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EVALUATION OF NEUTRON NUCLEAR DATA  
FOR  $^{241}\text{Am}$  AND  $^{243}\text{Am}$

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Evaluation of Neutron Nuclear Data for  $^{241}\text{Am}$  and  $^{243}\text{Am}$

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Neutron nuclear data of  $^{241}\text{Am}$  and  $^{243}\text{Am}$  were evaluated for JENDL-2.

Evaluated quantities are the total, elastic and inelastic scattering, fission, capture,  $(n,2n)$ ,  $(n,3n)$  and  $(n,4n)$  reaction cross sections, the resolved and unresolved resonance parameters, the angular or energy distribution of the emitted neutrons, and the average number of neutrons emitted per fission. The fission cross section was evaluated on the basis of newly measured data, and lower values than JENDL-1 were given in the subthreshold energy region. The reliability of the calculation parameters are also much improved, because experimental data became available for the total and capture cross sections of  $^{241}\text{Am}$  in the high energy region.

Keywords: Americium-241, Americium-243, Evaluation JENDL-2, Fission, Capture, Resonance Parameters, Optical Model, Statistical Model.

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$^{241}\text{Am}$  と  $^{243}\text{Am}$  の中性子核データの評価

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(1982年7月12日受理)

JENDL-2のために  $^{241}\text{Am}$  と  $^{243}\text{Am}$  の中性子核データの評価を行った。評価量は全断面積、弹性・非弹性散乱、核分裂、捕獲、(n, 2n), (n, 3n), (n, 4n)反応の各断面積、分離・非分離共鳴パラメータ、二次中性子の角度およびエネルギー分布、核分裂当たりの平均放出中性子数および核分裂スペクトルである。核分裂断面積は最近の実験値に基いて評価し、閾値以下のエネルギー領域においては JENDL-1 よりかなり低くなった。また  $^{241}\text{Am}$  において高エネルギー領域の全断面積や捕獲断面積の実験値の入手により、計算パラメータの信頼性も向上した。

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## 1. Introduction

Neutron nuclear data of Am and Cm isotopes are much required to predict production of long-lived high-level radioactive waste. Hence we have made the evaluation of these nuclides for Japanese Evaluated Nuclear Data Library under contracts with Power Reactor and Nuclear Fuel Development Corporation. Until now evaluation was made for  $^{241}\text{Am}$ <sup>1,2)</sup>,  $^{242m}\text{Am}$ <sup>3)</sup>,  $^{242g}\text{Am}$ <sup>3)</sup>,  $^{243}\text{Am}$ <sup>4)</sup>,  $^{242}\text{Cm}$ <sup>5)</sup>,  $^{243}\text{Cm}$ <sup>6)</sup>,  $^{244}\text{Cm}$ <sup>7)</sup> and  $^{245}\text{Cm}$ <sup>8)</sup>.

The evaluation for  $^{241}\text{Am}$  and  $^{243}\text{Am}$  was made in 1975 and 1976, respectively\*. At that time, the experimental data were so scarce that the uncertainties of the evaluated data were considerably large. Since then lots of experimental works have been made. Comparing the evaluated data with these newly measured ones, it was found that many discrepancies existed between them. Hence it was decided to reevaluate the data of  $^{241}\text{Am}$  and  $^{243}\text{Am}$  for JENDL-2.

This report describes the method and results of the reevaluation work. Chapters 2 and 3 are devoted to  $^{241}\text{Am}$  and  $^{243}\text{Am}$ , respectively. The results are given in Appendix with ENDF/B format.

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\* In JENDL-1, only the data of  $^{241}\text{Am}$  were contained. The previous evaluation of  $^{243}\text{Am}$  was made after releasing JENDL-1. In this report, however, the previous evaluation of  $^{243}\text{Am}$  is also referred as JENDL-1.

## 2. Americium-241

## 2.1 Status of Newly Measured Data

In early 1970's there existed large discrepancies among the measured subthreshold fission cross sections below 50 keV. The data of Seeger et al.<sup>9)</sup> are larger (more than a factor of 10) than the data of Bowman et al.<sup>10)</sup> and of Shpak et al.<sup>11)</sup> Though the data of Seeger et al. obtained from the bombshot experiment looked too high, they affected many evaluations including ENDF/B-IV, ENDL and JENDL-1. At that time, on the other hand, there were no available experimental data either for the fission cross section above 7 MeV or for the total and capture cross sections above the resonance region.

Since then intensive experimental works have been made on the <sup>241</sup>Am cross sections. The newly measured fission cross section data are:

Gayther and Thomas <sup>12)</sup>	(1977) ; $E_n = 50 \text{ eV} \sim 9 \text{ keV}$
Cance et al. <sup>13)</sup>	(1977) ; $E_n = 930 \text{ keV} \sim 2.7 \text{ keV}$
Kupriyanov et al. <sup>14)</sup>	(1978) ; $E_n = 130 \text{ keV} \sim 7 \text{ MeV}$
Knitter and Budtz-Jørgensen <sup>15)</sup>	(1978) ; $E_n = 150 \text{ eV} \sim 5.4 \text{ MeV}$
Wissak and Käppeler <sup>16)</sup>	(1980) ; $E_n = 10 \text{ keV} \sim 250 \text{ keV}$
Behrens and Browne <sup>17)</sup>	(1981) ; $E_n = 200 \text{ keV} \sim 30 \text{ MeV}$
Hage et al. <sup>18)</sup>	(1982) ; $E_n = 22 \text{ keV} \sim 1 \text{ MeV.}$

All the newly measured data support the lower cross section in the subthreshold energy region below 50 keV. Furthermore, the data of Behrens and Browne give the cross section shape above 7 MeV.

The capture or absorption cross section was also measured by three different laboratories:

Weston and Todd<sup>19)</sup> (1976) ;  $E_n = 0.01$  eV  $\sim 370$  keV  
 Gayther and Thomas<sup>12)</sup> (1976) ;  $E_n = 100$  eV  $\sim 500$  keV  
 Wissak and Käppeler<sup>16)</sup> (1980) ;  $E_n = 10$  keV  $\sim 250$  keV.

The total cross section was also measured:

Derrien and Lucas<sup>20)</sup> (1975) ;  $E_n = 0.8$  eV  $\sim 1$  keV  
 Phillips and Howe<sup>21)</sup> (1979) ;  $E_n = 500$  keV  $\sim 25$  MeV.

## 2.2 Thermal Cross Sections

The thermal capture or absorption cross section has been often measured in the pile spectrum. Assuming the 1/v cross section below the Cd cut-off energy, the 2200 m/s value was recommended in BNL-325, 3rd edition as  $832 \pm 20$  barns, which is apparently larger than the measured thermal total cross section values lying between 600 and 640 barns. This inconsistency comes mainly from existence of a large resonance at 0.3 eV. Taking account of the non 1/v behavior of the  $^{241}\text{Am}$  cross section, Lynn et al.<sup>22)</sup> recommended the following values as the cross section at 0.0253 eV:

$$\begin{aligned}\sigma_{n,T} &= 615 \pm 20 \text{ barns} \\ \sigma_{n,\gamma} &= 600 \pm 20 \text{ barns} \\ \sigma_{n,f} &= 3.1 \pm 0.2 \text{ barns} \\ \sigma_{n,n} &= 11.9 \pm 2 \text{ barns.}\end{aligned}$$

We adopted these values in the present work.

## 2.3 Resonance parameters

### 2.3.1 Resolved Resonance Parameters

The measured resonance parameters were collected and stored in Resonance Parameter Storage and Retrieve System, REPSTOR<sup>23)</sup>. The stored parameters are listed in Table 1 as well as the evaluated data including the present ones. The evaluation of JENDL-1 is mainly based on the measurements by Derrien and Lucas<sup>20)</sup>. Since then newly measured data were reported by Weston and Todd<sup>19)</sup>, by Gayther and Thomas<sup>12)</sup> and by Knitter and Budtz-Jørgensen<sup>15)</sup>. These new measurements cover much narrower energy range than the data of Derrien and Lucas. After examining these new measurements, we found no positive reason to revise the data of JENDL-1. Hence we adopted the data of JENDL-1.

It was pointed out<sup>2)</sup>, however, that the resonance parameters of JENDL-1 considerably underestimated the thermal cross sections. In JENDL-1, the discrepancy was adjusted by applying the 1/v type background cross sections. On the other hand, Lynn et al.<sup>22)</sup> resolved this discrepancy by assuming 5 negative resonances. In the present work, we also assumed the negative resonances at the same energies that Lynn et al. did, and adjusted the neutron and fission widths so that the calculated total, capture and fission cross sections might agree with the adopted cross sections described in section 2.2. We assumed the effective radius of 9.37 fm which was obtained from the optical model calculation. The finally adopted negative resonance parameters are given as:

$E_n$ (eV)	J	$\Gamma_n$ (meV)	$\Gamma_\gamma$ (meV)	$\Gamma_f$ (meV)
-0.5	2.5	0.0890	43.77	0.2
-0.45	"	0.0604	"	"
-0.4	"	0.0797	"	"
-0.32	"	0.0510	"	"
-0.2	"	0.0549	"	"

The calculated cross sections at 0.0253 eV are

$$\sigma_{n,T} = 614.7 \text{ barns}$$

$$\sigma_{n,\gamma} = 600.4 \text{ barns}$$

$$\sigma_{n,f} = 3.02 \text{ barns}$$

$$\sigma_{n,n} = 11.26 \text{ barns},$$

which agree with the adopted values.

The calculated total, capture and fission cross sections are compared with the measured ones in Figs. 1, 2 and 3, respectively. The agreement is satisfactory.

### 2.3.2 Unresolved Resonance Parameters

The unresolved resonance parameters were not adopted in JENDL-1, because the self-shielding effect is negligible for treating the Am isotopes built up in fast reactors. Recently, however, the reactivities of Am isotopes were measured in the FCA facility. For analyses of such experiments, the self-shielding correction is required. Hence the

unresolved resonance parameters were supplied for JENDL-2 in the energy range between 150 eV and 30 keV.

The total, fission and capture cross sections were first evaluated on the basis of the newly measurements. The evaluation method will be described in the next section. Then the unresolved resonance parameters were determined with ASREP<sup>24)</sup> code so as to reproduce the evaluated cross sections.

First the observable level spacing was determined so as to reproduce the global trends of the capture and total cross sections by assuming the values obtained from the optical model for the s- and p-wave strength functions and the effective scattering radius. Then the s- and p-wave strength functions and the fission widths were searched for so that the total, fission and capture cross sections might be well reproduced at each energy point. In this search, the ratio of s-wave to p-wave strength function were kept constant and the same value of the fission width were assumed to all the J-states.

The energy dependence of the unresolved resonance parameters are given in Table 2 with the calculated cross sections.

### 2.3.3 Resonance Integrals

The fission and capture integrals were calculated from the presently evaluated resonance parameters, assuming a cut-off energy of 0.5 eV. The results are compared in Table 3 with the measured values and with those calculated from various evaluated resonance parameters.

The measured values of the capture resonance integral are much spreaded and all the calculated values lie within this spread. The large spread was partly explained by Lynn et al.<sup>22)</sup>; the existence of

a strong resonance at 0.3 eV shifts the effective Cd cut-off energy to lower energies which depend on the thickness of the Cd cover and the neutron spectrum.

On the other hand, the calculated values of the fission resonance integral are considerably lower than the measured ones which are all greater than 20 barns. The reason of this disagreement is not clear and should be further investigated. Lynn et al. pointed out the possibility of the effect from some impurities such as  $^{242m}\text{Am}$ .

## 2.4 Cross Sections above Resonance Region

### 2.4.1 Fission Cross Section

Considerable number of new measurements have been reported concerning the fission cross section. All the newly measured data deny the high subthreshold fission cross section reported by Seeger et al.<sup>9)</sup> Hence we ignored the data of Seeger et al. in the present work. Most of the newly measured data<sup>15~18)</sup> are given as the ratio of  $\sigma_{n,f}(\text{Am})$  to  $\sigma_{n,f}(\text{U})$ . The absolute values of the fission cross section were deduced by using the fission cross section of  $^{235}\text{U}$  adopted in JENDL-2.

The evaluation was made with the eye-guide manner by using NDES<sup>31)</sup>. Comparing the experimental condition, particularly the  $^{239}\text{Pu}$  contamination in  $^{241}\text{Am}$  sample, we mainly adopted the data of Knitter and Budtz-Jørgensen<sup>15)</sup> in the energy range between 150 eV and 10 keV, those of Wisshak and Käppeler between 10 and 300 keV and those of Behrens and Browne above 300 keV. The data of Behrens and Browne are about 10 % higher than those of Knitter and Budtz-Jørgensen and of Shpak et al.<sup>11)</sup> However, we took the data of Behres and Browne, because they cover the energy region above 6 MeV up to 30 MeV and because the data of

Behrens et al. were mainly adopted in the evaluation of the other heavy nuclei for JENDL-2. The evaluated cross section is shown with the measured data in Figs. 4 ~ 6.

#### 2.4.2 Total Cross Section and Optical Model

At the time of the previous evaluation, no measurement was reported on the total cross section above keV region. Hence the optical potential parameters were determined by slightly modifying the parameters used for evaluation<sup>32)</sup> of the inelastic scattering cross section of <sup>238</sup>U. After that the total cross section of <sup>241</sup>Am was measured by Phillips and Howe<sup>21)</sup> in the energy range from 500 keV to 25 MeV.

Igarasi and Nakagawa<sup>5)</sup> obtained the optical potential parameters which reproduce these measured total cross section data. The precise discussion is given in Ref. (5). This potential parameter set has been used for the evaluation of <sup>242m</sup>Am, <sup>242g</sup>Am, <sup>242</sup>Cm and <sup>243</sup>Cm. This potential set was also used in the present evaluation. The potential parameters are:

$$V = 43.4 - 0.107 E_n \quad (\text{MeV})$$

$$W_s = 6.95 - 0.339 E_n + 0.0531 E_n^2 \quad (\text{MeV})$$

$$V_{so} = 7.0 \quad (\text{MeV})$$

$$r_o = r_{so} = 1.282 \quad (\text{fm})$$

$$r_s = 1.29 \quad (\text{fm})$$

$$a = a_{so} = 0.60 \quad (\text{fm})$$

$$b = 0.5 \quad (\text{fm})$$

The derivative Wood-Saxon form was assumed to the surface absorption term and no volume absorption was assumed. Figure 7 shows the total cross section calculated from the present potential and the measured data of Phillips and Howe. The present potential reproduces satisfactorily the experimental data. It was also found that the calculated total cross section agreed with the data of Derrien and Lucas<sup>20)</sup> below 1 keV.

Hence the calculated total cross section was adopted in the present evaluation.

#### 2.4.3 Capture Cross Section

Since the previous work, three measurements have been reported concerning the capture cross section in keV region. However, there exists considerable discrepancy between the data of Weston and Todd<sup>19)</sup> and of Gayther and Thomas<sup>12)</sup> in the energy region between 10 and 100 keV. To resolve this discrepancy, Wissak and Käppeler<sup>16)</sup> measured the capture cross section between 10 and 250 keV and their data agree very well with the data of Gayther and Thomas.

In the present work, the data of Gayther and Thomas were mainly adopted up to 350 keV. In the energy region above 350 keV where no experimental data exist, the statistical model calculation was applied. In the calculation, the  $\gamma$ -ray strength function was adjusted so that the calculated cross section might be connected smoothly with the data of Gayther and Thomas at 350 keV. It was found that the calculated capture cross section agreed very well with the data of Gayther and Thomas in the energy range between 30 and 350 keV. Hence we adopted the calculated values in this energy range. In the unresolved resonance

region below 30 keV, the structure observed in the data of Gayther and Thomas was reproduced with the unresolved resonance parameters. The presently evaluated capture cross section is shown in Fig. 8.

#### 2.4.4 Other Cross Sections

The  $(n,2n)$ ,  $(n,3n)$  and  $(n,4n)$  reaction cross sections were calculated with Pearlstein's method<sup>33)</sup> based on the evaporation model. The neutron emission cross section approximated to the difference between the compound nucleus formation cross section and the fission cross section, because the charged particle emission and the compound elastic scattering cross sections are negligibly small.

Taking account of the  $(n,2n)$ ,  $(n,3n)$ ,  $(n,4n)$  and fission cross section as the competing process, the capture, elastic and inelastic scattering cross sections were calculated with the statistical model code CASTHY<sup>34)</sup>. The  $\gamma$ -ray strength function was adjusted so that the calculated capture cross section might be 830 mb at 350 keV. Fifteen discrete levels were taken into account up to 670 keV and levels above 732 keV were assumed to be overlapping.

The level scheme of the discrete levels was taken from Table of Isotope, 7th edition<sup>35)</sup> and is shown in Table 4. The level density parameters were taken from the recommendation by Gilbert and Cameron<sup>36)</sup>. The Q-values of  $(n,2n)$ ,  $(n,3n)$  and  $(n,4n)$  reactions were obtained from the compilation of Wapstra and Bos<sup>37)</sup>. These values are also shown in Table 4.

## 2.5 Other Quantities

### 2.5.1 Average Number of Neutrons Emitted per Fission

Three measurements were reported for the average number of prompt neutron  $v_p$  for thermal neutron fission. JENDL-1 adopted  $v_p = 3.219$  according to the newest data of Jaffey and Lerner<sup>38)</sup>. The energy dependence was estimated from the neutron binding energy. As no new measurement has been done since then, the same value was adopted in the present work:

$$v_p = 3.219 + 0.15 \text{ En.}$$

As no measurement has been reported on the number of delayed neutrons, we estimated  $v_d$  from the systematics proposed by Tuttle<sup>39)</sup>:

$$v_d = \exp[13.81 + 0.1754(\text{Ac}-3Z)(\text{Ac}/Z)],$$

where Ac is the mass number of the compound nucleus and Z the atomic number. We also assumed that ( $n, n'f$ ) process was dominant after its channel open ( $E \gtrsim 6 \sim 8$  MeV). Under these assumptions, the presently evaluated value is

$$v_d = 0.0045 \text{ for } E < 6.2 \text{ MeV},$$

$$0.0031 \text{ for } E > 8 \text{ MeV}.$$

Both values are linearly connected between 6.2 and 8 MeV.

As to the decay constants and fraction of delayed neutrons, the values for  $\cancel{\text{Pu}}^{240}$  was assumed, and the evaluated data by Tuttle<sup>40)</sup> were adopted.

### 2.5.2 Angular Distribution of Emitted Neutrons

The angular distribution of the elastically scattered neutrons were calculated with the optical model. The 90° symmetric scattering in the center of mass system was assumed for the inelastic scattering.

### 2.5.3 Energy Distribution of Emitted Neutrons

The simple evaporation spectrum was assumed for the inelastically scattered neutrons which leave the residual nucleus in continuum excited states ( $MT = 91$ ). The nuclear temperature ( $\theta$ ) was determined from the relation

$$E = a\theta^2 - \theta,$$

where  $E$  is the incident neutron energy and  $a$  is the level density parameters of the residual nucleus.

As to the  $(n,2n)$  and  $(n,3n)$  reactions, we assumed the successive evaporation model. For the  $(n,2n)$  process, the first neutron evaporates leaving the residual nucleus in the excited states higher than the neutron separation energy, and then the second neutron evaporates from the excited states. In calculating the temperature for the second neutron, we assumed that the second neutron evaporated from a excited state corresponding the average energy of the first neutron. In the ENDF/B format, the temperature of each neutron is stored independently in each subsection.

#### 2.5.4 Fission Spectrum

The Maxwellian spectrum was adopted in the present work. As no measured data exist, the temperature was determined from the systematics of the average neutron energy on A and Z obtained by Smith et al.<sup>40)</sup> The obtained temperature is 1.389 MeV, by taking a reference <sup>252</sup>Cf average fission neutron energy of 2.13 MeV as recommended by Grundl and Eisenhauer<sup>41)</sup>.

#### 2.6 Discussion

The presently evaluated cross sections are shown in Fig. 9. The present evaluation was made on the basis of newly measured data, and the results are very different from the previous JENDL-1 data or ENDF/B-IV data.

Most significant improve is observed in the subthreshold fission cross section below 100 keV. The high values of Seeger et al. were completely denied by the newly measured data. The too high data of Seeger et al. are now believed to be caused by leakage of capture signal to fission signal. The present fission cross section in MeV region based on the data of Behrens and Browne is about 10 % higher than the other data. More experimental efforts are required in this energy region. However the shape of fission cross section above 6 MeV must be reliable.

The capture cross section in keV region was evaluated on the experimental data of Gayther and Thomas and must be much more reliable than the old evaluation.

As to the thermal cross section, careful examination of non 1/v behavior by Lynn et al. solved the apparent inconsistency between the total and capture cross sections at 0.0253 eV. We accepted their results. The cross section values below 1 eV were well reproduced with the resonance parameters by adding some negative resonances.

The existence of a resonance at 0.3 eV makes the definition of resonance integral rather uncertain. However, the disagreement between the calculated and measured values for the fission integral is too large to be explained from the uncertainty of the Cd cut-off energy. Further experimental work is required.

It was pointed out by Smith et al.<sup>41)</sup> that the  $^{252}\text{Cf}$  average fission neutron energy of 2.13 MeV might be too soft (about 50 keV). This problem should be further investigated in U or Pu isotopes for which lots of measured data are available.

### 3. Americium-243

#### 3.1 Status of Newly Measured Data

Comparing with  $^{241}\text{Am}$ , new measurements are scarce for  $^{243}\text{Am}$ .

However, some important measured data becomes available. Behrens and Browne<sup>17)</sup> measured the fission cross section ratio of  $\sigma_{n,f}(^{243}\text{Am})$  to  $\sigma_{n,f}(^{235}\text{U})$  in the energy range from 200 keV to 30 MeV. Asghar et al.<sup>43)</sup> and Gavrilov et al.<sup>30)</sup> measured the thermal fission cross section and showed that the thermal fission cross section was not so small as previously believed.

On the other hand, recent measurements of the subthreshold fission cross section of  $^{241}\text{Am}$  denied the high values of Seeger et al., as discussed before. This suggests that the data of Seeger et al. are also unreliable for the subthreshold fission cross section of  $^{243}\text{Am}$ . This means that no reliable data exist in the energy region below 100 keV.

Neither total nor capture cross section has so far been reported.

#### 3.2 Thermal Cross Sections

Lots of measured data were reported for the thermal capture cross section. They were measured in various pile spectra. BNL-325, 3rd edition recommended  $79.3 \pm 2.0$  b. Though  $^{243}\text{Am}$  has a small resonance below the Cd cut-off energy, the  $1/v$  behavior is not much affected by this small resonance. Hence we adopted the recommendation of BNL-325.

The fission cross section in the thermal region was believed to be very small (less than 70 mb<sup>44)</sup>). Recently, however, Asghar et al.<sup>43)</sup> made a very precise measurements by using the cold neutron beam. Asghar et al. reported  $198.3 \pm 4.2$  mb for neutrons with a 25 °K Maxwellian distribution. However, they made an inconsistent normalization for the

$^{235}\text{U}$  fission cross section used as a standard. Correcting this inconsistency, Lemmel<sup>45)</sup> deduced 784 mb  $\pm$  10 % for 25 °K neutrons, which corresponds to 226 mb at 0.0253 eV by assuming the 1/v cross section shape. This value agrees with (200  $\pm$  100) mb reported by Gavrilov et al.<sup>30)</sup> We adopted 225  $\pm$  25 mb in the present work.

No new measurements have so far been reported on the thermal total cross section since BNL-325, 3rd edition. We adopted the recommended value of BNL-325.

The presently adopted values at 0.0253 eV are:

$$\begin{aligned}\sigma_{n,T} &= 85 \pm 4 \text{ barns} \\ \sigma_{n,\gamma} &= 79.3 \pm 2.0 \text{ barns} \\ \sigma_{n,f} &= 0.225 \pm 0.025 \text{ barns.}\end{aligned}$$

### 3.3 Resonance Parameters

#### 3.3.1 Resolved Resonance Parameters

The measured resonance parameters were collected and stored in REPSTOR, and are shown in Table 5. The evaluation of JENDL-1 was mainly based on the measurements by Simpson et al.<sup>46)</sup>

As for the neutron and radiation widths, we used the same value as JENDL-1, because no extensive work has been reported. We adjusted slightly the parameters of a negative resonance in order to obtain better agreement of the thermal capture and total cross sections.

As to the fission width, no measured values were reported. JENDL-1 assumed a step-wise increasing fission widths so as to obtain a smooth connection to the data of Seeger et al.<sup>9)</sup> at the upper limit energy of 215 eV. In the present work, we abandoned the data of Seeger et al. and

assumed a constant value of  $\Gamma_f$  for all the resonances. The value of  $\Gamma_f$  were determined so that the calculated fission cross section might be 225 mb at 0.0253 eV.

The fission widths thus determined is 0.12 meV and the negative resonance parameters are

$$E_n = -2.0 \text{ eV}, \Gamma_n = 1.4 \text{ meV}, \Gamma_\gamma = 39 \text{ meV}, \Gamma_f = 0.12 \text{ meV}.$$

The calculated cross sections at 0.0253 eV are

$$\sigma_{n,T} = 86.2 \text{ barns}$$

$$\sigma_{n,\gamma} = 78.5 \text{ barns}$$

$$\sigma_{n,f} = 0.228 \text{ barns},$$

which agree with our adopted values. The calculated total, capture and fission cross sections in the thermal energy region are shown in Figs. 10 ~ 12.

### 3.3.2 Unresolved Resonance Parameters

The unresolved resonance parameters are defined in the energy region between 215 eV and 30 keV. As no experimental data exist in this energy region except the total cross section below 1 keV, we applied the s-wave and p-wave strength functions and the effective scattering radius obtained from the optical model calculation. The radiation and fission widths and the observable level spacing were obtained by averaging the resolved resonance parameters.

The presently adopted unresolved resonance parameters are given in Table 6.

### 3.3.3 Resonance Integrals

The fission and capture resonance integrals calculated from the present resonance parameters are compared in Table 7 with the measured data as well as the values calculated from JENDL-1 and ENDF/B-V parameters.

The present fission integral is about two times larger than the values of JENDL-1 and ENDF/B-V and lies within the spread of the measured data. This comes from our giving the fission width of 0.12 meV to all the levels. As to the capture integral, on the other hand, all the calculated values are considerably lower than the measured data. As the small resonance at 0.31 eV may not affect the Cd cut-off energy so much, this disagreement between the calculated and the measured capture integrals is left unresolved.

## 3.4 Cross Sections above Resonance Region

### 3.4.1 Fission Cross Section

The evaluation was made on the basis of the data of Behrens and Browne<sup>17)</sup> in the energy region above 200 keV. The evaluated curve was drawn with the eye-guide manner. No reliable experimental data exist below 200 keV, since we abandoned the data of Seeger et al. In the present work, a smooth curve was drawn with the eye-guide manner to connect the cross section curves obtained from the unresolved resonance parameters below 30 keV and obtained from the measured data above 200 keV. As is seen in Fig. 13, the connection is very smooth. This suggests that the present treatment of the fission cross section is reasonable as a whole. The presently evaluated fission cross sections are compared with the measured data as well as those of JENDL-1 and ENDF/B-V in Figs. 13 ~ 15.

### 3.4.2 Other Cross Sections

The evaluation of all the other cross sections were made with the optical, statistical and evaporation models, as no experimental data were available.

The same optical potential parameters and the same calculation procedure were used as in the case of  $^{241}\text{Am}$ . The  $\gamma$ -ray strength function was determined from the average radiation width and the mean level spacing in the resolved resonance region. The level scheme, the level density parameters and the Q-values of  $(n,2n)$ ,  $(n,3n)$  and  $(n,4n)$  reactions are shown in Table 6.

The calculated total and capture cross sections are shown in Figs. 16 and 17 with the other evaluated curves.

## 3.5 Other Quantities

### 3.5.1 Average Number of Neutrons Emitted per Fission

As no measured data are available on  $v$ -values for  $^{243}\text{Am}$ , JENDL-1 estimated  $v_p$ -values from the systematics. In the present work, the same value was adopted:

$$v_p = 3.2 + 0.16 \text{ En.}$$

The average number of delayed neutrons were estimated with the same method as used for  $^{241}\text{Am}$ . The result is

$$\begin{aligned} v_d &= 0.0095 \quad E < 6 \text{ MeV}, \\ &= 0.0065 \quad E > 8 \text{ MeV}. \end{aligned}$$

As to the decay constants and the fraction, the values for  $^{240}\text{Pu}$  were also adopted.

### 3.5.2 Angular and Energy Distribution of Emitted Neutrons

The same procedure as used for  $^{241}\text{Am}$  was adopted.

### 3.5.3 Fission Spectrum

The same method was used as in the case of  $^{241}\text{Am}$ . The temperature was estimated from systematics on  $Z^2/A$  and is 1.377 MeV.

## 3.6 Discussion

The presently evaluated cross sections are shown in Fig. 18. Scanty experimental data of this nuclide leave considerable uncertainties on the evaluated cross sections.

The present fission cross section is very different from that of JENDL-1 or ENDF/B-V. Abandoning the high subthreshold fission cross section of Seeger et al.<sup>9)</sup>, we assumed consistent low fission cross section values both in the thermal and resonance regions. The fission width of 0.12 meV, which was obtained by fitting the calculated thermal fission cross section to the recent data of Asghar et al.<sup>32)</sup> and of Gavrilov et al.<sup>33)</sup>, gives reasonable fission cross section values in the unresolved resonance region. The connection is very smooth between the cross sections calculated from the unresolved resonance parameters below 30 keV and those above 200 keV which were evaluated on the basis of reliable experimental data. This suggests the consistency and reliability of the presently evaluated fission cross section.

#### 4. Concluding Remarks

Reevaluation work was made on the neutron nuclear data for  $^{241}\text{Am}$  and  $^{243}\text{Am}$ . The results will be stored in JENDL-2.

The present evaluation is based on lots of new measurements published after the previous JENDL-1 work. The high subthreshold fission cross sections obtained by the bombshot experiments were denied by these experiments. As to  $^{241}\text{Am}$  the evaluation of the fission and capture cross sections were made mainly on the basis of the measured data and its reliability is expected to be high. For  $^{243}\text{Am}$ , on the other hand, very scanty experimental data leave the evaluated data considerably uncertain. Particularly no measurements are available for the subthreshold fission cross section after denying the bombshot data. New measurements are much required.

#### Acknowledgment

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Table 1 Resonance parameters of  $^{241}\text{Am}$ 

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH*	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS**	REFERENCE
-0.50	2.5	44.0590	0.08903	43.77	0.2	L = 0	JENDL-2
-0.500	3.0		A 0.0842	44.2	0.2041		79UKNOL
-0.45	2.5	44.0304	A 0.06038	43.77	0.2	L = 0	JENDL-2
-0.450	2.0		A 0.0571	44.4	0.2041		79UKNOL
-0.425			A 0.6				76KALEBIN+
-0.40	2.5	44.0497	0.07973	43.77	0.2	L = 0	JENDL-2
-0.400	3.0		A 0.0754	44.4	0.2041		79UKNOL
-0.32	2.5	44.0210	0.05096	43.77	0.2	L = 0	JENDL-2
-0.320	2.0		A 0.0482	44.2	0.2041		79UKNOL
-0.22	2.5	46.271	A 0.081	45.8	0.39	L = 0	ENDF-B-5
-0.22			A 0.081	45.8			76WESTON+
-0.20	2.5	44.0249	0.05488	43.77	0.2	L = 0	JENDL-2
-0.200	3.0		A 0.0519	44.2	0.2041		79UKNOL
0.308	2.5	44.12	A 0.06	43.77	0.29	L = 0	JENDL-2
0.308	2.0		A 0.054	46.9	0.31		79UKNOL
0.31	2.5	47.244	A 0.054	46.9	0.29	L = 0	ENDF-B-5
0.308	2.5	44.12	A 0.06	43.77	0.29	L = 0	JENDL-1
0.306			A 0.06 ± 0.003	36.0 ± 4.0			59BLOCK+
0.307					0.25	GFS= 52.0	59LEONARD+
0.305						WGO= 0.108 ± 0.006	61SLAUGHTER+
0.31							65BOWMAN+
0.306							66GERASIMOV
0.306 ± 0.002							76KALEBIN+
0.31							76WESTON+
0.576	2.5	43.985	A 0.075	43.77	0.14	L = 0	JENDL-2
0.576	3.0		A 0.093	47.3	0.23		79UKNOL
0.584	2.5	47.563	A 0.093	47.3	0.17	L = 0	ENDF-B-5
0.576	2.5	43.985	A 0.075	43.77	0.14	L = 0	JENDL-1
0.575			A 0.075 ± 0.007	34.0 ± 3.0			59BLOCK+
0.579					0.05	GFS= 15.0	59LEONARD+
0.575						WGO= 0.098 ± 0.01	61SLAUGHTER+
0.575							65BOWMAN+
0.575							66GERASIMOV
0.573 ± 0.004							76KALEBIN+
0.584							76WESTON+
1.276	2.5	47.192	A 0.322	46.5	0.37	L = 0	JENDL-2
1.276	2.0		A 0.318	47.9	0.37		79UKNOL
1.279	2.5	49.814	A 0.314	49.2	0.3	L = 0	ENDF-B-5
1.276	2.5	47.192	A 0.322	46.5	0.37	L = 0	JENDL-1
1.275			A 0.39 ± 0.02	39.0 ± 6.0			59BLOCK+
1.265					0.21	GFS= 56.0	59LEONARD+
1.275						WGO= 0.344 ± 0.018	61SLAUGHTER+
1.27							65BOWMAN+
1.27							66GERASIMOV
1.276							75OERRIEN+
1.268 ± 0.0043							76KALEBIN+
1.279							76WESTON+
1.28							77GAYTHER+
1.28							78KNITTER+
1.68							66GERASIMOV
1.928	2.5	44.493	A 0.113	44.3	0.08	L = 0	JENDL-2
1.928	3.0		A 0.114	44.6	0.08		79UKNOL
1.935	2.5	44.984	A 0.114	44.8	0.07	L = 0	ENDF-B-5
1.928	2.5	44.493	A 0.113	44.3	0.08	L = 0	JENDL-1
1.93			A 0.125 ± 0.006		( 0.7 )		59BLOCK+
1.93						WGO= 0.09 ± 0.004	59LEONARD+
1.68						GFS= 50.0	61SLAUGHTER+
1.93							65BOWMAN+
1.93							66GERASIMOV
1.928							75OERRIEN+
1.916 ± 0.005							76KALEBIN+
1.935							76WESTON+
1.93							77GAYTHER+
2.372	2.5	42.653	A 0.073	42.4	0.18	L = 0	JENDL-2
2.372	2.0		A 0.073	44.0	0.18		79UKNOL
2.383	2.5	45.622	A 0.072	45.4	0.15	L = 0	ENDF-B-5
2.372	2.5	42.653	A 0.073	42.4	0.18	L = 0	JENDL-1
2.375			A 0.08 ± 0.01		( 0.7 )		59BLOCK+
2.4						COM= DOUBLET H	59LEONARD+
2.375						WGO= 0.052 ± 0.008	61SLAUGHTER+
2.36							66GERASIMOV
2.372							75OERRIEN+

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GRAMA WIDTH (MEV)	FISSTION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
2.358 ± 0.008		41.0 ± 2.0	<sup>a</sup> 0.07 ± 0.001				76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
2.383			<sup>a</sup> 0.072 ± 0.001	45.4 ± 1.2	( 0.15 )		
2.37					0.16		
2.37					0.19 ± 0.03		
2.598	2.5	46.317	<sup>a</sup> 0.147	46.0	0.17	L = 0	JENDL-2
2.598	3.0		<sup>a</sup> 0.150	47.6	0.17		79UKNOL
2.61	2.5	49.353	0.153	49.1	0.1	L = 0	ENDF-B-S
2.598	2.5	46.317	<sup>a</sup> 0.147	46.0	0.17	L = 0	JENDL-1
2.6			<sup>a</sup> 0.2 ± 0.02				59BLOCK+
2.6			<sup>a</sup> 0.2 ± 0.02				61SLAUGHTER+
2.6			<sup>a</sup> 0.147 ± 0.001	46.0 ± 0.3	0.17		66GERASIMOV
2.598			± 0.01				75DERRIEN+
2.581 ± 0.009		38.0 ± 2.0	<sup>a</sup> 0.15 ± 0.004				76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
2.61			<sup>a</sup> 0.153 ± 0.002	49.1 ± 0.8	( 0.1 )		
2.6					0.14		
2.6					0.15 ± 0.03		
3.4					( 8.0 )		59LEONARD+
3.973	2.5	44.87	<sup>a</sup> 0.21	44.5	0.16	L = 0	JENDL-2
3.973	3.0		<sup>a</sup> 0.200	44.5	0.16		79UKNOL
3.98	2.5	44.7	0.189	44.5	0.011	L = 0	ENDF-B-S
3.973	2.5	44.87	<sup>a</sup> 0.21	44.5	0.16	L = 0	JENDL-1
3.99			<sup>a</sup> 0.26 ± 0.02				59BLOCK+
4.0					( 4.0 )		59LEONARD+
3.99			<sup>a</sup> 0.26 ± 0.026				61SLAUGHTER+
4.0			<sup>a</sup> 0.21 ± 0.001	44.5 ± 0.3	0.16		66GERASIMOV
3.973			± 0.006				75DERRIEN+
3.956 ± 0.017		28.0 ± 3.0	<sup>a</sup> 0.23 ± 0.008		( 0.01 )		76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
3.98			<sup>a</sup> 0.189 ± 0.002				
3.97					0.13		
3.97					0.13 ± 0.03		
4.4			<sup>a</sup> 0.027 ± 0.006				59BLOCK+
4.4			<sup>a</sup> 0.026 ± 0.008				61SLAUGHTER+
4.4							66GERASIMOV
4.968	2.5	44.415	<sup>a</sup> 0.175	43.8	0.44	L = 0	JENDL-2
4.968	2.0		<sup>a</sup> 0.178	43.8	0.44		79UKNOL
4.983	2.5	44.011	0.181	43.8	0.03	L = 0	ENDF-B-S
4.968	2.5	44.415	<sup>a</sup> 0.175	43.8	0.44	L = 0	JENDL-1
5.0			<sup>a</sup> 0.21 ± 0.02				59BLOCK+
5.3							61SLAUGHTER+
5.05			<sup>a</sup> 0.342 ± 0.034				66GERASIMOV
4.968			<sup>a</sup> 0.175 ± 0.001	43.8 ± 0.4	0.44		75DERRIEN+
4.947 ± 0.024		31.0 ± 5.0	<sup>a</sup> 0.175 ± 0.005				76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
4.983			<sup>a</sup> 0.181 ± 0.004		( 0.03 )		
4.97					0.38		
4.97					0.35 ± 0.05		
5.415	2.5	45.59	<sup>a</sup> 0.76	44.2	0.63	L = 0	JENDL-2
5.415	3.0		<sup>a</sup> 0.754	44.2	0.63		79UKNOL
5.423	2.5	45.327	0.747	44.2	0.38	L = 0	ENDF-B-S
5.415	2.5	45.59	<sup>a</sup> 0.76	44.2	0.63	L = 0	JENDL-1
5.44			1.3 ± 0.2				59BLOCK+
5.44							61SLAUGHTER+
5.48			<sup>a</sup> 1.048 ± 0.028				66GERASIMOV
5.415			<sup>a</sup> 0.75 ± 0.003	44.2 ± 0.1	0.63		75DERRIEN+
5.39 ± 0.03		38.0 ± 7.0	<sup>a</sup> 0.844 ± 0.114				76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
5.423			<sup>a</sup> 0.747 ± 0.007				
5.42					( 0.38 )		
5.42					0.55		
5.42					0.64 ± 0.03		
5.8	2.5	44.001	<sup>a</sup> 0.002	43.77	0.229	L = 0	JENDL-2
5.800	2.0		<sup>a</sup> 0.002	44.2	0.23		79UKNOL
5.8	2.5	44.001	<sup>a</sup> 0.002	43.77	0.229	L = 0	JENDL-1
5.8			<sup>a</sup> 0.002				75DERRIEN+
6.117	2.5	44.344	<sup>a</sup> 0.124	43.8	0.42	L = 0	JENDL-2
6.117	3.0		<sup>a</sup> 0.128	43.8	0.42		79UKNOL
6.128	2.5	43.961	0.131	43.8	0.03	L = 0	ENDF-B-S
6.117	2.5	44.344	<sup>a</sup> 0.124	43.8	0.42	L = 0	JENDL-1
6.14			<sup>a</sup> 0.23 ± 0.03				59BLOCK+
6.05							61SLAUGHTER+
6.2			<sup>a</sup> 0.130 ± 0.04				66GERASIMOV
6.117			<sup>a</sup> 0.124 ± 0.001	43.8 ± 0.7	0.42		75DERRIEN+
6.1 ± 0.04		42.0 ± 14.0	<sup>a</sup> 0.116 ± 0.005				76KALEBIN+ 76WESTON+ 77GAYTHER+ 78KNITTER+
6.128			<sup>a</sup> 0.131 ± 0.002				
6.12					( 0.03 )		
6.12					0.34		
6.12					0.34 ± 0.11		
6.745	2.5	44.018	0.028	43.77	0.22	L = 0	JENDL-2

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
6.745	3.0		<sup>a</sup> 0.030	44.2	0.22		79UKNDL
6.755	2.5	44.052	0.032	43.8	0.22	L = 0	ENDF-B-S
6.745	2.5	44.018	0.028	43.77	0.22	L = 0	JENDL-1
6.78			<sup>a</sup> 0.059 ± 0.015			WGO = 0.09 ± 0.036	59BLOCK+
6.78			<sup>a</sup> 0.026 ± 0.001		0.22		61SLAUGHTER+
6.745			<sup>a</sup> 0.05 ± 0.03				75DERRIEN+
6.65 ± 0.04			<sup>a</sup> 0.032 ± 0.002				76KALEBIN+
6.755					0.08		76WESTON+
6.74							77GAYTHER+
7.659	2.5	43.903	<sup>a</sup> 0.037	43.77	0.1	L = 0	JENDL-2
7.659	3.0		<sup>a</sup> 0.042	44.2	0.10		79UKNDL
7.679	2.5	43.946	0.046	43.8	0.1	L = 0	ENDF-B-S
7.659	2.5	43.903	0.037	43.77	0.1	L = 0	JENDL-1
7.64			<sup>a</sup> 0.037 ± 0.001		0.1	WGO = 0.044 ± 0.03	61SLAUGHTER+
7.659			<sup>a</sup> 0.07 ± 0.04				75DERRIEN+
7.53 ± 0.05			<sup>a</sup> 0.046 ± 0.003				76KALEBIN+
7.679							76WESTON+
7.97						WGO = 0.28 ± 0.12	61SLAUGHTER+
8.173	2.5	42.928	<sup>a</sup> 0.108	42.7	0.12	L = 0	JENDL-2
8.173	2.0		<sup>a</sup> 0.113	42.7	0.12		79UKNDL
8.196	2.5	42.937	0.117	42.7	0.12	L = 0	ENDF-B-S
8.173	2.5	42.928	<sup>a</sup> 0.108	42.7	0.12	L = 0	JENDL-1
8.1			<sup>a</sup> 5.0 ± 2.0				59BLOCK+
8.11			<sup>a</sup> 0.108 ± 0.001	42.7 ± 1.2	0.12	WGO = 0.28 ± 0.12	61SLAUGHTER+
8.173			<sup>a</sup> ± 0.001				75DERRIEN+
8.17 ± 0.02		42.0 ± 5.0	<sup>a</sup> 0.096 ± 0.004				76KALEBIN+
8.196			<sup>a</sup> 0.117 ± 0.003		0.19		76WESTON+
8.17							77GAYTHER+
8.28						WGO = 0.044 ± 0.026	61SLAUGHTER+
9.113	2.5	44.769	<sup>a</sup> 0.389	44.2	0.16	L = 0	JENDL-2
9.113	2.0		<sup>a</sup> 0.387	44.2	0.18		79UKNDL
9.137	2.5	44.635	0.385	44.2	0.05	L = 0	ENDF-B-S
9.113	2.5	44.769	<sup>a</sup> 0.389	44.2	0.18	L = 0	JENDL-1
9.14			<sup>a</sup> 0.8 ± 0.12				59BLOCK+
9.09			<sup>a</sup> 0.402 ± 0.050			WGO = 0.132 ± 0.016	61SLAUGHTER+
9.3			<sup>a</sup> 0.389 ± 0.002	44.2 ± 0.6	0.18		66GERASIMOV
9.113			<sup>a</sup> ± 0.009				75DERRIEN+
9.11 ± 0.02		48.0 ± 3.0	<sup>a</sup> 0.358 ± 0.005		{ 0.05 }		76KALEBIN+
9.137			<sup>a</sup> 0.365 ± 0.004		0.17		76WESTON+
9.11					0.17 ± 0.03		77GAYTHER+
9.12							78KNITTER+
9.851	2.5	45.256	<sup>a</sup> 0.406	43.9	0.95	L = 0	JENDL-2
9.851	3.0		<sup>a</sup> 0.412	43.9	0.95		79UKNDL
9.878	2.5	45.317	0.417	43.9	1.0	L = 0	ENDF-B-S
9.851	2.5	45.256	<sup>a</sup> 0.406	43.9	0.95	L = 0	JENDL-1
9.9			<sup>a</sup> 0.71 ± 0.11				59BLOCK+
9.84			<sup>a</sup> 0.336 ± 0.050			WGO = 0.106 ± 0.016	61SLAUGHTER+
10.05			<sup>a</sup> 0.406 ± 0.002	43.9 ± 0.6	0.35		66GERASIMOV
9.851			<sup>a</sup> ± 0.009				75DERRIEN+
9.84 ± 0.03		48.0 ± 3.0	<sup>a</sup> 0.37 ± 0.007		{ 1.0 }		76KALEBIN+
9.878			<sup>a</sup> 0.417 ± 0.005		0.85		76WESTON+
9.85					0.75 ± 0.08		77GAYTHER+
9.85							78KNITTER+
10.116	2.5	43.956	<sup>a</sup> 0.026	43.77	0.16	L = 0	JENDL-2
10.116	2.0		<sup>a</sup> 0.026	44.2	0.16		79UKNDL
10.116	2.5	43.956	<sup>a</sup> 0.026	43.77	0.16	L = 0	JENDL-1
10.116			<sup>a</sup> 0.026 ± 0.001				75DERRIEN+
10.11 ± 0.03			<sup>a</sup> 0.025 ± 0.004				76KALEBIN+
10.403	2.5	42.786	<sup>a</sup> 0.326	42.4	0.06	L = 0	JENDL-2
10.403	3.0		<sup>a</sup> 0.334	42.4	0.06		79UKNDL
10.43	2.5	42.803	0.343	42.4	0.06	L = 0	ENDF-B-S
10.403	2.5	42.786	<sup>a</sup> 0.326	42.4	0.06	L = 0	JENDL-1
10.4			<sup>a</sup> 0.7 ± 0.2				59BLOCK+
10.38			<sup>a</sup> 0.326 ± 0.002	42.4 ± 0.8	0.06	WGO = 0.106 ± 0.01	61SLAUGHTER+
10.403			<sup>a</sup> ± 0.005				75DERRIEN+
10.39 ± 0.03		45.0 ± 4.0	<sup>a</sup> 0.294 ± 0.007				76KALEBIN+
10.43			<sup>a</sup> 0.343 ± 0.005				76WESTON+
10.997	2.5	47.043	<sup>a</sup> 0.413	46.5	0.13	L = 0	JENDL-2
10.997	2.0		<sup>a</sup> 0.414	46.5	0.13		79UKNDL
11.03	2.5	47.045	0.415	46.5	0.13	L = 0	ENDF-B-S
10.997	2.5	47.043	<sup>a</sup> 0.413	46.5	0.13	L = 0	JENDL-1
10.98			<sup>a</sup> 0.413 ± 0.002	46.5 ± 0.8	0.13	WGO = 0.108 ± 0.014	61SLAUGHTER+
10.997			<sup>a</sup> ± 0.006				75DERRIEN-

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
10.99 ± 0.04		52.0 ± 4.0	<sup>a</sup> 0.382 ± 0.008 <sup>a</sup> 0.415 ± 0.008				76KALEBIN+ 76WESTON+
11.03							
11.583	2.5	44.015	<sup>a</sup> 0.016 <sup>a</sup> 0.023 <sup>a</sup> 0.03 <sup>a</sup> 0.016 <sup>a</sup> 0.65 ± 0.06 <sup>a</sup> 0.016 ± 0.001 <sup>a</sup> 0.018 ± 0.003 <sup>a</sup> 0.03 ± 0.004	43.77 44.2 43.8 43.77 43.77 43.77	0.229 0.23 0.227 0.229 0.229	L = 0 L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 59BLOCK+ 75DERRIEN+ 76KALEBIN+ 76WESTON+
11.583	3.0						
11.58	2.5	44.057					
11.583	2.5	44.015					
11.05							
11.583							
11.58 ± 0.05							
11.66							
12.137	2.5	44.006	<sup>a</sup> 0.007 <sup>a</sup> 0.011 <sup>a</sup> 0.014 <sup>a</sup> 0.007 <sup>a</sup> 0.007 ± 0.001 <sup>a</sup> 0.007 ± 0.003 <sup>a</sup> 0.014 ± 0.004	43.77 44.2 43.8 43.77 43.77	0.229 0.23 0.227 0.229 0.229	L = 0 L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 75DERRIEN+ 76KALEBIN+ 76WESTON+
12.137	2.0						
12.25	2.5	44.041					
12.137	2.5	44.006					
12.36 ± 0.05							
12.25							
12.879	2.5	43.961	<sup>a</sup> 0.131 <sup>a</sup> 0.141 <sup>a</sup> 0.151 <sup>a</sup> 0.131 <sup>a</sup> 0.24 ± 0.05 <sup>a</sup> 0.131 ± 0.001 <sup>a</sup> 0.116 ± 0.009 <sup>a</sup> 0.151 ± 0.006	43.77 44.2 43.8 43.77 43.77 43.77	0.06 0.06 0.06 0.06 0.06	L = C L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 59BLOCK+ 61SLAUGHTER+ 75DERRIEN+ 76KALEBIN+ 76WESTON+
12.879	3.0						
12.92	2.5	44.011					
12.879	2.5	43.961					
12.9							
12.86							
12.879							
12.86 ± 0.06		44.0 ± 5.0	<sup>a</sup> 0.012 <sup>a</sup> 0.012 <sup>a</sup> 0.012 ± 0.001 <sup>a</sup> 0.05 ± 0.015	43.77 44.2 43.77	0.229 0.23 0.229	L = 0 L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+ 76KALEBIN+
13.874	2.5	44.011	<sup>a</sup> 0.012 <sup>a</sup> 0.012 <sup>a</sup> 0.012 <sup>a</sup> 0.012 ± 0.001 <sup>a</sup> 0.05 ± 0.015	43.77 44.2 43.77	0.229 0.23 0.229	L = 0 L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+ 76KALEBIN+
13.874	2.0						
13.874	2.5						
13.8 ± 0.06		44.0 ± 5.0					
14.36	2.5	44.07	<sup>a</sup> 0.071 <sup>a</sup> 0.072 <sup>a</sup> 0.072 <sup>a</sup> 0.071 <sup>a</sup> 0.071 ± 0.002 <sup>a</sup> 0.001 <sup>a</sup> 0.066 ± 0.012 <sup>a</sup> 0.072 ± 0.01	43.77 44.2 43.8 43.77 43.77	0.229 0.23 0.227 0.229	L = 0 L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 75DERRIEN+ 76KALEBIN+ 76WESTON+
14.36	3.0						
14.35	2.5	44.059					
14.36	2.5	44.07					
14.36							
14.32 ± 0.06							
14.35							
14.682	2.5	43.052	<sup>a</sup> 2.482 <sup>a</sup> 2.397 <sup>a</sup> 2.312 <sup>a</sup> 2.482 <sup>a</sup> 3.5 ± 0.4	40.3 40.3 40.3 40.3	0.27 0.27 0.27 0.27	L = C L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 59BLOCK+ 61SLAUGHTER+ 66GERASIMOV 75DERRIEN+ 76KALEBIN+ 76WESTON+
14.682	2.0						
14.65	2.5	42.882					
14.682	2.5	43.052					
14.8							
14.7							
15.04							
14.682							
14.66 ± 0.07		44.0 ± 5.0	<sup>a</sup> 2.4 ± 0.05 <sup>a</sup> 2.482 ± 0.011 <sup>a</sup> 0.075	40.3 ± 0.5	0.27		
14.69							
14.68							
15.689	2.5	39.644	<sup>a</sup> 0.244 <sup>a</sup> 0.251 <sup>a</sup> 0.257 <sup>a</sup> 0.244 <sup>a</sup> 0.4 ± 0.12 <sup>a</sup> 0.244 ± 0.003 <sup>a</sup> 0.003	39.3 39.3 39.3 39.3 0.4 ± 0.12 39.3 ± 2.9	0.1 0.10 0.1 0.1 0.1	L = 0 L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 59BLOCK+ 61SLAUGHTER+ 75DERRIEN+ 76KALEBIN+ 76WESTON+
15.689	2.0						
15.7	2.5	39.657					
15.689	2.5	39.644					
15.8							
15.6							
15.689							
15.66 ± 0.07		32.0 ± 12.0	<sup>a</sup> 0.215 ± 0.012 <sup>a</sup> 0.257 ± 0.013	39.3 ± 2.9	0.1		
15.7							
15.73							61SLAUGHTER+
15.02							61SLAUGHTER+
16.388	2.5	43.187	<sup>a</sup> 1.277 <sup>a</sup> 1.244 <sup>a</sup> 1.21 <sup>a</sup> 1.277 <sup>a</sup> 1.8 ± 0.3	41.8 41.8 41.8 41.8	0.11 0.11 0.11 0.11	L = 0 L = 0 L = 0	JENDL-2 79UKNOL ENDF-B-S JENDL-1 59BLOCK+ 61SLAUGHTER+ 75DERRIEN+
16.388	2.0						
15.39	2.5	43.12					
16.388	2.5	43.187					
16.5							
16.38							
16.388							
16.35 ± 0.07		44.0 ± 5.0	<sup>a</sup> 1.277 ± 0.005 <sup>a</sup> 1.185 ± 0.033 <sup>a</sup> 1.21 ± 0.021	41.8 ± 0.9	0.11		
16.39							
15.849	2.5	42.166	<sup>a</sup> 0.646 <sup>a</sup> 0.645	41.2 41.2	0.32 0.32	L = C	JENDL-2 79UKNOL
15.849	3.0						

