLBB	779,	324	S. Schmidt, J. Billowes, M.L. Bissell, et al.
2018Se09	PRVCA	97,	055503	A.P. Serebrov, E.A. Kolomensky, A.K. Fomin, et al.
2018Sh09	ARISE	136,	101	H.A. Shugart, E. Browne, E.B. Norman
2018Sh11	JUPSA	87,	014203	Y. Shimizu, T. Kubo, N. Fukuda, et al.
2018Sh23	PRVCA	98,	014306	Y. Shigekawa, Y. Kasamatsu, Y. Yasuda, et al.
2018Sh27	PRVCA	98,	015502	P.D. Shidling, R.S. Behling, B. Fenker, et al.
2018Si28	PRVCA	98,	054307	K. Siegl, K. Kolos, N.D. Scielzo, et al.
2018Sm03	PRLTA	120,	143002	J.A. Smith, S. Hamzeloui, D.J. Fink, et al.
2018So16	PRVCA	98,	024602	A. Sonay, M. Deniz, H.T. Wong, et al.
2018St18	PRVCA	98,	064326	M. Stryjczyk, Y. Tsunoda, I.G. Darby, et al.
2018Sv02	BRSPE	82,	632	A.I. Svirikhin, A.V. Yeremin, A.V. Andreev, et al.
2018Ta17	PRLTA	121,	022501	O.B. Tarasov, D.S. Ahn, D. Bazin, et al.
2018Th02	NATUA	556,	321	J. Thielking, M.V. Okhapkin, P. Glowacki, et al.
2018Tu03	PRVCA	97,	014321	X.L. Tu, X.C. Chen, J.T. Zhang, et al.
2018Ut02	PRVCA	97,	014320	V.K. Utyonkov, N.T. Brewer, Yu. Ts. Oganessian, et al.
2018Va01	PRLTA	120,	032701	A.A. Valverde, M. Brodeur, G. Bollen, et al.
2018Va04	PRVCA	97,	035503	A.A. Valverde, M. Brodeur, T. Ahn, et al.
2018Vi02	PRLTA	120,	262701	M. Vilen, J.M. Kelly, A. Kankainen, et al.
2018Wa05	IMPEE	27,	1850014	K. Wang, D.Q. Fang, Y.T. Wang, et al.
2018Wa20	EPJAA	54,	107	Y.-T. Wang, D.-Q. Fang, K. Wang, et al.
2018Wa24	PYLBB	784,	12	Y.T. Wang, D.Q. Fang, K. Wang, et al.
2018Xi04	PYLBB	781,	358	Y.M. Xing, K.A. Li, Y.H. Zhang, et al.
2018Xu04	PRVCA	97,	034305	X.-D. Xu, I. Mukha, L.V. Grigorenko, et al.
2018Xu05	PYLBB	782,	619	Z.Y. Xu, H. Heylen, K. Asahi, et al.
2018Ya01	PYLBB	777,	212	H.B. Yang, L. Ma, Z.Y. Zhang, et al.
2018Ya11	PRVCA	97,	044324	X.F. Yang, Y. Tsunoda, C. Babcock, et al.
2018Yo07	PRVCA	98,	011303	D.T. Yordanov, D.L. Balabanski, M.L. Bissell, et al.
2018Zh29	PRVCA	98,	014319	Y.H. Zhang, P. Zhang, X.H. Zhou, et al.

2019

2019Ab04	EPJAA	55,	103	G. Abbas, M. Tahir
2019Ab06	PRVCA	100,	014323	B. Abromeit, V. Tripathi, H.L. Crawford, et al.
2019Ah04	NIMAE	940,	56	I. Ahmad, F.G. Kondev
2019Ah07	PRLTA	123,	212501	D.S. Ahn, N. Fukuda, H. Geissel, et al.
2019Al24	PRVCA	100,	025501	S.I. Alvis, for the Majorana Collaboration
2019An10	PRVCA	99,	064313	S.A.S. Andres, C. Hornung, J. Ebert, et al.
2019Ar04	ZCCNE	79,	440	R. Arnold, for the NEMO-3 Collaboration
2019As04	PRVCA	100,	014304	P. Ascher, N. Althubiti, D. Atanasov, et al.
2019Au02	PYLBB	792,	187	K. Auranen, D. Seweryniak, M. Albers, et al.
2019Ay03	PRLTA	123,	082501	Y. Ayyad, B. Olaizola, W. Mittig, et al.
2019Az02	PRLTA	123,	032501	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2019Az04	PRLTA	123,	262501	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2019Ba22	PRVCA	99,	054317	A.E. Barzakh, J.G. Cubiss, A.N. Andreyev, et al.

2019Be27	NUPAB	990,	64	P. Belli, R. Bernabei, R.S. Boiko, et al.
2019Be29	ZAANE	55,	140	P. Belli, R. Bernabei, F.A. Danevich, et al.
2019Bi04	PRVCA	99,	064302	S. Biswas, A. Lemasson, M. Rejmund, et al.
2019Br01	ARISE	144,	54	K. Broderick, R. Lusk, J. Hinderer, et al.
2019Br06	PRVCA	99,	024614	R. Briselet, Ch. Theisen, M. Vandebrouck, et al.
2019Bu01	PRVCA	99,	015501	D.P. Burdette, M. Brodeur, T. Ahn, et al.
2019Ca21	UNIGE	5,	10	A. Caminata, D. Adams, Ch. Alduino, et al.
2019Ch24	PRLTA	122,	212502	Z.Q. Chen, Z.H. Li, H. Hua, et al.
2019Ch43	PRLTA	123,	142501	S. Chen, J. Lee, P. Doornenbal, et al.
2019Co02	NUPAB	982,	189c	G. Coci, L. Oliva, S. Plumari, et al.
2019Cu02	PRVCA	99,	064317	J.G. Cubiss, A.N. Andreyev, A.E. Barzakh, et al.
2019Da02	PRVCA	99,	021302	P.J. Davies, J. Park, H. Grawe, et al.
2019De11	EPJAA	55,	25	H.M. Devaraja, S. Heinz, O. Beliuskina, et al.
2019De24	EPJAA	55,	135	H.D. Dearmon, K.S. Krane
2019Di08	PRVCA	99,	054322	F. Diel, Y. Fujita, H. Fujita, et al.
2019Do02	PRVCA	99,	015802	A.C. Dombos, A. Spyrou, F. Naqvi, et al.
2019Du12	PRVCA	99,	045805	R. Dunlop, C.E. Svensson, C. Andreoiu, et al.
2019Es04	PRVCA	100,	064309	A. Esmaylzadeh, J.-M. Regis, Y.H. Kim, et al.
2019Fo10	PRVCA	99,	051302	H.T. Fortune
2019Fr08	HYIND	240,	66	N. Frommgen, W. Nortershauser, M.L. Bissell, et al.
2019Ga11	PRLTA	122,	192501	A. Gando, for the KamLAND-Zen Collaboration
2019Gh11	PRVCA	100,	054310	L. Ghys, A.N. Andreyev, M. Huyse, et al.
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, et al.
2019Go10	PRVCA	99,	054326	A. Gottardo, J.J. Valiente-Dobón, G. Benzoni, et al.
2019Gy04	ARISE	148,	87	G. Gyurky, Z. Halasz, G.G. Kiss, et al.
2019Ha26	PRVCA	100,	024302	G. Häfner, K. Moschner, A. Blazhev, et al.
2019He17	EPJAA	55,	208	F.P. Heßberger
2019He19	PRVAA	100,	022518	F. Heisse, S. Rau, F. Kohler-Langes, et al.
2019Hi06	PRVCA	100,	014305	J. Hilton, J. Uusitalo, J. Saren, et al.
2019Hu07	PRVCA	99,	024310	A.M. Hurst, A. Sweet, B.L. Goldblum, et al.
2019Hu15	EPJAA	55,	96	W.J. Huang, D. Atanasov, G. Audi, et al.
2019Ic02	NPAHA	15,	321	Y. Ichikawa, H. Nishibata, Y. Tsunoda, et al.
2019Ja03	JRNCD	321,	765	W. Jang, M. Zaman, G. Kim, et al.
2019Jo03	ARISE	148,	262	G. Jorg
2019Ka04	PRVCA	99,	014301	L. Kaya, A. Vogt, P. Reiter, et al.
2019Ka30	PRVCA	100,	015502	J. Karthein, D. Atanasov, K. Blaum, et al.
2019Ka36	PRVCA	100,	024323	L. Kaya, A. Vogt, P. Reiter, et al.
2019Ka48	HYIND	240,	61	J. Karthein, D. Atanasov, K. Blaum, et al.
2019KaZW	APCPC	2165,	020014	D.V. Kasperovych, A.S. Barabash, P. Belli, et al.
2019Kh04	PRVCA	99,	054306	J. Khuyagbaatar, A. Yakushev, Ch. E. Dullmann, et al.
2019Ki.A	RIKAR	53,	33	G.G. Kiss, A. Tarifeno-Saldivia, J.L. Tain et al.
2019Ki.B	RIKAR	53,	52	S. Kimura, M. Wada, H. Haba et al.
2019Kl06	PRVCA	99,	061301	A. Klose, K. Minamisono, A.J. Miller, et al.
2019Ko06	ARISE	145,	12	K. Kossert, O. Nahle
2019Ko18	PRLTA	123,	092502	D. Kostyleva, I. Mukha, L. Acosta, et al.
2019Ko19	PRVCA	100,	034304	A. Koszorus, X.F. Yang, J. Billowes, et al.
2019KoZX	EPJWC	223,	1028	F.G. Kondev, D.J. Hartley, R. Orford, et al.
2019Kr02	ARISE	146,	115	K.S. Krane
2019Kr05	PRVCA	99,	044313	K.S. Krane
2019Kr06	PRVCA	99,	054311	K.S. Krane
2019Kr10	PRVCA	100,	014608	Krishichayan, M. Bhike, C.R. Howell, et al.
2019Kr13	PRVCA	100,	034613	K.S. Krane
2019Ku16	PRVCA	100,	034316	J. Kurpeta, A. Płochocki, W. Urban, et al.

2019Kw01	EPJCC	79,	791	V. Alenkov, for the AMoRE-Pilot Collaboration
2019La09	PRVCA	99,	045501	M. Laubenstein, B. Lehnert, S.S. Nagorny, et al.
2019Le05	PRVCA	99,	034601	R. Lewis, S.N. Liddick, A.C. Larsen, et al.
2019Le09	EPJAA	55,	63	J. Lerendegui-Marco, C. Guerrero, T. Belgya, et al.
2019Li41	PRVCA	100,	034306	R. Lică, for the IDS Collaboration
2019Lo04	PRVCA	99,	044310	Ch. Lorenz, L.G. Sarmiento, D. Rudolph, et al.
2019Lu08	PRLTA	122,	222502	D. Lubos, J. Park, T. Faestermann, et al.
2019Ly02	PRVCA	100,	025806	S. Lyons, A. Spyrou, S.N. Liddick, et al.
2019Mi08	NUPAB	987,	337	A.K. Mistry, J. Khuyagbaatar, F.P. Hessberger, et al.
2019Mi18	EPJAA	55,	148	Ivan Miskun, Timo Dickel, Israel Mardor, et al.
2019Mo11	PRVCA	99,	034307	K.J. Moody, N. Gharibyan, P.M. Grant, et al.
2019Mo28	PRVCA	100,	024319	B. Moon, C.-B. Moon, G.D. Dracoulis, et al.
2019Mo.B	Th.-York			Monther Hamed AL-Monthery
2019Ne08	IMSPF	435,	204	D.A. Nesterenko, L. Canete, T. Eronen, et al.
2019Ni04	PRVCA	99,	024322	H. Nishibata, S. Kanaya, T. Shimoda, et al.
2019Ni10	CPCHC	43,	113001	K. Ni, Y. Lai, A. Abdukerim, et al.
2019Ol02	PRVCA	99,	024321	B. Olaizola, L.M. Fraile, H. Mach, et al.
2019Oz03	PYLBB	797,	134800	F.C. Ozturk, B. Akkus, D. Atanasov, et al.
2019Pa16	PRVCA	99,	034313	J. Park, R. Krucken, D. Lubos, et al.
2019Pa27	PRVCA	99,	054307	E. Parr, R.D. Page, D.T. Joss, et al.
2019Pa45	PRVCA	100,	044323	E. Parr, J.F. Smith, P.T. Greenlees, et al.
2019Ph02	PRVCA	100,	011302	V.H. Phong, G. Lorusso, T. Davinson, et al.
2019Pi04	PRVCA	99,	024304	M. Piersa, for the IDS Collaboration
2019Po06	PRVCA	100,	054327	J.L. Pore, C. Andreoiu, J.K. Smith, et al.
2019Re03	PRVCA	99,	044316	J. Refsgaard, J. Buscher, A. Arokiaraj, et al.
2019Ro12	PRVCA	100,	024320	P. Roy, S.K. Tandel, S. Suman, et al.
2019Ru07	JPCSD	1308,	012018	B. Rubio, P. Aguilera, F. Molina, et al.
2019Sa36	PRVCA	100,	014308	R. Sandler, G. Bollen, J. Dissanayake, et al.
2019Sa39	PRVCA	100,	024309	R. Sandler, G. Bollen, N.D. Gamage, et al.
2019Sa.A	Th.-Michigan			R.N. Sandler, PhD Thesis, Central Michigan University
2019Sc11	NUPAB	989,	201	S. Schwarz, B.R. Barquest, G. Bollen, et al.
2019Se04	PRVCA	99,	044306	S. Sels, T. Day Goodacre, B.A. Marsh, et al.
2019Se13	NATUA	573,	243	B. Seiferle, L. von der Wense, P.V. Bilous, et al.
2019Sh34	PRVCA	100,	034309	U. Shirwadkar, S.K. Tandel, P. Chowdhury, et al.
2019Sh38	PRVCA	100,	044304	Y. Shigekawa, Y. Kasamatsu, E. Watanabe, et al.
2019Si33	PRVCA	100,	044311	L. Sinclair, R. Wadsworth, J. Dobaczewski, et al.
2019Su14	PRVCA	99,	064312	L.J. Sun, for the RIBLL Collaboration
2019Sz01	NUPAB	986,	213	T.N. Szegedi, G.G. Kiss, I. Öksuz, et al.
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, et al.
2019Uu01	APOBB	50,	319	J. Uusitalo, J. Saren, J. Partanen, et al.
2019Ve07	PRVCA	100,	044321	E. Verstraelen, A. Teigelhofer, W. Ryssens, et al.
2019Vi05	PRVCA	100,	054333	M. Vil/'en, A. Kankainen, P. Bączyk, et al.
2019Vo03	EPJAA	55,	17	M. Vostinar, F.P. Hessberger, D. Ackermann, et al.
2019Wa14	PYLBB	792,	263	H. Watanabe, H.K. Wang, G. Lorusso, et al.
2019We11	PRVCA	100,	024306	T.B. Webb, R.J. Charity, J.M. Elson, et al.
2019Wi04	PYLBB	792,	16	K. Wimmer, F. Recchia, S.M. Lenzi, et al.
2019Wi08	PYLBB	795,	266	K. Wimmer, P. Doornenbal, W. Korten, et al.
2019Wi11	PRVCA	100,	054331	J. Wisniewski, W. Urban, M. Czerwinski, et al.
2019Xi06	PRVCA	100,	034315	Y. Xiao, S. Go, R. Grzywacz, et al.
2019Xi07	PYLBB	797,	134805	L. Xie, X.F. Yang, C. Wraith, et al.
2019Xu09	PRVCA	99,	064303	X. Xu, M. Wang, K. Blaum, et al.
2019Xu13	PRVCA	100,	051303	X. Xu, J.H. Liu, C.X. Yuan, et al.

