

A HARTREE–FOCK NUCLEAR MASS TABLE

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We present the first complete nuclear mass table, HFBCS-1, to be based on the Hartree–Fock–BCS method. The force used, MSk7, is a 10-parameter Skyrme force, along with a 4-parameter δ -function pairing force and a 2-parameter phenomenological Wigner term. Our tabulation presents 9200 nuclei, including all those lying between the drip lines over the range $Z, N \geq 8$ and $Z \leq 120$. The root-mean-square error of our fit to the 1888 nuclei in this range for which measured masses are given in the 1995 Audi–Wapstra compilation is 0.738 MeV. In addition to the calculated masses, we show the calculated neutron- and proton-separation energies, and beta-decay energies. We also give for each nucleus in the table the calculated values for the deformation parameters and deformation energy (with axial and left–right symmetry assumed), and for the charge radius. © 2001 Academic Press

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INTRODUCTION

We present here the first complete nuclear mass table to be based on the Hartree–Fock (HF) method, HFBCS-1. Our work has been motivated to a large extent by the problem of the r-process of nucleosynthesis, which depends crucially on the binding energies of heavy nuclei lying so close to the neutron (n)-drip line that it is impossible to measure them in the laboratory. It thus becomes of the greatest importance to be able to make reliable extrapolations of these quantities away from the known region, relatively close to the stability line, out toward the n-drip line. This means not only that one’s mass formula should give a good fit to the data, but also that its theoretical basis should be sound; generally speaking, the more microscopically grounded is a mass formula, the better one would expect it to be theoretically.

Now even though it is much less fundamental than an approach based on the “real” nuclear force, the most microscopic approach to the mass formula that has any chance of yielding the required precision with present computing facilities is the Hartree–Fock method, with pairing correlations described by either the BCS or Bogolyubov methods. In fact, until recently we regarded the demands on computer time of a complete mass fit, with every one of nearly 2000 nuclei having to be computed many times, as being prohibitively onerous even with the HF method, essentially because of deformed nuclei. For this reason we developed a high-speed approximation to the HF method, the so-called ETFSI method (extended Thomas–Fermi plus Strutinsky integral) [1–6].

However, we demonstrated very recently [7] that HF-BCS calculations in which a Skyrme force is fitted to es-

entially all the mass data are now feasible. The best force that we found, labeled MSk6, fitted 1719 measured nuclear masses with a root-mean-square (rms) error of 0.754 MeV. The present table is based on an improved force, MSk7, that we describe below.

Force MSk7

The Skyrme part of force MSk7, on which the present table is based, has the usual form

$$\begin{aligned}
 v_{ij} = & t_0(1 + x_0 P_\sigma) \delta(\mathbf{r}_{ij}) \\
 & + t_1(1 + x_1 P_\sigma) \frac{1}{2\hbar^2} \{ p_{ij}^2 \delta(\mathbf{r}_{ij}) + h.c. \} \\
 & + t_2(1 + x_2 P_\sigma) \frac{1}{\hbar^2} \mathbf{p}_{ij} \cdot \delta(\mathbf{r}_{ij}) \mathbf{p}_{ij} \\
 & + \frac{1}{6} t_3(1 + x_3 P_\sigma) \rho^\gamma \delta(\mathbf{r}_{ij}) \\
 & + \frac{i}{\hbar^2} W_0(\boldsymbol{\sigma}_i + \boldsymbol{\sigma}_j) \cdot \mathbf{p}_{ij} \times \delta(\mathbf{r}_{ij}) \mathbf{p}_{ij}, \quad (1)
 \end{aligned}$$

where P_σ is the two-body spin-exchange operator. The HF formalism associated with this force is quite standard and is conveniently summarized in Ref. [7].

In order to have more reliable results for large neutron excesses, it would have been preferable to treat the pairing correlations in the full Bogolyubov approach. However, no complete mass formula has ever been constructed with this feature, and we, too, restrict ourselves here to the BCS

approximation (with blocking), using a δ -function pairing force,

$$v_{\text{pair}}(\mathbf{r}_{ij}) = V_{\pi q} \delta(\mathbf{r}_{ij}). \quad (2)$$

We allow the pairing-strength parameter $V_{\pi q}$ to be different for neutrons and protons, and also to be slightly stronger for an odd number of nucleons ($V_{\pi q}^-$) than for an even number ($V_{\pi q}^+$); i.e., the pairing force between neutrons, for example, depends on whether N is even or odd. This “staggered pairing” device was introduced in Ref. [8] and further discussed in Ref. [7]. A sharp cutoff energy of $\hbar\omega = 41 A^{-1/3}$ is adopted. Note that we do not use the Lipkin–Nogami variant of the BCS method, because in the ETFSI calculations we found better mass fits with the conventional form of the method. A possible reason for this is discussed in Section 4 of Ref. [3].

Both spherical and deformed HF-BCS codes are used, as described in Ref. [7]; the latter code has axial and left–right symmetries imposed with the rotational correction mode, as described in Ref. [3]. The codes expand the single-particle functions in a harmonic-oscillator basis limited to $21\hbar\omega$, where $\hbar\omega$ is the oscillator strength; taking a higher dimensionality would have led to very serious computer-time problems. We find that a typical error arising from this choice of finite basis is, for a given force, around 0.4 MeV, but such errors are absorbed to a large extent into the force itself, and it is likely that refitting the force with a larger dimensionality and reconstructing the table would have a very small effect on the calculated masses.

The Skyrme and pairing parameters are determined by fitting to the same data set to which force MSk6 was fitted [7], i.e., the 1719 measured masses of nuclei with $A \geq 36$ that are given in the 1995 compilation of Audi and Wapstra [9], with the exception of nuclei for which $N = Z$, $Z \pm 1$, since they are subject to Wigner-term anomalies (see, for example, Refs. [10–16]). These anomalies are highly conspicuous in the ETFSI-1 mass table [5], manifesting themselves as an underbinding with respect to experiment of about 2 MeV for such nuclei; they cannot be removed without leaving the HF-BCS framework (see also the discussion in Ref. [4]). We excluded nuclei with $A < 36$ from the fit since the HF-BCS method is not expected to work well for such light nuclei, and we wanted to avoid contaminating the force by including inappropriate data in its determination.

Actually, of the 10 Skyrme parameters, x_1 and γ were determined in rough preliminary fits to a restricted data set, leaving thereby 8 Skyrme parameters, along with the 4 pairing parameters, to be determined. It is to be noted that the mass fits are rather insensitive to x_1 , the actual value taken being -0.5 ; this value ensures that neutron matter will not

flip over into a nonphysical ferromagnetic state [17] until high densities, for which the Skyrme force is in any case inapplicable, are reached. As for γ , our value of 0.333333 leads to a nuclear-matter incompressibility K_v of 231.2 MeV (see Table B), in excellent agreement with the experimental value of 231 ± 5 MeV [18].

In determining force MSk6 in Ref. [7] we imposed the additional constraint of taking pre-fixed values of the combinations of Skyrme parameters that correspond to the nuclear-matter parameters a_v (the energy per nucleon at equilibrium in symmetric nuclear matter), ρ_0 (the corresponding density), J (the symmetry coefficient), M_s^* (the isoscalar effective mass at the equilibrium density), and M_v^* (the corresponding isovector effective mass); the values of these combinations were determined in a preliminary fit to a restricted data set (spherical and quasi-spherical nuclei). In this new fit we drop this constraint, except insofar as we keep the isoscalar and isovector effective masses equal, $M_s^* = M_v^* = M^*$. This latter condition leads to x_2 automatically taking the same value, -0.5 , as x_1 , whence the number of independent Skyrme parameters is reduced from 8 to 7. Altogether, then, there are 11 parameters to be determined by fitting to the full data set of 1719 masses.

We used the CERN least-squares routine MINSQ to perform the parameter fit to the data. The resulting force, MSk7, has an rms error of 0.702 MeV for the same data set of 1719 nuclei for which MSk6 gave an rms error of 0.754 MeV. There is, of course, no guarantee that we have found the true *minimum minimorum* of the rms error.

The Wigner Term

Although the data set to which we have fitted our force MSk7 excludes all nuclei with $N = Z$, $Z \pm 1$, we nevertheless wish to show these nuclei in our table and therefore add to the masses of *all* nuclei calculated with force MSk7 a Wigner correction term of the form [14, 19]

$$E_W = V_W \exp(-\lambda|N - Z|/A). \quad (3)$$

The two parameters V_W and λ are determined by fitting to a new data set of 1772 masses, consisting of the original 1719 nuclei plus the 53 measured nuclei with $N = Z$, $Z \pm 1$ and $A \geq 36$ that were originally excluded, even though they are given in the 1995 compilation [9]. We stress that in this new fit only V_W and λ are varied, the MSk7 parameters determined as described above being left unchanged. In this way the force MSk7 will be left untouched by any less phenomenological treatment of the perplexing Wigner effect [10–13, 15, 16] that may be undertaken in the future. (Actually, we tried varying

the Skyrme and pairing parameters in this new fit as well, but the effect was negligible.) The rms error in this final mass fit to 1772 nuclei is 0.683 MeV, which is to be compared with 0.702 MeV for the same data set with the ETFSI-2 mass formula [6].

Results for Masses

It should be noted that throughout this work we express our final HF energies E_{HF} as the atomic mass excess,

$$M_{\text{cal}}(A, Z) = E_{HF} + N M_n + Z M_H - a_{\text{el}} Z^{2.39}. \quad (4)$$

Here Z is the atomic number of the nucleus in question, N its neutron number, and $A = N + Z$ its mass number. Also $M_n = 8.071$ MeV and $M_H = 7.289$ MeV, while in the last term, which represents the electronic binding energy, $a_{\text{el}} = 1.433 \times 10^{-5}$ MeV [20].

The parameters of the force MSk7, along with the two Wigner parameters, are shown in Table A. Comparison with the force MSk6, as given in Table I of Ref. [7], shows that the pairing-force parameters have not changed at all, even though they were released in the new fit. The corresponding values of the various nuclear-matter parameters are found in Table B. Comparison with the MSk6 parameters (Table II of Ref. [7]) shows that of the parameters that we have released in the present paper, ρ_0 , M_s^* , and M_v^* have remained quite unchanged. This means that the bulk of the improvement in the fit comes from the fine-tuning of a_v and J .

The last three lines of Table B represent quantities that are derived rather than fitted, G_0 and G'_0 being the Landau parameters, defined as in Ref. [21]. All three of these quantities are essentially as for the force MSk6.

TABLE A
Parameters of the Force MSk7

t_0 (MeV fm ³)	−1828.23
t_1 (MeV fm ⁵)	259.400
t_2 (MeV fm ⁵)	−292.840
t_3 (MeV fm ^{3(1+γ)})	13421.7
x_0	0.576761
x_1	−0.5
x_2	−0.5
x_3	0.785290
W_0 (MeV fm ⁵)	118.807
γ	0.333333
$V_{\pi n}^+$ (MeV fm ³)	−227.0
$V_{\pi p}^+$ (MeV fm ³)	−242.0
$V_{\pi n}^-$ (MeV fm ³)	−236.0
$V_{\pi p}^-$ (MeV fm ³)	−251.0
V_W (MeV)	−2.35
λ	35.0

TABLE B
Nuclear-Matter Parameters of the Force MSk7

a_v (MeV)	−15.794
ρ_0 (fm ^{−3})	0.1575
J (MeV)	27.95
M_s^*/M	1.05
M_v^*/M	1.05
K_v (MeV)	231.2
G_0	−0.0807
G'_0	0.2291

We now recall that the data set of 1772 measured masses to which we fitted the force MSk7 and the two Wigner parameters was restricted to nuclei with $A \geq 36$, the point being that the HF-BCS method is expected to work less well for very light nuclei. Nevertheless, our mass table (Table I) gives all nuclei with $Z, N \geq 8$, of which 1888 have measured masses appearing in the 1995 compilation [9]. Table C shows our rms and mean errors with respect to this complete data set of 1888 measured masses: $\sigma(M)$ represents the rms error in the fit to the absolute masses, $\sigma(S_n)$ the rms error in the fit to the neutron-separation energies, and $\sigma(Q_\beta)$ the rms error in the fit to the beta-decay energies, while the ϵ quantities refer to the corresponding mean errors. Figures 1 and 2 plot the errors of our fit for this same data set of 1888 nuclei.

We see from Table C that our rms error for the set of 1888 masses is 0.738 MeV, as compared with 0.683 MeV for the set of 1772 nuclei with $A \geq 36$. A slightly smaller rms error for the 1888 masses might have been found if we had refitted the force on adding the 116 light nuclei, but this would have been at the expense of a worse fit to the heavier nuclei, for which the HF-BCS method is more appropriate.

For the same set of 1888 masses the rms error given by the “finite-range droplet model” (FRDM) [22], the most

TABLE C
Errors in the Fit of Force MSk7 to the 1888 Nuclei with $Z, N \geq 8$ for Which Measured Masses Are Given in the 1995 Compilation of Audi and Wapstra [9]

$\sigma(M)$	0.738
$\epsilon(M)$	0.104
$\sigma(S_n)$	0.489
$\epsilon(S_n)$	−0.002
$\sigma(Q_\beta)$	0.614
$\epsilon(Q_\beta)$	0.018

Note. $\sigma(M)$, $\sigma(S_n)$, and $\sigma(Q_\beta)$ denote, in MeV, the rms errors in the fit to the absolute masses, the neutron-separation energies, and the beta-decay energies, respectively, while the ϵ quantities refer to the corresponding mean errors.

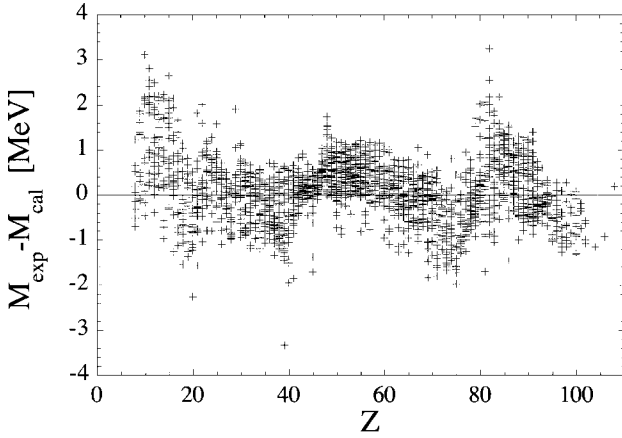


FIG. 1. Difference between experimental and calculated mass excesses, $M_{\text{exp}} - M_{\text{cal}}$ (MeV) as a function of the atomic number Z .

sophisticated liquid-droplet mass formula, is 0.689 MeV, while the Thomas–Fermi mass formula of Myers and Swiatecki [23], which uses the FRDM shell corrections and deformations, gives 0.673 MeV for the same quantity. The extrapolations out to the neutron-drip line given by these three mass formulas differ significantly, as we shall discuss elsewhere.

It might be asked whether releasing the constraint of left–right symmetry might lead to an improvement in our fit. Actually, most of the nuclei predicted by the FRDM [22] to have an octupole moment are already overbound in our calculations.

Results for Other Quantities

Charge Radii

Table I shows for each nucleus the rms charge radius R_{ch} , given by

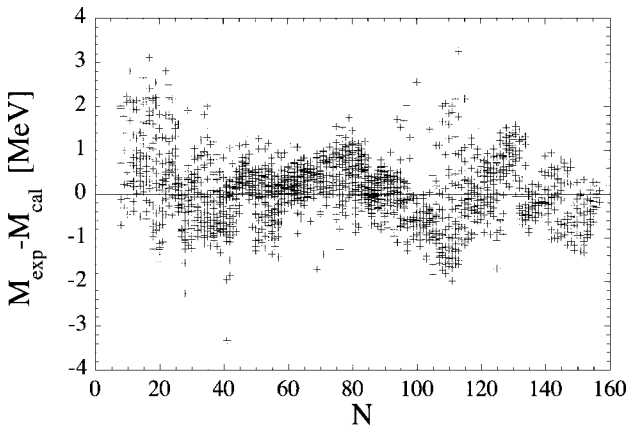


FIG. 2. Difference between experimental and calculated mass excesses, $M_{\text{exp}} - M_{\text{cal}}$ (MeV) as a function of the neutron number N .

$$R_{\text{ch}}^2 = \int \rho_p(\mathbf{r}) r^2 d^3\mathbf{r}, \quad (5)$$

where $\rho_p(\mathbf{r})$ represents the HF proton density with a correction for the finite size of the proton, whose charge distribution is supposed to have a Gaussian form of rms radius 0.8 fm. Comparison with the measured charge radii of the 143 nuclei listed in the 1994 data compilation of Nadjakov *et al.* [24] shows an rms error of only 0.019 fm. We stress that this good agreement has been achieved without any further parameter adjustment, all our parameters being determined by fitting exclusively to the mass data. This is a sensitive test of the overall quality of the underlying model.

Deformations

Our code calculates for all nuclei the quadrupole and hexadecapole moments, Q_2 and Q_4 , respectively, where Q_λ is the HF expectation value of the operator

$$\hat{Q}_\lambda = 2r^\lambda P_\lambda(\cos \theta). \quad (6)$$

However, rather than present these parameters we show (in Table I) the deformation parameters β_2 and β_4 of the equivalent sharp surface,

$$R(\Omega) = c(\beta_2, \beta_4) R_0 \left\{ 1 + \sum_{\lambda=2,4} \beta_\lambda Y_{\lambda 0}(\Omega) \right\}, \quad (7)$$

where the function $c(\beta_2, \beta_4)$ is determined by imposing conservation of the enclosed volume under deformation. The parameters β_2 and β_4 are determined by requiring that when the nucleons of the nucleus in question are distributed uniformly inside the equivalent surface, the resulting Q_2 and Q_4 both take the original HF values. The relation between the two representations is then [25, 26]

$$\begin{aligned} Q_2 &= \frac{3}{\sqrt{5}\pi} A R_0^2 \left(\beta_2 + \frac{2}{7} \sqrt{\frac{5}{\pi}} \beta_2^2 \right. \\ &\quad \left. + \frac{20}{77} \sqrt{\frac{5}{\pi}} \beta_4^2 + \frac{12}{7\sqrt{\pi}} \beta_2 \beta_4 \right), \\ Q_4 &= \frac{1}{\sqrt{\pi}} A R_0^4 \left(\beta_4 + \frac{9}{7\sqrt{\pi}} \beta_2^2 \right. \\ &\quad \left. + \frac{729}{1001\sqrt{\pi}} \beta_4^2 + \frac{300}{77\sqrt{5\pi}} \beta_2 \beta_4 \right). \end{aligned} \quad (8)$$

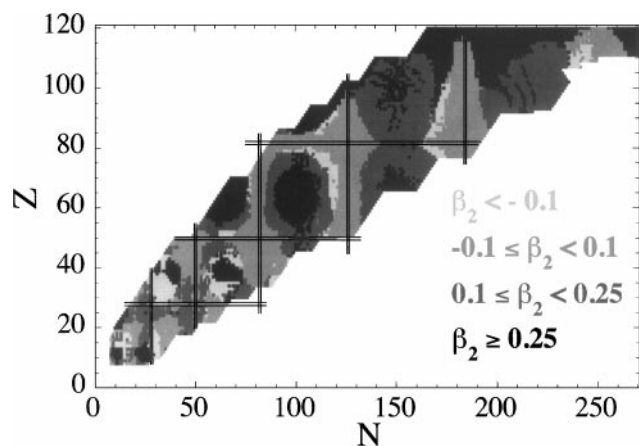


FIG. 3. Calculated quadrupole deformation parameters β_2 in the (N, Z) -plane for the 9200 nuclei given in Table I.

These two equations have to be inverted numerically to obtain β_2 and β_4 from the computed Q_2 and Q_4 . With R_0 being the equivalent sharp radius it should take the value $\sqrt{(5/3)\langle r^2 \rangle}$, where $\sqrt{\langle r^2 \rangle}$ is the rms matter radius. We adopt the value $1.2A^{1/3}$ fm for R_0 , since it is the convention adopted in the experimental compilation of Ref. [27]. In Fig. 3 we show how our computed quadrupole deformation parameter β_2 varies over the nuclear chart. Comparing with the 274 data points of Ref. [27] we find an rms error of 0.100; for the FRDM [22] the corresponding figure is 0.121.

As another measure of the deformation, in Table I we show for each nucleus the calculated deformation energy, defined by

$$E_{\text{def}} = M_{\text{cal}}^{\text{sph}} - M_{\text{cal}}, \quad (9)$$

where $M_{\text{cal}}^{\text{sph}}$ denotes the mass calculated for the spherical configuration, and M_{cal} the mass calculated at the equilibrium configuration. (Note that E_{def} , as defined here, is always positive in practice.)

Computer Files

The ASCII file for Table I is posted as supplementary material to this article on Idealibrary (<http://www.idealibrary.com/links/doi/10.1006/adnd.2000.0857>); computer files can also be found on the journal home page and at the web site: <http://www-astro.ulb.ac.be>.

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EXPLANATION OF TABLE

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

Z	Atomic number
A	Mass number
bet2	Deformation parameter β_2 , defined in Eqs. (8)
bet4	Deformation parameter β_4 , defined in Eqs. (8)
Rch	rms charge radius (fm), defined in Eq. (5)
Edef	Deformation energy (MeV), defined in Eq. (9)
Sn	Calculated neutron separation energy (MeV), $M_{\text{cal}}(A - 1, Z) - M_{\text{cal}}(A, Z) + M_n$ (MeV)
Sp	Calculated proton separation energy (MeV), $M_{\text{cal}}(A - 1, Z - 1) - M_{\text{cal}}(A, Z) + M_H$ (MeV)
Qbet	Calculated beta-decay energy, $M_{\text{cal}}(A, Z) - M_{\text{cal}}(A, Z + 1)$ (MeV)
Mcal	Calculated mass M_{cal} , expressed as atomic mass excess, and defined in Eq. (4) (MeV)
error	Difference between experimental and calculated mass excess, $M_{\text{exp}} - M_{\text{cal}}$ (MeV)

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
Z = 8										23	.44	-.04	3.05	3.1	9.9	9.3	-3.6	-9.8	.3
16	.00	.00	2.76	.0				-4.0	-.7	24	.35	-.02	3.02	2.7	7.5	10.1	4.3	-9.3	.8
17	.03	-.02	2.75	.0	4.5		-2.6	-.5	-.3	25	-.30	-.05	3.00	1.2	9.1	10.8	2.9	-10.3	.9
18	.18	.00	2.76	.2	8.6		-.5	-1.0	.2	26	-.22	-.02	2.99	.4	6.7	12.1	7.4	-9.0	2.1
19	.33	-.01	2.80	.3	5.0		3.5	2.1	1.2	27	.13	-.01	2.99	.1	6.9	13.3	8.1	-7.8	2.2
20	.23	-.01	2.78	.4	7.0		3.5	3.1	.7	28	.15	-.01	3.01	.4	3.7	14.7	12.2	-3.4	2.4
21	.19	-.01	2.77	.5	3.7		8.9	7.5	.5	29	.15	-.01	3.04	.1	4.2	16.0	13.0	.4	2.2
22	-.19	-.01	2.77	.3	5.8		7.5	9.8	-.5	30	-.06	.00	3.05	.3	2.5	17.2	16.1	6.0	2.6
23	-.12	-.01	2.77	.1	3.3		11.6	14.6	.1	31	.39	.01	3.14	.2	3.3	18.6	16.3	10.8	1.8
24	.00	.00	2.77	.0	3.5		12.9	19.1	-.1	32	.43	.01	3.16	.8	.8	20.3	19.8	18.1	.2
25	-.10	-.01	2.80	.1	-2		17.8	27.4		33	.42	-.01	3.17	2.2	3.5	21.3	17.7	22.7	2.8
26	-.03	.00	2.83	.0	.3		18.7	35.2		34	.42	-.01	3.18	3.0	.6	22.4	22.1	30.2	
27	.03	.00	2.85	.1	-.7		20.8	44.0		35	.38	.00	3.18	3.4	1.9	23.4	21.5	36.4	
28	.01	.00	2.88	.0	-.1		21.6	52.2		36	.36	-.01	3.18	4.0	-.1	24.6	24.8	44.5	
29	.15	.07	2.88	.2	-2.0		24.1	62.3		37	.39	-.04	3.19	3.6	.7	25.2	25.0	51.9	
30	.23	.10	2.88	.3	-1.6		24.9	72.0		38	.38	-.06	3.20	3.5	-1.0	26.2	27.8	61.0	
31	.23	.07	2.89	.5	-2.0		27.1	82.1		39	.43	-.09	3.21	3.2	.6	26.8	26.9	68.4	
32	.19	.04	2.89	.4	-1.9		28.0	92.0		40	.39	-.08	3.19	2.0	-1.9	27.0	30.3	78.3	
33	.05	.01	2.90	.4	-2.3		28.9	102.4		41	-.29	-.06	3.17	1.2	-.5	27.4	30.0	86.9	
34	.04	.00	2.90	.4	-2.0		29.4	112.4		42	-.24	-.06	3.16	1.0	-1.0	28.2	31.3	95.9	
Z = 9										43	-.21	-.07	3.16	.2	-.7	28.7	31.5	104.7	
17	.03	-.03	2.85	.0			1.2	2.1	-.1	44	-.02	.00	3.16	.1	-.8		32.1	113.6	
18	.18	.02	2.85	.0	10.6	7.3	-5.1	-.5	1.4	Z = 12									
19	.23	.00	2.85	.3	9.0	7.7	-2.9	-1.4	-.1	20	.19	-.01	3.12	.3			2.6	15.6	1.9
20	.35	.00	2.88	.8	7.0	9.7	6.3	-.3	.3	21	.27	-.01	3.09	.6	14.6	4.0	-14.7	9.1	1.8
21	.24	.00	2.85	1.2	9.2	11.8	4.6	-1.4	1.4	22	.41	-.03	3.11	2.2	18.0	5.5	-16.9	-.9	.5
22	.25	-.01	2.86	.4	4.4	12.5	10.1	2.3	.5	23	.45	-.04	3.11	3.2	13.4	5.5	-10.9	-6.2	.7
23	.16	.00	2.84	.3	7.4	14.2	9.3	2.9	.4	24	.50	-.08	3.11	2.9	15.4	11.0	-11.8	-13.6	-.4
24	.10	.01	2.84	.2	4.8	15.6	13.0	6.2	1.3	25	.35	-.03	3.08	2.5	7.7	11.2	-4.1	-13.2	.0
25	.03	-.01	2.85	.0	4.6	16.7	13.8	9.7	1.6	26	-.32	-.05	3.07	1.9	11.3	13.4	-3.5	-16.4	.2
26	.11	.00	2.88	.4	1.2	18.2	18.2	16.5	1.8	27	-.23	-.03	3.06	.7	7.5	14.2	1.8	-15.9	1.3
27	.01	-.01	2.90	.0	1.4	19.3	19.2	23.2	1.9	28	.03	.00	3.05	.2	7.9	15.2	2.4	-15.7	.6
28	.08	.00	2.93	.5	.7	20.7	21.4	30.6		29	-.14	-.02	3.07	.5	5.0	16.4	6.5	-12.6	1.9
29	.00	.00	2.95	.0	.5	21.4	22.1	38.1		30	.12	-.01	3.09	.2	5.6	17.8	6.9	-10.1	1.2
30	.16	.07	2.97	.9	-.9	22.5	25.0	47.1		31	.07	.00	3.11	.3	3.4	18.7	10.6	-5.4	2.2
31	.25	.06	2.98	1.6	.2	24.3	23.9	55.0		32	.31	.00	3.16	.1	4.4	19.8	10.6	-1.7	.9
32	.30	.06	3.01	2.4	-.9	25.3	27.3	64.0		33	.42	-.01	3.21	.1	1.4	20.4	15.0	5.0	.2
33	.32	.01	3.01	2.0	-1.4	25.8	28.1	73.5		34	.38	.00	3.20	1.7	5.0	21.9	12.3	8.1	.3
34	.38	-.02	3.03	2.8	-1.5	26.6	30.5	83.1		35	.41	-.01	3.23	2.2	1.3	22.6	16.8	14.9	2.5
35	.41	-.05	3.03	2.6	-.7	27.9	30.0	91.8		36	.34	.00	3.21	2.8	3.2	23.9	16.1	19.8	
36	.40	-.08	3.04	2.2	-2.7		32.8	102.6		37	.36	-.03	3.22	3.4	.9	24.9	19.5	26.9	
37	-.35	-.03	3.02	1.5	-1.3		32.1	111.9		38	.36	-.05	3.23	3.1	1.8	26.0	19.5	33.2	
38	-.30	-.05	3.02	2.3	-1.5		33.6	121.5		39	.37	-.07	3.24	3.0	-.3	26.7	22.4	41.5	
Z = 10										40	.34	-.06	3.27	2.7	1.6	27.6	20.7	48.0	
18	.18	.00	2.96	.2		4.8		4.6	.7	41	-.32	-.05	3.22	2.1	-.7	28.8	24.8	56.8	
19	.19	.01	2.94	.3	11.1	5.3	-9.4	1.5	.2	42	-.29	-.06	3.22	1.3	.3	29.5	24.8	64.6	
20	.35	.00	2.96	1.8	16.2	12.5	-12.4	-6.6	-.5	43	-.23	-.05	3.22	1.0	-.5	30.0	26.1	73.2	
21	.40	-.01	2.97	2.5	7.5	12.9	-3.3	-6.0	.3	44	-.19	-.05	3.22	.2	-.2	30.5	26.5	81.5	
22	.40	-.04	2.96	2.1	9.9	13.7	.1	-7.8	-.2	45	.00	.00	3.21	.0	-.6	30.8	27.2	90.1	
23	.29	-.01	2.95	2.0	6.7	16.0	3.4	-6.4	1.3	46	.00	.00	3.23	.0	-.6		27.2	98.8	
24	-.30	-.05	2.94	1.2	8.4	17.0	2.5	-6.8	.8	Z = 13									
25	-.19	-.02	2.93	.5	5.5	17.7	6.1	-4.2	2.1	21	.19	-.01	3.17	.3		-.9		23.8	
26	.07	.00	2.93	.1	5.7	18.7	7.2	-1.8	2.2	22	.28	-.01	3.14	.4	15.9	.4	-14.2	16.0	
27	-.07	.00	2.95	.3	2.3	19.8	11.8	4.0	3.1	23	.33	-.02	3.14	2.0	19.4	1.8	-16.2	4.7	2.1
28	.13	-.01	2.98	.1	2.9	21.3	12.6	9.1	2.1	24	.35	-.02	3.14	2.9	14.5	2.8	-10.3	-1.7	1.7
29	-.02	.00	3.00	.2	1.2	21.9	15.6	16.0	2.0	25	.35	-.03	3.13	2.5	15.4	2.8	-10.8	-.9	.2
30	.00	.00	3.02	.0	1.9	23.3	16.1	22.1	.1	26	.27	-.02	3.10	1.3	11.8	6.9	-4.9	-12.9	.6
31	.10	.03	3.03	.1	-.9	23.3	20.3	31.1		27	-.32	-.05	3.12	2.3	12.9	8.6	-4.3	-17.7	.5
32	.36	.02	3.09	1.5	2.4	25.5	18.6	36.8		28	-.24	-.04	3.09	1.1	8.5	9.5	4.2	-18.1	1.2
33	.31	.04	3.09	2.4	-.6	25.9	22.7	45.4		29	.16	-.02	3.09	.8	9.1	10.7	3.0	-19.1	.9
34	.35	.01	3.11	2.7	.9	28.3	22.3	52.5		30	.16	-.02	3.12	.7	5.9	11.6	6.9	-16.9	1.1
35	.31	-.01	3.10	3.1	-1.2	28.5	25.4	61.8		31	.17	-.02	3.14	.7	7.1	13.2	7.2	-16.0	1.0
36	.35	-.03	3.12	2.9	.1	29.3	25.3	69.8		32	.16	-.02	3.15	.6	4.4	14.2	10.8	-12.4	1.3
37	.38	-.08	3.13	2.6	-2.0	30.0	28.0	79.9		33	.19	.00	3.17	.6	5.7	15.6	10.6	-10.0	1.5
38	.40	-.09	3.15	2.3	.0	31.3	27.0	88.0		34	.27	.01	3.20	.4	2.2	16.4	15.1	-4.2	1.3
39	-.33	-.03	3.11	1.7	-2.0	30.8	29.6	98.1		35	.30	.00	3.22	1.5	5.8	17.2	12.8	-1.9	1.8
40	-.29	-.06	3.11	1.1	-.9		28.7	107.0		36	.28	.01	3.22	2.2	2.5	18.5	16.9	3.7	2.2
41	-.23	-.08	3.10	1.0	-1.8		30.0	116.8		37	.32	-.01	3.24	2.9	4.3	19.6	15.7	7.4	2.2
42	-.22	-.09	3.11	.1	-1.1		30.1	126.1		38	.33	-.02	3.25	3.7	1.9	20.6	19.1	13.6	
Z = 11										39	.33	-.04	3.26	3.1	2.5	21.3	19.2	19.1	
19	.32	-.01	3.05	.3		1.0	10.9	2.0		40	.33	-.06	3.27	2.4	-.1	21.5	23.0	27.3	
20	.35	.00	3.04	.9	13.1	3.0	-9.8	5.8	1.0	41	-.35	-.02	3.28	3.1	3.4	23.3	21.2	32.0	
21	.41	-.01	3.04	2.5	16.6	3.4	-11.8	-2.7	.5	42	-.30	-.04	3.26	2.6	.3	24.3	25.1	39.8	
22	.44	-.02	3.05	3.7	13.4	9.3	-7.1	-8.0	2.8	43	-.28	-.05	3.27	1.7	.8	24.9	25.2	47.1	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
44	-.24	-.06	3.26	1.6	.2	25.6	26.6	54.9		31	-.12	-.01	3.24	.1	13.6	4.4	-11.4	-19.9	.9
45	-.20	-.05	3.27	.4	.0	25.8	27.3	63.0		32	.12	-.01	3.25	.1	14.4	8.7	-11.3	-26.3	.3
46	-.06	-.01	3.26	.0	-.5	25.9	28.7	71.5		33	-.14	-.02	3.27	.5	8.5	8.9	-5.2	-26.7	.1
47	.00	.00	3.27	.0	-.1	26.4	29.0	79.7		34	-.13	-.01	3.28	.1	10.0	9.9	-2.6	-28.7	-1.3
48	.10	.02	3.28	.4	-2.0		31.4	89.8		35	-.06	.00	3.29	.3	7.8	10.9	-.1	-28.4	-.4
Z=14										36	.02	.00	3.30	.0	9.1	12.1	-.7	-29.4	-1.3
22	-.22	-.02	3.25	.3		.9		30.2		37	.02	.00	3.31	.2	5.8	13.4	3.5	-27.1	.2
23	.15	.01	3.20	.3	17.4	2.4	-18.2	20.9		38	.15	.00	3.33	.3	8.3	14.3	2.1	-27.3	.4
24	-.32	-.05	3.18	1.3	20.4	3.4	-20.0	8.5	2.2	39	.18	.00	3.34	.5	5.1	15.4	6.2	-24.4	1.2
25	-.29	-.04	3.16	1.3	14.9	3.9	-13.9	1.7	2.1	40	.23	-.01	3.36	1.0	7.3	16.5	4.9	-23.6	.7
26	-.32	-.04	3.17	2.0	17.7	6.2	-15.5	-8.0	.8	41	.24	-.02	3.37	1.4	4.4	17.4	8.7	-19.9	1.3
27	-.32	-.05	3.16	2.3	13.5	7.8	-10.5	-13.4	1.0	42	.21	-.02	3.37	1.1	5.7	18.4	8.3	-17.6	.3
28	-.33	-.04	3.17	2.5	16.9	11.9	-13.1	-22.2	.8	43	-.23	-.01	3.38	.9	3.0	19.3	11.9	-12.5	.0
29	-.28	-.05	3.16	.8	8.0	11.3	-4.6	-22.1	.2	44	-.23	-.01	3.38	1.1	5.5	20.2	10.3	-9.9	
30	-.23	-.03	3.16	.4	9.8	12.1	-1.0	-23.9	-.6	45	-.19	-.01	3.38	1.3	3.0	21.0	13.6	-4.9	
31	-.14	-.01	3.16	.6	7.4	13.5	1.7	-23.1	.2	46	-.18	-.02	3.39	.6	3.3	21.9	14.3	-.1	
32	-.16	-.01	3.18	.3	8.0	14.4	2.0	-23.1	-1.0	47	-.16	-.03	3.39	.7	2.2	22.5	16.0	5.8	
33	-.07	.00	3.19	.3	5.6	15.6	5.4	-20.6	.2	48	-.11	-.02	3.39	.0	2.2	23.1	16.9	11.6	
34	-.01	.00	3.21	.0	6.7	16.5	5.6	-19.3	-.7	49	.00	.00	3.40	.0	1.3	23.6	18.3	18.4	
35	.00	.00	3.22	.0	3.5	17.8	9.9	-14.7	.3	50	.00	.00	3.41	.0	1.2	24.0	19.0	25.3	
36	.21	.00	3.25	.6	6.5	18.6	7.8	-13.1	.8	51	.00	.00	3.43	.0	-1.1	24.8	21.8	34.5	
37	.23	.01	3.26	1.0	3.2	19.3	12.0	-8.2	1.7	52	-.09	-.01	3.45	.0	.2	25.8	21.5	42.4	
38	.26	.00	3.28	1.5	5.3	20.2	10.8	-5.4	1.7	53	-.08	-.01	3.47	.1	-1.4	26.3	23.8	51.9	
39	.28	-.02	3.29	2.0	2.7	21.0	14.3	-.1		54	.00	.00	3.49	.0	-.4	23.5	60.4		
40	-.31	-.03	3.30	1.7	3.7	22.2	14.1	4.3		Z=17									
41	-.30	-.02	3.30	1.9	1.5	23.8	17.3	10.8		25	-.10	.01	3.59	.6		-5.0	60.2		
42	-.35	-.03	3.32	2.4	4.2	24.6	15.2	14.7		26	.11	.00	3.48	.5	20.5	-4.0	47.8		
43	-.28	-.03	3.31	2.0	.9	25.2	19.0	21.9		27	-.14	-.02	3.40	.3	22.7	-3.2	-26.3	33.2	
44	-.23	-.03	3.31	1.1	1.7	26.0	19.4	28.3		28	.15	-.01	3.36	.5	18.6	-1.9	-20.9	22.6	
45	-.24	-.06	3.31	1.0	.7	26.5	21.2	35.7		29	-.17	-.02	3.34	.5	20.5	-.8	-21.6	10.2	
46	-.19	-.04	3.31	.2	.9	27.4	21.9	42.8		30	.18	-.02	3.32	1.1	16.7	.4	-16.6	1.6	
47	.00	.00	3.31	.0	.2	28.1	23.3	50.7		31	-.17	-.02	3.31	.6	18.1	1.4	-16.8	-8.5	1.4
48	.00	.00	3.32	.0	.4	28.6	23.7	58.4		32	-.20	-.04	3.30	.5	14.6	2.3	-12.0	-15.0	1.6
49	.00	.00	3.34	.0	-2.3	28.2	26.8	68.8		33	-.11	-.01	3.30	.5	14.6	2.5	-11.0	-21.5	.5
50	-.09	-.01	3.37	.1	-1.8		26.7	78.7		34	-.12	-.02	3.32	.9	12.7	6.7	-8.1	-26.1	1.7
Z=15										35	-.11	-.01	3.33	.4	10.3	6.9	-5.4	-28.3	-.7
23	-.15	-.01	3.32	.2			-1.6	39.1		36	-.06	.00	3.34	.4	8.5	7.6	.7	-28.7	-.8
24	.12	.01	3.26	.3	18.7	-.3	-19.4	28.5		37	-.04	.00	3.35	.1	10.0	8.5	-.4	-30.6	-1.1
25	-.21	-.02	3.24	.6	21.0	.3	-21.0	15.6		38	.07	.00	3.35	.3	6.8	9.6	3.8	-29.4	-.4
26	-.22	-.02	3.22	.6	16.1	1.5	-15.2	7.5		39	.14	-.01	3.37	.3	9.2	10.5	2.2	-30.5	.8
27	-.26	-.04	3.22	.8	18.4	2.2	-16.3	-2.8	2.1	40	.17	-.01	3.38	.4	6.0	11.4	6.5	-28.5	.9
28	-.19	-.02	3.19	1.1	14.3	3.0	-11.2	-9.1	1.9	41	.17	-.01	3.38	.8	8.2	12.3	5.3	-28.6	1.3
29	-.30	-.05	3.21	.9	16.5	2.6	-12.2	-17.5	.6	42	.23	-.02	3.40	1.2	5.3	13.2	9.1	-25.9	.9
30	-.15	-.01	3.18	.2	13.4	8.0	-8.5	-22.9	2.6	43	.19	-.02	3.40	.8	6.6	14.1	8.6	-24.4	.4
31	-.09	-.01	3.19	.1	10.1	8.3	-4.9	-24.8	.4	44	.12	-.01	3.40	.8	3.9	15.0	12.4	-20.2	.2
32	-.07	.00	3.20	.5	8.3	9.2	1.2	-25.1	.8	45	-.21	-.02	3.41	.8	6.4	15.9	10.9	-18.5	-.4
33	.00	.00	3.22	.1	9.0	10.2	.6	-26.1	-.3	46	-.17	-.02	3.41	1.2	3.9	16.8	14.3	-14.3	
34	-.07	.00	3.23	.3	6.8	11.4	3.9	-24.8	.2	47	-.14	-.02	3.42	.5	4.0	17.5	15.0	-10.3	
35	-.01	.00	3.24	.0	7.8	12.6	3.9	-24.5	-.3	48	-.14	-.02	3.42	.9	3.0	18.3	16.7	-5.2	
36	.00	.00	3.25	.0	4.5	13.6	8.5	-21.0	.7	49	-.10	-.01	3.43	.1	2.8	18.8	17.6	.1	
37	.17	-.01	3.28	.3	7.4	14.4	6.8	-20.3	1.3	50	-.04	.00	3.44	.1	1.8	19.4	19.3	6.4	
38	.19	.00	3.29	.6	4.1	15.3	11.0	-16.3	1.8	51	-.03	.00	3.45	.1	1.8	19.9	19.9	12.7	
39	.23	-.01	3.30	1.0	6.2	16.2	10.0	-14.4	1.7	52	-.09	-.01	3.47	.2	-.1	20.9	22.3	20.9	
40	.27	-.02	3.32	1.6	3.5	17.1	13.8	-9.8	1.5	53	-.09	-.01	3.49	.1	.9	21.6	21.9	28.0	
41	.21	-.02	3.32	1.3	4.7	18.0	13.5	-6.4	1.6	54	-.08	-.01	3.51	.1	-.7	22.3	24.6	36.8	
42	-.25	-.01	3.33	1.3	2.1	18.6	17.1	-.5		55	.00	.00	3.52	.0	.5	23.3	24.1	44.4	
43	-.26	-.01	3.34	1.4	4.6	19.1	15.4	2.9		56	.00	.00	3.54	.0	-1.4		26.8	53.9	
44	-.22	-.02	3.33	1.4	2.1	20.3	18.8	8.9		Z=18									
45	-.18	-.02	3.33	.7	2.4	21.1	19.4	14.5		27	.04	.00	3.59	.2		-4.4		59.5	
46	-.16	-.03	3.33	.8	1.6	22.0	21.0	21.0		28	-.13	-.01	3.50	.3	24.1	-3.0		43.5	
47	-.07	-.01	3.34	.1	1.6	22.7	21.7	27.5		29	.16	-.01	3.45	.2	19.7	-1.9	-23.4	31.9	
48	.00	.00	3.34	.0	.8	23.3	23.1	34.8		30	-.21	-.03	3.41	.3	21.7	-.7	-24.5	18.2	
49	.00	.00	3.35	.0	.8	23.7	23.6	42.0		31	.17	-.02	3.39	.8	18.0	.5	-19.9	8.3	
50	.00	.00	3.38	.0	-1.9	24.1	26.6	52.0		32	-.20	-.03	3.38	.4	19.4	1.8	-20.1	-3.0	.8
51	-.06	.00	3.40	.0	-.8	25.1	26.4	60.9		33	-.10	-.01	3.36	.1	15.6	2.8	-15.7	-10.5	1.1
52	-.09	-.02	3.42	.1	-2.0		28.5	70.9		34	-.13	-.01	3.37	.1	15.5	3.8	-14.4	-18.0	-.4
Z=16										35	-.13	-.01	3.38	.5	13.0	4.1	-10.9	-22.9	-.2
24	.01	.00	3.44	.2		-1.5		47.9		36	.02	.00	3.38	.0	14.6	8.4	-11.6	-29.4	-.9
25	.05	-.01	3.36	.0	19.5	-.7	-23.7	36.5		37	-.06	.00	3.39	.2	9.0	8.9	-5.7	-30.3	-.7
26	.13	-.01	3.32	.1	21.9	.1	-25.1	22.7		38	.02	.00	3.40	.0	11.0	9.8	-3.9	-33.2	-1.5
27	.15	-.01	3.29	.2	17.3	1.3	-19.7	13.5		39	.04	.00	3.40	.1	7.6	10.6	-.3	-32.7	-.5
28	.17	-.02	3.27	.3	19.4	2.3	-20.5	2.1	1.9	40	.05	.00	3.41	.0	10.3	11.7	-2.1	-34.9	-.1
29	.18	-.02	3.25	.9	15.5	3.5	-15.5	-5.3	2.1	41	.13	.00	3.42	.1	7.0	12.7	2.0	-33.9	.8
30	-.25	-.04	3.27	.5	17.1	4.1	-15.9	-14.4	.3	42	.13	.00	3.43	.4	9.2	13.6	.5	-35.0	.5

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
43	.19	.00	3.44	.7	6.1	14.4	4.3	-33.0	1.0	38	-.01	.00	3.47	.0	16.0	4.1	-15.5	-21.4	-.7
44	.16	-.01	3.44	.5	7.7	15.5	3.6	-32.6	.4	39	-.03	.00	3.48	.2	13.1	4.5	-11.7	-26.5	-.8
45	.17	-.02	3.45	.4	4.8	16.5	7.4	-29.4	-.3	40	-.01	.00	3.48	.0	15.2	8.5	-12.4	-33.6	-1.2
46	-.19	-.01	3.46	.5	7.3	17.5	5.9	-28.7	-1.1	41	.00	.00	3.48	.0	8.5	8.5	-6.2	-34.0	-1.1
47	-.17	-.02	3.46	.9	4.7	18.2	9.2	-25.3	-.7	42	-.01	.00	3.49	.0	12.1	9.5	-6.1	-38.1	-.5
48	-.15	-.02	3.46	.3	4.7	18.9	10.1	-21.9		43	.00	.00	3.49	.0	8.5	10.4	-2.4	-38.5	.1
49	-.12	-.02	3.47	.6	3.6	19.5	11.9	-17.4		44	.19	.00	3.52	.2	10.9	11.4	-3.9	-41.4	-.1
50	.00	.00	3.47	.0	3.6	20.3	12.7	-12.9		45	.13	.00	3.51	.2	7.7	12.1	.0	-41.0	.2
51	.00	.00	3.48	.0	2.3	20.9	14.6	-7.2		46	.16	-.01	3.52	.2	9.8	13.3	-.9	-42.7	-.4
52	.00	.00	3.49	.0	2.3	21.4	15.1	-1.5		47	.10	-.01	3.51	.6	6.8	14.2	2.6	-41.5	-.8
53	-.09	-.01	3.52	.0	.5	22.0	17.6	6.1		48	-.14	-.01	3.53	.1	8.5	14.8	1.8	-42.0	-2.3
54	.00	.00	3.53	.0	2.0	23.1	17.4	12.2		49	-.08	.00	3.52	.6	6.3	15.4	4.9	-40.1	-1.2
55	.00	.00	3.55	.0	.0	23.8	19.8	20.3		50	-.02	-.01	3.53	.0	6.3	16.3	5.8	-38.3	-1.2
56	.00	.00	3.57	.0	1.3	24.6	19.2	27.1		51	-.06	-.01	3.54	.5	4.9	16.9	7.8	-35.2	-.7
57	.00	.00	3.58	.0	-.6	25.4	22.0	35.8		52	-.02	-.01	3.55	.0	5.1	17.8	8.3	-32.2	-.3
58	.00	.00	3.59	.0	.9		21.2	42.9		53	.00	.00	3.56	.0	3.4	18.3	10.6	-27.6	
59	.00	.00	3.60	.0	-1.3	26.0	24.1	52.3		54	.00	.00	3.57	.0	3.8	19.1	10.7	-23.3	
60	.24	.02	3.64	.4	1.3	27.3	22.5	59.0		55	.00	.00	3.59	.0	1.9	19.2	13.2	-17.1	
61	.25	.01	3.66	1.0	-1.1	27.7	24.8	68.2		56	.00	.00	3.60	.0	3.7	20.6	12.0	-12.8	
62	.23	.01	3.66	1.1	.4	28.3	23.6	75.8		57	.00	.00	3.62	.0	1.3	21.1	15.2	-6.0	
63	.31	-.01	3.69	1.7	-1.2	28.7	26.0	85.1		58	.00	.00	3.63	.0	3.0	21.9	14.3	-.8	
64	.23	.00	3.67	1.6	-.2	29.2	25.4	93.3		59	-.03	.00	3.65	.1	.7	22.5	17.7	6.5	
65	.22	.00	3.67	2.1	-1.5	29.7	27.5	102.9		60	.00	.00	3.66	.0	2.5	23.4	16.3	12.0	
66	.25	-.01	3.69	1.9	-.2		26.4	111.1		61	.02	.00	3.67	.2	.1	23.8	19.7	20.0	
Z = 19										62	.00	.00	3.68	.0	2.1	24.8	17.9	26.0	
29	.05	.00	3.58	.4		-4.4		55.2		63	.00	.00	3.69	.0	-.2	25.2	21.4	34.2	
30	.05	.00	3.51	.3	20.6	-3.5	-23.9	42.7		64	.09	.01	3.70	.1	1.7	25.7	20.0	40.6	
31	-.18	-.03	3.46	.3	22.5	-2.7	-24.6	28.2		65	.14	.02	3.72	.4	-.2	26.3	23.0	48.9	
32	.09	.00	3.44	1.0	19.2	-1.5	-20.4	17.1		66	.13	.00	3.72	.4	1.2	26.9	22.2	55.8	
33	-.07	.00	3.41	.3	20.0	-.8	-20.6	5.1		67	.15	.00	3.73	.5	-.8	27.4	24.6	64.7	
34	-.06	.00	3.40	.3	16.8	.3	-16.1	-3.6		68	.13	.00	3.73	.4	.8	28.0	23.9	72.0	
35	-.04	.00	3.41	.3	16.5	1.3	-14.7	-12.0	.8	69	.15	.00	3.74	.9	-.8	28.7	25.9	80.9	
36	-.09	-.01	3.41	.7	13.9	2.2	-10.8	-17.8	.3	70	-.09	.01	3.74	.2	.0		25.1	88.9	
37	-.06	.00	3.42	.3	14.9	2.5	-11.1	-24.5	-.3	Z = 21									
38	-.06	.00	3.43	.4	12.8	6.3	-7.9	-29.3	.5	32	.46	.02	3.77	1.3		-5.2		65.3	
39	-.01	.00	3.44	.2	11.2	6.6	-6.0	-32.4	-1.4	33	.47	.00	3.69	.7	23.6	-4.9		49.7	
40	.06	.00	3.44	.4	8.5	7.4	.8	-32.8	-.7	34	.30	.02	3.60	.3	20.2	-4.6	-21.7	37.6	
41	.00	.00	3.44	.3	11.1	8.2	-1.8	-35.8	.3	35	.04	-.01	3.52	.2	22.7	-3.1	-22.7	23.0	
42	.08	.00	3.45	.3	7.7	8.9	2.6	-35.5	.5	36	.06	.02	3.50	.0	18.7	-2.4	-18.7	12.4	
43	.10	.00	3.45	.3	9.9	9.6	1.3	-37.3	.7	37	.04	.01	3.50	.1	18.9	-1.2	-18.0	1.6	
44	.15	.00	3.47	.5	7.0	10.5	5.2	-36.2	.4	38	.07	.01	3.51	.2	15.6	-.3	-13.6	-5.9	
45	-.09	.00	3.46	.4	8.6	11.4	4.3	-36.8	.2	39	.04	.00	3.51	.1	16.9	.6	-14.1	-14.8	.6
46	.12	-.01	3.48	.6	5.9	12.5	8.1	-34.6	-.8	40	.05	.01	3.52	1.0	14.6	2.1	-10.8	-21.3	.8
47	-.13	-.01	3.48	.5	7.9	13.1	7.1	-34.5	-1.3	41	.00	.00	3.52	.0	14.7	1.5	-10.7	-27.9	-.8
48	-.13	-.01	3.48	1.0	5.6	14.0	10.0	-32.0	-.1	42	-.05	.01	3.52	.0	12.2	5.2	-6.7	-32.0	-.1
49	-.10	-.01	3.50	.4	5.4	14.7	10.8	-29.3	-1.0	43	.00	.00	3.52	.0	12.3	5.4	-6.5	-36.2	.0
50	-.09	-.01	3.50	.9	4.4	15.5	12.7	-25.6	.3	44	.09	.00	3.53	.2	9.4	6.3	.0	-37.5	-.3
51	-.04	.00	3.51	.2	4.2	16.1	13.4	-21.7		45	.09	.00	3.54	.2	11.6	6.9	-1.9	-41.0	.0
52	-.04	.00	3.52	.2	2.9	16.7	15.6	-16.6		46	.21	-.01	3.56	.6	8.9	8.1	1.8	-41.9	.1
53	-.01	.00	3.53	.2	3.0	17.4	16.0	-11.5		47	.15	.00	3.55	.3	10.3	8.6	1.1	-44.1	-.3
54	-.11	-.01	3.55	.7	1.7	18.6	18.1	-.5.2		48	.13	.00	3.55	.7	7.7	9.5	4.5	-43.7	-.8
55	-.06	.00	3.57	.2	2.3	19.0	17.7	.6		49	-.10	.00	3.55	.3	9.4	10.3	3.5	-45.0	-1.6
56	-.08	-.01	3.59	.3	.8	19.8	20.6	7.8		50	-.11	.00	3.56	1.1	7.2	11.3	6.2	-44.2	-.4
57	-.06	.00	3.60	.2	2.2	20.6	19.7	13.8		51	.05	.00	3.56	.3	6.8	11.9	7.1	-42.9	-.3
58	-.04	.00	3.61	.4	.1	21.4	22.6	21.7		52	-.06	.00	3.58	.9	5.6	12.6	9.2	-40.5	.1
59	.00	.00	3.62	.2	1.7	22.1	21.6	28.1		53	.03	.00	3.58	.3	5.7	13.2	9.6	-38.1	-.8
60	-.05	.00	3.64	.7	-.3	23.0	24.5	36.5		54	.04	.00	3.59	.3	3.9	13.7	12.1	-34.0	-.5
61	.09	.01	3.65	.3	1.2	22.9	23.4	43.4		55	.00	.00	3.61	.0	4.4	14.3	12.4	-30.3	1.8
62	.12	.02	3.66	.5	-.7	23.3	26.2	52.2		56	-.01	.00	3.62	.0	2.5	15.0	15.3	-24.8	
63	.14	.01	3.67	.7	1.2	24.0	24.8	59.1		57	.00	.00	3.64	.0	4.5	15.7	14.1	-21.2	
64	.17	.02	3.69	1.2	-.8	24.5	27.3	67.9		58	-.02	.00	3.65	.0	2.0	16.4	17.3	-15.1	
65	.17	.00	3.69	1.2	.6	25.2	26.5	75.4		59	-.05	.00	3.67	.4	4.2	17.7	15.7	-11.2	
66	.19	.00	3.70	1.8	-1.3	25.4	29.0	84.8		60	-.09	-.01	3.68	.3	1.1	18.0	19.1	-4.2	
67	.17	.00	3.70	1.7	.2	25.7	28.0	92.7		61	-.03	.00	3.69	.4	3.6	19.1	17.6	.3	
68	.21	.00	3.71	2.1	-1.5		30.3	102.2		62	-.07	.00	3.70	.1	.3	19.3	21.3	8.0	
Z = 20										63	.10	.01	3.72	.4	3.3	20.4	19.3	12.9	
30	.33	.11	3.85	.4		-4.1		66.6		64	.12	.01	3.73	.3	.3	20.9	22.7	20.6	
31	.41	.06	3.69	.6		-2.8		52.8		65	.14	.01	3.74	.7	2.7	2.0	21.2	26.0	
32	.37	.01	3.61	.3	23.4	-2.0	-27.8	37.5		66	.15	.02	3.75	1.0	.4	22.5	24.1	33.7	
33	.27	.01	3.54	.6	19.9	-1.3	-24.0	25.7		67	.13	.01	3.76	.9	1.7	23.1	23.2	40.0	
34	.01	.00	3.47	.0	21.2	-.1	-25.0	12.6		68	.14	.01	3.77	1.2	.0	23.9	25.7	48.1	
35	-.01	.00	3.46	.0	17.9	1.0	-20.3	2.7		69	.14	.00	3.77	.9	1.2	24.3	24.9	54.9	
36	-.01	.00	3.46	.0	17.7	2.3	-19.3	-7.0	.5	70	.14	.00	3.78	.9	-.8	24.4	27.5	63.8	
37	-.10	-.01	3.46	.2	14.6	3.0	-15.0	-13.5	.3	71	-.09	.01	3.78	.7	1.1	25.4	25.9	70.8	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
Z = 22																			
72	-.10	.01	3.78	.8	-.6		28.3	79.4		58	.08	.00	3.70	.1	4.0	13.3	11.3	-41.3	.9
34	.49	-.03	3.77	2.5		-2.3		59.3		59	.00	.00	3.71	.0	5.8	13.9	10.1	-39.0	1.1
35	.32	.02	3.68	2.3	21.7	-.8		45.6		60	-.06	.00	3.72	.0	3.3	14.6	13.4	-34.3	1.2
36	.26	.02	3.63	.9	22.7	-.8	-26.5	31.0		61	.00	.00	3.73	.0	5.3	15.4	12.1	-31.4	
37	.18	.00	3.58	.5	19.5	.0	-22.5	19.6		62	.00	.00	3.74	.0	2.5	15.8	15.6	-25.9	
38	.17	.00	3.58	.5	20.0	1.1	-22.2	7.7		63	.00	.00	3.76	.0	4.9	16.7	13.9	-22.7	
39	.14	.00	3.57	.4	16.5	2.0	-18.0	-.7		64	.01	.00	3.77	.1	2.0	17.4	17.4	-16.6	
40	.10	.00	3.56	.1	17.9	3.0	-18.3	-10.4	1.6	65	.22	.02	3.81	.0	4.4	18.1	15.8	-12.9	
41	-.02	.00	3.56	.3	14.8	3.2	-14.5	-17.2		66	.22	.02	3.82	.2	2.0	18.8	19.0	-6.8	
42	-.01	.00	3.56	.0	16.2	4.7	-15.1	-25.3	.2	67	.19	.02	3.82	.3	3.7	19.2	17.7	-2.4	
43	.00	.00	3.56	.0	12.4	4.9	-10.6	-29.6	.3	68	.16	.02	3.83	.5	1.6	20.0	20.6	4.0	
44	.11	.00	3.57	.1	16.0	8.7	-13.4	-37.6	.0	69	.18	.01	3.83	.5	3.1	20.7	19.5	9.0	
45	.16	.01	3.59	.3	9.6	8.9	-6.8	-39.2	.1	70	.16	.00	3.84	.7	1.1	21.4	22.2	15.9	
46	.23	.00	3.60	.6	12.6	9.9	-6.0	-43.7	-.5	71	.14	.00	3.84	.3	2.3	21.9	21.5	21.7	
47	.25	.00	3.62	.9	9.6	10.6	-3.0	-45.2	.3	72	.16	.00	3.85	.3	.2	22.5	24.2	29.6	
48	.17	-.01	3.60	.6	11.1	11.4	-3.8	-48.2	-.3	73	.00	.00	3.84	.0	2.0	22.8	22.8	35.7	
49	.14	.00	3.59	.7	8.4	12.1	-.5	-48.5	-.1	74	.09	.01	3.85	.3	.4	23.2	25.2	43.4	
50	-.06	.00	3.59	.1	10.0	12.7	-1.4	-50.4	-1.0	75	.13	.00	3.86	.3	.9	23.7	24.9	50.5	
51	.08	.00	3.60	.6	7.7	13.2	1.4	-50.1	.3	76	.14	.00	3.86	.5	-.1	24.0	26.4	58.7	
52	.00	.00	3.60	.0	7.8	14.1	2.2	-49.7	.3	77	.07	.00	3.87	.2	.4	24.3	26.2	66.4	
53	-.07	.00	3.61	.4	6.0	14.5	4.4	-47.7	.9	78	-.12	.00	3.88	.5	-.4	24.5	27.3	74.9	
54	.00	.00	3.62	.0	6.5	15.3	4.8	-46.1	.4	79	-.09	-.01	3.88	.1	.1	24.8	26.9	82.8	
55	.00	.00	3.63	.0	4.6	16.0	7.3	-42.7	.9	80	-.04	-.01	3.88	.1	-.6	25.0	28.0	91.5	
56	.00	.00	3.65	.0	5.5	17.0	7.0	-40.1	1.0	81	.00	.00	3.88	.0	.0	25.3	27.8	99.6	
57	-.09	-.01	3.66	.1	3.3	17.8	10.1	-35.3	2.0	82	.03	.00	3.89	.1	-1.0	25.5	29.0	108.7	
58	.00	.00	3.67	.0	5.2	18.5	8.9	-32.4		83	.00	.00	3.90	.0	-1.0	25.7	29.2	117.8	
59	.00	.00	3.69	.0	2.6	19.1	12.1	-26.9		84	.05	.00	3.91	.1	-1.2		29.6	127.0	
60	.00	.00	3.70	.0	4.4	19.4	11.0	-23.3		Z = 24									
61	-.03	.00	3.72	.1	2.1	20.4	14.1	-17.4		38	.31	.00	3.73	2.1		-2.7		52.1	
62	.00	.00	3.73	.0	4.0	20.9	12.6	-13.3		39	.25	.00	3.70	1.6	21.3	-1.6		38.8	
63	.00	.00	3.74	.0	1.2	21.8	16.2	-6.5		40	.27	-.01	3.69	1.4	21.8	-.6	-25.1	25.1	
64	.17	.01	3.77	.0	3.7	22.2	14.6	-2.1		41	.21	.00	3.67	1.1	18.4	.3	-20.7	14.8	
65	.22	.02	3.80	.0	1.3	23.1	17.6	4.7		42	.19	.00	3.66	.6	19.6	1.3	-21.2	3.3	
66	.16	.01	3.78	.3	3.3	23.7	16.3	9.5		43	.09	.00	3.64	.3	16.2	2.0	-17.0	-4.9	
67	.17	.02	3.79	.5	.8	24.2	19.2	16.8		44	.00	.00	3.64	.0	17.9	2.9	-18.0	-14.7	
68	.15	.01	3.80	.5	2.5	24.9	18.4	22.4		45	.15	.01	3.65	.2	14.1	3.8	-13.3	-20.7	
69	.15	.00	3.80	.6	.4	25.4	21.0	30.0		46	.22	.01	3.67	.6	17.3	4.8	-15.5	-29.9	.5
70	.13	.00	3.80	.3	1.7	25.9	20.4	36.3		47	.22	.02	3.67	.9	13.4	4.9	-10.9	-35.3	.7
71	.04	.00	3.80	.0	-.5	26.2	23.1	44.9		48	.24	.01	3.68	1.2	16.1	8.4	-13.1	-43.3	.5
72	.00	.00	3.81	.0	1.8	27.0	21.5	51.1		49	.25	.00	3.68	1.6	10.5	8.6	-7.2	-45.8	.4
73	.09	.01	3.82	.2	-.1	27.4	23.7	59.3		50	.23	-.01	3.68	1.1	2.2	9.2	-5.7	-49.8	-.4
74	.11	.00	3.82	.3	.5		23.5	66.9		51	.18	-.01	3.67	1.2	9.7	9.7	-3.1	-51.4	.0
75	.12	.00	3.83	.5	-.4	28.0	24.9	75.4		52	.16	-.01	3.67	.4	11.3	10.5	-4.2	-54.6	-.8
76	-.12	.00	3.84	.3	.0	28.1	24.7	83.4		53	.14	.00	3.67	.8	9.1	11.0	-1.6	-55.7	.4
77	-.09	.00	3.84	.3	-.6	28.4	25.6	92.1		54	.17	-.01	3.69	.2	9.2	12.0	-1.2	-56.8	-.1
78	-.07	-.01	3.84	.1	-.2	29.2	25.5	100.3		55	.10	.00	3.68	.4	7.2	12.3	1.6	-55.9	.8
79	-.04	-.01	3.85	.1	-.8	29.5	26.4	109.2		56	.10	.00	3.69	.0	8.0	13.2	1.4	-55.8	.6
80	.00	.00	3.85	.0	-.3	29.7	26.1	117.6		57	.10	.00	3.70	.2	5.8	13.8	4.3	-53.6	1.2
81	.01	.00	3.86	.1	-1.2	29.9	27.3	126.9		58	.10	.00	3.72	.1	7.1	14.5	3.6	-52.6	.7
82	.00	.00	3.87	.0	-1.2		27.5	136.2		59	.08	.00	3.73	.1	4.6	15.2	6.9	-49.2	1.3
Z = 23										60	.00	.00	3.74	.0	6.5	15.9	5.6	-47.6	.8
36	.30	.03	3.72	3.2		-4.6		57.5		61	.00	.00	3.75	.0	4.0	16.6	8.9	-43.6	.8
37	.27	.02	3.68	1.7	23.5	-3.8		42.1		62	.00	.00	3.77	.0	6.0	17.4	7.5	-41.5	.3
38	.24	.02	3.64	1.1	20.2	-3.0	-22.1	29.9		63	.23	.01	3.81	.1	3.1	17.9	11.1	-36.6	
39	.21	.01	3.63	.9	20.7	-2.3	-21.6	17.3		64	.23	.01	3.82	.0	5.5	18.6	9.6	-34.0	
40	.18	.00	3.62	.8	17.5	-1.2	-17.3	7.8		65	.25	.01	3.84	.2	2.7	19.4	13.0	-28.7	
41	.15	.01	3.61	.2	18.6	-.5	-17.5	-2.7		66	.23	.01	3.84	.2	5.2	20.2	11.3	-25.8	
42	.11	.00	3.61	.3	15.5	.3	-13.4	-10.2		67	.25	.00	3.86	.4	2.4	20.6	14.6	-20.1	
43	.00	.00	3.60	.0	17.0	1.1	-14.2	-19.1		68	.20	.01	3.86	.4	4.5	21.4	13.1	-16.5	
44	.14	.02	3.61	.2	13.2	1.9	-9.5	-24.2		69	.17	.01	3.86	.5	2.0	21.8	15.9	-10.5	
45	.17	.01	3.62	.3	16.2	2.1	-11.6	-32.4	.5	70	.18	.00	3.86	.5	3.8	22.5	14.8	-6.2	
46	.21	.02	3.63	.6	13.3	5.8	-7.7	-37.6	.6	71	.17	.00	3.87	.6	1.6	23.0	17.5	.3	
47	.21	.01	3.63	.9	12.6	5.8	-6.9	-42.2	.2	72	.15	.00	3.87	.2	2.9	23.6	16.7	5.4	
48	.24	.01	3.65	1.3	10.3	6.5	-1.1	-44.4	-.1	73	.04	.00	3.86	.2	.6	24.1	19.5	12.8	
49	.19	.00	3.64	.7	11.6	7.0	-2.2	-47.9	.0	74	.00	.00	3.87	.0	2.7	24.8	18.3	18.2	
50	.15	.00	3.63	1.0	9.1	7.8	.9	-49.0	-.2	75	.09	.01	3.88	.2	.6	25.0	21.0	25.7	
51	.14	.00	3.63	.1	10.5	8.3	.0	-51.4	-.8	76	.11	.00	3.89	.2	1.4	25.5	20.5	32.3	
52	.13	.00	3.63	.8	8.6	9.2	2.7	-52.0	.5	77	.11	.00	3.90	.5	.2	25.8	22.0	40.2	
53	.13	.00	3.65	.1	8.2	9.7	3.5	-52.1	.3	78	.07	.00	3.90	.3	.7	26.2	21.9	47.5	
54	.10	.00	3.65	.5	6.9	10.5	5.9	-50.9	1.0	79	-.11	.00	3.90	.4	-.3	26.2	23.2	55.9	
55	-.04	.00	3.65	.0	7.1	11.1	5.9	-50.0	.8	80	-.18	-.03	3.91	.1	.5	26.6	22.7	63.5	
56	.09	.00	3.67	.1	5.2	11.7	8.7	-47.1	.9	81	-.04	-.01	3.91	.0	-.3	27.0	24.0	71.8	
57	.08	.00	3.69	.0	6.3	12.6	8.3	-45.4	1.0	82	.00	.00	3.92	.0	.3	27.2	23.5	79.6	
										83	-.03	.00	3.93	.1	-.9	27.4	24.8	88.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
84	.00	.00	3.94	.0	−.7	27.7	25.1	97.4		62	.12	−.01	3.81	.1	8.1	13.8	2.2	−59.0	.1
85	.03	.00	3.95	.1	−1.2	27.7	25.9	106.6		63	.10	.00	3.82	.1	5.3	14.6	5.4	−56.2	.4
86	.00	.00	3.96	.0	−.7		25.6	115.4		64	.00	.00	3.82	.0	7.3	15.1	4.4	−55.4	.3
Z = 25										65	−.04	.00	3.84	.1	4.5	15.5	7.4	−51.8	.5
40	.28	−.02	3.73	2.3		−4.1		50.2		66	.00	.00	3.85	.0	6.9	16.3	5.9	−50.7	.4
41	.26	−.01	3.72	2.0	22.8	−3.1		35.5		67	.00	.00	3.86	.1	3.9	16.6	9.2	−46.5	−.1
42	.25	−.02	3.70	1.7	19.1	−2.4	−20.9	24.5		68	.21	.00	3.90	.2	6.4	17.5	7.1	−44.9	
43	.23	−.01	3.69	1.1	20.5	−1.5	−21.5	12.1		69	.24	.00	3.91	.2	3.5	17.9	10.7	−40.3	
44	.15	.00	3.68	.6	16.8	−.9	−16.9	3.3		70	.19	.00	3.90	.3	5.8	18.8	9.8	−38.0	
45	.16	.00	3.68	.2	18.8	.0	−17.7	−7.4		71	.15	.01	3.91	.3	3.2	19.3	12.4	−33.1	
46	.17	.01	3.69	.6	15.1	1.0	−13.1	−14.4		72	.14	.00	3.91	.3	5.1	20.1	11.1	−30.1	
47	.23	.00	3.70	1.0	18.0	1.7	−15.3	−24.4		73	.15	.00	3.92	.4	2.5	20.5	14.1	−24.6	
48	.23	.01	3.70	1.3	13.9	2.2	−10.5	−30.2		74	.14	−.01	3.92	.1	4.2	21.3	13.3	−20.7	
49	.25	.00	3.71	1.6	16.5	2.6	−12.3	−38.6	1.0	75	.00	.00	3.92	.0	1.7	21.5	16.2	−14.4	
50	.26	.00	3.71	2.1	13.7	5.7	−9.0	−44.2	1.6	76	.00	.00	3.92	.0	4.1	22.3	14.5	−10.3	
51	.23	−.01	3.71	1.3	12.2	5.8	−7.5	−48.3	.1	77	.07	.01	3.93	.2	1.3	22.7	17.5	−3.6	
52	.20	−.01	3.71	1.5	10.2	6.3	−1.9	−50.4	−.3	78	.09	.00	3.94	.2	2.2	23.2	17.5	2.3	
53	.18	−.01	3.71	.5	11.7	6.8	−3.3	−54.1	−.6	79	.12	.00	3.95	.4	.9	23.5	19.3	9.5	
54	.15	.00	3.70	1.0	9.6	7.3	−.5	−55.6	.1	80	.16	−.02	3.96	.2	1.5	24.0	18.9	16.0	
55	.18	−.01	3.72	.3	9.9	8.0	−.1	−57.5	−.2	81	−.11	.00	3.96	.3	.4	24.3	20.6	23.8	
56	.14	.00	3.72	.5	8.8	8.6	2.6	−57.2	.3	82	−.10	−.01	3.97	.1	1.1	24.5	19.9	30.7	
57	.14	.00	3.73	.2	8.7	9.3	2.3	−57.9	.4	83	−.01	.00	3.97	.0	.2	24.9	21.2	38.6	
58	.11	.00	3.74	.3	6.4	9.8	5.4	−56.2	.3	84	.00	.00	3.98	.0	.7	25.1	21.0	46.0	
59	.14	.00	3.76	.2	8.0	10.8	4.5	−56.1	.6	85	−.02	.00	3.99	.1	−.2	25.3	21.9	54.3	
60	.12	−.01	3.77	.2	5.2	11.4	8.0	−53.3	.3	86	.00	.00	4.00	.0	.0	25.7	22.3	62.4	
61	.16	−.01	3.79	.0	7.3	12.1	6.5	−52.5	.7	87	−.02	.00	4.01	.1	−.7	25.9	23.0	71.2	
62	.15	.00	3.80	.1	4.6	12.7	10.0	−49.0	.5	88	.00	.00	4.02	.0	−.4	26.0	23.1	79.7	
63	.26	.00	3.83	.1	6.8	13.4	8.6	−47.7	.9	89	−.05	.00	4.03	.2	−2.0	26.6	24.8	89.7	
64	.25	.00	3.84	.3	4.0	14.3	11.8	−43.6	.5	90	.00	.00	4.05	.0	−.8		24.1	98.5	
65	.25	.00	3.85	.2	6.2	15.0	10.1	−41.7	.8	Z = 27									
66	.28	−.01	3.87	.6	3.5	15.7	13.6	−37.1		44	.22	−.03	3.82	1.4		−4.1		45.0	
67	.25	.00	3.87	.4	5.7	16.2	11.8	−34.7		45	−.21	−.01	3.77	.9	22.4	−3.2		30.7	
68	.25	.00	3.88	.5	3.0	16.8	15.2	−29.6		46	.13	−.01	3.75	.7	18.8	−2.4	−19.6	20.0	
69	.20	.01	3.88	.5	4.9	17.2	13.8	−26.5		47	.02	.00	3.74	.1	20.3	−1.8	−20.3	7.8	
70	.18	.01	3.89	.5	2.7	17.8	16.9	−21.0		48	.13	.00	3.74	.6	16.9	−.6	−16.2	−1.1	
71	.19	.00	3.89	.5	4.3	18.3	15.8	−17.3		49	.11	.00	3.74	.7	19.2	−.2	−18.2	−12.2	
72	.17	.00	3.90	.6	2.1	18.9	18.8	−11.3		50	.16	.00	3.75	.9	15.4	.5	−13.5	−19.5	
73	.17	.00	3.90	.2	3.4	19.4	17.9	−6.7		51	.17	.00	3.75	.8	17.2	.8	−14.8	−28.6	
74	.17	−.01	3.91	.3	1.6	20.3	20.6	−.1		52	.19	.00	3.76	1.5	14.7	1.8	−11.3	−35.3	
75	.00	.00	3.89	.0	3.2	20.8	19.1	4.7		53	.16	−.01	3.75	1.0	15.8	1.7	−12.2	−43.0	.4
76	.10	.01	3.91	.3	1.0	21.2	22.1	11.8		54	.15	−.01	3.75	.6	12.7	4.1	−8.2	−47.7	−.3
77	.13	.00	3.92	.2	1.7	21.4	21.8	18.2		55	.10	.00	3.75	.8	13.6	5.4	−8.9	−53.3	−.8
78	.14	.00	3.92	.5	.6	21.8	23.4	25.7		56	.12	−.01	3.75	1.9	11.2	6.3	−3.3	−56.4	.4
79	.13	−.01	3.93	.2	1.0	22.1	23.3	32.8		57	.15	−.01	3.77	.9	10.6	6.4	−3.2	−58.9	−.4
80	.15	−.02	3.94	.2	.0	22.4	24.8	40.8		58	.13	−.01	3.77	1.3	9.2	7.2	−.8	−60.0	.2
81	−.06	.00	3.94	.1	1.0	22.9	24.1	47.9		59	.13	−.01	3.79	.7	10.0	7.6	−1.4	−61.9	−.3
82	−.04	.00	3.94	.1	−.2	23.0	25.5	56.2		60	.03	.00	3.80	1.0	7.8	8.4	1.9	−61.7	.0
83	.00	.00	3.95	.0	.4	23.1	25.2	63.8		61	.11	−.01	3.81	.4	8.9	8.5	1.1	−62.5	−.4
84	−.02	.00	3.96	.1	−.4	23.6	26.3	72.3		62	−.12	−.01	3.82	.6	6.8	9.6	4.6	−61.2	−.2
85	−.02	.00	3.97	.0	−.4	23.9	26.5	80.8		63	.10	−.02	3.83	.3	8.5	10.0	3.3	−61.7	−.2
86	−.02	.00	3.98	.1	−1.0	24.1	27.4	89.8		64	.13	−.01	3.84	.8	6.3	10.9	6.3	−59.9	.1
87	.00	.00	3.99	.0	−.5	24.3	27.3	98.4		65	.00	.00	3.85	.0	7.4	11.1	5.3	−59.2	.1
88	−.05	.00	4.00	.1	−2.5		29.4	109.0		66	.09	−.01	3.86	.4	5.4	12.0	8.6	−56.6	.5
Z = 26										67	.00	.00	3.87	.0	7.2	12.3	7.2	−55.7	.4
42	.27	−.03	3.78	1.8		−2.5		45.4		68	.00	.00	3.88	.0	4.4	12.8	11.0	−52.0	.2
43	.22	−.02	3.75	1.4	19.9	−1.8		33.6		69	.00	.00	3.89	.0	7.1	13.4	8.9	−51.0	.0
44	.18	−.01	3.74	.8	21.5	−.8	−24.8	20.1		70	.11	.00	3.90	.8	4.9	14.8	11.7	−47.8	
45	.12	.00	3.72	.5	18.0	.3	−20.4	10.3		71	.13	.00	3.92	.4	5.8	14.9	10.5	−45.5	
46	.08	.00	3.71	.0	19.6	1.2	−21.3	−1.3		72	.14	.01	3.93	.5	3.8	15.4	13.6	−41.2	
47	.14	.01	3.72	.3	15.8	1.9	−16.8	−9.0		73	.14	.00	3.93	.5	5.5	15.8	12.3	−38.6	
48	.16	.00	3.72	.5	18.7	2.6	−18.6	−19.7		74	.14	.00	3.94	.8	3.5	16.8	15.0	−34.0	
49	.22	.00	3.73	.9	14.7	3.4	−14.1	−26.3		75	.10	.00	3.94	.3	4.6	17.1	14.2	−30.5	
50	.21	.00	3.73	1.1	17.0	3.9	−15.7	−35.2	.7	76	.09	−.01	3.95	.4	2.4	17.8	17.4	−24.9	
51	.23	−.01	3.74	1.4	13.7	3.9	−12.1	−40.8	.6	77	.00	.00	3.95	.0	4.2	18.0	16.0	−21.0	
52	.22	−.01	3.74	1.0	15.9	7.5	−13.3	−48.6	.2	78	.09	.00	3.96	.7	2.3	18.9	19.0	−15.2	
53	.16	−.01	3.73	1.2	10.4	7.7	−7.8	−50.8	−.1	79	.10	.00	3.97	.8	2.7	19.4	18.4	−9.8	
54	−.17	.00	3.74	.3	12.4	8.4	−7.5	−55.2	−1.1	80	.12	.00	3.98	.8	1.1	19.6	20.2	−2.8	
55	.12	.00	3.73	1.0	10.3	9.1	−4.2	−57.4	−.1	81	.12	−.01	3.98	.9	2.2	20.2	19.6	3.1	
56	.15	−.01	3.75	.3	10.5	9.6	−3.4	−59.8	−.8	82	.08	−.01	3.99	.7	.4	20.3	21.6	10.7	
57	.12	−.01	3.75	.4	8.4	10.2	−1.2	−60.1	−.1	83	−.06	.00	3.99	.3	1.4	20.6	21.2	17.4	
58	.15	−.01	3.77	.2	9.6	11.0	−1.6	−61.6	−.5	84	−.06	−.01	4.00	.3	.4	20.9	22.7	25.0	
59	.13	−.01	3.77	.3	7.1	11.7	1.3	−60.6	−.1	85	.00	.00	4.01	.0	.7	20.9	22.8	32.4	
60	.15	−.01	3.79	.2	8.7	12.4	.4	−61.2	−.2	86	.05	.00	4.02	.4	.3	21.4	23.9	40.2	
61	.05	.00	3.80	.1	5.8	12.9	3.6	−58.9	.0	87	.00	.00	4.03	.0	.0	21.5	23.9	48.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
88	.05	.00	4.04	.3	-.3	21.9	25.0	56.6		66	.10	.00	3.90	.9	6.9	8.9	2.0	-66.1	-.2
89	.00	.00	4.05	.0	-.3	22.0	25.0	64.9		67	-.12	-.01	3.91	.7	9.3	9.4	.2	-67.3	.0
90	-.06	.00	4.06	.3	-1.4	22.6	26.8	74.4		68	-.09	-.01	3.92	.9	6.3	10.0	3.8	-65.6	.1
91	.09	.00	4.08	.2	.1	23.4	25.7	82.4		69	.05	.00	3.92	.6	8.6	10.4	2.2	-66.1	.4
92	-.10	-.01	4.09	.3	-1.7		27.8	92.2		70	.00	.00	3.93	.0	5.0	10.4	6.5	-63.0	.0
Z = 28										71	.08	.00	3.94	.6	8.9	11.6	3.7	-63.8	1.1
46	-.23	-.01	3.83	1.0		-1.7		39.6		72	.09	.00	3.96	.7	5.3	12.3	7.4	-61.1	
47	-.14	-.01	3.80	.7	19.6	-.9		28.1		73	.11	.00	3.97	.8	7.4	12.9	5.7	-60.4	
48	.00	.00	3.78	.0	21.0	-.1	-23.4	15.2		74	.14	.01	3.98	.9	4.8	13.6	9.1	-57.2	
49	.00	.00	3.77	.0	17.2	.2	-18.9	6.0		75	.11	.00	3.98	.9	6.7	14.1	7.8	-55.8	
50	.06	.00	3.77	.1	20.1	1.1	-20.7	-6.0		76	.13	.00	3.99	1.0	4.3	14.6	10.8	-52.0	
51	.11	.00	3.78	.2	15.9	1.6	-16.3	-13.9		77	.10	.00	3.99	.6	5.7	14.8	10.0	-49.7	
52	.11	.00	3.78	.3	18.1	2.6	-17.7	-23.9		78	.09	.00	4.00	1.2	4.0	15.8	12.4	-45.6	
53	.17	.00	3.79	.5	14.9	2.8	-13.8	-30.8		79	.04	.00	4.00	.3	4.8	15.5	11.8	-42.3	
54	-.19	.00	3.79	.4	16.7	3.7	-15.2	-39.5	.3	80	.09	.01	4.01	1.0	3.0	16.4	15.0	-37.3	
55	.02	.00	3.77	.0	13.0	4.0	-10.9	-44.4	-1.0	81	.11	.00	4.02	.8	3.4	16.9	14.7	-32.6	
56	-.12	.01	3.79	.3	16.7	7.1	-13.0	-53.0	-.9	82	.11	.00	4.03	1.1	2.2	17.5	16.4	-26.8	
57	-.12	.00	3.79	.9	10.8	6.7	-8.3	-55.8	-.3	83	.10	.00	4.04	.9	2.7	17.8	16.2	-21.4	
58	-.17	-.01	3.81	.3	11.6	7.6	-5.7	-59.3	-1.0	84	.07	.00	4.04	.9	1.4	18.1	17.9	-14.7	
59	-.15	-.01	3.81	.4	9.4	7.8	-3.8	-60.5	-.6	85	-.08	.00	4.05	.7	2.3	18.5	17.3	-8.9	
60	-.16	-.01	3.83	.2	11.0	8.9	-4.7	-63.5	-1.0	86	-.10	-.01	4.05	.5	1.0	18.6	19.2	-1.8	
61	-.17	-.02	3.84	.3	8.1	9.2	-1.5	-63.6	-.7	87	.05	.00	4.06	.4	1.7	19.0	18.9	4.6	
62	-.16	-.01	3.85	.2	10.3	10.6	-3.0	-65.8	-1.0	88	.06	.00	4.07	.7	.6	19.5	20.3	12.0	
63	-.16	-.01	3.86	.4	7.3	11.1	.6	-65.0	-.5	89	.07	.00	4.09	.6	1.1	19.9	20.1	19.0	
64	-.16	-.01	3.87	.1	9.3	11.8	-.8	-66.2	-.9	90	.07	.00	4.10	.6	.0	20.2	21.8	27.1	
65	.06	-.01	3.87	.1	6.4	11.9	2.7	-64.5	-.6	91	.08	.00	4.11	.6	.9	20.7	21.0	34.3	
66	.02	.00	3.88	.0	8.7	13.3	.9	-65.2	-.8	92	-.10	-.01	4.13	1.2	-.3	21.3	23.0	42.7	
67	-.06	-.01	3.89	.2	5.8	13.6	4.5	-62.9	-.9	93	-.18	-.03	4.15	.7	.6	21.5	22.3	50.2	
68	.02	.00	3.90	.0	8.2	14.6	2.6	-63.0	-.5	94	.20	.01	4.18	.8	-.8	22.1	24.7	59.1	
69	.00	.00	3.91	.0	5.0	15.2	6.2	-59.9	-.5	95	.28	-.01	4.22	1.0	.8	22.7	23.2	66.3	
70	.00	.00	3.92	.0	7.7	15.8	3.5	-59.5	.0	96	.28	-.01	4.23	1.5	-.7		25.6	75.1	
71	.00	.00	3.93	.0	4.6	15.6	7.8	-56.0	.2	Z = 30									
72	.00	.00	3.93	.0	6.8	16.6	6.3	-54.8	.1	50	.00	.00	3.89	.0		-2.8		35.1	
73	.00	.00	3.94	.0	4.2	17.0	9.5	-50.9		51	.09	.00	3.88	.2	18.7	-2.5		24.4	
74	.05	.00	3.95	.0	6.2	17.7	8.2	-49.0		52	.10	.00	3.87	.1	21.2	-1.5	-23.6	11.3	
75	.11	.00	3.97	.0	3.8	18.0	11.1	-44.7		53	.16	-.01	3.87	.3	17.3	-.9	-19.5	2.0	
76	.00	.00	3.96	.0	5.6	19.0	9.8	-42.2		54	.16	-.01	3.87	.5	19.5	-.2	-21.2	-9.4	
77	.00	.00	3.97	.0	2.9	19.5	12.6	-37.1		55	.17	-.01	3.87	.7	16.0	.4	-17.4	-17.4	
78	.00	.00	3.98	.0	5.2	20.4	11.4	-34.2		56	.16	-.01	3.87	.6	17.8	1.0	-18.7	-27.2	
79	-.05	.00	3.98	.1	2.0	20.2	14.2	-28.2		57	.15	-.01	3.86	1.0	14.8	1.2	-15.1	-33.9	
80	-.05	.00	3.99	.0	2.9	20.5	14.3	-23.0		58	-.20	-.01	3.88	.5	16.5	2.0	-15.9	-42.3	.0
81	.08	.00	4.00	.2	1.6	21.0	16.1	-16.5		59	.10	.00	3.86	.9	13.7	1.6	-13.1	-47.9	.7
82	-.08	.00	4.01	.1	2.5	21.3	15.8	-10.9		60	.12	-.01	3.87	.2	14.5	4.8	-12.9	-54.3	.1
83	-.06	-.01	4.01	.2	1.0	21.8	17.5	-3.8		61	-.12	-.01	3.88	.4	10.1	4.8	-8.8	-56.3	.0
84	-.04	.00	4.02	.0	1.9	22.3	17.0	2.3		62	-.17	-.02	3.90	.5	12.1	5.6	-8.0	-60.3	-.8
85	.00	.00	4.03	.0	.9	22.8	18.5	9.5		63	-.17	-.02	3.91	.6	9.3	6.1	-5.3	-61.6	-.6
86	.00	.00	4.03	.0	1.3	23.4	18.1	16.3		64	-.18	-.02	3.92	.4	11.6	6.8	-7.0	-65.1	-.9
87	-.02	.00	4.04	.1	.1	23.2	19.7	24.3		65	-.16	-.02	3.93	.6	8.5	7.4	-3.6	-65.5	-.4
88	.00	.00	4.05	.0	.7	23.9	19.6	31.6		66	-.20	-.03	3.94	.4	10.7	8.2	-5.2	-68.1	-.8
89	-.02	.00	4.07	.0	-.3	23.9	20.9	40.0		67	-.21	-.03	3.96	.3	7.5	8.7	-1.5	-67.6	-.3
90	.00	.00	4.08	.0	.4	24.6	20.6	47.6		68	-.20	-.03	3.96	.3	10.0	9.4	-3.3	-69.5	-.5
91	-.05	.00	4.09	.2	-1.0	25.0	22.4	56.7		69	-.13	-.01	3.96	.3	7.0	10.0	.2	-68.4	-.1
92	.00	.00	4.10	.0	.3	25.3	21.8	64.4		70	.00	.00	3.96	.0	9.2	10.7	-1.4	-69.5	.0
93	.01	.00	4.12	.0	-1.4	25.6	23.7	73.9		71	.00	.00	3.97	.0	6.1	11.8	2.3	-67.5	.2
94	.00	.00	4.13	.0	.2		22.6	81.7		72	.14	.00	3.99	.1	9.0	11.9	.4	-68.4	.3
Z = 29										73	.00	.00	3.98	.0	5.8	12.3	3.9	-66.1	.7
48	-.13	-.01	3.84	1.1		-3.1		38.5		74	.14	.00	4.01	.2	8.2	13.1	2.0	-66.2	.5
49	-.06	.00	3.82	.4	21.6	-2.5		25.0		75	.14	.01	4.01	.2	5.4	13.7	5.3	-63.6	1.1
50	-.09	.00	3.82	.9	18.4	-1.4	-20.4	14.7		76	.13	.00	4.02	.2	7.3	14.3	3.8	-62.8	.8
51	.10	.00	3.81	.6	20.3	-1.2	-22.0	2.5		77	.13	.00	4.03	.4	5.0	15.0	6.9	-59.7	1.1
52	.11	.00	3.82	.8	16.7	-.4	-17.5	-6.2		78	.00	.00	4.02	.0	6.4	15.6	5.8	-58.0	.8
53	.14	.00	3.81	.8	18.8	.3	-19.0	-17.0		79	.00	.00	4.03	.0	4.2	15.8	8.8	-54.1	.2
54	.15	.00	3.82	1.1	15.4	.8	-14.9	-24.3		80	.00	.00	4.03	.0	6.3	17.3	7.2	-52.3	.6
55	.14	-.01	3.81	.9	17.2	1.3	-16.0	-33.4		81	.07	.01	4.04	.2	3.0	17.3	10.9	-47.3	
56	.15	-.01	3.81	1.9	14.6	2.9	-12.8	-40.0		82	.09	.00	4.05	.1	3.9	17.8	10.4	-43.1	
57	-.12	.00	3.81	.8	15.6	1.8	-13.6	-47.5	.2	83	.11	.00	4.06	.4	2.5	18.1	12.2	-37.5	
58	.10	.00	3.81	1.9	14.1	5.1	-11.3	-53.6	1.9	84	.07	.00	4.07	.2	3.1	18.5	12.1	-32.6	
59	-.13	-.01	3.83	.9	11.3	4.8	-8.9	-56.8	.5	85	-.11	.00	4.08	.2	1.7	18.8	14.1	-26.2	
60	-.16	-.01	3.84	1.2	10.1	5.5	-4.5	-58.8	.5	86	-.09	.00	4.08	.1	2.8	19.4	13.5	-21.0	
61	-.16	-.01	3.86	.9	11.3	5.8	-5.7	-62.0	.0	87	-.03	.00	4.08	.0	1.4	19.8	15.2	-14.3	
62	-.16	-.01	3.87	1.2	8.9	6.5	-2.5	-62.8	.0	88	.00	.00	4.09	.0	2.0	20.1	14.9	-8.3	
63	-.17	-.02	3.88	1.0	10.8	7.1	-3.9	-65.5	-.1	89	.07	.00	4.11	.1	.9	20.4	16.7	-1.0	
64	-.17	-.02	3.89	1.2	7.9	7.7	-.3	-65.4	-.1	90	-.16	-.02	4.14	.2	1.7	21.0	15.9	5.3	
65	-.17	-.02	3.90	.9	9.9	8.3	-1.8	-67.2	.0	91	.00	.00	4.13	.0	.1	21.1	18.5	13.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
92	-.20	-.03	4.17	.5	1.8	22.0	17.5	19.6		Z = 32									
93	-.18	-.02	4.18	.7	-.2	22.1	19.7	27.8		54	.00	.00	3.97	.0		-3.2		32.0	
94	-.22	-.04	4.20	.7	1.6	23.1	18.3	34.3		55	.04	.00	3.96	.0	18.4	-2.6		21.6	
95	.25	.00	4.23	.6	-.7	23.2	20.7	43.1		56	-.08	.00	3.95	.1	20.4	-2.0	-23.7	9.4	
96	.26	.00	4.24	1.0	1.7	24.1	19.1	49.5		57	.18	-.01	3.95	.5	17.5	-1.1	-20.3	-.1	
97	.29	-.01	4.26	1.2	-.7	24.1	21.7	58.3		58	-.11	.00	3.94	.2	18.8	-.7	-21.3	-10.8	
98	.27	-.01	4.26	1.3	1.2		20.1	65.2		59	.00	.00	3.92	.0	15.3	-1.0	-16.9	-18.0	
99	.27	-.01	4.27	1.7	-.7	24.9	22.2	73.9		60	-.14	-.01	3.94	.4	18.5	.9	-19.1	-28.4	
100	.23	.00	4.28	1.4	.6	25.3	21.4	81.5		61	-.15	-.01	3.94	1.2	15.0	1.2	-15.7	-35.3	
101	.24	.00	4.28	1.4	-1.2	25.5	23.7	90.8		62	-.17	-.02	3.95	.6	15.1	2.0	-15.3	-42.3	
102	.24	.00	4.29	1.1	.5	25.8	22.5	98.3		63	-.17	-.02	3.96	.6	12.9	2.1	-12.6	-47.1	
103	.23	-.01	4.29	1.4	-1.1	5.9	24.7	107.5		64	-.19	-.02	3.97	.8	15.1	5.1	-14.5	-54.1	
104	.19	.00	4.30	1.2	.3	26.5	23.8	115.2		65	-.19	-.02	3.98	.9	9.8	5.1	-.8.9	-55.8	-.6
105	.19	.00	4.30	1.3	-1.2	26.6	25.5	124.4		66	-.23	-.03	4.00	.8	12.8	5.9	-9.1	-60.5	-1.1
106	.22	.00	4.31	1.1	.0		24.3	132.5		67	-.20	-.03	4.00	.8	9.6	6.4	-6.0	-62.0	-.6
Z = 31										68	-.24	-.03	4.02	.8	11.9	7.1	-7.9	-65.8	-1.2
52	-.10	-.01	3.93	.8		-3.2		34.9		69	-.23	-.03	4.03	.7	8.9	7.7	-4.3	-66.6	-.4
53	.07	.00	3.91	.4	21.4	-3.0		21.5		70	-.21	-.03	4.03	.6	11.2	8.5	-6.4	-69.8	-.8
54	.12	.00	3.91	.6	17.8	-2.5	-20.2	11.8		71	-.18	-.03	4.03	.7	8.0	8.9	-2.5	-69.7	-.2
55	.12	.00	3.90	.6	19.8	-2.1	-21.6	.0		72	-.20	-.03	4.04	.4	10.6	9.6	-4.2	-72.2	-.4
56	.16	-.01	3.90	.8	16.6	-1.6	-17.8	-8.5		73	.22	-.01	4.06	.3	7.2	9.8	-.5	-71.3	.0
57	.12	.00	3.89	.6	18.3	-1.1	-18.7	-18.8		74	.17	.00	4.06	.3	10.1	10.6	-2.7	-73.4	.0
58	.15	-.01	3.89	1.4	15.6	-.3	-15.5	-26.3		75	.19	-.01	4.06	.2	6.8	11.2	.9	-72.1	.3
59	-.12	.00	3.89	.5	16.5	-.2	-16.8	-34.8		76	.17	.00	4.07	.4	9.3	11.8	-1.0	-73.4	.2
60	-.13	-.01	3.89	1.5	14.7	.8	-13.0	-41.4		77	.14	.00	4.07	.3	6.4	12.4	2.4	-71.7	.5
61	-.12	-.01	3.90	.4	14.2	.6	-12.3	-47.6		78	.16	-.01	4.08	.5	8.6	13.0	.9	-72.3	.4
62	-.13	-.01	3.91	.6	12.8	3.3	-10.0	-52.3	.3	79	.16	-.01	4.09	.6	5.9	13.6	4.0	-70.2	.7
63	-.15	-.01	3.92	.5	12.1	3.3	-9.2	-56.3	-.4	80	.12	.00	4.09	.1	7.6	14.1	2.9	-69.7	.2
64	-.18	-.02	3.94	.7	9.8	3.7	-3.9	-58.0	-.8	81	.00	.00	4.09	.1	5.0	14.3	6.0	-66.6	.3
65	-.19	-.02	3.96	.5	11.9	4.1	-6.1	-61.9	-.7	82	.00	.00	4.09	.0	7.6	15.2	4.2	-66.1	.5
66	-.21	-.03	3.96	.6	9.0	4.7	-2.4	-62.9	-.8	83	.07	.00	4.10	.3	4.1	15.8	7.9	-62.1	
67	-.18	-.02	3.97	.4	11.2	5.2	-4.0	-66.0	-.9	84	.09	.00	4.11	.2	4.8	16.3	7.7	-58.8	
68	-.21	-.03	3.99	.4	8.3	5.9	-.4	-66.2	-.9	85	.12	.00	4.12	.4	3.4	16.7	9.6	-54.1	
69	-.21	-.03	3.99	.3	10.5	6.4	-2.0	-68.6	-.7	86	.15	-.01	4.13	.4	4.2	17.2	9.2	-50.2	
70	-.18	-.03	4.00	.4	7.6	7.1	1.7	-68.1	-.8	87	.16	-.02	4.14	.5	2.6	17.6	11.4	-44.7	
71	.19	.00	4.01	.1	9.8	7.6	-.1	-69.9	-.3	88	-.15	-.01	4.15	.4	3.6	18.0	10.8	-40.2	
72	.22	-.01	4.03	.3	7.0	8.6	3.4	-68.8	.2	89	.00	.00	4.16	.1	1.9	18.2	12.8	-34.1	
73	.19	.00	4.03	.1	9.3	8.9	1.3	-70.0	.3	90	-.18	-.01	4.18	.6	3.4	19.0	11.7	-29.4	
74	.00	.00	4.01	.0	6.3	9.4	5.2	-68.2	.2	91	-.20	-.02	4.19	.8	1.5	19.5	14.2	-22.8	
75	.17	.00	4.04	.1	8.7	9.9	3.3	-68.9	.4	92	-.21	-.03	4.21	1.0	2.9	19.7	13.2	-17.6	
76	.14	.00	4.05	.2	5.9	10.4	6.7	-66.7	.5	93	-.25	-.04	4.23	.8	1.0	20.0	15.7	-10.6	
77	.15	.00	4.05	.2	8.0	11.1	5.1	-66.6	.7	94	-.24	-.04	4.24	1.1	2.6	20.6	14.4	-5.2	
78	.16	-.01	4.06	.2	5.3	11.4	8.4	-63.9	.2	95	-.25	-.04	4.25	1.5	.8	21.3	16.9	2.1	
79	.00	.00	4.05	.0	7.1	12.1	7.3	-62.9	.4	96	-.26	-.05	4.26	1.3	2.2	21.9	16.0	7.9	
80	.00	.00	4.05	.1	4.8	12.7	10.1	-59.6	.5	97	-.26	-.06	4.27	1.4	.4	22.1	18.3	15.6	
81	.00	.00	4.06	.0	6.7	13.1	8.4	-58.2	.2	98	-.26	-.06	4.28	1.4	2.2	22.4	16.8	21.5	
82	.09	.00	4.07	.1	3.4	13.6	12.6	-53.5		99	.27	-.01	4.31	1.7	.3	23.0	19.1	29.3	
83	.00	.00	4.07	.0	4.3	13.9	12.3	-49.8		100	.25	-.01	4.32	1.5	1.7	23.4	17.9	35.6	
84	.12	.00	4.09	.3	3.0	14.5	14.1	-44.7		101	.25	-.01	4.32	1.9	.3	24.0	19.8	43.4	
85	.13	-.01	4.10	.2	3.7	15.0	13.8	-40.3		102	.26	-.01	4.33	1.3	1.4	24.3	18.4	50.1	
86	.13	-.01	4.12	.3	2.2	15.5	15.8	-34.4		103	.24	-.02	4.34	1.1	-.6	24.4	21.6	58.8	
87	-.12	.00	4.12	.1	3.2	15.9	15.2	-29.5		104	.21	-.01	4.34	1.1	1.7	24.9	20.0	65.2	
88	.00	.00	4.11	.0	1.7	16.1	17.1	-23.2		105	.22	-.01	4.34	1.3	-.4	25.0	22.0	73.7	
89	-.16	-.01	4.14	.2	2.7	16.8	16.3	-17.8		106	.19	-.01	4.35	.9	.9	25.4	21.1	80.9	
90	.13	-.01	4.14	.1	.9	16.9	18.8	-10.6		107	.22	-.01	4.36	.8	-.6	25.8	23.1	89.6	
91	-.19	-.02	4.17	.5	2.7	17.8	17.6	-5.2		108	.19	-.01	4.36	.6	.8	26.1	21.9	96.9	
92	-.19	-.02	4.18	.6	.8	18.5	19.7	2.1		109	.18	.00	4.36	.8	-.7	26.4	23.8	105.6	
93	-.22	-.03	4.20	.9	2.0	18.8	18.8	8.1		110	.17	.00	4.37	.2	.2		23.1	113.5	
94	-.22	-.03	4.22	1.1	.2	19.1	21.2	16.0		Z = 33									
95	.22	.00	4.24	.8	1.6	19.2	20.4	22.5		56	.03	.00	4.01	.1		-4.1		33.0	
96	.24	.00	4.25	1.0	.1	20.0	22.5	30.5		57	.05	.00	3.99	.2	20.9	-3.6		20.2	
97	.24	.00	4.26	1.3	1.9	20.2	21.0	36.6		58	.14	-.01	3.99	.4	17.8	-3.3	-20.3	10.5	
98	.28	-.01	4.28	1.2	-.3	20.5	23.5	45.0		59	.12	-.01	3.98	.5	19.7	-2.4	-21.4	-1.1	
99	.25	-.01	4.28	1.0	1.4	20.8	22.4	51.7		60	.00	.00	3.97	.8	16.2	-1.5	-17.3	-9.3	
100	.25	-.01	4.29	1.5	-.3	21.2	24.4	60.0		61	-.17	-.01	3.98	.6	18.4	-1.5	-18.8	-19.6	
101	.22	.00	4.30	1.0	1.1	21.7	23.7	67.1		62	-.16	-.01	3.98	1.5	15.4	-1.0	-15.0	-27.0	
102	.22	.00	4.30	1.1	-.8	22.1	25.8	75.9		63	-.17	-.02	3.99	.9	15.6	-.5	-14.6	-34.5	
103	.24	-.01	4.31	1.0	1.2	22.9	24.0	82.8		64	-.20	-.03	3.99	.9	13.2	-.2	-11.4	-39.6	
104	.21	-.01	4.31	1.3	-.6	23.3	26.3	91.4		65	-.19	-.02	4.01	1.1	15.4	.1	-13.2	-46.9	
105	.21	-.01	4.32	.9	.5	23.5	25.3	99.0		66	-.21	-.03	4.01	1.5	12.5	2.8	-9.7	-51.3	-.7
106	.21	-.01	4.32	1.1	-1.1	23.6	27.2	108.1		67	-.24	-.04	4.03	1.2	12.8	2.8	-9.7	-56.0	-.6
107	.19	.00	4.33	.8	.5	24.1	26.1	115.7		68	-.20	-.03	4.03	1.2	10.0	3.2	-4.1	-57.9	-1.0
108	.21	-.01	4.34	1.2	-.9		27.8	124.7		69	-.25	-.04	4.05	1.2	12.5	3.8	-6.5	-62.4	-.7