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
16.85	2.5	42.164	0.644	41.2	0.32	L = 0	ENDF-B-5
16.849	2.5	42.166	0.646	41.2	0.32	L = 0	JENDL-1
17.0			R 0.7 ± 0.2				S9BLOCK+
16.82			R 0.646 ± 0.004	41.2 ± 1.5	0.32		61SLAUGHTER+
16.849			R 0.575 ± 0.02				75DERRIEN+
16.81 ± 0.07		31.0 ± 8.0	R 0.644 ± 0.018				76KALEBIN+
16.85							76WESTON+
17.729	2.5	37.991	R 0.391	37.3	0.3	L = 0	JENDL-2
17.729	2.0		R 0.411	37.3	0.30		79UKNOL
17.75	2.5	38.03	0.43	37.3	0.3	L = 0	ENDF-B-5
17.729	2.5	37.991	R 0.391	37.3	0.3	L = 0	JENDL-1
17.68			R 0.391 ± 0.004	37.3 ± 2.4	0.3		61SLAUGHTER+
17.729			R 0.373 ± 0.016				75DERRIEN+
17.69 ± 0.07		40.0 ± 10.0	R 0.43 ± 0.017				76KALEBIN+
17.76							76WESTON+
18.167	2.5	44.016	R 0.017	43.77	0.229	L = 0	JENDL-2
18.167	3.0		R 0.017	44.2	0.23		79UKNOL
18.167	2.5	44.016	R 0.017	43.77	0.229	L = 0	JENDL-1
18.37			R 0.017				61SLAUGHTER+
18.167							75DERRIEN+
18.09							76KALEBIN+
19.445	2.5	44.013	R 0.213	43.77	0.03	L = 0	JENDL-2
19.445	2.0		R 0.220	44.2	0.03		79UKNOL
19.47	2.5	44.056	0.226	43.8	0.03	L = 0	ENDF-B-5
19.445	2.5	44.013	R 0.213	43.77	0.03	L = 0	JENDL-1
19.48			R 0.213 ± 0.003		0.03		61SLAUGHTER+
19.445			R 0.213 ± 0.002				75DERRIEN+
19.39 ± 0.07		37.0 ± 12.0	R 0.182 ± 0.016				76KALEBIN+
19.47			R 0.226 ± 0.016				76WESTON+
20.333	2.5	44.033	R 0.034	43.77	0.229	L = 0	JENDL-2
20.333	3.0		R 0.041	44.2	0.23		79UKNOL
20.38	2.5	44.076	0.049	43.8	0.227	L = 0	ENDF-B-5
20.333	2.5	44.033	R 0.034	43.77	0.229	L = 0	JENDL-1
20.333			R 0.034				75DERRIEN+
20.28 ± 0.07		37.0 ± 12.0	R 0.05 ± 0.01				76KALEBIN+
20.38			R 0.049 ± 0.013				76WESTON+
20.64						WGO= 0.05 ± 0.04	61SLAUGHTER+
20.88	2.5	44.088	R 0.089	43.77	0.229	L = 0	JENDL-2
20.880	3.0		R 0.087	44.2	0.23		79UKNOL
20.91	2.5	44.112	0.085	43.8	0.227	L = 0	ENDF-B-5
20.88	2.5	44.088	R 0.089	43.77	0.229	L = 0	JENDL-1
20.88			R 0.089 ± 0.001				75DERRIEN+
20.84 ± 0.08		37.0 ± 12.0	R 0.054 ± 0.011				76KALEBIN+
20.91			R 0.085 ± 0.016				76WESTON+
21.74	2.5	44.121	R 0.081	43.77	0.27	L = 0	JENDL-2
21.740	2.0		R 0.079	44.2	0.27		79UKNOL
21.78	2.5	44.146	0.076	43.8	0.27	L = 0	ENDF-B-5
21.74	2.5	44.121	R 0.081	43.77	0.27	L = 0	JENDL-1
21.74			R 0.081 ± 0.003				75DERRIEN+
21.72 ± 0.08		37.0 ± 12.0	R 0.067 ± 0.012				76KALEBIN+
21.78			R 0.076 ± 0.016				76WESTON+
22.21	3.0		R 0.028	44.2	0.23		79UKNOL
22.21	2.5	44.055	R 0.028	43.8	0.227	L = 0	ENDF-B-5
22.21			R 0.028 ± 0.016				76WESTON+
22.748	2.5	44.068	R 6.899-2	43.77	0.229	L = 0	JENDL-2
22.748	3.0		R 0.067	44.2	0.23		79UKNOL
22.8	2.5	44.091	R 6.399-2	43.8	0.227	L = 0	ENDF-B-5
22.748	2.5	44.068	R 6.899-2	43.77	0.229	L = 0	JENDL-1
22.748			R 0.063 ± 0.003				75DERRIEN+
22.748			R 0.07 ± 0.012				76KALEBIN+
22.74 ± 0.09		37.0 ± 12.0	R 0.064 ± 0.016				76WESTON+
22.8							
23.079	2.5	42.887	R 0.417	42.2	0.27	L = 0	JENDL-2
23.079	2.0		R 0.387	42.2	0.27		79UKNOL
23.09	2.5	42.827	0.357	42.2	0.27	L = 0	ENDF-B-5
23.079	2.5	42.887	R 0.417	42.2	0.27	L = 0	JENDL-1
23.09			R 0.417 ± 0.012	42.2 ± 6.0	0.27		61SLAUGHTER+
23.079			R 0.357 ± 0.005				75DERRIEN+
23.08 ± 0.09		37.0 ± 12.0	R 0.39 ± 0.05				76KALEBIN+
23.09			R 0.357 ± 0.021				76WESTON+
23.337	2.5	43.115	R 0.445	42.5	0.17	L = 0	JENDL-2
23.337	3.0		R 0.472	42.5	0.17		79UKNOL
23.36	2.5	43.168	R 0.498	42.5	0.17	L = 0	ENDF-B-5

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
23.337	2.5	43.115	0.445	42.5	0.17	L = 0 WCO= 0.16 ± 0.048	JENDL-1 61SLAUGHTER+ 75DERRIEN+
23.28			<sup>a</sup> 0.445 ± 0.012	42.5 ± 5.8	0.17		
23.337			<sup>a</sup> 0.006				
23.33 ± 0.09		37.0 ± 12.0	<sup>a</sup> 0.4 ± 0.05				76KALEBIN+ 76WESTON+
23.36			<sup>a</sup> 0.498 ± 0.024				
24.192	2.5	40.644	<sup>a</sup> 1.304	39.2	0.14	L = 0	JENDL-2 79UKNOL
24.192	3.0		<sup>a</sup> 1.302	39.2	0.14		ENDF-B-5
24.23	2.5	40.639	1.299	39.2	0.14	L = 0	JENDL-1 61SLAUGHTER+ 75DERRIEN+
24.192	2.5	40.644	1.304	39.2	0.14		
24.17			<sup>a</sup> 1.304 ± 0.007	39.2 ± 1.5	0.14		
24.192			<sup>a</sup> ± 0.028				
24.17 ± 0.09		37.0 ± 12.0	<sup>a</sup> 1.27 ± 0.08				76KALEBIN+ 76WESTON+
24.23			<sup>a</sup> 1.299 ± 0.03				
25.008	2.5	44.013	<sup>a</sup> 0.014	43.77	0.229	L = 0	JENDL-2 79UKNOL
25.008	3.0		<sup>a</sup> 0.014	44.2	0.23		JENDL-1
25.008	2.5	44.013	<sup>a</sup> 0.014	43.77	0.229	L = 0	75DERRIEN+
25.008			<sup>a</sup> 0.014 ± 0.001				
25.05 ± 0.1			<sup>a</sup> ± 0.001				76KALEBIN+
25.634	2.5	39.148	<sup>a</sup> 1.258	37.5	0.29	L = 0	JENDL-2 79UKNOL
25.634	3.0		<sup>a</sup> 1.263	37.5	0.29		ENDF-B-5
25.68	2.5	39.158	1.258	37.5	0.29	L = 0	JENDL-1 61SLAUGHTER+ 75DERRIEN+
25.634	2.5	39.148	1.258	37.5	0.29		
25.61			<sup>a</sup> 1.258 ± 0.008	37.6 ± 1.7	0.29		
25.634			<sup>a</sup> ± 0.025				
25.6 ± 0.1		37.0 ± 12.0	<sup>a</sup> 1.21				76KALEBIN+ 76WESTON+
25.68			<sup>a</sup> 1.268 ± 0.032				
26.498	2.5	22.537	<sup>a</sup> 0.487	22.0	0.05	L = 0	JENDL-2 79UKNOL
26.498	3.0		<sup>a</sup> 0.457	44.2	0.05		JENDL-1 61SLAUGHTER+ 75DERRIEN+
26.498	2.5	22.537	<sup>a</sup> 0.487	22.0	0.05	L = 0	
26.6			<sup>a</sup> 0.487 ± 0.014	22.0 ± 6.1	0.05		
26.498			<sup>a</sup> ± 0.006				76KALEBIN+
26.5 ± 0.1							
26.59	2.5	44.845	<sup>a</sup> 0.618	43.8	0.227	L = 0	ENDF-B-5 76WESTON+
26.59			<sup>a</sup> 0.618 ± 0.052				
26.669	2.5	44.177	<sup>a</sup> 0.217	43.77	0.19	L = 0	JENDL-2 79UKNOL
26.669	2.0		<sup>a</sup> 0.204	44.2	0.19		JENDL-1 75DERRIEN+
26.669	2.5	44.177	<sup>a</sup> 0.217	43.77	0.19	L = 0	
26.669			<sup>a</sup> 0.217 ± 0.01				
26.67 ± 0.1			<sup>a</sup> ± 0.004				76KALEBIN+
27.575	2.5	44.164	<sup>a</sup> 0.165	43.77	0.229	L = 0	JENDL-2 79UKNOL
27.575	2.0		<sup>a</sup> 0.165	44.2	0.51		JENDL-1 75DERRIEN+
27.575	2.5	44.164	<sup>a</sup> 0.165	43.77	0.229	L = 0	
27.575			<sup>a</sup> 0.165 ± 0.021				76KALEBIN+
27.52 ± 0.1			<sup>a</sup> ± 0.002				
27.726	2.5	71.338	<sup>a</sup> 0.509	70.6	0.229	L = 0	JENDL-2 79UKNOL
27.726	3.0		<sup>a</sup> 0.572	44.2	0.19		ENDF-B-5
27.71	2.5	71.461	0.634	70.6	0.227	L = 0	JENDL-1 61SLAUGHTER+ 75DERRIEN+
27.726	2.5	71.338	0.509	70.6	0.229	L = 0	
27.68			<sup>a</sup> 0.509 ± 0.029	70.6 ± 8.8			
27.726			<sup>a</sup> ± 0.006				76KALEBIN+ 76WESTON+
27.65 ± 0.1							
27.71			<sup>a</sup> 0.634 ± 0.023				
28.355	2.5	45.43	<sup>a</sup> 0.57	44.7	0.15	L = 0	JENDL-2 79UKNOL
28.355	2.0		<sup>a</sup> 0.559	44.7	0.16		ENDF-B-5
28.35	2.5	45.416	0.556	44.7	0.16	L = 0	JENDL-1 61SLAUGHTER+ 75DERRIEN+
28.355	2.5	45.43	0.57	44.7	0.15	L = 0	
28.36			<sup>a</sup> 0.57 ± 0.009	44.7 ± 3.7	0.16		
28.355			<sup>a</sup> ± 0.008				76KALEBIN+ 76WESTON+
28.31 ± 0.11			<sup>a</sup> 0.4				
28.35			<sup>a</sup> 0.556 ± 0.019				
28.903	2.5	49.227	<sup>a</sup> 0.457	48.6	0.16	L = 0	JENDL-2 79UKNOL
28.903	3.0		<sup>a</sup> 0.482	48.6	0.16		ENDF-B-5
28.9	2.5	49.258	0.498	48.6	0.16	L = 0	JENDL-1 61SLAUGHTER+ 75DERRIEN+
28.903	2.5	49.227	0.457	48.6	0.16	L = 0	
28.93			<sup>a</sup> 0.467 ± 0.009	48.6 ± 4.7	0.16		
28.903			<sup>a</sup> ± 0.006				76KALEBIN+ 76WESTON+
28.82 ± 0.12			<sup>a</sup> 0.35				

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
28.9			<sup>a</sup> 0.498 ± 0.02				76WESTON+
29.504	2.5	45.401	<sup>a</sup> 0.701	44.6	0.1	L = 0	JENDL-2
29.504	2.0		<sup>a</sup> 0.692	44.6	0.10		79UKNOL
29.51	2.5	45.382	0.682	44.6	0.1	L = 0	ENDF-B-5
29.504	2.5	45.401	0.701	44.6	0.1	L = 0	JENDL-1
29.55			<sup>a</sup> 0.701 ± 0.009	44.6 ± 3.2	0.1	WGO = 0.15 ± 0.05	61SLAUGHTER+
29.504			<sup>a</sup> 0.009 ± 0.009				75DERRIEN+
29.43 ± 0.12			<sup>a</sup> 0.61				76KALEBIN+
29.51			<sup>a</sup> 0.682 ± 0.021				76WESTON+
29.956	2.5	44.049	<sup>a</sup> 0.05	43.77	0.229	L = 0	JENDL-2
29.956	3.0		<sup>a</sup> 0.066	44.2	0.23		79UKNOL
29.95	2.5	44.108	0.081	43.8	0.227	L = 0	ENDF-B-5
29.956	2.5	44.049	0.05	43.77	0.229	L = 0	JENDL-1
29.956			<sup>a</sup> 0.05				75DERRIEN+
29.95			<sup>a</sup> 0.081 ± 0.017				76WESTON+
30.822	2.5	44.149	<sup>a</sup> 0.15	43.77	0.229	L = 0	JENDL-2
30.822	3.0		<sup>a</sup> 0.233	44.2	0.27		79UKNOL
30.87	2.5	44.343	0.316	43.8	0.227	L = 0	ENDF-B-5
30.822	2.5	44.149	0.15	43.77	0.229	L = 0	JENDL-1
30.79			<sup>a</sup> 0.15 ± 0.01				61SLAUGHTER+
30.822			<sup>a</sup> 0.002 ± 0.002				75DERRIEN+
30.87			<sup>a</sup> 0.316 ± 0.023				76WESTON+
31.02	2.5	44.335	<sup>a</sup> 0.336	43.77	0.229	L = 0	JENDL-2
31.020	2.0		<sup>a</sup> 0.342	44.2	0.37		79UKNOL
31.02	2.5	44.335	0.336	43.77	0.229	L = 0	JENDL-1
31.02			<sup>a</sup> 0.336 ± 0.01				75DERRIEN+
			<sup>a</sup> ± 0.004				
31.251	2.5	43.816	<sup>a</sup> 0.996	42.6	0.22	L = 0	JENDL-2
31.251	3.0		<sup>a</sup> 1.012	42.6	0.22		79UKNOL
31.23	2.5	44.197	1.377	42.6	0.22	L = 0	ENDF-B-5
31.251	2.5	43.816	0.996	42.6	0.22	L = 0	JENDL-1
31.21			<sup>a</sup> 0.996 ± 0.019	42.6 ± 4.2	0.22	WGO = 0.22 ± 0.06	61SLAUGHTER+
31.251			<sup>a</sup> ± 0.015				75DERRIEN+
31.23			<sup>a</sup> 1.377 ± 0.031				76WESTON+
32.03	2.5	47.98	<sup>a</sup> 0.3	47.4	0.28	L = 0	JENDL-2
32.030	3.0		<sup>a</sup> 0.299	47.8	0.28		79UKNOL
32.05	2.5	48.378	0.298	47.8	0.28	L = 0	ENDF-B-5
32.03	2.5	47.98	0.3	47.4	0.28	L = 0	JENDL-1
32.14			<sup>a</sup> 0.3 ± 0.01	47.4 ± 8.6	0.28	WGO = 0.1 ± 0.08	61SLAUGHTER+
32.03			<sup>a</sup> ± 0.003				75DERRIEN+
32.05			<sup>a</sup> 0.298 ± 0.02				76WESTON+
33.51	2.5	44.059	<sup>a</sup> 0.06	43.77	0.229	L = 0	JENDL-2
33.510	3.0		<sup>a</sup> 0.060	44.2	0.23		79UKNOL
33.51	2.5	44.059	0.06	43.77	0.229	L = 0	JENDL-1
33.51			<sup>a</sup> 0.06				75DERRIEN+
34.028	2.5	46.257	<sup>a</sup> 0.628	45.4	0.229	L = 0	JENDL-2
34.028	2.0		<sup>a</sup> 0.639	45.4	0.01		79UKNOL
34.03	2.5	46.276	0.649	45.4	0.227	L = 0	ENDF-B-5
34.028	2.5	46.257	0.628	45.4	0.229	L = 0	JENDL-1
34.02			<sup>a</sup> 0.628 ± 0.012	45.4 ± 4.9		WGO = 0.14 ± 0.08	61SLAUGHTER+
34.028			<sup>a</sup> ± 0.008				75DERRIEN+
34.03			<sup>a</sup> 0.649 ± 0.025				76WESTON+
34.46	2.5	44.124	<sup>a</sup> 0.125	43.77	0.229	L = 0	JENDL-2
34.460	3.0		<sup>a</sup> 0.125	44.2	0.85		79UKNOL
34.44	2.5	44.153	0.126	43.8	0.227	L = 0	ENDF-B-5
34.46	2.5	44.124	0.125	43.77	0.229	L = 0	JENDL-1
34.46			<sup>a</sup> 0.125 ± 0.007				75DERRIEN+
34.44			<sup>a</sup> 0.126 ± 0.021				76WESTON+
34.928	2.5	43.641	<sup>a</sup> 0.612	42.8	0.229	L = 0	JENDL-2
34.928	2.0		<sup>a</sup> 0.611	42.8	0.16		79UKNOL
34.93	2.5	43.637	0.51	42.8	0.227	L = 0	ENDF-B-5
34.928	2.5	43.641	0.612	42.8	0.229	L = 0	JENDL-1
35.02			<sup>a</sup> 0.612 ± 0.012	42.8 ± 5.4		WGO = 0.12 ± 0.08	61SLAUGHTER+
34.928			<sup>a</sup> ± 0.006				75DERRIEN+
34.93			<sup>a</sup> 0.61 ± 0.025				76WESTON+
35.485	2.5	51.256	<sup>a</sup> 0.427	50.6	0.229	L = 0	JENDL-2
35.485	3.0		<sup>a</sup> 0.434	44.2	0.18		79UKNOL
35.53	2.5	51.271	0.444	50.6	0.227	L = 0	ENDF-B-5
35.485	2.5	51.256	0.427	50.6	0.229	L = 0	JENDL-1
35.53			<sup>a</sup> 0.427			WGO = 0.09 ± 0.046	61SLAUGHTER+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
35.485			<sup>a</sup> 0.427 ± 0.012 ± 0.004	50.6 ± 8.1			75OERRIEN+
35.53			<sup>a</sup> 0.444 ± 0.025				76WESTON+
36.25	2.5	44.166	<sup>a</sup> 0.167	43.77	0.229	L = 0	JENDL-2
36.250	3.0		<sup>a</sup> 0.159	44.2	0.10		79UKNOL
36.25	2.5	44.166	<sup>a</sup> 0.167	43.77	0.229	L = 0	JENDL-1
36.25			<sup>a</sup> 0.167 ± 0.007 ± 0.001				75OERRIEN+
36.36	2.5	44.27	<sup>a</sup> 0.243	43.8	0.227	L = 0	ENDF-B-5
36.36			<sup>a</sup> 0.243 ± 0.023				76WESTON+
36.483	2.5	44.099	<sup>a</sup> 0.1	43.77	0.229	L = 0	JENDL-2
36.483	2.0		<sup>a</sup> 0.095	44.2	0.23		79UKNOL
36.483	2.5	44.099	<sup>a</sup> 0.1	43.77	0.229	L = 0	JENDL-1
36.483			<sup>a</sup> 0.1				75OERRIEN+
36.979	2.5	55.505	<sup>a</sup> 2.995	52.0	0.51	L = 0	JENDL-2
36.979	3.0		<sup>a</sup> 3.124	44.2	0.51		79UKNOL
36.99	2.5	55.763	<sup>a</sup> 3.253	52.0	0.51	L = 0	ENDF-B-5
36.979	2.5	55.505	<sup>a</sup> 2.995	52.0	0.51	L = 0	JENDL-1
37.01			<sup>a</sup> 2.995 ± 0.017 ± 0.075	52.0 ± 1.5	0.51	WGO= 0.86 ± 0.28	61SLAUGHTER+
36.979			<sup>a</sup> 3.253 ± 0.046				75OERRIEN+
36.99							76WESTON+
38.366	2.5	49.56	<sup>a</sup> 2.26	47.0	0.3	L = 0	JENDL-2
38.366	2.0		<sup>a</sup> 2.315	44.2	0.30		79UKNOL
38.39	2.5	49.67	<sup>a</sup> 2.37	47.0	0.3	L = 0	ENDF-B-5
38.366	2.5	49.56	<sup>a</sup> 2.26	47.0	0.3	L = 0	JENDL-1
38.39			<sup>a</sup> 2.26 ± 0.015 ± 0.044	47.0 ± 2.0	0.3	WGO= 0.46 ± 0.15	61SLAUGHTER+
38.366			<sup>a</sup> 2.37 ± 0.041				75OERRIEN+
38.39							76WESTON+
38.83	2.5	44.054	<sup>a</sup> 0.055	43.77	0.229	L = 0	JENDL-2
38.830	3.0		<sup>a</sup> 0.055	44.2	0.23		79UKNOL
38.83	2.5	44.054	<sup>a</sup> 0.055	43.77	0.229	L = 0	JENDL-1
38.83			<sup>a</sup> 0.055				75OERRIEN+
39.617	2.5	41.725	<sup>a</sup> 1.295	40.2	0.23	L = 0	JENDL-2
39.617	3.0		<sup>a</sup> 1.321	40.2	0.23		79UKNOL
39.65	2.5	41.776	<sup>a</sup> 1.346	40.2	0.23	L = 0	ENDF-B-5
39.617	2.5	41.725	<sup>a</sup> 1.295	40.2	0.23	L = 0	JENDL-1
39.71			<sup>a</sup> 1.295 ± 0.02 ± 0.02	40.2 ± 4.2	0.23	WGO= 0.34 ± 0.1	61SLAUGHTER+
39.617			<sup>a</sup> 1.346 ± 0.114				75OERRIEN+
39.65							76WESTON+
40.067	2.5	78.67	<sup>a</sup> 0.541	77.9	0.229	L = 0	JENDL-2
40.067	2.0		<sup>a</sup> 0.435	44.2	0.23		79UKNOL
40.05	2.5	78.456	<sup>a</sup> 0.328	77.9	0.227	L = 0	ENDF-B-5
40.067	2.5	78.67	<sup>a</sup> 0.541	77.9	0.229	L = 0	JENDL-1
40.067			<sup>a</sup> 0.541 ± 0.04 ± 0.005	77.9 ± 20.1			75OERRIEN+
40.05			<sup>a</sup> 0.328 ± 0.102				76WESTON+
40.396	2.5	67.177	<sup>a</sup> 0.948	66.0	0.229	L = 0	JENDL-2
40.396	3.0		<sup>a</sup> 1.099	44.2	0.23		79UKNOL
40.37	2.5	67.477	<sup>a</sup> 1.25	66.0	0.227	L = 0	ENDF-B-5
40.396	2.5	67.177	<sup>a</sup> 0.948	66.0	0.229	L = 0	JENDL-1
40.42			<sup>a</sup> 0.948 ± 0.034 ± 0.012	66.0 ± 8.6		WGO= 0.28 ± 0.1	61SLAUGHTER+
40.396			<sup>a</sup> 1.25 ± 0.13				75OERRIEN+
40.37							76WESTON+
41.298	2.5	44.083	<sup>a</sup> 0.084	43.77	0.229	L = 0	JENDL-2
41.298	2.0		<sup>a</sup> 0.091	44.2	0.23		79UKNOL
41.34	2.5	44.124	<sup>a</sup> 9.699-2	43.8	0.227	L = 0	ENDF-B-5
41.298	2.5	44.083	<sup>a</sup> 0.084	43.77	0.229	L = 0	JENDL-1
41.298			<sup>a</sup> 0.084				75OERRIEN+
41.34			<sup>a</sup> 0.097 ± 0.081				76WESTON+
41.791	2.5	44.354	<sup>a</sup> 0.355	43.77	0.229	L = 0	JENDL-2
41.791	3.0		<sup>a</sup> 0.415	44.2	0.23		79UKNOL
41.84	2.5	44.502	<sup>a</sup> 0.475	43.8	0.227	L = 0	ENDF-B-5
41.791	2.5	44.354	<sup>a</sup> 0.355	43.77	0.229	L = 0	JENDL-1
41.71			<sup>a</sup> 0.355 ± 0.009 ± 0.003			WGO= 0.1 ± 0.1	61SLAUGHTER+
41.791			<sup>a</sup> 0.475 ± 0.095				75OERRIEN+
41.84							76WESTON+
42.13	2.5	44.149	<sup>a</sup> 0.15	43.77	0.229	L = 0	JENDL-2
42.130	2.0		<sup>a</sup> 0.137	44.2	0.23		79UKNOL
42.13	2.5	44.149	<sup>a</sup> 0.15	43.77	0.229	L = 0	JENDL-1
42.64			<sup>a</sup> 0.15			WGO= 1.8 ± 0.8	61SLAUGHTER+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
42.13			<sup>a</sup> 0.15 ± 0.009 ± 0.001				75DERRIEN+
43.294	2.5	19.034	<sup>a</sup> 0.805	18.0	0.229	L = 0	JENDL-2
43.294	3.0		<sup>a</sup> 0.733	44.2	0.23		79UKNOL
43.294	2.5	19.034	0.805	18.0	0.229	L = 0	JENDL-1
43.25			<sup>a</sup> 0.805 ± 0.033 ± 0.01	18.0 ± 8.9		WOO = 0.38 ± 0.18	61SLAUGHTER+ 75DERRIEN+
43.294							
43.42	2.5	45.29	<sup>a</sup> 1.263	43.8	0.227	L = 0	ENDF-B-5
43.42			1.263 ± 0.12				76WESTON+
43.574	2.5	37.011	<sup>a</sup> 0.582	36.2	0.229	L = 0	JENDL-2
43.574	2.0		<sup>a</sup> 0.530	44.2	0.23		79UKNOL
43.574	2.5	37.011	0.582	36.2	0.229	L = 0	JENDL-1
43.574			<sup>a</sup> 0.582 ± 0.035 ± 0.006	36.2 ± 13.6			75DERRIEN+
44.416	2.5	44.117	<sup>a</sup> 0.118	43.77	0.229	L = 0	JENDL-2
44.416	2.0		<sup>a</sup> 0.147	44.2	0.23		79UKNOL
44.5	2.5	44.203	0.176	43.8	0.227	L = 0	ENDF-B-5
44.416	2.5	44.117	<sup>a</sup> 0.118	43.77	0.229	L = 0	JENDL-1
44.416			<sup>a</sup> 0.118 ± 0.009				75DERRIEN+
44.5			<sup>a</sup> 0.176 ± 0.09				76WESTON+
44.921	2.5	44.073	<sup>a</sup> 7.399-2	43.77	0.229	L = 0	JENDL-2
44.921	3.0		<sup>a</sup> 0.090	44.2	0.23		79UKNOL
44.92	2.5	44.132	0.105	43.8	0.227	L = 0	ENDF-B-5
44.921	2.5	44.073	<sup>a</sup> 7.399-2	43.77	0.229	L = 0	JENDL-1
44.921			<sup>a</sup> 0.074 ± 0.009				75DERRIEN+
44.92			<sup>a</sup> 0.105 ± 0.091				76WESTON+
46.073	2.5	44.694	<sup>a</sup> 0.665	43.8	0.229	L = 0	JENDL-2
45.073	3.0		<sup>a</sup> 0.691	43.8	0.23		79UKNOL
46.11	2.5	44.743	0.716	43.8	0.227	L = 0	ENDF-B-5
46.073	2.5	44.694	<sup>a</sup> 0.665	43.8	0.229	L = 0	JENDL-1
46.073			<sup>a</sup> 0.665 ± 0.018 ± 0.007	43.8 ± 8.6			75DERRIEN+
46.11			<sup>a</sup> 0.716 ± 0.12				76WESTON+
46.566	2.5	23.4	<sup>a</sup> 0.371	22.8	0.229	L = 0	JENDL-2
46.566	2.0		<sup>a</sup> 0.415	44.2	0.23		79UKNOL
46.56	2.5	23.486	0.459	22.8	0.227	L = 0	ENDF-B-5
46.566	2.5	23.4	<sup>a</sup> 0.371	22.8	0.229	L = 0	JENDL-1
46.566			<sup>a</sup> 0.371 ± 0.018 ± 0.003	22.8 ± 14.0			75DERRIEN+
46.56			<sup>a</sup> 0.459 ± 0.116				76WESTON+
47.535	2.5	42.882	<sup>a</sup> 1.053	41.6	0.229	L = 0	JENDL-2
47.535	3.0		<sup>a</sup> 1.107	41.6	0.23		79UKNOL
47.59	2.5	42.988	1.161	41.6	0.227	L = 0	ENDF-B-5
47.535	2.5	42.882	<sup>a</sup> 1.053	41.6	0.229	L = 0	JENDL-1
47.535			<sup>a</sup> 1.053 ± 0.017 ± 0.012	41.6 ± 5.2			75DERRIEN+
47.59			<sup>a</sup> 1.161 ± 0.13				76WESTON+
48.765	2.5	40.942	<sup>a</sup> 0.713	40.0	0.229	L = 0	JENDL-2
48.765	3.0		<sup>a</sup> 0.755	40.0	0.23		79UKNOL
48.77	2.5	41.024	0.797	40.0	0.227	L = 0	ENDF-B-5
48.765	2.5	40.942	<sup>a</sup> 0.713	40.0	0.229	L = 0	JENDL-1
48.765			<sup>a</sup> 0.713 ± 0.018 ± 0.007	40.0 ± 8.0			75DERRIEN+
48.77			<sup>a</sup> 0.797 ± 0.13				76WESTON+
49.332	2.5	44.219	<sup>a</sup> 0.22	43.77	0.229	L = 0	JENDL-2
49.332	2.0		<sup>a</sup> 0.260	44.2	0.23		79UKNOL
49.38	2.5	44.327	0.3	43.8	0.227	L = 0	ENDF-B-5
49.332	2.5	44.219	<sup>a</sup> 0.22	43.77	0.229	L = 0	JENDL-1
49.332			<sup>a</sup> 0.22 ± 0.011 ± 0.002				75DERRIEN+
49.38			<sup>a</sup> 0.3 ± 0.111				76WESTON+
50.278	2.5	54.471	<sup>a</sup> 2.442	51.8	0.229	L = 0	JENDL-2
50.278	3.0		<sup>a</sup> 2.442	44.2	0.23		79UKNOL
50.278	2.5	54.471	<sup>a</sup> 2.442	51.8	0.229	L = 0	JENDL-1
50.278			<sup>a</sup> 2.442 ± 0.022 ± 0.042	51.8 ± 3.0			75DERRIEN+
50.847	2.5	36.422	<sup>a</sup> 0.393	35.8	0.229	L = 0	JENDL-2
50.847	2.0		<sup>a</sup> 0.393	44.2	0.23		79UKNOL
50.847	2.5	36.422	<sup>a</sup> 0.393	35.8	0.229	L = 0	JENDL-1
50.847			<sup>a</sup> 0.393 ± 0.02 ± 0.003	35.8 ± 16.4			75DERRIEN+
51.984	2.5	51.814	<sup>a</sup> 1.385	50.2	0.229	L = 0	JENDL-2
51.984	2.0		<sup>a</sup> 1.385	44.2	0.23		79UKNOL

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
51.984 51.984	2.5	51.814	P 1.385 1.385 ± 0.021 ± 0.017	50.2 50.2 ± 4.9	0.229	L = 0	JENDL-1 75DERRIEN+
53.014 53.014 53.014 53.014	2.5 3.0 2.5	44.164 44.164	P 0.165 0.165 0.165 0.165 ± 0.012 ± 0.001	43.77 44.2 43.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
53.493 53.493 53.493 53.493	2.5 2.0 2.5	44.183 44.183	P 0.184 0.174 0.184 0.184 ± 0.012 ± 0.001	43.77 44.2 43.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
54.407 54.407 54.407 54.407	2.5 3.0 2.5	44.072 44.072	P 0.073 0.730 0.073 0.073 ± 0.012	43.77 44.2 43.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
54.99 54.990 54.99 54.99	2.5 2.0 2.5	110.172 110.172	P 1.443 1.361 1.443 1.443 ± 0.025 ± 0.002	108.5 44.2 108.5 108.5 ± 6.9	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
55.595 55.595 55.595 55.595	2.5 2.0 2.5	144.212 144.212	P 0.213 0.201 0.213 0.213 ± 0.014 ± 0.002	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
55.945 55.945 55.945 55.945	2.5 3.0 2.5	145.431 145.431	P 1.432 1.432 1.432 1.432 ± 0.034 ± 0.018	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
56.158 56.158 56.158 56.158	2.5 3.0 2.5	144.948 144.948	P 0.949 0.949 0.949 0.949 ± 0.034 ± 0.01	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
57.372 57.372 57.372 57.372	2.5 2.0 2.5	185.375 185.375	P 4.146 0.391 4.146 4.146 ± 0.029 ± 0.082	181.0 44.2 181.0 81.0 ± 2.7	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
59.066 59.066 59.066 59.066	2.5 2.0 2.5	108.018 108.018	P 0.589 0.556 0.589 0.589 ± 0.028 ± 0.004	107.2 44.2 107.2 107.2 ± 19.4	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
60.045 60.045 60.045 60.045	2.5 3.0 2.5	144.284 144.284	P 0.285 0.285 0.285 0.285 ± 0.017	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
60.381 60.381 60.381 60.381	2.5 2.0 2.5	144.139 144.139	P 0.14 0.132 0.14 0.14 ± 0.017 ± 0.001	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
61.258 61.258 61.258 61.258	2.5 3.0 2.5	176.601 176.601	P 1.672 1.322 1.672 1.672 ± 0.044 ± 0.017	174.7 44.2 174.7 74.7 ± 9.6	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
61.613 61.613 61.613 61.613	2.5 3.0 2.5	144.433 144.433	P 0.434 0.434 0.434 0.434 ± 0.025 ± 0.004	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
62.549 62.549 62.549 62.549	2.5 2.0 2.5	144.221 144.221	P 0.222 0.209 0.222 0.222 ± 0.016 ± 0.001	143.77 44.2 143.77	0.229 0.23 0.229	L = 0	JENDL-2 79UKNOL JENDL-1 75DERRIEN+
63.507	2.5	144.198	0.199	143.77	0.229	L = 0	JENDL-2

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
63.507	3.0			0.199	44.2	0.23	
63.507	2.5	144.198		0.199	143.77	0.229	L = 0
63.507				0.199 ± 0.018 ± 0.001			79UKNOL JENDL-1 75DERRIEN+
64.039	2.5	151.371		4.042	147.1	0.229	L = 0
64.039	2.0			0.381	44.2	0.23	
64.039	2.5	151.371		4.042	147.1	0.229	L = 0
64.039				4.042 ± 0.043 ± 0.074	47.1 ± 4.6		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
64.539	2.5	140.483		1.954	138.3	0.229	L = 0
64.539	3.0			1.954	44.2	0.23	
64.539	2.5	140.483		1.954	138.3	0.229	L = 0
64.539				1.954 ± 0.052 ± 0.025	38.3 ± 9.2		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
65.164	2.5	155.116		5.187	149.7	0.229	L = 0
65.164	2.0			0.489	44.2	0.23	
65.164	2.5	155.116		5.187	149.7	0.229	L = 0
65.164				5.187 ± 0.048 ± 0.109	49.7 ± 3.7		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
65.733	2.5	120.119		1.09	118.8	0.229	L = 0
65.733	3.0			1.09	44.2	0.23	
65.733	2.5	120.119		1.09	118.8	0.229	L = 0
65.733				1.09 ± 0.046 ± 0.01	18.8 ± 14.0		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
66.314	2.5	176.465		1.036	175.2	0.229	L = 0
66.314	2.0			0.977	44.2	0.23	
66.314	2.5	176.465		1.036	175.2	0.229	L = 0
66.314				1.036 ± 0.052 ± 0.01	75.2 ± 19.6		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
66.874	2.5	174.234		2.105	171.9	0.229	L = 0
66.874	3.0			2.105	44.2	0.23	
66.874	2.5	174.234		2.105	171.9	0.229	L = 0
66.874				2.105 ± 0.044 ± 0.025	71.9 ± 8.1		JENDL-2 79UKNOL JENDL-1 75DERRIEN+
68.525	2.5	44.43		0.431	43.77	0.229	L = 0
68.525	2.0			0.407	44.2	0.23	
68.525	2.5	44.43		0.431	43.77	0.229	L = 0
68.525				0.431 ± 0.019 ± 0.009			JENDL-2 79UKNOL JENDL-1 75DERRIEN+
69.585	2.5	45.115		1.116	43.77	0.229	L = 0
69.585	3.0			1.116	44.2	0.23	
69.585	2.5	45.115		1.116	43.77	0.229	L = 0
69.585				1.116 ± 0.051 ± 0.013			JENDL-2 79UKNOL JENDL-1 75DERRIEN+
69.824	2.5	46.66		2.661	43.77	0.229	L = 0
69.824	2.0			0.251	44.2	0.23	
69.824	2.5	46.66		2.661	43.77	0.229	L = 0
69.824				2.661 ± 0.053 ± 0.04			JENDL-2 79UKNOL JENDL-1 75DERRIEN+
71.253	2.5	44.582		0.583	43.77	0.229	L = 0
71.253	3.0			0.770	44.2	0.23	
71.253	2.5	44.582		0.583	43.77	0.229	L = 0
71.253				0.583 ± 0.085 ± 0.006			JENDL-2 79UKNOL JENDL-1 75DERRIEN+
71.463	2.5	45.108		1.109	43.77	0.229	L = 0
71.463	2.5	45.108		1.109	43.77	0.229	L = 0
71.463				1.109 ± 0.079 ± 0.011			JENDL-2 JENDL-1 75DERRIEN+
71.841	2.5	45.033		1.034	43.77	0.229	L = 0
71.841	2.5	45.033		1.034	43.77	0.229	L = 0
71.841				1.034 ± 0.025 ± 0.01			JENDL-2 JENDL-1 75DERRIEN+
72.276	2.5	44.225		0.226	43.77	0.229	L = 0
72.276	2.5	44.225		0.226	43.77	0.229	L = 0
72.276				0.226 ± 0.021 ± 0.001			JENDL-2 JENDL-1 75DERRIEN+
74.969	2.5	44.48		0.481	43.77	0.229	L = 0
74.969	2.5	44.48		0.481	43.77	0.229	L = 0
74.969				0.481 ± 0.02 ± 0.004			JENDL-2 JENDL-1 75DERRIEN+
75.715	2.5	44.377		0.378	43.77	0.229	L = 0
75.715	2.5	44.377		0.378	43.77	0.229	L = 0
75.715							JENDL-2 JENDL-1

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
75.715			<sup>a</sup> 0.378 ± 0.034 ± 0.003				750ERRIEN+
75.943	2.5	44.514	0.515	43.77	0.229	L = 0	JENDL-2
75.943	2.5	44.514	0.515	43.77	0.229	L = 0	JENDL-1
75.943			<sup>a</sup> 0.515 ± 0.027 ± 0.003				750ERRIEN+
76.779	2.5	44.108	0.109	43.77	0.229	L = 0	JENDL-2
76.779	2.5	44.108	0.109	43.77	0.229	L = 0	JENDL-1
76.779			<sup>a</sup> 0.109				750ERRIEN+
78.191	2.5	12.015	1.486	10.3	0.229	L = 0	JENDL-2
78.191	2.5	12.015	1.486	10.3	0.229	L = 0	JENDL-1
78.191			<sup>a</sup> 1.486 ± 0.099 ± 0.015	10.3 ± 17.4			750ERRIEN+
79.551	2.5	62.208	1.179	50.8	0.229	L = 0	JENDL-2
79.551	2.5	62.208	1.179	50.8	0.229	L = 0	JENDL-1
79.551			<sup>a</sup> 1.179 ± 0.105 ± 0.011	50.8 ± 26.0			750ERRIEN+
80.05	2.5	44.545	0.546	43.77	0.229	L = 0	JENDL-2
80.05	2.5	44.545	0.546	43.77	0.229	L = 0	JENDL-1
80.05			<sup>a</sup> 0.546 ± 0.029 ± 0.004				750ERRIEN+
80.393	2.5	44.587	0.588	43.77	0.229	L = 0	JENDL-2
80.393	2.5	44.587	0.588	43.77	0.229	L = 0	JENDL-1
80.393			<sup>a</sup> 0.588 ± 0.029 ± 0.004				750ERRIEN+
81.077	2.5	44.105	0.106	43.77	0.229	L = 0	JENDL-2
81.077	2.5	44.105	0.106	43.77	0.229	L = 0	JENDL-1
81.077			<sup>a</sup> 0.106 ± 0.039				750ERRIEN+
81.458	2.5	105.871	1.042	104.5	0.229	L = 0	JENDL-2
81.458	2.5	105.871	1.042	104.5	0.229	L = 0	JENDL-1
81.458			<sup>a</sup> 1.042 ± 0.081 ± 0.008	104.5 ± 35.0			750ERRIEN+
82.089	2.5	28.383	1.454	26.7	0.229	L = 0	JENDL-2
82.089	2.5	28.383	1.454	26.7	0.229	L = 0	JENDL-1
82.089			<sup>a</sup> 1.454 ± 0.054 ± 0.015	26.7 ± 14.0			750ERRIEN+
82.9	2.5	44.438	0.439	43.77	0.229	L = 0	JENDL-2
82.9	2.5	44.438	0.439	43.77	0.229	L = 0	JENDL-1
82.9			<sup>a</sup> 0.439 ± 0.024 ± 0.003				750ERRIEN+
83.37	2.5	44.43	0.431	43.77	0.229	L = 0	JENDL-2
83.37	2.5	44.43	0.431	43.77	0.229	L = 0	JENDL-1
83.37			<sup>a</sup> 0.431 ± 0.024 ± 0.003				750ERRIEN+
84.006	2.5	39.785	1.456	38.1	0.229	L = 0	JENDL-2
84.006	2.5	39.785	1.456	38.1	0.229	L = 0	JENDL-1
84.006			<sup>a</sup> 1.456 ± 0.027 ± 0.015	38.1 ± 8.7			750ERRIEN+
84.685	2.5	46.14	2.141	43.77	0.229	L = 0	JENDL-2
84.685	2.5	46.14	2.141	43.77	0.229	L = 0	JENDL-1
84.685			<sup>a</sup> 2.141 ± 0.044 ± 0.022				750ERRIEN+
86.61	2.5	44.224	0.225	43.77	0.229	L = 0	JENDL-2
86.61	2.5	44.224	0.225	43.77	0.229	L = 0	JENDL-1
86.61			<sup>a</sup> 0.225 ± 0.025 ± 0.001				750ERRIEN+
87.481	2.5	44.125	0.126	43.77	0.229	L = 0	JENDL-2
87.481	2.5	44.125	0.126	43.77	0.229	L = 0	JENDL-1
87.481			<sup>a</sup> 0.126 ± 0.029				750ERRIEN+
87.984	2.5	74.847	3.918	70.7	0.229	L = 0	JENDL-2
87.984	2.5	74.847	3.918	70.7	0.229	L = 0	JENDL-1
87.984			<sup>a</sup> 3.918 ± 0.053 ± 0.055	70.7 ± 6.3			750ERRIEN+
89.297	2.5	44.331	0.332	43.77	0.229	L = 0	JENDL-2
89.297	2.5	44.331	0.332	43.77	0.229	L = 0	JENDL-1

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
89.297			<sup>a</sup> 0.332 ± 0.061 ± 0.002				750ERRIEN+
89.602	2.5	89.293	2.364	86.7	0.229	L = 0	JENDL-2
89.602	2.5	89.293	2.364	86.7	0.229	L = 0	JENDL-1
89.602			<sup>a</sup> 2.364 ± 0.093 ± 0.024	86.7 ± 16.1			750ERRIEN+
93.412	2.5	60.225	6.296	53.7	0.229	L = 0	JENDL-2
93.412	2.5	60.225	6.296	53.7	0.229	L = 0	JENDL-1
93.412			<sup>a</sup> 6.296 ± 0.055 ± 0.115	53.7 ± 4.0			750ERRIEN+
94.61	2.5	44.753	0.754	43.77	0.229	L = 0	JENDL-2
94.61	2.5	44.753	0.754	43.77	0.229	L = 0	JENDL-1
94.61			<sup>a</sup> 0.754 ± 0.03 ± 0.006				750ERRIEN+
95.285	2.5	44.359	0.36	43.77	0.229	L = 0	JENDL-2
95.285	2.5	44.359	0.36	43.77	0.229	L = 0	JENDL-1
95.285			<sup>a</sup> 0.36 ± 0.035 ± 0.003				750ERRIEN+
95.686	2.5	46.862	2.863	43.77	0.229	L = 0	JENDL-2
95.686	2.5	46.862	2.863	43.77	0.229	L = 0	JENDL-1
95.686			<sup>a</sup> 2.863 ± 0.041 ± 0.034				750ERRIEN+
96.1	2.5	46.905	2.906	43.77	0.229	L = 0	JENDL-2
96.1	2.5	46.905	2.906	43.77	0.229	L = 0	JENDL-1
96.1			<sup>a</sup> 2.906 ± 0.048 ± 0.037				750ERRIEN+
96.46	2.5	46.833	2.834	43.77	0.229	L = 0	JENDL-2
96.46	2.5	46.833	2.834	43.77	0.229	L = 0	JENDL-1
96.46			<sup>a</sup> 2.834 ± 0.052 ± 0.035				750ERRIEN+
97.423	2.5	44.276	0.277	43.77	0.229	L = 0	JENDL-2
97.423	2.5	44.276	0.277	43.77	0.229	L = 0	JENDL-1
97.423			<sup>a</sup> 0.277 ± 0.03 ± 0.001				750ERRIEN+
98.356	2.5	44.264	0.265	43.77	0.229	L = 0	JENDL-2
98.356	2.5	44.264	0.265	43.77	0.229	L = 0	JENDL-1
98.356			<sup>a</sup> 0.265 ± 0.03 ± 0.001				750ERRIEN+
100.156	2.5	45.074	1.075	43.77	0.229	L = 0	JENDL-2
100.156	2.5	45.074	1.075	43.77	0.229	L = 0	JENDL-1
100.156			<sup>a</sup> 1.075 ± 0.033 ± 0.009				750ERRIEN+
101.598	2.5	54.154	2.825	51.1	0.229	L = 0	JENDL-2
101.598	2.5	54.154	2.825	51.1	0.229	L = 0	JENDL-1
101.598			<sup>a</sup> 2.825 ± 0.058 ± 0.028	51.1 ± 10.0			750ERRIEN+
102.555	2.5	44.247	0.248	43.77	0.229	L = 0	JENDL-2
102.555	2.5	44.247	0.248	43.77	0.229	L = 0	JENDL-1
102.555			<sup>a</sup> 0.248 ± 0.035 ± 0.001				750ERRIEN+
103.203	2.5	47.409	6.98	40.2	0.229	L = 0	JENDL-2
103.203	2.5	47.409	6.98	40.2	0.229	L = 0	JENDL-1
103.203			<sup>a</sup> 6.98 ± 0.063 ± 0.12	40.2 ± 4.5			750ERRIEN+
104.788	2.5	42.625	2.196	40.2	0.229	L = 0	JENDL-2
104.788	2.5	42.625	2.196	40.2	0.229	L = 0	JENDL-1
104.788			<sup>a</sup> 2.196 ± 0.059 ± 0.022	40.2 ± 12.8			750ERRIEN+
106.148	2.5	50.823	6.824	43.77	0.229	L = 0	JENDL-2
106.148	2.5	50.823	6.824	43.77	0.229	L = 0	JENDL-1
106.148			<sup>a</sup> 6.824 ± 0.185 ± 0.136				750ERRIEN+
106.396	2.5	47.351	3.352	43.77	0.229	L = 0	JENDL-2
106.396	2.5	47.351	3.352	43.77	0.229	L = 0	JENDL-1
106.396			<sup>a</sup> 3.352 ± 0.18 ± 0.054				750ERRIEN+
107.615	2.5	45.924	1.925	43.77	0.229	L = 0	JENDL-2
107.615	2.5	45.924	1.925	43.77	0.229	L = 0	JENDL-1
107.615			<sup>a</sup> 1.925 ± 0.038 ± 0.019				750ERRIEN+

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
109.824	2.5	47.255	3.256	43.77	0.229	L = 0	JENDL-2
109.824	2.5	47.255	3.256	43.77	0.229	L = 0	JENDL-1
109.824			<sup>a</sup> 3.256 ± 0.144 ± 0.042				75DERRIEN+
110.093	2.5	47.336	3.337	43.77	0.229	L = 0	JENDL-2
110.093	2.5	47.336	3.337	43.77	0.229	L = 0	JENDL-1
110.093			<sup>a</sup> 3.337 ± 0.144 ± 0.043				75DERRIEN+
111.17	2.5	44.373	0.374	43.77	0.229	L = 0	JENDL-2
111.17	2.5	44.373	0.374	43.77	0.229	L = 0	JENDL-1
111.17			<sup>a</sup> 0.374 ± 0.059 ± 0.003				75DERRIEN+
111.627	2.5	99.729	5.2	94.3	0.229	L = 0	JENDL-2
111.627	2.5	99.729	5.2	94.3	0.229	L = 0	JENDL-1
111.627			<sup>a</sup> 5.2 ± 0.102 ± 0.068	94.3 ± 10.4			75DERRIEN+
112.752	2.5	44.413	0.414	43.77	0.229	L = 0	JENDL-2
112.752	2.5	44.413	0.414	43.77	0.229	L = 0	JENDL-1
112.752			<sup>a</sup> 0.414 ± 0.042 ± 0.003				75DERRIEN+
113.28	2.5	44.299	0.3	43.77	0.229	L = 0	JENDL-2
113.28	2.5	44.299	0.3	43.77	0.229	L = 0	JENDL-1
113.28			<sup>a</sup> 0.3				75DERRIEN+
113.907	2.5	79.57	1.741	77.5	0.229	L = 0	JENDL-2
113.907	2.5	79.57	1.741	77.5	0.229	L = 0	JENDL-1
113.907			<sup>a</sup> 1.741 ± 0.078 ± 0.014	77.5 ± 23.0			75DERRIEN+
115.084	2.5	81.329	1.8	79.3	0.229	L = 0	JENDL-2
115.084	2.5	81.329	1.8	79.3	0.229	L = 0	JENDL-1
115.084			<sup>a</sup> 1.8 ± 0.081 ± 0.014	79.3 ± 23.8			75DERRIEN+
115.777	2.5	44.7	0.701	43.77	0.229	L = 0	JENDL-2
115.777	2.5	44.7	0.701	43.77	0.229	L = 0	JENDL-1
115.777			<sup>a</sup> 0.701 ± 0.049 ± 0.004				75DERRIEN+
116.396	2.5	44.852	2.623	42.0	0.229	L = 0	JENDL-2
116.396	2.5	44.852	2.623	42.0	0.229	L = 0	JENDL-1
116.396			<sup>a</sup> 2.623 ± 0.081 ± 0.023	42.0 ± 15.6			75DERRIEN+
117.656	2.5	44.029	0.03	43.77	0.229	L = 0	JENDL-2
117.656	2.5	44.029	0.03	43.77	0.229	L = 0	JENDL-1
117.656			<sup>a</sup> 0.03				75DERRIEN+
118.522	2.5	44.805	0.806	43.77	0.229	L = 0	JENDL-2
118.522	2.5	44.805	0.806	43.77	0.229	L = 0	JENDL-1
118.522			<sup>a</sup> 0.806 ± 0.046 ± 0.005				75DERRIEN+
119.823	2.5	46.236	2.237	43.77	0.229	L = 0	JENDL-2
119.823	2.5	46.236	2.237	43.77	0.229	L = 0	JENDL-1
119.823			<sup>a</sup> 2.237 ± 0.131 ± 0.022				75DERRIEN+
120.123	2.5	45.929	1.93	43.77	0.229	L = 0	JENDL-2
120.123	2.5	45.929	1.93	43.77	0.229	L = 0	JENDL-1
120.123			<sup>a</sup> 1.93 ± 0.131 ± 0.026				75DERRIEN+
121.962	2.5	40.345	3.216	36.9	0.229	L = 0	JENDL-2
121.962	2.5	40.345	3.216	36.9	0.229	L = 0	JENDL-1
121.962			<sup>a</sup> 3.216 ± 0.138 ± 0.033	36.9 ± 19.0			75DERRIEN+
122.662	2.5	68.322	3.893	64.2	0.229	L = 0	JENDL-2
122.662	2.5	68.322	3.893	64.2	0.229	L = 0	JENDL-1
122.662			<sup>a</sup> 3.893 ± 0.222 ± 0.04	64.2 ± 27.6			75DERRIEN+
123.283	2.5	60.063	3.534	56.3	0.229	L = 0	JENDL-2
123.283	2.5	60.063	3.534	56.3	0.229	L = 0	JENDL-1
123.283			<sup>a</sup> 3.534 ± 0.166 ± 0.035	56.3 ± 20.5			75DERRIEN+
124.946	2.5	45.639	1.64	43.77	0.229	L = 0	JENDL-2
124.946	2.5	45.639	1.64	43.77	0.229	L = 0	JENDL-1
124.946			<sup>a</sup> 1.64 ± 0.054 ± 0.013				75DERRIEN+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
125.819	2.5	45.034	1.035	43.77	0.229	L = 0	JENDL-2
125.819	2.5	45.034	1.035	43.77	0.229	L = 0	JENDL-1
125.819			<sup>a</sup> 1.035 ± 0.055 ± 0.007				75DERRIEN+
126.441	2.5	46.034	2.035	43.77	0.229	L = 0	JENDL-2
126.441	2.5	46.034	2.035	43.77	0.229	L = 0	JENDL-1
126.441			<sup>a</sup> 2.035 ± 0.057 ± 0.017				75DERRIEN+
127.415	2.5	44.249	0.25	43.77	0.229	L = 0	JENDL-2
127.415	2.5	44.249	0.25	43.77	0.229	L = 0	JENDL-1
127.415			<sup>a</sup> 0.25				75DERRIEN+
127.994	2.5	45.687	1.688	43.77	0.229	L = 0	JENDL-2
127.994	2.5	45.687	1.688	43.77	0.229	L = 0	JENDL-1
127.994			<sup>a</sup> 1.688 ± 0.056 ± 0.013				75DERRIEN+
129.677	2.5	44.224	0.225	43.77	0.229	L = 0	JENDL-2
129.677	2.5	44.224	0.225	43.77	0.229	L = 0	JENDL-1
129.677			<sup>a</sup> 0.225 ± 0.002				75DERRIEN+
130.72	2.5	45.357	1.358	43.77	0.229	L = 0	JENDL-2
130.72	2.5	45.357	1.358	43.77	0.229	L = 0	JENDL-1
130.72			<sup>a</sup> 1.358 ± 0.072 ± 0.009				75DERRIEN+
131.319	2.5	59.35	3.121	56.0	0.229	L = 0	JENDL-2
131.319	2.5	59.35	3.121	56.0	0.229	L = 0	JENDL-1
131.319			<sup>a</sup> 3.121 ± 0.132 ± 0.032	56.0 ± 23.2			75DERRIEN+
132.18	2.5	44.874	0.875	43.77	0.229	L = 0	JENDL-2
132.18	2.5	44.874	0.875	43.77	0.229	L = 0	JENDL-1
132.18			<sup>a</sup> 0.875 ± 0.062 ± 0.006				75DERRIEN+
132.754	2.5	45.179	1.18	43.77	0.229	L = 0	JENDL-2
132.754	2.5	45.179	1.18	43.77	0.229	L = 0	JENDL-1
132.754			<sup>a</sup> 1.18 ± 0.059 ± 0.008				75DERRIEN+
133.657	2.5	54.113	1.784	52.1	0.229	L = 0	JENDL-2
133.657	2.5	54.113	1.784	52.1	0.229	L = 0	JENDL-1
133.657			<sup>a</sup> 1.784 ± 0.1 ± 0.014	52.1 ± 30.5			75DERRIEN+
134.867	2.5	52.014	8.015	43.77	0.229	L = 0	JENDL-2
134.867	2.5	52.014	8.015	43.77	0.229	L = 0	JENDL-1
134.867			<sup>a</sup> 8.015 ± 0.317 ± 0.104				75DERRIEN+
135.449	2.5	48.13	4.131	43.77	0.229	L = 0	JENDL-2
135.449	2.5	48.13	4.131	43.77	0.229	L = 0	JENDL-1
135.449			<sup>a</sup> 4.131 ± 0.348 ± 0.042				75DERRIEN+
136.435	2.5	51.886	5.757	45.7	0.229	L = 0	JENDL-2
136.435	2.5	51.886	5.757	45.7	0.229	L = 0	JENDL-1
136.435			<sup>a</sup> 5.757 ± 0.145 ± 0.068	45.7 ± 14.1			75DERRIEN+
137.103	2.5	45.293	1.294	43.77	0.229	L = 0	JENDL-2
137.103	2.5	45.293	1.294	43.77	0.229	L = 0	JENDL-1
137.103			<sup>a</sup> 1.294 ± 0.077 ± 0.009				75DERRIEN+
137.613	2.5	45.627	1.628	43.77	0.229	L = 0	JENDL-2
137.613	2.5	45.627	1.628	43.77	0.229	L = 0	JENDL-1
137.613			<sup>a</sup> 1.628 ± 0.064 ± 0.012				75DERRIEN+
138.774	2.5	44.715	3.886	40.6	0.229	L = 0	JENDL-2
138.774	2.5	44.715	3.886	40.6	0.229	L = 0	JENDL-1
138.774			<sup>a</sup> 3.886 ± 0.108 ± 0.04	40.6 ± 15.4			75DERRIEN+
139.963	2.5	45.252	1.253	43.77	0.229	L = 0	JENDL-2
139.963	2.5	45.252	1.253	43.77	0.229	L = 0	JENDL-1
139.963			<sup>a</sup> 1.253 ± 0.071 ± 0.008				75DERRIEN+
140.498	2.5	46.435	2.436	43.77	0.229	L = 0	JENDL-2
140.498	2.5	46.435	2.436	43.77	0.229	L = 0	JENDL-1
140.498			<sup>a</sup> 2.436 ± 0.073 ± 0.021				75DERRIEN+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GRMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
141.31	2.5	48.228	4.229	43.77	0.229	L = 0	JENDL-2
141.31	2.5	48.228	4.229	43.77	0.229	L = 0	JENDL-1
141.31			* 4.229± 0.108 ± 0.055				75DERRIEN+
141.52	2.5	47.255	3.256	43.77	0.229	L = 0	JENDL-2
141.52	2.5	47.255	3.256	43.77	0.229	L = 0	JENDL-1
141.52			* 3.256± 0.106 ± 0.039				75DERRIEN+
143.036	2.5	44.33	0.331	43.77	0.229	L = 0	JENDL-2
143.036	2.5	44.33	0.331	43.77	0.229	L = 0	JENDL-1
143.036			* 0.331± 0.066 ± 0.002				75DERRIEN+
144.869	2.5	45.42	1.421	43.77	0.229	L = 0	JENDL-2
144.869	2.5	45.42	1.421	43.77	0.229	L = 0	JENDL-1
144.869			* 1.421± 0.068 ± 0.01				75DERRIEN+
145.438	2.5	44.349	0.35	43.77	0.229	L = 0	JENDL-2
145.438	2.5	44.349	0.35	43.77	0.229	L = 0	JENDL-1
145.438			* 0.35				75DERRIEN+
146.436	2.5	45.738	1.739	43.77	0.229	L = 0	JENDL-2
146.436	2.5	45.738	1.739	43.77	0.229	L = 0	JENDL-1
146.436			* 1.739± 0.07 ± 0.012				75DERRIEN+
148.031	2.5	56.301	12.302	43.77	0.229	L = 0	JENDL-2
148.031	2.5	56.301	12.302	43.77	0.229	L = 0	JENDL-1
148.031			* 12.302± 0.138 ± 0.198				75DERRIEN+
149.141	2.5	47.925	3.926	43.77	0.229	L = 0	JENDL-2
149.141	2.5	47.925	3.926	43.77	0.229	L = 0	JENDL-1
149.141			* 3.926± 0.076 ± 0.039				75DERRIEN+

