Bulk and neutron-proton asymmetry coefficients of the semi-empirical mass formula tuned to ground state mass excess of AME2020 and/or FRDM(2012)

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Abstract

Davidson *et al.* has extended Seeger's mass formula to non-zero excitation energies by introducing temperature-dependent coefficients in the liquid drop energy part of the semi-empirical mass formula, without considering the shell effects. The semi-empirical mass formula of Davidson *et al.* is applicable for the compound nucleus temperatures less than or equal to 4 MeV. The mass excess calculated using this mass formula including shell effects/corrections does not reproduce the ground state mass excesses of the new atomic mass evaluation data AME2020 and/or FRDM(2012) with its coefficients at zero temperature. So, the coefficients of the semi-empirical mass formula are needed to be tuned to reproduce the ground state mass excess of the nuclei in the recent atomic mass evaluation data AME2020 and/or FRDM(2012). The bulk and neutron-proton asymmetry coefficients of the semi-empirical mass formula of Davidson *et al.* with shell effects have been tuned to reproduce the mass excess data for all the nuclei of AME2020 (Z=1-118 and A=1-295) and the nuclei of FRDM(2012) (Z=8-136 and A=16-339, except 3456 nuclei which are also available in the AME2020 data) at zero temperature, i.e., the coefficients are tuned for 9420 nuclei known at present. The tuned bulk and neutron-proton asymmetry coefficients reproduce the mass excess of the new atomic mass evaluation data AME2020 and/or FRDM(2012) within a difference of less than 1 MeV and can be used for the applications/investigations in the areas of physics where high energies are experienced or nuclei involved are in excited states, e.g., fusion-evaporation and fusion-fission processes in heavy-ion reactions.

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1. Introduction

Recently, new mass excess data is available for 3558 nuclei in the new atomic mass evaluation AME2020 [1] with nuclei of atomic and mass numbers ranging from Z=1-118 and A=1-295, respectively. It contains the mass excess data for 122 new nuclei that appeared in the atomic mass evaluation data AME2020 in addition to the revised mass excess data for 3436 nuclei of AME2016 [2] and hence superseded the mass excess data of AME2016. In addition to the newly measured ground state mass excess data of AME2020, there is a new theoretical ground state mass excess data available for 9318 nuclei in FRDM(2012) [3] with nuclei of atomic and mass numbers ranging from Z=8-136 and A=16-339, respectively. The FRDM(2012) contains the mass excess data of 339 new nuclei and revised mass excess data for 8979 nuclei of its previous generation FRDM(1992) mass table in Möller *et al.* (1995) [4]. The available data can be used to study the area of physics where the nuclei involved are in their ground state, like cluster radioactivity, spontaneous fission, etc. In the areas of physics like heavy-ion reactions and astrophysics etc., the nuclei happen to be in their excited states and hence there is a need for mass excesses at higher energies or excitation energies. In this direction, Davidson *et al.* [5] has extended Seeger's mass formula [6] by introducing the temperature-dependent coefficients to the liquid drop energy, excluding the shell corrections. The shell corrections have been introduced by Myers and Swiatecki [7] and extended for the finite nuclear excitation energy by Jensen *et al.* [8]. The mass excess at temperature T is expressed as $\Delta M(A, Z, T) = M(Z, A, T) - A = ZM_H + NM_n - B(A, Z, T) - A$, where the binding energies $B(A, Z, T)$ are expressed as the sum of temperature-dependent terms (i) liquid drop energies $V_{LDM}(T)$ of Davidson *et al.* [5] and (ii) shell corrections $\delta U(T)$, within the use of Strutinsky renormalization procedure [9]. But, this formula neither reproduces the recent ground state mass excess data of AME2020 nor of FRDM(2012), see Fig. (2) below. So, there is a need to adjust some of the coefficients of the semi-empirical mass formula of Davidson *et al.* of Eq. (4) at T=0 to reproduce the ground state mass excess data of AME2020 and/or FRDM(2012). Gupta *et. al.* [10] found that the measured ground state mass

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excess data can be fitted within 1–1.5 MeV by changing the bulk $\alpha(0)$ and the neutron-proton asymmetry a_a coefficients of the semi-empirical mass formula of Davidson *et al.* at T=0 MeV, where the neutron-proton asymmetry coefficient a_a controls the curvature of the measured mass excess parabola and the bulk coefficient $\alpha(0)$ acts as a scaling factor. First, these authors reproduced the ground state mass excess data of Audi and Wapstra AME1995 [11] by adjusting these coefficients up to $Z = 28$ [10] and used the mass excess data to study the decay of hot ^{56}Ni* formed in the ^{32}S + ^{24}Mg reaction [10, 12]. Later they extended the fitting of these coefficients up to Z=56 and used them to study the emission of intermediate mass fragments from hot ^{116}Ba* formed in low-energy ^{58}Ni + ^{58}Ni reaction, see ref. [13]. The adjustment of these coefficients has been extended further by [14] up to Z=97 to reproduce the experimental mass excess of AME2003 [15] and/or theoretical mass excess data of FRDM(1992) mass table in Möller *et al.* (1995), within a difference of less than 1.5 MeV between the calculated ground state mass excess and the mass excess of AME2003 and/or FRDM(1992), and used for the decay study of hot compound nucleus ^{246}Bk* at different excitation energies. The adjustment of these coefficients is then extended to Z=118 by [16]. Due to the addition of mass excess data for 257 new nuclei in AME2016 and 339 new nuclei FRDM(2012) with respect to the AME2003 and FRDM(1992), respectively, the coefficients are adjusted by [17] for these new nuclei and used for the investigation of the cold valley paths for the synthesis of isotopes of Ubh in optimum orientations [18]. It may be noted that a lot of work has been done using the dynamical cluster-decay model developed for the study of the decay of hot compound nuclei where the mass excess data of nuclei in excited states is used. With the availability of new mass excess data in AME2020 and FRDM(2012) the tuning of the bulk and neutron-proton asymmetry coefficients is needed again to reproduce the latest ground state mass excess data.

In this work, the bulk and neutron-proton asymmetry coefficients have been adjusted to reproduce the mass excess data for 122 new nuclei that appeared in AME2020 and readjusted the coefficients for the rest of the nuclei available in AME2020 and/or FRDM(2012) within a difference of less than 1 MeV. In total, we have obtained the bulk and neutron-proton asymmetry coefficients for all known 9420 nuclei (as listed in Table. A) up to Z=136, where 3558 nuclei are the nuclei available in AME2020 of Z=1-118 and 5862 nuclei of FRDM(2012) of Z=8-136, but other than the nuclei available in AME2020. Using the new bulk and neutron-proton asymmetry coefficients listed in Table A in the mass excess formula of Eq. (4) one can calculate the mass excess for the nuclei at higher energies. It may be noted that some of the experimental generations of atomic mass evaluation are AME2003 (3179 nuclei), AME2012 (=AME2003+174 new nuclei) [19], AME2016 (=AME2012+83 new nuclei) and AME2020 (=AME2016+122 new nuclei) and that of the theoretical one are FRDM(1992) (5523 nuclei) and FRDM(2012) (=FRDM(1992)+339 new nuclei).

The paper is organized as follows: Section 2 describes the mass excess formulae for the ground and excited states of nuclei, and the calculation detail of shell corrections. Section 3 contains the calculations and discussion of the results and Section 4 is the list of the present tuned bulk and neutron-proton asymmetry coefficients and the calculated mass excess compared with the mass excesses of AME2020 and/or FRDM(2012) data.

2. Mass excess for nuclei in ground and excited states

The standard form of the mass excess formula of P. A. Seeger [6] for an atom of Z proton and N neutron is

$$\Delta M(Z,A) = M(Z,A) - A = M_n N + M_H Z - A - \alpha A + \left(\beta - \frac{\eta}{A^{1/3}}\right)\left(\frac{I^2 + 2|I|}{A}\right) + \gamma A^{2/3}$$

$$+ \frac{3}{5}\frac{e^2}{R_0}\frac{Z^2}{A^{1/3}}\left(1 - \frac{0.7636}{Z^{2/3}} - \frac{2.29}{R_0^2 A^{2/3}}\right) + a\delta_a \tag{1}$$

where the mass excesses for neutron and hydrogen atom is $M_n - 1 (= 8.3674 \text{ MeV/c}^2)$ and $M_H - 1 (= 7.5848 \text{ MeV/c}^2)$, respectively, with $A (= N + Z)$ the mass number of a nucleus, $I (= N - Z)$ is the neutron-proton asymmetry and the free coefficients α, β, η, and γ respectively are 16.11, 20.65, 48.00, and 20.21 MeV/c^2. The R$_0$ is 1.07 fm, δ_a is the pairing term and the coefficient of the pairing term a is 1/2, 0, -1/2 for odd atoms, odd mass atoms, and even atoms, respectively. The mass excess formula, Eq. (1), is extended by Davidson $et.$ $al.$ for hot nuclei by introducing the temperature-dependent coefficients $\alpha(T)[= \alpha(0) + \frac{1}{15}T^2]$, $\beta(T)$, $\eta(T)$, $\gamma(T)$ and $\delta(T)$ [5] and nuclear radius R$(T) = R_0(1 + 0.01T)$ [20] in liquid drop energy as

$$V_{LDM}(Z,A,T) = \alpha(T)A + \left(\beta(T) - \frac{\eta(T)}{A^{1/3}}\right)\left(\frac{4t_\zeta^2 + 4|t_\zeta|}{A}\right) + \gamma(T)A^{2/3}$$

$$+ \frac{Z^2}{R(T)A^{1/3}}\left(1 - \frac{0.7636}{Z^{2/3}} - \frac{2.29}{[R(T)A^{1/3}]^2}\right) + \delta(T)\frac{f(Z,A)}{A^{3/4}} \tag{2}$$

where, $t_\zeta = a_a(Z - N)$ with the neutron-proton asymmetry coefficient $a_a = 1/2$ and the function $f(Z,A)$ in pairing term is $f(Z,A) = (-1, 0, 1)$, respectively for even-even, odd-even and odd-odd nuclei. At T=0 the coefficients α, β, η, and γ are the same as given in Seeger's mass formula and the pairing term coefficient δ is 33.0 MeV [21], here $\alpha(0) = -16.11$ MeV/c^2. For microscopic effects in liquid drop energy, the shell correction to the mass excess in the ground state (T=0) of a nucleus with the mass number A, neutron number N and proton number Z is of Myers and Swiatecki [7], given as

$$\delta U = C\left[\frac{F(N) + F(Z)}{(A/2)^{\frac{2}{3}}} - cA^{\frac{1}{3}}\right]; \quad F(X) = \frac{3}{5}\left(\frac{M_i^{5/3} - M_{i-1}^{5/3}}{M_i - M_{i-1}}\right)(X - M_{i-1}) - \frac{3}{5}\left(X^{5/3} - M_{i-1}^{5/3}\right) \tag{3}$$

with $X = N$ or Z, $M_{i-1} < X < M_i$ with M_{i-1} and M_i are the lower and upper limits of magic numbers for a set of nuclei of magic numbers 2, 8, 14 [22] or 20, 28, 50, 82, 126 are both for proton and neutron while 184 and 258 [23] are for neutron only with $c = 0.26$ and $C = 5.8$ MeV. The temperature-dependence in the shell corrections can be included using $\delta U(T) = \delta U \exp\left(-T^2/T_0\right)$ with T$_0$=1.5 MeV [8]. The temperature T of the compound nucleus of mass A can be obtained from the relation $E_{CN}^* = aT^2 - T$, where a is the level density parameter which is related to the mass of the compound nucleus of mass A as $a = A/9$ (for the heavy mass region) and $A/10$ (for the superheavy mass region), etc., and $E_{CN}^* = E_{cm} + Q_{in}$ is the compound nucleus excitation energy. Using Eq. (2) for temperature-dependent liquid drop energy V$_{LDM}(T)$ and shell correction $\delta U(T)$, the temperature-dependent mass excess formula becomes

$$\Delta M(Z,A,T) = M_n N + M_H Z - A + \alpha(T)A + \left(\beta(T) - \frac{\eta(T)}{A^{1/3}}\right)\left(\frac{4t_\zeta^2 + 4|t_\zeta|}{A}\right) + \gamma(T)A^{2/3}$$

$$+ \frac{Z^2}{R(T)A^{1/3}}\left(1 - \frac{0.7636}{Z^{2/3}} - \frac{2.29}{[R(T)A^{1/3}]^2}\right) + \delta(T)\frac{f(Z,A)}{A^{3/4}} + \delta U(T) \tag{4}$$

The bulk $\alpha(0)$ and neutron-proton asymmetry coefficients a$_a$ of $t_\zeta[= a_a(Z - N)]$ of Eq. (4) are adjusted to reproduce the mass excess data of AME2020 and/or theoretical FRDM(2012).
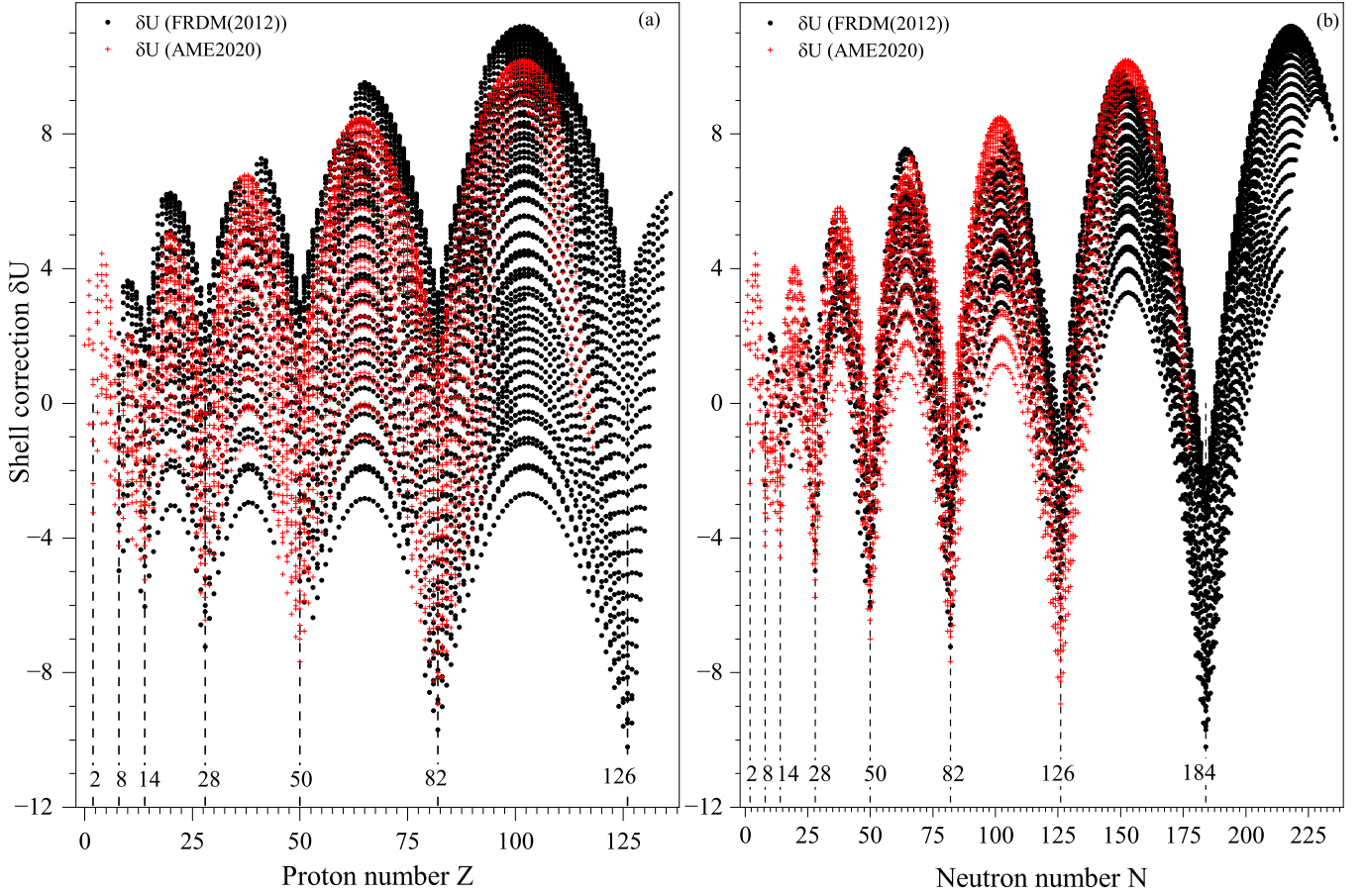
Fig. 1: The shell corrections calculated using Eq. (3) for all the nuclei of AME2020 [1] and/or theoretical FRDM(2012) [3], i.e., for all the nuclei listed in Table A, as a function of (a) proton number Z and (b) neutron number N.

3. Calculations and discussion of results

Fig. (1) shows the calculated shell corrections for the 9420 nuclei of AME2020 and/or FRDM(2012) data as a function of (a) the proton number Z and (b) the neutron number N, respectively. The + symbol (red) is for the shell corrections of the nuclei of AME2020 data while the black solid circle ● symbol is for the nuclei of FRDM(2012), which are not available in AME2020 data. The vertical dotted lines show the position of the various magic numbers with respect to which the shell corrections have been calculated using Eq. (3).

Fig. 2 shows that the calculated mass excess using the mass excess formula of Eq. (4) at T=0 MeV with Seeger's coefficients, shown by scattered green solid sphere ● symbols, neither reproduce the ground state mass excess of AME2020 nor of the FRDM(2012), shown for the isotopes of Z = 8, 90, 104, 118, 119 and 128 (arbitrarily chosen Z of light, heavy and superheavy mass regions). As stated in the introduction, the measured ground state mass excess data can be fitted within 1–1.5 MeV by changing the bulk $\alpha(0)$ and the neutron-proton asymmetry a_a coefficients of the semi-empirical mass formula of Davidson *et. al.* at T=0 MeV. This justifies the need of adjusting the bulk and neutron-proton asymmetry coefficients of the liquid drop energy of Davidson's *et. al.* at T=0 MeV in the mass excess formula of Eq. (4). The bulk and neutron-proton asymmetry coefficients of Eq. (4) at T=0 are adjusted to reproduce the mass excess
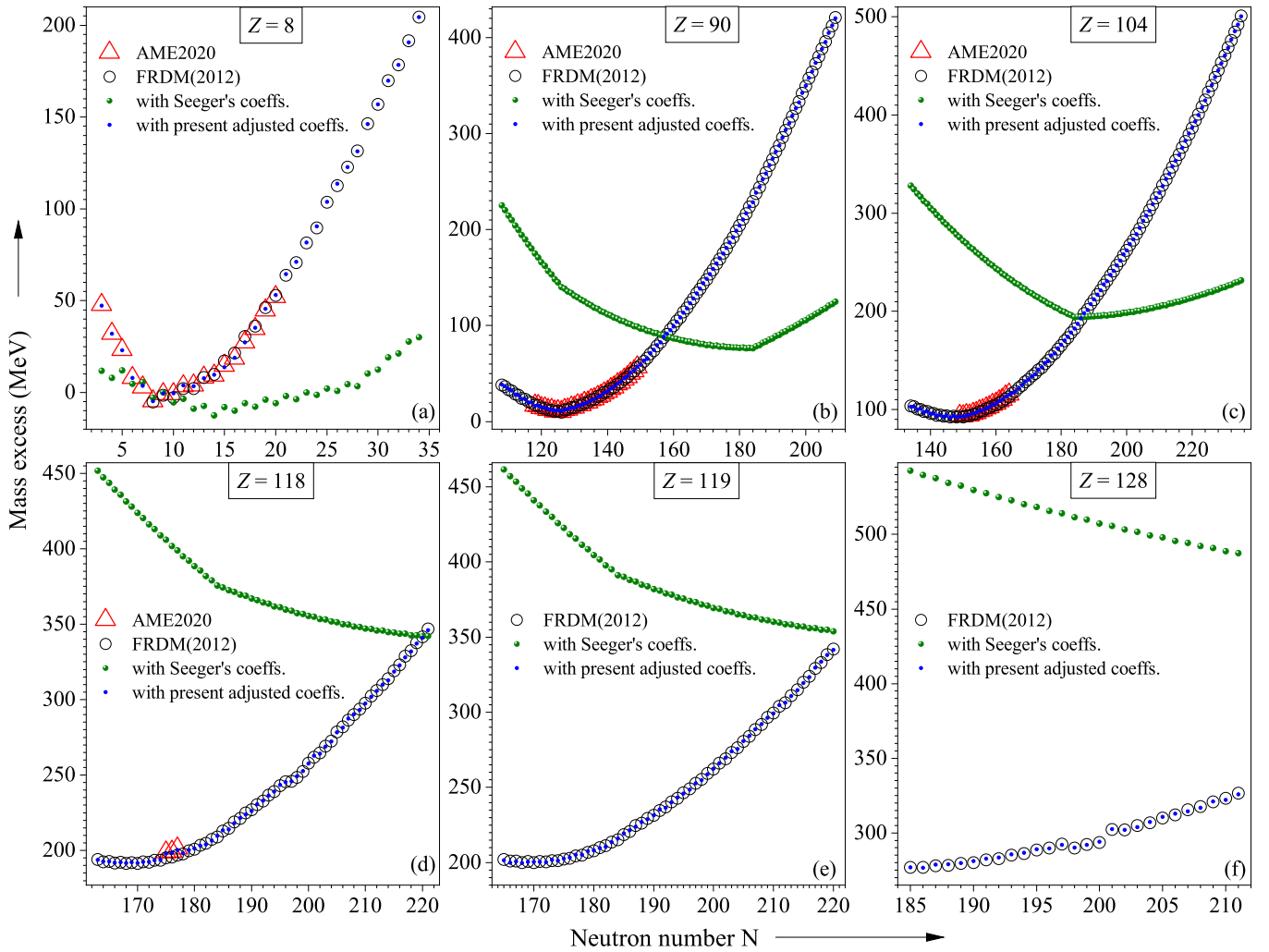
Fig. 2: The ground state mass excess for the isotopes of atomic number (a) 8, (b) 90, (c) 104, (d) 118 (e) 119 and (f) 128 of (i) AME2020 [1] (ii) FRDM(2012) [3] (iii) and the calculated ground state mass excess of Eq. (4) with (a) the coefficients of Seeger's mass formula (b) with present adjusted bulk and neutron-proton asymmetry coefficients of Eq. (4), as a function of neutron number N.

data of AME2020 and/or FRDM(2012) within a deviation of less than 1 MeV. So, Eq. (4) can be used to obtain the T-dependent mass excess for studying the decay/formation of hot compound nuclei, where according to the quantum mechanical fragmentation theory [24–26] the fragmentation potential for a hot compound nucleus is expressed in terms of the temperature-dependent quantities like binding energies or mass excess, the proximity potential, the Coulomb potential and the centrifugal potentials of the fragments, see ref. [12] for detail. The present adjusted bulk and neutron-proton asymmetry coefficients reproduce the mass excess values of AME2020 and FRDM(2012) data within a difference of less than 1 MeV as shown in Fig. 2 with symbol ● (blue) for the isotopes of atomic number (a) 8, (b) 90, (c) 104, (d) 118 (e) 119 and (f) 128. Here, the symbol Δ is for the mass excess of AME2020 and the symbol ○ is for the FRDM(2012) mass excess. The mass excess calculated for the nuclei of AME2020 and/or FRDM(2012) is listed in Table A below along with the adjusted bulk and neutron-proton asymmetry coefficients of the Eq. (4) and comparison with the mass excess of AME2020 and/or FRDM(2012).

4. The bulk and neutron-proton asymmetry coefficients and mass excesses

Table A
List of adjusted bulk $\alpha(0)$ and neutron-proton asymmetry a_a coefficients and our calculated mass excess (Cal.) with the help of these adjusted coefficients compared with the experimental and theoretical mass excess of the nuclei of AME2020 [1] (Ex.) and/or FRDM(2012) [3] (Th., shown in **bold text**)

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
1	2	-15.850	0.100	14.981	14.950	2	1	-15.600	0.070	14.863	14.931	3	0	-9.730	0.100	28.673	28.670
	3	-17.100	0.120	25.218	24.620		2	-16.110	0.100	2.497	2.425		1	-16.670	0.100	25.403	25.320
	4	-13.370	0.100	32.895	32.890		3	-16.900	0.300	11.414	11.231		2	-17.000	0.100	11.904	11.680
	5	-13.570	0.120	41.848	41.880		4	-14.230	0.300	17.519	17.592		3	-18.430	0.990	14.042	14.087
	6	-11.490	0.100	49.078	49.140		5	-14.230	0.300	26.475	26.073		4	-16.670	0.100	15.335	14.907
							6	-13.120	0.100	31.588	31.610		5	-16.670	0.100	20.277	20.946
							7	-12.870	0.100	40.859	40.940		6	-13.700	0.980	25.011	24.955
							8	-11.370	0.200	48.563	49.200		7	-14.370	0.400	33.114	33.053
													8	-13.160	0.100	40.829	40.728
													9	-13.100	0.100	48.901	49.010
													10	-12.180	0.100	57.239	56.980
4	1	-12.370	0.010	38.039	37.140	5	1	-12.500	0.100	47.621	47.320	6	2	-12.950	0.010	35.175	35.064
	2	-14.450	0.100	18.332	18.375		2	-14.530	0.100	27.783	27.677		3	-14.810	0.100	29.012	28.911
	3	-16.120	0.800	15.824	15.769		3	-16.430	0.100	22.865	22.922		4	-15.650	0.100	15.613	15.699
	4	-17.050	0.980	4.865	4.942		4	-16.650	0.600	12.496	12.417		5	-16.530	0.100	10.533	10.649
	5	-16.700	0.600	11.408	11.348		5	-17.160	0.100	12.026	12.051		6	-16.720	0.100	0.004	0.000
	6	-15.500	0.800	12.691	12.607		6	-16.570	0.600	8.588	8.668		7	-16.530	0.100	3.516	3.125
	7	-15.230	0.500	20.206	20.177		7	-16.300	0.100	13.348	13.369		8	-15.920	0.100	3.048	3.020
	8	-14.240	0.100	25.050	25.078		8	-15.330	0.100	16.649	16.562		9	-15.650	0.100	10.450	9.873
	9	-14.040	0.100	33.627	33.659		9	-15.120	0.100	23.701	23.664		10	-15.090	0.100	13.688	13.694
	10	-13.280	0.010	39.840	39.950		10	-14.400	0.100	29.008	28.957		11	-14.810	0.100	20.969	21.032
	11	-12.960	0.100	49.845	49.830		11	-14.100	0.100	37.128	37.112		12	-15.040	0.800	25.184	24.920
	12	-12.230	0.100	57.644	57.450		12	-13.410	0.100	43.718	43.720		13	-15.040	0.800	32.585	32.410
							13	-13.100	0.100	52.306	51.790		14	-14.830	0.800	37.644	37.500
							14	-12.920	0.400	59.421	59.770		15	-14.990	0.800	46.261	45.640
							15	-12.850	0.400	68.962	69.400		16	-14.900	0.800	53.841	53.610
							16	-12.450	0.400	78.321	78.380		17	-15.010	0.800	64.024	64.170
7	3	-14.270	0.200	39.633	38.800	8	3	-13.120	0.100	47.382	47.740	9	4	-14.200	0.900	42.117	42.030
	4	-15.120	0.530	24.947	24.366		4	-14.000	0.940	32.087	32.013		5	-15.310	0.800	31.842	31.960
	5	-16.200	0.800	17.122	17.338		5	-15.300	0.940	23.081	23.115		6	-15.780	0.500	16.402	16.567
	6	-16.530	0.800	5.374	5.345		6	-15.930	0.940	8.039	8.008		7	-16.250	0.910	10.564	10.675
	7	-16.750	0.800	2.836	2.863		7	-16.240	0.500	3.728	2.856		8	-16.170	0.910	2.233	1.952
	8	-16.350	0.800	0.018	0.101		8	-16.240	0.500	-4.836	-4.737		9	-16.300	0.900	0.901	0.873
	9	-16.200	0.800	5.918	5.684		9	-16.170	0.950	-0.486	-0.809		10	-16.130	0.900	-1.370	-1.487
	10	-15.900	0.940	7.911	7.870		10	-15.930	0.940	-0.387	-0.783		11	-16.180	0.910	0.171	-0.017
	11	-15.900	0.940	13.339	13.113		11	-15.930	0.940	3.921	3.333		12	-16.000	0.840	-0.634	-0.048
	12	-15.650	0.890	15.512	15.856		12	-15.850	0.940	3.437	3.796		13	-15.740	0.500	2.907	2.793
	13	-15.700	0.890	21.207	21.770		13	-15.930	0.940	7.699	8.062		14	-15.950	0.900	3.345	3.290
	14	-15.680	0.940	25.215	25.230		14	-15.850	0.940	9.600	9.280		15	-16.170	0.910	6.955	7.540
	15	-15.920	0.940	32.338	31.760		15	-16.170	0.950	13.664	14.620		16	-16.100	0.910	11.735	11.330
	16	-15.990	0.940	37.288	36.720		16	-16.170	0.950	18.904	18.500		17	-16.170	0.895	18.446	18.670
	17	-16.100	0.930	47.006	46.940		17	-16.090	0.895	27.233	27.330		18	-16.170	0.910	24.502	25.130
	18	-16.100	0.930	55.071	55.980		18	-16.010	0.895	35.201	34.660		19	-16.170	0.895	33.675	33.400
							19	-16.090	0.895	45.487	44.670		20	-16.170	0.895	39.768	40.150
							20	-16.090	0.895	53.007	52.080		21	-16.170	0.880	49.085	48.960
							21	-16.190	0.898	64.421	**63.890**		22	-16.170	0.880	56.275	56.840
							22	-16.270	0.898	71.089	**70.760**		23	-16.250	0.873	64.856	**64.720**
							23	-16.380	0.895	81.627	**81.500**		24	-16.200	0.866	72.826	**72.310**
							24	-16.420	0.895	90.570	**89.610**		25	-16.250	0.861	83.027	**83.420**
							25	-16.190	0.867	103.726	**103.640**		26	-16.280	0.866	92.858	**92.520**
							26	-16.210	0.867	113.644	**112.720**		27	-16.250	0.855	104.058	**103.110**
							27	-16.190	0.850	122.730	**122.670**		28	-16.250	0.846	110.252	**109.790**
							28	-16.190	0.845	131.370	**131.490**		29	-16.250	0.835	122.869	**122.800**
							29	-16.190	0.837	146.224	**146.280**		30	-16.250	0.830	133.651	**133.690**
							30	-16.190	0.830	156.875	**156.840**		31	-16.250	0.816	143.711	**143.980**
							31	-16.190	0.820	169.751	**169.710**		32	-16.250	0.811	153.989	**154.190**
							32	-16.190	0.811	178.451	**178.380**		33	-16.250	0.804	166.956	**167.490**
							33	-16.160	0.800	190.658	**191.480**		34	-16.250	0.802	178.896	**178.800**
							34	-16.170	0.800	204.345	**204.340**		35	-16.250	0.794	190.599	**190.670**
													36	-16.200	0.786	200.226	**199.980**
													37	-16.250	0.785	214.202	**213.650**
10	5	-14.530	0.500	40.997	40.220	11	6	-15.010	0.500	35.177	34.720	12	7	-15.700	0.900	31.093	31.840
	6	-15.220	0.500	23.905	23.987		7	-15.910	0.920	24.865	25.040		8	-15.860	0.958	17.528	17.478
	7	-15.700	0.500	16.357	16.501		8	-15.910	0.920	13.827	12.929		9	-16.070	0.920	9.955	10.904
	8	-15.890	0.500	4.588	5.318		9	-16.210	0.861	6.268	6.851		10	-16.100	0.920	0.137	-0.400
	9	-16.160	0.910	1.324	1.752		10	-16.270	0.865	-3.121	-2.185		11	-16.230	0.842	-5.249	-5.474

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	10	-16.260	0.910	-7.824	-7.042		11	-16.270	0.865	-4.268	-5.181		12	-16.230	0.842	-13.168	-13.934
	11	-16.190	0.910	-5.071	-5.732		12	-16.270	0.865	-10.280	-9.530		13	-16.230	0.842	-13.303	-13.193
	12	-16.150	0.910	-8.887	-8.025		13	-16.270	0.865	-9.343	-8.418		14	-16.100	0.842	-15.311	-16.215
	13	-15.890	0.500	-4.492	-5.154		14	-16.060	0.800	-9.311	-9.358		15	-16.180	0.842	-13.590	-14.586
	14	-15.700	0.500	-5.528	-5.952		15	-16.180	0.865	-6.404	-6.861		16	-16.180	0.842	-14.774	-15.020
	15	-16.160	0.910	-2.267	-2.036		16	-16.180	0.865	-6.375	-5.518		17	-16.180	0.842	-9.919	-10.612
	16	-16.160	0.910	-0.386	0.481		17	-16.180	0.865	-0.099	-0.988		18	-16.180	0.842	-9.721	-8.881
	17	-16.160	0.910	8.012	7.050		18	-16.150	0.865	2.305	2.680		19	-16.180	0.842	-3.740	-3.122
	18	-16.160	0.910	11.623	11.300		19	-16.180	0.865	8.936	8.475		20	-16.130	0.842	-0.554	-0.829
	19	-16.180	0.882	17.870	18.400		20	-16.180	0.865	11.967	12.246		21	-16.180	0.842	4.965	4.963
	20	-16.160	0.882	23.082	23.280		21	-16.210	0.861	19.231	18.640		22	-16.180	0.842	7.907	8.323
	21	-16.220	0.882	31.703	31.180		22	-16.200	0.865	24.518	23.780		23	-16.180	0.842	16.144	15.640
	22	-16.220	0.882	37.783	37.000		23	-16.250	0.861	32.007	31.680		24	-16.180	0.842	20.387	20.380
	23	-16.290	0.876	45.848	46.130		24	-16.250	0.865	38.519	37.830		25	-16.200	0.842	28.962	28.210
	24	-16.290	0.876	53.098	52.840		25	-16.290	0.852	44.983	45.900		26	-16.210	0.842	34.043	34.070
	25	-16.250	0.856	61.530	**61.230**		26	-16.240	0.852	53.472	53.130		27	-16.180	0.835	43.698	42.780
	26	-16.250	0.856	69.432	**68.770**		27	-16.180	0.833	61.698	61.910		28	-16.180	0.835	50.115	49.550
	27	-16.280	0.848	78.515	**78.300**		28	-16.150	0.833	70.127	69.980		29	-16.330	0.837	58.708	58.100
	28	-16.250	0.839	84.986	**85.120**		**29**	-16.290	0.832	79.231	**78.760**		**30**	-16.030	0.792	65.638	**64.720**
	29	-16.250	0.833	98.837	**98.650**		**30**	-16.270	0.825	88.338	**87.680**		**31**	-16.030	0.785	76.345	**75.520**
	30	-16.250	0.826	107.905	**107.090**		**31**	-16.270	0.815	99.244	**98.460**		**32**	-16.090	0.785	83.203	**83.580**
	31	-16.250	0.815	118.970	**118.470**		**32**	-16.270	0.809	107.638	**107.620**		**33**	-16.030	0.776	95.446	**94.800**
	32	-16.250	0.808	127.517	**127.620**		**33**	-16.270	0.801	118.791	**118.930**		**34**	-16.050	0.773	102.873	**103.000**
	33	-16.250	0.800	139.234	**139.350**		**34**	-16.270	0.798	128.506	**128.850**		**35**	-16.090	0.773	114.675	**114.360**
	34	-16.250	0.800	151.475	**150.760**		**35**	-16.270	0.789	138.516	**138.460**		**36**	-16.090	0.771	123.774	**123.580**
	35	-16.250	0.788	160.092	**159.920**		**36**	-16.270	0.788	149.368	**148.730**		**37**	-16.090	0.767	135.376	**135.390**
	36	-16.250	0.786	171.013	**170.530**		**37**	-16.270	0.782	160.704	**161.060**		**38**	-16.090	0.766	145.271	**144.900**
	37	-16.250	0.783	185.005	**185.190**		**38**	-16.270	0.780	171.016	**171.170**		**39**	-16.090	0.762	156.764	**156.720**
	38	-16.250	0.781	196.057	**195.800**		**39**	-16.270	0.778	184.954	**184.760**		**40**	-16.090	0.760	166.149	**166.340**
	39	-16.250	0.777	209.125	**208.790**		**40**	-16.270	0.777	196.238	**195.940**		**41**	-16.090	0.759	179.762	**179.490**
	40	-16.250	0.775	220.209	**219.960**		**41**	-16.270	0.773	208.555	**208.380**		**42**	-16.090	0.758	190.141	**190.340**
	41	-16.250	0.771	232.989	**232.780**		**42**	-16.270	0.770	218.205	**218.250**		**43**	-16.090	0.754	201.354	**201.400**
							43	-16.270	0.767	231.139	**231.420**		**44**	-16.090	0.753	211.864	**211.820**
							44	-16.270	0.766	242.655	**243.010**		**45**	-16.090	0.751	224.740	**224.710**
													46	-16.090	0.750	235.438	**235.500**
													47	-16.090	0.749	249.362	**248.970**
13	8	-15.950	0.950	26.149	27.090	**14**	8	-15.900	0.965	33.296	33.640	**15**	8	-16.120	0.970	45.226	44.280
	9	-16.100	0.930	18.114	18.200		9	-16.040	0.932	23.110	23.950		9	-16.230	0.939	33.152	34.020
	10	-16.100	0.930	7.613	6.748		10	-16.040	0.932	11.563	10.745		10	-16.200	0.939	20.667	20.190
	11	-16.260	0.842	-0.498	-0.049		11	-16.170	0.965	3.805	3.827		11	-16.310	0.939	11.067	10.970
	12	-16.260	0.842	-9.469	-8.916		12	-16.170	0.965	-6.762	-7.141		12	-16.310	0.939	-0.812	-0.659
	13	-16.260	0.842	-11.972	-12.210		13	-16.200	0.839	-11.793	-12.385		13	-16.310	0.939	-6.304	-7.148
	14	-16.200	0.842	-16.793	-17.197		14	-16.270	0.839	-22.156	-21.493		14	-16.310	0.939	-16.334	-16.953
	15	-16.260	0.842	-15.940	-16.851		15	-16.290	0.839	-21.362	-21.895		15	-16.400	0.893	-20.321	-20.201
	16	-16.260	0.842	-18.292	-18.208		16	-16.270	0.839	-24.097	-24.433		16	-16.400	0.893	-24.779	-24.441
	17	-16.280	0.842	-15.339	-15.864		17	-16.300	0.839	-22.574	-22.949		17	-16.400	0.893	-23.450	-24.305
	18	-16.260	0.842	-15.700	-14.951		18	-16.270	0.839	-23.584	-24.078		18	-16.400	0.893	-26.255	-26.337
	19	-16.260	0.842	-10.996	-11.099		19	-16.270	0.839	-19.980	-20.514		19	-16.420	0.893	-24.161	-24.549
	20	-16.220	0.845	-9.052	-8.497		20	-16.270	0.839	-20.532	-19.992		20	-16.400	0.893	-24.638	-24.858
	21	-16.220	0.845	-3.088	-2.998		21	-16.230	0.841	-14.238	-14.390		21	-16.400	0.893	-20.432	-20.251
	22	-16.220	0.845	-1.179	-0.224		22	-16.230	0.841	-13.351	-12.440		22	-16.400	0.893	-19.959	-19.000
	23	-16.220	0.845	5.942	5.950		23	-16.230	0.841	-7.350	-6.570		23	-16.400	0.893	-14.342	-14.620
	24	-16.220	0.845	9.183	9.810		24	-16.230	0.841	-5.138	-4.170		24	-16.400	0.893	-12.307	-12.770
	25	-16.220	0.842	16.910	16.470		25	-16.230	0.841	1.986	2.320		25	-16.150	0.783	-8.249	-8.140
	26	-16.220	0.842	21.338	21.490		26	-16.230	0.841	5.464	5.670		26	-16.120	0.783	-5.760	-4.980
	27	-16.260	0.842	28.959	28.820		27	-16.230	0.839	13.275	13.200		27	-16.100	0.783	0.927	1.090
	28	-16.260	0.842	34.539	34.590		28	-16.270	0.839	16.220	16.840		28	-16.070	0.783	4.555	5.040
	29	-16.430	0.850	42.890	41.990		29	-16.340	0.836	24.490	24.330		29	-16.010	0.756	11.360	11.110
	30	-16.130	0.799	49.198	48.270		30	-16.400	0.836	30.228	29.310		30	-16.070	0.762	15.472	15.960
	31	-16.110	0.787	58.536	**57.810**		31	-16.120	0.776	37.005	37.090		31	-16.110	0.762	23.309	22.840
	32	-16.010	0.771	65.748	**65.920**		32	-16.010	0.762	44.980	**45.170**		32	-16.110	0.762	29.530	28.810
	33	-16.000	0.763	75.286	**75.470**		33	-16.050	0.762	54.271	**54.820**		33	-16.110	0.762	39.740	**39.360**
	34	-16.000	0.763	83.833	**83.560**		34	-16.050	0.762	62.016	**61.770**		34	-16.110	0.762	46.637	**46.210**
	35	-16.050	0.763	93.933	**93.880**		35	-16.070	0.762	72.687	**72.160**		35	-16.150	0.762	55.398	**55.390**
	36	-16.040	0.763	103.523	**103.290**		36	-16.090	0.762	80.034	**80.100**		36	-16.130	0.762	63.920	**63.080**
	37	-16.080	0.764	115.012	**114.770**		37	-16.110	0.762	91.124	**90.620**		37	-16.090	0.754	73.645	**72.700**
	38	-16.080	0.764	124.697	**123.870**		38	-16.090	0.758	98.905	**99.670**		38	-16.090	0.754	81.525	**80.940**
	39	-16.080	0.759	134.930	**134.920**		39	-16.070	0.754	110.087	**110.600**		39	-16.090	0.749	90.409	**91.200**
	40	-16.080	0.758	144.274	**144.420**		40	-16.090	0.754	118.178	**119.030**		40	-16.090	0.749	98.662	**99.530**
	41	-16.080	0.755	155.697	**155.720**		41	-16.090	0.753	130.225	**130.490**		41	-16.090	0.749	110.429	**110.050**
	42	-16.080	0.756	166.804	**166.500**		42	-16.090	0.753	139.852	**139.820**		42	-16.090	0.749	119.212	**119.470**
	43	-16.080	0.753	178.275	**178.150**		43	-16.090	0.751	151.445	**151.430**		43	-16.090	0.747	130.045	**130.160**
	44	-16.080	0.751	187.312	**186.760**		44	-16.090	0.750	160.688	**160.540**		44	-16.090	0.748	139.972	**139.520**
	45	-16.080	0.750	200.446	**199.790**		45	-16.090	0.747	171.540	**171.580**		45	-16.090	0.745	150.235	**150.250**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	46	-16.080	0.749	210.545	**210.470**		46	-16.090	0.747	181.847	**181.880**		46	-16.090	0.745	159.824	**159.720**
	47	-16.080	0.747	222.857	**222.790**		47	-16.090	0.745	193.579	**193.580**		47	-16.090	0.742	170.082	**169.570**
	48	-16.080	0.746	233.136	**233.130**		48	-16.090	0.744	203.260	**203.190**		48	-16.090	0.743	180.882	**181.030**
	49	-16.080	0.744	245.442	**245.370**		49	-16.090	0.742	215.012	**215.290**		49	-16.090	0.741	192.087	**192.180**
	50	-16.080	0.744	257.001	**256.850**		50	-16.090	0.739	222.750	**222.950**		50	-16.090	0.741	202.364	**201.910**
							51	-16.090	0.740	240.463	**239.850**		51	-16.090	0.737	214.284	**213.940**
							52	-16.090	0.737	250.890	**250.970**		52	-16.090	0.735	225.273	**224.920**
							53	-16.090	0.734	263.993	**264.190**		53	-16.100	0.732	237.205	**237.430**
							54	-16.090	0.732	275.339	**275.670**		54	-16.100	0.731	249.199	**248.910**
													55	-16.100	0.728	261.524	**261.510**
													56	-16.100	0.727	273.477	**273.230**
													57	-16.100	0.723	284.190	**283.570**
													58	-16.100	0.721	294.671	**294.420**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
16	8	-16.160	0.955	54.563	**53.930**	17	8	-16.180	0.914	68.279	**67.840**	18	9	-16.090	0.864	66.898	**66.150**
	9	-16.150	0.907	42.397	**42.360**		9	-16.170	0.864	54.279	**54.940**		10	-16.100	0.811	46.922	**47.310**
	10	-16.250	0.925	26.800	27.680		10	-16.250	0.864	37.655	**37.820**		11	-16.120	0.811	37.759	37.970
	11	-16.310	0.925	17.202	17.490		11	-16.200	0.822	28.633	28.270		12	-16.350	0.893	21.311	22.070
	12	-16.310	0.925	4.288	4.070		12	-16.280	0.822	13.617	14.020		13	-16.400	0.893	10.756	11.330
	13	-16.310	0.925	-2.407	-3.094		13	-16.320	0.822	5.507	4.675		14	-16.400	0.893	-2.503	-2.200
	14	-16.310	0.925	-13.523	-14.059		14	-16.350	0.822	-6.885	-7.035		15	-16.460	0.893	-9.607	-9.384
	15	-16.400	0.893	-18.962	-19.043		15	-16.460	0.893	-13.342	-13.335		16	-16.460	0.893	-18.797	-18.378
	16	-16.400	0.893	-25.768	-26.016		16	-16.460	0.893	-21.429	-21.003		17	-16.460	0.893	-22.490	-23.047
	17	-16.400	0.893	-25.658	-26.586		17	-16.460	0.893	-23.926	-24.440		18	-16.460	0.893	-29.950	-30.232
	18	-16.400	0.893	-29.562	-29.932		18	-16.460	0.893	-29.083	-29.014		19	-16.460	0.893	-30.889	-30.948
	19	-16.400	0.893	-27.993	-28.846		19	-16.460	0.893	-28.854	-29.522		20	-16.430	0.899	-34.244	-34.715
	20	-16.400	0.893	-30.228	-30.664		20	-16.460	0.893	-32.319	-31.762		21	-16.430	0.899	-33.594	-33.242
	21	-16.400	0.893	-27.195	-26.896		21	-16.460	0.893	-30.594	-29.798		22	-16.400	0.899	-35.170	-35.040
	22	-16.400	0.893	-27.797	-26.861		22	-16.320	0.822	-29.207	-29.800		23	-16.400	0.899	-32.975	-33.068
	23	-16.400	0.893	-23.330	-23.160		23	-16.320	0.822	-26.794	-27.560		24	-16.430	0.899	-35.338	-34.423
	24	-16.400	0.893	-22.353	-22.838		24	-16.320	0.822	-27.923	-27.310		25	-16.430	0.899	-31.707	-32.010
	25	-16.310	0.828	-19.144	-19.009		25	-16.320	0.822	-24.381	-24.830		26	-16.250	0.775	-32.499	-32.673
	26	-16.310	0.828	-17.946	-17.638		26	-16.320	0.822	-24.255	-24.160		27	-16.250	0.775	-29.532	-29.771
	27	-16.310	0.828	-12.176	-12.195		27	-16.320	0.822	-19.626	-20.480		28	-16.250	0.775	-29.877	-29.771
	28	-16.310	0.828	-9.780	-9.204		28	-16.320	0.822	-18.302	-18.260		29	-16.330	0.785	-25.772	-25.367
	29	-16.190	0.775	-4.318	-3.340		29	-16.270	0.775	-14.720	-13.730		30	-16.350	0.785	-23.266	-22.355
	30	-16.200	0.775	0.220	0.640		30	-16.250	0.775	-9.702	-9.580		31	-16.370	0.785	-16.785	-17.060
	31	-16.250	0.773	6.498	7.200		31	-16.330	0.778	-4.804	-4.280		32	-16.350	0.772	-14.048	-13.230
	32	-16.250	0.773	12.145	12.390		32	-16.330	0.778	0.084	0.740		33	-16.350	0.772	-6.212	-6.490
	33	-16.270	0.773	20.772	20.390		33	-16.350	0.778	7.897	7.700		34	-16.350	0.772	-1.480	-1.380
	34	-16.110	0.751	28.262	**27.620**		34	-16.350	0.778	13.530	14.290		35	-16.350	0.772	7.007	6.790
	35	-16.130	0.751	36.887	**36.780**		35	-16.220	0.755	22.633	22.360		36	-16.210	0.745	11.930	12.560
	36	-16.130	0.751	43.344	**43.150**		36	-16.200	0.755	29.458	**29.620**		37	-16.210	0.745	20.348	**20.850**
	37	-16.130	0.751	53.493	**52.990**		37	-16.220	0.755	37.825	**37.760**		38	-16.210	0.745	25.789	**26.230**
	38	-16.130	0.751	60.558	**59.670**		38	-16.220	0.755	44.230	**44.230**		39	-16.210	0.745	34.738	**34.970**
	39	-16.220	0.758	69.614	**69.670**		39	-16.240	0.755	53.070	**53.130**		40	-16.210	0.745	40.783	**40.950**
	40	-16.200	0.755	76.997	**77.160**		40	-16.220	0.755	61.205	**60.270**		41	-16.210	0.745	50.239	**50.190**
	41	-16.200	0.755	88.208	**87.940**		41	-16.200	0.747	68.788	**69.550**		42	-16.190	0.741	56.091	**56.630**
	42	-16.200	0.755	96.494	**95.740**		42	-16.200	0.747	76.102	**76.920**		43	-16.190	0.741	65.905	**65.830**
	43	-16.220	0.755	106.989	**106.680**		43	-16.200	0.745	85.611	**86.530**		44	-16.150	0.739	74.295	**74.130**
	44	-16.220	0.755	115.788	**114.950**		44	-16.180	0.745	94.602	**95.530**		45	-16.170	0.739	83.266	**83.850**
	45	-16.200	0.751	126.233	**125.760**		45	-16.160	0.743	105.582	**105.810**		46	-16.170	0.739	90.760	**91.290**
	46	-16.200	0.750	134.627	**134.190**		46	-16.160	0.743	113.818	**113.970**		47	-16.190	0.741	101.468	**101.250**
	47	-16.200	0.748	145.344	**145.240**		47	-16.200	0.745	124.152	**123.670**		48	-16.210	0.741	108.193	**108.930**
	48	-16.200	0.747	153.994	**154.220**		48	-16.200	0.745	132.915	**132.520**		49	-16.210	0.741	119.289	**119.190**
	49	-16.200	0.746	165.682	**165.260**		49	-16.200	0.743	143.123	**143.120**		50	-16.210	0.741	127.782	**127.330**
	50	-16.200	0.745	174.599	**174.870**		50	-16.200	0.744	153.128	**152.760**		51	-16.210	0.737	138.510	**138.440**
	51	-16.200	0.741	186.235	**186.320**		51	-16.200	0.740	164.340	**164.030**		52	-16.210	0.735	148.079	**147.600**
	52	-16.200	0.738	195.852	**196.200**		52	-16.200	0.737	173.519	**173.930**		53	-16.210	0.732	159.416	**159.070**
	53	-16.200	0.736	209.178	**208.670**		53	-16.200	0.735	186.329	**185.610**		54	-16.210	0.730	168.912	**168.830**
	54	-16.200	0.733	218.580	**218.720**		54	-16.200	0.732	195.324	**194.830**		55	-16.210	0.727	180.021	**179.520**
	55	-16.200	0.730	230.553	**230.660**		55	-16.200	0.728	205.793	**205.540**		56	-16.210	0.726	190.478	**190.020**
	56	-16.200	0.728	240.865	**241.310**		56	-16.200	0.726	215.615	**216.140**		57	-16.210	0.723	201.374	**201.510**
	57	-16.200	0.726	253.771	**254.140**		57	-16.200	0.724	228.016	**228.270**		58	-16.210	0.722	211.837	**211.910**
	58	-16.200	0.726	266.543	**266.320**		58	-16.200	0.724	240.175	**239.530**		59	-16.210	0.720	223.695	**223.950**
	59	-16.200	0.724	279.349	**278.640**		59	-16.200	0.722	252.498	**252.270**		60	-16.210	0.720	235.435	**234.930**
	60	-16.200	0.722	289.475	**290.060**		60	-16.200	0.721	263.495	**263.650**		61	-16.210	0.719	248.512	**248.370**
							61	-16.200	0.719	275.678	**276.300**		62	-16.210	0.718	259.116	**259.740**
							62	-16.200	0.720	289.506	**288.870**		63	-16.210	0.717	272.200	**272.880**
													64	-16.210	0.717	284.292	**283.890**
													65	-16.210	0.716	297.420	**297.570**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
19	10	-16.170	0.830	61.601	**60.910**	20	10	-16.190	0.834	72.339	**71.850**	21	11	-16.120	0.770	71.387	**71.970**
	11	-16.200	0.787	47.137	**47.430**		11	-16.170	0.806	58.747	**57.870**		12	-16.190	0.770	53.612	**52.700**
	12	-16.180	0.787	33.677	34.260		12	-16.170	0.771	40.832	**40.030**		13	-16.290	0.770	40.032	**39.970**
	13	-16.450	0.899	21.720	21.990		13	-16.120	0.718	30.406	31.030		14	-16.250	0.770	27.059	27.100

				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
	14	-16.440	0.899	7.462	7.540		14	-16.450	0.899	14.591	14.890		15	-16.390	0.795	16.189	16.150
	15	-16.490	0.899	-0.804	-1.220		15	-16.490	0.899	5.388	5.190		16	-16.420	0.795	3.800	3.780
	16	-16.490	0.899	-11.282	-11.173		16	-16.490	0.899	-6.200	-6.450		17	-16.470	0.795	-4.382	-4.250
	17	-16.500	0.899	-16.689	-17.417		17	-16.490	0.899	-12.437	-13.136		18	-16.470	0.795	-14.392	-14.173
	18	-16.490	0.899	-25.016	-24.800		18	-16.490	0.899	-22.209	-22.059		19	-16.470	0.795	-19.534	-20.523
	19	-16.490	0.899	-28.448	-28.801		19	-16.490	0.899	-26.801	-27.283		20	-16.470	0.795	-28.189	-28.642
	20	-16.490	0.899	-34.143	-33.807		20	-16.490	0.899	-34.760	-34.846		21	-16.470	0.795	-32.134	-32.121
	21	-16.450	0.899	-33.181	-33.536		21	-16.450	0.899	-34.891	-35.138		22	-16.430	0.779	-36.731	-36.188
	22	-16.380	0.813	-35.280	-35.560		22	-16.390	0.789	-37.976	-38.547		23	-16.430	0.779	-38.503	-37.816
	23	-16.360	0.813	-34.142	-35.022		23	-16.370	0.789	-37.885	-38.409		24	-16.360	0.774	-40.478	-41.072
	24	-16.360	0.813	-37.213	-36.575		24	-16.370	0.789	-41.991	-41.469		25	-16.360	0.774	-41.162	-41.762
	25	-16.360	0.813	-35.753	-35.782		25	-16.370	0.789	-41.671	-40.812		26	-16.360	0.774	-45.047	-44.337
	26	-16.360	0.813	-37.568	-36.616		26	-16.350	0.789	-43.677	-43.140		27	-16.360	0.774	-44.730	-44.504
	27	-16.360	0.813	-35.008	-35.414		27	-16.370	0.789	-43.244	-42.345		28	-16.360	0.774	-47.517	-46.562
	28	-16.360	0.813	-35.621	-35.712		28	-16.370	0.789	-45.039	-44.225		29	-16.360	0.774	-43.601	-44.537
	29	-16.350	0.779	-32.386	-32.285		29	-16.390	0.789	-41.003	-41.300		30	-16.360	0.774	-42.773	-43.250
	30	-16.350	0.779	-29.898	-29.612		30	-16.390	0.789	-39.137	-39.589		31	-16.430	0.779	-41.216	-40.524
	31	-16.390	0.779	-25.446	-25.728		31	-16.430	0.783	-36.104	-36.332		32	-16.400	0.774	-38.492	-38.770
	32	-16.390	0.779	-22.152	-22.515		32	-16.430	0.783	-33.509	-34.266		33	-16.430	0.779	-34.001	-34.438
	33	-16.440	0.783	-16.848	-17.140		33	-16.470	0.783	-29.225	-29.390		34	-16.400	0.774	-30.581	-30.842
	34	-16.440	0.783	-12.691	-12.300		34	-16.450	0.783	-24.751	-25.161		35	-16.430	0.779	-25.196	-25.516
	35	-16.440	0.783	-4.801	-5.150		35	-16.490	0.789	-18.548	-18.650		36	-16.430	0.779	-21.810	-21.380
	36	-16.440	0.783	0.140	0.470		36	-16.490	0.789	-14.209	-13.510		37	-16.430	0.779	-14.872	-15.480
	37	-16.210	0.740	8.856	7.980		37	-16.490	0.789	-6.272	-6.560		38	-16.430	0.779	-10.711	-10.830
	38	-16.210	0.740	13.470	14.130		38	-16.220	0.735	-1.216	-1.530		39	-16.450	0.779	-4.296	-4.550
	39	-16.210	0.740	21.553	21.930		39	-16.220	0.735	6.058	5.810		40	-16.230	0.733	-0.404	0.500
	40	-16.190	0.740	27.958	28.750		40	-16.220	0.735	10.516	11.000		41	-16.230	0.733	6.663	7.310
	41	-16.210	0.740	35.379	**35.880**		41	-16.220	0.735	18.313	19.010		42	-16.210	0.733	12.281	13.070
	42	-16.190	0.740	42.407	42.290		42	-16.220	0.735	23.358	24.070		43	-16.230	0.733	18.602	**19.340**
	43	-16.190	0.738	50.559	50.780		43	-16.220	0.735	31.656	32.510		44	-16.210	0.733	24.833	25.080
	44	-16.190	0.738	56.871	**57.660**		44	-16.220	0.735	37.262	**38.210**		45	-16.210	0.733	32.926	**32.730**
	45	-16.210	0.740	66.212	**66.590**		45	-16.220	0.735	46.038	**46.830**		46	-16.210	0.733	38.423	**38.740**
	46	-16.210	0.740	73.107	**73.740**		46	-16.220	0.735	52.178	**52.950**		47	-16.210	0.733	46.986	**46.650**
	47	-16.210	0.740	83.124	**82.750**		47	-16.220	0.735	61.411	**61.710**		48	-16.210	0.733	53.005	**52.860**
	48	-16.210	0.740	90.524	**90.080**		48	-16.220	0.735	68.061	**68.260**		49	-16.230	0.733	60.617	**60.920**
	49	-16.210	0.738	99.548	**99.390**		49	-16.220	0.735	77.730	**77.450**		50	-16.230	0.733	67.114	**67.830**
	50	-16.210	0.738	107.347	**107.230**		50	-16.190	0.732	84.884	**84.420**		51	-16.210	0.729	77.819	**77.380**
	51	-16.210	0.734	117.571	**117.610**		51	-16.220	0.732	95.342	**94.780**		52	-16.230	0.729	85.714	**85.600**
	52	-16.210	0.732	126.561	**126.790**		52	-16.150	0.723	103.472	**103.070**		53	-16.150	0.718	95.484	**95.770**
	53	-16.210	0.730	138.237	**137.580**		53	-16.170	0.723	114.562	**114.020**		54	-16.150	0.718	104.807	**104.610**
	54	-16.210	0.728	147.221	**147.300**		54	-16.170	0.721	122.903	**122.950**		55	-16.170	0.718	115.353	**115.170**
	55	-16.210	0.726	158.821	**158.500**		55	-16.170	0.720	134.731	**134.210**		56	-16.170	0.718	124.984	**124.360**
	56	-16.210	0.725	168.770	**168.220**		56	-16.170	0.718	143.097	**143.270**		57	-16.170	0.715	134.559	**134.600**
	57	-16.210	0.721	178.232	**178.270**		57	-16.170	0.715	153.025	**153.180**		58	-16.170	0.714	143.420	**143.770**
	58	-16.210	0.720	188.163	**188.640**		58	-16.170	0.715	163.334	**163.710**		59	-16.170	0.714	155.822	**155.710**
	59	-16.210	0.719	200.671	**200.700**		59	-16.170	0.714	175.230	**174.920**		60	-16.170	0.714	165.894	**165.350**
	60	-16.210	0.719	211.874	**211.430**		60	-16.170	0.713	184.676	**184.770**		61	-16.170	0.713	177.455	**177.080**
	61	-16.210	0.717	223.244	**223.720**		61	-16.170	0.712	196.624	**196.490**		62	-16.170	0.713	187.768	**187.530**
	62	-16.210	0.717	234.619	**234.240**		62	-16.170	0.713	208.551	**208.970**		63	-16.170	0.712	199.429	**199.120**
	63	-16.210	0.717	248.557	**249.050**		63	-16.170	0.713	221.872	**221.800**		64	-16.170	0.712	209.970	**209.480**
	64	-16.210	0.717	260.189	**260.070**		64	-16.170	0.713	232.913	**232.170**		65	-16.170	0.711	221.719	**221.210**
	65	-16.210	0.716	272.915	**272.550**		65	-16.170	0.712	245.107	**244.510**		66	-16.170	0.710	231.156	**231.130**
	66	-16.210	0.715	283.274	**283.910**		66	-16.170	0.711	254.962	**254.960**		67	-16.170	0.709	242.932	**243.190**
	67	-16.210	0.714	295.999	**296.310**		67	-16.170	0.710	267.168	**267.670**		68	-16.170	0.709	253.842	**254.180**
	68	-16.210	0.714	307.960	**307.930**		68	-16.170	0.710	278.555	**278.050**		69	-16.170	0.708	265.680	**265.880**
							69	-16.170	0.709	290.809	**290.660**		70	-16.170	0.708	276.782	**276.690**
							70	-16.170	0.708	300.790	**301.250**		71	-16.170	0.707	288.670	**288.870**
							71	-16.170	0.708	314.668	**314.260**		72	-16.170	0.707	299.953	**299.870**
							72	-16.170	0.707	324.717	**325.240**		73	-16.170	0.706	311.880	**311.940**
														74	-16.170	0.705	321.621	**321.360**
22	12	-16.250	0.790	63.395	**62.830**	23	13	-16.170	0.721	61.566	62.440	24	14	-16.300	0.765	55.098	**55.750**
	13	-16.250	0.765	49.515	**49.680**		14	-16.170	0.721	46.646	**45.870**		15	-16.330	0.765	44.294	**43.630**
	14	-16.280	0.765	33.408	**33.280**		15	-16.440	0.790	33.412	**34.080**		16	-16.380	0.765	28.993	**28.150**
	15	-16.210	0.700	24.793	25.170		16	-16.400	0.790	21.930	22.570		17	-16.380	0.765	20.395	20.410
	16	-16.380	0.775	10.684	11.370		17	-16.420	0.768	12.100	12.470		18	-16.400	0.770	7.689	7.060
	17	-16.400	0.775	2.979	2.500		18	-16.450	0.768	-0.506	0.310		19	-16.450	0.770	-1.996	-1.970
	18	-16.440	0.775	-9.195	-8.990		19	-16.450	0.768	-7.235	-7.620		20	-16.450	0.770	-12.895	-13.420
	19	-16.440	0.775	-15.052	-15.698		20	-16.450	0.768	-17.361	-17.920		21	-16.450	0.770	-19.318	-19.510
	20	-16.440	0.775	-24.379	-25.104		21	-16.450	0.768	-22.957	-23.808		22	-16.450	0.770	-28.932	-29.472
	21	-16.440	0.775	-29.103	-29.316		22	-16.450	0.768	-31.822	-31.886		23	-16.450	0.770	-34.211	-34.563
	22	-16.440	0.775	-37.161	-37.549		23	-16.450	0.768	-36.302	-37.076		24	-16.450	0.770	-42.576	-42.821
	23	-16.440	0.775	-39.779	-39.010		24	-16.450	0.768	-42.979	-42.007		25	-16.450	0.770	-45.794	-45.332
	24	-16.390	0.803	-43.184	-44.128		25	-16.430	0.768	-44.467	-44.478		26	-16.400	0.795	-49.396	-50.261
	25	-16.390	0.803	-44.539	-44.938		26	-16.390	0.792	-47.760	-47.962		27	-16.400	0.795	-51.388	-51.451

