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BURN UP CALCULATION APPLIED TO THE NEACRP FAST BREEDER BENCHMARK

(APPENDIX; TABLES OF 70 AND 25 GROUP CROSS SECTIONS FOR ACTINIDE AND F.P.)

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Masayuki NAKAGAWA and Hiroyuki YOSHIDA

日本原子力研究所
Japan Atomic Energy Research Institute

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Burn up Calculation Applied to the NEACRP Fast Breeder Benchmark (Appendix : Tables of 70 and 25 Group Cross Sections for Actinide and F.P.)

Masayuki NAKAGAWA and Hiroyuki YOSHIDA

Division of Reactor Engineering, Tokai Research Establishment, JAERI
Division of Power Reactor Projects, JAERI

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The burn up calculations have been performed for the NEACRP fast breeder benchmark. The calculated core parameters are based on the proposal at the NEACRP meeting due to Hammer (CEA). The present calculations have been performed basing on JENDL-2 (Japanese Evaluated Nuclear Data Library) instead of JENDL-1 which was used for the previous international comparison calculation of a large LMFBR. The core parameters of the fresh core have been recalculated using JENDL-2 in order to enable direct comparison with those of the end-of-cycle core. The effective microscopic cross sections for fresh core elements have been obtained with use of the ESELEM5 code in 25 groups by weighting with a fundamental mode fine spectrum. Those of F.P. and Actinide nuclides have been generated by using the PROF-GROUCH-G2 code by weighting with 1/E and fission spectrum. The calculations based on the seventy group constants set (JENDL-2B-70) have been performed for a comparison. The burn up calculations have been performed in R-Z geometry by the diffusion theory code PHENIX. The irradiated fuel composition have been obtained at the end of-cycle of the inner core zone 1 by using the zero dimensional burn-up code, FPG S-3. The final report has been submitted to Hammer and intercomparison of solution will be made at NEACRP. Tables of group cross sections for Actinides and F.P. are shown in Appendixes.

Keywords :

Large Sodium Cooled Fast Breeder Reactor, Benchmark Calculation, Burn-up, Diffusion Calculation, Actinide, Fission Product, Fresh core, End-of cycle Core, Group Constants

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NEACRPベンチマーク用高速増殖炉の燃焼計算（付録：アクチナイドおよび核分裂生成核種の70群および25群炉定数）

日本原子力研究所東海研究所原子炉工学部
中川　正幸
動力炉開発・安全性研究管理部
吉田　弘幸

（1981年9月18日受理）

NEACRPで提案されたベンチマーク用高速増殖炉の燃焼特性の計算を行った。計算を行った炉心パラメータは，Hammer（CEA）がNEACRP会議で提出した各項目である。前回の国際比較計算においては，JENDL－1が用いられたが，今回はJENDL－2を用いた。このため，初期炉心に対する炉心パラメータも再計算し，これと燃焼炉心に対する値を比較した。初期炉心における各核種の25群微視実効断面積は，ESELEM 5コードにより，基本モードスペクトルを重みとして作成した。アクチナイドと，核分裂生成核種の定数は，PROF－GROUCH－G 2コードを用いて，1／Eおよび核分裂スペクトルを重みとして作成した。また比較のために，70群セット（JENDL－2 B－70）を用いた同じ計算も行った。燃焼計算は，PHENIXコードを用いてR－Z体系で行った。一方燃焼末期における照射燃料組成は，FPGS－3コードを用いて，内側炉心のゾーン1で求めた。

この結果の最終報告は，Hammerの元へ送ったが，これらの国際比較はNEACRPで行われる予定である。

巻末に付録として，アクチナイドおよび主要核分裂核種の70群および25群炉定数を示す。

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1. INTRODUCTION

An international comparison calculation of a large (1250 MWe) sodium-cooled fast breeder reactor benchmark model was proposed at the annual NEACRP meeting in 1975. The principal goal of comparison was to determine the influence of the differences in the several sets of basic nuclear data currently in use on a broad range of calculated reactor physics parameters for a reference core and on safety-related physics parameters about the reference configuration. The burn-up characteristics were outside the scope of the comparison. Ten countries participated in the comparison and sixteen solutions were contributed. In 1978, the specialists' meeting was held at ANL to discuss the results. The proceedings of the meeting was published from ANL as the report, ANL-80-78, NEACRP-L-243[1]. This report summarized the solution of each participant and made clear the agreement and the differences in the calculated parameters. These excellent discussions made in the proceedings, are very helpful to examine the characteristic of the nuclear data sets and the processing codes. It is interesting that unexpected large variations among the results were observed for radial reaction rate and worth distributions and for the central control rod worth.

In 1980, a proposal[2] was presented for a simple burn-up calculations applied to the identical benchmark core according to what was decided at the 22nd NEACRP meeting (1979). The aim of such an exercise is to provide a comparison of the multigroup data used by various laboratories for what concerns isotopes specifically involved in fuel burn-up problem: fission products (F.P.) and actinides which were outside the scope in the previous comparison calculation. The present comparison is performed through calculations of integral parameters according to an approach similar to the one previously used for the "fresh core" study. The integral quantities of interest in the present case are:

core parameter variations due to the fuel burn-up, irradiated fuel composition after a given in-pile residence time.

The following characteristics of the core parameters are investigated by comparing the end-of-cycle values to the "fresh core" ones:

reactivity loss per cycle,

the internal and external breeding gains,

radial and axial fission rate distributions,

Pu balance for the inner and outer cores and for the axial and radial blankets,

sodium void effect corresponding to the inner core voiding.

In the previous intercomparison, three solutions were submitted from Japan. These were calculated basing on the JENDL-1[3], the JAERI Fast version 2 data[4] and the JAERI Fast V2 set with twenty five group structure[5]. Since the present proposal aims to compare the nuclear data of F.P. and actinides, the latter two data are insufficient for such a purpose. On the other hand, the JENDL-1 was apdated and the compilation of the JENDL-2[6] are almost completed. In order to examine the adequacy of the JENDL-2, benchmark tests are being performed by analysing various integral quantities measured in fast critical assemblies. The nuclear data of F.P. are also reevaluated and compiled in the JENDL-2. By considering such a situation, we adopted the JENDL-2 at the present intercomparison calculations. The parameters of the "fresh core", therefore, have been recalculated in order to enable direct comparisons with those of the end-of-cycle core.

In the calculation, the group cross sections have been produced by weighting with fundamental mode fine spectrum for the elements composing the "fresh core". On the other hand, the group cross sections of F.P. and actinides have been produced by weighting with the standard spectrum ($^1/E$ and fission spectrum). In this article, furthermore, the results are compared with those obtained by using the seventy group cross section set JENDL-

2B-70[7]. In appendix, the twenty-five and seventy group constants are listed for the F.P. and actinides.

2. DESCRIPTION OF BENCHMARK CORE

The benchmark reactor specification is based on a 3260 MWt conventional mixed oxide design with a 0.300 inch pin size developed at ANL. The benchmark model is set up for R-Z modeling with specified homogeneous compositions for each region of the reactor. The model contains no control rods or control rod positions. The core height is 40 inches (101.6 cm) and the radious of the inner and outer core regions are 136.85 cm and 176.53 cm, respectively, giving a total core volume of 9950 liters. The core volume fractions are 41% for fuel, 38% for total sodium and 21% for total structual. In the burn-up calculations, the core and the blanket regions are divided into six zones in the inner core, four in the outer core, four in the radial blanket and ten in the axial blanket. The geometrical configuration is shown in Fig.1 and the core composition is in Table 1. The specified boundary condition is $\nabla\phi = 0$ at z=0 and r=0 and $\phi = 0$ at the outside boundary of reflector region.

Table 1 Compositions of fresh core

Nuclide	Inner Core	Outer Core	Axial Blanket	Radial Blanket	Refl.
Na	9.6673-3	9.6673-3	9.6673-3	6.1299-3	9.6673-3
ϕ-16	17.3293-3	17.3293-3	17.8922-3	27.1562-3	---
Fe	11.2693-3	11.2693-3	11.2693-3	8.7384-3	13.9943-3
Ni	2.2435-3	2.2435-3	2.2435-3	1.7397-3	29.5122-3
Cr	3.2840-3	3.2840-3	3.2840-3	2.5464-3	9.6621-3
Mo	0.2339-3	0.2339-3	0.2339-3	0.1814-3	0.2239-3
Mn	0.2842-3	0.2842-3	0.2842-3	0.2203-3	0.3607-3
^{235}U	0.0155-3	0.0149-3	0.0184-3	0.0279-3	---
^{238}U	7.6440-3	7.3256-3	9.0634-3	13.7561-3	---
^{239}Pu	0.7704-3	0.9868-3	---	---	---
^{240}Pu	0.2208-3	0.2828-3	---	---	---
^{241}Pu	0.1165-3	0.1497-3	---	---	---
^{242}Pu	0.0279-3	0.0358-3	---	---	---
^{10}B	---	---	---	---	---
^{12}C	---	---	---	---	---
^{11}B	---	---	---	---	---

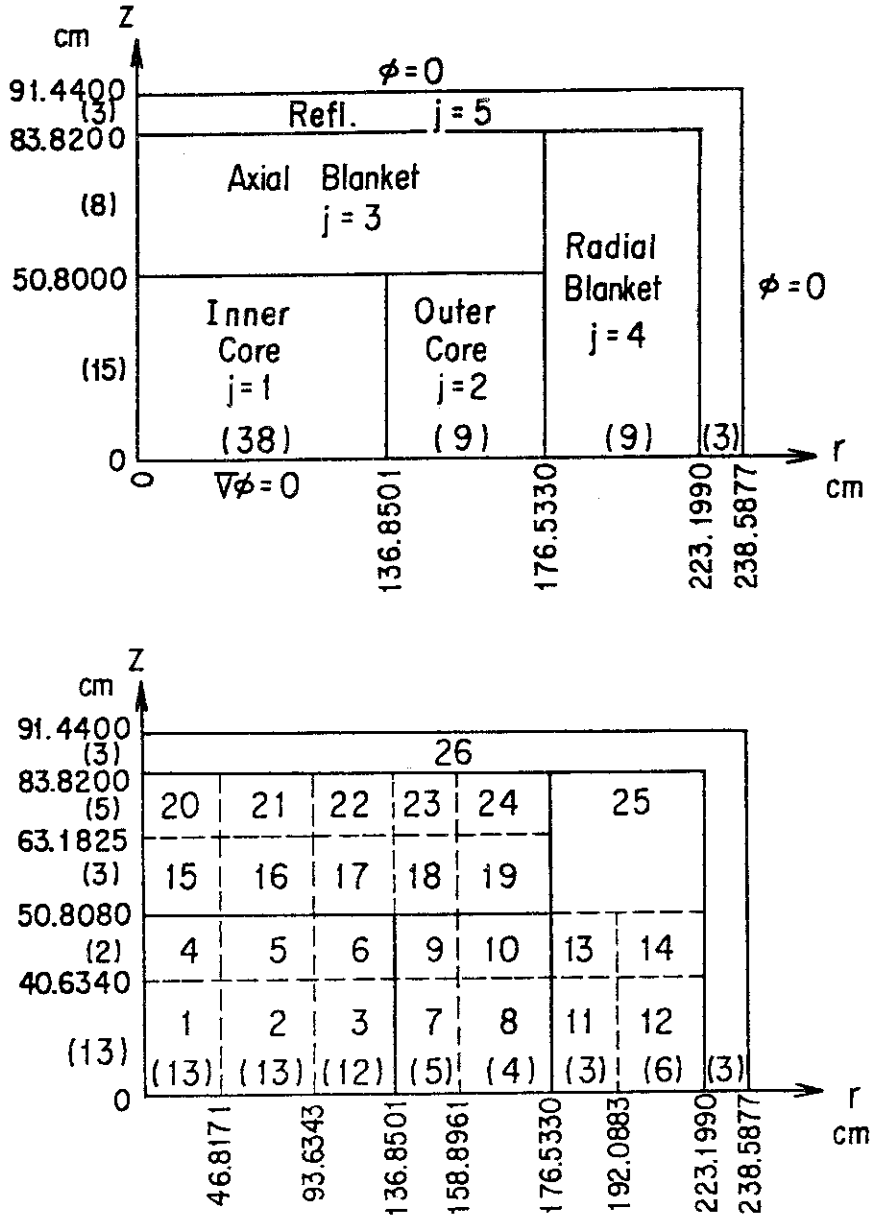

Fig. 1 Upper : Geometry of LMFBR international comparison calculational model
Lower : Burn-up calculational model of identical reactor

3. SPECIFICATION OF CALCULATIONAL METHOD AND PARAMETERS

3.1 Calculational Method

The calculational methods to be used are identical to those used for the "fresh core" and described in Ref.(1). In the burn-up calculation, the following characteristics are assumed. The cycle length is 360 FEPD (Full Equivalent Power Days). The reactor power is assumed to be at a constant level during the whole cycle length : 3000 MWth. To determine the corresponding flux level, it will be admitted that the mean energy associated to one fission in the reactor is 208 MeV. This value includes the contribution of the fission itself, the contribution due to the ^{238}U radiative capture and the inelastic scattering component. It is suggested to follow the prescription presented below in the preparation of broad group cross sections.

a. P_1 fundamental mode calculation in the inner core and outer core regions (i,e., search to critical buckling).

b. In the blanket regions set $B^2=0$ and perform a fixed source slowing down calculation using the ^{239}Pu fission spectrum as the source.

C. Use radial blanket cross sections for the reflector region.

d. Group structure: Use 27 groups each with U=0.5. No thermal group. Set top of upper group at 10 MeV. The Bondarenko structure is recommended as a second choice.

E. Diffusion coefficient $=1/3\ \Sigma_{tr}$.

f. All isotopes are assumed to be at a temperature of 1100°K.

3.2 Specified Parameters for Comparison

a) Fresh core

For the reference configuration, the following parameters are needed as reference values with respect to the end-of-cycle core characteristics.

a.1. K_{eff}

a.2. Reactor breeding ratio

a.3. Regional components of the breeding ratio

a.4. Internal breeding gain
a.5. Blanket breeding gain
a.6. Total breeding gain
} as defined in (1) P.161

a.7. Total radial and axial fission rate distributions normalized such that the fission/cm^3. sec is 1 at the core center

a.8. Radial and axial fission rate distributions for ^{239}Pu and ^{238}U separately with the same normalization as for the total fission rate distributions

a.9. Central reaction rate ratios. Per atom ratios of ^{238}U capture to ^{239}Pu fission, ^{238}U fission to ^{239}Pu fission, and ^{239}Pu capture to ^{239}Pu fission at the core centre. Inner core sodium void worth for configuration 2.

b) End of cycle core

b.1 End of cycle compositions

The end of cycle core and blanket compositions will be calculated according to the following procedure:

- the reactor will be divided into 25 zones according to the Fig. 1;
- for each reactor zone, the end of cycle composition will be determined with 0 . dimension calculations using the spectrum and level corresponding to the flux averaged over the zone and calculated for the fresh core reference configuration;
- for the end of cycle core parameter calculations, the isotopes and their concentrations of which must be calculated are:

  the pseudo fission product which represents the global capture due to the F.P. for fast breeders using the mixed oxide fuel;

  the following heavy isotopes;

^{235}U, ^{236}U, ^{237}Np, ^{238}Pu,

^{238}U, ^{239}Pa, ^{239}Np, ^{240}Pu, ^{241}Pu, ^{242}Pu, ^{241}Am.

For the sake of simplicity, it will be admitted here that all the ^{238}Pu obtained is issued only from the ^{235}U chain.

b.2 Required results

Using the fresh core flux spectrum at the core centre, one will determine the one group cross sections for the following isotopes:

-F.P. (capture cross sections): ^{105}Pd, ^{101}Ru, ^{103}Rh, ^{99}Tc, ^{107}Pd,
^{149}Sm, ^{151}Sm, ^{147}Pm, ^{97}Mo, ^{145}Nd,
^{133}Cs, ^{135}Cs, ^{109}Ag, ^{103}Ru, ^{102}Ru,
^{153}Eu, ^{143}Nd, ^{104}Ru, ^{95}Mo, ^{100}Mo,
^{141}Pr, ^{155}Eu, ^{93}Zr.

-Psuedo fission product (capture cross section)

-Heavy isotopes (capture and fission cross sections):

^{235}U, ^{236}U, ^{237}Np, ^{238}Pu, ^{238}U, ^{239}Np,

^{239}Pu, ^{240}pu, ^{241}Pu, ^{242}Pu, ^{241}Am.

The spatial calculations will be performed using the end of cycle compositions determined as described in b.1; but without recalculating new multigroup data for the sake of simplicity, excepted for the sodium void effect (see hereafter). The results to be edited are:

b.1. :

. $K_{eff}(1)$ corresponding to the end of cycle compositions for the whole reactor:

. $K_{eff}(2)$ corresponding to the fresh core compositions for the core zones and the end of cycle blanket compositions for the blanket zones:

. $K_{eff}(3)$ corresponding to the fresh core compositions as to the heavy isotopes and including the pseudo F.P. build up of each core zone, and to the fresh blanket compositions for the blanket zones:

. $K_{eff}(4)$ corresponding to end of cycle heavy isotope composition for each core zone but without pseudo F.P. and to the fresh blanket composition for the blanket zones.

These K_{eff} values will provide:

The global reactivity loss per cycle:

$$\frac{K_{eff}(1) - K_{eff} \text{ for configuration 1}}{K_{eff} \text{ for configuration 1}}$$

The reactivity gain due to the Pu build-up in the blankets:

$$\frac{K_{eff}(2) - K_{eff} \text{ for configuration 1}}{K_{eff} \text{ for configuration 1}}$$

The reactivity loss due to the F.P. build-up:

$$\frac{K_{eff}(3) - K_{eff} \text{ for configuration 1}}{K_{eff} \text{ for configuration 1}}$$

The reactivity loss due to the core heavy isotope burn-up :

$$\frac{K_{eff}(4) - K_{eff} \text{ for configuration 1}}{K_{eff} \text{ for configuration 1}}$$

b.2 to b.9:

The same results as those calculated for the fresh core and quoted in a).

b.10:

The end of cycle Pu balance for each core zone:

- end of cycle composition for each reactor zone,
- Pu balance for the inner and outer cores, and for the axial and radial blankets.

b.11:

The end of cycle flux spectrum at the core centre, to be compared to the fresh core one.

In order to calculate the inner core sodium void worth , the multigroup data corresponding to the end of cycle situation will have to be calculated for the inner core zones (1 to 6. see Fig. 1) for the two following situations: Na in, Na out according to the same procedure as the one used for determining the cross sections sets of the fresh core (see (1)). 154). The inner core sodium void effect corresponding to the end of cycle situation is then calculated according to the same procedure as the one used for the fresh core (see (1) p. 157).

3.3 Irradiated Fuel Composition

For the inner core zone 1 (see Fig.1) a complete 0. dimension calculation of the actinide concentration (i.e including all the actinide isotopes from ^{232}U to ^{244}Cm) at the end of cycle will be made using the zone 1 fresh core averaged flux (spectrum and level). The final concentration of these isotopes will be edited. A typical example of the actinide chain which can be used is given on Fig. 2.

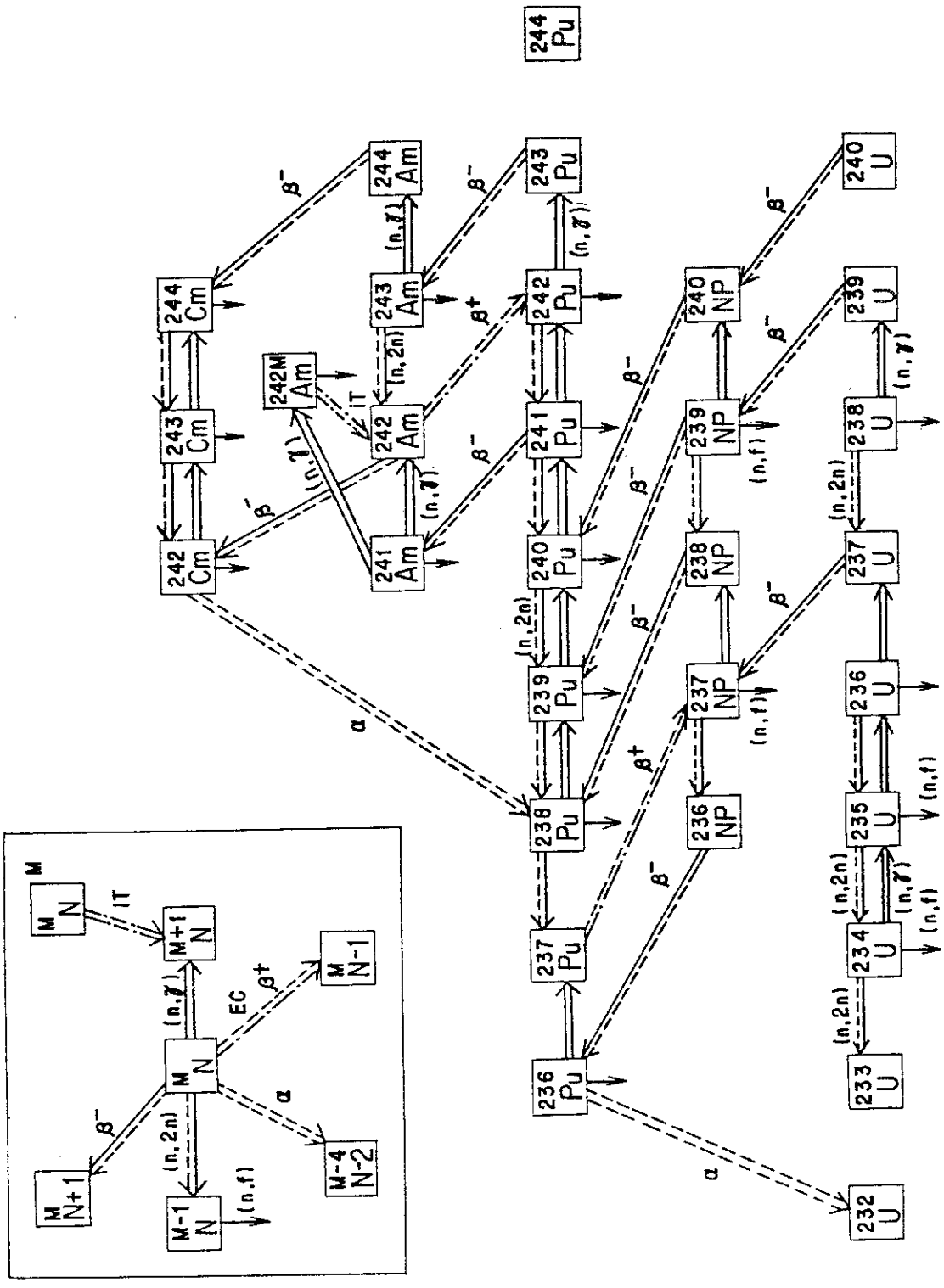

Fig. 2 Actinide chain

4. CALCULATIONAL METHOD

Calculational procedure is essentially following the method described before. The broad group cross sections were produced by weighting with P1 fundamental mode fine spectrum, however, those of F.P and actinides were weighted by the different spectra, 1/E and fission spectrum. Our calculations have been preformed also by using the broad group constants JENDL-2B-70 set. The calculation flow is shown in Fig.3.

4.1 Preparation of Broad Group Cross Sections

The JENDL-2 is compiled by the ENDFB/4 format. At first, the point cross sections are generated by using the RESEND-D code[8] and inserted in the file 3. The PRESM code[9] reads the data with the ENDFB/4 format and averages the point data over the fine mesh interval U = 0.0084. If the nuclear data are not given at the energy points required, these are generated by an interpolation or extrapolation. The PRESM code prepares the data library for the ESELEM 5[9] code. The P1 fundamental mode calculations are performed by ESELEM 5 for each configurations of the core with use of the critical buckling for the inner and outer cores. In the resonance energy region of heavy elements, the broad group representation is used for cross sections and self-shielding factors. The weighted microscopic cross sections are collapsed into the Bondarenko twenty-five group structure.

The broad group cross sections of F.P. and actinides are produced by the PROF-GROUCH-G2[10] code from the JENDL-2 and the ENDFB/4. The self-shielding effect are not taken into account at the present work. The weighting functions are the fission spectrum above 1 MeV and $1/_E$ spectrum below 1 MeV. The produced group cross sections are tabulated in Appendix 1 for actinides and in Appendix 2 for F.P.. The energy boundaries of 25 groups and the fission spectrum are presented in Table 2. The source of the nuclear data is presented in Table 3. In the burn-up calculations, lumped cross sections are

used for F.P.. At the present work the lumped cross sections were not produced for the lack of the nuclear data. Accordingly, we used the JNDC constants[11] mainly produced from the JENDL-1[(2)].

When we start from the JENDL-2B-70 set, the effective microscopic cross sections with the 25 group structure are obtained by collapsing with the flux calculated in one-dimensional geometry.

4.2 Core Parameter Calculation

The core parameters have been calculated by the diffusion theory code, PHENIX[13]. The burn-up calculations have also been made by the PHENIX code for the 25 regions model surrounded by a reflector, instead of by zero-dimensional burn-up calculation code. For a comparison, the eigen value of the fresh core has been also calculated by the CITATION code which was used in the previous comparison. It was seen that PHENIX gave a larger K_{eff} value by 0.18%Δk than CITATION. In this comparison the mesh size effect was not taken into account.

The irradiated fuel composition has been calculated at the end of cycle of the inner core zone 1 by using the zero dimensional burn-up calculation code, FPGS-3[14].

Table 2 Group structure and fission spectrum

Group	Upper energy	Lower energy	Fission Spectrum
1	10.5 (MeV)	6.5 (MeV)	2.3241 E-2
2	6.5 (MeV)	4.0 (MeV)	9.9621 E-2
3	4.0 (MeV)	2.5 (MeV)	1.8482 E-1
4	2.5 (MeV)	1.4 (MeV)	2.6141 E-1
5	1.4 (MeV)	0.8 (MeV)	1.9649 E-1
6	0.8 (MeV)	0.4 (MeV)	1.3638 E-1
7	0.4 (MeV)	0.2 (MeV)	6.0677 E-2
8	0.2 (MeV)	100.0 (KeV)	2.3624 E-2
9	100.0 (KeV)	46.5 (KeV)	9.4694 E-3
10	46.5 (KeV)	21.5 (KeV)	3.0402 E-3
11	21.5 (KeV)	10.0 (KeV)	9.7887 E-4
12	10.0 (KeV)	4.65 (KeV)	3.1475 E-4
13	4.65 (KeV)	2.15 (KeV)	9.8456 E-5
14	2.15 (KeV)	1000.0 (eV)	3.1506 E-5
15	1000.0 (eV)	465.0 (eV)	9.8335 E-6
16	465.0 (eV)	215.0 (eV)	3.1432 E-6
17	215.0 (eV)	100.0 (eV)	9.8053 E-7
18	100.0 (eV)	46.5 (eV)	3.1156 E-7
19	46.5 (eV)	21.5 (eV)	9.9564 E-8
20	21.5 (eV)	10.0 (eV)	3.1054 E-8
21	10.0 (eV)	4.65 (eV)	9.8666 E-9
22	4.65 (eV)	2.15 (eV)	3.1531 E-9
23	2.15 (eV)	1.0 (eV)	0.0
24	1.0 (eV)	0.465 (eV)	0.0
25	0.465 (eV)	0.215 (eV)	0.0

*Fission Spectrum was calculated by the ESELEM 5 code for the ^{239}Pu fission.

Table 3 Reference file of nuclear data

Nuclide	File	Nuclide	File
O	ENDFB -4[a]	Pu-238	JENDL-2
Na	JENDL -1	Pu-239	〃
Al	〃	Pu-240	〃
Cr	JENDL -2	Pu-241	〃
Mn	JENDL -1	Pu-242	ENDFB-4[c]
Fe	JENDL -2	Pu-236	JENDL-2
Ni	〃	Am-241	JENDL-1
Cu	JENDL -1	Am-242	JENDL-2
Mo	〃	Am-243	〃
U-234	JENDL -2	Cm-242	〃
U-235	〃	Cm-243	ENDFB-4
U-236	〃	Cm-244	JENDL-2
U-238	〃	F.P. (^{239}Pu)	JNDC
Np-237	ENDFB -4[b]	F.P. (^{235}U)	JNDC
Np-239	JENDL -2	F.P. (isotope)	JENDL-2

The data in JENDL-2 used at the present work were compiled before December 1980, so they may be revised in the publication.

a) Young P. et al., MAT 1276 (2), LASL

b) Smith J.R. and Stein W.E., MAT 6263 ANC, LASL

c) Alter H. and Dunford, MAT 1161 (0), AI, ANC

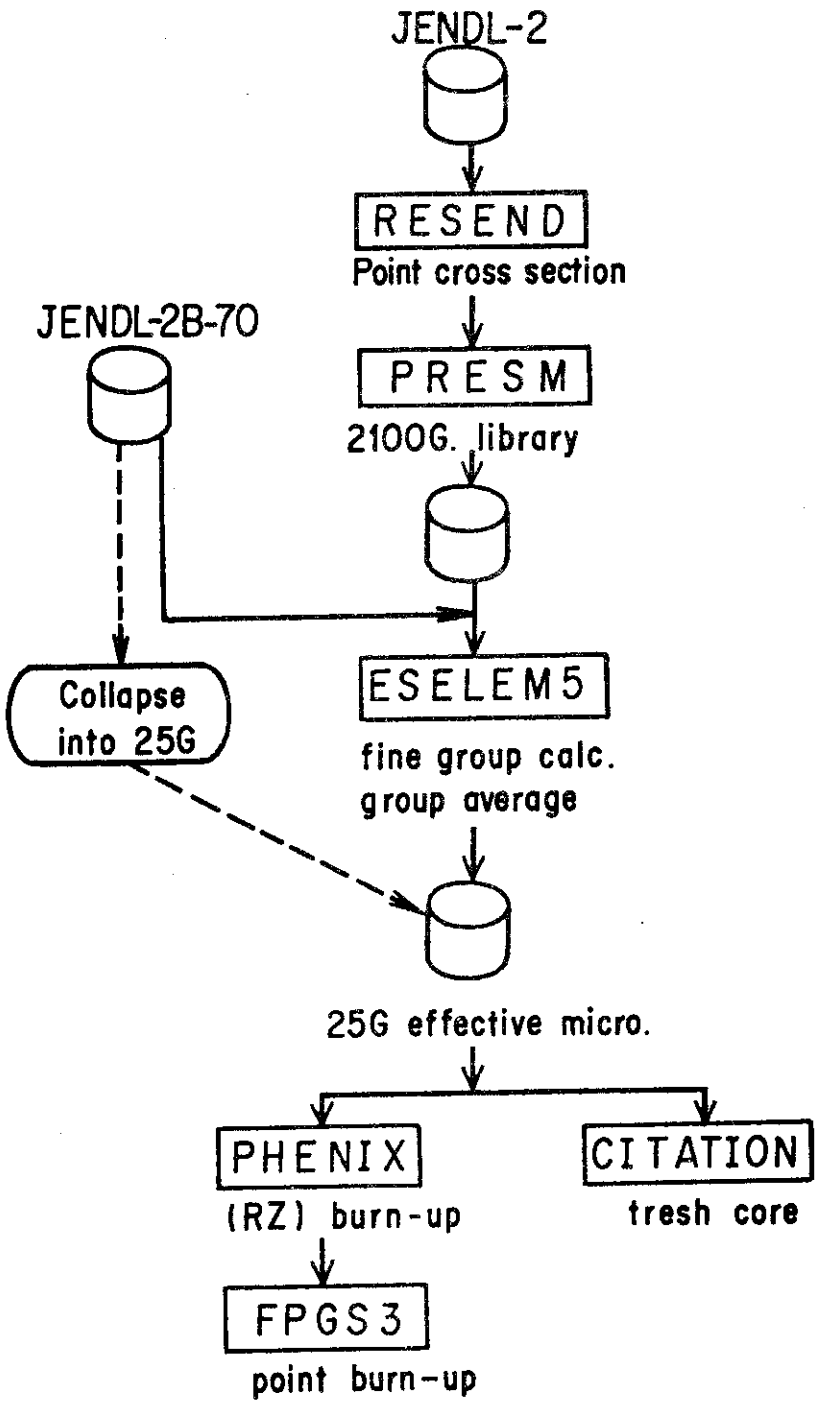

Fig. 3 Calculation flow

5. RESULTS AND DISCUSSION

The core parameters are compared between the fine group method (FGM) and the broad group method (BGM).The FGM is basedon the cross sections produced by ESELEM5 and BGM is on the 70 group set.

5.1 Fresh Core

Table 4 shows the comparison of parameters, K_{eff}, breeding ratio, breeding gain. The BGM gives a heigher value of K_{eff} by 0.5%, a lower breeding ratio by 0.8% and a lower total breeding gain by 2% than the FGM. The similar discrepancy of K_{eff} was observed in the previous comparison which used the JAERI Fast 2 data and the JAERI Fast V2 set with 25 group structure. Table 5 shows the radial fission distributions and Table 6 does the axial fission rate distributions for the FGM and the BGM. These methods agree well in the core regions for both of the radial and the axial directions. In the blanket regions, the BGM gives lower values by several percents for ^{238}U fission rate. Table 7 shows the central reaction rate ratios by the FGM. The inner core void worth is compared in Table 8. It is interesting that the results by the BGM agree very well with those by the FGM, because the former usually gives a more negative value by about ten percents than the latter[15].

5.2 End of Cycle Core

The one group capture cross sections of F.P. and pseudo F.P. were obtained by weighting with the flux at the core centre. They are shown in Table 9. The results of the BGM were obtained by using the 25 group and the 70 group fluxes. The BGM gives fairly larger cross sections than the FGM for all the nuclides, for example, the difference is 8% for the pseudo F.P.. This is because the BGM gives a softer neutron spectrum in the core and the capture cross sections increases in the lower energy region. The one group capture and fission cross sections of the heavy isotopes are compared in Table 10. The similar tendency mentioned above is observed for the capture cross

sections. Tables 11 and 12 show k_{eff} and the reactivities of various configuations at the end-of-cyle. These were obtained on the assumptions that all ^{239}Np decays to ^{239}Pu or no ^{239}Np decays to ^{239}Pu. The results by the BGM are represented in the parentheses. The reactivity loss or gain is similar between the two methods except for that due to the heavy isotope burn-up in the core. The breeding ratio and breeding gain are shown in Table 13. The breeding ratio decreases about 3 % at the end-of-cycle. The radial and axial fission distributions are shown in Tables 14 and 15 for the end-of-cycle. Due to the burn-up, the radial fission rates considerably decrease at the outer region of inner core and at the outer core, on the other hand the axial fission rates distributions are flattened. The two methods agree well in this case. Table 16 shows the central reaction rate ratios obtained by the FGM. The ratio $^{28}f/^{49}f$ increases and that of $^{49}C/^{49}f$ decreases due to the burn-up, since the neutron spectrum becomes harder due to the build-up of F.P. Table 17 shows the composition of heavy isotopes and pseudo F.P. for each reactor zone calculated by the FGM and Table 18 shows one by the BGM. The difference of compositions is hardly seen between the two methods in the core zones. In the blanket zones the compositions of pseude F.P. differ several percents at the most between them. In Tables 19 and 20 Pu balance calculated by the FGM and BGM, respectively is shown for the inner and the outer cores, and for the axial and radial blankets. Table 21 represents the neutron spectra at the core centre of the fresh core and the end-of-cycle core, which are plotted in Fig.4. It indicates that the BGM gives a considerable softer neutron spectrum than the FGM and the spectrum becomes harder at the end-of-cycle core. The sodium void worth at the inner core is shown in Table 22. The positive worth increases about 20% compared with that at the fresh core. The irradiated fuel composition is shown in Table 23 calculated at the inner core zone 1. Fig.2 shows the actinide chain considered in the calculation of the irradiated fuel compositions.

Table 4 K_{eff}, breeding ratio and breeding gain of fresh core

NO.	Parameters	FGM	BGM
a.1	K_{eff} of reference configuration	1.00712	1.00185
a.2	Breeding Ratio (B.R.)	1.3605	1.3492
a.3	Regional component of B.R.		
	Inner core	0.6785	0.6770
	Outer core	0.2787	0.2813
	(Core Subtotal)	0.9572	0.9583
	Radial blanket	0.1721	0.1662
	Axial blanket	0.2311	0.2247
	(Blanket subtotal)	0.4032	0.3909
	Reactor total	1.3605	1.3492
	Breeding gain		
a.4	Internal breeding gain	-0.0712	-0.0741
a.5	Blanket breeding gain	0.4098	0.4055
a.6	Total breeding gain	0.3386	0.3313

Table 5(a) a.7-(1), a.8-(1) Normalised radial fission rate distributions

Mesh i (j=1)	Distance from core centre (cm)	Total fission rate (fission/cm^3-sec)	238Pu fission rate (fission/cm^3-sec)	238U fission rate (fission/cm^3-sec)
1	0.0	1.00000	1.00000	1.00000
2	1.801	0.99995	0.99996	0.99996
3	5.402	0.99983	0.99983	0.99983
4	9.003	0.99949	0.99949	0.99948
5	12.605	0.99896	0.99896	0.99896
6	16.206	0.99826	0.99826	0.99827
7	19.807	0.99738	0.99738	0.99740
8	23.409	0.99633	0.99632	0.99636
9	27.010	0.99509	0.99509	0.99514
10	30.611	0.99368	0.99367	0.99374
11	34.213	0.99208	0.99207	0.99216
12	37.814	0.99031	0.99029	0.99040
13	41.415	0.98835	0.98833	0.98847
14	45.016	0.98621	0.98618	0.98635
15	48.618	0.98388	0.98385	0.98405
16	52.219	0.98137	0.98134	0.98157
17	55.820	0.97868	0.97864	0.97890
18	59.422	0.97579	0.97575	0.97604
19	63.023	0.97272	0.97267	0.97299
20	66.624	0.96946	0.96940	0.96975
21	70.226	0.96600	0.96594	0.96632
22	73.827	0.96235	0.96229	0.96270
23	77.428	0.95851	0.95845	0.95887
24	81.030	0.95447	0.95440	0.95485
25	84.631	0.95022	0.95016	0.95062
26	88.232	0.94577	0.94570	0.94619
27	91.834	0.94111	0.94104	0.94156
28	95.435	0.93622	0.93614	0.93672
29	99.036	0.93108	0.93100	0.93168
30	102.638	0.92569	0.92558	0.92647
31	106.239	0.91999	0.91984	0.92110
32	109.840	0.91395	0.91372	0.91566
33	113.442	0.90751	0.90712	0.91024
34	117.043	0.90056	0.89990	0.90506
35	120.644	0.89300	0.89185	0.90044
36	124.425	0.88467	0.88269	0.89694
37	127.847	0.87535	0.87199	0.89548
38	131.448	0.86474	0.85911	0.89753
39	135.049	0.85244	0.84311	0.90545
40	139.055	1.01991	0.81833	0.92531
41	143.464	0.98570	0.78789	0.91603
42	147.873	0.93985	0.74978	0.88418
43	152.282	0.88239	0.70333	0.83457
44	156.692	0.81408	0.64883	0.77008
45	161.101	0.73620	0.58728	0.69237
46	165.510	0.65055	0.52025	0.60197
47	169.919	0.55954	0.45013	0.49796
48	174.328	0.46675	0.38083	0.37703
49	179.126	0.06523	0.31321	0.20532
50	184.311	0.03556	0.23405	0.10511
51	189.496	0.01977	0.16849	0.05425
52	194.681	0.01120	0.11828	0.02828
53	199.866	0.00646	0.08075	0.01492
54	205.051	0.00378	0.05419	0.00798
55	210.236	0.00225	0.03621	0.00433
56	215.421	0.00138	0.02493	0.00238
57	220.606	0.00091	0.01942	0.00131
58	225.764	0.0	-	-
59	230.893	0.0	-	-
60	236.023	0.0	-	-

Table 5(b) Normalized radial fission rate distribution

Mesh i	Distance from core centre (cm)	Total fission rate	^{239}Pu fission rate	^{238}U fission rate
1	0.0	1.00000	1.00000	1.00000
2	1.801	0.99995	0.99996	0.99996
3	5.402	0.99985	0.99985	0.99986
4	9.003	0.99956	0.99956	0.99956
5	12.605	0.99911	0.99910	0.99912
6	16.206	0.99851	0.99850	0.99853
7	19.807	0.99775	0.99774	0.99779
8	23.409	0.99684	0.99683	0.99689
9	27.010	0.99578	0.99576	0.99585
10	30.611	0.99456	0.99454	0.99465
11	34.213	0.99318	0.99316	0.99330
12	37.814	0.99164	0.99162	0.99179
13	41.415	0.98994	0.98992	0.99012
14	45.016	0.98809	0.98805	0.98829
15	48.618	0.98606	0.98602	0.98630
16	52.219	0.98388	0.98383	0.98414
17	55.820	0.98152	0.98147	0.98182
18	59.422	0.97900	0.97894	0.97933
19	63.023	0.97630	0.97624	0.97667
20	66.624	0.97343	0.97336	0.97382
21	70.226	0.97039	0.97031	0.97080
22	73.827	0.96716	0.96708	0.96760
23	77.428	0.96375	0.96366	0.96420
24	81.030	0.96014	0.96006	0.96061
25	84.631	0.95634	0.95626	0.95682
26	88.232	0.95233	0.95226	0.95283
27	91.834	0.94809	0.94801	0.94862
28	95.435	0.94349	0.94337	0.94421
29	99.036	0.93880	0.93867	0.93961
30	102.638	0.93387	0.93374	0.93484
31	106.239	0.92867	0.92849	0.92994
32	109.840	0.92313	0.92288	0.92496
33	113.442	0.91718	0.91679	0.92000
34	117.043	0.91074	0.91007	0.91528
35	120.644	0.90366	0.90252	0.91111
36	124.425	0.89579	0.89383	0.90810
37	127.847	0.88689	0.88355	0.90719
38	131.448	0.87663	0.87100	0.90995
39	135.049	0.86457	0.85517	0.91891
40	139.055	1.03558	0.93027	0.94061
41	143.464	1.00115	0.79962	0.93191
42	147.873	0.95471	0.76104	0.89976
43	152.282	0.89624	0.71381	0.84927
44	156.692	0.82654	0.65824	0.78348
45	161.101	0.74722	0.59558	0.70410
46	165.510	0.65954	0.52694	0.61172
47	169.919	0.56639	0.45515	0.50534
48	174.328	0.47176	0.38448	0.38145
49	179.126	0.06404	0.31774	0.20415
50	184.311	0.03448	0.23748	0.10269
51	189.496	0.01899	0.17102	0.05212
52	194.681	0.01073	0.12082	0.02678
53	199.866	0.00616	0.08261	0.01396
54	205.051	0.00360	0.05541	0.00739
55	210.236	0.00213	0.03707	0.00397
56	215.421	0.00130	0.02575	0.00217
57	220.606	0.00086	0.02055	0.00119
58	225.764	0.00000	0.00000	0.00000
59	230.893	0.00000	0.00000	0.00000
60	236.023	0.00000	0.00000	0.00000

Table 6(a) a.7-(2), a.8-(2) Normalised axial fission rate distributions

Mesh j (i=1)	Distance from core centre	Total fission rate (fissions / cm^3-sec)	^{239}Pu fission rate (fissios/ cm^3-sec)	^{238}U fission rate (fissions/cm^3-sec)
1	0.0	1.00000	1.00000	1.00000
2	1.563	0.99732	0.99732	0.99732
3	4.689	0.99195	0.99195	0.99194
4	7.814	0.98125	0.98124	0.98122
5	10.940	0.96528	0.96528	0.96521
6	14.066	0.94415	0.94415	0.94398
7	17.191	0.91799	0.91802	0.91764
8	20.317	0.88699	0.88706	0.88629
9	23.443	0.85137	0.85152	0.85006
10	26.568	0.81138	0.81168	0.80904
11	29.694	0.76734	0.76791	0.76330
12	32.820	0.71964	0.72065	0.71283
13	35.945	0.66874	0.67050	0.65794
14	39.071	0.61523	0.61822	0.59689
15	43.178	0.54285	0.54821	0.50943
16	48.265	0.45202	0.46467	0.38067
17	52.870	0.04998	0.41679	0.23284
18	56.995	0.03367	0.36005	0.14847
19	61.120	0.02292	0.30342	0.09491
20	65.246	0.01577	0.25182	0.06086
21	69.373	0.01096	0.20482	0.03915
22	73.501	0.00709	0.16480	0.02526
23	77.629	0.00544	0.13230	0.01628
24	81.756	0.00390	0.10785	0.01037
25	85.090	0.0	0.0	0.0
26	87.630	0.0	0.0	0.0
27	90.170	0.0	0.0	0.0

Table 6(b) Normalized axial fission rate distributions

Mesh J	Distance from core center (cm)	Total fission rate	^{239}Pu fission	^{238}U fission
1	0.0	1.00000	1.00000	1.00000
2	1.563	0.99729	0.99729	0.99826
3	4.689	0.99187	0.99187	0.99284
4	7.814	0.98107	0.98106	0.98202
5	10.940	0.96495	0.96494	0.96585
6	14.066	0.94361	0.94361	0.94444
7	17.191	0.91721	0.91722	0.91787
8	20.317	0.88592	0.88596	0.88627
9	23.443	0.84997	0.85007	0.84977
10	26.568	0.80962	0.80985	0.80849
11	29.694	0.76522	0.76568	0.76249
12	32.820	0.71716	0.71803	0.71180
13	35.945	0.66594	0.66751	0.65627
14	39.071	0.61224	0.61499	0.59554
15	43.178	0.54027	0.54582	0.50789
16	48.265	0.44999	0.46257	0.37847
17	52.870	0.04872	0.41802	0.22848
18	56.995	0.03238	0.36218	0.14406
19	61.120	0.02193	0.30618	0.09109
20	65.246	0.01504	0.25579	0.05767
21	69.373	0.01043	0.20874	0.03674
22	73.501	0.00731	0.16842	0.02349
23	77.629	0.00518	0.13599	0.01503
24	81.756	0.00374	0.11263	0.00953
25	85.090	0.00000	0.00000	0.00000
26	87.630	0.00000	0.00000	0.00000
27	90.170	0.00000	0.00000	0.00000

Table 7 Central reaction rate ratios (FGM)

Reaction	
$^{28}C/^{49}f$	0.16193
$^{28}f/^{49}f$	0.02375
$^{49}C/^{49}f$	0.32282

Table 8 Inner core sodium void worth

	FGM	BGM[a)]
K_{eff} of the configuration 1, K_{Ref}	1.00712	1.00368
K_{eff} of the configuration 2, K_{voided}	1.03441	1.03081
Inner core sodium void worth		
$K_{voided} - K_{Ref}$	0.02729	0.02717
$\frac{K_{voided} - K_{Ref}}{K_{Ref}}$	0.02710	0.02707

a) Calculated by the CITATION code.

Table 9 F.P. Capture one-group cross-sections at core centre

Nuclide	FGM	BGM (25)[a]	BGM (70)[b]
^{105}Pd	0.8189	0.8575	0.8522
^{101}Ru	0.7606	0.8016	0.8023
^{103}Rh	0.7229	0.7655	0.7641
^{99}Tc	0.5961	0.6341	0.6301
^{107}pd	0.8106	0.8512	0.8431
^{149}Sm	2.3515	2.620	2.568
^{151}Sm	2.4791	2.779	2.716
^{147}Pm	1.2756	1.414	1.396
^{99}Mo	0.3551	0.3808	0.3723
^{145}Nd	0.4223	0.4776	0.4558
^{133}Cs	0.5295	0.5811	0.5562
^{135}Cs	0.3176	0.3525	0.3442
^{109}Ag	0.8806	0.9264	0.9180
^{103}Ru	-	-	-
^{102}Ru	0.2348	0.2414	0.2348
^{153}Eu	2.8316	3.101	3.047
^{143}Nd	0.3297	0.3729	0.3745
^{104}Ru	0.1906	0.2068	0.1975
^{95}Mo	0.3326	0.3548	0.3511
^{100}Mo	0.0947	0.1024	0.1024
^{141}Pr	0.1558	0.1794	0.1653
^{155}Eu	2.4962	2.782	2.7217
^{93}Zr	0.1975	0.2220	0.2042
Pseudo F.P.	0.5613	0.6072	

a) Weighted with the 25 group flux

b) Weighted with the 70 group flux

Table 10 One-group capture and fission cross-sections for heavy isotopes at core centre

Nuclide	$\langle\sigma_f\rangle$(barn)		$\langle\sigma_c\rangle$(barn)	
	FGM	BGM	FGM	BGM
^{235}U	2.010	2.086	0.644	0.686
^{236}U	0.098	0.0935	0.601	0.635
^{237}Np	0.316		1.704	
^{238}Pu	1.128		0.946	
^{238}U	0.044	0.0444	0.299	0.312
^{239}Np	0.433		2.176	
^{239}Pu	1.856	1.899	0.595	0.657
^{240}Pu	0.372	0.374	0.617	0.668
^{241}Pu	2.644	2.736	0.533	0.566
^{242}Pu	0.273	0.274	0.393	0.435
^{241}Am	0.422	0.438	1.401	1.537

Table 11 K_{eff} of various configurations at the end of cycle

- $K_{eff}(1)$ corresponding to the end of cycle compositions for the whole reactor:

  $K_{eff}(1) = 0.99093\ (0.98637)^{a)}$: no ^{239}Np decays to ^{239}Pu.
  $= 0.99228$: all ^{239}Np decays to ^{239}Pu.

- $K_{eff}(2)$ corresponding to the fresh core compositions for the core zones and the end of cycle blanket compositions for the blanket zone:

  $K_{eff}(2) = 1.01272\ (1.00727)$: no ^{239}Np decays to ^{239}Pu.
  $= 1.01277$: all ^{239}Np decays to ^{239}Pu.

- $K_{eff}(3)$ corresponding to the fresh core compositions as to the heavy isotopes and including the pseudo F.P. build up of each core zone, and to the fresh blanket compositions for the blanketzones:

  $K_{eff}(3) = 0.98829\ (0.98207)$: no ^{239}Np decays to ^{239}Pu.
  $= 0.98829$: all ^{239}Np decays to ^{239}Pu.

- $K_{eff}(4)$ corresponding to the end of cycle heavy isotope compositions for each core zone but without pseudo F.P. and to the fresh blanket compositions for the blanket zones:

  $K_{eff}(4) = 1.00501\ (1.00160)$: no ^{239}Np decays to ^{239}Pu.
  $= 1.00638$: all ^{239}Np decays to ^{239}Pu.

a) The results by BGM are shown in parenthesis.

Table 12 Reactivities at the end of cycle

Reactivity	Definition	$\Delta k/k$
Global reactivity loss per cycle	$\frac{K_{eff}(1) - K_{eff}(0)^a}{K_{eff}(0)}$	- 0.01607 (- 0.01544) - 0.01472
Reactivity gain due to Pu build-up in blanket	$\frac{K_{eff}(2) - K_{eff}(0)}{K_{eff}(0)}$	0.00556 (0.00542) 0.00561
Reactivity loss due to F.P. build-up	$\frac{K_{eff}(3) - K_{eff}(0)}{K_{eff}(0)}$	- 0.01870 (- 0.01974) - 0.01870
Reactivity loss due to core heavy isotope burn-up	$\frac{K_{eff}(4) - K_{eff}(0)}{K_{eff}(0)}$	- 0.00210 (- 0.00024) - 0.00074

a. $K_{eff}(0)$ is k_{eff} for configuration 1.

. Upper low: no ^{239}Np decays to ^{239}Pu.

Lower low: all ^{239}Np decays to ^{239}Pu.

