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EFFECTIVE CUTOFF ENERGIES FOR B, Cd, Gd AND Sm FILTERS

R. W. Stoughton
J. Halperin

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Effective Cutoff Energies for B, Cd, Gd and Sm Filters

by R. W. Stoughton and J. Halperin

ABSTRACT

Effective energy cutoffs have been calculated on an IBM-7090 computer for Cd, Gd, Sm and B filters as functions of filter geometry, the ratio of Maxwellian to epithermal flux (assumed to be $1/\underline{E}$), the lower energy limit of the $1/\underline{E}$ flux, the energy corresponding to the Maxwellian most probable (modal) velocity and filter thickness. The geometrical configurations were spherical (which on the assumptions made is equivalent to a beam flux case), cylindrical and slab. By the use of two or three different filters (Cd and Gd and perhaps Sm) it should be possible to detect resonances in the thermal to cutoff energy regions, in addition to measuring resonance integrals and thermal cross sections of unknown nuclides.

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INTRODUCTION

Effective Cd cutoff energies have been calculated by Dayton and Pettus[1]; by Westcott, Walker and Alexander[2]; and by Stoughton, Halperin

(1) I. E. Dayton and W. G. Pettus, Nucleonics 15, No. 12, 86 (1957).

(2) C. H. Westcott, W. H. Walker and T. K. Alexander, Second United Nations International Conference on the Peaceful Uses of Atomic Energy of September 1958, Paper A/CONF. 15/P/202.

and Lietzke[3] as a function of filter thickness by using high speed

(3) R. W. Stoughton, J. Halperin and Marjorie P. Lietzke, Nuclear Sci. and Eng. 6, 441 (1959); also see Oak Ridge National Laboratory Report ORNL-2823 and ORNL-2823 Supplement.

computers. Dayton and Pettus assumed a $1/E$ flux from about 2 Mev down to 0.025 ev, both monodirectional and isotropic, and a $1/v$ detector. Westcott, et al., assumed a $1/v$ detector, both a beam and isotropic ($\cos\theta$ law) flux incident on one side of the Cd foil and (presumably) a superposition of a $1/E$ and a Maxwellian flux, with the $1/E$ flux terminating at some factor μ times the Maxwellian temperature. Stoughton, et. al., assumed point $1/v$ detectors in the center of spherical and cylindrical filters with a $1/E$ flux going to zero at 5 kT and a Maxwellian flux of temperature T. The flux was assumed to be isotropic with respect to the point samples; with these assumptions the spherical case should be identical with that of a beam flux, a slab filter and an infinitely thin slab detector. Cutoffs were also calculated for boron filters for comparison.

All three groups of workers defined effective cutoff energy as the cutoff of a perfect (infinitely sharp) filter that allows the same total number of absorptions by the filtered sample as does the given filter.

The purpose of the present paper is to extend the calculations of Stoughton, Halperin and Lietzke to include isotropic flux with slab geometry and to include gadolinium and samarium filters. It should be emphasized here that calculations based on cylindrical filters with point detectors at the center are of more practical value than might first appear to be the case. The authors have used cylindrical filters (one cm. diam. by two cm high) in reactor irradiations. While the samples and monitors were not points, they were very thin (so that negligible self-shadowing occurred) and rather small in area. It can be shown that if a point sample is moved a significant distance from the center of the cylindrical shell its corresponding effective Cd thickness is changed very little. For example, if the point is moved along the axis half way to one of the faces (i.e., to one quarter of the height from the nearer face) the effective Cd thickness is changed about 0.2%. Hence a thin finite sample which approximates an integral of such points should show very nearly the same effective cutoff as does the central point. Actually an effective thickness could be calculated and a correction made, if desired. In the case of the spherical filters the correction would be larger. From an experimental point of view, however, the cylindrical filters are easier to make and to use, in addition to allowing an effective cutoff which is relatively insensitive to position of sample.

MODEL, ASSUMPTIONS AND CALCULATIONS

The flux was assumed to consist of a Maxwellian thermal plus a $1/E$ epithermal spectrum. The $1/E$ flux was assumed to go to zero (sharply) at μ times the Maxwellian characteristic energy E_m (where $E_m = kT$ and where μ was set equal alternately to 3, 5 and 10). For a Maxwellian

spectrum the derivative of the neutron density $\underline{n}$ with respect to the energy $\underline{E}$ is given by the equation

$$\frac{dn}{dE} = \frac{2\,n}{\sqrt{\pi}} \frac{E^{1/2}}{E_m^{\,1/2}} \; e^{-E/E_m} \tag{1}$$

The differential of the total flux $\underline{F_{tot}}$ in any interval $\underline{dE}$ then becomes

$$dF_{tot} = v\frac{dn}{dE}\,dE = \frac{2nv}{\sqrt{\pi}} \frac{E^{1/2}}{E_m^{\,3/2}} \; e^{-E/E_m}\,dE + \phi_r\,dE/E, \quad \mu E_m \leq E < \infty \tag{2}$$

$$= \frac{2nv}{\sqrt{\pi}} \frac{E^{1/2}}{E_m^{\,3/2}} \; e^{-E/E_m}\,dE \qquad , \; 0 \leq E < \mu E_m \tag{2a}$$

where $\underline{\phi_r}$ is the epithermal or $1/\underline{E}$ flux per unit ln $\underline{E}$. On changing the variable to $\underline{x} \equiv \underline{E/E_m}$, the differential of the total reaction rate $\underline{R}$ per atom <u>for a 1/v</u> absorber becomes

$$dR = \sigma_a\,dF_{tot} = \frac{\sigma_o v_o}{v}\,v\,\frac{dn}{dx}\,dx = \frac{2nv_o\sigma_o}{\sqrt{\pi}}\,x^{1/2}\,e^{-x}\,dx + \sigma_o x_o^{\,1/2}\phi_r\,dx/x^{3/2}, \tag{3}$$

where

$$\phi_r = o \text{ for } x < \mu \text{ (i.e., } E < \mu E_m\text{)}.$$

Here the subscript zero refers to a standard energy or velocity (here taken as 2200 m/s).

On normalizing to unit $\underline{\phi_r}$ and $\underline{\sigma_o}$,

$$dR' = \frac{dR}{\phi_r\sigma_o} = \frac{2r}{\sqrt{\pi}}\,x^{1/2}\,e^{-x}\,dx + x_o^{1/2}\,dx/x^{3/2}, \text{ for } \mu \leq x < \infty \tag{4}$$

$$= \frac{2r}{\sqrt{\pi}}\,x^{1/2}\,e^{-x}\,dx, \qquad \text{for } 0 \leq x < \mu \tag{4a}$$

where $\underline{r} \equiv \underline{nv_o/\phi_r}$, i.e., the ratio of the "conventional" thermal flux to the resonance flux per unit ln $\underline{E}$.

Three geometrical configurations were considered: spherical and cylindrical shells with point 1/v absorbers at their centers, and infinite slab filters with infinitely thin 1/v absorbers in between and with incident isotropic (cos θ law) flux. In the cases of the spheres and cylinders the flux was assumed to be isotropic with respect to the point 1/v detectors at the centers.

(1) Sphere or Beam Flux Case

As seen in Diagram 1 the only neutrons going through the spherical shells and also going through the point samples at the centers go along a diameter, and hence the thickness of cadmium traversed before reaching the samples is just the actual thickness of the spheres l_o. Effects of scattering* of neutrons by the shells would not in general be important and are not considered in these calculations.

By using the definition of effective Cd cutoff energy E_c mentioned above

$$\int_{E_c}^{\infty} dR' = \int_{o}^{\infty} e^{-\Sigma l_o} dR' \tag{5}$$

where Σl_o is the macroscopic cross section of the filter material times the thickness of the spheres. On substituting equations (4) and (4a) into (5),

$$\frac{2r}{\sqrt{\pi}} \int_{x_c}^{\infty} x^{1/2} e^{-x} dx + \int_{x_c'}^{\infty} \frac{x_o^{1/2} dx}{x^{3/2}} = \frac{2r}{\pi} \int_{o}^{\infty} x^{1/2} e^{-x} e^{-\Sigma l_o} dx$$

$$+ \int_{\mu}^{\infty} \frac{x_o^{1/2} e^{-\Sigma l_o} dx}{x^{3/2}} \tag{6}$$

* Scattering effects should cancel to a good approximation and show little net effect.

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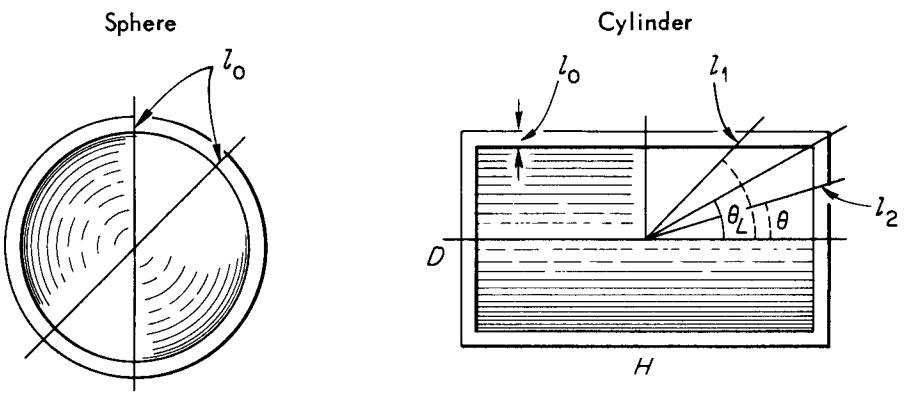

$$\theta_L = \tan^{-1} \frac{D}{H}$$

$$\frac{l_0}{l_1} = \sin \theta$$

$$\frac{l_0}{l_2} = \cos \theta$$

Diagram 1. Spherical and Cylindrical Cadmium Filters.

where

$$x_c' = x_c \text{ if } x_c > \mu$$

$$x_c' = \mu \text{ if } x_c \leq \mu.$$

The two integrals on the right were evaluated numerically using Gaussian quadrature. In the numerical integration finite upper limits $\underline{L}$ had to be set; all the four upper limits in equation (6) were set at $\underline{x}$ = 2000 for Cd and Gd, at x = 10,000 for Sm and 1,000,000 for B. Thus

$$\frac{2r}{\sqrt{\pi}} \int_{x_c}^{L} x^{1/2} e^{-x}\, dx + \frac{2x_o^{1/2}}{\sqrt{x_c'}} = \frac{2x_o^{1/2}}{\sqrt{L}} + \frac{2r}{\sqrt{\pi}} \int_{o}^{L} x^{1/2} e^{-(x+\Sigma\, l_o)} dx$$

$$+ \int_{\mu}^{L} \frac{x_o^{1/2} e^{-\Sigma\, l_o}}{x^{3/2}}\, dx, \tag{6a}$$

after adding $2x_o^{1/2}/\sqrt{L}$ to both sides. The RHS (right hand side) of (6a) is the total reaction rate of the filtered sample, normalized to unit ϕ_r and σ_o.

It can be shown that the error made in setting these limits at 2000 for Cd is less than about 0.1% in the reaction rate with even the thicker cadmium shells, by expanding the exponential in the last integral, dropping all terms after the second and integrating analytically. It should be noted that the error is not as great as the values of the integrals above this upper limit, since these approximately cancel on the two sides of equation (6).

After evaluating the RHS of (6a), $\underline{x_c}$ (and hence $\underline{E_c}$) was evaluated by successive approximations. For values of $\underline{x_c}$ significantly greater

than unity the first term on the left can be integrated analytically in series form; the definite integral becomes

$$\int_{x_c}^{L} x^{1/2} e^{-x}\, dx = \int_{x_c}^{\infty} x^{1/2}\, e^{-x}\, dx = x_c^{1/2}\, e^{-x_c} \left(1 + \frac{1}{2x_c} - \frac{1}{(2x_c)^2} + \frac{3}{(2x_c)^3} - \frac{15}{(2x_c)^4} + \frac{105}{(2x_c)^5} - \ldots\right) \qquad (7)$$

Equation (7) was used to evaluate this integral for values of $\underline{x_c}$ greater than 5. For values of $\underline{x_c}$ less than 5, the first integral on the left was divided into two parts: that from $\underline{x_c}$ to 5 and that above 5; the first part was evaluated numerically using Gaussian quadrature and equation (7) was used for the remainder of the integral.

The magnitude of the error made in using equation (7) is less than the last term in parentheses; in fact it is less than the first omitted term. For values of $\underline{x_c}$ greater than 5 this error is less than 0.1%. It is not recommended that this approximation be used for $\underline{x_c}$ values less than about 5.

The IBM-7090 at the Oak Ridge Gaseous Diffusion Plant was used to carry out these calculations.

In the numerical integration an eight-point Gaussian was used in each of the intervals between the following energies:

Filter	Energy Intervals (Values of x)
B	0, 1.5, 3, 5, 10, 25, 80, 250, 1000, 10^4, 10^5, 10^6
Cd and Gd	0, 1.5, 3, 5, 10, 25, 100, 400, 2000
Sm	0, 1.5, 3, 5, 10, 25, 100, 300, 1000, 3000, 10^4

(2) Cylinder Case

In the case of the cylindrical shells the transmission of neutrons, as seen in Diagram 1, depends upon the angle between the direction of the neutron and the axis of the cylinder as well as upon the neutron energy. In equations (5), (6), and (6a) l_o must be replaced by $l_o/\cos\theta$ and $l_o/\sin\theta$ for values of θ between zero and $\theta_L = \tan^{-1}(D/H)$ and between the latter value and $\pi/2$, respectively. Here H and D are the height and diameter, respectively, of the cylinders. The equation for the cylinder corresponding to (6a) becomes

$$\frac{2x_o^{1/2}}{\sqrt{x_c'}} + \frac{2r}{\sqrt{\pi}} x_c^{1/2} e^{-x_c} \left(1 + \frac{1}{2x_c} - \frac{1}{(2x_c)^2} + \frac{3}{(2x_c)^3} - \frac{15}{(2x_c)^5} + \frac{105}{(2x_c)^5} \cdots\right) = \frac{2x_o^{1/2}}{\sqrt{L}}$$

$$+ \frac{2r}{\sqrt{\pi}} \int_o^{\cos\theta_L} \int_o^{\mu} \left(e^{-\Sigma l_o/\sqrt{1-\cos^2\theta}}\right) x^{1/2} e^{-x} dx \, d(\cos\theta)$$

$$+ \int_o^{\cos\theta_L} \int_\mu^{L} \left(e^{-\Sigma l_o/\sqrt{1-\cos^2\theta}}\right)\left(\frac{2r}{\sqrt{\pi}} x^{1/2} e^{-x} + \frac{x_o^{1/2}}{x^{3/2}}\right) dx \, d(\cos\theta)$$

$$+ \frac{2r}{\sqrt{\pi}} \int_{\cos\theta_L}^{1} \int_o^{\mu} \left(e^{-\Sigma l_o/\cos\theta}\right) x^{1/2} e^{-x} dx \, d(\cos\theta)$$

$$+ \int_{\cos\theta_L}^{1} \int_\mu^{L} \left(e^{-\Sigma l_o/\cos\theta}\right)\left(\frac{2r}{\sqrt{\pi}} x^{1/2} e^{-x} + \frac{x_o^{1/2}}{x^{3/2}}\right) dx \, d(\cos\theta) \qquad (9)$$

In the numerical integration the range of θ was divided into 2 intervals: 0 to $\tan^{-1}(D/H)$ and $\tan^{-1}(D/H)$ to $\pi/2$. The integration was carried out using Gaussian quadrature with 8 points per interval (for both $\underline{x}$ and $\cos\theta$). After evaluating the RHS, x_c was calculated by successive iterations as in the sphere case.

(3) Slab or Isotropic Flux Case

This case is similar to that of the cylinder except that for all angles the $\underline{l_o}$ of equation (5) was replaced by $\underline{l_o}/\underline{\cos\theta}$, and integration with respect to $\cos\theta$ was carried out over 2 intervals: 0 to 0.3 and 0.3 to 1.0.

CROSS SECTION EQUATIONS

Boron was assumed to be a perfect $\underline{1/v}$ absorber. Cadmium and gadolinium were assumed to be represented by single Breit-Wigner expressions at 0.178 and 0.03 ev, respectively. Two cases were calculated for samarium: a Breit-Wigner expression for resonance energy at 0.0976 ev plus a $\underline{1/v}$ term, Sm(1-BW), and two independent Breit-Wigner expressions at 0.0976 and 0.88 ev plus a $\underline{1/v}$ term, Sm(2-BW). In the case of boron, the parameter was evaluated by using the 0.0253 ev (thermal) cross section (BNL-325); in the case of Cd the parameters were evaluated by a "best-fit" of the data in BNL-325 between about 0.01 and 1.0 ev; in the other three cases the parameters were evaluated from data in BNL-325 by using a non-linear least squares procedure. The cross sections used are the following, where the units of l_o are mils for Cd and mg/cm^2 for all others.

Filter	$\Sigma\, l_o$
B	$0.042039\ l_o\sqrt{E_o/E}$
Cd	$0.0050762\ l_o/[\sqrt{E}(4(E-0.178)^2 + 0.013112)]$
Gd	$1.7472 \times 10^{-4}\ l_o/[\sqrt{E}((E-0.03)^2 + 6.26 \times 10^{-3})]$
Sm (1-BW)	$2.0724 \times 10^{-5}\ l_o/[\sqrt{E}((E-0.0976)^2 + 1.0817 \times 10^{-3})]$
	$+ 1.1331 \times 10^{-4}\ l_o/\sqrt{E}$
Sm (2-BW)	$2.0997 \times 10^{-5}\ l_o/[\sqrt{E}((E-0.0976)^2 + 1.09625 \times 10^{-3})]$
	$+ 5.5126 \times 10^{-5}\ l_o/\sqrt{E}$
	$+ 1.4529 \times 10^{-5}\ l_o/[\sqrt{E}((E-0.88)^2 + 1.783 \times 10^{-3})]$

FILTER EFFICIENCIES

Real filters such as cadmium, etc., only approximate our defined perfect filter. A factor that affects the usefulness of a filter is the sharpness with which the transition from opacity to transparency is made at the cutoff. A simple measure of this efficiency was made by calculating the fraction FRACT of the total number of reactions occurring in the $1/v$ test sample at energies below the computed cutoff energies. Thus the hypothetical perfect filter would yield a FRACT = 0.

The values of FRACT were determined by Gaussian quadrature by integrating the reaction rate up to the cutoff after having determined the latter, and then dividing by the total reaction rate (RHS in equation (6a) or (9)). In the numerical integrations the rates resulting from Maxwellian neutrons were kept separate from those resulting from $1/E$ neutrons. These rates were kept separate in order to determine the following items in addition to the FRACTS.

FRACTM ≡ fraction of reactions below the cutoff due to Maxwellian neutrons only.

RMOE ≡ ratio of (Maxwellian neutron reaction rate/"1/E" neutron rate) above the cutoff.

RTOT ≡ total reaction rate of filtered sample per unit $\phi_r \sigma_o$ = RHS.

In addition to the above, differential reaction rates and integrated rates up to E were calculated for spherical filters (or beam flux) only, by using trapezoidal numerical integration.

RESULTS AND DISCUSSION

Illustrative values of the differential reaction rates vs neutron energy; of the effective cutoffs E_c vs filter thickness and E_m; and of the fractions FRACT of reactions below the cutoffs are shown for the four filter materials (Cd, Gd, Sm and B) in the figures. In the tables are presented the results of detailed calculations on the values of E_c, FRACT, etc. vs filter thickness, E_m, the thermal to epithermal flux ratio r and the assumed lower limit of the 1/E flux (μE_m).

(1) Differential Reaction Rates for Spherical Filters (or Beam Flux) for $\mu = 5$, $E_m = 0.0253$ ev and $r = 10$.

Fig. 1 shows the reaction rate per unit ln(E) and the fractions of reactions below energy E, each divided by the total reaction rate, for 10 and 40 mils Cd. The integral of the differential rate to E in each case gives the value at E of the fraction of reactions. It can be seen that at 10 mils thickness some 40% of the reactions occur below the effective cutoff due to transmitted Maxwellian neutrons. At 40 mils Cd and above only 7% of the reactions occur below the cutoff; these are in the region of the cutoff due to the lack of sharpness in the cross

section versus energy curve.

Fig. 2 shows the normalized reaction rates and fractions of total reactions (up to E) for 30, 80 and 200 mg Gd/cm^2. Gadolinium with its 0.03 ev resonance being very close to the Maxwellian E_m of 0.0253 ev shows only a slight tendency toward two peaks at thin samples (30 mg/cm^2). At 80 mg/cm^2 the cutoff is at 0.20 ev, which is rather close to the assumed beginning of the 1/E flux of 0.126 ev. The fractions of reactions below the cutoff are 0.24, .12 and .095 for 30, 80 and 200 mg/cm^2, respectively.

In Fig. 3 are shown the normalized reaction rates and fractions of total reactions (up to E) for 150 and 500 mg Sm/cm^2 when only the first resonance at 0.0976 ev and the 1/v tail were taken into account. This Sm resonance is closer (than that of Gd) to the 0.178 ev of Cd, and the curves show a similar behavior. At a thickness of 150 mg/cm^2 a rather large separate low-energy peak results from transmission of Maxwellian neutrons. At 500 mg/cm^2 the Maxwellian neutrons are nearly all filtered out. The fractions FRACT of reactions below the cutoffs are 0.24 and 0.10 for 150 and 500 mg/cm^2, respectively.

Fig. 4 shows the effect on the normalized reaction rates of taking into account the second resonance of Sm at 0.88 ev for a thickness of 500 mg/cm^2. The cutoff and value of FRACT are 0.30 ev and 0.098 for one resonance only; for both the values are 0.36 ev and 0.157, respectively.

Fig. 5 shows the normalized reaction rates and fractions of reaction to E for 150, 300 and 1000 mg B/cm^2. The curve for the thinnest filter shows a peak for Maxwellian neutrons at about 0.08 ev. At 300 mg/cm^2 and above the curves are very similar, showing mainly a shift to higher energies with increasing thickness. In this connection boron filters may

be useful with suitable $1/v$ detectors to evaluate fluxes in various higher energy regions.

(2) Effective Cutoffs for Cylinders (Height/Diameter = 2) for $\mu = 5$ and for r = 10 and 30 vs E_m and thickness.

Fig. 6 shows effective cadmium cutoffs as a function of thickness l_o, characteristic Maxwellian energy E_m and Maxwellian to $1/E$ flux ratio r. For thin filters the transmission of Maxwellian neutrons at relatively low energies (Fig. 1) causes the value of the cutoff E_c to depend rather strongly on r even at low values of E_m. At 10 mils Cd and at the higher E_m's the transmission of Maxwellian neutrons is so high that these neutrons alone tend to determine E_c, and hence the latter becomes insensitive to r. At higher thicknesses (40 mils and above) and at low E_m values, relatively few Maxwellian neutrons are transmitted so that E_c is insensitive to r. However, as E_m rises the fraction of Maxwellian neutrons existing and being transmitted in the cutoff region and above also rises and again E_c becomes a more sensitive function of r.

Similar results for Gd are shown in Fig. 7. Gadolinium with its resonance at 0.03 ev shows a cutoff closer to the values of E_m than does Cd. As may be expected in this situation, the Gd results for any E_m are similar to those of Cd at a higher E_m.

The results for Sm (one resonance case) are shown in Fig. 8. These appear to resemble more closely those of Gd than those of Cd, although a detailed comparison would probably require some normalization between different filter materials.

Fig. 9 shows E_c's for B as a function of l_o, E_m and r. Boron obeys the $1/v$ law throughout the thermal and cutoff regions (at least) and

hence shows no drastic change of cross section with energy. For this reason the cutoff for boron changes by a factor of about 100 for a factor of 10 in thickness, while Cd for example shows only a factor of 4 or 5 for a similar change in thickness. Fig. 10 shows this difference between B and the other filter materials, in a dramatic fashion.

(3) Fraction of Reactions FRACT below Cutoff for Cylindrical Filters (Height/Diameter = 2) for $\mu = 5$ and for $r = 30$.

Fig. 11 shows the fractions of total reactions of filtered samples inside Cd filters as a function of filter thickness l_o, E_m and r. At $E_m = 0.0253$ ev and at thicknesses of 30 mils Cd and above the FRACT is about constant at 0.07 and independent of r; actually it shows a slight rise with increasing thickness. At $E_m = 0.05$ ev FRACT is about constant at 0.08 for thicknesses of 40 mils and higher, although there is a greater dependence on r. At higher values of E_m the cutoffs generally decrease with increasing thickness, with decreasing E_m and with decreasing r; the latter factor reflects the larger transmission of Maxwellian neutrons at higher E_m's.

If these curves were extended to zero thickness, they should all decrease to zero FRACT since the cutoffs should all go to zero energy. This tendency is shown more clearly for the higher values of E_m in Fig. 12, which shows the results of similar calculations for Gd filters. Except for this difference, the Gd results are generally similar to those for Cd.

The results for Sm (one resonance) are shown in Fig. 13; these appear to be qualitatively in between those for Cd and Gd.

As expected the boron results (Figs. 14 and 15) are drastically different from those of the other three elements. The FRACT's for B are in general larger than for the other filter materials and the curves for all values of E_m and r are of similar shape.

(4) Effect of Variation of μ (Lower Limit of $1/E$ Flux).

Westcott[4] has discussed in some detail the lower limit of the $1/E$ flux. He points out that values between about 3 and 6.5 have been experimentally determined, with 5 being a reasonable approximate value. Further the lower limit is not expected to be infinitely sharp, and he gives several different smooth functions depending upon high powers of neutron energy (up to 16th) which go from $1/E$ to zero in a very short energy range.

(4) C. H. Westcott, Atomic Energy of Canada Ltd. reports CRRP-662 (1956); Addendum to CRRP-680; CRRP-787 (1958); CRRP-960 (1960).

The calculations in this paper cover three values of μ: 3, 5 and 10. From the results in the tables, the variation of μ from 3 to 5 for Cd filters generally causes less than a 1% variation in E_c, while the maximum variation (for 10 mils thickness) was 2%. For 40 mils Cd, the maximum variation was about 1%, for E_m from 0.0253 to 0.1 ev and an r of 10 to 30. For B, Gd and Sm the maximum change was about 3%. In going from $\mu = 5$ to $\mu = 10$ however, the maximum variation was much greater, being 30% for 10 mil Cd (10% for 40 mils); 17% for Gd; and about 20% for B and Sm. For useful thicknesses of Sm (500 mg/cm^2) and Gd (80 to 150 mg/cm^2) the maximum variations are about one third the values mentioned above. Since the experimental values of μ for existing reactors appear to be in the range of 3 to 6.5, the maximum variations in E_c for filters of useful thicknesses and for absorbers obeying the $1/v$ law (in the thermal and cutoff

regions) appear to be not more than about 3% (and still less for Cd). Hence it would not appear to matter particularly whether the $1/E$ flux lower limit were accurately known and whether or not it were assumed infinitely sharp. (Of course any calculated effects would be greater for a substance with a resonance in the cutoff region.)

(5) Effect of Height/Diameter in the Case of Cd Cylindrical Filters for $\mu = 5$ and $r = 20$.

In Fig. 16 are shown the effects of varying the Height/Diameter from unity to eleven in the case of cadmium filters for a flux ratio r of 20. Four different thicknesses were considered 10, 20, 40 and 100 mils. At 20 mils the effects of varying E_m from 0.0253 to 0.05 ev are shown. As expected the results are all in between the sphere and slab cases and the effects of variation of Height/Diameter are greater for the shorter cylinders. The effects are also greater at lower thicknesses, lower values of r and lower values of E_m.

The other filters may be expected to show generally similar effects. As the Height/Diameter increases the average effective thickness of filter seen by the neutrons going through the point detector at the center becomes greater; the consequent effect on the cutoff would be expected to be relatively greater for thinner filters.

CONCLUSIONS

The authors feel that Cd--with a thickness of 30 or preferably 40 mils--is perhaps the most useful all-around filter, with Gd as second choice. Cadmium for suitable thicknesses more closely approximates a perfect filter than do the other materials, as evidenced by its lower fraction of reactions which occur below the cutoff and by (the relatively

minor) interferences from higher resonances. In the case of Sm a correction may have to be made at least for the next higher resonance above thermal energies (i.e., that at 0.88 ev).

For low values of the Maxwellian temperature (E_m = 0.0253 to about 0.05 ev) and thicknesses of 30 mils or higher, the effective Cd cutoff is insensitive to the Maxwellian to $1/\underline{E}$ flux ratio, as very few Maxwellian neutrons are transmitted; for thinner filters or higher Maxwellian temperatures the flux ratio is more important. For Gd and Sm the sensitivity to transmission of Maxwellian neutrons is enhanced due to the lower energy of their resonances and their consequent lower cutoffs. On the other hand, the lower resonance of Gd (0.03 ev) allows a cutoff closer to the lower limit of the $1/\underline{E}$ flux (some 5 $\underline{E_m}$).

In general for any of the filters, it does not appear necessary to know (accurately) the resonance flux lower limit in order to calculate effective cutoffs. The variations in the cutoffs for filters of practical thicknesses appear to be less than about 3% at worst (and more typically 1%) due to variations of the resonance flux lower limit over a range as wide as that ordinarily encountered in well thermalized reactors (i.e., $\mu = 5 \pm 2$).

In all cases the cutoffs for cylinders were between those of spheres and slabs. This is to be expected since the effective thickness (at a given actual thickness) for these geometries are in that order. The variation of cutoff with ratio of height to diameter for cylinders is relatively minor and is more noticeable in going from a value of 1 to 2 in that parameter than for a similar increase at higher values.

By the use of Gd and Cd (and perhaps Sm, too) and by comparisons of monitors of known cross section it should be possible to detect resonances in the thermal to cutoff regions in an unknown sample.

Boron stands apart from the other three materials as a filter, since its cross sectional dependence is $E^{-1/2}$ rather than the sharper $E^{-5/2}$ dependence exhibited by the other filters on the high energy side of their resonances. Thus all its filter properties depart more drastically from the ideal filter than do those of the other filters. However boron filters do permit attaining higher energy cutoffs than are available with Cd, Gd or Sm.

The use of the effective cutoffs computed here permit establishing a firm lower limit in the measurement of resonance integrals. The calculations probably are sufficiently precise that when properly applied the largest uncertainty in a reported resonance integral will lie in the experimental measurement and the use of the flux model.

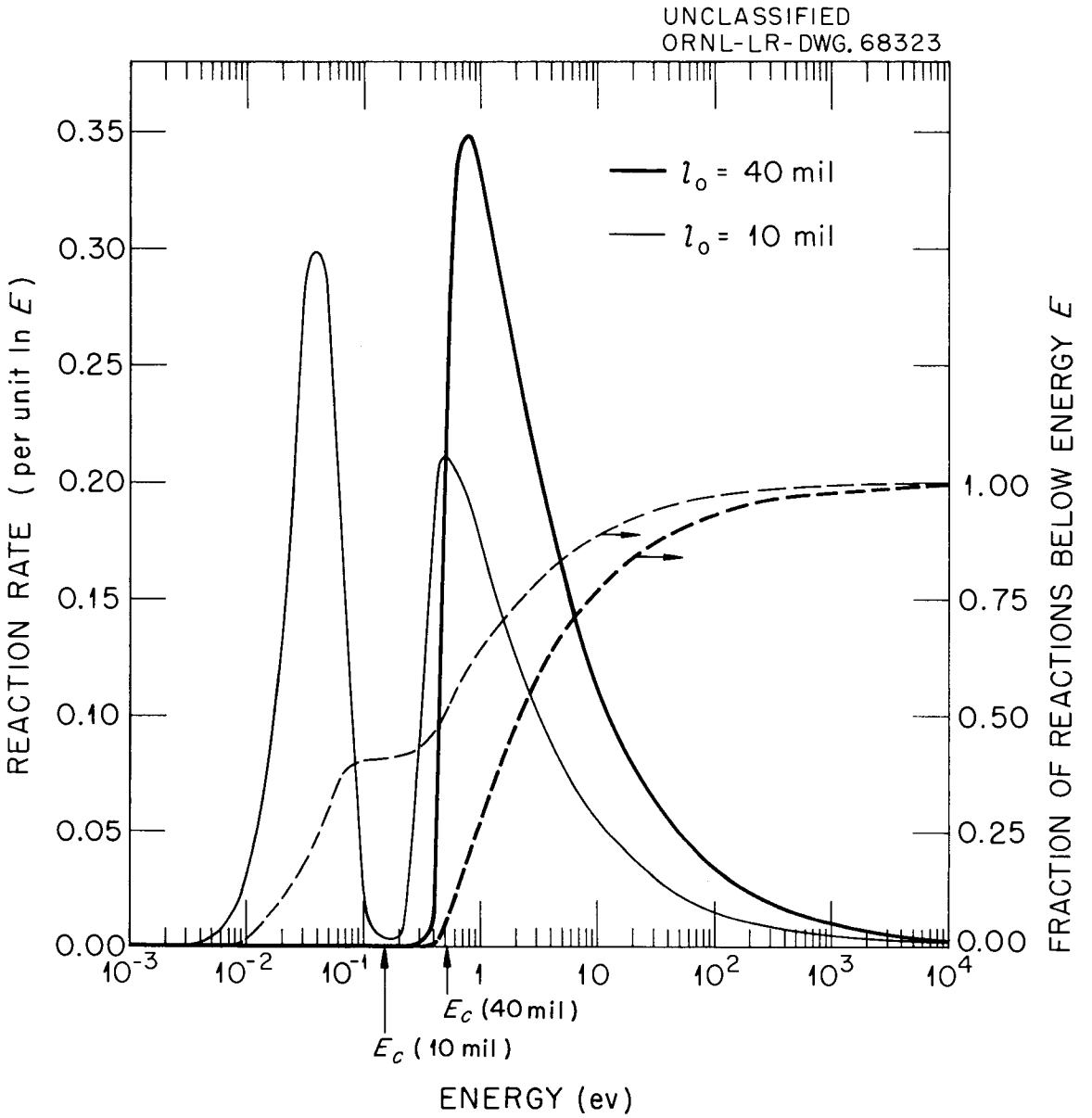

Fig. 1. Normalized Reaction Rates (per unit ln E) and Fractions of Total Reactions Below Energy E for Spherical Cadmium Shells (E_m = 0.0253 ev, μ = 5, r = 10).

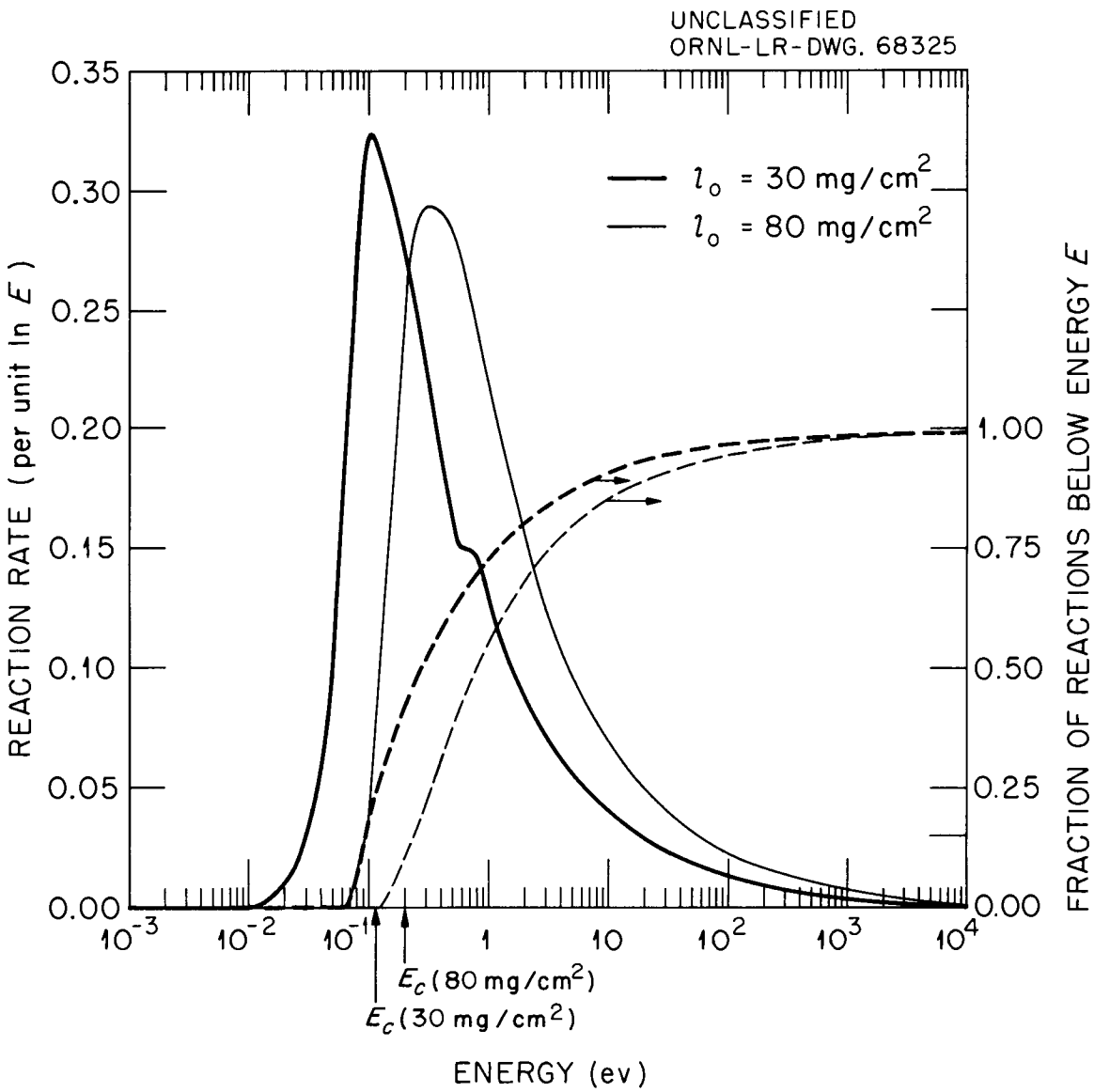

Fig. 2. Normalized Reaction Rates (per unit ln E) and Fractions of Total Reactions Below Energy E for Spherical Gadolinium Shells (E_m = 0.0253 ev, μ = 5, r = 10).

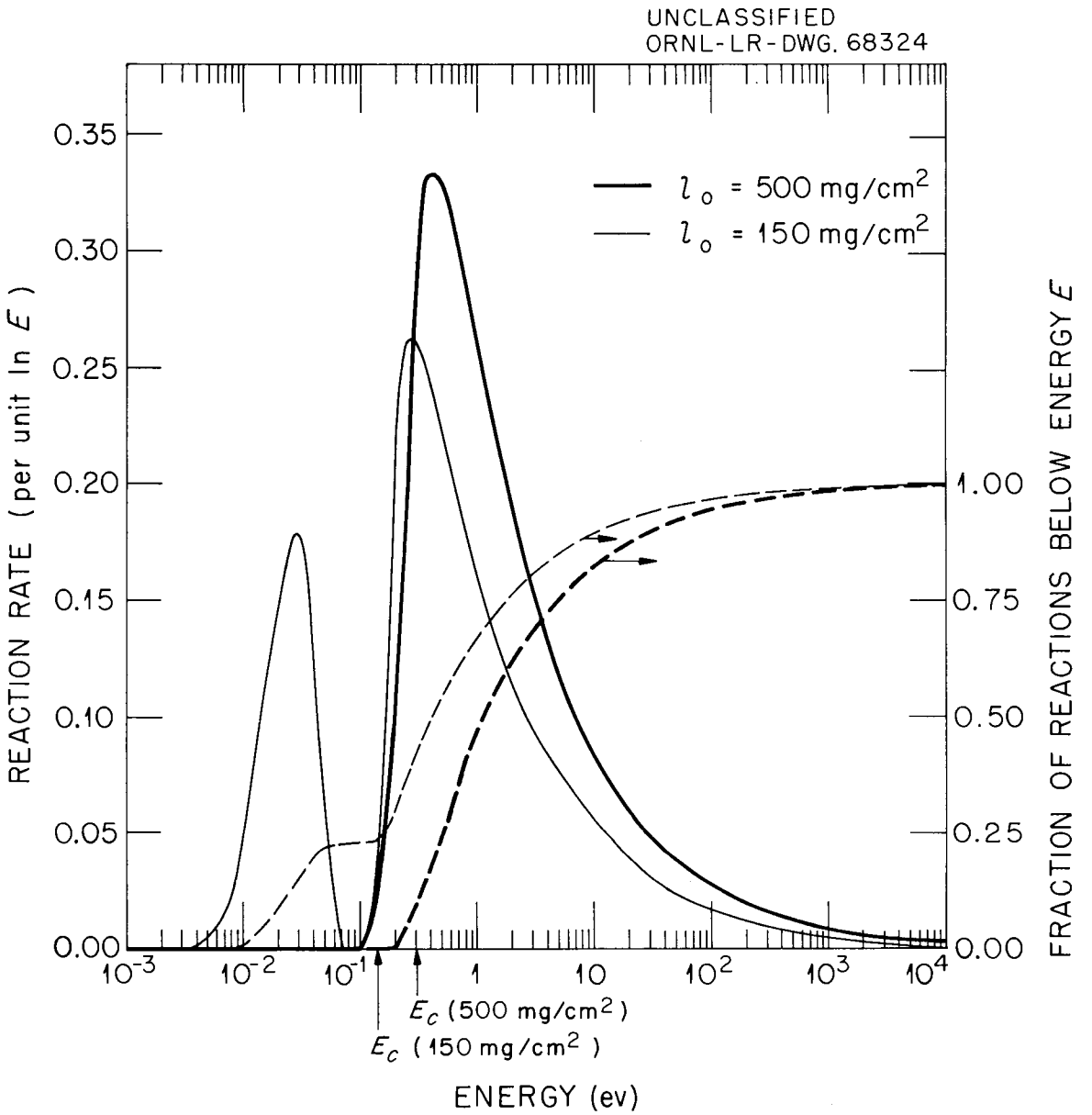

Fig. 3. Normalized Reaction Rates (per unit ln E) and Fractions of Total Reactions Below Energy E for Spherical Samarium Shells (E_m = 0.0253 ev, μ = 5, r = 10).

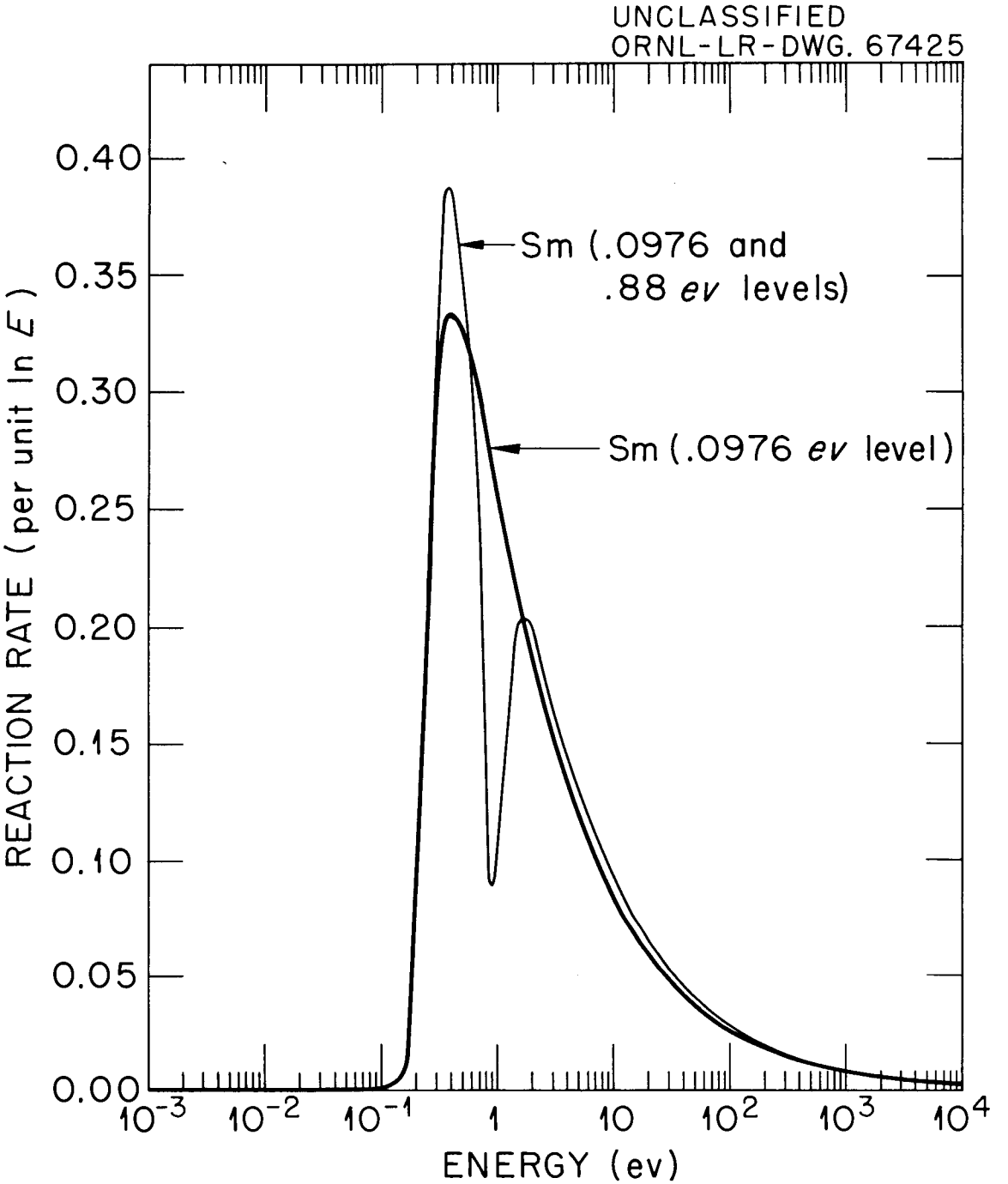

Fig. 4. Comparison of Reaction Rate per Unit ln E for One Level and Two Level Calculation in Sm. (E_m = 0.025 ev, μ = 5, r = 10, I_0 = 500 mg/cm^2).

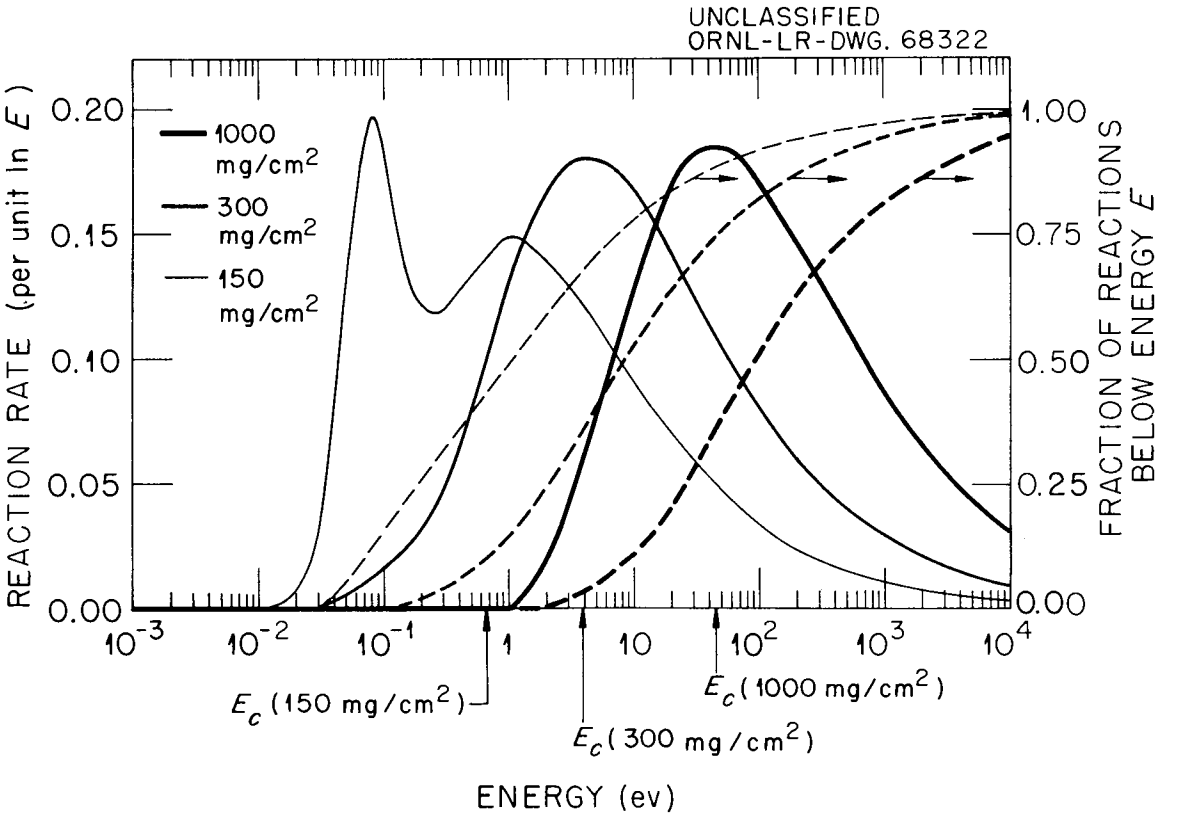

Fig. 5. Normalized Reaction Rates (per unit ln E) and Fractions of Total Reactions Below Energy E for Spherical Boron Shells ($E_m = 0.0253$ ev, $\mu = 5$, $r = 10$).

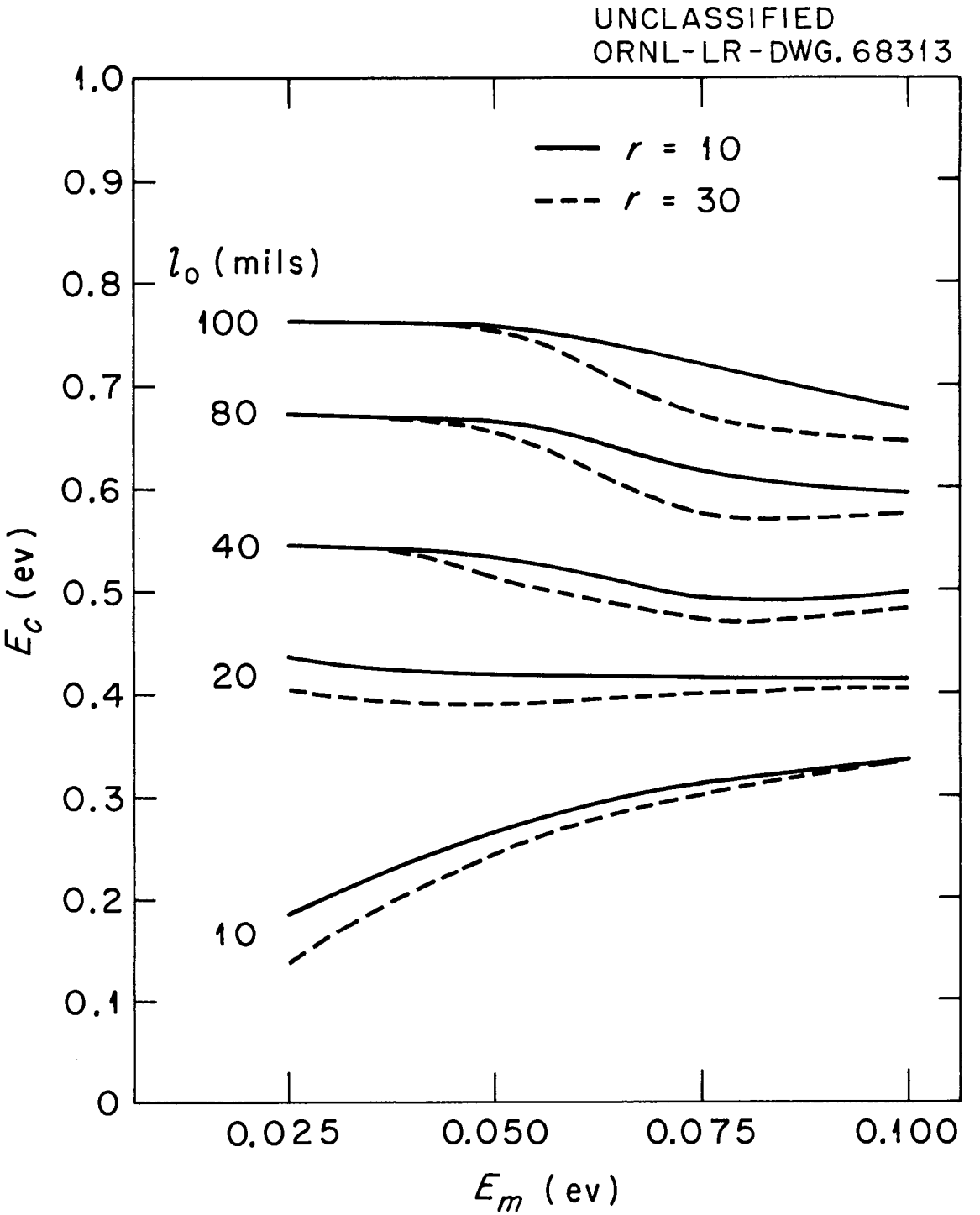

Fig. 6. Effective Cutoff Energies for Cadmium Cylindrical Filters (H/D = 2, μ = 5).

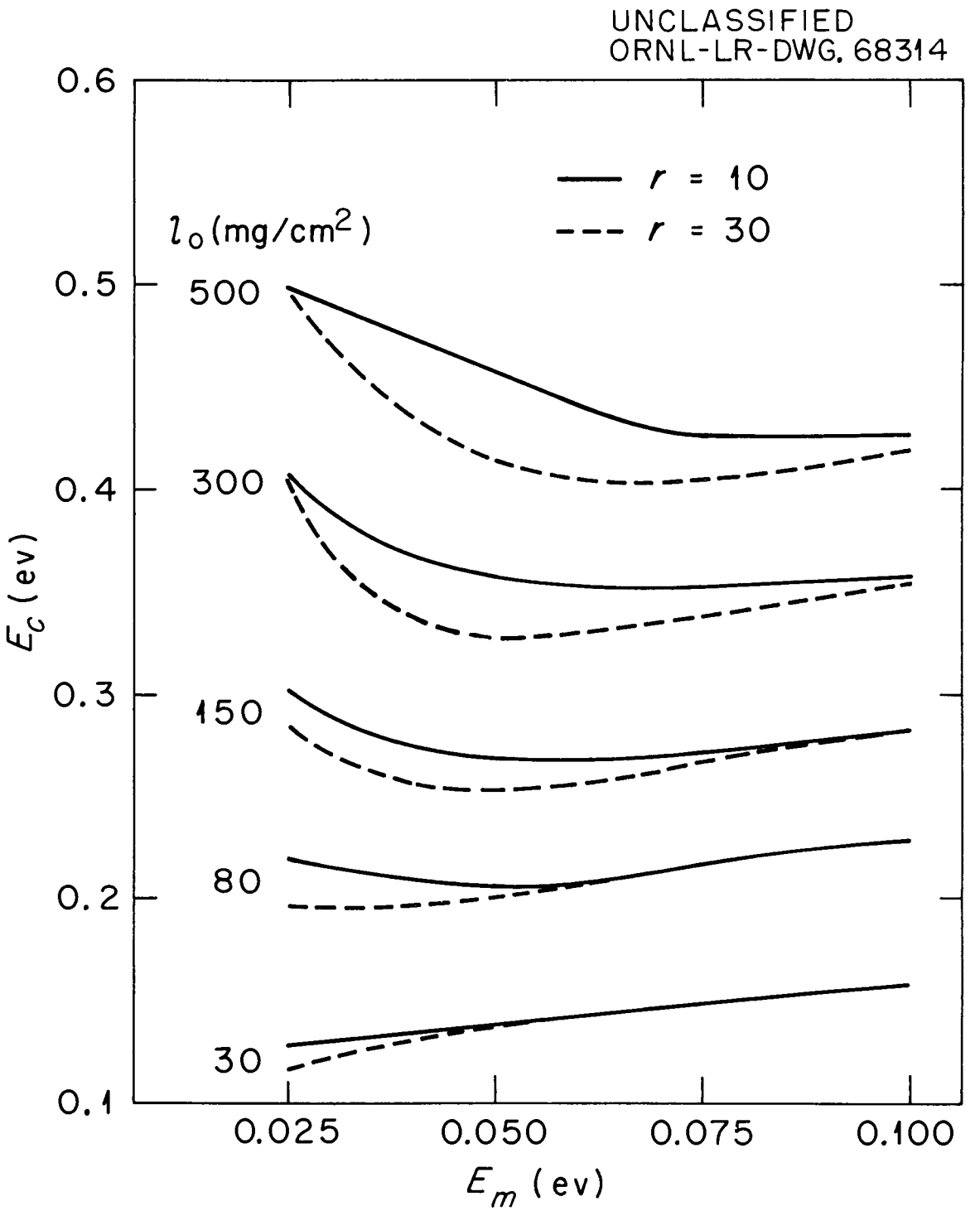

Fig. 7. Effective Cutoff Energies for Gadolinium Cylindrical Filters (H/D = 2, μ = 5).

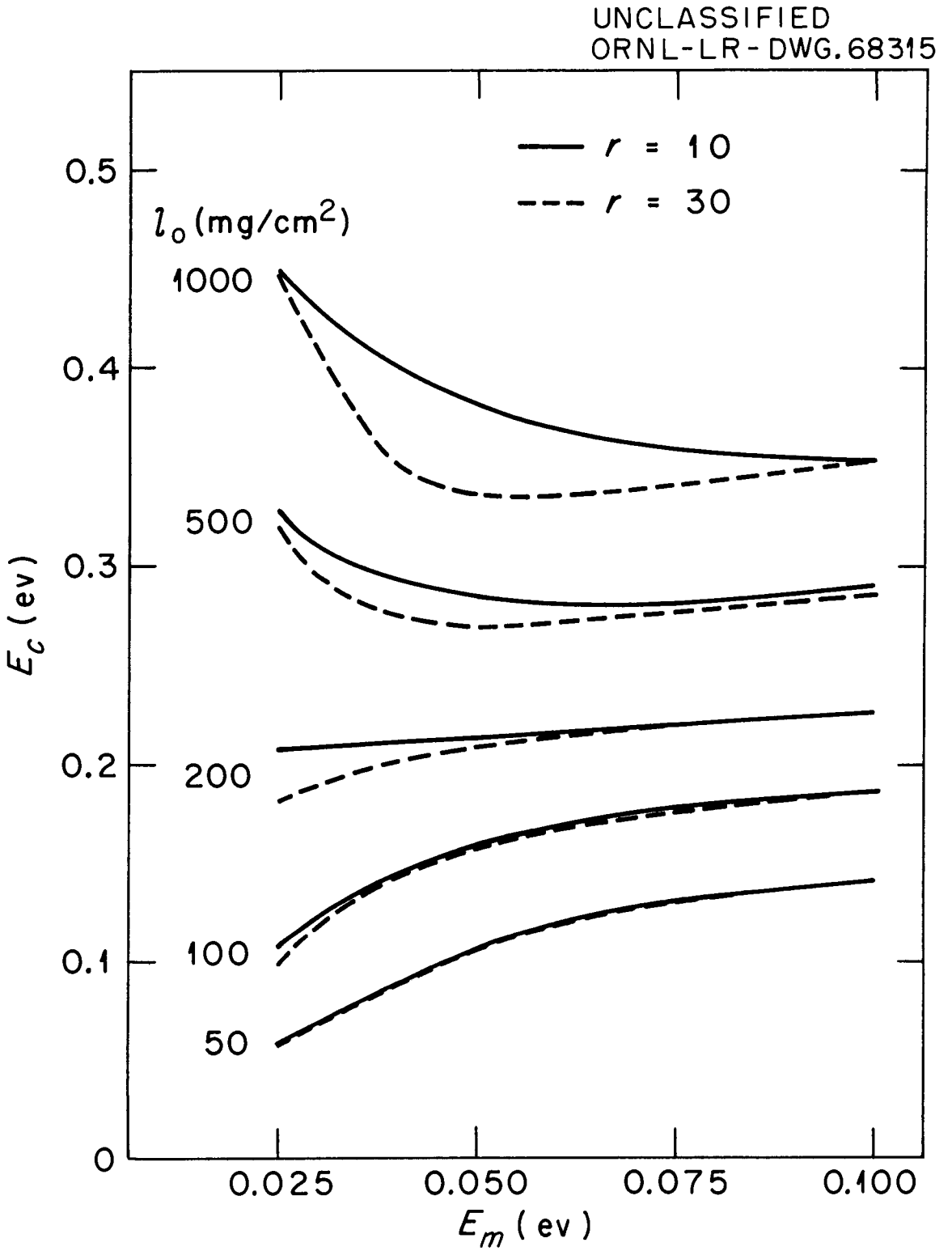

Fig. 8. Effective Cutoff Energies for Samarium Cylindrical Filters (H/D = 2, μ = 5).

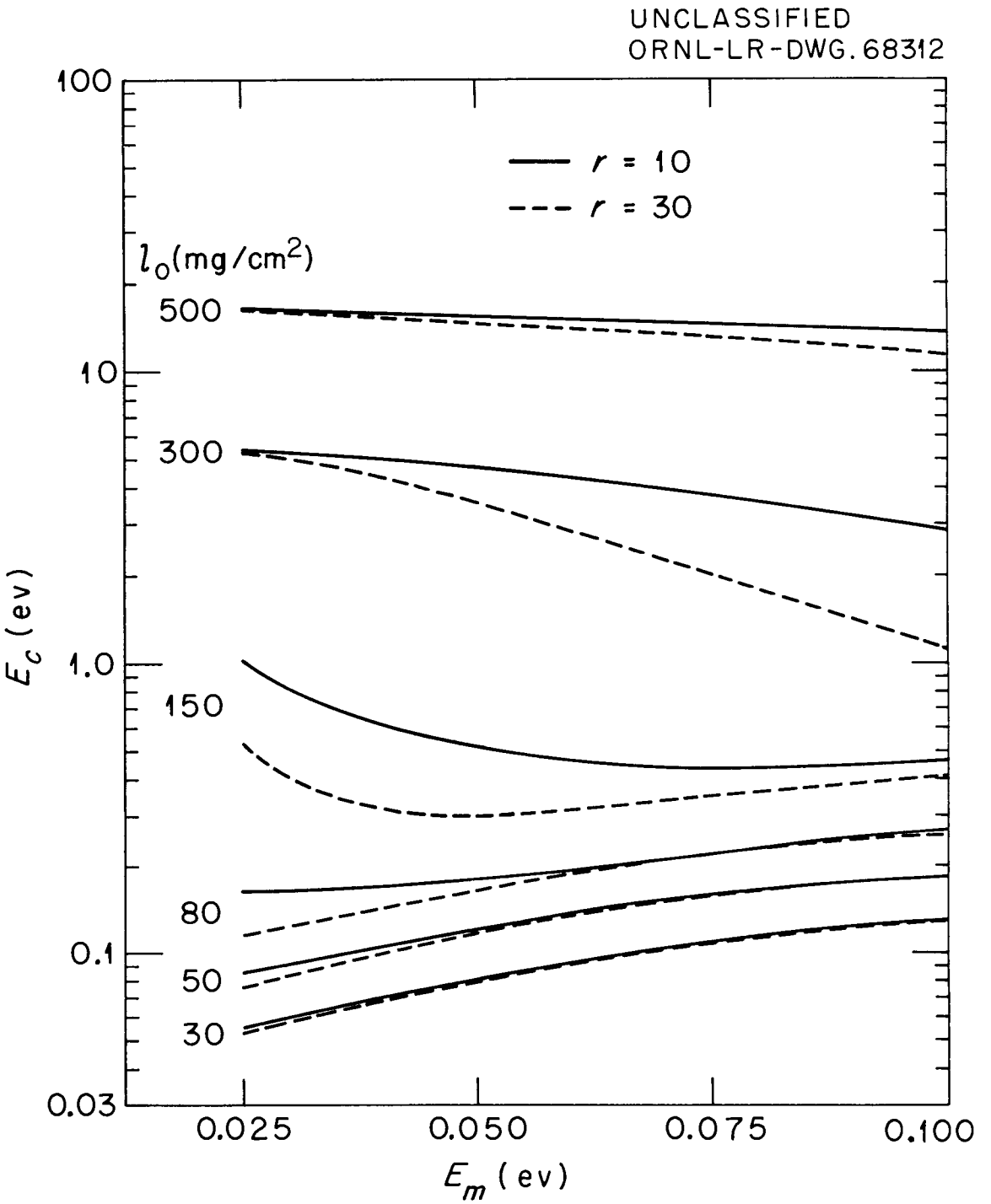

Fig. 9. Effective Cutoff Energies for Boron Cylindrical Filters (H/D = 2, μ = 5).

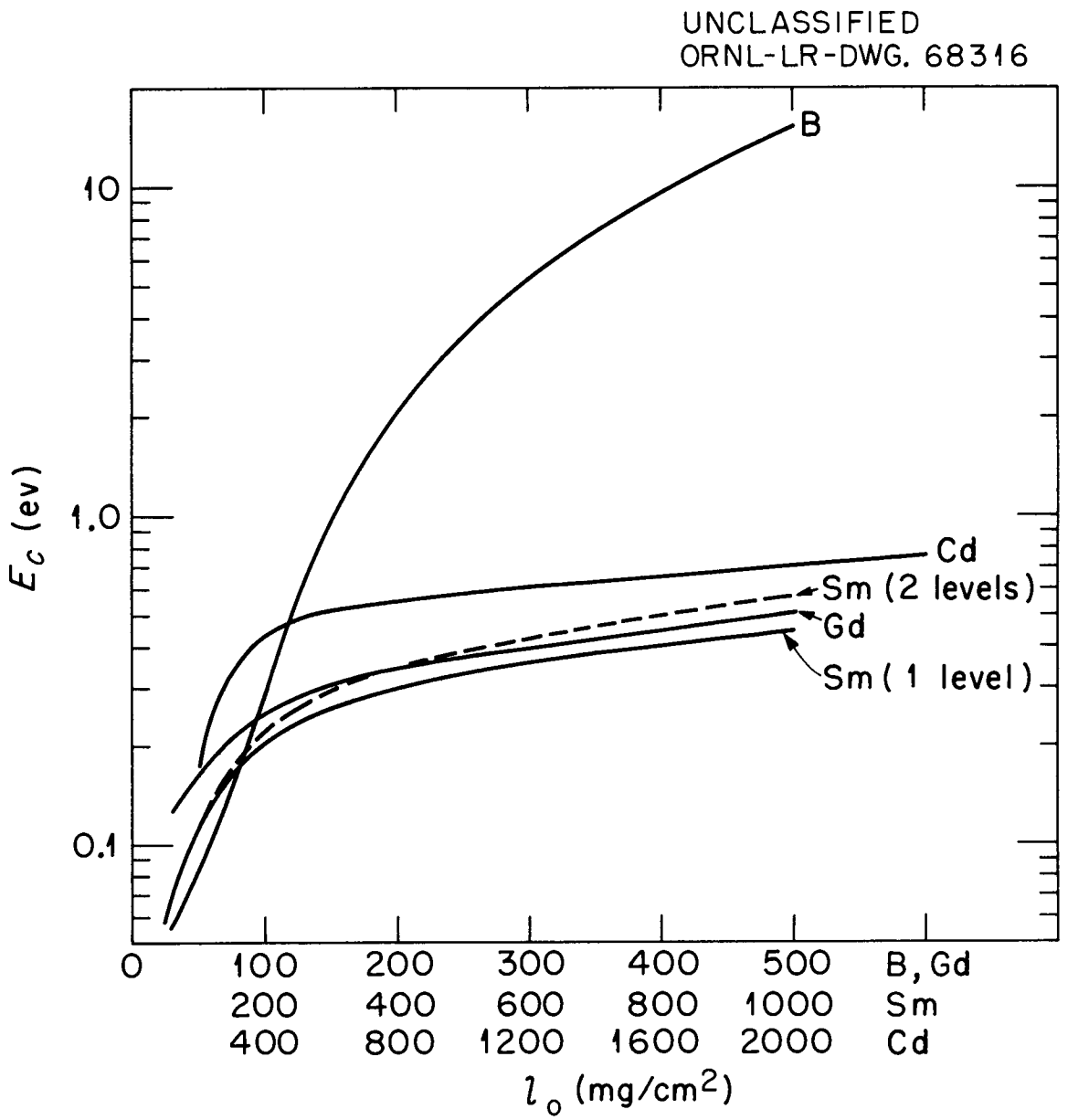

Fig. 10. Comparative Values of Effective Cutoffs for B, Cd, Gd, and Sm Cylindrical Filters (H/D = 2, E_m = 0.0253 ev, μ = 5, r = 10).

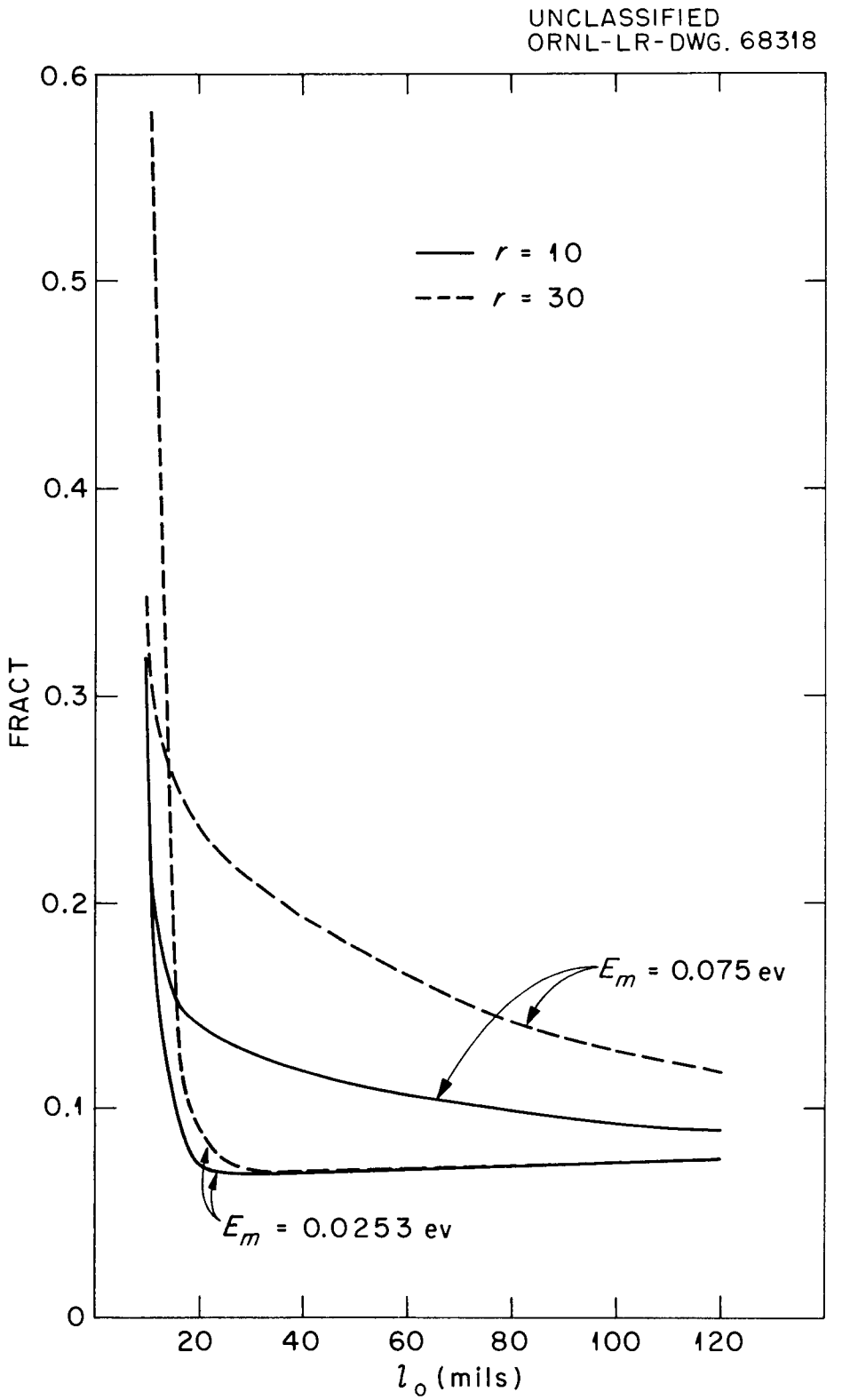

Fig. 11. Fraction of Reactions Below Cutoff for Cadmium Cylindrical Filters (H/D = 2, μ = 5).

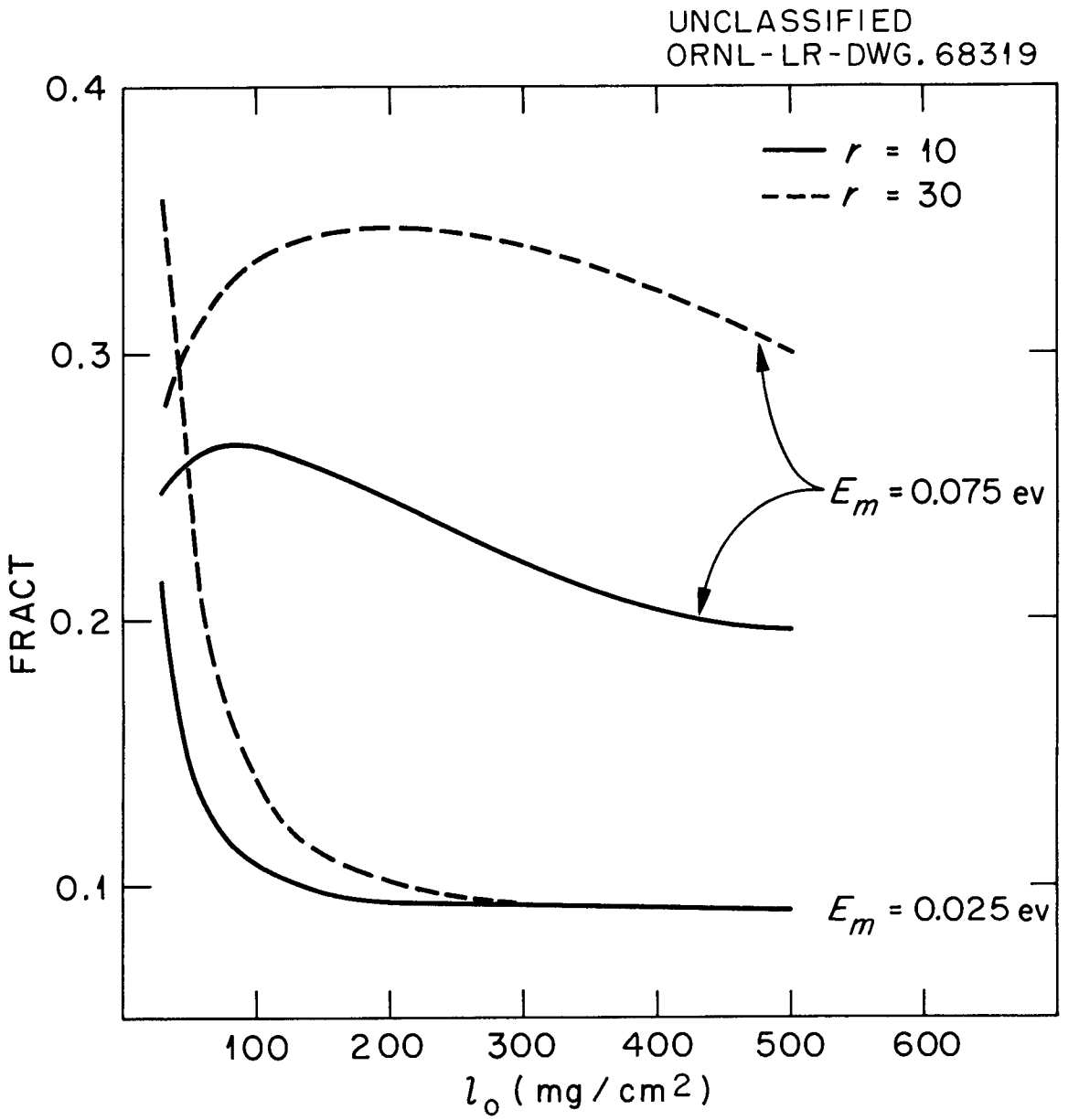

Fig. 12. Fraction of Reactions Below Cutoff for Gadolinium Cylindrical Filters (H/D = 2, μ = 5).

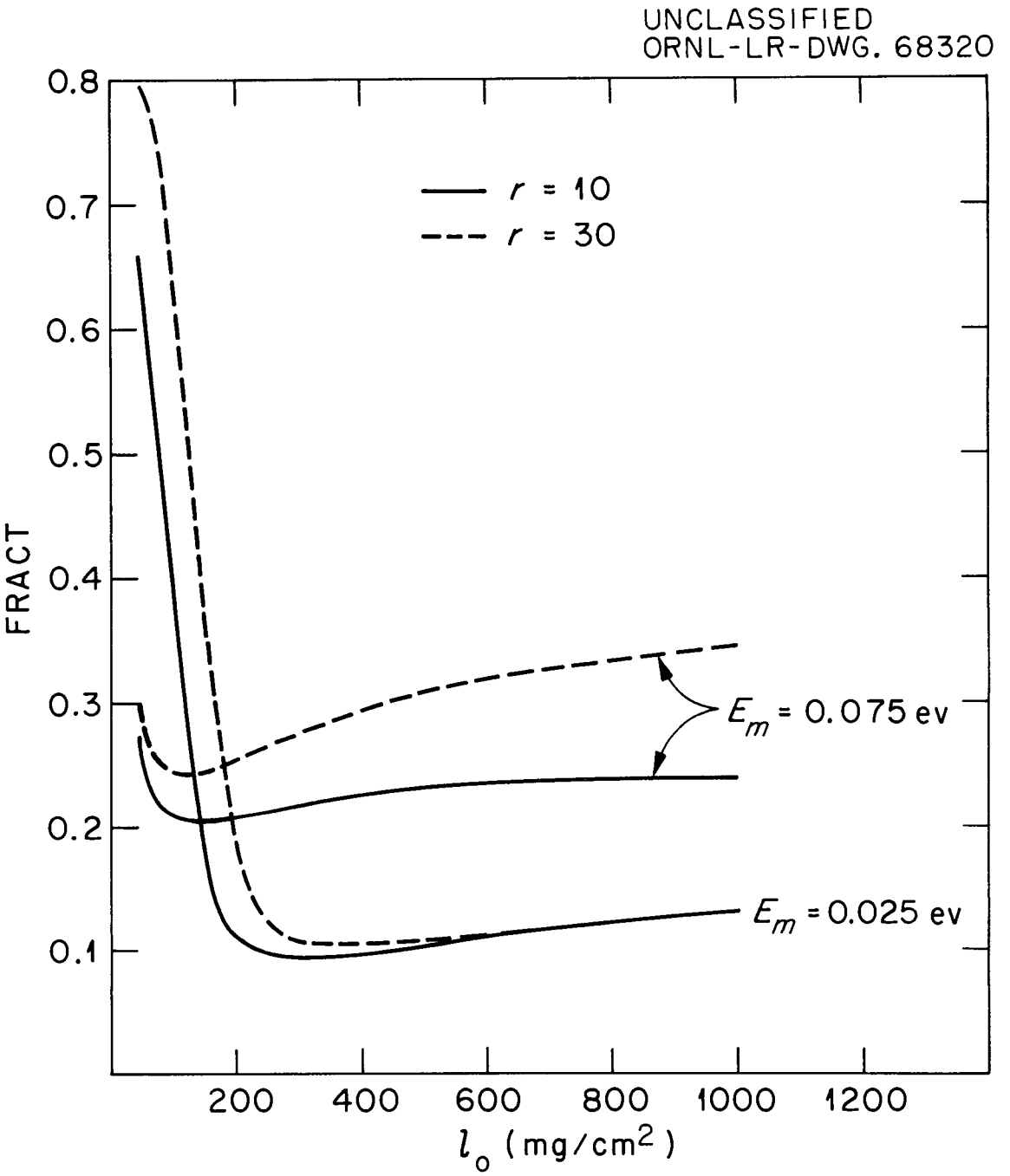

Fig. 13. Fraction of Reactions Below Cutoff for Samarium Cylindrical Filters (H/D = 2, μ = 5).

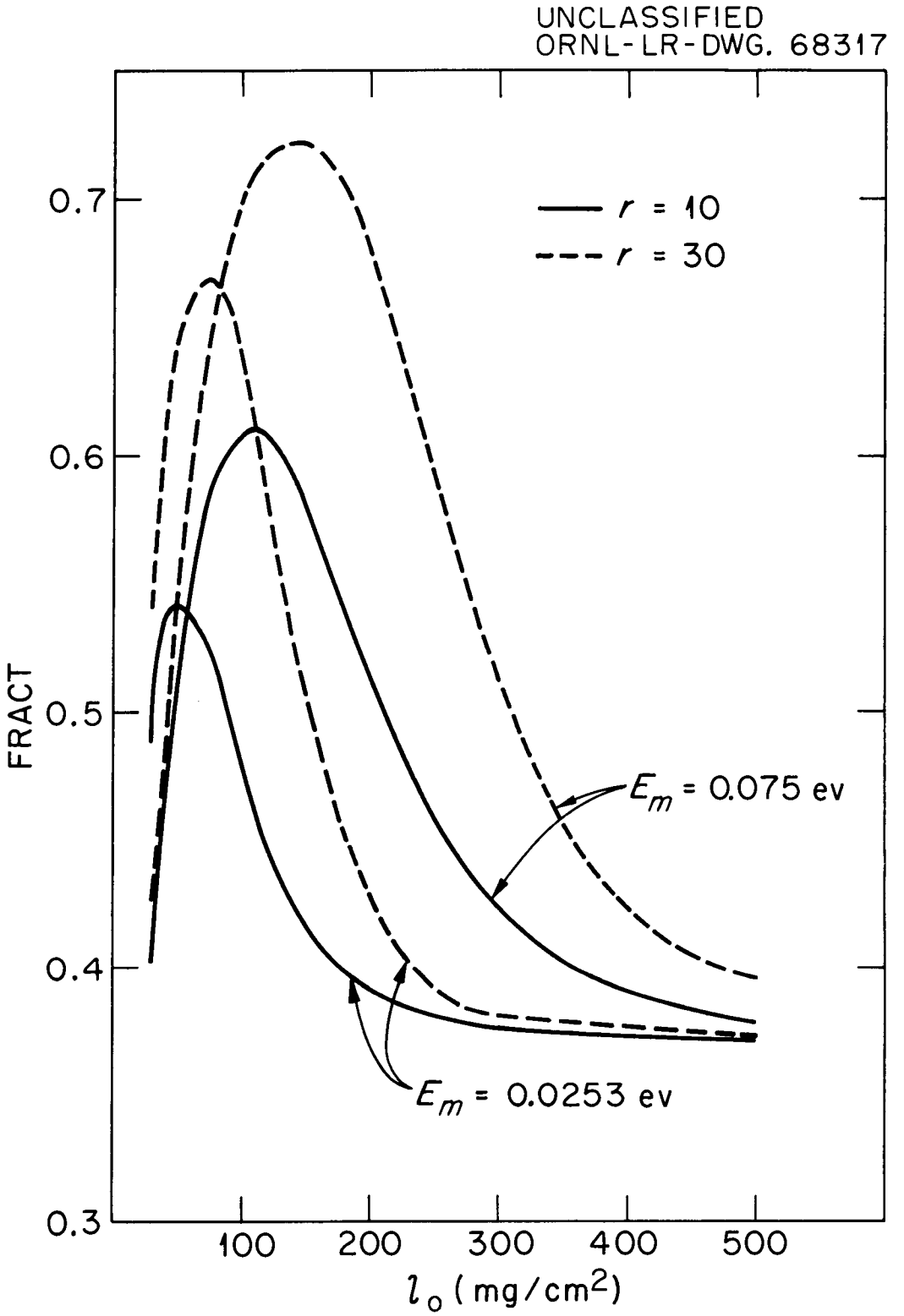

Fig. 14. Fraction of Reactions Below Cutoff for Boron Cylindrical Filters (H/D = 2, μ = 5).

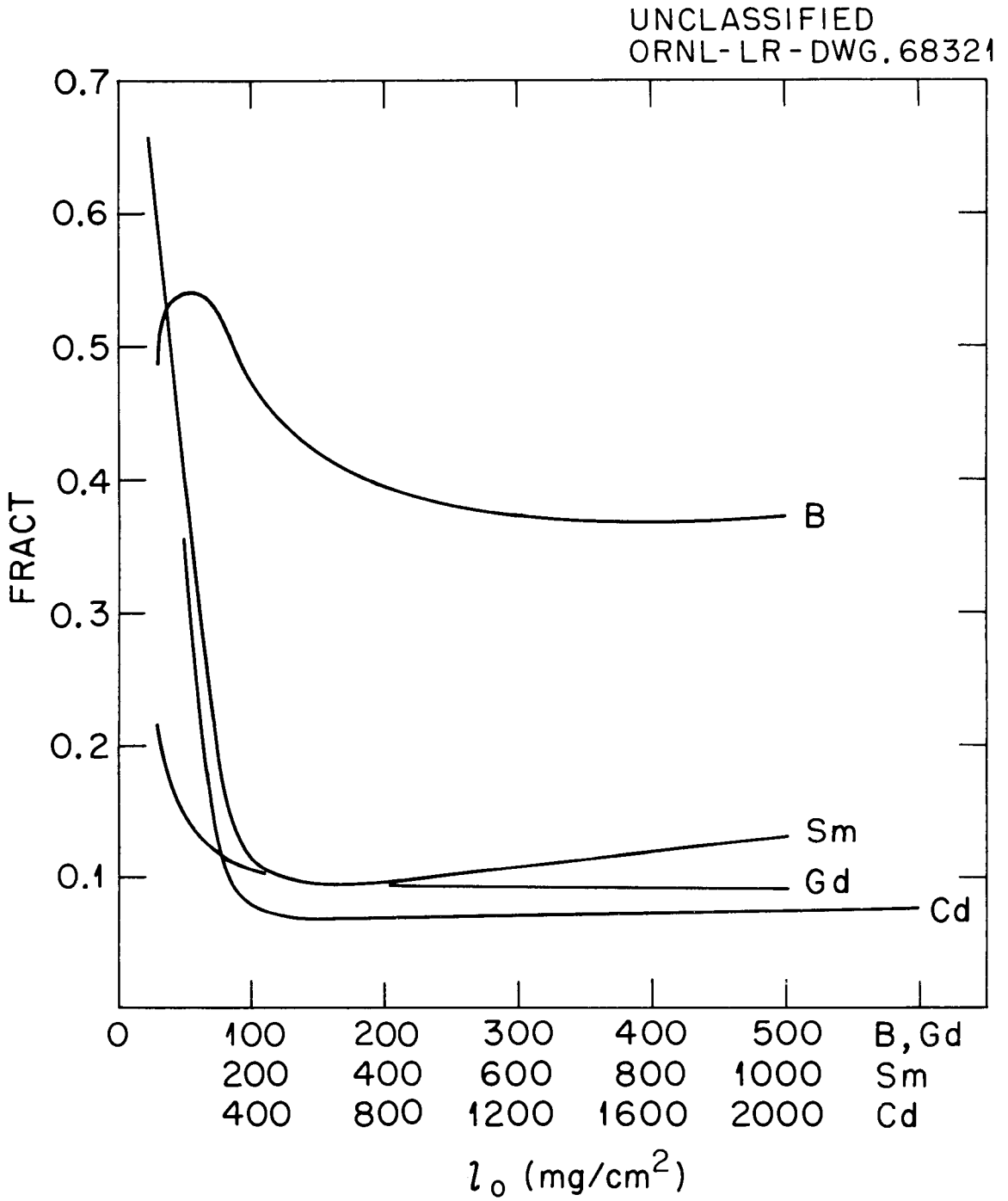

Fig. 15. Comparative Values of FRACT (fraction of reactions below cutoff) for B, Cd, Gd, and Sm Cylindrical Filters (H/D = 2, E_m = 0.0253 ev, μ = 5, r = 10).

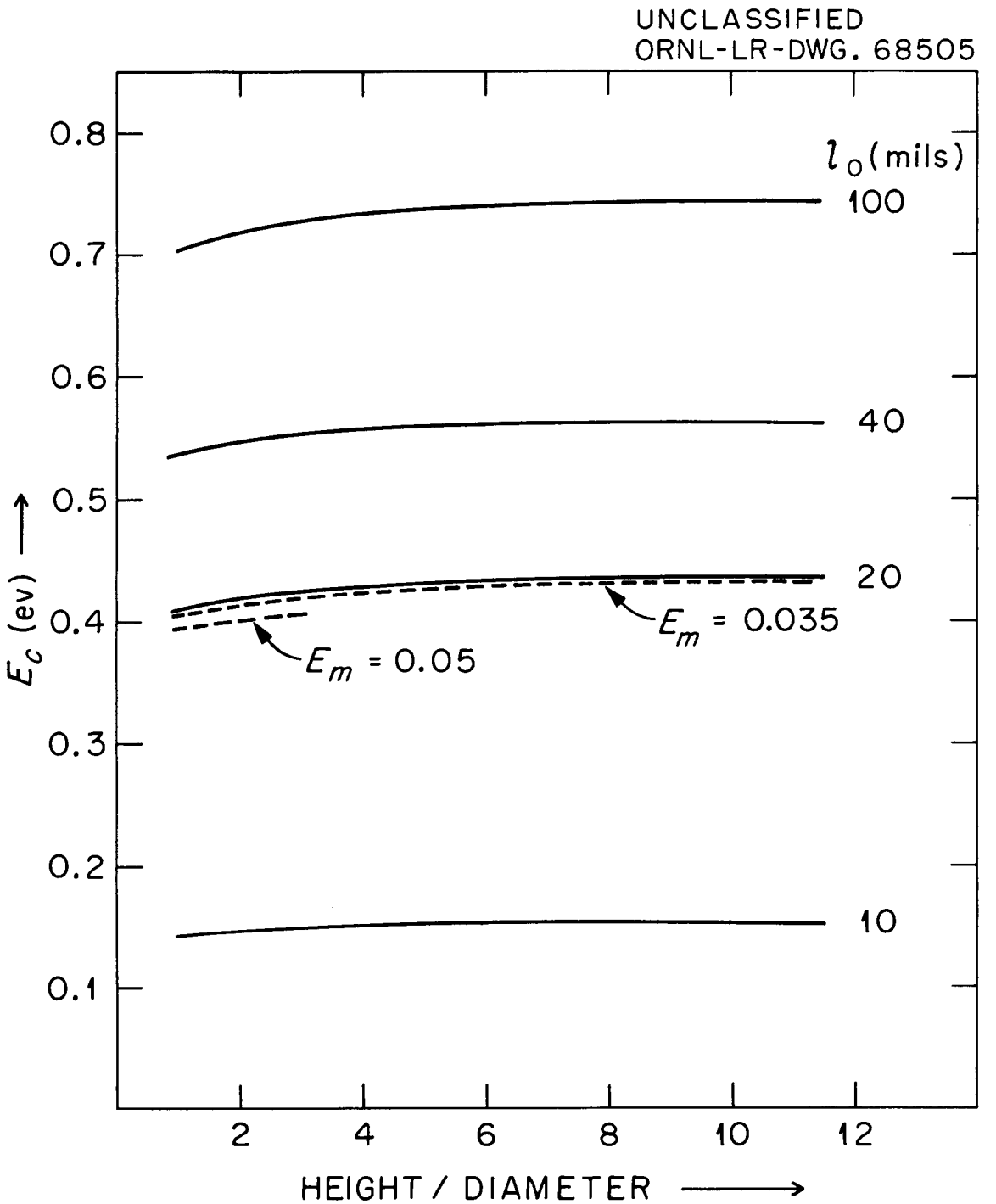

Fig. 16. Variation of Effective Cutoffs for Cylindrical Cd Filters as a Function of Height/Diameter (E_m = 0.0253 ev and r = 20).

Key to Tables

The scheme of major to minor subdivisions is as follows:

(1) the tables are alphabetical according to filter material: B, Cd, Gd, Sm (1-BW), Sm (2-BW).

(2) under each element the order of geometries is sphere (or beam flux), cylinder (H/D = 1), cylinder (H/D = 2), slab (or isotropic flux). This order shows an increasing $\underline{E_c}$ when other parameters are kept constant.

(3) for each geometry, the order of μ ($1/\underline{E}$ flux terminates at $\mu kT = \mu E_m$) is 3, 5, 10.

(4) for each μ, the order of $\underline{E_m}$ is 0.0253, 0.05, 0.075, 0.1 ev.

(5) for each $\underline{E_m}$, the order of $\underline{r} = nv_o/\phi_r$ is 10, 20, 30, 50. (The term $\underline{r}$ is the ratio of the 2200 m/s Maxwellian flux nv_o to the resonance flux per unit ln ($\underline{E}$), ϕ_r.