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Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	26	-16.390	0.803	-48.974	-48.493		27	-16.390	0.792	-48.955	-49.223		28	-16.400	0.795	-56.262	-55.420
	27	-16.390	0.803	-49.203	-48.564		28	-16.390	0.792	-53.098	-52.203		29	-16.400	0.795	-54.626	-55.288
	28	-16.390	0.803	-52.423	-51.432		29	-16.390	0.792	-50.662	-51.443		30	-16.420	0.774	-57.715	-56.935
	29	-16.390	0.803	-48.970	-49.733		30	-16.390	0.792	-51.161	-51.852		31	-16.420	0.774	-55.434	-55.110
	30	-16.390	0.803	-48.494	-49.478		31	-16.400	0.768	-49.899	-49.898		32	-16.420	0.774	-55.985	-55.285
	31	-16.390	0.768	-46.972	-46.881		32	-16.400	0.768	-49.813	-49.125		33	-16.420	0.774	-52.885	-52.525
	32	-16.390	0.768	-46.126	-45.744		33	-16.400	0.768	-46.050	-46.183		34	-16.420	0.774	-52.548	-51.992
	33	-16.390	0.768	-41.568	-41.832		34	-16.400	0.768	-45.111	-44.435		35	-16.420	0.774	-48.662	-48.116
	34	-16.390	0.768	-39.889	-39.423		35	-16.400	0.768	-40.599	-40.431		36	-16.420	0.774	-47.476	-46.909
	35	-16.390	0.768	-34.603	-34.402		36	-16.380	0.768	-37.663	-37.611		37	-16.420	0.774	-42.837	-42.497
	36	-16.380	0.768	-31.546	-30.918		37	-16.400	0.768	-33.613	-33.087		38	-16.420	0.774	-40.839	-40.853
	37	-16.390	0.768	-26.143	-25.880		38	-16.400	0.768	-31.077	-30.177		39	-16.420	0.774	-35.480	-36.178
	38	-16.390	0.768	-22.904	-22.100		39	-16.400	0.768	-25.159	-25.213		40	-16.420	0.774	-32.707	-33.640
	39	-16.390	0.768	-16.254	-16.370		40	-16.400	0.768	-21.878	-21.740		41	-16.440	0.774	-27.960	-28.310
	40	-16.390	0.768	-12.286	-12.200		41	-16.420	0.768	-16.584	-16.320		42	-16.430	0.770	-24.908	-25.140
	41	-16.390	0.768	-4.999	-5.860		42	-16.400	0.768	-11.311	-12.110		43	-16.450	0.770	-19.666	-19.270
	42	-16.200	0.729	-1.224	-1.480		43	-16.250	0.729	-7.040	-6.300		44	-16.150	0.706	-15.623	-15.690
	43	-16.220	0.729	4.367	5.210		44	-16.230	0.729	-2.056	-1.744		45	-16.150	0.706	-10.016	-9.630
	44	-16.220	0.729	8.624	**8.480**		**45**	-16.250	0.729	3.338	**3.880**		**46**	-16.140	0.706	-6.219	-5.640
	45	-16.220	0.729	15.994	**16.100**		**46**	-16.230	0.729	8.928	**8.730**		**47**	-16.210	0.720	0.442	**0.490**
	46	-16.220	0.729	20.803	**21.130**		**47**	-16.250	0.729	14.774	**15.470**		**48**	-16.210	0.720	4.425	**4.710**
	47	-16.240	0.731	28.243	**28.920**		**48**	-16.230	0.729	20.946	**21.000**		**49**	-16.210	0.720	11.324	**11.430**
	48	-16.240	0.731	33.628	**34.050**		**49**	-16.250	0.729	27.223	**27.840**		**50**	-16.210	0.720	15.820	**16.440**
	49	-16.220	0.729	42.289	**42.110**		**50**	-16.230	0.729	33.952	**33.710**		**51**	-16.210	0.720	25.666	**25.010**
	50	-16.220	0.729	48.128	**48.080**		**51**	-16.170	0.718	42.712	**42.350**		**52**	-16.150	0.710	32.033	**31.560**
	51	-16.240	0.729	57.953	**57.570**		**52**	-16.190	0.718	49.130	**49.750**		**53**	-16.170	0.710	40.383	**40.830**
	52	-16.150	0.717	65.453	**64.980**		**53**	-16.190	0.718	59.790	**59.100**		**54**	-16.150	0.708	48.183	**48.050**
	53	-16.170	0.717	75.168	**75.110**		**54**	-16.190	0.717	67.370	**67.090**		**55**	-16.150	0.708	58.312	**57.730**
	54	-16.170	0.715	82.465	**83.150**		**55**	-16.210	0.717	76.744	**76.920**		**56**	-16.170	0.708	64.512	**65.330**
	55	-16.170	0.715	93.875	**93.640**		**56**	-16.210	0.717	85.305	**85.250**		**57**	-16.170	0.708	74.918	**75.310**
	56	-16.170	0.715	102.900	**102.070**		**57**	-16.170	0.712	95.709	**95.120**		**58**	-16.170	0.708	83.036	**83.210**
	57	-16.170	0.712	112.027	**112.420**		**58**	-16.170	0.712	104.446	**104.190**		**59**	-16.150	0.706	93.747	**93.580**
	58	-16.170	0.712	121.250	**121.470**		**59**	-16.190	0.712	114.138	**114.400**		**60**	-16.150	0.706	102.129	**101.560**
	59	-16.170	0.712	133.083	**133.050**		**60**	-16.190	0.712	123.175	**123.140**		**61**	-16.170	0.706	111.336	**111.980**
	60	-16.170	0.711	141.583	**141.870**		**61**	-16.190	0.711	133.790	**133.800**		**62**	-16.170	0.706	120.008	**120.290**
	61	-16.170	0.711	153.679	**153.330**		**62**	-16.190	0.711	143.092	**142.950**		**63**	-16.170	0.706	131.159	**131.160**
	62	-16.170	0.711	163.460	**163.010**		**63**	-16.190	0.710	153.837	**153.670**		**64**	-16.170	0.706	140.130	**139.940**
	63	-16.170	0.710	174.640	**174.710**		**64**	-16.190	0.710	163.389	**163.180**		**65**	-16.170	0.705	150.461	**150.930**
	64	-16.170	0.710	184.659	**184.200**		**65**	-16.190	0.709	174.249	**174.280**		**66**	-16.170	0.705	159.676	**159.960**
	65	-16.170	0.709	195.938	**195.840**		**66**	-16.190	0.709	184.038	**184.070**		**67**	-16.170	0.705	171.280	**171.240**
	66	-16.170	0.708	204.933	**205.460**		**67**	-16.190	0.708	195.001	**195.300**		**68**	-16.170	0.705	180.771	**180.490**
	67	-16.170	0.708	217.548	**217.550**		**68**	-16.190	0.708	205.014	**205.390**		**69**	-16.170	0.704	191.355	**191.820**
	68	-16.170	0.707	226.662	**227.180**		**69**	-16.190	0.707	216.065	**216.700**		**70**	-16.170	0.704	201.066	**201.130**
	69	-16.170	0.707	239.445	**239.150**		**70**	-16.190	0.707	226.290	**226.470**		**71**	-16.170	0.704	213.083	**212.740**
	70	-16.170	0.706	248.664	**248.960**		**71**	-16.190	0.706	237.418	**238.120**		**72**	-16.170	0.703	221.656	**222.040**
	71	-16.170	0.706	261.606	**261.250**		**72**	-16.190	0.706	247.844	**248.110**		**73**	-16.170	0.703	233.841	**233.560**
	72	-16.170	0.705	270.917	**271.390**		**73**	-16.190	0.705	259.036	**259.700**		**74**	-16.170	0.702	242.517	**243.090**
	73	-16.170	0.705	284.008	**283.780**		**74**	-16.190	0.705	269.653	**269.030**		**75**	-16.170	0.702	254.862	**254.770**
	74	-16.170	0.705	295.036	**294.210**		**75**	-16.190	0.704	280.899	**280.920**		**76**	-16.170	0.701	263.627	**264.140**
	75	-16.170	0.703	304.946	**305.240**		**76**	-16.190	0.704	291.695	**291.570**		**77**	-16.170	0.701	276.122	**275.810**
	76	-16.170	0.703	316.092	**316.490**		**77**	-16.210	0.704	302.698	**303.550**		**78**	-16.170	0.701	286.650	**285.960**
							78	-16.190	0.703	313.950	**314.250**		**79**	-16.170	0.700	297.602	**297.990**
25	**15**	-16.380	0.758	55.103	**56.010**	**26**	**16**	-16.400	0.765	50.203	**49.580**	**27**	**17**	-16.500	0.782	50.517	**49.960**
	16	-16.380	0.758	41.037	**40.090**		**17**	-16.440	0.765	38.111	**37.660**		**18**	-16.500	0.761	33.800	**34.750**
	17	-16.480	0.780	28.973	**28.570**		**18**	-16.480	0.765	22.641	**22.810**		**19**	-16.500	0.761	23.731	**23.720**
	18	-16.450	0.780	17.024	17.370		19	-16.470	0.770	14.098	14.410		20	-16.480	0.755	11.191	10.620
	19	-16.460	0.760	7.174	7.460		20	-16.470	0.770	1.615	1.210		21	-16.480	0.755	2.419	1.730
	20	-16.460	0.760	-4.437	-4.980		21	-16.470	0.770	-6.497	-7.130		22	-16.480	0.755	-9.366	-9.780
	21	-16.460	0.760	-11.644	-12.420		22	-16.470	0.770	-17.660	-18.010		23	-16.480	0.755	-16.991	-17.590
	22	-16.460	0.760	-21.991	-22.570		23	-16.470	0.770	-24.585	-24.751		24	-16.480	0.755	-27.537	-27.340
	23	-16.480	0.760	-29.032	-29.297		24	-16.470	0.770	-34.466	-34.476		25	-16.480	0.755	-34.047	-34.344
	24	-16.460	0.760	-37.191	-37.620		25	-16.470	0.770	-40.238	-40.189		26	-16.480	0.755	-43.398	-42.659
	25	-16.460	0.760	-42.175	-42.627		26	-16.470	0.770	-48.882	-48.332		27	-16.480	0.755	-48.831	-48.010
	26	-16.460	0.760	-49.190	-48.243		27	-16.430	0.768	-50.509	-50.948		28	-16.440	0.767	-53.933	-54.030
	27	-16.420	0.768	-50.093	-50.711		28	-16.430	0.768	-57.031	-56.255		29	-16.460	0.767	-56.061	-56.041
	28	-16.380	0.768	-53.798	-54.690		29	-16.430	0.768	-57.233	-57.481		30	-16.440	0.767	-58.703	-59.346
	29	-16.420	0.768	-55.353	-55.558		30	-16.430	0.768	-60.239	-60.607		31	-16.460	0.767	-59.981	-59.847
	30	-16.420	0.768	-57.646	-57.713		31	-16.430	0.768	-59.567	-60.182		32	-16.440	0.767	-61.626	-62.230
	31	-16.420	0.768	-56.227	-56.912		32	-16.430	0.768	-61.632	-62.155		33	-16.440	0.767	-60.887	-61.650
	32	-16.420	0.768	-57.594	-57.486		33	-16.430	0.768	-60.120	-60.665		34	-16.440	0.767	-62.775	-62.898
	33	-16.420	0.768	-55.353	-55.828		34	-16.430	0.768	-61.282	-61.413		35	-16.440	0.767	-61.213	-61.424
	34	-16.420	0.768	-55.833	-55.525		35	-16.430	0.768	-58.964	-58.921		36	-16.440	0.767	-62.223	-61.852
	35	-16.420	0.768	-52.803	-52.968		36	-16.430	0.768	-59.261	-58.878		37	-16.440	0.767	-59.873	-59.792
	36	-16.420	0.768	-52.433	-51.742		37	-16.430	0.768	-56.171	-55.636		38	-16.440	0.767	-60.043	-59.185

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
	37	-16.420	0.768	-48.648	-48.524		38	-16.430	0.768	-55.641	-54.970		39	-16.440	0.767	-56.939	-56.409
	38	-16.420	0.768	-47.466	-46.887		39	-16.430	0.768	-51.812	-51.218		40	-16.440	0.767	-56.304	-55.322
	39	-16.420	0.768	-42.957	-42.989		40	-16.430	0.768	-50.491	-50.068		41	-16.440	0.767	-52.479	-51.643
	40	-16.420	0.768	-40.998	-40.967		41	-16.430	0.768	-45.954	-45.708		42	-16.440	0.767	-51.076	-50.385
	41	-16.420	0.768	-35.798	-36.750		42	-16.430	0.768	-43.878	-43.897		43	-16.440	0.767	-46.560	-46.525
	42	-16.420	0.768	-33.097	-33.580		43	-16.430	0.768	-38.665	-39.199		44	-16.440	0.767	-44.423	-44.370
	43	-16.440	0.768	-28.596	-28.920		44	-16.440	0.768	-36.566	-36.890		45	-16.450	0.767	-39.967	-40.300
	44	-16.440	0.768	-25.207	-25.360		45	-16.450	0.768	-31.426	-31.930		46	-16.460	0.767	-37.868	-37.970
	45	-16.430	0.761	-20.308	-20.450		46	-16.470	0.770	-28.755	-29.250		47	-16.470	0.767	-32.820	-33.540
	46	-16.430	0.761	-16.441	-16.620		47	-16.400	0.750	-24.090	-23.990		48	-16.490	0.767	-30.839	-30.560
	47	-16.210	0.715	-10.878	-11.170		48	-16.170	0.702	-20.769	-20.660		49	-16.420	0.750	-25.462	-25.660
	48	-16.210	0.715	-7.580	-6.700		49	-16.170	0.702	-15.440	-14.700		50	-16.420	0.750	-21.814	-21.910
	49	-16.210	0.715	-1.392	-0.950		50	-16.150	0.702	-10.946	-10.590		51	-16.180	0.701	-14.531	-15.320
	50	-16.190	0.715	3.922	3.790		51	-16.170	0.702	-4.240	-3.610		52	-16.180	0.701	-9.203	-9.640
	51	-16.210	0.715	11.540	11.670		52	-16.170	0.702	1.630	1.960		53	-16.180	0.701	-1.199	-1.940
	52	-16.210	0.715	18.282	18.080		53	-16.170	0.702	10.194	10.450		54	-16.180	0.701	4.520	4.210
	53	-16.170	0.706	25.905	26.630		54	-16.170	0.702	16.444	16.760		55	-16.180	0.701	12.861	12.320
	54	-16.150	0.706	34.342	33.760		55	-16.170	0.702	25.335	26.090		56	-16.180	0.701	18.956	18.940
	55	-16.170	0.706	42.281	42.730		56	-16.170	0.702	31.951	32.610		57	-16.180	0.701	27.623	27.740
	56	-16.170	0.706	49.499	50.090		57	-16.170	0.702	41.156	41.770		58	-16.180	0.701	34.080	34.610
	57	-16.170	0.706	59.325	59.460		58	-16.170	0.702	48.124	48.770		59	-16.180	0.701	43.060	43.390
	58	-16.170	0.706	66.891	67.090		59	-16.150	0.702	59.331	58.750		60	-16.160	0.701	51.606	51.050
	59	-16.170	0.706	77.014	76.880		60	-16.170	0.702	64.937	65.900		61	-16.180	0.701	59.147	59.860
	60	-16.150	0.704	84.999	84.850		61	-16.170	0.702	74.736	74.980		62	-16.180	0.701	66.288	67.270
	61	-16.170	0.704	93.628	94.390		62	-16.170	0.702	82.369	82.450		63	-16.180	0.700	75.042	75.860
	62	-16.170	0.704	101.768	102.690		63	-16.150	0.700	92.487	92.170		64	-16.160	0.700	84.287	83.640
	63	-16.170	0.704	112.370	112.680		64	-16.150	0.700	100.373	100.130		65	-16.180	0.700	92.279	93.060
	64	-16.170	0.704	120.816	121.320		65	-16.150	0.700	110.660	110.380		66	-16.160	0.700	101.873	101.050
	65	-16.170	0.704	131.680	131.510		66	-16.150	0.700	118.846	118.540		67	-16.180	0.700	110.093	110.680
	66	-16.170	0.704	140.423	140.440		67	-16.170	0.701	128.566	129.010		68	-16.180	0.700	118.126	118.750
	67	-16.170	0.703	150.441	150.730		68	-16.170	0.701	137.065	137.290		69	-16.180	0.700	128.465	128.670
	68	-16.170	0.703	159.424	159.880		69	-16.170	0.701	147.882	147.880		70	-16.180	0.700	136.787	137.380
	69	-16.170	0.703	170.741	170.680		70	-16.170	0.701	156.660	156.540		71	-16.180	0.700	147.375	147.550
	70	-16.170	0.703	179.997	180.040		71	-16.170	0.701	167.719	167.390		72	-16.180	0.700	155.974	156.390
	71	-16.170	0.702	190.268	190.910		72	-16.170	0.701	176.767	176.230		73	-16.180	0.700	166.803	166.530
	72	-16.170	0.702	199.742	200.290		73	-16.170	0.700	186.753	187.140		74	-16.180	0.700	175.670	175.320
	73	-16.170	0.702	211.471	211.210		74	-16.170	0.700	196.016	195.900		75	-16.180	0.699	185.401	185.620
	74	-16.170	0.702	221.199	220.710		75	-16.170	0.700	207.484	206.860		76	-16.180	0.699	194.480	194.590
	75	-16.170	0.701	231.677	231.710		76	-16.170	0.699	215.553	215.740		77	-16.180	0.698	204.296	204.910
	76	-16.170	0.701	241.600	241.440		77	-16.170	0.699	227.188	226.730		78	-16.180	0.698	213.576	214.020
	77	-16.170	0.700	252.143	252.240		78	-16.170	0.699	236.894	236.130		79	-16.180	0.698	224.983	224.370
	78	-16.170	0.700	262.252	262.250		79	-16.170	0.698	247.150	247.110		80	-16.180	0.698	234.503	233.690
	79	-16.170	0.699	272.848	273.450		80	-16.170	0.698	257.039	256.510		81	-16.180	0.697	244.503	244.150
	80	-16.170	0.699	283.133	283.570		81	-16.170	0.697	267.348	267.650		82	-16.180	0.697	254.205	253.770
28	18	-16.500	0.774	44.455	44.430	29	19	-16.540	0.750	44.953	44.700	30	21	-16.550	0.740	29.860	29.610
	19	-16.500	0.760	32.176	32.100		20	-16.540	0.750	30.426	29.920		22	-16.550	0.740	16.074	15.090
	20	-16.500	0.769	18.892	18.180		21	-16.540	0.750	20.085	19.600		23	-16.550	0.740	6.291	6.390
	21	-16.500	0.769	9.132	8.530		22	-16.540	0.750	6.849	6.400		24	-16.520	0.700	-6.012	-5.702
	22	-16.480	0.769	-2.549	-3.460		23	-16.510	0.720	-1.823	-1.880		25	-16.520	0.700	-14.250	-14.270
	23	-16.480	0.769	-11.065	-11.650		24	-16.510	0.720	-13.463	-13.140		26	-16.520	0.700	-25.266	-25.390
	24	-16.480	0.769	-22.417	-22.560		25	-16.510	0.720	-21.215	-21.240		27	-16.520	0.700	-32.578	-32.550
	25	-16.480	0.769	-29.746	-29.631		26	-16.510	0.720	-31.761	-31.635		28	-16.520	0.700	-42.600	-42.299
	26	-16.480	0.769	-39.835	-39.278		27	-16.510	0.720	-38.531	-38.630		29	-16.520	0.700	-46.659	-47.216
	27	-16.480	0.769	-46.020	-45.336		28	-16.510	0.720	-48.025	-47.309		30	-16.520	0.700	-53.418	-54.174
	28	-16.480	0.769	-54.895	-53.908		29	-16.510	0.720	-51.461	-51.668		31	-16.520	0.700	-55.945	-56.349
	29	-16.480	0.769	-56.681	-56.084		30	-16.510	0.720	-56.799	-56.358		32	-16.520	0.700	-61.125	-61.168
	30	-16.450	0.770	-59.421	-60.229		31	-16.510	0.790	-58.319	-58.345		33	-16.520	0.700	-62.951	-62.213
	31	-16.450	0.770	-60.257	-61.157		32	-16.510	0.790	-62.491	-61.984		34	-16.520	0.794	-65.953	-66.004
	32	-16.450	0.770	-63.727	-64.473		33	-16.510	0.790	-63.140	-62.788		35	-16.520	0.794	-66.388	-65.912
	33	-16.450	0.770	-63.679	-64.222		34	-16.510	0.790	-66.288	-65.580		36	-16.520	0.794	-69.224	-68.899
	34	-16.450	0.770	-66.208	-66.746		35	-16.510	0.790	-66.007	-65.424		37	-16.520	0.794	-68.740	-67.880
	35	-16.450	0.770	-65.312	-65.513		36	-16.510	0.790	-68.175	-67.264		38	-16.520	0.794	-70.612	-70.007
	36	-16.450	0.770	-66.939	-67.099		37	-16.510	0.790	-67.003	-66.258		39	-16.520	0.794	-69.247	-68.418
	37	-16.450	0.770	-65.231	-65.126		38	-16.510	0.790	-68.234	-67.320		40	-16.520	0.794	-70.197	-69.565
	38	-16.450	0.770	-65.996	-66.006		39	-16.510	0.790	-66.209	-65.567		41	-16.420	0.730	-67.271	-67.329
	39	-16.450	0.770	-63.509	-63.743		40	-16.510	0.790	-66.543	-65.736		42	-16.420	0.730	-68.357	-68.145
	40	-16.450	0.770	-63.449	-63.464		41	-16.510	0.790	-63.703	-62.976		43	-16.400	0.730	-64.979	-65.593
	41	-16.450	0.770	-60.217	-59.979		42	-16.510	0.790	-63.180	-62.711		44	-16.400	0.730	-65.359	-65.757
	42	-16.450	0.770	-59.368	-59.214		43	-16.510	0.790	-59.559	-59.783		45	-16.400	0.730	-62.805	-62.559
	43	-16.450	0.770	-55.424	-55.406		44	-16.510	0.790	-58.218	-58.987		46	-16.400	0.730	-62.529	-62.303
	44	-16.450	0.770	-53.820	-54.226		45	-16.440	0.751	-56.646	-56.006		47	-16.400	0.730	-59.384	-58.789
	45	-16.450	0.770	-49.195	-50.108		46	-16.440	0.751	-55.388	-54.470		48	-16.400	0.730	-58.480	-57.483
	46	-16.480	0.769	-49.347	-48.700		47	-16.440	0.751	-51.218	-50.982		49	-16.380	0.730	-53.189	-53.432
	47	-16.480	0.769	-44.127	-44.240		48	-16.440	0.751	-49.297	-48.863		50	-16.380	0.730	-51.663	-51.649

Columns under "Mass excess (MeV)" = Cal. and Ex./Th.

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
	48	-16.500	0.769	-42.689	-42.190		49	-16.440	0.751	-44.529	-44.789		51	-16.400	0.730	-46.634	-46.200
	49	-16.220	0.702	-37.141	-37.350		50	-16.440	0.751	-41.974	-42.408		52	-16.400	0.730	-42.214	-42.314
	50	-16.220	0.702	-35.175	-34.880		51	-16.470	0.751	-36.638	-36.679		53	-16.420	0.730	-36.802	-36.290
	51	-16.220	0.702	-28.038	-28.160		52	-16.240	0.700	-31.548	-31.910		54	-16.280	0.700	-31.898	-31.830
	52	-16.220	0.702	-23.195	-23.240		53	-16.260	0.700	-26.292	-25.730		55	-16.280	0.700	-25.169	-25.100
	53	-16.220	0.702	-15.693	-16.090		54	-16.240	0.700	-19.984	-20.390		56	-16.280	0.700	-20.606	-20.062
	54	-16.220	0.702	-10.446	-10.720		55	-16.240	0.700	-12.727	-13.720		**57**	-16.260	0.700	-11.777	**-12.230**
	55	-16.220	0.702	-2.593	**-2.350**		**56**	-16.230	0.700	-6.812	**-6.890**		**58**	-16.260	0.700	-6.802	**-7.160**
	56	-16.210	0.702	3.882	**3.520**		**57**	-16.230	0.700	0.803	**0.710**		**59**	-16.260	0.700	0.652	**0.650**
	57	-16.210	0.702	12.084	**12.220**		**58**	-16.230	0.700	6.260	**6.550**		**60**	-16.260	0.700	6.006	**6.150**
	58	-16.210	0.702	18.103	**18.190**		**59**	-16.230	0.700	14.210	**14.760**		**61**	-16.260	0.700	13.793	**13.760**
	59	-16.210	0.702	26.631	**27.500**		**60**	-16.230	0.700	20.036	**21.000**		**62**	-16.260	0.700	19.511	**19.470**
	60	-16.210	0.702	33.010	**33.870**		**61**	-16.230	0.700	28.308	**28.980**		**63**	-16.260	0.700	27.619	**27.690**
	61	-16.190	0.700	42.243	**42.470**		**62**	-16.230	0.700	34.488	**35.170**		**64**	-16.260	0.700	33.688	**34.010**
	62	-16.190	0.700	48.915	**49.050**		**63**	-16.230	0.700	43.071	**43.450**		**65**	-16.260	0.700	42.105	**42.540**
	63	-16.190	0.700	58.003	**57.600**		**64**	-16.230	0.700	49.592	**50.360**		**66**	-16.260	0.700	48.512	**49.030**
	64	-16.190	0.700	65.005	**64.550**		**65**	-16.230	0.700	58.474	**59.120**		**67**	-16.260	0.700	57.227	**57.750**
	65	-16.190	0.700	74.382	**73.990**		**66**	-16.230	0.700	65.324	**66.290**		**68**	-16.260	0.700	63.960	**64.440**
	66	-16.190	0.700	81.704	**81.330**		**67**	-16.230	0.700	74.494	**75.170**		**69**	-16.260	0.700	72.962	**73.290**
	67	-16.190	0.700	91.358	**90.910**		**68**	-16.230	0.700	81.661	**82.580**		**70**	-16.260	0.700	80.009	**80.490**
	68	-16.190	0.700	98.987	**98.330**		**69**	-16.230	0.700	91.110	**91.750**		**71**	-16.260	0.700	89.289	**89.940**
	69	-16.190	0.700	108.910	**108.150**		**70**	-16.230	0.700	98.583	**99.540**		**72**	-16.260	0.700	96.639	**97.370**
	70	-16.190	0.700	116.835	**115.990**		**71**	-16.230	0.700	108.299	**108.880**		**73**	-16.260	0.700	106.186	**107.180**
	71	-16.190	0.700	127.016	**126.200**		**72**	-16.210	0.700	118.087	**117.100**		**74**	-16.260	0.700	113.828	**114.610**
	72	-16.210	0.701	134.365	**134.420**		**73**	-16.230	0.700	126.042	**126.490**		**75**	-16.260	0.700	123.633	**124.150**
	73	-16.210	0.701	144.818	**144.610**		**74**	-16.230	0.700	134.095	**134.610**		**76**	-16.260	0.700	131.559	**131.580**
	74	-16.210	0.701	153.331	**152.670**		**75**	-16.230	0.700	144.320	**144.190**		**77**	-16.260	0.700	141.612	**141.150**
	75	-16.210	0.700	162.756	**162.930**		**76**	-16.230	0.700	152.647	**152.240**		**78**	-16.260	0.699	148.530	**149.030**
	76	-16.210	0.700	171.490	**171.210**		**77**	-16.230	0.699	161.816	**161.930**		**79**	-16.260	0.699	158.779	**158.630**
	77	-16.210	0.699	181.013	**181.460**		**78**	-16.230	0.699	170.363	**170.360**		**80**	-16.260	0.699	167.196	**166.550**
	78	-16.210	0.699	189.958	**189.920**		**79**	-16.230	0.698	179.628	**180.000**		**81**	-16.260	0.698	176.261	**176.100**
	79	-16.210	0.698	199.567	**200.080**		**80**	-16.230	0.698	188.384	**188.590**		**82**	-16.260	0.698	184.885	**184.320**
	80	-16.210	0.698	208.711	**208.730**		**81**	-16.230	0.697	197.735	**198.280**		**83**	-16.260	0.697	196.313	**195.990**
	81	-16.210	0.698	219.939	**219.080**		**82**	-16.230	0.697	206.690	**207.170**						
	82	-16.210	0.697	227.729	**228.010**		**83**	-16.230	0.696	218.406	**218.730**						
	83	-16.210	0.696	239.780	**240.270**												
31	**22**	-16.560	0.720	28.357	**27.990**	**32**	**23**	-16.580	0.720	27.655	**27.500**	**33**	**24**	-16.600	0.720	26.756	**26.130**
	23	-16.560	0.720	18.115	**17.520**		**24**	-16.580	0.720	14.010	**13.530**		**25**	-16.600	0.720	16.171	**15.560**
	24	-16.560	0.720	5.112	**4.660**		**25**	-16.580	0.720	4.139	**4.050**		**26**	-16.600	0.720	2.994	**2.950**
	25	-16.570	0.749	-3.650	-3.840		26	-16.580	0.749	-7.401	-7.580		27	-16.600	0.750	-5.556	-5.640
	26	-16.570	0.749	-15.835	-15.410		27	-16.580	0.749	-16.531	-16.370		28	-16.600	0.750	-17.924	-17.200
	27	-16.570	0.749	-24.260	-23.540		28	-16.580	0.749	-28.189	-27.530		29	-16.600	0.750	-24.413	-24.420
	28	-16.550	0.749	-34.080	-33.760		29	-16.580	0.749	-33.915	-33.790		30	-16.600	0.750	-33.380	-33.500
	29	-16.570	0.749	-40.271	-39.590		30	-16.580	0.749	-42.166	-42.140		31	-16.600	0.750	-38.896	-39.532
	30	-16.570	0.749	-47.853	-47.135		31	-16.580	0.749	-46.941	-46.921		32	-16.600	0.750	-46.839	-46.937
	31	-16.570	0.749	-51.928	-51.987		32	-16.580	0.749	-54.187	-54.316		33	-16.600	0.750	-51.419	-52.025
	32	-16.550	0.749	-56.442	-56.547		33	-16.580	0.749	-57.243	-56.478		34	-16.580	0.750	-56.248	-56.587
	33	-16.550	0.749	-58.794	-58.833		34	-16.570	0.795	-61.816	-61.607		35	-16.580	0.798	-58.926	-58.895
	34	-16.530	0.789	-61.963	-62.657		35	-16.550	0.795	-62.518	-62.674		36	-16.560	0.798	-62.564	-63.112
	35	-16.530	0.789	-63.212	-63.724		36	-16.550	0.795	-66.801	-66.979		37	-16.560	0.798	-64.302	-64.334
	36	-16.530	0.789	-66.828	-66.879		37	-16.550	0.795	-67.807	-67.101		38	-16.560	0.798	-68.278	-67.893
	37	-16.530	0.789	-67.154	-67.086		38	-16.550	0.795	-71.092	-70.562		39	-16.560	0.798	-69.074	-68.230
	38	-16.530	0.789	-69.805	-69.328		39	-16.540	0.795	-70.472	-69.907		40	-16.540	0.798	-70.611	-70.953
	39	-16.530	0.789	-69.248	-68.910		40	-16.550	0.795	-73.513	-72.586		41	-16.540	0.798	-70.486	-70.860
	40	-16.530	0.789	-70.976	-70.139		41	-16.530	0.795	-71.265	-71.298		42	-16.560	0.798	-74.027	-73.034
	41	-16.530	0.789	-69.572	-68.588		42	-16.550	0.795	-74.142	-73.422		43	-16.560	0.798	-73.058	-72.291
	42	-16.530	0.789	-70.417	-69.699		43	-16.550	0.795	-72.515	-71.857		44	-16.560	0.798	-74.223	-73.916
	43	-16.530	0.789	-68.204	-68.050		44	-16.550	0.795	-73.058	-73.213		45	-16.560	0.798	-72.427	-72.817
	44	-16.530	0.789	-68.203	-68.461		45	-16.550	0.795	-70.627	-71.213		46	-16.560	0.798	-72.734	-73.636
	45	-16.510	0.789	-66.736	-66.297		46	-16.430	0.719	-72.377	-71.862		47	-16.440	0.721	-71.961	-72.215
	46	-16.410	0.727	-65.910	-65.992		47	-16.410	0.719	-69.024	-69.527		48	-16.440	0.721	-72.877	-72.533
	47	-16.410	0.727	-63.416	-63.704		48	-16.410	0.719	-69.424	-69.535		49	-16.440	0.721	-71.049	-70.105
	48	-16.410	0.727	-63.135	-62.548		49	-16.410	0.719	-67.063	-66.292		50	-16.420	0.721	-69.688	-69.669
	49	-16.410	0.727	-60.069	-59.224		50	-16.390	0.719	-65.222	-65.415		51	-16.440	0.721	-66.642	-65.854
	50	-16.390	0.727	-57.560	-57.628		51	-16.410	0.719	-61.620	-60.976		52	-16.440	0.721	-64.068	-63.189
	51	-16.410	0.727	-53.209	-52.931		52	-16.410	0.719	-58.542	-58.148		53	-16.440	0.721	-58.896	-58.962
	52	-16.410	0.727	-49.420	-49.257		53	-16.410	0.719	-52.852	-53.123		54	-16.440	0.721	-55.825	-55.618
	53	-16.430	0.727	-44.676	-44.094		54	-16.410	0.719	-49.292	-49.400		55	-16.440	0.721	-50.206	-50.450
	54	-16.420	0.727	-39.572	-39.744		55	-16.410	0.719	-43.171	-43.590		56	-16.440	0.721	-46.656	-46.530
	55	-16.440	0.727	-34.444	-33.760		56	-16.410	0.719	-39.146	-39.520		57	-16.440	0.721	-40.605	-40.990
	56	-16.300	0.700	-28.726	-28.870		57	-16.410	0.719	-32.610	-33.040		58	-16.440	0.721	-36.595	-36.500
	57	-16.300	0.700	-22.153	-22.390		58	-16.320	0.701	-27.879	-28.470		59	-16.440	0.721	-30.130	-30.380
	58	-16.300	0.700	-17.686	**-16.860**		**59**	-16.320	0.701	-21.399	**-21.780**		**60**	-16.380	0.707	-26.563	**-26.050**
	59	-16.280	0.700	-8.955	**-9.700**		**60**	-16.320	0.701	-16.971	**-17.240**		**61**	-16.380	0.707	-20.072	**-19.790**

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
	60	-16.280	0.700	-4.079	**-4.470**		61	-16.320	0.701	-10.135	**-10.300**		62	-16.380	0.707	-15.576	**-15.010**
	61	-16.280	0.700	3.216	**2.610**		62	-16.320	0.701	-5.321	**-5.310**		63	-16.380	0.707	-8.723	**-8.220**
	62	-16.280	0.700	8.466	**8.320**		63	-16.320	0.701	1.857	**2.130**		64	-16.380	0.707	-3.837	**-3.050**
	63	-16.280	0.700	16.093	**15.910**		64	-16.320	0.701	7.042	**7.440**		65	-16.380	0.707	3.366	**3.800**
	64	-16.280	0.700	21.703	**21.880**		65	-16.320	0.701	14.551	**15.080**		66	-16.380	0.707	8.628	**9.270**
	65	-16.280	0.700	29.650	**29.730**		66	-16.320	0.701	20.094	**20.620**		67	-16.380	0.707	16.167	**16.180**
	66	-16.280	0.700	35.608	**36.010**		67	-16.320	0.701	27.922	**28.400**		68	-16.380	0.707	21.791	**22.010**
	67	-16.280	0.700	43.863	**43.900**		68	-16.320	0.701	33.809	**34.280**		69	-16.380	0.707	29.655	**29.440**
	68	-16.280	0.700	50.156	**50.540**		69	-16.320	0.701	41.944	**42.480**		70	-16.380	0.707	35.628	**35.720**
	69	-16.280	0.700	58.707	**58.820**		70	-16.320	0.701	48.165	**48.620**		71	-16.380	0.707	43.805	**43.520**
	70	-16.280	0.700	65.324	**65.770**		71	-16.320	0.701	56.596	**57.240**		72	-16.380	0.707	50.116	**50.190**
	71	-16.280	0.700	74.162	**74.460**		72	-16.320	0.701	63.137	**63.930**		73	-16.380	0.707	58.595	**58.630**
	72	-16.280	0.700	81.090	**81.710**		73	-16.300	0.701	73.955	**73.150**		74	-16.380	0.707	65.231	**65.390**
	73	-16.280	0.700	90.204	**90.900**		74	-16.300	0.701	80.826	**79.910**		75	-16.380	0.707	74.002	**73.790**
	74	-16.280	0.700	97.433	**98.380**		75	-16.300	0.701	89.839	**88.940**		76	-16.380	0.707	80.952	**80.880**
	75	-16.280	0.700	106.814	**107.430**		76	-16.300	0.701	97.010	**96.160**		77	-16.340	0.702	89.047	**89.300**
	76	-16.280	0.700	114.334	**114.940**		77	-16.320	0.701	104.109	**105.070**		78	-16.340	0.702	96.131	**96.140**
	77	-16.280	0.700	123.973	**123.880**		78	-16.320	0.701	111.549	**112.040**		79	-16.340	0.702	105.284	**104.490**
	78	-16.280	0.700	131.773	**131.510**		79	-16.320	0.701	121.066	**120.990**		80	-16.350	0.702	111.526	**111.590**
	79	-16.280	0.699	140.396	**140.540**		80	-16.320	0.701	128.785	**128.210**		81	-16.340	0.700	119.593	**119.930**
	80	-16.280	0.699	148.423	**148.280**		81	-16.320	0.700	137.256	**137.130**		82	-16.340	0.700	127.156	**127.340**
	81	-16.280	0.698	157.153	**157.260**		82	-16.320	0.700	145.201	**144.650**		83	-16.340	0.699	137.643	**137.810**
	82	-16.280	0.698	165.396	**165.430**		83	-16.320	0.699	156.030	**155.700**		84	-16.340	0.699	147.641	**147.270**
	83	-16.280	0.697	176.485	**176.460**		84	-16.320	0.698	164.987	**165.090**		85	-16.340	0.698	158.183	**157.900**
													86	-16.340	0.698	168.343	**167.520**
34	25	-16.600	0.701	25.537	**25.320**	35	26	-16.620	0.700	24.314	**24.010**	36	27	-16.640	0.702	23.166	**23.500**
	26	-16.600	0.701	12.039	**11.620**		27	-16.620	0.700	13.749	**13.890**		28	-16.640	0.702	9.525	**9.910**
	27	-16.600	0.701	2.113	**2.490**		28	-16.620	0.700	0.702	**1.100**		29	-16.640	0.702	1.516	**1.630**
	28	-16.600	0.701	-10.339	**-9.690**		29	-16.620	0.700	-6.664	**-6.870**		30	-16.640	0.702	-8.928	**-9.320**
	29	-16.600	0.701	-17.053	-16.850		30	-16.620	0.700	-16.508	-16.490		31	-16.640	0.702	-16.082	-15.552
	30	-16.600	0.701	-26.287	-26.860		31	-16.620	0.700	-23.040	-23.570		32	-16.640	0.702	-25.624	-25.626
	31	-16.600	0.700	-32.188	-33.020		32	-16.640	0.760	-32.829	-32.530		33	-16.630	0.652	-31.660	-32.140
	32	-16.620	0.700	-41.863	-41.660		33	-16.640	0.760	-38.842	-38.791		34	-16.630	0.652	-40.122	-41.100
	33	-16.600	0.700	-45.642	-46.580		34	-16.620	0.760	-45.762	-46.259		35	-16.630	0.652	-45.524	-46.327
	34	-16.620	0.700	-54.520	-54.189		35	-16.620	0.760	-50.795	-51.426		36	-16.630	0.652	-53.296	-53.941
	35	-16.600	0.700	-56.775	-56.435		36	-16.620	0.760	-57.299	-56.502		37	-16.630	0.652	-57.423	-56.552
	36	-16.600	0.700	-62.775	-61.930		37	-16.600	0.760	-59.208	-59.062		38	-16.610	0.652	-62.409	-62.332
	37	-16.570	0.797	-62.739	-63.147		38	-16.580	0.799	-62.966	-63.646		39	-16.610	0.799	-64.774	-64.324
	38	-16.570	0.797	-67.404	-67.868		39	-16.580	0.799	-65.188	-65.288		40	-16.590	0.799	-68.289	-69.014
	39	-16.570	0.797	-68.913	-68.227		40	-16.580	0.799	-69.540	-69.107		41	-16.590	0.799	-70.257	-70.169
	40	-16.570	0.797	-72.590	-72.213		41	-16.580	0.799	-70.827	-70.289		42	-16.590	0.799	-74.294	-74.178
	41	-16.550	0.797	-71.685	-72.169		42	-16.580	0.799	-74.214	-73.235		43	-16.590	0.799	-75.355	-74.442
	42	-16.570	0.797	-75.916	-75.252		43	-16.560	0.799	-73.046	-73.452		44	-16.590	0.799	-78.455	-77.893
	43	-16.550	0.797	-74.097	-74.599		44	-16.560	0.799	-75.488	-76.068		45	-16.590	0.799	-78.645	-77.696
	44	-16.570	0.797	-77.461	-77.026		45	-16.580	0.799	-76.603	-75.889		46	-16.590	0.799	-80.848	-80.592
	45	-16.570	0.797	-76.345	-75.917		46	-16.580	0.799	-78.179	-77.977		47	-16.590	0.799	-80.205	-79.991
	46	-16.570	0.797	-77.302	-77.759		47	-16.480	0.722	-77.025	-77.499		48	-16.590	0.799	-81.547	-82.439
	47	-16.460	0.721	-76.140	-76.389		48	-16.480	0.722	-78.987	-79.014		49	-16.490	0.719	-81.482	-81.480
	48	-16.460	0.721	-77.578	-77.594		49	-16.480	0.722	-78.238	-77.783		50	-16.490	0.719	-83.355	-83.266
	49	-16.460	0.721	-76.289	-75.341		50	-16.480	0.722	-79.561	-78.575		51	-16.490	0.719	-80.324	-80.710
	50	-16.440	0.721	-75.420	-75.948		51	-16.480	0.722	-75.945	-75.632		52	-16.490	0.719	-79.351	-79.691
	51	-16.460	0.721	-72.940	-72.414		52	-16.480	0.722	-74.408	-73.892		53	-16.490	0.719	-75.825	-76.536
	52	-16.460	0.721	-70.886	-70.503		53	-16.480	0.722	-70.301	-70.716		54	-16.490	0.719	-74.325	-74.959
	53	-16.460	0.721	-66.249	-66.426		54	-16.480	0.722	-68.242	-68.274		55	-16.490	0.719	-70.321	-70.974
	54	-16.460	0.721	-63.687	-63.884		55	-16.480	0.722	-63.662	-64.000		56	-16.490	0.719	-68.316	-68.769
	55	-16.460	0.721	-58.591	-58.992		56	-16.480	0.722	-61.102	-61.107		57	-16.490	0.719	-63.853	-64.136
	56	-16.460	0.721	-55.540	-55.800		57	-16.480	0.722	-56.067	-56.233		58	-16.490	0.719	-61.361	-61.348
	57	-16.460	0.721	-50.002	-50.580		58	-16.480	0.722	-53.024	-52.890		59	-16.490	0.719	-56.454	-56.159
	58	-16.460	0.721	-46.481	-46.724		59	-16.480	0.722	-47.552	-47.650		60	-16.490	0.719	-53.493	-53.082
	59	-16.460	0.721	-40.518	-40.860		60	-16.480	0.722	-44.044	-43.850		61	-16.490	0.719	-48.160	-47.423
	60	-16.460	0.721	-36.543	-36.803		61	-16.490	0.722	-39.109	-38.210		62	-16.490	0.719	-44.747	-44.120
	61	-16.370	0.701	-30.695	-30.460		62	-16.480	0.722	-34.193	-34.000		63	-16.490	0.719	-39.004	-38.400
	62	-16.370	0.701	-26.803	**-27.030**		63	-16.400	0.707	-27.251	-28.050		64	-16.490	0.719	-35.155	-34.470
	63	-16.370	0.701	-20.571	**-20.280**		64	-16.420	0.707	-25.229	**-24.780**		65	-16.420	0.706	-28.482	-28.580
	64	-16.370	0.701	-16.290	**-15.810**		65	-16.420	0.707	-18.953	**-18.690**		66	-16.440	0.706	-26.591	**-26.390**
	65	-16.370	0.701	-9.708	**-9.060**		66	-16.420	0.707	-14.578	**-14.300**		67	-16.440	0.706	-20.437	**-20.150**
	66	-16.370	0.701	-5.051	**-4.430**		67	-16.420	0.707	-7.947	**-7.910**		68	-16.440	0.706	-16.140	**-15.930**
	67	-16.370	0.701	1.867	**2.420**		68	-16.420	0.707	-3.193	**-3.120**		69	-16.440	0.706	-9.636	**-9.290**
	68	-16.370	0.701	6.886	**7.360**		69	-16.420	0.707	3.780	**3.530**		70	-16.440	0.706	-4.967	**-4.510**
	69	-16.370	0.701	14.130	**14.700**		70	-16.420	0.707	8.901	**8.950**		71	-16.440	0.706	1.874	**2.640**
	70	-16.370	0.701	19.498	**20.220**		71	-16.420	0.707	16.204	**16.110**		72	-16.430	0.706	7.982	**8.050**
	71	-16.360	0.701	28.105	**28.080**		72	-16.420	0.707	21.678	**22.200**		73	-16.420	0.706	16.249	**15.640**
	72	-16.350	0.701	34.880	**34.070**		73	-16.420	0.707	29.300	**29.710**		74	-16.440	0.709	21.858	**21.330**
	73	-16.350	0.701	42.760	**42.060**		74	-16.420	0.707	35.115	**36.020**		75	-16.440	0.709	29.451	**29.100**

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	74	-16.370	0.703	48.441	**48.530**		75	-16.380	0.703	43.894	**43.910**		76	-16.440	0.709	35.275	**34.680**
	75	-16.370	0.703	56.671	**57.080**		76	-16.370	0.703	51.033	**50.170**		77	-16.490	0.713	41.216	**42.100**
	76	-16.370	0.703	63.095	**63.500**		77	-16.390	0.704	57.877	**57.880**		78	-16.490	0.713	47.475	**47.810**
	77	-16.370	0.703	71.611	**72.140**		78	-16.390	0.704	64.249	**64.270**		79	-16.490	0.713	55.781	**55.740**
	78	-16.110	0.675	78.466	**78.360**		79	-16.400	0.704	71.533	**71.920**		80	-16.140	0.672	61.318	**61.410**
	79	-16.110	0.675	86.380	**86.640**		80	-16.400	0.704	78.199	**78.260**		81	-16.140	0.672	68.627	**68.750**
	80	-16.110	0.675	92.514	**93.150**		81	-16.390	0.702	85.795	**85.760**		82	-16.130	0.672	75.387	**74.630**
	81	-16.110	0.675	100.663	**101.380**		82	-16.400	0.702	91.512	**92.300**		83	-16.130	0.672	85.145	**84.580**
	82	-16.100	0.675	108.214	**108.100**		83	-16.380	0.700	102.539	**102.240**		84	-16.140	0.672	91.968	**92.690**
	83	-16.110	0.675	117.656	**118.530**		84	-16.380	0.700	111.820	**111.000**		85	-16.150	0.674	103.061	**103.020**
	84	-16.110	0.675	126.495	**127.340**		85	-16.400	0.700	120.639	**121.260**		86	-16.150	0.674	111.349	**111.590**
	85	-16.110	0.676	138.573	**138.120**		86	-16.400	0.700	130.124	**130.370**		87	-16.150	0.674	121.528	**121.940**
	86	-16.110	0.676	147.647	**147.190**		87	-16.400	0.699	140.141	**140.730**		88	-16.150	0.674	130.013	**130.520**
							88	-16.400	0.699	149.797	**149.990**						
37	29	-16.660	0.702	13.116	**13.050**	38	30	-16.680	0.702	10.831	**10.970**	39	31	-16.700	0.702	13.968	**13.590**
	30	-16.660	0.702	2.064	**1.920**		31	-16.680	0.702	2.448	**2.380**		32	-16.700	0.702	2.686	**2.530**
	31	-16.660	0.702	-5.724	**-6.140**		32	-16.680	0.702	-8.250	**-8.560**		33	-16.700	0.702	-5.457	**-5.530**
	32	-16.660	0.702	-15.862	**-16.130**		33	-16.680	0.702	-15.786	**-15.940**		34	-16.700	0.702	-15.838	**-15.810**
	33	-16.660	0.702	-22.814	**-23.340**		34	-16.680	0.702	-25.595	**-25.870**		35	-16.700	0.702	-23.154	**-23.060**
	34	-16.660	0.740	-31.763	-32.290		35	-16.670	0.735	-31.322	-31.950		36	-16.700	0.702	-32.671	-31.820
	35	-16.650	0.740	-37.352	-38.330		36	-16.670	0.735	-40.403	-40.827		37	-16.680	0.747	-37.500	-38.250
	36	-16.650	0.740	-45.859	-46.012		37	-16.670	0.735	-46.419	-46.619		38	-16.680	0.747	-46.285	-46.439
	37	-16.650	0.740	-51.273	-51.916		38	-16.670	0.735	-54.584	-54.248		39	-16.680	0.747	-52.077	-52.173
	38	-16.650	0.740	-58.128	-57.219		39	-16.650	0.735	-57.499	-57.803		40	-16.660	0.747	-57.642	-57.803
	39	-16.630	0.740	-60.452	-60.479		40	-16.630	0.742	-62.474	-63.174		41	-16.660	0.805	-61.624	-61.148
	40	-16.620	0.799	-65.173	-64.831		41	-16.630	0.742	-66.071	-65.480		42	-16.640	0.805	-66.025	-65.713
	41	-16.600	0.799	-66.302	-66.935		42	-16.610	0.742	-70.154	-70.311		43	-16.620	0.805	-67.454	-68.064
	42	-16.600	0.799	-71.009	-70.803		43	-16.600	0.748	-72.024	-71.528		44	-16.590	0.730	-71.468	-72.206
	43	-16.600	0.799	-72.756	-72.175		44	-16.580	0.748	-75.184	-76.010		45	-16.590	0.730	-74.169	-73.894
	44	-16.580	0.799	-74.893	-75.457		45	-16.580	0.748	-77.154	-76.798		46	-16.570	0.730	-77.186	-77.842
	45	-16.580	0.799	-75.737	-76.188		46	-16.580	0.748	-81.145	-80.650		47	-16.570	0.730	-79.171	-79.283
	46	-16.580	0.799	-78.565	-79.071		47	-16.560	0.748	-80.685	-81.103		48	-16.570	0.730	-83.144	-83.018
	47	-16.600	0.799	-80.242	-79.759		48	-16.560	0.748	-83.900	-84.523		49	-16.570	0.730	-84.460	-84.299
	48	-16.600	0.799	-82.217	-82.167		49	-16.560	0.748	-84.421	-84.880		50	-16.570	0.730	-87.740	-87.711
	49	-16.510	0.720	-81.970	-82.747		50	-16.580	0.748	-88.670	-87.922		51	-16.570	0.730	-86.199	-86.497
	50	-16.510	0.720	-84.348	-84.598		51	-16.580	0.748	-86.308	-86.209		52	-16.570	0.730	-86.630	-86.351
	51	-16.510	0.720	-81.855	-82.609		52	-16.580	0.748	-85.923	-85.951		53	-16.570	0.730	-84.537	-84.816
	52	-16.510	0.720	-81.392	-81.712		53	-16.580	0.748	-82.982	-83.652		54	-16.570	0.730	-84.389	-84.227
	53	-16.510	0.720	-78.388	-79.366		54	-16.580	0.748	-81.990	-82.867		55	-16.570	0.730	-81.764	-82.351
	54	-16.510	0.720	-77.387	-77.745		55	-16.570	0.734	-80.258	-80.086		56	-16.570	0.730	-81.059	-81.208
	55	-16.510	0.720	-73.893	-74.772		56	-16.570	0.734	-78.972	-78.846		57	-16.570	0.730	-77.922	-78.330
	56	-16.510	0.720	-72.373	-72.620		57	-16.570	0.734	-75.240	-75.117		58	-16.570	0.730	-76.680	-76.115
	57	-16.510	0.720	-68.406	-68.563		58	-16.570	0.734	-73.420	-72.918		59	-16.570	0.730	-73.050	-72.289
	58	-16.510	0.720	-66.388	-65.890		59	-16.570	0.734	-69.197	-68.581		60	-16.570	0.730	-71.291	-70.644
	59	-16.510	0.720	-61.966	-61.354		60	-16.570	0.734	-66.863	-66.422		61	-16.570	0.730	-67.186	-67.321
	60	-16.510	0.720	-59.467	-58.519		61	-16.570	0.734	-62.167	-62.519		62	-16.570	0.730	-64.929	-65.055
	61	-16.510	0.720	-54.608	-54.369		62	-16.570	0.734	-59.337	-59.818		63	-16.570	0.730	-60.366	-61.173
	62	-16.510	0.720	-51.646	-51.121		63	-16.590	0.734	-56.207	-55.325		64	-16.570	0.730	-57.629	-58.457
	63	-16.510	0.720	-46.364	-46.266		64	-16.610	0.742	-51.626	-52.160		65	-16.590	0.730	-54.705	-54.080
	64	-16.510	0.720	-42.956	-42.567		65	-16.630	0.742	-47.902	-47.280		66	-16.590	0.730	-51.525	-50.570
	65	-16.510	0.720	-37.267	-37.250		66	-16.630	0.742	-43.952	-43.760		67	-16.590	0.730	-46.115	-45.790
	66	-16.430	0.705	-32.632	-33.160		67	-16.630	0.742	-37.753	-38.190		68	-16.590	0.730	-42.488	-41.970
	67	-16.430	0.705	-26.934	-27.450		68	-16.450	0.705	-33.813	-34.300		69	-16.590	0.730	-36.667	-36.780
	68	-16.450	0.705	-25.177	**-24.910**		69	-16.450	0.705	-28.190	**-28.250**		70	-16.480	0.708	-32.713	**-32.480**
	69	-16.450	0.705	-19.143	**-18.950**		70	-16.470	0.705	-26.526	**-26.030**		71	-16.490	0.708	-28.189	**-28.060**
	70	-16.450	0.705	-14.926	**-14.180**		71	-16.460	0.705	-19.481	**-19.420**		72	-16.510	0.712	-24.127	**-23.420**
	71	-16.450	0.705	-8.548	**-7.620**		72	-16.470	0.708	-14.461	**-14.680**		73	-16.500	0.712	-16.929	**-16.930**
	72	-16.430	0.705	-1.786	**-2.240**		73	-16.470	0.708	-8.064	**-7.750**		74	-16.490	0.712	-11.448	**-12.120**
	73	-16.450	0.708	4.911	**4.950**		74	-16.470	0.708	-3.424	**-2.690**		75	-16.490	0.712	-5.005	**-6.000**
	74	-16.450	0.708	9.953	**10.540**		75	-16.470	0.708	3.305	**3.840**		76	-16.500	0.712	-1.429	**-1.450**
	75	-16.450	0.708	17.093	**17.430**		76	-16.470	0.708	8.297	**8.780**		77	-16.510	0.712	4.177	**4.590**
	76	-16.450	0.708	22.480	**22.790**		77	-16.470	0.708	15.347	**15.420**		78	-16.510	0.712	9.235	**9.550**
	77	-16.450	0.708	29.934	**29.560**		78	-16.470	0.708	20.680	**20.450**		79	-16.510	0.712	16.315	**15.930**
	78	-16.450	0.708	35.655	**35.290**		79	-16.470	0.708	28.040	**27.440**		80	-16.510	0.712	21.714	**21.060**
	79	-16.170	0.672	42.669	**42.550**		80	-16.210	0.673	32.441	**32.670**		81	-16.500	0.708	26.597	**27.130**
	80	-16.170	0.672	47.613	**48.110**		81	-16.210	0.673	39.033	**39.350**		82	-16.220	0.672	32.265	**32.140**
	81	-16.170	0.672	54.544	**54.820**		82	-16.210	0.673	43.925	**44.470**		83	-16.220	0.672	40.883	**40.960**
	82	-16.170	0.672	59.760	**60.630**		83	-16.210	0.673	52.944	**53.850**		84	-16.220	0.672	47.811	**48.410**
	83	-16.170	0.672	69.123	**69.970**		84	-16.200	0.673	61.479	**61.340**		85	-16.220	0.672	56.631	**57.580**
	84	-16.160	0.672	77.977	**78.110**		85	-16.200	0.673	70.704	**71.030**		86	-16.210	0.672	65.030	**65.460**
	85	-16.160	0.672	87.539	**87.770**		86	-16.210	0.674	78.125	**79.000**		87	-16.220	0.674	75.011	**74.720**
	86	-16.160	0.672	95.401	**96.330**		87	-16.200	0.674	88.821	**88.860**		88	-16.220	0.674	82.453	**82.680**
	87	-16.170	0.674	106.334	**106.150**		88	-16.190	0.674	97.870	**96.880**		89	-16.220	0.674	91.740	**92.020**
	88	-16.170	0.674	114.471	**114.730**		89	-16.190	0.674	107.522	**106.810**		90	-16.220	0.674	99.392	**100.190**

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Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
	89	-16.170	0.674	124.468	**124.620**		90	-16.190	0.674	115.525	**115.020**		91	-16.220	0.674	108.866	**109.750**
	90	-16.170	0.674	132.802	**133.330**		91	-16.190	0.674	125.358	**125.840**		92	-16.210	0.674	118.032	**118.140**
	91	-16.160	0.674	144.253	**144.020**		92	-16.190	0.674	133.559	**133.480**		93	-16.220	0.674	126.377	**127.290**
							93	-16.190	0.674	143.566	**143.260**		94	-16.210	0.674	135.760	**135.460**
													95	-16.220	0.674	144.261	**144.950**
40	32	-16.720	0.702	11.513	**11.180**	41	33	-16.750	0.708	13.831	**14.240**	42	35	-16.740	0.711	4.564	**3.680**
	33	-16.720	0.702	2.797	**2.850**		34	-16.730	0.708	3.769	**3.220**		36	-16.740	0.711	-6.626	**-7.130**
	34	-16.720	0.702	-8.125	**-8.030**		35	-16.730	0.708	-4.741	**-4.930**		37	-16.740	0.711	-14.867	**-14.890**
	35	-16.720	0.702	-16.003	**-15.440**		36	-16.730	0.708	-15.381	**-15.330**		38	-16.740	0.711	-25.173	**-24.990**
	36	-16.720	0.702	-26.052	**-25.750**		37	-16.730	0.708	-23.056	**-22.790**		39	-16.720	0.711	-30.974	-31.460
	37	-16.700	0.702	-31.585	-31.600		38	-16.710	0.708	-31.250	-31.650		40	-16.710	0.711	-39.591	-40.370
	38	-16.700	0.760	-40.554	-40.850		39	-16.710	0.708	-38.104	-38.420		41	-16.720	0.748	-46.983	-46.340
	39	-16.700	0.760	-46.985	-46.770		40	-16.700	0.747	-46.170	-46.360		42	-16.700	0.748	-53.967	-54.170
	40	-16.700	0.760	-55.437	-54.760		41	-16.700	0.747	-52.290	-51.810		43	-16.690	0.748	-58.262	-57.510
	41	-16.660	0.747	-57.020	-57.524		42	-16.680	0.747	-58.041	-57.613		44	-16.670	0.748	-63.620	-64.111
	42	-16.660	0.747	-63.826	-63.614		43	-16.670	0.746	-61.776	-61.194		45	-16.660	0.788	-66.759	-66.885
	43	-16.640	0.805	-65.679	-65.912		44	-16.650	0.746	-66.601	-66.280		46	-16.660	0.788	-72.770	-72.687
	44	-16.640	0.805	-71.311	-71.422		45	-16.640	0.794	-68.881	-69.134		47	-16.640	0.788	-74.262	-75.015
	45	-16.640	0.805	-74.091	-73.175		46	-16.640	0.794	-74.255	-73.874		48	-16.660	0.788	-81.157	-80.173
	46	-16.640	0.805	-78.763	-77.969		47	-16.640	0.794	-76.866	-76.172		49	-16.640	0.788	-81.768	-82.209
	47	-16.590	0.730	-79.077	-79.347		48	-16.640	0.794	-81.338	-80.626		50	-16.640	0.788	-86.002	-86.809
	48	-16.590	0.730	-83.566	-83.629		49	-16.640	0.794	-83.103	-82.662		51	-16.660	0.788	-87.300	-86.807
	49	-16.590	0.730	-85.413	-84.878		50	-16.640	0.794	-86.708	-86.638		52	-16.660	0.788	-88.591	-88.414
	50	-16.590	0.730	-89.199	-88.773		51	-16.640	0.794	-85.479	-86.453		53	-16.660	0.788	-87.333	-87.712
	51	-16.590	0.730	-88.197	-87.896		52	-16.590	0.728	-87.021	-87.213		54	-16.660	0.788	-87.889	-88.795
	52	-16.590	0.730	-89.141	-88.459		53	-16.590	0.728	-86.007	-86.369		55	-16.600	0.728	-86.919	-87.545
	53	-16.590	0.730	-87.576	-87.122		54	-16.590	0.728	-86.893	-86.786		56	-16.600	0.728	-87.711	-88.116
	54	-16.590	0.730	-87.932	-87.269		55	-16.590	0.728	-85.330	-85.603		57	-16.600	0.728	-86.111	-85.970
	55	-16.590	0.730	-85.825	-85.660		56	-16.590	0.728	-85.645	-85.603		58	-16.600	0.728	-86.344	-86.193
	56	-16.590	0.730	-85.615	-85.439		57	-16.590	0.728	-83.554	-83.525		59	-16.600	0.728	-84.226	-83.520
	57	-16.590	0.730	-82.986	-82.937		58	-16.590	0.728	-83.318	-82.335		60	-16.600	0.728	-83.920	-83.561
	58	-16.590	0.730	-82.230	-81.282		59	-16.590	0.728	-80.719	-79.791		61	-16.600	0.728	-81.303	-80.954
	59	-16.570	0.730	-77.119	-77.617		60	-16.570	0.728	-77.932	-78.891		62	-16.600	0.728	-80.478	-80.344
	60	-16.570	0.730	-75.818	-76.373		61	-16.590	0.728	-76.862	-76.298		63	-16.600	0.728	-77.380	-77.331
	61	-16.570	0.730	-72.182	-73.161		62	-16.590	0.728	-75.583	-75.029		64	-16.600	0.728	-76.053	-76.128
	62	-16.590	0.730	-72.415	-71.581		63	-16.590	0.728	-72.022	-71.811		65	-16.600	0.728	-72.491	-72.545
	63	-16.590	0.730	-68.332	-67.809		64	-16.590	0.728	-70.250	-69.916		66	-16.600	0.728	-70.680	-70.749
	64	-16.590	0.730	-66.056	-65.718		65	-16.590	0.728	-66.232	-66.203		67	-16.600	0.728	-66.671	-66.659
	65	-16.590	0.730	-61.524	-61.458		66	-16.650	0.746	-63.693	-63.724		68	-16.680	0.748	-65.277	-64.536
	66	-16.590	0.730	-58.777	-58.750		67	-16.650	0.746	-58.801	-59.545		69	-16.670	0.748	-59.246	-59.940
	67	-16.660	0.747	-53.907	-54.020		68	-16.660	0.746	-56.735	-56.690		70	-16.690	0.748	-58.252	-57.480
	68	-16.660	0.747	-50.275	-50.950		69	-16.670	0.746	-52.500	-52.310		71	-16.690	0.748	-52.892	-52.650
	69	-16.680	0.747	-46.626	-45.730		70	-16.680	0.747	-49.508	-48.960		72	-16.700	0.748	-50.352	-49.680
	70	-16.680	0.747	-42.549	-42.220		71	-16.680	0.747	-43.726	-44.070		73	-16.700	0.748	-44.569	-44.550
	71	-16.490	0.708	-36.636	-36.480		72	-16.680	0.747	-39.640	-40.210		74	-16.520	0.709	-41.719	-41.210
	72	-16.490	0.708	-33.168	-32.420		73	-16.490	0.708	-34.164	-34.960		75	-16.520	0.709	-36.589	-35.689
	73	-16.510	0.714	-26.257	-26.340		74	-16.490	0.708	-30.709	-30.880		76	-16.510	0.709	-31.951	-32.370
	74	-16.530	0.714	-24.515	**-23.940**		75	-16.490	0.708	-25.192	-25.230		77	-16.510	0.709	-26.459	-26.580
	75	-16.530	0.714	-18.438	**-18.290**		76	-16.510	0.708	-23.705	**-23.050**		78	-16.530	0.709	-25.023	**-24.680**
	76	-16.530	0.714	-14.062	**-14.030**		77	-16.510	0.708	-17.866	**-17.280**		79	-16.530	0.709	-19.212	**-19.140**
	77	-16.530	0.714	-7.642	**-8.020**		78	-16.510	0.708	-13.697	**-12.960**		80	-16.530	0.709	-15.039	**-15.380**
	78	-16.490	0.708	-2.805	**-3.560**		79	-16.510	0.708	-7.527	**-7.250**		81	-16.520	0.705	-10.803	**-10.090**
	79	-16.500	0.708	2.582	**2.630**		80	-16.510	0.708	-3.009	**-2.780**		82	-16.520	0.705	-6.418	**-6.420**
	80	-16.510	0.708	6.280	**7.190**		81	-16.500	0.705	2.219	**2.550**		83	-16.530	0.705	0.784	**1.770**
	81	-16.510	0.708	13.151	**13.180**		82	-16.500	0.705	6.975	**6.870**		84	-16.520	0.705	8.856	**8.020**
	82	-16.530	0.709	16.845	**17.560**		83	-16.510	0.705	14.576	**15.120**		85	-16.530	0.705	16.296	**16.540**
	83	-16.530	0.709	26.190	**26.340**		84	-16.510	0.705	21.763	**21.900**		86	-16.530	0.705	23.383	**23.260**
	84	-16.520	0.707	33.138	**33.210**		85	-16.510	0.704	29.871	**30.470**		87	-16.530	0.705	32.333	**32.040**
	85	-16.530	0.707	41.413	**42.370**		86	-16.510	0.704	37.289	**37.760**		88	-16.530	0.705	39.687	**38.940**
	86	-16.530	0.707	49.289	**49.690**		87	-16.510	0.704	46.577	**46.500**		89	-16.540	0.705	47.571	**47.710**
	87	-16.530	0.707	59.044	**59.000**		88	-16.260	0.674	54.443	**53.910**		90	-16.280	0.674	55.492	**54.790**
	88	-16.240	0.674	67.240	**66.370**		89	-16.260	0.674	63.033	**62.690**		91	-16.280	0.674	63.944	**63.930**
	89	-16.240	0.674	76.184	**75.680**		90	-16.260	0.674	70.014	**70.210**		92	-16.280	0.674	70.814	**70.860**
	90	-16.240	0.674	83.505	**83.290**		91	-16.260	0.674	78.802	**79.430**		93	-16.280	0.674	79.464	**79.600**
	91	-16.240	0.674	92.640	**93.000**		92	-16.260	0.674	85.998	**86.790**		94	-16.280	0.674	86.549	**86.670**
	92	-16.240	0.674	100.171	**100.730**		93	-16.260	0.674	94.979	**95.520**		95	-16.280	0.674	95.391	**95.720**
	93	-16.240	0.674	109.493	**109.960**		94	-16.260	0.674	102.383	**103.040**		96	-16.280	0.674	102.683	**103.110**
	94	-16.240	0.674	117.227	**117.600**		95	-16.260	0.674	111.552	**111.990**		97	-16.280	0.674	111.713	**112.160**
	95	-16.240	0.674	126.731	**127.130**		96	-16.260	0.674	119.159	**119.950**		98	-16.280	0.674	119.208	**119.570**
	96	-16.240	0.674	134.663	**134.970**		97	-16.260	0.674	128.509	**129.030**		99	-16.280	0.674	128.419	**128.750**
	97	-16.240	0.674	144.343	**144.600**		98	-16.260	0.674	136.314	**137.030**		100	-16.280	0.674	136.111	**136.410**
							99	-16.260	0.674	145.841	**146.280**		101	-16.280	0.674	145.499	**145.860**
													102	-16.280	0.674	153.382	**153.710**
43	36	-16.770	0.704	3.361	**3.860**	44	37	-16.770	0.704	4.732	**4.440**	45	38	-16.780	0.674	4.248	**4.700**