Table 13 Breeding ratio and gain

b.5 Breeding ratios corresponding to a.2 and a.3

	FGM	BGM
Inner Core	0.67031	0.6701
Outer Core	0.25119	0.2516
(Core Subtotal)	0.92150	0.9217
Radial Blanket	0.16114	0.1545
Axial Blanket	0.23644	0.2302
(Blanket Subtotal)	0.39758	0.3847
Reactor Total	1.31908	1.3064

b.6 Breeding gain corresponding to a.4

	FGM	BGM
Internal Breeding Gain, G_I	- 0.0501	- 0.0514
Blanket Breeding Gain, G_B	0.3717	0.3656
Total Breeding Gain, G	0.3216	0.3142

Table 14(a) Normalised radial fission rate distributions corresponding to a.7-(1) and a.8-(1) (FGM)

Mesh i (j=1)	Distance from core centre (cm)	Total fission rate (fissions/cm^3-sec)	^{239}Pu fission rate (fissions/cm^3-sec)	^{238}U fission rate (fissions/cm^3-sec)
1	0.0	1.00000	1.00000	1.00000
2	1.801	0.99996	0.99996	0.99996
3	5.402	0.99959	0.99959	0.99959
4	9.003	0.99877	0.99877	0.99876
5	12.605	0.99752	0.99752	0.99752
6	16.206	0.99586	0.99586	0.99585
7	19.807	0.99377	0.99377	0.99378
8	23.409	0.99128	0.99127	0.99128
9	27.010	0.98836	0.98836	0.98838
10	30.611	0.98504	0.98503	0.98507
11	34.213	0.98130	0.98130	0.98135
12	37.814	0.97716	0.97715	0.97723
13	41.415	0.97261	0.97261	0.97270
14	45.016	0.96768	0.96767	0.96778
15	48.618	0.96260	0.96234	0.96247
16	52.219	0.95684	0.95658	0.95672
17	55.820	0.95065	0.95038	0.95056
18	59.422	0.94404	0.94377	0.94397
19	63.023	0.93702	0.93675	0.93697
20	66.624	0.92959	0.92932	0.92956
21	70.226	0.92177	0.92150	0.92175
22	73.827	0.91356	0.91330	0.91354
23	77.428	0.90497	0.90471	0.90495
24	81.030	0.89600	0.89574	0.89597
25	84.631	0.88667	0.88642	0.88660
26	88.232	0.87698	0.87674	0.87684
27	91.834	0.86694	0.86674	0.86669
28	95.435	0.85588	0.85643	0.85614
29	99.036	0.84513	0.84569	0.84531
30	102.638	0.83398	0.83453	0.83419
31	106.239	0.82244	0.82296	0.82280
32	109.840	0.81049	0.81095	0.81116
33	113.442	0.79811	0.79846	0.79936
34	117.043	0.78525	0.78541	0.78751
35	120.644	0.77186	0.77170	0.77581
36	124.425	0.75783	0.75715	0.76460
37	127.847	0.74305	0.74149	0.75443
38	131.448	0.72733	0.72434	0.74618
39	135.049	0.71040	0.70510	0.74126
40	139.055	0.79940	0.67875	0.74230
41	143.464	0.76580	0.64818	0.72427
42	147.873	0.72518	0.61275	0.69257
43	152.282	0.67763	0.57208	0.65030
44	156.692	0.62366	0.52637	0.59939
45	161.101	0.57479	0.47632	0.54116
46	165.510	0.50891	0.42259	0.47315
47	169.919	0.43925	0.36675	0.39498
48	174.328	0.36815	0.31144	0.30451
49	179.126	0.08865	0.25577	0.17741
50	184.311	0.05728	0.19192	0.09948
51	189.496	0.03723	0.13940	0.05627
52	194.681	0.01454	0.09989	0.03043
53	199.866	0.00890	0.06943	0.01678
54	205.051	0.00552	0.04735	0.00945
55	210.236	0.00347	0.03210	0.00542
56	215.421	0.00224	0.02236	0.00316
57	220.606	0.00157	0.01756	0.00184
58	225.764	0.0	0.0	0.0
59	230.893	0.0	0.0	0.0
60	236.023	0.0	0.0	0.0

Table 14 (b) Normalized radial fission rate distributions corresponding to a.7-(1) and a.8-(1) (BGM)

Mesh i	Distance from core center (cm)	Total fission rate	^{239}Pu fission rate	^{238}U fission rate
1	0.0	1.00000	1.00000	1.00000
2	1.801	0.99979	0.99980	0.99980
3	5.402	0.99959	0.99959	0.99959
4	9.003	0.99876	0.99876	0.99875
5	12.605	0.99751	0.99751	0.99750
6	16.206	0.99583	0.99583	0.99583
7	19.807	0.99374	0.99374	0.99374
8	23.409	0.99123	0.99123	0.99124
9	27.010	0.98830	0.98830	0.98832
10	30.611	0.98496	0.98496	0.98499
11	34.213	0.98121	0.98121	0.98125
12	37.814	0.97706	0.97705	0.97711
13	41.415	0.97250	0.97248	0.97256
14	45.016	0.96754	0.96753	0.96761
15	48.618	0.96238	0.96219	0.96226
16	52.219	0.95659	0.95641	0.95648
17	55.820	0.95039	0.95020	0.95029
18	59.422	0.94376	0.94357	0.94368
19	63.023	0.93672	0.93654	0.93665
20	66.624	0.92929	0.92910	0.92923
21	70.226	0.92145	0.92127	0.92140
22	73.827	0.91323	0.91305	0.91317
23	77.428	0.90462	0.90444	0.90455
24	81.030	0.89564	0.89547	0.89554
25	84.631	0.88629	0.88613	0.88614
26	88.232	0.87657	0.87643	0.87634
27	91.834	0.86649	0.86638	0.86612
28	95.435	0.85521	0.85589	0.85549
29	99.036	0.84441	0.84511	0.84459
30	102.638	0.83325	0.83394	0.83343
31	106.239	0.82169	0.82236	0.82199
32	109.840	0.80974	0.81035	0.81032
33	113.442	0.79735	0.79860	0.79847
34	117.043	0.78449	0.78482	0.78657
35	120.644	0.77109	0.77111	0.77482
36	124.425	0.75706	0.75657	0.76356
37	127.847	0.74227	0.74092	0.75335
38	131.448	0.72653	0.72377	0.74510
39	135.049	0.70957	0.70451	0.74030
40	139.055	0.79803	0.67813	0.74168
41	143.464	0.76429	0.64742	0.72364
42	147.873	0.72346	0.61180	0.69173
43	152.282	0.67563	0.57086	0.64917
44	156.692	0.62137	0.52486	0.59796
45	161.101	0.57205	0.47471	0.53942
46	165.510	0.50581	0.42055	0.47113
47	169.919	0.43582	0.36430	0.39267
48	174.328	0.36459	0.30877	0.30181
49	179.126	0.08656	0.25419	0.17325
50	184.311	0.05571	0.19043	0.09589
51	189.496	0.03613	0.13815	0.05364
52	194.681	0.01379	0.09963	0.02863
53	199.866	0.00843	0.06926	0.01562
54	205.051	0.00521	0.04707	0.00871
55	210.236	0.00326	0.03176	0.00497
56	215.421	0.00210	0.02210	0.00289
57	220.606	0.00149	0.01768	0.00168
58	225.764	0.00000	0.00000	0.00000
59	230.893	0.00000	0.00000	0.00000
60	236.023	0.00000	0.00000	0.00000

Table 15 (a) Normalized axial fission rate distributions corresponding to a.7-(2) and a.8-(2) (FGM)

Mesh j (i=1)	Distance from core centre (cm)	Total fission rate (fissions/cm^2-sec)	^{239}Pu fission rate (fissions/cm^2-sec)	^{238}U fission rate (fissions/cm^2-sec)
1	0.0	1.00000	1.00000	1.00000
2	1.563	0.99745	0.99745	0.99745
3	4.689	0.99236	0.99236	0.99236
4	7.814	0.98221	0.98221	0.98220
5	10.940	0.96706	0.96706	0.96700
6	14.066	0.94699	0.94701	0.94688
7	17.191	0.92216	0.92219	0.92189
8	20.317	0.89269	0.89276	0.89215
9	23.443	0.85880	0.85895	0.85776
10	26.568	0.82072	0.82101	0.81883
11	29.694	0.77873	0.77928	0.77542
12	32.820	0.73319	0.73416	0.72753
13	35.945	0.68452	0.68619	0.67504
14	39.071	0.63326	0.63608	0.61764
15	43.178	0.56675	0.56888	0.53517
16	48.265	0.47752	0.48642	0.41340
17	52.870	0.11998	0.43239	0.27450
18	56.995	0.09529	0.37313	0.19114
19	61.120	0.07555	0.31567	0.13354
20	65.246	0.04110	0.26503	0.09173
21	69.373	0.03166	0.21774	0.06374
22	73.501	0.02438	0.17657	0.04459
23	77.629	0.01877	0.14_{245}	0.03106
24	81.756	0.01453	0.11633	0.02102
25	85.090	0.0	0.0	0.0
26	87.630	0.0	0.0	0.0
27	90.170	0.0	0.0	0.0

Table 15(b) Normalized axial fission rate distributions corresponding to a.7-(2) and a.8-(2) (BGM)

Mesh i	Distance from core center (cm)	Total fission rate	^{239}Pu fission rate	^{238}U fission rate
1	0.0	1.00000	1.00000	1.00000
2	1.563	0.99743	0.99743	0.99743
3	4.689	0.99228	0.99228	0.99228
4	7.814	0.98201	0.98201	0.98201
5	10.940	0.96669	0.96669	0.96669
6	14.066	0.94642	0.94642	0.94635
7	17.191	0.92130	0.92132	0.92113
8	20.317	0.89152	0.89157	0.89113
9	23.443	0.85727	0.85738	0.85646
10	26.568	0.81881	0.81904	0.88964
11	29.694	0.77642	0.77688	0.77354
12	32.820	0.73049	0.73134	0.72539
13	35.945	0.68148	0.68299	0.67266
14	39.071	0.63001	0.63269	0.61503
15	43.178	0.56308	0.56632	0.53219
16	48.265	0.47405	0.48389	0.40987
17	52.870	0.11770	0.43173	0.26931
18	56.995	0.09341	0.37281	0.18609
19	61.120	0.07407	0.31574	0.12912
20	65.246	0.03979	0.26645	0.08782
21	69.373	0.03066	0.21916	0.06065
22	73.501	0.02361	0.17770	0.04225
23	77.629	0.01822	0.14371	0.02937
24	81.756	0.01426	0.11900	0.01986
25	85.090	0.00000	0.00000	0.00000
26	87.630	0.00000	0.00000	0.00000
27	90.170	0.00000	0.00000	0.00000

Table 16 Central reaction rate ratios corresponding to a.9 (FGM)

Reaction	
$^{28}C/^{49}f$	0.16121
$^{28}f/^{49}f$	0.02403
$^{49}C/^{49}f$	0.31723

Table 17 The end of cycle composition for each reactor zone (FGM)

(Unit : 10^{24} n/cm^3)

Reactor zone / Nuclide	1	2	3	4	5
Pseudo F.P.	3.26524-4	3.17057-4	2.96574-4	1.93538-4	1.87689-4
^{235}U	1.02489-5	1.03799-5	1.06988-5	1.20271-5	1.21228-5
^{236}U	1.23238-6	1.20458-6	1.13112-6	8.68582-7	8.46172-7
^{237}Np	6.01380-8	5.72455-8	5.00944-8	2.93136-8	2.79006-8
^{238}Pu	5.28378-9	4.87666-9	3.92214-9	1.66761-9	1.53788-9
^{238}U	7.23908-3	7.25061-3	7.27925-3	7.39473-3	7.40117-3
^{239}Pu	8.12039-4	8.11367-4	8.08392-4	8.02873-4	8.02051-4
^{239}Np	2.20661-6	2.14503-6	1.98817-6	1.39456-6	1.35226-6
^{240}Pu	2.57708-4	2.56628-4	2.53317-4	2.46838-4	2.46020-4
^{241}Pu	8.52649-5	8.58213-5	8.70223-5	9.39634-5	9.43821-5
^{242}Pu	3.29721-5	3.28518-5	3.25200-5	3.14941-5	3.13967-5
^{241}Am	4.43290-6	4.46929-6	4.55769-6	4.92380-6	4.95011-6

Reactor zone / Nuclide	6	7	8	9	10
Pseudo F.P.	1.74669-4	3.00165-4	1.98636-4	1.76239-4	1.15508-4
^{235}U	1.23600-5	1.11062-5	1.22698-5	1.24768-5	1.32602-5
^{236}U	7.87484-7	8.90550-7	6.44478-7	6.10388-7	4.32204-7
^{237}Np	2.44436-8	3.31757-8	1.88848-8	1.73559-8	1.10790-8
^{238}Pu	1.23425-9	1.98053-9	7.65456-10	6.65607-10	2.85796-10
^{238}U	7.42048-3	7.04021-3	7.13560-3	7.15089-3	7.21238-3
^{239}Pu	7.99565-4	9.53058-4	9.66087-4	9.69603-4	9.76264-4
^{239}Np	1.24798-6	1.51551-6	1.02526-6	9.43440-7	6.31337-7
^{240}Pu	2.43699-4	3.08789-4	3.01646-4	3.01932-4	2.96172-4
^{241}Pu	9.53392-5	1.15558-4	1.23578-4	1.25431-4	1.30767-4
^{242}Pu	3.11355-4	4.04416-5	3.91541-5	3.90102-5	3.80341-5
^{241}Am	5.01558-6	6.15164-6	6.58231-6	6.65751-6	6.94528-6

Reactor zone / Nuclide	11	12	13	14	15
Pseudo F.P.	1.85738-5	1.72788-6	9.02714-6	9.23725-7	2.41889-5
^{235}U	2.50057-5	2.71320-5	2.61160-5	2.74198-5	1.51152-5
^{236}U	7.53051-7	2.15876-7	4.72916-7	1.32620-7	8.69092-7
^{237}Np	1.02463-8	8.27315-10	3.95597-9	3.11497-10	2.18913-8
^{238}Pu	2.70774-10	6.18524-12	6.44264-11	1.42569-12	1.08245-9
^{238}U	1.34773-2	1.37114-2	1.36443-2	1.37226-2	8.85681-3
^{239}Pu	1.52246-4	3.79945-5	9.29049-5	2.29513-5	1.72675-4
^{239}Np	1.04279-6	2.52163-7	6.25343-7	1.51622-7	1.22512-6
^{240}Pu	2.35232-6	1.79015-7	8.96783-7	6.67310-8	5.19313-6
^{241}Pu	2.39700-8	5.92404-10	5.75717-9	1.37289-10	1.01163-7
^{242}Pu	1.40939-10	9.29660-13	2.05550-11	1.31240-13	1.10277-9
^{241}Am	3.08829-10	7.64367-12	7.42539-11	1.77203-12	1.29873-9

Reactor zone / Nuclide	16	17	18	19	20
Pseudo F.P.	2.31607-5	2.08990-5	1.65799-5	9.42551-6	5.95283-6
^{235}U	1.52079-5	1.54490-5	1.60243-5	1.67995-5	1.66531-5
^{236}U	8.44981-7	7.79866-7	6.22255-7	4.22927-7	4.99180-7
^{237}Np	2.06174-8	1.73963-8	1.08362-8	4.87316-9	7.05372-9
^{238}Pu	9.87289-10	7.60118-10	3.67150-10	1.09203-10	1.94415-10
^{238}U	8.86222-3	8.87804-3	8.91810-3	8.96280-3	8.96280-3
^{239}Pu	1.67801-4	1.55246-4	1.25040-4	8.42535-5	8.77787-5
^{239}Np	1.18740-6	1.09188-6	8.66859-7	5.72985-7	5.99919-7
^{240}Pu	4.88571-6	4.10964-6	2.53942-6	1.13223-6	1.56299-6
^{241}Pu	9.22353-8	7.07959-8	3.39171-8	1.00944-8	1.90971-8
^{242}Pu	9.73251-10	6.82163-10	2.54683-10	4.97460-11	1.10437-10
^{241}Am	1.18433-9	9.09655-10	4.36472-10	1.30089-10	2.45617-10

(Table 17 continued)

Reactor zone / Nuclide	21	22	23	24	25
Pseudo F.P.	5.69241-6	5.07947-6	3.83553-6	2.17753-6	8.77524-7
^{235}U	1.67054-5	1.68467-5	1.71664-5	1.75828-5	2.75071-5
^{236}U	4.84277-7	4.43116-7	3.49886-7	2.30856-7	1.12724-7
^{237}Np	6.62493-9	5.51421-9	3.39593-9	1.45720-9	2.24365-10
^{238}Pu	1.76772-10	1.33755-10	6.40929-11	1.78745-11	8.68955-13
^{238}U	8.96281-3	8.97399-3	8.99633-3	9.01869-3	1.37337-2
^{239}Pu	8.51256-5	7.81576-5	6.21451-5	4.09287-5	1.95632-5
^{239}Np	5.80924-7	5.31558-7	4.19394-7	2.73475-7	1.29144-7
^{240}Pu	1.46775-6	1.22203-6	7.52205-7	3.21743-7	4.80118-8
^{241}Pu	1.73621-8	1.31141-8	6.26181-9	1.74534-9	8.24033-11
^{242}Pu	9.71809-11	6.67706-11	2.48542-11	4.49026-12	6.69030-14
^{241}Am	2.23344-10	1.68776-10	8.06744-11	2.25099-11	1.06379-12

(Table 17 continued)

Table 18 The end of cycle composition for each reactor zone (BGM)

Nuclide	1	2	3	4	5
Pseudo F.P.	3.23825-4	3.15397-4	2.96798-4	1.91034-4	1.85971-4
^{235}U	1.01738-5	1.02921-5	1.05882-5	1.19826-5	1.20674-5
^{236}U	1.26883-6	1.24323-6	1.17347-6	8.91134-7	8.70953-7
^{237}Np	-	-	-	-	-
^{238}Pu	-	-	-	-	-
^{238}U	7.24151-3	7.25205-3	7.27793-3	7.39962-3	7.40620-3
^{239}Pu	8.14351-4	8.13734-4	8.10980-4	8.03226-4	8.02510-4
^{239}Np	-	-	-	-	-
^{240}Pu	2.62223-4	2.61114-4	2.57681-4	2.49620-4	2.48831-4
^{241}Pu	8.60398-5	8.65133-5	8.75302-5	9.45385-5	9.48884-5
^{242}Pu	3.31466-5	3.30346-5	3.27160-5	3.15881-5	3.15007-5
^{241}Am	4.41856-6	4.45139-6	4.53299-6	4.91849-6	4.94168-6

Nuclide	6	7	8	9	10
Pseudo F.P.	1.74127-4	3.01433-4	1.98931-4	1.76222-4	1.15286-4
^{235}U	1.22884-5	1.09876-5	1.21836-5	1.23985-5	1.32017-5
^{236}U	8.15101-7	9.29689-7	6.71600-7	6.34974-7	4.48542-7
^{237}Np	-	-	-	-	-
^{238}Pu	-	-	-	-	-
^{238}U	7.42287-3	7.03843-3	7.13544-3	7.15388-3	7.21251-3
^{239}Pu	8.00291-4	9.54952-4	9.67268-4	9.70206-4	9.76586-4
^{239}Np	-	-	-	-	-
^{240}Pu	2.46406-4	3.13314-4	3.04849-4	3.04972-4	2.98287-4
^{241}Pu	9.57171-5	1.15867-4	1.23816-4	1.25697-4	1.30974-4
^{242}Pu	3.12530-5	4.06800-5	3.93175-5	3.91540-5	3.81318-5
^{241}Am	5.00241-6	6.11604-6	6.55948-6	6.63865-6	6.93411-6

Nuclide	11	12	13	14	15
Pseudo F.P.	1.82005-5	1.64792-6	8.76962-6	8.74097-7	2.36061-5
^{235}U	2.49700-5	2.71423-5	2.61065-5	2.74413-5	1.51093-5
^{236}U	7.83233-7	2.24199-7	4.90955-7	1.36927-7	8.92046-7
^{237}Np	-	-	-	-	-
^{238}Pu	-	-	-	-	-
^{238}U	1.35839-2	1.37176-2	1.36547-2	1.37332-2	8.86397-3
^{239}Pu	1.53238-4	3.70657-5	9.28528-5	2.21727-5	1.71952-4
^{239}Np	-	-	-	-	-
^{240}Pu	2.56675-6	1.91008-7	9.70710-7	7.01870-8	5.51923-6
^{241}Pu	2.85558-8	8.26562-10	6.88100-9	1.90491-10	1.18284-7
^{242}Pu	1.76240-10	1.36965-12	2.57330-11	1.91348-13	1.33902-9
^{241}Am	3.70769-10	1.07549-11	8.94454-11	2.47992-12	1.52965-9

Nuclide	16	17	18	19	20
Pseudo F.P.	2.27148-5	2.06508-5	1.63907-5	9.25253-6	5.77029-6
^{235}U	1.51920-5	1.54187-5	1.59970-5	1.67897-5	1.66496-5
^{236}U	8.70224-7	8.07737-7	6.46393-7	4.38537-7	5.17376-7
^{237}Np	-	-	-	-	-
^{238}Pu	-	-	-	-	-
^{238}U	8.86941-3	8.88370-3	8.91928-3	8.96705-3	8.97105-3
^{239}Pu	1.67678-4	1.56174-4	1.26317-4	8.48559-5	8.59751-5
^{239}Np	-	-	-	-	-
^{240}Pu	5.23066-6	4.45710-6	2.77477-6	1.23143-6	1.65662-6
^{241}Pu	1.09017-7	8.51081-8	4.10867-8	1.21853-8	2.54403-8
^{242}Pu	1.19925-9	8.60289-10	3.24508-10	6.30068-11	1.55179-10
^{241}Am	1.41012-9	1.10167-9	5.32812-10	1.58264-10	3.29772-10

(Table 18 continued)

Nuclide	21	22	23	24	25
Pseudo F.P	5.54624-6	4.98258-6	3.75712-6	2.11322-6	8.33994-7
^{235}U	1.66962-5	1.68301-5	1.71541-5	1.75850-5	2.75068-5
^{236}U	5.03746-7	4.63664-7	3.66968-7	2.41294-7	1.16576-7
^{237}Np	-	-	-	-	-
^{238}Pu	-	-	-	-	-
^{238}U	8.97362-3	8.98067-3	8.99782-3	9.02092-3	1.37365-2
^{239}Pu	8.37097-5	7.73850-5	6.17715-5	4.05133-5	1.89577-5
^{239}Np	-	-	-	-	-
^{240}Pu	1.56787-6	1.32265-6	8.19309-7	3.48026-7	5.06193-8
^{241}Pu	2.33882-8	1.79362-8	8.58922-9	2.37002-9	1.11223-10
^{242}Pu	1.38612-10	9.72735-11	3.63785-11	6.47986-12	9.48793-14
^{241}Am	3.03215-10	2.32640-10	1.11526-10	3.08107-11	1.44818-12

(Table 18 continued)

Table 19 Pu balance for the inner and outer cores, and for the axial and radial blankets (FGM)

(Unit : 10^{24}n/cm^3)

Region	Nuclide	$\Delta^{\ell}N$	$^{\ell}N$(EOC)	$^{\ell}N$(Fresh Core)
Inner Core	^{238}Pu	3.81081-9	3.81081-9	0.0
	^{239}Np	1.91518-6	1.91518-6	0.0
	^{239}Pu	3.76532-5	8.08052-4	7.70400-4
	^{240}Pu	3.21685-5	2.52968-4	2.20800-4
	^{241}Pu	-2.84132-5	8.80867-5	1.16500-4
	^{242}Pu	4.50500-6	3.24049-5	2.79000-5
Outer core	^{238}Pu	1.21875-9	1.21875-9	0.0
	^{239}Np	1.18470-6	1.18470-6	0.0
	^{239}Pu	-2.43370-5	9.61962-4	9.86300-4
	^{240}Pu	2.13497-5	3.04149-4	2.82800-4
	^{241}Pu	-2.86053-5	1.21095-4	1.49700-4
	^{242}Pu	3.77213-6	3.95721-5	3.58000-5
Radial Blanket	^{238}Pu	4.52915-11	4.52915-11	0.0
	^{239}Np	3.26991-7	3.26991-7	0.0
	^{239}Pu	4.85435-5	4.85435-5	0.0
	^{240}Pu	4.68606-7	4.68606-7	0.0
	^{241}Pu	4.02955-9	4.02955-9	0.0
	^{242}Pu	2.21182-11	2.21183-11	0.0
Axial Blanket	^{238}Pu	3.03342-10	3.03342-10	0.0
	^{239}Np	6.62301-7	6.62301-7	0.0
	^{239}Pu	9.59144-5	9.59144-5	0.0
	^{240}Pu	1.93844-6	1.93844-6	0.0
	^{241}Pu	2.85976-8	2.85976-8	0.0
	^{242}Pu	2.46081-10	2.46081-10	0.0

Table 20 Pu balance for the inner and outer cores, and for the axial and radial blankets (BGM)

(Unit : 10^{24}n/cm^3)

		$\Delta^{\ell}N$	$^{\ell}N$(EOC)	$^{\ell}N$(Fresh core)
Inner Core	^{238}Pu			
	^{239}Pu	3.97569-5	8.10156-4	7.70300-4
	^{240}Pu	3.62580-5	2.57058-4	2.20800-4
	^{241}Pu	-2.78409-5	8.86589-5	1.16500-4
	^{242}Pu	4.67803-6	3.25780-5	2.7900-4
Outer Core	^{238}Pu			
	^{239}Pu	-2.29999-5	9.63300-4	9.86300-4
	^{241}Pu	2.49863-5	3.07786-4	2.82800-4
	^{242}Pu	-2.83378-5	1.21362-4	1.49700-4
	^{242}Pu	3.95866-6	3.97586-5	3.58000-5
Axial Blanket	^{238}Pu			
	^{239}Pu	9.56213-5	9.56213-5	0.0
	^{240}Pu	2.09079-6	2.09079-6	0.0
	^{241}Pu	3.52177-8	3.52177-8	0.0
	^{242}Pu	3.13213-10	3.13213-10	0.0
Radial Blanket	^{238}Pu			
	^{239}Pu	4.80736-5	4.80736-5	0.0
	^{240}Pu	5.08662-7	5.08662-7	0.0
	^{241}Pu	4.84926-9	4.84926-9	0.0
	^{242}Pu	2.77355-11	2.77355-11	0.0

Table 21 Neutron spectra at the core centre of the fresh core and the end of cycle core

Group	Lower energy	Fresh core		End of cycle core	
		FGM	BGM	FGM	BGM
1	6.5	1.963-3	1.956-3	1.965-3	1.968-3
2	4.0 MeV	1.043-2	1.015-2	1.042-2	1.015-2
3	2.5 MeV	2.294-2	2.325-2	2.297-2	2.330-2
4	1.4 MeV	4.493-2	4.479-2	4.535-2	4.530-2
5	0.8 MeV	5.657-2	5.775-2	5.715-2	5.849-2
6	0.4 MeV	1.170-1	1.096-1	1.173-1	1.102-1
7	0.2 MeV	1.429-1	1.395-1	1.435-1	1.403-1
8	0.1 MeV	1.541-1	1.528-1	1.548-1	1.536-1
9	46.5 KeV	1.468-1	1.506-1	1.474-1	1.510-1
10	21.5 KeV	1.139-1	1.059-1	1.137-1	1.056-1
11	10.0 KeV	8.163-2	8.622-2	8.128-2	8.569-2
12	4.65 KeV	4.724-2	4.760-2	4.686-2	4.716-2
13	2.15 KeV	1.527-2	1.829-2	1.513-2	1.808-2
14	1.0 KeV	2.831-2	3.187-2	2.750-2	3.087-2
15	465 eV	1.207-2	1.454-2	1.134-2	1.364-2
16	215 eV	2.994-3	4.164-3	2.679-3	3.721-3
17	100 eV	6.020-4	9.720-4	5.065-4	8.175-4
18	46.5 eV	4.969-5	1.128-4	3.893-5	8.817-5
19	21.5 eV	1.887-6	5.698-6	1.348-6	6.123-6
20	10.0 eV	8.969-8	5.446-7	6.875-8	3.660-7
21	4.65 eV	5.653-8	2.664-8	4.753-8	1.634-8
22	2.15 eV	4.972-9	3.838-9	3.965-9	2.152-9
23	1.0 eV	1.047-9	7.134-10	6.206-10	2.922-10
24	0.465 eV	6.274-12	6.171-12	3.131-12	2.091-12
25	0.215 eV	9.172-14	1.108-13	4.373-14	3.540-14

* The upper limit of energy is 10.5 MeV.

Table 22 Inner core sodium void worth

K_{eff} of the configuration 1 for the end of cycle : K_{Ref}

K_{Ref} = 0.99093 . . . . . no ^{239}Np decays to ^{239}Pu

= 0.99228 . . . . . all ^{239}Np decays to ^{239}Pu

K_{eff} of the configuration 2 for the end of cycle : K_{voided}

K_{voided} = 1.02322 . . . . . no ^{239}Np decays to ^{239}Pu

= 1.02457 . . . . . all ^{239}Np decays to ^{239}Pu

Inner core sodium void worth

$K_{voided} - K_{Ref}$ = 0.03229 . . . . . no ^{239}Np decays to ^{239}Pu

= 0.03229 . . . . . all ^{239}Np decays to ^{239}Pu

$\frac{K_{voided} - K_{Ref}}{K_{Ref}}$ = 0.03259 . . . . . no ^{239}Np decays to ^{239}Pu

= 0.03254 . . . . . all ^{239}Np decays to ^{239}Pu

Table 23 Irradiated fuel composition of the inner core zone 1 at the end of cycle (FGM)

Nuclide	Number of atom/cm^3
^{232}U	1.13939 10^{11}
^{233}U	1.11087 10^{16}
^{234}U	7.09730 10^{20}
^{235}U	2.86028 10^{24}
^{236}U	3.38507 10^{23}
^{237}U	1.43221 10^{22}
^{238}U	2.02608 10^{27}
^{239}U	6.22756 10^{21}
^{240}U	-
^{236}Np	1.20659 10^{19}
^{237}Np	4.42714 10^{23}
^{238}Np	9.98807 10^{20}
^{239}Np	8.95317 10^{23}
^{240}Np	6.22017 10^{18}
^{236}Pu	1.88059 10^{12}
^{237}Pu	5.86281 10^{17}
^{238}Pu	1.04518 10^{23}
^{239}Pu	2.27011 10^{26}
^{240}Pu	7.24420 10^{25}
^{241}Pu	2.39767 10^{25}
^{242}Pu	9.24950 10^{24}
^{243}Pu	4.73664 10^{20}
^{244}Pu	-
^{241}Am	1.10778 10^{24}
^{242}Am	3.26733 10^{20}
^{242M}Am	5.50372 10^{22}
^{243}Am	4.61715 10^{23}
^{244}Am	6.17569 10^{22}
^{242}Cm	3.32082 10^{22}
^{243}Cm	1.15301 10^{21}

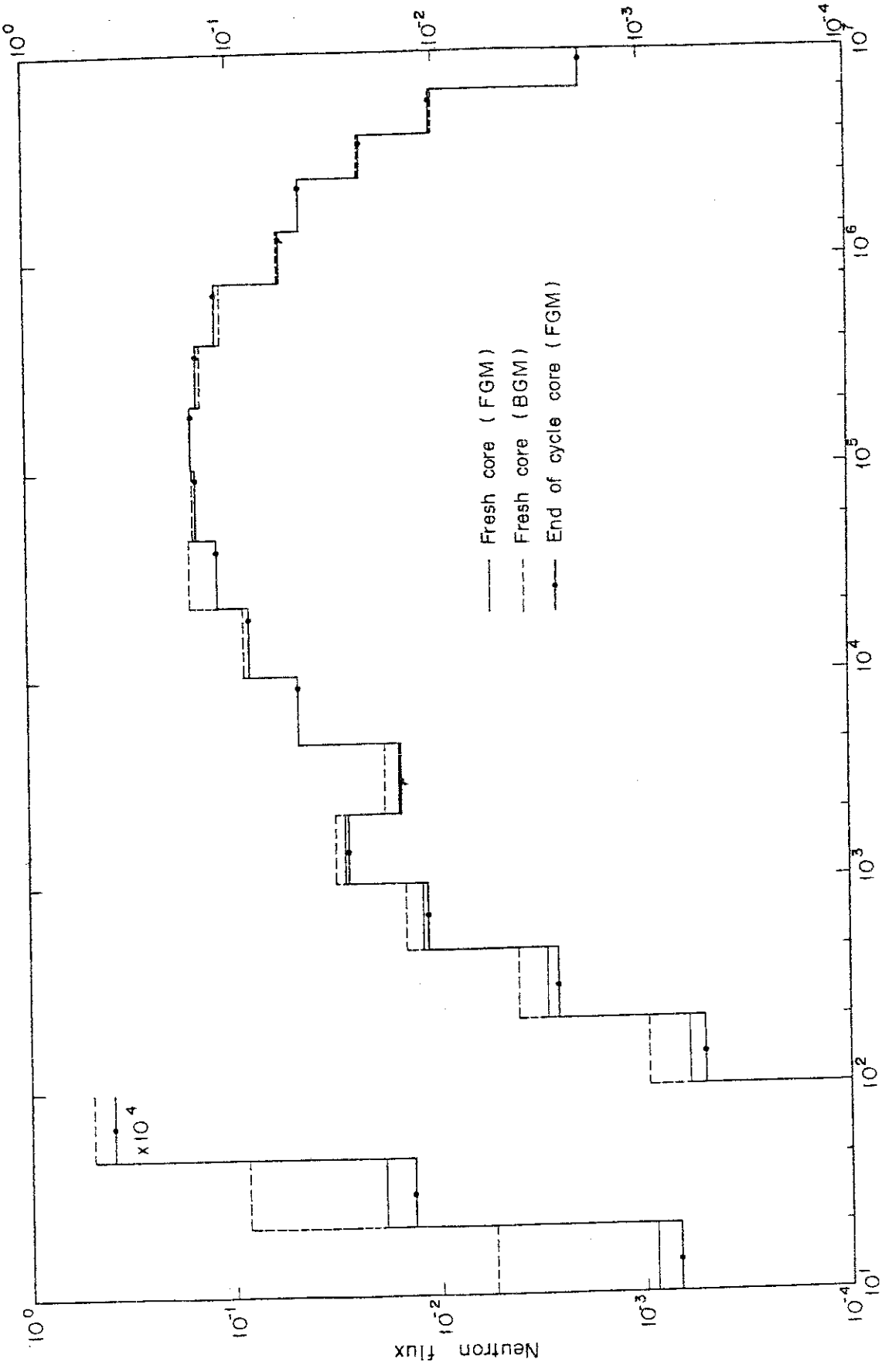

Fig. 4 Comparison of neutron spectra at the centre of fresh and-of-cycle cores

References

1) Lesage L.G. et a;.: "Proceedings of the NEACRP/IAEA Specialists Meeting on the International Comparison Calculation of a Large Sodium-Cooled Fast Breeder Reactor", ANL-80-78, NEACRP-L-243 (1980)
2) Hammer P. , NEACRP-A-439 (1980)
3) Yoshida H. et al. ANL-80-78 (1980)
4) Nakagawa M. and Zukeiran A. ibid
5) Zukeiran A. and Nakagawa M. ibid
6) Igarashi S., et al.: to be published
7) Kikuchi Y. et al. Private communication
8) Nakagawa T. Unpublished report
9) Nakagawa M. et al., "ESELEM4, A code for calculating Fine Neutron Spectrum and Multi-group Cross Sections in Plate Lattice" JAERI-1245 (1976)
10) Hasegawa A., Takano H. and Kaneko K. to be published
11) Kikuchi Y. et al., "Fission Product Fast Reactor Constants System of JNDC", JAERI-1248(1976)
12) Igarashi S., et al.: "Japanese Evaluated Nuclear Data Library, Version-1 JENDL-1", JAERI 1261 (1979)
13) O'dell R.D. and Hirons T.J.: "PHENIX, a Two-dimensional Diffusion-Burn up-Refueling Code", LA-4231 (1970)
14) Ihara H., Yoshida H. and Hotta M., Unpublished report
15) Nakagawa M., "Study of Analytical Method for Sodium Void Reactivity in Fast Critical Assemblies", JAERI-M 8138, P147 (1979)

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Appendix 1 Tables of 70 and 25 Groups Cross Sections for Actinide

Nuclide	Code number
^{234}U	924
^{236}U	926
^{237}Np	937
^{239}Np	939
^{236}Pu	946
^{238}Pu	948
^{242}Pu	942
^{241}Am	951
$^{242}Am(G)$	952
$^{242}Am(M)$	952
^{242}Cm	962

Table A.1 70-Group structure

Group	Upper energy	Lower energy	DU
1	10.5 (MeV)	8.3	0.2351
2	8.3 (MeV)	6.5	0.2445
3	6.5 (MeV)	5.1	0.2426
4	5.1 (MeV)	4.0	0.2429
5	4.0 (MeV)	3.1	0.2549
6	3.1 (MeV)	2.5	0.2151
7	2.5 (MeV)	1.9	0.2744
8	1.9 (MeV)	1.4	0.3054
9	1.4 (MeV)	1.1	0.2412
10	1.1 (MeV)	0.8	0.3185
11	0.8 (MeV)	0.63	0.2389
12	0.63 (MeV)	0.50	0.2311
13	0.50 (MeV)	0.40	0.2231
14	0.40 (MeV)	0.31	0.2549
15	0.31 (MeV)	0.25	0.2151
16	0.25 (MeV)	0.20	0.2231
17	0.20 (MeV)	0.15	0.2877
18	0.15 (MeV)	0.12	0.2231
19	0.12 (MeV)	0.10	0.1823
20	100 (KeV)	77.3	0.2575
21	77.3 (keV)	59.8	0.2567
22	59.8 (keV)	46.5	0.2516
23	46.5 (keV)	36.0	0.2559
24	36.0 (keV)	27.8	0.2585
25	27.8 (keV)	21.5	0.2570
26	21.5 (keV)	16.6	0.2587
27	16.6 (keV)	12.9	0.2522
28	12.9 (keV)	10.0	0.2546
29	10.0 (keV)	7.73	0.2575
30	7.73 (keV)	5.98	0.2567
31	5.98 (keV)	4.65	0.2516
32	4.65 (keV)	3.60	0.2559
33	3.60 (keV)	2.78	0.2585
34	2.78 (keV)	2.15	0.2570
35	2.15 (keV)	1.66	0.2587
36	1.66 (keV)	1.29	0.2522
37	1.29 (keV)	1.00	0.2546
38	1000 (ev)	773	0.2575
39	773 (ev)	598	0.2567
40	598 (ev)	465	0.2516
41	465 (ev)	360	0.2559
42	360 (ev)	278	0.2585
43	278 (ev)	215	0.2570
44	215 (ev)	166	0.2587
45	166 (ev)	129	0.2522
46	129 (ev)	100	0.2546
47	100 (ev)	77.3	0.2575
48	77.3 (ev)	59.8	0.2567
49	59.8 (ev)	46.5	0.2516
50	46.5 (ev)	36.0	0.2559
51	36.0 (ev)	27.8	0.2585

Table A.1 (Continued)

52	27.8 (ev)	21.5	0.2570
53	21.5 (ev)	16.6	0.2587
54	16.6 (ev)	12.9	0.2522
55	12.9 (ev)	10.0	0.2546
56	10.0 (ev)	7.73	0.2575
57	7.73 (ev)	5.98	0.2567
58	5.98 (ev)	4.65	0.2516
59	4.65 (ev)	3.60	0.2559
60	3.60 (ev)	2.78	0.2585
61	2.78 (ev)	2.15	0.2570
62	2.15 (ev)	1.66	0.2587
63	1.66 (ev)	1.29	0.2522
64	1.29 (ev)	1.0	0.2546
65	1.00 (ev)	0.773	0.2575
66	0.773 (ev)	0.598	0.2567
67	0.598 (ev)	0.465	0.2516
68	0.465 (ev)	0.360	0.2559
69	0.360 (ev)	0.278	0.2585
70	0.278 (ev)	0.215	0.2570

Table A.2 25-Group structure

Group	Upper energy	Lower energy	DU
1	10.5 (MeV)	6.5 (MeV)	0.4800
2	6.5 (MeV)	4.0 (MeV)	0.4800
3	4.0 (MeV)	2.5 (MeV)	0.4800
4	2.5 (MeV)	1.4 (MeV)	0.5700
5	1.4 (MeV)	0.8 (MeV)	0.5700
6	0.8 (MeV)	0.4 (MeV)	0.6900
7	0.4 (MeV)	0.2 (MeV)	0.6900
8	0.2 (MeV)	100 (keV)	0.6900
9	100 (keV)	46.5 (keV)	0.7700
10	46.5 (keV)	21.5 (keV)	0.7700
11	21.5 (keV)	10.0 (keV)	0.7700
12	10.0 (keV)	4.65 (keV)	0.7700
13	4.65 (keV)	2.15 (keV)	0.7700
14	2.15 (keV)	1000 (ev)	0.7700
15	1000 (ev)	465 (ev)	0.7700
16	465 (ev)	215 (ev)	0.7700
17	215 (ev)	100 (ev)	0.7700
18	100 (ev)	46.5 (ev)	0.7700
19	46.5 (ev)	21.5 (ev)	0.7700
20	21.5 (ev)	10.0 (ev)	0.7700
21	10.0 (ev)	4.65 (ev)	0.7700
22	4.65 (ev)	2.15 (ev)	0.7700
23	2.15 (ev)	1.0 (ev)	0.7700
24	1.0 (ev)	0.465 (ev)	0.7700
25	0.465 (ev)	0.215 (ev)	0.7700

NUCLID = U-234J2F MAT NO = 9234
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.56658E+00	2.18483E+00	3.50591E+00	1.86711E-05	3.80940E+00	3.19652E-01	2.52671E-01	8.47961E-01	4.07438E-02	1.09399E-02	0.0
2	6.93627E+00	2.21138E+00	3.27431E+00	1.35161E-04	4.20634E+00	4.70137E-01	4.82843E-02	8.38479E-01	4.11997E-02	3.88246E-02	0.0
3	7.25922E+00	1.65672E+00	3.08873E+00	1.59133E-03	4.52540E+00	1.07151E+00	0.0	8.15679E-01	4.45385E-02	9.31116E-02	0.0
4	7.40541E+00	1.44655E+00	2.93041E+00	7.09977E-03	4.68160E+00	1.27016E+00	0.0	7.87765E-01	4.61636E-02	1.69748E-01	0.0
5	7.39761E+00	1.47072E+00	2.80746E+00	2.06800E-02	4.61102E+00	1.29519E+00	0.0	7.58619E-01	4.50096E-02	2.62392E-01	0.0
6	7.30445E+00	1.49264E+00	2.71744E+00	4.30484E-02	4.43026E+00	1.33851E+00	0.0	7.16279E-01	5.71222E-02	2.71731E-01	0.0
7	7.12836E+00	1.49617E+00	2.64239E+00	7.49813E-02	4.20245E+00	1.35476E+00	0.0	6.54200E-01	4.93784E-02	3.75411E-01	0.0
8	6.91293E+00	1.38795E+00	2.57620E+00	1.13603E-01	4.11147E+00	1.29990E+00	0.0	5.70674E-01	5.25999E-02	4.03723E-01	0.0
9	6.76386E+00	1.19242E+00	2.52629E+00	1.36793E-01	4.29432E+00	1.14032E+00	0.0	4.97535E-01	7.82490E-02	2.80737E-01	0.0
10	6.85881E+00	1.15805E+00	2.48755E+00	1.47946E-01	4.74733E+00	8.05496E-01	0.0	4.39439E-01	7.89862E-02	3.22046E-01	0.0
11	7.23553E+00	1.06938E+00	2.46018E+00	1.49487E-01	5.40576E+00	6.10905E-01	0.0	3.87774E-01	1.32963E-01	2.38891E-01	0.0
12	7.70033E+00	6.33117E-01	2.44134E+00	1.69011E-01	6.18219E+00	7.16011E-01	0.0	3.40037E-01	1.64714E-01	2.31112E-01	0.0
13	8.23110E+00	3.96467E-01	2.42707E+00	1.76895E-01	6.92816E+00	7.31403E-01	0.0	3.00925E-01	2.01480E-01	2.23143E-01	0.0
14	8.82630E+00	2.03952E-01	2.41499E+00	1.88450E-01	7.71861E+00	7.15293E-01	0.0	2.62607E-01	2.06433E-01	2.54892E-01	0.0
15	9.39709E+00	1.02843E-01	2.40559E+00	1.98858E-01	8.43291E+00	6.62478E-01	0.0	2.29298E-01	2.74776E-01	2.15111E-01	0.0
16	9.93883E+00	5.16861E-02	2.39846E+00	2.11872E-01	9.07997E+00	5.95300E-01	0.0	1.99387E-01	2.94409E-01	2.23143E-01	0.0
17	1.05445E+01	3.84343E-02	2.39187E+00	2.30423E-01	9.77476E+00	5.00897E-01	0.0	1.67190E-01	2.57385E-01	2.87682E-01	0.0
18	1.11383E+01	3.04750E-02	2.38691E+00	2.55879E-01	1.04468E+01	4.05180E-01	0.0	1.37705E-01	3.61728E-01	2.23143E-01	0.0
19	1.15693E+01	2.59442E-02	2.38381E+00	2.82049E-01	1.09327E+01	3.28658E-01	0.0	1.17069E-01	4.67861E-01	1.82321E-01	0.0
20	1.20063E+01	2.28031E-02	2.38106E+00	3.18242E-01	1.14202E+01	2.44981E-01	0.0	9.76091E-02	3.57213E-01	2.57476E-01	0.0
21	1.25269E+01	1.99630E-02	2.37856E+00	3.76504E-01	1.19833E+01	1.47128E-01	0.0	7.76985E-02	3.82428E-01	2.56688E-01	0.0
22	1.30323E+01	1.82948E-02	2.37663E+00	4.47999E-01	1.25092E+01	5.68667E-02	0.0	6.15115E-02	4.12807E-01	2.51553E-01	0.0
23	1.35443E+01	1.70239E-02	2.37516E+00	5.19209E-01	1.30065E+01	1.58643E-03	0.0	4.84690E-02	4.26738E-01	2.55933E-01	0.0
24	1.40759E+01	1.53513E-02	2.37401E+00	5.73806E-01	1.34867E+01	0.0	0.0	3.79743E-02	4.41942E-01	2.58483E-01	0.0
25	1.46211E+01	1.39077E-02	2.37308E+00	6.29067E-01	1.39782E+01	0.0	0.0	2.96778E-02	4.64571E-01	2.56983E-01	0.0
26	1.52064E+01	1.27945E-02	2.37238E+00	6.93011E-01	1.45006E+01	0.0	0.0	2.32085E-02	4.82128E-01	2.58650E-01	0.0
27	1.58456E+01	1.18095E-02	2.37185E+00	7.64129E-01	1.50696E+01	0.0	0.0	1.82386E-02	5.17060E-01	2.52175E-01	0.0
28	1.65470E+01	1.05589E-02	2.37145E+00	8.48003E-01	1.56885E+01	0.0	0.0	1.44561E-02	5.32861E-01	2.54642E-01	0.0
29	1.72685E+01	1.00001E-02	2.37111E+00	9.48319E-01	1.63102E+01	0.0	0.0	1.15206E-02	5.51525E-01	2.57476E-01	0.0
30	1.81233E+01	9.99964E-03	2.37086E+00	1.07784E+00	1.70355E+01	0.0	0.0	9.30629E-03	5.79224E-01	2.56688E-01	0.0
31	1.90699E+01	9.23992E-03	2.37066E+00	1.24133E+00	1.78194E+01	0.0	0.0	4.76063E-03	6.22147E-01	2.51553E-01	0.0
32	2.01338E+01	7.19972E-03	2.37052E+00	1.44575E+00	1.86808E+01	0.0	0.0	2.87319E-03	6.41846E-01	2.55933E-01	0.0
33	2.13585E+01	5.34261E-03	2.37040E+00	1.71196E+00	1.96412E+01	0.0	0.0	2.87319E-03	6.69128E-01	2.58483E-01	0.0
34	2.27398E+01	3.90137E-03	2.37034E+00	2.05489E+00	2.06810E+01	0.0	0.0	2.87319E-03	7.09702E-01	2.56983E-01	0.0
35	2.42912E+01	2.40918E-03	2.37024E+00	2.47264E+00	2.18162E+01	0.0	0.0	2.87319E-03	7.43988E-01	2.58650E-01	0.0
36	2.60562E+01	4.90885E-04	2.37019E+00	2.99843E+00	2.30573E+01	0.0	0.0	2.87319E-03	8.06595E-01	2.52175E-01	0.0
37	2.80329E+01	9.80182E-05	2.37015E+00	3.64922E+00	2.43835E+01	0.0	0.0	2.87318E-03	8.45154E-01	2.54642E-01	0.0
38	3.02866E+01	9.49541E-05	2.37012E+00	4.44732E+00	2.58392E+01	0.0	0.0	2.87318E-03	8.86963E-01	2.57476E-01	0.0
39	3.28771E+01	9.25711E-05	2.37009E+00	5.44790E+00	2.74292E+01	0.0	0.0	2.87318E-03	9.44534E-01	2.56688E-01	0.0
40	3.57969E+01	9.07450E-05	2.37007E+00	6.66095E+00	2.91359E+01	0.0	0.0	2.87319E-03	1.02481E+00	2.51554E-01	0.0
41	3.91065E+01	8.93335E-05	2.37005E+00	8.13099E+00	3.09754E+01	0.0	0.0	2.87319E-03	1.07269E+00	2.55934E-01	0.0
42	4.28930E+01	8.82243E-05	2.37004E+00	9.91384E+00	3.29790E+01	0.0	0.0	2.87318E-03	1.12885E+00	2.58483E-01	0.0
43	4.14978E+01	8.73638E-05	2.37003E+00	1.01090E+01	3.13887E+01	0.0	0.0	2.87319E-03	8.17123E-01	2.56983E-01	0.0
44	6.94051E+01	8.09800E-02	2.37002E+00	2.35351E+01	4.57890E+01	0.0	0.0	2.87319E-03	2.64816E-01	2.57969E-01	0.0
45	2.92588E+01	8.59374E-03	2.37002E+00	1.26598E+01	1.65903E+01	0.0	0.0	2.87319E-03	3.24448E-01	2.51831E-01	0.0
46	3.81568E+01	1.77558E-01	2.37001E+00	1.74559E+01	2.05234E+01	0.0	0.0	2.87319E-03	3.40955E-01	2.54235E-01	0.0
47	1.01960E+02	5.13017E-02	2.37001E+00	4.33415E+01	5.85669E+01	0.0	0.0	2.87319E-03	3.65087E+00	2.57476E-01	0.0
48	8.30214E+00	2.21243E-04	2.37001E+00	3.59563E-01	7.94236E+00	0.0	0.0	2.87319E-03	3.01250E-01	2.56688E-01	0.0
49	6.45945E+01	6.79154E-03	2.37001E+00	4.17823E+01	2.28053E+01	0.0	0.0	2.87319E-03	2.25235E-01	2.51553E-01	0.0
50	1.18149E+01	9.73345E-03	2.37000E+00	3.07151E+00	8.73368E+00	0.0	0.0	2.87319E-03	3.23295E-01	2.55933E-01	0.0
51	1.15302E+02	4.05649E-02	2.37000E+00	8.44295E+01	3.08318E+01	0.0	0.0	2.87319E-03	2.49268E-01	2.58470E-01	0.0
52	1.38003E+01	1.17334E-04	2.37000E+00	5.35947E+00	8.44069E+00	0.0	0.0	2.87319E-03	2.93856E-01	2.56974E-01	0.0
53	9.30457E+00	9.68850E-05	2.37000E+00	1.12028E-01	9.19245E+00	0.0	0.0	2.87319E-03	3.16150E-01	2.58650E-01	0.0
54	1.00242E+01	1.34319E-04	2.37000E+00	1.60178E-01	9.86393E+00	0.0	0.0	2.87319E-03	3.47515E-01	2.52176E-01	0.0
55	1.10278E+01	2.50700E-04	2.37000E+00	3.35047E-01	1.06925E+01	0.0	0.0	2.87319E-03	3.78445E-01	2.54642E-01	0.0
56	1.31673E+01	7.00881E-04	2.37000E+00	9.72743E-01	1.21939E+01	0.0	0.0	2.87319E-03	4.47999E-01	2.57477E-01	0.0
57	2.31711E+01	4.53913E-03	2.37000E+00	6.10577E+00	1.70608E+01	0.0	0.0	2.87319E-03	7.93030E-01	2.56688E-01	0.0
58	2.36674E+03	1.54636E+00	2.37000E+00	2.03496E+03	3.30233E+02	0.0	0.0	2.87319E-03	9.27734E-03	2.51553E-01	0.0
59	1.97102E+01	1.18222E-02	2.37000E+00	1.60559E+01	3.64252E+00	0.0	0.0	2.87319E-03	1.91641E-01	2.55933E-01	0.0
60	1.19581E+01	3.20636E-03	2.37000E+00	5.08053E+00	6.87431E+00	0.0	0.0	2.87319E-03	2.55871E-01	2.58483E-01	0.0
61	1.23863E+01	1.99455E-03	2.37000E+00	4.02710E+00	8.34725E+00	0.0	0.0	2.87319E-03	2.96748E-01	2.56983E-01	0.0
62	1.36503E+01	1.60253E-03	2.37000E+00	4.30486E+00	9.34388E+00	0.0	0.0	2.87319E-03	3.23158E-01	2.58645E-01	0.0
63	1.52740E+01	1.45902E-03	2.37000E+00	5.18325E+00	1.00893E+01	0.0	0.0	2.87319E-03	3.54754E-01	2.52175E-01	0.0
64	1.72982E+01	1.42816E-03	2.37000E+00	6.55492E+00	1.07419E+01	0.0	0.0	2.87319E-03	3.72920E-01	2.54642E-01	0.0
65	1.97629E+01	1.46013E-03	2.37000E+00	8.40195E+00	1.13595E+01	0.0	0.0	2.87319E-03	3.88277E-01	2.57477E-01	0.0
66	2.26193E+01	1.53710E-03	2.37000E+00	1.07070E+01	1.19108E+01	0.0	0.0	2.87319E-03	4.07288E-01	2.56688E-01	0.0
67	2.59061E+01	1.65193E-03	2.37000E+00	1.34974E+01	1.24071E+01	0.0	0.0	2.87319E-03	4.31409E-01	2.51553E-01	0.0
68	2.96460E+01	1.80170E-03	2.37000E+00	1.68010E+01	1.28433E+01	0.0	0.0	2.87319E-03	4.37866E-01	2.55933E-01	0.0
69	3.37968E+01	1.98378E-03	2.37000E+00	2.05719E+01	1.32230E+01	0.0	0.0	2.87319E-03	4.45191E-01	2.58483E-01	0.0
70	3.84650E+01	2.20439E-03	2.37000E+00	2.49183E+01	1.35445E+01	0.0	0.0	1.40693E-02	4.57671E-01	2.56983E-01	0.0