\* A denotes  $2g\Gamma_n^0$ 

\*\* L : orbital angular momentum

GFS:  $\sigma\Gamma_f$ WGO:  $2g\Gamma_n^0$

Table 2 Energy dependence of unresolved resonance parameters  
and the calculated cross sections

The energy dependence of the parameters are given as the ratio to the initial guess values listed below:

$$S_0 = 0.967 \times 10^{-4}, \quad S_1 = 2.27 \times 10^{-4}$$

$$\Gamma_f = 0.23 \text{ meV}, \quad D_{\text{obs}} = 0.432 \text{ eV}.$$

$$\text{Fixed parameters: } R = 9.37 \text{ fm} \quad \Gamma_\gamma = 43.77 \text{ meV}$$

$E_n$ (keV)	$S_0, S_1$	$\Gamma_f$	D	$\sigma_{n,T}$ (barns)	$\sigma_{n,\gamma}$ (barns)	$\sigma_{n,f}$ (barns)
0.15	1.00	2.16	1.00	43.8	30.4	0.34
0.175	0.81	2.64	"	35.6	22.9	0.31
0.25	0.96	1.94	"	35.4	22.3	0.22
0.35	1.02	2.64	"	33.0	19.7	0.27
0.45	1.06	1.85	"	31.1	17.9	0.171
0.55	0.91	2.00	"	26.7	14.0	0.145
0.7	1.04	2.01	"	26.8	13.8	0.143
0.9	0.89	1.56	"	23.0	10.5	0.086
1.1	0.94	2.55	"	22.5	9.87	0.129
1.25	1.04	1.71	"	23.0	10.15	0.090
1.5	1.04	1.54	"	21.9	9.19	0.073
1.75	1.00	1.27	"	20.8	8.23	0.054
2.0	1.03	1.11	"	20.5	7.85	0.045
2.25	1.05	1.55	"	20.1	7.48	0.060
3.0	1.07	1.70	0.99	19.2	6.57	0.058
3.5	1.03	1.37	"	18.3	5.88	0.042
4.5	1.00	1.56	"	17.3	5.06	0.041
5.0	1.04	1.90	"	17.3	4.97	0.049
6.0	1.06	1.93	"	16.9	4.64	0.046
7.0	1.01	1.71	"	16.3	4.20	0.037
8.0	0.96	2.55	"	15.7	3.79	0.050
9.0	0.96	5.08	0.98	15.5	3.58	0.092
10.0	0.98	1.90	"	15.4	3.54	0.035
12.5	1.00	1.27	"	15.1	3.33	0.022
17.5	1.07	0.94	0.97	14.8	3.15	0.015
20.0	0.92	1.05	0.96	14.1	2.70	0.015
30.0	0.98	1.07	0.95	13.8	2.53	0.014

Table 3 Resonance integrals for  $^{241}\text{Am}$ 

	fission (barns)	capture (barns)
<b>Calculated</b>		
JENDL-2	14.7	1299
JENDL-1	14.8	1568
ENDF/B-V	13.7	1422
Lynn et al. <sup>22)</sup>	11.1	1499
<b>Experimental</b>		
67 Bak <sup>25)</sup>	21 $\pm$ 2	2400 $\pm$ 200
69 Schuman <sup>26)</sup>		1100 $\pm$ 72
70 Hellstrand <sup>27)</sup>		1450*
73 Harbour <sup>28)</sup>		1538 $\pm$ 118
75 Zhuravlev <sup>29)</sup>	27.7 $\pm$ 1.6	
76 Gavrilov <sup>30)</sup>	22.5 $\pm$ 1.7	

\* calculated by assuming  $\sigma_{(n,\gamma)} = 600$  barns

Table 4 Level scheme, level density parameters  
and Q-values for  $^{241}\text{Am}$

a) Level scheme of  $^{241}\text{Am}$

No.	Energy (keV)	$I^\pi$	No.	Energy (keV)	$I^\pi$
G.S.	0	5/2 -	9	471.8	3/2 -
1	41.2	7/2 -	10	504.5	5/2 -
2	93.6	9/2 -	11	549.0	7/2 -
3	158.0	11/2 -	12	623.1	1/2 +
4	205.9	5/2 +	13	636.9	3/2 -
5	234.0	7/2 +	14	652.1	1/2 -
6	271.0	9/2 +	15	653.2	3/2 +
7	319.0	11/2 +	16	670.2	3/2 +
8	375.0	13/2 +			

Levels above 732 keV are assumed to be overlapping.

b) Level density Parameters

	$^{241}\text{Am}$	$^{242}\text{Am}$
$a$ (MeV $^{-1}$ )	26.0691	26.5324
$\alpha_M^2/U^{1/2}$ (MeV $^{1/2}$ )	17.5585	17.7628
$\Delta$ (MeV)	0.430	0.0
$C_0$ (MeV)	5642.73	5766.83
$E_x$ (MeV)	3.5524	3.1198
$S_n$ (MeV)	6.5825	5.5412

c) Q-values and threshold energies (MeV)

	Q-value	Threshold energy
(n, 2n)	-6.5825	6.6100
(n, 3n)	-12.6002	12.6529
(n, 4n)	-19.7000	19.7823

Table 5 Resonance parameters of  $^{243}\text{Am}$ 

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH*	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS **	REFERENCE
-2.0	2.5	40.504	1.4	39.0	0.12	L = 0	JENDL-2
-2.0	2.5	40.117	1.1172	39.0		L = 0	ENDF-B-5
-2.0	2.5	40.1172	1.11723	39.0	1 -7	L = 0	JENDL-1
-2.0				( 42.0 )		CNO = 0.84	70BERRETH+
0.0107		34.0				WGO = 0.001	59COTE
0.42	2.5	39.1048	8.424-4	39.0	0.12	L = 0	JENDL-2
0.42	2.5	39.001	8.425-4	39.0		L = 0	ENDF-B-5
0.42	2.5	39.0008	8.424-4	39.0	1 -7	L = 0	JENDL-1
0.42				( 39.0 )		CNO = 0.0013	70BERRETH+
0.416 ± 0.003		39.0 ± 2.0	* 0.00084 ± 0.00005				76BELANOVA+
0.983	2.5	38.1186	1.457-2	38.0	0.12	L = 0	JENDL-2
0.983	2.5	38.015	0.0146	38.0		L = 0	ENDF-B-5
0.983	2.5	38.0146	1.457-2	38.0		L = 0	JENDL-1
0.976		78.0 ± 29.0	0.017 ± 0.003	78.0 ± 29.0	1 -7		59COTE
0.983				40.0		CNO = 0.0151	70BERRETH+
0.983 ± 0.001				36.0 ± 2.0		WGO = 0.0143 ± 0.0007	74SIMPSON+
0.977 ± 0.004		37.0 ± 2.0	* 0.0134 ± 0.0003				76BELANOVA+
1.356	2.5	44.2102	1.10625	43.0	0.12	L = 0	JENDL-2
1.356	2.5	44.11	1.11	43.0		L = 0	ENDF-B-5
1.356	2.5	44.1063	1.10625	43.0		L = 0	JENDL-1
1.353		43.8 ± 3.3	0.82 ± 0.08	43.0 ± 3.3	1 -7		59COTE
1.356				( 43.0 )		CNO = 0.95	70BERRETH+
1.356 ± 0.001				( 43.0 )		WGO = 0.951 ± 0.04	74SIMPSON+
1.355 ± 0.004		56.0 ± 1.0	* 0.89 ± 0.007	43.0 ± 2.0			76BELANOVA+
1.744	2.5	39.3443	0.24035	39.0	0.12	L = 0	JENDL-2
1.744	2.5	39.24	0.24	39.0		L = 0	ENDF-B-5
1.744	2.5	39.2403	0.24035	39.0		L = 0	JENDL-1
1.74		30.5 ± 8.1	0.18 ± 0.01	30.2 ± 8.1	1 -7		59COTE
1.746				40.0		CNO = 0.181	70BERRETH+
1.744 ± 0.001				38.0 ± 2.0		WGO = 0.182 ± 0.008	74SIMPSON+
1.744 ± 0.005		39.0 ± 1.0	* 0.208 ± 0.002				76BELANOVA+
3.14	2.5	32.1153	1.134-2	32.0	0.12	L = 0	JENDL-2
3.14	2.5	32.011	0.0113	32.0		L = 0	ENDF-B-5
3.14	2.5	32.013	1.134-2	32.0		L = 0	JENDL-1
3.141				37.0	1 -7		59COTE
3.14 ± 0.001				27.0 ± 6.0		CNO = 0.0066	70BERRETH+
3.134 ± 0.009		47.0 ± 3.0	* 0.012 ± 0.003			WGO = 0.0062 ± 0.0005	74SIMPSON+
							76BELANOVA+
3.424	2.5	38.3908	2.868-1	38.0	0.12	L = 0	JENDL-2
3.424	2.5	38.287	0.287	38.0		L = 0	ENDF-B-5
3.424	2.5	38.2868	2.868-1	38.0		L = 0	JENDL-1
3.42		42.2 ± 3.0	0.21 ± 0.01	( 42.0 )	1 -7		59COTE
3.43				( 42.0 )		CNO = 0.1536	70BERRETH+
3.424 ± 0.001				( 36.0 )		WGO = 0.156 ± 0.006	74SIMPSON+
3.424 ± 0.009		45.0 ± 2.0	* 0.253 ± 0.008				76BELANOVA+
3.845	2.5	45.1171	1.313-2	45.0	0.12	L = 0	JENDL-2
3.845	2.5	43.013	0.0131	43.0		L = 0	ENDF-B-5
3.845	2.5	45.0131	1.313-2	45.0		L = 0	JENDL-1
3.857				55.0	1 -7		59COTE
3.845 ± 0.001				43.0 ± 6.0		CNO = 0.0068	70BERRETH+
3.844 ± 0.009		22.0 ± 5.0	* 0.009 ± 0.001			WGO = 0.0066 ± 0.0006	74SIMPSON+
							76BELANOVA+
5.125	2.5	39.4187	3.146-1	39.0	0.12	L = 0	JENDL-2
5.125	2.5	39.315	0.315	39.0		L = 0	ENDF-B-5
5.125	2.5	39.3247	3.146-1	39.0		L = 0	JENDL-1
5.12		42.2 ± 3.0	0.22 ± 0.02	( 42.0 )	1 -7		59COTE
5.141				( 42.0 )		CNO = 0.137	70BERRETH+
5.125 ± 0.005				( 39.0 )		WGO = 0.14 ± 0.006	74SIMPSON+
5.12 ± 0.012		63.0 ± 2.0	* 0.26 ± 0.006				76BELANOVA+
6.554	2.5	38.0717	0.96771	37.0	0.12	L = 0	JENDL-2
6.554	2.5	37.968	0.968	37.0		L = 0	ENDF-B-5
6.554	2.5	37.9777	0.96771	37.0		L = 0	JENDL-1
6.54		42.8 ± 3.0	0.83 ± 0.04	( 42.0 )	1 -7		59COTE
6.572				( 42.0 )		CNO = 0.3556	70BERRETH+
6.554 ± 0.005				( 37.0 )		WGO = 0.39 ± 0.015	74SIMPSON+
6.551 ± 0.015		50.0 ± 3.0	* 0.794 ± 0.044				76BELANOVA+
7.067	2.5	40.1758	7.177-2	40.0	0.12	L = 0	JENDL-2
7.067	2.5	40.072	0.0718	40.0		L = 0	ENDF-B-5
7.067	2.5	40.0818	7.177-2	40.0		L = 0	JENDL-1
7.065				( 42.0 )	1 -7		59COTE
7.067 ± 0.005				( 40.0 )		CNO = 0.0269	70BERRETH+
7.063 ± 0.017		46.0 ± 3.0	* 0.072 ± 0.011			WGO = 0.027 ± 0.002	74SIMPSON+
				( 37.0 )			76BELANOVA+
7.863	2.5	40.4359	1.33195	39.0	0.12	L = 0	JENDL-2
7.863	2.5	40.33	1.33	39.0		L = 0	ENDF-B-5
7.863	2.5	40.3419	1.33195	39.0		L = 0	JENDL-1
7.84		42.9 ± 3.0	0.93 ± 0.05	( 42.0 )	1 -7		59COTE
7.886				( 42.0 )		CNO = 0.4547	70BERRETH+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
7.863 ± 0.005 7.86 ± 0.02		36.0 ± 9.0	<sup>a</sup> 1.58 ± 0.13	39.0 ± 4.0		WGO = 0.49 ± 0.02	74SIMPSON+ 76BELANOVA+
8.377 8.377 8.377 8.447 8.377 ± 0.005 8.39 ± 0.02	2.5 2.5 2.5 2.5 2.5	39.1127 39.009 39.0187	8.682-3 0.00868 8.682-3	39.0 39.0 39.0 ( 42.0 ) 39.0 ± 6.0	0.12 0.01  ( 42.0 ) 37.0 ± 10.0	L = 0 L = 0 L = 0 GNO = 0.0044 WGO = 0.0023 ± 0.001	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
8.77 8.77 8.77 8.8 8.77 ± 0.005 8.77 ± 0.02	2.5 2.5 2.5 2.5 2.5	37.2225 37.1118 37.1285	1.184-1 0.118 1.184-1	37.0 37.0 37.0 ( 42.0 ) 37.0 ± 10.0	0.12 0.01  ( 42.0 ) 37.0 ± 10.0	L = 0 L = 0 L = 0 GNO = 0.0406 WGO = 0.04 ± 0.002	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
9.314 9.314 9.314 9.345 9.314 ± 0.008 9.32 ± 0.02	2.5 2.5 2.5 2.5 2.5	39.2566 39.153 39.1626	1.525-1 0.153 1.525-1	39.0 39.0 39.0 ( 42.0 ) 39.0 ± 9.0	0.12 0.01  ( 42.0 ) 39.0 ± 9.0	L = 0 L = 0 L = 0 GNO = 0.048 WGO = 0.05 ± 0.003	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
10.314 10.314 10.314 10.3 10.337 10.314 ± 0.008 10.31 ± 0.03	2.5 2.5 2.5 2.5 2.5	49.5536 49.45 49.4596 42.2 ± 3.0 42.2 ± 3.0	4.496-1 0.45 4.496-1 0.23 ± 0.05 0.23 ± 0.05	49.0 49.0 49.0 ( 42.0 ) 49.0 ± 5.0	0.12 0.01  ( 42.0 ) 49.0 ± 5.0	L = 0 L = 0 L = 0 GNO = 0.125 WGO = 0.149 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 59COTE 70BERRETH+ 74SIMPSON+ 76BELANOVA+
10.877 10.877 10.877 10.885 10.877 ± 0.008 10.87 ± 0.04	2.5 2.5 2.5 2.5 2.5	39.1172 39.013 39.0232	1.319-2 0.0132 1.319-2	39.0 39.0 39.0 ( 42.0 ) ( 39.0 )	0.12 0.01  ( 42.0 ) ( 39.0 )	L = 0 L = 0 L = 0 GNO = 0.005 WGO = 0.004 ± 0.002	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
11.278 11.278 11.278 11.317 11.276 ± 0.008 11.27 ± 0.04	2.5 2.5 2.5 2.5 2.5	41.3894 41.285 41.2955	2.854-1 0.285 2.854-1	41.0 41.0 41.0 ( 42.0 ) 41.0 ± 6.0	0.12 0.01  ( 42.0 ) 41.0 ± 6.0	L = 0 L = 0 L = 0 GNO = 0.084 WGO = 0.086 ± 0.004	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
11.693 11.693 11.693 11.733 11.693 ± 0.008 11.68 ± 0.05	2.5 2.5 2.5 2.5 2.5	26.21 26.106 26.116	1.060-1 0.106 1.060-1	26.0 26.0 26.0 ( 42.0 ) 26.0 ± 14.0	0.12 0.01  ( 42.0 ) 26.0 ± 14.0	L = 0 L = 0 L = 0 GNO = 0.0324 WGO = 0.03 ± 0.002	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
12.122 12.122 12.122 12.169 12.122 ± 0.008 12.12 ± 0.06	2.5 2.5 2.5 2.5 2.5	37.2781 37.174 37.1841	1.740-1 0.174 1.740-1	37.0 37.0 37.0 ( 42.0 ) 37.0 ± 11.0	0.12 0.01  ( 42.0 ) 37.0 ± 11.0	L = 0 L = 0 L = 0 GNO = 0.0497 WGO = 0.049 ± 0.003	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
12.877 12.877 12.877 12.8 12.921 12.877 ± 0.008 12.87 ± 0.06	2.5 2.5 2.5 2.5 2.5	38.5083 38.4 38.4143 43.5 ± 3.0 43.5 ± 3.0	2.40426 2.4 2.40426 1.5 ± 0.2 1.5 ± 0.2	36.0 36.0 36.0 ( 42.0 ) ( 42.0 ) 36.0 ± 6.0	0.12 0.01  ( 42.0 ) ( 42.0 ) 36.0 ± 6.0	L = 0 L = 0 L = 0 GNO = 0.6627 WGO = 0.68 ± 0.03	JENDL-2 ENDF-B-5 JENDL-1 59COTE 70BERRETH+ 74SIMPSON+ 76BELANOVA+
13.152 13.152 13.152 13.1 13.201 13.152 ± 0.008 13.15 ± 0.06	2.5 2.5 2.5 2.5 2.5 2.5	42.5002 42.4 42.4062 42.8 ± 3.0 42.8 ± 3.0	1.39623 1.4 1.39623 0.8 ± 0.2 0.8 ± 0.2	41.0 41.0 41.0 ( 42.0 ) ( 42.0 ) 41.0 ± 8.0	0.12 0.01  ( 42.0 ) ( 42.0 ) 41.0 ± 8.0	L = 0 L = 0 L = 0 GNO = 0.3668 WGO = 0.4 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 59COTE 70BERRETH+ 74SIMPSON+ 76BELANOVA+
15.143 15.143 15.143 15.21 15.143 ± 0.009 15.12 ± 0.07	2.5 2.5 2.5 2.5 2.5	39.2013 39.097 39.1073	9.728-2 0.0973 9.728-2	39.0 39.0 39.0 ( 42.0 ) ( 39.0 )	0.12 0.01  ( 42.0 ) ( 39.0 )	L = 0 L = 0 L = 0 GNO = 0.0325 WGO = 0.019 ± 0.007	JENDL-2 ENDF-B-5 JENDL-1 70BERRETH+ 74SIMPSON+ 76BELANOVA+
15.404 15.404 15.404 15.3	2.5 2.5 2.5 2.5	45.4384 45.33 45.3444 42.6 ± 3.0	1.33443 1.33 1.33443 0.63 ± 0.3	44.0 44.0 44.0 ( 42.0 )	0.12 0.01  ( 42.0 )	L = 0 L = 0 L = 0 GNO = 0.0325 WGO = 0.019 ± 0.007	JENDL-2 ENDF-B-5 JENDL-1 59COTE

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
15.469				( 42.0 )		CNO= 0.3058	70BERRETH+
15.404 ± 0.009				44.0 ± 11.0		WGO= 0.36 ± 0.03	74SIMPSON+
15.39 ± 0.07		37.0 ± 6.0	* 0.36 ± 0.08				76BELANOVA+
16.21	2.5	48.6556	5.515-1	48.0	0.12	L = 0	JENDL-2
16.21	2.5	48.552	0.552	48.0		L = 0	ENDF-B-5
16.21	2.5	48.5616	5.515-1	48.0	0.01	L = 0	JENDL-1
16.278				( 42.0 )		CNO= 0.1317	70BERRETH+
16.21 ± 0.009				48.0 ± 9.0		WGO= 0.143 ± 0.007	74SIMPSON+
16.2 ± 0.07		39.0 ± 3.0	* 0.518 ± 0.009				76BELANOVA+
16.583	2.5	36.2995	1.954-1	36.0	0.12	L = 0	JENDL-2
16.583	2.5	36.195	0.195	36.0		L = 0	ENDF-B-5
16.583	2.5	36.2055	1.954-1	36.0	0.01	L = 0	JENDL-1
16.845				( 42.0 )		CNO= 0.048	70BERRETH+
16.583 ± 0.009				36.0 ± 10.0		WGO= 0.048 ± 0.004	74SIMPSON+
16.56 ± 0.07		27.0 ± 7.0	* 0.174 ± 0.005				76BELANOVA+
17.874	2.5	42.3323	2.282-1	42.0	0.12	L = 0	JENDL-2
17.874	2.5	42.228	0.228	42.0		L = 0	ENDF-B-5
17.874	2.5	42.2383	2.282-1	42.0	0.01	L = 0	JENDL-1
17.941				( 42.0 )		CNO= 0.0517	70BERRETH+
17.874 ± 0.009				42.0 ± 10.0		WGO= 0.055 ± 0.03	74SIMPSON+
17.84 ± 0.07		35.0 ± 8.0	* 0.21 ± 0.007				76BELANOVA+
18.158	2.5	39.1637	5.965-2	39.0	0.12	L = 0	JENDL-2
18.158	2.5	39.06	0.0597	39.0		L = 0	ENDF-B-5
18.158	2.5	39.0697	5.965-2	39.0	0.01	L = 0	JENDL-1
18.246				( 42.0 )		CNO= 0.0128	70BERRETH+
18.158 ± 0.009				( 39.0 )		WGO= 0.014 ± 0.002	74SIMPSON+
18.14 ± 0.07		27.0 ± 15.0	* 0.046 ± 0.007				76BELANOVA+
19.533	2.5	39.3382	0.23424	39.0	0.12	L = 0	JENDL-2
19.533	2.5	39.234	0.234	39.0		L = 0	ENDF-B-5
19.533	2.5	39.2442	0.23424	39.0	0.01	L = 0	JENDL-1
19.606				( 42.0 )		CNO= 0.0557	70BERRETH+
19.533 ± 0.009				( 39.0 )		WGO= 0.05 ± 0.004	74SIMPSON+
19.5 ± 0.07		27.0 ± 10.0	* 0.193 ± 0.007				76BELANOVA+
19.915	2.5	39.2066	0.10264	39.0	0.12	L = 0	JENDL-2
19.915	2.5	39.103	0.103	39.0		L = 0	ENDF-B-5
19.915	2.5	39.1126	0.10264	39.0	0.01	L = 0	JENDL-1
20.009				( 42.0 )		CNO= 0.0256	70BERRETH+
19.915 ± 0.01				( 39.0 )		WGO= 0.02 ± 0.004	74SIMPSON+
19.88 ± 0.07		40.0 ± 20.0	* 0.085 ± 0.006				76BELANOVA+
20.974	2.5	39.562	4.579-1	39.0	0.12	L = 0	JENDL-2
20.974	2.5	39.458	0.458	39.0		L = 0	ENDF-B-5
20.974	2.5	39.558	4.579-1	39.0	0.1	L = 0	JENDL-1
21.098				( 42.0 )		CNO= 0.157	70BERRETH+
20.974 ± 0.01				( 39.0 )		WGO= 0.1 ± 0.01	74SIMPSON+
20.94 ± 0.07		29.0 ± 15.0	* 0.54 ± 0.18				76BELANOVA+
21.115	2.5	40.2068	1.10283	39.0	0.12	L = 0	JENDL-2
21.115	2.5	40.1	1.1	39.0		L = 0	ENDF-B-5
21.115	2.5	40.2028	1.10283	39.0	0.1	L = 0	JENDL-1
21.225				( 42.0 )		CNO= 0.1775	70BERRETH+
21.115 ± 0.01				( 39.0 )		WGO= 0.24 ± 0.02	74SIMPSON+
21.09 ± 0.07		16.0 ± 10.0	* 0.86 ± 0.22				76BELANOVA+
21.872	2.5	39.2583	1.543-1	39.0	0.12	L = 0	JENDL-2
21.872	2.5	39.154	0.154	39.0		L = 0	ENDF-B-5
21.872	2.5	39.2543	1.543-1	39.0	0.1	L = 0	JENDL-1
21.997				( 42.0 )		CNO= 0.0389	70BERRETH+
21.872 ± 0.01				( 39.0 )		WGO= 0.033 ± 0.003	74SIMPSON+
21.85 ± 0.08		27.0	* 0.14 ± 0.02				76BELANOVA+
22.011	2.5	39.1556	5.160-2	39.0	0.12	L = 0	JENDL-2
22.011	2.5	39.052	0.0516	39.0		L = 0	ENDF-B-5
22.011	2.5	39.1516	5.160-2	39.0	0.1	L = 0	JENDL-1
22.011 ± 0.01				( 39.0 )		WGO= 0.311 ± 0.005	74SIMPSON+
22.01 ± 0.08							76BELANOVA+
22.6	2.5	39.6269	5.229-1	39.0	0.12	L = 0	JENDL-2
22.6	2.5	39.523	0.523	39.0		L = 0	ENDF-B-5
22.6	2.5	39.6229	5.229-1	39.0	0.1	L = 0	JENDL-1
22.523				( 42.0 )		CNO= 0.0574	70BERRETH+
22.6 ± 0.01				( 39.0 )		WGO= 0.11 ± 0.01	74SIMPSON+
22.59 ± 0.09		33.0	* 1.0 ± 0.6				76BELANOVA+
22.739	2.5	40.4392	1.33519	39.0	0.12	L = 0	JENDL-2
22.739	2.5	40.34	1.34	39.0		L = 0	ENDF-B-5
22.739	2.5	40.4352	1.33519	39.0	0.1	L = 0	JENDL-1
22.826				( 42.0 )		CNO= 0.3203	70BERRETH+
22.739 ± 0.01				( 39.0 )		WGO= 0.28 ± 0.03	74SIMPSON+
22.72 ± 0.09		19.0	* 0.65 ± 0.5				76BELANOVA+
24.454	2.5	40.0436	9.395-1	39.0	0.12	L = 0	JENDL-2

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
24.454	2.5	39.94	0.94	39.0		L = 0	ENDF-B-5
24.454	2.5	40.0396	9.395-1	39.0	0.1	L = 0	JENDL-1
24.588				( 42.0 )		GNO= 0.1944	70BERRETH+
24.454 ± 0.01				( 39.0 )		WGO= 0.19 ± 0.014	74SIMPSON+
24.39 ± 0.09		22.0	* 0.73 ± 0.02				76BELANOVA+
25.415	2.5	39.2653	1.613-1	39.0	0.12	L = 0	JENDL-2
25.415	2.5	39.161	0.161	39.0		L = 0	ENDF-B-5
25.415	2.5	39.2613	1.613-1	39.0	0.1	L = 0	JENDL-1
25.415 ± 0.01				( 39.0 )		WGO= 0.032 ± 0.005	74SIMPSON+
25.38 ± 0.1		40.0	* 0.14 ± 0.02				76BELANOVA+
26.237	2.5	39.145	4.097-2	39.0	0.12	L = 0	JENDL-2
26.237	2.5	39.041	0.041	39.0		L = 0	ENDF-B-5
26.237	2.5	39.141	4.097-2	39.0	0.1	L = 0	JENDL-1
26.237 ± 0.01				( 39.0 )		WGO= 0.008 ± 0.004	74SIMPSON+
26.3 ± 0.1		31.0	* 0.06 ± 0.01				76BELANOVA+
26.75	2.5	40.759	1.65505	39.0	0.12	L = 0	JENDL-2
26.75	2.5	40.66	1.66	39.0		L = 0	ENDF-B-5
26.75	2.5	40.7551	1.65505	39.0	0.1	L = 0	JENDL-1
26.75 ± 0.01				( 39.0 )		WGO= 0.32 ± 0.02	74SIMPSON+
26.75 ± 0.1			* 1.16 ± 0.03				76BELANOVA+
27.355	2.5	39.527	0.52302	39.0	0.12	L = 0	JENDL-2
27.355	2.5	39.523	0.523	39.0		L = 0	ENDF-B-5
27.355	2.5	39.623	0.52302	39.0	0.1	L = 0	JENDL-1
27.355 ± 0.01				( 39.0 )		WGO= 0.1 ± 0.01	74SIMPSON+
27.34 ± 0.11			* 0.43 ± 0.02				76BELANOVA+
28.735	2.5	40.1922	1.08818	39.0	0.12	L = 0	JENDL-2
28.735	2.5	40.09	1.09	39.0		L = 0	ENDF-B-5
28.735	2.5	40.1982	1.08818	39.0	0.1	L = 0	JENDL-1
28.735 ± 0.01				( 39.0 )		WGO= 0.203 ± 0.01	74SIMPSON+
28.73 ± 0.12			* 0.97 ± 0.12				76BELANOVA+
29.3	2.5	39.8347	7.307-1	39.0	0.12	L = 0	JENDL-2
29.3	2.5	39.731	0.731	39.0		L = 0	ENDF-B-5
29.3	2.5	39.8307	7.307-1	39.0	0.1	L = 0	JENDL-1
29.3 ± 0.01				( 39.0 )		WGO= 0.135 ± 0.01	74SIMPSON+
29.29 ± 0.12			* 0.68 ± 0.15				76BELANOVA+
30.13	2.5	39.6529	5.489-1	39.0	0.12	L = 0	JENDL-2
30.13	2.5	39.549	0.549	39.0		L = 0	ENDF-B-5
30.13	2.5	39.6489	5.489-1	39.0	0.1	L = 0	JENDL-1
30.13 ± 0.01				( 39.0 )		WGO= 0.1 ± 0.007	74SIMPSON+
30.12 ± 0.13			* 0.49 ± 0.2				76BELANOVA+
31.07	2.5	39.9122	8.082-1	39.0	0.12	L = 0	JENDL-2
31.07	2.5	39.808	0.808	39.0		L = 0	ENDF-B-5
31.07	2.5	39.9082	8.082-1	39.0	0.1	L = 0	JENDL-1
31.07 ± 0.01				( 39.0 )		WGO= 0.145 ± 0.01	74SIMPSON+
31.06 ± 0.13			* 0.7 ± 0.15				76BELANOVA+
31.49	2.5	39.278	1.739-1	39.0	0.12	L = 0	JENDL-2
31.49	2.5	39.174	0.174	39.0		L = 0	ENDF-B-5
31.49	2.5	39.274	1.739-1	39.0	0.1	L = 0	JENDL-1
31.49 ± 0.01				( 39.0 )		WGO= 0.031 ± 0.005	74SIMPSON+
31.49 ± 0.13			* 0.12 ± 0.05				76BELANOVA+
32.42	2.5	39.252	0.14804	39.0	0.12	L = 0	JENDL-2
32.42	2.5	39.148	0.148	39.0		L = 0	ENDF-B-5
32.42	2.5	39.248	0.14804	39.0	0.1	L = 0	JENDL-1
32.42 ± 0.01				( 39.0 )		WGO= 0.026 ± 0.005	74SIMPSON+
32.43 ± 0.14			* 0.88 ± 0.15				76BELANOVA+
33.2	2.5	40.0835	0.97953	39.0	0.12	L = 0	JENDL-2
33.2	2.5	39.98	0.98	39.0		L = 0	ENDF-B-5
33.2	2.5	40.0795	0.97953	39.0	0.1	L = 0	JENDL-1
33.2 ± 0.01				( 39.0 )		WGO= 0.17 ± 0.01	74SIMPSON+
33.19 ± 0.14			* 1.9 ± 0.2				76BELANOVA+
33.94	2.5	40.9683	1.86426	39.0	0.12	L = 0	JENDL-2
33.94	2.5	40.86	1.86	39.0		L = 0	ENDF-B-5
33.94	2.5	40.9643	1.86426	39.0	0.1	L = 0	JENDL-1
33.94 ± 0.01				( 39.0 )		WGO= 0.32 ± 0.015	74SIMPSON+
33.92 ± 0.14			* 0.8 ± 0.1				76BELANOVA+
34.39	2.5	40.1096	1.00559	39.0	0.12	L = 0	JENDL-2
34.99	2.5	40.01	1.01	39.0		L = 0	ENDF-B-5
34.99	2.5	40.1056	1.00559	39.0	0.1	L = 0	JENDL-1
34.99 ± 0.01				( 39.0 )		WGO= 0.17 ± 0.01	74SIMPSON+
34.99 ± 0.14			* 0.8 ± 0.1				76BELANOVA+
36.67	2.5	39.9518	8.477-1	39.0	0.12	L = 0	JENDL-2
36.67	2.5	39.848	8.484	39.0		L = 0	ENDF-B-5
36.67	2.5	39.9478	8.477-1	39.0	0.1	L = 0	JENDL-1
36.67 ± 0.01				( 39.0 )		WGO= 0.14 ± 0.01	74SIMPSON+

ENERGY (EV)		TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
37.03	2.5	41.1121	2.00813	39.0	0.12	L = 0	JENDL-2
37.03	2.5	41.01	2.01	39.0		L = 0	ENDF-B-5
37.03	2.5	41.1081	2.00813	39.0	0.1	L = 0	JENDL-1
37.03 ± 0.01				( 39.0 )		WGO= 0.33 ± 0.015	74SIMPSON+
37.55	2.5	39.1837	7.966-2	39.0	0.12	L = 0	JENDL-2
37.55	2.5	39.08	0.0797	39.0		L = 0	ENDF-B-5
37.55	2.5	39.1797	7.966-2	39.0	0.1	L = 0	JENDL-1
37.55 ± 0.01				( 39.0 )		WGO= 0.013 ± 0.005	74SIMPSON+
37.93	2.5	39.7199	6.158-1	39.0	0.12	L = 0	JENDL-2
37.93	2.5	39.816	0.616	39.0		L = 0	ENDF-B-5
37.93	2.5	39.7159	6.158-1	39.0	0.1	L = 0	JENDL-1
37.93 ± 0.01				( 39.0 )		WGO= 0.1 ± 0.008	74SIMPSON+
39.5	2.5	39.7451	0.64106	39.0	0.12	L = 0	JENDL-2
39.5	2.5	39.641	0.641	39.0		L = 0	ENDF-B-5
39.5	2.5	39.7411	0.64106	39.0	0.1	L = 0	JENDL-1
39.5 ± 0.01				( 39.0 )		WGO= 0.102 ± 0.01	74SIMPSON+
40.5	2.5	39.1994	9.545-2	39.0	0.12	L = 0	JENDL-2
40.5	2.5	39.095	0.0955	39.0		L = 0	ENDF-B-5
40.5	2.5	39.1955	9.545-2	39.0	0.1	L = 0	JENDL-1
40.5 ± 0.02				( 39.0 )		WGO= 0.015 ± 0.007	74SIMPSON+
40.95	2.5	39.424	3.199-1	39.0	0.12	L = 0	JENDL-2
40.95	2.5	39.32	0.32	39.0		L = 0	ENDF-B-5
40.95	2.5	39.42	3.199-1	39.0	0.1	L = 0	JENDL-1
40.95 ± 0.02				( 39.0 )		WGO= 0.05 ± 0.02	74SIMPSON+
41.26	2.5	40.196	1.09198	39.0	0.12	L = 0	JENDL-2
41.26	2.5	40.09	1.09	39.0		L = 0	ENDF-B-5
41.26	2.5	40.192	1.09198	39.0	0.1	L = 0	JENDL-1
41.26 ± 0.02				( 39.0 )		WGO= 0.17 ± 0.03	74SIMPSON+
41.54	2.5	41.6176	2.51361	39.0	0.12	L = 0	JENDL-2
41.54	2.5	41.51	2.51	39.0		L = 0	ENDF-B-5
41.54	2.5	41.6136	2.51361	39.0	0.1	L = 0	JENDL-1
41.54 ± 0.02				( 39.0 )		WGO= 0.39 ± 0.03	74SIMPSON+
42.95	2.5	41.9221	2.81806	39.0	0.12	L = 0	JENDL-2
42.95	2.5	41.82	2.82	39.0		L = 0	ENDF-B-5
42.95	2.5	41.918	2.81806	39.0	0.1	L = 0	JENDL-1
42.95 ± 0.02				( 39.0 )		WGO= 0.43 ± 0.02	74SIMPSON+
44.11	2.5	39.5357	0.4317	39.0	0.12	L = 0	JENDL-2
44.11	2.5	39.432	0.432	39.0		L = 0	ENDF-B-5
44.11	2.5	39.5317	0.4317	39.0	0.1	L = 0	JENDL-1
44.11 ± 0.02				( 39.0 )		WGO= 0.065 ± 0.007	74SIMPSON+
45.35	2.5	40.2488	1.14482	39.0	0.12	L = 0	JENDL-2
45.35	2.5	40.14	1.14	39.0		L = 0	ENDF-B-5
45.35	2.5	40.2448	1.14482	39.0	0.1	L = 0	JENDL-1
45.35 ± 0.02				( 39.0 )		WGO= 0.17 ± 0.01	74SIMPSON+
47.11	2.5	39.5021	3.980-1	39.0	0.12	L = 0	JENDL-2
47.11	2.5	39.398	0.398	39.0		L = 0	ENDF-B-5
47.11	2.5	39.4981	3.980-1	39.0	0.1	L = 0	JENDL-1
47.11 ± 0.02				( 39.0 )		WGO= 0.058 ± 0.008	74SIMPSON+
48.55	2.5	39.5639	4.598-1	39.0	0.12	L = 0	JENDL-2
48.55	2.5	39.46	0.46	39.0		L = 0	ENDF-B-5
48.55	2.5	39.5599	4.598-1	39.0	0.1	L = 0	JENDL-1
48.55 ± 0.02				( 39.0 )		WGO= 0.066 ± 0.01	74SIMPSON+
49.29	2.5	39.8622	7.582-1	39.0	0.12	L = 0	JENDL-2
49.29	2.5	39.758	0.758	39.0		L = 0	ENDF-B-5
49.29	2.5	39.8582	7.582-1	39.0	0.1	L = 0	JENDL-1
49.29 ± 0.02				( 39.0 )		WGO= 0.108 ± 0.01	74SIMPSON+
50.2	2.5	39.2103	1.062-1	39.0	0.12	L = 0	JENDL-2
50.2	2.5	39.106	0.106	39.0		L = 0	ENDF-B-5
50.2	2.5	39.2053	1.062-1	39.0	0.1	L = 0	JENDL-1
50.2 ± 0.02				( 39.0 )		WGO= 0.015 ± 0.005	74SIMPSON+
51.28	2.5	40.1781	1.07415	39.0	0.12	L = 0	JENDL-2
51.28	2.5	40.07	1.07	39.0		L = 0	ENDF-B-5
51.28	2.5	40.1742	1.07415	39.0	0.1	L = 0	JENDL-1
51.28 ± 0.02				( 39.0 )		WGO= 0.15 ± 0.01	74SIMPSON+
52.17	2.5	39.2123	1.083-1	39.0	0.12	L = 0	JENDL-2
52.17	2.5	39.108	0.108	39.0		L = 0	ENDF-B-5
52.17	2.5	39.2083	1.083-1	39.0	0.1	L = 0	JENDL-1
52.17 ± 0.02				( 39.0 )		WGO= 0.015 ± 0.005	74SIMPSON+
53.03	2.5	41.2158	2.11183	39.0	0.12	L = 0	JENDL-2
53.03	2.5	41.11	2.11	39.0		L = 0	ENDF-B-5

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
53.03 53.03 ± 0.02	2.5	41.2116	2.11183	39.0 ( 39.0 )	0.1	L = 0 WGO = 0.29 ± 0.02	JENDL-1 74SIMPSN+
53.6 53.6 53.6 53.6 ± 0.02	2.5	39.1992	9.517-2	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.013 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
54.02 54.02 54.02 54.02 ± 0.02	2.5	39.7655	6.614-1 0.661	39.0 ( 39.0 )	0.12 0.1	L = 0 L = 0 L = 0 WGO = 0.09 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
54.55 54.55 54.55 54.55 ± 0.02	2.5	41.0243	1.92031	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.26 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
54.93 54.93 54.93 54.93 ± 0.02	2.5	39.2745	1.704-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.023 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
55.87 55.87 55.87 55.87 ± 0.02	2.5	40.7464	1.64442	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.22 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
58.74 58.74 58.74 58.74 ± 0.02	2.5	39.5485	4.445-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.058 ± 0.015	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
59.13 59.13 59.13 59.13 ± 0.02	2.5	40.0037	8.996-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.117 ± 0.015	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
59.98 59.98 59.98 59.98 ± 0.02	2.5	39.8785	7.744-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.1 ± 0.012	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
60.76 60.76 60.76 60.76 ± 0.02	2.5	40.3122	1.2082	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.155 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
61.2 61.2 61.2 61.2 ± 0.02	2.5	41.9985	2.89453	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.37 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
62.51 62.51 62.51 62.51 ± 0.03	2.5	39.3728	2.688-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.034 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
63.19 63.19 63.19 63.19 ± 0.03	2.5	39.5015	3.974-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.05 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
64.82 64.82 64.82 64.82 ± 0.03	2.5	39.5065	4.025-1	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.05 ± 0.01	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
66.21 66.21 66.21 66.21 ± 0.03	2.5	40.4629	1.35887	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.167 ± 0.017	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
67.36 67.36 67.36 67.36 ± 0.03	2.5	40.2036	1.09978	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.134 ± 0.014	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
68.01 68.01 68.01 68.01 ± 0.03	2.5	40.341	1.23702	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.15 ± 0.015	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+
68.67 68.67 68.67 68.67 ± 0.03	2.5	40.7033	1.59934	39.0	0.12	L = 0 L = 0 L = 0 WGO = 0.193 ± 0.015	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSN+

ENERGY [EV ]	J	TOTAL WIDTH [MEV ]	NEUTRON WIDTH [MEV ]	GAMMA WIDTH [MEV ]	FISSION WIDTH [MEV ]	MISCELLANEOUS	REFERENCE
69.66	2.5	43.0351	3.93109	39.0	0.12	L = 0	JENDL-2
69.66	2.5	42.93	3.93	39.0		L = 0	ENDF-B-5
69.66	2.5	43.1311	3.93109	39.0	0.2	L = 0	JENDL-1
69.66 ± 0.03			( 39.0 )			WGO= 0.471± 0.02	74SIMPSON+
70.27	2.5	41.5266	2.42261	39.0	0.12	L = 0	JENDL-2
70.27	2.5	41.42	2.42	39.0		L = 0	ENDF-B-5
70.27	2.5	41.6226	2.42261	39.0	0.2	L = 0	JENDL-1
70.27 ± 0.03			( 39.0 )			WGO= 0.289± 0.02	74SIMPSON+
71.6	2.5	39.3578	0.25385	39.0	0.12	L = 0	JENDL-2
71.6	2.5	39.254	0.254	39.0		L = 0	ENDF-B-5
71.6	2.5	39.4539	0.25385	39.0	0.2	L = 0	JENDL-1
71.6 ± 0.03			( 39.0 )			WGO= 0.03 ± 0.015	74SIMPSON+
72.22	2.5	41.7299	2.62595	39.0	0.12	L = 0	JENDL-2
72.22	2.5	41.63	2.63	39.0		L = 0	ENDF-B-5
72.22	2.5	41.826	2.62595	39.0	0.2	L = 0	JENDL-1
72.22 ± 0.03			( 39.0 )			WGO= 0.309± 0.02	74SIMPSON+
72.88	2.5	42.1005	2.99648	39.0	0.12	L = 0	JENDL-2
72.88	2.5	42.0	3.0	39.0		L = 0	ENDF-B-5
72.88	2.5	42.1965	2.99648	39.0	0.2	L = 0	JENDL-1
72.88 ± 0.03			( 39.0 )			WGO= 0.351± 0.02	74SIMPSON+
73.93	2.5	39.4651	3.611-1	39.0	0.12	L = 0	JENDL-2
73.93	2.5	39.361	0.361	39.0		L = 0	ENDF-B-5
73.93	2.5	39.5611	3.611-1	39.0	0.2	L = 0	JENDL-1
73.93 ± 0.03			( 39.0 )			WGO= 0.042± 0.015	74SIMPSON+
74.34	2.5	39.4661	3.621-1	39.0	0.12	L = 0	JENDL-2
74.34	2.5	39.362	0.362	39.0		L = 0	ENDF-B-5
74.34	2.5	39.5621	3.621-1	39.0	0.2	L = 0	JENDL-1
74.34 ± 0.03			( 39.0 )			WGO= 0.042± 0.015	74SIMPSON+
74.88	2.5	39.4155	0.311152	39.0	0.12	L = 0	JENDL-2
74.88	2.5	39.312	0.312	39.0		L = 0	ENDF-B-5
74.88	2.5	39.5115	0.311152	39.0	0.2	L = 0	JENDL-1
74.88 ± 0.03			( 39.0 )			WGO= 0.036± 0.015	74SIMPSON+
75.43	2.5	42.2306	3.12662	39.0	0.12	L = 0	JENDL-2
75.43	2.5	42.13	3.13	39.0		L = 0	ENDF-B-5
75.43	2.5	42.3266	3.12662	39.0	0.2	L = 0	JENDL-1
75.43 ± 0.03			( 39.0 )			WGO= 0.36 ± 0.02	74SIMPSON+
76.5	2.5	39.3139	2.099-1	39.0	0.12	L = 0	JENDL-2
76.5	2.5	39.21	0.21	39.0		L = 0	ENDF-B-5
76.5	2.5	39.4099	2.099-1	39.0	0.2	L = 0	JENDL-1
76.5 ± 0.03			( 39.0 )			WGO= 0.024± 0.01	74SIMPSON+
77.0	2.5	39.5305	5.264-1	39.0	0.12	L = 0	JENDL-2
77.0	2.5	39.526	0.526	39.0		L = 0	ENDF-B-5
77.0	2.5	39.7255	5.264-1	39.0	0.2	L = 0	JENDL-1
77.0 ± 0.03			( 39.0 )			WGO= 0.06 ± 0.02	74SIMPSON+
77.54	2.5	40.601	1.49697	39.0	0.12	L = 0	JENDL-2
77.54	2.5	40.5	1.5	39.0		L = 0	ENDF-B-5
77.54	2.5	40.697	1.49697	39.0	0.2	L = 0	JENDL-1
77.54 ± 0.03			( 39.0 )			WGO= 0.17 ± 0.02	74SIMPSON+
78.22	2.5	39.4135	3.095-1	39.0	0.12	L = 0	JENDL-2
78.22	2.5	39.31	0.31	39.0		L = 0	ENDF-B-5
78.22	2.5	39.5095	3.095-1	39.0	0.2	L = 0	JENDL-1
78.22 ± 0.03			( 39.0 )			WGO= 0.035± 0.01	74SIMPSON+
80.5	2.5	40.0461	9.420-1	39.0	0.12	L = 0	JENDL-2
80.5	2.5	39.942	0.942	39.0		L = 0	ENDF-B-5
80.5	2.5	40.1421	9.420-1	39.0	0.2	L = 0	JENDL-1
80.5 ± 0.03			( 39.0 )			WGO= 0.105± 0.03	74SIMPSON+
81.0	2.5	41.48	2.376	39.0	0.12	L = 0	JENDL-2
81.0	2.5	41.38	2.38	39.0		L = 0	ENDF-B-5
81.0	2.5	41.576	2.376	39.0	0.2	L = 0	JENDL-1
81.0 ± 0.03			( 39.0 )			WGO= 0.264± 0.03	74SIMPSON+
81.1	2.5	40.8151	1.71106	39.0	0.12	L = 0	JENDL-2
81.1	2.5	40.71	1.71	39.0		L = 0	ENDF-B-5
81.1	2.5	40.9111	1.71106	39.0	0.2	L = 0	JENDL-1
81.1 ± 0.03			( 39.0 )			WGO= 0.19 ± 0.04	74SIMPSON+
83.1	2.5	40.1432	1.03921	39.0	0.12	L = 0	JENDL-2
83.1	2.5	40.04	1.04	39.0		L = 0	ENDF-B-5
83.1	2.5	40.2392	1.03921	39.0	0.2	L = 0	JENDL-1
83.1 ± 0.03			( 39.0 )			WGO= 0.114± 0.03	74SIMPSON+
83.52	2.5	41.6172	2.61321	39.0	0.12	L = 0	JENDL-2
83.52	2.5	41.51	2.51	39.0		L = 0	ENDF-B-5

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
83.52	2.5	41.7132	2.51321	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.275 ± 0.02	JENDL-1 74SIMSON+
83.52 ± 0.03							
84.19	2.5	41.3061	2.20212	39.0	0.12	L = 0	JENDL-2
84.19	2.5	41.2	2.2	39.0		L = 0	ENDF-B-5
84.19	2.5	41.4021	2.20212	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.24 ± 0.02	JENDL-1 74SIMSON+
84.19 ± 0.03							
85.56	2.5	45.9119	6.8079	39.0	0.12	L = 0	JENDL-2
85.56	2.5	45.81	6.81	39.0		L = 0	ENDF-B-5
85.56	2.5	46.0079	6.8079	39.0	0.2	L = 0 WGO = 0.736 ± 0.04	JENDL-1 74SIMSON+
85.56 ± 0.04							
86.63	2.5	40.6863	1.58228	39.0	0.12	L = 0	JENDL-2
86.63	2.5	40.58	1.58	39.0		L = 0	ENDF-B-5
86.63	2.5	40.7823	1.58228	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.17 ± 0.02	JENDL-1 74SIMSON+
86.63 ± 0.04							
88.36	2.5	40.5516	1.4476	39.0	0.12	L = 0	JENDL-2
88.36	2.5	40.45	1.45	39.0		L = 0	ENDF-B-5
88.36	2.5	40.6476	1.4476	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.154 ± 0.02	JENDL-1 74SIMSON+
88.36 ± 0.04							
89.0	2.5	40.387	1.28302	39.0	0.12	L = 0	JENDL-2
89.0	2.5	40.28	1.28	39.0		L = 0	ENDF-B-5
89.0	2.5	40.483	1.28302	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.136 ± 0.02	JENDL-1 74SIMSON+
89.0 ± 0.04							
90.43	2.5	40.5304	1.42642	39.0	0.12	L = 0	JENDL-2
90.43	2.5	40.43	1.43	39.0		L = 0	ENDF-B-5
90.43	2.5	40.6264	1.42642	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.15 ± 0.02	JENDL-1 74SIMSON+
90.43 ± 0.04							
91.25	2.5	40.2503	1.1463	39.0	0.12	L = 0	JENDL-2
91.25	2.5	40.15	1.15	39.0		L = 0	ENDF-B-5
91.25	2.5	40.3463	1.1463	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.12 ± 0.02	JENDL-1 74SIMSON+
91.25 ± 0.04							
94.72	2.5	40.4665	1.36254	39.0	0.12	L = 0	JENDL-2
94.72	2.5	40.35	1.36	39.0		L = 0	ENDF-B-5
94.72	2.5	40.5625	1.36254	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.14 ± 0.02	JENDL-1 74SIMSON+
94.72 ± 0.04							
95.8	2.5	39.4955	0.39151	39.0	0.12	L = 0	JENDL-2
95.8	2.5	39.392	0.392	39.0		L = 0	ENDF-B-5
95.8	2.5	39.5915	0.39151	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.04 ± 0.015	JENDL-1 74SIMSON+
95.8 ± 0.04							
97.53	2.5	41.2767	2.17266	39.0	0.12	L = 0	JENDL-2
97.53	2.5	41.17	2.17	39.0		L = 0	ENDF-B-5
97.53	2.5	41.3727	2.17266	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.22 ± 0.02	JENDL-1 74SIMSON+
97.53 ± 0.04							
99.48	2.5	40.1014	9.973-1	39.0	0.12	L = 0	JENDL-2
99.48	2.5	39.997	0.997	39.0		L = 0	ENDF-B-5
99.48	2.5	40.1974	9.973-1	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.1 ± 0.02	JENDL-1 74SIMSON+
99.48 ± 0.04							
101.12	2.5	42.8247	3.72066	39.0	0.12	L = 0	JENDL-2
101.12	2.5	42.72	3.72	39.0		L = 0	ENDF-B-5
101.12	2.5	42.9207	3.72066	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.37 ± 0.04	JENDL-1 74SIMSON+
101.12 ± 0.04							
101.92	2.5	41.6279	2.52389	39.0	0.12	L = 0	JENDL-2
101.92	2.5	41.52	2.52	39.0		L = 0	ENDF-B-5
101.92	2.5	41.7239	2.52389	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.25 ± 0.04	JENDL-1 74SIMSON+
101.92 ± 0.04							
104.06	2.5	39.8283	0.72427	39.0	0.12	L = 0	JENDL-2
104.06	2.5	39.724	0.724	39.0		L = 0	ENDF-B-5
104.06	2.5	39.9243	0.72427	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.071 ± 0.02	JENDL-1 74SIMSON+
104.06 ± 0.04							
104.96	2.5	41.0505	1.94655	39.0	0.12	L = 0	JENDL-2
104.96	2.5	40.95	1.95	39.0		L = 0	ENDF-B-5
104.96	2.5	41.1465	1.94655	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.19 ± 0.03	JENDL-1 74SIMSON+
104.96 ± 0.04							
107.17	2.5	42.7791	3.67506	39.0	0.12	L = 0	JENDL-2
107.17	2.5	42.68	3.68	39.0		L = 0	ENDF-B-5
107.17	2.5	42.8751	3.67506	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.355 ± 0.05	JENDL-1 74SIMSON+
107.17 ± 0.04							
109.72	2.5	40.3813	1.27792	39.0	0.12	L = 0	JENDL-2
109.72	2.5	40.26	1.28	39.0		L = 0	ENDF-B-5
109.72	2.5	40.4779	1.27792	39.0 ( 39.0 )	0.2	L = 0 WGO = 0.122 ± 0.03	JENDL-1 74SIMSON+
109.72 ± 0.04							