(6) for each $\underline{r}$, the l_o's are given in increasing order.

Thus, in terms of the Fortran symbols, Effective Cutoff Values EC ≡ E_c(ev) are given for

Filter: B, CD, GD, SM (1-BW), SM (2-BW)

Geometry: SPHERE, CYL (H/D = 1), CYL (H/D = 2), SLAB

EMU = μ = 3, 5, 10

EM = E_m = 0.0253, 0.05, 0.075, 0.1 ev

CRO = r = nv_o/ϕ_r = 10, 20, 30, 50

L = l_o = filter thickness (mils for Cd; mg/cm^2 for others)

In the table headings the following definitions were used

FRACT ≡ fraction of reactions which occur below the cutoff

FRACTM ≡ " " " " " " " " due to

Maxwellian neutrons only.

RMOE ≡ (rate for Maxwellian neutrons/rate for 1/E neutrons) above the cutoff.

RTOT ≡ total reaction rate per unit $\phi_r \sigma_o$.

Additional Comments on Tables

In all cases the total reaction rate per unit $\phi_r \sigma_o$, RTOT is given as an exponentiated number to a power of ten, e.g., 9.52341E-02 is to be read as 9.52341×10^{-2}. Zero values of the ratio of Maxwellian to 1/E reaction rate above the cutoff, RMOE, are sometimes given with a negative sign. This fact has no computational significance.

In the cases of spheres and slabs, to the right of the title on each page are four single-digit integers. These numbers were used as computing indices and are of no value to the reader, although the first two have the following significance:

1st digit refers to filter material -- B:1, Cd:2, Gd:3, Sm(1-BW):4, and Sm(2-BW):5.

2nd digit refers to the geometry--sphere:0 and slab:1.

In the cases of the cylinders, to the right of the title on each page are four single-digit integers and one three-digit integer.

The 1st digit refers to the filter material, as above.

The 2nd digit gives the value of Height/Diameter.

The other three integers are only of computational significance.

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0362	0.3734	0.3734	2.6235	5.28976E 00
30.00	0.0495	0.4519	0.4519	1.5814	3.86287E 00
50.00	0.0769	0.5302	0.5291	0.5681	2.22438E 00
80.00	0.1217	0.5400	0.5021	0.1176	1.13320E 00
100.00	0.1762	0.5104	0.4409	0.0179	7.87904E-01
150.00	0.6190	0.4348	0.2361	-0.	4.04319E-01
200.00	1.4446	0.3967	0.1083	-0.	2.64681E-01
300.00	3.8710	0.3730	0.0198	0.0000	1.61683E-01
500.00	11.1575	0.3679	0.0007	-0.0000	9.52341E-02

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0353	0.3965	0.3965	5.3765	9.66475E 00
30.00	0.0477	0.4861	0.4861	3.3267	6.90557E 00
50.00	0.0712	0.5864	0.5864	1.3379	3.78000E 00
80.00	0.1059	0.6254	0.6086	0.3717	1.75704E 00
100.00	0.1347	0.6053	0.5747	0.1302	1.14207E 00
150.00	0.4051	0.4967	0.3821	0.0000	4.99796E-01
200.00	1.1761	0.4254	0.1954	-0.	2.93342E-01
300.00	3.7223	0.3782	0.0388	0.0000	1.64885E-01
500.00	11.1421	0.3681	0.0014	-0.0000	9.53023E-02

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0350	0.4052	0.4052	8.1287	1.40397E 01
30.00	0.0471	0.4994	0.4994	5.0717	9.94827E 00
50.00	0.0694	0.6102	0.6102	2.1099	5.33561E 00
80.00	0.1012	0.6674	0.6568	0.6359	2.38088E 00
100.00	0.1246	0.6588	0.6391	0.2630	1.49623E 00
150.00	0.2870	0.5487	0.4808	0.0009	5.95273E-01
200.00	0.9760	0.4521	0.2670	-0.	3.22003E-01
300.00	3.5819	0.3834	0.0572	0.0000	1.68088E-01
500.00	11.1266	0.3683	0.0021	-0.0000	9.53705E-02

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0347	0.4126	0.4126	13.6330	2.27897E 01
30.00	0.0466	0.5110	0.5110	8.5605	1.60337E 01
50.00	0.0681	0.6317	0.6317	3.6516	8.44685E 00
80.00	0.0976	0.7087	0.7027	1.1687	3.62856E 00
100.00	0.1177	0.7157	0.7040	0.5362	2.20457E 00
150.00	0.1970	0.6281	0.5966	0.0292	7.86227E-01
200.00	0.7033	0.5002	0.3778	-0.	3.79325E-01
300.00	3.3238	0.3936	0.0918	-0.	1.74494E-01
500.00	11.0938	0.3687	0.0036	-0.0000	9.55069E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0548	0.3173	0.3173	5.0490	6.15371E 00
30.00	0.0740	0.3998	0.3998	3.4966	4.80254E 00
50.00	0.1094	0.5042	0.5042	1.7561	3.05826E 00
80.00	0.1620	0.5750	0.5703	0.6478	1.69529E 00
100.00	0.1971	0.5865	0.5691	0.3414	1.20094E 00
150.00	0.3350	0.5430	0.4882	0.0293	5.88129E-01
200.00	0.8437	0.4733	0.3349	0.0000	3.46341E-01
300.00	3.1675	0.4002	0.1178	0.0000	1.78744E-01
500.00	10.9415	0.3706	0.0108	-0.	9.61740E-02

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0540	0.3301	0.3301	10.2009	1.16129E 01
30.00	0.0725	0.4188	0.4188	7.1274	8.96399E 00
50.00	0.1059	0.5364	0.5364	3.6903	5.56637E 00
80.00	0.1527	0.6288	0.6282	1.4656	2.94533E 00
100.00	0.1822	0.6553	0.6480	0.8411	2.01078E 00
150.00	0.2677	0.6411	0.6163	0.1672	8.82896E-01
200.00	0.4832	0.5590	0.5002	0.0037	4.62338E-01
300.00	2.5351	0.4314	0.2108	0.0000	1.99798E-01
500.00	10.7088	0.3735	0.0213	-0.	9.72086E-02

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0538	0.3347	0.3347	15.3531	1.70720E 01
30.00	0.0721	0.4257	0.4257	10.7573	1.31254E 01
50.00	0.1047	0.5487	0.5487	5.6243	8.07447E 00
80.00	0.1495	0.6508	0.6508	2.2906	4.19537E 00
100.00	0.1774	0.6852	0.6807	1.3462	2.82062E 00
150.00	0.2514	0.6926	0.6764	0.3199	1.17766E 00
200.00	0.3725	0.6220	0.5890	0.0347	5.78336E-01
300.00	2.0746	0.4603	0.2860	-0.	2.20852E-01
500.00	10.4838	0.3763	0.0316	-0.	9.82433E-02

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0536	0.3385	0.3385	25.6563	2.79903E 01
30.00	0.0717	0.4315	0.4315	18.0194	2.14484E 01
50.00	0.1038	0.5592	0.5592	9.4884	1.30907E 01
80.00	0.1471	0.6703	0.6703	3.9577	6.69546E 00
100.00	0.1737	0.7124	0.7100	2.3593	4.44029E 00
150.00	0.2399	0.7451	0.7354	0.6308	1.76720E 00
200.00	0.3212	0.6998	0.6814	0.1293	8.10331E-01
300.00	1.4636	0.5118	0.4003	-0.	2.62959E-01
500.00	10.0565	0.3819	0.0516	-0.0000	1.00313E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0706	0.2829	0.2829	7.1479	6.63985E 00
30.00	0.0949	0.3632	0.3632	5.2534	5.37017E 00
50.00	0.1387	0.4731	0.4731	2.9732	3.62891E 00
80.00	0.2008	0.5645	0.5645	1.3242	2.14605E 00
100.00	0.2418	0.5951	0.5913	0.7915	1.56467E 00
150.00	0.3506	0.6027	0.5773	0.2080	7.87138E-01
200.00	0.5470	0.5512	0.4964	0.0204	4.52195E-01
300.00	2.3178	0.4443	0.2521	0.0000	2.08956E-01
500.00	10.3280	0.3783	0.0395	-0.	9.89842E-02

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0699	0.2918	0.2918	14.3852	1.26953E 01
30.00	0.0936	0.3763	0.3763	10.6244	1.01934E 01
50.00	0.1358	0.4954	0.4954	6.1054	6.77655E 00
80.00	0.1932	0.6021	0.6021	2.8490	3.88995E 00
100.00	0.2300	0.6440	0.6434	1.7559	2.76978E 00
150.00	0.3190	0.6818	0.6699	0.5643	1.29539E 00
200.00	0.4278	0.6523	0.6279	0.1429	6.80706E-01
300.00	1.4783	0.5103	0.4027	0.0000	2.61639E-01
500.00	9.5569	0.3888	0.0761	-0.	1.02898E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0696	0.2949	0.2949	21.6221	1.87508E 01
30.00	0.0931	0.3811	0.3811	15.9956	1.50167E 01
50.00	0.1349	0.5035	0.5035	9.2381	9.92419E 00
80.00	0.1908	0.6166	0.6166	4.3719	5.63385E 00
100.00	0.2261	0.6635	0.6634	2.7241	3.97490E 00
150.00	0.3095	0.7172	0.7094	0.9258	1.80365E 00
200.00	0.4007	0.7054	0.6893	0.2810	9.09217E-01
300.00	1.0253	0.5650	0.5028	0.0002	3.14323E-01
500.00	8.8703	0.3991	0.1099	0.0000	1.06812E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0694	0.2975	0.2975	36.0960	3.08617E 01
30.00	0.0928	0.3849	0.3849	26.7381	2.46633E 01
50.00	0.1341	0.5104	0.5104	15.5009	1.62195E 01
80.00	0.1889	0.6290	0.6290	7.4154	9.12165E 00
100.00	0.2230	0.6805	0.6805	4.6743	6.38512E 00
150.00	0.3022	0.7498	0.7453	1.6520	2.82016E 00
200.00	0.3820	0.7592	0.7496	0.5626	1.36624E 00
300.00	0.6576	0.6477	0.6214	0.0182	4.19689E-01
500.00	7.7001	0.4188	0.1707	-0.	1.14640E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0847	0.2591	0.2591	9.0141	6.96478E 00
30.00	0.1135	0.3366	0.3366	6.8638	5.76431E 00
50.00	0.1651	0.4469	0.4469	4.1570	4.05320E 00
80.00	0.2362	0.5472	0.5472	2.0682	2.51221E 00
100.00	0.2828	0.5869	0.5869	1.3107	1.87617E 00
150.00	0.3967	0.6251	0.6111	0.4529	9.79001E-01
200.00	0.5375	0.6035	0.5723	0.1239	5.65540E-01
300.00	1.6470	0.4942	0.3766	0.0000	2.47870E-01
500.00	9.3668	0.3916	0.0866	-0.	1.03938E-01

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0839	0.2659	0.2659	18.1083	1.34142E 01
30.00	0.1123	0.3467	0.3467	13.8347	1.10423E 01
50.00	0.1625	0.4639	0.4639	8.4606	7.67168E 00
80.00	0.2299	0.5759	0.5759	4.3230	4.65367E 00
100.00	0.2724	0.6243	0.6243	2.8273	3.41694E 00
150.00	0.3731	0.6874	0.6811	1.0678	1.69166E 00
200.00	0.4780	0.6915	0.6765	0.3856	9.13908E-01
300.00	0.9110	0.5889	0.5440	0.0078	3.41230E-01
500.00	7.9339	0.4146	0.1594	-0.	1.12937E-01

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0837	0.2683	0.2683	27.2031	1.98637E 01
30.00	0.1118	0.3502	0.3502	20.8075	1.63203E 01
50.00	0.1617	0.4700	0.4700	12.7642	1.12902E 01
80.00	0.2279	0.5866	0.5866	6.5771	6.79513E 00
100.00	0.2691	0.6386	0.6386	4.3415	4.95771E 00
150.00	0.3656	0.7131	0.7091	1.6863	2.40431E 00
200.00	0.4612	0.7319	0.7220	0.6535	1.26228E 00
300.00	0.7341	0.6539	0.6282	0.0493	4.34590E-01
500.00	6.8060	0.4363	0.2214	-0.	1.21936E-01

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0835	0.2703	0.2703	45.3906	3.27626E 01
30.00	0.1115	0.3532	0.3532	34.7463	2.68763E 01
50.00	0.1610	0.4751	0.4751	21.3718	1.85271E 01
80.00	0.2263	0.5956	0.5956	11.0851	1.10781E 01
100.00	0.2665	0.6508	0.6508	7.3705	8.03925E 00
150.00	0.3597	0.7359	0.7336	2.9257	3.82962E 00
200.00	0.4485	0.7699	0.7640	1.1924	1.95901E 00
300.00	0.6520	0.7296	0.7149	0.1557	6.21309E-01
500.00	5.1679	0.4763	0.3215	-0.0000	1.39933E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0355	0.3769	0.3769	3.2796	5.12049E 00
30.00	0.0481	0.4551	0.4551	1.9703	3.72631E 00
50.00	0.0728	0.5286	0.5286	0.7360	2.13543E 00
80.00	0.1256	0.5296	0.5296	0.1048	1.08636E 00
100.00	0.1864	0.4990	0.4613	0.0128	7.57317E-01
150.00	0.6528	0.4273	0.2425	0.0000	3.93736E-01
200.00	1.4857	0.3928	0.1098	-0.	2.60998E-01
300.00	3.8932	0.3722	0.0199	0.0000	1.61228E-01
500.00	11.1594	0.3679	0.0007	-0.	9.52267E-02

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0349	0.3988	0.3988	6.6571	9.49548E 00
30.00	0.0470	0.4886	0.4886	4.0635	6.76901E 00
50.00	0.0693	0.5874	0.5874	1.6268	3.69105E 00
80.00	0.1046	0.6211	0.6211	0.4009	1.71020E 00
100.00	0.1371	0.5990	0.5939	0.1212	1.11148E 00
150.00	0.4229	0.4903	0.3903	0.0000	4.89213E-01
200.00	1.2062	0.4218	0.1979	-0.	2.89659E-01
300.00	3.7426	0.3775	0.0390	0.0000	1.64431E-01
500.00	11.1440	0.3681	0.0014	-0.	9.52949E-02

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0347	0.4069	0.4069	10.0346	1.38705E 01
30.00	0.0466	0.5014	0.5014	6.1559	9.81171E 00
50.00	0.0682	0.6114	0.6114	2.5161	5.24667E 00
80.00	0.1000	0.6653	0.6653	0.6890	2.33404E 00
100.00	0.1258	0.6549	0.6549	0.2545	1.46565E 00
150.00	0.2970	0.5434	0.4896	0.0006	5.84690E-01
200.00	0.9987	0.4487	0.2701	-0.	3.18319E-01
300.00	3.6012	0.3827	0.0573	0.0000	1.67634E-01
500.00	11.1285	0.3683	0.0021	-0.0000	9.53631E-02

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0346	0.4137	0.4137	16.7892	2.26204E 01
30.00	0.0464	0.5123	0.5123	10.3416	1.58971E 01
50.00	0.0674	0.6328	0.6328	4.2938	8.35790E 00
80.00	0.0968	0.7080	0.7080	1.2609	3.58171E 00
100.00	0.1176	0.7138	0.7138	0.5436	2.17398E 00
150.00	0.1994	0.6245	0.6056	0.0270	7.75644E-01
200.00	0.7172	0.4973	0.3815	0.0000	3.75641E-01
300.00	3.3411	0.3929	0.0920	0.0000	1.74039E-01
500.00	11.0957	0.3687	0.0036	-0.0000	9.54996E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0542	0.3198	0.3198	6.3314	6.01739E 00
30.00	0.0729	0.4028	0.4028	4.3394	4.68554E 00
50.00	0.1068	0.5068	0.5068	2.1596	2.97206E 00
80.00	0.1560	0.5734	0.5734	0.7917	1.64071E 00
100.00	0.1927	0.5813	0.5813	0.3853	1.16068E 00
150.00	0.3481	0.5338	0.5070	0.0237	5.69262E-01
200.00	0.8885	0.4657	0.3437	0.0000	3.37473E-01
300.00	3.2389	0.3971	0.1191	-0.	1.76768E-01
500.00	10.9644	0.3704	0.0108	-0.	9.60722E-02

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0537	0.3316	0.3316	12.7409	1.14765E 01
30.00	0.0720	0.4206	0.4206	8.7802	8.84700E 00
50.00	0.1046	0.5384	0.5384	4.4521	5.48016E 00
80.00	0.1494	0.6292	0.6292	1.7437	2.89075E 00
100.00	0.1792	0.6540	0.6540	0.9432	1.97051E 00
150.00	0.2709	0.6364	0.6323	0.1594	8.64029E-01
200.00	0.4996	0.5533	0.5104	0.0028	4.53471E-01
300.00	2.5861	0.4286	0.2129	-0.	1.97821E-01
500.00	10.7317	0.3732	0.0213	-0.	9.71069E-02

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0536	0.3358	0.3358	19.1504	1.69357E 01
30.00	0.0717	0.4270	0.4270	13.2218	1.30085E 01
50.00	0.1039	0.5502	0.5502	6.7437	7.98826E 00
80.00	0.1474	0.6515	0.6515	2.6937	4.14080E 00
100.00	0.1753	0.6848	0.6848	1.4977	2.78035E 00
150.00	0.2531	0.6898	0.6893	0.3121	1.15880E 00
200.00	0.3777	0.6179	0.5993	0.0319	5.69468E-01
300.00	2.1125	0.4577	0.2886	0.0000	2.18875E-01
500.00	10.5066	0.3760	0.0316	-0.	9.81415E-02

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0534	0.3392	0.3392	31.9711	2.78540E 01
30.00	0.0715	0.4324	0.4324	22.1029	2.13314E 01
50.00	0.1033	0.5602	0.5602	11.3288	1.30045E 01
80.00	0.1458	0.6710	0.6710	4.5928	6.64088E 00
100.00	0.1724	0.7125	0.7125	2.6056	4.40002E 00
150.00	0.2401	0.7437	0.7437	0.6323	1.74833E 00
200.00	0.3228	0.6975	0.6898	0.1262	8.01463E-01
300.00	1.4857	0.5095	0.4034	0.0000	2.60983E-01
500.00	10.0775	0.3816	0.0516	-0.	1.00211E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0700	0.2849	0.2849	8.9944	6.52212E 00
30.00	0.0939	0.3657	0.3657	6.5413	5.26626E 00
50.00	0.1366	0.4758	0.4758	3.6458	3.54794E 00
80.00	0.1953	0.5658	0.5658	1.6202	2.09032E 00
100.00	0.2343	0.5942	0.5942	0.9531	1.52121E 00
150.00	0.3525	0.5963	0.5963	0.2067	7.63765E-01
200.00	0.5671	0.5431	0.5125	0.0164	4.39597E-01
300.00	2.4016	0.4392	0.2567	-0.	2.05273E-01
500.00	10.3966	0.3775	0.0397	0.0000	9.86621E-02

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0696	0.2929	0.2929	18.0576	1.25776E 01
30.00	0.0931	0.3778	0.3778	13.1716	1.00895E 01
50.00	0.1348	0.4971	0.4971	7.4111	6.69558E 00
80.00	0.1907	0.6035	0.6035	3.3880	3.83422E 00
100.00	0.2260	0.6446	0.6446	2.0657	2.72633E 00
150.00	0.3168	0.6796	0.6796	0.5951	1.27202E 00
200.00	0.4321	0.6482	0.6417	0.1367	6.68108E-01
300.00	1.5209	0.5061	0.4085	0.0000	2.57957E-01
500.00	9.6184	0.3880	0.0763	0.0000	1.02576E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0694	0.2957	0.2957	27.1197	1.86330E 01
30.00	0.0928	0.3820	0.3820	19.8037	1.49128E 01
50.00	0.1342	0.5048	0.5048	11.1773	9.84322E 00
80.00	0.1891	0.6177	0.6177	5.1552	5.57813E 00
100.00	0.2234	0.6642	0.6642	3.1771	3.93144E 00
150.00	0.3075	0.7160	0.7160	0.9785	1.78028E 00
200.00	0.4029	0.7029	0.7005	0.2749	8.96619E-01
300.00	1.0494	0.5615	0.5087	0.0001	3.10640E-01
500.00	8.9232	0.3982	0.1103	0.0000	1.06490E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0693	0.2980	0.2980	45.2445	3.07439E 01
30.00	0.0926	0.3856	0.3856	33.0630	2.45594E 01
50.00	0.1337	0.5111	0.5111	18.7086	1.61385E 01
80.00	0.1879	0.6297	0.6297	8.6898	9.06593E 00
100.00	0.2213	0.6810	0.6810	5.3991	6.34166E 00
150.00	0.3009	0.7495	0.7495	1.7424	2.79679E 00
200.00	0.3832	0.7580	0.7576	0.5563	1.35364E 00
300.00	0.6634	0.6453	0.6273	0.0171	4.16007E-01
500.00	7.7430	0.4180	0.1712	0.0000	1.14318E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0841	0.2607	0.2607	11.3718	6.85935E 00
30.00	0.1125	0.3386	0.3386	8.5738	5.66969E 00
50.00	0.1632	0.4495	0.4495	5.1075	3.97697E 00
80.00	0.2317	0.5493	0.5493	2.5087	2.45706E 00
100.00	0.2754	0.5878	0.5878	1.5948	1.83172E 00
150.00	0.3900	0.6215	0.6215	0.5007	9.53035E-01
200.00	0.5472	0.5971	0.5914	0.1150	5.50350E-01
300.00	1.7187	0.4879	0.3848	0.0000	2.42647E-01
500.00	9.4816	0.3899	0.0871	-0.	1.03309E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0836	0.2668	0.2668	22.8051	1.33088E 01
30.00	0.1118	0.3478	0.3478	17.2288	1.09477E 01
50.00	0.1616	0.4654	0.4654	10.3268	7.59546E 00
80.00	0.2277	0.5774	0.5774	5.1577	4.59852E 00
100.00	0.2689	0.6255	0.6255	3.3411	3.37249E 00
150.00	0.3689	0.6865	0.6865	1.1723	1.66569E 00
200.00	0.4793	0.6887	0.6887	0.3849	8.98717E-01
300.00	0.9320	0.5844	0.5530	0.0065	3.36007E-01
500.00	8.0230	0.4130	0.1603	-0.	1.12308E-01

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0835	0.2689	0.2689	34.2391	1.97582E 01
30.00	0.1115	0.3510	0.3510	25.8838	1.62257E 01
50.00	0.1610	0.4711	0.4711	15.5458	1.12139E 01
80.00	0.2265	0.5877	0.5877	7.8049	6.73999E 00
100.00	0.2668	0.6395	0.6395	5.0870	4.91325E 00
150.00	0.3626	0.7128	0.7128	1.8412	2.37834E 00
200.00	0.4607	0.7304	0.7304	0.6645	1.24709E 00
300.00	0.7404	0.6509	0.6367	0.0469	4.29367E-01
500.00	6.8768	0.4348	0.2225	-0.	1.21307E-01

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0834	0.2707	0.2707	57.1045	3.26571E 01
30.00	0.1114	0.3537	0.3537	43.1918	2.67817E 01
50.00	0.1606	0.4758	0.4758	25.9825	1.84509E 01
80.00	0.2254	0.5962	0.5962	13.1020	1.10229E 01
100.00	0.2652	0.6515	0.6515	8.5775	7.99479E 00
150.00	0.3578	0.7359	0.7359	3.1784	3.80365E 00
200.00	0.4478	0.7693	0.7693	1.2199	1.94382E 00
300.00	0.6543	0.7280	0.7216	0.1531	6.16086E-01
500.00	5.2149	0.4749	0.3230	-0.0000	1.39305E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0349	0.3843	0.3843	4.4660	4.93034E 00
30.00	0.0471	0.4646	0.4646	2.6589	3.56425E 00
50.00	0.0696	0.5391	0.5391	1.0127	2.01763E 00
80.00	0.1065	0.5294	0.5294	0.2247	1.01321E 00
100.00	0.1527	0.4822	0.4822	0.0420	7.04007E-01
150.00	0.7413	0.4093	0.2584	0.0000	3.69462E-01
200.00	1.6206	0.3810	0.1147	-0.	2.49877E-01
300.00	4.0104	0.3683	0.0202	0.0000	1.58853E-01
500.00	11.1864	0.3676	0.0007	-0.	9.51111E-02

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0346	0.4032	0.4032	8.9993	9.30533E 00
30.00	0.0465	0.4947	0.4947	5.4016	6.60695E 00
50.00	0.0678	0.5955	0.5955	2.1287	3.57324E 00
80.00	0.0987	0.6274	0.6274	0.5665	1.63705E 00
100.00	0.1227	0.5984	0.5984	0.2148	1.05817E 00
150.00	0.4681	0.4753	0.4107	0.0000	4.64939E-01
200.00	1.3044	0.4108	0.2058	-0.	2.78538E-01
300.00	3.8531	0.3736	0.0395	0.0000	1.62056E-01
500.00	11.1710	0.3678	0.0014	-0.	9.51793E-02

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0346	0.4100	0.4100	13.5327	1.36803E 01
30.00	0.0463	0.5057	0.5057	8.1446	9.64965E 00
50.00	0.0673	0.6177	0.6177	3.2437	5.12886E 00
80.00	0.0965	0.6717	0.6717	0.9063	2.26088E 00
100.00	0.1172	0.6580	0.6580	0.3809	1.41234E 00
150.00	0.3226	0.5307	0.5110	0.0003	5.60416E-01
200.00	1.0723	0.4385	0.2799	0.0000	3.07199E-01
300.00	3.7055	0.3788	0.0581	0.0000	1.65258E-01
500.00	11.1556	0.3680	0.0021	-0.	9.52475E-02

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0345	0.4157	0.4157	22.5996	2.24303E 01
30.00	0.0461	0.5151	0.5151	13.6308	1.57350E 01
50.00	0.0668	0.6370	0.6370	5.4739	8.24010E 00
80.00	0.0949	0.7132	0.7132	1.5840	3.50856E 00
100.00	0.1134	0.7179	0.7179	0.7098	2.12067E 00
150.00	0.1825	0.6177	0.6177	0.0483	7.51370E-01
200.00	0.7616	0.4884	0.3931	0.0000	3.64521E-01
300.00	3.4343	0.3891	0.0933	-0.	1.71664E-01
500.00	11.1227	0.3683	0.0036	-0.	9.53839E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0537	0.3243	0.3243	8.6750	5.86904E 00
30.00	0.0720	0.4088	0.4088	5.8717	4.55315E 00
50.00	0.1048	0.5153	0.5153	2.8757	2.86658E 00
80.00	0.1500	0.5827	0.5827	1.0701	1.56564E 00
100.00	0.1806	0.5885	0.5885	0.5571	1.10079E 00
150.00	0.2922	0.5220	0.5220	0.0640	5.35148E-01
200.00	1.0008	0.4484	0.3648	0.0000	3.17980E-01
300.00	3.4872	0.3870	0.1236	0.0000	1.70344E-01
500.00	11.1303	0.3683	0.0109	-0.	9.53496E-02

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0535	0.3341	0.3341	17.4043	1.13282E 01
30.00	0.0716	0.4241	0.4241	11.8131	8.71461E 00
50.00	0.1036	0.5437	0.5437	5.8417	5.37469E 00
80.00	0.1467	0.6361	0.6361	2.2463	2.81568E 00
100.00	0.1741	0.6611	0.6611	1.2257	1.91062E 00
150.00	0.2487	0.6369	0.6369	0.2535	8.29915E-01
200.00	0.5412	0.5402	0.5340	0.0014	4.33978E-01
300.00	2.7624	0.4193	0.2200	0.0000	1.91398E-01
500.00	10.8938	0.3712	0.0215	-0.	9.63843E-02

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0534	0.3374	0.3374	26.1347	1.67873E 01
30.00	0.0714	0.4295	0.4295	17.7552	1.28761E 01
50.00	0.1032	0.5539	0.5539	8.8088	7.88279E 00
80.00	0.1456	0.6568	0.6568	3.4215	4.06572E 00
100.00	0.1721	0.6905	0.6905	1.8936	2.72046E 00
150.00	0.2395	0.6928	0.6928	0.4372	1.12468E 00
200.00	0.3426	0.6111	0.6111	0.0589	5.49975E-01
300.00	2.2422	0.4491	0.2973	0.0000	2.12451E-01
500.00	10.6630	0.3741	0.0319	-0.	9.74189E-02

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0533	0.3402	0.3402	43.5943	2.77056E 01
30.00	0.0713	0.4339	0.4339	29.6366	2.11990E 01
50.00	0.1030	0.5626	0.5626	14.7395	1.28990E 01
80.00	0.1447	0.6745	0.6745	5.7729	6.56580E 00
100.00	0.1705	0.7165	0.7165	3.2285	4.34013E 00
150.00	0.2331	0.7472	0.7472	0.8028	1.71422E 00
200.00	0.3057	0.6963	0.6963	0.1757	7.81970E-01
300.00	1.5617	0.5021	0.4135	0.0000	2.54559E-01
500.00	10.2244	0.3797	0.0520	0.0000	9.94882E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0696	0.2881	0.2881	12.3776	6.39582E 00
30.00	0.0931	0.3701	0.3701	8.8952	5.15117E 00
50.00	0.1349	0.4824	0.4824	4.8640	3.45237E 00
80.00	0.1910	0.5743	0.5743	2.1345	2.01794E 00
100.00	0.2267	0.6030	0.6030	1.2666	1.46105E 00
150.00	0.3208	0.5996	0.5996	0.3357	7.25809E-01
200.00	0.4842	0.5303	0.5303	0.0433	4.15602E-01
300.00	2.6442	0.4254	0.2693	0.0000	1.95624E-01
500.00	10.7414	0.3731	0.0403	-0.	9.70635E-02

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0694	0.2946	0.2946	24.8031	1.24513E 01
30.00	0.0927	0.3802	0.3802	17.8539	9.97445E 00
50.00	0.1339	0.5009	0.5009	9.8103	6.60000E 00
80.00	0.1886	0.6090	0.6090	4.3681	3.76184E 00
100.00	0.2225	0.6507	0.6507	2.6390	2.66616E 00
150.00	0.3050	0.6852	0.6852	0.7859	1.23406E 00
200.00	0.3990	0.6476	0.6476	0.2131	6.44113E-01
300.00	1.6413	0.4948	0.4243	0.0000	2.48308E-01
500.00	9.9246	0.3837	0.0775	-0.	1.00977E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0693	0.2969	0.2969	37.2286	1.85067E 01
30.00	0.0926	0.3838	0.3838	26.8105	1.47977E 01
50.00	0.1336	0.5074	0.5074	14.7574	9.74764E 00
80.00	0.1878	0.6216	0.6216	6.6017	5.50574E 00
100.00	0.2211	0.6687	0.6687	4.0109	3.87127E 00
150.00	0.3003	0.7210	0.7210	1.2347	1.74232E 00
200.00	0.3830	0.7049	0.7049	0.3763	8.72624E-01
300.00	1.1174	0.5521	0.5251	0.0001	3.00991E-01
500.00	9.1979	0.3941	0.1119	0.0000	1.04891E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0692	0.2987	0.2987	62.0804	3.06176E 01
30.00	0.0925	0.3866	0.3866	44.7281	2.44443E 01
50.00	0.1334	0.5128	0.5128	24.6497	1.60429E 01
80.00	0.1871	0.6323	0.6323	11.0681	8.99355E 00
100.00	0.2200	0.6841	0.6841	6.7545	6.28150E 00
150.00	0.2967	0.7531	0.7531	2.1308	2.75883E 00
200.00	0.3720	0.7608	0.7608	0.7001	1.32965E 00
300.00	0.6296	0.6394	0.6394	0.0251	4.06358E-01
500.00	7.9648	0.4140	0.1736	0.0000	1.12719E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SPHERES 1 0 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0837	0.2632	0.2632	15.6960	6.74721E 00
30.00	0.1118	0.3421	0.3421	11.7050	5.56623E 00
50.00	0.1616	0.4547	0.4547	6.8419	3.88889E 00
80.00	0.2280	0.5566	0.5566	3.2973	2.38783E 00
100.00	0.2694	0.5960	0.5960	2.0873	1.77274E 00
150.00	0.3712	0.6285	0.6285	0.6896	9.13488E-01
200.00	0.4888	0.5961	0.5961	0.2060	5.23788E-01
300.00	1.9027	0.4730	0.4048	0.0000	2.30608E-01
500.00	9.9612	0.3832	0.0893	-0.	1.00790E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0834	0.2682	0.2682	31.4353	1.31967E 01
30.00	0.1114	0.3497	0.3497	23.4667	1.08442E 01
50.00	0.1608	0.4683	0.4683	13.7609	7.50737E 00
80.00	0.2260	0.5818	0.5818	6.6884	4.52930E 00
100.00	0.2660	0.6306	0.6306	4.2765	3.31351E 00
150.00	0.3607	0.6924	0.6924	1.4902	1.62614E 00
200.00	0.4561	0.6927	0.6927	0.5280	8.72156E-01
300.00	0.9429	0.5738	0.5738	0.0060	3.23968E-01
500.00	8.3952	0.4067	0.1639	-0.	1.09789E-01

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0834	0.2699	0.2699	47.1746	1.96461E 01
30.00	0.1113	0.3523	0.3523	35.2256	1.61222E 01
50.00	0.1605	0.4731	0.4731	20.6783	1.11259E 01
80.00	0.2253	0.5908	0.5908	10.0808	6.67076E 00
100.00	0.2649	0.6432	0.6432	6.4653	4.85428E 00
150.00	0.3573	0.7175	0.7175	2.2902	2.33880E 00
200.00	0.4471	0.7345	0.7345	0.8476	1.22052E 00
300.00	0.6861	0.6463	0.6463	0.0756	4.17327E-01
500.00	7.1722	0.4288	0.2273	-0.	1.18788E-01

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0833	0.2713	0.2713	78.6513	3.25450E 01
30.00	0.1112	0.3544	0.3544	58.7519	2.66782E 01
50.00	0.1603	0.4770	0.4770	34.5166	1.83628E 01
80.00	0.2248	0.5982	0.5982	16.8639	1.09537E 01
100.00	0.2640	0.6538	0.6538	10.8427	7.93582E 00
150.00	0.3547	0.7391	0.7391	3.8898	3.76411E 00
200.00	0.4403	0.7726	0.7726	1.4857	1.91726E 00
300.00	0.6275	0.7274	0.7274	0.1996	6.04047E-01
500.00	5.4089	0.4696	0.3289	-0.	1.36785E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0544	0.4739	0.4739	1.3120	3.46024E 00
50.00	0.0847	0.5418	0.5332	0.4317	1.91481E 00
80.00	0.1424	0.5301	0.4794	0.0572	9.47410E-01
100.00	0.2375	0.4922	0.3956	0.0021	6.55837E-01
120.00	0.4292	0.4576	0.3004	0.0000	4.85556E-01
150.00	0.8646	0.4212	0.1873	0.0000	3.42093E-01
200.00	1.9254	0.3899	0.0779	-0.0000	2.29251E-01
300.00	4.9197	0.3723	0.0124	-0.	1.43425E-01
500.00	13.9409	0.3679	0.0004	-0.	8.52008E-02

CRO 20. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0521	0.5122	0.5122	2.7998	6.13316E 00
50.00	0.0782	0.6043	0.6030	1.0264	3.20038E 00
80.00	0.1182	0.6216	0.5987	0.2357	1.42564E 00
100.00	0.1583	0.5860	0.5459	0.0565	9.15962E-01
120.00	0.2563	0.5350	0.4611	0.0019	6.31398E-01
150.00	0.6134	0.4705	0.3155	0.0000	4.06166E-01
200.00	1.6571	0.4106	0.1446	-0.0000	2.47117E-01
300.00	4.7999	0.3756	0.0245	-0.	1.45202E-01
500.00	13.9293	0.3680	0.0008	-0.	8.52329E-02

CRO 30. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0514	0.5274	0.5274	4.2863	8.80608E 00
50.00	0.0760	0.6316	0.6316	1.6272	4.48595E 00
80.00	0.1116	0.6692	0.6545	0.4274	1.90387E 00
100.00	0.1410	0.6443	0.6189	0.1436	1.17609E 00
120.00	0.1917	0.5948	0.5534	0.0240	7.77241E-01
150.00	0.4576	0.5137	0.4088	0.0000	4.70240E-01
200.00	1.4412	0.4302	0.2023	-0.	2.64983E-01
300.00	4.6846	0.3788	0.0363	-0.	1.46978E-01
500.00	13.9197	0.3681	0.0011	-0.	8.52650E-02

CRO 50. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0508	0.5406	0.5406	7.2577	1.41519E 01
50.00	0.0743	0.6566	0.6566	2.8513	7.05708E 00
80.00	0.1068	0.7175	0.7090	0.8170	2.86033E 00
100.00	0.1301	0.7096	0.6946	0.3302	1.69634E 00
120.00	0.1599	0.6728	0.6503	0.1080	1.06893E 00
150.00	0.2850	0.5851	0.5348	0.0014	5.98388E-01
200.00	1.1191	0.4666	0.2971	-0.	3.00714E-01
300.00	4.4660	0.3853	0.0590	0.0000	1.50530E-01
500.00	13.8984	0.3683	0.0019	-0.	8.53292E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRC 10. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0808	0.4253	0.4253	3.0591	4.39186E 00
50.00	0.1201	0.5264	0.5264	1.4256	2.68843E 00
80.00	0.1784	0.5849	0.5741	0.4802	1.43039E 00
100.00	0.2204	0.5856	0.5608	0.2230	9.95934E-01
120.00	0.2752	0.5667	0.5265	0.0834	7.23114E-01
150.00	0.4468	0.5201	0.4425	0.0041	4.80587E-01
200.00	1.2330	0.4527	0.2752	0.0000	2.86475E-01
300.00	4.2654	0.3920	0.0837	0.0000	1.54032E-01
500.00	13.8140	0.3704	0.0064	-0.	8.55916E-02

CRO 20. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0791	0.4467	0.4467	6.2629	8.16191E 00
50.00	0.1156	0.5629	0.5629	3.0401	4.85195E 00
80.00	0.1667	0.6459	0.6421	1.1256	2.44425E 00
100.00	0.2001	0.6629	0.6518	0.5969	1.62970E 00
120.00	0.2366	0.6580	0.6393	0.2980	1.12797E 00
150.00	0.3099	0.6202	0.5882	0.0773	6.94215E-01
200.00	0.7584	0.5242	0.4316	0.0000	3.65315E-01
300.00	3.6319	0.4142	0.1545	0.0000	1.66925E-01
500.00	13.6404	0.3721	0.0126	-0.	8.61358E-02

CRC 30. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0785	0.4546	0.4546	9.4654	1.19319E 01
50.00	0.1142	0.5771	0.5771	4.6528	7.01548E 00
80.00	0.1629	0.6715	0.6694	1.7756	3.45811E 00
100.00	0.1939	0.6978	0.6907	0.9766	2.26346E 00
120.00	0.2259	0.7026	0.6904	0.5219	1.53282E 00
150.00	0.2820	0.6779	0.6573	0.1778	9.07843E-01
200.00	0.5209	0.5820	0.5315	0.0025	4.44155E-01
300.00	3.1296	0.4352	0.2151	0.0000	1.79818E-01
500.00	13.4688	0.3738	0.0188	0.0000	8.66800E-02

CRO 50. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0781	0.4612	0.4612	15.8725	1.94720E 01
50.00	0.1130	0.5892	0.5892	7.8778	1.13425E 01
80.00	0.1599	0.6945	0.6935	3.0788	5.48583E 00
100.00	0.1890	0.7302	0.7261	1.7395	3.53098E 00
120.00	0.2180	0.7461	0.7389	0.9738	2.34253E 00
150.00	0.2641	0.7396	0.7274	0.3873	1.33510E 00
200.00	0.3786	0.6645	0.6406	0.0449	6.01835E-01
300.00	2.3938	0.4740	0.3135	0.0000	2.05605E-01
500.00	13.1369	0.3771	0.0310	-0.	8.77685E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1036	0.3890	0.3890	4.6954	4.96945E 00
50.00	0.1517	0.4986	0.4986	2.5085	3.23662E 00
80.00	0.2213	0.5831	0.5831	1.0159	1.83523E 00
100.00	0.2656	0.6063	0.5974	0.5903	1.31046E 00
120.00	0.3128	0.6107	0.5923	0.3299	9.63637E-01
150.00	0.4001	0.5915	0.5580	0.1140	6.39435E-01
200.00	0.7632	0.5244	0.4441	0.0016	3.65552E-01
300.00	3.3312	0.4265	0.1954	-0.	1.74294E-01
500.00	13.3192	0.3758	0.0251	-0.	8.71676E-02

CRO 20. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1020	0.4038	0.4038	9.5188	9.40576E 00
50.00	0.1481	0.5239	0.5239	5.1870	6.01074E 00
80.00	0.2112	0.6261	0.6261	2.2417	3.29089E 00
100.00	0.2508	0.6624	0.6590	1.3488	2.28487E 00
120.00	0.2900	0.6802	0.6720	0.8176	1.62750E 00
150.00	0.3527	0.6801	0.6642	0.3653	1.02296E 00
200.00	0.5007	0.6266	0.5951	0.0589	5.28191E-01
300.00	2.3311	0.4780	0.3269	-0.	2.08350E-01
500.00	12.6726	0.3824	0.0491	-0.	8.93598E-02

CRO 30. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1015	0.4091	0.4091	14.3408	1.38421E 01
50.00	0.1469	0.5333	0.5333	7.8647	8.78486E 00
80.00	0.2080	0.6428	0.6428	3.4663	4.74655E 00
100.00	0.2461	0.6852	0.6833	2.1110	3.25928E 00
120.00	0.2829	0.7100	0.7048	1.3095	2.29137E 00
150.00	0.3392	0.7215	0.7110	0.6238	1.40648E 00
200.00	0.4515	0.6863	0.6661	0.1468	6.90829E-01
300.00	1.7223	0.5228	0.4215	0.0000	2.42407E-01
500.00	12.0732	0.3890	0.0718	-0.	9.15521E-02

CRO 50. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1011	0.4136	0.4136	23.9849	2.27147E 01
50.00	0.1460	0.5411	0.5411	13.2218	1.43331E 01
80.00	0.2056	0.6574	0.6574	5.9126	7.65786E 00
100.00	0.2423	0.7053	0.7043	3.6383	5.20809E 00
120.00	0.2773	0.7370	0.7340	2.2961	3.61910E 00
150.00	0.3292	0.7608	0.7546	1.1442	2.17352E 00
200.00	0.4213	0.7501	0.7381	0.3315	1.01611E 00
300.00	1.0508	0.5960	0.5483	0.0002	3.10519E-01
500.00	10.9946	0.4018	0.1143	-0.	9.59366E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRC 10. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1238	0.3619	0.3619	6.2133	5.37631E 00
50.00	0.1803	0.4738	0.4738	3.5798	3.65237E 00
80.00	0.2589	0.5699	0.5699	1.6542	2.17268E 00
100.00	0.3107	0.6047	0.6031	1.0056	1.58774E 00
120.00	0.3602	0.6226	0.6137	0.6358	1.18701E 00
150.00	0.4407	0.6248	0.6052	0.3001	7.98039E-01
200.00	0.6336	0.5837	0.5426	0.0524	4.53642E-01
300.00	2.4892	0.4685	0.3103	0.0000	2.01632E-01
500.00	12.4526	0.3850	0.0584	-0.	9.01458E-02

CRO 20. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1224	0.3733	0.3733	12.5434	1.02770E 01
50.00	0.1771	0.4931	0.4931	7.3168	6.88507E 00
80.00	0.2508	0.6029	0.6029	3.5050	3.99333E 00
100.00	0.2976	0.6477	0.6477	2.1938	2.85997E 00
120.00	0.3419	0.6766	0.6730	1.4403	2.08960E 00
150.00	0.4085	0.6963	0.6871	0.7554	1.35010E 00
200.00	0.5333	0.6809	0.6618	0.2265	7.09199E-01
300.00	1.4503	0.5484	0.4736	0.0001	2.64194E-01
500.00	11.1175	0.4005	0.1103	-0.	9.54060E-02

CRC 30. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1219	0.3773	0.3773	18.8730	1.51778E 01
50.00	0.1761	0.5000	0.5000	11.0537	1.01178E 01
80.00	0.2482	0.6152	0.6152	5.3550	5.81398E 00
100.00	0.2932	0.6643	0.6643	3.3966	4.13221E 00
120.00	0.3359	0.6982	0.6961	2.2483	2.99219E 00
150.00	0.3985	0.7268	0.7209	1.2146	1.90215E 00
200.00	0.5078	0.7283	0.7156	0.4103	9.64757E-01
300.00	0.9833	0.6106	0.5723	0.0055	3.26757E-01
500.00	9.9857	0.4154	0.1568	-0.	1.00666E-01

CRO 50. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1215	0.3806	0.3806	31.5322	2.49792E 01
50.00	0.1753	0.5058	0.5058	18.5279	1.65832E 01
80.00	0.2462	0.6256	0.6256	9.0557	9.45529E 00
100.00	0.2898	0.6786	0.6786	5.8007	6.67669E 00
120.00	0.3312	0.7172	0.7161	3.8660	4.79738E 00
150.00	0.3908	0.7544	0.7509	2.1355	3.00626E 00
200.00	0.4896	0.7745	0.7669	0.7810	1.47587E 00
300.00	0.7558	0.6941	0.6753	0.0587	4.51881E-01
500.00	8.1853	0.4437	0.2365	-0.0000	1.11187E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0527	0.4766	0.4766	1.6384	3.33443E 00
50.00	0.0808	0.5380	0.5380	0.5390	1.83696E 00
80.00	0.1484	0.5191	0.5042	0.0474	9.09264E-01
100.00	0.2546	0.4813	0.4110	0.0012	6.32027E-01
120.00	0.4568	0.4486	0.3099	0.0000	4.70646E-01
150.00	0.9036	0.4151	0.1915	0.0000	3.34662E-01
200.00	1.9659	0.3871	0.0787	-0.	2.26890E-01
300.00	4.9361	0.3718	0.0124	0.0000	1.43176E-01
500.00	13.9409	0.3679	0.0004	0.0000	8.51976E-02

CRO 20. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0513	0.5147	0.5147	3.4072	6.00735E 00
50.00	0.0760	0.6044	0.6044	1.2405	3.12253E 00
80.00	0.1186	0.6161	0.6161	0.2357	1.38750E 00
100.00	0.1620	0.5790	0.5630	0.0504	8.92152E-01
120.00	0.2679	0.5279	0.4725	0.0013	6.16489E-01
150.00	0.6365	0.4652	0.3214	0.0000	3.98736E-01
200.00	1.6892	0.4079	0.1460	-0.	2.44756E-01
300.00	4.8163	0.3751	0.0245	0.0000	1.44952E-01
500.00	13.9312	0.3680	0.0008	0.0000	8.52297E-02

CRO 30. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0508	0.5293	0.5293	5.1760	8.68027E 00
50.00	0.0745	0.6322	0.6322	1.9400	4.40810E 00
80.00	0.1110	0.6661	0.6661	0.4451	1.86573E 00
100.00	0.1426	0.6398	0.6339	0.1368	1.15228E 00
120.00	0.1958	0.5894	0.5655	0.0210	7.62332E-01
150.00	0.4724	0.5090	0.4153	0.0000	4.62810E-01
200.00	1.4673	0.4277	0.2041	-0.	2.62622E-01
300.00	4.7005	0.3784	0.0363	0.0000	1.46728E-01
500.00	13.9197	0.3681	0.0011	-0.	8.52618E-02

CRO 50. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0505	0.5420	0.5420	8.7110	1.40261E 01
50.00	0.0734	0.6573	0.6573	3.3371	6.97924E 00
80.00	0.1062	0.7162	0.7162	0.8579	2.82219E 00
100.00	0.1308	0.7072	0.7061	0.3232	1.67253E 00
120.00	0.1612	0.6697	0.6607	0.1041	1.05402E 00
150.00	0.2917	0.5815	0.5417	0.0011	5.90958E-01
200.00	1.1369	0.4643	0.2994	-0.	2.98353E-01
300.00	4.4809	0.3848	0.0591	0.0000	1.50281E-01
500.00	13.9004	0.3683	0.0019	-0.	8.53260E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRG 10. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0795	0.4284	0.4284	3.7847	4.28158E 00
50.00	0.1168	0.5285	0.5285	1.7554	2.61016E 00
80.00	0.1728	0.5816	0.5816	0.5664	1.38344E 00
100.00	0.2191	0.5787	0.5787	0.2337	9.62459E-01
120.00	0.2830	0.5581	0.5486	0.0740	6.99207E-01
150.00	0.4717	0.5111	0.4570	0.0027	4.66114E-01
200.00	1.2893	0.4463	0.2814	-0.	2.80154E-01
300.00	4.3349	0.3898	0.0844	0.0000	1.52793E-01
500.00	13.8311	0.3703	0.0064	0.0000	8.55396E-02

CRG 20. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0785	0.4486	0.4486	7.6786	8.05162E 00
50.00	0.1140	0.5648	0.5648	3.6513	4.77368E 00
80.00	0.1635	0.6455	0.6455	1.2992	2.39729E 00
100.00	0.1976	0.6606	0.6606	0.6480	1.59622E 00
120.00	0.2373	0.6541	0.6541	0.2975	1.10406E 00
150.00	0.3146	0.6149	0.6027	0.0719	6.79742E-01
200.00	0.7852	0.5190	0.4392	0.0000	3.58994E-01
300.00	3.6862	0.4121	0.1556	0.0000	1.65686E-01
500.00	13.6557	0.3720	0.0126	0.0000	8.60838E-02

CRC 30. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0781	0.4560	0.4560	11.5724	1.18217E 01
50.00	0.1131	0.5785	0.5785	5.5476	6.93721E 00
80.00	0.1607	0.6717	0.6717	2.0301	3.41115E 00
100.00	0.1920	0.6968	0.6968	1.0572	2.22998E 00
120.00	0.2254	0.7004	0.7004	0.5358	1.50891E 00
150.00	0.2842	0.6747	0.6696	0.1720	8.93370E-01
200.00	0.5343	0.5778	0.5394	0.0020	4.37834E-01
300.00	3.1729	0.4332	0.2166	0.0000	1.78580E-01
500.00	13.4840	0.3736	0.0188	0.0000	8.66280E-02

CRG 50. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0778	0.4621	0.4621	19.3586	1.93617E 01
50.00	0.1124	0.5901	0.5901	9.3375	1.12643E 01
80.00	0.1586	0.6948	0.6948	3.4908	5.43887E 00
100.00	0.1878	0.7299	0.7299	1.8737	3.49750E 00
120.00	0.2174	0.7452	0.7452	1.0072	2.31862E 00
150.00	0.2651	0.7380	0.7365	0.3814	1.32063E 00
200.00	0.3814	0.6619	0.6480	0.0429	5.95515E-01
300.00	2.4228	0.4722	0.3154	0.0000	2.04366E-01
500.00	13.1521	0.3770	0.0310	0.0000	8.77164E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1024	0.3916	0.3916	5.8257	4.87045E 00
50.00	0.1490	0.5013	0.5013	3.0669	3.16184E 00
80.00	0.2141	0.5834	0.5834	1.2521	1.78603E 00
100.00	0.2585	0.6040	0.6040	0.6875	1.27318E 00
120.00	0.3084	0.6058	0.6058	0.3583	9.35356E-01
150.00	0.4086	0.5843	0.5785	0.1046	6.20709E-01
200.00	0.8020	0.5166	0.4563	0.0010	3.56081E-01
300.00	3.4278	0.4224	0.1982	-0.0000	1.71824E-01
500.00	13.3735	0.3752	0.0252	-0.	8.69880E-02

CRO 20. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1014	0.4053	0.4053	11.7479	9.30676E 00
50.00	0.1468	0.5257	0.5257	6.2609	5.93596E 00
80.00	0.2078	0.6271	0.6271	2.6587	3.24169E 00
100.00	0.2469	0.6622	0.6622	1.5410	2.24759E 00
120.00	0.2866	0.6789	0.6789	0.8916	1.59922E 00
150.00	0.3531	0.6770	0.6770	0.3677	1.00423E 00
200.00	0.5076	0.6220	0.6075	0.0548	5.18719E-01
300.00	2.3874	0.4745	0.3308	-0.0000	2.05880E-01
500.00	12.7241	0.3819	0.0492	-0.	8.91803E-02

CRO 30. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1011	0.4102	0.4102	17.6703	1.37431E 01
50.00	0.1461	0.5346	0.5346	9.4556	8.71008E 00
80.00	0.2058	0.6438	0.6438	4.0649	4.69734E 00
100.00	0.2433	0.6854	0.6854	2.3925	3.22200E 00
120.00	0.2804	0.7095	0.7095	1.4216	2.26309E 00
150.00	0.3385	0.7198	0.7198	0.6392	1.38775E 00
200.00	0.4545	0.6834	0.6766	0.1424	6.81358E-01
300.00	1.7578	0.5197	0.4258	0.0000	2.39937E-01
500.00	12.1204	0.3885	0.0720	0.0000	9.13725E-02

CRO 50. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1009	0.4143	0.4143	29.5129	2.26157E 01
50.00	0.1455	0.5420	0.5420	15.8420	1.42583E 01
80.00	0.2043	0.6581	0.6581	6.8749	7.60866E 00
100.00	0.2406	0.7056	0.7056	4.0947	5.17081E 00
120.00	0.2758	0.7369	0.7369	2.4801	3.59081E 00
150.00	0.3284	0.7602	0.7602	1.1789	2.15479E 00
200.00	0.4227	0.7487	0.7459	0.3270	1.00663E 00
300.00	1.0674	0.5937	0.5527	0.0001	3.08049E-01
500.00	11.0361	0.4013	0.1145	0.0000	9.57570E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.100C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
3C.00	0.1227	0.3641	0.3641	7.7329	5.28559E 00
5C.00	0.1780	0.4763	0.4763	4.3805	3.58124E 00
8C.00	0.2531	0.5715	0.5715	2.0067	2.12321E 00
1CC.00	0.3018	0.6046	0.6046	1.2139	1.54886E 00
12C.00	0.3520	0.6204	0.6204	0.7292	1.15643E 00
15C.00	0.4379	0.6199	0.6199	0.3142	7.76670E-01
20C.00	0.6488	0.5767	0.5596	0.0465	4.41833E-01
3CC.00	2.5820	0.4631	0.3160	0.0000	1.97971E-01
5CC.00	12.5556	0.3839	0.0586	0.0000	8.97750E-02

CRO 20. EM 0.100C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
3C.00	0.1218	0.3746	0.3746	15.5536	1.01863E 01
5C.00	0.1760	0.4946	0.4946	8.8799	6.81394E 00
8C.00	0.2480	0.6042	0.6042	4.1593	3.94386E 00
1CC.00	0.2930	0.6484	0.6484	2.5862	2.82110E 00
12C.00	0.3373	0.6764	0.6764	1.6250	2.05902E 00
15C.00	0.4051	0.6948	0.6948	0.8055	1.32873E 00
2CC.00	0.5374	0.6777	0.6749	0.2196	6.97390E-01
3CC.00	1.4912	0.5442	0.4802	0.0000	2.60534E-01
5CC.00	11.2052	0.3994	0.1107	0.0000	9.50351E-02

CRC 30. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
3C.00	0.1215	0.3782	0.3782	23.3762	1.50870E 01
5C.00	0.1753	0.5012	0.5012	13.3785	1.00466E 01
8C.00	0.2464	0.6162	0.6162	6.3116	5.76452E 00
1CC.00	0.2903	0.6650	0.6650	3.9565	4.09333E 00
12C.00	0.3328	0.6984	0.6984	2.5188	2.96161E 00
15C.00	0.3960	0.7261	0.7261	1.2934	1.88078E 00
2CC.00	0.5102	0.7265	0.7259	0.4032	9.52948E-01
3CC.00	1.0005	0.6074	0.5791	0.0047	3.23096E-01
5CC.00	10.0608	0.4144	0.1573	-0.	1.00295E-01

CRO 50. EM 0.1CCC EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
3C.00	0.1213	0.3812	0.3812	39.0176	2.48885E 01
5C.00	0.1748	0.5065	0.5065	22.3783	1.65120E 01
8C.00	0.2451	0.6264	0.6264	10.6158	9.40582E 00
1CC.00	0.2881	0.6792	0.6792	6.6977	6.63781E 00
12C.00	0.3293	0.7174	0.7174	4.3062	4.76680E 00
15C.00	0.3892	0.7542	0.7542	2.2664	2.98490E 00
2CC.00	0.4903	0.7737	0.7737	0.7789	1.46406E 00
3CC.00	0.7594	0.6922	0.6813	0.0570	4.48220E-01
5CC.00	8.2402	0.4427	0.2373	-0.	1.10816E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0514	0.4867	0.4867	2.2082	3.18205E 00
50.00	0.0764	0.5477	0.5477	0.7595	1.73043E 00
80.00	0.1225	0.5116	0.5116	0.1223	8.46685E-01
100.00	0.2931	0.4603	0.4422	0.0003	5.87997E-01
120.00	0.5237	0.4291	0.3318	0.0000	4.39593E-01
150.00	1.0123	0.3993	0.2026	-0.	3.16189E-01
200.00	2.1095	0.3776	0.0816	-0.	2.19032E-01
300.00	5.0403	0.3691	0.0125	-0.	1.41699E-01
500.00	13.9602	0.3677	0.0004	0.0000	8.51387E-02

CRO 20. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0506	0.5212	0.5212	4.5059	5.85497E 00
50.00	0.0740	0.6126	0.6126	1.6262	3.01600E 00
80.00	0.1092	0.6198	0.6198	0.3671	1.32492E 00
100.00	0.1414	0.5727	0.5727	0.1053	8.48122E-01
120.00	0.2959	0.5126	0.4980	0.0005	5.85436E-01
150.00	0.6999	0.4514	0.3370	-0.	3.80263E-01
200.00	1.8031	0.3989	0.1508	-0.	2.36897E-01
300.00	4.9158	0.3723	0.0248	-0.	1.43476E-01
500.00	13.9505	0.3678	0.0008	0.0000	8.51708E-02

CRO 30. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0504	0.5341	0.5341	6.8033	8.52790E 00
50.00	0.0732	0.6389	0.6389	2.4919	4.30156E 00
80.00	0.1058	0.6714	0.6714	0.6080	1.80315E 00
100.00	0.1308	0.6394	0.6394	0.2189	1.10825E 00
120.00	0.1737	0.5802	0.5802	0.0451	7.31278E-01
150.00	0.5126	0.4970	0.4326	0.0000	4.44337E-01
200.00	1.5592	0.4191	0.2104	0.0000	2.54763E-01
300.00	4.7965	0.3756	0.0367	-0.	1.45252E-01
500.00	13.9390	0.3679	0.0011	0.0000	8.52029E-02

CRO 50. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0502	0.5450	0.5450	11.3985	1.38737E 01
50.00	0.0727	0.6619	0.6619	4.2230	6.87270E 00
80.00	0.1034	0.7212	0.7212	1.0884	2.75961E 00
100.00	0.1246	0.7099	0.7099	0.4409	1.62850E 00
120.00	0.1503	0.6678	0.6678	0.1568	1.02296E 00
150.00	0.3098	0.5721	0.5594	0.0006	5.72485E-01
200.00	1.1992	0.4566	0.3075	-0.	2.90495E-01
300.00	4.5702	0.3821	0.0597	0.0000	1.48805E-01
500.00	13.9197	0.3681	0.0019	-0.	8.52671E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0785	0.4350	0.4350	5.0996	4.15491E 00
50.00	0.1142	0.5375	0.5375	2.3332	2.51207E 00
80.00	0.1644	0.5902	0.5902	0.7831	1.31642E 00
100.00	0.2000	0.5832	0.5832	0.3718	9.10395E-01
120.00	0.2436	0.5542	0.5542	0.1567	6.58704E-01
150.00	0.5292	0.4929	0.4869	0.0010	4.38259E-01
200.00	1.4396	0.4305	0.2974	-0.	2.65139E-01
300.00	4.5992	0.3818	0.0869	0.0000	1.48338E-01
500.00	13.9685	0.3690	0.0064	0.0000	8.51176E-02

CRO 20. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0780	0.4524	0.4524	10.2749	7.92495E 00
50.00	0.1128	0.5705	0.5705	4.7620	4.67560E 00
80.00	0.1598	0.6526	0.6526	1.6757	2.33028E 00
100.00	0.1903	0.6671	0.6671	0.8583	1.54416E 00
120.00	0.2224	0.6580	0.6580	0.4329	1.06356E 00
150.00	0.2831	0.6110	0.6110	0.1289	6.51887E-01
200.00	0.8552	0.5063	0.4584	0.0000	3.43979E-01
300.00	3.8931	0.4045	0.1599	0.0000	1.61231E-01
500.00	13.7911	0.3706	0.0127	0.0000	8.56618E-02

CRO 30. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0778	0.4587	0.4587	15.4496	1.16950E 01
50.00	0.1123	0.5826	0.5826	7.1906	6.83912E 00
80.00	0.1583	0.6772	0.6772	2.5676	3.34414E 00
100.00	0.1874	0.7024	0.7024	1.3433	2.17792E 00
120.00	0.2169	0.7051	0.7051	0.7059	1.46841E 00
150.00	0.2659	0.6750	0.6750	0.2521	8.65515E-01
200.00	0.5697	0.5676	0.5589	0.0011	4.22819E-01
300.00	3.3377	0.4261	0.2221	0.0000	1.74124E-01
500.00	13.6175	0.3723	0.0189	0.0000	8.62060E-02

CRO 50. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0776	0.4638	0.4638	25.7985	1.92351E 01
50.00	0.1119	0.5927	0.5927	12.0483	1.11662E 01
80.00	0.1572	0.6986	0.6986	4.3505	5.37186E 00
100.00	0.1853	0.7341	0.7341	2.3120	3.44544E 00
120.00	0.2127	0.7492	0.7492	1.2509	2.27812E 00
150.00	0.2553	0.7404	0.7404	0.4943	1.29277E 00
200.00	0.3557	0.6574	0.6574	0.0674	5.80499E-01
300.00	2.5321	0.4658	0.3225	0.0000	1.99911E-01
500.00	13.2799	0.3757	0.0312	0.0000	8.72944E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1015	0.3964	0.3964	7.8894	4.75946E 00
50.00	0.1469	0.5084	0.5084	4.0731	3.07180E 00
80.00	0.2084	0.5922	0.5922	1.6525	1.72013E 00
100.00	0.2481	0.6123	0.6123	0.9282	1.21960E 00
120.00	0.2891	0.6120	0.6120	0.5183	8.91750E-01
150.00	0.3606	0.5829	0.5829	0.1969	5.88648E-01
200.00	0.8936	0.5001	0.4827	0.0004	3.36798E-01
300.00	3.7285	0.4107	0.2067	-0.	1.64746E-01
500.00	13.6882	0.3721	0.0255	-0.	8.59834E-02

CRO 20. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1010	0.4080	0.4080	15.8458	9.19577E 00
50.00	0.1458	0.5299	0.5299	8.2320	5.84592E 00
80.00	0.2051	0.6329	0.6329	3.4083	3.17578E 00
100.00	0.2422	0.6686	0.6686	1.9657	2.19400E 00
120.00	0.2786	0.6851	0.6851	1.1499	1.55562E 00
150.00	0.3348	0.6811	0.6811	0.5112	9.72169E-01
200.00	0.4590	0.6171	0.6171	0.0982	4.99437E-01
300.00	2.5604	0.4643	0.3426	-0.	1.98803E-01
500.00	13.0159	0.3788	0.0497	-0.	8.81757E-02

CRO 30. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1008	0.4121	0.4121	23.8013	1.36321E 01
50.00	0.1454	0.5375	0.5375	12.3932	8.62004E 00
80.00	0.2041	0.6480	0.6480	5.1641	4.63144E 00
100.00	0.2403	0.6902	0.6902	3.0028	3.16841E 00
120.00	0.2754	0.7146	0.7146	1.7798	2.21948E 00
150.00	0.3277	0.7242	0.7242	0.8230	1.35569E 00
200.00	0.4268	0.6828	0.6828	0.2057	6.62075E-01
300.00	1.8662	0.5108	0.4388	0.0000	2.32859E-01
500.00	12.3922	0.3855	0.0728	0.0000	9.03679E-02

CRO 50. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1007	0.4154	0.4154	39.7132	2.25047E 01
50.00	0.1451	0.5438	0.5438	20.7149	1.41683E 01
80.00	0.2032	0.6608	0.6608	8.6747	7.54275E 00
100.00	0.2388	0.7088	0.7088	5.0768	5.11722E 00
120.00	0.2728	0.7405	0.7405	3.0400	3.54721E 00
150.00	0.3225	0.7637	0.7637	1.4451	2.12273E 00
200.00	0.4080	0.7503	0.7503	0.4157	9.87352E-01
300.00	1.1177	0.5869	0.5657	0.0001	3.00972E-01
500.00	11.2721	0.3984	0.1157	0.0000	9.47524E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 1) 1 1 1 0 200

CRC 10. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1219	0.3680	0.3680	10.5149	5.18534E 00
50.00	0.1761	0.4821	0.4821	5.8378	3.49761E 00
80.00	0.2484	0.5794	0.5794	2.6282	2.05942E 00
100.00	0.2938	0.6129	0.6129	1.5925	1.49556E 00
120.00	0.3388	0.6283	0.6283	0.9746	1.11187E 00
150.00	0.4089	0.6250	0.6250	0.4615	7.42560E-01
200.00	0.5653	0.5699	0.5699	0.0989	4.19917E-01
300.00	2.8383	0.4494	0.3313	0.0000	1.88822E-01
500.00	13.0344	0.3789	0.0597	0.0000	8.81139E-02

CRC 20. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1214	0.3766	0.3766	21.0918	1.00861E 01
50.00	0.1751	0.4979	0.4979	11.7573	6.73031E 00
80.00	0.2458	0.6089	0.6089	5.3549	3.88007E 00
100.00	0.2893	0.6538	0.6538	3.2905	2.76780E 00
120.00	0.3313	0.6822	0.6822	2.0589	2.01446E 00
150.00	0.3934	0.7004	0.7004	1.0363	1.29462E 00
200.00	0.5042	0.6793	0.6793	0.3179	6.75474E-01
300.00	1.6016	0.5336	0.4977	0.0000	2.51385E-01
500.00	11.6077	0.3946	0.1127	0.0000	9.33741E-02

CRC 30. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1213	0.3796	0.3796	31.6688	1.49868E 01
50.00	0.1747	0.5034	0.5034	17.6770	9.96300E 00
80.00	0.2449	0.6196	0.6196	8.0821	5.70072E 00
100.00	0.2878	0.6690	0.6690	4.9873	4.04003E 00
120.00	0.3289	0.7028	0.7028	3.1426	2.91705E 00
150.00	0.3886	0.7308	0.7308	1.6096	1.84667E 00
200.00	0.4896	0.7294	0.7294	0.5327	9.31032E-01
300.00	1.0481	0.5991	0.5966	0.0032	3.13947E-01
500.00	10.4022	0.4097	0.1600	0.0000	9.86342E-02

CRC 50. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1211	0.3821	0.3821	52.8201	2.47882E 01
50.00	0.1744	0.5079	0.5079	29.5150	1.64284E 01
80.00	0.2442	0.6285	0.6285	13.5353	9.34203E 00
100.00	0.2867	0.6818	0.6818	8.3826	6.58451E 00
120.00	0.3270	0.7204	0.7204	5.3089	4.72223E 00
150.00	0.3850	0.7575	0.7575	2.7558	2.95078E 00
200.00	0.4790	0.7765	0.7765	0.9609	1.44215E 00
300.00	0.7195	0.6891	0.6891	0.0811	4.39071E-01
500.00	8.4929	0.4384	0.2410	0.0000	1.09155E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0568	0.4854	0.4854	1.1989	3.28697E 00
50.00	0.0881	0.5484	0.5368	0.3823	1.80169E 00
80.00	0.1519	0.5301	0.4744	0.0410	8.89795E-01
100.00	0.2663	0.4916	0.3848	0.0008	6.17430E-01
120.00	0.4812	0.4582	0.2904	0.0000	4.58603E-01
150.00	0.9605	0.4235	0.1803	-0.	3.24576E-01
200.00	2.1187	0.3936	0.0750	0.0000	2.18548E-01
300.00	5.3830	0.3767	0.0120	-0.	1.37106E-01
500.00	15.2380	0.3723	0.0004	-0.0000	8.14937E-02

CRO 20. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0542	0.5256	0.5256	2.5798	5.80468E 00
50.00	0.0809	0.6134	0.6105	0.9269	2.99388E 00
80.00	0.1230	0.6231	0.5982	0.1973	1.32836E 00
100.00	0.1684	0.5838	0.5403	0.0395	8.55228E-01
120.00	0.2898	0.5325	0.4498	0.0006	5.91768E-01
150.00	0.6895	0.4706	0.3056	-0.	3.83106E-01
200.00	1.8334	0.4134	0.1395	0.0000	2.34931E-01
300.00	5.2565	0.3799	0.0237	-0.	1.38753E-01
500.00	15.2264	0.3724	0.0007	-0.0000	8.15241E-02

CRO 30. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0534	0.5417	0.5417	3.9584	8.32239E 00
50.00	0.0786	0.6420	0.6409	1.4782	4.18606E 00
80.00	0.1154	0.6723	0.6563	0.3690	1.76693E 00
100.00	0.1471	0.6431	0.6159	0.1147	1.09303E 00
120.00	0.2081	0.5911	0.5456	0.0135	7.24932E-01
150.00	0.5188	0.5121	0.3976	0.0000	4.41635E-01
200.00	1.6021	0.4322	0.1956	0.0000	2.51314E-01
300.00	5.1340	0.3831	0.0352	-0.	1.40401E-01
500.00	15.2148	0.3725	0.0011	-0.	8.15545E-02

CRO 50. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0527	0.5557	0.5557	6.7157	1.33578E 01
50.00	0.0767	0.6683	0.6681	2.5845	6.57044E 00
80.00	0.1099	0.7227	0.7134	0.7188	2.64406E 00
100.00	0.1343	0.7104	0.6946	0.2803	1.56862E 00
120.00	0.1668	0.6701	0.6462	0.0837	9.91260E-01
150.00	0.3249	0.5810	0.5237	0.0003	5.58694E-01
200.00	1.2539	0.4672	0.2884	0.0000	2.84080E-01
300.00	4.9004	0.3893	0.0573	-0.	1.43696E-01
500.00	15.1917	0.3727	0.0019	-0.0000	8.16153E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0843	0.4389	0.4389	2.8584	4.19939E 00
50.00	0.1250	0.5377	0.5377	1.2944	2.53845E 00
80.00	0.1852	0.5909	0.5778	0.4232	1.33950E 00
100.00	0.2299	0.5879	0.5605	0.1872	9.31404E-01
120.00	0.2911	0.5662	0.5224	0.0628	6.76710E-01
150.00	0.5009	0.5183	0.4319	0.0016	4.51143E-01
200.00	1.3807	0.4535	0.2659	-0.	2.70729E-01
300.00	4.6950	0.3956	0.0806	-0.	1.46815E-01
500.00	15.1091	0.3749	0.0062	-0.	8.18421E-02

CRC 20. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0824	0.4615	0.4615	5.8667	7.78805E 00
50.00	0.1200	0.5762	0.5762	2.7835	4.56549E 00
80.00	0.1722	0.6544	0.6494	1.0110	2.27639E 00
100.00	0.2068	0.6679	0.6555	0.5234	1.51394E 00
120.00	0.2452	0.6596	0.6395	0.2523	1.04758E 00
150.00	0.3267	0.6177	0.5834	0.0570	6.46322E-01
200.00	0.8615	0.5221	0.4201	0.0000	3.42726E-01
300.00	4.0200	0.4169	0.1493	-0.	1.58655E-01
500.00	14.9221	0.3765	0.0123	-0.	8.23501E-02

CRC 30. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0817	0.4699	0.4699	8.8751	1.13767E 01
50.00	0.1183	0.5910	0.5910	4.2721	6.59253E 00
80.00	0.1681	0.6813	0.6784	1.6040	3.21328E 00
100.00	0.1998	0.7043	0.6963	0.8664	2.09648E 00
120.00	0.2330	0.7059	0.6927	0.4527	1.41845E 00
150.00	0.2927	0.6767	0.6549	0.1448	8.41500E-01
200.00	0.5909	0.5780	0.5205	0.0007	4.14722E-01
300.00	3.4811	0.4371	0.2083	0.0000	1.70494E-01
500.00	14.7390	0.3782	0.0184	-0.	8.28581E-02

CRC 50. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0813	0.4769	0.4769	14.8908	1.85540E 01
50.00	0.1171	0.6039	0.6039	7.2455	1.06466E 01
80.00	0.1648	0.7056	0.7041	2.7924	5.08706E 00
100.00	0.1945	0.7384	0.7338	1.5557	3.26155E 00
120.00	0.2241	0.7514	0.7436	0.8581	2.16019E 00
150.00	0.2718	0.7406	0.7277	0.3308	1.23186E 00
200.00	0.4006	0.6600	0.6343	0.0302	5.58714E-01
300.00	2.6840	0.4744	0.3049	-0.	1.94173E-01
500.00	14.3843	0.3814	0.0303	-0.0000	8.38742E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1081	0.4030	0.4030	4.4270	4.77296E 00
50.00	0.1578	0.5118	0.5118	2.3124	3.06784E 00
80.00	0.2297	0.5926	0.5915	0.9141	1.72091E 00
100.00	0.2752	0.6127	0.6019	0.5229	1.22467E 00
120.00	0.3249	0.6141	0.5936	0.2833	8.99318E-01
150.00	0.4204	0.5910	0.5547	0.0892	5.97086E-01
200.00	0.8624	0.5223	0.4328	0.0005	3.42947E-01
300.00	3.7033	0.4285	0.1885	-0.	1.65304E-01
500.00	14.5869	0.3801	0.0244	-0.0000	8.32921E-02

CRO 20. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1064	0.4187	0.4187	8.9870	9.02087E 00
50.00	0.1538	0.5386	0.5386	4.8004	5.68354E 00
80.00	0.2186	0.6376	0.6376	2.0257	3.07369E 00
100.00	0.2589	0.6713	0.6669	1.2136	2.12462E 00
120.00	0.2993	0.6864	0.6770	0.7233	1.50979E 00
150.00	0.3646	0.6820	0.6650	0.3125	9.48303E-01
200.00	0.5301	0.6234	0.5894	0.0413	4.91465E-01
300.00	2.6218	0.4779	0.3172	-0.	1.96461E-01
500.00	13.9014	0.3866	0.0476	-0.0000	8.53231E-02

CRO 30. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1058	0.4244	0.4244	13.5468	1.32688E 01
50.00	0.1525	0.5484	0.5484	7.2887	8.29924E 00
80.00	0.2151	0.6553	0.6553	3.1441	4.42646E 00
100.00	0.2537	0.6953	0.6927	1.9080	3.02458E 00
120.00	0.2914	0.7176	0.7117	1.1678	2.12027E 00
150.00	0.3493	0.7252	0.7140	0.5440	1.29952E 00
200.00	0.4688	0.6843	0.6630	0.1177	6.39982E-01
300.00	1.9532	0.5209	0.4107	-0.	2.27619E-01
500.00	13.2619	0.3929	0.0698	-0.0000	8.73541E-02

CRO 50. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1054	0.4291	0.4291	22.6660	2.17646E 01
50.00	0.1515	0.5568	0.5568	12.2636	1.35306E 01
80.00	0.2123	0.6707	0.6707	5.3799	7.13202E 00
100.00	0.2496	0.7166	0.7152	3.2998	4.82449E 00
120.00	0.2852	0.7461	0.7426	2.0601	3.34121E 00
150.00	0.3380	0.7665	0.7599	1.0102	2.00195E 00
200.00	0.4333	0.7503	0.7377	0.2812	9.37016E-01
300.00	1.2039	0.5918	0.5373	0.0000	2.89934E-01
500.00	12.1089	0.4053	0.1111	-0.0000	9.14162E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1293	0.3759	0.3759	5.8905	5.18043E 00
50.00	0.1877	0.4878	0.4878	3.3263	3.47299E 00
80.00	0.2699	0.5813	0.5813	1.4972	2.04155E 00
100.00	0.3215	0.6136	0.6104	0.9079	1.48520E 00
120.00	0.3729	0.6288	0.6183	0.5632	1.10746E 00
150.00	0.4576	0.6273	0.6057	0.2556	7.43578E-01
200.00	0.6754	0.5815	0.5369	0.0361	4.23633E-01
300.00	2.7965	0.4686	0.3004	-0.	1.90230E-01
500.00	13.6752	0.3890	0.0564	-0.0000	8.60258E-02

CRC 20. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1277	0.3880	0.3880	11.9030	9.89168E 00
50.00	0.1842	0.5082	0.5082	6.8158	6.53479E 00
80.00	0.2598	0.6159	0.6159	3.1979	3.74084E 00
100.00	0.3075	0.6587	0.6581	1.9925	2.66482E 00
120.00	0.3527	0.6854	0.6810	1.2945	1.94027E 00
150.00	0.4212	0.7016	0.6915	0.6648	1.25040E 00
200.00	0.5524	0.6807	0.6603	0.1881	6.57241E-01
300.00	1.6537	0.5454	0.4620	0.0000	2.47381E-01
500.00	12.2543	0.4039	0.1068	-0.0000	9.08768E-02

CRC 30. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1272	0.3922	0.3922	17.9165	1.46029E 01
50.00	0.1830	0.5156	0.5156	10.3053	9.59658E 00
80.00	0.2569	0.6290	0.6290	4.8970	5.44013E 00
100.00	0.3028	0.6764	0.6762	3.0800	3.84445E 00
120.00	0.3461	0.7083	0.7055	2.0294	2.77308E 00
150.00	0.4101	0.7336	0.7270	1.0789	1.75723E 00
200.00	0.5230	0.7298	0.7164	0.3516	8.90850E-01
300.00	1.1047	0.6059	0.5623	0.0019	3.04532E-01
500.00	11.0431	0.4183	0.1520	-0.0000	9.57278E-02

CRC 50. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1268	0.3958	0.3958	29.9384	2.40254E 01
50.00	0.1821	0.5218	0.5218	17.2830	1.57202E 01
80.00	0.2546	0.6402	0.6402	8.2930	8.83872E 00
100.00	0.2991	0.6916	0.6916	5.2611	6.20369E 00
120.00	0.3410	0.7284	0.7268	3.5015	4.43870E 00
150.00	0.4015	0.7627	0.7589	1.9091	2.77088E 00
200.00	0.5022	0.7781	0.7701	0.6826	1.35807E 00
300.00	0.7917	0.6897	0.6697	0.0421	4.18834E-01
500.00	9.1044	0.4455	0.2301	-0.	1.05430E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0549	0.4878	0.4878	1.4995	3.16662E 00
50.00	0.0843	0.5438	0.5436	0.4700	1.72863E 00
80.00	0.1590	0.5191	0.4979	0.0328	8.54623E-01
100.00	0.2857	0.4811	0.3990	0.0004	5.95623E-01
120.00	0.5110	0.4496	0.2992	0.0000	4.44999E-01
150.00	1.0019	0.4176	0.1842	0.0000	3.17808E-01
200.00	2.1611	0.3909	0.0757	0.0000	2.16390E-01
300.00	5.4013	0.3762	0.0120	-0.	1.36874E-01
500.00	15.2380	0.3722	0.0004	-0.	8.14906E-02

CRO 20. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0533	0.5280	0.5280	3.1350	5.68433E 00
50.00	0.0787	0.6130	0.6130	1.1071	2.92082E 00
80.00	0.1245	0.6174	0.6174	0.1892	1.29319E 00
100.00	0.1728	0.5769	0.5566	0.0344	8.33421E-01
120.00	0.3033	0.5257	0.4605	0.0004	5.78163E-01
150.00	0.7145	0.4655	0.3110	0.0000	3.76337E-01
200.00	1.8677	0.4108	0.1408	0.0000	2.32773E-01
300.00	5.2739	0.3794	0.0238	-0.	1.38522E-01
500.00	15.2284	0.3724	0.0007	-0.	8.15210E-02

CRO 30. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0528	0.5436	0.5436	4.7691	8.20204E 00
50.00	0.0770	0.6424	0.6424	1.7420	4.11300E 00
80.00	0.1152	0.6690	0.6690	0.3777	1.73176E 00
100.00	0.1489	0.6385	0.6305	0.1086	1.07122E 00
120.00	0.2133	0.5858	0.5570	0.0114	7.11327E-01
150.00	0.5351	0.5075	0.4038	0.0000	4.34867E-01
200.00	1.6302	0.4298	0.1973	-0.	2.49156E-01
300.00	5.1504	0.3826	0.0353	-0.	1.40169E-01
500.00	15.2168	0.3725	0.0011	-0.	8.15514E-02

CRO 50. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0524	0.5570	0.5570	8.0373	1.32375E 01
50.00	0.0758	0.6689	0.6689	3.0103	6.49737E 00
80.00	0.1094	0.7212	0.7212	0.7479	2.60889E 00
100.00	0.1350	0.7080	0.7059	0.2740	1.54681E 00
120.00	0.1682	0.6669	0.6563	0.0802	9.77656E-01
150.00	0.3327	0.5775	0.5301	0.0002	5.51926E-01
200.00	1.2732	0.4650	0.2906	-0.	2.81922E-01
300.00	4.9168	0.3889	0.0574	-0.	1.43464E-01
500.00	15.1936	0.3727	0.0019	-0.0000	8.16122E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0829	0.4419	0.4419	3.5310	4.09276E 00
50.00	0.1214	0.5395	0.5395	1.5964	2.46403E 00
80.00	0.1799	0.5869	0.5869	0.4920	1.29565E 00
100.00	0.2307	0.5806	0.5806	0.1881	9.00411E-01
120.00	0.3000	0.5576	0.5435	0.0546	6.54714E-01
150.00	0.5300	0.5096	0.4452	0.0009	4.37907E-01
200.00	1.4414	0.4474	0.2717	-0.	2.64971E-01
300.00	4.7682	0.3935	0.0813	-0.	1.45681E-01
500.00	15.1262	0.3747	0.0062	0.0000	8.17933E-02

CRC 20. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0817	0.4635	0.4635	7.1756	7.68142E 00
50.00	0.1182	0.5779	0.5779	3.3385	4.49106E 00
80.00	0.1691	0.6537	0.6537	1.1549	2.23254E 00
100.00	0.2046	0.6653	0.6653	0.5616	1.48295E 00
120.00	0.2474	0.6555	0.6555	0.2448	1.02558E 00
150.00	0.3322	0.6124	0.5973	0.0523	6.33086E-01
200.00	0.8913	0.5171	0.4273	0.0000	3.36967E-01
300.00	4.0786	0.4149	0.1503	-0.	1.57521E-01
500.00	14.9393	0.3764	0.0123	0.0000	8.23013E-02

CRC 30. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0813	0.4713	0.4713	10.8202	1.12701E 01
50.00	0.1172	0.5924	0.5924	5.0795	6.51810E 00
80.00	0.1659	0.6813	0.6813	1.8156	3.16943E 00
100.00	0.1981	0.7031	0.7031	0.9294	2.06548E 00
120.00	0.2330	0.7035	0.7035	0.4586	1.39645E 00
150.00	0.2951	0.6734	0.6669	0.1397	8.28264E-01
200.00	0.6070	0.5739	0.5279	0.0005	4.08963E-01
300.00	3.5281	0.4352	0.2097	0.0000	1.69360E-01
500.00	14.7581	0.3780	0.0184	0.0000	8.28093E-02

CRC 50. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0810	0.4779	0.4779	18.1077	1.84474E 01
50.00	0.1164	0.6049	0.6049	8.5594	1.05722E 01
80.00	0.1635	0.7059	0.7059	3.1347	5.04322E 00
100.00	0.1933	0.7380	0.7380	1.6626	3.23055E 00
120.00	0.2236	0.7504	0.7504	0.8804	2.13820E 00
150.00	0.2729	0.7390	0.7367	0.3256	1.21862E 00
200.00	0.4041	0.6574	0.6415	0.0285	5.52956E-01
300.00	2.7158	0.4727	0.3067	-0.	1.93039E-01
500.00	14.4014	0.3813	0.0303	-0.	8.38254E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1068	0.4057	0.4057	5.4817	4.67674E 00
50.00	0.1549	0.5143	0.5143	2.8240	2.99622E 00
80.00	0.2220	0.5924	0.5924	1.1210	1.67459E 00
100.00	0.2684	0.6098	0.6098	0.6013	1.18988E 00
120.00	0.3219	0.6087	0.6087	0.3008	8.73114E-01
150.00	0.4299	0.5838	0.5745	0.0809	5.79868E-01
200.00	0.9067	0.5148	0.4441	0.0003	3.34300E-01
300.00	3.8063	0.4247	0.1911	0.0000	1.63052E-01
500.00	14.6442	0.3795	0.0244	-0.0000	8.31257E-02

CRO 20. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1057	0.4203	0.4203	11.0647	8.92465E 00
50.00	0.1524	0.5403	0.5403	5.7797	5.61193E 00
80.00	0.2149	0.6385	0.6385	2.4011	3.02737E 00
100.00	0.2550	0.6709	0.6709	1.3726	2.08984E 00
120.00	0.2961	0.6847	0.6847	0.7809	1.48359E 00
150.00	0.3665	0.6788	0.6788	0.3078	9.31085E-01
200.00	0.5382	0.6188	0.6013	0.0379	4.82817E-01
300.00	2.6831	0.4746	0.3209	0.0000	1.94209E-01
500.00	13.9557	0.3860	0.0477	-0.0000	8.51567E-02

CRO 30. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1054	0.4254	0.4254	16.6492	1.31726E 01
50.00	0.1516	0.5497	0.5497	8.7361	8.22763E 00
80.00	0.2127	0.6562	0.6562	3.6794	4.38015E 00
100.00	0.2510	0.6954	0.6954	2.1415	2.98979E 00
120.00	0.2890	0.7169	0.7169	1.2575	2.09406E 00
150.00	0.3491	0.7234	0.7234	0.5513	1.28230E 00
200.00	0.4721	0.6813	0.6732	0.1138	6.31335E-01
300.00	1.9926	0.5180	0.4148	-0.	2.25367E-01
500.00	13.3120	0.3924	0.0699	-0.0000	8.71878E-02

CRO 50. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1051	0.4297	0.4297	27.8149	2.16684E 01
50.00	0.1509	0.5576	0.5576	14.6485	1.34590E 01
80.00	0.2109	0.6713	0.6713	6.2371	7.08570E 00
100.00	0.2479	0.7168	0.7168	3.6779	4.78971E 00
120.00	0.2837	0.7459	0.7459	2.2074	3.31501E 00
150.00	0.3375	0.7658	0.7658	1.0332	1.98474E 00
200.00	0.4347	0.7488	0.7453	0.2774	9.28369E-01
300.00	1.2229	0.5895	0.5415	0.0000	2.87682E-01
500.00	12.1533	0.4048	0.1113	-0.	9.12498E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1281	0.3782	0.3782	7.3165	5.09195E 00
50.00	0.1851	0.4903	0.4903	4.0628	3.40455E 00
80.00	0.2624	0.5827	0.5827	1.8179	1.99473E 00
100.00	0.3127	0.6131	0.6131	1.0830	1.44872E 00
120.00	0.3650	0.6263	0.6263	0.6381	1.07897E 00
150.00	0.4574	0.6221	0.6221	0.2605	7.23835E-01
200.00	0.6936	0.5745	0.5530	0.0312	4.12819E-01
300.00	2.8972	0.4635	0.3058	0.0000	1.86895E-01
500.00	13.7840	0.3879	0.0566	-0.0000	8.56843E-02

CRC 20. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1271	0.3893	0.3893	14.7258	9.80320E 00
50.00	0.1829	0.5098	0.5098	8.2484	6.46635E 00
80.00	0.2567	0.6172	0.6172	3.7862	3.69402E 00
100.00	0.3028	0.6593	0.6593	2.3274	2.62834E 00
120.00	0.3481	0.6850	0.6850	1.4465	1.91178E 00
150.00	0.4182	0.6999	0.6999	0.7021	1.23066E 00
200.00	0.5568	0.6774	0.6731	0.1819	6.46427E-01
300.00	1.6992	0.5415	0.4684	0.0000	2.44046E-01
500.00	12.3458	0.4029	0.1072	-0.0000	9.05353E-02

CRC 30. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1268	0.3932	0.3932	22.1351	1.45145E 01
50.00	0.1822	0.5167	0.5167	12.4339	9.52815E 00
80.00	0.2549	0.6301	0.6301	5.7535	5.39331E 00
100.00	0.2997	0.6770	0.6770	3.5709	3.80797E 00
120.00	0.3430	0.7083	0.7083	2.2526	2.74459E 00
150.00	0.4077	0.7328	0.7328	1.1394	1.73749E 00
200.00	0.5254	0.7280	0.7265	0.3453	8.80035E-01
300.00	1.1267	0.6027	0.5686	0.0015	3.01197E-01
500.00	11.1213	0.4173	0.1526	-0.0000	9.53863E-02

CRC 50. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1265	0.3963	0.3963	36.9557	2.39370E 01
50.00	0.1816	0.5225	0.5225	20.8068	1.56517E 01
80.00	0.2534	0.6408	0.6408	9.6881	8.79189E 00
100.00	0.2972	0.6921	0.6921	6.0569	6.16722E 00
120.00	0.3391	0.7285	0.7285	3.8634	4.41021E 00
150.00	0.3999	0.7624	0.7624	2.0118	2.75114E 00
200.00	0.5035	0.7773	0.7771	0.6762	1.34725E 00
300.00	0.7959	0.6878	0.6755	0.0407	4.15500E-01
500.00	9.1630	0.4446	0.2308	-0.	1.05088E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0534	0.4979	0.4979	2.0213	3.01948E 00
50.00	0.0792	0.5528	0.5528	0.6720	1.62748E 00
80.00	0.1300	0.5090	0.5090	0.0929	7.96273E-01
100.00	0.3288	0.4607	0.4285	0.0001	5.54909E-01
120.00	0.5835	0.4308	0.3198	0.0000	4.16455E-01
150.00	1.1176	0.4026	0.1945	-0.	3.00924E-01
200.00	2.3118	0.3819	0.0783	-0.	2.09230E-01
300.00	5.5103	0.3736	0.0122	-0.	1.35522E-01
500.00	15.2592	0.3721	0.0004	-0.	8.14354E-02

CRO 20. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0525	0.5346	0.5346	4.1358	5.53719E 00
50.00	0.0765	0.6212	0.6212	1.4540	2.81967E 00
80.00	0.1131	0.6199	0.6199	0.3122	1.23484E 00
100.00	0.1496	0.5688	0.5688	0.0780	7.92706E-01
120.00	0.3352	0.5108	0.4845	0.0001	5.49620E-01
150.00	0.7833	0.4523	0.3257	-0.	3.59453E-01
200.00	1.9881	0.4023	0.1452	-0.	2.25613E-01
300.00	5.3781	0.3768	0.0240	-0.	1.37169E-01
500.00	15.2477	0.3722	0.0007	-0.	8.14658E-02

CRO 30. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0523	0.5485	0.5485	6.2481	8.05490E 00
50.00	0.0756	0.6490	0.6490	2.2351	4.01185E 00
80.00	0.1091	0.6736	0.6736	0.5271	1.67341E 00
100.00	0.1357	0.6369	0.6369	0.1798	1.03050E 00
120.00	0.1919	0.5752	0.5752	0.0239	6.82784E-01
150.00	0.5792	0.4960	0.4201	0.0000	4.17983E-01
200.00	1.7281	0.4216	0.2031	-0.	2.41997E-01
300.00	5.2517	0.3800	0.0356	-0.	1.38817E-01
500.00	15.2361	0.3723	0.0011	-0.	8.14962E-02

CRO 50. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0521	0.5601	0.5601	10.4769	1.30903E 01
50.00	0.0750	0.6735	0.6735	3.7974	6.39622E 00
80.00	0.1063	0.7259	0.7259	0.9542	2.55054E 00
100.00	0.1282	0.7100	0.7100	0.3773	1.50610E 00
120.00	0.1560	0.6641	0.6641	0.1252	9.49112E-01
150.00	0.3537	0.5684	0.5469	0.0001	5.35042E-01
200.00	1.3405	0.4576	0.2981	-0.	2.74763E-01
300.00	5.0104	0.3863	0.0580	-0.	1.42112E-01
500.00	15.2148	0.3725	0.0019	-0.0000	8.15570E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0817	0.4488	0.4488	4.7471	3.96936E 00
50.00	0.1185	0.5486	0.5486	2.1207	2.36979E 00
80.00	0.1702	0.5949	0.5949	0.6897	1.23233E 00
100.00	0.2075	0.5837	0.5837	0.3175	8.51642E-01
120.00	0.2557	0.5516	0.5516	0.1239	6.17043E-01
150.00	0.5963	0.4920	0.4733	0.0003	4.12207E-01
200.00	1.6032	0.4323	0.2866	-0.	2.51232E-01
300.00	5.0457	0.3859	0.0836	-0.0000	1.41621E-01
500.00	15.2712	0.3735	0.0062	0.0000	8.14044E-02