2019Ya04	EPJAA	55,	8	H.B. Yang, Z.G. Gan, Z.Y. Zhang, et al.
2019Ya18	PRLTA	123,	222501	A. Yamaguchi, H. Muramatsu, T. Hayashi, et al.
2019Yo03	PRVCA	100,	031302	R. Yokoyama, R. Grzywacz, B.C. Rasco, et al.
2019Yo06	HYIND	240,	67	D.T. Yordanov, M. Kowalska, K. Blaum, et al.
2019Ze02	ARISE	152,	101	J. Zeng, Y. Gong, X. Guo, et al.
2019Zh23	PRLTA	122,	192503	Z.Y. Zhang, Z.G. Gan, H.B. Yang, et al.
2019Zh49	PYLBB	799,	135036	G.X. Zhang, H. Watanabe, G.D. Dracoulis, et al.
2019Zh54	PRVCA	100,	064317	M.M. Zhang, Y.L. Tian, Y.S. Wang, et al.

2020

2020Ad04	PRVCA	124,	122501	D.Q. Adams, CUORE Collaboration
2020Ag05	PRLTA	125,	252502	M. Agostini, for the GERDA Collaboration
2020Ak04	JPGPE	47,	105105	D.S. Akerib
2020Al21	PRVCA	102,	064608	B.M. Ali, G.Y. Mohamed, F. Ditroi, et al.
2020Al.A	JPCSD	1690,	012029	E.N. Alexeev, A.M. Gangapshev, Yu. M. Gavrilyuk, et al.
2020An12	PRVCA	102,	014319	B. Andel, A.N. Andreyev, S. Antalic, et al.
2020Ar04	PRVCA	101,	055501	V. Araujo-Escalona, D. Atanasov, X. Flechard, et al.
2020Ar09	ZCCNE	80,	674	E. Armengaud, C. Augier, A.S. Barabash, et al.
2020Au01	PRVCA	101,	024306	K. Auranen, U. Jakobsson, H. Badran, et al.
2020Au04	PRVCA	102,	034305	K. Auranen, J. Uusitalo, H. Badran, et al.
2020Ay05	EPJAA	56,	143	S.A.S. Andres, A. Mollaebrahimi, T. Dickel, et al.
2020Az05	EPJCC	80,	702	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2020Ba08	NUPAB	996,	121797	A.S. Barabash, V.B. Brudanin, A.A. Klimenko, et al.
2020Ba17	PRVCA	101,	034308	A.E. Barzakh, D. Atanasov, A.N. Andreyev, et al.
2020Ba29	PRVCA	101,	064321	A.E. Barzakh, D. Atanasov, A.N. Andreyev, et al.
2020Ba52	PRVCA	102,	044329	R. Banik, S. Bhattacharyya, M. Rejmund, et al.
2020Ba53	PRVCA	102,	044615	J. Balibrea-Correa
2020Ba63	UNIGE	6,	159	A. Barabash
2020Ba.A	Th.-Bratislava			M. Balogh, Comenius University, 2020, unpublished
2020Be16	PRVCA	102,	014328	J. Benito, for the IDS Collaboration
2020Be23	PRVCA	102,	024605	P. Belli, R. Bernabei, F. Cappella, et al.
2020Bi06	PRVCA	102,	014326	S. Biswas, A. Lemasson, M. Rejmund, et al.
2020Bi15	NIMAE	964,	163773	J. Bishop, G.V. Rogachev, S. Ahn, et al.
2020Bo04	PRLTA	124,	112501	F. Boulay, G.S. Simpson, Y. Ichikawa, et al.
2020Br06	PRVCA	101,	064320	R. Broda, J. Wrzesinski, C. Michelagnoli, et al.
2020Bu02	PRVCA	101,	055504	D.P. Burdette, M. Brodeur, D.W. Bardayan, et al.
2020Ca01	PRVCA	101,	014313	L. Capponi, J.F. Smith, P. Ruotsalainen, et al.
2020Ca08	PRVCA	101,	041304	L. Canete, S. Giraud, A. Kankainen, et al.
2020Ca15	NUPAB	1002,	121941	V. Caracciolo, S.S. Nagorny, P. Belli, et al.
2020Ca25	PRLTA	125,	192501	R.J. Carroll, Z. Podolyák, T. Berry, et al.
2020Ch42	ARISE	166,	109366	C. Chu, Q. Xiang, J. Zeng, et al.
2020Ci04	PRVCA	101,	034305	A.A. Ciemny, W. Dominik, T. Ginter, et al.
2020Cu02	PRVCA	101,	014314	J.G. Cubiss, R.D. Harding, A.N. Andreyev, et al.
2020Cu04	PRVCA	102,	044332	J.G. Cubiss, A.N. Andreyev, A.E. Barzakh, et al.
2020Cz01	PRVCA	101,	024312	A. Czeszumska, N.D. Scielzo, S.A. Caldwell, et al.
2020Da02	ADNDA	132,	101308	S. Daoudi, A. Kahoul, N.K. Aylikci, et al.
2020Da03	NUPAB	996,	121703	F.A. Danevich, M. Hult, D.V. Kasperovych, et al.
2020Da04	EPJAA	56,	5	F.A. Danevich, M. Hult, D.V. Kasperovych, et al.
2020Da08	NCCUA	43,	24	V. D'Andrea, for the Gerda Collaboration
2020Da12	PRVCA	102,	024319	F.A. Danevich, M. Hult, D.V. Kasperovych, et al.
2020De20	PRLTA	124,	222503	A. de Roubin, J. Kostensalo, T. Eronen, et al.
2020De21	NPAHA	16,	620	R.P. de Groote, J. Billowes, C.L. Binnersley, et al.
2020Fe10	ARISE	166,	109294	A.J. Fenwick, S.M. Collins, W.D. Evans, et al.

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, et al.
2020Ge08	PRVCA	102,	044319	M.S.M. Gerathy, G.J. Lane, A.E. Stuchbery, et al.
2020Gi02	APOBB	51,	577	J. Giovinazzo, T. Goigoux, B. Blank, et al.
2020Go10	PRVCA	102,	044331	S. Go, R. Grzywacz, C. Mazzocchi, et al.
2020Gr08	JPGPE	47,	085104	M.R. Griffiths, C. Wheldon, Tz. Kokalova, et al.
2020Gr.1	NIMAE	972,	164013	J. Grund, M. Asai, K. Blaum, et al.
2020Gu04	ARISE	158,	108923	G. Gupta, H. Krishnamoorthy, A. Garai, et al.
2020Ha14	PRVCA	101,	044311	J. Ha, T. Sumikama, F. Browne, et al.
2020Ha24	PRVCA	102,	024312	R.D. Harding, A.N. Andreyev, A.E. Barzakh, et al.
2020Ha27	PRVCA	102,	024625	H. Haba, F. Fan, D. Kaji, et al.
2020Ha38	PRXHA	10,	041061	R.D. Harding, S. Pallada, J. Croese, et al.
2020Hi.B	Th.-Jyvaskyla			J. Hilton, University of Jyvaskyla, 2020, unpublished
2020Ho03	PYLBB	802,	135200	C. Hornung, D. Amanbayev, I. Dedes, et al.
2020Ho06	NATUA	580,	52	D.E.M. Hoff, A.M. Rogers, S.M. Wang, et al.
2020Ho10	PRVCA	102,	014310	V. Horvat, E.E. Tereshatov, J.C. Hardy, et al.
2020Ho17	PRVCA	102,	045810	D.E.M. Hoff, A.M. Rogers, Z. Meisel, et al.
2020Ia01	PRVCA	101,	015504	V.E. Iacob, J.C. Hardy, H.I. Park, et al.
2020Io02	PRVCA	102,	044311	M. Ionescu-Bujor, S. Aydin, A. Iordachescu, et al.
2020Is08	PRVCA	102,	054324	L.W. Iskra, S. Leoni, B. Fornal, et al.
2020Je01	ARISE	155,	108837	S. Jerome, C. Bobin, P. Cassette, et al.
2020Ju02	PRVCA	102,	034324	A. Jungclaus, J.M. Keatings, G.S. Simpson, et al.
2020Ka02	PRVCA	101,	011301	J. Kallunkathariyil, B. Sulignano, P.T. Greenlees, et al.
2020Ka58	PRVCA	102,	054331	A. Kanellakopoulos, X.F. Yang, M.L. Bissell, et al.
2020Ka.A	Th.-Mainz			O. Kaleja PhD Thesis
2020Ka.B	P-StPetersbg		31	V.G. Kalinnikov, V.I. Stegailov, I. Izosimov, et al.
2020Kh01	NUPAB	994,	121662	J. Khuyagbaatar, A.K. Mistry, D. Ackermann, et al.
2020Kh08	PRLTA	125,	142504	J. Khuyagbaatar, H.M. Albers, M. Block, et al.
2020Kh10	PRVCA	102,	044312	J. Khuyagbaatar, F.P. Hessberger, S. Hofmann, et al.
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, et al.
2020Ku19	NUPAB	1002,	121990	I. Kulikov, A. Algora, D. Atanasov, et al.
2020Ku23	BRSPE	84,	932	A.A. Kuznetsova, A.V. Yeremin, A. Lopez-Martens, et al.
2020Le04	NIMAE	959,	163481	O. Lebeda, F.G. Kondev, J. Cervenak
2020Le06	JPGPE	47,	045113	E. Leistenschneider, R. Klawitter, A. Lennarz, et al.
2020Le16	PRLTA	125,	192503	J. Lee, for the RIBLL Collaboration
2020Li05	PRVCA	101,	014611	R. Linares, C.C. Seabra, V.A.B. Zagatto, et al.
2020Li06	PRVCA	101,	024305	P.F. Liang, L.J. Sun, J. Lee, et al.
2020Li15	PRLTA	124,	222501	C. Lizarazo, P.-A. Soderstrom, V. Werner, et al.
2020Li28	PRVCA	102,	024301	J.J. Liu, J. Lee, H. Watanabe, et al.
2020Li47	PRVCA	102,	054607	G.S. Li, Y.D. Fang, X.H. Zhou, et al.
2020Lo01	PRVCA	101,	015501	J. Long, M. Brodeur, M. Baines, et al.
2020Ma09	PRLTA	124,	092502	V. Manea, J. Karthein, D. Atanasov, et al.
2020Ma27	PRLTA	125,	032502	L. Ma, Z.Y. Zhang, Z.G. Gan, et al.
2020Ma63	JRNCD	326,	1785	M. Marouli, S. Pomme, V. Jobbagy, et al.
2020Me06	PRVCA	101,	052801	Z. Meisel, S. George, S. Ahn, et al.
2020Mi13	PRLTA	125,	122501	S. Michimasa, M. Kobayashi, Y. Kiyokawa, et al.
2020Mo10	APOBB	51,	849	P. Mosat, S. Antalic, F.P. Hessberger, et al.
2020Mo11	PRLTA	101,	034310	P. Mosat, F.P. Heßberger, S. Antalic, et al.
2020Mo24	JPHGB	47,	045116	K.J. Moody, N. Gharibyan, D.A. Shaughnessy, et al.
2020Mo25	PRVCA	102,	014301	M. Mougeot, D. Atanasov, C. Barbieri, et al.
2020Mo32	PRVCA	102,	034325	S. Momiyama, K. Wimmer, D. Bazin, et al.