NUCLID = U-234J2F MAT NUMBER = 9234 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1											
		0.0	4.83337E-05	4.13170E-04	2.04449E-03	7.04615E-03	1.30104E-02	2.87027E-02	4.58871E-02	4.13088E-02	5.25689E-02
		3.36702E-02	2.63724E-02	1.97175E-02	1.64937E-02	9.88254E-03	7.27897E-03	6.16993E-03	3.06310E-03	1.73807E-03	1.64913E-03
		1.01804E-03	6.16178E-04	3.85425E-04	2.36585E-04	1.42238E-04	8.63327E-05	5.08543E-05	3.11192E-05	1.89443E-05	1.13329E-05
2											
		1.68840E-06	2.25629E-04	1.45408E-03	6.16996E-03	1.32642E-02	3.33657E-02	5.99904E-02	5.87396E-02	7.98125E-02	5.37731E-02
		4.35208E-02	3.33685E-02	2.84998E-02	1.73606E-02	1.29424E-02	1.10911E-02	5.55533E-03	3.16972E-03	3.02156E-03	1.87356E-03
		1.13785E-03	7.13608E-04	4.38937E-04	2.64318E-04	1.60529E-04	9.47089E-05	5.79972E-05	3.53270E-05	2.11426E-05	1.24963E-05
3											
		5.52627E-05	1.35297E-03	7.54105E-03	1.92697E-02	5.63570E-02	1.15904E-01	1.24891E-01	1.82959E-01	1.30604E-01	1.09750E-01
		8.66149E-02	7.57656E-02	4.70356E-02	3.55552E-02	3.08542E-02	1.56126E-02	8.96492E-03	8.59171E-03	5.35462E-03	3.26471E-03
		2.05366E-03	1.26619E-03	7.63876E-04	4.64876E-04	2.74395E-04	1.68174E-04	1.02505E-04	6.13785E-05	3.62917E-05	2.22950E-05
4											
		9.35907E-04	5.46889E-03	1.36368E-02	4.62374E-02	1.10548E-01	1.32543E-01	2.11325E-01	1.80932E-01	1.41064E-01	1.15002E-01
		1.03337E-01	6.55321E-02	5.03164E-02	4.42850E-02	2.26671E-02	1.31090E-02	1.26391E-02	7.92237E-03	4.85152E-03	3.06222E-03
		1.89307E-03	1.14443E-03	6.97586E-04	4.12259E-04	2.52906E-04	1.54265E-04	9.24249E-05	5.46727E-05	3.35985E-05	2.03388E-05
5											
		8.15696E-03	1.47634E-02	4.36562E-02	8.34423E-02	1.13051E-01	1.98792E-01	1.63063E-01	1.50065E-01	1.27015E-01	1.17732E-01
		7.65197E-02	5.98221E-02	5.35189E-02	2.77583E-02	1.61866E-02	1.57155E-02	9.91616E-03	6.10349E-03	3.86755E-03	2.39832E-03
		1.45334E-03	8.87522E-04	5.25255E-04	3.22576E-04	1.96429E-04	1.18065E-04	6.98752E-05	4.29578E-05	2.60125E-05	1.54748E-05
6											
		3.31057E-02	4.84178E-02	1.17016E-01	8.90425E-02	1.73996E-01	1.54524E-01	1.49849E-01	1.32050E-01	1.26561E-01	8.44627E-02
		6.73268E-02	6.13028E-02	3.22517E-02	1.84748E-02	1.85613E-02	1.17957E-02	7.30013E-03	4.64544E-03	2.89029E-03	1.75599E-03
		1.07448E-03	6.36876E-04	3.91586E-04	2.39278E-04	1.43557E-04	8.50092E-05	5.22840E-05	3.16703E-05	1.88455E-05	1.13480E-05
7											
		1.03774E-01	9.83042E-02	1.41211E-01	1.94439E-01	1.26862E-01	1.30637E-01	1.20574E-01	1.20090E-01	8.26140E-02	6.73396E-02
		6.25685E-02	3.34606E-02	1.98883E-02	1.96236E-02	1.25725E-02	7.83064E-03	5.00729E-03	3.12736E-03	1.90567E-03	1.16874E-03
		6.93965E-04	4.27263E-04	2.61354E-04	1.56931E-04	9.29875E-05	5.72188E-05	3.46728E-05	2.06383E-05	1.24303E-05	7.27876E-06
8											
		2.18196E-01	7.80651E-02	1.60272E-01	1.75179E-01	1.61111E-01	1.26680E-01	1.01626E-01	6.85154E-02	5.75688E-02	5.49836E-02
		3.00651E-02	1.81202E-02	1.80902E-02	1.17211E-02	7.36250E-03	4.73917E-03	2.97532E-03	1.82035E-03	1.11990E-03	6.66560E-04
		4.11144E-04	2.51856E-04	1.51397E-04	8.97855E-05	5.52851E-05	3.35185E-05	1.99593E-05	1.20251E-05	7.04316E-06	4.29113E-06
9											
		3.05837E-01	1.53345E-01	2.75746E-04	7.30754E-02	1.45961E-01	1.73288E-01	8.92310E-02	4.05080E-02	5.35543E-02	3.50013E-02
		1.95585E-02	1.95294E-02	1.19608E-02	7.29417E-03	4.53668E-03	2.86463E-03	1.76047E-03	1.08680E-03	6.48577E-04	4.00866E-04
		2.45952E-04	1.48031E-04	8.78727E-05	5.41470E-05	3.28474E-05	1.95684E-05	1.17937E-05	6.90943E-06	4.21051E-06	2.55488E-06
10											
		3.78868E-01	1.35399E-01	2.24899E-03	3.08712E-05	2.01197E-06	2.47633E-02	5.06259E-02	5.64341E-02	4.14349E-02	2.75237E-02
		2.73580E-02	2.02262E-02	1.38186E-02	9.94693E-03	6.25265E-03	3.84319E-03	2.43533E-03	1.74908E-03	1.05904E-03	6.95466E-04
		3.15398E-04	1.84391E-04	1.20835E-04	6.06648E-05	3.91960E-05	3.30616E-05	1.30372E-05	8.93030E-06	4.35872E-06	1.48346E-06
11											
		3.44620E-01	2.41662E-01	1.31584E-02	6.49950E-04	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.77407E-03
		3.58134E-03	2.19997E-03	1.33116E-03	7.92697E-04	4.78060E-04	2.80395E-04	1.71130E-04	1.04627E-04	6.28528E-05	3.73045E-05
12											
		3.84055E-01	2.99475E-01	3.19609E-02	3.66507E-04	1.51957E-04	7.63778E-07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13											
		3.44266E-01	3.52048E-01	3.49702E-02	1.81537E-06	8.16420E-05	2.76616E-05	8.26358E-06	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14											
		3.29191E-01	3.47407E-01	2.54995E-02	1.31821E-02	0.0	0.0	5.38927E-06	3.31589E-06	1.99318E-06	1.24673E-06
		7.60320E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15											
		1.52166E-01	4.90909E-01	5.94075E-03	9.84308E-03	3.61901E-03	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16											
		5.28489E-02	5.34341E-01	0.0	1.10194E-03	4.39344E-03	2.20893E-03	4.06360E-04	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17											
		5.11314E-02	3.08671E-01	1.39058E-01	0.0	0.0	6.08386E-04	6.07391E-04	3.62830E-04	2.10748E-04	1.20056E-04
		6.56601E-05	3.55639E-05	1.79110E-05	7.50058E-06	1.26318E-06	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18											
		0.0	7.40376E-02	3.06248E-01	2.48503E-02	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	1.09045E-05	1.35405E-05	8.21101E-06	4.87825E-06	2.95006E-06	1.72376E-06	1.05068E-06
		6.39712E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19											
		0.0	0.0	2.61841E-01	6.68169E-02	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20											
		0.0	0.0	1.08629E-01	1.08664E-01	2.76676E-02	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21											
		0.0	0.0	0.0	5.28520E-02	5.45486E-02	3.35654E-02	6.16169E-03	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22											
		0.0	0.0	0.0	0.0	0.0	1.76403E-02	1.59742E-02	9.81902E-03	5.89871E-03	3.48676E-03
		2.16114E-03	1.31336E-03	5.73250E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23											
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	1.96533E-04	5.58174E-04	3.27825E-04	2.00326E-04	1.21883E-04	7.26747E-05	4.29934E-05	2.64874E-05	1.58764E-05
		9.54302E-06	5.66700E-06	3.38297E-06	2.08777E-06	1.25897E-06	7.54197E-07	3.93681E-07	3.06166E-07	1.65947E-07	9.41604E-08

TABLE OF (N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1											
		0.0	0.0	0.0	0.0	0.0	0.0	4.24752E-03	1.74876E-02	3.02939E-02	6.50755E-02
		6.20304E-02	6.30403E-02	5.75963E-02	5.68830E-02	3.88721E-02	3.15303E-02	2.91662E-02	1.55417E-02	9.21695E-03	9.07702E-03
		5.80550E-03	3.61061E-03	2.30634E-03	1.43924E-03	8.76423E-04	5.37244E-04	3.18877E-04	1.96270E-04	1.20029E-04	7.20588E-05
2											
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	1.11622E-02	1.79555E-02	1.43287E-02	1.30324E-02	1.33771E-02	7.75094E-03	4.84416E-03	4.98709E-03	3.32689E-03
		2.13704E-03	1.39957E-03	8.90694E-04	5.50719E-04	3.41580E-04	2.04585E-04	1.26799E-04	7.79664E-05	4.70050E-05	2.79387E-05

NUCLID = U-23602F   MAT NO = 9236

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 2

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.03553E+00	1.57784E+00	3.59850E+00	4.46503E-06	3.29558E+00	2.33802E-04	9.26308E-01	6.01753E-01	4.52919E-02	1.09401E-02	0.0
2	6.65946E+00	1.45536E+00	3.34755E+00	1.27617E-04	3.92276E+00	1.01297E+00	2.78235E-01	6.08422E-01	4.38328E-02	3.86250E-02	0.0
3	7.29375E+00	9.37591E-01	3.14349E+00	1.12308E-03	4.57679E+00	1.77825E+00	0.0	8.10644E-01	4.49886E-02	9.31123E-02	0.0
4	7.79011E+00	8.88280E-01	2.97504E+00	5.67143E-03	5.02941E+00	1.86675E+00	0.0	7.97366E-01	4.74606E-02	1.69749E-01	0.0
5	7.91911E+00	9.06068E-01	2.84352E+00	1.93893E-02	5.09942E+00	1.89423E+00	0.0	7.67056E-01	4.89397E-02	2.62392E-01	0.0
6	7.77723E+00	8.83427E-01	2.74440E+00	4.43732E-02	4.90849E+00	1.94094E+00	0.0	7.17264E-01	6.14462E-02	2.71731E-01	0.0
7	7.48238E+00	5.79601E-01	2.66588E+00	5.26792E-02	4.58343E+00	1.93717E+00	0.0	6.48513E-01	5.49917E-02	3.75411E-01	0.0
8	7.10013E+00	7.38373E-01	2.59258E+00	1.28544E-01	4.38831E+00	1.84490E+00	0.0	5.57962E-01	5.62820E-02	4.03723E-01	0.0
9	6.92978E+00	5.38679E-01	2.54098E+00	1.72428E-01	4.50940E+00	1.60927E+00	0.0	4.85459E-01	6.35466E-02	2.80727E-01	0.0
10	7.03828E+00	3.06656E-01	2.50090E+00	2.54183E-01	5.13151E+00	1.34594E+00	0.0	4.21620E-01	8.93555E-02	3.22046E-01	0.0
11	7.46906E+00	6.26375E-02	2.46980E+00	2.75123E-01	5.98262E+00	1.14548E+00	0.0	3.73647E-01	1.46279E-01	2.38892E-01	0.0
12	8.02241E+00	1.19085E-02	2.44790E+00	2.55969E-01	6.72715E+00	1.02738E+00	0.0	3.41052E-01	1.75779E-01	2.31112E-01	0.0
13	8.62525E+00	2.70546E-07	2.43759E+00	2.40074E-01	7.44305E+00	9.42117E-01	0.0	3.10801E-01	2.09073E-01	2.23143E-01	0.0
14	9.27228E+00	9.77425E-09	2.41666E+00	2.34275E-01	8.18332E+00	8.54688E-01	0.0	2.78333E-01	2.11564E-01	2.54392E-01	0.0
15	9.90550E+00	1.63592E-08	2.40702E+00	2.38676E-01	8.90378E+00	7.67049E-01	0.0	2.45247E-01	2.80951E-01	2.15111E-01	0.0
16	1.04722E+01	2.24238E-08	2.39997E+00	2.50279E-01	9.53530E+00	6.83565E-01	0.0	2.14554E-01	3.00723E-01	2.23143E-01	0.0
17	1.10693E+01	2.95367E-08	2.39327E+00	2.72875E-01	1.02161E+01	5.30504E-01	0.0	1.80388E-01	2.62157E-01	2.87682E-01	0.0
18	1.16082E+01	3.67013E-08	2.38801E+00	3.03560E-01	1.08301E+01	4.74546E-01	0.0	1.49450E-01	3.65617E-01	2.23143E-01	0.0
19	1.19950E+01	4.23432E-08	2.38470E+00	3.38751E-01	1.12703E+01	3.85990E-01	0.0	1.27069E-01	4.72768E-01	1.82321E-01	0.0
20	1.23923E+01	4.85221E-08	2.38176E+00	3.88636E-01	1.17183E+01	2.85362E-01	0.0	1.05405E-01	3.59079E-01	2.57476E-01	0.0
21	1.28061E+01	5.58634E-08	2.37905E+00	4.62911E-01	1.21768E+01	1.66403E-01	0.0	8.41435E-02	3.81304E-01	2.56688E-01	0.0
22	1.31827E+01	6.26271E-08	2.37710E+00	5.54212E-01	1.25735E+01	5.50155E-02	0.0	6.66095E-02	4.06963E-01	2.51553E-01	0.0
23	1.35523E+01	6.97106E-08	2.37551E+00	6.37532E-01	1.29142E+01	2.31707E-04	0.0	5.26694E-02	4.15815E-01	2.55923E-01	0.0
24	1.39261E+01	7.69050E-08	2.37425E+00	7.01832E-01	1.32242E+01	0.0	0.0	4.15697E-02	4.26023E-01	2.58483E-01	0.0
25	1.43199E+01	8.41015E-08	2.37329E+00	7.72603E-01	1.35473E+01	0.0	0.0	3.25964E-02	4.42142E-01	2.56983E-01	0.0
26	1.47343E+01	9.12782E-08	2.37254E+00	8.43460E-01	1.38908E+01	0.0	0.0	2.55699E-02	4.55412E-01	2.58650E-01	0.0
27	1.52249E+01	9.86378E-08	2.37198E+00	9.24319E-01	1.43006E+01	0.0	0.0	2.01671E-02	4.81530E-01	2.52175E-01	0.0
28	1.56427E+01	1.05582E-07	2.37152E+00	1.01417E+00	1.46285E+01	0.0	0.0	1.60034E-02	4.88306E-01	2.54642E-01	0.0
29	1.61329E+01	1.13085E-07	2.37117E+00	1.12241E+00	1.50105E+01	0.0	0.0	1.27670E-02	4.99471E-01	2.57476E-01	0.0
30	1.67020E+01	1.19623E-07	2.37092E+00	1.24796E+00	1.54541E+01	0.0	0.0	1.02972E-02	5.17741E-01	2.56688E-01	0.0
31	1.73544E+01	1.26673E-07	2.37071E+00	1.41121E+00	1.59432E+01	0.0	0.0	7.73145E-03	5.48641E-01	2.51553E-01	0.0
32	1.81530E+01	1.33855E-07	2.37055E+00	1.62592E+00	1.65271E+01	0.0	0.0	2.84878E-03	5.59333E-01	2.55923E-01	0.0
33	1.89466E+01	1.41101E-07	2.37043E+00	1.86406E+00	1.70625E+01	0.0	0.0	2.84878E-03	5.72128E-01	2.58483E-01	0.0
34	1.99180E+01	1.48147E-07	2.37033E+00	2.21375E+00	1.77043E+01	0.0	0.0	2.84878E-03	5.96939E-01	2.56983E-01	0.0
35	1.99092E+01	1.55727E-07	2.37025E+00	2.57870E+00	1.73305E+01	0.0	0.0	2.84878E-03	5.28137E-01	2.58650E-01	0.0
36	2.45012E+01	1.87550E-07	2.37019E+00	2.64191E+00	2.18593E+01	0.0	0.0	2.84878E-03	9.50851E-01	2.51120E-01	0.0
37	2.42042E+01	3.83398E-07	2.37015E+00	2.48196E+00	2.17222E+01	0.0	0.0	2.84878E-03	4.39941E-01	2.53152E-01	0.0
38	3.40457E+01	8.76158E-07	2.36782E+00	3.66755E+00	3.03781E+01	0.0	0.0	2.84878E-03	4.92676E-01	2.57264E-01	0.0
39	3.30831E+01	2.27502E-06	2.37009E+00	5.55553E+00	2.75246E+01	0.0	0.0	2.84878E-03	3.77731E-01	2.56502E-01	0.0
40	3.00873E+01	8.61167E-06	2.37007E+00	5.65283E+00	2.44545E+01	0.0	0.0	2.84878E-03	5.82397E-01	2.51238E-01	0.0
41	3.77507E+01	5.14809E-02	2.37005E+00	7.03080E+00	3.06984E+01	0.0	0.0	2.84878E-03	2.76703E-01	2.55457E-01	0.0
42	2.90675E+01	9.56241E-02	2.37004E+00	6.21737E+00	2.27543E+01	0.0	0.0	2.84878E-03	3.55301E-01	2.58110E-01	0.0
43	2.07651E+01	5.37779E-02	2.37004E+00	3.73007E+00	1.59812E+01	0.0	0.0	2.84878E-03	7.79755E-01	2.56513E-01	0.0
44	7.07137E+01	2.46831E-01	2.37003E+00	1.55721E+01	5.48946E+01	0.0	0.0	2.84878E-03	3.16559E-01	2.58603E-01	0.0
45	1.40222E+01	5.43045E-04	2.37002E+00	2.70600E+00	1.13157E+01	0.0	0.0	2.84878E-03	4.97406E-01	2.52080E-01	0.0
46	9.09456E+01	3.80145E-01	2.37002E+00	2.69235E+01	6.36420E+01	0.0	0.0	2.84878E-03	3.18420E-01	2.54617E-01	0.0
47	8.68253E+01	4.11379E-01	2.37001E+00	2.74304E+01	5.89835E+01	0.0	0.0	2.84878E-03	3.04108E-01	2.57458E-01	0.0
48	8.33393E+01	4.73480E-01	2.37001E+00	3.60549E+01	4.62109E+01	0.0	0.0	2.84878E-03	2.67975E-01	2.56678E-01	0.0
49	1.00749E+01	3.24678E-03	2.37001E+00	1.59555E-01	9.91206E+00	0.0	0.0	2.84878E-03	4.51716E-01	2.51553E-01	0.0
50	1.53446E+02	1.69247E+00	2.37001E+00	7.56069E+01	7.61457E+01	0.0	0.0	2.84878E-03	2.59951E-01	2.55933E-01	0.0
51	5.10238E+01	3.24379E-01	2.37000E+00	3.95542E+01	1.11452E+01	0.0	0.0	2.84878E-03	2.50224E-01	2.58483E-01	0.0
52	8.18382E+00	9.11695E-04	2.37017E+00	7.39322E-02	8.10898E+00	0.0	0.0	2.84878E-03	2.78502E-01	2.56983E-01	0.0
53	8.66602E+00	7.27438E-04	2.37000E+00	5.58221E-02	8.60647E+00	0.0	0.0	2.84878E-03	2.89582E-01	2.58650E-01	0.0
54	9.06261E+00	9.93274E-04	2.37000E+00	8.31376E-02	8.97648E+00	0.0	0.0	2.84878E-03	3.09169E-01	2.52176E-01	0.0
55	9.57193E+00	2.00295E-03	2.37000E+00	1.73303E-01	9.39662E+00	0.0	0.0	2.84878E-03	3.23075E-01	2.54642E-01	0.0
56	1.07083E+01	6.42932E-03	2.37000E+00	5.53826E-01	1.01480E+01	0.0	0.0	2.84878E-03	3.56356E-01	2.57476E-01	0.0
57	1.84770E+01	6.22727E-02	2.37000E+00	5.28050E+00	1.31342E+01	0.0	0.0	2.84878E-03	6.10866E-01	2.56688E-01	0.0
58	1.18625E+03	1.26933E+01	2.37000E+00	1.07239E+03	1.01165E+02	0.0	0.0	2.84878E-03	1.35239E-01	2.51553E-01	0.0
59	1.06711E+01	5.69029E-02	2.37000E+00	4.65355E+00	5.76563E+00	0.0	0.0	2.84878E-03	2.21137E-01	2.55933E-01	0.0
60	8.85744E+00	2.02152E-02	2.37000E+00	1.77306E+00	7.06415E+00	0.0	0.0	2.84878E-03	2.42646E-01	2.58483E-01	0.0
61	8.77189E+00	1.32926E-02	2.37022E+00	1.21173E+00	7.54687E+00	0.0	0.0	2.84878E-03	2.55012E-01	2.56983E-01	0.0
62	8.84342E+00	1.08711E-02	2.37000E+00	1.03439E+00	7.79315E+00	0.0	0.0	2.84878E-03	2.59822E-01	2.58650E-01	0.0
63	8.94952E+00	9.97499E-03	2.37000E+00	9.89580E-01	7.94997E+00	0.0	0.0	2.84878E-03	2.70615E-01	2.52175E-01	0.0
64	9.07177E+00	9.77809E-03	2.37000E+00	1.00511E+00	8.05688E+00	0.0	0.0	2.84878E-03	2.70393E-01	2.54642E-01	0.0
65	9.19938E+00	9.96036E-03	2.37000E+00	1.06252E+00	8.12690E+00	0.0	0.0	2.84878E-03	2.69945E-01	2.57476E-01	0.0
66	9.34378E+00	1.04911E-02	2.37000E+00	1.15352E+00	8.17977E+00	0.0	0.0	2.84878E-03	2.72290E-01	2.56668E-01	0.0
67	9.49733E+00	1.12491E-02	2.37000E+00	1.26722E+00	8.21886E+00	0.0	0.0	2.84878E-03	2.76973E-01	2.51553E-01	0.0
68	9.66520E+00	1.22312E-02	2.37000E+00	1.40475E+00	8.24822E+00	0.0	0.0	2.84878E-03	2.75055E-01	2.55923E-01	0.0
69	9.85908E+00	1.34895E-02	2.37000E+00	1.57475E+00	8.27084E+00	0.0	0.0	2.84878E-03	2.72999E-01	2.58483E-01	0.0
70	1.00592E+01	1.49359E-02	2.37201E+00	1.76598E+00	8.28025E+00	0.0	0.0	1.38489E-02	2.75091E-01	2.56983E-01	0.0

NUCLID = U-236J2F MAT NUMBER = 9236 IPL = 0

TABLE OF INELASTIC MATRICES

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GROUP I / EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	0.0	2.41301E-05	2.27701E-04	1.21387E-03	4.44337E-03	8.57736E-03	1.96597E-02	3.25249E-02	3.00069E-02	3.89217E-02
	2.52998E-02	2.00062E-02	1.50679E-02	1.26810E-02	7.63468E-03	5.64313E-03	4.79858E-03	2.38846E-03	1.35745E-03	1.28973E-03
	7.97207E-04	4.52994E-04	3.02348E-04	1.85702E-04	1.11698E-04	6.76208E-05	3.99610E-05	2.44584E-05	1.48920E-05	8.90979E-06
2	3.66618E-06	1.96660E-04	1.50281E-03	7.81309E-03	1.94741E-02	5.57257E-02	1.12401E-01	1.19456E-01	1.73101E-01	1.22539E-01
	1.02415E-01	8.04887E-02	7.01640E-02	4.34387E-02	3.27704E-02	2.63860E-02	1.43425E-02	8.22803E-03	7.87940E-03	4.90706E-03
	2.99014E-03	1.58012E-03	1.15880E-03	6.96901E-04	4.25247E-04	2.50965E-04	1.53795E-04	9.37313E-05	5.61210E-05	3.31812E-05
3	9.48424E-05	1.04178E-03	4.55095E-03	1.50955E-02	5.58664E-02	1.41551E-01	1.76814E-01	2.91289E-01	2.27417E-01	2.02613E-01
	1.67264E-01	1.51866E-01	9.71026E-02	7.50072E-02	6.53777E-02	3.41258E-02	1.97905E-02	1.91256E-02	1.20147E-02	7.37012E-03
	4.65301E-03	2.88253E-03	1.74401E-03	1.06372E-03	6.28926E-04	3.85970E-04	2.35496E-04	1.41125E-04	8.34946E-05	5.13173E-05
4	7.98380E-04	5.13164E-03	7.85418E-03	2.96390E-02	9.65392E-02	1.43851E-01	2.73229E-01	2.37520E-01	2.27107E-01	1.97968E-01
	1.58035E-01	1.24597E-01	9.67999E-02	8.95334E-02	4.59234E-02	2.75405E-02	2.68859E-02	1.70531E-02	1.05363E-02	6.69640E-03
	4.16385E-03	2.52799E-03	1.54603E-03	9.15998E-04	5.63026E-04	3.43951E-04	2.06317E-04	1.22155E-04	7.51217E-05	4.54999E-05
5	6.55260E-03	1.75917E-02	4.54551E-02	5.63711E-02	1.01681E-01	2.26563E-01	2.21626E-01	2.29144E-01	2.12152E-01	2.11847E-01
	1.46035E-01	1.19214E-01	1.10918E-01	5.93824E-02	3.53201E-02	3.46701E-02	2.23548E-02	1.39282E-02	6.90931E-03	5.56582E-03
	3.39223E-03	2.06077E-03	1.23565E-03	7.60239E-04	4.65433E-04	2.79436E-04	1.65613E-04	1.01912E-04	6.17568E-05	3.67602E-05
6	2.85398E-02	5.24851E-02	1.69971E-01	7.01914E-02	1.59963E-01	1.87047E-01	2.09225E-01	2.05834E-01	2.16163E-01	1.55077E-01
	1.30363E-01	1.24565E-01	6.81353E-02	4.10743E-02	4.10129E-02	2.65747E-02	1.66974E-02	1.07491E-02	6.74899E-03	4.12940E-03
	2.54059E-03	1.51221E-03	9.22779E-04	5.71409E-04	3.43495E-04	2.03711E-04	1.25436E-04	7.60503E-05	4.52860E-05	2.72841E-05
7	1.00856E-01	9.92435E-02	2.24181E-01	3.04354E-01	1.35605E-01	1.54451E-01	1.61860E-01	1.79181E-01	1.33967E-01	1.16112E-01
	1.14069E-01	6.28056E-02	3.90052E-02	3.94128E-02	2.58297E-02	1.63675E-02	1.00071E-02	6.69480E-03	4.11293E-03	2.53840E-03
	1.51456E-03	9.35960E-04	5.74139E-04	3.45586E-04	2.05111E-04	1.26382E-04	7.66641E-05	4.56701E-05	2.75241E-05	1.61249E-05
8	2.48371E-01	1.05596E-01	1.73078E-01	2.69558E-01	2.24925E-01	2.13719E-01	1.79039E-01	1.00313E-01	7.76908E-02	7.83439E-02
	4.49986E-02	2.79692E-02	2.26609E-02	1.90355E-02	1.21862E-02	7.96005E-03	5.05541E-03	3.12080E-03	1.93327E-03	1.15681E-03
	7.16453E-04	4.40284E-04	2.65324E-04	1.57650E-04	9.72150E-05	5.90080E-05	3.51691E-05	2.12033E-05	1.24255E-05	7.57350E-06
9	3.60949E-01	2.07586E-01	3.46761E-02	9.58329E-02	1.27526E-01	1.75182E-01	1.51828E-01	1.40255E-01	1.27321E-01	5.55916E-02
	2.40291E-02	1.95534E-02	2.15594E-02	2.53946E-02	1.51591E-02	1.01042E-02	5.03242E-03	3.76256E-03	2.29718E-03	1.43770E-03
	8.77085E-04	5.26949E-04	3.02701E-04	2.11376E-04	1.09054E-04	6.65854E-05	5.10570E-05	2.28058E-05	1.19098E-05	7.22904E-06
10	5.86553E-01	2.35128E-01	3.83676E-03	4.19676E-03	6.53629E-02	5.91392E-02	4.99454E-02	5.22889E-02	5.22591E-02	4.64071E-02
	5.29659E-02	3.65155E-02	2.68755E-02	2.02977E-02	1.55016E-02	1.27646E-02	8.89955E-03	5.57813E-03	3.56590E-03	2.28313E-03
	1.43737E-03	8.29361E-04	5.63561E-04	3.50645E-04	2.03442E-04	1.57005E-04	1.74472E-04	1.95209E-04	1.32526E-04	7.25795E-05
11	5.94615E-01	3.99456E-01	2.42352E-02	1.25206E-03	0.0	0.0	0.0	0.0	1.36226E-02	3.17623E-02
	2.13595E-02	1.81301E-02	1.57143E-02	1.01047E-02	6.39226E-03	4.18922E-03	2.67166E-03	1.77759E-03	1.22731E-03	7.08472E-04
	4.20587E-04	2.59490E-04	1.52438E-04	1.04575E-04	4.89718E-05	3.76777E-05	9.15840E-06	1.97695E-05	1.31379E-05	0.0
12	5.61735E-01	4.20562E-01	4.42573E-02	5.49265E-04	2.25894E-04	3.25969E-05	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	4.51442E-01	4.48050E-01	4.13900E-02	1.06907E-03	9.65048E-05	4.83942E-05	1.72297E-05	4.22372E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	3.90656E-01	4.24817E-01	2.47730E-02	1.44377E-02	0.0	0.0	1.86665E-06	2.08317E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.63327E-01	5.85707E-01	3.50559E-03	9.77116E-03	4.58767E-03	1.50865E-04	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	4.32777E-02	5.32[illegible]E-01	0.0	1.194[illegible]E-03	4.14[illegible]	[illegible]E-03	9.64[illegible]E-04	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	4.36634E-02	[illegible]E-01	1.75[illegible]E-01	0.0	0.0	2.1[illegible]E-04	5.38012E-04	3.94377E-04	2.40092E-04	1.46020E-04
	8.66687E-05	5.[illegible]0767E-05	3.29155E-05	1.955[illegible]E-05	1.157[illegible]E-05	7.144[illegible]E-06	4.25013E-06	2.72958E-06	1.30110E-06	9.25446E-07
	7.43575E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	6.55525E-02	3.61839E-01	4.71541E-02	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	2.24438E-01	1.01151E-01	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	1.10640E-01	1.29855E-01	4.529[illegible]E-02	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	4.6717[illegible]E-02	6.455[illegible]E-02	3.9[illegible]E-02	1.53219E-02	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	1.05424E-02	1.84454E-02	1.10444E-02	6.40601E-03	3.58196E-03
	2.10069E-03	1.277[illegible]E-03	7.55[illegible]E-04	4.625[illegible]E-04	2.801[illegible]E-04	1.657[illegible]E-04	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	3.65179E-05	1.1845[illegible]E-04	7.07710E-05	4.16246E-05	2.56690E-05	1.55051E-05
	9.2456[illegible]E-06	5.5936[illegible]E-06	3.247[illegible]E-06	1.97[illegible]E-06	1.2222[illegible]E-05	7.354[illegible]E-07	4.21143E-07	2.6464[illegible]E-07	1.51273E-07	9.81667E-08

TABLE OF (N,2N) MATRICES

PAGE 1 OF 1

GROUP I / EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	0.0	0.0	0.0	0.0	0.0	5.12705E-02	2.02228E-01	3.01555E-01	2.52234E-01	3.16140E-01
	1.96496E-01	1.50951E-01	1.11190E-01	9.15732E-02	5.45122E-02	3.97650E-02	3.35754E-02	1.65804E-02	9.37735E-03	[illegible]E-03
	5.46315E-03	3.29997E-03	2.50096E-03	1.25352E-03	7.55981E-04	4.60315E-04	2.70991E-04	1.65756E-04	1.00373E-04	6.03278E-05
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.20714E-01
	1.19355E-01	8.99924E-02	7.5[illegible]E-02	4.56125E-02	3.37770E-02	2.67485E-02	1.43090E-02	9.13433E-03	7.73015E-03	4.77907E-03
	2.69568E-03	1.81300E-03	1.11354E-03	6.59[illegible]E-04	4.35[illegible]E-04	2.39[illegible]E-04	1.48705E-04	5.93262E-05	3.34445E-05	3.15810E-05

NUCLIDE = NP237J2F MAT NO = 12[illegible]
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	[illegible]	EL REMOVAL	FLUX	CHI
1	6.06196E+00	2.31657E+00	3.92376E+00	6.36858E-03	3.07262E+00	2.01281E-01	4.05122E-01	[illegible]	4.04434E-02	1.09400E-02	0.0
2	6.59654E+00	2.13258E+00	3.67926E+00	8.57376E-03	2.26317E+00	5.99865E-01	9.20729E-02	[illegible]	4.13132E-02	3.88253E-02	0.0
3	7.27105E+00	1.56214E+00	3.48230E+00	1.22112E-02	3.71015E+00	1.96647E+00	0.0	[illegible]	4.22497E-02	9.31125E-02	0.0
4	7.79495E+00	1.53234E+00	3.32316E+00	1.72137E-02	3.97551E+00	2.25484E+00	0.0	[illegible]	4.19546E-02	1.69749E-01	0.0
5	7.92754E+00	1.61139E+00	3.19557E+00	2.41557E-02	4.04329E+00	2.24570E+00	0.0	[illegible]	4.58916E-02	2.62392E-01	0.0
6	7.71252E+00	1.68365E+00	3.10176E+00	3.32365E-02	3.93291E+00	2.06272E+00	0.0	[illegible]	5.50833E-02	2.71721E-01	0.0
7	7.36644E+00	1.69138E+00	3.02297E+00	4.75869E-02	3.76036E+00	1.87714E+00	0.0	[illegible]	5.34134E-02	3.75431E-01	0.0
8	7.00673E+00	1.62535E+00	2.95272E+00	7.03716E-02	3.76084E+00	1.55250E+00	0.0	[illegible]	5.77431E-02	4.03723E-01	0.0
9	6.83497E+00	1.55533E+00	2.94032E+00	1.02025E-01	3.98034E+00	1.19728E+00	0.0	[illegible]	7.73144E-02	2.80737E-01	0.0
10	7.05662E+00	1.41164E+00	2.86343E+00	1.50922E-01	4.55545E+00	9.08615E-01	0.0	[illegible]	8.05511E-02	3.22046E-01	0.0
11	7.54961E+00	1.08669E+00	2.68819E+00	2.21968E-01	5.27595E+00	9.85014E-01	0.0	[illegible]	1.16890E-01	2.38891E-01	0.0
12	7.90846E+00	6.75522E-01	2.31416E+00	3.03365E-01	5.67705E+00	1.08253E+00	0.0	[illegible]	1.53845E-01	2.31112E-01	0.0
13	8.26599E+00	3.22997E-01	2.79935E+00	4.01382E-01	6.39419E+00	1.16734E+00	0.0	[illegible]	1.74234E-01	2.23143E-01	0.0
14	8.66359E+00	1.28789E-01	2.76713E+00	5.17580E-01	6.97245E+00	1.24426E+00	0.0	[illegible]	1.86507E-01	2.54892E-01	0.0
15	9.34032E+00	4.29786E-02	2.77697E+00	6.38036E-01	7.53971E+00	1.11600E+00	0.0	[illegible]	2.06823E-01	2.15111E-01	0.0
16	9.82924E+00	2.84537E-02	2.76911E+00	7.41205E-01	7.99837E+00	1.06120E+00	0.0	[illegible]	2.53844E-01	2.23143E-01	0.0
17	1.03372E+01	2.42214E-02	2.76265E+00	8.44459E-01	8.44900E+00	9.66938E-01	0.0	[illegible]	2.25224E-01	2.37682E-01	0.0
18	1.09224E+01	1.91184E-02	2.75753E+00	9.61731E-01	9.04250E+00	8.99078E-01	0.0	[illegible]	2.23143E-01	2.23143E-01	0.0
19	1.13350E+01	1.50767E-02	2.75425E+00	1.05719E+00	9.44614E+00	8.11558E-01	0.0	[illegible]	4.12053E-01	1.82321E-01	0.0
20	1.16602E+01	1.59425E-02	2.75156E+00	1.15886E+00	9.76092E+00	7.18528E-01	0.0	[illegible]	3.69128E-01	2.57476E-01	0.0
21	1.21096E+01	1.31639E-02	2.74922E+00	1.28825E+00	1.01449E+01	6.54252E-01	0.0	[illegible]	3.48353E-01	2.51553E-01	0.0
22	1.23401E+01	1.20615E-02	2.74585E+00	1.43378E+00	1.03957E+01	4.93533E-01	0.0	[illegible]	2.45745E-01	2.55923E-01	0.0
23	1.26324E+01	1.18001E-02	2.74536E+00	1.59369E+00	1.06395E+01	3.87376E-01	0.0	[illegible]	2.55183E-01	2.55483E-01	0.0
24	1.27034E+01	1.04303E-02	2.74414E+00	1.76955E+00	1.08823E+01	4.10865E-02	0.0	[illegible]	3.66358E-01	2.56933E-01	0.0
25	1.30996E+01	9.88309E-03	2.74319E+00	1.96511E+00	1.11046E+01	0.0	0.0	[illegible]	2.72426E-01	2.56650E-01	0.0
26	1.35761E+01	9.82600E-03	2.74247E+00	2.18588E+00	1.13176E+01	0.0	0.0	[illegible]	2.92175E-01	2.52175E-01	0.0
27	1.40844E+01	9.53435E-03	2.74191E+00	2.55838E+00	1.15165E+01	0.0	0.0	[illegible]	3.42914E-01	2.54642E-01	0.0
28	1.46316E+01	9.74575E-03	2.74148E+00	2.91923E+00	1.17026E+01	0.0	0.0	[illegible]	3.94425E-01	2.57476E-01	0.0
29	1.52579E+01	1.01459E-02	2.74114E+00	3.26466E+00	1.18831E+01	0.0	0.0	[illegible]	4.01010E-01	2.56668E-01	0.0
30	1.59296E+01	1.07364E-02	2.74089E+00	3.67599E+00	1.20529E+01	0.0	0.0	[illegible]	4.14532E-01	2.51553E-01	0.0
31	1.67084E+01	1.14154E-02	2.74069E+00	4.48317E+00	1.22136E+01	0.0	0.0	[illegible]	4.12884E-01	2.55933E-01	0.0
32	1.75856E+01	8.51204E-03	2.74053E+00	5.20245E+00	1.23749E+01	0.0	0.0	[illegible]	4.13487E-01	2.58483E-01	0.0
33	1.85008E+01	1.08970E-02	2.74041E+00	6.05530E+00	1.25346E+01	0.0	0.0	[illegible]	4.20151E-01	2.56983E-01	0.0
34	1.96856E+01	6.86251E-03	2.74032E+00	7.02116E+00	1.26576E+01	0.0	0.0	[illegible]	4.22058E-01	2.58650E-01	0.0
35	2.10222E+01	2.86702E-02	2.74024E+00	8.18657E+00	1.28070E+01	0.0	0.0	[illegible]	4.36978E-01	2.52175E-01	0.0
36	2.24418E+01	1.14754E-02	2.74018E+00	9.50681E+00	1.29235E+01	0.0	0.0	[illegible]	4.36965E-01	2.54642E-01	0.0
37	2.41107E+01	2.82212E-02	2.74015E+00	1.10264E+01	1.30561E+01	0.0	0.0	[illegible]	4.35733E-01	2.57476E-01	0.0
38	2.59819E+01	3.12616E-02	2.74011E+00	1.27923E+01	1.31883E+01	0.0	0.0	[illegible]	4.40140E-01	2.56668E-01	0.0
39	2.81150E+01	4.05520E-02	2.74009E+00	1.48003E+01	1.32741E+01	0.0	0.0	[illegible]	4.52233E-01	2.51553E-01	0.0
40	3.04627E+01	1.58053E-02	2.74007E+00	1.70955E+01	1.33614E+01	0.0	0.0	[illegible]	4.47453E-01	2.55933E-01	0.0
41	3.31691E+01	4.54800E-02	2.74005E+00	1.96918E+01	1.34519E+01	0.0	0.0	[illegible]	4.45378E-01	2.58483E-01	0.0
42	3.62727E+01	3.22417E-02	2.74004E+00	2.27100E+01	1.35299E+01	0.0	0.0	[illegible]	4.50157E-01	2.56983E-01	0.0
43	3.97884E+01	3.94570E-02	2.74003E+00	2.61476E+01	1.36013E+01	0.0	0.0	[illegible]	4.44705E-01	2.58650E-01	0.0
44	4.39369E+01	1.43180E-01	2.74002E+00	3.01146E+01	1.36793E+01	0.0	0.0	[illegible]	4.50270E-01	2.52168E-01	0.0
45	4.76509E+01	6.65390E-02	2.74002E+00	3.38742E+01	1.37101E+01	0.0	0.0	[illegible]	7.63007E-01	2.54642E-01	0.0
46	4.96341E+01	4.01512E-02	2.74001E+00	3.58546E+01	1.45394E+01	0.0	0.0	[illegible]	3.31587E-01	2.57476E-01	0.0
47	6.43293E+01	2.47473E-03	2.74001E+00	4.98965E+01	1.44301E+01	0.0	0.0	[illegible]	6.00623E-01	2.56668E-01	0.0
48	7.20541E+01	9.36947E-03	2.74001E+00	5.72437E+01	1.48071E+01	0.0	0.0	[illegible]	4.32144E-01	2.51553E-01	0.0
49	8.64390E+01	1.69002E-02	2.74000E+00	6.77276E+01	1.48694E+01	0.0	0.0	[illegible]	3.00104E-01	2.55933E-01	0.0
50	6.92526E+01	3.45234E-01	2.74000E+00	5.73914E+01	1.15160E+01	0.0	0.0	[illegible]	3.67129E-01	2.58483E-01	0.0
51	6.17075E+01	6.53720E-02	2.74000E+00	4.85641E+01	1.35760E+01	0.0	0.0	[illegible]	2.58835E-01	2.56983E-01	0.0
52	1.56715E+02	2.26922E-02	2.74000E+00	1.29446E+02	1.92467E+01	0.0	0.0	[illegible]	3.27433E-01	2.58650E-01	0.0
53	5.80397E+01	1.70231E-03	2.74000E+00	4.79593E+01	1.00757E+01	0.0	0.0	[illegible]	4.18211E-01	2.52175E-01	0.0
54	4.49146E+01	6.42240E-04	2.74000E+00	3.40574E+01	1.08260E+01	0.0	0.0	[illegible]	2.86179E-01	2.54642E-01	0.0
55	2.09156E+02	3.43764E-03	2.74000E+00	1.95240E+02	1.39121E+01	0.0	0.0	[illegible]	3.35186E-01	2.57476E-01	0.0
56	6.36967E+01	3.45226E-03	2.74000E+00	7.34812E+01	1.02121E+01	0.0	0.0	[illegible]	4.41000E-01	2.56668E-01	0.0
57	5.85921E+01	4.10634E-03	2.74000E+00	4.74250E+01	1.11021E+01	0.0	0.0	[illegible]	3.57735E-01	2.51553E-01	0.0
58	1.71077E+02	2.20065E-02	2.74000E+00	1.56975E+02	1.20756E+01	0.0	0.0	[illegible]	2.89586E-01	2.55933E-01	0.0
59	1.52475E+02	1.22346E-02	2.73999E+00	1.40159E+02	1.15721E+01	0.0	0.0	[illegible]	2.68787E-01	2.58483E-01	0.0
60	1.68163E+01	5.79450E-04	2.74000E+00	5.85296E+00	1.11761E+01	0.0	0.0	[illegible]	4.28071E-01	2.56983E-01	0.0
61	1.77508E+01	4.65201E-04	2.74000E+00	5.35554E+00	1.22394E+01	0.0	0.0	[illegible]	4.35298E-01	2.58650E-01	0.0
62	6.20008E+01	2.62535E-03	2.74000E+00	4.93897E+01	1.66161E+01	0.0	0.0	[illegible]	3.69945E-01	2.52175E-01	0.0
63	6.47293E+02	2.20858E-02	2.74000E+00	5.82155E+02	1.50585E+01	0.0	0.0	[illegible]	4.39563E-01	2.54642E-01	0.0
64	7.63970E+01	4.47431E-03	2.74000E+00	6.41043E+01	1.22502E+01	0.0	0.0	[illegible]	4.58038E-01	2.57476E-01	0.0
65	3.33270E+01	1.31166E-03	2.74000E+00	1.95559E+01	1.37395E+01	0.0	0.0	[illegible]	5.11539E-01	2.56668E-01	0.0
66	5.06820E+01	2.62783E-03	2.74000E+00	3.98449E+01	1.47955E+01	0.0	0.0	[illegible]	4.32022E-01	2.51553E-01	0.0
67	3.39622E+02	3.17671E-02	2.74000E+00	2.83077E+02	1.55124E+01	0.0	0.0	[illegible]	4.73125E-01	2.55923E-01	0.0
68	2.46967E+02	9.85600E-03	2.74000E+00	2.33442E+02	1.35085E+01	0.0	0.0	[illegible]	5.09730E-01	2.58483E-01	0.0
69	8.96993E+01	3.32597E-03	2.73993E+00	5.43945E+01	1.46321E+01	0.0	0.0	1.39247E-02	5.28452E-01	2.56983E-01	0.0
70	6.11365E+01	3.18704E-03	2.74000E+00	4.53533E+01	1.56000E+01	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]

NUCLID = NP237J2F MAT NUMBER = 1263 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1		5.5892bE-06	8.67755E-05	5.67609E-04	2.28025E-03	6.62653E-03	1.07955E-02	2.13997E-02	3.10774E-02	2.61117E-02	3.15006E-02
		1.93570E-02	1.47613E-02	1.08117E-02	8.89189E-03	5.25638E-03	3.83361E-03	3.22067E-03	1.58738E-03	8.96658E-04	8.47550E-04
		5.2132UE-04	3.14659E-04	1.96401E-04	1.20354E-04	7.22637E-05	4.38170E-05	2.57904E-05	1.57725E-05	9.59734E-06	5.73921E-06
2		1.03362E-04	1.20307E-03	6.06616E-03	2.12310E-02	3.96471E-02	8.83184E-02	1.42427E-01	1.29018E-01	1.64982E-01	1.06067E-01
		8.32790E-02	6.23801E-02	5.22615E-02	3.13517E-02	2.31127E-02	1.95070E-02	9.74040E-03	5.52918E-03	5.24805E-03	3.24079E-03
		1.96201E-03	1.22749E-03	7.53584E-04	4.53117E-04	2.75049E-04	1.62030E-04	9.91558E-05	6.03654E-05	3.61128E-05	2.13376E-05
3		6.4441BE-04	5.66318E-03	2.45860E-02	5.27443E-02	1.37163E-01	2.49825E-01	2.46885E-01	3.37889E-01	2.28921E-01	1.85945E-01
		1.42965E-01	1.22386E-01	7.46871E-02	5.57540E-02	4.78364E-02	2.39839E-02	1.36929E-02	1.30596E-02	8.10174E-03	4.92219E-03
		3.08787E-03	1.89977E-03	1.14420E-03	6.95433E-04	4.10081E-04	2.51143E-04	1.52985E-04	9.15635E-05	5.41202E-05	3.32385E-05
4		1.85688E-03	1.48863E-02	3.87734E-02	1.15317E-01	2.40730E-01	2.62163E-01	3.87286E-01	2.78241E-01	2.34792E-01	1.85895E-01
		1.63043E-01	1.01431E-01	7.67923E-02	6.67323E-02	3.38059E-02	1.94254E-02	1.86278E-02	1.16160E-02	7.08533E-03	4.45850E-03
		2.74965E-03	1.65916E-03	1.00989E-03	5.96162E-04	3.65414E-04	2.22742E-04	1.33383E-04	7.88698E-05	4.84536E-05	2.93243E-05
5		4.57616E-03	2.18897E-02	7.77199E-02	1.89870E-01	2.31142E-01	3.73038E-01	2.86720E-01	2.52847E-01	2.07095E-01	1.86907E-01
		1.18828E-01	9.14419E-02	8.06443E-02	4.18453E-02	2.39357E-02	2.30977E-02	1.44899E-02	8.87894E-03	5.60699E-03	3.46759E-03
		2.09590E-03	1.27d46E-03	7.55675E-04	4.63644E-04	2.82537E-04	1.69471E-04	1.00255E-04	6.16133E-05	3.72989E-05	2.21845E-05
6		6.49089E-03	4.59029E-02	1.32641E-01	1.81749E-01	3.22515E-01	2.66376E-01	2.46254E-01	2.09155E-01	1.94429E-01	1.26658E-01
		9.91856E-02	8.88696E-02	4.61503E-02	2.69321E-02	2.61652E-02	1.65199E-02	1.01728E-02	6.44854E-03	3.99997E-03	2.42446E-03
		1.48082E-03	8.76496E-04	5.36340E-04	3.28675E-04	1.97603E-04	1.16635E-04	7.17075E-05	4.34226E-05	2.58327E-05	1.55524E-05
7		1.49011E-02	8.57995E-02	1.34589E-01	2.66526E-01	2.39074E-01	2.33377E-01	2.06706E-01	1.98952E-01	1.33218E-01	1.06451E-01
		9.71421E-02	5.11990E-02	3.01560E-02	2.95269E-02	1.57612E-02	1.16314E-02	7.40558E-03	4.60952E-03	2.80142E-03	1.71461E-03
		1.01649E-03	6.25086E-04	3.82002E-04	2.29207E-04	1.35727E-04	8.34882E-05	5.05740E-05	3.00952E-05	1.81224E-05	1.06102E-05
8		2.42610E-02	7.96064E-02	1.84791E-01	1.86233E-01	1.96409E-01	1.84650E-01	1.86745E-01	1.30030E-01	1.06936E-01	1.00163E-01
		5.39157E-02	3.21772E-02	3.15582E-02	2.04795E-02	1.27664E-02	9.19211E-03	5.12426E-03	3.12618E-03	1.91903E-03	1.14027E-03
		7.02420E-04	4.29847E-04	2.58136E-04	1.53024E-04	9.41601E-05	5.70789E-05	3.39791E-05	2.04672E-05	1.19857E-05	7.30152E-06
9		1.95300E-02	1.14090E-01	1.29977E-01	1.48805E-01	1.49041E-01	1.58869E-01	1.15326E-01	9.77914E-02	9.41797E-02	5.18439E-02
		3.13775E-02	3.14368E-02	2.04374E-02	1.26708E-02	8.30134E-03	5.21987E-03	3.19750E-03	1.96899E-03	1.17278E-03	7.23790E-04
		4.43567E-04	2.66730E-04	1.5d224E-04	9.74454E-05	5.90689E-05	3.51900E-05	2.12032E-05	1.24198E-05	7.56733E-06	4.59122E-06
10		1.20865E-01	1.93747E-01	1.80209E-01	1.02697E-01	7.14152E-02	5.44999E-02	4.77590E-02	4.73908E-02	2.67228E-02	1.64189E-02
		1.66611E-02	1.09634E-02	6.96879E-03	4.52704E-03	2.86270E-03	1.76127E-03	1.08825E-03	6.49875E-04	4.01875E-04	2.46670E-04
		1.48510E-04	8.c1781E-05	5.43452E-05	3.29724E-05	1.99631E-05	1.18409E-05	6.93760E-06	4.22790E-06	2.56553E-06	1.53091E-06
11		2.45287E-01	2.95514E-01	1.41029E-01	1.46755E-01	6.79083E-02	2.15020E-02	2.21970E-02	1.29203E-02	8.09807E-03	8.35734E-03
		5.58803E-03	3.59587E-03	2.35820E-03	1.50236E-03	9.29703E-04	5.77015E-04	3.45767E-04	2.14383E-04	1.31859E-04	7.95148E-05
		4.72702E-05	2.9160VE-05	1.77058E-05	1.05553E-05	6.36497E-06	3.73052E-06	2.27405E-06	1.36020E-06	0.0	0.0
12		2.58889E-01	3.79763E-01	1.22228E-01	8.81636E-02	9.63612E-02	7.60974E-02	3.18537E-02	7.22481E-03	7.57405E-03	5.13342E-03
		3.33787E-03	2.20666E-03	1.41475E-03	8.79784E-04	5.49105E-04	3.29402E-04	2.06693E-04	1.26120E-04	7.61576E-05	4.53217E-05
		2.79814E-05	1.70004E-05	1.01396E-05	6.11672E-06	3.56606E-06	2.18648E-06	1.32728E-06	0.0	0.0	0.0
13		2.32853E-01	5.41535E-01	1.11211E-01	6.10812E-02	7.16159E-02	4.61609E-02	3.22140E-02	3.12010E-02	1.84254E-02	9.74744E-03
		6.15424E-03	3.47736E-03	6.66988E-04	3.93911E-04	2.37487E-04	1.47936E-04	9.13236E-05	5.52275E-05	3.29036E-05	2.03323E-05
		1.23617E-05	7.37698E-06	4.45193E-06	2.61087E-06	1.59227E-06	0.0	0.0	0.0	0.0	0.0
14		2.84779E-01	5.50673E-01	2.02056E-01	6.19117E-02	1.92476E-02	2.71604E-02	2.91643E-02	2.10391E-02	1.67503E-02	8.18795E-03
		3.29800E-03	7.07848E-03	4.58230E-03	2.83228E-03	1.64421E-03	1.20841E-03	7.94190E-04	5.20938E-04	3.62207E-04	2.49236E-04
		1.77638E-04	1.20583E-04	7.01978E-05	4.49347E-05	2.67918E-05	1.58854E-05	1.02055E-05	7.09942E-06	1.70889E-06	2.14154E-06
15		1.18293E-01	5.43136E-01	3.16624E-01	5.85773E-02	2.72336E-02	1.40480E-02	2.04631E-03	1.14021E-03	8.24284E-03	1.22490E-02
		7.29411E-03	4.32234E-03	2.52681E-03	1.54778E-03	9.30109E-04	5.62674E-04	3.25850E-04	2.04234E-04	1.19160E-04	7.43545E-05
		4.63915E-05	2.51123E-05	1.56529E-05	1.01207E-05	6.29251E-06	3.54845E-06	0.0	2.70511E-06	1.41693E-06	0.0
16		9.20801E-02	5.46471E-01	2.51367E-01	9.07637E-02	3.58437E-02	2.24512E-02	1.46463E-02	6.36021E-03	0.0	2.65406E-04
		3.11282E-04	1.82438E-04	1.11064E-04	6.72676E-05	4.03428E-05	2.38306E-05	1.45609E-05	8.80239E-06	5.34465E-06	3.15732E-06
		1.85831E-06	1.24167E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17		9.94340E-02	3.34236E-01	1.97029E-01	1.81857E-01	7.48943E-02	4.82266E-02	5.68508E-03	8.85576E-03	6.17900E-03	4.24295E-03
		2.48904E-03	1.52434E-03	9.19904E-04	5.58707E-04	3.15140E-04	1.99588E-04	1.19462E-04	7.09592E-05	4.16245E-05	2.46660E-05
		1.44196E-05	1.05440E-05	6.52806E-06	2.07123E-06	0.0	2.77491E-06	0.0	0.0	0.0	0.0
18		0.0	1.88503E-01	3.06731E-01	2.10400E-01	2.69565E-02	6.42536E-02	4.45801E-02	3.21961E-02	2.28221E-02	5.86970E-04
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19		0.0	1.66319E-01	2.25443E-01	1.69205E-01	1.08197E-01	1.75300E-02	7.52945E-03	3.60392E-04	2.73669E-02	2.12526E-02
		1.56722E-02	1.16295E-02	7.34078E-03	4.52135E-03	2.75220E-03	1.66108E-03	1.02112E-03	6.20115E-04	3.63363E-04	2.37215E-04
		1.37487E-04	8.66165E-05	5.09956E-05	2.65142E-05	3.10148E-05	0.0	1.06385E-05	1.22424E-05	0.0	0.0
20		0.0	1.15874E-01	2.83056E-01	1.05569E-01	9.56192E-02	7.65099E-02	5.05777E-02	4.13874E-03	2.77466E-03	1.71864E-03
		1.03431E-03	6.15206E-04	3.85245E-04	2.36026E-04	1.33960E-04	8.53076E-05	4.92283E-05	2.49166E-05	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21		0.0	0.0	2.11241E-01	2.34255E-01	4.42566E-02	1.03219E-02	4.79292E-02	3.51390E-02	2.55548E-02	1.88296E-02
		1.36046E-02	8.67855E-03	5.20559E-03	3.06984E-03	1.89352E-03	1.05532E-03	7.19263E-04	7.88705E-04	4.99698E-04	3.20341E-04
		2.30382E-04	9.45585E-05	9.95486E-05	1.98066E-05	5.44843E-05	3.49209E-05	4.42503E-06	2.64893E-06	1.61028E-06	1.02018E-06
22		0.0	0.0	0.0	1.81952E-01	1.83362E-01	1.28219E-01	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23		0.0	0.0	0.0	0.0	8.43109E-03	1.27361E-01	9.14694E-02	6.48734E-02	4.32016E-02	2.97193E-02
		2.00005E-02	2.82075E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		1.22537E-02	1.09221E-02	5.47910E-03	4.28655E-03	2.60962E-03	1.57488E-03	9.33371E-04	5.57668E-04	3.59906E-04	2.18474E-04
		1.37338E-04	8.33119E-05	5.03849E-05	3.31925E-05	2.29474E-05	1.40557E-05	8.55659E-06	4.29730E-06	3.11800E-06	3.12345E-06