CRC 20. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0811	0.4675	0.4675	9.5723	7.55802E 00
50.00	0.1168	0.5837	0.5837	4.3405	4.39683E 00
80.00	0.1649	0.6606	0.6606	1.4916	2.16923E 00
100.00	0.1963	0.6713	0.6713	0.7517	1.43418E 00
120.00	0.2297	0.6585	0.6585	0.3705	9.87913E-01
150.00	0.2965	0.6071	0.6071	0.0996	6.07386E-01
200.00	0.9686	0.5049	0.4455	0.0000	3.23228E-01
300.00	4.2971	0.4077	0.1543	-0.0000	1.53461E-01
500.00	15.0824	0.3751	0.0124	0.0000	8.19124E-02

CRC 30. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0809	0.4741	0.4741	14.3971	1.11467E 01
50.00	0.1163	0.5966	0.5966	6.5598	6.42387E 00
80.00	0.1632	0.6868	0.6868	2.2927	3.10612E 00
100.00	0.1929	0.7085	0.7085	1.1843	2.01671E 00
120.00	0.2231	0.7077	0.7077	0.6136	1.35878E 00
150.00	0.2748	0.6729	0.6729	0.2096	8.02564E-01
200.00	0.6488	0.5639	0.5464	0.0003	3.95224E-01
300.00	3.7033	0.4284	0.2149	-0.	1.65301E-01
500.00	14.8974	0.3768	0.0185	0.0000	8.24204E-02

CRC 50. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.0808	0.4796	0.4796	24.0475	1.83240E 01
50.00	0.1159	0.6075	0.6075	10.9974	1.04779E 01
80.00	0.1619	0.7097	0.7097	3.8938	4.97990E 00
100.00	0.1904	0.7421	0.7421	2.0492	3.18179E 00
120.00	0.2184	0.7542	0.7542	1.0976	2.10052E 00
150.00	0.2621	0.7409	0.7409	0.4244	1.19292E 00
200.00	0.3759	0.6522	0.6522	0.0464	5.39216E-01
300.00	2.8335	0.4665	0.3133	0.0000	1.88980E-01
500.00	14.5369	0.3801	0.0304	-0.	8.34365E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1058	0.4107	0.4107	7.4065	4.56815E 00
50.00	0.1525	0.5216	0.5216	3.7418	2.90919E 00
80.00	0.2156	0.6011	0.6011	1.4819	1.61185E 00
100.00	0.2565	0.6178	0.6178	0.8195	1.13929E 00
120.00	0.2991	0.6140	0.6140	0.4486	8.32237E-01
150.00	0.3763	0.5806	0.5806	0.1601	5.50071E-01
200.00	1.0103	0.4989	0.4691	0.0001	3.16559E-01
300.00	4.1267	0.4135	0.1990	-0.	1.56598E-01
500.00	14.9732	0.3766	0.0247	-0.	8.22061E-02

CRO 20. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1052	0.4231	0.4231	14.8819	8.81606E 00
50.00	0.1512	0.5445	0.5445	7.5749	5.52490E 00
80.00	0.2119	0.6443	0.6443	3.0704	2.96463E 00
100.00	0.2497	0.6771	0.6771	1.7512	2.03925E 00
120.00	0.2870	0.6906	0.6906	1.0126	1.44271E 00
150.00	0.3451	0.6823	0.6823	0.4400	9.01288E-01
200.00	0.4833	0.6125	0.6125	0.0724	4.65076E-01
300.00	2.8708	0.4648	0.3319	-0.	1.87756E-01
500.00	14.2619	0.3831	0.0482	-0.	8.42371E-02

CRO 30. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1051	0.4274	0.4274	22.3592	1.30640E 01
50.00	0.1508	0.5527	0.5527	11.4073	8.14060E 00
80.00	0.2107	0.6604	0.6604	4.6587	4.31741E 00
100.00	0.2476	0.7002	0.7002	2.6821	2.93920E 00
120.00	0.2833	0.7219	0.7219	1.5752	2.05318E 00
150.00	0.3369	0.7274	0.7274	0.7169	1.25251E 00
200.00	0.4414	0.6800	0.6800	0.1686	6.13593E-01
300.00	2.1116	0.5095	0.4270	-0.	2.18913E-01
500.00	13.5981	0.3895	0.0706	-0.0000	8.62681E-02

CRO 50. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1049	0.4309	0.4309	37.3121	2.15598E 01
50.00	0.1505	0.5595	0.5595	19.0722	1.33720E 01
80.00	0.2098	0.6741	0.6741	7.8346	7.02296E 00
100.00	0.2459	0.7201	0.7201	4.5424	4.73912E 00
120.00	0.2804	0.7494	0.7494	2.6999	3.27413E 00
150.00	0.3308	0.7692	0.7692	1.2692	1.95494E 00
200.00	0.4187	0.7499	0.7499	0.3552	9.10628E-01
300.00	1.2797	0.5829	0.5540	0.0000	2.81228E-01
500.00	12.4022	0.4020	0.1124	-0.0000	9.03302E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON CYLINDERS (H/D 2) 1 1 1 0 200

CRC 10. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1271	0.3822	0.3822	9.9264	4.99360E 00
50.00	0.1830	0.4963	0.4963	5.3992	3.32341E 00
80.00	0.2572	0.5905	0.5905	2.3783	1.93369E 00
100.00	0.3038	0.6213	0.6213	1.4233	1.39812E 00
120.00	0.3500	0.6338	0.6338	0.8599	1.03696E 00
150.00	0.4230	0.6263	0.6263	0.3969	6.91958E-01
200.00	0.5991	0.5658	0.5658	0.0723	3.92558E-01
300.00	3.1747	0.4504	0.3201	0.0000	1.78534E-01
500.00	14.2837	0.3831	0.0576	-0.0000	8.41685E-02

CRC 20. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1266	0.3915	0.3915	19.9166	9.70485E 00
50.00	0.1819	0.5131	0.5131	10.8830	6.38520E 00
80.00	0.2542	0.6220	0.6220	4.8580	3.63298E 00
100.00	0.2986	0.6648	0.6648	2.9545	2.57775E 00
120.00	0.3414	0.6908	0.6908	1.8320	1.86977E 00
150.00	0.4049	0.7051	0.7051	0.9093	1.19878E 00
200.00	0.5204	0.6782	0.6782	0.2679	6.26166E-01
300.00	1.8219	0.5312	0.4850	0.0000	2.35685E-01
500.00	12.7693	0.3983	0.1090	-0.0000	8.90195E-02

CRC 30. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1265	0.3946	0.3946	29.9081	1.44161E 01
50.00	0.1815	0.5191	0.5191	16.3669	9.44700E 00
80.00	0.2532	0.6335	0.6335	7.3383	5.33227E 00
100.00	0.2969	0.6810	0.6810	4.4855	3.75737E 00
120.00	0.3387	0.7127	0.7127	2.8036	2.70258E 00
150.00	0.3994	0.7373	0.7373	1.4205	1.70561E 00
200.00	0.5031	0.7304	0.7304	0.4586	8.59774E-01
300.00	1.1870	0.5947	0.5851	0.0009	2.92836E-01
500.00	11.4837	0.4128	0.1550	-0.0000	9.38705E-02

CRC 50. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1263	0.3972	0.3972	49.8899	2.38386E 01
50.00	0.1812	0.5239	0.5239	27.3349	1.55706E 01
80.00	0.2524	0.6430	0.6430	12.2966	8.73086E 00
100.00	0.2956	0.6947	0.6947	7.5478	6.11662E 00
120.00	0.3365	0.7315	0.7315	4.7458	4.36820E 00
150.00	0.3952	0.7657	0.7657	2.4420	2.71926E 00
200.00	0.4909	0.7798	0.7798	0.8380	1.32699E 00
300.00	0.7521	0.6841	0.6841	0.0595	4.07138E-01
500.00	9.4340	0.4404	0.2342	-0.	1.03572E-01

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0659	0.5534	0.5534	0.8711	2.72667E 00
30.00	0.0889	0.5963	0.5847	0.3823	1.77786E 00
50.00	0.1489	0.5951	0.5434	0.0470	9.06254E-01
80.00	0.5194	0.5371	0.3700	0.0000	4.41422E-01
100.00	1.0376	0.5074	0.2654	-0.	3.12290E-01
150.00	3.2924	0.4664	0.1029	0.0000	1.75319E-01
200.00	6.6511	0.4513	0.0375	-0.0000	1.23353E-01
300.00	15.9097	0.4437	0.0051	-0.	7.97534E-02
500.00	44.5134	0.4416	0.0001	-0.0000	4.76803E-02

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0615	0.5959	0.5959	1.9825	4.80258E 00
30.00	0.0806	0.6544	0.6518	0.9591	3.01590E 00
50.00	0.1187	0.6788	0.6574	0.2383	1.41520E 00
80.00	0.2779	0.6137	0.5398	0.0009	6.04761E-01
100.00	0.6481	0.5645	0.4194	-0.	3.95159E-01
150.00	2.7066	0.4895	0.1866	0.0000	1.93355E-01
200.00	6.1792	0.4598	0.0722	-0.0000	1.27973E-01
300.00	15.7476	0.4449	0.0102	-0.	8.01628E-02
500.00	44.4980	0.4417	0.0003	-0.0000	4.76867E-02

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0601	0.6129	0.6129	3.0913	6.87849E 00
30.00	0.0780	0.6793	0.6785	1.5438	4.25395E 00
50.00	0.1111	0.7203	0.7071	0.4473	1.92414E 00
80.00	0.1942	0.6694	0.6307	0.0225	7.68099E-01
100.00	0.4429	0.6108	0.5201	0.0000	4.78028E-01
150.00	2.2645	0.5109	0.2560	-0.	2.11390E-01
200.00	5.7565	0.4682	0.1045	-0.0000	1.32593E-01
300.00	15.5874	0.4461	0.0152	0.0000	8.05723E-02
500.00	44.4902	0.4417	0.0004	-0.	4.76931E-02

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0591	0.6279	0.6279	5.3072	1.10303E 01
30.00	0.0759	0.7019	0.7018	2.7173	6.73003E 00
50.00	0.1057	0.7611	0.7536	0.8725	2.94204E 00
80.00	0.1580	0.7381	0.7180	0.1194	1.09478E 00
100.00	0.2512	0.6810	0.6422	0.0045	6.43766E-01
150.00	1.6524	0.5492	0.3644	0.0000	2.47461E-01
200.00	5.0307	0.4841	0.1629	-0.	1.41833E-01
300.00	15.2766	0.4485	0.0252	0.0000	8.13912E-02
500.00	44.4671	0.4418	0.0007	-0.0000	4.77060E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRC 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1001	0.5202	0.5202	2.1412	3.43093E 00
30.00	0.1307	0.5861	0.5861	1.1854	2.37957E 00
50.00	0.1882	0.6392	0.6259	0.4117	1.30174E 00
80.00	0.3049	0.6255	0.5809	0.0509	6.43410E-01
100.00	0.5201	0.5919	0.5074	0.0011	4.42263E-01
150.00	2.0783	0.5214	0.3023	0.0000	2.20666E-01
200.00	5.1439	0.4816	0.1608	-0.	1.40262E-01
300.00	14.8745	0.4519	0.0397	0.0000	8.24824E-02
500.00	44.3902	0.4429	0.0025	-0.0000	4.77457E-02

CRC 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0968	0.5458	0.5458	4.4927	6.33778E 00
30.00	0.1241	0.6221	0.6221	2.6129	4.30850E 00
50.00	0.1730	0.6960	0.6912	1.0203	2.25353E 00
80.00	0.2474	0.7103	0.6913	0.2501	1.02883E 00
100.00	0.3190	0.6845	0.6536	0.0676	6.66857E-01
150.00	1.2254	0.5857	0.4642	0.0000	2.87369E-01
200.00	3.8174	0.5174	0.2770	-0.	1.62810E-01
300.00	13.7606	0.4610	0.0763	0.0000	8.57545E-02
500.00	44.1689	0.4435	0.0050	-0.0000	4.78654E-02

CRC 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0957	0.5553	0.5553	6.8439	9.24464E 00
30.00	0.1221	0.6360	0.6360	4.0381	6.23743E 00
50.00	0.1683	0.7195	0.7168	1.6349	3.20532E 00
80.00	0.2333	0.7507	0.7386	0.4638	1.41424E 00
100.00	0.2845	0.7356	0.7165	0.1745	8.91451E-01
150.00	0.8072	0.6361	0.5652	0.0000	3.54073E-01
200.00	2.9455	0.5489	0.3649	0.0000	1.85358E-01
300.00	12.7688	0.4698	0.1103	-0.	8.90266E-02
500.00	43.9477	0.4441	0.0075	-0.0000	4.79851E-02

CRC 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0948	0.5634	0.5634	11.5461	1.50583E 01
30.00	0.1205	0.6479	0.6479	6.8888	1.00953E 01
50.00	0.1645	0.7404	0.7390	2.8674	5.10891E 00
80.00	0.2232	0.7893	0.7823	0.8971	2.18507E 00
100.00	0.2637	0.7880	0.7771	0.4000	1.34064E 00
150.00	0.4597	0.7094	0.6810	0.0109	4.87480E-01
200.00	1.9056	0.6019	0.4892	0.0000	2.30453E-01
300.00	11.0788	0.4866	0.1712	-0.	9.55709E-02
500.00	43.5128	0.4452	0.0124	-0.0000	4.82245E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1310	0.4914	0.4914	3.3439	3.88759E 00
30.00	0.1685	0.5652	0.5652	2.0539	2.80041E 00
50.00	0.2376	0.6400	0.6374	0.8496	1.61628E 00
80.00	0.3395	0.6643	0.6427	0.2445	8.32037E-01
100.00	0.4323	0.6493	0.6134	0.0801	5.75590E-01
150.00	1.3108	0.5775	0.4590	0.0000	2.77841E-01
200.00	3.6818	0.5218	0.2984	0.0000	1.65786E-01
300.00	13.0245	0.4676	0.1040	0.0000	8.81455E-02
500.00	43.7186	0.4450	0.0106	-0.0000	4.81120E-02

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1279	0.5099	0.5099	6.8818	7.32004E 00
30.00	0.1629	0.5912	0.5912	4.3325	5.20206E 00
50.00	0.2246	0.6815	0.6815	1.9108	2.91375E 00
80.00	0.3069	0.7304	0.7210	0.6738	1.42167E 00
100.00	0.3654	0.7307	0.7149	0.3192	9.43639E-01
150.00	0.6528	0.6676	0.6259	0.0101	4.05382E-01
200.00	2.1839	0.5854	0.4597	0.0000	2.15257E-01
300.00	10.6856	0.4910	0.1884	0.0000	9.73143E-02
500.00	42.8030	0.4475	0.0210	-0.0000	4.86220E-02

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1269	0.5167	0.5167	10.4192	1.07525E 01
30.00	0.1611	0.6008	0.6008	6.6120	7.60371E 00
50.00	0.2202	0.6976	0.6976	2.9944	4.21121E 00
80.00	0.2972	0.7584	0.7524	1.1092	2.01131E 00
100.00	0.3481	0.7677	0.7576	0.5687	1.31169E 00
150.00	0.5206	0.7246	0.7012	0.0646	5.32922E-01
200.00	1.4440	0.6353	0.5606	0.0000	2.64729E-01
300.00	8.9246	0.5127	0.2583	0.0000	1.06483E-01
500.00	41.9218	0.4499	0.0311	-0.0000	4.91319E-02

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1261	0.5223	0.5223	17.4924	1.76174E 01
30.00	0.1597	0.6089	0.6089	11.1686	1.24070E 01
50.00	0.2168	0.7115	0.7115	5.1585	6.80614E 00
80.00	0.2898	0.7834	0.7800	1.9841	3.19058E 00
100.00	0.3356	0.8022	0.7963	1.0721	2.04779E 00
150.00	0.4616	0.7866	0.7736	0.2008	7.88003E-01
200.00	0.7877	0.7086	0.6790	0.0040	3.63672E-01
300.00	6.4951	0.5513	0.3673	0.0000	1.24821E-01
500.00	40.2338	0.4547	0.0508	-0.0000	5.01518E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRC 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1592	0.4686	0.4686	4.4736	4.22099E 00
30.00	0.2035	0.5456	0.5456	2.9026	3.12086E 00
50.00	0.2831	0.6313	0.6313	1.3323	1.87374E 00
80.00	0.3922	0.6774	0.6651	0.4834	1.00117E 00
100.00	0.4724	0.6779	0.6561	0.2302	7.01757E-01
150.00	0.9040	0.6254	0.5649	0.0050	3.38835E-01
200.00	2.6330	0.5626	0.4145	-0.	1.96048E-01
300.00	10.9268	0.4885	0.1827	-0.	9.62374E-02
500.00	42.4070	0.4488	0.0261	-0.0000	4.88516E-02

CRC 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1563	0.4832	0.4832	9.1294	8.03217E 00
30.00	0.1984	0.5662	0.5662	6.0177	5.87832E 00
50.00	0.2710	0.6640	0.6640	2.9150	3.45128E 00
80.00	0.3661	0.7301	0.7250	1.1649	1.77232E 00
100.00	0.4275	0.7446	0.7348	0.6426	1.20449E 00
150.00	0.6171	0.7196	0.6965	0.1067	5.30886E-01
200.00	1.3174	0.6464	0.5860	0.0002	2.77312E-01
300.00	7.8118	0.5289	0.3089	-0.	1.13816E-01
500.00	40.2784	0.4548	0.0508	-0.0000	5.01255E-02

CRC 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1554	0.4884	0.4884	13.7843	1.18434E 01
30.00	0.1968	0.5735	0.5735	9.1348	8.63577E 00
50.00	0.2672	0.6763	0.6763	4.4958	5.02882E 00
80.00	0.3578	0.7511	0.7480	1.8513	2.54348E 00
100.00	0.4143	0.7726	0.7664	1.0610	1.70721E 00
150.00	0.5671	0.7670	0.7524	0.2364	7.22938E-01
200.00	0.8701	0.7049	0.6755	0.0150	3.58575E-01
300.00	5.8618	0.5638	0.4014	-0.0000	1.31395E-01
500.00	38.3024	0.4606	0.0744	-0.0000	5.13993E-02

CRC 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1546	0.4928	0.4928	23.0946	1.94657E 01
30.00	0.1955	0.5797	0.5797	15.3653	1.41507E 01
50.00	0.2642	0.6866	0.6866	7.6583	8.18390E 00
80.00	0.3514	0.7695	0.7678	3.2262	4.08579E 00
100.00	0.4043	0.7977	0.7941	1.9003	2.71267E 00
150.00	0.5352	0.8136	0.8051	0.5027	1.10704E 00
200.00	0.7027	0.7745	0.7596	0.0981	5.21102E-01
300.00	3.6482	0.6214	0.5277	-0.	1.66552E-01
500.00	34.7729	0.4720	0.1181	-0.0000	5.39471E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0629	0.5542	0.5542	1.1144	2.63055E 00
30.00	0.0849	0.5926	0.5926	0.4740	1.71095E 00
50.00	0.1554	0.5863	0.5688	0.0382	8.71464E-01
80.00	0.5547	0.5291	0.3824	0.0000	4.27127E-01
100.00	1.0942	0.5010	0.2725	-0.0000	3.04107E-01
150.00	3.3759	0.4634	0.1042	-0.	1.73137E-01
200.00	6.7177	0.4501	0.0376	-0.	1.22732E-01
300.00	15.9329	0.4436	0.0051	0.0000	7.96967E-02
500.00	44.5134	0.4416	0.0001	0.0000	4.76796E-02

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0602	0.5974	0.5974	2.4160	4.70646E 00
30.00	0.0783	0.6542	0.6542	1.1565	2.94899E 00
50.00	0.1190	0.6747	0.6747	0.2388	1.38041E 00
80.00	0.2910	0.6079	0.5530	0.0006	5.90466E-01
100.00	0.6758	0.5594	0.4283	-0.0000	3.86976E-01
150.00	2.7688	0.4868	0.1887	-0.	1.91173E-01
200.00	6.2400	0.4587	0.0726	-0.	1.27352E-01
300.00	15.7708	0.4448	0.0102	0.0000	8.01062E-02
500.00	44.5057	0.4417	0.0003	0.0000	4.76861E-02

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0593	0.6143	0.6143	3.7166	6.78237E 00
30.00	0.0764	0.6797	0.6797	1.8357	4.18703E 00
50.00	0.1104	0.7181	0.7181	0.4689	1.88935E 00
80.00	0.1984	0.6652	0.6436	0.0196	7.53804E-01
100.00	0.4584	0.6066	0.5291	0.0000	4.69845E-01
150.00	2.3121	0.5084	0.2586	-0.	2.09208E-01
200.00	5.8105	0.4671	0.1050	-0.	1.31971E-01
300.00	15.6105	0.4459	0.0153	0.0000	8.05156E-02
500.00	44.4902	0.4417	0.0004	0.0000	4.76925E-02

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0586	0.6288	0.6288	6.3170	1.09342E 01
30.00	0.0749	0.7024	0.7024	3.1926	6.66312E 00
50.00	0.1049	0.7602	0.7602	0.9232	2.90724E 00
80.00	0.1590	0.7358	0.7285	0.1155	1.08048E 00
100.00	0.2565	0.6781	0.6507	0.0037	6.35583E-01
150.00	1.6821	0.5470	0.3677	-0.	2.45279E-01
200.00	5.0751	0.4831	0.1636	-0.	1.41211E-01
300.00	15.2978	0.4483	0.0252	0.0000	8.13345E-02
500.00	44.4671	0.4418	0.0007	-0.	4.77054E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRC 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0978	0.5225	0.5225	2.6455	3.34502E 00
30.00	0.1264	0.5872	0.5872	1.4774	2.31457E 00
50.00	0.1828	0.6360	0.6360	0.4797	1.26235E 00
80.00	0.3146	0.6185	0.6023	0.0435	6.23395E-01
100.00	0.5512	0.5846	0.5231	0.0007	4.29141E-01
150.00	2.1726	0.5160	0.3091	0.0000	2.15815E-01
200.00	5.2860	0.4784	0.1630	0.0000	1.38368E-01
300.00	14.9908	0.4510	0.0398	0.0000	8.21641E-02
500.00	44.4131	0.4429	0.0025	-0.0000	4.77345E-02

CRC 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0957	0.5475	0.5475	5.4571	6.25188E 00
30.00	0.1221	0.6235	0.6235	3.1432	4.24350E 00
50.00	0.1697	0.6955	0.6955	1.1711	2.21415E 00
80.00	0.2498	0.7072	0.7072	0.2412	1.00881E 00
100.00	0.3238	0.6804	0.6683	0.0625	6.53735E-01
150.00	1.2678	0.5815	0.4722	0.0000	2.82519E-01
200.00	3.9083	0.5146	0.2802	0.0000	1.60916E-01
300.00	13.8636	0.4601	0.0766	0.0000	8.54363E-02
500.00	44.1918	0.4435	0.0050	-0.0000	4.78543E-02

CRC 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0950	0.5566	0.5566	8.2691	9.15873E 00
30.00	0.1208	0.6371	0.6371	4.8086	6.17243E 00
50.00	0.1660	0.7195	0.7195	1.8591	3.16594E 00
80.00	0.2331	0.7489	0.7489	0.4709	1.39423E 00
100.00	0.2865	0.7332	0.7285	0.1691	8.78328E-01
150.00	0.8298	0.6328	0.5730	0.0000	3.49222E-01
200.00	3.0066	0.5464	0.3687	0.0000	1.83463E-01
300.00	12.8603	0.4690	0.1107	0.0000	8.87084E-02
500.00	43.9706	0.4440	0.0075	-0.	4.79740E-02

CRC 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0944	0.5642	0.5642	13.8917	1.49724E 01
30.00	0.1197	0.6487	0.6487	8.1373	1.00303E 01
50.00	0.1631	0.7406	0.7406	3.2343	5.06952E 00
80.00	0.2226	0.7886	0.7886	0.9236	2.16506E 00
100.00	0.2647	0.7869	0.7856	0.3945	1.32752E 00
150.00	0.4655	0.7073	0.6882	0.0099	4.82630E-01
200.00	1.9370	0.5999	0.4933	0.0000	2.28559E-01
300.00	11.1532	0.4858	0.1718	0.0000	9.52526E-02
500.00	43.5357	0.4452	0.0124	-0.	4.82134E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1289	0.4937	0.4937	4.1180	3.80927E 00
30.00	0.1648	0.5670	0.5670	2.5179	2.73873E 00
50.00	0.2297	0.6396	0.6396	1.0386	1.57610E 00
80.00	0.3383	0.6598	0.6598	0.2527	8.09461E-01
100.00	0.4421	0.6436	0.6334	0.0722	5.59817E-01
150.00	1.3774	0.5715	0.4705	0.0000	2.71051E-01
200.00	3.8224	0.5173	0.3040	0.0000	1.62715E-01
300.00	13.2290	0.4657	0.1048	0.0000	8.74605E-02
500.00	43.7929	0.4448	0.0106	-0.0000	4.80708E-02

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1269	0.5114	0.5114	8.3909	7.24173E 00
30.00	0.1612	0.5926	0.5926	5.2131	5.14039E 00
50.00	0.2204	0.6821	0.6821	2.2790	2.87356E 00
80.00	0.3038	0.7290	0.7290	0.7246	1.39910E 00
100.00	0.3672	0.7283	0.7283	0.3147	9.27867E-01
150.00	0.6686	0.6638	0.6371	0.0084	3.98592E-01
200.00	2.2477	0.5819	0.4663	0.0000	2.12186E-01
300.00	10.8387	0.4894	0.1898	0.0000	9.66293E-02
500.00	42.8774	0.4473	0.0210	-0.0000	4.85808E-02

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1262	0.5177	0.5177	12.6635	1.06742E 01
30.00	0.1600	0.6019	0.6019	7.9078	7.54204E 00
50.00	0.2175	0.6982	0.6982	3.5176	4.17103E 00
80.00	0.2948	0.7578	0.7578	1.1915	1.98873E 00
100.00	0.3477	0.7664	0.7664	0.5785	1.29592E 00
150.00	0.5250	0.7222	0.7111	0.0617	5.26132E-01
200.00	1.4781	0.6326	0.5672	0.0000	2.61658E-01
300.00	9.0405	0.5111	0.2600	0.0000	1.05798E-01
500.00	41.9905	0.4497	0.0312	-0.	4.90907E-02

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1257	0.5229	0.5229	21.2066	1.75391E 01
30.00	0.1591	0.6097	0.6097	13.2952	1.23453E 01
50.00	0.2153	0.7120	0.7120	5.9930	6.76596E 00
80.00	0.2882	0.7833	0.7833	2.1230	3.16801E 00
100.00	0.3348	0.8017	0.8017	1.1010	2.03201E 00
150.00	0.4631	0.7854	0.7809	0.1976	7.81213E-01
200.00	0.7984	0.7067	0.6849	0.0035	3.60601E-01
300.00	6.5674	0.5499	0.3693	0.0000	1.24136E-01
500.00	40.3025	0.4545	0.0509	-0.	5.01105E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1572	0.4707	0.4707	5.5125	4.14834E 00
30.00	0.2001	0.5476	0.5476	3.5460	3.06223E 00
50.00	0.2752	0.6320	0.6320	1.6333	1.83378E 00
80.00	0.3847	0.6750	0.6750	0.5410	9.77298E-01
100.00	0.4744	0.6737	0.6737	0.2292	6.84420E-01
150.00	0.9423	0.6196	0.5795	0.0036	3.30644E-01
200.00	2.7452	0.5575	0.4232	-0.	1.91999E-01
300.00	11.1747	0.4858	0.1847	0.0000	9.51649E-02
500.00	42.5596	0.4483	0.0261	-0.	4.87619E-02

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1553	0.4845	0.4845	11.1709	7.95953E 00
30.00	0.1968	0.5674	0.5674	7.2615	5.81968E 00
50.00	0.2674	0.6649	0.6649	3.4607	3.41132E 00
80.00	0.3615	0.7296	0.7296	1.2931	1.74845E 00
100.00	0.4246	0.7432	0.7432	0.6778	1.18715E 00
150.00	0.6227	0.7167	0.7086	0.1021	5.22696E-01
200.00	1.3563	0.6429	0.5947	0.0001	2.73263E-01
300.00	7.9607	0.5265	0.3118	0.0000	1.12744E-01
500.00	40.4234	0.4543	0.0509	-0.	5.00358E-02

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1547	0.4893	0.4893	16.8290	1.17707E 01
30.00	0.1957	0.5745	0.5745	10.9750	8.57714E 00
50.00	0.2648	0.6770	0.6770	5.2878	4.98886E 00
80.00	0.3546	0.7511	0.7511	2.0425	2.51961E 00
100.00	0.4119	0.7720	0.7720	1.1207	1.68988E 00
150.00	0.5697	0.7654	0.7620	0.2317	7.14747E-01
200.00	0.8815	0.7025	0.6837	0.0136	3.54526E-01
300.00	5.9582	0.5618	0.4047	-0.	1.30322E-01
500.00	38.4398	0.4602	0.0745	-0.	5.13096E-02

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1542	0.4933	0.4933	28.1476	1.93931E 01
30.00	0.1948	0.5803	0.5803	18.4056	1.40921E 01
50.00	0.2629	0.6872	0.6872	8.9419	8.14394E 00
80.00	0.3494	0.7696	0.7696	3.5398	4.06192E 00
100.00	0.4027	0.7975	0.7975	2.0042	2.69533E 00
150.00	0.5364	0.8128	0.8117	0.4981	1.09885E 00
200.00	0.7052	0.7732	0.7659	0.0962	5.17053E-01
300.00	3.6952	0.6199	0.5311	-0.	1.65479E-01
500.00	34.8873	0.4716	0.1183	-0.	5.38574E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0606	0.5628	0.5628	1.5175	2.51218E 00
30.00	0.0794	0.5999	0.5999	0.6893	1.62221E 00
50.00	0.1264	0.5799	0.5799	0.1106	8.18573E-01
80.00	0.6299	0.5138	0.4075	-0.	4.00817E-01
100.00	1.2280	0.4872	0.2887	-0.	2.87079E-01
150.00	3.6278	0.4550	0.1080	0.0000	1.67022E-01
200.00	6.9812	0.4457	0.0384	0.0000	1.20401E-01
300.00	16.0835	0.4425	0.0052	0.0000	7.93203E-02
500.00	44.5366	0.4416	0.0001	0.0000	4.76671E-02

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0590	0.6034	0.6034	3.1709	4.58810E 00
30.00	0.0760	0.6607	0.6607	1.5259	2.86025E 00
50.00	0.1091	0.6779	0.6779	0.3811	1.32752E 00
80.00	0.3183	0.5969	0.5790	0.0002	5.64156E-01
100.00	0.7394	0.5484	0.4480	-0.	3.69948E-01
150.00	2.9551	0.4791	0.1949	0.0000	1.85057E-01
200.00	6.4745	0.4544	0.0739	0.0000	1.25021E-01
300.00	15.9194	0.4437	0.0103	0.0000	7.97298E-02
500.00	44.5288	0.4416	0.0003	0.0000	4.76736E-02

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0586	0.6187	0.6187	4.8238	6.66401E 00
30.00	0.0749	0.6850	0.6850	2.3607	4.09830E 00
50.00	0.1050	0.7224	0.7224	0.6466	1.83646E 00
80.00	0.1748	0.6589	0.6589	0.0448	7.27494E-01
100.00	0.4935	0.5977	0.5490	0.0000	4.52817E-01
150.00	2.4535	0.5013	0.2664	0.0000	2.03093E-01
200.00	6.0209	0.4629	0.1069	-0.	1.29641E-01
300.00	15.7572	0.4449	0.0153	0.0000	8.01392E-02
500.00	44.5134	0.4416	0.0004	0.0000	4.76800E-02

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0582	0.6318	0.6318	8.1287	1.08158E 01
30.00	0.0741	0.7060	0.7060	4.0313	6.57438E 00
50.00	0.1022	0.7641	0.7641	1.1750	2.85435E 00
80.00	0.1482	0.7351	0.7351	0.1758	1.05417E 00
100.00	0.2686	0.6719	0.6691	0.0025	6.18555E-01
150.00	1.7692	0.5409	0.3771	0.0000	2.39164E-01
200.00	5.2469	0.4791	0.1663	-0.0000	1.38881E-01
300.00	15.4407	0.4472	0.0253	0.0000	8.09582E-02
500.00	44.4902	0.4417	0.0007	-0.	4.76929E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0960	0.5290	0.5290	3.5317	3.24401E 00
30.00	0.1228	0.5948	0.5948	1.9699	2.23370E 00
50.00	0.1720	0.6424	0.6424	0.6859	1.20804E 00
80.00	0.2647	0.6133	0.6133	0.1096	5.91563E-01
100.00	0.6136	0.5713	0.5527	0.0002	4.06291E-01
150.00	2.4008	0.5040	0.3249	-0.	2.05305E-01
200.00	5.6951	0.4696	0.1692	-0.	1.33295E-01
300.00	15.4715	0.4474	0.0405	0.0000	8.08751E-02
500.00	44.6038	0.4424	0.0025	0.0000	4.76334E-02

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0947	0.5513	0.5513	7.1856	6.15087E 00
30.00	0.1204	0.6283	0.6283	4.0766	4.16263E 00
50.00	0.1652	0.7010	0.7010	1.5203	2.15983E 00
80.00	0.2308	0.7097	0.7097	0.3756	9.76978E-01
100.00	0.2890	0.6776	0.6776	0.1195	6.30885E-01
150.00	1.3677	0.5723	0.4905	-0.	2.72009E-01
200.00	4.1665	0.5068	0.2894	-0.	1.55842E-01
300.00	14.2927	0.4566	0.0778	0.0000	8.41472E-02
500.00	44.3749	0.4429	0.0050	0.0000	4.77531E-02

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0943	0.5593	0.5593	10.8394	9.05772E 00
30.00	0.1197	0.6406	0.6406	6.1830	6.09156E 00
50.00	0.1631	0.7239	0.7239	2.3532	3.11162E 00
80.00	0.2229	0.7523	0.7523	0.6367	1.36239E 00
100.00	0.2673	0.7338	0.7338	0.2536	8.55478E-01
150.00	0.8821	0.6255	0.5908	0.0000	3.38712E-01
200.00	3.1797	0.5395	0.3792	0.0000	1.78390E-01
300.00	13.2418	0.4655	0.1123	0.0000	8.74193E-02
500.00	44.1537	0.4435	0.0075	-0.0000	4.78728E-02

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0940	0.5659	0.5659	18.1460	1.48714E 01
30.00	0.1191	0.6509	0.6509	10.3965	9.94943E 00
50.00	0.1615	0.7436	0.7436	4.0181	5.01521E 00
80.00	0.2173	0.7916	0.7916	1.1567	2.13322E 00
100.00	0.2545	0.7888	0.7888	0.5162	1.30467E 00
150.00	0.4494	0.7026	0.7026	0.0131	4.72120E-01
200.00	2.0261	0.5945	0.5045	0.0000	2.23485E-01
300.00	11.4622	0.4826	0.1741	0.0000	9.39636E-02
500.00	43.7188	0.4447	0.0124	-0.	4.81122E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1272	0.4989	0.4989	5.5002	3.71920E 00
30.00	0.1617	0.5734	0.5734	3.3278	2.66431E 00
50.00	0.2220	0.6466	0.6466	1.3849	1.52317E 00
80.00	0.3099	0.6635	0.6635	0.4014	7.75933E-01
100.00	0.3835	0.6411	0.6411	0.1524	5.34543E-01
150.00	1.5204	0.5594	0.4944	0.0000	2.57992E-01
200.00	4.1757	0.5066	0.3178	-0.	1.55672E-01
300.00	13.9257	0.4598	0.1076	0.0000	8.52485E-02
500.00	44.2679	0.4436	0.0107	-0.0000	4.78116E-02

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1260	0.5143	0.5143	11.1148	7.15165E 00
30.00	0.1597	0.5963	0.5963	6.7861	5.06596E 00
50.00	0.2169	0.6868	0.6868	2.9138	2.82064E 00
80.00	0.2932	0.7336	0.7336	0.9527	1.36557E 00
100.00	0.3449	0.7312	0.7312	0.4573	9.02593E-01
150.00	0.6174	0.6564	0.6564	0.0154	3.85532E-01
200.00	2.4048	0.5737	0.4823	-0.	2.05143E-01
300.00	11.3522	0.4839	0.1942	0.0000	9.44173E-02
500.00	43.3409	0.4461	0.0211	-0.0000	4.83216E-02

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1257	0.5197	0.5197	16.7297	1.05841E 01
30.00	0.1590	0.6045	0.6045	10.2459	7.46761E 00
50.00	0.2152	0.7017	0.7017	4.4427	4.11810E 00
80.00	0.2883	0.7616	0.7616	1.5021	1.95521E 00
100.00	0.3352	0.7696	0.7696	0.7582	1.27064E 00
150.00	0.4837	0.7198	0.7198	0.1020	5.13073E-01
200.00	1.5609	0.6260	0.5829	0.0000	2.54615E-01
300.00	9.4310	0.5060	0.2655	0.0000	1.03586E-01
500.00	42.4368	0.4485	0.0313	-0.	4.88315E-02

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1254	0.5242	0.5242	27.9567	1.74490E 01
30.00	0.1585	0.6113	0.6113	17.1605	1.22709E 01
50.00	0.2139	0.7143	0.7143	7.4987	6.71303E 00
80.00	0.2845	0.7861	0.7861	2.5995	3.13448E 00
100.00	0.3281	0.8044	0.8044	1.3581	2.00674E 00
150.00	0.4433	0.7858	0.7858	0.2615	7.68153E-01
200.00	0.8248	0.7023	0.6989	0.0026	3.53558E-01
300.00	6.8072	0.5455	0.3760	0.0000	1.21924E-01
500.00	40.7202	0.4533	0.0511	-0.	4.98513E-02

EFFECTIVE ENERGY CUTOFFS FOR BORON SLABS 1 1 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1556	0.4749	0.4749	7.3804	4.06594E 00
30.00	0.1973	0.5529	0.5529	4.6855	2.99279E 00
50.00	0.2686	0.6385	0.6385	2.1420	1.78263E 00
80.00	0.3657	0.6807	0.6807	0.7495	9.43302E-01
100.00	0.4336	0.6767	0.6767	0.3698	6.58011E-01
150.00	1.0224	0.6087	0.6071	0.0018	3.15991E-01
200.00	3.0040	0.5465	0.4427	-0.	1.83543E-01
300.00	11.9186	0.4781	0.1908	0.0000	9.21429E-02
500.00	43.3607	0.4462	0.0264	-0.	4.83100E-02

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1545	0.4868	0.4868	14.8695	7.87713E 00
30.00	0.1954	0.5704	0.5704	9.4961	5.75025E 00
50.00	0.2642	0.6689	0.6689	4.4242	3.36017E 00
80.00	0.3533	0.7342	0.7342	1.6471	1.71446E 00
100.00	0.4098	0.7473	0.7473	0.8886	1.16074E 00
150.00	0.5728	0.7157	0.7157	0.1655	5.08043E-01
200.00	1.4436	0.6354	0.6137	0.0001	2.64806E-01
300.00	8.4062	0.5200	0.3204	0.0000	1.09722E-01
500.00	41.1634	0.4522	0.0514	-0.	4.95839E-02

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1541	0.4909	0.4909	22.3569	1.16883E 01
30.00	0.1948	0.5766	0.5766	14.3057	8.50770E 00
50.00	0.2628	0.6799	0.6799	6.7070	4.93771E 00
80.00	0.3494	0.7546	0.7546	2.5433	2.48561E 00
100.00	0.4028	0.7755	0.7755	1.4054	1.66347E 00
150.00	0.5410	0.7665	0.7665	0.3191	7.00094E-01
200.00	0.8208	0.6976	0.6976	0.0232	3.46070E-01
300.00	6.2446	0.5561	0.4143	-0.	1.27300E-01
500.00	39.1264	0.4581	0.0751	-0.0000	5.08577E-02

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1539	0.4943	0.4943	37.3347	1.93107E 01
30.00	0.1943	0.5817	0.5817	23.9266	1.40226E 01
50.00	0.2616	0.6890	0.6890	11.2721	8.09279E 00
80.00	0.3464	0.7720	0.7720	4.3357	4.02792E 00
100.00	0.3976	0.8000	0.8000	2.4379	2.66892E 00
150.00	0.5209	0.8145	0.8145	0.6225	1.08420E 00
200.00	0.6710	0.7722	0.7722	0.1326	5.08597E-01
300.00	3.8344	0.6154	0.5410	-0.	1.62457E-01
500.00	35.4824	0.4696	0.1193	0.0000	5.34055E-02

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1488	0.4168	0.4118	0.0008	9.07264E-01
15.00	0.2975	0.1438	0.1371	0.0002	5.83560E-01
20.00	0.4011	0.0786	0.0351	0.0000	5.02279E-01
30.00	0.4783	0.0673	0.0020	0.0000	4.59976E-01
40.00	0.5198	0.0684	0.0001	0.0000	4.41198E-01
60.00	0.5842	0.0710	0.0000	0.0000	4.16203E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98797E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1256	0.5865	0.5830	0.0021	1.28131E 00
15.00	0.2345	0.2420	0.2409	0.0006	6.63668E-01
20.00	0.3745	0.0956	0.0677	0.0000	5.19891E-01
30.00	0.4764	0.0680	0.0039	0.0000	4.60885E-01
40.00	0.5198	0.0685	0.0003	0.0000	4.41257E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16207E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98798E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1189	0.6792	0.6766	0.0041	1.65535E 00
15.00	0.2015	0.3234	0.3225	0.0010	7.43776E-01
20.00	0.3504	0.1147	0.0982	0.0001	5.37504E-01
30.00	0.4745	0.0688	0.0059	0.0000	4.61794E-01
40.00	0.5196	0.0686	0.0004	0.0000	4.41315E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16211E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98799E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85495E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1139	0.7779	0.7761	0.0092	2.40343E 00
15.00	0.1767	0.4429	0.4422	0.0016	9.03992E-01
20.00	0.3096	0.1577	0.1534	0.0004	5.72729E-01
30.00	0.4708	0.0703	0.0098	0.0000	4.63612E-01
40.00	0.5193	0.0686	0.0007	0.0000	4.41432E-01
60.00	0.5841	0.0710	0.0000	0.0000	4.16218E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98802E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85496E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74770E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2365	0.3473	0.3470	0.1015	8.91702E-01
15.00	0.3268	0.1433	0.1290	0.0423	6.01293E-01
20.00	0.3918	0.0926	0.0560	0.0164	5.21444E-01
30.00	0.4608	0.0771	0.0232	0.0051	4.72248E-01
40.00	0.5055	0.0750	0.0154	0.0023	4.48986E-01
60.00	0.5749	0.0743	0.0084	0.0006	4.19957E-01
80.00	0.6300	0.0746	0.0051	0.0002	4.00907E-01
100.00	0.6766	0.0752	0.0033	0.0001	3.86797E-01
120.00	0.7173	0.0757	0.0022	0.0000	3.75627E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2251	0.4921	0.4920	0.2056	1.25470E 00
15.00	0.3082	0.2168	0.2099	0.1007	6.99790E-01
20.00	0.3732	0.1219	0.0967	0.0420	5.58322E-01
30.00	0.4466	0.0879	0.0430	0.0126	4.85434E-01
40.00	0.4932	0.0817	0.0293	0.0055	4.56832E-01
60.00	0.5662	0.0777	0.0164	0.0015	4.23714E-01
80.00	0.6240	0.0766	0.0100	0.0005	4.03019E-01
100.00	0.6723	0.0765	0.0065	0.0002	3.88101E-01
120.00	0.7142	0.0766	0.0045	0.0001	3.76484E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2212	0.5722	0.5722	0.3091	1.61770E 00
15.00	0.3008	0.2747	0.2701	0.1601	7.98287E-01
20.00	0.3635	0.1491	0.1295	0.0709	5.95200E-01
30.00	0.4364	0.0987	0.0600	0.0219	4.98619E-01
40.00	0.4832	0.0887	0.0420	0.0096	4.64679E-01
60.00	0.5582	0.0813	0.0241	0.0025	4.27471E-01
80.00	0.6182	0.0787	0.0149	0.0008	4.05131E-01
100.00	0.6681	0.0778	0.0097	0.0003	3.89404E-01
120.00	0.7110	0.0775	0.0067	0.0002	3.77341E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2180	0.6581	0.6580	0.5160	2.34370E 00
15.00	0.2944	0.3576	0.3548	0.2788	9.95281E-01
20.00	0.3541	0.1964	0.1821	0.1317	6.68957E-01
30.00	0.4236	0.1198	0.0888	0.0436	5.24990E-01
40.00	0.4683	0.1025	0.0641	0.0200	4.80372E-01
60.00	0.5440	0.0885	0.0384	0.0052	4.34984E-01
80.00	0.6071	0.0829	0.0243	0.0017	4.09355E-01
100.00	0.6599	0.0804	0.0160	0.0006	3.92011E-01
120.00	0.7049	0.0793	0.0111	0.0003	3.79056E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2938	0.2695	0.2626	0.5175	1.08262E 00
15.00	0.3530	0.1832	0.1633	0.3039	7.77909E-01
20.00	0.3886	0.1557	0.1285	0.2085	6.67585E-01
30.00	0.4343	0.1362	0.1034	0.1228	5.72300E-01
40.00	0.4699	0.1252	0.0892	0.0807	5.21759E-01
60.00	0.5306	0.1105	0.0689	0.0395	4.63813E-01
80.00	0.5838	0.1012	0.0544	0.0212	4.30214E-01
100.00	0.6322	0.0953	0.0436	0.0120	4.07655E-01
120.00	0.6764	0.0913	0.0354	0.0071	3.91126E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2894	0.3437	0.3398	1.0570	1.63666E 00
15.00	0.3483	0.2443	0.2309	0.6284	1.05303E 00
20.00	0.3830	0.2104	0.1909	0.4353	8.50606E-01
30.00	0.4262	0.1855	0.1609	0.2627	6.85536E-01
40.00	0.4587	0.1699	0.1426	0.1774	6.02380E-01
60.00	0.5132	0.1459	0.1141	0.0921	5.11426E-01
80.00	0.5611	0.1288	0.0929	0.0522	4.61634E-01
100.00	0.6058	0.1168	0.0767	0.0309	4.29817E-01
120.00	0.6481	0.1082	0.0638	0.0188	4.07482E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2878	0.3805	0.3778	1.5970	2.19071E 00
15.00	0.3465	0.2803	0.2700	0.9541	1.32815E 00
20.00	0.3809	0.2460	0.2305	0.6635	1.03363E 00
30.00	0.4229	0.2212	0.2010	0.4044	7.98773E-01
40.00	0.4540	0.2045	0.1818	0.2765	6.83000E-01
60.00	0.5052	0.1759	0.1493	0.1480	5.59039E-01
80.00	0.5497	0.1538	0.1237	0.0867	4.93053E-01
100.00	0.5909	0.1372	0.1036	0.0531	4.51979E-01
120.00	0.6304	0.1248	0.0875	0.0334	4.23839E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2864	0.4172	0.4155	2.6772	3.29879E 00
15.00	0.3450	0.3207	0.3137	1.6063	1.87839E 00
20.00	0.3791	0.2893	0.2782	1.1210	1.39967E 00
30.00	0.4200	0.2690	0.2540	0.6893	1.02525E 00
40.00	0.4498	0.2542	0.2368	0.4764	8.44240E-01
60.00	0.4980	0.2236	0.2027	0.2620	6.54265E-01
80.00	0.5386	0.1962	0.1724	0.1589	5.55891E-01
100.00	0.5757	0.1737	0.1472	0.1014	4.96303E-01
120.00	0.6108	0.1557	0.1264	0.0667	4.56552E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3211	0.2335	0.2291	1.2255	1.48959E 00
15.00	0.3676	0.2061	0.1917	0.8739	1.13959E 00
20.00	0.3967	0.1997	0.1803	0.6884	9.79028E-01
30.00	0.4375	0.1946	0.1708	0.4827	8.09084E-01
40.00	0.4693	0.1888	0.1626	0.3636	7.10096E-01
60.00	0.5209	0.1753	0.1457	0.2290	5.94013E-01
80.00	0.5638	0.1623	0.1301	0.1560	5.26900E-01
100.00	0.6018	0.1510	0.1164	0.1112	4.82714E-01
120.00	0.6366	0.1414	0.1046	0.0816	4.51214E-01

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3186	0.2736	0.2713	2.4770	2.45965E 00
15.00	0.3654	0.2484	0.2395	1.7672	1.77995E 00
20.00	0.3943	0.2453	0.2329	1.3951	1.47499E 00
30.00	0.4341	0.2466	0.2307	0.9836	1.15941E 00
40.00	0.4647	0.2447	0.2267	0.7464	9.79117E-01
60.00	0.5135	0.2339	0.2129	0.4785	7.71829E-01
80.00	0.5533	0.2200	0.1965	0.3325	6.55006E-01
100.00	0.5880	0.2059	0.1804	0.2424	5.79934E-01
120.00	0.6193	0.1926	0.1653	0.1823	5.27658E-01

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3178	0.2911	0.2895	3.7288	3.42972E 00
15.00	0.3647	0.2683	0.2619	2.6610	2.42031E 00
20.00	0.3934	0.2681	0.2589	2.1021	1.97095E 00
30.00	0.4329	0.2746	0.2626	1.4855	1.50973E 00
40.00	0.4630	0.2767	0.2628	1.1303	1.24814E 00
60.00	0.5108	0.2709	0.2543	0.7293	9.49645E-01
80.00	0.5494	0.2592	0.2403	0.5107	7.83111E-01
100.00	0.5825	0.2454	0.2246	0.3757	6.77155E-01
120.00	0.6123	0.2314	0.2089	0.2855	6.04103E-01

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3171	0.3072	0.3062	6.2328	5.36984E 00
15.00	0.3640	0.2874	0.2833	4.4497	3.70103E 00
20.00	0.3927	0.2909	0.2848	3.5163	2.96288E 00
30.00	0.4318	0.3038	0.2957	2.4904	2.21037E 00
40.00	0.4616	0.3116	0.3021	1.8993	1.78618E 00
60.00	0.5084	0.3146	0.3028	1.2322	1.30528E 00
80.00	0.5459	0.3087	0.2950	0.8685	1.03932E 00
100.00	0.5779	0.2983	0.2829	0.6439	8.71596E-01
120.00	0.6062	0.2858	0.2688	0.4939	7.56991E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1495	0.4139	0.4139	0.0008	9.02825E-01
15.00	0.2981	0.1430	0.1373	0.0002	5.82906E-01
20.00	0.4013	0.0785	0.0351	0.0000	5.02178E-01
30.00	0.4783	0.0673	0.0020	0.0000	4.59973E-01
40.00	0.5198	0.0684	0.0001	0.0000	4.41198E-01
60.00	0.5842	0.0710	0.0000	0.0000	4.16203E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98797E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1257	0.5850	0.5850	0.0020	1.27687E 00
15.00	0.2349	0.2412	0.2412	0.0006	6.63014E-01
20.00	0.3746	0.0955	0.0677	0.0000	5.19790E-01
30.00	0.4764	0.0680	0.0039	0.0000	4.60882E-01
40.00	0.5198	0.0685	0.0003	0.0000	4.41256E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16207E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98798E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1180	0.6783	0.6783	0.0043	1.65091E 00
15.00	0.2017	0.3228	0.3228	0.0010	7.43122E-01
20.00	0.3506	0.1145	0.0982	0.0001	5.37403E-01
30.00	0.4745	0.0688	0.0059	0.0000	4.61791E-01
40.00	0.5196	0.0686	0.0004	0.0000	4.41315E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16211E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98799E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85495E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1131	0.7774	0.7774	0.0098	2.39899E 00
15.00	0.1768	0.4425	0.4425	0.0016	9.03338E-01
20.00	0.3097	0.1575	0.1534	0.0004	5.72628E-01
30.00	0.4708	0.0703	0.0098	0.0000	4.63609E-01
40.00	0.5193	0.0686	0.0007	0.0000	4.41432E-01
60.00	0.5841	0.0710	0.0000	0.0000	4.16218E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98802E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85496E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74770E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2327	0.3470	0.3470	0.1022	8.90760E-01
15.00	0.3269	0.1432	0.1291	0.0423	6.01148E-01
20.00	0.3919	0.0926	0.0561	0.0164	5.21419E-01
30.00	0.4608	0.0771	0.0232	0.0051	4.72248E-01
40.00	0.5055	0.0750	0.0154	0.0023	4.48986E-01
60.00	0.5749	0.0743	0.0084	0.0006	4.19957E-01
80.00	0.6300	0.0746	0.0051	0.0002	4.00907E-01
100.00	0.6766	0.0752	0.0033	0.0001	3.86797E-01
120.00	0.7173	0.0757	0.0022	0.0000	3.75627E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2221	0.4922	0.4922	0.2063	1.25376E 00
15.00	0.3082	0.2167	0.2099	0.1006	6.99645E-01
20.00	0.3732	0.1219	0.0967	0.0420	5.58297E-01
30.00	0.4466	0.0879	0.0430	0.0126	4.85433E-01
40.00	0.4932	0.0817	0.0293	0.0055	4.56832E-01
60.00	0.5662	0.0777	0.0164	0.0015	4.23714E-01
80.00	0.6240	0.0766	0.0100	0.0005	4.03019E-01
100.00	0.6723	0.0765	0.0065	0.0002	3.88101E-01
120.00	0.7142	0.0766	0.0045	0.0001	3.76484E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2190	0.5724	0.5724	0.3100	1.61676E 00
15.00	0.3008	0.2746	0.2702	0.1600	7.98142E-01
20.00	0.3636	0.1491	0.1296	0.0709	5.95176E-01
30.00	0.4364	0.0987	0.0600	0.0219	4.98619E-01
40.00	0.4832	0.0887	0.0420	0.0096	4.64679E-01
60.00	0.5582	0.0813	0.0241	0.0025	4.27471E-01
80.00	0.6182	0.0787	0.0149	0.0008	4.05131E-01
100.00	0.6681	0.0778	0.0097	0.0003	3.89404E-01
120.00	0.7110	0.0775	0.0067	0.0002	3.77341E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2166	0.6582	0.6582	0.5171	2.34276E 00
15.00	0.2945	0.3576	0.3549	0.2787	9.95137E-01
20.00	0.3541	0.1963	0.1821	0.1317	6.68932E-01
30.00	0.4236	0.1198	0.0888	0.0436	5.24990E-01
40.00	0.4683	0.1025	0.0641	0.0200	4.80372E-01
60.00	0.5440	0.0885	0.0384	0.0052	4.34984E-01
80.00	0.6071	0.0829	0.0243	0.0017	4.09355E-01
100.00	0.6599	0.0804	0.0160	0.0006	3.92011E-01
120.00	0.7049	0.0793	0.0111	0.0003	3.79056E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2887	0.2650	0.2650	0.5628	1.04596E 00
15.00	0.3553	0.1715	0.1715	0.3030	7.55495E-01
20.00	0.3943	0.1466	0.1385	0.1992	6.53072E-01
30.00	0.4384	0.1311	0.1080	0.1187	5.65623E-01
40.00	0.4727	0.1225	0.0914	0.0788	5.18467E-01
60.00	0.5318	0.1096	0.0694	0.0391	4.62920E-01
80.00	0.5844	0.1010	0.0545	0.0210	4.29951E-01
100.00	0.6323	0.0952	0.0437	0.0120	4.07574E-01
120.00	0.6765	0.0913	0.0354	0.0071	3.91100E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2866	0.3428	0.3428	1.1375	1.60000E 00
15.00	0.3487	0.2370	0.2370	0.6371	1.03062E 00
20.00	0.3861	0.2039	0.2003	0.4251	8.36093E-01
30.00	0.4284	0.1815	0.1658	0.2580	6.78860E-01
40.00	0.4602	0.1676	0.1451	0.1751	5.99087E-01
60.00	0.5139	0.1450	0.1148	0.0916	5.10533E-01
80.00	0.5614	0.1285	0.0931	0.0521	4.61371E-01
100.00	0.6059	0.1167	0.0767	0.0309	4.29736E-01
120.00	0.6482	0.1082	0.0638	0.0188	4.07457E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2859	0.3807	0.3807	1.7119	2.15404E 00
15.00	0.3467	0.2751	0.2751	0.9704	1.30574E 00
20.00	0.3830	0.2410	0.2390	0.6530	1.01911E 00
30.00	0.4244	0.2179	0.2056	0.3997	7.92097E-01
40.00	0.4550	0.2025	0.1842	0.2742	6.79707E-01
60.00	0.5057	0.1752	0.1500	0.1473	5.58146E-01
80.00	0.5499	0.1535	0.1239	0.0865	4.92790E-01
100.00	0.5910	0.1371	0.1036	0.0531	4.51898E-01
120.00	0.6305	0.1248	0.0875	0.0334	4.23813E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2853	0.4178	0.4178	2.8609	3.26213E 00
15.00	0.3450	0.3175	0.3175	1.6371	1.85598E 00
20.00	0.3804	0.2861	0.2851	1.1101	1.38515E 00
30.00	0.4209	0.2667	0.2579	0.6844	1.01857E 00
40.00	0.4505	0.2527	0.2390	0.4740	8.40947E-01
60.00	0.4982	0.2230	0.2033	0.2614	6.53372E-01
80.00	0.5388	0.1960	0.1726	0.1587	5.55628E-01
100.00	0.5757	0.1736	0.1472	0.1014	4.96221E-01
120.00	0.6108	0.1557	0.1264	0.0667	4.56526E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3172	0.2334	0.2334	1.4560	1.41029E 00
15.00	0.3655	0.1984	0.1984	0.9798	1.07605E 00
20.00	0.3959	0.1886	0.1886	0.7444	9.27308E-01
30.00	0.4390	0.1812	0.1812	0.4966	7.73495E-01
40.00	0.4743	0.1757	0.1757	0.3579	6.84655E-01
60.00	0.5288	0.1657	0.1571	0.2183	5.80014E-01
80.00	0.5701	0.1557	0.1369	0.1500	5.18713E-01
100.00	0.6067	0.1465	0.1205	0.1077	4.77743E-01
120.00	0.6405	0.1383	0.1071	0.0796	4.48119E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3166	0.2750	0.2750	2.9201	2.38035E 00
15.00	0.3643	0.2451	0.2451	1.9739	1.71641E 00
20.00	0.3937	0.2399	0.2399	1.5080	1.42327E 00
30.00	0.4346	0.2391	0.2391	1.0206	1.12382E 00
40.00	0.4666	0.2367	0.2367	0.7515	9.53677E-01
60.00	0.5177	0.2274	0.2234	0.4668	7.57830E-01
80.00	0.5567	0.2151	0.2032	0.3258	6.46818E-01
100.00	0.5906	0.2023	0.1846	0.2384	5.74964E-01
120.00	0.6214	0.1900	0.1679	0.1799	5.24564E-01

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3164	0.2926	0.2926	4.3842	3.35041E 00
15.00	0.3639	0.2665	0.2665	2.9679	2.35677E 00
20.00	0.3931	0.2648	0.2648	2.2713	1.91923E 00
30.00	0.4331	0.2695	0.2695	1.5446	1.47414E 00
40.00	0.4641	0.2709	0.2709	1.1450	1.22270E 00
60.00	0.5136	0.2660	0.2635	0.7174	9.35646E-01
80.00	0.5516	0.2554	0.2464	0.5040	7.74923E-01
100.00	0.5844	0.2426	0.2287	0.3716	6.72184E-01
120.00	0.6138	0.2293	0.2116	0.2830	6.01008E-01

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3163	0.3083	0.3083	7.3124	5.29054E 00
15.00	0.3635	0.2866	0.2866	4.9562	3.63749E 00
20.00	0.3924	0.2889	0.2889	3.7993	2.91116E 00
30.00	0.4320	0.3010	0.3010	2.5922	2.17478E 00
40.00	0.4622	0.3082	0.3082	1.9308	1.76074E 00
60.00	0.5102	0.3115	0.3102	1.2198	1.29128E 00
80.00	0.5473	0.3062	0.3001	0.8615	1.03113E 00
100.00	0.5790	0.2963	0.2864	0.6398	8.66625E-01
120.00	0.6071	0.2844	0.2713	0.4911	7.53897E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1162	0.4139	0.4139	0.0016	9.01597E-01
15.00	0.2983	0.1427	0.1373	0.0002	5.82711E-01
20.00	0.4013	0.0785	0.0351	0.0000	5.02142E-01
30.00	0.4783	0.0673	0.0020	0.0000	4.59972E-01
40.00	0.5198	0.0684	0.0001	0.0000	4.41198E-01
60.00	0.5842	0.0710	0.0000	0.0000	4.16203E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98797E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1112	0.5846	0.5846	0.0045	1.27564E 00
15.00	0.1946	0.2412	0.2412	0.0006	6.62819E-01
20.00	0.3747	0.0954	0.0677	0.0000	5.19754E-01
30.00	0.4765	0.0680	0.0039	0.0000	4.60881E-01
40.00	0.5198	0.0685	0.0003	0.0000	4.41256E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16207E-01
80.00	0.6363	0.0727	0.0000	0.0000	3.98798E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85494E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1098	0.6778	0.6778	0.0074	1.64968E 00
15.00	0.1707	0.3228	0.3228	0.0010	7.42926E-01
20.00	0.3506	0.1145	0.0982	0.0001	5.37367E-01
30.00	0.4745	0.0688	0.0059	0.0000	4.61790E-01
40.00	0.5196	0.0686	0.0004	0.0000	4.41315E-01
60.00	0.5841	0.0709	0.0000	0.0000	4.16211E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98799E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85495E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74769E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1086	0.7770	0.7770	0.0135	2.39776E 00
15.00	0.1602	0.4426	0.4426	0.0016	9.03142E-01
20.00	0.3097	0.1575	0.1534	0.0004	5.72592E-01
30.00	0.4708	0.0703	0.0098	0.0000	4.63607E-01
40.00	0.5193	0.0686	0.0007	0.0000	4.41432E-01
60.00	0.5841	0.0710	0.0000	0.0000	4.16218E-01
80.00	0.6363	0.0726	0.0000	0.0000	3.98802E-01
100.00	0.6810	0.0739	0.0000	0.0000	3.85496E-01
120.00	0.7205	0.0749	0.0000	-0.0000	3.74770E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2146	0.3839	0.3839	0.1241	8.03223E-01
15.00	0.2928	0.1316	0.1316	0.0647	5.34189E-01
20.00	0.3745	0.0580	0.0580	0.0225	4.68225E-01
30.00	0.5337	0.0498	0.0287	0.0016	4.36359E-01
40.00	0.5656	0.0545	0.0177	0.0009	4.23480E-01
60.00	0.6146	0.0621	0.0089	0.0003	4.05954E-01
80.00	0.6564	0.0670	0.0052	0.0001	3.92719E-01
100.00	0.6943	0.0704	0.0033	0.0001	3.81826E-01
120.00	0.7293	0.0727	0.0023	0.0000	3.72532E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2139	0.5288	0.5288	0.2482	1.16622E 00
15.00	0.2885	0.2199	0.2199	0.1329	6.32687E-01
20.00	0.3527	0.0957	0.0957	0.0590	5.05103E-01
30.00	0.5074	0.0585	0.0541	0.0049	4.49545E-01
40.00	0.5474	0.0602	0.0342	0.0023	4.31326E-01
60.00	0.6042	0.0651	0.0176	0.0008	4.09711E-01
80.00	0.6498	0.0689	0.0104	0.0003	3.94831E-01
100.00	0.6897	0.0716	0.0067	0.0002	3.83130E-01
120.00	0.7260	0.0735	0.0045	0.0001	3.73390E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2137	0.6049	0.6049	0.3723	1.52922E 00
15.00	0.2871	0.2844	0.2844	0.2010	7.31184E-01
20.00	0.3470	0.1291	0.1291	0.0943	5.41982E-01
30.00	0.4514	0.0689	0.0689	0.0181	4.62730E-01
40.00	0.5314	0.0662	0.0494	0.0045	4.39173E-01
60.00	0.5943	0.0683	0.0260	0.0014	4.13468E-01
80.00	0.6433	0.0708	0.0154	0.0006	3.96943E-01
100.00	0.6853	0.0728	0.0099	0.0003	3.84434E-01
120.00	0.7228	0.0744	0.0068	0.0001	3.74247E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2134	0.6837	0.6837	0.6206	2.25522E 00
15.00	0.2860	0.3724	0.3724	0.3370	9.28178E-01
20.00	0.3429	0.1844	0.1844	0.1642	6.15738E-01
30.00	0.4195	0.0929	0.0929	0.0484	4.89101E-01
40.00	0.5058	0.0789	0.0759	0.0114	4.54866E-01
60.00	0.5764	0.0750	0.0417	0.0031	4.20982E-01
80.00	0.6309	0.0748	0.0253	0.0011	4.01167E-01
100.00	0.6766	0.0754	0.0164	0.0005	3.87041E-01
120.00	0.7165	0.0761	0.0112	0.0002	3.75962E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2848	0.2959	0.2959	0.7729	9.19036E-01
15.00	0.3437	0.1821	0.1821	0.4364	6.38963E-01
20.00	0.3783	0.1415	0.1415	0.2918	5.45726E-01
30.00	0.4204	0.1103	0.1103	0.1692	4.73708E-01
40.00	0.4525	0.0932	0.0932	0.1109	4.38908E-01
60.00	0.5116	0.0720	0.0720	0.0528	4.01681E-01
80.00	0.5825	0.0611	0.0611	0.0232	3.81453E-01
100.00	0.7526	0.0581	0.0570	0.0034	3.68336E-01
120.00	0.7903	0.0598	0.0436	0.0021	3.58837E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2846	0.3689	0.3689	1.5470	1.47308E 00
15.00	0.3432	0.2532	0.2532	0.8761	9.14084E-01
20.00	0.3772	0.2093	0.2093	0.5886	7.28747E-01
30.00	0.4178	0.1736	0.1736	0.3457	5.86945E-01
40.00	0.4476	0.1509	0.1509	0.2312	5.19529E-01
60.00	0.4974	0.1176	0.1176	0.1197	4.49294E-01
80.00	0.5445	0.0959	0.0959	0.0665	4.12872E-01
100.00	0.5983	0.0822	0.0822	0.0353	3.90498E-01
120.00	0.6838	0.0748	0.0748	0.0136	3.75194E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2846	0.4020	0.4020	2.3211	2.02712E 00
15.00	0.3430	0.2915	0.2915	1.3158	1.18920E 00
20.00	0.3768	0.2500	0.2500	0.8853	9.11767E-01
30.00	0.4170	0.2165	0.2165	0.5219	7.00181E-01
40.00	0.4460	0.1932	0.1932	0.3515	6.00149E-01
60.00	0.4932	0.1548	0.1548	0.1862	4.96907E-01
80.00	0.5349	0.1267	0.1267	0.1085	4.44291E-01
100.00	0.5772	0.1069	0.1069	0.0646	4.12660E-01
120.00	0.6269	0.0936	0.0936	0.0362	3.91550E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2845	0.4331	0.4331	3.8695	3.13521E 00
15.00	0.3429	0.3316	0.3316	2.1956	1.73945E 00
20.00	0.3766	0.2964	0.2964	1.4788	1.27781E 00
30.00	0.4163	0.2707	0.2707	0.8748	9.26655E-01
40.00	0.4447	0.2509	0.2509	0.5920	7.61389E-01
60.00	0.4900	0.2113	0.2113	0.3190	5.92133E-01
80.00	0.5281	0.1773	0.1773	0.1919	5.07130E-01
100.00	0.5635	0.1504	0.1504	0.1216	4.56984E-01
120.00	0.5997	0.1299	0.1299	0.0779	4.24264E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SPHERES 2 0 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3161	0.2532	0.2532	2.0306	1.28729E 00
15.00	0.3633	0.2171	0.2171	1.3654	9.57143E-01
20.00	0.3920	0.2060	0.2060	1.0389	8.12304E-01
30.00	0.4310	0.1948	0.1948	0.6993	6.65787E-01
40.00	0.4608	0.1836	0.1836	0.5145	5.83621E-01
60.00	0.5079	0.1605	0.1605	0.3166	4.90706E-01
80.00	0.5464	0.1400	0.1400	0.2140	4.39320E-01
100.00	0.5802	0.1229	0.1229	0.1525	4.06792E-01
120.00	0.6116	0.1090	0.1090	0.1121	3.84404E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3161	0.2885	0.2885	4.0628	2.25735E 00
15.00	0.3631	0.2598	0.2598	2.7326	1.59750E 00
20.00	0.3918	0.2553	0.2553	2.0797	1.30827E 00
30.00	0.4307	0.2543	0.2543	1.4018	1.01611E 00
40.00	0.4600	0.2496	0.2496	1.0337	8.52642E-01
60.00	0.5063	0.2327	0.2327	0.6394	6.68523E-01
80.00	0.5433	0.2123	0.2123	0.4362	5.67425E-01
100.00	0.5751	0.1924	0.1924	0.3149	5.04012E-01
120.00	0.6036	0.1740	0.1740	0.2360	4.60849E-01

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3161	0.3027	0.3027	6.0941	3.22742E 00
15.00	0.3631	0.2781	0.2781	4.0997	2.23786E 00
20.00	0.3918	0.2775	0.2775	3.1209	1.80423E 00
30.00	0.4305	0.2832	0.2832	2.1047	1.36643E 00
40.00	0.4598	0.2840	0.2840	1.5527	1.12166E 00
60.00	0.5058	0.2746	0.2746	0.9622	8.46339E-01
80.00	0.5423	0.2580	0.2580	0.6583	6.95531E-01
100.00	0.5735	0.2393	0.2393	0.4773	6.01233E-01
120.00	0.6011	0.2207	0.2207	0.3596	5.37293E-01

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3160	0.3150	0.3150	10.1587	5.16754E 00
15.00	0.3631	0.2947	0.2947	6.8344	3.51858E 00
20.00	0.3917	0.2981	0.2981	5.2039	2.79615E 00
30.00	0.4304	0.3116	0.3116	3.5110	2.06707E 00
40.00	0.4597	0.3195	0.3195	2.5902	1.65971E 00
60.00	0.5053	0.3211	0.3211	1.6082	1.20197E 00
80.00	0.5416	0.3126	0.3126	1.1023	9.51741E-01
100.00	0.5722	0.2989	0.2989	0.8019	7.95674E-01
120.00	0.5991	0.2830	0.2830	0.6069	6.90182E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1760	0.3386	0.3348	0.0006	7.88363E-01
15.00	0.3401	0.1097	0.0913	0.0001	5.45502E-01
20.00	0.4267	0.0730	0.0202	0.0000	4.86985E-01
30.00	0.4951	0.0679	0.0010	0.0000	4.52099E-01
40.00	0.5377	0.0694	0.0001	0.0000	4.33840E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09010E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91721E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1423	0.5044	0.5015	0.0012	1.05266E 00
15.00	0.2864	0.1701	0.1672	0.0003	5.95357E-01
20.00	0.4100	0.0817	0.0396	0.0000	4.96832E-01
30.00	0.4941	0.0682	0.0019	0.0000	4.52532E-01
40.00	0.5376	0.0694	0.0001	0.0000	4.33868E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09012E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91722E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1328	0.6035	0.6013	0.0020	1.31695E 00
15.00	0.2478	0.2319	0.2313	0.0007	6.45211E-01
20.00	0.3942	0.0912	0.0583	0.0000	5.06679E-01
30.00	0.4932	0.0686	0.0029	0.0000	4.52966E-01
40.00	0.5375	0.0695	0.0002	0.0000	4.33896E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09015E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91723E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78523E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1259	0.7166	0.7150	0.0037	1.84554E 00
15.00	0.2076	0.3343	0.3338	0.0013	7.44920E-01
20.00	0.3654	0.1122	0.0934	0.0001	5.26372E-01
30.00	0.4914	0.0694	0.0048	0.0000	4.53834E-01
40.00	0.5374	0.0695	0.0003	0.0000	4.33952E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09020E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91725E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78524E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2581	0.2815	0.2801	0.0862	7.86151E-01
15.00	0.3517	0.1192	0.0970	0.0299	5.64484E-01
20.00	0.4124	0.0862	0.0435	0.0117	5.04342E-01
30.00	0.4785	0.0763	0.0199	0.0037	4.62442E-01
40.00	0.5246	0.0749	0.0132	0.0016	4.40273E-01
60.00	0.5968	0.0747	0.0070	0.0004	4.12039E-01
80.00	0.6542	0.0752	0.0041	0.0001	3.93395E-01
100.00	0.7027	0.0758	0.0026	0.0001	3.79541E-01
120.00	0.7451	0.0765	0.0018	0.0000	3.68552E-01

CRC 20. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2448	0.4161	0.4157	0.1788	1.05120E 00
15.00	0.3319	0.1735	0.1612	0.0744	6.33696E-01
20.00	0.3945	0.1081	0.0766	0.0299	5.31598E-01
30.00	0.4648	0.0854	0.0373	0.0091	4.73222E-01
40.00	0.5131	0.0806	0.0254	0.0039	4.46734E-01
60.00	0.5891	0.0775	0.0137	0.0010	4.15070E-01
80.00	0.6490	0.0768	0.0082	0.0003	3.95069E-01
100.00	0.6990	0.0768	0.0052	0.0001	3.80559E-01
120.00	0.7425	0.0771	0.0035	0.0001	3.69214E-01

CRC 30. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2401	0.4973	0.4971	0.2704	1.31625E 00
15.00	0.3234	0.2197	0.2110	0.1213	7.02908E-01
20.00	0.3843	0.1292	0.1038	0.0513	5.58854E-01
30.00	0.4544	0.0945	0.0526	0.0159	4.84001E-01
40.00	0.5032	0.0864	0.0367	0.0067	4.53195E-01
60.00	0.5818	0.0804	0.0202	0.0016	4.18102E-01
80.00	0.6439	0.0785	0.0122	0.0005	3.96744E-01
100.00	0.6955	0.0779	0.0078	0.0002	3.81578E-01
120.00	0.7399	0.0778	0.0053	0.0001	3.69875E-01

CRC 50. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2363	0.5901	0.5900	0.4530	1.84635E 00
15.00	0.3158	0.2910	0.2853	0.2162	8.41332E-01
20.00	0.3737	0.1672	0.1482	0.0975	6.13365E-01
30.00	0.4405	0.1126	0.0788	0.0324	5.05560E-01
40.00	0.4879	0.0983	0.0567	0.0141	4.66116E-01
60.00	0.5685	0.0863	0.0327	0.0034	4.24165E-01
80.00	0.6342	0.0818	0.0200	0.0010	4.00093E-01
100.00	0.6885	0.0800	0.0129	0.0004	3.83616E-01
120.00	0.7348	0.0792	0.0088	0.0002	3.71199E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3105	0.2414	0.2313	0.4491	9.76446E-01
15.00	0.3672	0.1719	0.1489	0.2616	7.29041E-01
20.00	0.4013	0.1501	0.1210	0.1800	6.36653E-01
30.00	0.4480	0.1324	0.0982	0.1043	5.50915E-01
40.00	0.4857	0.1215	0.0840	0.0668	5.03819E-01
60.00	0.5508	0.1071	0.0634	0.0311	4.49635E-01
80.00	0.6082	0.0985	0.0491	0.0159	4.18162E-01
100.00	0.6598	0.0931	0.0387	0.0087	3.96960E-01
120.00	0.7067	0.0897	0.0308	0.0050	3.81365E-01

CRO 20. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3059	0.3125	0.3065	0.9212	1.43186E 00
15.00	0.3621	0.2307	0.2149	0.5431	9.62814E-01
20.00	0.3951	0.2036	0.1824	0.3779	7.96220E-01
30.00	0.4387	0.1803	0.1546	0.2253	6.50167E-01
40.00	0.4728	0.1640	0.1355	0.1491	5.73825E-01
60.00	0.5311	0.1396	0.1063	0.0742	4.90263E-01
80.00	0.5831	0.1231	0.0851	0.0402	4.44604E-01
100.00	0.6317	0.1118	0.0690	0.0227	4.15399E-01
120.00	0.6779	0.1041	0.0565	0.0133	3.94840E-01

CRO 30. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3043	0.3495	0.3451	1.3940	1.88728E 00
15.00	0.3602	0.2669	0.2545	0.8258	1.19659E 00
20.00	0.3927	0.2395	0.2225	0.5774	9.55787E-01
30.00	0.4349	0.2159	0.1947	0.3485	7.49419E-01
40.00	0.4674	0.1979	0.1741	0.2339	6.43831E-01
60.00	0.5219	0.1680	0.1401	0.1206	5.30890E-01
80.00	0.5699	0.1459	0.1141	0.0679	4.71046E-01
100.00	0.6149	0.1299	0.0941	0.0399	4.33837E-01
120.00	0.6584	0.1184	0.0783	0.0240	4.08315E-01

CRO 50. EM 0.0750 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3030	0.3876	0.3848	2.3394	2.79812E 00
15.00	0.3586	0.3087	0.3001	1.3920	1.66413E 00
20.00	0.3907	0.2844	0.2721	0.9775	1.27492E 00
30.00	0.4315	0.2649	0.2489	0.5963	9.47923E-01
40.00	0.4625	0.2479	0.2295	0.4056	7.83843E-01
60.00	0.5133	0.2142	0.1922	0.2162	6.12145E-01
80.00	0.5568	0.1858	0.1606	0.1270	5.23930E-01
100.00	0.5968	0.1632	0.1350	0.0784	4.70714E-01
120.00	0.6355	0.1459	0.1144	0.0496	4.35264E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3346	0.2246	0.2173	1.1137	1.37331E 00
15.00	0.3793	0.2041	0.1875	0.7940	1.07048E 00
20.00	0.4080	0.1991	0.1783	0.6237	9.26039E-01
30.00	0.4499	0.1934	0.1686	0.4314	7.67412E-01
40.00	0.4831	0.1864	0.1592	0.3205	6.74247E-01
60.00	0.5374	0.1711	0.1404	0.1971	5.65642E-01
80.00	0.5828	0.1573	0.1238	0.1314	5.03276E-01
100.00	0.6233	0.1456	0.1096	0.0916	4.62376E-01
120.00	0.6607	0.1360	0.0976	0.0658	4.33282E-01

CRC 20. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3323	0.2652	0.2611	2.2514	2.23279E 00
15.00	0.3770	0.2478	0.2375	1.6068	1.64832E 00
20.00	0.4054	0.2469	0.2334	1.2652	1.37603E 00
30.00	0.4461	0.2474	0.2306	0.8817	1.08335E 00
40.00	0.4779	0.2438	0.2249	0.6609	9.14718E-01
60.00	0.5288	0.2300	0.2079	0.4149	7.22277E-01
80.00	0.5706	0.2140	0.1895	0.2831	6.14831E-01
100.00	0.6073	0.1986	0.1719	0.2028	5.46230E-01
120.00	0.6406	0.1846	0.1560	0.1499	4.98673E-01

CRC 30. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3315	0.2834	0.2805	3.3894	3.09227E 00
15.00	0.3763	0.2690	0.2615	2.4198	2.22617E 00
20.00	0.4045	0.2713	0.2612	1.9072	1.82603E 00
30.00	0.4446	0.2769	0.2642	1.3333	1.39928E 00
40.00	0.4759	0.2773	0.2627	1.0026	1.15519E 00
60.00	0.5256	0.2682	0.2506	0.6342	8.78913E-01
80.00	0.5660	0.2538	0.2339	0.4367	7.26387E-01
100.00	0.6009	0.2380	0.2161	0.3163	6.30084E-01
120.00	0.6323	0.2225	0.1989	0.2368	5.64065E-01

CRC 50. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3308	0.3001	0.2983	5.6666	4.81124E 00
15.00	0.3756	0.2895	0.2846	4.0473	3.38185E 00
20.00	0.4037	0.2956	0.2890	3.1931	2.72601E 00
30.00	0.4435	0.3087	0.3000	2.2363	2.03115E 00
40.00	0.4743	0.3150	0.3049	1.6863	1.63613E 00
60.00	0.5229	0.3145	0.3019	1.0741	1.19218E 00
80.00	0.5620	0.3054	0.2908	0.7455	9.49498E-01
100.00	0.5953	0.2922	0.2758	0.5453	7.97791E-01
120.00	0.6250	0.2775	0.2595	0.4127	6.94848E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1770	0.3362	0.3361	0.0006	7.85436E-01
15.00	0.3406	0.1093	0.0914	0.0000	5.45127E-01
20.00	0.4268	0.0729	0.0202	0.0000	4.86934E-01
30.00	0.4951	0.0679	0.0010	0.0000	4.52097E-01
40.00	0.5377	0.0694	0.0001	0.0000	4.33840E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09010E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91721E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1425	0.5030	0.5029	0.0012	1.04973E 00
15.00	0.2868	0.1696	0.1673	0.0003	5.94982E-01
20.00	0.4101	0.0817	0.0396	0.0000	4.96780E-01
30.00	0.4941	0.0682	0.0019	0.0000	4.52531E-01
40.00	0.5376	0.0694	0.0001	0.0000	4.33868E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09012E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91722E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1329	0.6026	0.6026	0.0020	1.31402E 00
15.00	0.2481	0.2315	0.2314	0.0007	6.44836E-01
20.00	0.3943	0.0912	0.0583	0.0000	5.06627E-01
30.00	0.4932	0.0686	0.0029	0.0000	4.52965E-01
40.00	0.5375	0.0695	0.0002	0.0000	4.33896E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09015E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91723E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78523E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1259	0.7161	0.7161	0.0037	1.84261E 00
15.00	0.2077	0.3340	0.3340	0.0013	7.44545E-01
20.00	0.3655	0.1122	0.0935	0.0001	5.26320E-01
30.00	0.4914	0.0694	0.0048	0.0000	4.53833E-01
40.00	0.5374	0.0695	0.0003	0.0000	4.33952E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09020E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91725E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78524E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2582	0.2810	0.2804	0.0862	7.85529E-01
15.00	0.3518	0.1191	0.0971	0.0299	5.64399E-01
20.00	0.4124	0.0862	0.0435	0.0117	5.04329E-01
30.00	0.4785	0.0763	0.0199	0.0037	4.62442E-01
40.00	0.5246	0.0749	0.0132	0.0016	4.40273E-01
60.00	0.5968	0.0747	0.0070	0.0004	4.12039E-01
80.00	0.6542	0.0752	0.0041	0.0001	3.93395E-01
100.00	0.7027	0.0758	0.0026	0.0001	3.79541E-01
120.00	0.7451	0.0765	0.0018	0.0000	3.68552E-01

CRC 20. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2440	0.4158	0.4158	0.1792	1.05058E 00
15.00	0.3319	0.1735	0.1612	0.0744	6.33611E-01
20.00	0.3945	0.1081	0.0766	0.0299	5.31585E-01
30.00	0.4648	0.0854	0.0373	0.0091	4.73221E-01
40.00	0.5131	0.0806	0.0254	0.0039	4.46734E-01
60.00	0.5891	0.0775	0.0137	0.0010	4.15070E-01
80.00	0.6490	0.0768	0.0082	0.0003	3.95069E-01
100.00	0.6990	0.0768	0.0052	0.0001	3.80559E-01
120.00	0.7425	0.0771	0.0035	0.0001	3.69214E-01

CRC 30. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2391	0.4972	0.4972	0.2710	1.31563E 00
15.00	0.3234	0.2196	0.2110	0.1213	7.02824E-01
20.00	0.3843	0.1291	0.1038	0.0513	5.58841E-01
30.00	0.4544	0.0945	0.0526	0.0159	4.84001E-01
40.00	0.5032	0.0864	0.0367	0.0067	4.53195E-01
60.00	0.5818	0.0804	0.0202	0.0016	4.18102E-01
80.00	0.6439	0.0785	0.0122	0.0005	3.96744E-01
100.00	0.6955	0.0779	0.0078	0.0002	3.81578E-01
120.00	0.7399	0.0778	0.0053	0.0001	3.69875E-01

CRC 50. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2355	0.5901	0.5901	0.4538	1.84573E 00
15.00	0.3158	0.2909	0.2853	0.2162	8.41248E-01
20.00	0.3737	0.1672	0.1482	0.0975	6.13352E-01
30.00	0.4405	0.1126	0.0788	0.0324	5.05560E-01
40.00	0.4879	0.0983	0.0567	0.0141	4.66116E-01
60.00	0.5685	0.0863	0.0327	0.0034	4.24165E-01
80.00	0.6342	0.0818	0.0200	0.0010	4.00093E-01
100.00	0.6885	0.0800	0.0129	0.0004	3.83616E-01
120.00	0.7348	0.0792	0.0088	0.0002	3.71199E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3067	0.2335	0.2335	0.4807	9.44193E-01
15.00	0.3729	0.1609	0.1609	0.2510	7.09997E-01
20.00	0.4067	0.1422	0.1293	0.1723	6.24706E-01
30.00	0.4516	0.1283	0.1018	0.1011	5.45730E-01
40.00	0.4881	0.1194	0.0855	0.0654	5.01395E-01
60.00	0.5517	0.1065	0.0638	0.0308	4.49038E-01
80.00	0.6085	0.0984	0.0492	0.0158	4.18001E-01
100.00	0.6599	0.0931	0.0387	0.0086	3.96914E-01
120.00	0.7067	0.0897	0.0308	0.0050	3.81351E-01

CRO 20. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3037	0.3092	0.3092	0.9782	1.39961E 00
15.00	0.3641	0.2234	0.2234	0.5391	9.43770E-01
20.00	0.3981	0.1978	0.1905	0.3694	7.84273E-01
30.00	0.4406	0.1769	0.1584	0.2217	6.44982E-01
40.00	0.4742	0.1622	0.1374	0.1474	5.71401E-01
60.00	0.5317	0.1390	0.1067	0.0738	4.89665E-01
80.00	0.5833	0.1229	0.0852	0.0401	4.44443E-01
100.00	0.6319	0.1118	0.0691	0.0227	4.15353E-01
120.00	0.6780	0.1041	0.0565	0.0132	3.94826E-01

CRO 30. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3027	0.3478	0.3478	1.4754	1.85503E 00
15.00	0.3613	0.2614	0.2614	0.8262	1.17754E 00
20.00	0.3947	0.2350	0.2299	0.5686	9.43840E-01
30.00	0.4362	0.2132	0.1984	0.3447	7.44234E-01
40.00	0.4683	0.1963	0.1759	0.2323	6.41407E-01
60.00	0.5223	0.1675	0.1405	0.1201	5.30293E-01
80.00	0.5701	0.1457	0.1142	0.0678	4.70885E-01
100.00	0.6150	0.1299	0.0941	0.0399	4.33791E-01
120.00	0.6584	0.1184	0.0783	0.0240	4.08301E-01

CRO 50. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3020	0.3869	0.3869	2.4693	2.76586E 00
15.00	0.3592	0.3052	0.3052	1.4002	1.64509E 00
20.00	0.3919	0.2814	0.2781	0.9686	1.26297E 00
30.00	0.4324	0.2631	0.2523	0.5923	9.42738E-01
40.00	0.4631	0.2466	0.2312	0.4039	7.81419E-01
60.00	0.5135	0.2138	0.1926	0.2157	6.11548E-01
80.00	0.5568	0.1856	0.1607	0.1269	5.23769E-01
100.00	0.5970	0.1632	0.1351	0.0783	4.70668E-01
120.00	0.6355	0.1459	0.1145	0.0496	4.35250E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3313	0.2220	0.2220	1.3011	1.29850E 00
15.00	0.3777	0.1949	0.1949	0.8772	1.01180E 00
20.00	0.4077	0.1872	0.1872	0.6651	8.79137E-01
30.00	0.4526	0.1800	0.1800	0.4367	7.36090E-01
40.00	0.4905	0.1738	0.1738	0.3084	6.52417E-01
60.00	0.5447	0.1627	0.1499	0.1885	5.54151E-01
80.00	0.5885	0.1517	0.1291	0.1267	4.96821E-01
100.00	0.6277	0.1420	0.1127	0.0891	4.58602E-01
120.00	0.6641	0.1337	0.0993	0.0644	4.31015E-01

CRC 20. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3305	0.2652	0.2652	2.6119	2.15798E 00
15.00	0.3761	0.2437	0.2437	1.7704	1.58965E 00
20.00	0.4050	0.2407	0.2407	1.3518	1.32913E 00
30.00	0.4470	0.2395	0.2395	0.9042	1.05202E 00
40.00	0.4807	0.2357	0.2357	0.6565	8.92888E-01
60.00	0.5327	0.2240	0.2169	0.4054	7.10787E-01
80.00	0.5737	0.2098	0.1949	0.2779	6.08377E-01
100.00	0.6096	0.1957	0.1752	0.1998	5.42456E-01
120.00	0.6424	0.1826	0.1580	0.1482	4.96407E-01

CRC 30. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3303	0.2837	0.2837	3.9232	3.01746E 00
15.00	0.3756	0.2664	0.2664	2.6639	2.16749E 00
20.00	0.4042	0.2672	0.2672	2.0379	1.77912E 00
30.00	0.4452	0.2716	0.2716	1.3716	1.36796E 00
40.00	0.4776	0.2715	0.2715	1.0041	1.13336E 00
60.00	0.5282	0.2636	0.2586	0.6246	8.67423E-01
80.00	0.5680	0.2504	0.2389	0.4315	7.19932E-01
100.00	0.6025	0.2356	0.2193	0.3133	6.26310E-01
120.00	0.6335	0.2208	0.2009	0.2351	5.61798E-01

CRC 50. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3301	0.3007	0.3007	6.5451	4.73642E 00
15.00	0.3752	0.2882	0.2882	4.4507	3.32318E 00
20.00	0.4035	0.2935	0.2935	3.4105	2.67911E 00
30.00	0.4437	0.3054	0.3054	2.3062	1.99983E 00
40.00	0.4752	0.3115	0.3115	1.6982	1.61430E 00
60.00	0.5245	0.3116	0.3084	1.0641	1.18069E 00
80.00	0.5632	0.3031	0.2951	0.7401	9.43043E-01
100.00	0.5963	0.2905	0.2787	0.5420	7.94018E-01
120.00	0.6258	0.2763	0.2614	0.4107	6.92582E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1320	0.3364	0.3364	0.0007	7.84624E-01
15.00	0.3408	0.1092	0.0914	0.0000	5.45011E-01
20.00	0.4268	0.0729	0.0202	0.0000	4.86914E-01
30.00	0.4951	0.0679	0.0010	0.0000	4.52097E-01
40.00	0.5377	0.0694	0.0001	0.0000	4.33840E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09010E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91721E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 20. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1233	0.5031	0.5031	0.0016	1.04892E 00
15.00	0.2869	0.1695	0.1673	0.0003	5.94866E-01
20.00	0.4101	0.0817	0.0396	0.0000	4.96761E-01
30.00	0.4941	0.0682	0.0019	0.0000	4.52531E-01
40.00	0.5376	0.0694	0.0001	0.0000	4.33868E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09012E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91722E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78522E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 30. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1209	0.6027	0.6027	0.0026	1.31321E 00
15.00	0.2296	0.2314	0.2314	0.0007	6.44720E-01
20.00	0.3943	0.0911	0.0583	0.0000	5.06608E-01
30.00	0.4932	0.0686	0.0029	0.0000	4.52964E-01
40.00	0.5375	0.0695	0.0002	0.0000	4.33896E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09015E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91723E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78523E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

CRO 50. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1192	0.7162	0.7162	0.0047	1.84180E 00
15.00	0.1841	0.3340	0.3340	0.0013	7.44429E-01
20.00	0.3655	0.1122	0.0935	0.0001	5.26301E-01
30.00	0.4914	0.0694	0.0048	0.0000	4.53832E-01
40.00	0.5374	0.0695	0.0003	0.0000	4.33952E-01
60.00	0.6049	0.0719	0.0000	0.0000	4.09020E-01
80.00	0.6595	0.0736	0.0000	0.0000	3.91725E-01
100.00	0.7063	0.0748	0.0000	-0.0000	3.78524E-01
120.00	0.7477	0.0758	0.0000	-0.0000	3.67890E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2328	0.3092	0.3092	0.1079	7.04065E-01
15.00	0.3175	0.0960	0.0960	0.0481	5.03174E-01
20.00	0.4293	0.0507	0.0507	0.0096	4.56399E-01
30.00	0.5467	0.0518	0.0238	0.0012	4.30934E-01
40.00	0.5791	0.0569	0.0148	0.0007	4.18406E-01
60.00	0.6312	0.0644	0.0073	0.0002	4.00547E-01
80.00	0.6761	0.0691	0.0042	0.0001	3.86940E-01
100.00	0.7168	0.0721	0.0027	0.0000	3.75767E-01
120.00	0.7543	0.0741	0.0018	0.0000	3.66285E-01