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
70	-.25	-.05	4.06	1.1	9.1	4.0	-2.7	-63.4	-1.0	88	.15	-.01	4.19	.3	5.2	15.2	6.5	-64.1	.2
71	-.24	-.04	4.06	1.0	11.9	4.8	-4.7	-67.3	-.6	89	.16	-.02	4.20	.5	3.3	15.5	8.9	-59.3	
72	-.21	-.04	4.06	1.0	8.8	5.6	-1.3	-68.0	-.2	90	.16	-.02	4.21	.4	4.8	16.3	7.9	-56.0	
73	-.22	-.04	4.07	.8	10.9	5.9	-3.1	-70.8	-.1	91	-.20	-.02	4.22	.2	2.6	16.6	10.4	-50.5	
74	.22	-.02	4.08	.8	7.9	6.7	.7	-70.7	-.1	92	-.22	-.02	4.24	.8	4.6	17.3	8.9	-47.0	
75	.18	-.01	4.09	.5	10.4	7.0	-1.4	-73.1	.1	93	-.26	-.04	4.26	1.1	2.3	17.7	11.6	-41.3	
76	.19	-.01	4.10	.3	7.4	7.6	2.3	-72.4	.1	94	-.26	-.04	4.27	1.3	4.0	18.1	10.4	-37.2	
77	.18	-.01	4.10	.5	9.8	8.0	.4	-74.1	.2	95	-.28	-.05	4.29	1.4	1.9	18.7	13.1	-31.0	
78	.15	.00	4.10	.4	7.1	8.8	3.7	-73.2	.4	96	-.28	-.05	4.30	1.7	3.7	19.1	12.0	-26.6	
79	.14	.00	4.11	.5	9.0	9.1	2.4	-74.1	.5	97	-.26	-.05	4.31	2.0	1.5	19.3	14.5	-20.1	
80	.14	-.01	4.11	.6	6.6	9.7	5.4	-72.6	.5	98	-.26	-.05	4.32	2.0	3.4	20.0	13.0	-15.4	
81	.12	-.01	4.11	.4	8.0	10.2	4.4	-72.6	.0	99	-.26	-.05	4.33	1.9	1.0	20.4	15.8	-8.3	
82	.16	-.02	4.11	.4	5.8	11.0	7.3	-70.3	.0	100	-.27	-.06	4.34	2.0	3.2	21.0	14.1	-3.5	
83	.00	.00	4.11	.0	7.8	11.2	5.8	-70.0	.2	101	.35	-.03	4.39	2.5	1.2	21.6	16.3	3.4	
84	-.11	.00	4.13	.3	4.5	11.6	9.5	-66.4		102	-.27	-.06	4.35	1.8	2.3	21.7	15.4	9.2	
85	.12	.00	4.14	.3	5.3	12.2	9.3	-63.7		103	.28	-.03	4.38	2.2	.9	22.6	17.7	16.4	
86	.15	-.01	4.15	.5	3.8	12.6	11.4	-59.4		104	.25	-.02	4.39	1.7	2.5	22.6	16.0	21.9	
87	.15	-.01	4.16	.5	4.8	13.2	10.8	-56.1		105	.27	-.03	4.39	1.5	.1	22.6	18.7	29.9	
88	.18	-.02	4.17	.7	3.0	13.6	13.0	-51.0		106	.23	-.02	4.39	1.0	2.0	23.0	17.1	35.9	
89	.13	-.01	4.18	.4	4.0	14.0	12.4	-46.9		107	.23	-.02	4.40	.8	.2	23.3	19.2	43.8	
90	-.19	-.01	4.20	.2	2.3	14.3	14.8	-41.2		108	.22	-.02	4.39	.6	1.8	23.8	18.4	50.0	
91	-.22	-.02	4.21	.7	4.0	14.9	13.5	-37.0		109	.19	-.01	4.40	.4	.1	24.3	20.7	58.0	
92	-.24	-.03	4.23	1.0	1.9	15.4	16.1	-30.9		110	.16	-.01	4.40	.2	1.7	24.6	19.5	64.4	
93	-.24	-.03	4.24	1.1	3.5	16.0	14.9	-26.4		111	.17	-.02	4.40	.1	-.3	24.9	21.7	72.8	
94	-.27	-.05	4.26	1.0	1.3	16.2	17.6	-19.5		112	.00	.00	4.39	.0	1.5	25.4	20.7	79.3	
95	-.28	-.06	4.27	1.5	3.3	16.9	16.2	-14.8		113	.00	.00	4.40	.0	-.2	25.7	22.9	87.6	
96	-.26	-.05	4.28	1.9	1.4	17.4	18.5	-8.1		114	.00	.00	4.41	.0	1.4	21.5	94.3		
97	-.27	-.06	4.29	1.7	2.7	17.9	17.4	-2.7		115	-.01	.00	4.41	.1	-.6	26.7	23.9	103.0	
98	-.27	-.06	4.30	1.7	.6	18.2	20.2	4.8		116	.00	.00	4.42	.0	1.0	26.7	22.4	110.1	
99	-.27	-.06	4.31	1.7	2.6	18.6	18.5	10.2		117	.06	.02	4.43	.1	-1.5	26.5	25.6	119.6	
100	-.27	-.06	4.32	1.7	.5	18.8	21.2	17.7		118	.07	.02	4.43	.2	-.4	27.2	24.9	128.1	
101	-.27	-.06	4.33	1.5	2.2	19.3	20.2	23.6		119	.11	.01	4.44	.7	-.9	27.3	25.4	137.1	
102	-.27	-.06	4.34	1.3	-.1	18.9	22.5	31.8		120	.13	.00	4.45	.6	-.8	27.6	25.3	146.0	
103	.25	-.02	4.35	1.4	2.6	20.1	20.8	37.2		121	-.13	.01	4.45	.7	-1.5	27.7	26.2	155.6	
104	.27	-.03	4.36	1.6	.1	20.9	23.2	45.2		122	-.14	.01	4.46	.7	-.8		25.7	164.4	
105	.23	-.02	4.36	1.0	1.6	20.8	21.8	51.7		Z = 35									
106	.23	-.02	4.37	1.0	-.1	21.2	23.9	59.8		60	.18	-.02	4.07	.5		-4.8		32.4	
107	.20	-.01	4.37	.7	1.4	21.7	22.7	66.5		61	-.16	-.01	4.06	.6	21.0	-4.1		19.4	
108	.21	-.01	4.38	.5	-.4	21.9	25.0	75.0		62	-.16	-.01	4.06	.9	17.6	-3.4	-19.7	9.9	
109	.18	-.01	4.38	.3	1.3	22.4	23.7	81.8		63	-.16	-.01	4.05	.8	19.6	-3.0	-21.3	-1.7	
110	.18	-.01	4.39	.2	-.6	22.5	26.0	90.4		64	-.16	-.01	4.05	1.6	16.7	-2.4	-17.5	-10.3	
111	.00	.00	4.37	.0	1.0	23.3	24.7	97.5		65	-.23	-.03	4.07	.9	16.8	-1.9	-17.2	-19.0	
112	.13	-.01	4.39	.2	-.5		26.7	106.0		66	-.24	-.04	4.07	1.0	14.3	-1.2	-13.8	-25.2	
Z = 34										67	-.26	-.05	4.08	.9	16.1	-1.1	-15.0	-33.3	
58	.15	-.01	4.05	.3		-3.2		30.8		68	-.29	-.06	4.10	1.6	13.3	-.6	-11.3	-38.5	
59	.16	-.01	4.04	.6	18.5	-2.5		20.3		69	-.29	-.06	4.11	1.4	15.8	-.3	-13.4	-46.2	
60	.15	-.01	4.03	.5	20.4	-1.9	-24.4	8.0		70	-.28	-.05	4.12	1.2	12.8	2.3	-9.8	-50.9	
61	.13	-.01	4.01	.7	16.9	-1.1	-20.3	-.8		71	-.29	-.06	4.13	1.1	13.0	2.4	-9.9	-55.8	
62	-.19	-.01	4.03	.7	19.3	-.3	-21.9	-12.0		72	-.28	-.05	4.13	1.0	10.3	2.9	-4.6	-58.1	-1.1
63	-.20	-.02	4.02	1.4	16.0	.2	-18.2	-19.9		73	-.29	-.06	4.14	.8	12.7	.3	-6.8	-62.7	-.8
64	-.20	-.02	4.03	.9	16.4	1.0	-17.9	-28.2		74	.38	-.02	4.20	.6	9.9	4.0	-2.9	-64.5	-.8
65	-.21	-.03	4.04	.8	13.6	1.4	-14.7	-33.7		75	.38	-.02	4.20	.5	12.1	4.4	-4.9	-68.5	-.6
66	-.24	-.04	4.05	1.1	16.0	2.0	-16.5	-41.6		76	.34	-.03	4.19	.4	8.9	4.9	-1.2	-69.3	-1.0
67	-.24	-.04	4.05	1.5	12.8	2.3	-13.1	-46.3		77	.25	-.01	4.16	.2	11.6	5.5	-3.5	-72.9	-.3
68	-.25	-.04	4.07	1.1	15.5	5.1	-15.3	-53.8		78	-.07	.00	4.13	.0	8.5	6.1	.0	-73.3	-.1
69	-.29	-.06	4.09	1.0	10.2	5.3	-9.7	-55.9	-.4	79	.00	.00	4.13	.0	10.9	6.6	-2.0	-76.2	.1
70	-.26	-.05	4.08	1.0	12.9	5.7	-9.8	-60.7		80	.00	.00	4.14	.0	8.0	6.9	1.4	-76.2	.3
71	-.26	-.05	4.09	.9	9.9	6.4	-6.7	-62.5	-.9	81	.12	.00	4.16	.1	10.1	7.5	-.2	-78.2	.3
72	-.25	-.05	4.10	.8	12.3	6.8	-8.6	-66.7	-1.2	82	.17	-.02	4.17	.2	7.5	8.0	3.0	-77.7	.2
73	-.21	-.04	4.09	.6	9.1	7.1	-5.1	-67.8	-.4	83	.00	.00	4.15	.0	9.3	8.5	1.8	-78.9	-.1
74	-.24	-.04	4.11	.5	11.7	7.8	-6.9	-71.4	-.8	84	.07	.00	4.17	.7	7.2	9.5	4.5	-78.0	.2
75	-.25	-.05	4.12	.3	8.4	8.3	-3.2	-71.7	-.4	85	.00	.00	4.16	.0	8.2	9.5	3.5	-78.2	-.4
76	.29	-.02	4.15	.2	11.1	8.9	-5.4	-74.7	-.6	86	.05	.00	4.17	.2	5.5	9.9	7.3	-75.6	-.1
77	.06	-.01	4.10	.0	7.9	9.4	-1.6	-74.6	.0	87	.00	.00	4.18	.0	6.6	10.5	6.5	-74.1	.2
78	.14	-.01	4.12	.2	10.5	10.1	-3.6	-76.9	-.1	88	.13	-.01	4.20	.2	4.5	10.9	9.1	-70.5	-.2
79	.15	.00	4.13	.1	7.6	10.6	-.3	-76.5	.6	89	.16	-.02	4.21	.2	5.7	11.4	8.3	-68.2	-.4
80	.14	-.01	4.13	.2	9.6	11.2	-1.8	-78.0	.2	90	.13	-.01	4.22	.4	3.8	11.9	10.8	-63.9	-.7
81	.14	-.01	4.14	.3	7.0	11.6	1.3	-76.9	.6	91	-.15	-.01	4.23	.3	5.1	12.2	9.8	-60.9	-.6
82	.12	-.01	4.14	.1	8.8	12.4	.1	-77.6	.0	92	.13	-.01	4.24	.3	3.1	12.7	12.5	-55.9	-.6
83	.16	-.02	4.14	.4	6.3	12.8	3.0	-75.8	.5	93	-.25	-.03	4.28	.8	5.0	13.1	10.9	-52.9	
84	.00	.00	4.14	.0	8.2	13.2	2.1	-75.9	.0	94	-.29	-.04	4.30	1.1	2.8	13.7	13.6	-47.6	
85	-.09	.00	4.15	.0	5.2	13.9	5.2	-73.0	.6	95	-.28	-.05	4.30	1.4	4.6	14.2	12.2	-44.1	
86	.10	.00	4.16	.0	5.9	14.5	4.7	-70.9	.3	96	-.30	-.06	4.32	1.6	2.5	14.9	15.0	-38.6	
87	.15	-.01	4.18	.3	4.1	14.8	7.2	-66.9	.3	97	-.29	-.06	4.33	1.9	4.1	15.3	13.9	-34.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
98	-.28	-.05	4.34	2.1	1.9	15.6	16.8	-28.4		108	.26	-.03	4.45	1.2	2.9	22.5	15.2	9.5	
99	-.29	-.06	4.36	2.0	3.7	15.9	15.5	-24.1		109	.26	-.03	4.45	.7	.6	22.0	17.9	16.9	
100	-.29	-.06	4.36	2.1	1.6	16.6	18.2	-17.6		110	.24	-.02	4.45	.2	2.3	21.9	16.5	22.7	
101	-.28	-.05	4.37	2.0	3.4	16.7	17.0	-12.9		111	.19	-.02	4.45	.1	.9	22.4	18.3	29.9	
102	-.28	-.05	4.38	2.0	1.3	16.9	19.3	-6.2		112	.00	.00	4.42	.0	2.6	23.0	16.9	35.4	
103	-.27	-.05	4.39	1.9	3.2	17.8	17.9	-1.3		113	.00	.00	4.43	.0	.6	23.1	19.5	42.8	
104	-.28	-.06	4.40	1.9	.9	17.8	20.5	5.9		114	.00	.00	4.44	.0	2.5	23.6	18.0	48.4	
105	-.28	-.06	4.41	1.4	2.8	18.1	18.9	11.2		115	.00	.00	4.44	.1	.5	24.1	20.4	56.0	
106	-.27	-.05	4.42	.9	.5	18.4	21.7	18.8		116	.00	.00	4.45	.0	2.2	24.5	18.9	61.9	
107	-.28	-.05	4.43	.2	2.2	18.6	20.3	24.6		117	-.01	.00	4.46	.1	.1	25.0	21.6	69.9	
108	.27	-.03	4.43	.6	1.1	19.5	22.1	31.6		118	.00	.00	4.46	.0	2.0	25.4	19.8	75.9	
109	.23	-.02	4.43	.3	2.3	20.0	20.4	37.3		119	.00	.00	4.47	.0	-1.2	25.3	23.4	85.2	
110	.20	-.01	4.43	.2	.4	20.3	22.3	45.0		120	.06	.01	4.48	.1	-2.2	25.6	22.9	93.4	
111	.00	.00	4.40	.0	1.9	20.6	21.2	51.1		121	.09	.02	4.48	.4	-6.6	25.9	23.8	102.2	
112	.00	.00	4.41	.0	.5	21.4	23.3	58.7		122	.11	.00	4.49	.4	-6.6	25.8	23.7	110.8	
113	.00	.00	4.41	.0	2.0	21.9	21.9	64.7		123	-.11	.01	4.49	.5	-1.1	26.0	24.4	120.0	
114	.01	.00	4.42	.0	-1.1	22.0	24.4	72.8		124	-.12	.01	4.50	.5	-1.1	26.6	23.6	128.2	
115	.00	.00	4.43	.0	1.8	22.5	23.1	79.1		125	-.14	.01	4.51	.7	-1.2	26.5	24.7	137.4	
116	.00	.00	4.43	.0	-4.4	22.7	25.7	87.6		126	-.14	.00	4.51	.5	-8.8		24.3	146.3	
117	.00	.00	4.44	.0	1.7	23.3	24.1	94.0		Z = 37									
118	.04	.01	4.45	.1	-1.1	23.7	27.3	103.2		64	-.13	-.01	4.12	.8		-4.4		31.4	
119	.08	.01	4.45	.1	-.5	23.6	26.6	111.8		65	-.13	-.01	4.12	.3	20.5	-4.4		18.9	
120	.11	.01	4.46	.5	-.9	23.7	27.3	120.7		66	-.15	-.02	4.11	1.1	17.8	-3.8	-19.6	9.3	
121	.11	.00	4.47	.4	-.5	24.0	27.2	129.3		67	-.15	-.02	4.12	.5	18.2	-3.3	-19.4	-9	
122	-.12	.01	4.47	.5	-1.3	24.1	27.9	138.7		68	-.24	-.04	4.14	.8	15.6	-2.6	-16.0	-8.4	
123	-.12	.01	4.48	.5	-.8	24.2	27.6	147.5		69	-.28	-.06	4.15	1.3	17.7	-2.0	-17.9	-18.0	
124	-.15	.01	4.49	.8	-1.0		28.5	156.6		70	-.28	-.06	4.16	1.4	14.3	-1.3	-13.5	-24.1	
Z = 36										71	-.28	-.06	4.17	1.4	16.6	-1.1	-15.4	-32.7	
62	-.13	-.01	4.10	.3		-2.9		29.6		72	-.29	-.06	4.18	1.0	12.9	-1.2	-11.1	-37.5	
63	-.17	-.02	4.09	.5	18.0	-2.4		19.6		73	-.28	-.06	4.18	1.0	16.4	-4.4	-13.6	-45.8	
64	-.16	-.01	4.09	.5	20.5	-1.6	-24.1	7.2		74	.43	-.01	4.26	1.4	13.2	2.4	-9.8	-51.0	-.7
65	-.16	-.01	4.08	1.2	17.1	-1.2	-20.7	-1.8		75	.42	-.02	4.26	1.4	13.6	2.3	-10.3	-56.5	-.7
66	-.18	-.02	4.09	.8	17.7	-.3	-20.7	-11.4		76	.44	-.04	4.28	1.3	10.7	2.8	-4.8	-59.2	-1.3
67	-.25	-.04	4.11	1.0	14.9	.3	-17.4	-18.2		77	.41	-.02	4.27	1.0	13.0	3.2	-6.9	-64.0	-.8
68	-.28	-.05	4.13	1.2	17.0	1.2	-18.8	-27.2		78	.35	-.02	4.25	.8	9.9	3.7	-3.4	-65.9	-1.1
69	-.28	-.05	4.13	1.6	13.6	1.6	-14.8	-32.8		79	.32	-.01	4.25	.3	12.3	4.1	-5.6	-70.1	-.7
70	-.29	-.06	4.14	1.6	16.4	2.2	-16.9	-41.1		80	.06	-.01	4.18	.1	9.5	4.6	-2.2	-71.5	-.7
71	-.29	-.06	4.15	1.1	13.0	2.4	-13.3	-46.0		81	.08	-.01	4.19	.0	11.9	5.1	-4.3	-75.3	-.1
72	-.29	-.06	4.16	1.2	15.6	5.0	-16.0	-53.5	-.6	82	.00	.00	4.19	.0	9.1	5.6	-.9	-76.3	.2
73	-.28	-.06	4.16	1.0	10.4	5.1	-10.1	-55.9	-1.0	83	.00	.00	4.19	.0	11.2	6.0	-2.4	-79.5	.4
74	.43	-.03	4.25	1.3	13.8	6.1	-10.6	-61.6	-.6	84	.15	.00	4.22	.1	8.6	6.6	.6	-80.0	.3
75	.43	-.03	4.26	1.0	10.1	6.4	-7.0	-63.6	-.6	85	.00	.00	4.20	.0	10.3	7.0	-.6	-82.2	.0
76	.39	-.02	4.24	.9	12.6	6.9	-9.0	-68.1	-.9	86	-.02	.00	4.21	.3	7.9	7.6	2.5	-82.0	-.8
77	.34	-.02	4.22	.6	9.4	7.4	-5.4	-69.4	-.7	87	.02	.00	4.21	.1	9.6	8.0	1.6	-83.5	-1.1
78	.38	-.03	4.24	.3	11.9	7.7	-7.4	-73.3	-.9	88	.07	-.01	4.22	.7	6.5	8.7	4.7	-82.0	-.6
79	.04	.00	4.15	.0	9.0	8.1	-4.1	-74.2	-.2	89	.06	-.01	4.23	.3	7.3	8.9	4.2	-81.2	-.5
80	.14	-.01	4.18	.0	11.4	8.6	-6.0	-77.6	-.3	90	.10	.00	4.24	.1	5.6	9.5	6.1	-78.7	-.7
81	.00	.00	4.16	.0	8.6	9.2	-2.7	-78.1	.4	91	-.12	-.01	4.26	.2	6.6	9.8	5.5	-77.2	-.5
82	.12	.00	4.18	.0	10.7	9.8	-4.4	-80.7	.1	92	-.15	-.01	4.27	.4	4.6	10.4	8.4	-73.8	-1.0
83	.14	-.01	4.19	.2	8.0	10.3	-1.2	-80.7	.7	93	.18	-.02	4.30	.5	6.2	10.8	7.2	-71.9	-.7
84	.00	.00	4.18	.0	9.9	10.9	-2.5	-82.5	.1	94	-.23	-.03	4.31	.4	3.9	11.3	10.0	-67.8	-.8
85	.02	.00	4.18	.3	7.2	10.9	.5	-81.7	.2	95	-.23	-.03	4.32	1.0	6.1	11.9	8.3	-65.8	.0
86	-.04	-.01	4.19	.1	9.2	11.9	-.8	-82.8	-.4	96	.31	.00	4.38	1.4	3.6	12.4	11.2	-61.4	.2
87	-.08	.00	4.20	.2	5.9	12.4	2.9	-80.6	-.1	97	.34	.00	4.40	1.8	5.7	12.7	9.6	-59.0	.6
88	.00	.00	4.20	.0	7.1	12.8	2.4	-79.6	-.1	98	.34	-.01	4.41	2.2	3.5	13.2	12.6	-54.4	.1
89	.10	.00	4.22	.1	4.9	13.3	4.7	-76.5	-.2	99	.35	-.01	4.42	2.7	5.2	13.6	11.1	-51.5	.7
90	-.12	.00	4.23	.2	6.3	13.8	4.0	-74.7	-.3	100	.36	-.01	4.44	3.1	3.1	14.3	13.8	-46.6	
91	.16	-.02	4.25	.3	4.1	14.1	6.5	-70.7	-.6	101	.34	-.02	4.44	3.2	4.6	14.6	12.5	-43.1	-.5
92	-.19	-.02	4.27	.5	5.8	14.8	5.4	-68.4	-.3	102	.35	-.02	4.45	3.3	2.5	14.9	15.3	-37.6	
93	.18	-.02	4.27	.3	3.4	15.1	8.1	-63.8	-.2	103	.33	-.02	4.46	3.1	4.3	15.6	13.8	-33.8	
94	-.23	-.03	4.30	1.0	5.5	15.7	6.5	-61.3		104	.34	-.03	4.47	3.2	1.9	15.8	16.5	-27.7	
95	-.27	-.04	4.32	1.2	3.1	16.0	9.6	-56.3		105	.35	-.03	4.47	2.8	3.9	16.3	15.0	-23.5	
96	-.28	-.05	4.33	1.6	5.4	16.8	7.8	-53.6		106	.35	-.03	4.49	2.8	1.6	16.6	17.7	-17.0	
97	.35	.00	4.39	1.9	3.0	17.1	10.5	-48.5		107	.31	-.03	4.48	2.3	3.7	16.9	16.0	-12.6	
98	.35	-.01	4.40	2.5	4.8	17.9	9.2	-45.2		108	.34	-.04	4.49	2.0	1.2	17.3	18.7	-5.7	
99	.36	-.02	4.42	2.9	2.5	18.5	12.0	-39.6		109	.31	-.03	4.49	1.4	3.4	17.8	16.9	-1.0	
100	.33	-.01	4.42	2.9	4.3	19.0	10.8	-35.8		110	.31	-.03	4.50	.7	.9	18.0	19.6	6.2	
101	.35	-.02	4.43	3.1	2.2	19.6	13.2	-29.9		111	.00	.00	4.43	.0	2.7	18.4	18.0	11.6	
102	.33	-.02	4.43	2.9	3.7	19.9	12.1	-25.5		112	.00	.00	4.44	.0	1.2	18.8	20.4	18.4	
103	.34	-.03	4.44	3.1	1.8	20.4	14.6	-19.2		113	.00	.00	4.44	.0	3.2	19.4	18.7	23.3	
104	.32	-.03	4.44	2.7	3.4	20.5	13.2	-14.5		114	.00	.00	4.45	.0	1.0	19.7	21.4	30.4	
105	.31	-.03	4.45	2.6	1.3	21.0	15.7	-7.8		115	-.03	.00	4.46	.0	2.8	20.1	19.9	35.6	
106	.31	-.03	4.45	2.2	3.3	21.4	14.1	-3.0		116	.00	.00	4.47	.0	.7	20.3	22.4	43.0	
107	.30	-.03	4.45	1.9	.8	21.8	16.9	4.3		117	-.01	.00	4.47	.0	2.8	20.9	21.1	48.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
118	-.01	.00	4.48	.0	.2	21.0	23.5	56.2		128	-.06	-.01	4.55	.1	-.2	25.1	22.8	112.6	
119	-.01	.00	4.49	.0	2.4	21.4	22.0	61.8		129	-.07	-.01	4.55	.0	-.9	25.4	23.6	121.5	
120	-.04	.00	4.49	.2	-.7	22.0	25.1	70.6		130	-.05	-.01	4.56	.0	-.4		23.3	130.0	
121	.07	.01	4.50	.1	.3	22.4	24.5	78.4		Z = 39									
122	.08	.01	4.50	.4	-.7	22.3	25.4	87.1		68	-.07	-.01	4.17	1.0		-.4.7		30.6	
123	.09	.00	4.51	.4	-.4	22.5	25.2	95.5		69	.34	-.02	4.24	.5	19.3	-.4.4		19.3	
124	.10	.00	4.52	.5	-.9	22.7	26.1	104.6		70	.29	-.01	4.23	.6	16.6	-.3.6	-18.0	10.8	
125	-.11	.00	4.52	.4	-.1	22.7	25.6	112.8		71	.32	-.01	4.25	1.2	19.0	-.3.2	-19.8	-.1	
126	-.12	.01	4.53	.6	-1.2	22.7	26.8	122.1		72	-.27	-.06	4.21	1.4	15.3	-.2.8	-15.6	-7.3	
127	-.11	.00	4.53	.5	-.3	23.2	26.1	130.4		73	.39	-.02	4.27	1.2	18.2	-.1.8	-17.9	-17.4	
128	-.10	-.01	4.53	.4	-1.1		27.0	139.6		74	.43	-.03	4.30	1.6	14.7	-1.0	-14.3	-24.0	
Z = 38										75	.42	-.04	4.30	1.5	17.0	-1.0	-16.4	-32.9	
66	-.09	-.01	4.15	.1		-2.7		28.9		76	.43	-.03	4.32	1.5	13.6	-.4	-11.8	-38.5	
67	-.16	-.02	4.15	1.0	18.4	-2.0		18.6		77	.43	-.04	4.32	1.6	16.5	-.1	-14.4	-46.9	
68	-.18	-.02	4.16	.6	19.0	-1.2	-22.9	7.7		78	.45	-.05	4.33	1.5	13.2	2.2	-10.8	-52.0	
69	.29	-.02	4.19	.4	15.8	-1.0	-19.4	-.1		79	.38	-.03	4.33	1.1	13.5	2.3	-10.9	-57.5	-.9
70	-.24	-.04	4.17	1.2	18.6	-.1	-21.4	-10.6		80	.40	-.04	4.33	.8	10.6	2.8	-5.7	-60.0	-3.3
71	-.28	-.06	4.19	1.4	14.8	.5	-17.3	-17.4		81	.41	-.04	4.33	.1	13.0	2.9	-8.0	-64.9	-1.1
72	-.28	-.05	4.20	1.4	17.2	1.0	-19.2	-26.5		82	.00	.00	4.23	.0	10.6	3.7	-4.8	-67.5	-.7
73	-.28	-.05	4.21	1.4	13.9	2.0	-14.9	-32.3		83	.00	.00	4.23	.0	12.9	4.2	-6.8	-72.3	.0
74	.40	-.02	4.27	1.5	17.0	2.7	-17.3	-41.2		84	.00	.00	4.24	.0	10.1	4.6	-3.6	-74.4	.3
75	.42	-.02	4.28	1.5	13.1	2.5	-13.3	-46.2		85	.00	.00	4.24	.0	12.1	5.1	-5.0	-78.5	.6
76	.42	-.03	4.29	1.7	16.2	5.1	-15.9	-54.3		86	-.01	.00	4.25	.0	9.4	5.6	-1.8	-79.9	.6
77	.42	-.04	4.30	1.4	10.8	5.3	-10.2	-57.1	-.9	87	.00	.00	4.25	.0	11.5	6.1	-3.4	-83.3	.3
78	.37	-.02	4.29	1.3	13.5	5.8	-10.5	-62.5	-.7	88	-.05	.00	4.26	.7	9.1	6.5	-.5	-84.3	.0
79	.39	-.03	4.30	.9	10.1	6.0	-7.1	-64.6	-.9	89	.00	.00	4.26	.0	10.1	7.0	-1.0	-86.4	-1.3
80	.34	-.02	4.30	.4	12.8	6.5	-9.3	-69.3	-1.0	90	-.06	.00	4.27	.2	7.1	7.4	2.5	-85.4	-1.0
81	.00	.00	4.20	.0	9.8	6.8	-6.1	-71.0	-.5	91	.08	.00	4.28	.1	8.2	8.0	1.8	-85.6	-.8
82	.00	.00	4.21	.0	12.4	7.4	-7.9	-75.4	-.6	92	.08	-.01	4.29	.1	6.1	8.2	4.4	-83.6	-1.2
83	.00	.00	4.21	.0	9.8	8.0	-4.7	-77.1	.3	93	.00	.00	4.29	.0	7.7	8.3	3.5	-83.2	-1.1
84	.00	.00	4.22	.0	11.7	8.5	-6.3	-80.7	.0	94	.06	-.01	4.30	.1	5.9	9.1	5.8	-81.0	-1.4
85	.00	.00	4.22	.0	9.0	8.9	-3.1	-81.6	.5	95	-.15	-.01	4.32	.2	7.1	9.5	4.8	-80.0	-.1
86	.00	.00	4.23	.0	11.0	9.6	-4.7	-84.6	.0	96	.15	-.01	4.33	.2	4.9	10.0	7.5	-76.9	-1.4
87	-.05	.00	4.23	.8	8.7	10.5	-1.9	-85.2	.3	97	-.18	-.02	4.36	.7	6.8	10.4	5.9	-75.6	-.6
88	.00	.00	4.24	.0	9.6	10.5	-2.4	-86.7	-1.2	98	.33	-.01	4.44	1.4	4.5	10.7	8.8	-72.1	-.4
89	-.09	-.01	4.25	.3	6.7	10.6	1.1	-85.3	-.9	99	.36	-.01	4.46	1.7	6.8	11.1	6.9	-70.8	.6
90	.09	-.02	4.26	.0	7.6	10.9	.6	-84.8	-1.1	100	.38	-.02	4.48	2.4	4.4	11.8	9.9	-67.1	-.2
91	.00	.00	4.26	.0	5.9	11.3	2.9	-82.7	-.9	101	.37	-.02	4.48	2.6	6.2	12.2	8.3	-65.3	.3
92	.06	-.01	4.27	.0	7.5	12.2	1.4	-82.2	-.7	102	.38	-.03	4.49	3.1	3.8	12.7	11.1	-61.0	-.9
93	-.13	-.01	4.29	.2	5.1	12.7	4.0	-79.2	-.9	103	.40	-.04	4.50	3.1	5.6	13.0	9.7	-58.6	
94	-.16	-.01	4.31	.4	6.7	13.2	3.2	-77.8	-1.0	104	.35	-.02	4.51	3.4	3.3	13.4	12.5	-53.7	
95	-.18	-.02	4.32	.3	4.4	13.6	5.9	-74.2	-1.0	105	.39	-.04	4.51	3.1	5.1	13.9	11.1	-50.8	
96	-.23	-.03	4.34	.9	6.5	14.0	4.3	-72.6	-.4	106	.34	-.03	4.52	2.6	2.9	14.4	13.8	-45.6	
97	-.23	-.03	4.35	1.4	4.1	14.5	7.0	-68.6	-.2	107	.35	-.03	4.54	2.6	4.5	14.6	12.3	-42.0	
98	.34	-.01	4.43	1.9	6.4	15.3	5.1	-67.0	.3	108	.41	-.05	4.55	2.2	2.5	15.2	14.9	-36.5	
99	.36	-.01	4.45	2.4	3.7	15.5	8.2	-62.6	.5	109	.39	-.05	4.55	1.9	4.0	15.3	13.7	-32.5	
100	.36	-.01	4.46	2.9	5.8	16.1	6.8	-60.4	.2	110	.34	-.04	4.55	1.6	2.1	15.9	16.4	-26.5	
101	.36	-.02	4.47	3.2	3.3	16.3	9.6	-55.6	.2	111	.34	-.04	4.56	.8	3.8	16.1	14.7	-22.2	
102	.37	-.02	4.49	3.4	5.3	17.0	8.1	-52.9	-.2	112	.39	-.05	4.58	.2	1.6	16.6	17.4	-15.7	
103	.35	-.02	4.49	3.6	2.8	17.3	10.9	-47.6		113	.00	.00	4.47	.0	4.0	17.0	15.1	-11.6	
104	.37	-.03	4.49	3.3	4.7	17.7	9.5	-44.2		114	.00	.00	4.48	.0	2.2	17.7	17.7	-5.8	
105	.34	-.03	4.49	2.8	2.3	18.0	12.3	-38.5		115	.00	.00	4.48	.0	4.0	18.0	15.9	-1.7	
106	.35	-.03	4.50	2.9	4.3	18.5	10.8	-34.7		116	.00	.00	4.49	.0	1.6	18.3	18.8	4.7	
107	.34	-.03	4.52	2.4	2.0	18.9	13.4	-28.6		117	.00	.00	4.50	.0	3.6	18.7	17.5	9.2	
108	.33	-.03	4.51	2.2	3.9	19.1	12.1	-24.5		118	-.03	.00	4.51	.2	1.7	18.9	19.7	15.6	
109	.34	-.04	4.52	1.8	1.5	19.4	14.6	-17.9		119	.00	.00	4.51	.0	3.1	19.3	18.4	20.6	
110	.31	-.03	4.52	1.3	3.6	19.7	13.1	-13.4		120	-.01	.00	4.52	.2	1.2	19.7	20.9	27.5	
111	.39	-.05	4.55	.4	1.1	19.9	15.8	-6.4		121	.00	.00	4.52	.0	3.0	20.2	19.4	32.6	
112	.00	.00	4.45	.0	3.6	20.8	13.8	-1.9		122	.00	.00	4.53	.0	-.3	20.2	23.0	40.9	
113	.00	.00	4.46	.0	1.6	21.1	16.2	4.6		123	.00	.00	4.53	.0	.7	20.7	22.4	48.3	
114	.00	.00	4.46	.0	3.7	21.6	14.8	9.0		124	.00	.00	4.54	.0	-.5	20.8	23.9	56.9	
115	.00	.00	4.47	.0	1.3	22.0	17.4	15.7		125	.00	.00	4.55	.0	.3	21.2	23.2	64.6	
116	.00	.00	4.48	.0	3.2	22.3	15.9	20.6		126	-.03	.00	4.55	.0	-.6	21.2	24.4	73.2	
117	-.01	.00	4.49	.2	1.4	23.1	18.0	27.2		127	.00	.00	4.55	.0	.1	21.4	24.0	81.2	
118	.00	.00	4.49	.0	2.6	23.0	17.0	32.6		128	-.06	-.01	4.56	.1	-.6	21.8	24.8	89.8	
119	-.01	.00	4.50	.2	.9	23.6	19.3	39.8		129	.00	.00	4.57	.0	.0	22.0	24.3	97.9	
120	.00	.00	4.51	.0	2.4	23.6	18.0	45.5		130	.00	.00	4.57	.0	-.8	22.1	25.3	106.8	
121	.00	.00	4.51	.0	-.3	24.0	21.3	53.8		131	.00	.00	4.57	.0	-.3	22.2	25.1	115.1	
122	.00	.00	4.51	.0	.2	23.9	20.8	61.8		132	-.02	-.01	4.58	.1	-.9		25.9	124.0	
123	.06	.01	4.52	.2	-.5	24.1	22.0	70.3		Z = 40									
124	-.03	.00	4.53	.1	-.1	24.4	21.6	78.5		70	.27	.00	4.26	.5		-2.2		28.8	
125	-.07	.00	4.53	.2	-.6	24.7	22.6	87.1		71	.27	-.01	4.25	.5	17.1	-1.7		19.7	
126	-.06	.00	4.54	.1	.0	24.8	22.0	95.3		72	.29	-.01	4.26	1.0	19.5	-1.1	-23.1	8.3	
127	-.09	.00	4.55	.3	-1.0	25.0	23.2	104.3		73	-.26	-.06	4.24	1.2	15.9	-.5	-19.4	.5	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
74	-.26	-.06	4.24	1.0	18.3	-.4	-21.2	-9.7		84	.00	.00	4.28	.0	11.4	2.3	-6.0	-60.5	
75	-.28	-.05	4.26	1.0	14.9	-.2	-17.3	-16.5		85	.00	.00	4.28	.0	13.9	2.7	-8.2	-66.3	-.9
76	.40	-.03	4.32	1.9	18.3	1.0	-20.1	-26.7		86	.03	.00	4.28	.1	11.2	3.2	-5.2	-69.4	-.4
77	.40	-.03	4.33	1.2	13.9	1.3	-15.4	-32.5		87	.00	.00	4.29	.1	13.2	3.7	-7.1	-74.5	.3
78	.42	-.03	4.34	1.5	16.8	1.6	-18.3	-41.2		88	-.02	.00	4.29	.1	10.3	4.1	-3.8	-76.7	.7
79	.46	-.06	4.36	1.1	13.4	1.8	-14.0	-46.5		89	.00	.00	4.30	.1	12.4	4.5	-5.3	-81.1	.5
80	.40	-.04	4.35	1.0	15.8	4.1	-15.9	-54.3		90	-.03	.00	4.30	.4	9.7	4.7	-2.2	-82.8	.1
81	.40	-.04	4.36	.5	10.7	4.2	-10.6	-56.9	-2.0	91	.00	.00	4.30	.1	11.5	5.5	-3.8	-86.2	-.5
82	.31	-.02	4.32	.1	13.9	5.1	-11.5	-62.7	-1.5	92	-.06	.00	4.31	.7	8.3	6.3	.2	-86.4	-1.1
83	.00	.00	4.25	.0	10.9	5.4	-8.4	-65.5	-.9	93	-.07	-.01	4.32	.2	8.9	6.5	-.3	-87.2	.0
84	.00	.00	4.26	.0	13.4	5.8	-10.4	-70.8		94	.12	-.01	4.34	.3	7.1	6.8	2.2	-86.2	-2
85	.00	.00	4.26	.0	10.7	6.4	-7.2	-73.5	.3	95	.12	.00	4.35	.5	8.7	7.3	.8	-86.8	.1
86	.00	.00	4.27	.0	12.6	6.8	-8.7	-78.1	.2	96	.06	-.01	4.35	.4	6.2	7.5	3.9	-85.0	-.6
87	-.02	.00	4.27	.1	9.9	7.3	-5.4	-79.9	.6	97	.12	.00	4.37	.3	8.4	8.2	1.9	-85.3	-.3
88	.00	.00	4.28	.0	12.0	7.8	-7.1	-83.9	.3	98	.12	.00	4.38	.5	5.7	8.6	4.8	-82.9	-.7
89	-.05	.00	4.28	.8	9.6	8.4	-4.3	-85.4	.5	99	-.19	-.02	4.40	.8	7.8	9.0	3.4	-82.6	.3
90	.00	.00	4.28	.0	10.6	8.9	-5.2	-88.0	-.8	100	.29	.00	4.47	1.5	5.4	9.5	6.4	-79.9	.0
91	-.09	.00	4.30	.2	7.4	9.2	-1.2	-87.4	-.5	101	.33	-.01	4.48	1.6	7.5	9.6	4.5	-79.4	.4
92	-.06	-.01	4.30	.0	8.7	9.7	-1.6	-88.0	-.5	102	.32	-.01	4.50	2.2	5.2	10.2	7.2	-76.5	.1
93	.10	.00	4.31	.3	6.7	10.4	.5	-86.7	-.5	103	.33	-.01	4.51	2.3	6.9	10.5	6.1	-75.3	.0
94	.06	-.01	4.32	.2	8.2	10.9	-.6	-86.8	-.5	104	.34	-.02	4.52	2.7	4.6	10.8	9.0	-71.8	-.4
95	.04	.00	4.32	.1	6.1	11.1	2.0	-84.8	-.9	105	.37	-.03	4.53	2.8	6.6	11.3	7.4	-70.3	-.6
96	.23	-.03	4.36	.3	7.7	11.7	.6	-84.4	-1.1	106	.33	-.02	4.54	3.0	4.1	11.8	10.2	-66.3	
97	.12	-.01	4.36	.3	5.2	11.9	3.8	-81.5	-1.4	107	.34	-.03	4.55	2.7	5.9	12.1	8.8	-64.2	
98	-.21	-.03	4.38	.8	7.4	12.6	2.0	-80.9	-.4	108	.32	-.03	4.55	2.4	3.7	12.7	11.0	-59.8	
99	.33	-.01	4.45	1.4	4.9	13.0	4.8	-77.8	.0	109	.33	-.03	4.55	2.4	5.6	13.2	9.9	-57.3	
100	.32	-.01	4.47	1.8	7.3	13.5	3.0	-77.0	.4	110	.31	-.03	4.56	1.8	3.1	13.5	12.3	-52.4	
101	.35	-.01	4.48	2.3	4.7	13.7	5.8	-73.6	.1	111	-.24	-.05	4.52	1.4	4.9	13.6	11.1	-49.2	
102	.32	-.01	4.49	2.7	6.6	14.2	4.3	-72.1	.4	112	-.27	-.07	4.53	1.0	2.7	14.2	14.1	-43.8	
103	.38	-.03	4.51	3.0	4.2	14.6	7.0	-68.3	-1.1	113	-.27	-.07	4.54	.7	5.0	15.0	12.0	-40.8	
104	.34	-.02	4.52	3.2	6.1	15.0	5.5	-66.3		114	-.27	-.07	4.54	.3	2.5	15.7	15.0	-35.2	
105	.36	-.03	4.53	3.3	3.7	15.4	8.4	-61.9		115	-.18	-.03	4.53	.1	4.7	15.6	13.3	-31.8	
106	.39	-.04	4.53	3.2	5.6	15.9	6.9	-59.4		116	.00	.00	4.52	.0	2.8	16.2	15.7	-26.5	
107	.35	-.03	4.54	2.7	3.1	16.1	9.8	-54.4		117	.00	.00	4.53	.0	4.7	16.3	14.2	-23.1	
108	.32	-.03	4.54	2.7	5.1	16.7	8.4	-51.4		118	-.02	.00	4.53	.0	2.5	16.6	16.6	-17.6	
109	.34	-.04	4.55	2.1	2.8	16.9	11.1	-46.2		119	-.02	.00	4.54	.0	4.5	17.2	14.9	-14.0	
110	.34	-.04	4.56	1.9	4.8	17.7	9.5	-42.9		120	-.03	.00	4.55	.1	2.3	17.8	18.1	-8.2	
111	.36	-.05	4.56	1.5	2.1	17.7	12.2	-36.9		121	-.02	.00	4.55	.0	4.0	18.0	16.6	-4.1	
112	-.24	-.05	4.52	.8	4.2	18.2	10.7	-33.1		122	-.03	.00	4.56	.2	1.8	18.3	19.2	2.2	
113	.00	.00	4.48	.0	1.8	18.4	14.0	-26.8		123	-.02	.00	4.57	.0	3.7	18.7	17.8	6.5	
114	-.14	-.02	4.51	.2	4.8	19.1	11.7	-23.5		124	-.04	.00	4.57	.3	.6	19.2	21.1	14.0	
115	.00	.00	4.50	.0	2.2	19.1	14.1	-17.6		125	-.02	.00	4.58	.1	1.0	19.2	20.6	21.0	
116	.00	.00	4.51	.0	4.6	19.7	12.4	-14.1		126	.06	.01	4.58	.2	.1	19.6	22.0	29.0	
117	.00	.00	4.51	.0	2.2	20.3	14.9	-8.3		127	-.05	.00	4.59	.1	.8	19.9	21.5	36.3	
118	.00	.00	4.52	.0	3.9	20.6	13.5	-4.1		128	-.05	.00	4.59	.2	-.2	19.9	22.9	44.5	
119	.00	.00	4.53	.0	1.8	20.6	16.3	2.2		129	-.05	.00	4.60	.2	.9	20.5	22.1	51.8	
120	.00	.00	4.53	.0	3.8	21.3	14.8	6.6		130	-.10	-.01	4.60	.3	-.5	20.5	23.5	60.3	
121	-.01	.00	4.54	.2	1.5	21.6	17.3	13.2		131	-.11	-.01	4.61	.2	.6	21.0	22.7	67.8	
122	.00	.00	4.55	.0	3.3	21.9	15.8	17.9		132	-.06	.00	4.62	.2	-.6	20.8	24.0	76.5	
123	.00	.00	4.55	.0	.1	22.3	19.4	25.9		133	.00	.00	4.62	.1	.2	21.0	23.8	84.4	
124	.00	.00	4.55	.0	1.0	22.7	18.9	33.0		134	-.04	.00	4.63	.2	-.6	21.3	24.7	93.1	
125	.06	.01	4.56	.1	-.3	22.8	20.3	41.3		135	-.04	.00	4.63	.1	-.1	21.4	24.3	101.2	
126	.00	.00	4.57	.0	.6	23.0	19.8	48.8		136	-.03	.00	4.64	.1	-.7		25.1	110.1	
127	-.04	.00	4.57	.1	-.3	23.3	20.9	57.2		Z = 42									
128	.00	.00	4.58	.0	.3	23.4	20.5	65.0		74	.28	-.01	4.31	1.0		-.1.8		28.9	
129	-.06	-.01	4.58	.1	-.5	23.5	21.8	73.6		75	-.25	-.05	4.29	.9		-.1.6		20.4	
130	.00	.00	4.59	.0	.2	23.7	21.1	81.5		76	-.26	-.06	4.29	.9		19.4	-1.0	-23.1	9.1
131	.00	.00	4.59	.0	-.4	24.0	22.2	90.0		77	-.28	-.06	4.31	.5		15.7	-.8	-19.0	1.5
132	.00	.00	4.60	.0	-.1	24.2	21.6	98.1		78	.36	-.03	4.35	1.1		19.1	-.2	-21.5	-9.5
133	-.03	.00	4.60	.0	-.9	24.2	22.7	107.1		79	.40	-.04	4.37	1.0		15.0	.8	-17.6	-16.5
134	.00	.00	4.61	.0	-.1		22.2	115.3		80	.39	-.03	4.39	.6		17.7	.8	-19.6	-26.1
Z = 41										81	.40	-.04	4.41	.2		14.0	.8	-16.0	-32.0
72	.31	-.02	4.29	.7		-.4.4		31.4		82	.00	.00	4.29	.0		16.6	1.5	-17.3	-40.5
73	.29	-.01	4.29	.8		19.6	-.4.3	19.9		83	.00	.00	4.29	.2		13.7	2.2	-13.9	-46.1
74	-.25	-.05	4.26	1.0		16.4	-3.7	11.5		84	.00	.00	4.30	.0		16.5	4.7	-16.4	-54.5
75	-.25	-.05	4.27	.9		18.8	-3.2	-19.6	.8	85	.00	.00	4.30	.0		11.6	4.9	-11.2	-58.1
76	-.26	-.05	4.27	.8		15.5	-2.6	-15.7	-6.6	86	.00	.00	4.30	.0		14.2	5.2	-11.7	-64.2
77	.38	-.02	4.35	1.5		18.5	-2.3	-18.5	-17.1	87	.00	.00	4.31	.0		11.4	5.3	-8.7	-67.4
78	.38	-.03	4.35	1.0		13.9	-2.2	-13.4	-22.9	88	.00	.00	4.31	.0		13.5	5.7	-10.4	-72.9
79	.43	-.04	4.38	1.2		17.7	-1.4	-16.1	-32.6	89	.00	.00	4.32	.1		11.0	6.4	-7.5	-75.8
80	.46	-.06	4.38	1.0		13.9	-.8	-12.3	-38.4	90	.00	.00	4.32	.0		12.8	6.8	-8.9	-80.6
81	.38	-.03	4.39	.7		15.9	-.8	-14.3	-46.3	91	.00	.00	4.32	.0		9.9	6.9	-5.5	-82.4
82	.37	-.03	4.37	.3		13.0	1.6	-10.7	-51.2	92	.00	.00	4.33	.0		12.3	7.7	-7.2	-86.6
83	.00	.00	4.27	.0		14.0	1.7	-11.0	-57.1	93	.06	.01	4.34	.2		8.3	7.7	-3.1	-86.8

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	
94	.00	.00	4.34	.0	9.6	8.5	-4.0	-88.4	.0	104	-.26	-.05	4.49	1.1	5.7	8.5	5.8	-82.6	.1	
95	.00	.00	4.35	.0	7.4	8.8	-1.4	-87.7	-.1	105	-.25	-.05	4.49	1.2	7.8	8.8	4.0	-82.4	.1	
96	.11	.00	4.37	.3	9.3	9.3	-2.8	-88.8	.0	106	.32	-.03	4.54	1.7	5.4	9.2	6.7	-79.7	-.1	
97	.17	-.01	4.39	.2	6.4	9.4	.3	-87.1	-.4	107	.32	-.03	4.55	1.7	7.4	9.8	5.1	-79.0	-.1	
98	.16	-.01	4.40	.1	8.6	9.7	-1.0	-87.7	-.4	108	.29	-.02	4.56	1.9	4.8	10.1	7.9	-75.8	-.2	
99	-.16	-.01	4.41	.0	6.4	10.4	1.5	-86.0	.0	109	.30	-.03	4.57	1.7	6.9	11.1	6.2	-74.6	.0	
100	-.19	-.02	4.42	.5	8.5	11.1	-.6	-86.4	.2	110	-.26	-.06	4.54	1.1	4.1	10.7	9.5	-70.6		
101	-.22	-.02	4.44	.9	5.6	11.2	2.8	-83.9	.4	111	-.27	-.07	4.55	1.4	6.6	11.8	7.4	-69.2		
102	-.22	-.02	4.45	1.1	7.9	11.6	1.1	-83.7	.2	112	-.26	-.06	4.56	.9	4.0	12.1	10.4	-65.1		
103	.33	-.01	4.51	1.8	5.8	12.2	3.5	-81.4	.6	113	-.26	-.06	4.56	.9	6.1	12.6	8.7	-63.1		
104	.35	-.02	4.53	2.0	7.5	12.8	1.8	-80.8	.5	114	-.26	-.06	4.57	.5	3.5	13.0	11.9	-58.6		
105	.35	-.02	4.54	2.3	5.0	13.2	4.6	-77.7	.4	115	-.24	-.06	4.58	.2	5.7	13.3	9.9	-56.2		
106	.32	-.02	4.55	2.4	6.9	13.5	3.1	-76.6	.3	116	.00	.00	4.54	.0	3.5	13.9	12.4	-51.7		
107	.34	-.02	4.55	2.6	4.5	14.0	6.0	-73.0	.1	117	.00	.00	4.55	.0	5.7	14.4	10.8	-49.3		
108	-.27	-.06	4.51	1.9	5.8	13.8	5.1	-70.7	-.1	118	.00	.00	4.55	.0	3.4	14.6	13.5	-44.7		
109	.32	-.03	4.57	2.0	4.5	14.7	7.4	-67.2		119	.00	.00	4.56	.0	5.3	15.0	12.1	-41.9		
110	-.27	-.07	4.53	1.8	5.6	14.6	5.9	-64.7		120	.00	.00	4.57	.0	3.3	15.6	14.4	-37.1		
111	-.26	-.06	4.54	1.3	3.6	15.1	8.9	-60.2		121	.00	.00	4.58	.0	5.5	15.6	12.4	-34.5		
112	-.27	-.07	4.54	1.2	5.7	16.0	7.2	-57.9		122	.00	.00	4.58	.2	3.2	16.3	14.6	-29.7		
113	-.24	-.05	4.55	.8	3.0	16.3	10.3	-52.8		123	.00	.00	4.59	.0	4.8	16.6	13.4	-26.4		
114	-.26	-.06	4.56	.5	5.4	16.7	8.4	-50.2		124	.00	.00	4.60	.0	2.1	16.4	16.9	-20.4		
115	-.24	-.06	4.56	.1	3.0	17.2	11.1	-45.1		125	.00	.00	4.60	.0	4.7	17.2	15.4	-17.0		
116	.00	.00	4.53	.0	5.2	17.7	9.5	-42.2		126	.02	.01	4.61	.0	.9	17.5	19.1	-9.8		
117	.00	.00	4.54	.0	3.2	18.1	12.0	-37.3		127	.00	.00	4.61	.0	1.9	17.9	18.2	-3.6		
118	.00	.00	4.54	.0	4.9	18.4	10.5	-34.2		128	.00	.00	4.62	.0	.5	18.1	19.7	3.9		
119	.00	.00	4.55	.0	2.7	18.6	13.0	-28.9		129	.00	.00	4.62	.0	1.3	18.2	19.3	10.7		
120	.00	.00	4.56	.0	5.5	19.6	10.9	-26.3		130	.08	.00	4.63	.1	.4	18.5	20.6	18.4		
121	.00	.00	4.57	.1	2.5	19.8	13.8	-20.7		131	.00	.00	4.64	.0	1.1	18.8	20.2	25.4		
122	.00	.00	4.57	.0	4.4	20.2	12.7	-17.0		132	-.04	.00	4.64	.1	.1	19.1	21.4	33.3		
123	.00	.00	4.58	.3	2.3	20.7	15.1	-11.3		133	.00	.00	4.65	.0	.9	19.4	20.9	40.5		
124	.00	.00	4.58	.0	3.9	20.9	13.3	-7.1		134	-.04	.00	4.65	.0	.1	19.5	21.9	48.5		
125	.00	.00	4.59	.0	.6	20.9	17.4	.4		135	.00	.00	4.66	.1	.7	19.8	21.4	55.8		
126	.00	.00	4.59	.0	1.5	21.4	16.7	7.0		136	-.03	.00	4.67	.0	-.6	19.8	22.6	64.5		
127	.05	.01	4.60	.0	.3	21.5	18.4	14.8		137	.00	.00	4.67	.0	.4	20.1	22.1	72.2		
128	.05	.01	4.61	.0	1.2	21.9	17.7	21.6		138	.00	.00	4.68	.0	-.5	20.2	23.2	80.7		
129	.08	.00	4.61	.1	.1	22.2	18.9	29.6		139	-.22	-.02	4.74	.4	.6	20.8	22.3	88.1		
130	.00	.00	4.62	.0	.8	22.2	18.5	36.9		140	-.23	-.02	4.75	.8	-.5		24.3	96.7		
131	-.03	.00	4.62	.1	-.1	22.5	19.8	45.1		Z = 44										
132	.00	.00	4.63	.0	.6	22.5	19.3	52.5		78	-.26	-.05	4.35	.5		-2.2		29.9		
133	.00	.00	4.63	.0	-.1	23.1	20.2	60.7		79	-.28	-.05	4.37	.3	16.8	-1.9		21.2		
134	.00	.00	4.64	.0	.4	23.3	19.9	68.4		80	-.25	-.05	4.35	.1	19.1	-1.7	-22.0	10.1		
135	-.03	.00	4.65	.0	-.5	23.4	21.1	77.0		81	-.25	-.05	4.36	.1	16.5	-.9	-18.5	1.7		
136	.00	.00	4.65	.0	.1	23.6	20.5	85.0		82	.00	.00	4.32	.0	18.5	.1	-20.8	-8.7		
137	.00	.00	4.66	.0	-.6	23.7	21.4	93.6		83	.00	.00	4.33	.0	15.8	.5	-17.6	-16.4		
138	-.22	-.02	4.72	.3	.0		21.0	101.7		84	.00	.00	4.33	.0	17.5	.9	-19.3	-25.9		
Z = 43										85	.00	.00	4.34	.0	14.4	1.3	-15.4	-32.1		
	76	-.27	-.06	4.32	.5		-4.6	32.2		86	.00	.00	4.34	.0	17.3	1.8	-17.9	-41.3		
	77	-.27	-.07	4.32	.5	19.8	-4.1	20.5		87	.00	.00	4.34	.0	14.0	2.0	-14.2	-47.2		
	78	-.27	-.06	4.33	.4	16.6	-3.2	-18.0	12.0	88	.00	.00	4.35	.0	16.4	4.1	-16.4	-55.5		
	79	-.26	-.06	4.33	.3	18.9	-3.4	-20.1	1.1	89	.00	.00	4.35	.0	12.1	4.4	-11.7	-59.6		
	80	.35	-.02	4.39	.5	15.6	-2.7	-16.6	-6.5	90	.00	.00	4.36	.0	14.3	4.7	-11.9	-65.8		
	81	.00	.00	4.30	.0	17.5	-2.9	-17.6	-15.9	91	.00	.00	4.36	.1	11.6	4.9	-9.1	-69.3	.7	
	82	.00	.00	4.30	.0	15.3	-1.5	-14.5	-23.2	92	.00	.00	4.36	.0	13.8	5.4	-10.8	-75.0		
	83	.00	.00	4.31	.0	17.1	-.9	-15.8	-32.2	93	.01	.00	4.37	.1	10.7	5.5	-7.4	-77.6	.4	
	84	.01	.00	4.31	.1	13.9	-.7	-12.3	-38.1	94	.00	.00	4.37	.0	13.2	6.3	-9.0	-82.7	.2	
	85	-.01	.00	4.32	.0	16.8	-.4	-14.7	-46.8	95	.06	.00	4.38	.2	9.1	6.7	-5.0	-83.8	.3	
	86	.00	.00	4.32	.0	13.7	1.7	-11.2	-52.5	96	.00	.00	4.39	.0	10.4	7.1	-6.0	-86.2	.1	
	87	-.01	.00	4.32	.0	14.3	1.8	-11.5	-58.7	97	.00	.00	4.39	.0	8.3	7.6	-3.3	-86.3	.2	
	88	.00	.00	4.33	.0	11.9	2.3	-6.9	-62.5	98	.11	.00	4.41	.2	9.9	8.1	-4.6	-88.2	.0	
	89	.00	.00	4.33	.0	13.9	2.7	-8.8	-68.3	.8	99	.13	.00	4.43	.3	7.7	8.4	-2.0	-87.8	.2
	90	-.03	.00	4.34	.1	11.4	3.1	-5.8	-71.6	.4	100	.13	.00	4.44	.6	9.6	9.1	-3.7	-89.3	.1
	91	.00	.00	4.34	.0	13.4	3.6	-7.6	-76.9	.9	101	.18	-.01	4.46	.4	6.9	9.6	-.5	-88.1	.2
	92	.01	.00	4.34	.4	10.6	4.3	-4.4	-79.4	.4	102	.17	-.01	4.47	.4	9.2	9.9	-2.3	-89.3	.2
	93	.00	.00	4.35	.0	12.4	4.4	-6.1	-83.7	.1	103	.21	.00	4.48	.8	6.6	10.3	.4	-87.8	.5
	94	.06	.00	4.36	.3	8.8	4.8	-1.7	-84.4	.2	104	.21	-.01	4.49	.8	8.7	10.8	-1.3	-88.4	.4
	95	.00	.00	4.36	.0	10.0	5.2	-2.5	-86.3	.3	105	.29	-.01	4.53	1.1	6.0	11.0	1.9	-86.3	.4
	96	.08	.00	4.38	.0	7.8	5.6	.2	-86.0	.2	106	-.26	-.05	4.52	1.1	8.2	11.3	.1	-86.4	.1
	97	.11	.00	4.39	.1	9.5	5.9	-1.1	-87.4	.2	107	.26	-.01	4.54	1.5	5.8	11.8	2.7	-84.2	.3
	98	.15	.00	4.41	.3	7.4	6.9	1.5	-86.7	.										

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
114	.26	-.02	4.59	.9	6.7	14.6	4.8	-70.4	-.4	124	.00	.00	4.62	.1	3.6	14.7	13.2	-47.2	
115	-.24	-.05	4.59	.4	3.8	14.8	7.9	-66.1		125	.00	.00	4.63	.0	5.6	14.7	11.6	-44.7	
116	-.23	-.05	4.59	.1	6.0	15.2	6.5	-64.1		126	-.01	.00	4.63	.4	3.7	15.3	13.7	-40.3	
117	.00	.00	4.56	.0	4.1	15.7	8.9	-60.1		127	.00	.00	4.64	.1	5.1	15.8	12.3	-37.3	
118	.00	.00	4.57	.0	6.1	16.1	7.4	-58.2		128	.00	.00	4.64	.1	1.5	16.2	16.7	-30.7	
119	.00	.00	4.57	.0	3.9	16.6	9.8	-54.0		129	.00	.00	4.65	.0	2.3	16.5	16.2	-24.9	
120	.00	.00	4.58	.0	5.6	16.9	8.5	-51.5		130	.00	.00	4.66	.0	1.1	16.7	17.9	-18.0	
121	.00	.00	4.59	.0	3.5	17.1	11.2	-46.9		131	.00	.00	4.66	.0	2.1	17.1	17.1	-12.0	
122	.00	.00	4.59	.0	5.5	17.1	9.5	-44.3		132	.00	.00	4.67	.0	.7	17.1	18.7	-4.7	
123	.00	.00	4.60	.1	3.5	17.4	11.9	-39.8		133	.00	.00	4.67	.0	1.8	17.6	18.0	1.6	
124	.00	.00	4.61	.0	5.6	18.2	9.9	-37.3		134	-.01	.00	4.68	.1	.4	17.6	19.6	9.3	
125	.00	.00	4.62	.3	3.1	19.2	12.4	-32.3		135	.00	.00	4.69	.0	1.5	18.0	18.6	15.8	
126	.00	.00	4.62	.0	4.6	19.1	11.5	-28.8		136	-.04	.00	4.69	.0	.3	18.1	20.1	23.6	
127	.00	.00	4.63	.0	1.1	19.4	15.5	-21.8		137	.00	.00	4.70	.0	1.2	18.7	19.4	30.5	
128	.00	.00	4.63	.0	2.0	19.5	15.0	-15.8		138	.00	.00	4.71	.0	.0	18.8	20.9	38.6	
129	.00	.00	4.64	.0	.9	19.8	16.3	-8.6		139	.19	.00	4.76	.2	1.1	19.3	20.3	45.5	
130	.00	.00	4.64	.0	1.7	20.2	15.8	-2.2		140	.20	.01	4.78	.3	-.1	19.4	21.8	53.7	
131	.08	.00	4.65	.0	.7	20.5	17.2	5.2		141	.24	.00	4.79	1.0	1.3	19.2	20.8	60.5	
132	.00	.00	4.66	.0	1.4	20.8	16.6	11.9		142	.25	.00	4.81	1.4	.1	19.9	22.4	68.4	
133	-.03	.00	4.66	.1	.3	21.0	18.0	19.6		143	.25	.00	4.82	1.8	1.3	20.1	21.3	75.2	
134	.00	.00	4.67	.0	1.1	21.2	17.3	26.6		144	.27	.00	4.84	2.1	-.4		23.0	83.7	
135	-.01	.00	4.67	.0	.3	21.3	18.6	34.4		Z = 46									
136	.00	.00	4.68	.0	.6	21.3	18.3	41.9		82	.15	.00	4.39	.8		-2.1		29.7	
137	.00	.00	4.69	.0	-.1	21.8	19.5	50.0		83	.11	.00	4.38	.2	16.4	-2.0		21.4	
138	.00	.00	4.69	.0	.6	22.0	18.9	57.5		84	.11	.00	4.38	.3	19.9	-1.1	-22.8	9.6	
139	.00	.00	4.70	.0	-.3	22.2	20.3	65.8		85	-.04	.00	4.38	.0	16.2	-.6	-18.9	1.4	
140	.25	.00	4.78	.9	1.5	23.0	18.7	72.4		86	.00	.00	4.38	.0	18.4	-.4	-20.9	-9.0	
141	.26	.00	4.80	1.4	-.5	23.0	20.6	81.0		87	.00	.00	4.38	.1	15.7	.5	-17.5	-16.6	
142	.25	.00	4.81	1.9	1.0		19.6	88.1		88	.00	.00	4.39	.0	17.9	.7	-19.6	-26.4	
Z = 45										89	.00	.00	4.39	.0	14.7	1.1	-16.0	-33.0	
80	.14	.00	4.36	.7		-3.7		32.1		90	.00	.00	4.39	.0	17.2	1.6	-17.8	-42.1	
81	.16	.00	4.36	.6	19.9	-2.8		20.3		91	.00	.00	4.40	.0	14.1	1.6	-14.5	-48.2	
82	.13	.00	4.36	.2	16.2	-3.1	-17.6	12.1		92	.00	.00	4.40	.0	16.6	3.8	-16.6	-56.7	
83	.13	.00	4.36	.2	19.0	-2.6	-20.2	1.2		93	.00	.00	4.40	.0	12.2	3.9	-11.8	-60.8	
84	-.04	.00	4.35	.1	15.8	-2.6	-16.1	-6.5		94	.00	.00	4.41	.0	14.4	4.3	-12.3	-67.2	
85	.00	.00	4.36	.0	18.3	-1.9	-18.1	-16.7		95	.01	.00	4.41	.1	11.5	4.2	-9.1	-70.6	
86	.00	.00	4.36	.0	14.8	-1.4	-14.5	-23.4		96	.00	.00	4.41	.0	14.0	5.1	-11.4	-76.5	.4
87	.00	.00	4.36	.0	17.6	-1.0	-16.4	-33.0		97	.06	.00	4.42	.2	9.8	5.4	-6.9	-78.3	.5
88	.00	.00	4.37	.0	14.3	-.7	-12.8	-39.2		98	.00	.00	4.43	.0	11.5	6.0	-7.8	-81.7	.4
89	.00	.00	4.37	.0	16.7	-.4	-14.8	-47.8		99	.00	.00	4.43	.0	8.9	6.3	-5.2	-82.6	.4
90	.00	.00	4.37	.0	14.1	1.6	-11.8	-53.9		100	.11	.00	4.45	.1	10.8	6.8	-6.7	-85.3	.1
91	.00	.00	4.38	.0	14.4	1.7	-12.0	-60.2		101	.11	.00	4.47	.1	8.2	7.2	-3.7	-85.5	.0
92	.00	.00	4.38	.1	12.1	2.2	-7.5	-64.2		102	.14	.00	4.48	.4	10.5	7.6	-5.5	-87.9	.0
93	.00	.00	4.38	.0	14.0	2.5	-9.4	-70.2		103	.12	.00	4.48	1.2	7.8	8.0	-2.5	-87.7	.2
94	.00	.00	4.39	.5	11.6	3.3	-6.5	-73.7		104	.17	-.02	4.50	.6	9.6	8.4	-4.0	-89.3	-.1
95	.00	.00	4.39	.0	13.2	3.3	-8.2	-78.8	.4	105	.16	-.01	4.51	.6	7.3	8.7	-.9	-88.5	.1
96	.05	.01	4.40	.2	9.5	3.7	-3.7	-80.2	.6	106	.16	-.01	4.52	.5	9.7	9.3	-2.9	-90.1	.2
97	.00	.00	4.41	.0	10.9	4.2	-4.7	-83.0	.4	107	.20	-.01	4.53	.7	6.8	9.6	-.1	-88.9	.5
98	.00	.00	4.41	.0	8.6	4.6	-1.9	-83.6	.4	108	.20	-.01	4.54	.7	9.1	10.3	-1.9	-89.8	.3
99	.11	.00	4.43	.0	10.3	4.9	-3.2	-85.8	.2	109	.19	.00	4.56	.8	6.2	10.2	1.5	-88.0	.4
100	.13	.00	4.44	.1	7.9	5.1	-.3	-85.6	.0	110	.20	-.01	4.56	.9	8.6	10.9	-.5	-88.6	.2
101	.13	.00	4.46	.4	10.1	5.6	-2.2	-87.6	.2	111	.21	-.01	4.57	.9	6.0	11.1	2.5	-86.5	.4
102	.13	.00	4.46	.6	7.4	6.2	.9	-87.0	.2	112	-.25	-.05	4.59	.7	8.1	11.6	.6	-86.6	.2
103	.17	-.01	4.49	.3	9.2	6.2	-.5	-88.2	.2	113	-.26	-.06	4.60	.3	5.4	11.6	3.7	-83.8	.1
104	.21	-.01	4.50	.5	7.1	6.7	2.1	-87.2	.2	114	-.23	-.04	4.61	.6	7.8	12.3	1.9	-83.6	.1
105	.20	-.01	4.51	.6	9.1	7.0	.4	-88.2	.3	115	-.25	-.05	4.61	.0	5.1	12.6	4.9	-80.6	.2
106	.20	-.01	4.52	.8	6.4	7.5	3.6	-86.6	.2	116	.11	-.01	4.61	.3	7.5	13.3	3.0	-80.0	.0
107	-.26	-.05	4.53	.6	8.4	7.7	2.0	-86.8	.0	117	.00	.00	4.58	.0	4.8	13.4	6.0	-76.7	
108	.27	-.02	4.56	1.1	6.4	8.2	4.7	-85.1	.1	118	.00	.00	4.59	.0	7.1	14.0	4.2	-75.8	.3
109	-.26	-.05	4.55	.9	7.9	8.6	3.0	-84.9	-.1	119	.00	.00	4.60	.0	4.8	14.1	6.8	-72.4	
110	.27	-.02	4.57	1.2	5.8	9.2	5.9	-82.7	-.3	120	.00	.00	4.60	.0	6.8	14.6	5.3	-71.1	
111	-.26	-.06	4.57	1.0	7.6	9.4	4.2	-82.2		121	.00	.00	4.61	.0	4.7	15.1	7.8	-67.8	
112	.24	-.01	4.59	.7	5.4	10.2	7.0	-79.5	-.6	122	.00	.00	4.62	.0	6.4	15.3	6.3	-66.1	
113	-.26	-.06	4.59	.8	7.1	10.4	5.2	-78.6		123	.00	.00	4.63	.0	4.3	15.9	8.9	-62.4	
114	.25	-.02	4.60	.4	4.8	10.8	8.3	-75.3	-1.7	124	.00	.00	4.63	.0	6.1	16.0	7.6	-60.3	
115	-.24	-.05	4.59	.4	6.8	10.9	6.6	-74.0	-.4	125	-.01	.00	4.64	.1	4.0	16.4	10.1	-56.3	
116	.12	.00	4.58	.3	4.7	11.8	9.4	-70.6	-1.4	126	.00	.00	4.64	.0	5.8	16.6	8.4	-54.0	
117	.00	.00	4.57	.0	6.5	12.2	7.7	-69.0		127	.00	.00	4.65	.0	3.7	16.6	11.0	-49.6	
118	.00	.00	4.58	.0	4.7	12.8	10.1	-65.6		128	.00	.00	4.66	.0	5.9	17.4	8.6	-47.4	
119	.00	.00	4.59	.0	6.3	12.9	8.6	-63.8		129	.00	.00	4.66	.0	1.8	17.7	13.3	-41.1	
120	.00	.00	4.59	.0	4.3	13.3	11.2	-60.0		130	.00	.00	4.67	.0	2.8	18.2	12.6	-35.8	
121	.00	.00	4.60	.0	6.2	13.9	9.7	-58.1		131	.00	.00	4.67	.0	1.4	18.4	14.2	-29.1	
122	-.02	.00	4.61	.0	3.7	14.2	12.3	-53.8		132	.00	.00	4.68	.0	2.3	18.7	13.5	-23.4	
123	.00	.00	4.61	.0	5.9	14.6	10.7	-51.7		133	.00	.00	4.69	.0	1.0	18.9	15.1	-16.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
134	.00	.00	4.69	.0	2.0	19.2	14.4	-10.3		136	-.03	.00	4.72	.2	.8	16.3	17.6	-11.8	
135	.00	.00	4.70	.0	.5	19.3	16.3	-2.8		137	-.01	.00	4.72	.1	2.1	16.6	16.7	-5.8	
136	.00	.00	4.70	.0	1.8	19.6	15.3	3.5		138	-.02	.00	4.73	.1	.8	16.9	18.3	1.4	
137	.00	.00	4.71	.0	.5	19.8	16.9	11.1		139	-.04	.00	4.74	.1	1.7	17.1	17.7	7.8	
138	.00	.00	4.72	.0	1.5	20.1	16.2	17.7		140	.14	.00	4.77	.0	.5	17.2	19.1	15.4	
139	.00	.00	4.73	.0	.5	20.6	17.5	25.3		141	.15	.00	4.78	.6	2.0	17.7	18.0	21.5	
140	.15	.00	4.76	.5	1.4	20.9	16.5	31.9		142	.17	.00	4.79	.6	.3	17.6	19.9	29.3	
141	.21	.00	4.79	.6	.4	21.4	18.1	39.6		143	.18	.00	4.81	1.2	2.0	18.0	18.4	35.4	
142	.20	.01	4.81	1.2	1.6	21.7	16.8	46.1		144	.25	.00	4.84	1.8	.5	18.3	20.3	43.0	
143	.25	.00	4.83	1.8	.2	21.8	18.6	54.0		145	.24	.00	4.85	2.2	1.8	18.7	19.3	49.2	
144	.25	.00	4.84	2.2	1.4	21.9	17.7	60.7		146	.25	.00	4.87	2.5	.3	19.0	21.2	57.0	
145	.25	.00	4.85	2.4	.1	22.3	19.4	68.6		147	.28	-.01	4.87	2.9	1.5	19.0	20.0	63.6	
146	.26	.00	4.86	3.0	1.4		18.3	75.3		148	.28	-.02	4.89	2.9	.0	19.5	22.1	71.6	
147	.28	-.02	4.88	2.8	-.5	23.0	20.3	83.9		149	.25	-.01	4.89	3.3	1.4	19.9	20.6	78.3	
148	.29	-.02	4.88	3.3	1.1	23.0	19.2	90.9		150	.25	-.01	4.90	3.5	-.3	20.0	22.8	86.6	
149	.26	-.01	4.89	3.6	-.4	23.5	21.0	99.3		151	.24	-.02	4.89	3.3	.9	20.2	21.7	93.8	
150	.26	-.01	4.90	3.5	.6	24.0	20.1	106.7		152	.25	-.02	4.90	3.5	-.3	20.6	23.6	102.2	
151	.27	-.02	4.90	3.5	-.7	24.3	21.7	115.5		153	.23	-.02	4.90	3.2	1.0	21.4	22.3	109.3	
152	-.26	-.05	4.89	2.8	.1	24.1	21.2	123.4		154	.23	-.02	4.91	2.8	-.7	20.9	24.1	118.0	
153	.26	-.03	4.91	3.4	-.2	25.2	22.4	131.7		155	.21	-.02	4.91	3.0	.8	21.5	22.2	125.4	
154	.21	-.02	4.90	2.8	.2		21.5	139.5		156	.21	-.02	4.92	2.2	-1.2		24.5	134.6	
Z = 47										Z = 48									
84	.12	-.01	4.40	.7		-3.7		32.3		86	.00	.00	4.42	.0		-2.6		30.2	
85	.14	-.01	4.41	.5	20.1	-3.4		20.3		87	.00	.00	4.42	.0	17.2	-1.8		21.0	
86	-.04	.00	4.40	.1	16.4	-3.2	-18.3	11.9		88	.00	.00	4.42	.0	19.4	-1.5	-22.4	9.7	
87	.12	.00	4.41	.2	19.1	-2.6	-20.1	.9		89	.00	.00	4.42	.0	16.2	-1.1	-18.6	1.6	
88	.10	.00	4.41	.1	15.8	-2.5	-16.5	-6.8		90	.00	.00	4.43	.0	19.3	-.1	-21.5	-9.6	
89	.00	.00	4.41	.0	18.3	-2.1	-18.6	-17.0		91	.00	.00	4.43	.0	15.6	.1	-17.7	-17.1	
90	.00	.00	4.41	.0	15.3	-1.4	-14.6	-24.3		92	.00	.00	4.43	.0	17.9	.6	-19.7	-27.0	
91	.00	.00	4.41	.1	17.5	-1.1	-16.6	-33.7		93	.00	.00	4.44	.0	14.8	1.0	-16.4	-33.8	
92	.00	.00	4.42	.0	14.4	-.9	-13.0	-40.0		94	.00	.00	4.44	.0	17.0	1.0	-18.2	-42.7	
93	.00	.00	4.42	.1	17.0	-.4	-15.2	-49.0		95	.03	.00	4.45	.1	14.5	1.7	-15.3	-49.2	
94	.00	.00	4.42	.0	13.9	1.3	-12.1	-54.8		96	.00	.00	4.45	.0	16.5	3.4	-16.9	-57.6	
95	.00	.00	4.43	.0	14.7	1.6	-12.3	-61.5		97	.00	.00	4.45	.2	12.1	3.9	-12.3	-61.7	
96	.00	.00	4.43	.0	11.7	1.8	-7.5	-65.1		98	.00	.00	4.45	.0	14.5	4.0	-12.9	-68.1	
97	-.02	.00	4.43	.1	14.4	2.2	-9.8	-71.4		99	.03	.00	4.46	.2	10.5	3.9	-8.6	-70.6	
98	.07	.01	4.44	.6	10.6	2.9	-5.8	-73.9	1.0	100	.00	.00	4.47	.0	12.2	4.7	-9.3	-74.7	.4
99	.00	.00	4.45	.0	11.5	2.9	-6.8	-77.3	.6	101	.00	.00	4.47	.0	9.8	5.1	-7.2	-76.4	.7
100	.00	.00	4.45	.0	9.3	3.3	-3.9	-78.6	.4	102	.00	.00	4.48	.0	11.5	5.4	-8.7	-79.8	.4
101	.11	.00	4.47	.0	11.2	3.7	-5.3	-81.7	.5	103	.00	.00	4.49	.0	9.2	5.8	-5.8	-81.0	.3
102	.14	.00	4.49	.2	8.8	4.3	-2.7	-82.5	.5	104	.12	-.01	4.51	.1	11.0	6.0	-7.2	-83.9	.0
103	.11	.00	4.49	.3	10.8	4.6	-4.2	-85.2	.4	105	.10	.00	4.52	.8	8.9	6.7	-4.8	-84.7	.4
104	.14	-.01	4.50	1.0	8.2	4.9	-1.4	-85.3	.2	106	.15	-.01	4.53	.3	10.5	6.8	-5.6	-87.2	.0
105	.16	-.01	4.52	.7	10.4	5.6	-2.9	-87.6	.6	107	.18	-.02	4.54	.5	8.0	7.2	-3.5	-87.1	.1
106	.14	-.01	4.52	.8	7.7	6.0	-.1	-87.2	.3	108	.15	-.01	4.55	.3	10.2	7.8	-4.8	-89.3	.0
107	.16	-.01	4.53	.5	9.6	5.9	-1.7	-88.8	.4	109	.12	-.01	4.56	.3	7.8	8.2	-2.0	-88.9	.4
108	.18	-.01	4.55	.6	7.3	6.4	1.3	-88.0	.4	110	.15	-.01	4.57	.3	9.6	8.3	-3.7	-90.4	.1
109	.16	-.01	4.55	.6	9.5	6.9	-.5	-89.4	.7	111	.15	-.01	4.58	.3	7.2	8.8	-1.1	-89.5	.3
110	.16	-.01	4.56	.7	6.7	7.3	2.4	-88.0	.6	112	.17	-.02	4.59	.3	9.5	9.3	-2.8	-91.0	.4
111	.18	-.01	4.57	.7	9.0	7.7	.6	-89.0	.8	113	.00	.00	4.57	.0	6.7	9.7	-.1	-89.6	.6
112	.18	-.01	4.58	.3	6.3	8.0	3.8	-87.2	.6	114	.17	-.02	4.60	.3	8.8	10.1	-1.3	-90.3	.3
113	.18	-.01	4.59	.6	8.5	8.3	2.1	-87.6	.5	115	.00	.00	4.59	.0	6.5	10.6	.9	-88.7	.7
114	.18	-.01	4.60	.2	6.0	8.9	4.9	-85.5	.5	116	.17	-.02	4.62	.1	8.4	10.9	-.2	-89.1	.3
115	.18	-.01	4.60	.4	8.1	9.2	3.3	-85.5	.5	117	.00	.00	4.61	.0	6.3	11.5	2.0	-87.3	.8
116	.00	.00	4.59	.0	5.6	9.7	6.1	-83.0	.4	118	.00	.00	4.61	.0	7.9	11.7	.9	-87.1	.4
117	.16	-.01	4.62	.2	7.8	10.0	4.6	-82.7	.4	119	.00	.00	4.62	.0	5.8	12.2	3.3	-84.9	1.0
118	.00	.00	4.60	.0	5.3	10.6	7.2	-79.9	.4	120	.00	.00	4.63	.0	7.9	12.8	1.9	-84.8	.8
119	.00	.00	4.61	.0	7.4	10.8	5.6	-79.3	.7	121	.00	.00	4.63	.0	5.4	13.0	4.4	-82.1	1.1
120	.00	.00	4.61	.0	5.2	11.2	8.4	-76.4	.7	122	.00	.00	4.64	.0	7.5	13.3	3.1	-81.6	
121	-.03	.00	4.62	.1	7.3	11.7	6.6	-75.6	.9	123	.00	.00	4.65	.0	5.3	13.7	5.4	-78.8	1.5
122	-.02	.00	4.63	.0	4.9	11.9	9.2	-72.4		124	.00	.00	4.65	.0	7.3	14.1	3.8	-78.1	1.3
123	.00	.00	4.64	.1	6.9	12.4	7.6	-71.2		125	.00	.00	4.66	.0	4.9	14.3	6.4	-74.9	1.5
124	-.02	.00	4.64	.2	4.8	12.9	10.1	-67.9		126	.00	.00	4.67	.0	6.8	14.6	5.2	-73.6	1.3
125	.00	.00	4.65	.1	6.5	13.3	8.5	-66.4		127	-.01	.00	4.67	.2	4.7	15.1	7.4	-70.3	1.7
126	.00	.00	4.66	.1	4.1	13.4	11.2	-62.4		128	.00	.00	4.68	.0	6.6	15.4	6.1	-68.7	1.4
127	.00	.00	4.66	.1	6.3	13.9	9.6	-60.6		129	.00	.00	4.68	.0	3.9	15.9	8.8	-64.6	
128	-.02	.00	4.67	.0	3.5	13.7	12.7	-56.0		130	.00	.00	4.69	.0	6.5	15.9	7.0	-63.0	
129	.00	.00	4.67	.1	6.4	14.2	10.2	-54.4		131	.00	.00	4.70	.0	2.3	16.1	11.1	-57.2	
130	.02	.01	4.68	.2	2.2	14.6	14.5	-48.5		132	.00	.00	4.70	.0	3.6	16.7	9.9	-52.8	
131	-.02	.00	4.68	.1	3.0	14.8	13.9	-43.4		133	.00	.00	4.71	.0	2.0	17.1	11.7	-46.7	
132	.00	.00	4.69	.0	1.6	15.1	15.9	-36.9		134	.00	.00	4.72	.0	2.9	17.3	10.9	-41.5	
133	-.02	.00	4.70	.1	2.7	15.4	15.2	-31.5		135	.00	.00	4.72	.0	1.6	17.6	12.6	-35.0	
134	.00	.00	4.70	.0	1.3	15.6	16.9	-24.7		136	.00	.00	4.73	.0	2.5	17.6	11.9	-29.4	
135	-.02	.00	4.71	.1	2.5	16.1	15.9	-19.1		137	.00	.00	4.74	.0	1.2	18.0	13.7	-22.5	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
138	.00	.00	4.74	.0	2.4	18.3	12.6	-16.9		140	.00	.00	4.76	.0	1.2	14.7	16.9	-17.3	
139	.00	.00	4.75	.1	1.0	18.6	14.3	-9.8		141	.00	.00	4.77	.0	2.4	15.2	15.9	-11.6	
140	.00	.00	4.76	.0	1.9	18.8	13.6	-3.7		142	.00	.00	4.78	.0	1.1	15.4	17.5	-4.6	
141	.00	.00	4.76	.0	.9	19.2	15.1	3.5		143	.12	.00	4.80	1.0	3.0	16.3	15.8	.4	
142	.14	.00	4.79	.6	2.2	19.4	14.0	9.4		144	.14	.00	4.82	1.4	1.2	17.0	17.3	7.3	
143	.14	.00	4.80	.4	.5	19.6	16.5	17.0		145	.14	.00	4.82	1.4	2.0	16.5	16.6	13.4	
144	.19	.00	4.83	1.2	2.5	20.0	15.3	22.6		146	.25	.00	4.88	2.3	1.2	16.9	17.8	20.3	
145	.25	.00	4.86	1.8	.8	20.3	16.5	29.9		147	.25	.00	4.89	2.3	2.2	16.9	17.0	26.1	
146	.25	.00	4.87	2.2	2.2	20.7	15.5	35.8		148	.23	.00	4.90	2.9	.8	17.5	18.1	33.4	
147	.25	.00	4.89	2.7	.3	20.7	17.4	43.6		149	.24	.00	4.91	3.0	2.1	17.5	17.6	39.3	
148	.27	-.01	4.90	3.0	2.1	21.3	16.1	49.5		150	.24	.00	4.92	3.6	.7	18.3	19.5	46.7	
149	.28	-.02	4.91	3.3	.0	21.3	18.3	57.7		151	.25	-.01	4.93	3.2	1.5	17.9	18.8	53.3	
150	.29	-.02	4.92	3.5	1.9	21.7	17.1	63.8		152	.26	-.01	4.94	3.0	-.2	17.8	21.3	61.5	
151	.25	-.01	4.93	3.5	-.2	21.9	18.8	72.1		153	.24	-.02	4.93	1.8	.6	17.0	21.0	68.9	
152	.24	-.02	4.92	3.5	1.5	22.4	17.1	78.6		154	.25	-.02	4.94	2.1	1.0	18.3	22.0	76.0	
153	.25	-.02	4.93	3.6	-.3	22.5	18.1	87.0		155	.22	-.01	4.94	1.6	1.3	18.4	21.0	82.8	
154	.26	-.02	4.93	3.3	1.2	22.6	17.9	93.9		156	.23	-.02	4.95	1.0	-.2	19.4	22.7	91.0	
155	.23	-.02	4.94	2.1	-1.1	22.2	20.4	103.1		157	.21	-.02	4.96	1.3	1.4	19.7	21.5	97.7	
156	.24	-.03	4.94	2.4	1.1	22.6	19.1	110.1		158	.24	-.03	4.96	.9	-.2	20.8	23.2	106.0	
157	.22	-.02	4.95	.9	-1.3	22.4	21.8	119.5		159	.24	-.03	4.95	.9	1.2	20.5	22.0	112.9	
158	.23	-.03	4.94	.7	1.5		20.1	126.1		160	.18	-.02	4.95	.3	-.5		23.7	121.5	
Z = 49										Z = 50									
88	.02	.00	4.44	.3		-3.8		32.1		90	.00	.00	4.46	.0		-2.5		30.0	
89	.01	.00	4.44	.4	19.9	-3.3		20.2		91	.00	.00	4.47	.0	17.1	-1.9		21.0	
90	.03	.00	4.45	.2	16.5	-3.0	-18.2	11.8		92	.00	.00	4.47	.0	19.8	-1.4	-24.8	9.3	
91	.01	.00	4.45	.4	19.4	-2.9	-20.4		5	93	.00	.00	4.47	.0	16.4	-1.0	-21.4	1.0	
92	.02	.00	4.45	.1	15.9	-2.5	-16.6	-7.3		94	.00	.00	4.47	.0	18.8	-.4	-22.7	-9.7	
93	.00	.00	4.45	.0	18.2	-2.3	-18.4	-17.4		95	.00	.00	4.48	.0	15.8	.2	-19.8	-17.5	
94	.00	.00	4.46	.0	15.2	-1.9	-14.8	-24.5		96	.00	.00	4.48	.0	17.9	.6	-21.5	-27.3	
95	.00	.00	4.46	.0	17.5	-1.5	-16.5	-33.9		97	-.02	.00	4.48	.1	14.9	.6	-18.2	-34.1	
96	.00	.00	4.46	.1	14.9	-1.1	-13.5	-40.8		98	.00	.00	4.49	.0	17.3	1.2	-19.8	-43.3	
97	.00	.00	4.47	.0	16.7	-.9	-15.3	-49.4		99	.00	.00	4.49	.6	14.6	1.8		-49.8	
98	.04	-.01	4.47	.2	13.9	.9	-12.0	-55.3		100	.00	.00	4.49	.0	16.2	3.2	-19.0	-57.9	
99	.00	.00	4.47	.0	14.8	1.1	-12.1	-62.0		101	.03	.00	4.50	.1	10.9	2.6	-13.2	-60.7	
100	-.03	.00	4.48	1.0	11.5	2.1	-7.5	-65.4	1.3	102	.00	.00	4.51	.0	13.0	3.8	-12.9	-65.6	
101	.00	.00	4.49	.0	11.8	1.7	-8.5	-69.2		103	.00	.00	4.51	.0	10.3	4.0	-10.3	-67.9	
102	.00	.00	4.49	.0	10.1	2.0	-5.5	-71.2	1.0	104	.00	.00	4.52	.0	12.4	4.3	-11.9	-72.1	.6
103	.00	.00	4.50	.1	12.1	2.6	-7.3	-75.2	.6	105	.00	.00	4.53	.0	10.0	4.6	-9.1	-74.1	.8
104	.01	.00	4.51	.3	9.7	3.1	-4.6	-76.8	.7	106	.00	.00	4.54	.0	11.7	5.1	-10.8	-77.7	.2
105	.02	.00	4.52	.1	11.2	3.3	-5.8	-79.9	.4	107	.03	.00	4.55	.1	9.0	4.4	-7.2	-78.6	.1
106	.09	.00	4.53	1.5	9.7	4.1	-3.9	-81.6	.9	108	.00	.00	4.55	.0	11.6	5.8	-8.9	-82.2	.2
107	.02	.00	4.53	.1	10.1	3.8	-5.0	-83.6	.1	109	-.01	.00	4.56	.0	8.7	5.7	-6.0	-82.8	.1
108	.10	.00	4.55	.7	8.9	4.6	-2.2	-84.4	.3	110	.00	.00	4.57	.0	11.1	6.2	-8.1	-85.8	.0
109	.05	.00	4.56	.6	10.5	4.9	-4.1	-86.9	.4	111	.00	.00	4.58	.0	8.3	6.6	-4.8	-86.1	.1
110	.13	-.01	4.57	.6	7.9	5.1	-.9	-86.7	.3	112	.00	.00	4.59	.0	10.5	7.4	-6.5	-88.5	-.1
111	.15	-.01	4.58	.3	9.8	5.3	-2.4	-88.4	.0	113	.00	.00	4.59	.0	7.9	7.5	-3.8	-88.4	.0
112	.15	-.01	4.59	.6	7.8	5.9	.3	-88.2	.2	114	.00	.00	4.60	.0	10.1	8.2	-5.7	-90.4	-.1
113	.16	-.02	4.59	.3	9.4	5.8	-1.2	-89.6	.2	115	.00	.00	4.61	.0	7.9	8.4	-3.1	-90.2	.2
114	.01	.00	4.59	.3	7.6	6.8	1.3	-89.1	.5	116	.00	.00	4.62	.0	9.3	9.1	-4.4	-91.5	-.1
115	.00	.00	4.60	.0	8.6	6.6	.6	-89.7	.1	117	.00	.00	4.62	.0	7.5	9.4	-2.0	-90.9	.5
116	.00	.00	4.61	.2	7.2	7.4	2.7	-88.8	.6	118	.00	.00	4.63	.0	9.1	10.0	-3.5	-92.0	.3
117	.00	.00	4.61	.0	8.5	7.5	1.6	-89.3	.3	119	.00	.00	4.64	.0	7.1	10.2	-1.0	-91.0	.9
118	.00	.00	4.62	.1	6.9	8.1	3.9	-88.1	.8	120	.00	.00	4.65	.0	8.7	10.6	-2.3	-91.6	.5
119	.00	.00	4.63	.0	8.3	8.4	2.8	-88.2	.5	121	.00	.00	4.65	.0	6.7	10.9	.1	-90.2	1.0
120	.00	.00	4.64	.2	6.4	9.0	5.0	-86.6	.9	122	.00	.00	4.66	.0	8.6	11.4	-1.4	-90.7	.8
121	.00	.00	4.64	.0	8.0	9.1	3.6	-86.6	.7	123	.00	.00	4.67	.0	6.3	11.5	1.1	-88.9	1.1
122	.00	.00	4.65	.3	6.2	9.8	6.1	-84.7	1.1	124	.00	.00	4.67	.0	8.3	12.2	-.6	-89.1	.8
123	.00	.00	4.66	.0	7.6	9.9	4.7	-84.2	.8	125	.00	.00	4.68	.0	6.1	12.5	1.6	-87.1	1.2
124	.00	.00	4.66	.1	5.7	10.3	7.3	-81.8	1.0	126	.00	.00	4.69	.0	7.8	12.8	.6	-86.8	.8
125	.00	.00	4.67	.1	7.5	10.5	5.8	-81.3	.8	127	.00	.00	4.69	.0	5.7	12.8	2.7	-84.4	.8
126	.00	.00	4.68	.4	5.6	11.3	7.9	-78.8	1.0	128	.00	.00	4.70	.0	7.6	13.5	1.0	-83.9	.5
127	.00	.00	4.68	.0	6.9	11.4	6.7	-77.7	.7	129	.00	.00	4.71	.1	5.4	13.7	3.6	-81.2	.6
128	.00	.00	4.69	.4	5.2	11.8	9.1	-74.8	.4	130	.00	.00	4.71	.0	7.2	14.3	2.7	-80.3	.1
129	.00	.00	4.69	.0	6.6	11.9	7.8	-73.4	.4	131	-.02	-.01	4.72	.1	4.7	14.3	5.1	-76.9	-.4
130	.02	.00	4.70	.4	4.7	12.7	10.3	-70.0	.0	132	.00	.00	4.72	.0	7.0	14.9	3.0	-75.9	-.7
131	.00	.00	4.70	.0	6.4	12.6	8.6	-68.3	.1	133	.02	.00	4.73	.0	2.8	15.2	7.6	-70.6	-.4
132	.00	.00	4.71	.0	2.5	12.7	13.2	-62.7	.2	134	.00	.00	4.74	.0	4.0	15.5	7.3	-66.5	-.1
133	.00	.00	4.72	.0	3.7	12.9	12.3	-58.3		135	.00	.00	4.74	.0	2.4	15.8	8.9	-60.9	
134	.00	.00	4.72	.0	2.2	13.1	14.1	-52.4		136	.00	.00	4.75	.0	3.6	16.1	8.1	-56.4	
135	.00	.00	4.73	.0	3.3	13.4	13.3	-47.6		137	.00	.00	4.76	.0	2.1	16.4	9.9	-50.5	
136	.00	.00	4.74	.0	1.8	13.6	15.0	-41.4		138	.00	.00	4.76	.0	3.2	16.7	9.1	-45.6	
137	.00	.00	4.74	.0	2.9	14.1	14.3	-36.2		139	.00	.00	4.77	.0	1.6	17.0	11.2	-39.2	
138	.02	.00	4.75	.0	1.4	14.3	16.1	-29.5		140	.00	.00	4.78	.0	3.0	17.2	10.5	-34.1	
139	.00	.00	4.76	.0	2.7	14.6	15.0	-24.2		141	.00	.00	4.78	.1	1.5	17.5	12.1	-27.5	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	
142	.00	.00	4.79	.0	2.6	17.8	11.5	-22.1		144	.13	.01	4.84	.4	1.0	13.4	15.1	-21.5		
143	.00	.00	4.80	.0	1.4	18.0	13.1	-15.4		145	.13	.01	4.85	.9	3.8	14.4	13.3	-17.1		
144	-.08	.00	4.81	.3	2.7	17.7	11.5	-10.0		146	.15	.01	4.86	1.1	1.6	14.8	15.6	-10.6		
145	-.08	.00	4.82	.6	1.3	17.8	13.9	-3.2		147	.24	.01	4.91	1.8	3.3	15.7	13.9	-5.9		
146	-.11	.00	4.84	.7	2.4	18.2	13.1	2.5		148	.23	.01	4.92	2.6	1.7	15.9	15.9	.5		
147	.25	.00	4.90	1.6	1.4	18.5	15.1	9.1		149	.25	.00	4.93	2.6	2.9	16.9	14.9	5.7		
148	.25	.00	4.91	.9	1.9	18.1	14.9	15.3		150	.25	.00	4.94	3.0	1.2	16.5	17.2	12.6		
149	.25	.00	4.93	1.4	1.6	18.9	16.1	21.8		151	.26	.00	4.95	3.1	2.8	16.6	15.6	17.8		
150	.26	.00	4.93	1.6	2.7	19.5	14.6	27.2		152	.24	.00	4.95	3.4	.9	16.8	18.0	25.0		
151	.28	-.01	4.95	1.8	.8	19.5	16.7	34.5		153	.25	-.01	4.96	3.6	2.7	17.2	16.4	30.3		
152	.28	-.02	4.95	2.0	2.3	20.3	15.3	40.2		154	.25	-.01	4.97	3.6	.5	17.4	18.8	37.9		
153	.25	-.01	4.96	2.0	.3	20.8	17.6	48.0		155	.26	-.01	4.97	3.5	2.2	17.5	17.5	43.8		
154	.26	-.01	4.97	1.9	2.0	22.2	16.1	54.0		156	.25	-.02	4.98	3.0	.6	17.8	19.6	51.3		
155	.27	-.02	4.97	1.2	.3	21.5	18.0	61.8		157	.22	-.01	4.98	3.2	1.8	18.0	18.6	57.5		
156	.26	-.02	4.97	1.6	1.6	21.8	17.0	68.3		158	.23	-.02	4.99	2.9	.6	18.5	20.1	65.0		
157	.23	-.02	4.97	1.1	.1	22.1	18.7	76.2		159	.21	-.02	4.99	3.0	1.8	18.8	18.8	71.3		
158	.24	-.03	4.97	1.2	1.5	22.2	17.8	82.8		160	.22	-.02	5.00	2.2	.1	18.9	20.8	79.3		
159	.22	-.02	4.98	.7	.0	22.4	19.6	90.9		161	.19	-.02	4.99	2.0	1.2	18.9	19.8	86.1		
160	.20	-.02	4.98	.6	1.2	22.4	18.5	97.7		162	.23	-.03	4.99	1.3	.0	19.2	21.6	94.1		
161	.00	.00	4.94	.0	-.3	22.6	20.0	106.1		163	-.19	-.03	4.99	1.1	1.4	19.3	20.3	100.9		
162	.00	.00	4.95	.0	1.3		18.8	112.9		164	.15	-.01	5.00	1.3	.3	19.4	22.0	108.6		
163	.04	-.01	4.96	.2	.2		19.9	120.8		165	-.11	-.02	4.99	.7	1.3	19.5	20.7	115.4		
164	.00	.00	4.96	.0	1.2		19.0	127.6		166	-.12	-.02	5.00	.8	.2	19.6	22.0	123.3		
165	.02	-.01	4.97	.2	.1		20.2	135.6		167	-.12	-.02	5.01	.5	1.3	19.7	21.4	130.1		
166	.00	.00	4.98	.0	1.2		19.2	142.5		168	-.04	.00	5.00	.7	.2	20.2	22.7	138.0		
167	.00	.00	4.98	.0	-.4		20.8	150.9		169	-.04	.00	5.01	.2	1.2	20.0	21.7	144.9		
168	.00	.00	4.99	.0	1.4		19.6	157.6		170	-.06	.00	5.02	.1	-.4	20.2	24.0	153.3		
169	.00	.00	5.00	.0	-.5		21.3	166.2		171	.00	.00	5.02	.1	1.6	20.5	22.3	159.8		
170	.00	.00	5.00	.0	1.3		19.7	173.0		172	-.04	.00	5.03	.3	-.3	24.5	168.1			
Z= 51										173	-.02	.00	5.04	.2	1.3	23.0	174.9			
100	.00	.00	4.51	.3		-3.7		-38.8		174	-.02	.00	5.04	.2	-.5		25.3	183.5		
101	.00	.00	4.52	.0	16.7	-3.1		-47.5		175	-.02	.00	5.05	.1	1.3		23.5	190.3		
102	.05	.01	4.52	.8	13.3	-.7	-14.3	-52.8		176	-.03	.00	5.06	.2	-.8		25.9	199.2		
103	.05	.01	4.53	.2	12.9	-.8	-14.1	-57.5		177	-.02	.00	5.06	.1	1.3		24.2	205.9		
104	.05	.01	4.54	.4	10.8	-.3	-10.0	-60.2		178	-.02	.00	5.07	.1	-1.9		27.4	215.9		
105	.08	.01	4.55	.4	12.8	.1	-11.9	-64.9	1.2	179	.04	.02	5.07	.3	-1.1	22.6	26.6	225.1		
106	.08	.01	4.56	.3	10.0	.1	-8.9	-66.9	.0	180	.06	.02	5.08	.6	-1.8		27.6	235.0		
107	.09	.01	4.57	.6	12.6	1.0	-10.9	-71.4		Z= 52										
108	.09	.01	4.57	1.3	9.9	1.9	-7.6	-73.3		102	.00	.00	4.55	.0		-1.8		-38.4		
109	.11	.00	4.59	.8	11.6	1.9	-9.1	-76.8	.5	103	.05	.01	4.55	.3	13.1	-2.0		-43.5		
110	.11	.00	4.59	.9	9.0	2.3	-5.7	-77.8	.9	104	.00	.00	4.56	.0	14.9	.0	-17.5	-50.3		
111	.11	.00	4.60	.9	11.6	2.7	-7.5	-81.3	-2	105	.00	.00	4.56	.0	10.9	.1	-13.4	-53.1		
112	.11	.00	4.61	1.0	8.8	3.2	-4.5	-82.0	.4	106	-.03	.00	4.57	.1	13.0	.4	-13.6	-58.0		
113	-.11	.00	4.62	.7	10.7	3.4	-6.1	-84.6	.2	107	-.02	.00	4.58	.1	10.6	1.0	-10.9	-60.6		
114	-.12	.00	4.63	.9	8.2	3.7	-3.0	-84.8	.1	108	.14	.00	4.60	.7	13.1	1.5	-12.9	-65.6	-.1	
115	-.14	-.01	4.63	.8	10.4	4.0	-4.7	-87.1	.1	109	.11	.00	4.61	1.0	10.1	1.7	-9.9	-67.7	.1	
116	-.12	.00	4.64	.5	8.0	4.2	-1.6	-87.1	.3	110	.17	.00	4.63	1.0	12.4	2.5	-11.6	-72.0	-.3	
117	-.13	-.01	4.65	.8	9.9	4.8	-3.3	-88.9	.3	111	.15	.00	4.63	1.3	9.8	3.3	-8.5	-73.8	.3	
118	-.13	-.01	4.66	.5	7.6	4.9	-.4	-88.5	.5	112	.14	.01	4.64	1.2	11.8	3.5	-10.2	-77.5	.3	
119	-.11	.00	4.66	.6	9.5	5.3	-2.0	-90.0	.5	113	.16	-.01	4.65	1.3	9.1	3.8	-7.1	-78.5	-2	
120	-.11	.00	4.67	.5	7.3	5.5	.6	-89.3	.8	114	-.14	.00	4.65	.9	11.3	4.4	-8.8	-81.7	.2	
121	-.09	.00	4.67	.6	9.1	6.0	-.9	-90.3	.7	115	-.15	.00	4.66	.9	8.7	4.9	-5.8	-82.4	.0	
122	-.09	.00	4.68	.7	7.0	6.4	.6	-89.3	.9	116	-.15	.00	4.67	.8	11.1	5.6	-7.7	-85.5	.2	
123	-.08	.00	4.68	.4	8.8	6.6	.0	-90.0	.7	117	-.17	-.01	4.68	.5	8.2	5.8	-4.8	-85.6	.5	
124	-.06	.00	4.69	.4	6.6	6.8	2.7	-88.4	.8	118	-.14	-.01	4.68	.8	10.5	6.4	-6.6	-88.1	.3	
125	.00	.00	4.69	.0	8.3	6.9	1.1	-88.7	.4	119	-.16	-.01	4.69	.6	7.9	6.7	-3.7	-87.9	.8	
126	-.09	-.01	4.70	.5	6.7	7.5	3.3	-87.3	.9	120	-.15	-.01	4.69	.7	10.0	7.2	-5.6	-89.9	.4	
127	.00	.00	4.70	.0	7.8	7.5	2.3	-87.0	.3	121	-.13	-.01	4.70	.5	7.6	7.4	-2.8	-89.4	.8	
128	.00	.00	4.71	.0	6.0	7.8	5.0	-84.9	.3	122	-.13	-.01	4.70	.5	9.5	7.8	-4.5	-90.8	.5	
129	.00	.00	4.72	.0	7.9	8.2	3.3	-84.8	.2	123	-.09	.00	4.70	.3	7.2	7.9	-1.6	-89.9	.8	
130	.04	.01	4.73	.8	6.3	9.1	5.4	-83.0	.6	124	-.09	-.01	4.71	.3	9.3	8.5	-3.5	-91.2	.6	
131	.03	.01	4.73	.3	7.1	9.0	4.1	-82.1	.0	125	.00	.00	4.71	.0	6.7	8.6	-.5	-89.8	.7	
132	.04	.01	4.74	.2	4.9	9.2	7.3	-78.9	-.9	126	.00	.00	4.72	.0	9.0	9.3	-2.3	-90.7	.6	
133	.02	.01	4.74	.2	7.4	9.6	5.2	-78.2	-.8	127	.00	.00	4.72	.0	6.7	9.3	.3	-89.3	1.0	
134	.03	.01	4.75	.8	3.7	10.5	9.3	-73.8	-2	128	.00	.00	4.73	.0	8.6	10.2	-1.3	-89.9	.9	
135	.03	.01	4.76	.4	4.1	10.6	8.6	-69.8	.1	129										