Mass excess (MeV)

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
	37	-16.750	0.704	-3.797	**-4.240**		38	-16.770	0.704	-6.562	**-6.540**		39	-16.760	0.674	-2.793	**-3.530**
	38	-16.750	0.704	-14.582	**-14.470**		39	-16.750	0.709	-13.264	**-14.010**		40	-16.760	0.674	-13.502	**-13.970**
	39	-16.730	0.709	-20.808	**-21.760**		40	-16.750	0.709	-23.724	**-24.100**		41	-16.760	0.674	-21.490	**-21.400**
	40	-16.730	0.709	-30.761	-31.320		41	-16.730	0.709	-29.699	**-30.630**		42	-16.740	0.674	-29.719	**-30.610**
	41	-16.730	0.709	-37.911	-37.700		42	-16.730	0.709	-39.313	**-39.770**		43	-16.740	0.674	-37.002	-36.860
	42	-16.710	0.755	-45.293	-45.850		43	-16.730	0.748	-46.156	-45.730		44	-16.740	0.700	-46.212	-45.651
	43	-16.710	0.755	-51.715	-51.570		44	-16.730	0.748	-55.019	-54.340		45	-16.720	0.700	-51.063	-51.634
	44	-16.700	0.748	-58.490	-57.690		45	-16.710	0.747	-58.714	-58.369		46	-16.720	0.746	-58.929	-58.570
	45	-16.680	0.748	-61.635	-61.670		46	-16.690	0.747	-64.240	-64.884		47	-16.700	0.746	-62.312	-62.999
	46	-16.680	0.787	-68.121	-67.395		47	-16.680	0.788	-67.675	-68.240		48	-16.690	0.787	-68.114	-69.012
	47	-16.660	0.787	-70.225	-70.725		48	-16.680	0.788	-73.954	-74.301		49	-16.690	0.787	-72.339	-72.908
	48	-16.660	0.787	-75.930	-75.987		49	-16.680	0.788	-77.575	-77.217		50	-16.690	0.787	-78.320	-78.341
	49	-16.660	0.787	-78.965	-78.926		50	-16.680	0.788	-82.974	-82.584		51	-16.690	0.787	-79.589	-79.688
	50	-16.660	0.787	-83.801	-83.606		51	-16.680	0.788	-83.632	-83.458		52	-16.690	0.787	-82.625	-82.598
	51	-16.660	0.787	-83.870	-84.158		52	-16.680	0.788	-86.079	-86.080		53	-16.690	0.787	-83.149	-83.175
	52	-16.660	0.787	-85.751	-86.021		53	-16.680	0.788	-86.000	-86.121		54	-16.690	0.787	-85.421	-85.585
	53	-16.660	0.787	-85.096	-85.822		54	-16.680	0.788	-87.691	-88.225		55	-16.690	0.787	-85.227	-85.591
	54	-16.660	0.787	-86.233	-87.224		55	-16.680	0.788	-86.903	-87.625		56	-16.690	0.787	-86.764	-87.412
	55	-16.610	0.728	-85.656	-86.432		56	-16.700	0.788	-89.865	-89.227		57	-16.690	0.787	-85.879	-86.783
	56	-16.610	0.728	-86.940	-87.328		57	-16.630	0.728	-87.960	-87.958		58	-16.630	0.727	-87.048	-88.032
	57	-16.610	0.728	-85.843	-86.021		58	-16.620	0.728	-88.132	-89.106		59	-16.630	0.727	-86.404	-86.959
	58	-16.610	0.728	-86.559	-86.345		59	-16.620	0.728	-86.984	-87.267		60	-16.630	0.727	-87.516	-87.851
	59	-16.610	0.728	-84.935	-84.573		60	-16.620	0.728	-87.609	-88.096		61	-16.630	0.727	-86.349	-86.363
	60	-16.610	0.728	-85.103	-84.604		61	-16.620	0.728	-85.945	-85.935		62	-16.630	0.727	-86.918	-86.864
	61	-16.610	0.728	-82.971	-82.499		62	-16.620	0.728	-86.035	-86.323		63	-16.630	0.727	-85.247	-85.031
	62	-16.610	0.728	-82.612	-82.290		63	-16.620	0.728	-83.873	-83.863		64	-16.630	0.727	-85.293	-84.999
	63	-16.610	0.728	-79.990	-79.776		64	-16.620	0.728	-83.445	-83.661		65	-16.630	0.727	-83.135	-82.829
	64	-16.610	0.728	-79.121	-78.750		65	-16.620	0.728	-80.803	-80.738		66	-16.630	0.727	-82.676	-82.304
	65	-16.610	0.728	-76.027	-75.923		66	-16.620	0.728	-79.876	-80.073		67	-16.630	0.727	-80.048	-79.731
	66	-16.610	0.728	-74.666	-74.283		67	-16.620	0.728	-76.770	-76.785		68	-16.630	0.727	-79.101	-78.767
	67	-16.610	0.728	-71.115	-71.035		68	-16.620	0.728	-75.361	-75.631		69	-16.630	0.727	-76.019	-75.710
	68	-16.610	0.728	-69.280	-69.025		69	-16.620	0.728	-71.807	-71.868		70	-16.630	0.727	-74.601	-74.229
	69	-16.610	0.728	-65.289	-65.259		70	-16.620	0.728	-69.933	-70.221		71	-16.630	0.727	-71.080	-70.736
	70	-16.710	0.755	-62.940	-62.812		71	-16.620	0.728	-65.947	-66.105		72	-16.630	0.727	-69.207	-68.897
	71	-16.710	0.755	-57.853	-58.600		72	-16.700	0.747	-64.516	-64.069		73	-16.630	0.727	-65.262	-64.887
	72	-16.730	0.755	-56.723	-55.796		73	-16.700	0.747	-59.643	-59.490		74	-16.630	0.727	-62.949	-62.823
	73	-16.700	0.748	-51.331	-51.214		74	-16.710	0.747	-57.581	-57.000		75	-16.710	0.746	-58.819	-58.620
	74	-16.700	0.748	-47.641	-48.140		75	-16.720	0.748	-52.938	-52.080		76	-16.720	0.746	-56.800	-56.250
	75	-16.720	0.748	-44.239	-43.290		76	-16.730	0.748	-50.437	-49.720		77	-16.720	0.746	-51.556	-51.880
	76	-16.540	0.711	-40.676	-40.170		77	-16.560	0.712	-45.281	-44.620		78	-16.560	0.710	-49.058	-49.190
	77	-16.540	0.711	-35.543	-35.000		78	-16.560	0.712	-42.143	-41.780		79	-16.570	0.710	-45.626	-44.710
	78	-16.540	0.711	-32.049	-31.540		79	-16.560	0.712	-37.023	-36.550		80	-16.570	0.710	-42.559	-41.830
	79	-16.540	0.711	-26.567	-26.305		80	-16.550	0.710	-33.608	-33.590		81	-16.550	0.706	-37.660	-37.200
	80	-16.550	0.711	-23.937	**-24.020**		81	-16.550	0.710	-28.200	-28.370		82	-16.550	0.706	-34.340	-33.730
	81	-16.540	0.707	-19.855	**-19.350**		82	-16.560	0.707	-27.844	**-27.720**		83	-16.560	0.706	-28.289	-27.340
	82	-16.540	0.707	-15.781	**-15.740**		83	-16.560	0.707	-20.111	**-20.120**		84	-16.570	0.706	-23.846	**-23.250**
	83	-16.540	0.707	-7.658	**-8.150**		84	-16.570	0.707	-15.259	**-14.520**		85	-16.570	0.706	-16.256	**-15.800**
	84	-16.550	0.707	-2.420	**-1.950**		85	-16.570	0.707	-7.262	**-6.520**		86	-16.570	0.706	-9.767	**-9.760**
	85	-16.550	0.707	5.961	**6.020**		86	-16.570	0.707	-0.849	**-0.430**		87	-16.570	0.706	-2.376	**-2.110**
	86	-16.550	0.707	12.743	**12.680**		87	-16.570	0.707	7.414	**7.770**		88	-16.570	0.706	3.928	**4.170**
	87	-16.550	0.707	21.383	**20.920**		88	-16.570	0.707	14.107	**14.120**		89	-16.570	0.706	12.053	**12.180**
	88	-16.550	0.707	28.440	**27.780**		89	-16.570	0.707	22.629	**22.690**		90	-16.570	0.706	18.636	**18.380**
	89	-16.300	0.674	37.021	**36.140**		90	-16.570	0.707	29.596	**29.130**		91	-16.570	0.706	27.016	**26.490**
	90	-16.300	0.674	43.332	**43.280**		91	-16.320	0.674	37.913	**37.540**		92	-16.590	0.707	32.177	**32.850**
	91	-16.300	0.674	51.437	**51.470**		92	-16.320	0.674	44.125	**43.830**		93	-16.590	0.707	40.825	**40.470**
	92	-16.300	0.674	57.974	**58.240**		93	-16.320	0.674	52.104	**52.070**		94	-16.350	0.676	47.100	**46.880**
	93	-16.300	0.674	66.283	**66.510**		94	-16.320	0.674	58.541	**58.580**		95	-16.350	0.676	55.014	**54.900**
	94	-16.300	0.674	73.039	**73.560**		95	-16.320	0.674	66.723	**67.240**		96	-16.350	0.676	61.415	**61.630**
	95	-16.300	0.674	81.546	**82.150**		96	-16.320	0.674	73.378	**73.800**		97	-16.350	0.676	69.534	**69.750**
	96	-16.300	0.674	88.516	**89.420**		97	-16.320	0.674	81.757	**82.420**		98	-16.350	0.676	76.153	**76.650**
	97	-16.300	0.674	97.216	**98.010**		98	-16.320	0.674	88.625	**89.410**		99	-16.350	0.676	84.471	**84.820**
	98	-16.290	0.674	105.802	**105.410**		99	-16.320	0.674	97.196	**98.100**		100	-16.350	0.676	91.303	**91.920**
	99	-16.300	0.674	113.279	**114.090**		100	-16.320	0.674	104.270	**105.210**		101	-16.350	0.676	99.815	**100.360**
	100	-16.290	0.674	122.087	**121.690**		101	-16.320	0.674	113.029	**113.990**		102	-16.350	0.676	106.854	**107.690**
	101	-16.300	0.674	129.727	**130.660**		102	-16.310	0.674	121.763	**121.500**		103	-16.350	0.676	115.554	**116.420**
	102	-16.290	0.674	138.751	**138.550**		103	-16.310	0.674	130.713	**130.710**		104	-16.350	0.677	124.280	**124.000**
	103	-16.290	0.674	148.007	**147.760**		104	-16.330	0.676	138.311	**138.400**		105	-16.350	0.677	133.206	**133.090**
	104	-16.300	0.675	155.910	**155.860**		105	-16.330	0.676	147.505	**147.990**		106	-16.350	0.677	140.686	**140.900**
							106	-16.330	0.676	155.242	**155.890**		107	-16.350	0.677	149.791	**149.980**
													108	-16.350	0.677	157.463	**157.880**
46	40	-16.790	0.684	-6.125	**-5.800**	47	41	-16.790	0.684	-2.480	**-3.140**	48	42	-16.820	0.678	-6.234	**-5.820**
	41	-16.770	0.684	-12.930	**-13.370**		42	-16.790	0.684	-13.427	**-13.710**		43	-16.800	0.678	-13.150	**-13.360**
	42	-16.770	0.684	-23.398	**-23.400**		43	-16.790	0.690	-21.657	**-21.050**		44	-16.800	0.678	-23.748	**-23.940**
	43	-16.760	0.689	-30.280	**-29.930**		44	-16.770	0.690	-30.060	**-30.890**		45	-16.800	0.695	-31.661	**-30.820**

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	44	-16.760	0.689	-40.012	-39.710		45	-16.770	0.690	-37.661	-37.530		46	-16.780	0.695	-39.723	-40.440
	45	-16.760	0.710	-47.106	-46.170		46	-16.760	0.746	-46.138	-46.400		47	-16.770	0.745	-46.099	-47.056
	46	-16.740	0.710	-54.293	-54.779		47	-16.750	0.745	-52.160	-52.402		48	-16.770	0.745	-55.336	-55.572
	47	-16.730	0.746	-59.126	-58.982		48	-16.750	0.745	-60.251	-59.906		49	-16.770	0.745	-61.387	-60.734
	48	-16.730	0.746	-66.684	-66.102		49	-16.730	0.745	-63.859	-64.512		50	-16.760	0.786	-68.064	-67.636
	49	-16.710	0.780	-69.521	-69.966		50	-16.720	0.780	-69.916	-70.904		51	-16.740	0.786	-69.144	-69.931
	50	-16.710	0.780	-76.101	-76.183		51	-16.720	0.780	-72.403	-73.066		52	-16.740	0.786	-73.889	-74.195
	51	-16.710	0.780	-78.004	-77.806		52	-16.720	0.780	-76.624	-76.712		53	-16.740	0.786	-76.156	-75.837
	52	-16.710	0.780	-81.662	-81.321		53	-16.720	0.780	-78.364	-78.138		54	-16.740	0.786	-80.113	-79.660
	53	-16.710	0.780	-82.828	-82.183		54	-16.720	0.780	-81.819	-81.334		55	-16.740	0.786	-81.636	-80.652
	54	-16.710	0.780	-85.729	-85.213		55	-16.720	0.780	-82.838	-82.247		56	-16.740	0.786	-84.832	-83.968
	55	-16.710	0.780	-86.184	-85.432		56	-16.720	0.780	-85.555	-84.803		57	-16.720	0.786	-83.538	-84.334
	56	-16.710	0.780	-88.356	-87.903		57	-16.720	0.780	-85.879	-85.116		58	-16.740	0.786	-88.101	-87.132
	57	-16.710	0.780	-88.126	-87.457		58	-16.720	0.780	-87.885	-87.071		59	-16.720	0.786	-86.076	-86.990
	58	-16.710	0.780	-89.596	-89.395		59	-16.720	0.780	-87.539	-86.942		60	-16.740	0.786	-89.971	-89.252
	59	-16.710	0.780	-88.706	-88.418		60	-16.720	0.780	-88.859	-88.407		61	-16.740	0.786	-89.420	-88.504
	60	-16.710	0.780	-89.499	-89.908		61	-16.720	0.780	-87.868	-87.607		62	-16.740	0.786	-90.493	-90.348
	61	-16.710	0.780	-87.972	-88.373		62	-16.720	0.780	-88.526	-88.719		63	-16.740	0.786	-89.298	-89.252
	62	-16.640	0.727	-88.889	-89.524		63	-16.650	0.726	-87.595	-87.457		64	-16.660	0.725	-90.136	-90.575
	63	-16.640	0.727	-87.672	-87.606		64	-16.650	0.726	-88.545	-88.215		65	-16.660	0.725	-89.360	-89.043
	64	-16.640	0.727	-88.155	-88.331		65	-16.650	0.726	-87.309	-86.584		66	-16.660	0.725	-90.236	-90.015
	65	-16.640	0.727	-86.444	-85.986		66	-16.650	0.726	-87.741	-87.027		67	-16.660	0.725	-88.971	-88.084
	66	-16.640	0.727	-86.415	-86.321		67	-16.640	0.726	-84.883	-84.931		68	-16.660	0.725	-89.341	-88.712
	67	-16.640	0.727	-84.226	-83.591		68	-16.650	0.726	-85.954	-84.983		69	-16.650	0.725	-86.434	-86.418
	68	-16.640	0.727	-83.702	-83.490		69	-16.640	0.726	-82.609	-82.543		70	-16.660	0.725	-87.487	-86.702
	69	-16.640	0.727	-81.052	-80.426		70	-16.640	0.726	-82.047	-82.182		71	-16.650	0.725	-84.103	-83.977
	70	-16.640	0.727	-80.050	-79.831		71	-16.640	0.726	-79.400	-79.554		72	-16.660	0.725	-84.703	-83.957
	71	-16.640	0.727	-76.954	-76.424		72	-16.650	0.726	-79.561	-78.646		73	-16.660	0.725	-82.068	-81.074
	72	-16.640	0.727	-75.490	-75.388		73	-16.650	0.726	-76.487	-75.652		74	-16.660	0.725	-81.021	-80.612
	73	-16.640	0.727	-71.964	-71.407		74	-16.650	0.726	-75.016	-74.403		75	-16.660	0.725	-77.959	-77.414
	74	-16.640	0.727	-70.053	-70.280		75	-16.650	0.726	-71.521	-71.106		76	-16.660	0.725	-76.471	-76.699
	75	-16.640	0.727	-66.110	-66.182		76	-16.650	0.726	-69.612	-69.569		77	-16.660	0.725	-72.996	-73.348
	76	-16.730	0.746	-65.481	-64.616		77	-16.650	0.726	-65.709	-66.230		78	-16.670	0.725	-72.339	-72.256
	77	-16.730	0.746	-60.661	-60.430		78	-16.740	0.745	-64.921	-64.520		79	-16.670	0.725	-68.474	-68.741
	78	-16.730	0.746	-57.412	-58.400		79	-16.750	0.745	-61.401	-60.720		80	-16.760	0.745	-66.984	-67.238
	79	-16.590	0.711	-54.720	-53.960		80	-16.750	0.745	-58.176	-58.650		81	-16.770	0.745	-63.503	-63.122
	80	-16.570	0.707	-51.834	-51.790		81	-16.770	0.746	-54.946	-54.710		82	-16.770	0.745	-60.259	-61.118
	81	-16.570	0.707	-47.282	-47.220		82	-16.780	0.746	-52.575	-51.870		83	-16.670	0.720	-55.573	-55.212
	82	-16.570	0.707	-44.299	-44.390		83	-16.780	0.746	-44.923	-45.898		84	-16.670	0.720	-50.578	-50.465
	83	-16.580	0.707	-38.612	-37.880		84	-16.580	0.705	-40.976	-40.750		85	-16.600	0.705	-44.502	-44.140
	84	-16.580	0.707	-33.320	-32.730		85	-16.580	0.705	-34.158	-34.400		86	-16.600	0.705	-39.957	-39.460
	85	-16.580	0.707	-25.966	-25.740		86	-16.580	0.705	-28.887	-29.080		87	-16.600	0.705	-32.868	-32.820
	86	-16.590	0.707	-21.592	**-21.550**		**87**	-16.590	0.705	-23.127	**-22.630**		**88**	-16.610	0.705	-29.020	**-28.110**
	87	-16.590	0.707	-14.069	**-13.930**		**88**	-16.590	0.705	-17.569	**-16.930**		**89**	-16.580	0.702	-20.301	**-20.740**
	88	-16.590	0.707	-8.091	**-8.160**		**89**	-16.590	0.705	-10.204	**-9.480**		**90**	-16.580	0.702	-14.883	**-15.300**
	89	-16.590	0.707	-0.299	**-0.110**		**90**	-16.590	0.705	-4.359	**-3.790**		**91**	-16.580	0.702	-7.688	**-7.860**
	90	-16.590	0.707	5.964	**5.590**		**91**	-16.590	0.705	3.272	**3.630**		**92**	-16.580	0.702	-1.988	**-2.530**
	91	-16.590	0.707	14.019	**13.670**		**92**	-16.590	0.705	9.398	**9.690**		**93**	-16.600	0.705	5.462	**5.280**
	92	-16.590	0.705	18.560	**19.540**		**93**	-16.590	0.705	17.287	**17.150**		**94**	-16.610	0.705	10.106	**10.820**
	93	-16.590	0.705	26.793	**27.560**		**94**	-16.570	0.701	22.417	**23.300**		**95**	-16.610	0.705	17.897	**18.170**
	94	-16.590	0.705	33.524	**33.300**		**95**	-16.570	0.701	30.424	**30.490**		**96**	-16.610	0.705	24.221	**23.850**
	95	-16.400	0.680	41.444	**41.220**		**96**	-16.390	0.677	36.836	**36.630**		**97**	-16.390	0.674	31.079	**31.380**
	96	-16.400	0.680	47.651	**47.510**		**97**	-16.390	0.677	44.343	**44.200**		**98**	-16.390	0.674	36.704	**37.250**
	97	-16.400	0.680	55.574	**55.610**		**98**	-16.390	0.677	50.371	**50.570**		**99**	-16.390	0.674	44.010	**44.830**
	98	-16.400	0.680	62.009	**62.000**		**99**	-16.390	0.677	58.087	**58.120**		**100**	-16.380	0.674	51.341	**51.030**
	99	-16.400	0.680	70.138	**70.020**		**100**	-16.390	0.677	64.339	**64.820**		**101**	-16.410	0.678	59.188	**58.970**
	100	-16.400	0.680	76.795	**76.650**		**101**	-16.390	0.677	72.259	**72.800**		**102**	-16.410	0.678	65.394	**65.290**
	101	-16.400	0.680	85.126	**85.250**		**102**	-16.340	0.672	79.740	**79.610**		**103**	-16.410	0.678	73.245	**73.480**
	102	-16.400	0.680	91.998	**92.080**		**103**	-16.340	0.672	87.707	**87.890**		**104**	-16.410	0.678	79.668	**80.140**
	103	-16.400	0.680	100.526	**100.760**		**104**	-16.340	0.672	94.233	**94.910**		**105**	-16.410	0.678	87.717	**88.570**
	104	-16.400	0.680	107.607	**107.950**		**105**	-16.330	0.672	103.909	**103.440**		**106**	-16.390	0.677	96.029	**95.440**
	105	-16.400	0.680	116.326	**116.910**		**106**	-16.390	0.679	111.642	**110.670**		**107**	-16.390	0.677	104.250	**103.960**
	106	-16.350	0.676	125.148	**124.250**		**107**	-16.390	0.679	120.226	**119.400**		**108**	-16.390	0.677	111.067	**110.980**
	107	-16.350	0.676	133.931	**133.360**		**108**	-16.390	0.679	127.397	**126.710**		**109**	-16.390	0.677	119.475	**119.660**
	108	-16.350	0.676	141.290	**140.790**		**109**	-16.390	0.679	136.167	**135.360**		**110**	-16.390	0.677	126.491	**126.630**
	109	-16.350	0.676	150.252	**150.000**		**110**	-16.390	0.679	143.535	**143.000**		**111**	-16.390	0.677	135.082	**135.540**
	110	-16.350	0.676	157.801	**157.600**		**111**	-16.390	0.679	152.484	**151.680**		**112**	-16.390	0.677	142.292	**142.630**
							112	-16.390	0.679	160.043	**159.450**		**113**	-16.390	0.677	151.060	**151.740**
							113	-16.400	0.679	167.568	**168.130**		**114**	-16.390	0.677	158.459	**159.280**
													115	-16.390	0.677	167.400	**168.270**
49	**43**	-16.840	0.678	-4.472	**-3.690**	**50**	**44**	-16.840	0.639	-6.194	**-6.500**	**51**	**46**	-16.860	0.639	-13.335	**-12.430**
	44	-16.820	0.678	-13.687	**-14.480**		45	-16.840	0.639	-14.876	**-14.310**		47	-16.840	0.639	-19.899	**-20.310**
	45	-16.820	0.678	-22.183	**-22.140**		46	-16.840	0.639	-25.423	**-25.080**		48	-16.840	0.639	-30.226	**-30.410**
	46	-16.820	0.678	-32.517	**-32.130**		47	-16.820	0.600	-31.811	**-32.230**		49	-16.840	0.639	-38.159	**-37.450**

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	47	-16.800	0.695	-38.366	-38.090		48	-16.820	0.600	-41.611	**-42.260**		50	-16.820	0.630	-45.883	**-46.480**
	48	-16.800	0.752	-47.965	-47.390		49	-16.820	0.990	-48.627	-47.976		51	-16.820	0.630	-51.201	-51.100
	49	-16.780	0.752	-53.237	-53.906		50	-16.800	0.990	-56.342	-57.148		52	-16.820	0.885	-57.567	-56.670
	50	-16.780	0.752	-61.532	-61.376		51	-16.800	0.990	-60.339	-60.310		53	-16.800	0.885	-59.276	-59.300
	51	-16.770	0.752	-64.265	-64.178		52	-16.800	0.990	-65.709	-64.930		54	-16.800	0.885	-64.546	-64.015
	52	-16.770	0.789	-69.458	-68.545		53	-16.780	0.798	-67.759	-67.090		55	-16.800	0.885	-67.288	-66.473
	53	-16.750	0.789	-70.266	-70.695		54	-16.760	0.798	-70.688	-71.627		56	-16.800	0.885	-71.521	-70.653
	54	-16.750	0.789	-74.758	-74.632		55	-16.760	0.798	-73.251	-73.338		57	-16.800	0.885	-73.273	-72.445
	55	-16.750	0.789	-76.825	-76.183		56	-16.760	0.798	-77.434	-77.354		58	-16.800	0.885	-76.506	-76.251
	56	-16.750	0.789	-80.541	-79.641		57	-16.760	0.798	-79.234	-78.512		59	-16.800	0.885	-77.303	-77.450
	57	-16.730	0.789	-79.754	-80.608		58	-16.760	0.798	-82.640	-82.070		60	-16.770	0.797	-81.153	-80.837
	58	-16.730	0.789	-82.702	-83.567		59	-16.750	0.798	-82.614	-82.630		61	-16.770	0.797	-82.076	-81.599
	59	-16.730	0.789	-83.308	-84.120		60	-16.760	0.798	-86.359	-85.842		62	-16.770	0.797	-84.561	-84.417
	60	-16.730	0.789	-85.533	-86.490		61	-16.760	0.798	-86.713	-85.939		63	-16.770	0.797	-84.793	-84.497
	61	-16.740	0.789	-86.557	-86.470		62	-16.760	0.798	-88.645	-88.655		64	-16.770	0.797	-86.573	-87.003
	62	-16.750	0.789	-89.206	-88.392		63	-16.760	0.798	-88.314	-88.328		65	-16.770	0.797	-86.136	-86.822
	63	-16.750	0.789	-88.492	-87.990		64	-16.770	0.798	-90.687	-90.560		66	-16.700	0.724	-88.706	-88.640
	64	-16.750	0.789	-89.368	-89.367		65	-16.680	0.725	-89.144	-90.034		67	-16.690	0.724	-87.611	-87.996
	65	-16.670	0.727	-88.349	-88.570		66	-16.680	0.725	-90.875	-91.526		68	-16.690	0.724	-89.275	-89.476
	66	-16.670	0.727	-89.624	-89.536		67	-16.680	0.725	-90.484	-90.398		69	-16.690	0.724	-88.859	-88.417
	67	-16.670	0.727	-88.767	-88.250		68	-16.680	0.725	-91.697	-91.653		70	-16.690	0.724	-90.017	-89.599
	68	-16.670	0.727	-89.527	-88.943		69	-16.680	0.725	-90.819	-90.065		71	-16.690	0.724	-89.125	-88.334
	69	-16.670	0.727	-88.186	-87.228		70	-16.680	0.725	-91.531	-91.098		72	-16.690	0.724	-89.793	-89.223
	70	-16.670	0.727	-88.448	-87.699		71	-16.680	0.725	-90.183	-89.197		73	-16.690	0.724	-88.441	-87.619
	71	-16.670	0.727	-86.641	-85.728		72	-16.680	0.725	-90.410	-89.940		74	-16.690	0.724	-88.636	-88.255
	72	-16.670	0.727	-86.421	-85.835		73	-16.680	0.725	-88.608	-87.815		75	-16.690	0.724	-86.839	-86.393
	73	-16.670	0.727	-84.162	-83.571		74	-16.680	0.725	-88.366	-88.231		76	-16.690	0.724	-86.574	-86.698
	74	-16.670	0.727	-83.475	-83.429		75	-16.680	0.725	-86.123	-85.894		77	-16.690	0.724	-84.346	-84.630
	75	-16.670	0.727	-80.780	-80.868		76	-16.680	0.725	-85.427	-86.015		78	-16.690	0.724	-83.637	-84.629
	76	-16.670	0.727	-79.642	-80.412		77	-16.680	0.725	-82.759	-83.470		79	-16.680	0.717	-82.479	-82.286
	77	-16.680	0.727	-77.784	-77.809		78	-16.680	0.719	-84.042	-83.361		80	-16.690	0.717	-82.823	-81.981
	78	-16.780	0.752	-77.794	-76.880		79	-16.680	0.719	-81.121	-80.591		81	-16.690	0.717	-79.961	-79.635
	79	-16.660	0.718	-74.306	-74.190		80	-16.680	0.719	-79.723	-80.132		82	-16.690	0.717	-78.598	-78.924
	80	-16.660	0.718	-72.552	-72.835		81	-16.680	0.719	-76.411	-77.265		83	-16.690	0.717	-73.321	-74.019
	81	-16.670	0.718	-70.179	-69.907		82	-16.680	0.715	-76.648	-76.547		84	-16.690	0.717	-69.545	-69.690
	82	-16.670	0.718	-68.037	-68.024		83	-16.680	0.715	-71.030	-70.874		85	-16.690	0.717	-63.942	-64.507
	83	-16.670	0.718	-61.948	-62.412		84	-16.680	0.715	-66.931	-66.434		86	-16.690	0.717	-59.826	-60.060
	84	-16.670	0.718	-57.389	-57.690		85	-16.680	0.715	-60.991	-60.632		87	-16.690	0.717	-53.897	-54.650
	85	-16.670	0.718	-50.980	-51.970		86	-16.680	0.715	-56.555	-56.170		88	-16.690	0.717	-49.447	-50.050
	86	-16.680	0.718	-47.436	-47.110		87	-16.680	0.715	-50.303	-50.150		89	-16.640	0.706	-43.708	-44.390
	87	-16.610	0.704	-40.952	-40.970		88	-16.630	0.706	-44.836	-45.510		90	-16.640	0.706	-39.238	-39.540
	88	-16.610	0.704	-36.135	-35.830		89	-16.630	0.706	-38.524	-39.310		91	-16.640	0.706	-33.007	-33.610
	89	-16.610	0.704	-29.524	**-28.710**		**90**	-16.630	0.706	-33.694	**-34.490**		**92**	-16.640	0.706	-28.235	**-27.990**
	90	-16.610	0.704	-24.408	**-23.450**		**91**	-16.630	0.706	-27.098	**-26.450**		**93**	-16.640	0.706	-21.722	**-21.400**
	91	-16.600	0.704	-16.120	**-16.470**		**92**	-16.630	0.706	-21.971	**-21.610**		**94**	-16.640	0.706	-16.655	**-16.480**
	92	-16.600	0.704	-10.705	**-11.110**		**93**	-16.630	0.706	-15.099	**-14.540**		**95**	-16.640	0.706	-9.869	**-9.960**
	93	-16.610	0.704	-4.959	**-4.020**		**94**	-16.630	0.706	-9.684	**-9.550**		**96**	-16.630	0.704	-4.871	**-4.970**
	94	-16.610	0.704	0.728	**1.440**		**95**	-16.630	0.706	-2.543	**-1.990**		**97**	-16.640	0.704	0.640	**1.340**
	95	-16.610	0.704	8.144	**8.940**		**96**	-16.630	0.706	3.153	**3.070**		**98**	-16.640	0.704	6.198	**6.590**
	96	-16.610	0.704	14.105	**14.550**		**97**	-16.630	0.706	10.554	**9.910**		**99**	-16.640	0.704	13.434	**13.430**
	97	-16.610	0.704	21.775	**21.440**		**98**	-16.430	0.676	15.787	**15.320**		**100**	-16.640	0.704	19.261	**18.890**
	98	-16.390	0.673	27.638	**27.280**		**99**	-16.430	0.676	22.531	**22.510**		**101**	-16.630	0.702	26.080	**25.870**
	99	-16.390	0.673	34.605	**34.470**		**100**	-16.430	0.676	27.840	**28.060**		**102**	-16.630	0.702	32.101	**31.630**
	100	-16.390	0.673	40.127	**40.570**		**101**	-16.430	0.676	34.801	**35.440**		**103**	-16.640	0.702	38.222	**38.770**
	101	-16.390	0.673	47.305	**47.950**		**102**	-16.430	0.676	40.339	**41.260**		**104**	-16.640	0.702	44.485	**44.860**
	102	-16.380	0.673	54.559	**54.220**		**103**	-16.440	0.679	49.515	**48.890**		**105**	-16.640	0.702	52.370	**52.240**
	103	-16.410	0.677	62.286	**61.950**		**104**	-16.440	0.679	55.382	**54.990**		**106**	-16.640	0.702	58.879	**58.550**
	104	-16.410	0.677	68.384	**68.500**		**105**	-16.440	0.679	62.867	**62.970**		**107**	-16.450	0.679	66.945	**66.230**
	105	-16.410	0.677	76.103	**76.400**		**106**	-16.440	0.679	68.955	**69.300**		**108**	-16.450	0.679	72.953	**72.630**
	106	-16.420	0.679	83.563	**83.220**		**107**	-16.430	0.679	78.212	**77.460**		**109**	-16.450	0.679	80.539	**80.470**
	107	-16.420	0.679	91.549	**91.360**		**108**	-16.430	0.679	84.524	**83.900**		**110**	-16.450	0.679	86.760	**87.080**
	108	-16.420	0.679	98.142	**98.250**		**109**	-16.430	0.679	92.419	**92.140**		**111**	-16.450	0.679	94.543	**94.930**
	109	-16.420	0.679	106.322	**106.470**		**110**	-16.430	0.679	98.940	**98.840**		**112**	-16.430	0.678	102.743	**101.930**
	110	-16.420	0.679	113.120	**113.600**		**111**	-16.430	0.679	107.027	**107.330**		**113**	-16.430	0.678	110.696	**109.930**
	111	-16.420	0.679	121.489	**121.970**		**112**	-16.430	0.679	113.751	**114.030**		**114**	-16.430	0.678	117.304	**116.500**
	112	-16.420	0.679	128.486	**129.350**		**113**	-16.430	0.679	122.025	**122.490**		**115**	-16.430	0.678	125.442	**124.680**
	113	-16.420	0.679	137.038	**137.740**		**114**	-16.430	0.679	128.948	**129.110**		**116**	-16.430	0.678	132.247	**131.480**
	114	-16.420	0.679	144.229	**145.040**		**115**	-16.430	0.679	137.404	**137.630**		**117**	-16.430	0.678	140.567	**139.580**
	115	-16.420	0.679	152.960	**153.480**		**116**	-16.430	0.679	144.520	**144.440**		**118**	-16.440	0.678	145.873	**146.560**
	116	-16.420	0.679	160.341	**160.890**		**117**	-16.430	0.679	153.155	**153.060**		**119**	-16.440	0.678	154.359	**154.490**
	117	-16.420	0.679	169.246	**169.550**		**118**	-16.430	0.679	160.459	**160.080**		**120**	-16.440	0.678	161.532	**162.110**
							119	-16.430	0.679	169.267	**168.930**		**121**	-16.440	0.678	170.190	**170.250**
52	47	-16.860	0.680	-9.235	**-10.120**	53	48	-16.880	0.600	-9.003	**-8.100**	54	49	-16.870	0.600	-4.505	**-5.380**
	48	-16.860	0.680	-20.173	**-20.950**		49	-16.860	0.600	-15.517	**-15.960**		50	-16.870	0.600	-15.176	**-15.920**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	49	-16.860	0.680	-28.684	**-28.090**		50	-16.860	0.600	-25.857	**-25.770**		51	-16.870	0.600	-21.574	**-21.450**
	50	-16.840	0.680	-36.891	**-37.840**		51	-16.850	0.685	-30.617	**-31.270**		52	-16.870	0.600	-29.766	**-29.190**
	51	-16.840	0.630	-42.757	**-42.540**		52	-16.850	0.685	-38.627	**-38.160**		53	-16.850	0.600	-33.606	**-34.050**
	52	-16.840	0.630	-50.274	-49.630		53	-16.840	0.685	-43.266	-43.300		54	-16.860	0.600	-42.419	-42.632
	53	-16.830	0.885	-53.717	-52.810		54	-16.830	0.685	-49.047	-49.430		55	-16.840	0.600	-45.337	-46.170
	54	-16.810	0.885	-57.561	-58.220		55	-16.820	0.885	-51.893	-52.771		56	-16.840	0.889	-51.286	-51.923
	55	-16.810	0.885	-60.987	-60.657		56	-16.820	0.885	-57.465	-57.673		57	-16.840	0.889	-55.053	-54.520
	56	-16.810	0.885	-65.884	-65.782		57	-16.820	0.885	-60.572	-60.468		58	-16.840	0.889	-60.242	-60.026
	57	-16.810	0.885	-68.309	-67.715		58	-16.820	0.885	-65.124	-64.954		59	-16.840	0.889	-63.014	-62.204
	58	-16.810	0.885	-72.197	-72.230		59	-16.820	0.885	-67.256	-67.063		60	-16.840	0.889	-67.199	-67.086
	59	-16.810	0.885	-73.657	-73.587		60	-16.820	0.885	-70.824	-71.120		61	-16.810	0.799	-68.588	-68.657
	60	-16.780	0.796	-77.139	-77.568		61	-16.800	0.798	-73.533	-72.639		62	-16.810	0.799	-72.639	-73.047
	61	-16.780	0.796	-78.614	-78.347		62	-16.800	0.798	-77.075	-76.338		63	-16.810	0.799	-74.460	-74.185
	62	-16.780	0.796	-81.634	-81.890		63	-16.800	0.798	-78.378	-77.421		64	-16.810	0.799	-77.780	-78.079
	63	-16.780	0.796	-82.410	-82.063		64	-16.800	0.798	-81.197	-80.439		65	-16.810	0.799	-78.904	-78.794
	64	-16.780	0.796	-84.720	-85.264		65	-16.800	0.798	-81.814	-80.971		66	-16.810	0.799	-81.515	-82.172
	65	-16.780	0.796	-84.821	-85.096		66	-16.800	0.798	-83.934	-83.778		67	-16.810	0.799	-81.966	-82.481
	66	-16.790	0.796	-87.624	-87.691		67	-16.800	0.798	-83.887	-83.747		68	-16.820	0.799	-85.113	-85.355
	67	-16.710	0.723	-87.099	-87.183		68	-16.800	0.798	-85.332	-86.246		69	-16.740	0.726	-84.433	-85.248
	68	-16.710	0.723	-89.209	-89.362		69	-16.720	0.725	-85.543	-86.079		70	-16.740	0.726	-86.827	-87.667
	69	-16.700	0.723	-88.038	-88.543		70	-16.720	0.725	-87.531	-87.943		71	-16.740	0.726	-87.192	-87.199
	70	-16.700	0.723	-89.628	-90.313		71	-16.720	0.725	-87.484	-87.365		72	-16.740	0.726	-89.075	-89.146
	71	-16.700	0.723	-89.176	-89.171		72	-16.720	0.725	-88.968	-88.836		73	-16.740	0.726	-88.957	-88.321
	72	-16.700	0.723	-90.271	-90.524		73	-16.720	0.725	-88.447	-87.910		74	-16.740	0.726	-90.344	-89.861
	73	-16.700	0.723	-89.355	-89.022		74	-16.720	0.725	-89.443	-88.983		75	-16.730	0.726	-88.470	-88.696
	74	-16.700	0.723	-89.972	-90.064		75	-16.720	0.725	-88.462	-87.738		76	-16.740	0.726	-90.667	-89.880
	75	-16.700	0.723	-88.606	-88.280		76	-16.720	0.725	-88.986	-88.507		77	-16.730	0.726	-88.321	-88.414
	76	-16.700	0.723	-88.759	-88.994		77	-16.720	0.725	-87.560	-86.936		78	-16.740	0.726	-90.073	-89.279
	77	-16.700	0.723	-86.957	-87.005		78	-16.720	0.725	-87.626	-87.443		79	-16.740	0.726	-88.598	-87.644
	78	-16.700	0.723	-86.662	-87.353		79	-16.720	0.725	-85.769	-85.704		80	-16.740	0.726	-88.590	-88.126
	79	-16.700	0.723	-84.438	-85.211		80	-16.720	0.725	-85.392	-85.857		81	-16.740	0.726	-86.690	-86.413
	80	-16.680	0.713	-84.992	-85.188		81	-16.720	0.725	-83.118	-84.043		82	-16.740	0.726	-86.245	-86.429
	81	-16.690	0.713	-83.929	-82.937		82	-16.700	0.713	-84.582	-83.779		83	-16.740	0.726	-81.930	-82.383
	82	-16.690	0.713	-83.033	-82.534		83	-16.700	0.713	-80.187	-79.545		84	-16.700	0.712	-79.663	-79.972
	83	-16.690	0.713	-78.244	-77.729		84	-16.700	0.713	-77.273	-76.356		85	-16.700	0.712	-75.322	-75.645
	84	-16.690	0.713	-74.949	-74.425		85	-16.700	0.713	-72.539	-71.980		86	-16.710	0.712	-73.839	-72.986
	85	-16.690	0.713	-69.829	-69.304		86	-16.700	0.713	-69.274	-68.471		87	-16.710	0.712	-69.176	-68.197
	86	-16.730	0.724	-65.569	-65.696		87	-16.700	0.713	-64.212	-63.606		88	-16.710	0.712	-65.959	-65.230
	87	-16.690	0.713	-60.747	-60.205		88	-16.700	0.713	-60.608	-59.927		89	-16.710	0.712	-60.973	-60.203
	88	-16.690	0.713	-56.773	-56.367		89	-16.700	0.713	-55.227	-54.803		90	-16.710	0.712	-57.421	-56.872
	89	-16.690	0.713	-51.017	-50.670		90	-16.700	0.713	-51.292	-50.790		91	-16.710	0.712	-52.122	-51.493
	90	-16.690	0.713	-46.718	-46.550		91	-16.700	0.713	-45.602	-45.330		92	-16.710	0.712	-48.245	-47.955
	91	-16.640	0.702	-41.243	-40.530		92	-16.640	0.700	-41.680	-41.130		93	-16.710	0.712	-42.641	-42.400
	92	-16.640	0.702	-36.934	-36.220		93	-16.640	0.700	-36.047	-35.540		94	-16.650	0.700	-38.199	-38.650
	93	-16.640	0.702	-30.893	-30.010		94	-16.640	0.700	-31.842	-31.200		95	-16.650	0.700	-32.627	-33.000
	94	-16.640	0.702	-26.290	**-25.650**		95	-16.640	0.700	-25.931	**-25.930**		96	-16.660	0.700	-29.961	-28.990
	95	-16.640	0.702	-19.975	**-19.590**		96	-16.640	0.700	-21.437	**-21.550**		97	-16.660	0.700	-24.125	**-24.120**
	96	-16.640	0.702	-15.085	**-15.100**		97	-16.640	0.700	-15.257	**-15.580**		98	-16.660	0.700	-19.683	**-20.010**
	97	-16.640	0.702	-8.503	**-8.620**		98	-16.640	0.700	-10.481	**-10.990**		99	-16.660	0.700	-13.579	**-13.890**
	98	-16.640	0.702	-3.334	**-3.840**		99	-16.650	0.701	-4.635	**-4.840**		100	-16.670	0.700	-10.398	**-9.450**
	99	-16.630	0.700	3.079	**2.880**		100	-16.650	0.701	0.440	**0.200**		101	-16.670	0.700	-4.045	**-3.230**
	100	-16.640	0.700	6.936	**7.900**		101	-16.660	0.701	5.624	**6.550**		102	-16.670	0.700	0.937	**1.540**
	101	-16.640	0.700	13.955	**14.870**		102	-16.660	0.701	10.956	**11.720**		103	-16.670	0.700	7.543	**8.060**
	102	-16.640	0.700	19.584	**20.020**		103	-16.660	0.701	17.919	**18.290**		104	-16.670	0.700	12.788	**13.020**
	103	-16.640	0.700	26.847	**27.200**		104	-16.660	0.701	23.513	**23.850**		105	-16.670	0.700	19.641	**19.960**
	104	-16.640	0.700	32.731	**32.710**		105	-16.660	0.701	30.718	**30.720**		106	-16.670	0.700	25.143	**25.190**
	105	-16.640	0.700	40.231	**40.170**		106	-16.660	0.701	36.565	**36.510**		107	-16.670	0.700	32.235	**32.380**
	106	-16.640	0.700	46.363	**45.930**		107	-16.660	0.701	44.006	**43.720**		108	-16.670	0.700	37.988	**37.890**
	107	-16.640	0.700	54.093	**53.630**		108	-16.660	0.701	50.100	**49.640**		109	-16.670	0.700	45.313	**45.240**
	108	-16.640	0.700	60.467	**59.600**		109	-16.660	0.701	57.772	**56.980**		110	-16.670	0.700	51.309	**50.930**
	109	-16.650	0.700	66.812	**67.410**		110	-16.490	0.680	64.038	**63.170**		111	-16.670	0.700	58.862	**58.430**
	110	-16.480	0.680	73.457	**73.620**		111	-16.490	0.680	71.259	**70.630**		112	-16.670	0.700	65.096	**64.420**
	111	-16.480	0.680	80.972	**81.600**		112	-16.490	0.680	77.144	**76.980**		113	-16.670	0.700	72.870	**72.000**
	112	-16.470	0.680	88.783	**88.100**		113	-16.490	0.680	84.565	**84.610**		114	-16.510	0.680	77.602	**78.080**
	113	-16.470	0.680	96.505	**96.160**		114	-16.490	0.680	90.661	**91.230**		115	-16.500	0.680	86.619	**85.960**
	114	-16.470	0.680	102.893	**102.310**		115	-16.490	0.680	98.278	**98.760**		116	-16.500	0.680	92.649	**92.070**
	115	-16.470	0.680	110.806	**110.410**		116	-16.490	0.680	104.579	**105.250**		117	-16.500	0.680	100.180	**99.820**
	116	-16.470	0.680	117.395	**116.810**		117	-16.490	0.680	112.386	**112.950**		118	-16.500	0.680	106.414	**105.760**
	117	-16.470	0.680	125.495	**124.910**		118	-16.490	0.680	118.888	**119.500**		119	-16.500	0.680	114.134	**113.680**
	118	-16.470	0.680	132.281	**131.480**		119	-16.490	0.680	126.881	**127.400**		120	-16.500	0.680	120.567	**120.150**
	119	-16.470	0.680	140.562	**139.790**		120	-16.490	0.680	133.578	**134.210**		121	-16.500	0.680	128.472	**128.060**
	120	-16.470	0.680	147.540	**146.650**		121	-16.490	0.680	141.752	**142.080**		122	-16.500	0.680	135.099	**134.290**
	121	-16.480	0.680	154.269	**154.850**		122	-16.490	0.680	148.640	**148.720**		123	-16.510	0.680	141.415	**142.140**
	122	-16.480	0.680	161.424	**161.500**		123	-16.490	0.680	156.991	**156.590**		124	-16.510	0.680	148.222	**148.670**

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	123	-16.480	0.680	170.046	**169.810**		124	-16.490	0.680	164.065	**163.520**		125	-16.510	0.680	156.473	**156.660**
	124	-16.480	0.680	177.384	**176.830**		125	-16.500	0.680	170.809	**171.550**		126	-16.510	0.680	163.465	**163.440**
							126	-16.500	0.680	178.055	**178.730**		127	-16.510	0.680	173.827	**173.720**
													128	-16.510	0.680	182.924	**182.420**
55	51	-16.880	0.600	-8.799	**-9.380**	56	52	-16.900	0.600	-7.546	**-7.760**	57	53	-16.910	0.600	-1.332	**-2.270**
	52	-16.880	0.600	-17.341	**-17.510**		53	-16.900	0.600	-14.240	**-13.730**		54	-16.910	0.600	-10.105	**-10.780**
	53	-16.880	0.600	-23.681	**-23.190**		54	-16.900	0.600	-22.675	**-22.490**		55	-16.910	0.600	-16.733	**-16.890**
	54	-16.870	0.600	-30.688	**-30.680**		55	-16.890	0.600	-27.844	**-27.800**		56	-16.910	0.600	-25.067	**-24.590**
	55	-16.870	0.600	-36.608	**-36.040**		56	-16.880	0.600	-34.713	**-35.190**		57	-16.890	0.600	-29.008	**-29.480**
	56	-16.860	0.600	-42.694	-42.900		57	-16.870	0.600	-38.985	-39.710		58	-16.890	0.600	-36.446	**-36.210**
	57	-16.850	0.889	-45.754	-46.415		58	-16.870	0.890	-45.214	-45.905		59	-16.880	0.600	-40.648	-40.050
	58	-16.850	0.889	-51.604	-51.765		59	-16.870	0.890	-49.314	-48.920		60	-16.870	0.735	-45.754	-46.271
	59	-16.850	0.889	-55.045	-54.686		60	-16.870	0.890	-54.792	-54.380		61	-16.870	0.735	-50.216	-49.620
	60	-16.850	0.889	-59.882	-59.699		61	-16.870	0.890	-57.911	-57.458		62	-16.860	0.735	-55.018	-55.020
	61	-16.850	0.889	-62.354	-62.043		62	-16.870	0.890	-62.400	-62.200		63	-16.860	0.789	-57.666	-57.570
	62	-16.850	0.889	-66.213	-66.493		63	-16.840	0.797	-64.053	-64.590		64	-16.850	0.789	-61.417	-62.190
	63	-16.850	0.889	-67.747	-68.409		64	-16.840	0.797	-68.429	-68.889		65	-16.850	0.789	-64.208	-64.543
	64	-16.830	0.797	-73.185	-72.305		65	-16.840	0.797	-70.628	-70.745		66	-16.850	0.789	-68.451	-68.651
	65	-16.830	0.797	-74.871	-73.889		66	-16.840	0.797	-74.286	-74.609		67	-16.850	0.789	-70.566	-70.259
	66	-16.830	0.797	-78.031	-77.102		67	-16.840	0.797	-75.801	-75.655		68	-16.850	0.789	-74.123	-73.759
	67	-16.830	0.797	-79.040	-78.145		68	-16.840	0.797	-78.764	-79.090		69	-16.850	0.789	-75.585	-74.973
	68	-16.830	0.797	-81.512	-81.044		69	-16.840	0.797	-79.617	-79.669		70	-16.850	0.789	-78.478	-77.896
	69	-16.830	0.797	-81.866	-81.741		70	-16.840	0.797	-81.907	-82.670		71	-16.850	0.789	-79.307	-78.625
	70	-16.830	0.797	-83.672	-84.090		71	-16.840	0.797	-82.119	-82.818		72	-16.850	0.789	-81.557	-81.324
	71	-16.830	0.797	-83.393	-84.351		72	-16.760	0.713	-85.276	-85.369		73	-16.850	0.789	-81.774	-81.627
	72	-16.740	0.713	-86.440	-86.240		73	-16.750	0.713	-84.909	-85.061		74	-16.850	0.789	-83.402	-83.769
	73	-16.730	0.713	-85.677	-85.932		74	-16.750	0.713	-87.311	-87.257		75	-16.770	0.727	-83.203	-83.724
	74	-16.730	0.713	-87.684	-87.499		75	-16.740	0.713	-86.456	-86.679		76	-16.770	0.727	-85.287	-85.494
	75	-16.730	0.713	-87.738	-86.900		76	-16.740	0.713	-88.377	-88.435		77	-16.770	0.727	-85.447	-85.219
	76	-16.720	0.713	-87.970	-88.056		77	-16.730	0.712	-87.268	-87.554		78	-16.770	0.727	-87.047	-86.643
	77	-16.710	0.712	-86.498	-87.153		78	-16.730	0.712	-88.743	-88.950		79	-16.770	0.727	-86.750	-86.037
	78	-16.710	0.712	-87.590	-88.071		79	-16.730	0.712	-88.325	-87.851		80	-16.770	0.727	-87.882	-87.141
	79	-16.710	0.712	-86.782	-86.891		80	-16.730	0.712	-89.359	-88.887		81	-16.770	0.727	-87.141	-86.513
	80	-16.710	0.712	-87.438	-87.582		81	-16.730	0.712	-88.525	-87.721		82	-16.700	0.698	-86.787	-87.222
	81	-16.710	0.712	-86.220	-86.339		82	-16.730	0.712	-89.132	-88.262		83	-16.700	0.698	-84.223	-84.312
	82	-16.710	0.712	-86.454	-86.546		83	-16.730	0.712	-85.910	-84.914		84	-16.700	0.698	-83.104	-82.930
	83	-16.710	0.712	-82.844	-82.887		84	-16.730	0.712	-84.137	-83.268		85	-16.700	0.698	-80.200	-80.024
	84	-16.710	0.712	-80.694	-80.701		85	-16.730	0.712	-80.562	-79.732		86	-16.700	0.698	-78.729	-78.171
	85	-16.710	0.712	-76.736	-77.050		86	-16.730	0.712	-78.423	-77.842		87	-16.700	0.698	-75.493	-74.850
	86	-16.710	0.712	-74.225	-74.477		87	-16.730	0.712	-74.504	-73.937		88	-16.700	0.698	-73.680	-72.835
	87	-16.710	0.712	-69.929	-70.515		88	-16.730	0.712	-72.010	-71.767		89	-16.700	0.698	-70.124	-69.221
	88	-16.710	0.712	-67.068	-67.676		89	-16.730	0.712	-67.758	-67.516		90	-16.690	0.698	-66.507	-66.678
	89	-16.710	0.712	-62.444	-63.271		90	-16.730	0.712	-64.918	-64.866		91	-16.690	0.698	-62.629	-62.709
	90	-16.710	0.712	-59.243	-60.054		91	-16.730	0.712	-60.342	-60.264		92	-16.690	0.698	-60.149	-60.220
	91	-16.720	0.712	-55.760	-55.310		92	-16.730	0.712	-57.167	-57.545		93	-16.690	0.698	-55.967	-56.311
	92	-16.720	0.713	-51.613	-51.920		93	-16.740	0.713	-53.147	-52.831		94	-16.690	0.698	-53.172	-53.310
	93	-16.730	0.713	-47.819	-46.911		94	-16.740	0.713	-49.625	-49.890		95	-16.700	0.698	-50.215	-49.290
	94	-16.730	0.713	-43.955	-43.300		95	-16.750	0.713	-45.916	-44.940		96	-16.690	0.698	-45.595	-46.060
	95	-16.730	0.713	-38.389	-38.170		96	-16.750	0.713	-42.085	-41.610		97	-16.700	0.698	-42.371	-41.530
	96	-16.730	0.713	-34.211	-34.280		97	-16.750	0.713	-36.578	-36.470		98	-16.690	0.698	-37.432	-37.930
	97	-16.670	0.700	-29.337	-29.130		98	-16.690	0.700	-33.206	-32.920		99	-16.710	0.701	-33.243	-33.050
	98	-16.680	0.700	-26.755	**-25.830**		99	-16.690	0.700	-27.776	**-28.180**		100	-16.710	0.701	-29.478	-29.070
	99	-16.680	0.700	-20.997	**-20.260**		100	-16.700	0.700	-25.269	**-24.390**		101	-16.710	0.701	-24.085	**-24.550**
	100	-16.680	0.700	-16.612	**-15.890**		101	-16.700	0.700	-19.579	**-18.710**		102	-16.710	0.701	-20.034	**-20.470**
	101	-16.680	0.700	-10.589	**-10.240**		102	-16.700	0.700	-15.242	**-14.590**		103	-16.710	0.701	-14.374	**-14.990**
	102	-16.680	0.700	-5.929	**-5.630**		103	-16.700	0.700	-9.290	**-8.640**		104	-16.710	0.701	-10.045	**-10.440**
	103	-16.680	0.700	0.351	**0.520**		104	-16.700	0.700	-4.681	**-4.080**		105	-16.710	0.701	-4.123	**-4.600**
	104	-16.680	0.700	5.280	**5.410**		105	-16.700	0.700	1.526	**2.220**		106	-16.710	0.701	0.476	**0.230**
	105	-16.680	0.700	11.811	**11.870**		106	-16.700	0.700	6.401	**7.080**		107	-16.710	0.701	6.651	**6.420**
	106	-16.680	0.700	17.001	**17.080**		107	-16.700	0.700	12.856	**13.690**		108	-16.710	0.701	11.514	**11.530**
	107	-16.680	0.700	23.775	**23.770**		108	-16.700	0.700	17.990	**18.820**		109	-16.710	0.701	17.936	**17.940**
	108	-16.680	0.700	29.220	**29.220**		109	-16.700	0.700	24.687	**25.610**		110	-16.710	0.701	23.056	**23.150**
	109	-16.680	0.700	36.233	**36.100**		110	-16.700	0.700	30.072	**30.910**		111	-16.710	0.701	29.719	**29.750**
	110	-16.680	0.700	41.925	**41.800**		111	-16.700	0.700	37.005	**37.940**		112	-16.710	0.701	35.089	**35.190**
	111	-16.680	0.700	49.169	**48.840**		112	-16.700	0.700	42.636	**43.470**		113	-16.710	0.701	41.987	**41.830**
	112	-16.680	0.700	55.104	**54.740**		113	-16.700	0.700	49.799	**50.630**		114	-16.710	0.701	47.602	**47.560**
	113	-16.680	0.700	62.574	**62.000**		114	-16.700	0.700	55.669	**56.280**		115	-16.710	0.701	54.728	**54.570**
	114	-16.680	0.700	68.743	**68.020**		115	-16.700	0.700	63.056	**63.850**		116	-16.710	0.701	60.581	**60.250**
	115	-16.680	0.700	76.434	**75.490**		116	-16.700	0.700	69.160	**69.430**		117	-16.710	0.701	67.931	**67.100**
	116	-16.530	0.682	82.187	**81.570**		117	-16.700	0.700	76.765	**76.750**		118	-16.540	0.680	73.645	**72.920**
	117	-16.530	0.682	89.498	**88.940**		118	-16.700	0.700	83.097	**82.540**		119	-16.540	0.680	80.528	**80.010**
	118	-16.530	0.682	95.520	**94.980**		119	-16.700	0.700	90.915	**90.020**		120	-16.540	0.680	86.146	**86.040**
	119	-16.530	0.682	103.026	**102.460**		120	-16.710	0.700	95.709	**96.180**		121	-16.540	0.680	93.225	**93.140**
	120	-16.530	0.682	109.252	**109.060**		121	-16.540	0.681	103.160	**103.600**		122	-16.540	0.680	99.048	**99.240**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	121	-16.530	0.682	116.948	**116.480**		122	-16.540	0.681	109.282	**109.630**		123	-16.540	0.680	106.317	**106.000**
	122	-16.530	0.682	123.374	**122.710**		123	-16.540	0.681	116.854	**116.840**		124	-16.540	0.680	112.340	**112.060**
	123	-16.540	0.682	129.474	**130.150**		124	-16.540	0.681	123.172	**122.920**		125	-16.540	0.680	119.795	**119.310**
	124	-16.540	0.682	136.084	**136.640**		125	-16.540	0.681	130.928	**130.560**		126	-16.540	0.680	126.013	**125.700**
	125	-16.530	0.681	144.114	**144.210**		126	-16.540	0.681	137.439	**136.940**		127	-16.540	0.680	135.569	**134.960**
	126	-16.530	0.681	150.880	**151.020**		127	-16.540	0.681	147.299	**146.670**		128	-16.540	0.680	143.881	**143.260**
	127	-16.530	0.681	161.006	**160.820**		128	-16.540	0.681	155.909	**154.980**		129	-16.540	0.680	153.586	**152.960**
	128	-16.530	0.681	169.874	**169.500**		129	-16.540	0.681	165.915	**165.120**		130	-16.540	0.680	162.057	**161.500**
	129	-16.530	0.681	180.144	**179.680**		130	-16.550	0.681	172.822	**173.640**		131	-16.550	0.680	170.030	**170.750**
	130	-16.530	0.681	189.166	**188.610**		131	-16.550	0.681	182.963	**183.370**		132	-16.550	0.680	178.646	**178.890**
							132	-16.540	0.680	191.679	**191.570**		133	-16.550	0.680	188.632	**188.100**
							133	-16.540	0.680	201.925	**201.140**		134	-16.560	0.680	195.491	**196.380**
													135	-16.560	0.680	205.606	**205.610**
58	55	-16.930	0.600	-7.128	**-7.330**	59	56	-16.950	0.600	-4.213	**-4.400**	60	58	-16.970	0.600	-10.240	**-10.440**
	56	-16.930	0.600	-15.791	**-15.760**		57	-16.950	0.600	-11.122	**-10.770**		59	-16.970	0.600	-17.076	**-16.430**
	57	-16.920	0.600	-21.201	**-21.270**		58	-16.950	0.600	-19.689	**-18.960**		60	-16.970	0.600	-25.538	**-24.610**
	58	-16.910	0.600	-28.263	**-29.110**		59	-16.930	0.600	-23.834	**-24.520**		61	-16.950	0.600	-29.124	**-29.220**
	59	-16.910	0.600	-33.959	**-33.690**		60	-16.930	0.600	-31.520	**-31.610**		62	-16.950	0.600	-36.725	**-35.740**
	60	-16.910	0.600	-41.316	**-40.430**		61	-16.920	0.600	-35.980	**-36.030**		63	-16.920	0.600	-38.647	**-39.500**
	61	-16.890	0.736	-43.509	-43.820		62	-16.910	0.850	-40.598	-41.551		64	-16.930	0.834	-44.827	-44.830
	62	-16.890	0.736	-49.945	-49.730		63	-16.910	0.850	-44.875	-44.780		65	-16.920	0.834	-47.671	-48.070
	63	-16.880	0.746	-52.886	-52.690		64	-16.910	0.850	-50.517	-50.230		66	-16.920	0.834	-53.115	-53.380
	64	-16.870	0.746	-57.402	-57.874		65	-16.910	0.850	-53.946	-53.151		67	-16.920	0.834	-56.406	-55.910
	65	-16.870	0.746	-61.018	-60.286		66	-16.910	0.850	-58.732	-58.070		68	-16.920	0.834	-61.050	-60.530
	66	-16.860	0.746	-64.875	-64.916		67	-16.900	0.850	-60.080	-60.324		69	-16.910	0.834	-62.284	-62.375
	67	-16.860	0.788	-65.906	-66.658		68	-16.910	0.850	-65.298	-64.543		70	-16.920	0.834	-67.444	-66.596
	68	-16.860	0.788	-69.951	-70.821		69	-16.910	0.850	-67.113	-66.331		71	-16.910	0.834	-67.915	-67.768
	69	-16.860	0.788	-71.909	-71.979		70	-16.860	0.772	-69.409	-69.774		72	-16.920	0.834	-72.345	-71.426
	70	-16.860	0.788	-75.285	-75.534		71	-16.860	0.772	-71.402	-71.175		73	-16.910	0.834	-72.077	-72.332
	71	-16.860	0.788	-76.607	-76.288		72	-16.860	0.772	-74.804	-74.301		74	-16.920	0.834	-75.800	-75.646
	72	-16.860	0.788	-79.336	-79.423		73	-16.860	0.772	-76.203	-75.227		75	-16.920	0.834	-76.166	-76.214
	73	-16.860	0.788	-80.040	-79.708		74	-16.850	0.772	-77.671	-77.938		76	-16.930	0.834	-79.214	-79.199
	74	-16.860	0.788	-82.143	-82.469		75	-16.850	0.772	-78.485	-78.528		77	-16.820	0.735	-79.264	-79.584
	75	-16.860	0.788	-82.249	-82.418		76	-16.850	0.772	-80.688	-80.936		78	-16.820	0.735	-81.911	-82.017
	76	-16.870	0.788	-85.085	-84.833		77	-16.860	0.772	-82.303	-81.340		79	-16.820	0.735	-82.672	-82.017
	77	-16.770	0.720	-83.941	-84.616		78	-16.860	0.772	-83.949	-83.202		80	-16.820	0.735	-84.823	-84.257
	78	-16.770	0.720	-86.043	-86.509		79	-16.860	0.772	-83.673	-83.129		81	-16.820	0.735	-85.113	-84.192
	79	-16.770	0.720	-86.259	-85.919		80	-16.860	0.772	-84.768	-84.829		82	-16.820	0.735	-86.781	-85.950
	80	-16.770	0.720	-87.898	-87.566		81	-16.760	0.710	-84.905	-84.686		83	-16.820	0.735	-84.667	-84.002
	81	-16.770	0.720	-87.675	-86.958		82	-16.760	0.710	-86.649	-86.015		84	-16.820	0.735	-83.939	-83.748
	82	-16.770	0.720	-88.865	-88.074		83	-16.760	0.710	-84.614	-83.786		85	-16.820	0.735	-81.416	-81.432
	83	-16.770	0.720	-86.252	-85.431		84	-16.760	0.710	-83.994	-83.068		86	-16.820	0.735	-80.269	-80.926
	84	-16.770	0.720	-85.059	-84.533		85	-16.760	0.710	-81.591	-80.751		87	-16.750	0.702	-78.210	-78.147
	85	-16.770	0.720	-82.070	-81.606		86	-16.760	0.710	-80.591	-79.626		88	-16.750	0.702	-77.356	-77.408
	86	-16.770	0.720	-80.490	-80.432		87	-16.750	0.710	-76.372	-76.673		89	-16.750	0.702	-74.774	-74.376
	87	-16.770	0.720	-77.136	-77.067		88	-16.750	0.710	-74.994	-75.444		90	-16.750	0.702	-73.568	-73.680
	88	-16.770	0.720	-75.179	-75.626		89	-16.760	0.710	-73.357	-72.535		91	-16.750	0.702	-70.654	-70.943
	89	-16.770	0.720	-71.471	-72.014		90	-16.760	0.710	-71.632	-71.039		92	-16.750	0.699	-70.456	-70.150
	90	-16.860	0.746	-69.997	-70.398		91	-16.760	0.710	-68.188	-68.301		93	-16.750	0.699	-67.297	-67.330
	91	-16.870	0.746	-66.806	-66.670		92	-16.760	0.710	-66.115	-66.780		94	-16.750	0.699	-65.495	-65.580
	92	-16.880	0.746	-64.994	-64.847		93	-16.740	0.702	-63.392	-63.758		95	-16.750	0.699	-62.025	-62.284
	93	-16.790	0.720	-61.049	-61.225		94	-16.740	0.702	-61.181	-61.568		96	-16.750	0.699	-59.903	-60.202
	94	-16.800	0.720	-59.564	-58.980		95	-16.750	0.702	-58.835	-57.860		97	-16.750	0.699	-56.132	-56.494
	95	-16.800	0.720	-54.881	-54.910		96	-16.750	0.702	-56.314	-55.415		98	-16.750	0.699	-53.667	-53.835
	96	-16.800	0.720	-51.550	-52.220		97	-16.750	0.702	-52.138	-51.449		99	-16.750	0.699	-49.632	-49.724
	97	-16.880	0.736	-48.049	-47.780		98	-16.750	0.702	-49.306	-48.435		100	-16.750	0.699	-46.894	-46.725
	98	-16.890	0.736	-45.525	-44.820		99	-16.750	0.702	-44.837	-44.150		101	-16.750	0.699	-42.542	-42.230
	99	-16.890	0.736	-39.791	-39.930		100	-16.750	0.702	-41.702	-40.770		102	-16.790	0.708	-39.345	-39.010
	100	-16.740	0.703	-37.056	-36.540		101	-16.770	0.708	-35.668	-36.200		103	-16.790	0.708	-34.470	-34.080
	101	-16.740	0.703	-31.941	-31.340		102	-16.770	0.708	-32.066	-32.490		104	-16.790	0.708	-30.897	**-31.130**
	102	-16.740	0.703	-28.158	**-28.260**		103	-16.780	0.708	-28.479	**-28.070**		105	-16.790	0.708	-25.742	**-25.740**
	103	-16.740	0.703	-22.768	**-22.840**		104	-16.780	0.708	-24.593	**-24.010**		106	-16.790	0.708	-21.880	**-21.800**
	104	-16.740	0.703	-18.701	**-18.720**		105	-16.780	0.708	-19.120	**-18.590**		107	-16.790	0.708	-16.451	**-16.190**
	105	-16.740	0.703	-13.045	**-12.910**		106	-16.780	0.708	-14.948	**-14.230**		108	-16.790	0.708	-12.306	**-12.060**
	106	-16.740	0.703	-8.702	**-8.540**		107	-16.780	0.708	-9.206	**-8.550**		109	-16.790	0.708	-6.611	**-6.140**
	107	-16.740	0.703	-2.785	**-2.380**		108	-16.780	0.708	-4.755	**-3.960**		110	-16.790	0.708	-2.190	**-1.730**
	108	-16.740	0.703	1.828	**2.200**		109	-16.780	0.708	1.250	**1.980**		111	-16.790	0.708	3.765	**4.410**
	109	-16.740	0.703	7.997	**8.600**		110	-16.780	0.708	5.972	**6.880**		112	-16.790	0.708	8.454	**8.920**
	110	-16.740	0.703	12.873	**13.480**		111	-16.780	0.708	12.232	**12.950**		113	-16.790	0.708	14.662	**15.130**
	111	-16.740	0.703	19.290	**19.940**		112	-16.780	0.708	17.219	**17.990**		114	-16.790	0.708	19.614	**19.900**
	112	-16.740	0.703	24.422	**25.040**		113	-16.780	0.708	23.729	**24.200**		115	-16.790	0.708	26.068	**26.250**
	113	-16.740	0.703	31.079	**31.680**		114	-16.780	0.708	28.974	**29.470**		116	-16.790	0.708	31.275	**31.330**
	114	-16.740	0.703	36.461	**36.930**		115	-16.780	0.708	35.726	**35.720**		117	-16.790	0.708	37.971	**37.650**
	115	-16.740	0.703	43.352	**43.780**		116	-16.780	0.708	41.224	**41.280**		118	-16.790	0.708	43.427	**42.740**