TABLE OF (N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1		0.0	0.0	0.0	0.0	0.0	1.56964E-04	3.90415E-02	8.87992E-02	1.02771E-01	1.59317E-01
		1.18755E-01	1.02647E-01	8.27660E-02	7.37283E-02	4.54287E-02	3.54627E-02	3.10659E-02	1.58406E-02	9.13933E-03	8.79416E-03
		5.50152E-03	3.36432E-03	2.12112E-03	1.31012E-03	7.91473E-04	4.82156E-04	2.84845E-04	1.74688E-04	1.06528E-04	6.38121E-05
2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		1.26131E-02	2.72470E-02	3.17666E-02	2.47404E-02	2.20979E-02	2.22133E-02	1.27591E-02	7.90838E-03	8.08677E-03	5.35755E-03
		3.42392E-03	2.23353E-03	1.41703E-03	8.74045E-04	5.41114E-04	3.23520E-04	2.00361E-04	1.23093E-04	7.41615E-05	4.40574E-05

NUCLID = NP239J2F MAT NO = 9339
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.17422E+00	2.17057E+00	3.92526E+00	9.99648E-06	3.14734E+00	5.22350E-01	3.33942E-01	8.62392E-01	2.97632E-02	1.09399E-02	0.0
2	6.69014E+00	1.90752E+00	3.68244E+00	5.08819E-03	3.64753E+00	9.88797E-01	1.41228E-01	8.60574E-01	3.01971E-02	3.88245E-02	0.0
3	7.02081E+00	1.52342E+00	3.48226E+00	1.31505E-02	3.95590E+00	1.52643E+00	1.91549E-03	8.39664E-01	3.38488E-02	9.31118E-02	0.0
4	7.06853E+00	1.46663E+00	3.32226E+00	1.99675E-02	3.98805E+00	1.59389E+00	0.0	7.98430E-01	3.76395E-02	1.69748E-01	0.0
5	6.88823E+00	1.53767E+00	3.19313E+00	2.44163E-02	3.80498E+00	1.52117E+00	0.0	7.60773E-01	3.80235E-02	2.62392E-01	0.0
6	6.74047E+00	1.64533E+00	3.10104E+00	3.80216E-02	3.61751E+00	1.43960E+00	0.0	7.06817E-01	4.52948E-02	2.71731E-01	0.0
7	6.71947E+00	1.72811E+00	3.02318E+00	5.65095E-02	3.51784E+00	1.41702E+00	0.0	6.71480E-01	3.80535E-02	3.73411E-01	0.0
8	6.97264E+00	1.72458E+00	2.95240E+00	8.08743E-02	3.69103E+00	1.47616E+00	0.0	6.86596E-01	3.86639E-02	4.03723E-01	0.0
9	7.41124E+00	1.66455E+00	2.90151E+00	1.21659E-01	4.14036E+00	1.48467E+00	0.0	6.07114E-01	5.75991E-02	2.80737E-01	0.0
10	8.03296E+00	1.60207E+00	2.86299E+00	1.82597E-01	4.79466E+00	1.45163E+00	0.0	5.78477E-01	6.02827E-02	3.22046E-01	0.0
11	8.76148E+00	1.40470E+00	2.83304E+00	2.56846E-01	5.64589E+00	1.44403E+00	0.0	5.36393E-01	1.03299E-01	2.38891E-01	0.0
12	9.38594E+00	1.18867E+00	2.81212E+00	3.36839E-01	6.43575E+00	1.42468E+00	0.0	4.91571E-01	1.31337E-01	2.31112E-01	0.0
13	9.96875E+00	9.02567E-01	2.79960E+00	4.33633E-01	7.17842E+00	1.45413E+00	0.0	4.45784E-01	1.63146E-01	2.23143E-01	0.0
14	1.05768E+01	5.60241E-01	2.78785E+00	5.62836E-01	7.86133E+00	1.59235E+00	0.0	3.97779E-01	1.68992E-01	2.54892E-01	0.0
15	1.11144E+01	3.16991E-01	2.77716E+00	7.11188E-01	8.42281E+00	1.66039E+00	0.0	3.52951E-01	2.25887E-01	2.15111E-01	0.0
16	1.15479E+01	1.72881E-01	2.77015E+00	8.63254E-01	8.86811E+00	1.64261E+00	0.0	3.09994E-01	2.43165E-01	2.23143E-01	0.0
17	1.19594E+01	9.37035E-02	2.76345E+00	1.04390E+00	9.32193E+00	1.49855E+00	0.0	2.60691E-01	2.13811E-01	2.87622E-01	0.0
18	1.22795E+01	6.38131E-02	2.75787E+00	1.21670E+00	9.75686E+00	1.24209E+00	0.0	2.13665E-01	3.02503E-01	2.23143E-01	0.0
19	1.25201E+01	5.39019E-02	2.75460E+00	1.34298E+00	1.00805E+01	1.04282E+00	0.0	1.79862E-01	3.93047E-01	1.82321E-01	0.0
20	1.27717E+01	4.63244E-02	2.75155E+00	1.49204E+00	1.04043E+01	8.39036E-01	0.0	1.48039E-01	3.02670E-01	2.57476E-01	0.0
21	1.29766E+01	4.00006E-02	2.74891E+00	1.65045E+00	1.07698E+01	5.16260E-01	0.0	1.15652E-01	3.18466E-01	2.56688E-01	0.0
22	1.31911E+01	3.94869E-02	2.74690E+00	1.88129E+00	1.08896E+01	3.80068E-01	0.0	9.14484E-02	3.37030E-01	2.51553E-01	0.0
23	1.33610E+01	2.93139E-02	2.74552E+00	2.16845E+00	1.09654E+01	2.26714E-01	0.0	7.19613E-02	3.40405E-01	2.55533E-01	0.0
24	1.36114E+01	4.15459E-03	2.74520E+00	2.48624E+00	1.11044E+01	3.45027E-02	0.0	5.59384E-02	3.44990E-01	2.58483E-01	0.0
25	1.40477E+01	0.0	0.0	2.98662E+00	1.10611E+01	0.0	0.0	4.37835E-02	3.47666E-01	2.56983E-01	0.0
26	1.44558E+01	0.0	0.0	3.49990E+00	1.09569E+01	0.0	0.0	3.46058E-02	3.44903E-01	2.58650E-01	0.0
27	1.45465E+01	0.0	0.0	3.68144E+00	1.08650E+01	0.0	0.0	2.73904E-02	3.53422E-01	2.52175E-01	0.0
28	1.49332E+01	0.0	0.0	4.14170E+00	1.07915E+01	0.0	0.0	2.18429E-02	3.49648E-01	2.54642E-01	0.0
29	1.54356E+01	0.0	0.0	4.69935E+00	1.07363E+01	0.0	0.0	1.74805E-02	3.45674E-01	2.57476E-01	0.0
30	1.60130E+01	0.0	0.0	5.21726E+00	1.06957E+01	0.0	0.0	1.40747E-02	3.46623E-01	2.56688E-01	0.0
31	1.67042E+01	0.0	0.0	6.03542E+00	1.06688E+01	0.0	0.0	1.14694E-02	3.54548E-01	2.51553E-01	0.0
32	1.75754E+01	0.0	0.0	6.85681E+00	1.07165E+01	0.0	0.0	9.48255E-03	3.51441E-01	2.55933E-01	0.0
33	1.85327E+01	0.0	0.0	7.74961E+00	1.07831E+01	0.0	0.0	5.60118E-03	3.51850E-01	2.58483E-01	0.0
34	1.96296E+01	0.0	0.0	8.79448E+00	1.08221E+01	0.0	0.0	2.81295E-03	3.55424E-01	2.56983E-01	0.0
35	2.09120E+01	0.0	0.0	1.00403E+01	1.08117E+01	0.0	0.0	2.81295E-03	3.54239E-01	2.56650E-01	0.0
36	2.22943E+01	0.0	0.0	1.13930E+01	1.09013E+01	0.0	0.0	2.81295E-03	3.64193E-01	2.52175E-01	0.0
37	2.38870E+01	0.0	0.0	1.29630E+01	1.09241E+01	0.0	0.0	2.81295E-03	3.61329E-01	2.54642E-01	0.0
38	2.57701E+01	0.0	0.0	1.47596E+01	1.10165E+01	0.0	0.0	2.81295E-03	3.62695E-01	2.57476E-01	0.0
39	2.80687E+01	0.0	0.0	1.68290E+01	1.12397E+01	0.0	0.0	2.81295E-03	3.72690E-01	2.56689E-01	0.0
40	3.05285E+01	0.0	0.0	1.90518E+01	1.14768E+01	0.0	0.0	2.81295E-03	3.87190E-01	2.51554E-01	0.0
41	3.33192E+01	0.0	0.0	2.16593E+01	1.16598E+01	0.0	0.0	2.81295E-03	3.85912E-01	2.55934E-01	0.0
42	3.64108E+01	0.0	0.0	2.45973E+01	1.18135E+01	0.0	0.0	2.81295E-03	3.87875E-01	2.58483E-01	0.0
43	3.99895E+01	0.0	0.0	2.79405E+01	1.20490E+01	0.0	0.0	2.81295E-03	3.98544E-01	2.56983E-01	0.0
44	4.41992E+01	0.0	0.0	3.18356E+01	1.23641E+01	0.0	0.0	2.81295E-03	4.09978E-01	2.58650E-01	0.0
45	4.89014E+01	0.0	0.0	3.60742E+01	1.28252E+01	0.0	0.0	2.81295E-03	4.24282E-01	2.52175E-01	0.0
46	5.41034E+01	0.0	0.0	4.09192E+01	1.21842E+01	0.0	0.0	2.81295E-03	4.40764E-01	2.54642E-01	0.0
47	6.02119E+01	0.0	0.0	4.65616E+01	1.36503E+01	0.0	0.0	2.81295E-03	4.55052E-01	2.57476E-01	0.0
48	6.72968E+01	0.0	0.0	5.31292E+01	1.41675E+01	0.0	0.0	2.81295E-03	4.71543E-01	2.56689E-01	0.0
49	7.46913E+01	0.0	0.0	6.01151E+01	1.47762E+01	0.0	0.0	2.81295E-03	5.05726E-01	2.51553E-01	0.0
50	8.38636E+01	0.0	0.0	6.83716E+01	1.54720E+01	0.0	0.0	2.81295E-03	5.21869E-01	2.55933E-01	0.0
51	9.41092E+01	0.0	0.0	7.77828E+01	1.63266E+01	0.0	0.0	2.81295E-03	5.44995E-01	2.58483E-01	0.0
52	1.05553E+02	0.0	0.0	8.82567E+01	1.72670E+01	0.0	0.0	2.81295E-03	5.79587E-01	2.56983E-01	0.0
53	1.18916E+02	0.0	0.0	1.00629E+02	1.82963E+01	0.0	0.0	2.81295E-03	6.14700E-01	2.58650E-01	0.0
54	1.33647E+02	0.0	0.0	1.14134E+02	1.95128E+01	0.0	0.0	2.81295E-03	6.72729E-01	2.52176E-01	0.0
55	1.50313E+02	0.0	0.0	1.29461E+02	2.08524E+01	0.0	0.0	2.81295E-03	7.08466E-01	2.54642E-01	0.0
56	1.69686E+02	0.0	0.0	1.47357E+02	2.23286E+01	0.0	0.0	2.81295E-03	7.56546E-01	2.57476E-01	0.0
57	1.92174E+02	0.0	0.0	1.68032E+02	2.41421E+01	0.0	0.0	2.81295E-03	8.18756E-01	2.56689E-01	0.0
58	2.07525E+02	0.0	0.0	1.84472E+02	2.30622E+01	0.0	0.0	2.81295E-03	7.15866E-01	2.51554E-01	0.0
59	1.37057E+02	0.0	0.0	1.17203E+02	1.98529E+01	0.0	0.0	2.81295E-03	6.14197E-01	2.55933E-01	0.0
60	4.30611E+01	0.0	0.0	2.54023E+01	1.76588E+01	0.0	0.0	2.81295E-03	5.47241E-01	2.58483E-01	0.0
61	1.98242E+01	0.0	0.0	3.80093E+00	1.60234E+01	0.0	0.0	2.81295E-03	5.03239E-01	2.56983E-01	0.0
62	1.90959E+01	0.0	0.0	4.33282E+00	1.47621E+01	0.0	0.0	2.81295E-03	4.69719E-01	2.58650E-01	0.0
63	1.86786E+01	0.0	0.0	4.88612E+00	1.37925E+01	0.0	0.0	2.81295E-03	4.47447E-01	2.52176E-01	0.0
64	1.85982E+01	0.0	0.0	5.55037E+00	1.30478E+01	0.0	0.0	2.81295E-03	4.21263E-01	2.54642E-01	0.0
65	1.87969E+01	0.0	0.0	6.32533E+00	1.24716E+01	0.0	0.0	2.81295E-03	3.99685E-01	2.57476E-01	0.0
66	1.92133E+01	0.0	0.0	7.19634E+00	1.20170E+01	0.0	0.0	2.81295E-03	3.87831E-01	2.56689E-01	0.0
67	1.97967E+01	0.0	0.0	8.12915E+00	1.16696E+01	0.0	0.0	2.81295E-03	3.85581E-01	2.51553E-01	0.0
68	2.06478E+01	0.0	0.0	9.24859E+00	1.13952E+01	0.0	0.0	2.81295E-03	3.71114E-01	2.55933E-01	0.0
69	2.16953E+01	0.0	0.0	1.05076E+01	1.11976E+01	0.0	0.0	2.81295E-03	3.61363E-01	2.58483E-01	0.0
70	2.29801E+01	0.0	0.0	1.19566E+01	1.10235E+01	0.0	0.0	1.26016E+02	3.58759E-01	2.56983E-01	0.0

NUCLID = NP239J2F MAT NUMBER = 9239 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I	EXIT GROUP ** KK ** J=	1	2	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1											
		3.08059E-06	8.25535E-05	6.94781E-04	3.41214E-03	1.16872E-02	2.16824E-02	4.72092E-02	7.52109E-02	6.75380E-02	8.57812E-02
		5.48602E-02	4.29279E-02	3.20713E-02	2.68112E-02	1.60566E-02	1.19222E-02	1.00177E-02	4.97204E-03	2.82080E-03	2.67608E-03
		1.65178E-03	9.99653E-04	6.25243E-04	3.83768E-04	2.20715E-04	1.40030E-04	8.24826E-05	5.04723E-05	3.07254E-05	1.83802E-05
2											
		2.50794E-05	4.96246E-04	3.13439E-02	1.32082E-02	2.82518E-02	7.07561E-02	1.26720E-01	1.23732E-01	1.67754E-01	1.12833E-01
		9.12203E-02	6.98821E-02	5.96446E-02	3.63124E-02	2.70601E-02	2.31809E-02	1.16075E-02	6.62168E-03	6.31118E-03	3.91276E-03
		2.37603E-03	1.49001E-03	9.16435E-04	5.51825E-04	3.35336E-04	1.97112E-04	1.21071E-04	7.37449E-05	4.41364E-05	2.60851E-05
3											
		1.16468E-04	2.06467E-03	1.09682E-02	2.78696E-02	8.11062E-02	1.66072E-01	1.78389E-01	2.60686E-01	1.85737E-01	1.55887E-01
		1.22910E-01	1.07421E-01	6.66515E-02	5.02605E-02	4.26840E-02	2.20973E-02	1.26858E-02	1.21556E-02	7.57448E-03	4.61755E-03
		2.90438E-03	1.79057E-03	1.08016E-03	6.52328E-04	3.87977E-04	2.37780E-04	1.44928E-04	8.67795E-05	5.13100E-05	3.15209E-05
4											
		4.36599E-04	5.65741E-03	1.70762E-02	5.88426E-02	1.39992E-01	1.67258E-01	2.65932E-01	2.02087E-01	1.76893E-01	1.44057E-01
		1.29330E-01	8.19569E-02	6.28965E-02	5.53317E-02	2.83105E-02	1.63689E-02	1.57791E-02	9.88867E-03	6.05477E-03	3.82126E-03
		2.36211E-03	1.42768E-03	8.70319E-04	5.14320E-04	3.15507E-04	1.92444E-04	1.15297E-04	6.82017E-05	4.19121E-05	2.53712E-05
5											
		2.30844E-03	9.20634E-03	3.57551E-02	1.01106E-01	1.36466E-01	2.39175E-01	1.95721E-01	1.79838E-01	1.52030E-01	1.40778E-01
		9.14261E-02	7.14342E-02	6.28737E-02	3.31150E-02	1.92051E-02	1.87390E-02	1.18214E-02	7.27492E-03	4.60929E-03	2.85800E-03
		1.73177E-03	1.05749E-03	6.25817E-04	3.84321E-04	2.34616E-04	1.40657E-04	8.32447E-05	5.11765E-05	3.09888E-05	1.84351E-05
6											
		7.19542E-03	2.13566E-02	6.87889E-02	1.05695E-01	2.05805E-01	1.82286E-01	1.76460E-01	1.55290E-01	1.48667E-01	9.91274E-02
		7.89647E-02	7.18566E-02	3.77860E-02	2.22242E-02	2.17344E-02	1.28089E-02	8.54449E-03	5.43651E-03	3.38210E-03	2.05461E-03
		1.25712E-03	7.48093E-04	4.58105E-04	2.79915E-04	1.67924E-04	9.94425E-05	6.11602E-05	3.70466E-05	2.20445E-05	1.32741E-05
7											
		2.56895E-02	4.88817E-02	7.96481E-02	1.75013E-01	1.69688E-01	1.74361E-01	1.60684E-01	1.59836E-01	1.09847E-01	8.94716E-02
		8.30765E-02	4.44040E-02	2.63840E-02	2.60253E-02	1.66708E-02	1.03802E-02	6.63656E-03	4.14440E-03	2.52516E-03	1.54856E-03
		9.19437E-04	5.66056E-04	3.46241E-04	2.07897E-04	1.23164E-04	7.57985E-05	4.59310E-05	2.73392E-05	1.64661E-05	9.64192E-06
8											
		7.94293E-02	6.18271E-02	1.42044E-01	1.55173E-01	1.72952E-01	1.69681E-01	1.77804E-01	1.27315E-01	1.06883E-01	1.02004E-01
		5.57415E-02	3.35823E-02	3.35156E-02	2.17088E-02	1.36379E-02	8.77277E-03	5.50748E-03	3.36919E-03	2.07258E-03	1.23351E-03
		7.60810E-04	4.66033E-04	2.80135E-04	1.66129E-04	1.02792E-04	6.20169E-05	3.69289E-05	2.22487E-05	1.30311E-05	7.93932E-06
9											
		1.52228E-01	1.17425E-01	1.28179E-01	1.55477E-01	1.63447E-01	1.81421E-01	1.35927E-01	1.17993E-01	1.16081E-01	6.50047E-02
		3.97675E-02	4.02062E-02	2.63647E-02	1.67138E-02	1.08352E-02	6.84059E-03	4.20336E-03	2.59463E-03	1.54830E-03	9.56900E-04
		5.87079E-04	3.53332E-04	2.09736E-04	1.29236E-04	7.83977E-05	4.87038E-05	2.81475E-05	1.64904E-05	1.00490E-05	6.09756E-06
10											
		2.75203E-01	1.72110E-01	2.39572E-02	1.50849E-01	1.77965E-01	1.40391E-01	1.26605E-01	1.28948E-01	7.42506E-02	4.62239E-02
		4.74303E-02	3.15414E-02	2.02120E-02	1.32124E-02	8.29612E-03	5.18546E-03	3.21343E-03	1.92334E-03	1.19144E-03	7.32299E-04
		4.41355E-04	2.62268E-04	1.61761E-04	9.81799E-05	5.85184E-05	3.52818E-05	2.06763E-05	1.26027E-05	7.66851E-06	4.56650E-06
11											
		3.33033E-01	4.14154E-01	4.71108E-02	7.93548E-03	6.69709E-02	1.33547E-01	1.41716E-01	9.43305E-02	5.35935E-02	5.59636E-02
		3.78387E-02	2.45580E-02	1.62121E-02	1.03823E-02	6.45075E-03	4.03411E-03	2.41226E-03	1.49846E-03	9.22981E-04	5.57206E-04
		3.31534E-04	2.04659E-04	1.24328E-04	7.41483E-05	4.47262E-05	2.62203E-05	1.59863E-05	9.70407E-06	5.79220E-06	3.41643E-06
12											
		3.85984E-01	6.03837E-01	1.36721E-01	1.78425E-02	3.24156E-02	1.40629E-02	2.72816E-02	6.01167E-02	6.38238E-02	6.38352E-02
		2.87943E-02	1.91862E-02	1.23772E-02	7.73400E-03	4.82619E-03	2.91478E-03	1.81522E-03	1.12036E-03	6.77421E-04	4.03554E-04
		2.49249E-04	1.51589E-04	9.04578E-05	5.45880E-05	3.20126E-05	1.95228E-05	1.18532E-05	7.07611E-06	4.17423E-06	2.55976E-06
13											
		3.80761E-01	7.95498E-01	1.83159E-01	6.42189E-02	1.39304E-02	2.00138E-02	1.16488E-03	1.09963E-03	0.0	0.0
		0.0	0.0	0.0	0.0	9.29455E-03	9.94170E-03	5.52898E-03	3.34792E-03	1.99659E-03	1.23471E-03
		7.51123E-04	4.48449E-04	2.70731E-04	1.58816E-04	9.46776E-05	5.68292E-05	3.51247E-05	2.07225E-05	1.27087E-05	7.68086E-06
14											
		3.98851E-01	7.08688E-01	2.32756E-01	1.15191E-01	2.45752E-02	4.29790E-03	4.15161E-03	2.43064E-03	5.53688E-06	3.46147E-04
		2.11332E-04	1.25700E-04	7.69813E-05	4.54386E-05	2.74840E-05	1.67983E-05	1.02831E-05	5.99794E-06	3.69721E-06	2.33634E-06
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15											
		2.43124E-01	6.94634E-01	6.90010E-01	1.59245E-01	3.25183E-02	3.42842E-02	3.66791E-03	2.31901E-03	1.45218E-03	8.91363E-04
		5.38700E-04	3.28255E-04	1.93480E-04	1.19101E-04	6.99342E-05	2.20817E-06	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16											
		1.98532E-01	7.24257E-01	3.76136E-01	1.31341E-01	1.37509E-01	3.22259E-02	1.68964E-02	1.31219E-02	9.10680E-03	1.67792E-03
		0.0	0.0	0.0	4.80900E-05	2.97944E-04	9.03711E-04	1.25019E-04	7.58262E-05	4.50946E-05	2.70981E-05
		1.58792E-05	9.67334E-06	5.91454E-06	3.54818E-06	2.03936E-06	0.0	0.0	0.0	0.0	0.0
17											
		2.07305E-01	4.29552E-01	2.85219E-01	2.85927E-01	1.15059E-01	6.72034E-02	4.77519E-02	3.15661E-02	1.26369E-02	6.99539E-03
		4.12844E-03	2.54200E-03	1.54454E-03	9.27856E-04	5.52639E-04	3.27051E-04	2.03426E-04	1.21867E-04	7.58884E-05	4.31161E-05
		2.44959E-05	1.61227E-05	9.61947E-06	5.00029E-06	4.76894E-06	0.0	0.0	1.69989E-06	0.0	0.0
18											
		0.0	3.53443E-01	2.39165E-01	3.04026E-01	2.24600E-01	1.99803E-02	3.45043E-03	3.26571E-02	2.56956E-02	1.52755E-02
		9.41994E-03	5.78222E-03	3.43182E-03	2.06809E-03	1.25928E-03	7.67272E-04	4.60548E-04	2.59345E-04	1.42716E-04	8.65546E-05
		5.68839E-05	2.99675E-05	1.42699E-05	1.93246E-06	1.58212E-06	3.98821E-06	6.90494E-06	0.0	0.0	0.0
19											
		0.0	3.18882E-01	2.67203E-01	1.38717E-02	2.22259E-01	1.76166E-01	4.34229E-02	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	1.62844E-04	2.98962E-04	1.82247E-04	1.10746E-04
		6.60986E-05	3.90702E-05	2.39713E-05	1.45545E-05	8.63790E-06	5.21259E-06	3.07306E-06	1.90180E-06	1.14678E-06	0.0
20											
		0.0	2.13273E-01	2.26240E-01	1.07513E-02	3.16431E-03	7.02970E-03	7.27133E-02	4.74427E-02	3.19929E-02	2.17231E-02
		1.46498E-02	8.54400E-03	5.48826E-03	3.27864E-03	1.96041E-03	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21											
		0.0	0.0	2.77645E-01	1.94909E-01	0.0	0.0	0.0	0.0	0.0	1.59159E-05
		4.56742E-03	3.17191E-03	1.92906E-03	5.11229E-03	1.16369E-02	6.52172E-03	4.16228E-03	2.52750E-02	1.50944E-03	8.92812E-04
		5.46693E-04	3.32767E-04	1.96569E-04	1.19448E-04	6.61684E-05	4.36809E-05	2.50132E-05	1.54719E-05	9.07644E-06	6.62190E-06
22											
		0.0	0.0	1.78160E-02	1.95166E-01	1.32564E-01	3.51231E-02	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23											
		0.0	0.0	0.0	0.0	6.28729E-02	7.16565E-02	4.77272E-02	2.95713E-02	1.68856E-02	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24											
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.79485E-04	1.22125E-02	8.13814E-03
		4.87982E-03	2.96918E-03	1.72726E-03	1.06195E-02	6.50775E-04	3.93446E-04	2.37964E-04	1.40271E-04	8.59404E-05	5.18265E-05
		3.09531E-05	1.69874E-05	1.06810E-05	5.25763E-06	5.91735E-06	0.0	2.20771E-06	2.17289E-06	0.0	0.0

NUCLID = PU236J2F MAT NO = 9436
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.56314E+00	3.01658E+00	4.07570E+00	2.12292E-03	3.45685E+00	3.57455E-02	5.18385E-02	8.16334E-01	4.42333E-02	1.09399E-02	0.0
2	7.09351E+00	3.03162E+00	3.81817E+00	7.04975E-02	3.95416E+00	9.71569E-02	3.55365E-03	8.20516E-01	4.06313E-02	3.88246E-02	0.0
3	7.71042E+00	2.71820E+00	3.61342E+00	3.47509E-02	4.55052E+00	4.06957E-01	0.0	8.08934E-01	4.57678E-02	1.69748E-01	0.0
4	8.19208E+00	2.62062E+00	3.44836E+00	3.96847E-02	5.03560E+00	4.96176E-01	0.0	7.70882E-01	5.08766E-02	2.62392E-01	0.0
5	8.36362E+00	2.58052E+00	3.31594E+00	3.63955E-02	5.25505E+00	4.91655E-01	0.0	7.21871E-01	6.61011E-02	2.71731E-01	0.0
6	8.34501E+00	2.55012E+00	3.21725E+00	4.44752E-02	5.27783E+00	4.72583E-01	0.0	6.60298E-01	5.91393E-02	3.75411E-01	0.0
7	8.10444E+00	2.50014E+00	3.13640E+00	6.71543E-02	5.11109E+00	4.26057E-01	0.0	5.87413E-01	5.85461E-02	4.03723E-01	0.0
8	7.83267E+00	2.40988E+00	3.06212E+00	9.10777E-02	4.97429E+00	3.57424E-01	0.0	5.32637E-01	8.22086E-02	2.80737E-01	0.0
9	7.71999E+00	2.27264E+00	3.00809E+00	1.13185E-01	5.39272E+00	3.06329E-01	0.0	4.89124E-01	8.10089E-02	3.22046E-01	0.0
10	7.87740E+00	2.02068E+00	2.96714E+00	1.57670E-01	5.39272E+00	3.06329E-01	0.0	4.43083E-01	1.33272E-01	2.38892E-01	0.0
11	8.31650E+00	1.58306E+00	2.93561E+00	2.37070E-01	6.09374E+00	4.02637E-01	0.0	4.01476E-01	1.66080E-01	2.31112E-01	0.0
12	8.86164E+00	1.14383E+00	2.91558E+00	3.04106E-01	6.88750E+00	5.26197E-01	0.0	3.62481E-01	2.02926E-01	2.23143E-01	0.0
13	9.47641E+00	7.92934E-01	2.90017E+00	3.54192E-01	7.71876E+00	6.10520E-01	0.0	3.23079E-01	2.10019E-01	2.54892E-01	0.0
14	1.01722E+01	5.44502E-01	2.88742E+00	3.95580E-01	8.58810E+00	6.44002E-01	0.0	2.85933E-01	2.83032E-01	2.15111E-01	0.0
15	1.08552E+01	3.89075E-01	2.87691E+00	4.31738E-01	9.39854E+00	6.35814E-01	0.0	2.52449E-01	3.03197E-01	2.23143E-01	0.0
16	1.14673E+01	3.00306E-01	2.86975E+00	4.68081E-01	1.00998E+01	5.99034E-01	0.0	2.13265E-01	2.66924E-01	2.87682E-01	0.0
17	1.20782E+01	2.36088E-01	2.86203E+00	5.23948E-01	1.07906E+01	5.27546E-01	0.0	1.76854E-01	3.75943E-01	2.23143E-01	0.0
18	1.26692E+01	1.96388E-01	2.85514E+00	5.92002E-01	1.14449E+01	4.35914E-01	0.0	1.54063E-01	4.88216E-01	1.82321E-01	0.0
19	1.31735E+01	1.69707E-01	2.85221E+00	6.50632E-01	1.19887E+01	3.64476E-01	0.0	1.30860E-01	3.72636E-01	2.57476E-01	0.0
20	1.36235E+01	1.50744E-01	2.85003E+00	7.32552E-01	1.24760E+01	2.74269E-01	0.0	1.05335E-01	3.98159E-01	2.56688E-01	0.0
21	1.41238E+01	1.38216E-01	2.84738E+00	8.53245E-01	1.29860E+01	1.56347E-01	0.0	8.41904E-02	4.27940E-01	2.51553E-01	0.0
22	1.45996E+01	1.30909E-01	2.84521E+00	9.85306E-01	1.34319E+01	5.14690E-02	0.0	6.68564E-02	4.39815E-01	2.55933E-01	0.0
23	1.50564E+01	1.27612E-01	2.84359E+00	1.10130E+00	1.38267E+01	7.44336E-04	0.0	5.26784E-02	4.52886E-01	2.58483E-01	0.0
24	1.55174E+01	1.27564E-01	2.84232E+00	1.20007E+00	1.41898E+01	0.0	0.0	4.12930E-02	4.71960E-01	2.56983E-01	0.0
25	1.60033E+01	1.30940E-01	2.84132E+00	1.30729E+00	1.45651E+01	0.0	0.0	3.23262E-02	4.87515E-01	2.58650E-01	0.0
26	1.65112E+01	1.36391E-01	2.84056E+00	1.41907E+00	1.49557E+01	0.0	0.0	2.53790E-02	5.16482E-01	2.52175E-01	0.0
27	1.71084E+01	1.45451E-01	2.83999E+00	1.55583E+00	1.54071E+01	0.0	0.0	2.00224E-02	5.24542E-01	2.54642E-01	0.0
28	1.76317E+01	1.55460E-01	2.83954E+00	1.70837E+00	1.57678E+01	0.0	0.0	1.58422E-02	5.35604E-01	2.57476E-01	0.0
29	1.82099E+01	1.69214E-01	2.83919E+00	1.88684E+00	1.61528E+01	0.0	0.0	1.26568E-02	5.52772E-01	2.56688E-01	0.0
30	1.89389E+01	1.89830E-01	2.83892E+00	2.13651E+00	1.66125E+01	0.0	0.0	1.02442E-02	5.83252E-01	2.51553E-01	0.0
31	1.97298E+01	2.12542E-01	2.83872E+00	2.42570E+00	1.70906E+01	0.0	0.0	7.40714E-03	5.94116E-01	2.55933E-01	0.0
32	2.06345E+01	2.44902E-01	2.83856E+00	2.79880E+00	1.75908E+01	0.0	0.0	2.84878E-03	6.06674E-01	2.58483E-01	0.0
33	2.16703E+01	2.84236E-01	2.83843E+00	3.26119E+00	1.81249E+01	0.0	0.0	2.84878E-03	6.28922E-01	2.56983E-01	0.0
34	2.28824E+01	3.32065E-01	2.83998E+00	3.84364E+00	1.87068E+01	0.0	0.0	2.84878E-03	6.44043E-01	2.58650E-01	0.0
35	2.41815E+01	3.90286E-01	2.83825E+00	4.53665E+00	1.92546E+01	0.0	0.0	2.84878E-03	6.81595E-01	2.52175E-01	0.0
36	2.57032E+01	4.61933E-01	2.83819E+00	5.38659E+00	1.98547E+01	0.0	0.0	2.84878E-03	6.94153E-01	2.54642E-01	0.0
37	2.74108E+01	5.47025E-01	2.83815E+00	6.39443E+00	2.04694E+01	0.0	0.0	2.84878E-03	7.08084E-01	2.57476E-01	0.0
38	2.93428E+01	6.49720E-01	2.83812E+00	7.61067E+00	2.10824E+01	0.0	0.0	2.84878E-03	7.31888E-01	2.56689E-01	0.0
39	3.15631E+01	7.70982E-01	2.83809E+00	9.04481E+00	2.17473E+01	0.0	0.0	2.84878E-03	7.69623E-01	2.51554E-01	0.0
40	3.40679E+01	9.15557E-01	2.83807E+00	1.07542E+01	2.23981E+01	0.0	0.0	2.84878E-03	7.79556E-01	2.55934E-01	0.0
41	3.69267E+01	1.08518E+00	2.83806E+00	1.27591E+01	2.30824E+01	0.0	0.0	2.84878E-03	7.95029E-01	2.58483E-01	0.0
42	4.01647E+01	1.28448E+00	2.83804E+00	1.51146E+01	2.37657E+01	0.0	0.0	2.84878E-03	8.22739E-01	2.56983E-01	0.0
43	4.39262E+01	1.52216E+00	2.83803E+00	1.79248E+01	2.44792E+01	0.0	0.0	2.84878E-03	8.40210E-01	2.58650E-01	0.0
44	4.81253E+01	1.79664E+00	2.83803E+00	2.11714E+01	2.51573E+01	0.0	0.0	2.84877E-03	8.85422E-01	2.52176E-01	0.0
45	5.29416E+01	2.11790E+00	2.83802E+00	2.49717E+01	2.58521E+01	0.0	0.0	2.84878E-03	8.97903E-01	2.54642E-01	0.0
46	5.83369E+01	2.48527E+00	2.83801E+00	2.93205E+01	2.65211E+01	0.0	0.0	2.84878E-03	9.10461E-01	2.57476E-01	0.0
47	6.45246E+01	2.91583E+00	2.83801E+00	3.44240E+01	2.71848E+01	0.0	0.0	2.84878E-03	9.34662E-01	2.56689E-01	0.0
48	7.15110E+01	3.40748E+00	2.83801E+00	4.02563E+01	2.78473E+01	0.0	0.0	2.84878E-03	9.75159E-01	2.51553E-01	0.0
49	7.94938E+01	3.97805E+00	2.83801E+00	4.70311E+01	2.84846E+01	0.0	0.0	2.84877E-03	9.79065E-01	2.55933E-01	0.0
50	8.86218E+01	4.63786E+00	2.83801E+00	5.48741E+01	2.91098E+01	0.0	0.0	2.84877E-03	9.89044E-01	2.58483E-01	0.0
51	9.90566E+01	5.39932E+00	2.83801E+00	6.39405E+01	2.97168E+01	0.0	0.0	2.84878E-03	1.01338E+00	2.56983E-01	0.0
52	1.10691E+02	6.25548E+00	2.83640E+00	7.41427E+01	3.02931E+01	0.0	0.0	2.84878E-03	1.02429E+00	2.58650E-01	0.0
53	1.24396E+02	7.27352E+00	2.83800E+00	8.62867E+01	3.08355E+01	0.0	0.0	2.84877E-03	1.06767E+00	2.52176E-01	0.0
54	1.39364E+02	8.38983E+00	2.83800E+00	9.96211E+01	3.13525E+01	0.0	0.0	2.84878E-03	1.07217E+00	2.54642E-01	0.0
55	1.56202E+02	9.65241E+00	2.83800E+00	1.14723E+02	3.18268E+01	0.0	0.0	2.84877E-03	1.03841E+00	2.57476E-01	0.0
56	1.75079E+02	1.10811E+01	2.83600E+00	1.31824E+02	3.21742E+01	0.0	0.0	2.84878E-03	7.49756E-01	2.56688E-01	0.0
57	1.40538E+02	8.83283E+00	2.83600E+00	1.05153E+02	2.65528E+01	0.0	0.0	2.84878E-03	4.16060E-01	2.51553E-01	0.0
58	2.29188E+01	7.49360E-01	2.83800E+00	8.91847E+00	1.32509E+01	0.0	0.0	2.84878E-03	4.20712E-01	2.55933E-01	0.0
59	1.33584E+01	7.02589E-02	2.83800E+00	8.21337E-01	1.24668E+01	0.0	0.0	2.84878E-03	4.33304E-01	2.58483E-01	0.0
60	1.47266E+01	1.43835E-01	2.83800E+00	1.68145E+00	1.29013E+01	0.0	0.0	2.84878E-03	4.60174E-01	2.56983E-01	0.0
61	1.73680E+01	3.03855E-01	2.83800E+00	3.55211E+00	1.35121E+01	0.0	0.0	2.84878E-03	4.94655E-01	2.58650E-01	0.0
62	2.28613E+01	6.63217E-01	2.83960E+00	7.75746E+00	1.44406E+01	0.0	0.0	2.84878E-03	5.66606E-01	2.52175E-01	0.0
63	3.52815E+01	1.52724E+00	2.83600E+00	1.78537E+01	1.59006E+01	0.0	0.0	2.84878E-03	6.74850E-01	2.54642E-01	0.0
64	6.66348E+01	3.80002E+00	2.83800E+00	4.44226E+01	1.84120E+01	0.0	0.0	2.84878E-03	9.18060E-01	2.57476E-01	0.0
65	1.66037E+02	1.12253E+01	2.83800E+00	1.31224E+02	2.35876E+01	0.0	0.0	2.84878E-03	1.80856E+00	2.56689E-01	0.0
66	6.32041E+02	4.67724E+01	2.83800E+00	5.46775E+02	3.84932E+01	0.0	0.0	2.84878E-03	1.69985E+01	2.51553E-01	0.0
67	9.01350E+03	6.96659E+02	2.83800E+00	8.14404E+03	1.72811E+02	0.0	0.0	2.84878E-03	6.83594E-01	2.55933E-01	0.0
68	2.82599E+04	2.20423E+03	2.83800E+00	2.57678E+04	2.87824E+02	0.0	0.0	2.84878E-03	1.73759E-02	2.58483E-01	0.0
69	2.75270E+03	2.16525E+02	2.83800E+00	2.53121E+03	4.96319E+00	0.0	0.0	1.97488E-02	1.38550E-02	2.56983E-01	0.0
70	1.19600E+03	9.42256E+01	2.83800E+00	1.10151E+03	2.66847E-01	0.0	0.0				

NUCLID = PU236J2F MAT NUMBER = 9436 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I	J=	EXIT 1	GROUP ** KK ** 2	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1		1.18310E-04	1.42152E-04	4.11469E-04	1.10921E-03	2.32793E-03	2.98277E-03	4.82808E-03	5.84027E-03	4.30106E-03	4.68937E-03
		2.66288E-03	1.93018E-03	1.35968E-03	1.08285E-03	6.23961E-04	4.46649E-04	3.68953E-04	1.79367E-04	1.00456E-04	9.42734E-05
		5.75906E-05	3.45784E-05	2.14954E-05	1.31304E-05	7.86438E-06	4.75945E-06	2.79727E-06	1.70879E-06	1.03885E-06	6.20809E-07
2		3.70321E-04	7.95270E-04	2.17713E-03	5.09812E-03	7.08342E-03	1.22721E-02	1.57852E-02	1.21526E-02	1.37072E-02	7.99301E-03
		5.89325E-03	4.20608E-03	3.38606E-03	1.96794E-03	1.41756E-03	1.17762E-03	5.75145E-04	3.23039E-04	3.03891E-04	1.86071E-04
		1.11917E-04	6.96676E-05	4.26016E-05	2.55371E-05	1.54648E-05	9.09360E-06	5.55716E-06	3.37947E-06	2.02000E-06	1.19276E-06
3		1.35875E-03	7.82875E-03	1.88480E-02	2.74247E-02	4.92982E-02	6.58091E-02	5.19640E-02	5.97610E-02	3.52806E-02	2.63415E-02
		1.89415E-02	1.53430E-02	8.96106E-03	6.47808E-03	5.39907E-03	2.64384E-03	1.48740E-03	1.40116E-03	8.59055E-04	5.17223E-04
		3.22217E-04	1.97156E-04	1.18240E-04	7.16298E-05	4.21316E-05	2.57525E-05	1.56635E-05	9.36373E-06	5.52960E-06	3.39370E-06
4		1.84747E-03	1.89777E-02	3.17956E-02	5.90527E-02	8.08733E-02	6.51425E-02	7.60714E-02	4.55771E-02	3.41943E-02	2.47335E-02
		2.01323E-02	1.18038E-02	8.55724E-03	7.15013E-03	3.50659E-03	1.97645E-03	1.86389E-03	1.14394E-03	6.89292E-04	4.29675E-04
		2.63033E-04	1.57807E-04	9.56275E-05	5.62592E-05	3.43936E-05	2.09220E-05	1.25087E-05	7.38737E-06	4.53415E-06	2.74205E-06
5		3.42628E-03	2.07039E-02	5.79056E-02	8.22198E-02	6.79724E-02	8.09821E-02	4.92819E-02	3.73470E-02	2.72231E-02	2.23003E-02
		1.31412E-02	9.56210E-03	8.01652E-03	3.94442E-03	2.22573E-03	2.10196E-03	1.29180E-03	7.79201E-04	4.86111E-04	2.97769E-04
		1.78735E-04	1.08350E-04	6.37626E-05	3.89695E-05	2.37219E-05	1.41845E-05	8.37797E-06	5.14257E-06	3.11019E-06	1.84849E-06
6		8.17010E-03	2.88395E-02	8.40073E-02	7.09779E-02	8.59948E-02	5.30201E-02	4.05192E-02	2.97270E-02	2.44817E-02	1.44879E-02
		1.05748E-02	8.89038E-03	4.38437E-03	2.47749E-03	2.34252E-03	1.44128E-03	8.70123E-04	5.43199E-04	3.32915E-04	1.99912E-04
		1.21227E-04	7.13576E-05	4.36418E-05	2.65564E-05	1.58812E-05	9.78092E-06	5.75860E-06	3.48294E-06	2.07011E-06	1.24540E-06
7		2.66380E-02	3.45082E-02	7.14687E-02	8.81525E-02	5.51189E-02	4.25065E-02	3.14028E-02	2.60108E-02	1.54632E-02	1.13244E-02
		9.54936E-03	4.72092E-03	2.67174E-03	2.52944E-03	1.55819E-03	9.41589E-04	5.88239E-04	3.60725E-04	2.16708E-04	1.31456E-04
		7.73994E-05	4.73465E-05	2.88152E-05	1.72341E-05	1.03811E-05	6.25021E-06	3.78056E-06	2.24707E-06	1.35191E-06	7.90963E-07
8		6.27539E-02	2.18637E-02	4.46082E-02	5.28804E-02	4.44541E-02	3.50938E-02	3.07057E-02	1.90659E-02	1.44144E-02	1.25102E-02
		6.33100E-03	3.63557E-03	3.48441E-03	2.17171E-03	1.32414E-03	8.32973E-04	5.13568E-04	3.09845E-04	1.88568E-04	1.11304E-04
		6.82174E-05	4.15799E-05	2.48977E-05	1.47215E-05	9.04388E-06	5.47325E-06	3.25459E-06	1.95870E-06	1.14627E-06	6.97932E-07
9		9.32494E-02	4.92128E-02	1.93912E-04	1.98469E-02	2.95476E-02	2.96843E-02	2.05606E-02	1.68436E-02	1.57216E-02	8.43859E-03
		5.02727E-03	4.96998E-03	3.19033E-03	1.98971E-03	1.27371E-03	7.96193E-04	4.85486E-04	2.97901E-04	1.76956E-04	1.08982E-04
		6.66794E-05	4.00452E-05	2.37316E-05	1.46046E-05	8.85069E-06	5.26856E-06	3.17338E-06	1.85829E-06	1.12201E-06	6.86699E-07
10		1.61625E-01	7.31666E-02	1.22432E-03	7.50965E-05	1.41491E-06	5.59979E-03	1.37548E-02	1.53809E-02	9.56375E-03	6.22680E-03
		6.64920E-03	4.59187E-03	3.02901E-03	2.02487E-03	1.30960E-03	8.19942E-04	5.13509E-04	3.09857E-04	1.93144E-04	1.19293E-04
		7.21708E-05	4.30112E-05	2.65846E-05	1.61659E-05	9.64861E-06	5.82348E-06	3.41552E-06	2.08314E-06	1.26486E-06	7.55136E-07
11		2.19752E-01	1.64192E-01	9.16298E-03	5.72578E-04	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	2.55533E-03	2.06169E-03	1.47062E-03	1.01870E-03	6.64254E-04	4.39426E-04	2.84358E-04	1.78390E-04
		1.09314E-04	6.90317E-05	4.26924E-05	2.58169E-05	1.57404E-05	9.30296E-06	5.70844E-06	3.48232E-06	2.08655E-06	1.23435E-06
12		2.72603E-01	2.29648E-01	2.34737E-02	3.06697E-04	1.50814E-04	1.41346E-05	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13		2.82359E-01	3.01143E-01	2.68950E-02	0.0	7.72790E-05	2.28169E-05	1.10849E-05	1.71828E-06	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14		2.88624E-01	3.25216E-01	1.96067E-02	1.05479E-02	0.0	0.0	2.73209E-06	2.46541E-06	1.48682E-06	9.23849E-07
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15		1.39145E-01	4.80471E-01	4.37701E-03	8.24965E-03	3.57068E-02	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16		4.45778E-02	5.46797E-01	0.0	8.52629E-04	4.28850E-02	2.08449E-03	4.23099E-04	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17		4.68893E-02	3.25495E-01	1.53352E-01	0.0	0.0	4.57499E-04	5.29638E-04	3.29550E-04	1.99322E-04	1.22742E-04
		7.22504E-05	4.43982E-05	2.69846E-05	1.68410E-05	9.42266E-06	5.21514E-07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18		0.0	6.96654E-02	3.30977E-01	3.51226E-02	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	4.71926E-05	4.11555E-05	2.45139E-05	1.47745E-05	8.65064E-06	5.27666E-06
		3.19953E-06	1.92380E-06	1.12561E-06	6.87860E-07	0.0	0.0	0.0	0.0	0.0	0.0
19		0.0	0.0	2.78978E-01	8.54974E-02	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20		0.0	0.0	1.14667E-01	1.22928E-01	3.66743E-02	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21		0.0	0.0	0.0	5.12582E-02	5.94806E-02	3.56896E-02	9.61877E-03	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22		0.0	0.0	0.0	0.0	0.0	1.36298E-02	1.59207E-02	9.47599E-03	5.44561E-03	3.02562E-03
		1.83281E-03	1.12259E-03	6.73707E-04	3.42184E-04	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	3.78360E-05	2.76509E-04	1.71001E-04	1.03896E-04	6.20694E-05	3.67527E-05	2.25300E-05	1.35973E-05
		8.12077E-06	4.86937E-06	2.87345E-06	1.77901E-06	1.05102E-06	6.21743E-07	3.72731E-07	2.22821E-07	1.66850E-07	6.58750E-08

TABLE OF (N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP ** KK ** 2	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
1		0.0	0.0	0.0	0.0	0.0	0.0	7.45336E-04	1.13600E-02	1.25846E-02	1.88436E-02
		1.36786E-02	1.16206E-02	9.24834E-03	6.14630E-03	5.08516E-03	3.65952E-03	3.26148E-03	1.70600E-03	9.71412E-04	9.42021E-04
		5.87966E-04	3.58890E-04	2.25957E-04	1.39411E-04	9.41497E-05	5.12226E-05	3.02499E-05	1.85443E-05	1.13052E-05	6.77043E-06
2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	3.00546E-04	7.86298E-04	8.25968E-04	9.22094E-04	1.14126E-03	7.67646E-04	5.26969E-04	5.87658E-04	4.22799E-04
		2.87806E-04	1.97130E-04	1.29957E-04	8.25829E-05	5.23161E-05	3.16477E-05	1.99864E-05	1.24099E-05	7.53888E-06	4.50714E-06