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
138	.00	.00	4.79	.0	4.4	13.2	6.0	-66.3		132	.00	.00	4.77	.0	6.1	7.6	3.9	-86.5	.8
139	.00	.00	4.80	.0	3.0	13.8	7.6	-61.2		133	.00	.00	4.77	.0	8.3	7.9	2.1	-86.7	.8
140	.00	.00	4.81	.0	4.1	14.2	6.5	-57.2		134	.00	.00	4.78	.0	5.4	7.9	5.2	-84.1	.1
141	.00	.00	4.81	.0	2.5	14.3	8.8	-51.6		135	.00	.00	4.78	.0	8.2	8.4	2.7	-84.2	.4
142	.00	.00	4.82	.0	3.6	14.9	7.8	-47.2		136	-.04	.00	4.79	.3	4.0	9.0	7.2	-80.1	.6
143	.00	.00	4.83	.0	2.0	14.8	10.0	-41.1		137	.02	.00	4.80	.1	5.0	9.3	6.4	-77.0	.5
144	.14	.01	4.86	.1	3.6	15.4	9.0	-36.6		138	.04	.00	4.80	.1	3.3	9.6	8.6	-72.3	.0
145	.00	.00	4.84	.0	1.9	16.3	11.3	-30.4		139	.08	.01	4.82	.0	4.7	9.9	7.6	-68.9	.0
146	.20	.01	4.89	.8	3.9	16.4	10.0	-26.2		140	.09	.01	4.82	.1	3.0	9.8	9.5	-63.8	
147	.21	.01	4.91	1.2	1.7	16.5	12.3	-19.8		141	.00	.00	4.82	.0	4.7	10.4	8.3	-60.4	
148	.24	.01	4.92	1.5	3.7	16.8	10.9	-15.4		142	.13	.01	4.85	.1	2.7	10.7	10.6	-55.0	
149	.24	.01	4.93	2.2	1.9	17.0	12.9	-9.2		143	.14	.01	4.86	.2	4.2	11.2	9.7	-51.1	
150	.25	.00	4.95	2.4	3.4	17.6	11.5	-4.6		144	.17	.01	4.88	.4	2.6	11.8	11.9	-45.6	
151	.25	.00	4.96	2.8	1.3	17.7	13.9	2.2		145	.17	.01	4.89	.8	4.2	12.4	10.5	-41.7	
152	.25	.00	4.97	3.1	3.3	18.2	12.2	7.0		146	.19	.01	4.90	1.1	2.6	13.1	12.5	-36.2	
153	.28	-.01	4.98	3.3	1.1	18.3	14.5	13.9		147	.19	.01	4.91	1.6	3.9	13.1	11.3	-32.1	
154	.28	-.02	4.99	3.4	2.9	18.5	13.5	19.1		148	.23	.01	4.93	2.4	2.4	13.8	13.5	-26.4	
155	.29	-.02	5.00	3.4	.9	18.9	15.5	26.3		149	.23	.01	4.94	2.5	3.8	14.0	12.3	-22.1	
156	.26	-.01	5.01	3.4	2.7	19.4	14.1	31.6		150	.24	.01	4.96	3.2	2.0	14.1	14.6	-16.0	
157	.25	-.02	5.01	2.7	.8	19.7	16.1	38.9		151	.25	.00	4.97	3.4	3.8	14.4	13.1	-11.7	
158	.25	-.02	5.00	3.0	2.1	20.0	14.9	44.8		152	.25	.00	4.98	3.9	1.5	14.7	15.6	-5.2	
159	.26	-.02	5.01	2.5	.4	19.8	17.0	52.5		153	.25	.00	4.99	4.0	3.5	14.9	14.2	-.6	
160	.21	-.02	5.01	2.5	2.1	20.2	15.5	58.4		154	.28	-.01	5.00	4.5	1.9	15.7	16.1	5.5	
161	.22	-.02	5.02	1.8	.2	20.3	17.5	66.3		155	.28	-.02	5.01	4.4	2.8	15.6	15.0	10.8	
162	.19	-.01	5.02	1.8	1.8	20.9	16.5	72.5		156	.29	-.02	5.02	4.6	1.3	16.0	17.1	17.5	
163	.23	-.03	5.02	1.0	.1	20.9	18.4	80.5		157	.26	-.01	5.02	4.4	2.8	16.1	15.8	22.8	
164	.20	-.02	5.02	1.1	2.0	21.6	16.8	86.6		158	.25	-.02	5.03	3.7	1.0	16.3	17.9	29.9	
165	.16	-.02	5.03	.8	-.1	21.2	18.7	94.7		159	.26	-.02	5.02	4.1	2.5	16.7	16.6	35.5	
166	-.13	-.01	5.02	.2	1.5	21.5	17.6	101.3		160	.26	-.03	5.03	3.5	.7	16.9	18.7	42.9	
167	.04	-.01	5.01	.4	.6	21.9	18.6	108.7		161	.21	-.02	5.03	3.3	2.2	16.9	17.4	48.8	
168	.00	.00	5.01	.0	1.5	22.1	17.5	115.3		162	.22	-.02	5.03	2.8	.8	17.5	19.2	56.0	
169	.06	.01	5.02	.1	.2	22.1	19.1	123.2		163	.22	-.02	5.03	2.7	2.0	17.7	18.1	62.1	
170	.00	.00	5.03	.0	1.9	22.8	17.6	129.3		164	.20	-.02	5.04	1.9	.4	18.0	19.9	69.8	
171	.00	.00	5.03	.0	-.1	23.1	19.6	137.5		165	.18	-.02	5.04	1.8	1.9	17.9	18.6	76.0	
172	.00	.00	5.04	.0	1.9	23.5	17.9	143.6		166	.11	-.01	5.05	1.4	.4	18.3	20.5	83.7	
173	.00	.00	5.05	.0	-.2	23.5	20.2	151.9		167	.19	-.02	5.05	.9	1.6	18.4	19.1	90.1	
174	.00	.00	5.05	.0	1.7	24.0	18.6	158.2		168	.14	-.02	5.05	.7	.4	18.2	21.0	97.8	
175	.00	.00	5.06	.0	-.5	24.0	20.9	166.8		169	-.14	-.02	5.04	.2	1.8	18.6	19.4	104.0	
176	.00	.00	5.07	.0	1.6	24.3	19.3	173.3		170	-.12	-.02	5.05	.2	.4	18.7	20.9	111.7	
177	-.02	.00	5.07	.3	-.3	24.8	21.5	181.7		171	.00	.00	5.05	.0	2.0	18.8	19.5	117.8	
178	.00	.00	5.08	.0	1.3	24.7	9.8	188.5		172	.00	.00	5.05	.0	.2	19.1	21.7	125.7	
179	.00	-.01	5.09	.0	-1.9	24.7	23.6	198.5		173	.00	.00	5.06	.0	2.1	19.2	20.1	131.7	
180	.00	.00	5.09	.0	-.9	25.0	22.7	207.4		174	.00	.00	5.07	.0	.2	19.6	22.2	139.6	
181	.05	.02	5.09	.2	-1.9	24.9	23.8	217.4		175	.00	.00	5.07	.0	1.8	19.6	20.8	145.9	
182	.06	.02	5.10	.1	-1.1		23.3	226.6		176	.00	.00	5.08	.0	.0	20.1	22.7	153.9	
Z=53										177	.00	.00	5.09	.0	1.8	20.3	21.1	160.2	
104	.08	.01	4.58	.5		-3.5		-32.7		178	.00	.00	5.09	.0	-.4	20.3	23.8	168.7	
105	.10	.01	4.59	.2	15.0	-3.3		-39.7		179	.00	.00	5.10	.0	1.9	20.9	21.5	174.8	
106	.14	.01	4.60	.4	12.8	-1.3	-13.7	-44.4		180	.01	.00	5.10	.0	-1.8	21.0	25.6	184.7	
107	.15	.01	4.61	.4	13.3	-1.1	-13.8	-49.6		181	.00	.00	5.11	.0	-.8	21.1	25.1	193.6	
108	.15	.01	4.62	.7	11.2	-.5	-9.6	-52.8		182	.06	.02	5.11	.1	-1.6	21.4	25.9	203.3	
109	.19	.01	4.64	.8	13.1	-.6	-11.4	-57.8	.2	183	.06	.02	5.12	.2	-1.0	21.5	25.4	212.4	
110	.16	.00	4.64	1.2	10.8	.1	-8.4	-60.5	-.4	184	.08	.01	5.12	.3	-1.7		25.9	222.2	
111	.17	.00	4.65	1.2	12.8	.5	-10.5	-65.2		Z=54									
112	.19	.00	4.66	1.5	10.2	.9	-7.3	-67.3		106	.11	.01	4.62	.4		-1.7		-30.7	
113	.19	.00	4.67	1.4	12.1	1.2	-8.9	-71.4	.3	107	.13	.01	4.63	.6		-1.4		-35.8	
114	.21	.00	4.68	1.5	9.6	1.8	-5.8	-73.0		108	.16	.00	4.64	1.1	15.4	.8	-18.0	-43.2	
115	.20	.00	4.69	1.4	11.7	2.1	-7.5	-76.6		109	.16	.00	4.65	1.3	11.3	1.0	-13.7	-46.4	
116	.22	.00	4.70	1.4	9.3	2.7	-4.4	-77.8	.2	110	.17	.00	4.66	1.7	13.7	1.6	-14.3	-52.1	
117	.21	.00	4.70	1.3	11.1	2.7	-6.5	-80.8	.4	111	.18	.00	4.67	1.9	10.7	1.6	-11.1	-54.7	
118	.21	.00	4.71	.6	8.7	3.2	-3.1	-81.5	.8	112	.22	.00	4.70	2.1	13.3	2.1	-13.2	-60.0	.1
119	.21	.00	4.72	.9	10.8	3.5	-5.4	-84.3	.6	113	.19	.00	4.69	2.4	10.6	2.4	-10.0	-62.5	.4
120	.21	-.01	4.72	.5	8.1	3.6	-1.8	-84.3	.5	114	.20	.00	4.70	2.4	12.8	3.1	-12.1	-67.2	
121	.18	.00	4.73	.6	10.4	4.0	-3.7	-86.6	.3	115	.26	.00	4.72	2.7	9.9	3.4	-8.9	-69.1	1.1
122	.18	.00	4.74	2	7.9	4.3	-.8	-86.4	.3	116	.24	.00	4.72	2.7	12.4	4.1	-10.8	-73.4	.2
123	.19	.00	4.74	3	10.0	4.8	-2.6	-88.3	.4	117	.29	-.01	4.75	2.3	9.1	3.9	-7.2	-74.4	.4
124	.17	-.01	4.74	.1	7.4	5.0	.1	-87.7	.3	118	.24	.00	4.74	2.3	12.1	4.8	-9.4	-78.4	.7
125	.00	.00	4.72	.0	9.7	5.4	-1.9	-89.3	.4	119	.25	-.01	4.75	1.3	8.6	4.7	-6.0	-78.9	.2
126	.00	.00	4.73	.0	7.1	5.9	.9	-88.3	.4	120	.23	-.01	4.75	1.7	11.7	5.6	-8.2	-82.5	.7
127	.00	.00	4.74	.0	9.3	6.2	-1.1	-89.6	.6	121	.24	-.01	4.76	1.3	8.5	5.9	-5.3	-82.9	.4
128	.00	.00	4.74	.0	7.1	6.6	1.5	-88.6	.9	122	.21	-.01	4.76	1.4	10.8	6.3	-7.1	-85.6	.4
129	.00	.00	4.75	.0	8.8	6.7	.0	-89.3	.8	123	.22	-.01	4.77	.8	8.2	6.6	-4.1	-85.7	.5
130	.00	.00	4.76	.0	6.7	7.1	2.8	-87.9	1.0	124	.23	-.02	4.77	.9	10.1	6.8	-5.8	-87.8	.1
131	.00	.00	4.76	.0	8.6	7.3	1.0	-88.4	1.0	125	.20	-.01	4.78	.4	7.7	7.0	-3.0	-87.4	.2

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
126	.17	-.01	4.77	.3	9.9	7.2	-4.8	-89.2	.1	120	.24	.00	4.77	2.6	9.5	2.7	-4.6	-74.3	.4
127	.00	.00	4.75	.0	7.4	7.5	-2.1	-88.5	.2	121	.23	-.01	4.77	2.2	11.4	2.4	-6.7	-77.6	.5
128	.00	.00	4.76	.0	9.7	7.8	-4.2	-90.1	.3	122	.23	-.01	4.78	1.9	9.0	2.9	-3.5	-78.6	.4
129	.00	.00	4.76	.0	7.3	8.0	-1.6	-89.3	.6	123	.24	-.01	4.78	2.0	11.2	3.3	-5.5	-81.6	.6
130	.00	.00	4.77	.0	9.4	8.7	-3.5	-90.7	.8	124	.24	-.02	4.79	1.5	8.4	3.6	-2.4	-82.0	.3
131	.00	.00	4.78	.1	6.8	8.8	-.7	-89.4	1.0	125	.23	-.02	4.79	1.4	10.5	3.9	-4.3	-84.4	.3
132	.00	.00	4.78	.0	9.0	9.2	-2.4	-90.3	1.1	126	.23	-.02	4.80	1.0	8.1	4.3	-1.5	-84.4	.1
133	-.02	.00	4.79	.1	6.5	9.6	.4	-88.8	1.1	127	.20	-.01	4.80	.8	10.1	4.4	-3.3	-86.4	.1
134	.00	.00	4.79	.0	8.6	9.9	-1.4	-89.3	1.1	128	.18	-.01	4.80	.3	7.6	4.7	-.6	-85.9	.0
135	.00	.00	4.80	.0	5.7	10.1	1.9	-86.9	.4	129	.16	-.01	4.80	.2	9.9	4.9	-2.5	-87.8	.3
136	.00	.00	4.80	.0	8.4	10.4	-.3	-87.3	.8	130	.00	.00	4.78	.0	7.5	5.2	.0	-87.2	.3
137	.03	.00	4.81	.0	4.2	10.6	4.1	-83.4	1.0	131	.00	.00	4.79	.0	9.6	5.3	-1.6	-88.7	.7
138	.00	.00	4.82	.0	5.6	11.2	2.9	-80.9	.8	132	.00	.00	4.80	.0	7.3	5.8	.7	-87.9	.8
139	.00	.00	4.82	.0	3.7	11.5	5.4	-76.5	.8	133	.00	.00	4.80	.0	9.3	6.1	-.9	-89.1	1.1
140	.08	.01	4.84	.1	4.9	11.7	4.2	-73.3	.3	134	.00	.00	4.81	.1	6.8	6.4	2.0	-87.8	.9
141	.12	.01	4.85	.1	3.4	12.1	6.1	-68.7	.3	135	.00	.00	4.81	.0	9.0	6.8	.0	-88.8	1.2
142	.13	.01	4.86	.5	5.0	12.5	4.9	-65.6	.1	136	.00	.00	4.82	.3	6.2	7.3	3.1	-86.9	.6
143	.13	.01	4.87	.2	3.3	13.1	7.0	-60.8		137	.00	.00	4.82	.1	8.6	7.5	.9	-87.5	.9
144	.16	.01	4.89	.6	4.8	13.7	5.0	-57.5		138	.05	.01	4.83	.2	4.3	7.7	5.5	-83.8	.9
145	.18	.01	4.90	.7	2.8	13.9	8.1	-52.3		139	.00	.00	4.84	.2	6.2	8.3	3.9	-81.9	1.2
146	.19	.01	4.91	1.2	4.6	14.3	6.9	-48.8		140	.00	.00	4.84	.0	3.6	8.3	6.6	-77.5	.4
147	.22	.02	4.94	1.4	2.7	14.4	9.3	-43.3		141	.11	.01	4.86	.0	5.3	8.7	5.6	-74.8	.3
148	.23	.01	4.94	2.1	4.6	15.1	7.7	-39.9		142	.12	.01	4.88	.2	3.8	9.1	7.5	-70.5	.0
149	.24	.01	4.96	2.9	2.6	15.4	10.1	-34.4		143	.15	.01	4.89	.7	5.4	9.6	6.3	-67.8	.2
150	.23	.01	4.97	3.1	4.3	15.8	8.9	-30.6		144	.15	.01	4.89	.3	2.7	9.0	9.5	-62.5	-.8
151	.23	.01	4.98	3.7	2.3	16.1	11.2	-24.8		145	.16	.01	4.91	.9	5.9	10.1	7.4	-60.3	.1
152	.24	.01	4.99	4.0	4.1	16.4	9.4	-20.8		146	.18	.01	4.92	1.4	3.5	10.8	8.8	-55.7	.0
153	.28	-.01	5.00	4.4	2.1	16.9	11.9	-14.8		147	.21	.01	4.94	1.7	5.1	11.2	8.4	-52.7	.4
154	.25	.00	5.01	4.7	3.9	17.3	10.5	-10.6		148	.24	.02	4.96	2.0	3.0	11.5	10.8	-47.6	.0
155	.27	-.01	5.02	4.9	1.7	17.0	12.7	-4.2		149	.22	.02	4.97	2.9	5.0	11.9	9.3	-44.5	
156	.28	-.01	5.03	5.0	3.4	17.7	11.4	.4		150	.24	.01	4.98	3.8	3.1	12.4	11.5	-39.5	
157	.28	-.02	5.03	5.1	1.5	17.8	13.6	7.0		151	.24	.01	4.99	3.9	4.5	12.7	10.1	-36.0	
158	.25	-.01	5.04	5.0	3.0	18.1	12.4	12.1		152	.26	.00	5.00	4.5	2.3	12.7	12.9	-30.2	
159	.25	-.02	5.04	4.2	1.3	18.4	14.5	18.9		153	.27	.00	5.01	4.8	4.6	13.2	11.0	-26.8	
160	.26	-.02	5.05	4.5	2.7	18.5	13.1	24.2		154	.27	.00	5.02	5.2	2.4	13.6	13.3	-21.1	
161	.26	-.02	5.05	3.9	.9	18.8	15.1	31.4		155	.29	-.01	5.03	5.5	3.9	13.6	12.1	-16.9	
162	.24	-.03	5.05	4.0	2.6	19.2	13.8	36.8		156	.29	-.01	5.04	5.8	2.2	14.1	14.3	-11.0	
163	.22	-.02	5.06	3.3	.9	19.3	15.6	44.0		157	.28	-.01	5.04	5.8	3.6	14.3	13.0	-6.6	
164	.22	-.02	5.06	3.3	2.2	19.5	14.6	49.9		158	.28	-.02	5.06	5.9	1.8	14.6	15.1	-.3	
165	.20	-.02	5.06	2.3	.6	19.7	16.5	57.4		159	.29	-.02	5.06	5.7	3.3	14.9	14.2	4.4	
166	.24	-.03	5.07	2.2	2.3	20.0	15.2	63.2		160	.24	-.02	5.06	5.0	1.4	15.1	15.9	11.1	
167	.19	-.03	5.07	1.6	.3	20.0	17.3	71.0		161	.25	-.02	5.06	5.2	2.9	15.2	14.7	16.3	
168	.16	-.02	5.07	1.4	2.3	20.6	15.6	76.8		162	.26	-.02	5.06	4.6	1.3	15.6	16.8	23.1	
169	.19	-.02	5.07	.9	.3	20.5	17.8	84.6		163	.24	-.03	5.07	4.5	2.7	15.7	15.4	28.4	
170	.13	-.01	5.07	.3	1.8	20.4	16.6	90.9		164	.22	-.02	5.07	3.9	1.2	16.1	17.1	35.3	
171	.00	.00	5.06	.0	.6	20.7	17.8	98.3		165	.25	-.03	5.08	3.8	2.4	16.3	16.2	40.9	
172	.00	.00	5.06	.0	2.4	21.1	16.3	104.0		166	.09	.00	5.08	3.0	1.0	16.7	18.1	48.0	
173	.00	.00	5.07	.0	.5	21.4	18.1	111.6		167	.24	-.03	5.08	3.0	2.4	16.8	16.9	53.7	
174	.00	.00	5.08	.0	2.3	21.6	16.6	117.4		168	.24	-.03	5.09	2.2	.6	17.1	18.9	61.2	
175	.00	.00	5.08	.1	.4	21.8	18.7	125.1		169	.19	-.03	5.09	1.8	2.5	17.3	17.1	66.8	
176	.00	.00	5.09	.0	2.0	21.9	17.2	131.2		170	.19	-.03	5.09	1.5	.6	17.6	19.0	74.3	
177	.00	.00	5.10	.0	.2	22.1	19.5	139.1		171	.14	-.02	5.09	.6	1.8	17.6	18.3	80.6	
178	.00	.00	5.10	.0	2.3	22.7	17.5	144.8		172	.14	-.02	5.10	.4	.9	17.9	19.5	87.8	
179	.00	.00	5.11	.0	-.4	22.6	20.3	153.3		173	.00	.00	5.08	.0	2.3	17.8	17.5	93.5	
180	.00	.00	5.11	.0	2.3	23.0	17.9	159.1		174	.09	-.01	5.10	.1	.8	18.1	19.5	100.8	
181	.01	.00	5.12	.1	-1.4	23.5	21.8	168.6		175	.00	.00	5.09	.0	2.5	18.3	18.0	106.4	
182	.00	.00	5.12	.0	-.7	23.5	21.1	177.4		176	.00	.00	5.10	.0	.4	18.3	20.5	114.1	
183	.00	.00	5.13	.0	-1.6	23.5	22.5	187.1		177	.00	.00	5.11	.0	2.5	18.9	18.8	119.6	
184	.00	.00	5.13	.0	-1.1	23.4	22.0	196.3		178	.00	.00	5.11	.0	.4	19.1	21.1	127.3	
185	.08	.01	5.14	.1	-1.5	23.6	22.9	205.9		179	.00	.00	5.12	.0	2.3	19.1	19.3	133.1	
186	.07	.02	5.15	.2	-.9		22.3	214.9		180	.00	.00	5.13	.0	-.2	19.4	22.0	141.3	
Z=55										Z=56									
108	.17	.00	4.66	1.1		-3.3		-25.2		181	.00	.00	5.13	.0	2.5	19.6	19.8	146.8	
109	.18	.00	4.67	1.5	15.6	-3.1		-32.7		182	.00	.00	5.14	.0	-1.4	19.6	23.9	156.3	
110	.19	.00	4.68	1.8	13.1	-1.3	-14.0	-37.8		183	.00	.00	5.14	.0	-.2	20.1	23.1	164.6	
111	.20	.00	4.69	2.3	13.9	-1.1	-14.4	-43.6		184	.00	.00	5.15	.0	-1.6	20.1	24.3	174.3	
112	.18	.00	4.70	2.8	11.2	-.7	-9.9	-46.8		185	.00	.00	5.15	.0	-.7	20.5	23.6	183.0	
113	.24	.00	4.72	2.8	13.8	-.2	-12.1	-52.5	.8	186	.07	.02	5.16	.2	-1.5	20.5	24.6	192.6	
114	.24	.00	4.73	3.1	10.7	-.1	-9.1	-55.1	.0	187	.09	.01	5.16	.2	-.7	20.8	23.9	201.4	
115	.23	-.01	4.73	3.2	13.2	.3	-10.7	-60.2		188	.10	.01	5.17	.4	-1.3		24.8	210.8	
116	.27	-.01	4.75	3.5	10.5	.9	-7.4	-62.7	.2										
117	.27	-.01	4.75	3.5	12.6	1.0	-9.1	-67.2	.7	110	.18	.00	4.70	2.0		-1.6		-23.8	
118	.29	-.01	4.77	3.7	9.9	1.9	-5.8	-69.0	.6	111	.20	.00	4.71	2.4	13.5	-1.2		-29.3	
119	.24	.00	4.77	3.0	11.9	1.8	-7.5	-72.8	.5	112	.20	.00	4.72	3.0	15.6	.5	-18.7	-36.9	
										113	.25	.00	4.74	3.7	11.6	.9	-14.0	-40.4	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
114	.23	.00	4.74	3.6	13.7	.8	-14.5	-46.0		188	.07	.02	5.18	.1	-.5	22.7	20.8	186.0	
115	.29	.01	4.77	4.1	11.6	1.7	-11.7	-49.5		189	.10	.01	5.19	.3	-1.6	22.4	21.9	195.7	
116	.28	.00	4.78	4.5	13.8	2.3	-14.1	-55.3		190	.10	.01	5.19	3	-.7		21.3	204.5	
117	.32	.00	4.81	4.8	10.9	2.7	-10.6	-58.0	.0	Z=57									
118	.31	.00	4.80	5.0	13.2	3.3	-12.7	-63.2		112	.23	.00	4.74	3.0		-3.8		-18.2	
119	.32	-.01	4.82	5.1	10.2	3.5	-9.3	-65.3	1.1	113	.26	.00	4.75	3.8	16.3	-3.2		-26.4	
120	.30	.00	4.82	5.1	12.4	4.1	-11.2	-69.7	.8	114	.27	.00	4.76	4.6	13.3	-1.5	-13.9	-31.6	
121	.31	-.01	4.82	3.7	9.3	4.0	-7.9	-70.9	.6	115	.30	.02	4.79	4.8	14.4	-.9	-14.6	-37.9	
122	.28	-.01	4.81	4.1	12.1	4.7	-10.4	-75.0		116	.31	.02	4.81	5.1	11.4	-1.1	-9.6	-41.2	
123	.28	-.02	4.82	2.9	9.2	4.9	-7.1	-76.2		117	.31	.02	4.81	5.5	14.3	-.5	-12.0	-47.5	
124	.27	-.02	4.82	2.9	11.5	5.2	-9.6	-79.6	.5	118	.32	.01	4.83	5.8	11.1	-.3	-8.7	-50.5	
125	.24	-.02	4.82	2.2	8.6	5.4	-5.8	-80.2	.6	119	.33	.01	4.84	6.0	13.6	.1	-10.8	-56.0	
126	.23	-.02	4.82	2.2	10.9	5.8	-7.6	-82.9	.3	120	.34	.00	4.84	6.0	10.6	.5	-7.5	-58.5	
127	.23	-.02	4.82	1.6	8.2	6.0	-4.7	-83.1	.3	121	.33	.00	4.85	6.0	12.6	.7	-9.1	-63.0	
128	.20	-.01	4.82	1.3	10.4	6.3	-6.6	-85.4	.0	122	.33	-.01	4.86	4.9	9.6	.9	-5.8	-64.6	
129	.18	-.01	4.82	.7	7.9	6.6	-3.9	-85.2	.2	123	.29	-.01	4.84	5.0	12.5	1.3	-8.0	-69.0	
130	.18	-.01	4.83	.5	10.1	6.8	-6.0	-87.3	.0	124	.28	-.01	4.84	3.8	9.1	1.1	-4.3	-70.0	
131	.16	-.01	4.83	.3	7.9	7.1	-3.3	-87.1	.4	125	.28	-.02	4.85	3.7	12.4	2.0	-7.2	-74.3	
132	.00	.00	4.81	.0	9.6	7.2	-4.7	-88.6	.2	126	.27	-.02	4.85	3.1	9.1	2.5	-4.3	-75.4	
133	.00	.00	4.82	.0	7.7	7.6	-2.5	-88.3	.7	127	.27	-.02	4.85	2.8	11.1	2.7	-5.9	-78.4	
134	.00	.00	4.82	.0	9.7	8.0	-4.4	-89.8	.9	128	.28	-.02	4.86	2.2	8.5	3.0	-2.9	-78.8	.1
135	.00	.00	4.83	.2	7.0	8.2	-1.4	-88.8	.9	129	.24	-.02	4.85	1.8	10.6	3.2	-4.7	-81.3	.0
136	.00	.00	4.83	.0	9.3	8.5	-3.2	-90.0	1.1	130	.21	-.01	4.85	1.0	8.0	3.3	-1.7	-81.3	
137	.01	.00	4.84	.1	6.4	8.7	-.1	-88.4	.6	131	.15	-.01	4.84	.9	10.6	3.8	-4.0	-83.8	.1
138	.00	.00	4.84	.0	8.9	9.1	-2.2	-89.3	1.0	132	.16	-.01	4.85	.6	8.2	4.1	-1.6	-83.9	.2
139	.05	.01	4.85	.1	4.7	9.4	2.4	-85.8	.9	133	.15	-.01	4.85	.2	9.9	4.4	-3.2	-85.8	.4
140	.00	.00	4.86	.0	6.3	9.4	1.0	-84.1	.8	134	.15	-.01	4.85	.1	7.7	4.5	-.6	-85.4	.2
141	.00	.00	4.86	.0	4.4	10.2	3.2	-80.3	.6	135	.00	.00	4.84	.0	10.1	4.9	-2.5	-87.4	.8
142	.11	.01	4.88	.1	5.7	10.5	1.9	-78.0	.2	136	.00	.00	4.85	.3	7.5	5.4	.2	-86.9	.8
143	.12	.01	4.90	.4	4.3	11.0	4.1	-74.2	.3	137	.00	.00	4.85	.0	9.5	5.6	-1.6	-88.3	1.2
144	.16	.01	4.91	1.1	5.9	11.5	2.7	-72.1	.3	138	.06	-.01	4.86	.3	6.9	6.0	1.5	-87.1	.6
145	.15	.01	4.91	1.3	3.7	12.5	5.1	-67.7	-.4	139	.00	.00	4.86	.0	9.2	6.2	-.8	-88.2	1.0
146	.20	.01	4.94	1.3	4.8	11.4	4.6	-64.5	-.6	140	.05	.01	4.87	.1	4.9	6.5	4.2	-85.0	.7
147	.22	.01	4.95	1.9	4.6	12.6	6.2	-61.0	-.4	141	.00	.00	4.88	.0	6.6	6.7	2.7	-83.5	.6
148	.22	.02	4.97	2.5	5.4	13.0	4.0	-58.4	.3	142	.00	.00	4.88	.0	4.5	6.9	5.1	-79.9	-.1
149	.25	.02	4.99	2.6	3.5	13.5	7.3	-53.8		143	.12	.01	4.90	.1	6.4	7.6	3.6	-78.3	.1
150	.25	.02	5.00	3.5	5.3	13.9	5.7	-51.0		144	.16	.01	4.92	.4	4.5	7.8	5.6	-74.7	-.2
151	.26	.02	5.01	4.3	3.1	13.9	8.3	-46.1		145	.19	.01	4.94	1.1	6.2	8.1	4.7	-72.8	-.2
152	.27	.01	5.02	4.6	5.0	14.4	6.5	-43.1		146	.20	.02	4.95	1.5	4.4	8.7	6.8	-69.1	-.1
153	.28	.01	5.03	5.1	2.7	14.8	9.2	-37.8		147	.21	.01	4.96	2.5	6.2	10.1	5.2	-67.3	.0
154	.29	.00	5.03	5.5	4.7	14.9	7.7	-34.4		148	.21	.01	4.97	2.4	3.2	8.6	8.6	-62.4	-.8
155	.30	.00	5.05	5.9	2.7	15.3	9.8	-29.0		149	.24	.02	4.99	3.0	6.8	10.0	6.0	-61.1	
156	.28	-.01	5.05	6.2	4.3	15.6	8.6	-25.3		150	.26	.02	5.01	3.4	3.7	10.2	8.8	-56.7	
157	.29	-.01	5.06	6.4	2.4	15.9	10.6	-19.6		151	.26	.02	5.01	4.2	5.7	10.6	7.5	-54.4	
158	.28	-.01	5.07	6.4	3.9	16.1	9.6	-15.4		152	.27	.02	5.04	4.7	3.3	10.8	10.1	-49.6	
159	.28	-.02	5.07	6.3	2.5	16.8	11.2	-9.8		153	.27	.01	5.03	5.2	5.4	11.1	8.4	-47.0	
160	.29	-.02	5.08	6.3	3.1	16.6	10.4	-4.9		154	.28	.01	5.05	5.7	3.2	11.6	10.9	-42.1	
161	.26	-.01	5.09	5.5	1.6	16.8	12.7	1.6		155	.29	.00	5.05	5.8	4.9	11.8	9.1	-38.9	
162	.25	-.02	5.09	5.8	3.4	17.3	11.3	6.3		156	.30	.00	5.07	6.3	3.0	12.1	11.7	-33.8	
163	.26	-.02	5.09	5.0	1.3	17.3	13.5	13.1		157	.28	-.01	5.07	6.5	4.4	12.2	10.5	-30.2	
164	.26	-.03	5.09	5.1	3.0	17.6	12.2	18.1		158	.29	-.01	5.08	6.3	2.9	12.7	12.6	-25.0	
165	.25	-.03	5.10	4.4	1.4	17.8	14.0	24.8		159	.27	-.01	5.08	6.8	4.1	12.9	11.4	-21.0	
166	.22	-.02	5.10	4.3	2.9	18.3	12.5	29.9		160	.28	-.02	5.09	6.3	2.4	12.8	13.6	-15.3	
167	.09	.00	5.10	3.3	1.1	18.5	14.6	36.8		161	.29	-.02	5.10	6.7	3.9	13.5	12.1	-11.1	
168	.16	-.02	5.10	3.4	2.6	18.7	13.1	42.3		162	.30	-.03	5.11	6.0	2.0	13.9	14.4	-5.0	
169	.22	-.04	5.11	2.7	.8	18.9	15.3	49.6		163	.30	-.03	5.11	6.3	3.5	14.0	13.1	-.4	
170	.19	-.03	5.11	2.2	2.5	18.9	14.0	55.2		164	.25	-.02	5.11	5.5	1.7	14.4	15.1	5.9	
171	.19	-.03	5.11	1.8	1.0	19.2	15.7	62.3		165	.26	-.02	5.12	5.5	3.2	14.6	13.8	10.8	
172	.16	-.02	5.11	1.0	2.2	19.6	14.4	68.2		166	.26	-.03	5.12	4.7	.5	14.6	15.9	17.4	
173	.16	-.02	5.12	.3	.3	19.1	16.8	76.0		167	.25	-.03	5.12	4.6	3.2	14.9	14.4	22.3	
174	.11	-.01	5.11	.1	2.8	19.5	15.1	81.3		168	.25	-.03	5.12	3.5	1.2	14.9	16.6	29.2	
175	.00	.00	5.11	.1	1.1	19.8	16.5	88.3		169	.22	-.02	5.13	3.5	2.9	15.2	15.1	34.4	
176	.00	.00	5.11	.0	2.9	20.1	14.6	93.6		170	.23	-.04	5.13	2.9	1.2	15.7	17.2	41.3	
177	.00	.00	5.12	.1	.8	20.5	17.1	100.8		171	.20	-.03	5.13	2.5	2.8	15.9	15.6	46.6	
178	.00	.00	5.12	.0	2.7	20.7	15.3	106.2		172	.20	-.03	5.13	1.8	.9	15.8	17.8	53.8	
179	.02	.00	5.13	.1	.6	20.9	18.0	113.7		173	.17	-.03	5.13	1.0	2.6	16.3	16.4	59.2	
180	.00	.00	5.14	.0	2.6	21.1	16.2	119.2		174	.15	-.02	5.13	.8	1.0	17.1	18.0	66.3	
181	-.02	-.01	5.14	.2	.3	21.5	18.6	127.0		175	.12	-.02	5.13	.2	2.4	16.7	16.7	71.9	
182	.00	.00	5.15	.0	2.7	21.8	16.5	132.4		176	.00	.00	5.12	.0	1.0	16.7	18.6	78.9	
183	.00	.00	5.15	.2	-1.0	22.1	20.4	141.5		177	.00	.00	5.13	.0	3.3	17.1	16.4	83.7	
184	.00	.00	5.16	.0	-.4	21.9	19.9	149.9		178	.00	.00	5.13	.0	.9	17.2	18.6	90.9	
185	.00	.00	5.16	.0	-1.4	22.1	21.1	159.4		179	.00	.00	5.14	.0	3.2	17.7	17.0	95.8	
186	.00	.00	5.17	.0	-.6	22.3	20.7	168.1		180	-.02	.00	5.15	.2	.8	18.0	19.3	103.1	
187	.08	.01	5.18	.0	-1.4	22.4	21.6	177.5		181	.00	.00	5.15	.0	2.7	18.1	17.4	108.4	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
182	-.02	-.01	5.16	.3	.6	18.5	20.0	115.8		176	.12	-.01	5.15	.6	2.9	18.8	13.2	60.4	
183	.00	.00	5.17	.0	2.8	18.5	18.1	121.1		177	-.11	-.01	5.15	.1	1.1	18.9	15.4	67.3	
184	.00	.00	5.17	.1	-.9	18.7	21.9	130.1		178	.00	.00	5.14	.0	3.2	18.7	13.6	72.3	
185	.00	.00	5.18	.0	-.2	18.9	21.6	138.3		179	.00	.00	5.15	.0	1.5	19.4	15.4	78.8	
186	.00	.00	5.18	.1	-1.0	19.4	22.5	147.4		180	.00	.00	5.16	.0	3.2	19.3	13.7	83.7	
187	.00	.00	5.18	.0	-.5	19.4	22.0	155.9		181	-.01	.00	5.16	.0	.8	19.4	16.7	91.0	
188	.00	.00	5.19	.0	-1.3	19.5	23.1	165.3		182	.00	.00	5.17	.0	3.2	19.9	14.5	95.8	
189	.09	.01	5.20	.1	-.5	19.5	22.5	173.8		183	-.02	-.01	5.18	.1	.9	20.1	17.1	103.0	
190	.09	.01	5.20	.2	-1.2	19.9	23.5	183.1		184	.00	.00	5.18	.0	2.9	20.2	15.3	108.2	
191	.12	.01	5.21	.1	-.6	19.9	23.1	191.9		185	.00	.00	5.19	.2	-.4	20.7	18.8	116.7	
192	.11	.00	5.22	.3	-1.2		23.7	201.2		186	.00	.00	5.19	.0	-.1	20.8	18.3	124.9	
Z = 58										187	.00	.00	5.20	.0	-1.0	20.7	19.7	134.0	
114	.27	.01	4.79	4.4		-1.4		-17.7		188	.00	.00	5.20	.0	-.1	21.1	19.1	142.1	
115	.31	.02	4.82	5.3	13.7	-1.0		-23.3		189	.00	.00	5.20	.0	-1.1	21.2	20.2	151.3	
116	.32	.01	4.83	5.9	16.3	1.0	-18.9	-31.6		190	.09	.01	5.22	.1	-.2	21.5	19.6	159.6	
117	.33	.02	4.84	6.3	11.9	1.5	-14.4	-35.5		191	.10	.01	5.22	.2	-1.1	21.7	20.6	168.8	
118	.33	.01	4.84	6.6	14.4	1.6	-15.2	-41.8		192	.12	.01	5.23	.2	-.6	21.7	20.1	177.4	
119	.33	.01	4.85	6.8	11.5	2.0	-12.1	-45.2		193	.11	.00	5.24	.3	-1.3	21.7	21.3	186.8	
120	.35	.00	4.87	7.2	13.8	2.3	-14.1	-51.0		194	.14	.01	5.26	.6	-.2		20.2	195.0	
121	.35	.00	4.87	7.2	11.1	2.7	-11.0	-53.9		Z = 59									
122	.35	-.01	4.88	7.2	13.0	3.1	-12.9	-58.8		116	.32	.02	4.84	6.0		-3.4		-12.6	
123	.33	-.01	4.87	6.5	10.3	3.7	-9.7	-61.0		117	.32	.01	4.85	6.7	16.5	-3.3		-21.0	
124	.32	-.01	4.89	6.3	12.8	4.0	-11.8	-65.7		118	.32	.01	4.85	7.2	13.7	-1.5	-13.9	-26.6	
125	.31	-.01	4.88	5.4	.5	4.4	-8.5	-67.1		119	.33	.01	4.86	7.7	14.6	-1.4	-14.9	-33.2	
126	.29	-.01	4.88	4.3	12.0	4.1	-10.3	-71.1		120	.39	.00	4.91	7.7	11.8	-1.1	-10.4	-36.8	
127	.31	-.02	4.89	3.6	9.4	4.4	-7.7	-72.5		121	.35	.00	4.89	7.9	14.2	-.7	-12.5	-42.9	
128	.29	-.02	4.88	3.4	11.6	4.9	-9.3	-76.0		122	.38	-.01	4.92	8.0	11.1	-.7	-9.0	-46.0	
129	.28	-.03	4.88	2.7	8.7	5.1	-6.3	-76.6	.9	123	.35	.00	4.90	7.9	13.4	-.2	-11.2	-51.3	
130	.27	-.02	4.89	2.2	11.0	5.5	-8.1	-79.5	-.3	124	.33	-.01	4.89	7.3	10.6	.2	-.7.8	-53.9	
131	.23	-.02	4.87	1.4	8.4	5.9	-5.4	-79.8	.1	125	.32	-.01	4.90	7.5	12.9	.2	-10.0	-57.7	
132	.21	-.01	4.88	1.1	10.5	5.8	-7.2	-82.3		126	.33	-.01	4.91	6.3	10.2	1.0	-6.7	-60.8	
133	.19	-.01	4.87	.8	8.4	6.0	-4.9	-82.6		127	.35	-.02	4.91	5.8	12.0	1.0	-8.4	-64.8	
134	.15	-.01	4.87	.3	10.3	6.4	-6.4	-84.8	.1	128	.32	-.02	4.91	4.2	9.9	1.5	-5.7	-66.7	
135	.15	-.01	4.87	.1	8.1	6.7	-4.0	-84.9	.2	129	.33	-.02	4.91	4.0	11.7	1.6	-8.8	-70.3	
136	.00	.00	4.86	.0	10.3	6.9	-5.8	-87.1	.6	130	.29	-.02	4.91	3.3	9.2	2.1	-4.7	-71.4	
137	.00	.00	4.86	.1	7.7	7.1	-3.1	-86.7	.8	131	.26	-.01	4.91	2.6	11.1	2.2	-6.3	-74.4	-.1
138	.00	.00	4.87	.0	10.0	7.6	-5.0	-88.6	1.0	132	.29	-.01	4.93	1.8	8.7	2.5	-3.5	-75.1	
139	.00	.00	4.88	.0	6.9	7.6	-1.5	-87.4	.4	133	.26	-.01	4.91	1.2	10.8	2.8	-5.4	-77.8	
140	.00	.00	4.88	.0	9.9	8.3	-4.2	-89.2	1.1	134	.20	-.01	4.89	.9	8.8	3.1	-3.0	-78.5	
141	.07	.01	4.89	.0	5.1	8.4	1.0	-86.2	.8	135	.16	-.01	4.89	.3	10.5	3.3	-4.7	-80.9	.0
142	.00	.00	4.89	.0	6.9	8.9	-.4	-85.1	.5	136	-.10	-.01	4.88	.2	8.4	3.6	-2.3	-81.2	-.2
143	.11	.00	4.91	.1	4.9	9.3	1.8	-81.9	.3	137	.00	.00	4.88	.0	10.4	3.8	-4.1	-83.6	.4
144	.13	.01	4.93	.2	6.4	9.3	.4	-80.3	-.2	138	.00	.00	4.88	.1	8.1	4.2	-1.4	-83.6	.5
145	.15	.01	4.94	.6	5.3	10.1	2.1	-77.5	.4	139	.00	.00	4.89	.0	10.3	4.6	-3.3	-85.8	1.0
146	.16	.01	4.95	1.4	6.5	10.4	.7	-75.9	.2	140	.00	.00	4.89	.0	7.2	4.9	.2	-85.0	.3
147	.21	.01	4.97	1.8	4.6	10.6	3.4	-72.4	.3	141	.00	.00	4.90	.0	10.3	5.3	-2.7	-87.2	1.2
148	.22	.02	4.99	2.8	6.6	11.0	1.8	-70.9	.5	142	-.04	.00	4.90	.2	5.5	5.8	2.3	-84.7	.9
149	.25	.02	5.01	3.6	4.2	12.0	4.5	-67.1	.3	143	.00	.00	4.91	.0	7.1	5.9	.9	-83.7	.6
150	.25	.02	5.02	3.4	6.5	11.7	2.8	-65.5	.5	144	.11	.00	4.93	.1	5.1	6.1	3.3	-80.7	.0
151	.27	.02	5.04	4.4	4.4	12.5	5.0	-61.9		145	.15	.01	4.95	.4	6.9	6.6	2.0	-79.6	.0
152	.27	.02	5.05	4.9	5.9	12.6	3.8	-59.7		146	.16	.01	4.96	.6	5.2	6.5	4.2	-76.7	-.1
153	.29	.02	5.06	5.4	3.7	13.1	6.3	-55.4		147	.19	.01	4.98	1.4	7.2	7.2	2.5	-75.8	.4
154	.29	.01	5.06	5.8	5.7	13.3	4.9	-53.0		148	.22	.02	5.00	1.9	4.9	7.5	4.8	-72.7	.2
155	.29	.01	5.07	5.9	3.0	13.2	7.8	-48.0		149	.25	.02	5.02	2.9	7.0	8.0	3.3	-71.6	.6
156	.29	.01	5.08	6.7	5.7	14.0	5.9	-45.5		150	.25	.03	5.03	4.0	4.8	8.5	5.9	-68.3	.3
157	.30	.00	5.09	6.9	3.2	14.1	8.3	-40.6		151	.27	.02	5.05	4.6	6.6	8.6	4.5	-66.8	.0
158	.30	-.01	5.09	7.3	5.0	14.7	6.8	-37.6		152	.27	.02	5.06	4.5	4.7	8.9	6.8	-63.5	
159	.31	-.01	5.11	6.9	2.9	14.7	9.0	-32.4		153	.28	.01	5.06	5.1	6.2	9.2	4.8	-61.6	
160	.32	-.02	5.11	7.5	4.6	15.2	7.7	-28.9		154	.29	.02	5.08	5.9	4.3	9.8	7.8	-57.9	
161	.30	-.02	5.11	7.0	2.4	15.2	10.0	-23.3		155	.29	.01	5.09	6.2	5.9	10.1	6.4	-55.8	
162	.31	-.02	5.13	7.5	4.2	15.6	8.7	-19.4		156	.29	.01	5.09	6.6	3.8	10.8	9.1	-51.5	
163	.32	-.01	5.14	6.9	2.2	15.8	10.9	-13.6		157	.30	.00	5.10	7.0	5.6	10.7	7.3	-49.0	
164	.30	-.02	5.13	6.9	3.7	16.0	9.6	-9.2		158	.30	.00	5.11	7.3	3.4	11.0	9.9	-44.3	
165	.27	-.02	5.14	6.1	1.9	16.3	11.7	-3.0		159	.30	-.01	5.12	7.5	5.2	11.1	8.6	-41.4	
166	.26	-.03	5.13	6.1	3.6	16.6	10.3	1.4		160	.31	-.01	5.12	7.2	3.3	11.5	10.7	-36.6	
167	.25	-.03	5.14	5.3	1.6	16.8	12.6	7.9		161	.32	-.02	5.13	7.8	4.7	11.6	9.3	-33.2	
168	.22	-.02	5.14	5.2	3.4	17.0	10.9	12.6		162	.32	-.02	5.14	7.3	2.9	12.1	11.7	-28.1	
169	.00	.00	5.14	4.5	1.4	17.3	13.1	19.2		163	.31	-.02	5.14	7.7	4.5	12.4	10.2	-24.5	
170	.21	-.03	5.14	4.1	3.2	17.5	11.6	24.1		164	.32	-.01	5.16	7.1	2.3	12.5	12.7	-18.8	
171	.22	-.04	5.15	3.5	1.2	17.6	13.8	31.0		165	.32	-.03	5.16	7.1	4.1	12.9	11.1	-14.8	
172	.20	-.03	5.15	3.1	3.1	17.9	12.4	36.0		166	.30	-.03	5.16	6.4	2.2	13.1	13.4	-8.9	
173	.20	-.03	5.15	2.3	1.2	18.2	14.5	42.9		167	.27	-.02	5.16	6.3	3.9	13.4	11.9	-4.7	
174	.17	-.03	5.15	1.5	2.7	18.3	13.3	48.3		168	.27	-.03	5.16	5.7	1.8	13.5	14.2	1.6	
175	.16	-.02	5.15	.9	1.1	18.3	15.0	55.2		169	.27	-.03	5.16	5.3	3.5	13.7	12.7	6.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
170	.25	-.03	5.16	4.6	1.7	14.0	14.9	12.5		164	.33	-.02	5.17	8.3	4.8	14.2	6.9	-31.5	
171	.21	-.03	5.16	4.2	3.4	14.3	13.3	17.1		165	.32	-.01	5.18	7.9	2.5	14.4	9.5	-25.9	
172	.23	-.04	5.16	3.6	1.6	14.7	15.4	23.6		166	.31	-.02	5.18	7.8	4.5	14.8	7.8	-22.3	
173	.20	-.03	5.16	3.1	3.3	14.9	13.9	28.4		167	.30	-.03	5.18	7.1	2.3	15.0	10.2	-16.6	
174	.21	-.04	5.17	2.5	1.5	15.2	15.7	34.9		168	.27	-.02	5.18	6.9	4.0	15.1	8.7	-12.5	
175	.20	-.03	5.17	1.8	2.8	15.4	14.4	40.2		169	.27	-.03	5.18	6.2	2.0	15.4	11.0	-6.5	
176	.15	-.03	5.17	1.1	1.1	15.4	16.6	47.1		170	.27	-.03	5.18	5.9	3.9	15.8	9.5	-2.4	
177	.14	-.02	5.17	.6	3.3	15.7	15.2	51.9		171	.25	-.03	5.18	5.2	1.9	16.0	11.6	3.8	
178	-.17	-.02	5.18	.1	1.4	16.0	16.8	58.6		172	.24	-.04	5.18	4.7	3.7	16.2	10.3	8.2	
179	.00	.00	5.16	.0	3.3	16.1	15.2	63.4		173	.25	-.04	5.19	4.0	1.9	16.4	12.2	14.4	
180	.00	.00	5.16	.0	1.5	16.1	17.0	70.0		174	.23	-.04	5.19	3.5	3.3	16.4	11.0	19.2	
181	.00	.00	5.17	.0	3.8	16.7	14.9	74.3		175	.20	-.03	5.19	2.7	1.5	16.4	12.9	25.8	
182	.00	.00	5.18	.0	1.0	17.0	17.3	81.3		176	.20	-.03	5.19	2.1	3.4	17.0	11.3	30.5	
183	.00	.00	5.18	.0	3.5	17.2	15.9	85.9		177	.15	-.03	5.19	1.8	1.9	17.7	13.2	36.7	
184	-.02	-.01	5.19	.2	1.0	17.4	18.3	92.9		178	-.17	-.02	5.19	1.1	2.9	17.4	12.0	41.8	
185	.00	.00	5.20	.0	3.1	17.6	16.7	97.9		179	-.17	-.02	5.19	.3	1.7	17.7	13.8	48.2	
186	.00	.00	5.20	.2	-.6	17.4	20.3	106.5		180	-.12	-.02	5.19	.2	3.3	17.7	12.3	53.0	
187	.00	.00	5.21	.0	.4	17.9	19.5	114.3		181	.00	.00	5.18	.0	1.7	17.9	14.2	59.3	
188	.00	.00	5.21	.1	-.7	18.2	20.8	123.1		182	.00	.00	5.19	.0	3.5	17.6	12.6	64.0	
189	.00	.00	5.22	.0	.0	18.3	20.3	131.1		183	.00	.00	5.19	.0	2.1	18.6	14.4	70.0	
190	.00	.00	5.22	.0	-.8	18.6	21.7	140.0		184	.00	.00	5.20	.0	3.4	18.6	12.5	74.6	
191	.00	.00	5.22	.0	-.1	18.7	20.7	148.2		185	-.02	-.01	5.21	.1	1.5	19.0	15.4	81.2	
192	.10	.01	5.24	.1	-1.0	18.7	22.2	157.3		186	.00	.00	5.21	.0	3.1	19.0	13.8	86.2	
193	.12	.01	5.25	.2	-.1	19.2	21.3	165.5		187	.00	.00	5.22	.1	-.5	19.1	18.0	94.8	
194	.11	.00	5.25	.3	-1.3	19.2	22.6	174.9		188	.00	.00	5.22	.0	.6	19.3	16.9	102.2	
195	.14	.01	5.27	.6	.0	19.4	21.7	182.9		189	.00	.00	5.23	.0	-.5	19.5	18.2	110.8	
196	.21	.03	5.31	.7	-1.0		23.0	192.0		190	.00	.00	5.23	.0	.6	20.1	17.2	118.3	
Z = 60										191	.00	.00	5.24	.0	-1.0	19.9	19.0	127.4	
118	.35	.02	4.89	7.6		-1.0		-12.7		192	.00	.00	5.24	.0	.4	20.3	17.7	135.2	
119	.35	.01	4.89	7.9	13.6	-1.1		-18.2		193	.11	.01	5.26	.1	-1.0	20.4	19.3	144.2	
120	.36	.02	4.90	8.7	16.3	.6	-19.1	-26.5		194	.12	.01	5.26	.3	.0	20.5	18.7	152.3	
121	.35	.01	4.91	8.9	12.1	.9	-14.5	-30.5		195	.13	.01	5.28	.6	-.9	21.0	19.6	161.2	
122	.36	.00	4.91	8.9	14.6	1.3	-15.5	-36.9		196	.18	.03	5.31	.9	.3	21.2	18.5	169.0	
123	.36	-.01	4.92	8.8	11.3	1.5	-12.1	-40.2		197	.20	.03	5.32	1.1	-1.0	21.2	20.2	178.1	
124	.36	-.01	4.92	9.0	13.9	2.0	-14.4	-46.0		198	.21	.03	5.34	2.3	1.0		18.8	185.1	
125	.36	-.01	4.93	8.2	10.7	2.1	-11.1	-48.7		Z = 61									
126	.36	-.01	4.94	8.6	13.5	2.8	-13.4	-54.1		120	.36	.00	4.92	8.6		-3.6		-7.3	
127	.32	-.01	4.93	7.9	10.4	2.9	-10.2	-56.4		121	.37	.01	4.93	9.4	16.7	-3.2		-15.9	
128	.33	-.01	4.94	7.0	12.6	3.5	-12.0	-61.0		122	.38	.01	4.94	9.7	13.5	-1.8	-14.5	-21.4	
129	.37	-.03	4.95	5.0	8.6	2.2	-8.3	-61.5		123	.38	.00	4.94	10.0	14.8	-1.6	-15.5	-28.1	
130	.32	-.02	4.94	4.6	13.3	3.8	-10.7	-66.8		124	.38	.00	4.95	9.7	11.6	-1.3	-11.0	-31.6	
131	.32	-.01	4.96	3.8	9.4	3.9	-7.9	-68.1	2	125	.38	.00	4.95	9.6	14.0	-1.1	-13.3	-37.6	
132	.33	-.02	4.95	3.3	11.6	4.4	-9.7	-71.5		126	.37	-.01	4.95	8.9	11.2	-.6	-9.7	-40.7	
133	.31	-.02	4.95	2.3	8.9	4.6	-6.8	-72.4		127	.37	-.01	4.96	9.1	13.5	-.6	-12.0	-46.2	
134	.27	-.01	4.95	1.6	11.1	4.9	-8.7	-75.4		128	.36	-.02	4.96	8.6	10.9	-.1	-8.8	-49.0	
135	.21	-.01	4.92	1.0	8.8	5.0	-6.3	-76.2		129	.36	-.02	4.97	7.7	12.3	-.5	-9.9	-53.2	
136	.15	-.01	4.90	.6	10.8	5.3	-7.9	-78.9	-.2	130	.33	-.01	4.97	6.8	10.9	1.8	-7.6	-56.0	
137	.15	-.01	4.91	.3	8.6	5.6	-5.8	-79.5	.0	131	.33	-.01	4.98	5.2	12.2	.7	-9.2	-60.2	
138	.00	.00	4.90	.0	10.8	5.9	-7.5	-82.2	1.1	132	.37	-.03	4.98	4.3	9.7	1.1	-6.2	-61.8	
139	.00	.00	4.90	.1	8.4	6.2	-4.7	-82.5	.5	133	.34	-.02	4.99	3.7	11.8	1.3	-8.0	-65.5	
140	.00	.00	4.91	.0	10.7	6.6	-6.6	-85.1	.6	134	.35	-.02	5.00	2.7	9.2	1.6	-5.1	-66.7	
141	.00	.00	4.91	.0	7.4	6.8	-3.0	-84.5	.3	135	.35	-.02	4.99	1.9	11.2	1.7	-6.7	-69.8	
142	.00	.00	4.92	.0	10.5	7.0	-5.6	-86.9	1.0	136	.26	-.01	4.96	1.2	9.2	2.1	-4.3	-71.0	-.3
143	.02	.00	4.92	.1	5.7	7.2	-.6	-84.5	.5	137	.22	-.01	4.95	.4	10.8	2.1	-6.3	-73.8	
144	.00	.00	4.93	.0	7.6	7.6	-2.1	-84.0	.3	138	.17	-.01	4.93	.2	9.0	2.5	-3.8	-74.7	.6
145	.11	.00	4.95	.1	5.6	8.1	.2	-81.6	.1	139	.00	.00	4.91	.0	11.1	2.9	-5.8	-77.8	.3
146	.13	.01	4.96	.5	7.3	8.6	-1.4	-80.9	-.1	140	.04	.00	4.92	.2	8.9	3.3	-3.3	-78.6	.1
147	.16	.01	4.98	1.1	5.6	9.0	.6	-78.4	.2	141	.00	.00	4.93	.0	10.9	3.6	-5.1	-81.4	.9
148	.19	.01	5.00	1.7	7.2	9.0	-.7	-77.5	.1	142	.02	.00	4.93	.1	7.9	4.1	-1.8	-81.3	.2
149	.22	.02	5.02	2.1	5.5	9.5	1.7	-74.9	.5	143	.00	.00	4.93	.0	10.8	4.3	-4.3	-84.0	1.0
150	.25	.02	5.04	3.3	7.4	9.9	-.3	-74.2	.5	144	-.03	.00	4.94	.1	6.0	4.7	.7	-81.9	.5
151	.26	.02	5.05	4.5	5.1	10.2	2.6	-71.3	.3	145	.00	.00	4.95	.0	7.9	5.1	-.9	-81.8	.5
152	.27	.02	5.07	5.1	7.1	10.8	.9	-70.3	.2	146	.00	.00	4.95	.0	5.7	5.2	1.7	-79.5	.0
153	.28	.02	5.08	5.6	4.2	10.2	4.0	-66.4	-.9	147	.13	.00	4.98	.4	7.6	5.4	.2	-79.0	-.1
154	.29	.02	5.09	5.7	7.4	11.4	1.9	-65.7	.0	148	.20	.01	5.01	.9	5.9	5.7	2.3	-76.8	-.1
155	.30	.01	5.10	6.5	4.6	11.6	3.7	-62.2	-.5	149	.21	.01	5.03	1.9	7.9	6.4	.7	-76.6	.6
156	.30	.01	5.11	7.2	6.4	12.1	2.9	-60.6		150	.23	.01	5.03	2.2	5.4	6.3	3.5	-73.9	.3
157	.30	.01	5.12	7.3	3.7	12.0	5.7	-56.2		151	.27	.02	5.07	3.3	8.1	7.0	1.4	-73.9	.5
158	.30	.00	5.12	7.7	6.1	12.5	4.1	-54.2		152	.27	.02	5.08	4.5	5.4	7.2	3.7	-71.2	.0
159	.31	.00	5.13	8.0	3.9	13.0	6.0	-50.0		153	.27	.02	5.08	5.1	7.3	7.4	2.6	-70.4	-.3
160	.30	.00	5.14	8.3	5.3	13.2	5.2	-47.3		154	.29	.02	5.10	6.2	5.3	8.5	5.1	-67.6	-.8
161	.31	-.01	5.14	7.9	3.3	13.2	7.6	-42.5		155	.32	.01	5.12	6.2	6.3	7.4	4.3	-65.9	-1.1
162	.32	-.01	5.16	8.5	5.3	13.8	6.0	-39.7		156	.31	.01	5.13	6.5	5.7	8.6	6.1	-63.5	-.8
163	.32	-.01	5.16	7.9	3.0	13.9	8.4	-34.7		157	.31	.01	5.13	7.1	6.4	8.5	4.7	-61.8	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
158	.31	.01	5.14	7.6	4.5	9.4	7.1	-58.3		152	.26	.02	5.08	3.7	7.6	8.3	-1.4	-74.9	.2
159	.31	.00	5.15	7.9	5.9	9.2	5.8	-56.1		153	.27	.01	5.09	4.8	6.2	9.1	.7	-73.0	.4
160	.31	.00	5.15	8.3	4.5	9.7	8.1	-52.5		154	.28	.01	5.10	5.7	7.8	9.6	-.5	-72.7	.3
161	.32	-.01	5.16	8.4	5.7	10.1	6.3	-50.1		155	.29	.02	5.12	6.6	5.6	9.9	1.7	-70.2	.0
162	.30	-.01	5.17	8.1	3.7	10.5	9.1	-45.7		156	.29	.01	5.13	7.3	7.4	10.9	.1	-69.5	.2
163	.32	-.01	5.17	8.7	5.4	10.6	7.6	-43.0		157	.30	.01	5.14	7.5	5.1	10.4	2.7	-66.6	-.2
164	.32	-.01	5.18	8.0	3.4	11.0	10.0	-38.4		158	.30	.00	5.14	7.6	6.9	10.8	1.1	-65.4	.2
165	.33	-.02	5.19	8.4	5.1	11.2	8.3	-35.4		159	.30	.00	5.15	8.0	4.6	10.9	3.8	-61.9	
166	.32	-.01	5.20	8.1	2.8	11.5	11.1	-30.1		160	.28	.01	5.16	8.7	6.8	11.8	2.1	-60.6	
167	.33	-.02	5.21	7.8	4.7	11.7	9.4	-26.7		161	.29	.00	5.16	8.7	3.9	11.3	5.1	-56.4	
168	.32	-.03	5.20	7.3	2.6	11.9	11.8	-21.2		162	.30	-.01	5.17	9.1	6.4	12.0	3.3	-54.8	
169	.32	-.03	5.21	7.0	4.4	12.3	10.1	-17.5		163	.31	-.01	5.18	8.6	3.9	12.2	5.7	-50.7	
170	.32	-.03	5.22	6.2	2.4	12.6	12.4	-11.8		164	.29	-.01	5.18	9.2	5.8	12.6	4.3	-48.4	
171	.27	-.03	5.20	5.8	4.1	12.8	10.9	-7.8		165	.29	-.01	5.20	8.6	3.4	12.6	6.8	-43.7	
172	.25	-.03	5.20	5.2	2.3	13.1	13.1	-2.0		166	.31	-.02	5.20	8.9	5.5	13.0	5.2	-41.2	
173	.26	-.04	5.20	4.7	3.8	13.2	11.8	2.3		167	.32	-.01	5.22	8.5	3.1	13.4	7.5	-36.2	
174	.23	-.04	5.20	4.1	2.2	13.5	13.6	8.2		168	.31	-.02	5.22	8.4	4.9	13.6	6.0	-33.1	
175	.23	-.04	5.20	3.4	3.4	13.6	12.6	12.9		169	.30	-.03	5.22	7.7	2.6	13.7	8.6	-27.0	
176	.20	-.03	5.21	2.7	1.8	13.9	14.6	19.2		170	.31	-.03	5.22	7.5	4.6	13.9	6.9	-24.2	
177	.20	-.03	5.20	2.0	3.7	14.3	12.8	23.5		171	.27	-.03	5.21	6.7	2.6	14.2	9.3	-18.8	
178	.18	-.03	5.21	1.6	1.7	14.1	14.8	29.9		172	.27	-.03	5.22	6.4	4.4	14.6	8.0	-15.1	
179	-.20	-.03	5.21	1.0	3.5	14.7	13.4	34.5		173	.26	-.04	5.22	5.6	2.5	14.8	10.0	-9.6	
180	-.18	-.03	5.21	.5	1.8	14.8	15.3	40.7		174	.25	-.04	5.22	5.1	4.0	15.0	8.5	-5.5	
181	-.14	-.02	5.21	.0	3.6	15.1	13.5	45.2		175	.25	-.04	5.22	4.4	2.3	15.2	10.4	.3	
182	.00	.00	5.20	.0	1.9	15.3	15.8	51.3		176	.23	-.04	5.22	3.8	3.8	15.6	9.3	4.6	
183	.00	.00	5.20	.0	3.9	15.7	13.7	55.5		177	.21	-.04	5.22	3.0	1.9	15.7	11.5	10.7	
184	.00	.00	5.21	.0	1.5	15.2	16.2	62.1		178	.20	-.03	5.22	2.2	3.7	15.7	10.1	15.1	
185	.00	.00	5.22	.0	4.4	16.1	13.7	65.8		179	.18	-.03	5.22	1.7	2.1	16.1	11.6	21.1	
186	-.02	-.01	5.22	.1	1.5	16.1	16.6	72.4		180	-.18	-.02	5.23	1.2	3.7	16.3	10.3	25.5	
187	.00	.00	5.23	.0	3.6	16.7	14.7	76.8		181	-.15	-.02	5.22	.6	1.9	16.3	12.5	31.7	
188	.00	.00	5.23	.1	-.4	16.8	19.2	85.3		182	-.14	-.02	5.22	.4	4.2	16.9	10.5	35.6	
189	.00	.00	5.24	.0	.8	16.9	18.5	92.6		183	.00	.00	5.21	.0	1.8	16.8	12.9	41.9	
190	.00	.00	5.24	.0	-.5	17.0	19.9	101.2		184	.00	.00	5.22	.0	4.0	16.9	11.3	45.9	
191	.00	.00	5.25	.0	.7	17.1	18.7	108.5		185	.00	.00	5.22	.0	1.9	17.3	13.2	52.1	
192	.00	.00	5.25	.0	-.9	17.3	20.4	117.4		186	.00	.00	5.23	.0	4.4	17.3	11.3	55.8	
193	.00	.00	5.26	.0	.6	17.5	19.4	124.9		187	.00	.00	5.24	.0	1.8	17.6	13.9	62.1	
194	.00	.00	5.26	.0	-.6	17.9	20.3	133.6		188	.00	.00	5.24	.0	4.1	18.0	11.9	66.1	
195	.14	.02	5.29	.1	.1	18.0	19.8	141.5		189	.00	.00	5.25	.1	.1	18.5	15.8	74.1	
196	.18	.02	5.31	.2	-.8	18.0	21.0	150.4		190	.00	.00	5.25	.0	.9	18.6	15.6	81.3	
197	.18	.03	5.33	.9	.6	18.4	19.8	157.9		191	.00	.00	5.26	.0	-.4	18.6	17.1	89.8	
198	.18	.03	5.34	1.3	-.4	19.0	21.4	166.3		192	.00	.00	5.26	.0	.8	18.7	16.3	97.0	
199	.22	.03	5.36	2.3	.5	18.5	20.3	173.9		193	.06	.01	5.27	.0	-.4	19.2	17.3	105.5	
200	.23	.03	5.37	2.8	.0		21.9	182.0		194	.06	.01	5.28	.1	.3	19.0	16.7	113.3	
Z=62										195	.05	.00	5.28	.0	-.4	19.1	18.1	121.7	
122	.37	.00	4.95	9.8		-1.8		-6.9		196	.14	.02	5.30	.4	.4	19.5	17.1	129.4	
123	.38	.00	4.95	10.0	13.8	-1.5		-12.6		197	.18	.02	5.33	.4	-.6	19.7	18.6	138.0	
124	.38	.00	4.96	10.4	16.1	-.1	-19.4	-20.7		198	.19	.03	5.34	1.2	1.2	20.3	16.8	144.9	
125	.37	-.01	4.97	10.0	11.8	.0	-14.7	-24.3		199	.21	.03	5.36	1.7	-.6	20.0	18.9	153.6	
126	.37	-.01	4.97	10.0	14.8	.8	-15.7	-31.1		200	.22	.02	5.37	3.0	1.5	21.0	17.3	160.2	
127	.36	-.02	4.97	9.3	11.3	.8	-13.1	-34.2		201	.23	.03	5.39	3.5	-.2	20.9	18.6	168.4	
128	.36	-.02	4.98	9.7	14.0	1.3	-14.8	-40.2		202	.24	.02	5.39	4.6	.8		18.1	175.7	
129	.35	-.02	4.98	9.1	11.2	1.6	-11.8	-43.3		Z=63									
130	.36	-.03	4.98	8.9	13.2	2.5	-13.6	-48.4		124	.38	-.01	4.98	10.5		-4.0		-1.3	
131	.37	-.03	4.99	7.4	10.6	2.2	-10.6	-51.0		125	.38	.00	4.98	10.7	16.5	-3.7		-9.7	
132	.37	-.03	4.99	7.0	12.8	2.8	-12.5	-55.7		126	.37	-.01	4.99	10.9	13.7	-1.7	-15.1	-15.3	
133	.38	-.04	5.00	4.8	9.9	2.9	-9.3	-57.5		127	.38	-.02	4.99	10.4	13.8	-2.7	-15.3	-21.1	
134	.32	-.02	5.00	4.1	12.2	3.4	-11.8	-61.6		128	.37	-.02	4.99	9.8	12.3	-1.6	-11.4	-25.3	
135	.32	-.02	5.01	3.1	9.6	3.7	-8.3	-63.1		129	.38	-.02	5.00	10.1	14.2	-1.4	-14.1	-31.5	
136	.32	-.02	5.01	2.4	11.6	4.1	-10.0	-66.7		130	.35	-.02	5.00	9.5	11.4	-1.2	-10.4	-34.8	
137	.24	-.02	4.97	1.3	8.9	3.8	-7.1	-67.5	-.5	131	.36	-.03	5.00	9.3	13.6	-.8	-12.2	-40.4	
138	.21	-.01	4.97	.6	11.5	4.4	-9.4	-70.9		132	.37	-.03	5.01	8.6	10.9	-.5	-9.4	-43.2	
139	-.15	-.01	4.95	.3	9.2	4.6	-7.0	-72.0	-.3	133	.37	-.03	5.01	7.6	13.1	-.2	-11.1	-48.2	
140	.02	-.01	4.93	.0	11.3	4.8	-8.7	-75.3	-.2	134	.38	-.04	5.02	6.0	9.7	-.4	-7.4	-49.8	
141	-.06	-.01	4.94	.2	9.1	5.1	-6.2	-76.4	.4	135	.32	-.02	5.03	4.6	13.1	.5	-9.9	-54.8	
142	.00	.00	4.94	.0	11.2	5.4	-8.2	-79.5	.5	136	.32	-.02	5.03	3.6	9.9	.8	-8.1	-56.7	
143	.00	.00	4.95	.0	8.2	5.6	-4.8	-79.6	.1	137	.32	-.02	5.03	2.7	11.8	1.0	-8.7	-60.4	
144	.00	.00	4.95	.0	11.1	6.0	-7.3	-82.6	.7	138	.31	-.02	5.03	1.7	9.3	1.3	-5.7	-61.5	
145	-.03	.00	4.96	.1	6.3	6.2	-2.1	-80.9	.2	139	-.23	-.04	4.98	1.0	11.6	1.4	-7.7	-65.0	-1.3
146	.00	.00	4.96	.0	8.4	6.6	-3.8	-81.2	.2	140	-.15	-.02	4.96	.6	9.6	1.8	-5.2	-66.6	-.4
147	.04	.00	4.97	.1	6.1	7.0	-1.4	-79.2	-.1	141	.00	.00	4.95	.0	11.6	2.1	-7.6	-70.1	.2
148	.17	.01	5.01	.5	8.0	7.4	-3.0	-79.1	-.3	142	-.03	.00	4.96	.1	9.2	2.2	-4.6	-71.3	-.1
149	.19	.01	5.02	1.1	6.3	7.8	-1.2	-77.4	.2	143	.00	.00	4.96	.0	11.7	2.7	-6.7	-74.9	.6
150	.19	.01	5.04	2.1	8.1	8.1	-2.7	-77.4	.3	144	.06	-.01	4.97	.1	8.5	3.0	-3.2	-75.3	-.3
151	.23	.01	5.05	2.7	6.0	8.7	-.3	-75.4	.8	145	.00	.00	4.97	.0	11.5	3.4	-5.8	-78.8	.8