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	116	-16.740	0.703	48.978	**49.220**		117	-16.780	0.708	48.213	**47.560**		119	-16.790	0.708	50.357	**49.660**
	117	-16.740	0.703	56.098	**56.050**		118	-16.780	0.708	53.956	**53.030**		120	-16.610	0.684	55.599	**54.830**
	118	-16.740	0.703	61.961	**61.510**		119	-16.590	0.683	60.500	**59.900**		121	-16.610	0.684	61.985	**61.580**
	119	-16.740	0.703	69.304	**68.740**		120	-16.590	0.683	65.673	**65.490**		122	-16.610	0.684	67.138	**66.820**
	120	-16.570	0.682	74.862	**74.290**		121	-16.590	0.683	72.299	**72.320**		123	-16.610	0.684	73.728	**73.090**
	121	-16.570	0.682	81.733	**81.470**		122	-16.590	0.683	77.686	**77.870**		124	-16.610	0.684	79.094	**78.240**
	122	-16.570	0.682	87.357	**87.100**		123	-16.590	0.683	84.511	**84.150**		125	-16.610	0.684	85.883	**85.060**
	123	-16.570	0.682	94.424	**93.840**		124	-16.590	0.683	90.107	**89.760**		126	-16.610	0.684	91.457	**90.580**
	124	-16.570	0.682	100.252	**99.460**		125	-16.590	0.683	97.128	**96.560**		127	-16.610	0.684	100.338	**99.470**
	125	-16.570	0.682	107.510	**106.670**		126	-16.590	0.683	102.926	**102.540**		128	-16.620	0.684	106.118	**106.830**
	126	-16.570	0.682	113.538	**112.610**		127	-16.590	0.683	112.043	**111.400**		129	-16.610	0.684	117.042	**116.120**
	127	-16.570	0.682	122.893	**121.940**		128	-16.590	0.683	119.931	**119.220**		130	-16.620	0.684	122.975	**123.500**
	128	-16.580	0.682	129.153	**129.750**		129	-16.590	0.683	129.206	**128.460**		131	-16.420	0.663	133.207	**132.300**
	129	-16.370	0.661	140.260	**139.470**		130	-16.590	0.683	137.262	**136.360**		132	-16.420	0.663	140.503	**139.690**
	130	-16.370	0.661	147.841	**147.570**		131	-16.410	0.663	144.381	**145.170**		133	-16.420	0.663	149.151	**148.460**
	131	-16.370	0.661	156.792	**156.740**		132	-16.400	0.663	153.828	**152.910**		134	-16.420	0.663	156.597	**155.900**
	132	-16.370	0.661	164.518	**164.540**		133	-16.410	0.663	160.810	**161.680**		135	-16.420	0.663	165.383	**164.770**
	133	-16.370	0.661	173.602	**173.680**		134	-16.400	0.663	170.423	**169.500**		136	-16.430	0.663	171.015	**171.950**
	134	-16.370	0.661	181.470	**181.490**		135	-16.410	0.663	177.520	**178.350**		137	-16.430	0.663	179.927	**180.740**
	135	-16.370	0.661	190.685	**190.800**		136	-16.410	0.663	185.347	**185.970**		138	-16.430	0.663	187.652	**188.120**
	136	-16.370	0.661	198.692	**198.680**		137	-16.410	0.663	194.506	**194.790**		139	-16.430	0.663	196.695	**196.960**
	137	-16.370	0.661	208.035	**207.750**		138	-16.410	0.663	202.473	**202.550**		140	-16.430	0.663	204.561	**204.430**
							139	-16.410	0.663	211.762	**211.660**		141	-16.430	0.663	213.734	**213.490**
61	59	-16.990	0.600	-5.718	**-5.730**	62	61	-17.000	0.600	-10.745	**-10.850**	63	62	-17.010	0.826	-6.783	**-7.490**
	60	-16.990	0.600	-14.506	**-14.060**		62	-17.000	0.600	-19.415	**-18.690**		63	-17.000	0.826	-12.728	**-12.880**
	61	-16.970	0.600	-18.841	**-19.570**		63	-16.980	0.826	-22.992	**-23.230**		64	-17.000	0.826	-20.674	**-19.780**
	62	-16.970	0.600	-26.763	**-26.510**		64	-16.980	0.826	-30.398	**-29.690**		65	-16.980	0.826	-23.903	**-24.180**
	63	-16.950	0.600	-30.226	**-30.900**		65	-16.960	0.826	-33.099	**-33.590**		66	-16.980	0.826	-31.000	**-30.230**
	64	-16.950	0.600	-37.735	**-36.750**		66	-16.960	0.859	-39.307	**-39.150**		67	-16.960	0.889	-32.691	-33.513
	65	-16.940	0.840	-39.751	-39.750		67	-16.950	0.859	-42.267	-42.330		68	-16.960	0.889	-38.614	-39.464
	66	-16.930	0.840	-44.440	-45.310		68	-16.950	0.859	-47.804	-47.700		69	-16.960	0.889	-42.376	-42.200
	67	-16.930	0.840	-48.237	-48.220		69	-16.950	0.859	-51.209	-50.280		70	-16.960	0.889	-47.384	-47.236
	68	-16.930	0.840	-53.366	-53.180		70	-16.950	0.859	-55.905	-55.140		71	-16.950	0.889	-48.923	-49.800
	69	-16.930	0.840	-56.375	-55.470		71	-16.940	0.859	-57.169	-57.231		72	-16.960	0.889	-54.383	-54.148
	70	-16.930	0.840	-60.710	-59.770		72	-16.940	0.859	-61.040	-61.376		73	-16.960	0.889	-56.407	-56.244
	71	-16.920	0.840	-61.637	-61.628		73	-16.940	0.859	-62.841	-62.857		74	-16.960	0.889	-59.667	-60.146
	72	-16.920	0.840	-65.193	-65.408		74	-16.950	0.859	-67.281	-66.811		75	-16.900	0.777	-61.874	-61.750
	73	-16.920	0.840	-66.692	-66.764		75	-16.950	0.859	-68.332	-67.992		76	-16.900	0.777	-65.756	-65.398
	74	-16.930	0.840	-70.852	-70.062		76	-16.950	0.859	-70.656	-71.498		77	-16.900	0.777	-67.711	-66.986
	75	-16.930	0.840	-71.646	-71.170		77	-16.860	0.747	-72.269	-72.380		78	-16.890	0.777	-69.584	-69.926
	76	-16.930	0.840	-73.744	-74.073		78	-16.860	0.747	-75.542	-75.456		79	-16.890	0.777	-70.956	-71.309
	77	-16.940	0.840	-75.224	-74.914		79	-16.860	0.747	-76.932	-75.934		80	-16.900	0.777	-75.079	-74.241
	78	-16.840	0.745	-77.516	-77.501		80	-16.860	0.747	-79.679	-78.982		81	-16.900	0.777	-75.905	-75.619
	79	-16.840	0.745	-78.526	-78.212		81	-16.850	0.747	-79.138	-79.517		82	-16.900	0.777	-78.044	-77.992
	80	-16.840	0.745	-80.905	-80.523		82	-16.860	0.747	-82.804	-81.966		83	-16.900	0.777	-76.411	-77.118
	81	-16.840	0.745	-81.422	-81.142		83	-16.860	0.747	-81.279	-80.651		84	-16.910	0.777	-77.570	-77.545
	82	-16.840	0.745	-83.299	-82.961		84	-16.860	0.747	-81.108	-80.996		85	-16.790	0.699	-75.668	-76.297
	83	-16.840	0.745	-81.400	-81.416		85	-16.860	0.747	-79.145	-79.266		86	-16.790	0.699	-76.297	-76.441
	84	-16.840	0.745	-80.869	-81.268		86	-16.780	0.700	-79.296	-79.336		87	-16.790	0.699	-75.195	-74.792
	85	-16.840	0.745	-78.542	-79.454		87	-16.780	0.700	-77.818	-77.136		88	-16.790	0.699	-75.451	-74.653
	86	-16.750	0.695	-78.884	-79.042		88	-16.780	0.700	-77.708	-77.051		89	-16.780	0.699	-72.476	-72.889
	87	-16.750	0.695	-77.142	-76.866		89	-16.770	0.700	-74.371	-74.576		90	-16.790	0.699	-73.890	-73.367
	88	-16.750	0.695	-76.782	-76.064		90	-16.780	0.700	-75.412	-74.763		91	-16.790	0.699	-72.093	-71.738
	89	-16.740	0.695	-73.203	-73.597		91	-16.780	0.700	-73.247	-72.560		92	-16.790	0.699	-71.635	-71.818
	90	-16.750	0.695	-73.994	-73.386		92	-16.780	0.700	-72.429	-72.456		93	-16.790	0.699	-69.506	-70.083
	91	-16.750	0.695	-71.587	-71.254		93	-16.780	0.700	-69.934	-70.191		94	-16.790	0.699	-68.704	-69.459
	92	-16.750	0.695	-70.540	-70.648		94	-16.780	0.700	-68.776	-69.361		95	-16.800	0.699	-67.830	-67.270
	93	-16.750	0.695	-67.814	-68.267		95	-16.780	0.700	-65.960	-66.678		96	-16.790	0.699	-65.115	-66.043
	94	-16.750	0.695	-66.438	-66.940		96	-16.780	0.700	-64.472	-65.252		97	-16.800	0.699	-63.946	-63.493
	95	-16.750	0.695	-63.402	-64.167		97	-16.780	0.700	-61.344	-62.208		98	-16.790	0.699	-60.887	-61.792
	96	-16.750	0.695	-61.706	-62.297		98	-16.780	0.700	-59.534	-60.233		99	-16.790	0.699	-57.811	-58.723
	97	-16.750	0.695	-58.368	-59.106		99	-16.780	0.700	-56.103	-56.672		100	-16.790	0.699	-56.035	-56.574
	98	-16.750	0.695	-56.360	-56.554		100	-16.780	0.700	-53.980	-54.379		101	-16.790	0.699	-52.660	-53.232
	99	-16.750	0.695	-52.728	-52.895		101	-16.780	0.700	-50.252	-50.600		102	-16.790	0.699	-50.576	-50.729
	100	-16.750	0.695	-50.416	-50.087		102	-16.780	0.700	-47.824	-47.925		103	-16.790	0.699	-46.910	-46.749
	101	-16.750	0.695	-46.499	-46.040		103	-16.780	0.700	-43.809	-43.510		104	-16.790	0.699	-44.526	-43.770
	102	-16.750	0.695	-43.891	-42.960		104	-16.800	0.705	-40.784	-40.450		105	-16.810	0.706	-38.916	-39.250
	103	-16.790	0.705	-38.977	-38.360		105	-16.790	0.705	-34.683	-35.330		106	-16.810	0.706	-36.042	-35.660
	104	-16.780	0.705	-34.158	-34.670		106	-16.790	0.705	-31.520	-31.640		107	-16.810	0.706	-31.617	-30.860
	105	-16.790	0.705	-31.063	**-30.340**		107	-16.800	0.707	-26.844	**-27.750**		108	-16.810	0.706	-28.451	**-28.200**
	106	-16.790	0.707	-25.943	**-26.420**		108	-16.800	0.707	-23.337	**-24.140**		109	-16.810	0.706	-23.749	**-23.240**
	107	-16.790	0.707	-20.857	**-21.240**		109	-16.800	0.707	-18.289	**-18.750**		110	-16.810	0.708	-18.533	**-19.330**
	108	-16.790	0.707	-17.047	**-17.160**		110	-16.800	0.707	-14.500	**-14.790**		111	-16.810	0.708	-13.495	**-14.120**
	109	-16.790	0.707	-11.691	**-11.680**		111	-16.800	0.707	-9.185	**-9.150**		112	-16.810	0.708	-9.697	**-10.000**

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	110	-16.790	0.707	-7.602	**-7.220**		112	-16.800	0.707	-5.121	**-5.020**		113	-16.810	0.708	-4.394	**-4.610**
	111	-16.790	0.707	-1.984	**-1.580**		113	-16.800	0.707	0.454	**0.750**		114	-16.810	0.708	-0.323	**-0.370**
	112	-16.790	0.707	2.377	**2.960**		114	-16.800	0.707	4.787	**5.020**		115	-16.810	0.708	5.239	**5.130**
	113	-16.790	0.707	8.251	**8.720**		115	-16.800	0.707	10.614	**10.950**		116	-16.810	0.708	9.575	**9.610**
	114	-16.790	0.707	12.877	**13.420**		116	-16.800	0.707	15.210	**15.430**		117	-16.810	0.708	15.389	**15.460**
	115	-16.790	0.707	19.001	**19.390**		117	-16.800	0.707	21.285	**21.640**		118	-16.810	0.708	19.986	**20.010**
	116	-16.790	0.707	23.885	**24.230**		118	-16.800	0.707	26.136	**26.170**		119	-16.810	0.708	26.046	**25.940**
	117	-16.790	0.707	30.253	**30.480**		119	-16.800	0.707	32.452	**32.680**		120	-16.810	0.708	30.897	**30.740**
	118	-16.790	0.707	35.389	**35.410**		120	-16.800	0.707	37.552	**37.520**		121	-16.660	0.685	35.832	**36.660**
	119	-16.630	0.684	41.379	**41.990**		121	-16.800	0.707	44.104	**43.850**		122	-16.650	0.685	42.055	**41.370**
	120	-16.620	0.684	47.843	**47.310**		122	-16.800	0.707	49.448	**48.530**		123	-16.650	0.685	47.862	**46.990**
	121	-16.620	0.684	53.953	**53.390**		123	-16.640	0.684	53.989	**54.480**		124	-16.650	0.685	52.468	**51.730**
	122	-16.620	0.684	58.838	**58.640**		124	-16.640	0.684	58.821	**59.220**		125	-16.650	0.685	58.486	**57.690**
	123	-16.620	0.684	65.156	**64.510**		125	-16.640	0.684	65.068	**65.620**		126	-16.650	0.685	63.309	**62.770**
	124	-16.620	0.684	70.257	**69.680**		126	-16.640	0.684	70.114	**70.700**		127	-16.650	0.685	71.409	**70.860**
	125	-16.620	0.684	76.778	**76.070**		127	-16.640	0.684	78.446	**79.210**		128	-16.650	0.685	78.310	**77.750**
	126	-16.620	0.684	82.089	**81.570**		128	-16.640	0.684	85.572	**86.120**		129	-16.650	0.685	86.584	**85.880**
	127	-16.620	0.684	90.698	**90.050**		129	-16.640	0.684	94.074	**94.830**		130	-16.650	0.685	93.667	**92.770**
	128	-16.620	0.684	98.093	**97.390**		130	-16.640	0.684	101.377	**101.720**		131	-16.660	0.685	100.171	**100.640**
	129	-16.430	0.662	107.123	**106.190**		131	-16.640	0.684	110.046	**110.040**		132	-16.460	0.661	106.969	**107.640**
	130	-16.430	0.662	113.977	**113.430**		132	-16.640	0.684	117.524	**117.030**		133	-16.450	0.661	116.744	**115.760**
	131	-16.430	0.662	122.191	**121.800**		133	-16.640	0.684	126.355	**125.510**		134	-16.450	0.661	123.387	**122.790**
	132	-16.430	0.662	129.200	**129.210**		134	-16.650	0.684	132.043	**132.590**		135	-16.450	0.661	131.359	**130.840**
	133	-16.430	0.662	137.558	**137.650**		135	-16.440	0.661	140.462	**141.010**		136	-16.450	0.661	138.155	**137.440**
	134	-16.430	0.662	144.719	**145.040**		136	-16.440	0.661	147.496	**147.620**		137	-16.450	0.661	146.270	**145.480**
	135	-16.430	0.662	153.217	**153.580**		137	-16.440	0.661	155.852	**155.980**		138	-16.450	0.661	153.216	**152.300**
	136	-16.430	0.662	160.527	**160.590**		138	-16.440	0.661	163.033	**162.960**		139	-16.460	0.661	159.451	**160.430**
	137	-16.430	0.662	169.163	**168.960**		139	-16.440	0.661	171.526	**171.390**		140	-16.460	0.661	166.535	**167.420**
	138	-16.430	0.662	176.618	**176.250**		140	-16.440	0.661	178.853	**178.370**		141	-16.460	0.661	174.916	**175.520**
	139	-16.430	0.662	185.389	**184.850**		141	-16.440	0.661	187.479	**186.990**		142	-16.460	0.661	182.144	**182.580**
	140	-16.430	0.662	192.986	**192.250**		142	-16.440	0.661	194.947	**194.040**		143	-16.460	0.661	190.659	**190.860**
	141	-16.440	0.662	199.868	**200.800**		143	-16.440	0.661	203.704	**202.830**		144	-16.460	0.661	198.029	**198.140**
	142	-16.440	0.662	207.596	**208.400**		144	-16.450	0.661	209.251	**210.080**		145	-16.460	0.661	206.674	**206.610**
	143	-16.440	0.662	216.616	**216.960**		145	-16.450	0.661	218.127	**219.020**		146	-16.460	0.661	214.182	**213.950**
	144	-16.440	0.662	224.480	**224.870**		146	-16.450	0.661	225.858	**226.380**		147	-16.460	0.661	222.956	**222.060**
													148	-16.460	0.661	230.599	**230.540**
64	64	-17.010	0.826	-10.778	**-11.260**	65	65	-17.020	0.826	-5.342	**-5.370**	66	67	-17.020	0.826	-8.530	**-9.290**
	65	-17.000	0.826	-15.801	**-15.880**		66	-17.020	0.826	-13.487	**-12.730**		68	-17.020	0.826	-16.349	**-16.250**
	66	-17.000	0.826	-23.418	**-22.620**		67	-17.000	0.826	-16.882	**-17.520**		69	-17.000	0.726	-19.964	**-20.610**
	67	-16.980	0.826	-26.298	**-27.010**		68	-17.000	0.826	-24.192	**-23.930**		70	-17.010	0.826	-27.759	**-26.810**
	68	-16.980	0.826	-33.087	**-33.100**		69	-16.990	0.826	-28.083	**-28.100**		71	-16.990	0.826	-29.990	**-30.230**
	69	-16.970	0.826	-36.460	-36.060		70	-16.980	0.826	-33.242	-33.053		72	-17.000	0.930	-35.221	-34.931
	70	-16.970	0.889	-41.018	-41.530		71	-16.970	0.826	-36.334	-35.900		73	-17.000	0.930	-38.641	-37.700
	71	-16.970	0.889	-44.475	-44.250		72	-16.960	0.826	-40.687	-40.967		74	-17.000	0.930	-43.214	-42.830
	72	-16.970	0.889	-49.159	-49.090		73	-16.960	0.826	-44.383	-43.600		75	-17.000	0.930	-45.694	-45.382
	73	-16.970	0.889	-51.754	-51.214		74	-16.950	0.826	-47.964	-48.130		76	-17.000	0.930	-49.325	-50.120
	74	-16.970	0.889	-55.571	-55.660		75	-16.950	0.826	-50.936	-50.482		77	-17.010	0.930	-52.324	-52.169
	75	-16.970	0.889	-57.330	-57.632		76	-16.950	0.826	-55.176	-54.541		78	-16.930	0.768	-56.796	-56.570
	76	-16.910	0.773	-61.407	-61.782		77	-16.910	0.767	-56.369	-56.560		79	-16.920	0.768	-58.130	-58.243
	77	-16.910	0.773	-63.847	-63.224		78	-16.910	0.767	-60.620	-60.419		80	-16.920	0.768	-62.199	-62.555
	78	-16.910	0.773	-67.608	-66.960		79	-16.910	0.767	-62.990	-62.368		81	-16.920	0.768	-64.417	-64.196
	79	-16.900	0.773	-68.046	-68.231		80	-16.910	0.767	-66.667	-66.400		82	-16.920	0.768	-67.922	-67.859
	80	-16.910	0.773	-72.658	-71.760		81	-16.910	0.767	-68.487	-67.764		83	-16.920	0.768	-67.706	-67.694
	81	-16.900	0.773	-72.522	-72.927		82	-16.910	0.767	-71.606	-70.743		84	-16.920	0.768	-68.785	-69.310
	82	-16.910	0.773	-76.591	-76.086		83	-16.910	0.767	-70.990	-70.537		85	-16.920	0.768	-68.077	-68.752
	83	-16.910	0.773	-75.457	-75.357		84	-16.910	0.767	-71.682	-71.489		86	-16.840	0.700	-69.162	-70.118
	84	-16.910	0.773	-75.635	-76.269		85	-16.910	0.767	-70.582	-71.106		87	-16.840	0.700	-69.105	-69.143
	85	-16.920	0.773	-75.502	-75.127		86	-16.820	0.699	-71.181	-71.624		88	-16.840	0.700	-70.377	-70.394
	86	-16.810	0.701	-75.096	-75.764		87	-16.820	0.699	-70.788	-70.717		89	-16.840	0.700	-69.953	-69.156
	87	-16.810	0.701	-74.312	-74.189		88	-16.820	0.699	-71.733	-71.314		90	-16.840	0.700	-70.848	-70.529
	88	-16.810	0.701	-74.876	-74.707		89	-16.820	0.699	-70.978	-70.157		91	-16.840	0.700	-70.068	-69.425
	89	-16.810	0.701	-73.733	-72.883		90	-16.820	0.699	-71.552	-71.250		92	-16.860	0.709	-71.132	-70.407
	90	-16.810	0.701	-73.928	-73.706		91	-16.820	0.699	-70.446	-70.091		93	-16.860	0.709	-69.834	-69.167
	91	-16.810	0.701	-72.436	-72.070		92	-16.820	0.699	-70.659	-70.764		94	-16.860	0.709	-69.831	-69.672
	92	-16.810	0.701	-72.271	-72.535		93	-16.820	0.699	-69.211	-69.471		95	-16.860	0.709	-68.184	-68.055
	93	-16.810	0.701	-70.439	-70.824		94	-16.820	0.699	-69.073	-69.533		96	-16.860	0.709	-67.822	-68.181
	94	-16.810	0.701	-69.925	-70.690		95	-16.820	0.699	-67.293	-67.836		97	-16.860	0.709	-65.834	-66.381
	95	-16.810	0.701	-67.762	-68.562		96	-16.820	0.699	-66.813	-67.462		98	-16.860	0.709	-65.123	-65.968
	96	-16.820	0.701	-68.508	-67.942		97	-16.830	0.699	-66.328	-65.880		99	-16.860	0.709	-62.805	-63.612
	97	-16.820	0.701	-66.033	-65.506		98	-16.820	0.699	-63.895	-64.596		100	-16.860	0.709	-61.754	-62.584
	98	-16.820	0.701	-64.858	-64.281		99	-16.820	0.699	-61.475	-62.105		101	-16.860	0.709	-59.113	-59.911
	99	-16.810	0.701	-60.440	-61.389		100	-16.820	0.699	-60.338	-60.589		102	-16.860	0.709	-57.731	-58.558
	100	-16.810	0.701	-58.931	-59.694		101	-16.820	0.699	-57.611	-57.809		103	-16.860	0.709	-54.775	-55.596
	101	-16.810	0.701	-55.828	-56.526		102	-16.820	0.699	-56.157	-55.883		104	-16.860	0.709	-53.070	-53.710

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Z	N	$\alpha(0)$	a_a	Mass excess (MeV)		Z	N	$\alpha(0)$	a_a	Mass excess (MeV)		Z	N	$\alpha(0)$	a_a	Mass excess (MeV)	
				Cal.	Ex./Th.					Cal.	Ex./Th.					Cal.	Ex./Th.
	102	-16.810	0.701	-54.006	-54.371		103	-16.820	0.699	-53.131	-52.781		105	-16.860	0.709	-49.808	-50.010
	103	-16.810	0.701	-50.605	-50.776		104	-16.820	0.702	-49.526	-50.480		106	-16.860	0.709	-47.789	-47.760
	104	-16.810	0.701	-48.476	-48.150		105	-16.820	0.702	-46.122	-46.710		107	-16.860	0.709	-44.228	-43.740
	105	-16.810	0.701	-44.786	-43.890		106	-16.820	0.702	-43.972	-43.770		108	-16.870	0.713	-40.815	-41.130
	106	-16.820	0.706	-40.500	-40.850		107	-16.850	0.711	-39.066	-39.690		109	-16.870	0.713	-36.852	-36.730
	107	-16.820	0.706	-36.384	-36.210		108	-16.850	0.711	-36.375	-36.510		110	-16.870	0.713	-34.112	-33.610
	108	-16.820	0.706	-33.520	-32.970		109	-16.850	0.711	-32.154	-31.970		111	-16.870	0.713	-29.860	-30.010
	109	-16.820	0.706	-29.124	-29.230		110	-16.850	0.711	-29.166	-29.290		112	-16.870	0.713	-26.824	-26.750
	110	-16.820	0.706	-25.971	-25.810		111	-16.850	0.711	-24.663	-24.590		113	-16.870	0.713	-22.292	-21.940
	111	-16.820	0.706	-21.301	-20.610		112	-16.850	0.711	-21.384	-20.920		114	-16.870	0.713	-18.967	-18.530
	112	-16.820	0.706	-17.866	-17.000		113	-16.850	0.711	-16.606	-16.000		115	-16.870	0.713	-14.160	-13.400
	113	-16.820	0.708	-11.047	-11.550		114	-16.850	0.711	-13.044	-12.140		116	-16.870	0.713	-10.554	-9.890
	114	-16.820	0.708	-7.269	-7.740		115	-16.850	0.711	-7.997	-7.120		117	-16.870	0.713	-5.480	-4.540
	115	-16.820	0.708	-2.003	-2.320		116	-16.830	0.709	-2.552	-3.030		118	-16.860	0.713	0.242	-0.540
	116	-16.820	0.708	2.045	1.840		117	-16.830	0.709	2.707	2.230		119	-16.860	0.713	5.587	4.870
	117	-16.820	0.708	7.566	7.470		118	-16.830	0.709	6.764	6.630		120	-16.870	0.713	7.888	8.610
	118	-16.820	0.708	11.878	11.850		119	-16.830	0.709	12.276	12.130		121	-16.870	0.713	13.477	14.140
	119	-16.820	0.708	17.649	17.860		120	-16.830	0.709	16.595	16.290		122	-16.870	0.713	17.890	18.100
	120	-16.820	0.708	22.218	22.050		121	-16.830	0.709	22.355	21.830		123	-16.870	0.713	23.729	23.320
	121	-16.670	0.685	28.118	28.010		122	-16.690	0.686	25.436	26.180		124	-16.880	0.713	26.498	27.290
	122	-16.670	0.685	32.228	32.310		123	-16.690	0.686	30.723	31.400		125	-16.800	0.701	32.434	32.970
	123	-16.670	0.685	37.759	37.930		124	-16.680	0.686	36.711	35.750		126	-16.800	0.701	36.964	37.220
	124	-16.670	0.685	42.095	42.290		125	-16.680	0.686	42.225	41.480		127	-16.800	0.701	44.746	44.810
	125	-16.670	0.685	47.839	48.310		126	-16.680	0.686	46.558	46.130		128	-16.800	0.701	51.356	50.870
	126	-16.670	0.685	52.396	52.970		127	-16.680	0.686	54.148	53.720		129	-16.800	0.701	59.336	58.690
	127	-16.670	0.685	60.220	61.010		128	-16.680	0.686	60.552	60.210		130	-16.540	0.664	64.217	64.790
	128	-16.670	0.685	66.850	67.510		129	-16.680	0.686	68.323	67.980		131	-16.530	0.664	73.178	72.300
	129	-16.670	0.685	74.851	75.650		130	-16.680	0.686	74.917	74.410		132	-16.530	0.664	79.007	78.460
	130	-16.670	0.685	81.667	82.160		131	-16.680	0.686	82.866	81.890		133	-16.530	0.664	86.168	86.050
	131	-16.670	0.685	89.841	90.040		132	-16.690	0.686	87.675	88.420		134	-16.530	0.664	92.165	92.290
	132	-16.670	0.685	96.838	96.610		133	-16.690	0.686	95.787	96.070		135	-16.530	0.664	99.483	99.840
	133	-16.670	0.685	105.182	104.710		134	-16.690	0.686	102.737	102.690		136	-16.530	0.664	105.644	105.630
	134	-16.670	0.685	112.356	111.360		135	-16.520	0.665	110.061	110.100		137	-16.530	0.664	113.116	113.210
	135	-16.480	0.662	119.253	119.420		136	-16.520	0.665	116.497	116.420		138	-16.530	0.664	119.438	119.340
	136	-16.480	0.662	125.837	125.640		137	-16.520	0.665	124.247	124.020		139	-16.530	0.664	127.059	126.980
	137	-16.480	0.662	133.736	133.520		138	-16.520	0.665	130.842	130.530		140	-16.530	0.664	133.539	133.230
	138	-16.480	0.662	140.474	140.030		139	-16.520	0.665	138.740	138.190		141	-16.530	0.664	141.307	140.850
	139	-16.480	0.662	148.517	148.160		140	-16.520	0.665	145.490	144.720		142	-16.530	0.664	147.940	147.210
	140	-16.480	0.662	155.405	154.730		141	-16.530	0.665	151.473	152.410		143	-16.530	0.664	155.852	155.010
	141	-16.480	0.662	163.588	162.810		142	-16.530	0.665	158.365	159.190		144	-16.530	0.663	160.685	161.630
	142	-16.490	0.662	168.563	169.550		143	-16.530	0.665	166.540	166.980		145	-16.530	0.664	170.690	169.730
	143	-16.490	0.662	176.873	177.790		144	-16.530	0.665	173.581	173.940		146	-16.540	0.664	175.502	176.290
	144	-16.490	0.662	184.043	184.620		145	-16.530	0.665	181.895	181.840		147	-16.540	0.664	183.682	184.510
	145	-16.490	0.662	192.487	193.060		146	-16.530	0.665	189.082	189.070		148	-16.540	0.664	190.749	191.510
	146	-16.490	0.662	199.799	200.240		147	-16.530	0.665	197.531	197.300		149	-16.540	0.664	199.065	200.000
	147	-16.490	0.662	208.374	208.990		148	-16.530	0.665	204.862	204.710		150	-16.570	0.667	206.453	207.420
	148	-16.490	0.662	215.824	216.410		149	-16.530	0.665	213.444	213.250		151	-16.530	0.664	216.891	216.090
	149	-16.490	0.662	224.528	225.370		150	-16.530	0.665	220.914	220.910		152	-16.530	0.664	224.249	223.550
	150	-16.490	0.662	232.114	233.070		151	-16.530	0.665	229.627	229.640		153	-16.530	0.664	232.836	232.540
							152	-16.530	0.665	237.234	237.740		154	-16.530	0.664	240.330	240.210
							153	-16.530	0.665	246.075	246.740		155	-16.530	0.664	249.044	249.410
67	69	-17.030	0.826	-11.115	-11.120	68	70	-17.050	0.826	-10.542	-9.580	69	72	-17.040	0.881	-9.876	-10.030
	70	-17.020	0.726	-17.830	-17.470		71	-17.030	0.826	-13.755	-13.680		73	-17.030	0.881	-13.942	-14.060
	71	-17.010	0.826	-21.366	-21.470		72	-17.020	0.826	-19.574	-19.660		74	-17.000	0.708	-18.782	-19.610
	72	-17.000	0.826	-26.701	-26.870		73	-17.010	0.826	-23.372	-23.170		75	-16.990	0.708	-22.943	-22.159
	73	-17.000	0.930	-29.065	-29.317		74	-17.000	0.826	-28.391	-27.930		76	-16.990	0.820	-26.954	-27.583
	74	-17.000	0.930	-34.235	-34.364		75	-17.000	0.870	-31.576	-31.160		77	-16.990	0.820	-31.212	-31.055
	75	-17.000	0.930	-37.318	-37.250		76	-17.000	0.870	-36.903	-36.608		78	-16.990	0.820	-36.695	-35.974
	76	-17.000	0.930	-41.539	-42.048		77	-16.990	0.870	-38.791	-39.240		79	-16.980	0.820	-38.790	-38.765
	77	-17.000	0.930	-43.703	-44.610		78	-17.000	0.870	-44.765	-44.322		80	-16.980	0.820	-43.573	-43.940
	78	-17.010	0.930	-48.452	-49.120		79	-17.000	0.870	-47.330	-46.608		81	-16.980	0.820	-46.475	-46.491
	79	-16.930	0.768	-51.187	-51.238		80	-17.000	0.870	-51.075	-51.479		82	-16.980	0.820	-50.588	-50.772
	80	-16.930	0.768	-55.669	-55.757		81	-16.920	0.724	-53.801	-53.742		83	-16.990	0.820	-52.496	-51.720
	81	-16.930	0.768	-58.306	-57.991		82	-16.910	0.724	-57.138	-57.831		84	-16.990	0.820	-54.116	-53.973
	82	-16.930	0.768	-62.219	-61.646		83	-16.910	0.724	-58.305	-58.266		85	-16.990	0.820	-53.920	-54.427
	83	-16.930	0.768	-62.424	-61.946		84	-16.910	0.724	-60.783	-60.500		86	-16.910	0.720	-56.507	-56.626
	84	-16.930	0.768	-63.915	-63.623		85	-16.890	0.712	-60.040	-60.467		87	-16.910	0.720	-57.238	-56.834
	85	-16.930	0.768	-63.624	-63.605		86	-16.890	0.712	-62.234	-62.605		88	-16.910	0.720	-59.256	-58.709
	86	-16.930	0.768	-64.610	-65.012		87	-16.890	0.712	-62.716	-62.209		89	-16.910	0.720	-59.579	-58.703
	87	-16.930	0.768	-63.836	-64.639		88	-16.890	0.712	-64.498	-64.212		90	-16.910	0.720	-61.179	-60.570
	88	-16.850	0.700	-65.671	-66.040		89	-16.880	0.712	-63.016	-63.414		91	-16.910	0.720	-61.104	-60.301
	89	-16.850	0.700	-65.593	-65.538		90	-16.890	0.712	-65.967	-65.304		92	-16.910	0.720	-62.299	-61.899
	90	-16.850	0.700	-66.825	-66.833		91	-16.880	0.712	-64.084	-64.561		93	-16.910	0.720	-61.837	-61.477
	91	-16.850	0.700	-66.386	-66.187		92	-16.890	0.712	-66.664	-66.064		94	-16.910	0.720	-62.636	-62.728

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	92	-16.850	0.700	-67.248	-67.330		93	-16.890	0.712	-65.999	-65.201		95	-16.910	0.720	-61.798	-61.909
	93	-16.850	0.700	-66.457	-66.382		94	-16.890	0.712	-66.608	-66.334		96	-16.900	0.712	-63.034	-62.930
	94	-16.880	0.712	-68.062	-67.196		95	-16.890	0.712	-65.581	-65.167		97	-16.900	0.712	-61.991	-61.886
	95	-16.880	0.712	-66.700	-66.041		96	-16.890	0.712	-65.821	-65.943		98	-16.900	0.712	-62.198	-62.543
	96	-16.880	0.712	-66.613	-66.378		97	-16.890	0.712	-64.441	-64.521		99	-16.900	0.712	-60.808	-61.312
	97	-16.880	0.712	-64.903	-64.981		98	-16.890	0.712	-64.320	-64.924		100	-16.900	0.712	-60.659	-61.275
	98	-16.880	0.712	-64.459	-64.898		99	-16.890	0.712	-62.598	-63.289		101	-16.900	0.712	-58.931	-59.795
	99	-16.880	0.712	-62.410	-63.070		100	-16.890	0.712	-62.125	-62.989		102	-16.900	0.712	-58.435	-59.210
	100	-16.880	0.712	-61.619	-62.279		101	-16.890	0.712	-60.068	-60.921		103	-16.900	0.712	-56.377	-57.374
	101	-16.880	0.712	-59.239	-60.059		102	-16.890	0.712	-59.253	-60.108		104	-16.900	0.712	-55.544	-56.256
	102	-16.880	0.712	-58.109	-58.796		103	-16.890	0.712	-56.870	-57.718		105	-16.900	0.712	-53.165	-53.865
	103	-16.880	0.712	-55.407	-56.238		104	-16.890	0.712	-55.721	-56.483		106	-16.900	0.712	-52.003	-52.311
	104	-16.880	0.712	-53.947	-54.518		105	-16.890	0.712	-53.021	-53.654		107	-16.900	0.712	-49.310	-49.371
	105	-16.880	0.712	-50.932	-51.484		106	-16.890	0.712	-51.546	-51.949		108	-16.900	0.712	-47.827	-47.570
	106	-16.880	0.712	-49.149	-49.351		107	-16.890	0.712	-48.537	-48.652		109	-16.900	0.712	-44.828	-44.240
	107	-16.880	0.712	-45.829	-45.870		108	-16.890	0.712	-46.745	-46.631		110	-16.890	0.712	-41.242	-41.900
	108	-16.880	0.712	-43.733	-43.300		109	-16.890	0.712	-43.434	-42.858		111	-16.920	0.719	-38.486	-38.170
	109	-16.900	0.718	-39.408	-39.390		110	-16.910	0.718	-40.702	-40.260		112	-16.920	0.719	-36.193	-35.440
	110	-16.900	0.718	-36.843	-36.280		111	-16.910	0.718	-36.935	-36.080		113	-16.920	0.719	-32.412	-31.490
	111	-16.900	0.718	-32.767	-32.130		112	-16.900	0.718	-32.567	-33.180		**114**	-16.920	0.719	-29.814	**-29.680**
	112	-16.900	0.718	-29.898	**-29.790**		**113**	-16.910	0.718	-30.306	**-30.130**		**115**	-16.920	0.719	-25.743	**-25.440**
	113	-16.900	0.718	-25.532	**-25.390**		**114**	-16.910	0.718	-27.437	**-27.240**		**116**	-16.920	0.719	-22.846	**-22.330**
	114	-16.900	0.718	-22.365	**-22.040**		**115**	-16.910	0.718	-23.091	**-22.610**		**117**	-16.920	0.719	-18.491	**-17.820**
	115	-16.900	0.718	-17.718	**-17.350**		**116**	-16.910	0.718	-19.927	**-19.480**		**118**	-16.910	0.719	-13.433	**-14.270**
	116	-16.900	0.718	-14.260	**-13.760**		**117**	-16.910	0.718	-15.301	**-14.550**		**119**	-16.920	0.719	-10.670	**-9.770**
	117	-16.900	0.718	-9.336	**-8.820**		**118**	-16.910	0.718	-11.851	**-11.060**		**120**	-16.920	0.719	-7.199	**-6.630**
	118	-16.900	0.718	-5.595	**-4.800**		**119**	-16.910	0.718	-6.953	**-6.070**		**121**	-16.920	0.719	-2.295	**-1.830**
	119	-16.900	0.718	-0.402	**0.150**		**120**	-16.910	0.718	-3.223	**-2.830**		**122**	-16.920	0.719	1.454	**1.660**
	120	-16.900	0.718	3.615	**3.840**		**121**	-16.910	0.718	1.942	**2.320**		**123**	-16.920	0.719	6.622	**6.060**
	121	-16.900	0.718	9.071	**9.000**		**122**	-16.910	0.718	5.945	**5.880**		**124**	-16.930	0.719	8.713	**9.550**
	122	-16.900	0.718	13.359	**12.990**		**123**	-16.910	0.718	11.370	**10.610**		**125**	-16.850	0.705	13.519	**14.460**
	123	-16.910	0.718	17.172	**17.760**		**124**	-16.830	0.703	13.615	**14.170**		**126**	-16.850	0.705	17.364	**18.270**
	124	-16.800	0.701	22.260	**21.720**		**125**	-16.830	0.703	18.824	**19.450**		**127**	-16.850	0.705	24.435	**25.050**
	125	-16.800	0.701	27.689	**27.080**		**126**	-16.830	0.703	22.879	**23.350**		**128**	-16.850	0.705	30.353	**30.640**
	126	-16.800	0.701	31.957	**31.320**		**127**	-16.830	0.703	30.169	**30.500**		**129**	-16.850	0.705	37.634	**37.650**
	127	-16.810	0.701	37.529	**38.470**		**128**	-16.830	0.703	36.299	**36.100**		**130**	-16.850	0.705	43.770	**43.580**
	128	-16.810	0.701	43.863	**44.490**		**129**	-16.830	0.703	43.793	**43.640**		**131**	-16.850	0.705	51.256	**50.280**
	129	-16.810	0.701	51.565	**51.980**		**130**	-16.830	0.703	50.136	**49.420**		**132**	-16.610	0.668	55.287	**55.910**
	130	-16.580	0.669	59.098	**58.100**		**131**	-16.590	0.668	57.462	**56.580**		**133**	-16.610	0.668	61.807	**62.740**
	131	-16.580	0.669	65.995	**65.240**		**132**	-16.590	0.668	62.915	**62.210**		**134**	-16.600	0.668	69.213	**68.520**
	132	-16.580	0.669	71.728	**71.260**		**133**	-16.590	0.668	69.695	**69.410**		**135**	-16.600	0.668	75.912	**75.280**
	133	-16.580	0.669	78.793	**78.450**		**134**	-16.590	0.668	75.324	**75.200**		**136**	-16.600	0.668	81.473	**80.910**
	134	-16.580	0.669	84.700	**84.650**		**135**	-16.590	0.668	82.270	**82.370**		**137**	-16.600	0.668	88.336	**87.500**
	135	-16.580	0.669	91.927	**91.730**		**136**	-16.590	0.668	88.072	**87.780**		**138**	-16.600	0.668	94.068	**93.270**
	136	-16.560	0.666	97.325	**97.590**		**137**	-16.590	0.668	95.179	**94.930**		**139**	-16.600	0.668	101.093	**100.140**
	137	-16.560	0.666	104.613	**104.690**		**138**	-16.590	0.668	101.150	**100.700**		**140**	-16.610	0.668	104.903	**105.900**
	138	-16.560	0.666	110.758	**110.860**		**139**	-16.590	0.668	108.416	**107.970**		**141**	-16.610	0.668	112.076	**112.960**
	139	-16.560	0.666	118.201	**118.060**		**140**	-16.590	0.668	114.553	**113.830**		**142**	-16.610	0.668	118.131	**118.870**
	140	-16.560	0.666	124.508	**124.330**		**141**	-16.590	0.668	121.974	**121.150**		**143**	-16.610	0.668	125.458	**125.950**
	141	-16.560	0.666	132.101	**131.630**		**142**	-16.600	0.668	126.172	**127.070**		**144**	-16.610	0.668	131.674	**132.020**
	142	-16.560	0.666	138.566	**137.920**		**143**	-16.600	0.668	133.735	**134.620**		**145**	-16.610	0.668	139.152	**139.350**
	143	-16.560	0.666	146.307	**145.370**		**144**	-16.600	0.668	140.182	**140.710**		**146**	-16.610	0.668	145.527	**145.690**
	144	-16.560	0.666	152.926	**151.950**		**145**	-16.600	0.668	147.893	**148.390**		**147**	-16.610	0.668	153.153	**153.160**
	145	-16.570	0.666	158.693	**159.660**		**146**	-16.600	0.668	154.496	**154.760**		**148**	-16.610	0.668	159.682	**159.560**
	146	-16.570	0.666	165.454	**166.380**		**147**	-16.600	0.668	162.353	**162.610**		**149**	-16.610	0.668	167.453	**167.260**
	147	-16.570	0.666	173.471	**174.200**		**148**	-16.600	0.668	169.107	**169.080**		**150**	-16.610	0.668	174.134	**173.930**
	148	-16.570	0.666	180.381	**181.140**		**149**	-16.600	0.668	177.106	**177.100**		**151**	-16.610	0.668	182.047	**181.720**
	149	-16.570	0.666	188.537	**189.230**		**150**	-16.600	0.668	184.011	**183.810**		**152**	-16.610	0.668	188.877	**188.650**
	150	-16.570	0.666	195.592	**196.380**		**151**	-16.600	0.668	192.149	**192.040**		**153**	-16.610	0.668	196.929	**196.830**
	151	-16.570	0.666	203.885	**204.630**		**152**	-16.600	0.668	199.200	**199.070**		**154**	-16.610	0.668	203.904	**204.210**
	152	-16.570	0.666	211.083	**212.040**		**153**	-16.600	0.668	207.475	**207.580**		**155**	-16.610	0.668	212.093	**212.510**
	153	-16.580	0.667	219.604	**220.590**		**154**	-16.600	0.668	214.669	**214.920**		**156**	-16.610	0.668	219.211	**220.090**
	154	-16.570	0.667	229.187	**228.280**		**155**	-16.600	0.668	223.078	**223.770**		**157**	-16.610	0.668	227.533	**228.500**
	155	-16.570	0.667	237.788	**237.230**		**156**	-16.600	0.668	230.412	**231.170**		**158**	-16.601	0.668	236.835	**236.030**
	156	-16.570	0.667	245.309	**245.090**		**157**	-16.590	0.668	241.204	**240.210**		**159**	-16.600	0.668	245.525	**244.560**
	157	-16.570	0.667	254.038	**253.940**		**158**	-16.590	0.668	248.685	**247.700**		**160**	-16.600	0.668	252.930	**252.170**
							159	-16.590	0.668	257.365	**256.750**		161	-16.600	0.668	261.523	**260.710**
70	**73**	-17.040	0.778	-5.450	**-5.860**	**71**	**75**	-17.030	0.603	-6.429	**-6.110**	**72**	**77**	-17.040	0.845	-7.836	**-7.670**
	74	-17.030	0.778	-11.602	**-11.900**		**76**	-17.040	0.910	-11.840	**-11.900**		**78**	-17.030	0.845	-13.062	**-13.920**
	75	-17.010	0.642	-16.120	**-15.780**		**77**	-17.030	0.910	-15.032	**-15.680**		**79**	-17.030	0.845	-17.863	**-17.690**
	76	-17.010	0.786	-21.120	**-21.400**		**78**	-17.030	0.910	-20.804	**-21.130**		**80**	-17.030	0.845	-23.826	**-23.670**
	77	-17.000	0.786	-24.616	**-24.570**		79	-17.000	0.797	-24.194	-24.771		81	-17.000	0.770	-26.511	-27.300
	78	-17.000	0.813	-29.885	-30.230		80	-17.000	0.797	-30.084	-30.300		82	-17.000	0.770	-32.419	-32.730
	79	-17.000	0.813	-33.984	-33.330		81	-17.000	0.797	-34.123	-33.422		83	-17.000	0.770	-34.685	-34.310

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	80	-17.000	0.813	-39.296	-38.830		82	-17.000	0.797	-39.374	-38.375		84	-17.000	0.770	-38.185	-37.820
	81	-16.990	0.813	-41.229	-41.542		83	-16.990	0.797	-39.407	-39.667		85	-16.990	0.770	-38.355	-38.855
	82	-16.990	0.813	-45.869	-46.270		84	-16.990	0.797	-42.190	-42.545		86	-17.000	0.770	-42.893	-42.102
	83	-16.990	0.813	-46.803	-47.160		85	-16.990	0.797	-43.187	-43.700		87	-16.990	0.770	-42.532	-42.853
	84	-17.000	0.813	-50.495	-49.932		86	-17.000	0.797	-46.969	-46.440		88	-17.000	0.770	-46.572	-45.939
	85	-17.000	0.813	-50.852	-50.503		87	-17.000	0.797	-47.426	-47.212		89	-17.000	0.770	-47.305	-46.316
	86	-17.000	0.813	-52.420	-53.266		88	-17.000	0.797	-49.091	-49.709		90	-17.000	0.770	-49.251	-49.168
	87	-17.010	0.813	-53.776	-53.420		89	-16.930	0.717	-49.822	-50.270		91	-17.000	0.770	-49.500	-49.269
	88	-16.920	0.711	-56.112	-56.010		90	-16.930	0.717	-52.160	-52.562		92	-17.000	0.770	-50.956	-51.818
	89	-16.910	0.711	-55.335	-55.834		91	-16.930	0.717	-52.835	-52.832		93	-17.000	0.770	-50.734	-51.636
	90	-16.910	0.711	-57.413	-58.163		92	-16.930	0.717	-54.763	-54.791		94	-16.950	0.718	-54.493	-53.859
	91	-16.910	0.711	-57.826	-57.834		93	-16.930	0.717	-55.046	-54.642		95	-16.940	0.718	-53.052	-53.468
	92	-16.910	0.711	-59.506	-59.821		94	-16.930	0.717	-56.574	-56.442		96	-16.940	0.718	-54.500	-55.361
	93	-16.910	0.711	-59.541	-59.294		95	-16.930	0.717	-56.477	-56.021		97	-16.940	0.718	-54.344	-54.717
	94	-16.910	0.711	-60.834	-61.012		96	-16.930	0.717	-57.617	-57.526		98	-16.940	0.718	-55.408	-56.254
	95	-16.910	0.711	-60.500	-60.295		97	-16.930	0.717	-57.148	-57.073		99	-16.940	0.718	-54.884	-55.431
	96	-16.910	0.711	-61.415	-61.594		98	-16.930	0.717	-57.909	-58.083		100	-16.940	0.718	-55.574	-56.402
	97	-16.910	0.711	-60.722	-60.590		99	-16.930	0.717	-57.079	-57.306		101	-16.940	0.718	-54.693	-55.412
	98	-16.910	0.711	-61.270	-61.580		100	-16.930	0.717	-57.470	-57.828		102	-16.940	0.718	-55.018	-55.845
	99	-16.910	0.711	-60.228	-60.376		101	-16.930	0.717	-56.288	-56.736		103	-16.940	0.718	-53.790	-54.482
	100	-16.910	0.711	-60.418	-60.764		102	-16.930	0.717	-56.320	-56.881		104	-16.940	0.718	-53.759	-54.576
	101	-16.910	0.711	-59.034	-59.307		103	-16.930	0.717	-54.794	-55.570		105	-16.940	0.718	-52.191	-52.881
	102	-16.910	0.711	-58.875	-59.255		104	-16.930	0.717	-54.475	-55.166		106	-16.940	0.718	-51.813	-52.435
	103	-16.910	0.711	-57.159	-57.551		105	-16.930	0.717	-52.615	-53.382		107	-16.940	0.718	-49.914	-50.463
	104	-16.910	0.711	-56.660	-56.945		106	-16.930	0.717	-51.953	-52.384		108	-16.940	0.718	-49.198	-49.779
	105	-16.910	0.711	-54.620	-54.696		107	-16.930	0.717	-49.767	-50.338		109	-16.940	0.718	-46.975	-47.403
	106	-16.910	0.711	-53.789	-53.491		108	-16.930	0.717	-48.772	-49.059		110	-16.940	0.718	-45.929	-46.050
	107	-16.910	0.711	-51.433	-50.986		109	-16.930	0.717	-46.267	-46.676		111	-16.940	0.718	-43.391	-43.284
	108	-16.910	0.711	-50.279	-49.677		110	-16.930	0.717	-44.946	-44.797		112	-16.940	0.718	-42.023	-41.499
	109	-16.900	0.711	-45.825	-46.640		111	-16.930	0.717	-42.130	-41.770		113	-16.940	0.718	-39.177	-38.320
	110	-16.900	0.711	-44.345	-44.720		112	-16.930	0.717	-40.491	-39.716		114	-16.930	0.718	-35.634	-36.424
	111	-16.900	0.711	-41.370	-41.088		113	-16.920	0.717	-35.533	-36.300		115	-16.930	0.718	-32.478	-33.000
	112	-16.930	0.720	-38.860	-38.900		114	-16.950	0.723	-34.833	-33.960		116	-16.930	0.718	-30.478	-30.830
	113	-16.930	0.720	-35.354	-35.000		115	-16.950	0.723	-31.256	-30.320		117	-16.940	0.721	-26.611	-27.150
	114	-16.930	0.720	-33.023	-32.600		116	-16.940	0.723	-26.969	-27.770		118	-16.940	0.721	-24.228	-24.800
	115	-16.930	0.720	-29.221	-28.480		117	-16.940	0.723	-23.089	-23.820		**119**	-16.880	0.706	-21.324	**-21.650**
	116	-16.930	0.720	-26.587	**-26.890**		**118**	-16.950	0.723	-22.250	**-21.850**		**120**	-16.880	0.706	-19.061	**-19.400**
	117	-16.930	0.720	-22.497	**-22.440**		**119**	-16.950	0.723	-18.091	**-17.560**		**121**	-16.880	0.706	-15.382	**-15.310**
	118	-16.930	0.720	-19.568	**-19.490**		**120**	-16.950	0.723	-15.078	**-14.940**		**122**	-16.880	0.706	-12.844	**-12.890**
	119	-16.930	0.720	-15.197	**-14.900**		**121**	-16.950	0.723	-10.638	**-10.680**		**123**	-16.880	0.706	-8.903	**-9.010**
	120	-16.930	0.720	-11.979	**-12.210**		**122**	-16.950	0.723	-7.336	**-7.700**		**124**	-16.880	0.706	-6.096	**-6.410**
	121	-16.930	0.720	-7.333	**-7.510**		**123**	-16.960	0.723	-4.561	**-3.820**		**125**	-16.880	0.706	-1.899	**-1.880**
	122	-16.930	0.720	-3.833	**-4.470**		**124**	-16.960	0.723	-0.988	**-0.740**		**126**	-16.880	0.706	1.171	**1.090**
	123	-16.940	0.720	-0.848	**-0.190**		**125**	-16.870	0.706	3.485	**3.770**		**127**	-16.880	0.706	7.438	**7.260**
	124	-16.860	0.705	2.349	**2.920**		**126**	-16.870	0.706	6.824	**7.210**		**128**	-16.880	0.706	12.574	**11.950**
	125	-16.860	0.705	7.065	**7.820**		**127**	-16.870	0.706	13.369	**13.430**		**129**	-16.880	0.706	19.062	**18.570**
	126	-16.860	0.705	10.642	**11.200**		**128**	-16.870	0.706	18.776	**18.540**		**130**	-16.880	0.706	24.424	**23.720**
	127	-16.860	0.705	17.434	**17.960**		**129**	-16.870	0.706	25.539	**25.310**		**131**	-16.880	0.706	31.128	**30.410**
	128	-16.860	0.705	23.081	**23.160**		**130**	-16.870	0.706	31.170	**30.800**		**132**	-16.680	0.672	35.685	**35.300**
	129	-16.860	0.705	30.087	**30.170**		**131**	-16.670	0.672	36.395	**37.210**		**133**	-16.680	0.672	41.568	**41.780**
	130	-16.860	0.705	35.954	**35.760**		**132**	-16.660	0.672	43.235	**42.430**		**134**	-16.680	0.672	46.324	**46.690**
	131	-16.860	0.705	43.169	**42.560**		**133**	-16.660	0.672	49.374	**48.890**		**135**	-16.680	0.672	52.386	**53.350**
	132	-16.650	0.672	48.036	**47.820**		**134**	-16.660	0.672	54.382	**54.200**		**136**	-16.680	0.672	57.330	**58.310**
	133	-16.650	0.672	54.427	**54.660**		**135**	-16.660	0.672	60.698	**60.810**		**137**	-16.670	0.672	65.658	**64.760**
	134	-16.650	0.672	59.681	**60.000**		**136**	-16.660	0.672	65.890	**66.090**		**138**	-16.680	0.672	68.694	**69.570**
	135	-16.650	0.672	66.246	**66.930**		**137**	-16.660	0.672	72.379	**72.220**		**139**	-16.680	0.673	76.560	**76.110**
	136	-16.650	0.672	71.681	**72.150**		**138**	-16.660	0.672	77.751	**77.610**		**140**	-16.680	0.672	80.408	**81.180**
	137	-16.650	0.672	78.417	**78.720**		**139**	-16.660	0.672	84.410	**84.150**		**141**	-16.680	0.672	86.987	**87.820**
	138	-16.650	0.672	84.029	**84.160**		**140**	-16.660	0.672	89.958	**89.650**		**142**	-16.680	0.672	92.467	**93.050**
	139	-16.650	0.672	90.931	**91.030**		**141**	-16.660	0.672	96.783	**96.220**		**143**	-16.680	0.672	99.219	**99.820**
	140	-16.650	0.672	96.717	**96.490**		**142**	-16.660	0.672	102.503	**101.880**		**144**	-16.680	0.672	104.861	**105.180**
	141	-16.650	0.672	103.783	**103.500**		**143**	-16.660	0.672	109.491	**108.590**		**145**	-16.680	0.672	111.767	**112.050**
	142	-16.650	0.672	109.738	**109.060**		**144**	-16.670	0.673	114.933	**114.300**		**146**	-16.680	0.672	117.586	**117.620**
	143	-16.650	0.672	116.964	**116.150**		**145**	-16.670	0.672	120.367	**121.220**		**147**	-16.680	0.672	124.649	**124.590**
	144	-16.660	0.672	120.946	**121.940**		**146**	-16.670	0.672	126.412	**127.060**		**148**	-16.680	0.672	130.633	**130.400**
	145	-16.660	0.672	128.317	**129.150**		**147**	-16.670	0.672	133.704	**134.140**		**149**	-16.680	0.672	137.852	**137.600**
	146	-16.660	0.672	134.593	**135.130**		**148**	-16.670	0.672	139.911	**140.230**		**150**	-16.680	0.672	143.997	**143.460**
	147	-16.660	0.672	142.118	**142.570**		**149**	-16.670	0.672	147.356	**147.440**		**151**	-16.680	0.672	151.367	**150.860**
	148	-16.660	0.672	148.553	**148.670**		**150**	-16.670	0.672	153.722	**153.800**		**152**	-16.680	0.672	157.671	**157.080**
	149	-16.660	0.672	156.228	**156.280**		**151**	-16.670	0.672	161.317	**161.210**		**153**	-16.680	0.672	165.190	**164.810**
	150	-16.660	0.672	162.819	**162.540**		**152**	-16.670	0.672	167.839	**167.750**		**154**	-16.680	0.672	171.648	**171.210**
	151	-16.660	0.672	170.641	**170.460**		**153**	-16.670	0.672	175.580	**175.540**		**155**	-16.680	0.672	179.314	**179.250**
	152	-16.660	0.672	177.386	**177.010**		**154**	-16.670	0.672	182.255	**182.300**		**156**	-16.680	0.672	185.924	**185.800**
	153	-16.660	0.672	185.353	**185.120**		**155**	-16.670	0.672	190.139	**190.340**		**157**	-16.680	0.672	193.732	**193.810**