2020MoZS	PrvCom	NDG		A. Morales
2020Mu16	PRVCA	102,	054307	M. Mukai, Y. Hirayama, Y.X. Watanabe, et al.
2020MuZY	JPCSD	1643,	012057	I. Mukul, C. Andreoiu, M. Brodeur, et al.
2020Ne06	PYLBB	808,	135642	D.A. Nesterenko, A. Kankainen, J. Kostensalo, et al.
2020Ne.1	IMSPF	458,	116435	D.A. Nesterenko, R.P. de Groote, T. Eronen, et al.
2020Nu01	JLTPA	199,	519	I. Nutini, D.Q. Adams, C. Alduino, et al.
2020On01	PRLTA	125,	262701	W.-J. Ong, E.F. Brown, J. Browne, et al.
2020Or02	NIMBE	463,	491	R. Orford, J.A. Clark, G. Savard, et al.
2020Or03	PRVCA	102,	011303	R. Orford, F.G. Kondev, G. Savard, et al.
2020Pa26	PRVCA	102,	014329	V. Paziy, L.M. Fraile, H. Mach, et al.
2020Pa44	PRVCA	102,	054335	E. Parr, J.F. Smith, P.T. Greenlees, et al.
2020PaDG	PTEP.	2020,	083C01	Particle Data Group
2020Po07	PRLTA	124,	252502	J.L. Pore, J.M. Gates, R. Orford, et al.
2020Po12	PRVCA	102,	064310	C. Porzio, C. Michelagnoli, N. Cieplicka-Orynczak, et al.
2020Pu02	PRVCA	101,	064309	D. Puentes, G. Bollen, M. Brodeur, et al.
2020Ra.1	NATUA	585,	43	S. Rau, F. Heisse, F. Kohler-Langes, et al.
2020Re04	PRVCA	101,	025803	M.P. Reiter, S. Ayet San Andres, S. Nikas, et al.
2020Re06	PRLTA	124,	152502	A. Reve, O. Sorlin, F.M. Marquéss, et al.
2020Ri02	EPJAA	56,	100	K. Riisager, M.J.G. Borge, J.A. Briz, et al.
2020Ri04	PRLTA	124,	113001	A. Rischka, H. Cakir, M. Door, et al.
2020Ro19	PRVCA	102,	051301	L.V. Rodriguez, D.L. Balabanski, M.L. Bissell, et al.
2020Ro25	EPJAA	56,	289	M. Rocchini, A. Nannini, G. Benzoni, et al.
2020Sa31	PRVCA	102,	024337	Y. Saito, for the GRIFFIN collaboration
2020Se13	EPJAA	56,	161	M. Sedlak, M. Venhart, J.L. Wood, et al.
2020Sh.A	JPCSD	1643,	012208	R. Shearman, G. Lorusso, A. Boso, et al.
2020Si22	PRLTA	125,	142503	T. Sikorsky, J. Geist, D. Hengstler, et al.
2020Sm02	PRVCA	102,	054314	J.K. Smith, A.B. Garnsworthy, J.L. Pore, et al.
2020Sm.1	HYIND	241,	59	M.B. Smith, T.E. Dunling, A. Jacobs, et al.
2020So26	NACOP	11,	3242	P.-A. Soderstrom, L. Capponi, E. Aciksoz, et al.
2020St03	EPJAA	56,	69	D. Studer, J. Ulrich, S. Braccini, et al.
2020St11	PRVCA	102,	024322	M. Stryjczyk, for the IDS Collaboration
2020Su02	PYLBB	800,	135096	M.D. Sun, Z. Liu, T.H. Huang, et al.
2020Su06	PYLBB	802,	135215	Y.L. Sun, A. Obertelli, P. Doornenbal, et al.
2020Sz02	EPJAA	56,	182	T.N. Szegedi, A. Toth, G.G. Kiss, et al.
2020Ta03	PRLTA	124,	062502	T.L. Tang, B.P. Kay, C.R. Hoffman, et al.
2020Ur02	PRVCA	102,	024318	W. Urban, T. Rzaca-Urban, J. Wisniewski, et al.
2020Ve03	PYLBB	806,	135488	M. Venhart, M. Balogh, A. Herzan, et al.
2020Ve.A	AnRpt PSI,		19	M. Veicht, I. Kajan, D. Schumann
2020Vi02	APOBB	51,	587	A. Vitez-Sveiczer, A. Algora, A.I. Morales, et al.
2020Vi03	APOBB	51,	717	S. Vinals, E. Nacher, O. Tengblad, et al.
2020Vi04	PRVCA	101,	034312	M. Vilen, J.M. Kelly, A. Kankainen, et al.
2020Vi05	APPYJ	285,	70	I.M. Villa, N.E. Holden, A. Possolo, et al.
2020Vo07	BRSPE	84,	351	A.A. Voinov, V.K. Utyonkov, Yu. Ts. Oganessian, et al.
2020Wa04	PRVCA	101,	025806	B.S. Wang, S.A. Caldwell, N.D. Scielzo, et al.
2020Wa08	NIMBE	469,	28	Q. Wang, Y. Han, L. Yang, et al.
2020Wa12	PRVCA	101,	041305	Y.X. Watanabe, M. Ahmed, Y. Hirayama, et al.
2020Wa24	PRVCA	102,	024329	S.G. Wahid, S.K. Tandel, S. Suman, et al.
2020Wa29	PRLTA	125,	192505	P.M. Walker, Y. Hirayama, G.J. Lane, et al.
2020We08	PRVCA	101,	044317	T.B. Webb, R.J. Charity, J.M. Elson, et al.
2020Wh02	PRVCA	102,	024327	K. Whitmore, C. Andreoiu, F.H. Garcia, et al.
2020Wu04	PRVCA	101,	042801	J. Wu, S. Nishimura, P. Moller, et al.
2020Yo07	NACOP	3,	1	D.T. Yordanov, L.V. Rodríguez, D.L. Balabanski, et al.
2020Za04	PRVCA	101,	054312	C.J. Zachary, N.T. Brewer, J.C. Batchelder, et al.
2020Za.A	Th.-Padova			L. Zago, MSc thesis, University of Padova, 2020, unpublished

2020Zh01	PYLBB	800,	135102	M.M. Zhang, H.B. Yang, Z.G. Gan, et al.

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2021Ad18	PRLTA	126,	171801	D.Q. Adams, C. Alduino, K. Alfonso, et al.
2021Ah02	PRVCA	103,	054312	M. Ahmed, Y.X. Watanabe, Y. Hirayama, et al.
2021Al33	PRVDA	104,	112002	S. Al Kharusi, G. Anton, I. Badhrees, et al.
2021An14	PRVCA	104,	054301	B. Andel, for the IDS Collaboration
2021Ar.1	PRLTA	126,	181802	E. Armengaud, for the CUPID-Mo Collaboration
2021Au03	PRVCA	103,	054323	K. Auranen, J. Uusitalo, H. Badran, et al.
2021Az03	PYLBB	822,	136642	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2021Ba34	PRVCA	104,	024308	J.C. Batchelder, C. Apgar, N.T. Brewer, et al.
2021Ba45	PRLTA	127,	192501	A. Barzakh, A.N. Andreyev, C. Raison, et al.
2021Be13	ARISE	170,	109572	D.E. Bergeron, S.M. Collins, L. Pibida, et al.
2021Be18	EPJAA	57,	215	P. Belli, R. Bernabei, R.S. Boiko, et al.
2021Be20	JPGPE	48,	085104	P. Belli, R. Bernabei, F. Cappella, et al.
2021Be23	PRLTA	127,	112501	S. Beck, B. Kootte, I. Dedes, et al.
2021Bl02	EPJAA	57,	28	B. Blank, N. Adimi, M. Alcorta, et al.
2021Bo02	PRVCA	103,	014320	S. Bottoni, N. Cieplicka-Orynczak, S. Leoni, et al.
2021Br06	PRVCA	103,	054327	M. Brunet, Zs. Podolyak, T.A. Berry, et al.
2021Br09	NUPAB	1012,	122212	B. Broerman, M. Laubenstein, S. Nagorny, et al.
2021Br.A	Th.-Liverpool			A.D. Briscoe, PhD thesis, University of Liverpool, 2021, unpublished
2021Ch46	JRNCD	329,	1393	C. Chu, G. Hu, X. Guo, et al.
2021Ch54	PRVCA	104,	054307	R.J. Charity, T.B. Webb, L.G. Sobotka, et al.
2021Ch56	PRVCA	104,	054314	A. Chester, B.A. Brown, S.P. Burcher, et al.
2021Co07	EPJAA	57,	88	A. Corsi, B. Monteagudo, F.M. Marques
2021Cr02	NDSBA	175,	269	S. Croft, A. Favalli
2021Da01	PRVCA	126,	032502	T. Day Goodacre, A.V. Afanasjev, A.E. Barzakh, et al.
2021Da02	NUPAB	1002,	122097	S. Das, A. Adhikari, S.S. Alam, et al.
2021Da13	JRNCD	329,	411	G. D'Agostino, M. Di Luzio, N.E. Sharp, et al.
2021Da15	PRVCA	104,	024321	J.M. Daugas, B. Rosse, D.L. Balabanski, et al.
2021Da16	PRVCA	104,	054322	T. Day Goodacre, A.V. Afanasjev, A.E. Barzakh, et al.
2021De.A	Th.-Liverpool			C.S. Devlin, PhD Thesis, University of Liverpool, 2021, unpublished
2021Do08	PRLTA	127,	202501	D.T. Doherty, A.N. Andreyev, D. Seweryniak, et al.
2021Du15	ARISE	176,	109893	M.T. Duran, F. Juget, Y. Nedjadi, et al.
2021Es05	PRVCA	103,	064328	S. Escrig, A.I. Morales, S. Nishimura, et al.
2021Fi03	PRLTA	127,	072502	P. Filianin, C. Lyu, M. Door, et al.
2021Fi.1	PRLTA	127,	243001	D.J. Fink, E.G. Myers
2021Fr01	PRLTA	126,	102501	U. Friman-Gayer, C. Romig, T. Huther, et al.
2021Ga10	PRVCA	103,	024310	F.H. Garcia, C. Andreoiu, G.C. Ball, et al.
2021Ge04	PRVCA	103,	065502	Z. Ge, T. Eronen, A. de Roubin, et al.
2021Ge11	PRLTA	127,	272301	Z. Ge, T. Eronen, K.S. Tyrin, et al.
2021Gi08	PRVCA	103,	044307	S.A. Gillespie, A. Stott, A.N. Andreyev, et al.
2021Gi18	NCAOB	12,	1	J. Giovinazzo, T. Roger, B. Blank, et al.
2021Go24	PRLTA	127,	162501	F.M. Gonzalez, for the UCN—t Collaboration
2021Go26	EPJAA	57,	321	T. Goigoux, Ch. Theisen, B. Sulignano, et al.
2021Go.A	JERAE	238,	106733	M.A. Goodwin, S.J. Bell, R. Britton, et al.
2021Gr06	PYLBB	820,	136591	H. Grawe, for the RISING Collaboration
2021Ha10	JRNCD	327,	1113	T.A. Hain, S.J. Pendleton, J.A. Silano, et al.
2021Ha19	PYLBB	816,	136266	O. Hall, T. Davinson, A. Estrade, et al.
2021Ha32	PRVCA	104,	024326	R.D. Harding, A.N. Andreyev, A.E. Barzakh, et al.
2021Ha47	NATUA	17,	1408	A. Hamaker, E. Leistenschneider, R. Jain, et al.
2021He04	PRVCA	103,	014318	H. Heylen, C.S. Devlin, W. Gins, et al.
2021He15	PRLTA	126,	182501	F.P. Hessberger, M. Block, C.E. Dullmann, et al.

2021He16	PRVCA	103,	054613	F. Heim, M. Muller, S. Wilden, et al.
2021Hi05	NIMAE	997,	165152	Y. Hirayama, P. Schury, M. Mukai, et al.
2021Hu18	CPCHC	45,	044001	W. Hua, Z. Zhang, L. Ma, et al.
2021Hu19	CPCHC	45,	044003	W. Hua, Z. Zhang, L. Ma, et al.
2021Is09	PPNLA	18,	449	A.V. Isaev, A.V. Andreev, M.L. Chelnokov, et al.
2021Iz01	PRVCA	103,	025811	C. Izzo, J. Bergmann, K.A. Dietrich, et al.
2021Ji15	PRLTA	127,	262502	Y. Jin, C.Y. Niu, K.W. Brown, et al.
2021Ju02	PYLBB	814,	136108	M.M. Juhasz, Z. Elekes, D. Sohler, et al.
2021Ka38	ARISE	178,	109978	I. Kajan, S. Pomme, K. Pelczar, et al.
2021Ka50	SRCEC	11,	19788	I. Kajan, S. Heinitz, K. Kossert, et al.
2021Ke10	PRVCA	104,	044609	K. Kessaci, B.J.P. Gall, O. Dorvaux, et al.
2021Kh03	PRVCA	103,	064303	J. Khuyagbaatar, H. Brand, R.A. Cantemir, et al.
2021Kh07	PRVCA	104,	L031303	J. Khuyagbaatar, H. Brand, R.A. Cantemir, et al.
2021Ki08	EPJCC	81,	746	K.W. Kim, for the COSINE-100 Collaboration
2021Km01	PRVCA	103,	034610	K.N. Kmak, D.A. Shaughnessy, J. Vujic
2021Ko08	NPAHA	17,	439	A. Koszorus, X.F. Yang, W.G. Jiang, et al.
2021Ko26	PYLBB	819,	136439	A. Koszorus, L.J. Vormawah, R. Beerwerth, et al.
2021Kr02	NIMAE	992,	165024	K.S. Krane
2021Kr05	EPJAA	57,	19	K.S. Krane
2021Ku11	ARISE	172,	109645	Z. Kulage, T. Cantrell, J. Griswold, et al.
2021La04	PRVCA	103,	055809	L. Lalanne, O. Sorlin, M. Assie, et al.
2021Le02	PRLTA	126,	042501	E. Leistenschneider, E. Dunling, G. Bollen, et al.
2021Le11	PRVCA	104,	014302	S. Lechner, Z.Y. Xu, M.L. Bissell, et al.
2021Li58	PRVCA	104,	044331	B.D. Linh, A. Corsi, A. Gillibert, et al.
2021Ma22	PRVCA	103,	034319	I. Mardor, S.A. Andres, T. Dickel, et al.
2021Ma66	PRVCA	104,	044310	L. Ma, Z.Y. Zhang, H.B. Yang, et al.
2021Me.1	JPCSC	5,	085007	M.J. Merrick, D.A. Rotsch, A. Tiwari, et al.
2021Mi07	PRVCA	103,	024323	A.J. Mitchell, R. Orford, G.J. Lane, et al.
2021Mo10	PRVCA	103,	034320	B. Moon, A. Jungclaus, H. Naidja, et al.
2021Mo23	NPAHA	17,	1099	M. Mougeot, D. Atanasov, J. Karthein, et al.
2021Mu05	PRVCA	103,	044320	I. Mukul, C. Andreoiu, J. Bergmann, et al.
2021Ni08	PRVCA	104,	044617	T. Niwase, M. Wada, P. Schury, et al.
2021Ob01	PRVCA	103,	034609	D. Gjestvang, S. Siem, F. Zeiser, et al.
2021Or01	PRVCA	103,	014324	S.E.A. Orrigo, B. Rubio, W. Gelletly, et al.
2021Pa44	PRVCA	104,	065803	S.F. Paul, J. Bergmann, J.D. Cardona, et al.
2021Pe08	PRVCA	103,	055808	C.F. Persch, P.A. DeYoung, S. Lyons, et al.
2021Pi01	ARISE	167,	109455	L. Pibida, D.E. Bergeron, B. Zimmerman, et al.
2021Pi11	PRVCA	104,	044328	M. Piersa-Silkowska, for the IDS Collaboration
2021Po16	PHSTB.	96,	085302	O.G. Polischuk, A.S. Barabash, P. Belli, et al.
2021Ri01	ARISE	167,	109298	J. Riffaud, M.-C. Lepy, P. Cassette, et al.
2021Sa01	PRLTA	126,	032503	A. Samark-Roth, D.M. Cox, D. Rudolph, et al.
2021Sc14	PRVCA	104,	L021304	P. Schury, T. Niwase, M. Wada, et al.
2021Sh23	PRVCA	103,	L061301	G.Z. Shi, J.J. Liu, Z.Y. Lin, et al.
2021So03	PRVCA	103,	014310	P.C. Sood, P.M. Jodidar, R. Gowrishankar
2021Su01	PRVCA	103,	014614	T. Sumikama, N. Fukuda, N. Inabe, et al.
2021Su03	PRVCA	103,	014322	L.J. Sun, M. Friedman, T. Budner, et al.
2021Su04	PRVCA	103,	014323	J. Surbrook, G. Bollen, M. Brodeur, et al.
2021SuZZ	RIKAR	54,	2	H. Suzuki, M. Yoshimoto, N. Fukuda, et al.
2021Sv02	PPNLA	18,	445	A.I. Svirikhin, A.V. Yeremin, N.I. Zamyatin, et al.
2021Ta01	ARISE	167,	109425	M.P. Takács, K. Kossert
2021Te02	EPJAA	57,	59	D.A. Testov, A.P. Severyukhin, B. Roussiere, et al.
2021Te06	PRVCA	104,	015806	M. Tessler, J. Zappala, S. Cristallo, et al.
2021Te08	BRSPE	85,	1167	M.S. Tezekbayeva, A.V. Yeremin, O.N. Malyshev, et al.
2021Va03	PYLBB	816,	136183	J.J. Valiente-Dobon, A. Gottardo, G. Benzoni, et al.