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
146	-.03	.00	4.97	.1	6.7	3.8	-.8	-77.3	.2	140	-.22	-.04	4.99	1.1	12.1	3.7	-11.1	-61.4	-.8
147	.00	.00	4.98	.0	8.5	3.8	-2.4	-77.7	.2	141	.19	-.02	5.00	.1	9.2	3.2	-8.0	-62.5	
148	.00	.00	4.99	.1	6.4	4.2	.3	-76.1	-.2	142	-.09	-.01	4.98	.0	12.2	3.8	-10.2	-66.7	-.5
149	.17	.01	5.03	.4	8.2	4.4	-1.4	-76.2	-.3	143	.00	.00	4.97	.0	9.6	4.2	-7.9	-68.2	.0
150	.20	.01	5.04	.9	6.6	4.7	.6	-74.8	.0	144	.00	.00	4.98	.0	12.0	4.5	-9.8	-72.1	.8
151	.23	.00	5.06	1.9	8.4	4.9	-.9	-75.1	.4	145	.02	.00	4.98	.2	8.9	4.8	-6.3	-72.9	.0
152	.23	.01	5.08	2.6	6.5	5.4	1.5	-73.5	.6	146	.00	.00	4.99	.0	11.7	5.0	-8.6	-76.5	.4
153	.24	.01	5.09	3.9	8.3	6.1	-.2	-73.7	.3	147	-.03	.00	4.99	.1	6.9	5.3	-3.8	-75.3	.0
154	.27	.01	5.11	5.0	6.6	6.5	2.0	-72.2	.4	148	.00	.00	5.00	.0	9.0	5.9	-5.2	-76.3	.0
155	.28	.01	5.12	5.6	7.9	6.6	.5	-72.0	.2	149	.04	.00	5.00	.1	6.6	6.1	-3.0	-74.8	-.3
156	.29	.01	5.13	6.7	5.7	6.7	3.2	-69.6	-.4	150	.13	.00	5.03	.4	8.6	6.4	-4.5	-75.3	-.4
157	.29	.01	5.14	7.3	7.7	7.0	1.4	-69.3	-.2	151	.19	.01	5.05	1.0	6.9	6.7	-2.6	-74.2	.0
158	.31	.01	5.15	8.1	5.3	7.2	4.2	-66.5	-.7	152	.23	.00	5.08	2.1	8.8	7.2	-4.2	-75.0	.3
159	.32	.00	5.17	8.1	7.3	7.6	2.6	-65.7	-.3	153	.24	.01	5.09	2.7	6.6	7.3	-1.8	-73.5	.6
160	.31	.00	5.17	8.0	5.0	8.1	5.1	-62.7	-1.1	154	.27	.00	5.11	4.1	8.8	7.8	-3.5	-74.2	.5
161	.28	.00	5.17	8.6	6.9	8.2	2.9	-61.5		155	.27	.01	5.12	5.2	6.3	7.6	-.9	-72.5	.4
162	.32	-.01	5.19	9.0	4.7	8.9	6.2	-58.1		156	.28	.01	5.14	5.7	8.4	8.2	-2.4	-72.9	.3
163	.30	-.01	5.19	9.2	6.4	8.9	4.6	-56.4		157	.29	.01	5.15	6.6	5.9	8.3	.0	-70.6	-.2
164	.32	-.01	5.20	8.8	4.3	9.3	7.2	-52.7		158	.30	.00	5.16	7.4	8.2	8.8	-1.7	-70.7	.0
165	.29	-.01	5.20	9.2	5.9	9.4	5.6	-50.4		159	.30	.00	5.17	8.0	5.7	9.1	.9	-68.3	-.2
166	.30	-.02	5.21	8.6	3.9	9.9	8.0	-46.3		160	.28	.01	5.18	8.8	7.6	9.4	-.7	-67.8	-.1
167	.31	-.02	5.22	8.9	5.4	9.8	6.9	-43.6		161	.28	.00	5.18	8.0	4.7	9.0	2.5	-64.4	-1.1
168	.34	-.03	5.23	8.5	3.5	10.2	9.3	-39.1		162	.30	.00	5.19	8.7	7.9	10.1	.1	-64.3	.0
169	.32	-.03	5.23	8.3	5.3	10.5	7.7	-36.2		163	.30	-.01	5.20	9.1	4.8	10.2	3.0	-61.0	
170	.30	-.02	5.24	7.5	2.9	10.8	10.3	-31.1		164	.34	-.02	5.20	9.4	6.9	10.8	1.3	-59.8	
171	.31	-.03	5.24	7.4	5.1	11.2	8.4	-28.1		165	.29	-.01	5.21	9.1	4.3	10.7	3.9	-56.1	
172	.30	-.04	5.24	6.8	3.1	11.6	10.6	-23.1		166	.30	-.02	5.22	9.6	6.3	11.2	2.6	-54.3	
173	.27	-.03	5.24	6.4	4.5	11.7	9.2	-19.5		167	.31	-.02	5.23	8.9	4.3	11.5	4.8	-50.5	
174	.29	-.05	5.24	5.7	2.5	11.7	11.7	-14.0		168	.29	-.02	5.23	9.3	5.9	12.0	3.5	-48.4	
175	.26	-.04	5.24	5.0	4.2	12.0	10.2	-10.1		169	.35	-.03	5.25	8.8	3.6	12.1	6.1	-43.9	
176	.25	-.04	5.24	4.3	2.7	12.3	12.3	-4.8		170	.30	-.03	5.24	8.7	5.5	12.4	4.4	-41.3	
177	.22	-.03	5.24	3.6	4.1	12.6	10.9	-.8		171	.31	-.03	5.25	8.0	3.3	12.7	7.0	-36.5	
178	.21	-.04	5.24	2.9	2.2	13.0	12.9	5.1		172	.30	-.04	5.25	7.8	5.3	13.0	5.2	-33.8	
179	.20	-.03	5.24	2.1	3.7	13.0	11.5	9.4		173	.29	-.04	5.25	7.0	3.0	12.9	7.7	-28.7	
180	.18	-.03	5.24	1.6	2.4	13.2	13.4	15.1		174	.29	-.05	5.25	6.7	5.1	13.5	6.1	-25.7	
181	-.20	-.03	5.24	1.0	4.1	13.6	11.8	19.2		175	.28	-.05	5.25	5.9	2.7	13.6	8.4	-20.4	
182	-.19	-.03	5.25	.4	2.1	13.9	14.1	25.1		176	.25	-.04	5.25	5.4	4.8	14.3	7.0	-17.1	
183	.00	.00	5.24	.2	4.2	13.9	12.1	29.0		177	.23	-.04	5.25	4.5	2.7	14.2	8.9	-11.7	
184	-.11	-.01	5.24	.2	2.5	14.5	13.9	34.6		178	.23	-.04	5.26	3.8	4.3	14.4	7.9	-7.9	
185	.00	.00	5.23	.0	3.8	14.3	12.9	38.9		179	.23	-.04	5.26	3.0	2.3	14.5	9.9	-2.1	
186	.00	.00	5.24	.0	2.5	14.9	14.3	44.5		180	.20	-.03	5.26	2.2	4.2	15.0	8.4	1.7	
187	.00	.00	5.25	.0	4.4	14.9	12.4	48.2		181	-.20	-.03	5.25	1.9	2.4	15.1	10.2	7.4	
188	-.02	-.01	5.25	.2	2.0	15.2	15.0	54.2		182	-.18	-.02	5.26	1.3	4.4	15.5	8.8	11.0	
189	.00	.00	5.26	.0	4.0	15.1	13.4	58.3		183	-.16	-.02	5.26	.6	2.1	15.5	11.1	16.9	
190	.00	.00	5.26	.2	.7	15.7	16.8	65.7		184	-.15	-.02	5.26	.3	4.3	15.6	9.5	20.7	
191	.00	.00	5.27	.0	1.0	15.9	16.5	72.7		185	-.11	-.01	5.26	.2	2.8	15.9	11.0	26.0	
192	.00	.00	5.27	.0	.1	16.4	17.8	80.7		186	.00	.00	5.25	.0	3.9	16.0	9.8	30.1	
193	.00	.00	5.28	.0	.6	16.1	17.3	88.2		187	.00	.00	5.25	.0	2.4	16.0	11.9	35.8	
194	.00	.00	5.28	.0	-.3	16.2	19.0	96.6		188	.00	.00	5.26	.0	4.6	16.2	9.8	39.2	
195	.06	.01	5.29	.1	1.0	16.9	17.8	103.7		189	.00	.00	5.27	.0	2.5	16.6	12.4	44.8	
196	.11	.01	5.30	.2	-.6	16.7	19.2	112.3		190	.00	.00	5.27	.0	4.1	16.7	11.0	48.9	
197	.15	.02	5.33	.2	.9	17.2	18.3	119.5		191	.00	.00	5.28	.2	.6	16.7	14.7	56.3	
198	.18	.02	5.34	.5	-.6	17.2	20.1	128.1		192	.00	.00	5.28	.0	1.4	17.1	13.8	63.0	
199	.18	.03	5.36	1.1	1.4	17.5	17.9	134.7		193	.00	.00	5.29	.0	.1	17.1	15.5	70.9	
200	.20	.02	5.37	1.7	-.1	18.0	19.7	142.9		194	.00	.00	5.29	.0	1.5	18.0	14.4	77.5	
201	.22	.02	5.39	2.9	1.2	17.7	18.8	149.8		195	.00	.00	5.30	.0	-.3	18.0	16.1	85.9	
202	.23	.03	5.40	3.6	.3	18.1	19.8	157.6		196	.08	.01	5.31	.0	.9	17.9	15.5	93.0	
203	.25	.02	5.41	4.8	1.0	18.3	19.3	164.6		197	.11	.01	5.32	.1	-.1	18.4	16.7	101.2	
204	.25	.02	5.43	5.2	-.4		21.1	173.1		198	.13	.02	5.34	.6	1.2	18.7	15.5	108.0	
Z = 64										Z = 65									
126	.37	-.01	5.00	10.7		-2.1		-.3		128	.38	-.03	5.02	10.5		-4.2		5.6	
127	.38	-.02	5.01	10.8	13.6	-2.2		-5.8		129	.36	-.03	5.02	10.6	16.4	-4.0		-2.7	
128	.37	-.02	5.00	10.9	16.1	.1	-19.5	-13.9		130	.37	-.03	5.02	10.1	13.6	-2.0	-15.2	-8.2	
129	.35	-.02	5.01	9.8	11.6	-.6	-14.8	-17.4		131	.38	-.04	5.03	10.0	14.4	-2.5	-16.0	-14.5	
130	.36	-.03	5.01	10.2	15.0	.2	-16.2	-24.4		132	.35	-.03	5.03	9.6	12.2	-2.3	-11.8	-18.6	
131	.34	-.03	5.01	9.6	11.9	.6	-13.6	-28.2		133	.36	-.04	5.04	9.4	14.2	-1.8	-13.6	-24.8	
132	.35	-.03	5.02	9.5	13.7	.7	-15.2	-33.8											
133	.35	-.03	5.02	8.7	11.4	1.2	-12.4	-37.1											
134	.36	-.04	5.03	8.5	13.4	1.5	-14.1	-42.4											
135	.35	-.03	5.03	6.8	10.6	2.4	-11.2	-44.9											
136	.36	-.04	5.04	5.1	11.7	1.1	-12.6	-48.6											
137	.36	-.04	5.05	3.7	11.1	2.3	-9.9	-51.7											
138	.32	-.03	5.04	2.8	12.3	2.8	-11.7	-55.9											
139	.30	-.03	5.04	1.7	9.6	3.1	-8.9	-57.4											

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
134	.34	-.04	5.04	8.7	11.6	-1.5	-10.8	-28.3		208	.25	.01	5.47	7.3	.0		19.6	164.5	
135	.37	-.04	5.05	8.4	13.5	-1.4	-12.6	-33.8		Z = 66									
136	.37	-.04	5.06	6.9	10.4	-1.6	-8.9	-36.0		130	.37	-.03	5.04	10.7		-2.4		7.0	
137	.37	-.05	5.06	6.2	13.8	.5	-11.5	-41.8		131	.35	-.03	5.04	10.2	13.7	-2.3		1.4	
138	.37	-.05	5.06	4.4	10.5	-.2	-8.5	-44.2		132	.36	-.04	5.05	10.7	16.3	-.4	-20.1	-6.8	
139	.32	-.03	5.07	2.9	12.4	-.1	-10.3	-48.5		133	.34	-.04	5.05	9.8	12.4	-.3	-15.9	-11.1	
140	.31	-.03	5.06	2.0	9.9	.2	-7.5	-50.3	-.6	134	.34	-.04	5.05	9.7	14.4	.0	-16.3	-17.4	
141	.30	-.02	5.06	1.1	12.3	.4	-9.3	-54.5		135	.35	-.04	5.06	8.9	11.8	.2	-13.4	-21.1	
142	.00	.00	5.01	.7	10.1	1.3	-7.1	-56.5	-.3	136	.36	-.05	5.07	8.8	14.1	.7	-15.4	-27.1	
143	-.18	-.02	5.01	.0	11.9	1.0	-8.6	-60.3		137	.35	-.04	5.07	7.8	11.2	1.5	-12.5	-30.2	
144	.01	.00	4.99	.1	10.0	1.4	-6.2	-62.3		138	.36	-.05	5.07	6.5	13.5	1.2	-14.4	-35.6	
145	-.07	.00	5.00	.0	12.3	1.7	-8.3	-66.6		139	.36	-.05	5.08	5.4	10.6	1.4	-11.3	-38.2	
146	.05	-.01	5.00	.4	9.4	2.3	-5.0	-67.9	.1	140	.30	-.03	5.07	3.4	12.7	1.6	-12.9	-42.8	
147	.00	.00	5.00	.0	11.7	2.3	-7.3	-71.5	.8	141	.30	-.04	5.07	1.9	10.4	2.2	-10.3	-45.2	
148	-.05	.00	5.01	.4	7.6	3.0	-2.6	-71.1	.6	142	-.23	-.05	5.03	1.1	12.3	2.2	-12.2	-49.4	-.2
149	.00	.00	5.01	.0	8.8	2.8	-4.0	-71.9	.4	143	-.22	-.04	5.04	.4	10.4	2.6	-9.9	-51.8	
150	.09	.00	5.03	.2	7.0	3.2	-1.4	-70.8	-.3	144	-.19	-.03	5.03	.1	12.5	3.1	-11.9	-56.1	
151	.13	.00	5.04	.4	8.9	3.6	-3.1	-71.6	.0	145	.00	.00	5.01	.1	10.2	3.3	-9.2	-58.3	
152	.19	.00	5.07	1.1	7.3	3.9	-1.2	-70.8	.1	146	.00	.00	5.01	.0	12.7	3.6	-11.2	-62.9	.3
153	.23	.00	5.09	2.0	9.0	.1	-2.7	-71.8	.5	147	-.03	.00	5.01	.1	9.4	3.6	-7.8	-64.3	-.1
154	.24	.01	5.11	2.7	7.1	.5	-.3	-70.8	.6	148	.00	.00	5.02	.0	12.3	4.2	-10.4	-68.5	.6
155	.25	.00	5.12	4.0	8.9	4.7	-2.0	-71.6	.4	149	-.05	.00	5.03	.1	7.5	4.1	-5.2	-67.9	.2
156	.26	.00	5.13	5.2	6.9	5.2	.5	-70.4	.3	150	.00	.00	5.03	.0	9.6	4.9	-6.9	-69.4	.1
157	.28	.00	5.16	5.8	8.3	5.1	-.9	-70.7	-.1	151	.04	.00	5.04	.0	7.2	5.0	-4.2	-68.5	-.2
158	.28	.01	5.16	6.4	6.5	5.7	1.6	-69.1	-.4	152	.16	.00	5.07	.3	9.2	5.3	-5.9	-69.6	-.5
159	.28	.01	5.17	7.1	8.3	5.8	.0	-69.3	-.3	153	.19	.00	5.09	.8	7.6	5.6	-4.1	-69.1	.0
160	.30	.00	5.18	7.8	5.9	6.1	2.7	-67.1	-.7	154	.19	.00	5.10	1.9	9.4	6.0	-5.7	-70.5	.1
161	.28	.00	5.19	8.5	7.8	6.4	1.1	-66.9	-.6	155	.23	.00	5.13	2.6	7.3	6.2	-3.3	-69.7	.5
162	.29	.00	5.20	9.1	5.6	7.3	3.6	-64.4	-1.3	156	.26	.00	5.14	3.9	9.4	6.6	-5.1	-71.0	.5
163	.30	-.01	5.21	8.5	7.7	7.0	1.8	-64.0	-.6	157	.27	.00	5.15	5.0	6.8	6.6	-2.5	-69.7	.3
164	.31	-.01	5.22	9.0	5.2	7.4	4.3	-61.1	-1.0	158	.27	.00	5.16	5.8	9.0	7.3	-4.1	-70.7	.2
165	.29	-.01	5.22	9.2	6.9	7.4	3.0	-59.9		159	.28	.00	5.18	6.6	6.7	7.5	-1.6	-69.3	.1
166	.30	-.02	5.23	9.1	5.0	8.1	5.6	-56.9		160	.29	.00	5.19	7.1	8.6	7.9	-3.3	-69.8	.2
167	.31	-.02	5.24	9.7	6.5	8.3	4.0	-55.3		161	.29	.00	5.20	7.7	6.2	8.1	-.7	-68.0	-.1
168	.33	-.03	5.24	9.0	4.7	8.6	6.3	-51.9		162	.30	.00	5.21	8.5	8.1	8.4	-2.5	-68.0	-.2
169	.30	-.02	5.25	9.4	6.1	8.9	5.0	-49.9		163	.31	-.02	5.22	8.9	5.8	8.7	.3	-65.8	-.6
170	.30	-.02	5.26	8.7	3.9	9.2	7.5	-45.8		164	.32	-.03	5.23	9.6	7.7	8.7	-1.2	-65.4	-.6
171	.30	-.03	5.26	8.6	5.8	9.5	5.6	-43.5		165	.32	-.03	5.23	8.8	5.7	9.1	1.3	-63.0	-.6
172	.31	-.03	5.27	8.0	3.5	9.7	8.4	-39.0		166	.33	-.03	5.24	9.4	7.6	9.9	-.4	-62.5	-.1
173	.30	-.04	5.27	7.5	5.5	9.9	6.9	-36.4		167	.34	-.04	5.25	9.1	4.8	9.6	2.3	-59.3	-.7
174	.27	-.03	5.26	6.9	3.5	10.4	9.3	-31.8		168	.29	-.02	5.25	9.7	7.0	10.1	1.0	-58.2	
175	.26	-.04	5.26	6.5	5.0	10.3	7.8	-28.8		169	.30	-.03	5.26	9.2	4.8	10.3	3.3	-54.9	-.7
176	.25	-.04	5.27	5.9	3.5	11.1	9.8	-24.1		170	.30	-.03	5.26	9.4	6.4	10.6	2.0	-53.2	
177	.25	-.04	5.27	5.3	4.6	10.8	8.6	-20.6		171	.30	-.03	5.26	8.8	4.0	10.7	4.8	-49.1	
178	.25	-.04	5.28	4.6	3.2	11.4	10.6	-15.8		172	.30	-.04	5.27	8.7	6.3	11.1	2.7	-47.4	
179	.25	-.04	5.28	3.8	4.3	11.4	9.6	-12.0		173	.31	-.04	5.27	8.1	4.0	11.6	5.4	-43.3	
180	.23	-.04	5.28	3.0	2.7	11.8	11.4	-6.7		174	.27	-.03	5.28	7.9	5.9	12.0	3.7	-41.1	
181	.21	-.04	5.28	2.1	4.3	11.9	9.9	-2.9		175	.29	-.05	5.28	7.1	3.6	12.1	6.0	-36.6	
182	-.20	-.03	5.27	1.9	3.0	12.5	11.4	2.2		176	.30	-.05	5.28	6.7	5.4	12.5	4.7	-33.9	
183	-.18	-.02	5.27	1.3	4.5	12.5	10.3	5.8		177	.28	-.05	5.28	5.9	3.4	12.4	7.0	-29.3	
184	-.18	-.03	5.28	.7	2.7	13.0	12.4	11.2		178	.25	-.04	5.29	5.5	5.1	13.0	5.5	-26.3	
185	-.15	-.02	5.28	.4	4.3	13.0	10.9	15.0		179	.25	-.04	5.29	4.7	3.3	13.1	7.5	-21.6	
186	-.19	-.03	5.28	.1	2.8	12.9	12.9	20.4		180	.25	-.04	5.29	3.9	4.6	13.4	6.2	-18.1	
187	-.07	-.01	5.27	.1	4.5	13.5	11.1	23.9		181	.23	-.04	5.29	3.0	2.7	13.4	8.6	-12.8	
188	.00	.00	5.27	.0	2.5	13.6	13.6	29.5		182	.21	-.04	5.30	2.1	4.6	13.7	7.1	-9.2	
189	-.02	.00	5.28	.1	5.1	14.1	11.1	32.5		183	-.20	-.03	5.28	1.9	3.3	13.9	8.6	-4.4	
190	-.04	-.01	5.28	.2	2.7	14.3	13.3	37.9		184	-.18	-.02	5.29	1.4	4.8	14.3	7.4	-1.2	
191	.00	.00	5.29	.0	4.4	14.6	11.9	41.6		185	-.19	-.03	5.29	.6	2.8	14.4	9.3	4.1	
192	.00	.00	5.29	.1	.4	14.4	16.0	.2		186	-.15	-.02	5.29	.4	4.7	14.8	7.7	7.5	
193	-.02	.00	5.30	.2	1.9	14.9	15.0	55.4		187	-.13	-.01	5.29	.1	2.7	14.8	9.8	12.9	
194	.00	.00	5.30	.0	.3	15.1	16.3	63.1		188	.00	.00	5.28	.0	5.0	15.3	8.0	15.9	
195	.00	.00	5.31	.0	1.4	15.0	15.7	69.8		189	.00	.00	5.28	.0	2.6	15.3	10.7	21.4	
196	.00	.00	5.31	.0	.3	15.6	17.4	77.6		190	.00	.00	5.29	.0	4.9	15.2	8.8	24.6	
197	.08	.01	5.32	.1	1.1	15.8	16.7	84.5		191	-.02	-.01	5.30	.2	3.0	15.6	11.0	29.6	
198	.11	.01	5.34	.1	.0	15.9	18.0	92.5		192	.00	.00	5.30	.0	4.5	15.7	9.6	33.2	
199	.15	.02	5.36	.5	1.3	16.0	16.8	99.3		193	.00	.00	5.30	.0	.9	16.1	13.1	40.3	
200	.18	.02	5.37	.8	-.2	16.6	18.6	107.6		194	.00	.00	5.31	.0	1.6	15.9	12.9	46.8	
201	.19	.02	5.39	1.4	1.4	16.3	17.2	114.2		195	.00	.00	5.32	.0	.7	16.3	13.9	54.1	
202	.20	.02	5.41	2.1	.8	16.7	18.2	121.5		196	.00	.00	5.32	.0	2.0	16.9	12.9	60.1	
203	.22	.02	5.42	3.3	1.4	16.9	17.6	128.2		197	.00	.00	5.33	.0	.5	17.1	13.9	67.8	
204	.22	.02	5.43	3.9	.6	16.9	18.6	135.7		198	.00	.00	5.33	.0	1.3	17.2	13.5	74.5	
205	.24	.02	5.44	5.2	1.4	17.0	18.0	142.4		199	.00	.00	5.34	.0	.1	17.3	15.0	82.5	
206	.24	.02	5.45	5.8	.8	17.7	18.5	149.6		200	.13	.02	5.37	.5	1.6	17.6	13.8	89.0	
207	.25	.02	5.46	7.0	1.3	17.6	18.1	156.4		201	.15	.02	5.39	.8	.0	17.8	15.5	97.1	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
202	.18	.03	5.40	1.7	1.8	18.2	14.3	103.3		180	.25	-.04	5.31	4.6	3.3	10.0	9.0	-24.3	
203	.20	.02	5.42	2.3	.8	18.2	15.7	110.6		181	.22	-.04	5.31	3.8	5.2	10.6	7.7	-21.4	
204	.22	.03	5.43	3.2	1.6	18.4	14.7	117.1		182	.24	-.05	5.31	2.9	3.0	10.8	9.9	-16.3	
205	.22	.02	5.44	4.0	.8	18.6	15.9	124.3		183	.21	-.04	5.31	2.0	4.8	11.1	8.1	-13.1	
206	.24	.02	5.45	5.0	1.3	18.5	15.1	131.1		184	-.20	-.03	5.30	2.0	3.6	11.5	9.8	-8.7	
207	.25	.01	5.46	5.6	.9	18.6	16.2	138.3		185	-.18	-.02	5.30	1.3	4.6	11.3	9.1	-5.2	
208	.25	.01	5.47	6.9	1.4	18.8	15.5	144.9		186	-.18	-.03	5.30	.5	3.0	11.6	11.1	-.2	
209	.24	.01	5.48	7.1	.0	18.8	17.3	153.0		187	-.15	-.02	5.30	.3	4.8	11.7	9.6	3.1	
210	.26	.00	5.49	8.6	1.9		15.5	159.2		188	.00	.00	5.29	.0	3.3	12.3	11.5	7.9	
211	.26	.00	5.50	9.3	-.3	19.7	18.0	167.6		189	.00	.00	5.29	.0	5.2	12.4	9.4	10.7	
212	.27	.00	5.51	9.7	1.5	19.8	16.6	174.1		190	.00	.00	5.30	.0	3.0	12.9	11.7	15.8	
213	.27	.00	5.52	10.3	-.3	20.1	18.3	182.6		191	.00	.00	5.30	.0	5.2	13.2	9.9	18.7	
214	.29	-.01	5.52	10.8	1.3	20.3	16.9	189.4		192	-.02	-.01	5.31	.1	3.1	13.3	11.9	23.6	
215	.27	-.01	5.53	11.2	-.7	20.5	19.3	198.1		193	.00	.00	5.31	.0	4.4	13.3	10.7	27.2	
216	.28	-.01	5.53	11.5	.9	20.6	18.0	205.2		194	.00	.00	5.32	.2	1.4	13.7	14.2	33.9	
217	.28	-.02	5.54	11.8	-.2	21.3	19.4	213.5		195	.00	.00	5.32	.0	1.8	13.9	13.4	40.2	
218	.29	-.02	5.55	12.1	.7		18.2	220.9		196	.00	.00	5.33	.0	1.0	14.2	15.0	47.2	
219	.28	-.03	5.55	12.2	-1.0	21.2	20.0	230.0		197	.00	.00	5.34	.0	1.5	13.6	14.8	53.8	
220	.29	-.03	5.55	12.3	.4	21.5	19.0	237.6		198	.00	.00	5.34	.0	.8	14.0	15.7	61.1	
221	.30	-.03	5.56	11.5	-.9	21.5	21.0	246.6		199	.00	.00	5.35	.0	1.7	14.4	14.9	67.5	
222	.26	-.03	5.57	12.4	.4	21.8	19.6	254.3		200	.00	.00	5.35	.0	.4	14.6	16.3	75.1	
223	.28	-.04	5.57	12.1	-.6	22.6	20.7	263.0		201	.13	.02	5.38	.4	1.7	14.7	15.4	81.5	
224	.26	-.03	5.58	12.1	-.3	22.4	20.0	271.4		202	.15	.02	5.40	.7	.6	15.4	16.6	89.0	
225	.30	-.03	5.59	11.9	-6	22.5	21.2	280.1		203	.18	.02	5.41	1.6	2.1	15.7	15.3	94.9	
226	.30	-.03	5.59	11.5	-.8		20.9	289.0		204	.20	.02	5.43	2.2	.6	15.5	17.0	102.3	
Z = 67										205	.19	.02	5.44	3.1	1.9	15.9	15.9	108.5	
132	.34	-.04	5.05	10.2		-4.5		13.3		206	.22	.02	5.46	3.6	.5	15.6	17.6	116.0	
133	.35	-.04	5.06	10.5	16.5	-4.4		4.8		207	.22	.02	5.47	4.7	1.9	16.2	16.5	122.2	
134	.36	-.05	5.07	10.2	14.1	-2.6	-15.8	-1.2		208	.26	.01	5.47	5.3	.8	16.2	17.6	129.4	
135	.36	-.05	5.07	9.7	14.6	-2.4	-16.5	-7.7		209	.26	.01	5.48	6.5	1.8	16.5	17.1	135.7	
136	.34	-.05	5.07	9.0	12.1	-2.1	-12.2	-11.8		210	.26	.00	5.49	7.4	.0	16.6	18.7	143.7	
137	.35	-.05	5.07	8.7	14.0	-2.2	-14.0	-17.7		211	.27	.00	5.50	8.1	2.3	17.0	17.3	149.5	
138	.31	-.04	5.07	7.8	11.6	-1.7	-11.1	-21.2		212	.27	.00	5.51	9.0	.1	17.3	19.4	157.5	
139	.31	-.04	5.08	7.3	13.8	-1.5	-13.2	-26.9		213	.28	-.01	5.52	9.6	1.4	17.2	18.1	164.2	
140	.34	-.05	5.09	5.5	11.1	-1.0	-10.2	-29.9		214	.29	-.01	5.53	10.1	-.1	17.4	20.3	172.4	
141	.31	-.04	5.09	4.7	13.1	-.6	-11.8	-34.9		215	.27	-.01	5.53	10.5	1.7	17.9	18.5	178.8	
142	.31	-.04	5.09	2.4	10.4	-.7	-9.0	-37.2		216	.28	-.01	5.54	10.9	-.3	18.2	20.6	187.2	
143	.28	-.04	5.07	1.1	12.7	-.3	-10.9	-41.8		217	.28	-.02	5.55	11.3	1.1	18.4	19.0	194.1	
144	-.25	-.05	5.05	.3	10.4	-.2	-8.4	-44.2		218	.29	-.02	5.56	11.6	-.5	18.1	20.8	202.7	
145	.00	.00	5.02	.0	13.0	.3	-10.4	-49.1		219	.28	-.02	5.55	11.8	.8	18.2	19.7	210.0	
146	.00	.00	5.02	.1	10.7	.7	-7.8	-51.7		220	.25	-.02	5.56	12.0	-.6	18.6	21.4	218.7	
147	.00	.00	5.03	.0	12.8	.8	-9.5	-56.4		221	.26	-.02	5.57	12.1	1.1	19.3	20.3	225.7	
148	.00	.00	5.03	.0	9.7	1.1	-6.3	-58.1		222	.26	-.03	5.57	11.3	-1.0	19.2	22.1	234.7	
149	.00	.00	5.03	.0	12.7	1.6	-9.0	-62.7	1.1	223	.28	-.04	5.58	12.2	.5	19.3	21.1	242.3	
150	-.04	.00	5.04	.2	7.9	1.9	-3.8	-62.5	-.1	224	.28	-.04	5.59	11.9	-1.0	18.9	22.7	251.4	
151	.00	.00	5.05	.0	9.9	2.2	-5.6	-64.3	.7	225	.29	-.04	5.59	12.0	.6	19.8	21.3	258.9	
152	.00	.00	5.05	.0	7.5	2.5	-2.9	-63.7	.1	226	.28	-.04	5.60	11.7	-1.0	19.3	23.1	268.0	
153	.09	.01	5.07	.2	9.4	2.7	-4.4	-65.0	.0	227	.25	-.03	5.60	11.3	-.1	20.1	22.4	276.2	
154	.20	.00	5.11	.7	7.8	2.9	-2.6	-64.8	.1	228	.25	-.03	5.61	10.9	-1.2		23.7	285.4	
155	.23	-.01	5.13	1.7	9.8	3.2	-4.2	-66.4	.4	Z = 68									
156	.24	.00	5.13	2.3	7.5	3.5	-1.9	-65.9	-.3	134	.36	-.05	5.09	10.4		-2.5		14.6	
157	.27	-.01	5.16	3.5	9.5	3.6	-3.5	-67.3	.4	135	.35	-.05	5.08	9.9	13.9	-2.7		8.8	
158	.26	.00	5.16	4.7	7.4	4.1	-1.0	-66.6	.4	136	.36	-.06	5.09	10.0	16.4	-.9	-19.9		.5
159	.28	-.01	5.18	5.4	9.2	4.3	-2.7	-67.7	.3	137	.36	-.06	5.09	8.9	12.3	-.8	-16.0	-3.7	
160	.27	.00	5.19	6.3	6.9	4.6	-.1	-66.6	.2	138	.36	-.06	5.10	8.7	14.4	-.3	-16.6	-10.1	
161	.27	.00	5.20	7.1	8.8	4.7	-1.8	-67.3	.1	139	.29	-.05	5.09	7.5	11.6	-.3	-13.6	-13.6	
162	.28	-.01	5.21	7.4	6.3	4.8	1.2	-65.5	-.5	140	.32	-.05	5.10	7.2	14.1	.1	-15.8	-19.7	
163	.28	-.01	5.22	8.1	8.7	5.4	-.6	-66.1	-.3	141	.31	-.05	5.11	6.1	11.4	.4	-12.9	-23.1	
164	.29	-.01	5.23	8.6	6.2	5.7	1.5	-64.2	-.8	142	.29	-.05	5.10	4.5	13.3	.6	-14.5	-28.3	
165	.32	-.03	5.24	9.3	8.1	6.2	.1	-64.3	-.6	143	.29	-.04	5.11	3.2	10.8	1.0	-12.4	-31.0	
166	.33	-.03	5.25	9.7	5.8	6.3	2.8	-62.0	-1.0	144	.29	-.04	5.10	1.3	12.9	1.2	-13.6	-35.8	
167	.34	-.04	5.26	9.0	7.6	6.3	1.2	-61.6	-.7	145	-.25	-.05	5.07	.3	11.1	1.8	-12.4	-38.8	
168	.30	-.03	5.26	8.9	5.7	7.2	3.4	-59.2	-.9	146	-.19	-.03	5.07	.0	13.2	2.0	-13.5	-43.9	
169	.31	-.03	5.27	9.4	7.1	7.4	2.1	-58.3	-.6	147	.00	.00	5.04	.2	11.1	2.5	-10.9	-46.9	
170	.31	-.03	5.28	9.0	5.1	7.6	4.7	-55.2	-1.0	148	.00	.00	5.04	.0	13.0	2.7	-12.6	-51.8	
171	.32	-.04	5.28	9.4	6.8	8.0	3.1	-53.9	-.6	149	.00	.00	5.05	.0	10.0	2.9	-.9	-53.7	.4
172	.30	-.04	5.28	8.6	4.2	8.3	5.8	-50.1		150	.00	.00	5.05	.0	13.0	3.2	-11.8	-58.7	.2
173	.31	-.04	5.29	8.7	6.7	8.6	3.9	-48.7		151	-.05	.00	5.06	.0	8.1	3.5	-.6	-58.7	
174	.29	-.04	5.28	7.9	4.1	8.8	6.6	-44.7		152	.00	.00	5.06	.0	10.2	3.8	-.8	-60.8	.4
175	.29	-.05	5.29	7.7	6.0	8.8	4.9	-42.6		153	.00	.00	5.07	.0	7.8	4.2	-.5	-60.6	.2
176	.30	-.05	5.30	7.1	4.1	9.3	7.6	-38.7		154	.14	.00	5.09	.2	9.6	4.5	-.7	-62.2	-.4
177	.20	-.02	5.30	6.6	5.7	9.6	5.8	-36.2		155	.18	.00	5.12	.6	8.1	4.8	-.5	-62.2	.0
178	.25	-.04	5.30	5.8	3.7	9.8	8.2	-31.8		156	.20	.00	5.13	1.5	9.8	4.8	-.7	-63.9	-.3
179	.29	-.05	5.31	5.3	5.3	10.0	6.9	-29.1		157	.22	.00	5.15	2.1	7.9	5.2	-.4	-63.8	.4

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
158	.23	-.01	5.16	3.3	9.9	5.6	-6.5	-65.6		Z=69									
159	.27	-.01	5.18	4.3	7.5	5.7	-4.0	-65.0	.4	136	.37	-.07	5.10	9.8		-4.3		20.4	
160	.27	-.01	5.19	5.3	9.5	6.1	-5.9	-66.5	.4	137	.37	-.07	5.11	9.7	16.2	-4.5		12.2	
161	.28	-.01	5.20	6.1	7.1	6.2	-3.0	-65.5	.3	138	.30	-.05	5.10	9.0	13.8	-3.0	-16.0	6.6	
162	.26	.00	5.21	6.9	9.3	6.7	-4.8	-66.7	.3	139	.39	-.08	5.11	8.4	14.6	-2.8	-16.6	.0	
163	.28	-.01	5.22	7.6	6.9	7.3	-2.3	-65.5	.3	140	.51	-.13	5.11	7.4	11.9	-2.5	-12.5	-3.9	
164	.29	-.01	5.24	8.0	8.3	6.9	-3.6	-65.8	-.2	141	.51	-.13	5.11	6.9	14.3	-2.3	-14.9	-10.1	
165	.29	-.01	5.24	8.4	6.7	7.5	-1.2	-64.4	-.1	142	.30	-.05	5.12	5.8	11.7	-2.0	-11.7	-13.8	
166	.32	-.03	5.25	9.1	8.4	7.8	-3.5	-64.8	-.1	143	.27	-.04	5.12	4.4	12.8	-2.5	-12.9	-18.5	
167	.32	-.03	5.26	9.5	6.0	8.0	-.4	-62.8	-.5	144	.34	-.06	5.12	3.2	11.7	-1.5	-10.6	-22.2	
168	.30	-.03	5.27	10.0	7.9	8.3	-2.0	-62.6	-.4	145	.26	-.04	5.12	1.3	12.2	-2.1	-11.6	-26.4	
169	.30	-.03	5.28	8.6	5.9	8.5	.3	-60.4	-.5	146	-.23	-.05	5.09	.6	12.1	-1.0	-10.1	-30.4	
170	.31	-.03	5.29	9.3	7.6	8.9	-1.3	-59.9	-.2	147	.00	.00	5.05	.0	13.6	-.6	-12.9	-36.0	
171	.32	-.04	5.29	8.8	5.2	9.1	1.5	-57.0	-.7	148	.00	.00	5.06	.1	11.3	-.4	-9.6	-39.2	
172	.30	-.04	5.29	9.3	6.9	9.3	.0	-55.9	-.6	149	.00	.00	5.06	.0	13.5	.2	-11.4	-44.7	
173	.31	-.04	5.30	8.7	4.8	9.8	2.6	-52.6		150	.00	.00	5.06	.0	10.2	.4	-7.8	-46.8	
174	.29	-.04	5.30	8.6	6.7	9.9	.8	-51.3		151	.00	.00	5.07	.0	13.3	.7	-10.5	-52.1	
175	.29	-.05	5.30	8.0	4.4	10.1	3.7	-47.6		152	.02	.00	5.07	.0	8.3	.9	-5.2	-52.3	
176	.30	-.05	5.31	7.8	6.7	10.9	1.7	-46.2		153	.00	.00	5.08	.0	10.6	1.4	-7.2	-54.9	.9
177	.28	-.05	5.31	7.1	3.8	10.6	4.5	-42.0		154	.04	.00	5.09	.1	8.2	1.7	-4.4	-55.0	-.1
178	.25	-.04	5.31	6.8	6.1	11.1	3.0	-40.0		155	.00	.00	5.09	.0	9.8	1.9	-5.9	-56.8	.1
179	.29	-.05	5.32	6.0	4.1	11.5	5.0	-36.0		156	.19	.00	5.14	.5	8.2	1.9	-4.0	-56.8	.0
180	.26	-.05	5.32	5.3	5.4	11.5	3.8	-33.3		157	.22	-.01	5.15	1.2	10.1	2.2	-5.5	-58.9	.0
181	.24	-.05	5.32	4.5	3.8	12.1	5.8	-29.1		158	.23	-.01	5.17	1.8	8.3	2.6	-3.3	-59.0	
182	.24	-.05	5.32	3.8	5.2	12.1	4.7	-26.2		159	.23	-.01	5.18	3.0	10.0	2.7	-5.1	-61.0	.3
183	.24	-.05	5.33	2.8	3.1	12.2	7.0	-21.2		160	.23	-.01	5.19	4.0	7.7	2.9	-2.4	-60.6	.1
184	.24	-.05	5.33	2.0	5.3	12.6	5.3	-18.4		161	.27	-.01	5.21	4.7	9.9	3.3	-4.2	-62.5	.4
185	-.18	-.02	5.31	2.0	4.0	12.9	6.4	-14.3		162	.27	-.01	5.22	5.6	7.6	3.7	-1.9	-61.9	.4
186	-.18	-.02	5.32	1.5	5.1	13.4	5.9	-11.3		163	.27	-.01	5.23	6.3	9.4	3.8	-3.5	-63.2	.5
187	-.21	-.04	5.32	.7	3.3	13.6	8.2	-.6.5		164	.27	-.01	5.24	7.0	7.0	3.9	-.7	-62.2	.2
188	-.14	-.02	5.32	.4	5.2	14.0	6.3	-3.6		165	.27	-.01	5.24	7.8	9.1	4.8	-2.5	-63.2	.3
189	-.13	-.01	5.32	.1	3.2	13.9	8.4	1.3		166	.28	-.02	5.25	7.8	6.2	4.2	.6	-61.3	-.6
190	.00	.00	5.31	.0	5.3	13.9	6.9	4.1		167	.32	-.03	5.27	8.5	9.2	4.9	-1.6	-62.4	-.1
191	.00	.00	5.31	.0	3.4	14.3	9.0	8.7		168	.28	-.02	5.27	8.9	6.3	5.1	.9	-60.6	-.7
192	.00	.00	5.32	.0	5.2	14.3	7.4	11.7		169	.29	-.02	5.28	9.3	8.2	5.4	-.3	-60.7	-.6
193	-.02	-.01	5.32	.1	3.2	14.4	9.8	16.5		170	.31	-.03	5.30	9.2	6.0	5.5	2.1	-58.6	-1.2
194	.00	.00	5.33	.0	4.9	14.8	8.4	19.7		171	.29	-.03	5.29	8.7	8.0	5.9	.4	-58.5	-.7
195	.00	.00	5.33	.0	1.0	14.5	12.3	26.7		172	.30	-.03	5.30	8.3	5.5	6.2	3.0	-55.9	-1.5
196	.00	.00	5.34	.0	2.6	15.2	11.1	32.2		173	.30	-.04	5.30	8.7	7.4	6.6	1.6	-55.2	-1.0
197	.00	.00	5.34	.0	1.3	15.6	12.2	39.0		174	.31	-.04	5.31	8.2	4.9	6.7	4.4	-52.0	-1.8
198	.00	.00	5.35	.0	1.7	15.7	11.7	45.4		175	.29	-.04	5.32	8.4	7.3	7.3	2.4	-51.3	-1.0
199	.00	.00	5.36	.0	.9	15.8	13.5	52.5		176	.26	-.04	5.32	7.6	4.7	7.7	5.0	-47.9	-1.4
200	.00	.00	5.36	.0	1.8	15.9	12.5	58.9		177	.30	-.05	5.32	7.4	6.6	7.5	3.5	-46.5	
201	.00	.00	5.37	.0	.8	16.3	13.7	66.1		178	.28	-.05	5.32	6.9	4.6	8.3	5.4	-43.0	
202	.13	.02	5.40	.3	1.8	16.4	12.8	72.4		179	.25	-.04	5.33	6.3	6.1	8.3	4.4	-41.0	
203	.15	.02	5.41	.6	.8	16.6	14.2	79.7		180	.29	-.05	5.33	5.6	4.1	8.3	6.8	-37.0	
204	.18	.02	5.43	1.6	2.4	16.9	12.8	85.3		181	.26	-.05	5.34	5.1	5.9	8.9	5.1	-34.9	
205	.19	.03	5.44	2.3	.8	17.0	14.3	92.6		182	.24	-.05	5.34	4.2	4.1	9.1	7.3	-30.9	
206	.19	.02	5.45	3.3	2.3	17.4	13.3	98.4		183	.24	-.05	5.34	3.4	5.4	9.3	6.1	-28.2	
207	.22	.02	5.47	4.0	.8	17.6	14.6	105.7		184	.24	-.05	5.34	2.5	3.6	9.8	8.2	-23.7	
208	.22	.02	5.48	4.8	1.9	17.6	13.9	111.8		185	.24	-.05	5.34	1.6	5.1	9.6	7.3	-20.7	
209	.24	.02	5.49	5.4	1.4	18.2	15.1	118.5		186	-.18	-.02	5.33	1.8	4.5	10.1	8.0	-17.2	
210	.26	.00	5.50	6.6	1.6	18.0	14.2	125.0		187	-.21	-.03	5.33	1.3	5.6	10.6	7.3	-14.6	
211	.25	.01	5.51	7.5	.9	18.8	15.7	132.2		188	.00	.00	5.33	.6	3.3	10.7	9.4	-9.9	
212	.27	.00	5.52	8.4	2.2	18.7	14.1	138.1		189	-.11	-.01	5.33	.2	5.3	10.8	8.0	-7.1	
213	.27	.00	5.53	9.0	.1	18.7	16.3	146.1		190	-.14	-.02	5.34	.0	3.8	11.5	9.5	-2.9	
214	.28	-.01	5.54	9.7	2.1	19.4	15.1	152.1		191	.00	.00	5.32	.0	5.4	11.6	8.3	-.2	
215	.27	-.01	5.54	10.2	-.1	19.5	17.0	160.3		192	.00	.00	5.33	.0	3.6	11.8	10.1	4.3	
216	.27	-.01	5.55	10.8	1.8	19.5	15.5	166.6		193	.00	.00	5.33	.0	5.7	12.3	8.4	6.7	
217	.28	-.01	5.55	11.0	-.5	19.3	17.8	175.2		194	-.02	-.01	5.34	.1	3.5	12.6	10.5	11.3	
218	.28	-.02	5.57	11.4	1.4	19.6	16.5	181.9		195	.00	.00	5.34	.0	4.9	12.5	9.3	14.5	
219	.27	-.02	5.56	11.7	-.3	19.8	18.3	190.3		196	.00	.00	5.35	.0	1.4	12.9	13.2	21.2	
220	.28	-.03	5.57	11.9	1.0	20.0	17.4	197.3		197	.00	.00	5.35	.0	2.5	12.8	12.2	26.8	
221	.29	-.03	5.58	12.1	.1	20.6	18.6	205.3		198	.00	.00	5.36	.0	1.1	12.6	14.2	33.7	
222	.26	-.02	5.58	12.2	.8	20.4	17.4	212.6		199	.00	.00	5.36	.0	2.7	13.6	12.7	39.1	
223	.26	-.03	5.59	11.5	-.6	20.8	19.0	221.2		200	.00	.00	5.37	.0	.8	13.5	14.5	46.3	
224	.28	-.04	5.59	12.3	.6	20.9	18.4	228.7		201	.00	.00	5.38	.0	2.0	13.8	13.6	52.4	
225	.25	-.03	5.60	11.9	-.8	21.1	20.3	237.6		202	.11	.01	5.40	.0	.8	13.8	15.0	59.6	
226	.25	-.03	5.61	12.1	.8	21.3	18.5	244.9		203	.13	.02	5.41	.1	2.2	14.2	13.8	65.5	
227	.28	-.04	5.61	11.8	-.8	21.6	20.0	253.7		204	.15	.02	5.42	.4	1.1	14.5	15.3	72.5	
228	.25	-.03	5.62	11.4	.1	21.8	19.3	261.7		205	.18	.02	5.44	1.4	2.2	14.3	13.9	78.3	
229	.24	-.04	5.61	10.8	-1.1	21.9	22.0	270.8		206	.20	.02	5.45	2.3	1.3	14.8	15.3	85.1	
230	.24	-.04	5.62	10.5	.0		20.1	278.9		207	.20	.02	5.47	2.9	2.1	14.6	14.7	91.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
208	.22	.02	5.48	3.7	1.2	15.0	16.0	97.9		186	.22	-.05	5.35	1.6	5.2	11.7	3.9	-25.1	
209	.22	.02	5.49	4.7	2.6	15.7	14.7	103.4		187	-.19	-.03	5.34	1.9	4.9	12.1	4.9	-22.0	
210	.22	.02	5.50	5.2	.7	15.0	16.8	110.8		188	-.18	-.03	5.34	1.3	5.4	11.9	4.7	-19.3	
211	.23	.01	5.51	6.2	2.4	15.8	15.5	116.5		189	-.19	-.03	5.35	.6	3.8	12.5	6.5	-15.1	
212	.23	.01	5.52	7.0	.5	15.4	17.4	124.1		190	-.10	-.01	5.35	.2	5.3	12.5	5.0	-12.4	
213	.27	.00	5.53	8.0	2.3	15.6	15.6	129.8		191	-.16	-.03	5.35	.1	4.3	13.0	6.7	-8.5	
214	.27	.00	5.54	8.6	.9	16.4	17.4	137.0		192	.00	.00	5.34	.0	5.4	12.9	5.4	-5.9	
215	.26	.00	5.54	9.3	1.7	16.1	16.4	143.3		193	.00	.00	5.34	.0	3.9	13.3	7.6	-1.7	
216	.27	-.01	5.55	9.8	.3	16.4	18.5	151.1		194	.00	.00	5.34	.0	5.6	13.3	5.8	.7	
217	.27	-.01	5.56	10.4	1.8	16.5	17.1	157.3		195	-.03	.00	5.35	.1	3.6	13.4	8.2	5.2	
218	.28	-.01	5.57	10.8	.1	17.1	19.2	165.4		196	.00	.00	5.36	.0	5.3	13.8	6.9	8.0	
219	.27	-.02	5.57	11.1	1.5	17.3	17.6	171.9		197	.00	.00	5.36	.0	1.5	13.9	11.0	14.5	
220	.28	-.02	5.58	11.3	.1	17.6	19.5	179.9		198	.00	.00	5.37	.0	3.0	14.5	9.5	19.5	
221	.28	-.03	5.58	11.5	1.3	17.9	18.5	186.7		199	.00	.00	5.37	.0	1.3	14.6	11.3	26.4	
222	.26	-.02	5.59	11.1	-4	17.4	20.3	195.2		200	.00	.00	5.38	.0	2.6	14.5	10.3	31.9	
223	.27	-.03	5.59	11.7	1.1	17.7	19.1	202.2		201	.00	.00	5.38	.0	1.1	14.9	12.0	38.8	
224	.28	-.04	5.60	11.1	-1	18.2	21.5	210.3		202	.00	.00	5.39	.0	2.2	15.1	11.1	44.6	
225	.25	-.03	5.61	11.9	1.0	18.7	20.4	217.3		203	.00	.00	5.39	.0	1.0	15.2	12.9	51.7	
226	.29	-.04	5.61	11.6	-1.0	18.5	21.6	226.4		204	.12	.01	5.42	.6	2.5	15.5	11.4	57.2	
227	.24	-.03	5.61	11.7	.8	18.5	20.0	233.7		205	.15	.02	5.44	.4	.8	15.3	13.0	64.5	
228	.24	-.04	5.62	11.2	-7	18.6	21.9	242.4		206	.15	.02	5.45	1.3	2.7	15.8	11.6	69.8	
229	.24	-.04	5.63	11.1	1.7	20.2	19.2	248.8		207	.17	.02	5.47	2.3	1.5	16.0	12.8	76.3	
230	.28	-.05	5.63	9.3	-1.9	19.3	22.0	258.8		208	.18	.02	5.47	2.9	2.4	16.4	11.9	82.0	
231	.28	-.05	5.63	8.8	.0	19.3	22.3	266.9		209	.19	.02	5.49	3.7	1.3	16.5	13.4	88.8	
232	.21	-.03	5.64	8.2	-1.3		24.3	276.2		210	.22	.02	5.50	4.7	2.8	16.7	12.4	94.0	
Z = 70										211	.24	.02	5.51	5.4	1.1	17.1	13.7	101.0	
138	.38	-.08	5.13	9.3		-3.0		22.5		212	.23	.01	5.52	6.5	2.4	17.1	12.8	106.7	
139	.38	-.08	5.13	8.6	13.9	-2.8		16.6		213	.23	.01	5.53	7.0	.6	17.2	14.9	114.2	
140	.35	-.07	5.13	8.4	16.0	-1.4	-20.5	8.6		214	.25	.00	5.54	7.8	2.7	17.6	13.3	119.5	
141	.28	-.05	5.13	6.9	12.0	-1.3	-16.2	4.7		215	.24	.01	5.55	8.6	.7	17.3	15.0	126.9	
142	.28	-.05	5.13	6.5	14.9	-.8	-17.1	-2.1		216	.26	.00	5.56	9.3	2.4	18.0	13.5	132.6	
143	.32	-.06	5.14	5.3	11.6	-.9	-14.2	-5.6		217	.27	-.01	5.57	9.7	.4	18.1	15.2	140.3	
144	.31	-.06	5.14	4.7	14.1	.3	-16.5	-11.6		218	.27	-.01	5.58	10.3	2.1	18.4	14.2	146.2	
145	.45	-.10	5.14	2.8	11.3	-.1	-13.4	-14.8		219	.28	-.02	5.58	10.1	.0	18.4	16.4	154.3	
146	.27	-.04	5.15	1.9	13.6	1.2	-15.0	-20.3		220	.27	-.02	5.58	11.0	1.9	18.8	16.2	160.4	
147	-.22	-.04	5.10	.6	10.8	-.1		-23.0		221	.28	-.02	5.59	10.8	.3	19.0	16.2	168.2	
148	-.22	-.04	5.10	.1	14.7	1.0	-14.7	-29.6		222	.25	-.02	5.60	11.5	1.3	19.1	15.6	174.9	
149	.00	.00	5.07	.1	11.7	1.4	-13.3	-33.3		223	.26	-.02	5.60	11.1	-.1	19.4	17.2	183.1	
150	.00	.00	5.08	.0	13.8	1.6	-14.4	-39.0		224	.27	-.03	5.60	11.8	2.4	20.7	14.9	188.8	
151	.00	.00	5.08	.0	10.6	2.0	-10.4	-41.6	-.7	225	.24	-.03	5.61	10.8	-.1	20.7	16.5	196.9	
152	.00	.00	5.08	.0	13.6	2.3	-13.3	-47.1		226	.29	-.04	5.62	10.6	.1	19.8	16.6	204.9	
153	-.05	.00	5.09	.0	8.6	2.6	-8.1	-47.7		227	.25	-.03	5.63	10.2	-.8	20.0	19.5	213.7	
154	.00	.00	5.10	.0	10.9	3.0	-10.1	-50.5	-.1	228	.21	-.03	5.63	10.4	1.2	20.4	18.3	220.6	
155	.00	.00	5.10	.0	8.3	3.1	-7.1	-50.8		229	.28	-.05	5.63	9.7	-.9	20.1	20.0	229.6	
156	.09	.00	5.12	.1	10.2	3.4	-8.6	-52.9	-.4	230	.21	-.03	5.64	9.8	.9	19.3	18.0	236.8	
157	.16	.00	5.15	.4	8.6	3.8	-6.5	-53.4	.0	231	.25	-.04	5.64	9.3	.3	21.5	18.1	244.5	
158	.19	.00	5.16	1.2	10.4	4.1	-8.5	-55.7	-.3	232	.23	-.04	5.64	8.9	.8	22.3	16.9	251.8	
159	.22	-.01	5.17	1.5	8.2	4.1	-6.2	-55.8	.1	233	.23	-.04	5.64	7.6	-1.6	22.0	19.5	261.5	
160	.23	-.01	5.19	2.8	10.4	4.5	-8.1	-58.2		234	.23	-.04	5.64	6.6	-.5		19.2	270.0	
161	.23	-.01	5.20	3.7	8.1	4.9	-5.6	-58.2	-.1	Z = 71									
162	.27	-.02	5.21	4.4	9.9	4.9	-7.1	-60.0		148	-.23	-.05	5.12	1.4		-.8		-14.9	
163	.27	-.01	5.23	5.2	7.8	5.1	-4.7	-59.8	.4	149	.00	.00	5.08	.0	13.1	-2.4		-20.0	
164	.27	-.01	5.24	6.0	9.8	5.5	-6.3	-61.4		150	.00	.00	5.09	.0	12.7	-1.4	-10.8	-24.6	
165	.28	-.01	5.25	6.6	7.3	5.8	-4.1	-60.7	.5	151	.00	.00	5.09	.0	14.6	-.6	-13.2	-31.1	
166	.28	-.01	5.26	7.4	9.3	6.0	-5.8	-61.9	.3	152	.00	.00	5.10	.0	10.7	-.5	-9.6	-33.8	
167	.28	-.01	5.27	7.7	7.0	6.8	-3.1	-60.8	.3	153	.00	.00	5.10	.0	13.9	-.2	-12.3	-39.6	
168	.28	-.02	5.28	8.3	8.7	6.3	-4.5	-61.5	-.1	154	.00	.00	5.10	.0	9.0	.1	-6.7	-40.5	
169	.29	-.02	5.29	8.5	6.9	7.0	-2.3	-60.3	.0	155	.00	.00	5.11	.0	11.3	.5	-8.9	-43.7	.5
170	.28	-.03	5.29	9.0	8.4	7.3	-4.0	-60.7	-.1	156	.00	.00	5.12	.0	8.6	.8	-5.8	-44.3	
171	.30	-.03	5.31	8.9	6.3	7.6	-1.3	-58.9	-.4	157	.00	.00	5.13	.0	10.6	1.3	-7.6	-46.9	.4
172	.32	-.04	5.32	9.6	8.0	7.6	-2.7	-58.9	-.4	158	.13	.00	5.15	.2	8.4	1.1	-5.1	-47.2	-.7
173	.33	-.04	5.32	7.9	6.0	8.2	-.5	-56.8	-.7	159	.19	.00	5.18	.7	10.5	1.3	-6.9	-49.7	.0
174	.31	-.04	5.32	8.6	7.7	8.5	-2.3	-56.4	-.5	160	.19	-.01	5.19	1.1	8.5	1.6	-4.6	-50.2	
175	.29	-.04	5.32	7.9	5.3	8.9	.6	-53.7	-1.0	161	.22	.00	5.20	2.2	10.5	1.7	-6.5	-52.6	-.4
176	.29	-.05	5.33	8.3	7.4	9.0	-1.2	-53.0	-.5	162	.24	-.01	5.21	3.1	8.4	2.0	-4.0	-53.0	
177	.27	-.04	5.33	7.7	5.1	9.3	1.3	-50.0	-1.0	163	.23	-.01	5.22	3.7	10.2	2.3	-5.6	-55.0	.3
178	.28	-.05	5.33	7.3	6.5	9.2	.4	-48.4	-1.3	164	.23	-.01	5.23	4.4	8.1	2.6	-3.5	-55.1	
179	.25	-.04	5.34	6.7	5.2	9.8	2.3	-45.5		165	.30	-.02	5.26	5.1	9.6	2.5	-4.7	-56.6	.4
180	.26	-.05	5.34	6.4	6.5	10.1	1.0	-43.9		166	.30	-.02	5.27	5.7	7.6	2.7	-2.2	-56.1	.0
181	.24	-.05	5.34	5.4	4.2	10.2	3.5	-40.0		167	.28	-.02	5.28	6.4	9.7	3.1	-4.0	-57.7	.3
182	.27	-.06	5.35	5.0	6.2	10.6	2.2	-38.1		168	.29	-.02	5.28	6.9	7.3	3.4	-1.4	-57.0	-.1
183	.24	-.05	5.35	4.2	4.3	10.8	4.2	-34.3		169	.30	-.02	5.28	7.6	9.1	3.8	-3.1	-58.0	-.1
184	.24	-.05	5.35	3.4	5.7	11.0	2.9	-32.0		170	.32	-.03	5.31	7.6	6.8	3.7	-.3	-56.7	-.6
185	.22	-.05	5.35	2.5	4.1	11.6	4.8	-28.0		171	.34	-.04	5.32	8.0	8.9	4.2	-2.0	-57.6	-.2