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Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	154	-16.660	0.672	192.248	**191.990**		156	-16.670	0.672	196.964	**197.350**		158	-16.680	0.672	200.492	**200.520**
	155	-16.660	0.672	200.355	**200.400**		157	-16.670	0.672	204.989	**205.320**		159	-16.680	0.672	208.440	**208.470**
	156	-16.660	0.672	207.398	**207.480**		158	-16.670	0.672	211.961	**212.490**		160	-16.680	0.672	215.346	**215.150**
	157	-16.660	0.672	215.644	**215.810**		159	-16.670	0.672	220.123	**220.440**		161	-16.680	0.672	223.432	**223.320**
	158	-16.660	0.672	222.831	**223.050**		160	-16.670	0.672	227.239	**227.600**		162	-16.680	0.672	230.481	**230.120**
	159	-16.660	0.672	231.213	**231.380**		161	-16.670	0.672	235.538	**235.710**		163	-16.680	0.672	238.702	**238.880**
	160	-16.660	0.672	238.542	**238.500**		162	-16.670	0.672	242.794	**242.930**		164	-16.680	0.672	245.891	**246.340**
	161	-16.660	0.672	247.056	**247.100**		163	-16.670	0.672	251.226	**251.660**		165	-16.792	0.683	255.977	**255.270**
	162	-16.660	0.672	254.525	**254.460**		164	-16.670	0.672	258.621	**259.600**		166	-16.792	0.683	263.704	**262.950**
	163	-16.660	0.672	263.170	**263.510**		165	-16.660	0.672	269.542	**268.620**		167	-16.793	0.683	272.351	**271.700**
	164	-16.660	0.672	270.774	**271.400**		166	-16.660	0.672	277.084	**276.600**		168	-16.792	0.683	280.458	**279.640**
73	**78**	-17.050	0.845	-4.252	**-4.190**	**74**	**80**	-17.060	0.845	-7.535	**-7.260**	**75**	**81**	-17.070	0.845	-2.441	**-2.350**
	79	-17.050	0.845	-9.552	**-8.560**		**81**	-17.060	0.845	-12.577	**-11.620**		**82**	-17.070	0.845	-9.090	**-8.390**
	80	-17.040	0.845	-14.474	**-14.610**		**82**	-17.060	0.845	-18.757	**-17.780**		**83**	-17.060	0.845	-10.488	**-11.000**
	81	-17.040	0.845	-19.032	**-18.780**		83	-17.050	0.845	-19.682	-19.690		84	-17.060	0.845	-14.595	-14.805
	82	-17.010	0.772	-23.176	-23.988		84	-17.020	0.762	-22.799	-23.693		85	-17.030	0.766	-16.081	-16.878
	83	-17.010	0.772	-25.837	-26.001		85	-17.020	0.762	-25.425	-25.434		86	-17.030	0.766	-20.272	-20.843
	84	-17.010	0.772	-29.721	-29.596		86	-17.020	0.762	-29.265	-29.329		87	-17.030	0.766	-22.741	-22.453
	85	-17.010	0.772	-31.848	-31.118		87	-17.020	0.762	-31.382	-30.507		88	-17.030	0.766	-26.407	-26.002
	86	-17.010	0.772	-35.192	-34.439		88	-17.020	0.762	-34.708	-33.999		89	-17.030	0.766	-28.372	-27.472
	87	-17.010	0.772	-36.801	-35.824		89	-17.010	0.762	-34.702	-34.908		90	-17.030	0.766	-31.526	-30.659
	88	-17.010	0.772	-39.619	-38.779		90	-17.020	0.762	-39.158	-38.236		91	-17.020	0.766	-31.340	-31.837
	89	-17.010	0.772	-40.722	-39.781		91	-17.010	0.762	-38.651	-38.861		92	-17.030	0.766	-35.657	-34.834
	90	-17.010	0.772	-43.029	-42.535		92	-17.020	0.762	-42.639	-41.887		93	-17.030	0.766	-36.652	-35.795
	91	-17.010	0.772	-43.641	-43.283		93	-17.010	0.762	-41.645	-42.093		94	-17.030	0.766	-38.824	-38.409
	92	-17.010	0.772	-45.449	-45.848		94	-17.020	0.762	-45.178	-44.893		95	-17.030	0.766	-39.353	-38.904
	93	-17.010	0.772	-45.583	-46.098		95	-17.020	0.762	-45.398	-44.918		96	-17.030	0.766	-41.053	-41.250
	94	-16.960	0.719	-48.835	-48.351		96	-17.020	0.762	-46.799	-47.291		97	-17.030	0.766	-41.129	-41.567
	95	-16.950	0.719	-47.709	-48.394		97	-16.970	0.723	-46.878	-47.086		98	-16.970	0.716	-43.216	-43.554
	96	-16.950	0.719	-49.472	-50.290		98	-16.970	0.723	-48.511	-49.097		99	-16.970	0.716	-43.719	-43.673
	97	-16.950	0.719	-49.634	-50.138		99	-16.970	0.723	-48.563	-48.727		100	-16.970	0.716	-45.413	-45.288
	98	-16.950	0.719	-51.008	-51.720		100	-16.970	0.723	-49.808	-50.227		101	-16.970	0.716	-45.549	-45.063
	99	-16.950	0.719	-50.798	-51.330		101	-16.970	0.723	-49.488	-49.633		102	-16.970	0.716	-46.869	-46.269
	100	-16.950	0.719	-51.792	-52.397		102	-16.970	0.723	-50.355	-50.642		103	-16.970	0.721	-45.077	-45.653
	101	-16.950	0.719	-51.220	-51.741		103	-16.970	0.723	-49.674	-49.702		104	-16.970	0.721	-45.927	-46.584
	102	-16.950	0.719	-51.845	-52.409		104	-16.970	0.723	-50.172	-50.407		105	-16.970	0.721	-45.250	-45.837
	103	-16.950	0.719	-50.920	-51.365		105	-16.970	0.723	-49.137	-49.295		106	-16.970	0.721	-45.740	-46.517
	104	-16.950	0.719	-51.184	-51.715		106	-16.970	0.723	-49.276	-49.636		107	-16.970	0.721	-44.717	-45.446
	105	-16.950	0.719	-49.914	-50.598		107	-16.970	0.723	-47.897	-48.234		108	-16.970	0.721	-44.854	-45.810
	106	-16.950	0.719	-49.826	-50.357		108	-16.970	0.723	-47.684	-48.246		109	-16.970	0.721	-43.495	-44.220
	107	-16.950	0.719	-48.221	-48.934		109	-16.970	0.723	-45.970	-46.366		110	-16.970	0.721	-43.288	-43.819
	108	-16.950	0.719	-47.790	-48.439		110	-16.970	0.723	-45.415	-45.705		111	-16.970	0.721	-41.559	-41.927
	109	-16.950	0.719	-45.856	-46.431		111	-16.970	0.723	-43.372	-43.388		112	-16.970	0.721	-41.057	-41.217
	110	-16.950	0.719	-45.091	-45.294		112	-16.970	0.723	-42.482	-42.509		113	-16.970	0.721	-39.047	-39.017
	111	-16.950	0.719	-42.837	-42.839		113	-16.970	0.723	-40.120	-39.904		114	-16.970	0.721	-38.177	-37.979
	112	-16.950	0.719	-41.745	-41.394		114	-16.970	0.723	-38.904	-38.668		115	-16.970	0.721	-35.854	-35.583
	113	-16.950	0.719	-39.179	-38.608		115	-16.970	0.723	-36.229	-35.809		116	-16.970	0.721	-34.663	-34.350
	114	-16.950	0.719	-37.768	-36.896		116	-16.970	0.723	-34.694	-34.369		117	-16.970	0.721	-32.033	-31.589
	115	-16.950	0.719	-34.898	-33.910		117	-16.970	0.723	-31.714	-31.176		118	-16.970	0.721	-30.531	-30.232
	116	-16.940	0.719	-31.285	-31.960		118	-16.970	0.723	-29.867	-29.620		119	-16.970	0.721	-27.602	-27.260
	117	-16.940	0.719	-28.107	-28.720		119	-16.900	0.706	-25.861	-26.190		120	-16.910	0.706	-25.266	-25.560
	118	-16.880	0.704	-25.931	-26.520		120	-16.900	0.706	-24.156	-24.410		121	-16.910	0.706	-22.436	-22.360
	119	-16.890	0.706	-23.223	-23.100		121	-16.900	0.706	-21.043	-20.740		122	-16.910	0.706	-20.728	-20.350
	120	-16.890	0.706	-21.242	-20.810		122	-16.900	0.706	-19.057	-18.740		123	-16.910	0.706	-17.628	-16.990
	121	-16.890	0.706	-17.848	-17.130		123	-16.900	0.706	-15.675	-14.870		124	-16.910	0.706	-15.642	-14.730
	122	-16.890	0.706	-15.589	**-15.190**		**124**	-16.900	0.706	-13.415	**-13.820**		**125**	-16.910	0.706	-12.276	**-11.920**
	123	-16.890	0.706	-11.930	**-11.730**		**125**	-16.900	0.706	-9.771	**-9.810**		**126**	-16.910	0.706	-10.019	**-9.400**
	124	-16.890	0.706	-9.399	**-9.160**		**126**	-16.900	0.706	-7.241	**-7.280**		**127**	-16.910	0.706	-4.592	**-4.140**
	125	-16.890	0.706	-5.481	**-5.020**		**127**	-16.900	0.706	-1.533	**-1.520**		**128**	-16.910	0.706	-0.278	**0.110**
	126	-16.890	0.706	-2.684	**-2.050**		**128**	-16.900	0.706	3.055	**2.680**		**129**	-16.910	0.706	5.379	**5.880**
	127	-16.890	0.706	3.301	**3.690**		**129**	-16.900	0.706	8.990	**8.870**		**130**	-16.910	0.706	9.928	**10.460**
	128	-16.890	0.706	8.160	**8.340**		**130**	-16.900	0.706	13.812	**13.510**		**131**	-16.910	0.706	15.810	**16.350**
	129	-16.890	0.706	14.370	**14.520**		**131**	-16.900	0.706	19.969	**19.960**		**132**	-16.910	0.706	20.591	**20.920**
	130	-16.890	0.706	19.459	**19.550**		**132**	-16.900	0.706	25.019	**24.570**		**133**	-16.910	0.706	26.693	**26.740**
	131	-16.890	0.706	25.887	**25.930**		**133**	-16.900	0.706	31.393	**30.710**		**134**	-16.910	0.706	31.701	**31.260**
	132	-16.890	0.706	31.202	**30.810**		**134**	-16.910	0.706	34.587	**35.230**		**135**	-16.910	0.706	38.018	**37.100**
	133	-16.890	0.706	37.844	**36.910**		**135**	-16.710	0.672	40.552	**41.440**		**136**	-16.920	0.706	41.137	**41.760**
	134	-16.900	0.706	41.310	**41.780**		**136**	-16.700	0.672	47.104	**46.140**		**137**	-16.720	0.672	46.738	**47.730**
	135	-16.900	0.706	48.151	**48.020**		**137**	-16.700	0.672	52.855	**52.380**		**138**	-16.710	0.672	53.270	**52.370**
	136	-16.900	0.706	53.893	**53.080**		**138**	-16.700	0.672	57.506	**57.060**		**139**	-16.710	0.672	58.956	**58.270**
	137	-16.690	0.672	58.553	**59.230**		**139**	-16.700	0.672	63.435	**63.270**		**140**	-16.710	0.672	63.554	**62.990**
	138	-16.690	0.672	63.439	**64.220**		**140**	-16.700	0.672	68.269	**67.800**		**141**	-16.710	0.672	69.416	**68.760**
	139	-16.690	0.672	69.607	**70.180**		**141**	-16.700	0.672	74.371	**74.100**		**142**	-16.710	0.672	74.197	**73.610**
	140	-16.690	0.672	74.674	**75.280**		**142**	-16.700	0.672	79.386	**78.960**		**143**	-16.710	0.672	80.232	**79.720**

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	141	-16.690	0.672	81.012	**81.560**		143	-16.700	0.672	85.659	**85.390**		144	-16.710	0.672	85.191	**84.720**
	142	-16.690	0.672	86.257	**86.720**		144	-16.700	0.672	90.850	**90.440**		145	-16.710	0.672	91.396	**90.950**
	143	-16.690	0.672	92.763	**93.210**		145	-16.700	0.672	97.289	**96.910**		146	-16.710	0.672	96.530	**96.100**
	144	-16.690	0.672	98.182	**98.600**		146	-16.700	0.672	102.653	**102.090**		147	-16.710	0.672	102.901	**102.340**
	145	-16.690	0.672	104.852	**105.070**		147	-16.700	0.672	109.255	**108.760**		148	-16.710	0.672	108.207	**107.630**
	146	-16.690	0.672	110.442	**110.630**		148	-16.700	0.672	114.789	**114.060**		149	-16.710	0.672	114.740	**114.150**
	147	-16.690	0.672	117.273	**117.320**		149	-16.700	0.672	121.551	**120.880**		150	-16.710	0.672	120.214	**119.620**
	148	-16.690	0.672	123.029	**122.960**		150	-16.700	0.672	127.250	**126.320**		151	-16.710	0.672	126.906	**126.220**
	149	-16.690	0.672	130.018	**129.790**		151	-16.700	0.672	134.169	**133.370**		152	-16.720	0.673	132.089	**131.980**
	150	-16.690	0.672	135.938	**135.600**		152	-16.700	0.672	140.032	**139.150**		153	-16.720	0.673	138.968	**139.050**
	151	-16.690	0.672	143.081	**142.610**		153	-16.710	0.673	146.743	**146.590**		154	-16.720	0.673	144.800	**145.100**
	152	-16.690	0.672	149.162	**148.800**		154	-16.710	0.673	152.796	**152.580**		155	-16.720	0.673	151.832	**152.290**
	153	-16.690	0.672	156.456	**156.150**		155	-16.710	0.673	160.051	**160.140**		156	-16.720	0.673	157.824	**158.430**
	154	-16.690	0.672	162.694	**162.620**		156	-16.710	0.673	166.262	**166.380**		157	-16.720	0.673	165.006	**165.640**
	155	-16.690	0.672	170.136	**170.180**		157	-16.710	0.673	173.665	**174.040**		158	-16.720	0.673	171.155	**171.870**
	156	-16.690	0.672	176.529	**176.720**		158	-16.710	0.673	180.029	**180.220**		159	-16.720	0.673	178.485	**179.060**
	157	-16.690	0.672	184.116	**184.350**		159	-16.710	0.673	187.578	**187.820**		160	-16.720	0.673	184.786	**185.340**
	158	-16.690	0.672	190.660	**191.070**		160	-16.710	0.673	194.094	**194.040**		161	-16.720	0.673	192.261	**192.670**
	159	-16.690	0.672	198.390	**198.730**		161	-16.710	0.673	201.785	**201.820**		162	-16.890	0.691	199.203	**199.140**
	160	-16.690	0.672	205.082	**205.350**		162	-16.710	0.673	208.449	**208.180**		163	-16.890	0.691	207.449	**206.970**
	161	-16.800	0.683	212.800	**213.060**		163	-16.910	0.693	216.359	**216.470**		164	-16.890	0.691	214.682	**213.970**
	162	-16.800	0.683	220.021	**219.920**		164	-16.910	0.693	223.873	**223.630**		165	-16.890	0.691	223.077	**222.110**
	163	-16.800	0.683	228.415	**228.230**		165	-16.910	0.693	232.553	**232.090**		166	-16.892	0.691	229.983	**229.390**
	164	-16.800	0.683	235.785	**235.550**		166	-16.910	0.693	240.221	**239.430**		167	-16.892	0.691	238.524	**237.740**
	165	-16.800	0.683	244.319	**244.280**		167	-16.912	0.693	248.564	**247.810**		168	-16.892	0.691	246.063	**245.150**
	166	-16.800	0.683	251.836	**252.030**		168	-16.912	0.693	256.382	**255.550**		169	-16.896	0.691	253.771	**253.530**
	167	-16.800	0.683	260.508	**260.450**		169	-16.916	0.693	264.377	**263.990**		170	-16.896	0.691	261.455	**260.970**
	168	-16.810	0.684	268.428	**268.240**		170	-16.920	0.693	271.363	**271.580**		171	-16.900	0.691	269.294	**269.360**
	169	-16.810	0.684	277.273	**277.240**		171	-16.916	0.693	281.442	**280.550**		172	-16.898	0.691	277.614	**276.840**
	170	-16.810	0.684	285.111	**284.950**		172	-16.920	0.693	288.567	**288.020**		173	-16.900	0.691	286.078	**285.280**
							173	-16.920	0.693	297.804	**296.960**		174	-16.902	0.691	293.550	**292.940**
													175	-16.902	0.691	302.642	**301.730**
76	83	-17.080	0.845	-3.728	**-3.940**	77	85	-17.090	0.845	-1.578	**-1.720**	78	87	-17.100	0.845	-0.759	-0.318
	84	-17.080	0.845	-8.308	**-8.340**		86	-17.090	0.845	-5.940	-5.310		88	-17.080	0.798	-3.935	-4.783
	85	-17.080	0.845	-11.082	-10.196		87	-17.060	0.780	-6.851	-7.483		89	-17.080	0.798	-6.771	-6.753
	86	-17.060	0.795	-14.285	-14.500		88	-17.060	0.780	-11.159	-11.595		90	-17.080	0.798	-10.745	-11.010
	87	-17.060	0.795	-16.884	-16.336		89	-17.060	0.780	-13.763	-13.306		91	-17.080	0.798	-13.026	-12.464
	88	-17.060	0.795	-20.646	-20.425		90	-17.060	0.780	-17.529	-17.072		92	-17.080	0.798	-16.440	-16.299
	89	-17.060	0.795	-22.689	-21.747		91	-17.060	0.780	-19.611	-18.666		93	-17.080	0.798	-18.180	-17.467
	90	-17.060	0.795	-25.890	-25.432		92	-17.060	0.780	-22.850	-22.093		94	-17.080	0.798	-21.047	-21.107
	91	-17.060	0.795	-27.392	-26.499		93	-17.050	0.780	-22.724	-23.182		95	-17.080	0.798	-22.261	-21.937
	92	-17.060	0.795	-30.046	-29.995		94	-17.060	0.780	-27.148	-26.412		96	-17.080	0.798	-24.596	-25.318
	93	-17.060	0.795	-31.021	-30.723		95	-17.020	0.740	-27.054	-27.379		97	-17.080	0.798	-25.296	-25.709
	94	-17.060	0.795	-33.142	-33.926		96	-17.020	0.740	-29.849	-30.268		98	-17.050	0.755	-29.405	-28.934
	95	-17.060	0.795	-33.604	-34.297		97	-17.020	0.740	-31.046	-30.786		99	-17.050	0.755	-30.302	-29.370
	96	-17.020	0.743	-37.558	-37.244		98	-17.020	0.740	-33.409	-33.395		100	-17.050	0.755	-32.341	-31.997
	97	-17.020	0.743	-38.365	-37.438		99	-17.020	0.740	-34.191	-33.882		101	-17.050	0.755	-32.810	-32.268
	98	-17.020	0.743	-40.345	-39.995		100	-17.020	0.740	-36.133	-36.047		102	-17.050	0.755	-34.414	-34.430
	99	-17.020	0.743	-40.737	-40.105		101	-17.020	0.740	-36.511	-36.254		103	-17.050	0.755	-34.466	-34.381
	100	-17.020	0.743	-42.295	-42.131		102	-17.020	0.740	-38.041	-38.082		104	-17.050	0.755	-35.647	-36.168
	101	-16.980	0.720	-41.111	-41.956		103	-17.020	0.740	-38.025	-37.978		105	-17.050	0.755	-35.291	-35.773
	102	-16.980	0.720	-42.666	-43.544		104	-17.020	0.740	-39.155	-39.463		106	-16.990	0.718	-36.636	-37.332
	103	-16.980	0.720	-42.682	-43.020		105	-17.020	0.740	-38.754	-39.052		107	-16.990	0.718	-36.605	-36.688
	104	-16.980	0.720	-43.864	-44.356		106	-16.980	0.718	-39.533	-40.202		108	-16.990	0.718	-37.714	-37.864
	105	-16.980	0.720	-43.524	-43.550		107	-16.980	0.718	-39.194	-39.611		109	-16.990	0.718	-37.339	-36.685
	106	-16.980	0.720	-44.343	-44.609		108	-16.980	0.718	-40.002	-40.336		110	-16.990	0.718	-38.098	-37.821
	107	-16.980	0.720	-43.655	-43.664		109	-16.980	0.718	-39.322	-39.172		111	-16.990	0.718	-37.387	-36.469
	108	-16.980	0.720	-44.120	-44.253		110	-16.980	0.718	-39.783	-39.549		112	-16.990	0.718	-37.804	-37.307
	109	-16.980	0.720	-43.093	-42.806		111	-16.980	0.718	-38.771	-38.345		113	-16.980	0.718	-34.856	-35.698
	110	-16.980	0.720	-43.212	-43.000		112	-16.980	0.718	-38.893	-38.450		114	-16.990	0.718	-36.843	-36.289
	111	-16.980	0.720	-41.853	-41.219		113	-16.980	0.718	-37.556	-36.754		115	-16.980	0.718	-33.561	-34.480
	112	-16.980	0.720	-41.634	-41.137		114	-16.980	0.718	-37.347	-36.709		116	-16.990	0.718	-35.248	-34.760
	113	-16.980	0.720	-39.952	-38.987		115	-16.980	0.718	-35.693	-34.836		117	-16.990	0.718	-33.577	-32.794
	114	-16.980	0.720	-39.403	-38.708		116	-16.980	0.718	-35.161	-34.536		118	-16.990	0.718	-33.014	-32.645
	115	-16.970	0.720	-35.495	-36.395		117	-16.980	0.718	-33.198	-32.532		119	-16.990	0.718	-31.038	-30.420
	116	-16.980	0.720	-36.534	-35.882		118	-16.980	0.718	-32.350	-31.692		120	-16.990	0.718	-30.164	-29.904
	117	-16.980	0.720	-34.228	-33.394		119	-16.980	0.718	-30.084	-29.436		121	-16.990	0.718	-27.889	-27.389
	118	-16.980	0.720	-33.042	-32.435		120	-16.980	0.718	-28.927	-28.264		122	-16.990	0.718	-26.711	-26.599
	119	-16.980	0.720	-30.435	-29.512		121	-16.980	0.718	-26.366	-25.710		123	-16.990	0.718	-24.144	-23.741
	120	-16.980	0.720	-28.941	-28.277		122	-16.980	0.718	-24.908	-24.399		124	-16.990	0.718	-22.667	-22.692
	121	-16.920	0.706	-24.558	-25.080		123	-16.930	0.706	-21.193	-21.570		125	-16.940	0.706	-19.088	-19.510
	122	-16.920	0.706	-23.122	-23.600		124	-16.930	0.706	-19.751	-19.840		126	-16.940	0.706	-17.635	-17.620
	123	-16.920	0.706	-20.297	-20.270		125	-16.930	0.706	-16.935	-16.640		127	-16.940	0.706	-13.040	-12.820
	124	-16.920	0.706	-18.581	-18.550		126	-16.930	0.706	-15.216	-14.370		128	-16.940	0.706	-9.540	-9.240

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	125	-16.920	0.706	-15.489	-14.840		127	-16.930	0.706	-10.345	-9.570		129	-16.940	0.706	-4.705	-4.140
	126	-16.920	0.706	-13.499	-12.530		128	-16.930	0.706	-6.576	-5.600		130	-16.940	0.706	-0.960	-0.500
	127	-16.910	0.706	-6.317	-7.270		129	-16.930	0.706	-1.469	-1.270		131	-16.940	0.706	4.108	4.540
	128	-16.920	0.706	-4.304	-4.710		130	-16.930	0.706	2.542	2.870		132	-16.940	0.706	8.093	8.190
	129	-16.920	0.706	1.080	1.060		131	-16.930	0.706	7.880	8.500		133	-16.940	0.706	13.391	13.810
	130	-16.920	0.706	5.362	5.250		132	-16.930	0.706	12.128	12.560		134	-16.940	0.706	17.611	17.690
	131	-16.920	0.706	10.974	11.290		133	-16.930	0.706	17.692	18.200		135	-16.940	0.706	23.132	23.440
	132	-16.920	0.706	15.491	15.560		134	-16.930	0.706	22.173	22.550		136	-16.940	0.706	27.582	27.350
	133	-16.920	0.706	21.326	21.460		135	-16.930	0.706	27.958	28.040		137	-16.940	0.706	33.322	33.010
	134	-16.920	0.706	26.072	25.620		136	-16.930	0.706	32.665	32.330		138	-16.940	0.706	37.997	37.010
	135	-16.920	0.706	32.125	31.490		137	-16.930	0.706	38.667	37.920		139	-16.950	0.706	41.782	42.740
	136	-16.930	0.706	34.975	35.770		138	-16.940	0.706	41.447	42.280		140	-16.950	0.706	46.668	46.850
	137	-16.730	0.671	40.850	41.730		139	-16.740	0.672	48.167	47.970		141	-16.750	0.671	51.787	52.590
	138	-16.720	0.670	45.890	46.120		140	-16.730	0.671	53.197	52.380		142	-16.750	0.671	55.829	56.560
	139	-16.720	0.671	52.535	52.080		141	-16.730	0.671	58.550	58.080		143	-16.740	0.670	62.008	62.320
	140	-16.720	0.671	56.864	56.470		142	-16.730	0.671	62.830	62.410		144	-16.740	0.671	67.563	66.610
	141	-16.720	0.671	62.456	62.280		143	-16.730	0.671	68.360	68.150		145	-16.740	0.671	73.037	72.470
	142	-16.720	0.671	66.970	66.770		144	-16.740	0.672	72.016	72.800		146	-16.740	0.671	77.456	76.950
	143	-16.730	0.672	71.958	72.890		145	-16.740	0.672	77.746	78.680		147	-16.740	0.671	83.102	82.860
	144	-16.730	0.672	76.680	77.530		146	-16.740	0.673	83.894	83.520		148	-16.740	0.671	87.698	87.420
	145	-16.720	0.671	83.367	83.770		147	-16.740	0.673	89.832	89.460		149	-16.740	0.671	93.513	93.550
	146	-16.730	0.673	89.070	88.560		148	-16.740	0.673	94.717	94.380		150	-16.740	0.671	98.284	98.310
	147	-16.730	0.673	95.240	94.810		149	-16.740	0.673	100.822	100.470		151	-16.821	0.683	105.505	104.620
	148	-16.730	0.673	100.352	99.790		150	-16.730	0.672	106.520	105.560		152	-16.821	0.683	110.605	109.710
	149	-16.730	0.673	106.687	106.250		151	-16.810	0.682	111.328	111.860		153	-16.820	0.683	117.368	116.420
	150	-16.730	0.673	111.970	111.370		152	-16.820	0.684	118.023	117.320		154	-16.821	0.683	122.641	121.770
	151	-16.720	0.672	119.017	118.020		153	-16.820	0.683	123.037	123.970		155	-16.820	0.683	129.574	128.660
	152	-16.720	0.672	124.439	123.460		154	-16.820	0.683	128.755	129.700		156	-16.828	0.683	133.379	134.170
	153	-16.740	0.674	130.090	130.500		155	-16.820	0.683	135.670	136.610		157	-16.821	0.683	141.880	141.060
	154	-16.740	0.674	135.736	136.160		156	-16.820	0.683	141.557	142.420		158	-16.830	0.683	145.602	146.570
	155	-16.740	0.674	142.579	143.390		157	-16.820	0.683	148.634	149.260		159	-16.830	0.683	152.616	153.500
	156	-16.740	0.674	148.387	149.180		158	-16.820	0.683	154.688	155.170		160	-16.830	0.683	158.618	159.090
	157	-16.739	0.674	155.617	156.410		159	-16.820	0.683	161.923	162.100		161	-16.830	0.683	165.790	166.120
	158	-16.740	0.674	161.351	162.200		160	-16.820	0.683	168.141	168.020		162	-16.830	0.683	171.955	171.930
	159	-16.740	0.674	168.499	169.490		161	-16.820	0.683	175.351	175.050		163	-16.830	0.683	179.281	179.420
	160	-16.740	0.674	174.622	175.320		162	-16.820	0.683	181.910	181.200		164	-16.830	0.683	185.606	185.660
	161	-16.740	0.674	181.916	182.670		163	-16.820	0.683	189.452	188.570		165	-16.830	0.683	193.084	193.590
	162	-16.740	0.674	188.193	188.840		164	-16.820	0.683	195.989	195.160		166	-16.830	0.683	199.565	199.980
	163	-16.738	0.674	196.109	196.690		165	-16.820	0.683	203.680	203.150		167	-16.780	0.678	207.925	207.720
	164	-17.030	0.705	204.365	203.390		166	-16.820	0.683	210.371	209.880		168	-16.780	0.678	214.389	214.500
	165	-17.034	0.705	212.084	211.410		167	-16.820	0.683	218.209	217.700		169	-16.776	0.678	222.978	222.260
	166	-17.040	0.705	218.314	218.430		168	-16.790	0.680	225.169	224.660		170	-16.776	0.678	229.595	228.890
	167	-17.040	0.705	227.144	226.580		169	-16.790	0.680	233.046	232.680		171	-16.776	0.678	237.339	236.640
	168	-17.042	0.705	234.495	233.760		170	-16.788	0.680	240.426	239.720		172	-16.778	0.678	243.601	243.150
	169	-17.046	0.705	242.498	242.090		171	-16.790	0.680	247.949	247.420		173	-16.778	0.678	251.481	250.980
	170	-17.050	0.705	249.505	248.950		172	-16.790	0.680	254.979	254.390		174	-16.780	0.678	257.880	257.700
	171	-16.816	0.683	257.973	257.250		173	-16.790	0.680	263.133	262.440		175	-16.778	0.678	266.400	265.750
	172	-16.816	0.683	265.312	264.520		174	-16.788	0.680	270.808	269.980		176	-16.778	0.678	273.443	272.520
	173	-16.818	0.683	273.279	272.900		175	-16.790	0.680	278.594	278.020		177	-16.780	0.678	281.081	280.660
	174	-16.820	0.683	280.258	279.950		176	-16.790	0.680	285.906	285.250		178	-16.780	0.678	288.260	287.800
	175	-16.816	0.683	289.857	289.210		177	-16.790	0.680	294.326	293.420		179	-16.780	0.678	296.537	296.510
	176	-16.820	0.683	296.469	296.450		178	-16.790	0.680	301.775	300.840		180	-16.780	0.678	303.851	303.950
	177	-16.818	0.683	305.702	304.920		179	-16.790	0.680	310.324	309.600		181	-16.780	0.678	312.256	312.700
													182	-16.780	0.678	319.703	320.520
79	88	-17.110	0.845	4.464	4.260	80	90	-17.120	0.845	5.353	5.415	81	92	-17.130	0.845	7.768	8.640
	89	-17.110	0.845	1.616	2.530		91	-17.090	0.783	4.208	3.339		93	-17.120	0.845	7.035	6.370
	90	-17.090	0.801	-1.561	-1.788		92	-17.090	0.783	-0.144	-1.061		94	-17.130	0.845	1.758	2.500
	91	-17.090	0.801	-4.221	-3.703		93	-17.090	0.783	-2.843	-2.661		95	-17.080	0.765	1.459	0.585
	92	-17.090	0.801	-8.002	-7.562		94	-17.090	0.783	-6.664	-6.641		96	-17.080	0.765	-2.421	-3.340
	93	-17.080	0.801	-8.392	-9.318		95	-17.090	0.783	-8.850	-7.969		97	-17.080	0.765	-4.701	-4.613
	94	-17.090	0.801	-13.338	-12.832		96	-17.090	0.783	-12.154	-11.785		98	-17.080	0.765	-8.099	-8.270
	95	-17.080	0.801	-13.172	-14.058		97	-17.080	0.783	-12.070	-12.776		99	-17.080	0.765	-9.915	-9.390
	96	-17.090	0.801	-17.598	-17.404		98	-17.090	0.783	-16.639	-16.315		100	-17.080	0.765	-12.843	-12.799
	97	-17.090	0.801	-18.649	-18.521		99	-17.090	0.783	-17.839	-16.933		101	-17.070	0.765	-12.385	-13.327
	98	-17.090	0.801	-20.807	-21.546		100	-17.090	0.783	-20.146	-20.251		102	-17.080	0.765	-16.674	-16.587
	99	-17.050	0.759	-21.594	-22.303		101	-17.090	0.783	-20.871	-20.661		103	-17.080	0.765	-17.594	-16.883
	100	-17.060	0.759	-25.696	-24.989		102	-17.090	0.783	-22.698	-23.577		104	-17.080	0.765	-19.615	-19.758
	101	-17.060	0.759	-26.449	-25.626		103	-17.090	0.783	-22.960	-23.805		105	-17.080	0.765	-20.103	-19.883
	102	-17.060	0.759	-28.328	-27.871		104	-17.050	0.743	-26.547	-26.345		106	-17.080	0.765	-21.688	-22.445
	103	-17.060	0.759	-28.654	-28.304		105	-17.050	0.743	-27.078	-26.184		107	-17.010	0.716	-21.736	-22.336
	104	-17.060	0.759	-30.100	-30.191		106	-17.050	0.743	-28.726	-28.539		108	-17.010	0.716	-23.782	-24.616
	105	-17.060	0.759	-30.010	-30.319		107	-17.050	0.743	-28.868	-28.119		109	-17.010	0.716	-24.357	-24.366
	106	-17.060	0.759	-31.034	-31.858		108	-17.050	0.743	-30.121	-30.198		110	-17.010	0.716	-26.047	-26.283
	107	-16.990	0.715	-31.228	-31.715		109	-17.050	0.743	-29.883	-29.626		111	-17.010	0.716	-26.278	-25.872

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	108	-16.990	0.715	-32.694	-33.029		110	-17.050	0.743	-30.750	-31.371		112	-17.010	0.716	-27.619	-27.477
	109	-16.990	0.715	-32.682	-32.371		111	-17.050	0.743	-30.140	-30.592		113	-17.010	0.716	-27.515	-26.937
	110	-16.990	0.715	-33.798	-33.582		112	-17.000	0.713	-32.766	-32.011		114	-17.010	0.716	-28.515	-28.155
	111	-16.990	0.715	-33.450	-32.834		113	-16.990	0.713	-30.500	-31.062		115	-17.010	0.716	-28.084	-27.497
	112	-16.990	0.715	-34.224	-33.798		114	-16.990	0.713	-31.265	-32.184		116	-17.010	0.716	-28.750	-28.354
	113	-16.990	0.715	-33.549	-32.772		115	-16.990	0.713	-30.598	-31.013		117	-17.010	0.716	-28.000	-27.529
	114	-16.990	0.715	-33.990	-33.405		116	-16.990	0.713	-31.036	-31.826		118	-17.010	0.716	-28.341	-28.059
	115	-16.990	0.715	-32.994	-32.212		117	-16.990	0.713	-30.056	-30.540		119	-17.010	0.716	-27.278	-27.047
	116	-16.990	0.715	-33.108	-32.567		118	-16.990	0.713	-30.175	-30.954		120	-17.010	0.716	-27.300	-27.181
	117	-16.990	0.715	-31.800	-31.139		119	-16.990	0.713	-28.888	-29.546		121	-17.010	0.716	-25.931	-25.980
	118	-16.990	0.715	-31.596	-31.140		120	-16.990	0.713	-28.694	-29.503		122	-17.010	0.716	-25.642	-25.761
	119	-16.990	0.715	-29.982	-29.581		121	-16.990	0.713	-27.108	-27.663		123	-17.010	0.716	-23.975	-24.346
	120	-16.990	0.715	-29.466	-29.094		122	-16.990	0.713	-26.609	-27.345		124	-17.010	0.716	-23.382	-23.821
	121	-16.990	0.715	-27.554	-27.240		123	-16.990	0.713	-24.730	-25.269		125	-17.010	0.716	-21.422	-22.253
	122	-16.990	0.715	-26.733	-26.401		124	-16.990	0.713	-23.932	-24.690		126	-17.010	0.716	-20.531	-21.034
	123	-16.990	0.715	-24.529	-24.353		125	-16.990	0.713	-21.767	-22.288		127	-17.010	0.716	-16.518	-16.750
	124	-16.990	0.715	-23.411	-23.143		126	-16.990	0.713	-20.677	-20.946		128	-17.010	0.716	-13.580	-13.645
	125	-16.990	0.715	-20.921	-20.390		127	-16.990	0.713	-16.459	-16.487		129	-17.010	0.716	-9.310	-9.247
	126	-16.990	0.715	-19.511	-18.570		128	-16.990	0.713	-13.321	-13.265		130	-17.010	0.716	-6.108	-6.078
	127	-16.970	0.711	-14.086	-14.190		129	-16.990	0.713	-8.852	-8.610		131	-17.010	0.716	-1.587	-1.551
	128	-16.970	0.711	-10.727	-10.640		130	-16.990	0.713	-5.457	-5.300		132	-16.990	0.712	2.565	1.784
	129	-16.970	0.711	-6.033	-5.910		131	-16.980	0.711	-0.423	-0.390		133	-16.990	0.712	7.226	6.465
	130	-16.970	0.711	-2.422	-2.230		132	-16.980	0.711	3.169	3.020		134	-16.990	0.712	10.828	10.030
	131	-16.970	0.711	2.513	2.680		133	-16.980	0.711	8.071	8.200		135	-16.990	0.712	15.726	14.870
	132	-16.970	0.711	6.372	6.470		134	-16.980	0.711	11.909	11.770		136	-16.990	0.712	19.572	18.660
	133	-16.970	0.711	11.542	11.570		135	-16.980	0.711	17.044	17.110		137	-16.990	0.712	24.703	23.710
	134	-16.970	0.711	15.643	15.440		136	-16.980	0.711	21.122	20.920		138	-16.990	0.712	28.787	28.010
	135	-16.970	0.711	21.045	20.870		137	-16.980	0.711	26.486	26.190		139	-16.990	0.711	33.027	33.130
	136	-16.970	0.711	25.383	24.790		138	-16.980	0.711	30.798	29.860		140	-17.000	0.712	36.253	36.950
	137	-16.840	0.685	30.134	30.140		139	-16.980	0.710	35.227	35.350		141	-16.860	0.685	41.405	42.250
	138	-16.830	0.684	34.986	34.140		140	-16.840	0.684	40.048	39.180		142	-16.860	0.685	45.145	46.050
	139	-16.830	0.684	40.039	39.570		141	-16.840	0.684	45.055	44.670		143	-16.860	0.685	50.127	50.930
	140	-16.830	0.684	44.029	43.670		142	-16.840	0.684	49.010	48.280		144	-16.860	0.685	54.070	54.880
	141	-16.830	0.684	49.278	49.170		143	-16.840	0.684	54.211	53.700		145	-16.860	0.685	59.246	60.080
	142	-16.830	0.684	53.469	53.340		144	-16.840	0.684	58.366	57.650		146	-16.860	0.685	63.387	64.230
	143	-16.830	0.684	58.909	58.580		145	-16.840	0.684	63.758	63.160		147	-16.860	0.685	68.753	69.460
	144	-16.830	0.684	63.298	62.880		146	-16.840	0.684	68.108	67.280		148	-16.860	0.685	73.089	73.680
	145	-16.830	0.684	68.926	68.370		147	-16.840	0.684	73.686	72.880		149	-16.860	0.685	78.641	79.010
	146	-16.830	0.684	73.509	72.850		148	-16.840	0.683	76.795	77.090		150	-16.860	0.685	83.168	83.400
	147	-16.830	0.684	79.320	78.510		149	-16.849	0.684	81.928	82.790		151	-16.860	0.685	88.902	88.990
	148	-16.840	0.685	83.306	83.030		150	-16.850	0.684	86.420	87.190		152	-16.860	0.685	93.616	93.730
	149	-16.840	0.684	87.805	88.750		151	-16.850	0.684	92.349	93.140		153	-16.860	0.685	99.528	99.800
	150	-16.840	0.684	92.753	93.490		152	-16.850	0.684	97.254	97.900		154	-16.860	0.685	104.427	104.820
	151	-16.840	0.684	98.911	99.420		153	-16.850	0.684	103.359	104.300		155	-16.860	0.685	110.514	111.030
	152	-16.840	0.684	104.041	104.570		154	-16.850	0.684	108.445	109.340		156	-16.860	0.685	115.593	116.210
	153	-16.840	0.684	110.374	110.910		155	-16.841	0.684	116.837	115.870		157	-16.860	0.685	121.851	122.440
	154	-16.840	0.684	115.682	116.280		156	-16.842	0.684	121.874	121.100		158	-16.860	0.685	127.107	127.720
	155	-16.840	0.684	122.184	122.830		157	-16.848	0.684	126.905	127.670		159	-16.860	0.685	133.534	133.960
	156	-16.840	0.684	127.668	128.400		158	-16.850	0.684	131.869	132.850		160	-16.864	0.686	139.854	139.190
	157	-16.840	0.684	134.337	134.930		159	-16.850	0.684	138.480	139.460		161	-16.870	0.686	145.030	145.690
	158	-16.840	0.684	139.993	140.470		160	-16.850	0.684	144.088	144.780		162	-16.866	0.686	151.633	151.120
	159	-16.840	0.684	146.824	147.040		161	-16.850	0.684	150.861	151.520		163	-16.866	0.686	158.423	157.900
	160	-16.840	0.684	152.649	152.640		162	-16.850	0.684	156.637	157.010		164	-16.864	0.686	164.715	163.950
	161	-16.840	0.684	159.641	159.420		163	-16.850	0.684	163.570	164.070		165	-16.870	0.686	170.190	170.780
	162	-16.840	0.684	165.631	165.180		164	-16.862	0.686	170.728	170.000		166	-16.862	0.685	176.026	176.310
	163	-16.840	0.684	172.780	172.290		165	-16.860	0.686	178.380	177.540		167	-16.860	0.685	183.589	183.150
	164	-16.840	0.684	178.932	178.550		166	-16.868	0.686	182.590	183.340		168	-16.860	0.685	189.680	188.860
	165	-16.856	0.686	186.676	186.150		167	-16.862	0.686	191.382	190.490		169	-16.862	0.685	196.403	195.770
	166	-16.856	0.686	193.059	192.730		168	-16.850	0.684	196.203	196.260		170	-16.862	0.685	202.651	201.670
	167	-16.860	0.686	199.601	200.050		169	-16.850	0.684	203.596	203.510		171	-16.870	0.685	208.005	208.760
	168	-16.856	0.686	207.125	206.270		170	-16.850	0.684	210.012	209.420		172	-16.868	0.685	214.906	214.950
	169	-16.858	0.686	214.304	213.520		171	-16.850	0.684	217.552	216.850		173	-16.868	0.685	222.419	222.180
	170	-16.860	0.686	220.499	219.770		172	-16.858	0.684	222.105	222.950		174	-16.866	0.685	229.479	228.580
	171	-16.848	0.684	226.445	227.200		173	-16.852	0.684	231.301	230.520		175	-16.870	0.685	236.113	235.920
	172	-16.846	0.684	233.711	233.590		174	-16.854	0.684	237.509	236.870		176	-16.960	0.694	242.693	242.400
	173	-16.850	0.684	240.589	241.190		175	-16.856	0.684	244.822	244.480		177	-16.960	0.694	250.813	249.950
	174	-16.846	0.684	248.512	247.920		176	-16.856	0.684	251.682	250.950		178	-16.968	0.694	255.909	256.770
	175	-16.846	0.684	256.538	255.550		177	-16.860	0.684	258.616	258.770		179	-16.970	0.694	263.645	264.610
	176	-16.850	0.684	262.579	262.370		178	-16.860	0.684	265.616	265.600		180	-16.970	0.694	270.952	271.750
	177	-16.850	0.684	270.739	270.190		179	-16.860	0.684	273.712	273.970		181	-16.966	0.694	280.397	279.500
	178	-16.850	0.684	277.938	277.340		180	-16.860	0.684	280.854	281.020		182	-16.970	0.694	286.803	286.480
	179	-16.850	0.684	286.234	285.740		181	-16.860	0.684	289.085	289.650		183	-16.970	0.694	295.339	294.520
	180	-16.850	0.684	293.574	293.120		182	-16.856	0.684	297.414	296.610		184	-16.970	0.694	302.938	301.950
	181	-16.850	0.684	302.003	301.550		183	-16.860	0.684	304.730	304.950		185	-16.974	0.694	312.260	311.640

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	182	-16.850	0.684	309.480	**309.270**		184	-16.860	0.684	312.149	**312.360**		186	-16.980	0.694	320.100	**319.930**
	183	-16.854	0.684	316.992	**317.570**		185	-16.860	0.684	322.360	**322.350**		187	-16.980	0.694	330.595	**329.960**
	184	-16.850	0.684	325.652	**325.290**		186	-16.860	0.684	331.623	**330.650**		188	-16.983	0.694	339.345	**338.600**
82	93	-17.130	0.845	14.640	**14.320**	83	95	-17.140	0.845	18.801	**18.480**	84	97	-17.160	0.845	19.886	**20.670**
	94	-17.130	0.845	10.683	**9.980**		96	-17.140	0.845	15.032	**14.460**		98	-17.160	0.845	16.296	**16.090**
	95	-17.130	0.845	8.403	**8.000**		97	-17.140	0.845	12.917	**12.280**		99	-17.160	0.845	14.337	**13.690**
	96	-17.110	0.786	3.269	3.573		98	-17.150	0.845	7.951	**8.550**		100	-17.170	0.845	9.509	**9.660**
	97	-17.100	0.786	2.653	2.052		99	-17.150	0.845	6.420	**6.380**		101	-17.170	0.845	8.125	**7.790**
	98	-17.110	0.786	-2.637	-1.941		100	-17.160	0.845	2.022	**2.840**		102	-17.180	0.845	3.855	4.102
	99	-17.100	0.786	-2.733	-3.111		101	-17.080	0.747	1.895	1.254		103	-17.180	0.845	3.030	2.824
	100	-17.110	0.786	-7.539	-6.825		102	-17.080	0.747	-1.514	-2.236		104	-17.100	0.751	0.064	-0.544
	101	-17.100	0.786	-7.128	-7.580		103	-17.080	0.747	-3.393	-3.145		105	-17.100	0.751	-1.682	-1.422
	102	-17.110	0.786	-11.462	-11.052		104	-17.080	0.747	-6.371	-6.383		106	-17.100	0.751	-4.511	-4.563
	103	-17.110	0.786	-12.406	-11.541		105	-17.080	0.747	-7.836	-7.195		107	-17.100	0.751	-5.844	-5.069
	104	-17.110	0.786	-14.431	-14.681		106	-17.080	0.747	-10.393	-10.065		108	-17.100	0.751	-8.255	-8.066
	105	-17.110	0.786	-14.911	-14.987		107	-17.080	0.747	-11.452	-10.596		109	-17.100	0.751	-9.183	-8.325
	106	-17.120	0.786	-18.347	-17.811		108	-17.080	0.747	-13.600	-13.239		110	-17.100	0.751	-11.185	-11.005
	107	-17.020	0.716	-17.027	-17.844		109	-17.080	0.747	-14.263	-13.535		111	-17.100	0.751	-11.719	-11.117
	108	-17.030	0.716	-21.270	-20.417		110	-17.080	0.747	-16.009	-15.885		112	-17.100	0.751	-13.321	-13.469
	109	-17.020	0.716	-20.245	-20.291		111	-17.080	0.747	-16.287	-16.023		113	-17.100	0.751	-13.469	-13.393
	110	-17.020	0.716	-22.228	-22.552		112	-17.080	0.747	-17.641	-18.026		114	-17.100	0.751	-14.681	-15.473
	111	-17.020	0.716	-22.758	-22.229		113	-17.080	0.747	-17.541	-18.009		115	-17.100	0.751	-14.452	-15.239
	112	-17.020	0.716	-24.389	-24.208		114	-17.030	0.717	-19.525	-19.687		116	-17.040	0.717	-16.272	-16.942
	113	-17.020	0.716	-24.580	-23.738		115	-17.030	0.717	-19.664	-19.374		117	-17.040	0.717	-16.377	-16.521
	114	-17.020	0.716	-25.867	-25.348		116	-17.030	0.717	-20.888	-20.798		118	-17.040	0.717	-17.555	-17.942
	115	-17.020	0.716	-25.728	-24.745		117	-17.030	0.717	-20.701	-20.371		119	-17.040	0.717	-17.338	-17.311
	116	-17.020	0.716	-26.679	-26.067		118	-17.030	0.717	-21.591	-21.429		120	-17.040	0.717	-18.187	-18.341
	117	-17.020	0.716	-26.217	-25.232		119	-17.030	0.717	-21.085	-20.751		121	-17.040	0.717	-17.655	-17.521
	118	-17.020	0.716	-26.839	-26.251		120	-17.030	0.717	-21.650	-21.525		122	-17.040	0.717	-18.184	-18.189
	119	-17.020	0.716	-26.062	-25.271		121	-17.030	0.717	-20.831	-20.646		123	-17.040	0.717	-17.343	-17.146
	120	-17.020	0.716	-26.363	-25.941		122	-17.030	0.717	-21.079	-21.066		124	-17.040	0.717	-17.558	-17.469
	121	-17.020	0.716	-25.277	-24.786		123	-17.030	0.717	-19.954	-20.028		125	-17.040	0.717	-16.416	-16.366
	122	-17.020	0.716	-25.265	-25.110		124	-17.030	0.717	-19.891	-20.055		126	-17.040	0.717	-16.324	-15.953
	123	-17.020	0.716	-23.877	-23.770		125	-17.030	0.717	-18.468	-18.870		127	-17.040	0.717	-13.136	-12.432
	124	-17.020	0.716	-23.557	-23.786		126	-17.030	0.717	-18.100	-18.259		128	-17.040	0.717	-11.004	-10.369
	125	-17.020	0.716	-21.875	-22.452		127	-17.030	0.717	-14.628	-14.792		129	-17.040	0.717	-7.549	-6.654
	126	-17.020	0.716	-21.255	-21.749		128	-17.030	0.717	-12.217	-11.859		130	-17.040	0.717	-5.145	-4.470
	127	-17.020	0.716	-17.522	-17.615		129	-17.030	0.717	-8.481	-8.118		131	-17.040	0.717	-1.429	-0.542
	128	-17.020	0.716	-14.857	-14.728		130	-17.030	0.717	-5.801	-5.232		132	-17.040	0.717	1.243	1.782
	129	-17.020	0.716	-10.865	-10.493		131	-17.030	0.717	-1.807	-1.201		133	-17.040	0.717	5.214	5.883
	130	-17.020	0.716	-7.934	-7.549		132	-17.030	0.717	1.137	1.629		134	-17.040	0.717	8.146	8.357
	131	-17.020	0.716	-3.687	-3.204		133	-17.030	0.717	5.384	5.874		135	-17.040	0.717	12.368	12.681
	132	-17.020	0.716	-0.496	-0.183		134	-17.030	0.717	8.586	8.730		136	-17.040	0.717	15.556	15.263
	133	-17.020	0.716	4.000	4.342		135	-17.030	0.717	13.081	13.216		137	-16.910	0.685	19.371	19.774
	134	-17.000	0.712	8.098	7.510		136	-17.010	0.713	17.144	16.320		138	-16.910	0.685	21.936	22.486
	135	-17.000	0.712	12.731	12.260		137	-17.010	0.713	21.772	20.960		139	-16.900	0.685	27.987	27.079
	136	-17.000	0.712	16.316	15.630		138	-17.010	0.712	24.361	24.200		140	-16.900	0.685	30.781	29.910
	137	-17.000	0.712	21.184	20.620		139	-17.020	0.713	28.007	28.950		141	-16.910	0.686	33.595	34.580
	138	-17.000	0.712	25.010	24.130		140	-17.020	0.713	31.830	32.240		142	-16.910	0.686	36.625	37.549
	139	-17.000	0.712	30.108	**30.050**		141	-16.890	0.686	36.753	37.070		143	-16.900	0.686	43.163	42.281
	140	-17.000	0.712	34.170	**33.480**		142	-16.890	0.686	40.034	**40.850**		144	-16.900	0.686	46.414	**45.660**
	141	-17.000	0.712	39.494	**38.780**		143	-16.890	0.686	44.555	**45.540**		145	-16.900	0.686	50.893	**50.370**
	142	-17.010	0.712	41.547	**42.200**		144	-16.890	0.686	48.045	**48.880**		146	-16.900	0.686	54.351	**53.760**
	143	-17.010	0.712	47.082	**47.230**		145	-16.890	0.686	52.764	**53.660**		147	-16.900	0.686	59.027	**58.460**
	144	-16.870	0.685	50.083	**50.630**		146	-16.890	0.686	56.459	**57.400**		148	-16.900	0.686	62.689	**61.960**
	145	-16.870	0.685	55.022	**55.830**		147	-16.890	0.686	61.373	**62.340**		149	-16.900	0.686	67.558	**66.930**
	146	-16.870	0.685	58.932	**59.540**		148	-16.890	0.686	65.268	**66.160**		150	-16.900	0.686	71.418	**70.720**
	147	-16.870	0.685	64.063	**64.790**		149	-16.890	0.686	70.373	**71.130**		151	-16.900	0.686	76.477	**75.870**
	148	-16.870	0.685	68.170	**68.670**		150	-16.890	0.686	74.464	**75.230**		152	-16.900	0.686	80.531	**79.960**
	149	-16.870	0.685	73.489	**74.000**		151	-16.890	0.686	79.757	**80.440**		153	-16.910	0.687	84.844	**85.640**
	150	-16.870	0.685	77.790	**78.060**		152	-16.890	0.686	84.041	**84.830**		154	-16.910	0.687	89.116	**89.970**
	151	-16.870	0.685	83.293	**83.610**		153	-16.890	0.686	89.518	**90.510**		155	-16.900	0.687	96.961	**96.000**
	152	-16.870	0.685	87.783	**88.020**		154	-16.881	0.686	96.123	**95.220**		156	-16.900	0.687	101.432	**100.520**
	153	-16.870	0.685	93.467	**94.040**		155	-16.870	0.684	101.295	**101.170**		157	-16.910	0.688	106.255	**106.470**
	154	-16.870	0.685	98.143	**98.780**		156	-16.866	0.684	106.854	**106.060**		158	-16.910	0.688	110.939	**111.060**
	155	-16.862	0.685	105.901	**105.070**		157	-16.870	0.684	111.674	**111.960**		159	-16.910	0.688	116.788	**116.990**
	156	-16.868	0.685	109.339	**109.920**		158	-16.870	0.684	116.457	**116.790**		160	-16.910	0.688	121.653	**121.500**
	157	-16.861	0.685	117.049	**116.190**		159	-16.870	0.684	122.406	**122.810**		161	-16.910	0.688	127.675	**127.640**
	158	-16.868	0.685	120.416	**121.090**		160	-16.870	0.684	127.366	**127.680**		162	-16.910	0.688	132.720	**132.400**
	159	-16.867	0.685	126.865	**127.350**		161	-16.870	0.684	133.484	**133.770**		163	-16.910	0.688	138.912	**138.850**
	160	-16.880	0.687	132.541	**132.290**		162	-16.870	0.684	138.617	**138.910**		164	-16.910	0.688	144.131	**144.110**
	161	-16.880	0.687	138.984	**138.720**		163	-16.870	0.684	144.901	**145.310**		165	-16.910	0.688	150.491	**150.540**
	162	-16.880	0.687	144.440	**143.810**		164	-16.870	0.684	150.205	**150.880**		166	-16.910	0.688	155.882	**155.500**
	163	-16.880	0.687	151.050	**150.580**		165	-16.870	0.684	156.651	**157.330**		167	-16.910	0.688	162.406	**161.940**