2021Wa04	PRVCA	103,	014317	E.H. Wang, J.M. Eldridge, N.T. Brewer, et al.
2021Wa06	PRVCA	103,	L011301	Y.B. Wang, for the BRIF Collaboration
2021Wa15	PYLBB	814,	136088	H. Watanabe, Y.X. Watanabe, Y. Hirayama, et al.
2021Wa39	PRVCA	104,	024330	Y.X. Watanabe, P.M. Walker, Y. Hirayama, et al.
2021Wa49	PYLBB	823,	136766	H. Watanabe, C.X. Yuan, G. Lorusso, et al.
2021Wi05	PRVCA	104,	014304	K. Wimmer, F. Recchia, S.M. Lenzi, et al.
2021Wu10	PRVCA	104,	044311	C.G. Wu, for the RIBLL Collaboration
2021Yo08	PRVCA	104,	L021303	R. Yokoyama, E. Ideguchi, G.S. Simpson, et al.
2021Ze01	ARISE	168,	109511	J. Zeng, Y. Zhang, Y. Gong, et al.
2021Zh22	PRLTA	126,	152502	Z.Y. Zhang, H.B. Yang, M.H. Huang, et al.
2021Zh24	PRVCA	103,	044314	H.B. Zhou, Z.G. Gan, N. Wang, et al.
2021Zh38	PRVCA	104,	014326	K.K. Zheng, C.M. Petrache, Z.H. Zhang, et al.
2021Zh54	PYLBB	822,	136645	K.K. Zheng, C.M. Petrache, Z.H. Zhang, et al.
2021Zh56	PRVCA	104,	044305	K.K. Zheng, C.M. Petrache, Z.H. Zhang, et al.
2021Zh57	PRVCA	104,	044325	K.K. Zheng, C.M. Petrache, Z.H. Zhang, et al.
2021Zh.B	NSETE	32,	37	X. Zhou, M. Wang, Y.H. Zhang, et al.

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2022Ab01	ARISE	179,	109994	E.P. Abel, C. Kleinfeldt, M. Kalman, et al.
2022Ab17	PYLBB	833,	137355	K. Abe, K. Hiraide, K. Ichimura, et al.
2022Ad07	PRVCA	105,	065504	D.Q. Adams, for the CUORE Collaboration
2022Ad13	PRLTA	129,	222501	D.Q. Adams, for the CUORE Collaboration
2022Ad14	NATUA	604,	53	D.Q. Adams, for the CUORE Collaboration
2022Ah02	PRLTA	129,	212502	D.S. Ahn, J. Amano, H. Baba, et al.
2022Ak01	NPAHA	18,	160	M. Aker, for the KATRIN Collaboration
2022Ap01	PRVCA	106,	024328	E. Aprile, for the XENON Collaboration
2022Au01	PRLTA	128,	112501	K. Auranen, A.D. Briscoe, L.S. Ferreira, et al.
2022Au.1	EPJCC	82,	1033	C. Augier, A.S. Barabash, F. Bellini, et al.
2022Az02	PRLTA	129,	111801	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2022Ba06	PRVCA	105,	034346	A. Barresi, D. Chiesa, M. Nastasi, et al.
2022Ba15	PYLBB	829,	137064	S.W. Bai, A. Koszorus, B.S. Hu, et al.
2022Ba21	PRVCA	105,	065502	V.V. Barinov, S.N. Danshin, V.N. Gavrin, et al.
2022Ba42	PRVCA	106,	064324	M. Balogh, E. Jajcisinova, M. Venhart, et al.
2022Be20	EPJAA	58,	106	B. Bergmann, J. Jelinek
2022Bo04	PRVCA	105,	044327	V. Bothe, S.K. Tandel, S.G. Wahid, et al.
2022Br08	PRVCA	106,	014602	A. Bronis, F.P. Hessberger, S. Antalic, et al.
2022Bu14	PRLTA	128,	182701	T. Budner, M. Friedman, C. Wrede, et al.
2022Ca10	PYLBB	829,	137067	M. Caamano, T. Roger, A.M. Moro, et al.
2022Ch11	NIMBE	517,	1	A. Chekhovska, Ye. Skakun, I. Semisalov, et al.
2022Ch58	SRCEC	12,	8988	N.M. Chiera, R. Dressler, P. Sprung, et al.
2022Ci04	PRVCA	106,	014317	A.A. Ciemny, C. Mazzocchi, W. Dominik, et al.
2022Co10	ARISE	190,	110480	S.M. Collins, A.P. Robinson, P. Ivanov, et al.
2022Cr03	PRLTA	129,	212501	H.L. Crawford, V. Tripathi, J.M. Allmond, et al.
2022Da02	EPJCC	82,	29	F.A. Danevich, M. Hult, A. Junghans, et al.
2022Da13	PRVDA	106,	032012	W.H. Dai, for the CDEX Collaboration
2022De07	EPJAA	58,	51	C. Delafosse, A. Goasduff, A. Kankainen, et al.
2022De08	ARISE	184,	110175	G. Dellepiane, P. Casolaro, Ch. Favaretto, et al.
2022Du13	ARISE	190,	110507	M.T. Duran, F. Juget, Y. Nedjadi, et al.
2022Er01	PYLBB	830,	137135	T. Eronen, Z. Ge, A. de Roubin, et al.
2022Fe02	PRLTA	128,	O52501	J. Feng, W. Wang, C. Fu, et al.
2022Fi.1	NIMAE	1025,	166127	S.W. Finch, M.E. Gooden, C. Hagmann, et al.
2022Fr01	APPYJ	138,	102686	F.M. Frankle, A. Schaller, K. Blaum, et al.
2022Ga22	EPJAA	58,	158	Z.G. Gan, W.X. Huang, Z.Y. Zhang, et al.

2022Ga27	PRVCA	106,	045503	N.D. Gamage, R. Sandler, F. Buchinger, et al.
2022Ga36	PRVCA	106,	065503	M.H. Gamage, R. Bhandari, G. Bollen, et al.
2022Ge01	PRVCA	105,	024302	R.-B. Gerst, A. Blazhev, K. Moschner, et al.
2022Ge07	PRVCA	106,	015502	Z. Ge, T. Eronen, A. de Roubin, et al.
2022Ge11	PYLBB	832,	137226	Z. Ge, T. Eronen, A. de Roubin, et al.
2022Gi04	PRVCA	105,	044321	S.A. Gillespie, K.W. Brown, R.J. Charity, et al.
2022Gi08	PYLBB	839,	137309	S. Giraud, L. Canete, B. Bastin, et al.
2022Gi.A	PrvCom	WgM	Feb	F. Giacoppo
2022Ha04	EPJAA	58,	6	K. Hauschild, A. Lopez-Martens, R. Chakma, et al.
2022He04	EPJAA	58,	11	F.P. Hessberger, S. Antalic, F. Giacoppo, et al.
2022Hi07	PRVCA	106,	034326	Y. Hirayama, M. Mukai, Y.X. Watanabe, et al.
2022Hu09	PYLBB	833,	137345	H. Huang, W.Q. Zhang, A.N. Andreyev, et al.
2022Hu12	PYLBB	834,	137484	M.H. Huang, Z.G. Gan, Z.Y. Zhang, et al.
2022Hu21	PRVCA	106,	L061301	T. Huang, D. Seweryniak, B.B. Back, et al.
2022Hu22	PRVCA	106,	064331	Z. Huang, G.X. Zhang, G.L. Zhang, et al.
2022Is05	EPJAA	58,	108 A	A.V. Isaev, R.S. Mukhin, A.V. Andreev, et al.
2022Ja13	PRVCA	106,	044303	L. Janiak, M. Gierlik, G. Madejowski, et al.
2022Ja.1	RPCHD	200,	110234	S. Jazrawi, A. Yaneva, M. Polettini, et al.
2022Ka04	PRVCA	105,	014629	P. Kaur, M. Maiti, T.N. Nag, et al.
2022Ka08	JRNCD	331,	645	I. Kajan, S. Pomme, S. Heinitz
2022Ka42	PRVCA	106,	045502	M. Kanafani, X. Flechard, O. Naviliat-Cuncic, et al.
2022Ka45	PRVCA	106,	054325	O. Kaleja, B. Andjelic, O. Bezrodnova, et al.
2022Ka.A	Th.-Heidelberg			Kanika
2022Kh08	PRVCA	106,	024309	J. Khuyagbaatar, H. Brand, Ch. E. Dullmann, et al.
2022Ki23	ASJOA	936,	107	G.G. Kiss, A. Vitez-Sveiczer, Y. Saito, et al.
2022Ko02	ARISE	181,	110078	K. Kossert, O.J. Nahle, A. Honig, et al.
2022Ko06	PYLBB	827,	136953	T. Koiwai, K. Wimmer, P. Doornenbal, et al.
2022Ko10	ARISE	185,	110237	K. Kossert, M. Loidl, X. Mougeot, et al.
2022Ko22	ARISE	188,	110362	K. Kossert, Y. Amelin, D. Arnold, et al.
2022Kr04	ZAANE	58,	202	K. Kromer, C. Lyu, M. Door, et al.
2022Ku09	PRVCA	105,	034316	J. Kurpeta, A. Abramuk, T. Rzaca-Urban, et al.
2022Ku31	PRVCA	106,	034306	D. Kumar, T. Bhattacharjee, S.S. Alam, et al.
2022La12	CPCHC	46,	114001	C. Lan, Y. Wei, J. Wang, et al.
2022La.A	Th.-Mainz			J.J.W. van de Laar, PhD Thesis, Johannes Gutenberg University of Mainz
2022Le06	PRVCA	105,	045801	B. Lehnert, M. Hult, G. Lutter, et al.
2022Le14	PRLTA	129,	232502	A.F. Leder, D. Mayer, J.L. Ouellet, et al.
2022Li20	PRLTA	128,	152701	H.F. Li, S. Naimi, T.M. Sprouse, et al.
2022Li66	PRLTA	129,	242502	J.J. Liu, for the RIBLL Collaboration
2022Lo03	PRVCA	105,	L021306	A. Lopez-Martens, K. Hauschild, A.I. Svirikhin, et al.
2022Lo14	PRVCA	106,	045501	J. Long, C.R. Nicoloff, D.W. Bardayan, et al.
2022Ma25	PRVCA	105,	054607	I. Majeed Bhat, M. Shuaib, M.S. Asnain, et al.
2022Me04	PRVCA	105,	025804	Z. Meisel, A. Hamaker, G. Bollen, et al.
2022Mi.1	NIMAE	1033,	166662	A.K. Mistry, H.M. Albers, T. Arıcı, et al.
2022Mo11	PRVCA	105,	034334	B. Moon, A. Gargano, H. Naidja, et al.
2022Mo.A	Th.-Orsay			E. Morin
2022Mu10	PRVCA	105,	034331	M. Mukai, Y. Hirayama, Y.X. Watanabe, et al.
2022Na07	NUPAB	1018,	122359	F. Naqvi, S. Karampagia, A. Spyrou, et al.
2022Ne04	EPJAA	58,	44	D.A. Nesterenko, L. Jokiniemi, J. Kotila, et al.
2022Ne10	PRVCA	106,	024310	D.A. Nesterenko, K. Blaum, P. Delahaye, et al.
2022No01	PRVCA	105,	L021302	S. Nothhelfer, Th. E. Albrecht-Schonzart, M. Block, et al.
2022No06	PRVCA	105,	055501	P. Novella, M. Sorel, A. Uson, et al.
2022Og05	PRVCA	106,	024612	Yu. Ts. Oganessian, V.K. Utyonkov, D. Ibadullayev, et al.
2022Og07	PRVCA	106,	L031301	Yu. Ts. Oganessian, V.K. Utyonkov, N.D. Kovrizhnykh, et al.