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
172	.30	-.03	5.33	7.9	6.6	4.5	.0	-56.1	-.6	158	.00	.00	5.14	.0	10.9	2.5	-10.1	-42.1	-.7
173	.31	-.03	5.34	8.4	8.3	4.8	-1.2	-56.3	-.5	159	.15	.00	5.17	.1	8.8	2.9	-7.7	-42.8	
174	.31	-.03	5.34	8.1	5.9	4.6	1.6	-54.2	-1.4	160	.14	.00	5.17	.8	10.8	3.2	-9.6	-45.6	-.3
175	.29	-.04	5.32	7.5	8.2	5.2	-.1	-54.3	-.9	161	.17	-.01	5.19	1.0	8.6	3.3	-7.3	-46.1	-.1
176	.29	-.05	5.33	6.9	5.6	5.4	2.3	-51.8	-1.6	162	.19	.00	5.20	2.0	10.9	3.6	-9.2	-48.9	-.2
177	.26	-.05	5.33	7.2	7.6	5.6	.6	-51.3	-1.1	163	.22	-.01	5.22	2.7	8.6	3.8	-7.0	-49.4	
178	.28	-.05	5.34	6.8	5.6	6.1	3.2	-48.8	-1.6	164	.22	-.01	5.22	3.3	10.3	3.9	-8.4	-51.6	
179	.29	-.05	5.35	6.8	7.0	6.7	1.8	-47.7	-1.3	165	.23	-.01	5.24	4.0	8.4	4.1	-6.3	-51.9	
180	.26	-.05	5.35	6.2	5.2	6.7	4.0	-44.9	-1.8	166	.23	-.01	5.25	4.7	10.1	4.6	-7.9	-53.9	
181	.27	-.06	5.35	5.7	6.7	6.9	2.7	-43.5		167	.28	-.01	5.27	5.3	7.9	4.9	-5.3	-53.7	
182	.24	-.05	5.36	5.0	4.9	7.6	5.0	-40.3		168	.27	-.02	5.27	6.0	10.0	5.2	-7.1	-55.6	
183	.24	-.05	5.36	4.4	6.3	7.7	3.5	-38.6		169	.30	-.02	5.30	6.4	7.4	5.3	-4.4	-55.0	.1
184	.25	-.05	5.37	3.5	4.3	7.8	5.9	-34.8		170	.29	-.02	5.31	7.3	9.6	5.7	-6.3	-56.5	
185	.23	-.05	5.36	3.0	6.1	8.2	4.5	-32.8		171	.29	-.02	5.32	7.5	7.2	6.1	-3.7	-55.6	
186	.23	-.05	5.36	2.0	4.2	8.3	6.8	-29.0		172	.30	-.02	5.32	7.7	8.6	5.8	-4.8	-56.2	-.2
187	.22	-.05	5.37	1.3	5.9	9.0	5.3	-26.8		173	.30	-.03	5.34	7.6	7.1	6.3	-2.7	-55.2	
188	-.25	-.06	5.36	1.6	5.2	9.3	7.0	-24.0		174	.32	-.04	5.35	8.2	8.6	6.7	-4.8	-55.8	-.1
189	-.18	-.03	5.36	1.1	5.6	9.5	5.8	-21.5		175	.30	-.04	5.34	7.8	6.5	7.3	-2.0	-54.2	-.3
190	-.20	-.04	5.36	.4	3.9	9.6	8.0	-17.4		176	.28	-.04	5.34	8.3	8.0	7.1	-3.3	-54.1	-.4
191	-.19	-.03	5.36	.1	5.9	10.1	6.3	-15.2		177	.29	-.05	5.34	6.7	5.8	7.4	-.5	-51.9	-1.0
192	-.11	-.01	5.36	.0	4.2	10.1	8.3	-11.3		178	.26	-.04	5.35	7.0	8.1	8.0	-2.4	-52.0	-.5
193	.00	.00	5.35	.0	6.1	10.7	6.5	-9.3		179	.32	-.06	5.35	6.5	5.7	8.1	-.1	-49.6	-.9
194	.00	.00	5.35	.0	3.8	10.7	8.8	-5.1		180	.22	-.03	5.36	6.5	7.4	8.4	-1.3	-48.9	-.9
195	.00	.00	5.36	.0	6.0	11.0	7.2	-3.0		181	.23	-.04	5.36	5.9	5.4	8.6	.8	-46.2	-1.2
196	-.03	.00	5.36	.0	4.0	11.4	9.3	1.0		182	.24	-.05	5.36	5.7	7.2	9.1	-.4	-45.3	-.7
197	.00	.00	5.37	.0	5.6	11.8	7.9	3.5		183	.25	-.05	5.37	4.7	4.8	9.0	1.7	-42.0	-1.2
198	.00	.00	5.38	.0	1.5	11.8	11.8	10.0		184	.25	-.05	5.37	4.3	6.7	9.4	.4	-40.7	-.8
199	.00	.00	5.38	.0	3.0	11.8	10.8	15.1		185	.22	-.05	5.37	3.5	4.7	9.8	2.8	-37.3	
200	.00	.00	5.39	.0	1.6	12.1	12.4	21.6		186	.22	-.05	5.37	2.9	6.6	10.3	1.3	-35.8	
201	.00	.00	5.39	.0	2.9	12.3	11.4	26.8		187	.22	-.05	5.37	1.9	4.4	10.5	3.4	-32.2	
202	.07	.01	5.40	.1	1.4	12.5	13.0	33.5		188	-.18	-.02	5.36	2.2	6.9	11.5	1.4	-31.0	
203	.00	.00	5.40	.0	2.8	13.1	11.7	38.8		189	-.18	-.03	5.37	1.6	4.3	10.6	3.5	-27.3	
204	.11	.01	5.42	.2	1.1	13.2	13.6	45.8		190	-.19	-.03	5.37	1.2	6.2	11.2	3.0	-25.4	
205	.12	.01	5.44	.4	2.4	13.1	12.6	51.5		191	-.15	-.02	5.37	.5	4.1	11.4	5.0	-21.5	
206	.13	.02	5.45	.6	1.4	13.6	14.4	58.2		192	-.15	-.02	5.37	.2	6.2	11.7	3.5	-19.6	
207	.16	.01	5.46	1.1	2.7	13.6	13.1	63.5		193	-.12	-.02	5.37	.1	4.3	11.9	5.5	-15.9	
208	.18	.02	5.48	2.0	1.6	13.6	14.9	70.0		194	.00	.00	5.36	.0	6.1	11.9	3.9	-13.9	
209	.18	.02	5.49	2.6	2.8	13.9	13.5	75.3		195	.00	.00	5.37	.0	4.3	12.4	6.2	-10.2	
210	.20	.02	5.50	3.8	1.8	14.5	14.9	81.6		196	.00	.00	5.37	.0	6.2	12.6	4.4	-8.3	
211	.22	.02	5.51	4.3	2.3	14.0	14.1	87.3		197	-.02	-.01	5.38	.0	4.2	12.8	6.6	-4.4	
212	.22	.02	5.52	5.4	1.5	14.4	15.5	93.9		198	.00	.00	5.38	.0	5.4	12.5	5.6	-1.8	
213	.23	.01	5.53	6.0	2.7	14.7	14.3	99.3		199	.00	.00	5.39	.0	2.0	13.0	9.4	4.3	
214	.23	.01	5.54	6.9	1.1	15.2	16.2	106.2		200	.00	.00	5.39	.0	3.2	13.2	8.4	9.1	
215	.25	.00	5.55	7.3	2.4	14.9	16.1	111.9		201	.00	.00	5.40	.0	1.8	13.4	10.0	15.4	
216	.26	.00	5.56	7.9	.9	15.1	16.8	119.1		202	.00	.00	5.41	.0	3.0	13.6	9.1	20.5	
217	.26	.00	5.57	8.6	2.1	14.8	15.9	125.0		203	.00	.00	5.41	.0	1.4	13.7	10.8	27.1	
218	.27	-.01	5.58	9.2	1.1	15.6	17.2	132.0		204	.08	.01	5.43	.3	3.0	13.9	9.6	32.2	
219	.28	-.01	5.59	9.7	2.2	15.6	15.8	137.9		205	.11	.01	5.44	.1	1.4	14.2	11.1	38.9	
220	.28	-.02	5.59	9.5	1.8	17.4	16.6	144.2		206	.12	.01	5.45	.8	3.2	14.9	9.8	43.8	
221	.27	-.02	5.59	9.1	.3	15.7	17.1	151.9		207	.13	.02	5.46	.5	1.5	15.1	11.6	50.4	
222	.24	-.02	5.60	8.9	.7	16.2	18.4	159.3		208	.15	.02	5.47	1.5	3.3	15.6	9.8	55.2	
223	.26	-.03	5.61	9.6	1.4	16.3	19.0	165.9		209	.15	.02	5.48	2.1	1.4	15.5	11.9	61.9	
224	.27	-.03	5.61	9.1	.2	16.6	20.4	173.9		210	.19	.02	5.50	2.6	3.2	15.9	10.7	66.7	
225	.24	-.02	5.62	9.9	1.5	15.6	19.2	180.4		211	.18	.02	5.51	3.6	1.5	15.6	12.0	73.3	
226	.24	-.03	5.62	9.8	.3	16.0	19.5	188.2		212	.21	.01	5.52	4.2	2.9	16.2	10.9	78.4	
227	.25	-.03	5.63	9.9	2.1	18.0	17.3	194.2		213	.23	.01	5.53	5.2	1.5	16.2	12.6	85.0	
228	.20	-.02	5.63	9.5	.0	18.7	19.1	202.3		214	.23	.01	5.55	5.8	3.1	16.6	11.0	90.0	
229	.21	-.03	5.64	9.6	.8	18.3	18.0	209.6		215	.23	.01	5.55	6.5	2.3	17.7	11.8	95.8	
230	.21	-.03	5.64	7.9	-1.2	18.1	20.8	218.8		216	.24	.01	5.57	6.3	1.6	16.9	11.8	102.3	
231	.25	-.04	5.65	7.9	.5	17.7	20.1	226.4		217	.24	.01	5.58	6.6	1.2	17.2	13.5	109.2	
232	.23	-.04	5.65	7.4	-.5	16.9	21.8	234.9		218	.27	-.01	5.58	7.3	2.4	17.5	12.2	114.8	
233	.23	-.04	5.65	7.1	1.0	17.1	20.5	242.0		219	.27	-.01	5.59	7.6	.8	17.1	15.1	122.1	
234	.23	-.04	5.65	6.4	-.7	17.9	22.0	250.8		220	.28	-.01	5.60	8.4	2.7	17.6	13.8	127.5	
235	.23	-.04	5.66	6.1	.3	18.8	20.8	258.5		221	.25	-.01	5.61	8.2	.8	16.7	15.2	134.8	
236	.22	-.04	5.66	5.7	-.4		22.3	267.1		222	.27	-.02	5.61	9.1	2.0	18.4	13.3	140.9	
Z=72																			
150	-.18	-.03	5.13	.7		1.1		-13.8		223	.24	-.02	5.61	8.7	2.0	19.6	13.5	147.0	
151	.00	.00	5.10	.1	12.2	.6		-17.9		224	.25	-.02	5.62	9.6	1.6	19.8	12.9	153.5	
152	.00	.00	5.11	.0	14.3	.3	-15.9	-24.1		225	.27	-.03	5.63	8.7	.3	19.9	14.4	161.2	
153	.00	.00	5.11	.0	11.3	.9	-11.9	-27.3		226	.28	-.04	5.63	8.6	.6	19.0	14.4	168.7	
154	.00	.00	5.11	.0	14.5	1.5	-15.1	-33.8		227	.24	-.03	5.64	8.3	-.1	18.6	16.4	176.9	
155	.00	.00	5.12	.0	9.1	1.6	-9.8	-34.8		228	.25	-.03	5.64	8.5	1.8	18.3	15.0	183.2	
156	.00	.00	5.13	.0	11.8	2.1	-11.6	-38.5		229	.13	-.01	5.64	8.0	-.3	18.0	17.2	191.6	
157	.00	.00	5.13	.0	8.8	2.3	-8.6	-39.3		230	.21	-.03	5.65	8.3	1.6	18.8	15.7	198.0	
										231	.21	-.03	5.66	7.8	-.3	19.7	17.4	206.4	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
232	.25	-.04	5.66	7.8	1.2	20.5	16.1	213.2		218	.26	.00	5.59	6.3	1.1	13.8	15.1	102.6	
233	.23	-.04	5.66	7.4	-.2	20.8	17.7	221.5		219	.27	-.01	5.59	6.8	3.7	15.1	12.8	107.0	
234	.23	-.04	5.66	7.1	.7	20.5	16.9	228.8		220	.27	-.01	5.60	7.2	1.3	15.7	14.4	113.7	
235	.23	-.04	5.67	6.5	-.9	20.3	18.8	237.8		221	.24	.00	5.61	7.4	2.2	15.2	13.4	119.6	
236	.22	-.04	5.67	6.2	1.0	21.0	17.7	244.8		222	.27	-.02	5.61	6.1	.1	14.5	16.1	127.6	
237	.22	-.04	5.67	5.6	-.9	20.6	19.4	253.8		223	.24	-.01	5.62	7.2	2.2	14.7	14.9	133.5	
238	.19	-.04	5.67	5.1	.8		18.0	261.0		224	.24	-.02	5.63	6.7	.9	13.6	16.5	140.6	
Z = 73										225	.26	-.03	5.63	7.5	1.9	14.0	15.6	146.8	
152	-.14	-.02	5.14	.3		-2.4		-8.3		226	.27	-.03	5.64	6.9	.6	14.3	17.2	154.3	
153	.00	.00	5.12	.0	15.3	-1.4		-15.5		227	.24	-.03	5.64	7.9	1.9	15.5	16.0	160.5	
154	.00	.00	5.13	.0	11.3	-1.4	-11.2	-18.7		228	.25	-.03	5.65	7.7	.3	15.9	17.8	168.2	
155	.00	.00	5.13	.0	14.5	-1.4	-13.3	-25.1		229	.23	-.03	5.65	8.0	1.9	16.1	16.5	174.4	
156	-.05	.00	5.14	.1	9.9	-.6	-8.5	-26.9		230	.11	-.01	5.66	7.5	.1	16.5	18.4	182.3	
157	.00	.00	5.14	.0	11.9	-.5	-10.5	-30.7		231	.24	-.04	5.66	7.7	1.4	16.3	17.2	189.0	
158	.00	.00	5.15	.0	9.3	.0	-7.2	-32.0		232	.25	-.04	5.66	7.2	.0	16.6	19.1	197.1	
159	.00	.00	5.16	.0	11.2	.3	-9.1	-35.2	.1	233	.22	-.04	5.66	7.2	1.3	16.7	17.6	203.8	
160	.00	.00	5.16	.0	8.9	.5	-6.4	-36.0		234	.23	-.04	5.67	6.6	-.1	16.8	19.6	211.9	
161	.15	.00	5.20	.4	10.9	.6	-8.1	-38.9	.1	235	.23	-.04	5.68	6.5	1.0	17.1	18.4	219.0	
162	.14	.00	5.20	.7	9.0	.9	-5.8	-39.8	-.7	236	.21	-.04	5.67	6.1	-.1	18.0	19.7	227.1	
163	.16	-.01	5.20	1.4	10.7	.8	-7.6	-42.4	-.1	237	.22	-.04	5.68	5.7	.8	17.8	19.0	234.4	
164	.19	.00	5.23	2.1	8.9	1.1	-5.3	-43.3		238	.22	-.04	5.68	5.2	-.6	18.0	20.4	243.0	
165	.19	-.01	5.24	2.5	10.4	1.3	-6.6	-45.6		239	.19	-.04	5.68	4.7	.7	18.0	19.6	250.4	
166	.22	-.01	5.25	3.2	8.5	1.4	-4.4	-46.0		240	.20	-.04	5.68	4.4	-.2		20.8	258.6	
167	.22	-.01	5.26	3.9	10.6	1.9	-6.2	-48.5		Z = 74									
168	.22	-.01	5.27	4.3	8.1	2.1	-3.8	-48.5		154	-.07	-.01	5.14	.1		-.7		-7.4	
169	.24	-.01	5.28	5.1	10.1	2.2	-5.4	-50.5		155	.00	.00	5.14	.0	12.4	.4		-11.8	
170	.24	-.01	5.29	5.5	7.7	2.5	-2.8	-50.2		156	.00	.00	5.15	.0	14.8	.7	-16.2	-18.5	
171	.28	-.02	5.30	6.1	9.8	2.7	-4.7	-51.9		157	.00	.00	5.15	.0	9.8	.6	-10.8	-20.2	
172	.29	-.02	5.33	6.5	7.6	3.1	-2.3	-51.4	-.1	158	.00	.00	5.16	.0	12.6	1.3	-13.3	-24.8	
173	.28	-.03	5.32	6.9	9.2	3.6	-3.6	-52.5		159	.00	.00	5.16	.0	9.4	1.4	-10.1	-26.1	
174	.30	-.03	5.35	6.7	6.6	3.1	-.6	-51.0	-1.0	160	.00	.00	5.17	.0	11.6	1.7	-11.6	-29.6	
175	.30	-.03	5.34	7.1	9.3	3.7	-2.6	-52.2		161	.00	.00	5.18	.0	9.3	2.1	-9.2	-30.8	
176	.30	-.04	5.35	7.0	6.7	3.9	-.1	-50.8	-.6	162	.14	-.01	5.20	.5	11.3	2.4	-10.9	-34.0	-.7
177	.25	-.03	5.34	7.3	8.6	4.5	-2.2	-51.4	-.4	163	.15	.00	5.22	.5	8.9	2.3	-8.3	-34.8	
178	.11	-.01	5.34	6.8	6.3	4.9	.5	-49.6	-1.0	164	.18	-.01	5.23	1.3	11.2	2.8	-10.4	-38.0	-.2
179	.21	-.03	5.35	6.1	8.0	4.8	-1.1	-49.5	-.8	165	.18	-.01	5.24	1.9	9.1	3.0	-7.8	-39.0	.2
180	.21	-.03	5.36	5.7	6.2	5.3	1.1	-47.6	-1.3	166	.18	-.01	5.25	2.3	10.7	3.3	-9.4	-41.6	-.3
181	.23	-.04	5.36	5.7	7.5	5.5	.1	-47.0	-1.4	167	.19	-.01	5.26	2.8	8.7	3.5	-7.1	-42.3	
182	.23	-.04	5.36	5.2	5.9	6.0	2.2	-44.9	-1.5	168	.21	-.01	5.26	3.3	10.6	3.5	-8.7	-44.7	
183	.23	-.04	5.37	4.9	6.9	5.7	1.2	-43.7	-1.6	169	.22	-.01	5.28	3.8	8.4	3.9	-6.6	-45.1	
184	.23	-.04	5.37	4.3	5.5	6.4	3.3	-41.2	-1.7	170	.25	-.01	5.31	4.6	10.3	4.1	-8.3	-47.3	-.7
185	.22	-.05	5.38	3.7	7.0	6.7	1.8	-40.1	-1.3	171	.24	-.01	5.30	4.9	8.0	4.3	-5.8	-47.2	
186	-.27	-.07	5.37	3.2	5.1	7.1	4.0	-37.1	-1.5	172	.23	-.02	5.31	5.4	9.9	4.4	-7.6	-49.0	.8
187	.19	-.04	5.38	2.5	6.5	7.0	3.1	-35.5		173	.31	-.02	5.35	5.8	7.9	4.8	-5.4	-48.9	
188	.20	-.04	5.38	1.6	5.0	7.6	5.4	-32.5		174	.30	-.02	5.34	6.4	9.5	5.2	-6.7	-50.4	
189	.18	-.04	5.38	1.2	6.4	7.1	4.2	-30.8		175	.30	-.02	5.36	6.4	7.3	5.9	-4.4	-49.6	
190	-.14	-.02	5.38	1.5	5.7	8.4	5.6	-28.4		176	.30	-.03	5.35	6.8	9.3	5.9	-5.8	-50.8	
191	-.17	-.02	5.38	1.0	6.2	8.4	4.4	-26.5		177	.31	-.03	5.38	6.3	6.5	5.7	-3.1	-49.2	
192	-.16	-.03	5.38	.5	4.7	9.0	6.4	-23.1		178	.33	-.04	5.39	6.6	9.0	6.0	-4.8	-50.1	-.3
193	-.11	-.01	5.38	.2	6.3	9.0	4.8	-21.4		179	.11	-.01	5.36	6.1	6.4	6.2	-2.3	-48.5	-.8
194	-.12	-.02	5.39	.0	4.6	9.3	6.8	-17.8		180	.26	-.05	5.37	6.4	8.3	6.5	-3.8	-48.7	-.9
195	.00	.00	5.38	.0	6.6	9.8	5.1	-16.4		181	.23	-.04	5.37	5.0	6.5	6.8	-1.5	-47.1	-1.1
196	.00	.00	5.38	.0	4.4	9.8	7.3	-12.7		182	.24	-.05	5.38	5.2	8.0	7.3	-3.0	-47.0	-1.2
197	.00	.00	5.39	.0	6.3	10.0	5.7	-11.0		183	.24	-.05	5.38	4.6	6.0	7.3	-.9	-44.9	-1.4
198	.00	.00	5.39	.0	4.4	10.2	7.8	-7.4		184	.24	-.05	5.39	4.4	7.7	8.1	-1.9	-44.5	-1.2
199	.00	.00	5.40	.0	5.8	10.6	6.7	-5.1		185	.22	-.04	5.38	3.7	5.5	8.1	.3	-41.9	-1.5
200	.00	.00	5.40	.2	2.2	10.8	10.4	.8		186	.21	-.04	5.38	3.5	7.2	8.2	-1.1	-41.0	-1.5
201	.00	.00	5.41	.0	3.4	11.0	9.4	5.4		187	-.20	-.04	5.38	2.8	5.6	8.8	1.0	-38.6	-1.3
202	.00	.00	5.41	.0	2.1	11.3	11.1	11.4		188	-.21	-.05	5.38	2.7	7.3	9.6	-.5	-37.9	-.8
203	.00	.00	5.42	.0	3.2	11.5	10.1	16.3		189	-.19	-.04	5.39	2.2	5.2	9.8	1.9	-35.0	-.5
204	.00	.00	5.42	.0	1.8	11.8	11.8	22.6		190	-.20	-.04	5.39	1.9	7.1	10.5	.4	-34.0	-.3
205	.08	.01	5.44	.2	3.0	11.8	11.2	27.8		191	-.18	-.03	5.39	1.4	5.0	9.8	3.3	-30.9	
206	.09	.02	5.45	.3	1.8	12.2	12.6	34.0		192	-.15	-.02	5.39	1.1	6.6	10.3	1.4	-29.5	
207	.11	.01	5.46	.6	3.2	12.3	11.2	38.8		193	-.16	-.03	5.39	.5	4.7	10.3	3.6	-26.2	
208	.14	.01	5.47	.8	1.5	12.3	12.9	45.4		194	-.11	-.02	5.39	.3	6.6	10.6	2.2	-24.7	
209	.14	.01	5.48	1.3	3.5	12.5	10.8	50.0		195	-.11	-.02	5.40	.1	4.8	10.9	4.2	-21.5	
210	.15	.02	5.49	1.8	2.0	13.1	12.5	56.0		196	.00	.00	5.39	.0	6.7	11.0	2.9	-20.1	
211	.17	.01	5.51	1.4	2.8	12.7	11.8	61.3		197	.00	.00	5.39	.0	4.7	11.3	5.0	-16.7	
212	.18	.02	5.52	2.3	1.8	13.0	13.3	67.6		198	.00	.00	5.40	.0	6.5	11.5	3.2	-15.2	
213	.21	.01	5.53	2.8	3.2	13.3	12.1	72.4		199	-.03	.00	5.41	.0	4.7	11.7	5.3	-11.8	
214	.23	.01	5.55	3.6	1.5	13.3	14.0	79.0		200	.00	.00	5.41	.0	5.9	11.8	4.0	-9.6	
215	.21	.01	5.55	4.3	3.1	13.3	12.5	84.0		201	.00	.00	5.41	.0	2.4	12.0	7.9	-4.0	
216	.23	.01	5.57	5.1	1.5	12.6	15.1	90.5		202	.00	.00	5.42	.0	3.8	12.4	6.7	.3	
217	.22	.01	5.57	5.7	2.9	13.9	13.7	95.7		203	.02	.01	5.43	.0	2.1	12.5	8.7	6.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
204	.00	.00	5.43	.0	3.4	12.7	7.7	10.9		190	-.19	-.04	5.40	1.9	5.6	6.7	3.3	-34.4	-1.2
205	.00	.00	5.44	.0	2.4	13.4	9.1	16.5		191	-.20	-.04	5.40	1.7	7.9	7.5	1.1	-34.2	-.1
206	.00	.00	5.44	.0	3.2	13.6	8.1	21.4		192	-.15	-.02	5.40	.8	4.7	7.2	4.0	-30.9	
207	.00	.00	5.45	.0	1.9	13.6	9.7	27.6		193	-.14	-.02	5.40	.4	7.0	7.6	2.6	-29.8	
208	.11	.01	5.47	.3	3.2	13.6	8.6	32.5		194	.00	.00	5.39	.0	5.2	8.0	4.7	-26.9	
209	.00	.00	5.46	.0	1.4	13.5	10.6	39.2		195	.00	.00	5.39	.0	6.9	8.3	3.5	-25.6	
210	.12	.01	5.49	.8	3.8	13.8	8.6	43.5		196	.00	.00	5.40	.0	5.4	8.8	5.2	-23.0	
211	.16	.01	5.51	1.3	2.0	13.8	10.0	49.5		197	.00	.00	5.40	.0	6.8	8.9	3.7	-21.7	
212	.16	.01	5.51	1.6	3.4	14.4	9.8	54.2		198	.02	.00	5.41	.1	4.8	9.0	6.1	-18.4	
213	.19	.02	5.53	2.0	2.0	14.5	10.5	60.3		199	.00	.00	5.41	.0	6.8	9.2	4.3	-17.1	
214	.19	.02	5.54	2.5	3.3	14.7	9.2	65.1		200	.00	.00	5.42	.0	4.6	9.1	6.8	-13.7	
215	.20	.02	5.56	3.3	1.6	14.8	11.2	71.5		201	.00	.00	5.42	.0	6.3	9.5	5.3	-11.9	
216	.23	.01	5.57	4.0	4.2	15.9	9.1	75.4		202	.00	.00	5.43	.1	2.6	9.8	9.2	-6.4	
217	.23	.01	5.58	4.4	1.5	15.8	11.0	82.0		203	.00	.00	5.43	.0	4.1	10.1	7.8	-2.5	
218	.22	.01	5.58	4.3	2.5	15.4	10.4	87.6		204	.00	.00	5.44	.1	2.4	10.3	9.9	3.2	
219	.24	.01	5.60	4.8	1.5	15.7	12.2	94.2		205	.00	.00	5.45	.0	3.8	10.7	8.7	7.4	
220	.23	.00	5.60	5.4	3.0	15.0	10.8	99.3		206	.00	.00	5.45	.0	2.2	10.5	10.6	13.4	
221	.27	-.01	5.62	5.7	1.1	14.7	12.9	106.3		207	.00	.00	5.46	.0	3.5	10.8	9.5	17.9	
222	.24	.00	5.62	6.3	2.8	15.4	11.4	111.5		208	.00	.00	5.46	.0	2.1	11.0	11.4	23.9	
223	.25	-.01	5.63	5.8	1.0	16.3	13.3	118.6		209	.09	.01	5.48	.2	3.4	11.3	10.6	28.6	
224	.24	-.01	5.63	6.8	2.5	16.7	12.2	124.1		210	.12	.01	5.49	.1	1.8	11.6	12.1	34.8	
225	.24	-.02	5.64	6.4	1.0	16.7	13.7	131.2		211	.12	.01	5.50	.6	3.4	11.3	11.0	39.5	
226	.25	-.02	5.64	7.4	2.2	17.0	12.8	137.0		212	.14	.01	5.51	1.5	3.1	12.4	11.0	44.4	
227	.24	-.02	5.65	6.4	.7	17.1	14.5	144.4		213	.14	.01	5.52	.5	2.7	11.7	10.1	49.8	
228	.24	-.03	5.65	7.4	2.1	17.3	13.4	150.4		214	.16	.01	5.54	1.2	2.0	11.7	12.2	55.9	
229	.25	-.03	5.66	7.3	.7	17.7	15.0	157.8		215	.18	.01	5.55	1.3	3.6	12.0	10.7	60.3	
230	.23	-.03	5.66	7.6	1.9	17.7	13.6	164.0		216	.21	.01	5.57	2.0	2.1	12.4	12.4	66.3	
231	.20	-.02	5.67	7.2	.3	17.8	15.4	171.8		217	.21	.01	5.57	2.5	3.4	11.7	11.0	71.0	
232	.13	-.01	5.67	7.4	1.9	18.3	14.1	177.9		218	.22	.01	5.59	3.3	1.9	12.1	12.9	77.2	
233	.21	-.03	5.68	6.9	-.2	18.2	16.2	186.2		219	.22	.01	5.60	3.8	3.3	12.9	11.7	82.0	
234	.22	-.04	5.68	6.9	1.9	18.7	14.9	192.4		220	.24	.01	5.61	4.2	1.5	13.0	13.7	88.5	
235	.23	-.04	5.68	6.3	-.1	18.7	16.6	200.6		221	.23	.00	5.62	4.9	3.2	13.2	12.2	93.4	
236	.21	-.04	5.68	6.2	1.2	18.9	15.6	207.4		222	.23	.00	5.63	5.2	1.3	13.4	14.3	100.1	
237	.21	-.04	5.68	5.8	.1	19.0	17.0	215.4		223	.24	.00	5.64	5.7	2.9	13.5	12.9	105.3	
238	.21	-.04	5.69	5.4	.8	19.0	15.9	222.6		224	.25	-.01	5.64	5.2	1.4	14.0	14.6	111.9	
239	.22	-.04	5.69	4.9	-.1	19.5	17.7	230.8		225	.24	-.01	5.64	6.2	2.5	14.0	13.4	117.4	
240	.19	-.04	5.69	4.6	1.1	19.9	17.1	237.8		226	.24	-.02	5.65	5.8	1.2	14.2	15.1	124.3	
241	.17	-.04	5.69	4.0	-.4	19.6	18.2	246.3		227	.23	-.02	5.65	6.7	2.4	14.3	14.0	130.0	
242	.18	-.04	5.70	3.6	.8		17.2	253.5		228	.23	-.02	5.66	6.1	1.0	14.7	15.7	137.0	
Z = 75										229	.24	-.02	5.66	6.9	2.3	14.9	14.5	142.8	
156	-.07	-.01	5.16	.5		-2.2		-2.3		230	.25	-.03	5.66	6.5	.5	14.7	16.4	150.4	
157	-.01	.00	5.16	.0	15.2	-1.8		-9.4		231	.20	-.02	5.67	6.8	2.1	14.9	15.2	156.4	
158	-.02	.00	5.17	.3	10.2	-1.4	-10.1	-11.5		232	.23	-.03	5.68	6.6	.6	15.2	16.9	163.8	
159	.00	.00	5.17	.0	12.5	-1.5	-11.8	-16.0		233	.25	-.04	5.68	6.7	1.9	15.3	15.6	170.0	
160	.00	.00	5.18	.1	10.0	-.8	-.8.9	-18.0		234	.25	-.04	5.68	6.4	.5	15.9	17.2	177.5	
161	.00	.00	5.19	.0	11.7	-.7	-10.4	-21.6		235	.22	-.04	5.69	6.3	1.6	15.7	16.1	184.0	
162	.00	.00	5.19	.0	9.5	-.5	-7.8	-23.0		236	.21	-.04	5.69	5.8	.2	16.0	17.9	191.8	
163	.09	.00	5.21	.3	11.6	-.1	-9.5	-26.5	-.1	237	.21	-.04	5.69	5.6	1.5	16.3	16.7	198.4	
164	.14	-.01	5.23	.3	9.1	.1	-7.1	-27.6		238	.21	-.04	5.69	4.8	-.3	15.9	18.7	206.7	
165	.16	-.01	5.24	1.1	11.6	.4	-9.1	-31.1	.4	239	.21	-.04	5.70	4.9	1.7	16.8	17.3	213.1	
166	.14	-.01	5.24	1.7	9.2	.6	-6.6	-32.3	-.2	240	.19	-.04	5.70	4.4	.5	17.4	18.5	220.7	
167	.18	-.01	5.26	1.9	11.0	.8	-8.2	-35.2		241	.19	-.04	5.70	4.1	.7	17.1	17.8	228.0	
168	.18	-.01	5.27	2.4	8.9	1.0	-6.0	-36.0		242	.17	-.04	5.71	3.3	-.2	17.3	19.5	236.3	
169	.21	-.02	5.27	2.8	10.5	1.0	-7.4	-38.5		243	.17	-.04	5.71	3.2	1.1	17.5	18.3	243.3	
170	.21	-.02	5.28	3.2	8.6	1.2	-5.2	-39.0		244	.17	-.04	5.72	2.5	-.3		19.9	251.6	
171	.21	-.02	5.29	3.7	10.5	1.4	-6.9	-41.5		Z = 76									
172	.21	-.02	5.30	3.9	8.1	1.5	-3.7	-41.5		158	.00	.00	5.18	.0		-.8		-1.4	
173	.21	-.02	5.31	4.4	10.1	1.8	-5.8	-43.5		159	.00	.00	5.18	.0	10.9	.0	-4.2		
174	.23	-.02	5.32	4.9	8.2	2.1	-3.6	-43.7		160	.00	.00	5.19	.0	12.9	.4	-14.6	-9.1	
175	.22	-.02	5.32	5.2	9.5	2.1	-4.9	-45.2		161	.00	.00	5.19	.0	10.2	.5	-11.0	-11.2	
176	.30	-.02	5.37	5.5	7.9	2.7	-2.8	-44.9		162	.00	.00	5.20	.0	12.1	1.0	-12.8	-15.2	
177	.22	-.02	5.34	5.6	9.3	2.7	-4.2	-46.2		163	.00	.00	5.21	.0	9.9	1.4	-10.0	-17.1	
178	.32	-.04	5.40	5.7	7.3	3.4	-2.0	-45.3	-.4	164	.00	.00	5.22	.0	11.5	1.3	-11.5	-20.5	
179	.25	-.02	5.38	5.6	8.9	3.4	-3.4	-46.2	-.4	165	.00	.00	5.22	.0	9.6	1.7	-9.1	-22.0	
180	.20	-.02	5.37	5.3	6.8	3.8	-1.0	-45.0	-.9	166	.14	-.01	5.24	.7	11.7	1.8	-10.9	-25.6	-.5
181	.26	-.05	5.38	5.5	8.7	4.2	-2.8	-45.6	-.9	167	.14	-.01	5.26	1.1	9.4	2.0	-8.9	-27.0	
182	.23	-.04	5.39	5.1	6.5	4.2	.0	-44.0	-1.4	168	.17	-.01	5.27	1.3	11.1	2.1	-10.4	-30.0	.0
183	.24	-.05	5.39	4.3	8.1	4.3	-1.6	-44.1	-1.7	169	.18	-.01	5.28	1.8	9.2	2.3	-8.1	-31.1	.4
184	.24	-.05	5.40	3.9	6.6	5.0	.7	-42.6	-1.6	170	.17	-.01	5.28	2.1	10.8	2.6	-9.6	-33.8	-.1
185	.24	-.05	5.40	3.7	7.6	5.0	-.6	-42.2	-1.6	171	.18	-.01	5.29	2.4	8.8	2.8	-7.5	-34.5	
186	.21	-.04	5.39	3.1	5.8	5.3	1.8	-40.0	-2.0	172	.23	-.03	5.30	2.9	11.4	3.7	-9.9	-37.8	
187	-.24	-.06	5.39	3.0	7.8	5.9	.3	-39.7	-1.6	173	.18	-.01	5.31	2.5	8.0	3.5	-7.1	-37.7	
188	-.21	-.05	5.39	2.7	5.8	6.1	2.6	-37.4	-1.6	174	.25	-.01	5.35	3.1	10.4	3.8	-8.9	-40.1	-.6
189	-.23	-.05	5.39	2.4	7.5	6.2	1.1	-36.8	-1.1	175	.28	-.02	5.37	3.3	8.3	3.9	-6.7	-40.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
176	.26	-.01	5.37	3.8	9.9	4.3	-7.8	-42.2	-.9	162	.00	.00	5.21	.1	10.4	-1.5	-10.5	-2.4	
177	.25	-.02	5.37	3.8	7.9	4.3	-5.8	-42.0		163	.00	.00	5.22	.0	12.8	-.9	-12.1	-7.1	
178	.24	-.02	5.36	4.1	9.4	4.5	-6.9	-43.4	-.1	164	.00	.00	5.22	.0	10.0	-.8	-9.5	-9.0	
179	.26	-.03	5.39	4.0	7.5	4.7	-4.7	-42.8		165	.00	.00	5.23	.0	11.9	-.4	-10.6	-12.9	
180	.28	-.03	5.39	4.3	9.3	5.1	-6.0	-44.0	-.4	166	.00	.00	5.24	.0	10.0	.1	-8.5	-14.8	
181	.20	-.02	5.38	3.6	7.0	5.2	-3.7	-42.9	-.7	167	.00	.00	5.24	.0	11.3	-.3	-9.7	-18.0	.3
182	.26	-.05	5.39	3.9	9.2	5.7	-5.6	-44.0	-.5	168	.13	-.01	5.27	.4	9.6	-.1	-7.7	-19.6	
183	.22	-.04	5.38	3.4	6.6	5.8	-3.1	-42.5		169	.15	-.01	5.27	.6	11.4	.3	-9.5	-22.9	1.0
184	.24	-.05	5.40	3.3	8.9	6.5	-4.9	-43.3	-.9	170	.16	-.01	5.28	.8	9.3	.4	-7.1	-24.2	.4
185	.21	-.04	5.39	2.3	6.4	6.3	-2.4	-41.6	-1.2	171	.13	-.01	5.29	1.0	10.9	.5	-8.7	-27.0	
186	.21	-.04	5.40	2.3	8.2	6.8	-3.4	-41.7	-1.3	172	.17	-.01	5.30	1.2	9.0	.7	-6.4	-27.9	
187	-.23	-.05	5.39	1.8	6.3	7.3	-1.2	-39.9	-1.3	173	.17	-.02	5.31	1.4	10.7	.0	-7.9	-30.6	
188	-.20	-.04	5.40	1.9	8.2	7.7	-2.7	-40.0	-1.1	174	.21	-.01	5.34	1.4	8.6	.7	-5.6	-31.1	
189	-.19	-.04	5.40	1.6	6.1	7.9	-.4	-38.0	-1.0	175	.20	-.01	5.34	1.8	10.5	.8	-7.6	-33.6	
190	-.24	-.06	5.41	1.6	7.8	8.1	-1.8	-37.7	-1.0	176	.24	-.01	5.36	2.3	8.8	1.4	-5.4	-34.3	
191	-.20	-.04	5.41	.9	5.7	8.2	.7	-35.3	-1.1	177	.23	-.02	5.36	2.6	10.0	1.4	-6.7	-36.2	
192	-.19	-.04	5.42	.9	.6	7.9	-.8	-34.9	-1.0	178	.26	-.03	5.37	2.8	8.3	1.8	-4.4	-36.5	-.7
193	-.16	-.03	5.41	.5	5.6	8.8	1.2	-32.4	-1.0	179	.23	-.02	5.38	2.9	9.6	2.0	-5.8	-38.0	
194	-.09	-.02	5.40	.3	7.2	9.0	.1	-31.5	-.9	180	.28	-.02	5.40	2.8	8.0	2.5	-3.3	-38.0	-.6
195	.00	.00	5.40	.0	5.7	9.5	2.0	-29.1	-.6	181	.24	-.02	5.39	3.1	9.3	2.5	-4.9	-39.2	-.3
196	.00	.00	5.41	.0	7.1	9.8	.6	-28.2	-.1	182	.26	-.02	5.41	2.6	7.4	2.9	-2.3	-38.5	-.5
197	.00	.00	5.41	.0	5.4	9.8	2.7	-25.5		183	.27	-.04	5.39	2.5	9.0	2.7	-4.0	-39.4	
198	.00	.00	5.41	.0	7.1	10.1	1.2	-24.5		184	.20	-.03	5.39	2.3	7.1	3.2	-1.7	-38.4	-1.3
199	.00	.00	5.42	.0	5.0	10.4	3.5	-21.5		185	.17	-.03	5.39	2.4	8.8	3.2	-3.0	-39.2	
200	.00	.00	5.43	.0	7.1	10.6	1.6	-20.5		186	-.24	-.06	5.39	1.9	7.3	4.0	-.9	-38.4	-.8
201	.00	.00	5.43	.0	4.8	10.8	4.1	-17.2		187	-.20	-.04	5.40	1.6	8.4	4.3	-2.5	-38.7	-1.0
202	.00	.00	5.44	.0	6.5	11.1	2.7	-15.6		188	-.20	-.04	5.40	1.3	6.7	4.7	.0	-37.3	-1.0
203	.00	.00	5.44	.0	2.8	11.2	6.5	-10.3		189	-.24	-.06	5.41	1.4	8.3	4.8	-1.4	-37.5	-.9
204	.00	.00	5.45	.0	4.4	11.5	5.2	-6.7		190	-.20	-.04	5.41	1.1	6.4	5.2	.8	-35.9	-.8
205	.01	.00	5.45	.0	2.6	11.7	7.4	-1.2		191	-.19	-.04	5.42	1.1	8.1	5.6	-.5	-36.0	-.7
206	.00	.00	5.46	.0	4.1	12.0	6.2	2.7		192	-.15	-.02	5.42	.7	6.2	6.0	1.5	-34.1	-.8
207	.00	.00	5.46	.0	2.3	12.2	8.3	8.5		193	-.19	-.03	5.42	.6	7.6	6.1	.5	-33.6	-.9
208	.00	.00	5.47	.0	4.1	12.8	6.9	12.5		194	-.11	-.02	5.41	.2	6.1	6.5	2.9	-31.7	-.9
209	.00	.00	5.48	.0	2.6	13.3	8.4	18.0		195	-.09	-.02	5.42	.2	7.5	6.8	1.6	-31.1	-.6
210	.00	.00	5.48	.0	3.3	13.1	7.6	22.8		196	.05	-.02	5.42	.0	5.8	7.0	3.4	-28.8	-.6
211	.00	.00	5.49	.0	2.4	13.7	8.8	28.5		197	.02	-.01	5.42	.0	7.4	7.3	2.2	-28.1	-.1
212	.00	.00	5.49	.0	3.1	13.3	8.3	33.5		198	.00	.00	5.42	.0	5.6	7.5	4.1	-25.7	
213	.14	.01	5.53	.3	1.9	12.1	9.8	39.7		199	.00	.00	5.43	.0	7.3	7.7	2.8	-24.9	.5
214	.16	.01	5.54	.4	4.0	13.4	7.7	43.7		200	.00	.00	5.43	.0	5.2	7.9	5.1	-22.1	
215	.19	.02	5.55	.7	2.2	13.6	9.4	49.6		201	.00	.00	5.44	.0	7.3	8.1	3.1	-21.3	
216	.19	.02	5.57	1.2	3.7	13.7	8.0	53.9		202	.00	.00	5.44	.0	5.1	8.4	5.3	-18.3	
217	.20	.02	5.58	1.4	2.0	13.6	9.9	60.0		203	.00	.00	5.45	.0	6.6	8.5	3.9	-16.9	
218	.21	.01	5.59	2.0	3.8	13.9	8.4	64.3		204	.00	.00	5.45	.0	3.0	8.8	7.7	-11.8	
219	.23	.01	5.60	2.7	2.2	14.2	10.0	70.3		205	.00	.00	5.46	.0	4.9	9.3	6.1	-8.6	
220	.23	.01	5.61	3.3	3.5	14.4	8.9	74.8		206	.00	.00	5.47	.0	2.9	9.6	8.4	-3.5	
221	.24	.01	5.62	3.6	1.7	14.6	10.9	81.2		207	.00	.00	5.47	.0	4.4	9.8	7.0	.2	
222	.23	.00	5.63	4.3	3.4	14.8	9.5	85.8		208	.00	.00	5.48	.0	2.7	10.2	8.9	5.6	
223	.23	.00	5.64	4.6	1.5	15.1	11.4	92.3		209	.00	.00	5.48	.0	4.1	10.2	7.8	9.6	
224	.24	.00	5.64	5.2	3.1	15.2	10.3	97.4		210	.00	.00	5.49	.0	2.5	10.1	9.6	15.1	
225	.24	.00	5.66	4.8	1.4	15.2	12.0	104.0		211	.00	.00	5.50	.0	3.6	10.4	8.7	19.6	
226	.24	-.01	5.65	5.6	2.9	15.6	10.7	109.1		212	.00	.00	5.50	.0	2.6	10.6	10.1	25.1	
227	.24	-.02	5.66	5.7	1.2	15.6	12.6	116.0		213	.00	.00	5.51	.0	3.3	10.9	9.4	29.9	
228	.23	-.02	5.66	6.0	2.7	15.9	11.4	121.4		214	.12	.01	5.54	.2	2.0	11.0	11.1	36.0	
229	.23	-.02	5.67	5.8	1.1	16.0	13.1	128.3		215	.12	.01	5.54	.3	3.8	10.8	9.2	40.2	
230	.24	-.02	5.68	6.3	2.4	16.1	11.9	134.0		216	.16	.01	5.56	.6	2.3	11.0	11.0	45.9	
231	.24	-.03	5.68	6.0	.9	16.5	13.6	141.1		217	.16	.01	5.57	.9	3.8	11.1	9.5	50.2	
232	.20	-.02	5.68	6.2	2.3	16.7	12.5	146.9		218	.20	.02	5.59	1.2	2.3	11.4	11.1	55.9	
233	.23	-.03	5.69	5.8	.6	16.8	14.4	154.4		219	.20	.02	5.61	1.4	3.8	11.4	9.8	60.2	
234	.25	-.04	5.69	6.0	2.1	16.9	13.3	160.3		220	.20	.02	5.61	2.1	2.4	11.7	11.5	65.9	
235	.25	-.04	5.70	5.6	.5	16.9	14.9	167.9		221	.23	.01	5.62	2.7	3.7	11.8	10.5	70.3	
236	.22	-.04	5.70	5.8	2.0	17.3	13.6	173.9		222	.24	.01	5.64	3.0	2.0	12.2	12.1	76.3	
237	.22	-.04	5.70	5.0	.3	17.4	15.2	181.7		223	.25	.00	5.64	3.7	3.4	12.1	10.8	81.0	
238	.21	-.04	5.70	5.0	1.7	17.6	14.0	188.1		224	.23	.00	5.65	3.9	2.0	12.6	12.7	87.1	
239	.21	-.04	5.70	4.6	.3	18.2	15.8	195.8		225	.24	.00	5.66	4.5	3.2	12.7	11.5	92.0	
240	.21	-.04	5.71	4.4	1.6	18.2	14.4	202.2		226	.24	.00	5.66	4.6	1.6	12.9	13.5	98.4	
241	.19	-.04	5.71	3.5	.1	17.8	16.0	210.2		227	.25	-.01	5.67	5.1	3.0	13.0	12.1	103.4	
242	.19	-.04	5.71	3.6	1.5	18.5	15.1	216.8		228	.24	-.02	5.68	5.0	.6	13.3	13.9	109.9	
243	.17	-.04	5.71	2.8	-.1	18.6	16.7	225.0		229	.22	-.01	5.68	5.4	2.7	13.4	12.8	115.3	
244	.15	-.04	5.71	2.7	1.3	18.8	16.1	231.8		230	.23	-.02	5.68	5.2	1.3	13.6	14.6	122.1	
245	.15	-.03	5.72	2.2	.2	19.3	17.1	239.7		231	.22	-.02	5.68	5.5	2.6	13.8	13.4	127.5	
246	.15	-.03	5.72	2.0	1.2		16.3	246.6		232	.25	-.03	5.69	5.3	1.1	14.0	15.1	134.5	
Z = 77																			
160	-.04	.00	5.20	.2		-.2.4		5.6		234	.26	-.04	5.70	5.1	1.0	14.6	15.4	147.1	
161	.00	.00	5.20	.0	13.7	-1.6		-.1		235	.20	-.02	5.71	5.2	2.1	14.6	14.3	153.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
236	.22	-.03	5.71	4.7	.7	14.8	16.1	160.4		206	.00	.00	5.47	.0	5.2	10.5	3.3	-11.9	
237	.22	-.04	5.71	4.7	2.0	14.7	15.0	166.5		207	.00	.00	5.48	.0	3.0	10.6	5.6	-6.8	
238	.22	-.04	5.71	4.1	.5	14.9	16.6	174.0		208	.00	.00	5.49	.0	4.7	10.9	4.4	-3.4	
239	.20	-.03	5.72	4.3	2.1	15.3	15.2	180.0		209	.00	.00	5.49	.0	2.9	11.0	6.3	1.8	
240	.18	-.03	5.72	3.8	.3	15.3	17.3	187.8		210	.00	.00	5.50	.0	4.3	11.3	5.2	5.6	
241	.18	-.03	5.72	3.5	1.7	15.3	16.0	194.2		211	.00	.00	5.50	.0	2.7	11.5	6.8	10.9	
242	.19	-.04	5.72	2.6	.5	15.8	17.3	201.7		212	.00	.00	5.51	.0	3.9	11.8	6.1	15.1	
243	.17	-.03	5.72	2.8	1.5	15.8	16.5	208.3		213	.00	.00	5.51	.0	2.7	12.0	7.4	20.4	
244	.17	-.03	5.72	2.2	.6	16.5	17.9	215.7		214	.00	.00	5.52	.0	3.6	12.3	6.8	24.9	
245	.15	-.03	5.72	2.1	1.2	16.5	17.0	222.6		215	.10	.01	5.54	.0	2.0	12.3	8.6	31.0	
246	.15	-.03	5.72	1.4	.4	16.7	18.5	230.2		216	.00	.00	5.53	.0	4.2	12.6	6.8	34.9	
247	-.20	-.04	5.73	1.7	1.6	17.2	17.1	236.7		217	.16	.02	5.58	.4	2.3	12.6	8.6	40.6	
248	-.16	-.03	5.73	1.1	.2		18.8	244.6		218	.17	.02	5.59	.5	3.9	12.6	7.3	44.8	
249	-.16	-.03	5.74	1.1	1.3		17.9	251.3		219	.20	.02	5.61	1.0	2.5	12.8	8.7	50.4	
250	-.12	-.02	5.74	.7	.3		19.4	259.1		220	.20	.02	5.61	1.3	4.1	13.1	7.2	54.4	
251	-.14	-.02	5.75	.7	1.4	17.9	18.4	265.7		221	.20	.02	5.63	1.6	2.6	13.4	8.9	59.8	
252	-.12	-.02	5.75	.1	-2	17.8	20.0	274.0		222	.20	.02	5.63	2.1	3.7	13.4	7.9	64.2	
253	-.08	-.01	5.75	.2	1.4	18.1	19.0	280.7		223	.24	.01	5.64	2.5	2.1	13.4	9.7	70.1	
254	.00	.00	5.74	.0	.3	18.3	20.2	288.5		224	.23	.00	5.65	3.2	3.9	13.9	8.2	74.3	
255	.00	.00	5.75	.0	1.7	18.6	18.9	294.8		225	.25	.00	5.66	3.4	2.0	13.9	10.3	80.4	
256	.00	.00	5.76	.0	.3		20.2	302.6		226	.24	.00	5.67	4.1	3.6	14.3	8.9	84.9	
257	.00	.00	5.76	.0	1.6		18.9	309.1		227	.24	.00	5.68	4.1	1.7	14.4	10.8	91.3	
258	.00	.00	5.77	.0	-2		20.8	317.4		228	.23	-.01	5.68	4.7	3.3	14.7	9.4	96.0	
259	.00	.00	5.77	.0	1.3	19.2	19.9	324.2		229	.24	-.01	5.68	4.6	1.6	14.8	11.2	102.5	
260	-.01	.00	5.78	.1	-1	19.2	21.1	332.4		230	.23	-.02	5.69	5.0	3.0	15.1	9.9	107.5	
261	.00	.00	5.78	.0	1.2	19.5	20.2	339.3		231	.23	-.02	5.70	4.8	1.4	15.2	11.8	114.1	
262	.00	.00	5.78	.2	-1.7	19.9	23.0	349.0		232	.24	-.02	5.70	5.1	2.8	15.4	10.6	119.4	
263	.00	.00	5.79	.0	-1.2	19.8	22.5	358.3		233	.24	-.03	5.71	4.8	1.2	15.5	12.2	126.2	
264	.00	.00	5.79	.0	-1.9		23.6	368.2		234	.23	-.03	5.71	5.1	2.6	15.6	11.0	131.7	
Z = 78										235	.23	-.03	5.71	4.7	1.1	15.7	12.8	138.7	
162	.00	.00	5.22	.0		-9		8.0		236	.11	-.01	5.72	4.9	2.4	16.0	11.7	144.3	
163	.00	.00	5.22	.1		-2		5.0		237	.24	-.04	5.73	4.3	.9	16.1	13.4	151.5	
164	.00	.00	5.23	.0	12.6	-3	-14.4	.5		238	.22	-.03	5.72	4.4	2.1	16.3	12.5	157.5	
165	.00	.00	5.24	.0	10.8	.5	-11.8	-2.3		239	.22	-.04	5.73	3.8	.7	16.5	14.2	164.8	
166	.00	.00	5.24	.0	12.1	.7	-13.3	-6.3		240	.20	-.03	5.73	3.8	2.4	16.8	12.5	170.5	
167	.00	.00	5.25	.0	10.1	.8	-11.0	-8.3		241	.21	-.04	5.73	3.4	.5	16.9	14.5	178.1	
168	.00	.00	5.26	.0	11.6	1.2	-12.1	-11.9		242	.18	-.03	5.73	3.1	1.8	17.1	13.7	184.4	
169	.10	.00	5.27	.2	9.6	1.2	-9.9	-13.4		243	.18	-.03	5.74	2.2	.6	17.1	15.0	191.9	
170	.07	-.01	5.27	.2	11.7	1.4	-11.7	-17.1	.1	244	.17	-.03	5.73	2.5	2.1	17.8	13.9	197.8	
171	.14	.00	5.29	.2	9.3	1.5	-9.3	-18.3		245	.17	-.03	5.74	1.7	.3	17.5	15.0	205.5	
172	.14	-.01	5.30	.4	11.3	1.8	-11.0	-21.6	.5	246	-.17	-.02	5.73	1.8	1.8	18.1	14.1	211.8	
173	.17	-.01	5.31	.5	9.2	2.0	-8.3	-22.7	.8	247	-.15	-.02	5.74	1.2	.3	18.0	15.8	219.5	
174	.17	-.01	5.32	.8	10.9	2.2	-9.4	-25.5	.2	248	-.17	-.02	5.74	1.4	1.9	18.2	14.7	225.8	
175	.24	.00	5.37	.4	8.5	2.1	-7.0	-26.0		249	-.16	-.03	5.74	.8	.4	18.4	16.2	233.4	
176	.24	.00	5.38	1.0	11.1	2.6	-9.3	-29.0		250	-.12	-.02	5.75	1.0	1.8	19.0	15.0	239.7	
177	.28	-.02	5.39	1.3	8.7	2.5	-6.8	-29.5		251	-.12	-.02	5.75	.6	.4	19.0	16.5	247.3	
178	.25	-.01	5.40	1.7	10.6	3.2	-9.1	-32.1	-.6	252	-.12	-.02	5.76	.6	1.4	19.0	15.6	254.0	
179	.29	-.02	5.41	1.7	8.3	3.1	-7.0	-32.3		253	-.08	-.01	5.75	.2	.3	19.6	17.0	261.7	
180	.25	-.02	5.40	2.2	10.4	3.8	-8.6	-34.6	-.8	254	-.08	-.01	5.76	.1	1.5	19.7	16.0	268.3	
181	.26	-.02	5.41	1.9	7.7	3.6	-6.4	-34.3		255	.00	.00	5.76	.0	.5	19.9	17.4	275.9	
182	.26	-.03	5.42	2.3	9.9	4.3	-7.8	-36.1	.0	256	.00	.00	5.76	.0	1.5	19.7	16.3	282.5	
183	.25	-.03	5.41	1.8	7.3	4.2	-5.1	-35.4		257	.00	.00	5.77	.0	.3	19.7	17.7	290.2	
184	.25	-.03	5.42	2.1	9.5	4.7	-6.4	-36.8	-.6	258	.00	.00	5.77	.0	1.8	19.9	16.6	296.5	
185	-.23	-.05	5.39	1.6	7.5	5.1	-4.2	-36.2	-.3	259	.00	.00	5.78	.0	.3	20.3	17.8	304.4	
186	-.23	-.05	5.40	1.9	9.3	5.5	-5.7	-37.4	-.4	260	.00	.00	5.78	.0	1.1	20.2	17.3	311.3	
187	.20	-.03	5.41	1.4	6.9	5.2	-3.5	-36.2		261	-.01	.00	5.79	.1	.3	20.6	18.5	319.1	
188	-.19	-.04	5.41	1.5	9.1	5.9	-4.9	-37.3	-.5	262	.00	.00	5.79	.0	1.1	20.5	18.0	326.0	
189	-.16	-.02	5.41	.9	6.9	6.1	-2.9	-36.1	-.3	263	.00	.00	5.79	.0	-1.7	20.5	20.7	335.8	
190	-.14	-.02	5.41	1.0	8.6	6.4	-4.0	-36.7	-.6	264	.00	.00	5.80	.0	-.7	21.0	19.9	344.6	
191	-.13	-.01	5.41	.8	6.8	6.8	-2.3	-35.4	-.3	265	.00	.00	5.80	.0	-1.6	21.2	21.1	354.3	
192	-.20	-.04	5.42	.8	8.2	6.9	-3.1	-35.6	-.7	266	.00	.00	5.80	.0	-1.0		20.4	363.4	
193	-.13	-.01	5.42	.4	6.6	7.4	-1.1	-34.1	-.3	Z = 79									
194	-.12	-.02	5.43	.6	8.5	8.2	-2.5	-34.5	-.2	164	.00	.00	5.24	.2		-2.5		14.9	
195	-.12	-.02	5.43	.3	6.3	8.4	-.6	-32.7	-.1	165	.00	.00	5.25	.1	13.4	-1.8		9.6	
196	.00	.00	5.42	.0	7.6	8.5	-1.5	-32.2	-.4	166	.00	.00	5.25	.1	10.6	-2.0	-10.7	7.0	
197	.00	.00	5.43	.0	6.2	8.9	.4	-30.4	-.1	167	.00	.00	5.26	.0	12.4	-1.7	-11.8	2.7	
198	.00	.00	5.43	.0	7.5	8.9	-.6	-29.8	-.1	168	-.02	.00	5.26	.2	10.6	-1.2	-9.7	.2	
199	.00	.00	5.43	.0	6.0	9.3	1.3	-27.7	.3	169	-.08	-.01	5.28	.2	11.8	-1.0	-10.8	-3.6	
200	.00	.00	5.44	.0	7.5	9.5	-.4	-27.2	.5	170	-.11	.00	5.29	.1	9.9	-.7	-8.2	-5.4	
201	-.01	.01	5.45	.0	5.3	9.6	2.2	-24.4	.6	171	.00	.00	5.28	.0	11.7	-.8	-9.9	-9.0	
202	.00	.00	5.45	.0	7.4	9.7	.3	-23.7		172	.00	.00	5.29	.0	9.6	-.5	-7.6	-10.6	
203	.00	.00	5.46	.0	5.2	9.8	2.7	-20.8		173	-.13	-.01	5.31	.1	11.9	.1	-9.3	-14.4	1.7
204	.00	.00	5.46	.0	6.8	9.9	1.2	-19.5		174	-.15	-.01	5.32	.4	9.8	.7	-7.6	-16.1	1.5
205	.00	.00	5.47	.0	3.3	10.2	5.1	-14.7		175	-.15	-.01	5.32	.4	10.9	.8	-8.8	-19.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
176	-.15	-.01	5.34	.0	8.7	1.0	-6.2	-19.6		250	-.16	-.03	5.75	.4	.6	16.0	17.6	224.6	
177	-.15	-.01	5.35	.4	11.1	1.0	-7.9	-22.7		251	-.12	-.02	5.76	.6	1.8	16.1	16.6	230.9	
178	.00	.00	5.32	.0	8.4	.8	-5.4	-23.1		252	-.12	-.02	5.76	.2	.6	16.3	18.0	238.4	
179	-.16	-.01	5.35	.1	10.3	.5	-6.7	-25.3		253	-.10	-.01	5.76	.2	1.7	16.5	17.0	244.7	
180	-.16	-.01	5.36	.1	8.8	1.0	-4.8	-26.0		254	.00	.00	5.76	.0	.5	16.7	18.4	252.3	
181	-.16	-.01	5.36	.2	9.9	.6	-5.9	-27.9		255	-.07	-.01	5.77	.0	1.8	17.0	17.6	258.5	
182	-.17	-.02	5.38	.2	8.5	1.3	-4.0	-28.3	-.9	256	.00	.00	5.77	.0	.5	17.0	18.8	266.1	
183	-.17	-.02	5.38	.3	10.0	1.4	-5.4	-30.3		257	.00	.00	5.77	.0	1.7	17.2	18.0	272.5	
184	.10	-.02	5.37	.4	8.2	2.3	-3.7	-30.4	-.6	258	.00	.00	5.78	.0	.7	17.6	19.2	279.9	
185	-.20	-.03	5.39	.5	9.7	2.6	-4.9	-32.0	.2	259	.00	.00	5.78	.0	1.5	17.3	18.4	286.5	
186	-.13	-.01	5.39	.5	7.7	2.8	-3.0	-31.7	.0	260	.00	.00	5.79	.0	.6	17.7	19.3	294.0	
187	-.17	-.02	5.41	.4	9.1	2.6	-3.8	-32.7		261	.00	.00	5.79	.0	1.5	18.0	18.4	300.6	
188	-.17	-.02	5.41	.3	7.8	3.5	-2.2	-32.4	.1	262	-.01	.00	5.80	.1	.6	18.3	19.6	308.1	
189	-.14	-.02	5.40	.4	8.9	3.2	-3.2	-33.3	-.1	263	.00	.00	5.80	.0	1.1	18.2	19.2	315.1	
190	.04	-.01	5.40	.3	7.6	3.9	-1.5	-32.8	-.1	264	.00	.00	5.80	.0	-1.6	18.4	22.3	324.7	
191	.00	.00	5.40	.0	8.5	3.8	-2.3	-33.2	-.7	265	.00	.00	5.81	.0	-.4	18.7	21.2	333.2	
192	-.11	-.02	5.41	.0	7.4	4.4	-.6	-32.5	-.3	266	.01	.00	5.81	.0	-1.7	18.6	22.4	343.0	
193	.00	.00	5.41	.0	8.6	4.7	-1.7	-33.0	-.4	267	.00	.00	5.82	.0	-.9	18.7	21.9	352.0	
194	.00	.00	5.42	.0	7.2	5.2	.0	-32.1	-.2	268	.00	.00	5.82	.0	-1.7		22.8	361.7	
195	.00	.00	5.42	.0	8.1	4.8	-.7	-32.1	-.5	Z = 80									
196	.00	.00	5.43	.0	6.8	5.3	.9	-30.8	-.4	166	.00	.00	5.26	.0	-.9			17.7	
197	.02	-.01	5.43	.0	8.1	5.8	-.2	-30.8	-.4	167	.00	.00	5.27	.0	11.3	-.2		14.5	
198	.00	.00	5.44	.0	6.5	6.1	1.5	-29.2	-.4	168	.00	.00	5.27	.0	12.6	.1	-14.3	9.9	
199	.00	.00	5.44	.0	7.9	6.5	.4	-29.0	-.1	169	.00	.00	5.28	.0	10.7	.2	-11.4	7.3	
200	.00	.00	5.45	.0	5.9	6.4	2.4	-26.8	-.5	170	.00	.00	5.29	.0	12.5	.9	-13.6	2.8	
201	.00	.00	5.45	.0	7.8	6.6	1.0	-26.5	.1	171	-.03	.00	5.29	.1	10.0	1.0	-10.6	.9	
202	-.01	.01	5.46	.1	5.5	6.9	3.3	-24.0	-.4	172	.00	.00	5.30	.0	12.0	1.3	-12.6	-3.0	
203	.00	.00	5.46	.0	7.6	7.1	1.6	-23.5	.3	173	.00	.00	5.30	.0	10.1	1.8	-10.4	-5.1	
204	.00	.00	5.47	.0	5.3	7.2	4.2	-20.7		174	.00	.00	5.31	.0	11.6	1.5	-11.8	-8.6	
205	.00	.00	5.47	.0	7.1	7.5	2.5	-19.8		175	.00	.00	5.32	.0	9.7	1.3	-9.7	-10.2	
206	.00	.00	5.48	.2	3.5	7.8	6.3	-15.2		176	.00	.00	5.32	.0	11.3	1.7	-11.4	-13.4	1.7
207	.00	.00	5.49	.0	5.3	7.8	4.7	-12.4		177	.00	.00	5.33	.0	9.4	2.4	-9.1	-14.8	2.0
208	.00	.00	5.49	.0	3.4	8.2	7.0	-7.7		178	.00	.00	5.33	.0	10.9	2.2	-10.4	-17.6	1.3
209	.00	.00	5.50	.0	4.8	8.4	5.7	-4.5		179	.00	.00	5.34	.0	9.1	2.8	-8.3	-18.6	
210	.00	.00	5.50	.0	3.2	8.7	7.5	.4		180	.00	.00	5.34	.0	10.7	3.2	-9.3	-21.2	
211	.00	.00	5.51	.0	4.3	8.8	6.7	4.1		181	.00	.00	5.35	.0	8.9	3.3	-7.3	-22.0	
212	.00	.00	5.51	.0	3.2	9.2	8.1	9.0		182	.00	.00	5.36	.0	10.3	3.7	-8.5	-24.3	.0
213	.00	.00	5.52	.0	4.1	9.4	7.3	13.0		183	.00	.00	5.36	.0	8.7	3.8	-6.5	-24.9	
214	.00	.00	5.53	.0	3.0	9.7	8.7	18.1		184	-.10	-.01	5.38	.0	9.9	3.7	-7.8	-26.7	-.6
215	.00	.00	5.53	.0	3.7	9.8	8.1	22.4		185	.00	.00	5.37	.0	8.5	4.0	-5.4	-27.1	
216	-.05	.00	5.54	.1	2.4	10.1	9.8	28.1		186	-.13	-.01	5.40	.1	9.7	4.0	-7.4	-28.8	.3
217	.00	.00	5.55	.0	4.1	10.1	8.2	32.1		187	-.15	-.02	5.40	.1	8.3	4.5	-5.0	-29.0	
218	.12	.01	5.57	.4	2.7	10.4	9.9	37.5		188	-.15	-.02	5.41	.1	9.4	4.8	-5.9	-30.3	.0
219	.12	.01	5.58	.3	3.8	10.4	8.6	41.7		189	.00	.00	5.40	.0	7.8	4.9	-4.4	-30.0	.9
220	.17	.02	5.61	.8	2.6	10.5	10.0	47.2		190	.00	.00	5.40	.0	9.3	5.3	-5.4	-31.2	.4
221	.19	.02	5.62	1.4	4.4	10.8	8.2	50.9		191	.00	.00	5.41	.0	7.8	5.4	-3.8	-30.9	.3
222	.20	.02	5.63	1.7	2.7	10.8	9.9	56.3		192	.00	.00	5.41	.0	9.1	6.1	-4.6	-32.0	.2
223	.21	.01	5.64	1.8	3.9	11.1	9.0	60.4		193	.00	.00	5.42	.1	7.4	6.1	-3.0	-31.3	.2
224	.21	.01	5.65	2.1	2.4	11.3	10.8	66.1		194	.00	.00	5.42	.0	8.9	6.4	-4.4	-32.1	-.1
225	.24	.01	5.67	2.8	4.0	11.4	9.3	70.2		195	.00	.00	5.43	.0	7.4	6.6	-2.8	-31.4	.3
226	.23	.00	5.68	3.1	2.2	11.7	11.2	76.0		196	.00	.00	5.43	.0	8.4	6.9	-3.5	-31.7	-.1
227	.24	.00	5.68	3.6	3.6	11.7	9.9	80.5		197	.00	.00	5.44	.0	7.0	7.2	-2.0	-30.6	.1
228	.24	.00	5.69	3.6	2.0	12.0	12.1	86.6		198	.00	.00	5.45	.0	8.1	7.2	-2.8	-30.7	-.3
229	.23	-.01	5.69	4.2	3.4	12.1	10.8	91.3		199	.00	.00	5.45	.0	6.8	7.5	-1.1	-29.4	-.1
230	.24	-.01	5.70	4.0	1.8	12.2	12.7	97.6		200	.00	.00	5.45	.0	7.8	7.5	-2.1	-29.2	-.3
231	.24	-.02	5.71	4.4	3.3	12.5	11.2	102.3		201	.00	.00	5.46	.0	6.4	8.0	-.2	-27.5	-.2
232	.25	-.02	5.72	4.3	1.6	12.6	13.0	108.8		202	.00	.00	5.47	.0	7.9	8.1	-2.2	-27.3	-.1
233	.24	-.02	5.72	4.5	2.8	12.7	12.1	114.0		203	.02	-.01	5.47	.1	5.9	8.4	.5	-25.1	-.2
234	.24	-.02	5.72	4.1	1.4	12.9	13.9	120.6		204	.00	.00	5.47	.0	7.9	8.8	-1.5	-24.9	.2
235	.24	-.03	5.73	4.5	2.9	13.1	12.6	125.8		205	.00	.00	5.48	.0	5.4	8.9	1.2	-22.3	.0
236	.20	-.02	5.72	4.2	1.4	13.4	14.2	132.6		206	.00	.00	5.49	.0	7.2	9.0	-.9	-21.5	.5
237	.20	-.02	5.73	4.3	2.6	13.5	13.0	138.1		207	.00	.00	5.49	.0	3.7	9.2	3.4	-17.0	.8
238	.21	-.03	5.74	3.8	1.2	13.8	14.8	145.0		208	.00	.00	5.50	.0	5.7	9.6	1.6	-14.7	
239	.22	-.03	5.73	3.9	2.5	14.2	13.4	150.6		209	.00	.00	5.50	.0	3.6	9.8	3.9	-10.2	
240	.25	-.04	5.74	3.2	.6	14.1	15.4	158.0		210	.00	.00	5.51	.0	4.9	9.9	2.8	-7.1	
241	.20	-.03	5.74	3.2	2.5	14.2	13.9	163.6		211	.00	.00	5.51	.0	3.6	10.3	4.5	-2.6	
242	.21	-.04	5.74	3.0	1.0	14.8	15.3	170.6		212	.00	.00	5.52	.0	4.6	10.4	3.6	.9	
243	.18	-.03	5.74	2.8	1.9	14.8	14.7	176.8		213	.00	.00	5.53	.0	3.3	10.6	5.3	5.7	
244	.18	-.03	5.74	2.0	1.0	15.3	15.4	183.9		214	.00	.00	5.53	.0	4.4	10.9	4.4	9.4	
245	-.17	-.02	5.74	1.8	1.5	14.6	15.2	190.5		215	.00	.00	5.54	.0	3.2	11.1	5.7	14.3	
246	-.16	-.02	5.74	1.2	.9	15.2	16.5	197.6		216	.00	.00	5.55	.0	4.0	11.4	5.2	18.3	
247	-.14	-.01	5.75	1.4	2.0	15.3	15.7	203.7		217	-.04	.00	5.55	.1	2.5	11.5	6.8	23.9	
248	-.15	-.02	5.75	.9	.7	15.7	17.0	211.1		218	.00	.00	5.56	.0	4.4	11.8	5.3	27.5	
249	-.20	-.04	5.75	1.0	2.0	15.8	16.2	217.2		219	.00	.00	5.57	.0	2.5	11.6	7.4	33.1	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
220	.00	.00	5.57	.0	4.0	11.8	6.1	37.2		190	.00	.00	5.41	.0	8.3	3.1	-3.5	-25.8	2.1
221	.17	.02	5.63	.1	2.5	11.8	7.8	42.7		191	.00	.00	5.42	.0	9.3	3.2	-4.2	-27.1	1.3
222	.20	.02	5.63	.6	4.4	11.8	6.3	46.4		192	.00	.00	5.42	.2	8.3	3.7	-2.9	-27.4	2.0
223	.20	.02	5.65	1.2	3.1	12.2	7.2	51.4		193	-.07	.00	5.43	.1	9.0	3.6	-3.7	-28.3	
224	.20	.02	5.66	1.5	4.1	12.3	6.2	55.4		194	.02	.00	5.43	.1	7.5	3.7	-1.9	-27.7	
225	.23	.01	5.67	1.5	2.6	12.5	8.2	60.9		195	.00	.00	5.44	.0	9.0	3.8	-2.9	-28.6	
226	.24	.01	5.68	2.2	4.1	12.7	6.8	64.8		196	.00	.00	5.44	.0	7.7	4.2	-1.5	-28.3	
227	.25	.00	5.69	2.4	2.3	12.7	9.0	70.6		197	.00	.00	5.45	.0	8.5	4.3	-2.1	-28.7	.3
228	.23	.00	5.70	3.0	4.1	13.3	7.3	74.6		198	.00	.00	5.45	.0	7.2	4.5	-.6	-27.9	.3
229	.24	.00	5.70	3.0	2.2	13.5	9.2	80.4		199	.00	.00	5.46	.1	8.5	4.9	-1.8	-28.3	.2
230	.23	-.01	5.70	3.5	3.6	13.7	7.8	84.9		200	.00	.00	5.46	.0	6.8	4.9	.0	-27.1	.0
231	.24	-.01	5.71	3.3	1.8	13.7	10.0	91.2		201	.00	.00	5.47	.1	8.3	5.4	-1.1	-27.3	.1
232	.24	-.01	5.72	3.9	3.5	13.9	8.6	95.7		202	-.03	.00	5.47	.2	5.9	4.9	1.5	-25.1	-.9
233	.25	-.02	5.73	3.7	1.9	14.1	10.4	101.9		203	.00	.00	5.48	.0	8.5	5.6	-.4	-25.6	-.2
234	.23	-.02	5.73	4.1	3.3	14.6	9.1	106.7		204	-.02	.00	5.48	.3	5.9	5.6	2.1	-23.5	-.9
235	.24	-.02	5.73	3.6	1.5	14.7	10.9	113.3		205	.00	.00	5.49	.0	8.1	5.9	.0	-23.5	-.3
236	.24	-.03	5.74	3.9	3.0	14.8	9.7	118.4		206	-.03	.00	5.49	.2	5.1	5.6	3.1	-20.6	-1.7
237	.23	-.03	5.74	3.6	1.4	14.8	11.5	125.1		207	.00	.00	5.50	.0	8.0	6.3	1.1	-20.5	-.6
238	.23	-.03	5.74	3.7	2.9	15.1	10.2	130.2		208	.02	.00	5.50	.1	3.9	6.6	4.8	-16.3	-.4
239	.27	-.04	5.75	3.2	1.1	15.1	12.1	137.1		209	.00	.00	5.51	.0	5.9	6.7	3.1	-14.1	.5
240	.22	-.03	5.75	3.3	2.6	15.3	10.9	142.6		210	.00	.00	5.51	.1	3.8	7.0	5.4	-9.9	.6
241	.25	-.04	5.75	2.6	1.0	15.6	12.8	149.7		211	.00	.00	5.52	.0	5.3	7.3	4.1	-7.1	
242	.20	-.03	5.75	2.6	2.4	15.5	11.7	155.4		212	.00	.00	5.53	.0	3.6	7.4	6.0	-2.7	
243	.18	-.03	5.75	2.3	1.3	15.8	12.1	162.2		213	.00	.00	5.53	.0	5.0	7.8	5.0	.5	
244	-.16	-.01	5.74	1.6	1.7	15.6	12.1	168.5		214	.00	.00	5.54	.0	3.6	8.0	6.4	5.0	
245	-.13	-.01	5.74	1.2	1.3	15.8	13.3	175.3		215	.00	.00	5.55	.0	4.4	8.1	5.8	8.6	
246	-.17	-.02	5.74	1.4	2.3	16.7	12.5	181.1		216	.00	.00	5.55	.0	3.5	8.4	7.0	13.1	
247	-.13	-.01	5.75	.8	1.1	16.9	13.8	188.1		217	.00	.00	5.56	.0	4.2	8.6	6.5	17.0	
248	-.10	-.01	5.75	1.1	2.0	16.9	12.9	194.1		218	-.05	.00	5.57	.2	2.9	9.0	8.1	22.2	
249	-.10	-.01	5.76	.6	1.2	17.4	14.1	201.0		219	.00	.00	5.57	.0	4.5	9.1	6.5	25.8	
250	-.11	-.01	5.76	.9	2.1	17.5	13.3	207.0		220	-.05	.00	5.58	.1	2.8	9.4	8.6	31.1	
251	-.12	-.02	5.77	.3	.8	17.6	14.9	214.3		221	-.05	.00	5.58	.0	4.2	9.6	7.3	34.9	
252	-.08	-.01	5.76	.3	2.0	17.9	13.9	220.3		222	-.05	.00	5.59	.2	2.8	9.9	8.9	40.1	
253	-.08	-.01	5.77	.1	.7	18.0	15.4	227.7		223	-.05	.00	5.60	.0	3.9	9.4	7.7	44.3	
254	-.08	-.01	5.77	.1	1.9	18.2	14.5	233.9		224	.18	.02	5.65	.6	3.1	9.5	8.9	49.2	
255	.00	.00	5.77	.0	.9	18.6	15.5	241.0		225	.20	.02	5.67	1.3	4.6	10.0	7.6	52.7	
256	.00	.00	5.77	.0	1.8	18.5	14.8	247.3		226	.20	.02	5.68	1.5	2.7	10.1	9.4	58.0	
257	.00	.00	5.78	.0	.9	18.9	15.9	254.5		227	.24	.01	5.69	2.1	4.5	10.5	7.9	61.6	
258	.00	.00	5.78	.0	1.9	19.1	14.9	260.7		228	.21	.01	5.70	2.2	2.4	10.6	10.1	67.3	
259	.00	.00	5.79	.0	.7	19.1	16.3	268.1		229	.23	.00	5.70	2.8	4.1	10.6	8.8	71.2	
260	.00	.00	5.79	.0	1.5	19.1	15.6	274.7		230	.24	.00	5.71	2.7	2.2	10.6	10.7	77.1	
261	.00	.00	5.80	.0	.6	19.1	16.8	282.1		231	.24	.00	5.72	3.3	4.0	11.1	9.2	81.1	
262	.00	.00	5.80	.0	1.7	19.4	15.8	288.5		232	.25	-.01	5.73	3.1	2.0	11.3	11.3	87.2	
263	.00	.00	5.81	.0	.6	19.5	16.9	295.9		233	.24	-.01	5.73	3.6	3.7	11.5	9.8	91.6	
264	.00	.00	5.81	.0	1.5	19.9	15.9	302.5		234	.25	-.02	5.74	3.4	2.1	11.6	11.7	97.6	
265	.00	.00	5.82	.0	-1.4	20.0	19.0	312.0		235	.26	-.02	5.75	3.6	3.2	11.6	10.7	102.4	
266	.00	.00	5.82	.0	-.6	19.9	18.5	320.6		236	.24	-.02	5.75	3.3	1.8	11.9	12.4	108.7	
267	.00	.00	5.82	.0	-1.4	20.2	19.5	330.0		237	.24	-.03	5.76	3.6	3.2	12.1	11.1	113.6	
268	.00	.00	5.83	.0	-.8	20.3	19.0	338.9		238	.25	-.03	5.76	3.1	1.7	12.4	12.8	120.0	
269	.00	.00	5.83	.0	-1.6	20.5	20.1	348.5		239	.23	-.03	5.76	3.4	3.0	12.5	11.5	125.0	
270	.00	.00	5.84	.0	-.6		19.3	357.3		240	.31	-.05	5.77	2.8	1.3	12.7	13.4	131.7	
Z=81										241	.21	-.03	5.76	3.1	2.9	13.0	12.0	136.9	
168	-.01	.00	5.28	.7		-2.4		24.2		242	.22	-.03	5.76	2.5	1.3	13.3	13.9	143.7	
169	-.02	-.01	5.28	.7	13.6	-1.5		18.7		243	-.16	-.01	5.74	1.5	1.7	12.6	13.6	150.1	
170	-.03	.00	5.29	.6	10.3	-1.9	-11.1	16.4		244	-.16	-.01	5.74	1.6	1.7	13.1	14.7	156.4	
171	-.03	.00	5.30	.7	13.0	-1.4	-12.9	11.5		245	-.15	-.01	5.75	1.4	2.4	13.8	13.6	162.0	
172	-.04	.00	5.31	.4	10.0	-1.4	-10.3	9.6		246	-.15	-.01	5.75	.9	1.5	14.0	14.5	168.6	
173	-.04	-.01	5.31	.7	12.2	-1.1	-11.8	5.4		247	-.16	-.01	5.76	1.2	2.5	14.1	13.8	174.2	
174	-.05	-.01	5.32	.7	10.2	-1.0	-9.4	3.2		248	-.15	-.01	5.76	.6	1.2	14.2	14.1	181.1	
175	-.04	-.01	5.33	.6	11.8	-.8	-10.8	-.5		249	-.09	-.01	5.75	.9	2.4	14.5	13.8	186.8	
176	-.08	.00	5.34	.2	9.5	-.9	-8.2	-2.0		250	-.07	-.01	5.76	.5	1.2	14.5	15.0	193.8	
177	-.06	.00	5.34	.6	11.8	-.4	-9.7	-5.7		251	-.10	-.01	5.76	.7	2.4	14.9	14.3	199.4	
178	-.09	.00	5.35	.0	9.6	-.2	-7.7	-7.3		252	-.08	-.01	5.77	.3	1.0	15.1	15.5	206.5	
179	.00	.00	5.35	.0	11.2	.0	-8.9	-10.4		253	-.07	-.01	5.77	.5	2.3	15.3	14.9	212.3	
180	.00	.00	5.35	.0	9.6	.6	-7.0	-11.9		254	-.06	-.01	5.77	.2	1.0	15.6	16.1	219.4	
181	-.09	-.01	5.36	.0	10.9	.8	-8.3	-14.8		255	-.05	-.01	5.78	.2	2.0	15.7	15.5	225.5	
182	.00	.00	5.36	.1	9.1	1.1	-6.4	-15.8		256	-.05	-.01	5.78	.1	1.0	15.7	16.7	232.5	
183	.00	.00	5.37	.2	10.6	1.4	-7.5	-18.4		257	.00	.00	5.79	.0	1.9	15.9	16.0	238.7	
184	.00	.00	5.38	.1	8.6	1.3	-5.5	-18.9		258	-.05	-.01	5.79	.0	.9	16.0	17.3	245.8	
185	-.09	-.01	5.39	.7	10.9	2.3	-7.1	-21.7		259	.00	.00	5.80	.0	2.0	16.1	16.4	251.9	
186	.00	.00	5.39	.0	7.7	1.5	-4.5	-21.4	.4	260	.00	.00	5.80	.0	.9	16.3	17.6	259.1	
187	-.08	.00	5.40	.1	10.6	2.5	-5.9	-23.9		261	.00	.00	5.80	.0	1.8	16.7	16.9	265.3	
188	-.08	.00	5.40	.1	8.5	2.7	-4.5	-24.3		262	.00	.00	5.81	.0	.7	16.7	18.0	272.7	
189	.00	.00	5.40	.0	9.3	2.6	-5.0	-25.6	1.6	263	.00	.00	5.82	.0	1.7	16.7	17.3	279.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
264	.00	.00	5.82	.0	.5	16.6	18.5	286.6		234	.24	-.01	5.74	3.2	3.9	13.0	7.3	85.9	
265	.00	.00	5.82	.0	1.7	16.8	17.5	292.9		235	.24	-.02	5.75	3.0	2.2	13.1	9.1	91.7	
266	.00	.00	5.83	.0	-1.1	17.2	20.2	302.1		236	.25	-.02	5.76	3.3	3.5	13.4	8.0	96.3	
267	.00	.00	5.83	.0	-.4	17.4	19.6	310.5		237	.24	-.02	5.76	2.9	1.9	13.5	9.8	102.5	
268	.00	.00	5.84	.0	-1.3	17.5	21.0	319.9		238	.24	-.02	5.77	3.2	3.4	13.8	8.8	107.1	
269	.00	.00	5.84	.0	-.5	17.7	20.4	328.5		239	.24	-.03	5.77	2.8	1.7	13.8	10.5	113.5	
270	.00	.00	5.85	.0	-1.4	17.9	21.4	337.9		240	.20	-.02	5.77	2.9	3.2	13.9	9.3	118.3	
271	.00	.00	5.85	.0	-.7	17.8	20.9	346.7		241	.20	-.02	5.78	2.4	1.5	14.2	11.0	124.8	
272	.00	.00	5.85	.0	-1.4		21.9	356.2		242	.00	.00	5.78	2.6	3.2	14.4	9.7	129.8	
Z = 82										243	.22	-.03	5.78	2.0	1.4	14.5	11.4	136.4	
170	.00	.00	5.30	.0		-1.6		27.5		244	.19	-.03	5.78	2.0	2.8	15.7	10.0	141.7	
171	.00	.00	5.30	.0	11.2	-.7		24.4		245	.20	-.03	5.78	1.5	1.3	15.2	12.0	148.5	
172	.00	.00	5.31	.0	12.6	-1.0	-17.4	19.8		246	-.16	-.01	5.76	1.1	2.4	15.2	11.0	154.1	
173	.00	.00	5.32	.0	10.7	-.3	-15.0	17.2		247	-.17	-.02	5.77	.6	1.7	15.4	11.1	160.5	
174	.00	.00	5.32	.0	12.7	.1	-16.9	12.6		248	.00	.00	5.74	.0	1.5	14.5	11.8	167.0	
175	.00	.00	5.33	.0	10.4	.3	-14.4	10.2		249	.00	.00	5.75	.0	2.1	15.4	12.2	173.0	
176	.00	.00	5.34	.0	12.1	.6	-15.4	6.2		250	.00	.00	5.76	.0	2.3	15.4	11.9	178.8	
177	.00	.00	5.34	.0	10.3	1.3	-13.7	4.0		251	-.04	.00	5.76	.1	1.8	16.0	12.6	185.1	
178	.00	.00	5.35	.0	11.7	1.2	-15.5	.4		252	.00	.00	5.76	.0	2.2	15.7	12.1	191.0	
179	.00	.00	5.35	.0	10.0	1.5	-13.4	-1.5		253	.00	.00	5.77	.0	1.6	16.3	13.0	197.4	
180	.00	.00	5.36	.0	11.4	1.8	-14.2	-4.9		254	.00	.00	5.78	.0	2.2	16.3	12.3	203.3	
181	.00	.00	5.36	.0	9.6	1.8	-12.3	-6.4		255	.00	.00	5.78	.0	1.4	16.7	13.3	210.0	
182	.00	.00	5.37	.0	11.0	1.9	-13.1	-9.4	2.6	256	.00	.00	5.79	.0	2.2	17.0	12.6	215.8	
183	.00	.00	5.38	.0	9.5	2.3	-11.5	-10.9		257	.00	.00	5.79	.0	1.3	17.2	13.8	222.6	
184	.00	.00	5.38	.0	10.7	2.3	-12.5	-13.4		258	.00	.00	5.80	.0	2.2	17.5	12.8	228.5	
185	.00	.00	5.39	.0	9.2	3.0	-10.9	-14.6		259	.00	.00	5.80	.0	1.1	17.6	14.1	235.5	
186	.00	.00	5.39	.0	10.4	2.4	-11.4	-16.9	1.5	260	.00	.00	5.81	.0	2.1	17.7	13.0	241.4	
187	.00	.00	5.40	.0	9.2	3.9	-9.9	-18.0		261	.00	.00	5.81	.0	1.1	18.0	14.1	248.4	
188	.00	.00	5.40	.0	10.0	3.2	-10.6	-19.9	1.1	262	.00	.00	5.82	.0	1.8	17.9	13.6	254.6	
189	.00	.00	5.41	.0	8.8	3.5	-9.0	-20.6		263	.00	.00	5.82	.0	1.0	18.3	14.7	261.7	
190	.00	.00	5.41	.0	9.8	4.0	-9.6	-22.3	2.0	264	.00	.00	5.82	.0	1.7	18.2	13.9	268.1	
191	.00	.00	5.42	.0	8.6	4.3	-8.2	-22.9		265	-.01	.00	5.83	.1	.7	18.4	15.2	275.5	
192	.00	.00	5.43	.0	9.6	4.6	-9.1	-24.5	1.8	266	.00	.00	5.83	.0	1.7	18.4	14.3	281.9	
193	.00	.00	5.43	.0	8.2	4.5	-7.7	-24.5		267	.00	.00	5.84	.0	-1.0	18.4	17.1	290.9	
194	.00	.00	5.44	.0	9.3	4.8	-8.5	-25.8	2.2	268	.00	.00	5.84	.0	.1	18.9	16.0	298.9	
195	.00	.00	5.44	.0	8.0	5.3	-6.8	-25.7	3.3	269	.00	.00	5.85	.0	-1.1	19.1	17.4	308.1	
196	.00	.00	5.45	.0	9.2	5.5	-7.6	-26.8		270	.00	.00	5.85	.0	-.4	19.2	16.8	316.6	
197	.00	.00	5.45	.0	7.8	5.6	-6.1	-26.6		271	.00	.00	5.86	.0	-1.2	19.4	18.1	325.9	
198	.00	.00	5.46	.0	8.8	5.9	-7.0	-27.3		272	.00	.00	5.86	.0	-.4	19.6	17.3	334.3	
199	.00	.00	5.46	.0	7.3	6.0	-5.3	-26.5	1.3	273	.00	.00	5.86	.0	-1.3	19.8	18.2	343.7	
200	.00	.00	5.47	.0	8.6	6.1	-6.1	-27.1	.8	274	.00	.00	5.87	.0	-.7		17.8	352.5	
201	.00	.00	5.47	.0	7.2	6.4	-4.6	-26.2	.9	Z = 83									
202	.00	.00	5.48	.0	8.5	6.6	-5.6	-26.6	.6	172	.04	.02	5.32	.0		-5.5		37.2	
203	.00	.00	5.48	.0	6.7	7.4	-3.7	-25.2	.4	173	.04	.01	5.33	.2	13.1	-5.1		32.2	
204	.00	.00	5.49	.0	8.4	7.2	-5.0	-25.5	.4	174	.06	.02	5.34	.2	10.7	-5.1	-14.5	29.5	
205	.00	.00	5.49	.0	6.1	7.3	-2.7	-23.5	-3	175	.04	.02	5.34	.3	12.9	-4.8	-15.7	24.7	
206	.00	.00	5.50	.0	8.3	7.5	-4.0	-23.7	-1	176	.05	.02	5.35	.6	11.2	-4.1	-13.7	21.6	
207	.00	.00	5.50	.0	6.0	8.3	-2.0	-21.6	-9	177	.07	.02	5.36	.3	11.9	-4.2	-14.7	17.7	
208	.00	.00	5.51	.0	7.6	8.0	-3.3	-21.2	-6	178	.00	.00	5.36	.0	9.9	-4.6	-11.7	15.9	
209	.02	.00	5.51	.1	4.1	8.2	.3	-17.2	-4	179	-.06	.01	5.37	.1	12.0	-4.2	-13.1	11.9	
210	.00	.00	5.52	.0	6.2	8.4	-1.4	-15.3	.5	180	-.06	.01	5.37	.2	10.7	-3.5	-11.3	9.3	
211	.00	.00	5.52	.0	4.0	8.6	.9	-11.2	.7	181	-.06	.01	5.38	.1	11.5	-3.4	-12.3	5.8	
212	.00	.00	5.53	.0	5.5	8.8	-.3	-8.6	1.1	182	-.07	.01	5.39	.5	10.3	-2.8	-10.6	3.7	
213	.00	.00	5.54	.0	3.9	9.1	1.6	-4.5		183	-.07	.01	5.39	.3	11.1	-2.7	-11.6	.6	
214	.00	.00	5.54	.0	5.0	9.2	.5	-1.4	1.3	184	-.08	.00	5.40	.1	9.6	-2.6	-9.5	-.9	
215	.00	.00	5.55	.0	3.8	9.4	2.1	2.8		185	-.07	.00	5.40	.1	10.9	-2.4	-10.4	-3.7	
216	.00	.00	5.55	.0	4.7	9.7	1.6	6.2		186	-.07	.00	5.41	.2	9.8	-1.8	-9.0	-5.5	
217	.00	.00	5.56	.0	3.7	9.9	2.8	10.6		187	-.07	.00	5.41	.1	10.6	-1.5	-10.0	-8.0	
218	.00	.00	5.57	.0	4.5	10.2	2.2	14.2		188	-.08	.00	5.42	.1	9.3	-1.4	-8.5	-9.3	
219	.00	.00	5.57	.0	2.9	10.2	3.8	19.3		189	-.05	.01	5.42	.1	10.4	-1.0	-9.1	-11.6	
220	.00	.00	5.58	.0	4.9	10.6	2.6	22.5		190	-.08	.00	5.43	.4	9.2	-.6	-7.6	-12.7	1.1
221	.01	.00	5.59	.0	2.9	10.7	4.3	27.6		191	-.08	.00	5.43	.2	10.0	-.4	-8.5	-14.7	
222	.00	.00	5.59	.0	.5	11.0	3.5	31.2		192	-.05	.00	5.44	.2	8.8	-.2	-6.9	-15.3	
223	.00	.00	5.60	.0	2.8	10.9	5.3	36.5		193	-.05	.00	5.45	.1	9.5	-.4	-7.4	-16.8	1.6
224	.00	.00	5.60	.0	4.3	11.2	4.5	40.3		194	-.05	.00	5.45	.0	8.6	.1	-5.8	-17.3	1.9
225	.20	.02	5.67	.4	3.3	11.4	5.5	45.1		195	-.05	.00	5.45	.1	9.6	.4	-6.8	-18.9	1.3
226	.20	.02	5.68	1.0	4.6	11.4	5.1	48.6		196	-.06	.00	5.46	.4	8.4	.9	-5.3	-19.3	1.8
227	.23	.01	5.69	1.2	2.9	11.6	6.7	53.7		197	-.05	.00	5.47	.2	9.3	1.0	-6.3	-20.5	.8
228	.23	.01	5.70	1.9	4.6	11.7	5.4	57.2		198	.00	.00	5.47	.0	7.9	1.0	-4.4	-20.3	.8
229	.24	.01	5.71	2.0	2.9	12.1	7.3	62.4		199	-.05	.00	5.47	.0	8.9	1.2	-5.1	-21.2	.3
230	.23	.00	5.71	2.3	4.1	12.1	6.3	66.4		200	-.03	.00	5.48	.2	7.9	1.7	-3.3	-21.0	.6
231	.22	.01	5.73	2.3	2.6	12.5	7.9	71.9		201	-.05	.00	5.49	.0	8.7	1.8	-4.2	-21.6	.1
232	.24	.00	5.74	3.0	4.1	12.5	6.6	75.9		202	.00	.00	5.49	.1	7.4	2.0	-2.1	-21.0	.2
233	.24	.00	5.74	2.7	2.2	12.7	8.7	81.7		203	.00	.00	5.49	.0	8.7	2.3	-3.2	-21.5	.0