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ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
111.63	2.5	40.4986	1.39465	39.0	0.12	L = 0	JENDL-2
111.63	2.5	40.39	1.39	39.0	0.12	L = 0	ENDF-B-5
111.63	2.5	40.5946	1.39465	39.0	0.2	L = 0	JENDL-1
111.63 ± 0.04				( 39.0 )		WGO = 0.132 ± 0.03	74SIMPSON+
112.12	2.5	40.1523	1.04828	39.0	0.12	L = 0	JENDL-2
112.12	2.5	40.05	1.05	39.0	0.12	L = 0	ENDF-B-5
112.12	2.5	40.2483	1.04828	39.0	0.2	L = 0	JENDL-1
112.12 ± 0.04				( 39.0 )		WGO = 0.099 ± 0.03	74SIMPSON+
112.7	2.5	40.3248	1.22084	39.0	0.12	L = 0	JENDL-2
112.7	2.5	40.22	1.22	39.0	0.12	L = 0	ENDF-B-5
112.7	2.5	40.4208	1.22084	39.0	0.2	L = 0	JENDL-1
112.7 ± 0.04				( 39.0 )		WGO = 0.115 ± 0.03	74SIMPSON+
113.19	2.5	49.4558	10.3518	39.0	0.12	L = 0	JENDL-2
113.19	2.5	49.4	10.4	39.0	0.12	L = 0	ENDF-B-5
113.19	2.5	49.5518	10.3518	39.0	0.2	L = 0	JENDL-1
113.19 ± 0.04				( 39.0 )		WGO = 0.973 ± 0.07	74SIMPSON+
114.24	2.5	44.523	5.41897	39.0	0.12	L = 0	JENDL-2
114.24	2.5	44.42	5.42	39.0	0.12	L = 0	ENDF-B-5
114.24	2.5	44.619	5.41897	39.0	0.2	L = 0	JENDL-1
114.24 ± 0.04				( 39.0 )		WGO = 0.507 ± 0.05	74SIMPSON+
115.6	2.5	46.4791	7.37513	39.0	0.12	L = 0	JENDL-2
115.6	2.5	46.38	7.38	39.0	0.12	L = 0	ENDF-B-5
115.6	2.5	46.5751	7.37513	39.0	0.2	L = 0	JENDL-1
115.6 ± 0.04				( 39.0 )		WGO = 0.683 ± 0.07	74SIMPSON+
119.74	2.5	43.8912	4.72719	39.0	0.12	L = 0	JENDL-2
119.74	2.5	43.73	4.73	39.0	0.12	L = 0	ENDF-B-5
119.74	2.5	43.9272	4.72719	39.0	0.2	L = 0	JENDL-1
119.74 ± 0.04				( 39.0 )		WGO = 0.432 ± 0.05	74SIMPSON+
122.31	2.5	46.182	7.07801	39.0	0.12	L = 0	JENDL-2
122.31	2.5	46.08	7.08	39.0	0.12	L = 0	ENDF-B-5
122.31	2.5	46.278	7.07801	39.0	0.2	L = 0	JENDL-1
122.31 ± 0.04				( 39.0 )		WGO = 0.64 ± 0.06	74SIMPSON+
123.37	2.5	57.853	18.549	39.0	0.12	L = 0	JENDL-2
123.37	2.5	57.5	18.5	39.0	0.12	L = 0	ENDF-B-5
123.37	2.5	57.749	18.549	39.0	0.2	L = 0	JENDL-1
123.37 ± 0.06				( 39.0 )		WGO = 1.67 ± 0.12	74SIMPSON+
125.18	2.5	47.0254	7.92138	39.0	0.12	L = 0	JENDL-2
125.18	2.5	46.92	7.92	39.0	0.12	L = 0	ENDF-B-5
125.18	2.5	47.1214	7.92138	39.0	0.2	L = 0	JENDL-1
125.18 ± 0.06				( 39.0 )		WGO = 0.708 ± 0.07	74SIMPSON+
126.4	2.5	39.8348	0.73078	39.0	0.12	L = 0	JENDL-2
126.4	2.5	39.731	0.731	39.0	0.12	L = 0	ENDF-B-5
126.4	2.5	39.9308	0.73078	39.0	0.2	L = 0	JENDL-1
126.4 ± 0.06				( 39.0 )		WGO = 0.065 ± 0.025	74SIMPSON+
127.38	2.5	41.4741	2.37012	39.0	0.12	L = 0	JENDL-2
127.38	2.5	41.37	2.37	39.0	0.12	L = 0	ENDF-B-5
127.38	2.5	41.5701	2.37012	39.0	0.2	L = 0	JENDL-1
127.38 ± 0.06				( 39.0 )		WGO = 0.21 ± 0.03	74SIMPSON+
130.3	2.5	39.6519	5.479-1	39.0	0.12	L = 0	JENDL-2
130.3	2.5	39.548	0.548	39.0	0.12	L = 0	ENDF-B-5
130.3	2.5	39.7479	5.479-1	39.0	0.2	L = 0	JENDL-1
130.3 ± 0.06				( 39.0 )		WGO = 0.048 ± 0.015	74SIMPSON+
132.5	2.5	39.9873	8.633-1	39.0	0.12	L = 0	JENDL-2
132.5	2.5	39.863	0.863	39.0	0.12	L = 0	ENDF-B-5
132.5	2.5	40.0633	8.633-1	39.0	0.2	L = 0	JENDL-1
132.5 ± 0.06				( 39.0 )		WGO = 0.075 ± 0.02	74SIMPSON+
133.5	2.5	40.1208	1.01677	39.0	0.12	L = 0	JENDL-2
133.5	2.5	40.02	1.02	39.0	0.12	L = 0	ENDF-B-5
133.5	2.5	40.2168	1.01677	39.0	0.2	L = 0	JENDL-1
133.5 ± 0.06				( 39.0 )		WGO = 0.088 ± 0.03	74SIMPSON+
134.1	2.5	40.5515	1.44752	39.0	0.12	L = 0	JENDL-2
134.1	2.5	40.45	1.45	39.0	0.12	L = 0	ENDF-B-5
134.1	2.5	40.6475	1.44752	39.0	0.2	L = 0	JENDL-1
134.1 ± 0.06				( 39.0 )		WGO = 0.125 ± 0.03	74SIMPSON+
134.7	2.5	39.8584	7.543-1	39.0	0.12	L = 0	JENDL-2
134.7	2.5	39.754	0.754	39.0	0.12	L = 0	ENDF-B-5
134.7	2.5	39.9544	7.543-1	39.0	0.2	L = 0	JENDL-1
134.7 ± 0.06				( 39.0 )		WGO = 0.065 ± 0.03	74SIMPSON+
135.2	2.5	39.8365	7.325-1	39.0	0.12	L = 0	JENDL-2
135.2	2.5	39.733	0.733	39.0	0.12	L = 0	ENDF-B-5

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
135.2 135.2 ± 0.06	2.5	39.9325	7.325-1 ( 39.0 )	39.0 ( 39.0 )	0.2	L = 0 WGO= 0.063± 0.03	JENDL-1 74SIMPSON+
139.4 139.4 139.4 139.4 ± 0.06	2.5 2.5 2.5	41.548 41.44 41.644	2.444 2.44 2.444 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.207± 0.07	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
140.03 140.03 140.03 140.03 ± 0.06	2.5 2.5 2.5	46.0265 45.92 46.1226	6.92255 6.92 6.92255 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.585± 0.08	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
141.2 141.2 141.2 141.2 ± 0.06	2.5 2.5 2.5	40.3636 40.26 40.4596	1.25957 1.26 1.25957 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.106± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
144.0 144.0 144.0 144.0 ± 0.06	2.5 2.5 2.5	42.908 42.8 43.004	3.804 3.8 3.804 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.317± 0.03	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
144.47 144.47 144.47 144.47 ± 0.06	2.5 2.5 2.5	45.5585 45.45 45.8545	6.45451 6.45 6.45451 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.537± 0.04	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
145.0 145.0 145.0 145.0 ± 0.06	2.5 2.5 2.5	42.7165 42.61 42.8125	3.61248 3.61 3.61248 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.3 ± 0.04	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
146.09 146.09 146.09 146.09 ± 0.06	2.5 2.5 2.5	48.1086 48.0 48.2046	9.00464 9.0 9.00464 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.745± 0.06	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
146.6 146.6 146.6 146.6 ± 0.06	2.5 2.5 2.5	43.1722 43.07 43.2682	4.06824 4.07 4.06824 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.336± 0.05	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
148.38 148.38 148.38 148.38 ± 0.06	2.5 2.5 2.5	43.611 43.51 43.707	4.50702 4.51 4.50702 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.37 ± 0.05	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
149.8 149.8 149.8 149.8 ± 0.06	2.5 2.5 2.5	39.8384 39.734 39.9344	7.343-1 0.734 7.343-1 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.06 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
151.1 151.1 151.1 151.1 ± 0.06	2.5 2.5 2.5	40.0874 39.983 40.1834	9.833-1 0.983 9.833-1 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.08 ± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
152.8 152.8 152.8 152.8 ± 0.06	2.5 2.5 2.5	41.1559 41.05 41.252	2.05196 2.05 2.05196 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.166± 0.04	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
154.0 154.0 154.0 154.0 ± 0.06	2.5 2.5 2.5	43.013 42.91 43.109	3.90905 3.91 3.90905 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.315± 0.06	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
154.7 154.7 154.7 154.7 ± 0.06	2.5 2.5 2.5	43.2334 43.13 43.3294	4.12936 4.13 4.12936 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.332± 0.06	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
158.64 158.64 158.64 158.64 ± 0.06	2.5 2.5 2.5	43.5753 43.47 43.6713	4.47131 4.47 4.47131 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.355± 0.04	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
160.64 160.64 160.64 160.64 ± 0.08	2.5 2.5 2.5	54.2372 54.1 54.3332	15.1332 15.1 15.1332 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 1.194± 0.12	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+
163.9 163.9 163.9 163.9 ± 0.08	2.5 2.5 2.5	39.6417 39.538 39.7377	5.376-1 0.538 5.376-1 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.042± 0.02	JENDL-2 ENDF-B-5 JENDL-1 74SIMPSON+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GRAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
164.87	2.5	44.0603	4.95631	39.0	0.12	L = 0	JENDL-2
164.87	2.5	43.96	4.96	39.0		L = 0	ENDF-B-5
164.87	2.5	44.1563	4.95631	39.0	0.2	L = 0	JENDL-1
164.87 ± 0.08				( 39.0 )		WGO = 0.386 ± 0.05	74SIMPSON+
166.1	2.5	41.5527	2.44872	39.0	0.12	L = 0	JENDL-2
166.1	2.5	41.45	2.45	39.0		L = 0	ENDF-B-5
166.1	2.5	41.6487	2.44872	39.0	0.2	L = 0	JENDL-1
166.1 ± 0.08				( 39.0 )		WGO = 0.19 ± 0.04	74SIMPSON+
166.8	2.5	41.39	2.28597	39.0	0.12	L = 0	JENDL-2
166.8	2.5	41.29	2.29	39.0		L = 0	ENDF-B-5
166.8	2.5	41.486	2.28597	39.0	0.2	L = 0	JENDL-1
166.8 ± 0.08				( 39.0 )		WGO = 0.177 ± 0.04	74SIMPSON+
168.01	2.5	45.6238	6.51982	39.0	0.12	L = 0	JENDL-2
168.01	2.5	45.52	6.52	39.0		L = 0	ENDF-B-5
168.01	2.5	45.7198	6.51982	39.0	0.2	L = 0	JENDL-1
168.01 ± 0.08				( 39.0 )		WGO = 0.503 ± 0.07	74SIMPSON+
169.7	2.5	40.3546	1.25058	39.0	0.12	L = 0	JENDL-2
169.7	2.5	40.25	1.25	39.0		L = 0	ENDF-B-5
169.7	2.5	40.4506	1.25058	39.0	0.2	L = 0	JENDL-1
169.7 ± 0.08				( 39.0 )		WGO = 0.096 ± 0.02	74SIMPSON+
171.7	2.5	40.3619	1.25793	39.0	0.12	L = 0	JENDL-2
171.7	2.5	40.25	1.26	39.0		L = 0	ENDF-B-5
171.7	2.5	40.4579	1.25793	39.0	0.2	L = 0	JENDL-1
171.7 ± 0.08				( 39.0 )		WGO = 0.096 ± 0.02	74SIMPSON+
172.7	2.5	46.5815	7.47753	39.0	0.12	L = 0	JENDL-2
172.7	2.5	46.48	7.48	39.0		L = 0	ENDF-B-5
172.7	2.5	46.6775	7.47753	39.0	0.2	L = 0	JENDL-1
172.7 ± 0.08				( 39.0 )		WGO = 0.569 ± 0.07	74SIMPSON+
173.6	2.5	46.5483	7.44429	39.0	0.12	L = 0	JENDL-2
173.6	2.5	46.44	7.44	39.0		L = 0	ENDF-B-5
173.6	2.5	46.6443	7.44429	39.0	0.2	L = 0	JENDL-1
173.6 ± 0.08				( 39.0 )		WGO = 0.566 ± 0.07	74SIMPSON+
174.7	2.5	43.0692	3.96522	39.0	0.12	L = 0	JENDL-2
174.7	2.5	42.97	3.97	39.0		L = 0	ENDF-B-5
174.7	2.5	43.1652	3.96522	39.0	0.2	L = 0	JENDL-1
174.7 ± 0.08				( 39.0 )		WGO = 0.3 ± 0.05	74SIMPSON+
175.8	2.5	43.0949	3.99095	39.0	0.12	L = 0	JENDL-2
175.8	2.5	42.99	3.99	39.0		L = 0	ENDF-B-5
175.8	2.5	43.1909	3.99095	39.0	0.2	L = 0	JENDL-1
175.8 ± 0.08				( 39.0 )		WGO = 0.301 ± 0.05	74SIMPSON+
177.0	2.5	47.7118	8.60777	39.0	0.12	L = 0	JENDL-2
177.0	2.5	47.61	8.61	39.0		L = 0	ENDF-B-5
177.0	2.5	47.8078	8.60777	39.0	0.2	L = 0	JENDL-1
177.0 ± 0.08				( 39.0 )		WGO = 0.647 ± 0.07	74SIMPSON+
180.0	2.5	42.0556	2.95161	39.0	0.12	L = 0	JENDL-2
180.0	2.5	41.95	2.95	39.0		L = 0	ENDF-B-5
180.0	2.5	42.1516	2.95161	39.0	0.2	L = 0	JENDL-1
180.0 ± 0.08				( 39.0 )		WGO = 0.22 ± 0.04	74SIMPSON+
180.5	2.5	41.0252	1.92121	39.0	0.12	L = 0	JENDL-2
180.5	2.5	40.92	1.92	39.0		L = 0	ENDF-B-5
180.5	2.5	41.1212	1.92121	39.0	0.2	L = 0	JENDL-1
180.5 ± 0.08				( 39.0 )		WGO = 0.143 ± 0.04	74SIMPSON+
181.5	2.5	41.3	2.19597	39.0	0.12	L = 0	JENDL-2
181.5	2.5	41.2	2.2	39.0		L = 0	ENDF-B-5
181.5	2.5	41.396	2.19597	39.0	0.2	L = 0	JENDL-1
181.5 ± 0.08				( 39.0 )		WGO = 0.163 ± 0.04	74SIMPSON+
183.0	2.5	40.9844	1.88036	39.0	0.12	L = 0	JENDL-2
183.0	2.5	40.98	1.88	39.0		L = 0	ENDF-B-5
183.0	2.5	41.0804	1.88036	39.0	0.2	L = 0	JENDL-1
183.0 ± 0.08				( 39.0 )		WGO = 0.139 ± 0.04	74SIMPSON+
184.05	2.5	42.4413	3.33736	39.0	0.12	L = 0	JENDL-2
184.05	2.5	42.34	3.34	39.0		L = 0	ENDF-B-5
184.05	2.5	42.5374	3.33736	39.0	0.2	L = 0	JENDL-1
184.05 ± 0.08				( 39.0 )		WGO = 0.246 ± 0.04	74SIMPSON+
184.5	2.5	43.7087	4.6047	39.0	0.12	L = 0	JENDL-2
184.5	2.5	43.6	4.6	39.0		L = 0	ENDF-B-5
184.5	2.5	43.8047	4.6047	39.0	0.2	L = 0	JENDL-1
184.5 ± 0.08				( 39.0 )		WGO = 0.339 ± 0.04	74SIMPSON+
186.2	2.5	41.1508	2.04683	39.0	0.12	L = 0	JENDL-2
186.2	2.5	41.05	2.05	39.0		L = 0	ENDF-B-5

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
186.2	2.5	41.2468	2.04683	39.0 ( 39.0 )	0.2	L = 0 WGO= 0.15 ± 0.03	JENDL-1 74SIMPSON+
186.2 ± 0.08							
186.9	2.5	43.8899	4.7849	39.0	0.12	L = 0	JENDL-2
186.9	2.5	43.78	4.78	39.0		L = 0	ENDF-B-5
186.9	2.5	43.9849	4.7849	39.0	0.2	L = 0	JENDL-1
186.9 ± 0.08				( 39.0 )		WGO= 0.35 ± 0.04	74SIMPSON+
188.0	2.5	47.6736	8.56957	39.0	0.12	L = 0	JENDL-2
188.0	2.5	47.57	8.57	39.0		L = 0	ENDF-B-5
188.0	2.5	47.7696	8.56957	39.0	0.2	L = 0	JENDL-1
188.0 ± 0.08				( 39.0 )		WGO= 0.625 ± 0.07	74SIMPSON+
190.6	2.5	42.086	2.98205	39.0	0.12	L = 0	JENDL-2
190.6	2.5	41.98	2.98	39.0		L = 0	ENDF-B-5
190.6	2.5	42.1821	2.98205	39.0	0.2	L = 0	JENDL-1
190.6 ± 0.08				( 39.0 )		WGO= 0.216 ± 0.04	74SIMPSON+
191.6	2.5	42.2876	3.18365	39.0	0.12	L = 0	JENDL-2
191.6	2.5	42.18	3.18	39.0		L = 0	ENDF-B-5
191.6	2.5	42.3837	3.18365	39.0	0.2	L = 0	JENDL-1
191.6 ± 0.08				( 39.0 )		WGO= 0.23 ± 0.04	74SIMPSON+
192.25	2.5	43.7905	4.68651	39.0	0.12	L = 0	JENDL-2
192.25	2.5	43.69	4.69	39.0		L = 0	ENDF-B-5
192.25	2.5	43.8865	4.68651	39.0	0.2	L = 0	JENDL-1
192.25 ± 0.08				( 39.0 )		WGO= 0.338 ± 0.04	74SIMPSON+
193.35	2.5	47.8781	8.77408	39.0	0.12	L = 0	JENDL-2
193.35	2.5	47.77	8.77	39.0		L = 0	ENDF-B-5
193.35	2.5	47.9741	8.77408	39.0	0.2	L = 0	JENDL-1
193.35 ± 0.1				( 39.0 )		WGO= 0.631 ± 0.07	74SIMPSON+
195.9	2.5	39.244	1.399-1	39.0	0.12	L = 0	JENDL-2
195.9	2.5	39.14	0.14	39.0		L = 0	ENDF-B-5
195.9	2.5	39.34	1.399-1	39.0	0.2	L = 0	JENDL-1
195.9 ± 0.1				( 39.0 )		WGO= 0.01 ± 0.003	74SIMPSON+
196.2	2.5	40.5187	1.41472	39.0	0.12	L = 0	JENDL-2
196.2	2.5	40.41	1.41	39.0		L = 0	ENDF-B-5
196.2	2.5	40.6147	1.41472	39.0	0.2	L = 0	JENDL-1
196.2 ± 0.1				( 39.0 )		WGO= 0.101 ± 0.02	74SIMPSON+
196.9	2.5	41.4053	2.30127	39.0	0.12	L = 0	JENDL-2
196.9	2.5	41.3	2.3	39.0		L = 0	ENDF-B-5
196.9	2.5	41.5013	2.30127	39.0	0.2	L = 0	JENDL-1
196.9 ± 0.1				( 39.0 )		WGO= 0.164 ± 0.02	74SIMPSON+
197.6	2.5	44.6846	5.58064	39.0	0.12	L = 0	JENDL-2
197.6	2.5	44.58	5.58	39.0		L = 0	ENDF-B-5
197.6	2.5	44.7806	5.58064	39.0	0.2	L = 0	JENDL-1
197.6 ± 0.1				( 39.0 )		WGO= 0.397 ± 0.06	74SIMPSON+
199.2	2.5	40.3037	1.19967	39.0	0.12	L = 0	JENDL-2
199.2	2.5	40.2	1.2	39.0		L = 0	ENDF-B-5
199.2	2.5	40.3997	1.19967	39.0	0.2	L = 0	JENDL-1
199.2 ± 0.1				( 39.0 )		WGO= 0.085 ± 0.04	74SIMPSON+
199.85	2.5	42.2141	3.11101	39.0	0.12	L = 0	JENDL-2
199.85	2.5	42.11	3.11	39.0		L = 0	ENDF-B-5
199.85	2.5	42.3101	3.11101	39.0	0.2	L = 0	JENDL-1
199.85 ± 0.1				( 39.0 )		WGO= 0.22 ± 0.04	74SIMPSON+
202.1	2.5	39.4594	3.554-1	39.0	0.12	L = 0	JENDL-2
202.1	2.5	39.355	0.355	39.0		L = 0	ENDF-B-5
202.1	2.5	39.5554	3.554-1	39.0	0.2	L = 0	JENDL-1
202.1 ± 0.1				( 39.0 )		WGO= 0.025 ± 0.008	74SIMPSON+
203.7	2.5	39.7891	6.850-1	39.0	0.12	L = 0	JENDL-2
203.7	2.5	39.685	0.685	39.0		L = 0	ENDF-B-5
203.7	2.5	39.8851	6.850-1	39.0	0.2	L = 0	JENDL-1
203.7 ± 0.1				( 39.0 )		WGO= 0.048 ± 0.015	74SIMPSON+
205.0	2.5	42.4973	3.39332	39.0	0.12	L = 0	JENDL-2
205.0	2.5	42.39	3.39	39.0		L = 0	ENDF-B-5
205.0	2.5	42.5933	3.39332	39.0	0.2	L = 0	JENDL-1
205.0 ± 0.1				( 39.0 )		WGO= 0.237 ± 0.04	74SIMPSON+
206.6	2.5	40.8719	1.76795	39.0	0.12	L = 0	JENDL-2
206.6	2.5	40.77	1.77	39.0		L = 0	ENDF-B-5
206.6	2.5	40.968	1.76795	39.0	0.2	L = 0	JENDL-1
206.6 ± 0.1				( 39.0 )		WGO= 0.123 ± 0.02	74SIMPSON+
208.2	2.5	42.8556	3.75158	39.0	0.12	L = 0	JENDL-2
208.2	2.5	42.75	3.75	39.0		L = 0	ENDF-B-5
208.2	2.5	42.9516	3.75158	39.0	0.2	L = 0	JENDL-1
208.2 ± 0.1				( 39.0 )		WGO= 0.26 ± 0.04	74SIMPSON+

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
209.6	2.5	43.1722	4.0682	39.0	0.12	L = 0	JENDL-2
209.6	2.5	43.07	4.07	39.0		L = 0	ENDF-B-5
209.6	2.5	43.2682	4.0682	39.0	0.2	L = 0	JENDL-1
209.6 ± 0.1				( 39.0 )		WGO= 0.281 ± 0.04	74SIMPSON+
210.95	2.5	44.7974	5.69345	39.0	0.12	L = 0	JENDL-2
210.95	2.5	44.69	5.69	39.0		L = 0	ENDF-B-5
210.95	2.5	44.8935	5.69345	39.0	0.2	L = 0	JENDL-1
210.95 ± 0.1				( 39.0 )		WGO= 0.392 ± 0.06	74SIMPSON+
211.5	2.5	45.4593	6.35531	39.0	0.12	L = 0	JENDL-2
211.5	2.5	45.36	6.36	39.0		L = 0	ENDF-B-5
211.5	2.5	45.5553	6.35531	39.0	0.2	L = 0	JENDL-1
211.5 ± 0.1				( 39.0 )		WGO= 0.437 ± 0.06	74SIMPSON+
213.4	2.5	40.9592	1.85524	39.0	0.12	L = 0	JENDL-2
213.4	2.5	40.86	1.86	39.0		L = 0	ENDF-B-5
213.4	2.5	41.0552	1.85524	39.0	0.2	L = 0	JENDL-1
213.4 ± 0.1				( 39.0 )		WGO= 0.127 ± 0.02	74SIMPSON+
214.5	2.5	46.1633	7.05928	39.0	0.12	L = 0	JENDL-2
214.5	2.5	46.06	7.06	39.0		L = 0	ENDF-B-5
214.5	2.5	46.2593	7.05928	39.0	0.2	L = 0	JENDL-1
214.5 ± 0.1				( 39.0 )		WGO= 0.482 ± 0.06	74SIMPSON+
217.0	2.5	41.9471	2.84307	39.0	0.12	L = 0	JENDL-2
217.0	2.5	41.84	2.84	39.0		L = 0	ENDF-B-5
217.0	2.5	42.0431	2.84307	39.0	0.2	L = 0	JENDL-1
217.0 ± 0.1				( 39.0 )		WGO= 0.193 ± 0.04	74SIMPSON+
220.3	2.5	44.3879	5.28393	39.0	0.12	L = 0	JENDL-2
220.3	2.5	44.28	5.28	39.0		L = 0	ENDF-B-5
220.3	2.5	44.4839	5.28393	39.0	0.2	L = 0	JENDL-1
220.3 ± 0.1				( 39.0 )		WGO= 0.356 ± 0.06	74SIMPSON+
221.2	2.5	41.8555	2.75147	39.0	0.12	L = 0	JENDL-2
221.2	2.5	41.75	2.75	39.0		L = 0	ENDF-B-5
221.2	2.5	41.9515	2.75147	39.0	0.2	L = 0	JENDL-1
221.2 ± 0.1				( 39.0 )		WGO= 0.185 ± 0.04	74SIMPSON+
222.0	2.5	41.7263	2.62234	39.0	0.12	L = 0	JENDL-2
222.0	2.5	41.52	2.62	39.0		L = 0	ENDF-B-5
222.0	2.5	41.8223	2.62234	39.0	0.2	L = 0	JENDL-1
222.0 ± 0.1				( 39.0 )		WGO= 0.176 ± 0.04	74SIMPSON+
224.3	2.5	41.5003	2.39626	39.0	0.12	L = 0	JENDL-2
224.3	2.5	41.4	2.4	39.0		L = 0	ENDF-B-5
224.3	2.5	41.5963	2.39626	39.0	0.2	L = 0	JENDL-1
224.3 ± 0.1				( 39.0 )		WGO= 0.16 ± 0.04	74SIMPSON+
225.3	2.5	46.884	7.58005	39.0	0.12	L = 0	JENDL-2
225.3	2.5	46.58	7.58	39.0		L = 0	ENDF-B-5
225.3	2.5	46.78	7.58005	39.0	0.2	L = 0	JENDL-1
225.3 ± 0.1				( 39.0 )		WGO= 0.505 ± 0.07	74SIMPSON+
226.2	2.5	42.0518	2.94783	39.0	0.12	L = 0	JENDL-2
226.2	2.5	41.95	2.95	39.0		L = 0	ENDF-B-5
226.2	2.5	42.1478	2.94783	39.0	0.2	L = 0	JENDL-1
226.2 ± 0.1				( 39.0 )		WGO= 0.196 ± 0.04	74SIMPSON+
227.3	2.5	42.5716	3.46759	39.0	0.12	L = 0	JENDL-2
227.3	2.5	42.47	3.47	39.0		L = 0	ENDF-B-5
227.3	2.5	42.6676	3.46759	39.0	0.2	L = 0	JENDL-1
227.3 ± 0.1				( 39.0 )		WGO= 0.23 ± 0.05	74SIMPSON+
228.8	2.5	40.2233	1.11933	39.0	0.12	L = 0	JENDL-2
228.8	2.5	40.12	1.12	39.0		L = 0	ENDF-B-5
228.8	2.5	40.3193	1.11933	39.0	0.2	L = 0	JENDL-1
228.8 ± 0.11				( 39.0 )		WGO= 0.074 ± 0.02	74SIMPSON+
231.8	2.5	40.5504	1.44637	39.0	0.12	L = 0	JENDL-2
231.8	2.5	40.45	1.45	39.0		L = 0	ENDF-B-5
231.8	2.5	40.6464	1.44637	39.0	0.2	L = 0	JENDL-1
231.8 ± 0.11				( 39.0 )		WGO= 0.095 ± 0.03	74SIMPSON+
232.9	2.5	47.8944	8.79037	39.0	0.12	L = 0	JENDL-2
232.9	2.5	47.79	8.79	39.0		L = 0	ENDF-B-5
232.9	2.5	47.9904	8.79037	39.0	0.2	L = 0	JENDL-1
232.9 ± 0.11				( 39.0 )		WGO= 0.576 ± 0.07	74SIMPSON+
234.1	2.5	47.3356	8.23158	39.0	0.12	L = 0	JENDL-2
234.1	2.5	47.23	8.23	39.0		L = 0	ENDF-B-5
234.1	2.5	47.4316	8.23158	39.0	0.2	L = 0	JENDL-1
234.1 ± 0.11				( 39.0 )		WGO= 0.538 ± 0.07	74SIMPSON+
236.0	2.5	40.8553	1.7513	39.0	0.12	L = 0	JENDL-2
236.0	2.5	40.75	1.75	39.0		L = 0	ENDF-B-5

ENERGY (EV)	J	TOTAL WIDTH (MEV)	NEUTRON WIDTH (MEV)	GAMMA WIDTH (MEV)	FISSION WIDTH (MEV)	MISCELLANEOUS	REFERENCE
236.0 236.0 ± 0.11	2.5	40.9513	1.7513 ( 39.0 )	39.0 ( 39.0 )	0.2	L = 0 WGO= 0.114± 0.03	JENDL-1 74SIMSON+
237.5 237.5 237.5 237.5 ± 0.11	2.5 2.5 2.5	41.955 41.85 42.051	2.85104 2.85 2.85104 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.185± 0.04	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
238.7 238.7 238.7 238.7 ± 0.11	2.5 2.5 2.5	40.8035 40.7 40.8995	1.69949 1.7 1.69949 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.11 ± 0.03	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
239.5 239.5 239.5 239.5 ± 0.11	2.5 2.5 2.5	43.0348 42.93 43.1308	3.93085 3.93 3.93085 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.254± 0.05	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
241.2 241.2 241.2 241.2 ± 0.11	2.5 2.5 2.5	40.8279 40.72 40.9239	1.7239 1.72 1.7239 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.111± 0.03	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
242.8 242.8 242.8 242.8 ± 0.11	2.5 2.5 2.5	43.654 43.55 43.75	4.54996 4.55 4.54996 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.292± 0.06	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
244.1 244.1 244.1 244.1 ± 0.11	2.5 2.5 2.5	40.5414 40.44 40.6374	1.43738 1.44 1.43738 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.092± 0.03	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
244.6 244.6 244.6 244.6 ± 0.11	2.5 2.5 2.5	43.7177 43.61 43.8137	4.61371 4.61 4.61371 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.295± 0.06	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
246.3 246.3 246.3 246.3 ± 0.11	2.5 2.5 2.5	40.9559 40.85 41.0519	1.85189 1.85 1.85189 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.118± 0.03	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
247.1 247.1 247.1 247.1 ± 0.11	2.5 2.5 2.5	45.3289 45.22 45.4249	6.22489 6.22 6.22489 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.396± 0.06	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
248.6 248.6 248.6 248.6 ± 0.11	2.5 2.5 2.5	51.9068 51.8 52.0028	12.8028 12.8 12.8028 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.812± 0.12	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+
249.7 249.7 249.7 249.7 ± 0.13	2.5 2.5 2.5	42.5804 42.48 42.6764	3.47642 3.48 3.47642 ( 39.0 )	39.0 39.0 39.0 ( 39.0 )	0.12 0.2	L = 0 L = 0 L = 0 WGO= 0.22 ± 0.05	JENDL-2 ENDF-B-S JENDL-1 74SIMSON+

\* A denotes  $2g\Gamma_n^0$ 

\*\* L : orbital angular momentum

GNO:  $\Gamma_n^0$ WGO:  $2g\Gamma_n^0$

Table 6 Unresolved resonance parameters of  $^{243}\text{Am}$  and  
the calculated cross sections.

$$S_0 = 0.93 \times 10^{-4}, S_1 = 2.44 \times 10^{-4}, R = 9.34 \text{ fm}$$

$$D_{\text{obs}} = 0.67 \text{ eV}, \Gamma_\gamma = 39 \text{ meV}, \Gamma_f = 0.12 \text{ meV}.$$

$E_n$ (keV)	$\sigma_{n,T}$ (barns)	$\sigma_{n,\gamma}$ (barns)	$\sigma_{n,f}$ (barns)
0.215	37.2	23.2	0.071
0.5	28.3	14.6	0.046
1.0	23.3	9.91	0.030
2.0	19.8	6.76	0.021
5.0	16.8	4.23	0.013
10.0	15.3	3.15	0.0097
20.0	14.3	2.51	0.0077
30.0	13.9	2.23	0.0068

Table 7 Resonance integrals for  $^{243}\text{Am}$

	fission (barns)	capture (barns)
<b>Calculated</b>		
JENDL-2	11.4	1816
JENDL-1	5.7	1822
ENDF/B-V	6.2	1820
<b>Experimental</b>		
57 Butler <sup>47)</sup>		2340
67 Bak <sup>25)</sup>		$2300 \pm 200$
68 Folger <sup>48)</sup>		2250
69 Schuman <sup>26)</sup>		$2160 \pm 120$
75 Zhuravlev <sup>29)</sup>	$9 \pm 1$	
76 Gavrilov <sup>30)</sup>	$17.1 \pm 1.3$	$2200 \pm 150$

Table 8 Level scheme, level density parameters  
and Q-values for  $^{243}\text{Am}$

a) Level scheme of  $^{243}\text{Am}$

No.	Energy (keV)	$I^\pi$	No.	Energy (keV)	$I^\pi$
G.S.	0	5/2 -	5	143.5	9/2 +
1	42.2	7/2 -	6	189.3	11/2 +
2	84.0	5/2 +	7	267	3/2 -
3	96.4	9/2 -	8	298	5/2 -
4	109.3	7/2 +	9	344	7/2 -

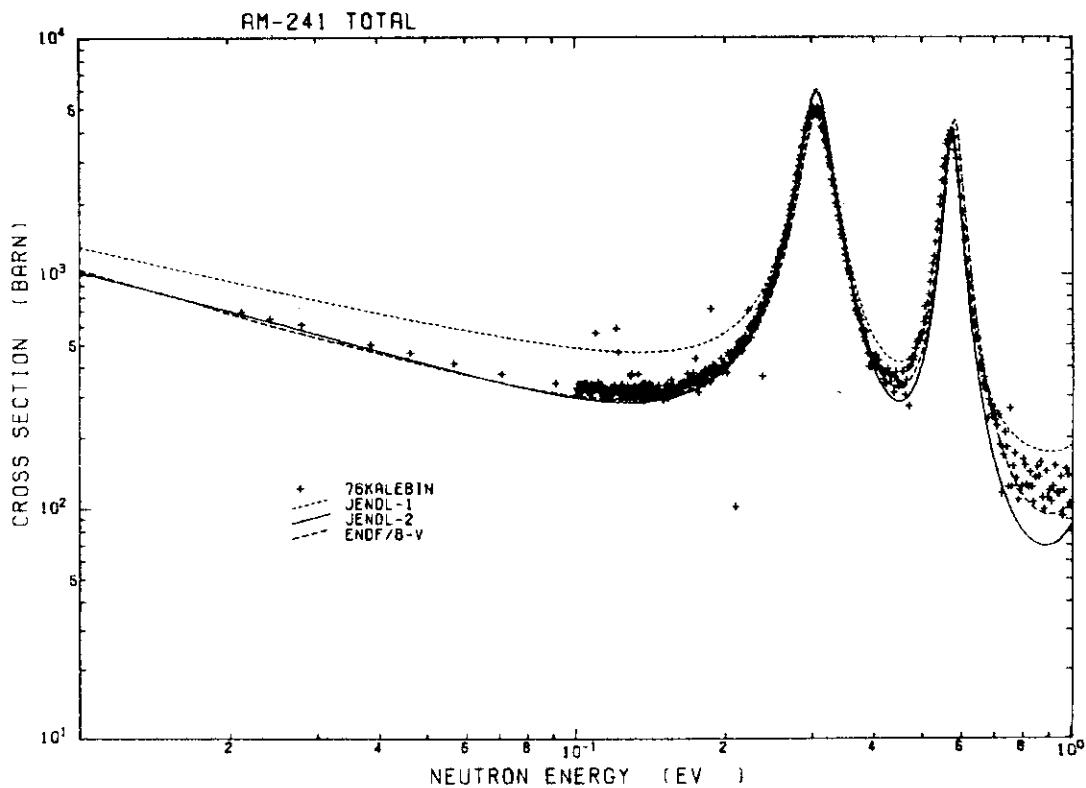
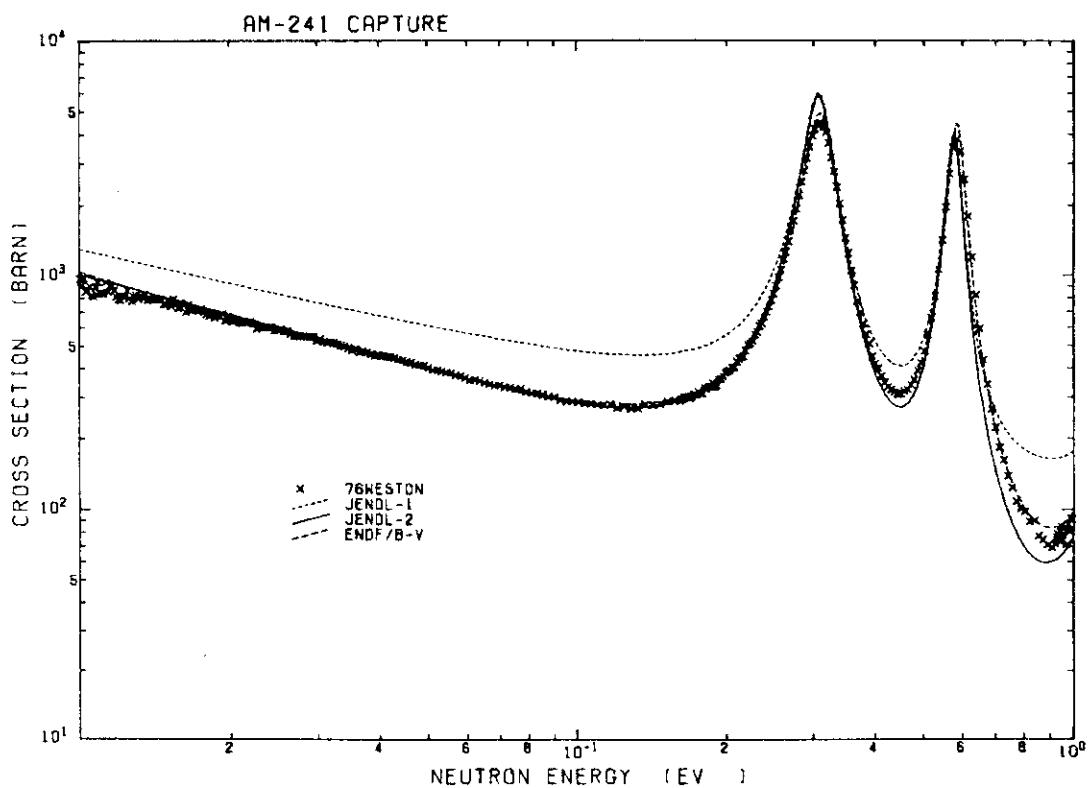
Levels above 383 keV are assumed to be overlapping.

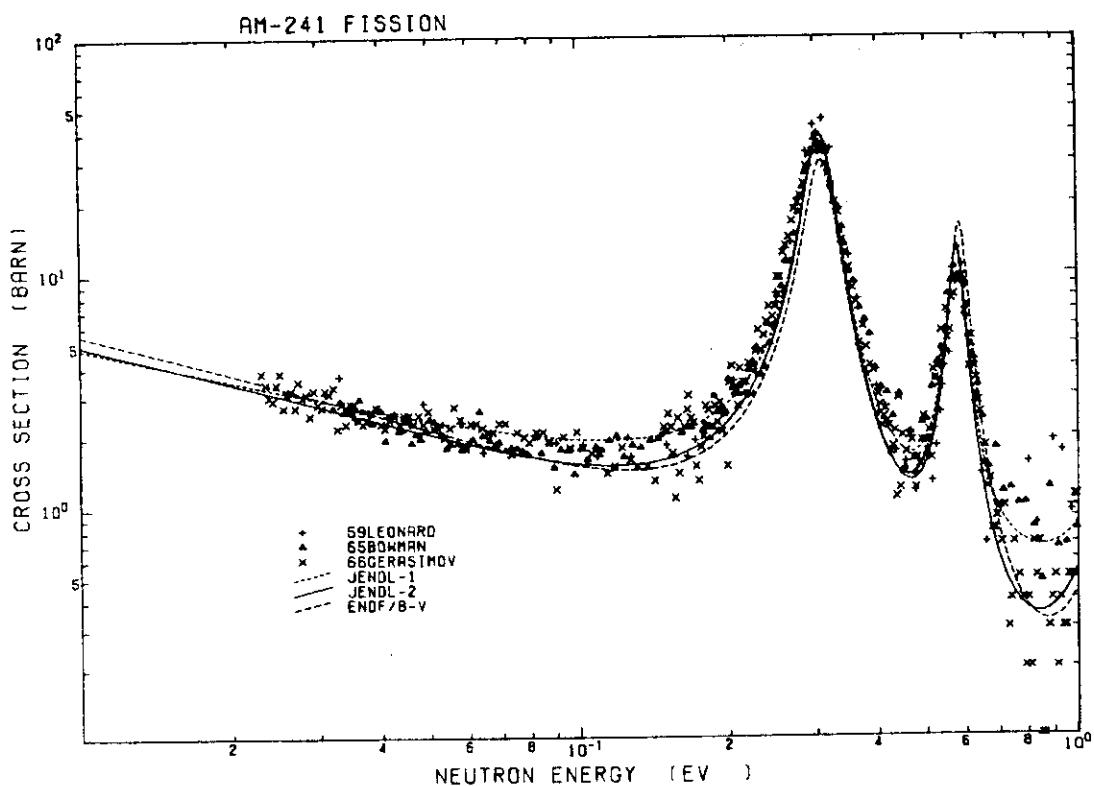
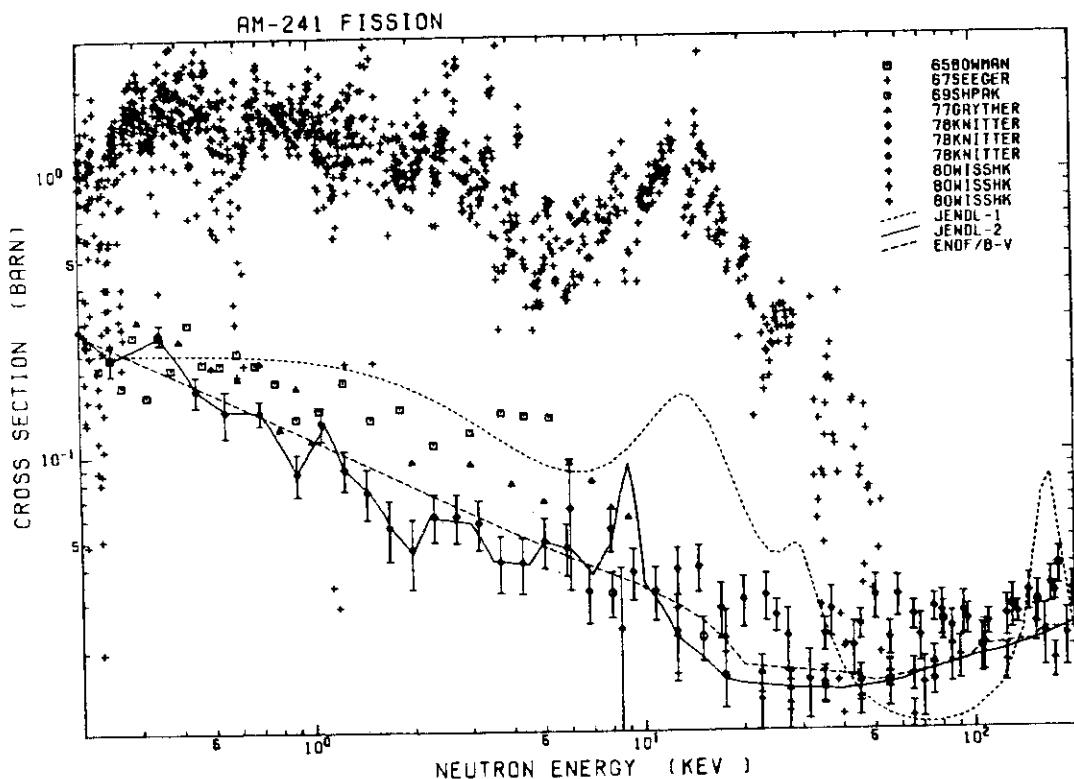
b) Level density Parameters

	$^{243}\text{Am}$	$^{244}\text{Am}$
$a$ (MeV $^{-1}$ )	26.9094	26.9754
$\alpha_M^2/U^{1/2}$ (MeV $^{1/2}$ )	17.9378	18.0090
$\Delta$ (MeV)	0.5	0.0
$C_0$ (MeV)	5872.94	5911.57
$E_x$ (MeV)	3.6173	3.1148
$S_n$ (MeV)	6.3643	5.3632

c) Q-values and threshold energies (MeV)

	Q-value	Threshold energy
(n,2n)	-6.3643	6.3907
(n,3n)	-11.9055	11.9549
(n,4n)	-18.4880	18.5647

Fig.1 Total cross section of  $^{241}\text{Am}$  below 1 eVFig.2 Capture cross section of  $^{241}\text{Am}$  below 1 eV

Fig.3 Fission cross section of  $^{241}\text{Am}$  below 1 eVFig.4 Fission cross section of  $^{241}\text{Am}$  in the energy range between 200 eV and 200 keV

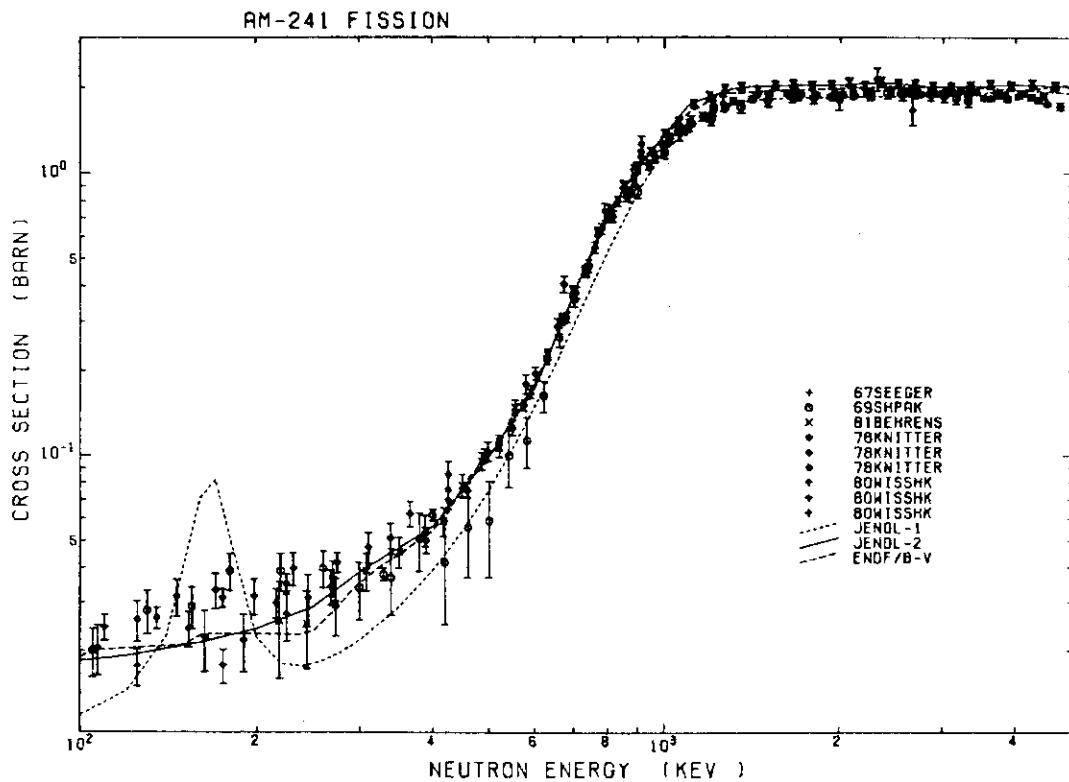


Fig.5 Fission cross section of  $^{241}\text{Am}$  in the energy range between 100 keV and 5 MeV

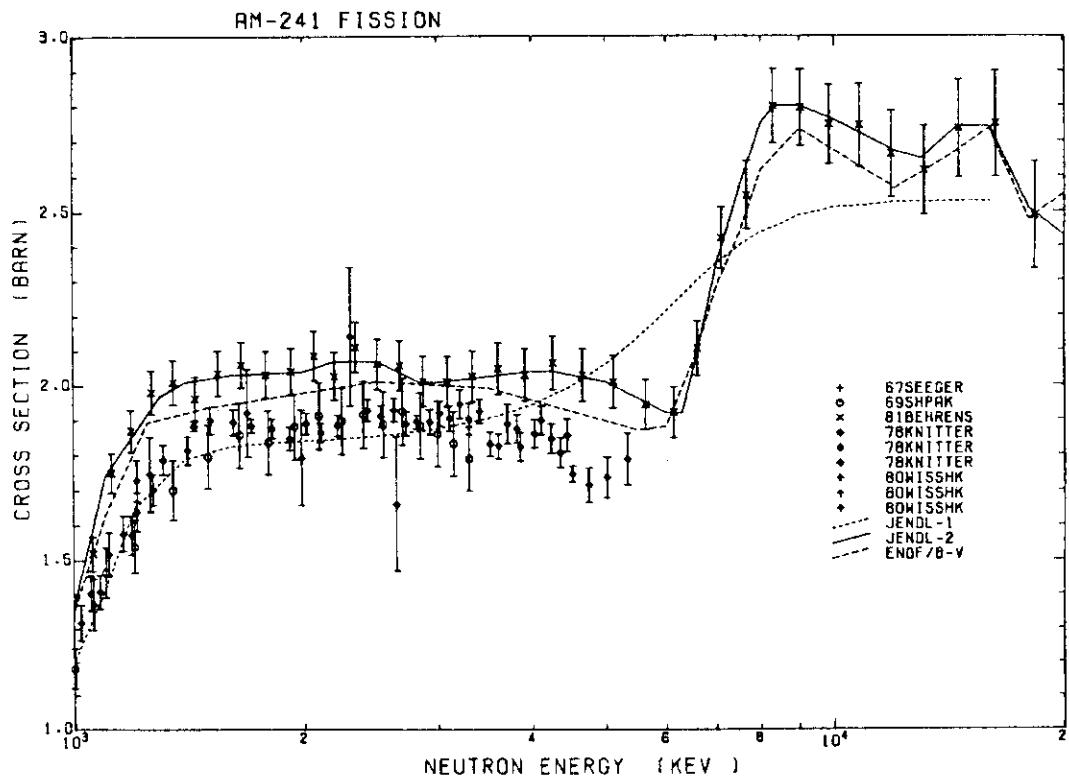


Fig.6 Fission cross section of  $^{241}\text{Am}$  in the energy range between 1 MeV and 20 MeV