2022Og08	PRVCA	106,	064306	Yu. Ts. Oganessian, V.K. Utyonkov, N.D. Kovrizhnykh, et al.
2022Or02	PRVCA	105,	L052802	R. Orford, N. Vassh, J.A. Clark, et al.
2022Or04	PRVCA	106,	064301	R. Orlandi, H. Makii, K. Nishio, et al.
2022Pa09	PRVCA	105,	034303	E. Parr, J.F. Smith, P.T. Greenlees, et al.
2022Ph01	PRLTA	129,	172701	V.H. Phong, S. Nishimura, G. Lorusso, et al.
2022Po01	PRVCA	105,	034310	R. Powel, B.A. Brown, J.D. Holt, et al.
2022Po02	PRVCA	105,	L041301	W.S. Porter, B. Ashrafkhani, J. Bergmann, et al.
2022Po06	PRVCA	106,	024312	W.S. Porter, E. Dunling, E. Leistenschneider, et al.
2022Pu01	PRVCA	106,	L012801	D. Puentes, Z. Meisel, G. Bollen, et al.
2022Ra20	PRVCA	106,	015501	M. Ramalho, Z. Ge, T. Eronen, et al.
2022Ra.A	Th.-Manitoba			D. Ray, PhD Thesis, University of Manitoba
2022Ru03	PYLBB	830,	137144	D. Rudolph, B. Blank, J. Giovinazzo, et al.
2022Rz01	PRVCA	106,	024322	T. Rzaca-Urban, K. Sieja, M. Czerwinski, et al.
2022Sa20	PYLBB	829,	137059	M. Saxena, W.-J. Ong, Z. Meisel, et al.
2022Sh20	PRVCA	105,	054312	P. Shuai, B.C. Rasco, K.P. Rykaczewski, et al.
2022Sh26	EPJAA	58,	83	S. Sharma, G.F. Grinyer, G.C. Ball, et al.
2022Si09	PRVCA	105,	L031302	P. Siwach, P. Arumugam, S. Modi, et al.
2022Si16	PRVCA	106,	014302	M. Si, R. Lozeva, H. Naidja, et al.
2022Si20	PYLBB	833,	137288	R. Silwal, C. Andreoiu, B. Ashrafkhani, et al.
2022Si25	PRVCA	106,	044311	U. Silwal, J.A. Winger, S.V. Ilyushkin, et al.
2022SiZZ	arXiv:	2205.12809		L. Si, Zh. Cheng, A. Abdukerim, et al.
2022So18	PRVCA	106,	054307	P.C. Sood, R. Gowrishankar
2022Te01	EPJAA	58,	52	M.S. Tezekbayeva, A.V. Yeremin, A.I. Svirikhin, et al.
2022Te02	PRVCA	105,	035801	M. Tessler, M. Paul, S. Halfon, et al.
2022Th06	NIMAE	1042,	167437	D.J. Thomas, N.J. Roberts
2022Tr03	PRVCA	106,	064314	V. Tripathi, S. Bhattacharya, E. Rubino, et al.
2022Ud01	MOLEF	27,	768	M.S. Uddin, S.M. Qaim, B. Scholten, et al.
2022Ve01	PRVCA	105,	034338	M. Venhart, A.N. Andreyev, J.G. Cubiss, et al.
2022Ve05	NATUA	607,	260	A.R. Vernon, R.F. Garcia Ruiz, T. Miyagi, et al.
2022Vi03	PYLBB	30,	137123	A. Vitez-Sveiczer, A. Algora, A.I. Morales, et al.
2022Vi.1	PACHA	94,	1085	I.M. Villa, N.E. Holden, A. Possolo, et al.
2022Wa20	PYLBB	832,	137262	S.G. Wahid, S.K. Tandel, S. Suman, et al.
2022Wa34	PRVCA	106,	044317	S. Waniganeththi, D.E.M. Hoff, A.M. Rogers, et al.
2022Wa39	PRVCA	106,	L051301	M. Wang, M. Zhang, X. Zhou, et al.
2022We05	EPJAA	58,	222	Y. Wei, C. Lan, Y. Ge, et al.
2022We.A	Th.-Brighton			A.P. Weaver, PhD Thesis, University of Brighton, 2022
2022Wu18	PRVCA	106,	064328	J. Wu, S. Nishimura, P.-A. Soderstrom, et al.
2022Ya13	PRVCA	105,	044325	A. Yagi, A. Odahara, H. Nishibata, et al.
2022Ya15	PRVCA	105,	L051302	H.B. Yang, Z.G. Gan, Z.Y. Zhang, et al.
2022Ya27	PRVCA	106,	064311	H.B. Yang, Z.G. Gan, Z.Y. Zhang, et al.
2022Za05	PYLBB	834,	137457	L. Zago, A. Gottardo, J.J. Valiente-Dobon, et al.
2022Ze02	PRVCA	106,	034307	Q.B. Zeng, S. Guo, Z. Liu, et al.
2022Zh04	PRVCA	105,	014604	D. Zhang, Y. Li, J. Bao, et al.
2022Zh22	PYLBB	829,	137129	W.Q. Zhang, A.N. Andreyev, Z. Liu, et al.
2022Zh45	PRVCA	106,	024305	M.M. Zhang, Y.L. Tian, Y.S. Wang, et al.
2022Zh46	PRVCA	106,	024317	W.Q. Zhang, A.N. Andreyev, Z. Liu, et al.
2022Zh76	NCAOB	5,	285	W. Zhang, B. Cederwall, O. Aktas, et al.
2022Zh.A	Th.-KTH			W. Zhang, PhD thesis, KTH Royal Institute of Technology, 2022, unpublished

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2023Ad01	NCCUA	46,	7	D.Q. Adams
2023Ag05	PRLTA	131,	142501	M. Agostini, A. Alexander, G.R. Araujo, et al.

2023Ag06	EPJCC	83,	1117	X. Aguerre, R. Arnold, C. Augier, et al.
2023Al22	PANUE	86,	528	E.N. Alexeev, Yu. M. Gavrilyuk, A.M. Gangapshev, et al.
2023Am.A	Th.-Giessen			D. Amanbayev, PhD thesis, Justus-Liebig-Universität Giessen, 2023, unpublished
2023An09	PRVCA	108,	034303	A.N. Andreyev, D. Seweryniak, B. Andel, et al.
2023Ar01	PRVCA	107,	014321	I.J. Arnquist
2023Ar02	PRLTA	130,	062501	I.J. Arnquist, for the Majorana Collaboration
2023Ar11	PRLTA	131,	152501	I.J. Arnquist, for the Majorana Collaboration
2023As02	PRLTA	131,	102502	A. Ashtari Esfahani, for the Project 8 Collaboration
2023Au01	PRVCA	107,	025503	C. Augier, for the CUPID-Mo Collaboration
2023Au03	PRVCA	108,	L011303	K. Auranen, P. Siwach, P. Arumugam, et al.
2023Au05	PRLTA	131,	162501	C. Augier, A.S. Barabash, F. Bellini, et al.
2023Az05	PRLTA	131,	222501	O. Azzolini, J.W. Beeman, F. Bellini, et al.
2023Be10	EPJAA	59,	176	P. Belli, R. Bernabei, F. Cappella, et al.
2023Be16	NPAEA	24,	193	P. Belli, R. Bernabei, F. Cappella, et al.
2023Bh05	PRVCA	108,	024312	S. Bhattacharya, V. Tripathi, S.L. Tabor, et al.
2023Bi03	PRLTA	130,	222501	J. Bishop, G.V. Rogachev, S. Ahn, et al.
2023Bo25	ATOMC	11,	116	P. Bohm, Yu. Hrabar, D. Rudolph, et al.
2023Br08	ARISE	201,	110987	R. Broda, T. Ziemek, J. Marganiec-Galazka, et al.
2023Br09	EPJAA	59,	199	F. Browne, A.M. Bruce, T. Sumikama, et al.
2023Br10	PYLBB	847,	138310	A.D. Briscoe, R.D. Page, J. Uusitalo, et al.
2023Ce02	EPJCC	83,	925	R. Cerroni, S. Dell'Oro, A. Formicola, et al.
2023Ch05	PRVCA	107,	014326	R. Chakma, A. Lopez-Martens, K. Hauschild, et al.
2023Ch11	ARISE	194,	110708	N.M. Chiera, R. Dressler, P. Sprung, et al.
2023Ch12	EPJAA	59,	29	S. Chenmarev, Sz. Nagy, J.J.W. van de Laar, et al.
2023Ch22	PRVCA	107,	054301	R.J. Charity, K. Brown, T. Webb, et al.
2023Ch24	CPCHC	47,	054001	I. Chen, S. Xu, Z. Zhang, et al.
2023Ch46	PRLTA	131,	172501	R.J. Charity, J. Wylie, S.M. Wang, et al.
2023Ch47	PRVCA	108,	044318	R.J. Charity, L.G. Sobotka
2023Co04	PRVCA	107,	L021301	D.M. Cox, A. Saamark-Roth, D. Rudolph, et al.
2023Co07	PRVCA	108,	L021602	J.I. Collar, S.G. Yoon
2023Co11	ARISE	202,	111044	S.M. Collins, U. Koster, A.P. Robinson, et al.
2023Cu04	PRLTA	131,	202501	J.G. Cubiss, A.N. Andreyev, A.E. Barzakh, et al.
2023Da19	PRVCA	108,	064304	P. Das, U. Datta, S. Chakraborty, et al.
2023Do04	ARISE	194,	110689	J. Dong, T. Bai, Y. Dai, et al.
2023Dr02	PRVCA	107,	L061303	N. Dronchi, J. Berkman, R.J. Charity, et al.
2023Ge04	PRVCA	108,	045502	Z. Ge, T. Eronen, A. de Roubin, et al.
2023Gh02	PRVCA	107,	045504	L.E. Ghezzer, F. Nozzoli, R. Nicolaidis, et al.
2023Gr04	PRLTA	130,	242501	T.J. Gray, J.M. Allmond, Z. Xu, et al.
2023Ha25	PRVCA	108,	014327	L. Hariasz, M. Stukel, P.C.F. Di Stefano, et al.
2023Ha27	PRLTA	131,	052502	S.J. Haselschwardt, B.G. Lenardo, T. Daniels, et al.
2023Ha30	PRVCA	108,	024307	D.J. Hartley, F.G. Kondev, M.P. Carpenter, et al.
2023Ha31	PRVCA	108,	034608	K. Haak, O.B. Tarasov, P. Chowdhury, et al.
2023He18	PRLTA	131,	253002	F. Heisse, M. Door, T. Sailer, et al.
2023He.A	Th.-MichiganState			K. Hermansen, PhD thesis, Michigan State University, 2023
2023Ho11	PRVCA	108,	054312	D.S. Hou, A. Takamine, M. Rosenbusch, et al.
2023Ho14	PRLTA	131,	262701	D.E.M. Hoff, K. Kolos, G.W. Misch, et al.
2023Hu01	PRVCA	107,	014306	M. Hukkanen, W. Ryssens, P. Ascher, et al.
2023Hu18	PRVCA	108,	034301	W.J. Huang, X. Zhou, Y.H. Zhang, et al.
2023Hu25	PRVCA	108,	064315	M. Hukkanen, W. Ryssens, P. Ascher, et al.
2023Ib01	BRSPE	87,	1118	D. Ibadullayev, V.K. Utyonkov, Yu. Ts. Oganessian, et al.
2023Ii01	PRLTA	130,	012501	S. Iimura, M. Rosenbusch, A. Takamine, et al.
2023In01	NUPAB	1035,	122666	A. Kh. Inoyatov, D. Venos, A. Kovalik
2023Is02	PRVCA	107,	024306	Y. Ishibashi, A. Gladkov, Y. Ichikawa, et al.

2023Is03	PYLBB	843,	138008	A.V. Isaev, R.S. Mukhin, A.V. Andreev, et al.
2023Ja05	NUPAB	1033,	122636	A. Jacobs, C. Andreoiu, J. Bergmann, et al.
2023Ja10	EPJAA	59,	263	A. Jaries, M. Stryjczyk, A. Kankainen, et al.
2023Ja11	PRVCA	108,	064302	A. Jaries, M. Stryjczyk, A. Kankainen, et al.
2023Ju01	ARISE	202,	111058	F. Juget, M. van Dijk, E.A. Maugeri, et al.
2023Ke04	PRLTA	130,	152502	S. Kegel, P. Achenbach, S. Bacca, et al.
2023Ke11	PRVCA	108,	035805	K-U. Kettner, H.W. Becker, C.R. Brune, et al.
2023Ki01	NUCIA	46,	8	S.C. Kim, for the AMoRE Collaboration
2023Kn03	PRVCA	107,	044313	I. Knapova, A. Couture, C. Fry, et al.
2023Ko10	PRVCA	107,	064312	H. Kokkonen, K. Auranen, J. Uusitalo, et al.
2023Ko15	NATUA	620,	965	Y. Kondo, N.L. Achouri, H. Al Falou, et al.
2023Ko19	PRLTA	131,	102501	K. Konig, S. Fritzsche, G. Hagen, et al.
2023Ko22	BRSPE	87,	1098	N.D. Kovrizhnykh, Yu. Ts. Oganessian, V.K. Utyonkov, et al.
2023Ko31	SRCEC	13,	4783	A. Koszorus, M. Block, P. Campbell, et al.
2023Kr02	NATUA	617,	706	S. Kraemer, J. Moens, M. Athanasakis-Kaklamanakis, et al.
2023Ku17	BRSPE	87,	1105	A.A. Kuznetsova
2023La09	PRLTA	131,	092501	L. Lalanne, O. Sorlin, A. Poves, et al.
2023La12	EPJCC	83,	1114	M. Laubenstein, B. Lehnert, S.S. Nagorny, et al.
2023Le15	PYLBB	847,	138278	S. Lechner, T. Miyagi, Z.Y. Xu, et al.
2023Le18	PRVCA	108,	064313	M. Ley, L. Knafla, J. Jolie, et al.
2023Lo.1	EPJWC	290,	02027	A. Lopez-Martens, K. Hauschild, A.I. Svirikhin, et al.
2023Lu04	PRVCA	108,	014302	H.Y. Lu, Z. Liu, Z.H. Li, et al.
2023Lu07	PRVCA	108,	014329	R.S. Lubna, S.N. Liddick, T.H. Ogunbeku, et al.
2023Lu.A	Th.-Jyvaskyla			M. Luoma, PhD Thesis, University of Jyvaskyla, 2023, unpublished
2023Ma26	ARISE	197,	110829	J. Marganiec-Galazka, M. Czudek, E. Lech, et al.
2023Me17	PRLTA	131,	243002	M. Medina Restrepo, E.G. Myers
2023Mo01	PRVCA	107,	014311	B. Moon, C.-B. Moon, A. Odahara, et al.
2023Mo07	PYLBB	839,	137833	A. Mollaebrahimi, C. Hornung, T. Dickel, et al.
2023Mo25	ARISE	202,	111061	K.-ichi. Mori, T. Yamada, Y. Sato, et al.
2023Mo.1	NATUA	622,	53	J. Morgner, B. Tu, C.M. König, et al.
2023Na12	EPJAA	59,	90	S. Naimi, Y. Yamaguchi, T. Yamaguchi, et al.
2023Ne12	EPJNN	9,	30	D. Neudecker, A.D. Carlson, S. Croft, et al.
2023Ne13	PRVCA	108,	054301	D.A. Nesterenko, J. Ruotsalainen, M. Stryjczyk, et al.
2023Ni04	PRLTA	130,	132502	T. Niwase, Y.X. Watanabe, Y. Hirayama, et al.
2023Ni07	PRLTA	131,	022502	L. Nies, D. Atanasov, M. Athanasakis-Kaklamanakis, et al.
2023Ni10	PRLTA	131,	222503	L. Nies, L. Canete, D.D. Dao, et al.
2023Ni.1	PTEP.	3,	031H01	T. Niwase, W. Xian, M. Wada, et al.
2023Ni.2	NIMBE	541,	197	T. Niwase, M. Wada, P. Schury, et al.
2023Og03	PRVCA	108,	024611	Yu. Ts. Oganessian, V.K. Utyonkov, M.V. Shumeiko, et al.
2023Pe06	PRVCA	107,	044301	L.G. Pedersen, E. Sahin, A. Gorgen, et al.
2023Pe11	PRVCA	108,	014317	C.M. Petrache, J. Uusitalo, A.D. Briscoe, et al.
2023Pl01	PRLTA	131,	222502	P. Plattner, E. Wood, L. Al Ayoubi, et al.
2023Po.1	APOBB	16,	4-A26	M. Polettini, G. Benzoni, J. Pellumaj, et al.
2023Po.B	Th.-Milano			M. Polettini, PhD thesis, University Universit'a degli Studi di Milano, 2023, unpublished
2023Qu02	PRVCA	107,	024313	F.G.A. Quarati, G. Bollen, P. Dorenbos, et al.
2023Re08	PRVCA	108,	014304	E. Rey-herme, A. Raggio, M. Vandebrouck, et al.
2023Re09	PRLTA	131,	052501	B.M. Rebeiro, S. Triambak, P.E. Garrett, et al.
2023Sa03	PRVCA	107,	024301	A. Saamark-Roth, D.M. Cox, D. Rudolph, et al.
2023Sa59	NCAOB	14,	5961	L.G. Sarmiento, Th. Roger, J. Giovinazzo, et al.
2023Sa.1	PRLTA	131,	093201	S. Sasidharan, O. Bezrodnova, S. Rau, et al.
2023Sh24	NATUA	622,	471	Y. Shvyd'ko, R. Rohlsberger, O. Kocharovskaya, et al.
2023St09	PRLTA	131,	052503	M. Stukel, for the KDK Collaboration
2023Su.A	Th.-Liverpool			C.M. Sullivan, PhD Thesis, University of Liverpool, 2023, unpublished