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
204	-.02	.00	5.50	.2	7.1	2.6	-1.4	-20.6	-.1	Z = 84									
205	.00	.00	5.50	.0	8.3	2.6	-2.6	-20.8	-.2	174	.00	.00	5.34	.0		-4.6		44.0	
206	.02	.00	5.51	.5	6.9	3.4	-.8	-19.7	-.4	175	.00	.00	5.35	.0	11.7	-3.5		40.4	
207	.00	.00	5.51	.0	8.0	3.2	-2.0	-19.6	-.5	176	.02	.00	5.35	.0	13.1	-3.4	-17.7	35.3	
208	-.02	.00	5.52	.1	6.3	3.5	.2	-17.8	-1.0	177	.00	.00	5.36	.0	11.0	-3.5	-15.1	32.4	
209	.00	.00	5.52	.0	7.7	3.6	-1.0	-17.5	-.8	178	.00	.00	5.37	.0	12.9	-2.6	-16.5	27.6	
210	-.02	.01	5.53	.3	4.5	4.0	2.6	-13.9	-.9	179	.00	.00	5.38	.0	10.7	-1.8	-14.4	25.0	
211	-.02	.00	5.53	.1	6.3	4.1	.7	-12.1	.2	180	.00	.00	5.38	.0	12.4	-1.4	-15.7	20.6	
212	-.02	.00	5.54	.2	4.3	4.4	3.2	-8.3	.2	181	.00	.00	5.39	.0	10.6	-1.5	-13.6	18.1	
213	-.02	.00	5.55	.1	5.8	4.7	2.0	-6.1	.8	182	.00	.00	5.39	.0	11.9	-1.2	-15.2	14.3	
214	.00	.00	5.55	.0	4.0	4.8	3.9	-2.0	.8	183	.00	.00	5.40	.0	10.2	-1.2	-13.6	12.2	
215	-.02	.01	5.56	.1	5.4	5.1	2.8	.7	1.0	184	.00	.00	5.41	.0	11.7	-.7	-14.7	8.6	
216	-.02	.01	5.57	.2	4.2	5.5	4.3	4.6		185	.00	.00	5.41	.0	10.0	-.3	-12.3	6.7	
217	-.04	.00	5.57	.1	4.9	5.7	3.6	7.8		186	.00	.00	5.41	.0	11.2	.0	-13.5	3.6	
218	-.02	.01	5.58	.1	3.9	5.9	4.9	11.9		187	.00	.00	5.42	.0	9.6	-.2	-11.0	2.0	
219	-.04	.00	5.58	.0	4.5	5.9	4.6	15.5		188	.00	.00	5.43	.0	10.9	.1	-12.4	-.8	
220	-.04	.01	5.59	.5	3.7	6.7	5.7	19.9		189	.00	.00	5.43	.0	9.8	.5	-10.8	-2.5	
221	-.04	.01	5.60	.0	4.7	6.5	4.6	23.3		190	.00	.00	5.44	.0	10.6	.8	-12.1	-5.1	-.2
222	.07	.02	5.61	.6	3.6	7.2	6.0	27.7		191	.00	.00	5.44	.0	9.2	.7	-10.4	-6.2	
223	.10	.02	5.62	.4	4.6	7.2	5.2	31.3		192	.00	.00	5.45	.0	10.4	1.1	-11.3	-8.5	-.5
224	.10	.02	5.63	.7	3.5	8.0	6.7	35.8		193	.00	.00	5.45	.0	9.0	1.3	-9.4	-9.4	
225	.10	.02	5.63	.6	4.3	8.0	6.1	39.6		194	.00	.00	5.46	.0	10.2	2.0	-10.4	-11.5	.6
226	.19	.02	5.68	1.7	4.1	8.8	7.4	43.5		195	.00	.00	5.46	.0	8.6	2.0	-8.5	-12.1	
227	.20	.02	5.69	2.0	4.6	8.8	6.3	47.1		196	-.02	.00	5.47	.0	10.0	2.4	-9.5	-14.0	.4
228	.20	.02	5.70	2.4	3.4	9.3	8.0	51.8		197	-.05	.00	5.48	.0	8.2	2.2	-7.5	-14.2	
229	.23	.01	5.71	3.0	4.8	9.4	6.5	55.1		198	.00	.00	5.48	.0	9.8	2.7	-8.9	-15.9	1.0
230	.24	.01	5.72	3.1	3.0	9.6	8.5	60.1		199	.00	.00	5.49	.0	8.3	3.1	-7.2	-16.1	2.2
231	.25	.00	5.73	3.4	4.2	9.7	7.2	64.0		200	.00	.00	5.49	.0	9.6	3.8	-8.1	-17.6	
232	.25	.00	5.74	3.3	2.8	10.0	9.6	69.2		201	.00	.00	5.49	.0	7.8	3.7	-6.8	-17.4	
233	.24	.00	5.75	4.0	4.3	10.2	7.8	73.0		202	.00	.00	5.50	.0	9.6	4.6	-7.9	-18.9	
234	.24	.00	5.75	3.7	2.5	10.5	9.7	78.5		203	.00	.00	5.51	.0	7.5	4.7	-6.0	-18.3	1.0
235	.24	-.01	5.75	4.2	4.0	10.6	8.5	82.6		204	.00	.00	5.51	.0	8.9	4.9	-6.8	-19.1	.8
236	.24	-.02	5.76	3.9	2.3	10.7	10.3	88.3		205	.00	.00	5.51	.0	7.2	5.0	-4.9	-18.3	.7
237	.25	-.02	5.77	4.3	3.7	10.9	9.3	92.7		206	.00	.00	5.52	.0	8.7	5.3	-6.1	-18.9	.7
238	.23	-.02	5.77	4.1	2.4	11.4	10.7	98.3		207	-.01	.01	5.53	.1	6.7	5.2	-3.7	-17.6	.4
239	.24	-.02	5.77	4.1	3.4	11.4	9.8	103.0		208	.00	.00	5.53	.0	8.6	5.8	-5.6	-18.1	.6
240	.21	-.02	5.78	3.8	2.0	11.7	11.5	109.0		209	.00	.00	5.53	.0	6.4	5.9	-3.0	-16.4	.0
241	.23	-.03	5.78	4.0	3.3	11.8	10.3	113.8		210	.00	.00	5.54	.0	8.2	6.3	-4.7	-16.5	.5
242	.23	-.03	5.79	3.4	1.8	12.1	11.9	120.1		211	.00	.00	5.54	.0	4.4	6.3	-.9	-12.9	.4
243	.13	-.01	5.79	3.5	3.2	12.0	10.8	125.0		212	.00	.00	5.55	.0	6.7	6.7	-2.9	-11.5	1.1
244	.25	-.04	5.79	2.8	1.4	12.1	12.6	131.7		213	.00	.00	5.56	.0	4.6	7.0	-.4	-8.0	1.3
245	.19	-.03	5.79	2.8	3.3	12.5	11.2	136.5		214	.00	.00	5.56	.0	5.9	7.1	-1.5	-5.9	1.4
246	.19	-.03	5.79	2.4	1.4	12.6	13.1	143.2		215	.00	.00	5.57	.0	4.3	7.4	.4	-2.1	1.6
247	-.09	.00	5.76	1.1	1.8	12.0	12.7	149.4		216	.00	.00	5.58	.0	5.6	7.7	-.6	.3	1.5
248	-.11	.00	5.77	1.1	2.3	12.6	13.2	155.2		217	.00	.00	5.58	.0	4.2	7.7	1.0	4.2	
249	-.09	.00	5.77	1.1	2.5	13.5	12.4	160.8		218	.00	.00	5.59	.0	5.2	8.1	.2	7.0	1.3
250	-.09	.00	5.77	.9	2.0	13.5	13.4	166.9		219	.00	.00	5.59	.0	4.1	8.3	1.6	11.0	
251	-.09	.00	5.78	1.0	2.4	13.6	12.9	172.5		220	.00	.00	5.60	.0	4.8	8.6	1.0	14.2	
252	-.08	.00	5.78	.6	1.6	13.4	14.0	179.0		221	.00	.00	5.61	.0	3.6	8.4	2.5	18.7	
253	-.06	.00	5.79	.7	2.6	13.9	13.2	184.4		222	.00	.00	5.61	.0	5.1	8.9	1.5	21.7	
254	.00	.00	5.79	.5	1.5	13.7	14.6	191.0		223	.14	.03	5.65	.2	3.7	8.9	3.3	26.1	
255	.00	.00	5.80	.6	2.4	13.9	13.7	196.7		224	.15	.03	5.66	.3	5.0	9.4	2.5	29.1	
256	-.07	.00	5.80	.4	1.5	14.1	14.6	203.2		225	.16	.03	5.67	.7	3.7	9.7	4.3	33.5	
257	-.06	.00	5.81	.4	2.4	14.3	14.0	208.8		226	.18	.03	5.68	1.3	5.3	10.7	2.8	36.2	
258	-.07	.00	5.81	.3	1.2	14.3	15.2	215.7		227	.19	.02	5.69	1.7	3.5	10.1	4.6	40.7	
259	-.06	-.01	5.81	.2	2.3	14.4	14.4	221.4		228	.21	.02	5.71	2.1	5.0	10.5	3.8	43.8	
260	-.06	-.01	5.82	.2	1.1	14.4	15.9	228.4		229	.21	.02	5.72	2.4	3.3	10.5	5.4	48.6	
261	.00	.00	5.82	.0	2.2	14.5	15.0	234.2		230	.23	.01	5.72	3.0	5.0	10.8	4.1	51.6	
262	.00	.00	5.83	.0	1.2	14.5	16.4	241.1		231	.23	.01	5.74	3.0	2.9	10.6	6.3	56.8	
263	-.02	.00	5.83	.1	2.1	14.9	15.5	247.0		232	.24	.01	5.75	3.6	5.2	11.6	4.5	59.7	
264	-.02	.00	5.84	.0	.9	14.9	16.9	254.2		233	.25	.00	5.75	3.1	2.5	11.3	6.8	65.2	
265	-.02	.00	5.84	.1	2.0	15.2	16.1	260.2		234	.24	.00	5.76	3.5	4.5	11.5	5.7	68.8	
266	-.03	.00	5.84	.1	.8	15.2	17.3	267.6		235	.24	.00	5.77	3.2	2.7	11.7	7.4	74.1	
267	.00	.00	5.85	.0	1.8	15.3	16.6	273.9		236	.23	-.01	5.76	3.7	4.2	11.9	6.2	78.0	
268	-.02	.00	5.85	.2	-.9	15.4	19.3	282.9		237	.24	-.01	5.77	3.5	2.7	12.2	8.0	83.4	
269	-.02	.00	5.86	.1	.3	15.5	18.2	290.6		238	.24	-.02	5.78	3.8	3.8	12.3	6.8	87.6	
270	.00	.00	5.86	.1	-1.0	15.6	19.5	299.8		239	.25	-.02	5.78	3.5	2.5	12.4	8.5	93.2	
271	-.02	.00	5.87	.1	.0	16.1	18.9	307.8		240	.23	-.02	5.79	3.7	3.7	12.7	7.5	97.6	
272	-.02	.00	5.87	.1	-1.2	16.1	20.1	317.1		241	.24	-.02	5.80	3.3	2.1	12.8	9.2	103.5	
273	-.02	.00	5.88	.1	-.4	16.1	19.6	325.5		242	.23	-.03	5.79	3.4	3.4	12.9	8.2	108.2	
274	-.02	.00	5.88	.1	-1.2	16.3	20.6	334.8		243	.20	-.02	5.80	2.9	2.0	13.1	9.8	114.3	
275	-.02	.00	5.88	.1	-.5	16.5	20.0	343.4		244	.20	-.02	5.80	2.9	3.3	13.2	8.7	119.1	
276	-.02	.00	5.89	.1	-1.3		20.9	352.7		245	.21	-.03	5.80	2.3	1.8	13.6	10.2	125.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
246	.22	-.03	5.80	2.3	3.3	13.7	9.0	130.1		216	.01	.01	5.59	.1	4.6	4.3	1.9	.9	1.4
247	.19	-.02	5.80	1.7	1.5	13.7	10.6	136.7		217	.00	.00	5.59	.1	5.8	4.4	1.1	3.2	1.2
248	.16	-.02	5.79	1.4	2.8	14.7	9.8	142.0		218	.00	.00	5.60	.0	4.4	4.7	2.6	6.8	1.3
249	-.12	-.01	5.78	.6	1.7	14.2	10.8	148.3		219	.00	.00	5.60	.1	5.5	4.9	1.8	9.4	1.1
250	-.12	-.01	5.79	.8	2.9	14.6	10.1	153.5		220	.00	.00	5.61	.0	4.3	5.1	3.3	13.2	
251	-.12	-.01	5.80	.5	2.0	14.6	10.8	159.6		221	.00	.00	5.62	.0	5.1	5.3	2.8	16.2	
252	-.13	-.01	5.80	.6	2.7	14.9	10.2	164.9		222	.12	.02	5.64	.3	4.0	5.8	4.1	20.2	
253	-.10	-.01	5.80	.2	1.8	15.1	11.4	171.2		223	.13	.03	5.65	.3	5.5	6.2	3.2	22.8	
254	-.14	-.02	5.81	.4	2.9	15.3	10.2	176.4		224	.15	.03	5.66	.9	4.2	6.7	4.8	26.6	
255	.00	.00	5.80	.0	1.5	15.3	11.9	183.0		225	.15	.03	5.67	1.2	5.5	7.2	3.7	29.2	
256	-.09	-.01	5.81	.1	2.5	15.4	11.1	188.6		226	.18	.03	5.69	1.7	3.9	7.4	5.5	33.4	
257	.00	.00	5.81	.0	1.8	15.7	12.0	194.8		227	.18	.03	5.70	2.1	5.3	7.4	4.5	36.1	
258	.00	.00	5.81	.0	2.4	15.6	11.5	200.5		228	.19	.02	5.71	2.6	4.2	8.0	6.0	40.0	
259	.00	.00	5.82	.0	1.6	16.0	12.5	207.0		229	.19	.02	5.71	3.0	4.9	7.9	5.3	43.2	
260	.00	.00	5.82	.0	2.6	16.2	11.4	212.5		230	.22	.02	5.74	3.3	3.8	8.4	6.9	47.5	
261	.00	.00	5.83	.0	1.3	16.5	13.0	219.2		231	.23	.01	5.74	3.8	5.0	8.4	5.5	50.5	
262	.00	.00	5.83	.0	2.7	16.9	11.6	224.7		232	.23	.01	5.75	4.0	3.4	8.9	7.3	55.2	
263	.00	.00	5.84	.0	1.2	16.9	13.2	231.5		233	.24	.01	5.76	4.4	4.8	8.5	6.3	58.5	
264	.00	.00	5.84	.0	2.3	17.0	12.4	237.3		234	.25	.00	5.76	4.2	3.4	9.4	7.9	63.1	
265	.00	.00	5.85	.0	1.2	17.3	13.6	244.2		235	.25	.00	5.77	4.6	4.5	9.4	6.6	66.7	
266	.00	.00	5.85	.0	2.0	17.2	12.9	250.3		236	.24	.00	5.78	4.1	3.0	9.6	8.9	71.8	
267	-.01	.00	5.86	.1	1.1	17.6	14.0	257.3		237	.24	.00	5.78	4.6	4.5	9.9	7.2	75.4	
268	.00	.00	5.86	.0	1.8	17.6	13.3	263.6		238	.24	-.01	5.79	4.3	2.6	9.9	9.2	80.8	
269	.00	.00	5.86	.0	-.9	17.6	16.3	272.5		239	.24	-.02	5.79	4.6	4.2	10.2	7.8	84.7	
270	.00	.00	5.87	.0	.3	17.7	15.1	280.2		240	.25	-.02	5.80	4.4	2.7	10.4	9.4	90.1	
271	.00	.00	5.87	.0	-.6	18.1	16.2	288.9		241	.23	-.02	5.80	4.5	3.8	10.6	8.4	94.3	
272	.00	.00	5.88	.0	.0	18.1	15.4	297.0		242	.24	-.02	5.80	4.1	2.3	10.8	9.9	100.0	
273	.00	.00	5.88	.0	-.9	18.4	16.5	305.9		243	.24	-.03	5.81	4.1	3.6	11.0	9.1	104.5	
274	.00	.00	5.89	.0	-.2	18.6	16.1	314.2		244	.23	-.03	5.81	3.6	2.2	11.2	10.5	110.3	
275	.00	.00	5.89	.0	-1.1	18.7	17.2	323.4		245	.20	-.02	5.81	3.6	3.3	11.3	9.4	115.1	
276	.00	.00	5.89	.0	-.4	18.8	16.8	331.8		246	.21	-.03	5.82	3.1	2.1	11.6	11.1	121.1	
277	.00	.00	5.90	.0	-1.1	19.0	17.6	341.0		247	.19	-.02	5.81	2.7	3.0	11.3	10.1	126.1	
278	.00	.00	5.90	.0	-.5		17.1	349.6		248	.19	-.02	5.81	2.3	2.0	11.8	11.9	132.2	
Z = 85										249	.12	-.01	5.80	1.7	2.7	11.7	10.8	137.6	
176	.12	.03	5.40	.5		-5.3		53.0		250	.16	-.02	5.81	1.4	2.2	12.2	12.0	143.4	
177	.13	.03	5.40	.6	13.6	-4.9		47.5		251	-.13	-.01	5.80	1.2	2.8	12.1	11.4	148.7	
178	.14	.03	5.41	.7	11.5	-4.4	-13.9	44.1		252	-.12	-.01	5.81	.8	2.0	12.1	12.5	154.8	
179	.14	.03	5.41	.6	12.8	-4.5	-15.3	39.4		253	-.12	-.01	5.81	1.0	3.1	12.5	11.6	159.8	
180	.15	.03	5.42	.6	11.1	-4.1	-12.8	36.4		254	-.12	-.01	5.82	.5	1.6	12.3	12.9	166.2	
181	.15	.03	5.43	.8	12.7	-3.8	-15.9	31.8		255	-.08	.00	5.82	.7	3.2	12.6	11.9	171.1	
182	.00	.00	5.40	.2	10.3	-4.1	-12.3	29.5		256	-.07	.00	5.82	.4	1.8	12.9	13.2	177.4	
183	.00	.00	5.41	.0	11.9	-4.2	-13.2	25.8		257	-.09	-.01	5.83	.5	2.7	13.0	12.1	182.8	
184	.35	.00	5.56	.1	10.5	-3.8	-10.5	23.3		258	-.09	-.01	5.83	.3	1.9	13.1	13.5	189.0	
185	.35	.00	5.57	.5	12.4	-3.1	-12.2	19.0		259	-.07	-.01	5.84	.3	2.6	13.3	12.6	194.5	
186	.35	.00	5.58	.2	10.0	-3.1	-9.4	17.0		260	-.07	-.01	5.84	.1	1.5	13.2	14.1	201.0	
187	.36	-.01	5.58	.7	12.1	-2.1	-11.3	13.0		261	-.07	-.01	5.84	.1	2.8	13.5	13.1	206.3	
188	.36	-.01	5.59	.2	9.5	-2.3	-8.5	11.6		262	-.04	.00	5.84	.0	1.3	13.5	14.4	213.1	
189	.36	-.01	5.60	.4	11.4	-1.8	-10.3	8.3		263	.00	.00	5.85	.0	2.8	13.6	13.5	218.3	
190	.00	.00	5.45	.1	9.3	-2.2	-7.7	7.0		264	.00	.00	5.85	.0	1.5	13.9	14.7	224.9	
191	.00	.00	5.45	.0	10.8	-2.0	-9.0	4.2		265	.00	.00	5.86	.0	2.5	14.1	13.9	230.5	
192	.00	.00	5.46	.0	9.5	-1.7	-7.2	2.8		266	.00	.00	5.86	.0	1.2	14.1	15.2	237.4	
193	.00	.00	5.46	.0	10.8	-1.2	-9.4	.0		267	.00	.00	5.87	.0	2.2	14.3	14.3	243.3	
194	.00	.00	5.47	.1	9.2	-1.0	-7.5	-1.0		268	-.01	.00	5.87	.1	1.0	14.3	15.5	250.3	
195	-.23	-.03	5.53	.2	10.6	-.7	-9.1	-3.5		269	.00	.00	5.88	.0	2.1	14.6	14.8	256.2	
196	-.11	.00	5.49	.4	9.0	-.3	-7.0	-4.5		270	-.01	.00	5.88	.0	-.9	14.6	17.8	265.2	
197	-.11	.00	5.49	.4	10.2	-.1	-8.6	-6.6	.9	271	.00	.00	5.88	.0	.5	14.8	16.8	272.7	
198	-.10	.00	5.50	.3	8.5	.1	-6.2	-7.0	.9	272	.00	.00	5.89	.0	-.8	14.7	18.2	281.6	
199	-.10	.00	5.50	.3	10.0	.3	-7.9	-8.9	.5	273	.00	.00	5.89	.0	.2	14.8	17.3	289.5	
200	-.08	.00	5.51	.1	8.7	.7	-6.0	-9.5	1.1	274	.00	.00	5.90	.0	-.5	15.2	18.2	298.0	
201	-.08	.00	5.51	.1	9.2	.3	-6.5	-10.6	-1	275	.00	.00	5.90	.0	.0	15.4	17.4	306.1	
202	.00	.00	5.51	.0	8.4	.9	-5.1	-11.0	.2	276	.00	.00	5.91	.0	-.8	15.6	18.7	315.0	
203	.00	.00	5.52	.1	9.4	.7	-6.3	-12.3	.1	277	.00	.00	5.91	.0	-.3	15.7	18.1	323.4	
204	.00	.00	5.52	.0	8.1	1.3	-4.3	-12.4	.5	278	-.01	.00	5.91	.0	-1.0	15.8	19.4	332.5	
205	.00	.00	5.53	.0	9.1	1.6	-5.3	-13.4	.4	279	.00	.00	5.92	.0	-.4	15.9	19.1	340.9	
206	.00	.00	5.53	.1	7.4	1.8	-2.8	-12.8	.3	280	.00	.00	5.92	.0	-1.0		19.9	350.0	
207	.00	.00	5.54	.1	9.2	2.3	-4.4	-13.9	.6	Z = 86									
208	-.01	.01	5.54	.0	6.7	2.2	-1.9	-12.4	-.1	178	.16	.03	5.43	1.4		-3.3		58.0	
209	.00	.00	5.55	.1	9.0	2.6	-3.9	-13.4	.5	179	.16	.03	5.43	1.5		-3.4		54.8	
210	-.01	.00	5.55	.1	6.6	2.7	-1.4	-11.9	-.1	180	.16	.03	5.44	1.7	13.6	-2.5	-17.2	49.2	
211	.00	.00	5.55	.1	8.2	2.8	-2.7	-12.0	.3	181	.00	.00	5.41	.0	9.6	-4.0	-13.3	47.6	
212	.00	.00	5.56	.0	4.7	3.0	1.0	-8.6	.0	182	.34	.01	5.55	.6	13.9	-2.8	-17.0	41.8	
213	.00	.00	5.57	.0	7.1	3.4	-1.3	-7.6	1.0	183	.34	.01	5.56	.6	10.9	-2.2	-14.0	39.0	
214	.01	.00	5.57	.3	4.9	3.7	1.4	-4.4	1.0	184	.34	.00	5.56	1.4	13.3	-.7	-15.8	33.8	
215	.00	.00	5.58	.1	6.2	4.0	-.1	-2.6	1.3	185	.34	.00	5.57	1.3	10.7	-.6	-13.4	31.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
186	.36	.00	5.59	1.9	12.8	-.2	-15.0	26.5		260	-.07	-.01	5.85	.2	3.1	14.9	10.1	186.9	
187	.36	.00	5.59	1.6	10.3	.1		24.3		261	-.09	-.01	5.85	.0	1.7	15.1	11.3	193.2	
188	.36	-.01	5.60	2.0	12.3	.2	-14.0	20.1		262	-.07	-.01	5.86	.1	2.7	15.0	10.4	198.6	
189	.36	-.01	5.61	1.5	9.6	.2	-11.1	18.6		263	.00	.00	5.86	.0	1.9	15.5	11.7	204.8	
190	.37	-.01	5.61	2.0	12.0	.9	-13.4	14.7		264	.00	.00	5.86	.0	2.7	15.4	10.6	210.2	
191	.38	-.01	5.63	1.3	9.5	1.0	-10.8	13.2		265	.00	.00	5.87	.0	1.7	15.6	11.7	216.6	
192	.38	-.01	5.64	1.4	11.3	1.5	-12.4	10.0		266	.00	.00	5.87	.0	2.5	15.7	11.3	222.1	
193	.38	-.01	5.65	.5	8.6	.6	-9.4	9.4		267	.00	.00	5.88	.0	1.2	15.6	12.7	229.0	
194	.39	-.01	5.66	.7	11.0	.9	-11.4	6.5		268	.00	.00	5.88	.0	2.3	15.8	12.0	234.8	
195	.00	.00	5.49	.0	9.0	.7	-9.3	5.6		269	-.01	.00	5.88	.1	1.4	16.2	13.0	241.4	
196	.14	-.01	5.51	.8	11.1	1.3	-11.2	2.5	-1.5	270	.00	.00	5.89	.0	2.1	16.1	12.1	247.4	
197	-.26	-.04	5.56	.1	8.6	.9	-9.1	1.9		271	-.02	.00	5.89	.1	-.4	16.5	15.0	255.9	
198	-.12	-.01	5.51	.6	10.8	1.5	-11.3	-.8	-.3	272	.00	.00	5.90	.0	.6	16.7	13.9	263.3	
199	-.21	-.03	5.55	.0	8.2	1.3	-9.1	-1.0		273	.00	.00	5.90	.0	-.7	16.7	15.3	272.1	
200	-.09	-.01	5.52	.5	10.7	1.9	-10.0	-3.5	-.5	274	.00	.00	5.91	.0	.4	16.9	14.6	279.9	
201	-.09	.00	5.53	.3	8.7	1.9	-8.3	-4.2		275	.00	.00	5.91	.0	-.8	16.6	16.0	288.7	
202	-.08	.00	5.53	.2	9.9	2.6	-9.3	-5.9	.2	276	.00	.00	5.91	.0	.4	17.0	15.1	296.4	
203	.00	.00	5.53	.0	8.2	2.3	-7.3	-6.0	1.1	277	.00	.00	5.92	.0	-.8	17.1	16.2	305.2	
204	.00	.00	5.53	.0	10.1	3.0	-9.2	-8.0		278	.00	.00	5.92	.0	.3	17.6	15.4	313.0	
205	.00	.00	5.54	.0	8.1	3.0	-7.2	-8.1		279	.00	.00	5.93	.0	-.8	17.9	16.4	321.9	
206	.00	.00	5.54	.0	9.9	3.8	-8.8	-9.9		280	.00	.00	5.93	.0	-.2	18.1	16.3	330.1	
207	.00	.00	5.55	.0	7.5	3.9	-6.5	-9.4	.8	281	.00	.00	5.94	.0	-1.1	18.0	17.3	339.3	
208	.00	.00	5.55	.0	9.3	4.0	-7.4	-10.6	.9	282	.00	.00	5.94	.0	-.2		16.5	347.5	
209	-.01	.01	5.56	.0	6.9	4.3	-4.9	-9.5	.5	Z=87									
210	.00	.00	5.56	.0	9.1	4.4	-6.8	-10.5	.9	188	.36	.00	5.61	3.0		-2.5		34.1	
211	.00	.00	5.57	.0	6.9	4.7	-4.3	-9.3	.5	189	.36	.00	5.61	3.3	12.4	-2.3		29.7	
212	.00	.00	5.57	.0	8.4	4.9	-5.7	-9.6	.9	190	.36	-.01	5.62	2.8	9.7	-2.2	-9.6	28.1	
213	.00	.00	5.57	.0	4.8	5.0	-1.9	-6.3	.6	191	.37	-.01	5.63	3.0	12.1	-2.1	-11.3	24.0	
214	.00	.00	5.58	.0	7.6	5.5	-4.3	-5.8	1.5	192	.38	-.01	5.65	2.4	9.8	-1.8	-8.9	22.3	
215	.00	.00	5.59	.0	4.8	5.4	-1.6	-2.5	1.4	193	.37	-.01	5.64	2.5	11.5	-1.6	-10.8	18.9	
216	.00	.00	5.59	.0	6.6	5.7	-2.8	-1.0	1.3	194	.40	.00	5.68	1.6	9.1	-1.1	-7.9	17.9	
217	.00	.00	5.60	.0	5.0	6.1	-1.1	2.1	1.6	195	.39	-.01	5.67	1.8	11.1	-1.1	-9.6	14.8	
218	.00	.00	5.61	.0	5.9	6.2	-1.9	4.2	1.0	196	.39	-.01	5.68	.9	9.2	-.9	-7.4	13.7	
219	.00	.00	5.61	.0	4.7	6.6	-.2	7.6	1.3	197	.39	-.01	5.69	.9	10.8	-1.2	-9.3	11.0	
220	.00	.00	5.62	.0	5.7	6.7	-1.1	9.9	.7	198	.40	-.01	5.69	.2	8.5	-1.3	-6.5	10.5	
221	.00	.00	5.63	.0	4.6	7.1	.3	13.4		199	.00	.00	5.52	.0	10.4	-1.7	-8.2	8.1	
222	.00	.00	5.63	.0	5.4	7.3	-.3	16.1	.2	200	-.22	-.02	5.57	.8	9.8	-.2	-7.1	6.5	
223	.12	.03	5.66	.6	4.6	8.0	1.2	19.6		201	-.13	.00	5.54	.7	10.4	-.4	-8.6	4.1	.2
224	.15	.03	5.67	.9	5.8	8.3	.2	21.8		202	-.12	.00	5.55	.4	8.8	-.2	-6.8	3.4	.3
225	.16	.03	5.68	1.5	4.4	8.5	1.8	25.5		203	.09	.00	5.54	.7	10.1	.1	-8.2	1.3	.0
226	.18	.03	5.69	1.8	5.7	8.6	1.0	27.8		204	.00	.00	5.54	.0	8.2	.1	-5.8	1.1	.0
227	.19	.03	5.71	2.2	4.3	9.0	2.9	31.6		205	-.08	-.01	5.55	.3	10.1	.2	-7.3	-.9	-.4
228	.20	.03	5.72	2.8	5.7	9.4	1.5	34.0		206	.02	-.01	5.55	.3	8.3	.4	-5.7	-1.1	-.3
229	.20	.02	5.73	3.3	4.2	9.4	3.3	37.9		207	.00	.00	5.56	.0	9.8	.3	-7.3	-2.9	.0
230	.21	.02	5.74	3.8	5.4	9.8	2.3	40.6		208	.00	.00	5.56	.0	8.4	1.1	-5.4	-3.2	.5
231	.22	.02	5.75	3.9	3.7	9.8	4.2	45.0		209	.00	.00	5.57	.0	9.4	1.2	-6.4	-4.5	.7
232	.21	.02	5.76	4.5	5.2	9.9	3.1	47.9		210	.00	.00	5.57	.0	7.2	1.5	-3.3	-3.7	.3
233	.26	.01	5.77	4.7	3.8	10.4	4.6	52.1		211	.00	.00	5.58	.0	9.4	1.8	-5.3	-5.0	.9
234	.23	.01	5.77	5.1	5.0	10.6	3.2	55.2		212	.00	.00	5.58	.0	7.0	2.0	-2.7	-3.9	.4
235	.24	.01	5.77	4.9	3.2	10.3	5.5	60.1		213	.00	.00	5.59	.0	8.6	2.2	-4.1	-4.4	.9
236	.25	.00	5.78	5.3	5.3	11.1	3.7	62.8		214	.00	.00	5.59	.1	5.1	2.5	-.4	-1.5	.5
237	.24	.00	5.79	4.6	2.7	10.9	5.8	68.2		215	.00	.00	5.60	.0	7.5	2.4	-2.5	-.9	1.2
238	.24	.00	5.80	4.7	4.6	11.0	5.1	71.7		216	.01	.01	5.60	.1	5.3	3.0	-.2	1.8	1.2
239	.25	-.01	5.80	4.3	2.8	11.2	6.7	76.9		217	.00	.00	5.61	.0	6.7	3.1	-1.6	3.2	1.1
240	.24	-.01	5.80	4.8	4.3	11.3	5.5	80.7		218	.00	.00	5.62	.0	5.1	3.2	.6	6.2	.9
241	.24	-.02	5.81	4.5	2.9	11.5	6.9	85.9		219	.00	.00	5.62	.0	6.4	3.7	-.6	7.8	.8
242	.23	-.02	5.81	4.5	3.8	11.4	6.3	90.1		220	.00	.00	5.63	.0	4.8	3.8	1.1	11.1	.4
243	.24	-.02	5.82	4.1	2.8	11.9	7.5	95.4		221	.00	.00	5.63	.0	6.0	4.1	.1	13.1	.1
244	.22	-.02	5.82	4.2	3.6	11.9	6.8	99.9		222	.00	.00	5.64	.0	4.8	4.3	1.6	16.4	.0
245	.23	-.03	5.82	3.6	2.3	12.0	8.4	105.7		223	.14	.03	5.67	.5	6.1	5.1	.6	18.3	.0
246	.20	-.02	5.83	3.6	3.8	12.4	7.2	110.0		224	.15	.03	5.68	1.1	4.8	5.2	2.5	21.6	.0
247	.23	-.03	5.83	3.0	2.0	12.3	8.9	116.1		225	.16	.03	5.69	1.5	6.1	5.5	1.4	23.6	.2
248	.16	-.02	5.82	3.1	3.8	13.1	7.4	120.3		226	.17	.03	5.70	2.2	4.9	5.9	3.3	26.8	.5
249	.16	-.02	5.83	2.4	1.6	12.6	9.4	126.8		227	.18	.03	5.71	2.6	6.1	6.3	2.1	28.8	.9
250	.16	-.02	5.82	2.0	3.4	13.4	8.3	131.4		228	.19	.03	5.72	3.0	4.3	6.4	4.1	32.6	-.2
251	.18	-.02	5.82	1.4	2.2	13.4	9.5	137.3		229	.20	.03	5.73	3.6	6.0	6.7	2.7	34.7	
252	.11	-.01	5.82	1.4	3.1	13.7	8.8	142.3		230	.20	.03	5.74	4.0	4.4	6.9	4.7	38.3	
253	-.17	-.02	5.83	1.0	2.2	13.9	9.6	148.2		231	.21	.02	5.75	4.5	5.6	7.1	3.5	40.8	
254	-.12	-.01	5.83	.9	3.0	13.7	9.1	153.3		232	.22	.02	5.76	4.8	4.1	7.5	5.4	44.8	
255	-.13	-.01	5.83	.7	2.2	14.3	10.2	159.2		233	.24	.02	5.77	5.2	5.3	7.6	4.3	47.6	
256	-.10	-.01	5.83	.7	3.0	14.2	9.1	164.3		234	.24	.02	5.78	5.3	3.7	7.4	6.2	52.0	
257	-.13	-.01	5.84	.1	1.6	14.0	10.8	170.7		235	.26	.01	5.79	5.9	5.5	7.9	4.7	54.6	
258	-.10	-.01	5.84	.4	3.3	14.6	9.5	175.4		236	.24	.01	5.79	5.8	3.5	8.3	6.6	59.1	
259	-.10	-.01	5.85	.2	1.7	14.4	11.0	181.9		237	.25	.00	5.80	6.2	4.8	7.7	5.4	62.4	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
238	.26	.00	5.80	5.6	3.9	8.9	6.9	66.6		216	.00	.00	5.61	.0	7.7	4.4	-5.4	2.0	1.3
239	.24	.00	5.81	5.7	4.4	8.7	5.8	70.3		217	.01	.00	5.62	.0	5.3	4.3	-2.6	4.8	1.1
240	.24	.00	5.82	5.0	3.2	9.1	7.9	75.2		218	.00	.00	5.62	.0	7.3	4.9	-4.3	5.6	1.1
241	.24	-.01	5.81	5.2	4.3	9.0	6.6	79.0		219	.00	.00	5.63	.0	5.3	5.0	-2.3	8.4	1.0
242	.24	-.02	5.82	5.0	3.2	9.4	8.3	83.8		220	.00	.00	5.64	.0	6.5	5.1	-3.3	10.0	.3
243	.22	-.01	5.82	5.1	3.9	9.4	7.6	88.0		221	.00	.00	5.64	.0	5.0	5.4	-1.4	13.0	.0
244	.23	-.02	5.82	4.6	3.0	9.6	8.8	93.1		222	.00	.00	5.65	.0	6.3	5.7	-2.3	14.8	-.4
245	.24	-.02	5.83	4.7	3.9	9.9	8.1	97.3		223	.15	.03	5.68	.0	5.1	6.0	-.6	17.7	-.5
246	.22	-.02	5.83	4.2	2.6	10.2	9.6	102.8		224	.15	.03	5.69	1.0	6.6	6.5	-1.9	19.1	-.3
247	.23	-.03	5.84	4.1	3.7	10.1	8.5	107.2		225	.14	.03	5.70	1.5	5.0	6.7	.1	22.2	-.3
248	.20	-.02	5.84	3.5	2.3	10.4	10.1	112.9		226	.18	.04	5.72	2.1	6.8	7.4	-1.4	23.5	.2
249	.05	.00	5.83	3.2	3.6	10.2	8.9	117.4		227	.19	.03	5.72	2.7	4.9	7.4	.6	26.7	.5
250	.16	-.02	5.83	3.0	2.4	11.0	10.3	123.1		228	.19	.04	5.73	3.3	6.3	7.6	-.6	28.4	.5
251	.24	-.03	5.83	2.5	3.4	10.9	9.6	127.8		229	.21	.03	5.74	3.7	4.6	7.9	1.7	31.9	.5
252	.16	-.02	5.84	1.7	2.3	11.1	10.9	133.5		230	.20	.03	5.75	4.4	6.4	8.3	.0	33.6	.9
253	.11	-.01	5.84	1.5	3.0	10.9	10.4	138.6		231	.21	.03	5.76	4.8	4.4	8.3	2.0	37.3	
254	.16	-.02	5.84	1.1	2.5	11.2	11.1	144.3		232	.22	.03	5.76	5.2	5.9	8.7	.9	39.4	
255	-.16	-.01	5.85	1.3	3.3	11.6	10.1	149.0		233	.22	.02	5.78	5.5	4.2	8.9	2.7	43.3	
256	-.16	-.01	5.86	.8	1.9	11.4	11.5	155.1		234	.24	.02	5.78	6.0	5.5	9.0	1.7	45.8	
257	-.10	-.01	5.85	.7	3.3	11.6	10.7	160.0		235	.24	.01	5.79	6.1	4.0	9.4	3.6	49.9	
258	-.11	-.01	5.85	.4	2.1	12.0	12.1	166.0		236	.25	.01	5.80	6.6	5.4	9.3	2.3	52.6	
259	-.13	-.01	5.85	.5	3.2	11.9	11.1	170.9		237	.23	.01	5.80	6.4	3.7	9.4	4.2	57.0	
260	-.13	-.01	5.86	.2	2.2	12.3	12.3	176.8		238	.25	.00	5.81	6.9	5.3	10.0	2.8	59.7	
261	-.07	-.01	5.86	.2	3.0	12.3	11.4	181.9		239	.25	.00	5.82	6.6	3.3	9.4	4.9	64.4	
262	-.10	-.01	5.87	.0	1.7	12.2	12.9	188.2		240	.24	.00	5.82	6.7	5.3	10.3	3.2	67.3	
263	-.07	-.01	5.87	.1	3.2	12.8	11.7	193.1		241	.24	.00	5.83	5.8	3.0	10.2	5.5	72.3	
264	.00	.00	5.87	.0	1.6	12.5	12.9	199.6		242	.23	-.01	5.82	5.7	4.9	10.7	4.5	75.5	
265	.00	.00	5.88	.0	2.8	12.6	12.2	204.9		243	.24	-.02	5.84	5.3	3.2	10.7	5.7	80.4	
266	.00	.00	5.88	.0	2.0	13.0	13.1	210.9		244	.24	-.02	5.84	5.3	4.2	11.0	5.4	84.3	
267	.00	.00	5.89	.0	2.6	13.1	12.4	216.4		245	.23	-.02	5.84	5.1	3.1	11.1	6.3	89.2	
268	.00	.00	5.89	.0	1.7	13.6	13.6	222.8		246	.21	-.01	5.84	5.1	4.1	11.4	5.3	93.2	
269	.00	.00	5.89	.0	2.4	13.6	13.0	228.4		247	.22	-.02	5.85	4.5	2.6	11.4	7.0	98.6	
270	.00	.00	5.90	.0	1.2	13.4	14.3	235.3		248	.19	-.02	5.85	4.4	3.9	11.7	6.1	102.8	
271	.00	.00	5.90	.0	2.5	13.8	13.3	240.9		249	.20	-.02	5.86	3.7	2.3	11.7	7.8	108.5	
272	.00	.00	5.90	.0	-.4	13.8	16.3	249.4		250	.20	-.02	5.85	3.6	3.8	11.9	6.7	112.8	
273	.00	.00	5.91	.0	.7	13.8	15.4	256.9		251	.18	-.02	5.85	3.3	2.7	12.2	8.0	118.2	
274	.00	.00	5.91	.0	-.3	14.2	16.6	265.3		252	.18	-.02	5.85	3.0	3.7	12.5	7.1	122.6	
275	.00	.00	5.92	.0	.7	14.5	15.8	272.7		253	.16	-.02	5.86	2.3	2.4	12.5	8.5	128.3	
276	.00	.00	5.92	.0	-.5	14.8	17.0	281.2		254	.00	.00	5.85	1.9	3.2	12.7	7.8	133.2	
277	.00	.00	5.93	.0	.3	14.6	16.1	289.0		255	.16	-.02	5.86	1.1	2.3	12.6	8.8	138.9	
278	.00	.00	5.93	.0	-.5	14.9	17.1	297.6		256	-.17	-.02	5.86	1.4	3.4	12.7	8.0	143.6	
279	.00	.00	5.94	.0	.3	14.9	16.6	305.4		257	-.17	-.02	5.87	.9	2.4	13.1	9.0	149.3	
280	.00	.00	5.94	.1	-.3	15.3	17.2	313.8		258	-.12	-.01	5.86	1.0	3.6	13.4	8.0	153.8	
281	.00	.00	5.95	.0	-.1	15.4	16.9	322.0		259	-.06	.00	5.87	.6	2.2	13.5	9.3	159.8	
282	.00	.00	5.95	.0	-1.0	15.5	18.5	331.0		260	-.09	-.01	5.87	.7	3.3	13.7	8.1	164.5	
283	.14	.03	5.99	.2	.1	15.8	17.7	339.1		261	-.09	-.01	5.87	.5	2.1	13.6	9.8	170.4	
284	.15	.03	6.00	.7	-.5		18.6	347.6		262	-.10	-.01	5.88	.3	3.1	13.8	9.0	175.4	
Z = 88										263	-.09	-.01	5.88	.1	2.0	14.1	10.1	181.4	
190	.36	.00	5.63	4.6		-.6		37.6		264	-.08	-.01	5.88	.2	2.9	13.8	9.5	186.6	
191	.36	.00	5.64	4.1	10.3	.0		35.4		265	.00	.00	5.88	.0	2.1	14.2	10.4	192.6	
192	.36	.00	5.64	4.4	12.2	.1	-14.2	31.3		266	.00	.00	5.89	.0	3.0	14.4	9.6	197.7	
193	.38	.00	5.66	3.7	9.7	.0	-11.6	29.6		267	.00	.00	5.89	.0	1.9	14.2	10.9	203.9	
194	.38	-.01	5.67	3.9	11.9	.4	-13.3	25.8		268	.00	.00	5.90	.0	2.8	14.5	10.2	209.2	
195	.38	-.01	5.67	3.0	9.3	.7	-11.2	24.5		269	.00	.00	5.90	.0	1.8	14.6	11.3	215.5	
196	.38	-.01	5.68	3.2	11.4	1.0	-12.5	21.1		270	.00	.00	5.91	.0	2.5	14.7	10.5	221.1	
197	.39	-.01	5.69	2.2	8.9	.7	-9.9	20.3		271	.00	.00	5.91	.0	1.5	15.0	12.0	227.6	
198	.40	-.02	5.71	2.3	11.4	1.3	-12.1	17.0		272	.00	.00	5.91	.0	2.5	15.1	10.9	233.2	
199	.40	-.02	5.72	1.4	8.7	1.4	-9.6	16.4		273	.00	.00	5.92	.1	-.3	15.3	13.7	241.5	
200	.40	-.02	5.72	1.4	10.9	1.9	-11.3	13.6		274	.00	.00	5.92	.0	.9	15.4	12.9	248.7	
201	-.25	-.04	5.60	1.0	8.9	1.0	-9.2	12.8		275	.00	.00	5.93	.0	-.1	15.6	14.1	256.9	
202	-.25	-.04	5.60	.9	10.6	1.2	-11.2	10.2		276	.00	.00	5.93	.0	.7	15.7	13.5	264.3	
203	-.23	-.03	5.59	.5	8.8	1.2	-9.2	9.5		277	.00	.00	5.93	.0	-.6	15.5	14.8	273.0	
204	.12	-.01	5.57	1.0	10.5	1.6	-10.7	7.0	-1.0	278	.00	.00	5.94	.0	.5	15.8	14.4	280.6	
205	-.13	-.01	5.57	.6	8.6	2.0	-8.7	6.4		279	.00	.00	5.95	.0	-.2	16.1	15.2	288.9	
206	-.07	-.01	5.57	.4	9.9	1.8	-9.5	4.6	-.4	280	.00	.00	5.95	.0	.3	16.1	14.6	296.6	
207	.00	.00	5.57	.0	8.3	1.8	-7.6	4.3	.5	281	.00	.00	5.95	.0	-.4	16.0	15.4	305.1	
208	-.09	-.01	5.58	.4	10.2	2.2	-9.5	2.2		282	.00	.00	5.96	.0	.6	16.7	14.2	312.6	
209	.00	.00	5.58	.3	8.4	2.3	-7.5	1.8		283	.00	.00	5.96	.0	-.8	16.9	15.5	321.4	
210	.00	.00	5.58	.0	10.2	3.1	-9.2	-.3		284	.15	.04	6.01	.3	.4	17.3	15.3	329.0	
211	.00	.00	5.59	.0	7.5	3.4	-6.7	.3	.6	285	.16	.04	6.02	1.4	-.2	17.6	15.9	337.3	
212	.00	.00	5.59	.0	9.6	3.5	-8.0	-1.2	1.0	286	.17	.03	6.02	1.8	.9		15.0	344.5	
213	.00	.00	5.59	.0	7.2	3.7	-5.4	-.3	.7	Z = 89									
214	.00	.00	5.60	.0	8.8	3.9	-6.8	-1.1	1.1	192	.36	.00	5.65	5.4		-2.9		45.5	
215	.00	.00	5.61	.1	5.4	4.1	-3.2	1.6	.9	193	.38	.00	5.66	5.5	12.4	-2.7		41.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
194	.38	.00	5.67	4.9	10.2	-2.2	-10.3	39.1		268	.00	.00	5.91	.0	2.1	12.2	12.0	199.0	
195	.38	.00	5.68	4.9	11.5	-2.6	-11.5	35.7		269	.00	.00	5.91	.0	2.9	12.3	11.4	204.2	
196	.39	-.01	5.69	4.1	10.1	-1.8	-9.6	33.6		270	.00	.00	5.91	.0	1.7	12.3	12.6	210.5	
197	.39	-.01	5.70	4.1	11.5	-1.8	-11.2	30.2		271	.00	.00	5.92	.0	3.0	12.7	11.6	215.6	
198	.40	-.01	5.71	3.2	9.1	-1.5	-8.3	29.1		272	-.01	.00	5.92	.1	1.5	12.7	12.9	222.2	
199	.40	-.01	5.72	3.1	11.2	-1.6	-10.1	26.0		273	.00	.00	5.93	.0	2.5	12.7	12.2	227.8	
200	.40	-.01	5.72	2.2	9.1	-1.2	-7.7	24.9		274	.00	.00	5.93	.1	.1	12.9	14.9	235.8	
201	.40	-.02	5.73	2.1	11.0	-1.1	-9.4	22.0		275	.00	.00	5.94	.0	1.1	13.2	14.0	242.8	
202	.43	-.01	5.77	1.3	8.6	-1.4	-7.0	21.4		276	.00	.00	5.94	.0	.1	13.4	15.4	250.8	
203	.43	-.02	5.77	1.0	10.8	-1.2	-8.8	18.7		277	.00	.00	5.94	.0	.7	13.4	14.5	258.2	
204	-.21	-.03	5.61	.7	9.1	-.9	-7.0	17.7		278	.00	.00	5.95	.0	.1	14.0	15.7	266.2	
205	-.22	-.03	5.61	.9	10.6	-.9	-9.0	15.2		279	.00	.00	5.95	.0	.6	14.2	14.9	273.7	
206	-.13	-.01	5.59	.8	9.2	-.3	-7.4	14.1		280	.00	.00	5.96	.0	-.3	14.1	15.9	282.0	
207	-.12	-.02	5.59	.9	10.2	.0	-8.5	11.9	-.3	281	.00	.00	5.96	.0	.4	14.3	15.4	289.7	
208	.09	.00	5.59	.5	8.3	-.1	-6.3	11.7	-.4	282	.00	.00	5.97	.0	-.6	14.0	16.7	298.4	
209	-.06	-.02	5.59	.4	10.4	.1	-8.2	9.4	-.4	283	.00	.00	5.97	.0	.6	14.0	16.0	305.9	
210	.05	-.01	5.60	.6	8.6	.3	-6.3	8.9	-.3	284	.00	.00	5.98	.0	.2	14.9	16.2	313.8	
211	.02	-.01	5.60	.3	10.0	.0	-7.8	7.0	.2	285	.16	.04	6.03	.4	.4	14.9	16.2	321.4	
212	.00	.00	5.60	.0	8.2	.8	-5.9	6.8	.5	286	.17	.03	6.03	1.5	.0	15.1	17.3	329.5	
213	.00	.00	5.61	.0	9.8	1.0	-7.5	5.1	1.0	287	.17	.03	6.04	1.9	1.1	15.3	16.4	336.5	
214	.00	.00	5.61	.0	7.4	1.2	-4.0	5.7	.7	288	.17	.03	6.05	3.0	.1		17.4	344.4	
215	.00	.00	5.61	.0	9.0	1.4	-5.4	4.8	1.2	Z = 90									
216	.00	.00	5.62	.1	5.5	1.6	-1.7	7.3	.8	194	.36	.00	5.67	6.8		-.9		49.4	
217	.00	.00	5.63	.0	8.0	1.9	-3.9	7.4	1.3	195	.38	.00	5.68	6.1	10.3	-.8		47.2	
218	.00	.00	5.63	.1	5.6	2.1	-1.3	9.9	.9	196	.38	.00	5.69	6.2	12.1	-.2	-14.3	43.2	
219	.00	.00	5.64	.0	7.3	2.2	-2.8	10.7	.9	197	.38	.00	5.70	5.1	9.8	-.5	-11.9	41.4	
220	.00	.00	5.64	.0	5.5	2.4	-.8	13.3	.4	198	.38	-.01	5.70	5.4	12.0	.0	-13.9	37.5	
221	.00	.00	5.65	.0	7.0	2.9	-2.3	14.4	.1	199	.40	-.01	5.73	4.3	9.5	.4	-11.3	36.0	
222	.00	.00	5.66	.0	5.4	3.2	-.6	17.0	-.4	200	.40	-.01	5.73	4.4	11.5	.6	-12.9	32.6	
223	.15	.04	5.69	.4	6.8	3.7	-1.5	18.3	-.5	201	.40	-.01	5.74	3.4	9.3	.8	-10.5	31.4	
224	.14	.03	5.70	.5	5.4	4.0	.4	21.0	-.8	202	.40	-.02	5.75	3.4	11.0	.8	-12.2	28.5	
225	.17	.03	5.71	1.5	6.9	4.3	-.6	22.1	-.5	203	.42	-.02	5.77	2.6	9.0	1.2	-10.0	27.5	
226	.17	.04	5.72	2.1	5.3	4.6	1.4	24.9	-.6	204	.43	-.02	5.78	2.4	10.9	1.3	-11.7	24.7	
227	.19	.04	5.73	2.7	6.9	4.8	.0	26.0	-.2	205	.43	-.02	5.79	1.1	8.6	.8	-9.3	24.2	
228	.19	.04	5.74	3.2	5.1	5.0	2.0	29.0	-.1	206	.52	-.03	5.89	1.3	10.8	1.0	-10.9	21.4	
229	.20	.03	5.75	4.0	6.8	5.5	.6	30.2	.4	207	-.20	-.02	5.63	.9	9.1	.9	-9.4	20.4	
230	.21	.03	5.76	4.4	4.8	5.7	2.8	33.6	.0	208	-.15	-.01	5.61	1.1	10.6	1.2	-11.4	18.0	
231	.21	.03	5.77	5.0	6.3	5.6	1.6	35.3	.6	209	-.12	-.01	5.61	.7	8.4	1.4	-8.7	17.6	
232	.22	.03	5.78	5.3	4.8	6.0	3.5	38.6	.6	210	-.08	-.01	5.61	.9	10.4	1.4	-10.4	15.2	-.6
233	.22	.02	5.79	5.9	6.1	6.2	2.3	40.6		211	-.09	-.01	5.61	.4	8.5	1.4	-8.3	14.8	.4
234	.22	.02	5.79	6.1	4.5	6.4	4.1	44.1		212	-.06	.00	5.62	.4	10.1	1.6	-9.8	12.7	
235	.24	.02	5.80	6.7	5.9	6.8	2.8	46.3		213	.00	.00	5.61	.0	8.2	1.5	-7.8	12.6	
236	.24	.01	5.81	6.8	4.0	6.9	4.9	50.3		214	.00	.00	5.62	.0	10.9	2.7	-10.0	9.7	
237	.26	.01	5.81	7.2	5.6	7.1	3.5	52.7		215	.00	.00	5.63	.0	7.6	2.8	-7.5	10.2	.7
238	.22	.02	5.82	7.0	3.8	7.3	5.7	57.0		216	.00	.00	5.63	.0	9.2	3.0	-7.9	9.1	1.2
239	.25	.00	5.82	7.6	5.5	7.4	4.2	59.5		217	.01	.00	5.64	.2	5.8	3.3	-4.3	11.3	.9
240	.25	.00	5.83	7.2	3.5	7.7	6.0	64.1		218	.00	.00	5.64	.0	8.2	3.5	-6.6	11.2	1.2
241	.26	.00	5.84	7.6	5.3	7.7	4.7	66.8		219	-.01	.00	5.65	.1	5.8	3.8	-3.9	13.5	1.0
242	.23	.00	5.84	7.1	3.9	8.6	6.1	71.0		220	.00	.00	5.65	.0	7.4	3.9	-5.3	14.1	.5
243	.25	-.01	5.85	6.6	4.3	8.1	5.4	74.7		221	.00	.00	5.66	.0	5.6	4.0	-3.1	16.6	.3
244	.24	-.01	5.85	6.4	4.0	8.8	7.3	78.8		222	.00	.00	5.67	.0	7.1	4.0	-4.4	17.6	-.4
245	.24	-.02	5.85	5.8	3.9	8.6	6.3	83.0		223	.00	.00	5.67	.0	5.8	4.5	-2.8	19.9	-.5
246	.23	-.02	5.85	5.4	3.1	8.6	8.4	87.9		224	.15	.03	5.71	.8	7.3	5.0	-4.0	20.6	-.6
247	.24	-.02	5.86	5.4	4.4	8.9	6.8	91.6		225	.19	.04	5.73	1.1	5.9	5.5	-2.1	22.8	-.5
248	.24	-.02	5.87	4.9	3.0	9.2	8.3	96.7		226	.19	.04	5.74	2.0	7.4	6.0	-3.4	23.5	-.3
249	.21	-.02	5.87	4.8	4.1	9.4	7.4	100.7		227	.19	.04	5.74	2.8	5.5	6.1	-1.3	26.1	-.3
250	.23	-.03	5.87	4.2	2.7	9.8	9.0	106.0		228	.20	.04	5.76	3.4	7.2	6.3	-2.5	27.0	-.2
251	.19	-.02	5.86	3.8	3.9	9.9	7.8	110.2		229	.21	.04	5.76	4.0	5.4	6.6	-.7	29.7	-.1
252	.16	-.02	5.86	3.6	2.7	9.9	9.4	115.6		230	.21	.04	5.77	4.7	7.0	6.8	-1.9	30.8	.1
253	.13	-.01	5.86	3.2	3.8	10.1	8.3	119.8		231	.22	.03	5.78	5.1	5.1	7.2	.1	33.7	.1
254	.11	-.01	5.87	2.6	2.5	10.2	9.6	125.4		232	.22	.03	5.78	5.8	6.8	7.6	-1.2	35.0	.4
255	.16	-.02	5.87	2.5	3.3	10.4	9.0	130.1		233	.23	.03	5.79	6.3	4.8	7.6	.7	38.3	.5
256	.00	.00	5.87	1.8	2.6	10.6	9.8	135.6		234	.23	.03	5.80	6.8	6.3	7.8	-.4	40.0	.6
257	.05	.00	5.87	1.4	3.3	10.6	9.3	140.3		235	.23	.03	5.81	6.9	4.6	7.9	1.5	43.5	.8
258	.13	-.01	5.87	1.0	2.5	10.8	10.1	145.8		236	.24	.02	5.81	7.5	6.1	8.1	.2	45.5	
259	-.15	-.01	5.88	1.1	3.5	10.7	9.3	150.4		237	.24	.02	5.82	7.5	4.3	8.3	2.3	49.3	
260	-.13	-.01	5.89	.5	2.2	10.7	10.9	156.4		238	.24	.01	5.83	8.1	6.1	8.8	.9	51.2	
261	-.12	-.01	5.88	.8	3.8	11.1	9.3	160.6		239	.26	.01	5.83	7.7	3.9	8.9	3.0	55.4	
262	-.10	-.01	5.89	.6	2.3	11.3	10.8	166.4		240	.26	.00	5.84	8.2	5.3	8.8	2.0	58.1	
263	-.10	-.01	5.89	.4	3.2	11.3	10.0	171.4		241	.25	.00	5.84	7.9	4.1	9.3	3.8	62.1	
264	-.09	-.01	5.89	.2	2.2	11.6	11.1	177.2		242	.25	.00	5.85	8.3	5.3	9.2	2.5	64.9	
265	-.08	-.01	5.90	.0	3.0	11.7	10.3	182.2		243	.24	.00	5.86	7.9	3.7	9.0	4.2	69.3	
266	.00	.00	5.90	.0	2.2	11.8	11.6	188.1		244	.24	.00	5.86	8.1	5.9	10.5	2.4	71.5	
267	.00	.00	5.90	.0	3.1	11.9	10.8	193.1		245	.24	-.01	5.86	6.9	2.8	9.4	4.5	76.7	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
246	.24	-.02	5.86	6.9	5.3	10.8	3.1	79.5		224	.15	.03	5.72	.6	6.2	2.6	-1.7	24.5	-.7
247	.24	-.02	5.87	5.9	2.8	10.4	4.9	84.8		225	.17	.02	5.72	1.2	7.7	3.0	-2.8	24.9	-.6
248	.23	-.02	5.87	5.9	4.4	10.5	4.2	88.4		226	.19	.04	5.75	1.5	6.1	3.2	-.9	26.9	-.9
249	.21	-.01	5.88	5.3	3.2	10.7	5.8	93.3		227	.19	.04	5.75	2.7	7.6	3.4	-2.0	27.3	-.5
250	.21	-.02	5.88	5.3	4.3	10.9	4.6	97.1		228	.20	.04	5.76	3.3	5.9	3.9	.1	29.4	-.5
251	.23	-.03	5.89	4.7	2.8	11.0	6.5	102.3		229	.21	.04	5.77	3.8	7.2	3.9	-1.1	30.3	-.4
252	.23	-.03	5.88	4.6	4.3	11.3	5.3	106.1		230	.21	.04	5.78	4.6	5.8	4.3	.8	32.6	-.5
253	.16	-.02	5.88	4.0	2.7	11.3	6.9	111.5		231	.21	.04	5.79	5.3	7.1	4.4	-.4	33.6	-.2
254	.18	-.02	5.88	3.6	3.8	11.3	6.0	115.8		232	.22	.03	5.80	5.7	5.4	4.7	1.5	36.3	-.3
255	.24	-.04	5.88	2.9	2.8	11.6	7.0	121.1		233	.23	.03	5.80	6.4	6.8	4.8	.4	37.5	-.1
256	.16	-.02	5.88	2.7	3.4	11.6	6.5	125.8		234	.23	.03	5.80	6.8	5.2	5.2	2.2	40.4	-.1
257	.16	-.02	5.89	2.0	2.8	11.8	7.5	131.1		235	.23	.03	5.81	7.3	6.5	5.3	1.2	42.0	.4
258	.11	-.01	5.89	1.8	3.3	11.8	6.5	135.8		236	.24	.02	5.82	7.4	4.8	5.5	3.1	45.3	.1
259	.16	-.02	5.89	1.1	2.7	12.0	7.5	141.1		237	.24	.02	5.82	8.0	6.4	5.8	1.8	46.9	.7
260	-.15	-.01	5.90	1.2	3.7	12.3	6.5	145.5		238	.24	.02	5.83	8.0	4.7	6.2	3.6	50.3	.5
261	-.17	-.02	5.90	.6	2.2	12.3	8.0	151.3		239	.24	.02	5.84	8.4	6.1	6.2	2.3	52.3	
262	-.10	-.01	5.90	.6	3.8	12.3	7.0	155.7		240	.26	.01	5.85	8.3	4.3	6.6	4.1	56.1	
263	-.09	-.01	5.90	.4	2.4	12.3	8.8	161.4		241	.24	.01	5.85	8.8	5.8	7.0	2.8	58.4	
264	-.10	-.01	5.90	.3	3.4	12.6	7.9	166.1		242	.25	.00	5.86	8.4	4.0	7.0	4.8	62.4	
265	-.09	-.01	5.91	.2	2.3	12.6	9.2	171.9		243	.25	.00	5.86	8.8	5.4	7.2	3.6	65.1	
266	-.08	-.01	5.91	.2	3.5	13.0	8.2	176.5		244	.24	.00	5.87	8.4	4.1	7.5	5.3	69.1	
267	.00	.00	5.91	.0	2.3	13.1	9.4	182.3		245	.24	.00	5.87	8.6	4.9	6.5	4.3	72.3	
268	.00	.00	5.91	.0	3.3	13.3	8.4	187.1		246	.25	-.01	5.88	8.2	3.9	7.6	5.8	76.4	
269	.00	.00	5.92	.0	2.3	13.5	9.7	192.8		247	.24	-.01	5.88	7.3	4.6	6.9	5.2	79.9	
270	.00	.00	5.92	.0	3.0	13.6	9.3	197.9		248	.24	-.02	5.88	6.8	3.8	7.8	6.6	84.2	
271	.00	.00	5.93	.0	2.0	13.8	10.3	204.0		249	.23	-.02	5.88	6.3	4.8	8.2	5.5	87.5	
272	.00	.00	5.93	.0	2.8	13.6	9.7	209.3		250	.24	-.02	5.89	5.7	3.2	8.2	7.1	92.4	
273	-.01	.00	5.93	.1	1.8	13.9	10.9	215.6		251	.21	-.01	5.89	5.7	4.7	8.5	5.8	95.8	
274	.00	.00	5.94	.0	2.7	14.1	10.1	221.0		252	.22	-.02	5.89	5.1	3.0	8.8	7.6	100.8	
275	.00	.00	5.94	.1	.2	14.3	12.5	228.8		253	.19	-.02	5.89	4.8	4.3	8.8	5.8	104.6	
276	.00	.00	5.95	.0	1.5	14.7	11.4	235.4		254	.19	-.02	5.89	4.4	2.9	9.0	7.8	109.8	
277	.00	.00	5.95	.0	-.1	14.4	13.1	243.7		255	.19	-.02	5.89	3.8	3.8	9.0	7.0	114.1	
278	.00	.00	5.96	.0	1.2	15.0	12.1	250.5		256	.16	-.02	5.90	3.0	2.9	9.1	7.8	119.2	
279	.00	.00	5.96	.0	-.3	14.7	13.8	258.8		257	.11	-.01	5.90	2.9	3.7	9.5	7.3	123.6	
280	.00	.00	5.97	.0	.8	14.9	13.1	266.1		258	.05	.00	5.90	1.8	2.4	9.1	8.8	129.3	
281	.00	.00	5.97	.0	-.1	15.1	14.1	274.3		259	.05	.00	5.90	1.5	3.7	9.4	8.1	133.6	
282	.00	.00	5.97	.0	.6	15.2	13.6	281.7		260	.18	-.02	5.91	1.0	2.7	9.4	8.2	139.0	
283	.00	.00	5.98	.0	.0	15.9	14.3	289.8		261	-.14	.00	5.91	.9	3.7	9.4	8.1	143.3	
284	.15	.04	6.02	.1	.3	15.6	13.9	297.6		262	-.17	-.02	5.91	.4	2.7	10.0	9.4	148.7	
285	.14	.03	6.02	.6	.4	15.9	14.1	305.2		263	-.12	-.01	5.91	.7	4.2	10.4	7.8	152.5	
286	.17	.03	6.04	1.1	1.1	16.5	13.5	312.2		264	-.13	-.01	5.91	.4	2.5	10.5	9.6	158.1	
287	.17	.03	6.05	1.9	.2	16.7	14.7	320.1		265	-.13	-.01	5.92	.3	3.6	10.7	8.9	162.7	
288	.17	.03	6.05	2.3	1.2	16.8	13.8	327.0		266	-.06	.00	5.92	.2	2.4	10.9	10.3	168.3	
289	.19	.04	6.07	2.9	-.2	16.5	15.7	335.2		267	-.08	-.01	5.92	.1	3.5	10.9	9.3	172.9	
290	.20	.03	6.07	3.7	1.2		14.4	342.1		268	-.04	.00	5.93	.1	2.3	11.0	10.7	178.6	
Z=91										269	.00	.00	5.93	.0	3.6	11.2	9.4	183.1	
196	.37	.00	5.70	7.2		-3.0		57.5		270	.00	.00	5.93	.0	2.6	11.5	10.7	188.6	
197	.38	-.01	5.71	7.1	12.3	-2.8		53.3		271	.00	.00	5.94	.0	3.0	11.5	10.1	193.7	
198	.38	-.02	5.71	6.3	10.0	-2.7	-10.8	51.4		272	.00	.00	5.94	.0	2.2	11.7	11.3	199.6	
199	.38	-.02	5.72	6.2	12.2	-2.6	-12.4	47.3		273	.00	.00	5.95	.0	3.0	11.9	10.6	204.7	
200	.39	-.02	5.73	5.4	9.8	-2.3	-10.1	45.6		274	-.03	.00	5.95	.1	1.9	12.0	11.9	210.8	
201	.39	-.02	5.74	5.3	11.8	-2.0	-11.8	41.9		275	.00	.00	5.95	.0	2.6	12.0	11.1	216.3	
202	.40	-.02	5.76	4.3	9.3	-2.0	-9.0	40.7		276	.00	.00	5.96	.0	.3	12.1	13.7	224.1	
203	.40	-.02	5.76	4.1	11.3	-1.7	-10.6	37.5		277	.00	.00	5.96	.0	1.6	12.2	12.6	230.5	
204	.41	-.02	5.77	3.2	9.2	-1.6	-8.3	36.4		278	.00	.00	5.96	.1	.2	12.6	14.1	238.4	
205	.41	-.02	5.78	2.9	11.0	-1.4	-10.0	33.4		279	.00	.00	5.97	.0	1.5	12.8	12.9	245.0	
206	.43	-.03	5.80	1.9	9.2	-.8	-7.9	32.3		280	.00	.00	5.97	.1	.1	13.1	14.5	253.0	
207	.43	-.03	5.81	1.7	10.5	-1.2	-9.1	29.9		281	.00	.00	5.98	.1	.9	13.3	13.8	260.2	
208	.43	-.03	5.81	.7	8.6	-1.6	-6.8	29.3		282	.00	.00	5.98	.1	.1	13.4	14.8	268.1	
209	-.15	-.01	5.63	1.2	11.1	-1.0	-9.1	26.3		283	.00	.00	5.99	.0	.7	13.5	14.4	275.5	
210	-.13	-.01	5.63	.8	8.7	-.7	-7.0	25.6		284	.00	.00	5.99	.0	-.1	13.4	15.4	283.7	
211	-.12	-.01	5.63	.9	10.7	-.5	-9.2	23.0		285	.15	.04	6.03	.0	.6	13.7	14.9	291.2	
212	-.10	-.01	5.63	.8	8.6	-.4	-7.1	22.5		286	.16	.04	6.05	.4	.5	13.8	16.0	298.8	
213	-.08	-.02	5.63	.1	10.1	-.4	-8.3	20.4	-.7	287	.17	.03	6.05	1.5	1.5	14.1	15.0	305.4	
214	.05	-.01	5.63	.8	8.8	.2	-6.8	19.7	-.4	288	.18	.04	6.06	2.2	.3	14.2	16.3	313.2	
215	-.01	.00	5.64	.0	10.1	-.7	-9.0	17.7	.1	289	.19	.04	6.08	2.6	1.8	14.8	14.8	319.5	
216	.00	.00	5.64	.0	8.8	.6	-7.1	16.9	.9	290	.20	.03	6.08	3.1	-.1	14.8	16.7	327.7	
217	.00	.00	5.64	.0	9.4	.7	-7.6	15.6	1.4	291	.20	.03	6.09	3.8	1.3	14.9	16.0	334.5	
218	.00	.00	5.65	.1	5.9	.8	-3.0	17.8	.9	292	.21	.03	6.10	4.7	.4		16.6	342.1	
219	.00	.00	5.66	.0	8.5	1.2	-5.3	17.3	1.2	Z=92									
220	-.01	.00	5.66	.1	6.0	1.3	-2.5	19.4	.9	198	.37	.00	5.71	8.2		-1.6		62.2	
221	.00	.00	5.67	.0	7.8	1.7	-4.1	19.7	.7	199	.37	-.01	5.72	7.3	10.6	-1.0		59.7	
222	.00	.00	5.67	.0	5.8	1.9	-1.9	22.0		200	.39	-.01	5.74	7.3	12.1	-1.1	-14.9	55.7	
223	.10	.01	5.69	.2	7.4	2.3	-3.2	22.6	-.3	201	.38	-.02	5.74	6.3	10.1	-.8	-12.5	53.7	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
202	.39	-.02	5.75	6.4	12.0	-.6	-14.4	49.7		276	.00	.00	5.97	.0	3.0	13.2	9.1	210.3	
203	.40	-.03	5.77	5.4	9.8	-.1	-11.9	48.0		277	.00	.00	5.97	.1	.5	13.4	11.7	217.9	
204	.40	-.03	5.77	5.1	11.5	.1	-13.1	44.7		278	.00	.00	5.97	.0	1.8	13.6	10.4	224.3	
205	.42	-.02	5.80	4.2	9.3	.3	-11.0	43.4		279	.00	.00	5.98	.0	.2	13.6	12.1	232.1	
206	.43	-.03	5.80	4.0	11.3	.6	-12.6	40.2		280	.00	.00	5.98	.0	1.7	13.8	11.1	238.5	
207	.43	-.03	5.81	3.0	9.3	.6	-10.6	39.0		281	.00	.00	5.99	.0	.2	13.9	12.3	246.3	
208	.43	-.03	5.82	2.8	10.9	1.1	-12.0	36.1		282	.00	.00	5.99	.0	1.1	14.1	11.7	253.3	
209	.52	-.03	5.93	1.8	8.8	1.3	-9.8	35.3		283	.00	.00	5.99	.0	.3	14.3	12.9	261.1	
210	.52	-.03	5.93	1.7	10.8	.9	-11.5	32.6		284	.00	.00	6.00	.0	.9	14.5	12.3	268.3	
211	-.15	-.01	5.64	.9	8.5	.7	-9.3	32.2		285	.00	.00	6.01	.0	.2	14.8	13.3	276.2	
212	-.13	-.01	5.65	.8	10.7	.7	-11.2	29.6		286	.15	.04	6.05	.8	1.5	15.7	12.1	282.8	
213	-.13	-.01	5.65	1.0	9.0	1.1	-9.9	28.7		287	.17	.03	6.06	1.2	.5	15.7	13.3	290.4	
214	-.06	.00	5.65	.7	10.3	1.2	-10.7	26.5		288	.17	.03	6.07	2.0	1.6	15.8	12.7	296.9	
215	.00	.00	5.65	.3	7.9	.3	-8.3	26.7		289	.17	.03	6.07	3.1	.3	15.8	14.4	304.7	
216	.00	.00	5.65	.0	10.7	.9	-10.4	24.1		290	.20	.03	6.09	3.4	1.7	15.8	12.5	311.0	
217	-.03	.00	5.65	.1	8.9	1.0	-8.9	23.3		291	.20	.03	6.09	3.9	.6	16.5	13.8	318.5	
218	.00	.00	5.66	.0	10.6	2.2	-10.4	20.8		292	.21	.03	6.11	4.2	1.0	16.2	13.1	325.6	
219	.00	.00	5.66	.1	6.2	2.4	-6.4	22.6	.6	293	.21	.03	6.11	5.0	.4	16.2	15.2	333.2	
220	.00	.00	5.67	.0	8.8	2.7	-7.6	21.9		294	.21	.03	6.12	5.7	1.3		14.3	340.0	
221	.01	.00	5.68	.1	6.2	2.9	-4.8	23.8		295	.19	.02	6.11	6.2	.1		15.3	348.0	
222	.00	.00	5.68	.0	7.9	3.1	-6.4	23.9		296	.23	.03	6.13	7.0	1.3		14.3	354.7	
223	.00	.00	5.69	.0	6.2	3.5	-4.3	25.9	.0	297	.20	.02	6.12	7.4	.1		15.6	362.7	
224	.15	.04	5.72	.3	7.7	3.7	-5.5	26.3	-.6	298	.24	.02	6.14	8.2	1.0		14.8	369.8	
225	.17	.02	5.73	.9	6.6	4.1	-4.1	27.7	-.4	299	.22	.02	6.15	8.6	.1		15.8	377.8	
226	.17	.02	5.74	1.9	8.0	4.4	-5.3	27.8	-.5	300	.22	.02	6.15	9.0	.7		15.2	385.1	
227	.19	.04	5.76	2.1	6.6	4.9	-3.5	29.3	-.3	301	.22	.02	6.16	9.2	-.6		16.7	393.8	
228	.21	.04	5.77	3.3	8.1	5.3	-4.8	29.3	-.1	302	.23	.01	6.16	9.9	1.0		15.5	400.9	
229	.21	.04	5.78	4.1	6.0	5.3	-2.7	31.4	-.2	303	.25	.00	6.17	10.2	.2		16.4	408.8	
230	.21	.04	5.79	4.6	7.6	5.8	-3.8	31.9	-.3	304	.26	.00	6.17	10.7	.3		15.8	416.5	
231	.22	.03	5.79	5.2	5.9	5.9	-1.8	34.0	-.2	305	.26	.00	6.18	10.8	-.5		17.5	425.1	
232	.22	.03	5.80	6.0	7.3	6.1	-3.2	34.8	-.2	306	.26	.00	6.18	11.1	.8		16.1	432.4	
233	.23	.04	5.81	6.5	5.7	6.4	-1.0	37.2	-.2	307	.26	.00	6.19	10.9	-.6		17.5	441.1	
234	.23	.03	5.82	7.2	7.0	6.6	-2.4	38.2	-.1	308	.25	-.01	6.18	11.5	.6		16.4	448.5	
235	.23	.03	5.82	7.5	5.6	7.0	-.5	40.7	.2	309	.25	-.01	6.19	11.1	-1.2		18.3	457.8	
236	.24	.02	5.83	8.1	6.7	7.1	-1.6	42.1	.3	310	.22	.00	6.19	11.4	.2		17.8	465.7	
237	.24	.02	5.84	8.2	5.1	7.4	.2	45.1	.3	Z = 93									
238	.24	.02	5.84	8.8	6.5	7.5	-.9	46.7	.6	200	.29	.02	5.67	8.1		-3.5		70.6	
239	.24	.01	5.85	8.7	4.7	7.6	1.0	50.0	.5	201	.28	.01	5.68	8.0		-3.2		66.1	
240	.24	.01	5.86	9.3	6.1	7.6	-.1	52.0	.7	202	.39	-.02	5.76	6.9	10.0	-3.2	-10.8	64.2	
241	.25	.01	5.86	8.9	4.5	7.9	1.9	55.5		203	.39	-.02	5.77	6.8	12.3	-2.9	-12.3	59.9	
242	.26	.01	5.87	9.4	6.0	8.0	.6	57.6		204	.40	-.03	5.78	6.1	10.2	-2.5	-10.6	57.8	
243	.25	.00	5.87	9.0	4.3	8.3	2.5	61.4		205	.40	-.03	5.78	5.8	11.5	-2.4	-12.0	54.4	
244	.25	.00	5.88	9.5	5.7	8.6	1.2	63.8		206	.40	-.03	5.79	4.9	9.6	-2.1	-9.6	52.8	
245	.25	.00	5.88	9.1	3.9	8.4	3.1	67.9		207	.41	-.03	5.80	4.5	11.3	-2.1	-11.1	49.6	
246	.26	.00	5.89	9.3	5.4	9.0	1.9	70.6		208	.42	-.03	5.82	3.5	9.5	-1.9	-9.0	48.1	
247	.24	.00	5.89	8.9	3.9	9.0	3.1	74.7		209	.42	-.03	5.82	3.2	11.1	-1.7	-10.5	45.1	
248	.24	-.01	5.89	8.9	5.2	9.6	1.9	77.6		210	.42	-.03	5.83	2.3	9.1	-1.5	-.8.1	44.1	
249	.24	-.02	5.89	7.8	3.7	9.5	3.5	82.0		211	.42	-.04	5.84	1.9	10.7	-1.6	-9.4	41.5	
250	.25	-.02	5.90	7.3	4.8	9.5	2.7	85.3		212	.42	-.04	5.84	1.1	8.8	-1.3	-7.2	40.8	
251	.23	-.02	5.90	6.2	3.4	9.8	4.3	90.0		213	.42	-.04	5.85	.5	10.3	-1.7	-8.5	38.6	
252	.24	-.02	5.91	6.1	4.8	9.8	3.2	93.3		214	-.13	-.01	5.66	.7	9.6	-1.2	-7.3	37.1	
253	.24	-.02	5.91	5.0	2.5	9.3	5.5	98.8		215	-.09	-.01	5.66	.3	10.2	-1.3	-9.1	35.0	
254	.19	-.02	5.91	4.9	4.8	9.9	3.8	102.0		216	.00	.00	5.66	.4	8.6	-.5	-7.0	34.5	
255	.19	-.02	5.91	4.4	3.0	10.0	5.6	107.1		217	-.01	.00	5.66	.0	10.4	-.8	-8.9	32.2	
256	.19	-.02	5.91	3.8	3.7	10.0	5.1	111.4		218	-.03	.00	5.67	.3	9.0	-.7	-7.5	31.2	
257	.18	-.02	5.91	3.0	3.2	10.3	6.3	116.2		219	.00	.00	5.67	.0	10.3	-1.0	-9.0	29.0	
258	.13	-.01	5.91	2.9	3.9	10.4	5.6	120.4		220	.00	.00	5.68	.1	7.6	.4	-6.4	29.5	
259	.00	.00	5.91	2.1	3.0	11.0	6.5	125.5		221	.00	.00	5.68	.0	9.0	.6	-8.0	28.6	
260	.40	.00	6.09	1.0	2.8	10.1	7.0	130.8		222	.00	.00	5.69	.0	6.3	.8	-3.9	30.3	
261	.16	-.02	5.92	1.0	3.6	11.0	7.4	135.3		223	.00	.00	5.70	.0	8.2	1.1	-5.4	30.1	
262	-.15	.00	5.93	1.3	4.0	11.3	6.1	139.3		224	.00	.00	5.70	.0	6.4	1.4	-3.4	31.8	
263	-.15	-.01	5.93	.6	2.7	11.3	7.4	144.7		225	.15	.03	5.74	.3	8.0	1.7	-4.9	31.9	-.3
264	-.12	.00	5.93	.7	4.2	11.3	6.0	148.6		226	.18	.04	5.76	.9	6.8	1.9	-2.9	33.1	
265	-.12	-.01	5.93	.5	2.8	11.6	7.5	153.8		227	.19	.04	5.77	2.1	8.4	2.3	-4.3	32.8	-.2
266	-.13	-.01	5.93	.5	3.8	11.9	6.4	158.0		228	.20	.04	5.78	2.5	6.7	2.5	-2.3	34.1	
267	-.06	.00	5.93	.2	2.5	12.0	8.2	163.6		229	.21	.04	5.79	3.5	8.1	2.5	-3.2	34.1	-.4
268	-.08	-.01	5.94	.3	3.8	12.3	7.1	167.9		230	.21	.04	5.80	4.4	6.6	3.1	-1.5	35.6	-.4
269	-.08	-.01	5.94	.1	2.2	12.2	8.8	173.8		231	.22	.03	5.80	5.1	7.8	3.3	-2.7	35.9	-.3
270	.00	.00	5.94	.0	3.8	12.5	7.3	178.0		232	.22	.04	5.81	5.6	6.0	3.3	-.6	38.0	
271	.00	.00	5.95	.0	2.5	12.4	8.6	183.6		233	.25	.03	5.84	6.4	7.9	3.9	-2.1	38.2	-.2
272	.00	.00	5.95	.0	3.3	12.7	8.0	188.3		234	.25	.03	5.84	6.8	5.6	3.9	.1	40.6	-.6
273	.00	.00	5.95	.0	2.3	12.9	9.1	194.0		235	.25	.03	5.85	7.7	7.4	4.3	-1.4	41.2	-.2
274	.00	.00	5.96	.0	3.2	13.1	8.3	198.9		236	.26	.02	5.85	7.9	5.6	4.3	.6	43.7	-.4
275	-.01	.00	5.96	.1	1.8	12.9	9.9	205.2		237	.24	.02	5.84	8.4	6.9	4.5	-.2	44.9	.0

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
238	.27	.02	5.86	8.8	5.4	4.8	1.5	47.6	-.1	312	.23	-.01	6.21	11.2	-.8		19.8	464.8	
239	.25	.02	5.86	9.3	6.6	4.9	-.2	49.0	.3	313	.21	-.01	6.19	11.4	-.1		19.0	473.0	
240	.24	.01	5.86	9.4	5.1	5.3	1.9	52.1	.3	314	.22	-.01	6.21	11.1	-.7		21.3	481.7	
241	.24	.01	5.87	9.7	6.5	5.6	.3	53.7	.6	315	.22	-.01	6.21	11.0	.1	17.7	20.4	489.7	
242	.25	.01	5.87	9.5	4.7	5.8	2.6	57.1		316	.22	-.01	6.22	10.6	-1.3	17.9	22.0	499.1	
243	.26	.01	5.88	10.0	6.2	6.0	.9	58.9		317	.22	-.01	6.22	10.6	.3	18.1	20.5	506.8	
244	.25	.00	5.89	9.6	4.4	6.2	3.0	62.6		318	.24	-.02	6.22	10.4	-1.4	18.0	21.9	516.3	
245	.25	.00	5.89	9.9	5.8	6.2	1.8	64.8		319	.21	-.02	6.22	10.0	-.3	17.9	21.0	524.6	
246	.25	.00	5.89	9.4	4.2	6.5	3.6	68.7		320	.21	-.02	6.22	9.7	.4		20.7	532.2	
247	.26	.00	5.90	9.4	5.1	6.2	2.9	71.6		Z = 94									
248	.27	-.01	5.91	8.8	4.0	6.3	4.6	75.7		202	.30	.00	5.69	9.2		-1.5		75.0	
249	.25	-.01	5.91	8.8	5.2	6.4	3.8	78.5		203	.28	.00	5.70	8.4	10.8	-.8		72.3	
250	.24	-.02	5.91	8.4	4.0	6.7	5.2	82.6		204	.39	-.02	5.78	8.0	11.9	-1.2	-14.9	68.4	
251	.25	-.02	5.91	7.8	5.0	7.0	4.2	85.6		205	.38	-.02	5.78	7.2	10.1	-1.3	-12.8	66.4	
252	.23	-.02	5.91	6.9	3.6	7.2	5.8	90.1		206	.36	-.02	5.79	6.9	12.0	-.8	-14.4	62.5	
253	.21	-.01	5.91	5.9	4.9	7.3	5.2	93.3		207	.40	-.03	5.80	5.9	9.9	-.6	-12.3	60.7	
254	.24	-.02	5.92	5.3	3.2	7.9	6.5	98.2		208	.40	-.03	5.81	5.6	11.6	-.3	-13.7	57.1	
255	.21	-.02	5.92	5.2	4.9	7.9	5.8	101.4		209	.40	-.03	5.82	4.5	9.6	-.2	-11.5	55.6	
256	.19	-.02	5.92	4.6	3.2	8.0	6.8	106.3		210	.42	-.04	5.84	4.3	11.5	.2	-13.2	52.2	
257	.23	-.03	5.93	4.2	4.5	8.8	5.8	109.9		211	.50	-.02	5.93	3.4	9.3	.5		51.0	
258	.16	-.02	5.93	3.5	3.2	8.7	7.0	114.8		212	.50	-.02	5.94	3.3	11.1	.9	-12.4	48.0	
259	.17	-.02	5.93	3.1	3.8	8.7	6.6	119.0		213	.50	-.02	5.95	2.2	9.0	1.0	-10.1	47.1	
260	.18	-.02	5.93	2.5	3.3	9.1	7.4	123.7		214	.52	-.03	5.97	1.8	10.7	1.4	-11.7	44.5	
261	.16	-.02	5.93	2.2	4.0	10.2	6.8	127.8		215	-.13	-.01	5.68	1.0	8.4	.3	-.9.2	44.1	
262	.16	-.02	5.93	1.3	2.7	9.3	7.7	133.2		216	-.09	-.01	5.68	.6	10.7	.8	-11.3	41.5	
263	-.15	.00	5.94	1.5	4.0	9.3	6.0	137.3		217	.00	.00	5.68	.5	8.5	.7	-.9.1	41.1	
264	-.15	.00	5.95	.8	2.8	9.5	7.7	142.5		218	.00	.00	5.68	.0	10.4	.8	-11.0	38.7	
265	-.15	-.01	5.95	1.0	4.3	9.6	7.0	146.3		219	-.03	.00	5.68	.3	8.8	.5	-.9.1	38.0	
266	-.12	-.01	5.94	.5	2.7	9.5	8.8	151.6		220	.00	.00	5.68	.0	10.2	.4	-10.4	35.9	
267	-.13	-.01	5.94	.5	4.3	9.9	7.6	155.4		221	.00	.00	5.69	.1	7.4	.3	-.7.8	36.5	
268	-.07	.00	5.95	.3	2.7	10.1	8.8	160.8		222	.00	.00	5.70	.0	10.5	1.7	-10.6	34.2	
269	-.07	-.01	5.95	.3	3.9	10.3	7.7	164.9		223	-.01	.00	5.70	.1	6.7	2.0	-.7.1	35.6	
270	-.08	-.01	5.95	.1	2.4	10.4	9.3	170.6		224	.00	.00	5.71	.0	8.5	2.3	-.7.6	35.1	
271	-.04	.00	5.95	.2	3.7	10.3	8.3	175.0		225	.00	.00	5.72	.0	6.5	2.3	-.5.4	36.7	
272	-.04	.00	5.96	.0	2.8	10.6	9.5	180.3		226	.18	.03	5.76	.8	8.8	3.2	-.7.4	36.0	
273	.00	.00	5.96	.0	3.4	10.6	8.9	184.9		227	.19	.03	5.77	1.4	7.0	3.3	-.5.5	37.1	
274	.00	.00	5.97	.0	2.4	10.8	10.2	190.6		228	.22	.02	5.79	2.7	8.7	3.6	-.6.8	36.5	-.4
275	.00	.00	5.97	.0	3.3	10.9	9.4	195.3		229	.25	.03	5.82	3.5	7.2	4.1	-.5.2	37.3	.1
276	-.01	.00	5.97	.2	2.1	11.2	10.6	201.3		230	.25	.03	5.83	4.5	8.3	4.3	-.6.6	37.1	-.2
277	.00	.00	5.97	.0	3.1	11.4	9.7	206.2		231	.22	.03	5.81	4.9	6.6	4.3	-.4.3	38.6	
278	.00	.00	5.98	.0	.4	11.3	12.7	213.9		232	.25	.03	5.84	5.8	8.1	4.6	-.5.4	38.6	-.2
279	.00	.00	5.98	.0	1.9	11.5	11.3	220.1		233	.25	.03	5.84	6.3	6.4	5.1	-.4.1	40.2	-.2
280	-.01	.00	5.99	.0	.7	12.0	12.9	227.4		234	.25	.03	5.85	7.3	7.8	4.9	-.4.8	40.5	-.2
281	.00	.00	5.99	.0	1.5	11.8	11.9	234.0		235	.26	.02	5.85	7.5	6.0	5.3	-.2.8	42.6	-.4
282	.00	.00	6.00	.0	.4	12.0	13.1	241.6		236	.26	.02	5.86	8.4	7.6	5.4	-.4.3	43.1	-.2
283	.00	.00	6.00	.0	1.5	12.4	12.3	248.2		237	.25	.03	5.86	8.7	6.1	5.9	-.2.5	45.1	.0
284	.00	.00	6.01	.0	.2	12.3	13.9	256.1		238	.24	.02	5.86	9.3	7.1	6.1	-.3.3	46.1	.0
285	.00	.00	6.01	.0	1.3	12.7	13.1	262.9		239	.25	.02	5.87	9.0	4.9	5.6	-.1.0	49.3	-.7
286	.00	.00	6.02	.0	.3	12.9	13.9	270.6		240	.25	.02	5.88	9.6	7.1	6.1	-.2.3	50.2	-.1
287	.17	.03	6.07	.8	1.6	13.0	12.7	277.1		241	.27	.02	5.89	9.6	4.9	6.0	-.1	53.4	-.4
288	.17	.03	6.07	1.4	.9	13.4	14.1	284.2		242	.24	.01	5.88	10.1	7.0	6.4	-.1.5	54.5	.2
289	.17	.03	6.08	2.6	2.0	13.9	13.0	290.3		243	.26	.01	5.89	9.7	4.6	6.4	.3	58.0	-.3
290	.20	.03	6.10	2.9	-.2	13.5	15.5	298.5		244	.23	.01	5.89	10.3	6.6	6.7	-.9	59.5	.3
291	.20	.03	6.10	3.6	1.9	13.6	14.4	304.7		245	.25	.00	5.90	9.8	4.5	6.8	1.1	63.1	.0
292	.20	.03	6.11	4.4	.3	13.3	15.4	312.5		246	.25	.00	5.90	10.2	6.1	7.1	.0	65.1	.3
293	.21	.03	6.12	4.9	2.5	14.8	13.4	318.0		247	.27	-.01	5.91	9.7	4.4	7.3	1.6	68.7	
294	.21	.03	6.13	5.5	.4	14.9	15.4	325.6		248	.24	.00	5.91	9.8	5.7	7.8	.6	71.1	
295	.21	.03	6.13	5.8	1.0	14.6	15.6	332.6		249	.24	.00	5.92	9.6	4.4	8.3	2.1	74.7	
296	.22	.02	6.14	6.4	.2	14.8	16.6	340.5		250	.25	-.01	5.93	9.5	5.4	8.4	1.3	77.4	
297	.23	.03	6.15	7.1	1.4	14.9	15.1	347.2		251	.24	-.02	5.93	9.1	4.0	8.5	2.7	81.4	
298	.24	.02	6.15	7.6	.3	15.0	16.7	355.0		252	.24	-.02	5.93	9.0	5.2	8.7	1.7	84.3	
299	.24	.02	6.16	8.3	1.1	15.1	15.5	362.0		253	.25	-.02	5.93	8.1	4.3	9.3	2.6	88.1	
300	.24	.02	6.16	8.7	.1	15.1	17.2	369.9		254	.23	-.02	5.93	7.6	4.4	8.9	2.2	91.7	
301	.22	.02	6.17	9.1	.9	15.3	16.3	377.1		255	.24	-.02	5.94	6.3	4.1	9.9	3.8	95.6	
302	.22	.02	6.17	9.4	-.2	15.7	17.7	385.4		256	.21	-.02	5.94	5.5	4.2	9.2	3.0	99.5	
303	.23	.01	6.18	9.9	1.1	15.8	16.4	392.4		257	.19	-.02	5.94	5.0	3.5	9.5	5.0	104.1	
304	.23	.01	6.18	10.1	-.3	15.3	17.9	400.8		258	.23	-.03	5.94	4.6	4.4	9.5	3.8	107.8	
305	.26	.00	6.18	10.8	1.2	16.3	16.5	407.6		259	.20	-.02	5.94	3.7	3.4	9.6	4.8	112.4	
306	.25	.00	6.19	10.6	-.6	16.1	18.5	416.3		260	.20	-.02	5.94	3.4	4.2	10.0	4.3	116.3	
307	.26	.00	6.20	11.1	.8	16.1	17.3	423.6		261	.18	-.02	5.94	2.6	3.3	10.0	5.1	121.1	
308	.24	.00	6.19	11.3	-.5	16.2	18.7	432.1		262	.40	.00	6.11	1.8	3.6	9.6	5.3	125.6	
309	.25	-.01	6.20	11.7	.7	16.3	17.5	439.5		263	.42	.00	6.14	.5	2.3	9.2	7.2	131.3	
310	.25	-.01	6.20	11.5	-.3	17.2	18.6	447.9		264	.40	.00	6.13	.7	4.5	9.7	5.7	134.9	
311	.22	.00	6.20	11.5	.1	17.1	18.1	455.9		265	-.14	.00	5.96	.9	3.7	10.6	5.7	139.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
266	-.15	-.01	5.96	1.2	4.5	10.7	5.0	142.8		228	.20	.03	5.79	1.5	7.4	1.1	-4.1	43.3	
267	-.14	-.01	5.96	.9	3.0	11.1	6.4	147.9		229	.21	.04	5.80	2.5	8.8	1.2	-5.3	42.5	
268	-.13	-.01	5.95	.7	4.0	10.8	5.6	152.0		230	.21	.03	5.81	3.0	6.9	1.0	-3.2	43.7	
269	-.06	.00	5.96	.2	2.8	10.8	7.2	157.3		231	.22	.03	5.82	4.4	8.8	1.5	-4.9	43.0	
270	-.08	-.01	5.96	.2	4.0	10.9	6.2	161.4		232	.23	.03	5.83	5.2	7.1	1.9	-3.1	44.0	
271	-.08	-.01	5.97	.0	2.8	11.2	7.3	166.7		233	.23	.03	5.83	5.6	7.7	1.5	-3.6	44.3	
272	-.04	.00	5.97	.0	4.0	11.5	6.6	170.7		234	.23	.03	5.84	6.2	7.1	2.2	-2.1	45.3	
273	.00	.00	5.97	.0	2.8	11.6	7.8	176.0		235	.23	.03	5.85	7.1	8.0	2.4	-3.3	45.4	
274	.00	.00	5.97	.0	3.6	11.8	7.0	180.4		236	.25	.03	5.86	7.4	6.1	2.5	-1.2	47.4	
275	.00	.00	5.98	.0	2.6	12.0	8.2	185.9		237	.26	.02	5.87	8.1	7.9	2.8	-2.8	47.6	-1.0
276	.00	.00	5.98	.0	3.3	11.9	7.6	190.7		238	.27	.02	5.88	8.6	6.2	3.0	-.8	49.4	-1.0
277	-.03	.00	5.98	.0	2.3	12.1	9.0	196.5		239	.25	.02	5.88	9.2	7.2	3.2	-2.0	50.3	-.9
278	.00	.00	5.99	.0	3.4	12.3	7.7	201.2		240	.25	.02	5.88	9.3	5.9	4.1	.1	52.5	-1.0
279	.01	.00	5.99	.1	.5	12.4	10.7	208.8		241	.25	.01	5.88	9.8	7.0	4.0	-1.2	53.5	-.6
280	.00	.00	6.00	.0	2.3	12.8	9.5	214.5		242	.25	.01	5.89	9.8	5.5	4.6	.7	56.0	-.6
281	.00	.00	6.00	.0	.5	12.7	11.2	222.1		243	.24	.01	5.90	10.2	6.4	4.1	-.3	57.7	-.5
282	.00	.00	6.01	.0	1.6	12.8	10.2	228.5		244	.25	.01	5.90	9.9	5.3	4.9	1.5	60.4	-.5
283	.00	.00	6.01	.0	.7	13.0	11.6	235.9		245	.23	.01	5.91	10.5	6.5	4.8	.3	62.0	-.1
284	.00	.00	6.01	.0	1.8	13.3	10.5	242.2		246	.25	.00	5.91	10.1	5.1	5.3	2.1	65.0	.0
285	.00	.00	6.02	.0	.4	13.5	11.8	249.8		247	.25	.00	5.92	10.4	6.0	5.3	1.1	67.1	
286	.00	.00	6.03	.0	1.2	13.5	11.2	256.7		248	.25	.00	5.92	9.9	4.6	5.5	2.9	70.5	
287	.15	.03	6.07	.1	.4	13.6	12.3	264.3		249	.24	.00	5.93	10.2	6.0	5.7	1.8	72.6	
288	.17	.03	6.08	1.1	2.3	14.3	11.1	270.1		250	.24	.00	5.93	9.6	4.6	5.9	3.2	76.1	
289	.17	.03	6.09	1.5	.9	14.3	12.2	277.3		251	.25	-.01	5.94	9.7	5.4	5.9	2.4	78.8	
290	.17	.03	6.09	2.8	2.3	14.5	10.8	283.0		252	.25	-.01	5.94	9.1	4.3	6.1	4.1	82.6	
291	.20	.03	6.11	3.6	.7	15.4	12.4	290.4		253	.25	-.01	5.95	9.0	5.2	6.1	3.0	85.4	
292	.21	.03	6.12	3.9	1.3	14.9	12.3	297.1		254	.25	-.02	5.94	8.4	4.0	5.8	4.7	89.5	
293	.21	.03	6.12	4.6	.6	15.2	13.8	304.6		255	.25	-.02	5.95	8.2	5.8	7.2	3.1	91.8	
294	.21	.03	6.13	5.6	2.5	15.1	12.1	310.2		256	.23	-.02	5.95	7.0	3.4	6.4	4.9	96.5	
295	.21	.03	6.14	6.3	1.2	15.8	12.6	317.1		257	.24	-.02	5.95	6.3	5.4	7.7	3.5	99.1	
296	.22	.02	6.14	6.6	1.3	16.0	12.1	323.9		258	.21	-.02	5.95	5.1	3.3	7.4	5.7	103.9	
297	.22	.02	6.15	6.7	-.1	15.7	13.9	332.0		259	.21	-.02	5.96	4.6	4.4	7.4	4.3	107.6	
298	.22	.02	6.16	7.4	1.8	16.2	13.4	338.3		260	.23	-.03	5.96	3.8	3.7	7.8	6.0	112.0	
299	.24	.02	6.16	7.8	-.1	15.8	14.5	346.5		261	.22	-.02	5.96	3.4	4.1	7.7	5.6	115.9	
300	.24	.02	6.17	8.7	1.8	16.5	13.4	352.8		262	.18	-.02	5.96	2.9	3.8	8.1	6.3	120.2	
301	.26	.01	6.18	8.9	.1	16.5	14.7	360.8		263	.11	-.01	5.96	2.6	4.2	8.8	5.7	124.1	
302	.22	.02	6.18	9.5	1.2	16.7	14.1	367.7		264	.16	-.02	5.96	1.6	3.0	9.4	6.6	129.1	
303	.22	.02	6.18	9.7	-.2	16.7	15.7	376.0		265	.40	.00	6.14	.8	3.6	8.5	6.0	133.6	
304	.23	.01	6.19	10.2	1.2	16.8	14.6	382.8		266	-.15	.00	5.97	.9	3.8	8.7	6.9	137.8	
305	.23	.01	6.20	10.2	-.1	17.0	16.0	391.0		267	-.15	.00	5.97	1.1	4.4	8.6	5.6	141.5	
306	.25	.00	6.20	10.8	1.4	17.1	14.5	397.8		268	-.14	-.01	5.97	.8	3.2	8.7	7.7	146.4	
307	.25	.00	6.20	10.7	-.4	17.3	16.0	406.3		269	-.13	-.01	5.97	.8	4.4	9.2	6.5	150.1	
308	.26	.00	6.21	11.2	.9	17.4	14.9	413.5		270	-.09	-.01	5.97	.5	3.0	9.4	8.0	155.2	
309	.24	.00	6.20	11.4	-.5	17.4	16.7	422.0		271	-.10	-.01	5.98	.2	3.9	9.3	7.3	159.4	
310	.25	-.01	6.21	11.7	.8	17.5	17.6	429.3		272	-.08	-.01	5.98	.1	3.3	9.8	8.3	164.2	
311	.25	-.01	6.21	11.5	-.4	17.4	18.4	437.8		273	.00	.00	5.98	.0	4.0	9.8	7.0	168.2	
312	.22	.00	6.22	11.8	.9	18.2	17.4	445.0		274	.00	.00	5.98	.0	2.9	9.9	8.5	173.4	
313	.23	-.01	6.22	11.4	-.8	18.2	18.8	453.9		275	.00	.00	5.99	.0	3.8	10.0	7.8	177.7	
314	.23	-.01	6.23	11.4	1.6	19.8	16.9	460.4		276	.00	.00	5.99	.0	2.7	10.1	8.8	183.1	
315	.22	-.01	6.22	10.9	-.8	19.7	18.2	469.3		277	.00	.00	5.99	.0	3.6	10.4	8.1	187.5	
316	.22	-.01	6.22	11.0	.3	19.9	17.1	477.1		278	.00	.00	6.00	.0	2.1	10.3	9.9	193.5	
317	.22	-.01	6.23	10.7	-1.2	20.0	18.1	486.4		279	.00	.00	6.00	.0	3.6	10.5	8.4	198.0	
318	.22	-.01	6.23	10.4	.1	19.8	17.6	494.4		280	.00	.00	6.00	.2	1.0	11.0	11.1	205.1	
319	.24	-.02	6.23	10.1	-1.1	20.0	19.1	503.6		281	.00	.00	6.01	.0	2.3	10.9	9.8	210.9	
320	.21	-.02	6.23	9.8	.1	20.3	17.5	511.6		282	.00	.00	6.01	.0	.7	11.1	12.0	218.3	
321	.21	-.02	6.24	9.3	-1.3	18.6	18.3	520.9		283	.00	.00	6.02	.0	2.0	11.5	10.6	224.3	
322	.23	-.03	6.23	9.1	.1		17.0	528.9		284	.00	.00	6.02	.0	.7	11.5	12.1	231.7	
Z=95										285	.00	.00	6.03	.0	1.7	11.4	11.3	238.1	
212	.50	-.02	5.95	3.8		-2.1		60.3		286	.00	.00	6.03	.0	.6	11.6	12.6	245.5	
213	.50	-.02	5.95	3.5	11.3	-1.9		57.1		287	.00	.00	6.04	.0	1.6	12.0	12.0	252.0	
214	.50	-.02	5.96	2.6	9.0	-1.8	-8.4	56.2		288	.16	.03	6.09	.1	1.0	12.6	12.8	259.0	
215	.52	-.03	5.98	2.0	10.9	-1.6	-10.1	53.3		289	.17	.03	6.09	1.1	2.1	12.4	11.8	265.0	
216	.52	-.03	5.99	1.3	8.7	-1.4	-7.9	52.7		290	.17	.03	6.10	1.5	.9	12.4	13.3	272.2	
217	.52	-.03	5.99	.6	10.7	-1.4	-9.3	50.1		291	.20	.03	6.12	2.7	2.3	12.3	12.5	278.0	
218	.00	.00	5.69	.4	8.5	-1.3	-7.2	49.7		292	.21	.03	6.13	3.8	1.3	12.9	13.5	284.8	
219	.00	.00	5.69	.0	10.7	-1.1	-10.3	47.1		293	.21	.03	6.14	4.4	2.1	13.6	12.4	290.8	
220	-.03	.00	5.70	.1	8.9	-1.0	-8.0	46.3		294	.22	.03	6.14	5.2	.7	13.7	14.3	298.1	
221	.00	.00	5.70	.0	10.0	-1.1	-9.1	44.3		295	.21	.03	6.15	5.6	1.7	13.0	13.7	304.5	
222	.01	.00	5.71	.4	7.7	-.9	-6.5	44.8		296	.22	.02	6.16	6.4	.8	12.6	14.9	311.8	
223	.00	.00	5.71	.0	10.2	-1.2	-9.6	42.6		297	.22	.02	6.16	6.9	1.7	13.0	13.7	318.2	
224	.00	.00	5.72	.0	8.0	.1	-7.2	42.7		298	.24	.02	6.17	7.4	1.4	14.4	14.6	324.9	
225	.00	.00	5.72	.0	8.7	.3	-8.0	42.1		299	.24	.02	6.17	7.4	1.0	13.6	14.0	332.0	
226	.18	.03	5.77	.0	6.8	.6	-4.6	43.4		300	.24	.02	6.18	7.8	.6	14.3	16.5	339.4	
227	.20	.03	5.79	.7	8.9	.7	-6.4	42.6		301	.25	.01	6.18	8.5	1.4	14.0	14.9	346.1	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
302	.26	.01	6.19	8.9	.6	14.5	15.9	353.6		264	.40	.00	6.14	2.4	3.9	8.8	4.1	122.6	
303	.22	.02	6.19	9.5	1.4	14.7	15.0	360.3		265	.42	.00	6.16	1.3	3.1	8.9	5.5	127.6	
304	.23	.01	6.20	9.7	.1	15.0	16.5	368.2		266	.40	.00	6.15	1.5	4.8	10.0	4.1	130.9	
305	.23	.01	6.20	10.1	1.3	15.1	15.5	375.0		267	.41	-.01	6.16	.5	3.1	9.2	5.4	135.9	
306	.23	.01	6.21	10.3	-.1	15.1	18.7	383.2		268	-.15	.00	5.99	1.3	5.2	10.0	3.5	138.8	
307	.25	.00	6.21	10.7	1.0	14.8	17.4	390.3		269	-.14	-.01	5.99	1.0	3.2	10.1	5.6	143.6	
308	.25	.00	6.22	10.6	-.1	15.0	19.0	398.5		270	-.12	-.01	5.99	.9	4.5	10.2	4.6	147.2	
309	.26	.00	6.22	11.2	1.2	15.4	17.6	405.4		271	-.09	-.01	5.99	.6	3.2	10.4	6.0	152.1	
310	.24	.00	6.22	11.5	1.8	17.6	16.9	411.7		272	-.08	-.01	5.99	.6	4.3	10.8	5.0	155.9	
311	.25	-.01	6.22	11.8	.4	17.2	16.9	419.4		273	-.08	-.01	5.99	.4	2.7	10.2	6.7	161.2	
312	.25	-.01	6.23	11.5	-.1	17.5	18.0	427.6		274	.00	.00	5.99	.0	4.4	10.6	5.3	164.9	
313	.22	.00	6.23	11.8	.5	17.1	17.5	435.1		275	.00	.00	5.99	.0	3.1	10.8	6.5	169.9	
314	.26	-.01	6.24	11.4	-.3	17.7	18.3	443.5		276	.00	.00	6.00	.0	3.7	10.8	6.2	174.3	
315	.23	-.01	6.24	11.6	.5	16.6	17.3	451.1		277	.00	.00	6.00	.0	2.9	10.9	7.4	179.4	
316	.22	-.01	6.23	11.1	-.8	16.7	17.5	459.9		278	.00	.00	6.01	.0	3.9	11.2	6.5	183.6	
317	.22	-.01	6.24	10.9	-.2	16.2	16.5	468.2		279	.00	.00	6.01	.0	2.0	11.2	8.1	189.6	
318	.22	-.01	6.24	10.7	-.5	16.8	17.6	476.8		280	.00	.00	6.01	.0	3.8	11.3	7.2	194.0	
319	.22	-.01	6.24	10.5	.4	17.2	16.5	484.5		281	.00	.00	6.01	.2	.9	11.3	9.5	201.1	
320	.21	-.01	6.24	9.7	-1.6	16.7	18.2	494.1		282	.00	.00	6.02	.0	2.8	11.9	8.0	206.3	
321	.21	-.02	6.24	9.0	-.5	16.2	19.7	502.7		283	.00	.00	6.03	.0	.7	11.9	9.9	213.7	
322	.21	-.02	6.25	8.2	-1.2	16.3	20.9	511.9		284	.00	.00	6.03	.0	2.1	12.0	9.1	219.6	
323	.21	-.02	6.25	7.5	-.7	15.5	20.6	520.7		285	.00	.00	6.04	.0	.9	12.2	10.5	226.8	
324	.23	-.03	6.25	6.7	-.5		21.7	529.3		286	.00	.00	6.04	.0	1.9	12.4	9.6	232.9	
Z=96										287	.00	.00	6.05	.0	1.0	12.8	10.8	240.0	
214	.50	-.02	5.97	4.6		-.2		64.6		288	.14	.02	6.08	.0	1.9	13.0	10.0	246.3	
215	.50	-.02	5.97	3.5		9.3	.1	63.4		289	.14	.03	6.09	.4	1.1	13.1	10.5	253.2	
216	.50	-.03	5.98	3.0	10.8	-.1	-13.0	60.7		290	.17	.03	6.11	1.5	2.5	13.5	9.6	258.8	
217	.50	-.03	5.98	2.4	9.3	.6	-10.8	59.5		291	.17	.03	6.11	1.9	1.4	14.0	11.0	265.5	
218	.50	-.03	5.99	1.6	10.7	.6	-12.1	56.8		292	.20	.03	6.13	3.1	2.3	14.0	10.0	271.3	
219	-.18	-.03	5.71	.2	7.5	-.4	-8.7	57.4		293	.21	.03	6.14	4.0	1.1	13.8	11.8	278.3	
220	.00	.00	5.70	.0	11.2	.1	-10.8	54.3		294	.21	.03	6.14	4.9	2.5	14.2	10.4	283.8	
221	-.03	.00	5.71	.0	8.9	.1	-9.3	53.5		295	.22	.03	6.15	5.8	1.1	14.6	11.9	290.8	
222	.00	.00	5.71	.0	10.3	.4	-11.0	51.2		296	.22	.02	6.16	6.3	2.0	15.0	11.3	296.8	
223	.01	.00	5.72	.1	7.1	-.2	-7.6	52.2		297	.22	.02	6.16	6.7	.4	14.6	13.0	304.5	
224	.00	.00	5.72	.0	10.4	.0	-10.5	49.9		298	.24	.02	6.17	7.4	2.3	15.2	12.1	310.3	
225	.00	.00	5.73	.1	7.9	-.1	-7.5	50.1		299	.24	.02	6.18	7.8	.4	14.2	13.1	318.0	
226	.00	.00	5.74	.0	10.1	1.4	-9.7	48.0		300	.24	.02	6.18	8.6	3.2	16.4	10.8	322.9	
227	.18	.03	5.79	.2	7.1	1.7	-6.7	49.0		301	.24	.02	6.19	8.6	-.2	15.5	13.4	331.2	
228	.21	.03	5.81	1.4	9.7	2.5	-8.1	47.4		302	.26	.01	6.19	8.8	1.6	15.7	14.3	337.7	
229	.22	.03	5.81	2.3	7.6	2.8	-6.4	47.8		303	.26	.01	6.20	9.2	.5	15.6	16.0	345.3	
230	.23	.03	5.82	3.2	9.0	3.0	-7.5	46.8		304	.22	.02	6.20	9.8	1.6	15.8	14.3	351.7	
231	.21	.03	5.82	3.5	7.1	3.1	-5.5	47.8		305	.23	.01	6.21	10.0	.3	16.0	15.5	359.5	
232	.23	.03	5.84	4.8	8.8	3.2	-6.7	47.1		306	.24	.01	6.21	10.5	3.0	17.8	13.0	364.6	
233	.23	.03	5.84	5.6	7.2	3.3	-5.1	47.9		307	.23	.01	6.22	10.6	-.2	17.6	14.9	372.9	
234	.23	.03	5.85	6.6	8.6	4.2	-6.3	47.4		308	.25	.00	6.22	11.1	1.5	18.1	14.0	379.5	
235	.23	.03	5.86	7.2	6.8	3.8	-4.6	48.8		309	.25	.00	6.23	10.9	-.2	18.0	15.3	387.8	
236	.24	.02	5.86	7.6	8.3	4.1	-5.7	48.6		310	.26	.00	6.23	11.4	1.0	17.9	14.4	394.8	
237	.25	.03	5.87	7.8	6.3	4.3	-3.6	50.4		311	.24	.00	6.23	11.6	.4	16.5	13.6	402.5	
238	.27	.02	5.89	8.9	8.3	4.7	-5.3	50.2	-.8	312	.25	-.01	6.23	12.0	1.0	17.1	13.0	409.6	
239	.25	.02	5.89	9.0	6.0	4.4	-3.0	52.3		313	.25	-.01	6.24	11.6	-.1	17.2	14.0	417.7	
240	.27	.02	5.90	9.7	8.0	5.2	-4.4	52.3	-.6	314	.25	-.01	6.24	11.9	.5	17.2	13.5	425.3	
241	.27	.02	5.91	9.8	5.7	5.1	-2.6	54.7	-1.0	315	.26	-.01	6.25	11.5	-.5	17.0	14.9	433.8	
242	.25	.01	5.90	10.4	7.4	5.4	-3.8	55.4	-.6	316	.23	-.01	6.25	10.0	-.5	16.0	14.9	442.4	
243	.27	.02	5.92	10.3	5.5	5.4	-1.6	58.0	-.8	317	.22	-.01	6.24	9.5	-1.2	15.5	16.9	451.7	
244	.25	.01	5.91	10.8	7.1	6.0	-2.9	59.0	-.5	318	.22	-.01	6.25	9.6	.6	16.3	17.4	459.2	
245	.26	.01	5.92	10.4	5.3	6.0	-1.2	61.7	-.7	319	.22	-.01	6.25	9.0	-.7	16.1	19.0	468.0	
246	.27	-.01	5.93	11.1	6.8	6.3	-2.3	62.9	-.3	320	.22	-.01	6.26	8.9	.1	15.9	18.7	475.9	
247	.27	-.01	5.93	10.7	5.1	6.4	-.3	65.9	-.4	321	.21	-.01	6.25	8.4	1.0	18.4	17.7	483.0	
248	.28	-.02	5.94	11.1	6.4	6.8	-1.6	67.6	-.2	322	.24	-.02	6.26	8.4	.0	18.9	17.1	491.0	
249	.27	-.01	5.94	10.5	4.8	6.9	.5	70.8	-.1	323	.21	-.02	6.26	7.9	-1.0	19.1	18.4	500.1	
250	.24	.00	5.94	10.8	6.0	7.0	-.4	72.9	.1	324	.23	-.03	6.25	7.7	.5	20.4	16.9	507.7	
251	.24	.00	5.95	10.2	4.6	7.0	1.2	76.4	.3	325	.23	-.03	6.26	6.7	-1.3	19.6	18.4	517.0	
252	.25	-.01	5.95	10.2	6.0	7.6	.1	78.4		326	.20	-.02	6.26	6.7	.1		17.7	525.0	
253	.24	-.02	5.95	9.8	4.1	7.5	1.7	82.4		Z=97									
254	.24	-.02	5.95	9.6	5.6	7.9	.8	84.8		216	.50	-.02	5.99	3.5		-2.9		73.6	
255	.25	-.02	5.96	8.9	4.2	8.1	2.3	88.7		217	.50	-.03	5.99	3.1	11.4	-2.3		70.3	
256	.25	-.02	5.96	8.8	5.2	7.5	1.3	91.6		218	.50	-.03	6.00	2.4	9.3	-2.3	-9.2	9.0	
257	.24	-.02	5.97	8.2	4.1	8.2	3.0	95.6		219	.51	-.04	6.01	1.8	11.0	-2.0	-10.7	66.1	
258	.24	-.02	5.97	7.3	5.5	8.2	1.4	98.2		220	.52	-.03	6.03	1.5	9.1	-.4	-8.5	65.1	
259	.24	-.02	5.97	6.2	3.0	7.9	3.7	103.3		221	.53	-.04	6.04	.5	10.4	-1.2	-9.6	62.7	
260	.21	-.02	5.97	5.0	5.4	8.9	2.6	106.0		222	.00	.00	5.72	.0	8.5	-1.5	-7.4	62.3	
261	.23	-.03	5.97	4.2	3.7	8.9	3.8	110.4		223	.00	.00	5.72	.0	10.5	-1.3	-10.3	59.8	
262	.20	-.02	5.97	3.8	4.5	9.3	2.9	114.0		224	.01	.00	5.74	.3	7.4	-.9	-6.9	60.4	
263	.18	-.02	5.97	3.2	3.7	9.1	4.1	118.4		225	.24	.02	5.81	.9	10.9	-.4	-10.3	57.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
226	.24	.02	5.81	1.6	7.9	-.4	-6.2	57.8		300	.24	.02	6.19	7.8	.9	13.2	15.6	312.1	
227	.22	.02	5.82	1.1	10.2	-.3	-8.0	55.6		301	.24	.02	6.20	8.6	2.3	12.4	14.4	317.8	
228	.22	.02	5.82	1.0	8.2	.8	-6.7	55.5		302	.24	.02	6.20	8.8	2.5	15.1	13.8	323.4	
229	.24	.02	5.83	1.6	9.4	.5	-7.3	54.2		303	.26	.01	6.21	9.6	2.2	15.7	12.8	329.3	
230	.22	.03	5.83	2.4	7.9	.7	-5.1	54.4		304	.26	.00	6.21	9.0	.0	15.1	15.0	337.4	
231	.24	.02	5.84	3.4	9.1	.8	-6.8	53.3		305	.27	.00	6.22	9.6	1.5	15.0	13.1	344.0	
232	.22	.02	5.85	4.1	7.6	1.4	-4.8	53.8		306	.23	.01	6.22	9.8	.5	15.2	14.4	351.6	
233	.23	.03	5.85	5.0	8.8	1.4	-5.8	53.0		307	.25	.00	6.23	10.4	1.6	13.8	12.6	358.0	
234	.24	.02	5.86	5.8	7.3	1.5	-4.1	53.8		308	.25	.00	6.23	10.5	.6	14.6	13.9	365.5	
235	.24	.02	5.86	6.5	8.5	1.4	-5.2	53.4		309	.25	.00	6.24	10.9	1.1	14.3	13.1	372.5	
236	.24	.02	5.87	7.2	7.2	1.8	-3.7	54.3		310	.26	.00	6.24	10.8	.1	14.6	14.4	380.4	
237	.24	.02	5.88	8.0	8.3	1.8	-4.8	54.0		311	.26	.00	6.24	9.5	-.4	13.2	15.3	388.9	
238	.24	.02	5.88	7.9	6.6	2.1	-2.3	55.5		312	.24	.00	6.24	9.7	.5	13.3	16.6	396.5	
239	.25	.02	5.89	8.9	8.3	2.2	-3.9	55.3		313	.25	-.01	6.24	10.1	.9	13.2	15.8	403.7	
240	.25	.02	5.90	9.2	6.6	2.8	-2.2	56.7		314	.25	-.01	6.25	9.7	.0	13.3	18.5	411.7	
241	.25	.02	5.91	9.9	7.6	2.4	-2.9	57.2		315	.22	.00	6.26	10.0	.8	13.6	17.8	419.0	
242	.25	.01	5.91	9.8	6.2	2.8	-1.2	59.2		316	.26	-.01	6.26	9.6	-.5	13.6	19.2	427.5	
243	.27	.02	5.93	10.5	7.6	3.0	-2.4	59.6	-.9	317	.23	-.01	6.26	9.8	.7	14.9	18.1	434.8	
244	.24	.01	5.92	10.5	5.8	3.4	-.3	61.8	-1.1	318	.22	-.01	6.26	9.4	1.2	17.2	17.8	441.8	
245	.26	.00	5.93	10.8	7.1	3.4	-1.3	62.9	-1.1	319	.22	-.01	6.26	9.4	.9	17.5	16.7	449.0	
246	.27	.00	5.93	10.5	5.7	3.8	.5	65.2	-1.3	320	.22	-.01	6.26	9.2	-.2	18.0	17.6	457.2	
247	.27	-.01	5.94	11.2	7.1	4.0	-1.1	66.2	-.7	321	.22	-.01	6.27	9.0	.1	18.0	17.3	465.2	
248	.25	.00	5.94	10.7	5.0	4.0	1.1	69.3		322	.21	-.01	6.26	8.3	-.6	16.3	18.6	474.0	
249	.28	-.02	5.95	11.2	7.0	4.6	-.3	70.3	-.5	323	.24	-.02	6.27	8.2	.3	16.6	17.5	481.7	
250	.29	-.02	5.96	10.9	5.1	4.8	1.5	73.3	-.4	324	.21	-.02	6.27	7.8	-.9	16.6	19.4	490.7	
251	.28	-.01	5.95	10.9	6.3	5.1	.3	75.1	.1	325	.21	-.02	6.28	7.4	.2	16.3	18.3	498.6	
252	.24	.00	5.96	10.4	4.8	5.3	2.2	78.4		326	.19	-.02	6.27	6.7	-.6	17.0	19.0	507.3	
253	.25	-.01	5.96	10.3	5.8	5.0	1.3	80.7		327	.20	-.02	6.27	6.7	.0	16.9	18.8	515.4	
254	.24	-.01	5.97	9.8	4.7	5.6	3.0	84.0		328	.23	-.03	6.28	5.7	-.7		19.5	524.2	
255	.24	-.02	5.97	9.8	5.8	5.8	1.6	86.4		Z=98									
256	.25	-.02	5.97	9.1	4.2	5.7	3.6	90.3		218	.51	-.02	6.01	4.1		-.7		78.2	
257	.25	-.02	5.98	9.1	5.7	6.2	2.5	92.6		219	.50	-.03	6.01	3.3	9.5	-.5		76.8	
258	.23	-.02	5.98	8.2	3.9	6.1	4.0	96.8		220	.50	-.03	6.02	2.8	11.2	-.2	-13.0	73.6	
259	.24	-.02	5.98	8.0	5.3	5.9	3.0	99.6		221	.50	-.03	6.03	2.5	9.4	.1	-11.3	72.3	
260	.24	-.02	5.98	6.7	4.2	7.1	4.6	103.5		222	.52	-.03	6.05	1.5	10.7	.3	-12.3	69.7	
261	.22	-.01	5.99	6.1	4.9	6.7	3.5	106.6		223	.00	.00	5.74	.0	7.7	-.5	-9.2	70.1	
262	.23	-.03	5.99	4.0	3.7	6.7	5.0	111.0		224	.00	.00	5.74	.0	10.8	-.3	-12.1	67.3	
263	.21	-.02	5.99	3.8	4.8	7.0	4.2	114.3		225	.03	.00	5.76	.1	7.4	-.3	-7.8	68.0	
264	.23	-.03	5.99	3.1	3.8	7.2	5.3	118.5		226	.53	-.04	6.08	1.7	12.1	1.0	-11.0	64.0	
265	.17	-.02	5.99	2.7	4.5	7.8	4.7	122.0		227	.53	-.04	6.08	2.7	8.4	1.4	-8.8	63.7	
266	.24	-.03	5.99	1.7	3.3	8.1	5.9	126.8		228	.24	.01	5.84	2.6	9.6	.8	-9.5	62.2	
267	.40	.00	6.17	1.5	4.4	7.7	5.4	130.5		229	.24	.02	5.84	2.7	8.8	1.4	-8.5	61.4	
268	.40	.00	6.17	.6	3.3	8.0	6.8	135.2		230	.24	.02	5.84	2.6	10.0	2.0	-9.6	59.5	
269	-.15	.00	6.00	1.2	5.3	8.0	4.6	138.0		231	.22	.02	5.84	2.8	7.4	1.5	-7.5	60.1	
270	-.14	.00	6.00	.9	3.5	8.3	6.0	142.6		232	.24	.01	5.86	4.0	9.7	2.1	-8.9	58.5	
271	-.13	-.01	6.00	.9	4.6	8.4	5.4	146.1		233	.24	.02	5.86	4.5	7.8	2.2	-6.9	58.8	
272	-.12	-.01	6.00	.6	3.2	8.5	7.0	150.9		234	.24	.02	5.86	5.4	9.0	2.4	-8.1	57.9	
273	-.10	-.01	6.00	.5	4.4	8.6	5.8	154.6		235	.24	.02	5.87	6.1	7.4	2.5	-6.3	58.6	
274	-.08	-.01	6.00	.4	3.0	8.9	7.3	159.6		236	.24	.02	5.88	6.9	8.7	2.7	-6.9	57.9	
275	-.05	-.01	6.00	.2	4.3	8.9	6.3	163.4		237	.25	.02	5.88	7.4	7.2	2.8	-5.4	58.8	
276	.00	.00	6.01	.0	3.4	9.2	7.2	168.0		238	.25	.02	5.89	8.4	9.0	3.4	-7.0	57.9	
277	.00	.00	6.01	.0	4.1	9.5	6.4	172.0		239	.25	.02	5.90	8.8	6.7	3.6	-4.8	59.2	
278	.00	.00	6.01	.0	3.0	9.6	7.3	177.1		240	.25	.02	5.90	9.3	8.4	3.7	-6.2	58.9	
279	.00	.00	6.02	.0	3.6	9.3	7.2	181.6		241	.25	.01	5.91	9.7	6.8	3.9	-4.4	60.1	
280	-.01	.00	6.02	.1	2.9	10.2	8.2	186.8		242	.27	.02	5.93	10.4	7.9	4.2	-5.4	60.3	-1.0
281	.00	.00	6.03	.0	3.2	9.7	7.7	191.6		243	.24	.01	5.92	10.4	6.4	4.4	-3.4	62.0	
282	.01	.00	6.03	.1	1.4	10.1	10.3	198.3		244	.27	.01	5.94	11.0	7.9	4.8	-5.1	62.1	-.7
283	.00	.00	6.03	.0	2.6	9.9	8.7	203.8		245	.25	.01	5.93	11.0	6.0	4.9	-3.1	64.2	
284	.00	.00	6.04	.0	1.4	10.5	10.5	210.5		246	.26	.01	5.94	11.5	7.6	5.4	-4.6	64.7	-.6
285	.00	.00	6.04	.0	2.2	10.6	9.3	216.3		247	.27	-.01	5.95	11.1	5.5	5.2	-2.0	67.3	-1.2
286	.00	.00	6.05	.0	1.0	10.7	11.2	223.3		248	.25	.00	5.95	11.7	7.2	5.3	-3.3	68.2	-.9
287	.00	.00	6.05	.0	2.2	11.0	10.3	229.2		249	.25	.00	5.96	11.3	5.6	5.9	-1.7	70.7	-.9
288	.00	.00	6.06	.0	1.1	11.1	11.2	236.2		250	.28	-.02	5.96	11.7	6.9	5.8	-2.7	71.8	-.6
289	.13	.03	6.09	.1	1.5	10.8	10.9	242.8		251	.29	-.02	5.97	11.3	5.1	5.8	-.8	74.8	-.7
290	.16	.03	6.11	.4	1.6	11.3	11.7	249.3		252	.25	-.01	5.97	11.6	6.7	6.2	-2.0	76.2	-.1
291	.18	.03	6.12	1.6	2.8	11.6	10.5	254.5		253	.26	-.01	5.98	11.0	4.8	6.2	.1	79.5	-.2
292	.17	.03	6.13	2.1	1.3	11.5	12.4	261.3		254	.24	-.01	5.97	11.0	6.5	6.9	-1.2	81.1	.3
293	.21	.02	6.15	3.2	2.8	12.0	10.6	266.5		255	.24	-.02	5.98	10.4	4.4	6.6	.6	84.7	
294	.20	.03	6.14	4.3	1.3	12.2	12.3	273.4		256	.25	-.02	5.98	10.3	6.1	7.0	-.5	86.6	
295	.22	.02	6.16	4.8	2.6	12.2	11.2	278.9		257	.25	-.02	5.99	9.6	4.6	7.4	1.1	90.1	
296	.22	.03	6.17	5.9	1.4	12.5	12.7	285.6		258	.25	-.02	5.99	9.5	5.4	7.1	.3	92.8	
297	.24	.02	6.18	6.4	2.2	12.7	13.4	291.5		259	.24	-.02	5.99	8.8	4.3	7.6	1.7	96.5	
298	.24	.02	6.18	7.3	1.3	13.6	14.4	298.2		260	.24	-.02	6.00	8.6	5.7	8.0	.5	98.9	
299	.24	.02	6.19	7.3	1.4	12.6	14.6	304.9		261	.24	-.02	6.00	7.8	3.9	7.7	2.1	103.1	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
262	.24	-.02	6.00	6.7	5.1	7.9	1.4	106.0		224	.00	.00	5.75	.0	7.9	-2.1	-7.5	79.4	
263	.23	-.03	6.00	5.6	4.0	8.2	2.5	110.1		225	.52	-.03	6.08	.9	11.8	-1.1	-10.1	75.8	
264	.23	-.03	6.00	4.3	5.0	8.4	2.3	113.2		226	.53	-.03	6.09	2.2	8.9	.3	-8.0	74.9	
265	.23	-.03	6.00	3.4	3.9	8.4	2.9	117.4		227	.25	.01	5.85	2.0	10.5	-1.3	-9.7	72.5	
266	.20	-.02	6.01	3.1	4.5	8.4	3.0	120.9		228	.25	.01	5.85	3.2	8.9	-.7	-8.0	71.7	
267	.18	-.02	6.00	2.4	3.9	9.0	3.6	125.1		229	.24	.01	5.85	3.3	9.8	-.5	-9.2	69.9	
268	.40	.00	6.18	2.0	4.7	9.4	2.4	128.4		230	.24	.01	5.86	4.6	8.9	-.3	-7.6	69.1	
269	.41	-.01	6.18	1.1	3.0	9.1	4.3	133.4		231	.24	.01	5.86	3.5	9.5	-.9	-9.0	67.7	
270	.41	-.01	6.19	1.0	4.9	8.7	3.0	136.6		232	.24	.01	5.87	4.3	8.2	-.1	-6.8	67.5	
271	-.14	.00	6.01	1.2	4.1	9.3	3.6	140.6		233	.24	.01	5.87	4.0	9.8	.1	-8.0	65.8	
272	-.13	-.01	6.01	1.1	4.8	9.4	3.3	143.9		234	.25	.01	5.88	4.6	7.9	.2	-6.2	66.0	
273	-.13	-.01	6.01	.8	3.2	9.4	5.1	148.8		235	.24	.01	5.88	5.5	9.1	.3	-7.0	64.9	
274	-.10	-.01	6.01	.6	4.5	9.5	4.2	152.4		236	.25	.02	5.89	6.5	8.2	1.0	-5.7	64.8	
275	-.08	-.01	6.01	.4	3.4	9.9	5.5	157.0		237	.25	.02	5.89	7.0	8.7	1.0	-6.4	64.2	
276	-.05	-.01	6.01	.2	4.3	9.9	4.7	160.8		238	.25	.01	5.90	7.6	7.4	1.2	-4.6	64.9	
277	-.04	.00	6.02	.1	3.3	9.7	6.0	165.6		239	.25	.02	5.91	8.4	8.9	1.1	-6.1	64.0	
278	.00	.00	6.02	.0	3.9	9.6	5.3	169.8		240	.25	.02	5.91	8.7	7.0	1.4	-3.9	65.1	
279	.00	.00	6.03	.0	3.5	10.0	6.2	174.4		241	.25	.01	5.92	9.6	8.7	1.7	-5.6	64.5	
280	.00	.00	6.03	.0	3.9	10.3	5.5	178.5		242	.24	.01	5.93	9.7	6.8	1.7	-3.3	65.8	
281	-.01	.00	6.03	.2	2.7	10.2	6.8	183.9		243	.24	.01	5.93	10.3	8.4	2.2	-4.6	65.4	
282	.00	.00	6.04	.0	3.9	10.9	6.0	188.0		244	.25	.01	5.94	10.4	6.3	2.1	-2.4	67.2	
283	.00	.00	6.04	.2	1.0	10.6	8.6	195.0		245	.25	.01	5.94	11.0	8.0	2.1	-3.8	67.3	
284	.00	.00	6.05	.0	3.1	11.1	6.9	200.0		246	.26	.01	5.95	10.9	6.1	2.2	-1.5	69.3	
285	.00	.00	6.05	.1	1.0	10.7	9.2	207.0		247	.28	-.01	5.95	11.4	8.1	2.7	-3.3	69.3	
286	.00	.00	6.05	.0	2.9	11.4	7.8	212.2		248	.29	-.01	5.96	11.1	5.9	3.1	-1.3	71.5	
287	.00	.00	6.06	.0	1.3	11.7	9.2	218.9		249	.25	.00	5.96	11.7	7.2	3.1	-2.2	72.4	
288	.00	.00	6.06	.0	2.0	11.5	8.3	225.0		250	.25	.00	5.97	11.2	5.9	3.4	-.2	74.5	
289	.00	.00	6.07	.0	1.2	11.6	9.9	231.9		251	.29	-.02	5.98	11.7	7.0	3.5	-1.7	75.6	-1.1
290	.13	.03	6.11	.3	2.4	12.5	8.7	237.6		252	.25	-.01	5.98	11.4	5.5	4.0	.0	78.1	-.8
291	.14	.03	6.12	.9	1.6	12.6	9.6	244.0		253	.26	-.01	5.99	11.6	6.8	4.1	-.9	79.4	-.4
292	.18	.03	6.13	2.0	3.1	12.9	8.2	248.9		254	.26	-.01	5.99	11.0	5.2	4.5	.7	82.3	-.3
293	.18	.03	6.14	2.2	1.1	12.7	10.8	255.9		255	.25	-.01	5.99	11.0	6.3	4.3	-.2	84.1	.0
294	.18	.03	6.15	3.6	2.9	12.8	10.1	261.0		256	.24	-.02	5.99	10.4	5.0	4.9	1.5	87.1	
295	.20	.02	6.16	4.3	1.5	13.0	11.7	267.6		257	.25	-.02	5.99	10.4	6.2	4.9	.5	89.0	
296	.22	.02	6.18	5.2	2.8	13.3	10.3	272.9		258	.25	-.02	6.00	9.7	4.5	4.9	2.4	92.5	
297	.22	.03	6.18	6.2	2.9	14.7	10.6	278.1		259	.26	-.02	6.01	9.4	5.8	5.3	1.3	94.8	
298	.22	.02	6.18	6.7	2.3	14.9	8.6	283.9		260	.24	-.02	6.01	8.8	4.5	5.4	3.0	98.4	
299	.24	.02	6.20	7.6	1.5	15.1	9.6	290.4		261	.26	-.02	6.01	8.5	5.5	5.2	1.9	101.0	
300	.24	.02	6.20	8.1	2.0	15.7	9.2	296.5		262	.24	-.02	6.01	7.9	4.4	5.8	3.5	104.6	
301	.24	.02	6.20	8.5	1.2	16.0	10.4	303.4		263	.24	-.03	6.02	7.3	5.1	5.7	2.7	107.6	
302	.26	.01	6.21	8.9	1.9	15.5	10.1	309.6		264	.23	-.03	6.01	6.3	4.8	6.5	3.7	110.9	
303	.26	.00	6.22	9.4	1.1	14.2	11.0	316.5		265	.21	-.02	6.03	5.4	4.6	6.1	3.2	114.4	
304	.26	.00	6.22	9.9	2.2	14.2	9.1	322.4		266	.23	-.03	6.02	4.4	4.6	6.8	3.7	117.9	
305	.22	.02	6.22	8.6	-.4	13.8	11.9	330.9		267	.20	-.02	6.02	2.8	4.5	6.7	3.7	121.5	
306	.24	.01	6.23	8.9	1.9	14.1	11.2	337.1		268	.20	-.02	6.03	2.1	3.6	6.4	5.6	126.0	
307	.25	.00	6.23	8.4	-.2	13.5	13.6	345.4		269	.38	.00	6.17	1.7	4.9	6.6	4.1	129.1	
308	.25	.00	6.24	9.1	1.8	13.6	13.1	351.7		270	.41	-.01	6.19	.9	3.6	7.2	5.7	133.6	
309	.25	.00	6.24	9.0	.4	13.5	13.2	359.3		271	.41	-.01	6.20	.8	4.7	6.9	4.8	137.0	
310	.25	.00	6.25	9.5	1.3	13.7	12.7	366.1		272	-.14	.00	6.03	1.0	4.4	7.3	5.4	140.6	
311	.26	.00	6.25	9.2	.5	14.1	15.3	373.7		273	-.13	-.01	6.03	1.1	5.0	7.6	4.3	143.6	
312	.24	.00	6.25	10.1	1.8	16.3	14.7	380.0		274	-.12	-.01	6.03	.8	3.6	7.9	5.1	148.1	
313	.25	-.01	6.25	9.9	.1	15.9	16.0	387.9		275	-.10	-.01	6.02	.6	4.7	8.1	4.8	151.5	
314	.25	-.01	6.26	10.3	2.7	17.7	13.8	393.3		276	-.10	-.01	6.03	.5	3.5	8.2	6.1	156.1	
315	.25	-.01	6.26	9.8	.2	17.8	14.5	401.2		277	-.07	-.01	6.03	.3	4.6	8.4	4.8	159.6	
316	.26	-.01	6.27	10.3	.9	17.9	14.1	408.4		278	.00	.00	6.03	.0	3.2	8.4	6.4	164.5	
317	.26	-.01	6.27	9.8	-.3	18.1	15.4	416.7		279	.00	.00	6.03	.0	4.4	8.8	5.5	168.2	
318	.21	-.01	6.26	10.1	.8	18.2	14.6	424.0		280	.00	.00	6.04	.0	3.2	8.6	6.8	173.0	
319	.24	-.02	6.27	9.6	-.3	16.8	16.1	432.3		281	.00	.00	6.04	.0	4.0	8.7	6.3	177.1	
320	.25	-.02	6.28	9.6	.7	16.6	15.2	439.6		282	.00	.00	6.04	.0	3.2	9.2	7.3	182.0	
321	.25	-.02	6.28	9.2	-.3	16.5	16.2	448.0		283	.00	.00	6.05	.0	3.7	8.9	6.4	186.4	
322	.23	-.02	6.27	9.1	.7	17.2	15.5	455.3		284	.01	.00	6.05	.1	1.4	9.3	9.1	193.1	
323	.21	-.01	6.28	8.6	-.8	17.0	16.7	464.2		285	.00	.00	6.06	.0	3.3	9.4	7.4	197.9	
324	.24	-.02	6.28	8.4	.9	17.7	16.2	471.3		286	.00	.00	6.06	.0	1.5	9.9	9.6	204.4	
325	.21	-.02	6.28	7.8	-.9	17.7	17.7	480.3		287	.00	.00	6.07	.0	2.8	9.7	8.5	209.7	
326	.21	-.02	6.28	7.5	.1	17.7	16.9	488.3		288	.00	.00	6.07	.0	1.1	9.5	10.7	216.7	
327	.19	-.02	6.28	6.9	-.3	18.0	17.3	496.6		289	.00	.00	6.07	.0	2.8	10.4	9.4	222.0	
328	.20	-.02	6.28	6.9	.1	18.1	16.8	504.6		290	.00	.00	6.08	.0	1.1	10.3	10.9	228.9	
329	.20	-.02	6.29	5.9	-.6	18.1	15.9	513.3		291	.15	.03	6.12	.1	2.5	10.4	10.1	234.4	
330	.20	-.02	6.29	5.9	.1	15.0	15.0	521.3		292	.15	.03	6.13	.7	1.8	10.5	10.9	240.8	
Z=99										293	.16	.03	6.14	1.7	3.7	11.1	8.8	245.1	
220	.50	-.03	6.02	3.5		-2.6		86.7		294	.18	.03	6.15	2.1	2.2	12.3	10.0	250.9	
221	.52	-.03	6.06	2.8	11.1	-2.7		83.6		295	.18	.03	6.16	3.4	3.1	12.4	8.7	255.9	
222	.50	-.03	6.04	2.6	9.7	-2.4	-9.7	82.0		296	.18	.03	6.17	4.3	1.5	12.4	10.7	262.6	
223	.52	-.03	6.06	1.6	10.8	-2.2	-10.8	79.2		297	.22	.02	6.18	5.1	3.2	12.7	9.2	267.5	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
298	.24	.02	6.19	4.9	.4	10.2	11.8	275.2		260	.24	-.02	6.01	10.1	6.2	6.7	-1.4	95.3	
299	.24	.02	6.20	5.4	2.5	10.4	11.0	280.8		261	.24	-.02	6.02	9.2	4.3	6.6	.8	99.1	
300	.24	.01	6.21	5.8	1.6	10.4	12.0	287.3		262	.24	-.03	6.02	9.1	6.1	7.2	-.6	101.1	
301	.26	.01	6.21	6.5	2.3	10.8	11.5	293.0		263	.24	-.02	6.02	8.3	4.2	6.9	1.1	104.9	
302	.26	.00	6.22	7.2	1.5	11.1	12.4	299.5		264	.23	-.03	6.02	8.0	5.8	7.7	-.3	107.2	
303	.26	.00	6.22	7.6	2.0	11.3	12.0	305.6		265	.23	-.03	6.03	6.8	4.1	7.0	1.5	111.2	
304	.26	.00	6.23	7.5	.3	10.5	14.1	313.3		266	.23	-.03	6.03	6.5	5.1	7.6	.7	114.2	
305	.23	.01	6.23	8.1	2.3	10.7	12.6	319.0		267	.18	-.02	6.03	5.1	4.5	7.4	1.8	117.8	
306	.23	.01	6.24	8.2	1.2	12.3	13.5	326.0		268	.24	-.04	6.03	4.6	5.5	8.4	.6	120.3	
307	.25	.00	6.24	8.9	2.2	12.6	11.9	331.8		269	.18	-.02	6.03	2.6	3.4	8.3	2.6	125.0	
308	.25	.00	6.24	9.0	1.3	14.1	14.6	338.6		270	.40	.00	6.20	2.5	5.2	8.6	1.4	127.8	
309	.25	.00	6.25	8.6	.5	12.8	15.6	346.2		271	.40	.00	6.21	1.7	3.7	8.6	2.7	132.2	
310	.25	.00	6.25	8.6	.9	13.3	17.2	353.4		272	.41	.00	6.21	1.6	5.1	9.1	1.6	135.2	
311	.26	.00	6.26	9.1	3.0	15.0	14.4	358.4		273	-.15	.00	6.04	1.1	3.9	8.5	3.1	139.4	
312	.24	.00	6.26	9.4	1.2	15.7	14.8	365.3		274	.43	-.01	6.25	.6	4.3	7.8	2.7	143.1	
313	.24	.00	6.26	9.8	1.4	15.3	14.3	371.9		275	-.12	-.01	6.04	.9	4.4	8.7	3.3	146.7	
314	.25	-.01	6.26	9.6	.5	15.7	15.4	379.5		276	-.10	-.01	6.03	.7	4.7	8.8	3.0	150.1	
315	.25	-.01	6.27	9.9	.9	13.9	15.0	386.6		277	-.10	-.01	6.04	.5	3.3	8.6	4.8	154.8	
316	.25	-.01	6.27	9.5	.4	14.2	15.6	394.3		278	-.07	-.01	6.04	.3	4.8	8.8	3.6	158.1	
317	.26	-.01	6.28	9.9	1.1	14.4	15.0	401.3		279	-.04	-.01	6.04	.0	3.4	9.1	5.3	162.7	
318	.23	-.01	6.28	9.5	.0	14.7	16.4	409.4		280	-.04	-.01	6.05	.0	4.6	9.3	4.4	166.2	
319	.24	-.02	6.28	9.9	1.2	15.1	15.3	416.2		281	.00	.00	6.05	.0	3.4	9.4	5.5	170.9	
320	.24	-.02	6.28	9.4	-.1	15.2	17.3	424.4		282	.00	.00	6.05	.0	4.2	9.7	4.7	174.7	
321	.25	-.02	6.29	9.4	.7	15.1	16.2	431.8		283	-.01	.00	6.05	.3	2.7	9.3	6.3	180.0	
322	.25	-.02	6.29	9.0	.0	15.4	17.4	439.9		284	.00	.00	6.06	.0	4.2	9.7	4.7	183.9	
323	.25	-.02	6.30	8.8	.4	15.1	15.5	447.5		285	.00	.00	6.06	.1	1.6	9.9	7.3	190.4	
324	.21	-.01	6.29	8.5	.4	16.4	15.6	455.1		286	.00	.00	6.07	.0	3.7	10.3	5.4	194.9	
325	.24	-.02	6.29	8.3	.6	16.0	14.4	462.6		287	.02	.00	6.07	.2	1.7	10.5	7.8	201.2	
326	.24	-.02	6.29	7.9	-.7	16.2	16.6	471.4		288	.00	.00	6.08	.0	3.3	11.0	6.6	206.0	
327	.24	-.02	6.30	7.2	.2	16.3	15.8	479.3		289	.00	.00	6.08	.0	1.5	11.4	8.1	212.6	
328	.19	-.02	6.29	6.4	-.5	16.0	17.1	487.9		290	.00	.00	6.09	.0	2.6	11.3	7.3	218.0	
329	.23	-.03	6.30	5.1	-1.5	14.5	18.1	497.5		291	.00	.00	6.09	.1	1.8	11.9	8.5	224.3	
330	.20	-.02	6.30	4.0	-.8	14.3	19.2	506.3		292	.00	.00	6.10	.0	2.5	11.9	7.8	229.9	
331	.20	-.02	6.30	4.3	.7	14.9	17.9	513.7		293	.00	.00	6.10	.0	1.6	11.7	9.1	236.3	
332	.18	-.02	6.30	2.9	-1.5		19.5	523.3		294	.16	.03	6.15	1.2	3.4	11.4	8.1	241.0	
Z = 100										295	.18	.03	6.16	1.7	1.8	11.0	9.3	247.2	
222	.52	-.03	6.07	3.8		-.8		91.7		296	.26	.00	6.21	3.2	3.4	11.3	8.1	251.9	
223	.51	-.02	6.05	3.4		-.8		90.1		297	.19	.02	6.18	3.7	1.7	11.6	9.4	258.3	
224	.52	-.03	6.08	2.6	11.2	-.4	-13.3	86.9		298	.26	.00	6.22	4.4	2.9	11.3	8.4	263.4	
225	.52	-.03	6.09	2.0	9.2	.9	-11.4	85.8		299	.24	.02	6.20	5.2	1.8	12.7	9.7	269.8	
226	.52	-.03	6.09	1.9	11.0	.2	-12.9	82.9		300	.26	.01	6.22	5.7	2.6	12.8	8.8	275.3	
227	.53	-.03	6.10	2.9	8.8	.1	-10.7	82.2		301	.22	.02	6.22	6.4	1.8	13.0	9.7	281.5	
228	.53	-.03	6.10	2.6	10.6	.1	-12.1	79.7		302	.26	.00	6.22	6.9	2.5	13.2	9.0	287.1	
229	.53	-.03	6.11	3.3	8.6	-.2	-10.0	79.1		303	.26	.00	6.23	7.4	1.6	13.2	10.4	293.6	
230	.53	-.03	6.12	3.8	10.5	.6	-11.8	76.6		304	.26	.00	6.23	7.9	2.5	13.7	11.3	299.2	
231	.53	-.03	6.12	4.3	8.1	-.3	-9.3	76.6		305	.27	.00	6.24	8.3	.9	14.2	12.6	306.4	
232	.24	.01	5.88	5.2	10.4	.6	-11.0	74.3		306	.24	.01	6.24	8.4	2.0	13.9	12.1	312.5	
233	.25	.01	5.88	4.6	8.6	1.0	-9.0	73.8		307	.23	.01	6.25	8.4	.6	13.3	13.7	319.9	
234	.24	.01	5.89	5.4	9.7	.9	-9.9	72.2		308	.25	.00	6.25	9.2	4.1	15.1	11.0	324.0	
235	.25	.01	5.89	4.9	8.3	1.3	-8.5	72.0		309	.25	.00	6.25	9.2	1.4	15.3	11.5	330.6	
236	.24	.01	5.90	5.9	9.5	1.7	-9.6	70.5		310	.25	.00	6.26	9.8	2.5	17.3	9.7	336.1	
237	.25	.01	5.90	6.8	8.0	1.6	-7.8	70.5		311	.26	.00	6.27	9.2	.3	16.7	12.2	343.9	
238	.25	.01	5.91	7.3	9.1	1.9	-8.5	69.5		312	.24	.00	6.26	9.7	1.5	15.2	12.2	350.5	
239	.25	.01	5.91	7.8	7.5	2.0	-6.9	70.1		313	.24	.00	6.27	9.6	.9	15.0	13.6	357.6	
240	.25	.01	5.92	8.6	9.2	2.3	-8.2	69.0		314	.25	-.01	6.27	10.1	1.6	15.1	11.7	364.1	
241	.25	.01	5.92	8.8	7.0	2.3	-6.0	70.1		315	.25	-.01	6.28	9.8	.5	15.2	13.2	371.6	
242	.24	.01	5.93	9.9	9.2	2.8	-7.6	69.0		316	.25	-.01	6.28	10.2	1.0	15.2	13.3	378.7	
243	.25	.01	5.94	10.3	7.1	3.0	-5.6	70.0		317	.25	-.01	6.29	9.8	.6	15.3	12.7	386.2	
244	.25	.01	5.95	10.8	8.4	3.1	-6.7	69.7		318	.23	-.01	6.29	10.1	1.4	15.6	11.5	393.0	
245	.27	.00	5.95	10.6	6.6	3.4	-4.9	71.1		319	.24	-.02	6.29	9.8	.2	15.8	13.2	400.9	
246	.27	-.01	5.96	11.5	8.4	3.8	-6.2	70.8	-.7	320	.24	-.02	6.29	10.2	1.9	16.4	11.2	407.1	
247	.28	-.01	5.96	11.4	6.3	4.0	-4.0	72.6		321	.25	-.02	6.30	9.8	-.4	16.1	13.2	415.6	
248	.27	-.01	5.97	12.0	7.9	3.8	-.5.1	72.8	-.9	322	.25	-.02	6.30	9.8	1.1	16.6	11.9	422.5	
249	.25	.00	5.97	11.4	6.2	4.2	-3.4	74.6		323	.25	-.02	6.30	7.8	-1.5	15.1	14.8	432.0	
250	.28	-.02	5.98	12.2	8.0	4.9	-5.0	74.7	-.6	324	.23	-.02	6.29	7.7	.6	15.3	14.3	439.6	
251	.28	-.02	5.98	11.8	5.5	4.5	-2.8	77.3	-1.3	325	.23	-.02	6.30	7.1	-.6	14.2	15.7	448.2	
252	.29	-.02	5.99	12.1	7.2	4.7	-3.7	78.1	-1.3	326	.24	-.02	6.30	7.0	1.5	15.1	14.3	454.8	
253	.26	-.01	5.99	11.6	5.9	5.2	-2.4	80.3	-.9	327	.24	-.02	6.30	6.6	-.5	15.2	15.6	463.4	
254	.26	-.01	6.00	11.9	6.7	5.1	-3.0	81.6	-.7	328	.19	-.02	6.30	6.4	.7	15.8	14.5	470.8	
255	.27	-.02	6.00	11.4	5.4	5.3	-1.3	84.2	-.4	329	.19	-.02	6.30	5.5	-.5	15.8	16.1	479.4	
256	.24	-.02	6.00	11.5	6.8	5.8	-2.4	85.6	-.1	330	.23	-.03	6.31	5.3	.3	17.6	15.8	487.1	
257	.25	-.02	6.00	10.9	5.1	5.9	-.8	88.5	.1	331	.20	-.02	6.31	4.2	-.7	17.8	16.6	495.8	
258	.25	-.02	6.01	10.8	6.5	6.2	-1.8	90.1		332	.20	-.02	6.31	4.4	.2	17.3	16.0	503.7	
259	.23	-.02	6.01	10.2	4.7	6.3	-.1	93.5		333	.18	-.02	6.31	3.0	-.8	17.9	16.9	512.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
334	.13	-.01	6.31	3.2	.2		16.0	520.5		296	.27	.00	6.22	2.2	2.2	10.7	10.0	243.8	
Z = 101										297	.27	.00	6.22	2.9	3.0	10.3	9.0	248.9	
224	.52	-.03	6.09	3.6		-2.9		100.3		298	.27	.00	6.24	3.6	1.9	10.5	10.3	255.1	
225	.52	-.03	6.09	2.6	11.2	-2.9		97.2		299	.27	.00	6.23	4.2	3.1	10.6	9.2	260.1	
226	.52	-.03	6.10	2.3	9.4	-2.7	-10.1	95.8		300	.26	.00	6.23	4.7	1.7	10.6	12.1	266.5	
227	.52	-.03	6.11	1.9	11.1	-2.7	-11.6	92.8		301	.26	.00	6.24	5.3	2.7	10.7	11.3	271.8	
228	.53	-.03	6.11	3.1	9.2	-2.3	-9.2	91.8		302	.27	.00	6.24	5.9	1.8	10.7	12.6	278.1	
229	.52	-.03	6.12	2.6	10.8	-2.1	-10.6	89.1		303	.26	.00	6.24	6.5	2.9	11.2	11.5	283.2	
230	.53	-.03	6.12	3.3	8.7	-2.0	-8.4	88.4		304	.25	.00	6.25	7.2	3.4	13.0	11.2	287.9	
231	.53	-.03	6.13	3.7	10.6	-2.0	-9.9	85.9		305	.24	.01	6.24	7.7	2.2	12.7	10.6	293.8	
232	.53	-.03	6.14	4.3	8.7	-1.4	-7.8	85.3		306	.25	.00	6.25	8.0	1.5	13.4	11.9	300.3	
233	.23	.01	5.89	5.3	10.6	-1.3	-9.7	82.8		307	.25	.00	6.25	8.5	2.2	13.6	11.1	306.2	
234	.27	.00	5.89	6.2	8.8	-1.0	-8.0	82.1		308	.25	.00	6.26	8.7	1.3	14.3	12.7	313.0	
235	.27	.00	5.90	5.5	9.8	-.9	-9.3	80.4		309	.25	.00	6.26	8.8	1.9	12.1	12.2	319.1	
236	.25	.01	5.91	6.0	8.4	-.8	-7.3	80.1		310	.25	.00	6.27	8.8	.8	11.5	13.7	326.4	
237	.25	.01	5.91	5.8	9.8	-.5	-9.3	78.3		311	.26	.00	6.27	9.3	2.8	11.7	11.9	331.7	
238	.25	.01	5.92	6.8	8.3	-.2	-6.9	78.1		312	.24	.00	6.27	9.6	1.6	13.0	11.1	338.2	
239	.24	.01	5.92	7.2	9.1	-.3	-7.3	77.1		313	.24	.00	6.27	10.2	2.3	13.7	10.9	344.0	
240	.25	.01	5.93	7.7	7.9	.2	-5.9	77.2		314	.24	.00	6.28	9.2	-.3	12.5	13.2	352.4	
241	.26	.00	5.93	8.6	9.2	.2	-7.3	76.1		315	.25	-.01	6.28	9.6	2.0	12.9	12.4	358.5	
242	.27	.00	5.94	8.9	7.6	.8	-5.2	76.6		316	.25	-.01	6.29	9.4	1.1	13.5	12.7	365.5	
243	.27	.00	5.94	9.7	9.0	.7	-6.6	75.6		317	.25	-.01	6.29	8.4	.0	12.5	13.6	373.6	
244	.27	.00	5.95	10.1	7.3	.9	-4.6	76.4		318	.26	-.01	6.30	7.8	.2	12.1	15.0	381.4	
245	.27	.00	5.95	10.8	8.5	1.0	-5.7	76.0		319	.23	-.01	6.30	8.2	1.8	12.6	13.6	387.7	
246	.27	.00	5.96	11.0	7.1	1.4	-3.8	77.0		320	.24	-.02	6.30	7.8	-.1	12.3	15.4	395.8	
247	.24	.01	5.96	11.1	8.4	1.5	-5.1	76.7		321	.24	-.02	6.30	8.2	1.6	12.0	14.3	402.3	
248	.29	-.01	5.97	11.5	6.8	2.0	-3.0	77.9		322	.25	-.02	6.31	7.6	-.2	12.3	16.3	410.6	
249	.27	-.01	5.97	11.8	7.9	2.0	-4.4	78.0		323	.25	-.02	6.31	7.8	1.4	12.5	14.9	417.3	
250	.27	-.01	5.98	11.5	6.4	2.2	-2.3	79.7		324	.23	-.02	6.30	7.5	.1	14.0	16.4	425.3	
251	.27	-.01	5.99	11.8	7.7	1.9	-3.8	80.1		325	.23	-.02	6.31	7.3	.8	14.3	15.7	432.5	
252	.28	-.02	5.99	11.6	6.3	2.8	-1.7	81.8		326	.21	-.01	6.31	6.8	.0	14.9	16.8	440.6	
253	.25	-.01	6.00	12.1	7.2	2.8	-3.0	82.7		327	.24	-.02	6.31	6.7	.8	14.3	15.5	447.9	
254	.25	-.01	6.00	11.6	6.1	2.9	-1.1	84.6		328	.24	-.02	6.32	6.3	-.3	14.5	16.9	456.3	
255	.27	-.02	6.01	11.8	7.1	3.3	-2.3	85.6	-.7	329	.19	-.02	6.31	6.1	1.1	14.8	16.3	463.2	
256	.27	-.02	6.02	11.4	5.7	3.6	-.4	87.9	-.3	330	.19	-.02	6.32	5.2	.0	15.3	17.0	471.3	
257	.27	-.02	6.02	11.5	6.7	3.6	-1.6	89.3	-.3	331	.23	-.03	6.32	5.3	.1	15.1	16.4	479.3	
258	.27	-.02	6.03	11.0	5.5	3.9	.1	91.9	-.2	332	.20	-.02	6.32	4.2	-.4	15.4	17.8	487.7	
259	.27	-.03	6.02	10.9	6.3	3.8	-.8	93.6		333	.20	-.02	6.32	4.0	.1	15.4	17.6	495.7	
260	.27	-.03	6.03	10.3	4.9	4.1	.9	96.7		334	.18	-.02	6.32	2.8	-.7	15.4	19.0	504.5	
261	.24	-.02	6.03	10.0	6.5	4.4	.0	98.3		335	.13	-.01	6.32	3.0	.6	15.9	16.9	511.9	
262	.24	-.03	6.03	9.3	4.7	4.7	1.4	101.6		336	.13	-.01	6.32	2.0	-.8		18.1	520.7	
263	.24	-.03	6.03	8.9	5.9	4.6	.5	103.8		Z = 102									
264	.24	-.03	6.04	8.2	4.4	4.8	2.6	107.5		226	.53	-.03	6.11	3.2		-1.5		105.9	
265	.24	-.03	6.05	7.8	5.8	4.8	1.1	109.7		227	.53	-.03	6.11	2.7	9.6	-1.3		104.4	
266	.23	-.03	6.04	6.8	4.3	5.0	2.9	113.5		228	.53	-.03	6.12	2.7	11.5	-.8	-14.1	101.0	
267	.23	-.03	6.04	6.4	5.6	5.5	2.9	116.0		229	.53	-.03	6.13	3.8	9.4	-.6	-11.8	99.7	
268	.23	-.03	6.05	5.7	4.3	5.3	4.1	119.7		230	.53	-.03	6.13	3.3	11.0	-.4	-13.1	96.8	
269	.20	-.02	6.05	4.7	5.4	5.2	3.1	122.4		231	.53	-.03	6.14	4.0	9.0	-.1	-11.0	95.9	
270	.18	-.02	6.04	3.7	4.0	5.9	4.3	126.5		232	.53	-.03	6.15	4.3	10.8	.1	-12.5	93.1	
271	.16	-.02	6.05	2.4	4.9	5.6	3.5	129.6		233	.53	-.03	6.15	4.8	8.7	.1	-10.3	92.6	
272	.40	.00	6.22	1.3	4.1	6.0	4.4	133.6		234	.53	-.03	6.16	5.5	10.5	.0	-12.0	90.1	
273	.41	-.01	6.23	1.3	5.4	6.2	3.8	136.2		235	.54	-.04	6.17	5.8	8.5	-.3		89.7	
274	-.15	.00	6.05	.7	3.9	6.3	4.9	140.4		236	.54	-.04	6.17	6.8	10.4	.3	-11.4	87.4	
275	-.14	-.01	6.05	.8	5.0	7.0	3.6	143.4		237	.23	.01	5.91	5.8	7.8	-.3	-.9.1	87.6	
276	-.13	-.01	6.05	.9	4.4	7.0	4.5	147.0		238	.23	.01	5.92	7.1	10.7	.6	-10.8	85.0	
277	-.10	-.01	6.05	.8	5.1	7.3	3.1	150.0		239	.23	.01	5.93	6.9	8.6	.9	-9.2	84.4	
278	-.10	-.01	6.05	.5	3.6	7.6	5.2	154.5		240	.27	.00	5.93	7.4	9.4	1.2	-9.6	83.1	
279	-.07	-.01	6.05	.3	5.1	7.9	3.9	157.5		241	.26	.01	5.94	7.7	7.8	1.2	-8.0	83.3	
280	-.04	-.01	6.05	.2	3.8	8.2	5.0	161.8		242	.27	.00	5.94	8.6	9.6	1.6	-9.0	81.8	
281	-.04	-.01	6.06	.1	4.5	8.1	4.7	165.4		243	.23	.01	5.95	8.9	7.6	1.6	-7.4	82.3	
282	.00	.00	6.06	.0	3.5	8.2	5.6	170.0		244	.23	.01	5.95	9.8	9.3	1.9	-8.9	81.0	
283	.00	.00	6.07	.0	4.3	8.2	5.0	173.8		245	.24	.01	5.96	10.1	7.4	2.0	-6.9	81.6	
284	-.01	.00	6.07	.1	2.6	8.1	6.7	179.2		246	.24	.01	5.97	10.8	8.9	2.4	-8.1	80.8	
285	.00	.00	6.07	.0	4.2	8.1	5.9	183.1		247	.25	.00	5.97	11.0	7.2	2.5	-6.0	81.7	
286	.00	.00	6.07	.1	.8	8.3	8.1	189.4		248	.25	.00	5.98	11.9	8.9	3.0	-7.7	80.9	
287	.00	.00	6.08	.0	4.2	8.8	5.9	193.3		249	.27	-.01	5.98	11.4	6.5	2.7	-5.2	82.4	
288	.00	.00	6.09	.0	2.0	9.1	8.1	199.4		250	.27	-.01	5.99	11.9	8.5	3.3	-6.7	82.0	
289	.00	.00	6.09	.0	3.0	8.8	7.3	204.5		251	.27	-.01	5.99	11.6	6.3	3.2	-5.1	83.8	
290	.00	.00	6.09	.0	1.9	9.2	8.9	210.7		252	.30	-.02	6.00	12.4	8.4	3.8	-5.2	83.5	-.6
291	.00	.00	6.10	.0	2.9	9.5	7.7	215.8		253	.25	-.01	6.01	11.7	5.9	3.5	-3.0	85.7	
292	.00	.00	6.11	.0	1.8	9.5	9.0	222.1		254	.26	-.01	6.01	12.3	7.9	4.2	-4.3	85.8	-1.1
293	.31	-.01	6.22	.6	3.0	10.0	8.0	227.2		255	.27	-.02	6.02	11.9	6.0	4.1	-2.4	87.8	-1.0
294	.31	-.01	6.22	1.0	2.4	10.7	9.4	232.9		256	.27	-.02	6.02	12.1	7.5	4.5	-3.8	88.4	-.6
295	.27	.00	6.22	1.6	3.0	10.3	8.8	237.9		257	.25	-.02	6.02	11.5	5.6	4.4	-2.0	90.8	-.6