CRC 20. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2316	0.4491	0.4491	0.2160	9.69116E-01
15.00	0.3100	0.1640	0.1640	0.1026	5.72386E-01
20.00	0.3789	0.0776	0.0776	0.0396	4.83655E-01
30.00	0.5238	0.0593	0.0454	0.0036	4.41714E-01
40.00	0.5633	0.0618	0.0288	0.0017	4.24867E-01
60.00	0.6223	0.0670	0.0145	0.0006	4.03578E-01
80.00	0.6705	0.0706	0.0084	0.0002	3.88614E-01
100.00	0.7130	0.0731	0.0053	0.0001	3.76786E-01
120.00	0.7516	0.0748	0.0036	0.0000	3.66947E-01

CRC 30. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2312	0.5290	0.5290	0.3242	1.23417E 00
15.00	0.3078	0.2176	0.2176	0.1567	6.41598E-01
20.00	0.3690	0.1035	0.1035	0.0673	5.10911E-01
30.00	0.5046	0.0672	0.0646	0.0074	4.52493E-01
40.00	0.5490	0.0669	0.0419	0.0033	4.31328E-01
60.00	0.6138	0.0696	0.0215	0.0010	4.06610E-01
80.00	0.6650	0.0722	0.0125	0.0004	3.90289E-01
100.00	0.7093	0.0741	0.0079	0.0002	3.77805E-01
120.00	0.7490	0.0755	0.0053	0.0001	3.67609E-01

CRC 50. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2309	0.6167	0.6167	0.5404	1.76427E 00
15.00	0.3060	0.2964	0.2964	0.2647	7.80022E-01
20.00	0.3622	0.1488	0.1488	0.1216	5.65422E-01
30.00	0.4450	0.0859	0.0859	0.0314	4.74052E-01
40.00	0.5251	0.0776	0.0654	0.0080	4.44249E-01
60.00	0.5980	0.0751	0.0348	0.0021	4.12672E-01
80.00	0.6545	0.0753	0.0206	0.0007	3.93638E-01
100.00	0.7020	0.0761	0.0131	0.0003	3.79842E-01
120.00	0.7438	0.0768	0.0088	0.0001	3.68932E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3013	0.2599	0.2599	0.6644	8.20105E-01
15.00	0.3575	0.1653	0.1653	0.3716	5.97164E-01
20.00	0.3901	0.1322	0.1322	0.2502	5.21679E-01
30.00	0.4326	0.1039	0.1039	0.1435	4.58856E-01
40.00	0.4669	0.0872	0.0872	0.0917	4.27167E-01
60.00	0.5346	0.0675	0.0675	0.0400	3.93088E-01
80.00	0.6371	0.0589	0.0589	0.0126	3.74436E-01
100.00	0.7766	0.0595	0.0485	0.0025	3.62185E-01
120.00	0.8147	0.0615	0.0367	0.0016	3.53179E-01

CRO 20. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3011	0.3337	0.3337	1.3305	1.27552E 00
15.00	0.3568	0.2358	0.2358	0.7475	8.30937E-01
20.00	0.3887	0.1995	0.1995	0.5060	6.81246E-01
30.00	0.4292	0.1655	0.1655	0.2951	5.58108E-01
40.00	0.4604	0.1422	0.1422	0.1940	4.97173E-01
60.00	0.5143	0.1092	0.1092	0.0962	4.33716E-01
80.00	0.5688	0.0890	0.0890	0.0495	4.00878E-01
100.00	0.6424	0.0775	0.0775	0.0215	3.80624E-01
120.00	0.7645	0.0738	0.0685	0.0054	3.66654E-01

CRO 30. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3010	0.3687	0.3687	1.9964	1.73094E 00
15.00	0.3565	0.2754	0.2754	1.1231	1.06471E 00
20.00	0.3883	0.2412	0.2412	0.7618	8.40813E-01
30.00	0.4282	0.2086	0.2086	0.4466	6.57361E-01
40.00	0.4583	0.1838	0.1838	0.2961	5.67180E-01
60.00	0.5085	0.1443	0.1443	0.1516	4.74343E-01
80.00	0.5548	0.1170	0.1170	0.0843	4.27320E-01
100.00	0.6055	0.0989	0.0989	0.0461	3.99062E-01
120.00	0.6774	0.0880	0.0880	0.0205	3.80129E-01

CRO 50. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3009	0.4023	0.4023	3.3294	2.64177E 00
15.00	0.3564	0.3183	0.3183	1.8743	1.53225E 00
20.00	0.3879	0.2903	0.2903	1.2732	1.15995E 00
30.00	0.4273	0.2648	0.2648	0.7497	8.55865E-01
40.00	0.4567	0.2422	0.2422	0.5004	7.07192E-01
60.00	0.5042	0.1992	0.1992	0.2623	5.55598E-01
80.00	0.5452	0.1644	0.1644	0.1530	4.80204E-01
100.00	0.5848	0.1382	0.1382	0.0929	4.35939E-01
120.00	0.6282	0.1193	0.1193	0.0554	4.07079E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 1) 2 1 1 0 200

CRC 10. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3299	0.2417	0.2417	1.8137	1.17659E 00
15.00	0.3749	0.2134	0.2134	1.2222	8.94451E-01
20.00	0.4030	0.2041	0.2041	0.9289	7.66103E-01
30.00	0.4427	0.1917	0.1917	0.6187	6.31057E-01
40.00	0.4735	0.1786	0.1786	0.4502	5.54617E-01
60.00	0.5227	0.1533	0.1533	0.2715	4.68861E-01
80.00	0.5632	0.1319	0.1319	0.1801	4.21902E-01
100.00	0.5994	0.1148	0.1148	0.1258	3.92364E-01
120.00	0.6337	0.1012	0.1012	0.0905	3.72105E-01

CRC 20. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3299	0.2792	0.2792	3.6280	2.03607E 00
15.00	0.3747	0.2588	0.2588	2.4466	1.47229E 00
20.00	0.4027	0.2565	0.2565	1.8604	1.21610E 00
30.00	0.4422	0.2542	0.2542	1.2413	9.46992E-01
40.00	0.4725	0.2472	0.2472	0.9054	7.95088E-01
60.00	0.5206	0.2264	0.2264	0.5499	6.25496E-01
80.00	0.5592	0.2034	0.2034	0.3693	5.33458E-01
100.00	0.5926	0.1820	0.1820	0.2627	4.76218E-01
120.00	0.6229	0.1630	0.1630	0.1939	4.37496E-01

CRC 30. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3298	0.2944	0.2944	5.4431	2.89555E 00
15.00	0.3747	0.2787	0.2787	3.6707	2.05014E 00
20.00	0.4026	0.2803	0.2803	2.7932	1.66609E 00
30.00	0.4420	0.2852	0.2852	1.8646	1.26293E 00
40.00	0.4722	0.2839	0.2839	1.3606	1.03556E 00
60.00	0.5199	0.2701	0.2701	0.8283	7.82132E-01
80.00	0.5579	0.2502	0.2502	0.5584	6.45014E-01
100.00	0.5905	0.2292	0.2292	0.3994	5.60071E-01
120.00	0.6195	0.2088	0.2088	0.2972	5.02888E-01

CRC 50. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3298	0.3079	0.3079	9.0718	4.61452E 00
15.00	0.3746	0.2969	0.2969	6.1192	3.20582E 00
20.00	0.4026	0.3033	0.3033	4.6553	2.56608E 00
30.00	0.4419	0.3166	0.3166	3.1091	1.89480E 00
40.00	0.4720	0.3225	0.3225	2.2708	1.51650E 00
60.00	0.5193	0.3200	0.3200	1.3857	1.09540E 00
80.00	0.5569	0.3077	0.3077	0.9364	8.68125E-01
100.00	0.5887	0.2908	0.2908	0.6730	7.27779E-01
120.00	0.6169	0.2723	0.2723	0.5034	6.33671E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1851	0.3197	0.3161	0.0006	7.60968E-01
15.00	0.3501	0.1064	0.0849	0.0000	5.37655E-01
20.00	0.4344	0.0734	0.0189	0.0000	4.82647E-01
30.00	0.5031	0.0689	0.0009	0.0000	4.48513E-01
40.00	0.5465	0.0705	0.0001	0.0000	4.30321E-01
60.00	0.6153	0.0730	0.0000	0.0000	4.05570E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88348E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75205E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1474	0.4829	0.4802	0.0011	1.00179E 00
15.00	0.2980	0.1608	0.1564	0.0003	5.83327E-01
20.00	0.4185	0.0816	0.0371	0.0000	4.91770E-01
30.00	0.5022	0.0693	0.0018	0.0000	4.48923E-01
40.00	0.5464	0.0705	0.0001	0.0000	4.30348E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05572E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1368	0.5828	0.5807	0.0018	1.24262E 00
15.00	0.2591	0.2182	0.2173	0.0006	6.29000E-01
20.00	0.4033	0.0903	0.0546	0.0000	5.00893E-01
30.00	0.5012	0.0696	0.0027	0.0000	4.49334E-01
40.00	0.5463	0.0705	0.0002	0.0000	4.30374E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05575E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1293	0.6989	0.6974	0.0032	1.72427E 00
15.00	0.2154	0.3167	0.3162	0.0012	7.20345E-01
20.00	0.3756	0.1095	0.0878	0.0001	5.19138E-01
30.00	0.4994	0.0703	0.0046	0.0000	4.50156E-01
40.00	0.5462	0.0706	0.0003	0.0000	4.30428E-01
60.00	0.6152	0.0730	0.0000	0.0000	4.05580E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88351E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75207E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64624E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2645	0.2671	0.2652	0.0804	7.60699E-01
15.00	0.3587	0.1166	0.0926	0.0266	5.55837E-01
20.00	0.4195	0.0861	0.0419	0.0103	4.99003E-01
30.00	0.4866	0.0769	0.0191	0.0032	4.58199E-01
40.00	0.5338	0.0757	0.0126	0.0014	4.36326E-01
60.00	0.6075	0.0756	0.0066	0.0004	4.08386E-01
80.00	0.6659	0.0761	0.0039	0.0001	3.89899E-01
100.00	0.7153	0.0768	0.0025	0.0000	3.76148E-01
120.00	0.7587	0.0775	0.0017	0.0000	3.65235E-01

CRC 20. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2504	0.3983	0.3978	0.1687	1.00397E 00
15.00	0.3379	0.1682	0.1546	0.0674	6.20039E-01
20.00	0.4011	0.1071	0.0742	0.0266	5.24531E-01
30.00	0.4729	0.0856	0.0360	0.0079	4.68297E-01
40.00	0.5224	0.0811	0.0243	0.0032	4.42358E-01
60.00	0.6000	0.0782	0.0130	0.0008	4.11203E-01
80.00	0.6609	0.0777	0.0077	0.0003	3.91451E-01
100.00	0.7119	0.0778	0.0049	0.0001	3.77090E-01
120.00	0.7562	0.0781	0.0033	0.0000	3.65846E-01

CRC 30. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2455	0.4794	0.4791	0.2559	1.24724E 00
15.00	0.3288	0.2127	0.2030	0.1108	6.84240E-01
20.00	0.3903	0.1273	0.1009	0.0460	5.50059E-01
30.00	0.4622	0.0943	0.0510	0.0138	4.78396E-01
40.00	0.5125	0.0866	0.0352	0.0057	4.48390E-01
60.00	0.5928	0.0809	0.0192	0.0013	4.14021E-01
80.00	0.6560	0.0792	0.0115	0.0004	3.93003E-01
100.00	0.7085	0.0787	0.0073	0.0002	3.78032E-01
120.00	0.7537	0.0787	0.0049	0.0001	3.66457E-01

CRC 50. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2414	0.5736	0.5735	0.4295	1.73377E 00
15.00	0.3208	0.2824	0.2760	0.1989	8.12644E-01
20.00	0.3789	0.1643	0.1445	0.0884	6.01114E-01
30.00	0.4475	0.1117	0.0767	0.0285	4.98593E-01
40.00	0.4966	0.0978	0.0548	0.0120	4.60453E-01
60.00	0.5797	0.0865	0.0311	0.0027	4.19656E-01
80.00	0.6467	0.0824	0.0188	0.0008	3.96106E-01
100.00	0.7017	0.0807	0.0121	0.0003	3.79916E-01
120.00	0.7489	0.0801	0.0082	0.0001	3.67679E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3158	0.2370	0.2260	0.4244	9.46326E-01
15.00	0.3721	0.1712	0.1474	0.2463	7.13776E-01
20.00	0.4064	0.1499	0.1201	0.1686	6.25292E-01
30.00	0.4541	0.1321	0.0972	0.0965	5.42200E-01
40.00	0.4929	0.1211	0.0827	0.0610	4.96449E-01
60.00	0.5601	0.1069	0.0620	0.0277	4.43779E-01
80.00	0.6193	0.0985	0.0477	0.0139	4.13132E-01
100.00	0.6725	0.0933	0.0373	0.0074	3.92444E-01
120.00	0.7207	0.0900	0.0295	0.0042	3.77196E-01

CRO 20. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3112	0.3084	0.3017	0.8719	1.37529E 00
15.00	0.3667	0.2305	0.2139	0.5125	9.35919E-01
20.00	0.3998	0.2038	0.1820	0.3552	7.77108E-01
30.00	0.4441	0.1798	0.1535	0.2098	6.36301E-01
40.00	0.4790	0.1631	0.1340	0.1375	5.62602E-01
60.00	0.5391	0.1386	0.1044	0.0671	4.81989E-01
80.00	0.5930	0.1222	0.0830	0.0356	4.37918E-01
100.00	0.6434	0.1112	0.0670	0.0197	4.09683E-01
120.00	0.6912	0.1037	0.0545	0.0113	3.89768E-01

CRO 30. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3094	0.3460	0.3411	1.3202	1.80425E 00
15.00	0.3647	0.2673	0.2544	0.7800	1.15806E 00
20.00	0.3973	0.2403	0.2228	0.5436	9.28924E-01
30.00	0.4399	0.2157	0.1940	0.3254	7.30401E-01
40.00	0.4731	0.1970	0.1726	0.2166	6.28756E-01
60.00	0.5290	0.1664	0.1378	0.1099	5.20200E-01
80.00	0.5786	0.1444	0.1117	0.0608	4.62703E-01
100.00	0.6254	0.1286	0.0916	0.0350	4.26922E-01
120.00	0.6708	0.1174	0.0759	0.0206	4.02340E-01

CRO 50. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3080	0.3850	0.3818	2.2174	2.66217E 00
15.00	0.3630	0.3103	0.3013	1.3160	1.60235E 00
20.00	0.3950	0.2864	0.2736	0.9215	1.23256E 00
30.00	0.4363	0.2656	0.2491	0.5580	9.18601E-01
40.00	0.4678	0.2473	0.2285	0.3771	7.61064E-01
60.00	0.5196	0.2124	0.1899	0.1983	5.96621E-01
80.00	0.5643	0.1835	0.1577	0.1150	5.12274E-01
100.00	0.6058	0.1610	0.1320	0.0699	4.61400E-01
120.00	0.6460	0.1439	0.1114	0.0434	4.27484E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3396	0.2253	0.2170	1.0688	1.33441E 00
15.00	0.3840	0.2061	0.1888	0.7600	1.04458E 00
20.00	0.4130	0.2010	0.1796	0.5949	9.04478E-01
30.00	0.4555	0.1945	0.1691	0.4087	7.50023E-01
40.00	0.4893	0.1869	0.1590	0.3018	6.59473E-01
60.00	0.5446	0.1708	0.1395	0.1837	5.54179E-01
80.00	0.5912	0.1566	0.1224	0.1212	4.93831E-01
100.00	0.6328	0.1449	0.1080	0.0837	4.54286E-01
120.00	0.6714	0.1352	0.0958	0.0595	4.26159E-01

CRC 20. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3372	0.2669	0.2621	2.1613	2.15809E 00
15.00	0.3816	0.2511	0.2403	1.5391	1.59994E 00
20.00	0.4101	0.2500	0.2361	1.2082	1.33643E 00
30.00	0.4513	0.2497	0.2324	0.8367	1.05212E 00
40.00	0.4836	0.2452	0.2258	0.6240	8.88685E-01
60.00	0.5355	0.2303	0.2077	0.3882	7.02791E-01
80.00	0.5780	0.2134	0.1883	0.2629	5.99316E-01
100.00	0.6155	0.1975	0.1702	0.1869	5.33367E-01
120.00	0.6497	0.1831	0.1538	0.1371	4.87695E-01

CRC 30. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3364	0.2855	0.2821	3.2546	2.98177E 00
15.00	0.3808	0.2729	0.2650	2.3190	2.15529E 00
20.00	0.4092	0.2752	0.2648	1.8222	1.76838E 00
30.00	0.4498	0.2803	0.2672	1.2659	1.35421E 00
40.00	0.4815	0.2799	0.2649	0.9471	1.11790E 00
60.00	0.5320	0.2692	0.2512	0.5945	8.51404E-01
80.00	0.5729	0.2536	0.2332	0.4067	7.04801E-01
100.00	0.6085	0.2370	0.2146	0.2927	6.12448E-01
120.00	0.6406	0.2210	0.1968	0.2178	5.49230E-01

CRC 50. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3357	0.3029	0.3008	5.4414	4.62913E 00
15.00	0.3801	0.2944	0.2892	3.8788	3.26600E 00
20.00	0.4083	0.3008	0.2939	3.0507	2.63228E 00
30.00	0.4486	0.3134	0.3044	2.1242	1.95840E 00
40.00	0.4797	0.3188	0.3084	1.5950	1.57632E 00
60.00	0.5290	0.3170	0.3040	1.0082	1.14863E 00
80.00	0.5686	0.3065	0.2914	0.6956	9.15770E-01
100.00	0.6025	0.2922	0.2753	0.5060	7.70609E-01
120.00	0.6327	0.2765	0.2580	0.3811	6.72302E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1861	0.3173	0.3172	0.0006	7.58296E-01
15.00	0.3506	0.1060	0.0850	0.0000	5.37308E-01
20.00	0.4345	0.0734	0.0189	0.0000	4.82599E-01
30.00	0.5031	0.0689	0.0009	0.0000	4.48512E-01
40.00	0.5465	0.0705	0.0001	0.0000	4.30321E-01
60.00	0.6153	0.0730	0.0000	0.0000	4.05570E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88348E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75205E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1477	0.4815	0.4815	0.0011	9.99121E-01
15.00	0.2984	0.1603	0.1565	0.0003	5.82981E-01
20.00	0.4186	0.0815	0.0371	0.0000	4.91722E-01
30.00	0.5022	0.0693	0.0018	0.0000	4.48922E-01
40.00	0.5464	0.0705	0.0001	0.0000	4.30348E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05572E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1370	0.5820	0.5819	0.0018	1.23995E 00
15.00	0.2594	0.2178	0.2175	0.0006	6.28654E-01
20.00	0.4034	0.0902	0.0546	0.0000	5.00844E-01
30.00	0.5012	0.0696	0.0027	0.0000	4.49333E-01
40.00	0.5463	0.0705	0.0002	0.0000	4.30374E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05575E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1294	0.6985	0.6985	0.0032	1.72160E 00
15.00	0.2155	0.3164	0.3164	0.0012	7.19999E-01
20.00	0.3757	0.1094	0.0878	0.0001	5.19090E-01
30.00	0.4994	0.0703	0.0046	0.0000	4.50155E-01
40.00	0.5462	0.0706	0.0003	0.0000	4.30428E-01
60.00	0.6152	0.0730	0.0000	0.0000	4.05580E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88351E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75207E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64624E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2647	0.2666	0.2655	0.0804	7.60131E-01
15.00	0.3588	0.1165	0.0926	0.0266	5.55759E-01
20.00	0.4195	0.0861	0.0419	0.0103	4.98991E-01
30.00	0.4866	0.0769	0.0191	0.0032	4.58198E-01
40.00	0.5338	0.0757	0.0126	0.0014	4.36326E-01
60.00	0.6075	0.0756	0.0066	0.0004	4.08386E-01
80.00	0.6659	0.0761	0.0039	0.0001	3.89899E-01
100.00	0.7153	0.0768	0.0025	0.0000	3.76148E-01
120.00	0.7587	0.0775	0.0017	0.0000	3.65235E-01

CRC 20. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2505	0.3980	0.3980	0.1687	1.00340E 00
15.00	0.3380	0.1681	0.1546	0.0674	6.19961E-01
20.00	0.4011	0.1071	0.0742	0.0266	5.24519E-01
30.00	0.4729	0.0856	0.0360	0.0079	4.68297E-01
40.00	0.5224	0.0811	0.0243	0.0032	4.42358E-01
60.00	0.6000	0.0782	0.0130	0.0008	4.11203E-01
80.00	0.6609	0.0777	0.0077	0.0003	3.91451E-01
100.00	0.7119	0.0778	0.0049	0.0001	3.77090E-01
120.00	0.7562	0.0781	0.0033	0.0000	3.65846E-01

CRC 30. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2450	0.4792	0.4792	0.2562	1.24667E 00
15.00	0.3288	0.2126	0.2030	0.1108	6.84162E-01
20.00	0.3903	0.1273	0.1009	0.0460	5.50046E-01
30.00	0.4622	0.0943	0.0510	0.0138	4.78396E-01
40.00	0.5125	0.0866	0.0352	0.0057	4.48390E-01
60.00	0.5928	0.0809	0.0192	0.0013	4.14021E-01
80.00	0.6560	0.0792	0.0115	0.0004	3.93003E-01
100.00	0.7085	0.0787	0.0073	0.0002	3.78032E-01
120.00	0.7537	0.0787	0.0049	0.0001	3.66457E-01

CRC 50. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2408	0.5735	0.5735	0.4301	1.73320E 00
15.00	0.3208	0.2823	0.2760	0.1989	8.12566E-01
20.00	0.3789	0.1643	0.1445	0.0884	6.01102E-01
30.00	0.4475	0.1117	0.0767	0.0285	4.98593E-01
40.00	0.4966	0.0978	0.0548	0.0120	4.60453E-01
60.00	0.5797	0.0865	0.0311	0.0027	4.19656E-01
80.00	0.6467	0.0824	0.0188	0.0008	3.96106E-01
100.00	0.7017	0.0807	0.0121	0.0003	3.79916E-01
120.00	0.7489	0.0801	0.0082	0.0001	3.67679E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3124	0.2284	0.2284	0.4514	9.15857E-01
15.00	0.3782	0.1607	0.1594	0.2352	6.95972E-01
20.00	0.4117	0.1424	0.1279	0.1616	6.14209E-01
30.00	0.4576	0.1283	0.1004	0.0937	5.37439E-01
40.00	0.4952	0.1191	0.0841	0.0598	4.94234E-01
60.00	0.5610	0.1063	0.0623	0.0275	4.43233E-01
80.00	0.6196	0.0983	0.0477	0.0138	4.12984E-01
100.00	0.6726	0.0932	0.0373	0.0074	3.92402E-01
120.00	0.7207	0.0900	0.0295	0.0042	3.77183E-01

CRO 20. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3090	0.3043	0.3043	0.9214	1.34482E 00
15.00	0.3692	0.2232	0.2232	0.5052	9.18116E-01
20.00	0.4026	0.1981	0.1896	0.3475	7.66025E-01
30.00	0.4460	0.1766	0.1570	0.2066	6.31539E-01
40.00	0.4803	0.1614	0.1357	0.1360	5.60387E-01
60.00	0.5396	0.1380	0.1048	0.0668	4.81444E-01
80.00	0.5932	0.1220	0.0831	0.0355	4.37770E-01
100.00	0.6435	0.1111	0.0670	0.0197	4.09641E-01
120.00	0.6912	0.1037	0.0545	0.0113	3.89755E-01

CRO 30. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3080	0.3437	0.3437	1.3910	1.77378E 00
15.00	0.3661	0.2618	0.2618	0.7764	1.14026E 00
20.00	0.3992	0.2358	0.2296	0.5357	9.17842E-01
30.00	0.4413	0.2131	0.1974	0.3219	7.25639E-01
40.00	0.4740	0.1954	0.1743	0.2151	6.26541E-01
60.00	0.5294	0.1660	0.1383	0.1095	5.19654E-01
80.00	0.5788	0.1442	0.1118	0.0607	4.62555E-01
100.00	0.6256	0.1286	0.0917	0.0350	4.26879E-01
120.00	0.6708	0.1174	0.0759	0.0206	4.02327E-01

CRO 50. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3071	0.3839	0.3839	2.3299	2.63170E 00
15.00	0.3637	0.3069	0.3069	1.3177	1.58455E 00
20.00	0.3962	0.2833	0.2793	0.9135	1.22147E 00
30.00	0.4371	0.2637	0.2522	0.5545	9.13840E-01
40.00	0.4684	0.2463	0.2302	0.3754	7.58849E-01
60.00	0.5199	0.2120	0.1903	0.1980	5.96075E-01
80.00	0.5644	0.1834	0.1578	0.1149	5.12126E-01
100.00	0.6059	0.1610	0.1321	0.0698	4.61357E-01
120.00	0.6460	0.1438	0.1114	0.0434	4.27471E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3362	0.2220	0.2220	1.2403	1.26193E 00
15.00	0.3825	0.1963	0.1963	0.8348	9.88235E-01
20.00	0.4128	0.1886	0.1886	0.6307	8.59740E-01
30.00	0.4587	0.1810	0.1810	0.4104	7.20445E-01
40.00	0.4979	0.1746	0.1746	0.2870	6.39013E-01
60.00	0.5518	0.1627	0.1483	0.1758	5.43527E-01
80.00	0.5967	0.1514	0.1273	0.1170	4.87891E-01
100.00	0.6371	0.1414	0.1108	0.0814	4.50830E-01
120.00	0.6747	0.1330	0.0974	0.0582	4.24089E-01

CRC 20. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3354	0.2663	0.2663	2.4916	2.08560E 00
15.00	0.3807	0.2466	0.2466	1.6866	1.54359E 00
20.00	0.4099	0.2437	0.2437	1.2837	1.29169E 00
30.00	0.4525	0.2416	0.2416	0.8536	1.02254E 00
40.00	0.4870	0.2373	0.2373	0.6159	8.68225E-01
60.00	0.5392	0.2244	0.2160	0.3797	6.92139E-01
80.00	0.5810	0.2094	0.1933	0.2582	5.93376E-01
100.00	0.6178	0.1947	0.1732	0.1842	5.29910E-01
120.00	0.6514	0.1812	0.1557	0.1356	4.85624E-01

CRC 30. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3351	0.2856	0.2856	3.7426	2.90928E 00
15.00	0.3802	0.2703	0.2703	2.5384	2.09895E 00
20.00	0.4089	0.2710	0.2710	1.9371	1.72364E 00
30.00	0.4505	0.2748	0.2748	1.2961	1.32463E 00
40.00	0.4835	0.2741	0.2741	0.9438	1.09744E 00
60.00	0.5345	0.2647	0.2587	0.5857	8.40752E-01
80.00	0.5749	0.2504	0.2379	0.4019	6.98860E-01
100.00	0.6101	0.2348	0.2176	0.2898	6.08991E-01
120.00	0.6418	0.2194	0.1987	0.2161	5.47160E-01

CRC 50. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3350	0.3033	0.3033	6.2438	4.55664E 00
15.00	0.3797	0.2930	0.2930	4.2418	3.20966E 00
20.00	0.4082	0.2985	0.2985	3.2432	2.58755E 00
30.00	0.4489	0.3100	0.3100	2.1813	1.92882E 00
40.00	0.4809	0.3154	0.3154	1.5992	1.55586E 00
60.00	0.5305	0.3140	0.3101	0.9992	1.13798E 00
80.00	0.5697	0.3042	0.2954	0.6909	9.09830E-01
100.00	0.6034	0.2905	0.2779	0.5032	7.67152E-01
120.00	0.6334	0.2753	0.2598	0.3793	6.70231E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1374	0.3175	0.3175	0.0006	7.57553E-01
15.00	0.3507	0.1059	0.0850	0.0000	5.37202E-01
20.00	0.4345	0.0734	0.0189	0.0000	4.82581E-01
30.00	0.5031	0.0689	0.0009	0.0000	4.48511E-01
40.00	0.5465	0.0705	0.0001	0.0000	4.30321E-01
60.00	0.6153	0.0730	0.0000	0.0000	4.05570E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88348E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75205E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 20. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1269	0.4817	0.4817	0.0014	9.98378E-01
15.00	0.2985	0.1602	0.1565	0.0003	5.82874E-01
20.00	0.4186	0.0815	0.0371	0.0000	4.91703E-01
30.00	0.5022	0.0693	0.0018	0.0000	4.48922E-01
40.00	0.5464	0.0705	0.0001	0.0000	4.30348E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05572E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 30. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1241	0.5821	0.5821	0.0022	1.23920E 00
15.00	0.2594	0.2176	0.2175	0.0006	6.28547E-01
20.00	0.4035	0.0902	0.0546	0.0000	5.00826E-01
30.00	0.5012	0.0696	0.0027	0.0000	4.49332E-01
40.00	0.5463	0.0705	0.0002	0.0000	4.30374E-01
60.00	0.6152	0.0729	0.0000	0.0000	4.05575E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88349E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75206E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64623E-01

CRO 50. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1221	0.6986	0.6986	0.0039	1.72085E 00
15.00	0.1908	0.3164	0.3164	0.0012	7.19892E-01
20.00	0.3757	0.1094	0.0878	0.0001	5.19072E-01
30.00	0.4994	0.0703	0.0046	0.0000	4.50154E-01
40.00	0.5462	0.0706	0.0003	0.0000	4.30428E-01
60.00	0.6152	0.0730	0.0000	0.0000	4.05580E-01
80.00	0.6710	0.0746	0.0000	0.0000	3.88351E-01
100.00	0.7189	0.0759	0.0000	-0.0000	3.75207E-01
120.00	0.7612	0.0768	0.0000	-0.0000	3.64624E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.050C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2379	0.2914	0.2914	0.1019	6.81515E-01
15.00	0.3240	0.0914	0.0914	0.0434	4.97082E-01
20.00	0.4631	0.0512	0.0512	0.0055	4.53316E-01
30.00	0.5528	0.0534	0.0225	0.0011	4.28450E-01
40.00	0.5862	0.0585	0.0140	0.0006	4.15832E-01
60.00	0.6401	0.0659	0.0069	0.0002	3.97732E-01
80.00	0.6866	0.0704	0.0040	0.0001	3.83958E-01
100.00	0.7287	0.0734	0.0025	0.0000	3.72691E-01
120.00	0.7674	0.0753	0.0017	0.0000	3.63164E-01

CRC 20. EM 0.050C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2365	0.4294	0.4294	0.2041	9.24783E-01
15.00	0.3152	0.1563	0.1563	0.0939	5.61284E-01
20.00	0.3871	0.0760	0.0760	0.0343	4.78844E-01
30.00	0.5307	0.0605	0.0431	0.0032	4.38549E-01
40.00	0.5710	0.0632	0.0272	0.0015	4.21864E-01
60.00	0.6316	0.0683	0.0136	0.0005	4.00550E-01
80.00	0.6813	0.0719	0.0079	0.0002	3.85510E-01
100.00	0.7251	0.0743	0.0050	0.0001	3.73633E-01
120.00	0.7648	0.0759	0.0033	0.0000	3.63775E-01

CRC 30. EM 0.050C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2361	0.5099	0.5099	0.3063	1.16805E 00
15.00	0.3125	0.2083	0.2083	0.1440	6.25486E-01
20.00	0.3750	0.1009	0.1009	0.0601	5.04372E-01
30.00	0.5119	0.0682	0.0616	0.0064	4.48648E-01
40.00	0.5571	0.0680	0.0397	0.0028	4.27896E-01
60.00	0.6235	0.0708	0.0202	0.0008	4.03367E-01
80.00	0.6761	0.0734	0.0118	0.0003	3.87062E-01
100.00	0.7215	0.0752	0.0074	0.0001	3.74575E-01
120.00	0.7623	0.0766	0.0050	0.0001	3.64386E-01

CRC 50. EM 0.050C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2357	0.5999	0.5999	0.5107	1.65459E 00
15.00	0.3105	0.2857	0.2857	0.2439	7.53890E-01
20.00	0.3670	0.1448	0.1448	0.1103	5.55427E-01
30.00	0.4578	0.0852	0.0852	0.0252	4.68845E-01
40.00	0.5336	0.0783	0.0623	0.0068	4.39959E-01
60.00	0.6081	0.0760	0.0328	0.0017	4.09003E-01
80.00	0.6660	0.0764	0.0193	0.0006	3.90166E-01
100.00	0.7146	0.0771	0.0123	0.0002	3.76460E-01
120.00	0.7574	0.0779	0.0083	0.0001	3.65608E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRO 10. EM 0.075C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3064	0.2536	0.2536	0.6249	7.93451E-01
15.00	0.3618	0.1631	0.1631	0.3489	5.85243E-01
20.00	0.3945	0.1307	0.1307	0.2342	5.13546E-01
30.00	0.4378	0.1023	0.1023	0.1329	4.53150E-01
40.00	0.4734	0.0858	0.0858	0.0839	4.22601E-01
60.00	0.5460	0.0667	0.0667	0.0348	3.89671E-01
80.00	0.6787	0.0594	0.0594	0.0079	3.71532E-01
100.00	0.7875	0.0609	0.0459	0.0022	3.59524E-01
120.00	0.8262	0.0630	0.0346	0.0013	3.50630E-01

CRO 20. EM 0.075C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3061	0.3286	0.3286	1.2519	1.22241E 00
15.00	0.3610	0.2346	0.2346	0.7020	8.07387E-01
20.00	0.3930	0.1985	0.1985	0.4743	6.65362E-01
30.00	0.4340	0.1638	0.1638	0.2745	5.47251E-01
40.00	0.4658	0.1401	0.1401	0.1790	4.88755E-01
60.00	0.5217	0.1072	0.1072	0.0869	4.27881E-01
80.00	0.5805	0.0876	0.0876	0.0429	3.96317E-01
100.00	0.6695	0.0772	0.0772	0.0158	3.76763E-01
120.00	0.7773	0.0748	0.0650	0.0046	3.63202E-01

CRO 30. EM 0.075C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3060	0.3645	0.3645	1.8790	1.65137E 00
15.00	0.3608	0.2753	0.2753	1.0549	1.02953E 00
20.00	0.3925	0.2411	0.2411	0.7144	8.17179E-01
30.00	0.4327	0.2072	0.2072	0.4161	6.41351E-01
40.00	0.4634	0.1816	0.1816	0.2740	5.54909E-01
60.00	0.5150	0.1417	0.1417	0.1383	4.66092E-01
80.00	0.5636	0.1147	0.1147	0.0751	4.21103E-01
100.00	0.6193	0.0973	0.0973	0.0390	3.94002E-01
120.00	0.7102	0.0876	0.0876	0.0142	3.75774E-01

CRO 50. EM 0.075C EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3059	0.3997	0.3997	3.1327	2.50930E 00
15.00	0.3606	0.3197	0.3197	1.7612	1.47382E 00
20.00	0.3921	0.2918	0.2918	1.1944	1.12081E 00
30.00	0.4318	0.2646	0.2646	0.6990	8.29551E-01
40.00	0.4616	0.2408	0.2408	0.4638	6.87217E-01
60.00	0.5100	0.1964	0.1964	0.2405	5.42513E-01
80.00	0.5522	0.1613	0.1613	0.1385	4.70673E-01
100.00	0.5940	0.1354	0.1354	0.0823	4.28479E-01
120.00	0.6415	0.1171	0.1171	0.0471	4.00918E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM CYLINDERS (H/D 2) 2 2 1 0 200

CRC 10. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3348	0.2418	0.2418	1.7279	1.14071E 00
15.00	0.3793	0.2148	0.2148	1.1629	8.71849E-01
20.00	0.4075	0.2052	0.2052	0.8814	7.47910E-01
30.00	0.4478	0.1918	0.1918	0.5836	6.16992E-01
40.00	0.4790	0.1779	0.1779	0.4225	5.43065E-01
60.00	0.5290	0.1517	0.1517	0.2526	4.60411E-01
80.00	0.5703	0.1299	0.1299	0.1664	4.15279E-01
100.00	0.6076	0.1127	0.1127	0.1152	3.86920E-01
120.00	0.6433	0.0993	0.0993	0.0819	3.67467E-01

CRC 20. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3347	0.2807	0.2807	3.4572	1.96439E 00
15.00	0.3792	0.2620	0.2620	2.3279	1.42720E 00
20.00	0.4073	0.2595	0.2595	1.7653	1.17986E 00
30.00	0.4471	0.2560	0.2560	1.1716	9.19086E-01
40.00	0.4780	0.2481	0.2481	0.8502	7.72277E-01
60.00	0.5266	0.2254	0.2254	0.5130	6.09023E-01
80.00	0.5658	0.2014	0.2014	0.3424	5.20764E-01
100.00	0.5998	0.1794	0.1794	0.2422	4.66001E-01
120.00	0.6308	0.1602	0.1602	0.1776	4.29002E-01

CRC 30. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3347	0.2966	0.2966	5.1858	2.78807E 00
15.00	0.3791	0.2828	0.2828	3.4926	1.98256E 00
20.00	0.4072	0.2844	0.2844	2.6503	1.61181E 00
30.00	0.4470	0.2886	0.2886	1.7590	1.22118E 00
40.00	0.4776	0.2860	0.2860	1.2782	1.00149E 00
60.00	0.5258	0.2703	0.2703	0.7731	7.57635E-01
80.00	0.5643	0.2490	0.2490	0.5182	6.26248E-01
100.00	0.5973	0.2269	0.2269	0.3689	5.45081E-01
120.00	0.6269	0.2061	0.2061	0.2730	4.90538E-01

CRC 50. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3346	0.3106	0.3106	8.6448	4.43543E 00
15.00	0.3790	0.3018	0.3018	5.8236	3.09327E 00
20.00	0.4071	0.3084	0.3084	4.4191	2.47572E 00
30.00	0.4468	0.3213	0.3213	2.9343	1.82537E 00
40.00	0.4774	0.3264	0.3264	2.1333	1.45991E 00
60.00	0.5252	0.3222	0.3222	1.2933	1.05486E 00
80.00	0.5632	0.3081	0.3081	0.8698	8.37218E-01
100.00	0.5954	0.2899	0.2899	0.6221	7.03243E-01
120.00	0.6240	0.2703	0.2703	0.4635	6.13609E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3396	0.1600	0.1436	0.0000	5.45921E-01
15.00	0.4899	0.0974	0.0280	0.0000	4.54503E-01
20.00	0.5564	0.0906	0.0053	-0.0000	4.26458E-01
30.00	0.6326	0.0917	0.0002	0.0000	3.99985E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83004E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59724E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2616	0.2529	0.2509	0.0004	6.24353E-01
15.00	0.4636	0.1092	0.0545	0.0000	4.67238E-01
20.00	0.5506	0.0926	0.0106	-0.0000	4.28730E-01
30.00	0.6322	0.0917	0.0004	0.0000	4.00075E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83010E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59725E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2169	0.3355	0.3343	0.0008	7.02786E-01
15.00	0.4392	0.1218	0.0796	0.0000	4.79973E-01
20.00	0.5448	0.0946	0.0158	0.0000	4.31001E-01
30.00	0.6319	0.0918	0.0007	0.0000	4.00164E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83016E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59726E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1831	0.4564	0.4555	0.0013	8.59651E-01
15.00	0.3962	0.1492	0.1260	0.0000	5.05443E-01
20.00	0.5334	0.0987	0.0261	0.0000	4.35545E-01
30.00	0.6314	0.0920	0.0011	0.0000	4.00343E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83029E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59728E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRC 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3596	0.1619	0.1403	0.0224	5.54713E-01
15.00	0.4725	0.1071	0.0481	0.0038	4.65644E-01
20.00	0.5372	0.0980	0.0235	0.0012	4.34871E-01
30.00	0.6190	0.0959	0.0112	0.0003	4.04521E-01
40.00	0.6804	0.0962	0.0070	0.0001	3.85711E-01
60.00	0.7768	0.0975	0.0033	0.0000	3.60932E-01
80.00	0.8537	0.0987	0.0019	0.0000	3.44288E-01
100.00	0.9190	0.0997	0.0011	0.0000	3.31827E-01
120.00	0.9765	0.1005	0.0007	0.0000	3.21909E-01

CRC 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3282	0.2380	0.2283	0.0637	6.42745E-01
15.00	0.4408	0.1291	0.0873	0.0123	4.89609E-01
20.00	0.5155	0.1078	0.0449	0.0035	4.45567E-01
30.00	0.6059	0.1002	0.0220	0.0007	4.09147E-01
40.00	0.6712	0.0989	0.0138	0.0002	3.88424E-01
60.00	0.7716	0.0987	0.0066	0.0000	3.62141E-01
80.00	0.8505	0.0994	0.0037	0.0000	3.44930E-01
100.00	0.9169	0.1001	0.0023	0.0000	3.32206E-01
120.00	0.9752	0.1008	0.0015	0.0000	3.22149E-01

CRC 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3159	0.2998	0.2937	0.1071	7.30776E-01
15.00	0.4206	0.1514	0.1197	0.0245	5.13573E-01
20.00	0.4977	0.1179	0.0643	0.0069	4.56263E-01
30.00	0.5935	0.1047	0.0324	0.0013	4.13773E-01
40.00	0.6622	0.1016	0.0205	0.0004	3.91138E-01
60.00	0.7666	0.1000	0.0099	0.0001	3.63349E-01
80.00	0.8475	0.1001	0.0056	0.0000	3.45573E-01
100.00	0.9149	0.1005	0.0034	0.0000	3.32585E-01
120.00	0.9736	0.1011	0.0022	0.0000	3.22390E-01

CRC 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3058	0.3898	0.3862	0.1940	9.06840E-01
15.00	0.3989	0.1932	0.1716	0.0547	5.61503E-01
20.00	0.4718	0.1383	0.0975	0.0170	4.77655E-01
30.00	0.5714	0.1139	0.0520	0.0030	4.23024E-01
40.00	0.6452	0.1071	0.0335	0.0008	3.96565E-01
60.00	0.7567	0.1025	0.0164	0.0001	3.65766E-01
80.00	0.8412	0.1015	0.0092	0.0000	3.46858E-01
100.00	0.9108	0.1014	0.0057	0.0000	3.33344E-01
120.00	0.9707	0.1016	0.0037	0.0000	3.22870E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3838	0.2107	0.1851	0.1952	6.80304E-01
15.00	0.4421	0.1704	0.1333	0.1035	5.59874E-01
20.00	0.4835	0.1539	0.1110	0.0643	5.06245E-01
30.00	0.5511	0.1366	0.0858	0.0293	4.49474E-01
40.00	0.6111	0.1266	0.0686	0.0145	4.16784E-01
60.00	0.7168	0.1159	0.0455	0.0042	3.78341E-01
80.00	0.8053	0.1108	0.0315	0.0015	3.55314E-01
100.00	0.8804	0.1082	0.0228	0.0006	3.39346E-01
120.00	0.9455	0.1069	0.0170	0.0003	3.27301E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3744	0.2833	0.2663	0.4192	8.93944E-01
15.00	0.4287	0.2303	0.2038	0.2317	6.78069E-01
20.00	0.4654	0.2061	0.1750	0.1508	5.88316E-01
30.00	0.5233	0.1777	0.1408	0.0758	4.99052E-01
40.00	0.5750	0.1589	0.1166	0.0413	4.50571E-01
60.00	0.6726	0.1362	0.0825	0.0133	3.96959E-01
80.00	0.7632	0.1242	0.0596	0.0046	3.66983E-01
100.00	0.8442	0.1176	0.0439	0.0018	3.47245E-01
120.00	0.9152	0.1136	0.0332	0.0007	3.32934E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3709	0.3284	0.3153	0.6450	1.10758E 00
15.00	0.4235	0.2730	0.2518	0.3628	7.96265E-01
20.00	0.4581	0.2463	0.2210	0.2408	6.70387E-01
30.00	0.5111	0.2127	0.1825	0.1268	5.48630E-01
40.00	0.5572	0.1884	0.1540	0.0730	4.84358E-01
60.00	0.6447	0.1564	0.1128	0.0262	4.15576E-01
80.00	0.7307	0.1380	0.0842	0.0097	3.78651E-01
100.00	0.8128	0.1272	0.0635	0.0037	3.55144E-01
120.00	0.8875	0.1206	0.0486	0.0015	3.38567E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3680	0.3810	0.3720	1.0979	1.53486E 00
15.00	0.4190	0.3294	0.3139	0.6267	1.03266E 00
20.00	0.4517	0.3036	0.2847	0.4232	8.34528E-01
30.00	0.5002	0.2676	0.2446	0.2324	6.47787E-01
40.00	0.5407	0.2380	0.2118	0.1413	5.51932E-01
60.00	0.6147	0.1938	0.1612	0.0582	4.52812E-01
80.00	0.6884	0.1652	0.1250	0.0247	4.01988E-01
100.00	0.7644	0.1468	0.0978	0.0102	3.70941E-01
120.00	0.8398	0.1350	0.0768	0.0043	3.49833E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRC 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.4020	0.2508	0.2306	0.6066	9.53757E-01
15.00	0.4474	0.2355	0.2084	0.4120	7.75333E-01
20.00	0.4806	0.2262	0.1956	0.3070	6.80720E-01
30.00	0.5329	0.2097	0.1751	0.1917	5.73008E-01
40.00	0.5768	0.1952	0.1574	0.1295	5.10406E-01
60.00	0.6531	0.1723	0.1289	0.0659	4.38683E-01
80.00	0.7223	0.1560	0.1070	0.0360	3.97867E-01
100.00	0.7880	0.1445	0.0897	0.0203	3.71047E-01
120.00	0.8510	0.1362	0.0757	0.0117	3.51821E-01

CRC 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3977	0.3075	0.2949	1.2422	1.44348E 00
15.00	0.4417	0.2975	0.2796	0.8519	1.10983E 00
20.00	0.4730	0.2915	0.2708	0.6423	9.37569E-01
30.00	0.5212	0.2774	0.2532	0.4123	7.46169E-01
40.00	0.5604	0.2615	0.2347	0.2873	6.37824E-01
60.00	0.6263	0.2315	0.2005	0.1575	5.17643E-01
80.00	0.6840	0.2067	0.1719	0.0937	4.52089E-01
100.00	0.7385	0.1871	0.1484	0.0579	4.10646E-01
120.00	0.7918	0.1717	0.1288	0.0363	3.81974E-01

CRC 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3962	0.3355	0.3263	1.8789	1.93321E 00
15.00	0.4397	0.3309	0.3175	1.2932	1.44433E 00
20.00	0.4703	0.3289	0.3131	0.9793	1.19442E 00
30.00	0.5169	0.3200	0.3010	0.6347	9.19329E-01
40.00	0.5543	0.3063	0.2850	0.4476	7.65242E-01
60.00	0.6158	0.2759	0.2510	0.2527	5.96603E-01
80.00	0.6684	0.2479	0.2198	0.1560	5.06310E-01
100.00	0.7167	0.2240	0.1928	0.1008	4.50245E-01
120.00	0.7634	0.2042	0.1698	0.0665	4.12126E-01

CRC 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3950	0.3634	0.3574	3.1523	2.91266E 00
15.00	0.4380	0.3661	0.3571	2.1761	2.11333E 00
20.00	0.4680	0.3703	0.3594	1.6534	1.70812E 00
30.00	0.5133	0.3701	0.3568	1.0814	1.26565E 00
40.00	0.5491	0.3624	0.3472	0.7701	1.02008E 00
60.00	0.6069	0.3375	0.3190	0.4456	7.54523E-01
80.00	0.6548	0.3094	0.2883	0.2840	6.14753E-01
100.00	0.6976	0.2825	0.2590	0.1908	5.29444E-01
120.00	0.7376	0.2583	0.2325	0.1322	4.72432E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3406	0.1591	0.1438	0.0000	5.45123E-01
15.00	0.4900	0.0973	0.0280	0.0000	4.54414E-01
20.00	0.5564	0.0905	0.0053	-0.0000	4.26447E-01
30.00	0.6326	0.0917	0.0002	0.0000	3.99985E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83004E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59724E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2623	0.2519	0.2513	0.0004	6.23556E-01
15.00	0.4637	0.1091	0.0545	0.0000	4.67149E-01
20.00	0.5506	0.0925	0.0106	-0.0000	4.28719E-01
30.00	0.6322	0.0917	0.0004	0.0000	4.00075E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83010E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59725E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2173	0.3347	0.3347	0.0008	7.01988E-01
15.00	0.4395	0.1217	0.0796	0.0000	4.79884E-01
20.00	0.5448	0.0946	0.0158	0.0000	4.30990E-01
30.00	0.6319	0.0918	0.0007	0.0000	4.00164E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83016E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59726E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1832	0.4559	0.4559	0.0013	8.58853E-01
15.00	0.3963	0.1491	0.1260	0.0000	5.05354E-01
20.00	0.5335	0.0987	0.0261	0.0000	4.35534E-01
30.00	0.6314	0.0920	0.0011	0.0000	4.00343E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83029E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59728E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3598	0.1618	0.1404	0.0224	5.54542E-01
15.00	0.4726	0.1071	0.0481	0.0038	4.65623E-01
20.00	0.5372	0.0980	0.0235	0.0012	4.34868E-01
30.00	0.6190	0.0959	0.0112	0.0003	4.04521E-01
40.00	0.6804	0.0962	0.0070	0.0001	3.85711E-01
60.00	0.7768	0.0975	0.0033	0.0000	3.60932E-01
80.00	0.8537	0.0987	0.0019	0.0000	3.44288E-01
100.00	0.9190	0.0997	0.0011	0.0000	3.31827E-01
120.00	0.9765	0.1005	0.0007	0.0000	3.21909E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3282	0.2378	0.2284	0.0636	6.42574E-01
15.00	0.4408	0.1292	0.0874	0.0123	4.89588E-01
20.00	0.5155	0.1078	0.0449	0.0035	4.45564E-01
30.00	0.6059	0.1002	0.0220	0.0007	4.09147E-01
40.00	0.6712	0.0989	0.0138	0.0002	3.88424E-01
60.00	0.7716	0.0987	0.0066	0.0000	3.62141E-01
80.00	0.8505	0.0994	0.0037	0.0000	3.44930E-01
100.00	0.9169	0.1001	0.0023	0.0000	3.32206E-01
120.00	0.9752	0.1008	0.0015	0.0000	3.22149E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3160	0.2996	0.2938	0.1070	7.30605E-01
15.00	0.4206	0.1514	0.1197	0.0245	5.13553E-01
20.00	0.4977	0.1179	0.0643	0.0069	4.56260E-01
30.00	0.5935	0.1047	0.0324	0.0013	4.13773E-01
40.00	0.6622	0.1016	0.0205	0.0004	3.91138E-01
60.00	0.7666	0.1000	0.0099	0.0001	3.63349E-01
80.00	0.8475	0.1001	0.0056	0.0000	3.45573E-01
100.00	0.9149	0.1005	0.0034	0.0000	3.32585E-01
120.00	0.9736	0.1011	0.0022	0.0000	3.22390E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3058	0.3897	0.3863	0.1939	9.06669E-01
15.00	0.3990	0.1933	0.1716	0.0546	5.61482E-01
20.00	0.4718	0.1383	0.0975	0.0170	4.77652E-01
30.00	0.5714	0.1139	0.0520	0.0030	4.23024E-01
40.00	0.6452	0.1071	0.0335	0.0008	3.96565E-01
60.00	0.7567	0.1025	0.0164	0.0001	3.65766E-01
80.00	0.8412	0.1015	0.0092	0.0000	3.46858E-01
100.00	0.9108	0.1014	0.0057	0.0000	3.33344E-01
120.00	0.9707	0.1016	0.0037	0.0000	3.22870E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3896	0.2009	0.1957	0.1864	6.64949E-01
15.00	0.4475	0.1641	0.1391	0.0987	5.51710E-01
20.00	0.4879	0.1498	0.1142	0.0617	5.01524E-01
30.00	0.5539	0.1348	0.0868	0.0285	4.47663E-01
40.00	0.6129	0.1258	0.0689	0.0143	4.16012E-01
60.00	0.7173	0.1157	0.0455	0.0042	3.78175E-01
80.00	0.8056	0.1108	0.0315	0.0015	3.55273E-01
100.00	0.8805	0.1082	0.0228	0.0006	3.39335E-01
120.00	0.9455	0.1068	0.0170	0.0003	3.27298E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3774	0.2766	0.2760	0.4100	8.78589E-01
15.00	0.4315	0.2253	0.2099	0.2264	6.69905E-01
20.00	0.4678	0.2026	0.1786	0.1478	5.83595E-01
30.00	0.5249	0.1761	0.1421	0.0747	4.97241E-01
40.00	0.5760	0.1581	0.1172	0.0409	4.49799E-01
60.00	0.6729	0.1360	0.0826	0.0132	3.96792E-01
80.00	0.7635	0.1242	0.0596	0.0046	3.66942E-01
100.00	0.8442	0.1176	0.0439	0.0018	3.47234E-01
120.00	0.9152	0.1136	0.0332	0.0007	3.32931E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3727	0.3234	0.3234	0.6374	1.09223E 00
15.00	0.4254	0.2691	0.2576	0.3572	7.88101E-01
20.00	0.4597	0.2435	0.2247	0.2375	6.65665E-01
30.00	0.5121	0.2112	0.1840	0.1256	5.46819E-01
40.00	0.5579	0.1877	0.1546	0.0726	4.83586E-01
60.00	0.6449	0.1561	0.1129	0.0262	4.15410E-01
80.00	0.7308	0.1379	0.0842	0.0097	3.78610E-01
100.00	0.8128	0.1272	0.0635	0.0037	3.55133E-01
120.00	0.8875	0.1206	0.0486	0.0015	3.38564E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3689	0.3779	0.3779	1.0945	1.51951E 00
15.00	0.4201	0.3268	0.3189	0.6210	1.02449E 00
20.00	0.4527	0.3016	0.2880	0.4198	8.29807E-01
30.00	0.5008	0.2664	0.2460	0.2312	6.45976E-01
40.00	0.5411	0.2374	0.2124	0.1408	5.51160E-01
60.00	0.6149	0.1937	0.1614	0.0581	4.52645E-01
80.00	0.6884	0.1651	0.1250	0.0247	4.01947E-01
100.00	0.7644	0.1468	0.0978	0.0102	3.70930E-01
120.00	0.8398	0.1349	0.0768	0.0043	3.49830E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.4005	0.2396	0.2396	0.6512	9.07770E-01
15.00	0.4501	0.2216	0.2216	0.4167	7.42399E-01
20.00	0.4885	0.2125	0.2125	0.2940	6.56117E-01
30.00	0.5421	0.1993	0.1876	0.1808	5.58144E-01
40.00	0.5850	0.1873	0.1656	0.1227	5.00801E-01
60.00	0.6594	0.1677	0.1325	0.0631	4.34174E-01
80.00	0.7272	0.1534	0.1087	0.0347	3.95545E-01
100.00	0.7917	0.1429	0.0905	0.0198	3.69782E-01
120.00	0.8538	0.1353	0.0760	0.0115	3.51105E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3967	0.3022	0.3022	1.3328	1.39750E 00
15.00	0.4425	0.2898	0.2898	0.8751	1.07690E 00
20.00	0.4758	0.2832	0.2832	0.6390	9.12966E-01
30.00	0.5259	0.2703	0.2649	0.4004	7.31305E-01
40.00	0.5646	0.2557	0.2429	0.2798	6.28218E-01
60.00	0.6295	0.2278	0.2046	0.1542	5.13134E-01
80.00	0.6866	0.2044	0.1740	0.0921	4.49767E-01
100.00	0.7405	0.1857	0.1495	0.0571	4.09381E-01
120.00	0.7933	0.1708	0.1294	0.0359	3.81258E-01

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3955	0.3324	0.3324	2.0138	1.88722E 00
15.00	0.4400	0.3258	0.3258	1.3329	1.41140E 00
20.00	0.4719	0.3231	0.3231	0.9832	1.16981E 00
30.00	0.5201	0.3147	0.3114	0.6227	9.04465E-01
40.00	0.5571	0.3018	0.2925	0.4400	7.55636E-01
60.00	0.6179	0.2729	0.2550	0.2493	5.92094E-01
80.00	0.6701	0.2459	0.2219	0.1543	5.03988E-01
100.00	0.7180	0.2227	0.1940	0.0999	4.48980E-01
120.00	0.7644	0.2033	0.1705	0.0661	4.11410E-01

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3945	0.3618	0.3618	3.3763	2.86667E 00
15.00	0.4381	0.3632	0.3632	2.2481	2.08040E 00
20.00	0.4689	0.3668	0.3668	1.6699	1.68351E 00
30.00	0.5152	0.3669	0.3651	1.0691	1.25078E 00
40.00	0.5508	0.3596	0.3535	0.7622	1.01047E 00
60.00	0.6082	0.3354	0.3227	0.4420	7.50014E-01
80.00	0.6558	0.3079	0.2904	0.2822	6.12432E-01
100.00	0.6984	0.2815	0.2602	0.1898	5.28179E-01
120.00	0.7382	0.2576	0.2332	0.1317	4.71715E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3409	0.1588	0.1439	0.0000	5.44898E-01
15.00	0.4901	0.0973	0.0280	0.0000	4.54386E-01
20.00	0.5565	0.0906	0.0053	-0.0000	4.26442E-01
30.00	0.6326	0.0917	0.0002	0.0000	3.99985E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83004E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59724E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2624	0.2517	0.2514	0.0004	6.23330E-01
15.00	0.4638	0.1091	0.0545	0.0000	4.67121E-01
20.00	0.5506	0.0925	0.0106	-0.0000	4.28714E-01
30.00	0.6322	0.0917	0.0004	0.0000	4.00074E-01
40.00	0.6898	0.0936	0.0000	0.0000	3.83010E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59725E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43646E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1833	0.3348	0.3348	0.0008	7.01763E-01
15.00	0.4395	0.1216	0.0796	0.0000	4.79856E-01
20.00	0.5448	0.0946	0.0158	0.0000	4.30986E-01
30.00	0.6319	0.0918	0.0007	0.0000	4.00164E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83016E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59726E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.1651	0.4560	0.4560	0.0013	8.58628E-01
15.00	0.3963	0.1491	0.1260	0.0000	5.05326E-01
20.00	0.5335	0.0987	0.0261	0.0000	4.35530E-01
30.00	0.6314	0.0920	0.0011	0.0000	4.00343E-01
40.00	0.6898	0.0936	0.0001	0.0000	3.83029E-01
60.00	0.7820	0.0962	0.0000	-0.0000	3.59728E-01
80.00	0.8569	0.0980	0.0000	-0.0000	3.43647E-01
100.00	0.9212	0.0993	0.0000	-0.0000	3.31448E-01
120.00	0.9780	0.1002	0.0000	-0.0000	3.21669E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRC 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3147	0.1410	0.1410	0.0399	5.06077E-01
15.00	0.5444	0.0784	0.0544	0.0012	4.31865E-01
20.00	0.6028	0.0769	0.0257	0.0004	4.09964E-01
30.00	0.6669	0.0824	0.0118	0.0001	3.89610E-01
40.00	0.7156	0.0871	0.0072	0.0000	3.76096E-01
60.00	0.7967	0.0929	0.0034	0.0000	3.56423E-01
80.00	0.8653	0.0962	0.0019	0.0000	3.41966E-01
100.00	0.9260	0.0983	0.0011	0.0000	3.30562E-01
120.00	0.9810	0.0997	0.0007	0.0000	3.21193E-01

CRC 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3013	0.2337	0.2337	0.0890	5.94109E-01
15.00	0.4706	0.0980	0.0980	0.0080	4.55829E-01
20.00	0.5741	0.0855	0.0496	0.0013	4.20660E-01
30.00	0.6517	0.0864	0.0232	0.0003	3.94236E-01
40.00	0.7055	0.0896	0.0142	0.0001	3.78810E-01
60.00	0.7913	0.0941	0.0067	0.0000	3.57631E-01
80.00	0.8621	0.0969	0.0037	0.0000	3.42609E-01
100.00	0.9239	0.0987	0.0023	0.0000	3.30941E-01
120.00	0.9794	0.1000	0.0015	0.0000	3.21433E-01

CRC 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2974	0.3030	0.3030	0.1373	6.82140E-01
15.00	0.4068	0.1235	0.1235	0.0310	4.79794E-01
20.00	0.5489	0.0946	0.0716	0.0030	4.31356E-01
30.00	0.6373	0.0906	0.0342	0.0006	3.98861E-01
40.00	0.6956	0.0922	0.0212	0.0002	3.81523E-01
60.00	0.7860	0.0953	0.0101	0.0000	3.58840E-01
80.00	0.8589	0.0976	0.0056	0.0000	3.43251E-01
100.00	0.9219	0.0991	0.0034	0.0000	3.31320E-01
120.00	0.9779	0.1002	0.0022	0.0000	3.21673E-01

CRC 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.2946	0.3992	0.3992	0.2334	8.58204E-01
15.00	0.3832	0.1726	0.1726	0.0705	5.27723E-01
20.00	0.5095	0.1139	0.1097	0.0096	4.52748E-01
30.00	0.6107	0.0992	0.0552	0.0016	4.08113E-01
40.00	0.6769	0.0974	0.0346	0.0005	3.86950E-01
60.00	0.7756	0.0978	0.0167	0.0001	3.61257E-01
80.00	0.8525	0.0989	0.0093	0.0000	3.44536E-01
100.00	0.9177	0.1000	0.0057	0.0000	3.32079E-01
120.00	0.9750	0.1008	0.0037	0.0000	3.22154E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3676	0.1995	0.1995	0.2796	5.70550E-01
15.00	0.4223	0.1407	0.1407	0.1470	4.71273E-01
20.00	0.4611	0.1164	0.1164	0.0910	4.31703E-01
30.00	0.5345	0.0931	0.0931	0.0378	3.93118E-01
40.00	0.6705	0.0834	0.0834	0.0082	3.71989E-01
60.00	0.8399	0.0843	0.0526	0.0011	3.47662E-01
80.00	0.9139	0.0869	0.0346	0.0004	3.32963E-01
100.00	0.9739	0.0895	0.0243	0.0002	3.22444E-01
120.00	1.0255	0.0918	0.0178	0.0001	3.14189E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3655	0.2863	0.2863	0.5681	7.84189E-01
15.00	0.4169	0.2167	0.2167	0.3077	5.89468E-01
20.00	0.4506	0.1837	0.1837	0.1996	5.13773E-01
30.00	0.5041	0.1460	0.1460	0.1005	4.42696E-01
40.00	0.5580	0.1229	0.1229	0.0524	4.05776E-01
60.00	0.7659	0.1025	0.0972	0.0050	3.66280E-01
80.00	0.8564	0.0989	0.0662	0.0017	3.44632E-01
100.00	0.9293	0.0980	0.0472	0.0007	3.30342E-01
120.00	0.9904	0.0981	0.0349	0.0003	3.19822E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3648	0.3360	0.3360	0.8565	9.97829E-01
15.00	0.4152	0.2675	0.2675	0.4682	7.07664E-01
20.00	0.4474	0.2326	0.2326	0.3077	5.95844E-01
30.00	0.4961	0.1891	0.1891	0.1620	4.92275E-01
40.00	0.5400	0.1591	0.1591	0.0929	4.39563E-01
60.00	0.6523	0.1236	0.1236	0.0252	3.84897E-01
80.00	0.8081	0.1116	0.0945	0.0043	3.56300E-01
100.00	0.8891	0.1069	0.0686	0.0016	3.38241E-01
120.00	0.9575	0.1046	0.0513	0.0007	3.25455E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3643	0.3907	0.3907	1.4331	1.42511E 00
15.00	0.4138	0.3308	0.3308	0.7893	9.44055E-01
20.00	0.4450	0.2990	0.2990	0.5238	7.59986E-01
30.00	0.4902	0.2540	0.2540	0.2843	5.91431E-01
40.00	0.5281	0.2180	0.2180	0.1726	5.07137E-01
60.00	0.6027	0.1671	0.1671	0.0685	4.22133E-01
80.00	0.7208	0.1384	0.1384	0.0180	3.79637E-01
100.00	0.8228	0.1255	0.1067	0.0055	3.54038E-01
120.00	0.8993	0.1182	0.0817	0.0022	3.36721E-01

EFFECTIVE ENERGY CUTOFFS FOR CADMIUM SLABS 2 1 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3941	0.2575	0.2575	0.9026	8.03184E-01
15.00	0.4375	0.2328	0.2328	0.5908	6.46124E-01
20.00	0.4680	0.2165	0.2165	0.4327	5.66795E-01
30.00	0.5149	0.1899	0.1899	0.2672	4.80063E-01
40.00	0.5536	0.1678	0.1678	0.1808	4.31573E-01
60.00	0.6221	0.1352	0.1352	0.0930	3.78229E-01
80.00	0.6929	0.1139	0.1139	0.0489	3.49181E-01
100.00	0.7892	0.1008	0.1008	0.0215	3.30670E-01
120.00	1.0124	0.0954	0.0920	0.0032	3.17663E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3936	0.3185	0.3185	1.8109	1.29291E 00
15.00	0.4364	0.3041	0.3041	1.1899	9.80623E-01
20.00	0.4662	0.2944	0.2944	0.8750	8.23644E-01
30.00	0.5111	0.2731	0.2731	0.5472	6.53223E-01
40.00	0.5471	0.2507	0.2507	0.3771	5.58991E-01
60.00	0.6064	0.2102	0.2102	0.2066	4.57189E-01
80.00	0.6590	0.1783	0.1783	0.1238	4.03402E-01
100.00	0.7115	0.1541	0.1541	0.0760	3.70269E-01
120.00	0.7714	0.1363	0.1363	0.0448	3.47816E-01

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3934	0.3459	0.3459	2.7201	1.78263E 00
15.00	0.4361	0.3393	0.3393	1.7882	1.31512E 00
20.00	0.4656	0.3352	0.3352	1.3176	1.08049E 00
30.00	0.5100	0.3216	0.3216	0.8268	8.26383E-01
40.00	0.5450	0.3029	0.3029	0.5731	6.86408E-01
60.00	0.6017	0.2634	0.2634	0.3196	5.36149E-01
80.00	0.6497	0.2281	0.2281	0.1976	4.57624E-01
100.00	0.6945	0.1988	0.1988	0.1281	4.09868E-01
120.00	0.7400	0.1754	0.1754	0.0840	3.77968E-01

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
10.00	0.3933	0.3718	0.3718	4.5355	2.76208E 00
15.00	0.4358	0.3740	0.3740	2.9860	1.98412E 00
20.00	0.4651	0.3774	0.3774	2.2022	1.59419E 00
30.00	0.5090	0.3754	0.3754	1.3866	1.17270E 00
40.00	0.5433	0.3649	0.3649	0.9654	9.41244E-01
60.00	0.5980	0.3337	0.3337	0.5454	6.94069E-01
80.00	0.6427	0.2993	0.2993	0.3447	5.66067E-01
100.00	0.6826	0.2672	0.2672	0.2313	4.89067E-01
120.00	0.7202	0.2389	0.2389	0.1602	4.38274E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1129	0.2544	0.2233	0.1730	1.25037E 00
50.00	0.1510	0.1741	0.1262	0.0505	8.94843E-01
80.00	0.1982	0.1267	0.0648	0.0106	7.27676E-01
100.00	0.2252	0.1134	0.0442	0.0043	6.75192E-01
120.00	0.2486	0.1058	0.0311	0.0019	6.39987E-01
150.00	0.2785	0.0996	0.0194	0.0007	6.03508E-01
200.00	0.3184	0.0947	0.0099	0.0002	5.63853E-01
300.00	0.3789	0.0915	0.0034	0.0000	5.16810E-01
500.00	0.4656	0.0902	0.0007	0.0000	4.66198E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1088	0.3385	0.3182	0.3787	1.66708E 00
50.00	0.1432	0.2354	0.2011	0.1227	1.04332E 00
80.00	0.1854	0.1590	0.1130	0.0304	7.81513E-01
100.00	0.2116	0.1345	0.0806	0.0127	7.07555E-01
120.00	0.2362	0.1200	0.0587	0.0055	6.60985E-01
150.00	0.2687	0.1080	0.0376	0.0018	6.15585E-01
200.00	0.3124	0.0988	0.0195	0.0004	5.69517E-01
300.00	0.3764	0.0929	0.0068	0.0000	5.18577E-01
500.00	0.4649	0.0905	0.0014	0.0000	4.66535E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1073	0.3895	0.3742	0.5868	2.08380E 00
50.00	0.1400	0.2826	0.2549	0.1985	1.19180E 00
80.00	0.1786	0.1888	0.1513	0.0547	8.35350E-01
100.00	0.2028	0.1553	0.1111	0.0244	7.39919E-01
120.00	0.2266	0.1345	0.0829	0.0110	6.81984E-01
150.00	0.2601	0.1166	0.0546	0.0035	6.27661E-01
200.00	0.3066	0.1030	0.0289	0.0007	5.75180E-01
300.00	0.3738	0.0943	0.0101	0.0001	5.20345E-01
500.00	0.4643	0.0908	0.0022	0.0000	4.66873E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1060	0.4480	0.4376	1.0046	2.91723E 00
50.00	0.1372	0.3496	0.3290	0.3529	1.48876E 00
80.00	0.1719	0.2402	0.2114	0.1080	9.43023E-01
100.00	0.1930	0.1941	0.1605	0.0531	8.04647E-01
120.00	0.2142	0.1630	0.1237	0.0262	7.23981E-01
150.00	0.2463	0.1343	0.0850	0.0089	6.51813E-01
200.00	0.2959	0.1116	0.0468	0.0016	5.86507E-01
300.00	0.3689	0.0970	0.0168	0.0001	5.23881E-01
500.00	0.4629	0.0913	0.0036	0.0000	4.67547E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1300	0.2774	0.2774	1.3311	2.39863E 00
50.00	0.1628	0.2669	0.2617	0.7746	1.68038E 00
80.00	0.1945	0.2520	0.2297	0.4558	1.22897E 00
100.00	0.2113	0.2395	0.2114	0.3417	1.06711E 00
120.00	0.2262	0.2272	0.1951	0.2641	9.55247E-01
150.00	0.2462	0.2098	0.1738	0.1868	8.39973E-01
200.00	0.2758	0.1851	0.1448	0.1119	7.21280E-01
300.00	0.3280	0.1507	0.1037	0.0455	5.99325E-01
500.00	0.4204	0.1175	0.0570	0.0093	4.98322E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1286	0.3205	0.3205	2.7048	4.05372E 00
50.00	0.1604	0.3231	0.3194	1.5885	2.65634E 00
80.00	0.1915	0.3158	0.3018	0.9426	1.79909E 00
100.00	0.2077	0.3067	0.2882	0.7121	1.49938E 00
120.00	0.2218	0.2959	0.2742	0.5558	1.29589E 00
150.00	0.2405	0.2785	0.2533	0.3997	1.09038E 00
200.00	0.2674	0.2497	0.2206	0.2481	8.84850E-01
300.00	0.3133	0.2017	0.1673	0.1104	6.83646E-01
500.00	0.3952	0.1453	0.1000	0.0268	5.30783E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1281	0.3387	0.3387	4.0777	5.70881E 00
50.00	0.1595	0.3482	0.3458	2.4040	3.63230E 00
80.00	0.1904	0.3492	0.3389	1.4304	2.36921E 00
100.00	0.2063	0.3441	0.3301	1.0841	1.93165E 00
120.00	0.2202	0.3363	0.3196	0.8493	1.63654E 00
150.00	0.2383	0.3219	0.3021	0.6148	1.34078E 00
200.00	0.2642	0.2947	0.2713	0.3868	1.04842E 00
300.00	0.3071	0.2427	0.2144	0.1790	7.67967E-01
500.00	0.3815	0.1715	0.1345	0.0486	5.63244E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1277	0.3549	0.3549	6.8246	9.01899E 00
50.00	0.1588	0.3723	0.3708	4.0354	5.58422E 00
80.00	0.1895	0.3834	0.3766	2.4076	3.50945E 00
100.00	0.2052	0.3842	0.3749	1.8289	2.79619E 00
120.00	0.2188	0.3818	0.3703	1.4369	2.31784E 00
150.00	0.2365	0.3734	0.3595	1.0463	1.84159E 00
200.00	0.2614	0.3528	0.3358	0.6662	1.37556E 00
300.00	0.3017	0.3031	0.2816	0.3189	9.36609E-01
500.00	0.3679	0.2176	0.1892	0.0970	6.28167E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1403	0.2349	0.2349	3.2468	3.57925E 00
50.00	0.1733	0.2478	0.2478	2.2118	2.68784E 00
80.00	0.2077	0.2582	0.2582	1.4781	2.03343E 00
100.00	0.2260	0.2620	0.2616	1.1963	1.77243E 00
120.00	0.2404	0.2640	0.2585	1.0204	1.58111E 00
150.00	0.2592	0.2641	0.2524	0.8263	1.37231E 00
200.00	0.2856	0.2598	0.2407	0.6109	1.14169E 00
300.00	0.3281	0.2438	0.2159	0.3727	8.83596E-01
500.00	0.3941	0.2075	0.1718	0.1718	6.53713E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1399	0.2563	0.2563	6.5119	6.51364E 00
50.00	0.1724	0.2768	0.2768	4.4529	4.74622E 00
80.00	0.2058	0.2958	0.2958	3.0009	3.45818E 00
100.00	0.2232	0.3040	0.3040	2.4421	2.94866E 00
120.00	0.2377	0.3100	0.3072	2.0796	2.57753E 00
150.00	0.2563	0.3153	0.3085	1.6871	2.17560E 00
200.00	0.2822	0.3179	0.3061	1.2525	1.73693E 00
300.00	0.3232	0.3102	0.2919	0.7738	1.25579E 00
500.00	0.3848	0.2770	0.2519	0.3703	8.42007E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1397	0.2644	0.2644	9.7777	9.44804E 00
50.00	0.1721	0.2882	0.2882	6.6949	6.80461E 00
80.00	0.2051	0.3114	0.3114	4.5241	4.88293E 00
100.00	0.2223	0.3222	0.3222	3.6893	4.12489E 00
120.00	0.2367	0.3304	0.3286	3.1396	3.57395E 00
150.00	0.2552	0.3389	0.3342	2.5490	2.97890E 00
200.00	0.2810	0.3464	0.3379	1.8951	2.33217E 00
300.00	0.3214	0.3464	0.3326	1.1762	1.62799E 00
500.00	0.3814	0.3214	0.3016	0.5709	1.03030E 00

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1396	0.2713	0.2713	16.3077	1.53168E 01
50.00	0.1719	0.2982	0.2982	11.1770	1.09214E 01
80.00	0.2046	0.3255	0.3255	7.5681	7.73242E 00
100.00	0.2216	0.3387	0.3387	6.1842	6.47735E 00
120.00	0.2359	0.3493	0.3482	5.2612	5.56678E 00
150.00	0.2544	0.3614	0.3584	4.2729	4.58550E 00
200.00	0.2800	0.3746	0.3690	3.1813	3.52264E 00
300.00	0.3200	0.3850	0.3757	1.9813	2.37238E 00
500.00	0.3784	0.3748	0.3608	0.9734	1.40689E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRC 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1479	0.1967	0.1967	5.4333	4.56248E 00
50.00	0.1815	0.2159	0.2159	4.0479	3.62245E 00
80.00	0.2162	0.2343	0.2343	2.9704	2.86599E 00
100.00	0.2343	0.2427	0.2427	2.5257	2.54384E 00
120.00	0.2500	0.2492	0.2492	2.1939	2.29860E 00
150.00	0.2706	0.2566	0.2566	1.8253	2.02073E 00
200.00	0.2998	0.2647	0.2647	1.4096	1.69893E 00
300.00	0.3422	0.2712	0.2611	0.9870	1.31457E 00
500.00	0.4048	0.2648	0.2431	0.5731	9.40609E-01

CRC 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1477	0.2091	0.2091	10.8773	8.55526E 00
50.00	0.1812	0.2327	0.2327	8.1116	6.68221E 00
80.00	0.2155	0.2566	0.2566	5.9661	5.17927E 00
100.00	0.2333	0.2684	0.2684	5.0808	4.54127E 00
120.00	0.2486	0.2778	0.2778	4.4223	4.05685E 00
150.00	0.2686	0.2890	0.2890	3.6929	3.50974E 00
200.00	0.2966	0.3028	0.3028	2.8723	2.87942E 00
300.00	0.3388	0.3185	0.3128	2.0090	2.13372E 00
500.00	0.4002	0.3253	0.3117	1.1759	1.42121E 00

CRC 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2136	0.2136	16.3207	1.25480E 01
50.00	0.1811	0.2390	0.2390	12.1749	9.74198E 00
80.00	0.2152	0.2652	0.2652	8.9605	7.49255E 00
100.00	0.2329	0.2783	0.2783	7.6360	6.53870E 00
120.00	0.2482	0.2891	0.2891	6.6507	5.81510E 00
150.00	0.2680	0.3022	0.3022	5.5601	4.99875E 00
200.00	0.2956	0.3188	0.3188	4.3345	4.05991E 00
300.00	0.3377	0.3396	0.3356	3.0323	2.95287E 00
500.00	0.3985	0.3552	0.3452	1.7803	1.90180E 00

CRC 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2174	0.2174	27.2066	2.05336E 01
50.00	0.1810	0.2443	0.2443	20.3019	1.58615E 01
80.00	0.2150	0.2726	0.2726	14.9499	1.21191E 01
100.00	0.2326	0.2868	0.2868	12.7485	1.05336E 01
120.00	0.2478	0.2988	0.2988	11.1086	9.33160E 00
150.00	0.2675	0.3139	0.3139	9.2932	7.97677E 00
200.00	0.2948	0.3332	0.3332	7.2580	6.42089E 00
300.00	0.3367	0.3592	0.3567	5.0791	4.59117E 00
500.00	0.3973	0.3851	0.3786	2.9883	2.86299E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1133	0.2351	0.2351	0.1753	1.19333E 00
50.00	0.1552	0.1619	0.1339	0.0453	8.72475E-01
80.00	0.2009	0.1228	0.0661	0.0098	7.21651E-01
100.00	0.2268	0.1116	0.0445	0.0041	6.72555E-01
120.00	0.2495	0.1050	0.0312	0.0018	6.38799E-01
150.00	0.2788	0.0993	0.0194	0.0007	6.03134E-01
200.00	0.3185	0.0947	0.0099	0.0002	5.63794E-01
300.00	0.3789	0.0915	0.0034	0.0000	5.16808E-01
500.00	0.4656	0.0902	0.0007	0.0000	4.66198E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1083	0.3273	0.3273	0.3946	1.61004E 00
50.00	0.1454	0.2253	0.2102	0.1162	1.02096E 00
80.00	0.1871	0.1552	0.1150	0.0290	7.75488E-01
100.00	0.2128	0.1327	0.0813	0.0123	7.04918E-01
120.00	0.2369	0.1192	0.0589	0.0054	6.59797E-01
150.00	0.2690	0.1077	0.0377	0.0018	6.15210E-01
200.00	0.3125	0.0988	0.0195	0.0004	5.69458E-01
300.00	0.3764	0.0929	0.0068	0.0000	5.18576E-01
500.00	0.4649	0.0905	0.0014	0.0000	4.66535E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1068	0.3820	0.3820	0.6127	2.02675E 00
50.00	0.1414	0.2744	0.2642	0.1917	1.16944E 00
80.00	0.1798	0.1853	0.1537	0.0530	8.29325E-01
100.00	0.2037	0.1535	0.1120	0.0238	7.37282E-01
120.00	0.2272	0.1337	0.0832	0.0108	6.80796E-01
150.00	0.2604	0.1164	0.0547	0.0035	6.27286E-01
200.00	0.3067	0.1030	0.0289	0.0007	5.75122E-01
300.00	0.3738	0.0943	0.0101	0.0001	5.20344E-01
500.00	0.4643	0.0908	0.0022	0.0000	4.66873E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1056	0.4440	0.4440	1.0477	2.86018E 00
50.00	0.1380	0.3438	0.3376	0.3459	1.46640E 00
80.00	0.1726	0.2371	0.2141	0.1061	9.36998E-01
100.00	0.1935	0.1925	0.1616	0.0523	8.02010E-01
120.00	0.2145	0.1621	0.1241	0.0259	7.22792E-01
150.00	0.2466	0.1341	0.0851	0.0089	6.51439E-01
200.00	0.2959	0.1115	0.0468	0.0016	5.86449E-01
300.00	0.3689	0.0970	0.0168	0.0001	5.23879E-01
500.00	0.4629	0.0913	0.0036	0.0000	4.67547E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1279	0.2824	0.2824	1.6419	2.27231E 00
50.00	0.1595	0.2647	0.2647	0.9203	1.58154E 00
80.00	0.1928	0.2382	0.2382	0.4985	1.15963E 00
100.00	0.2113	0.2227	0.2227	0.3569	1.01190E 00
120.00	0.2285	0.2094	0.2094	0.2628	9.11013E-01
150.00	0.2531	0.1936	0.1917	0.1718	8.07900E-01
200.00	0.2820	0.1732	0.1555	0.1034	7.02023E-01
300.00	0.3326	0.1449	0.1074	0.0428	5.91843E-01
500.00	0.4223	0.1163	0.0574	0.0090	4.96961E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1275	0.3248	0.3248	3.2961	3.92740E 00
50.00	0.1586	0.3228	0.3228	1.8600	2.55751E 00
80.00	0.1904	0.3094	0.3094	1.0265	1.72975E 00
100.00	0.2072	0.2976	0.2976	0.7501	1.44417E 00
120.00	0.2223	0.2854	0.2854	0.5683	1.25166E 00
150.00	0.2430	0.2675	0.2675	0.3906	1.05830E 00
200.00	0.2706	0.2407	0.2317	0.2385	8.65594E-01
300.00	0.3158	0.1967	0.1718	0.1069	6.76164E-01
500.00	0.3965	0.1441	0.1007	0.0263	5.29423E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1274	0.3421	0.3421	4.9503	5.58249E 00
50.00	0.1583	0.3488	0.3488	2.7997	3.53347E 00
80.00	0.1896	0.3453	0.3453	1.5540	2.29988E 00
100.00	0.2059	0.3382	0.3382	1.1423	1.87644E 00
120.00	0.2203	0.3291	0.3291	0.8729	1.59231E 00
150.00	0.2397	0.3139	0.3139	0.6107	1.30871E 00
200.00	0.2663	0.2877	0.2818	0.3769	1.02916E 00
300.00	0.3088	0.2384	0.2191	0.1753	7.60485E-01
500.00	0.3823	0.1703	0.1353	0.0480	5.61884E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1273	0.3574	0.3574	8.2590	8.89268E 00
50.00	0.1580	0.3731	0.3731	4.6784	5.48539E 00
80.00	0.1890	0.3815	0.3815	2.6093	3.44012E 00
100.00	0.2049	0.3809	0.3809	1.9274	2.74098E 00
120.00	0.2188	0.3775	0.3775	1.4814	2.27360E 00
150.00	0.2372	0.3686	0.3686	1.0495	1.80952E 00
200.00	0.2627	0.3482	0.3448	0.6562	1.35630E 00
300.00	0.3027	0.2999	0.2860	0.3151	9.29126E-01
500.00	0.3684	0.2165	0.1901	0.0964	6.26806E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1396	0.2411	0.2411	4.0930	3.44820E 00
50.00	0.1719	0.2537	0.2537	2.7577	2.56851E 00
80.00	0.2048	0.2614	0.2614	1.8232	1.92953E 00
100.00	0.2218	0.2624	0.2624	1.4683	1.67755E 00
120.00	0.2366	0.2615	0.2615	1.2163	1.49436E 00
150.00	0.2559	0.2579	0.2579	0.9511	1.29633E 00
200.00	0.2834	0.2490	0.2490	0.6724	1.08045E 00
300.00	0.3292	0.2284	0.2284	0.3816	8.43056E-01
500.00	0.4021	0.1950	0.1851	0.1608	6.34797E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1396	0.2601	0.2601	8.1910	6.38259E 00
50.00	0.1717	0.2808	0.2808	5.5236	4.62690E 00
80.00	0.2043	0.2989	0.2989	3.6591	3.35428E 00
100.00	0.2211	0.3058	0.3058	2.9516	2.85378E 00
120.00	0.2357	0.3102	0.3102	2.4506	2.49078E 00
150.00	0.2545	0.3134	0.3134	1.9238	2.09963E 00
200.00	0.2809	0.3131	0.3131	1.3721	1.67568E 00
300.00	0.3232	0.3017	0.3017	0.8021	1.21525E 00
500.00	0.3890	0.2684	0.2645	0.3583	8.23091E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2672	0.2672	12.2890	9.31699E 00
50.00	0.1716	0.2912	0.2912	8.2888	6.68528E 00
80.00	0.2042	0.3139	0.3139	5.4958	4.77902E 00
100.00	0.2209	0.3239	0.3239	4.4352	4.03001E 00
120.00	0.2353	0.3310	0.3310	3.6848	3.48720E 00
150.00	0.2540	0.3382	0.3382	2.8967	2.90292E 00
200.00	0.2801	0.3437	0.3437	2.0718	2.27092E 00
300.00	0.3213	0.3410	0.3410	1.2219	1.58745E 00
500.00	0.3841	0.3150	0.3130	0.5587	1.01139E 00

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2730	0.2730	20.4857	1.51858E 01
50.00	0.1716	0.3001	0.3001	13.8205	1.08021E 01
80.00	0.2040	0.3272	0.3272	9.1676	7.62852E 00
100.00	0.2207	0.3401	0.3401	7.4017	6.38246E 00
120.00	0.2351	0.3501	0.3501	6.1523	5.48004E 00
150.00	0.2536	0.3613	0.3613	4.8420	4.50952E 00
200.00	0.2794	0.3732	0.3732	3.4711	3.46139E 00
300.00	0.3199	0.3819	0.3819	2.0611	2.33184E 00
500.00	0.3801	0.3708	0.3700	0.9609	1.38797E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2011	0.2011	6.9270	4.44029E 00
50.00	0.1810	0.2211	0.2211	5.1233	3.50571E 00
80.00	0.2151	0.2398	0.2398	3.7243	2.75692E 00
100.00	0.2327	0.2479	0.2479	3.1497	2.43956E 00
120.00	0.2479	0.2539	0.2539	2.7234	2.19887E 00
150.00	0.2676	0.2601	0.2601	2.2528	1.92742E 00
200.00	0.2950	0.2655	0.2655	1.7285	1.61529E 00
300.00	0.3383	0.2665	0.2665	1.1378	1.24703E 00
500.00	0.4035	0.2530	0.2530	0.6117	8.95753E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2116	0.2116	13.8568	8.43307E 00
50.00	0.1809	0.2358	0.2358	10.2508	6.56547E 00
80.00	0.2149	0.2602	0.2602	7.4549	5.07020E 00
100.00	0.2325	0.2718	0.2718	6.3076	4.43699E 00
120.00	0.2476	0.2811	0.2811	5.4562	3.95712E 00
150.00	0.2671	0.2920	0.2920	4.5174	3.41643E 00
200.00	0.2943	0.3046	0.3046	3.4717	2.79578E 00
300.00	0.3368	0.3173	0.3173	2.2969	2.06618E 00
500.00	0.3992	0.3196	0.3196	1.2557	1.37635E 00

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2153	0.2153	20.7872	1.24258E 01
50.00	0.1809	0.2412	0.2412	15.3778	9.62524E 00
80.00	0.2148	0.2677	0.2677	11.1871	7.38348E 00
100.00	0.2324	0.2809	0.2809	9.4654	6.43442E 00
120.00	0.2475	0.2917	0.2917	8.1878	5.71537E 00
150.00	0.2670	0.3045	0.3045	6.7820	4.90543E 00
200.00	0.2940	0.3203	0.3203	5.2156	3.97627E 00
300.00	0.3362	0.3392	0.3392	3.4562	2.88533E 00
500.00	0.3979	0.3518	0.3518	1.8992	1.85695E 00

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2185	0.2185	34.6453	2.04114E 01
50.00	0.1808	0.2457	0.2457	25.6322	1.57448E 01
80.00	0.2148	0.2742	0.2742	18.6492	1.20100E 01
100.00	0.2323	0.2886	0.2886	15.7824	1.04293E 01
120.00	0.2474	0.3005	0.3005	13.6552	9.23187E 00
150.00	0.2669	0.3154	0.3154	11.3107	7.88345E 00
200.00	0.2938	0.3343	0.3343	8.7023	6.33725E 00
300.00	0.3359	0.3593	0.3593	5.7732	4.52363E 00
500.00	0.3967	0.3832	0.3832	3.1872	2.81814E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1053	0.2451	0.2451	0.2672	1.03080E 00
50.00	0.1388	0.1330	0.1330	0.0806	7.51302E-01
80.00	0.2098	0.0766	0.0766	0.0080	6.41063E-01
100.00	0.2727	0.0739	0.0522	0.0009	6.09984E-01
120.00	0.2915	0.0744	0.0352	0.0005	5.89588E-01
150.00	0.3137	0.0766	0.0211	0.0002	5.68101E-01
200.00	0.3432	0.0805	0.0104	0.0001	5.43043E-01
300.00	0.3911	0.0855	0.0035	0.0000	5.08718E-01
500.00	0.4687	0.0889	0.0007	0.0000	4.64675E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1046	0.3458	0.3458	0.5420	1.44752E 00
50.00	0.1356	0.2133	0.2133	0.1742	8.99782E-01
80.00	0.1752	0.1180	0.1180	0.0437	6.94899E-01
100.00	0.2246	0.0927	0.0927	0.0090	6.42348E-01
120.00	0.2729	0.0867	0.0672	0.0018	6.10586E-01
150.00	0.3012	0.0840	0.0411	0.0006	5.80177E-01
200.00	0.3363	0.0842	0.0205	0.0002	5.48706E-01
300.00	0.3884	0.0868	0.0069	0.0000	5.10486E-01
500.00	0.4680	0.0892	0.0014	0.0000	4.65012E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1044	0.4015	0.4015	0.8168	1.86423E 00
50.00	0.1346	0.2711	0.2711	0.2676	1.04826E 00
80.00	0.1693	0.1558	0.1558	0.0764	7.48736E-01
100.00	0.1966	0.1176	0.1176	0.0308	6.74711E-01
120.00	0.2572	0.0998	0.0959	0.0043	6.31584E-01
150.00	0.2897	0.0918	0.0599	0.0014	5.92253E-01
200.00	0.3296	0.0880	0.0304	0.0003	5.54370E-01
300.00	0.3857	0.0881	0.0103	0.0000	5.12254E-01
500.00	0.4673	0.0895	0.0022	0.0000	4.65350E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1042	0.4613	0.4613	1.3666	2.69766E 00
50.00	0.1338	0.3484	0.3484	0.4541	1.34522E 00
80.00	0.1654	0.2180	0.2180	0.1404	8.56409E-01
100.00	0.1853	0.1646	0.1646	0.0694	7.39439E-01
120.00	0.2110	0.1307	0.1307	0.0298	6.73581E-01
150.00	0.2702	0.1082	0.0941	0.0043	6.16405E-01
200.00	0.3171	0.0960	0.0493	0.0008	5.65697E-01
300.00	0.3805	0.0908	0.0171	0.0001	5.15790E-01
500.00	0.4660	0.0901	0.0036	0.0000	4.66024E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1273	0.3020	0.3020	2.2796	2.10260E 00
50.00	0.1579	0.2873	0.2873	1.2726	1.42191E 00
80.00	0.1886	0.2578	0.2578	0.6959	1.01376E 00
100.00	0.2045	0.2374	0.2374	0.5081	8.74393E-01
120.00	0.2182	0.2180	0.2180	0.3865	7.81272E-01
150.00	0.2362	0.1916	0.1916	0.2702	6.88813E-01
200.00	0.2622	0.1556	0.1556	0.1621	5.98369E-01
300.00	0.3091	0.1086	0.1086	0.0670	5.12202E-01
500.00	0.5084	0.0753	0.0704	0.0023	4.47618E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1272	0.3377	0.3377	4.5612	3.75769E 00
50.00	0.1578	0.3401	0.3401	2.5484	2.39787E 00
80.00	0.1883	0.3286	0.3286	1.3969	1.58388E 00
100.00	0.2040	0.3157	0.3157	1.0222	1.30666E 00
120.00	0.2174	0.3009	0.3009	0.7801	1.12192E 00
150.00	0.2349	0.2770	0.2770	0.5489	9.39218E-01
200.00	0.2595	0.2380	0.2380	0.3353	7.61940E-01
300.00	0.3004	0.1750	0.1750	0.1502	5.96523E-01
500.00	0.3848	0.1066	0.1066	0.0331	4.80079E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1272	0.3517	0.3517	6.8417	5.41278E 00
50.00	0.1577	0.3623	0.3623	3.8243	3.37383E 00
80.00	0.1882	0.3619	0.3619	2.0981	2.15400E 00
100.00	0.2038	0.3552	0.3552	1.5361	1.73893E 00
120.00	0.2172	0.3451	0.3451	1.1739	1.46257E 00
150.00	0.2344	0.3264	0.3264	0.8279	1.18962E 00
200.00	0.2586	0.2914	0.2914	0.5083	9.25510E-01
300.00	0.2977	0.2252	0.2252	0.2328	6.80844E-01
500.00	0.3676	0.1389	0.1389	0.0631	5.12540E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1272	0.3636	0.3636	11.4053	8.72296E 00
50.00	0.1577	0.3823	0.3823	6.3766	5.32575E 00
80.00	0.1882	0.3940	0.3940	3.5000	3.29425E 00
100.00	0.2037	0.3946	0.3946	2.5649	2.60347E 00
120.00	0.2170	0.3914	0.3914	1.9610	2.14386E 00
150.00	0.2341	0.3815	0.3815	1.3849	1.69043E 00
200.00	0.2579	0.3564	0.3564	0.8543	1.25265E 00
300.00	0.2957	0.2959	0.2959	0.3978	8.49485E-01
500.00	0.3569	0.1939	0.1939	0.1212	5.77463E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2512	0.2512	5.7423	3.30103E 00
50.00	0.1715	0.2673	0.2673	3.8515	2.42456E 00
80.00	0.2040	0.2786	0.2786	2.5334	1.79024E 00
100.00	0.2206	0.2812	0.2812	2.0348	1.54127E 00
120.00	0.2350	0.2814	0.2814	1.6824	1.36100E 00
150.00	0.2534	0.2785	0.2785	1.3140	1.16721E 00
200.00	0.2791	0.2688	0.2688	0.9308	9.58029E-01
300.00	0.3192	0.2416	0.2416	0.5413	7.32789E-01
500.00	0.3788	0.1869	0.1869	0.2428	5.44619E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2658	0.2658	11.4857	6.23543E 00
50.00	0.1715	0.2890	0.2890	7.7046	4.48295E 00
80.00	0.2039	0.3101	0.3101	5.0689	3.21499E 00
100.00	0.2205	0.3186	0.3186	4.0722	2.71749E 00
120.00	0.2349	0.3245	0.3245	3.3678	2.35742E 00
150.00	0.2533	0.3293	0.3293	2.6316	1.97051E 00
200.00	0.2787	0.3304	0.3304	1.8666	1.55327E 00
300.00	0.3184	0.3183	0.3183	1.0890	1.10498E 00
500.00	0.3763	0.2728	0.2728	0.4958	7.32913E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2712	0.2712	17.2285	9.16982E 00
50.00	0.1715	0.2971	0.2971	11.5569	6.54133E 00
80.00	0.2039	0.3221	0.3221	7.6050	4.63973E 00
100.00	0.2205	0.3335	0.3335	6.1097	3.89372E 00
120.00	0.2348	0.3419	0.3419	5.0539	3.35384E 00
150.00	0.2532	0.3507	0.3507	3.9492	2.77381E 00
200.00	0.2786	0.3580	0.3580	2.8019	2.14850E 00
300.00	0.3181	0.3562	0.3562	1.6372	1.47718E 00
500.00	0.3755	0.3236	0.3236	0.7486	9.21207E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1395	0.2756	0.2756	28.7142	1.50386E 01
50.00	0.1715	0.3039	0.3039	19.2616	1.06581E 01
80.00	0.2039	0.3326	0.3326	12.6750	7.48923E 00
100.00	0.2205	0.3465	0.3465	10.1828	6.24618E 00
120.00	0.2348	0.3573	0.3573	8.4250	5.34668E 00
150.00	0.2532	0.3699	0.3699	6.5849	4.38040E 00
200.00	0.2786	0.3836	0.3836	4.6729	3.33897E 00
300.00	0.3180	0.3942	0.3942	2.7325	2.22157E 00
500.00	0.3748	0.3810	0.3810	1.2546	1.29780E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SPHERES 3 0 1 0