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	164	-16.880	0.687	156.675	**156.000**		166	-16.870	0.684	162.122	**162.490**		168	-16.910	0.688	167.966	**167.080**
	165	-16.880	0.687	163.447	**162.700**		167	-16.870	0.684	168.728	**169.100**		169	-16.912	0.688	174.144	**173.600**
	166	-16.870	0.685	167.622	**168.020**		168	-16.870	0.684	174.364	**174.440**		170	-16.914	0.688	179.361	**178.850**
	167	-16.870	0.685	174.478	**175.010**		169	-16.872	0.684	180.622	**180.970**		171	-16.914	0.688	186.200	**185.580**
	168	-16.870	0.685	180.362	**180.460**		170	-16.870	0.684	186.923	**186.570**		172	-16.900	0.686	191.279	**191.120**
	169	-16.870	0.685	187.373	**187.270**		171	-16.870	0.684	193.840	**193.280**		173	-16.900	0.686	198.202	**198.010**
	170	-16.870	0.685	193.416	**192.840**		172	-16.870	0.684	199.795	**199.100**		174	-16.900	0.686	204.174	**203.750**
	171	-16.870	0.685	200.580	**199.910**		173	-16.870	0.684	206.862	**205.990**		175	-16.900	0.686	211.247	**210.830**
	172	-16.872	0.685	206.273	**205.780**		174	-16.870	0.684	212.974	**212.070**		176	-16.900	0.686	217.375	**216.710**
	173	-16.872	0.685	213.584	**213.080**		175	-16.874	0.684	219.157	**219.110**		177	-16.900	0.686	224.598	**223.980**
	174	-16.872	0.685	219.936	**219.190**		176	-16.874	0.684	225.417	**225.290**		178	-16.902	0.686	230.355	**230.110**
	175	-16.876	0.685	226.367	**226.500**		177	-16.876	0.684	232.254	**232.600**		179	-16.900	0.686	238.248	**237.740**
	176	-16.880	0.685	231.835	**232.710**		178	-16.872	0.684	239.707	**239.030**		180	-16.900	0.686	244.679	**243.920**
	177	-16.880	0.685	239.429	**240.300**		179	-16.872	0.684	247.209	**246.550**		181	-16.900	0.686	252.191	**251.340**
	178	-16.880	0.685	246.074	**246.780**		180	-16.878	0.684	252.191	**253.110**		182	-16.906	0.686	257.174	**257.750**
	179	-16.880	0.685	253.811	**254.420**		181	-16.875	0.684	260.619	**260.610**		183	-16.900	0.686	264.821	**265.500**
	180	-16.876	0.685	261.650	**260.880**		182	-16.876	0.684	267.057	**267.330**		184	-16.906	0.686	271.540	**272.330**
	181	-16.880	0.685	268.477	**268.650**		183	-16.876	0.684	274.833	**275.070**		185	-16.902	0.686	282.102	**281.720**
	182	-16.880	0.685	275.412	**275.330**		184	-16.876	0.684	281.676	**282.260**		186	-16.910	0.686	288.500	**289.340**
	183	-16.880	0.685	283.424	**283.400**		185	-16.876	0.684	291.293	**291.570**		187	-16.910	0.686	298.102	**298.970**
	184	-16.880	0.685	290.501	**290.530**		186	-16.880	0.684	298.898	**299.570**		188	-16.906	0.686	307.863	**306.890**
	185	-16.880	0.685	300.356	**300.240**		187	-16.880	0.684	308.628	**309.210**		189	-16.910	0.686	316.494	**315.960**
	186	-16.884	0.685	308.200	**308.190**		188	-16.876	0.684	318.509	**317.510**		190	-16.916	0.686	323.646	**323.720**
	187	-16.882	0.685	318.705	**318.180**		189	-16.880	0.684	327.269	**326.680**		191	-16.920	0.686	332.374	**332.740**
	188	-16.890	0.685	325.578	**326.470**		190	-16.886	0.684	334.548	**334.750**		192	-16.920	0.686	341.280	**340.570**
	189	-16.874	0.684	336.906	**335.990**		191	-16.890	0.684	343.402	**343.790**		193	-16.926	0.686	349.556	**349.800**
	190	-16.880	0.684	344.385	**344.150**		192	-16.890	0.684	352.425	**352.000**		194	-16.914	0.685	358.715	**357.840**
	191	-16.880	0.684	354.532	**353.630**		193	-16.894	0.684	361.379	**361.280**		195	-16.920	0.685	367.047	**367.360**
85	99	-17.180	0.845	22.337	**23.040**	86	100	-17.200	0.845	25.736	**26.610**	87	102	-17.210	0.845	29.969	**29.830**
	100	-17.180	0.845	18.915	**18.970**		101	-17.200	0.845	23.494	**24.220**		103	-17.210	0.845	27.886	**27.460**
	101	-17.180	0.845	17.103	**16.660**		102	-17.200	0.845	20.241	**20.210**		104	-17.210	0.845	24.801	**23.860**
	102	-17.190	0.845	12.403	**13.100**		103	-17.200	0.845	18.578	**18.330**		105	-17.220	0.845	21.367	**21.990**
	103	-17.190	0.845	11.156	**11.270**		104	-17.210	0.845	14.006	**14.800**		106	-17.220	0.845	18.844	**18.820**
	104	-17.190	0.845	8.893	**8.170**		105	-17.210	0.845	12.897	**13.410**		107	-17.220	0.845	17.875	**17.380**
	105	-17.200	0.845	6.306	**6.770**		106	-17.210	0.845	10.784	**10.250**		108	-17.230	0.845	13.961	**14.560**
	106	-17.200	0.845	4.598	3.864		107	-17.220	0.845	8.296	9.043		109	-17.230	0.845	13.524	**13.120**
	107	-17.210	0.845	2.528	2.926		108	-17.230	0.845	4.787	5.725		110	-17.240	0.845	10.126	10.254
	108	-17.110	0.751	-0.197	-0.067		109	-17.120	0.753	5.922	5.050		111	-17.240	0.845	10.208	9.578
	109	-17.110	0.751	-1.459	-0.716		110	-17.130	0.753	1.346	1.975		112	-17.140	0.759	7.129	6.771
	110	-17.110	0.751	-3.789	-3.470		111	-17.120	0.753	2.152	1.510		113	-17.140	0.759	6.143	6.134
	111	-17.110	0.751	-4.654	-3.913		112	-17.130	0.753	-2.036	-1.230		114	-17.140	0.759	4.118	3.589
	112	-17.110	0.751	-6.580	-6.355		113	-17.120	0.753	-0.816	-1.560		115	-17.140	0.759	3.529	3.102
	113	-17.110	0.751	-7.056	-6.709		114	-17.130	0.753	-4.624	-4.000		116	-17.140	0.754	0.304	0.876
	114	-17.110	0.751	-8.589	-8.823		115	-17.130	0.753	-5.008	-4.107		117	-17.150	0.759	-0.338	0.607
	115	-17.110	0.751	-8.684	-8.988		116	-17.130	0.753	-6.436	-6.275		118	-17.090	0.728	-0.328	-1.310
	116	-17.110	0.751	-9.832	-10.789		117	-17.130	0.753	-6.443	-6.184		119	-17.090	0.728	-0.774	-1.247
	117	-17.050	0.718	-9.954	-10.595		118	-17.130	0.753	-7.490	-7.970		120	-17.090	0.728	-2.262	-2.849
	118	-17.050	0.718	-11.401	-12.163		119	-17.130	0.753	-7.129	-7.710		121	-17.090	0.728	-2.372	-2.665
	119	-17.050	0.718	-11.455	-11.875		120	-17.140	0.753	-9.862	-9.133		122	-17.090	0.728	-3.520	-3.782
	120	-17.050	0.718	-12.569	-12.985		121	-17.020	0.699	-8.035	-8.635		123	-17.090	0.728	-3.301	-3.344
	121	-17.050	0.718	-12.305	-12.439		122	-17.020	0.700	-9.055	-9.655		124	-17.090	0.728	-4.115	-4.140
	122	-17.050	0.718	-13.094	-13.227		123	-17.020	0.700	-9.143	-8.941		125	-17.090	0.728	-3.575	-3.516
	123	-17.050	0.718	-12.517	-12.470		124	-17.020	0.700	-10.283	-9.605		126	-17.090	0.728	-4.063	-3.554
	124	-17.050	0.718	-12.990	-12.884		125	-17.010	0.700	-7.971	-8.755		127	-17.090	0.728	-1.475	-0.958
	125	-17.050	0.718	-12.107	-11.972		126	-17.020	0.706	-7.660	-8.659		128	-17.090	0.728	0.081	0.318
	126	-17.050	0.718	-12.268	-11.647		127	-17.020	0.706	-5.283	-5.696		129	-17.090	0.728	2.956	2.971
	127	-17.050	0.718	-9.341	-8.628		128	-17.020	0.706	-3.956	-4.320		130	-17.010	0.700	4.625	4.315
	128	-17.050	0.718	-7.465	-6.580		129	-17.020	0.706	-1.317	-1.169		131	-17.010	0.700	7.109	7.059
	129	-17.050	0.718	-4.267	-3.379		130	-17.020	0.706	0.278	0.253		132	-17.010	0.700	8.555	8.617
	130	-17.050	0.718	-2.114	-1.257		131	-17.020	0.706	3.173	3.659		133	-17.010	0.700	11.287	11.482
	131	-17.050	0.718	1.349	2.257		132	-17.000	0.700	5.174	5.217		134	-17.010	0.700	12.988	13.277
	132	-17.050	0.718	3.772	4.395		133	-17.020	0.706	8.176	8.829		135	-17.010	0.700	15.963	16.378
	133	-17.050	0.718	7.494	8.100		134	-17.020	0.706	10.289	10.612		136	-17.010	0.700	17.912	18.382
	134	-17.050	0.718	10.182	10.396		135	-17.020	0.706	13.682	14.471		137	-17.010	0.700	21.125	21.749
	135	-17.050	0.718	14.158	14.376		136	-17.020	0.706	16.046	16.372		138	-17.010	0.700	23.318	23.821
	136	-17.050	0.718	17.106	16.783		137	-17.020	0.706	19.679	20.390		139	-17.010	0.700	26.764	27.521
	137	-17.050	0.718	21.331	20.953		138	-17.020	0.706	22.290	22.445		140	-17.010	0.700	29.195	29.682
	138	-17.060	0.719	23.236	23.428		139	-17.020	0.706	26.159	26.534		141	-17.010	0.700	32.871	33.384
	139	-16.920	0.685	26.986	27.711		140	-17.020	0.706	29.011	28.747		142	-17.010	0.700	35.536	35.668
	140	-16.920	0.685	29.524	30.300		141	-17.020	0.706	33.111	32.886		143	-17.010	0.700	39.436	39.487
	141	-16.910	0.685	35.565	34.660		142	-17.020	0.706	36.199	35.243		144	-17.010	0.700	42.330	42.081
	142	-16.910	0.685	38.330	37.430		143	-16.930	0.684	38.635	39.362		145	-17.010	0.700	46.449	46.073
	143	-16.910	0.685	42.329	41.880		144	-16.930	0.684	41.334	42.170		146	-16.960	0.688	48.273	48.920
	144	-16.910	0.685	45.307	44.890		145	-16.921	0.684	47.333	46.550		147	-16.960	0.688	52.263	**53.140**

Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	145	-16.910	0.685	49.508	49.150		146	-16.920	0.684	50.482	49.510		148	-16.959	0.688	55.488	56.260
	146	-16.910	0.685	52.694	52.410		147	-16.920	0.684	54.612	53.890		149	-16.959	0.688	59.682	60.520
	147	-16.910	0.685	57.095	56.830		148	-16.920	0.684	57.737	57.060		150	-16.959	0.688	62.880	63.870
	148	-16.910	0.685	60.485	60.330		149	-16.920	0.684	62.064	61.670		151	-16.956	0.688	67.985	68.380
	149	-16.910	0.685	65.081	64.960		150	-16.920	0.684	65.390	65.000		152	-16.950	0.688	72.823	72.050
	150	-16.919	0.686	67.839	68.660		151	-16.920	0.684	69.909	69.880		153	-16.950	0.688	77.418	77.130
	151	-16.919	0.686	72.652	73.520		152	-16.920	0.684	73.433	73.550		154	-16.960	0.690	81.303	81.180
	152	-16.910	0.686	78.598	77.620		153	-16.936	0.688	79.701	78.950		155	-16.960	0.690	86.150	86.540
	153	-16.910	0.686	83.609	82.910		154	-16.934	0.688	84.026	83.030		156	-16.956	0.690	90.989	90.730
	154	-16.910	0.686	87.624	87.320		155	-16.938	0.688	88.086	88.640		157	-16.956	0.690	96.027	95.920
	155	-16.919	0.688	93.590	92.990		156	-16.938	0.688	92.121	92.920		158	-16.954	0.690	100.581	100.180
	156	-16.920	0.688	97.620	97.600		157	-16.930	0.688	99.270	98.460		159	-16.952	0.690	106.298	105.490
	157	-16.920	0.688	103.060	103.120		158	-16.930	0.688	103.504	102.670		160	-16.954	0.690	110.061	109.810
	158	-16.920	0.688	107.517	107.660		159	-16.930	0.688	108.897	108.360		161	-16.952	0.690	115.964	115.180
	159	-16.920	0.688	113.137	113.360		160	-16.930	0.688	113.316	112.630		162	-16.958	0.690	118.913	119.660
	160	-16.920	0.688	117.777	117.800		161	-16.930	0.688	118.889	118.320		163	-16.954	0.690	125.494	125.260
	161	-16.916	0.688	124.557	123.580		162	-16.930	0.688	123.490	122.790		164	-16.960	0.691	130.330	130.180
	162	-16.920	0.688	128.393	128.410		163	-16.930	0.688	129.236	128.830		165	-16.960	0.691	136.122	136.220
	163	-16.920	0.688	134.361	134.450		164	-16.930	0.688	134.018	133.680		166	-16.960	0.691	140.958	140.990
	164	-16.920	0.688	139.360	139.690		165	-16.930	0.688	139.935	140.020		167	-16.960	0.691	146.923	146.750
	165	-16.920	0.688	145.497	145.860		166	-16.930	0.688	144.893	144.740		168	-16.960	0.691	151.936	151.510
	166	-16.920	0.688	150.670	150.810		167	-16.930	0.688	150.978	150.780		169	-16.960	0.691	158.069	157.350
	167	-16.920	0.688	156.973	156.900		168	-16.930	0.688	156.108	155.570		170	-16.960	0.691	163.256	162.350
	168	-16.920	0.688	162.315	161.970		169	-16.930	0.688	162.359	161.730		171	-16.964	0.691	168.523	168.480
	169	-16.920	0.688	168.782	168.150		170	-16.930	0.688	167.658	166.750		172	-16.968	0.691	172.841	173.600
	170	-16.920	0.688	174.293	173.500		171	-16.930	0.688	174.071	173.210		173	-16.965	0.691	180.075	179.950
	171	-16.922	0.688	180.407	179.890		172	-16.934	0.688	178.505	178.490		174	-16.966	0.691	185.333	185.370
	172	-16.926	0.688	185.053	185.430		173	-16.934	0.688	185.074	184.950		175	-16.966	0.691	191.950	191.800
	173	-16.926	0.688	191.831	192.010		174	-16.938	0.688	189.659	190.370		176	-16.968	0.691	197.107	197.390
	174	-16.924	0.688	198.180	197.740		175	-16.932	0.688	197.946	197.110		177	-16.966	0.691	204.406	204.010
	175	-16.930	0.688	203.554	204.470		176	-16.936	0.688	202.686	202.670		178	-16.964	0.691	210.780	209.880
	176	-16.926	0.688	210.585	210.350		177	-16.932	0.688	210.614	209.640		179	-16.964	0.691	217.710	216.810
	177	-16.926	0.688	217.668	217.330		178	-16.936	0.688	215.505	215.510		180	-16.970	0.691	222.114	223.040
	178	-16.928	0.688	223.289	223.440		179	-16.934	0.688	223.062	222.780		181	-16.970	0.691	229.189	230.180
	179	-16.926	0.688	231.048	230.830		180	-16.934	0.688	229.162	228.980		182	-16.970	0.691	235.345	236.300
	180	-16.924	0.688	237.878	237.180		181	-16.936	0.688	235.804	236.330		183	-16.970	0.691	242.570	243.450
	181	-16.924	0.688	245.259	244.380		182	-16.938	0.688	241.519	242.440		184	-16.965	0.691	250.233	249.990
	182	-16.930	0.688	250.110	250.870		183	-16.932	0.688	250.452	249.890		185	-16.964	0.691	259.570	258.720
	183	-16.930	0.688	257.629	258.320		184	-16.934	0.688	256.316	256.430		186	-16.970	0.691	266.078	265.980
	184	-16.930	0.688	264.224	265.160		185	-16.936	0.688	264.932	265.470		187	-16.970	0.691	275.265	274.930
	185	-16.930	0.688	273.582	274.200		186	-16.934	0.688	273.708	272.750		188	-16.972	0.691	282.987	282.370
	186	-16.932	0.688	281.469	281.820		187	-16.940	0.688	281.352	281.990		189	-16.978	0.691	290.641	290.350
	187	-16.928	0.688	292.034	291.130		188	-16.940	0.688	289.709	289.490		190	-16.920	0.685	298.178	297.740
	188	-16.932	0.688	299.500	299.000		189	-16.942	0.688	298.558	298.060		191	-16.924	0.685	306.273	305.770
	189	-16.940	0.688	306.905	307.620		190	-16.940	0.687	304.709	305.390		192	-16.926	0.685	314.010	313.190
	190	-16.940	0.688	315.576	315.290		191	-16.940	0.687	314.180	313.950		193	-16.920	0.684	322.065	321.760
	191	-16.944	0.688	324.180	323.900		192	-16.942	0.687	322.184	321.200		194	-16.920	0.684	330.440	329.510
	192	-16.946	0.688	332.415	331.710		193	-16.946	0.687	330.656	330.130		195	-16.926	0.684	338.143	338.070
	193	-16.950	0.688	341.121	340.610		194	-16.940	0.686	337.945	337.860		196	-16.918	0.683	345.813	345.760
	194	-16.930	0.686	349.335	348.520		195	-16.940	0.686	347.602	347.040		197	-16.920	0.683	354.709	354.670
	195	-16.934	0.686	358.067	357.910		196	-16.946	0.686	354.664	354.750		198	-16.920	0.683	363.273	362.450
	196	-16.938	0.686	365.884	366.100		197	-16.948	0.686	363.862	364.100		199	-16.928	0.683	370.559	371.400
	197	-16.942	0.686	374.712	375.190		198	-16.940	0.685	371.743	371.820		200	-16.920	0.682	378.258	379.090
							199	-16.940	0.685	381.576	380.720		201	-16.930	0.683	388.331	387.900
							200	-16.948	0.685	388.226	388.770		202	-16.920	0.682	396.639	395.670
88	104	-17.230	0.845	31.079	31.520	89	106	-17.230	0.834	35.997	35.600	90	108	-17.240	0.830	38.516	37.920
	105	-17.230	0.845	29.145	29.620		107	-17.230	0.834	34.063	33.720		109	-17.240	0.830	36.666	36.370
	106	-17.230	0.845	26.220	26.020		108	-17.230	0.834	31.140	30.470		110	-17.240	0.830	33.834	33.160
	107	-17.230	0.845	24.845	24.610		109	-17.230	0.834	29.739	28.940		111	-17.240	0.830	32.503	31.720
	108	-17.240	0.845	20.522	21.290		110	-17.240	0.834	25.363	26.010		112	-17.250	0.830	28.174	28.570
	109	-17.240	0.845	19.684	20.240		111	-17.240	0.834	24.475	24.450		113	-17.250	0.830	27.342	27.210
	110	-17.240	0.845	17.861	17.100		112	-17.260	0.845	21.069	21.640		114	-17.260	0.830	23.494	24.270
	111	-17.250	0.845	15.566	15.960		113	-17.260	0.845	20.878	20.340		115	-17.260	0.830	23.149	23.250
	112	-17.260	0.845	12.270	13.080		114	-17.270	0.845	17.686	17.780		116	-17.270	0.830	19.772	20.620
	113	-17.260	0.845	12.466	11.937		115	-17.280	0.845	15.959	16.820		117	-17.270	0.830	19.902	19.700
	114	-17.150	0.755	9.292	9.075		116	-17.290	0.845	13.243	14.107		118	-17.290	0.834	16.190	16.688
	115	-17.150	0.755	8.303	8.601		117	-17.150	0.749	13.053	13.485		119	-17.160	0.751	16.855	16.395
	116	-17.150	0.755	6.284	6.061		118	-17.150	0.749	11.000	11.146		120	-17.160	0.751	14.918	14.060
	117	-17.150	0.755	5.681	5.804		119	-17.150	0.749	10.344	10.761		121	-17.160	0.751	14.364	13.876
	118	-17.150	0.755	4.052	3.566		120	-17.150	0.749	8.668	8.845		122	-17.160	0.751	12.801	12.111
	119	-17.150	0.755	3.826	3.514		121	-17.150	0.749	8.377	8.764		123	-17.160	0.751	12.609	12.120
	120	-17.150	0.755	2.578	1.728		122	-17.150	0.749	7.071	7.143		124	-17.160	0.751	11.413	10.695
	121	-17.100	0.728	2.473	1.858		123	-17.150	0.749	7.137	7.300		125	-17.160	0.751	11.575	10.921
	122	-17.100	0.728	1.040	0.443		124	-17.150	0.749	6.192	6.141		126	-17.160	0.751	10.737	10.299

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	123	-17.100	0.728	0.969	0.832		125	-17.150	0.749	6.607	6.433		127	-17.050	0.700	12.748	12.206
	124	-17.100	0.728	-0.128	-0.199		126	-17.150	0.749	6.016	6.031		128	-17.050	0.700	12.864	12.367
	125	-17.100	0.728	0.126	0.346		127	-17.150	0.749	8.497	8.150		129	-17.050	0.700	14.278	14.463
	126	-17.100	0.728	-0.643	0.093		128	-17.040	0.701	8.689	8.702		130	-17.050	0.700	14.667	14.690
	127	-17.100	0.728	1.657	2.532		129	-17.040	0.701	10.394	10.851		131	-17.050	0.700	16.343	16.940
	128	-17.100	0.728	2.929	3.291		130	-17.040	0.701	11.068	11.570		132	-17.050	0.700	16.998	17.203
	129	-17.100	0.728	5.517	5.890		131	-17.040	0.701	13.033	13.744		133	-17.050	0.700	18.930	19.385
	130	-17.100	0.728	7.084	6.646		132	-17.040	0.701	13.973	14.531		134	-17.050	0.700	19.847	19.996
	131	-17.020	0.699	9.456	9.394		133	-17.040	0.701	16.192	16.622		135	-17.050	0.700	22.030	22.310
	132	-17.020	0.699	10.617	10.272		134	-17.040	0.701	17.391	17.825		136	-17.050	0.700	23.202	23.198
	133	-17.020	0.699	13.060	12.964		135	-17.040	0.701	19.860	20.234		137	-17.050	0.700	25.631	25.805
	134	-17.020	0.699	14.476	14.320		136	-17.040	0.701	21.313	21.637		138	-17.050	0.700	27.054	26.771
	135	-17.020	0.699	17.163	17.233		137	-17.040	0.701	24.027	24.309		139	-17.050	0.700	29.724	29.586
	136	-17.020	0.699	18.830	18.826		138	-17.040	0.701	25.729	25.850		140	-17.050	0.700	31.393	30.863
	137	-17.020	0.699	21.758	21.993		139	-17.040	0.701	28.682	28.895		141	-17.050	0.700	34.298	33.816
	138	-17.020	0.699	23.669	23.668		140	-17.040	0.701	30.629	30.690		142	-17.050	0.700	36.208	35.447
	139	-17.020	0.699	26.832	27.177		141	-17.040	0.701	33.816	33.838		143	-17.050	0.700	39.346	38.732
	140	-17.020	0.699	28.983	28.940		142	-17.040	0.701	36.002	35.763		144	-17.050	0.700	41.492	40.613
	141	-17.020	0.699	32.376	32.562		143	-17.040	0.701	39.419	39.154		145	-17.050	0.700	44.856	44.018
	142	-17.020	0.699	34.763	34.516		144	-17.040	0.701	41.840	41.308		146	-17.050	0.700	47.234	46.255
	143	-17.020	0.699	38.382	38.216		145	-17.040	0.701	45.483	44.841		147	-17.050	0.700	50.820	49.955
	144	-17.020	0.699	40.999	40.497		146	-17.040	0.701	48.134	47.357		148	-17.050	0.700	53.425	52.525
	145	-17.020	0.699	44.839	44.334		147	-17.040	0.701	51.997	51.221		149	-17.060	0.702	56.975	56.500
	146	-17.020	0.699	47.683	46.931		148	-17.050	0.703	54.658	54.020		150	-17.062	0.702	59.378	**58.810**
	147	-16.970	0.687	50.651	51.130		149	-17.052	0.703	58.317	**57.750**		151	-17.062	0.702	63.450	**62.910**
	148	-16.970	0.687	53.375	**53.830**		150	-17.052	0.703	61.470	**60.740**		152	-17.068	0.702	65.099	**65.850**
	149	-16.970	0.687	57.299	**58.080**		151	-17.052	0.703	65.817	**64.860**		153	-17.060	0.702	71.321	**70.510**
	150	-16.965	0.687	61.422	**61.060**		152	-17.053	0.703	68.948	**68.170**		154	-17.060	0.702	74.641	**73.880**
	151	-16.962	0.687	66.267	**65.550**		153	-17.058	0.703	72.294	**72.840**		155	-17.064	0.703	79.425	**78.880**
	152	-16.962	0.687	69.412	**68.860**		154	-17.056	0.703	76.360	**76.580**		156	-17.066	0.703	82.495	**82.430**
	153	-16.960	0.687	74.221	**73.890**		155	-17.050	0.703	82.584	**81.600**		157	-17.062	0.703	88.209	**87.370**
	154	-16.970	0.689	77.743	**77.630**		156	-17.050	0.703	86.382	**85.510**		158	-17.064	0.703	91.485	**90.890**
	155	-16.966	0.689	83.295	**82.960**		157	-17.050	0.703	91.349	**90.350**		159	-17.068	0.703	95.417	**95.940**
	156	-16.966	0.689	86.904	**86.870**		158	-17.052	0.703	94.860	**94.260**		160	-17.070	0.703	98.889	**99.670**
	157	-16.964	0.689	92.168	**92.070**		159	-17.052	0.703	100.024	**99.350**		161	-17.070	0.703	104.007	**104.640**
	158	-16.960	0.689	96.959	**96.000**		160	-17.058	0.703	102.736	**103.360**		162	-17.070	0.703	108.178	**108.440**
	159	-16.960	0.689	101.925	**101.360**		161	-17.060	0.703	107.587	**108.350**		163	-17.070	0.703	113.490	**113.960**
	160	-16.960	0.689	105.926	**105.280**		162	-17.060	0.703	111.985	**112.550**		164	-17.070	0.703	117.858	**118.170**
	161	-16.970	0.690	110.137	**110.720**		163	-17.060	0.703	117.526	**117.950**		165	-17.070	0.703	123.358	**123.700**
	162	-16.970	0.690	114.352	**114.860**		164	-17.060	0.703	122.118	**122.470**		166	-17.070	0.703	127.921	**128.310**
	163	-16.970	0.690	119.709	**120.590**		165	-17.060	0.703	127.846	**128.150**		167	-17.070	0.703	133.608	**133.870**
	164	-16.970	0.690	124.108	**125.080**		166	-17.060	0.703	132.631	**132.850**		168	-17.070	0.703	138.360	**137.950**
	165	-16.970	0.691	131.348	**131.120**		167	-17.060	0.703	138.543	**138.270**		169	-17.070	0.703	144.230	**143.470**
	166	-16.970	0.691	135.968	**135.710**		168	-17.060	0.703	143.516	**142.800**		170	-17.072	0.703	148.648	**147.790**
	167	-16.970	0.691	141.714	**141.460**		169	-17.064	0.703	148.576	**148.180**		171	-17.076	0.703	153.652	**153.580**
	168	-16.970	0.691	146.512	**145.960**		170	-16.970	0.690	153.789	**152.850**		172	-17.068	0.702	158.951	**158.270**
	169	-16.970	0.691	152.429	**151.740**		171	-16.974	0.690	158.585	**158.620**		173	-17.070	0.702	164.612	**164.260**
	170	-16.970	0.691	157.403	**156.430**		172	-16.976	0.690	162.962	**163.600**		174	-17.070	0.702	169.875	**169.140**
	171	-16.970	0.691	163.487	**162.570**		173	-16.972	0.690	170.007	**169.650**		175	-17.074	0.702	175.172	**175.200**
	172	-16.978	0.691	166.553	**167.450**		174	-16.970	0.690	175.604	**174.850**		176	-17.074	0.702	180.607	**180.120**
	173	-16.972	0.691	174.361	**173.790**		175	-16.970	0.690	181.770	**180.860**		177	-17.084	0.703	186.579	**186.460**
	174	-16.972	0.691	179.674	**178.890**		176	-16.970	0.690	187.010	**186.130**		178	-17.086	0.703	191.683	**191.710**
	175	-16.976	0.691	185.031	**185.300**		177	-16.970	0.690	193.337	**192.460**		179	-17.084	0.703	198.942	**198.470**
	176	-16.976	0.691	190.507	**190.550**		178	-16.976	0.690	197.140	**198.030**		180	-17.086	0.703	204.213	**204.180**
	177	-16.974	0.691	197.601	**197.220**		179	-16.972	0.690	204.690	**204.720**		181	-17.088	0.703	210.556	**210.970**
	178	-16.974	0.691	203.242	**202.740**		180	-16.970	0.690	210.793	**210.800**		182	-16.934	0.685	216.918	**216.480**
	179	-16.976	0.691	209.431	**209.760**		181	-16.972	0.690	216.892	**217.550**		183	-16.932	0.685	223.885	**223.360**
	180	-16.976	0.691	215.231	**215.790**		182	-16.916	0.684	223.756	**223.380**		184	-16.936	0.685	228.303	**229.300**
	181	-16.974	0.691	222.643	**222.850**		183	-16.914	0.684	230.886	**230.230**		185	-16.930	0.685	238.196	**237.700**
	182	-16.976	0.691	228.063	**228.670**		184	-16.912	0.684	237.109	**236.470**		186	-16.934	0.685	244.430	**244.280**
	183	-16.972	0.691	236.172	**235.820**		185	-16.916	0.684	244.429	**244.850**		187	-16.936	0.685	252.250	**252.660**
	184	-16.970	0.691	242.832	**242.070**		186	-16.914	0.684	252.477	**251.780**		188	-16.940	0.685	258.604	**259.230**
	185	-16.970	0.691	251.696	**250.790**		187	-16.914	0.684	261.018	**260.330**		189	-16.940	0.685	267.101	**266.750**
	186	-16.980	0.691	256.903	**257.720**		188	-16.920	0.684	266.988	**267.210**		190	-16.934	0.684	273.752	**273.240**
	187	-16.980	0.691	265.886	**266.570**		189	-16.924	0.684	274.537	**274.750**		191	-16.938	0.684	281.211	**281.050**
	188	-16.980	0.691	273.957	**273.640**		190	-16.920	0.683	280.724	**281.570**		192	-16.942	0.684	287.763	**287.830**
	189	-16.984	0.691	281.960	**281.710**		191	-16.918	0.683	290.023	**289.420**		193	-16.934	0.683	295.972	**296.060**
	190	-16.938	0.686	289.145	**288.420**		192	-16.922	0.683	296.738	**296.540**		194	-16.934	0.683	303.738	**303.250**
	191	-16.942	0.686	297.077	**296.580**		193	-16.916	0.682	304.477	**304.770**		195	-16.940	0.683	310.809	**311.300**
	192	-16.936	0.685	304.056	**303.710**		194	-16.920	0.682	311.265	**311.980**		196	-16.940	0.683	318.693	**318.120**
	193	-16.938	0.685	312.618	**312.250**		195	-16.920	0.682	320.198	**320.250**		197	-16.934	0.682	326.377	**326.390**
	194	-16.944	0.685	319.147	**319.630**		196	-16.920	0.682	328.236	**327.840**		198	-16.940	0.682	332.615	**333.430**
	195	-16.944	0.685	328.381	**328.140**		197	-16.922	0.682	336.713	**336.100**		199	-16.938	0.682	342.157	**341.850**
	196	-16.934	0.684	336.536	**335.550**		198	-16.914	0.681	344.127	**343.440**		200	-16.939	0.682	349.950	**349.200**

				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
	197	-16.940	0.684	344.138	**344.280**		199	-16.920	0.681	351.521	**352.050**		201	-16.942	0.682	358.156	**357.370**
	198	-16.940	0.684	352.552	**351.700**		200	-16.918	0.681	360.330	**359.410**		202	-16.948	0.682	364.601	**364.210**
	199	-16.940	0.684	361.973	**360.980**		201	-16.922	0.681	368.400	**367.770**		203	-16.938	0.681	373.503	**372.750**
	200	-16.934	0.683	369.025	**368.030**		202	-16.926	0.681	375.580	**374.820**		204	-16.944	0.681	380.009	**380.060**
	201	-16.938	0.683	377.360	**376.770**		203	-16.918	0.680	383.978	**383.200**		205	-16.948	0.681	388.078	**388.550**
	202	-16.942	0.683	384.802	**384.240**		204	-16.920	0.680	391.806	**391.020**		206	-16.940	0.680	395.470	**395.900**
	203	-16.934	0.682	393.374	**392.870**		205	-16.924	0.680	400.029	**399.510**		207	-16.940	0.680	404.783	**404.660**
	204	-16.938	0.682	400.876	**400.560**		206	-16.928	0.680	407.370	**407.260**		208	-16.942	0.680	412.633	**412.150**
													209	-16.948	0.680	420.256	**421.010**
91	109	-17.250	0.830	46.090	**45.750**	92	111	-17.260	0.827	48.686	**48.550**	93	113	-17.250	0.800	52.724	**53.060**
	110	-17.250	0.830	42.874	**42.420**		112	-17.260	0.827	45.576	**45.190**		114	-17.250	0.800	49.350	**49.740**
	111	-17.250	0.830	41.158	**40.750**		113	-17.260	0.827	43.946	**43.540**		115	-17.250	0.800	47.421	**47.920**
	112	-17.250	0.830	38.469	**37.700**		114	-17.270	0.827	39.290	**40.240**		116	-17.250	0.800	44.518	**44.890**
	113	-17.260	0.830	35.224	**36.010**		115	-17.270	0.827	38.149	**38.780**		117	-17.250	0.800	43.046	**43.390**
	114	-17.260	0.830	33.040	**33.030**		116	-17.270	0.827	36.047	**35.760**		118	-17.250	0.800	40.603	**40.450**
	115	-17.260	0.830	32.325	**31.620**		117	-17.270	0.827	35.395	**34.640**		119	-17.250	0.800	39.578	**39.090**
	116	-17.270	0.830	28.575	**28.970**		118	-17.270	0.820	31.874	**31.650**		120	-17.260	0.801	35.738	**36.510**
	117	-17.270	0.830	28.339	**27.810**		119	-17.270	0.820	31.560	**30.610**		121	-17.260	0.800	34.857	**35.480**
	118	-17.290	0.838	25.353	**25.190**		120	-17.280	0.820	28.166	**27.990**		122	-17.260	0.800	33.296	**33.190**
	119	-17.290	0.834	24.462	**24.270**		121	-17.280	0.820	28.301	**27.310**		123	-17.260	0.800	33.125	**32.350**
	120	-17.300	0.834	21.703	22.052		122	-17.310	0.830	24.635	**25.060**		124	-17.270	0.800	29.825	**30.560**
	121	-17.170	0.751	21.294	21.597		123	-17.310	0.830	25.414	24.889		125	-17.270	0.800	30.063	**30.350**
	122	-17.170	0.751	19.427	19.654		124	-17.300	0.820	23.374	23.066		126	-17.270	0.800	29.346	29.437
	123	-17.170	0.751	18.928	19.460		125	-17.100	0.705	22.313	22.971		127	-17.280	0.800	29.496	30.475
	124	-17.170	0.751	17.430	17.805		126	-17.090	0.704	21.766	21.895		128	-17.280	0.800	30.875	29.910
	125	-17.170	0.751	17.288	17.824		127	-17.090	0.704	22.438	23.296		129	-17.290	0.800	31.376	31.275
	126	-17.170	0.751	16.152	17.055		128	-17.090	0.704	22.092	23.013		130	-17.300	0.800	30.899	30.659
	127	-17.170	0.751	18.073	18.650		129	-17.090	0.707	24.399	24.520		131	-17.310	0.800	31.733	32.032
	128	-17.170	0.751	18.993	18.583		130	-17.090	0.707	24.402	24.273		132	-17.090	0.700	30.712	31.618
	129	-17.170	0.751	21.235	20.278		131	-17.090	0.707	25.691	26.045		133	-17.090	0.700	31.845	32.817
	130	-17.060	0.699	19.941	20.375		132	-17.090	0.707	25.973	25.743		134	-17.090	0.700	31.978	32.579
	131	-17.060	0.699	21.326	22.064		133	-17.090	0.707	27.530	27.372		135	-17.090	0.700	33.370	33.825
	132	-17.060	0.699	21.695	22.338		134	-17.090	0.704	26.368	27.329		136	-17.090	0.700	33.767	33.801
	133	-17.060	0.699	23.337	23.862		135	-17.090	0.704	28.112	29.045		137	-17.090	0.700	35.412	35.237
	134	-17.060	0.699	23.969	24.357		136	-17.090	0.704	28.856	29.220		138	-17.090	0.700	36.066	35.624
	135	-17.060	0.699	25.865	26.034		137	-17.090	0.704	30.854	31.211		139	-17.090	0.700	37.960	37.359
	136	-17.060	0.699	26.753	26.830		138	-17.080	0.700	31.468	31.615		140	-17.090	0.700	38.867	37.949
	137	-17.060	0.699	28.896	28.924		139	-17.080	0.700	33.618	33.806		141	-17.100	0.701	39.384	39.955
	138	-17.060	0.699	30.038	29.897		140	-17.080	0.700	34.776	34.609		142	-17.100	0.701	40.556	41.043
	139	-17.060	0.699	32.423	32.174		141	-17.080	0.700	37.167	36.919		143	-17.100	0.701	42.949	43.378
	140	-17.060	0.699	33.812	33.424		142	-17.080	0.700	38.571	38.145		144	-17.100	0.701	44.366	44.872
	141	-17.060	0.699	36.435	35.947		143	-17.080	0.700	41.198	40.919		145	-17.100	0.701	46.994	47.455
	142	-17.060	0.699	38.066	37.489		144	-17.080	0.700	42.843	42.445		146	-17.090	0.700	50.178	49.311
	143	-17.060	0.699	40.922	40.339		145	-17.080	0.700	45.701	45.390		147	-17.090	0.700	53.016	52.316
	144	-17.060	0.699	42.791	42.289		146	-17.080	0.700	47.582	47.308		148	-17.090	0.700	54.886	54.315
	145	-17.060	0.699	45.875	45.334		147	-17.080	0.700	50.667	50.573		149	-17.090	0.700	57.949	57.417
	146	-17.060	0.699	47.977	47.528		148	-17.080	0.700	52.779	52.715		150	-17.090	0.700	60.049	59.806
	147	-17.060	0.699	51.285	50.894		149	-17.080	0.700	56.087	56.197		151	-17.090	0.700	63.333	63.240
	148	-17.060	0.699	53.616	53.337		150	-17.080	0.700	58.427	58.620		152	-17.090	0.701	66.704	65.850
	149	-17.060	0.699	57.143	57.010		151	-17.080	0.701	63.006	62.480		153	-17.090	0.701	70.236	**69.380**
	150	-17.070	0.702	60.468	59.740		152	-17.082	0.701	65.113	**64.530**		154	-17.090	0.701	72.814	**72.310**
	151	-17.072	0.702	63.814	**63.050**		153	-17.080	0.701	69.374	**68.820**		155	-17.090	0.701	76.560	**76.580**
	152	-17.074	0.702	66.190	**65.980**		154	-17.080	0.701	72.188	**71.750**		156	-17.110	0.705	79.097	**79.740**
	153	-17.070	0.702	71.205	**70.290**		155	-17.086	0.703	77.063	**76.390**		157	-17.110	0.705	83.166	**84.100**
	154	-17.070	0.702	74.287	**73.570**		156	-17.086	0.703	80.154	**79.580**		158	-17.106	0.705	87.295	**87.360**
	155	-17.070	0.702	78.541	**78.300**		157	-17.090	0.703	83.411	**84.230**		159	-17.108	0.705	91.072	**91.760**
	156	-17.072	0.703	82.605	**81.830**		158	-17.090	0.703	86.712	**87.460**		160	-17.108	0.705	94.412	**95.000**
	157	-17.072	0.703	87.097	**86.460**		159	-17.090	0.703	91.166	**92.150**		161	-17.108	0.705	98.895	**99.370**
	158	-17.078	0.703	89.142	**90.000**		160	-17.090	0.703	94.675	**95.340**		162	-17.110	0.705	101.934	**102.860**
	159	-17.078	0.703	93.830	**94.710**		161	-17.090	0.703	99.329	**100.120**		163	-17.108	0.705	107.128	**107.680**
	160	-17.076	0.703	98.071	**98.420**		162	-17.090	0.703	103.044	**103.620**		164	-17.106	0.705	111.395	**111.710**
	161	-17.078	0.703	102.457	**103.080**		163	-17.090	0.703	107.895	**108.770**		165	-17.106	0.705	116.278	**116.700**
	162	-17.078	0.703	106.399	**106.900**		164	-17.090	0.703	111.812	**112.780**		166	-17.108	0.705	119.717	**120.680**
	163	-17.073	0.703	112.751	**112.100**		165	-17.086	0.703	117.885	**118.080**		167	-17.104	0.705	125.831	**125.850**
	164	-17.076	0.703	116.134	**116.330**		166	-17.086	0.703	122.002	**122.140**		168	-17.108	0.705	128.943	**129.910**
	165	-17.076	0.703	121.409	**121.560**		167	-17.086	0.703	127.242	**127.570**		169	-17.104	0.705	135.256	**134.930**
	166	-17.076	0.703	125.749	**125.990**		168	-17.088	0.703	131.034	**131.550**		170	-17.110	0.705	138.028	**139.020**
	167	-17.080	0.704	131.848	**131.460**		169	-17.090	0.703	135.935	**136.880**		171	-17.104	0.705	145.061	**144.100**
	168	-17.080	0.704	136.415	**135.610**		170	-17.088	0.703	140.959	**140.850**		172	-17.110	0.705	148.011	**148.420**
	169	-17.080	0.703	140.354	**140.850**		171	-17.090	0.703	146.040	**146.290**		173	-17.110	0.705	153.644	**153.870**
	170	-17.080	0.703	145.071	**145.110**		172	-17.090	0.703	150.726	**150.620**		174	-17.112	0.705	157.832	**158.410**
	171	-17.078	0.703	151.421	**150.550**		173	-17.090	0.703	156.511	**156.340**		175	-17.110	0.705	164.178	**163.910**
	172	-17.080	0.703	155.800	**155.280**		174	-17.090	0.703	161.382	**160.910**		176	-17.110	0.705	169.085	**168.460**
	173	-17.080	0.703	161.803	**161.020**		175	-17.096	0.703	165.742	**166.680**		177	-17.116	0.705	173.454	**174.160**

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				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
	174	-17.084	0.703	165.829	**165.850**		176	-17.096	0.703	170.788	**171.290**		178	-17.114	0.705	179.078	**179.100**
	175	-17.084	0.703	172.004	**171.590**		177	-17.092	0.703	177.994	**177.290**		179	-17.110	0.705	186.325	**185.350**
	176	-17.090	0.703	175.662	**176.580**		178	-17.098	0.703	181.601	**182.240**		180	-17.110	0.705	191.590	**190.680**
	177	-17.082	0.702	182.082	**182.520**		179	-17.096	0.703	188.442	**188.750**		181	-17.114	0.705	196.828	**196.980**
	178	-17.084	0.702	186.941	**187.790**		180	-17.094	0.703	194.384	**194.200**		182	-17.114	0.705	202.264	**202.350**
	179	-17.082	0.702	193.955	**194.300**		181	-17.094	0.703	200.855	**200.650**		183	-17.114	0.705	208.763	**208.620**
	180	-17.078	0.702	200.608	**200.060**		182	-17.096	0.703	205.879	**205.870**		184	-17.114	0.705	214.370	**214.260**
	181	-17.080	0.702	206.710	**206.440**		183	-17.094	0.703	213.062	**212.440**		185	-17.120	0.705	221.029	**221.890**
	182	-17.080	0.702	212.451	**212.060**		184	-17.094	0.703	218.804	**218.080**		186	-17.120	0.705	228.455	**228.170**
	183	-17.084	0.702	218.160	**218.620**		185	-17.096	0.703	226.715	**226.190**		187	-17.010	0.691	234.630	**235.440**
	184	-17.080	0.702	225.164	**224.570**		186	-16.998	0.691	233.033	**232.410**		188	-17.010	0.691	241.711	**241.400**
	185	-17.084	0.702	232.697	**232.640**		187	-17.000	0.691	240.658	**240.210**		189	-17.014	0.691	248.694	**248.330**
	186	-17.086	0.702	239.874	**239.210**		188	-17.004	0.691	246.821	**246.250**		190	-17.010	0.690	254.574	**254.650**
	187	-17.094	0.702	246.423	**247.100**		189	-17.008	0.691	254.009	**253.540**		191	-17.012	0.690	262.208	**261.780**
	188	-16.942	0.685	254.066	**253.600**		190	-17.004	0.690	260.025	**259.710**		192	-17.020	0.690	267.240	**267.920**
	189	-16.948	0.685	260.688	**260.760**		191	-17.008	0.690	267.293	**267.180**		193	-17.010	0.689	275.827	**275.150**
	190	-16.948	0.685	268.086	**267.220**		192	-17.001	0.689	274.175	**273.790**		194	-17.014	0.689	282.084	**281.580**
	191	-16.942	0.684	275.594	**274.710**		193	-17.006	0.689	281.238	**281.330**		195	-17.018	0.689	289.345	**288.910**
	192	-16.950	0.684	280.820	**281.480**		194	-17.012	0.689	287.118	**287.750**		196	-17.010	0.688	296.460	**295.630**
	193	-16.950	0.684	289.322	**289.500**		195	-17.001	0.688	296.137	**295.400**		197	-17.014	0.688	303.799	**303.240**
	194	-16.940	0.683	297.044	**296.140**		196	-17.005	0.688	302.671	**301.960**		198	-17.018	0.688	310.254	**309.740**
	195	-16.948	0.683	303.346	**303.880**		197	-17.008	0.688	310.495	**310.120**		199	-17.020	0.688	318.284	**317.610**
	196	-16.950	0.683	310.466	**310.690**		198	-17.004	0.687	316.587	**316.690**		200	-17.014	0.687	324.879	**324.250**
	197	-16.940	0.682	319.175	**318.670**		199	-17.004	0.687	325.355	**324.650**		201	-17.018	0.687	332.397	**332.020**
	198	-16.946	0.682	325.222	**325.830**		200	-17.008	0.687	332.079	**331.600**		202	-17.020	0.687	339.629	**338.840**
	199	-16.944	0.682	334.577	**333.860**		201	-17.010	0.687	340.376	**339.630**		203	-17.026	0.687	346.662	**346.570**
	200	-16.948	0.682	341.311	**340.860**		202	-17.004	0.686	347.094	**346.490**		204	-17.020	0.686	353.295	**353.400**
	201	-16.949	0.682	349.909	**349.200**		203	-17.008	0.686	354.872	**354.420**		205	-17.020	0.686	362.174	**361.370**
	202	-16.952	0.682	357.042	**356.400**		204	-17.012	0.686	361.775	**361.260**		206	-17.024	0.686	368.995	**368.380**
	203	-16.956	0.682	364.866	**364.150**		205	-17.014	0.686	370.246	**369.520**		207	-17.020	0.685	375.963	**376.410**
	204	-16.948	0.681	372.157	**371.420**		206	-17.010	0.685	376.397	**376.480**		208	-17.020	0.685	384.052	**383.640**
	205	-16.951	0.681	380.338	**379.610**		207	-17.010	0.685	385.531	**384.880**		209	-17.024	0.685	391.904	**391.680**
	206	-16.954	0.681	387.643	**386.960**		208	-17.018	0.685	391.404	**392.150**		210	-17.025	0.685	399.804	**399.070**
	207	-16.962	0.681	394.432	**395.400**		209	-17.020	0.685	400.040	**400.440**		211	-17.028	0.685	408.058	**407.590**
	208	-16.964	0.681	402.133	**402.890**		210	-17.010	0.684	408.010	**407.840**		212	-17.029	0.685	416.066	**415.270**
	209	-16.966	0.681	410.804	**411.460**		211	-17.010	0.684	417.317	**416.690**		213	-17.024	0.684	423.360	**423.980**
	210	-16.954	0.680	419.347	**418.890**		212	-17.029	0.685	423.520	**424.340**		214	-17.024	0.684	431.742	**431.780**
	211	-16.954	0.680	428.686	**427.760**		213	-17.014	0.684	433.964	**433.320**		215	-17.028	0.684	439.846	**440.510**
94	115	-17.260	0.801	55.760	**55.630**	95	117	-17.270	0.800	59.720	**60.150**	96	119	-17.280	0.800	62.737	**63.070**
	116	-17.260	0.801	52.532	**52.360**		118	-17.270	0.800	56.596	**56.960**		120	-17.280	0.800	59.736	**59.980**
	117	-17.260	0.801	50.731	**50.750**		119	-17.270	0.800	54.884	**55.400**		121	-17.280	0.800	58.130	**58.580**
	118	-17.260	0.801	47.967	**47.570**		120	-17.270	0.800	52.216	**52.540**		122	-17.280	0.800	55.578	**55.420**
	119	-17.260	0.801	46.617	**46.350**		121	-17.270	0.800	50.947	**51.190**		123	-17.280	0.800	54.409	**54.120**
	120	-17.260	0.800	44.046	**43.250**		122	-17.270	0.800	48.727	**48.420**		124	-17.280	0.800	52.297	**51.470**
	121	-17.270	0.801	41.250	**42.210**		123	-17.270	0.800	47.892	**47.140**		125	-17.280	0.800	51.556	**50.890**
	122	-17.270	0.801	39.376	**39.520**		124	-17.280	0.800	43.919	**44.890**		126	-17.290	0.800	47.656	**48.610**
	123	-17.270	0.801	38.890	**38.660**		125	-17.280	0.800	43.498	**44.380**		127	-17.290	0.800	49.010	**49.100**
	124	-17.270	0.800	37.109	**36.460**		126	-17.280	0.800	42.133	**42.480**		128	-17.300	0.800	47.180	**47.950**
	125	-17.270	0.800	37.024	**36.190**		127	-17.280	0.800	43.821	**42.970**		129	-17.300	0.800	48.914	**48.470**
	126	-17.280	0.800	33.790	**34.330**		128	-17.290	0.800	42.328	42.700		130	-17.310	0.801	47.873	**47.410**
	127	-17.280	0.800	35.805	35.930		129	-17.300	0.801	42.582	43.260		131	-17.320	0.801	47.733	**48.020**
	128	-17.290	0.803	35.942	35.060		130	-17.300	0.800	43.260	42.390		132	-17.330	0.803	47.585	**47.150**
	129	-17.300	0.803	36.174	36.121		131	-17.310	0.800	43.434	42.970		133	-17.340	0.803	47.830	**47.770**
	130	-17.310	0.801	34.471	35.280		132	-17.320	0.800	42.644	42.180		134	-17.350	0.803	47.122	**46.640**
	131	-17.310	0.800	36.736	36.300		133	-17.330	0.800	43.149	42.850		135	-17.360	0.803	47.698	**47.270**
	132	-17.320	0.800	36.273	35.630		134	-17.340	0.800	42.695	42.180		136	-17.370	0.800	45.594	46.333
	133	-17.330	0.800	37.107	36.770		135	-17.350	0.800	43.524	42.872		137	-17.150	0.707	47.190	47.293
	134	-17.110	0.701	35.165	36.108		136	-17.120	0.700	41.920	42.410		138	-17.150	0.705	46.119	46.722
	135	-17.109	0.701	36.543	37.395		137	-17.120	0.700	43.043	43.420		139	-17.150	0.705	47.346	48.013
	136	-17.110	0.701	36.473	36.932		138	-17.120	0.700	43.185	43.285		140	-17.150	0.705	47.604	47.853
	137	-17.110	0.701	37.878	38.309		139	-17.120	0.700	44.562	44.462		141	-17.150	0.705	49.087	49.247
	138	-17.110	0.701	38.298	38.361		140	-17.120	0.700	44.961	44.625		142	-17.150	0.705	49.603	49.445
	139	-17.110	0.701	39.955	40.052		141	-17.120	0.700	46.585	46.041		143	-17.150	0.705	51.335	51.147
	140	-17.110	0.701	40.631	40.350		142	-17.120	0.700	47.237	46.570		144	-17.150	0.705	52.106	51.724
	141	-17.110	0.701	42.535	42.182		143	-17.120	0.700	49.104	48.421		145	-17.150	0.705	54.083	53.702
	142	-17.110	0.701	43.462	42.902		144	-17.120	0.700	50.004	49.390		146	-17.150	0.705	55.104	54.804
	143	-17.110	0.701	45.607	45.092		145	-17.120	0.700	52.110	51.510		147	-17.150	0.705	57.321	57.182
	144	-17.110	0.701	46.780	46.163		146	-17.120	0.700	53.252	52.934		148	-17.150	0.705	58.585	58.452
	145	-17.110	0.701	49.162	48.588		147	-17.120	0.700	55.591	55.468		149	-17.150	0.705	61.038	61.005
	146	-17.110	0.701	50.576	50.125		148	-17.120	0.700	56.972	57.175		150	-17.150	0.705	62.542	62.617
	147	-17.110	0.701	53.191	52.955		149	-17.120	0.700	59.540	59.879		151	-17.150	0.705	65.226	65.533
	148	-17.110	0.701	54.843	54.717		150	-17.120	0.700	61.155	61.900		152	-17.150	0.705	66.966	67.393
	149	-17.110	0.701	57.685	57.755		151	-17.130	0.704	65.256	64.994		153	-17.150	0.705	69.876	70.751
	150	-17.110	0.701	59.568	59.806		152	-17.130	0.704	67.212	67.153		154	-17.150	0.707	73.852	72.990