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
258	.25	-.02	6.03	11.6	7.1	4.8	-3.9	91.8		332	.23	-.03	6.33	5.4	1.0	16.7	14.2	469.9	
259	.23	-.02	6.02	11.0	5.5	4.8	-2.2	94.3		333	.21	-.03	6.32	4.5	-.1	17.0	15.2	478.0	
260	.24	-.02	6.03	11.1	6.6	5.1	-3.0	95.8		334	.18	-.02	6.33	4.7	.7	17.5	14.2	485.4	
261	.24	-.02	6.04	10.6	5.6	5.7	-1.4	98.3		335	.15	-.01	6.33	3.2	-1.5	16.8	16.3	495.0	
262	.24	-.03	6.04	10.3	6.2	5.4	-2.2	100.2		336	.18	-.02	6.33	3.1	.5	16.6	15.9	502.6	
263	.25	-.03	6.04	9.6	4.9	5.6	-.4	103.3		337	.18	-.02	6.34	2.1	-.6	16.7	17.1	511.3	
264	.23	-.03	6.04	9.4	6.6	6.2	-1.8	104.9		338	.31	-.05	6.34	2.2	.4		16.3	518.9	
265	.23	-.03	6.04	8.4	4.3	6.2	.4	108.6		Z = 103									
266	.26	-.04	6.05	8.1	6.1	6.4	-.9	110.6		236	.54	-.04	6.18	5.7		-1.8		98.8	
267	.23	-.03	6.05	7.2	5.6	7.7	-.5	113.1		237	.54	-.04	6.19	6.5	10.1	-2.0		96.7	
268	.20	-.02	6.06	6.9	5.5	7.6	-1.1	115.7		238	.24	.01	5.93	7.1	8.9	-.9	-7.9	95.8	
269	.24	-.04	6.05	6.0	4.4	7.7	.2	119.3		239	.24	.01	5.94	7.4	10.3	-1.4	-8.7	93.6	
270	.20	-.02	6.06	5.4	5.2	7.5	-.2	122.2		240	.24	.01	5.94	7.8	9.0	-1.0	-7.5	92.7	
271	.24	-.04	6.06	4.6	4.2	7.7	.9	126.0		241	.24	.01	5.95	7.2	9.4	-.9	-8.6	91.4	
272	.37	.00	6.19	3.3	5.0	7.8	.3	129.1		242	.24	.01	5.95	7.9	8.7	-.1	-6.8	90.7	
273	.41	.00	6.23	2.5	4.7	8.4	1.0	132.4		243	.24	.01	5.96	8.4	9.2	-.6	-7.8	89.6	
274	.41	.00	6.24	1.3	5.0	8.0	.5	135.5		244	.24	.01	5.96	8.7	7.8	-.3	-6.2	89.8	
275	.41	.00	6.24	.5	3.8	7.9	2.8	139.8		245	.24	.01	5.97	9.5	9.4	-.3	-7.5	88.6	
276	.41	.00	6.25	.5	5.3	8.1	.6	142.6		246	.25	.00	5.97	9.9	7.7	.0	-5.6	88.9	
277	-.15	-.01	6.07	.0	3.8	7.4	2.7	146.9		247	.27	-.01	5.98	10.6	9.2	.4	-7.0	87.8	
278	-.07	-.01	6.06	.4	5.6	8.0	1.3	149.3		248	.27	-.01	5.98	10.9	7.3	.5	-4.8	88.6	
279	-.10	-.01	6.06	.3	3.9	8.3	2.9	153.5		249	.27	-.01	5.99	11.5	9.0	.5	-6.4	87.7	
280	-.07	-.01	6.06	.0	4.9	8.0	2.4	156.7		250	.27	-.01	5.99	11.6	7.1	1.1	-4.3	88.7	
281	.00	.00	6.07	.0	4.1	8.4	3.5	160.7		251	.28	-.01	6.00	11.6	7.8	.4	-4.9	88.9	
282	.00	.00	6.07	.0	4.4	8.3	3.1	164.4		252	.28	-.02	6.01	11.4	8.3	2.4	-4.4	88.7	
283	.00	.00	6.07	.0	3.7	8.5	4.3	168.8		253	.25	-.01	6.01	12.0	8.1	2.2	-5.8	88.6	
284	.00	.00	6.08	.0	4.4	8.6	3.8	172.5		254	.27	-.02	6.01	11.6	6.6	2.9	-4.0	90.1	
285	-.01	.00	6.08	.1	3.3	9.3	5.1	177.2		255	.24	-.01	6.02	12.1	7.9	2.9	-5.2	90.2	
286	.00	.00	6.08	.0	4.0	9.1	4.3	181.3		256	.24	-.02	6.02	11.4	6.1	3.0	-3.2	92.2	
287	.00	.00	6.09	.1	2.0	9.3	6.5	187.4		257	.25	-.02	6.03	11.6	7.4	2.9	-4.3	92.8	
288	.00	.00	6.09	.0	4.2	9.3	4.4	191.3		258	.25	-.02	6.03	10.3	5.2	2.5	-1.7	95.7	
289	.00	.00	6.10	.0	2.1	9.4	6.4	197.3		259	.27	-.03	6.03	10.4	7.3	2.6	-2.8	96.5	
290	.00	.00	6.10	.0	3.5	10.0	5.3	201.8		260	.27	-.03	6.04	9.9	5.8	2.9	-1.0	98.8	
291	.00	.00	6.11	.0	1.7	9.9	7.5	208.1		261	.24	-.03	6.04	9.9	7.1	3.4	-2.2	99.7	
292	.00	.00	6.11	.0	3.1	10.0	6.3	213.1		262	.24	-.03	6.05	9.4	5.4	3.2	-.4	102.3	
293	.00	.00	6.12	.0	2.0	10.2	7.6	219.2		263	.24	-.03	6.05	9.4	6.7	3.8	-1.5	103.7	
294	.54	-.02	6.50	.9	3.8	11.0	6.0	223.5		264	.23	-.03	6.05	8.6	5.1	4.0	.1	106.7	
295	.27	.00	6.24	1.4	2.4	11.0	6.9	229.2		265	.26	-.04	6.05	8.3	6.6	4.0	-.8	108.2	
296	.27	.00	6.24	2.3	3.4	11.4	6.2	233.9		266	.20	-.02	6.06	7.6	4.7	4.4	1.0	111.5	
297	.27	.00	6.23	2.3	2.0	11.2	9.0	239.9		267	.20	-.02	6.06	7.3	6.0	4.3	.1	113.5	
298	.27	.00	6.25	3.4	3.2	11.4	8.1	244.8		268	.20	-.02	6.06	6.2	4.8	3.6	1.5	116.8	
299	.27	.00	6.25	4.0	2.0	11.5	9.8	250.9		269	.23	-.03	6.07	6.0	5.8	3.8	.9	119.1	
300	.27	.00	6.24	4.6	4.6	13.0	7.3	254.4		270	.24	-.04	6.07	5.2	4.8	4.3	1.7	122.3	
301	.27	.00	6.25	5.1	2.0	13.3	8.7	260.5		271	.23	-.03	6.07	4.7	5.3	4.4	1.3	125.1	
302	.27	.00	6.25	5.8	3.1	13.6	7.8	265.5		272	.16	-.02	6.07	3.8	4.4	4.6	2.7	128.8	
303	.27	.00	6.26	6.2	1.8	13.6	9.0	271.8		273	.38	.00	6.22	3.6	5.5	5.0	1.7	131.4	
304	.27	.00	6.26	6.8	3.1	13.8	8.1	276.7		274	.39	.00	6.23	2.3	4.5	4.8	3.0	135.0	
305	.25	.00	6.26	7.4	1.6	12.1	9.4	283.2		275	.39	.00	6.23	2.0	6.1	5.8	1.4	137.0	
306	.25	.00	6.26	7.9	2.8	12.7	8.4	288.4		276	.41	.00	6.26	.4	3.0	5.1	4.0	142.0	
307	.25	.00	6.26	8.1	1.4	12.5	8.6	295.1		277	.41	.00	6.26	.2	5.9	5.7	2.6	144.2	
308	.25	.00	6.26	8.9	2.9	13.3	7.9	300.3		278	.00	.00	6.06	.0	4.2	6.1	4.1	148.1	
309	.25	.00	6.27	8.8	1.4	13.3	8.8	307.0		279	.00	.00	6.07	.0	5.4	5.9	2.5	150.7	
310	.25	.00	6.28	9.5	2.3	13.7	8.6	312.7		280	-.10	-.01	6.07	.3	4.4	6.5	3.8	154.3	
311	.25	.00	6.28	9.0	.9	13.8	10.1	319.9		281	-.07	-.01	6.07	.1	5.3	6.9	2.8	157.2	
312	.24	.00	6.28	8.2	.8	11.9	10.9	327.1		282	.00	.00	6.08	.0	3.9	6.7	4.2	161.3	
313	.24	.00	6.28	8.1	2.1	12.4	11.4	333.1		283	.00	.00	6.08	.0	4.9	7.2	3.7	164.5	
314	.24	.00	6.28	8.9	2.0	12.1	9.7	339.2		284	.00	.00	6.08	.0	3.9	7.4	4.8	168.7	
315	.25	-.01	6.29	8.7	1.2	13.6	11.5	346.1		285	.00	.00	6.09	.0	4.6	7.6	4.0	172.2	
316	.25	-.01	6.30	8.7	1.4	13.0	11.0	352.8		286	-.01	.00	6.09	.2	3.2	7.5	5.5	177.1	
317	.25	-.01	6.30	8.1	.8	12.8	12.4	360.0		287	.00	.00	6.09	.0	4.2	7.7	4.8	180.9	
318	.26	-.01	6.30	8.5	1.7	14.5	12.4	366.4		288	.01	.00	6.10	.0	2.1	7.8	7.1	186.9	
319	.23	-.01	6.31	8.0	.4	14.7	13.2	374.0		289	.00	.00	6.10	.0	4.1	7.8	5.2	190.9	
320	.24	-.02	6.30	8.6	1.7	14.6	11.9	380.4		290	.01	.00	6.11	.1	2.4	8.0	7.2	196.5	
321	.24	-.02	6.31	8.1	.5	15.1	13.1	388.0		291	.00	.00	6.11	.1	3.9	8.4	5.5	200.6	
322	.25	-.02	6.31	8.4	1.8	15.3	11.9	394.3		292	.00	.00	6.12	.0	1.9	8.6	7.3	206.8	
323	.25	-.02	6.32	7.8	-.1	15.5	13.8	402.4		293	.00	.00	6.12	.0	3.3	8.8	7.1	211.6	
324	.25	-.02	6.32	8.0	1.6	15.6	12.5	408.9		294	.00	.00	6.13	.0	2.2	8.9	9.1	217.5	
325	.23	-.02	6.31	7.7	.2	15.8	13.8	416.8		295	.54	-.02	6.51	.7	3.3	8.5	8.6	222.3	
326	.21	-.01	6.32	7.6	1.1	16.1	13.1	423.8		296	.27	.00	6.25	1.2	2.7	8.9	9.7	227.6	
327	.24	-.02	6.32	7.0	-.5	15.6	14.9	432.3		297	.27	.00	6.25	2.2	4.8	10.3	7.2	230.9	
328	.24	-.02	6.32	6.9	1.0	15.8	13.7	439.4		298	.29	-.01	6.24	2.4	2.3	10.6	9.1	236.6	
329	.22	-.02	6.32	6.7	.5	16.6	14.6	446.9		299	.27	.00	6.26	3.4	3.7	11.0	7.8	241.0	
330	.19	-.02	6.32	6.3	.7	16.2	14.2	454.3		300	.27	.00	6.26	3.8	2.0	11.1	9.0	247.1	
331	.23	-.03	6.33	5.3	-.5	15.8	15.5	462.8		301	.29	-.01	6.26	4.3	3.3	9.8	7.5	251.8	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
302	.27	.00	6.26	4.9	2.2	10.1	8.5	257.7		274	.39	.00	6.23	3.9	5.8	6.7	-.5	131.9	
303	.29	-.01	6.26	5.4	3.0	10.0	7.9	262.7		275	.41	.00	6.26	3.2	4.4	6.7	.6	135.6	
304	.29	-.01	6.27	6.1	2.2	10.4	9.0	268.6		276	.39	.00	6.25	3.2	5.7	6.3	-.4	138.0	
305	.25	.00	6.26	6.7	2.9	10.2	8.2	273.8		277	.41	.00	6.27	1.9	4.4	7.7	1.0	141.6	
306	.25	.00	6.27	6.6	1.9	10.5	9.5	280.0		278	.42	.00	6.28	1.2	5.7	7.5	-.1	144.0	
307	.25	.00	6.27	6.0	1.5	9.2	10.3	286.5		279	.42	.00	6.28	.1	3.9	7.2	1.8	148.1	
308	.25	.00	6.28	6.5	2.3	10.1	10.8	292.3		280	.00	.00	6.08	.0	5.7	7.4	1.1	150.5	
309	.25	.00	6.28	6.9	2.3	9.4	10.7	298.1		281	.00	.00	6.08	.0	4.2	7.2	1.7	154.4	
310	.25	.00	6.28	7.2	2.0	10.1	11.1	304.1		282	.00	.00	6.08	.0	5.3	7.3	1.2	157.2	
311	.24	.00	6.28	7.9	2.5	10.2	10.5	309.8		283	.00	.00	6.09	.0	4.4	7.8	2.5	160.8	
312	.24	.00	6.28	7.9	1.6	10.9	11.6	316.2		284	.00	.00	6.09	.0	5.1	8.0	1.8	163.9	
313	.24	.00	6.29	8.5	2.5	12.6	10.9	321.8		285	.00	.00	6.09	.0	3.8	7.8	3.3	168.2	
314	.24	.00	6.29	7.7	.3	10.9	12.8	329.5		286	.00	.00	6.10	.0	4.7	7.9	2.5	171.5	
315	.25	-.01	6.30	8.4	3.0	11.9	11.3	334.6		287	-.01	.00	6.10	.2	3.5	8.2	4.0	176.1	
316	.25	-.01	6.30	8.2	.9	11.7	12.5	341.7		288	.00	.00	6.11	.0	4.4	8.4	2.9	179.8	
317	.25	-.01	6.31	8.8	2.2	12.4	11.4	347.6		289	.01	.00	6.11	.0	2.2	8.6	5.6	185.6	
318	.25	-.01	6.31	8.5	1.7	13.3	12.6	354.0		290	.00	.00	6.11	.0	4.4	8.8	3.8	189.3	
319	.23	-.01	6.32	8.4	1.3	12.9	12.3	360.8		291	.01	.00	6.12	.1	2.2	8.6	6.1	195.2	
320	.24	-.01	6.31	7.7	.4	12.9	14.4	368.5		292	.00	.00	6.12	.0	3.7	8.4	5.2	199.5	
321	.24	-.02	6.32	8.1	1.6	12.8	13.1	375.0		293	.00	.00	6.13	.0	3.0	9.5	6.0	204.6	
322	.24	-.02	6.32	7.6	.6	12.9	14.5	382.4		294	.54	-.02	6.51	.3	4.3	10.5	4.5	208.4	
323	.25	-.02	6.32	7.9	1.8	12.9	12.8	388.6		295	.54	-.02	6.52	.6	2.8	11.1	5.2	213.7	
324	.25	-.02	6.33	7.4	.3	13.3	14.6	396.4		296	.54	-.02	6.52	1.5	3.8	11.6	4.3	217.9	
325	.23	-.02	6.32	7.5	1.5	13.2	13.4	403.0		297	.55	-.02	6.53	1.6	2.3	11.3	5.9	223.6	
326	.23	-.02	6.32	7.2	.5	13.5	14.7	410.6		298	.54	-.01	6.54	2.7	4.2	10.6	4.3	227.6	
327	.21	-.01	6.33	7.2	1.2	13.6	14.0	417.5		299	.32	-.01	6.28	2.8	2.3	10.6	5.5	233.3	
328	.24	-.02	6.33	6.7	-.1	14.0	15.6	425.7		300	.32	-.02	6.28	3.7	3.3	10.3	5.4	238.1	
329	.21	-.02	6.33	6.4	1.5	14.4	14.3	432.3		301	.27	.00	6.28	3.5	1.8	10.0	7.2	244.3	
330	.19	-.02	6.33	6.3	.3	14.2	15.2	440.0		302	.27	.00	6.28	3.6	3.2	9.9	6.3	249.2	
331	.23	-.03	6.33	5.9	.8	14.2	14.6	447.4		303	.29	-.01	6.28	4.2	2.5	10.2	7.5	254.8	
332	.19	-.02	6.34	5.0	-.3	14.4	16.4	455.7		304	.29	-.01	6.28	4.6	3.3	10.4	7.2	259.6	
333	.20	-.02	6.34	5.1	.9	14.3	15.4	462.8		305	.25	.00	6.28	4.9	2.1	10.4	8.1	265.5	
334	.20	-.02	6.34	4.0	-.4	14.1	16.3	471.3		306	.25	.00	6.28	5.6	3.1	10.6	7.2	270.5	
335	.20	-.02	6.35	4.1	.6	14.0	15.9	478.7		307	.25	.00	6.28	5.8	2.3	11.0	8.0	276.3	
336	.18	-.02	6.34	3.4	.2	15.6	16.7	486.6		308	.25	.00	6.28	6.3	2.8	12.3	7.5	281.5	
337	.13	-.01	6.34	3.2	.6	15.7	15.9	494.1		309	.26	.00	6.29	6.7	2.1	12.1	8.7	287.5	
338	.18	-.02	6.35	2.2	-.4	15.9	16.7	502.6		310	.26	.00	6.29	7.1	2.5	12.3	7.8	293.1	
Z = 104										311	.27	-.01	6.30	7.3	1.9	12.2	9.1	299.3	
238	.54	-.04	6.20	7.0		.3		103.8		312	.24	.00	6.29	8.0	2.7	12.5	8.6	304.6	
239	.55	-.04	6.21	7.3	9.5	.8		102.3		313	.24	.00	6.29	8.1	1.8	12.6	9.2	310.9	
240	.54	-.04	6.22	8.2	10.1	.7	-12.2	100.3		314	.24	.00	6.30	8.6	2.3	12.4	8.8	316.7	
241	.25	.00	5.95	7.7	8.4	.1	-10.3	99.9		315	.25	-.01	6.30	8.3	1.5	13.6	9.8	323.2	
242	.25	.00	5.96	8.2	10.4	1.1	-12.1	97.6		316	.25	-.01	6.31	8.5	2.1	12.6	9.7	329.2	
243	.25	.00	5.96	7.0	8.2	.6	-9.6	97.4		317	.25	-.01	6.31	8.2	1.0	12.8	11.0	336.3	
244	.25	.00	5.97	7.6	9.5	.9	-10.4	96.0		318	.25	-.01	6.32	8.7	2.9	13.5	9.7	341.4	
245	.25	.00	5.97	7.8	8.0	1.1	-8.6	96.1		319	.26	-.01	6.32	8.4	1.0	12.8	10.6	348.5	
246	.27	-.01	5.98	8.7	9.7	1.4	-9.6	94.5		320	.24	-.01	6.32	9.1	2.5	14.0	10.1	354.1	
247	.27	-.01	5.99	9.0	7.8	1.4	-8.2	94.8		321	.24	-.01	6.32	8.1	.3	13.9	11.9	361.9	
248	.27	-.01	5.99	9.7	9.5	1.7	-9.4	93.4		322	.24	-.02	6.33	8.4	2.1	14.4	10.9	367.9	
249	.27	-.01	6.00	9.7	7.4	1.8	-7.4	94.1		323	.25	-.02	6.33	7.7	.1	13.8	13.4	375.9	
250	.28	-.01	6.00	10.6	9.1	1.9	-8.6	93.0		324	.25	-.02	6.34	8.0	2.2	14.2	11.1	381.8	
251	.28	-.01	6.01	10.5	7.3	2.1	-6.9	93.8		325	.22	-.01	6.34	7.5	.3	14.1	12.6	389.6	
252	.25	-.01	6.01	11.2	8.9	3.2	-7.7	93.0		326	.23	-.02	6.33	7.7	1.8	14.4	11.5	395.9	
253	.25	-.01	6.02	10.8	6.7	1.5	-5.8	94.4		327	.21	-.01	6.33	7.2	.5	14.4	12.8	403.4	
254	.27	-.02	6.02	11.1	8.5	1.9	-7.2	94.1		328	.24	-.02	6.34	7.2	1.4	14.7	12.0	410.1	
255	.24	-.01	6.02	10.6	6.7	1.9	-5.3	95.4		329	.24	-.02	6.34	6.9	.1	14.9	13.3	418.0	
256	.27	-.02	6.04	11.3	8.1	2.1	-6.2	95.4	-1.2	330	.22	-.02	6.34	6.7	1.3	14.7	12.4	424.9	
257	.25	-.02	6.03	10.7	6.4	2.3	-4.4	97.1		331	.19	-.02	6.34	6.4	.2	14.6	13.6	432.7	
258	.26	-.02	6.04	10.8	7.8	2.7	-5.5	97.4		332	.23	-.03	6.34	6.0	1.5	15.3	12.4	439.3	
259	.27	-.03	6.04	10.4	6.2	3.7	-3.8	99.3		333	.19	-.02	6.35	5.1	.0	15.5	13.7	447.5	
260	.24	-.02	6.05	10.6	7.7	4.1	-4.9	99.7		334	.20	-.02	6.35	5.2	.5	15.1	13.4	455.0	
261	.24	-.03	6.05	10.0	5.8	4.1	-3.2	101.9		335	.21	-.03	6.35	4.2	.3	15.7	14.3	462.8	
262	.24	-.03	6.06	10.1	7.3	4.3	-4.3	102.8		336	.11	-.01	6.35	4.5	1.0	16.1	13.5	469.9	
263	.24	-.03	6.06	9.5	5.6	4.4	-2.7	105.2		337	.11	-.01	6.35	3.3	-.3	15.6	14.6	478.3	
264	.23	-.03	6.06	9.4	6.8	4.4	-3.5	106.6		338	.18	-.02	6.35	2.8	.5	15.6	13.8	485.9	
265	.23	-.03	6.07	8.9	5.7	5.0	-2.0	108.9		Z = 105									
266	.23	-.03	6.07	8.7	6.5	4.9	-2.9	110.5		240	.54	-.03	6.22	6.3		-2.9		112.5	
267	.24	-.04	6.07	7.9	5.1	5.3	-1.0	113.5		241	.55	-.04	6.23	7.1	10.3	-2.7		110.2	
268	.23	-.03	6.07	7.5	6.3	5.5	-2.5	115.3		242	.54	-.03	6.24	7.4	8.6	-2.5	-8.2	109.7	
269	.21	-.03	6.07	6.5	5.1	5.8	-.8	118.3		243	.27	-.01	5.97	7.7	10.7	-2.2	-10.0	107.1	
270	.21	-.03	6.07	6.2	5.7	5.8	-1.3	120.6		244	.28	-.01	5.98	7.7	8.7	-1.7	-8.1	106.4	
271	.21	-.03	6.08	5.3	4.9	5.9	-.2	123.8		245	.27	-.01	5.98	7.3	9.9	-1.3	-9.6	104.6	
272	.21	-.03	6.08	5.0	5.8	6.3	-.8	126.1		246	.28	-.01	5.99	7.9	8.6	-.7	-8.6	104.0	
273	.19	-.02	6.08	4.0	4.5	6.4	.6	129.7		247	.27	-.01	5.99	8.3	9.1	-1.2	-8.6	103.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
248	.28	-.01	6.00	8.7	8.3	-.7	-7.2	102.8		322	.24	-.02	6.33	8.1	1.2	12.3	12.4	356.9	
249	.28	-.01	6.00	9.2	9.4	-.8	-7.7	101.5		323	.25	-.02	6.34	8.6	2.6	12.7	11.0	362.4	
250	.24	.00	6.01	9.3	7.9	-.2	-6.5	101.6		324	.25	-.02	6.34	7.5	-.2	12.5	13.3	370.7	
251	.25	-.01	6.02	10.1	8.9	-.4	-7.2	100.7		325	.22	-.01	6.35	7.4	1.8	12.1	12.5	376.9	
252	.25	-.01	6.02	10.2	8.1	.4	-6.3	100.7		326	.23	-.02	6.34	7.1	.6	12.4	13.3	384.4	
253	.27	-.02	6.02	10.7	8.6	.1	-6.8	100.2		327	.23	-.02	6.34	7.2	1.8	12.5	12.1	390.7	
254	.24	-.01	6.03	10.3	7.0	.4	-4.8	101.3		328	.21	-.01	6.34	6.7	.6	12.6	13.2	398.1	
255	.24	-.02	6.03	11.1	8.7	.6	-6.2	100.7		329	.24	-.02	6.35	6.6	1.5	12.7	12.4	404.7	
256	.28	-.03	6.04	10.4	7.1	1.1	-4.4	101.6		330	.21	-.02	6.35	6.3	.4	12.9	13.8	412.4	
257	.25	-.02	6.04	10.9	8.2	1.2	-5.5	101.5		331	.19	-.02	6.35	5.8	1.4	13.1	13.1	419.1	
258	.27	-.03	6.04	10.5	6.6	1.5	-3.6	102.9		332	.19	-.02	6.35	5.8	.3	13.1	14.8	426.9	
259	.27	-.03	6.05	10.8	7.9	1.6	-4.7	103.1		333	.23	-.03	6.35	5.1	1.2	12.9	13.5	433.8	
260	.24	-.02	6.05	10.3	6.5	2.0	-2.9	104.7		334	.23	-.03	6.36	4.2	.3	13.2	15.0	441.5	
261	.24	-.03	6.06	10.3	7.6	1.9	-3.8	105.2		335	.20	-.02	6.36	4.3	1.1	13.8	14.3	448.5	
262	.24	-.03	6.06	9.7	6.2	2.2	-2.3	107.1		336	.21	-.03	6.36	3.6	.2	13.7	15.1	456.4	
263	.25	-.03	6.07	9.8	7.2	2.1	-3.2	107.9		337	.24	-.04	6.36	3.7	.8	13.5	14.4	463.7	
264	.26	-.04	6.07	9.2	6.0	2.5	-1.6	110.0		338	.24	-.04	6.36	2.6	-.3	13.5	16.3	472.1	
265	.27	-.04	6.07	9.3	7.1	2.9	-2.7	111.0		Z = 106									
266	.27	-.04	6.08	8.6	5.6	2.8	-1.0	113.4		242	.54	-.03	6.24	7.6		-.3		117.9	
267	.31	-.05	6.08	8.5	7.1	3.4	-2.1	114.5		243	.54	-.03	6.25	7.8	8.9	-.1		117.1	
268	.21	-.03	6.08	7.7	4.8	3.0	.1	117.8		244	.54	-.03	6.26	8.6	10.6	-.2	-12.3	114.6	
269	.21	-.03	6.08	7.4	6.8	3.6	-1.3	119.0		245	.24	.00	5.99	7.8	8.4	-.5	-10.1	114.2	
270	.21	-.03	6.08	6.3	5.1	3.6	.4	122.0		246	.24	.00	5.99	8.1	9.7	-.7	-10.9	112.6	
271	.25	-.04	6.09	6.2	6.1	4.0	-.3	124.0		247	.24	.00	6.00	8.6	9.1	-.2	-10.1	111.6	
272	.21	-.03	6.09	5.2	5.2	4.2	.8	126.9		248	.24	.00	6.00	8.1	9.6	.3	-10.4	110.0	
273	.21	-.03	6.09	4.8	5.9	4.3	.1	129.1		249	.24	.00	6.01	8.4	8.9	.9	-9.8	109.2	
274	.21	-.03	6.10	4.0	4.6	4.5	1.4	132.5		250	.25	-.01	6.02	9.1	9.1	.6	-9.8	108.1	
275	.42	.00	6.27	3.4	5.6	4.3	.4	135.0		251	.25	-.01	6.02	9.0	8.3	1.0	-8.8	107.9	
276	.42	.00	6.28	2.8	4.6	4.5	2.0	138.4		252	.27	-.02	6.02	9.8	9.0	1.0	-9.4	107.0	
277	.39	.01	6.26	2.7	5.8	4.6	.9	140.7		253	.25	-.01	6.03	9.9	8.1	1.0	-8.1	107.0	
278	.42	.00	6.28	2.2	4.7	4.9	2.6	144.1		254	.28	-.02	6.03	10.4	8.9	1.4	-8.8	106.1	
279	.42	.00	6.29	1.5	5.8	4.9	1.4	146.4		255	.24	-.02	6.04	10.1	7.3	1.7	-7.4	106.9	
280	.42	.00	6.30	1.0	5.0	6.0	2.3	149.4		256	.25	-.02	6.04	10.9	9.0	2.0	-8.6	106.0	
281	.00	.00	6.09	.0	4.8	5.1	2.3	152.7		257	.26	-.02	6.05	10.6	7.1	1.9	-6.4	107.0	
282	.00	.00	6.09	.0	4.8	5.7	4.2	156.0		258	.27	-.03	6.05	10.8	8.5	2.3	-7.6	106.5	
283	.00	.00	6.09	.0	5.7	6.1	1.8	158.4		259	.24	-.02	6.06	10.4	6.8	2.5	-5.7	107.8	
284	.00	.00	6.10	.0	4.4	6.1	3.5	162.0		260	.31	-.05	6.06	10.9	8.3	2.9	-6.8	107.5	-.9
285	.00	.00	6.10	.0	5.2	6.3	3.1	164.9		261	.24	-.03	6.07	10.3	6.6	2.9	-5.3	109.0	
286	.00	.00	6.11	.0	3.9	6.4	4.1	169.0		262	.25	-.03	6.07	10.5	7.7	3.0	-6.1	109.4	
287	.00	.00	6.11	.0	4.9	6.7	3.5	172.2		263	.25	-.03	6.07	9.7	6.3	3.2	-4.5	111.1	
288	.00	.00	6.11	.0	3.3	6.5	5.1	176.9		264	.23	-.03	6.08	10.0	7.6	3.6	-5.4	111.6	
289	.00	.00	6.12	.0	4.9	7.0	3.8	180.0		265	.27	-.04	6.08	9.4	6.0	3.6	-3.8	113.7	
290	.01	.00	6.12	.1	2.5	7.4	5.9	185.6		266	.31	-.05	6.09	9.2	7.3	3.8	-4.8	114.5	
291	.00	.00	6.13	.0	4.6	7.6	4.3	189.0		267	.24	-.03	6.09	8.6	5.9	4.1	-3.4	116.6	
292	.00	.00	6.13	.0	2.8	8.1	6.0	194.4		268	.25	-.04	6.09	8.5	7.0	4.1	-4.4	117.7	
293	.00	.00	6.14	.0	3.8	8.2	5.1	198.6		269	.25	-.04	6.09	7.8	5.5	4.7	-2.5	120.3	
294	.00	.00	6.14	.0	2.8	8.0	6.3	203.9		270	.25	-.04	6.09	7.6	6.8	4.8	-3.9	121.5	
295	.54	-.02	6.52	.1	3.5	7.2	5.9	208.4		271	.22	-.03	6.10	6.7	5.3	4.9	-1.9	124.3	
296	.00	.00	6.15	.0	2.9	7.3	7.2	213.6		272	.22	-.03	6.10	6.4	6.3	5.1	-2.7	126.1	
297	.54	-.01	6.54	.6	4.0	7.4	6.2	217.8		273	.22	-.03	6.10	5.4	5.2	5.2	-.7	129.0	
298	.54	-.01	6.54	.6	2.6	7.7	8.1	223.3		274	.22	-.03	6.11	5.0	5.9	5.2	-1.2	131.1	
299	.54	-.01	6.55	1.5	3.6	7.1	6.9	227.8		275	.42	.01	6.28	3.7	4.7	5.2	.2	134.5	
300	.32	-.01	6.30	1.6	3.2	7.9	8.2	232.6		276	.42	.01	6.29	3.7	6.2	5.8	-.6	136.4	
301	.29	-.01	6.29	2.6	3.5	8.2	7.0	237.2		277	.42	.01	6.29	3.0	4.7	5.9	.2	139.8	
302	.27	.00	6.30	2.9	2.3	8.7	8.6	242.9		278	.42	.01	6.30	3.1	6.4	6.5	-1.1	141.4	
303	.29	-.01	6.29	3.5	3.6	9.2	7.5	247.3		279	.42	.00	6.30	2.5	4.6	6.4	.5	145.0	
304	.29	-.01	6.30	4.1	3.0	9.7	8.2	252.4		280	.42	.00	6.30	2.5	5.9	6.6	-1.0	147.1	
305	.29	-.01	6.30	4.3	3.1	9.4	7.6	257.4		281	.42	.00	6.31	1.9	4.8	6.4	.2	150.4	
306	.25	.00	6.29	4.5	2.2	9.5	8.9	263.4		282	.42	.00	6.32	1.2	6.7	8.2	-2.0	151.8	
307	.26	.00	6.30	5.1	3.2	9.5	8.4	268.3		283	.42	.00	6.32	.1	3.3	6.8	.8	156.5	
308	.26	.00	6.29	5.3	2.3	9.5	9.4	274.1		284	.00	.00	6.11	.0	6.1	7.1	-.5	158.5	
309	.24	.00	6.28	6.1	3.4	10.1	7.9	278.8		285	.00	.00	6.11	.0	4.8	7.5	1.0	161.8	
310	.26	.00	6.31	6.1	1.5	9.4	9.9	285.3		286	.00	.00	6.11	.0	5.0	7.3	1.3	164.9	
311	.24	.00	6.29	6.8	3.2	10.2	8.8	290.1		287	.00	.00	6.12	.0	4.3	7.6	2.2	168.7	
312	.24	.00	6.30	7.1	2.2	10.5	10.0	296.0		288	.00	.00	6.12	.0	4.9	7.6	1.7	171.9	
313	.24	.00	6.30	7.5	2.4	10.2	9.4	301.6		289	.00	.00	6.13	.0	3.7	7.9	3.1	176.3	
314	.24	.00	6.30	7.5	1.8	10.3	10.6	307.9		290	.00	.00	6.13	.0	4.7	7.7	2.1	179.7	
315	.25	-.01	6.31	8.1	2.6	10.6	10.0	313.4		291	.00	.00	6.13	.1	3.0	8.1	4.3	184.8	
316	.25	-.01	6.32	7.9	1.9	11.0	10.7	319.5		292	.00	.00	6.14	.0	4.5	8.0	2.6	188.3	
317	.25	-.01	6.32	8.5	2.4	11.3	10.2	325.2		293	.00	.00	6.14	.0	2.9	8.1	4.5	193.5	
318	.25	-.01	6.32	8.3	1.6	11.8	11.2	331.7		294	.00	.00	6.15	.0	4.1	8.4	3.5	197.5	
319	.26	-.01	6.33	8.2	1.8	10.8	11.3	338.0		295	.00	.00	6.15	.0	3.1	8.6	4.9	202.5	
320	.24	-.01	6.33	8.0	2.0	11.8	11.8	344.0		296	.54	-.02	6.53	.7	4.2	9.3	3.4	206.4	
321	.24	-.01	6.33	8.5	2.1	11.4	10.6	350.0		297	.54	-.02	6.54	.7	2.9	9.4	5.2	211.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
298	.54	-.01	6.55	1.6	4.4	9.9	3.8	215.2		276	.23	-.04	6.12	4.0	5.4	4.8	-.9	137.0	
299	.54	-.01	6.55	1.1	2.4	9.7	5.5	220.8		277	.42	.01	6.30	3.3	5.6	4.2	-1.2	139.6	
300	.54	-.01	6.56	2.2	4.5	10.6	4.2	224.4		278	.42	.01	6.31	2.7	5.1	4.5	.4	142.5	
301	.54	-.01	6.57	1.9	2.3	9.8	6.4	230.1		279	.42	.00	6.31	2.7	6.2	4.3	-.6	144.4	
302	.54	-.01	6.57	3.0	3.9	10.1	5.0	234.3		280	.42	.00	6.31	1.7	4.4	4.2	1.6	148.1	
303	.54	-.01	6.58	3.4	2.6	10.4	6.5	239.8		281	.42	.00	6.32	1.5	5.9	4.2	.6	150.2	
304	.54	-.01	6.59	3.9	3.7	10.4	4.8	244.2		282	.42	-.01	6.33	.9	4.5	3.9	2.2	153.8	
305	.30	-.02	6.31	4.0	2.4	9.9	6.2	249.9		283	.42	-.01	6.33	.9	6.1	3.3	.9	155.7	
306	.30	-.02	6.31	4.6	3.5	10.3	5.3	254.4		284	.44	.00	6.36	.3	4.7	4.8	2.3	159.1	
307	.26	.00	6.30	4.8	2.6	10.7	6.7	259.9		285	.00	.00	6.12	.0	6.4	5.0	.3	160.8	
308	.26	.00	6.31	5.2	3.3	10.8	5.9	264.7		286	.00	.00	6.12	.1	5.3	5.5	1.1	163.5	
309	.26	.00	6.30	5.3	1.9	10.4	7.8	270.9		287	.00	.00	6.12	.0	5.2	5.7	1.1	166.5	
310	.26	.00	6.31	6.0	3.5	10.6	6.7	275.4		288	.00	.00	6.13	.0	4.4	5.8	2.2	170.1	
311	.26	.00	6.31	6.4	2.2	11.3	7.8	281.3		289	.00	.00	6.13	.0	5.1	6.0	2.0	173.1	
312	.24	.00	6.30	6.9	3.4	11.5	6.5	286.0		290	.00	.00	6.14	.0	3.6	6.0	3.8	177.6	
313	.24	.00	6.31	7.0	1.8	11.1	8.3	292.2		291	.00	.00	6.14	.0	5.1	6.4	2.7	180.5	
314	.24	.00	6.31	7.5	3.0	11.6	7.6	297.3		292	.00	.00	6.14	.0	2.8	6.3	4.9	185.8	
315	.24	.00	6.32	7.4	2.0	11.9	8.8	303.4		293	.00	.00	6.15	.0	4.8	6.6	3.2	189.0	
316	.25	-.01	6.32	8.1	2.6	11.9	7.9	308.8		294	.00	.00	6.15	.0	3.1	6.8	5.1	194.0	
317	.25	-.01	6.33	7.8	1.9	11.8	8.9	315.0		295	.00	.00	6.16	.0	4.4	7.1	3.9	197.7	
318	.25	-.01	6.33	8.4	2.6	12.0	8.5	320.5		296	.00	.00	6.16	.0	2.7	6.8	5.8	203.0	
319	.25	-.01	6.33	8.3	1.9	12.3	9.4	326.7		297	.54	-.02	6.55	.6	4.8	7.4	3.9	206.3	
320	.26	-.01	6.34	8.7	2.5	12.9	8.1	332.3		298	.53	.00	6.55	.7	3.0	7.5	5.9	211.4	
321	.23	-.01	6.34	7.9	.9	11.9	10.1	339.5		299	.54	-.01	6.56	1.5	4.2	7.2	5.3	215.3	
322	.24	-.02	6.34	8.5	3.1	12.9	8.5	344.5		300	.54	-.01	6.57	1.5	3.2	7.9	6.8	220.2	
323	.24	-.02	6.34	7.9	1.1	12.7	9.5	351.5		301	.54	-.01	6.57	2.5	4.5	7.9	5.2	223.8	
324	.25	-.02	6.35	8.4	2.2	12.4	8.6	357.3		302	.54	-.01	6.58	2.0	2.5	8.1	7.2	229.3	
325	.25	-.02	6.35	7.9	1.0	13.5	10.2	364.4		303	.54	-.01	6.59	3.0	4.0	8.3	6.3	233.4	
326	.23	-.02	6.34	7.3	1.4	13.1	9.9	371.1		304	.32	-.02	6.33	2.6	2.0	7.7	8.3	239.4	
327	.23	-.02	6.35	6.9	.6	13.2	11.9	378.5		305	.32	-.02	6.33	3.2	3.9	7.9	7.3	243.6	
328	.21	-.01	6.35	6.6	1.7	13.0	11.8	384.9		306	.32	-.02	6.33	3.4	2.6	8.0	8.5	249.1	
329	.24	-.02	6.36	6.1	.6	13.1	12.6	392.3		307	.30	-.02	6.32	4.1	4.0	8.4	7.2	253.2	
330	.21	-.02	6.36	6.2	1.9	13.4	11.5	398.6		308	.30	-.02	6.33	4.3	2.5	8.4	8.6	258.8	
331	.22	-.02	6.35	6.0	.6	13.7	12.4	406.0		309	.30	-.02	6.32	5.1	3.8	8.9	7.1	263.1	
332	.19	-.02	6.36	5.8	2.0	14.2	11.4	412.1		310	.26	.00	6.33	5.2	2.4	9.4	8.4	268.8	
333	.23	-.03	6.36	5.5	.0	14.0	13.0	420.3		311	.26	.00	6.33	5.5	3.3	9.2	7.4	273.5	
334	.20	-.02	6.36	5.1	1.8	14.5	11.8	426.5		312	.27	-.01	6.33	5.6	2.2	9.2	9.0	279.4	
335	.23	-.03	6.37	4.2	.3	14.6	12.9	434.3		313	.24	.00	6.32	6.5	3.6	9.3	7.6	283.9	
336	.18	-.02	6.36	4.5	1.0	14.5	12.3	441.3		314	.24	.00	6.32	6.8	2.3	9.8	8.2	289.7	
337	.18	-.02	6.37	3.6	.1	14.4	14.0	449.3		315	.24	.00	6.32	7.2	3.2	10.0	7.5	294.5	
338	.24	-.04	6.37	3.7	1.6	15.2	12.9	455.8		316	.25	-.01	6.33	6.9	1.8	9.8	8.9	300.9	
Z = 107																			
244	.54	-.03	6.26	7.6		-2.5		126.8		317	.25	-.01	6.33	7.6	2.8	10.0	8.4	306.1	
245	.54	-.03	6.27	8.3		-2.5		124.4		318	.25	-.01	6.34	7.4	2.2	10.3	9.4	312.0	
246	.24	-.01	6.00	8.3	8.9	-2.0	-8.8	123.6		319	.25	-.01	6.34	8.0	2.7	10.5	8.3	317.3	
247	.24	-.01	6.00	8.2	10.0	-1.8	-9.3	121.7		320	.26	-.01	6.35	7.2	1.1	9.8	10.4	324.2	
248	.24	-.01	6.01	8.8	9.3	-1.6	-8.6	120.4		321	.24	-.01	6.34	7.8	2.9	10.2	9.3	329.4	
249	.24	-.01	6.01	8.8	9.5	-1.7	-9.7	119.0		322	.24	-.01	6.35	7.5	1.5	10.8	10.5	336.0	
250	.24	-.01	6.02	8.1	9.1	-1.5	-8.7	117.9		323	.24	-.02	6.35	7.8	2.2	9.8	10.1	341.9	
251	.24	-.01	6.02	8.6	9.3	-1.3	-9.1	116.7		324	.24	-.02	6.36	7.0	1.2	10.0	11.9	348.8	
252	.24	-.01	6.03	8.7	8.4	-1.2	-7.9	116.4		325	.25	-.02	6.36	7.4	2.6	10.4	10.7	354.3	
253	.24	-.02	6.03	9.4	9.4	-.8	-8.2	115.1		326	.23	-.02	6.35	6.8	1.1	10.5	11.6	361.2	
254	.24	-.02	6.04	9.4	8.3	-.6	-7.4	114.9		327	.23	-.02	6.35	7.3	2.7	11.7	10.7	366.6	
255	.24	-.02	6.04	9.9	8.7	-.9	-7.7	114.3		328	.23	-.02	6.36	7.0	1.6	12.7	11.7	373.1	
256	.25	-.02	6.05	9.7	7.7	-.4	-6.0	114.6		329	.21	-.01	6.36	6.6	1.5	12.5	11.3	379.7	
257	.27	-.03	6.05	10.7	9.3	-.1	-7.9	113.3		330	.24	-.02	6.37	6.1	.7	12.5	12.8	387.1	
258	.27	-.03	6.06	10.3	7.3	.2	-5.6	114.1		331	.21	-.02	6.37	5.7	1.5	12.2	12.1	393.6	
259	.27	-.03	6.07	11.0	8.7	.3	-6.8	113.5		332	.22	-.02	6.36	5.5	1.0	12.6	13.6	400.8	
260	.28	-.04	6.07	10.6	7.3	.8	-5.2	114.3		333	.19	-.02	6.37	5.2	1.6	12.2	12.8	407.3	
261	.24	-.03	6.07	10.4	8.0	.5	-5.8	114.3		334	.19	-.02	6.37	5.0	.6	12.8	13.6	414.7	
262	.25	-.03	6.08	10.0	6.9	.8	-4.1	115.5		335	.20	-.02	6.38	4.7	1.5	12.5	12.8	421.3	
263	.26	-.04	6.08	10.3	7.9	1.1	-4.8	115.6		336	.20	-.02	6.38	3.7	.4	12.5	14.1	429.0	
264	.23	-.03	6.09	9.8	6.7	1.5	-2.4	117.0		337	.21	-.03	6.37	4.2	1.8	13.4	12.9	435.3	
265	.13	-.01	6.09	9.8	7.6	1.4	-3.4	117.4		338	.18	-.02	6.38	3.4	.4	13.7	14.3	442.9	
266	.11	-.01	6.09	9.0	6.3	1.8	-1.6	119.2		339	.23	-.03	6.39	3.0	.5	12.6	13.7	450.5	
267	.21	-.03	6.09	8.9	7.3	1.7	-2.5	120.0		340	.20	-.02	6.39	2.2	.6		14.6	458.0	
268	.25	-.04	6.10	8.3	6.0	1.8	-.9	122.1		341	.23	-.03	6.39	2.1	.9		14.0	465.1	
269	.25	-.04	6.10	8.1	7.4	2.2	-2.4	122.8		342	.12	-.01	6.38	1.4	.3		14.7	472.9	
270	.22	-.03	6.11	7.5	5.4	2.2	-1.1	125.4		343	-.17	-.02	6.38	1.5	.9		14.2	480.1	
271	.22	-.03	6.11	7.2	7.2	2.6	-2.4	126.3		344	-.16	-.01	6.38	1.3	.5		14.9	487.7	
272	.22	-.03	6.11	6.2	5.5	2.8	-.7	128.8		345	-.16	-.01	6.39	1.4	1.5		14.1	494.2	
273	.22	-.03	6.11	6.0	7.3	3.8	-2.4	129.7		346	-.15	-.01	6.39	1.2	.4		15.0	501.9	
274	.22	-.03	6.12	5.2	5.4	3.9	-1.2	132.4		347	-.13	-.01	6.39	1.3	1.1		14.2	508.9	
275	.22	-.03	6.13	4.7	6.1	4.1	-1.8	134.3		348	-.14	-.02	6.39	1.0	-.3		16.1	517.2	
										349	.00	.00	6.39	1.2	1.1		15.2	524.2	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
Z = 108										319	.25	-.01	6.35	6.5	1.7	10.3	7.9	309.0	
246	.55	-.03	6.28	8.6		-.7		132.3		320	.23	-.01	6.34	7.2	3.2	10.8	7.2	313.8	
247	.55	-.03	6.29	8.7	9.5	-.1		130.9		321	.23	-.01	6.34	6.9	1.8	11.4	8.4	320.1	
248	.55	-.03	6.30	9.4	10.0	.0	-11.8	129.0		322	.24	-.01	6.35	7.5	2.7	11.2	7.5	325.5	
249	.24	-.02	6.01	7.9	8.4	-1.0	-10.0	128.7		323	.24	-.02	6.36	7.2	1.7	11.4	8.8	331.9	
250	.24	-.02	6.02	8.9	10.1	-.4	-10.9	126.7		324	.24	-.02	6.36	7.7	3.1	12.4	7.5	336.8	
251	.24	-.02	6.03	8.7	8.9	-.6	-10.9	125.8		325	.25	-.02	6.36	7.3	1.4	12.5	8.8	343.5	
252	.24	-.02	6.03	8.3	9.6	-.3	-10.0	124.3		326	.25	-.02	6.37	7.3	2.0	12.0	8.6	349.6	
253	.24	-.02	6.04	8.5	9.1	.4	-10.0	123.3		327	.23	-.02	6.36	6.7	1.7	12.6	10.0	356.0	
254	.25	-.02	6.04	9.0	9.0	.1	-9.4	122.3		328	.23	-.02	6.36	7.1	2.6	12.5	8.7	361.4	
255	.25	-.02	6.05	9.0	8.5	.3	-8.8	121.9		329	.21	-.01	6.37	6.7	1.1	12.0	10.1	368.4	
256	.27	-.03	6.05	9.7	9.4	.9	-10.1	120.7		330	.24	-.02	6.37	6.9	2.2	12.7	9.4	374.3	
257	.26	-.02	6.06	9.2	7.5	.7	-8.4	121.2		331	.21	-.02	6.38	5.9	.8	12.8	11.0	381.5	
258	.27	-.03	6.06	10.2	9.6	.9	-9.9	119.7		332	.22	-.02	6.37	6.2	2.4	13.7	9.9	387.2	
259	.24	-.02	6.07	10.0	7.5	1.1	-8.2	120.3		333	.19	-.02	6.37	5.9	.9	13.6	11.4	394.4	
260	.24	-.03	6.07	10.5	8.9	1.3	-9.2	119.5		334	.23	-.03	6.38	5.3	1.4	13.5	10.5	401.1	
261	.25	-.03	6.08	10.1	7.4	1.4	-7.3	120.2		335	.23	-.03	6.38	4.9	.6	13.5	12.0	408.5	
262	.26	-.04	6.08	10.6	8.7	2.1	-8.5	119.6		336	.20	-.02	6.38	4.6	1.7	13.8	10.8	414.9	
263	.23	-.03	6.09	9.9	7.2	2.4	-7.2	120.4		337	.16	-.02	6.38	3.7	.6	13.9	12.1	422.4	
264	.20	-.02	6.09	10.1	9.1	3.5	-8.6	119.4	.2	338	.18	-.02	6.38	4.1	1.9	14.0	10.8	428.6	
265	.11	-.01	6.09	9.6	6.7	3.5	-6.9	120.8		339	.23	-.03	6.39	2.9	-.1	13.5	12.5	436.8	
266	.21	-.03	6.10	9.7	8.0	3.9	-7.9	120.9		340	.20	-.02	6.39	3.1	1.4	14.4	11.5	443.4	
267	.25	-.04	6.10	9.1	6.4	4.0	-6.1	122.5		341	.17	-.02	6.39	2.1	.3	14.1	12.7	451.2	
268	.22	-.03	6.10	8.9	7.6	4.3	-7.2	123.0		342	.17	-.02	6.40	2.1	1.0	14.2	12.4	458.2	
269	.22	-.03	6.11	7.9	5.9	4.2	-5.3	125.2		343	.12	-.01	6.39	1.3	.4	14.3	13.1	465.9	
270	.25	-.04	6.11	7.3	6.7	3.5	-6.1	126.5		344	.38	.01	6.57	1.4	1.2	14.6	12.4	472.8	
271	.23	-.04	6.11	6.6	5.9	4.0	-3.9	128.6		345	-.17	-.02	6.39	1.2	.7	14.8	13.2	480.2	
272	.22	-.04	6.12	6.3	7.2	4.0	-5.2	129.5		346	-.16	-.01	6.40	1.4	1.3	14.6	12.5	486.9	
273	.23	-.04	6.11	5.3	5.5	4.0	-3.3	132.1		347	-.15	-.01	6.40	1.1	.4	14.6	13.6	494.6	
274	.23	-.04	6.12	5.3	6.6	3.4	-3.9	133.5		348	-.13	-.01	6.39	1.3	1.6	15.1	12.8	501.1	
275	.20	-.03	6.12	4.2	5.5	3.5	-2.6	136.1		349	-.13	-.01	6.41	1.0	.2	15.6	13.9	509.0	
276	.42	.01	6.30	3.7	6.3	3.7	-3.3	137.9		Z = 109									
277	.42	.01	6.31	2.8	5.2	3.6	-1.7	140.8		248	.55	-.03	6.30	8.5		-2.6		140.8	
278	.42	.00	6.32	3.0	6.8	4.8	-3.3	142.1		249	.55	-.03	6.31	9.1	10.2	-2.4		138.7	
279	.42	.00	6.32	2.3	5.1	4.8	-1.5	145.0		250	.55	-.03	6.32	9.3	9.2	-1.5	-9.3	137.5	
280	.43	.00	6.34	2.4	6.6	5.3	-3.0	146.5		251	.25	.01	6.05	8.0	8.9	-2.8	-8.5	136.7	
281	.42	.00	6.33	1.7	4.9	5.7	-1.1	149.6		252	.25	-.01	6.05	8.4	10.5	-1.2	-9.1	134.3	
282	.42	-.01	6.33	1.8	6.1	5.9	-1.9	151.6		253	.25	-.01	6.06	8.5	9.1	-1.7	-9.2	133.3	
283	.42	-.01	6.34	1.3	4.8	6.2	-.2	154.9		254	.26	-.01	6.06	7.8	9.6	-1.2	-9.1	131.7	
284	.42	-.01	6.34	1.3	6.2	6.3	-1.5	156.8		255	.26	-.02	6.06	8.2	9.1	-1.1	-10.3	130.7	
285	.44	-.01	6.36	.8	4.4	5.9	.3	160.5		256	.26	-.02	6.07	7.4	8.0	-1.5	-7.8	130.7	
286	.44	-.01	6.37	.8	6.1	5.7	-1.3	162.4		257	.26	-.03	6.07	7.9	9.1	-1.7	-9.1	129.7	
287	.00	.00	6.13	.0	5.1	5.5	-.3	165.3		258	.26	-.03	6.07	7.5	8.1	-1.1	-7.2	129.6	
288	.00	.00	6.14	.0	5.4	5.8	-.8	167.9		259	.27	-.03	6.08	8.4	9.2	-1.5	-8.5	128.5	
289	.00	.00	6.14	.0	4.9	6.3	1.2	171.1		260	.27	-.03	6.08	8.0	7.9	-1.1	-7.0	128.6	
290	.00	.00	6.14	.0	5.4	6.6	-.2	173.8		261	.25	-.03	6.08	8.8	9.2	-.8	-8.1	127.5	
291	.00	.00	6.15	.0	4.1	7.1	1.2	177.8		262	.23	-.03	6.08	8.4	7.6	-.6	-6.3	128.0	
292	.00	.00	6.15	.0	5.0	6.9	.9	180.9		263	.26	-.04	6.09	8.8	8.5	-.7	-6.7	127.6	
293	.00	.00	6.16	.0	3.1	7.2	3.0	185.8		264	.11	-.01	6.10	8.6	7.6	-.3	-5.5	128.0	
294	.00	.00	6.16	.0	5.0	7.4	1.2	188.9		265	.27	-.04	6.10	8.4	8.4	-1.0	-6.5	127.7	
295	.00	.00	6.16	.0	3.2	7.4	3.4	193.8		266	.25	-.04	6.10	8.0	7.0	-.7	-5.1	128.8	
296	.00	.00	6.17	.0	4.6	7.7	1.8	197.3		267	.25	-.04	6.10	8.2	8.2	-.5	-6.1	128.7	
297	.00	.00	6.17	.0	2.9	7.9	3.7	202.4		268	.22	-.03	6.11	7.6	6.6	-.3	-4.2	130.1	
298	.51	-.01	6.51	.7	5.0	8.1	2.1	205.5		269	.25	-.04	6.11	7.7	7.8	-.2	-5.1	130.4	
299	.53	.00	6.56	1.2	3.5	8.6	3.3	210.0		270	.25	-.04	6.12	6.7	5.9	-.1	-2.9	132.6	
300	.54	-.01	6.57	2.1	4.7	9.2	1.9	213.4		271	.23	-.04	6.11	6.8	8.1	1.2	-4.5	132.6	
301	.54	-.01	6.58	1.9	2.8	8.9	4.2	218.6		272	.23	-.04	6.12	6.2	6.0	1.2	-2.8	134.7	
302	.54	-.01	6.58	3.0	4.6	9.0	3.2	222.0		273	.23	-.04	6.12	6.0	7.3	1.4	-3.8	135.4	
303	.54	-.01	6.59	2.7	3.1	9.6	4.5	227.0		274	.23	-.04	6.13	4.9	6.1	1.9	-2.1	137.4	
304	.54	-.01	6.60	3.5	4.0	9.6	3.6	231.1		275	.21	-.04	6.13	4.7	6.8	2.1	-2.9	138.7	
305	.54	-.01	6.60	3.8	2.9	10.4	5.1	236.3		276	.21	-.04	6.13	3.8	5.5	2.1	-1.9	141.3	
306	.54	-.01	6.61	4.2	3.7	10.2	4.6	240.7		277	.21	-.04	6.14	3.7	6.9	2.7	-2.9	142.5	
307	.54	-.01	6.61	4.1	2.7	10.4	5.7	246.1		278	.42	.00	6.33	2.6	5.2	2.7	-.6	145.3	
308	.55	-.01	6.62	4.9	3.9	10.3	4.2	250.2		279	.42	.00	6.33	2.7	6.8	2.8	-1.9	146.6	
309	.55	-.01	6.62	4.7	2.3	10.1	5.9	256.0		280	.42	.00	6.34	2.0	5.2	2.8	.0	149.5	
310	.55	-.01	6.63	5.5	3.7	10.0	4.5	260.4		281	.44	.00	6.36	2.1	6.8	3.0	-1.1	150.7	
311	.30	-.02	6.34	5.1	2.3	9.9	6.4	266.1		282	.44	.00	6.36	1.6	5.3	3.4	.5	153.5	
312	.26	.00	6.34	5.7	3.7	10.4	5.2	270.5		283	.44	.00	6.37	1.7	6.5	3.8	-.6	155.1	
313	.27	-.01	6.34	5.7	2.2	10.4	6.0	276.3		284	.43	.00	6.36	1.1	4.9	3.9	.9	158.3	
314	.27	-.01	6.34	5.6	2.9	9.7	5.5	281.5		285	.43	.00	6.37	1.0	6.2	3.8	-.2	160.2	
315	.25	-.01	6.33	6.0	2.6	10.0	6.8	287.0		286	.44	-.01	6.38	.7	4.6	4.1	1.8	163.7	
316	.25	-.01	6.33	6.4	3.1	9.8	6.5	292.0		287	.44	-.01	6.38	.6	6.2	4.1	.2	165.6	
317	.25	-.01	6.34	6.3	2.4	10.4	7.1	297.7		288	-.04	-.01	6.14	.3	4.9	3.8	1.9	168.8	
318	.25	-.01	6.34	7.0	3.2	10.8	6.1	302.6		289	-.04	-.01	6.14	.4	6.9	5.3	-.8	169.9	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
290	.00	.00	6.15	.0	4.0	4.4	.7	174.0		253	.54	-.02	6.34	8.1	9.0	-.9	-11.2	142.5	
291	.00	.00	6.15	.0	5.4	4.5	.2	176.6		254	.54	-.02	6.34	8.7	9.8	-.3	-11.5	140.9	
292	.00	.00	6.16	.0	4.7	5.1	2.3	180.0		255	.26	-.01	6.07	7.3	7.9	-2.0	-9.4	141.0	
293	.00	.00	6.16	.0	5.3	5.3	1.4	182.8		256	.27	-.02	6.08	7.5	10.6	-.5	-13.2	138.5	
294	.00	.00	6.16	.0	3.3	5.5	3.8	187.7		257	.27	-.02	6.08	6.5	7.8	-.7	-10.8	138.7	
295	.00	.00	6.17	.0	5.3	5.7	2.0	190.4		258	.27	-.02	6.09	7.4	9.9	.1	-11.6	136.9	
296	.00	.00	6.18	.0	3.0	5.6	4.3	195.5		259	.27	-.02	6.10	6.9	7.9	-.1		137.0	
297	.00	.00	6.18	.0	4.7	5.8	3.1	198.8		260	.26	-.03	6.09	7.8	9.5	.2	-10.9	135.6	
298	.00	.00	6.18	.0	3.5	6.3	4.3	203.4		261	.27	-.03	6.10	7.5	8.1	.3	-9.0	135.6	
299	.50	.00	6.52	.6	4.7	6.0	3.7	206.8		262	.25	-.03	6.10	8.2	9.4	.5	-10.2	134.3	
300	.50	.00	6.53	.8	3.4	5.9	5.1	211.4		263	.25	-.03	6.10	7.9	8.1	1.1	-9.1	134.3	
301	.53	-.01	6.57	1.8	5.1	6.3	3.3	214.4		264	.25	-.03	6.11	8.4	8.8	1.3	-9.7	133.5	
302	.54	-.01	6.59	2.0	3.6	7.0	5.1	218.9		265	.23	-.03	6.10	7.9	7.4	1.2	-8.2	134.1	
303	.54	-.01	6.60	2.9	4.5	6.9	3.6	222.5		266	.20	-.02	6.11	8.2	8.3	1.1	-8.7	133.9	
304	.54	-.01	6.60	2.7	3.1	6.8	5.5	227.5		267	.31	-.05	6.11	7.7	7.2	1.3		134.7	
305	.54	-.01	6.61	3.8	4.3	7.2	4.4	231.2		268	.25	-.04	6.11	7.7	8.4	1.6	-8.6	134.4	
306	.54	-.01	6.61	4.0	3.2	7.5	5.8	236.1		269	.22	-.03	6.12	7.1	6.9	1.9	-6.8	135.6	
307	.55	-.01	6.62	4.0	3.7	7.6	5.2	240.4		270	.25	-.04	6.12	7.2	8.1	2.2	-7.7	135.5	
308	.55	-.01	6.62	3.7	2.4	7.3	7.7	246.0		271	.22	-.04	6.13	6.5	6.5	2.8	-5.9	137.1	
309	.55	-.01	6.63	4.2	3.9	7.3	6.1	250.2		272	.23	-.04	6.12	6.6	7.6	2.4	-7.0	137.5	
310	.55	-.01	6.64	4.2	2.3	7.4	7.9	255.9		273	.23	-.04	6.13	5.8	6.3	2.8	-5.1	139.2	
311	.55	-.01	6.64	4.8	4.3	8.0	6.4	259.7		274	.21	-.04	6.13	5.6	7.8	3.2	-6.5	139.6	
312	.54	-.01	6.64	4.8	2.5	8.1	7.9	265.3		275	.21	-.04	6.13	4.8	6.0	3.1	-4.8	141.7	
313	.30	-.02	6.36	4.6	3.0	7.4	7.4	270.3		276	.42	.00	6.32	4.1	6.5	2.8	-5.2	143.2	
314	.26	.00	6.35	4.7	2.4	7.6	8.9	276.0		277	.42	.00	6.33	3.3	5.9	3.2	-4.0	145.4	
315	.27	-.01	6.36	5.2	3.9	8.6	7.6	280.2		278	.42	.00	6.33	3.6	7.5	3.8	-5.1	146.0	
316	.25	-.01	6.34	5.7	2.8	8.8	8.6	285.5		279	.42	.00	6.34	2.8	5.6	4.2	-3.6	148.4	
317	.25	-.01	6.34	6.0	2.9	8.6	8.0	290.6		280	.42	.00	6.34	3.0	7.0	4.3	-4.4	149.5	
318	.25	-.01	6.35	5.8	2.3	8.5	9.0	296.5		281	.44	.00	6.36	2.4	5.8	5.0	-3.0	151.8	
319	.25	-.01	6.35	6.4	3.5	8.8	7.6	301.0		282	.44	.00	6.37	2.4	6.8	5.0	-3.8	153.0	
320	.22	.00	6.36	6.3	2.5	9.6	8.4	306.6		283	.44	.00	6.38	1.9	5.4	5.1	-2.4	155.7	
321	.23	-.01	6.35	6.9	3.0	9.4	8.0	311.7		284	.44	.00	6.38	1.8	6.4	5.0	-3.1	157.4	
322	.24	-.01	6.35	6.5	1.8	9.4	9.1	318.0		285	.45	-.01	6.39	1.3	5.1	5.2	-1.6	160.4	
323	.24	-.01	6.36	6.9	3.0	9.7	8.9	323.1		286	.45	-.01	6.39	1.4	6.6	5.6	-3.0	161.9	
324	.21	-.01	6.36	6.7	1.9	9.9	9.8	329.3		287	.45	-.01	6.40	1.0	4.6	5.7	-1.0	165.3	
325	.22	-.01	6.36	7.2	2.6	9.4	9.2	334.7		288	.45	-.01	6.41	1.0	6.5	6.0	-2.4	166.9	
326	.22	-.01	6.36	6.9	1.8	9.9	10.3	341.0		289	.00	.00	6.15	.0	4.2	5.3	-.2	170.8	
327	.23	-.02	6.37	7.3	3.1	10.9	9.2	345.9		290	.00	.00	6.16	.0	5.6	4.0	-1.2	173.3	
328	.23	-.02	6.37	6.8	1.3	10.5	10.8	352.7		291	.00	.00	6.16	.0	4.9	4.8	-.1	176.4	
329	.23	-.02	6.37	6.6	2.6	10.5	9.8	358.3		292	.01	.01	6.17	.0	6.8	6.2	-1.9	177.7	
330	.21	-.01	6.38	6.3	1.4	10.8	11.3	364.9		293	.00	.01	6.17	.1	4.3	5.9	-.6	181.4	
331	.24	-.02	6.38	6.3	2.4	11.0	9.8	370.6		294	.00	.00	6.17	.0	5.7	6.3	-.6	183.8	
332	.19	-.01	6.38	6.1	1.3	11.5	11.6	377.3		295	.00	.00	6.18	.0	3.4	6.5	1.4	188.5	
333	.22	-.02	6.38	6.2	2.4	11.5	10.3	383.0		296	.00	.00	6.18	.0	5.4	6.6	-.1	191.1	
334	.19	-.02	6.38	5.4	.5	11.2	12.1	390.5		297	.00	.00	6.18	.0	3.5	7.1	2.2	195.7	
335	.23	-.03	6.39	5.2	2.1	11.8	11.1	396.5		298	.00	.00	6.19	.0	4.7	7.0	1.1	199.1	
336	.20	-.02	6.39	4.6	.5	11.7	12.7	404.1		299	.50	-.01	6.51	.5	4.1	7.6	1.9	203.1	
337	.24	-.03	6.39	4.3	1.9	11.9	11.9	410.3		300	.50	.00	6.53	1.0	4.8	7.8	1.2	206.3	
338	.21	-.03	6.39	3.3	.6	11.9	13.4	417.8		301	.51	.00	6.54	.9	3.3	7.6	2.9	211.1	
339	.20	-.02	6.40	3.4	1.6	11.7	12.0	424.2		302	.53	-.01	6.57	2.0	5.4	7.9	1.3	213.8	
340	.20	-.02	6.40	2.6	.4	12.2	13.5	431.8		303	.53	-.01	6.58	1.8	3.0	7.3	3.2	218.8	
341	.20	-.02	6.40	2.6	1.4	12.2	12.6	438.5		304	.53	-.01	6.59	2.8	4.9	7.8	1.7	221.9	
342	.17	-.02	6.41	1.8	.7	12.6	13.3	445.8		305	.54	-.01	6.61	2.8	3.2	7.9	4.0	226.8	
343	.15	-.01	6.41	1.7	1.1	12.7	13.1	452.8		306	.54	-.01	6.62	3.8	4.6	8.2	2.7	230.3	
344	.17	-.02	6.41	1.1	.6	12.8	14.2	460.3		307	.54	-.01	6.62	4.0	3.2	8.2	4.2	235.1	
345	.09	-.02	6.37	1.3	1.4	13.1	13.0	467.0		308	.54	-.01	6.63	4.6	4.8	9.3	2.7	238.4	
346	-.17	-.02	6.40	1.2	.6	13.0	14.2	474.4		309	.54	-.01	6.63	4.4	2.4	9.3	4.5	244.0	
347	-.16	-.01	6.41	1.3	1.5	13.1	13.6	481.0		310	.55	-.01	6.64	4.8	4.1	9.5	3.7	248.0	
348	-.15	-.01	6.41	1.1	.9	13.7	14.1	488.2		311	.55	-.01	6.64	4.5	2.7	9.9	5.6	253.4	
349	-.17	-.02	6.41	1.3	1.2	13.3	13.8	495.1		312	.54	-.01	6.65	5.2	4.1	9.7	4.1	257.3	
350	-.14	-.02	6.41	.9	.2	13.3	14.9	503.0		313	.54	-.01	6.65	5.0	2.5	9.6	5.7	263.0	
351	.00	.00	6.41	1.1	1.8		13.6	509.3		314	.54	-.01	6.66	5.6	3.9	10.5	4.8	267.1	
352	-.12	-.02	6.41	1.0	.0		15.2	517.3		315	.54	-.01	6.66	5.5	2.7	10.7	4.9	272.6	
353	-.11	-.02	6.41	1.0	1.5		14.0	523.9		316	.54	-.01	6.67	6.1	3.8	10.6	4.8	276.9	
354	-.11	-.02	6.41	.8	-.2		15.6	532.1		317	.54	-.01	6.67	5.8	2.3	10.1	6.3	282.6	
355	-.11	-.02	6.41	.8	1.0		14.9	539.1		318	.54	-.01	6.68	6.2	3.2	10.5	5.8	287.5	
356	-.09	-.02	6.41	.2	.1		15.4	547.1		319	.22	.00	6.35	5.7	2.2	10.4	7.2	293.4	
357	-.09	-.02	6.41	.2	.5		15.5	554.6		320	.54	-.01	6.68	6.2	3.2	10.1	6.6	298.2	
358	.02	.00	6.42	.1	.4		15.9	562.3		321	.22	.00	6.37	5.9	2.6	10.2	7.0	303.7	
359	.00	.00	6.43	.0	.4		15.5	570.0		322	.55	-.02	6.69	6.1	2.9	10.1	6.3	308.9	
Z=110										323	.24	-.01	6.36	6.4	2.7	11.1	6.8	314.2	
250	.55	-.03	6.32	8.5		-.9		146.8		324	.24	-.01	6.37	6.7	2.8	10.9	6.5	319.5	
251	.55	-.03	6.33	8.6	9.6	-.5		145.3		325	.21	-.01	6.37	6.3	2.0	11.0	7.3	325.5	
252	.55	-.03	6.33	9.1	9.9	.6	-12.3	143.4		326	.22	-.01	6.37	6.9	3.0	11.4	7.3	330.6	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
327	.23	-.02	6.37	6.7	2.0	11.5	8.1	336.8		307	.53	.00	6.61	3.7	4.7	6.6	3.8	231.0	
328	.23	-.02	6.38	7.0	2.9	11.3	7.3	341.9		308	.54	-.01	6.63	4.0	3.4	6.8	5.3	235.7	
329	.23	-.02	6.38	6.4	1.5	11.6	8.7	348.5		309	.55	-.01	6.64	4.5	4.2	6.1	4.6	239.5	
330	.23	-.02	6.38	6.9	3.0	12.0	7.4	353.6		310	.54	-.01	6.64	4.7	3.3	7.1	5.5	244.3	
331	.21	-.01	6.39	6.1	.9	11.4	9.7	360.7		311	.55	-.01	6.65	5.2	4.6	7.6	4.6	247.7	
332	.22	-.02	6.38	6.2	3.0	12.1	8.4	365.8		312	.55	-.01	6.66	4.8	2.6	7.4	6.6	253.2	
333	.22	-.02	6.39	5.8	1.1	11.9	9.9	372.7		313	.55	-.01	6.66	5.3	4.1	7.4	5.8	257.3	
334	.22	-.02	6.39	5.9	2.3	11.8	8.9	378.4		314	.54	-.01	6.66	5.1	2.9	7.9	7.2	262.4	
335	.19	-.02	6.39	5.7	1.1	12.4	10.2	385.4		315	.50	-.02	6.59	4.6	2.8	6.7	5.9	267.7	
336	.23	-.03	6.40	4.9	2.0	12.4	9.4	391.5		316	.54	-.01	6.67	5.5	3.7	7.8	6.4	272.0	
337	.11	-.01	6.39	4.8	1.2	13.1	10.6	398.3		317	.54	-.01	6.68	5.9	3.8	7.8	5.5	276.3	
338	.16	-.02	6.40	4.5	2.1	13.3	9.4	404.3		318	.54	-.01	6.68	6.0	2.8	8.3	7.4	281.6	
339	.23	-.03	6.40	3.0	.1	12.8	11.5	412.3		319	.54	-.01	6.69	6.3	3.5	8.5	6.7	286.2	
340	.20	-.02	6.41	3.2	2.0	13.1	10.3	418.4		320	.54	-.01	6.69	6.0	2.6	9.0	7.6	291.7	
341	.20	-.02	6.41	2.4	.6	13.3	11.8	425.8		321	.54	-.01	6.70	6.3	3.1	8.8	7.3	296.7	
342	.17	-.02	6.41	2.4	1.4	13.2	10.9	432.5		322	.54	-.01	6.70	5.7	2.2	8.4	8.6	302.5	
343	.17	-.02	6.41	1.6	.9	13.5	11.5	439.7		323	.55	-.02	6.70	6.2	3.3	8.8	7.8	307.4	
344	.15	-.01	6.42	1.7	1.6	13.9	10.8	446.1		324	.23	-.01	6.39	6.0	2.5	8.5	8.9	313.0	
345	.12	-.01	6.41	1.1	.2	13.6	12.4	454.0		325	.55	-.02	6.71	6.1	2.8	8.6	8.0	318.2	
346	.38	.01	6.60	1.2	1.8	14.0	11.3	460.3		326	.22	-.01	6.37	6.3	3.0	9.5	8.5	323.3	
347	-.17	-.02	6.41	1.0	.9	14.3	12.0	467.4		327	.22	-.01	6.38	6.6	2.8	9.3	7.9	328.6	
348	-.17	-.02	6.41	1.2	1.3	14.2	11.9	474.2		328	.23	-.02	6.38	6.3	2.1	9.4	8.8	334.6	
349	-.13	-.01	6.41	.9	.9	14.2	12.2	481.3		329	.23	-.02	6.39	6.6	3.0	9.5	7.6	339.7	
350	-.17	-.02	6.42	1.1	1.4	14.4	12.0	488.0		330	.20	-.01	6.39	6.3	1.6	9.6	9.1	346.2	
351	-.13	-.01	6.43	.8	.4	14.6	13.2	495.6		331	.22	-.02	6.39	6.7	3.2	9.8	8.5	351.1	
352	-.14	-.01	6.43	1.0	1.6	14.4	12.2	502.1		332	.22	-.02	6.39	6.3	1.7	10.6	9.8	357.4	
353	-.07	.00	6.42	.9	.3	14.7	13.5	509.9		333	.22	-.02	6.39	6.4	2.7	10.2	8.6	362.8	
354	-.11	-.02	6.42	.9	1.4	14.7	12.7	516.5		334	.22	-.02	6.40	5.6	1.4	10.5	10.4	369.5	
355	-.11	-.02	6.42	.7	.3	15.2	13.6	524.2		335	.22	-.02	6.40	5.5	2.4	10.6	9.6	375.2	
356	-.11	-.02	6.42	.7	.6	14.8	13.2	531.6		336	.19	-.02	6.40	5.3	1.3	10.7	11.4	382.0	
357	-.12	-.02	6.43	.3	.6	15.3	14.0	539.1		337	.23	-.03	6.41	5.0	2.3	11.0	10.1	387.8	
358	-.11	-.02	6.43	.4	.8	15.5	13.5	546.3		338	.17	-.01	6.40	4.6	.9	10.8	11.5	394.9	
359	.00	.00	6.43	.0	.0	15.1	14.4	554.4		339	.23	-.03	6.41	3.9	2.2	10.9	10.6	400.7	
360	.00	.00	6.44	.0	.8	15.6	13.9	561.7		340	.20	-.02	6.41	3.0	.8	11.5	12.1	408.0	
Z = 111										341	.20	-.02	6.42	3.3	2.1	11.6	11.4	414.0	
268	.27	-.04	6.12	6.8		-1.0		143.0		342	.20	-.02	6.42	2.1	.6	11.6	12.5	421.6	
269	.22	-.03	6.12	7.0	8.7	-.7		142.3		343	.17	-.02	6.42	2.1	1.5	11.7	11.9	428.1	
270	.22	-.03	6.13	6.4	7.2	-.4	-6.6	143.2		344	.17	-.02	6.42	1.3	.8	11.6	13.1	435.4	
271	.23	-.04	6.13	6.6	8.3	-.2	-6.5	143.0		345	.15	-.01	6.43	1.5	1.9	11.8	11.6	441.6	
272	.23	-.04	6.13	5.8	6.6	-.1	-5.8	144.5		346	.12	-.01	6.42	.9	.7	12.3	12.8	449.0	
273	.21	-.04	6.13	6.0	8.3	.5	-6.8	144.3		347	.07	-.01	6.39	1.0	1.7	12.2	12.4	455.4	
274	.21	-.04	6.14	5.4	6.3	.5	-4.6	146.1		348	-.11	-.01	6.41	1.0	1.2	12.4	12.8	462.3	
275	.21	-.04	6.14	4.9	7.6	.3	-5.3	146.5		349	-.15	-.01	6.43	1.0	1.2	12.3	12.5	469.1	
276	.21	-.04	6.14	4.1	6.2	.6	-3.5	148.4		350	.09	-.02	6.40	1.0	1.1	12.5	13.3	476.1	
277	.42	.00	6.34	3.8	7.1	1.1	-3.8	149.4		351	-.11	-.01	6.42	1.1	1.7	12.9	12.7	482.5	
278	.42	.00	6.34	3.0	6.3	1.5	-2.3	151.1		352	-.11	-.01	6.42	.9	.6	13.0	13.9	489.9	
279	.42	.00	6.35	3.1	7.2	1.3	-3.1	152.0		353	-.12	-.02	6.42	1.1	1.7	13.1	12.9	496.3	
280	.43	.00	6.35	2.5	6.2	1.9	-1.7	153.9		354	-.12	-.02	6.43	1.1	.7	13.4	13.6	503.7	
281	.43	.00	6.36	2.6	7.1	2.0	-2.8	154.9		355	-.11	-.02	6.43	1.0	1.2	13.2	13.5	510.6	
282	.44	.01	6.38	2.2	6.1	2.3	-1.3	156.8		356	-.11	-.02	6.43	.8	.2	13.1	14.7	518.4	
283	.45	-.01	6.38	2.3	6.8	2.3	-2.3	158.1		357	-.11	-.02	6.43	.9	1.5	13.9	13.6	525.0	
284	.45	-.01	6.39	1.7	5.7	2.5	-.8	160.5		358	-.12	-.02	6.44	.5	.3	13.5	14.7	532.8	
285	.45	-.01	6.40	1.6	6.6	2.7	-1.7	162.0		359	-.09	-.02	6.43	.5	.9	13.6	14.4	540.0	
286	.45	-.01	6.40	1.0	5.2	2.8	.0	164.9		360	-.06	-.01	6.43	.2	.3	13.9	15.1	547.8	
287	.45	-.01	6.41	1.1	6.6	2.8	-1.3	166.3		361	-.08	-.02	6.43	.3	1.1	14.2	14.1	554.8	
288	.45	-.01	6.41	.9	5.1	3.3	.4	169.3		362	.00	.00	6.45	.2	.2		15.3	562.7	
289	.46	.00	6.43	.8	6.4	3.2	-.7	170.9		363	.00	.00	6.45	.0	.5		15.2	570.2	
290	.00	.00	6.16	.0	4.6	3.6	1.4	174.4		364	.00	.00	6.45	.0	.2		15.8	578.1	
291	.00	.00	6.17	.0	6.0	4.0	-.1	176.5		365	.00	.00	6.46	.0	.5		15.6	585.6	
292	.00	.00	6.17	.0	5.1	4.2	.9	179.6		366	.00	.00	6.46	.0	.0		16.2	593.7	
293	.00	.00	6.17	.0	5.6	3.0	.3	182.0		367	.00	.00	6.46	.0	.6		15.3	601.2	
294	-.01	.01	6.18	.0	5.6	4.3	.6	184.5		368	-.02	.00	6.47	.2	-.3		16.5	609.5	
295	.00	.00	6.18	.0	5.4	4.0	-.1	187.1		369	.00	.00	6.47	.0	.7		15.8	616.9	
296	.00	.00	6.19	.0	3.9	4.5	1.5	191.3		370	-.02	.00	6.48	.2	-1.3		17.6	626.3	
297	.00	.00	6.19	.0	5.8	4.9	.8	193.5		371	.00	.00	6.47	.0	.1		15.9	634.3	
298	.00	.00	6.20	.0	3.6	5.0	2.6	198.0		372	.00	.00	6.47	.1	-1.2		17.6	643.6	
299	.00	.00	6.20	.0	4.8	5.1	2.1	201.2		373	.00	.00	6.48	.0	.0		16.6	651.7	
300	.50	-.01	6.52	.4	4.2	5.3	3.1	205.1		374	.00	.00	6.48	.1	-1.0		17.7	660.8	
301	.50	-.01	6.53	.9	4.9	5.3	2.7	208.2		375	.00	.00	6.48	.0	-.5		16.9	669.3	
302	.50	-.01	6.54	1.0	3.9	5.9	3.9	212.4		376	.00	.00	6.49	.0	-1.3		17.9	678.7	
303	.51	.00	6.56	1.7	4.9	5.4	3.1	215.6		377	.49	.00	6.84	.3	-.4		17.4	687.1	
304	.51	.00	6.56	1.6	3.5	5.9	4.9	220.2		378	.49	.00	6.84	.4	-.9		18.8	696.1	
305	.53	-.01	6.60	2.9	5.5	6.4	3.0	222.8		379	.49	.00	6.84	1.2	.1		17.7	704.1	
306	.54	-.02	6.61	2.7	3.3	6.5	4.7	227.6		380	.49	.00	6.83	1.4	-1.2		19.2	713.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
Z=112	381	.49	.00	6.83	2.4	.1	18.0	721.3		342	.20	-.02	6.43	2.9	1.6	12.3	8.9	409.1	
										343	.20	-.02	6.43	2.2	.9	12.7	10.5	416.2	
	270	.42	.01	6.30	5.4	-.2		149.8		344	.11	-.01	6.43	2.2	1.9	13.1	9.8	422.3	
	271	.22	-.03	6.13	5.8	8.4	1.0	149.5		345	.15	-.01	6.43	1.0	.4	12.7	10.9	430.0	
	272	.42	.00	6.32	5.0	7.3	.0	-8.0	150.3	346	.12	-.01	6.43	1.1	1.9	12.7	10.4	436.2	
	273	.42	.00	6.32	4.5	7.3	.7	-6.5	151.1	347	.12	-.01	6.43	.8	1.3	13.3	10.8	443.0	
	274	.42	.00	6.33	4.7	8.5	1.0	-7.8	150.6	348	.38	.00	6.62	.9	1.6	13.2	10.6	449.5	
	275	.42	.00	6.34	4.4	6.9	1.6	-6.2	151.8	349	.07	-.01	6.40	.6	.9	13.0	11.5	456.6	
	276	.42	.00	6.34	4.4	8.0	1.9	-6.9	151.9	350	-.15	-.01	6.43	.8	1.9	13.6	10.8	462.8	
	277	.42	.00	6.35	3.9	6.8	2.5	-5.9	153.2	351	.09	-.02	6.41	.7	1.1	13.6	11.2	469.8	
278	.43	.00	6.35	4.0	7.8	3.3	-6.6	153.4	352	-.11	-.01	6.43	.9	1.8	13.8	10.9	476.0		
279	.43	.00	6.36	3.2	6.4	3.3	-5.1	155.1	353	-.10	-.01	6.42	.6	.6	13.7	12.1	483.5		
280	.43	.00	6.36	3.5	7.6	3.7	-5.9	155.6	354	.00	.00	6.44	.9	1.4	13.5	11.4	490.1		
281	.43	.00	6.37	2.6	6.0	3.5	-4.2	157.6	355	-.12	-.02	6.43	.8	1.1	13.9	12.1	497.1		
282	.44	.01	6.39	2.9	7.6	4.0	-5.5	158.1	356	-.11	-.02	6.44	.8	1.4	14.1	11.7	503.8		
283	.44	.01	6.39	2.2	5.8	3.8	-3.6	160.4	357	-.11	-.02	6.44	.6	.4	14.3	12.9	511.5		
284	.44	.01	6.40	2.3	7.1	4.1	-4.5	161.3	358	-.10	-.01	6.44	.6	1.4	14.2	12.2	518.1		
285	.45	-.01	6.41	1.8	5.7	4.1	-3.1	163.7	359	-.10	-.01	6.45	.2	.6	14.5	13.1	525.6		
286	.45	-.01	6.41	1.8	6.9	4.4	-3.7	164.9	360	-.06	-.01	6.43	.3	1.0	14.7	12.5	532.7		
287	.45	-.01	6.42	1.1	5.3	4.6	-2.3	167.6	361	-.06	-.01	6.44	.0	.1	14.5	13.5	540.6		
288	.45	-.01	6.42	1.2	6.8	4.7	-3.6	168.9	362	-.06	-.01	6.44	.1	1.3	14.6	12.7	547.4		
289	.45	.00	6.43	1.0	5.3	4.	-1.9	171.7	363	.00	.00	6.46	.0	.4	14.9	13.2	555.1		
290	.47	.00	6.45	1.0	6.7	5.2	-3.3	173.1	364	-.02	.00	6.47	.0	.9	15.3	12.8	562.3		
291	.00	.00	6.17	.0	4.5	5.1	-.9	176.7	365	-.02	.00	6.47	.1	.3	15.4	13.7	570.0		
292	.00	.00	6.18	.0	6.1	5.2	-2.5	178.6	366	.00	.00	6.47	.0	.5	15.4	13.6	577.6		
293	.00	.00	6.18	.0	5.0	5.2	-1.2	181.6	367	.00	.00	6.47	.0	-.3	15.1	14.8	585.9		
294	.00	.00	6.18	.0	5.8	5.4	-1.8	183.9	368	.00	.00	6.47	.0	.9	15.4	13.8	593.0		
295	.00	.00	6.19	.0	4.7	4.5	-.5	187.3	369	.00	.00	6.48	.1	.0	15.7	14.2	601.1		
296	.00	.00	6.19	.0	5.6	4.6	-1.3	189.8	370	.00	.00	6.48	.0	.5	15.5	13.9	608.7		
297	.02	.01	6.20	.3	5.1	5.8	-.7	192.7	371	.00	.00	6.48	.1	-1.6	15.2	15.7	618.3		
298	.00	.00	6.20	.0	5.3	5.4	-2.0	195.4	372	.00	.00	6.48	.0	.4	15.6	14.5	626.0		
299	.00	.00	6.21	.0	4.4	6.2	.5	199.1	373	.00	.00	6.49	.0	-1.0	15.8	16.1	635.1		
300	.00	.00	6.21	.0	5.1	6.5	-.8	202.0	374	.00	.00	6.49	.0	.1	15.9	15.2	643.0		
301	.50	-.01	6.54	.8	4.6	6.8	1.3	205.5	375	.00	.00	6.49	.0	-1.3	15.6	16.4	652.4		
302	.48	-.01	6.52	1.0	5.1	7.0	.3	208.5	376	.00	.00	6.49	.0	-.3	15.8	16.0	660.8		
303	.50	-.01	6.55	1.3	4.1	7.2	1.3	212.5	377	.00	.00	6.50	.0	-.9	16.2	16.9	669.8		
304	.51	.00	6.57	2.2	5.2	7.6	.1	215.4	378	.49	.00	6.85	1.0	.5	17.1	15.9	677.3		
305	.51	.00	6.58	2.0	3.6	7.7	2.0	219.9	379	.49	.00	6.84	1.1	-1.0	17.0	17.3	686.4		
306	.52	-.01	6.58	2.8	5.1	7.3	.9	222.9	380	.49	.00	6.85	2.0	.3	17.2	16.4	694.2		
307	.53	-.01	6.61	2.8	3.8	7.7	2.3	227.2	381	.49	.00	6.86	1.8	-1.0	17.4	17.2	703.3		
308	.54	-.02	6.62	3.9	4.8	7.8	1.1	230.4	382	.49	.00	6.86	2.8	.0	17.2	16.7	711.4		
309	.54	-.02	6.63	4.2	3.5	8.0	2.8	234.9	Z=113										
310	.53	.00	6.63	4.6	4.3	8.1	2.3	238.7	272	.42	.00	6.32	4.8		-1.5		158.3		
311	.54	-.01	6.65	4.9	3.7	8.4	3.5	243.1	273	.42	.00	6.33	5.2	8.8	.0		157.6		
312	.54	-.01	6.66	5.4	4.5	8.3	2.0	246.7	274	.42	.00	6.34	4.8	7.2	-.1	-5.2	158.4		
313	.55	-.01	6.66	5.2	3.3	9.1	3.5	251.5	275	.43	.01	6.34	4.7	8.5	-.1	-6.7	158.0		
314	.54	-.01	6.67	5.9	4.3	9.3	2.6	255.2	276	.43	.00	6.35	4.6	7.3	.3	-5.0	158.8		
315	.51	-.02	6.59	4.4	1.5	7.9	4.5	261.8	277	.43	.00	6.36	4.3	7.8	.1	-5.3	159.1		
316	.51	-.02	6.60	4.9	4.2	9.3	3.8	265.6	278	.43	.00	6.36	3.8	7.2	.5	-4.4	159.9		
317	.50	-.01	6.61	4.9	2.9	8.5	4.9	270.8	279	.43	.00	6.37	3.9	7.8	.5	-5.0	160.2		
318	.54	-.01	6.69	6.1	4.7	9.4	3.1	274.2	280	.44	.01	6.39	3.5	6.8	.9	-3.5	161.4		
319	.54	-.01	6.69	6.0	2.7	9.3	4.5	279.6	281	.43	.00	6.38	3.5	7.7	1.1	-4.4	161.8		
320	.54	-.01	6.70	6.4	3.5	9.4	4.7	284.1	282	.43	.00	6.38	2.8	6.2	1.3	-2.8	163.6		
321	.54	-.01	6.70	6.1	2.7	9.5	5.5	289.4	283	.44	.01	6.40	3.1	7.8	1.5	-3.9	164.0		
322	.54	-.01	6.70	6.5	3.6	10.1	4.7	293.9	284	.45	.00	6.41	2.5	6.2	1.8	-2.3	165.8		
323	.54	-.01	6.71	5.9	2.4	10.3	6.2	299.5	285	.45	.00	6.41	2.5	7.1	1.8	-3.3	166.8		
324	.54	-.01	6.71	6.4	3.5	10.5	5.3	304.1	286	.45	.00	6.42	2.1	6.3	2.4	-2.2	168.6		
325	.54	-.01	6.72	5.7	2.0	10.1	6.8	310.2	287	.45	.00	6.42	2.0	6.8	2.3	-2.7	169.9		
326	.55	-.02	6.72	6.3	3.5	10.7	5.6	314.8	288	.45	.00	6.43	1.4	5.4	2.4	-.9	172.5		
327	.54	-.01	6.73	5.8	2.2	9.9	7.2	320.7	289	.45	.00	6.44	1.5	7.0	2.6	-2.2	173.6		
328	.55	-.02	6.73	6.0	2.9	10.0	6.3	325.9	290	.45	.00	6.44	1.1	5.3	2.6	-.5	176.3		
329	.54	-.01	6.74	5.3	1.8	9.8	7.9	332.1	291	.47	.00	6.46	1.1	6.9	2.8	-1.8	177.5		
330	.54	-.01	6.74	5.7	3.1	9.9	6.8	337.1	292	.00	.00	6.18	.0	4.5	2.8	.6	181.1		
331	.21	-.02	6.39	5.7	2.6	10.9	7.8	342.6	293	.00	.00	6.19	.0	6.3	3.0	-1.0	182.9		
332	.22	-.02	6.40	6.1	3.1	10.8	6.8	347.6	294	.00	.00	6.19	.1	5.3	3.3	.0	185.6		
333	.22	-.02	6.40	5.7	1.4	10.5	8.3	354.2	295	.00	.00	6.20	.0	5.9	3.4	-.5	187.8		
334	.22	-.02	6.40	5.9	3.2	11.0	7.0	359.1	296	.00	.00	6.20	.0	4.8	3.5	.7	191.0		
335	.22	-.02	6.41	5.6	1.6	11.3	8.4	365.6	297	.00	.00	6.20	.0	5.7	3.7	.1	193.4		
336	.19	-.02	6.41	5.6	3.0	11.9	6.9	370.6	298	.02	.01	6.21	.2	4.1	2.6	1.8	197.4		
337	.19	-.02	6.41	4.9	1.0	11.6	8.7	377.7	299	.01	.01	6.22	.0	6.9	4.1	-.8	198.6		
338	.18																		