ORO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1476	0.2069	0.2069	9.7563	4.31061E 00
50.00	0.1808	0.2290	0.2290	7.1980	3.37740E 00
80.00	0.2148	0.2502	0.2502	5.2152	2.63063E 00
100.00	0.2323	0.2599	0.2599	4.4011	2.31459E 00
120.00	0.2473	0.2673	0.2673	3.7973	2.07522E 00
150.00	0.2668	0.2753	0.2753	3.1323	1.80569E 00
200.00	0.2937	0.2828	0.2828	2.3948	1.49670E 00
300.00	0.3356	0.2860	0.2860	1.5692	1.13441E 00
500.00	0.3963	0.2711	0.2711	0.8467	7.94005E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1475	0.2148	0.2148	19.5144	8.30339E 00
50.00	0.1808	0.2403	0.2403	14.3961	6.43716E 00
80.00	0.2148	0.2663	0.2663	10.4305	4.94391E 00
100.00	0.2323	0.2790	0.2790	8.8023	4.31202E 00
120.00	0.2473	0.2892	0.2892	7.5963	3.83346E 00
150.00	0.2668	0.3015	0.3015	6.2674	3.29470E 00
200.00	0.2936	0.3159	0.3159	4.7917	2.67719E 00
300.00	0.3354	0.3316	0.3316	3.1419	1.95356E 00
500.00	0.3956	0.3362	0.3362	1.6996	1.27460E 00

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1475	0.2175	0.2175	29.2716	1.22962E 01
50.00	0.1808	0.2443	0.2443	21.5941	9.49692E 00
80.00	0.2148	0.2721	0.2721	15.6457	7.25719E 00
100.00	0.2322	0.2859	0.2859	13.2062	6.30946E 00
120.00	0.2473	0.2974	0.2974	11.3944	5.59171E 00
150.00	0.2668	0.3114	0.3114	9.4011	4.78371E 00
200.00	0.2936	0.3288	0.3288	7.1891	3.85768E 00
300.00	0.3354	0.3502	0.3502	4.7150	2.77271E 00
500.00	0.3955	0.3658	0.3658	2.5518	1.75520E 00

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1475	0.2198	0.2198	48.7860	2.02817E 01
50.00	0.1808	0.2475	0.2475	35.9939	1.56164E 01
80.00	0.2148	0.2769	0.2769	26.0762	1.18837E 01
100.00	0.2322	0.2918	0.2918	22.0103	1.03043E 01
120.00	0.2473	0.3043	0.3043	18.9907	9.10821E 00
150.00	0.2667	0.3198	0.3198	15.6720	7.76172E 00
200.00	0.2936	0.3398	0.3398	11.9845	6.21866E 00
300.00	0.3353	0.3667	0.3667	7.8601	4.41101E 00
500.00	0.3953	0.3935	0.3935	4.2568	2.71639E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0951	0.3056	0.2876	0.3040	1.60359E 00
30.00	0.1203	0.2367	0.2015	0.1356	1.14942E 00
50.00	0.1610	0.1613	0.1103	0.0363	8.45495E-01
80.00	0.2116	0.1201	0.0544	0.0067	6.99489E-01
100.00	0.2397	0.1090	0.0362	0.0026	6.52479E-01
150.00	0.2943	0.0978	0.0153	0.0004	5.86757E-01
200.00	0.3352	0.0940	0.0076	0.0001	5.49504E-01
300.00	0.3976	0.0915	0.0025	0.0000	5.04534E-01
500.00	0.4877	0.0905	0.0005	0.0000	4.55497E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0920	0.3909	0.3806	0.6485	2.32438E 00
30.00	0.1156	0.3184	0.2948	0.3017	1.48576E 00
50.00	0.1519	0.2162	0.1794	0.0915	9.63615E-01
80.00	0.1980	0.1467	0.0971	0.0199	7.41669E-01
100.00	0.2265	0.1259	0.0675	0.0077	6.77591E-01
150.00	0.2859	0.1043	0.0299	0.0010	5.95930E-01
200.00	0.3303	0.0971	0.0151	0.0002	5.53730E-01
300.00	0.3955	0.0925	0.0051	0.0000	5.05816E-01
500.00	0.4873	0.0907	0.0010	0.0000	4.55732E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0908	0.4361	0.4289	0.9951	3.04517E 00
30.00	0.1138	0.3705	0.3524	0.4704	1.82210E 00
50.00	0.1480	0.2605	0.2306	0.1509	1.08173E 00
80.00	0.1900	0.1723	0.1317	0.0372	7.83849E-01
100.00	0.2170	0.1429	0.0944	0.0152	7.02703E-01
150.00	0.2782	0.1110	0.0438	0.0019	6.05102E-01
200.00	0.3254	0.1002	0.0224	0.0004	5.57956E-01
300.00	0.3935	0.0934	0.0076	0.0000	5.07099E-01
500.00	0.4867	0.0909	0.0015	0.0000	4.55967E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0899	0.4833	0.4786	1.6895	4.48675E 00
30.00	0.1123	0.4331	0.4205	0.8095	2.49478E 00
50.00	0.1445	0.3262	0.3037	0.2727	1.31797E 00
80.00	0.1818	0.2180	0.1871	0.0769	8.68208E-01
100.00	0.2053	0.1757	0.1389	0.0350	7.52926E-01
150.00	0.2649	0.1247	0.0694	0.0047	6.23446E-01
200.00	0.3163	0.1067	0.0366	0.0008	5.66409E-01
300.00	0.3897	0.0955	0.0125	0.0001	5.09664E-01
500.00	0.4857	0.0913	0.0026	0.0000	4.56437E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1126	0.2814	0.2814	1.7810	2.94225E 00
30.00	0.1373	0.2771	0.2771	1.1751	2.21231E 00
50.00	0.1701	0.2671	0.2560	0.6848	1.55449E 00
80.00	0.2030	0.2471	0.2218	0.3934	1.14230E 00
100.00	0.2205	0.2330	0.2024	0.2908	9.95000E-01
150.00	0.2574	0.2012	0.1634	0.1535	7.89230E-01
200.00	0.2890	0.1761	0.1340	0.0888	6.82265E-01
300.00	0.3457	0.1428	0.0933	0.0335	5.72586E-01
500.00	0.4458	0.1129	0.0487	0.0060	4.81201E-01

CRC 20. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1117	0.3183	0.3183	3.5947	5.12421E 00
30.00	0.1355	0.3229	0.3229	2.3975	3.68937E 00
50.00	0.1676	0.3240	0.3178	1.4065	2.41549E 00
80.00	0.1996	0.3132	0.2969	0.8168	1.63849E 00
100.00	0.2164	0.3018	0.2813	0.6095	1.36833E 00
150.00	0.2507	0.2693	0.2424	0.3326	1.00208E 00
200.00	0.2791	0.2381	0.2075	0.2009	8.19536E-01
300.00	0.3285	0.1892	0.1530	0.0844	6.41941E-01
500.00	0.4192	0.1362	0.0873	0.0177	5.07141E-01

CRC 30. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1114	0.3332	0.3332	5.4074	7.30617E 00
30.00	0.1350	0.3426	0.3426	3.6192	5.16643E 00
50.00	0.1667	0.3512	0.3469	2.1294	3.27648E 00
80.00	0.1984	0.3487	0.3366	1.2417	2.13468E 00
100.00	0.2149	0.3413	0.3256	0.9300	1.74167E 00
150.00	0.2481	0.3139	0.2926	0.5140	1.21493E 00
200.00	0.2752	0.2830	0.2583	0.3159	9.56807E-01
300.00	0.3210	0.2278	0.1981	0.1393	7.11295E-01
500.00	0.4032	0.1588	0.1189	0.0333	5.33080E-01

CRC 50. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1112	0.3463	0.3463	9.0343	1.16701E 01
30.00	0.1345	0.3605	0.3605	6.0627	8.12055E 00
50.00	0.1660	0.3775	0.3748	3.5762	4.99848E 00
80.00	0.1974	0.3860	0.3779	2.0927	3.12705E 00
100.00	0.2136	0.3849	0.3742	1.5719	2.48833E 00
150.00	0.2460	0.3685	0.3534	0.8785	1.64062E 00
200.00	0.2719	0.3431	0.3249	0.5480	1.23135E 00
300.00	0.3144	0.2871	0.2643	0.2523	8.50004E-01
500.00	0.3865	0.2000	0.1696	0.0697	5.84958E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1231	0.2282	0.2282	3.9470	4.17204E 00
30.00	0.1475	0.2389	0.2389	2.9834	3.35841E 00
50.00	0.1814	0.2517	0.2517	2.0090	2.51215E 00
80.00	0.2171	0.2614	0.2614	1.3235	1.89407E 00
100.00	0.2351	0.2645	0.2609	1.0810	1.64875E 00
150.00	0.2695	0.2642	0.2494	0.7337	1.27478E 00
200.00	0.2970	0.2576	0.2358	0.5345	1.06086E 00
300.00	0.3415	0.2381	0.2082	0.3178	8.23512E-01
500.00	0.4115	0.1986	0.1614	0.1398	6.14620E-01

CRO 20. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1228	0.2463	0.2463	7.9086	7.69320E 00
30.00	0.1470	0.2619	0.2619	5.9876	6.07509E 00
50.00	0.1803	0.2827	0.2827	4.0518	4.39958E 00
80.00	0.2147	0.3014	0.3014	2.6970	3.18606E 00
100.00	0.2324	0.3093	0.3077	2.2023	2.70885E 00
150.00	0.2664	0.3183	0.3096	1.5003	1.98970E 00
200.00	0.2932	0.3186	0.3049	1.0987	1.58532E 00
300.00	0.3359	0.3066	0.2866	0.6635	1.14630E 00
500.00	0.4005	0.2672	0.2407	0.3058	7.74245E-01

CRO 30. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1227	0.2530	0.2530	11.8698	1.12144E 01
30.00	0.1468	0.2706	0.2706	8.9924	8.79178E 00
50.00	0.1799	0.2952	0.2952	6.0932	6.28701E 00
80.00	0.2139	0.3184	0.3184	4.0696	4.47805E 00
100.00	0.2314	0.3288	0.3278	3.3253	3.76894E 00
150.00	0.2653	0.3439	0.3377	2.2679	2.70463E 00
200.00	0.2919	0.3493	0.3392	1.6646	2.10977E 00
300.00	0.3338	0.3451	0.3300	1.0109	1.46910E 00
500.00	0.3964	0.3128	0.2918	0.4739	9.33869E-01

CRO 50. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1226	0.2587	0.2587	19.7927	1.82567E 01
30.00	0.1467	0.2782	0.2782	14.9995	1.42251E 01
50.00	0.1796	0.3059	0.3059	10.1792	1.00619E 01
80.00	0.2133	0.3337	0.3337	6.8154	7.06202E 00
100.00	0.2306	0.3469	0.3463	5.5710	5.88912E 00
150.00	0.2644	0.3686	0.3646	3.8044	4.13448E 00
200.00	0.2908	0.3803	0.3737	2.7964	3.15867E 00
300.00	0.3321	0.3870	0.3767	1.7067	2.11468E 00
500.00	0.3929	0.3694	0.3544	0.8118	1.25312E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1304	0.1873	0.1873	6.3025	5.14276E 00
30.00	0.1553	0.2017	0.2017	5.0908	4.33584E 00
50.00	0.1898	0.2214	0.2214	3.7571	3.42412E 00
80.00	0.2255	0.2396	0.2396	2.7291	2.69427E 00
100.00	0.2442	0.2479	0.2479	2.3071	2.38500E 00
150.00	0.2820	0.2611	0.2611	1.6471	1.88566E 00
200.00	0.3113	0.2684	0.2656	1.2784	1.58073E 00
300.00	0.3553	0.2725	0.2596	0.8800	1.21951E 00
500.00	0.4207	0.2617	0.2378	0.4973	8.72318E-01

CRC 20. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1303	0.1979	0.1979	12.6122	9.71316E 00
30.00	0.1551	0.2151	0.2151	10.1926	8.10339E 00
50.00	0.1894	0.2395	0.2395	7.5321	6.28778E 00
80.00	0.2246	0.2638	0.2638	5.4851	4.83915E 00
100.00	0.2430	0.2754	0.2754	4.6474	4.22756E 00
150.00	0.2796	0.2959	0.2959	3.3406	3.24492E 00
200.00	0.3083	0.3092	0.3079	2.5973	2.64940E 00
300.00	0.3518	0.3229	0.3154	1.7934	1.95138E 00
500.00	0.4155	0.3252	0.3100	1.0241	1.29364E 00

CRC 30. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1302	0.2016	0.2016	18.9237	1.42836E 01
30.00	0.1550	0.2200	0.2200	15.2935	1.18709E 01
50.00	0.1892	0.2463	0.2463	11.3075	9.15145E 00
80.00	0.2243	0.2730	0.2730	8.2417	6.98404E 00
100.00	0.2426	0.2862	0.2862	6.9876	6.07013E 00
150.00	0.2788	0.3102	0.3102	5.0331	4.60419E 00
200.00	0.3072	0.3264	0.3257	3.9179	3.71807E 00
300.00	0.3506	0.3458	0.3405	2.7082	2.68326E 00
500.00	0.4137	0.3577	0.3464	1.5519	1.71496E 00

CRC 50. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1302	0.2048	0.2048	31.5426	2.34244E 01
30.00	0.1550	0.2241	0.2241	25.4967	1.94060E 01
50.00	0.1891	0.2520	0.2520	18.8575	1.48788E 01
80.00	0.2241	0.2810	0.2810	13.7536	1.12738E 01
100.00	0.2423	0.2957	0.2957	11.6661	9.75526E 00
150.00	0.2782	0.3228	0.3228	8.4200	7.32272E 00
200.00	0.3063	0.3422	0.3417	6.5589	5.85541E 00
300.00	0.3496	0.3675	0.3641	4.5374	4.14702E 00
500.00	0.4121	0.3905	0.3831	2.6084	2.55761E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0925	0.2928	0.2928	0.3440	1.52131E 00
30.00	0.1235	0.2174	0.2174	0.1266	1.10153E 00
50.00	0.1651	0.1513	0.1158	0.0326	8.28289E-01
80.00	0.2138	0.1174	0.0551	0.0063	6.95317E-01
100.00	0.2409	0.1079	0.0364	0.0025	6.50759E-01
150.00	0.2945	0.0976	0.0153	0.0004	5.86542E-01
200.00	0.3353	0.0939	0.0076	0.0001	5.49474E-01
300.00	0.3976	0.0915	0.0025	0.0000	5.04533E-01
500.00	0.4877	0.0905	0.0005	0.0000	4.55497E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0904	0.3858	0.3858	0.7202	2.24210E 00
30.00	0.1159	0.3059	0.3059	0.3042	1.43787E 00
50.00	0.1541	0.2075	0.1864	0.0867	9.46408E-01
80.00	0.1995	0.1439	0.0983	0.0191	7.37497E-01
100.00	0.2275	0.1247	0.0678	0.0074	6.75871E-01
150.00	0.2861	0.1042	0.0299	0.0010	5.95714E-01
200.00	0.3303	0.0970	0.0151	0.0002	5.53700E-01
300.00	0.3955	0.0925	0.0051	0.0000	5.05815E-01
500.00	0.4873	0.0907	0.0010	0.0000	4.55732E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0897	0.4337	0.4337	1.0960	2.96289E 00
30.00	0.1138	0.3618	0.3618	0.4797	1.77422E 00
50.00	0.1494	0.2531	0.2379	0.1457	1.06453E 00
80.00	0.1911	0.1696	0.1333	0.0361	7.79677E-01
100.00	0.2177	0.1417	0.0949	0.0148	7.00982E-01
150.00	0.2784	0.1108	0.0438	0.0019	6.04887E-01
200.00	0.3255	0.1002	0.0224	0.0004	5.57926E-01
300.00	0.3935	0.0934	0.0076	0.0000	5.07098E-01
500.00	0.4867	0.0909	0.0015	0.0000	4.55967E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0892	0.4825	0.4825	1.8471	4.40447E 00
30.00	0.1122	0.4280	0.4280	0.8291	2.44690E 00
50.00	0.1454	0.3208	0.3107	0.2674	1.30077E 00
80.00	0.1824	0.2156	0.1889	0.0757	8.64036E-01
100.00	0.2058	0.1745	0.1396	0.0345	7.51206E-01
150.00	0.2651	0.1246	0.0695	0.0047	6.23231E-01
200.00	0.3163	0.1067	0.0366	0.0008	5.66378E-01
300.00	0.3897	0.0955	0.0125	0.0001	5.09663E-01
500.00	0.4857	0.0913	0.0026	0.0000	4.56437E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1113	0.2886	0.2886	2.2083	2.80367E 00
30.00	0.1347	0.2807	0.2807	1.4472	2.09193E 00
50.00	0.1671	0.2604	0.2604	0.7975	1.46294E 00
80.00	0.2019	0.2316	0.2316	0.4209	1.08048E 00
100.00	0.2217	0.2155	0.2155	0.2952	9.46888E-01
150.00	0.2640	0.1865	0.1783	0.1414	7.62647E-01
200.00	0.2949	0.1659	0.1424	0.0823	6.66978E-01
300.00	0.3497	0.1383	0.0958	0.0317	5.67068E-01
500.00	0.4473	0.1121	0.0489	0.0058	4.80314E-01

CRO 20. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1111	0.3234	0.3234	4.4255	4.98563E 00
30.00	0.1342	0.3266	0.3266	2.9084	3.56899E 00
50.00	0.1659	0.3223	0.3223	1.6166	2.32394E 00
80.00	0.1988	0.3053	0.3053	0.8746	1.57667E 00
100.00	0.2164	0.2916	0.2916	0.6305	1.32022E 00
150.00	0.2541	0.2588	0.2570	0.3194	9.75495E-01
200.00	0.2822	0.2300	0.2165	0.1935	8.04249E-01
300.00	0.3308	0.1852	0.1563	0.0819	6.36423E-01
500.00	0.4202	0.1354	0.0877	0.0174	5.06253E-01

CRO 30. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1110	0.3370	0.3370	6.6435	7.16759E 00
30.00	0.1341	0.3458	0.3458	4.3691	5.04605E 00
50.00	0.1656	0.3507	0.3507	2.4356	3.18493E 00
80.00	0.1977	0.3437	0.3437	1.3282	2.07286E 00
100.00	0.2148	0.3346	0.3346	0.9648	1.69356E 00
150.00	0.2504	0.3060	0.3059	0.5004	1.18834E 00
200.00	0.2772	0.2766	0.2669	0.3083	9.41520E-01
300.00	0.3225	0.2243	0.2016	0.1366	7.05777E-01
500.00	0.4038	0.1580	0.1194	0.0330	5.32193E-01

CRO 50. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1109	0.3489	0.3489	11.0770	1.15315E 01
30.00	0.1340	0.3628	0.3628	7.2910	8.00017E 00
50.00	0.1652	0.3776	0.3776	4.0735	4.90693E 00
80.00	0.1969	0.3834	0.3834	2.2348	3.06523E 00
100.00	0.2135	0.3811	0.3811	1.6333	2.44022E 00
150.00	0.2471	0.3635	0.3635	0.8685	1.61404E 00
200.00	0.2731	0.3388	0.3325	0.5401	1.21606E 00
300.00	0.3153	0.2844	0.2678	0.2494	8.44486E-01
500.00	0.3868	0.1992	0.1701	0.0693	5.84071E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1227	0.2341	0.2341	5.0008	4.03634E 00
30.00	0.1467	0.2451	0.2451	3.7521	3.22976E 00
50.00	0.1797	0.2572	0.2572	2.4974	2.39637E 00
80.00	0.2135	0.2633	0.2633	1.6292	1.79494E 00
100.00	0.2311	0.2631	0.2631	1.3021	1.55919E 00
150.00	0.2665	0.2561	0.2561	0.8295	1.20483E 00
200.00	0.2954	0.2451	0.2451	0.5775	1.00576E 00
300.00	0.3445	0.2224	0.2224	0.3167	7.88493E-01
500.00	0.4192	0.1876	0.1722	0.1311	5.99335E-01

CRO 20. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1226	0.2498	0.2498	10.0054	7.55750E 00
30.00	0.1466	0.2658	0.2658	7.5088	5.94644E 00
50.00	0.1794	0.2867	0.2867	5.0043	4.28380E 00
80.00	0.2129	0.3038	0.3038	3.2728	3.08693E 00
100.00	0.2302	0.3100	0.3100	2.6210	2.61928E 00
150.00	0.2647	0.3153	0.3153	1.6829	1.91976E 00
200.00	0.2922	0.3127	0.3127	1.1852	1.53021E 00
300.00	0.3367	0.2975	0.2975	0.6763	1.11128E 00
500.00	0.4045	0.2593	0.2514	0.2962	7.58959E-01

CRO 30. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1226	0.2555	0.2555	15.0096	1.10787E 01
30.00	0.1466	0.2734	0.2734	11.2678	8.66313E 00
50.00	0.1794	0.2981	0.2981	7.5112	6.17124E 00
80.00	0.2127	0.3205	0.3205	4.9156	4.37891E 00
100.00	0.2300	0.3299	0.3299	3.9402	3.67938E 00
150.00	0.2641	0.3424	0.3424	2.5364	2.63469E 00
200.00	0.2911	0.3457	0.3457	1.7933	2.05467E 00
300.00	0.3342	0.3390	0.3390	1.0356	1.43408E 00
500.00	0.3990	0.3069	0.3016	0.4641	9.18583E-01

CRO 50. EM 0.0750 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1226	0.2602	0.2602	25.0208	1.81210E 01
30.00	0.1465	0.2799	0.2799	18.7835	1.40965E 01
50.00	0.1793	0.3080	0.3080	12.5239	9.94610E 00
80.00	0.2126	0.3353	0.3353	8.2016	6.96289E 00
100.00	0.2298	0.3479	0.3479	6.5772	5.79956E 00
150.00	0.2637	0.3681	0.3681	4.2425	4.06454E 00
200.00	0.2903	0.3784	0.3784	3.0080	3.10357E 00
300.00	0.3323	0.3836	0.3836	1.7527	2.07966E 00
500.00	0.3945	0.3655	0.3624	0.8021	1.23783E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1302	0.1912	0.1912	8.0581	5.01849E 00
30.00	0.1550	0.2063	0.2063	6.4801	4.21475E 00
50.00	0.1891	0.2267	0.2267	4.7448	3.30910E 00
80.00	0.2241	0.2450	0.2450	3.4118	2.58773E 00
100.00	0.2423	0.2528	0.2528	2.8684	2.28370E 00
150.00	0.2784	0.2638	0.2638	2.0264	1.79624E 00
200.00	0.3068	0.2678	0.2678	1.5395	1.50161E 00
300.00	0.3519	0.2660	0.2660	0.9971	1.15715E 00
500.00	0.4204	0.2488	0.2488	0.5208	8.32633E-01

CRC 20. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1302	0.2001	0.2001	16.1177	9.58889E 00
30.00	0.1550	0.2177	0.2177	12.9628	7.98230E 00
50.00	0.1890	0.2427	0.2427	9.4945	6.17277E 00
80.00	0.2240	0.2673	0.2673	6.8308	4.73261E 00
100.00	0.2420	0.2789	0.2789	5.7454	4.12627E 00
150.00	0.2778	0.2984	0.2984	4.0661	3.15550E 00
200.00	0.3059	0.3101	0.3101	3.0955	2.57028E 00
300.00	0.3499	0.3207	0.3207	2.0175	1.88903E 00
500.00	0.4149	0.3186	0.3186	1.0773	1.25395E 00

CRC 30. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.2032	0.2032	24.1788	1.41593E 01
30.00	0.1549	0.2218	0.2218	19.4462	1.17498E 01
50.00	0.1890	0.2485	0.2485	14.2448	9.03643E 00
80.00	0.2239	0.2756	0.2756	10.2506	6.87750E 00
100.00	0.2420	0.2889	0.2889	8.6217	5.96884E 00
150.00	0.2777	0.3124	0.3124	6.1045	4.51477E 00
200.00	0.3056	0.3276	0.3276	4.6516	3.63895E 00
300.00	0.3493	0.3448	0.3448	3.0379	2.62090E 00
500.00	0.4132	0.3535	0.3535	1.6332	1.67528E 00

CRC 50. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.2058	0.2058	40.2980	2.33001E 01
30.00	0.1549	0.2252	0.2252	32.4135	1.92849E 01
50.00	0.1890	0.2535	0.2535	23.7437	1.47638E 01
80.00	0.2238	0.2827	0.2827	17.0880	1.11673E 01
100.00	0.2419	0.2974	0.2974	14.3757	9.65397E 00
150.00	0.2775	0.3244	0.3244	10.1831	7.23330E 00
200.00	0.3053	0.3431	0.3431	7.7647	5.77629E 00
300.00	0.3488	0.3672	0.3672	5.0780	4.08466E 00
500.00	0.4118	0.3883	0.3883	2.7447	2.51792E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0890	0.3165	0.3165	0.4802	1.33922E 00
30.00	0.1118	0.2195	0.2195	0.2096	9.48155E-01
50.00	0.1480	0.1159	0.1159	0.0584	7.17412E-01
80.00	0.2607	0.0750	0.0662	0.0015	6.24328E-01
100.00	0.2846	0.0746	0.0415	0.0006	5.96807E-01
150.00	0.3255	0.0785	0.0163	0.0001	5.57665E-01
200.00	0.3562	0.0823	0.0079	0.0000	5.33014E-01
300.00	0.4071	0.0868	0.0026	0.0000	4.98540E-01
500.00	0.4899	0.0896	0.0005	0.0000	4.54496E-01

CRO 20. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0888	0.4097	0.4097	0.9662	2.06001E 00
30.00	0.1108	0.3199	0.3199	0.4278	1.28450E 00
50.00	0.1431	0.1883	0.1883	0.1316	8.35531E-01
80.00	0.1915	0.1042	0.1042	0.0256	6.66508E-01
100.00	0.2636	0.0891	0.0785	0.0024	6.21919E-01
150.00	0.3153	0.0843	0.0320	0.0004	5.66837E-01
200.00	0.3507	0.0852	0.0156	0.0001	5.37240E-01
300.00	0.4051	0.0878	0.0051	0.0000	4.99823E-01
500.00	0.4894	0.0898	0.0010	0.0000	4.54731E-01

CRO 30. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0887	0.4546	0.4546	1.4523	2.78081E 00
30.00	0.1106	0.3787	0.3787	0.6459	1.62084E 00
50.00	0.1416	0.2431	0.2431	0.2044	9.53651E-01
80.00	0.1807	0.1363	0.1363	0.0514	7.08687E-01
100.00	0.2250	0.1055	0.1055	0.0124	6.47030E-01
150.00	0.3057	0.0903	0.0471	0.0008	5.76009E-01
200.00	0.3454	0.0882	0.0232	0.0002	5.41466E-01
300.00	0.4030	0.0888	0.0077	0.0000	5.01105E-01
500.00	0.4889	0.0900	0.0015	0.0000	4.54966E-01

CRO 50. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.0886	0.4984	0.4984	2.4245	4.22239E 00
30.00	0.1103	0.4446	0.4446	1.0820	2.29352E 00
50.00	0.1405	0.3203	0.3203	0.3496	1.18989E 00
80.00	0.1744	0.1919	0.1919	0.1009	7.93047E-01
100.00	0.1988	0.1441	0.1441	0.0439	6.97254E-01
150.00	0.2886	0.1030	0.0751	0.0022	5.94354E-01
200.00	0.3351	0.0942	0.0380	0.0004	5.49919E-01
300.00	0.3989	0.0908	0.0127	0.0000	5.03670E-01
500.00	0.4879	0.0904	0.0026	0.0000	4.55435E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1109	0.3057	0.3057	3.0750	2.63005E 00
30.00	0.1339	0.3014	0.3014	2.0062	1.92426E 00
50.00	0.1651	0.2830	0.2830	1.1029	1.30644E 00
80.00	0.1966	0.2490	0.2490	0.5924	9.39028E-01
100.00	0.2129	0.2267	0.2267	0.4278	8.14470E-01
150.00	0.2460	0.1784	0.1784	0.2218	6.49822E-01
200.00	0.2736	0.1424	0.1424	0.1295	5.70217E-01
300.00	0.3269	0.0984	0.0984	0.0486	4.94626E-01
500.00	0.5315	0.0755	0.0579	0.0015	4.37250E-01

CRO 20. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1109	0.3341	0.3341	6.1513	4.81201E 00
30.00	0.1339	0.3407	0.3407	4.0149	3.40132E 00
50.00	0.1649	0.3404	0.3404	2.2096	2.16743E 00
80.00	0.1962	0.3242	0.3242	1.1901	1.43522E 00
100.00	0.2122	0.3084	0.3084	0.8623	1.18780E 00
150.00	0.2442	0.2639	0.2639	0.4531	8.62670E-01
200.00	0.2699	0.2222	0.2222	0.2710	7.07488E-01
300.00	0.3139	0.1588	0.1588	0.1156	5.63981E-01
500.00	0.4282	0.0977	0.0977	0.0161	4.63189E-01

CRO 30. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1109	0.3447	0.3447	9.2289	6.99396E 00
30.00	0.1339	0.3562	0.3562	6.0236	4.87838E 00
50.00	0.1649	0.3652	0.3652	3.3158	3.02843E 00
80.00	0.1960	0.3607	0.3607	1.7883	1.93140E 00
100.00	0.2120	0.3509	0.3509	1.2970	1.56114E 00
150.00	0.2436	0.3156	0.3156	0.6844	1.07552E 00
200.00	0.2687	0.2761	0.2761	0.4125	8.44759E-01
300.00	0.3101	0.2064	0.2064	0.1818	6.33335E-01
500.00	0.3924	0.1247	0.1247	0.0409	4.89129E-01

CRO 50. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1109	0.3537	0.3537	15.3814	1.13579E 01
30.00	0.1338	0.3696	0.3696	10.0414	7.83250E 00
50.00	0.1649	0.3878	0.3878	5.5288	4.75042E 00
80.00	0.1960	0.3967	0.3967	2.9832	2.92378E 00
100.00	0.2119	0.3949	0.3949	2.1656	2.30780E 00
150.00	0.2432	0.3751	0.3751	1.1470	1.50121E 00
200.00	0.2678	0.3442	0.3442	0.6956	1.11930E 00
300.00	0.3073	0.2763	0.2763	0.3138	7.72044E-01
500.00	0.3748	0.1737	0.1737	0.0868	5.41007E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1226	0.2426	0.2426	7.0283	3.88797E 00
30.00	0.1465	0.2560	0.2560	5.2584	3.08323E 00
50.00	0.1792	0.2716	0.2716	3.4842	2.25346E 00
80.00	0.2125	0.2815	0.2815	2.2602	1.65724E 00
100.00	0.2296	0.2827	0.2827	1.8020	1.42483E 00
150.00	0.2634	0.2767	0.2767	1.1460	1.07839E 00
200.00	0.2899	0.2639	0.2639	0.8020	8.86661E-01
300.00	0.3314	0.2321	0.2321	0.4570	6.82529E-01
500.00	0.3939	0.1738	0.1738	0.1978	5.14587E-01

CRO 20. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1225	0.2545	0.2545	14.0579	7.40913E 00
30.00	0.1465	0.2720	0.2720	10.5189	5.79992E 00
50.00	0.1792	0.2955	0.2955	6.9699	4.14089E 00
80.00	0.2124	0.3159	0.3159	4.5233	2.94923E 00
100.00	0.2295	0.3239	0.3239	3.6064	2.48492E 00
150.00	0.2632	0.3320	0.3320	2.2961	1.79332E 00
200.00	0.2895	0.3303	0.3303	1.6090	1.41111E 00
300.00	0.3304	0.3126	0.3126	0.9211	1.00532E 00
500.00	0.3906	0.2594	0.2594	0.4068	6.74211E-01

CRO 30. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1225	0.2588	0.2588	21.0869	1.09303E 01
30.00	0.1465	0.2779	0.2779	15.7783	8.51661E 00
50.00	0.1792	0.3045	0.3045	10.4548	6.02833E 00
80.00	0.2124	0.3294	0.3294	6.7865	4.24121E 00
100.00	0.2295	0.3403	0.3403	5.4119	3.54502E 00
150.00	0.2631	0.3557	0.3557	3.4464	2.50825E 00
200.00	0.2893	0.3606	0.3606	2.4168	1.93557E 00
300.00	0.3301	0.3539	0.3539	1.3855	1.32811E 00
500.00	0.3895	0.3122	0.3122	0.6156	8.33835E-01

CRO 50. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1225	0.2623	0.2623	35.1449	1.79726E 01
30.00	0.1465	0.2827	0.2827	26.2972	1.39500E 01
50.00	0.1792	0.3121	0.3121	17.4247	9.80319E 00
80.00	0.2124	0.3412	0.3412	11.3108	6.82519E 00
100.00	0.2295	0.3549	0.3549	9.0199	5.66520E 00
150.00	0.2631	0.3773	0.3773	5.7466	3.93810E 00
200.00	0.2892	0.3893	0.3893	4.0316	2.98447E 00
300.00	0.3299	0.3961	0.3961	2.3134	1.97370E 00
500.00	0.3886	0.3741	0.3741	1.0333	1.15308E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 1) 3 1 1 0 200

CRO 10. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.1962	0.1962	11.3602	4.88830E 00
30.00	0.1549	0.2126	0.2126	9.1225	4.08534E 00
50.00	0.1890	0.2352	0.2352	6.6614	3.18124E 00
80.00	0.2238	0.2563	0.2563	4.7716	2.46213E 00
100.00	0.2418	0.2658	0.2658	4.0015	2.15960E 00
150.00	0.2774	0.2798	0.2798	2.8131	1.67576E 00
200.00	0.3052	0.2859	0.2859	2.1293	1.38463E 00
300.00	0.3485	0.2859	0.2859	1.3737	1.04677E 00
500.00	0.4112	0.2652	0.2652	0.7245	7.34129E-01

CRC 20. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.2027	0.2027	22.7226	9.45870E 00
30.00	0.1549	0.2211	0.2211	18.2469	7.85289E 00
50.00	0.1889	0.2475	0.2475	13.3242	6.04490E 00
80.00	0.2238	0.2740	0.2740	9.5431	4.60702E 00
100.00	0.2418	0.2867	0.2867	8.0047	4.00217E 00
150.00	0.2774	0.3088	0.3088	5.6288	3.03502E 00
200.00	0.3051	0.3224	0.3224	4.2615	2.45329E 00
300.00	0.3482	0.3358	0.3358	2.7518	1.77865E 00
500.00	0.4104	0.3352	0.3352	1.4556	1.15545E 00

CRC 30. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.2050	0.2050	34.0839	1.40291E 01
30.00	0.1549	0.2241	0.2241	27.3703	1.16204E 01
50.00	0.1889	0.2519	0.2519	19.9863	8.90857E 00
80.00	0.2238	0.2803	0.2803	14.3177	6.75191E 00
100.00	0.2418	0.2943	0.2943	12.0096	5.84473E 00
150.00	0.2773	0.3197	0.3197	8.4450	4.39429E 00
200.00	0.3050	0.3367	0.3367	6.3937	3.52196E 00
300.00	0.3482	0.3566	0.3566	4.1296	2.51053E 00
500.00	0.4102	0.3679	0.3679	2.1864	1.57677E 00

CRC 50. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
20.00	0.1301	0.2069	0.2069	56.8065	2.31699E 01
30.00	0.1549	0.2266	0.2266	45.6172	1.91555E 01
50.00	0.1889	0.2555	0.2555	33.3105	1.46359E 01
80.00	0.2238	0.2856	0.2856	23.8628	1.10417E 01
100.00	0.2418	0.3009	0.3009	20.0161	9.52987E 00
150.00	0.2773	0.3292	0.3292	14.0750	7.11282E 00
200.00	0.3050	0.3491	0.3491	10.6585	5.65930E 00
300.00	0.3481	0.3752	0.3752	6.8857	3.97428E 00
500.00	0.4101	0.3992	0.3992	3.6473	2.41942E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1231	0.2331	0.1967	0.1227	1.11670E 00
50.00	0.1650	0.1589	0.1068	0.0315	8.28654E-01
80.00	0.2172	0.1193	0.0519	0.0055	6.89012E-01
100.00	0.2460	0.1089	0.0343	0.0021	6.43658E-01
120.00	0.2704	0.1030	0.0236	0.0009	6.12598E-01
150.00	0.3013	0.0983	0.0143	0.0003	5.79770E-01
200.00	0.3429	0.0947	0.0071	0.0001	5.43290E-01
300.00	0.4064	0.0923	0.0024	0.0000	4.99037E-01
500.00	0.4984	0.0914	0.0005	0.0000	4.50616E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1180	0.3147	0.2902	0.2753	1.42999E 00
50.00	0.1551	0.2123	0.1748	0.0812	9.38421E-01
80.00	0.2030	0.1446	0.0933	0.0167	7.28090E-01
100.00	0.2326	0.1247	0.0643	0.0062	6.66886E-01
120.00	0.2592	0.1135	0.0453	0.0025	6.27515E-01
150.00	0.2932	0.1043	0.0281	0.0008	5.88231E-01
200.00	0.3382	0.0976	0.0141	0.0001	5.47181E-01
300.00	0.4044	0.0932	0.0047	0.0000	5.00216E-01
500.00	0.4979	0.0916	0.0010	0.0000	4.50831E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1161	0.3677	0.3488	0.4308	1.74328E 00
50.00	0.1509	0.2560	0.2255	0.1353	1.04819E 00
80.00	0.1944	0.1690	0.1273	0.0317	7.67169E-01
100.00	0.2226	0.1407	0.0904	0.0124	6.90115E-01
120.00	0.2497	0.1242	0.0653	0.0050	6.42431E-01
150.00	0.2856	0.1106	0.0413	0.0014	5.96691E-01
200.00	0.3335	0.1005	0.0209	0.0003	5.51072E-01
300.00	0.4026	0.0942	0.0070	0.0000	5.01394E-01
500.00	0.4975	0.0918	0.0014	0.0000	4.51047E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1145	0.4320	0.4188	0.7433	2.36986E 00
50.00	0.1471	0.3218	0.2988	0.2465	1.26772E 00
80.00	0.1854	0.2134	0.1817	0.0671	8.45325E-01
100.00	0.2101	0.1721	0.1340	0.0295	7.36572E-01
120.00	0.2353	0.1459	0.1002	0.0127	6.72264E-01
150.00	0.2724	0.1234	0.0658	0.0036	6.13612E-01
200.00	0.3247	0.1065	0.0343	0.0006	5.58854E-01
300.00	0.3989	0.0961	0.0117	0.0000	5.03751E-01
500.00	0.4964	0.0922	0.0024	0.0000	4.51478E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1404	0.2798	0.2798	1.1096	2.13960E 00
50.00	0.1733	0.2688	0.2562	0.6468	1.50577E 00
80.00	0.2065	0.2472	0.2208	0.3679	1.10915E 00
100.00	0.2244	0.2325	0.2010	0.2701	9.67651E-01
120.00	0.2404	0.2185	0.1835	0.2048	8.70246E-01
150.00	0.2621	0.1997	0.1612	0.1405	7.70277E-01
200.00	0.2946	0.1744	0.1314	0.0800	6.67763E-01
300.00	0.3533	0.1415	0.0907	0.0292	5.62543E-01
500.00	0.4569	0.1126	0.0464	0.0049	4.74471E-01

CRC 20. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1384	0.3271	0.3271	2.2690	3.54874E 00
50.00	0.1706	0.3274	0.3202	1.3300	2.32396E 00
80.00	0.2029	0.3147	0.2976	0.7658	1.57861E 00
100.00	0.2199	0.3023	0.2811	0.5685	1.32008E 00
120.00	0.2349	0.2887	0.2645	0.4366	1.14555E 00
150.00	0.2548	0.2679	0.2405	0.3068	9.70344E-01
200.00	0.2838	0.2358	0.2047	0.1833	7.96389E-01
300.00	0.3347	0.1866	0.1495	0.0750	6.27245E-01
500.00	0.4293	0.1347	0.0840	0.0147	4.98543E-01

CRC 30. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1378	0.3477	0.3477	3.4276	4.95787E 00
50.00	0.1697	0.3555	0.3505	2.0148	3.14215E 00
80.00	0.2016	0.3514	0.3386	1.1652	2.04807E 00
100.00	0.2183	0.3429	0.3267	0.8687	1.67250E 00
120.00	0.2328	0.3320	0.3131	0.6705	1.42086E 00
150.00	0.2520	0.3134	0.2916	0.4753	1.17041E 00
200.00	0.2796	0.2810	0.2557	0.2895	9.25014E-01
300.00	0.3265	0.2247	0.1943	0.1251	6.91947E-01
500.00	0.4121	0.1563	0.1150	0.0283	5.22614E-01

CRC 50. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1373	0.3664	0.3664	5.7453	7.77613E 00
50.00	0.1689	0.3831	0.3799	3.3845	4.77853E 00
80.00	0.2006	0.3904	0.3819	1.9647	2.98700E 00
100.00	0.2169	0.3882	0.3771	1.4702	2.37736E 00
120.00	0.2311	0.3825	0.3693	1.1396	1.97147E 00
150.00	0.2497	0.3696	0.3540	0.8143	1.57054E 00
200.00	0.2759	0.3423	0.3235	0.5041	1.18227E 00
300.00	0.3192	0.2839	0.2606	0.2286	8.21350E-01
500.00	0.3937	0.1962	0.1649	0.0607	5.70757E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1507	0.2429	0.2429	2.8626	3.26390E 00
50.00	0.1850	0.2556	0.2556	1.9185	2.43796E 00
80.00	0.2213	0.2651	0.2651	1.2557	1.83620E 00
100.00	0.2391	0.2678	0.2629	1.0296	1.59792E 00
120.00	0.2542	0.2683	0.2583	0.8690	1.42414E 00
150.00	0.2739	0.2663	0.2503	0.6937	1.23558E 00
200.00	0.3018	0.2587	0.2358	0.5022	1.02897E 00
300.00	0.3471	0.2377	0.2071	0.2954	8.00459E-01
500.00	0.4188	0.1970	0.1591	0.1274	6.00041E-01

CRO 20. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1502	0.2668	0.2668	5.7476	5.88802E 00
50.00	0.1838	0.2879	0.2879	3.8717	4.25407E 00
80.00	0.2186	0.3065	0.3065	2.5634	3.07412E 00
100.00	0.2363	0.3141	0.3116	2.0989	2.61142E 00
120.00	0.2512	0.3188	0.3132	1.7740	2.27646E 00
150.00	0.2707	0.3222	0.3126	1.4200	1.91619E 00
200.00	0.2979	0.3214	0.3070	1.0343	1.52667E 00
300.00	0.3411	0.3075	0.2869	0.6191	1.10537E 00
500.00	0.4069	0.2657	0.2386	0.2810	7.49927E-01

CRO 30. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1500	0.2761	0.2761	8.6320	8.51215E 00
50.00	0.1834	0.3008	0.3008	5.8249	6.07017E 00
80.00	0.2178	0.3242	0.3242	3.8706	4.31204E 00
100.00	0.2353	0.3345	0.3329	3.1693	3.62492E 00
120.00	0.2502	0.3418	0.3379	2.6801	3.12878E 00
150.00	0.2696	0.3489	0.3420	2.1475	2.59680E 00
200.00	0.2965	0.3534	0.3428	1.5678	2.02437E 00
300.00	0.3389	0.3474	0.3317	0.9442	1.41028E 00
500.00	0.4024	0.3120	0.2905	0.4370	8.99813E-01

CRO 50. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1499	0.2839	0.2839	14.4014	1.37604E 01
50.00	0.1831	0.3122	0.3122	9.7310	9.70239E 00
80.00	0.2171	0.3403	0.3403	6.4851	6.78789E 00
100.00	0.2345	0.3534	0.3525	5.3109	5.65193E 00
120.00	0.2494	0.3636	0.3612	4.4926	4.83342E 00
150.00	0.2686	0.3747	0.3704	3.6031	3.95802E 00
200.00	0.2952	0.3857	0.3787	2.6360	3.01976E 00
300.00	0.3371	0.3911	0.3804	1.5955	2.02010E 00
500.00	0.3986	0.3703	0.3548	0.7504	1.19958E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1588	0.2058	0.2058	4.9254	4.23348E 00
50.00	0.1936	0.2257	0.2257	3.6203	3.33572E 00
80.00	0.2298	0.2441	0.2441	2.6171	2.61903E 00
100.00	0.2488	0.2523	0.2523	2.2069	2.31611E 00
120.00	0.2654	0.2584	0.2584	1.9030	2.08674E 00
150.00	0.2872	0.2653	0.2653	1.5672	1.82834E 00
200.00	0.3165	0.2722	0.2681	1.2194	1.53144E 00
300.00	0.3611	0.2751	0.2612	0.8332	1.18093E 00
500.00	0.4275	0.2625	0.2377	0.4656	8.45662E-01

CRO 20. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1586	0.2198	0.2198	9.8626	7.89957E 00
50.00	0.1932	0.2447	0.2447	7.2586	6.11240E 00
80.00	0.2288	0.2692	0.2692	5.2634	4.69072E 00
100.00	0.2475	0.2810	0.2810	4.4485	4.09220E 00
120.00	0.2635	0.2903	0.2903	3.8463	3.64040E 00
150.00	0.2846	0.3014	0.3014	3.1830	3.13340E 00
200.00	0.3134	0.3145	0.3125	2.4785	2.55443E 00
300.00	0.3574	0.3273	0.3191	1.6997	1.87841E 00
500.00	0.4220	0.3279	0.3120	0.9606	1.24482E 00

CRO 30. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1585	0.2249	0.2249	14.7998	1.15657E 01
50.00	0.1930	0.2518	0.2518	10.8969	8.88908E 00
80.00	0.2285	0.2790	0.2790	7.9086	6.76241E 00
100.00	0.2470	0.2923	0.2923	6.6901	5.86829E 00
120.00	0.2629	0.3032	0.3032	5.7896	5.19406E 00
150.00	0.2837	0.3163	0.3163	4.7988	4.43846E 00
200.00	0.3123	0.3326	0.3313	3.7389	3.57741E 00
300.00	0.3561	0.3513	0.3455	2.5672	2.57589E 00
500.00	0.4200	0.3616	0.3499	1.4569	1.64398E 00

CRO 50. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1584	0.2291	0.2291	24.6761	1.88978E 01
50.00	0.1929	0.2577	0.2577	18.1765	1.44424E 01
80.00	0.2283	0.2873	0.2873	13.2007	1.09058E 01
100.00	0.2466	0.3021	0.3021	11.1743	9.42048E 00
120.00	0.2625	0.3145	0.3145	9.6747	8.30139E 00
150.00	0.2830	0.3296	0.3296	8.0298	7.04857E 00
200.00	0.3113	0.3490	0.3482	6.2607	5.62338E 00
300.00	0.3551	0.3740	0.3703	4.3031	3.97085E 00
500.00	0.4183	0.3959	0.3882	2.4510	2.44230E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1273	0.2145	0.2136	0.1111	1.07220E 00
50.00	0.1690	0.1496	0.1116	0.0283	8.12884E-01
80.00	0.2194	0.1168	0.0525	0.0052	6.85205E-01
100.00	0.2471	0.1078	0.0344	0.0020	6.42085E-01
120.00	0.2710	0.1026	0.0236	0.0009	6.11925E-01
150.00	0.3015	0.0981	0.0143	0.0003	5.79572E-01
200.00	0.3430	0.0947	0.0071	0.0001	5.43261E-01
300.00	0.4064	0.0923	0.0024	0.0000	4.99037E-01
500.00	0.4984	0.0914	0.0005	0.0000	4.50616E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1188	0.3022	0.3022	0.2740	1.38549E 00
50.00	0.1573	0.2041	0.1811	0.0769	9.22652E-01
80.00	0.2045	0.1420	0.0944	0.0160	7.24284E-01
100.00	0.2336	0.1236	0.0646	0.0060	6.65314E-01
120.00	0.2597	0.1130	0.0454	0.0024	6.26841E-01
150.00	0.2934	0.1042	0.0281	0.0007	5.88032E-01
200.00	0.3382	0.0975	0.0141	0.0001	5.47152E-01
300.00	0.4044	0.0932	0.0047	0.0000	5.00215E-01
500.00	0.4979	0.0916	0.0010	0.0000	4.50831E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1163	0.3588	0.3588	0.4353	1.69878E 00
50.00	0.1523	0.2487	0.2322	0.1306	1.03242E 00
80.00	0.1955	0.1665	0.1287	0.0308	7.63362E-01
100.00	0.2234	0.1396	0.0909	0.0121	6.88543E-01
120.00	0.2501	0.1237	0.0654	0.0049	6.41757E-01
150.00	0.2858	0.1104	0.0413	0.0014	5.96493E-01
200.00	0.3335	0.1005	0.0209	0.0003	5.51044E-01
300.00	0.4026	0.0942	0.0070	0.0000	5.01394E-01
500.00	0.4975	0.0918	0.0014	0.0000	4.51047E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1145	0.4267	0.4267	0.7565	2.32536E 00
50.00	0.1480	0.3166	0.3054	0.2416	1.25195E 00
80.00	0.1861	0.2111	0.1833	0.0660	8.41519E-01
100.00	0.2106	0.1709	0.1346	0.0291	7.35000E-01
120.00	0.2357	0.1454	0.1004	0.0126	6.71590E-01
150.00	0.2725	0.1232	0.0658	0.0036	6.13414E-01
200.00	0.3247	0.1065	0.0343	0.0006	5.58826E-01
300.00	0.3989	0.0961	0.0117	0.0000	5.03750E-01
500.00	0.4964	0.0922	0.0024	0.0000	4.51478E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1375	0.2826	0.2826	1.3655	2.02252E 00
50.00	0.1703	0.2611	0.2611	0.7469	1.41789E 00
80.00	0.2058	0.2312	0.2312	0.3898	1.05066E 00
100.00	0.2263	0.2148	0.2148	0.2706	9.22453E-01
120.00	0.2463	0.2015	0.2015	0.1913	8.34990E-01
150.00	0.2686	0.1856	0.1750	0.1295	7.45610E-01
200.00	0.3004	0.1647	0.1391	0.0742	6.53685E-01
300.00	0.3573	0.1373	0.0929	0.0276	5.57500E-01
500.00	0.4583	0.1118	0.0466	0.0048	4.73661E-01

CRC 20. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1370	0.3305	0.3305	2.7455	3.43165E 00
50.00	0.1690	0.3250	0.3250	1.5168	2.23608E 00
80.00	0.2022	0.3065	0.3065	0.8140	1.52012E 00
100.00	0.2202	0.2919	0.2919	0.5837	1.27488E 00
120.00	0.2366	0.2776	0.2776	0.4331	1.11030E 00
150.00	0.2582	0.2578	0.2542	0.2946	9.45677E-01
200.00	0.2869	0.2282	0.2131	0.1765	7.82311E-01
300.00	0.3369	0.1828	0.1525	0.0729	6.22201E-01
500.00	0.4303	0.1339	0.0843	0.0145	4.97732E-01

CRC 30. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1369	0.3506	0.3506	4.1252	4.84078E 00
50.00	0.1685	0.3547	0.3547	2.2862	3.05427E 00
80.00	0.2011	0.3463	0.3463	1.2378	1.98958E 00
100.00	0.2183	0.3359	0.3359	0.8958	1.62731E 00
120.00	0.2338	0.3242	0.3242	0.6731	1.38560E 00
150.00	0.2543	0.3057	0.3042	0.4629	1.14574E 00
200.00	0.2816	0.2749	0.2639	0.2825	9.10936E-01
300.00	0.3280	0.2213	0.1975	0.1227	6.86903E-01
500.00	0.4128	0.1555	0.1154	0.0280	5.21804E-01

CRC 50. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1367	0.3685	0.3685	6.8854	7.65904E 00
50.00	0.1682	0.3831	0.3831	3.8254	4.69064E 00
80.00	0.2002	0.3876	0.3876	2.0855	2.92850E 00
100.00	0.2169	0.3842	0.3842	1.5193	2.33216E 00
120.00	0.2315	0.3778	0.3778	1.1526	1.93621E 00
150.00	0.2510	0.3648	0.3645	0.8014	1.54588E 00
200.00	0.2771	0.3380	0.3307	0.4970	1.16819E 00
300.00	0.3201	0.2813	0.2637	0.2261	8.16307E-01
500.00	0.3942	0.1955	0.1654	0.0604	5.69946E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1499	0.2492	0.2492	3.5941	3.13672E 00
50.00	0.1832	0.2610	0.2610	2.3800	2.32428E 00
80.00	0.2173	0.2663	0.2663	1.5437	1.73972E 00
100.00	0.2351	0.2656	0.2656	1.2298	1.51121E 00
120.00	0.2507	0.2631	0.2631	1.0089	1.34606E 00
150.00	0.2711	0.2574	0.2574	0.7782	1.16861E 00
200.00	0.3005	0.2456	0.2456	0.5382	9.76669E-01
300.00	0.3511	0.2220	0.2220	0.2906	7.67635E-01
500.00	0.4264	0.1865	0.1690	0.1195	5.85923E-01

CRO 20. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1498	0.2708	0.2708	7.1956	5.76085E 00
50.00	0.1829	0.2918	0.2918	4.7702	4.14039E 00
80.00	0.2167	0.3087	0.3087	3.1023	2.97765E 00
100.00	0.2342	0.3144	0.3144	2.4776	2.52471E 00
120.00	0.2494	0.3175	0.3175	2.0387	2.19838E 00
150.00	0.2691	0.3187	0.3187	1.5817	1.84922E 00
200.00	0.2969	0.3151	0.3151	1.1083	1.47437E 00
300.00	0.3422	0.2982	0.2982	0.6266	1.07254E 00
500.00	0.4108	0.2581	0.2486	0.2723	7.35808E-01

CRO 30. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2789	0.2789	10.7956	8.38498E 00
50.00	0.1828	0.3038	0.3038	7.1598	5.95650E 00
80.00	0.2165	0.3262	0.3262	4.6605	4.21557E 00
100.00	0.2339	0.3353	0.3353	3.7255	3.53822E 00
120.00	0.2489	0.3416	0.3416	3.0683	3.05069E 00
150.00	0.2684	0.3470	0.3470	2.3850	2.52983E 00
200.00	0.2957	0.3494	0.3494	1.6786	1.97206E 00
300.00	0.3395	0.3411	0.3411	0.9614	1.37745E 00
500.00	0.4050	0.3063	0.2998	0.4280	8.85694E-01

CRO 50. EM 0.0750 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2858	0.2858	17.9964	1.36332E 01
50.00	0.1827	0.3142	0.3142	11.9407	9.58871E 00
80.00	0.2163	0.3417	0.3417	7.7777	6.69141E 00
100.00	0.2336	0.3543	0.3543	6.2201	5.56522E 00
120.00	0.2486	0.3638	0.3638	5.1274	4.75533E 00
150.00	0.2679	0.3740	0.3740	3.9911	3.89105E 00
200.00	0.2948	0.3837	0.3837	2.8181	2.96745E 00
300.00	0.3373	0.3874	0.3874	1.6310	1.98727E 00
500.00	0.4001	0.3665	0.3625	0.7414	1.18547E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1584	0.2106	0.2106	6.2639	4.11308E 00
50.00	0.1929	0.2312	0.2312	4.5649	3.22178E 00
80.00	0.2283	0.2495	0.2495	3.2655	2.51402E 00
100.00	0.2467	0.2570	0.2570	2.7386	2.21659E 00
120.00	0.2626	0.2624	0.2624	2.3496	1.99237E 00
150.00	0.2832	0.2675	0.2675	1.9246	1.74112E 00
200.00	0.3120	0.2709	0.2709	1.4566	1.45477E 00
300.00	0.3577	0.2680	0.2680	0.9371	1.12115E 00
500.00	0.4278	0.2492	0.2492	0.4835	8.08201E-01

CRC 20. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1584	0.2225	0.2225	12.5315	7.77917E 00
50.00	0.1928	0.2479	0.2479	9.1355	5.99846E 00
80.00	0.2281	0.2728	0.2728	6.5394	4.58571E 00
100.00	0.2464	0.2843	0.2843	5.4866	3.99268E 00
120.00	0.2622	0.2935	0.2935	4.7105	3.54603E 00
150.00	0.2826	0.3038	0.3038	3.8637	3.04618E 00
200.00	0.3110	0.3151	0.3151	2.9301	2.47775E 00
300.00	0.3556	0.3247	0.3247	1.8987	1.81863E 00
500.00	0.4216	0.3209	0.3209	1.0045	1.20736E 00

CRC 30. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1584	0.2267	0.2267	18.7990	1.14453E 01
50.00	0.1928	0.2541	0.2541	13.7061	8.77514E 00
80.00	0.2280	0.2816	0.2816	9.8133	6.65740E 00
100.00	0.2463	0.2949	0.2949	8.2335	5.76877E 00
120.00	0.2620	0.3056	0.3056	7.0718	5.09970E 00
150.00	0.2824	0.3183	0.3183	5.8019	4.35124E 00
200.00	0.3107	0.3335	0.3335	4.4039	3.50073E 00
300.00	0.3548	0.3500	0.3500	2.8603	2.51611E 00
500.00	0.4196	0.3571	0.3571	1.5250	1.60652E 00

CRC 50. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1584	0.2303	0.2303	31.3317	1.87774E 01
50.00	0.1927	0.2592	0.2592	22.8482	1.43285E 01
80.00	0.2280	0.2890	0.2890	16.3625	1.08008E 01
100.00	0.2462	0.3038	0.3038	13.7313	9.32096E 00
120.00	0.2619	0.3161	0.3161	11.7941	8.20703E 00
150.00	0.2822	0.3311	0.3311	9.6783	6.96136E 00
200.00	0.3104	0.3499	0.3499	7.3513	5.54670E 00
300.00	0.3543	0.3735	0.3735	4.7833	3.91107E 00
500.00	0.4181	0.3936	0.3936	2.5652	2.40484E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1140	0.2135	0.2135	0.1902	9.23666E-01
50.00	0.1516	0.1122	0.1122	0.0510	7.06887E-01
80.00	0.2657	0.0762	0.0621	0.0012	6.18206E-01
100.00	0.2897	0.0761	0.0388	0.0005	5.91474E-01
120.00	0.3084	0.0775	0.0258	0.0003	5.73065E-01
150.00	0.3313	0.0801	0.0152	0.0001	5.52771E-01
200.00	0.3629	0.0838	0.0073	0.0000	5.28093E-01
300.00	0.4154	0.0880	0.0024	0.0000	4.93557E-01
500.00	0.5004	0.0906	0.0005	0.0000	4.49701E-01

CRO 20. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1130	0.3144	0.3144	0.3895	1.23696E 00
50.00	0.1458	0.1828	0.1828	0.1177	8.16654E-01
80.00	0.1999	0.1019	0.1019	0.0193	6.57285E-01
100.00	0.2694	0.0898	0.0738	0.0020	6.14703E-01
120.00	0.2934	0.0866	0.0500	0.0008	5.87982E-01
150.00	0.3216	0.0855	0.0299	0.0003	5.61232E-01
200.00	0.3577	0.0865	0.0146	0.0001	5.31984E-01
300.00	0.4135	0.0890	0.0048	0.0000	4.94735E-01
500.00	0.4999	0.0908	0.0010	0.0000	4.49916E-01

CRO 30. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1126	0.3745	0.3745	0.5888	1.55025E 00
50.00	0.1441	0.2369	0.2369	0.1839	9.26422E-01
80.00	0.1855	0.1323	0.1323	0.0433	6.96363E-01
100.00	0.2511	0.1045	0.1045	0.0053	6.37931E-01
120.00	0.2801	0.0963	0.0725	0.0019	6.02898E-01
150.00	0.3124	0.0912	0.0440	0.0006	5.69692E-01
200.00	0.3526	0.0893	0.0217	0.0001	5.35876E-01
300.00	0.4115	0.0899	0.0071	0.0000	4.95914E-01
500.00	0.4995	0.0910	0.0014	0.0000	4.50132E-01

CRO 50. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1124	0.4429	0.4429	0.9868	2.17683E 00
50.00	0.1428	0.3142	0.3142	0.3161	1.14596E 00
80.00	0.1777	0.1861	0.1861	0.0884	7.74520E-01
100.00	0.2047	0.1401	0.1401	0.0357	6.84389E-01
120.00	0.2584	0.1167	0.1123	0.0064	6.32731E-01
150.00	0.2958	0.1030	0.0706	0.0017	5.86613E-01
200.00	0.3427	0.0949	0.0355	0.0003	5.43658E-01
300.00	0.4077	0.0917	0.0118	0.0000	4.98270E-01
500.00	0.4985	0.0914	0.0024	0.0000	4.50563E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1367	0.3038	0.3038	1.8909	1.85613E 00
50.00	0.1680	0.2837	0.2837	1.0329	1.26330E 00
80.00	0.1998	0.2477	0.2477	0.5508	9.11786E-01
100.00	0.2163	0.2244	0.2244	0.3961	7.92929E-01
120.00	0.2307	0.2029	0.2029	0.2972	7.14012E-01
150.00	0.2498	0.1751	0.1751	0.2034	6.36130E-01
200.00	0.2782	0.1392	0.1392	0.1173	5.60409E-01
300.00	0.3350	0.0962	0.0962	0.0419	4.88372E-01
500.00	0.5414	0.0769	0.0544	0.0013	4.33113E-01

CRC 20. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1366	0.3451	0.3451	3.7841	3.26526E 00
50.00	0.1679	0.3436	0.3436	2.0698	2.08148E 00
80.00	0.1993	0.3251	0.3251	1.1075	1.38125E 00
100.00	0.2155	0.3079	0.3079	0.7994	1.14536E 00
120.00	0.2295	0.2893	0.2893	0.6027	9.89318E-01
150.00	0.2478	0.2612	0.2612	0.4168	8.36197E-01
200.00	0.2739	0.2183	0.2183	0.2475	6.89035E-01
300.00	0.3193	0.1549	0.1549	0.1032	5.53073E-01
500.00	0.4598	0.0968	0.0968	0.0095	4.57184E-01

CRC 30. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1366	0.3615	0.3615	5.6774	4.67439E 00
50.00	0.1678	0.3696	0.3696	3.1067	2.89967E 00
80.00	0.1992	0.3632	0.3632	1.6643	1.85071E 00
100.00	0.2153	0.3523	0.3523	1.2024	1.49778E 00
120.00	0.2291	0.3380	0.3380	0.9083	1.26462E 00
150.00	0.2472	0.3140	0.3140	0.6301	1.03626E 00
200.00	0.2726	0.2726	0.2726	0.3774	8.17660E-01
300.00	0.3149	0.2019	0.2019	0.1638	6.17775E-01
500.00	0.4043	0.1219	0.1219	0.0332	4.81256E-01

CRC 50. EM 0.0500 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1366	0.3757	0.3757	9.4643	7.49265E 00
50.00	0.1678	0.3936	0.3936	5.1801	4.53605E 00
80.00	0.1990	0.4010	0.4010	2.7775	2.78963E 00
100.00	0.2151	0.3981	0.3981	2.0095	2.20264E 00
120.00	0.2288	0.3911	0.3911	1.5193	1.81523E 00
150.00	0.2467	0.3757	0.3757	1.0566	1.43640E 00
200.00	0.2715	0.3423	0.3423	0.6373	1.07491E 00
300.00	0.3116	0.2717	0.2717	0.2844	7.47179E-01
500.00	0.3820	0.1691	0.1691	0.0753	5.29398E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2604	0.2604	5.0352	2.99062E 00
50.00	0.1827	0.2760	0.2760	3.3172	2.18204E 00
80.00	0.2162	0.2850	0.2850	2.1394	1.60302E 00
100.00	0.2335	0.2857	0.2857	1.7003	1.37805E 00
120.00	0.2484	0.2838	0.2838	1.3932	1.21632E 00
150.00	0.2676	0.2780	0.2780	1.0750	1.04379E 00
200.00	0.2943	0.2638	0.2638	0.7488	8.59528E-01
300.00	0.3364	0.2302	0.2302	0.4234	6.64098E-01
500.00	0.4000	0.1704	0.1704	0.1808	5.03989E-01

CRO 20. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2774	0.2774	10.0704	5.61474E 00
50.00	0.1826	0.3011	0.3011	6.6358	3.99814E 00
80.00	0.2161	0.3213	0.3213	4.2816	2.84094E 00
100.00	0.2334	0.3288	0.3288	3.4036	2.39155E 00
120.00	0.2482	0.3332	0.3332	2.7894	2.06864E 00
150.00	0.2674	0.3357	0.3357	2.1543	1.72440E 00
200.00	0.2939	0.3327	0.3327	1.5031	1.35722E 00
300.00	0.3353	0.3127	0.3127	0.8542	9.69007E-01
500.00	0.3962	0.2564	0.2564	0.3732	6.53874E-01

CRO 30. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2836	0.2836	15.1056	8.23887E 00
50.00	0.1826	0.3105	0.3105	9.9557	5.81425E 00
80.00	0.2161	0.3355	0.3355	6.4237	4.07887E 00
100.00	0.2334	0.3462	0.3462	5.1066	3.40505E 00
120.00	0.2482	0.3537	0.3537	4.1860	2.92095E 00
150.00	0.2673	0.3607	0.3607	3.2336	2.40501E 00
200.00	0.2938	0.3647	0.3647	2.2567	1.85492E 00
300.00	0.3349	0.3556	0.3556	1.2854	1.27392E 00
500.00	0.3949	0.3103	0.3103	0.5656	8.03760E-01

CRO 50. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1497	0.2886	0.2886	25.1811	1.34871E 01
50.00	0.1826	0.3185	0.3185	16.5929	9.44646E 00
80.00	0.2161	0.3478	0.3478	10.7085	6.55471E 00
100.00	0.2333	0.3615	0.3615	8.5147	5.43206E 00
120.00	0.2481	0.3721	0.3721	6.9798	4.62559E 00
150.00	0.2672	0.3836	0.3836	5.3917	3.76623E 00
200.00	0.2936	0.3950	0.3950	3.7662	2.85031E 00
300.00	0.3346	0.3999	0.3999	2.1472	1.88374E 00
500.00	0.3939	0.3742	0.3742	0.9501	1.10353E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM CYLINDERS (H/D 2) 3 2 1 0 200

CRO 10. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1583	0.2171	0.2171	8.8157	3.98385E 00
50.00	0.1927	0.2400	0.2400	6.4056	3.09421E 00
80.00	0.2280	0.2613	0.2613	4.5636	2.38888E 00
100.00	0.2462	0.2705	0.2705	3.8176	2.09304E 00
120.00	0.2619	0.2773	0.2773	3.2681	1.87038E 00
150.00	0.2821	0.2840	0.2840	2.6697	1.62143E 00
200.00	0.3102	0.2895	0.2895	2.0121	1.33878E 00
300.00	0.3540	0.2880	0.2880	1.2901	1.01214E 00
500.00	0.4174	0.2648	0.2648	0.6745	7.11578E-01

CRC 20. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1583	0.2261	0.2261	17.6313	7.64994E 00
50.00	0.1927	0.2530	0.2530	12.8112	5.87089E 00
80.00	0.2279	0.2797	0.2797	9.1292	4.46057E 00
100.00	0.2461	0.2925	0.2925	7.6369	3.86913E 00
120.00	0.2618	0.3027	0.3027	6.5390	3.42405E 00
150.00	0.2820	0.3144	0.3144	5.3418	2.92649E 00
200.00	0.3101	0.3277	0.3277	4.0277	2.36176E 00
300.00	0.3537	0.3402	0.3402	2.5849	1.70962E 00
500.00	0.4166	0.3374	0.3374	1.3558	1.11074E 00

CRC 30. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1583	0.2293	0.2293	26.4470	1.13160E 01
50.00	0.1927	0.2577	0.2577	19.2168	8.64756E 00
80.00	0.2279	0.2865	0.2865	13.6938	6.53226E 00
100.00	0.2461	0.3007	0.3007	11.4553	5.64522E 00
120.00	0.2618	0.3123	0.3123	9.8084	4.97771E 00
150.00	0.2820	0.3262	0.3262	8.0127	4.23155E 00
200.00	0.3100	0.3429	0.3429	6.0429	3.38474E 00
300.00	0.3536	0.3622	0.3622	3.8791	2.40710E 00
500.00	0.4163	0.3717	0.3717	2.0365	1.50990E 00

CRC 50. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1583	0.2319	0.2319	44.0783	1.86482E 01
50.00	0.1927	0.2613	0.2613	32.0346	1.42009E 01
80.00	0.2279	0.2922	0.2922	22.8230	1.06756E 01
100.00	0.2461	0.3076	0.3076	19.0922	9.19740E 00
120.00	0.2618	0.3203	0.3203	16.3510	8.08504E 00
150.00	0.2820	0.3361	0.3361	13.3574	6.84167E 00
200.00	0.3100	0.3561	0.3561	10.0737	5.43071E 00
300.00	0.3535	0.3819	0.3819	6.4681	3.80206E 00
500.00	0.4161	0.4046	0.4046	3.3988	2.30822E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1660	0.2001	0.1445	0.0280	8.24706E-01
50.00	0.2324	0.1480	0.0675	0.0031	6.63607E-01
80.00	0.3053	0.1268	0.0275	0.0002	5.75953E-01
100.00	0.3413	0.1217	0.0170	0.0001	5.44568E-01
120.00	0.3715	0.1190	0.0112	0.0000	5.21935E-01
150.00	0.4098	0.1168	0.0065	0.0000	4.96919E-01
200.00	0.4623	0.1152	0.0031	0.0000	4.67842E-01
300.00	0.5445	0.1143	0.0010	0.0000	4.31101E-01
500.00	0.6661	0.1140	0.0002	0.0000	3.89765E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1521	0.2676	0.2304	0.0807	9.61805E-01
50.00	0.2105	0.1793	0.1214	0.0119	7.10143E-01
80.00	0.2897	0.1383	0.0533	0.0008	5.91928E-01
100.00	0.3301	0.1286	0.0334	0.0002	5.53871E-01
120.00	0.3633	0.1234	0.0222	0.0001	5.27802E-01
150.00	0.4045	0.1193	0.0130	0.0000	5.00170E-01
200.00	0.4595	0.1164	0.0062	0.0000	4.69291E-01
300.00	0.5435	0.1147	0.0019	0.0000	4.31519E-01
500.00	0.6659	0.1141	0.0004	0.0000	3.89837E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1466	0.3205	0.2914	0.1390	1.09890E 00
50.00	0.1975	0.2096	0.1644	0.0260	7.56679E-01
80.00	0.2758	0.1502	0.0772	0.0019	6.07904E-01
100.00	0.3195	0.1357	0.0492	0.0004	5.63174E-01
120.00	0.3555	0.1280	0.0329	0.0001	5.33669E-01
150.00	0.3993	0.1219	0.0194	0.0000	5.03421E-01
200.00	0.4567	0.1176	0.0092	0.0000	4.70740E-01
300.00	0.5424	0.1150	0.0029	0.0000	4.31938E-01
500.00	0.6657	0.1142	0.0006	0.0000	3.89909E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1420	0.3960	0.3750	0.2591	1.37310E 00
50.00	0.1847	0.2637	0.2311	0.0616	8.49750E-01
80.00	0.2537	0.1745	0.1197	0.0063	6.39854E-01
100.00	0.3004	0.1501	0.0789	0.0013	5.81780E-01
120.00	0.3406	0.1372	0.0535	0.0003	5.45404E-01
150.00	0.3892	0.1271	0.0318	0.0001	5.09924E-01
200.00	0.4511	0.1200	0.0153	0.0000	4.73637E-01
300.00	0.5403	0.1158	0.0048	0.0000	4.32776E-01
500.00	0.6651	0.1143	0.0009	0.0000	3.90053E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRC 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1772	0.3157	0.3019	0.5633	1.44660E 00
50.00	0.2138	0.2861	0.2572	0.3014	1.04639E 00
80.00	0.2550	0.2471	0.2071	0.1475	7.99128E-01
100.00	0.2788	0.2260	0.1814	0.0978	7.11735E-01
120.00	0.3012	0.2086	0.1602	0.0665	6.51773E-01
150.00	0.3336	0.1880	0.1342	0.0382	5.90220E-01
200.00	0.3861	0.1646	0.1017	0.0156	5.26631E-01
300.00	0.4839	0.1403	0.0605	0.0029	4.59618E-01
500.00	0.6335	0.1240	0.0252	0.0002	3.99817E-01

CRC 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1735	0.3827	0.3750	1.1739	2.23996E 00
50.00	0.2084	0.3631	0.3448	0.6429	1.48852E 00
80.00	0.2459	0.3257	0.2986	0.3305	1.04194E 00
100.00	0.2666	0.3013	0.2705	0.2286	8.89942E-01
120.00	0.2855	0.2788	0.2451	0.1635	7.88342E-01
150.00	0.3122	0.2497	0.2123	0.1024	6.87094E-01
200.00	0.3549	0.2123	0.1688	0.0488	5.86938E-01
300.00	0.4422	0.1677	0.1094	0.0110	4.88559E-01
500.00	0.6036	0.1344	0.0488	0.0006	4.09941E-01

CRC 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1722	0.4148	0.4095	1.7862	3.03332E 00
50.00	0.2064	0.4051	0.3916	0.9866	1.93065E 00
80.00	0.2425	0.3750	0.3541	0.5165	1.28475E 00
100.00	0.2620	0.3521	0.3280	0.3629	1.06815E 00
120.00	0.2796	0.3294	0.3027	0.2644	9.24911E-01
150.00	0.3037	0.2977	0.2679	0.1715	7.83969E-01
200.00	0.3412	0.2535	0.2189	0.0884	6.47244E-01
300.00	0.4168	0.1945	0.1488	0.0241	5.17500E-01
500.00	0.5767	0.1450	0.0710	0.0015	4.20065E-01

CRC 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1711	0.4461	0.4428	3.0114	4.62004E 00
50.00	0.2048	0.4498	0.4409	1.6746	2.81490E 00
80.00	0.2397	0.4336	0.4191	0.8899	1.77037E 00
100.00	0.2582	0.4162	0.3990	0.6337	1.42456E 00
120.00	0.2746	0.3967	0.3774	0.4689	1.19805E 00
150.00	0.2965	0.3662	0.3443	0.3132	9.77717E-01
200.00	0.3294	0.3181	0.2924	0.1724	7.67858E-01
300.00	0.3913	0.2432	0.2101	0.0578	5.75381E-01
500.00	0.5328	0.1668	0.1107	0.0051	4.40313E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1938	0.3077	0.3077	1.6355	2.26906E 00
50.00	0.2328	0.3153	0.3127	1.0398	1.67850E 00
80.00	0.2710	0.3133	0.2986	0.6730	1.26122E 00
100.00	0.2912	0.3078	0.2876	0.5316	1.10019E 00
120.00	0.3091	0.3008	0.2762	0.4311	9.84594E-01
150.00	0.3328	0.2890	0.2595	0.3259	8.61140E-01
200.00	0.3674	0.2688	0.2336	0.2167	7.28481E-01
300.00	0.4269	0.2328	0.1904	0.1079	5.85085E-01
500.00	0.5337	0.1844	0.1307	0.0316	4.61468E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1918	0.3463	0.3463	3.3231	3.94204E 00
50.00	0.2292	0.3649	0.3641	2.1326	2.78917E 00
80.00	0.2666	0.3746	0.3662	1.3909	1.98626E 00
100.00	0.2861	0.3747	0.3626	1.1058	1.68087E 00
120.00	0.3031	0.3721	0.3569	0.9031	1.46394E 00
150.00	0.3255	0.3648	0.3459	0.6911	1.23506E 00
200.00	0.3572	0.3481	0.3248	0.4711	9.93527E-01
300.00	0.4096	0.3102	0.2810	0.2504	7.40230E-01
500.00	0.4972	0.2449	0.2080	0.0885	5.33310E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1911	0.3620	0.3620	5.0102	5.61501E 00
50.00	0.2280	0.3863	0.3859	3.2273	3.89984E 00
80.00	0.2650	0.4033	0.3974	2.1103	2.71129E 00
100.00	0.2843	0.4075	0.3988	1.6811	2.26156E 00
120.00	0.3010	0.4084	0.3973	1.3768	1.94329E 00
150.00	0.3228	0.4056	0.3916	1.0581	1.60899E 00
200.00	0.3535	0.3943	0.3766	0.7280	1.25857E 00
300.00	0.4032	0.3614	0.3386	0.3962	8.95375E-01
500.00	0.4829	0.2928	0.2635	0.1508	6.05152E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1906	0.3758	0.3758	8.3835	8.96097E 00
50.00	0.2270	0.4059	0.4058	5.4165	6.12118E 00
80.00	0.2637	0.4306	0.4269	3.5505	4.16136E 00
100.00	0.2828	0.4396	0.4340	2.8338	3.42292E 00
120.00	0.2993	0.4450	0.4378	2.3258	2.90199E 00
150.00	0.3207	0.4485	0.4392	1.7935	2.35684E 00
200.00	0.3505	0.4460	0.4339	1.2430	1.78866E 00
300.00	0.3979	0.4248	0.4087	0.6894	1.20567E 00
500.00	0.4708	0.3622	0.3406	0.2789	7.48836E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2061	0.2782	0.2782	3.0842	3.06617E 00
50.00	0.2457	0.2982	0.2982	2.1566	2.36203E 00
80.00	0.2880	0.3133	0.3133	1.4743	1.82017E 00
100.00	0.3096	0.3186	0.3163	1.2207	1.59796E 00
120.00	0.3275	0.3214	0.3150	1.0474	1.43281E 00
150.00	0.3509	0.3225	0.3110	0.8554	1.25030E 00
200.00	0.3837	0.3192	0.3012	0.6409	1.04566E 00
300.00	0.4367	0.3045	0.2778	0.4003	8.11930E-01
500.00	0.5191	0.2679	0.2320	0.1920	5.97428E-01

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2052	0.3021	0.3021	6.2005	5.59048E 00
50.00	0.2439	0.3296	0.3296	4.3597	4.19890E 00
80.00	0.2845	0.3537	0.3537	3.0111	3.13519E 00
100.00	0.3055	0.3638	0.3631	2.4945	2.70195E 00
120.00	0.3232	0.3710	0.3677	2.1450	2.38159E 00
150.00	0.3461	0.3778	0.3714	1.7575	2.02966E 00
200.00	0.3779	0.3824	0.3718	1.3251	1.63864E 00
300.00	0.4283	0.3782	0.3614	0.8414	1.19893E 00
500.00	0.5039	0.3493	0.3253	0.4221	8.06504E-01

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2048	0.3110	0.3110	9.3188	8.11480E 00
50.00	0.2433	0.3421	0.3421	6.5615	6.03577E 00
80.00	0.2833	0.3703	0.3703	4.5476	4.45021E 00
100.00	0.3041	0.3829	0.3825	3.7698	3.80594E 00
120.00	0.3217	0.3924	0.3903	3.2433	3.33037E 00
150.00	0.3444	0.4025	0.3981	2.6607	2.80902E 00
200.00	0.3759	0.4122	0.4046	2.0104	2.23161E 00
300.00	0.4254	0.4162	0.4039	1.2837	1.58593E 00
500.00	0.4984	0.3975	0.3792	0.6547	1.01558E 00

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2046	0.3187	0.3187	15.5514	1.31634E 01
50.00	0.2428	0.3527	0.3527	10.9674	9.70950E 00
80.00	0.2824	0.3849	0.3849	7.6208	7.08025E 00
100.00	0.3030	0.4000	0.3999	6.3209	6.01393E 00
120.00	0.3205	0.4120	0.4107	5.4410	5.22793E 00
150.00	0.3430	0.4255	0.4228	4.4680	4.36773E 00
200.00	0.3742	0.4407	0.4359	3.3825	3.41756E 00
300.00	0.4230	0.4548	0.4467	2.1700	2.35994E 00
500.00	0.4939	0.4520	0.4395	1.1211	1.43373E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1711	0.1886	0.1510	0.0242	8.05256E-01
50.00	0.2362	0.1440	0.0684	0.0027	6.57736E-01
80.00	0.3066	0.1259	0.0276	0.0002	5.74738E-01
100.00	0.3419	0.1214	0.0170	0.0001	5.44103E-01
120.00	0.3718	0.1188	0.0112	0.0000	5.21748E-01
150.00	0.4099	0.1168	0.0065	0.0000	4.96868E-01
200.00	0.4623	0.1152	0.0031	0.0000	4.67835E-01
300.00	0.5445	0.1143	0.0010	0.0000	4.31101E-01
500.00	0.6661	0.1140	0.0002	0.0000	3.89765E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1546	0.2580	0.2388	0.0757	9.42355E-01
50.00	0.2131	0.1753	0.1231	0.0111	7.04272E-01
80.00	0.2908	0.1374	0.0534	0.0008	5.90713E-01
100.00	0.3306	0.1283	0.0335	0.0002	5.53406E-01
120.00	0.3636	0.1233	0.0222	0.0001	5.27615E-01
150.00	0.4046	0.1193	0.0130	0.0000	5.00119E-01
200.00	0.4595	0.1164	0.0062	0.0000	4.69284E-01
300.00	0.5435	0.1147	0.0019	0.0000	4.31519E-01
500.00	0.6659	0.1141	0.0004	0.0000	3.89837E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1482	0.3126	0.3000	0.1337	1.07945E 00
50.00	0.1993	0.2058	0.1668	0.0247	7.50808E-01
80.00	0.2768	0.1493	0.0774	0.0018	6.06688E-01
100.00	0.3200	0.1353	0.0493	0.0004	5.62708E-01
120.00	0.3557	0.1278	0.0329	0.0001	5.33482E-01
150.00	0.3994	0.1219	0.0194	0.0000	5.03370E-01
200.00	0.4567	0.1176	0.0092	0.0000	4.70733E-01
300.00	0.5424	0.1150	0.0029	0.0000	4.31938E-01
500.00	0.6657	0.1142	0.0006	0.0000	3.89909E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1428	0.3905	0.3831	0.2537	1.35365E 00
50.00	0.1857	0.2603	0.2339	0.0600	8.43880E-01
80.00	0.2545	0.1736	0.1201	0.0061	6.38639E-01
100.00	0.3009	0.1498	0.0790	0.0013	5.81314E-01
120.00	0.3408	0.1370	0.0535	0.0003	5.45217E-01
150.00	0.3893	0.1271	0.0318	0.0001	5.09873E-01
200.00	0.4511	0.1200	0.0153	0.0000	4.73631E-01
300.00	0.5403	0.1158	0.0048	0.0000	4.32776E-01
500.00	0.6651	0.1143	0.0009	0.0000	3.90053E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1738	0.3075	0.3075	0.6446	1.37047E 00
50.00	0.2137	0.2699	0.2699	0.3132	9.95684E-01
80.00	0.2623	0.2312	0.2246	0.1344	7.69239E-01
100.00	0.2862	0.2125	0.1941	0.0887	6.89997E-01
120.00	0.3086	0.1974	0.1693	0.0602	6.35653E-01
150.00	0.3407	0.1798	0.1397	0.0346	5.79630E-01
200.00	0.3922	0.1597	0.1039	0.0142	5.21068E-01
300.00	0.4873	0.1386	0.0609	0.0027	4.57855E-01
500.00	0.6342	0.1238	0.0252	0.0002	3.99577E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1716	0.3801	0.3801	1.3242	2.16383E 00
50.00	0.2077	0.3548	0.3548	0.6760	1.43781E 00
80.00	0.2493	0.3149	0.3149	0.3170	1.01205E 00
100.00	0.2702	0.2914	0.2835	0.2185	8.68204E-01
120.00	0.2891	0.2702	0.2552	0.1560	7.72221E-01
150.00	0.3157	0.2428	0.2190	0.0977	6.76504E-01
200.00	0.3582	0.2078	0.1721	0.0467	5.81375E-01
300.00	0.4447	0.1660	0.1102	0.0106	4.86796E-01
500.00	0.6042	0.1341	0.0489	0.0006	4.09701E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1709	0.4138	0.4138	2.0035	2.95719E 00
50.00	0.2058	0.4000	0.4000	1.0377	1.87994E 00
80.00	0.2442	0.3674	0.3674	0.5079	1.25486E 00
100.00	0.2644	0.3448	0.3402	0.3525	1.04641E 00
120.00	0.2819	0.3227	0.3124	0.2568	9.08790E-01
150.00	0.3060	0.2920	0.2747	0.1666	7.73378E-01
200.00	0.3433	0.2495	0.2225	0.0860	6.41682E-01
300.00	0.4185	0.1928	0.1498	0.0235	5.15736E-01
500.00	0.5773	0.1447	0.0711	0.0015	4.19825E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1703	0.4460	0.4460	3.3620	4.54390E 00
50.00	0.2043	0.4471	0.4471	1.7607	2.76419E 00
80.00	0.2405	0.4290	0.4290	0.8879	1.74048E 00
100.00	0.2596	0.4115	0.4092	0.6232	1.40283E 00
120.00	0.2759	0.3922	0.3859	0.4613	1.18193E 00
150.00	0.2978	0.3622	0.3506	0.3081	9.67127E-01
200.00	0.3306	0.3151	0.2962	0.1698	7.62296E-01
300.00	0.3922	0.2417	0.2113	0.0571	5.73618E-01
500.00	0.5334	0.1666	0.1108	0.0051	4.40073E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1910	0.3119	0.3119	2.0062	2.16961E 00
50.00	0.2280	0.3143	0.3143	1.2522	1.59681E 00
80.00	0.2674	0.3056	0.3056	0.7588	1.19808E 00
100.00	0.2887	0.2969	0.2969	0.5803	1.04618E 00
120.00	0.3079	0.2877	0.2877	0.4569	9.37979E-01
150.00	0.3345	0.2740	0.2740	0.3301	8.23278E-01
200.00	0.3764	0.2537	0.2532	0.2010	7.01004E-01
300.00	0.4359	0.2212	0.2018	0.0996	5.69611E-01
500.00	0.5418	0.1786	0.1343	0.0292	4.55698E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1904	0.3498	0.3498	4.0311	3.84259E 00
50.00	0.2267	0.3660	0.3660	2.5309	2.70748E 00
80.00	0.2645	0.3720	0.3720	1.5532	1.92312E 00
100.00	0.2845	0.3701	0.3701	1.2016	1.62686E 00
120.00	0.3021	0.3658	0.3658	0.9597	1.41733E 00
150.00	0.3254	0.3567	0.3567	0.7138	1.19720E 00
200.00	0.3598	0.3388	0.3388	0.4651	9.66050E-01
300.00	0.4140	0.3020	0.2925	0.2412	7.24756E-01
500.00	0.5012	0.2399	0.2125	0.0854	5.27540E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1902	0.3647	0.3647	6.0560	5.51557E 00
50.00	0.2263	0.3876	0.3876	3.8101	3.81815E 00
80.00	0.2636	0.4020	0.4020	2.3477	2.64815E 00
100.00	0.2831	0.4049	0.4049	1.8224	2.20755E 00
120.00	0.3002	0.4046	0.4046	1.4624	1.89668E 00
150.00	0.3226	0.4004	0.4004	1.0963	1.57113E 00
200.00	0.3549	0.3880	0.3880	0.7281	1.23110E 00
300.00	0.4061	0.3554	0.3492	0.3867	8.79902E-01
500.00	0.4854	0.2887	0.2681	0.1475	5.99382E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1901	0.3775	0.3775	10.1067	8.86152E 00
50.00	0.2259	0.4070	0.4070	6.3674	6.03948E 00
80.00	0.2629	0.4303	0.4303	3.9356	4.09822E 00
100.00	0.2821	0.4385	0.4385	3.0637	3.36891E 00
120.00	0.2987	0.4432	0.4432	2.4662	2.85537E 00
150.00	0.3204	0.4457	0.4457	1.8607	2.31898E 00
200.00	0.3511	0.4423	0.4423	1.2530	1.76119E 00
300.00	0.3996	0.4211	0.4175	0.6798	1.19019E 00
500.00	0.4723	0.3593	0.3451	0.2754	7.43066E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2048	0.2837	0.2837	3.8381	2.96304E 00
50.00	0.2432	0.3027	0.3027	2.6536	2.27010E 00
80.00	0.2832	0.3152	0.3152	1.7982	1.74115E 00
100.00	0.3042	0.3181	0.3181	1.4663	1.52590E 00
120.00	0.3224	0.3187	0.3187	1.2276	1.36676E 00
150.00	0.3464	0.3170	0.3170	0.9732	1.19192E 00
200.00	0.3806	0.3101	0.3101	0.7013	9.97435E-01
300.00	0.4375	0.2911	0.2911	0.4109	7.77767E-01
500.00	0.5295	0.2550	0.2479	0.1796	5.78653E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2045	0.3054	0.3054	7.6877	5.48736E 00
50.00	0.2426	0.3329	0.3329	5.3237	4.10697E 00
80.00	0.2822	0.3559	0.3559	3.6193	3.05617E 00
100.00	0.3027	0.3650	0.3650	2.9582	2.62989E 00
120.00	0.3205	0.3710	0.3710	2.4845	2.31554E 00
150.00	0.3436	0.3762	0.3762	1.9804	1.97128E 00
200.00	0.3760	0.3787	0.3787	1.4429	1.59041E 00
300.00	0.4280	0.3715	0.3715	0.8735	1.16477E 00
500.00	0.5090	0.3412	0.3396	0.4090	7.87729E-01