2023Ta02	ARISE	193,	110674	M.P. Takacs
2023Vi.A	APOBB	16,	4-A8	A. Vitéz-Sveiczer, S. Kovács, G.G. Kiss, et al.
2023Wa10	PRLTA	130,	192501	M. Wang, Y.H. Zhang, X. Zhou, et al.
2023We04	PRVCA	107,	034313	F. Weber, T.E. Albrecht-Schonzart, S.O. Allehabi, et al.
2023Wo01	PRVCA	107,	034303	M. Wolinska-Cichocka, B.C. Rasco, K.P. Rykaczewski, et al.
2023Xi01	PRVCA	107,	014304	Y.M. Xing, C.X. Yuan, M. Wang, et al.
2023Ya12	PRVCA	107,	054303	K. Yadav, A.Y. Deo, Madhu, et al.
2023Ya17	PRVCA	107,	064309	D. Yates, R. Krucken, I. Dillmann, et al.
2023Ya31	PRVCA	108,	065802	I.T. Yandow, A. Abdullah-Smoot, G. Bollen, et al.
2023Ya.A	PrvCom	HWJ	Mar	X.L. Yan
2023Yo04	PRVCA	108,	064307	R. Yokoyama, R. Grzywacz, B.C. Rasco, et al.
2023Zh03	PRVCA	107,	014308	W. Zhang, B. Cederwall, M. Doncel, et al.
2023Zh10	EPJAA	59,	27	M. Zhang, X. Zhou, M. Wang, et al.

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2024Ag03	EPJCC	84,	34	M. Agostini, A. Alexander, G.R. Araujo, et al.
2024Al20	PRVCA	110,	034303	B. Alayed, R.D. Page, D.T. Joss, et al.
2024An09	PRVCA	109,	064321	B. Andel, A.N. Andreyev, A. Blazhev, et al.
2024As04	PRVCA	109,	035503	A. Ashtari Esfahani, S. Boser, N. Buzinsky, et al.
2024Ba08	ARISE	208,	111289	S. Bara, E. Jajcisinova, T.E. Cocolios, et al.
2024Ba40	EPJCC	84,	1158	I. Bandac, L. Berge, J.M. Calvo-Mozota, et al.
2024Be01	ARISE	203,	111108	D.E. Bergeron, J.T. Cessna, R.P. Fitzgerald, et al.
2024Be07	EPJAA	60,	46	P. Belli, R. Bernabei, R.S. Boiko, et al.
2024Be17	EPJAA	60,	150	P. Belli, R. Bernabei, F. Cappella, et al.
2024Be18	PRVCA	110,	014305	T. Beck, A. Gade, B.A. Brown, et al.
2024Be19	PRVCA	110,	014328	J. Benito, L.M. Fraile, A. Korgul, et al.
2024Be25	PRVCA	110,	034325	O. Beliuskina, D.A. Nesterenko, A. Jaries, et al.
2024Bh03	PRVCA	109,	L022501	R. Bhandari, G. Bollen, T. Brunner, et al.
2024Bh09	IMPEE	33,	2450060	P. Bhat, S. Sharma, D. Negi, et al.
2024Bi01	PRVCA	109,	054308	J. Bishop, G.V. Rogachev, S. Ahn, et al.
2024Ca05	PRLTA	132,	152501	S.E. Campbell, G. Bollen, B.A. Brown, et al.
2024Ca11	PYLBB	853,	138663	L. Canete, S. Giraud, A. Kankainen, et al.
2024Ch58	EPJAA	60,	204	S. Chenmarev, K. Blaum, M. Block, et al.
2024Ch.A	SRCEC	14,	17436	N.M. Chiera, P. Sprung, Y. Amelin, et al.
2024Ci.A				Isotopic compositions of the elements 2024. Available online at www. ciaaw. org (retrival on Sep 19, 2026)
2024Co05	PRLTA	132,	152503	I. Cox, Z.Y. Xu, R. Grzywacz, et al.
2024Co.A	Th.-UTennessee			I.C. Cox, 2024; $https://trace.tennessee.edu/utk_graddiss/11344$
2024De01	PYLBB	848,	138352	R.P. de Groote, D.A. Nesterenko, A. Kankainen, et al.
2024Di10	NATUA	632,	757	S. Dickopf, B. Sikora, A. Kaiser, et al.
2024Do04	ARISE	209,	111339	J. Dong, T. Bai, Y. Hu, et al.
2024Do05	ARISE	214,	111517	J. Dong, T. Bai, Y. Dai, et al.
2024Dr01	PRVCA	110,	L031302	N. Dronchi, R.J. Charity, L.G. Sobotka, et al.
2024El03	PRLTA	133,	013201	R. Elwell, Ch. Schneider, J. Jeet, et al.
2024Fl.A	Th.-Bordeaux			M. Flayol
2024Fr05	PRLTA	133,	022502	D. Freire-Fernandez, W. Korten, R.J. Chen, et al.
2024Fu.A	arXiv:	2412.19519v1		Y. Fuwa et al.
2024Ga01	ARISE	203,	111105	R. Galea, K. Moore
2024Ga26	PRVCA	110,	014331	A. Gade, B.A. Brown, J.A. Tostevin, et al.
2024Ga31	PRLTA	133,	172502	J.M. Gates, R. Orford, D. Rudolph, et al.
2024Ge01	EPJAA	60,	104	Z. Ge, T. Eronen, M. Ramalho, et al.
2024Ge05	EPJAA	60,	147	Zh. Ge, Sh. Bai, T. Eronen, et al.
2024Ge07	PRLTA	133,	132503	Zh. Ge, M. Reponen, T. Eronen, et al.

2024Ge09	PYLBB	859,	139094	Zh. Ge, T. Eronen, V.A. Sevestrean, et al.
2024Gi.A				F. Giacoppo - GSI/NUSTAR seminar, February 22, 2024
2024Go14	EPJAA	60,	234	N. Goel, S. Nag, B. Maheshwari, et al.
2024Go.A	Th.-Hebrew			I. Goldberg, MSc Thesis, Hebrew University, December 2024, arXiv:2412.14734v1
2024Gu20	EPJAA	60,	165	C.Y. Guo, W.Q. Zhang, H. Huang, et al.
2024Ha23	PRVCA	110,	044319	D.J. Hartley, F.G. Kondev, M.P. Carpenter, et al.
2024Hi06	NATUA	633,	63	T. Hiraki, K. Okai, M. Bartokos, et al.
2024Hu14	PRVCA	110,	014326	H. Huang, H.Y. Wu, C.Y. Guo, et al.
2024Hu16	PYLBB	856,	138916	M. Hukkanen, W. Ryssens, P. Ascher, et al.
2024Ja03	EPJAA	60,	37	A. Jaries, M. Stryjczyk, A. Kankainen, et al.
2024Ja07	PRVCA	110,	014306	L. Janiak, M. Gierlik, T. Kosinski, et al.
2024Ja10	PRVCA	110,	034326	A. Jaries, M. Stryjczyk, A. Kankainen, et al.
2024Ja12	PRVCA	110,	045809	A. Jaries, S. Nikas, A. Kankainen, et al.
2024Ja.A	Th.-MSU			R. Jain, PhD thesis, Michigan State University, 2024, unpublished
2024Je01	EPJAA	60,	153	E.A.M. Jensen, S.T. Nielsen, A. Andreyev, et al.
2024Jo02	PYLBB	855,	138806	P.M. Jodidar, C.M. Petrache, B.F. Lv, et al.
2024Jo06	EPJAA	60,	241	H. Joukainen, P. Ruotsalainen, J. Saren, et al.
2024Ju03	PRLTA	132,	222501	A. Jungclaus, M. Gorska, M. Mikolajczuk, et al.
2024Ka23	EPJAA	60,	140	M. Kaja, M. Urquiza-Gonzalez, F. Berg, et al.
2024Ka32	PRLTA	133,	082501	J. Kahlbow, T. Aumann, O. Sorlin, et al.
2024Ka49	NPAHA	20,	1719	J. Karthein, C.M. Ricketts, R.F. Garcia Ruiz, et al.
2024Ka.A	Th.-UMichigan			A.R. Kanver, PhD Thesis, University of Michigan, 2024, unpublished
2024Ke05	PRVCA	110,	054310	K. Kessaci, B.J.P. Gall, O. Dorvaux, et al.
2024Kh02	PRVCA	109,	034311	J. Khuyagbaatar, R.A. Cantemir, Ch. E. Dullmann, et al.
2024Ki16	PRVCA	110,	045810	S. Kimura, M. Wada, H. Haba, et al.
2024Ko07	PRLTA	132,	162502	K. Konig, J.C. Berengut, A. Borschevsky, et al.
2024Ko22	PRVCA	110,	L031301	D. Kostyleva, X.-D. Xu, I. Mukha, et al.
2024Kr02	PRVCA	109,	L021301	K. Kromer, Ch. Lyu, J. Bieron, et al.
2024Ku30	PRVCA	110,	064302	A.N. Kuchera, R. Shahid, J. Zhao, et al.
2024La01	PRVCA	109,	024309	S. Lalkovski, F.G. Kondev, K. Auranen, et al.
2024Lo03	NIMAE	1062,	169228	S. Lopez-Caceres, S.T. Marley, M.P. Carpenter, et al.
2024Lo12	PRVCA	110,	034311	J. Louko, K. Auranen, J. Uusitalo, et al.
2024Lo13	PRVCA	110,	064303	R. Lozeva, M. Si, H. Naidja, et al.
2024Ma28	PRVCA	109,	L061301	M. Madurga, J.M. Christie, Z. Xu, et al.
2024Mo02	PRLTA	132,	082501	B. Monteagudo, F.M. Marques, J. Gibelin, et al.
2024Mu01	JRNCD	333,	1531	G. Mukherjee, S.S. Nayak, J. Datta, et al.
2024Mu06	PYLBB	854,	138737	P. MUller, S. Kaufmann, T. Miyagi, et al.
2024Mu08	CPCHC	48,	064002	R.S. Mukhin, A.V. Isaev, A.V. Andreev, et al.
2024Na17	PRVCA	110,	014310	D. Nagae, S. Omika, Y. Abe, et al.
2024Na22	PRVDA	110,	030001	S. Navas, C. Amsler, T. Gutsche, et al.
2024Ne06	PRVCA	110,	034323	S. Neupane, N. Kitamura, Z.Y. Xu, et al.
2024Ni16	PRVCA	110,	L061301	L. Ni, Y. Jin, Z.H. Li, et al.
2024No04	PRVCA	109,	055501	E.B. Norman, A. Drobizhev, N. Gharibyan, et al.
2024Og02	PRVCA	109,	054307	Yu. Ts. Oganessian, V.K. Utyonkov, M.V. Shumeiko, et al.
2024On02	PRVCA	110,	024321	W.-J. Ong, H. Schatz, K. Kravvaris, et al.
2024Pa29	PRLTA	133,	122501	L. Pagnanini, G. Benato, P. Carniti, et al.
2024Pa41	PRVCA	110,	055503	M. Paulsen, P.C.-O. Ranitzsch, M. Loidl, et al.
2024Pe.A	Th.-Oslo			L.G. Pedersen, PhD thesis, University of Oslo, 2024, unpublished
2024Pi01	ARISE	205,	111171	L. Pibida, D.E. Bergeron, S.M. Collins, et al.
2024Po10	NDSBA	196,	12	S. Pomme, K. Pelczar
2024Po14	PRVCA	110,	034321	W.S. Porter, B. Liu, D. Ray, et al.
2024Po17	PRVCA	110,	L041301	J.L. Pore, W. Younes, J.M. Gates, et al.
2024Po18	PRVCA	110,	044313	J.L. Pore, J.M. Gates, R. Orford, et al.