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
304	.47	.00	6.52	1.1	4.0	4.5	3.1	215.3		378	.49	.00	6.85	.6	-.5	15.6	17.0	661.5	
305	.50	-.01	6.57	2.0	5.5	4.8	1.8	217.9		379	.49	.00	6.86	1.4	.4	15.5	16.2	669.1	
306	.52	-.01	6.59	2.2	4.0	5.2	3.5	221.9		380	.49	.00	6.86	1.7	-.6	15.9	17.7	677.8	
307	.52	-.01	6.60	3.0	5.1	5.3	2.3	224.8		381	.49	.00	6.87	2.5	-.3	15.4	17.3	686.1	
308	.52	-.01	6.60	2.8	3.6	5.2	4.2	229.3		382	.49	.00	6.87	2.6	-.5	15.9	17.8	694.6	
309	.53	.00	6.63	4.0	5.3	5.6	2.8	232.1		383	.49	.00	6.87	3.5	.3	16.2	17.1	702.4	
310	.54	-.02	6.64	4.4	3.8	5.8	4.3	236.4		Z = 114									
311	.53	.00	6.64	4.7	4.8	6.4	3.3	239.7		274	.43	.01	6.35	5.0		1.2		163.6	
312	.53	.00	6.65	4.6	3.1	5.8	5.0	244.6		275	.42	.00	6.35	4.3	6.9	1.0		164.8	
313	.53	.00	6.65	5.2	4.7	6.0	3.7	248.0		276	.43	.01	6.36	4.7	9.1	1.5	-8.4	163.8	
314	.54	-.01	6.67	5.3	3.4	6.1	5.3	252.6		277	.43	.00	6.36	4.3	7.4	1.6	-7.1	164.4	
315	.51	-.02	6.60	4.9	3.4	5.2	4.4	257.3		278	.43	.00	6.37	4.2	8.2	2.0	-8.1	164.3	
316	.50	-.01	6.61	4.9	3.5	7.2	5.7	261.9		279	.43	.00	6.38	3.5	7.2	2.0	-6.4	165.2	
317	.50	-.01	6.61	5.3	4.1	7.1	4.9	265.9		280	.44	.01	6.39	4.1	8.4	2.6	-7.6	164.9	
318	.50	-.01	6.62	5.1	2.9	7.1	6.7	271.1		281	.44	.01	6.40	3.5	6.8	2.5	-6.2	166.2	
319	.50	-.01	6.62	5.4	4.0	6.4	5.7	275.1		282	.45	.00	6.40	3.7	7.8	2.6	-6.8	166.4	
320	.54	-.01	6.70	6.1	3.8	7.4	5.9	279.4		283	.45	.00	6.41	2.8	6.6	3.0	-5.6	167.9	
321	.54	-.01	6.70	6.4	3.6	7.5	5.2	283.9		284	.45	.00	6.41	3.1	7.8	3.1	-6.5	168.2	
322	.54	-.01	6.71	6.2	2.8	7.5	7.2	289.2		285	.45	.00	6.42	2.4	6.2	3.0	-5.1	170.1	
323	.54	-.01	6.71	6.7	3.9	7.9	5.9	293.3		286	.45	.00	6.43	2.4	7.4	3.3	-5.8	170.8	
324	.54	-.01	6.72	6.2	2.6	8.0	7.4	298.8		287	.45	.00	6.43	1.9	6.3	3.3	-4.7	172.6	
325	.54	-.01	6.72	6.6	3.6	8.1	6.4	303.3		288	.45	.00	6.44	2.0	7.2	3.7	-5.4	173.5	
326	.54	-.01	6.73	6.0	2.2	8.3	8.1	309.2		289	.45	.00	6.44	1.5	5.8	4.1	-3.9	175.7	
327	.55	-.02	6.73	6.5	3.8	8.6	6.5	313.5		290	.45	.00	6.45	1.5	6.9	4.0	-4.6	176.9	
328	.54	-.01	6.74	6.0	2.0	8.5	8.5	319.5		291	.45	.00	6.46	1.2	5.6	4.3	-3.3	179.3	
329	.55	-.02	6.74	6.1	3.3	8.9	7.7	324.3		292	.47	.00	6.47	1.2	6.9	4.3	-4.4	180.4	
330	.54	-.01	6.75	5.5	2.1	9.2	8.9	330.2		293	.00	.00	6.20	.0	4.7	4.5	-2.2	183.9	
331	.21	-.02	6.39	6.1	3.5	9.6	6.7	334.8		294	.00	.00	6.20	.0	6.3	4.5	-3.2	185.6	
332	.22	-.02	6.40	5.8	2.1	9.1	8.1	340.8		295	.00	.00	6.20	.0	5.4	4.7	-2.1	188.3	
333	.22	-.02	6.40	5.9	3.0	9.0	7.6	345.9		296	.00	.00	6.21	.0	6.0	4.8	-2.5	190.3	
334	.22	-.02	6.41	5.6	1.8	9.4	9.1	352.1		297	.00	.00	6.21	.0	5.1	5.0	-1.2	193.3	
335	.22	-.02	6.41	5.7	3.1	9.3	8.0	357.1		298	.00	.00	6.21	.0	5.8	5.1	-1.9	195.6	
336	.22	-.02	6.42	5.3	1.5	9.1	9.7	363.7		299	.00	.00	6.22	.1	4.2	5.3	-2	199.4	
337	.19	-.02	6.42	5.4	2.8	8.9	8.5	369.0		300	.00	.00	6.22	.0	6.0	4.3	-1.8	201.5	
338	.23	-.03	6.41	5.3	1.9	9.8	8.8	375.2		301	.00	.00	6.23	.0	4.7	5.2	-.4	204.9	
339	.20	-.02	6.42	4.5	2.6	10.0	8.8	380.7		302	.49	-.01	6.55	1.7	7.6	6.2	-3.6	205.4	
340	.23	-.03	6.43	4.3	1.3	10.0	10.1	387.4		303	.47	.00	6.54	1.3	3.8	5.8	.6	209.7	
341	.23	-.03	6.43	3.8	2.4	10.1	9.6	393.1		304	.47	.00	6.53	1.3	5.6	6.3	.0	212.2	
342	.20	-.02	6.43	2.9	1.0	9.7	11.1	400.2		305	.47	.00	6.54	1.4	4.2	6.5	.8	216.1	
343	.20	-.02	6.44	3.3	2.6	10.7	9.7	405.7		306	.51	.00	6.59	2.5	5.8	6.8	-.3	218.4	
344	.20	-.02	6.44	2.4	1.2	10.9	10.7	412.5		307	.52	-.01	6.60	2.3	4.0	6.7	.9	222.5	
345	.15	-.01	6.43	1.9	1.5	10.5	10.6	419.1		308	.52	-.01	6.61	3.2	5.5	7.1	-.3	225.1	
346	.15	-.01	6.43	1.5	1.4	11.5	11.4	425.8		309	.52	-.01	6.61	3.0	3.9	7.3	1.2	229.3	
347	.12	-.01	6.44	1.4	1.7	11.3	10.9	432.2		310	.53	.00	6.64	4.2	5.2	7.3	.1	232.1	
348	.08	-.01	6.40	.9	1.4	11.4	12.0	438.9		311	.54	-.02	6.65	4.4	3.9	7.4	1.4	236.3	
349	.09	-.02	6.41	1.1	1.9	11.7	11.3	445.1		312	.53	.00	6.65	4.8	4.7	7.3	1.0	239.7	
350	.08	-.01	6.41	.9	1.1	11.9	12.3	452.0		313	.53	.00	6.66	4.6	3.5	7.7	2.6	244.3	
351	.09	-.02	6.41	.9	1.5	11.5	11.8	458.6		314	.53	.00	6.66	5.4	5.0	8.0	1.4	247.3	
352	.07	-.01	6.42	.9	1.5	11.9	12.0	465.2		315	.50	-.02	6.61	4.4	2.5	7.1	2.8	252.9	
353	-.13	-.01	6.45	1.0	1.9	11.9	11.8	471.4		316	.50	-.01	6.62	5.1	3.3	8.2	3.3	261.0	
354	.07	-.01	6.42	1.0	.7	12.1	12.5	478.7		318	.50	-.01	6.62	5.6	4.7	8.8	2.0	264.3	
355	-.12	-.02	6.44	1.0	1.8	12.5	12.0	485.0		319	.50	-.01	6.63	5.4	3.0	9.0	3.5	269.4	
356	-.12	-.02	6.44	1.0	1.0	12.3	12.7	492.1		320	.50	-.01	6.63	5.5	3.9	8.9	3.1	273.5	
357	-.11	-.02	6.45	1.0	1.5	12.5	12.5	498.6		321	.50	-.01	6.64	5.3	2.9	8.0	4.5	278.7	
358	-.11	-.02	6.45	.9	.8	12.9	13.2	505.9		322	.54	-.01	6.72	6.6	4.8	9.2	2.9	282.0	
359	-.10	-.01	6.45	.8	1.4	12.8	12.4	512.6		323	.54	-.01	6.72	6.2	2.7	9.1	4.2	287.4	
360	-.12	-.02	6.45	.5	.5	12.8	13.4	520.2		324	.54	-.01	6.72	6.6	4.1	9.2	3.8	291.4	
361	-.09	-.02	6.45	.5	1.1	12.8	13.3	527.2		325	.54	-.01	6.73	6.1	2.5	9.2	5.0	296.9	
362	.04	-.01	6.45	.3	.6	13.2	13.8	534.7		326	.54	-.01	6.73	6.7	3.9	9.6	4.0	301.1	
363	-.06	-.01	6.45	.3	.9	12.8	13.8	541.9		327	.54	-.01	6.74	5.9	2.2	9.5	5.7	306.9	
364	.04	-.01	6.45	.1	.5	12.9	14.4	549.4		328	.54	-.01	6.74	6.5	3.9	9.7	4.3	311.1	
365	.02	-.01	6.46	.2	1.2	13.2	14.0	556.3		329	.54	-.01	6.75	5.9	2.5	10.2	5.7	316.6	
366	.02	.00	6.47	.2	.5	13.4	14.4	563.9		330	.55	-.02	6.75	6.3	3.3	10.3	5.2	321.3	
367	-.02	.00	6.48	.2	.9	13.8	13.8	571.1		331	.24	-.02	6.41	4.8	1.3	9.4	6.7	328.1	
368	-.02	.00	6.49	.3	-.2	13.9	15.1	579.3		332	.21	-.02	6.41	5.4	3.5	9.4	5.5	332.7	
369	.00	.00	6.48	.0	.4	13.4	15.0	586.9		333	.21	-.02	6.41	5.1	2.5	9.8	6.5	338.3	
370	-.02	.00	6.49	.2	.2	13.6	15.5	594.8		334	.22	-.02	6.41	5.4	3.3	10.1	5.4	343.1	
371	.00	.00	6.49	.0	.2	13.4	15.5	602.7		335	.22	-.02	6.42	5.0	2.1	10.3	6.8	349.1	
372	-.02	.00	6.50	.2	-.8	14.1	16.5	611.5		336	.22	-.02	6.42	4.9	3.1	10.4	6.1	354.1	
373	.00	.00	6.49	.0	.6	14.3	15.2	619.0		337	.22	-.02	6.42	4.6	1.7	10.5	7.5	360.5	
374	.02	.00	6.49	.2	-.8	14.5	16.8	627.9		338	.53	-.01	6.76	4.0	2.2	9.9	7.6	366.4	
375	.02	.00	6.49	.0	-.1	14.3	16.1	636.0		339	.23	-.03	6.43	4.5	2.6	10.6	7.8	371.9	
376	.02	.00	6.49	.2	-.7	14.9	17.0	644.8		340	.20	-.02	6.43	4.3	2.7	10.7	7.0	377.3	
377	.48	.01	6.85	.3	-.1	15.2	16.1	652.9		341	.20	-.02	6.44	4.1	1.9	11.2	8.4	383.5	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
342	.23	-.03	6.44	3.3	2.5	11.3	7.8	389.1		306	.50	-.01	6.58	1.8	4.8	4.8	2.1	218.6	
343	.17	-.01	6.44	2.5	1.2	11.5	9.5	396.0		307	.50	-.01	6.59	2.0	5.1	4.0	1.0	221.6	
344	.20	-.02	6.45	2.5	2.3	11.2	9.0	401.8		308	.50	-.01	6.59	1.9	4.3	4.4	2.6	225.4	
345	.43	.00	6.67	1.9	1.4	11.3	9.8	408.5		309	.52	-.01	6.62	2.9	5.4	4.3	1.4	228.1	
346	.17	-.02	6.45	2.0	2.2	12.1	9.2	414.4		310	.52	-.01	6.62	2.7	4.1	4.5	3.0	232.0	
347	.43	.00	6.67	1.0	1.2	11.8	10.1	421.3		311	.52	-.01	6.63	3.6	5.2	4.5	1.9	234.9	
348	.42	.00	6.68	1.3	2.4	12.5	9.4	426.9		312	.52	-.01	6.63	4.0	4.3	5.0	3.6	238.6	
349	.08	-.01	6.41	.8	1.2	12.4	10.8	433.8		313	.53	.00	6.66	4.7	5.0	5.3	2.5	241.7	
350	.08	-.01	6.41	1.0	2.2	12.6	9.7	439.7		314	.53	.00	6.67	4.8	3.9	5.7	3.9	245.9	
351	.08	-.01	6.42	.6	1.1	12.6	11.0	446.7		315	.50	-.02	6.61	4.5	3.9	4.5	3.2	250.1	
352	.09	-.02	6.42	.7	1.6	12.7	10.7	453.1		316	.51	-.02	6.62	4.2	3.6	5.7	4.5	254.5	
353	.08	-.01	6.42	.7	1.7	12.9	10.8	459.5		317	.51	-.02	6.62	4.8	4.9	5.8	3.2	257.7	
354	.08	-.01	6.43	.6	1.4	12.4	10.6	466.2		318	.50	-.01	6.63	4.9	3.4	5.9	4.8	262.3	
355	.06	-.01	6.43	.6	1.4	13.1	11.3	472.9		319	.50	-.01	6.63	5.3	4.6	5.8	3.9	265.8	
356	-.12	-.02	6.45	.6	1.6	12.8	11.1	479.4		320	.50	-.01	6.64	5.4	3.5	6.3	5.1	270.4	
357	-.12	-.02	6.45	.6	1.4	13.2	11.3	486.1		321	.50	-.01	6.64	5.6	4.3	6.6	4.2	274.2	
358	-.11	-.02	6.45	.6	1.5	13.2	11.2	492.6		322	.50	-.01	6.65	5.4	3.2	6.9	5.5	279.1	
359	-.11	-.02	6.46	.5	.5	13.0	12.2	500.2		323	.50	-.01	6.65	5.5	3.9	6.1	5.0	283.2	
360	-.10	-.01	6.46	.5	1.5	13.1	11.9	506.8		324	.54	-.01	6.73	6.1	3.8	7.1	5.4	287.5	
361	-.10	-.01	6.46	.2	1.0	13.6	12.5	513.9		325	.54	-.02	6.72	6.1	3.7	6.7	5.0	291.9	
362	-.11	-.02	6.47	.2	1.0	13.6	12.4	520.9		326	.54	-.02	6.73	5.6	2.9	7.1	6.5	297.1	
363	.02	.00	6.46	.0	.9	13.9	12.7	528.0		327	.54	-.02	6.73	6.1	4.0	7.2	5.4	301.2	
364	-.05	-.01	6.45	.0	1.1	14.1	12.3	535.0		328	.54	-.02	6.74	5.5	2.6	7.5	6.9	306.7	
365	.00	.00	6.48	.0	.7	14.4	12.9	542.4		329	.54	-.02	6.74	6.1	3.9	7.5	5.8	310.9	
366	.00	.00	6.48	.0	.9	14.1	12.7	549.6		330	.54	-.01	6.76	5.8	2.8	7.8	6.8	316.1	
367	.00	.00	6.48	.0	.3	13.9	13.4	557.3		331	.50	-.01	6.69	5.3	2.7	7.2	6.4	321.4	
368	.00	.00	6.49	.0	1.2	14.2	13.3	564.2		332	.50	-.01	6.69	4.7	2.3	8.2	7.8	327.2	
369	.00	.00	6.49	.0	.3	14.6	13.7	572.0		333	.50	-.01	6.70	5.0	3.5	8.2	6.8	331.7	
370	.00	.00	6.49	.0	.8	15.0	13.4	579.3		334	.50	-.01	6.70	4.4	2.2	7.9	8.4	337.6	
371	-.02	.00	6.50	.1	.2	14.9	14.2	587.2		335	.22	-.02	6.42	4.8	3.4	8.1	7.3	342.3	
372	.00	.00	6.50	.0	.2	14.9	14.2	595.0		336	.22	-.02	6.43	4.5	2.5	8.5	8.3	347.9	
373	-.02	.00	6.51	.1	-.7	15.0	15.5	603.8		337	.22	-.02	6.43	4.5	3.0	8.4	7.2	353.0	
374	.00	.00	6.50	.0	.9	15.3	13.8	611.0		338	.22	-.02	6.43	4.3	2.3	8.9	8.4	358.8	
375	.00	.00	6.50	.0	-.8	15.2	15.6	619.9		339	.23	-.03	6.44	4.1	2.8	9.6	7.4	364.1	
376	.00	.00	6.51	.0	.2	15.5	14.4	627.8		340	.23	-.03	6.44	4.0	1.9	8.9	9.0	370.3	
377	.00	.00	6.51	.0	-.9	15.3	15.8	636.8		341	.20	-.02	6.44	3.7	3.3	9.5	7.6	375.1	
378	.48	.01	6.86	.5	.4	15.7	14.6	644.5		342	.17	-.01	6.44	3.5	1.8	9.4	8.9	381.4	
379	.49	.00	6.86	.7	-.3	15.9	15.6	652.9		343	.23	-.03	6.45	3.2	3.0	10.0	7.4	386.4	
380	.49	.00	6.87	1.8	.8	16.3	14.4	660.1		344	.17	-.01	6.45	2.5	1.7	10.5	9.0	392.8	
381	.49	.00	6.87	1.9	-.6	16.2	15.8	668.8		345	.15	-.01	6.45	2.2	2.1	10.4	8.7	398.7	
382	.49	.00	6.88	2.8	.0	16.5	15.9	676.9		346	.43	.00	6.68	1.6	1.6	10.6	10.4	405.2	
383	.49	.00	6.88	2.8	-.4	16.6	16.5	685.3		347	.43	.00	6.68	1.5	2.1	10.5	10.2	411.2	
384	.49	.00	6.88	3.8	.4	16.7	15.7	693.0		348	.43	.00	6.68	1.2	1.8	11.1	10.5	417.5	
Z = 115										349	.08	-.01	6.42	1.4	2.6	11.2	9.7	423.0	
276	.45	.00	6.39	4.6		-.1		172.2		350	.08	-.01	6.42	.6	1.0	11.1	11.0	430.0	
277	.45	.00	6.39	4.5	8.7	-.4		171.5		351	.08	-.01	6.42	.9	2.4	11.3	9.9	435.8	
278	.43	.01	6.38	4.2	7.2	-.7	-5.7	172.4		352	.08	-.01	6.43	.8	1.4	11.6	11.5	442.4	
279	.45	.00	6.40	4.3	8.9	.0	-7.0	171.6		353	.08	-.01	6.43	.5	1.8	11.7	10.7	448.7	
280	.45	.00	6.41	3.5	7.1	.0	-5.5	172.5		354	.08	-.01	6.43	.3	1.2	11.2	11.8	455.6	
281	.45	.00	6.41	3.6	8.3	-.2	-6.3	172.3		355	.08	-.01	6.43	.4	2.1	11.9	10.8	461.6	
282	.45	.00	6.41	3.1	7.1	.2	-5.2	173.3		356	.06	-.01	6.44	.4	1.3	11.9	11.6	468.3	
283	.45	.00	6.42	3.3	7.9	.3	-5.8	173.4		357	-.12	-.02	6.46	.3	1.6	11.9	11.2	474.8	
284	.45	.00	6.43	2.7	6.8	.5	-4.2	174.7		358	.06	-.01	6.45	.5	1.4	12.0	11.5	481.4	
285	.45	.00	6.43	2.5	7.6	.3	-4.8	175.2		359	-.11	-.02	6.46	.4	1.4	11.9	11.6	488.0	
286	.45	.00	6.44	2.1	6.7	.8	-3.5	176.6		360	.04	-.01	6.46	.4	1.3	12.7	12.0	494.8	
287	.45	.00	6.44	2.1	7.4	.8	-4.4	177.2		361	-.09	-.02	6.46	.3	1.5	12.7	11.5	501.4	
288	.45	.00	6.45	1.5	6.4	.9	-3.1	178.9		362	.04	-.01	6.46	.1	.9	12.6	12.4	508.5	
289	.45	.00	6.45	1.5	7.4	1.2	-4.0	179.6		363	-.05	-.01	6.45	.2	1.3	12.9	12.2	515.3	
290	.46	.00	6.46	1.3	6.2	1.6	-2.4	181.4		364	.02	.00	6.47	.0	.7	12.6	13.0	522.7	
291	.46	.00	6.46	1.1	6.9	1.5	-3.1	182.6		365	.02	.00	6.48	.0	1.3	12.8	12.4	529.5	
292	.46	.00	6.47	.9	5.9	1.7	-1.7	184.9		366	.00	.00	6.49	.0	.7	12.8	13.1	536.8	
293	.46	.00	6.48	.7	6.8	1.6	-2.7	186.1		367	.00	.00	6.49	.0	1.1	13.0	13.0	543.9	
294	.00	.00	6.20	.0	5.3	2.3	-.6	188.8		368	.00	.00	6.49	.0	1.0	13.7	13.2	550.9	
295	.00	.00	6.21	.0	6.6	2.6	-1.6	190.3		369	.00	.00	6.49	.0	.8	13.2	13.2	558.2	
296	.00	.00	6.21	.0	5.6	2.7	-.1	192.9		370	.00	.00	6.50	.0	.5	13.4	13.7	565.8	
297	.00	.00	6.22	.0	6.4	3.1	-1.8	194.5		371	.00	.00	6.50	.0	1.0	13.6	13.3	572.9	
298	.00	.00	6.22	.0	5.1	3.1	.5	197.5		372	.00	.00	6.50	.1	.2	13.7	14.2	580.8	
299	.00	.00	6.22	.0	6.0	3.3	-1.3	199.6		373	.00	.00	6.51	.0	.6	14.0	13.7	588.3	
300	.00	.00	6.23	.0	4.3	3.4	1.7	203.3		374	-.02	.00	6.51	.2	-.8	13.9	15.5	597.2	
301	.00	.00	6.23	.0	6.1	3.5	.9	205.3		375	.00	.00	6.51	.0	1.0	14.0	14.0	604.3	
302	.00	.00	6.24	.0	4.3	3.2	3.0	209.0		376	.00	.00	6.51	.0	-1.1	13.8	15.9	613.5	
303	.47	.00	6.55	1.8	7.9	3.5	.0	209.1		377	.00	.00	6.51	.0	.5	14.0	14.7	621.1	
304	.48	.00	6.55	2.2	5.0	4.8	.9	212.2		378	.00	.00	6.52	.0	-.8	14.2	16.1	629.9	
305	.50	-.01	6.58	1.7	5.0	4.2	.5	215.3		379	.48	.01	6.87	.6	.7	14.5	15.4	637.3	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
380	.49	.00	6.87	.7	−.4	14.4	16.6	645.7		345	.49	−.01	6.74	2.3	1.8	10.1	7.3	390.0	
381	.49	.00	6.88	1.7	.7	14.3	15.1	653.1		346	.49	−.01	6.74	2.7	3.2	11.2	6.6	394.8	
382	.49	.00	6.88	2.1	.1	15.1	16.2	661.0		347	.43	.00	6.69	2.2	1.9	11.5	7.6	401.0	
383	.49	.00	6.89	2.9	.2	15.3	15.6	668.9		348	.43	.00	6.69	2.0	2.1	11.5	7.3	407.0	
384	.49	.00	6.88	3.0	−.4	15.3	16.5	677.3		349	.43	.00	6.70	1.6	1.8	11.5	8.7	413.3	
385	.49	.00	6.89	3.8	.1	15.1	16.0	685.3		350	.43	.00	6.70	1.6	2.3	11.2	7.9	419.0	
Z=116																			
278	.45	.00	6.40	4.8			.7	178.1		351	.43	.00	6.70	.9	1.3	11.5	9.4	425.9	
279	.45	.00	6.41	4.4	7.6	1.1		178.6		352	.43	.00	6.70	1.4	3.0	12.1	8.0	431.0	
280	.45	.00	6.41	4.4	8.6	.9	−9.0	178.0		353	.38	.00	6.67	.7	1.0	11.6	9.2	438.1	
281	.45	.00	6.42	4.0	7.4	1.2	−7.8	178.6		354	.38	.00	6.68	.8	2.3	12.2	8.6	443.8	
282	.45	.00	6.42	3.9	8.3	1.2	−8.2	178.4		355	.08	−.01	6.44	.6	1.1	12.2	9.9	450.7	
283	.45	.00	6.43	3.2	7.3	1.3	−7.2	179.2		356	.08	−.01	6.44	.3	2.1	12.1	9.1	456.8	
284	.45	.00	6.43	3.5	8.4	1.8	−8.1	178.9		357	.06	−.01	6.45	.4	1.2	12.0	10.0	463.6	
285	.45	.00	6.44	2.9	7.0	2.0	−6.8	180.0		358	−.14	−.01	6.48	.3	1.7	12.1	10.0	469.9	
286	.45	.00	6.44	3.1	7.9	2.4	−7.5	180.1		359	.06	−.01	6.45	.4	1.6	12.3	10.1	476.4	
287	.45	.00	6.45	2.4	6.5	2.2	−6.0	181.7		360	−.11	−.02	6.47	.3	1.6	12.5	9.8	482.9	
288	.45	.00	6.45	2.5	7.8	2.6	−6.7	182.0		361	.04	−.01	6.47	.4	1.0	12.2	10.8	489.9	
289	.45	.00	6.46	1.8	6.5	2.6	−5.5	183.6		362	−.10	−.01	6.48	.3	1.9	12.6	10.3	496.1	
290	.45	.00	6.47	2.1	7.8	3.0	−6.6	183.9		363	.02	.00	6.48	.1	1.0	12.7	11.0	503.1	
291	.46	.00	6.47	1.7	6.2	3.0	−4.9	185.8		364	−.06	−.01	6.47	.2	1.5	12.9	10.6	509.7	
292	.46	.00	6.47	1.6	7.3	3.4	−5.6	186.6		365	.02	.00	6.48	.0	.7	13.0	11.4	517.0	
293	.46	.00	6.48	1.2	5.9	3.4	−4.3	188.8		366	−.05	−.01	6.47	.0	1.4	13.1	11.3	523.7	
294	.46	−.01	6.49	1.4	7.4	4.0	−5.5	189.4		367	.00	.00	6.49	.0	.9	13.2	11.7	530.9	
295	.46	−.01	6.49	.9	5.5	4.1	−3.5	192.0		368	.00	.00	6.50	.0	1.2	13.4	11.4	537.7	
296	.46	−.01	6.50	1.2	7.1	4.7	−4.7	192.9		369	.00	.00	6.50	.0	.7	13.1	12.0	545.1	
297	.00	.00	6.22	.0	4.7	3.8	−2.3	196.4		370	.00	.00	6.50	.0	1.0	13.4	11.9	552.1	
298	.46	−.01	6.51	1.0	7.4	4.8	−4.2	197.0		371	.00	.00	6.51	.0	.6	13.5	12.4	559.6	
299	.00	.00	6.23	.0	4.2	3.9	−1.5	200.9		372	.00	.00	6.51	.0	1.1	13.6	11.6	566.6	
300	.47	.00	6.52	1.3	7.4	5.3	−4.3	201.6		373	.00	.00	6.51	.0	.1	13.4	12.8	574.6	
301	.48	−.01	6.54	2.0	5.3	6.2	−2.1	204.4		374	.00	.00	6.51	.0	1.0	13.9	12.2	581.7	
302	.49	−.01	6.56	2.0	6.5	6.6	−3.4	205.9		375	−.02	.00	6.52	.1	−.6	14.2	13.9	590.3	
303	.49	−.01	6.57	2.4	4.8	7.1	−1.8	209.2		376	.00	.00	6.52	.0	.8	14.0	12.5	597.5	
304	.50	−.01	6.58	2.5	6.0	5.1	−2.5	211.3		377	−.02	.00	6.53	.0	−.7	14.4	14.4	606.4	
305	.47	.00	6.55	2.3	4.6	4.7	−1.0	214.8		378	.48	.01	6.87	.1	.6	14.6	13.1	613.8	
306	.47	−.01	6.55	2.8	6.3	6.1	−2.7	216.5		379	.45	−.01	6.82	.5	.0	15.3	14.1	621.9	
307	.49	−.02	6.58	2.3	3.9	5.3	−.2	220.6		380	.48	.01	6.88	1.1	.8	15.4	13.4	629.2	
308	.51	.00	6.62	3.2	5.9	6.1	−1.3	222.8		381	.48	.01	6.88	1.1	−.7	15.1	14.8	638.0	
309	.52	−.01	6.62	2.6	4.2	6.0	.3	226.7		382	.49	.00	6.89	2.3	1.2	15.5	13.2	644.8	
310	.52	−.01	6.63	3.5	5.8	6.4	−1.5	229.0		383	.49	.00	6.89	2.5	−.3	15.1	14.5	653.2	
311	.52	−.01	6.63	3.2	4.0	6.3	.5	233.0		384	.49	.00	6.89	3.3	.5	15.4	13.9	660.8	
312	.53	.00	6.66	4.7	6.1	7.2	−1.7	235.0		385	.49	.00	6.89	3.3	−.4	15.3	15.0	669.3	
313	.53	.00	6.67	4.6	3.9	6.8	.5	239.1		386	.49	.00	6.90	4.4	1.0	16.2	14.0	676.4	
314	.53	.00	6.68	5.3	5.2	7.0	−.3	242.0		Z=117									
315	.50	−.02	6.62	4.5	3.2	6.3	1.5	246.8		280	.45	.00	6.42	4.2		−1.1		187.0	
316	.51	−.02	6.62	5.2	4.9	7.4	.5	250.0		281	.45	.00	6.43	4.1	8.7	−1.1		186.4	
317	.51	−.02	6.63	4.8	3.6	7.3	2.1	254.4		282	.45	.00	6.43	3.7	7.9	−.7	−6.9	186.6	
318	.50	−.01	6.63	5.5	5.0	7.4	1.0	257.6		283	.45	.00	6.43	3.7	8.2	−.7	−7.3	186.4	
319	.50	−.01	6.64	5.3	3.7	7.7	2.3	261.9		284	.45	.00	6.44	3.2	7.5	−.5	−6.0	187.0	
320	.50	−.01	6.64	5.9	4.7	7.8	1.3	265.3		285	.45	.00	6.45	3.1	8.4	−.6	−6.9	186.8	
321	.50	−.01	6.65	5.7	3.4	7.7	2.5	270.0		286	.45	.00	6.45	2.6	7.2	−.4	−5.3	187.6	
322	.50	−.01	6.65	6.1	4.5	8.0	2.0	273.5		287	.45	.00	6.45	2.7	8.1	−.2	−6.2	187.6	
323	.50	−.01	6.66	5.9	3.4	8.1	3.0	278.2		288	.46	.00	6.46	2.2	7.1	.3	−4.8	188.6	
324	.50	−.01	6.66	6.2	4.2	8.4	2.5	282.1		289	.46	.00	6.47	2.3	7.7	.2	−5.6	189.0	
325	.50	−.01	6.67	6.0	3.3	7.9	3.5	286.9		290	.46	.00	6.47	1.6	6.6	.4	−4.0	190.5	
326	.54	−.02	6.73	6.5	4.4	8.6	2.3	290.6		291	.46	.00	6.48	1.7	7.8	.4	−5.4	190.7	
327	.54	−.02	6.74	5.9	2.9	8.6	3.8	295.8		292	.46	−.01	6.49	1.7	6.6	.9	−3.6	192.2	
328	.54	−.02	6.74	6.5	4.0	8.7	3.0	299.8		293	.46	.00	6.49	1.3	7.2	.9	−4.3	193.0	
329	.54	−.02	6.74	5.8	2.8	8.9	4.1	305.1		294	.46	.00	6.49	1.1	6.1	1.1	−2.7	194.9	
330	.54	−.02	6.75	6.4	3.8	8.8	3.1	309.3		295	.47	−.01	6.51	1.2	7.5	1.2	−3.8	195.5	
331	.50	−.01	6.69	5.3	2.3	8.3	4.8	315.0		296	.46	−.01	6.51	.8	6.0	1.6	−2.3	197.6	
332	.50	−.01	6.70	5.7	3.8	9.4	3.8	319.4		297	.46	−.01	6.51	.9	7.0	1.5	−3.3	198.7	
333	.50	−.01	6.70	5.1	2.4	9.5	5.4	325.0		298	.47	.00	6.52	.7	5.6	2.5	−1.7	201.2	
334	.50	−.01	6.71	5.5	3.8	9.8	4.2	329.2		299	.47	.00	6.52	.8	6.9	1.9	−2.9	202.4	
335	.50	−.01	6.71	5.0	2.3	9.9	5.6	335.0		300	.00	.00	6.24	.0	4.6	2.3	−.5	205.9	
336	.50	−.01	6.71	5.1	3.5	10.0	4.7	339.6		301	.47	.00	6.53	1.1	7.4	2.4	−2.5	206.5	
337	.50	−.01	6.72	4.3	1.8	9.4	6.4	345.9		302	.47	.00	6.54	1.7	5.2	2.3	−.6	209.4	
338	.50	−.01	6.72	4.5	3.5	9.9	5.4	350.4		303	.47	.00	6.55	1.5	6.4	2.2	−1.6	211.0	
339	.50	−.01	6.72	3.9	1.9	9.5	6.9	356.6		304	.48	−.01	6.57	2.2	5.2	2.7	.0	213.8	
340	.50	−.01	6.73	4.0	3.4	10.1	5.4	361.3		305	.50	−.01	6.59	2.3	6.2	2.8	−1.0	215.8	
341	.23	−.03	6.45	3.7	1.9	10.1	7.0	367.5		306	.48	.00	6.58	2.3	4.6	2.9	.7	219.2	
342	.49	−.01	6.73	3.4	3.0	9.9	6.1	372.5		307	.50	−.01	6.60	2.8	6.4	2.9	−.9	220.9	
343	.49	−.01	6.74	3.1	1.5	9.6	7.8	379.0		308	.50	−.01	6.60	2.9	4.9	3.9	.5	224.1	
344	.44	.00	6.68	2.9	3.4	10.0	6.5	383.7		309	.49	−.02	6.59	3.1	5.7	3.7	−.5	226.4	
										310	.47	−.01	6.58	2.4	4.0	3.6	2.2	230.4	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
311	.50	.00	6.63	3.3	6.0	3.8	1.1	232.5		385	.49	.00	6.91	3.3	.7	13.8	14.8	654.3	
312	.50	.00	6.63	2.7	3.9	3.6	2.5	236.7		386	.49	.00	6.91	3.4	-.1	14.1	15.7	662.4	
313	.52	-.01	6.65	3.9	6.1	3.7	1.0	238.6		387	.49	.00	6.91	4.3	.7	13.9	15.0	669.8	
314	.52	-.01	6.66	4.3	4.4	4.1	2.2	242.3		Z = 118									
315	.50	-.02	6.62	4.4	5.0	3.9	1.3	245.4		282	.45	.00	6.44	4.3		.2		193.5	
316	.50	-.02	6.63	4.4	3.9	4.6	2.8	249.5		283	.45	.00	6.44	3.8	7.9	.2		193.7	
317	.51	-.02	6.63	4.9	5.2	4.9	1.8	252.4		284	.45	.00	6.45	3.9	8.8	.7	-9.4	193.0	
318	.50	-.01	6.64	4.9	3.9	5.2	3.1	256.6		285	.45	.00	6.45	3.3	7.4	.7	-8.4	193.7	
319	.50	-.01	6.64	5.4	5.0	5.2	1.9	259.6		286	.45	.00	6.46	3.6	8.8	1.1	-9.4	192.9	
320	.50	-.01	6.65	5.3	3.6	5.2	3.8	264.1		287	.46	.00	6.46	2.9	7.2	1.1	-7.9	193.8	
321	.50	-.01	6.66	5.6	4.6	5.1	3.2	267.5		288	.46	.00	6.47	3.0	8.4	1.5	-8.7	193.5	
322	.50	-.01	6.66	5.5	4.1	5.8	3.9	271.5		289	.46	.00	6.47	2.5	6.9	1.3	-7.2	194.7	
323	.50	-.01	6.66	5.8	4.4	5.6	3.4	275.2		290	.46	.00	6.48	2.6	8.3	1.8	-7.8	194.5	
324	.50	-.01	6.67	5.7	3.7	5.9	4.3	279.6		291	.46	.00	6.49	1.9	6.5	1.7	-6.4	196.1	
325	.50	-.01	6.67	6.0	4.3	6.0	3.6	283.4		292	.47	.00	6.50	2.5	8.4	2.2	-7.8	195.8	
326	.50	-.01	6.68	5.7	3.2	5.9	5.1	288.2		293	.47	-.01	6.51	1.9	6.6	2.2	-6.1	197.3	
327	.50	-.01	6.68	6.0	4.3	5.9	4.1	292.0		294	.47	-.01	6.51	2.0	7.7	2.7	-6.8	197.7	
328	.52	-.01	6.72	5.5	3.3	6.3	5.2	296.8		295	.46	-.01	6.51	1.8	6.4	2.9	-5.5	199.3	
329	.52	-.01	6.73	5.8	3.9	6.1	4.9	301.0		296	.46	-.01	6.51	1.7	7.4	2.8	-6.4	200.0	
330	.52	-.01	6.73	5.2	2.9	6.2	6.7	306.2		297	.46	-.01	6.52	1.2	6.1	3.0	-4.9	202.0	
331	.50	-.01	6.70	5.6	4.0	6.4	5.1	310.2		298	.46	-.01	6.52	1.4	7.2	3.1	-5.7	202.9	
332	.50	-.01	6.70	5.0	2.8	6.8	6.7	315.5		299	.47	.00	6.53	1.0	5.7	3.2	-3.6	205.3	
333	.50	-.01	6.71	5.3	4.0	7.0	5.5	319.6		300	.47	.00	6.53	1.4	7.0	3.3	-5.2	206.3	
334	.50	-.01	6.71	4.8	2.6	7.2	6.9	325.1		301	.48	-.01	6.55	1.1	5.4	4.2	-3.4	209.0	
335	.50	-.01	6.72	5.1	3.8	7.2	5.9	329.4		302	.48	-.01	6.56	1.6	7.1	3.8	-4.7	210.0	
336	.50	-.01	6.72	4.6	2.5	7.4	7.2	334.9		303	.49	-.01	6.58	2.3	5.4	4.1	-3.2	212.6	
337	.50	-.01	6.72	4.7	3.5	7.4	6.4	339.5		304	.49	-.01	6.59	2.4	6.9	4.4	-4.3	213.8	
338	.50	-.01	6.73	4.2	2.6	8.1	7.5	345.0		305	.50	-.01	6.59	2.8	5.2	4.4	-2.8	216.7	
339	.50	-.01	6.73	4.2	3.3	8.0	6.8	349.7		306	.50	-.01	6.60	2.9	6.3	4.6	-3.8	218.5	
340	.50	-.01	6.74	3.7	1.9	8.1	8.5	355.9		307	.49	-.02	6.59	2.9	4.8	4.8	-1.8	221.7	
341	.50	-.01	6.74	3.6	3.4	8.1	7.4	360.5		308	.50	-.01	6.61	3.5	6.3	4.6	-3.0	223.5	
342	.49	-.01	6.74	3.5	2.2	8.4	8.7	366.4		309	.49	-.02	6.60	3.3	4.7	4.4	-1.4	226.9	
343	.49	-.01	6.74	3.2	3.2	8.5	7.6	371.3		310	.51	.00	6.64	4.4	6.7	5.4	-3.2	228.3	
344	.49	-.01	6.75	3.3	2.1	9.1	8.9	377.3		311	.52	-.01	6.64	4.1	4.9	6.3	-1.6	231.4	
345	.49	-.01	6.75	2.7	2.7	8.4	8.2	382.6		312	.52	-.01	6.65	4.3	5.3	5.6	-1.6	234.2	
346	.44	.00	6.70	2.2	2.5	9.0	8.7	388.2		313	.52	-.01	6.66	4.1	4.7	6.3	-.2	237.6	
347	.43	.00	6.70	2.3	2.9	8.7	7.9	393.4		314	.52	-.01	6.66	4.7	5.6	5.8	-1.3	240.1	
348	.43	.00	6.70	2.0	1.9	8.7	8.9	399.6		315	.50	-.02	6.63	4.6	4.1	5.6	-.3	244.0	
349	.43	.00	6.70	2.0	3.2	9.7	8.2	404.5		316	.50	-.02	6.63	5.0	5.3	5.9	-.6	246.8	
350	.43	.00	6.71	1.1	1.5	9.4	9.3	411.1		317	.50	-.02	6.64	4.9	4.2	6.2	.4	250.6	
351	.43	.00	6.71	1.5	2.8	9.9	8.7	416.5		318	.51	-.02	6.64	5.4	5.2	6.2	-.3	253.5	
352	.43	.00	6.71	1.2	1.6	10.2	10.2	423.0		319	.50	-.01	6.65	5.1	3.8	6.1	1.1	257.7	
353	.43	.00	6.72	1.1	2.2	9.4	9.4	428.8		320	.50	-.01	6.65	5.9	5.5	6.7	-.1	260.3	
354	.43	.00	6.72	.9	1.7	10.2	10.5	435.2		321	.50	-.01	6.66	5.8	4.0	7.0	1.1	264.3	
355	.39	.00	6.69	.6	2.4	10.3	9.6	440.8		322	.50	-.01	6.66	6.3	4.8	7.1	.4	267.6	
356	.06	-.01	6.45	.3	1.3	10.4	10.7	447.6		323	.50	-.01	6.67	6.1	3.9	7.0	1.6	271.8	
357	.06	-.01	6.45	.4	2.2	10.5	10.3	453.5		324	.50	-.01	6.67	6.4	4.5	7.2	1.3	275.3	
358	.08	-.01	6.45	.4	1.7	10.9	10.6	459.9		325	.50	-.01	6.68	6.2	3.6	7.1	2.3	279.8	
359	.06	-.01	6.46	.1	1.6	10.9	10.5	466.4		326	.50	-.01	6.68	6.6	4.7	7.5	1.2	283.2	
360	.06	-.01	6.46	.2	1.4	10.7	11.3	473.0		327	.50	-.01	6.69	6.2	3.3	7.6	2.7	287.9	
361	-.11	-.02	6.48	.1	2.0	11.1	10.6	479.1		328	.50	-.01	6.69	6.7	4.4	7.7	2.0	291.5	
362	.04	-.01	6.47	.3	1.4	11.4	11.2	485.8		329	.50	-.01	6.70	6.2	3.6	8.1	2.9	296.0	
363	-.09	-.02	6.48	.0	1.7	11.2	10.6	492.2		330	.54	-.02	6.76	7.0	4.6	8.8	2.0	299.5	
364	.02	.00	6.49	.0	1.1	11.3	11.5	499.1		331	.50	-.01	6.71	5.7	2.5	8.4	3.8	305.1	
365	.02	.00	6.49	.0	1.5	11.3	11.5	505.7		332	.50	-.01	6.71	6.2	4.3	8.6	2.9	308.9	
366	.02	.00	6.49	.0	1.4	11.9	11.9	512.4		333	.50	-.01	6.71	5.6	2.8	8.7	4.2	314.1	
367	.00	.00	6.49	.0	1.3	11.8	11.8	519.2		334	.50	-.01	6.72	5.9	4.0	8.7	3.3	318.2	
368	.00	.00	6.50	.0	1.0	11.9	12.1	526.3		335	.50	-.01	6.72	5.3	2.9	9.0	4.6	323.4	
369	.00	.00	6.51	.0	1.3	11.9	11.9	533.1		336	.50	-.01	6.73	5.6	3.8	8.9	3.8	327.7	
370	.00	.00	6.51	.0	.9	12.1	12.5	540.3		337	.50	-.01	6.73	5.0	2.7	9.1	5.0	333.1	
371	.00	.00	6.51	.0	1.1	12.2	12.1	547.2		338	.50	-.01	6.73	5.2	3.7	9.3	4.4	337.5	
372	.00	.00	6.51	.0	.3	12.0	13.4	555.0		339	.50	-.01	6.74	4.8	2.7	9.4	5.3	342.9	
373	.00	.00	6.52	.0	1.2	12.1	12.6	561.8		340	.50	-.01	6.74	5.0	3.6	9.6	4.4	347.4	
374	.00	.00	6.52	.0	.5	12.5	13.5	569.4		341	.50	-.01	6.74	4.4	2.3	10.0	5.6	353.1	
375	.00	.00	6.52	.0	1.1	12.6	12.7	576.4		342	.50	-.01	6.75	4.5	3.6	10.1	4.9	357.6	
376	.00	.00	6.53	.0	-.6	12.6	14.2	585.0		343	.49	-.01	6.75	4.0	2.1	10.0	6.2	363.6	
377	.00	.00	6.53	.0	1.1	12.9	13.0	592.0		344	.49	-.01	6.75	3.8	3.4	10.2	5.3	368.4	
378	.35	-.02	6.70	.1	-.6	12.9	14.7	600.7		345	.49	-.01	6.76	3.6	2.0	10.1	6.8	374.5	
379	.48	.01	6.88	.3	1.0	13.4	13.6	607.7		346	.49	-.01	6.76	3.3	3.0	10.4	5.9	379.5	
380	.48	.01	6.89	.8	.1	13.4	15.1	615.8		347	.49	-.01	6.76	2.7	2.0	10.0	6.9	385.5	
381	.48	.01	6.89	1.0	.6	13.3	14.7	623.2		348	.49	-.01	6.76	2.8	2.9	10.0	6.4	390.7	
382	.45	-.01	6.84	1.2	-.4	13.6	15.9	631.6		349	.49	-.01	6.77	2.2	2.4	10.6	7.0	396.3	
383	.49	.00	6.90	2.1	1.0	13.4	14.9	638.7		350	.43	.00	6.71	2.3	2.6	10.0	6.6	401.8	
384	.49	.00	6.90	2.4	-.1	13.6	15.6	646.9		351	.48	.00	6.77	1.7	2.2	10.7	7.5	407.7	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
352	.43	.00	6.72	2.2	3.0	11.0	6.4	412.8		320	.51	-.02	6.66	5.3	4.4	4.7	1.9	260.3	
353	.43	.00	6.72	1.3	1.4	10.8	7.9	419.4		321	.50	-.01	6.66	5.7	5.2	4.3	1.4	263.2	
354	.43	.00	6.73	1.6	2.9	11.5	7.5	424.6		322	.50	-.01	6.67	5.8	4.1	4.4	2.5	267.2	
355	.43	.00	6.73	1.2	1.5	11.3	8.6	431.2		323	.50	-.01	6.68	6.1	5.1	4.7	1.6	270.2	
356	.43	.00	6.73	1.3	2.3	11.1	7.8	437.0		324	.50	-.01	6.68	6.2	4.2	5.0	2.8	274.1	
357	.43	.00	6.74	1.0	1.8	11.7	8.4	443.3		325	.50	-.01	6.68	6.4	4.6	5.1	2.5	277.5	
358	.39	.00	6.71	.7	2.0	11.5	8.3	449.3		326	.50	-.01	6.69	6.2	3.6	5.1	3.6	282.0	
359	.08	-.01	6.46	.3	1.5	11.3	9.1	455.9		327	.50	-.01	6.69	6.4	4.8	5.2	2.7	285.3	
360	.39	.00	6.71	.5	2.2	11.9	8.7	461.8		328	.50	-.01	6.70	6.4	3.8	5.7	3.9	289.5	
361	.06	-.01	6.47	.4	1.4	11.9	9.2	468.5		329	.50	-.01	6.70	6.5	4.5	5.7	3.1	293.1	
362	-.11	-.02	6.49	.1	1.9	11.8	8.9	474.6		330	.50	-.01	6.71	6.3	3.7	5.8	4.0	297.5	
363	.04	-.01	6.48	.3	1.1	11.5	10.0	481.5		331	.50	-.01	6.71	6.5	4.3	5.5	3.6	301.3	
364	-.10	-.01	6.50	.1	2.0	11.8	9.4	487.7		332	.50	-.01	6.72	6.0	3.3	6.4	4.7	306.0	
365	.02	.00	6.49	.0	1.5	12.2	9.7	494.2		333	.50	-.01	6.72	6.3	4.1	6.2	4.0	309.9	
366	.02	.00	6.50	.1	1.7	12.4	9.7	500.6		334	.50	-.01	6.72	5.7	3.1	6.5	5.3	314.9	
367	.02	.00	6.50	.0	1.2	12.3	10.3	507.5		335	.50	-.01	6.73	6.0	4.1	6.6	4.5	318.9	
368	.02	.00	6.50	.0	1.3	12.3	10.2	514.2		336	.50	-.01	6.73	5.5	3.0	6.7	5.9	324.0	
369	.00	.00	6.51	.0	1.1	12.5	10.6	521.2		337	.50	-.01	6.74	5.6	4.0	6.9	4.7	328.1	
370	.00	.00	6.51	.0	1.5	12.6	10.4	527.7		338	.50	-.01	6.74	5.4	3.1	7.3	5.8	333.0	
371	.00	.00	6.52	.0	.7	12.4	11.3	535.1		339	.50	-.01	6.74	5.3	3.6	7.2	5.1	337.5	
372	.00	.00	6.52	.0	1.6	12.9	10.5	541.6		340	.50	-.01	6.75	4.8	2.7	7.2	6.4	343.0	
373	.00	.00	6.52	.0	.5	13.0	11.6	549.2		341	.50	-.01	6.75	4.9	3.5	7.1	5.8	347.5	
374	.00	.00	6.53	.0	1.4	13.2	10.9	555.9		342	.50	-.01	6.75	4.5	2.9	7.7	6.8	352.7	
375	.00	.00	6.53	.0	.3	13.1	11.9	563.7		343	.50	-.01	6.76	4.4	3.3	7.5	5.7	357.4	
376	.00	.00	6.53	.0	.9	12.8	11.6	570.9		344	.49	-.01	6.76	4.2	2.4	7.8	7.2	363.1	
377	.39	-.02	6.73	.3	.0	13.4	12.5	578.9		345	.49	-.01	6.76	3.9	3.5	8.0	6.4	367.7	
378	.40	.00	6.79	.1	1.0	13.3	11.6	586.0		346	.49	-.01	6.77	3.7	2.2	8.2	7.7	373.6	
379	.40	.00	6.79	.4	-.1	13.8	13.1	594.2		347	.49	-.01	6.77	3.2	3.0	8.1	7.0	378.6	
380	.48	.01	6.89	1.1	1.6	14.4	12.0	600.7		348	.49	-.01	6.77	2.7	2.4	8.5	8.1	384.3	
381	.48	.01	6.89	1.5	.2	14.6	12.9	608.5		349	.49	-.01	6.77	2.8	3.0	8.6	7.1	389.4	
382	.48	.01	6.90	2.1	.8	14.7	12.5	615.8		350	.49	-.01	6.78	2.4	2.2	8.4	8.1	395.3	
383	.45	-.01	6.85	2.1	-.1	15.0	13.4	623.9		351	.48	.00	6.78	2.2	3.1	8.9	7.4	400.2	
384	.49	.00	6.91	2.9	.7	14.8	13.1	631.3		352	.48	.00	6.78	1.7	1.9	8.7	8.3	406.4	
385	.49	.00	6.91	3.0	-.1	14.7	14.1	639.5		353	.43	.00	6.73	2.0	2.9	8.5	7.5	411.6	
386	.49	.00	6.91	3.8	.9	14.9	13.3	646.7		354	.43	.00	6.74	1.7	2.5	9.6	8.0	417.1	
387	.49	.00	6.92	3.9	.0	14.9	14.0	654.7		355	.43	.00	6.74	1.8	2.5	9.3	7.8	422.7	
388	.49	.00	6.92	4.9	.7	15.0	13.4	662.1		356	.43	.00	6.74	1.2	1.5	9.3	9.4	429.2	
Z=119										357	.43	.00	6.74	1.2	2.4	9.4	8.9	434.8	
284	.45	.00	6.45	3.6		-1.5		202.5		358	.43	.00	6.75	1.0	1.9	9.5	9.8	441.1	
285	.45	.00	6.46	3.6	8.5	-1.7		202.1		359	.43	.00	6.75	.9	2.3	9.8	9.1	446.8	
286	.45	.00	6.46	3.1	7.8	-1.4	-7.2	202.3		360	.08	-.01	6.47	.7	1.8	10.2	9.7	453.0	
287	.45	.00	6.47	3.2	8.7	-1.5	-7.7	201.7		361	.07	-.01	6.47	.3	1.9	9.8	9.3	459.2	
288	.46	.00	6.47	2.7	7.6	-1.1	-6.7	202.2		362	.05	-.01	6.48	.3	1.6	10.0	10.4	465.8	
289	.46	.00	6.48	2.8	8.4	-1.1	-7.4	201.9		363	.05	-.01	6.48	.2	2.3	10.3	10.0	471.6	
290	.46	.00	6.49	2.4	7.6	-.4	-6.2	202.3		364	.04	-.01	6.49	.4	1.4	10.6	10.5	478.3	
291	.46	.00	6.49	2.3	7.9	-.7	-6.5	202.5		365	.00	.00	6.51	.0	1.8	10.4	10.1	484.5	
292	.46	.00	6.50	1.8	7.0	-.2	-5.2	203.6		366	.02	.00	6.50	.0	1.6	10.6	10.4	490.9	
293	.46	.00	6.50	2.0	8.2	-.3	-6.3	203.4		367	.02	.00	6.51	.1	1.8	10.7	10.3	497.2	
294	.47	-.01	6.52	2.0	7.1	.2	-4.9	204.4		368	.00	.00	6.51	.0	1.3	10.7	10.8	504.0	
295	.47	-.01	6.53	1.8	7.7	.1	-5.6	204.8		369	.02	.00	6.51	.1	1.5	11.0	10.7	510.5	
296	.47	-.01	6.53	1.6	6.5	.3	-4.2	206.4		370	.02	.00	6.51	.0	1.2	11.1	11.1	517.3	
297	.46	-.01	6.53	1.5	7.6	.4	-5.3	206.9		371	.02	.00	6.52	.0	1.6	11.2	10.9	523.8	
298	.47	.00	6.53	1.2	6.4	.6	-3.7	208.6		372	.02	.00	6.52	.0	.8	11.3	11.8	531.1	
299	.49	-.03	6.55	1.8	7.8	1.3	-4.5	208.9		373	.00	.00	6.53	.0	1.6	11.3	11.1	537.6	
300	.47	.00	6.54	1.0	5.5	1.1	-2.4	211.5		374	.02	.00	6.53	.0	.7	11.5	12.0	545.0	
301	.47	.00	6.55	1.2	7.2	1.2	-3.4	212.4		375	.00	.00	6.53	.0	1.4	11.5	11.3	551.7	
302	.48	-.01	6.57	1.0	5.7	1.5	-2.3	214.7		376	.00	.00	6.54	.1	.5	11.6	12.4	559.3	
303	.48	-.01	6.57	1.5	7.0	1.5	-3.6	215.8		377	.00	.00	6.54	.0	.9	11.7	12.1	566.5	
304	.48	-.01	6.58	2.3	5.7	1.7	-2.1	218.2		378	.39	-.02	6.74	.4	.1	11.8	13.4	574.5	
305	.49	-.01	6.60	2.1	6.7	1.5	-3.0	219.6		379	.44	.00	6.84	.3	1.4	12.2	12.5	581.1	
306	.49	-.02	6.59	2.4	5.3	1.7	-1.4	222.3		380	.45	-.01	6.84	.9	.6	12.9	13.3	588.6	
307	.50	-.01	6.61	2.8	6.9	2.3	-2.9	223.5		381	.45	-.01	6.85	1.1	1.1	12.3	12.7	595.6	
308	.49	-.02	6.60	3.0	5.0	2.4	-1.1	226.6		382	.48	.01	6.90	1.7	.4	12.5	13.6	603.3	
309	.49	-.02	6.61	3.3	6.4	2.5	-2.1	228.3		383	.48	.01	6.91	2.2	.9	12.6	13.3	610.5	
310	.49	-.02	6.61	3.3	4.9	2.7	.2	231.5		384	.49	.00	6.91	2.5	.4	13.1	14.2	618.1	
311	.51	.00	6.65	4.3	6.5	2.5	-1.1	233.1		385	.49	.00	6.91	3.2	.8	13.2	14.1	625.4	
312	.52	-.01	6.66	4.2	5.3	2.8	.0	235.9		386	.49	.00	6.92	3.4	.1	13.4	15.0	633.4	
313	.52	-.01	6.66	4.9	6.1	3.6	-1.3	237.9		387	.49	.00	6.92	4.0	.8	13.3	14.4	640.7	
314	.52	-.01	6.67	4.4	4.6	3.5	.6	241.4		388	.49	.00	6.93	4.1	.2	13.4	15.4	648.6	
315	.50	-.02	6.63	4.7	5.1	3.0	.4	244.4		389	.49	.00	6.93	5.0	.8	13.5	14.4	655.9	
316	.50	-.02	6.64	4.9	5.1	4.0	1.2	247.3		390	.49	.00	6.93	5.1	-.1		16.2	664.1	
317	.50	-.02	6.64	4.9	5.2	3.8	.4	250.2		391	.49	.00	6.94	5.9	.7		15.5	671.5	
318	.51	-.02	6.65	5.0	4.5	4.1	1.7	253.8		392	.49	.00	6.94	6.1	-.4		16.9	680.0	
319	.51	-.02	6.66	5.3	5.2	4.1	1.3	256.6		393	.49	.00	6.95	6.7	1.1		15.6	687.0	

TABLE I. The HFBCS-1 Table of Nuclear Masses and Related Quantities

See page 318 for Explanation of Table

A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error	A	bet2	bet4	Rch	Edef	Sn	Sp	Qbet	Mcal	error
394	.49	.00	6.93	6.4	−.9		17.3	695.9		340	.50	−.01	6.76	5.8	4.0	8.3		336.5	
395	.49	.00	6.94	7.0	1.4		15.3	702.5		341	.50	−.01	6.76	5.4	2.9	8.5		341.7	
396	.49	.00	6.95	7.1	−.5		16.5	711.1		342	.50	−.01	6.76	5.3	3.9	8.9		345.9	
397	.49	−.01	6.92	7.3	.3		15.6	718.9		343	.50	−.01	6.76	4.8	2.3	8.3		351.8	
398	.49	−.01	6.92	7.2	−.8		17.1	727.7		344	.50	−.01	6.77	4.8	3.9	8.8		355.9	
399	.49	−.01	6.92	7.7	.2		16.0	735.6		345	.50	−.01	6.77	4.6	2.7	9.1		361.2	
400	.49	−.01	6.92	7.2	−.8		17.7	744.5		346	.49	−.01	6.77	4.3	3.4	9.1		365.9	
401	.49	−.01	6.92	7.8	.3		16.4	752.2		347	.49	−.01	6.78	4.2	2.3	9.2		371.7	
402	.43	.00	6.86	7.1	−1.5		18.1	761.7		348	.49	−.01	6.78	3.8	3.6	9.7		376.2	
403	.47	−.01	6.89	7.2	.5		16.3	769.3		349	.49	−.01	6.78	3.0	2.0	9.4		382.2	
404	.48	.00	6.90	7.3	−.7		17.5	778.1		350	.49	−.01	6.78	3.1	3.1	9.5		387.2	
405	.22	.00	6.72	7.2	−.3		16.7	786.5		351	.49	−.01	6.79	2.7	2.4	9.7		392.8	
406	.22	.00	6.71	7.4	−.7		17.8	795.2		352	.49	−.01	6.79	2.7	2.8	9.4		398.1	
407	.19	.00	6.72	7.1	−.4		17.2	803.7		353	.48	.00	6.79	2.2	2.1	9.6		404.1	
408	.22	.00	6.72	7.5	−.5		17.3	812.3		354	.43	.00	6.74	2.2	3.1	9.8		409.1	
409	.19	.00	6.72	7.6	−.1		17.1	820.5		355	.43	.00	6.74	1.8	2.3	9.6		414.9	
Z= 120																			
286	.46	.00	6.47	3.9		−.2		209.5		356	.43	.00	6.75	2.0	3.1	10.1		419.8	
287	.46	.00	6.48	3.3	8.1	.2		209.4		357	.43	.00	6.75	1.6	2.0	10.5		426.0	
288	.46	.00	6.48	3.5	8.7	.2	−10.4	208.9		358	.43	.00	6.75	1.8	2.8	10.9		431.2	
289	.46	.00	6.49	2.9	7.6	.2	−8.7	209.3		359	.43	.00	6.76	1.3	1.7	10.7		437.6	
290	.47	.00	6.50	3.3	8.9	.7	−9.6	208.5		360	.43	.00	6.76	1.3	2.3	10.7		443.4	
291	.47	−.01	6.51	2.9	7.6	.6	−8.6	209.0		361	.43	.00	6.77	1.0	1.5	10.4		449.9	
292	.47	−.01	6.51	3.0	8.3	1.0	−9.1	208.8		362	.43	.00	6.77	1.1	2.7	11.2		455.3	
293	.47	−.01	6.52	2.2	7.1	1.1	−7.8	209.8		363	.43	.00	6.77	.8	1.8	11.4		461.6	
294	.47	−.01	6.53	2.6	8.5	1.4	−8.8	209.3		364	.39	.00	6.74	.5	1.9	11.1		467.8	
295	.46	−.01	6.52	2.3	6.9	1.3	−7.3	210.4		365	.39	.00	6.75	.3	1.4	11.1		474.4	
296	.46	−.01	6.53	2.2	7.9	1.5	−8.0	210.6		366	.39	.00	6.75	.3	2.0	11.3		480.5	
297	.46	−.01	6.53	2.0	6.5	1.5	−6.6	212.1		367	.02	.00	6.51	.2	1.7	11.3		486.9	
298	.46	−.01	6.54	1.9	7.9	1.9	−7.5	212.3		368	.00	.00	6.52	.0	1.7	11.2		493.2	
299	.49	−.03	6.55	2.0	6.9	2.5		213.4		369	.00	.00	6.52	.0	1.5	11.5		499.8	
300	.49	−.03	6.55	2.2	7.6	2.3		213.9		370	.00	.00	6.53	.0	1.6	11.5		506.3	
301	.49	−.03	6.56	2.0	6.2	3.0		215.8		371	.00	.00	6.53	.0	1.4	11.7		513.0	
302	.49	−.01	6.59	1.9	6.8	2.6		217.1		372	.00	.00	6.53	.0	1.7	11.8		519.3	
303	.48	−.01	6.58	1.5	5.7	2.6		219.4		373	.00	.00	6.53	.0	.9	11.9		526.5	
304	.48	−.01	6.58	2.0	7.3	2.8	−5.8	220.2		374	.00	.00	6.54	.0	1.5	11.8		533.0	
305	.48	−.01	6.59	2.6	5.8	2.9	−4.3	222.5		375	.00	.00	6.53	.0	.7	11.9		540.4	
306	.48	−.01	6.59	2.5	6.9	3.2	−5.3	223.7		376	.39	−.02	6.74	.1	1.6	12.1		546.9	
307	.49	−.02	6.60	2.8	5.4	3.2	−3.6	226.4		377	.00	.00	6.55	.0	.6	12.2		554.4	
308	.49	−.02	6.61	3.0	6.8	3.1	−4.8	227.7		378	.39	−.02	6.75	.4	1.4	12.7		561.0	
309	.49	−.02	6.61	3.2	5.4	3.5	−3.3	230.3		379	.39	−.02	6.75	.9	.5	13.1		568.6	
310	.51	.00	6.65	4.3	7.1	4.3	−5.0	231.3		380	.44	.00	6.85	1.0	1.4	13.1		575.4	
311	.51	.00	6.66	4.2	5.2	4.6	−2.9	234.2		381	.45	−.01	6.85	1.3	.5	13.0		582.9	
312	.52	−.01	6.66	5.0	6.4	4.5	−3.7	235.9		382	.48	.01	6.91	1.8	1.3	13.2		589.7	
313	.52	−.01	6.67	4.8	4.8	4.0	−2.2	239.2		383	.45	−.01	6.86	2.2	.6	13.4		597.2	
314	.52	−.01	6.68	5.5	6.5	4.4	−3.4	240.8		384	.48	.01	6.92	2.9	1.3	13.9		603.9	
315	.50	−.02	6.64	5.3	4.9	4.7		244.0		385	.49	.00	6.92	3.4	.7	14.1		611.3	
316	.50	−.02	6.64	5.7	5.9	5.6		246.1		386	.49	.00	6.93	4.1	1.0	14.3		618.4	
317	.50	−.02	6.65	5.5	4.3	4.8		249.9		387	.49	.00	6.93	4.3	.2	14.4		626.3	
318	.51	−.02	6.66	5.8	5.8	5.4		252.1		388	.49	.00	6.93	5.0	1.1	14.8		633.2	
319	.51	−.02	6.66	5.8	4.8	5.7		255.4		389	.49	.00	6.94	5.0	−.2	14.4		641.5	
320	.51	−.02	6.67	6.0	5.0	5.5		258.5		390	.49	.00	6.94	6.0	1.7	15.3		647.9	
321	.51	−.02	6.67	6.0	4.7	5.8		261.9		391	.49	.00	6.95	5.6	.0	15.4		655.9	
322	.50	−.01	6.68	6.5	5.2	5.8		264.8		392	.49	.00	6.95	6.6	.9	15.6		663.1	
323	.50	−.01	6.68	6.3	4.2	5.9		268.6		393	.49	.00	6.95	6.9	−.2	15.9		671.4	
324	.50	−.01	6.69	6.7	5.4	6.3		271.3		394	.49	.00	6.96	7.4	.8	15.6		678.6	
325	.50	−.01	6.69	6.8	4.3	6.4		275.0		395	.49	.00	6.96	7.3	−.6	15.9		687.3	
326	.50	−.01	6.70	7.0	4.7	6.4		278.4		396	.49	.00	6.96	7.9	.7	15.2		694.6	
327	.50	−.01	6.70	6.8	3.8	6.7		282.6		397	.49	.00	6.95	7.7	−.6	15.1		703.3	
328	.50	−.01	6.70	7.2	5.1	6.9		285.6		398	.49	.00	6.95	8.2	.8	15.6		710.6	
329	.50	−.01	6.71	6.9	3.7	6.8		290.0		399	.48	.01	6.94	7.8	−1.0	15.4		719.6	
330	.50	−.01	6.71	7.1	4.6	6.9		293.5		400	.49	−.01	6.95	8.5	1.0	16.2		726.7	
331	.50	−.01	6.72	6.9	3.9	7.1		297.7		401	.49	−.01	6.93	8.1	−1.0	16.0		735.8	
332	.50	−.01	6.72	7.2	4.4	7.2		301.3		402	.49	−.01	6.93	8.5	.2	15.9		743.6	
333	.50	−.01	6.73	6.7	3.5	7.4		305.9		403	.43	.00	6.88	7.4	−1.3	16.0		753.0	
334	.50	−.01	6.73	7.1	4.4	7.7		309.5		404	.47	.00	6.91	8.0	.4	16.0		760.6	
335	.50	−.01	6.74	6.4	3.3	7.8		314.3		405	.47	.00	6.91	7.7	−1.1	15.6		769.8	
336	.50	−.01	6.74	6.8	4.3	8.1		318.1		406	.48	.00	6.91	8.0	.4	16.3		777.4	
337	.50	−.01	6.74	6.0	2.8	7.9		323.4		407	.47	.00	6.89	7.4	−1.0	16.0		786.5	
338	.50	−.01	6.75	6.3	4.2	8.2		327.2		408	.43	−.01	6.86	7.4	−.4	16.0		795.0	
339	.50	−.01	6.75	5.6	2.9	7.9		332.4		409	.22	.00	6.73	7.4	−.3	16.2		803.4	
										410	.19	.00	6.73	7.3	−.8	15.6		812.2	