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2044	0.3135	0.3135	11.5365	8.01167E 00
50.00	0.2425	0.3445	0.3445	7.9927	5.94383E 00
80.00	0.2818	0.3722	0.3722	5.4400	4.37119E 00
100.00	0.3022	0.3841	0.3841	4.4506	3.73388E 00
120.00	0.3198	0.3929	0.3929	3.7413	3.26432E 00
150.00	0.3427	0.4020	0.4020	2.9872	2.75063E 00
200.00	0.3745	0.4101	0.4101	2.1843	2.18339E 00
300.00	0.4250	0.4120	0.4120	1.3351	1.55177E 00
500.00	0.5018	0.3919	0.3917	0.6411	9.96806E-01

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2044	0.3202	0.3202	19.2358	1.30603E 01
50.00	0.2423	0.3544	0.3544	13.3329	9.61757E 00
80.00	0.2815	0.3863	0.3863	9.0831	7.00123E 00
100.00	0.3018	0.4010	0.4010	7.4363	5.94187E 00
120.00	0.3193	0.4125	0.4125	6.2556	5.16189E 00
150.00	0.3420	0.4255	0.4255	5.0007	4.30935E 00
200.00	0.3734	0.4399	0.4399	3.6663	3.36934E 00
300.00	0.4227	0.4526	0.4526	2.2583	2.32577E 00
500.00	0.4957	0.4487	0.4487	1.1106	1.41496E 00

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1498	0.1533	0.1533	0.0487	7.11981E-01
50.00	0.2832	0.1061	0.0772	0.0006	5.98367E-01
80.00	0.3456	0.1030	0.0295	0.0001	5.41176E-01
100.00	0.3742	0.1044	0.0179	0.0000	5.20098E-01
120.00	0.3982	0.1059	0.0116	0.0000	5.04137E-01
150.00	0.4295	0.1080	0.0067	0.0000	4.85397E-01
200.00	0.4744	0.1103	0.0031	0.0000	4.61824E-01
300.00	0.5494	0.1126	0.0010	0.0000	4.29169E-01
500.00	0.6671	0.1138	0.0002	0.0000	3.89491E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1413	0.2412	0.2412	0.1207	8.49080E-01
50.00	0.2184	0.1360	0.1360	0.0098	6.44903E-01
80.00	0.3262	0.1136	0.0571	0.0002	5.57151E-01
100.00	0.3611	0.1108	0.0351	0.0001	5.29401E-01
120.00	0.3891	0.1101	0.0230	0.0000	5.10004E-01
150.00	0.4238	0.1104	0.0133	0.0000	4.88648E-01
200.00	0.4715	0.1115	0.0063	0.0000	4.63273E-01
300.00	0.5483	0.1129	0.0019	0.0000	4.29588E-01
500.00	0.6668	0.1139	0.0004	0.0000	3.89563E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1390	0.3053	0.3053	0.1918	9.86180E-01
50.00	0.1876	0.1729	0.1729	0.0364	6.91439E-01
80.00	0.3088	0.1247	0.0831	0.0006	5.73127E-01
100.00	0.3489	0.1174	0.0517	0.0002	5.38704E-01
120.00	0.3803	0.1144	0.0341	0.0000	5.15871E-01
150.00	0.4182	0.1129	0.0198	0.0000	4.91899E-01
200.00	0.4686	0.1127	0.0094	0.0000	4.64722E-01
300.00	0.5473	0.1133	0.0029	0.0000	4.30007E-01
500.00	0.6666	0.1139	0.0006	0.0000	3.89635E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1373	0.3919	0.3919	0.3332	1.26038E 00
50.00	0.1759	0.2379	0.2379	0.0834	7.84511E-01
80.00	0.2793	0.1480	0.1296	0.0028	6.05077E-01
100.00	0.3264	0.1312	0.0830	0.0005	5.57309E-01
120.00	0.3637	0.1233	0.0555	0.0001	5.27606E-01
150.00	0.4074	0.1180	0.0326	0.0000	4.98402E-01
200.00	0.4628	0.1150	0.0155	0.0000	4.67620E-01
300.00	0.5452	0.1141	0.0049	0.0000	4.30844E-01
500.00	0.6661	0.1140	0.0009	0.0000	3.89779E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1702	0.3288	0.3288	0.8849	1.23208E 00
50.00	0.2043	0.2824	0.2824	0.4499	8.75360E-01
80.00	0.2410	0.2240	0.2240	0.2181	6.68940E-01
100.00	0.2615	0.1939	0.1939	0.1465	6.00111E-01
120.00	0.2811	0.1699	0.1699	0.1013	5.54552E-01
150.00	0.3116	0.1428	0.1428	0.0585	5.09432E-01
200.00	0.3856	0.1151	0.1151	0.0168	4.64767E-01
300.00	0.5756	0.1044	0.0684	0.0006	4.19706E-01
500.00	0.7020	0.1045	0.0266	0.0001	3.79700E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1698	0.3982	0.3982	1.7782	2.02544E 00
50.00	0.2033	0.3714	0.3714	0.9117	1.31749E 00
80.00	0.2381	0.3212	0.3212	0.4524	9.11750E-01
100.00	0.2567	0.2889	0.2889	0.3118	7.78318E-01
120.00	0.2735	0.2597	0.2597	0.2240	6.91121E-01
150.00	0.2969	0.2225	0.2225	0.1426	6.06306E-01
200.00	0.3362	0.1763	0.1763	0.0694	5.25074E-01
300.00	0.5092	0.1298	0.1257	0.0038	4.48646E-01
500.00	0.6664	0.1141	0.0517	0.0002	3.89824E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1697	0.4286	0.4286	2.6714	2.81880E 00
50.00	0.2029	0.4155	0.4155	1.3739	1.75962E 00
80.00	0.2371	0.3774	0.3774	0.6868	1.15456E 00
100.00	0.2552	0.3486	0.3486	0.4769	9.56525E-01
120.00	0.2711	0.3202	0.3202	0.3461	8.27689E-01
150.00	0.2928	0.2808	0.2808	0.2258	7.03181E-01
200.00	0.3264	0.2269	0.2269	0.1189	5.85381E-01
300.00	0.4109	0.1594	0.1594	0.0274	4.77587E-01
500.00	0.6338	0.1241	0.0754	0.0006	3.99948E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1696	0.4564	0.4564	4.4584	4.40552E 00
50.00	0.2026	0.4597	0.4597	2.2973	2.64387E 00
80.00	0.2364	0.4401	0.4401	1.1550	1.64018E 00
100.00	0.2540	0.4194	0.4194	0.8067	1.31294E 00
120.00	0.2693	0.3961	0.3961	0.5905	1.10083E 00
150.00	0.2897	0.3599	0.3599	0.3916	8.96929E-01
200.00	0.3197	0.3030	0.3030	0.2167	7.05995E-01
300.00	0.3782	0.2168	0.2168	0.0732	5.35468E-01
500.00	0.5783	0.1450	0.1184	0.0025	4.20197E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1900	0.3285	0.3285	2.7626	2.03644E 00
50.00	0.2259	0.3338	0.3338	1.7139	1.47204E 00
80.00	0.2628	0.3252	0.3252	1.0391	1.08363E 00
100.00	0.2820	0.3150	0.3150	0.7995	9.37590E-01
120.00	0.2987	0.3031	0.3031	0.6370	8.34656E-01
150.00	0.3205	0.2844	0.2844	0.4734	7.26972E-01
200.00	0.3514	0.2540	0.2540	0.3116	6.14614E-01
300.00	0.4033	0.2029	0.2029	0.1573	4.98539E-01
500.00	0.5044	0.1396	0.1396	0.0460	4.04914E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1899	0.3603	0.3603	5.5288	3.70942E 00
50.00	0.2256	0.3796	0.3796	3.4341	2.58271E 00
80.00	0.2623	0.3880	0.3880	2.0868	1.80867E 00
100.00	0.2813	0.3866	0.3866	1.6092	1.51827E 00
120.00	0.2976	0.3820	0.3820	1.2854	1.31400E 00
150.00	0.3189	0.3716	0.3716	0.9595	1.10090E 00
200.00	0.3486	0.3489	0.3489	0.6384	8.79659E-01
300.00	0.3962	0.2990	0.2990	0.3344	6.53684E-01
500.00	0.4742	0.2166	0.2166	0.1214	4.76756E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1899	0.3722	0.3722	8.2968	5.38239E 00
50.00	0.2256	0.3978	0.3978	5.1546	3.69338E 00
80.00	0.2621	0.4148	0.4148	3.1345	2.53370E 00
100.00	0.2810	0.4187	0.4187	2.4189	2.09896E 00
120.00	0.2973	0.4188	0.4188	1.9335	1.79335E 00
150.00	0.3183	0.4145	0.4145	1.4461	1.47482E 00
200.00	0.3476	0.3998	0.3998	0.9655	1.14471E 00
300.00	0.3940	0.3584	0.3584	0.5112	8.08830E-01
500.00	0.4661	0.2742	0.2742	0.1955	5.48598E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.1899	0.3825	0.3825	13.8280	8.72834E 00
50.00	0.2255	0.4138	0.4138	8.5949	5.91471E 00
80.00	0.2620	0.4393	0.4393	5.2290	3.98377E 00
100.00	0.2808	0.4485	0.4485	4.0380	3.26032E 00
120.00	0.2970	0.4539	0.4539	3.2301	2.75205E 00
150.00	0.3179	0.4571	0.4571	2.4181	2.22267E 00
200.00	0.3469	0.4533	0.4533	1.6191	1.67480E 00
300.00	0.3922	0.4278	0.4278	0.8649	1.11912E 00
500.00	0.4603	0.3539	0.3539	0.3428	6.92282E-01

EFFECTIVE ENERGY CUTOFFS FOR GADOLINIUM SLABS 3 1 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2043	0.2943	0.2943	5.3361	2.84069E 00
50.00	0.2423	0.3166	0.3166	3.6642	2.15222E 00
80.00	0.2815	0.3319	0.3319	2.4661	1.62899E 00
100.00	0.3018	0.3362	0.3362	2.0044	1.41711E 00
120.00	0.3192	0.3375	0.3375	1.6753	1.26109E 00
150.00	0.3419	0.3361	0.3361	1.3267	1.09051E 00
200.00	0.3733	0.3283	0.3283	0.9591	9.02331E-01
300.00	0.4227	0.3038	0.3038	0.5763	6.93102E-01
500.00	0.4967	0.2502	0.2502	0.2716	5.09537E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2043	0.3116	0.3116	10.6745	5.36501E 00
50.00	0.2422	0.3414	0.3414	7.3316	3.98909E 00
80.00	0.2813	0.3667	0.3667	4.9378	2.94401E 00
100.00	0.3015	0.3771	0.3771	4.0153	2.52110E 00
120.00	0.3189	0.3842	0.3842	3.3574	2.20987E 00
150.00	0.3414	0.3907	0.3907	2.6614	1.86987E 00
200.00	0.3725	0.3942	0.3942	1.9282	1.49531E 00
300.00	0.4209	0.3862	0.3862	1.1658	1.08010E 00
500.00	0.4917	0.3475	0.3475	0.5607	7.18614E-01

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2043	0.3178	0.3178	16.0118	7.88932E 00
50.00	0.2422	0.3505	0.3505	10.9998	5.82596E 00
80.00	0.2812	0.3801	0.3801	7.4084	4.25903E 00
100.00	0.3014	0.3932	0.3932	6.0256	3.62509E 00
120.00	0.3188	0.4028	0.4028	5.0396	3.15865E 00
150.00	0.3412	0.4131	0.4131	3.9968	2.64923E 00
200.00	0.3722	0.4227	0.4227	2.8970	2.08828E 00
300.00	0.4204	0.4253	0.4253	1.7546	1.46711E 00
500.00	0.4901	0.4010	0.4010	0.8496	9.27690E-01

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
30.00	0.2043	0.3230	0.3230	26.6863	1.29380E 01
50.00	0.2422	0.3581	0.3581	18.3370	9.49969E 00
80.00	0.2812	0.3914	0.3914	12.3530	6.88907E 00
100.00	0.3013	0.4070	0.4070	10.0473	5.83308E 00
120.00	0.3187	0.4192	0.4192	8.4032	5.05621E 00
150.00	0.3411	0.4332	0.4332	6.6659	4.20795E 00
200.00	0.3720	0.4487	0.4487	4.8351	3.27423E 00
300.00	0.4199	0.4629	0.4629	2.9326	2.24111E 00
500.00	0.4889	0.4582	0.4582	1.4269	1.34584E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0552	0.6660	0.6660	0.4033	3.40253E 00
100.00	0.0990	0.4794	0.4791	0.0716	1.50841E 00
150.00	0.1426	0.2390	0.2370	0.0407	9.45638E-01
200.00	0.1871	0.1287	0.1065	0.0152	7.55401E-01
300.00	0.2465	0.0921	0.0265	0.0024	6.42871E-01
400.00	0.2793	0.0931	0.0121	0.0007	6.02527E-01
500.00	0.3052	0.0975	0.0079	0.0003	5.75998E-01
700.00	0.3508	0.1070	0.0044	0.0001	5.37164E-01
1000.00	0.4118	0.1203	0.0021	0.0000	4.95714E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0530	0.7434	0.7434	0.8995	5.99527E 00
100.00	0.0928	0.6329	0.6327	0.1439	2.28349E 00
150.00	0.1308	0.3710	0.3706	0.0873	1.19789E 00
200.00	0.1703	0.1886	0.1797	0.0435	8.45700E-01
300.00	0.2360	0.1024	0.0499	0.0065	6.61298E-01
400.00	0.2732	0.0973	0.0237	0.0018	6.10249E-01
500.00	0.3007	0.1001	0.0156	0.0007	5.80720E-01
700.00	0.3477	0.1083	0.0087	0.0001	5.39537E-01
1000.00	0.4101	0.1209	0.0043	0.0000	4.96780E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0522	0.7739	0.7739	1.3977	8.58802E 00
100.00	0.0907	0.7086	0.7084	0.2162	3.05857E 00
150.00	0.1265	0.4587	0.4585	0.1325	1.45015E 00
200.00	0.1628	0.2422	0.2373	0.0738	9.36000E-01
300.00	0.2278	0.1134	0.0704	0.0124	6.79724E-01
400.00	0.2675	0.1016	0.0346	0.0033	6.17970E-01
500.00	0.2963	0.1027	0.0231	0.0012	5.85442E-01
700.00	0.3448	0.1097	0.0130	0.0002	5.41910E-01
1000.00	0.4083	0.1215	0.0064	0.0000	4.97846E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0517	0.8004	0.8004	2.3952	1.37735E 01
100.00	0.0890	0.7836	0.7835	0.3610	4.60873E 00
150.00	0.1231	0.5665	0.5665	0.2222	1.95465E 00
200.00	0.1564	0.3272	0.3248	0.1341	1.11660E 00
300.00	0.2167	0.1356	0.1048	0.0283	7.16578E-01
400.00	0.2579	0.1106	0.0544	0.0074	6.33414E-01
500.00	0.2881	0.1081	0.0374	0.0026	5.94886E-01
700.00	0.3390	0.1123	0.0213	0.0004	5.46656E-01
1000.00	0.4049	0.1227	0.0106	0.0000	4.99978E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0972	0.4659	0.4659	1.4882	3.56050E 00
100.00	0.1508	0.2840	0.2838	0.9043	1.91891E 00
150.00	0.1819	0.2172	0.2037	0.6119	1.38137E 00
200.00	0.2021	0.1943	0.1717	0.4534	1.15015E 00
300.00	0.2284	0.1820	0.1508	0.2943	9.41203E-01
400.00	0.2480	0.1777	0.1421	0.2098	8.31471E-01
500.00	0.2654	0.1743	0.1350	0.1551	7.57494E-01
700.00	0.2978	0.1686	0.1218	0.0886	6.59800E-01
1000.00	0.3462	0.1638	0.1039	0.0387	5.71871E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0965	0.5216	0.5216	2.9797	6.35678E 00
100.00	0.1484	0.3423	0.3423	1.8382	3.11581E 00
150.00	0.1797	0.2700	0.2618	1.2502	2.07320E 00
200.00	0.1997	0.2457	0.2309	0.9307	1.63667E 00
300.00	0.2248	0.2341	0.2126	0.6137	1.25822E 00
400.00	0.2429	0.2308	0.2058	0.4464	1.06820E 00
500.00	0.2584	0.2269	0.1992	0.3386	9.43739E-01
700.00	0.2863	0.2178	0.1848	0.2064	7.84834E-01
1000.00	0.3256	0.2046	0.1633	0.1037	6.49129E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0963	0.5432	0.5432	4.4712	9.15306E 00
100.00	0.1476	0.3684	0.3684	2.7726	4.31270E 00
150.00	0.1789	0.2965	0.2906	1.8896	2.76503E 00
200.00	0.1988	0.2735	0.2624	1.4097	2.12319E 00
300.00	0.2235	0.2656	0.2490	0.9345	1.57524E 00
400.00	0.2410	0.2649	0.2453	0.6854	1.30492E 00
500.00	0.2558	0.2627	0.2407	0.5247	1.12998E 00
700.00	0.2817	0.2542	0.2279	0.3283	9.09868E-01
1000.00	0.3170	0.2385	0.2057	0.1749	7.26387E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0962	0.5618	0.5618	7.4543	1.47456E 01
100.00	0.1469	0.3928	0.3928	4.6405	6.70649E 00
150.00	0.1782	0.3230	0.3192	3.1687	4.14868E 00
200.00	0.1981	0.3030	0.2956	2.3684	3.09623E 00
300.00	0.2224	0.3016	0.2900	1.5773	2.20927E 00
400.00	0.2393	0.3061	0.2923	1.1646	1.77838E 00
500.00	0.2535	0.3079	0.2922	0.8990	1.50247E 00
700.00	0.2778	0.3042	0.2850	0.5748	1.15994E 00
1000.00	0.3095	0.2898	0.2656	0.3218	8.80904E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1197	0.2855	0.2855	3.6823	4.30185E 00
100.00	0.1680	0.2051	0.2051	2.4758	2.81213E 00
150.00	0.1950	0.1943	0.1943	1.8717	2.24761E 00
200.00	0.2131	0.1985	0.1985	1.5279	1.95151E 00
300.00	0.2376	0.2133	0.2080	1.1607	1.61651E 00
400.00	0.2556	0.2251	0.2130	0.9478	1.40916E 00
500.00	0.2712	0.2335	0.2163	0.7935	1.25980E 00
700.00	0.2981	0.2436	0.2189	0.5812	1.05303E 00
1000.00	0.3331	0.2499	0.2175	0.3868	8.59901E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1195	0.3088	0.3088	7.3678	7.94726E 00
100.00	0.1674	0.2293	0.2293	4.9694	4.98116E 00
150.00	0.1939	0.2211	0.2211	3.7741	3.86466E 00
200.00	0.2114	0.2279	0.2279	3.0985	3.28429E 00
300.00	0.2353	0.2479	0.2453	2.3593	2.63598E 00
400.00	0.2530	0.2645	0.2576	1.9316	2.24070E 00
500.00	0.2681	0.2770	0.2668	1.6233	1.95950E 00
700.00	0.2939	0.2941	0.2788	1.2008	1.57631E 00
1000.00	0.3264	0.3074	0.2867	0.8175	1.22686E 00

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3175	0.3175	11.0535	1.15927E 01
100.00	0.1672	0.2388	0.2388	7.4635	7.15019E 00
150.00	0.1935	0.2320	0.2320	5.6769	5.48171E 00
200.00	0.2108	0.2403	0.2403	4.6687	4.61706E 00
300.00	0.2345	0.2632	0.2614	3.5595	3.65545E 00
400.00	0.2521	0.2825	0.2777	2.9171	3.07225E 00
500.00	0.2671	0.2978	0.2905	2.4541	2.65921E 00
700.00	0.2924	0.3194	0.3082	1.8226	2.09960E 00
1000.00	0.3240	0.3388	0.3234	1.2500	1.59383E 00

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3248	0.3248	18.4243	1.88835E 01
100.00	0.1671	0.2471	0.2471	12.4503	1.14882E 01
150.00	0.1933	0.2417	0.2417	9.4815	8.71581E 00
200.00	0.2103	0.2516	0.2516	7.8090	7.28262E 00
300.00	0.2338	0.2775	0.2764	5.9596	5.69439E 00
400.00	0.2513	0.2998	0.2967	4.8879	4.73533E 00
500.00	0.2662	0.3179	0.3132	4.1170	4.05861E 00
700.00	0.2912	0.3451	0.3378	3.0656	3.14617E 00
1000.00	0.3220	0.3719	0.3617	2.1167	2.32775E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1315	0.1979	0.1979	6.1283	5.10421E 00
100.00	0.1768	0.1656	0.1656	4.4955	3.74100E 00
150.00	0.2016	0.1705	0.1705	3.6675	3.16106E 00
200.00	0.2186	0.1808	0.1808	3.1568	2.82023E 00
300.00	0.2437	0.2015	0.2015	2.5118	2.39315E 00
400.00	0.2636	0.2184	0.2184	2.0927	2.10957E 00
500.00	0.2809	0.2325	0.2325	1.7872	1.89777E 00
700.00	0.3100	0.2548	0.2519	1.3832	1.59376E 00
1000.00	0.3445	0.2776	0.2656	1.0319	1.29649E 00

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1314	0.2096	0.2096	12.2597	9.63411E 00
100.00	0.1766	0.1783	0.1783	9.0031	6.91402E 00
150.00	0.2011	0.1853	0.1853	7.3537	5.76032E 00
200.00	0.2180	0.1980	0.1980	6.3373	5.08468E 00
300.00	0.2425	0.2227	0.2227	5.0592	4.24214E 00
400.00	0.2618	0.2434	0.2434	4.2315	3.68602E 00
500.00	0.2784	0.2607	0.2607	3.6307	3.27296E 00
700.00	0.3065	0.2884	0.2873	2.8210	2.68462E 00
1000.00	0.3400	0.3185	0.3120	2.1179	2.11653E 00

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2137	0.2137	18.3915	1.41640E 01
100.00	0.1765	0.1830	0.1830	13.5097	1.00870E 01
150.00	0.2010	0.1909	0.1909	11.0398	8.35958E 00
200.00	0.2177	0.2045	0.2045	9.5184	7.34913E 00
300.00	0.2421	0.2310	0.2310	7.6077	6.09112E 00
400.00	0.2612	0.2533	0.2533	6.3707	5.26248E 00
500.00	0.2776	0.2721	0.2721	5.4741	4.64816E 00
700.00	0.3052	0.3026	0.3020	4.2603	3.77548E 00
1000.00	0.3384	0.3367	0.3322	3.2050	2.93656E 00

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2172	0.2172	30.6540	2.32238E 01
100.00	0.1764	0.1870	0.1870	22.5226	1.64331E 01
150.00	0.2009	0.1957	0.1957	18.4114	1.35581E 01
200.00	0.2175	0.2101	0.2101	15.8815	1.18780E 01
300.00	0.2418	0.2383	0.2383	12.7024	9.78908E 00
400.00	0.2608	0.2621	0.2621	10.6472	8.41538E 00
500.00	0.2769	0.2822	0.2822	9.1620	7.39855E 00
700.00	0.3042	0.3154	0.3151	7.1397	5.95721E 00
1000.00	0.3371	0.3536	0.3508	5.3807	4.57662E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0521	0.6543	0.6543	0.4808	3.38242E 00
100.00	0.0931	0.4795	0.4795	0.0721	1.50644E 00
150.00	0.1427	0.2388	0.2371	0.0407	9.45391E-01
200.00	0.1871	0.1287	0.1065	0.0152	7.55364E-01
300.00	0.2465	0.0921	0.0265	0.0024	6.42870E-01
400.00	0.2793	0.0931	0.0121	0.0007	6.02527E-01
500.00	0.3052	0.0975	0.0079	0.0003	5.75998E-01
700.00	0.3508	0.1070	0.0044	0.0001	5.37164E-01
1000.00	0.4118	0.1203	0.0021	0.0000	4.95714E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0515	0.7367	0.7367	0.9925	5.97516E 00
100.00	0.0896	0.6331	0.6331	0.1446	2.28152E 00
150.00	0.1308	0.3709	0.3707	0.0873	1.19764E 00
200.00	0.1703	0.1885	0.1797	0.0435	8.45663E-01
300.00	0.2360	0.1025	0.0499	0.0065	6.61296E-01
400.00	0.2732	0.0973	0.0237	0.0018	6.10249E-01
500.00	0.3007	0.1001	0.0156	0.0007	5.80720E-01
700.00	0.3477	0.1083	0.0087	0.0001	5.39537E-01
1000.00	0.4101	0.1209	0.0043	0.0000	4.96780E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0513	0.7692	0.7692	1.5045	8.56791E 00
100.00	0.0885	0.7088	0.7088	0.2172	3.05660E 00
150.00	0.1266	0.4586	0.4586	0.1325	1.44990E 00
200.00	0.1628	0.2422	0.2373	0.0738	9.35963E-01
300.00	0.2278	0.1134	0.0704	0.0124	6.79723E-01
400.00	0.2675	0.1016	0.0346	0.0033	6.17970E-01
500.00	0.2963	0.1027	0.0231	0.0012	5.85442E-01
700.00	0.3448	0.1097	0.0130	0.0002	5.41910E-01
1000.00	0.4083	0.1215	0.0064	0.0000	4.97846E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0511	0.7974	0.7974	2.5282	1.37534E 01
100.00	0.0876	0.7837	0.7837	0.3623	4.60676E 00
150.00	0.1228	0.5665	0.5665	0.2223	1.95441E 00
200.00	0.1564	0.3272	0.3248	0.1341	1.11656E 00
300.00	0.2167	0.1356	0.1048	0.0283	7.16577E-01
400.00	0.2579	0.1106	0.0544	0.0074	6.33414E-01
500.00	0.2881	0.1081	0.0374	0.0026	5.94886E-01
700.00	0.3390	0.1123	0.0213	0.0004	5.46656E-01
1000.00	0.4049	0.1227	0.0106	0.0000	4.99978E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0961	0.4842	0.4842	1.8207	3.42208E 00
100.00	0.1470	0.2907	0.2907	1.0879	1.81270E 00
150.00	0.1797	0.2090	0.2090	0.6937	1.29807E 00
200.00	0.2016	0.1803	0.1803	0.4875	1.08360E 00
300.00	0.2314	0.1659	0.1659	0.2901	8.96867E-01
400.00	0.2547	0.1641	0.1606	0.1927	8.00679E-01
500.00	0.2715	0.1635	0.1485	0.1432	7.35486E-01
700.00	0.3029	0.1619	0.1290	0.0826	6.47908E-01
1000.00	0.3500	0.1606	0.1067	0.0366	5.66734E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5328	0.5328	3.6422	6.21836E 00
100.00	0.1465	0.3488	0.3488	2.1826	3.00960E 00
150.00	0.1784	0.2671	0.2671	1.4058	1.98990E 00
200.00	0.1992	0.2381	0.2381	1.0035	1.57012E 00
300.00	0.2258	0.2240	0.2240	0.6244	1.21388E 00
400.00	0.2458	0.2210	0.2210	0.4331	1.03740E 00
500.00	0.2616	0.2187	0.2123	0.3253	9.21730E-01
700.00	0.2889	0.2121	0.1925	0.1994	7.72941E-01
1000.00	0.3277	0.2016	0.1668	0.1008	6.43992E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5513	0.5513	5.4636	9.01464E 00
100.00	0.1463	0.3738	0.3738	3.2774	4.20650E 00
150.00	0.1780	0.2952	0.2952	2.1178	2.68173E 00
200.00	0.1984	0.2688	0.2688	1.5187	2.05664E 00
300.00	0.2240	0.2583	0.2583	0.9582	1.53090E 00
400.00	0.2426	0.2575	0.2575	0.6775	1.27413E 00
500.00	0.2579	0.2564	0.2528	0.5109	1.10798E 00
700.00	0.2835	0.2497	0.2354	0.3209	8.97975E-01
1000.00	0.3184	0.2358	0.2093	0.1718	7.21250E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5670	0.5670	9.1067	1.46072E 01
100.00	0.1462	0.3966	0.3966	5.4669	6.60029E 00
150.00	0.1777	0.3228	0.3228	3.5413	4.06538E 00
200.00	0.1978	0.3005	0.3005	2.5492	3.02968E 00
300.00	0.2226	0.2970	0.2970	1.6247	2.16494E 00
400.00	0.2402	0.3014	0.3014	1.1647	1.74758E 00
500.00	0.2548	0.3036	0.3020	0.8851	1.48046E 00
700.00	0.2789	0.3010	0.2916	0.5672	1.14804E 00
1000.00	0.3103	0.2877	0.2690	0.3186	8.75767E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.2948	0.2948	4.6920	4.16091E 00
100.00	0.1671	0.2121	0.2121	3.1286	2.68060E 00
150.00	0.1935	0.1991	0.1991	2.3517	2.12475E 00
200.00	0.2107	0.2009	0.2009	1.9126	1.83666E 00
300.00	0.2347	0.2112	0.2112	1.4086	1.51589E 00
400.00	0.2533	0.2195	0.2195	1.1073	1.32071E 00
500.00	0.2694	0.2253	0.2253	0.8991	1.18182E 00
700.00	0.2978	0.2315	0.2315	0.6267	9.91873E-01
1000.00	0.3363	0.2354	0.2354	0.3887	8.16599E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3142	0.3142	9.3853	7.80632E 00
100.00	0.1670	0.2339	0.2339	6.2628	4.84963E 00
150.00	0.1931	0.2247	0.2247	4.7143	3.74180E 00
200.00	0.2102	0.2304	0.2304	3.8407	3.16944E 00
300.00	0.2337	0.2481	0.2481	2.8402	2.53536E 00
400.00	0.2517	0.2628	0.2628	2.2435	2.15225E 00
500.00	0.2671	0.2737	0.2737	1.8345	1.88152E 00
700.00	0.2934	0.2883	0.2883	1.3013	1.51516E 00
1000.00	0.3271	0.2993	0.2993	0.8444	1.18356E 00

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3212	0.3212	14.0784	1.14517E 01
100.00	0.1669	0.2421	0.2421	9.3975	7.01866E 00
150.00	0.1930	0.2347	0.2347	7.0775	5.35886E 00
200.00	0.2100	0.2426	0.2426	5.7675	4.50222E 00
300.00	0.2334	0.2639	0.2639	4.2712	3.55483E 00
400.00	0.2512	0.2819	0.2819	3.3804	2.98380E 00
500.00	0.2663	0.2961	0.2961	2.7688	2.58122E 00
700.00	0.2920	0.3159	0.3159	1.9759	2.03845E 00
1000.00	0.3243	0.3334	0.3334	1.2989	1.55052E 00

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3271	0.3271	23.4648	1.87425E 01
100.00	0.1669	0.2492	0.2492	15.6681	1.13567E 01
150.00	0.1929	0.2435	0.2435	11.8032	8.59296E 00
200.00	0.2099	0.2532	0.2532	9.6231	7.16777E 00
300.00	0.2332	0.2782	0.2782	7.1334	5.59377E 00
400.00	0.2508	0.2997	0.2997	5.6524	4.64689E 00
500.00	0.2657	0.3171	0.3171	4.6388	3.98063E 00
700.00	0.2909	0.3433	0.3433	3.3235	3.08502E 00
1000.00	0.3220	0.3688	0.3688	2.2071	2.28445E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1314	0.2028	0.2028	7.8674	4.97739E 00
100.00	0.1765	0.1701	0.1701	5.7456	3.61814E 00
150.00	0.2010	0.1750	0.1750	4.6683	3.04202E 00
200.00	0.2178	0.1854	0.1854	4.0029	2.70488E 00
300.00	0.2423	0.2058	0.2058	3.1635	2.28481E 00
400.00	0.2615	0.2221	0.2221	2.6213	2.00775E 00
500.00	0.2779	0.2350	0.2350	2.2298	1.80204E 00
700.00	0.3060	0.2542	0.2542	1.6914	1.50902E 00
1000.00	0.3414	0.2730	0.2730	1.1966	1.22570E 00

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2122	0.2122	15.7364	9.50729E 00
100.00	0.1764	0.1809	0.1809	11.4967	6.79116E 00
150.00	0.2009	0.1881	0.1881	9.3445	5.64128E 00
200.00	0.2175	0.2009	0.2009	8.0163	4.96933E 00
300.00	0.2418	0.2257	0.2257	6.3442	4.13379E 00
400.00	0.2607	0.2461	0.2461	5.2655	3.58420E 00
500.00	0.2769	0.2629	0.2629	4.4867	3.17723E 00
700.00	0.3043	0.2892	0.2892	3.4193	2.59989E 00
1000.00	0.3382	0.3173	0.3173	2.4426	2.04574E 00

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2156	0.2156	23.6058	1.40372E 01
100.00	0.1764	0.1849	0.1849	17.2467	9.96419E 00
150.00	0.2008	0.1928	0.1928	14.0227	8.24054E 00
200.00	0.2175	0.2067	0.2067	12.0298	7.23378E 00
300.00	0.2417	0.2333	0.2333	9.5248	5.98277E 00
400.00	0.2605	0.2554	0.2554	7.9092	5.16065E 00
500.00	0.2766	0.2740	0.2740	6.7426	4.55243E 00
700.00	0.3037	0.3035	0.3035	5.1473	3.69075E 00
1000.00	0.3372	0.3363	0.3363	3.6889	2.86577E 00

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2184	0.2184	39.3430	2.30970E 01
100.00	0.1764	0.1881	0.1881	28.7499	1.63102E 01
150.00	0.2008	0.1969	0.1969	23.3760	1.34391E 01
200.00	0.2174	0.2115	0.2115	20.0584	1.17627E 01
300.00	0.2415	0.2398	0.2398	15.8855	9.68073E 00
400.00	0.2603	0.2635	0.2635	13.1971	8.31356E 00
500.00	0.2763	0.2837	0.2837	11.2560	7.30282E 00
700.00	0.3033	0.3163	0.3163	8.6013	5.87248E 00
1000.00	0.3364	0.3536	0.3536	6.1796	4.50583E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0510	0.6815	0.6815	0.6456	3.21510E 00
100.00	0.0871	0.5203	0.5203	0.0866	1.38776E 00
150.00	0.1214	0.2587	0.2587	0.0512	8.55656E-01
200.00	0.1612	0.1075	0.1075	0.0280	6.84794E-01
300.00	0.2852	0.0691	0.0303	0.0007	5.96143E-01
400.00	0.3118	0.0771	0.0133	0.0003	5.69915E-01
500.00	0.3316	0.0857	0.0084	0.0001	5.52513E-01
700.00	0.3682	0.1003	0.0045	0.0000	5.24267E-01
1000.00	0.4215	0.1173	0.0022	0.0000	4.90008E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.7541	0.7541	1.2950	5.80785E 00
100.00	0.0868	0.6677	0.6677	0.1732	2.16284E 00
150.00	0.1197	0.3995	0.3995	0.1025	1.10791E 00
200.00	0.1527	0.1853	0.1853	0.0622	7.75094E-01
300.00	0.2695	0.0772	0.0579	0.0022	6.14570E-01
400.00	0.3038	0.0805	0.0261	0.0007	5.77637E-01
500.00	0.3262	0.0880	0.0167	0.0003	5.57235E-01
700.00	0.3649	0.1015	0.0090	0.0001	5.26640E-01
1000.00	0.4196	0.1178	0.0043	0.0000	4.91074E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.7818	0.7818	1.9453	8.40060E 00
100.00	0.0866	0.7373	0.7373	0.2599	2.93792E 00
150.00	0.1191	0.4881	0.4881	0.1539	1.36016E 00
200.00	0.1504	0.2475	0.2475	0.0955	8.65393E-01
300.00	0.2562	0.0862	0.0826	0.0052	6.32997E-01
400.00	0.2963	0.0841	0.0384	0.0013	5.85359E-01
500.00	0.3209	0.0902	0.0247	0.0005	5.61957E-01
700.00	0.3617	0.1027	0.0134	0.0001	5.29013E-01
1000.00	0.4179	0.1184	0.0065	0.0000	4.92140E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.8056	0.8056	3.2437	1.35861E 01
100.00	0.0865	0.8044	0.8044	0.4331	4.48808E 00
150.00	0.1186	0.5934	0.5934	0.2565	1.86467E 00
200.00	0.1487	0.3399	0.3399	0.1614	1.04599E 00
300.00	0.2135	0.1097	0.1097	0.0323	6.69851E-01
400.00	0.2829	0.0919	0.0613	0.0033	6.00802E-01
500.00	0.3110	0.0950	0.0402	0.0012	5.71401E-01
700.00	0.3554	0.1052	0.0220	0.0002	5.33759E-01
1000.00	0.4142	0.1195	0.0108	0.0000	4.94272E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5107	0.5107	2.5470	3.24378E 00
100.00	0.1462	0.3190	0.3190	1.5123	1.64202E 00
150.00	0.1778	0.2317	0.2317	0.9688	1.13459E 00
200.00	0.1980	0.1972	0.1972	0.6896	9.26956E-01
300.00	0.2231	0.1724	0.1724	0.4297	7.52846E-01
400.00	0.2412	0.1603	0.1603	0.3006	6.68027E-01
500.00	0.2570	0.1505	0.1505	0.2202	6.13095E-01
700.00	0.2873	0.1349	0.1349	0.1238	5.43205E-01
1000.00	0.3431	0.1213	0.1213	0.0460	4.82947E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0959	0.5485	0.5485	5.0943	6.04006E 00
100.00	0.1461	0.3686	0.3686	3.0267	2.83891E 00
150.00	0.1775	0.2864	0.2864	1.9437	1.82642E 00
200.00	0.1974	0.2559	0.2559	1.3879	1.41348E 00
300.00	0.2219	0.2371	0.2371	0.8729	1.06986E 00
400.00	0.2389	0.2282	0.2282	0.6190	9.04753E-01
500.00	0.2533	0.2192	0.2192	0.4622	7.99339E-01
700.00	0.2789	0.2004	0.2004	0.2778	6.68239E-01
1000.00	0.3157	0.1760	0.1760	0.1379	5.60206E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0959	0.5624	0.5624	7.6414	8.83634E 00
100.00	0.1461	0.3888	0.3888	4.5412	4.03581E 00
150.00	0.1774	0.3111	0.3111	2.9183	2.51825E 00
200.00	0.1973	0.2846	0.2846	2.0864	1.90000E 00
300.00	0.2214	0.2722	0.2722	1.3161	1.38688E 00
400.00	0.2381	0.2679	0.2679	0.9375	1.14148E 00
500.00	0.2521	0.2619	0.2619	0.7042	9.85584E-01
700.00	0.2763	0.2455	0.2455	0.4312	7.93273E-01
1000.00	0.3089	0.2190	0.2190	0.2271	6.37464E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0959	0.5740	0.5740	12.7361	1.44289E 01
100.00	0.1460	0.4067	0.4067	7.5704	6.42960E 00
150.00	0.1773	0.3342	0.3342	4.8677	3.90190E 00
200.00	0.1971	0.3127	0.3127	3.4834	2.87304E 00
300.00	0.2211	0.3095	0.3095	2.2017	2.02092E 00
400.00	0.2376	0.3126	0.3126	1.5737	1.61493E 00
500.00	0.2512	0.3125	0.3125	1.1875	1.35807E 00
700.00	0.2743	0.3037	0.3037	0.7372	1.04334E 00
1000.00	0.3041	0.2807	0.2807	0.4042	7.91980E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3057	0.3057	6.6101	4.01139E 00
100.00	0.1669	0.2236	0.2236	4.3949	2.53365E 00
150.00	0.1930	0.2117	0.2117	3.2970	1.98034E 00
200.00	0.2100	0.2148	0.2148	2.6764	1.69473E 00
300.00	0.2334	0.2269	0.2269	1.9666	1.37877E 00
400.00	0.2512	0.2362	0.2362	1.5446	1.18822E 00
500.00	0.2664	0.2420	0.2420	1.2558	1.05379E 00
700.00	0.2922	0.2468	0.2468	0.8826	8.72268E-01
1000.00	0.3249	0.2447	0.2447	0.5669	7.08485E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3203	0.3203	13.2207	7.65679E 00
100.00	0.1669	0.2407	0.2407	8.7930	4.70268E 00
150.00	0.1929	0.2326	0.2326	6.5996	3.59739E 00
200.00	0.2098	0.2396	0.2396	5.3599	3.02750E 00
300.00	0.2331	0.2593	0.2593	3.9441	2.39824E 00
400.00	0.2507	0.2754	0.2754	3.1030	2.01977E 00
500.00	0.2656	0.2875	0.2875	2.5282	1.75349E 00
700.00	0.2907	0.3029	0.3029	1.7876	1.39555E 00
1000.00	0.3218	0.3126	0.3126	1.1646	1.07545E 00

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3255	0.3255	19.8310	1.13022E 01
100.00	0.1669	0.2470	0.2470	13.1918	6.87171E 00
150.00	0.1929	0.2405	0.2405	9.9014	5.21444E 00
200.00	0.2098	0.2493	0.2493	8.0435	4.36028E 00
300.00	0.2330	0.2723	0.2723	5.9216	3.41771E 00
400.00	0.2505	0.2919	0.2919	4.6610	2.85131E 00
500.00	0.2653	0.3070	0.3070	3.8013	2.45320E 00
700.00	0.2902	0.3283	0.3283	2.6931	1.91884E 00
1000.00	0.3208	0.3459	0.3459	1.7625	1.44241E 00

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1193	0.3297	0.3297	33.0528	1.85930E 01
100.00	0.1669	0.2523	0.2523	21.9864	1.12098E 01
150.00	0.1929	0.2473	0.2473	16.5059	8.44854E 00
200.00	0.2097	0.2576	0.2576	13.4117	7.02583E 00
300.00	0.2329	0.2838	0.2838	9.8761	5.45665E 00
400.00	0.2504	0.3065	0.3065	7.7774	4.51440E 00
500.00	0.2651	0.3248	0.3248	6.3460	3.85260E 00
700.00	0.2898	0.3523	0.3523	4.5036	2.96541E 00
1000.00	0.3200	0.3792	0.3792	2.9562	2.17633E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 4 0 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2081	0.2081	11.1022	4.84706E 00
100.00	0.1764	0.1760	0.1760	8.0928	3.48922E 00
150.00	0.2008	0.1819	0.1819	6.5636	2.91450E 00
200.00	0.2175	0.1934	0.1934	5.6180	2.57875E 00
300.00	0.2417	0.2156	0.2156	4.4272	2.16139E 00
400.00	0.2606	0.2333	0.2333	3.6591	1.88699E 00
500.00	0.2767	0.2475	0.2475	3.1050	1.68387E 00
700.00	0.3040	0.2684	0.2684	2.3484	1.39587E 00
1000.00	0.3377	0.2884	0.2884	1.6592	1.11966E 00

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2152	0.2152	22.2044	9.37696E 00
100.00	0.1764	0.1842	0.1842	16.1887	6.66224E 00
150.00	0.2008	0.1920	0.1920	13.1328	5.51376E 00
200.00	0.2174	0.2055	0.2055	11.2434	4.84320E 00
300.00	0.2415	0.2316	0.2316	8.8644	4.01037E 00
400.00	0.2603	0.2531	0.2531	7.3300	3.46344E 00
500.00	0.2763	0.2709	0.2709	6.2259	3.05907E 00
700.00	0.3033	0.2988	0.2988	4.7168	2.48674E 00
1000.00	0.3364	0.3287	0.3287	3.3459	1.93969E 00

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2176	0.2176	33.3066	1.39069E 01
100.00	0.1764	0.1872	0.1872	24.2831	9.83527E 00
150.00	0.2008	0.1957	0.1957	19.6991	8.11302E 00
200.00	0.2174	0.2099	0.2099	16.8687	7.10765E 00
300.00	0.2415	0.2374	0.2374	13.3026	5.85935E 00
400.00	0.2602	0.2605	0.2605	11.0025	5.03990E 00
500.00	0.2762	0.2798	0.2798	9.3454	4.43426E 00
700.00	0.3031	0.3107	0.3107	7.0853	3.57760E 00
1000.00	0.3360	0.3451	0.3451	5.0322	2.75972E 00

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2196	0.2196	55.5139	2.29667E 01
100.00	0.1763	0.1895	0.1895	40.4756	1.61813E 01
150.00	0.2007	0.1986	0.1986	32.8388	1.33115E 01
200.00	0.2173	0.2135	0.2135	28.1207	1.16365E 01
300.00	0.2414	0.2424	0.2424	22.1760	9.55732E 00
400.00	0.2602	0.2667	0.2667	18.3460	8.19280E 00
500.00	0.2761	0.2874	0.2874	15.5865	7.18465E 00
700.00	0.3029	0.3209	0.3209	11.8228	5.75933E 00
1000.00	0.3356	0.3595	0.3595	8.4053	4.39979E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0608	0.6675	0.6675	0.2614	3.01864E 00
100.00	0.1088	0.4170	0.4167	0.0627	1.31463E 00
150.00	0.1580	0.1886	0.1825	0.0305	8.59223E-01
200.00	0.2044	0.1118	0.0772	0.0092	7.14151E-01
300.00	0.2598	0.0922	0.0198	0.0015	6.25463E-01
400.00	0.2927	0.0956	0.0099	0.0005	5.88372E-01
500.00	0.3202	0.1009	0.0066	0.0002	5.62288E-01
700.00	0.3694	0.1115	0.0036	0.0000	5.23427E-01
1000.00	0.4362	0.1260	0.0017	0.0000	4.81687E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0581	0.7586	0.7586	0.5901	5.24167E 00
100.00	0.1015	0.5743	0.5741	0.1261	1.90769E 00
150.00	0.1438	0.2966	0.2952	0.0719	1.03671E 00
200.00	0.1872	0.1514	0.1338	0.0282	7.75014E-01
300.00	0.2510	0.0995	0.0378	0.0039	6.38662E-01
400.00	0.2873	0.0990	0.0194	0.0011	5.94438E-01
500.00	0.3161	0.1030	0.0130	0.0004	5.66076E-01
700.00	0.3668	0.1125	0.0071	0.0001	5.25303E-01
1000.00	0.4347	0.1265	0.0034	0.0000	4.82507E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0572	0.7952	0.7952	0.9213	7.46469E 00
100.00	0.0990	0.6570	0.6569	0.1893	2.50075E 00
150.00	0.1385	0.3765	0.3758	0.1118	1.21419E 00
200.00	0.1785	0.1900	0.1791	0.0511	8.35878E-01
300.00	0.2436	0.1072	0.0542	0.0074	6.51861E-01
400.00	0.2822	0.1023	0.0286	0.0020	6.00504E-01
500.00	0.3122	0.1051	0.0193	0.0007	5.69865E-01
700.00	0.3642	0.1135	0.0106	0.0001	5.27179E-01
1000.00	0.4332	0.1269	0.0051	0.0000	4.83327E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0565	0.8273	0.8273	1.5850	1.19107E 01
100.00	0.0970	0.7426	0.7425	0.3158	3.68687E 00
150.00	0.1342	0.4833	0.4830	0.1900	1.56916E 00
200.00	0.1703	0.2568	0.2509	0.0989	9.57604E-01
300.00	0.2324	0.1230	0.0825	0.0171	6.78258E-01
400.00	0.2731	0.1094	0.0456	0.0044	6.12635E-01
500.00	0.3047	0.1094	0.0315	0.0014	5.77442E-01
700.00	0.3592	0.1157	0.0175	0.0002	5.30931E-01
1000.00	0.4303	0.1278	0.0084	0.0000	4.84968E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.050C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1050	0.4398	0.4398	1.3860	3.22868E 00
100.00	0.1596	0.2627	0.2591	0.8159	1.74049E 00
150.00	0.1900	0.2081	0.1908	0.5435	1.28031E 00
200.00	0.2096	0.1907	0.1653	0.4018	1.08222E 00
300.00	0.2360	0.1811	0.1480	0.2579	8.94790E-01
400.00	0.2567	0.1768	0.1392	0.1800	7.91971E-01
500.00	0.2756	0.1732	0.1315	0.1298	7.21995E-01
700.00	0.3115	0.1676	0.1172	0.0699	6.29519E-01
1000.00	0.3670	0.1639	0.0977	0.0270	5.46216E-01

CRO 20. EM 0.050C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1042	0.4979	0.4979	2.7754	5.69932E 00
100.00	0.1573	0.3195	0.3178	1.6594	2.76809E 00
150.00	0.1877	0.2604	0.2496	1.1127	1.88164E 00
200.00	0.2069	0.2424	0.2255	0.8278	1.51214E 00
300.00	0.2319	0.2340	0.2111	0.5415	1.17748E 00
400.00	0.2507	0.2300	0.2036	0.3877	1.00168E 00
500.00	0.2673	0.2252	0.1958	0.2886	8.85515E-01
700.00	0.2976	0.2147	0.1794	0.1688	7.37516E-01
1000.00	0.3419	0.2013	0.1560	0.0781	6.11605E-01

CRO 30. EM 0.050C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1039	0.5208	0.5208	4.1649	8.16996E 00
100.00	0.1565	0.3458	0.3447	2.5029	3.79568E 00
150.00	0.1868	0.2875	0.2796	1.6830	2.48296E 00
200.00	0.2059	0.2714	0.2586	1.2552	1.94207E 00
300.00	0.2303	0.2666	0.2488	0.8272	1.46016E 00
400.00	0.2484	0.2653	0.2444	0.5978	1.21138E 00
500.00	0.2641	0.2617	0.2383	0.4506	1.04903E 00
700.00	0.2920	0.2510	0.2228	0.2724	8.45512E-01
1000.00	0.3311	0.2336	0.1979	0.1362	6.76993E-01

CRO 50. EM 0.050C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1037	0.5407	0.5407	6.9437	1.31112E 01
100.00	0.1558	0.3706	0.3700	4.1911	5.85087E 00
150.00	0.1861	0.3153	0.3102	2.8239	3.68562E 00
200.00	0.2051	0.3026	0.2940	2.1112	2.80191E 00
300.00	0.2290	0.3048	0.2924	1.3995	2.02553E 00
400.00	0.2465	0.3087	0.2938	1.0203	1.63079E 00
500.00	0.2613	0.3090	0.2921	0.7765	1.37608E 00
700.00	0.2872	0.3022	0.2815	0.4827	1.06151E 00
1000.00	0.3216	0.2842	0.2580	0.2578	8.07771E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1275	0.2680	0.2680	3.4819	4.00853E 00
100.00	0.1758	0.2009	0.2009	2.2877	2.63212E 00
150.00	0.2023	0.1963	0.1963	1.7244	2.12156E 00
200.00	0.2203	0.2030	0.2030	1.4040	1.84855E 00
300.00	0.2447	0.2190	0.2110	1.0709	1.52995E 00
400.00	0.2636	0.2305	0.2157	0.8645	1.32957E 00
500.00	0.2800	0.2383	0.2185	0.7159	1.18535E 00
700.00	0.3088	0.2473	0.2201	0.5131	9.86849E-01
1000.00	0.3465	0.2517	0.2168	0.3307	8.03134E-01

CRO 20. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1273	0.2915	0.2915	6.9683	7.36242E 00
100.00	0.1751	0.2258	0.2258	4.5965	4.62450E 00
150.00	0.2010	0.2241	0.2241	3.4845	3.61727E 00
200.00	0.2183	0.2339	0.2339	2.8555	3.08426E 00
300.00	0.2423	0.2556	0.2513	2.1790	2.47066E 00
400.00	0.2607	0.2721	0.2635	1.7656	2.09080E 00
500.00	0.2766	0.2843	0.2723	1.4689	1.82100E 00
700.00	0.3038	0.3002	0.2831	1.0668	1.45590E 00
1000.00	0.3383	0.3114	0.2889	0.7076	1.12658E 00

CRO 30. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1273	0.3003	0.3003	10.4546	1.07163E 01
100.00	0.1749	0.2357	0.2357	6.9053	6.61687E 00
150.00	0.2005	0.2356	0.2356	5.2451	5.11299E 00
200.00	0.2176	0.2472	0.2472	4.3068	4.31998E 00
300.00	0.2414	0.2720	0.2691	3.2884	3.41138E 00
400.00	0.2598	0.2917	0.2856	2.6673	2.85203E 00
500.00	0.2754	0.3066	0.2980	2.2232	2.45665E 00
700.00	0.3021	0.3275	0.3149	1.6223	1.92494E 00
1000.00	0.3354	0.3448	0.3280	1.0868	1.45004E 00

CRO 50. EM 0.075C EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.3076	0.3076	17.4280	1.74241E 01
100.00	0.1747	0.2442	0.2442	11.5242	1.06016E 01
150.00	0.2002	0.2460	0.2460	8.7646	8.10443E 00
200.00	0.2170	0.2592	0.2592	7.2089	6.79140E 00
300.00	0.2407	0.2874	0.2855	5.5084	5.29281E 00
400.00	0.2589	0.3103	0.3064	4.4724	4.37449E 00
500.00	0.2744	0.3286	0.3230	3.7323	3.72794E 00
700.00	0.3006	0.3554	0.3472	2.7339	2.86304E 00
1000.00	0.3330	0.3809	0.3696	1.8466	2.09694E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1392	0.1891	0.1891	5.8488	4.84318E 00
100.00	0.1841	0.1665	0.1665	4.2409	3.56108E 00
150.00	0.2085	0.1749	0.1749	3.4511	3.01791E 00
200.00	0.2256	0.1870	0.1870	2.9602	2.69214E 00
300.00	0.2516	0.2089	0.2089	2.3351	2.27551E 00
400.00	0.2726	0.2266	0.2266	1.9275	1.99684E 00
500.00	0.2909	0.2410	0.2410	1.6322	1.78922E 00
700.00	0.3207	0.2633	0.2576	1.2633	1.49290E 00
1000.00	0.3573	0.2856	0.2705	0.9230	1.20569E 00

CRO 20. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1391	0.2007	0.2007	11.7012	9.11289E 00
100.00	0.1837	0.1797	0.1797	8.4953	6.55583E 00
150.00	0.2079	0.1907	0.1907	6.9230	5.47640E 00
200.00	0.2248	0.2052	0.2052	5.9482	4.83160E 00
300.00	0.2502	0.2316	0.2316	4.7100	4.01126E 00
400.00	0.2704	0.2532	0.2532	3.9069	3.46614E 00
500.00	0.2878	0.2710	0.2710	3.3272	3.06247E 00
700.00	0.3168	0.2992	0.2964	2.5809	2.49128E 00
1000.00	0.3523	0.3294	0.3210	1.9010	1.94531E 00

CRO 30. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2049	0.2049	17.5539	1.33826E 01
100.00	0.1837	0.1847	0.1847	12.7492	9.55058E 00
150.00	0.2078	0.1968	0.1968	10.3935	7.93490E 00
200.00	0.2246	0.2124	0.2124	8.9341	6.97105E 00
300.00	0.2497	0.2407	0.2407	7.0844	5.74701E 00
400.00	0.2697	0.2639	0.2639	5.8863	4.93544E 00
500.00	0.2868	0.2834	0.2834	5.0215	4.33573E 00
700.00	0.3155	0.3147	0.3128	3.8997	3.48966E 00
1000.00	0.3505	0.3492	0.3433	2.8810	2.68493E 00

CRO 50. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2084	0.2084	29.2600	2.19220E 01
100.00	0.1836	0.1889	0.1889	21.2570	1.55401E 01
150.00	0.2076	0.2018	0.2018	17.3374	1.28519E 01
200.00	0.2244	0.2184	0.2184	14.9100	1.12500E 01
300.00	0.2493	0.2485	0.2485	11.8342	9.21851E 00
400.00	0.2691	0.2734	0.2734	9.8446	7.87404E 00
500.00	0.2860	0.2945	0.2945	8.4106	6.88224E 00
700.00	0.3144	0.3288	0.3277	6.5373	5.48642E 00
1000.00	0.3490	0.3677	0.3640	4.8414	4.16416E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0571	0.6585	0.6585	0.3142	3.00346E 00
100.00	0.1038	0.4170	0.4170	0.0630	1.31338E 00
150.00	0.1580	0.1885	0.1826	0.0305	8.59083E-01
200.00	0.2044	0.1118	0.0772	0.0092	7.14132E-01
300.00	0.2598	0.0922	0.0198	0.0015	6.25463E-01
400.00	0.2927	0.0956	0.0099	0.0005	5.88372E-01
500.00	0.3202	0.1009	0.0066	0.0002	5.62288E-01
700.00	0.3694	0.1115	0.0036	0.0000	5.23427E-01
1000.00	0.4362	0.1260	0.0017	0.0000	4.81687E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0563	0.7532	0.7532	0.6528	5.22648E 00
100.00	0.0985	0.5744	0.5744	0.1264	1.90644E 00
150.00	0.1438	0.2965	0.2952	0.0719	1.03657E 00
200.00	0.1873	0.1514	0.1338	0.0282	7.74995E-01
300.00	0.2510	0.0995	0.0378	0.0039	6.38662E-01
400.00	0.2873	0.0990	0.0194	0.0011	5.94438E-01
500.00	0.3161	0.1030	0.0130	0.0004	5.66076E-01
700.00	0.3668	0.1125	0.0071	0.0001	5.25303E-01
1000.00	0.4347	0.1265	0.0034	0.0000	4.82507E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0561	0.7914	0.7914	0.9915	7.44950E 00
100.00	0.0969	0.6571	0.6571	0.1898	2.49949E 00
150.00	0.1385	0.3764	0.3759	0.1118	1.21405E 00
200.00	0.1785	0.1899	0.1791	0.0511	8.35858E-01
300.00	0.2436	0.1072	0.0542	0.0074	6.51860E-01
400.00	0.2822	0.1023	0.0286	0.0020	6.00504E-01
500.00	0.3122	0.1051	0.0193	0.0007	5.69865E-01
700.00	0.3642	0.1135	0.0106	0.0001	5.27179E-01
1000.00	0.4332	0.1269	0.0051	0.0000	4.83327E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0558	0.8249	0.8249	1.6692	1.18956E 01
100.00	0.0957	0.7427	0.7427	0.3165	3.68561E 00
150.00	0.1342	0.4833	0.4831	0.1900	1.56902E 00
200.00	0.1703	0.2569	0.2509	0.0989	9.57585E-01
300.00	0.2324	0.1230	0.0825	0.0171	6.78258E-01
400.00	0.2731	0.1094	0.0456	0.0044	6.12635E-01
500.00	0.3047	0.1094	0.0315	0.0014	5.77442E-01
700.00	0.3592	0.1157	0.0175	0.0002	5.30931E-01
1000.00	0.4303	0.1278	0.0084	0.0000	4.84968E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.050C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1037	0.4581	0.4581	1.6859	3.09510E 00
100.00	0.1560	0.2646	0.2646	0.9677	1.64085E 00
150.00	0.1883	0.1970	0.1970	0.6042	1.20392E 00
200.00	0.2097	0.1754	0.1754	0.4229	1.02236E 00
300.00	0.2407	0.1656	0.1656	0.2457	8.56170E-01
400.00	0.2632	0.1645	0.1551	0.1657	7.65878E-01
500.00	0.2814	0.1637	0.1426	0.1201	7.03811E-01
700.00	0.3163	0.1620	0.1227	0.0654	6.20141E-01
1000.00	0.3705	0.1615	0.0996	0.0257	5.42416E-01

CRO 20. EM 0.050C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1036	0.5094	0.5094	3.3724	5.56574E 00
100.00	0.1554	0.3232	0.3232	1.9451	2.66844E 00
150.00	0.1866	0.2554	0.2554	1.2306	1.80525E 00
200.00	0.2067	0.2338	0.2338	0.8782	1.45228E 00
300.00	0.2334	0.2237	0.2237	0.5417	1.13886E 00
400.00	0.2541	0.2209	0.2187	0.3720	9.75584E-01
500.00	0.2703	0.2178	0.2071	0.2777	8.67331E-01
700.00	0.3001	0.2099	0.1857	0.1634	7.28138E-01
1000.00	0.3438	0.1989	0.1586	0.0760	6.07805E-01

CRO 30. EM 0.050C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5292	0.5292	5.0591	8.03638E 00
100.00	0.1552	0.3492	0.3492	2.9223	3.69604E 00
150.00	0.1861	0.2847	0.2847	1.8566	2.40658E 00
200.00	0.2057	0.2656	0.2656	1.3331	1.88220E 00
300.00	0.2312	0.2592	0.2592	0.8363	1.42154E 00
400.00	0.2507	0.2583	0.2580	0.5818	1.18529E 00
500.00	0.2661	0.2559	0.2488	0.4392	1.03085E 00
700.00	0.2936	0.2469	0.2289	0.2667	8.36134E-01
1000.00	0.3323	0.2314	0.2006	0.1339	6.73193E-01

CRO 50. EM 0.050C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5461	0.5461	8.4323	1.29777E 01
100.00	0.1550	0.3734	0.3734	4.8768	5.75123E 00
150.00	0.1857	0.3140	0.3140	3.1085	3.60923E 00
200.00	0.2049	0.2995	0.2995	2.2422	2.74205E 00
300.00	0.2294	0.3002	0.3002	1.4245	1.98691E 00
400.00	0.2477	0.3041	0.3041	1.0078	1.60470E 00
500.00	0.2626	0.3050	0.3009	0.7651	1.35789E 00
700.00	0.2882	0.2993	0.2870	0.4767	1.05213E 00
1000.00	0.3223	0.2825	0.2607	0.2555	8.03971E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.075C EMU 5.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.2772	0.2772	4.4303	3.86887E 00
100.00	0.1748	0.2075	0.2075	2.8853	2.50293E 00
150.00	0.2004	0.2002	0.2002	2.1630	2.00191E 00
200.00	0.2175	0.2044	0.2044	1.7545	1.73761E 00
300.00	0.2420	0.2155	0.2155	1.2798	1.43425E 00
400.00	0.2615	0.2235	0.2235	0.9941	1.24667E 00
500.00	0.2786	0.2286	0.2286	0.7980	1.11325E 00
700.00	0.3092	0.2340	0.2340	0.5425	9.31693E-01
1000.00	0.3519	0.2371	0.2371	0.3213	7.65332E-01

CRO 20. EM 0.075C EMU 5.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.2968	0.2968	8.8621	7.22276E 00
100.00	0.1746	0.2302	0.2302	5.7783	4.49530E 00
150.00	0.2000	0.2273	0.2273	4.3392	3.49763E 00
200.00	0.2168	0.2359	0.2359	3.5265	2.97333E 00
300.00	0.2408	0.2550	0.2550	2.5849	2.37497E 00
400.00	0.2596	0.2696	0.2696	2.0212	2.00790E 00
500.00	0.2757	0.2801	0.2801	1.6361	1.74889E 00
700.00	0.3036	0.2935	0.2935	1.1389	1.40074E 00
1000.00	0.3399	0.3029	0.3029	0.7175	1.08878E 00

CRO 30. EM 0.075C EMU 5.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.3040	0.3040	13.2943	1.05766E 01
100.00	0.1745	0.2388	0.2388	8.6724	6.48768E 00
150.00	0.1999	0.2382	0.2382	6.5145	4.99334E 00
200.00	0.2166	0.2490	0.2490	5.2981	4.20904E 00
300.00	0.2404	0.2721	0.2721	3.8900	3.31568E 00
400.00	0.2589	0.2904	0.2904	3.0475	2.76913E 00
500.00	0.2748	0.3043	0.3043	2.4736	2.38454E 00
700.00	0.3018	0.3234	0.3234	1.7346	1.86979E 00
1000.00	0.3362	0.3390	0.3390	1.1124	1.41223E 00

CRO 50. EM 0.075C EMU 5.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.3100	0.3100	22.1581	1.72844E 01
100.00	0.1745	0.2463	0.2463	14.4595	1.04724E 01
150.00	0.1998	0.2477	0.2477	10.8668	7.98478E 00
200.00	0.2165	0.2606	0.2606	8.8421	6.68046E 00
300.00	0.2401	0.2878	0.2878	6.4999	5.19711E 00
400.00	0.2584	0.3099	0.3099	5.1008	4.29159E 00
500.00	0.2740	0.3274	0.3274	4.1483	3.65583E 00
700.00	0.3005	0.3533	0.3533	2.9250	2.80788E 00
1000.00	0.3334	0.3777	0.3777	1.9001	2.05914E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRC 10. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.1938	0.1938	7.5037	4.71689E 00
100.00	0.1837	0.1710	0.1710	5.4141	3.43924E 00
150.00	0.2078	0.1796	0.1796	4.3854	2.90034E 00
200.00	0.2246	0.1915	0.1915	3.7466	2.57867E 00
300.00	0.2499	0.2131	0.2131	2.9341	2.16977E 00
400.00	0.2699	0.2296	0.2296	2.4092	1.89824E 00
500.00	0.2872	0.2425	0.2425	2.0323	1.69721E 00
700.00	0.3169	0.2615	0.2615	1.5184	1.41265E 00
1000.00	0.3546	0.2795	0.2795	1.0513	1.14003E 00

CRC 20. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2034	0.2034	15.0093	8.98660E 00
100.00	0.1836	0.1824	0.1824	10.8346	6.43399E 00
150.00	0.2076	0.1936	0.1936	8.7803	5.35883E 00
200.00	0.2244	0.2083	0.2083	7.5048	4.71813E 00
300.00	0.2493	0.2346	0.2346	5.8869	3.90552E 00
400.00	0.2691	0.2557	0.2557	4.8430	3.36754E 00
500.00	0.2860	0.2729	0.2729	4.0943	2.97047E 00
700.00	0.3148	0.2996	0.2996	3.0765	2.41103E 00
1000.00	0.3506	0.3274	0.3274	2.1576	1.87965E 00

CRC 30. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2068	0.2068	22.5153	1.32563E 01
100.00	0.1835	0.1866	0.1866	16.2550	9.42874E 00
150.00	0.2076	0.1988	0.1988	13.1761	7.81733E 00
200.00	0.2243	0.2145	0.2145	11.2646	6.85759E 00
300.00	0.2491	0.2429	0.2429	8.8404	5.64127E 00
400.00	0.2688	0.2660	0.2660	7.2763	4.83684E 00
500.00	0.2856	0.2851	0.2851	6.1559	4.24373E 00
700.00	0.3141	0.3153	0.3153	4.6347	3.40941E 00
1000.00	0.3493	0.3482	0.3482	3.2635	2.61927E 00

CRC 50. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2096	0.2096	37.5255	2.17957E 01
100.00	0.1835	0.1901	0.1901	27.0944	1.54182E 01
150.00	0.2075	0.2032	0.2032	21.9648	1.27343E 01
200.00	0.2242	0.2198	0.2198	18.7826	1.11365E 01
300.00	0.2490	0.2500	0.2500	14.7474	9.11277E 00
400.00	0.2686	0.2749	0.2749	12.1440	7.77543E 00
500.00	0.2853	0.2956	0.2956	10.2814	6.79024E 00
700.00	0.3136	0.3293	0.3293	7.7521	5.40617E 00
1000.00	0.3483	0.3674	0.3674	5.4751	4.09850E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0557	0.6893	0.6893	0.4226	2.84408E 00
100.00	0.0951	0.4550	0.4550	0.0747	1.20327E 00
150.00	0.1333	0.1949	0.1949	0.0433	7.77340E-01
200.00	0.1894	0.0804	0.0804	0.0145	6.50838E-01
300.00	0.2963	0.0722	0.0222	0.0004	5.84703E-01
400.00	0.3221	0.0818	0.0107	0.0002	5.60643E-01
500.00	0.3435	0.0910	0.0069	0.0001	5.42796E-01
700.00	0.3843	0.1060	0.0036	0.0000	5.13196E-01
1000.00	0.4440	0.1237	0.0017	0.0000	4.77433E-01

CRO 20. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.7734	0.7734	0.8484	5.06711E 00
100.00	0.0946	0.6095	0.6095	0.1495	1.79633E 00
150.00	0.1304	0.3169	0.3169	0.0874	9.54824E-01
200.00	0.1687	0.1341	0.1341	0.0446	7.11701E-01
300.00	0.2841	0.0781	0.0429	0.0013	5.97902E-01
400.00	0.3154	0.0846	0.0210	0.0004	5.66709E-01
500.00	0.3389	0.0928	0.0137	0.0002	5.46585E-01
700.00	0.3815	0.1070	0.0073	0.0000	5.15072E-01
1000.00	0.4424	0.1241	0.0034	0.0000	4.78253E-01

CRO 30. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.8062	0.8062	1.2744	7.29013E 00
100.00	0.0944	0.6873	0.6873	0.2243	2.38938E 00
150.00	0.1295	0.4006	0.4006	0.1314	1.13231E 00
200.00	0.1643	0.1816	0.1816	0.0717	7.72564E-01
300.00	0.2731	0.0844	0.0622	0.0029	6.11100E-01
400.00	0.3091	0.0875	0.0310	0.0008	5.72775E-01
500.00	0.3344	0.0947	0.0204	0.0003	5.50373E-01
700.00	0.3787	0.1080	0.0108	0.0001	5.16948E-01
1000.00	0.4409	0.1246	0.0051	0.0000	4.79073E-01

CRO 50. EM 0.0253 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.8346	0.8346	2.1259	1.17362E 01
100.00	0.0942	0.7655	0.7655	0.3738	3.57550E 00
150.00	0.1288	0.5082	0.5082	0.2193	1.48728E 00
200.00	0.1611	0.2580	0.2580	0.1247	8.94291E-01
300.00	0.2552	0.0982	0.0959	0.0086	6.37498E-01
400.00	0.2974	0.0936	0.0501	0.0020	5.84907E-01
500.00	0.3257	0.0986	0.0333	0.0007	5.57950E-01
700.00	0.3734	0.1100	0.0179	0.0001	5.20700E-01
1000.00	0.4379	0.1255	0.0085	0.0000	4.80714E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.4858	0.4858	2.3550	2.91782E 00
100.00	0.1550	0.2918	0.2918	1.3453	1.47209E 00
150.00	0.1858	0.2178	0.2178	0.8467	1.04317E 00
200.00	0.2051	0.1898	0.1898	0.6032	8.69137E-01
300.00	0.2301	0.1684	0.1684	0.3732	7.16717E-01
400.00	0.2491	0.1560	0.1560	0.2566	6.38656E-01
500.00	0.2663	0.1458	0.1458	0.1837	5.87487E-01
700.00	0.3010	0.1305	0.1305	0.0962	5.22282E-01
1000.00	0.3820	0.1201	0.1201	0.0236	4.65828E-01

CRO 20. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5261	0.5261	4.7102	5.38846E 00
100.00	0.1549	0.3432	0.3432	2.6936	2.49969E 00
150.00	0.1854	0.2745	0.2745	1.7003	1.64450E 00
200.00	0.2045	0.2507	0.2507	1.2163	1.29906E 00
300.00	0.2285	0.2350	0.2350	0.7616	9.99402E-01
400.00	0.2462	0.2249	0.2249	0.5330	8.48362E-01
500.00	0.2614	0.2143	0.2143	0.3917	7.51007E-01
700.00	0.2892	0.1937	0.1937	0.2267	6.30278E-01
1000.00	0.3320	0.1692	0.1692	0.1022	5.31216E-01

CRO 30. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1034	0.5411	0.5411	7.0655	7.85911E 00
100.00	0.1548	0.3647	0.3647	4.0416	3.52728E 00
150.00	0.1853	0.3008	0.3008	2.5541	2.24583E 00
200.00	0.2042	0.2812	0.2812	1.8295	1.72899E 00
300.00	0.2280	0.2722	0.2722	1.1500	1.28209E 00
400.00	0.2452	0.2665	0.2665	0.8092	1.05807E 00
500.00	0.2599	0.2586	0.2586	0.5993	9.14527E-01
700.00	0.2857	0.2390	0.2390	0.3561	7.38274E-01
1000.00	0.3221	0.2104	0.2104	0.1763	5.96605E-01

CRO 50. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1034	0.5537	0.5537	11.7758	1.28004E 01
100.00	0.1548	0.3839	0.3839	6.7379	5.58247E 00
150.00	0.1852	0.3259	0.3259	4.2613	3.44848E 00
200.00	0.2040	0.3119	0.3119	3.0560	2.58883E 00
300.00	0.2276	0.3124	0.3124	1.9267	1.84746E 00
400.00	0.2444	0.3143	0.3143	1.3618	1.47748E 00
500.00	0.2587	0.3121	0.3121	1.0146	1.24157E 00
700.00	0.2832	0.2993	0.2993	0.6140	9.54267E-01
1000.00	0.3153	0.2719	0.2719	0.3226	7.27383E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRO 10. EM 0.075C EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.2881	0.2881	6.2387	3.71969E 00
100.00	0.1745	0.2192	0.2192	4.0516	2.35665E 00
150.00	0.1999	0.2134	0.2134	3.0301	1.85847E 00
200.00	0.2166	0.2188	0.2188	2.4536	1.59696E 00
300.00	0.2405	0.2318	0.2318	1.7854	1.29898E 00
400.00	0.2590	0.2403	0.2403	1.3872	1.11654E 00
500.00	0.2749	0.2453	0.2453	1.1161	9.88041E-01
700.00	0.3021	0.2479	0.2479	0.7697	8.15715E-01
1000.00	0.3371	0.2432	0.2432	0.4804	6.61786E-01

CRO 20. EM 0.075C EMU1C.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.3030	0.3030	12.4779	7.07358E 00
100.00	0.1745	0.2373	0.2373	8.1063	4.34903E 00
150.00	0.1998	0.2359	0.2359	6.0654	3.35419E 00
200.00	0.2164	0.2457	0.2457	4.9150	2.83267E 00
300.00	0.2401	0.2669	0.2669	3.5833	2.23969E 00
400.00	0.2583	0.2829	0.2829	2.7896	1.87777E 00
500.00	0.2739	0.2944	0.2944	2.2510	1.62369E 00
700.00	0.3002	0.3080	0.3080	1.5645	1.28476E 00
1000.00	0.3331	0.3149	0.3149	0.9951	9.85237E-01

CRO 30. EM 0.075C EMU1C.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.3083	0.3083	18.7177	1.04275E 01
100.00	0.1744	0.2439	0.2439	12.1618	6.34141E 00
150.00	0.1997	0.2444	0.2444	9.1021	4.84991E 00
200.00	0.2164	0.2563	0.2563	7.3759	4.06838E 00
300.00	0.2399	0.2812	0.2812	5.3812	3.18041E 00
400.00	0.2581	0.3009	0.3009	4.1922	2.63900E 00
500.00	0.2736	0.3159	0.3159	3.3862	2.25933E 00
700.00	0.2996	0.3360	0.3360	2.3592	1.75381E 00
1000.00	0.3318	0.3513	0.3513	1.5091	1.30869E 00

CRO 50. EM 0.075C EMU1C.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1271	0.3127	0.3127	31.1961	1.71352E 01
100.00	0.1744	0.2497	0.2497	20.2697	1.03262E 01
150.00	0.1997	0.2518	0.2518	15.1734	7.84135E 00
200.00	0.2163	0.2654	0.2654	12.2986	6.53981E 00
300.00	0.2398	0.2939	0.2939	8.9770	5.06184E 00
400.00	0.2579	0.3172	0.3172	6.9968	4.16146E 00
500.00	0.2733	0.3357	0.3357	5.6556	3.53063E 00
700.00	0.2991	0.3629	0.3629	3.9473	2.69190E 00
1000.00	0.3308	0.3880	0.3880	2.5376	1.95559E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 4 1 1 0 200

CRC 10. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.1992	0.1992	10.5861	4.58674E 00
100.00	0.1835	0.1772	0.1772	7.6222	3.31070E 00
150.00	0.2076	0.1869	0.1869	6.1618	2.77337E 00
200.00	0.2243	0.2000	0.2000	5.2544	2.45325E 00
300.00	0.2492	0.2234	0.2234	4.1019	2.04741E 00
400.00	0.2689	0.2415	0.2415	3.3585	1.77885E 00
500.00	0.2858	0.2557	0.2557	2.8268	1.58072E 00
700.00	0.3144	0.2763	0.2763	2.1058	1.30172E 00
1000.00	0.3500	0.2951	0.2951	1.4586	1.03692E 00

CRC 20. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1390	0.2063	0.2063	21.1722	8.85645E 00
100.00	0.1835	0.1859	0.1859	15.2473	6.30544E 00
150.00	0.2075	0.1978	0.1978	12.3289	5.23186E 00
200.00	0.2242	0.2132	0.2132	10.5158	4.59271E 00
300.00	0.2490	0.2410	0.2410	8.2131	3.78316E 00
400.00	0.2686	0.2632	0.2632	6.7311	3.24815E 00
500.00	0.2853	0.2815	0.2815	5.6694	2.85398E 00
700.00	0.3136	0.3098	0.3098	4.2338	2.30010E 00
1000.00	0.3484	0.3393	0.3393	2.9482	1.77654E 00

CRO 30. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1389	0.2088	0.2088	31.7602	1.31262E 01
100.00	0.1835	0.1890	0.1890	22.8732	9.30019E 00
150.00	0.2075	0.2017	0.2017	18.4972	7.69036E 00
200.00	0.2241	0.2180	0.2180	15.7771	6.73217E 00
300.00	0.2489	0.2475	0.2475	12.3252	5.51891E 00
400.00	0.2685	0.2714	0.2714	10.1036	4.71745E 00
500.00	0.2852	0.2914	0.2914	8.5121	4.12723E 00
700.00	0.3133	0.3230	0.3230	6.3613	3.29848E 00
1000.00	0.3478	0.3575	0.3575	4.4374	2.51615E 00

CRO 50. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1389	0.2108	0.2108	52.9337	2.16656E 01
100.00	0.1835	0.1915	0.1915	38.1258	1.52897E 01
150.00	0.2074	0.2049	0.2049	30.8353	1.26074E 01
200.00	0.2241	0.2220	0.2220	26.3010	1.10111E 01
300.00	0.2489	0.2529	0.2529	20.5513	8.99040E 00
400.00	0.2684	0.2784	0.2784	16.8471	7.65605E 00
500.00	0.2850	0.2997	0.2997	14.2001	6.67375E 00
700.00	0.3131	0.3345	0.3345	10.6173	5.29525E 00
1000.00	0.3474	0.3738	0.3738	7.4155	3.99538E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0634	0.6634	0.6634	0.2221	2.86624E 00
100.00	0.1123	0.3980	0.3977	0.0596	1.25948E 00
150.00	0.1626	0.1800	0.1722	0.0272	8.38597E-01
200.00	0.2096	0.1109	0.0730	0.0077	7.03593E-01
300.00	0.2655	0.0940	0.0188	0.0012	6.18511E-01
400.00	0.2994	0.0980	0.0094	0.0004	5.81702E-01
500.00	0.3279	0.1036	0.0062	0.0001	5.55609E-01
700.00	0.3792	0.1147	0.0033	0.0000	5.16630E-01
1000.00	0.4491	0.1300	0.0016	0.0000	4.74692E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0603	0.7602	0.7602	0.5018	4.94310E 00
100.00	0.1045	0.5555	0.5553	0.1200	1.80305E 00
150.00	0.1475	0.2821	0.2801	0.0664	1.00121E 00
200.00	0.1919	0.1476	0.1276	0.0244	7.59771E-01
300.00	0.2567	0.1009	0.0362	0.0032	6.30843E-01
400.00	0.2941	0.1011	0.0185	0.0009	5.87361E-01
500.00	0.3240	0.1055	0.0123	0.0003	5.59131E-01
700.00	0.3767	0.1157	0.0067	0.0000	5.18367E-01
1000.00	0.4477	0.1303	0.0032	0.0000	4.75449E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0594	0.7994	0.7994	0.7840	7.01996E 00
100.00	0.1018	0.6401	0.6399	0.1803	2.34661E 00
150.00	0.1418	0.3596	0.3587	0.1043	1.16382E 00
200.00	0.1825	0.1838	0.1713	0.0452	8.15949E-01
300.00	0.2492	0.1080	0.0521	0.0061	6.43175E-01
400.00	0.2890	0.1042	0.0273	0.0015	5.93020E-01
500.00	0.3201	0.1075	0.0183	0.0005	5.62654E-01
700.00	0.3742	0.1166	0.0100	0.0001	5.20104E-01
1000.00	0.4463	0.1308	0.0048	0.0000	4.76205E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0587	0.8340	0.8340	1.3495	1.11737E 01
100.00	0.0997	0.7289	0.7288	0.3008	3.43374E 00
150.00	0.1372	0.4654	0.4650	0.1786	1.48904E 00
200.00	0.1737	0.2478	0.2409	0.0894	9.28305E-01
300.00	0.2376	0.1230	0.0800	0.0143	6.67840E-01
400.00	0.2799	0.1108	0.0438	0.0034	6.04338E-01
500.00	0.3128	0.1115	0.0300	0.0011	5.69699E-01
700.00	0.3693	0.1186	0.0165	0.0001	5.23579E-01
1000.00	0.4434	0.1316	0.0079	0.0000	4.77718E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.050C EMU 3.0C H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1084	0.4291	0.4291	1.3434	3.09679E 00
100.00	0.1627	0.2593	0.2546	0.7799	1.68196E 00
150.00	0.1929	0.2085	0.1902	0.5170	1.24696E 00
200.00	0.2125	0.1920	0.1657	0.3810	1.05744E 00
300.00	0.2394	0.1826	0.1486	0.2420	8.75584E-01
400.00	0.2608	0.1781	0.1394	0.1670	7.75250E-01
500.00	0.2804	0.1744	0.1313	0.1190	7.06947E-01
700.00	0.3182	0.1690	0.1165	0.0621	6.16657E-01
1000.00	0.3774	0.1660	0.0961	0.0225	5.35191E-01

CRO 20. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1075	0.4881	0.4881	2.6910	5.43917E 00
100.00	0.1604	0.3164	0.3140	1.5879	2.65597E 00
150.00	0.1905	0.2617	0.2502	1.0600	1.82046E 00
200.00	0.2096	0.2448	0.2272	0.7865	1.46838E 00
300.00	0.2349	0.2362	0.2126	0.5106	1.14514E 00
400.00	0.2542	0.2318	0.2045	0.3625	9.74498E-01
500.00	0.2713	0.2265	0.1962	0.2675	8.61833E-01
700.00	0.3028	0.2156	0.1790	0.1535	7.18451E-01
1000.00	0.3496	0.2022	0.1547	0.0680	5.96490E-01

CRO 30. EM 0.050C EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1072	0.5115	0.5115	4.0385	7.78155E 00
100.00	0.1595	0.3431	0.3415	2.3961	3.62999E 00
150.00	0.1896	0.2895	0.2810	1.6043	2.39395E 00
200.00	0.2086	0.2746	0.2613	1.1937	1.87931E 00
300.00	0.2333	0.2698	0.2514	0.7812	1.41469E 00
400.00	0.2517	0.2677	0.2462	0.5607	1.17375E 00
500.00	0.2677	0.2635	0.2393	0.4195	1.01672E 00
700.00	0.2965	0.2519	0.2228	0.2498	8.20244E-01
1000.00	0.3375	0.2340	0.1968	0.1211	6.57788E-01

CRO 50. EM 0.050C EMU 3.0C H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1070	0.5320	0.5320	6.7334	1.24663E 01
100.00	0.1589	0.3685	0.3676	4.0131	5.57802E 00
150.00	0.1889	0.3182	0.3126	2.6931	3.54094E 00
200.00	0.2077	0.3069	0.2979	2.0095	2.70118E 00
300.00	0.2318	0.3093	0.2964	1.3235	1.95380E 00
400.00	0.2496	0.3125	0.2972	0.9587	1.57224E 00
500.00	0.2647	0.3120	0.2945	0.7256	1.32649E 00
700.00	0.2912	0.3039	0.2825	0.4457	1.02383E 00
1000.00	0.3269	0.2847	0.2575	0.2332	7.80385E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1310	0.2630	0.2630	3.3853	3.88819E 00
100.00	0.1789	0.2026	0.2026	2.2069	2.56430E 00
150.00	0.2054	0.1999	0.1999	1.6602	2.07130E 00
200.00	0.2236	0.2073	0.2073	1.3478	1.80467E 00
300.00	0.2480	0.2234	0.2142	1.0285	1.49131E 00
400.00	0.2673	0.2347	0.2187	0.8258	1.29420E 00
500.00	0.2842	0.2424	0.2214	0.6801	1.15266E 00
700.00	0.3137	0.2508	0.2224	0.4828	9.58428E-01
1000.00	0.3526	0.2546	0.2184	0.3066	7.79346E-01

CRO 20. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1307	0.2866	0.2866	6.7760	7.12289E 00
100.00	0.1781	0.2280	0.2280	4.4372	4.49097E 00
150.00	0.2039	0.2287	0.2287	3.3581	3.51964E 00
200.00	0.2213	0.2392	0.2392	2.7460	3.00003E 00
300.00	0.2455	0.2612	0.2561	2.0946	2.39791E 00
400.00	0.2643	0.2777	0.2683	1.6885	2.02528E 00
500.00	0.2805	0.2898	0.2771	1.3984	1.76132E 00
700.00	0.3084	0.3053	0.2874	1.0074	1.40539E 00
1000.00	0.3437	0.3156	0.2923	0.6608	1.08585E 00

CRO 30. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1306	0.2955	0.2955	10.1668	1.03576E 01
100.00	0.1779	0.2382	0.2382	6.6674	6.41764E 00
150.00	0.2034	0.2406	0.2406	5.0559	4.96799E 00
200.00	0.2206	0.2530	0.2530	4.1435	4.19540E 00
300.00	0.2447	0.2784	0.2749	3.1612	3.30451E 00
400.00	0.2633	0.2981	0.2914	2.5520	2.75635E 00
500.00	0.2792	0.3130	0.3038	2.1181	2.36998E 00
700.00	0.3064	0.3335	0.3204	1.5342	1.85236E 00
1000.00	0.3405	0.3502	0.3327	1.0174	1.39235E 00

CRO 50. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1306	0.3030	0.3030	16.9486	1.68270E 01
100.00	0.1777	0.2471	0.2471	11.1274	1.02710E 01
150.00	0.2030	0.2513	0.2513	8.4523	7.86469E 00
200.00	0.2200	0.2655	0.2655	6.9389	6.58613E 00
300.00	0.2439	0.2944	0.2922	5.2965	5.11770E 00
400.00	0.2624	0.3176	0.3133	4.2809	4.21850E 00
500.00	0.2782	0.3359	0.3299	3.5582	3.58731E 00
700.00	0.3049	0.3628	0.3542	2.5878	2.74630E 00
1000.00	0.3379	0.3879	0.3761	1.7321	2.00534E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1426	0.1875	0.1875	5.7115	4.73236E 00
100.00	0.1871	0.1693	0.1693	4.1242	3.48708E 00
150.00	0.2116	0.1791	0.1791	3.3487	2.95547E 00
200.00	0.2290	0.1917	0.1917	2.8657	2.63377E 00
300.00	0.2554	0.2142	0.2142	2.2493	2.22076E 00
400.00	0.2769	0.2322	0.2322	1.8490	1.94481E 00
500.00	0.2957	0.2468	0.2468	1.5591	1.73969E 00
700.00	0.3258	0.2693	0.2622	1.2069	1.44786E 00
1000.00	0.3634	0.2914	0.2750	0.8735	1.16622E 00

CRO 20. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1424	0.1992	0.1992	11.4281	8.89180E 00
100.00	0.1868	0.1830	0.1830	8.2624	6.40887E 00
150.00	0.2110	0.1955	0.1955	6.7191	5.35306E 00
200.00	0.2281	0.2108	0.2108	5.7595	4.71683E 00
300.00	0.2539	0.2380	0.2380	4.5403	3.90449E 00
400.00	0.2745	0.2598	0.2598	3.7524	3.36546E 00
500.00	0.2923	0.2780	0.2780	3.1846	2.96738E 00
700.00	0.3218	0.3067	0.3031	2.4681	2.40607E 00
1000.00	0.3579	0.3368	0.3275	1.8035	1.87218E 00

CRO 30. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1424	0.2035	0.2035	17.1444	1.30512E 01
100.00	0.1867	0.1881	0.1881	12.4010	9.33067E 00
150.00	0.2108	0.2018	0.2018	10.0896	7.75065E 00
200.00	0.2278	0.2181	0.2181	8.6547	6.79989E 00
300.00	0.2534	0.2473	0.2473	6.8323	5.58823E 00
400.00	0.2737	0.2710	0.2710	5.6563	4.78612E 00
500.00	0.2912	0.2909	0.2909	4.8099	4.19508E 00
700.00	0.3203	0.3228	0.3204	3.7311	3.36428E 00
1000.00	0.3560	0.3575	0.3510	2.7352	2.57815E 00

CRO 50. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1424	0.2071	0.2071	28.5758	2.13701E 01
100.00	0.1866	0.1925	0.1925	20.6766	1.51743E 01
150.00	0.2107	0.2071	0.2071	16.8305	1.25458E 01
200.00	0.2276	0.2244	0.2244	14.4437	1.09660E 01
300.00	0.2529	0.2555	0.2555	11.4157	8.95569E 00
400.00	0.2731	0.2811	0.2811	9.4622	7.62744E 00
500.00	0.2903	0.3025	0.3025	8.0600	6.65046E 00
700.00	0.3192	0.3375	0.3361	6.2575	5.28071E 00
1000.00	0.3544	0.3769	0.3728	4.5996	3.99009E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0594	0.6557	0.6557	0.2664	2.85235E 00
100.00	0.1078	0.3979	0.3979	0.0600	1.25833E 00
150.00	0.1626	0.1799	0.1722	0.0272	8.38467E-01
200.00	0.2096	0.1109	0.0730	0.0077	7.03575E-01
300.00	0.2655	0.0940	0.0188	0.0012	6.18510E-01
400.00	0.2994	0.0980	0.0094	0.0004	5.81702E-01
500.00	0.3279	0.1036	0.0062	0.0001	5.55609E-01
700.00	0.3792	0.1147	0.0033	0.0000	5.16630E-01
1000.00	0.4491	0.1300	0.0016	0.0000	4.74692E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0585	0.7554	0.7554	0.5545	4.92921E 00
100.00	0.1016	0.5556	0.5556	0.1204	1.80189E 00
150.00	0.1475	0.2820	0.2802	0.0664	1.00108E 00
200.00	0.1919	0.1476	0.1276	0.0244	7.59753E-01
300.00	0.2567	0.1009	0.0362	0.0032	6.30843E-01
400.00	0.2941	0.1011	0.0185	0.0009	5.87361E-01
500.00	0.3240	0.1055	0.0123	0.0003	5.59131E-01
700.00	0.3767	0.1157	0.0067	0.0000	5.18367E-01
1000.00	0.4477	0.1303	0.0032	0.0000	4.75449E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0582	0.7960	0.7960	0.8430	7.00607E 00
100.00	0.0998	0.6402	0.6402	0.1807	2.34546E 00
150.00	0.1418	0.3595	0.3587	0.1043	1.16369E 00
200.00	0.1825	0.1838	0.1713	0.0452	8.15931E-01
300.00	0.2492	0.1080	0.0521	0.0061	6.43175E-01
400.00	0.2890	0.1042	0.0273	0.0015	5.93020E-01
500.00	0.3201	0.1075	0.0183	0.0005	5.62654E-01
700.00	0.3742	0.1166	0.0100	0.0001	5.20104E-01
1000.00	0.4463	0.1308	0.0048	0.0000	4.76205E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0579	0.8319	0.8319	1.4198	1.11598E 01
100.00	0.0984	0.7290	0.7290	0.3014	3.43259E 00
150.00	0.1372	0.4654	0.4651	0.1786	1.48891E 00
200.00	0.1737	0.2478	0.2409	0.0894	9.28288E-01
300.00	0.2376	0.1230	0.0800	0.0143	6.67839E-01
400.00	0.2799	0.1108	0.0438	0.0034	6.04338E-01
500.00	0.3128	0.1115	0.0300	0.0011	5.69699E-01
700.00	0.3693	0.1186	0.0165	0.0001	5.23579E-01
1000.00	0.4434	0.1316	0.0079	0.0000	4.77718E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

ORC 10. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1069	0.4472	0.4472	1.6293	2.96597E 00
100.00	0.1592	0.2597	0.2597	0.9192	1.58565E 00
150.00	0.1913	0.1967	0.1967	0.5707	1.17381E 00
200.00	0.2130	0.1766	0.1766	0.3973	1.00051E 00
300.00	0.2451	0.1674	0.1674	0.2266	8.39234E-01
400.00	0.2672	0.1663	0.1542	0.1538	7.50881E-01
500.00	0.2862	0.1654	0.1417	0.1101	6.90067E-01
700.00	0.3229	0.1637	0.1215	0.0581	6.08027E-01
1000.00	0.3809	0.1637	0.0978	0.0214	5.31718E-01

CRO 20. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1068	0.4996	0.4996	3.2593	5.30835E 00
100.00	0.1585	0.3192	0.3192	1.8492	2.55967E 00
150.00	0.1895	0.2562	0.2562	1.1649	1.74730E 00
200.00	0.2095	0.2359	0.2359	0.8292	1.41145E 00
300.00	0.2368	0.2260	0.2260	0.5065	1.10879E 00
400.00	0.2576	0.2230	0.2189	0.3479	9.50129E-01
500.00	0.2743	0.2194	0.2068	0.2575	8.44953E-01
700.00	0.3052	0.2110	0.1848	0.1485	7.09821E-01
1000.00	0.3515	0.1999	0.1570	0.0662	5.93017E-01