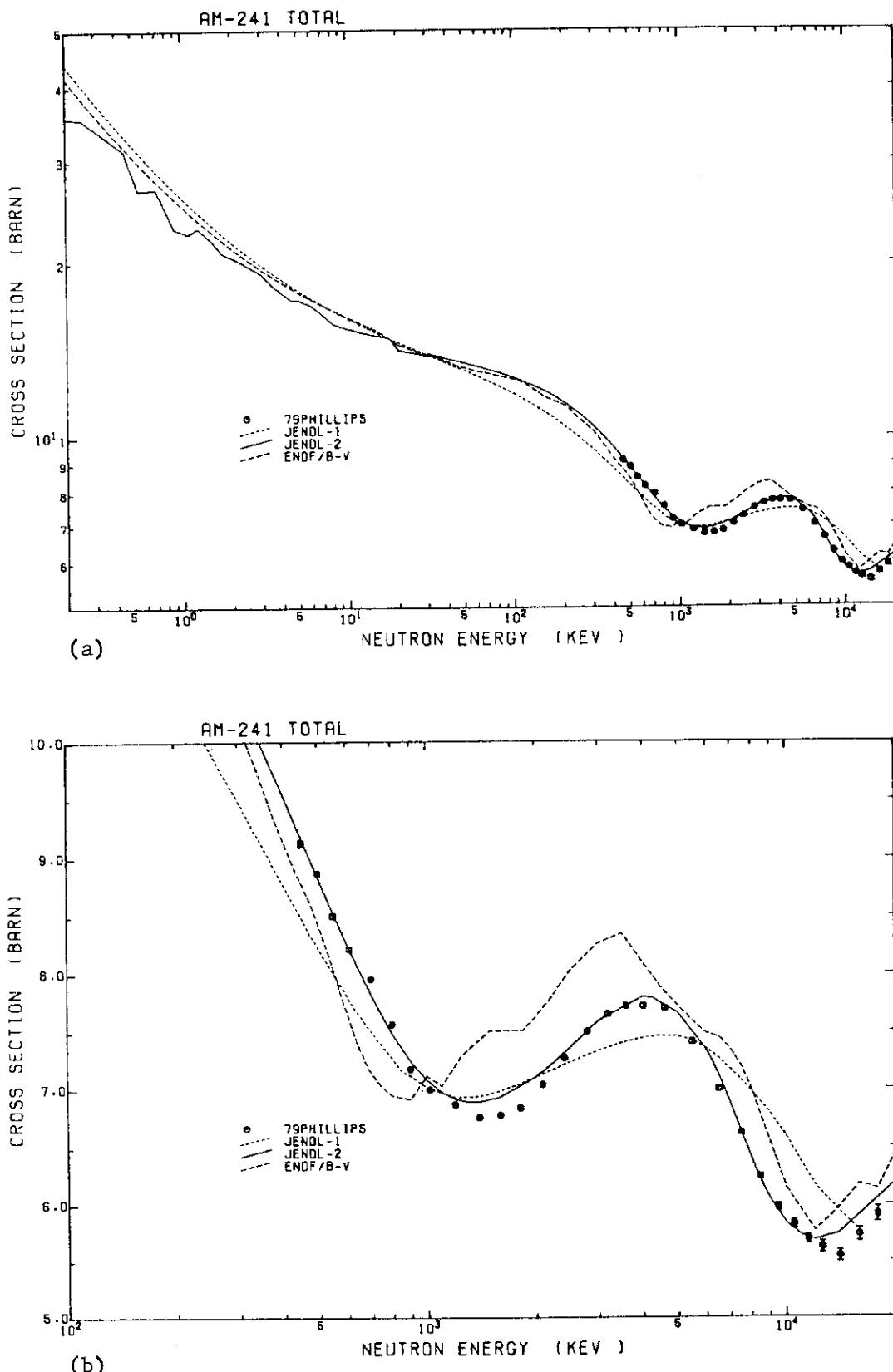
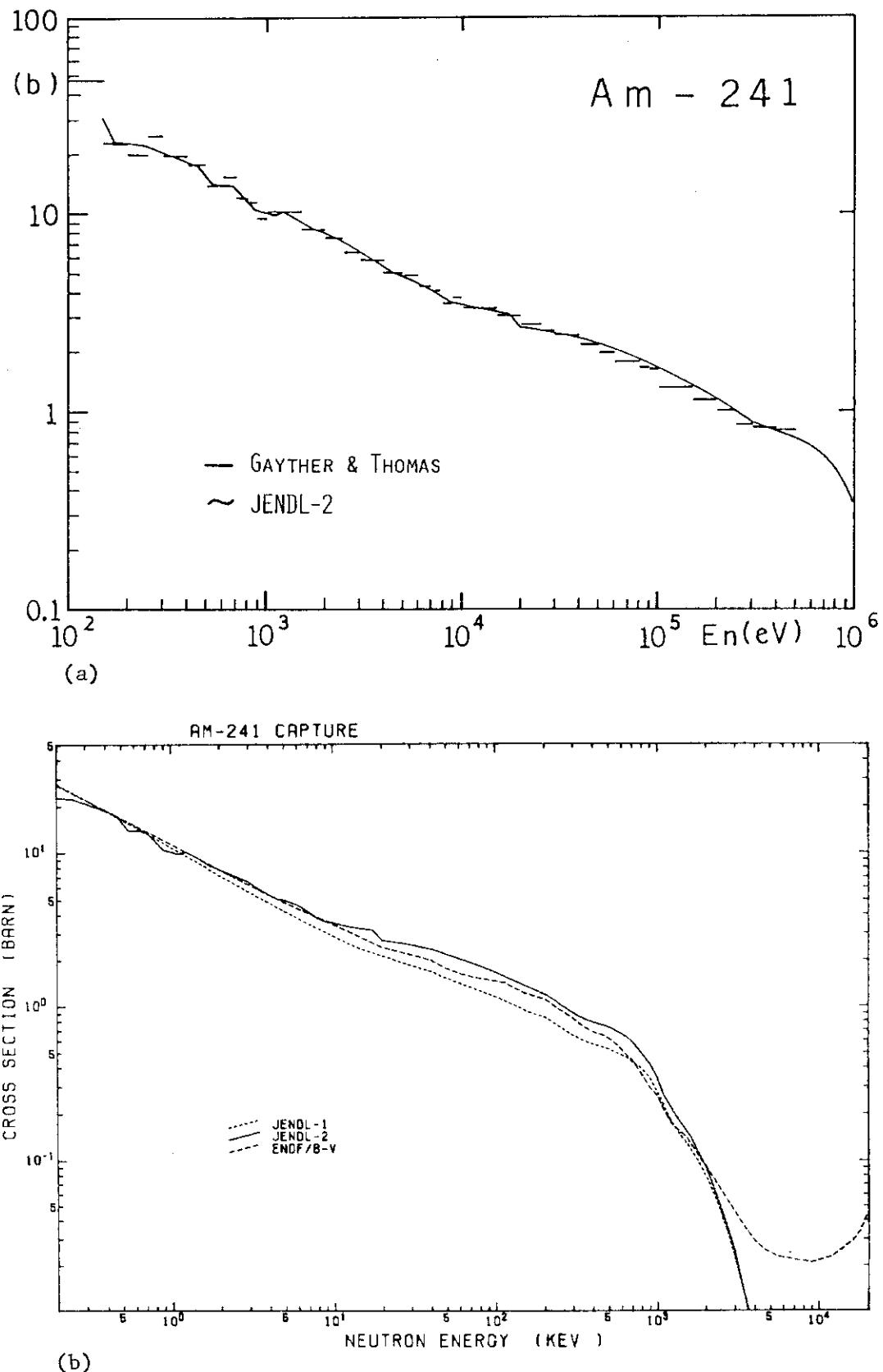
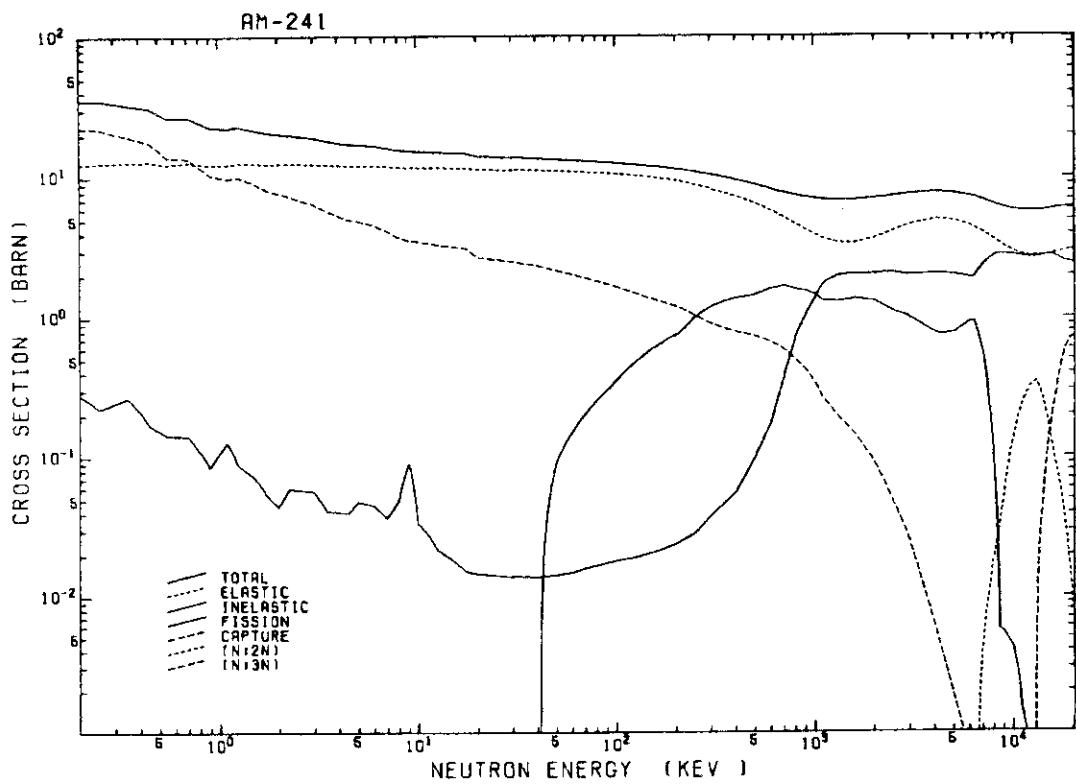
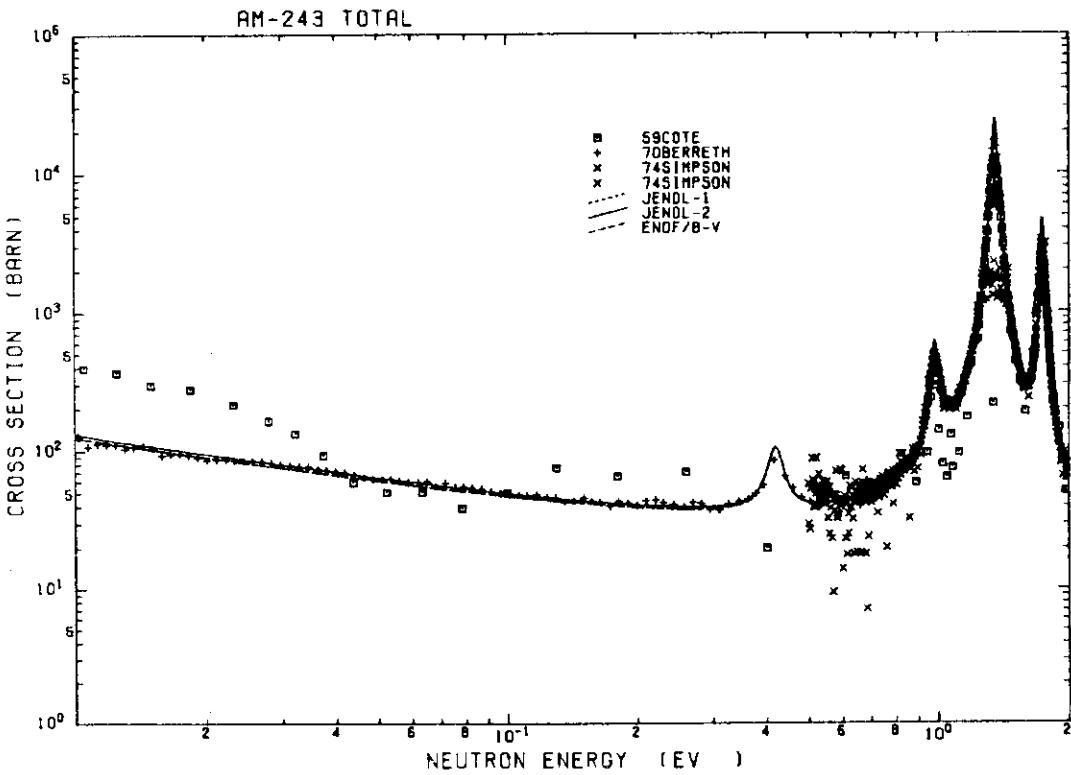
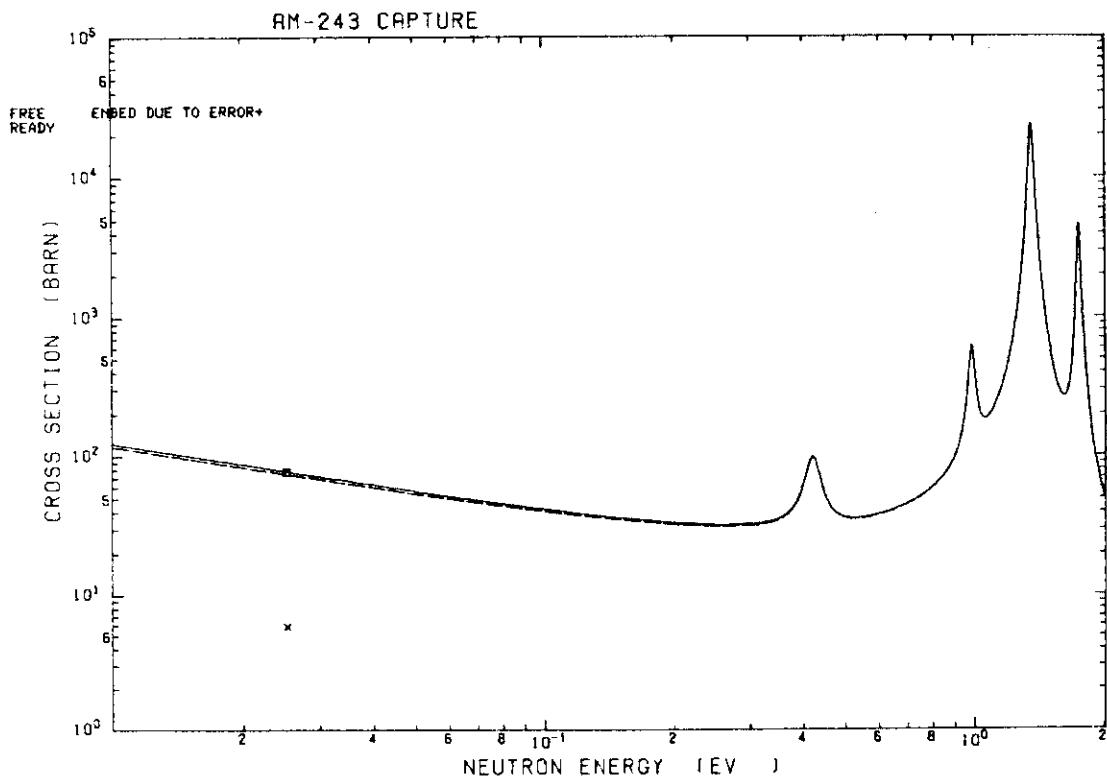
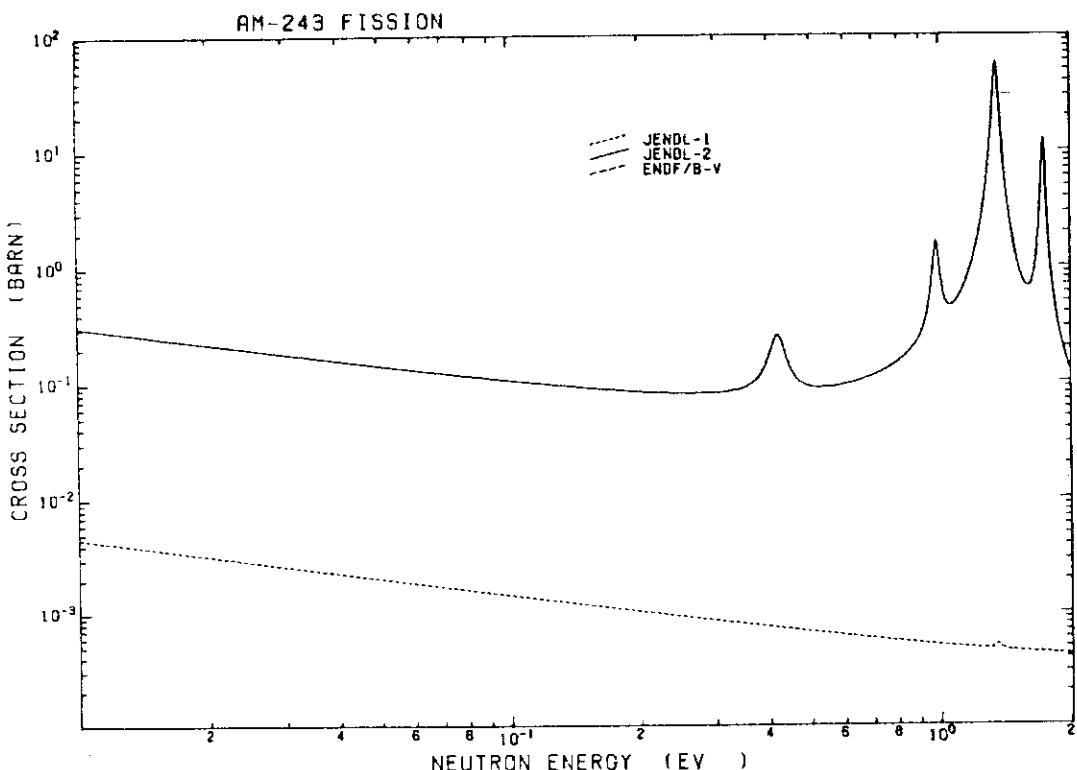


Fig. 7 Total cross section of  $^{241}\text{Am}$  calculated from the present optical potential parameters with the measured data of Phillips and Howe

Fig. 8 Capture cross section of  $^{241}\text{Am}$

Fig.9 Cross sections of  $^{241}\text{Am}$  aboveFig.10 Total cross section of  $^{243}\text{Am}$  below 2 eV

Fig.11 Capture cross section of  $^{243}\text{Am}$  below 2 eVFig.12 Fission cross section of  $^{243}\text{Am}$  below 2 eV

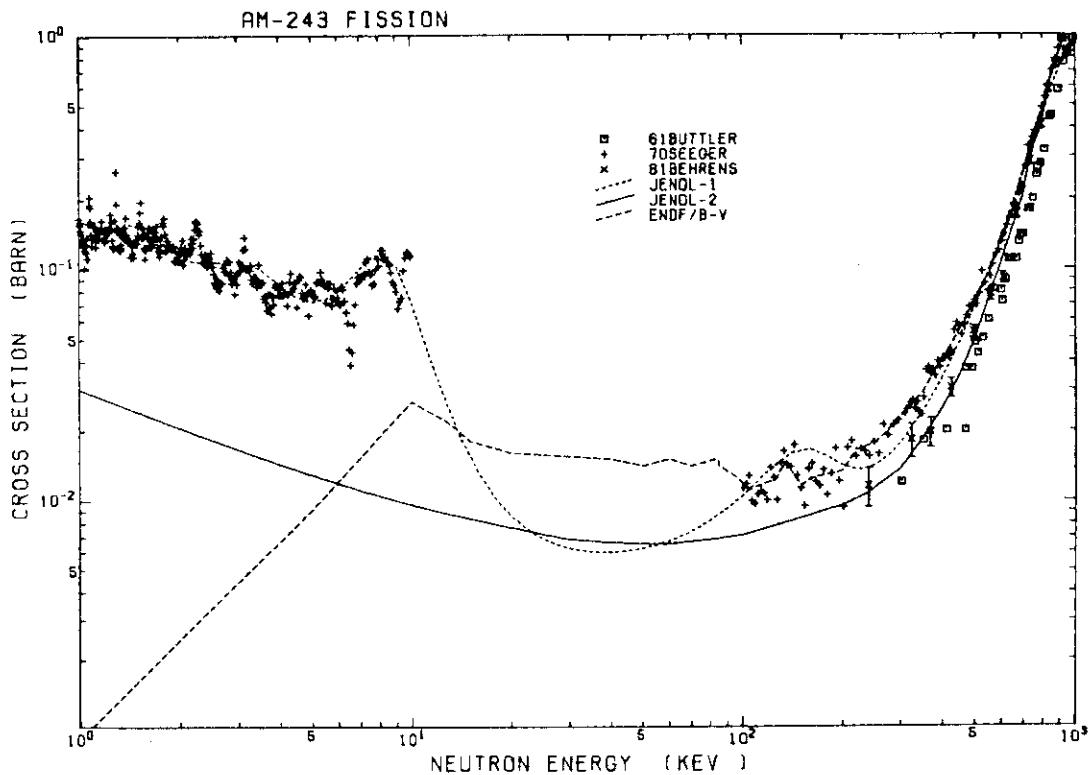


Fig.13 Fission cross section of  $^{243}\text{Am}$  in the energy range between 1 keV and 1 MeV

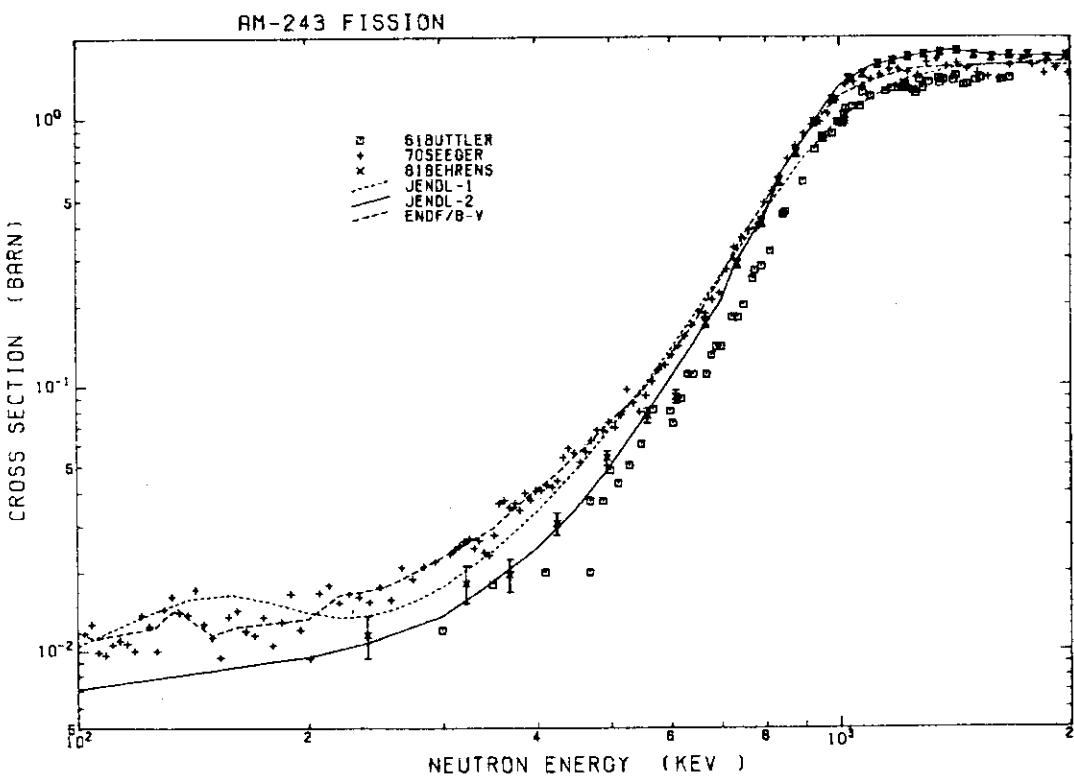


Fig.14 Fission cross section of  $^{243}\text{Am}$  in the energy range between 100 keV and 2 MeV

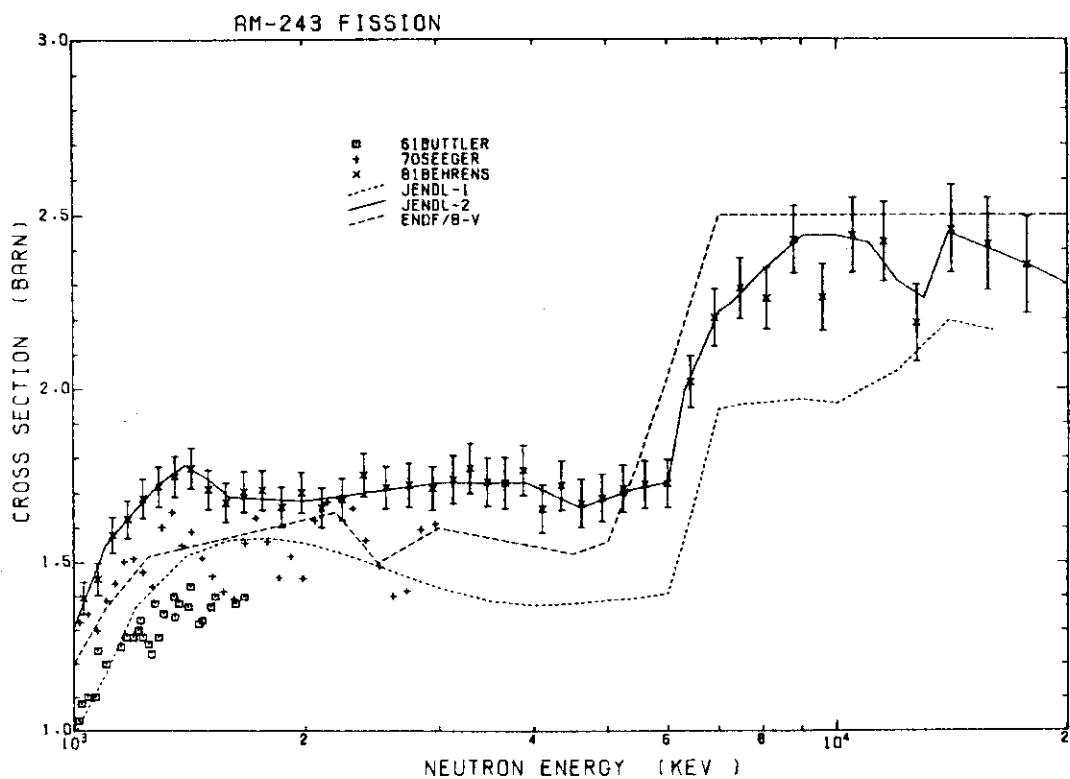


Fig.15 Fission cross section of  $^{243}\text{Am}$  in the energy range between 1 MeV and 20 MeV

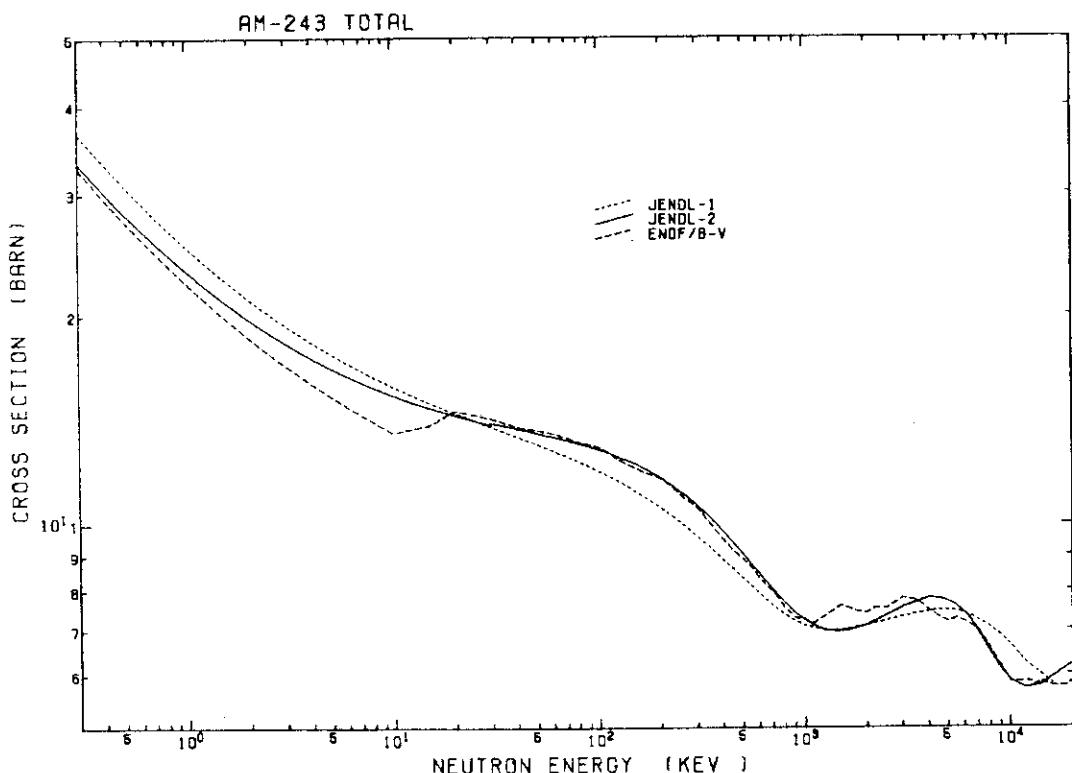
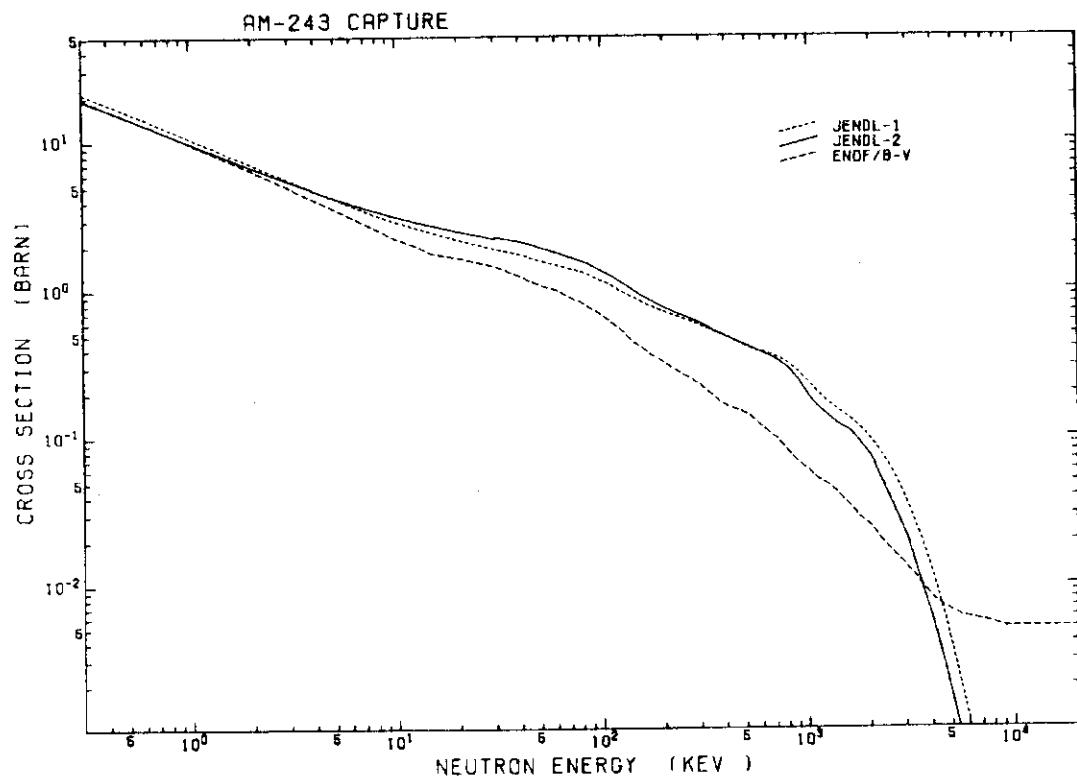
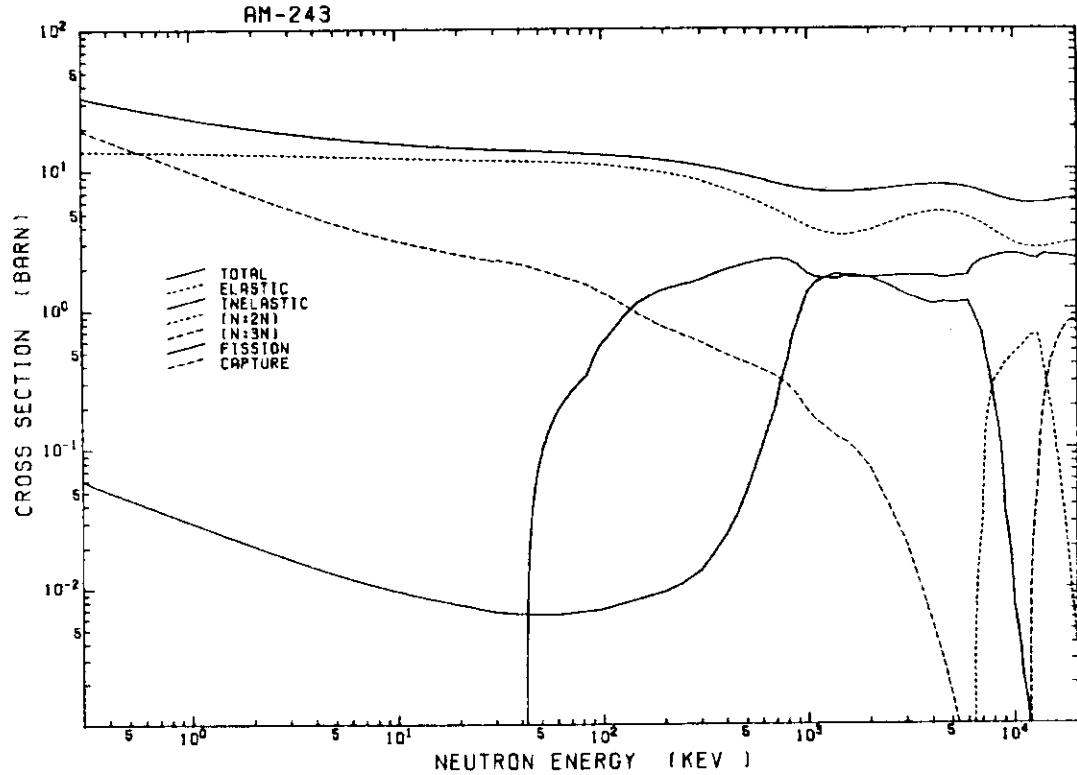


Fig.16 Total cross section of  $^{243}\text{Am}$

Fig.17 Capture cross section of  $^{243}\text{Am}$ Fig.18 Cross sections of  $^{243}\text{Am}$

Appendix

List with ENDF/B format

File 4 is omitted from the list

## Americium-241

						MAT	MF	MT	SEQ				
.....	10.....	20.....	30.....	40.....	50.....	60.....							
9.52410+	4	2.38986+	2	1	1	0	359541	1451	1				
0.0	+ 0	0.0	+ 0	0	0	1	09541	1451	2				
							9541	1451	3				
	1	451		38			9541	1451	4				
	1	452		5			9541	1451	5				
	1	455		7			9541	1451	6				
	1	456		3			9541	1451	7				
	2	151		377			9541	1451	8				
	3	1		26			9541	1451	9				
	3	2		26			9541	1451	10				
	3	4		24			9541	1451	11				
	3	16		10			9541	1451	12				
	3	17		7			9541	1451	13				
	3	18		20			9541	1451	14				
	3	37		4			9541	1451	15				
	3	51		24			9541	1451	16				
	3	52		23			9541	1451	17				
	3	53		21			9541	1451	18				
	3	54		20			9541	1451	19				
	3	55		20			9541	1451	20				
	3	56		19			9541	1451	21				
	3	57		19			9541	1451	22				
	3	58		18			9541	1451	23				
	3	59		17			9541	1451	24				
	3	60		17			9541	1451	25				
	3	61		16			9541	1451	26				
	3	62		16			9541	1451	27				
	3	63		15			9541	1451	28				
	3	64		15			9541	1451	29				
	3	65		15			9541	1451	30				
	3	66		14			9541	1451	31				
	3	91		14			9541	1451	32				
	3	102		26			9541	1451	33				
	3	251		26			9541	1451	34				
	5	16		15			9541	1451	35				
	5	17		19			9541	1451	36				
	5	18		7			9541	1451	37				
	5	91		7			9541	1451	38				
							9541	1 0	39				
9.52410+	4	2.38986+	2	0	2	0	09541	1452	40				
0.0	+ 0	0.0	+ 0	0	0	1	49541	1452	41				
	4	2		0	0	0	09541	1452	42				
1.00000-	5	3.22350+	0	6.20000+	6	4.15350+	0	8.00000+	6	4.42210+	09541	1452	43
2.00000+	7	6.22210+	0								9541	1452	44
											9541	1 0	45
9.52410+	4	2.38986+	2	0	2	0	09541	1455	46				
0.0	+ 0	0.0	+ 0	0	0	6	09541	1455	47				
1.29000-	2	3.13000-	2	1.35000-	1	3.33000-	1	1.36000+	0	4.04000+	09541	1455	48
0.0	+ 0	0.0	+ 0	0	0	0	1			49541	1455	49	

										MAT	MF	MT	SEQ	
.....	10.....	20.....	30.....	40.....	50.....	60.....								
	4	2	0	0	0	0				09541	1455		50	
1.00000-	5	4.50000-	3	6.20000+	6	4.50000-	3	8.00000+	6	3.10000-	39541	1455	51	
2.00000+	7	3.10000-	3							9541	1455		52	
										9541	1	0	53	
9.52410+	4	2.38986+	2		0		1		0	09541	1456		54	
0.0	+ 0	0.0	+ 0		0		0		2	09541	1456		55	
3.21900+	0	1.50000-	7							9541	1456		56	
										9541	1	0	57	
										9541	0	0	58	
9.52410+	4	2.38986+	2		0		0		1	09541	2151		59	
9.52410+	4	1.00000+	0		0		0		2	09541	2151		60	
1.00000-	5	1.50000+	2		1		2		0	09541	2151		61	
2.50000+	0	9.37000-	1		0		0		1	09541	2151		62	
2.38930+	2	0.0	+ 0		0		0		1164	1949541	2151		63	
-5.00000-	1	2.50000+	0	4.40590-	2	8.90300-	5	4.37700-	2	2.00000-	49541	2151		64
-4.50000-	1	2.50000+	0	4.40304-	2	6.03800-	5	4.37700-	2	2.00000-	49541	2151		65
-4.00000-	1	2.50000+	0	4.40497-	2	7.97300-	5	4.37700-	2	2.00000-	49541	2151		66
-3.20000-	1	2.50000+	0	4.40210-	2	5.09600-	5	4.37700-	2	2.00000-	49541	2151		67
-2.00000-	1	2.50000+	0	4.40249-	2	5.48800-	5	4.37700-	2	2.00000-	49541	2151		68
3.08000-	1	2.50000+	0	4.41200-	2	6.00000-	5	4.37700-	2	2.90000-	49541	2151		69
5.76000-	1	2.50000+	0	4.39850-	2	7.50000-	5	4.37700-	2	1.40000-	49541	2151		70
1.27600+	0	2.50000+	0	4.71920-	2	3.22000-	4	4.65000-	2	3.70000-	49541	2151		71
1.92800+	0	2.50000+	0	4.44930-	2	1.13000-	4	4.43000-	2	8.00000-	59541	2151		72
2.37200+	0	2.50000+	0	4.26530-	2	7.30000-	5	4.24000-	2	1.80000-	49541	2151		73
2.59800+	0	2.50000+	0	4.63170-	2	1.47000-	4	4.60000-	2	1.70000-	49541	2151		74
3.97300+	0	2.50000+	0	4.48700-	2	2.10000-	4	4.45000-	2	1.60000-	49541	2151		75
4.96800+	0	2.50000+	0	4.44150-	2	1.75000-	4	4.38000-	2	4.40000-	49541	2151		76
5.41500+	0	2.50000+	0	4.55900-	2	7.60000-	4	4.42000-	2	6.30000-	49541	2151		77
5.80000+	0	2.50000+	0	4.40010-	2	2.00000-	6	4.37700-	2	2.29000-	49541	2151		78
6.11700+	0	2.50000+	0	4.43440-	2	1.24000-	4	4.38000-	2	4.20000-	49541	2151		79
6.74500+	0	2.50000+	0	4.40180-	2	2.80000-	5	4.37700-	2	2.20000-	49541	2151		80
7.65900+	0	2.50000+	0	4.39070-	2	3.70000-	5	4.37700-	2	1.00000-	49541	2151		81
8.17300+	0	2.50000+	0	4.29280-	2	1.08000-	4	4.27000-	2	1.20000-	49541	2151		82
9.11300+	0	2.50000+	0	4.47690-	2	3.89000-	4	4.42000-	2	1.80000-	49541	2151		83
9.85100+	0	2.50000+	0	4.52560-	2	4.06000-	4	4.39000-	2	9.50000-	49541	2151		84
1.01160+	1	2.50000+	0	4.39560-	2	2.60000-	5	4.37700-	2	1.60000-	49541	2151		85
1.04030+	1	2.50000+	0	4.27860-	2	3.26000-	4	4.24000-	2	6.00000-	59541	2151		86
1.09970+	1	2.50000+	0	4.70430-	2	4.13000-	4	4.65000-	2	1.30000-	49541	2151		87
1.15830+	1	2.50000+	0	4.40150-	2	1.60000-	5	4.37700-	2	2.29000-	49541	2151		88
1.21370+	1	2.50000+	0	4.40060-	2	7.00000-	6	4.37700-	2	2.29000-	49541	2151		89
1.28790+	1	2.50000+	0	4.39610-	2	1.31000-	4	4.37700-	2	6.00000-	59541	2151		90
1.38740+	1	2.50000+	0	4.40110-	2	1.20000-	5	4.37700-	2	2.29000-	49541	2151		91
1.43600+	1	2.50000+	0	4.40700-	2	7.10000-	5	4.37700-	2	2.29000-	49541	2151		92
1.46820+	1	2.50000+	0	4.30520-	2	2.48200-	3	4.03000-	2	2.70000-	49541	2151		93
1.56890+	1	2.50000+	0	3.96440-	2	2.44000-	4	3.93000-	2	1.00000-	49541	2151		94
1.63880+	1	2.50000+	0	4.31870-	2	1.27700-	3	4.18000-	2	1.10000-	49541	2151		95
1.68490+	1	2.50000+	0	4.21660-	2	6.46000-	4	4.12000-	2	3.20000-	49541	2151		96
1.77290+	1	2.50000+	0	3.79910-	2	3.91000-	4	3.73000-	2	3.00000-	49541	2151		97
1.81670+	1	2.50000+	0	4.40160-	2	1.70000-	5	4.37700-	2	2.29000-	49541	2151		98
1.94450+	1	2.50000+	0	4.40130-	2	2.13000-	4	4.37700-	2	3.00000-	59541	2151		99
2.03330+	1	2.50000+	0	4.40330-	2	3.40000-	5	4.37700-	2	2.29000-	49541	2151		100
2.08800+	1	2.50000+	0	4.40880-	2	8.90000-	5	4.37700-	2	2.29000-	49541	2151		101
2.174400+	1	2.50000+	0	4.41210-	2	8.10000-	5	4.37700-	2	2.70000-	49541	2151		102
2.27480+	1	2.50000+	0	4.40680-	2	6.90000-	5	4.37700-	2	2.29000-	49541	2151		103
2.30790+	1	2.50000+	0	4.28870-	2	4.17000-	4	4.22000-	2	2.70000-	49541	2151		104

										MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....							
2.33370+	1	2.50000+	0	4.31150-	2	4.45000-	4	4.25000-	2	1.70000-	49541	2151	105
2.41920+	1	2.50000+	0	4.06440-	2	1.30400-	3	3.92000-	2	1.40000-	49541	2151	106
2.50080+	1	2.50000+	0	4.40130-	2	1.40000-	5	4.37700-	2	2.29000-	49541	2151	107
2.56340+	1	2.50000+	0	3.91480-	2	1.25800-	3	3.76000-	2	2.90000-	49541	2151	108
2.64980+	1	2.50000+	0	2.25370-	2	4.87000-	4	2.20000-	2	5.00000-	59541	2151	109
2.66690+	1	2.50000+	0	4.41770-	2	2.17000-	4	4.37700-	2	1.90000-	49541	2151	110
2.75750+	1	2.50000+	0	4.41640-	2	1.65000-	4	4.37700-	2	2.29000-	49541	2151	111
2.77260+	1	2.50000+	0	7.13379-	2	5.09000-	4	7.06000-	2	2.29000-	49541	2151	112
2.83550+	1	2.50000+	0	4.54300-	2	5.70000-	4	4.47000-	2	1.60000-	49541	2151	113
2.89030+	1	2.50000+	0	4.92270-	2	4.67000-	4	4.86000-	2	1.60000-	49541	2151	114
2.95040+	1	2.50000+	0	4.54010-	2	7.01000-	4	4.46000-	2	1.00000-	49541	2151	115
2.99560+	1	2.50000+	0	4.40490-	2	5.00000-	5	4.37700-	2	2.29000-	49541	2151	116
3.08220+	1	2.50000+	0	4.41490-	2	1.50000-	4	4.37700-	2	2.29000-	49541	2151	117
3.10200+	1	2.50000+	0	4.43350-	2	3.36000-	4	4.37700-	2	2.29000-	49541	2151	118
3.12510+	1	2.50000+	0	4.38160-	2	9.96000-	4	4.26000-	2	2.20000-	49541	2151	119
3.20300+	1	2.50000+	0	4.79800-	2	3.00000-	4	4.74000-	2	2.80000-	49541	2151	120
3.35100+	1	2.50000+	0	4.40590-	2	6.00000-	5	4.37700-	2	2.29000-	49541	2151	121
3.40280+	1	2.50000+	0	4.62570-	2	6.28000-	4	4.54000-	2	2.29000-	49541	2151	122
3.44600+	1	2.50000+	0	4.41240-	2	1.25000-	4	4.37700-	2	2.29000-	49541	2151	123
3.49280+	1	2.50000+	0	4.36410-	2	6.12000-	4	4.28000-	2	2.29000-	49541	2151	124
3.54850+	1	2.50000+	0	5.12560-	2	4.27000-	4	5.06000-	2	2.29000-	49541	2151	125
3.62500+	1	2.50000+	0	4.41660-	2	1.67000-	4	4.37700-	2	2.29000-	49541	2151	126
3.64830+	1	2.50000+	0	4.40990-	2	1.00000-	4	4.37700-	2	2.29000-	49541	2151	127
3.69790+	1	2.50000+	0	5.55050-	2	2.99500-	3	5.20000-	2	5.10000-	49541	2151	128
3.83660+	1	2.50000+	0	4.95600-	2	2.26000-	3	4.70000-	2	3.00000-	49541	2151	129
3.88300+	1	2.50000+	0	4.40540-	2	5.50000-	5	4.37700-	2	2.29000-	49541	2151	130
3.96170+	1	2.50000+	0	4.17101-	2	1.29500-	3	4.02000-	2	2.15100-	49541	2151	131
4.00670+	1	2.50000+	0	7.86699-	2	5.41000-	4	7.79000-	2	2.29000-	49541	2151	132
4.03960+	1	2.50000+	0	6.71769-	2	9.48000-	4	6.60000-	2	2.29000-	49541	2151	133
4.12980+	1	2.50000+	0	4.40830-	2	8.40000-	5	4.37700-	2	2.29000-	49541	2151	134
4.17910+	1	2.50000+	0	4.43540-	2	3.55000-	4	4.37700-	2	2.29000-	49541	2151	135
4.21300+	1	2.50000+	0	4.41490-	2	1.50000-	4	4.37700-	2	2.29000-	49541	2151	136
4.32940+	1	2.50000+	0	1.90340-	2	8.05000-	4	1.80000-	2	2.29000-	49541	2151	137
4.35740+	1	2.50000+	0	3.70110-	2	5.82000-	4	3.62000-	2	2.29000-	49541	2151	138
4.44160+	1	2.50000+	0	4.41170-	2	1.18000-	4	4.37700-	2	2.29000-	49541	2151	139
4.49210+	1	2.50000+	0	4.40730-	2	7.40000-	5	4.37700-	2	2.29000-	49541	2151	140
4.60730+	1	2.50000+	0	4.46940-	2	6.65000-	4	4.38000-	2	2.29000-	49541	2151	141
4.65660+	1	2.50000+	0	2.34000-	2	3.71000-	4	2.28000-	2	2.29000-	49541	2151	142
4.75350+	1	2.50000+	0	4.28820-	2	1.05300-	3	4.16000-	2	2.29000-	49541	2151	143
4.87650+	1	2.50000+	0	4.09420-	2	7.13000-	4	4.00000-	2	2.29000-	49541	2151	144
4.93320+	1	2.50000+	0	4.42190-	2	2.20000-	4	4.37700-	2	2.29000-	49541	2151	145
5.02780+	1	2.50000+	0	5.44710-	2	2.44200-	3	5.18000-	2	2.29000-	49541	2151	146
5.08470+	1	2.50000+	0	3.64220-	2	3.93000-	4	3.58000-	2	2.29000-	49541	2151	147
5.19840+	1	2.50000+	0	5.18140-	2	1.38500-	3	5.02000-	2	2.29000-	49541	2151	148
5.30140+	1	2.50000+	0	4.41640-	2	1.65000-	4	4.37700-	2	2.29000-	49541	2151	149
5.34930+	1	2.50000+	0	4.41830-	2	1.84000-	4	4.37700-	2	2.29000-	49541	2151	150
5.44070+	1	2.50000+	0	4.40720-	2	7.30000-	5	4.37700-	2	2.29000-	49541	2151	151
5.49900+	1	2.50000+	0	1.10172-	1	1.44300-	3	1.08500-	1	2.29000-	49541	2151	152
5.55950+	1	2.50000+	0	1.44212-	1	2.13000-	4	1.43770-	1	2.29000-	49541	2151	153
5.59450+	1	2.50000+	0	1.45431-	1	1.43200-	3	1.43770-	1	2.29000-	49541	2151	154
5.61580+	1	2.50000+	0	1.44948-	1	9.49000-	4	1.43770-	1	2.29000-	49541	2151	155
5.73720+	1	2.50000+	0	1.85375-	1	4.14600-	3	1.81000-	1	2.29000-	49541	2151	156
5.90660+	1	2.50000+	0	1.08018-	1	5.89000-	4	1.07200-	1	2.29000-	49541	2151	157
6.00450+	1	2.50000+	0	1.44284-	1	2.85000-	4	1.43770-	1	2.29000-	49541	2151	158
6.03810+	1	2.50000+	0	1.44139-	1	1.40000-	4	1.43770-	1	2.29000-	49541	2151	159

.....10.....20.....30.....40.....50.....60.....MAT MF MT SEQ  
 6.12580+ 1 2.50000+ 0 1.76601- 1 1.67200- 3 1.74700- 1 2.29000- 49541 2151 160  
 6.16130+ 1 2.50000+ 0 1.44433- 1 4.34000- 4 1.43770- 1 2.29000- 49541 2151 161  
 6.25490+ 1 2.50000+ 0 1.44221- 1 2.22000- 4 1.43770- 1 2.29000- 49541 2151 162  
 6.35070+ 1 2.50000+ 0 1.44198- 1 1.99000- 4 1.43770- 1 2.29000- 49541 2151 163  
 6.40390+ 1 2.50000+ 0 1.51371- 1 4.04200- 3 1.47100- 1 2.29000- 49541 2151 164  
 6.45390+ 1 2.50000+ 0 1.40483- 1 1.95400- 3 1.38300- 1 2.29000- 49541 2151 165  
 6.51640+ 1 2.50000+ 0 1.55116- 1 5.18700- 3 1.49700- 1 2.29000- 49541 2151 166  
 6.57330+ 1 2.50000+ 0 1.20119- 1 1.09000- 3 1.18800- 1 2.29000- 49541 2151 167  
 6.63140+ 1 2.50000+ 0 1.76465- 1 1.03600- 3 1.75200- 1 2.29000- 49541 2151 168  
 6.68740+ 1 2.50000+ 0 1.74234- 1 2.10500- 3 1.71900- 1 2.29000- 49541 2151 169  
 6.85250+ 1 2.50000+ 0 4.44300- 2 4.31000- 4 4.37700- 2 2.29000- 49541 2151 170  
 6.95850+ 1 2.50000+ 0 4.51150- 2 1.11600- 3 4.37700- 2 2.29000- 49541 2151 171  
 6.98240+ 1 2.50000+ 0 4.66600- 2 2.66100- 3 4.37700- 2 2.29000- 49541 2151 172  
 7.12530+ 1 2.50000+ 0 4.45820- 2 5.83000- 4 4.37700- 2 2.29000- 49541 2151 173  
 7.14630+ 1 2.50000+ 0 4.51080- 2 1.10900- 3 4.37700- 2 2.29000- 49541 2151 174  
 7.18410+ 1 2.50000+ 0 4.50330- 2 1.03400- 3 4.37700- 2 2.29000- 49541 2151 175  
 7.22760+ 1 2.50000+ 0 4.42250- 2 2.26000- 4 4.37700- 2 2.29000- 49541 2151 176  
 7.49690+ 1 2.50000+ 0 4.44800- 2 4.81000- 4 4.37700- 2 2.29000- 49541 2151 177  
 7.57150+ 1 2.50000+ 0 4.43770- 2 3.78000- 4 4.37700- 2 2.29000- 49541 2151 178  
 7.59430+ 1 2.50000+ 0 4.45140- 2 5.15000- 4 4.37700- 2 2.29000- 49541 2151 179  
 7.67790+ 1 2.50000+ 0 4.41080- 2 1.09000- 4 4.37700- 2 2.29000- 49541 2151 180  
 7.81910+ 1 2.50000+ 0 1.20150- 2 1.48600- 3 1.03000- 2 2.29000- 49541 2151 181  
 7.85510+ 1 2.50000+ 0 6.22080- 2 1.17900- 3 6.08000- 2 2.29000- 49541 2151 182  
 7.95550+ 1 2.50000+ 0 4.47290- 2 7.30000- 4 4.37700- 2 2.29000- 49541 2151 183  
 8.00500+ 1 2.50000+ 0 4.45450- 2 5.46000- 4 4.37700- 2 2.29000- 49541 2151 184  
 8.03930+ 1 2.50000+ 0 4.45870- 2 5.88000- 4 4.37700- 2 2.29000- 49541 2151 185  
 8.10770+ 1 2.50000+ 0 4.41050- 2 1.06000- 4 4.37700- 2 2.29000- 49541 2151 186  
 8.14580+ 1 2.50000+ 0 1.05871- 1 1.04200- 3 1.04600- 1 2.29000- 49541 2151 187  
 8.20890+ 1 2.50000+ 0 2.83830- 2 1.45400- 3 2.67000- 2 2.29000- 49541 2151 188  
 8.29000+ 1 2.50000+ 0 4.44380- 2 4.39000- 4 4.37700- 2 2.29000- 49541 2151 189  
 8.33700+ 1 2.50000+ 0 4.44300- 2 4.31000- 4 4.37700- 2 2.29000- 49541 2151 190  
 8.40060+ 1 2.50000+ 0 3.97850- 2 1.45600- 3 3.81000- 2 2.29000- 49541 2151 191  
 8.46850+ 1 2.50000+ 0 4.61400- 2 2.14100- 3 4.37700- 2 2.29000- 49541 2151 192  
 8.66100+ 1 2.50000+ 0 4.42240- 2 2.25000- 4 4.37700- 2 2.29000- 49541 2151 193  
 8.74810+ 1 2.50000+ 0 4.41250- 2 1.26000- 4 4.37700- 2 2.29000- 49541 2151 194  
 8.79840+ 1 2.50000+ 0 7.48469- 2 3.91800- 3 7.07000- 2 2.29000- 49541 2151 195  
 8.92970+ 1 2.50000+ 0 4.43310- 2 3.32000- 4 4.37700- 2 2.29000- 49541 2151 196  
 8.96020+ 1 2.50000+ 0 8.92929- 2 2.36400- 3 8.67000- 2 2.29000- 49541 2151 197  
 9.34120+ 1 2.50000+ 0 6.02250- 2 6.29600- 3 5.37000- 2 2.29000- 49541 2151 198  
 9.46100+ 1 2.50000+ 0 4.47530- 2 7.54000- 4 4.37700- 2 2.29000- 49541 2151 199  
 9.52850+ 1 2.50000+ 0 4.43590- 2 3.60000- 4 4.37700- 2 2.29000- 49541 2151 200  
 9.56860+ 1 2.50000+ 0 4.68620- 2 2.86300- 3 4.37700- 2 2.29000- 49541 2151 201  
 9.61000+ 1 2.50000+ 0 4.69050- 2 2.90600- 3 4.37700- 2 2.29000- 49541 2151 202  
 9.64600+ 1 2.50000+ 0 4.68330- 2 2.83400- 3 4.37700- 2 2.29000- 49541 2151 203  
 9.74230+ 1 2.50000+ 0 4.42760- 2 2.77000- 4 4.37700- 2 2.29000- 49541 2151 204  
 9.83560+ 1 2.50000+ 0 4.42640- 2 2.65000- 4 4.37700- 2 2.29000- 49541 2151 205  
 1.00156+ 2 2.50000+ 0 4.50740- 2 1.07500- 3 4.37700- 2 2.29000- 49541 2151 206  
 1.01598+ 2 2.50000+ 0 5.41540- 2 2.82500- 3 5.11000- 2 2.29000- 49541 2151 207  
 1.02555+ 2 2.50000+ 0 4.42470- 2 2.48000- 4 4.37700- 2 2.29000- 49541 2151 208  
 1.03203+ 2 2.50000+ 0 4.74090- 2 6.98000- 3 4.02000- 2 2.29000- 49541 2151 209  
 1.04788+ 2 2.50000+ 0 4.26250- 2 2.19600- 3 4.02000- 2 2.29000- 49541 2151 210  
 1.06148+ 2 2.50000+ 0 5.08230- 2 6.82400- 3 4.37700- 2 2.29000- 49541 2151 211  
 1.06396+ 2 2.50000+ 0 4.73510- 2 3.35200- 3 4.37700- 2 2.29000- 49541 2151 212  
 1.07615+ 2 2.50000+ 0 4.59240- 2 1.92500- 3 4.37700- 2 2.29000- 49541 2151 213  
 1.09824+ 2 2.50000+ 0 4.72550- 2 3.25600- 3 4.37700- 2 2.29000- 49541 2151 214