2024Ra.A	arXiv:	2411.06310		D. Ray, N. Vassh, B. Liu, et al.
2024Ri04	ARISE	211,	111407	J. Riffaud, K. Kossert, M.P. Takacs, et al.
2024Sa41	PYLBB	857,	138976	E. Sahin, V. Werner, A.K. Mistry, et al.
2024Sa.A	APCPC	3020,	020007	B. Sailaubekov, A.V. Isaev, A.I. Svirikhin, et al.
2024Sc06	JRNCD	333,	3615	D. Schumann, E. Maugeri, Y. Dai, et al.
2024Sc12	NPAHA	20,	921	C. Schweiger, M. Braß, V. Debierre, et al.
2024Sh17	PRVCA	109,	044313	Y. Shimizu, T. Kubo, T. Sumikama, et al.
2024Si12	PRVCA	109,	064309	K. Siegl, A.M. Keeler, R. Grzywacz, et al.
2024Si18	PRLTA	133,	232701	R.S. Sidhu, G. Leckenby, R.J. Chen, et al.
2024Si.A	APOBB	17,	3-A10	S. Singh, D. Choudhury, R. Roy, et al.
2024So16	PRVCA	110,	034328	N. Sokolowska, V. Guadilla, C. Mazzocchi, et al.
2024St06	PRVCA	110,	015804	I.C. Stefanescu, L. Trache, A. Saastamoinen, et al.
2024St10	PRVCA	110,	054321	M. Stepaniuk, M. Karny, A. Fijalkowska, et al.
2024Su04	CPCHC	48,	034002	M.Z. Sun, Y. Yu, X.P. Wang, et al.
2024Su18	ARISE	214,	111512	A. Subercaze, V. Radulovic, H. Philibert, et al.
2024Ta07	PRLTA	132,	072501	O.B. Tarasov, A. Gade, K. Fukushima, et al.
2024Ta18	PRVCA	110,	014626	A.S. Tamashiro, S. Burcher, J.T. Harke, et al.
2024Ti04	PRLTA	132,	182501	J. Tiedau, M.V. Okhapkin, K. Zhang, et al.
2024Tr01	PRVCA	109,	044320	V. Tripathi, S. Bhattacharya, E. Rubino, et al.
2024Va14	PYLBB	858,	139037	A.A. Valverde, F.G. Kondev, B. Liu, et al.
2024Vo03	PRVCA	109,	044312	W.W. von Seeger, P.A. DeYoung, A. Spyrou, et al.
2024Wa14	PYLBB	850,	138503	J.G. Wang, Z.G. Gan, Z.Y. Zhang, et al.
2024Wa19	PRVCA	109,	035806	K.-L. Wang, A. Estrade, M. Famiano, et al.
2024Wa45	PYLBB	856,	138867	S.J. Wang, A. Kanellakopoulos, X.F. Yang, et al.
2024Xi06	PRVCA	109,	035804	W. Xian, S. Chen, S. Nikas, et al.
2024Ya04	PRVAA	132,	072502	H.B. Yang, Z.G. Gan, Y.J. Li, et al.
2024Ya08	PRLTA	132,	152502	X. Yan, Zh. Cheng, A. Abdukerim, et al.
2024Ya11	NATUA	629,	62	A. Yamaguchi, Yu. Shigekawa, H. Haba, et al.
2024Ya27	PRVCA	110,	044302	H.B. Yang, Z.G. Gan, Z.Y. Zhang, et al.
2024Ye04	PRLTA	133,	072501	T.T. Yeung, A.I. Morales, J. Wu, et al.
2024Yo09	PTEP.	2024,	101D01	M. Yoshimoto, H. Suzuki, N. Fukuda, et al.
2024Yu02	PYLBB	849,	138452	Z. Yue, A.N. Andreyev, A.E. Barzakh, et al.
2024Yu11	PRVCA	110,	034315	Z. Yue, A.E. Barzakh, A.N. Andreyev, et al.
2024Yu13	PRLTA	133,	222501	Y. Yu, Y.M. Xing, Y.H. Zhang, et al.
2024Ze04	ARISE	212,	111480	Q. Zeng, T.W. Peng, H.F. Li, et al.
2024Zh19	PRVCA	109,	034314	Z. Zhao, Z.G. Gan, Z.Y. Zhang, et al.
2024Zh44	NATUA	633,	63	Ch. Zhang, T. Ooi, J.S. Higgins, et al.
2024Zh47	CPCHC	48,	103001	B.-T. Zhang, J.-Zh. Wang, L.-T. Yang, et al.

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2025Aa01	JPGPE	52,	015103	J. Aalbers, D.S. Akerib, A.K. Al Musalhi, et al.
2025Ab11	PRVCA	111,	034301	A. Abramuk, J. Kurpeta, W. Urban, et al.
2025Ad02	EPJCC	85,	728	P. Adhikari, R. Ajaj, M. Alpizar-Venegas, et al.
2025Ad05	PRLTA	135,	082501	D.Q. Adams, C. Alduino, K. Alfonso, et al.
2025Ag04	PRLTA	134,	082501	A. Agrawal, V.V. Alenkov, P. Aryal, et al.
2025Ag12	PRVCA	112,	054319	P. Aguilera, F. Molina, B. Rubio, et al.
2025Al08	PRLTA	134,	162502	A. Algora, A. Vitez-Sveiczer, A. Poves, et al.
2025Al22	PRLTA	135,	142502	G.A. Alcala, A. Algora, M. Estienne, et al.
2025An17	PYLBB	871,	140013	A.N. Andreyev, A. Barzakh, M.D. Seliverstov, et al.
2025Ap05	PRVCA	112,	034310	C.J. Appleton, P.J. Woods, A. Algora, et al.
2025Ap07	PRVCA	112,	064314	C.J. Appleton, R.M. Clark, C. Morse, et al.
2025Ba06	EPJCC	85,	174	A.S. Barabash, P. Belli, R. Bernabei, et al.
2025Ba15	PRLTA	134,	182501	S.W. Bai, X.F. Yang, A. Koszorus, et al.

2025Ba16	PRVCA	111,	054317	S. Bae, T. Sumikama, P.M. Walker, et al.
2025Ba18	NUPAB	1061,	123142	S. Banerjee, S. Bhattacharyya, S. Chakraborty, et al.
2025Ba22	PRVCA	111,	065803	S. Bara, A. Algora, B. Andel, et al.
2025Ba36	PRVCA	112,	034304	A. Barzakh, A.N. Andreyev, Z. Yue, et al.
2025Ba40	APOBB	18,	2-A24	G. Bartram, Zs. Podolyák on behalf of the S450 Collaboration
2025Be01	NUPAB	1053,	122976	P. Belli, R. Bernabei, F. Cappella, et al.
2025Be31	PRVCA	112,	045503	P. Belli, R. Bernabei, F. Cappella, et al.
2025Be.1	PRVAA	111,	L040801	O. Bezrodnova, S. Sasidharan, W. Quint, et al.
2025Be.2	EPJWC	324,	00006	G. Benzoni, M. Polettini
2025Bo.1	ARISE	226,	112124	C. Bobin, M.N. Amiot, C. Michotte et al.
2025Br09	PRVCA	112,	014320	P. Brionnet, A. Lopez-Martens, O. Dorvaux, et al.
2025Bu.A	arXiv:	2510.04456v1		T.Budner, M.Friedman, L.J.Sun et al.
2025Ca26	PYLBB	871,	140012	S. Cannarozzo, S. Pomp, A. Kankainen, et al.
2025Ce04	PRLTA	135,	252502	A. Ceulemans, R. Raabe, F. Nowacki et al.
2025Ch10	PRVCA	111,	014304	J.L. Chen, H. Watanabe, P.M. Walker, et al.
2025Ch42	PRVCA	112,	014332	C. Chambers, M.P. Reiter, A.T. Gallant, et al.
2025Ch67	ASJOA	994,	270	Z.Y. Chen, X.L. Yan, S.Q. Hou, et al.
2025Ch72	PRVCA	112,	064318	R.J. Charity, K.W. Brown, L.G. Sobotka
2025Ci01	PRVCA	111,	014306	N. Cieplicka-Orynczak, C. Michelagnoli, S. Leoni, et al.
2025Cr03	ARISE	226,	112193	G. Craveiro, S. Leblond, X. Mougeot
2025Cz.1	ATOMC	13,	6	A. Czihaly, S. Beck, J. Bergmann, et al.
2025De26	PANUE	88,	52	A.V. Derbin, I.S. Drachnev, D.V. Ivanov, et al.
2025Do.1	PRLTA	134,	063002	M. Door, C.-H. Yeh, M. Heinz, et al.
2025El05	PRVCA	112,	044317	D. Elchine, M. Muller, M. Schiffer, et al.
2025Er02	PRVCA	112,	044313	H. Erington, G. Bollen, G. Dykstra, et al.
2025Fu07	CPCHC	49,	84004	X.Y. Fu, Z. Liu, A.N. Andreyev, et al.
2025Ga07	PANUE	88,	11	Yu. M. Gavrilyuk, A.M. Gangapshev, A.M. Gezhaev, et al.
2025Ge08	PRVCA	112,	035501	Z. Ge, T. Eronen, V.A. Sevestrean, et al.
2025Ge09	JPGPE	52,	105103	R.M. Gesue, S. Turkat, J. Skowronski, et al.
2025Gu07	NUPAB	1060,	123113	Ch. Guo, Y. Li, Sh. Yan, et al.
2025Gu12	CPCHC	49,	074004	F. Guan, Zh.-Y. Zhang, Z.-G. Gan, et al.
2025Gu23	PRLTA	135,	222501	F.P. Gustafsson, L.V. Rodriguez, R.F. Garcia Ruiz, et al.
2025Hi02	PRLTA	134,	113801	J.S. Higgins, T. Ooi, J.F. Doyle, et al.
2025Ho01	PRVCA	111,	014327	Z. Hockenbery, T. Murbock, B. Ashrafkhani, et al.
2025Ir01	PRVCA	111,	014314	C.M. Ireland, F.M. Maier, G. Bollen, et al.
2025Ja05	PRLTA	134,	042501	A. Jaries, M. Stryjczyk, A. Kankainen, et al.
2025Ja06	PRLTA	134,	052504	R.E. Jacob, S.M. Tannous, L.A. Bernstein, et al.
2025Ja07	PRLTA	134,	062701	A. Jacobs, S. Nikas, J. Ash, et al.
2025Jo01	PRVCA	111,	014303	P.M. Jodidar, C.M. Petrache, A. Astier, et al.
2025Ka40	EPJAA	61,	281	E. Kauppinen, J. Ruotsalainen, V. Kumar, et al.
2025Ke01	PRVCA	111,	L021601	I. Kelly, W. Flanagan, J. Moldenhauer, et al.
2025Kh01	PRLTA	134,	022501	J. Khuyagbaatar, P. Mosat, J. Ballof, et al.
2025Kh09	PRVCA	112,	044605	M.S. Khirk, L.V. Grigorenko, E. Yu. Nikolskii, et al.
2025Ki14	PRLTA	135,	152701	S. Kimura, M. Wada, C.Y. Fu, et al.
2025Km01	PRVCA	111,	024308	K.N. Kmak, S. Neupane, K. Kolos, et al.
2025Ko04	NIMAE	1073,	170272	S.R. Kovacs, T.N. Szegedi, A. Toth, et al.
2025Ko08	ARISE	222,	111863	K. Kossert, M. Faure, D. Deptuck
2025Ko13	NCAOB	16,	4985	H. Kokkonen, K. Auranen, P. Siwach, et al.
2025Ko14	PRVCA	112,	024318	B. Kootte, M.P. Reiter, C. Andreoiu, et al.
2025Ko.B	PrvCom	FGK		F.G. Kondev (private communication)
2025Kr04	PRRHA	7,	L042022	G. Kripkó-Koncz, W.R. Plass, I. Dedes, et al.
2025Ku.A	PPNLA	22,	406	A.A. Kuznetsova, A.I. Svirikhin, A.V. Isaev et al.
2025Ku.B	arXiv:	2509.25061v1		A. Kubiela, D.-S. Ahn, H. Baba et al.
2025La10	PRVCA	112,	L031301	L. Lalanne, M. Athanasakis-Kaklamanakis, D.D. Dao, et al.

2025Le11	EPJCC	85,	659	B. Lehnert, S.S. Nagorny, M. Thiesse, et al.
2025Le.2	RPCHD	238,	113148	D.H. Lee, E.J. Choi, H.S. Lee, et al.
2025Li18	PRVCA	111,	034303	R. Li, D. Verney, G. De Gregorio, et al.
2025Li19	PRVCA	111,	034308	B. Liu, M. Brodeur, J.A. Clark, et al.
2025Li31	PRVCA	111,	054320	R. Li, A. Teigelhofer, J. Li, et al.
2025Li48	ARISE	225,	112056	J. Liang, G. Chen, X. Zhang, et al.
2025Li64	PRVCA	112,	045504	B. Liu, M. Brodeur, D.W. Bardayan, et al.
2025Ll01	PRVCA	111,	064310	M. Llanos-Exposito, J. Benito, L.M. Fraile, et al.
2025Ll.A	Th.-Madrid			M. Llanos-Exposito, PhD thesis, Universidad Complutense de Madrid, 2025, unpublished
2025Lu09	PRLTA	134,	232502	D.W. Luo, J.Z. Zhang, Z.H. Li, et al.
2025Lu16	PRVCA	112,	034307	D. Lunney, V. Manea, M. Mougeot, et al.
2025Ly01	PRLTA	134,	052503	E.M. Lykiardopoulou, C. Walls, J. Bergmann, et al.
2025Ma41	PRVCA	112,	014329	F.M. Maier, G. Bollen, B.A. Brown, et al.
2025Ma56	PRLTA	135,	202501	B. Maass, W. Ryssens, K. Konig, et al.
2025Mi06	PRVCA	112,	024328	J. Mist, B. Andel, A.N. Andreyev, et al.
2025Mo10	PRVCA	111,	044320	C. Morse, R.M. Clark, D. Seweryniak, et al.
2025Mo17	PRLTA	134,	232501	P. Mosat, J. Khuyagbaatar, J. Ballof, et al.
2025Mo18	PRVCA	134,	232701	A. Mollaebrahimi, C. Walls, T. Dickel, et al.
2025Mo.A	Th.-Lund			M. Mohamed, MSc thesis, University of Lund, 2025, unpublished
2025Mu03	PRVCA	111,	014322	M. Mukai, Y. Hirayama, P. Schury, et al.
2025Mu06	PRVCA	111,	045501	R. Musedinovic, L.S. Blokland, C.B. Cude-Woods, et al.
2025Na12	PHSTB	100,	075302	S. Nandi, F.G. Kondev, M.P. Carpenter, et al.
2025Ni02	PRVCA	111,	014315	L. Nies, D. Atanasov, M. Athanasakis-Kaklamanakis, et al.
2025Ni08	ARISE	222,	111870	S. Nissim, O. Aviv, M. Brandis, et al.
2025Ni09	PRVCA	111,	064317	H. Nishibata, A. Odahara, T. Shimoda, et al.
2025Ni11	PRVCA	112,	024321	L. Ni, Y. Jin, Z.H. Li, et al.
2025Ni12	PYLBB	868,	139660	L. Ni, Y. Jin, Z.H. Li, et al.
2025Og03	PRVCA	112,	014603	Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, et al.
2025Og04	PRLTA	135,	072501	T.H. Ogunbeku, J.M. Allmond, T.J. Gray, et al.
2025Ol02	PYLBB	866,	139551	B. Olaizola, A. Illana, J. Benito, et al.
2025On01	PRVCA	112,	024322	G. O'Neil, K. Beeks, E. Hudson, et al.
2025Or05	PRVCA	112,	L061302	A. Ortega Moral, S.M. Wang, J. Giovinazzo, et al.
2025Ow01	PRVCA	111,	065801	G. Owens-Fryar, S.M. Lyons, A.L. Richard, et al.
2025Pe09	PRVCA	111,	044312	A. Perez de Rada Fiol, T. Martinez, D. Cano-Ott, et al.
2025Pe11	PYLBB	866,	139576	J.F. Peltier, Z.Y. Xu, I. Cox, et al.
2025Ph02	PRLTA	135,	252501	J.S. Phillips, R.J. Charity, N. Dronchi, et al.
2025Pi01	EPJAA	61,	5	V. Piau, A. Gook, S. Oberstedt, et al.
2025Pi03	PRRHA	7,	013052	S.V. Pineda, P. Chhetri, S. Bara, et al.
2025Pi12	ARISE	226,	112142	L. Pibida, G. Hamad, D.E. Bergeron, et al.
2025Po09	ARISE	225,	112029	S. Pomme, K. Pelczar
2025Pr02	ADNDA	161,	101694	B. Pritychenko, V.I. Tretyak
2025Re12	EPJAA	61,	158	P. Reiter, D. Habs, D. Schwalm, et al.
2025Re.1	PRVAA	112,	L040801	M.M. Restrepo, M.F. Davila, C.A. Navarro, et al.
2025Ri09	PRVCA	112,	L032802	F. Rivero, M. Brodeur, J.A. Clark, et al.
2025Ru01	EPJAA	61,	33	J. Ruotsalainen, E. Kauppinen, T. Eronen, et al.
2025Ru02	PRVCA	111,	044314	J. Ruotsalainen, D.A. Nesterenko, M. Stryjczyk, et al.
2025Ru03	PRLTA	134,	172501	J. Ruotsalainen, M. Stryjczyk, M. Ramalho, et al.
2025Ru08	PRVCA	112,	064302	J. Ruotsalainen, A. Jaries, M. Stryjczyk, et al.
2025Sa04	PRVCA	111,	014318	D. Sahoo, A.Y. Deo, Madhu, et al.
2025Sc06	PRRHA	7,	L022036	F. Schaden, T. Riebner, I. Morawetz, et al.
2025Se.1	arXiv:	2511.07635		K. Setoodehnia, J.H. Kelley, C.G. Sheu
2025Se.2	arXiv:	2511.10321		K. Setoodehnia, J.H. Kelley
2025Sh11	PRVCA	111,	L031301	K. Sharma, P. Chowdhury, A.M. Rogers, et al.