CRO 30. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5200	0.5200	4.8895	7.65073E 00
100.00	0.1583	0.3459	0.3459	2.7792	3.53368E 00
150.00	0.1889	0.2863	0.2863	1.7591	2.32080E 00
200.00	0.2084	0.2687	0.2687	1.2606	1.82238E 00
300.00	0.2343	0.2623	0.2623	0.7849	1.37834E 00
400.00	0.2539	0.2608	0.2591	0.5458	1.14938E 00
500.00	0.2698	0.2578	0.2493	0.4091	9.99839E-01
700.00	0.2982	0.2481	0.2285	0.2445	8.11614E-01
1000.00	0.3387	0.2320	0.1993	0.1191	6.54315E-01

CRO 50. EM 0.0500 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5374	0.5374	8.1499	1.23355E 01
100.00	0.1581	0.3708	0.3708	4.6391	5.48172E 00
150.00	0.1884	0.3167	0.3167	2.9472	3.46779E 00
200.00	0.2076	0.3036	0.3036	2.1232	2.64425E 00
300.00	0.2323	0.3045	0.3045	1.3410	1.91745E 00
400.00	0.2509	0.3080	0.3077	0.9435	1.54787E 00
500.00	0.2659	0.3082	0.3029	0.7149	1.30961E 00
700.00	0.2922	0.3011	0.2877	0.4403	1.01520E 00
1000.00	0.3275	0.2830	0.2599	0.2311	7.76912E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.075C EMU 5.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CO	0.1306	0.2720	0.2720	4.3037	3.74934E 00
100.CO	0.1778	0.2089	0.2089	2.7804	2.43655E 00
150.CC	0.2033	0.2035	0.2035	2.0799	1.95356E 00
200.CC	0.2205	0.2082	0.2082	1.6825	1.69599E 00
300.CO	0.2455	0.2194	0.2194	1.2200	1.39831E 00
400.CO	0.2654	0.2271	0.2271	0.9424	1.21418E 00
500.CC	0.2829	0.2320	0.2320	0.7525	1.08346E 00
700.CO	0.3145	0.2372	0.2372	0.5055	9.05997E-01
1000.CC	0.3595	0.2401	0.2401	0.2924	7.43789E-01

CRO 20. EM 0.075C EMU 5.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CC	0.1305	0.2919	0.2919	8.6093	6.98404E 00
100.CO	0.1776	0.2323	0.2323	5.5694	4.36322E 00
150.CO	0.2029	0.2317	0.2317	4.1734	3.40191E 00
200.CO	0.2198	0.2410	0.2410	3.3834	2.89136E 00
300.CC	0.2441	0.2604	0.2604	2.4670	2.30490E 00
400.CO	0.2632	0.2748	0.2748	1.9199	1.94525E 00
500.CC	0.2797	0.2853	0.2853	1.5473	1.69212E 00
700.CO	0.3082	0.2982	0.2982	1.0685	1.35296E 00
1000.CC	0.3456	0.3069	0.3069	0.6648	1.05029E 00

CRO 30. EM 0.075C EMU 5.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CO	0.1305	0.2992	0.2992	12.9146	1.02187E 01
100.CO	0.1775	0.2415	0.2415	8.3573	6.28989E 00
150.CC	0.2027	0.2431	0.2431	6.2668	4.85025E 00
200.CO	0.2195	0.2547	0.2547	5.0843	4.08672E 00
300.CO	0.2437	0.2782	0.2782	3.7143	3.21150E 00
400.CO	0.2625	0.2966	0.2966	2.8970	2.67633E 00
500.CO	0.2786	0.3104	0.3104	2.3417	2.30079E 00
700.CO	0.3062	0.3291	0.3291	1.6306	1.79993E 00
1000.CO	0.3415	0.3443	0.3443	1.0345	1.35679E 00

CRO 50. EM 0.075C EMU 5.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CO	0.1305	0.3053	0.3053	21.5263	1.66881E 01
100.CO	0.1775	0.2493	0.2493	13.9342	1.01432E 01
150.CC	0.2026	0.2530	0.2530	10.4538	7.74695E 00
200.CC	0.2193	0.2668	0.2668	8.4872	6.47745E 00
300.CC	0.2433	0.2947	0.2947	6.2077	5.02470E 00
400.CO	0.2619	0.3170	0.3170	4.8511	4.13848E 00
500.CC	0.2778	0.3347	0.3347	3.9299	3.51811E 00
700.CO	0.3047	0.3604	0.3604	2.7538	2.69386E 00
1000.CC	0.3383	0.3843	0.3843	1.7734	1.96979E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1424	0.1922	0.1922	7.3246	4.60642E 00
100.00	0.1867	0.1740	0.1740	5.2607	3.36589E 00
150.00	0.2109	0.1838	0.1838	4.2514	2.83883E 00
200.00	0.2279	0.1963	0.1963	3.6222	2.52147E 00
300.00	0.2536	0.2183	0.2183	2.8222	2.11660E 00
400.00	0.2740	0.2350	0.2350	2.3077	1.84810E 00
500.00	0.2917	0.2480	0.2480	1.9391	1.64982E 00
700.00	0.3221	0.2670	0.2670	1.4386	1.37005E 00
1000.00	0.3608	0.2846	0.2846	0.9868	1.10316E 00

CRO 20. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2019	0.2019	14.6520	8.76586E 00
100.00	0.1866	0.1857	0.1857	10.5287	6.28768E 00
150.00	0.2106	0.1983	0.1983	8.5137	5.23642E 00
200.00	0.2276	0.2138	0.2138	7.2574	4.60453E 00
300.00	0.2529	0.2408	0.2408	5.6651	3.80033E 00
400.00	0.2731	0.2623	0.2623	4.6412	3.26876E 00
500.00	0.2904	0.2798	0.2798	3.9095	2.87751E 00
700.00	0.3197	0.3065	0.3065	2.9206	2.32826E 00
1000.00	0.3564	0.3344	0.3344	2.0315	1.80913E 00

CRO 30. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2054	0.2054	21.9779	1.29253E 01
100.00	0.1866	0.1901	0.1901	15.7962	9.20948E 00
150.00	0.2106	0.2038	0.2038	12.7761	7.63400E 00
200.00	0.2275	0.2203	0.2203	10.8933	6.68759E 00
300.00	0.2528	0.2496	0.2496	8.5073	5.48406E 00
400.00	0.2728	0.2731	0.2731	6.9747	4.68941E 00
500.00	0.2899	0.2925	0.2925	5.8808	4.10521E 00
700.00	0.3189	0.3231	0.3231	4.4020	3.28648E 00
1000.00	0.3549	0.3563	0.3563	3.0760	2.51509E 00

CRO 50. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2082	0.2082	36.6322	2.12442E 01
100.00	0.1865	0.1937	0.1937	26.3296	1.50531E 01
150.00	0.2105	0.2084	0.2084	21.2981	1.24292E 01
200.00	0.2274	0.2259	0.2259	18.1635	1.08537E 01
300.00	0.2526	0.2571	0.2571	14.1918	8.85152E 00
400.00	0.2725	0.2824	0.2824	11.6434	7.53073E 00
500.00	0.2896	0.3037	0.3037	9.8220	6.56060E 00
700.00	0.3183	0.3379	0.3379	7.3649	5.20291E 00
1000.00	0.3538	0.3765	0.3765	5.1645	3.92703E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.0253 EMU 10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0578	0.6878	0.6878	0.3577	2.69708E 00
100.00	0.0978	0.4344	0.4344	0.0708	1.15220E 00
150.00	0.1368	0.1821	0.1821	0.0404	7.60247E-01
200.00	0.2034	0.0785	0.0785	0.0097	6.43367E-01
300.00	0.3010	0.0750	0.0209	0.0004	5.80111E-01
400.00	0.3278	0.0849	0.0101	0.0001	5.55778E-01
500.00	0.3503	0.0943	0.0065	0.0001	5.37496E-01
700.00	0.3934	0.1097	0.0034	0.0000	5.07206E-01
1000.00	0.4565	0.1278	0.0016	0.0000	4.70802E-01

CRO 20. EM 0.0253 EMU 10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0577	0.7768	0.7768	0.7182	4.77394E 00
100.00	0.0971	0.5902	0.5902	0.1416	1.69577E 00
150.00	0.1333	0.2993	0.2993	0.0820	9.22857E-01
200.00	0.1732	0.1276	0.1276	0.0394	6.99545E-01
300.00	0.2892	0.0805	0.0406	0.0011	5.92443E-01
400.00	0.3213	0.0876	0.0198	0.0003	5.61437E-01
500.00	0.3459	0.0960	0.0129	0.0001	5.41019E-01
700.00	0.3907	0.1106	0.0068	0.0000	5.08943E-01
1000.00	0.4551	0.1282	0.0032	0.0000	4.71558E-01

CRO 30. EM 0.0253 EMU 10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0576	0.8118	0.8118	1.0788	6.85079E 00
100.00	0.0969	0.6705	0.6705	0.2125	2.23933E 00
150.00	0.1322	0.3815	0.3815	0.1234	1.08547E 00
200.00	0.1677	0.1727	0.1727	0.0648	7.55723E-01
300.00	0.2785	0.0865	0.0590	0.0024	6.04775E-01
400.00	0.3152	0.0903	0.0294	0.0006	5.67096E-01
500.00	0.3415	0.0977	0.0192	0.0002	5.44541E-01
700.00	0.3881	0.1115	0.0102	0.0000	5.10680E-01
1000.00	0.4536	0.1286	0.0048	0.0000	4.72315E-01

CRO 50. EM 0.0253 EMU 10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0576	0.8422	0.8422	1.8003	1.10045E 01
100.00	0.0967	0.7522	0.7522	0.3542	3.32646E 00
150.00	0.1314	0.4890	0.4890	0.2062	1.41069E 00
200.00	0.1640	0.2464	0.2464	0.1140	8.68079E-01
300.00	0.2607	0.0995	0.0917	0.0071	6.29440E-01
400.00	0.3038	0.0961	0.0475	0.0016	5.78414E-01
500.00	0.3331	0.1014	0.0314	0.0005	5.51586E-01
700.00	0.3829	0.1134	0.0168	0.0001	5.14154E-01
1000.00	0.4507	0.1295	0.0080	0.0000	4.73828E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.050C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.4754	0.4754	2.274C	2.78935E 00
100.00	0.1581	0.2869	0.2869	1.2773	1.41811E 00
150.00	0.1886	0.2170	0.2170	0.8006	1.01474E 00
200.00	0.2079	0.1901	0.1901	0.5690	8.49357E-01
300.00	0.2331	0.1684	0.1684	0.3494	7.02430E-01
400.00	0.2527	0.1557	0.1557	0.2378	6.26695E-01
500.00	0.2706	0.1454	0.1454	0.1682	5.77023E-01
700.00	0.3079	0.1304	0.1304	0.0846	5.13644E-01
1000.00	0.4144	0.1220	0.1220	0.0135	4.58510E-01

CRO 20. EM 0.050C EMU1C.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5167	0.5167	4.5482	5.13173E 00
100.00	0.158C	0.3395	0.3395	2.558C	2.39212E 00
150.00	0.1881	0.2753	0.2753	1.6086	1.58823E 00
200.00	0.2071	0.2525	0.2525	1.1488	1.26029E 00
300.00	0.2313	0.2362	0.2362	0.7151	9.71984E-01
400.00	0.2493	0.2254	0.2254	0.4968	8.25943E-01
500.00	0.2650	0.2142	0.2142	0.3624	7.31909E-01
700.00	0.2938	0.1929	0.1929	0.206C	6.15438E-01
1000.00	0.3401	0.1687	0.1687	0.0879	5.19809E-01

CRO 30. EM 0.050C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1066	0.5322	0.5322	6.8226	7.47411E 00
100.00	0.1579	0.3616	0.3616	3.8387	3.36614E 00
150.00	0.1880	0.3026	0.3026	2.4169	2.16173E 00
200.00	0.2068	0.2842	0.2842	1.7287	1.67123E 00
300.00	0.2307	0.2747	0.2747	1.0803	1.24154E 00
400.00	0.2482	0.2680	0.268C	0.7557	1.02519E 00
500.00	0.2632	0.2593	0.2593	0.5561	8.86795E-01
700.00	0.2898	0.2385	0.2385	0.3262	7.17231E-01
1000.00	0.3281	0.2094	0.2094	0.1567	5.81107E-01

CRO 50. EM 0.050C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1066	0.5452	0.5452	11.3709	1.21589E 01
100.00	0.1578	0.3815	0.3815	6.4008	5.31417E 00
150.00	0.1879	0.3288	0.3288	4.0332	3.30872E 00
200.00	0.2066	0.3163	0.3163	2.8877	2.49310E 00
300.00	0.2302	0.3165	0.3165	1.8117	1.78065E 00
400.00	0.2474	0.3176	0.3176	1.2730	1.42368E 00
500.00	0.2619	0.3144	0.3144	0.9433	1.19657E 00
700.00	0.2869	0.2999	0.2999	0.5654	9.20819E-01
1000.00	0.3201	0.2709	0.2709	0.2916	7.03704E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.075C EMU10.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1305	0.2831	0.2831	6.0584	3.60038E 00
100.00	0.1775	0.2210	0.2210	3.9018	2.29071E 00
150.00	0.2027	0.2170	0.2170	2.9121	1.81076E 00
200.00	0.2195	0.2229	0.2229	2.3516	1.55616E 00
300.00	0.2437	0.2358	0.2358	1.7017	1.26419E 00
400.00	0.2626	0.2441	0.2441	1.3150	1.08550E 00
500.00	0.2788	0.2485	0.2485	1.0534	9.59970E-01
700.00	0.3066	0.2504	0.2504	0.7203	7.92161E-01
1000.00	0.3426	0.2445	0.2445	0.4440	6.42826E-01

CRO 20. EM 0.075C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1305	0.2982	0.2982	12.1180	6.83508E 00
100.00	0.1774	0.2397	0.2397	7.8081	4.21738E 00
150.00	0.2026	0.2405	0.2405	5.8304	3.25910E 00
200.00	0.2193	0.2510	0.2510	4.7118	2.75152E 00
300.00	0.2433	0.2726	0.2726	3.4160	2.17078E 00
400.00	0.2618	0.2885	0.2885	2.6468	1.81658E 00
500.00	0.2776	0.2997	0.2997	2.1271	1.56863E 00
700.00	0.3045	0.3128	0.3128	1.4669	1.23913E 00
1000.00	0.3380	0.3183	0.3183	0.9242	9.49326E-01

CRO 30. EM 0.075C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1305	0.3036	0.3036	18.1770	1.00698E 01
100.00	0.1774	0.2467	0.2467	11.7145	6.14405E 00
150.00	0.2025	0.2494	0.2494	8.7495	4.70745E 00
200.00	0.2192	0.2621	0.2621	7.0724	3.94688E 00
300.00	0.2431	0.2877	0.2877	5.1300	3.07738E 00
400.00	0.2616	0.3074	0.3074	3.9786	2.54765E 00
500.00	0.2773	0.3222	0.3222	3.2005	2.17730E 00
700.00	0.3038	0.3419	0.3419	2.2143	1.68609E 00
1000.00	0.3366	0.3561	0.3561	1.4043	1.25583E 00

CRO 50. EM 0.075C EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1305	0.3080	0.3080	30.2964	1.65392E 01
100.00	0.1774	0.2526	0.2526	19.5241	9.99739E 00
150.00	0.2025	0.2572	0.2572	14.5856	7.60415E 00
200.00	0.2192	0.2717	0.2717	11.7927	6.33761E 00
300.00	0.2430	0.3010	0.3010	8.5598	4.89058E 00
400.00	0.2614	0.3245	0.3245	6.6420	4.00980E 00
500.00	0.2770	0.3432	0.3432	5.3469	3.39462E 00
700.00	0.3033	0.3703	0.3703	3.7067	2.58003E 00
1000.00	0.3354	0.3946	0.3946	2.3639	1.86882E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 4 2 1 0 200

CRO 10. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.1977	0.1977	10.3314	4.47639E 00
100.00	0.1866	0.1803	0.1803	7.4041	3.23758E 00
150.00	0.2106	0.1913	0.1913	5.9713	2.71221E 00
200.00	0.2275	0.2051	0.2051	5.0773	2.39653E 00
300.00	0.2528	0.2290	0.2290	3.9429	1.99491E 00
400.00	0.2729	0.2472	0.2472	3.2147	1.72958E 00
500.00	0.2901	0.2615	0.2615	2.6950	1.53437E 00
700.00	0.3193	0.2819	0.2819	1.9944	1.26049E 00
1000.00	0.3557	0.3002	0.3002	1.3698	1.00180E 00

CRO 20. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2049	0.2049	20.6642	8.63584E 00
100.00	0.1865	0.1894	0.1894	14.8111	6.15938E 00
150.00	0.2105	0.2028	0.2028	11.9477	5.10980E 00
200.00	0.2274	0.2190	0.2190	10.1614	4.47958E 00
300.00	0.2526	0.2474	0.2474	7.8966	3.67864E 00
400.00	0.2726	0.2701	0.2701	6.4427	3.15024E 00
500.00	0.2896	0.2885	0.2885	5.4078	2.76207E 00
700.00	0.3184	0.3171	0.3171	4.0128	2.21870E 00
1000.00	0.3538	0.3465	0.3465	2.7722	1.70777E 00

CRO 30. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2074	0.2074	30.9962	1.27953E 01
100.00	0.1865	0.1926	0.1926	22.2189	9.08117E 00
150.00	0.2105	0.2069	0.2069	17.9254	7.50739E 00
200.00	0.2274	0.2240	0.2240	15.2455	6.56264E 00
300.00	0.2525	0.2543	0.2543	11.8503	5.36237E 00
400.00	0.2724	0.2787	0.2787	9.6731	4.57089E 00
500.00	0.2894	0.2990	0.2990	8.1192	3.98976E 00
700.00	0.3181	0.3311	0.3311	6.0307	3.17692E 00
1000.00	0.3532	0.3658	0.3658	4.1746	2.41374E 00

CRO 50. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1423	0.2095	0.2095	51.6637	2.11142E 01
100.00	0.1865	0.1952	0.1952	37.0351	1.49248E 01
150.00	0.2105	0.2104	0.2104	29.8756	1.23026E 01
200.00	0.2273	0.2282	0.2282	25.4147	1.07288E 01
300.00	0.2524	0.2600	0.2600	19.7595	8.72984E 00
400.00	0.2723	0.2861	0.2861	16.1292	7.41221E 00
500.00	0.2893	0.3079	0.3079	13.5447	6.44515E 00
700.00	0.3178	0.3432	0.3432	10.0680	5.09334E 00
1000.00	0.3528	0.3831	0.3831	6.9781	3.82567E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0931	0.5434	0.5424	0.0783	1.65569E 00
100.00	0.1638	0.2344	0.2259	0.0233	8.33364E-01
150.00	0.2458	0.1461	0.0839	0.0022	6.43808E-01
200.00	0.3041	0.1355	0.0327	0.0003	5.77125E-01
300.00	0.3758	0.1446	0.0094	0.0000	5.18921E-01
400.00	0.4314	0.1571	0.0050	0.0000	4.84371E-01
500.00	0.4823	0.1687	0.0033	0.0000	4.58066E-01
700.00	0.5785	0.1889	0.0017	0.0000	4.18244E-01
1000.00	0.7172	0.2138	0.0008	-0.0000	3.75617E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0868	0.6878	0.6874	0.1609	2.60870E 00
100.00	0.1439	0.3557	0.3539	0.0618	1.03612E 00
150.00	0.2155	0.1816	0.1493	0.0108	6.99053E-01
200.00	0.2857	0.1459	0.0629	0.0011	5.96149E-01
300.00	0.3689	0.1470	0.0186	0.0001	5.23794E-01
400.00	0.4270	0.1583	0.0100	0.0000	4.86796E-01
500.00	0.4792	0.1694	0.0065	0.0000	4.59570E-01
700.00	0.5765	0.1892	0.0034	0.0000	4.18955E-01
1000.00	0.7162	0.2140	0.0016	-0.0000	3.75911E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0847	0.7549	0.7546	0.2443	3.56171E 00
100.00	0.1371	0.4420	0.4412	0.0980	1.23888E 00
150.00	0.1982	0.2188	0.2003	0.0254	7.54299E-01
200.00	0.2698	0.1572	0.0904	0.0028	6.15174E-01
300.00	0.3622	0.1496	0.0276	0.0001	5.28668E-01
400.00	0.4228	0.1595	0.0149	0.0000	4.89221E-01
500.00	0.4760	0.1702	0.0098	0.0000	4.61074E-01
700.00	0.5746	0.1896	0.0051	0.0000	4.19667E-01
1000.00	0.7150	0.2141	0.0023	-0.0000	3.76205E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0830	0.8188	0.8186	0.4117	5.46774E 00
100.00	0.1317	0.5523	0.5520	0.1684	1.64439E 00
150.00	0.1823	0.2874	0.2786	0.0608	8.64790E-01
200.00	0.2455	0.1813	0.1376	0.0099	6.53224E-01
300.00	0.3494	0.1548	0.0450	0.0003	5.38415E-01
400.00	0.4146	0.1621	0.0245	0.0000	4.94070E-01
500.00	0.4699	0.1718	0.0162	0.0000	4.64082E-01
700.00	0.5707	0.1904	0.0084	0.0000	4.21089E-01
1000.00	0.7128	0.2145	0.0039	-0.0000	3.76793E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1490	0.3513	0.3513	0.8475	1.95782E 00
100.00	0.2018	0.2590	0.2376	0.4183	1.15382E 00
150.00	0.2336	0.2329	0.1979	0.2541	9.08743E-01
200.00	0.2571	0.2236	0.1804	0.1721	7.90577E-01
300.00	0.2963	0.2163	0.1615	0.0885	6.63373E-01
400.00	0.3346	0.2134	0.1467	0.0463	5.88733E-01
500.00	0.3755	0.2129	0.1324	0.0231	5.37128E-01
700.00	0.4683	0.2173	0.1044	0.0046	4.67950E-01
1000.00	0.6206	0.2306	0.0712	0.0003	4.03985E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1457	0.4175	0.4175	1.7359	3.22826E 00
100.00	0.1974	0.3234	0.3104	0.8767	1.68006E 00
150.00	0.2272	0.2953	0.2724	0.5489	1.22981E 00
200.00	0.2481	0.2843	0.2555	0.3865	1.02338E 00
300.00	0.2804	0.2730	0.2365	0.2202	8.12800E-01
400.00	0.3095	0.2642	0.2208	0.1332	6.95612E-01
500.00	0.3390	0.2571	0.2059	0.0803	6.17800E-01
700.00	0.4070	0.2484	0.1765	0.0252	5.18510E-01
1000.00	0.5438	0.2484	0.1316	0.0023	4.32842E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1446	0.4465	0.4465	2.6224	4.49870E 00
100.00	0.1958	0.3574	0.3479	1.3369	2.20630E 00
150.00	0.2249	0.3323	0.3150	0.8464	1.55087E 00
200.00	0.2447	0.3233	0.3011	0.6041	1.25617E 00
300.00	0.2745	0.3134	0.2851	0.3573	9.62227E-01
400.00	0.3000	0.3039	0.2705	0.2277	8.02491E-01
500.00	0.3246	0.2944	0.2555	0.1480	6.98473E-01
700.00	0.3779	0.2786	0.2262	0.0592	5.69070E-01
1000.00	0.4881	0.2673	0.1810	0.0089	4.61699E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1438	0.4732	0.4732	4.3948	7.03957E 00
100.00	0.1945	0.3926	0.3864	2.2582	3.25877E 00
150.00	0.2230	0.3740	0.3622	1.4431	2.19299E 00
200.00	0.2420	0.3699	0.3545	1.0419	1.72177E 00
300.00	0.2695	0.3664	0.3464	0.6348	1.26108E 00
400.00	0.2921	0.3596	0.3359	0.4217	1.01625E 00
500.00	0.3128	0.3502	0.3229	0.2905	8.59818E-01
700.00	0.3538	0.3299	0.2944	0.1409	6.70190E-01
1000.00	0.4282	0.3053	0.2516	0.0392	5.19412E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1720	0.2647	0.2647	2.2285	2.71748E 00
100.00	0.2205	0.2582	0.2582	1.3358	1.84651E 00
150.00	0.2469	0.2692	0.2607	1.0059	1.50381E 00
200.00	0.2662	0.2795	0.2639	0.8116	1.30471E 00
300.00	0.2967	0.2932	0.2678	0.5727	1.06224E 00
400.00	0.3225	0.3006	0.2681	0.4255	9.10905E-01
500.00	0.3461	0.3045	0.2662	0.3243	8.04523E-01
700.00	0.3907	0.3069	0.2587	0.1945	6.62218E-01
1000.00	0.4597	0.3059	0.2425	0.0887	5.34655E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1709	0.2945	0.2945	4.4897	4.81604E 00
100.00	0.2175	0.2943	0.2943	2.7384	3.10661E 00
150.00	0.2433	0.3107	0.3063	2.0663	2.44685E 00
200.00	0.2619	0.3258	0.3170	1.6781	2.07013E 00
300.00	0.2906	0.3470	0.3319	1.2040	1.62010E 00
400.00	0.3140	0.3598	0.3402	0.9137	1.34531E 00
500.00	0.3347	0.3675	0.3441	0.7153	1.15576E 00
700.00	0.3717	0.3738	0.3440	0.4618	9.08285E-01
1000.00	0.4232	0.3724	0.3341	0.2521	6.94573E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1705	0.3062	0.3062	6.7508	6.91460E 00
100.00	0.2165	0.3098	0.3098	4.1398	4.36671E 00
150.00	0.2421	0.3293	0.3263	3.1282	3.38990E 00
200.00	0.2604	0.3472	0.3411	2.5463	2.83555E 00
300.00	0.2884	0.3734	0.3627	1.8374	2.17796E 00
400.00	0.3110	0.3906	0.3763	1.4044	1.77972E 00
500.00	0.3307	0.4017	0.3845	1.1097	1.50699E 00
700.00	0.3652	0.4132	0.3912	0.7334	1.15435E 00
1000.00	0.4110	0.4161	0.3879	0.4231	8.54490E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1702	0.3163	0.3163	11.2742	1.11117E 01
100.00	0.2157	0.3236	0.3236	6.9438	6.88692E 00
150.00	0.2410	0.3465	0.3447	5.2528	5.27599E 00
200.00	0.2591	0.3675	0.3637	4.2844	4.36638E 00
300.00	0.2866	0.3996	0.3927	3.1054	3.29367E 00
400.00	0.3086	0.4219	0.4126	2.3878	2.64853E 00
500.00	0.3275	0.4377	0.4264	1.9001	2.20946E 00
700.00	0.3598	0.4571	0.4425	1.2797	1.64649E 00
1000.00	0.4014	0.4691	0.4501	0.7690	1.17433E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1850	0.2198	0.2198	4.0008	3.53864E 00
100.00	0.2300	0.2386	0.2386	2.7428	2.61554E 00
150.00	0.2574	0.2599	0.2599	2.1499	2.19386E 00
200.00	0.2784	0.2779	0.2779	1.7777	1.92675E 00
300.00	0.3113	0.3052	0.3022	1.3320	1.58137E 00
400.00	0.3368	0.3244	0.3147	1.0741	1.35611E 00
500.00	0.3592	0.3384	0.3230	0.8873	1.19340E 00
700.00	0.3986	0.3571	0.3327	0.6313	9.69735E-01
1000.00	0.4512	0.3718	0.3366	0.3997	7.63241E-01

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1844	0.2363	0.2363	8.0263	6.52521E 00
100.00	0.2286	0.2603	0.2603	5.5322	4.69900E 00
150.00	0.2550	0.2860	0.2860	4.3637	3.87228E 00
200.00	0.2750	0.3078	0.3078	3.6333	3.35261E 00
300.00	0.3063	0.3412	0.3402	2.7398	2.68673E 00
400.00	0.3308	0.3657	0.3608	2.2254	2.25727E 00
500.00	0.3519	0.3842	0.3761	1.8543	1.95014E 00
700.00	0.3882	0.4106	0.3970	1.3485	1.53361E 00
1000.00	0.4344	0.4340	0.4137	0.8933	1.15709E 00

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1842	0.2425	0.2425	12.0513	9.51178E 00
100.00	0.2282	0.2688	0.2688	8.3209	6.78247E 00
150.00	0.2542	0.2964	0.2964	6.5766	5.55070E 00
200.00	0.2739	0.3199	0.3199	5.4882	4.77846E 00
300.00	0.3046	0.3563	0.3558	4.1492	3.79210E 00
400.00	0.3287	0.3835	0.3802	3.3789	3.15842E 00
500.00	0.3494	0.4046	0.3990	2.8234	2.70688E 00
700.00	0.3846	0.4357	0.4261	2.0681	2.09749E 00
1000.00	0.4288	0.4653	0.4509	1.3897	1.55095E 00

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1840	0.2477	0.2477	20.1014	1.54849E 01
100.00	0.2278	0.2760	0.2760	13.8997	1.09494E 01
150.00	0.2536	0.3055	0.3055	11.0023	8.90755E 00
200.00	0.2730	0.3306	0.3306	9.1977	7.63018E 00
300.00	0.3032	0.3699	0.3696	6.9698	6.00284E 00
400.00	0.3270	0.3998	0.3979	5.6861	4.96072E 00
500.00	0.3473	0.4236	0.4202	4.7621	4.22037E 00
700.00	0.3817	0.4597	0.4537	3.5086	3.22525E 00
1000.00	0.4242	0.4964	0.4872	2.3851	2.33865E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0871	0.5432	0.5432	0.0808	1.65067E 00
100.00	0.1639	0.2342	0.2260	0.0233	8.33032E-01
150.00	0.2459	0.1461	0.0839	0.0022	6.43775E-01
200.00	0.3041	0.1355	0.0327	0.0003	5.77120E-01
300.00	0.3758	0.1446	0.0094	0.0000	5.18921E-01
400.00	0.4314	0.1571	0.0050	0.0000	4.84371E-01
500.00	0.4823	0.1687	0.0033	0.0000	4.58066E-01
700.00	0.5785	0.1889	0.0017	0.0000	4.18244E-01
1000.00	0.7172	0.2138	0.0008	-0.0000	3.75617E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0836	0.6878	0.6878	0.1650	2.60369E 00
100.00	0.1439	0.3555	0.3540	0.0618	1.03579E 00
150.00	0.2156	0.1816	0.1494	0.0107	6.99020E-01
200.00	0.2857	0.1459	0.0629	0.0011	5.96145E-01
300.00	0.3689	0.1470	0.0186	0.0001	5.23794E-01
400.00	0.4270	0.1583	0.0100	0.0000	4.86796E-01
500.00	0.4792	0.1694	0.0065	0.0000	4.59570E-01
700.00	0.5765	0.1892	0.0034	0.0000	4.18955E-01
1000.00	0.7162	0.2140	0.0016	-0.0000	3.75911E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0825	0.7549	0.7549	0.2494	3.55670E 00
100.00	0.1371	0.4418	0.4413	0.0980	1.23854E 00
150.00	0.1982	0.2188	0.2004	0.0254	7.54266E-01
200.00	0.2698	0.1571	0.0904	0.0028	6.15170E-01
300.00	0.3622	0.1496	0.0276	0.0001	5.28668E-01
400.00	0.4228	0.1595	0.0149	0.0000	4.89221E-01
500.00	0.4760	0.1702	0.0098	0.0000	4.61074E-01
700.00	0.5746	0.1896	0.0051	0.0000	4.19667E-01
1000.00	0.7150	0.2141	0.0023	-0.0000	3.76205E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0817	0.8189	0.8189	0.4183	5.46273E 00
100.00	0.1317	0.5523	0.5521	0.1684	1.64406E 00
150.00	0.1823	0.2874	0.2786	0.0607	8.64757E-01
200.00	0.2455	0.1812	0.1376	0.0099	6.53220E-01
300.00	0.3494	0.1548	0.0450	0.0003	5.38415E-01
400.00	0.4146	0.1621	0.0245	0.0000	4.94070E-01
500.00	0.4699	0.1718	0.0162	0.0000	4.64082E-01
700.00	0.5707	0.1904	0.0084	0.0000	4.21089E-01
1000.00	0.7128	0.2145	0.0039	-0.0000	3.76793E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1444	0.3586	0.3586	1.0110	1.86545E 00
100.00	0.2003	0.2463	0.2463	0.4520	1.09414E 00
150.00	0.2381	0.2171	0.2171	0.2433	8.67056E-01
200.00	0.2647	0.2099	0.1999	0.1555	7.60098E-01
300.00	0.3039	0.2069	0.1730	0.0795	6.45638E-01
400.00	0.3420	0.2070	0.1535	0.0414	5.77653E-01
500.00	0.3827	0.2085	0.1362	0.0206	5.29885E-01
700.00	0.4745	0.2153	0.1056	0.0042	4.64577E-01
1000.00	0.6243	0.2299	0.0714	0.0003	4.02766E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1435	0.4242	0.4242	2.0346	3.13589E 00
100.00	0.1963	0.3174	0.3174	0.9476	1.62037E 00
150.00	0.2283	0.2854	0.2854	0.5551	1.18812E 00
200.00	0.2518	0.2746	0.2736	0.3684	9.92897E-01
300.00	0.2841	0.2655	0.2486	0.2097	7.95065E-01
400.00	0.3130	0.2587	0.2289	0.1267	6.84532E-01
500.00	0.3424	0.2530	0.2113	0.0764	6.10558E-01
700.00	0.4105	0.2463	0.1787	0.0238	5.15137E-01
1000.00	0.5467	0.2477	0.1321	0.0022	4.31623E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1432	0.4520	0.4520	3.0579	4.40632E 00
100.00	0.1950	0.3538	0.3538	1.4426	2.14661E 00
150.00	0.2254	0.3255	0.3255	0.8644	1.50918E 00
200.00	0.2469	0.3159	0.3159	0.5901	1.22570E 00
300.00	0.2769	0.3075	0.2965	0.3464	9.44493E-01
400.00	0.3022	0.2992	0.2783	0.2209	7.91411E-01
500.00	0.3267	0.2907	0.2610	0.1437	6.91230E-01
700.00	0.3800	0.2765	0.2288	0.0574	5.65697E-01
1000.00	0.4902	0.2664	0.1817	0.0086	4.60480E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1429	0.4771	0.4771	5.1051	6.94720E 00
100.00	0.1940	0.3909	0.3909	2.4314	3.19908E 00
150.00	0.2231	0.3700	0.3700	1.4824	2.15131E 00
200.00	0.2430	0.3653	0.3653	1.0357	1.69129E 00
300.00	0.2709	0.3625	0.3560	0.6238	1.24335E 00
400.00	0.2933	0.3563	0.3430	0.4147	1.00517E 00
500.00	0.3139	0.3475	0.3280	0.2860	8.52576E-01
700.00	0.3548	0.3281	0.2972	0.1388	6.66817E-01
1000.00	0.4292	0.3045	0.2526	0.0386	5.18193E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1706	0.2719	0.2719	2.7840	2.59855E 00
100.00	0.2169	0.2596	0.2596	1.6607	1.74591E 00
150.00	0.2437	0.2658	0.2658	1.1958	1.41677E 00
200.00	0.2637	0.2726	0.2726	0.9299	1.22839E 00
300.00	0.2960	0.2820	0.2820	0.6197	1.00201E 00
400.00	0.3245	0.2872	0.2872	0.4365	8.62246E-01
500.00	0.3522	0.2903	0.2903	0.3129	7.64567E-01
700.00	0.4024	0.2941	0.2831	0.1744	6.34322E-01
1000.00	0.4736	0.2960	0.2586	0.0772	5.17383E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1702	0.2993	0.2993	5.5824	4.69711E 00
100.00	0.2157	0.2966	0.2966	3.3527	3.00601E 00
150.00	0.2415	0.3104	0.3104	2.4352	2.35982E 00
200.00	0.2604	0.3234	0.3234	1.9138	1.99380E 00
300.00	0.2897	0.3419	0.3419	1.3111	1.55987E 00
400.00	0.3141	0.3531	0.3531	0.9606	1.29665E 00
500.00	0.3360	0.3597	0.3597	0.7286	1.11580E 00
700.00	0.3770	0.3656	0.3650	0.4405	8.80390E-01
1000.00	0.4289	0.3652	0.3498	0.2389	6.77301E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1701	0.3098	0.3098	8.3812	6.79567E 00
100.00	0.2153	0.3117	0.3117	5.0439	4.26612E 00
150.00	0.2408	0.3295	0.3295	3.6746	3.30286E 00
200.00	0.2593	0.3462	0.3462	2.8968	2.75922E 00
300.00	0.2878	0.3707	0.3707	2.0006	2.11772E 00
400.00	0.3109	0.3863	0.3863	1.4829	1.73106E 00
500.00	0.3312	0.3965	0.3965	1.1421	1.46704E 00
700.00	0.3680	0.4075	0.4075	0.7190	1.12646E 00
1000.00	0.4145	0.4108	0.4018	0.4098	8.37218E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1699	0.3187	0.3187	13.9790	1.09928E 01
100.00	0.2150	0.3251	0.3251	8.4275	6.78632E 00
150.00	0.2403	0.3469	0.3469	6.1536	5.18895E 00
200.00	0.2585	0.3672	0.3672	4.8633	4.29005E 00
300.00	0.2862	0.3982	0.3982	3.3812	3.23344E 00
400.00	0.3084	0.4195	0.4195	2.5275	2.59988E 00
500.00	0.3276	0.4348	0.4348	1.9664	2.16951E 00
700.00	0.3612	0.4539	0.4539	1.2767	1.61859E 00
1000.00	0.4033	0.4658	0.4611	0.7557	1.15705E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1843	0.2250	0.2250	5.0697	3.42371E 00
100.00	0.2285	0.2432	0.2432	3.4453	2.51094E 00
150.00	0.2549	0.2636	0.2636	2.6850	2.09757E 00
200.00	0.2749	0.2803	0.2803	2.2128	1.83748E 00
300.00	0.3066	0.3046	0.3046	1.6256	1.50360E 00
400.00	0.3327	0.3211	0.3211	1.2623	1.28755E 00
500.00	0.3559	0.3329	0.3329	1.0108	1.13244E 00
700.00	0.3974	0.3481	0.3481	0.6820	9.20672E-01
1000.00	0.4562	0.3604	0.3604	0.3964	7.26732E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1841	0.2394	0.2394	10.1535	6.41028E 00
100.00	0.2278	0.2634	0.2634	6.9172	4.59440E 00
150.00	0.2538	0.2888	0.2888	5.4069	3.77599E 00
200.00	0.2733	0.3101	0.3101	4.4694	3.26334E 00
300.00	0.3038	0.3421	0.3421	3.3105	2.60897E 00
400.00	0.3285	0.3652	0.3652	2.5957	2.18870E 00
500.00	0.3499	0.3827	0.3827	2.1042	1.88918E 00
700.00	0.3870	0.4071	0.4071	1.4668	1.48455E 00
1000.00	0.4351	0.4286	0.4286	0.9237	1.12058E 00

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1840	0.2446	0.2446	15.2378	9.39685E 00
100.00	0.2277	0.2710	0.2710	10.3875	6.67787E 00
150.00	0.2534	0.2986	0.2986	8.1275	5.45441E 00
200.00	0.2728	0.3217	0.3217	6.7267	4.68920E 00
300.00	0.3029	0.3574	0.3574	4.9938	3.71434E 00
400.00	0.3271	0.3836	0.3836	3.9288	3.08985E 00
500.00	0.3480	0.4040	0.4040	3.1975	2.64592E 00
700.00	0.3836	0.4337	0.4337	2.2513	2.04843E 00
1000.00	0.4288	0.4619	0.4619	1.4480	1.51444E 00

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1839	0.2490	0.2490	25.4039	1.53700E 01
100.00	0.2275	0.2774	0.2774	17.3321	1.08448E 01
150.00	0.2531	0.3069	0.3069	13.5712	8.81125E 00
200.00	0.2724	0.3318	0.3318	11.2407	7.54091E 00
300.00	0.3022	0.3708	0.3708	8.3619	5.92508E 00
400.00	0.3260	0.4001	0.4001	6.5954	4.89216E 00
500.00	0.3464	0.4234	0.4234	5.3834	4.15940E 00
700.00	0.3810	0.4588	0.4588	3.8179	3.17619E 00
1000.00	0.4240	0.4946	0.4946	2.4955	2.30214E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0817	0.5790	0.5790	0.0985	1.54526E 00
100.00	0.1351	0.2367	0.2367	0.0368	7.68457E-01
150.00	0.2822	0.1214	0.0916	0.0007	5.99443E-01
200.00	0.3410	0.1196	0.0348	0.0001	5.44839E-01
300.00	0.4047	0.1354	0.0097	0.0000	5.00049E-01
400.00	0.4533	0.1512	0.0051	0.0000	4.72474E-01
500.00	0.4992	0.1647	0.0033	0.0000	4.50214E-01
700.00	0.5889	0.1869	0.0017	-0.0000	4.14520E-01
1000.00	0.7226	0.2130	0.0008	-0.0000	3.74235E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0811	0.7160	0.7160	0.1981	2.49828E 00
100.00	0.1290	0.3733	0.3733	0.0759	9.71213E-01
150.00	0.2029	0.1556	0.1556	0.0159	6.54689E-01
200.00	0.3186	0.1286	0.0672	0.0004	5.63864E-01
300.00	0.3969	0.1377	0.0193	0.0000	5.04923E-01
400.00	0.4487	0.1524	0.0102	0.0000	4.74899E-01
500.00	0.4959	0.1654	0.0067	0.0000	4.51719E-01
700.00	0.5869	0.1873	0.0034	0.0000	4.15231E-01
1000.00	0.7214	0.2132	0.0016	-0.0000	3.74529E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0809	0.7773	0.7773	0.2977	3.45129E 00
100.00	0.1273	0.4629	0.4629	0.1145	1.17397E 00
150.00	0.1803	0.2023	0.2023	0.0406	7.09934E-01
200.00	0.2988	0.1385	0.0970	0.0011	5.82888E-01
300.00	0.3894	0.1401	0.0286	0.0000	5.09796E-01
400.00	0.4442	0.1536	0.0152	0.0000	4.77324E-01
500.00	0.4927	0.1662	0.0100	0.0000	4.53223E-01
700.00	0.5849	0.1877	0.0051	0.0000	4.15942E-01
1000.00	0.7203	0.2134	0.0024	-0.0000	3.74823E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0807	0.8345	0.8345	0.4968	5.35731E 00
100.00	0.1259	0.5732	0.5732	0.1916	1.57948E 00
150.00	0.1701	0.2825	0.2825	0.0817	8.20425E-01
200.00	0.2668	0.1605	0.1489	0.0051	6.20938E-01
300.00	0.3750	0.1449	0.0468	0.0001	5.19543E-01
400.00	0.4353	0.1560	0.0251	0.0000	4.82173E-01
500.00	0.4862	0.1677	0.0165	0.0000	4.56231E-01
700.00	0.5809	0.1884	0.0085	0.0000	4.17365E-01
1000.00	0.7180	0.2137	0.0039	-0.0000	3.75411E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1431	0.3887	0.3887	1.3879	1.70759E 00
100.00	0.1949	0.2653	0.2653	0.6391	9.53731E-01
150.00	0.2255	0.2215	0.2215	0.3747	7.40225E-01
200.00	0.2474	0.2015	0.2015	0.2500	6.44446E-01
300.00	0.2848	0.1814	0.1814	0.1258	5.47694E-01
400.00	0.3285	0.1709	0.1709	0.0583	4.93320E-01
500.00	0.4291	0.1683	0.1683	0.0103	4.56422E-01
700.00	0.6103	0.1837	0.1238	0.0004	4.07429E-01
1000.00	0.7730	0.2068	0.0797	0.0000	3.61840E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1428	0.4450	0.4450	2.7808	2.97802E 00
100.00	0.1937	0.3368	0.3368	1.2959	1.47997E 00
150.00	0.2226	0.2981	0.2981	0.7772	1.06129E 00
200.00	0.2423	0.2795	0.2795	0.5355	8.77245E-01
300.00	0.2721	0.2569	0.2569	0.3008	6.97121E-01
400.00	0.2990	0.2395	0.2395	0.1812	6.00199E-01
500.00	0.3283	0.2257	0.2257	0.1068	5.37095E-01
700.00	0.4543	0.2114	0.2114	0.0121	4.57989E-01
1000.00	0.6634	0.2228	0.1475	0.0003	3.90696E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1427	0.4677	0.4677	4.1736	4.24846E 00
100.00	0.1933	0.3708	0.3708	1.9530	2.00621E 00
150.00	0.2217	0.3392	0.3392	1.1792	1.38235E 00
200.00	0.2407	0.3250	0.3250	0.8202	1.11004E 00
300.00	0.2685	0.3064	0.3064	0.4742	8.46548E-01
400.00	0.2919	0.2893	0.2893	0.3003	7.07078E-01
500.00	0.3149	0.2732	0.2732	0.1949	6.17768E-01
700.00	0.3711	0.2480	0.2480	0.0716	5.08549E-01
1000.00	0.5780	0.2400	0.2049	0.0019	4.19553E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1427	0.4875	0.4875	6.9594	6.78934E 00
100.00	0.1930	0.4038	0.4038	3.2661	3.05868E 00
150.00	0.2210	0.3825	0.3825	1.9823	2.02448E 00
200.00	0.2394	0.3757	0.3757	1.3895	1.57564E 00
300.00	0.2657	0.3672	0.3672	0.8200	1.14540E 00
400.00	0.2869	0.3551	0.3551	0.5368	9.20837E-01
500.00	0.3062	0.3405	0.3405	0.3675	7.79113E-01
700.00	0.3449	0.3109	0.3109	0.1772	6.09669E-01
1000.00	0.4385	0.2782	0.2782	0.0345	4.77266E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1701	0.2857	0.2857	3.8828	2.45818E 00
100.00	0.2155	0.2754	0.2754	2.3074	1.61360E 00
150.00	0.2412	0.2823	0.2823	1.6618	1.29123E 00
200.00	0.2599	0.2891	0.2891	1.2957	1.10877E 00
300.00	0.2889	0.2965	0.2965	0.8762	8.92505E-01
400.00	0.3129	0.2979	0.2979	0.6352	7.61247E-01
500.00	0.3345	0.2959	0.2959	0.4778	6.70920E-01
700.00	0.3750	0.2876	0.2876	0.2837	5.52908E-01
1000.00	0.4407	0.2736	0.2736	0.1268	4.50119E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1699	0.3075	0.3075	7.7741	4.55674E 00
100.00	0.2150	0.3071	0.3071	4.6327	2.87371E 00
150.00	0.2403	0.3225	0.3225	3.3474	2.23427E 00
200.00	0.2585	0.3366	0.3366	2.6211	1.87418E 00
300.00	0.2864	0.3559	0.3559	1.7915	1.45036E 00
400.00	0.3088	0.3662	0.3662	1.3187	1.19565E 00
500.00	0.3283	0.3710	0.3710	1.0112	1.02215E 00
700.00	0.3626	0.3712	0.3712	0.6374	7.98975E-01
1000.00	0.4097	0.3601	0.3601	0.3451	6.10036E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1699	0.3156	0.3156	11.6654	6.65530E 00
100.00	0.2149	0.3196	0.3196	6.9569	4.13381E 00
150.00	0.2400	0.3389	0.3389	5.0330	3.17732E 00
200.00	0.2581	0.3565	0.3565	3.9470	2.63960E 00
300.00	0.2855	0.3822	0.3822	2.7075	2.00822E 00
400.00	0.3074	0.3982	0.3982	2.0012	1.63006E 00
500.00	0.3263	0.4079	0.4079	1.5436	1.37339E 00
700.00	0.3589	0.4157	0.4157	0.9899	1.04504E 00
1000.00	0.4015	0.4121	0.4121	0.5597	7.69954E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1698	0.3224	0.3224	19.4494	1.08524E 01
100.00	0.2147	0.3302	0.3302	11.6079	6.65402E 00
150.00	0.2398	0.3532	0.3532	8.4062	5.06341E 00
200.00	0.2577	0.3745	0.3745	6.5975	4.17043E 00
300.00	0.2849	0.4067	0.4067	4.5383	3.12393E 00
400.00	0.3063	0.4288	0.4288	3.3674	2.49888E 00
500.00	0.3247	0.4441	0.4441	2.6096	2.07586E 00
700.00	0.3560	0.4624	0.4624	1.6934	1.53718E 00
1000.00	0.3955	0.4709	0.4709	0.9871	1.08979E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 4 1 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1840	0.2324	0.2324	7.1030	3.29907E 00
100.00	0.2278	0.2528	0.2528	4.8027	2.39138E 00
150.00	0.2537	0.2748	0.2748	3.7303	1.98233E 00
200.00	0.2732	0.2928	0.2928	3.0657	1.72612E 00
300.00	0.3037	0.3186	0.3186	2.2462	1.39905E 00
400.00	0.3283	0.3356	0.3356	1.7450	1.18889E 00
500.00	0.3497	0.3473	0.3473	1.4025	1.03900E 00
700.00	0.3867	0.3609	0.3609	0.9623	8.36229E-01
1000.00	0.4352	0.3677	0.3677	0.5924	6.53230E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1839	0.2436	0.2436	14.2145	6.28564E 00
100.00	0.2275	0.2690	0.2690	9.6227	4.47484E 00
150.00	0.2532	0.2957	0.2957	7.4834	3.66075E 00
200.00	0.2725	0.3180	0.3180	6.1594	3.15198E 00
300.00	0.3024	0.3515	0.3515	4.5300	2.50442E 00
400.00	0.3263	0.3756	0.3756	3.5357	2.09004E 00
500.00	0.3469	0.3938	0.3938	2.8568	1.79574E 00
700.00	0.3819	0.4186	0.4186	1.9887	1.40011E 00
1000.00	0.4259	0.4390	0.4390	1.2649	1.04708E 00

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1839	0.2475	0.2475	21.3259	9.27221E 00
100.00	0.2274	0.2751	0.2751	14.4406	6.55830E 00
150.00	0.2531	0.3035	0.3035	11.2356	5.33917E 00
200.00	0.2722	0.3274	0.3274	9.2546	4.57783E 00
300.00	0.3020	0.3643	0.3643	6.8133	3.60978E 00
400.00	0.3257	0.3915	0.3915	5.3261	2.99119E 00
500.00	0.3460	0.4127	0.4127	4.3112	2.55248E 00
700.00	0.3803	0.4432	0.4432	3.0150	1.96399E 00
1000.00	0.4229	0.4713	0.4713	1.9369	1.44094E 00

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1838	0.2509	0.2509	35.5467	1.52454E 01
100.00	0.2274	0.2800	0.2800	24.0786	1.07252E 01
150.00	0.2529	0.3100	0.3100	18.7436	8.69602E 00
200.00	0.2720	0.3355	0.3355	15.4428	7.42955E 00
300.00	0.3016	0.3753	0.3753	11.3805	5.82052E 00
400.00	0.3252	0.4054	0.4054	8.9054	4.79349E 00
500.00	0.3453	0.4294	0.4294	7.2197	4.06597E 00
700.00	0.3791	0.4656	0.4656	5.0664	3.09174E 00
1000.00	0.4206	0.5019	0.5019	3.2796	2.22864E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0553	0.6684	0.6684	0.4048	3.39767E 00
100.00	0.0996	0.4847	0.4844	0.0728	1.49574E 00
150.00	0.1456	0.2464	0.2437	0.0407	9.26485E-01
200.00	0.1968	0.1456	0.1135	0.0124	7.31041E-01
300.00	0.2721	0.1288	0.0293	0.0011	6.10691E-01
400.00	0.3174	0.1427	0.0135	0.0002	5.64756E-01
500.00	0.3548	0.1572	0.0088	0.0001	5.34120E-01
700.00	0.4216	0.1821	0.0049	0.0000	4.89972E-01
1000.00	0.5118	0.2089	0.0024	0.0000	4.44664E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0530	0.7451	0.7451	0.9052	5.99340E 00
100.00	0.0930	0.6375	0.6374	0.1464	2.27254E 00
150.00	0.1320	0.3785	0.3781	0.0893	1.17954E 00
200.00	0.1754	0.2011	0.1891	0.0411	8.21682E-01
300.00	0.2579	0.1360	0.0558	0.0035	6.29188E-01
400.00	0.3092	0.1451	0.0266	0.0006	5.72511E-01
500.00	0.3486	0.1585	0.0175	0.0001	5.38871E-01
700.00	0.4175	0.1826	0.0097	0.0000	4.92371E-01
1000.00	0.5093	0.2092	0.0049	0.0000	4.45749E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0522	0.7752	0.7752	1.4079	8.58913E 00
100.00	0.0908	0.7125	0.7124	0.2200	3.04934E 00
150.00	0.1273	0.4662	0.4660	0.1360	1.43259E 00
200.00	0.1660	0.2534	0.2472	0.0731	9.12323E-01
300.00	0.2462	0.1441	0.0792	0.0076	6.47684E-01
400.00	0.3014	0.1476	0.0391	0.0012	5.80266E-01
500.00	0.3427	0.1599	0.0260	0.0003	5.43622E-01
700.00	0.4134	0.1832	0.0145	0.0000	4.94770E-01
1000.00	0.5069	0.2095	0.0073	0.0000	4.46834E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0517	0.8013	0.8013	2.4137	1.37806E 01
100.00	0.0890	0.7865	0.7865	0.3674	4.60293E 00
150.00	0.1235	0.5735	0.5734	0.2282	1.93869E 00
200.00	0.1580	0.3377	0.3348	0.1366	1.09360E 00
300.00	0.2295	0.1623	0.1178	0.0210	6.84678E-01
400.00	0.2873	0.1534	0.0625	0.0031	5.95776E-01
500.00	0.3313	0.1628	0.0424	0.0007	5.53125E-01
700.00	0.4055	0.1843	0.0240	0.0000	4.99569E-01
1000.00	0.5019	0.2100	0.0121	0.0000	4.49004E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0973	0.4670	0.4670	1.5000	3.55335E 00
100.00	0.1514	0.2874	0.2869	0.9173	1.90640E 00
150.00	0.1832	0.2248	0.2103	0.6218	1.36404E 00
200.00	0.2044	0.2066	0.1819	0.4596	1.12843E 00
300.00	0.2330	0.2032	0.1675	0.2944	9.12007E-01
400.00	0.2557	0.2076	0.1643	0.2041	7.96273E-01
500.00	0.2770	0.2123	0.1617	0.1446	7.17494E-01
700.00	0.3201	0.2217	0.1539	0.0712	6.12963E-01
1000.00	0.3941	0.2362	0.1350	0.0203	5.19446E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0966	0.5223	0.5223	3.0038	6.34914E 00
100.00	0.1487	0.3445	0.3445	1.8675	3.10334E 00
150.00	0.1804	0.2750	0.2665	1.2786	2.05631E 00
200.00	0.2009	0.2542	0.2387	0.9557	1.61564E 00
300.00	0.2272	0.2501	0.2268	0.6315	1.23001E 00
400.00	0.2468	0.2542	0.2260	0.4570	1.03411E 00
500.00	0.2642	0.2575	0.2249	0.3420	9.04866E-01
700.00	0.2972	0.2614	0.2194	0.1972	7.39004E-01
1000.00	0.3491	0.2653	0.2052	0.0823	5.97425E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0964	0.5438	0.5438	4.5075	9.14493E 00
100.00	0.1478	0.3700	0.3700	2.8187	4.30028E 00
150.00	0.1793	0.3000	0.2940	1.9367	2.74859E 00
200.00	0.1996	0.2800	0.2685	1.4535	2.10286E 00
300.00	0.2251	0.2783	0.2607	0.9712	1.54801E 00
400.00	0.2435	0.2842	0.2628	0.7138	1.27194E 00
500.00	0.2595	0.2885	0.2638	0.5445	1.09224E 00
700.00	0.2887	0.2924	0.2609	0.3317	8.65045E-01
1000.00	0.3316	0.2926	0.2490	0.1597	6.75403E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0962	0.5623	0.5623	7.5152	1.47365E 01
100.00	0.1471	0.3938	0.3938	4.7198	6.69416E 00
150.00	0.1785	0.3251	0.3213	3.2533	4.13313E 00
200.00	0.1985	0.3072	0.2997	2.4499	3.07729E 00
300.00	0.2233	0.3103	0.2983	1.6524	2.18402E 00
400.00	0.2407	0.3203	0.3056	1.2294	1.74762E 00
500.00	0.2556	0.3277	0.3107	0.9524	1.46698E 00
700.00	0.2817	0.3353	0.3135	0.6051	1.11713E 00
1000.00	0.3175	0.3357	0.3064	0.3242	8.31360E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 28W 5 0 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1200	0.2866	0.2866	3.7359	4.29028E 00
100.00	0.1687	0.2088	0.2088	2.5341	2.79380E 00
150.00	0.1963	0.2013	0.2013	1.9253	2.22426E 00
200.00	0.2150	0.2086	0.2086	1.5760	1.92415E 00
300.00	0.2403	0.2293	0.2228	1.2067	1.58309E 00
400.00	0.2593	0.2466	0.2325	0.9859	1.37122E 00
500.00	0.2760	0.2604	0.2402	0.8227	1.21820E 00
700.00	0.3056	0.2809	0.2513	0.5922	1.00559E 00
1000.00	0.3457	0.3017	0.2608	0.3740	8.06211E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1196	0.3095	0.3095	7.4775	7.93430E 00
100.00	0.1678	0.2313	0.2313	5.0986	4.96216E 00
150.00	0.1945	0.2249	0.2249	3.9027	3.84124E 00
200.00	0.2123	0.2339	0.2339	3.2210	3.25716E 00
300.00	0.2366	0.2581	0.2550	2.4769	2.60290E 00
400.00	0.2549	0.2790	0.2714	2.0375	2.20283E 00
500.00	0.2706	0.2960	0.2847	1.7148	1.91750E 00
700.00	0.2978	0.3222	0.3050	1.2620	1.52728E 00
1000.00	0.3330	0.3493	0.3252	0.8366	1.16974E 00

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1195	0.3180	0.3180	11.2188	1.15783E 01
100.00	0.1675	0.2401	0.2401	7.6631	7.13052E 00
150.00	0.1940	0.2346	0.2346	5.8792	5.45822E 00
200.00	0.2114	0.2446	0.2446	4.8656	4.59017E 00
300.00	0.2354	0.2708	0.2689	3.7484	3.62271E 00
400.00	0.2534	0.2938	0.2886	3.0909	3.03445E 00
500.00	0.2688	0.3129	0.3050	2.6086	2.61680E 00
700.00	0.2951	0.3427	0.3305	1.9347	2.04897E 00
1000.00	0.3286	0.3752	0.3578	1.3029	1.53327E 00

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3251	0.3251	18.7017	1.88664E 01
100.00	0.1672	0.2477	0.2477	12.7923	1.14672E 01
150.00	0.1935	0.2432	0.2432	9.8321	8.69217E 00
200.00	0.2107	0.2543	0.2543	8.1532	7.25618E 00
300.00	0.2343	0.2826	0.2815	6.2924	5.66233E 00
400.00	0.2521	0.3078	0.3046	5.1987	4.69768E 00
500.00	0.2672	0.3291	0.3241	4.3980	4.01541E 00
700.00	0.2929	0.3635	0.3558	3.2800	3.09235E 00
1000.00	0.3251	0.4024	0.3912	2.2370	2.26032E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1319	0.1991	0.1991	6.2154	5.09034E 00
100.00	0.1777	0.1693	0.1693	4.5995	3.71825E 00
150.00	0.2030	0.1770	0.1770	3.7725	3.13125E 00
200.00	0.2206	0.1903	0.1903	3.2576	2.78438E 00
300.00	0.2467	0.2168	0.2168	2.5966	2.34732E 00
400.00	0.2678	0.2397	0.2397	2.1559	2.05560E 00
500.00	0.2864	0.2599	0.2599	1.8274	1.83690E 00
700.00	0.3176	0.2945	0.2892	1.3984	1.52179E 00
1000.00	0.3563	0.3349	0.3184	0.9944	1.21287E 00

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1316	0.2104	0.2104	12.4385	9.61567E 00
100.00	0.1771	0.1807	0.1807	9.2257	6.88488E 00
150.00	0.2020	0.1898	0.1898	7.5873	5.72255E 00
200.00	0.2192	0.2046	0.2046	6.5697	5.03926E 00
300.00	0.2444	0.2342	0.2342	5.2672	4.18346E 00
400.00	0.2645	0.2599	0.2599	4.4042	3.61599E 00
500.00	0.2819	0.2825	0.2825	3.7645	3.19295E 00
700.00	0.3115	0.3216	0.3196	2.8976	2.58787E 00
1000.00	0.3481	0.3695	0.3610	2.0963	2.00122E 00

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1316	0.2144	0.2144	18.6616	1.41410E 01
100.00	0.1770	0.1849	0.1849	13.8518	1.00515E 01
150.00	0.2017	0.1946	0.1946	11.4005	8.31385E 00
200.00	0.2187	0.2101	0.2101	9.8810	7.29414E 00
300.00	0.2437	0.2410	0.2410	7.9377	6.01960E 00
400.00	0.2634	0.2679	0.2679	6.6525	5.17639E 00
500.00	0.2804	0.2918	0.2918	5.7000	4.54900E 00
700.00	0.3095	0.3331	0.3319	4.3982	3.65395E 00
1000.00	0.3453	0.3849	0.3792	3.2001	2.78957E 00

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1315	0.2178	0.2178	31.1075	2.31917E 01
100.00	0.1768	0.1885	0.1885	23.1039	1.63848E 01
150.00	0.2015	0.1987	0.1987	19.0293	1.34965E 01
200.00	0.2183	0.2149	0.2149	16.5013	1.18039E 01
300.00	0.2431	0.2469	0.2469	13.2788	9.69189E 00
400.00	0.2625	0.2749	0.2749	11.1486	8.29719E 00
500.00	0.2793	0.2999	0.2999	9.5724	7.26110E 00
700.00	0.3078	0.3435	0.3429	7.4009	5.78611E 00
1000.00	0.3430	0.3990	0.3955	5.4103	4.36626E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0522	0.6568	0.6568	0.4827	3.37756E 00
100.00	0.0937	0.4848	0.4848	0.0733	1.49377E 00
150.00	0.1456	0.2462	0.2437	0.0407	9.26239E-01
200.00	0.1968	0.1456	0.1135	0.0124	7.31005E-01
300.00	0.2721	0.1288	0.0293	0.0011	6.10690E-01
400.00	0.3174	0.1427	0.0135	0.0002	5.64756E-01
500.00	0.3548	0.1572	0.0088	0.0001	5.34120E-01
700.00	0.4216	0.1821	0.0049	0.0000	4.89972E-01
1000.00	0.5118	0.2089	0.0024	0.0000	4.44664E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0515	0.7384	0.7384	0.9989	5.97328E 00
100.00	0.0898	0.6378	0.6378	0.1471	2.27057E 00
150.00	0.1320	0.3784	0.3782	0.0893	1.17929E 00
200.00	0.1754	0.2010	0.1891	0.0411	8.21645E-01
300.00	0.2579	0.1360	0.0558	0.0035	6.29187E-01
400.00	0.3092	0.1451	0.0266	0.0006	5.72511E-01
500.00	0.3486	0.1585	0.0175	0.0001	5.38871E-01
700.00	0.4175	0.1826	0.0097	0.0000	4.92371E-01
1000.00	0.5093	0.2092	0.0049	0.0000	4.45749E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0513	0.7705	0.7705	1.5151	8.56901E 00
100.00	0.0886	0.7127	0.7127	0.2210	3.04736E 00
150.00	0.1273	0.4661	0.4661	0.1360	1.43234E 00
200.00	0.1660	0.2533	0.2472	0.0731	9.12286E-01
300.00	0.2462	0.1441	0.0792	0.0076	6.47683E-01
400.00	0.3014	0.1476	0.0391	0.0012	5.80266E-01
500.00	0.3427	0.1599	0.0260	0.0003	5.43622E-01
700.00	0.4134	0.1832	0.0145	0.0000	4.94770E-01
1000.00	0.5069	0.2095	0.0073	0.0000	4.46834E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0511	0.7984	0.7984	2.5483	1.37605E 01
100.00	0.0877	0.7867	0.7867	0.3688	4.60096E 00
150.00	0.1232	0.5734	0.5734	0.2283	1.93844E 00
200.00	0.1581	0.3377	0.3348	0.1366	1.09357E 00
300.00	0.2295	0.1623	0.1178	0.0210	6.84677E-01
400.00	0.2873	0.1534	0.0625	0.0031	5.95776E-01
500.00	0.3313	0.1628	0.0424	0.0007	5.53125E-01
700.00	0.4055	0.1843	0.0240	0.0000	4.99569E-01
1000.00	0.5019	0.2100	0.0121	0.0000	4.49004E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0963	0.4853	0.4853	1.8388	3.41490E 00
100.00	0.1476	0.2941	0.2941	1.1066	1.80013E 00
150.00	0.1812	0.2167	0.2167	0.7049	1.28063E 00
200.00	0.2043	0.1931	0.1931	0.4912	1.06174E 00
300.00	0.2380	0.1886	0.1886	0.2810	8.67490E-01
400.00	0.2633	0.1960	0.1854	0.1847	7.65288E-01
500.00	0.2843	0.2036	0.1775	0.1306	6.95298E-01
700.00	0.3270	0.2168	0.1624	0.0643	6.00914E-01
1000.00	0.4001	0.2342	0.1379	0.0183	5.14205E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0961	0.5336	0.5336	3.6789	6.21070E 00
100.00	0.1468	0.3510	0.3510	2.2246	2.99707E 00
150.00	0.1791	0.2721	0.2721	1.4408	1.97291E 00
200.00	0.2005	0.2470	0.2470	1.0301	1.54895E 00
300.00	0.2285	0.2405	0.2405	0.6386	1.18549E 00
400.00	0.2505	0.2453	0.2449	0.4363	1.00312E 00
500.00	0.2678	0.2503	0.2399	0.3267	8.82670E-01
700.00	0.3004	0.2568	0.2287	0.1888	7.26955E-01
1000.00	0.3520	0.2630	0.2095	0.0788	5.92184E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0961	0.5519	0.5519	5.5189	9.00649E 00
100.00	0.1465	0.3755	0.3755	3.3425	4.19401E 00
150.00	0.1784	0.2988	0.2988	2.1762	2.66518E 00
200.00	0.1992	0.2753	0.2753	1.5683	2.03617E 00
300.00	0.2257	0.2714	0.2714	0.9935	1.50350E 00
400.00	0.2455	0.2774	0.2774	0.7000	1.24096E 00
500.00	0.2618	0.2829	0.2772	0.5288	1.07004E 00
700.00	0.2907	0.2885	0.2696	0.3229	8.52995E-01
1000.00	0.3333	0.2904	0.2534	0.1559	6.70162E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5674	0.5674	9.1992	1.45981E 01
100.00	0.1463	0.3977	0.3977	5.5787	6.58789E 00
150.00	0.1779	0.3249	0.3249	3.6469	4.04973E 00
200.00	0.1982	0.3047	0.3047	2.6432	3.01060E 00
300.00	0.2236	0.3062	0.3062	1.7013	2.13950E 00
400.00	0.2417	0.3158	0.3158	1.2267	1.71663E 00
500.00	0.2569	0.3238	0.3214	0.9366	1.44478E 00
700.00	0.2829	0.3324	0.3209	0.5963	1.10508E 00
1000.00	0.3184	0.3340	0.3104	0.3203	8.26119E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1197	0.2960	0.2960	4.7819	4.14923E 00
100.00	0.1679	0.2160	0.2160	3.2272	2.66207E 00
150.00	0.1947	0.2064	0.2064	2.4439	2.10113E 00
200.00	0.2125	0.2117	0.2117	1.9961	1.80897E 00
300.00	0.2377	0.2280	0.2280	1.4751	1.48204E 00
400.00	0.2575	0.2422	0.2422	1.1562	1.28227E 00
500.00	0.2750	0.2535	0.2535	0.9320	1.13968E 00
700.00	0.3067	0.2708	0.2708	0.6303	9.43879E-01
1000.00	0.3529	0.2898	0.2898	0.3575	7.62380E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1195	0.3149	0.3149	9.5680	7.79325E 00
100.00	0.1674	0.2360	0.2360	6.4753	4.83043E 00
150.00	0.1938	0.2287	0.2287	4.9236	3.71811E 00
200.00	0.2111	0.2367	0.2367	4.0387	3.14197E 00
300.00	0.2352	0.2587	0.2587	3.0125	2.50185E 00
400.00	0.2537	0.2778	0.2778	2.3876	2.11389E 00
500.00	0.2698	0.2934	0.2934	1.9508	1.83898E 00
700.00	0.2977	0.3172	0.3172	1.3701	1.46557E 00
1000.00	0.3346	0.3425	0.3425	0.8561	1.12591E 00

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3218	0.3218	14.3539	1.14373E 01
100.00	0.1672	0.2434	0.2434	9.7250	6.99879E 00
150.00	0.1935	0.2375	0.2375	7.4027	5.33509E 00
200.00	0.2106	0.2468	0.2468	6.0813	4.47498E 00
300.00	0.2344	0.2717	0.2717	4.5486	3.52165E 00
400.00	0.2525	0.2935	0.2935	3.6178	2.94550E 00
500.00	0.2681	0.3116	0.3116	2.9681	2.53828E 00
700.00	0.2948	0.3399	0.3399	2.1072	1.98725E 00
1000.00	0.3293	0.3706	0.3706	1.3503	1.48944E 00

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3275	0.3275	23.9254	1.87253E 01
100.00	0.1671	0.2499	0.2499	16.2229	1.13355E 01
150.00	0.1932	0.2451	0.2451	12.3613	8.56904E 00
200.00	0.2102	0.2558	0.2558	10.1651	7.14099E 00
300.00	0.2337	0.2834	0.2834	7.6217	5.56127E 00
400.00	0.2516	0.3078	0.3078	6.0788	4.60874E 00
500.00	0.2668	0.3286	0.3286	5.0025	3.93689E 00
700.00	0.2927	0.3620	0.3620	3.5798	3.03063E 00
1000.00	0.3253	0.3998	0.3998	2.3354	2.21649E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRC 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1318	0.2040	0.2040	8.0154	4.96359E 00
100.00	0.1774	0.1739	0.1739	5.9254	3.59553E 00
150.00	0.2024	0.1818	0.1818	4.8528	3.01240E 00
200.00	0.2197	0.1952	0.1952	4.1839	2.66929E 00
300.00	0.2452	0.2216	0.2216	3.3232	2.23935E 00
400.00	0.2655	0.2440	0.2440	2.7513	1.95426E 00
500.00	0.2832	0.2632	0.2632	2.3274	1.74175E 00
700.00	0.3139	0.2950	0.2950	1.7269	1.43783E 00
1000.00	0.3541	0.3321	0.3321	1.1523	1.14308E 00

CRC 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1316	0.2131	0.2131	16.0383	9.48892E 00
100.00	0.1770	0.1834	0.1834	11.8746	6.76216E 00
150.00	0.2018	0.1927	0.1927	9.7432	5.60371E 00
200.00	0.2187	0.2077	0.2077	8.4149	4.92417E 00
300.00	0.2437	0.2373	0.2373	6.7090	4.07549E 00
400.00	0.2634	0.2629	0.2629	5.5775	3.51465E 00
500.00	0.2803	0.2852	0.2852	4.7409	3.09780E 00
700.00	0.3095	0.3231	0.3231	3.5595	2.50391E 00
1000.00	0.3466	0.3693	0.3693	2.4342	1.93143E 00

CRC 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1315	0.2163	0.2163	24.0612	1.40143E 01
100.00	0.1769	0.1869	0.1869	17.8239	9.92879E 00
150.00	0.2015	0.1967	0.1967	14.6336	8.19501E 00
200.00	0.2184	0.2124	0.2124	12.6449	7.17905E 00
300.00	0.2432	0.2433	0.2433	10.0939	5.91163E 00
400.00	0.2626	0.2702	0.2702	8.4043	5.07505E 00
500.00	0.2794	0.2938	0.2938	7.1550	4.45385E 00
700.00	0.3081	0.3344	0.3344	5.3915	3.56999E 00
1000.00	0.3442	0.3851	0.3851	3.7148	2.71977E 00

CRC 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1315	0.2189	0.2189	40.1082	2.30649E 01
100.00	0.1767	0.1897	0.1897	29.7235	1.62621E 01
150.00	0.2013	0.2000	0.2000	24.4154	1.33776E 01
200.00	0.2182	0.2162	0.2162	21.1077	1.16888E 01
300.00	0.2428	0.2484	0.2484	16.8661	9.58391E 00
400.00	0.2621	0.2766	0.2766	14.0539	8.19585E 00
500.00	0.2787	0.3013	0.3013	11.9805	7.16595E 00
700.00	0.3069	0.3445	0.3445	9.0548	5.70215E 00
1000.00	0.3424	0.3994	0.3994	6.2744	4.29647E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0510	0.6841	0.6841	0.6499	3.21031E 00
100.00	0.0876	0.5264	0.5264	0.0884	1.37509E 00
150.00	0.1239	0.2658	0.2658	0.0526	8.36424E-01
200.00	0.1782	0.1188	0.1188	0.0214	6.60303E-01
300.00	0.3186	0.1150	0.0326	0.0002	5.63773E-01
400.00	0.3577	0.1345	0.0145	0.0001	5.31937E-01
500.00	0.3884	0.1519	0.0093	0.0000	5.10431E-01
700.00	0.4450	0.1793	0.0050	0.0000	4.76902E-01
1000.00	0.5255	0.2073	0.0025	0.0000	4.38841E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.7558	0.7558	1.3068	5.80603E 00
100.00	0.0870	0.6728	0.6728	0.1769	2.15188E 00
150.00	0.1208	0.4079	0.4079	0.1057	1.08948E 00
200.00	0.1578	0.1949	0.1949	0.0613	7.50943E-01
300.00	0.2991	0.1196	0.0628	0.0009	5.82270E-01
400.00	0.3476	0.1361	0.0286	0.0002	5.39692E-01
500.00	0.3813	0.1528	0.0184	0.0000	5.15182E-01
700.00	0.4405	0.1798	0.0100	0.0000	4.79301E-01
1000.00	0.5229	0.2076	0.0049	0.0000	4.39926E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.7832	0.7832	1.9640	8.40176E 00
100.00	0.0868	0.7415	0.7415	0.2655	2.92868E 00
150.00	0.1198	0.4965	0.4965	0.1587	1.34253E 00
200.00	0.1534	0.2576	0.2576	0.0968	8.41584E-01
300.00	0.2820	0.1252	0.0903	0.0024	6.00767E-01
400.00	0.3379	0.1379	0.0422	0.0003	5.47447E-01
500.00	0.3744	0.1538	0.0273	0.0001	5.19934E-01
700.00	0.4362	0.1803	0.0149	0.0000	4.81701E-01
1000.00	0.5203	0.2079	0.0074	0.0000	4.41011E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0509	0.8066	0.8066	3.2780	1.35932E 01
100.00	0.0866	0.8074	0.8074	0.4426	4.48227E 00
150.00	0.1190	0.6009	0.6009	0.2647	1.84863E 00
200.00	0.1503	0.3505	0.3505	0.1662	1.02286E 00
300.00	0.2550	0.1391	0.1368	0.0096	6.37760E-01
400.00	0.3201	0.1421	0.0680	0.0010	5.62957E-01
500.00	0.3612	0.1560	0.0447	0.0002	5.29437E-01
700.00	0.4276	0.1813	0.0246	0.0000	4.86499E-01
1000.00	0.5152	0.2085	0.0122	0.0000	4.43181E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0961	0.5120	0.5120	2.5833	3.23661E 00
100.00	0.1468	0.3229	0.3229	1.5508	1.62948E 00
150.00	0.1792	0.2406	0.2406	0.9967	1.11722E 00
200.00	0.2006	0.2118	0.2118	0.7070	9.05188E-01
300.00	0.2287	0.1976	0.1976	0.4314	7.23629E-01
400.00	0.2508	0.1947	0.1947	0.2902	6.32873E-01
500.00	0.2722	0.1935	0.1935	0.1982	5.73227E-01
700.00	0.3245	0.1941	0.1941	0.0799	4.96704E-01
1000.00	0.5461	0.2102	0.1798	0.0013	4.31159E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5493	0.5493	5.1676	6.03241E 00
100.00	0.1464	0.3711	0.3711	3.1097	2.82641E 00
150.00	0.1782	0.2920	0.2920	2.0146	1.80949E 00
200.00	0.1987	0.2657	0.2657	1.4462	1.39240E 00
300.00	0.2244	0.2556	0.2556	0.9117	1.04163E 00
400.00	0.2431	0.2546	0.2546	0.6429	8.70709E-01
500.00	0.2597	0.2532	0.2532	0.4721	7.60599E-01
700.00	0.2915	0.2479	0.2479	0.2635	6.22745E-01
1000.00	0.3489	0.2406	0.2406	0.0948	5.09138E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5630	0.5630	7.7519	8.82820E 00
100.00	0.1462	0.3906	0.3906	4.6689	4.02335E 00
150.00	0.1778	0.3150	0.3150	3.0325	2.50176E 00
200.00	0.1980	0.2916	0.2916	2.1858	1.87962E 00
300.00	0.2231	0.2866	0.2866	1.3914	1.35964E 00
400.00	0.2408	0.2895	0.2895	0.9939	1.10855E 00
500.00	0.2561	0.2906	0.2906	0.7429	9.47970E-01
700.00	0.2838	0.2869	0.2869	0.4405	7.48786E-01
1000.00	0.3257	0.2760	0.2760	0.2035	5.87116E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0960	0.5744	0.5744	12.9207	1.44198E 01
100.00	0.1462	0.4078	0.4078	7.7861	6.41723E 00
150.00	0.1775	0.3364	0.3364	5.0689	3.88631E 00
200.00	0.1976	0.3172	0.3172	3.6623	2.85404E 00
300.00	0.2220	0.3191	0.3191	2.3501	1.99564E 00
400.00	0.2390	0.3280	0.3280	1.6950	1.58422E 00
500.00	0.2534	0.3339	0.3339	1.2834	1.32271E 00
700.00	0.2783	0.3368	0.3368	0.7908	1.00087E 00
1000.00	0.3124	0.3291	0.3291	0.4116	7.43073E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 2BW 5 0 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1196	0.3069	0.3069	6.7733	4.00077E 00
100.00	0.1676	0.2273	0.2273	4.5755	2.51721E 00
150.00	0.1941	0.2186	0.2186	3.4673	1.95977E 00
200.00	0.2116	0.2249	0.2249	2.8319	1.67103E 00
300.00	0.2359	0.2425	0.2425	2.0924	1.35067E 00
400.00	0.2545	0.2569	0.2569	1.6415	1.15715E 00
500.00	0.2706	0.2675	0.2675	1.3275	1.02049E 00
700.00	0.2985	0.2808	0.2808	0.9140	8.35681E-01
1000.00	0.3351	0.2896	0.2896	0.5567	6.68716E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1195	0.3210	0.3210	13.5510	7.64479E 00
100.00	0.1672	0.2425	0.2425	9.1740	4.68557E 00
150.00	0.1935	0.2363	0.2363	6.9687	3.57675E 00
200.00	0.2106	0.2453	0.2453	5.7074	3.00403E 00
300.00	0.2343	0.2687	0.2687	4.2393	2.37048E 00
400.00	0.2523	0.2887	0.2887	3.3453	1.98877E 00
500.00	0.2677	0.3047	0.3047	2.7230	1.71979E 00
700.00	0.2939	0.3280	0.3280	1.9051	1.35737E 00
1000.00	0.3270	0.3490	0.3490	1.2017	1.03224E 00

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3260	0.3260	20.3286	1.12888E 01
100.00	0.1671	0.2482	0.2482	13.7708	6.85393E 00
150.00	0.1933	0.2429	0.2429	10.4708	5.19373E 00
200.00	0.2103	0.2530	0.2530	8.5841	4.33704E 00
300.00	0.2338	0.2792	0.2792	6.3858	3.39029E 00
400.00	0.2516	0.3019	0.3019	5.0479	2.82038E 00
500.00	0.2667	0.3206	0.3206	4.1173	2.41909E 00
700.00	0.2924	0.3491	0.3491	2.8952	1.87906E 00
1000.00	0.3245	0.3780	0.3780	1.8448	1.39577E 00

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1194	0.3301	0.3301	33.8843	1.85768E 01
100.00	0.1670	0.2528	0.2528	22.9677	1.11907E 01
150.00	0.1931	0.2486	0.2486	17.4735	8.42769E 00
200.00	0.2100	0.2599	0.2599	14.3325	7.00305E 00
300.00	0.2334	0.2885	0.2885	10.6776	5.42991E 00
400.00	0.2510	0.3136	0.3136	8.4532	4.48361E 00
500.00	0.2659	0.3348	0.3348	6.9071	3.81770E 00
700.00	0.2912	0.3687	0.3687	4.8762	2.92243E 00
1000.00	0.3225	0.4061	0.4061	3.1312	2.12283E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SPHERES 28W 5 0 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1315	0.2085	0.2085	11.0911	4.84232E 00
100.00	0.1767	0.1769	0.1769	8.0749	3.48250E 00
150.00	0.2012	0.1837	0.1837	6.5368	2.90608E 00
200.00	0.2180	0.1963	0.1963	5.5807	2.56857E 00
300.00	0.2426	0.2211	0.2211	4.3693	2.14771E 00
400.00	0.2619	0.2416	0.2416	3.5818	1.86991E 00
500.00	0.2785	0.2589	0.2589	3.0089	1.66357E 00
700.00	0.3068	0.2864	0.2864	2.2186	1.36975E 00
1000.00	0.3425	0.3162	0.3162	1.4912	1.08662E 00

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1314	0.2155	0.2155	22.1833	9.36765E 00
100.00	0.1766	0.1851	0.1851	16.1529	6.64913E 00
150.00	0.2011	0.1939	0.1939	13.0791	5.49738E 00
200.00	0.2179	0.2086	0.2086	11.1688	4.82345E 00
300.00	0.2424	0.2374	0.2374	8.7507	3.98385E 00
400.00	0.2616	0.2622	0.2622	7.1772	3.43031E 00
500.00	0.2780	0.2835	0.2835	6.0355	3.01962E 00
700.00	0.3060	0.3193	0.3193	4.4598	2.43583E 00
1000.00	0.3410	0.3616	0.3616	3.0131	1.87497E 00

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1314	0.2180	0.2180	33.2749	1.38930E 01
100.00	0.1766	0.1880	0.1880	24.2317	9.81576E 00
150.00	0.2011	0.1975	0.1975	19.6228	8.08868E 00
200.00	0.2179	0.2131	0.2131	16.7569	7.07833E 00
300.00	0.2423	0.2434	0.2434	13.1322	5.81999E 00
400.00	0.2615	0.2698	0.2698	10.7735	4.99071E 00
500.00	0.2779	0.2929	0.2929	9.0620	4.37567E 00
700.00	0.3058	0.3321	0.3321	6.7015	3.50192E 00
1000.00	0.3405	0.3801	0.3801	4.5355	2.66332E 00

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1314	0.2199	0.2199	55.4611	2.29436E 01
100.00	0.1766	0.1904	0.1904	40.3899	1.61490E 01
150.00	0.2011	0.2006	0.2006	32.7046	1.32713E 01
200.00	0.2179	0.2167	0.2167	27.9344	1.15881E 01
300.00	0.2423	0.2486	0.2486	21.8920	9.49228E 00
400.00	0.2614	0.2764	0.2764	17.9643	8.11151E 00
500.00	0.2777	0.3009	0.3009	15.1143	7.08777E 00
700.00	0.3055	0.3432	0.3432	11.1862	5.63408E 00
1000.00	0.3401	0.3965	0.3965	7.5794	4.24001E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0609	0.6702	0.6702	0.2626	3.01271E 00
100.00	0.1097	0.4229	0.4226	0.0640	1.30015E 00
150.00	0.1627	0.1983	0.1897	0.0292	8.37946E-01
200.00	0.2180	0.1341	0.0832	0.0065	6.87531E-01
300.00	0.2902	0.1340	0.0219	0.0006	5.90970E-01
400.00	0.3366	0.1504	0.0110	0.0001	5.48414E-01
500.00	0.3765	0.1659	0.0073	0.0000	5.18446E-01
700.00	0.4489	0.1914	0.0040	0.0000	4.74805E-01
1000.00	0.5475	0.2170	0.0019	0.0000	4.29942E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0581	0.7605	0.7605	0.5945	5.23857E 00
100.00	0.1019	0.5798	0.5797	0.1286	1.89465E 00
150.00	0.1459	0.3051	0.3033	0.0730	1.01603E 00
200.00	0.1955	0.1685	0.1436	0.0242	7.48628E-01
300.00	0.2784	0.1388	0.0424	0.0017	6.04220E-01
400.00	0.3293	0.1522	0.0217	0.0003	5.54511E-01
500.00	0.3711	0.1669	0.0146	0.0001	5.22263E-01
700.00	0.4453	0.1918	0.0080	0.0000	4.76705E-01
1000.00	0.5453	0.2172	0.0039	0.0000	4.30778E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0572	0.7967	0.7967	0.9289	7.46442E 00
100.00	0.0992	0.6619	0.6618	0.1931	2.48914E 00
150.00	0.1398	0.3850	0.3842	0.1145	1.19411E 00
200.00	0.1839	0.2046	0.1901	0.0478	8.09726E-01
300.00	0.2679	0.1440	0.0612	0.0037	6.17469E-01
400.00	0.3224	0.1541	0.0322	0.0006	5.60607E-01
500.00	0.3657	0.1679	0.0217	0.0001	5.26080E-01
700.00	0.4418	0.1922	0.0119	0.0000	4.78606E-01
1000.00	0.5432	0.2175	0.0058	0.0000	4.31615E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0565	0.8284	0.8284	1.5994	1.19161E 01
100.00	0.0971	0.7464	0.7464	0.3222	3.67814E 00
150.00	0.1349	0.4915	0.4912	0.1955	1.55027E 00
200.00	0.1732	0.2697	0.2624	0.0983	9.31921E-01
300.00	0.2511	0.1558	0.0941	0.0105	6.43968E-01
400.00	0.3095	0.1581	0.0520	0.0014	5.72801E-01
500.00	0.3555	0.1701	0.0355	0.0003	5.33714E-01
700.00	0.4348	0.1931	0.0197	0.0000	4.82406E-01
1000.00	0.5391	0.2180	0.0097	0.0000	4.33287E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1052	0.4411	0.4411	1.3984	3.22076E 00
100.00	0.1603	0.2669	0.2630	0.8286	1.72668E 00
150.00	0.1916	0.2173	0.1988	0.5522	1.26121E 00
200.00	0.2124	0.2051	0.1772	0.4066	1.05841E 00
300.00	0.2417	0.2055	0.1669	0.2557	8.63143E-01
400.00	0.2663	0.2106	0.1638	0.1718	7.54223E-01
500.00	0.2900	0.2159	0.1603	0.1167	6.79525E-01
700.00	0.3399	0.2264	0.1500	0.0511	5.80660E-01
1000.00	0.4283	0.2424	0.1257	0.0110	4.92676E-01

CRO 20. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1043	0.4987	0.4987	2.8008	5.69097E 00
100.00	0.1576	0.3222	0.3205	1.6895	2.75444E 00
150.00	0.1885	0.2666	0.2554	1.1401	1.86309E 00
200.00	0.2083	0.2527	0.2349	0.8512	1.48912E 00
300.00	0.2348	0.2528	0.2276	0.5566	1.14687E 00
400.00	0.2555	0.2569	0.2266	0.3948	9.65049E-01
500.00	0.2745	0.2599	0.2246	0.2879	8.44141E-01
700.00	0.3114	0.2635	0.2169	0.1553	6.89578E-01
1000.00	0.3729	0.2677	0.1984	0.0546	5.58664E-01

CRO 30. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1040	0.5215	0.5215	4.2031	8.16118E 00
100.00	0.1567	0.3476	0.3466	2.5512	3.78220E 00
150.00	0.1874	0.2921	0.2840	1.7294	2.46497E 00
200.00	0.2068	0.2792	0.2659	1.2979	1.91983E 00
300.00	0.2322	0.2819	0.2628	0.8607	1.43060E 00
400.00	0.2515	0.2878	0.2647	0.6221	1.17588E 00
500.00	0.2687	0.2914	0.2646	0.4650	1.00876E 00
700.00	0.3007	0.2939	0.2592	0.2697	7.98495E-01
1000.00	0.3501	0.2930	0.2435	0.1159	6.24653E-01

CRO 50. EM 0.0500 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1038	0.5413	0.5413	7.0077	1.31016E 01
100.00	0.1559	0.3718	0.3712	4.2740	5.83771E 00
150.00	0.1865	0.3180	0.3128	2.9087	3.66872E 00
200.00	0.2056	0.3078	0.2990	2.1920	2.78124E 00
300.00	0.2301	0.3157	0.3027	1.4707	1.99805E 00
400.00	0.2482	0.3257	0.3098	1.0793	1.59753E 00
500.00	0.2639	0.3322	0.3138	0.8227	1.33799E 00
700.00	0.2920	0.3375	0.3137	0.5044	1.01633E 00
1000.00	0.3317	0.3352	0.3024	0.2516	7.56629E-01

EFFECTUVE CUTOFFS FCR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.075C EMU 3.CO H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CC	0.1279	0.2694	0.2694	3.5377	3.99592E 00
1CC.CC	0.1767	0.2055	0.2C55	2.3451	2.61238E 00
15C.CC	0.2038	0.2044	0.2C44	1.7765	2.09657E 00
2CC.CC	0.2225	0.2148	C.2148	1.4488	1.81945E 00
3CC.CC	0.2477	0.237C	0.2274	1.1144	1.49468E 00
4CC.CC	0.2678	C.2547	0.2374	0.8982	1.28969E 00
5CC.CC	0.2856	C.2685	0.2451	0.7393	1.14172E 00
7CC.CC	0.3175	0.2888	0.2557	0.517C	9.37315E-01
1CCC.CC	0.3616	0.3088	0.2637	0.3096	7.47601E-01

CRO 20. EM 0.075C EMU 3.CO H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CC	0.1275	C.2923	0.2923	7.0835	7.34849E 00
100.CC	0.1755	0.2282	0.2282	4.7268	4.60427E 00
150.CC	0.2017	C.2288	0.2288	3.6112	3.59235E 00
200.CC	0.2193	0.2409	0.2409	2.9752	3.05546E 00
300.CC	0.2438	0.2674	0.2625	2.2928	2.43564E 00
400.CC	0.2629	0.2889	0.2794	1.8642	2.05074E 00
500.CC	0.2795	0.3061	0.2929	1.5507	1.77658E 00
700.CC	0.3085	C.3324	0.3130	1.1149	1.4C419E 00
1000.CC	0.3463	0.3588	0.332C	0.7114	1.C6692E 00

CRO 30. EM 0.075C EMU 3.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CC	0.1274	0.3008	0.3008	10.6293	1.07011E 01
100.CC	0.1752	C.2373	0.2373	7.1079	6.59616E 00
150.CC	0.2010	C.2389	C.2389	5.4454	5.08813E 00
200.CC	0.2183	C.2523	C.2523	4.5CCC	4.29146E 00
300.CC	C.2425	0.2809	0.2777	3.473C	3.3766CE 00
400.CC	0.2612	0.3047	0.2982	2.8322	2.81180E 00
500.CC	C.2774	0.3242	0.3149	2.3646	2.41144E 00
700.CC	0.3053	0.3545	0.3407	1.7163	1.87106E 00
1000.CC	0.3411	0.3867	0.3674	1.1174	1.38624E 00

CRO 50. EM 0.075C EMU 3.CC H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.CC	C.1273	0.3081	0.3081	17.7208	1.74062E 01
100.CC	0.1749	C.2451	C.2451	11.8713	1.05799E 01
150.CC	0.2004	C.2478	0.2478	9.1154	8.07969E 00
200.CC	0.2174	C.2625	0.2625	7.5498	6.76348E 00
300.CC	0.2413	C.2936	0.2917	5.8342	5.25853E 00
400.CC	0.2598	C.3199	0.3158	4.7692	4.33391E 00
500.CC	0.2757	C.3419	0.336C	3.9925	3.68117E 00
700.CC	C.3027	C.3771	0.3683	2.92CC	2.80480E 00
1000.CC	0.3368	0.4165	0.4C4C	1.9321	2.02487E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1396	0.1905	0.1905	5.9403	4.82798E 00
100.00	0.1851	0.1709	0.1709	4.3463	3.53639E 00
150.00	0.2101	0.1826	0.1826	3.5554	2.98565E 00
200.00	0.2278	0.1980	0.1980	3.0578	2.65349E 00
300.00	0.2550	0.2265	0.2265	2.4118	2.22637E 00
400.00	0.2774	0.2509	0.2509	1.9793	1.93921E 00
500.00	0.2972	0.2722	0.2722	1.6574	1.72447E 00
700.00	0.3294	0.3083	0.2995	1.2625	1.41699E 00
1000.00	0.3710	0.3496	0.3290	0.8653	1.11870E 00