NUCLID = PU239U2F MAT NO = 9438
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	1.00049E+01	2.72386E+00	4.24045E+00	1.75782E-01	3.56518E+00	3.12768E+00	4.12384E-01	8.23433E-01	4.38766E-02	1.09399E-02	0.0
2	1.01377E+01	2.72715E+00	3.96047E+00	2.15514E-01	4.02455E+00	3.11296E+00	5.74890E-02	8.26618E-01	3.94030E-02	3.88247E-02	0.0
3	1.02861E+01	2.22193E+00	3.72948E+00	2.43489E-01	4.58867E+00	3.13204E+00	0.0	8.35639E-01	3.86572E-02	9.31119E-02	0.0
4	1.06300E+01	2.18828E+00	3.55701E+00	1.93642E-01	5.06553E+00	3.17956E+00	0.0	8.21633E-01	4.34122E-02	1.69748E-01	0.0
5	1.09541E+01	2.30579E+00	3.41375E+00	1.22112E-01	5.34267E+00	3.18252E+00	0.0	7.80834E-01	4.98552E-02	2.62292E-01	0.0
6	1.08647E+01	2.25273E+00	3.30542E+00	1.71730E-01	5.41272E+00	3.02651E+00	0.0	7.25389E-01	6.79188E-02	2.71731E-01	0.0
7	1.06327E+01	2.21097E+00	3.21702E+00	3.12325E-01	5.40387E+00	2.70552E+00	0.0	6.51286E-01	6.53515E-02	3.75411E-01	0.0
8	1.01752E+01	2.17267E+00	3.13717E+00	3.83627E-01	5.46280E+00	2.15814E+00	0.0	5.66860E-01	6.85663E-02	4.03723E-01	0.0
9	1.01912E+01	2.15423E+00	3.07752E+00	3.85214E-01	5.71819E+00	1.92362E+00	0.0	5.00866E-01	1.00597E-01	2.80737E-01	0.0
10	1.03397E+01	2.11055E+00	3.03359E+00	4.03609E-01	6.31477E+00	1.51079E+00	0.0	4.48208E-01	1.00896E-01	3.22045E-01	0.0
11	1.06051E+01	1.87862E+00	2.99841E+00	3.87201E-01	7.07111E+00	1.26816E+00	0.0	4.11932E-01	1.59093E-01	2.38880E-01	0.0
12	1.08282E+01	1.56614E+00	2.97757E+00	3.81740E-01	7.64511E+00	1.03521E+00	0.0	3.82046E-01	1.89909E-01	2.31104E-01	0.0
13	1.12075E+01	1.28016E+00	2.96061E+00	3.64192E-01	8.57916E+00	9.64006E-01	0.0	3.54938E-01	2.22858E-01	2.23134E-01	0.0
14	1.17238E+01	1.08227E+00	2.94617E+00	3.57605E-01	9.36179E+00	9.22046E-01	0.0	3.24264E-01	2.24521E-01	2.54892E-01	0.0
15	1.22778E+01	9.28181E-01	2.92509E+00	3.64837E-01	1.01176E+01	8.57191E-01	0.0	2.92664E-01	2.96834E-01	2.15104E-01	0.0
16	1.28152E+01	8.25250E-01	2.92703E+00	3.82028E-01	1.08087E+01	7.88243E-01	0.0	2.61288E-01	3.18753E-01	2.23143E-01	0.0
17	1.33949E+01	7.17236E-01	2.91961E+00	4.16522E-01	1.15676E+01	6.93557E-01	0.0	2.24394E-01	2.80448E-01	2.87682E-01	0.0
18	1.39628E+01	6.47951E-01	2.91369E+00	4.64377E-01	1.22655E+01	5.86057E-01	0.0	1.59520E-01	3.92562E-01	2.23135E-01	0.0
19	1.44226E+01	6.21623E-01	2.90996E+00	5.19527E-01	1.28053E+01	4.85787E-01	0.0	1.62593E-01	5.13261E-01	1.82321E-01	0.0
20	1.48817E+01	6.06497E-01	2.90678E+00	5.92186E-01	1.33126E+01	3.69455E-01	0.0	1.37058E-01	3.90581E-01	2.57476E-01	0.0
21	1.53941E+01	6.12596E-01	2.90764E+00	6.97412E-01	1.38561E+01	2.28036E-01	0.0	1.11108E-01	4.19351E-01	2.56682E-01	0.0
22	1.58891E+01	6.40721E-01	2.90140E+00	8.29909E-01	1.42350E+01	8.76227E-02	0.0	8.90765E-02	4.50376E-01	2.51547E-01	0.0
23	1.64226E+01	7.33298E-01	2.89962E+00	9.51050E-01	1.47463E+01	1.97204E-03	0.0	7.10291E-02	4.63174E-01	2.55928E-01	0.0
24	1.69793E+01	8.02175E-01	2.89827E+00	1.04875E+00	1.51274E+01	0.0	0.0	5.60362E-02	4.76676E-01	2.58476E-01	0.0
25	1.74578E+01	8.15238E-01	2.89725E+00	1.14678E+00	1.54955E+01	0.0	0.0	4.40177E-02	4.96263E-01	2.56978E-01	0.0
26	1.79525E+01	8.14295E-01	2.89642E+00	1.25012E+00	1.58861E+01	0.0	0.0	3.44419E-02	5.10826E-01	2.58650E-01	0.0
27	1.84935E+01	8.21773E-01	2.89579E+00	1.26686E+00	1.62048E+01	0.0	0.0	2.69992E-02	5.41064E-01	2.52175E-01	0.0
28	1.90421E+01	7.97793E-01	2.89529E+00	1.49610E+00	1.67482E+01	0.0	0.0	2.12428E-02	5.53864E-01	2.54634E-01	0.0
29	1.96832E+01	7.80444E-01	2.89491E+00	1.65279E+00	1.72489E+01	0.0	0.0	1.67482E-02	5.66940E-01	2.57476E-01	0.0
30	2.07667E+01	1.15447E+00	2.89459E+00	1.52932E+00	1.77727E+01	0.0	0.0	1.32963E-02	5.88470E-01	2.56682E-01	0.0
31	2.16209E+01	1.19605E+00	2.89440E+00	2.08007E+00	1.82448E+01	0.0	0.0	1.07062E-02	6.21307E-01	2.51553E-01	0.0
32	2.22628E+01	9.03578E-01	2.89420E+00	2.26753E+00	1.89717E+01	0.0	0.0	8.74772E-03	6.32996E-01	2.55932E-01	0.0
33	2.27408E+01	1.35241E+00	2.89406E+00	2.75752E+00	1.96309E+01	0.0	0.0	4.20684E-03	6.52771E-01	2.58474E-01	0.0
34	2.51460E+01	1.56657E+00	2.89397E+00	3.23393E+00	2.03455E+01	0.0	0.0	2.82480E-03	6.60588E-01	2.56979E-01	0.0
35	2.61885E+01	1.23269E+00	2.89388E+00	3.87142E+00	2.11242E+01	0.0	0.0	2.82480E-03	7.02301E-01	2.58650E-01	0.0
36	2.77450E+01	1.25497E+00	2.89382E+00	4.55605E+00	2.19340E+01	0.0	0.0	2.82480E-03	7.47955E-01	2.52169E-01	0.0
37	2.96207E+01	1.42036E+00	2.89377E+00	5.42539E+00	2.27650E+01	0.0	0.0	2.82480E-03	7.69043E-01	2.54642E-01	0.0
38	3.25136E+01	2.22572E+00	2.89373E+00	6.51361E+00	2.36643E+01	0.0	0.0	2.82480E-03	7.91306E-01	2.57472E-01	0.0
39	3.51090E+01	2.66629E+00	2.89370E+00	7.82223E+00	2.46202E+01	0.0	0.0	2.82479E-03	8.25760E-01	2.56683E-01	0.0
40	3.63502E+01	1.29952E+00	2.89368E+00	7.64987E+00	2.74905E+01	0.0	0.0	2.82479E-03	1.85873E+00	2.51509E-01	0.0
41	3.90284E+01	2.87667E+00	2.89366E+00	9.82627E+00	2.73335E+01	0.0	0.0	2.82480E-03	6.05713E-01	2.55672E-01	0.0
42	7.47885E+01	1.42715E+01	2.89364E+00	1.22269E+01	4.82901E+01	0.0	0.0	2.82480E-03	3.82980E-01	2.58483E-01	0.0
43	4.88449E+01	5.31875E+00	2.89364E+00	1.21875E+01	3.12286E+01	0.0	0.0	2.82479E-03	1.25121E+00	2.56958E-01	0.0
44	6.84345E+01	8.41372E+00	2.89363E+00	2.13247E+01	3.86961E+01	0.0	0.0	2.82480E-03	3.09555E-01	2.58532E-01	0.0
45	3.49030E+01	2.74138E+00	2.89362E+00	1.10436E+01	2.11180E+01	0.0	0.0	2.82480E-03	6.39633E-01	2.52154E-01	0.0
46	1.02901E+02	6.64014E+00	2.89362E+00	4.86032E+01	4.74581E+01	0.0	0.0	2.82480E-03	4.47995E-01	2.54589E-01	0.0
47	6.28034E+01	2.97439E+00	2.89361E+00	2.84819E+01	3.13472E+01	0.0	0.0	2.82480E-03	3.94562E-01	2.57476E-01	0.0
48	2.52592E+01	1.45492E+00	2.89361E+00	9.18827E+00	1.46163E+01	0.0	0.0	2.82480E-03	6.32017E-01	2.56688E-01	0.0
49	1.74870E+01	7.02820E-02	2.89361E+00	2.85058E+00	1.45361E+01	0.0	0.0	2.82480E-03	5.08161E-01	2.51553E-01	0.0
50	1.58659E+01	5.71784E-02	2.89360E+00	2.86857E-01	1.55419E+01	0.0	0.0	2.82480E-03	5.22634E-01	2.55923E-01	0.0
51	2.74721E+01	1.40014E+00	2.89361E+00	9.86730E+00	1.62046E+01	0.0	0.0	2.82480E-03	5.29319E-01	2.58483E-01	0.0
52	1.72214E+01	2.44479E-02	2.89360E+00	2.19932E-01	1.69770E+01	0.0	0.0	2.82480E-03	5.93063E-01	2.56983E-01	0.0
53	1.88665E+02	7.01234E+00	2.89360E+00	1.45832E+02	3.58129E+01	0.0	0.0	2.82480E-03	4.43161E-01	2.58650E-01	0.0
54	1.57999E+01	4.38501E-02	2.89360E+00	5.81437E-01	1.51979E+01	0.0	0.0	2.82480E-03	5.35966E-01	2.52176E-01	0.0
55	2.96332E+01	2.26491E+00	2.89360E+00	1.04951E+01	1.70703E+01	0.0	0.0	2.82480E-03	7.27798E-01	2.54642E-01	0.0
56	3.77205E+01	2.79518E+00	2.89360E+00	1.75473E+01	1.62552E+01	0.0	0.0	2.82480E-03	5.62752E-01	2.57477E-01	0.0
57	1.83915E+01	5.56263E-02	2.89360E+00	7.29477E-01	1.75764E+01	0.0	0.0	2.82480E-03	5.93338E-01	2.56689E-01	0.0
58	2.01636E+01	7.62883E-02	2.89360E+00	1.48221E+00	1.86040E+01	0.0	0.0	2.82480E-03	6.44958E-01	2.51553E-01	0.0
59	2.61317E+01	2.05468E-01	2.89360E+00	5.45484E+00	2.04714E+01	0.0	0.0	2.82480E-03	7.34329E-01	2.55933E-01	0.0
60	1.35394E+03	4.09969E+01	2.89360E+00	1.26717E+03	4.97612E+01	0.0	0.0	2.82480E-03	1.47400E+00	2.58483E-01	0.0
61	8.79710E+01	2.42409E+00	2.89360E+00	7.28197E+01	1.17272E+01	0.0	0.0	2.82480E-03	4.95920E-01	2.56983E-01	0.0
62	2.78489E+01	3.92522E-01	2.89360E+00	1.12064E+01	1.62800E+01	0.0	0.0	2.82480E-03	5.56490E-01	2.58650E-01	0.0
63	2.71206E+01	2.22629E-01	2.89360E+00	9.19206E+00	1.76049E+01	0.0	0.0	2.82480E-03	6.05743E-01	2.52175E-01	0.0
64	2.96124E+01	3.66231E-01	2.89360E+00	1.07343E+01	1.85128E+01	0.0	0.0	2.82480E-03	5.27563E-01	2.54642E-01	0.0
65	3.42084E+01	4.74454E-01	2.89360E+00	1.45174E+01	1.93166E+01	0.0	0.0	2.82480E-03	5.46118E-01	2.57477E-01	0.0
66	4.14224E+01	6.50629E-01	2.89360E+00	2.07021E+01	2.00784E+01	0.0	0.0	2.82480E-03	6.72729E-01	2.56688E-01	0.0
67	5.12935E+01	9.04881E-01	2.89360E+00	2.96712E+01	2.09174E+01	0.0	0.0	2.82480E-03	7.11014E-01	2.51553E-01	0.0
68	6.52188E+01	1.26723E+00	2.89360E+00	4.24062E+01	2.15493E+01	0.0	0.0	2.82480E-03	7.23007E-01	2.55933E-01	0.0
69	8.29208E+01	1.75731E+00	2.89367E+00	5.99048E+01	2.72766E+01	0.0	0.0	2.82480E-03	7.29548E-01	2.58483E-01	0.0
70	1.07826E+02	2.38450E+00	2.89360E+00	7.24595E+01	2.29759E+01	0.0	0.0	1.35729E-02	7.66113E-01	2.56983E-01	0.0

NUCLID = PU238J2F   MAT NUMBER = 9438   IPL = 0

TABLE OF INELASTIC MATRICES

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GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	3.29692E-02	3.76129E-02	2.42620E-02	9.32858E-02	1.97275E-01	2.54420E-01	4.13893E-01	5.02945E-01	3.71613E-01	4.06181E-01
	2.31104E-01	1.67727E-01	1.18266E-01	9.42624E-02	5.47506E-02	3.89227E-02	2.21662E-02	1.56430E-02	8.76281E-03	8.22500E-03
	5.02541E-03	3.01774E-03	1.87615E-03	1.14613E-03	6.86509E-04	4.15489E-04	2.44204E-04	1.69183E-04	9.06974E-05	5.42008E-05
2	2.04023E-02	5.41853E-02	7.47998E-02	1.68240E-01	2.30015E-01	2.93136E-01	4.99526E-01	3.81185E-01	4.27046E-01	2.47708E-01
	1.82016E-01	1.29568E-01	1.04092E-01	6.02862E-02	4.34450E-02	3.60507E-02	1.75906E-02	9.87450E-03	9.28472E-03	5.68238E-03
	3.41662E-03	2.12624E-03	1.29991E-03	7.79092E-04	4.71742E-04	2.77366E-04	1.69488E-04	1.03064E-04	6.16016E-05	3.63728E-05
3	2.20824E-02	5.52768E-02	1.52619E-01	2.12250E-01	3.60746E-01	5.05152E-01	3.97691E-01	4.56321E-01	2.69677E-01	2.00550E-01
	1.44083E-01	1.16626E-01	6.80759E-02	4.91925E-02	4.09822E-02	2.06265E-02	1.12948E-02	1.06289E-02	6.51556E-03	3.92245E-03
	2.44337E-03	1.49492E-03	8.96494E-04	5.43074E-04	3.15419E-04	1.95236E-04	1.18746E-04	7.09861E-05	4.19192E-05	2.57269E-05
4	1.68031E-02	5.26095E-02	1.54113E-01	3.87912E-01	5.34245E-01	4.32997E-01	5.08052E-01	3.05522E-01	2.29765E-01	1.66499E-01
	1.35731E-01	7.56755E-02	5.78123E-02	4.83444E-02	2.27380E-02	1.33774E-02	1.26195E-02	7.74773E-03	4.66964E-03	2.91141E-03
	1.78254E-03	1.06956E-03	6.48197E-04	3.81365E-04	2.22157E-04	1.41828E-04	8.48024E-05	5.00844E-05	3.07410E-05	1.85910E-05
5	2.05922E-02	4.28144E-02	6.63321E-02	5.89791E-01	5.06642E-01	6.06993E-01	3.70995E-01	2.81926E-01	2.05952E-01	1.69009E-01
	9.97345E-02	7.26460E-02	6.09607E-02	3.00177E-02	1.69461E-02	1.60101E-02	9.84306E-03	5.93895E-03	2.70590E-03	2.27046E-03
	1.36202E-03	8.26356E-04	4.86239E-04	2.97405E-04	1.80956E-04	1.08207E-04	6.39131E-05	3.92321E-05	2.37277E-05	1.41024E-05
6	5.74579E-02	1.00022E-01	2.29262E-01	1.48674E-01	7.77972E-01	4.64186E-01	3.55959E-01	2.61838E-01	2.16106E-01	1.28109E-01
	9.36252E-02	7.88019E-02	3.88931E-02	2.19929E-02	2.08049E-02	1.28065E-02	7.73424E-03	4.82964E-03	2.96063E-03	1.77813E-03
	1.07839E-03	6.34826E-04	3.85291E-04	2.26293E-04	1.41314E-04	8.34760E-05	5.12441E-05	3.09944E-05	1.84221E-05	1.10831E-05
7	2.02199E-01	2.16976E-01	3.19023E-01	4.04730E-01	1.30964E-01	1.50500E-01	2.58824E-01	3.14396E-01	1.81201E-01	1.29036E-01
	1.08888E-01	5.26621E-02	3.04935E-02	2.88751E-02	1.77947E-02	1.07554E-02	6.72039E-03	4.12169E-03	2.47639E-03	1.50221E-03
	8.84592E-04	5.41145E-04	3.29355E-04	1.96991E-04	1.16274E-04	7.14443E-05	4.22143E-05	2.56862E-05	1.54537E-05	9.04160E-06
8	4.05591E-01	2.04995E-01	2.89220E-01	3.19670E-01	2.95362E-01	2.24695E-01	1.18993E-01	6.30059E-02	4.84183E-02	3.20304E-02
	1.54637E-02	4.04495E-02	2.82230E-02	2.28700E-02	1.28047E-02	9.61479E-03	5.28682E-03	2.16787E-03	1.92256E-03	1.12993E-03
	6.89757E-04	4.15801E-04	2.59531E-04	1.43178E-04	9.27929E-05	5.60446E-05	3.32572E-05	2.05728E-05	1.05775E-05	6.25762E-06
9	4.92040E-01	2.66987E-01	1.42792E-01	1.72015E-01	9.1?724E-02	1.86582E-01	1.47404E-01	1.25416E-01	1.33572E-01	6.75548E-02
	3.11228E-02	2.77927E-02	2.03420E-02	1.11116E-02	6.98555E-03	4.22238E-03	2.23626E-03	1.38669E-03	8.04861E-04	4.63946E-04
	2.66024E-04	1.65666E-04	9.84117E-05	6.16439E-05	2.67957E-05	1.93115E-05	1.45230E-05	8.95588E-06	5.15516E-06	2.27718E-06
10	6.32500E-01	2.43617E-01	5.45044E-02	8.67901E-02	1.22170E-01	5.51890E-02	6.66236E-02	2.74847E-02	2.65227E-02	4.34378E-02
	5.32142E-02	3.69124E-02	2.74696E-02	1.69888E-02	1.02641E-02	7.81541E-03	5.52130E-03	3.42249E-03	2.90022E-03	1.91570E-03
	1.22516E-03	7.84442E-04	5.22910E-04	3.51650E-04	2.39490E-04	1.64467E-04	1.05544E-04	7.42753E-05	5.07369E-05	2.70991E-05
11	5.86579E-01	2.96523E-01	2.48757E-02	1.60475E-03	1.61175E-06	1.62660E-06	6.42597E-02	5.26715E-02	3.81532E-02	3.84619E-02
	2.60233E-02	1.62523E-02	1.01837E-02	6.47857E-03	3.45071E-03	8.47825E-04	5.66467E-04	7.59186E-04	2.60001E-04	1.62803E-04
	9.86342E-05	6.17904E-05	4.57890E-05	1.22874E-05	1.92872E-05	0.0	5.12196E-06	6.28211E-06	0.0	0.0
12	5.27434E-01	4.17637E-01	4.73629E-02	9.27782E-04	3.4939?E-04	2.87482E-05	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	2.02047E-02	1.18127E-02	6.96291E-03	4.24212E-03	2.56536E-03	1.53965E-03	9.10518E-04
	5.60246E-04	3.27238E-04	2.01256E-04	1.20956E-04	7.17545E-05	4.40562E-05	2.54245E-05	1.57747E-05	9.04179E-06	6.78644E-06
13	4.71969E-01	4.64021E-01	4.76952E-02	6.33846E-05	1.69946E-04	6.76180E-05	1.73518E-05	2.32417E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	4.24646E-01	4.45497E-01	3.20361E-02	1.66825E-02	0.0	0.0	7.37916E-06	5.03413E-06	2.18757E-06	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.95619E-01	6.27729E-01	6.48446E-03	1.22161E-02	5.22141E-03	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	6.80212E-02	7.09957E-01	0.0	8.26372E-04	5.55115E-03	2.05736E-03	8.77734E-04	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6.84604E-02	4.26124E-01	1.96411E-01	0.0	0.0	7.09162E-04	7.76437E-04	4.25152E-04	2.58763E-04	1.57190E-04
	9.40721E-05	5.79547E-05	3.52827E-05	2.04489E-05	1.25041E-05	7.56568E-06	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	1.02873E-01	4.44243E-01	2.77919E-02	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	4.56887E-05	4.06989E-05	2.46613E-05	1.44404E-05	8.80878E-06
	5.22715E-06	2.19563E-06	1.29058E-06	1.16690E-06	6.57131E-07	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	3.54935E-01	1.00849E-01	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	1.61093E-01	1.64863E-01	4.34792E-02	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	3.05207E-02	5.47899E-02	4.24026E-02	1.03125E-02	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	2.65266E-02	2.42733E-02	1.44924E-02	8.35436E-03	4.64096E-03
	2.78051E-02	1.70282E-03	6.52942E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	1.21746E-04	7.32459E-04	4.26802E-04	2.55672E-04	1.57578E-04	9.44082E-05	5.57947E-05	3.41135E-05	2.07869E-05
	1.22822E-05	7.47802E-06	4.25778E-06	2.67017E-06	1.55580E-06	9.65401E-07	6.35510E-07	4.07280E-07	2.00156E-07	1.21088E-07

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GROUP I / EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	0.0	0.0	0.0	0.0	0.0	0.0	6.01661E-02	1.26254E-01	1.15605E-01	1.49148E-01
	9.65835E-02	7.62030E-02	5.72992E-02	4.81065E-02	2.85170E-02	2.13960E-02	1.81521E-02	9.04591E-03	5.13961E-03	4.88202E-03
	3.01697E-03	1.82753E-03	1.14396E-03	7.02479E-04	4.22501E-04	2.5551?E-04	1.51137E-04	9.25012E-05	5.63195E-05	2.36948E-05
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	2.96911E-03	2.19766E-02	2.01107E-02	2.21644E-02	1.22274E-02	5.42139E-03	8.80726E-03	5.96348E-03
	3.87471E-03	2.56010E-03	1.64061E-03	1.01985E-03	6.75214E-04	3.81874E-04	2.37127E-04	1.46092E-04	8.82091E-05	5.24897E-05

NUCLID = PU242J2F   MAT NO = 9442
INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.11642E+00	1.91567E+00	4.09981E+00	1.10611E-03	3.75543E+00	1.87181E-01	6.57069E-01	8.08347E-01	4.31471E-02	1.09400E-02	0.0
2	6.77962E+00	1.83752E+00	3.87495E+00	9.00854E-04	3.99132E+00	7.12260E-01	2.39619E-01	8.15585E-01	4.40788E-02	3.98249E-02	0.0
3	7.44992E+00	1.22138E+00	3.62026E+00	1.50570E-02	4.56201E+00	1.45431E+00	7.12602E-04	7.85751E-01	5.27167E-02	9.31126E-02	0.0
4	7.89931E+00	1.25145E+00	3.44279E+00	5.23520E-02	5.15425E+00	1.52777E+00	0.0	7.35415E-01	6.25157E-02	1.69749E-01	0.0
5	8.04271E+00	1.38100E+00	3.20152E+00	1.75932E-02	5.17450E+00	1.52011E+00	0.0	6.87812E-01	6.29158E-02	2.62392E-01	0.0
6	7.91212E+00	1.39475E+00	3.20206E+00	4.10618E-02	4.96543E+00	1.51099E+00	0.0	6.47056E-01	7.41177E-02	2.71731E-01	0.0
7	7.61879E+00	1.42519E+00	3.12000E+00	7.26061E-02	4.64679E+00	1.47421E+00	0.0	5.84672E-01	6.19078E-02	3.75411E-01	0.0
8	7.23580E+00	1.42088E+00	3.04053E+00	9.69666E-02	4.37629E+00	1.34196E+00	0.0	5.06205E-01	5.91459E-02	4.03723E-01	0.0
9	7.04012E+00	1.47469E+00	2.98472E+00	9.44946E-02	4.39995E+00	1.07095E+00	0.0	4.48729E-01	5.16593E-02	2.80737E-01	0.0
10	7.13761E+00	1.28377E+00	2.94278E+00	1.07722E-01	4.77555E+00	9.70251E-01	0.0	4.07421E-01	8.20694E-02	3.22046E-01	0.0
11	7.53657E+00	5.74676E-01	2.91047E+00	1.40304E-01	5.54355E+00	1.17772E+00	0.0	2.78600E-01	1.28346E-01	2.38892E-01	0.0
12	7.89567E+00	3.47679E-01	2.98910E+00	1.40725E-01	6.13994E+00	1.26776E+00	0.0	3.57786E-01	1.51180E-01	2.31111E-01	0.0
13	8.32635E+00	1.64658E-01	2.87250E+00	1.38594E-01	6.75527E+00	1.27769E+00	0.0	3.32475E-01	1.79667E-01	2.23143E-01	0.0
14	8.89650E+00	9.40795E-02	2.85870E+00	1.27880E-01	7.43544E+00	1.22911E+00	0.0	2.97119E-01	1.84056E-01	2.54692E-01	0.0
15	9.56758E+00	6.21490E-02	2.84795E+00	1.40152E-01	8.20042E+00	1.16444E+00	0.0	2.63279E-01	2.49147E-01	2.15111E-01	0.0
16	1.02423E+01	4.19591E-02	2.84011E+00	1.48959E-01	8.95577E+00	1.09562E+00	0.0	2.29092E-01	2.74168E-01	2.23143E-01	0.0
17	1.11695E+01	2.83026E-02	2.83294E+00	1.78454E-01	9.55595E+00	9.56667E-01	0.0	1.89881E-01	2.54471E-01	2.87682E-01	0.0
18	1.22214E+01	2.08470E-02	2.82717E+00	2.23759E-01	1.11042E+01	8.82592E-01	0.0	1.54281E-01	3.70486E-01	2.23143E-01	0.0
19	1.30117E+01	1.52949E-02	2.82262E+00	2.61593E-01	1.19696E+01	7.61979E-01	0.0	1.31849E-01	4.93174E-01	1.82321E-01	0.0
20	1.37798E+01	1.67421E-02	2.82058E+00	2.95572E-01	1.25887E+01	5.98812E-01	0.0	1.09381E-01	3.90089E-01	2.57476E-01	0.0
21	1.46050E+01	1.40749E-02	2.81773E+00	2.73010E-01	1.38496E+01	3.66374E-01	0.0	8.64162E-02	4.28198E-01	2.56688E-01	0.0
22	1.53776E+01	1.26502E-02	2.81550E+00	4.87166E-01	1.47000E+01	1.29661E-01	0.0	6.79954E-02	4.68201E-01	2.51553E-01	0.0
23	1.59037E+01	1.21575E-02	2.81262E+00	5.94520E-01	1.52940E+01	2.04521E-03	0.0	5.26958E-02	4.60272E-01	2.55923E-01	0.0
24	1.62991E+01	1.27461E-02	2.81251E+00	6.68882E-01	1.56209E+01	0.0	0.0	4.25049E-02	4.87760E-01	2.58483E-01	0.0
25	1.65885E+01	1.19955E-02	2.81149E+00	7.89239E-01	1.58177E+01	0.0	0.0	3.34390E-02	5.00157E-01	2.56983E-01	0.0
26	1.68220E+01	1.07702E-02	2.81070E+00	8.82009E-01	1.59592E+01	0.0	0.0	2.62727E-02	5.02776E-01	2.58650E-01	0.0
27	1.70526E+01	9.52937E-03	2.81009E+00	9.59058E-01	1.60840E+01	0.0	0.0	2.07859E-02	5.24025E-01	2.52175E-01	0.0
28	1.72879E+01	8.00366E-03	2.80963E+00	1.06241E+00	1.62145E+01	0.0	0.0	1.65866E-02	5.24465E-01	2.54642E-01	0.0
29	1.75766E+01	5.68289E-03	2.80927E+00	1.17111E+00	1.63995E+01	0.0	0.0	1.33091E-02	5.28542E-01	2.57476E-01	0.0
30	1.80106E+01	5.09484E-03	2.80896E+00	1.29729E+00	1.67092E+01	0.0	0.0	1.08170E-02	5.43198E-01	2.56688E-01	0.0
31	1.95915E+01	1.21416E-02	2.80872E+00	1.45961E+00	1.81198E+01	0.0	0.0	8.89340E-03	6.41586E-01	2.51553E-01	0.0
32	2.21905E+01	1.14834E-02	2.80857E+00	1.67346E+00	2.05056E+01	0.0	0.0	5.29417E-03	6.67191E-01	2.55923E-01	0.0
33	1.97527E+01	1.46432E-02	2.80846E+00	1.95426E+00	1.77348E+01	0.0	0.0	2.77802E-03	5.36102E-01	2.58483E-01	0.0
34	2.10124E+01	9.52894E-03	2.80834E+00	2.32815E+00	1.86804E+01	0.0	0.0	2.77802E-03	6.38290E-01	2.56983E-01	0.0
35	2.02589E+01	2.56235E-02	2.80826E+00	2.78646E+00	1.74468E+01	0.0	0.0	2.77802E-03	4.74289E-01	2.58650E-01	0.0
36	2.10998E+01	2.48358E-02	2.80821E+00	3.32094E+00	1.77401E+01	0.0	0.0	2.77802E-03	6.27594E-01	2.52175E-01	0.0
37	2.41264E+01	5.82279E-03	2.80816E+00	2.66492E+00	2.85556E+01	0.0	0.0	2.77802E-03	6.25798E-01	2.53220E-01	0.0
38	2.55657E+01	3.79493E-02	2.80811E+00	2.25610E+00	2.32414E+01	0.0	0.0	2.77802E-03	2.25928E-01	2.57231E-01	0.0
39	2.54704E+01	2.00542E-01	2.80911E+00	3.37163E+00	2.15987E+01	0.0	0.0	2.77802E-03	5.21332E-01	2.56419E-01	0.0
40	3.54262E+01	5.49280E-02	2.80807E+00	5.42421E+00	2.99571E+01	0.0	0.0	2.77802E-03	3.46069E-01	2.51417E-01	0.0
41	1.95526E+01	1.60354E-02	2.80805E+00	2.56931E+00	1.59652E+01	0.0	0.0	2.77802E-03	4.24844E-01	2.55803E-01	0.0
42	6.29505E+01	3.42001E-02	2.80704E+00	9.40623E+00	5.35100E+01	0.0	0.0	2.77802E-03	3.24142E-01	2.58218E-01	0.0
43	1.74908E+01	2.20795E-02	2.80802E+00	4.90216E+00	1.25847E+01	0.0	0.0	2.77802E-03	5.29055E-01	2.56782E-01	0.0
44	3.07492E+01	1.77706E-02	2.80500E+00	5.98865E+00	2.47428E+01	0.0	0.0	2.77802E-03	3.58429E-01	2.58438E-01	0.0
45	2.78986E+01	2.69752E-02	2.80502E+00	1.19929E+01	1.59759E+01	0.0	0.0	2.77802E-03	3.26622E-01	2.52161E-01	0.0
46	3.52190E+01	3.22011E-02	2.80801E+00	1.32529E+01	2.19328E+01	0.0	0.0	2.77802E-03	3.24930E-01	2.54614E-01	0.0
47	1.28724E+01	3.91454E-02	2.80801E+00	1.30252E+00	1.15610E+01	0.0	0.0	2.77802E-03	2.99938E-01	2.57476E-01	0.0
48	2.99251E+01	2.86959E-02	2.80801E+00	1.34544E+01	1.64520E+01	0.0	0.0	2.77802E-03	5.33672E-01	2.56688E-01	0.0
49	3.05175E+02	1.79036E-01	2.80801E+00	9.32888E+01	2.11705E+02	0.0	0.0	2.77802E-03	2.00089E-01	2.51553E-01	0.0
50	1.24603E+01	1.03124E-02	2.80800E+00	4.40207E+00	8.04716E+00	0.0	0.0	2.77802E-03	2.87766E-01	2.55923E-01	0.0
51	9.41483E+00	2.17567E-02	2.80800E+00	5.74906E-02	9.35417E+00	0.0	0.0	2.77802E-03	3.11677E-01	2.58483E-01	0.0
52	1.89711E+01	2.56629E-02	2.80800E+00	8.82242E+00	1.00620E+01	0.0	0.0	2.77802E-03	3.14154E-01	2.56983E-01	0.0
53	1.01764E+01	4.11006E-02	2.80800E+00	7.49378E-02	1.00674E+01	0.0	0.0	2.77802E-03	3.21328E-01	2.58650E-01	0.0
54	1.51618E+01	1.42007E-02	2.80802E+00	4.71819E+00	1.04224E+01	0.0	0.0	2.77802E-03	3.46400E-01	2.52176E-01	0.0
55	1.08187E+01	5.24841E-02	2.80800E+00	1.16492E-01	1.06970E+01	0.0	0.0	2.77802E-03	3.54614E-01	2.54642E-01	0.0
56	1.13154E+01	6.00525E-02	2.80800E+00	2.16579E-01	1.10929E+01	0.0	0.0	2.77802E-03	3.65127E-01	2.57476E-01	0.0
57	1.21694E+01	6.99782E-02	2.80800E+00	5.08217E-01	1.14971E+01	0.0	0.0	2.77802E-03	3.89767E-01	2.56688E-01	0.0
58	1.40928E+01	8.50856E-02	2.80800E+00	1.41906E+00	1.25882E+01	0.0	0.0	2.77802E-03	4.42970E-01	2.51553E-01	0.0
59	2.08967E+01	1.74218E-02	2.80800E+00	8.74174E+00	3.81392E+01	0.0	0.0	2.77802E-03	5.70867E-01	2.55933E-01	0.0
60	1.70817E+02	9.88627E-02	2.80800E+00	1.33177E+02	3.75417E+01	0.0	0.0	2.77801E-03	2.96341E+00	2.58483E-01	0.0
61	4.23384E+02	2.64311E+00	2.80800E+00	2.97266E+02	2.98644E+02	0.0	0.0	2.77802E-03	6.51855E-02	2.56983E-01	0.0
62	3.09530E+01	3.06922E-02	2.80755E+00	2.70055E+01	3.91690E+00	0.0	0.0	2.77802E-03	1.64883E-01	2.58650E-01	0.0
63	1.76641E+01	2.22277E-02	2.80800E+00	1.19021E+01	5.83910E+00	0.0	0.0	2.77802E-03	2.08558E-01	2.52175E-01	0.0
64	1.49122E+01	2.17515E-02	2.80800E+00	8.20724E+00	6.68213E+00	0.0	0.0	2.77802E-03	2.26897E-01	2.54642E-01	0.0
65	1.39924E+01	2.30958E-02	2.80800E+00	6.81279E+00	7.15514E+00	0.0	0.0	2.77802E-03	2.26088E-01	2.57476E-01	0.0
66	1.37457E+01	2.53220E-02	2.80800E+00	6.27612E+00	7.44426E+00	0.0	0.0	2.77802E-03	2.44360E-01	2.56688E-01	0.0
67	1.38066E+01	2.81067E-02	2.80800E+00	6.14901E+00	7.62948E+00	0.0	0.0	2.77802E-03	2.54625E-01	2.51554E-01	0.0
68	1.40573E+01	3.13902E-02	2.80800E+00	6.26315E+00	7.76209E+00	0.0	0.0	2.77802E-03	2.53760E-01	2.55933E-01	0.0
69	1.44822E+01	3.54124E-02	2.80800E+00	6.59114E+00	7.85545E+00	0.0	0.0	2.77802E-03	2.53839E-01	2.58483E-01	0.0
70	1.50229E+01	3.99182E-02	2.81427E+00	7.05824E+00	7.92847E+00	0.0	0.0	1.35354E-02	2.57222E-01	2.56983E-01	0.0

NUCLID = PU242J2F   MAT NUMBER = 9442   IPL = 0

TABLE OF INELASTIC MATRICES

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GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	0.0	4.66928E-05	2.52810E-04	1.57976E-03	5.01690E-03	8.72393E-03	1.82821E-02	2.79103E-02	2.43079E-02	3.01502E-02
	1.89209E-02	1.46285E-02	1.05770E-02	8.59161E-03	5.35272E-03	3.92292E-03	3.21186E-03	1.63848E-03	9.27696E-04	8.78620E-04
	5.41449E-04	3.27279E-04	2.04506E-04	1.25430E-04	7.52626E-05	4.57201E-05	2.69214E-05	1.64692E-05	1.00237E-05	5.99532E-06
2	0.0	5.20092E-04	3.12959E-03	1.20400E-02	2.40395E-02	5.67257E-02	9.63229E-02	9.05380E-02	1.19154E-01	7.83264E-02
	6.23894E-02	4.72522E-02	3.99509E-02	2.41410E-02	1.78916E-02	1.52508E-02	7.60592E-03	4.32803E-03	4.11638E-03	2.54692E-03
	1.54423E-03	9.67233E-04	5.94342E-04	3.57620E-04	2.17159E-04	1.28004E-04	7.83584E-05	4.77160E-05	2.85510E-05	1.68722E-05
3	0.0	2.24447E-03	1.62459E-02	3.32624E-02	5.95035E-02	1.72279E-01	1.76659E-01	2.48635E-01	1.72190E-01	1.41872E-01
	1.10281E-01	9.52662E-02	5.85565E-02	4.39420E-02	2.78826E-02	1.96669E-02	1.09119E-02	1.04284E-02	6.48193E-03	3.94393E-03
	2.47700E-03	1.52531E-03	9.19210E-04	5.59052E-04	3.29794E-04	2.02038E-04	1.23103E-04	7.36930E-05	4.25640E-05	2.67584E-05
4	0.0	4.08547E-03	2.21297E-02	6.95959E-02	1.52678E-01	1.72234E-01	2.61629E-01	1.92016E-01	1.64299E-01	1.31481E-01
	1.16243E-01	7.28679E-02	5.54670E-02	4.84255E-02	2.46245E-02	1.41829E-02	1.36276E-02	8.51402E-03	5.20074E-03	3.27628E-03
	2.02232E-03	1.22112E-03	7.43651E-04	4.39175E-04	2.69272E-04	1.64178E-04	9.83222E-05	5.81525E-05	3.57300E-05	2.16258E-05
5	5.94646E-02	9.16452E-03	5.28297E-02	1.18531E-01	1.49169E-01	2.47217E-01	1.93586E-01	1.73254E-01	1.43354E-01	1.30404E-01
	8.35050E-02	6.45747E-02	5.72025E-02	2.94324E-02	1.76772E-02	1.65105E-02	1.03761E-02	6.36693E-03	4.02495E-03	2.49128E-03
	1.50749E-03	9.19561E-04	5.43748E-04	3.33713E-04	2.03623E-04	1.22029E-04	7.21992E-05	4.43760E-05	2.68662E-05	1.59804E-05
6	3.16084E-02	2.81165E-02	1.21261E-01	1.23245E-01	2.19591E-01	1.64810E-01	1.72982E-01	1.48332E-01	1.28984E-01	9.11083E-02
	7.16757E-02	6.44592E-02	3.26027E-02	1.96510E-02	1.91257E-02	1.20956E-02	7.45903E-03	4.73236E-03	2.92776E-03	1.78172E-03
	1.09876E-03	6.44568E-04	3.96061E-04	2.41652E-04	1.45027E-04	9.58578E-05	5.27884E-05	3.19687E-05	1.90197E-05	1.14513E-05
7	1.16915E-01	8.72255E-02	1.20912E-01	2.42655E-01	1.56697E-01	1.49482E-01	1.33516E-01	1.29407E-01	8.71297E-02	6.99060E-02
	6.40274E-02	3.20462E-02	1.99727E-02	1.95862E-02	1.24768E-02	7.72586E-03	4.92968E-03	3.07056E-03	1.86713E-03	1.14325E-03
	6.77982E-04	4.17022E-04	2.54325E-04	1.52966E-04	9.05577E-05	5.57291E-05	3.27509E-05	2.00912E-05	1.20989E-05	7.08380E-06
8	2.80020E-01	1.01619E-01	1.22431E-01	1.77664E-01	1.23700E-01	1.37674E-01	1.26219E-01	7.53600E-02	5.58634E-02	5.18290E-02
	2.79360E-02	1.66565E-02	1.65329E-02	1.06251E-02	6.64349E-03	4.25811E-03	2.66435E-03	1.62585E-03	9.98226E-04	5.93221E-04
	3.65474E-04	2.23672E-04	1.34158E-04	7.96361E-05	4.90147E-05	2.97068E-05	1.76849E-05	1.06527E-05	6.23837E-06	3.80035E-06
9	3.50711E-01	1.71745E-01	6.59356E-04	5.99498E-02	9.57625E-02	1.21223E-01	7.70292E-02	5.34902E-02	4.23402E-02	1.94599E-02
	1.04246E-02	1.34247E-02	1.67596E-02	1.05714E-02	6.57432E-03	4.17126E-03	2.49200E-03	1.52008E-03	9.08562E-04	5.53776E-04
	3.41401E-04	2.08696E-04	1.18511E-04	7.74569E-05	4.17279E-05	2.76267E-05	1.94874E-05	9.13961E-06	4.84041E-06	2.93673E-06
10	4.82041E-01	2.19952E-01	2.91001E-03	1.72537E-04	1.72647E-02	3.28629E-02	2.66969E-02	4.50582E-02	2.99822E-02	2.01729E-02
	2.87549E-02	2.38004E-02	1.58106E-02	1.15607E-02	9.84257E-03	6.52940E-03	3.99441E-03	1.97352E-03	1.24054E-03	7.25029E-04
	4.42442E-04	2.62298E-04	1.62939E-04	1.02623E-04	5.11782E-05	5.06764E-05	2.70490E-05	7.82772E-06	9.27415E-06	7.37795E-06
11	6.87004E-01	4.45652E-01	2.21069E-02	9.87726E-04	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	2.58218E-04	7.94855E-03	5.45964E-03	3.31247E-03	1.97505E-03
	1.16544E-02	7.15114E-04	4.32276E-04	2.56757E-04	1.54907E-04	9.11425E-05	5.57871E-05	3.41768E-05	2.02505E-05	1.25750E-05
12	7.01212E-01	5.21656E-01	4.41429E-02	4.36822E-04	1.31501E-04	2.15540E-05	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	6.25299E-01	6.10415E-01	4.21650E-02	2.57462E-04	8.21926E-05	2.12115E-05	8.95134E-06	1.44296E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	5.71529E-01	6.16555E-01	2.67699E-02	1.42100E-02	0.0	0.0	2.19274E-06	1.43692E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	2.61495E-01	6.84175E-01	4.66499E-03	9.96360E-03	4.25129E-03	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	5.55079E-02	1.00244E+00	0.0	3.66496E-04	4.27845E-03	2.21569E-02	7.19600E-04	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	8.85859E-02	6.09442E-01	2.36924E-01	0.0	0.0	4.66415E-04	6.12206E-04	3.22518E-04	1.68209E-04	8.32904E-05
	3.58996E-05	1.45404E-05	8.44512E-06	4.95672E-06	2.01225E-06	1.79295E-06	1.13251E-06	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	1.42212E-01	6.70569E-01	5.97704E-02	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	1.02058E-06	9.47078E-06	5.28421E-06	3.21866E-06
	1.95611E-06	1.14744E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	5.66910E-01	1.75097E-01	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	2.47613E-01	2.75716E-01	8.64122E-02	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	1.27924E-01	1.29099E-01	5.64775E-02	2.27050E-02	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	3.57355E-02	3.94687E-02	2.30372E-02	1.35265E-02	7.85607E-03
	4.75223E-02	2.85425E-02	1.69231E-03	6.45076E-04	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	3.17204E-04	6.85576E-04	4.15552E-04	2.61592E-04	1.50280E-04	8.86697E-05	5.43748E-05	3.28123E-05
	1.95120E-05	1.16303E-05	6.99566E-06	4.10220E-06	2.41245E-06	1.52748E-06	9.22661E-07	5.20918E-07	2.76265E-07	1.92206E-07

TABLE OF (N,2N) MATRICES

PAGE 1 OF 1

GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	0.0	0.0	0.0	0.0	0.0	1.73929E-02	5.10446E-02	1.19271E-01	1.40696E-01	2.21441E-01
	1.66982E-01	1.44427E-01	1.17972E-01	1.05572E-01	6.67922E-02	6.11190E-02	4.45916E-02	2.29373E-02	1.22508E-02	1.27641E-02
	7.99372E-02	4.89194E-02	3.08612E-02	1.95707E-02	1.15250E-02	7.02251E-04	4.14991E-04	2.54550E-04	1.55249E-04	9.30068E-05
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.77720E-02	4.41822E-02
	5.54072E-02	5.95418E-02	6.72174E-02	5.11615E-02	4.42149E-02	4.49227E-02	3.51666E-02	1.54712E-02	1.57066E-02	1.03399E-02
	6.57466E-03	4.27213E-03	2.76215E-03	1.66270E-03	1.07746E-03	6.13624E-04	3.79493E-04	2.22945E-04	1.40253E-04	8.32781E-05
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.70324E-05	2.66080E-04	2.57018E-04
	2.20913E-04	1.89456E-04	1.41415E-04	1.01550E-04	6.04297E-05	4.55216E-05	2.65290E-05	1.94236E-05	1.20216E-05	7.66159E-06

NUCLID = AM241J2F MAT NO = 9541

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 2

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.76434E+00	2.48411E+00	4.52517E+00	1.48516E-05	3.97252E+00	2.08558E-01	9.91160E-02	8.52514E-01	4.01344E-02	1.09399E-02	0.0
2	7.13141E+00	2.36687E+00	4.30149E+00	1.16791E-04	4.35091E+00	3.89948E-01	2.35672E-02	8.41971E-01	4.01459E-02	3.88246E-02	0.0
3	7.37959E+00	2.16227E+00	4.07423E+00	7.98445E-04	4.60545E+00	6.11075E-01	0.0	8.16464E-01	4.42228E-02	9.31118E-02	0.0
4	7.45763E+00	1.99925E+00	3.89273E+00	3.88968E-03	4.70772E+00	7.46971E-01	0.0	7.81231E-01	4.67758E-02	1.69748E-01	0.0
5	7.36556E+00	1.90521E+00	3.74605E+00	1.25524E-02	4.60426E+00	5.63536E-01	0.0	7.49800E-01	4.49457E-02	2.62392E-01	0.0
6	7.28044E+00	1.86380E+00	3.62602E+00	3.09044E-02	4.37443E+00	1.01132E+00	0.0	7.16721E-01	5.27897E-02	2.71731E-01	0.0
7	7.13823E+00	1.84338E+00	3.54708E+00	6.42400E-02	4.09598E+00	1.13465E+00	0.0	6.67545E-01	4.47283E-02	3.75411E-01	0.0
8	6.99891E+00	1.82049E+00	3.46472E+00	1.15249E-01	3.95032E+00	1.11225E+00	0.0	5.93759E-01	4.53882E-02	4.03723E-01	0.0
9	6.93167E+00	1.65429E+00	3.40739E+00	1.79659E-01	4.08316E+00	1.01456E+00	0.0	5.31974E-01	6.75592E-02	2.80737E-01	0.0
10	7.09173E+00	9.94628E-01	3.36491E+00	3.13915E-01	4.61014E+00	1.17305E+00	0.0	4.70499E-01	7.29370E-02	3.22046E-01	0.0
11	7.45598E+00	3.30135E-01	3.32832E+00	4.31036E-01	5.37667E+00	1.34814E+00	0.0	4.13775E-01	1.22149E-01	2.38892E-01	0.0
12	7.97328E+00	1.21528E-01	3.30524E+00	4.97526E-01	6.11459E+00	1.23903E+00	0.0	3.69274E-01	1.52027E-01	2.31112E-01	0.0
13	8.50971E+00	5.52826E-02	3.28744E+00	5.46654E-01	6.60439E+00	1.10338E+00	0.0	3.30718E-01	1.82969E-01	2.23143E-01	0.0
14	9.10779E+00	3.01525E-02	3.27292E+00	6.00146E-01	7.49509E+00	9.52403E-01	0.0	2.92109E-01	1.87405E-01	2.54892E-01	0.0
15	9.68407E+00	2.00608E-02	3.26108E+00	6.53021E-01	8.16654E+00	8.12448E-01	0.0	2.54678E-01	2.50667E-01	2.15111E-01	0.0
16	1.01949E+01	1.87317E-02	3.25241E+00	7.93435E-01	8.76726E+00	5.95372E-01	0.0	2.20468E-01	2.70571E-01	2.23143E-01	0.0
17	1.07731E+01	5.44652E-02	3.24460E+00	8.94639E-01	9.35521E+00	4.36766E-01	0.0	1.84874E-01	2.34445E-01	2.87682E-01	0.0
18	1.12932E+01	2.22574E-02	3.23970E+00	1.00826E+00	9.91045E+00	3.52222E-01	0.0	1.52816E-01	3.25840E-01	2.23143E-01	0.0
19	1.16808E+01	1.28235E-02	3.23556E+00	1.10775E+00	1.02748E+01	2.55363E-01	0.0	1.30106E-01	4.20122E-01	1.62321E-01	0.0
20	1.20709E+01	1.08627E-02	3.23226E+00	1.21655E+00	1.06189E+01	2.24512E-01	0.0	1.08517E-01	3.16748E-01	2.57476E-01	0.0
21	1.25098E+01	1.05495E-02	3.22922E+00	1.34774E+00	1.09756E+01	1.71859E-01	0.0	9.68326E-02	3.34999E-01	2.56668E-01	0.0
22	1.29277E+01	1.37571E-02	3.22690E+00	1.49106E+00	1.13072E+01	1.17697E-01	0.0	6.90239E-02	3.57722E-01	2.51553E-01	0.0
23	1.33274E+01	1.69210E-02	3.22503E+00	1.66473E+00	1.16267E+01	1.69945E-02	0.0	5.44882E-02	3.66208E-01	2.55933E-01	0.0
24	1.37567E+01	3.69614E-02	3.22366E+00	1.81529E+00	1.19044E+01	0.0	0.0	4.28176E-02	3.74630E-01	2.58483E-01	0.0
25	1.41900E+01	4.63433E-02	3.22266E+00	1.98247E+00	1.21613E+01	0.0	0.0	3.36103E-02	3.88083E-01	2.56983E-01	0.0
26	1.46582E+01	8.00649E-02	3.22177E+00	2.17360E+00	1.24043E+01	0.0	0.0	2.64252E-02	3.95389E-01	2.58650E-01	0.0
27	1.51671E+01	1.44446E-01	3.22116E+00	2.38974E+00	1.26329E+01	0.0	0.0	2.09066E-02	4.15132E-01	2.52175E-01	0.0
28	1.57113E+01	1.39723E-01	3.22072E+00	2.69549E+00	1.28731E+01	0.0	0.0	1.66553E-02	4.20765E-01	2.54642E-01	0.0
29	1.63192E+01	1.02091E-01	3.22033E+00	3.09399E+00	1.31231E+01	0.0	0.0	1.33477E-02	4.25244E-01	2.57476E-01	0.0
30	1.70074E+01	8.72506E-02	3.22002E+00	3.55504E+00	1.33621E+01	0.0	0.0	1.06155E-02	4.24989E-01	2.56668E-01	0.0
31	1.77761E+01	9.20517E-02	3.21979E+00	4.10056E+00	1.35550E+01	0.0	0.0	8.91144E-03	4.51734E-01	2.51553E-01	0.0
32	1.86429E+01	1.04993E-01	3.21961E+00	4.74045E+00	1.37975E+01	0.0	0.0	4.61851E-03	4.53268E-01	2.55933E-01	0.0
33	1.96341E+01	1.27041E-01	3.21947E+00	5.50341E+00	1.40036E+01	0.0	0.0	2.79022E-03	4.55330E-01	2.58483E-01	0.0
34	2.07548E+01	1.52257E-01	3.22223E+00	6.39905E+00	1.42034E+01	0.0	0.0	2.79022E-03	4.64395E-01	2.56983E-01	0.0
35	2.20413E+01	1.76657E-01	3.21928E+00	7.46624E+00	1.43984E+01	0.0	0.0	2.79022E-03	4.67633E-01	2.58650E-01	0.0
36	2.34861E+01	1.96396E-01	3.21922E+00	8.70299E+00	1.45867E+01	0.0	0.0	2.79022E-03	4.85720E-01	2.52175E-01	0.0
37	2.51205E+01	2.10578E-01	3.21917E+00	1.01427E+01	1.47673E+01	0.0	0.0	2.79022E-03	4.86850E-01	2.54642E-01	0.0
38	2.69671E+01	2.19973E-01	3.21913E+00	1.18036E+01	1.49436E+01	0.0	0.0	2.79022E-03	4.87165E-01	2.57476E-01	0.0
39	2.90856E+01	2.25492E-01	3.21910E+00	1.37467E+01	1.51144E+01	0.0	0.0	2.79022E-03	4.94081E-01	2.56668E-01	0.0
40	3.14798E+01	2.28685E-01	3.21908E+00	1.59754E+01	1.52757E+01	0.0	0.0	2.79022E-03	5.09358E-01	2.51553E-01	0.0
41	3.41969E+01	2.30312E-01	3.21906E+00	1.85376E+01	1.54269E+01	0.0	0.0	2.79022E-03	5.05548E-01	2.55933E-01	0.0
42	3.73178E+01	2.31062E-01	3.21905E+00	2.15115E+01	1.55753E+01	0.0	0.0	2.79022E-03	5.05168E-01	2.58483E-01	0.0
43	4.08443E+01	2.31304E-01	3.21904E+00	2.49001E+01	1.57129E+01	0.0	0.0	2.79022E-03	5.12431E-01	2.56983E-01	0.0
44	4.49166E+01	2.31263E-01	3.21903E+00	2.86434E+01	1.58420E+01	0.0	0.0	2.79022E-03	5.13187E-01	2.56650E-01	0.0
45	5.72604E+01	2.21563E-01	3.21902E+00	4.08328E+01	1.62060E+01	0.0	0.0	2.79022E-03	3.46835E-01	2.52175E-01	0.0
46	6.43667E+01	2.24982E-01	3.21902E+00	4.99815E+01	1.41623E+01	0.0	0.0	2.79022E-03	3.36623E-01	2.54642E-01	0.0
47	5.75142E+01	2.23713E-01	3.21901E+00	4.51617E+01	1.22259E+01	0.0	0.0	2.79022E-03	3.91660E-01	2.57476E-01	0.0
48	7.24574E+01	1.62350E-01	3.21901E+00	6.06336E+01	1.16615E+01	0.0	0.0	2.79022E-03	3.13622E-01	2.56668E-01	0.0
49	6.96531E+01	1.54976E-01	3.21901E+00	5.86077E+01	1.08504E+01	0.0	0.0	2.79022E-03	3.43516E-01	2.51553E-01	0.0
50	8.50767E+01	4.51281E-01	3.21900E+00	7.23806E+01	1.22449E+01	0.0	0.0	2.79022E-03	2.66555E-01	2.55933E-01	0.0
51	7.40010E+01	2.55320E-01	3.21900E+00	6.33449E+01	1.03989E+01	0.0	0.0	2.79022E-03	3.35228E-01	2.58483E-01	0.0
52	9.33136E+01	3.65240E-01	3.21900E+00	8.21846E+01	1.07808E+01	0.0	0.0	2.79022E-03	3.00457E-01	2.56983E-01	0.0
53	7.12757E+01	2.10915E-01	3.21900E+00	5.98251E+01	1.11296E+01	0.0	0.0	2.79022E-03	4.14991E-01	2.58650E-01	0.0
54	1.62629E+02	8.18490E-01	3.21900E+00	1.46361E+02	1.54495E+01	0.0	0.0	2.79022E-03	3.19507E-01	2.52176E-01	0.0
55	1.02075E+02	2.66791E-01	3.21900E+00	9.16572E+01	1.01214E+01	0.0	0.0	2.79022E-03	3.38802E-01	2.54642E-01	0.0
56	1.28046E+02	9.72146E-01	3.21900E+00	1.17559E+02	9.51509E+00	0.0	0.0	2.79022E-03	3.05595E-01	2.57476E-01	0.0
57	8.73333E+01	4.27767E-01	3.21900E+00	7.67401E+01	1.01554E+01	0.0	0.0	2.79021E-03	3.20450E-01	2.56689E-01	0.0
58	3.24006E+02	3.61931E+00	3.21900E+00	3.07455E+02	1.29234E+01	0.0	0.0	2.79022E-03	2.67590E-01	2.51553E-01	0.0
59	1.69462E+02	5.78242E-01	3.21900E+00	1.59512E+02	9.39166E+00	0.0	0.0	2.79022E-03	2.80692E-01	2.55923E-01	0.0
60	7.87673E+01	2.33187E-01	3.21900E+00	6.88042E+01	9.72989E+00	0.0	0.0	2.79022E-03	2.56846E-01	2.58483E-01	0.0
61	3.51167E+02	1.27962E+00	3.21900E+00	3.29464E+02	1.04025E+01	0.0	0.0	2.79022E-03	3.15272E-01	2.56983E-01	0.0
62	3.33926E+02	7.67546E-01	3.21900E+00	3.22581E+02	1.02774E+01	0.0	0.0	2.79022E-03	3.25664E-01	2.58650E-01	0.0
63	6.35754E+02	4.42044E+00	3.21900E+00	6.13722E+02	1.75001E+01	0.0	0.0	2.79021E-03	1.51310E+00	2.52175E-01	0.0
64	1.13265E+03	8.35225E+00	3.21900E+00	1.11387E+03	1.04192E+01	0.0	0.0	2.79022E-03	2.31273E-01	2.54642E-01	0.0
65	1.80705E+02	7.21322E-01	3.21900E+00	1.71797E+02	8.15651E+00	0.0	0.0	2.79022E-03	2.96336E-01	2.57477E-01	0.0
66	5.46191E+02	1.82395E+00	3.21900E+00	5.32661E+02	1.17062E+01	0.0	0.0	2.79022E-03	5.44468E-01	2.56669E-01	0.0
67	1.50697E+03	4.59320E+00	3.21900E+00	1.49331E+03	8.66710E+00	0.0	0.0	2.79022E-03	2.52130E-01	2.51553E-01	0.0
68	5.84730E+02	2.92649E+00	3.21900E+00	5.72064E+02	9.73956E+00	0.0	0.0	2.79022E-03	4.07249E-01	2.55933E-01	0.0
69	3.51822E+03	2.23104E+01	3.21900E+00	3.48327E+03	1.25369E+01	0.0	0.0	2.79022E-03	1.41979E-01	2.58483E-01	0.0
70	1.18035E+03	5.93175E+00	3.21900E+00	1.16922E+03	4.18166E+00	0.0	0.0	1.51345E-02	1.56203E-01	2.56983E-01	0.0