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	151	-17.110	0.701	62.634	63.178		153	-17.130	0.704	70.340	70.563		155	-17.150	0.707	77.047	76.648
	152	-17.110	0.701	64.746	65.395		154	-17.130	0.704	72.524	73.104		156	-17.150	0.707	79.309	79.056
	153	-17.106	0.701	69.019	69.210		155	-17.145	0.709	77.486	**76.570**		157	-17.156	0.709	83.407	**82.710**
	154	-17.104	0.701	71.855	**71.340**		156	-17.146	0.709	79.789	**79.410**		158	-17.160	0.709	84.935	**85.230**
	155	-17.100	0.701	76.357	**75.520**		157	-17.150	0.709	82.492	**83.310**		159	-17.154	0.709	90.153	**89.240**
	156	-17.100	0.701	78.922	**78.320**		158	-17.150	0.709	85.265	**86.260**		160	-17.160	0.709	91.384	**91.790**
	157	-17.100	0.701	82.643	**82.640**		159	-17.148	0.709	89.695	**90.200**		161	-17.160	0.709	95.285	**95.880**
	158	-17.100	0.701	85.424	**85.590**		160	-17.150	0.709	92.179	**93.130**		162	-17.160	0.709	98.265	**98.680**
	159	-17.120	0.705	89.253	**89.840**		161	-17.150	0.709	96.313	**97.230**		163	-17.160	0.709	102.375	**103.170**
	160	-17.120	0.705	92.362	**92.770**		162	-17.150	0.709	99.520	**100.380**		164	-17.160	0.709	105.567	**106.490**
	161	-17.120	0.705	96.612	**97.210**		163	-17.150	0.709	103.862	**104.860**		165	-17.152	0.709	111.972	**111.320**
	162	-17.120	0.705	99.932	**100.360**		164	-17.146	0.709	108.317	**108.490**		166	-17.152	0.709	115.382	**114.750**
	163	-17.120	0.705	104.384	**105.200**		165	-17.148	0.709	112.346	**113.310**		167	-17.154	0.709	119.383	**119.430**
	164	-17.120	0.705	107.911	**108.830**		166	-17.142	0.709	117.541	**117.030**		168	-17.154	0.709	122.997	**123.060**
	165	-17.118	0.705	113.081	**113.950**		167	-17.140	0.709	122.818	**121.820**		169	-17.150	0.709	128.780	**127.920**
	166	-17.118	0.705	116.812	**117.620**		168	-17.144	0.709	125.608	**125.660**		170	-17.156	0.709	131.005	**131.450**
	167	-17.110	0.705	123.750	**122.770**		169	-17.144	0.709	130.556	**130.460**		171	-17.156	0.709	135.921	**136.320**
	168	-17.114	0.705	126.641	**126.600**		170	-17.146	0.709	134.064	**134.300**		172	-17.156	0.709	139.935	**140.110**
	169	-17.114	0.705	131.686	**131.650**		171	-17.146	0.709	139.202	**139.200**		173	-17.152	0.709	146.118	**145.170**
	170	-17.114	0.705	135.817	**135.470**		172	-17.150	0.709	142.368	**143.190**		174	-17.160	0.709	148.172	**149.140**
	171	-17.116	0.705	140.521	**140.620**		173	-17.150	0.709	147.692	**148.330**		175	-17.158	0.709	154.006	**154.310**
	172	-17.120	0.705	143.778	**144.610**		174	-17.150	0.709	152.115	**152.550**		176	-17.160	0.709	157.862	**158.210**
	173	-17.120	0.705	149.191	**150.040**		175	-17.150	0.709	157.626	**157.720**		177	-17.160	0.709	163.338	**163.550**
	174	-17.120	0.705	153.698	**154.250**		176	-17.151	0.709	161.968	**161.940**		178	-17.162	0.709	167.377	**167.840**
	175	-17.120	0.705	159.293	**159.740**		177	-17.150	0.709	167.933	**167.300**		179	-17.160	0.709	173.584	**173.830**
	176	-17.122	0.705	163.446	**163.960**		178	-17.150	0.709	172.734	**171.900**		180	-17.160	0.709	178.356	**178.550**
	177	-17.121	0.705	169.488	**169.630**		179	-17.154	0.709	177.512	**177.910**		181	-17.160	0.709	184.193	**184.550**
	178	-17.120	0.705	174.634	**174.240**		180	-17.150	0.709	183.592	**182.940**		182	-17.160	0.709	189.148	**189.270**
	179	-17.120	0.705	180.584	**180.520**		181	-17.156	0.709	187.987	**188.980**		183	-17.160	0.709	195.161	**195.240**
	180	-17.120	0.705	185.638	**185.700**		182	-17.150	0.709	194.808	**194.070**		184	-17.160	0.709	200.296	**200.280**
	181	-17.120	0.705	191.761	**191.850**		183	-17.154	0.709	199.921	**200.030**		185	-17.160	0.709	208.133	**207.500**
	182	-17.120	0.705	196.992	**196.820**		184	-17.150	0.709	206.376	**205.380**		186	-17.168	0.709	212.832	**213.050**
	183	-17.120	0.705	203.284	**203.090**		185	-17.156	0.709	212.748	**212.540**		187	-17.030	0.691	220.217	**219.870**
	184	-17.120	0.705	208.689	**208.430**		186	-17.020	0.691	218.241	**218.430**		188	-17.034	0.691	225.568	**225.210**
	185	-17.120	0.705	216.808	**216.120**		187	-17.024	0.691	224.687	**225.160**		189	-17.038	0.691	231.937	**231.900**
	186	-17.126	0.705	222.357	**222.070**		188	-17.024	0.691	231.371	**230.880**		190	-17.034	0.690	237.407	**237.480**
	187	-17.128	0.705	230.055	**229.290**		189	-17.020	0.690	237.905	**237.600**		191	-17.036	0.690	244.439	**244.200**
	188	-17.010	0.690	235.477	**234.960**		190	-17.024	0.690	243.554	**243.310**		192	-17.030	0.689	250.513	**249.820**
	189	-17.014	0.690	242.221	**241.900**		191	-17.020	0.689	250.109	**250.130**		193	-17.034	0.689	257.061	**256.780**
	190	-17.010	0.689	247.935	**247.830**		192	-17.022	0.689	256.422	**255.930**		194	-17.036	0.689	263.307	**262.350**
	191	-17.010	0.689	255.903	**254.910**		193	-17.030	0.689	262.016	**262.880**		195	-17.034	0.688	269.214	**269.270**
	192	-17.020	0.689	260.128	**260.810**		194	-17.020	0.688	269.401	**268.940**		196	-17.038	0.688	274.946	**274.960**
	193	-17.010	0.688	268.555	**268.040**		195	-17.024	0.688	276.230	**276.020**		197	-17.038	0.688	282.882	**282.090**
	194	-17.018	0.688	273.428	**274.110**		196	-17.028	0.688	282.178	**282.060**		198	-17.034	0.687	288.476	**287.980**
	195	-17.016	0.688	282.185	**281.690**		197	-17.029	0.688	289.997	**289.250**		199	-17.038	0.687	295.301	**295.290**
	196	-17.010	0.687	288.567	**287.790**		198	-17.024	0.687	296.009	**295.390**		200	-17.039	0.687	302.143	**301.360**
	197	-17.014	0.687	295.672	**295.140**		199	-17.026	0.687	303.619	**302.740**		201	-17.036	0.686	308.399	**308.780**
	198	-17.018	0.687	301.898	**301.490**		200	-17.030	0.687	309.767	**309.120**		202	-17.040	0.686	314.432	**314.820**
	199	-17.019	0.687	309.992	**309.170**		201	-17.024	0.686	317.036	**316.590**		203	-17.044	0.686	321.440	**322.340**
	200	-17.014	0.686	316.140	**315.580**		202	-17.030	0.686	322.668	**322.930**		204	-17.044	0.686	328.785	**328.790**
	201	-17.018	0.686	323.429	**323.340**		203	-17.030	0.686	331.061	**330.500**		205	-17.038	0.685	335.975	**336.520**
	202	-17.020	0.686	330.437	**329.710**		204	-17.036	0.686	336.802	**337.230**		206	-17.040	0.685	342.801	**342.850**
	203	-17.024	0.686	337.832	**337.640**		205	-17.030	0.685	344.107	**345.000**		207	-17.040	0.685	351.201	**350.580**
	204	-17.020	0.685	343.724	**344.230**		206	-17.030	0.685	351.718	**351.670**		208	-17.043	0.685	357.841	**357.140**
	205	-17.020	0.685	352.379	**352.160**		207	-17.030	0.685	360.304	**359.400**		209	-17.034	0.684	365.981	**365.060**
	206	-17.024	0.685	358.976	**358.940**		208	-17.034	0.685	366.825	**366.110**		210	-17.042	0.684	371.166	**371.800**
	207	-17.024	0.685	367.744	**366.970**		209	-17.030	0.684	373.555	**374.000**		211	-17.040	0.684	380.364	**379.980**
	208	-17.020	0.684	373.665	**373.800**		210	-17.028	0.684	381.971	**381.100**		212	-17.046	0.684	386.261	**387.060**
	209	-17.020	0.684	382.505	**381.830**		211	-17.034	0.684	388.905	**389.270**		213	-17.044	0.684	395.573	**395.400**
	210	-17.024	0.684	389.277	**388.960**		212	-17.034	0.684	396.824	**396.670**		214	-17.044	0.684	403.432	**402.600**
	211	-17.026	0.684	397.615	**397.420**		213	-17.036	0.684	405.085	**405.020**		215	-17.048	0.684	410.996	**410.990**
	212	-17.028	0.684	405.101	**404.810**		214	-17.036	0.684	413.118	**412.540**		216	-17.048	0.684	418.965	**418.230**
	213	-17.030	0.684	413.541	**413.440**		215	-17.038	0.684	421.482	**420.930**		217	-17.054	0.684	426.001	**426.650**
	214	-17.030	0.684	421.749	**420.960**		216	-17.040	0.684	429.005	**428.500**		218	-17.040	0.683	434.931	**433.940**
	215	-17.032	0.684	430.293	**429.670**		217	-17.044	0.684	436.847	**436.930**		219	-17.044	0.683	442.653	**442.490**
	216	-17.024	0.683	437.511	**437.240**		218	-17.034	0.683	444.618	**444.470**		220	-17.046	0.683	450.172	**449.960**
	217	-17.024	0.683	446.737	**445.960**		219	-17.038	0.683	452.515	**453.020**		221	-17.048	0.683	458.620	**458.790**
	218	-17.028	0.683	453.877	**453.510**		220	-17.038	0.683	460.833	**460.780**		222	-17.050	0.683	466.240	**466.740**
97	121	-17.270	0.789	68.959	68.130	98	123	-17.300	0.800	70.174	**70.970**	99	125	-17.300	0.800	76.809	**76.380**
	122	-17.290	0.800	64.115	**64.990**		124	-17.300	0.800	67.404	**67.890**		126	-17.300	0.800	74.159	**73.590**
	123	-17.290	0.800	62.609	**63.310**		125	-17.300	0.800	66.000	**66.880**		127	-17.310	0.800	72.272	**73.200**
	124	-17.290	0.800	60.166	**60.630**		126	-17.300	0.800	63.667	**64.180**		128	-17.290	0.800	76.244	**76.420**
	125	-17.290	0.800	59.091	**59.670**		127	-17.300	0.800	64.364	**64.200**		129	-17.290	0.799	76.696	**75.850**
	126	-17.290	0.800	57.082	**57.380**		128	-17.310	0.800	61.866	**62.650**		130	-17.320	0.800	70.012	**69.670**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	127	-17.290	0.800	58.110	**57.380**		129	-17.310	0.800	62.949	**62.820**		131	-17.330	0.800	68.855	**69.250**
	128	-17.300	0.800	55.949	**56.150**		130	-17.320	0.803	61.947	**61.330**		132	-17.340	0.800	66.754	**67.520**
	129	-17.310	0.801	55.478	**56.300**		131	-17.330	0.803	61.185	**61.250**		133	-17.340	0.800	68.260	**67.290**
	130	-17.310	0.801	55.965	**55.330**		132	-17.340	0.805	60.320	**59.510**		134	-17.350	0.800	66.516	**65.830**
	131	-17.320	0.801	55.495	**55.220**		133	-17.350	0.805	59.948	**59.650**		135	-17.360	0.801	66.512	**65.880**
	132	-17.330	0.802	54.519	**53.950**		134	-17.360	0.806	59.105	**58.260**		136	-17.370	0.801	65.131	**64.680**
	133	-17.340	0.802	54.411	**54.130**		135	-17.370	0.806	59.095	**58.780**		137	-17.380	0.802	65.529	**64.950**
	134	-17.350	0.803	53.850	**53.240**		136	-17.380	0.807	58.669	**57.730**		138	-17.390	0.802	64.506	**63.900**
	135	-17.360	0.803	54.100	**53.660**		137	-17.390	0.807	59.017	**58.330**		139	-17.417	0.807	63.527	**64.370**
	136	-17.370	0.803	53.404	52.771		138	-17.390	0.800	56.800	**57.380**		140	-17.420	0.807	64.619	63.630
	137	-17.380	0.803	53.979	53.395		139	-17.180	0.707	57.339	57.938		141	-17.190	0.707	64.451	64.225
	138	-17.160	0.707	53.413	52.770		140	-17.180	0.707	57.134	57.278		142	-17.190	0.707	64.260	63.893
	139	-17.170	0.708	52.625	53.542		141	-17.180	0.707	58.149	58.202		143	-17.190	0.707	65.279	64.801
	140	-17.170	0.708	52.694	53.210		142	-17.180	0.707	58.209	57.989		144	-17.190	0.707	65.352	64.747
	141	-17.170	0.708	53.987	54.216		143	-17.180	0.707	59.481	59.327		145	-17.190	0.707	66.623	66.026
	142	-17.170	0.708	54.320	54.250		144	-17.180	0.707	59.801	59.387		146	-17.190	0.707	66.953	66.315
	143	-17.170	0.708	55.867	55.664		145	-17.180	0.707	61.323	60.990		147	-17.190	0.707	68.473	67.819
	144	-17.170	0.708	56.458	55.981		146	-17.180	0.707	61.899	61.478		148	-17.190	0.707	69.055	68.578
	145	-17.170	0.708	58.255	57.752		147	-17.180	0.707	63.668	63.385		149	-17.190	0.707	70.820	70.299
	146	-17.170	0.708	59.101	58.690		148	-17.180	0.707	64.493	64.090		150	-17.190	0.707	71.649	71.175
	147	-17.170	0.708	61.143	60.714		149	-17.180	0.707	66.504	66.109		151	-17.190	0.707	73.653	73.225
	148	-17.170	0.708	62.238	61.814		150	-17.180	0.707	67.575	67.238		152	-17.190	0.707	74.726	74.512
	149	-17.170	0.708	64.520	63.967		151	-17.180	0.707	69.822	69.723		153	-17.190	0.707	76.963	77.295
	150	-17.170	0.708	65.859	65.490		152	-17.180	0.707	71.135	71.170		154	-17.190	0.707	78.275	79.010
	151	-17.170	0.708	68.377	68.131		153	-17.180	0.707	73.615	74.135		155	-17.190	0.709	82.595	81.994
	152	-17.170	0.708	69.956	69.846		154	-17.180	0.709	77.028	76.035		156	-17.190	0.709	84.201	84.089
	153	-17.170	0.708	72.705	72.952		155	-17.180	0.709	79.796	79.302		157	-17.190	0.709	86.957	87.185
	154	-17.170	0.708	74.520	75.228		156	-17.180	0.709	81.639	81.341		158	-17.190	0.709	88.795	89.403
	155	-17.160	0.707	79.018	78.535		157	-17.180	0.709	84.634	84.809		159	-17.188	0.709	92.290	92.702
	156	-17.160	0.707	81.042	80.929		158	-17.180	0.709	86.707	87.041		160	-17.190	0.709	93.840	**94.310**
	157	-17.160	0.707	84.219	84.393		159	-17.180	0.709	89.922	**90.230**		161	-17.186	0.709	98.078	**97.720**
	158	-17.166	0.709	87.127	**86.620**		160	-17.180	0.709	92.221	**92.380**		162	-17.184	0.709	100.893	**100.140**
	159	-17.164	0.709	91.094	**90.340**		161	-17.180	0.709	95.654	**96.150**		163	-17.182	0.709	104.838	**103.920**
	160	-17.170	0.709	92.086	**92.860**		162	-17.176	0.709	99.214	**98.600**		164	-17.180	0.709	107.880	**106.900**
	161	-17.170	0.709	95.751	**96.610**		163	-17.174	0.709	103.386	**102.710**		165	-17.180	0.709	111.515	**111.080**
	162	-17.170	0.709	98.499	**99.420**		164	-17.172	0.709	106.653	**105.700**		166	-17.180	0.709	114.249	**114.260**
	163	-17.168	0.709	102.896	**103.570**		165	-17.170	0.709	111.044	**110.250**		167	-17.190	0.711	118.064	**118.370**
	164	-17.162	0.709	107.427	**106.900**		166	-17.174	0.710	114.272	**113.400**		168	-17.190	0.711	121.069	**121.490**
	165	-17.160	0.709	112.044	**111.420**		167	-17.174	0.710	118.375	**117.800**		169	-17.190	0.711	125.177	**126.000**
	166	-17.160	0.709	115.229	**114.880**		168	-17.176	0.710	121.045	**121.060**		170	-17.190	0.711	128.391	**129.250**
	167	-17.162	0.709	119.000	**119.260**		169	-17.176	0.710	125.349	**125.700**		171	-17.190	0.711	132.702	**133.510**
	168	-17.158	0.709	123.451	**122.860**		170	-17.176	0.710	128.757	**128.920**		172	-17.190	0.711	136.122	**136.900**
	169	-17.160	0.709	127.420	**127.490**		171	-17.172	0.710	134.336	**133.480**		173	-17.190	0.711	140.631	**141.310**
	170	-17.160	0.709	131.018	**131.020**		172	-17.176	0.710	136.871	**136.880**		174	-17.190	0.711	144.254	**144.930**
	171	-17.160	0.709	135.714	**135.590**		173	-17.176	0.710	141.570	**141.620**		175	-17.184	0.711	150.601	**149.630**
	172	-17.160	0.709	139.513	**139.380**		174	-17.180	0.710	144.292	**145.250**		176	-17.190	0.711	152.779	**153.480**
	173	-17.160	0.709	144.402	**144.120**		175	-17.176	0.710	150.273	**150.390**		177	-17.190	0.711	157.675	**158.140**
	174	-17.161	0.709	148.127	**148.060**		176	-17.176	0.710	154.279	**153.960**		178	-17.190	0.711	161.692	**162.100**
	175	-17.160	0.709	153.478	**153.100**		177	-17.180	0.710	158.262	**158.960**		179	-17.190	0.711	166.776	**167.490**
	176	-17.160	0.709	157.668	**156.970**		178	-17.180	0.710	162.457	**162.920**		180	-17.186	0.711	172.101	**171.910**
	177	-17.164	0.709	161.839	**161.960**		179	-17.180	0.710	167.721	**168.610**		181	-17.060	0.692	178.270	**177.340**
	178	-17.164	0.709	166.215	**166.270**		180	-17.180	0.710	172.106	**173.020**		182	-17.060	0.692	182.060	**181.780**
	179	-17.160	0.709	172.766	**171.960**		181	-17.176	0.710	178.669	**178.730**		183	-17.060	0.692	186.898	**187.150**
	180	-17.160	0.709	177.334	**176.680**		182	-17.176	0.710	183.245	**183.140**		184	-17.054	0.692	192.561	**191.890**
	181	-17.160	0.709	182.965	**182.370**		183	-17.176	0.710	188.876	**188.850**		185	-17.060	0.692	197.509	**198.210**
	182	-17.160	0.709	187.717	**187.230**		184	-17.174	0.710	194.200	**193.590**		186	-17.058	0.692	203.848	**203.330**
	183	-17.160	0.709	193.525	**192.890**		185	-17.178	0.710	200.521	**200.330**		187	-17.060	0.692	210.075	**209.470**
	184	-17.160	0.709	198.459	**197.920**		186	-17.184	0.710	205.392	**205.500**		188	-17.054	0.691	215.660	**214.680**
	185	-17.162	0.709	205.526	**204.620**		187	-17.188	0.710	211.854	**211.970**		189	-17.058	0.691	221.417	**220.710**
	186	-17.170	0.709	210.012	**210.090**		188	-17.060	0.692	216.679	**217.190**		190	-17.064	0.691	225.718	**225.620**
	187	-17.038	0.691	216.599	**216.570**		189	-17.058	0.692	224.390	**223.540**		191	-17.066	0.691	232.180	**231.650**
	188	-17.038	0.691	222.886	**222.020**		190	-17.064	0.692	228.928	**228.610**		192	-17.064	0.690	236.719	**236.730**
	189	-17.044	0.691	228.480	**228.420**		191	-17.060	0.691	235.127	**235.020**		193	-17.064	0.690	243.862	**242.970**
	190	-17.038	0.690	234.386	**233.790**		192	-17.064	0.691	240.336	**240.110**		194	-17.060	0.689	249.016	**248.210**
	191	-17.040	0.690	241.219	**240.230**		193	-17.068	0.691	246.548	**246.610**		195	-17.063	0.689	255.379	**254.580**
	192	-17.040	0.690	246.597	**245.650**		194	-17.064	0.690	251.865	**251.900**		196	-17.060	0.688	260.267	**259.900**
	193	-17.040	0.689	252.933	**252.230**		195	-17.064	0.690	259.336	**258.580**		197	-17.064	0.688	266.422	**266.400**
	194	-17.044	0.689	258.402	**257.720**		196	-17.060	0.689	264.682	**263.910**		198	-17.064	0.688	272.900	**271.990**
	195	-17.040	0.688	264.756	**264.390**		197	-17.064	0.689	271.069	**270.700**		199	-17.070	0.688	278.580	**278.520**
	196	-17.044	0.688	270.313	**270.110**		198	-17.068	0.689	276.589	**276.260**		200	-17.064	0.687	284.437	**284.070**
	197	-17.046	0.688	277.450	**276.910**		199	-17.060	0.688	284.093	**283.200**		201	-17.068	0.687	290.793	**290.710**
	198	-17.044	0.687	282.324	**282.820**		200	-17.070	0.688	287.914	**288.880**		202	-17.070	0.687	296.894	**296.540**
	199	-17.044	0.687	290.135	**289.750**		201	-17.068	0.688	296.289	**295.750**		203	-17.068	0.686	302.504	**303.500**
	200	-17.050	0.687	295.305	**295.820**		202	-17.054	0.686	302.035	**301.550**		204	-17.070	0.686	308.689	**309.660**

Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	201	-17.050	0.687	303.238	**302.820**		203	-17.060	0.686	308.061	**308.860**		205	-17.068	0.686	317.059	**316.700**
	202	-17.044	0.686	309.362	**308.840**		204	-17.060	0.686	315.037	**315.010**		206	-17.069	0.686	323.675	**322.900**
	203	-17.050	0.686	315.582	**316.120**		205	-17.060	0.686	322.989	**322.310**		207	-17.074	0.686	330.032	**330.170**
	204	-17.050	0.686	322.744	**322.510**		206	-17.054	0.685	329.055	**328.550**		208	-17.068	0.685	336.025	**336.600**
	205	-17.052	0.686	330.277	**329.830**		207	-17.055	0.685	336.784	**336.060**		209	-17.070	0.685	343.375	**343.960**
	206	-17.049	0.685	335.549	**336.320**		208	-17.062	0.685	341.833	**342.430**		210	-17.068	0.685	351.120	**350.490**
	207	-17.046	0.685	344.675	**343.860**		209	-17.060	0.685	350.594	**350.050**		211	-17.070	0.685	358.587	**358.040**
	208	-17.048	0.685	351.437	**350.450**		210	-17.064	0.685	356.672	**356.580**		212	-17.071	0.685	365.526	**364.770**
	209	-17.054	0.685	357.935	**358.050**		211	-17.064	0.685	364.936	**364.430**		213	-17.074	0.685	372.792	**372.440**
	210	-17.054	0.685	365.421	**364.860**		212	-17.060	0.684	370.472	**371.180**		214	-17.078	0.685	378.909	**379.300**
	211	-17.050	0.684	371.950	**372.730**		213	-17.060	0.684	378.810	**379.180**		215	-17.080	0.685	386.591	**387.040**
	212	-17.046	0.684	380.750	**379.760**		214	-17.064	0.684	385.067	**386.060**		216	-17.081	0.685	393.759	**393.900**
	213	-17.050	0.684	388.032	**387.800**		215	-17.060	0.684	394.768	**394.100**		217	-17.070	0.684	402.355	**401.740**
	214	-17.050	0.684	395.715	**394.970**		216	-17.064	0.684	401.136	**401.020**		218	-17.074	0.684	408.650	**408.670**
	215	-17.054	0.684	403.098	**403.070**		217	-17.064	0.684	409.698	**409.110**		219	-17.074	0.684	417.146	**416.660**
	216	-17.054	0.684	410.894	**410.290**		218	-17.066	0.684	416.802	**416.060**		220	-17.076	0.684	424.183	**423.820**
	217	-17.060	0.684	417.749	**418.390**		219	-17.068	0.684	424.839	**424.330**		221	-17.076	0.684	432.787	**432.030**
	218	-17.058	0.684	426.283	**425.690**		220	-17.070	0.684	432.050	**431.530**		222	-17.076	0.684	440.575	**439.710**
	219	-17.060	0.684	434.496	**433.940**		221	-17.070	0.684	440.826	**440.020**		223	-17.079	0.684	448.322	**448.130**
	220	-17.062	0.684	441.880	**441.420**		222	-17.072	0.684	448.144	**447.700**		224	-17.078	0.684	456.543	**455.880**
	221	-17.061	0.684	451.147	**450.160**		223	-17.072	0.684	457.026	**456.390**		225	-17.078	0.684	465.363	**464.370**
	222	-17.066	0.684	457.681	**457.930**		224	-17.072	0.684	465.094	**464.160**		226	-17.080	0.684	472.721	**472.200**
	223	-17.064	0.684	467.373	**466.620**		225	-17.076	0.684	472.791	**473.080**		227	-17.094	0.685	480.866	**480.800**
	224	-17.066	0.684	474.966	**474.760**		226	-17.075	0.684	481.287	**480.750**		228	-17.083	0.684	488.780	**488.710**
							227	-17.075	0.684	490.378	**489.630**		229	-17.084	0.684	497.477	**497.440**
100	126	-17.320	0.803	80.282	**81.070**	101	128	-17.301	0.800	93.915	**93.140**	102	130	-17.330	0.802	96.802	**97.630**
	127	-17.320	0.802	80.101	**80.740**		129	-17.310	0.800	91.980	**92.180**		131	-17.350	0.802	92.370	**92.490**
	128	-17.300	0.802	83.807	**83.720**		130	-17.330	0.800	86.569	**85.630**		132	-17.351	0.800	90.791	**89.910**
	129	-17.302	0.802	83.844	**83.070**		131	-17.340	0.800	84.750	**84.690**		133	-17.360	0.800	89.238	**89.200**
	130	-17.330	0.802	76.976	**76.480**		132	-17.350	0.803	83.040	**82.500**		134	-17.370	0.802	87.252	**86.900**
	131	-17.340	0.802	75.526	**75.940**		133	-17.360	0.803	81.634	**81.830**		135	-17.380	0.802	85.852	**86.460**
	132	-17.350	0.802	73.139	**73.820**		134	-17.360	0.801	80.871	**79.910**		136	-17.386	0.800	83.662	**84.540**
	133	-17.350	0.802	74.368	**73.520**		135	-17.370	0.801	79.775	**79.470**		137	-17.390	0.800	83.992	**84.520**
	134	-17.360	0.802	72.343	**71.650**		136	-17.386	0.803	77.202	**78.070**		138	-17.400	0.800	81.975	**82.890**
	135	-17.370	0.802	71.592	**71.610**		137	-17.390	0.803	77.909	**78.020**		139	-17.400	0.800	83.615	**83.010**
	136	-17.380	0.804	70.836	**70.200**		138	-17.398	0.801	75.786	**76.710**		140	-17.415	0.800	80.729	**81.420**
	137	-17.390	0.804	70.466	**70.510**		139	-17.400	0.801	77.274	**76.830**		141	-17.420	0.800	81.502	**81.650**
	138	-17.406	0.805	68.255	**69.150**		140	-17.417	0.802	74.776	**75.590**		142	-17.436	0.802	79.794	**80.370**
	139	-17.410	0.805	69.666	**69.600**		141	-17.420	0.802	76.385	**75.840**		143	-17.440	0.802	81.187	**80.940**
	140	-17.430	0.807	67.456	**68.410**		142	-17.438	0.803	74.031	**74.920**		144	-17.448	0.800	79.488	**80.060**
	141	-17.430	0.807	70.214	69.220		143	-17.440	0.803	76.238	75.597		145	-17.450	0.800	81.651	**80.870**
	142	-17.210	0.710	68.892	68.400		144	-17.220	0.710	75.961	75.325		146	-17.270	0.723	79.708	80.689
	143	-17.210	0.710	69.724	69.316		145	-17.220	0.710	76.800	76.115		147	-17.270	0.723	80.842	81.787
	144	-17.210	0.710	69.616	68.964		146	-17.220	0.710	76.707	75.936		148	-17.270	0.723	81.057	81.566
	145	-17.210	0.710	70.706	70.192		147	-17.220	0.710	77.801	76.948		149	-17.270	0.723	82.454	82.849
	146	-17.210	0.710	70.859	70.191		148	-17.220	0.710	77.967	77.181		150	-17.270	0.723	82.937	82.871
	147	-17.210	0.710	72.203	71.672		149	-17.220	0.710	79.312	78.399		151	-17.270	0.723	84.594	84.359
	148	-17.210	0.710	72.614	71.898		150	-17.220	0.710	79.732	78.967		152	-17.270	0.723	85.339	84.723
	149	-17.210	0.710	74.206	73.519		151	-17.220	0.710	81.323	80.467		153	-17.270	0.723	87.250	86.812
	150	-17.210	0.710	74.868	74.072		152	-17.220	0.710	81.993	81.173		154	-17.270	0.723	88.254	87.823
	151	-17.210	0.710	76.704	75.959		153	-17.220	0.710	83.825	83.453		155	-17.270	0.723	90.414	90.247
	152	-17.210	0.710	77.615	76.817		154	-17.220	0.710	84.741	84.842		156	-17.270	0.723	91.671	91.477
	153	-17.210	0.710	79.689	79.346		155	-17.220	0.710	86.810	87.456		157	-17.270	0.723	94.076	94.079
	154	-17.210	0.710	80.843	80.903		156	-17.220	0.712	89.742	88.992		158	-17.270	0.723	95.581	95.610
	155	-17.220	0.714	84.184	83.800		157	-17.220	0.712	92.103	91.690		159	-17.270	0.723	98.227	98.455
	156	-17.220	0.714	85.685	85.485		158	-17.220	0.712	93.555	93.564		160	-17.270	0.723	99.977	100.101
	157	-17.220	0.714	88.335	88.590		159	-17.220	0.712	96.145	96.550		161	-17.270	0.723	102.859	103.129
	158	-17.220	0.714	90.075	90.426		160	-17.220	0.712	97.831	98.578		162	-17.270	0.723	104.849	105.011
	159	-17.220	0.714	92.954	93.704		161	-17.216	0.712	101.695	101.667		163	-17.224	0.711	107.272	**106.660**
	160	-17.220	0.714	94.927	95.766		162	-17.214	0.711	103.068	**102.400**		164	-17.224	0.711	109.160	**108.910**
	161	-17.184	0.706	98.818	**98.120**		163	-17.214	0.711	106.081	**105.810**		165	-17.220	0.711	113.229	**112.780**
	162	-17.184	0.706	100.800	**100.110**		164	-17.210	0.711	109.256	**108.440**		166	-17.220	0.711	115.344	**115.270**
	163	-17.184	0.706	103.904	**103.890**		165	-17.210	0.711	112.488	**112.300**		167	-17.220	0.711	118.564	**119.200**
	164	-17.180	0.706	107.161	**106.510**		166	-17.210	0.711	114.828	**115.220**		168	-17.230	0.714	121.885	**121.690**
	165	-17.180	0.706	110.480	**110.690**		167	-17.218	0.714	119.839	**119.080**		169	-17.230	0.714	125.407	**125.790**
	166	-17.180	0.706	112.900	**113.580**		168	-17.220	0.714	121.951	**121.890**		170	-17.230	0.714	128.047	**128.470**
	167	-17.190	0.709	117.564	**117.700**		169	-17.220	0.714	125.699	**126.040**		171	-17.230	0.714	131.779	**132.370**
	168	-17.190	0.709	120.288	**120.500**		170	-17.220	0.714	128.561	**129.030**		172	-17.230	0.714	134.632	**135.110**
	169	-17.190	0.709	124.112	**124.980**		171	-17.220	0.714	132.517	**132.960**		173	-17.226	0.714	139.670	**139.140**
	170	-17.190	0.709	127.046	**127.920**		172	-17.220	0.714	135.592	**136.010**		174	-17.230	0.714	141.633	**142.070**
	171	-17.190	0.710	132.483	**132.170**		173	-17.222	0.714	139.203	**140.080**		175	-17.226	0.714	146.882	**146.410**
	172	-17.190	0.710	135.659	**135.220**		174	-17.216	0.714	144.134	**143.330**		176	-17.230	0.714	149.043	**149.760**
	173	-17.190	0.710	139.920	**139.620**		175	-17.220	0.714	147.395	**147.710**		177	-17.226	0.714	154.499	**154.250**
	174	-17.189	0.710	143.574	**142.890**		176	-17.216	0.714	151.989	**151.370**		178	-17.230	0.714	156.855	**157.580**

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Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	175	-17.188	0.710	148.307	**147.600**		177	-17.220	0.714	155.440	**155.780**		179	-17.224	0.714	163.076	**162.580**
	176	-17.190	0.710	151.336	**151.210**		178	-17.216	0.714	160.244	**159.410**		180	-17.224	0.714	166.754	**166.440**
	177	-17.190	0.710	155.986	**155.870**		179	-17.220	0.714	163.880	**164.470**		181	-17.224	0.714	171.488	**171.370**
	178	-17.190	0.710	159.762	**159.500**		180	-17.220	0.714	167.765	**168.560**		182	-17.224	0.714	175.361	**175.240**
	179	-17.186	0.710	165.718	**164.860**		181	-17.214	0.714	174.400	**173.650**		183	-17.080	0.691	181.232	**180.290**
	180	-17.190	0.710	168.571	**168.950**		182	-17.214	0.714	178.486	**177.800**		184	-17.078	0.691	185.140	**184.410**
	181	-17.190	0.710	173.598	**174.330**		183	-17.214	0.714	183.622	**182.860**		185	-17.078	0.691	191.143	**190.420**
	182	-17.184	0.710	179.449	**178.480**		184	-17.214	0.714	187.899	**187.260**		186	-17.080	0.691	195.702	**194.950**
	183	-17.184	0.710	184.665	**183.850**		185	-17.218	0.714	193.709	**193.230**		187	-17.080	0.691	201.857	**200.920**
	184	-17.184	0.710	189.017	**188.280**		186	-17.222	0.714	198.647	**198.050**		188	-17.084	0.691	205.988	**205.490**
	185	-17.188	0.710	194.910	**194.650**		187	-17.078	0.692	204.361	**203.870**		189	-17.080	0.690	211.513	**211.350**
	186	-17.190	0.710	200.498	**199.500**		188	-17.080	0.692	209.304	**208.810**		190	-17.084	0.690	215.752	**215.640**
	187	-17.058	0.690	205.746	**205.660**		189	-17.084	0.692	214.682	**214.600**		191	-17.080	0.689	221.318	**221.340**
	188	-17.058	0.690	211.401	**210.570**		190	-17.080	0.691	219.481	**219.070**		192	-17.081	0.689	226.543	**225.740**
	189	-17.060	0.690	217.497	**216.700**		191	-17.084	0.691	224.958	**224.780**		193	-17.084	0.689	232.180	**231.630**
	190	-17.060	0.689	221.220	**221.260**		192	-17.080	0.690	229.798	**229.530**		194	-17.080	0.688	236.894	**236.290**
	191	-17.060	0.689	227.997	**227.240**		193	-17.082	0.690	235.960	**235.430**		195	-17.084	0.688	242.332	**242.340**
	192	-17.064	0.689	232.741	**232.000**		194	-17.080	0.689	240.251	**240.360**		196	-17.080	0.687	247.081	**247.040**
	193	-17.060	0.688	238.629	**238.220**		195	-17.080	0.689	247.102	**246.460**		197	-17.080	0.687	253.806	**253.190**
	194	-17.062	0.688	244.058	**243.220**		196	-17.084	0.689	251.912	**251.540**		198	-17.084	0.687	258.484	**257.940**
	195	-17.068	0.688	249.304	**249.590**		197	-17.080	0.688	257.780	**257.580**		199	-17.090	0.687	263.537	**264.140**
	196	-17.060	0.687	255.505	**254.670**		198	-17.082	0.688	263.281	**262.790**		200	-17.086	0.686	268.378	**269.070**
	197	-17.064	0.687	261.430	**261.100**		199	-17.084	0.688	269.765	**268.910**		201	-17.088	0.686	274.723	**275.410**
	198	-17.070	0.687	265.897	**266.280**		200	-17.084	0.687	273.567	**274.190**		202	-17.088	0.686	280.830	**280.510**
	199	-17.060	0.686	273.682	**272.820**		201	-17.088	0.687	279.533	**280.520**		203	-17.088	0.686	287.912	**287.170**
	200	-17.064	0.686	278.837	**277.980**		202	-17.090	0.687	285.253	**285.920**		204	-17.084	0.685	292.839	**292.700**
	201	-17.070	0.686	284.365	**284.560**		203	-17.088	0.687	293.161	**292.570**		205	-17.088	0.685	298.785	**299.610**
	202	-17.066	0.685	289.485	**290.080**		204	-17.084	0.686	298.242	**298.420**		206	-17.090	0.685	304.503	**305.420**
	203	-17.068	0.685	296.297	**297.000**		205	-17.084	0.686	305.635	**305.290**		207	-17.086	0.685	313.305	**312.520**
	204	-17.068	0.685	302.869	**302.830**		206	-17.088	0.686	310.963	**311.370**		208	-17.090	0.685	318.263	**318.340**
	205	-17.068	0.685	310.413	**310.050**		207	-17.090	0.686	317.862	**318.330**		209	-17.090	0.685	325.685	**325.550**
	206	-17.074	0.685	315.281	**315.950**		208	-17.088	0.686	325.161	**324.420**		210	-17.094	0.685	331.031	**331.340**
	207	-17.070	0.685	324.172	**323.310**		209	-17.090	0.686	332.182	**331.580**		211	-17.092	0.685	339.200	**338.610**
	208	-17.068	0.684	328.790	**329.400**		210	-17.092	0.686	338.370	**337.850**		212	-17.094	0.685	345.292	**344.820**
	209	-17.064	0.684	337.774	**336.860**		211	-17.094	0.686	345.506	**345.130**		213	-17.090	0.684	351.286	**352.160**
	210	-17.070	0.684	342.833	**343.100**		212	-17.090	0.685	350.740	**351.510**		214	-17.090	0.684	358.089	**358.280**
	211	-17.070	0.684	350.699	**350.670**		213	-17.090	0.685	358.579	**358.880**		215	-17.090	0.684	365.833	**365.700**
	212	-17.074	0.684	356.488	**357.080**		214	-17.090	0.685	365.594	**365.340**		216	-17.091	0.684	372.441	**371.880**
	213	-17.070	0.684	365.722	**364.730**		215	-17.090	0.685	373.553	**372.730**		217	-17.096	0.684	378.708	**379.360**
	214	-17.074	0.684	371.625	**371.260**		216	-17.094	0.685	379.423	**379.270**		218	-17.096	0.684	385.750	**385.730**
	215	-17.074	0.684	379.725	**378.930**		217	-17.096	0.685	386.859	**386.720**		219	-17.096	0.684	393.326	**393.380**
	216	-17.076	0.684	386.368	**385.530**		218	-17.096	0.685	394.112	**393.380**		220	-17.098	0.684	400.242	**399.930**
	217	-17.078	0.684	393.948	**393.260**		219	-17.098	0.685	401.659	**401.040**		221	-17.098	0.684	408.329	**407.740**
	218	-17.080	0.684	400.703	**399.950**		220	-17.101	0.685	408.066	**407.900**		222	-17.102	0.684	414.311	**414.600**
	219	-17.096	0.685	407.255	**407.940**		221	-17.092	0.684	415.897	**415.960**		223	-17.099	0.684	423.481	**422.770**
	220	-17.096	0.685	414.792	**414.770**		222	-17.090	0.684	423.989	**423.100**		224	-17.101	0.684	430.223	**429.810**
	221	-17.096	0.685	423.259	**423.160**		223	-17.094	0.684	431.063	**431.190**		225	-17.102	0.684	438.205	**438.060**
	222	-17.095	0.685	431.235	**430.290**		224	-17.096	0.684	437.973	**438.720**		226	-17.102	0.684	445.710	**445.220**
	223	-17.098	0.685	438.846	**438.670**		225	-17.095	0.684	446.775	**446.890**		227	-17.102	0.684	454.128	**453.550**
	224	-17.098	0.685	446.611	**446.170**		226	-17.098	0.684	453.465	**454.450**		228	-17.107	0.684	460.096	**460.830**
	225	-17.098	0.685	455.297	**454.670**		227	-17.104	0.685	463.729	**462.780**		229	-17.102	0.684	470.272	**469.430**
	226	-17.099	0.685	462.849	**462.170**		228	-17.094	0.684	471.144	**470.410**		230	-17.104	0.684	477.338	**476.860**
	227	-17.088	0.684	471.523	**470.770**		229	-17.108	0.685	478.964	**478.840**		231	-17.108	0.684	484.637	**485.430**
	228	-17.102	0.685	478.648	**478.410**		230	-17.108	0.685	486.894	**486.730**		232	-17.108	0.684	492.471	**492.960**
	229	-17.094	0.684	486.360	**487.110**		231	-17.108	0.685	495.729	**495.260**		233	-17.108	0.684	501.204	**501.700**
	230	-17.106	0.685	494.318	**494.890**		232	-17.108	0.685	503.768	**503.140**		234	-17.104	0.684	510.490	**509.640**
	231	-17.102	0.685	504.639	**503.780**		233	-17.108	0.685	512.707	**511.760**		235	-17.105	0.684	518.993	**518.280**
													236	-17.108	0.684	526.032	**525.860**
103	132	-17.360	0.803	100.236	**99.430**	104	134	-17.388	0.804	102.982	**103.790**	105	136	-17.397	0.800	109.658	**110.090**
	133	-17.370	0.803	98.174	**98.330**		135	-17.390	0.804	102.878	**102.990**		137	-17.400	0.800	109.291	**109.240**
	134	-17.380	0.803	95.195	**95.980**		136	-17.400	0.804	99.959	**100.640**		138	-17.410	0.800	106.333	**107.240**
	135	-17.380	0.803	95.863	**95.190**		137	-17.400	0.804	100.706	**100.120**		139	-17.410	0.800	107.056	**106.670**
	136	-17.388	0.800	92.571	**93.220**		138	-17.408	0.801	97.417	**98.230**		140	-17.426	0.802	103.824	**104.700**
	137	-17.390	0.800	93.067	**92.810**		139	-17.410	0.801	97.982	**97.970**		141	-17.430	0.802	103.962	**104.200**
	138	-17.402	0.800	90.255	**91.190**		140	-17.426	0.804	95.589	**96.110**		142	-17.436	0.800	101.782	**102.530**
	139	-17.410	0.803	91.011	**90.960**		141	-17.430	0.804	96.081	**96.020**		143	-17.440	0.800	102.219	**102.370**
	140	-17.420	0.802	88.610	**89.430**		142	-17.436	0.801	93.698	**94.230**		144	-17.450	0.800	100.279	**101.030**
	141	-17.420	0.802	90.339	**89.340**		143	-17.440	0.801	94.462	**94.420**		145	-17.450	0.800	102.051	**101.070**
	142	-17.432	0.800	87.192	**87.930**		144	-17.458	0.804	92.508	**93.120**		146	-17.468	0.801	98.999	**99.940**
	143	-17.440	0.800	87.250	**88.140**		145	-17.460	0.804	94.171	**93.550**		147	-17.470	0.801	100.623	**100.170**
	144	-17.448	0.800	86.408	**87.220**		146	-17.468	0.801	91.657	**92.500**		148	-17.486	0.803	99.075	**99.310**
	145	-17.450	0.800	88.272	**87.680**		147	-17.470	0.801	93.577	**93.120**		149	-17.490	0.803	100.567	**99.790**
	146	-17.470	0.802	86.027	**86.990**		148	-17.480	0.801	92.602	**92.320**		150	-17.300	0.725	100.414	99.595
	147	-17.472	0.802	88.264	**87.670**		149	-17.300	0.727	92.924	93.642		151	-17.302	0.725	100.859	100.298

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
	148	-17.270	0.721	88.151	87.830		150	-17.300	0.727	93.004	93.201		152	-17.304	0.725	100.402	100.154
	149	-17.270	0.721	89.254	88.537		151	-17.300	0.727	94.254	94.329		153	-17.304	0.725	101.618	101.508
	150	-17.270	0.721	89.446	88.523		152	-17.300	0.727	94.604	94.222		154	-17.300	0.725	102.975	101.991
	151	-17.276	0.721	89.285	89.646		153	-17.300	0.727	96.116	95.866		155	-17.300	0.725	104.451	103.673
	152	-17.272	0.721	90.753	89.947		154	-17.300	0.727	96.731	96.344		156	-17.300	0.725	105.038	104.308
	153	-17.272	0.721	92.369	91.747		155	-17.300	0.727	98.501	98.367		157	-17.300	0.725	106.767	106.253
	154	-17.270	0.721	93.593	92.665		156	-17.300	0.727	99.376	99.148		158	-17.300	0.725	107.609	107.110
	155	-17.270	0.721	95.460	94.782		157	-17.300	0.727	101.398	101.318		159	-17.300	0.725	109.587	109.262
	156	-17.270	0.721	96.427	95.851		158	-17.300	0.727	102.529	102.392		160	-17.300	0.725	110.681	110.382
	157	-17.270	0.721	98.540	98.277		159	-17.300	0.727	104.799	104.757		161	-17.270	0.717	113.619	112.740
	158	-17.270	0.721	99.755	99.557		160	-17.300	0.727	106.182	106.075		162	-17.270	0.717	114.753	114.014
	159	-17.270	0.721	102.109	102.105		161	-17.300	0.727	108.695	108.690		163	-17.270	0.717	117.004	117.060
	160	-17.270	0.721	103.569	103.669		162	-17.300	0.727	110.324	110.136		164	-17.270	0.717	118.375	119.148
	161	-17.270	0.721	106.159	106.375		163	-17.300	0.727	113.077	113.444		165	-17.264	0.717	122.475	122.397
	162	-17.270	0.721	107.860	108.233		164	-17.300	0.727	114.949	115.476		166	-17.270	0.717	122.458	**121.900**
	163	-17.270	0.721	110.683	111.662		165	-17.260	0.716	116.958	**116.550**		167	-17.270	0.717	125.163	**125.220**
	164	-17.254	0.716	111.546	**111.600**		**166**	-17.260	0.716	118.759	**118.740**		**168**	-17.278	0.720	128.169	**127.410**
	165	-17.250	0.716	115.526	**115.150**		**167**	-17.260	0.716	121.664	**122.330**		**169**	-17.276	0.720	131.732	**130.850**
	166	-17.250	0.716	117.554	**117.660**		**168**	-17.268	0.719	124.986	**124.500**		**170**	-17.278	0.720	133.330	**133.180**
	167	-17.245	0.716	122.036	**121.280**		**169**	-17.266	0.719	128.745	**128.270**		**171**	-17.280	0.720	136.012	**136.410**
	168	-17.244	0.716	124.565	**123.790**		**170**	-17.268	0.719	130.540	**130.590**		**172**	-17.278	0.720	138.934	**138.760**
	169	-17.246	0.716	127.376	**127.560**		**171**	-17.268	0.719	133.970	**134.170**		**173**	-17.278	0.720	142.383	**142.110**
	170	-17.246	0.716	129.853	**130.280**		**172**	-17.270	0.719	135.979	**136.540**		**174**	-17.276	0.720	145.530	**144.640**
	171	-17.252	0.717	133.071	**133.880**		**173**	-17.266	0.719	140.728	**140.220**		**175**	-17.278	0.720	148.635	**148.320**
	172	-17.246	0.717	137.443	**136.610**		**174**	-17.268	0.719	142.952	**142.770**		**176**	-17.282	0.720	150.315	**151.310**
	173	-17.250	0.717	140.149	**140.320**		**175**	-17.266	0.719	147.363	**146.770**		**177**	-17.274	0.720	156.437	**155.620**
	174	-17.246	0.717	144.194	**143.230**		**176**	-17.270	0.719	149.236	**149.790**		**178**	-17.274	0.720	159.458	**158.500**
	175	-17.248	0.717	147.655	**147.240**		**177**	-17.264	0.719	154.979	**154.150**		**179**	-17.274	0.720	163.538	**162.790**
	176	-17.246	0.717	151.362	**150.590**		**178**	-17.268	0.719	157.056	**157.130**		**180**	-17.274	0.720	166.766	**166.210**
	177	-17.250	0.717	154.462	**154.920**		**179**	-17.264	0.719	162.450	**161.760**		**181**	-17.274	0.720	171.047	**170.520**
	178	-17.250	0.717	157.815	**158.230**		**180**	-17.264	0.719	165.860	**165.220**		**182**	-17.274	0.720	174.481	**174.100**
	179	-17.248	0.717	162.795	**162.890**		**181**	-17.264	0.719	170.325	**169.830**		**183**	-17.274	0.720	178.961	**178.570**
	180	-17.244	0.717	167.486	**166.660**		**182**	-17.264	0.719	173.938	**173.380**		**184**	-17.278	0.720	181.440	**182.370**
	181	-17.244	0.717	172.103	**171.380**		**183**	-17.264	0.719	178.599	**178.120**		**185**	-17.280	0.720	187.148	**187.760**
	182	-17.244	0.717	175.865	**175.260**		**184**	-17.264	0.719	182.411	**181.950**		**186**	-17.280	0.720	192.586	**191.910**
	183	-17.244	0.717	180.676	**180.010**		**185**	-17.270	0.719	187.152	**187.680**		**187**	-17.076	0.690	205.899	**205.230**
	184	-17.244	0.717	184.634	**184.080**		**186**	-17.270	0.719	192.769	**191.850**		**188**	-17.110	0.690	200.622	**201.580**
	185	-17.248	0.717	190.108	**189.740**		**187**	-17.274	0.719	198.249	**197.600**		**189**	-17.110	0.690	206.284	**206.950**
	186	-17.252	0.717	194.717	**194.230**		**188**	-17.100	0.690	201.418	**201.900**		**190**	-17.110	0.690	211.094	**211.330**
	187	-17.256	0.717	200.346	**199.890**		**189**	-17.100	0.690	207.282	**207.530**		**191**	-17.110	0.690	216.910	**216.430**
	188	-17.260	0.717	205.115	**204.470**		**190**	-17.100	0.690	212.293	**211.790**		**192**	-17.110	0.689	219.970	**220.490**
	189	-17.090	0.690	209.646	**210.060**		**191**	-17.104	0.690	217.129	**217.200**		**193**	-17.110	0.689	225.898	**225.760**
	190	-17.090	0.690	214.854	**214.390**		**192**	-17.100	0.689	221.518	**221.290**		**194**	-17.110	0.689	230.982	**230.020**
	191	-17.090	0.689	219.102	**219.730**		**193**	-17.100	0.689	227.644	**226.840**		**195**	-17.114	0.689	235.858	**235.400**
	192	-17.090	0.689	224.424	**224.170**		**194**	-17.100	0.688	230.891	**231.120**		**196**	-17.110	0.688	240.232	**239.720**
	193	-17.090	0.689	230.747	**229.770**		**195**	-17.100	0.688	237.125	**236.840**		**197**	-17.112	0.688	245.810	**245.190**
	194	-17.090	0.688	234.136	**234.340**		**196**	-17.104	0.688	241.314	**241.210**		**198**	-17.110	0.687	249.621	**249.660**
	195	-17.090	0.688	240.565	**240.080**		**197**	-17.100	0.687	246.743	**246.960**		**199**	-17.110	0.687	255.905	**255.220**
	196	-17.094	0.688	244.950	**244.770**		**198**	-17.102	0.687	251.635	**251.450**		**200**	-17.114	0.687	260.135	**259.790**
	197	-17.090	0.687	250.515	**250.540**		**199**	-17.102	0.687	258.112	**257.340**		**201**	-17.116	0.687	265.944	**265.450**
	198	-17.094	0.687	254.997	**255.370**		**200**	-17.100	0.686	262.091	**261.860**		**202**	-17.115	0.686	269.543	**270.290**
	199	-17.098	0.687	260.454	**261.210**		**201**	-17.100	0.686	268.666	**267.850**		**203**	-17.116	0.686	275.752	**276.360**
	200	-17.094	0.686	265.166	**266.080**		**202**	-17.104	0.686	273.182	**272.690**		**204**	-17.114	0.686	282.056	**281.600**
	201	-17.091	0.686	272.839	**272.110**		**203**	-17.109	0.686	278.355	**279.100**		**205**	-17.114	0.686	288.709	**287.920**
	202	-17.094	0.686	277.850	**277.260**		**204**	-17.106	0.686	285.149	**284.350**		**206**	-17.120	0.686	292.670	**293.340**
	203	-17.096	0.686	284.133	**283.560**		**205**	-17.106	0.686	291.988	**291.010**		**207**	-17.118	0.686	300.075	**299.800**
	204	-17.100	0.686	288.963	**289.090**		**206**	-17.100	0.685	297.347	**296.420**		**208**	-17.120	0.686	305.408	**305.320**
	205	-17.102	0.686	295.369	**295.820**		**207**	-17.106	0.685	302.415	**303.170**		**209**	-17.110	0.685	312.874	**311.880**
	206	-17.101	0.686	301.866	**301.450**		**208**	-17.104	0.685	309.142	**308.660**		**210**	-17.116	0.685	317.044	**317.490**
	207	-17.101	0.686	309.017	**308.300**		**209**	-17.106	0.685	315.576	**315.580**		**211**	-17.114	0.685	324.677	**324.060**
	208	-17.104	0.686	314.407	**314.160**		**210**	-17.110	0.685	320.556	**321.150**		**212**	-17.120	0.685	328.962	**329.920**
	209	-17.104	0.686	321.683	**321.040**		**211**	-17.110	0.685	327.736	**328.190**		**213**	-17.118	0.685	336.722	**336.610**
	210	-17.108	0.686	326.883	**327.010**		**212**	-17.108	0.685	334.731	**334.010**		**214**	-17.120	0.685	342.397	**342.430**
	211	-17.108	0.686	334.281	**334.000**		**213**	-17.114	0.685	340.137	**340.990**		**215**	-17.120	0.685	349.646	**349.310**
	212	-17.108	0.686	340.859	**339.990**		**214**	-17.111	0.685	347.578	**346.750**		**216**	-17.120	0.685	356.085	**355.170**
	213	-17.110	0.686	347.749	**347.020**		**215**	-17.117	0.685	353.092	**353.850**		**217**	-17.124	0.685	362.169	**362.050**
	214	-17.114	0.686	353.184	**353.150**		**216**	-17.118	0.685	359.383	**359.740**		**218**	-17.124	0.685	368.730	**368.090**
	215	-17.116	0.686	360.188	**360.230**		**217**	-17.110	0.684	366.504	**366.930**		**219**	-17.120	0.684	374.495	**375.160**
	216	-17.100	0.684	366.099	**366.400**		**218**	-17.108	0.684	373.845	**372.990**		**220**	-17.120	0.684	381.140	**381.410**
	217	-17.100	0.684	373.782	**373.620**		**219**	-17.110	0.684	380.827	**380.350**		**221**	-17.120	0.684	388.707	**388.620**
	218	-17.100	0.684	380.654	**379.960**		**220**	-17.112	0.684	386.999	**386.610**		**222**	-17.120	0.684	395.473	**395.140**
	219	-17.101	0.684	388.134	**387.370**		**221**	-17.116	0.684	393.440	**394.140**		**223**	-17.120	0.684	403.157	**402.730**
	220	-17.102	0.684	394.803	**393.860**		**222**	-17.118	0.684	399.723	**400.620**		**224**	-17.120	0.684	410.044	**409.410**
	221	-17.106	0.684	401.422	**401.390**		**223**	-17.118	0.684	407.574	**408.490**		**225**	-17.122	0.684	417.185	**417.030**

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Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Mass excess (MeV) Cal.	Ex./Th.
	222	-17.108	0.684	407.879	**408.240**		224	-17.118	0.684	414.625	**415.220**		226	-17.120	0.684	424.849	**424.060**
	223	-17.108	0.684	415.904	**416.090**		225	-17.114	0.684	423.907	**423.140**		227	-17.132	0.685	432.167	**431.790**
	224	-17.108	0.684	423.126	**423.120**		226	-17.116	0.684	430.420	**430.000**		228	-17.135	0.685	438.325	**438.790**
	225	-17.108	0.684	431.263	**431.100**		227	-17.126	0.685	438.642	**438.190**		229	-17.132	0.685	447.385	**446.650**
	226	-17.108	0.684	438.601	**438.250**		228	-17.118	0.684	445.123	**445.190**		230	-17.135	0.685	453.653	**453.790**
	227	-17.118	0.685	447.068	**446.240**		229	-17.120	0.684	452.645	**453.310**		231	-17.133	0.685	462.494	**461.760**
	228	-17.108	0.684	454.302	**453.710**		230	-17.118	0.684	460.710	**460.500**		232	-17.133	0.685	469.880	**469.050**
	229	-17.108	0.684	462.661	**461.900**		231	-17.120	0.684	468.338	**468.730**		233	-17.138	0.685	476.471	**477.120**
	230	-17.110	0.684	469.560	**469.320**		232	-17.118	0.684	476.519	**476.020**		234	-17.138	0.685	483.964	**484.670**
	231	-17.109	0.684	478.360	**477.630**		233	-17.118	0.684	484.925	**484.380**						
	232	-17.110	0.684	485.700	**485.150**		234	-17.120	0.684	491.871	**491.920**						
	233	-17.110	0.684	494.271	**493.650**		235	-17.120	0.684	500.381	**500.650**						
	234	-17.110	0.684	502.055	**501.350**												
	235	-17.112	0.684	510.056	**510.110**												
	236	-17.110	0.684	518.624	**517.800**												
106	138	-17.416	0.800	114.120	**114.960**	107	140	-17.430	0.800	120.857	**121.580**	108	142	-17.450	0.802	125.820	**126.650**
	139	-17.420	0.800	113.559	**114.380**		141	-17.430	0.800	121.334	**120.800**		143	-17.450	0.802	126.397	**126.090**
	140	-17.428	0.800	111.128	**112.120**		142	-17.446	0.802	117.794	**118.720**		144	-17.458	0.800	123.221	**123.910**
	141	-17.430	0.800	111.413	**111.690**		143	-17.450	0.802	117.668	**118.080**		145	-17.460	0.800	123.603	**123.480**
	142	-17.440	0.800	108.835	**109.580**		144	-17.454	0.800	115.742	**116.290**		146	-17.474	0.802	121.042	**121.550**
	143	-17.440	0.800	109.967	**109.390**		145	-17.460	0.800	115.413	**115.960**		147	-17.480	0.802	120.788	**121.370**
	144	-17.458	0.802	106.708	**107.660**		146	-17.466	0.800	114.207	**114.400**		148	-17.490	0.802	118.643	**119.630**
	145	-17.460	0.802	107.726	**107.660**		147	-17.470	0.800	114.715	**114.250**		149	-17.490	0.802	120.255	**119.690**
	146	-17.468	0.800	105.283	**106.150**		148	-17.488	0.802	111.906	**112.900**		150	-17.500	0.800	117.269	**118.180**
	147	-17.470	0.800	106.591	**106.360**		149	-17.490	0.802	113.295	**112.970**		151	-17.500	0.800	119.165	**118.520**
	148	-17.486	0.802	104.653	**105.080**		150	-17.498	0.800	111.055	**111.810**		152	-17.514	0.802	117.840	**117.500**
	149	-17.490	0.802	105.827	**105.520**		151	-17.500	0.800	112.720	**112.170**		153	-17.520	0.802	118.547	**118.390**
	150	-17.498	0.800	103.819	**104.430**		152	-17.510	0.800	111.454	**111.500**		154	-17.530	0.802	117.347	**117.880**
	151	-17.500	0.800	105.773	**105.120**		153	-17.330	0.729	113.698	113.123		155	-17.334	0.727	120.085	119.678
	152	-17.330	0.731	105.158	105.296		154	-17.330	0.729	113.628	113.079		156	-17.334	0.727	119.996	119.563
	153	-17.330	0.731	106.266	106.519		155	-17.330	0.729	114.708	114.252		157	-17.334	0.727	121.046	120.900
	154	-17.330	0.731	106.485	106.547		156	-17.330	0.729	114.905	114.496		158	-17.334	0.727	121.220	121.140
	155	-17.330	0.731	107.857	108.005		157	-17.330	0.729	116.245	115.958		159	-17.330	0.727	123.593	122.658
	156	-17.330	0.731	108.344	108.369		158	-17.330	0.729	116.707	116.395		160	-17.332	0.727	123.495	122.968
	157	-17.330	0.731	109.975	110.195		159	-17.330	0.729	118.302	118.104		161	-17.332	0.727	125.053	124.493
	158	-17.330	0.731	110.725	110.783		160	-17.330	0.729	119.022	118.765		162	-17.334	0.727	125.203	125.112
	159	-17.330	0.731	112.612	112.794		161	-17.330	0.729	120.868	120.707		163	-17.330	0.727	128.090	127.691
	160	-17.330	0.731	113.621	113.617		162	-17.330	0.729	121.843	121.477		164	-17.330	0.727	129.032	129.004
	161	-17.330	0.731	115.758	115.806		163	-17.330	0.729	123.935	124.230		165	-17.330	0.727	131.082	131.767
	162	-17.330	0.731	117.021	116.800		164	-17.330	0.729	125.160	125.859		166	-17.326	0.727	133.366	133.406
	163	-17.330	0.731	119.404	119.692		165	-17.324	0.729	129.126	128.787		167	-17.326	0.727	135.658	136.492
	164	-17.330	0.731	120.916	121.431		166	-17.326	0.729	130.056	130.683		168	-17.324	0.727	137.643	138.185
	165	-17.326	0.731	124.625	124.617		167	-17.324	0.729	133.181	133.762		169	-17.322	0.727	140.725	141.375
	166	-17.324	0.731	126.931	126.520		168	-17.324	0.729	134.899	135.780		170	-17.314	0.725	142.465	143.220
	167	-17.326	0.731	129.254	129.920		169	-17.286	0.721	139.523	138.950		171	-17.310	0.725	146.286	146.500
	168	-17.296	0.722	129.637	**129.100**		170	-17.292	0.723	141.823	141.100		172	-17.312	0.725	147.582	148.420
	169	-17.298	0.722	131.930	**132.490**		171	-17.292	0.723	144.704	144.370		173	-17.324	0.725	147.142	**147.060**
	170	-17.294	0.722	135.009	**134.400**		172	-17.306	0.723	142.822	142.490		174	-17.324	0.725	149.213	**148.890**
	171	-17.294	0.722	138.076	**137.580**		173	-17.308	0.723	145.350	145.470		175	-17.324	0.725	152.353	**152.180**
	172	-17.300	0.722	138.615	**139.530**		174	-17.310	0.723	147.022	147.660		176	-17.324	0.725	154.648	**154.420**
	173	-17.296	0.722	143.010	**142.840**		175	-17.308	0.723	150.888	150.940		177	-17.324	0.725	158.006	**158.140**
	174	-17.294	0.722	145.997	**145.040**		176	-17.304	0.723	154.475	153.600		178	-17.324	0.725	160.521	**160.540**
	175	-17.294	0.722	149.498	**148.650**		177	-17.304	0.723	157.997	157.500		179	-17.320	0.725	165.241	**164.390**
	176	-17.294	0.722	152.145	**151.410**		178	-17.304	0.723	160.673	160.180		180	-17.320	0.725	167.976	**167.030**
	177	-17.294	0.722	155.858	**155.540**		179	-17.304	0.723	164.407	164.050		181	-17.320	0.725	171.763	**170.960**
	178	-17.294	0.722	158.721	**158.130**		180	-17.304	0.723	167.297	167.080		182	-17.320	0.725	174.712	**173.850**
	179	-17.294	0.722	162.642	**162.370**		181	-17.304	0.723	171.237	171.090		183	-17.320	0.725	178.705	**177.990**
	180	-17.294	0.722	165.716	**165.420**		182	-17.307	0.723	173.470	174.230		184	-17.140	0.690	181.368	**181.220**
	181	-17.294	0.722	169.841	**169.710**		183	-17.130	0.690	178.705	**178.370**		185	-17.140	0.690	186.104	**186.610**
	182	-17.294	0.722	173.123	**172.920**		184	-17.130	0.690	181.007	**181.900**		186	-17.140	0.690	189.992	**190.200**
	183	-17.297	0.722	176.583	**177.360**		185	-17.129	0.690	186.237	**187.130**		187	-17.140	0.690	194.891	**195.500**
	184	-17.297	0.722	180.067	**180.890**		186	-17.130	0.690	190.033	**190.980**		188	-17.140	0.690	198.946	**199.350**
	185	-17.299	0.722	185.622	**186.410**		187	-17.128	0.690	195.722	**196.180**		189	-17.115	0.690	211.431	**212.330**
	186	-17.300	0.722	190.619	**190.290**		188	-17.130	0.690	199.386	**200.300**		190	-17.114	0.690	215.972	**216.030**
	187	-17.120	0.690	194.872	**195.770**		189	-17.104	0.690	212.341	**213.170**		191	-17.140	0.690	213.443	**213.570**
	188	-17.120	0.690	199.324	**199.880**		190	-17.130	0.690	209.061	**209.490**		192	-17.140	0.690	217.822	**217.400**
	189	-17.120	0.690	204.787	**205.190**		191	-17.130	0.690	214.477	**214.690**		193	-17.140	0.690	223.196	**222.320**
	190	-17.120	0.690	209.401	**209.310**		192	-17.130	0.690	219.052	**218.560**		194	-17.140	0.689	225.897	**225.960**
	191	-17.120	0.690	215.018	**214.720**		193	-17.130	0.689	222.774	**223.490**		195	-17.140	0.689	231.386	**231.020**
	192	-17.120	0.689	217.931	**218.470**		194	-17.130	0.689	227.468	**227.440**		196	-17.140	0.688	234.132	**234.710**
	193	-17.120	0.689	223.663	**223.720**		195	-17.130	0.689	233.152	**232.520**		197	-17.140	0.688	239.733	**239.850**
	194	-17.120	0.689	228.552	**227.660**		196	-17.130	0.688	236.041	**236.530**		198	-17.140	0.688	244.505	**243.690**
	195	-17.120	0.688	232.463	**233.060**		197	-17.130	0.688	241.835	**241.630**		199	-17.144	0.688	249.026	**248.930**
	196	-17.120	0.688	237.467	**237.040**		198	-17.131	0.688	246.491	**245.780**		200	-17.144	0.687	251.882	**252.840**

				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
	197	-17.120	0.688	243.455	**242.500**		199	-17.130	0.687	250.662	**250.990**		201	-17.140	0.687	258.968	**258.230**
	198	-17.120	0.687	246.524	**246.610**		200	-17.134	0.687	254.505	**255.230**		202	-17.142	0.687	263.379	**262.440**
	199	-17.120	0.687	252.618	**252.170**		201	-17.136	0.687	259.929	**260.620**		203	-17.144	0.687	268.752	**268.260**
	200	-17.124	0.687	256.655	**256.410**		202	-17.134	0.687	265.759	**265.130**		204	-17.140	0.686	272.954	**272.870**
	201	-17.128	0.687	261.659	**262.140**		203	-17.136	0.687	271.320	**270.980**		205	-17.140	0.686	279.050	**278.850**
	202	-17.123	0.686	266.355	**266.640**		204	-17.130	0.686	276.271	**275.830**		206	-17.140	0.686	284.329	**283.660**
	203	-17.120	0.686	273.613	**272.690**		205	-17.130	0.686	282.553	**281.830**		207	-17.140	0.686	290.564	**289.720**
	204	-17.122	0.686	278.501	**277.580**		206	-17.131	0.686	287.702	**286.930**		208	-17.144	0.686	294.719	**294.600**
	205	-17.126	0.686	283.725	**283.890**		207	-17.136	0.686	292.549	**293.010**		209	-17.148	0.686	299.816	**300.790**
	206	-17.124	0.686	289.991	**289.080**		208	-17.134	0.686	298.775	**298.180**		210	-17.144	0.686	306.639	**305.770**
	207	-17.130	0.686	294.714	**295.490**		209	-17.134	0.686	305.324	**304.370**		211	-17.150	0.686	311.223	**311.980**
	208	-17.127	0.686	301.432	**300.720**		210	-17.140	0.686	309.157	**309.580**		212	-17.150	0.686	316.908	**317.090**
	209	-17.130	0.686	307.219	**307.200**		211	-17.138	0.686	316.467	**315.890**		213	-17.150	0.686	323.532	**323.450**
	210	-17.124	0.685	312.455	**312.500**		212	-17.136	0.685	320.371	**321.270**		214	-17.154	0.686	328.064	**328.820**
	211	-17.126	0.685	318.643	**319.010**		213	-17.136	0.685	327.137	**327.670**		215	-17.150	0.686	336.105	**335.500**
	212	-17.124	0.685	325.285	**324.430**		214	-17.136	0.685	333.095	**333.320**		216	-17.154	0.686	340.760	**340.900**
	213	-17.130	0.685	330.321	**331.220**		215	-17.138	0.685	339.344	**340.010**		217	-17.154	0.686	347.637	**347.580**
	214	-17.130	0.685	336.455	**336.810**		216	-17.140	0.685	344.785	**345.660**		218	-17.156	0.686	353.063	**353.180**
	215	-17.130	0.685	343.525	**343.690**		217	-17.140	0.685	351.800	**352.400**		219	-17.150	0.685	359.180	**359.960**
	216	-17.129	0.685	350.109	**349.410**		218	-17.140	0.685	358.013	**358.240**		220	-17.158	0.686	365.612	**365.640**
	217	-17.130	0.685	356.982	**356.280**		219	-17.140	0.685	365.152	**365.020**		221	-17.158	0.686	372.734	**372.550**
	218	-17.136	0.685	361.428	**362.050**		220	-17.140	0.685	371.492	**370.900**		222	-17.158	0.686	379.064	**378.390**
	219	-17.134	0.685	369.389	**369.140**		221	-17.140	0.685	378.753	**377.830**		223	-17.158	0.686	386.308	**385.680**
	220	-17.136	0.685	375.249	**375.110**		222	-17.142	0.685	384.560	**384.050**		224	-17.150	0.685	392.351	**391.820**
	221	-17.138	0.685	382.026	**382.320**		223	-17.142	0.685	391.939	**391.180**		225	-17.160	0.686	399.461	**399.060**
	222	-17.138	0.685	388.658	**388.550**		224	-17.146	0.685	397.202	**397.740**		226	-17.162	0.686	405.368	**405.270**
	223	-17.138	0.685	396.206	**396.040**		225	-17.146	0.685	404.695	**405.090**		227	-17.155	0.685	411.988	**412.620**
	224	-17.138	0.685	402.960	**402.450**		226	-17.154	0.686	411.956	**411.600**		228	-17.158	0.685	417.636	**418.490**
	225	-17.138	0.685	410.626	**410.250**		227	-17.148	0.685	418.342	**419.010**		229	-17.158	0.685	425.190	**426.170**
	226	-17.138	0.685	417.500	**416.800**		228	-17.145	0.685	426.169	**425.690**		230	-17.153	0.685	433.653	**432.660**
	227	-17.140	0.685	424.616	**424.520**		229	-17.148	0.685	432.887	**433.250**		231	-17.158	0.685	439.630	**440.570**
	228	-17.142	0.685	430.938	**431.210**		230	-17.148	0.685	439.827	**440.070**						
	229	-17.140	0.685	439.499	**439.070**		231	-17.150	0.685	446.989	**447.780**						
	230	-17.140	0.685	446.607	**445.900**		232	-17.150	0.685	454.043	**454.650**						
	231	-17.141	0.685	454.275	**453.880**												
	232	-17.142	0.685	461.158	**460.790**												
	233	-17.145	0.685	468.256	**468.930**												
109	144	-17.464	0.803	132.982	**133.520**	110	146	-17.476	0.800	137.929	**138.880**	111	148	-17.488	0.800	145.161	**145.850**
	145	-17.470	0.803	132.115	**132.790**		147	-17.480	0.800	137.552	**138.360**		149	-17.490	0.800	145.348	**145.200**
	146	-17.478	0.803	129.872	**130.710**		148	-17.486	0.800	135.801	**136.120**		150	-17.508	0.804	142.509	**143.380**
	147	-17.480	0.803	130.365	**130.210**		149	-17.490	0.800	135.760	**135.810**		151	-17.510	0.804	143.118	**142.940**
	148	-17.488	0.802	127.954	**128.440**		150	-17.500	0.800	133.305	**133.940**		152	-17.510	0.800	141.221	**141.590**
	149	-17.490	0.802	128.764	**128.170**		151	-17.500	0.800	134.634	**133.880**		153	-17.360	0.726	141.838	**141.730**
	150	-17.502	0.803	126.685	**126.600**		152	-17.516	0.802	132.079	**132.470**		154	-17.360	0.726	140.730	**140.660**
	151	-17.510	0.803	126.290	**126.570**		153	-17.520	0.802	132.733	**132.960**		155	-17.360	0.726	140.763	**140.970**
	152	-17.520	0.803	124.511	**125.510**		154	-17.350	0.725	132.385	**132.000**		156	-17.360	0.726	139.929	**140.210**
	153	-17.520	0.803	126.521	**126.030**		155	-17.350	0.725	132.640	**132.710**		157	-17.360	0.726	140.227	**140.660**
	154	-17.530	0.803	125.057	**125.440**		156	-17.350	0.725	132.022	**132.010**		158	-17.360	0.726	139.661	**140.020**
	155	-17.340	0.724	125.901	**126.210**		157	-17.350	0.728	134.470	133.880		159	-17.360	0.726	140.220	**140.580**
	156	-17.340	0.727	127.438	126.624		158	-17.350	0.728	134.195	133.648		160	-17.360	0.726	139.918	**140.130**
	157	-17.340	0.727	128.246	127.673		159	-17.350	0.728	135.048	134.835		161	-17.370	0.733	143.053	142.773
	158	-17.340	0.727	128.183	127.791		160	-17.350	0.728	135.036	134.682		162	-17.370	0.733	143.186	142.885
	159	-17.340	0.727	129.250	129.151		161	-17.350	0.728	136.144	135.952		163	-17.370	0.733	144.432	144.612
	160	-17.340	0.727	129.448	129.300		162	-17.350	0.728	136.391	136.083		164	-17.370	0.733	144.826	145.395
	161	-17.340	0.727	130.768	130.709		163	-17.350	0.728	137.750	138.285		165	-17.350	0.728	147.694	147.386
	162	-17.340	0.727	131.222	131.100		164	-17.350	0.728	138.253	139.197		166	-17.350	0.728	148.223	148.407
	163	-17.334	0.726	133.587	133.481		165	-17.340	0.727	141.749	141.666		167	-17.350	0.728	149.846	150.521
	164	-17.330	0.726	135.363	134.782		166	-17.340	0.727	142.482	142.539		168	-17.348	0.728	151.181	151.721
	165	-17.330	0.726	137.156	137.249		167	-17.340	0.727	144.312	145.092		169	-17.348	0.728	153.047	153.886
	166	-17.326	0.726	139.191	138.767		168	-17.340	0.727	145.291	146.251		170	-17.344	0.728	155.193	155.333
	167	-17.328	0.726	140.676	141.312		169	-17.332	0.727	149.590	149.024		171	-17.344	0.728	157.299	157.742
	168	-17.326	0.726	142.409	143.008		170	-17.336	0.727	149.698	150.320		172	-17.340	0.728	159.696	159.380
	169	-17.324	0.726	145.237	145.767		171	-17.334	0.727	152.566	153.273		173	-17.340	0.727	160.976	161.970
	170	-17.324	0.726	146.659	147.585		172	-17.332	0.727	154.592	154.790		174	-17.338	0.727	163.020	163.730
	171	-17.322	0.726	149.724	150.510		173	-17.330	0.727	157.697	157.830		175	-17.332	0.727	167.277	166.510
	172	-17.320	0.726	151.945	152.400		174	-17.330	0.727	159.397	159.460		176	-17.350	0.727	163.823	**162.860**
	173	-17.315	0.726	156.091	155.455		175	-17.344	0.727	158.174	**157.210**		177	-17.350	0.727	166.577	**165.760**
	174	-17.334	0.726	152.611	**152.290**		176	-17.348	0.727	158.945	**159.060**		178	-17.350	0.727	168.498	**167.720**
	175	-17.334	0.726	155.557	**155.240**		177	-17.344	0.727	163.064	**162.410**		179	-17.350	0.727	171.472	**170.700**
	176	-17.334	0.726	157.660	**157.500**		178	-17.344	0.727	165.205	**164.380**		180	-17.350	0.727	173.617	**172.940**
	177	-17.334	0.726	160.826	**160.950**		179	-17.348	0.727	167.243	**167.770**		181	-17.350	0.727	176.807	**176.210**
	178	-17.334	0.726	163.153	**163.250**		180	-17.350	0.727	169.020	**170.010**		182	-17.350	0.727	179.171	**178.740**
	179	-17.330	0.726	167.687	**166.770**		181	-17.346	0.727	173.587	**173.600**		183	-17.350	0.727	182.575	**182.320**
	180	-17.330	0.726	170.237	**169.380**		182	-17.348	0.727	175.581	**176.140**		184	-17.170	0.689	185.497	**185.230**