CRO 20. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1393	0.2017	0.2017	11.8907	9.09283E 00
100.00	0.1844	0.1827	0.1827	8.7231	6.52433E 00
150.00	0.2090	0.1961	0.1961	7.1562	5.43556E 00
200.00	0.2262	0.2132	0.2132	6.1745	4.78252E 00
300.00	0.2524	0.2451	0.2451	4.9048	3.94800E 00
400.00	0.2734	0.2723	0.2723	4.0606	3.39082E 00
500.00	0.2919	0.2963	0.2963	3.4352	2.97667E 00
700.00	0.3228	0.3377	0.3337	2.6277	2.38834E 00
1000.00	0.3617	0.3875	0.3766	1.8414	1.82430E 00

CRO 30. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1393	0.2057	0.2057	17.8404	1.33577E 01
100.00	0.1842	0.1870	0.1870	13.1003	9.51228E 00
150.00	0.2086	0.2012	0.2012	10.7577	7.88546E 00
200.00	0.2257	0.2191	0.2191	9.2912	6.91154E 00
300.00	0.2515	0.2524	0.2524	7.3972	5.66963E 00
400.00	0.2722	0.2811	0.2811	6.1400	4.84243E 00
500.00	0.2901	0.3063	0.3063	5.2112	4.22887E 00
700.00	0.3205	0.3503	0.3478	3.9944	3.35968E 00
1000.00	0.3586	0.4046	0.3972	2.8199	2.52990E 00

ORO 50. EM 0.1000 EMU 3.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1392	0.2091	0.2091	29.7412	2.18874E 01
100.00	0.1840	0.1908	0.1908	21.8533	1.54882E 01
150.00	0.2083	0.2055	0.2055	17.9608	1.27853E 01
200.00	0.2253	0.2241	0.2241	15.5238	1.11696E 01
300.00	0.2508	0.2587	0.2587	12.3838	9.11289E 00
400.00	0.2711	0.2886	0.2886	10.3004	7.74566E 00
500.00	0.2888	0.3152	0.3152	8.7633	6.73327E 00
700.00	0.3187	0.3617	0.3602	6.7306	5.30237E 00
1000.00	0.3560	0.4206	0.4161	4.7780	3.94111E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0572	0.6613	0.6613	0.3157	2.99752E 00
100.00	0.1048	0.4228	0.4228	0.0643	1.29890E 00
150.00	0.1628	0.1982	0.1898	0.0292	8.37807E-01
200.00	0.2181	0.1341	0.0832	0.0065	6.87512E-01
300.00	0.2902	0.1340	0.0219	0.0006	5.90970E-01
400.00	0.3366	0.1504	0.0110	0.0001	5.48414E-01
500.00	0.3765	0.1659	0.0073	0.0000	5.18446E-01
700.00	0.4489	0.1914	0.0040	0.0000	4.74805E-01
1000.00	0.5475	0.2170	0.0019	0.0000	4.29942E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0563	0.7551	0.7551	0.6574	5.22338E 00
100.00	0.0989	0.5800	0.5800	0.1289	1.89339E 00
150.00	0.1459	0.3050	0.3033	0.0729	1.01589E 00
200.00	0.1955	0.1685	0.1436	0.0242	7.48609E-01
300.00	0.2784	0.1388	0.0424	0.0017	6.04219E-01
400.00	0.3293	0.1522	0.0217	0.0003	5.54511E-01
500.00	0.3711	0.1669	0.0146	0.0001	5.22263E-01
700.00	0.4453	0.1918	0.0080	0.0000	4.76705E-01
1000.00	0.5453	0.2172	0.0039	0.0000	4.30778E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0561	0.7928	0.7928	0.9997	7.44923E 00
100.00	0.0971	0.6621	0.6621	0.1936	2.48789E 00
150.00	0.1398	0.3849	0.3843	0.1145	1.19397E 00
200.00	0.1839	0.2046	0.1901	0.0478	8.09707E-01
300.00	0.2679	0.1440	0.0612	0.0037	6.17469E-01
400.00	0.3224	0.1541	0.0322	0.0006	5.60607E-01
500.00	0.3657	0.1679	0.0217	0.0001	5.26080E-01
700.00	0.4418	0.1922	0.0119	0.0000	4.78606E-01
1000.00	0.5432	0.2175	0.0058	0.0000	4.31615E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0558	0.8260	0.8260	1.6839	1.19009E 01
100.00	0.0958	0.7466	0.7466	0.3228	3.67688E 00
150.00	0.1349	0.4915	0.4912	0.1955	1.55013E 00
200.00	0.1732	0.2697	0.2624	0.0983	9.31902E-01
300.00	0.2511	0.1558	0.0941	0.0105	6.43968E-01
400.00	0.3095	0.1581	0.0520	0.0014	5.72801E-01
500.00	0.3555	0.1701	0.0355	0.0003	5.33714E-01
700.00	0.4348	0.1931	0.0197	0.0000	4.82406E-01
1000.00	0.5391	0.2180	0.0097	0.0000	4.33287E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1039	0.4595	0.4595	1.7047	3.08716E 00
100.00	0.1568	0.2689	0.2689	0.9850	1.62696E 00
150.00	0.1902	0.2066	0.2066	0.6127	1.18471E 00
200.00	0.2133	0.1906	0.1906	0.4234	9.98398E-01
300.00	0.2493	0.1919	0.1919	0.2323	8.24337E-01
400.00	0.2738	0.2006	0.1822	0.1553	7.27940E-01
500.00	0.2973	0.2086	0.1735	0.1054	6.61162E-01
700.00	0.3467	0.2227	0.1565	0.0461	5.71143E-01
1000.00	0.4341	0.2410	0.1275	0.0100	4.88790E-01

CRO 20. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1037	0.5103	0.5103	3.4107	5.55737E 00
100.00	0.1557	0.3259	0.3259	1.9864	2.65472E 00
150.00	0.1875	0.2619	0.2619	1.2626	1.78659E 00
200.00	0.2083	0.2445	0.2445	0.9018	1.42911E 00
300.00	0.2369	0.2431	0.2431	0.5513	1.10806E 00
400.00	0.2592	0.2489	0.2435	0.3769	9.38766E-01
500.00	0.2779	0.2536	0.2376	0.2752	8.25778E-01
700.00	0.3145	0.2597	0.2245	0.1487	6.80060E-01
1000.00	0.3758	0.2661	0.2015	0.0522	5.54779E-01

CRO 30. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1036	0.5299	0.5299	5.1166	8.02758E 00
100.00	0.1554	0.3512	0.3512	2.9874	3.68248E 00
150.00	0.1867	0.2894	0.2894	1.9119	2.38846E 00
200.00	0.2067	0.2737	0.2737	1.3794	1.85981E 00
300.00	0.2333	0.2748	0.2748	0.8669	1.39179E 00
400.00	0.2539	0.2815	0.2796	0.6039	1.14959E 00
500.00	0.2709	0.2862	0.2764	0.4521	9.90394E-01
700.00	0.3027	0.2906	0.2666	0.2627	7.88977E-01
1000.00	0.3517	0.2914	0.2469	0.1131	6.20767E-01

CRO 50. EM 0.0500 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5467	0.5467	8.5285	1.29680E 01
100.00	0.1551	0.3746	0.3746	4.9890	5.73800E 00
150.00	0.1860	0.3169	0.3169	3.2104	3.59222E 00
200.00	0.2055	0.3047	0.3047	2.3330	2.72123E 00
300.00	0.2306	0.3113	0.3113	1.4961	1.95925E 00
400.00	0.2496	0.3213	0.3213	1.0621	1.57124E 00
500.00	0.2652	0.3287	0.3234	0.8096	1.31963E 00
700.00	0.2931	0.3351	0.3201	0.4972	1.00681E 00
1000.00	0.3326	0.3338	0.3056	0.2487	7.52744E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.075C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1276	0.2786	0.2786	4.5239	3.85614E 00
100.00	0.1757	0.2122	0.2122	2.9833	2.48297E 00
150.00	0.2019	0.2089	0.2089	2.2520	1.97662E 00
200.00	0.2196	0.2167	0.2167	1.8341	1.70814E 00
300.00	0.2454	0.2346	0.2346	1.3396	1.39852E 00
400.00	0.2664	0.2490	0.2490	1.0348	1.20627E 00
500.00	0.2851	0.2603	0.2603	0.8212	1.06906E 00
700.00	0.3199	0.2777	0.2777	0.5354	8.81603E-01
1000.00	0.3732	0.2974	0.2974	0.2779	7.09300E-01

CRO 20. EM 0.075C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1274	0.2977	0.2977	9.0540	7.20871E 00
100.00	0.1751	0.2327	0.2327	5.9919	4.47486E 00
150.00	0.2008	0.2322	0.2322	4.5448	3.47240E 00
200.00	0.2179	0.2432	0.2432	3.7191	2.94415E 00
300.00	0.2425	0.2673	0.2673	2.7461	2.33948E 00
400.00	0.2619	0.2869	0.2869	2.1509	1.96732E 00
500.00	0.2788	0.3027	0.3027	1.7363	1.70393E 00
700.00	0.3087	0.3267	0.3267	1.1891	1.34848E 00
1000.00	0.3491	0.3517	0.3517	0.7100	1.02862E 00

CRO 30. EM 0.075C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1273	0.3046	0.3046	13.5839	1.05613E 01
100.00	0.1748	0.2405	0.2405	9.0015	6.46675E 00
150.00	0.2004	0.2415	0.2415	6.8366	4.96818E 00
200.00	0.2173	0.2542	0.2542	5.6029	4.18016E 00
300.00	0.2415	0.2813	0.2813	4.1525	3.28044E 00
400.00	0.2605	0.3039	0.3039	3.2657	2.72838E 00
500.00	0.2768	0.3223	0.3223	2.6502	2.33879E 00
700.00	0.3053	0.3512	0.3512	1.8400	1.81535E 00
1000.00	0.3423	0.3818	0.3818	1.1367	1.34794E 00

CRO 50. EM 0.075C EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.3104	0.3104	22.6436	1.72664E 01
100.00	0.1747	0.2472	0.2472	15.0197	1.04505E 01
150.00	0.2001	0.2498	0.2498	11.4191	7.95974E 00
200.00	0.2169	0.2638	0.2638	9.3721	6.65217E 00
300.00	0.2407	0.2940	0.2940	6.9649	5.16237E 00
400.00	0.2593	0.3196	0.3196	5.4956	4.25049E 00
500.00	0.2753	0.3411	0.3411	4.4759	3.60851E 00
700.00	0.3026	0.3755	0.3755	3.1396	2.74909E 00
1000.00	0.3374	0.4139	0.4139	1.9858	1.98657E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1395	0.1953	0.1953	7.6595	4.70177E 00
100.00	0.1847	0.1756	0.1756	5.5969	3.41470E 00
150.00	0.2094	0.1874	0.1874	4.5706	2.86830E 00
200.00	0.2268	0.2029	0.2029	3.9234	2.54031E 00
300.00	0.2532	0.2311	0.2311	3.0829	2.12105E 00
400.00	0.2746	0.2547	0.2547	2.5228	1.84115E 00
500.00	0.2933	0.2748	0.2748	2.1092	1.63312E 00
700.00	0.3261	0.3078	0.3078	1.5280	1.33759E 00
1000.00	0.3695	0.3456	0.3456	0.9793	1.05411E 00

CRO 20. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1393	0.2044	0.2044	15.3283	8.96662E 00
100.00	0.1842	0.1854	0.1854	11.2217	6.40264E 00
150.00	0.2086	0.1990	0.1990	9.1814	5.31821E 00
200.00	0.2257	0.2163	0.2163	7.8969	4.66933E 00
300.00	0.2515	0.2481	0.2481	6.2333	3.84268E 00
400.00	0.2721	0.2753	0.2753	5.1263	3.29276E 00
500.00	0.2900	0.2988	0.2988	4.3116	2.88532E 00
700.00	0.3209	0.3385	0.3385	3.1700	2.30893E 00
1000.00	0.3605	0.3867	0.3867	2.0967	1.75972E 00

CRO 30. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1392	0.2075	0.2075	22.9980	1.32315E 01
100.00	0.1841	0.1890	0.1890	16.8460	9.39059E 00
150.00	0.2084	0.2032	0.2032	13.7930	7.76811E 00
200.00	0.2254	0.2213	0.2213	11.8721	6.79836E 00
300.00	0.2509	0.2547	0.2547	9.3830	5.56431E 00
400.00	0.2713	0.2833	0.2833	7.7286	4.74437E 00
500.00	0.2889	0.3082	0.3082	6.5142	4.13752E 00
700.00	0.3192	0.3513	0.3513	4.8101	3.28028E 00
1000.00	0.3576	0.4045	0.4045	3.2121	2.46532E 00

CRO 50. EM 0.1000 EMU 5.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1392	0.2102	0.2102	38.3346	2.17612E 01
100.00	0.1839	0.1920	0.1920	28.0961	1.53665E 01
150.00	0.2082	0.2069	0.2069	23.0134	1.26679E 01
200.00	0.2251	0.2254	0.2254	19.8226	1.10564E 01
300.00	0.2504	0.2603	0.2603	15.6823	9.00757E 00
400.00	0.2706	0.2903	0.2903	12.9339	7.64759E 00
500.00	0.2880	0.3166	0.3166	10.9162	6.64192E 00
700.00	0.3179	0.3626	0.3626	8.0900	5.22296E 00
1000.00	0.3554	0.4208	0.4208	5.4423	3.87652E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0253 EMU1C.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0558	0.6924	0.6924	0.4258	2.83821E 00
100.00	0.0958	0.4618	0.4618	0.0765	1.18876E 00
150.00	0.1377	0.2019	0.2019	0.0440	7.55962E-01
200.00	0.2609	0.1068	0.0964	0.0017	6.24066E-01
300.00	0.3346	0.1228	0.0240	0.0001	5.50011E-01
400.00	0.3736	0.1438	0.0117	0.0000	5.20480E-01
500.00	0.4068	0.1616	0.0076	0.0000	4.98760E-01
700.00	0.4692	0.1891	0.0041	0.0000	4.64420E-01
1000.00	0.5587	0.2155	0.0020	0.0000	4.25591E-01

CRO 20. EM 0.0253 EMU1C.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.7754	0.7754	0.8571	5.06406E 00
100.00	0.0949	0.6157	0.6157	0.1531	1.78326E 00
150.00	0.1322	0.3256	0.3256	0.0901	9.34043E-01
200.00	0.1797	0.1471	0.1471	0.0381	6.85163E-01
300.00	0.3193	0.1259	0.0467	0.0004	5.63261E-01
400.00	0.3650	0.1451	0.0231	0.0001	5.26576E-01
500.00	0.4006	0.1624	0.0152	0.0000	5.02577E-01
700.00	0.4653	0.1895	0.0081	0.0000	4.66320E-01
1000.00	0.5565	0.2158	0.0039	0.0000	4.26428E-01

CRO 30. EM 0.0253 EMU1C.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.8078	0.8078	1.2880	7.28991E 00
100.00	0.0946	0.6927	0.6927	0.2298	2.37775E 00
150.00	0.1306	0.4098	0.4098	0.1358	1.11212E 00
200.00	0.1699	0.1936	0.1936	0.0689	7.46261E-01
300.00	0.3052	0.1294	0.0680	0.0011	5.76510E-01
400.00	0.3568	0.1464	0.0342	0.0002	5.32673E-01
500.00	0.3947	0.1632	0.0226	0.0000	5.06394E-01
700.00	0.4616	0.1899	0.0122	0.0000	4.68220E-01
1000.00	0.5543	0.2161	0.0059	0.0000	4.27264E-01

CRO 50. EM 0.0253 EMU1C.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0556	0.8357	0.8357	2.1506	1.17416E 01
100.00	0.0943	0.7696	0.7696	0.3830	3.56675E 00
150.00	0.1294	0.5171	0.5171	0.2269	1.46828E 00
200.00	0.1640	0.2701	0.2701	0.1260	8.68456E-01
300.00	0.2810	0.1381	0.1064	0.0040	6.03009E-01
400.00	0.3412	0.1494	0.0555	0.0005	5.44867E-01
500.00	0.3831	0.1649	0.0370	0.0001	5.14028E-01
700.00	0.4542	0.1907	0.0201	0.0000	4.72020E-01
1000.00	0.5500	0.2166	0.0098	0.0000	4.28937E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1037	0.4873	0.4873	2.3928	2.90990E 00
100.00	0.1558	0.2969	0.2969	1.3819	1.45825E 00
150.00	0.1876	0.2288	0.2288	0.8707	1.02403E 00
200.00	0.2084	0.2073	0.2073	0.6163	8.45287E-01
300.00	0.2370	0.1971	0.1971	0.3706	6.85073E-01
400.00	0.2612	0.1948	0.1948	0.2403	6.00999E-01
500.00	0.2862	0.1938	0.1938	0.1548	5.45215E-01
700.00	0.3602	0.1969	0.1969	0.0428	4.73854E-01
1000.00	0.5940	0.2170	0.1594	0.0005	4.13038E-01

CRO 20. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5271	0.5271	4.7865	5.38011E 00
100.00	0.1553	0.3462	0.3462	2.7753	2.48601E 00
150.00	0.1863	0.2816	0.2816	1.7671	1.62591E 00
200.00	0.2060	0.2626	0.2626	1.2697	1.27599E 00
300.00	0.2317	0.2563	0.2563	0.7951	9.68801E-01
400.00	0.2514	0.2551	0.2551	0.5499	8.11825E-01
500.00	0.2694	0.2528	0.2528	0.3935	7.09832E-01
700.00	0.3057	0.2462	0.2462	0.2037	5.82771E-01
1000.00	0.3867	0.2404	0.2404	0.0485	4.79026E-01

CRO 30. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5418	0.5418	7.1802	7.85032E 00
100.00	0.1551	0.3668	0.3668	4.1684	3.51376E 00
150.00	0.1859	0.3058	0.3058	2.6632	2.22778E 00
200.00	0.2052	0.2900	0.2900	1.9229	1.70670E 00
300.00	0.2300	0.2891	0.2891	1.2185	1.25253E 00
400.00	0.2485	0.2915	0.2915	0.8569	1.02265E 00
500.00	0.2648	0.2911	0.2911	0.6287	8.74448E-01
700.00	0.2953	0.2852	0.2852	0.3547	6.91688E-01
1000.00	0.3453	0.2726	0.2726	0.1423	5.45014E-01

CRO 50. EM 0.0500 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1035	0.5542	0.5542	11.9678	1.27907E 01
100.00	0.1549	0.3851	0.3851	6.9552	5.56928E 00
150.00	0.1855	0.3289	0.3289	4.4552	3.43154E 00
200.00	0.2046	0.3174	0.3174	3.2282	2.56812E 00
300.00	0.2286	0.3240	0.3240	2.0653	1.81998E 00
400.00	0.2462	0.3327	0.3327	1.4703	1.44430E 00
500.00	0.2613	0.3371	0.3371	1.0964	1.20368E 00
700.00	0.2881	0.3369	0.3369	0.6526	9.09523E-01
1000.00	0.3261	0.3251	0.3251	0.3165	6.76991E-01

EFFECTIVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1275	0.2895	0.2895	6.4088	3.70816E 00
100.00	0.1753	0.2237	0.2237	4.2308	2.33904E 00
150.00	0.2012	0.2214	0.2214	3.1953	1.83662E 00
200.00	0.2184	0.2302	0.2302	2.6020	1.57196E 00
300.00	0.2432	0.2492	0.2492	1.9001	1.26964E 00
400.00	0.2627	0.2634	0.2634	1.4709	1.08428E 00
500.00	0.2797	0.2734	0.2734	1.1739	9.53573E-01
700.00	0.3094	0.2853	0.2853	0.7871	7.78031E-01
1000.00	0.3493	0.2915	0.2915	0.4578	6.21218E-01

CRO 20. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1273	0.3038	0.3038	12.8241	7.06072E 00
100.00	0.1749	0.2395	0.2395	8.4875	4.33093E 00
150.00	0.2004	0.2402	0.2402	6.4284	3.33240E 00
200.00	0.2173	0.2522	0.2522	5.2506	2.80797E 00
300.00	0.2414	0.2778	0.2778	3.8575	2.21060E 00
400.00	0.2602	0.2982	0.2982	3.0068	1.84533E 00
500.00	0.2763	0.3140	0.3140	2.4189	1.58844E 00
700.00	0.3039	0.3366	0.3366	1.6543	1.24490E 00
1000.00	0.3393	0.3556	0.3556	1.0075	9.40537E-01

CRO 30. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.3089	0.3089	19.2393	1.04133E 01
100.00	0.1747	0.2454	0.2454	12.7434	6.32282E 00
150.00	0.2002	0.2474	0.2474	9.6614	4.82818E 00
200.00	0.2169	0.2607	0.2607	7.8992	4.04397E 00
300.00	0.2408	0.2893	0.2893	5.8148	3.15157E 00
400.00	0.2593	0.3128	0.3128	4.5418	2.60639E 00
500.00	0.2752	0.3317	0.3317	3.6623	2.22330E 00
700.00	0.3022	0.3600	0.3600	2.5209	1.71178E 00
1000.00	0.3362	0.3876	0.3876	1.5556	1.25986E 00

CRO 50. EM 0.0750 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1272	0.3131	0.3131	32.0695	1.71184E 01
100.00	0.1746	0.2504	0.2504	21.2551	1.03066E 01
150.00	0.2000	0.2535	0.2535	16.1268	7.81974E 00
200.00	0.2166	0.2681	0.2681	13.1951	6.51599E 00
300.00	0.2403	0.2993	0.2993	9.7301	5.03350E 00
400.00	0.2587	0.3257	0.3257	7.6133	4.12850E 00
500.00	0.2743	0.3476	0.3476	6.1502	3.49303E 00
700.00	0.3008	0.3822	0.3822	4.2528	2.64552E 00
1000.00	0.3338	0.4194	0.4194	2.6510	1.89849E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 1) 2-B.W. 5 1 1 0 200

CRO 10. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1391	0.1996	0.1996	10.5747	4.58169E 00
100.00	0.1838	0.1783	0.1783	7.6017	3.30353E 00
150.00	0.2081	0.1892	0.1892	6.1303	2.76425E 00
200.00	0.2249	0.2035	0.2035	5.2120	2.44215E 00
300.00	0.2502	0.2300	0.2300	4.0361	2.03238E 00
400.00	0.2704	0.2514	0.2514	3.2714	1.76007E 00
500.00	0.2878	0.2692	0.2692	2.7190	1.55843E 00
700.00	0.3178	0.2972	0.2972	1.9633	1.27333E 00
1000.00	0.3557	0.3266	0.3266	1.2785	1.00166E 00

CRO 20. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1391	0.2067	0.2067	21.1507	8.84654E 00
100.00	0.1838	0.1870	0.1870	15.2080	6.29147E 00
150.00	0.2079	0.2001	0.2001	12.2685	5.21415E 00
200.00	0.2248	0.2170	0.2170	10.4310	4.57118E 00
300.00	0.2500	0.2481	0.2481	8.0835	3.75401E 00
400.00	0.2700	0.2741	0.2741	6.5586	3.21168E 00
500.00	0.2873	0.2965	0.2965	5.4569	2.81063E 00
700.00	0.3168	0.3338	0.3338	3.9521	2.24467E 00
1000.00	0.3539	0.3773	0.3773	2.5912	1.70726E 00

CRO 30. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1391	0.2092	0.2092	31.7261	1.31114E 01
100.00	0.1838	0.1901	0.1901	22.8142	9.27942E 00
150.00	0.2079	0.2040	0.2040	18.4068	7.66406E 00
200.00	0.2248	0.2219	0.2219	15.6500	6.70020E 00
300.00	0.2499	0.2546	0.2546	12.1337	5.47564E 00
400.00	0.2699	0.2827	0.2827	9.8449	4.66329E 00
500.00	0.2871	0.3069	0.3069	8.1953	4.06283E 00
700.00	0.3165	0.3482	0.3482	5.9419	3.21602E 00
1000.00	0.3533	0.3984	0.3984	3.9028	2.41286E 00

CRO 50. EM 0.1000 EMU10.00 H/D 1

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1391	0.2112	0.2112	52.8768	2.16411E 01
100.00	0.1837	0.1927	0.1927	38.0274	1.52553E 01
150.00	0.2079	0.2074	0.2074	30.6780	1.25639E 01
200.00	0.2247	0.2259	0.2259	26.0892	1.09582E 01
300.00	0.2499	0.2604	0.2604	20.2276	8.91890E 00
400.00	0.2698	0.2899	0.2899	16.4200	7.56651E 00
500.00	0.2870	0.3158	0.3158	13.6723	6.56723E 00
700.00	0.3163	0.3609	0.3609	9.9184	5.15871E 00
1000.00	0.3528	0.4172	0.4172	6.5280	3.82407E 00

EFFECTIVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0635	0.6663	0.6663	0.2233	2.85964E 00
100.00	0.1133	0.4042	0.4038	0.0608	1.24400E 00
150.00	0.1682	0.1909	0.1797	0.0255	8.16222E-01
200.00	0.2248	0.1351	0.0789	0.0052	6.75849E-01
300.00	0.2981	0.1380	0.0209	0.0004	5.82963E-01
400.00	0.3460	0.1550	0.0105	0.0001	5.40842E-01
500.00	0.3875	0.1708	0.0069	0.0000	5.11039E-01
700.00	0.4628	0.1963	0.0038	0.0000	4.67607E-01
1000.00	0.5657	0.2209	0.0018	0.0000	4.22959E-01

CRO 20. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0604	0.7622	0.7622	0.5059	4.93921E 00
100.00	0.1049	0.5615	0.5613	0.1226	1.78889E 00
150.00	0.1500	0.2912	0.2886	0.0670	9.79376E-01
200.00	0.2015	0.1663	0.1375	0.0202	7.32243E-01
300.00	0.2864	0.1423	0.0405	0.0013	5.95345E-01
400.00	0.3389	0.1566	0.0206	0.0002	5.46531E-01
500.00	0.3822	0.1717	0.0138	0.0000	5.14589E-01
700.00	0.4593	0.1967	0.0075	0.0000	4.69367E-01
1000.00	0.5636	0.2212	0.0036	0.0000	4.23730E-01

CRO 30. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0594	0.8010	0.8010	0.7909	7.01878E 00
100.00	0.1021	0.6454	0.6453	0.1842	2.33378E 00
150.00	0.1433	0.3686	0.3675	0.1068	1.14253E 00
200.00	0.1888	0.1998	0.1828	0.0413	7.88637E-01
300.00	0.2760	0.1471	0.0588	0.0028	6.07726E-01
400.00	0.3322	0.1583	0.0306	0.0004	5.52221E-01
500.00	0.3770	0.1726	0.0205	0.0001	5.18139E-01
700.00	0.4559	0.1972	0.0112	0.0000	4.71127E-01
1000.00	0.5616	0.2215	0.0055	0.0000	4.24502E-01

CRO 50. EM 0.0253 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0586	0.8351	0.8351	1.3625	1.11779E 01
100.00	0.0998	0.7331	0.7331	0.3073	3.42357E 00
150.00	0.1379	0.4742	0.4737	0.1839	1.46884E 00
200.00	0.1771	0.2616	0.2531	0.0881	9.01425E-01
300.00	0.2585	0.1578	0.0911	0.0081	6.32489E-01
400.00	0.3194	0.1621	0.0496	0.0010	5.63599E-01
500.00	0.3670	0.1746	0.0336	0.0002	5.25239E-01
700.00	0.4492	0.1980	0.0185	0.0000	4.74646E-01
1000.00	0.5575	0.2221	0.0091	0.0000	4.26045E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1086	0.4305	0.4305	1.3564	3.08842E 00
100.00	0.1635	0.2641	0.2589	0.7927	1.66735E 00
150.00	0.1947	0.2185	0.1987	0.5255	1.22685E 00
200.00	0.2156	0.2078	0.1786	0.3850	1.03249E 00
300.00	0.2457	0.2086	0.1685	0.2389	8.42706E-01
400.00	0.2713	0.2138	0.1650	0.1577	7.36341E-01
500.00	0.2963	0.2192	0.1609	0.1048	6.63466E-01
700.00	0.3497	0.2301	0.1491	0.0432	5.67174E-01
1000.00	0.4452	0.2464	0.1224	0.0081	4.81606E-01

CRO 20. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1076	0.4890	0.4890	2.7175	5.43041E 00
100.00	0.1608	0.3194	0.3169	1.6187	2.64158E 00
150.00	0.1914	0.2684	0.2564	1.0876	1.80094E 00
200.00	0.2112	0.2561	0.2374	0.8094	1.44424E 00
300.00	0.2381	0.2563	0.2302	0.5247	1.11331E 00
400.00	0.2595	0.2603	0.2288	0.3680	9.36688E-01
500.00	0.2791	0.2630	0.2262	0.2651	8.19410E-01
700.00	0.3180	0.2663	0.2174	0.1383	6.69832E-01
1000.00	0.3845	0.2706	0.1966	0.0444	5.43445E-01

CRO 30. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1073	0.5123	0.5123	4.0785	7.77241E 00
100.00	0.1598	0.3452	0.3436	2.4453	3.61582E 00
150.00	0.1902	0.2946	0.2858	1.6510	2.37503E 00
200.00	0.2096	0.2833	0.2694	1.2358	1.85599E 00
300.00	0.2353	0.2861	0.2663	0.8137	1.38391E 00
400.00	0.2551	0.2917	0.2678	0.5828	1.13704E 00
500.00	0.2728	0.2950	0.2671	0.4315	9.75354E-01
700.00	0.3062	0.2968	0.2605	0.2446	7.72491E-01
1000.00	0.3586	0.2952	0.2428	0.0993	6.05283E-01

CRO 50. EM 0.0500 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1070	0.5326	0.5326	6.8003	1.24564E 01
100.00	0.1590	0.3698	0.3688	4.0989	5.56428E 00
150.00	0.1892	0.3213	0.3156	2.7789	3.52320E 00
200.00	0.2083	0.3128	0.3036	2.0900	2.67950E 00
300.00	0.2330	0.3210	0.3075	1.3937	1.92511E 00
400.00	0.2515	0.3307	0.3143	1.0152	1.53773E 00
500.00	0.2675	0.3367	0.3175	0.7685	1.28724E 00
700.00	0.2965	0.3411	0.3162	0.4635	9.77808E-01
1000.00	0.3380	0.3374	0.3030	0.2239	7.28961E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1313	0.2645	0.2645	3.4425	3.87501E 00
100.00	0.1799	0.2075	0.2075	2.2646	2.54380E 00
150.00	0.2070	0.2086	0.2086	1.7114	2.04547E 00
200.00	0.2258	0.2198	0.2194	1.3939	1.77468E 00
300.00	0.2513	0.2426	0.2316	1.0702	1.45509E 00
400.00	0.2719	0.2603	0.2416	0.8570	1.25332E 00
500.00	0.2902	0.2740	0.2493	0.7008	1.10801E 00
700.00	0.3231	0.2942	0.2596	0.4832	9.07972E-01
1000.00	0.3691	0.3138	0.2667	0.2820	7.23287E-01

CRO 20. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1309	0.2875	0.2875	6.8948	7.10845E 00
100.00	0.1786	0.2307	0.2307	4.5687	4.47006E 00
150.00	0.2047	0.2336	0.2336	3.4848	3.49390E 00
200.00	0.2224	0.2468	0.2468	2.8636	2.97031E 00
300.00	0.2472	0.2739	0.2682	2.2055	2.36181E 00
400.00	0.2667	0.2957	0.2853	1.7831	1.98401E 00
500.00	0.2837	0.3131	0.2989	1.4752	1.71562E 00
700.00	0.3133	0.3392	0.3189	1.0494	1.35243E 00
1000.00	0.3523	0.3650	0.3371	0.6582	1.02533E 00

CRO 30. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1308	0.2961	0.2961	10.3470	1.03419E 01
100.00	0.1782	0.2400	0.2400	6.8717	6.39631E 00
150.00	0.2039	0.2441	0.2441	5.2574	4.94234E 00
200.00	0.2213	0.2584	0.2584	4.3354	4.16595E 00
300.00	0.2458	0.2879	0.2841	3.3431	3.26854E 00
400.00	0.2649	0.3122	0.3050	2.7115	2.71471E 00
500.00	0.2814	0.3319	0.3219	2.2523	2.32323E 00
700.00	0.3099	0.3625	0.3479	1.6190	1.79689E 00
1000.00	0.3466	0.3941	0.3740	1.0387	1.32737E 00

CRO 50. EM 0.0750 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1307	0.3034	0.3034	17.2507	1.68088E 01
100.00	0.1779	0.2480	0.2480	11.4796	1.02488E 01
150.00	0.2033	0.2534	0.2534	8.8028	7.83921E 00
200.00	0.2204	0.2691	0.2691	7.2771	6.55723E 00
300.00	0.2446	0.3011	0.2988	5.6185	5.08199E 00
400.00	0.2634	0.3280	0.3235	4.5691	4.17609E 00
500.00	0.2795	0.3504	0.3441	3.8075	3.53845E 00
700.00	0.3071	0.3863	0.3770	2.7588	2.68582E 00
1000.00	0.3419	0.4255	0.4124	1.8022	1.93146E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1430	0.1891	0.1891	5.8055	4.71641E 00
100.00	0.1882	0.1741	0.1741	4.2305	3.46126E 00
150.00	0.2133	0.1874	0.1874	3.4523	2.92186E 00
200.00	0.2313	0.2035	0.2035	2.9612	2.59359E 00
300.00	0.2591	0.2330	0.2330	2.3216	2.16985E 00
400.00	0.2820	0.2582	0.2582	1.8939	1.88528E 00
500.00	0.3022	0.2801	0.2794	1.5828	1.67303E 00
700.00	0.3350	0.3167	0.3063	1.1980	1.37025E 00
1000.00	0.3779	0.3582	0.3359	0.8064	1.07818E 00

CRO 20. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1427	0.2003	0.2003	11.6232	8.87084E 00
100.00	0.1875	0.1862	0.1862	8.4936	6.37598E 00
150.00	0.2121	0.2013	0.2013	6.9536	5.31043E 00
200.00	0.2296	0.2193	0.2193	5.9838	4.66565E 00
300.00	0.2562	0.2523	0.2523	4.7287	3.83866E 00
400.00	0.2778	0.2804	0.2804	3.8949	3.28728E 00
500.00	0.2967	0.3052	0.3052	3.2786	2.87860E 00
700.00	0.3281	0.3475	0.3425	2.5000	2.30030E 00
1000.00	0.3680	0.3980	0.3861	1.7255	1.74918E 00

CRO 30. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1426	0.2044	0.2044	17.4405	1.30253E 01
100.00	0.1873	0.1908	0.1908	12.7559	9.29070E 00
150.00	0.2117	0.2067	0.2067	10.4533	7.69900E 00
200.00	0.2290	0.2255	0.2255	9.0064	6.73771E 00
300.00	0.2553	0.2599	0.2599	7.1353	5.50747E 00
400.00	0.2764	0.2895	0.2895	5.8941	4.68929E 00
500.00	0.2948	0.3156	0.3156	4.9792	4.08416E 00
700.00	0.3257	0.3608	0.3576	3.8036	3.23035E 00
1000.00	0.3647	0.4162	0.4081	2.6468	2.42018E 00

CRO 50. EM 0.1000 EMU 3.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1426	0.2078	0.2078	29.0750	2.13341E 01
100.00	0.1871	0.1946	0.1946	21.2812	1.51201E 01
150.00	0.2114	0.2111	0.2111	17.4566	1.24761E 01
200.00	0.2286	0.2307	0.2307	15.0516	1.08818E 01
300.00	0.2545	0.2665	0.2665	11.9484	8.84510E 00
400.00	0.2753	0.2975	0.2975	9.8930	7.49329E 00
500.00	0.2933	0.3249	0.3249	8.3800	6.49529E 00
700.00	0.3238	0.3729	0.3710	6.4131	5.09045E 00
1000.00	0.3619	0.4332	0.4282	4.4916	3.76217E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0594	0.6587	0.6587	0.2679	2.84574E 00
100.00	0.1090	0.4041	0.4041	0.0612	1.24285E 00
150.00	0.1682	0.1908	0.1798	0.0255	8.16093E-01
200.00	0.2248	0.1351	0.0789	0.0052	6.75831E-01
300.00	0.2981	0.1380	0.0209	0.0004	5.82963E-01
400.00	0.3460	0.1550	0.0105	0.0001	5.40842E-01
500.00	0.3875	0.1708	0.0069	0.0000	5.11039E-01
700.00	0.4628	0.1963	0.0038	0.0000	4.67607E-01
1000.00	0.5657	0.2209	0.0018	0.0000	4.22959E-01

CRO 20. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0585	0.7575	0.7575	0.5590	4.92532E 00
100.00	0.1020	0.5616	0.5616	0.1229	1.78774E 00
150.00	0.1500	0.2911	0.2887	0.0670	9.79248E-01
200.00	0.2015	0.1663	0.1375	0.0202	7.32225E-01
300.00	0.2864	0.1423	0.0405	0.0013	5.95344E-01
400.00	0.3389	0.1566	0.0206	0.0002	5.46531E-01
500.00	0.3822	0.1717	0.0138	0.0000	5.14589E-01
700.00	0.4593	0.1967	0.0075	0.0000	4.69367E-01
1000.00	0.5636	0.2212	0.0036	0.0000	4.23730E-01

CRO 30. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0582	0.7976	0.7976	0.8505	7.00489E 00
100.00	0.1000	0.6455	0.6455	0.1846	2.33264E 00
150.00	0.1433	0.3685	0.3675	0.1068	1.14240E 00
200.00	0.1888	0.1998	0.1828	0.0413	7.88619E-01
300.00	0.2760	0.1471	0.0588	0.0028	6.07726E-01
400.00	0.3322	0.1583	0.0306	0.0004	5.52220E-01
500.00	0.3770	0.1726	0.0205	0.0001	5.18139E-01
700.00	0.4559	0.1972	0.0112	0.0000	4.71127E-01
1000.00	0.5616	0.2215	0.0055	0.0000	4.24502E-01

CRO 50. EM 0.0253 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0579	0.8330	0.8330	1.4336	1.11640E 01
100.00	0.0985	0.7333	0.7333	0.3079	3.42242E 00
150.00	0.1380	0.4741	0.4737	0.1839	1.46871E 00
200.00	0.1771	0.2616	0.2531	0.0881	9.01407E-01
300.00	0.2585	0.1578	0.0911	0.0081	6.32488E-01
400.00	0.3194	0.1621	0.0496	0.0010	5.63599E-01
500.00	0.3670	0.1746	0.0336	0.0002	5.25239E-01
700.00	0.4492	0.1980	0.0185	0.0000	4.74646E-01
1000.00	0.5575	0.2221	0.0091	0.0000	4.26045E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.050C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1072	0.4487	0.4487	1.6488	2.95757E 00
100.00	0.1601	0.2646	0.2646	0.9362	1.57096E 00
150.00	0.1935	0.2072	0.2072	0.5781	1.15357E 00
200.00	0.2169	0.1929	0.1929	0.3967	9.75401E-01
300.00	0.2534	0.1954	0.1927	0.2162	8.06171E-01
400.00	0.2788	0.2042	0.1823	0.1424	7.11787E-01
500.00	0.3036	0.2123	0.1732	0.0945	6.46415E-01
700.00	0.3566	0.2266	0.1550	0.0388	5.58413E-01
1000.00	0.4509	0.2451	0.1239	0.0073	4.78054E-01

CRO 20. EM 0.05CC EMU 5.0C H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1069	0.5006	0.5006	3.2991	5.29957E 00
100.00	0.1589	0.3222	0.3222	1.8908	2.54520E 00
150.00	0.1905	0.2632	0.2632	1.1966	1.72766E 00
200.00	0.2113	0.2475	0.2475	0.8519	1.38715E 00
300.00	0.2407	0.2468	0.2468	0.5142	1.07677E 00
400.00	0.2631	0.2525	0.2449	0.3514	9.12134E-01
500.00	0.2826	0.2570	0.2386	0.2532	8.02359E-01
700.00	0.3211	0.2627	0.2245	0.1322	6.61071E-01
1000.00	0.3874	0.2690	0.1994	0.0424	5.39893E-01

CRO 30. EM 0.05CC EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1068	0.5208	0.5208	4.9492	7.64156E 00
100.00	0.1586	0.3481	0.3481	2.8448	3.51943E 00
150.00	0.1895	0.2915	0.2915	1.8141	2.30175E 00
200.00	0.2095	0.2776	0.2776	1.3056	1.79891E 00
300.00	0.2366	0.2790	0.2790	0.8138	1.34737E 00
400.00	0.2575	0.2856	0.2821	0.5660	1.11248E 00
500.00	0.2750	0.2899	0.2783	0.4197	9.58303E-01
700.00	0.3081	0.2936	0.2674	0.2381	7.63730E-01
1000.00	0.3604	0.2937	0.2460	0.0968	6.01731E-01

CRO 50. EM 0.050C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5380	0.5380	8.2498	1.23256E 01
100.00	0.1582	0.3721	0.3721	4.7536	5.46790E 00
150.00	0.1888	0.3199	0.3199	3.0490	3.44993E 00
200.00	0.2082	0.3095	0.3095	2.2126	2.62241E 00
300.00	0.2336	0.3165	0.3165	1.4101	1.88858E 00
400.00	0.2529	0.3265	0.3255	0.9985	1.51317E 00
500.00	0.2688	0.3333	0.3268	0.7562	1.27019E 00
700.00	0.2976	0.3387	0.3222	0.4571	9.69047E-01
1000.00	0.3388	0.3360	0.3060	0.2212	7.25409E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.075C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.131C	0.2736	0.2736	4.3996	3.73603E 00
100.00	0.1788	0.2141	0.2141	2.8781	2.41582E 00
150.00	0.2049	0.2127	0.2127	2.168C	1.92741E 00
200.00	0.2227	0.2212	0.2212	1.76CC	1.66562E 00
300.00	0.2491	0.2394	0.2394	1.2767	1.36161E 00
400.00	0.2706	0.2540	0.254C	0.9791	1.17277E 00
500.00	0.2899	0.2653	0.2653	0.7712	1.03826E 00
700.00	0.3263	0.2830	0.2830	0.4933	8.54998E-01
1000.00	0.3812	0.3027	0.2997	0.2507	6.87251E-01

CRO 20. EM 0.075C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1307	0.2928	0.2928	8.8063	6.96947E 00
100.00	0.1781	0.2351	0.2351	5.7844	4.34207E 00
150.00	0.2037	0.2370	0.237C	4.3774	3.37585E 00
200.00	0.2209	0.2488	0.2488	3.5732	2.86126E 00
300.00	0.2459	0.2734	0.2734	2.6232	2.26834E 00
400.00	0.2657	0.2933	0.2933	2.0427	1.90346E 00
500.00	0.2831	0.3093	0.3093	1.6396	1.64587E 00
700.00	0.3138	0.3334	0.3334	1.1099	1.29946E 00
1000.00	0.3557	0.3579	0.3579	0.649C	9.89294E-01

CRO 30. EM 0.075C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1307	0.2999	0.2999	13.2132	1.02029E 01
100.00	0.1778	0.2432	0.2432	8.6901	6.26833E 00
150.00	0.2032	0.2467	0.2467	6.5878	4.82429E 00
200.00	0.2203	0.2602	0.2602	5.3856	4.05690E 00
300.00	0.2448	0.2882	0.2882	3.9686	3.17506E 00
400.00	0.2642	0.3111	0.3111	3.1046	2.63416E 00
500.00	0.2809	0.3298	0.3298	2.5072	2.25349E 00
700.00	0.3100	0.3587	0.3587	1.7241	1.74392E 00
1000.00	0.3482	0.3893	0.3893	1.0474	1.29134E 00

CRO 50. EM 0.075C EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1306	0.3058	0.3058	22.0261	1.66698E 01
100.00	0.1777	0.2502	0.2502	14.5003	1.01208E 01
150.00	0.2029	0.2552	0.2552	11.0061	7.72116E 00
200.00	0.2198	0.2704	0.2704	9.0108	6.44817E 00
300.00	0.2440	0.3015	0.3015	6.6598	4.98852E 00
400.00	0.2629	0.3277	0.3277	5.2285	4.09555E 00
500.00	0.2792	0.3494	0.3494	4.2399	3.46871E 00
700.00	0.3071	0.3843	0.3843	2.9483	2.63284E 00
1000.00	0.3426	0.4227	0.4227	1.8405	1.89542E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1429	0.1939	0.1939	7.4854	4.59055E 00
100.00	0.1878	0.1789	0.1789	5.4460	3.34023E 00
150.00	0.2126	0.1922	0.1922	4.4360	2.80544E 00
200.00	0.2302	0.2085	0.2085	3.7962	2.48159E 00
300.00	0.2571	0.2376	0.2376	2.9646	2.06613E 00
400.00	0.2790	0.2617	0.2617	2.4119	1.78914E 00
500.00	0.2982	0.2822	0.2822	2.0053	1.58385E 00
700.00	0.3319	0.3157	0.3157	1.4361	1.29333E 00
1000.00	0.3768	0.3536	0.3536	0.9027	1.01623E 00

CRO 20. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1427	0.2030	0.2030	14.9815	8.74498E 00
100.00	0.1873	0.1890	0.1890	10.9217	6.25495E 00
150.00	0.2117	0.2042	0.2042	8.9150	5.19401E 00
200.00	0.2290	0.2224	0.2224	7.6463	4.55365E 00
300.00	0.2552	0.2554	0.2554	6.0001	3.73494E 00
400.00	0.2763	0.2833	0.2833	4.9076	3.19114E 00
500.00	0.2946	0.3074	0.3074	4.1072	2.78941E 00
700.00	0.3263	0.3482	0.3482	2.9893	2.22338E 00
1000.00	0.3669	0.3969	0.3969	1.9476	1.68723E 00

CRO 30. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1426	0.2063	0.2063	22.4766	1.28994E 01
100.00	0.1871	0.1927	0.1927	16.3973	9.16967E 00
150.00	0.2114	0.2087	0.2087	13.3929	7.58258E 00
200.00	0.2286	0.2277	0.2277	11.4954	6.62571E 00
300.00	0.2546	0.2622	0.2622	9.0342	5.40375E 00
400.00	0.2754	0.2918	0.2918	7.4027	4.59315E 00
500.00	0.2934	0.3174	0.3174	6.2088	3.99498E 00
700.00	0.3244	0.3617	0.3617	4.5411	3.15342E 00
1000.00	0.3638	0.4159	0.4159	2.9896	2.35823E 00

CRO 50. EM 0.1000 EMU 5.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1426	0.2090	0.2090	37.4682	2.12083E 01
100.00	0.1870	0.1958	0.1958	27.3481	1.49991E 01
150.00	0.2112	0.2124	0.2124	22.3508	1.23597E 01
200.00	0.2283	0.2321	0.2321	19.1937	1.07698E 01
300.00	0.2541	0.2681	0.2681	15.1030	8.74138E 00
400.00	0.2747	0.2990	0.2990	12.3947	7.39715E 00
500.00	0.2925	0.3262	0.3262	10.4100	6.40610E 00
700.00	0.3230	0.3736	0.3736	7.6442	5.01352E 00
1000.00	0.3613	0.4333	0.4333	5.0735	3.70022E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0579	0.6911	0.6911	0.3605	2.69052E 00
100.00	0.0986	0.4416	0.4416	0.0726	1.13669E 00
150.00	0.1421	0.1894	0.1894	0.0407	7.37762E-01
200.00	0.2680	0.1099	0.0905	0.0013	6.15465E-01
300.00	0.3416	0.1275	0.0227	0.0001	5.44365E-01
400.00	0.3820	0.1489	0.0110	0.0000	5.14717E-01
500.00	0.4168	0.1668	0.0072	0.0000	4.92740E-01
700.00	0.4823	0.1941	0.0038	0.0000	4.58038E-01
1000.00	0.5765	0.2195	0.0018	-0.0000	4.18979E-01

CRO 20. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0577	0.7789	0.7789	0.7261	4.77009E 00
100.00	0.0975	0.5969	0.5969	0.1453	1.68158E 00
150.00	0.1354	0.3083	0.3083	0.0845	9.00917E-01
200.00	0.1876	0.1423	0.1423	0.0307	6.71859E-01
300.00	0.3267	0.1304	0.0442	0.0003	5.56747E-01
400.00	0.3737	0.1500	0.0218	0.0001	5.20407E-01
500.00	0.4108	0.1675	0.0143	0.0000	4.96290E-01
700.00	0.4787	0.1946	0.0077	0.0000	4.59798E-01
1000.00	0.5743	0.2197	0.0037	-0.0000	4.19751E-01

CRO 30. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0576	0.8134	0.8134	1.0920	6.84967E 00
100.00	0.0971	0.6762	0.6762	0.2180	2.22647E 00
150.00	0.1335	0.3911	0.3911	0.1277	1.06407E 00
200.00	0.1745	0.1857	0.1857	0.0607	7.28253E-01
300.00	0.3130	0.1337	0.0646	0.0008	5.69128E-01
400.00	0.3657	0.1513	0.0323	0.0001	5.26096E-01
500.00	0.4050	0.1682	0.0213	0.0000	4.99840E-01
700.00	0.4750	0.1949	0.0114	0.0000	4.61557E-01
1000.00	0.5723	0.2200	0.0055	-0.0000	4.20523E-01

CRO 50. EM 0.0253 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0576	0.8433	0.8433	1.8233	1.10088E 01
100.00	0.0969	0.7567	0.7567	0.3634	3.31625E 00
150.00	0.1321	0.4984	0.4984	0.2138	1.39038E 00
200.00	0.1673	0.2593	0.2593	0.1143	8.41041E-01
300.00	0.2890	0.1417	0.1017	0.0030	5.93891E-01
400.00	0.3506	0.1541	0.0526	0.0003	5.37475E-01
500.00	0.3938	0.1698	0.0350	0.0001	5.06940E-01
700.00	0.4679	0.1958	0.0189	0.0000	4.65077E-01
1000.00	0.5681	0.2206	0.0091	0.0000	4.22066E-01

EFFECTUVE CUTCFFS FCR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.050C EMU1C.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1069	0.4770	0.477C	2.3131	2.78097E 00
100.00	0.1590	0.2924	0.2924	1.3137	1.40347E 00
150.00	0.1906	0.2291	0.2291	0.8235	9.94581E-01
200.0C	0.2114	0.2088	0.2088	0.5807	8.24367E-01
300.00	0.2408	0.1988	0.1988	0.3446	6.69577E-01
400.00	0.2661	0.1963	0.1963	0.2191	5.87912E-01
500.00	0.2931	0.1955	0.1955	0.1365	5.33785E-01
700.00	0.3860	0.1999	0.1999	0.027C	4.64645E-01
1000.00	0.6153	0.2199	0.1522	0.0003	4.05726E-01

CRO 20. EM 0.05CC EMU1C.CC H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1068	0.5178	0.5178	4.6272	5.12297E 00
100.00	0.1584	0.3429	0.3429	2.6402	2.37770E 00
150.00	0.1891	0.2830	0.283C	1.6748	1.56867E 00
200.00	0.2087	0.2654	0.2654	1.2007	1.23612E 00
300.0C	0.2348	0.2592	0.2592	0.7457	9.40179E-01
400.00	0.2551	0.2574	0.2574	0.5103	7.88259E-01
500.00	0.2738	0.2544	0.2544	0.361C	6.89729E-01
700.00	0.3123	0.2474	0.2474	0.1795	5.67304E-01
1000.00	0.4132	0.2425	0.2425	0.0299	4.67565E-01

CRO 30. EM 0.050C EMU1C.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5330	0.5330	6.9414	7.46496E 00
100.00	0.1582	0.364C	0.364C	3.9669	3.35193E 00
150.00	0.1886	0.3C82	0.3C82	2.5253	2.14276E 00
200.00	0.2079	0.2939	0.2939	1.8201	1.64787E 00
300.00	0.2329	0.2930	0.293C	1.1457	1.21078E 00
400.00	0.2518	0.2946	0.2946	0.7994	9.88606E-01
500.0C	0.2686	0.2936	0.2936	0.5811	8.45673E-01
700.0C	0.3004	0.2865	0.2865	0.3205	6.69962E-01
1000.00	0.3549	0.2732	0.2732	0.1189	5.29403E-01

CRO 50. EM 0.05CC EMU1C.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1067	0.5458	0.5458	11.5698	1.21490E 01
100.00	0.158C	0.383C	0.383C	6.6195	5.30040E 00
150.00	0.1882	0.3322	0.3322	4.2265	3.29093E 00
200.0C	0.2072	0.3224	0.3224	3.0585	2.47138E 00
300.00	0.2315	0.3294	0.3294	1.9448	1.75198E 00
400.0C	0.2494	0.3374	0.3374	1.3753	1.38930E 00
500.00	0.2648	0.3410	0.3410	1.0189	1.15756E 00
700.00	0.2923	0.3394	0.3394	0.5974	8.75279E-01
1000.0C	0.3320	0.3257	0.3257	0.2806	6.53081E-01

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1309	0.2846	0.2846	6.2329	3.58836E 00
100.00	0.1784	0.2258	0.2258	4.0816	2.27248E 00
150.00	0.2041	0.2257	0.2257	3.0746	1.78828E 00
200.00	0.2214	0.2351	0.2351	2.4957	1.53054E 00
300.00	0.2466	0.2542	0.2542	1.8102	1.23427E 00
400.00	0.2665	0.2683	0.2683	1.3923	1.05268E 00
500.00	0.2839	0.2780	0.2780	1.1044	9.24965E-01
700.00	0.3145	0.2892	0.2892	0.7313	7.54060E-01
1000.00	0.3557	0.2941	0.2941	0.4162	6.02171E-01

CRO 20. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1307	0.2990	0.2990	12.4733	6.82180E 00
100.00	0.1779	0.2422	0.2422	8.1902	4.19874E 00
150.00	0.2033	0.2452	0.2452	6.1886	3.23671E 00
200.00	0.2202	0.2580	0.2580	5.0396	2.72618E 00
300.00	0.2447	0.2842	0.2842	3.6787	2.14100E 00
400.00	0.2638	0.3048	0.3048	2.8507	1.78337E 00
500.00	0.2802	0.3206	0.3206	2.2811	1.53258E 00
700.00	0.3085	0.3427	0.3427	1.5447	1.19852E 00
1000.00	0.3447	0.3605	0.3605	0.9267	9.04214E-01

CRO 30. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1306	0.3042	0.3042	18.7134	1.00552E 01
100.00	0.1777	0.2484	0.2484	12.2971	6.12499E 00
150.00	0.2030	0.2527	0.2527	9.3032	4.68515E 00
200.00	0.2198	0.2670	0.2670	7.5836	3.92182E 00
300.00	0.2440	0.2963	0.2963	5.5480	3.04772E 00
400.00	0.2629	0.3200	0.3200	4.3092	2.51407E 00
500.00	0.2790	0.3391	0.3391	3.4572	2.14019E 00
700.00	0.3066	0.3675	0.3675	2.3565	1.64298E 00
1000.00	0.3413	0.3941	0.3941	1.4350	1.20626E 00

CRO 50. EM 0.0750 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1306	0.3085	0.3085	31.1934	1.65221E 01
100.00	0.1776	0.2534	0.2534	20.5150	9.97751E 00
150.00	0.2028	0.2590	0.2590	15.5324	7.58203E 00
200.00	0.2195	0.2748	0.2748	12.6709	6.31310E 00
300.00	0.2435	0.3071	0.3071	9.2837	4.86118E 00
400.00	0.2622	0.3338	0.3338	7.2253	3.97545E 00
500.00	0.2781	0.3560	0.3560	5.8088	3.35541E 00
700.00	0.3051	0.3911	0.3911	3.9797	2.53191E 00
1000.00	0.3387	0.4281	0.4281	2.4499	1.81034E 00

EFFECTUVE CUTOFFS FOR SAMARIUM CYLINDERS (H/D 2) 2-B.W. 5 2 1 0 200

CRO 10. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1425	0.1981	0.1981	10.3200	4.47117E 00
100.00	0.1869	0.1815	0.1815	7.3823	3.23011E 00
150.00	0.2111	0.1938	0.1938	5.9373	2.70264E 00
200.00	0.2282	0.2090	0.2090	5.0310	2.38482E 00
300.00	0.2539	0.2361	0.2361	3.8730	1.97905E 00
400.00	0.2745	0.2580	0.2580	3.1217	1.70980E 00
500.00	0.2923	0.2761	0.2761	2.5811	1.51100E 00
700.00	0.3229	0.3042	0.3042	1.8460	1.23100E 00
1000.00	0.3618	0.3332	0.3332	1.1849	9.65719E-01

CRO 20. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1425	0.2053	0.2053	20.6412	8.62560E 00
100.00	0.1868	0.1906	0.1906	14.7690	6.14483E 00
150.00	0.2110	0.2053	0.2053	11.8824	5.09121E 00
200.00	0.2280	0.2231	0.2231	10.0711	4.45688E 00
300.00	0.2537	0.2551	0.2551	7.7586	3.64786E 00
400.00	0.2741	0.2819	0.2819	6.2601	3.11180E 00
500.00	0.2917	0.3048	0.3048	5.1828	2.71656E 00
700.00	0.3219	0.3428	0.3428	3.7189	2.16105E 00
1000.00	0.3597	0.3868	0.3868	2.4054	1.63672E 00

CRO 30. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1425	0.2079	0.2079	30.9619	1.27800E 01
100.00	0.1868	0.1939	0.1939	22.1557	9.05955E 00
150.00	0.2109	0.2095	0.2095	17.8275	7.47978E 00
200.00	0.2280	0.2281	0.2281	15.1134	6.52894E 00
300.00	0.2536	0.2622	0.2622	11.6434	5.31668E 00
400.00	0.2740	0.2909	0.2909	9.3991	4.51380E 00
500.00	0.2915	0.3160	0.3160	7.7838	3.92213E 00
700.00	0.3215	0.3583	0.3583	5.5915	3.09110E 00
1000.00	0.3591	0.4093	0.4093	3.6252	2.30771E 00

CRO 50. EM 0.1000 EMU10.00 H/D 2

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1425	0.2099	0.2099	51.6031	2.10889E 01
100.00	0.1868	0.1965	0.1965	36.9299	1.48890E 01
150.00	0.2109	0.2130	0.2130	29.7125	1.22569E 01
200.00	0.2279	0.2324	0.2324	25.1947	1.06731E 01
300.00	0.2535	0.2682	0.2682	19.4148	8.65430E 00
400.00	0.2738	0.2986	0.2986	15.6765	7.31781E 00
500.00	0.2914	0.3253	0.3253	12.9890	6.33325E 00
700.00	0.3213	0.3717	0.3717	9.3360	4.95119E 00
1000.00	0.3586	0.4294	0.4294	6.0655	3.64971E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0937	0.5502	0.5492	0.0802	1.63838E 00
100.00	0.1707	0.2486	0.2363	0.0213	8.06728E-01
150.00	0.2714	0.1812	0.0898	0.0010	6.11540E-01
200.00	0.3455	0.1853	0.0352	0.0001	5.41226E-01
300.00	0.4411	0.2100	0.0102	0.0000	4.78981E-01
400.00	0.5164	0.2301	0.0055	0.0000	4.42704E-01
500.00	0.5850	0.2435	0.0037	-0.0000	4.15913E-01
700.00	0.7119	0.2493	0.0019	-0.0000	3.77023E-01
1000.00	0.8867	0.2097	0.0009	-0.0000	3.37816E-01

CRO 20. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0871	0.6933	0.6928	0.1649	2.59292E 00
100.00	0.1465	0.3675	0.3652	0.0628	1.01004E 00
150.00	0.2326	0.2090	0.1607	0.0070	6.66985E-01
200.00	0.3226	0.1918	0.0679	0.0003	5.60329E-01
300.00	0.4322	0.2114	0.0202	0.0000	4.83881E-01
400.00	0.5107	0.2308	0.0110	0.0000	4.45148E-01
500.00	0.5808	0.2441	0.0073	-0.0000	4.17433E-01
700.00	0.7092	0.2501	0.0038	-0.0000	3.77746E-01
1000.00	0.8852	0.2104	0.0018	-0.0000	3.38117E-01

CRO 30. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0848	0.7593	0.7590	0.2505	3.54747E 00
100.00	0.1386	0.4534	0.4524	0.1012	1.21336E 00
150.00	0.2090	0.2414	0.2149	0.0206	7.22430E-01
200.00	0.3022	0.1993	0.0981	0.0010	5.79433E-01
300.00	0.4236	0.2128	0.0301	0.0000	4.88780E-01
400.00	0.5051	0.2316	0.0164	0.0000	4.47593E-01
500.00	0.5766	0.2448	0.0109	0.0000	4.18954E-01
700.00	0.7065	0.2509	0.0057	-0.0000	3.78469E-01
1000.00	0.8836	0.2111	0.0027	-0.0000	3.38417E-01

CRO 50. EM 0.0253 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0831	0.8220	0.8218	0.4223	5.45656E 00
100.00	0.1325	0.5628	0.5624	0.1751	1.61998E 00
150.00	0.1875	0.3061	0.2947	0.0579	8.33320E-01
200.00	0.2693	0.2170	0.1507	0.0051	6.17639E-01
300.00	0.4071	0.2157	0.0491	0.0000	4.98580E-01
400.00	0.4943	0.2332	0.0270	0.0000	4.52481E-01
500.00	0.5682	0.2460	0.0180	0.0000	4.21995E-01
700.00	0.7011	0.2524	0.0095	-0.0000	3.79915E-01
1000.00	0.8804	0.2125	0.0044	-0.0000	3.39019E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1498	0.3563	0.3563	0.8643	1.94056E 00
100.00	0.2044	0.2734	0.2499	0.4255	1.12862E 00
150.00	0.2389	0.2563	0.2164	0.2528	8.78148E-01
200.00	0.2657	0.2547	0.2034	0.1650	7.56164E-01
300.00	0.3142	0.2605	0.1893	0.0745	6.24217E-01
400.00	0.3661	0.2682	0.1746	0.0310	5.47166E-01
500.00	0.4257	0.2763	0.1565	0.0109	4.94533E-01
700.00	0.5600	0.2881	0.1190	0.0008	4.25634E-01
1000.00	0.7603	0.2706	0.0794	0.0000	3.64827E-01

CRO 20. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1461	0.4207	0.4207	1.7767	3.21113E 00
100.00	0.1987	0.3333	0.3196	0.9059	1.65542E 00
150.00	0.2298	0.3128	0.2880	0.5659	1.19994E 00
200.00	0.2523	0.3087	0.2766	0.3941	9.89753E-01
300.00	0.2886	0.3087	0.2656	0.2150	7.74412E-01
400.00	0.3235	0.3092	0.2548	0.1195	6.54717E-01
500.00	0.3616	0.3098	0.2417	0.0624	5.75764E-01
700.00	0.4596	0.3123	0.2063	0.0108	4.76543E-01
1000.00	0.6531	0.3065	0.1470	0.0002	3.93803E-01

CRO 30. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1449	0.4488	0.4488	2.6869	4.48170E 00
100.00	0.1967	0.3648	0.3550	1.3881	2.18223E 00
150.00	0.2266	0.3462	0.3279	0.8824	1.52174E 00
200.00	0.2474	0.3433	0.3194	0.6285	1.22334E 00
300.00	0.2796	0.3441	0.3121	0.3646	9.24606E-01
400.00	0.3084	0.3433	0.3037	0.2226	7.62268E-01
500.00	0.3377	0.3410	0.2928	0.1345	6.56996E-01
700.00	0.4078	0.3360	0.2644	0.0394	5.27451E-01
1000.00	0.5698	0.3286	0.2045	0.0017	4.22779E-01

CRO 50. EM 0.0500 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1439	0.4747	0.4747	4.5064	7.02285E 00
100.00	0.1950	0.3973	0.3910	2.3541	3.23584E 00
150.00	0.2239	0.3838	0.3716	1.5175	2.16533E 00
200.00	0.2435	0.3849	0.3687	1.0997	1.69052E 00
300.00	0.2724	0.3906	0.3689	0.6684	1.22500E 00
400.00	0.2966	0.3919	0.3653	0.4368	9.77371E-01
500.00	0.3195	0.3895	0.3578	0.2915	8.19459E-01
700.00	0.3675	0.3795	0.3357	0.1248	6.29268E-01
1000.00	0.4678	0.3626	0.2889	0.0199	4.80731E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 28W 5 1 1 0

CRO 10. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1730	0.2698	0.2698	2.2931	2.69530E 00
100.00	0.2227	0.2704	0.2704	1.3788	1.81653E 00
150.00	0.2500	0.2876	0.2775	1.0438	1.46903E 00
200.00	0.2704	0.3033	0.2853	0.8394	1.26669E 00
300.00	0.3033	0.3264	0.2969	0.5821	1.02021E 00
400.00	0.3316	0.3415	0.3032	0.4200	8.66675E-01
500.00	0.3582	0.3519	0.3058	0.3068	7.59144E-01
700.00	0.4106	0.3637	0.3033	0.1614	6.16414E-01
1000.00	0.4986	0.3674	0.2846	0.0495	4.90831E-01

CRO 20. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1714	0.2973	0.2973	4.6350	4.79293E 00
100.00	0.2186	0.3019	0.3019	2.8538	3.07588E 00
150.00	0.2449	0.3229	0.3180	2.1691	2.41112E 00
200.00	0.2641	0.3423	0.3328	1.7644	2.03081E 00
300.00	0.2939	0.3717	0.3551	1.2588	1.57596E 00
400.00	0.3187	0.3919	0.3699	0.9414	1.29820E 00
500.00	0.3409	0.4062	0.3796	0.7205	1.10681E 00
700.00	0.3815	0.4233	0.3884	0.4337	8.57854E-01
1000.00	0.4406	0.4308	0.3843	0.1981	6.45176E-01

CRO 30. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1709	0.3082	0.3082	6.9758	6.89055E 00
100.00	0.2172	0.3151	0.3151	4.3286	4.33523E 00
150.00	0.2432	0.3386	0.3355	3.2959	3.35322E 00
200.00	0.2619	0.3603	0.3537	2.6919	2.79492E 00
300.00	0.2907	0.3939	0.3823	1.9382	2.13172E 00
400.00	0.3143	0.4179	0.4024	1.4664	1.72973E 00
500.00	0.3351	0.4356	0.4166	1.1385	1.45448E 00
700.00	0.3720	0.4584	0.4334	0.7135	1.09929E 00
1000.00	0.4227	0.4724	0.4392	0.3611	7.99522E-01

CRO 50. EM 0.0750 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1704	0.3175	0.3175	11.6586	1.10858E 01
100.00	0.2161	0.3272	0.3272	7.2760	6.85393E 00
150.00	0.2417	0.3531	0.3512	5.5521	5.23740E 00
200.00	0.2601	0.3772	0.3732	4.5486	4.32316E 00
300.00	0.2882	0.4158	0.4085	3.2982	3.24323E 00
400.00	0.3108	0.4443	0.4344	2.5182	2.59279E 00
500.00	0.3304	0.4664	0.4542	1.9772	2.14982E 00
700.00	0.3645	0.4974	0.4812	1.2762	1.58218E 00
1000.00	0.4092	0.5224	0.5008	0.6937	1.10821E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1862	0.2254	0.2254	4.1115	3.50888E 00
100.00	0.2325	0.2511	0.2511	2.8269	2.57347E 00
150.00	0.2611	0.2790	0.2790	2.2065	2.14353E 00
200.00	0.2833	0.3029	0.3029	1.8086	1.87045E 00
300.00	0.3181	0.3414	0.3362	1.3355	1.51704E 00
400.00	0.3458	0.3703	0.3574	1.0452	1.28686E 00
500.00	0.3706	0.3931	0.3733	0.8299	1.12114E 00
700.00	0.4152	0.4252	0.3940	0.5316	8.94986E-01
1000.00	0.4770	0.4507	0.4053	0.2658	6.89691E-01

CRO 20. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1852	0.2403	0.2403	8.2670	6.48603E 00
100.00	0.2302	0.2698	0.2698	5.7326	4.64335E 00
150.00	0.2574	0.3010	0.3010	4.5179	3.80505E 00
200.00	0.2782	0.3280	0.3280	3.7434	3.27666E 00
300.00	0.3110	0.3718	0.3700	2.7885	2.59846E 00
400.00	0.3370	0.4061	0.3999	2.2128	2.16086E 00
500.00	0.3598	0.4339	0.4239	1.7875	1.84831E 00
700.00	0.3996	0.4765	0.4596	1.1972	1.42615E 00
1000.00	0.4519	0.5174	0.4919	0.6656	1.04880E 00

CRO 30. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1849	0.2458	0.2458	12.4229	9.46318E 00
100.00	0.2295	0.2769	0.2769	8.6390	6.71323E 00
150.00	0.2563	0.3097	0.3097	6.8283	5.46657E 00
200.00	0.2766	0.3381	0.3381	5.6764	4.68287E 00
300.00	0.3086	0.3846	0.3836	4.2430	3.67988E 00
400.00	0.3340	0.4215	0.4174	3.3832	3.03486E 00
500.00	0.3561	0.4521	0.4453	2.7478	2.57549E 00
700.00	0.3944	0.5005	0.4889	1.8661	1.95732E 00
1000.00	0.4437	0.5506	0.5328	1.0714	1.40791E 00

CRO 50. EM 0.1000 EMU 3.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1846	0.2504	0.2504	20.7338	1.54175E 01
100.00	0.2289	0.2830	0.2830	14.4518	1.08530E 01
150.00	0.2553	0.3173	0.3173	11.4499	8.78961E 00
200.00	0.2753	0.3471	0.3471	9.5417	7.49529E 00
300.00	0.3066	0.3960	0.3955	7.1549	5.84272E 00
400.00	0.3316	0.4356	0.4332	5.7242	4.78286E 00
500.00	0.3532	0.4690	0.4649	4.6694	4.02984E 00
700.00	0.3902	0.5233	0.5161	3.2067	3.01965E 00
1000.00	0.4371	0.5836	0.5724	1.8863	2.12614E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0878	0.5501	0.5501	0.0826	1.63337E 00
100.00	0.1708	0.2484	0.2365	0.0213	8.06397E-01
150.00	0.2714	0.1811	0.0898	0.0010	6.11508E-01
200.00	0.3455	0.1852	0.0352	0.0001	5.41222E-01
300.00	0.4411	0.2100	0.0102	0.0000	4.78981E-01
400.00	0.5164	0.2301	0.0055	0.0000	4.42704E-01
500.00	0.5850	0.2435	0.0037	-0.0000	4.15913E-01
700.00	0.7119	0.2493	0.0019	-0.0000	3.77023E-01
1000.00	0.8867	0.2097	0.0009	-0.0000	3.37816E-01

CRO 20. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0839	0.6934	0.6934	0.1690	2.58791E 00
100.00	0.1466	0.3673	0.3654	0.0628	1.00971E 00
150.00	0.2326	0.2089	0.1607	0.0070	6.66953E-01
200.00	0.3226	0.1918	0.0679	0.0003	5.60325E-01
300.00	0.4322	0.2114	0.0202	0.0000	4.83880E-01
400.00	0.5107	0.2308	0.0110	0.0000	4.45148E-01
500.00	0.5808	0.2441	0.0073	-0.0000	4.17433E-01
700.00	0.7092	0.2501	0.0038	-0.0000	3.77746E-01
1000.00	0.8852	0.2104	0.0018	-0.0000	3.38117E-01

CRO 30. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0827	0.7594	0.7594	0.2557	3.54245E 00
100.00	0.1386	0.4532	0.4526	0.1012	1.21303E 00
150.00	0.2090	0.2414	0.2150	0.0206	7.22397E-01
200.00	0.3022	0.1993	0.0981	0.0010	5.79429E-01
300.00	0.4236	0.2128	0.0301	0.0000	4.88780E-01
400.00	0.5051	0.2316	0.0164	0.0000	4.47593E-01
500.00	0.5766	0.2448	0.0109	0.0000	4.18954E-01
700.00	0.7065	0.2509	0.0057	-0.0000	3.78469E-01
1000.00	0.8836	0.2111	0.0027	-0.0000	3.38417E-01

CRO 50. EM 0.0253 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0818	0.8220	0.8220	0.4292	5.45154E 00
100.00	0.1325	0.5627	0.5625	0.1751	1.61965E 00
150.00	0.1875	0.3060	0.2947	0.0579	8.33287E-01
200.00	0.2693	0.2170	0.1507	0.0051	6.17635E-01
300.00	0.4071	0.2157	0.0491	0.0000	4.98579E-01
400.00	0.4943	0.2332	0.0270	0.0000	4.52481E-01
500.00	0.5682	0.2460	0.0180	0.0000	4.21995E-01
700.00	0.7011	0.2524	0.0095	-0.0000	3.79915E-01
1000.00	0.8804	0.2125	0.0044	-0.0000	3.39019E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1453	0.3636	0.3636	1.0363	1.84811E 00
100.00	0.2034	0.2611	0.2611	0.4572	1.06881E 00
150.00	0.2459	0.2419	0.2419	0.2322	8.36325E-01
200.00	0.2745	0.2432	0.2254	0.1462	7.25544E-01
300.00	0.3238	0.2531	0.2025	0.0645	6.06350E-01
400.00	0.3766	0.2637	0.1819	0.0262	5.35972E-01
500.00	0.4365	0.2734	0.1602	0.0090	4.87196E-01
700.00	0.5689	0.2863	0.1201	0.0007	4.22199E-01
1000.00	0.7655	0.2685	0.0797	0.0000	3.63576E-01

CRO 20. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1439	0.4275	0.4275	2.0916	3.11868E 00
100.00	0.1977	0.3275	0.3275	0.9796	1.59562E 00
150.00	0.2314	0.3035	0.3035	0.5676	1.15812E 00
200.00	0.2563	0.2999	0.2965	0.3740	9.59133E-01
300.00	0.2928	0.3022	0.2793	0.2029	7.56545E-01
400.00	0.3279	0.3047	0.2642	0.1120	6.43523E-01
500.00	0.3663	0.3066	0.2478	0.0579	5.68427E-01
700.00	0.4650	0.3107	0.2085	0.0098	4.73108E-01
1000.00	0.6573	0.3053	0.1475	0.0001	3.92552E-01

CRO 30. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1434	0.4544	0.4544	3.1467	4.38926E 00
100.00	0.1959	0.3615	0.3615	1.5003	2.12242E 00
150.00	0.2272	0.3398	0.3398	0.8988	1.47992E 00
200.00	0.2500	0.3368	0.3368	0.6080	1.19272E 00
300.00	0.2822	0.3389	0.3248	0.3521	9.06739E-01
400.00	0.3110	0.3393	0.3128	0.2148	7.51074E-01
500.00	0.3404	0.3380	0.2993	0.1293	6.49659E-01
700.00	0.4109	0.3344	0.2674	0.0375	5.24017E-01
1000.00	0.5730	0.3278	0.2052	0.0015	4.21528E-01

CRO 50. EM 0.0500 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1431	0.4787	0.4787	5.2559	6.93040E 00
100.00	0.1945	0.3957	0.3957	2.5409	3.17603E 00
150.00	0.2241	0.3800	0.3800	1.5587	2.12351E 00
200.00	0.2447	0.3806	0.3806	1.0898	1.65990E 00
300.00	0.2738	0.3870	0.3793	0.6559	1.20713E 00
400.00	0.2979	0.3890	0.3732	0.4288	9.66177E-01
500.00	0.3208	0.3871	0.3637	0.2862	8.12122E-01
700.00	0.3688	0.3780	0.3389	0.1223	6.25834E-01
1000.00	0.4695	0.3620	0.2901	0.0193	4.79480E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1716	0.2773	0.2773	2.8909	2.57613E 00
100.00	0.2190	0.2724	0.2724	1.7361	1.71559E 00
150.00	0.2471	0.2850	0.2850	1.2476	1.38160E 00
200.00	0.2684	0.2976	0.2976	0.9628	1.18994E 00
300.00	0.3037	0.3168	0.3168	0.6235	9.59530E-01
400.00	0.3360	0.3303	0.3303	0.4184	8.17583E-01
500.00	0.3692	0.3404	0.3404	0.2776	7.18777E-01
700.00	0.4252	0.3536	0.3321	0.1380	5.88164E-01
1000.00	0.5185	0.3585	0.3025	0.0382	4.73289E-01

CRO 20. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1707	0.3022	0.3022	5.8152	4.67375E 00
100.00	0.2168	0.3043	0.3043	3.5364	2.97494E 00
150.00	0.2432	0.3230	0.3230	2.5795	2.32369E 00
200.00	0.2627	0.3405	0.3405	2.0262	1.95406E 00
300.00	0.2934	0.3676	0.3676	1.3731	1.51529E 00
400.00	0.3193	0.3861	0.3861	0.9862	1.24911E 00
500.00	0.3431	0.3996	0.3996	0.7254	1.06645E 00
700.00	0.3875	0.4166	0.4128	0.4087	8.29605E-01
1000.00	0.4476	0.4247	0.4028	0.1831	6.27635E-01

CRO 30. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1704	0.3118	0.3118	8.7389	6.77137E 00
100.00	0.2160	0.3173	0.3173	5.3364	4.23429E 00
150.00	0.2420	0.3391	0.3391	3.9109	3.26578E 00
200.00	0.2609	0.3596	0.3596	3.0877	2.71818E 00
300.00	0.2902	0.3916	0.3916	2.1208	2.07104E 00
400.00	0.3144	0.4145	0.4145	1.5489	1.68064E 00
500.00	0.3360	0.4313	0.4313	1.1672	1.41411E 00
700.00	0.3757	0.4537	0.4535	0.6885	1.07105E 00
1000.00	0.4268	0.4680	0.4555	0.3457	7.81980E-01

CRO 50. EM 0.0750 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1702	0.3199	0.3199	14.5863	1.09666E 01
100.00	0.2155	0.3288	0.3288	8.9347	6.75299E 00
150.00	0.2410	0.3537	0.3537	6.5735	5.14997E 00
200.00	0.2595	0.3772	0.3772	5.2104	4.24641E 00
300.00	0.2878	0.4146	0.4146	3.6140	3.18256E 00
400.00	0.3106	0.4424	0.4424	2.6740	2.54369E 00
500.00	0.3307	0.4639	0.4639	2.0473	2.10945E 00
700.00	0.3661	0.4947	0.4947	1.2647	1.55393E 00
1000.00	0.4113	0.5198	0.5135	0.6783	1.09067E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1855	0.2308	0.2308	5.2608	3.39419E 00
100.00	0.2309	0.2561	0.2561	3.5991	2.46925E 00
150.00	0.2585	0.2832	0.2832	2.8005	2.04774E 00
200.00	0.2796	0.3061	0.3061	2.2920	1.78177E 00
300.00	0.3137	0.3418	0.3418	1.6433	1.44001E 00
400.00	0.3424	0.3683	0.3683	1.2312	1.21914E 00
500.00	0.3683	0.3891	0.3891	0.9414	1.06109E 00
700.00	0.4163	0.4184	0.4184	0.5599	8.46943E-01
1000.00	0.4895	0.4417	0.4417	0.2376	6.54264E-01

CRO 20. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1849	0.2434	0.2434	10.5597	6.37134E 00
100.00	0.2294	0.2729	0.2729	7.2639	4.53914E 00
150.00	0.2562	0.3040	0.3040	5.6840	3.70926E 00
200.00	0.2764	0.3306	0.3306	4.6825	3.18798E 00
300.00	0.3086	0.3732	0.3732	3.4071	2.52143E 00
400.00	0.3349	0.4064	0.4064	2.6002	2.09314E 00
500.00	0.3581	0.4332	0.4332	2.0355	1.78827E 00
700.00	0.3990	0.4742	0.4742	1.2948	1.37811E 00
1000.00	0.4542	0.5133	0.5133	0.6709	1.01338E 00

CRO 30. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1846	0.2479	0.2479	15.8585	9.34849E 00
100.00	0.2290	0.2792	0.2792	10.9287	6.60902E 00
150.00	0.2554	0.3120	0.3120	8.5676	5.37078E 00
200.00	0.2754	0.3402	0.3402	7.0715	4.59419E 00
300.00	0.3069	0.3859	0.3859	5.1702	3.60285E 00
400.00	0.3325	0.4221	0.4221	3.9685	2.96714E 00
500.00	0.3549	0.4521	0.4521	3.1275	2.51544E 00
700.00	0.3937	0.4994	0.4994	2.0270	1.90927E 00
1000.00	0.4446	0.5485	0.5485	1.0996	1.37249E 00

CRO 50. EM 0.1000 EMU 5.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1845	0.2518	0.2518	26.4545	1.53028E 01
100.00	0.2286	0.2845	0.2845	18.2566	1.07488E 01
150.00	0.2548	0.3188	0.3188	14.3348	8.69382E 00
200.00	0.2746	0.3484	0.3484	11.8507	7.40662E 00
300.00	0.3055	0.3969	0.3969	8.6964	5.76570E 00
400.00	0.3306	0.4361	0.4361	6.7031	4.71514E 00
500.00	0.3524	0.4693	0.4693	5.3094	3.96979E 00
700.00	0.3898	0.5231	0.5231	3.4875	2.97161E 00
1000.00	0.4375	0.5829	0.5829	1.9549	2.09071E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0823	0.5868	0.5868	0.1012	1.52792E 00
100.00	0.1411	0.2473	0.2473	0.0370	7.41716E-01
150.00	0.3149	0.1641	0.0976	0.0002	5.67037E-01
200.00	0.3909	0.1760	0.0375	0.0000	5.08790E-01
300.00	0.4783	0.2050	0.0107	0.0000	4.59965E-01
400.00	0.5455	0.2262	0.0057	0.0000	4.30682E-01
500.00	0.6081	0.2398	0.0037	-0.0000	4.07957E-01
700.00	0.7265	0.2449	0.0019	-0.0000	3.73229E-01
1000.00	0.8943	0.2063	0.0009	-0.0000	3.36397E-01

CRO 20. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0813	0.7219	0.7219	0.2039	2.48247E 00
100.00	0.1312	0.3853	0.3853	0.0789	9.45030E-01
150.00	0.2631	0.1860	0.1759	0.0027	6.22482E-01
200.00	0.3632	0.1812	0.0723	0.0001	5.27893E-01
300.00	0.4683	0.2063	0.0211	0.0000	4.64865E-01
400.00	0.5394	0.2270	0.0113	0.0000	4.33126E-01
500.00	0.6035	0.2405	0.0074	-0.0000	4.09478E-01
700.00	0.7237	0.2457	0.0039	-0.0000	3.73952E-01
1000.00	0.8926	0.2070	0.0018	-0.0000	3.36698E-01

CRO 30. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0810	0.7820	0.7820	0.3067	3.43701E 00
100.00	0.1286	0.4751	0.4751	0.1196	1.14834E 00
150.00	0.1946	0.2217	0.2217	0.0314	6.77927E-01
200.00	0.3385	0.1871	0.1045	0.0003	5.46997E-01
300.00	0.4585	0.2075	0.0313	0.0000	4.69765E-01
400.00	0.5334	0.2278	0.0168	0.0000	4.35571E-01
500.00	0.5990	0.2412	0.0111	-0.0000	4.10998E-01
700.00	0.7209	0.2466	0.0058	-0.0000	3.74675E-01
1000.00	0.8910	0.2077	0.0027	-0.0000	3.36999E-01

CRO 50. EM 0.0253 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.0808	0.8378	0.8378	0.5122	5.34610E 00
100.00	0.1267	0.5843	0.5843	0.2006	1.55497E 00
150.00	0.1751	0.2997	0.2997	0.0798	7.88817E-01
200.00	0.2971	0.2017	0.1616	0.0020	5.85204E-01
300.00	0.4400	0.2102	0.0511	0.0000	4.79564E-01
400.00	0.5216	0.2294	0.0277	0.0000	4.40459E-01
500.00	0.5903	0.2426	0.0184	-0.0000	4.14040E-01
700.00	0.7153	0.2483	0.0096	-0.0000	3.76121E-01
1000.00	0.8880	0.2092	0.0045	-0.0000	3.37600E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1439	0.3944	0.3944	1.4384	1.69037E 00
100.00	0.1978	0.2818	0.2818	0.6598	9.28629E-01
150.00	0.2316	0.2483	0.2483	0.3752	7.09806E-01
200.00	0.2580	0.2365	0.2365	0.2369	6.10282E-01
300.00	0.3120	0.2300	0.2300	0.0923	5.08930E-01
400.00	0.4822	0.2345	0.2345	0.0043	4.52273E-01
500.00	0.5900	0.2455	0.1956	0.0005	4.14457E-01
700.00	0.7559	0.2392	0.1391	0.0000	3.65906E-01
1000.00	0.9663	0.1807	0.0895	0.0000	3.23611E-01

CRO 20. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1432	0.4485	0.4485	2.8899	2.96094E 00
100.00	0.1950	0.3479	0.3479	1.3621	1.45543E 00
150.00	0.2254	0.3177	0.3177	0.8140	1.03160E 00
200.00	0.2468	0.3065	0.3065	0.5535	8.43870E-01
300.00	0.2812	0.2955	0.2955	0.2944	6.59124E-01
400.00	0.3159	0.2873	0.2873	0.1575	5.59824E-01
500.00	0.3627	0.2815	0.2815	0.0687	4.95689E-01
700.00	0.5843	0.2834	0.2436	0.0010	4.16815E-01
1000.00	0.8141	0.2474	0.1644	0.0000	3.52587E-01

CRO 30. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1430	0.4701	0.4701	4.3411	4.23151E 00
100.00	0.1942	0.3790	0.3790	2.0635	1.98224E 00
150.00	0.2235	0.3547	0.3547	1.2510	1.35340E 00
200.00	0.2435	0.3471	0.3471	0.8675	1.07746E 00
300.00	0.2738	0.3395	0.3395	0.4902	8.09319E-01
400.00	0.3010	0.3310	0.3310	0.2952	6.67375E-01
500.00	0.3298	0.3219	0.3219	0.1740	5.76920E-01
700.00	0.4341	0.3087	0.3087	0.0265	4.67723E-01
1000.00	0.6955	0.2939	0.2278	0.0001	3.81563E-01

CRO 50. EM 0.0500 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1428	0.4891	0.4891	7.2430	6.77266E 00
100.00	0.1935	0.4089	0.4089	3.4658	3.03585E 00
150.00	0.2220	0.3929	0.3929	2.1244	1.99699E 00
200.00	0.2410	0.3917	0.3917	1.4945	1.54464E 00
300.00	0.2686	0.3929	0.3929	0.8780	1.10971E 00
400.00	0.2914	0.3890	0.3890	0.5640	8.82478E-01
500.00	0.3131	0.3813	0.3813	0.3728	7.39383E-01
700.00	0.3603	0.3617	0.3617	0.1542	5.69540E-01
1000.00	0.5344	0.3391	0.3259	0.0057	4.39516E-01

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1709	0.2904	0.2904	4.0648	2.43939E 00
100.00	0.2172	0.2866	0.2866	2.4379	1.58912E 00
150.00	0.2438	0.2990	0.2990	1.7551	1.26358E 00
200.00	0.2633	0.3106	0.3106	1.3613	1.07919E 00
300.00	0.2941	0.3256	0.3256	0.9026	8.60944E-01
400.00	0.3200	0.3327	0.3327	0.6355	7.28971E-01
500.00	0.3438	0.3351	0.3351	0.4595	6.38600E-01
700.00	0.3901	0.3319	0.3319	0.2438	5.21603E-01
1000.00	0.4746	0.3185	0.3185	0.0749	4.21748E-01

CRO 20. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1704	0.3101	0.3101	8.1583	4.53701E 00
100.00	0.2159	0.3138	0.3138	4.9276	2.84847E 00
150.00	0.2416	0.3332	0.3332	3.5747	2.20568E 00
200.00	0.2603	0.3511	0.3511	2.7965	1.84331E 00
300.00	0.2890	0.3772	0.3772	1.8910	1.41670E 00
400.00	0.3124	0.3935	0.3935	1.3663	1.16050E 00
500.00	0.3330	0.4035	0.4035	1.0220	9.86268E-01
700.00	0.3698	0.4113	0.4113	0.6033	7.63043E-01
1000.00	0.4219	0.4052	0.4052	0.2815	5.76094E-01

CRO 30. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1702	0.3173	0.3173	12.2532	6.63464E 00
100.00	0.2154	0.3242	0.3242	7.4184	4.10782E 00
150.00	0.2409	0.3469	0.3469	5.3945	3.14777E 00
200.00	0.2593	0.3679	0.3679	4.2313	2.60743E 00
300.00	0.2874	0.3998	0.3998	2.8792	1.97246E 00
400.00	0.3100	0.4216	0.4216	2.0956	1.59203E 00
500.00	0.3296	0.4366	0.4366	1.5832	1.33394E 00
700.00	0.3640	0.4534	0.4534	0.9599	1.00448E 00
1000.00	0.4099	0.4573	0.4573	0.4825	7.30439E-01

CRO 50. EM 0.0750 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1700	0.3234	0.3234	20.4408	1.08299E 01
100.00	0.2151	0.3332	0.3332	12.3979	6.62652E 00
150.00	0.2403	0.3589	0.3589	9.0342	5.03195E 00
200.00	0.2585	0.3830	0.3830	7.0993	4.13567E 00
300.00	0.2861	0.4208	0.4208	4.8528	3.08397E 00
400.00	0.3081	0.4483	0.4483	3.5538	2.45508E 00
500.00	0.3270	0.4690	0.4690	2.7036	2.02927E 00
700.00	0.3596	0.4968	0.4968	1.6714	1.48736E 00
1000.00	0.4014	0.5158	0.5158	0.8815	1.03913E 00

EFFECTIVE ENERGY CUTOFFS FOR SAMARIUM SLABS 2BW 5 1 1 0

CRO 10. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1844	0.2341	0.2341	7.0646	3.28955E 00
100.00	0.2286	0.2572	0.2572	4.7346	2.37788E 00
150.00	0.2549	0.2822	0.2822	3.6385	1.96570E 00
200.00	0.2748	0.3031	0.3031	2.9553	1.70696E 00
300.00	0.3061	0.3344	0.3344	2.1083	1.37609E 00
400.00	0.3317	0.3566	0.3566	1.5871	1.16332E 00
500.00	0.3541	0.3726	0.3726	1.2309	1.01167E 00
700.00	0.3932	0.3926	0.3926	0.7764	8.07147E-01
1000.00	0.4451	0.4027	0.4027	0.4063	6.24270E-01

CRO 20. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1843	0.2454	0.2454	14.1375	6.26670E 00
100.00	0.2283	0.2740	0.2740	9.4845	4.44776E 00
150.00	0.2544	0.3040	0.3040	7.2998	3.62722E 00
200.00	0.2741	0.3297	0.3297	5.9386	3.11317E 00
300.00	0.3049	0.3701	0.3701	4.2531	2.45751E 00
400.00	0.3298	0.4009	0.4009	3.2186	2.03732E 00
500.00	0.3514	0.4254	0.4254	2.5118	1.73884E 00
700.00	0.3885	0.4612	0.4612	1.6127	1.33831E 00
1000.00	0.4359	0.4925	0.4925	0.8823	9.83381E-01

CRO 30. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1843	0.2494	0.2494	21.2105	9.24385E 00
100.00	0.2282	0.2800	0.2800	14.2365	6.51764E 00
150.00	0.2542	0.3121	0.3121	10.9603	5.28874E 00
200.00	0.2738	0.3396	0.3396	8.9235	4.51938E 00
300.00	0.3044	0.3840	0.3840	6.3979	3.53893E 00
400.00	0.3292	0.4188	0.4188	4.8489	2.91132E 00
500.00	0.3505	0.4472	0.4472	3.7921	2.46602E 00
700.00	0.3870	0.4909	0.4909	2.4485	1.86948E 00
1000.00	0.4330	0.5343	0.5343	1.3578	1.34249E 00

CRO 50. EM 0.1000 EMU 10.00

L	EC	FRACT	FRACTM	RMOE	RTOT
50.00	0.1842	0.2527	0.2527	35.3579	1.51982E 01
100.00	0.2281	0.2851	0.2851	23.7384	1.06574E 01
150.00	0.2541	0.3188	0.3188	18.2848	8.61177E 00
200.00	0.2736	0.3482	0.3482	14.8909	7.33181E 00
300.00	0.3041	0.3960	0.3960	10.6881	5.70178E 00
400.00	0.3287	0.4343	0.4343	8.1099	4.65932E 00
500.00	0.3498	0.4663	0.4663	6.3539	3.92037E 00
700.00	0.3857	0.5180	0.5180	4.1203	2.93181E 00
1000.00	0.4308	0.5744	0.5744	2.3072	2.06071E 00

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