NUCLID = AM241J2F MAT NUMBER = 9541 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I — EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	9.41160E-07	5.20447E-05	3.50675E-04	1.75227E-03	5.57234E-03	9.69956E-03	2.03442E-02	3.10824E-02	2.70858E-02	3.36101E-02
	2.11103E-02	1.63273E-02	1.20893E-02	1.00320E-02	5.97271E-03	4.37677E-03	3.69602E-03	1.82865E-03	1.03541E-03	9.80662E-04
	6.04349E-04	3.65308E-04	2.26273E-04	1.40009E-04	8.41230E-05	5.10351E-05	3.00512E-05	1.83840E-05	1.11892E-05	6.69240E-06
2	1.81334E-06	2.51015E-04	1.65816E-03	6.42957E-03	1.29417E-02	3.07523E-02	5.25461E-02	4.96115E-02	6.55199E-02	4.31858E-02
	3.44588E-02	2.61332E-02	2.21196E-02	1.33779E-02	9.92111E-03	8.46170E-03	4.22202E-03	2.40319E-03	2.28624E-03	1.41489E-03
	6.58022E-04	5.37499E-04	3.30317E-04	1.58771E-04	1.20731E-04	7.11549E-05	4.25596E-05	2.65263E-05	1.58725E-05	9.37996E-06
3	2.07103E-05	1.11790E-03	5.62970E-03	1.33660E-02	3.66553E-02	7.11873E-02	7.36425E-02	1.04472E-01	7.27618E-02	6.01715E-02
	4.69056E-02	4.06141E-02	2.50103E-02	1.67942E-02	1.62221E-02	5.17296E-03	4.65029E-03	4.47521E-03	2.78304E-03	1.69399E-03
	1.06423E-03	6.55493E-04	3.95139E-04	2.40326E-04	1.41788E-04	8.66889E-05	5.29331E-05	3.16888E-05	1.87337E-05	1.15072E-05
4	2.54216E-04	3.21367E-03	9.52665E-03	3.19876E-02	7.17077E-02	8.21419E-02	1.26302E-01	9.35607E-02	8.05420E-02	6.47553E-02
	5.75213E-02	3.61469E-02	2.75691E-02	2.41160E-02	1.22842E-02	7.08262E-03	6.81118E-03	4.25887E-03	2.60316E-03	1.64069E-03
	1.01312E-03	6.11926E-04	3.72743E-04	2.20169E-04	1.35011E-04	3.23262E-05	4.93121E-05	2.91644E-05	1.79200E-05	1.08467E-05
5	2.09031E-03	6.20437E-03	2.46369E-02	6.41506E-02	8.25855E-02	1.39380E-01	1.10830E-01	9.99357E-02	8.32666E-02	7.61824E-02
	4.90073E-02	3.80246E-02	3.37556E-02	1.74266E-02	1.01267E-02	9.80325E-03	6.16556E-03	3.78869E-03	2.39682E-03	1.48438E-03
	8.98609E-04	5.48335E-04	3.24323E-04	1.99087E-04	1.21496E-04	7.28204E-05	4.30887E-05	2.64857E-05	1.60359E-05	9.53885E-06
6	7.67770E-03	1.95926E-02	5.69268E-02	8.03686E-02	1.49954E-01	1.28627E-01	1.21909E-01	1.05549E-01	9.96906E-02	6.57640E-02
	5.19779E-02	4.69634E-02	2.45540E-02	1.42895E-02	1.40301E-02	8.98827E-03	5.46759E-03	3.48558E-03	2.16550E-03	1.31416E-03
	8.03426E-04	4.75593E-04	2.92454E-04	1.78632E-04	1.07128E-04	6.34291E-05	3.90036E-05	2.36224E-05	1.40551E-05	8.46259E-06
7	5.13571E-02	5.89394E-02	6.90672E-02	1.45665E-01	1.36122E-01	1.36604E-01	1.23599E-01	1.21086E-01	8.22198E-02	6.63786E-02
	6.11410E-02	3.24681E-02	1.92138E-02	1.88756E-02	1.20595E-02	7.49021E-03	4.77961E-03	2.98026E-03	1.81372E-03	1.11125E-03
	6.59332E-04	4.05705E-04	2.48055E-04	1.46893E-04	8.82003E-05	5.42618E-05	3.28755E-05	1.95660E-05	1.17833E-05	6.89937E-06
8	8.75422E-02	1.09345E-01	7.78024E-02	1.14951E-01	1.26374E-01	1.20997E-01	1.24578E-01	8.79748E-02	7.31051E-02	6.91240E-02
	3.74921E-02	2.24822E-02	2.23489E-02	1.44216E-02	9.03055E-03	5.79888E-03	3.63372E-03	2.21990E-03	1.36416E-03	8.11231E-04
	5.00045E-04	3.06153E-04	1.83962E-04	1.09064E-04	6.71393E-05	4.06978E-05	2.42307E-05	1.45969E-05	8.54874E-06	5.20808E-06
9	1.28465E-01	2.29128E-01	1.11699E-01	7.21584E-02	2.50470E-02	9.71975E-02	8.34152E-02	7.11806E-02	6.92848E-02	3.84679E-02
	2.34071E-02	2.35580E-02	1.38814E-02	9.71875E-03	6.25437E-03	3.95954E-03	2.42975E-03	1.49771E-03	8.92900E-04	5.51451E-04
	3.38138E-04	2.03421E-04	1.20709E-04	7.43599E-05	4.50954E-05	2.68828E-05	1.61678E-05	9.46284E-06	5.77627E-06	3.50597E-06
10	2.71285E-01	3.06116E-01	1.01424E-01	1.02995E-01	1.20254E-01	5.55531E-02	2.82721E-02	2.30132E-02	3.73307E-03	9.77261E-04
	1.47017E-02	3.08145E-02	1.94714E-02	1.26752E-02	8.02116E-03	4.94755E-03	3.06035E-03	1.82590E-03	1.13217E-03	6.95018E-04
	4.18501E-04	2.48134E-04	1.53726E-04	9.26716E-05	5.54777E-05	3.36051E-05	1.95056E-05	1.18879E-05	7.21408E-06	4.30496E-06
11	2.51854E-01	3.97491E-01	2.87277E-01	6.57460E-02	6.27665E-02	7.92956E-02	7.57043E-02	4.51601E-02	2.15824E-02	2.17203E-02
	1.06919E-02	7.76440E-03	5.17091E-03	3.30859E-03	2.05787E-03	1.31671E-03	3.21265E-04	5.13896E-04	3.13742E-04	1.92889E-04
	1.12850E-04	5.46184E-05	2.79055E-05	2.76913E-05	6.54266E-06	5.61052E-06	9.54340E-06	2.79900E-06	0.0	0.0
12	2.42994E-01	3.23678E-01	3.40138E-01	1.61548E-01	3.12207E-02	6.91375E-03	2.10562E-02	2.32750E-02	2.37051E-02	2.38061E-02
	1.50813E-02	9.80183E-03	6.10845E-03	3.42777E-03	1.55127E-03	9.05352E-04	5.59784E-04	3.33366E-04	2.00060E-04	1.20772E-04
	7.56993E-05	4.26855E-05	9.53925E-05	1.60162E-04	6.61352E-05	5.74576E-05	3.54713E-05	1.99647E-05	1.24576E-05	6.75404E-06
13	1.91607E-01	3.38340E-01	1.68770E-01	2.38432E-01	1.28643E-01	2.20026E-02	2.72441E-03	3.53188E-03	7.32724E-04	3.32312E-04
	2.12376E-04	1.34166E-04	1.45600E-03	4.18204E-03	2.43949E-03	1.48695E-03	9.05888E-04	5.40503E-04	3.18770E-04	1.96901E-04
	1.17904E-04	7.10648E-05	4.21475E-05	2.50246E-05	1.55110E-05	9.29181E-06	5.59460E-06	2.94589E-06	2.29004E-06	1.20555E-06
14	1.79674E-01	2.74916E-01	5.67068E-02	1.51766E-01	1.27553E-01	8.44593E-02	4.77264E-02	1.60662E-02	7.27073E-03	4.55433E-03
	4.59291E-04	2.73172E-04	2.59356E-04	2.72258E-04	1.66403E-04	1.01221E-04	6.02994E-05	3.54149E-05	2.19157E-05	1.34462E-05
	6.05626E-06	4.61107E-06	2.43755E-06	2.16842E-06	0.0	0.0	0.0	0.0	0.0	0.0
15	9.50739E-02	2.96315E-01	1.12905E-01	1.73648E-02	1.50704E-02	7.12243E-02	7.35611E-02	5.47334E-02	2.44929E-02	1.79087E-02
	1.20534E-02	6.07599E-03	4.17292E-03	1.33837E-03	9.34250E-04	6.41358E-04	3.65323E-04	2.37766E-04	1.42116E-04	8.74879E-05
	5.13819E-05	3.07742E-05	1.54047E-05	1.11706E-05	5.51862E-06	5.23893E-06	0.0	2.24262E-06	2.17016E-06	0.0
16	4.39057E-02	3.12514E-01	7.46220E-02	3.62505E-02	6.44622E-02	7.02546E-03	4.28922E-03	2.01177E-02	1.98798E-02	1.33350E-02
	9.10165E-03	9.72929E-03	1.20926E-02	8.70366E-03	5.79142E-03	3.85975E-03	2.67499E-03	1.69561E-03	9.91423E-04	6.00517E-04
	3.53262E-04	2.10012E-04	1.27776E-04	6.67419E-05	4.24728E-05	2.70827E-05	2.04360E-05	1.01111E-05	5.69456E-06	2.02407E-06
17	4.90078E-02	2.08860E-01	9.30423E-02	4.54260E-02	2.51143E-02	7.46659E-03	1.55542E-03	2.06591E-03	1.23390E-03	7.49689E-04
	4.52742E-04	2.85524E-04	1.83455E-04	1.12190E-04	7.23495E-05	4.61009E-05	3.00741E-05	2.07646E-05	1.33560E-05	9.26319E-06
	5.64859E-06	3.32078E-06	2.71559E-06	9.36954E-07	0.0	1.28805E-06	0.0	0.0	0.0	0.0
18	0.0	7.50791E-02	2.27286E-01	1.92227E-02	1.58701E-02	1.71653E-02	1.07168E-02	3.47201E-03	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	2.53735E-03	2.34475E-01	3.62338E-02	0.0	0.0	4.11960E-03	5.70154E-02	3.37645E-02	2.07362E-03
	1.25624E-03	7.46227E-04	4.25892E-04	1.40138E-05	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	1.14106E-01	9.82054E-02	9.42156E-02	0.0	0.0	0.0	0.0	0.0
	0.0	1.99769E-05	1.03153E-03	6.96419E-04	4.11198E-04	2.48338E-04	1.45601E-04	5.65039E-05	5.39600E-05	3.20164E-05
	1.91513E-05	1.16011E-05	7.21969E-06	4.06756E-06	2.53766E-06	1.46717E-06	9.22120E-07	6.20440E-07	2.82961E-07	0.0
21	0.0	0.0	0.0	7.63887E-02	6.05517E-02	3.45880E-02	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	1.00526E-02	3.77907E-02	2.67764E-02	1.90074E-02	1.31401E-02	8.97088E-03
	1.95902E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.92199E-03
	5.32586E-03	3.48315E-03	2.10999E-03	1.23849E-03	7.56507E-04	4.60819E-04	2.76630E-04	1.62755E-04	9.82620E-05	6.11987E-05
	3.55612E-05	2.12545E-05	1.25427E-05	7.66582E-06	4.62409E-06	3.15629E-06	1.36729E-06	6.63059E-07	1.11722E-06	5.83961E-07

NUCLID = AM4262F MAT NO = 9521
INFINITE DILUTION CROSS SECTION

PAGE 1 OF 2

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	5.98739E+00	2.32963E+00	4.83959E+00	5.53628E-05	2.95520E+00	4.50266E-01	2.52068E-01	2.37497E-01	2.36275E-02	1.09399E-02	0.0
2	6.56300E+00	1.93732E+00	4.51472E+00	2.94222E-04	3.51771E+00	9.36678E-01	1.70988E-01	8.31595E-01	3.42703E-02	3.88245E-02	0.0
3	7.16227E+00	1.70454E+00	4.24592E+00	1.55959E-03	4.15495E+00	1.27800E+00	2.32189E-02	8.30098E-01	3.61643E-02	9.31119E-02	0.0
4	7.62351E+00	1.76169E+00	4.03826E+00	5.56925E-03	4.58342E+00	1.27284E+00	0.0	6.15912E-01	3.64016E-02	1.69746E-01	0.0
5	7.74881E+00	1.79964E+00	3.87117E+00	1.69189E-02	4.61381E+00	1.31845E+00	0.0	7.87673E-01	3.90062E-02	2.62392E-01	0.0
6	7.65483E+00	1.74576E+00	3.74735E+00	4.10266E-02	4.39324E+00	1.47080E+00	0.0	7.48192E-01	4.75941E-02	2.71731E-01	0.0
7	7.40828E+00	1.65736E+00	3.64538E+00	8.69737E-02	4.00558E+00	1.65836E+00	0.0	5.90292E-01	4.04596E-02	3.75411E-01	0.0
8	7.09158E+00	1.54142E+00	3.54896E+00	1.65922E-01	3.69418E+00	1.69006E+00	0.0	6.15376E-01	3.90566E-02	4.03723E-01	0.0
9	6.97809E+00	1.47741E+00	3.48269E+00	2.71191E-01	3.70863E+00	1.52086E+00	0.0	5.54726E-01	5.72615E-02	2.80737E-01	0.0
10	7.15953E+00	1.56203E+00	3.42878E+00	3.96591E-01	4.06996E+00	1.13095E+00	0.0	5.04208E-01	5.88245E-02	3.22046E-01	0.0
11	7.59757E+00	1.66509E+00	3.39034E+00	4.75105E-01	4.67238E+00	7.65002E-01	0.0	4.55727E-01	9.65805E-02	2.36892E-01	0.0
12	8.16195E+00	1.50084E+00	3.36460E+00	4.45670E-01	5.25113E+00	6.64310E-01	0.0	4.21502E-01	1.18776E-01	2.31112E-01	0.0
13	8.77957E+00	2.00447E+00	3.34486E+00	4.09182E-01	5.62894E+00	5.37278E-01	0.0	3.53206E-01	1.44667E-01	2.22143E-01	0.0
14	9.44162E+00	2.22382E+00	3.32860E+00	3.67563E-01	6.43183E+00	3.95397E-01	0.0	3.40412E-01	1.50187E-01	2.54892E-01	0.0
15	1.00880E+01	2.41405E+00	3.31591E+00	3.78842E-01	7.01187E+00	2.83254E-01	0.0	2.97131E-01	2.02592E-01	2.15111E-01	0.0
16	1.06511E+01	2.55094E+00	3.30554E+00	3.67900E-01	7.51283E+00	2.19465E-01	0.0	2.57429E-01	2.19909E-01	2.23143E-01	0.0
17	1.12561E+01	2.66553E+00	3.29752E+00	3.66985E-01	8.05573E+00	1.67879E-01	0.0	2.12484E-01	1.95008E-01	2.87682E-01	0.0
18	1.18009E+01	2.74718E+00	3.29119E+00	3.82760E-01	8.54614E+00	1.24810E-01	0.0	1.74142E-01	2.74526E-01	2.23143E-01	0.0
19	1.22103E+01	2.79993E+00	3.28692E+00	4.06902E-01	8.90746E+00	9.60374E-02	0.0	1.46265E-01	3.57567E-01	1.82321E-01	0.0
20	1.25283E+01	2.85645E+00	3.28324E+00	4.43108E-01	9.26312E+00	6.55540E-02	0.0	1.19941E-01	2.73022E-01	2.57476E-01	0.0
21	1.30780E+01	2.93374E+00	3.27978E+00	4.90223E-01	9.62466E+00	2.94140E-02	0.0	9.43831E-02	2.90944E-01	2.56688E-01	0.0
22	1.35231E+01	3.03222E+00	3.27710E+00	5.31922E-01	9.94257E+00	1.63948E-02	0.0	7.39130E-02	3.12007E-01	2.51553E-01	0.0
23	1.39647E+01	3.16518E+00	3.27565E+00	5.76013E-01	1.02228E+01	6.46759E-04	0.0	5.76918E-02	3.19724E-01	2.55933E-01	0.0
24	1.44383E+01	3.34255E+00	3.27346E+00	6.26805E-01	1.04690E+01	0.0	0.0	4.48416E-02	3.27450E-01	2.58483E-01	0.0
25	1.49362E+01	3.56990E+00	3.27222E+00	6.84355E-01	1.06819E+01	0.0	0.0	3.48836E-02	3.38621E-01	2.56983E-01	0.0
26	1.54793E+01	3.85415E+00	3.27126E+00	7.54298E-01	1.08708E+01	0.0	0.0	2.72409E-02	3.44453E-01	2.58650E-01	0.0
27	1.60706E+01	4.19870E+00	3.27052E+00	8.36843E-01	1.10351E+01	0.0	0.0	2.14394E-02	3.59996E-01	2.52175E-01	0.0
28	1.67227E+01	4.61075E+00	3.26995E+00	9.36443E-01	1.11755E+01	0.0	0.0	1.70486E-02	3.62114E-01	2.54642E-01	0.0
29	1.74589E+01	5.09849E+00	3.26952E+00	1.05678E+00	1.13036E+01	0.0	0.0	1.36496E-02	3.63215E-01	2.57476E-01	0.0
30	1.82992E+01	5.67881E+00	3.26917E+00	1.20249E+00	1.14195E+01	0.0	0.0	1.10562E-02	3.68697E-01	2.56688E-01	0.0
31	1.92421E+01	6.34425E+00	3.26591E+00	1.37708E+00	1.15208E+01	0.0	0.0	9.10787E-03	3.79955E-01	2.51553E-01	0.0
32	2.03053E+01	7.11255E+00	3.26870E+00	1.56357E+00	1.16112E+01	0.0	0.0	4.36257E-03	3.78392E-01	2.55933E-01	0.0
33	2.15368E+01	8.01530E+00	3.26554E+00	1.87958E+00	1.16935E+01	0.0	0.0	2.77800E-03	3.77162E-01	2.58483E-01	0.0
34	2.29395E+01	9.05283E+00	3.26842E+00	2.11020E+00	1.17765E+01	0.0	0.0	2.77800E-03	3.81629E-01	2.56983E-01	0.0
35	2.45314E+01	1.02502E+01	3.26832E+00	2.44472E+00	1.18366E+01	0.0	0.0	2.77800E-03	3.81391E-01	2.58650E-01	0.0
36	2.63551E+01	1.16096E+01	3.26825E+00	2.84666E+00	1.18988E+01	0.0	0.0	2.77800E-03	3.93017E-01	2.52175E-01	0.0
37	2.83413E+01	1.31427E+01	3.26819E+00	3.25172E+00	1.19468E+01	0.0	0.0	2.77800E-03	3.90552E-01	2.54642E-01	0.0
38	3.06496E+01	1.49031E+01	3.26815E+00	3.75415E+00	1.19924E+01	0.0	0.0	2.77800E-03	3.87680E-01	2.57476E-01	0.0
39	3.32574E+01	1.69220E+01	3.26812E+00	4.32626E+00	1.20391E+01	0.0	0.0	2.77800E-03	3.90459E-01	2.56688E-01	0.0
40	3.62961E+01	1.92061E+01	3.26809E+00	5.00920E+00	1.20808E+01	0.0	0.0	2.77800E-03	3.99761E-01	2.51553E-01	0.0
41	3.97041E+01	2.17929E+01	3.26807E+00	5.79166E+00	1.21193E+01	0.0	0.0	2.77800E-03	3.94119E-01	2.55933E-01	0.0
42	4.36227E+01	2.47868E+01	3.26805E+00	6.68052E+00	1.21534E+01	0.0	0.0	2.77800E-03	3.91247E-01	2.58483E-01	0.0
43	4.80179E+01	2.81676E+01	3.26804E+00	7.66085E+00	1.21835E+01	0.0	0.0	2.77800E-02	3.94458E-01	2.56983E-01	0.0
44	5.30983E+01	3.20661E+01	3.26803E+00	8.82101E+00	1.22112E+01	0.0	0.0	2.77800E-03	3.92778E-01	2.58650E-01	0.0
45	5.88016E+01	3.64527E+01	3.26802E+00	1.01131E+01	1.22355E+01	0.0	0.0	2.77800E-03	4.03608E-01	2.52175E-01	0.0
46	6.52315E+01	4.13830E+01	3.26802E+00	1.15905E+01	1.22580E+01	0.0	0.0	2.77800E-03	4.00414E-01	2.54642E-01	0.0
47	7.26100E+01	4.70214E+01	3.26801E+00	1.33101E+01	1.22786E+01	0.0	0.0	2.77800E-03	3.96634E-01	2.57476E-01	0.0
48	8.09678E+01	5.34464E+01	3.26948E+00	1.52239E+01	1.22974E+01	0.0	0.0	2.77800E-03	3.98447E-01	2.56688E-01	0.0
49	9.04627E+01	6.07467E+01	3.26801E+00	1.74025E+01	1.23134E+01	0.0	0.0	2.77800E-03	4.07026E-01	2.51553E-01	0.0
50	1.01222E+02	6.89522E+01	3.26801E+00	1.99315E+01	1.23280E+01	0.0	0.0	2.77800E-03	4.00570E-01	2.55933E-01	0.0
51	1.13648E+02	7.84937E+01	3.26800E+00	2.28123E+01	1.23418E+01	0.0	0.0	2.77800E-03	3.97011E-01	2.58483E-01	0.0
52	1.27605E+02	8.92481E+01	3.26800E+00	2.60039E+01	1.23525E+01	0.0	0.0	2.77800E-03	3.99691E-01	2.56983E-01	0.0
53	1.43596E+02	1.01582E+02	3.26800E+00	2.96514E+01	1.23623E+01	0.0	0.0	2.77800E-03	3.97328E-01	2.58650E-01	0.0
54	1.61568E+02	1.15491E+02	3.26800E+00	3.37066E+01	1.23705E+01	0.0	0.0	2.77800E-03	4.07834E-01	2.52176E-01	0.0
55	1.82186E+02	1.31109E+02	3.26800E+00	3.86926E+01	1.23844E+01	0.0	0.0	2.77800E-03	4.04475E-01	2.54642E-01	0.0
56	2.05405E+02	1.49957E+02	3.26800E+00	4.40576E+01	1.23905E+01	0.0	0.0	2.77800E-03	3.99855E-01	2.57476E-01	0.0
57	2.31578E+02	1.69360E+02	3.26657E+00	4.98259E+01	1.23924E+01	0.0	0.0	2.77800E-03	4.01387E-01	2.56688E-01	0.0
58	2.61913E+02	1.92391E+02	3.26800E+00	5.71223E+01	1.24000E+01	0.0	0.0	2.77800E-03	4.09770E-01	2.51553E-01	0.0
59	2.95477E+02	2.18413E+02	3.26800E+00	6.46522E+01	1.24023E+01	0.0	0.0	2.77800E-03	4.02731E-01	2.55933E-01	0.0
60	3.34565E+02	2.46404E+02	3.27019E+00	7.37563E+01	1.24058E+01	0.0	0.0	2.77800E-03	3.98965E-01	2.58483E-01	0.0
61	3.78950E+02	2.82464E+02	3.26800E+00	8.40549E+01	1.24116E+01	0.0	0.0	2.77800E-03	4.01493E-01	2.56983E-01	0.0
62	4.29882E+02	3.21825E+02	3.26800E+00	9.58299E+01	1.24167E+01	0.0	0.0	2.77800E-03	3.99040E-01	2.56650E-01	0.0
63	4.87131E+02	3.65660E+02	3.26800E+00	1.09050E+02	1.24214E+01	0.0	0.0	2.77800E-03	4.09451E-01	2.52175E-01	0.0
64	5.51795E+02	4.15112E+02	3.26800E+00	1.24257E+02	1.24291E+01	0.0	0.0	2.77800E-03	4.05827E-01	2.54642E-01	0.0
65	6.38036E+02	4.71521E+02	3.26800E+00	1.53940E+02	1.25757E+01	0.0	0.0	2.77800E-03	4.10307E-01	2.57476E-01	0.0
66	7.45492E+02	5.35809E+02	3.26800E+00	1.96855E+02	1.22777E+01	0.0	0.0	2.77800E-03	4.18727E-01	2.56688E-01	0.0
67	8.77589E+02	6.06983E+02	3.26800E+00	2.55609E+02	1.29964E+01	0.0	0.0	2.77800E-03	4.28782E-01	2.51553E-01	0.0
68	1.03399E+03	6.91385E+02	3.26800E+00	3.29554E+02	1.29058E+01	0.0	0.0	2.77800E-03	4.16997E-01	2.55933E-01	0.0
69	1.22904E+03	7.86778E+02	3.26800E+00	4.29460E+02	1.27845E+01	0.0	0.0	2.77800E-03	4.09447E-01	2.58483E-01	0.0
70	1.77738E+03	2.56268E+02	3.26800E+00	9.08405E+02	1.26660E+01	0.0	0.0	1.34388E-02	4.07884E-01	2.56983E-01	0.0

NUCLID = AM420J2F MAT NUMBER = 9521 IPL = 0

TABLE OF INELASTIC MATRICES

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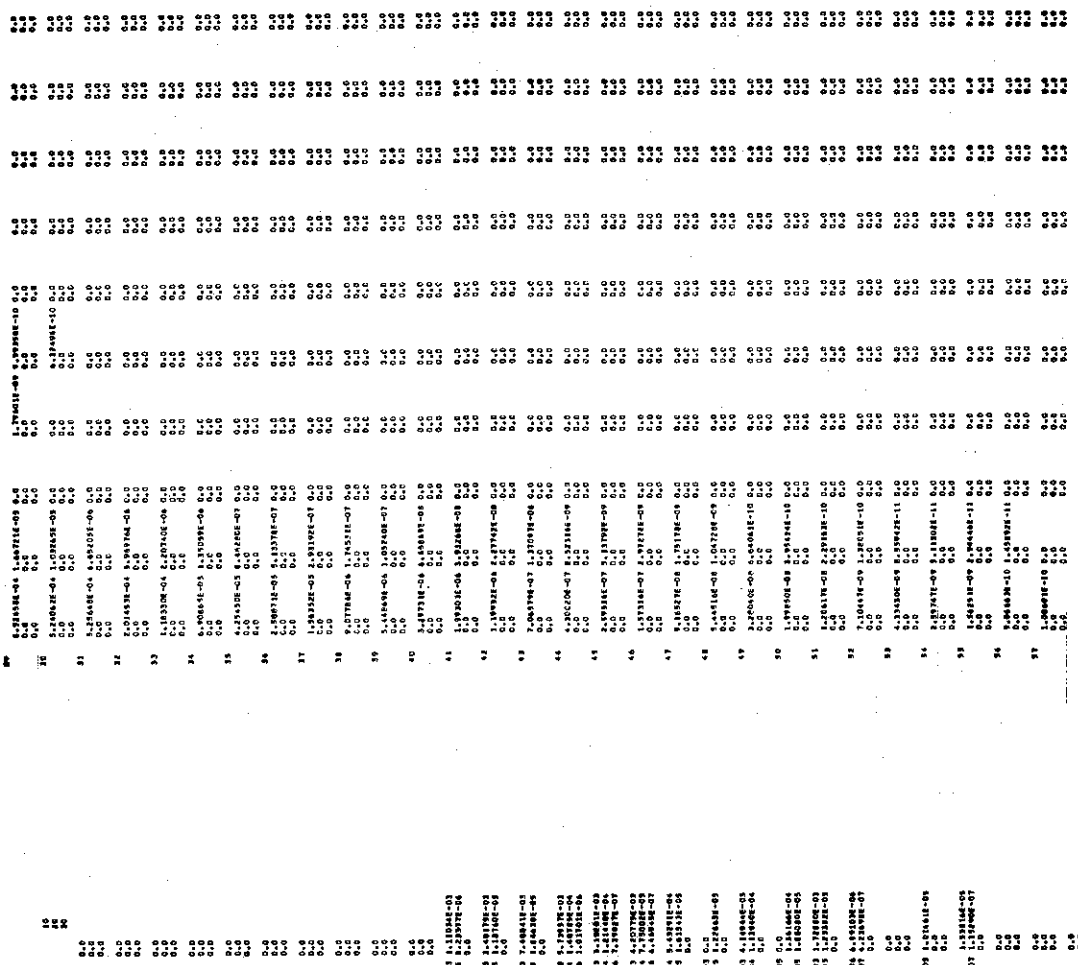
EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1 / 11 / 21	2 / 12 / 22	3 / 13 / 23	4 / 14 / 24	5 / 15 / 25	6 / 16 / 26	7 / 17 / 27	8 / 18 / 28	9 / 19 / 29	10 / 20 / 30
1	2.33957E-01	2.16209E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	5.01585E-01	4.35093E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	7.25726E-01	5.52272E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	7.41294E-01	5.21544E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	7.31578E-01	5.35159E-01	1.70912E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	6.55033E-01	5.14275E-01	1.49515E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.91848E-01	6.61566E-01	4.95024E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	6.13197E-01	7.51215E-01	8.54297E-02	2.17993E-04	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	5.02313E-01	9.35329E-01	8.69297E-02	2.20083E-03	8.05518E-05	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	4.17875E-01	4.40132E-01	2.32127E-01	3.74382E-02	2.16723E-03	1.91512E-04	1.51760E-05	3.25972E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	2.29917E-01	2.26792E-01	1.88013E-01	1.23611E-01	1.52613E-02	1.95140E-03	3.52941E-04	9.71209E-05	1.25313E-06	1.06944E-06
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	1.79212E-01	1.98205E-01	8.94097E-02	1.12265E-01	6.42216E-02	1.73781E-02	2.66741E-03	3.54212E-04	2.63094E-04	8.31136E-05
	2.00958E-05	1.27741E-05	7.79549E-06	4.60591E-06	2.74809E-06	1.65142E-06	9.85054E-07	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	1.22156E-01	2.14871E-01	2.22429E-02	3.66429E-02	7.80469E-02	3.53700E-02	1.48870E-02	7.40418E-03	2.07935E-03	7.59490E-04
	4.66671E-04	2.35363E-04	5.41214E-05	1.32847E-05	7.79463E-06	4.78518E-06	2.66351E-06	1.74342E-06	9.90985E-07	6.35620E-07
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	9.17143E-02	1.72580E-01	3.73510E-02	1.19948E-02	1.26552E-02	1.45568E-02	2.11096E-02	1.49366E-02	8.30860E-03	5.32243E-03
	3.37171E-03	2.53740E-03	3.44614E-04	4.39504E-04	2.66026E-04	1.63043E-04	9.75490E-05	5.76017E-05	3.53307E-05	2.14907E-05
	1.29558E-05	7.42762E-06	3.87094E-06	3.61075E-06	9.14749E-07	9.90424E-07	1.15999E-06	0.0	0.0	0.0
15	2.51354E-02	1.72246E-01	5.24600E-02	7.67755E-03	4.06375E-03	1.07056E-05	2.15384E-03	3.52363E-03	2.19973E-03	1.34214E-03
	7.99004E-04	3.38122E-03	2.86860E-03	1.90264E-03	1.18851E-03	6.71256E-04	3.88813E-04	2.37076E-04	1.41586E-04	8.44475E-05
	5.12535E-05	3.33324E-05	1.64589E-05	1.03766E-05	6.66749E-06	4.17532E-06	2.52411E-06	1.46385E-06	7.41964E-07	5.15054E-07
16	4.82200E-03	1.56449E-01	4.82182E-02	2.42177E-04	4.69460E-03	2.75006E-03	1.06454E-03	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	2.91544E-04	3.22250E-04	2.01586E-04	1.22110E-04	7.26357E-05	4.37812E-05
	2.55789E-05	1.56775E-05	9.45232E-06	5.72055E-06	3.28729E-06	2.10480E-06	1.21365E-06	7.70953E-07	4.67522E-07	2.57119E-07
17	4.61624E-03	6.37342E-02	6.12139E-02	3.27578E-02	2.67688E-03	4.58059E-04	9.29131E-04	5.69307E-04	3.45630E-04	2.10891E-04
	1.25415E-04	7.73857E-05	4.66949E-05	2.79256E-05	1.69816E-05	1.01747E-05	6.32014E-06	3.54567E-06	2.44882E-06	2.14356E-07
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	6.95512E-03	5.31296E-02	2.96520E-02	2.30227E-02	1.70226E-03	2.49665E-06	1.15363E-06	7.26193E-07	4.32820E-07
	2.55444E-07	1.62742E-07	0.0	0.0	0.0	0.0	0.0	0.0	9.84320E-06	2.86776E-05
	1.75537E-05	1.04914E-05	5.19642E-06	3.80135E-06	2.30660E-06	1.37157E-06	5.29410E-07	4.38492E-07	2.99834E-07	1.84022E-07
19	0.0	0.0	3.88896E-02	1.67690E-02	2.07845E-02	1.57195E-02	3.69390E-03	0.0	0.0	0.0
	0.0	1.21611E-07	2.67855E-07	1.64942E-07	1.00125E-07	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	1.49629E-02	1.99066E-02	7.52629E-03	5.71340E-03	6.06212E-03	3.96170E-03	2.71691E-03	1.87634E-03
	1.30111E-03	3.61111E-04	5.32920E-04	2.26359E-04	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	6.54219E-03	1.00486E-02	6.75372E-03	1.90123E-03	3.87706E-04	0.0	0.0
	0.0	0.0	4.75119E-04	1.31011E-03	7.90909E-04	4.63641E-04	2.62629E-04	1.72166E-04	1.02596E-04	6.03763E-05
	3.75066E-05	2.25914E-05	1.33282E-05	7.99951E-06	4.89711E-06	2.86335E-06	1.78394E-06	9.85935E-07	7.02809E-07	3.48510E-07
22	0.0	0.0	0.0	0.0	0.0	3.67788E-03	3.66673E-03	3.18401E-03	2.22823E-03	1.52987E-03
	9.20358E-04	5.99044E-04	2.86504E-04	2.42157E-05	1.38739E-05	8.77613E-06	5.05564E-06	2.99365E-06	1.76531E-06	1.04522E-06
	6.56926E-07	5.11705E-07	1.51440E-07	1.89950E-07	0.0	1.06027E-07	6.47032E-08	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	3.23862E-05	2.26245E-04	1.32906E-04	8.12361E-05	4.93544E-05	2.94346E-05	1.74882E-05	1.07116E-05	6.43394E-06
	3.85497E-06	2.29480E-06	1.37492E-06	6.41150E-07	5.15421E-07	3.05282E-07	1.55995E-07	1.23079E-07	7.00761E-08	3.48485E-08

NUCLID = AM42MJ2F MAT NO = 9522
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	5.98875E+00	2.29485E+00	4.83831E+00	7.92569E-06	2.95520E+00	3.86423E-01	2.52068E-01	8.37497E-01	3.36275E-02	1.09399E-02	0.0
2	6.58049E+00	2.06395E+00	4.51395E+00	8.21885E-05	3.51771E+00	9.07760E-01	1.70968E-01	8.21595E-01	3.42703E-02	3.88245E-02	0.0
3	7.15746E+00	1.73171E+00	4.24770E+00	5.70349E-04	4.15495E+00	1.24703E+00	2.32189E-02	8.30098E-01	2.61643E-02	9.31119E-02	0.0
4	7.61079E+00	1.73412E+00	4.03817E+00	2.29166E-03	4.58342E+00	1.29096E+00	0.0	8.15912E-01	3.83997E-02	1.69748E-01	0.0
5	7.75027E+00	1.83613E+00	3.87042E+00	7.01807E-03	4.61272E+00	1.29340E+00	0.0	7.87687E-01	2.90005E-02	2.62392E-01	0.0
6	7.66235E+00	1.87126E+00	3.74681E+00	1.65598E-02	4.39273E+00	1.38261E+00	0.0	7.47282E-01	4.75586E-02	2.71731E-01	0.0
7	7.41231E+00	1.83092E+00	3.64365E+00	3.47067E-02	4.00236E+00	1.54433E+00	0.0	6.90850E-01	4.02708E-02	3.75411E-01	0.0
8	7.10254E+00	1.72487E+00	3.54987E+00	6.70024E-02	3.67959E+00	1.62108E+00	0.0	6.17786E-01	3.85122E-02	4.03723E-01	0.0
9	6.98075E+00	1.63748E+00	3.48301E+00	1.12741E-01	3.64816E+00	1.56238E+00	0.0	5.60608E-01	3.54180E-02	2.80737E-01	0.0
10	7.14954E+00	1.67931E+00	3.42924E+00	1.75167E-01	3.98264E+00	1.31142E+00	0.0	5.14993E-01	5.58968E-02	3.22046E-01	0.0
11	7.61666E+00	1.79233E+00	3.39046E+00	2.42107E-01	4.55445E+00	1.02777E+00	0.0	4.70534E-01	9.23529E-02	2.36891E-01	0.0
12	8.16244E+00	1.88269E+00	3.36465E+00	2.51429E-01	5.13617E+00	8.92347E-01	0.0	4.30865E-01	1.14890E-01	2.31112E-01	0.0
13	8.77722E+00	2.05497E+00	3.34524E+00	2.45257E-01	5.72659E+00	7.50275E-01	0.0	3.90012E-01	1.41284E-01	2.23142E-01	0.0
14	9.43900E+00	2.25780E+00	3.32863E+00	2.49716E-01	6.35566E+00	5.76830E-01	0.0	3.44440E-01	1.48074E-01	2.56892E-01	0.0
15	1.00763E+01	2.44052E+00	3.31605E+00	2.58540E-01	6.95403E+00	4.23262E-01	0.0	2.99535E-01	2.00883E-01	2.15111E-01	0.0
16	1.06458E+01	2.58706E+00	3.30651E+00	2.70955E-01	7.47943E+00	3.08396E-01	0.0	2.58697E-01	2.18992E-01	2.22143E-01	0.0
17	1.12645E+01	2.71604E+00	3.29791E+00	2.86801E-01	8.03865E+00	2.23062E-01	0.0	2.13715E-01	1.94750E-01	2.87682E-01	0.0
18	1.18168E+01	2.81606E+00	3.29120E+00	3.09662E-01	8.53820E+00	1.52727E-01	0.0	1.74140E-01	2.74578E-01	2.22143E-01	0.0
19	1.22216E+01	2.88393E+00	3.28691E+00	3.39049E-01	8.89959E+00	9.87149E-02	0.0	1.46130E-01	3.56977E-01	1.82321E-01	0.0
20	1.26256E+01	2.95594E+00	3.28223E+00	3.66971E-01	9.24862E+00	5.40876E-02	0.0	1.20126E-01	2.72343E-01	2.57476E-01	0.0
21	1.30779E+01	3.05026E+00	3.27978E+00	3.96710E-01	9.60228E+00	2.86413E-02	0.0	9.45969E-02	2.90269E-01	2.56898E-01	0.0
22	1.35242E+01	3.16486E+00	3.27710E+00	4.30331E-01	9.91415E+00	1.48798E-02	0.0	7.41149E-02	3.10929E-01	2.51553E-01	0.0
23	1.39682E+01	3.31174E+00	3.27506E+00	4.60371E-01	1.01835E+01	1.05524E-02	0.0	5.79019E-02	3.18290E-01	2.55933E-01	0.0
24	1.44355E+01	3.50797E+00	3.27246E+00	5.00209E-01	1.04200E+01	7.29193E-03	0.0	4.50378E-02	3.25728E-01	2.58483E-01	0.0
25	1.49295E+01	3.75372E+00	3.27281E+00	5.43795E-01	1.06272E+01	4.82618E-03	0.0	3.50458E-02	3.36823E-01	2.56983E-01	0.0
26	1.54779E+01	4.05869E+00	3.27126E+00	6.04407E-01	1.08115E+01	3.27769E-03	0.0	2.73745E-02	3.42463E-01	2.58650E-01	0.0
27	1.60715E+01	4.42664E+00	3.27052E+00	6.71900E-01	1.09708E+01	2.16088E-03	0.0	2.15481E-02	3.57809E-01	2.52175E-01	0.0
28	1.67279E+01	4.86538E+00	3.26995E+00	7.54445E-01	1.11067E+01	1.40452E-03	0.0	1.71365E-02	3.59806E-01	2.56642E-01	0.0
29	1.74606E+01	5.38375E+00	3.26952E+00	8.48140E-01	1.12279E+01	8.69333E-04	0.0	1.37226E-02	3.60627E-01	2.57476E-01	0.0
30	1.82992E+01	5.99820E+00	3.26986E+00	9.62861E-01	1.13366E+01	5.34289E-04	0.0	1.11169E-02	3.65926E-01	2.56988E-01	0.0
31	1.92415E+01	6.70557E+00	3.26891E+00	1.10347E+00	1.14321E+01	3.32300E-04	0.0	9.15686E-03	3.76937E-01	2.51553E-01	0.0
32	2.03081E+01	7.52114E+00	3.26873E+00	1.26992E+00	1.15169E+01	2.05423E-04	0.0	4.27542E-03	3.75229E-01	2.55933E-01	0.0
33	2.15386E+01	8.47670E+00	3.26854E+00	1.46667E+00	1.15933E+01	1.20598E-04	0.0	2.77800E-03	3.73851E-01	2.58483E-01	0.0
34	2.29431E+01	9.57805E+00	3.26764E+00	1.69662E+00	1.16624E+01	7.04271E-05	0.0	2.77800E-03	3.78250E-01	2.56983E-01	0.0
35	2.44607E+01	1.08439E+01	3.26832E+00	1.91949E+00	1.16973E+01	4.33913E-05	0.0	2.77800E-03	3.75044E-01	2.56650E-01	0.0
36	2.64149E+01	1.29621E+01	3.26825E+00	1.86765E+00	1.15552E+01	2.64005E-05	0.0	2.77800E-03	3.80231E-01	2.52175E-01	0.0
37	2.90477E+01	1.55029E+01	3.26920E+00	2.01337E+00	1.15314E+01	1.59264E-05	0.0	2.77800E-03	3.75210E-01	2.54642E-01	0.0
38	2.59204E+01	1.27742E+01	3.26815E+00	1.65897E+00	1.14871E+01	9.25239E-06	0.0	2.77800E-03	3.70511E-01	2.57476E-01	0.0
39	2.45342E+01	1.15568E+01	3.26812E+00	1.50068E+00	1.14765E+01	5.55393E-06	0.0	2.77800E-03	3.71442E-01	2.56898E-01	0.0
40	2.70629E+01	1.37937E+01	3.26809E+00	1.79124E+00	1.14779E+01	3.3639CE-06	0.0	2.77800E-03	3.79363E-01	2.51553E-01	0.0
41	3.04140E+01	1.67599E+01	3.26807E+00	2.17661E+00	1.14776E+01	2.03226E-06	0.0	2.77800E-03	3.72546E-01	2.55933E-01	0.0
42	3.55062E+01	2.12602E+01	3.26805E+00	2.76116E+00	1.14842E+01	1.22209E-06	0.0	2.77800E-03	3.69928E-01	2.58483E-01	0.0
43	4.67264E+01	3.11592E+01	3.26777E+00	4.04632E+00	1.15208E+01	7.20288E-07	0.0	2.77800E-03	3.71683E-01	2.56983E-01	0.0
44	4.73447E+01	3.17214E+01	3.26803E+00	4.11957E+00	1.15039E+01	4.38544E-07	0.0	2.77800E-03	3.68556E-01	2.56650E-01	0.0
45	4.20212E+01	2.70375E+01	3.26802E+00	3.51136E+00	1.14724E+01	2.64674E-07	0.0	2.77800E-03	3.77807E-01	2.52175E-01	0.0
46	4.78935E+01	3.22271E+01	3.26802E+00	4.18524E+00	1.14811E+01	1.60289E-07	0.0	2.77800E-03	3.75793E-01	2.54642E-01	0.0
47	5.17744E+01	3.56626E+01	3.26801E+00	4.62149E+00	1.14804E+01	9.74044E-08	0.0	2.77800E-03	3.69580E-01	2.57476E-01	0.0
48	5.95772E+01	4.25683E+01	3.26801E+00	5.52833E+00	1.14805E+01	5.54989E-08	0.0	2.77800E-03	3.72049E-01	2.56689E-01	0.0
49	8.22710E+01	6.35033E+01	3.26801E+00	8.24712E+00	1.15209E+01	2.34681E-08	0.0	2.77800E-03	3.78212E-01	2.51553E-01	0.0
50	6.69792E+01	4.91051E+01	3.26800E+00	6.27727E+00	1.14969E+01	2.03905E-08	0.0	2.77800E-03	3.78019E-01	2.55933E-01	0.0
51	9.11172E+01	7.04514E+01	3.26801E+00	9.14957E+00	1.15162E+01	1.22906E-08	0.0	2.77800E-03	3.71761E-01	2.56983E-01	0.0
52	7.98804E+01	6.09492E+01	3.26800E+00	7.83755E+00	1.14937E+01	7.24252E-09	0.0	2.77800E-03	3.71649E-01	2.58650E-01	0.0
53	1.50225E+02	1.22827E+02	3.26800E+00	1.55515E+01	1.15456E+01	4.41989E-09	0.0	2.77800E-03	3.82641E-01	2.52175E-01	0.0
54	1.68204E+02	1.38661E+02	3.26800E+00	1.80060E+01	1.15352E+01	2.64960E-09	0.0	2.77800E-03	3.73939E-01	2.54642E-01	0.0
55	1.26474E+02	1.01770E+02	3.26800E+00	1.32169E+01	1.14872E+01	1.59196E-09	0.0	2.77800E-03	3.69581E-01	2.57476E-01	0.0
56	1.09628E+02	8.88893E+01	3.26800E+00	1.12843E+01	1.14542E+01	9.21253E-10	0.0	2.77800E-03	3.75025E-01	2.56689E-01	0.0
57	1.70575E+02	1.40791E+02	3.26800E+00	1.82845E+01	1.14992E+01	1.08601E-10	0.0	2.77800E-03	3.79502E-01	2.51553E-01	0.0
58	2.82125E+02	2.40360E+02	3.26800E+00	3.12166E+01	1.15499E+01	0.0	0.0	2.77800E-03	3.74446E-01	2.55933E-01	0.0
59	2.66385E+02	2.14032E+02	3.26800E+00	4.07714E+01	1.15803E+01	0.0	0.0	2.77800E-03	3.75654E-01	2.58483E-01	0.0
60	3.89022E+02	3.47624E+02	3.26800E+00	2.97341E+01	1.26647E+01	0.0	0.0	2.77800E-03	4.25706E-01	2.56983E-01	0.0
61	2.55682E+02	2.19317E+02	3.26800E+00	2.37170E+01	1.26483E+01	0.0	0.0	2.77800E-03	3.95567E-01	2.58650E-01	0.0
62	4.21019E+02	3.65508E+02	3.26800E+00	4.34423E+01	1.23691E+01	0.0	0.0	2.77800E-03	4.11609E-01	2.52175E-01	0.0
63	4.36834E+02	3.88204E+02	3.26800E+00	3.62475E+01	1.22824E+01	0.0	0.0	2.77800E-03	4.17494E-01	2.54642E-01	0.0
64	5.33333E+02	4.80609E+02	3.26800E+00	4.00536E+01	1.26696E+01	0.0	0.0	2.77800E-03	4.23639E-01	2.57476E-01	0.0
65	6.83814E+02	6.04370E+02	3.26800E+00	6.63439E+01	1.21000E+01	0.0	0.0	2.77800E-03	4.29202E-01	2.56689E-01	0.0
66	1.13362E+03	9.46385E+02	3.26800E+00	1.72520E+02	1.27272E+01	0.0	0.0	2.77800E-03	4.42625E-01	2.51553E-01	0.0
67	1.35271E+03	1.11889E+03	3.26800E+00	2.20917E+02	1.29951E+01	0.0	0.0	2.77800E-03	4.96947E-01	2.55933E-01	0.0
68	1.56956E+03	1.30683E+03	3.26800E+00	2.48259E+02	1.43695E+01	0.0	0.0	2.77800E-03	5.27886E-01	2.58483E-01	0.0
69	2.59362E+03	2.14961E+03	3.26800E+00	4.27852E+02	1.61556E+01	0.0	0.0	1.31469E-02	5.17776E-01	2.56983E-01	0.0
70	4.27108E+03	3.52896E+03	3.26800E+00	7.25544E+02	1.66755E+01	0.0	0.0				



NUCLID = CM242J2F MAT NO = 9642
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.07851E+00	2.61742E+00	5.04762E+00	3.24997E-06	3.20224E+00	4.24546E-02	2.16276E-01	8.17292E-01	4.07896E-02	1.09399E-02	0.0
2	6.80544E+00	2.42642E+00	4.73081E+00	1.52760E-04	3.95122E+00	3.82216E-01	4.43176E-02	8.16312E-01	4.21562E-02	3.88246E-02	0.0
3	7.46001E+00	1.97797E+00	4.46759E+00	1.22582E-03	4.62210E+00	8.47611E-01	0.0	8.09558E-01	4.53672E-02	9.31118E-02	0.0
4	7.75239E+00	1.94155E+00	4.26315E+00	4.90161E-03	4.95979E+00	8.47141E-01	0.0	7.86452E-01	4.80824E-02	1.69748E-01	0.0
5	7.70564E+00	1.95383E+00	4.09613E+00	1.42373E-02	4.30961E+00	9.27961E-01	0.0	7.50291E-01	4.69704E-02	2.62392E-01	0.0
6	7.46862E+00	2.03818E+00	3.97271E+00	2.98239E-02	4.35268E+00	1.01792E+00	0.0	7.03601E-01	5.47800E-02	2.71731E-01	0.0
7	7.17534E+00	2.14997E+00	3.87938E+00	5.22156E-02	3.86180E+00	1.11136E+00	0.0	6.38323E-01	4.48017E-02	3.75411E-01	0.0
8	6.97286E+00	2.22287E+00	3.77810E+00	7.72514E-02	3.52637E+00	1.12637E+00	0.0	5.54242E-01	4.37050E-02	4.03723E-01	0.0
9	6.96784E+00	2.22655E+00	3.71061E+00	8.74696E-02	3.65265E+00	1.00118E+00	0.0	5.03642E-01	6.18706E-02	2.80727E-01	0.0
10	7.27744E+00	2.30941E+00	3.66089E+00	7.91310E-02	4.14592E+00	7.22972E-01	0.0	4.81954E-01	6.51836E-02	3.22046E-01	0.0
11	7.88526E+00	1.56456E+00	3.62248E+00	1.24575E-01	5.26171E+00	9.34417E-01	0.0	4.28318E-01	1.22052E-01	2.38691E-01	0.0
12	8.58186E+00	7.93176E-01	3.59740E+00	1.71735E-01	6.47719E+00	1.13978E+00	0.0	3.71374E-01	1.65400E-01	2.31112E-01	0.0
13	9.31114E+00	3.40086E-01	3.57745E+00	1.97269E-01	7.56251E+00	1.19125E+00	0.0	3.24593E-01	2.07661E-01	2.23143E-01	0.0
14	1.00552E+01	1.92052E-01	3.56112E+00	2.08749E-01	8.49305E+00	1.16139E+00	0.0	2.81831E-01	2.15445E-01	2.54892E-01	0.0
15	1.07267E+01	1.22265E-01	3.54782E+00	2.18079E-01	9.27826E+00	1.11098E+00	0.0	2.41792E-01	2.87957E-01	2.15111E-01	0.0
16	1.12715E+01	9.46940E-02	3.52938E+00	2.31773E-01	9.91095E+00	1.04410E+00	0.0	2.05561E-01	3.08903E-01	2.23143E-01	0.0
17	1.18248E+01	6.43489E-02	3.52996E+00	2.55705E-01	1.05700E+01	9.27782E-01	0.0	1.65888E-01	2.68841E-01	2.67682E-01	0.0
18	1.22697E+01	5.72266E-02	3.52297E+00	2.88794E-01	1.11217E+01	8.02067E-01	0.0	1.31929E-01	3.72798E-01	2.23143E-01	0.0
19	1.25799E+01	5.62265E-02	3.51866E+00	3.25269E-01	1.15189E+01	6.79839E-01	0.0	1.09344E-01	4.80785E-01	1.82321E-01	0.0
20	1.28632E+01	5.64755E-02	3.51505E+00	3.80266E-01	1.19956E+01	5.27798E-01	0.0	8.67693E-02	3.61269E-01	2.57476E-01	0.0
21	1.31408E+01	5.72761E-02	3.51160E+00	4.62722E-01	1.22799E+01	3.40823E-01	0.0	6.65515E-02	3.80785E-01	2.56688E-01	0.0
22	1.33907E+01	5.91788E-02	3.50898E+00	5.75924E-01	1.26122E+01	1.43329E-01	0.0	5.08393E-02	4.03444E-01	2.51553E-01	0.0
23	1.36407E+01	6.13714E-02	3.50693E+00	6.97898E-01	1.29712E+01	1.02624E-02	0.0	3.89055E-02	4.07660E-01	2.55933E-01	0.0
24	1.38967E+01	6.24029E-02	3.50538E+00	7.84286E-01	1.30489E+01	0.0	0.0	2.98543E-02	4.12507E-01	2.58483E-01	0.0
25	1.41789E+01	6.62094E-02	3.50415E+00	8.70691E-01	1.32420E+01	0.0	0.0	2.29513E-02	4.23567E-01	2.56983E-01	0.0
26	1.44810E+01	6.94788E-02	3.50321E+00	9.68833E-01	1.34456E+01	0.0	0.0	1.77670E-02	4.30310E-01	2.58650E-01	0.0
27	1.48251E+01	7.29909E-02	3.50249E+00	1.06154E+00	1.36996E+01	0.0	0.0	1.38972E-02	4.51027E-01	2.52175E-01	0.0
28	1.52280E+01	7.86212E-02	3.50192E+00	1.16402E+00	1.39952E+01	0.0	0.0	1.10342E-02	4.57849E-01	2.54642E-01	0.0
29	1.56666E+01	8.43527E-02	3.50149E+00	1.26945E+00	1.43129E+01	0.0	0.0	8.25259E-03	4.65585E-01	2.57476E-01	0.0
30	1.61984E+01	9.19505E-02	3.50115E+00	1.39266E+00	1.47138E+01	0.0	0.0	3.90500E-03	4.83952E-01	2.56688E-01	0.0
31	1.68131E+01	9.92686E-02	3.50089E+00	1.54028E+00	1.51726E+01	0.0	0.0	2.77801E-03	5.08056E-01	2.51553E-01	0.0
32	1.74960E+01	1.05483E-01	3.50069E+00	1.72030E+00	1.55702E+01	0.0	0.0	2.77801E-03	5.17697E-01	2.55933E-01	0.0
33	1.82847E+01	1.11778E-01	3.50054E+00	1.95111E+00	1.62218E+01	0.0	0.0	2.77801E-03	5.30929E-01	2.58483E-01	0.0
34	1.91999E+01	1.22936E-01	3.50041E+00	2.24187E+00	1.69251E+01	0.0	0.0	2.77801E-03	5.54840E-01	2.56983E-01	0.0
35	2.02604E+01	1.34250E-01	3.50032E+00	2.60770E+00	1.75185E+01	0.0	0.0	2.77801E-03	5.74692E-01	2.58650E-01	0.0
36	2.14572E+01	1.45742E-01	3.50025E+00	3.06433E+00	1.82471E+01	0.0	0.0	2.77801E-03	6.13096E-01	2.52175E-01	0.0
37	2.28037E+01	1.59456E-01	3.50019E+00	3.62615E+00	1.90191E+01	0.0	0.0	2.77801E-03	6.32072E-01	2.54642E-01	0.0
38	2.43562E+01	1.77770E-01	3.50015E+00	4.32164E+00	1.98569E+01	0.0	0.0	2.77801E-03	6.54510E-01	2.57476E-01	0.0
39	2.61521E+01	1.99999E-01	3.50012E+00	5.19945E+00	2.07627E+01	0.0	0.0	2.77801E-03	6.86523E-01	2.56688E-01	0.0
40	2.81259E+01	2.25348E-01	3.50009E+00	6.22672E+00	2.17242E+01	0.0	0.0	2.77801E-03	7.32253E-01	2.51554E-01	0.0
41	3.04875E+01	2.54792E-01	3.50007E+00	7.49712E+00	2.27356E+01	0.0	0.0	2.77801E-03	7.55432E-01	2.55934E-01	0.0
42	3.18445E+01	2.73213E-01	3.50005E+00	9.35569E+00	2.22176E+01	0.0	0.0	2.77801E-03	6.65207E-01	2.58483E-01	0.0
43	6.06557E+01	5.80612E-02	3.50004E+00	1.93292E+01	4.12684E+01	0.0	0.0	2.77801E-03	3.02795E-01	2.56915E-01	0.0
44	1.07516E+01	5.79508E-02	3.50003E+00	1.68913E-02	1.06767E+01	0.0	0.0	2.77801E-03	3.74925E-01	2.58650E-01	0.0
45	3.99188E+01	6.58406E-02	3.50002E+00	2.02752E+01	1.94788E+01	0.0	0.0	2.77801E-03	4.21600E-01	2.52175E-01	0.0
46	1.92224E+01	7.48665E-02	3.50002E+00	7.22735E+00	1.19102E+01	0.0	0.0	2.77801E-03	3.26553E-01	2.54642E-01	0.0
47	3.60422E+01	8.49410E-02	3.51696E+00	1.91667E+01	1.67905E+01	0.0	0.0	2.77801E-03	3.51563E-01	2.57476E-01	0.0
48	1.14815E+02	9.66923E-02	3.50001E+00	6.21174E+01	5.16098E+01	0.0	0.0	2.77799E-03	2.35201E+01	2.56688E-01	0.0
49	1.12620E+01	1.09670E-01	3.50747E+00	3.06101E+00	8.19130E+00	0.0	0.0	2.77801E-03	3.28231E-01	2.51553E-01	0.0
50	6.08426E+01	1.24506E-01	3.50001E+00	4.73522E+01	1.37659E+01	0.0	0.0	2.77801E-03	2.47257E-01	2.55933E-01	0.0
51	6.37007E+01	1.41591E-01	3.51386E+00	5.11272E+01	1.24319E+01	0.0	0.0	2.77801E-03	2.81095E-01	2.58483E-01	0.0
52	1.00690E+01	1.51175E-01	3.50000E+00	2.63428E-01	9.64438E+00	0.0	0.0	2.77801E-03	3.25436E-01	2.56983E-01	0.0
53	1.08363E+01	1.92201E-01	3.50000E+00	2.07398E-01	1.04456E+01	0.0	0.0	2.77801E-03	3.49616E-01	2.58650E-01	0.0
54	1.70319E+02	2.08166E-01	3.50000E+00	1.51076E+02	1.50255E+01	0.0	0.0	2.77801E-03	2.14462E-01	2.52176E-01	0.0
55	1.04607E+01	2.36464E-01	3.50000E+00	1.25021E+00	8.97391E+00	0.0	0.0	2.77801E-03	3.15065E-01	2.54642E-01	0.0
56	1.04448E+01	2.58784E-01	3.50000E+00	2.82493E-01	9.49354E+00	0.0	0.0	2.77801E-03	3.24782E-01	2.57476E-01	0.0
57	1.07343E+01	3.05680E-01	3.50000E+00	2.46320E-01	1.01923E+01	0.0	0.0	2.77801E-03	3.33175E-01	2.56688E-01	0.0
58	1.10140E+01	3.47409E-01	3.50000E+00	2.95023E-01	1.03716E+01	0.0	0.0	2.77801E-03	3.45700E-01	2.51553E-01	0.0
59	1.13036E+01	3.94122E-01	3.50000E+00	3.44452E-01	1.05448E+01	0.0	0.0	2.77801E-03	3.44798E-01	2.55933E-01	0.0
60	1.16278E+01	4.48447E-01	3.50000E+00	4.56955E-01	1.06925E+01	0.0	0.0	2.77801E-03	3.45955E-01	2.58483E-01	0.0
61	1.19917E+01	5.10188E-01	3.50000E+00	6.54240E-01	1.08272E+01	0.0	0.0	2.77801E-03	3.52126E-01	2.56983E-01	0.0
62	1.23960E+01	5.80007E-01	3.50000E+00	8.66137E-01	1.09499E+01	0.0	0.0	2.77801E-03	3.52638E-01	2.58650E-01	0.0
63	1.28501E+01	6.59056E-01	3.50000E+00	1.13121E+00	1.10599E+01	0.0	0.0	2.77801E-03	3.66105E-01	2.52175E-01	0.0
64	1.33565E+01	7.49453E-01	3.50000E+00	1.44743E+00	1.11596E+01	0.0	0.0	2.77801E-03	3.65564E-01	2.54642E-01	0.0
65	1.39151E+01	9.52267E-01	3.50000E+00	1.82044E+00	1.12419E+01	0.0	0.0	2.77801E-03	3.64079E-01	2.57476E-01	0.0
66	1.45295E+01	9.67910E-01	3.50000E+00	2.24690E+00	1.13147E+01	0.0	0.0	2.77801E-03	3.67382E-01	2.56688E-01	0.0
67	1.52142E+01	1.10083E+00	3.50000E+00	2.72793E+00	1.13755E+01	0.0	0.0	2.77801E-03	3.76688E-01	2.51553E-01	0.0
68	1.59486E+01	1.24723E+00	3.50000E+00	3.27525E+00	1.14260E+01	0.0	0.0	2.77801E-03	3.71727E-01	2.55933E-01	0.0
69	1.67836E+01	1.41925E+00	3.50000E+00	3.89705E+00	1.14672E+01	0.0	0.0	2.77801E-03	3.69281E-01	2.58483E-01	0.0
70	1.77155E+01	1.61687E+00	3.50037E+00	4.59743E+00	1.15012E+01	0.0	0.0	1.25114E-02	3.72417E-01	2.56953E-01	0.0