Z	N	α(0)	a_a	Cal.	Ex./Th.
	181	-17.330	0.726	173.835	**172.960**
	182	-17.330	0.726	176.601	**175.800**
	183	-17.330	0.726	180.409	**179.640**
	184	-17.150	0.690	183.087	**182.870**
	185	-17.150	0.690	187.618	**187.980**
	186	-17.150	0.690	191.304	**191.560**
	187	-17.150	0.690	196.000	**196.630**
	188	-17.150	0.690	199.854	**200.490**
	189	-17.150	0.690	204.712	**205.480**
	190	-17.150	0.690	208.732	**209.380**
	191	-17.150	0.690	213.750	**214.270**
	192	-17.150	0.690	217.933	**218.220**
	193	-17.150	0.690	223.108	**222.970**
	194	-17.150	0.690	227.451	**226.590**
	195	-17.150	0.689	230.952	**231.290**
	196	-17.150	0.689	235.416	**235.020**
	197	-17.150	0.689	240.860	**239.880**
	198	-17.150	0.688	243.539	**243.690**
	199	-17.154	0.688	247.863	**248.660**
	200	-17.152	0.688	253.209	**252.570**
	201	-17.150	0.687	257.477	**257.650**
	202	-17.150	0.687	262.319	**261.890**
	203	-17.150	0.687	268.126	**267.400**
	204	-17.151	0.687	272.803	**272.040**
	205	-17.154	0.687	277.808	**277.790**
	206	-17.154	0.687	282.939	**282.530**
	207	-17.154	0.687	289.022	**288.290**
	208	-17.160	0.687	292.393	**293.110**
	209	-17.158	0.687	299.243	**299.000**
	210	-17.152	0.686	304.157	**303.920**
	211	-17.156	0.686	309.194	**309.860**
	212	-17.158	0.686	314.059	**314.980**
	213	-17.158	0.686	320.502	**321.100**
	214	-17.159	0.686	325.821	**326.510**
	215	-17.160	0.686	332.070	**332.800**
	216	-17.160	0.686	337.843	**338.280**
	217	-17.160	0.686	344.544	**344.740**
	218	-17.160	0.686	350.449	**350.230**
	219	-17.178	0.688	356.961	**356.670**
	220	-17.178	0.688	363.065	**362.280**
	221	-17.179	0.688	369.757	**368.910**
	222	-17.164	0.686	375.104	**374.900**
	223	-17.164	0.686	382.176	**381.760**
	224	-17.168	0.686	387.129	**387.790**
	225	-17.168	0.686	394.319	**394.700**
	226	-17.165	0.686	401.729	**400.850**
	227	-17.168	0.686	408.034	**407.950**
	228	-17.160	0.685	414.070	**413.330**
	229	-17.160	0.685	421.459	**420.770**
	230	-17.160	0.685	428.071	**427.280**
112	150	-17.504	0.802	151.284	**151.470**
	151	-17.510	0.802	150.513	**151.040**
	152	-17.370	0.726	149.764	**149.340**
	153	-17.370	0.726	149.283	**149.450**
	154	-17.370	0.726	147.934	**148.020**
	155	-17.370	0.726	147.726	**148.290**
	156	-17.370	0.726	146.652	**147.160**
	157	-17.370	0.726	146.710	**147.580**
	158	-17.370	0.726	145.907	**146.580**
	159	-17.370	0.726	146.228	**147.200**
	160	-17.370	0.726	145.691	**146.350**
	161	-17.370	0.726	146.269	**147.180**
	162	-17.370	0.726	145.993	**146.630**
	163	-17.368	0.726	147.375	**147.920**
	164	-17.358	0.726	150.117	150.360
	165	-17.352	0.726	152.872	152.332
	166	-17.350	0.726	153.679	152.842
	167	-17.350	0.726	155.024	155.021
	168	-17.350	0.726	155.525	155.654
	169	-17.350	0.726	157.110	157.947
	170	-17.350	0.726	157.855	158.826
	171	-17.342	0.726	161.942	161.337
	172	-17.342	0.726	162.933	162.415
	173	-17.342	0.726	164.997	165.086
	183	-17.348	0.727	179.197	**179.980**
	184	-17.342	0.727	183.751	**182.910**
	185	-17.346	0.727	188.000	**188.020**
	186	-17.350	0.727	191.412	**191.330**
	187	-17.350	0.727	197.024	**196.630**
	188	-17.160	0.690	200.261	**200.220**
	189	-17.160	0.690	204.920	**205.350**
	190	-17.160	0.690	208.743	**208.990**
	191	-17.160	0.690	213.563	**213.900**
	192	-17.160	0.690	217.551	**217.580**
	193	-17.160	0.690	222.530	**222.500**
	194	-17.160	0.690	226.680	**225.850**
	195	-17.160	0.689	230.034	**230.600**
	196	-17.160	0.689	234.306	**234.070**
	197	-17.164	0.689	238.329	**238.930**
	198	-17.168	0.689	241.522	**242.440**
	199	-17.164	0.689	248.152	**247.340**
	200	-17.168	0.689	251.491	**251.000**
	201	-17.168	0.689	257.034	**256.110**
	202	-17.160	0.687	260.170	**260.090**
	203	-17.160	0.687	265.789	**265.570**
	204	-17.160	0.687	270.594	**269.910**
	205	-17.160	0.687	276.356	**275.610**
	206	-17.164	0.687	280.043	**280.170**
	207	-17.166	0.687	285.307	**285.910**
	208	-17.164	0.687	291.032	**290.460**
	209	-17.166	0.687	296.431	**296.350**
	210	-17.170	0.687	300.382	**301.000**
	211	-17.170	0.687	306.550	**306.930**
	212	-17.160	0.686	312.697	**311.760**
	213	-17.163	0.686	317.999	**317.890**
	214	-17.166	0.686	322.495	**322.970**
	215	-17.168	0.686	328.243	**329.190**
	216	-17.166	0.686	334.493	**334.450**
	217	-17.168	0.686	340.367	**340.840**
	218	-17.178	0.687	345.510	**346.000**
	219	-17.178	0.687	352.196	**352.450**
	220	-17.179	0.687	357.762	**357.820**
	221	-17.178	0.687	364.905	**364.580**
	222	-17.178	0.687	370.932	**370.150**
	223	-17.178	0.687	377.869	**376.900**
	224	-17.172	0.686	383.074	**382.570**
	225	-17.175	0.686	389.093	**389.520**
	226	-17.177	0.686	394.658	**395.380**
	227	-17.175	0.686	402.472	**401.630**
	228	-17.170	0.685	407.396	**406.710**
	229	-17.170	0.685	414.616	**414.170**
113	153	-17.380	0.728	159.101	**158.980**
	154	-17.380	0.728	157.554	**157.510**
	155	-17.380	0.728	157.145	**157.450**
	156	-17.380	0.728	155.878	**156.200**
	157	-17.380	0.728	155.740	**156.250**
	158	-17.380	0.728	154.745	**155.230**
	159	-17.380	0.728	154.873	**155.440**
	160	-17.380	0.728	154.149	**154.590**
	161	-17.380	0.728	154.538	**155.070**
	162	-17.380	0.728	154.077	**154.500**
	163	-17.380	0.728	154.723	**155.360**
	164	-17.380	0.728	154.523	**155.440**
	165	-17.366	0.727	158.551	159.030
	166	-17.364	0.727	159.151	159.460
	167	-17.364	0.727	160.286	161.240
	168	-17.362	0.727	161.143	161.810
	169	-17.358	0.727	163.651	163.729
	170	-17.350	0.724	163.763	164.563
	171	-17.342	0.724	167.579	166.591
	172	-17.342	0.724	168.296	167.768
	173	-17.340	0.724	170.653	169.957
	174	-17.340	0.724	171.608	171.455
	175	-17.360	0.729	173.112	173.970
	176	-17.359	0.729	174.722	175.550
	185	-17.170	0.689	189.588	**190.000**
	186	-17.170	0.689	192.839	**193.310**
	187	-17.168	0.689	197.694	**198.350**
	188	-17.166	0.689	201.715	**201.930**
	189	-17.170	0.690	206.464	**206.870**
	190	-17.170	0.690	210.089	**210.570**
	191	-17.170	0.690	214.710	**215.360**
	192	-17.170	0.690	218.501	**219.070**
	193	-17.170	0.690	223.281	**223.620**
	194	-17.170	0.690	227.236	**227.190**
	195	-17.170	0.690	232.174	**231.650**
	196	-17.174	0.690	235.061	**235.140**
	197	-17.178	0.690	238.919	**239.720**
	198	-17.166	0.688	243.203	**243.260**
	199	-17.170	0.688	247.138	**247.860**
	200	-17.170	0.688	251.492	**251.510**
	201	-17.170	0.688	256.813	**256.320**
	202	-17.171	0.688	261.007	**260.310**
	203	-17.174	0.688	265.532	**265.550**
	204	-17.174	0.688	270.184	**269.880**
	205	-17.174	0.688	275.794	**275.270**
	206	-17.176	0.688	279.960	**279.860**
	207	-17.176	0.688	285.709	**285.320**
	208	-17.172	0.687	289.703	**289.910**
	209	-17.174	0.687	294.917	**295.450**
	210	-17.174	0.687	299.967	**300.190**
	211	-17.177	0.687	304.990	**305.860**
	212	-17.173	0.687	311.470	**310.710**
	213	-17.178	0.687	315.977	**316.520**
	214	-17.180	0.687	320.652	**321.640**
	215	-17.180	0.687	326.905	**327.620**
	216	-17.180	0.687	332.366	**332.590**
	217	-17.180	0.687	338.751	**338.640**
	218	-17.180	0.687	344.346	**343.830**
	219	-17.180	0.687	350.862	**350.050**
	220	-17.184	0.687	355.266	**355.550**
	221	-17.184	0.687	361.905	**361.880**
	222	-17.188	0.687	366.428	**367.320**
	223	-17.188	0.687	373.190	**373.740**
	224	-17.185	0.687	380.176	**379.980**
	225	-17.188	0.687	386.057	**386.180**
	226	-17.180	0.686	391.877	**391.170**
	227	-17.182	0.686	398.174	**397.220**
	228	-17.186	0.686	403.012	**402.250**
114	155	-17.390	0.730	165.898	**165.420**
	156	-17.390	0.730	164.436	**163.840**
	157	-17.390	0.730	164.103	**163.900**
	158	-17.390	0.730	162.918	**162.540**
	159	-17.390	0.730	162.855	**162.760**
	160	-17.390	0.730	161.943	**161.610**
	161	-17.390	0.730	162.145	**162.050**
	162	-17.390	0.730	161.501	**161.200**
	163	-17.390	0.730	161.963	**161.980**
	164	-17.390	0.730	161.582	**160.810**
	165	-17.390	0.730	162.300	**161.940**
	166	-17.390	0.730	162.178	**161.570**
	167	-17.390	0.730	163.147	**163.000**
	168	-17.390	0.730	163.280	**163.050**
	169	-17.390	0.730	164.497	**164.870**
	170	-17.378	0.730	168.288	168.779
	171	-17.350	0.722	170.579	170.932
	172	-17.350	0.722	171.017	171.606
	173	-17.342	0.722	174.818	173.929
	174	-17.341	0.722	175.788	174.917
	175	-17.342	0.722	177.242	177.465
	176	-17.367	0.729	178.202	178.731
	177	-17.366	0.729	180.650	181.500
	178	-17.388	0.729	175.562	**176.120**

Z	N	$\alpha(0)$	a_a	Mass excess (MeV)		Z	N	$\alpha(0)$	a_a	Mass excess (MeV)		Z	N	$\alpha(0)$	a_a	Mass excess (MeV)	
				Cal.	Ex./Th.					Cal.	Ex./Th.					Cal.	Ex./Th.
	174	-17.348	0.728	166.621	166.450		177	-17.358	0.729	177.391	178.315		179	-17.388	0.729	177.925	**178.810**
	175	-17.350	0.728	168.394	169.370	**178**	-17.380	0.729	172.543	**173.500**	**180**	-17.386	0.729	180.056	**180.410**
	176	-17.348	0.728	170.485	170.930	**179**	-17.379	0.729	175.418	**176.140**	**181**	-17.382	0.729	183.824	**183.340**
177	-17.362	0.728	169.013	**168.120**	**180**	-17.378	0.729	177.472	**178.080**	**182**	-17.380	0.729	186.192	**185.260**
178	-17.364	0.728	170.164	**169.550**	**181**	-17.378	0.729	180.278	**181.040**	**183**	-17.384	0.730	189.088	**188.570**
179	-17.368	0.728	171.781	**172.480**	**182**	-17.372	0.729	184.035	**183.280**	**184**	-17.382	0.730	191.713	**190.880**
180	-17.368	0.728	173.732	**174.370**	**183**	-17.372	0.729	187.065	**186.570**	**185**	-17.386	0.730	195.163	**195.340**
181	-17.364	0.728	177.900	**177.570**	**184**	-17.370	0.729	189.872	**189.180**	**186**	-17.390	0.730	197.787	**197.980**
182	-17.365	0.728	179.783	**179.800**	**185**	-17.372	0.729	194.111	**193.640**	**187**	-17.390	0.730	202.624	**202.890**
183	-17.362	0.728	183.882	**183.370**	**186**	-17.380	0.729	195.731	**196.600**	**188**	-17.390	0.729	205.205	**205.700**
184	-17.360	0.728	186.872	**185.990**	**187**	-17.380	0.729	200.753	**201.460**	**189**	-17.390	0.729	210.202	**210.640**
185	-17.362	0.728	191.301	**190.760**	**188**	-17.380	0.729	204.956	**204.640**	**190**	-17.390	0.729	214.389	**213.630**
186	-17.370	0.728	193.114	**193.740**	**189**	-17.190	0.690	209.884	**209.520**	**191**	-17.200	0.690	218.821	**218.590**
187	-17.370	0.728	198.321	**198.920**	**190**	-17.190	0.690	213.115	**212.870**	**192**	-17.200	0.690	222.026	**221.700**
188	-17.370	0.728	202.708	**202.110**	**191**	-17.190	0.690	217.338	**217.710**	**193**	-17.202	0.690	225.604	**226.590**
189	-17.180	0.690	207.510	**207.280**	**192**	-17.190	0.690	220.738	**221.150**	**194**	-17.200	0.690	229.591	**229.520**
190	-17.180	0.690	210.940	**210.660**	**193**	-17.190	0.690	225.125	**225.730**	**195**	-17.200	0.690	233.944	**234.130**
191	-17.180	0.690	215.362	**215.660**	**194**	-17.190	0.690	228.691	**229.090**	**196**	-17.200	0.690	237.483	**237.260**
192	-17.180	0.690	218.959	**219.090**	**195**	-17.190	0.690	233.239	**233.670**	**197**	-17.212	0.690	238.264	**238.620**
193	-17.180	0.690	223.544	**223.980**	**196**	-17.190	0.690	236.969	**237.070**	**198**	-17.205	0.689	242.430	**241.730**
194	-17.180	0.690	227.305	**227.470**	**197**	-17.198	0.690	239.195	**238.380**	**199**	-17.200	0.689	248.624	**248.550**
195	-17.190	0.690	228.978	**229.300**	**198**	-17.190	0.689	243.812	**244.120**	**200**	-17.200	0.689	252.449	**251.690**
196	-17.176	0.689	235.478	**234.790**	**199**	-17.190	0.689	248.637	**248.460**	**201**	-17.201	0.689	256.922	**256.220**
197	-17.180	0.689	239.110	**239.340**	**200**	-17.190	0.689	252.650	**251.860**	**202**	-17.200	0.688	259.368	**259.620**
198	-17.180	0.689	243.157	**242.610**	**201**	-17.194	0.689	256.372	**256.410**	**203**	-17.202	0.688	263.637	**264.620**
199	-17.180	0.689	248.175	**247.230**	**202**	-17.190	0.688	259.899	**260.080**	**204**	-17.200	0.688	268.370	**268.450**
200	-17.180	0.688	250.508	**250.620**	**203**	-17.190	0.688	264.989	**265.080**	**205**	-17.197	0.688	274.379	**273.630**
201	-17.180	0.688	255.639	**255.440**	**204**	-17.192	0.688	268.640	**269.150**	**206**	-17.200	0.688	277.674	**277.660**
202	-17.180	0.688	259.959	**259.130**	**205**	-17.190	0.688	274.511	**274.340**	**207**	-17.200	0.688	282.872	**282.930**
203	-17.180	0.688	265.239	**264.400**	**206**	-17.194	0.688	277.671	**278.610**	**208**	-17.200	0.688	287.273	**287.010**
204	-17.184	0.688	268.447	**268.480**	**207**	-17.192	0.688	283.690	**283.870**	**209**	-17.203	0.688	291.648	**292.350**
205	-17.186	0.688	273.235	**273.940**	**208**	-17.190	0.688	288.913	**288.210**	**210**	-17.204	0.688	295.869	**296.550**
206	-17.184	0.688	278.486	**278.180**	**209**	-17.190	0.688	294.440	**293.480**	**211**	-17.204	0.688	301.351	**301.930**
207	-17.186	0.688	283.414	**283.710**	**210**	-17.195	0.688	297.555	**298.010**	**212**	-17.206	0.688	305.390	**306.150**
208	-17.188	0.688	287.537	**288.020**	**211**	-17.196	0.688	302.894	**303.370**	**213**	-17.204	0.688	311.663	**311.670**
209	-17.190	0.688	292.599	**293.560**	**212**	-17.194	0.688	308.411	**307.840**	**214**	-17.206	0.688	315.841	**316.050**
210	-17.188	0.688	298.146	**298.020**	**213**	-17.196	0.688	313.563	**313.440**	**215**	-17.206	0.688	321.599	**321.720**
211	-17.190	0.688	303.344	**303.680**	**214**	-17.200	0.688	317.264	**318.090**	**216**	-17.208	0.688	325.911	**326.120**
212	-17.190	0.688	308.390	**308.290**	**215**	-17.200	0.688	323.198	**323.780**	**217**	-17.210	0.688	331.142	**331.900**
213	-17.190	0.688	314.369	**314.210**	**216**	-17.200	0.688	328.344	**328.490**	**218**	-17.210	0.688	336.250	**336.510**
214	-17.186	0.687	318.442	**318.860**	**217**	-17.198	0.688	335.072	**334.290**	**219**	-17.210	0.688	342.275	**342.490**
215	-17.186	0.687	324.520	**324.790**	**218**	-17.200	0.688	339.696	**339.170**	**220**	-17.210	0.688	347.520	**347.110**
216	-17.190	0.687	328.495	**329.440**	**219**	-17.200	0.688	345.897	**345.160**	**221**	-17.210	0.688	353.677	**353.000**
217	-17.190	0.687	334.702	**335.530**	**220**	-17.206	0.688	349.320	**350.180**	**222**	-17.208	0.687	357.086	**357.610**
218	-17.188	0.687	340.783	**340.390**	**221**	-17.202	0.688	356.983	**356.230**	**223**	-17.206	0.687	364.007	**363.260**
219	-17.190	0.687	346.461	**346.760**	**222**	-17.200	0.687	360.505	**361.260**	**224**	-17.212	0.687	367.454	**367.680**
220	-17.190	0.687	352.015	**351.840**	**223**	-17.200	0.687	366.925	**367.020**	**225**	-17.212	0.687	373.825	**373.460**
221	-17.190	0.687	358.483	**358.140**	**224**	-17.200	0.687	372.568	**371.850**						
222	-17.190	0.687	364.169	**363.330**	**225**	-17.202	0.687	378.438	**377.730**						
223	-17.190	0.687	370.764	**370.010**	**226**	-17.206	0.687	382.853	**382.290**						
224	-17.198	0.687	373.893	**374.860**												
225	-17.190	0.686	380.421	**381.020**												
226	-17.190	0.686	386.323	**385.570**												
227	-17.192	0.686	392.446	**391.610**												
115 **157**	-17.400	0.731	173.271	**173.210**	**116** **159**	-17.410	0.731	179.183	**179.870**	**117** **161**	-17.420	0.733	187.190	**187.540**
158	-17.400	0.731	171.869	**171.850**	**160**	-17.410	0.731	177.820	**178.330**	**162**	-17.420	0.733	185.910	**185.980**
159	-17.400	0.731	171.586	**171.780**	**161**	-17.410	0.731	177.568	**178.420**	**163**	-17.420	0.733	185.731	**185.900**
160	-17.400	0.731	170.460	**170.590**	**162**	-17.410	0.731	176.477	**176.770**	**164**	-17.420	0.733	184.722	**184.490**
161	-17.400	0.731	170.445	**170.700**	**163**	-17.410	0.731	176.489	**177.110**	**165**	-17.420	0.733	184.807	**184.950**
162	-17.400	0.731	169.589	**169.760**	**164**	-17.410	0.731	175.666	**175.680**	**166**	-17.420	0.733	184.065	**184.220**
163	-17.400	0.731	169.837	**169.940**	**165**	-17.410	0.731	175.939	**176.490**	**167**	-17.420	0.733	184.409	**184.710**
164	-17.400	0.731	169.246	**168.830**	**166**	-17.410	0.731	175.379	**175.850**	**168**	-17.420	0.733	183.928	**184.210**
165	-17.400	0.731	169.753	**169.640**	**167**	-17.410	0.731	175.907	**176.650**	**169**	-17.420	0.733	184.527	**184.950**
166	-17.400	0.731	169.424	**169.340**	**168**	-17.410	0.733	177.114	**176.210**	**170**	-17.420	0.733	184.305	**184.770**
167	-17.400	0.731	170.185	**170.350**	**169**	-17.410	0.733	177.947	**177.270**	**171**	-17.420	0.733	185.155	**185.780**
168	-17.400	0.731	170.113	**170.240**	**170**	-17.410	0.733	177.955	**177.150**	172	-17.420	0.735	186.852	**185.950**
169	-17.400	0.731	171.124	**171.350**	**171**	-17.410	0.733	179.037	**178.490**	173	-17.420	0.735	188.004	**187.190**
170	-17.400	0.731	171.305	**171.550**	**172**	-17.410	0.733	179.297	**178.710**	174	-17.420	0.739	191.912	191.653
171	-17.400	0.731	172.561	**172.920**	173	-17.420	0.740	184.016	184.457	175	-17.420	0.739	193.424	193.621
172	-17.350	0.720	177.558	177.748	174	-17.420	0.740	184.716	185.028	176	-17.409	0.735	193.543	194.428
173	-17.350	0.720	178.790	179.666	175	-17.420	0.740	186.479	187.244	177	-17.400	0.733	195.882	196.397
174	-17.348	0.720	179.773	180.683	176	-17.420	0.740	187.428	188.133	**178**	-17.418	0.733	191.359	**192.320**
175	-17.343	0.720	182.686	182.792	177	-17.395	0.733	189.648	190.568	**179**	-17.412	0.733	194.948	**194.460**
176	-17.342	0.720	183.621	184.180	**178**	-17.410	0.733	186.244	**186.000**	**180**	-17.410	0.733	196.554	**195.760**

Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	177	-17.370	0.730	187.496	186.600		179	-17.410	0.733	188.281	**188.390**		181	-17.410	0.733	198.606	**198.170**
	178	-17.396	0.730	181.029	**181.570**		180	-17.403	0.732	190.478	**189.720**		182	-17.414	0.734	199.786	**199.780**
	179	-17.392	0.730	184.376	**183.890**		181	-17.404	0.732	192.423	**192.350**		183	-17.410	0.734	203.293	**202.450**
	180	-17.390	0.730	186.326	**185.500**		182	-17.404	0.732	193.855	**193.970**		184	-17.410	0.734	204.802	**204.450**
	181	-17.390	0.730	188.729	**188.150**		183	-17.400	0.732	197.517	**196.940**		185	-17.410	0.734	208.912	**208.230**
	182	-17.394	0.731	190.332	**190.090**		184	-17.400	0.732	199.181	**198.940**		186	-17.418	0.734	209.792	**210.540**
	183	-17.394	0.731	192.985	**193.060**		185	-17.400	0.732	203.449	**203.050**		187	-17.416	0.734	214.708	**214.770**
	184	-17.390	0.731	196.025	**195.390**		186	-17.406	0.732	205.096	**205.380**		188	-17.420	0.734	216.995	**217.270**
	185	-17.390	0.731	200.482	**199.530**		187	-17.408	0.732	208.956	**209.940**		189	-17.420	0.734	221.505	**221.540**
	186	-17.398	0.731	201.718	**202.160**		188	-17.410	0.732	212.006	**212.430**		190	-17.232	0.690	223.483	**224.210**
	187	-17.400	0.731	205.765	**206.710**		189	-17.410	0.732	216.670	**217.020**		191	-17.226	0.690	228.761	**228.030**
	188	-17.400	0.731	209.604	**209.550**		190	-17.220	0.690	220.290	**219.680**		192	-17.230	0.690	230.149	**230.330**
	189	-17.400	0.731	214.450	**214.120**		191	-17.222	0.690	223.306	**224.150**		193	-17.230	0.690	233.750	**234.410**
	190	-17.210	0.690	217.790	**217.120**		192	-17.223	0.690	225.812	**226.580**		194	-17.230	0.690	236.543	**237.230**
	191	-17.210	0.690	221.618	**221.620**		193	-17.220	0.690	230.535	**230.770**		195	-17.230	0.690	240.310	**241.160**
	192	-17.212	0.690	224.013	**224.660**		194	-17.220	0.690	233.521	**233.560**		196	-17.230	0.690	243.272	**244.010**
	193	-17.210	0.690	228.621	**228.960**		195	-17.220	0.690	237.484	**237.970**		197	-17.238	0.690	244.690	**244.330**
	194	-17.210	0.690	231.800	**232.050**		196	-17.220	0.690	240.639	**240.770**		198	-17.240	0.690	247.181	**247.170**
	195	-17.210	0.690	235.957	**236.350**		197	-17.220	0.690	244.765	**245.030**		199	-17.234	0.689	251.549	**251.130**
	196	-17.210	0.690	239.303	**239.480**		198	-17.216	0.689	247.722	**247.910**		200	-17.230	0.689	256.071	**256.560**
	197	-17.218	0.690	241.124	**240.650**		199	-17.229	0.689	247.881	**248.630**		201	-17.230	0.689	260.288	**260.670**
	198	-17.216	0.689	243.589	**243.780**		200	-17.220	0.689	254.163	**254.060**		202	-17.228	0.689	264.344	**263.770**
	199	-17.210	0.689	249.908	**250.390**		201	-17.222	0.689	257.937	**258.350**		203	-17.230	0.689	268.075	**268.240**
	200	-17.210	0.689	253.543	**253.550**		202	-17.220	0.689	262.178	**261.460**		204	-17.230	0.689	271.657	**271.800**
	201	-17.210	0.689	258.140	**257.870**		203	-17.220	0.689	266.740	**266.180**		205	-17.230	0.689	276.183	**276.520**
	202	-17.212	0.689	261.299	**261.260**		204	-17.224	0.689	269.225	**269.770**		206	-17.225	0.689	281.532	**281.570**
	203	-17.210	0.689	266.683	**266.010**		205	-17.220	0.689	275.220	**274.750**		207	-17.230	0.689	284.595	**285.030**
	204	-17.214	0.689	269.357	**269.830**		206	-17.220	0.689	279.140	**278.490**		208	-17.229	0.689	288.809	**288.890**
	205	-17.210	0.689	275.534	**274.760**		207	-17.224	0.689	282.712	**283.470**		209	-17.230	0.689	293.310	**293.700**
	206	-17.210	0.689	279.638	**278.800**		208	-17.220	0.689	288.077	**287.340**		210	-17.230	0.689	297.351	**297.620**
	207	-17.210	0.689	284.688	**283.760**		209	-17.222	0.689	292.439	**292.450**		211	-17.232	0.689	301.668	**302.490**
	208	-17.215	0.689	287.328	**287.890**		210	-17.225	0.689	295.683	**296.370**		212	-17.232	0.689	305.856	**306.280**
	209	-17.216	0.689	292.195	**293.020**		211	-17.224	0.689	301.162	**301.480**		213	-17.230	0.689	311.632	**311.290**
	210	-17.216	0.689	296.594	**297.190**		212	-17.226	0.689	304.875	**305.440**		214	-17.236	0.689	313.984	**314.870**
	211	-17.216	0.689	301.927	**302.300**		213	-17.224	0.689	310.828	**310.690**		215	-17.236	0.689	319.239	**320.170**
	212	-17.216	0.689	306.474	**306.430**		214	-17.228	0.689	314.022	**314.550**		216	-17.236	0.689	323.717	**324.220**
	213	-17.216	0.689	311.950	**311.670**		215	-17.226	0.689	320.119	**319.880**		217	-17.236	0.689	329.112	**329.380**
	214	-17.220	0.689	315.325	**315.880**		216	-17.230	0.689	323.448	**323.930**		218	-17.234	0.689	334.403	**333.560**
	215	-17.218	0.689	321.598	**321.250**		217	-17.230	0.689	329.019	**329.410**		219	-17.236	0.689	339.267	**338.830**
	216	-17.216	0.688	324.747	**325.630**		218	-17.230	0.689	333.815	**333.610**		220	-17.237	0.689	343.693	**342.990**
	217	-17.216	0.688	330.462	**331.130**		219	-17.230	0.689	339.524	**339.210**		221	-17.238	0.689	349.023	**348.300**
	218	-17.218	0.688	334.730	**335.600**		220	-17.226	0.688	343.348	**343.410**		222	-17.240	0.689	353.245	**352.710**
	219	-17.215	0.688	341.579	**341.210**		221	-17.226	0.688	349.156	**349.040**							
	220	-17.220	0.688	344.978	**345.740**		222	-17.228	0.688	353.515	**353.380**							
	221	-17.220	0.688	350.957	**351.380**		223	-17.230	0.688	358.776	**358.840**							
	222	-17.220	0.688	356.163	**355.880**													
	223	-17.221	0.688	361.935	**361.360**													
	224	-17.223	0.688	366.596	**365.910**													
118	163	-17.440	0.739	193.817	**194.000**	119	165	-17.300	0.665	201.515	**201.990**	120	167	-17.200	0.610	208.859	**209.110**
	164	-17.440	0.739	192.708	**192.310**		166	-17.300	0.667	200.008	**200.970**		168	-17.200	0.615	207.863	**207.940**
	165	-17.440	0.739	192.694	**192.730**		167	-17.300	0.671	200.824	**201.120**		169	-17.200	0.620	208.125	**208.310**
	166	-17.440	0.739	191.858	**191.670**		168	-17.300	0.673	199.766	**200.010**		170	-17.200	0.625	207.766	**207.490**
	167	-17.440	0.739	192.110	**192.140**		169	-17.300	0.676	200.494	**200.700**		171	-17.200	0.630	208.675	**208.320**
	168	-17.440	0.739	191.543	**191.320**		170	-17.300	0.679	200.535	**200.100**		172	-17.200	0.633	207.702	**207.690**
	169	-17.440	0.739	192.056	**192.030**		171	-17.300	0.680	200.396	**200.680**		173	-17.200	0.637	208.563	**208.520**
	170	-17.440	0.739	191.753	**191.490**		172	-17.300	0.682	200.190	**200.430**		174	-17.200	0.640	208.091	**208.150**
	171	-17.440	0.739	192.524	**192.450**		173	-17.300	0.685	201.874	**201.280**		175	-17.200	0.644	209.509	**209.340**
	172	-17.440	0.739	192.481	**192.240**		174	-17.300	0.686	201.347	**201.290**		176	-17.200	0.647	209.553	**209.530**
	173	-17.440	0.739	193.504	**193.460**		175	-17.300	0.688	202.710	**202.460**		177	-17.200	0.651	211.546	**211.130**
	174	-17.440	0.739	193.717	**193.520**		176	-17.300	0.690	203.357	**202.960**		178	-17.200	0.653	211.317	**211.210**
	175	-17.430	0.739	197.918	198.802		177	-17.300	0.692	205.149	**204.550**		179	-17.200	0.656	213.039	**213.110**
	176	-17.430	0.739	198.392	**199.320**		178	-17.300	0.693	205.349	**204.910**		180	-17.200	0.659	214.101	**213.790**
	177	-17.422	0.737	200.384	201.369		179	-17.300	0.695	207.546	**206.840**		181	-17.200	0.662	216.340	**215.890**
	178	-17.432	0.737	198.095	**197.670**		180	-17.300	0.696	208.100	**207.820**		182	-17.200	0.664	217.007	**216.880**
	179	-17.430	0.737	200.394	**199.850**		181	-17.230	0.675	209.635	**209.910**		183	-17.202	0.668	220.096	**219.250**
	180	-17.430	0.737	201.298	**200.910**		182	-17.238	0.679	210.449	**211.260**		184	-17.204	0.670	220.632	**220.620**
	181	-17.430	0.737	203.241	**203.320**		183	-17.236	0.681	213.507	**213.640**		185	-17.203	0.672	224.761	**224.010**
	182	-17.428	0.736	203.888	**204.650**		184	-17.230	0.682	216.046	**215.310**		186	-17.200	0.672	226.708	**225.710**
	183	-17.426	0.736	206.635	**207.330**		185	-17.230	0.683	219.406	**218.730**		187	-17.212	0.675	228.278	**228.780**
	184	-17.420	0.736	209.796	**209.010**		186	-17.232	0.684	221.398	**220.730**		188	-17.212	0.676	230.670	**230.140**
	185	-17.421	0.736	213.444	**212.740**		187	-17.240	0.686	223.739	**224.580**		189	-17.210	0.676	233.582	**233.110**
	186	-17.430	0.736	213.855	**214.760**		188	-17.235	0.686	227.036	**226.350**		190	-17.210	0.676	235.067	**234.850**
	187	-17.430	0.736	218.007	**218.920**		189	-17.242	0.687	228.830	**229.350**		191	-17.210	0.677	238.732	**238.070**
	188	-17.430	0.736	221.358	**221.140**		190	-17.240	0.687	231.417	**231.390**		192	-17.214	0.678	240.404	**240.080**

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Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.	Z	N	α(0)	a_a	Mass excess (MeV) Cal.	Ex./Th.
	189	-17.244	0.690	223.929	**224.890**		191	-17.241	0.688	235.320	**234.630**		193	-17.214	0.679	244.357	**243.430**
	190	-17.244	0.690	226.176	**226.950**		192	-17.236	0.686	236.472	**236.950**		194	-17.218	0.679	245.014	**245.600**
	191	-17.240	0.690	230.643	**230.510**		193	-17.234	0.686	240.192	**240.350**		195	-17.196	0.674	248.186	**249.120**
	192	-17.240	0.690	233.070	**232.850**		194	-17.236	0.687	243.212	**242.810**		196	-17.194	0.674	250.756	**251.400**
	193	-17.240	0.690	236.476	**236.540**		195	-17.216	0.682	245.878	**246.380**		197	-17.194	0.675	255.043	**255.160**
	194	-17.240	0.690	239.077	**239.040**		196	-17.206	0.680	248.564	**249.010**		198	-17.194	0.675	257.177	**257.600**
	195	-17.224	0.687	243.367	**242.920**		197	-17.208	0.681	252.629	**252.780**		199	-17.206	0.678	260.807	**261.510**
	196	-17.226	0.687	245.427	**245.520**		198	-17.218	0.683	254.901	**255.500**		200	-17.204	0.678	263.827	**264.080**
	197	-17.236	0.687	245.929	**245.940**		199	-17.217	0.683	258.724	**259.440**		201	-17.206	0.679	268.046	**267.940**
	198	-17.244	0.689	249.303	**248.510**		200	-17.214	0.683	262.391	**262.330**		202	-17.206	0.679	270.619	**270.690**
	199	-17.246	0.689	252.533	**252.440**		201	-17.214	0.683	266.058	**266.130**		203	-17.206	0.679	274.139	**274.860**
	200	-17.240	0.689	257.505	**257.790**		202	-17.211	0.683	269.895	**269.150**		204	-17.200	0.679	278.812	**277.900**
	201	-17.236	0.689	262.808	**261.900**		203	-17.210	0.683	274.043	**273.260**		205	-17.204	0.680	282.855	**282.000**
	202	-17.242	0.689	264.125	**264.700**		204	-17.220	0.684	275.533	**276.430**		206	-17.206	0.680	285.126	**285.140**
	203	-17.240	0.689	268.950	**269.180**		205	-17.216	0.684	280.833	**280.710**		207	-17.210	0.681	289.412	**289.400**
	204	-17.240	0.689	272.344	**272.440**		206	-17.215	0.684	284.379	**284.010**		208	-17.210	0.681	292.517	**292.360**
	205	-17.235	0.689	278.298	**278.500**		207	-17.220	0.685	288.704	**288.370**		209	-17.210	0.681	296.552	**297.120**
	206	-17.236	0.689	281.530	**281.810**		208	-17.220	0.685	292.111	**291.860**		210	-17.210	0.681	299.808	**300.350**
	207	-17.232	0.689	287.327	**286.440**		209	-17.220	0.685	296.452	**296.570**		211	-17.212	0.681	303.329	**303.080**
	208	-17.234	0.689	290.389	**289.940**		210	-17.222	0.685	299.353	**299.430**		212	-17.220	0.682	305.998	**306.470**
	209	-17.240	0.689	293.076	**293.790**		211	-17.219	0.685	304.830	**304.050**		213	-17.214	0.681	310.389	**311.260**
	210	-17.239	0.689	297.264	**297.550**		212	-17.244	0.688	306.215	**306.200**		214	-17.220	0.682	313.930	**314.850**
	211	-17.240	0.689	301.727	**302.340**		213	-17.220	0.684	310.829	**311.020**		215	-17.214	0.682	320.436	**319.850**
	212	-17.240	0.689	305.738	**305.960**		214	-17.220	0.684	314.649	**314.910**		216	-17.219	0.683	324.561	**323.610**
	213	-17.242	0.689	310.013	**309.870**		215	-17.220	0.684	319.387	**319.910**		217	-17.218	0.683	329.573	**328.720**
	214	-17.246	0.689	312.843	**313.740**		216	-17.220	0.684	323.353	**323.940**		218	-17.218	0.683	333.482	**332.580**
	215	-17.244	0.689	318.583	**319.050**		217	-17.216	0.684	329.576	**329.090**		219	-17.220	0.683	337.621	**337.840**
	216	-17.244	0.689	322.886	**323.130**		218	-17.216	0.684	333.688	**333.240**							
	217	-17.244	0.689	328.105	**328.650**		219	-17.218	0.684	338.033	**338.270**							
	218	-17.246	0.689	331.879	**332.550**		220	-17.220	0.684	341.608	**342.130**							
	219	-17.246	0.689	337.236	**337.710**													
	220	-17.248	0.689	341.148	**341.580**													
	221	-17.250	0.689	345.962	**346.910**													
121	169	-17.200	0.611	217.709	**217.710**	122	172	-17.200	0.616	224.401	**224.430**	123	174	-17.200	0.618	234.137	**234.160**
	170	-17.200	0.615	216.284	**216.780**		173	-17.200	0.620	224.284	**225.230**		175	-17.200	0.624	235.387	**234.840**
	171	-17.200	0.622	217.800	**217.130**		174	-17.200	0.625	224.137	**225.050**		176	-17.200	0.628	234.807	**234.560**
	172	-17.200	0.625	216.386	**216.580**		175	-17.200	0.630	225.246	**225.870**		177	-17.200	0.631	234.757	**235.400**
	173	-17.200	0.630	217.394	**217.520**		176	-17.200	0.635	225.773	**225.730**		178	-17.198	0.634	234.627	**235.600**
	174	-17.200	0.635	217.809	**217.150**		177	-17.200	0.638	226.153	**226.390**		179	-17.198	0.638	235.772	**236.670**
	175	-17.200	0.638	218.121	**218.000**		178	-17.200	0.642	226.588	**226.670**		180	-17.198	0.642	236.301	**237.010**
	176	-17.200	0.642	218.461	**218.180**		179	-17.200	0.645	227.477	**228.020**		181	-17.192	0.643	237.522	**238.450**
	177	-17.200	0.645	219.281	**219.400**		180	-17.200	0.649	228.489	**228.400**		182	-17.200	0.651	239.385	**239.130**
	178	-17.200	0.648	219.427	**219.540**		181	-17.200	0.653	230.723	**230.100**		183	-17.200	0.655	241.769	**240.910**
	179	-17.200	0.652	221.539	**220.920**		182	-17.200	0.655	230.660	**230.790**		184	-17.214	0.661	241.023	**241.950**
	180	-17.200	0.654	221.391	**221.580**		183	-17.200	0.659	233.463	**232.860**		185	-17.200	0.660	245.426	**244.650**
	181	-17.200	0.657	223.211	**223.320**		184	-17.200	0.662	234.772	**233.920**		186	-17.207	0.662	245.295	**246.030**
	182	-17.200	0.659	223.495	**224.350**		185	-17.200	0.664	237.864	**236.940**		187	-17.210	0.664	247.485	**247.330**
	183	-17.200	0.664	226.424	**226.430**		186	-17.200	0.665	239.287	**238.330**		188	-17.210	0.664	247.923	**248.320**
	184	-17.200	0.666	228.422	**227.790**		187	-17.210	0.667	239.657	**240.230**		189	-17.210	0.666	251.376	**250.650**
	185	-17.209	0.669	230.103	**230.840**		188	-17.210	0.668	241.384	**241.240**		190	-17.210	0.666	252.040	**252.040**
	186	-17.206	0.669	231.783	**232.540**		189	-17.210	0.669	244.146	**243.880**		191	-17.216	0.668	253.948	**254.610**
	187	-17.211	0.671	234.065	**234.890**		190	-17.210	0.670	246.160	**245.300**		192	-17.218	0.669	255.313	**256.220**
	188	-17.210	0.672	236.430	**236.210**		191	-17.214	0.671	247.954	**248.200**		193	-17.210	0.669	259.716	**258.960**
	189	-17.210	0.673	239.526	**238.870**		192	-17.218	0.672	248.998	**249.840**		194	-17.216	0.670	260.072	**260.690**
	190	-17.214	0.674	240.630	**240.590**		193	-17.218	0.673	252.323	**252.920**		195	-17.192	0.664	262.592	**263.540**
	191	-17.214	0.675	244.010	**243.510**		194	-17.214	0.673	254.959	**254.690**		196	-17.192	0.665	264.932	**265.440**
	192	-17.214	0.675	245.452	**245.460**		195	-17.194	0.668	257.438	**257.900**		197	-17.194	0.666	267.648	**268.540**
	193	-17.218	0.676	247.834	**248.510**		196	-17.194	0.668	258.846	**259.800**		198	-17.192	0.666	269.626	**270.580**
	194	-17.216	0.676	250.102	**250.640**		197	-17.194	0.669	262.508	**263.210**		199	-17.192	0.667	273.232	**273.820**
	195	-17.196	0.672	253.891	**253.850**		198	-17.192	0.669	264.747	**265.290**		200	-17.190	0.667	275.405	**275.810**
	196	-17.194	0.672	256.225	**256.100**		199	-17.188	0.669	268.584	**268.850**		201	-17.200	0.670	278.793	**278.950**
	197	-17.194	0.672	258.887	**259.540**		200	-17.202	0.673	271.430	**270.900**		202	-17.200	0.670	280.565	**281.250**
	198	-17.193	0.672	261.069	**261.920**		201	-17.206	0.674	274.397	**274.400**		203	-17.200	0.671	284.729	**284.720**
	199	-17.200	0.675	265.878	**265.540**		202	-17.206	0.674	276.462	**276.850**		204	-17.200	0.672	288.177	**287.320**
	200	-17.206	0.676	267.513	**268.080**		203	-17.208	0.674	278.818	**279.260**		205	-17.204	0.673	291.317	**291.100**
	201	-17.200	0.676	272.534	**271.840**		204	-17.210	0.676	283.460	**283.230**		206	-17.204	0.673	293.493	**293.750**
	202	-17.206	0.677	274.418	**274.510**		205	-17.220	0.678	286.562	**287.240**		207	-17.206	0.674	297.533	**297.440**
	203	-17.204	0.677	278.343	**278.420**		206	-17.200	0.675	290.796	**290.090**		208	-17.206	0.674	299.894	**299.950**
	204	-17.200	0.677	282.135	**281.210**		207	-17.204	0.676	294.467	**294.000**		209	-17.211	0.675	303.183	**303.960**
	205	-17.206	0.678	285.233	**285.150**		208	-17.206	0.676	296.406	**296.890**		210	-17.214	0.676	306.426	**307.260**
	206	-17.206	0.678	287.913	**288.090**		209	-17.206	0.676	299.930	**300.640**		211	-17.214	0.676	309.921	**309.710**
	207	-17.204	0.678	292.183	**292.220**		210	-17.212	0.677	302.433	**302.300**		212	-17.216	0.677	313.748	**312.800**
	208	-17.210	0.679	294.769	**295.230**		211	-17.212	0.677	306.133	**306.720**		213	-17.216	0.677	317.421	**317.060**
	209	-17.210	0.679	298.562	**299.450**		212	-17.218	0.678	308.875	**309.840**		214	-17.214	0.677	321.000	**320.290**

Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.	Z	N	$\alpha(0)$	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	210	-17.220	0.680	300.066	**300.970**		213	-17.212	0.678	314.759	**314.350**		215	-17.218	0.678	325.349	**324.690**
	211	-17.216	0.680	305.360	**305.360**		214	-17.210	0.678	318.542	**317.620**		216	-17.218	0.678	328.434	**328.100**
	212	-17.214	0.680	309.221	**308.750**		215	-17.210	0.678	322.567	**322.300**						
	213	-17.216	0.680	312.670	**313.270**		216	-17.218	0.679	325.088	**325.710**						
	214	-17.217	0.681	317.624	**316.840**		217	-17.210	0.678	329.991	**330.580**						
	215	-17.216	0.681	322.254	**321.550**												
	216	-17.216	0.681	325.779	**325.270**												
	217	-17.218	0.681	329.539	**330.140**												
	218	-17.214	0.681	334.562	**333.960**												
124	**176**	-17.200	0.619	242.481	**242.460**	**125**	**178**	-17.198	0.618	251.190	**251.720**	**126**	**180**	-17.194	0.617	259.644	**260.360**
	177	-17.200	0.625	243.876	**243.160**		179	-17.196	0.623	252.629	**252.590**		181	-17.192	0.622	261.168	**261.760**
	178	-17.198	0.626	242.027	**242.630**		180	-17.195	0.626	251.830	**252.690**		182	-17.208	0.634	261.524	**261.840**
	179	-17.196	0.630	243.288	**243.810**		181	-17.202	0.636	254.699	**254.140**		183	-17.210	0.639	262.679	**263.530**
	180	-17.196	0.635	244.040	**244.650**		182	-17.204	0.641	255.118	**254.550**		184	-17.218	0.643	260.661	**259.830**
	181	-17.194	0.638	245.167	**246.050**		183	-17.200	0.644	257.090	**257.180**		185	-17.218	0.645	262.262	**261.300**
	182	-17.200	0.645	246.288	**246.430**		184	-17.200	0.649	258.785	**257.900**		186	-17.221	0.647	262.223	**261.570**
	183	-17.200	0.649	248.205	**248.190**		185	-17.216	0.650	255.007	**254.680**		187	-17.224	0.649	263.252	**263.160**
	184	-17.200	0.653	249.532	**248.930**		186	-17.219	0.653	256.194	**255.280**		188	-17.224	0.651	264.519	**263.580**
	185	-17.210	0.656	249.664	**250.490**		187	-17.222	0.655	257.626	**256.930**		189	-17.224	0.652	265.957	**265.420**
	186	-17.209	0.657	250.749	**251.490**		188	-17.224	0.656	257.755	**257.690**		190	-17.226	0.654	266.947	**266.140**
	187	-17.210	0.659	253.170	**253.460**		189	-17.224	0.657	259.531	**259.550**		191	-17.226	0.655	268.679	**268.410**
	188	-17.210	0.660	254.252	**254.130**		190	-17.224	0.658	260.560	**260.560**		192	-17.224	0.656	270.304	**269.550**
	189	-17.224	0.662	252.960	**252.880**		191	-17.224	0.660	263.610	**262.860**		193	-17.200	0.650	272.868	**272.170**
	190	-17.224	0.663	254.337	**253.910**		192	-17.226	0.661	264.312	**264.260**		194	-17.200	0.651	273.956	**273.540**
	191	-17.224	0.664	256.739	**256.550**		193	-17.200	0.655	267.548	**266.920**		195	-17.204	0.651	273.700	**273.930**
	192	-17.214	0.665	261.559	**261.420**		194	-17.189	0.655	271.411	**272.340**		196	-17.202	0.652	275.670	**275.040**
	193	-17.190	0.659	264.191	**264.140**		195	-17.188	0.656	274.155	**274.920**		197	-17.202	0.653	278.001	**277.520**
	194	-17.190	0.659	264.835	**265.600**		196	-17.204	0.657	270.708	**270.560**		198	-17.206	0.654	278.306	**278.770**
	195	-17.190	0.660	267.584	**268.430**		197	-17.202	0.658	274.034	**273.100**		199	-17.203	0.655	281.879	**281.500**
	196	-17.188	0.660	269.058	**270.010**		198	-17.190	0.659	279.863	**280.530**		200	-17.224	0.665	287.943	**288.840**
	197	-17.200	0.661	268.202	**267.610**		199	-17.188	0.659	282.251	**283.060**		201	-17.201	0.661	292.293	**291.620**
	198	-17.190	0.662	273.675	**274.620**		200	-17.189	0.660	284.141	**284.730**		202	-17.204	0.661	292.303	**291.690**
	199	-17.190	0.663	276.946	**277.520**		201	-17.206	0.665	287.006	**287.540**		203	-17.208	0.662	294.230	**294.940**
	200	-17.188	0.663	278.833	**279.260**		202	-17.192	0.662	288.870	**289.530**		204	-17.204	0.663	298.074	**297.110**
	201	-17.180	0.662	282.282	**282.360**		203	-17.218	0.668	290.656	**291.170**		205	-17.208	0.664	300.270	**300.750**
	202	-17.210	0.668	282.101	**282.820**		204	-17.216	0.668	292.826	**293.610**		206	-17.210	0.665	302.413	**303.080**
	203	-17.200	0.667	286.432	**286.400**		205	-17.226	0.672	297.724	**297.220**		207	-17.210	0.666	306.207	**306.740**
	204	-17.204	0.669	289.667	**288.830**		206	-17.222	0.672	300.836	**299.910**		208	-17.204	0.666	309.811	**309.150**
	205	-17.206	0.670	293.144	**292.730**		207	-17.210	0.669	303.029	**303.600**		209	-17.210	0.667	311.848	**312.800**
	206	-17.210	0.671	295.246	**295.390**		208	-17.205	0.669	306.554	**306.280**		210	-17.210	0.668	315.188	**315.280**
	207	-17.212	0.672	298.998	**299.390**		209	-17.206	0.670	310.575	**309.970**		211	-17.210	0.669	319.511	**319.100**
	208	-17.200	0.670	301.947	**302.090**		210	-17.208	0.670	311.954	**312.750**		212	-17.210	0.669	321.511	**321.770**
	209	-17.214	0.673	305.117	**306.060**		211	-17.210	0.671	315.883	**316.600**		213	-17.196	0.667	325.853	**325.940**
	210	-17.208	0.673	309.428	**308.870**		212	-17.210	0.672	319.785	**319.520**						
	211	-17.210	0.673	311.990	**311.670**		213	-17.210	0.672	322.959	**322.180**						
	212	-17.216	0.674	314.156	**314.530**		214	-17.210	0.673	327.115	**327.420**						
	213	-17.211	0.675	321.002	**320.330**												
	214	-17.218	0.675	321.313	**321.770**												
	215	-17.218	0.676	326.724	**326.170**												
127	**183**	-17.210	0.630	271.462	**272.380**	**128**	**185**	-17.228	0.630	276.923	**276.900**	**129**	**187**	-17.228	0.626	287.465	**286.860**
	184	-17.218	0.634	268.907	**268.400**		186	-17.224	0.630	276.733	**276.820**		188	-17.232	0.628	286.171	**286.920**
	185	-17.223	0.638	269.998	**269.510**		187	-17.228	0.635	278.845	**278.050**		189	-17.200	0.619	288.786	**288.070**
	186	-17.224	0.640	270.160	**269.710**		188	-17.226	0.636	279.107	**278.110**		190	-17.200	0.620	288.052	**288.400**
	187	-17.224	0.642	271.704	**271.010**		189	-17.236	0.641	279.885	**279.640**		191	-17.200	0.624	290.793	**290.080**
	188	-17.226	0.644	271.918	**271.380**		190	-17.227	0.640	281.023	**280.040**		192	-17.200	0.626	291.238	**290.820**
	189	-17.226	0.646	273.828	**272.920**		191	-17.200	0.632	282.717	**282.010**		193	-17.200	0.629	293.614	**292.760**
	190	-17.232	0.648	273.142	**273.610**		192	-17.200	0.634	283.601	**282.760**		194	-17.200	0.631	294.447	**293.710**
	191	-17.200	0.640	276.436	**275.600**		193	-17.200	0.636	285.540	**285.040**		195	-17.200	0.632	295.387	**295.950**
	192	-17.202	0.642	277.132	**276.690**		194	-17.200	0.638	286.794	**286.080**		196	-17.194	0.632	296.573	**297.050**
	193	-17.200	0.643	279.199	**279.010**		195	-17.200	0.640	289.102	**288.580**		197	-17.194	0.634	298.738	**299.570**
	194	-17.204	0.646	280.594	**280.350**		196	-17.194	0.639	289.644	**289.740**		198	-17.190	0.635	300.511	**300.880**
	195	-17.198	0.645	282.222	**282.840**		197	-17.192	0.640	291.855	**292.510**		199	-17.201	0.637	299.413	**298.740**
	196	-17.196	0.646	283.824	**284.320**		198	-17.200	0.641	290.078	**289.790**		200	-17.202	0.639	300.914	**299.980**
	197	-17.200	0.647	284.485	**283.770**		199	-17.196	0.641	292.107	**292.180**		201	-17.182	0.640	309.274	**308.810**
	198	-17.203	0.649	285.845	**285.080**		200	-17.200	0.644	294.106	**293.460**		202	-17.192	0.642	308.166	**308.520**
	199	-17.206	0.650	287.113	**287.410**		201	-17.184	0.646	302.633	**302.280**		203	-17.209	0.648	310.483	**311.210**
	200	-17.186	0.651	295.169	**294.980**		202	-17.194	0.648	301.954	**302.010**		204	-17.204	0.649	313.626	**313.000**
	201	-17.186	0.652	297.700	**297.490**		203	-17.210	0.653	303.998	**304.960**		205	-17.206	0.651	316.671	**315.960**
	202	-17.192	0.653	297.535	**297.460**		204	-17.202	0.653	307.224	**306.850**		206	-17.210	0.652	317.114	**317.960**
	203	-17.210	0.658	299.475	**300.400**		205	-17.200	0.654	310.682	**310.090**		207	-17.208	0.653	320.543	**320.990**
	204	-17.210	0.659	301.664	**302.660**		206	-17.204	0.656	312.753	**312.120**		208	-17.200	0.653	323.948	**323.130**
	205	-17.209	0.660	305.173	**305.920**		207	-17.208	0.657	314.506	**315.440**		209	-17.210	0.656	326.330	**326.170**
	206	-17.210	0.661	307.308	**308.240**		208	-17.208	0.658	316.889	**317.580**		210	-17.208	0.656	327.954	**328.330**
	207	-17.206	0.662	312.097	**311.600**		209	-17.210	0.660	321.004	**320.900**						

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Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.	Z	N	α(0)	a_a	Cal.	Ex./Th.
				Mass excess (MeV)						Mass excess (MeV)						Mass excess (MeV)	
	208	-17.210	0.663	313.509	**314.010**		210	-17.210	0.660	322.237	**323.070**						
	209	-17.210	0.664	317.240	**317.390**		211	-17.210	0.661	325.872	**326.580**						
	210	-17.209	0.664	319.099	**319.830**												
	211	-17.210	0.665	322.738	**323.390**												
	212	-17.214	0.667	326.238	**326.030**												
130	189	-17.278	0.642	296.293	**295.620**	131	192	-17.200	0.608	306.788	**306.510**	132	194	-17.200	0.605	316.734	**316.110**
	190	-17.281	0.645	296.515	**295.670**		193	-17.200	0.612	308.979	**308.120**		195	-17.190	0.604	318.092	**317.920**
	191	-17.250	0.634	297.260	**297.250**		194	-17.200	0.615	309.754	**308.780**		196	-17.241	0.626	318.201	**318.400**
	192	-17.250	0.637	298.552	**297.740**		195	-17.189	0.613	310.921	**310.720**		197	-17.240	0.628	319.823	**320.390**
	193	-17.250	0.639	300.080	**299.690**		196	-17.190	0.616	311.695	**311.450**		198	-17.240	0.630	320.442	**321.020**
	194	-17.250	0.640	300.030	**300.320**		197	-17.189	0.618	313.302	**313.470**		199	-17.238	0.632	322.756	**323.200**
	195	-17.239	0.639	302.707	**302.540**		198	-17.190	0.620	313.571	**314.490**		200	-17.235	0.634	324.738	**324.050**
	196	-17.239	0.641	303.822	**303.420**		199	-17.190	0.623	316.169	**316.590**		201	-17.254	0.642	326.519	**326.270**
	197	-17.242	0.643	305.003	**305.730**		200	-17.191	0.625	316.823	**317.790**		202	-17.252	0.643	327.660	**326.850**
	198	-17.242	0.645	306.492	**306.740**		201	-17.189	0.627	319.504	**320.110**		203	-17.258	0.645	328.180	**329.130**
	199	-17.241	0.646	308.320	**309.230**		202	-17.191	0.629	320.191	**320.980**		204	-17.252	0.646	330.958	**330.390**
	200	-17.240	0.647	309.428	**310.350**		203	-17.204	0.636	323.691	**323.240**		205	-17.255	0.648	332.827	**332.950**
	201	-17.238	0.648	311.852	**312.640**		204	-17.213	0.640	324.801	**324.730**		206	-17.254	0.649	334.226	**334.330**
	202	-17.239	0.650	313.693	**313.730**		205	-17.210	0.640	326.441	**327.390**		207	-17.255	0.651	337.121	**336.990**
	203	-17.254	0.656	316.559	**316.370**		206	-17.208	0.641	328.169	**329.050**						
	204	-17.252	0.657	318.712	**317.880**		207	-17.204	0.642	331.547	**331.770**						
	205	-17.255	0.658	320.176	**320.850**		208	-17.204	0.644	334.122	**333.550**						
	206	-17.252	0.658	321.686	**322.520**												
	207	-17.215	0.650	325.350	**325.550**												
	208	-17.260	0.662	326.345	**327.340**												
	209	-17.260	0.664	330.743	**330.400**												
133	196	-17.240	0.617	326.541	**327.150**	134	198	-17.200	0.599	337.246	**336.780**	135	201	-17.252	0.620	350.039	**349.300**
	197	-17.236	0.619	328.697	**328.770**		199	-17.200	0.603	339.370	**338.500**		202	-17.258	0.623	349.182	**349.900**
	198	-17.241	0.623	328.967	**329.480**		200	-17.200	0.605	339.167	**338.970**		203	-17.254	0.625	351.814	**351.390**
	199	-17.237	0.624	330.623	**331.310**		201	-17.200	0.609	341.790	**340.870**		204	-17.254	0.627	352.439	**352.480**
	200	-17.254	0.633	332.105	**332.060**		202	-17.202	0.612	342.249	**341.500**						
	201	-17.252	0.635	334.526	**333.990**		203	-17.208	0.615	342.427	**343.260**						
	202	-17.252	0.637	335.621	**334.900**		204	-17.204	0.617	344.371	**344.140**						
	203	-17.253	0.639	337.409	**336.650**		205	-17.200	0.619	347.338	**346.470**						
	204	-17.258	0.641	337.193	**337.890**												
	205	-17.254	0.643	341.037	**340.380**												
	206	-17.265	0.648	342.551	**341.680**												
136	203	-17.200	0.597	359.516	**358.580**												

Declarations

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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