										MAT	MF	MT	SEQ
.....10.....	.....20.....	.....30.....	.....40.....	.....50.....	.....60.....								
1.10093+	2	2.50000+	0	4.73360-	2	3.33700-	3	4.37700-	2	2.29000-	49541	2151	215
1.11170+	2	2.50000+	0	4.43730-	2	3.74000-	4	4.37700-	2	2.29000-	49541	2151	216
1.11627+	2	2.50000+	0	9.97289-	2	5.20000-	3	9.43000-	2	2.29000-	49541	2151	217
1.12752+	2	2.50000+	0	4.44130-	2	4.14000-	4	4.37700-	2	2.29000-	49541	2151	218
1.13280+	2	2.50000+	0	4.42990-	2	3.00000-	4	4.37700-	2	2.29000-	49541	2151	219
1.13907+	2	2.50000+	0	7.95699-	2	1.74100-	3	7.76000-	2	2.29000-	49541	2151	220
1.15084+	2	2.50000+	0	8.13289-	2	1.80000-	3	7.93000-	2	2.29000-	49541	2151	221
1.15777+	2	2.50000+	0	4.47000-	2	7.01000-	4	4.37700-	2	2.29000-	49541	2151	222
1.16396+	2	2.50000+	0	4.48520-	2	2.62300-	3	4.20000-	2	2.29000-	49541	2151	223
1.17656+	2	2.50000+	0	4.40290-	2	3.00000-	5	4.37700-	2	2.29000-	49541	2151	224
1.18522+	2	2.50000+	0	4.48050-	2	8.06000-	4	4.37700-	2	2.29000-	49541	2151	225
1.19823+	2	2.50000+	0	4.62360-	2	2.23700-	3	4.37700-	2	2.29000-	49541	2151	226
1.20123+	2	2.50000+	0	4.59290-	2	1.93000-	3	4.37700-	2	2.29000-	49541	2151	227
1.21982+	2	2.50000+	0	4.03450-	2	3.21600-	3	3.69000-	2	2.29000-	49541	2151	228
1.22662+	2	2.50000+	0	6.83219-	2	3.89300-	3	6.42000-	2	2.29000-	49541	2151	229
1.23283+	2	2.50000+	0	6.00630-	2	3.53400-	3	5.63000-	2	2.29000-	49541	2151	230
1.24946+	2	2.50000+	0	4.56390-	2	1.64000-	3	4.37700-	2	2.29000-	49541	2151	231
1.25819+	2	2.50000+	0	4.50340-	2	1.03500-	3	4.37700-	2	2.29000-	49541	2151	232
1.26441+	2	2.50000+	0	4.60340-	2	2.03500-	3	4.37700-	2	2.29000-	49541	2151	233
1.27415+	2	2.50000+	0	4.42490-	2	2.50000-	4	4.37700-	2	2.29000-	49541	2151	234
1.27994+	2	2.50000+	0	4.56870-	2	1.68800-	3	4.37700-	2	2.29000-	49541	2151	235
1.29677+	2	2.50000+	0	4.42240-	2	2.25000-	4	4.37700-	2	2.29000-	49541	2151	236
1.30720+	2	2.50000+	0	4.53570-	2	1.35800-	3	4.37700-	2	2.29000-	49541	2151	237
1.31319+	2	2.50000+	0	5.93500-	2	3.12100-	3	5.60000-	2	2.29000-	49541	2151	238
1.32180+	2	2.50000+	0	4.48740-	2	8.75000-	4	4.37700-	2	2.29000-	49541	2151	239
1.32754+	2	2.50000+	0	4.51790-	2	1.18000-	3	4.37700-	2	2.29000-	49541	2151	240
1.33657+	2	2.50000+	0	5.41130-	2	1.78400-	3	5.21000-	2	2.29000-	49541	2151	241
1.34867+	2	2.50000+	0	5.20140-	2	8.01500-	3	4.37700-	2	2.29000-	49541	2151	242
1.35449+	2	2.50000+	0	4.81300-	2	4.13100-	3	4.37700-	2	2.29000-	49541	2151	243
1.36435+	2	2.50000+	0	5.16860-	2	5.75700-	3	4.57000-	2	2.29000-	49541	2151	244
1.37103+	2	2.50000+	0	4.52930-	2	1.29400-	3	4.37700-	2	2.29000-	49541	2151	245
1.37613+	2	2.50000+	0	4.56270-	2	1.62800-	3	4.37700-	2	2.29000-	49541	2151	246
1.38774+	2	2.50000+	0	4.47150-	2	3.88600-	3	4.06000-	2	2.29000-	49541	2151	247
1.39963+	2	2.50000+	0	4.52520-	2	1.25300-	3	4.37700-	2	2.29000-	49541	2151	248
1.40498+	2	2.50000+	0	4.64350-	2	2.43600-	3	4.37700-	2	2.29000-	49541	2151	249
1.41310+	2	2.50000+	0	4.82280-	2	4.22900-	3	4.37700-	2	2.29000-	49541	2151	250
1.41520+	2	2.50000+	0	4.72550-	2	3.25600-	3	4.37700-	2	2.29000-	49541	2151	251
1.43036+	2	2.50000+	0	4.43300-	2	3.31000-	4	4.37700-	2	2.29000-	49541	2151	252
1.44869+	2	2.50000+	0	4.54200-	2	1.42100-	3	4.37700-	2	2.29000-	49541	2151	253
1.45438+	2	2.50000+	0	4.43490-	2	3.50000-	4	4.37700-	2	2.29000-	49541	2151	254
1.46436+	2	2.50000+	0	4.57380-	2	1.73900-	3	4.37700-	2	2.29000-	49541	2151	255
1.48031+	2	2.50000+	0	5.63010-	2	1.23020-	2	4.37700-	2	2.29000-	49541	2151	256
1.49141+	2	2.50000+	0	4.79250-	2	3.92600-	3	4.37700-	2	2.29000-	49541	2151	257
1.50000+	2	3.00000+	4		2		2		0		09541	2151	258
2.50000+	0	9.37000-	1		0		0		2		09541	2151	259
2.38990+	2	0.0	+ 0		0		0		2		09541	2151	260
2.00000+	0	0.0	+ 0		2		0		168		279541	2151	261
0.0	+ 0	0.0	+ 0	0.0	+ 0	1.00000+	0	0.0	+ 0	1.00000+	09541	2151	262
1.50000+	2	1.03780+	0	0.0	+ 0	1.00750-	4	4.37700-	2	4.97820-	49541	2151	263
1.75000+	2	1.03780+	0	0.0	+ 0	8.14260-	5	4.37700-	2	6.07890-	49541	2151	264
2.50000+	2	1.03760+	0	0.0	+ 0	9.63770-	5	4.37700-	2	4.45510-	49541	2151	265
3.50000+	2	1.03740+	0	0.0	+ 0	1.02640-	4	4.37700-	2	6.07180-	49541	2151	266
4.50000+	2	1.03730+	0	0.0	+ 0	1.06580-	4	4.37700-	2	4.26000-	49541	2151	267
5.50000+	2	1.03710+	0	0.0	+ 0	9.15770-	5	4.37700-	2	4.61750-	49541	2151	268
7.00000+	2	1.03680+	0	0.0	+ 0	1.04010-	4	4.37700-	2	4.61970-	49541	2151	269

										MAT	MF	MT	SEQ
.....10.....	.....20.....	.....30.....	.....40.....	.....50.....	.....60.....								
9.00000+	2 1.03640+	0 0.0	+ 0 8.87140-	5 4.37700-	2 3.65320-	49541	2151	270					
1.10000+	3 1.03600+	0 0.0	+ 0 9.37130-	5 4.37700-	2 5.85380-	49541	2151	271					
1.25000+	3 1.03570+	0 0.0	+ 0 1.04270-	4 4.37700-	2 3.93070-	49541	2151	272					
1.50000+	3 1.03530+	0 0.0	+ 0 1.03880-	4 4.37700-	2 3.54310-	49541	2151	273					
1.75000+	3 1.03480+	0 0.0	+ 0 1.00220-	4 4.37700-	2 2.93090-	49541	2151	274					
2.00000+	3 1.03430+	0 0.0	+ 0 1.02920-	4 4.37700-	2 2.54340-	49541	2151	275					
2.25000+	3 1.03390+	0 0.0	+ 0 1.04740-	4 4.37700-	2 3.56400-	49541	2151	276					
3.00000+	3 1.03240+	0 0.0	+ 0 1.07040-	4 4.37700-	2 3.90150-	49541	2151	277					
3.50000+	3 1.03150+	0 0.0	+ 0 1.02520-	4 4.37700-	2 3.15850-	49541	2151	278					
4.50000+	3 1.02960+	0 0.0	+ 0 9.90800-	5 4.37700-	2 3.58080-	49541	2151	279					
5.00000+	3 1.02870+	0 0.0	+ 0 1.03090-	4 4.37700-	2 4.37540-	49541	2151	280					
6.00000+	3 1.02680+	0 0.0	+ 0 1.04830-	4 4.37700-	2 4.44100-	49541	2151	281					
7.00000+	3 1.02490+	0 0.0	+ 0 1.00480-	4 4.37700-	2 3.93760-	49541	2151	282					
8.00000+	3 1.02310+	0 0.0	+ 0 9.49580-	5 4.37700-	2 5.85410-	49541	2151	283					
9.00000+	3 1.02120+	0 0.0	+ 0 9.47960-	5 4.37700-	2 1.16880-	39541	2151	284					
1.00000+	4 1.01930+	0 0.0	+ 0 9.67130-	5 4.37700-	2 4.35260-	49541	2151	285					
1.25000+	4 1.01470+	0 0.0	+ 0 9.84730-	5 4.37700-	2 2.93130-	49541	2151	286					
1.75000+	4 1.00550+	0 0.0	+ 0 1.04310-	4 4.37700-	2 2.15090-	49541	2151	287					
2.00000+	4 1.00090+	0 0.0	+ 0 8.95170-	5 4.37700-	2 2.41510-	49541	2151	288					
3.00000+	4 9.82790-	1 0.0	+ 0 9.28590-	5 4.37700-	2 2.45890-	49541	2151	289					
3.00000+	0 0.0	+ 0	2	0	168		279541	2151	290				
0.0	+ 0 0.0	+ 0 0.0	+ 0 1.00000+	0 0.0	+ 0 1.00000+	09541	2151	291					
1.50000+	2 7.41300-	1 0.0	+ 0 7.19630-	5 4.37700-	2 4.97820-	49541	2151	292					
1.75000+	2 7.41260-	1 0.0	+ 0 5.81620-	5 4.37700-	2 6.07890-	49541	2151	293					
2.50000+	2 7.41170-	1 0.0	+ 0 6.88400-	5 4.37700-	2 4.45510-	49541	2151	294					
3.50000+	2 7.41030-	1 0.0	+ 0 7.33110-	5 4.37700-	2 6.07180-	49541	2151	295					
4.50000+	2 7.40900-	1 0.0	+ 0 7.61280-	5 4.37700-	2 4.26000-	49541	2151	296					
5.50000+	2 7.40760-	1 0.0	+ 0 6.54120-	5 4.37700-	2 4.61750-	49541	2151	297					
7.00000+	2 7.40560-	1 0.0	+ 0 7.42960-	5 4.37700-	2 4.61970-	49541	2151	298					
9.00000+	2 7.40280-	1 0.0	+ 0 6.33670-	5 4.37700-	2 3.65320-	49541	2151	299					
1.10000+	3 7.40020-	1 0.0	+ 0 6.69380-	5 4.37700-	2 5.85380-	49541	2151	300					
1.25000+	3 7.39810-	1 0.0	+ 0 7.44770-	5 4.37700-	2 3.93070-	49541	2151	301					
1.50000+	3 7.39470-	1 0.0	+ 0 7.41980-	5 4.37700-	2 3.54310-	49541	2151	302					
1.75000+	3 7.39130-	1 0.0	+ 0 7.15890-	5 4.37700-	2 2.93090-	49541	2151	303					
2.00000+	3 7.38800-	1 0.0	+ 0 7.35110-	5 4.37700-	2 2.54340-	49541	2151	304					
2.25000+	3 7.38470-	1 0.0	+ 0 7.48170-	5 4.37700-	2 3.56400-	49541	2151	305					
3.00000+	3 7.37450-	1 0.0	+ 0 7.64570-	5 4.37700-	2 3.90150-	49541	2151	306					
3.50000+	3 7.36780-	1 0.0	+ 0 7.32270-	5 4.37700-	2 3.15850-	49541	2151	307					
4.50000+	3 7.35430-	1 0.0	+ 0 7.07710-	5 4.37700-	2 3.58080-	49541	2151	308					
5.00000+	3 7.34770-	1 0.0	+ 0 7.36360-	5 4.37700-	2 4.37540-	49541	2151	309					
6.00000+	3 7.33420-	1 0.0	+ 0 7.48790-	5 4.37700-	2 4.44100-	49541	2151	310					
7.00000+	3 7.32080-	1 0.0	+ 0 7.17720-	5 4.37700-	2 3.93760-	49541	2151	311					
8.00000+	3 7.30750-	1 0.0	+ 0 6.78270-	5 4.37700-	2 5.85410-	49541	2151	312					
9.00000+	3 7.29410-	1 0.0	+ 0 6.77110-	5 4.37700-	2 1.16880-	39541	2151	313					
1.00000+	4 7.28080-	1 0.0	+ 0 6.90810-	5 4.37700-	2 4.35260-	49541	2151	314					
1.25000+	4 7.24770-	1 0.0	+ 0 7.03380-	5 4.37700-	2 2.93130-	49541	2151	315					
1.75000+	4 7.18190-	1 0.0	+ 0 7.45080-	5 4.37700-	2 2.15090-	49541	2151	316					
2.00000+	4 7.14920-	1 0.0	+ 0 6.39410-	5 4.37700-	2 2.41510-	49541	2151	317					
3.00000+	4 7.01990-	1 0.0	+ 0 6.63280-	5 4.37700-	2 2.45890-	49541	2151	318					
2.38990+	2 0.0	+ 0	1	0	4		09541	2151	319				
1.00000+	0 0.0	+ 0	2	0	168		279541	2151	320				
0.0	+ 0 0.0	+ 0 0.0	+ 0 1.00000+	0 0.0	+ 0 1.00000+	09541	2151	321					
1.50000+	2 1.72970+	0 0.0	+ 0 3.94170-	4 4.37700-	2 4.97820-	49541	2151	322					
1.75000+	2 1.72960+	0 0.0	+ 0 3.18580-	4 4.37700-	2 6.07890-	49541	2151	323					
2.50000+	2 1.72940+	0 0.0	+ 0 3.77070-	4 4.37700-	2 4.45510-	49541	2151	324					

										MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....							
3.50000+	2	1.72910+	0	0.0	+ 0	4.01560-	4	4.37700-	2	6.07180-	49541	2151	325
4.50000+	2	1.72880+	0	0.0	+ 0	4.16980-	4	4.37700-	2	4.26000-	49541	2151	326
5.50000+	2	1.72850+	0	0.0	+ 0	3.58290-	4	4.37700-	2	4.61750-	49541	2151	327
7.00000+	2	1.72800+	0	0.0	+ 0	4.06950-	4	4.37700-	2	4.61970-	49541	2151	328
9.00000+	2	1.72730+	0	0.0	+ 0	3.47090-	4	4.37700-	2	3.65320-	49541	2151	329
1.10000+	3	1.72670+	0	0.0	+ 0	3.66650-	4	4.37700-	2	5.85380-	49541	2151	330
1.25000+	3	1.72620+	0	0.0	+ 0	4.07940-	4	4.37700-	2	3.93070-	49541	2151	331
1.50000+	3	1.72540+	0	0.0	+ 0	4.06420-	4	4.37700-	2	3.54310-	49541	2151	332
1.75000+	3	1.72460+	0	0.0	+ 0	3.92120-	4	4.37700-	2	2.93090-	49541	2151	333
2.00000+	3	1.72390+	0	0.0	+ 0	4.02650-	4	4.37700-	2	2.54340-	49541	2151	334
2.25000+	3	1.72310+	0	0.0	+ 0	4.09810-	4	4.37700-	2	3.56400-	49541	2151	335
3.00000+	3	1.72070+	0	0.0	+ 0	4.18790-	4	4.37700-	2	3.90150-	49541	2151	336
3.50000+	3	1.71920+	0	0.0	+ 0	4.01100-	4	4.37700-	2	3.15850-	49541	2151	337
4.50000+	3	1.71600+	0	0.0	+ 0	3.87640-	4	4.37700-	2	3.58080-	49541	2151	338
5.00000+	3	1.71450+	0	0.0	+ 0	4.03340-	4	4.37700-	2	4.37540-	49541	2151	339
6.00000+	3	1.71130+	0	0.0	+ 0	4.10150-	4	4.37700-	2	4.44100-	49541	2151	340
7.00000+	3	1.70820+	0	0.0	+ 0	3.93120-	4	4.37700-	2	3.93760-	49541	2151	341
8.00000+	3	1.70510+	0	0.0	+ 0	3.71520-	4	4.37700-	2	5.85410-	49541	2151	342
9.00000+	3	1.70200+	0	0.0	+ 0	3.70880-	4	4.37700-	2	1.16880-	39541	2151	343
1.00000+	4	1.69890+	0	0.0	+ 0	3.78380-	4	4.37700-	2	4.35260-	49541	2151	344
1.25000+	4	1.69110+	0	0.0	+ 0	3.85270-	4	4.37700-	2	2.93130-	49541	2151	345
1.75000+	4	1.67580+	0	0.0	+ 0	4.08110-	4	4.37700-	2	2.15090-	49541	2151	346
2.00000+	4	1.66810+	0	0.0	+ 0	3.50230-	4	4.37700-	2	2.41510-	49541	2151	347
3.00000+	4	1.63800+	0	0.0	+ 0	3.63300-	4	4.37700-	2	2.45890-	49541	2151	348
2.00000+	0	0.0	+ 0		2	0	168			279541	2151	349	
0.0	+ 0	0.0	+ 0	0.0	+ 0	2.00000+	0	0.0	+ 0	1.00000+	09541	2151	350
1.50000+	2	1.03780+	0	0.0	+ 0	2.36500-	4	4.37700-	2	4.97820-	49541	2151	351
1.75000+	2	1.03780+	0	0.0	+ 0	1.91150-	4	4.37700-	2	6.07890-	49541	2151	352
2.50000+	2	1.03760+	0	0.0	+ 0	2.26240-	4	4.37700-	2	4.45510-	49541	2151	353
3.50000+	2	1.03740+	0	0.0	+ 0	2.40930-	4	4.37700-	2	6.07180-	49541	2151	354
4.50000+	2	1.03730+	0	0.0	+ 0	2.50190-	4	4.37700-	2	4.26000-	49541	2151	355
5.50000+	2	1.03710+	0	0.0	+ 0	2.14970-	4	4.37700-	2	4.61750-	49541	2151	356
7.00000+	2	1.03680+	0	0.0	+ 0	2.44170-	4	4.37700-	2	4.61970-	49541	2151	357
9.00000+	2	1.03640+	0	0.0	+ 0	2.08250-	4	4.37700-	2	3.65320-	49541	2151	358
1.10000+	3	1.03600+	0	0.0	+ 0	2.19990-	4	4.37700-	2	5.85380-	49541	2151	359
1.25000+	3	1.03570+	0	0.0	+ 0	2.44770-	4	4.37700-	2	3.93070-	49541	2151	360
1.50000+	3	1.03530+	0	0.0	+ 0	2.43850-	4	4.37700-	2	3.54310-	49541	2151	361
1.75000+	3	1.03480+	0	0.0	+ 0	2.35270-	4	4.37700-	2	2.93090-	49541	2151	362
2.00000+	3	1.03430+	0	0.0	+ 0	2.41590-	4	4.37700-	2	2.54340-	49541	2151	363
2.25000+	3	1.03390+	0	0.0	+ 0	2.45880-	4	4.37700-	2	3.56400-	49541	2151	364
3.00000+	3	1.03240+	0	0.0	+ 0	2.51270-	4	4.37700-	2	3.90150-	49541	2151	365
3.50000+	3	1.03150+	0	0.0	+ 0	2.40660-	4	4.37700-	2	3.15850-	49541	2151	366
4.50000+	3	1.02960+	0	0.0	+ 0	2.32590-	4	4.37700-	2	3.58080-	49541	2151	367
5.00000+	3	1.02870+	0	0.0	+ 0	2.42000-	4	4.37700-	2	4.37540-	49541	2151	368
6.00000+	3	1.02680+	0	0.0	+ 0	2.46090-	4	4.37700-	2	4.44100-	49541	2151	369
7.00000+	3	1.02490+	0	0.0	+ 0	2.35870-	4	4.37700-	2	3.93760-	49541	2151	370
8.00000+	3	1.02310+	0	0.0	+ 0	2.22910-	4	4.37700-	2	5.85410-	49541	2151	371
9.00000+	3	1.02120+	0	0.0	+ 0	2.22530-	4	4.37700-	2	1.16880-	39541	2151	372
1.00000+	4	1.01930+	0	0.0	+ 0	2.27030-	4	4.37700-	2	4.35260-	49541	2151	373
1.25000+	4	1.01470+	0	0.0	+ 0	2.31160-	4	4.37700-	2	2.93130-	49541	2151	374
1.75000+	4	1.00550+	0	0.0	+ 0	2.44870-	4	4.37700-	2	2.15090-	49541	2151	375
2.00000+	4	1.00090+	0	0.0	+ 0	2.10140-	4	4.37700-	2	2.41510-	49541	2151	376
3.00000+	4	9.82790-	1	0.0	+ 0	2.17980-	4	4.37700-	2	2.45890-	49541	2151	377
3.00000+	0	0.0	+ 0		2	0	168			279541	2151	378	
0.0	+ 0	0.0	+ 0	0.0	+ 0	2.00000+	0	0.0	+ 0	1.00000+	09541	2151	379

.....10.....20.....30.....40.....50.....60.....MAT MF MT SEQ

1.50000+ 2 7.41300- 1 0.0 + 0 1.68930- 4 4.37700- 2 4.97820- 49541 2151 380  
 1.75000+ 2 7.41260- 1 0.0 + 0 1.36530- 4 4.37700- 2 6.07890- 49541 2151 381  
 2.50000+ 2 7.41170- 1 0.0 + 0 1.61600- 4 4.37700- 2 4.45510- 49541 2151 382  
 3.50000+ 2 7.41030- 1 0.0 + 0 1.72100- 4 4.37700- 2 6.07180- 49541 2151 383  
 4.50000+ 2 7.40900- 1 0.0 + 0 1.78710- 4 4.37700- 2 4.26000- 49541 2151 384  
 5.50000+ 2 7.40760- 1 0.0 + 0 1.53550- 4 4.37700- 2 4.61750- 49541 2151 385  
 7.00000+ 2 7.40560- 1 0.0 + 0 1.74410- 4 4.37700- 2 4.61970- 49541 2151 386  
 9.00000+ 2 7.40280- 1 0.0 + 0 1.48750- 4 4.37700- 2 3.65320- 49541 2151 387  
 1.10000+ 3 7.40020- 1 0.0 + 0 1.57130- 4 4.37700- 2 5.85380- 49541 2151 388  
 1.25000+ 3 7.39810- 1 0.0 + 0 1.74830- 4 4.37700- 2 3.93070- 49541 2151 389  
 1.50000+ 3 7.39470- 1 0.0 + 0 1.74180- 4 4.37700- 2 3.54310- 49541 2151 390  
 1.75000+ 3 7.39130- 1 0.0 + 0 1.68050- 4 4.37700- 2 2.93090- 49541 2151 391  
 2.00000+ 3 7.38800- 1 0.0 + 0 1.72560- 4 4.37700- 2 2.54340- 49541 2151 392  
 2.25000+ 3 7.38470- 1 0.0 + 0 1.75630- 4 4.37700- 2 3.56400- 49541 2151 393  
 3.00000+ 3 7.37450- 1 0.0 + 0 1.79480- 4 4.37700- 2 3.90150- 49541 2151 394  
 3.50000+ 3 7.36780- 1 0.0 + 0 1.71900- 4 4.37700- 2 3.15850- 49541 2151 395  
 4.50000+ 3 7.35430- 1 0.0 + 0 1.66130- 4 4.37700- 2 3.58080- 49541 2151 396  
 5.00000+ 3 7.34770- 1 0.0 + 0 1.72860- 4 4.37700- 2 4.37540- 49541 2151 397  
 6.00000+ 3 7.33420- 1 0.0 + 0 1.75780- 4 4.37700- 2 4.44100- 49541 2151 398  
 7.00000+ 3 7.32080- 1 0.0 + 0 1.68480- 4 4.37700- 2 3.93760- 49541 2151 399  
 8.00000+ 3 7.30750- 1 0.0 + 0 1.59220- 4 4.37700- 2 5.85410- 49541 2151 400  
 9.00000+ 3 7.29410- 1 0.0 + 0 1.58950- 4 4.37700- 2 1.16880- 39541 2151 401  
 1.00000+ 4 7.28080- 1 0.0 + 0 1.62160- 4 4.37700- 2 4.35260- 49541 2151 402  
 1.25000+ 4 7.24770- 1 0.0 + 0 1.65120- 4 4.37700- 2 2.93130- 49541 2151 403  
 1.75000+ 4 7.18190- 1 0.0 + 0 1.74900- 4 4.37700- 2 2.15090- 49541 2151 404  
 2.00000+ 4 7.14920- 1 0.0 + 0 1.50100- 4 4.37700- 2 2.41510- 49541 2151 405  
 3.00000+ 4 7.01990- 1 0.0 + 0 1.55700- 4 4.37700- 2 2.45890- 49541 2151 406  
 4.00000+ 0 0.0 + 0 2 0 168 279541 2151 407  
 0.0 + 0 0.0 + 0 0.0 + 0 1.00000+ 0 0.0 + 0 1.00000+ 09541 2151 408  
 1.50000+ 2 5.76570- 1 0.0 + 0 1.31390- 4 4.37700- 2 4.97820- 49541 2151 409  
 1.75000+ 2 5.76540- 1 0.0 + 0 1.06190- 4 4.37700- 2 6.07890- 49541 2151 410  
 2.50000+ 2 5.76470- 1 0.0 + 0 1.25690- 4 4.37700- 2 4.45510- 49541 2151 411  
 3.50000+ 2 5.76360- 1 0.0 + 0 1.33850- 4 4.37700- 2 6.07180- 49541 2151 412  
 4.50000+ 2 5.76250- 1 0.0 + 0 1.38990- 4 4.37700- 2 4.26000- 49541 2151 413  
 5.50000+ 2 5.76150- 1 0.0 + 0 1.19430- 4 4.37700- 2 4.61750- 49541 2151 414  
 7.00000+ 2 5.75990- 1 0.0 + 0 1.35650- 4 4.37700- 2 4.61970- 49541 2151 415  
 9.00000+ 2 5.75780- 1 0.0 + 0 1.15700- 4 4.37700- 2 3.65320- 49541 2151 416  
 1.10000+ 3 5.75570- 1 0.0 + 0 1.22220- 4 4.37700- 2 5.85380- 49541 2151 417  
 1.25000+ 3 5.75410- 1 0.0 + 0 1.35980- 4 4.37700- 2 3.93070- 49541 2151 418  
 1.50000+ 3 5.75140- 1 0.0 + 0 1.35470- 4 4.37700- 2 3.54310- 49541 2151 419  
 1.75000+ 3 5.74880- 1 0.0 + 0 1.30710- 4 4.37700- 2 2.93090- 49541 2151 420  
 2.00000+ 3 5.74630- 1 0.0 + 0 1.34220- 4 4.37700- 2 2.54340- 49541 2151 421  
 2.25000+ 3 5.74360- 1 0.0 + 0 1.36600- 4 4.37700- 2 3.56400- 49541 2151 422  
 3.00000+ 3 5.73570- 1 0.0 + 0 1.39600- 4 4.37700- 2 3.90150- 49541 2151 423  
 3.50000+ 3 5.73050- 1 0.0 + 0 1.33700- 4 4.37700- 2 3.15850- 49541 2151 424  
 4.50000+ 3 5.72000- 1 0.0 + 0 1.29210- 4 4.37700- 2 3.58080- 49541 2151 425  
 5.00000+ 3 5.71490- 1 0.0 + 0 1.34450- 4 4.37700- 2 4.37540- 49541 2151 426  
 6.00000+ 3 5.70440- 1 0.0 + 0 1.36720- 4 4.37700- 2 4.44100- 49541 2151 427  
 7.00000+ 3 5.69400- 1 0.0 + 0 1.31040- 4 4.37700- 2 3.93760- 49541 2151 428  
 8.00000+ 3 5.68360- 1 0.0 + 0 1.23840- 4 4.37700- 2 5.85410- 49541 2151 429  
 9.00000+ 3 5.67320- 1 0.0 + 0 1.23630- 4 4.37700- 2 1.16880- 39541 2151 430  
 1.00000+ 4 5.66290- 1 0.0 + 0 1.26130- 4 4.37700- 2 4.35260- 49541 2151 431  
 1.25000+ 4 5.63710- 1 0.0 + 0 1.28420- 4 4.37700- 2 2.93130- 49541 2151 432  
 1.75000+ 4 5.58590- 1 0.0 + 0 1.36040- 4 4.37700- 2 2.15090- 49541 2151 433  
 2.00000+ 4 5.56050- 1 0.0 + 0 1.16740- 4 4.37700- 2 2.41510- 49541 2151 434

							MAT	MF	MT	SEQ				
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....		
3.00000+	4	5.45990-	1	0.0	+ 0	1.21100-	4	4.37700-	2	2.45890-	49541	2151	435	
											9541	2	436	
											9541	0	437	
9.52410+	4	2.38986+	2		0	.	99		0		09541	3	1	438
0.0	+ 0	0.0	+ 0		0		0		2		689541	3	1	439
3			2		68		5		0		09541	3	1	440
1.00000-	5	0.0	+ 0	2.53000-	2	0.0	+ 0	3.00000+	4	0.0	+ 09541	3	1	441
3.00000+	4	1.39349+	1	4.00000+	4	1.36328+	1	4.13724+	4	1.35983+	19541	3	1	442
5.00000+	4	1.34052+	1	6.00000+	4	1.32168+	1	7.00000+	4	1.30508+	19541	3	1	443
9.00000+	4	1.27571+	1	9.39917+	4	1.27023+	1	1.00000+	5	1.26216+	19541	3	1	444
1.25000+	5	1.23022+	1	1.50000+	5	1.20008+	1	1.58661+	5	1.18995+	19541	3	1	445
1.75000+	5	1.17122+	1	2.00000+	5	1.14344+	1	2.06762+	5	1.13610+	19541	3	1	446
2.34979+	5	1.10623+	1	2.50000+	5	1.09083+	1	2.72134+	5	1.06878+	19541	3	1	447
3.00000+	5	1.04212+	1	3.20335+	5	1.02339+	1	3.50000+	5	9.97207+	09541	3	1	448
3.76569+	5	9.74892+	0	4.00000+	5	9.56091+	0	4.73774+	5	9.02172+	09541	3	1	449
5.00000+	5	8.84884+	0	5.06611+	5	8.80678+	0	5.51297+	5	8.53854+	09541	3	1	450
6.00000+	5	8.27602+	0	6.25707+	5	8.14955+	0	6.39565+	5	8.08474+	09541	3	1	451
6.54829+	5	8.01602+	0	6.55933+	5	8.01116+	0	6.73004+	5	7.93777+	09541	3	1	452
7.00000+	5	7.82852+	0	7.35063+	5	7.69862+	0	8.00000+	5	7.49159+	09541	3	1	453
9.00000+	5	7.24881+	0	1.00000+	6	7.08303+	0	1.10000+	6	6.97792+	09541	3	1	454
1.20000+	6	6.91871+	0	1.30000+	6	6.89307+	0	1.40000+	6	6.89125+	09541	3	1	455
1.60000+	6	6.93352+	0	2.00000+	6	7.10276+	0	2.20000+	6	7.20395+	09541	3	1	456
2.50000+	6	7.35885+	0	2.85000+	6	7.52700+	0	3.00000+	6	7.59048+	09541	3	1	457
4.00000+	6	7.79799+	0	4.25000+	6	7.78754+	0	5.00000+	6	7.65729+	09541	3	1	458
6.00000+	6	7.34001+	0	6.30000+	6	7.21209+	0	6.61000+	6	7.06661+	09541	3	1	459
7.00000+	6	6.87325+	0	7.50000+	6	6.62688+	0	8.00000+	6	6.40089+	09541	3	1	460
8.35000+	6	6.26067+	0	8.50000+	6	6.20577+	0	9.00000+	6	6.04639+	09541	3	1	461
1.00000+	7	5.83188+	0	1.10000+	7	5.72500+	0	1.20000+	7	5.68417+	09541	3	1	462
1.40000+	7	5.74149+	0	2.00000+	7	6.18838+	0			9541	3	1	463	
										9541	3	0	464	
9.52410+	4	2.38986+	2		0		0		0		09541	3	2	465
0.0	+ 0	0.0	+ 0		0		0		2		689541	3	2	466
3			2		68		5		0		09541	3	2	467
1.00000-	5	0.0	+ 0	2.53000-	2	0.0	+ 0	3.00000+	4	0.0	+ 09541	3	2	468
3.00000+	4	1.13962+	1	4.00000+	4	1.12602+	1	4.13724+	4	1.12445+	19541	3	2	469
5.00000+	4	1.11215+	1	6.00000+	4	1.10099+	1	7.00000+	4	1.09038+	19541	3	2	470
9.00000+	4	1.06954+	1	9.39917+	4	1.06538+	1	1.00000+	5	1.05887+	19541	3	2	471
1.25000+	5	1.03061+	1	1.50000+	5	1.00206+	1	1.58661+	5	9.92252+	09541	3	2	472
1.75000+	5	9.73742+	0	2.00000+	5	9.45891+	0	2.06762+	5	9.38490+	09541	3	2	473
2.34979+	5	9.03112+	0	2.50000+	5	8.83974+	0	2.72134+	5	8.58719+	09541	3	2	474
3.00000+	5	8.28238+	0	3.20335+	5	8.07607+	0	3.50000+	5	7.79200+	09541	3	2	475
3.76569+	5	7.55243+	0	4.00000+	5	7.35140+	0	4.73774+	5	6.76693+	09541	3	2	476
5.00000+	5	6.56674+	0	5.06611+	5	6.51678+	0	5.51297+	5	6.17709+	09541	3	2	477
6.00000+	5	5.83278+	0	6.25707+	5	5.65744+	0	6.39565+	5	5.56557+	09541	3	2	478
6.54829+	5	5.46701+	0	6.55933+	5	5.45983+	0	6.73004+	5	5.34869+	09541	3	2	479
7.00000+	5	5.18294+	0	7.35063+	5	4.97573+	0	8.00000+	5	4.63792+	09541	3	2	480
9.00000+	5	4.23031+	0	1.00000+	6	3.90987+	0	1.10000+	6	3.66763+	09541	3	2	481
1.20000+	6	3.52266+	0	1.30000+	6	3.43097+	0	1.40000+	6	3.38720+	09541	3	2	482
1.60000+	6	3.40029+	0	2.00000+	6	3.66531+	0	2.20000+	6	3.85295+	09541	3	2	483
2.50000+	6	4.14535+	0	2.85000+	6	4.45487+	0	3.00000+	6	4.56862+	09541	3	2	484
4.00000+	6	4.97995+	0	4.25000+	6	4.99393+	0	5.00000+	6	4.87639+	09541	3	2	485
6.00000+	6	4.49538+	0	6.30000+	6	4.35706+	0	6.61000+	6	4.20885+	09541	3	2	486
7.00000+	6	4.01955+	0	7.50000+	6	3.78117+	0	8.00000+	6	3.55771+	09541	3	2	487
8.35000+	6	3.41452+	0	8.50000+	6	3.35705+	0	9.00000+	6	3.18394+	09541	3	2	488
1.00000+	7	2.92666+	0	1.10000+	7	2.77821+	0	1.20000+	7	2.71106+	09541	3	2	489

										MAT	MF	MT	SEQ	
.....	10.....	20.....	30.....	40.....	50.....	60.....								
1.40000+	7	2.72235+	0	2.00000+	7	3.02251+	0			9541	3	2	490	
										9541	3	0	491	
9.52410+	4	2.38986+	2		0	99		0		09541	3	4	492	
0.0	+ 0	-4.12000+	4		0	0		1		639541	3	4	493	
63			3		0	0		0		09541	3	4	494	
4.13724+	4	0.0	+ 0	5.00000+	4	9.30624-	2	6.00000+	4	1.51166-	19541	3	4	495
7.00000+	4	2.05112-	1	9.00000+	4	3.01061-	1	9.39917+	4	3.18134-	19541	3	4	496
1.00000+	5	3.50538-	1	1.25000+	5	4.82639-	1	1.50000+	5	5.90473-	19541	3	4	497
1.58661+	5	6.21653-	1	1.75000+	5	6.79060-	1	2.00000+	5	7.51406-	19541	3	4	498
2.06762+	5	7.67980-	1	2.34979+	5	9.17880-	1	2.50000+	5	1.00874+	09541	3	4	499
2.72134+	5	1.09479+	0	3.00000+	5	1.19233+	0	3.20335+	5	1.24268+	09541	3	4	500
3.50000+	5	1.30055+	0	3.76569+	5	1.33940+	0	4.00000+	5	1.36727+	09541	3	4	501
4.73774+	5	1.41887+	0	5.00000+	5	1.45027+	0	5.06611+	5	1.45679+	09541	3	4	502
5.51297+	5	1.52638+	0	6.00000+	5	1.60248+	0	6.25707+	5	1.61686+	09541	3	4	503
6.39565+	5	1.62557+	0	6.54829+	5	1.63593+	0	6.55933+	5	1.63706+	09541	3	4	504
6.73004+	5	1.65483+	0	7.00000+	5	1.67743+	0	7.35063+	5	1.65033+	09541	3	4	505
8.00000+	5	1.58517+	0	9.00000+	5	1.54740+	0	1.00000+	6	1.46256+	09541	3	4	506
1.10000+	6	1.30954+	0	1.20000+	6	1.31072+	0	1.30000+	6	1.29726+	09541	3	4	507
1.40000+	6	1.31949+	0	1.60000+	6	1.36056+	0	2.00000+	6	1.30738+	09541	3	4	508
2.20000+	6	1.21269+	0	2.50000+	6	1.09769+	0	2.85000+	6	1.03201+	09541	3	4	509
3.00000+	6	9.87241-	1	4.00000+	6	7.71816-	1	4.25000+	6	7.49158-	19541	3	4	510
5.00000+	6	7.69069-	1	6.00000+	6	9.23931-	1	6.30000+	6	9.34513-	19541	3	4	511
6.61000+	6	7.57462-	1	7.00000+	6	5.49550-	1	7.50000+	6	2.35670-	19541	3	4	512
8.00000+	6	7.31733-	2	8.35000+	6	1.81471-	2	8.50000+	6	5.71939-	39541	3	4	513
9.00000+	6	5.44311-	3	1.00000+	7	4.12021-	3	1.10000+	7	1.48972-	39541	3	4	514
1.20000+	7	7.02535-	4	1.40000+	7	4.22087-	5	2.00000+	7	7.07914-	59541	3	4	515
										9541	3	0	516	
9.52410+	4	2.38986+	2		0	99		0		09541	3	16	517	
0.0	+ 0	-6.58250+	6		0	0		1		219541	3	16	518	
21			2		0	0		0		09541	3	16	519	
6.61000+	6	0.0	+ 0	7.00000+	6	4.00000-	3	7.50000+	6	1.00000-	29541	3	16	520
8.00000+	6	2.00000-	2	8.35000+	6	2.80000-	2	8.50000+	6	3.30000-	29541	3	16	521
9.00000+	6	5.71000-	2	1.00000+	7	1.41890-	1	1.10000+	7	2.35280-	19541	3	16	522
1.20000+	7	3.12440-	1	1.30000+	7	3.42810-	1	1.40000+	7	2.62410-	19541	3	16	523
1.45000+	7	2.05330-	1	1.50000+	7	1.62050-	1	1.55000+	7	1.26200-	19541	3	16	524
1.60000+	7	9.73230-	2	1.65000+	7	7.85100-	2	1.70000+	7	6.48540-	29541	3	16	525
1.80000+	7	3.76830-	2	1.90000+	7	1.83810-	2	2.00000+	7	8.02520-	39541	3	16	526
										9541	3	0	527	
9.52410+	4	2.38986+	2		0	99		0		09541	3	17	528	
0.0	+ 0	-1.26529+	7		0	0		1		129541	3	17	529	
12			2		0	0		0		09541	3	17	530	
1.26530+	7	0.0	+ 0	1.30000+	7	7.97410-	4	1.40000+	7	4.67390-	29541	3	17	531
1.45000+	7	8.87080-	2	1.50000+	7	1.37650-	1	1.55000+	7	1.89430-	19541	3	17	532
1.60000+	7	2.43410-	1	1.65000+	7	3.16360-	1	1.70000+	7	4.12970-	19541	3	17	533
1.80000+	7	5.82810-	1	1.90000+	7	6.81430-	1	2.00000+	7	7.27720-	19541	3	17	534
										9541	3	0	535	
9.52410+	4	2.38986+	2		0	0		0		09541	3	18	536	
0.0	+ 0	0.0	+ 0		0	0		2		509541	3	18	537	
3			2		50	5		0		09541	3	18	538	
1.00000-	5	0.0	+ 0	2.53000-	2	0.0	+ 0	3.00000+	4	0.0	+ 09541	3	18	539
3.00000+	4	1.41000-	2	4.00000+	4	1.40000-	2	5.00000+	4	1.44000-	29541	3	18	540
6.00000+	4	1.50000-	2	7.00000+	4	1.61000-	2	9.00000+	4	1.76000-	29541	3	18	541
1.00000+	5	1.83000-	2	1.20000+	5	1.91000-	2	1.60000+	5	2.14000-	29541	3	18	542
2.00000+	5	2.41000-	2	2.50000+	5	2.90000-	2	3.00000+	5	3.87000-	29541	3	18	543
4.00000+	5	5.63000-	2	5.00000+	5	1.00000-	1	6.00000+	5	1.76000-	19541	3	18	544

.....10.....20.....30.....40.....50.....60.....										MAT	MF	MT	SEQ	
7.00000+	5	3.81000-	1	8.00000+	5	7.33000-	1	9.00000+	5	1.05000+	09541	3	18	545
1.00000+	6	1.37000+	0	1.10000+	6	1.74000+	0	1.20000+	6	1.86000+	09541	3	18	546
1.30000+	6	1.97000+	0	1.40000+	6	2.01000+	0	1.60000+	6	2.03000+	09541	3	18	547
2.00000+	6	2.04000+	0	2.20000+	6	2.07000+	0	2.50000+	6	2.07000+	09541	3	18	548
2.85000+	6	2.01000+	0	3.00000+	6	2.01000+	0	4.00000+	6	2.04000+	09541	3	18	549
4.25000+	6	2.04000+	0	5.00000+	6	2.01000+	0	6.00000+	6	1.92000+	09541	3	18	550
6.30000+	6	1.92000+	0	6.60000+	6	2.10000+	0	7.00000+	6	2.35000+	09541	3	18	551
7.50000+	6	2.57000+	0	8.00000+	6	2.75000+	0	8.35000+	6	2.80000+	09541	3	18	552
9.00000+	6	2.80000+	0	1.00000+	7	2.76000+	0	1.20000+	7	2.67000+	09541	3	18	553
1.30000+	7	2.65000+	0	1.45000+	7	2.74000+	0	1.60000+	7	2.74000+	09541	3	18	554
1.80000+	7	2.51000+	0	2.00000+	7	2.43000+	0			9541	3	18	555	
										9541	3	0	556	
9.52410+	4	2.38986+	2		0		99		0	09541	3	37	557	
0.0	+ 0-1.96999+	7			0		0		1	29541	3	37	558	
	2				0		0		0	09541	3	37	559	
1.97820+	7	0.0	+ 0	2.00000+	7	5.05500-	7			9541	3	37	560	
										9541	3	0	561	
9.52410+	4	2.38986+	2		0		1		0	09541	3	51	562	
0.0	+ 0-4.12000+	4			0		0		1	639541	3	51	563	
	63				0		0		0	09541	3	51	564	
4.13724+	4	0.0	+ 0	5.00000+	4	9.30624-	2	6.00000+	4	1.51166-	19541	3	51	565
7.00000+	4	2.05112-	1	9.00000+	4	3.01061-	1	9.39917+	4	3.18134-	19541	3	51	566
1.00000+	5	3.41580-	1	1.25000+	5	4.19850-	1	1.50000+	5	4.75021-	19541	3	51	567
1.58661+	5	4.90143-	1	1.75000+	5	5.13407-	1	2.00000+	5	5.39347-	19541	3	51	568
2.06762+	5	5.44833-	1	2.34979+	5	5.46426-	1	2.50000+	5	5.38980-	19541	3	51	569
2.72134+	5	5.35443-	1	3.00000+	5	5.26175-	1	3.20335+	5	5.21043-	19541	3	51	570
3.50000+	5	5.13296-	1	3.76569+	5	5.06289-	1	4.00000+	5	5.00045-	19541	3	51	571
4.73774+	5	4.78050-	1	5.00000+	5	4.68094-	1	5.06611+	5	4.65226-	19541	3	51	572
5.51297+	5	4.40117-	1	6.00000+	5	4.09785-	1	6.25707+	5	3.91570-	19541	3	51	573
6.39565+	5	3.82232-	1	6.54829+	5	3.71914-	1	6.55933+	5	3.71164-	19541	3	51	574
6.73004+	5	3.58980-	1	7.00000+	5	3.40859-	1	7.35063+	5	3.13868-	19541	3	51	575
8.00000+	5	2.67339-	1	9.00000+	5	2.10888-	1	1.00000+	6	1.58114-	19541	3	51	576
1.10000+	6	1.12108-	1	1.20000+	6	8.92615-	2	1.30000+	6	7.07645-	29541	3	51	577
1.40000+	6	5.78426-	2	1.60000+	6	3.87500-	2	2.00000+	6	1.56687-	29541	3	51	578
2.20000+	6	9.36966-	3	2.50000+	6	4.36642-	3	2.85000+	6	1.88211-	39541	3	51	579
3.00000+	6	1.28767-	3	4.00000+	6	1.07010-	4	4.25000+	6	5.92833-	59541	3	51	580
5.00000+	6	1.18168-	5	6.00000+	6	1.90277-	6	6.30000+	6	1.09493-	69541	3	51	581
6.61000+	6	5.03062-	7	7.00000+	6	1.82009-	7	7.50000+	6	3.28217-	89541	3	51	582
8.00000+	6	4.39289-	9	8.35000+	6	6.12373-10	8.50000+	6	1.51211-109541	3	51	583		
9.00000+	6	6.46052-11	1	1.00000+	7	1.04202-11	1.10000+	7	8.62585-139541	3	51	584		
1.20000+	7	9.93121-14	1	1.40000+	7	4.15129-16	2.00000+	7	5.81784-199541	3	51	585		
									9541	3	0	586		
9.52410+	4	2.38986+	2		0		2		0	09541	3	52	587	
0.0	+ 0-9.36000+	4			0		0		1	589541	3	52	588	
	58				0		0		0	09541	3	52	589	
9.39917+	4	0.0	+ 0	1.00000+	5	8.95842-	3	1.25000+	5	6.27897-	29541	3	52	590
1.50000+	5	1.15452-	1	1.58661+	5	1.31511-	1	1.75000+	5	1.57915-	19541	3	52	591
2.00000+	5	1.90666-	1	2.06762+	5	1.98150-	1	2.34979+	5	2.20632-	19541	3	52	592
2.50000+	5	2.25383-	1	2.72134+	5	2.35110-	1	3.00000+	5	2.41256-	19541	3	52	593
3.20335+	5	2.45858-	1	3.50000+	5	2.50581-	1	3.76569+	5	2.53783-	19541	3	52	594
4.00000+	5	2.55794-	1	4.73774+	5	2.58687-	1	5.00000+	5	2.58656-	19541	3	52	595
5.06611+	5	2.58434-	1	5.51297+	5	2.54248-	1	6.00000+	5	2.46495-	19541	3	52	596
6.25707+	5	2.40269-	1	6.39565+	5	2.37045-	1	6.54829+	5	2.33545-	19541	3	52	597
6.55933+	5	2.33296-	1	6.73004+	5	2.29311-	1	7.00000+	5	2.23318-	19541	3	52	598
7.35063+	5	2.11674-	1	8.00000+	5	1.88703-	1	9.00000+	5	1.56697-	19541	3	52	599

.....10.....20.....30.....40.....50.....60.....										MAT	MF	MT	SEQ	
1.00000+	6	1.21860-	1	1.10000+	6	8.86457-	2	1.20000+	6	7.20471-	29541	3	52	600
1.30000+	6	5.80625-	2	1.40000+	6	4.80895-	2	1.60000+	6	3.28401-	29541	3	52	601
2.00000+	6	1.35740-	2	2.20000+	6	8.17904-	3	2.50000+	6	3.85412-	39541	3	52	602
2.85000+	6	1.68523-	3	3.00000+	6	1.16061-	3	4.00000+	6	1.00987-	49541	3	52	603
4.25000+	6	5.65086-	5	5.00000+	6	1.15868-	5	6.00000+	6	1.93200-	69541	3	52	604
6.30000+	6	1.12092-	6	6.61000+	6	5.18629-	7	7.00000+	6	1.88987-	79541	3	52	605
7.50000+	6	3.43353-	8	8.00000+	6	4.62618-	9	8.35000+	6	6.47828-	109541	3	52	606
8.50000+	6	1.60276-10	9	9.00000+	6	6.89227-11	1	1.00000+	7	1.12541-119541	3	52	607	
1.10000+	7	9.41187-13	1	2.00000+	7	1.09234-13	1	4.00000+	7	4.62690-169541	3	52	608	
2.00000+	7	6.67883-19								9541	3	52	609	
										9541	3	0	610	
9.52410+	4	2.38986+	2		0		3		0	09541	3	53	611	
0.0	+ 0-1.58000+	5		0		0		1		549541	3	53	612	
	54	3		0		0		0		09541	3	53	613	
1.58661+	5	0.0	+ 0	1.75000+	5	7.73844-	3	2.00000+	5	2.13923-	29541	3	53	614
2.06762+	5	2.49976-	2	2.34979+	5	3.87627-	2	2.50000+	5	4.41550-	29541	3	53	615
2.72134+	5	5.18448-	2	3.00000+	5	5.86668-	2	3.20335+	5	6.34741-	29541	3	53	616
3.50000+	5	6.92378-	2	3.76569+	5	7.39802-	2	4.00000+	5	7.76040-	29541	3	53	617
4.73774+	5	8.80634-	2	5.00000+	5	9.16480-	2	5.06611+	5	9.24849-	29541	3	53	618
5.51297+	5	9.75478-	2	6.00000+	5	1.01781-	1	6.25707+	5	1.02892-	19541	3	53	619
6.39565+	5	1.03487-	1	6.54829+	5	1.04124-	1	6.55933+	5	1.04169-	19541	3	53	620
6.73004+	5	1.04809-	1	7.00000+	5	1.05777-	1	7.35063+	5	1.04708-	19541	3	53	621
8.00000+	5	9.99244-	2	9.00000+	5	8.96607-	2	1.00000+	6	7.37191-	29541	3	53	622
1.10000+	6	5.59001-	2	1.20000+	6	4.70458-	2	1.30000+	6	3.89760-	29541	3	53	623
1.40000+	6	3.30174-	2	1.60000+	6	2.33206-	2	2.00000+	6	1.00322-	29541	3	53	624
2.20000+	6	6.12844-	3	2.50000+	6	2.94243-	3	2.85000+	6	1.31526-	39541	3	53	625
3.00000+	6	9.14698-	4	4.00000+	6	8.48543-	5	4.25000+	6	4.81326-	59541	3	53	626
5.00000+	6	1.02455-	5	6.00000+	6	1.78709-	6	6.30000+	6	1.04818-	69541	3	53	627
6.61000+	6	4.89592-	7	7.00000+	6	1.80168-	7	7.50000+	6	3.30716-	89541	3	53	628
8.00000+	6	4.49593-	9	8.35000+	6	6.33291-10	8	8.50000+	6	1.57064-109541	3	53	629	
9.00000+	6	6.80827-11	1	1.00000+	7	1.12816-11	1	1.10000+	7	9.55164-139541	3	53	630	
1.20000+	7	1.11963-13	1	4.00000+	7	4.82296-16	2	0.00000+	7	7.23054-199541	3	53	631	
										9541	3	0	632	
9.52410+	4	2.38986+	2		0		4		0	09541	3	54	633	
0.0	+ 0-2.05900+	5		0		0		1		519541	3	54	634	
	51	3		0		0		0		09541	3	54	635	
2.06762+	5	0.0	+ 0	2.34979+	5	1.12058-	1	2.50000+	5	1.411114-	19541	3	54	636
2.72134+	5	1.74603-	1	3.00000+	5	2.04059-	1	3.20335+	5	2.19355-	19541	3	54	637
3.50000+	5	2.35537-	1	3.76569+	5	2.45800-	1	4.00000+	5	2.52569-	19541	3	54	638
4.73774+	5	2.63624-	1	5.00000+	5	2.61802-	1	5.06611+	5	2.61345-	19541	3	54	639
5.51297+	5	2.52271-	1	6.00000+	5	2.40990-	1	6.25707+	5	2.33317-	19541	3	54	640
6.39565+	5	2.28939-	1	6.54829+	5	2.22925-	1	6.55933+	5	2.22433-	19541	3	54	641
6.73004+	5	2.15175-	1	7.00000+	5	2.03642-	1	7.35063+	5	1.86243-	19541	3	54	642
8.00000+	5	1.56166-	1	9.00000+	5	1.20154-	1	1.00000+	6	8.80282-	29541	3	54	643
1.10000+	6	6.09650-	2	1.20000+	6	4.75411-	2	1.30000+	6	3.70383-	29541	3	54	644
1.40000+	6	2.98571-	2	1.60000+	6	1.96977-	2	2.00000+	6	8.06505-	39541	3	54	645
2.20000+	6	4.92672-	3	2.50000+	6	2.39483-	3	2.85000+	6	1.09179-	39541	3	54	646
3.00000+	6	7.65735-	4	4.00000+	6	7.50016-	5	4.25000+	6	4.31595-	59541	3	54	647
5.00000+	6	9.39102-	6	6.00000+	6	1.56120-	6	6.30000+	6	8.95668-	79541	3	54	648
6.61000+	6	4.09381-	7	7.00000+	6	1.47014-	7	7.50000+	6	2.62733-	89541	3	54	649
8.00000+	6	3.49279-	9	8.35000+	6	4.85577-10	8	8.50000+	6	1.19832-109541	3	54	650	
9.00000+	6	5.12176-11	1	1.00000+	7	8.31912-12	1	1.10000+	7	6.92915-139541	3	54	651	
1.20000+	7	7.99225-14	1	4.00000+	7	3.33532-16	2	0.00000+	7	4.63664-199541	3	54	652	
										9541	3	0	653	
9.52410+	4	2.38986+	2		0		5		0	09541	3	55	654	

									MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....						
0.0	+ 0-2.34000+	5	0	0	1	509541	3	55	655			
	50	3	0	0	0	09541	3	55	656			
2.34979+	5 0.0	+ 0 2.50000+	5	5.91046-	2 2.72134+	5 9.77908-	29541	3	55	657		
3.00000+	5 1.30876-	1 3.20335+	5	1.48846-	1 3.50000+	5 1.68264-	19541	3	55	658		
3.76569+	5 1.80954-	1 4.00000+	5	1.89607-	1 4.73774+	5 2.06099-	19541	3	55	659		
5.00000+	5 2.08296-	1 5.06611+	5	2.08696-	1 5.51297+	5 2.06641-	19541	3	55	660		
6.00000+	5 2.01437-	1 6.25707+	5	1.96902-	1 6.39565+	5 1.94335-	19541	3	55	661		
6.54829+	5 1.90992-	1 6.55933+	5	1.90748-	1 6.73004+	5 1.86800-	19541	3	55	662		
7.00000+	5 1.80194-	1 7.35063+	5	1.68218-	1 8.00000+	5 1.45259-	19541	3	55	663		
9.00000+	5 1.14859-	1 1.00000+	6	8.53309-	2 1.10000+	6 5.95312-	29541	3	55	664		
1.20000+	6 4.66017-	2 1.30000+	6	3.64374-	2 1.40000+	6 2.94493-	29541	3	55	665		
1.60000+	6 1.95246-	2 2.00000+	6	8.07908-	3 2.20000+	6 4.96635-	39541	3	55	666		
2.50000+	6 2.43994-	3 2.85000+	6	1.12830-	3 3.00000+	6 7.96473-	49541	3	55	667		
4.00000+	6 8.13413-	5 4.25000+	6	4.72403-	5 5.00000+	6 1.05453-	59541	3	55	668		
6.00000+	6 1.80268-	6 6.30000+	6	1.04004-	6 6.61000+	6 4.77478-	79541	3	55	669		
7.00000+	6 1.72174-	7 7.50000+	6	3.08906-	8 8.00000+	6 4.12069-	99541	3	55	670		
8.35000+	6 5.74260-10	8.50000+	6	1.41871-10	9.00000+	6 6.08649-11	99541	3	55	671		
1.00000+	7 9.96494-12	1.10000+	7	8.36079-13	1.20000+	7 9.70023-14	9541	3	55	672		
1.40000+	7 4.08473-16	2.00000+	7	5.78545-19			9541	3	55	673		
							9541	3	0	674		
9.52410+	4 2.38986+	2	0	6	0	09541	3	56	675			
0.0	+ 0-2.71000+	5	0	0	1	489541	3	56	676			
	48	3	0	0	0	09541	3	56	677			
2.72134+	5 0.0	+ 0 3.00000+	5	3.12944-	2 3.20335+	5 4.41001-	29541	3	56	678		
3.50000+	5 5.89553-	2 3.76569+	5	6.95564-	2 4.00000+	5 7.73306-	29541	3	56	679		
4.73774+	5 9.52311-	2 5.00000+	5	1.00023-	1 5.06611+	5 1.01072-	19541	3	56	680		
5.51297+	5 1.06093-	1 6.00000+	5	1.08777-	1 6.25707+	5 1.08933-	19541	3	56	681		
6.39565+	5 1.08917-	1 6.54829+	5	1.08767-	1 6.55933+	5 1.08750-	19541	3	56	682		
6.73004+	5 1.08365-	1 7.00000+	5	1.07447-	1 7.35063+	5 1.03672-	19541	3	56	683		
8.00000+	5 9.42450-	2 9.00000+	5	7.88847-	2 1.00000+	6 6.09501-	29541	3	56	684		
1.10000+	6 4.37791-	2 1.20000+	6	3.50769-	2 1.30000+	6 2.79542-	29541	3	56	685		
1.40000+	6 2.29618-	2 1.60000+	6	1.56263-	2 2.00000+	6 6.71155-	39541	3	56	686		
2.20000+	6 4.18969-	3 2.50000+	6	2.10373-	3 2.85000+	6 9.97512-	49541	3	56	687		
3.00000+	6 7.11677-	4 4.00000+	6	7.74626-	5 4.25000+	6 4.55840-	59541	3	56	688		
5.00000+	6 1.05363-	5 6.00000+	6	1.86431-	6 6.30000+	6 1.08264-	69541	3	56	689		
6.61000+	6 4.99558-	7 7.00000+	6	1.80976-	7 7.50000+	6 3.26189-	89541	3	56	690		
8.00000+	6 4.37011-	9 8.35000+	6	6.11010-10	8.50000+	6 1.51175-109541	3	56	691			
9.00000+	6 6.52030-11	1.100000+	7	1.07984-11	1.10000+	7 9.15495-139541	3	56	692			
1.20000+	7 1.07083-13	1.40000+	7	4.56498-16	2.00000+	7 6.63947-199541	3	56	693			
						9541	3	0	694			
9.52410+	4 2.38986+	2	0	7	0	09541	3	57	695			
0.0	+ 0-3.19000+	5	0	0	1	469541	3	57	696			
	46	3	0	0	0	09541	3	57	697			
3.20335+	5 0.0	+ 0 3.50000+	5	4.68269-	3 3.76569+	5 9.03596-	39541	3	57	698		
4.00000+	5 1.27837-	2 4.73774+	5	2.37635-	2 5.00000+	5 2.73541-	29541	3	57	699		
5.06611+	5 2.82172-	2 5.51297+	5	3.37124-	2 6.00000+	5 3.87173-	29541	3	57	700		
6.25707+	5 4.07616-	2 6.39565+	5	4.17820-	2 6.54829+	5 4.28539-	29541	3	57	701		
6.55933+	5 4.29276-	2 6.73004+	5	4.40209-	2 7.00000+	5 4.55803-	29541	3	57	702		
7.35063+	5 4.62811-	2 8.00000+	5	4.54833-	2 9.00000+	5 4.14591-	29541	3	57	703		
1.00000+	6 3.40217-	2 1.10000+	6	2.55814-	2 1.20000+	6 2.12789-	29541	3	57	704		
1.30000+	6 1.74620-	2 1.40000+	6	1.47232-	2 1.60000+	6 1.04332-	29541	3	57	705		
2.00000+	6 4.73749-	3 2.20000+	6	3.02377-	3 2.50000+	6 1.56623-	39541	3	57	706		
2.85000+	6 7.68999-	4 3.00000+	6	5.56723-	4 4.00000+	6 6.60407-	59541	3	57	707		
4.25000+	6 3.95515-	5 5.00000+	6	9.56066-	6 6.00000+	6 1.76431-	69541	3	57	708		
6.30000+	6 1.03274-	6 6.61000+	6	4.79567-	7 7.00000+	6 1.74786-	79541	3	57	709		

										MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....							
7.50000+	6	3.16989-	8	8.00000+	6	4.27190-	9	8.35000+	6	5.99884-109541	3	57	710
8.50000+	6	1.48714-10	9.00000+	6	6.45844-11	1.00000+	7	1.08525-119541	3	57	711		
1.10000+	7	9.32335-13	1.20000+	7	1.10213-13	1.40000+	7	4.77566-169541	3	57	712		
2.00000+	7	7.19423-19						9541	3	57	713		
								9541	3	0	714		
9.52410+	4	2.38986+	2	0	8	0		09541	3	58	715		
0.0	+ 0-3.75000+	5	0	0	1			449541	3	58	716		
	44	3	0	0	0			09541	3	58	717		
3.76569+	5	0.0	+ 0	4.00000+	5	1.53592-	3	4.73774+	5	5.35200-39541	3	58	718
5.00000+	5	6.67423-	3	5.06611+	5	7.00035-	3	5.51297+	5	9.18573-39541	3	58	719
6.00000+	5	1.14814-	2	6.25707+	5	1.25399-	2	6.39565+	5	1.30942-29541	3	58	720
6.54829+	5	1.36918-	2	6.55933+	5	1.37345-	2	6.73004+	5	1.43856-29541	3	58	721
7.00000+	5	1.53939-	2	7.35063+	5	1.62569-	2	8.00000+	5	1.70132-29541	3	58	722
9.00000+	5	1.67195-	2	1.00000+	6	1.45595-	2	1.10000+	6	1.15047-29541	3	58	723
1.20000+	6	9.98854-	3	1.30000+	6	8.50854-	3	1.40000+	6	7.41244-39541	3	58	724
1.60000+	6	5.55037-	3	2.00000+	6	2.73896-	3	2.20000+	6	1.81065-39541	3	58	725
2.50000+	6	9.85394-	4	2.85000+	6	5.10579-	4	3.00000+	6	3.77796-49541	3	58	726
4.00000+	6	5.05901-	5	4.25000+	6	3.10183-	5	5.00000+	6	7.94619-69541	3	58	727
6.00000+	6	1.54357-	6	6.30000+	6	9.12042-	7	6.61000+	6	4.26734-79541	3	58	728
7.00000+	6	1.56649-	7	7.50000+	6	2.86232-	8	8.00000+	6	3.88565-99541	3	58	729
8.35000+	6	5.48624-10	8.50000+	6	1.36347-10	9.00000+	6	5.97319-119541	3	58	730		
1.00000+	7	1.02220-11	1.10000+	7	8.92648-13	1.20000+	7	1.06896-139541	3	58	731		
1.40000+	7	4.72532-16	2.00000+	7	7.43766-19			9541	3	58	732		
								9541	3	0	733		
9.52410+	4	2.38986+	2	0	9	0		09541	3	59	734		
0.0	+ 0-4.71800+	5	0	0	1			429541	3	59	735		
	42	3	0	0	0			09541	3	59	736		
4.73774+	5	0.0	+ 0	5.00000+	5	2.77181-	2	5.06611+	5	3.43098-29541	3	59	737
5.51297+	5	7.42272-	2	6.00000+	5	1.05000-	1	6.25707+	5	1.15204-19541	3	59	738
6.39565+	5	1.18804-	1	6.54829+	5	1.21652-	1	6.55933+	5	1.21776-19541	3	59	739
6.73004+	5	1.22432-	1	7.00000+	5	1.21805-	1	7.35063+	5	1.18058-19541	3	59	740
8.00000+	5	1.07467-	1	9.00000+	5	9.05272-	2	1.00000+	6	7.11498-29541	3	59	741
1.10000+	6	5.23837-	2	1.20000+	6	4.32318-	2	1.30000+	6	3.55358-29541	3	59	742
1.40000+	6	3.01344-	2	1.60000+	6	2.17966-	2	2.00000+	6	1.00136-29541	3	59	743
2.20000+	6	6.25216-	3	2.50000+	6	3.03289-	3	2.85000+	6	1.33116-39541	3	59	744
3.00000+	6	9.11606-	4	4.00000+	6	7.33727-	5	4.25000+	6	4.02294-59541	3	59	745
5.00000+	6	7.72328-	6	6.00000+	6	1.17881-	6	6.30000+	6	6.71696-79541	3	59	746
6.61000+	6	3.06466-	7	7.00000+	6	1.10166-	7	7.50000+	6	1.97277-89541	3	59	747
8.00000+	6	2.62307-	9	8.35000+	6	3.64051-10	8.50000+	6	8.97228-119541	3	59	748	
9.00000+	6	3.80981-11	1.00000+	7	6.07107-12	1.10000+	7	4.97751-139541	3	59	749		
1.20000+	7	5.69403-14	1.40000+	7	2.35270-16	2.00000+	7	3.21449-199541	3	59	750		
								9541	3	0	751		
9.52410+	4	2.38986+	2	0	10	0		09541	3	60	752		
0.0	+ 0-5.04500+	5	0	0	1			409541	3	60	753		
	40	3	0	0	0			09541	3	60	754		
5.06611+	5	0.0	+ 0	5.51297+	5	5.23380-	2	6.00000+	5	9.83752-29541	3	60	755
6.25707+	5	1.15898-	1	6.39565+	5	1.23401-	1	6.54829+	5	1.30191-19541	3	60	756
6.55933+	5	1.30629-	1	6.73004+	5	1.35719-	1	7.00000+	5	1.40926-19541	3	60	757
7.35063+	5	1.41967-	1	8.00000+	5	1.35182-	1	9.00000+	5	1.17454-19541	3	60	758
1.00000+	6	9.29680-	2	1.10000+	6	6.81734-	2	1.20000+	6	5.57975-29541	3	60	759
1.30000+	6	4.54374-	2	1.40000+	6	3.82322-	2	1.60000+	6	2.73256-29541	3	60	760
2.00000+	6	1.24898-	2	2.20000+	6	7.81120-	3	2.50000+	6	3.80530-39541	3	60	761
2.85000+	6	1.68066-	3	3.00000+	6	1.15424-	3	4.00000+	6	9.48534-59541	3	60	762
4.25000+	6	5.22663-	5	5.00000+	6	1.01750-	5	6.00000+	6	1.58160-69541	3	60	763
6.30000+	6	9.05480-	7	6.61000+	6	4.14878-	7	7.00000+	6	1.49776-79541	3	60	764

										MAT	MF	MT	SEQ	
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....		
7.50000+	6	2.69348-	8	8.00000+	6	3.59435-	9	8.35000+	6	5.00076-109541	3	60	765	
8.50000+	6	1.23373-10	9.00000+	6	5.25714-11	1.00000+	7	8.43454-129541	3	60		766		
1.10000+	7	6.95486-13	1.20000+	7	7.98923-14	1.40000+	7	3.32066-169541	3	60		767		
2.00000+	7	4.59985-19							9541	3	60		768	
									9541	3	0		769	
9.52410+	4	2.38986+	2		0	11		0		09541	3	61	770	
0.0	+ 0-5.49000+	5		0	0		1		399541	3	61		771	
39		3		0	0		0		09541	3	61		772	
5.51297+	5	0.0	+ 0	6.00000+	5	3.96376-	2	6.25707+	5	5.85774-	29541	3	61	773
6.39565+	5	6.78034-	2	6.54829+	5	7.69181-	2	6.55933+	5	7.75351-	29541	3	61	774
6.73004+	5	8.61556-	2	7.00000+	5	9.72506-	2	7.35063+	5	1.05753-	19541	3	61	775
8.00000+	5	1.10347-	1	9.00000+	5	1.03447-	1	1.00000+	6	8.51079-	29541	3	61	776
1.10000+	6	6.37184-	2	1.20000+	6	5.27698-	2	1.30000+	6	4.32913-	29541	3	61	777
1.40000+	6	3.66301-	2	1.60000+	6	2.64553-	2	2.00000+	6	1.23734-	29541	3	61	778
2.20000+	6	7.82027-	3	2.50000+	6	3.86204-	3	2.85000+	6	1.72893-	39541	3	61	779
3.00000+	6	1.19407-	3	4.00000+	6	1.01421-	4	4.25000+	6	5.62781-	59541	3	61	780
5.00000+	6	1.11659-	5	6.00000+	6	1.77808-	6	6.30000+	6	1.02455-	69541	3	61	781
6.61000+	6	4.72329-	7	7.00000+	6	1.71701-	7	7.50000+	6	3.11162-	89541	3	61	782
8.00000+	6	4.18003-	9	8.35000+	6	5.83992-10	8.50000+	6	1.44326-109541	3	61		783	
9.00000+	6	6.18330-11	1	1.00000+	7	1.00146-11	1.10000+	7	8.32049-139541	3	61		784	
1.20000+	7	9.61751-14	1	1.40000+	7	4.04090-16	2.00000+	7	5.72545-199541	3	61		785	
									9541	3	0		786	
9.52410+	4	2.38986+	2		0	12		0		09541	3	62	787	
0.0	+ 0-6.23100+	5		0	0		1		379541	3	62		788	
37		3		0	0		0		09541	3	62		789	
6.25707+	5	0.0	+ 0	6.39565+	5	5.72496-	3	6.54829+	5	8.90338-	39541	3	62	790
6.55933+	5	9.08694-	3	6.73004+	5	1.17158-	2	7.00000+	5	1.48800-	29541	3	62	791
7.35063+	5	1.74973-	2	8.00000+	5	1.94913-	2	9.00000+	5	1.93557-	29541	3	62	792
1.00000+	6	1.67846-	2	1.10000+	6	1.31791-	2	1.20000+	6	1.13488-	29541	3	62	793
1.30000+	6	9.58660-	3	1.40000+	6	8.27071-	3	1.60000+	6	6.07853-	39541	3	62	794
2.00000+	6	2.87399-	3	2.00000+	6	1.83357-	3	2.50000+	6	9.27017-	49541	3	62	795
2.85000+	6	4.30244-	4	3.00000+	6	3.02258-	4	4.00000+	6	2.88577-	59541	3	62	796
4.25000+	6	1.64902-	5	5.00000+	6	3.51879-	6	6.00000+	6	5.74249-	79541	3	62	797
6.30000+	6	3.28749-	7	6.61000+	6	1.50120-	7	7.00000+	6	5.38771-	89541	3	62	798
7.50000+	6	9.61589-	9	8.00000+	6	1.27546-	9	8.35000+	6	1.76973-109541	3	62		799
8.50000+	6	4.36356-11	9	9.00000+	6	1.85955-11	1	1.00000+	7	3.00554-129541	3	62		800
1.10000+	7	2.49648-13	1	1.20000+	7	2.87484-14	1.40000+	7	1.19395-169541	3	62		801	
									9541	3	62		802	
2.00000+	7	1.64204-19							9541	3	0		803	
9.52410+	4	2.38986+	2		0	13		0		09541	3	63	804	
0.0	+ 0-6.36900+	5		0	0		1		369541	3	63		805	
36		3		0	0		0		09541	3	63		806	
6.39565+	5	0.0	+ 0	6.54829+	5	9.45500-	3	6.55933+	5	1.00083-	29541	3	63	807
6.73004+	5	1.86545-	2	7.00000+	5	3.11757-	2	7.35063+	5	4.36962-	29541	3	63	808
8.00000+	5	5.64523-	2	9.00000+	5	6.03879-	2	1.00000+	6	5.29047-	29541	3	63	809
1.10000+	6	4.11686-	2	1.20000+	6	3.50153-	2	1.30000+	6	2.93026-	29541	3	63	810
1.40000+	6	2.51782-	2	1.60000+	6	1.86081-	2	2.00000+	6	9.02541-	39541	3	63	811
2.20000+	6	5.77140-	3	2.50000+	6	2.87689-	3	2.85000+	6	1.28719-	39541	3	63	812
3.00000+	6	8.86371-	4	4.00000+	6	7.21758-	5	4.25000+	6	3.96120-	59541	3	63	813
5.00000+	6	7.60319-	6	6.00000+	6	1.15564-	6	6.30000+	6	6.58316-	79541	3	63	814
6.61000+	6	3.00504-	7	7.00000+	6	1.08164-	7	7.50000+	6	1.94021-	89541	3	63	815
8.00000+	6	2.58296-	9	8.35000+	6	3.58704-10	8.50000+	6	8.84314-119541	3	63		816	
9.00000+	6	3.75797-11	1	1.00000+	7	5.99577-12	1.10000+	7	4.92041-139541	3	63		817	
1.20000+	7	5.63516-14	1	1.40000+	7	2.33284-16	2.00000+	7	3.19779-199541	3	63		818	
									9541	3	0		819	

							MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....				
9.52410+	4	2.38986+	2	0	14	0	09541	3	64	820
0.0	+ 0	-6.52100+	5	0	0	1	359541	3	64	821
	35		3	0	0	0	09541	3	64	822
6.54829+	5	0.0	+ 0	6.55933+	5	8.01239-	4	6.73004+	5	4.98385-
7.00000+	5	1.11195-	2	7.35063+	5	1.76769-	2	8.00000+	5	2.48439-
9.00000+	5	2.79155-	2	1.00000+	6	2.51987-	2	1.10000+	6	2.01006-
1.20000+	6	1.74725-	2	1.30000+	6	1.49023-	2	1.40000+	6	1.30115-
1.60000+	6	9.84877-	3	2.00000+	6	4.89674-	3	2.20000+	6	3.14941-
2.50000+	6	1.57701-	3	2.85000+	6	7.06597-	4	3.00000+	6	4.86449-
4.00000+	6	3.92737-	5	4.25000+	6	2.14979-	5	5.00000+	6	4.09512-
6.00000+	6	6.16600-	7	6.30000+	6	3.50361-	7	6.61000+	6	1.59543-
7.00000+	6	5.72673-	8	7.50000+	6	1.02390-	8	8.00000+	6	1.35908-
8.35000+	6	1.88390-10	8	8.50000+	6	4.64103-11	9	9.00000+	6	1.96787-119541
1.00000+	7	3.12864-12	1	1.10000+	7	2.56056-13	1	1.20000+	7	2.92636-149541
1.40000+	7	1.20756-16	2	2.00000+	7	1.64369-19			9541	3 64
									9541	3 0
									9541	835
9.52410+	4	2.38986+	2	0	15	0	09541	3	65	836
0.0	+ 0	-6.53200+	5	0	0	1	349541	3	65	837
	34		3	0	0	0	09541	3	65	838
6.55933+	5	0.0	+ 0	6.73004+	5	1.33181-	2	7.00000+	5	2.23932-
7.35063+	5	3.01100-	2	8.00000+	5	3.70693-	2	9.00000+	5	3.85036-
1.00000+	6	3.34626-	2	1.10000+	6	2.59733-	2	1.20000+	6	2.20188-
1.30000+	6	1.83055-	2	1.40000+	6	1.55673-	2	1.60000+	6	1.11865-
2.00000+	6	5.17617-	3	2.20000+	6	3.29094-	3	2.50000+	6	1.66285-
2.85000+	6	7.74189-	4	3.00000+	6	5.45023-	4	4.00000+	6	5.29695-
4.25000+	6	3.04038-	5	5.00000+	6	6.56573-	6	6.00000+	6	1.08427-
6.30000+	6	6.22292-	7	6.61000+	6	2.84770-	7	7.00000+	6	1.02416-
7.50000+	6	1.83148-	8	8.00000+	6	2.43273-	9	8.35000+	6	3.37816-109541
8.50000+	6	8.33206-11	9	9.00000+	6	3.55419-11	1	1.00000+	7	5.75547-129541
1.10000+	7	4.79107-13	1	1.20000+	7	5.53007-14	1	1.40000+	7	2.30603-169541
2.00000+	7	3.19613-19							9541	3 65
									9541	3 0
									9541	851
9.52410+	4	2.38986+	2	0	16	0	09541	3	66	852
0.0	+ 0	-6.70200+	5	0	0	1	339541	3	66	853
	33		3	0	0	0	09541	3	66	854
6.73004+	5	0.0	+ 0	7.00000+	5	1.56720-	2	7.35063+	5	2.46475-
8.00000+	5	3.32446-	2	9.00000+	5	3.61957-	2	1.00000+	6	3.20647-
1.10000+	6	2.51397-	2	1.20000+	6	2.14416-	2	1.30000+	6	1.78961-
1.40000+	6	1.52615-	2	1.60000+	6	1.10108-	2	2.00000+	6	5.12076-
2.20000+	6	3.26234-	3	2.50000+	6	1.65215-	3	2.85000+	6	7.70512-
3.00000+	6	5.42667-	4	4.00000+	6	5.28026-	5	4.25000+	6	3.03127-
5.00000+	6	6.54872-	6	6.00000+	6	1.08187-	6	6.30000+	6	6.20994-
6.61000+	6	2.84216-	7	7.00000+	6	1.02235-	7	7.50000+	6	1.82854-
8.00000+	6	2.42904-	9	8.35000+	6	3.37312-10	8	8.50000+	6	8.31975-119541
9.00000+	6	3.54901-11	1	1.00000+	7	5.74740-12	1	1.10000+	7	4.78494-139541
1.20000+	7	5.52386-14	1	1.40000+	7	2.30393-16	2	2.00000+	7	3.19438-199541
									9541	3 0
									9541	866
9.52410+	4	2.38986+	2	0	98	0	09541	3	91	867
0.0	+ 0	-7.32000+	5	0	0	1	319541	3	91	868
	31		3	0	0	0	09541	3	91	869
7.35063+	5	0.0	+ 0	8.00000+	5	4.69363-	2	9.00000+	5	2.24288-
1.00000+	6	4.16331-	1	1.10000+	6	5.41685-	1	1.20000+	6	6.82780-
1.30000+	6	7.87799-	1	1.40000+	6	8.93847-	1	1.60000+	6	1.06250+
2.00000+	6	1.17580+	0	2.20000+	6	1.13090+	0	2.50000+	6	1.05764+
2.85000+	6	1.01392+	0	3.00000+	6	9.74646-	1	4.00000+	6	7.70657-

										MAT	MF	MT	SEQ			
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....				
4.25000+	6	7.48500-	1	5.00000+	6	7.68930-	1	6.00000+	6	9.23907-	19541	3	91	875		
6.30000+	6	9.34499-	1	6.61000+	6	7.57456-	1	7.00000+	6	5.49548-	19541	3	91	876		
7.50000+	6	2.35669-	1	8.00000+	6	7.31733-	2	8.35000+	6	1.81471-	29541	3	91	877		
8.50000+	6	5.71939-	3	9.00000+	6	5.44311-	3	1.00000+	7	4.12021-	39541	3	91	878		
1.10000+	7	1.48972-	3	1.20000+	7	7.02535-	4	1.40000+	7	4.22087-	59541	3	91	879		
2.00000+	7	7.07914-	5							9541	3	91	880			
										9541	3	0	881			
9.52410+	4	2.38986+	2		0		99		0		09541	3102		882		
0.0	+	0	0.0	+	0		0		2		689541	3102		883		
	3			2	68		5		0		09541	3102		884		
1.00000-	5	0.0	+	0	2.53000-	2	0.0	+	0	3.00000+	4	0.0	+	09541	3102	885
3.00000+	4	2.52458+	0	4.00000+	4	2.35854+	0	4.13724+	4	2.33973+	09541	3102		886		
5.00000+	4	2.17623+	0	6.00000+	4	2.04066+	0	7.00000+	4	1.92586+	09541	3102		887		
9.00000+	4	1.74297+	0	9.39917+	4	1.71249+	0	1.00000+	5	1.66411+	09541	3102		888		
1.25000+	5	1.49409+	0	1.50000+	5	1.36891+	0	1.58661+	5	1.33395+	09541	3102		889		
1.75000+	5	1.27328+	0	2.00000+	5	1.19987+	0	2.06762+	5	1.18322+	09541	3102		890		
2.34979+	5	1.08577+	0	2.50000+	5	1.03085+	0	2.72134+	5	9.72486-	19541	3102		891		
3.00000+	5	9.07773-	1	3.20335+	5	8.72899-	1	3.50000+	5	8.32013-	19541	3102		892		
3.76569+	5	8.04919-	1	4.00000+	5	7.85945-	1	4.73774+	5	7.47379-	19541	3102		893		
5.00000+	5	7.31832-	1	5.06611+	5	7.28182-	1	5.51297+	5	6.96083-	19541	3102		894		
6.00000+	5	6.64757-	1	6.25707+	5	6.46541-	1	6.39565+	5	6.36494-	19541	3102		895		
6.54829+	5	6.24682-	1	6.55933+	5	6.23605-	1	6.73004+	5	6.08590-	19541	3102		896		
7.00000+	5	5.87147-	1	7.35063+	5	5.54113-	1	8.00000+	5	4.95509-	19541	3102		897		
9.00000+	5	4.21106-	1	1.00000+	6	3.40604-	1	1.10000+	6	2.60760-	19541	3102		898		
1.20000+	6	2.25323-	1	1.30000+	6	1.94842-	1	1.40000+	6	1.74570-	19541	3102		899		
1.60000+	6	1.42679-	1	2.00000+	6	9.00736-	2	2.20000+	6	6.83208-	29541	3102		900		
2.50000+	6	4.58069-	2	2.85000+	6	3.01246-	2	3.00000+	6	2.46246-	29541	3102		901		
4.00000+	6	6.22526-	3	4.25000+	6	4.45891-	3	5.00000+	6	1.82938-	39541	3102		902		
6.00000+	6	6.93741-	4	6.30000+	6	5.08602-	4	6.61000+	6	2.99715-	49541	3102		903		
7.00000+	6	1.48536-	4	7.50000+	6	4.04177-	5	8.00000+	6	8.26981-	69541	3102		904		
8.35000+	6	1.56441-	6	8.50000+	6	4.41214-	7	9.00000+	6	2.96215-	79541	3102		905		
1.00000+	7	1.21767-	7	1.10000+	7	2.63038-	8	1.20000+	7	8.05779-	99541	3102		906		
1.40000+	7	2.63611-10		2.00000+	7	1.77070-10				9541	3102		907			
										9541	3	0	908			
9.52410+	4	2.38986+	2		0		0		0		09541	3251		909		
0.0	+	0	0.0	+	0		0		1		689541	3251		910		
	68			3	0		0		0		09541	3251		911		
1.00000-	5	2.76625-	3	2.53000-	2	2.76625-	3	1.00000+	2	2.76625-	39541	3251		912		
3.00000+	4	3.17488-	2	4.00000+	4	4.26056-	2	4.13724+	4	4.41014-	29541	3251		913		
5.00000+	4	5.36487-	2	6.00000+	4	6.46082-	2	7.00000+	4	7.54646-	29541	3251		914		
9.00000+	4	9.66975-	2	9.39917+	4	1.00842-	1	1.00000+	5	1.07039-	19541	3251		915		
1.25000+	5	1.32079-	1	1.50000+	5	1.55700-	1	1.58661+	5	1.63530-	19541	3251		916		
1.75000+	5	1.77826-	1	2.00000+	5	1.98463-	1	2.06762+	5	2.03789-	19541	3251		917		
2.34979+	5	2.26141-	1	2.50000+	5	2.37653-	1	2.72134+	5	2.53274-	19541	3251		918		
3.00000+	5	2.71643-	1	3.20335+	5	2.83940-	1	3.50000+	5	3.00460-	19541	3251		919		
3.76569+	5	3.13953-	1	4.00000+	5	3.24914-	1	4.73774+	5	3.54759-	19541	3251		920		
5.00000+	5	3.64361-	1	5.06611+	5	3.66724-	1	5.51297+	5	3.82663-	19541	3251		921		
6.00000+	5	3.98478-	1	6.25707+	5	4.06537-	1	6.39565+	5	4.10764-	19541	3251		922		
6.54829+	5	4.15295-	1	6.55933+	5	4.15629-	1	6.73004+	5	4.20877-	19541	3251		923		
7.00000+	5	4.28650-	1	7.35063+	5	4.38618-	1	8.00000+	5	4.54821-	19541	3251		924		
9.00000+	5	4.73617-	1	1.00000+	6	4.89592-	1	1.10000+	6	5.03869-	19541	3251		925		
1.20000+	6	5.13301-	1	1.30000+	6	5.23316-	1	1.40000+	6	5.33971-	19541	3251		926		
1.60000+	6	5.59453-	1	2.00000+	6	6.18117-	1	2.20000+	6	6.45421-	19541	3251		927		
2.50000+	6	6.80157-	1	2.85000+	6	7.11680-	1	3.00000+	6	7.22770-	19541	3251		928		
4.00000+	6	7.73451-	1	4.25000+	6	7.81917-	1	5.00000+	6	8.00285-	19541	3251		929		

										MAT	MF	MT	SEQ
.....10.....	.....20.....	.....30.....	.....40.....	.....50.....	.....60.....								
6.00000+ 6	8.11955- 1	6.30000+ 6	8.13513- 1	6.61000+ 6	8.14440- 19541	3251							930
7.00000+ 6	8.14769- 1	7.50000+ 6	8.14156- 1	8.00000+ 6	8.12924- 19541	3251							931
8.35000+ 6	8.12049- 1	8.50000+ 6	8.11738- 1	9.00000+ 6	8.11278- 19541	3251							932
1.00000+ 7	8.15026- 1	1.10000+ 7	8.26823- 1	1.20000+ 7	8.44301- 19541	3251							933
1.40000+ 7	8.81575- 1	2.00000+ 7	9.43808- 1							9541	3251		934
										9541	3	0	935
										9541	0	0	936
9.52410+ 4	2.38986+ 2		0	0		2				09541	5	16	937
6.61000+ 6	0.0 + 0		0	9		1				29541	5	16	938
	2		0	0		0				09541	5	16	939
6.61000+ 6	5.00000- 1	2.00000+ 7	5.00000- 1							9541	5	16	940
0.0 + 0	0.0 + 0		0	0		1				29541	5	16	941
	2		0	0		0				09541	5	16	942
6.61000+ 6	5.23100+ 5	2.00000+ 7	8.95284+ 5							9541	5	16	943
6.61000+ 6	0.0 + 0		0	9		1				29541	5	16	944
	2		0	0		0				09541	5	16	945
6.61000+ 6	5.00000- 1	2.00000+ 7	5.00000- 1							9541	5	16	946
0.0 + 0	0.0 + 0		0	0		1				99541	5	16	947
	9		0	0		0				09541	5	16	948
6.61000+ 6	3.89000+ 4	7.00000+ 6	9.74600+ 4	8.00000+ 6	1.82400+ 59541	5	16						949
1.00000+ 7	3.13100+ 5	1.20000+ 7	4.15300+ 5	1.40000+ 7	4.98800+ 59541	5	16						950
1.60000+ 7	5.70500+ 5	1.80000+ 7	6.34100+ 5	2.00000+ 7	6.91900+ 59541	5	16						951
						9541	5	0					952
9.52410+ 4	2.38986+ 2		0	0		3				09541	5	17	953
1.26530+ 7	0.0 + 0		0	9		1				29541	5	17	954
	2		0	0		0				09541	5	17	955
1.26530+ 7	3.33334- 1	2.00000+ 7	3.33334- 1							9541	5	17	956
0.0 + 0	0.0 + 0		0	0		1				29541	5	17	957
	2		0	0		0				09541	5	17	958
1.26530+ 7	7.16120+ 5	2.00000+ 7	8.95284+ 5							9541	5	17	959
1.26530+ 7	0.0 + 0		0	9		1				29541	5	17	960
	2		0	0		0				09541	5	17	961
1.26530+ 7	3.33333- 1	2.00000+ 7	3.33333- 1							9541	5	17	962
0.0 + 0	0.0 + 0		0	0		1				39541	5	17	963
	3		0	0		0				09541	5	17	964
1.26530+ 7	5.05000+ 5	1.50000+ 7	5.51800+ 5	2.00000+ 7	6.92400+ 59541	5	17						965
1.26530+ 7	0.0 + 0		0	9		1				29541	5	17	966
	2		0	0		0				09541	5	17	967
1.26530+ 7	3.33333- 1	2.00000+ 7	3.33333- 1							9541	5	17	968
0.0 + 0	0.0 + 0		0	0		1				39541	5	17	969
	3		0	0		0				09541	5	17	970
1.26530+ 7	3.90800+ 4	1.50000+ 7	1.70600+ 5	2.00000+ 7	4.25300+ 59541	5	17						971
						9541	5	0					972
9.52410+ 4	2.38986+ 2		0	0		1				09541	5	18	973
-2.00000+ 7	0.0 + 0		0	7		1				29541	5	18	974
	2		0	0		0				09541	5	18	975
1.00000- 5	1.00000+ 0	2.00000+ 7	1.00000+ 0							9541	5	18	976
0.0 + 0	0.0 + 0		0	0		1				29541	5	18	977
	2		0	0		0				09541	5	18	978
1.00000- 5	1.38900+ 6	2.00000+ 7	1.38900+ 6							9541	5	18	979
						9541	5	0					980
9.52410+ 4	2.38986+ 2		0	0		1				09541	5	91	981
7.35063+ 5	0.0 + 0		0	9		1				29541	5	91	982
	2		0	0		0				09541	5	91	983
7.35063+ 5	1.00000+ 0	2.00000+ 7	1.00000+ 0							9541	5	91	984
0.0 + 0	0.0 + 0		0	0		1				39541	5	91	985
	3		0	0		0				09541	5	91	986
7.35063+ 5	1.88190+ 5	2.00000+ 6	2.96825+ 5	2.00000+ 7	8.95284+ 59541	5	91						987
						9541	5	0					988
						9541	0	0					989

## Americium-243

							MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....				
9.52430+	4	2.40973+	2	1	1	0	289543	1451	1	
0.0	+ 0	0.0	+ 0	0	0	1	09543	1451	2	
							9543	1451	3	
							9543	1451	4	
				1	451	31	9543	1451	5	
				1	452	5	9543	1451	6	
				1	455	7	9543	1451	7	
				1	456	3	9543	1451	8	
				2	151	289	9543	1451	9	
				3	1	21	9543	1451	10	
				3	2	21	9543	1451	11	
				3	4	19	9543	1451	12	
				3	16	9	9543	1451	13	
				3	17	7	9543	1451	14	
				3	18	21	9543	1451	15	
				3	37	4	9543	1451	16	
				3	51	19	9543	1451	17	
				3	52	18	9543	1451	18	
				3	53	18	9543	1451	19	
				3	54	17	9543	1451	20	
				3	55	17	9543	1451	21	
				3	56	16	9543	1451	22	
				3	57	15	9543	1451	23	
				3	58	15	9543	1451	24	
				3	59	14	9543	1451	25	
				3	91	14	9543	1451	26	
				3	102	21	9543	1451	27	
				3	251	21	9543	1451	28	
				5	16	15	9543	1451	29	
				5	17	19	9543	1451	30	
				5	18	7	9543	1451	31	
				5	91	7	9543	1	0	
							9543	1	0	
							09543	1452	33	
							49543	1452	34	
							09543	1452	35	
							09543	1452	36	
							9543	1452	37	
							9543	1	0	
							9543	1	0	
							09543	1455	39	
							09543	1455	40	
							09543	1455	41	
							49543	1455	42	
							09543	1455	43	
							09543	1455	44	
							39543	1455	45	
							9543	1455	46	
							9543	1	0	
							09543	1456	47	
							09543	1456	48	
							9543	1456	49	

									MAT	MF	MT	SEQ	
.....	10.....	20.....	30.....	40.....	50.....	60.....							
									9543	1	0	50	
									9543	0	0	51	
9.52430+	4	2.40973+	2	0	0	1			09543	2151		52	
9.52430+	4	1.00000+	0	0	0	2			09543	2151		53	
1.00000-	5	2.15000+	2	1	2	0			09543	2151		54	
2.50000+	0	9.05000-	1	0	0	1			09543	2151		55	
2.40973+	2	0.0	+ 0	0	0	1320			2209543	2151		56	
-2.00000+	0	2.50000+	0	4.05200-	2	1.40000-	3	3.90000-	2	1.20000-	49543	2151	57
4.20000-	1	2.50000+	0	3.91208-	2	8.42496-	7	3.90000-	2	1.20000-	49543	2151	58
9.83000-	1	2.50000+	0	3.81346-	2	1.45745-	5	3.80000-	2	1.20000-	49543	2151	59
1.35600+	0	2.50000+	0	4.42262-	2	1.10625-	3	4.30000-	2	1.20000-	49543	2151	60
1.74400+	0	2.50000+	0	3.93603-	2	2.40350-	4	3.90000-	2	1.20000-	49543	2151	61
3.14000+	0	2.50000+	0	3.21313-	2	1.13408-	5	3.20000-	2	1.20000-	49543	2151	62
3.42400+	0	2.50000+	0	3.84068-	2	2.86813-	4	3.80000-	2	1.20000-	49543	2151	63
3.84500+	0	2.50000+	0	4.51331-	2	1.31378-	5	4.50000-	2	1.20000-	49543	2151	64
5.12500+	0	2.50000+	0	3.94347-	2	3.14675-	4	3.90000-	2	1.20000-	49543	2151	65
6.55400+	0	2.50000+	0	3.80877-	2	9.67710-	4	3.70000-	2	1.20000-	49543	2151	66
7.06700+	0	2.50000+	0	4.01918-	2	7.17763-	5	4.00000-	2	1.20000-	49543	2151	67
7.86300+	0	2.50000+	0	4.04519-	2	1.33195-	3	3.90000-	2	1.20000-	49543	2151	68
8.37700+	0	2.50000+	0	3.91287-	2	8.68291-	6	3.90000-	2	1.20000-	49543	2151	69
8.77000+	0	2.50000+	0	3.72385-	2	1.18457-	4	3.70000-	2	1.20000-	49543	2151	70
9.31400+	0	2.50000+	0	3.92726-	2	1.52594-	4	3.90000-	2	1.20000-	49543	2151	71
1.03140+	1	2.50000+	0	4.95696-	2	4.49616-	4	4.90000-	2	1.20000-	49543	2151	72
1.08770+	1	2.50000+	0	3.91332-	2	1.31921-	5	3.90000-	2	1.20000-	49543	2151	73
1.12780+	1	2.50000+	0	4.14054-	2	2.85453-	4	4.10000-	2	1.20000-	49543	2151	74
1.16930+	1	2.50000+	0	2.62260-	2	1.06005-	4	2.60000-	2	1.20000-	49543	2151	75
1.21220+	1	2.50000+	0	3.72941-	2	1.74083-	4	3.70000-	2	1.20000-	49543	2151	76
1.28770+	1	2.50000+	0	3.85242-	2	2.40426-	3	3.60000-	2	1.20000-	49543	2151	77
1.31520+	1	2.50000+	0	4.25162-	2	1.39623-	3	4.10000-	2	1.20000-	49543	2151	78
1.51430+	1	2.50000+	0	3.92173-	2	9.72850-	5	3.90000-	2	1.20000-	49543	2151	79
1.54040+	1	2.50000+	0	4.54544-	2	1.33443-	3	4.40000-	2	1.20000-	49543	2151	80
1.62100+	1	2.50000+	0	4.86716-	2	5.51585-	4	4.80000-	2	1.20000-	49543	2151	81
1.65830+	1	2.50000+	0	3.63155-	2	1.95467-	4	3.60000-	2	1.20000-	49543	2151	82
1.78740+	1	2.50000+	0	4.23483-	2	2.28299-	4	4.20000-	2	1.20000-	49543	2151	83
1.81580+	1	2.50000+	0	3.91796-	2	5.96571-	5	3.90000-	2	1.20000-	49543	2151	84
1.95330+	1	2.50000+	0	3.93542-	2	2.34240-	4	3.90000-	2	1.20000-	49543	2151	85
1.99150+	1	2.50000+	0	3.92226-	2	1.02640-	4	3.90000-	2	1.20000-	49543	2151	86
2.09740+	1	2.50000+	0	3.95780-	2	4.57974-	4	3.90000-	2	1.20000-	49543	2151	87
2.11150+	1	2.50000+	0	4.02228-	2	1.10283-	3	3.90000-	2	1.20000-	49543	2151	88
2.18720+	1	2.50000+	0	3.92743-	2	1.54333-	4	3.90000-	2	1.20000-	49543	2151	89
2.20110+	1	2.50000+	0	3.91716-	2	5.16075-	5	3.90000-	2	1.20000-	49543	2151	90
2.26000+	1	2.50000+	0	3.96429-	2	5.22934-	4	3.90000-	2	1.20000-	49543	2151	91
2.27390+	1	2.50000+	0	4.04552-	2	1.33519-	3	3.90000-	2	1.20000-	49543	2151	92
2.44540+	1	2.50000+	0	4.00596-	2	9.39569-	4	3.90000-	2	1.20000-	49543	2151	93
2.54150+	1	2.50000+	0	3.92813-	2	1.61323-	4	3.90000-	2	1.20000-	49543	2151	94
2.62370+	1	2.50000+	0	3.91610-	2	4.09777-	5	3.90000-	2	1.20000-	49543	2151	95
2.67500+	1	2.50000+	0	4.07750-	2	1.65505-	3	3.90000-	2	1.20000-	49543	2151	96
2.73550+	1	2.50000+	0	3.96430-	2	5.23020-	4	3.90000-	2	1.20000-	49543	2151	97
2.87350+	1	2.50000+	0	4.02082-	2	1.08818-	3	3.90000-	2	1.20000-	49543	2151	98
2.93000+	1	2.50000+	0	3.98507-	2	7.30748-	4	3.90000-	2	1.20000-	49543	2151	99
3.01300+	1	2.50000+	0	3.96689-	2	5.48908-	4	3.90000-	2	1.20000-	49543	2151	100
3.10700+	1	2.50000+	0	3.99282-	2	8.08237-	4	3.90000-	2	1.20000-	49543	2151	101
3.14900+	1	2.50000+	0	3.92939-	2	1.73959-	4	3.90000-	2	1.20000-	49543	2151	102
3.24200+	1	2.50000+	0	3.92680-	2	1.48040-	4	3.90000-	2	1.20000-	49543	2151	103
3.32000+	1	2.50000+	0	4.00995-	2	9.79530-	4	3.90000-	2	1.20000-	49543	2151	104

							MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....				
3.39400+	1	2.50000+	0	4.09842-	2	1.86426-	3	3.90000-	2	1.20000- 49543 2151 105
3.49900+	1	2.50000+	0	4.01256-	2	1.00559-	3	3.90000-	2	1.20000- 49543 2151 106
3.66700+	1	2.50000+	0	3.99678-	2	8.47781-	4	3.90000-	2	1.20000- 49543 2151 107
3.70300+	1	2.50000+	0	4.11281-	2	2.00813-	3	3.90000-	2	1.20000- 49543 2151 108
3.75500+	1	2.50000+	0	3.91997-	2	7.96615-	5	3.90000-	2	1.20000- 49543 2151 109
3.79300+	1	2.50000+	0	3.97359-	2	6.15873-	4	3.90000-	2	1.20000- 49543 2151 110
3.95000+	1	2.50000+	0	3.97611-	2	6.41060-	4	3.90000-	2	1.20000- 49543 2151 111
4.05000+	1	2.50000+	0	3.92155-	2	9.54594-	5	3.90000-	2	1.20000- 49543 2151 112
4.09500+	1	2.50000+	0	3.94400-	2	3.19961-	4	3.90000-	2	1.20000- 49543 2151 113
4.12600+	1	2.50000+	0	4.02120-	2	1.09198-	3	3.90000-	2	1.20000- 49543 2151 114
4.15400+	1	2.50000+	0	4.16336-	2	2.51361-	3	3.90000-	2	1.20000- 49543 2151 115
4.29500+	1	2.50000+	0	4.19381-	2	2.81806-	3	3.90000-	2	1.20000- 49543 2151 116
4.41100+	1	2.50000+	0	3.95517-	2	4.31700-	4	3.90000-	2	1.20000- 49543 2151 117
4.53500+	1	2.50000+	0	4.02648-	2	1.14482-	3	3.90000-	2	1.20000- 49543 2151 118
4.71100+	1	2.50000+	0	3.95181-	2	3.98093-	4	3.90000-	2	1.20000- 49543 2151 119
4.85500+	1	2.50000+	0	3.95799-	2	4.59874-	4	3.90000-	2	1.20000- 49543 2151 120
4.92900+	1	2.50000+	0	3.98782-	2	7.58234-	4	3.90000-	2	1.20000- 49543 2151 121
5.02000+	1	2.50000+	0	3.92263-	2	1.06278-	4	3.90000-	2	1.20000- 49543 2151 122
5.12800+	1	2.50000+	0	4.01941-	2	1.07415-	3	3.90000-	2	1.20000- 49543 2151 123
5.21700+	1	2.50000+	0	3.92283-	2	1.08343-	4	3.90000-	2	1.20000- 49543 2151 124
5.30300+	1	2.50000+	0	4.12318-	2	2.11183-	3	3.90000-	2	1.20000- 49543 2151 125
5.36000+	1	2.50000+	0	3.92152-	2	9.51756-	5	3.90000-	2	1.20000- 49543 2151 126
5.40200+	1	2.50000+	0	3.97815-	2	6.61485-	4	3.90000-	2	1.20000- 49543 2151 127
5.45500+	1	2.50000+	0	4.10403-	2	1.92031-	3	3.90000-	2	1.20000- 49543 2151 128
5.49300+	1	2.50000+	0	3.92905-	2	1.70464-	4	3.90000-	2	1.20000- 49543 2151 129
5.58700+	1	2.50000+	0	4.07644-	2	1.64442-	3	3.90000-	2	1.20000- 49543 2151 130
5.87400+	1	2.50000+	0	3.95645-	2	4.44524-	4	3.90000-	2	1.20000- 49543 2151 131
5.91300+	1	2.50000+	0	4.00197-	2	8.99684-	4	3.90000-	2	1.20000- 49543 2151 132
5.99800+	1	2.50000+	0	3.98945-	2	7.74468-	4	3.90000-	2	1.20000- 49543 2151 133
6.07600+	1	2.50000+	0	4.03282-	2	1.20820-	3	3.90000-	2	1.20000- 49543 2151 134
6.12000+	1	2.50000+	0	4.20145-	2	2.89453-	3	3.90000-	2	1.20000- 49543 2151 135
6.25100+	1	2.50000+	0	3.93888-	2	2.68815-	4	3.90000-	2	1.20000- 49543 2151 136
6.31900+	1	2.50000+	0	3.95175-	2	3.97461-	4	3.90000-	2	1.20000- 49543 2151 137
6.48200+	1	2.50000+	0	3.95225-	2	4.02554-	4	3.90000-	2	1.20000- 49543 2151 138
6.62100+	1	2.50000+	0	4.04789-	2	1.35887-	3	3.90000-	2	1.20000- 49543 2151 139
6.73600+	1	2.50000+	0	4.02198-	2	1.09978-	3	3.90000-	2	1.20000- 49543 2151 140
6.80100+	1	2.50000+	0	4.03570-	2	1.23702-	3	3.90000-	2	1.20000- 49543 2151 141
6.86700+	1	2.50000+	0	4.07193-	2	1.59934-	3	3.90000-	2	1.20000- 49543 2151 142
6.96600+	1	2.50000+	0	4.30511-	2	3.93109-	3	3.90000-	2	1.20000- 49543 2151 143
7.02700+	1	2.50000+	0	4.15426-	2	2.42261-	3	3.90000-	2	1.20000- 49543 2151 144
7.16000+	1	2.50000+	0	3.93738-	2	2.53850-	4	3.90000-	2	1.20000- 49543 2151 145
7.22200+	1	2.50000+	0	4.17459-	2	2.62595-	3	3.90000-	2	1.20000- 49543 2151 146
7.28800+	1	2.50000+	0	4.21165-	2	2.99648-	3	3.90000-	2	1.20000- 49543 2151 147
7.39300+	1	2.50000+	0	3.94811-	2	3.61127-	4	3.90000-	2	1.20000- 49543 2151 148
7.43400+	1	2.50000+	0	3.94821-	2	3.62127-	4	3.90000-	2	1.20000- 49543 2151 149
7.48800+	1	2.50000+	0	3.94315-	2	3.11520-	4	3.90000-	2	1.20000- 49543 2151 150
7.54300+	1	2.50000+	0	4.22466-	2	3.12662-	3	3.90000-	2	1.20000- 49543 2151 151
7.65000+	1	2.50000+	0	3.93299-	2	2.09914-	4	3.90000-	2	1.20000- 49543 2151 152
7.70000+	1	2.50000+	0	3.96465-	2	5.26498-	4	3.90000-	2	1.20000- 49543 2151 153
7.75400+	1	2.50000+	0	4.06170-	2	1.49697-	3	3.90000-	2	1.20000- 49543 2151 154
7.82200+	1	2.50000+	0	3.94295-	2	3.09547-	4	3.90000-	2	1.20000- 49543 2151 155
8.05000+	1	2.50000+	0	4.00621-	2	9.42079-	4	3.90000-	2	1.20000- 49543 2151 156
8.10000+	1	2.50000+	0	4.14960-	2	2.37600-	3	3.90000-	2	1.20000- 49543 2151 157
8.11000+	1	2.50000+	0	4.08311-	2	1.71106-	3	3.90000-	2	1.20000- 49543 2151 158
8.31000+	1	2.50000+	0	4.01592-	2	1.03921-	3	3.90000-	2	1.20000- 49543 2151 159

										MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....							
8.35200+	1	2.50000+	0	4.16332-	2	2.51321-	3	3.90000-	2	1.20000-	49543	2151	160
8.41900+	1	2.50000+	0	4.13221-	2	2.20212-	3	3.90000-	2	1.20000-	49543	2151	161
8.55600+	1	2.50000+	0	4.59279-	2	6.80790-	3	3.90000-	2	1.20000-	49543	2151	162
8.66300+	1	2.50000+	0	4.07023-	2	1.58228-	3	3.90000-	2	1.20000-	49543	2151	163
8.83600+	1	2.50000+	0	4.05676-	2	1.44760-	3	3.90000-	2	1.20000-	49543	2151	164
8.90000+	1	2.50000+	0	4.04030-	2	1.28302-	3	3.90000-	2	1.20000-	49543	2151	165
9.04300+	1	2.50000+	0	4.05464-	2	1.42642-	3	3.90000-	2	1.20000-	49543	2151	166
9.12500+	1	2.50000+	0	4.02663-	2	1.14630-	3	3.90000-	2	1.20000-	49543	2151	167
9.47200+	1	2.50000+	0	4.04825-	2	1.36254-	3	3.90000-	2	1.20000-	49543	2151	168
9.58000+	1	2.50000+	0	3.95115-	2	3.91510-	4	3.90000-	2	1.20000-	49543	2151	169
9.75300+	1	2.50000+	0	4.12927-	2	2.17266-	3	3.90000-	2	1.20000-	49543	2151	170
9.94800+	1	2.50000+	0	4.01174-	2	9.97397-	4	3.90000-	2	1.20000-	49543	2151	171
1.01120+	2	2.50000+	0	4.28407-	2	3.72066-	3	3.90000-	2	1.20000-	49543	2151	172
1.01920+	2	2.50000+	0	4.16439-	2	2.52389-	3	3.90000-	2	1.20000-	49543	2151	173
1.04060+	2	2.50000+	0	3.98443-	2	7.24270-	4	3.90000-	2	1.20000-	49543	2151	174
1.04960+	2	2.50000+	0	4.10665-	2	1.94655-	3	3.90000-	2	1.20000-	49543	2151	175
1.07170+	2	2.50000+	0	4.27951-	2	3.67506-	3	3.90000-	2	1.20000-	49543	2151	176
1.09720+	2	2.50000+	0	4.03979-	2	1.27792-	3	3.90000-	2	1.20000-	49543	2151	177
1.11630+	2	2.50000+	0	4.05146-	2	1.39465-	3	3.90000-	2	1.20000-	49543	2151	178
1.12120+	2	2.50000+	0	4.01683-	2	1.04828-	3	3.90000-	2	1.20000-	49543	2151	179
1.12700+	2	2.50000+	0	4.03408-	2	1.22084-	3	3.90000-	2	1.20000-	49543	2151	180
1.13190+	2	2.50000+	0	4.94718-	2	1.03518-	2	3.90000-	2	1.20000-	49543	2151	181
1.14240+	2	2.50000+	0	4.45390-	2	5.41897-	3	3.90000-	2	1.20000-	49543	2151	182
1.16600+	2	2.50000+	0	4.64951-	2	7.37513-	3	3.90000-	2	1.20000-	49543	2151	183
1.19740+	2	2.50000+	0	4.38472-	2	4.72719-	3	3.90000-	2	1.20000-	49543	2151	184
1.22310+	2	2.50000+	0	4.61980-	2	7.07801-	3	3.90000-	2	1.20000-	49543	2151	185
1.23370+	2	2.50000+	0	5.76690-	2	1.85490-	2	3.90000-	2	1.20000-	49543	2151	186
1.25180+	2	2.50000+	0	4.70414-	2	7.92138-	3	3.90000-	2	1.20000-	49543	2151	187
1.26400+	2	2.50000+	0	3.98508-	2	7.30780-	4	3.90000-	2	1.20000-	49543	2151	188
1.27380+	2	2.50000+	0	4.14901-	2	2.37012-	3	3.90000-	2	1.20000-	49543	2151	189
1.30300+	2	2.50000+	0	3.96679-	2	5.47915-	4	3.90000-	2	1.20000-	49543	2151	190
1.32500+	2	2.50000+	0	3.99833-	2	8.63315-	4	3.90000-	2	1.20000-	49543	2151	191
1.33500+	2	2.50000+	0	4.01368-	2	1.01677-	3	3.90000-	2	1.20000-	49543	2151	192
1.34100+	2	2.50000+	0	4.05675-	2	1.44752-	3	3.90000-	2	1.20000-	49543	2151	193
1.34700+	2	2.50000+	0	3.98744-	2	7.54392-	4	3.90000-	2	1.20000-	49543	2151	194
1.35200+	2	2.50000+	0	3.98525-	2	7.32536-	4	3.90000-	2	1.20000-	49543	2151	195
1.39400+	2	2.50000+	0	4.15640-	2	2.44400-	3	3.90000-	2	1.20000-	49543	2151	196
1.40030+	2	2.50000+	0	4.60425-	2	6.92255-	3	3.90000-	2	1.20000-	49543	2151	197
1.41200+	2	2.50000+	0	4.03796-	2	1.25957-	3	3.90000-	2	1.20000-	49543	2151	198
1.44000+	2	2.50000+	0	4.29240-	2	3.80400-	3	3.90000-	2	1.20000-	49543	2151	199
1.44470+	2	2.50000+	0	4.55745-	2	6.45451-	3	3.90000-	2	1.20000-	49543	2151	200
1.45000+	2	2.50000+	0	4.27325-	2	3.61248-	3	3.90000-	2	1.20000-	49543	2151	201
1.46090+	2	2.50000+	0	4.81246-	2	9.00464-	3	3.90000-	2	1.20000-	49543	2151	202
1.46600+	2	2.50000+	0	4.31882-	2	4.06824-	3	3.90000-	2	1.20000-	49543	2151	203
1.48380+	2	2.50000+	0	4.36270-	2	4.50702-	3	3.90000-	2	1.20000-	49543	2151	204
1.49800+	2	2.50000+	0	3.98544-	2	7.34357-	4	3.90000-	2	1.20000-	49543	2151	205
1.51100+	2	2.50000+	0	4.01034-	2	9.83382-	4	3.90000-	2	1.20000-	49543	2151	206
1.52800+	2	2.50000+	0	4.11720-	2	2.05196-	3	3.90000-	2	1.20000-	49543	2151	207
1.54000+	2	2.50000+	0	4.30291-	2	3.90905-	3	3.90000-	2	1.20000-	49543	2151	208
1.54700+	2	2.50000+	0	4.32494-	2	4.12936-	3	3.90000-	2	1.20000-	49543	2151	209
1.58640+	2	2.50000+	0	4.35913-	2	4.47131-	3	3.90000-	2	1.20000-	49543	2151	210
1.60640+	2	2.50000+	0	5.42532-	2	1.51332-	2	3.90000-	2	1.20000-	49543	2151	211
1.63900+	2	2.50000+	0	3.96577-	2	5.37698-	4	3.90000-	2	1.20000-	49543	2151	212
1.64870+	2	2.50000+	0	4.40763-	2	4.95631-	3	3.90000-	2	1.20000-	49543	2151	213
1.66100+	2	2.50000+	0	4.15687-	2	2.44872-	3	3.90000-	2	1.20000-	49543	2151	214