NUCLID = CM242J2F MAT NUMBER = 9642 IPL = 0

TABLE OF INELASTIC MATRICES

GROUP I	EXIT GROUP J=	** KK **	KK = I + J - 1								
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
1	2.42899E-02	1.61646E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.21301E-01	1.62015E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	5.86463E-01	2.61148E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	5.92640E-01	2.53503E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	4.57960E-01	2.70001E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	6.94729E-01	3.22194E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.98301E-01	3.12056E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	8.42210E-01	2.94035E-01	2.88675E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	6.81567E-01	3.19609E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	5.12860E-01	2.06803E-01	3.30911E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	5.22049E-01	3.94539E-01	1.67712E-02	1.08879E-03	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	5.99287E-01	4.91279E-01	4.82969E-02	6.12292E-04	2.02327E-04	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	5.78332E-01	5.62812E-01	4.99025E-02	5.60523E-05	1.27566E-04	3.24965E-05	2.66003E-06	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	5.52267E-01	5.54653E-01	2.71920E-02	1.61184E-02	0.0	7.30749E-04	7.51609E-06	2.25366E-06	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	2.86916E-01	7.93512E-01	1.27112E-02	1.40624E-02	3.25554E-03	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	1.29814E-01	9.08691E-01	0.0	2.99765E-03	6.45674E-03	9.14047E-03	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	1.26891E-01	5.68024E-01	2.32486E-01	0.0	2.02192E-04	1.92077E-03	1.10171E-03	6.45055E-04	3.57273E-04	1.94640E-04
	9.54277E-06	2.39332E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	1.99237E-01	5.94529E-01	7.77579E-03	0.0	0.0	0.0	0.0	0.0	0.0
	6.22465E-05	1.13711E-04	6.22925E-05	4.05177E-05	2.47975E-05	1.55974E-05	9.01118E-06	5.29547E-06	3.17962E-06	1.91088E-06
	1.18110E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	3.52216E-03	5.94744E-01	8.12767E-03	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	2.73605E-01	2.29111E-01	2.50779E-02	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	1.68830E-01	1.13779E-01	4.22145E-03	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	1.84417E-02	6.66498E-02	3.27489E-02	1.99230E-02	1.17517E-02	7.10032E-03
	2.27281E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.33990E-03
	2.16754E-02	1.84700E-03	1.14756E-03	6.74485E-04	4.13225E-04	2.45362E-04	1.50459E-04	8.77791E-05	5.40703E-05	3.26409E-05
	1.92904E-05	1.27700E-05	4.52185E-06	4.19034E-06	2.54755E-06	1.53231E-06	9.56903E-07	5.41174E-07	3.42049E-07	3.98849E-07

NUCLID = U-234J2F MAT NO = 9234
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.85500E+00	2.20554E+00	3.32474E+00	1.09553E-04	4.11907E+00	4.37057E-01	9.32150E-02	8.40407E-01	3.21426E-02	4.97645E-02	0.0
2	7.35221E+00	1.52100E+00	2.99149E+00	5.14854E-03	4.62627E+00	1.19979E+00	0.0	7.97437E-01	2.98119E-02	2.62860E-01	0.0
3	7.35021E+00	1.48187E+00	2.76133E+00	3.20597E-02	4.51906E+00	1.31723E+00	0.0	7.37502E-01	2.90623E-02	5.34122E-01	0.0
4	7.01673E+00	1.44010E+00	2.60933E+00	9.49935E-02	4.15531E+00	1.32633E+00	0.0	6.11376E-01	2.72570E-02	7.79124E-01	0.0
5	6.81458E+00	1.17406E+00	2.50587E+00	1.42752E-01	4.53634E+00	9.61436E-01	0.0	4.65052E-01	4.22001E-02	6.02782E-01	0.0
6	7.71100E+00	7.06703E-01	2.44860E+00	1.64820E-01	6.15474E+00	8.84741E-01	0.0	3.40313E-01	6.48613E-02	6.93147E-01	0.0
7	9.36159E+00	1.23555E-01	2.41034E+00	1.99220E-01	8.37654E+00	6.60273E-01	0.0	2.30147E-01	9.47781E-02	6.93147E-01	0.0
8	1.10052E+01	3.25866E-02	2.38869E+00	2.52197E-01	1.02957E+01	4.24778E-01	0.0	1.43559E-01	1.23063E-01	6.93147E-01	0.0
9	1.25179E+01	2.03700E-02	2.37893E+00	3.80400E-01	1.19667E+01	1.50378E-01	0.0	7.85289E-02	1.35614E-01	7.65717E-01	0.0
10	1.40811E+01	1.54253E-02	2.37415E+00	5.74101E-01	1.34911E+01	5.26341E-04	0.0	3.86674E-02	1.54766E-01	7.71399E-01	0.0
11	1.58630E+01	1.17263E-02	2.37192E+00	7.68000E-01	1.50832E+01	0.0	0.0	1.85443E-02	1.77263E-01	7.65468E-01	0.0
12	1.81469E+01	9.75020E-03	2.37088E+00	1.02800E+00	1.70491E+01	0.0	0.0	8.45779E-03	2.04391E-01	7.65717E-01	0.0
13	2.14123E+01	5.47862E-03	2.37044E+00	1.73788E+00	1.96689E+01	0.0	0.0	2.87319E-03	2.36435E-01	7.71399E-01	0.0
14	2.61174E+01	1.00838E-03	2.37023E+00	3.02726E+00	2.30791E+01	0.0	0.0	2.87319E-03	2.81143E-01	7.65468E-01	0.0
15	3.29652E+01	9.27724E-05	2.37009E+00	5.50996E+00	2.74552E+01	0.0	0.0	2.87319E-03	3.36670E-01	7.65718E-01	0.0
16	4.11719E+01	8.83056E-05	2.37004E+00	9.38733E+00	3.17845E+01	0.0	0.0	2.87318E-03	2.72247E-01	7.71399E-01	0.0
17	4.57746E+01	8.92575E-02	2.37002E+00	1.79276E+01	2.77577E+01	0.0	0.0	2.87319E-03	1.33423E-01	7.64036E-01	0.0
18	5.82880E+01	1.95558E-02	2.37001E+00	2.84206E+01	2.98479E+01	0.0	0.0	2.87319E-03	7.39899E-02	7.65718E-01	0.0
19	4.71522E+01	1.68608E-02	2.37000E+00	3.10947E+01	1.60406E+01	0.0	0.0	2.87319E-03	4.78889E-02	7.71377E-01	0.0
20	1.01149E+01	1.60379E-04	2.37000E+00	2.02080E+01	9.91267E+00	0.0	0.0	2.87319E-03	1.25895E-01	7.65468E-01	0.0
21	7.89715E+02	5.09767E-01	2.37000E+00	6.70898E+02	1.18307E+02	0.0	0.0	2.87319E-03	2.97546E-03	7.65718E-01	0.0
22	1.46727E+01	5.66120E-03	2.37000E+00	8.37430E+00	6.29276E+00	0.0	0.0	2.87319E-03	9.88588E-02	7.71400E-01	0.0
23	1.53987E+01	1.49724E-03	2.37000E+00	5.34275E+00	1.00545E+01	0.0	0.0	2.87319E-03	1.24023E-01	7.65462E-01	0.0
24	2.27386E+01	1.54894E-03	2.37000E+00	1.08486E+01	1.18885E+01	0.0	0.0	2.87319E-03	1.41726E-01	7.65719E-01	0.0
25	3.39748E+01	1.99686E-03	2.37000E+00	2.07687E+01	1.32041E+01	0.0	0.0	6.69921E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted] MATRICES

GROUP I J= EXIT 1 11 GROUP 2 12 ** KK ** KK = I + J - 1 3 4 5 6 7 8 9 10

1
1.19426E-05 1.85073E-03 1.95710E-02 9.40086E-02 1.49696E-01 1.68337E-01 1.16610E-01 4.99888E-02 1.76474E-02 4.50591E-03
1.03783E-03 2.21984E-04

2
1.10322E-03 2.18350E-02 1.62268E-01 3.31110E-01 3.85107E-01 1.97638E-01 7.13367E-02 2.25076E-02 5.38560E-03 1.20147E-03
2.65519E-04 4.27288E-05

3
2.81021E-02 1.46601E-01 2.87014E-01 4.38250E-01 2.66424E-01 1.05128E-01 3.47479E-02 8.51920E-03 1.92236E-03 4.27081E-04
9.37829E-05 5.77319E-06

4
2.10430E-01 2.85225E-01 4.22064E-01 2.48108E-01 1.09311E-01 3.85489E-02 9.77838E-03 2.24211E-03 5.01824E-04 1.10578E-04
2.16005E-05 0.0

5
4.16273E-01 1.75698E-01 1.81409E-01 1.17345E-01 5.08686E-02 1.49751E-02 3.79631E-03 8.62999E-04 1.67540E-04 4.00718E-05
4.31117E-06 0.0

6
5.45330E-01 1.35646E-01 3.81093E-05 0.0 0.0 0.0 1.84573E-03 1.49020E-03 3.20379E-04 7.05786E-05
0.0 0.0

7
4.74769E-01 1.83243E-01 2.26024E-03 7.37319E-07 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

8
2.30880E-01 1.93291E-01 4.90146E-04 9.18397E-05 1.45815E-05 8.57286E-06 1.84257E-06 2.05941E-07 0.0 0.0
0.0 0.0

9
3.65269E-02 8.18522E-02 2.43605E-02 6.30905E-03 1.32976E-03 0.0 0.0 0.0 0.0 0.0
0.0 0.0

10
0.0 0.0 0.0 6.52054E-05 3.60419E-04 7.88143E-05 1.72215E-05 3.69526E-06 7.98474E-07 1.87977E-07
0.0 0.0

NUCLID = U-236J2F MAT NO = 9236

INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.53010E+00	1.48229E+00	3.40636E+00	1.00544E-04	3.78485E+00	2.41634E-01	4.21144E-01	8.07145E-01	3.41969E-02	4.97650E-02	0.0
2	7.61425E+00	9.05747E-01	3.02681E+00	4.06028E-03	4.56908E+00	1.23540E+00	0.0	8.01787E-01	3.06492E-02	2.62862E-01	0.0
3	7.84693E+00	8.94549E-01	2.79372E+00	3.20997E-02	5.00229E+00	1.91799E+00	0.0	7.42199E-01	3.12605E-02	5.34124E-01	0.0
4	7.28455E+00	8.06421E-01	2.63110E+00	1.06445E-01	4.48232E+00	1.88936E+00	0.0	6.02576E-01	2.91643E-02	7.79135E-01	0.0
5	6.96775E+00	4.61291E-01	2.52675E+00	2.16106E-01	4.84177E+00	1.46558E+00	0.0	4.49311E-01	4.77400E-02	6.02783E-01	0.0
6	8.02576E+00	2.55586E-02	2.46639E+00	2.57453E-01	6.70108E+00	1.04167E+00	0.0	3.40264E-01	6.73056E-02	6.93147E-01	0.0
7	9.65631E+00	1.58901E-06	2.40600E+00	2.40793E-01	8.84311E+00	7.72407E-01	0.0	2.45848E-01	9.68113E-02	6.93147E-01	0.0
8	1.14865E+01	3.52117E-08	2.38880E+00	3.00060E-01	1.08910E+01	4.95395E-01	0.0	1.55514E-01	1.24353E-01	6.93147E-01	0.0
9	1.27907E+01	5.56169E-08	2.37912E+00	4.67930E-01	1.21529E+01	1.59210E-01	0.0	8.51454E-02	1.33696E-01	7.65717E-01	0.0
10	1.39333E+01	7.69155E-08	2.37428E+00	7.04175E-01	1.32290E+01	1.10053E-04	0.0	4.21682E-02	1.47294E-01	7.71399E-01	0.0
11	1.51981E+01	9.34611E-08	2.37199E+00	9.26887E-01	1.42712E+01	0.0	0.0	2.05242E-02	1.62440E-01	7.65468E-01	0.0
12	1.67250E+01	1.19740E-07	2.37093E+00	1.25937E+00	1.54656E+01	0.0	0.0	1.02343E-02	1.80239E-01	7.65717E-01	0.0
13	1.90069E+01	1.41044E-07	2.37043E+00	1.90825E+00	1.70987E+01	0.0	0.0	2.84878E-03	1.98868E-01	7.71398E-01	0.0
14	2.28455E+01	2.41747E-07	2.37018E+00	2.56740E+00	2.02784E+01	0.0	0.0	2.84878E-03	1.45981E-01	7.62921E-01	0.0
15	3.24226E+01	3.95296E-06	2.36990E+00	4.95366E+00	2.74690E+01	0.0	0.0	2.84878E-03	1.91315E-01	7.65104E-01	0.0
16	2.91880E+01	6.71017E-02	2.37004E+00	5.65769E+00	2.34632E+01	0.0	0.0	2.84878E-03	2.60010E-01	7.70481E-01	0.0
17	5.87714E+01	2.10061E-01	2.37002E+00	1.51108E+01	4.34506E+01	0.0	0.0	2.84878E-03	1.05927E-01	7.65300E-01	0.0
18	6.04417E+01	2.98112E-01	2.37001E+00	2.13622E+01	3.87814E+01	0.0	0.0	2.84878E-03	1.48422E-01	7.65689E-01	0.0
19	7.07335E+01	6.70522E-01	2.37000E+00	3.93632E+01	3.16997E+01	0.0	0.0	2.84878E-03	9.27734E-02	7.71399E-01	0.0
20	9.09803E+00	1.23933E-03	2.37000E+00	1.04240E-01	8.99253E+00	0.0	0.0	2.84878E-03	1.07475E-01	7.65468E-01	0.0
21	3.99500E+02	4.19303E+00	2.37000E+00	3.54257E+02	4.10500E+01	0.0	0.0	2.84878E-03	4.44183E-02	7.65718E-01	0.0
22	9.43402E+00	3.00515E-02	2.37003E+00	2.60310E+00	6.79582E+00	0.0	0.0	2.84878E-03	8.49543E-02	7.71399E-01	0.0
23	8.95433E+00	1.02123E-02	2.37000E+00	1.01089E+00	7.93323E+00	0.0	0.0	2.84878E-03	9.01155E-02	7.65468E-01	0.0
24	9.34567E+00	1.05515E-02	2.37000E+00	1.16037E+00	8.17473E+00	0.0	0.0	2.84878E-03	9.16471E-02	7.65717E-01	0.0
25	9.86474E+00	1.35539E-02	2.37074E+00	1.58205E+00	8.26913E+00	0.0	0.0	6.52183E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted] MATRICES

PAGE 1 OF 1

GROUP I EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	2.16486E-05	1.64422E-03	3.54219E-02	2.58356E-01	3.69663E-01	5.09896E-01	2.51974E-01	9.46484E-02	2.87689E-02	6.75153E-03	1.49261E-03	3.19489E-04
2	9.18155E-04	1.53466E-02	1.51413E-01	4.35160E-01	5.39464E-01	3.60453E-01	1.48516E-01	4.88214E-02	1.19359E-02	2.68981E-03	5.97213E-04	9.60722E-05
3	2.63804E-02	1.63196E-01	2.83517E-01	6.31962E-01	4.89573E-01	2.19942E-01	7.78363E-02	1.97803E-02	4.53935E-03	1.01639E-03	2.24005E-04	1.38306E-05
4	2.25112E-01	3.99117E-01	5.95742E-01	3.91630E-01	1.52905E-01	7.03514E-02	1.86796E-02	4.37624E-03	9.89303E-04	2.19012E-04	4.23812E-05	0.0
5	5.73322E-01	2.50093E-01	3.11357E-01	1.77026E-01	9.31403E-02	4.10454E-02	1.31319E-02	3.25777E-03	7.30085E-04	3.21337E-04	1.12948E-04	0.0
6	6.23556E-01	1.73556E-01	4.75015E-03	2.45572E-02	1.11015E-02	2.97723E-03	8.12118E-04	1.78012E-04	3.30924E-05	1.13415E-05	0.0	0.0
7	5.55373E-01	2.14595E-01	2.43915E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	2.61429E-01	2.33285E-01	5.23127E-04	1.16504E-04	2.65265E-05	5.62155E-05	1.23271E-06	0.0	0.0	0.0	0.0	0.0
9	3.72166E-02	9.50314E-02	2.80127E-02	5.90955E-02	1.36129E-03	2.78747E-04	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	1.21159E-05	7.65560E-05	1.67282E-05	3.59004E-06	7.89294E-07	1.73681E-07	0.0	0.0

NUCLID = NP237J2F MAT NO = 1263

INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.47902E+00	2.17301E+00	3.73657E+00	8.32804E-03	3.29929E+00	8.24302E-01	1.74094E-01	7.96574E-01	3.22313E-02	4.97654E-02	0.0
2	7.60939E+00	1.54290E+00	3.38024E+00	1.54771E-02	3.86156E+00	2.16946E+00	0.0	7.70768E-01	2.71120E-02	2.62862E-01	0.0
3	7.81814E+00	1.64815E+00	3.14681E+00	2.87755E-02	3.98713E+00	2.15409E+00	0.0	7.01467E-01	2.80247E-02	5.34123E-01	0.0
4	7.18005E+00	1.65131E+00	2.98719E+00	5.93932E-02	3.76043E+00	1.70892E+00	0.0	5.32865E-01	2.99206E-02	7.79134E-01	0.0
5	6.95339E+00	1.47856E+00	2.88290E+00	1.28149E-01	4.30363E+00	1.04305E+00	0.0	4.25819E-01	4.30346E-02	6.02782E-01	0.0
6	7.90629E+00	6.96850E-01	2.82199E+00	3.06864E-01	5.82635E+00	1.07622E+00	0.0	3.59247E-01	5.60904E-02	6.93146E-01	0.0
7	9.32239E+00	6.98577E-02	2.78283E+00	6.26953E-01	7.47894E+00	1.14664E+00	0.0	2.69032E-01	8.17184E-02	6.93147E-01	0.0
8	1.07875E+01	2.09607E-02	2.75935E+00	9.40243E-01	8.92210E+00	9.04221E-01	0.0	1.24678E-01	1.08383E-01	6.93146E-01	0.0
9	1.20342E+01	1.37396E-02	2.74914E+00	1.29419E+00	1.00999E+01	6.26418E-01	0.0	5.35327E-02	1.12799E-01	7.65717E-01	0.0
10	1.28118E+01	1.07290E-02	2.74430E+00	1.78301E+00	1.08758E+01	1.42291E-01	0.0	2.20749E-02	1.22048E-01	7.71399E-01	0.0
11	1.40947E+01	9.65143E-03	2.74195E+00	2.57382E+00	1.15112E+01	0.0	0.0	6.29748E-03	1.30707E-01	7.65468E-01	0.0
12	1.59629E+01	1.07619E-02	2.74090E+00	3.90352E+00	1.20487E+01	0.0	0.0	2.83673E-03	1.36182E-01	7.65718E-01	0.0
13	1.88255E+01	8.76168E-03	2.74043E+00	6.09411E+00	1.25225E+01	0.0	0.0	2.83673E-03	1.39968E-01	7.71399E-01	0.0
14	2.25173E+01	2.28562E-02	2.74019E+00	9.56620E+00	1.29283E+01	0.0	0.0	2.83673E-03	1.45354E-01	7.65468E-01	0.0
15	2.81690E+01	2.93251E-02	2.74009E+00	1.48725E+01	1.32672E+01	0.0	0.0	2.83673E-03	1.48567E-01	7.65718E-01	0.0
16	3.64208E+01	3.92386E-02	2.74004E+00	2.28538E+01	1.35278E+01	0.0	0.0	2.83673E-03	1.49965E-01	7.71399E-01	0.0
17	4.70556E+01	8.36578E-02	2.74002E+00	3.29963E+01	1.39757E+01	0.0	0.0	2.83673E-03	2.53825E-01	7.65460E-01	0.0
18	7.41823E+01	7.50500E-03	2.74001E+00	5.82173E+01	1.59575E+01	0.0	0.0	2.83673E-03	1.41963E-01	7.65718E-01	0.0
19	9.65276E+01	1.44339E-01	2.74000E+00	8.16003E+01	1.47930E+01	0.0	0.0	2.83673E-03	8.62226E-02	7.71399E-01	0.0
20	1.03985E+02	1.93036E-03	2.74000E+00	9.23342E+01	1.16003E+01	0.0	0.0	2.83673E-03	9.52015E-02	7.65468E-01	0.0
21	1.03987E+02	9.76022E-03	2.74000E+00	9.28338E+01	1.11434E+01	0.0	0.0	2.83673E-03	1.17522E-01	7.65718E-01	0.0
22	6.21465E+01	4.40537E-03	2.73999E+00	5.03257E+01	1.18134E+01	0.0	0.0	2.83673E-03	1.42606E-01	7.71399E-01	0.0
23	2.59946E+02	9.65260E-03	2.74000E+00	2.46278E+02	1.36585E+01	0.0	0.0	2.83673E-03	1.46252E-01	7.65468E-01	0.0
24	3.04029E+02	1.15669E-02	2.74002E+00	2.89013E+02	1.50046E+01	0.0	0.0	2.83673E-03	1.41923E-01	7.65718E-01	0.0
25	1.25660E+02	5.44541E-03	2.73998E+00	1.10939E+02	1.47153E+01	0.0	0.0	6.80461E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted]MATRICES

PAGE 1 OF 1

GROUP I — EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	1.00944E-04	6.29726E-03	5.16745E-02	2.19660E-01	2.99650E-01	3.04235E-01	1.82754E-01	7.43164E-02	2.55643E-02	6.44283E-03	1.47510E-03	3.20997E-04
2	3.43364E-03	6.23968E-02	3.67007E-01	6.26539E-01	6.48947E-01	3.09939E-01	1.07760E-01	3.33456E-02	7.89833E-03	1.75368E-03	3.86704E-04	6.20009E-05
3	1.63037E-02	2.22288E-01	5.53347E-01	7.34006E-01	4.08877E-01	1.54079E-01	4.97181E-02	1.20371E-02	2.70020E-03	5.98252E-04	1.31203E-04	7.91219E-06
4	6.10920E-02	3.30377E-01	6.21192E-01	4.30695E-01	1.82517E-01	6.26259E-02	1.56591E-02	3.56632E-03	7.95712E-04	1.75081E-04	3.44438E-05	0.0
5	1.26805E-01	4.53906E-01	2.66258E-01	1.30990E-01	4.26359E-02	1.25755E-02	2.94365E-03	6.62741E-04	1.46439E-04	3.14753E-05	4.32687E-06	0.0
6	5.22898E-01	4.13474E-01	1.01586E-01	3.05096E-02	6.45715E-03	1.00364E-03	2.29468E-04	5.10692E-05	1.10136E-05	9.18231E-07	0.0	0.0
7	6.16436E-01	4.50790E-01	5.35309E-02	1.75328E-02	6.20535E-03	1.53459E-03	4.22881E-04	1.15743E-04	2.49062E-05	5.30584E-06	0.0	0.0
8	3.22448E-01	4.55736E-01	8.90415E-02	2.38451E-02	9.90414E-03	2.51950E-03	5.60760E-04	1.29340E-04	2.96980E-05	6.01846E-06	0.0	0.0
9	1.28427E-01	3.15371E-01	1.52999E-01	2.06742E-02	5.93633E-03	1.26571E-03	5.39292E-04	1.42309E-04	3.66146E-05	2.91118E-06	3.41969E-07	0.0
10	0.0	4.50528E-02	5.62044E-02	2.13716E-02	7.43539E-03	1.71491E-03	3.90790E-04	9.08023E-05	2.37300E-05	5.35191E-06	1.04561E-06	0.0

NUCLID = NP239J2F MAT NO = 9339

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.57672E+00	1.96535E+00	3.74215E+00	3.95623E-03	3.53757E+00	8.66256E-01	1.83593E-03	8.60929E-01	2.35586E-02	4.97645E-02	0.0
2	7.05163E+00	1.48674E+00	3.38033E+00	1.75527E-02	2.97666E+00	1.56999E+00	6.78516E-04	8.12960E-01	2.43082E-02	2.62860E-01	0.0
3	6.81305E+00	1.59244E+00	3.14472E+00	3.13430E-02	3.70960E+00	1.47967E+00	0.0	7.28966E-01	2.30436E-02	5.34122E-01	0.0
4	6.85065E+00	1.72628E+00	2.98706E+00	6.91345E-02	3.60758E+00	1.44766E+00	0.0	6.52986E-01	2.00338E-02	7.79134E-01	0.0
5	7.74393E+00	1.63170E+00	2.88129E+00	1.54216E-01	4.49099E+00	1.46702E+00	0.0	5.90773E-01	2.22075E-02	6.02782E-01	0.0
6	9.35489E+00	1.17102E+00	2.81766E+00	3.40430E-01	6.40261E+00	1.44083E+00	0.0	4.88667E-01	5.25208E-02	6.93146E-01	0.0
7	1.10562E+01	3.60049E-01	2.78219E+00	7.05589E-01	8.35969E+00	1.63090E+00	0.0	3.52783E-01	7.82804E-02	6.93147E-01	0.0
8	1.22099E+01	7.36395E-02	2.76019E+00	1.17818E+00	9.65146E+00	1.29665E+00	0.0	2.23219E-01	1.03385E-01	6.93147E-01	0.0
9	1.29781E+01	4.19582E-02	2.74927E+00	1.66965E+00	1.06863E+01	5.80252E-01	0.0	1.18152E-01	1.10721E-01	7.65717E-01	0.0
10	1.36839E+01	1.17946E-02	2.74546E+00	2.54084E+00	1.10439E+01	9.74438E-02	0.0	5.71274E-02	1.15754E-01	7.71398E-01	0.0
11	1.46445E+01	0.0	0.0	3.77287E+00	1.08716E+01	0.0	0.0	2.80157E-02	1.16314E-01	7.65468E-01	0.0
12	1.60459E+01	0.0	0.0	5.34541E+00	1.07005E+01	0.0	0.0	1.43703E-02	1.16476E-01	7.65718E-01	0.0
13	1.85805E+01	0.0	0.0	7.80214E+00	1.07783E+01	0.0	0.0	5.94854E-03	1.18404E-01	7.71398E-01	0.0
14	2.23571E+01	0.0	0.0	1.14582E+01	1.08989E+01	0.0	0.0	2.81295E-03	1.20200E-01	7.65467E-01	0.0
15	2.81039E+01	0.0	0.0	1.68634E+01	1.12405E+01	0.0	0.0	2.81295E-03	1.27199E-01	7.65718E-01	0.0
16	3.65772E+01	0.0	0.0	2.47363E+01	1.18410E+01	0.0	0.0	2.81295E-03	1.32771E-01	7.71399E-01	0.0
17	4.90432E+01	0.0	0.0	3.62544E+01	1.27888E+01	0.0	0.0	2.81295E-03	1.46626E-01	7.65468E-01	0.0
18	6.74094E+01	0.0	0.0	5.32158E+01	1.41936E+01	0.0	0.0	2.81295E-03	1.66142E-01	7.65718E-01	0.0
19	9.45155E+01	0.0	0.0	7.81592E+01	1.63563E+01	0.0	0.0	2.81295E-03	1.93207E-01	7.71399E-01	0.0
20	1.34213E+02	0.0	0.0	1.14669E+02	1.95440E+01	0.0	0.0	2.81295E-03	2.35703E-01	7.65468E-01	0.0
21	1.89658E+02	0.0	0.0	1.66481E+02	2.31779E+01	0.0	0.0	2.81295E-03	2.35184E-01	7.65718E-01	0.0
22	6.65058E+01	0.0	0.0	4.86636E+01	1.78422E+01	0.0	0.0	2.81295E-03	1.67694E-01	7.71399E-01	0.0
23	1.87926E+01	0.0	0.0	4.92013E+00	1.38727E+01	0.0	0.0	2.81295E-03	1.40138E-01	7.65468E-01	0.0
24	1.92649E+01	0.0	0.0	7.20958E+00	1.20554E+01	0.0	0.0	2.81295E-03	1.26670E-01	7.65718E-01	0.0
25	2.17758E+01	0.0	0.0	1.05726E+01	1.12032E+01	0.0	0.0	6.34942E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted]MATRICES

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GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J* 1	2	3	4	5	6	7	8	9	10	11	12
1	2.83914E-05	3.73534E-03	3.96275E-02	1.80976E-01	2.61112E-01	2.42262E-01	1.07996E-01	3.62220E-02	1.10012E-02	2.58047E-03	5.70333E-04	1.23111E-04
2	1.05456E-03	2.84381E-02	2.15959E-01	4.35275E-01	5.02314E-01	2.56565E-01	9.23796E-02	2.91101E-02	6.96084E-03	1.55241E-03	3.43026E-04	5.46153E-05
3	9.21732E-03	1.12094E-01	3.42000E-01	5.20694E-01	3.15401E-01	1.24216E-01	4.10162E-02	1.00508E-02	2.26741E-03	5.03680E-04	1.10598E-04	6.75312E-06
4	7.69921E-02	2.28343E-01	5.01129E-01	2.66128E-01	1.73277E-01	6.12536E-02	1.55572E-02	3.56924E-03	7.99078E-04	1.76101E-04	3.49744E-05	0.0
5	2.72619E-01	3.94110E-01	4.40480E-01	2.36117E-01	9.17789E-02	2.45050E-02	5.75611E-03	1.30283E-03	2.88585E-04	6.20992E-05	9.36484E-06	0.0
6	7.26361E-01	4.53822E-01	1.21491E-01	8.66424E-02	2.44917E-02	1.17924E-02	4.85887E-03	1.08664E-03	2.34816E-04	5.11390E-05	7.41746E-06	0.0
7	8.84577E-01	6.61089E-01	7.58474E-02	8.84119E-03	2.54002E-04	1.97448E-04	8.12935E-05	1.69497E-05	3.70284E-06	0.0	0.0	0.0
8	4.96479E-01	5.99367E-01	1.72443E-01	2.18945E-02	4.88758E-03	1.07558E-03	3.86207E-04	1.01380E-04	2.24012E-05	5.60806E-06	3.01644E-07	0.0
9	1.81414E-01	2.59428E-01	1.06249E-01	1.66396E-02	6.88842E-03	7.58339E-03	1.55225E-03	3.60780E-04	7.76778E-05	1.66136E-05	2.21983E-06	0.0
10	0.0	4.46342E-02	2.15426E-02	8.78473E-03	1.93285E-03	4.25624E-04	9.21659E-05	2.03109E-05	3.75457E-06	1.46786E-06	0.0	0.0

NUCLID = PU236J2F MAT NO = 9436
INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.97691E+00	3.02831E+00	3.87457E+00	5.96666E-03	3.84481E+00	8.36565E-02	1.41683E-02	8.19689E-01	2.16992E-02	4.97645E-02	0.0
2	8.02146E+00	2.65518E+00	3.50821E+00	3.79370E-02	4.86377E+00	4.64572E-01	0.0	8.14770E-01	2.95582E-02	2.62860E-01	0.0
3	8.35415E+00	2.56505E+00	3.26602E+00	4.05060E-02	5.26663E+00	4.81952E-01	0.0	7.45894E-01	3.36294E-02	5.34122E-01	0.0
4	7.96361E+00	2.45337E+00	3.09859E+00	7.95507E-02	5.04020E+00	3.90493E-01	0.0	6.23025E-01	3.03364E-02	7.79134E-01	0.0
5	7.80408E+00	2.13849E+00	2.98742E+00	1.36951E-01	5.22443E+00	3.04216E-01	0.0	5.08640E-01	4.32806E-02	6.02782E-01	0.0
6	8.87166E+00	1.18225E+00	2.92149E+00	2.97126E-01	6.88153E+00	5.10758E-01	0.0	4.00093E-01	6.53276E-02	6.93147E-01	0.0
7	1.08011E+01	4.17653E-01	2.88029E+00	4.30141E-01	9.32628E+00	6.26984E-01	0.0	2.86838E-01	9.76067E-02	6.93146E-01	0.0
8	1.25566E+01	2.05847E-01	2.85800E+00	5.79179E-01	1.13164E+01	4.55154E-01	0.0	1.84913E-01	1.28417E-01	6.93146E-01	0.0
9	1.41186E+01	1.40028E-01	2.84765E+00	8.56046E-01	1.29610E+01	1.61544E-01	0.0	1.06398E-01	1.40587E-01	7.65717E-01	0.0
10	1.55263E+01	1.28704E-01	2.84240E+00	1.20302E+00	1.41943E+01	2.46954E-04	0.0	5.33685E-02	1.57228E-01	7.71399E-01	0.0
11	1.70807E+01	1.45719E-01	2.84001E+00	1.56026E+00	1.53746E+01	0.0	0.0	2.58350E-02	1.74495E-01	7.65468E-01	0.0
12	1.89536E+01	1.90688E-01	2.83893E+00	2.14756E+00	1.66153E+01	0.0	0.0	1.28829E-02	1.91605E-01	7.65718E-01	0.0
13	2.17304E+01	2.87119E-01	2.83906E+00	3.30182E+00	1.81415E+01	0.0	0.0	4.31523E-03	2.09518E-01	7.71398E-01	0.0
14	2.57571E+01	4.66030E-01	2.83819E+00	5.43466E+00	1.98564E+01	0.0	0.0	2.84878E-03	2.30927E-01	7.65467E-01	0.0
15	3.16393E+01	7.77703E-01	2.83809E+00	9.12414E+00	2.17375E+01	0.0	0.0	2.84878E-03	2.52838E-01	7.65718E-01	0.0
16	4.03435E+01	1.29753E+00	2.83804E+00	1.52693E+01	2.37767E+01	0.0	0.0	2.84878E-03	2.74078E-01	7.71399E-01	0.0
17	5.31090E+01	2.13155E+00	2.83802E+00	2.51242E+01	2.58432E+01	0.0	0.0	2.84878E-03	2.98706E-01	7.65468E-01	0.0
18	7.17843E+01	3.42960E+00	2.83801E+00	4.05208E+01	2.78339E+01	0.0	0.0	2.84878E-03	3.20358E-01	7.65718E-01	0.0
19	9.94704E+01	5.43190E+00	2.83739E+00	6.43312E+01	2.97074E+01	0.0	0.0	2.84877E-03	3.37601E-01	7.71399E-01	0.0
20	1.39908E+02	8.43264E+00	2.83800E+00	1.00139E+02	3.13359E+01	0.0	0.0	2.84878E-03	3.56674E-01	7.65468E-01	0.0
21	1.13513E+02	6.93326E+00	2.82800E+00	8.25062E+01	2.40731E+01	0.0	0.0	2.84878E-03	1.36703E-01	7.65718E-01	0.0
22	1.51526E+01	1.72733E-01	2.83600E+00	2.01927E+00	1.29606E+01	0.0	0.0	2.84878E-03	1.53301E-01	7.71399E-01	0.0
23	4.15148E+01	1.99136E+00	2.83818E+00	2.22807E+01	1.62427E+01	0.0	0.0	2.84878E-03	2.24487E-01	7.65468E-01	0.0
24	3.22882E+03	2.48320E+02	2.83800E+00	2.90289E+03	7.76070E+01	0.0	0.0	2.84878E-03	5.58434E+00	7.65718E-01	0.0
25	1.06968E+04	8.35259E+02	2.83800E+00	9.76430E+03	9.72455E+01	0.0	0.0	2.86423E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted]MATRICES

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GROUP I — EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	3.46170E-04	2.65326E-03	1.06711E-02	2.68958E-02	2.90603E-02	2.32528E-02	1.14907E-02	4.99223E-03	1.93865E-03	5.35282E-04	1.28776E-04	2.85612E-05
2	4.44749E-03	4.91790E-02	1.31170E-01	1.30768E-01	9.60596E-02	3.70534E-02	1.15353E-02	3.37134E-03	7.75100E-04	1.69714E-04	3.71832E-05	5.90092E-06
3	1.60106E-02	1.26248E-01	1.53034E-01	1.18641E-01	4.73137E-02	1.49831E-02	4.41764E-03	1.02031E-03	2.23884E-04	4.90998E-05	1.07170E-05	6.33590E-07
4	6.19792E-02	1.11354E-01	1.30790E-01	5.86990E-02	1.98099E-02	6.04018E-03	1.41995E-03	3.14178E-04	6.91684E-05	1.51246E-05	3.00305E-06	0.0
5	1.52700E-01	6.28796E-02	4.15867E-02	3.02367E-02	1.23512E-02	3.40969E-03	8.14999E-04	1.86030E-04	4.13727E-05	8.91967E-06	1.39903E-06	0.0
6	3.93845E-01	1.13781E-01	4.37243E-05	5.53163E-07	2.09809E-03	7.31473E-04	1.97160E-04	4.74032E-05	1.05989E-05	2.34472E-06	0.0	0.0
7	4.39581E-01	1.85209E-01	2.19352E-03	3.39729E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	2.40628E-01	2.13917E-01	4.39321E-04	9.93561E-05	2.21004E-05	3.66743E-05	9.23992E-06	2.01171E-06	2.21441E-07	0.0	0.0	0.0
9	3.85574E-02	9.08228E-02	2.49635E-02	5.89602E-03	1.19224E-03	1.12414E-04	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	1.61027E-04	6.72575E-05	1.46806E-05	3.15913E-06	6.78651E-07	1.51472E-07	0.0	0.0

NUCLID = PU239FJ2F MAT NO = 9439
INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	1.010855+01	2.726425+00	4.821965+00	2.067805-01	2.923585+00	3.116195+00	1.355075-01	6.259825-01	2.074075-02	4.976475-02	0.0
2	1.050825+01	2.235625+00	4.623775+00	2.112995-01	4.896555+00	2.162745+00	0.0	6.262805-01	2.802425-02	2.628605-01	0.0
3	1.090865+01	2.278795+00	4.859275+00	1.472555-01	5.279215+00	3.102155+00	0.0	7.524465-01	3.455355-02	5.341225-01	0.0
4	1.039565+01	2.191125+00	4.375995+00	3.492715-01	5.434925+00	2.420225+00	0.0	6.072065-01	3.552935-02	7.791345-01	0.0
5	1.027065+01	2.130945+00	4.255295+00	3.955415-01	6.036925+00	1.707725+00	0.0	4.714485-01	5.390655-02	6.027825-01	0.0
6	1.027345+01	1.581775+00	3.981695+00	3.779725-01	7.214665+00	1.099015+00	0.0	3.481785-01	7.174405-02	6.931185-01	0.0
7	1.224715+01	9.580695-01	2.937425+00	2.680345-01	1.006215+01	8.588765-01	0.0	2.492595-01	1.028165-01	6.921395-01	0.0
8	1.365105+01	6.697505-01	2.915415+00	4.591075-01	1.211785+01	6.042995-01	0.0	1.959525-01	1.350075-01	6.931395-01	0.0
9	1.532445+01	6.197655-01	2.902915+00	7.055235-01	1.389215+01	2.281475-01	0.0	1.120075-01	1.479575-01	7.657055-01	0.0
10	1.695745+01	7.840435-01	2.895845+00	1.046995+00	1.512375+01	6.376905-04	0.0	5.678735-02	1.653585-01	7.713835-01	0.0
11	1.849225+01	5.112695-01	2.695835+00	1.270415+00	1.621155+01	0.0	0.0	2.748765-02	1.842505-01	7.654595-01	0.0
12	2.068905+01	1.042435+00	2.894605+00	1.856035+00	1.778455+01	0.0	0.0	1.354435-02	2.041175-01	7.657115-01	0.0
13	2.271865+01	1.274845+00	2.894055+00	2.792465+00	1.965025+01	0.0	0.0	5.218165-03	2.267305-01	7.713855-01	0.0
14	2.784905+01	1.302465+00	2.893825+00	4.603755+00	2.193695+01	0.0	0.0	2.824705-03	2.558595-01	7.656615-01	0.0
15	3.464395+01	2.076775+00	2.893715+00	7.325595+00	2.524165+01	0.0	0.0	2.824795-03	6.105505-01	7.656645-01	0.0
16	5.428995+01	7.510745+00	2.893645+00	1.108625+01	2.569295+01	0.0	0.0	2.824805-03	4.169465-01	7.711135-01	0.0
17	6.885245+01	6.021625+00	2.893625+00	2.701205+01	3.591615+01	0.0	0.0	2.824805-03	1.490625-01	7.652755-01	0.0
18	3.533035+01	1.510935+00	2.893615+00	1.360265+01	2.021585+01	0.0	0.0	2.824805-03	1.657625-01	7.657185-01	0.0
19	2.021315+01	4.942645-01	2.893605+00	5.396625+01	2.177325+01	0.0	0.0	2.824805-03	1.975715-01	7.713995-01	0.0
20	7.887885+01	3.129375+00	2.893605+00	3.474825+00	1.624215+01	0.0	0.0	2.824805-03	2.421265-01	7.654685-01	0.0
21	2.547665+01	1.219695+00	2.893605+00	6.622175+00	1.752465+01	0.0	0.0	2.824805-03	2.118845-01	7.657195-01	0.0
22	4.916595+02	1.461315+01	2.893605+00	4.496675+02	2.727965+01	0.0	0.0	2.824805-03	1.651925-01	7.714005-01	0.0
23	2.619595+01	2.619595-01	2.893605+00	1.038685+01	1.744515+01	0.0	0.0	2.824805-03	2.057715-01	7.654685-01	0.0
24	4.230935+01	6.749565-01	2.893605+00	2.156935+01	2.006505+01	0.0	0.0	2.824805-03	2.336825-01	7.657185-01	0.0
25	8.567775+01	1.801295+00	2.893605+00	6.160825+01	2.226825+01	0.0	0.0	6.622235-03	0.0	7.713995-01	0.0

TABLE OF INELA[redacted] MATRICES

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GROUP I	J=	EXIT GROUP 1	2	** KK **	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12									
1		9.94550E-02	1.28868E-01	4.10025E-01	9.39964E-01	8.69741E-01	6.00596E-01	2.60792E-01	1.03287E-01	3.46034E-02	8.66780E-03	
		1.95278E-03	4.28229E-04									
2		3.64293E-02	2.62132E-01	9.09315E-01	9.10218E-01	6.75800E-01	2.59269E-01	8.08091E-02	2.36368E-02	5.43453E-03	1.19010E-03	
		2.60759E-04	4.09705E-05									
3		6.03956E-02	4.89647E-01	1.01951E+00	9.72382E-01	3.90458E-01	1.24086E-01	3.48524E-02	8.47376E-03	1.86010E-03	4.08023E-04	
		8.90677E-05	5.63844E-06									
4		4.12117E-01	6.04612E-01	7.59065E-01	4.20382E-01	1.34939E-01	6.65112E-02	1.52590E-02	3.34994E-03	7.33762E-04	1.61973E-04	
		9.11682E-05	0.0									
5		6.91426E-01	3.68956E-01	3.60873E-01	1.60233E-01	9.04203E-02	2.50012E-02	7.56992E-03	2.35235E-03	6.50973E-04	1.98349E-04	
		4.26456E-05	0.0									
6		8.17781E-01	1.81594E-01	5.35435E-02	2.79266E-02	7.40693E-03	2.28596E-03	1.65876E-03	4.08393E-04	8.84294E-05	1.89201E-05	
		2.24276E-06	0.0									
7		6.13321E-01	2.46493E-01	3.07216E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		0.0	0.0									
8		3.20235E-01	2.87249E-01	6.06119E-04	1.28535E-04	2.84564E-05	3.19533E-05	1.54234E-05	3.25227E-06	6.00054E-07	0.0	
		0.0	0.0									
9		5.41692E-02	1.25492E-01	3.77125E-02	9.90619E-03	1.75304E-03	0.0	0.0	0.0	0.0	0.0	
		0.0	0.0									
10		0.0	0.0	0.0	4.03926E-05	4.66543E-04	1.02115E-04	2.22854E-05	4.77949E-06	1.02522E-06	2.45026E-07	
		0.0	0.0									

NUCLID = PU242J2F MAT NO = 9442

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.63382E+00	1.55469E+00	2.89511E+00	9.45979E-04	3.85153E+00	5.95269E-01	2.31387E-01	8.14199E-01	3.42895E-02	4.97649E-02	0.0
2	7.74012E+00	1.27976E+00	3.50892E+00	2.91397E-03	4.94798E+00	1.50870E+00	2.52777E-04	7.52215E-01	4.10185E-02	2.62862E-01	0.0
3	7.97627E+00	1.26242E+00	2.25221E+00	2.99927E-02	5.06789E+00	1.51542E+00	0.0	6.67495E-01	3.77064E-02	5.34123E-01	0.0
4	7.42033E+00	1.47290E+00	3.07959E+00	5.52299E-02	4.50662E+00	1.40569E+00	0.0	5.45188E-01	3.06473E-02	7.79134E-01	0.0
5	7.09221E+00	1.37269E+00	2.96426E+00	1.01551E-01	4.60061E+00	1.01715E+00	0.0	4.25820E-01	4.38490E-02	6.02783E-01	0.0
6	7.91377E+00	4.01445E-01	2.89928E+00	1.39760E-01	6.13259E+00	1.27959E+00	0.0	3.55295E-01	5.78403E-02	6.93146E-01	0.0
7	9.53800E+00	6.74040E-02	2.85189E+00	1.42132E-01	9.16226E+00	1.16620E+00	0.0	2.62539E-01	8.82607E-02	6.93147E-01	0.0
8	1.19959E+01	2.22700E-02	2.62935E+00	2.14995E-01	1.06594E+01	9.98220E-01	0.0	1.61237E-01	1.29721E-01	6.93147E-01	0.0
9	1.45682E+01	1.45697E-02	2.81816E+00	3.84466E-01	1.38018E+01	3.67408E-01	0.0	8.71672E-02	1.53812E-01	7.65717E-01	0.0
10	1.62643E+01	1.23619E-02	2.81266E+00	6.72207E-01	1.55780E+01	6.79556E-04	0.0	4.30834E-02	1.66621E-01	7.71399E-01	0.0
11	1.70563E+01	9.42716E-02	2.81019E+00	5.60980E-01	1.60859E+01	0.0	0.0	2.12169E-02	1.74463E-01	7.65467E-01	0.0
12	1.83840E+01	7.60790E-02	2.80915E+00	1.30817E+00	1.70652E+01	0.0	0.0	1.09513E-02	2.10785E-01	7.65718E-01	0.0
13	2.09815E+01	1.19910E-02	2.80846E+00	1.92366E+00	1.89558E+01	0.0	0.0	3.67964E-03	2.12646E-01	7.71399E-01	0.0
14	2.24797E+01	1.87947E-02	2.80822E+00	2.69274E+00	1.95692E+01	0.0	0.0	2.77802E-03	2.10709E-01	7.64046E-01	0.0
15	2.87774E+01	9.30232E-02	2.80811E+00	4.01739E+00	2.46620E+01	0.0	0.0	2.77802E-03	1.13724E-01	7.65068E-01	0.0
16	3.34043E+01	2.47327E-02	2.80804E+00	5.94972E+00	2.74108E+01	0.0	0.0	2.77802E-03	1.79581E-01	7.70804E-01	0.0
17	3.12971E+01	2.56287E-02	2.80801E+00	1.03949E+01	2.06386E+01	0.0	0.0	2.77802E-03	1.11425E-01	7.65213E-01	0.0
18	1.14619E+02	5.94212E-02	2.80800E+00	3.55957E+01	7.85542E+01	0.0	0.0	2.77802E-03	6.57196E-02	7.65718E-01	0.0
19	1.36088E+01	1.30248E-02	2.80800E+00	4.43912E+00	9.15667E+00	0.0	0.0	2.77802E-03	1.04657E-01	7.71399E-01	0.0
20	1.20325E+01	7.81299E-02	2.80801E+00	1.61744E+00	1.04072E+01	0.0	0.0	2.77802E-03	1.17967E-01	7.65468E-01	0.0
21	1.25141E+01	7.15938E-02	2.80800E+00	7.09401E-01	1.17956E+01	0.0	0.0	2.77802E-03	1.45524E-01	7.65718E-01	0.0
22	1.47462E+02	9.17777E-01	2.80800E+00	1.35662E+02	1.17095E+01	0.0	0.0	2.77802E-03	2.16370E-02	7.71400E-01	0.0
23	2.12289E+01	2.49427E-02	2.80796E+00	1.57434E+01	5.47059E+00	0.0	0.0	2.77802E-03	7.54795E-02	7.65468E-01	0.0
24	1.38487E+01	2.54884E-02	2.80500E+00	6.41515E+00	7.40807E+00	0.0	0.0	2.77802E-03	8.36172E-02	7.65718E-01	0.0
25	1.45220E+01	3.55857E-02	2.80754E+00	6.63516E+00	7.84827E+00	0.0	0.0	6.29705E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted]MATRICES