2025Sh16	PRLTA	134,	162501	T. Shao, J. Chen, J. Pochodzalla, et al.
2025Si04	NIMAE	1073,	170239	M. Singh, R. Yokoyama, R. Grzywacz, et al.
2025Sp01	EPJAA	61,	43	A. Spacek, A. Herzan, M. Sedlak, et al.
2025Sp03	PRVCA	111,	054307	A. Spataru, G. Kripko-Koncz, T. Dickel, et al.
2025St02	PYLBB	862,	139359	M. Stryjczyk, A. Jaries, W. Ryssens, et al.
2025St.A	Th.-Warsaw			M. Stepaniuk, PhD Thesis, Warsaw University, 2025, unpublished
2025Su07	PTEP.	2025,	053D02	H. Suzuki, N. Fukuda, H. Takeda, et al.
2025Su21	PTEP.	2025,	113D01	H. Suzuki, N. Fukuda, H. Takeda, et al.
2025Su.A	PTEP.	2025,	053D03	H. Suzuki, N. Fukuda, H. Takeda, et al.
2025Ta17	PRVCA	112,	024302	S.K. Tandel, S.G. Wahid, N. Krishnadev, et al.
2025Ta21	PRVCA	112,	034604	O.B. Tarasov, B.M. Sherrill, A.C. Dombos, et al.
2025Te04	PRRHA	7,	L022062	J.E.S. Terhune, R. Elwell, H.B.T. Tan, et al.
2025Ti01	ANEND	211,	110983	Yu. E. Titarenko, S.A. Balyuk, V.F. Batyaev, et al.
2025To01	NUPAB	1053,	122967	N. Tortorelli, M.P. Reiter, A.K. Rink, et al.
2025To04	PRLTA	134,	172701	A. Tolosa-Delgado, J.L. Tain, M. Reichert, et al.
2025Tr01	PRVCA	112,	024320	V. Tripathi, B. Longfellow, A. Volya, et al.
2025Ur02	PRVCA	112,	014316	W. Urban, A. Abramuk, J. Kurpeta, et al.
2025Va02	PRVCA	111,	014329	B. van den Borne, M. Stryjczyk, R.P. de Groote, et al.
2025Va.A	arXiv:	2511.19673v1		A.A. Valverde, S. Cupp, A. Gross, et al.
2025Ve05	PRLTA	134,	252501	A.R. Vernon, C.L. Binnersley, R.F.G. Ruiz, et al.
2025Ve06	PRVCA	111,	064325	A.R. Vernon, C.L. Binnersley, B.K. Sahoo, et al.
2025Wa17	PRVCA	111,	034320	S.G. Wahid, P. Chowdhury, D. Seweryniak, et al.
2025Wi05	PRLTA	134,	233002	A. Wilzewski, L.J. Spiess, M. Wehrheim, et al.
2025Xi05	PRLTA	135,	012501	Y.M. Xing, Y.F. Luo, Y.H. Zhang, et al.
2025Xi16	FRPHY	13,	01	W. Xian, M. Rosenbusch, V. H. Phong, et al.
2025Xu03	PRLTA	135,	022502	X.-D. Xu, I. Mukha, J.G. Li, et al.
2025Xu07	PRVCA	112,	034315	S.Y. Xu, Z.Y. Zhang, Z.G. Gan, et al.
2025Ze03	CPCHC	49,	114002	Q. Zeng, B. Huang, T. Peng, et al.
2025Ze04	PRLTA	135,	232501	Q.B. Zeng, S. Nishimura, V.H. Phong, et al.
2025Zh34	NCAOB	16,	5003	M.M. Zhang, J.G. Wang, L. Ma, et al.
2025Zh.A	arXiv:	2509.26390v1		S. Zhang, H. Liu, K. Han et al.
2025Zi02	PRLTA	134,	022502	G.L. Zimba, P. Ruotsalainen, D.G. Jenkins, et al.
2025Zi04	PRVAA	111,	L050802	G. Zitzer, J. Tiedau, Ch. E. Dullmann, et al.

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2026Ab04	PRVCA	113,	014308	M. Abushawish, E.H. Wang, J. Dudouet, et al.
2026Ac01	PRLTA	136,	022701	H. Acharya, N. Ackermann, M. Agostini, et al.
2026An02	PRVCA	113,	014325	B. Andel, A.N. Andreyev, S. Bara, et al.
2026As.1	arXiv:	2602.14829		L. Ascenzo, M.H. Baiocchi, G. Benato, et al.
2026Ba28	PYLBB	880,	140790	G. Bartram, Zs. Podolyak, H.M. Albers et al.
2026Be02	EPJAA	62,	16	P. Belli, R. Bernabei, F. Cappella, et al.
2026Bo.1	ARISE	236,	112742	A. Bourgouin, K. Moore, R. Galea
2026Br.A	arXiv:	2603.08908v1		C.L. Brown, J. Ash, B. Ashrafkhani, et al.
2026Br.B	P-Brighton			A. Briscoe
2026Ca02	PRVCA	113,	014331	J.H. Cai, W.P. Lin, B. Gao, et al.
2026Ca.A	arXiv:	2603.05628v1		A. Cannon, W.S. Porter, A.A. Valverde, et al.
2026Co.1	NATUA	654,	54	I. Cox, R. Grzywacz, T.T. King, et al.
2026Cr01	ADNDA	167,	101758	S. Croft, A. Favalli, R.D. McElroy
2026Da.1	ARISE	236,	112786	G. D'Agostino, M. Guyon, A. Gandini, et al.
2026Do01	EPJAA	62,	17	S. Doshi, P.M. Walker, A.M. Bruce, et al.
2026Du.1	ARISE	236,	112741	M.T. Durán, S. Collins, Y. Nedjadia, et al.
2026Ef01	NPAHA	1068,	123338	M. Efstathiou, P. Koseoglou, P. Vasileiou, et al.
2026Er.A	PrvCom	FGK	May	H. Errigton, R. Ringle

2026Fa.1	ARISE	229,	112382	M. Faure, M. Shmeit, K. Kossert, et al.
2026Fe.1	arXiv:	2607.10894		David Freire-Fernández, Rui-Jiu Chen, Usama Ahmed, et al.
2026Fe.B	PrvCom	FGK	Oct	D. Freire-Fernández
2026Fe.C	PrvCom	FGK	Oct	D. Freire-Fernández
2026Fl.A	arXiv:	2609.10754		M. Flayol, P. Ascher, D.D. Dao, et al.
2026Fu08	PRLTA	137,	062502	C.Y. Fu, W.D. Xian, T. Niwase, et al.
2026Ga05	PRVCA	113,	024611	J.M. Gates, R. Orford, D. Rudolph, et al.
2026Ge.A	arXiv:	2604.03410v1		Z. Ge, T. Eronen, V.A. Sevestrean, et al.
2026Gi02	PRVCA	113,	034318	P.F. Giesel, D. Atanasov, K. Blaum, et al.
2026Go.1	PRLTA	136,	192501	M. Urquiza-González, M.Stemmler, T.E.Albrecht et al.
2026Ha.1	PRVCA	113,	064314	D.J. Hartley, F.G. Kondev, G.J. Lane, et al.
2026Ha.A	PrvCom	FGK	May	D.J. Hartley
2026Ho.A	arXiv:	2602.23776		D.S. Hou, W.D. Xian, M. Rosenbusch, et al.
2026Ib.1	BRSPE	90,	837	D. Ibadullayev, Yu. Ts. Oganessian, V.K. Utyonkov, et al.
2026Ir.1	PRVCA	113,	L021302	C.M. Ireland, G. Bollen, S.E. Campbell, et al.
2026Is.1	EPJAA	62,	155	A.V. Isaev, R.S. Mukhin, A.V. Andreev, et al.
2026Is.A	JINR-E7-2026-23			A.V. Isaev, R.S. Mukhin, A.V. Andreev, et al.
2026Jo01	PRVCA	113,	024323	S. Jongile, M. Wiedeking, O. Sorlin, et al.
2026Ka.A	arXiv:	2606.03146		S. Kakkar, D. Perera, J. Ash, et al.
2026Kh03	NPAHA	1070,	123382	J. Khuyagbaatar, R.A. Cantemir, Ch. E. Düllmann, et al.
2026Ki04	PRLTA	136,	232501	S. Kimura, M. Wada, H. Haba, et al.
2026Ku.1	APOBB	19,	1-A24	S. Kumar, D. Ackermann, J. Piot, et al.
2026La.A	arXiv:	2604.18287v1		D. Lange, D. Atanasov, M. Au, et al.
2026Le08	PRVCA	113,	024620	C. Lee, X. Zhang, A. Kavner, et al.
2026Li08	PRVCA	113,	014610	C. Li, Z. Bo, W. Chen, et al.
2026Li.A	arXiv:	2601.09959v1		B. Liu, M. Brodeur, J.A. Clark, et al.
2026Ma.A	PrvCom	FGK	May	F.M. Maier
2026Mo.1	NPAHA	1069,	123338	M.F.Alshudifat, R.Grzywacz, K.P.Rykaczewski et al.
2026Mu04	PRVCA	113,	044321	M. Muller, N.A. Althubiti, D. Atanasov, et al.
2026Mu.A	arXiv:	2603.13868v1		M. Müller, N.A. Althubiti, D. Atanasov, et al.
2026Og02	PRVCA	113,	014614	Yu. Ts. Oganessian, V.K. Utyonkov, D.I. Solovyev, et al.
2026On.1	PRLTA	136,	092502	W.-J. Ong, Z.Y. Xu, R. Grzywacz, et al.
2026Pi.1	ARISE	236,	112745	L. Pibida, D.E. Bergeron, J.T. Cessna, et al.
2026Pi.2	PYLBB	880,	140729	S. Pietri, H.A. Rösch-Kabaday, J. Enders, et al.
2026Ro.A	PrvCom	Sna	Jun	R. Rosenbusch
2026Ru03	NIMBE	574,	166084	G. Rugel, Th. Faestermann, G. Korschinek
2026Sh.1	PTEP.	2026	033D06	Y. Shimizu, K.P. Rykaczewski, N. Fukuda, et al.
2026Si.1	NPAHA	1067,	123301	S.K. Singh, S.K. Tandel, S. Suman, et al.
2026Si.A	PrvCom	SNa		R. Simpson
2026Su01	JUPSA	95,	024202	T. Sumikama, N. Fukuda, T. Kubo, et al.
2026Su04	PRVCA	113,	014321	S. Suman, S.K. Tandel, J. Kaushik, et al.
2026Su06	PTEP.	2026,	023D02	H. Suzuki, N. Fukuda, H. Takeda, et al.
2026Ta06	ARISE	231,	112519	M.P. Takács, K. Kossert
2026Ta.A	PrvCom	FGK	May	S. Tandel
2026Tw01	PRVCA	113,	025802	M. Twisha, A. Gupta, A.K. Verma, et al.
2026Ur.A	arXiv:	2606.06319		W. Urban, T. Rzaca-Urban, J. Wiśniewski, et al.
2026Wa03	ARISE	228,	112280	S. Waniganeththi, E.A. McCutchan, V.L. Su, et al.
2026Wa.1	PYLBB	875,	140365	J.G. Wang, Z.C. Li, Z.Y. Zhang, et al.
2026Wa.2	PrvCom	FGK	May	A. Rogers
2026Wa.A	PrvCom	SNa		C. Walls
2026Wi.1	EPJAA	62,	123	M. Winter, Z. Ge, T. Eronen, et al.
2026Wu.1	PYLBB	872,	140113	Y. Wu, R. Li, C. Xu
2026Ya.1	ATOMC	14,	63	J.M. Yap, P. Schury, S. Naimi, et al.
2026Ye.A	arXiv:	2608.05476		T.-H. Yeh, J.D. Cardona, Y. Wang, et al.

2026Yu.1	PRLTA	136,	162501	Z. Yuan et al. (PandaX Collaboration)
2026Zh07	PRLTA	136,	082503	W.Q. Zhang, Z. Liu, A.N. Andreyev et al.
2026Zh11	PYLBB	873,	140144	J.Z. Zhang, Z.Q. Chen, T. Qu, et al.
2026Zh40	PRVCA	114,	014301	L. Zhu, Z.G. Gan, M.H. Huang et al.
2026Zh42	PRVCA	114,	014325	S.Y. Zhang, H. Huang, H.Y. Wu et al.