							MAT	MF	MT	SEQ							
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....	MAT	MF	MT	SEQ	
1.66800+	2	2.50000+	0	4.14060-	2	2.28597-	3	3.90000-	2	1.20000-	49543	2151	215				
1.68010+	2	2.50000+	0	4.56398-	2	6.51982-	3	3.90000-	2	1.20000-	49543	2151	216				
1.69700+	2	2.50000+	0	4.03706-	2	1.25058-	3	3.90000-	2	1.20000-	49543	2151	217				
1.71700+	2	2.50000+	0	4.03779-	2	1.25793-	3	3.90000-	2	1.20000-	49543	2151	218				
1.72700+	2	2.50000+	0	4.65975-	2	7.47753-	3	3.90000-	2	1.20000-	49543	2151	219				
1.73600+	2	2.50000+	0	4.65643-	2	7.44429-	3	3.90000-	2	1.20000-	49543	2151	220				
1.74700+	2	2.50000+	0	4.30852-	2	3.96522-	3	3.90000-	2	1.20000-	49543	2151	221				
1.75800+	2	2.50000+	0	4.31109-	2	3.99095-	3	3.90000-	2	1.20000-	49543	2151	222				
1.77000+	2	2.50000+	0	4.77278-	2	8.60777-	3	3.90000-	2	1.20000-	49543	2151	223				
1.80000+	2	2.50000+	0	4.20716-	2	2.95161-	3	3.90000-	2	1.20000-	49543	2151	224				
1.80500+	2	2.50000+	0	4.10412-	2	1.92121-	3	3.90000-	2	1.20000-	49543	2151	225				
1.81500+	2	2.50000+	0	4.13160-	2	2.19597-	3	3.90000-	2	1.20000-	49543	2151	226				
1.83000+	2	2.50000+	0	4.10004-	2	1.88036-	3	3.90000-	2	1.20000-	49543	2151	227				
1.84050+	2	2.50000+	0	4.24574-	2	3.33736-	3	3.90000-	2	1.20000-	49543	2151	228				
1.84500+	2	2.50000+	0	4.37247-	2	4.60470-	3	3.90000-	2	1.20000-	49543	2151	229				
1.86200+	2	2.50000+	0	4.11668-	2	2.04683-	3	3.90000-	2	1.20000-	49543	2151	230				
1.86900+	2	2.50000+	0	4.39049-	2	4.78490-	3	3.90000-	2	1.20000-	49543	2151	231				
1.88000+	2	2.50000+	0	4.76896-	2	8.56957-	3	3.90000-	2	1.20000-	49543	2151	232				
1.90600+	2	2.50000+	0	4.21020-	2	2.98205-	3	3.90000-	2	1.20000-	49543	2151	233				
1.91600+	2	2.50000+	0	4.23036-	2	3.18365-	3	3.90000-	2	1.20000-	49543	2151	234				
1.92250+	2	2.50000+	0	4.38065-	2	4.68651-	3	3.90000-	2	1.20000-	49543	2151	235				
1.93350+	2	2.50000+	0	4.78941-	2	8.77408-	3	3.90000-	2	1.20000-	49543	2151	236				
1.95900+	2	2.50000+	0	3.92600-	2	1.39964-	4	3.90000-	2	1.20000-	49543	2151	237				
1.96200+	2	2.50000+	0	4.05347-	2	1.41472-	3	3.90000-	2	1.20000-	49543	2151	238				
1.96900+	2	2.50000+	0	4.14213-	2	2.30127-	3	3.90000-	2	1.20000-	49543	2151	239				
1.97600+	2	2.50000+	0	4.47006-	2	5.58064-	3	3.90000-	2	1.20000-	49543	2151	240				
1.99200+	2	2.50000+	0	4.03197-	2	1.19967-	3	3.90000-	2	1.20000-	49543	2151	241				
1.99850+	2	2.50000+	0	4.22301-	2	3.11010-	3	3.90000-	2	1.20000-	49543	2151	242				
2.02100+	2	2.50000+	0	3.94754-	2	3.55405-	4	3.90000-	2	1.20000-	49543	2151	243				
2.03700+	2	2.50000+	0	3.98051-	2	6.85073-	4	3.90000-	2	1.20000-	49543	2151	244				
2.05000+	2	2.50000+	0	4.25133-	2	3.39332-	3	3.90000-	2	1.20000-	49543	2151	245				
2.06600+	2	2.50000+	0	4.08879-	2	1.76795-	3	3.90000-	2	1.20000-	49543	2151	246				
2.08200+	2	2.50000+	0	4.28716-	2	3.75158-	3	3.90000-	2	1.20000-	49543	2151	247				
2.09600+	2	2.50000+	0	4.31882-	2	4.06820-	3	3.90000-	2	1.20000-	49543	2151	248				
2.10950+	2	2.50000+	0	4.48134-	2	5.69345-	3	3.90000-	2	1.20000-	49543	2151	249				
2.11500+	2	2.50000+	0	4.54753-	2	6.35531-	3	3.90000-	2	1.20000-	49543	2151	250				
2.13400+	2	2.50000+	0	4.09752-	2	1.85524-	3	3.90000-	2	1.20000-	49543	2151	251				
2.14500+	2	2.50000+	0	4.61793-	2	7.05928-	3	3.90000-	2	1.20000-	49543	2151	252				
2.17000+	2	2.50000+	0	4.19631-	2	2.84307-	3	3.90000-	2	1.20000-	49543	2151	253				
2.20300+	2	2.50000+	0	4.44039-	2	5.28393-	3	3.90000-	2	1.20000-	49543	2151	254				
2.21200+	2	2.50000+	0	4.18715-	2	2.75147-	3	3.90000-	2	1.20000-	49543	2151	255				
2.22000+	2	2.50000+	0	4.17423-	2	2.62234-	3	3.90000-	2	1.20000-	49543	2151	256				
2.24300+	2	2.50000+	0	4.15163-	2	2.39626-	3	3.90000-	2	1.20000-	49543	2151	257				
2.25300+	2	2.50000+	0	4.67000-	2	7.58005-	3	3.90000-	2	1.20000-	49543	2151	258				
2.26200+	2	2.50000+	0	4.20678-	2	2.94783-	3	3.90000-	2	1.20000-	49543	2151	259				
2.27300+	2	2.50000+	0	4.25876-	2	3.46759-	3	3.90000-	2	1.20000-	49543	2151	260				
2.28800+	2	2.50000+	0	4.02393-	2	1.11933-	3	3.90000-	2	1.20000-	49543	2151	261				
2.31800+	2	2.50000+	0	4.05664-	2	1.44637-	3	3.90000-	2	1.20000-	49543	2151	262				
2.32900+	2	2.50000+	0	4.79104-	2	8.79037-	3	3.90000-	2	1.20000-	49543	2151	263				
2.34100+	2	2.50000+	0	4.73516-	2	8.23158-	3	3.90000-	2	1.20000-	49543	2151	264				
2.36000+	2	2.50000+	0	4.08713-	2	1.75130-	3	3.90000-	2	1.20000-	49543	2151	265				
2.37500+	2	2.50000+	0	4.19710-	2	2.85104-	3	3.90000-	2	1.20000-	49543	2151	266				
2.38700+	2	2.50000+	0	4.08195-	2	1.69949-	3	3.90000-	2	1.20000-	49543	2151	267				
2.39500+	2	2.50000+	0	4.30508-	2	3.93085-	3	3.90000-	2	1.20000-	49543	2151	268				
2.41200+	2	2.50000+	0	4.08439-	2	1.72390-	3	3.90000-	2	1.20000-	49543	2151	269				

										MAT	MF	MT	SEQ
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....	
2.42800+	2	2.50000+	0	4.36700-	2	4.54996-	3	3.90000-	2	1.20000-	49543	2151	270
2.44100+	2	2.50000+	0	4.05574-	2	1.43738-	3	3.90000-	2	1.20000-	49543	2151	271
2.44600+	2	2.50000+	0	4.37337-	2	4.61371-	3	3.90000-	2	1.20000-	49543	2151	272
2.46300+	2	2.50000+	0	4.09719-	2	1.85189-	3	3.90000-	2	1.20000-	49543	2151	273
2.47100+	2	2.50000+	0	4.53449-	2	6.22489-	3	3.90000-	2	1.20000-	49543	2151	274
2.48600+	2	2.50000+	0	5.19228-	2	1.28028-	2	3.90000-	2	1.20000-	49543	2151	275
2.49700+	2	2.50000+	0	4.25964-	2	3.47642-	3	3.90000-	2	1.20000-	49543	2151	276
2.15000+	2	3.00000+	4		2		2		0		09543	2151	277
2.50000+	0	9.34000-	1		0		0		2		09543	2151	278
2.40970+	2	0.0	+ 0		0		0		2		09543	2151	279
2.00000+	0	0.0	+ 0		2		0		54		89543	2151	280
0.0	+ 0	0.0	+ 0	0.0	+ 0	1.00000+	0	0.0	+ 0	1.00000+	09543	2151	281
2.15000+	2	1.60740+	0	0.0	+ 0	1.49490-	4	3.90000-	2	1.20000-	49543	2151	282
5.00000+	2	1.60650+	0	0.0	+ 0	1.49410-	4	3.90000-	2	1.20000-	49543	2151	283
1.00000+	3	1.60500+	0	0.0	+ 0	1.49270-	4	3.90000-	2	1.20000-	49543	2151	284
2.00000+	3	1.60200+	0	0.0	+ 0	1.48990-	4	3.90000-	2	1.20000-	49543	2151	285
5.00000+	3	1.59310+	0	0.0	+ 0	1.48150-	4	3.90000-	2	1.20000-	49543	2151	286
1.00000+	4	1.57820+	0	0.0	+ 0	1.46780-	4	3.90000-	2	1.20000-	49543	2151	287
2.00000+	4	1.54900+	0	0.0	+ 0	1.44060-	4	3.90000-	2	1.20000-	49543	2151	288
3.00000+	4	1.52040+	0	0.0	+ 0	1.41400-	4	3.90000-	2	1.20000-	49543	2151	289
3.00000+	0	0.0	+ 0		2		0		54		89543	2151	290
0.0	+ 0	0.0	+ 0	0.0	+ 0	1.00000+	0	0.0	+ 0	1.00000+	09543	2151	291
2.15000+	2	1.14810+	0	0.0	+ 0	1.06780-	4	3.90000-	2	1.20000-	49543	2151	292
5.00000+	2	1.14750+	0	0.0	+ 0	1.06720-	4	3.90000-	2	1.20000-	49543	2151	293
1.00000+	3	1.14640+	0	0.0	+ 0	1.06620-	4	3.90000-	2	1.20000-	49543	2151	294
2.00000+	3	1.14430+	0	0.0	+ 0	1.06420-	4	3.90000-	2	1.20000-	49543	2151	295
5.00000+	3	1.13790+	0	0.0	+ 0	1.05820-	4	3.90000-	2	1.20000-	49543	2151	296
1.00000+	4	1.12730+	0	0.0	+ 0	1.04840-	4	3.90000-	2	1.20000-	49543	2151	297
2.00000+	4	1.10650+	0	0.0	+ 0	1.02900-	4	3.90000-	2	1.20000-	49543	2151	298
3.00000+	4	1.08600+	0	0.0	+ 0	1.01000-	4	3.90000-	2	1.20000-	49543	2151	299
2.40970+	2	0.0	+ 0		1		0		4		09543	2151	300
1.00000+	0	0.0	+ 0		2		0		54		89543	2151	301
0.0	+ 0	0.0	+ 0	0.0	+ 0	1.00000+	0	0.0	+ 0	1.00000+	09543	2151	302
2.15000+	2	2.67890+	0	0.0	+ 0	6.53660-	4	3.90000-	2	1.20000-	49543	2151	303
5.00000+	2	2.67750+	0	0.0	+ 0	6.53310-	4	3.90000-	2	1.20000-	49543	2151	304
1.00000+	3	2.67500+	0	0.0	+ 0	6.52710-	4	3.90000-	2	1.20000-	49543	2151	305
2.00000+	3	2.67000+	0	0.0	+ 0	6.51490-	4	3.90000-	2	1.20000-	49543	2151	306
5.00000+	3	2.65510+	0	0.0	+ 0	6.47840-	4	3.90000-	2	1.20000-	49543	2151	307
1.00000+	4	2.63040+	0	0.0	+ 0	6.41810-	4	3.90000-	2	1.20000-	49543	2151	308
2.00000+	4	2.58170+	0	0.0	+ 0	6.29940-	4	3.90000-	2	1.20000-	49543	2151	309
3.00000+	4	2.53400+	0	0.0	+ 0	6.18290-	4	3.90000-	2	1.20000-	49543	2151	310
2.00000+	0	0.0	+ 0		2		0		54		89543	2151	311
0.0	+ 0	0.0	+ 0	0.0	+ 0	2.00000+	0	0.0	+ 0	1.00000+	09543	2151	312
2.15000+	2	1.60740+	0	0.0	+ 0	3.92200-	4	3.90000-	2	1.20000-	49543	2151	313
5.00000+	2	1.60650+	0	0.0	+ 0	3.91990-	4	3.90000-	2	1.20000-	49543	2151	314
1.00000+	3	1.60500+	0	0.0	+ 0	3.91620-	4	3.90000-	2	1.20000-	49543	2151	315
2.00000+	3	1.60200+	0	0.0	+ 0	3.90890-	4	3.90000-	2	1.20000-	49543	2151	316
5.00000+	3	1.59310+	0	0.0	+ 0	3.88710-	4	3.90000-	2	1.20000-	49543	2151	317
1.00000+	4	1.57820+	0	0.0	+ 0	3.85090-	4	3.90000-	2	1.20000-	49543	2151	318
2.00000+	4	1.54900+	0	0.0	+ 0	3.77970-	4	3.90000-	2	1.20000-	49543	2151	319
3.00000+	4	1.52040+	0	0.0	+ 0	3.70970-	4	3.90000-	2	1.20000-	49543	2151	320
3.00000+	0	0.0	+ 0		2		0		54		89543	2151	321
0.0	+ 0	0.0	+ 0	0.0	+ 0	2.00000+	0	0.0	+ 0	1.00000+	09543	2151	322
2.15000+	2	1.14810+	0	0.0	+ 0	2.80140-	4	3.90000-	2	1.20000-	49543	2151	323
5.00000+	2	1.14750+	0	0.0	+ 0	2.79990-	4	3.90000-	2	1.20000-	49543	2151	324

									MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....						
1.00000+	3 1.14640+	0 0.0	+ 0	2.79730-	4 3.90000-	2 1.20000-	49543	2151	325			
2.00000+	3 1.14430+	0 0.0	+ 0	2.79210-	4 3.90000-	2 1.20000-	49543	2151	326			
5.00000+	3 1.13790+	0 0.0	+ 0	2.77650-	4 3.90000-	2 1.20000-	49543	2151	327			
1.00000+	4 1.12730+	0 0.0	+ 0	2.75060-	4 3.90000-	2 1.20000-	49543	2151	328			
2.00000+	4 1.10650+	0 0.0	+ 0	2.69980-	4 3.90000-	2 1.20000-	49543	2151	329			
3.00000+	4 1.08600+	0 0.0	+ 0	2.64980-	4 3.90000-	2 1.20000-	49543	2151	330			
4.00000+	0 0.0	+ 0	2	0	54		89543	2151	331			
0.0	+ 0 0.0	+ 0 0.0	+ 0	1.00000+	0 0.0	+ 0	1.00000+	09543	2151	332		
2.15000+	2 8.92980-	1 0.0	+ 0	2.17890-	4 3.90000-	2 1.20000-	49543	2151	333			
5.00000+	2 8.92510-	1 0.0	+ 0	2.17770-	4 3.90000-	2 1.20000-	49543	2151	334			
1.00000+	3 8.91680-	1 0.0	+ 0	2.17570-	4 3.90000-	2 1.20000-	49543	2151	335			
2.00000+	3 8.90010-	1 0.0	+ 0	2.17160-	4 3.90000-	2 1.20000-	49543	2151	336			
5.00000+	3 8.85030-	1 0.0	+ 0	2.15950-	4 3.90000-	2 1.20000-	49543	2151	337			
1.00000+	4 8.76790-	1 0.0	+ 0	2.13940-	4 3.90000-	2 1.20000-	49543	2151	338			
2.00000+	4 8.60580-	1 0.0	+ 0	2.09980-	4 3.90000-	2 1.20000-	49543	2151	339			
3.00000+	4 8.44660-	1 0.0	+ 0	2.06100-	4 3.90000-	2 1.20000-	49543	2151	340			
							9543	2 0	341			
							9543	0 0	342			
9.52430+	4 2.40973+	2	0	99	0		09543	3 1	343			
0.0	+ 0 0.0	+ 0	0	0	2		539543	3 1	344			
	3	2	53	5	0		09543	3 1	345			
1.00000-	5 0.0	+ 0 2.53000-	2 0.0	+ 0 3.00000+	4 0.0	+ 09543	3 1	346				
3.00000+	4 1.39503+	1 4.00000+	4 1.36815+	1 4.23751+	4 1.36293+	19543	3 1	347				
6.00000+	4 1.33125+	1 8.00000+	4 1.30271+	1 8.43486+	4 1.29700+	19543	3 1	348				
9.68000+	4 1.28123+	1 1.00000+	5 1.27729+	1 1.09754+	5 1.26545+	19543	3 1	349				
1.44096+	5 1.22546+	1 1.50000+	5 1.21877+	1 1.90086+	5 1.17450+	19543	3 1	350				
2.00000+	5 1.16385+	1 2.50000+	5 1.11200+	1 2.68108+	5 1.09402+	19543	3 1	351				
2.99237+	5 1.06419+	1 3.00000+	5 1.06348+	1 3.45428+	5 1.02240+	19543	3 1	352				
3.50000+	5 1.01843+	1 3.84589+	5 9.89382+	0 4.00000+	5 9.76995+	09543	3 1	353				
5.00000+	5 9.04866+	0 6.00000+	5 8.46519+	0 7.00000+	5 8.00652+	09543	3 1	354				
8.00000+	5 7.65779+	0 9.00000+	5 7.40215+	0 1.00000+	6 7.22205+	09543	3 1	355				
1.10000+	6 7.10112+	0 1.20000+	6 7.02494+	0 1.30000+	6 6.98180+	09543	3 1	356				
1.40000+	6 6.96315+	0 1.50000+	6 6.96181+	0 1.60000+	6 6.97349+	09543	3 1	357				
2.00000+	6 7.09788+	0 3.00000+	6 7.55869+	0 4.00000+	6 7.78966+	09543	3 1	358				
4.60000+	6 7.75766+	0 5.00000+	6 7.69013+	0 5.40000+	6 7.59481+	09543	3 1	359				
6.00000+	6 7.39327+	0 6.50000+	6 7.17288+	0 7.00000+	6 6.92662+	09543	3 1	360				
7.30000+	6 6.77780+	0 8.00000+	6 6.45612+	0 9.00000+	6 6.10071+	09543	3 1	361				
1.00000+	7 5.88111+	0 1.10000+	7 5.76441+	0 1.20000+	7 5.71313+	09543	3 1	362				
1.40000+	7 5.75941+	0 2.00000+	7 6.20766+	0	9543	3 1	363					
					9543	3 0	364					
9.52430+	4 2.40973+	2	0	0	0		09543	3 2	365			
0.0	+ 0 0.0	+ 0	0	0	2		539543	3 2	366			
	3	2	53	5	0		09543	3 2	367			
1.00000-	5 0.0	+ 0 2.53000-	2 0.0	+ 0 3.00000+	4 0.0	+ 09543	3 2	368				
3.00000+	4 1.16494+	1 4.00000+	4 1.15535+	1 4.23751+	4 1.15354+	19543	3 2	369				
6.00000+	4 1.13429+	1 8.00000+	4 1.11503+	1 8.43486+	4 1.11073+	19543	3 2	370				
9.68000+	4 1.09079+	1 1.00000+	5 1.08647+	1 1.09754+	5 1.07319+	19543	3 2	371				
1.44096+	5 1.02063+	1 1.50000+	5 1.01176+	1 1.90086+	5 9.60475+	09543	3 2	372				
2.00000+	5 9.48756+	0 2.50000+	5 8.93456+	0 2.68108+	5 8.74708+	09543	3 2	373				
2.99237+	5 8.40982+	0 3.00000+	5 8.40024+	0 3.45428+	5 7.90122+	09543	3 2	374				
3.50000+	5 7.85179+	0 3.84589+	5 7.49377+	0 4.00000+	5 7.34285+	09543	3 2	375				
5.00000+	5 6.46912+	0 6.00000+	5 5.75066+	0 7.00000+	5 5.15949+	09543	3 2	376				
8.00000+	5 4.66173+	0 9.00000+	5 4.24950+	0 1.00000+	6 3.92523+	09543	3 2	377				
1.10000+	6 3.70645+	0 1.20000+	6 3.56142+	0 1.30000+	6 3.46734+	09543	3 2	378				
1.40000+	6 3.41674+	0 1.50000+	6 3.40462+	0 1.60000+	6 3.42035+	09543	3 2	379				

										MAT	MF	MT	SEQ	
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....		
2.00000+	6	3.66108+	0	3.00000+	6	4.54561+	0	4.00000+	6	4.97496+	09543	3	2	380
4.60000+	6	4.97584+	0	5.00000+	6	4.89755+	0	5.40000+	6	4.77488+	09543	3	2	381
6.00000+	6	4.53621+	0	6.50000+	6	4.30720+	0	7.00000+	6	4.06662+	09543	3	2	382
7.30000+	6	3.92251+	0	8.00000+	6	3.60355+	0	9.00000+	6	3.22487+	09543	3	2	383
1.00000+	7	2.96070+	0	1.10000+	7	2.80423+	0	1.20000+	7	2.72862+	09543	3	2	384
1.40000+	7	2.72787+	0	2.00000+	7	3.02801+	0			9543	3	2	385	
										9543	3	0	386	
9.52430+	4	2.40973+	2		0	99		0		09543	3	4	387	
0.0	+ 0-4.22000+	4			0	0		1		489543	3	4	388	
48	.3				0	0		0		09543	3	4	389	
4.23751+	4	0.0	+ 0	6.00000+	4	1.81360-	1	8.00000+	4	3.14535-	19543	3	4	390
8.43486+	4	3.39834-	1	9.68000+	4	5.38337-	1	1.00000+	5	5.74020-	19543	3	4	391
1.09754+	5	6.74304-	1	1.44096+	5	1.07158+	0	1.50000+	5	1.13092+	09543	3	4	392
1.90086+	5	1.35506+	0	2.00000+	5	1.39234+	0	2.50000+	5	1.51911+	09543	3	4	393
2.68108+	5	1.54840+	0	2.99237+	5	1.62882+	0	3.00000+	5	1.63314+	09543	3	4	394
3.45428+	5	1.77512+	0	3.50000+	5	1.79025+	0	3.84589+	5	1.88648+	09543	3	4	395
4.00000+	5	1.92359+	0	5.00000+	5	2.11292+	0	6.00000+	5	2.23759+	09543	3	4	396
7.00000+	5	2.30726+	0	8.00000+	5	2.26419+	0	9.00000+	5	2.07872+	09543	3	4	397
1.00000+	6	1.80013+	0	1.10000+	6	1.68564+	0	1.20000+	6	1.66963+	09543	3	4	398
1.30000+	6	1.65389+	0	1.40000+	6	1.64703+	0	1.50000+	6	1.70380+	09543	3	4	399
1.60000+	6	1.75573+	0	2.00000+	6	1.68363+	0	3.00000+	6	1.26222+	09543	3	4	400
4.00000+	6	1.07912+	0	4.60000+	6	1.11914+	0	5.00000+	6	1.10599+	09543	3	4	401
5.40000+	6	1.10897+	0	6.00000+	6	1.12658+	0	6.50000+	6	8.65475-	19543	3	4	402
7.00000+	6	6.69907-	1	7.30000+	6	4.55246-	1	8.00000+	6	2.12552-	19543	3	4	403
9.00000+	6	3.58337-	2	1.00000+	7	7.60588-	3	1.10000+	7	2.27626-	39543	3	4	404
1.20000+	7	8.12737-	4	1.40000+	7	4.23551-	5	2.00000+	7	4.97255-	59543	3	4	405
										9543	3	0	406	
9.52430+	4	2.40973+	2		0	99		0		09543	3	16	407	
0.0	+ 0-6.36430+	6			0	0		1		179543	3	16	408	
17	.2				0	0		0		09543	3	16	409	
6.39070+	6	0.0	+ 0	7.00000+	6	3.00000-	2	7.30000+	6	1.50000-	19543	3	16	410
8.00000+	6	3.00000-	1	9.00000+	6	4.00000-	1	1.00000+	7	4.72770-	19543	3	16	411
1.10000+	7	5.37850-	1	1.20000+	7	6.33660-	1	1.30000+	7	6.49470-	19543	3	16	412
1.35000+	7	5.23890-	1	1.40000+	7	3.60480-	1	1.50000+	7	2.01980-	19543	3	16	413
1.60000+	7	9.90380-	2	1.70000+	7	4.81390-	2	1.80000+	7	2.21050-	29543	3	16	414
1.90000+	7	9.37430-	3	2.00000+	7	3.91430-	3			9543	3	16	415	
										9543	3	0	416	
9.52430+	4	2.40973+	2		0	99		0		09543	3	17	417	
0.0	+ 0-1.19055+	7			0	0		1		109543	3	17	418	
10	.2				0	0		0		09543	3	17	419	
1.19550+	7	0.0	+ 0	1.30000+	7	5.53840-	2	1.35000+	7	1.43440-	19543	3	17	420
1.40000+	7	2.21080-	1	1.50000+	7	4.11200-	1	1.60000+	7	5.45630-	19543	3	17	421
1.70000+	7	6.73720-	1	1.80000+	7	7.72280-	1	1.90000+	7	8.14260-	19543	3	17	422
2.00000+	7	8.35320-	1							9543	3	17	423	
										9543	3	0	424	
9.52430+	4	2.40973+	2		0	0		0		09543	3	18	425	
0.0	+ 0 0.0	+ 0			0	0		2		529543	3	18	426	
3	.2				52	5		0		09543	3	18	427	
1.00000-	5	0.0	+ 0	2.53000-	2	0.0	+ 0	3.00000+	4	0.0	+ 09543	3	18	428
3.00000+	4	6.81980-	3	4.00000+	4	6.60000-	3	5.00000+	4	6.50000-	39543	3	18	429
6.00000+	4	6.50000-	3	8.00000+	4	6.80000-	3	1.00000+	5	7.10000-	39543	3	18	430
1.25000+	5	7.80000-	3	1.50000+	5	8.40000-	3	1.75000+	5	9.00000-	39543	3	18	431
2.00000+	5	9.50000-	3	2.40000+	5	1.08000-	2	3.00000+	5	1.36000-	29543	3	18	432
3.40000+	5	1.74000-	2	4.00000+	5	2.48000-	2	4.50000+	5	3.46000-	29543	3	18	433
5.00000+	5	5.00000-	2	5.50000+	5	7.32999-	2	6.00000+	5	1.06000-	19543	3	18	434

							MAT	MF	MT	SEQ				
.....	10.....	20.....	30.....	40.....	50.....	60.....								
7.00000+	5	2.07000-	1	7.30000+	5	2.85000-	1	8.00000+	5	4.43000-	19543	3	18	435
8.40000+	5	6.28000-	1	9.00000+	5	8.36000-	1	9.50000+	5	1.07000+	09543	3	18	436
1.00000+	6	1.31000+	0	1.10000+	6	1.55000+	0	1.20000+	6	1.65000+	09543	3	18	437
1.30000+	6	1.73000+	0	1.40000+	6	1.78000+	0	1.50000+	6	1.74000+	09543	3	18	438
1.60000+	6	1.69000+	0	2.00000+	6	1.68000+	0	3.00000+	6	1.73000+	09543	3	18	439
3.90000+	6	1.73000+	0	4.60000+	6	1.66000+	0	5.40000+	6	1.71000+	09543	3	18	440
6.00000+	6	1.73000+	0	6.30000+	6	1.99000+	0	7.00000+	6	2.22000+	09543	3	18	441
7.30000+	6	2.25000+	0	8.00000+	6	2.34000+	0	9.00000+	6	2.44000+	09543	3	18	442
1.00000+	7	2.44000+	0	1.10000+	7	2.42000+	0	1.20000+	7	2.31000+	09543	3	18	443
1.30000+	7	2.26000+	0	1.40000+	7	2.45000+	0	1.80000+	7	2.35000+	09543	3	18	444
2.00000+	7	2.30000+	0							9543	3	18	445	
										9543	3	0	446	
9.52430+	4	2.40973+	2		0	99		0		09543	3	37	447	
0.0	+ 0-1.84880+	7		0	0		1			39543	3	37	448	
	3	2		0	0		0			09543	3	37	449	
1.85650+	7	0.0	+ 0	1.90000+	7	1.21660-	5	2.00000+	7	1.04990-	29543	3	37	450
										9543	3	0	451	
9.52430+	4	2.40973+	2		0	1		0		09543	3	51	452	
0.0	+ 0-4.22000+	4		0	0		1			489543	3	51	453	
	48	3		0	0		0			09543	3	51	454	
4.23751+	4	0.0	+ 0	6.00000+	4	1.81360-	1	8.00000+	4	3.14535-	19543	3	51	455
8.43486+	4	3.39834-	1	9.68000+	4	3.89368-	1	1.00000+	5	4.01653-	19543	3	51	456
1.09754+	5	4.35044-	1	1.44096+	5	4.90751-	1	1.50000+	5	4.94773-	19543	3	51	457
1.90086+	5	5.29363-	1	2.00000+	5	5.35212-	1	2.50000+	5	5.52736-	19543	3	51	458
2.68108+	5	5.55195-	1	2.99237+	5	5.50815-	1	3.00000+	5	5.50305-	19543	3	51	459
3.45428+	5	5.25501-	1	3.50000+	5	5.22025-	1	3.84589+	5	4.95395-	19543	3	51	460
4.00000+	5	4.83715-	1	5.00000+	5	4.11278-	1	6.00000+	5	3.47196-	19543	3	51	461
7.00000+	5	2.90897-	1	8.00000+	5	2.34102-	1	9.00000+	5	1.77846-	19543	3	51	462
1.00000+	6	1.28264-	1	1.10000+	6	1.00160-	1	1.20000+	6	8.27856-	29543	3	51	463
1.30000+	6	6.83421-	2	1.40000+	6	5.65874-	2	1.50000+	6	4.84700-	29543	3	51	464
1.60000+	6	4.12293-	2	2.00000+	6	1.76809-	2	3.00000+	6	1.49831-	39543	3	51	465
4.00000+	6	1.32630-	4	4.60000+	6	3.52552-	5	5.00000+	6	1.44498-	59543	3	51	466
5.40000+	6	6.22201-	6	6.00000+	6	1.89971-	6	6.50000+	6	5.63839-	79543	3	51	467
7.00000+	6	1.74764-	7	7.30000+	6	6.95853-	8	8.00000+	6	9.67552-	99543	3	51	468
9.00000+	6	3.10891-10	1	1.00000+	7	1.36060-11	1	1.10000+	7	9.04566-139543	3	51	469	
1.20000+	7	7.66278-14	1	1.40000+	7	2.63524-16	2	2.00000+	7	2.26169-199543	3	51	470	
										9543	3	0	471	
9.52430+	4	2.40973+	2		0	2		0		09543	3	52	472	
0.0	+ 0-8.40000+	4		0	0		1			459543	3	52	473	
	45	3		0	0		0			09543	3	52	474	
8.43486+	4	0.0	+ 0	9.68000+	4	1.48969-	1	1.00000+	5	1.66606-	19543	3	52	475
1.09754+	5	2.11171-	1	1.44096+	5	2.94317-	1	1.50000+	5	3.02812-	19543	3	52	476
1.90086+	5	3.36491-	1	2.00000+	5	3.41002-	1	2.50000+	5	3.53036-	19543	3	52	477
2.68108+	5	3.54999-	1	2.99237+	5	3.48740-	1	3.00000+	5	3.47482-	19543	3	52	478
3.45428+	5	3.30778-	1	3.50000+	5	3.28273-	1	3.84589+	5	3.15413-	19543	3	52	479
4.00000+	5	3.10084-	1	5.00000+	5	2.73894-	1	6.00000+	5	2.35336-	19543	3	52	480
7.00000+	5	1.97145-	1	8.00000+	5	1.56579-	1	9.00000+	5	1.16420-	19543	3	52	481
1.00000+	6	8.18259-	2	1.10000+	6	6.21804-	2	1.20000+	6	5.00819-	29543	3	52	482
1.30000+	6	4.04112-	2	1.40000+	6	3.28388-	2	1.50000+	6	2.77280-	29543	3	52	483
1.60000+	6	2.33516-	2	2.00000+	6	9.98131-	3	3.00000+	6	9.48002-	49543	3	52	484
4.00000+	6	9.75511-	5	4.60000+	6	2.80012-	5	5.00000+	6	1.18664-	59543	3	52	485
5.40000+	6	5.19556-	6	6.00000+	6	1.58542-	6	6.50000+	6	4.65451-	79543	3	52	486
7.00000+	6	1.42532-	7	7.30000+	6	5.63823-	8	8.00000+	6	7.75539-	99543	3	52	487
9.00000+	6	2.48687-10	1	1.00000+	7	1.09674-11	1	1.10000+	7	7.32802-139543	3	52	488	
1.20000+	7	6.21127-14	1	1.40000+	7	2.13086-16	2	2.00000+	7	1.80931-199543	3	52	489	

							MAT	MF	MT	SEQ				
.....	10.....	20.....	30.....	40.....	50.....	60.....								
							9543	3	0	490				
9.52430+	4	2.40973+	2	0	3	0	09543	3	53	491				
0.0	+ 0	-9.64000+	4	0	0	1	449543	3	53	492				
44			3	0	0	0	09543	3	53	493				
9.68000+	4	0.0	+ 0	1.00000+	5	5.76090-	3	1.09754+	5	2.80892-	29543	3	53	494
1.44096+	5	1.08573-	1	1.50000+	5	1.18618-	1	1.90086+	5	1.80339-	19543	3	53	495
2.00000+	5	1.91922-	1	2.50000+	5	2.34923-	1	2.68108+	5	2.45651-	19543	3	53	496
2.99237+	5	2.58907-	1	3.00000+	5	2.59113-	1	3.45428+	5	2.66627-	19543	3	53	497
3.50000+	5	2.66649-	1	3.84589+	5	2.64553-	1	4.00000+	5	2.62869-	19543	3	53	498
5.00000+	5	2.44683-	1	6.00000+	5	2.20718-	1	7.00000+	5	1.95059-	19543	3	53	499
8.00000+	5	1.64151-	1	9.00000+	5	1.29565-	1	1.00000+	6	9.65305-	29543	3	53	500
1.10000+	6	7.74639-	2	1.20000+	6	6.54918-	2	1.30000+	6	5.50776-	29543	3	53	501
1.40000+	6	4.62990-	2	1.50000+	6	4.01479-	2	1.60000+	6	3.44927-	29543	3	53	502
2.00000+	6	1.51864-	2	3.00000+	6	1.34662-	3	4.00000+	6	1.24992-	49543	3	53	503
4.60000+	6	3.40450-	5	5.00000+	6	1.41675-	5	5.40000+	6	6.19702-	69543	3	53	504
6.00000+	6	1.93037-	6	6.50000+	6	5.80146-	7	7.00000+	6	1.81472-	79543	3	53	505
7.30000+	6	7.25815-	8	8.00000+	6	1.01890-	8	9.00000+	6	3.31506-109543	3	53	506	
1.00000+	7	1.46963-11	1	1.10000+	7	9.86905-13	1.20000+	7	8.42655-149543	3	53	507		
1.40000+	7	2.93686-16	2	0.00000+	7	2.59627-19			9543	3	53	508		
							9543	3	0	509				
9.52430+	4	2.40973+	2	0	4	0	09543	3	54	510				
0.0	+ 0	-1.09300+	5	0	0	1	429543	3	54	511				
42			3	0	0	0	09543	3	54	512				
1.09754+	5	0.0	+ 0	1.44096+	5	1.77943-	1	1.50000+	5	1.88394-	19543	3	54	513
1.90086+	5	2.37586-	1	2.00000+	5	2.44786-	1	2.50000+	5	2.66892-	19543	3	54	514
2.68108+	5	2.71527-	1	2.99237+	5	2.74307-	1	3.00000+	5	2.73575-	19543	3	54	515
3.45428+	5	2.69461-	1	3.50000+	5	2.67935-	1	3.84589+	5	2.61813-	19543	3	54	516
4.00000+	5	2.59100-	1	5.00000+	5	2.36544-	1	6.00000+	5	2.08080-	19543	3	54	517
7.00000+	5	1.77581-	1	8.00000+	5	1.43293-	1	9.00000+	5	1.07999-	19543	3	54	518
1.00000+	6	7.68036-	2	1.10000+	6	5.89675-	2	1.20000+	6	4.79177-	29543	3	54	519
1.30000+	6	3.89614-	2	1.40000+	6	3.18706-	2	1.50000+	6	2.70646-	29543	3	54	520
1.60000+	6	2.29101-	2	2.00000+	6	9.96100-	3	3.00000+	6	9.87831-	49543	3	54	521
4.00000+	6	1.06070-	4	4.60000+	6	3.11122-	5	5.00000+	6	1.33595-	59543	3	54	522
5.40000+	6	5.92190-	6	6.00000+	6	1.83291-	6	6.50000+	6	5.42240-	79543	3	54	523
7.00000+	6	1.66874-	7	7.30000+	6	6.61656-	8	8.00000+	6	9.14708-	99543	3	54	524
9.00000+	6	2.95527-10	1	1.00000+	7	1.31447-11	1.10000+	7	8.84748-139543	3	54	525		
1.20000+	7	7.54232-14	1	4.00000+	7	2.61059-16	2.00000+	7	2.25788-199543	3	54	526		
							9543	3	0	527				
9.52430+	4	2.40973+	2	0	5	0	09543	3	55	528				
0.0	+ 0	-1.43500+	5	0	0	1	419543	3	55	529				
41			3	0	0	0	09543	3	55	530				
1.44096+	5	0.0	+ 0	1.50000+	5	2.63266-	2	1.90086+	5	7.12796-	29543	3	55	531
2.00000+	5	7.79836-	2	2.50000+	5	1.01781-	1	2.68108+	5	1.07980-	19543	3	55	532
2.99237+	5	1.16962-	1	3.00000+	5	1.16941-	1	3.45428+	5	1.25289-	19543	3	55	533
3.50000+	5	1.25362-	1	3.84589+	5	1.28649-	1	4.00000+	5	1.29872-	19543	3	55	534
5.00000+	5	1.31420-	1	6.00000+	5	1.24395-	1	7.00000+	5	1.12341-	19543	3	55	535
8.00000+	5	9.49151-	2	9.00000+	5	7.43471-	2	1.00000+	6	5.46290-	29543	3	55	536
1.10000+	6	4.31258-	2	1.20000+	6	3.58827-	2	1.30000+	6	2.97671-	29543	3	55	537
1.40000+	6	2.47706-	2	1.50000+	6	2.13462-	2	1.60000+	6	1.83012-	29543	3	55	538
2.00000+	6	8.27701-	3	3.00000+	6	8.86117-	4	4.00000+	6	1.01406-	49543	3	55	539
4.60000+	6	3.06487-	5	5.00000+	6	1.33898-	5	5.40000+	6	6.02788-	69543	3	55	540
6.00000+	6	1.89783-	6	6.50000+	6	5.66430-	7	7.00000+	6	1.75315-	79543	3	55	541
7.30000+	6	6.97041-	8	8.00000+	6	9.69859-	9	9.00000+	6	3.16673-109543	3	55	542	
1.00000+	7	1.42588-11	1	1.10000+	7	9.69719-13	1.20000+	7	8.33198-149543	3	55	543		
1.40000+	7	2.91904-16	2	0.00000+	7	2.59176-19			9543	3	55	544		

								MAT	MF	MT	SEQ
.....	10.....	20.....	30.....	40.....	50.....	60.....					
								9543	3	0	545
9.52430+	4 2.40973+ 2	0	6	0	0	0	09543	3	56	546	
0.0	+ 0-1.89300+ 5	0	0	1			399543	3	56	547	
	39	3	0	0	0	0	09543	3	56	548	
1.90086+	5 0.0 + 0 2.00000+ 5	1.43258- 3	2.50000+ 5	9.74496-	39543	3	56	549			
2.68108+	5 1.30508- 2	2.99237+ 5	1.88583- 2	3.00000+ 5	1.90004-	29543	3	56	550		
3.45428+	5 2.73143- 2	3.50000+ 5	2.80236- 2	3.84589+ 5	3.37754-	29543	3	56	551		
4.00000+	5 3.61921- 2	5.00000+ 5	4.79101- 2	6.00000+ 5	5.29289-	29543	3	56	552		
7.00000+	5 5.30277- 2	8.00000+ 5	4.83747- 2	9.00000+ 5	4.02674-	29543	3	56	553		
1.00000+	6 3.10886- 2	1.10000+ 6	2.55612- 2	1.20000+ 6	2.19981-	29543	3	56	554		
1.30000+	6 1.87697- 2	1.40000+ 6	1.59956- 2	1.50000+ 6	1.40651-	29543	3	56	555		
1.60000+	6 1.22712- 2	2.00000+ 6	5.85794- 3	3.00000+ 6	6.96849-	49543	3	56	556		
4.00000+	6 8.68785- 5	4.60000+ 6	2.73076- 5	5.00000+ 6	1.21948-	59543	3	56	557		
5.40000+	6 5.59509- 6	6.00000+ 6	1.79858- 6	6.50000+ 6	5.42763-	79543	3	56	558		
7.00000+	6 1.69249- 7	7.30000+ 6	6.75430- 8	8.00000+ 6	9.47972-	99543	3	56	559		
9.00000+	6 3.13789-10	1.00000+ 7	1.43487-11	1.10000+ 7	9.88759-139543	3	56	560			
1.20000+	7 8.58327-14	1.40000+ 7	3.05572-16	2.00000+ 7	2.80915-199543	3	56	561			
						9543	3	0	562		
9.52430+	4 2.40973+ 2	0	7	0	09543	3	57	563			
0.0	+ 0-2.67000+ 5	0	0	1	369543	3	57	564			
	36	3	0	0	09543	3	57	565			
2.68108+	5 0.0 + 0 2.99237+ 5	6.02290- 2	3.00000+ 5	6.14951-	29543	3	57	566			
3.45428+	5 1.30901- 1	3.50000+ 5	1.36363- 1	3.84589+ 5	1.69121-	19543	3	57	567		
4.00000+	5 1.79650- 1	5.00000+ 5	2.07692- 1	6.00000+ 5	1.98955-	19543	3	57	568		
7.00000+	5 1.76799- 1	8.00000+ 5	1.46271- 1	9.00000+ 5	1.12625-	19543	3	57	569		
1.00000+	6 8.18891- 2	1.10000+ 6	6.44278- 2	1.20000+ 6	5.37576-	29543	3	57	570		
1.30000+	6 4.49090- 2	1.40000+ 6	3.77043- 2	1.50000+ 6	3.27752-	29543	3	57	571		
1.60000+	6 2.82962- 2	2.00000+ 6	1.27327- 2	3.00000+ 6	1.09794-	39543	3	57	572		
4.00000+	6 9.28699- 5	4.60000+ 6	2.39518- 5	5.00000+ 6	9.60100-	69543	3	57	573		
5.40000+	6 4.04699- 6	6.00000+ 6	1.20365- 6	6.50000+ 6	3.52218-	79543	3	57	574		
7.00000+	6 1.08057- 7	7.30000+ 6	4.27935- 8	8.00000+ 6	5.88474-	99543	3	57	575		
9.00000+	6 1.86015-10	1.00000+ 7	8.04715-12	1.10000+ 7	5.29369-139543	3	57	576			
1.20000+	7 4.45019-14	1.40000+ 7	1.50934-16	2.00000+ 7	1.25768-199543	3	57	577			
					9543	3	0	578			
9.52430+	4 2.40973+ 2	0	8	0	09543	3	58	579			
0.0	+ 0-2.98000+ 5	0	0	1	359543	3	58	580			
	35	3	0	0	09543	3	58	581			
2.99237+	5 0.0 + 0 3.00000+ 5	5.22688- 3	3.45428+ 5	9.92470-	29543	3	58	582			
3.50000+	5 1.07626- 1	3.84589+ 5	1.62384- 1	4.00000+ 5	1.81462-	19543	3	58	583		
5.00000+	5 2.43369- 1	6.00000+ 5	2.44054- 1	7.00000+ 5	2.20570-	19543	3	58	584		
8.00000+	5 1.83519- 1	9.00000+ 5	1.41343- 1	1.00000+ 6	1.02549-	19543	3	58	585		
1.10000+	6 8.04640- 2	1.20000+ 6	6.69678- 2	1.30000+ 6	5.58378-	29543	3	58	586		
1.40000+	6 4.68232- 2	1.50000+ 6	4.06830- 2	1.60000+ 6	3.51240-	29543	3	58	587		
2.00000+	6 1.58570- 2	3.00000+ 6	1.39080- 3	4.00000+ 6	1.20214-	49543	3	58	588		
4.60000+	6 3.13779- 5	5.00000+ 6	1.26766- 5	5.40000+ 6	5.38464-	69543	3	58	589		
6.00000+	6 1.61884- 6	6.50000+ 6	4.77035- 7	7.00000+ 6	1.47090-	79543	3	58	590		
7.30000+	6 5.83925- 8	8.00000+ 6	8.07056- 9	9.00000+ 6	2.56864-109543	3	58	591			
1.00000+	7 1.11898-11	1.10000+ 7	7.40131-13	1.20000+ 7	6.24616-149543	3	58	592			
					9543	3	58	593			
1.40000+	7 2.13068-16	2.00000+ 7	1.79991-19		9543	3	0	594			
9.52430+	4 2.40973+ 2	0	9	0	09543	3	59	595			
0.0	+ 0-3.44000+ 5	0	0	1	339543	3	59	596			
	33	3	0	0	09543	3	59	597			
3.45428+	5 0.0 + 0 3.50000+ 5	7.99525- 3	3.84589+ 5	5.53774-	29543	3	59	598			
4.00000+	5 7.62757- 2	5.00000+ 5	1.65205- 1	6.00000+ 5	1.89623-	19543	3	59	599		

										MAT	MF	MT	SEQ			
.....	10	.....	20	.....	30	.....	40	.....	50	.....	60	.....				
7.00000+	5	1.82718-	1	8.00000+	5	1.57989-	1	9.00000+	5	1.24922-	19543	3	59	600		
1.00000+	6	9.24412-	2	1.10000+	6	7.36828-	2	1.20000+	6	6.21433-	29543	3	59	601		
1.30000+	6	5.24256-	2	1.40000+	6	4.44300-	2	1.50000+	6	3.89815-	29543	3	59	602		
1.60000+	6	3.39554-	2	2.00000+	6	1.57583-	2	3.00000+	6	1.43978-	39543	3	59	603		
4.00000+	6	1.28659-	4	4.60000+	6	3.41394-	5	5.00000+	6	1.39404-	59543	3	59	604		
5.40000+	6	5.98158-	6	6.00000+	6	1.82460-	6	6.50000+	6	5.43268-	79543	3	59	605		
7.00000+	6	1.68969-	7	7.30000+	6	6.73862-	8	8.00000+	6	9.39855-	99543	3	59	606		
9.00000+	6	3.02355-10	1	1.00000+	7	1.32959-11	1	1.10000+	7	8.85864-139543	3	59	607			
1.20000+	7	7.52172-14	1	1.40000+	7	2.59348-16	2	0.00000+	7	2.24062-199543	3	59	608			
										9543	3	0	609			
9.52430+	4	2.40973+	2		0	98		0		09543	3	91	610			
0.0	+ 0	-3.83000+	5		0	0		1		319543	3	91	611			
	31		3		0	0		0		09543	3	91	612			
3.84589+	5	0.0	+	0	4.00000+	5	4.37278-	3	5.00000+	5	1.50923-	19543	3	91	613	
6.00000+	5	4.16301-	1	7.00000+	5	7.01117-	1	8.00000+	5	9.34999-	19543	3	91	614		
9.00000+	5	1.05339+	0	1.00000+	6	1.05411+	0	1.10000+	6	1.09960+	09543	3	91	615		
1.20000+	6	1.18260+	0	1.30000+	6	1.24939+	0	1.40000+	6	1.30971+	09543	3	91	616		
1.50000+	6	1.41254+	0	1.60000+	6	1.50580+	0	2.00000+	6	1.57234+	09543	3	91	617		
3.00000+	6	1.25193+	0	4.00000+	6	1.07813+	0	4.60000+	6	1.11886+	09543	3	91	618		
5.00000+	6	1.10587+	0	5.40000+	6	1.10892+	0	6.00000+	6	1.12656+	09543	3	91	619		
6.50000+	6	8.65470-	1	7.00000+	6	6.69906-	1	7.30000+	6	4.55246-	19543	3	91	620		
8.00000+	6	2.12552-	1	9.00000+	6	3.58337-	2	1.00000+	7	7.60588-	39543	3	91	621		
1.10000+	7	2.27626-	3	1.20000+	7	8.12737-	4	1.40000+	7	4.23551-	59543	3	91	622		
2.00000+	7	4.97255-	5							9543	3	91	623			
										9543	3	0	624			
9.52430+	4	2.40973+	2		0	99		0		09543	3102			625		
0.0	+ 0	0.0	+ 0		0	0		2		539543	3102			626		
	3		2		53	5		0		09543	3102			627		
1.00000-	5	0.0	+	0	2.53000-	2	0.0	+	0	3.00000+	4	0.0	+	09543	3102	628
3.00000+	4	2.29411+	0	4.00000+	4	2.12151+	0	4.23751+	4	2.08742+	09543	3102		629		
6.00000+	4	1.78174+	0	8.00000+	4	1.55553+	0	8.43486+	4	1.51609+	09543	3102		630		
9.68000+	4	1.35905+	0	1.00000+	5	1.32706+	0	1.09754+	5	1.24092+	09543	3102		631		
1.44096+	5	9.68451-	1	1.50000+	5	9.30792-	1	1.90086+	5	7.75950-	19543	3102		632		
2.00000+	5	7.49148-	1	2.50000+	5	6.55312-	1	2.68108+	5	6.32742-	19543	3102		633		
2.99237+	5	5.89700-	1	3.00000+	5	5.87777-	1	3.45428+	5	5.30631-	19543	3102		634		
3.50000+	5	5.24872-	1	3.84589+	5	4.91052-	1	4.00000+	5	4.78710-	19543	3102		635		
5.00000+	5	4.16622-	1	6.00000+	5	3.70934-	1	7.00000+	5	3.32773-	19543	3102		636		
8.00000+	5	2.88874-	1	9.00000+	5	2.37921-	1	1.00000+	6	1.86686-	19543	3102		637		
1.10000+	6	1.59028-	1	1.20000+	6	1.43897-	1	1.30000+	6	1.30572-	19543	3102		638		
1.40000+	6	1.19384-	1	1.50000+	6	1.13389-	1	1.60000+	6	1.07411-	19543	3102		639		
2.00000+	6	7.31739-	2	3.00000+	6	2.08586-	2	4.00000+	6	5.57456-	39543	3102		640		
4.60000+	6	2.68247-	3	5.00000+	6	1.58748-	3	5.40000+	6	9.64553-	49543	3102		641		
6.00000+	6	4.78281-	4	6.50000+	6	2.09771-	4	7.00000+	6	9.61225-	59543	3102		642		
7.30000+	6	4.85471-	5	8.00000+	6	1.19655-	5	9.00000+	6	9.13531-	79543	3102		643		
1.00000+	7	9.93301-	8	1.10000+	7	1.68099-	8	1.20000+	7	3.70232-	99543	3102		644		
1.40000+	7	9.79497-11	2	0.00000+	7	4.10014-11				9543	3102			645		
										9543	3	0	646			
9.52430+	4	2.40973+	2		0	0		0		09543	3251			647		
0.0	+ 0	0.0	+ 0		0	0		1		539543	3251			648		
	53		3		0	0		0		09543	3251			649		
1.00000-	5	2.74348-	3	2.53000-	2	2.74348-	3	1.00000+	2	2.74348-	39543	3251		650		
3.00000+	4	3.16023-	2	4.00000+	4	4.24499-	2	4.23751+	4	4.50354-	29543	3251		651		
6.00000+	4	6.45423-	2	8.00000+	4	8.63014-	2	8.43486+	4	9.09552-	29543	3251		652		
9.68000+	4	1.04773-	1	1.00000+	5	1.08222-	1	1.09754+	5	1.18644-	19543	3251		653		
1.44096+	5	1.54811-	1	1.50000+	5	1.60822-	1	1.90086+	5	1.98380-	19543	3251		654		

									MAT	MF	MT	SEQ		
.....	10.....	20.....	30.....	40.....	50.....	60.....								
2.00000+	5	2.06972-	1	2.50000+	5	2.46402-	1	2.68108+	5	2.59179-	19543	3251	655	
2.99237+	5	2.80383-	1	3.00000+	5	2.80930-	1	3.45428+	5	3.10047-	19543	3251	656	
3.50000+	5	3.12848-	1	3.84589+	5	3.32937-	1	4.00000+	5	3.41278-	19543	3251	657	
5.00000+	5	3.87704-	1	6.00000+	5	4.23052-	1	7.00000+	5	4.49848-	19543	3251	658	
8.00000+	5	4.71610-	1	9.00000+	5	4.90020-	1	1.00000+	6	5.05259-	19543	3251	659	
1.10000+	6	5.14767-	1	1.20000+	6	5.22145-	1	1.30000+	6	5.30283-	19543	3251	660	
1.40000+	6	5.39692-	1	1.50000+	6	5.50128-	1	1.60000+	6	5.62083-	19543	3251	661	
2.00000+	6	6.17182-	1	3.00000+	6	7.18603-	1	4.00000+	6	7.70180-	19543	3251	662	
4.60000+	6	7.89695-	1	5.00000+	6	7.99152-	1	5.40000+	6	8.06143-	19543	3251	663	
6.00000+	6	8.12902-	1	6.50000+	6	8.15865-	1	7.00000+	6	8.16903-	19543	3251	664	
7.30000+	6	8.16804-	1	8.00000+	6	8.15353-	1	9.00000+	6	8.13481-	19543	3251	665	
1.00000+	7	8.16756-	1	1.10000+	7	8.27977-	1	1.20000+	7	8.44788-	19543	3251	666	
1.40000+	7	8.81233-	1	2.00000+	7	9.43680-	1			9543	3251	667		
										9543	3	668		
										9543	0	669		
9.52430+	4	2.40973+	2		0		0		2	09543	5	16	670	
6.39070+	6	0.0	+ 0		0		9		1	29543	5	16	671	
	2		2		0		0		0	09543	5	16	672	
6.39070+	6	5.00000-	1	2.00000+	7	5.00000-	1			9543	5	16	673	
0.0	+ 0	0.0	+ 0		0		0		1	29543	5	16	674	
	2		5		0		0		0	09543	5	16	675	
6.39070+	6	5.06260+	5	2.00000+	7	8.80891+	5			9543	5	16	676	
6.39070+	6	0.0	+ 0		0		9		1	29543	5	16	677	
	2		2		0		0		0	09543	5	16	678	
6.39070+	6	5.00000-	1	2.00000+	7	5.00000-	1			9543	5	16	679	
0.0	+ 0	0.0	+ 0		0		0		1	99543	5	16	680	
	9		2		0		0		0	09543	5	16	681	
6.39070+	6	3.76900+	4	7.00000+	6	1.16700+	5	8.00000+	6	1.95800+	59543	5	16	682
1.00000+	7	3.21500+	5	1.20000+	7	4.19500+	5	1.40000+	7	4.99900+	59543	5	16	683
1.60000+	7	5.69300+	5	1.80000+	7	6.31100+	5	2.00000+	7	6.87300+	59543	5	16	684
										9543	5	0	685	
9.52430+	4	2.40973+	2		0		0		3	09543	5	17	686	
1.19550+	7	0.0	+ 0		0		9		1	29543	5	17	687	
	2		2		0		0		0	09543	5	17	688	
1.19550+	7	3.33334-	1	2.00000+	7	3.33334-	1			9543	5	17	689	
0.0	+ 0	0.0	+ 0		0		0		1	39543	5	17	690	
	3		5		0		0		0	09543	5	17	691	
1.19550+	7	6.85370+	5	1.50000+	7	7.65422+	5	2.00000+	7	8.80891+	59543	5	17	692
1.19550+	7	0.0	+ 0		0		9		1	29543	5	17	693	
	2		2		0		0		0	09543	5	17	694	
1.19550+	7	3.33333-	1	2.00000+	7	3.33333-	1			9543	5	17	695	
0.0	+ 0	0.0	+ 0		0		0		1	39543	5	17	696	
	3		5		0		0		0	09543	5	17	697	
1.19550+	7	4.77200+	5	1.50000+	7	5.44700+	5	2.00000+	7	6.87600+	59543	5	17	698
1.19550+	7	0.0	+ 0		0		9		1	29543	5	17	699	
	2		2		0		0		0	09543	5	17	700	
1.19550+	7	3.33333-	1	2.00000+	7	3.33333-	1			9543	5	17	701	
0.0	+ 0	0.0	+ 0		0		0		1	39543	5	17	702	
	3		2		0		0		0	09543	5	17	703	
1.19550+	7	3.84000+	4	1.50000+	7	2.10400+	5	2.00000+	7	4.54100+	59543	5	17	704
										9543	5	0	705	
9.52430+	4	2.40973+	2		0		0		1	09543	5	18	706	
-2.00000+	7	0.0	+ 0		0		7		1	29543	5	18	707	
	2		2		0		0		0	09543	5	18	708	
1.00000-	5	1.00000+	0	2.00000+	7	1.00000+	0			9543	5	18	709	

	10	20	30	40	50	60	MAT	MF	MT	SEQ
0.0	+ 0 0.0	+ 0	0	0	1		29543	5	18	710
2	2	0	0	0	0		09543	5	18	711
1.000000-	5	1.37700+ 6	2.00000+ 7	1.37700+ 6			9543	5	18	712
							9543	5	0	713
9.52430+	4	2.40973+ 2		0	0	1	09543	5	91	714
3.84589+	5	0.0	+ 0	0	9	1	29543	5	91	715
2	2	0	0	0	0	0	09543	5	91	716
3.84589+	5	1.000000+ 0	2.00000+ 7	1.000000+ 0			9543	5	91	717
0.0	+ 0 0.0	+ 0	0	0	1		39543	5	91	718
3	5	0	0	0	0		09543	5	91	719
3.84589+	5	1.39565+ 5	2.00000+ 6	2.91837+ 5	2.00000+ 7	8.80891+	59543	5	91	720
							9543	5	0	721
							9543	0	0	722