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GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	1.02649E-05	3.28000E-03	3.41131E-02	1.66999E-01	2.76842E-01	3.75169E-01	2.44545E-01	1.06818E-01	3.78760E-02	9.67562E-03	2.22902E-03	4.86657E-04
2	8.30474E-04	3.37589E-02	2.36404E-01	4.30792E-01	4.61219E-01	2.28072E-01	6.03710E-02	2.52496E-02	6.15228E-03	1.40088E-03	3.14174E-04	4.92213E-05
3	2.35049E-02	1.66066E-01	3.69138E-01	5.08271E-01	2.90329E-01	1.10650E-01	3.60127E-02	8.75025E-03	1.96616E-03	4.35957E-04	9.56444E-05	5.82576E-06
4	2.42461E-01	2.96091E-01	4.39250E-01	2.71467E-01	1.06760E-01	3.66964E-02	9.18386E-03	2.09248E-03	4.66960E-04	1.02754E-04	1.99644E-05	0.0
5	5.00864E-01	1.92001E-01	1.54254E-01	8.49166E-02	4.60598E-02	2.09247E-02	5.24025E-03	1.08610E-03	2.38113E-04	6.13003E-05	1.02644E-05	0.0
6	1.00705E+00	2.25320E-01	4.24225E-05	4.64528E-07	0.0	4.74374E-03	2.22434E-03	4.84255E-04	1.04027E-04	2.31273E-05	0.0	0.0
7	8.29892E-01	3.22950E-01	2.35880E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	4.58754E-01	4.35927E-01	4.56630E-04	5.55442E-05	6.57016E-06	1.54217E-06	5.46429E-06	1.00556E-06	0.0	0.0	0.0	0.0
9	8.32611E-02	2.05251E-01	6.10396E-02	1.45976E-02	3.06490E-03	2.11920E-04	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	4.76766E-04	1.62547E-04	2.54004E-05	7.55399E-06	1.68662E-06	3.61435E-07	0.0	0.0

NUCLID = AM241J2F MAT NO = 9541

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	7.05071E+00	2.39264E+00	4.36624E+00	9.43838E-05	4.26772E+00	3.50077E-01	4.01753E-02	8.44128E-01	3.13206E-02	4.97645E-02	0.0
2	7.42996E+00	2.05699E+00	3.96081E+00	2.66553E-03	4.67149E+00	6.98833E-01	0.0	7.93542E-01	3.02067E-02	2.62860E-01	0.0
3	7.33208E+00	1.68414E+00	3.69070E+00	2.18865E-02	4.48733E+00	9.38717E-01	0.0	7.33395E-01	2.68555E-02	5.34123E-01	0.0
4	7.06604E+00	1.62152E+00	3.50466E+00	9.06714E-02	4.02049E+00	1.12335E+00	0.0	6.29976E-01	2.35195E-02	7.79134E-01	0.0
5	7.01718E+00	1.30185E+00	3.39005E+00	2.51287E-01	4.36470E+00	1.09924E+00	0.0	4.97283E-01	3.89690E-02	6.02782E-01	0.0
6	7.97802E+00	1.72198E-01	3.31865E+00	4.90526E-01	6.08233E+00	1.23296E+00	0.0	3.68946E-01	5.89018E-02	6.93147E-01	0.0
7	9.63659E+00	2.33601E-02	3.26446E+00	5.66090E-01	8.12008E+00	6.05062E-01	0.0	2.55465E-01	8.71048E-02	6.93147E-01	0.0
8	1.11793E+01	3.31484E-02	3.24262E+00	9.87282E-01	9.78829E+00	3.70555E-01	0.0	1.59303E-01	1.10506E-01	6.93147E-01	0.0
9	1.24995E+01	1.10586E-02	3.22941E+00	1.35071E+00	1.09660E+01	1.71771E-01	0.0	8.78606E-02	1.17518E-01	7.65717E-01	0.0
10	1.37566E+01	2.34379E-02	3.22343E+00	1.82102E+00	1.15578E+01	6.30195E-03	0.0	4.34661E-02	1.29286E-01	7.71399E-01	0.0
11	1.51762E+01	1.21120E-01	3.22114E+00	2.41948E+00	1.26356E+01	0.0	0.0	2.12974E-02	1.39972E-01	7.65467E-01	0.0
12	1.70285E+01	9.33241E-02	3.22006E+00	3.58023E+00	1.33510E+01	0.0	0.0	1.10159E-02	1.48402E-01	7.65717E-01	0.0
13	1.96786E+01	1.28127E-01	3.22060E+00	5.54865E+00	1.40018E+01	0.0	0.0	3.36795E-03	1.54707E-01	7.71399E-01	0.0
14	2.25416E+01	1.94444E-01	3.21922E+00	6.76402E+00	1.45831E+01	0.0	0.0	2.79022E-03	1.61956E-01	7.65468E-01	0.0
15	2.91601E+01	2.24655E-01	3.21910E+00	1.38255E+01	1.51099E+01	0.0	0.0	2.79022E-03	1.67335E-01	7.65718E-01	0.0
16	3.74571E+01	2.30594E-01	3.21905E+00	2.16537E+01	1.55726E+01	0.0	0.0	2.79022E-03	1.70711E-01	7.71399E-01	0.0
17	5.54541E+01	2.25991E-01	3.21902E+00	3.98250E+01	1.54031E+01	0.0	0.0	2.79022E-03	1.11988E-01	7.65468E-01	0.0
18	6.65450E+01	1.93702E-01	3.21901E+00	5.47655E+01	1.15858E+01	0.0	0.0	2.79022E-03	1.12851E-01	7.65718E-01	0.0
19	8.41094E+01	3.57246E-01	3.21900E+00	7.26202E+01	1.11319E+01	0.0	0.0	2.79022E-03	1.00094E-01	7.71399E-01	0.0
20	1.19206E+02	4.63453E-01	3.21900E+00	1.05525E+02	1.22174E+01	0.0	0.0	2.79022E-03	1.12706E-01	7.65468E-01	0.0
21	1.73775E+02	1.65930E+00	3.21900E+00	1.56261E+02	1.06544E+01	0.0	0.0	2.79021E-03	8.79087E-02	7.65718E-01	0.0
22	1.99611E+02	6.96277E-01	3.21900E+00	1.89073E+02	9.84209E+00	0.0	0.0	2.79022E-03	1.05029E-01	7.71400E-01	0.0
23	6.99063E+02	4.49443E+00	3.21900E+00	6.81832E+02	1.27369E+01	0.0	0.0	2.79021E-03	7.69396E-02	7.65468E-01	0.0
24	7.38928E+02	2.49434E+00	3.21900E+00	7.26910E+02	9.52428E+00	0.0	0.0	2.79022E-03	8.28304E-02	7.65718E-01	0.0
25	1.76611E+03	1.07560E+01	3.21900E+00	1.74653E+03	8.82525E+00	0.0	0.0	4.73874E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted]MATRICES

PAGE 1 OF 1

GROUP I EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	1.30628E-05	1.99177E-02	1.64701E-02	7.62918E-02	1.02164E-01	9.15515E-02	3.99150E-02	1.32124E-02	3.98564E-03	9.31568E-04	2.05553E-04	4.43269E-05
2	5.67492E-04	1.52144E-02	1.05164E-01	1.97701E-01	2.17952E-01	1.08155E-01	3.83807E-02	1.20009E-02	2.85607E-03	6.36199E-04	1.40453E-04	2.26529E-05
3	7.98079E-03	8.25462E-02	2.26217E-01	3.25601E-01	1.90797E-01	7.38380E-02	2.41588E-02	5.59163E-03	1.32613E-03	2.94279E-04	6.45860E-05	4.30528E-06
4	8.88692E-02	2.00542E-01	3.75706E-01	2.77961E-01	1.21256E-01	4.22531E-02	1.06508E-02	2.43493E-03	5.44234E-04	1.19846E-04	2.36939E-05	0.0
5	3.11481E-01	4.02645E-01	2.26318E-01	7.56972E-02	5.72824E-02	1.96100E-02	4.55725E-03	1.02592E-03	2.29434E-04	4.93733E-05	7.78707E-06	0.0
6	5.73529E-01	4.86902E-01	1.17739E-01	3.61965E-02	1.06701E-02	4.52011E-03	9.99883E-04	2.40446E-04	1.36071E-04	2.93427E-05	3.37728E-05	0.0
7	3.35271E-01	3.16055E-01	9.29741E-02	3.60125E-02	1.47508E-02	6.55016E-03	1.52720E-03	4.09564E-04	8.97239E-05	1.99222E-05	2.49484E-06	0.0
8	1.69611E-01	1.82954E-01	1.38558E-02	3.55211E-03	7.92678E-04	4.47511E-05	1.17322E-05	3.10568E-06	5.26288E-07	0.0	0.0	0.0
9	3.83666E-02	5.22102E-02	3.81028E-02	1.35149E-02	1.36088E-03	1.62222E-04	2.53496E-05	7.69630E-06	1.65671E-06	3.07135E-07	0.0	0.0
10	0.0	0.0	0.0	4.55596E-03	1.36151E-03	2.56888E-04	6.47106E-05	1.28328E-05	3.02196E-06	8.57393E-07	0.0	0.0

NUCLID = AM426J2F MAT NO = 9521
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.43645E+00	2.02361E+00	4.59694E+00	2.37316E-04	3.39405E+00	8.29748E-01	1.88812E-01	8.32724E-01	2.57363E-02	4.97645E-02	0.0
2	7.46012E+00	1.74144E+00	4.11026E+00	4.14893E-03	4.43164E+00	1.27467E+00	8.22472E-03	8.20624E-01	2.47984E-02	2.62860E-01	0.0
3	7.70100E+00	1.77626E+00	3.80905E+00	2.91835E-02	4.50159E+00	1.39596E+00	0.0	7.88071E-01	2.42128E-02	5.36123E-01	0.0
4	7.24417E+00	1.59728E+00	3.59718E+00	1.27882E-01	3.84422E+00	1.67479E+00	0.0	6.52988E-01	2.02379E-02	7.79134E-01	0.0
5	7.07502E+00	1.52262E+00	3.45314E+00	3.38168E-01	3.90167E+00	1.31254E+00	0.0	5.26572E-01	3.14274E-02	6.02782E-01	0.0
6	8.16636E+00	1.81961E+00	3.86572E+00	4.44068E-01	5.23767E+00	6.65011E-01	0.0	4.19226E-01	4.65717E-02	6.93146E-01	0.0
7	1.00316E+01	2.38618E+00	3.31703E+00	3.78526E-01	6.95484E+00	3.05060E-01	0.0	2.98042E-01	7.07932E-02	6.93147E-01	0.0
8	1.16825E+01	2.72716E+00	3.24277E+00	3.62563E-01	8.43764E+00	1.35117E-01	0.0	1.81990E-01	9.40533E-02	6.93147E-01	0.0
9	1.30730E+01	2.96010E+00	3.26000E+00	4.66079E-01	9.60752E+00	3.73228E-02	0.0	9.57097E-02	1.02499E-01	7.65717E-01	0.0
10	1.44470E+01	3.35944E+00	3.27352E+00	6.29126E-01	1.04582E+01	2.14580E-04	0.0	4.56207E-02	1.12807E-01	7.71398E-01	0.0
11	1.60877E+01	4.21935E+00	3.27054E+00	8.42084E-01	1.10269E+01	0.0	0.0	2.18916E-02	1.20461E-01	7.65467E-01	0.0
12	1.83264E+01	5.70161E+00	3.26918E+00	1.21085E+00	1.14140E+01	0.0	0.0	1.12737E-02	1.24823E-01	7.65717E-01	0.0
13	2.15965E+01	8.06176E+00	3.26854E+00	1.84091E+00	1.16938E+01	0.0	0.0	3.30001E-03	1.27135E-01	7.71399E-01	0.0
14	2.63996E+01	1.18602E+01	3.26925E+00	2.84559E+00	1.18938E+01	0.0	0.0	2.77800E-03	1.29921E-01	7.65468E-01	0.0
15	3.33868E+01	1.69935E+01	3.26811E+00	4.35824E+00	1.20371E+01	0.0	0.0	2.77800E-03	1.31329E-01	7.65718E-01	0.0
16	4.37868E+01	2.49204E+01	3.26805E+00	6.71427E+00	1.21521E+01	0.0	0.0	2.77800E-03	1.31410E-01	7.71399E-01	0.0
17	5.90134E+01	3.66106E+01	3.26903E+00	1.01680E+01	1.22349E+01	0.0	0.0	2.77800E-03	1.33202E-01	7.65468E-01	0.0
18	8.12767E+01	5.36642E+01	3.26850E+00	1.52961E+01	1.22983E+01	0.0	0.0	2.77800E-03	1.33716E-01	7.65717E-01	0.0
19	1.14175E+02	7.69140E+01	3.26755E+00	2.29199E+01	1.23411E+01	0.0	0.0	2.77800E-03	1.33152E-01	7.71399E-01	0.0
20	1.62354E+02	1.15967E+02	3.26800E+00	3.39955E+01	1.23724E+01	0.0	0.0	2.77800E-03	1.34553E-01	7.65468E-01	0.0
21	2.32743E+02	1.70065E+02	3.26752E+00	5.02832E+01	1.23942E+01	0.0	0.0	2.77800E-03	1.34618E-01	7.65718E-01	0.0
22	3.36383E+02	2.49807E+02	3.26873E+00	7.41700E+01	1.24064E+01	0.0	0.0	2.77800E-03	1.33754E-01	7.71399E-01	0.0
23	4.89299E+02	3.67231E+02	3.26800E+00	1.09645E+02	1.24224E+01	0.0	0.0	2.77800E-03	1.35003E-01	7.65467E-01	0.0
24	7.52083E+02	5.38230E+02	3.26800E+00	2.01054E+02	1.27984E+01	0.0	0.0	6.30010E-03	0.0	7.71399E-01	0.0
25	1.34699E+03	7.78279E+02	3.26800E+00	5.55922E+02	1.27920E+01	0.0	0.0				

TABLE OF INELA [redacted] MATRICES

GROUP I	J=	EXIT GROUP 1	2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10	11
1		4.90303E-01	3.39445E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		9.31408E-01	3.43257E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		9.80100E-01	4.15859E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4		1.21304E+00	4.56635E-01	1.12957E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5		8.92820E-01	4.17920E-01	1.80257E-03	1.74156E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6		3.67026E-01	2.25965E-01	4.83235E-02	3.42002E-03	2.67902E-04	1.01218E-05	1.80856E-06	2.04624E-07	0.0	0.0	0.0
7		1.73732E-01	1.00402E-01	2.08154E-02	5.47734E-03	3.24280E-03	1.01299E-03	2.96971E-04	6.39894E-05	1.36704E-05	2.78748E-06	3.93124E-07
8		5.60131E-02	6.69224E-02	1.19354E-02	1.72157E-04	3.82481E-05	8.41200E-06	1.35063E-05	1.10233E-05	2.40787E-06	5.20794E-07	5.92419E-08
9		5.03125E-03	1.67080E-02	9.80407E-03	3.63695E-03	1.46206E-03	5.30799E-04	1.15572E-04	2.52746E-05	5.39529E-06	1.22024E-05	1.18629E-07
10		0.0	0.0	0.0	2.76687E-05	1.49111E-04	3.19426E-05	6.96750E-06	1.49627E-06	3.24047E-07	7.56467E-08	0.0

NUCLID = AM42MJ2F MAT NO = 9522
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.43480E+00	2.13669E+00	4.59387E+00	6.66431E-05	3.39405E+00	7.95180E-01	1.88812E-01	8.32724E-01	2.67363E-02	4.97645E-02	0.0
2	7.45021E+00	1.73326E+00	4.11232E+00	1.68192E-03	4.43164E+00	1.27540E+00	2.22472E-03	8.20624E-01	2.47984E-02	2.62860E-01	0.0
3	7.70605E+00	1.85400E+00	3.80695E+00	1.18723E-02	4.50129E+00	1.33888E+00	0.0	7.68123E-01	2.41938E-02	5.34123E-01	0.0
4	7.25179E+00	1.77597E+00	3.59645E+00	5.14413E-02	2.83511E+00	1.58928E+00	0.0	6.54526E-01	1.99556E-02	7.79134E-01	0.0
5	7.07092E+00	1.65983E+00	3.45395E+00	1.46093E-01	3.62670E+00	1.42830E+00	0.0	5.35304E-01	2.98643E-02	6.02782E-01	0.0
6	8.17238E+00	1.90708E+00	3.36626E+00	2.46239E-01	5.12575E+00	8.93215E-01	0.0	4.28319E-01	4.54836E-02	6.93146E-01	0.0
7	1.00253E+01	2.42050E+00	3.31708E+00	2.59292E-01	6.90312E+00	4.42287E-01	0.0	3.00494E-01	7.04985E-02	6.93147E-01	0.0
8	1.16940E+01	2.79240E+00	3.29275E+00	3.07903E-01	8.42603E+00	1.67712E-01	0.0	1.82028E-01	9.38969E-02	6.93147E-01	0.0
9	1.30724E+01	3.05619E+00	3.27999E+00	3.97755E-01	9.58581E+00	3.26768E+02	0.0	9.59198E-02	1.02145E-01	7.65717E-01	0.0
10	1.44450E+01	2.52540E+00	3.27372E+00	5.01511E-01	1.04106E+01	7.56918E-03	0.0	4.58147E-02	1.12208E-01	7.71398E-01	0.0
11	1.60893E+01	4.44826E+00	3.27054E+00	6.76554E-01	1.09622E+01	2.28670E-03	0.0	2.20029E-02	1.19694E-01	7.65467E-01	0.0
12	1.83264E+01	6.02395E+00	3.26907E+00	9.70480E-01	1.13314E+01	5.80625E-04	0.0	1.13354E-02	1.23830E-01	7.65717E-01	0.0
13	2.15977E+01	8.52656E+00	3.26825E+00	1.47800E+00	1.15930E+01	1.32010E-04	0.0	3.30451E-03	1.26009E-01	7.71399E-01	0.0
14	2.66304E+01	1.30916E+01	3.26825E+00	1.92364E+00	1.16052E+01	2.88579E-05	0.0	2.77800E-03	1.24818E-01	7.65467E-01	0.0
15	2.58310E+01	1.27010E+01	3.26812E+00	1.64946E+00	1.14805E+01	6.07808E-06	0.0	2.77800E-03	1.24627E-01	7.65718E-01	0.0
16	3.75546E+01	2.30650E+01	3.26793E+00	2.99535E+00	1.14942E+01	1.32375E-06	0.0	2.77800E-03	1.23822E-01	7.71399E-01	0.0
17	4.57735E+01	3.03465E+01	3.26802E+00	3.94108E+00	1.14859E+01	2.88699E-07	0.0	2.77800E-03	1.25012E-01	7.65468E-01	0.0
18	6.47373E+01	4.71237E+01	3.26801E+00	6.11994E+00	1.14938E+01	6.10072E-08	0.0	2.77800E-03	1.24283E-01	7.65718E-01	0.0
19	7.92986E+01	6.00037E+01	3.26800E+00	7.79269E+00	1.15023E+01	1.32930E-08	0.0	2.77800E-03	1.23848E-01	7.71399E-01	0.0
20	1.48281E+02	1.21039E+02	3.26800E+00	1.57193E+01	1.15228E+01	2.89561E-09	0.0	2.77800E-03	1.24395E-01	7.65468E-01	0.0
21	1.87056E+02	1.55377E+02	3.26800E+00	2.01788E+01	1.15007E+01	3.46181E-10	0.0	2.77800E-03	1.24674E-01	7.65718E-01	0.0
22	3.37091E+02	2.93735E+02	3.26800E+00	3.10564E+01	1.22995E+01	0.0	0.0	2.77800E-03	1.41819E-01	7.71399E-01	0.0
23	4.63591E+02	4.11206E+02	3.26800E+00	3.99450E+01	1.24402E+01	0.0	0.0	2.77800E-03	1.38885E-01	7.65468E-01	0.0
24	1.05435E+03	8.88053E+02	3.26800E+00	1.53020E+02	1.32758E+01	0.0	0.0	2.77800E-03	1.45411E-01	7.65718E-01	0.0
25	2.81269E+03	2.32951E+03	3.26800E+00	4.67473E+02	1.57096E+01	0.0	0.0	6.42267E-03	0.0	7.71399E-01	0.0

TABLE OF INELA[redacted] MATRICES

GROUP I — J= EXIT 1 / 11 — GROUP 2 — ** KK ** 3 — KK = I + J - 1 4 — 5 — 6 — 7 — 8 — 9 — 10

I	J=	EXIT 1 / 11	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
1		4.32744E-01	2.82435E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
2		9.28050E-01	3.47349E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
3		9.39146E-01	3.99739E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
4		1.10661E+00	4.80493E-01	2.17342E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
5		8.54903E-01	5.50952E-01	2.15605E-02	8.84871E-04	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
6		4.37392E-01	3.61075E-01	7.56884E-02	1.52757E-02	3.26832E-03	5.08648E-04	8.64862E-05	1.93946E-05	4.27392E-06	4.25190E-07
		0.0									
7		1.92669E-01	1.85008E-01	4.11707E-02	1.36880E-02	6.48111E-03	2.61273E-03	5.90708E-04	1.29780E-04	2.94701E-05	6.89795E-06
		8.98804E-07									
8		5.62931E-02	7.84680E-02	2.42519E-02	5.71184E-03	1.93219E-03	6.86105E-04	2.12564E-04	5.43914E-05	2.09838E-06	2.82399E-07
		0.0									
9		1.77909E-02	7.07059E-03	3.95576E-03	1.81194E-03	4.69921E-04	1.02332E-04	5.47034E-04	7.34603E-04	1.58404E-04	3.50813E-05
		0.0									
10		7.17414E-03	3.07107E-04	6.42948E-05	1.43170E-05	7.28624E-06	1.60272E-06	3.52472E-07	7.47131E-08	1.65690E-08	2.26149E-09
		0.0									
11		2.27766E-03	9.03522E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
12		5.78438E-04	2.18648E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
13		1.31560E-04	4.49934E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
14		2.85604E-05	9.75339E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
15		6.05621E-06	2.18751E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
16		1.31918E-06	4.56724E-09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
17		2.87710E-07	9.88932E-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
18		6.07890E-08	2.18157E-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
19		1.32470E-08	4.59901E-11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
20		2.88581E-09	9.79509E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									
21		3.46181E-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0									

NUCLID = CM242J2F MAT NO = 9642
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	6.64563E+00	2.46841E+00	4.80466E+00	1.19915E-04	3.78660E+00	3.08383E-01	8.21196E-02	8.16494E-01	3.28884E-02	4.97644E-02	0.0
2	7.64946E+00	1.95445E+00	4.33643E+00	3.63497E-03	4.84407E+00	8.47307E-01	0.0	7.94282E-01	3.10526E-02	2.62860E-01	0.0
3	7.58506E+00	1.99674E+00	4.03156E+00	2.21695E-02	4.59241E+00	9.73734E-01	0.0	7.27623E-01	2.78683E-02	5.34123E-01	0.0
4	7.07042E+00	2.18774E+00	3.82606E+00	6.51883E-02	3.69317E+00	1.12432E+00	0.0	5.96604E-01	2.26469E-02	7.79134E-01	0.0
5	7.13324E+00	2.27062E+00	3.68359E+00	8.30145E-02	3.92687E+00	8.52541E-01	0.0	4.91349E-01	3.48253E-02	6.02782E-01	0.0
6	8.57656E+00	9.19608E-01	3.60959E+00	1.63708E-01	6.40767E+00	1.08557E+00	0.0	3.69715E-01	6.68526E-02	6.93146E-01	0.0
7	1.06552E+01	1.35833E-01	3.55284E+00	2.19056E-01	9.19229E+00	1.10798E+00	0.0	2.42220E-01	9.94425E-02	6.93147E-01	0.0
8	1.21666E+01	5.99195E-02	3.52502E+00	2.85070E-01	1.09972E+01	8.24485E-01	0.0	1.38978E-01	1.26462E-01	6.93147E-01	0.0
9	1.31295E+01	5.76655E-02	3.51185E+00	4.72198E-01	1.22609E+01	3.38813E-01	0.0	6.78393E-02	1.32539E-01	7.65718E-01	0.0
10	1.39058E+01	6.36641E-02	3.50544E+00	7.84439E-01	1.30543E+01	3.40517E-02	0.0	3.04959E-02	1.41106E-01	7.71399E-01	0.0
11	1.48429E+01	7.40731E-02	3.50251E+00	1.06331E+00	1.37055E+01	0.0	0.0	1.42082E-02	1.52309E-01	7.65467E-01	0.0
12	1.62215E+01	9.17998E-02	3.50116E+00	1.39972E+00	1.47300E+01	0.0	0.0	5.14014E-03	1.66905E-01	7.65717E-01	0.0
13	1.83279E+01	1.13407E-01	3.50054E+00	1.97139E+00	1.62421E+01	0.0	0.0	2.77801E-03	1.84845E-01	7.71399E-01	0.0
14	2.15007E+01	1.46421E-01	3.50025E+00	3.09693E+00	1.82574E+01	0.0	0.0	2.77801E-03	2.10602E-01	7.65467E-01	0.0
15	2.62164E+01	2.00852E-01	3.50012E+00	5.24156E+00	2.07740E+01	0.0	0.0	2.77801E-03	2.40936E-01	7.65718E-01	0.0
16	4.09906E+01	1.94767E-01	3.50006E+00	1.17272E+01	2.90687E+01	0.0	0.0	2.77801E-03	1.00861E-01	7.71331E-01	0.0
17	2.31783E+01	6.61772E-02	3.50002E+00	9.12602E+00	1.39861E+01	0.0	0.0	2.77801E-03	1.12628E-01	7.65468E-01	0.0
18	5.43408E+01	9.70043E-02	3.50777E+00	2.86091E+01	2.56348E+01	0.0	0.0	2.77799E-03	1.07834E-01	7.65718E-01	0.0
19	4.48856E+01	1.42447E-01	3.50462E+00	3.29300E+01	1.18121E+01	0.0	0.0	2.77801E-03	1.08416E-01	7.71399E-01	0.0
20	6.32514E+01	2.09178E-01	3.50000E+00	5.62564E+01	1.27858E+01	0.0	0.0	2.77801E-03	1.04815E-01	7.65468E-01	0.0
21	1.07289E+01	3.06982E-01	3.50000E+00	2.71197E-01	1.01507E+01	0.0	0.0	2.77801E-03	1.13569E-01	7.65718E-01	0.0
22	1.16415E+01	4.50992E-01	3.50000E+00	5.62107E-01	1.06884E+01	0.0	0.0	2.77801E-03	1.17308E-01	7.71399E-01	0.0
23	1.28651E+01	6.62417E-01	3.49999E+00	1.14682E+00	1.10559E+01	0.0	0.0	2.77801E-03	1.21611E-01	7.65468E-01	0.0
24	1.45478E+01	9.72693E-01	3.50000E+00	2.26495E+00	1.13102E+01	0.0	0.0	2.77801E-03	1.23749E-01	7.65718E-01	0.0
25	1.66170E+01	1.42809E+00	3.50014E+00	3.92407E+00	1.14649E+01	0.0	0.0	6.36503E-03	0.0	7.71399E-01	0.0

TABLE OF INELA [redacted] MATRICES

GROUP I	J= EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
1	1.81985E-01	1.26398E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	6.83602E-01	1.62704E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.09311E-01	1.64423E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	9.71945E-01	1.52375E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	7.40285E-01	1.12255E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	8.71515E-01	2.14004E-01	5.30937E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.98356E-01	3.06534E-01	3.09233E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	4.48596E-01	3.74768E-01	8.73254E-04	1.55796E-04	7.16358E-05	1.57712E-05	3.37572E-06	3.80228E-07	0.0	0.0
9	9.20022E-02	1.78534E-01	5.47791E-02	1.27515E-02	7.46992E-04	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	2.45665E-03	7.41624E-04	1.61851E-04	2.51690E-05	7.79089E-06	1.67109E-06	4.25362E-07

Appendix 2. Tables of 70 and 25 Groups Cross Sections for Fission Product

List of Nuclide (MAT Number)	
^{93}Zr (1401)	^{109}Ag (1471)
^{95}Mo (1423)	^{133}Cs (1551)
^{97}Mo (1425)	^{135}Cs (1552)
^{100}Mo (1427)	^{141}Pr (5941)
^{99}Tc (1431)	^{143}Nd (1601)
^{101}Ru (1441)	^{145}Nd (1603)
^{102}Ru (1442)	^{147}Pm (1611)
^{104}Ru (1443)	^{149}Sm (1622)
^{103}Rh (1451)	^{151}Sm (1623)
^{105}Pd(1461)	^{153}Eu (1631)
^{107}Pd (1462)	^{155}Eu (1633)

NUCLID = ZR092J2F MAT NO = 1401
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.37064E+00	0.0	0.0	5.10885E-04	2.65466E+00	1.71534E+00	0.0	6.16726E-01	6.57706E-02	1.09399E-02	0.0
2	4.22794E+00	0.0	0.0	1.44771E-03	2.45479E+00	1.77170E+00	0.0	7.45805E-01	9.26371E-02	3.88245E-02	0.0
3	3.96155E+00	0.0	0.0	3.19842E-03	2.16651E+00	1.79216E+00	0.0	6.59760E-01	9.25341E-02	9.31115E-02	0.0
4	3.64416E+00	0.0	0.0	6.59365E-03	2.11616E+00	1.71740E+00	0.0	5.72694E-01	1.10476E-01	1.69748E-01	0.0
5	3.65401E+00	0.0	0.0	2.81357E-02	2.29549E+00	1.53039E+00	0.0	4.86074E-01	1.24719E-01	2.62391E-01	0.0
6	3.90454E+00	0.0	0.0	5.66061E-02	2.60226E+00	1.24307E+00	0.0	4.30110E-01	1.73362E-01	2.71731E-01	0.0
7	4.39151E+00	0.0	0.0	5.66423E-02	2.20173E+00	1.13113E+00	0.0	4.20277E-01	1.63442E-01	3.75412E-01	0.0
8	5.00211E+00	0.0	0.0	5.37510E-02	4.15279E+00	7.95573E-01	0.0	4.13406E-01	1.58752E-01	4.03723E-01	0.0
9	5.72032E+00	0.0	0.0	4.89643E-02	5.07500E+00	5.96362E-01	0.0	4.08075E-01	2.70003E-01	2.50737E-01	0.0
10	6.50342E+00	0.0	0.0	4.42543E-02	5.58159E+00	5.77593E-01	0.0	3.99599E-01	2.61336E-01	3.22046E-01	0.0
11	7.24468E+00	0.0	0.0	4.18847E-02	6.61264E+00	5.89148E-01	0.0	3.88163E-01	4.04262E-01	2.38842E-01	0.0
12	7.80467E+00	0.0	0.0	4.10884E-02	7.19523E+00	5.68245E-01	0.0	3.31626E-01	4.78664E-01	2.31112E-01	0.0
13	8.25903E+00	0.0	0.0	4.10879E-02	7.73866E+00	4.79083E-01	0.0	2.89221E-01	5.64594E-01	2.23143E-01	0.0
14	8.62691E+00	0.0	0.0	4.24575E-02	8.30028E+00	4.84234E-01	0.0	2.40742E-01	5.69178E-01	2.54092E-01	0.0
15	8.82051E+00	0.0	0.0	4.52361E-02	8.72565E+00	4.96187E-02	0.0	1.96455E-01	7.29607E-01	2.19111E-01	0.0
16	8.98933E+00	0.0	0.0	4.69379E-02	8.92039E+00	0.0	0.0	1.61195E-01	7.45655E-01	2.23143E-01	0.0
17	9.08197E+00	0.0	0.0	5.46950E-02	8.97728E+00	0.0	0.0	1.26261E-01	8.00702E-01	2.87882E-01	0.0
18	8.98919E+00	0.0	0.0	6.22611E-02	8.92691E+00	0.0	0.0	9.70659E-02	7.96723E-01	2.23143E-01	0.0
19	8.98427E+00	0.0	0.0	6.88406E-02	8.89543E+00	0.0	0.0	7.87114E-02	9.80956E-01	1.82321E-01	0.0
20	8.89627E+00	0.0	0.0	7.87343E-02	8.81753E+00	0.0	0.0	6.24614E-02	9.97857E-01	2.57476E-01	0.0
21	8.77797E+00	0.0	0.0	9.46852E-02	8.68328E+00	0.0	0.0	4.73143E-02	9.78761E-01	2.56668E-01	0.0
22	8.66186E+00	0.0	0.0	1.14761E-01	8.54884E+00	0.0	0.0	3.61501E-02	7.09023E-01	2.51553E-01	0.0
23	8.55820E+00	0.0	0.0	1.39722E-01	8.41345E+00	0.0	0.0	2.79715E-02	6.91679E-01	2.55943E-01	0.0
24	8.47655E+00	0.0	0.0	1.70225E-01	8.30632E+00	0.0	0.0	2.19554E-02	6.80265E-01	2.58483E-01	0.0
25	8.42311E+00	0.0	0.0	2.07844E-01	8.21546E+00	0.0	0.0	1.76718E-02	8.80109E-01	2.56983E-01	0.0
26	8.40063E+00	0.0	0.0	2.50549E-01	8.14988E+00	0.0	0.0	1.45410E-02	6.73220E-01	2.58650E-01	0.0
27	8.41264E+00	0.0	0.0	3.01441E-01	8.11120E+00	0.0	0.0	1.10288E-02	6.92774E-01	2.52175E-01	0.0
28	8.46424E+00	0.0	0.0	3.57885E-01	8.10835E+00	0.0	0.0	7.23755E-03	6.86171E-01	2.54642E-01	0.0
29	8.55267E+00	0.0	0.0	4.21451E-01	8.13122E+00	0.0	0.0	7.23756E-03	6.82644E-01	2.57476E-01	0.0
30	8.69334E+00	0.0	0.0	4.92194E-01	8.19115E+00	0.0	0.0	7.23756E-03	6.91575E-01	2.56668E-01	0.0
31	8.88026E+00	0.0	0.0	5.68215E-01	8.29204E+00	0.0	0.0	7.23756E-03	7.15885E-01	2.51553E-01	0.0
32	9.10812E+00	0.0	0.0	6.51015E-01	8.45701E+00	0.0	0.0	7.23756E-03	7.19116E-01	2.55993E-01	0.0
33	9.36892E+00	0.0	0.0	7.43390E-01	8.62553E+00	0.0	0.0	7.23756E-03	7.26397E-01	2.58483E-01	0.0
34	9.69362E+00	0.0	0.0	8.44340E-01	8.84895E+00	0.0	0.0	7.23756E-03	7.52460E-01	2.56983E-01	0.0
35	1.01026E+01	0.0	0.0	9.65280E-01	9.13728E+00	0.0	0.0	7.23756E-03	7.73988E-01	2.58650E-01	0.0
36	1.05775E+01	0.0	0.0	1.10088E+00	9.47659E+00	0.0	0.0	7.23757E-03	8.25499E-01	2.52175E-01	0.0
37	1.11322E+01	0.0	0.0	1.26450E+00	9.86766E+00	0.0	0.0	7.23756E-03	8.48392E-01	2.54642E-01	0.0
38	1.17617E+01	0.0	0.0	1.46601E+00	1.02937E+01	0.0	0.0	7.23756E-03	8.79420E-01	2.57476E-01	0.0
39	1.24661E+01	0.0	0.0	1.71965E+00	1.07663E+01	0.0	0.0	7.23756E-03	9.24642E-01	2.56668E-01	0.0
40	1.33244E+01	0.0	0.0	2.03006E+00	1.12944E+01	0.0	0.0	7.23756E-03	9.90088E-01	2.51553E-01	0.0
41	1.43510E+01	0.0	0.0	2.42306E+00	1.19265E+01	0.0	0.0	7.23756E-03	1.02801E+00	2.55993E-01	0.0
42	1.49956E+01	0.0	0.0	2.76090E+00	1.22347E+01	0.0	0.0	7.23757E-03	9.44184E-01	2.58483E-01	0.0
43	1.31628E+01	0.0	0.0	6.33419E-01	7.68266E+00	0.0	0.0	7.23756E-03	5.46363E-01	2.56983E-01	0.0
44	6.78872E+00	0.0	0.0	3.32639E-02	6.75546E+00	0.0	0.0	7.23756E-03	5.83501E-01	2.58650E-01	0.0
45	8.04559E+00	0.0	0.0	2.14506E-01	7.83106E+00	0.0	0.0	7.23755E-03	7.72830E-01	2.52175E-01	0.0
46	1.90103E+02	0.0	0.0	9.52775E+01	9.46251E+01	0.0	0.0	7.23756E-03	2.55310E-01	2.54315E-01	0.0
47	4.74058E+00	0.0	0.0	7.84334E-01	3.95625E+00	0.0	0.0	7.23756E-03	3.78570E-01	2.57476E-01	0.0
48	5.00801E+00	0.0	0.0	1.65492E-01	4.82252E+00	0.0	0.0	7.23756E-03	4.19041E-01	2.56668E-01	0.0
49	5.21776E+00	0.0	0.0	1.09641E-01	5.10752E+00	0.0	0.0	7.23756E-03	4.44379E-01	2.51553E-01	0.0
50	5.33572E+00	0.0	0.0	5.51322E-02	5.25059E+00	0.0	0.0	7.23756E-03	4.45908E-01	2.55922E-01	0.0
51	5.40728E+00	0.0	0.0	7.49272E-02	5.33635E+00	0.0	0.0	7.23756E-03	4.43175E-01	2.58483E-01	0.0
52	5.45862E+00	0.0	0.0	7.15106E-02	5.38681E+00	0.0	0.0	7.23756E-03	4.52462E-01	2.56983E-01	0.0
53	5.49459E+00	0.0	0.0	7.14179E-02	5.42317E+00	0.0	0.0	7.23756E-03	4.53112E-01	2.58650E-01	0.0
54	5.52268E+00	0.0	0.0	7.40935E-02	5.44659E+00	0.0	0.0	7.23756E-03	4.66554E-01	2.52175E-01	0.0
55	5.54504E+00	0.0	0.0	7.87546E-02	5.46691E+00	0.0	0.0	7.23756E-03	4.63350E-01	2.54642E-01	0.0
56	5.56495E+00	0.0	0.0	8.48293E-02	5.48011E+00	0.0	0.0	7.23758E-03	4.59230E-01	2.57477E-01	0.0
57	5.58307E+00	0.0	0.0	9.29527E-02	5.49014E+00	0.0	0.0	7.23756E-03	4.61360E-01	2.56668E-01	0.0
58	5.60006E+00	0.0	0.0	1.02435E-01	5.49763E+00	0.0	0.0	7.23756E-03	4.71361E-01	2.51553E-01	0.0
59	5.61693E+00	0.0	0.0	1.13647E-01	5.50226E+00	0.0	0.0	7.23756E-03	4.63717E-01	2.55933E-01	0.0
60	5.63494E+00	0.0	0.0	1.27272E-01	5.50767E+00	0.0	0.0	7.23756E-03	4.59466E-01	2.58483E-01	0.0
61	5.65356E+00	0.0	0.0	1.42502E-01	5.51106E+00	0.0	0.0	7.23756E-03	4.62402E-01	2.56983E-01	0.0
62	5.67437E+00	0.0	0.0	1.60694E-01	5.51506E+00	0.0	0.0	7.23756E-03	4.55615E-01	2.58650E-01	0.0
63	5.69723E+00	0.0	0.0	1.81501E-01	5.51573E+00	0.0	0.0	7.23756E-03	4.71572E-01	2.52175E-01	0.0
64	5.72165E+00	0.0	0.0	2.04296E-01	5.51736E+00	0.0	0.0	7.23756E-03	4.67145E-01	2.54642E-01	0.0
65	5.75021E+00	0.0	0.0	2.31555E-01	5.51871E+00	0.0	0.0	7.23756E-03	4.62089E-01	2.57476E-01	0.0
66	5.78242E+00	0.0	0.0	2.62555E-01	5.51987E+00	0.0	0.0	7.23756E-03	4.63611E-01	2.56668E-01	0.0
67	5.81747E+00	0.0	0.0	2.96662E-01	5.52067E+00	0.0	0.0	7.23756E-03	4.73134E-01	2.51554E-01	0.0
68	5.85863E+00	0.0	0.0	3.36791E-01	5.52104E+00	0.0	0.0	7.23756E-03	4.65129E-01	2.55943E-01	0.0
69	5.90491E+00	0.0	0.0	3.81726E-01	5.52261E+00	0.0	0.0	7.23758E-03	4.60622E-01	2.58483E-01	0.0
70	5.95782E+00	0.0	0.0	4.33995E-01	5.52384E+00	0.0	0.0	7.47946E-02	4.63393E-01	2.56983E-01	0.0

NUCLID = MCC95J2F MAT NO = 1422
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA.	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.37733E+00	0.0	0.0	1.65209E-03	2.65651E+00	1.72117E+00	0.0	9.17119E-01	8.44462E-02	1.09399E-02	0.0
2	4.21879E+00	0.0	0.0	3.61625E-03	2.43951E+00	1.77567E+00	0.0	7.42504E-01	9.12447E-02	3.88245E-02	0.0
3	3.95389E+00	0.0	0.0	7.02232E-03	2.14495E+00	1.80193E+00	0.0	6.54873E-01	9.09185E-02	9.31115E-02	0.0
4	3.85733E+00	0.0	0.0	1.18898E-02	2.02981E+00	1.81563E+00	0.0	5.92015E-01	9.20834E-02	1.69748E-01	0.0
5	3.89581E+00	0.0	0.0	1.78936E-02	2.06220E+00	1.81571E+00	0.0	5.50590E-01	9.10234E-02	2.68391E-01	0.0
6	4.05462E+00	0.0	0.0	2.47147E-02	2.22169E+00	1.80822E+00	0.0	5.24731E-01	1.18063E-01	2.71731E-01	0.0
7	4.48448E+00	0.0	0.0	3.06454E-02	2.71847E+00	1.73536E+00	0.0	5.20362E-01	1.14031E-01	3.75411E-01	0.0
8	5.14528E+00	0.0	0.0	3.98226E-02	3.52102E+00	1.58444E+00	0.0	5.15358E-01	1.2946PE-01	4.02722E-01	0.0
9	5.85110E+00	0.0	0.0	4.75881E-02	4.43632E+00	1.36729E+00	0.0	4.92189E-01	2.09961E-01	2.80737E-01	0.0
10	6.64157E+00	0.0	0.0	6.82532E-02	5.62794E+00	9.45379E-01	0.0	4.27504E-01	2.45634E-01	3.22046E-01	0.0
11	7.39804E+00	0.0	0.0	8.39856E-02	6.68563E+00	6.28624E-01	0.0	3.87294E-01	3.98227E-01	2.38892E-01	0.0
12	7.97326E+00	0.0	0.0	8.26693E-02	7.24873E+00	6.41862E-01	0.0	3.52637E-01	4.55751E-01	2.31112E-01	0.0
13	8.42768E+00	0.0	0.0	8.16771E-02	7.73288E+00	6.13120E-01	0.0	3.12649E-01	5.32059E-01	2.23143E-01	0.0
14	8.80261E+00	0.0	0.0	8.38555E-02	8.21229E+00	5.0646PE-01	0.0	2.66787E-01	5.30874E-01	2.54692E-01	0.0
15	9.05713E+00	0.0	0.0	9.05683E-02	8.64274E+00	3.23815E-01	0.0	2.2CC2PE-01	6.93600E-01	2.15111E-01	0.0
16	9.18297E+00	0.0	0.0	1.02752E-01	8.98995E+00	9.02687E-02	0.0	1.80045E-01	7.25647E-01	2.23143E-01	0.0
17	9.21984E+00	0.0	0.0	1.19323E-01	9.10051E+00	0.0	0.0	1.41852E-01	5.85708E-01	2.57682E-01	0.0
18	9.16910E+00	0.0	0.0	1.38239E-01	9.03086E+00	0.0	0.0	1.1C779E-01	7.71316E-01	2.23143E-01	0.0
19	9.14229E+00	0.0	0.0	1.54962E-01	8.98731E+00	0.0	0.0	9.12341E-02	9.57099E-01	1.82321E-01	0.0
20	9.06375E+00	0.0	0.0	1.78527E-01	8.88523E+00	0.0	0.0	7.35630E-02	6.79600E-01	2.57476E-01	0.0
21	8.98311E+00	0.0	0.0	2.14614E-01	8.70850E+00	0.0	0.0	5.65509E-02	6.78209E-01	2.56688E-01	0.0
22	8.78002E+00	0.0	0.0	2.58241E-01	8.52178E+00	0.0	0.0	4.37209E-02	6.85114E-01	2.51553E-01	0.0
23	8.64644E+00	0.0	0.0	3.10160E-01	8.33629E+00	0.0	0.0	3.40951E-02	6.64602E-01	2.55933E-01	0.0
24	8.53280E+00	0.0	0.0	3.70832E-01	8.16197E+00	0.0	0.0	2.69326E-02	6.49022E-01	2.59483E-01	0.0
25	8.44805E+00	0.0	0.0	4.41501E-01	8.00655E+00	0.0	0.0	2.14991E-02	6.44230E-01	2.56983E-01	0.0
26	8.39504E+00	0.0	0.0	5.19919E-01	7.87512E+00	0.0	0.0	1.73262E-02	6.22546E-01	2.58655E-01	0.0
27	8.37961E+00	0.0	0.0	6.05948E-01	7.77366E+00	0.0	0.0	1.46922E-02	6.43336E-01	2.52175E-01	0.0
28	8.39652E+00	0.0	0.0	6.96173E-01	7.70035E+00	0.0	0.0	1.0C179E-02	6.25815E-01	2.54642E-01	0.0
29	8.45565E+00	0.0	0.0	7.94114E-01	7.66152E+00	0.0	0.0	7.0850GE-03	6.27459E-01	2.57476E-01	0.0
30	8.55665E+00	0.0	0.0	8.99211E-01	7.65744E+00	0.0	0.0	7.0850GE-03	6.30783E-01	2.56688E-01	0.0
31	8.70206E+00	0.0	0.0	1.00734E+00	7.69472E+00	0.0	0.0	7.0850GE-03	6.48254E-01	2.51553E-01	0.0
32	8.90884E+00	0.0	0.0	1.12142E+00	7.78743E+00	0.0	0.0	7.0850GE-03	6.46142E-01	2.55933E-01	0.0
33	9.13882E+00	0.0	0.0	1.25099E+00	7.88783E+00	0.0	0.0	7.0850GE-03	6.48369E-01	2.58483E-01	0.0
34	9.05217E+00	0.0	0.0	1.18043E+00	7.87174E+00	0.0	0.0	7.0850GE-03	6.26256E-01	2.56983E-01	0.0
35	1.14411E+01	0.0	0.0	1.62345E+00	9.81767E+00	0.0	0.0	7.0850GE-03	7.7644CE-01	2.57976E-01	0.0
36	1.63857E+01	0.0	0.0	2.14715E+00	1.42286E+01	0.0	0.0	7.0850GE-03	5.14CP4E-01	2.51391E-01	0.0
37	1.02049E+01	0.0	0.0	2.10996E+00	8.09494E+00	0.0	0.0	7.0850GE-03	6.10920E-01	2.54059E-01	0.0
38	9.71996E+00	0.0	0.0	1.20760E+00	8.41236E+00	0.0	0.0	7.0850GE-03	7.5C660E-01	2.57476E-01	0.0
39	2.55438E+01	0.0	0.0	5.11310E+00	2.04307E+01	0.0	0.0	7.0850GE-03	4.69120E-01	2.56679E-01	0.0
40	8.75575E+00	0.0	0.0	2.00847E+00	6.7472PE+00	0.0	0.0	7.0850GE-03	5.2430BE-01	2.51553E-01	0.0
41	8.77682E+00	0.0	0.0	5.11844E-01	8.26498E+00	0.0	0.0	7.0850GE-03	1.48017E+00	2.55933E-01	0.0
42	2.47544E+01	0.0	0.0	6.93831E+00	1.78161E+01	0.0	0.0	7.0850GE-03	4.70154E-01	2.53477E-01	0.0
43	6.54119E+00	0.0	0.0	5.38799E-01	6.00229E+00	0.0	0.0	7.0850GE-03	5.02816E-01	2.56983E-01	0.0
44	6.47003E+00	0.0	0.0	1.25705E-01	6.33633E+00	0.0	0.0	7.0850GE-03	5.37207E-01	2.58650E-01	0.0
45	1.10194E+01	0.0	0.0	4.49915E+00	6.52027E+00	0.0	0.0	7.0850GE-03	5.43627E-01	2.52150E-01	0.0
46	7.17248E+00	0.0	0.0	3.71028E-01	6.8C145E+00	0.0	0.0	7.0850GE-03	5.78529E-01	2.54634E-01	0.0
47	7.72037E+00	0.0	0.0	2.63242E-01	7.45713E+00	0.0	0.0	7.0850GE-03	6.51524E-01	2.57476E-01	0.0
48	1.00001E+01	0.0	0.0	6.28093E-01	9.37198E+00	0.0	0.0	7.0850GE-03	9.18006E-01	2.56688E-01	0.0
49	4.29169E+01	0.0	0.0	1.14139E+01	3.15030E+01	0.0	0.0	7.0850GE-03	8.27958E+00	2.51553E-01	0.0
50	8.61079E+02	0.0	0.0	3.87956E+02	4.73124E+02	0.0	0.0	7.0850GE-03	2.21191E-01	2.55933E-01	0.0
51	4.99640E+00	0.0	0.0	2.17154E+00	2.82486E+00	0.0	0.0	7.0850GE-03	2.559C0E-01	2.58483E-01	0.0
52	4.61540E+00	0.0	0.0	1.13799E+00	3.47741E+00	0.0	0.0	7.0850GE-03	3.036P4E-01	2.56983E-01	0.0
53	4.80771E+00	0.0	0.0	9.21203E-01	3.88651E+00	0.0	0.0	7.0850GE-03	3.27492E-01	2.58650E-01	0.0
54	4.99070E+00	0.0	0.0	8.69443E-01	4.12125E+00	0.0	0.0	7.0850GE-03	3.51177E-01	2.52169E-01	0.0
55	5.15144E+00	0.0	0.0	8.83681E-01	4.26776E+00	0.0	0.0	7.0850GE-03	3.5772SE-01	2.54642E-01	0.0
56	5.29563E+00	0.0	0.0	9.33184E-01	4.36245E+00	0.0	0.0	7.0850GE-03	3.606C6E-01	2.57477E-01	0.0
57	5.43978E+00	0.0	0.0	1.00871E+00	4.42107E+00	0.0	0.0	7.0850GE-03	3.662P9E-01	2.56659E-01	0.0
58	5.58738E+00	0.0	0.0	1.10881E+00	4.47857E+00	0.0	0.0	7.0850GE-03	3.77223E-01	2.51554E-01	0.0
59	5.73855E+00	0.0	0.0	1.22562E+00	4.51293E+00	0.0	0.0	7.0850GE-03	3.73251E-01	2.55933E-01	0.0
60	5.90687E+00	0.0	0.0	1.36826E+00	4.53661E+00	0.0	0.0	7.0850GE-03	3.713P5E-01	2.58483E-01	0.0
61	6.09769E+00	0.0	0.0	1.54002E+00	4.55767E+00	0.0	0.0	7.0850GE-03	3.74912E-01	2.56983E-01	0.0
62	6.30180E+00	0.0	0.0	1.72973E+00	4.57207E+00	0.0	0.0	7.0850GE-03	3.72525E-01	2.5P645E-01	0.0
63	6.53680E+00	0.0	0.0	1.95406E+00	4.58274E+00	0.0	0.0	7.0850GE-03	3.83890E-01	2.52175E-01	0.0
64	6.79867E+00	0.0	0.0	2.20703E+00	4.59164E+00	0.0	0.0	7.0850GE-03	3.80792E-01	2.54642E-01	0.0
65	7.08981E+00	0.0	0.0	2.49240E+00	4.59741E+00	0.0	0.0	7.0850GE-03	3.7704BE-01	2.57471E-01	0.0
66	7.43512E+00	0.0	0.0	2.83281E+00	4.60231E+00	0.0	0.0	7.0850GE-03	3.78585E-01	2.56688E-01	0.0
67	7.80839E+00	0.0	0.0	3.20219E+00	4.60620E+00	0.0	0.0	7.0850GE-03	3.86589E-01	2.51552E-01	0.0
68	8.23586E+00	0.0	0.0	3.62644E+00	4.60942E+00	0.0	0.0	7.0850GE-03	3.80212E-01	2.55929E-01	0.0
69	8.74199E+00	0.0	0.0	4.13006E+00	4.61199E+00	0.0	0.0	7.0850GE-03	3.78666E-01	2.58482E-01	0.0
70	9.29415E+00	0.0	0.0	4.67980E+00	4.61434E+00	0.0	0.0	2.40761E-02	3.79036E-01	2.56975E-01	0.0

NUCLID = MOD97J2F MAT NO = 1425
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.38515E+00	0.0	0.0	7.03139E-04	2.65160E+00	1.73285E+00	0.0	8.15005E-01	8.36830E-02	1.09299E-02	0.0
2	4.20834E+00	0.0	0.0	1.77816E-03	2.42014E+00	1.78642E+00	0.0	7.39208E-01	8.96931E-02	3.88245E-02	0.0
3	3.94547E+00	0.0	0.0	4.05774E-03	2.11875E+00	1.82266E+00	0.0	6.50560E-01	8.89359E-02	9.31115E-02	0.0
4	3.86515E+00	0.0	0.0	7.54589E-03	2.01601E+00	1.84160E+00	0.0	5.92092E-01	9.02853E-02	1.69746E-01	0.0
5	3.92922E+00	0.0	0.0	1.17435E-02	2.07666E+00	1.84087E+00	0.0	5.60015E-01	8.77500E-02	2.62391E-01	0.0
6	4.11723E+00	0.0	0.0	1.66168E-02	2.25939E+00	1.84122E+00	0.0	5.41184E-01	1.13334E-01	2.71731E-01	0.0
7	4.58857E+00	0.0	0.0	2.17780E-02	2.79181E+00	1.77498E+00	0.0	5.37196E-01	1.11684E-01	3.75413E-01	0.0
8	5.28821E+00	0.0	0.0	3.26491E-02	3.63442E+00	1.62113E+00	0.0	5.28790E-01	1.26835E-01	4.03723E-01	0.0
9	6.00539E+00	0.0	0.0	4.84353E-02	4.53373E+00	1.42323E+00	0.0	5.09264E-01	1.99595E-01	2.80727E-01	0.0
10	6.81160E+00	0.0	0.0	6.24380E-02	5.53823E+00	1.21093E+00	0.0	4.68840E-01	2.22049E-01	3.22045E-01	0.0
11	7.52259E+00	0.0	0.0	7.73081E-02	6.86445E+00	5.80829E-01	0.0	3.99137E-01	4.00825E-01	2.38892E-01	0.0
12	8.09984E+00	0.0	0.0	8.82281E-02	7.81469E+00	1.96920E-01	0.0	3.48380E-01	4.44041E-01	2.31112E-01	0.0
13	8.52662E+00	0.0	0.0	8.93606E-02	8.43490E+00	2.35710E-03	0.0	3.07813E-01	5.66792E-01	2.23143E-01	0.0
14	8.91830E+00	0.0	0.0	9.03569E-02	8.82794E+00	0.0	0.0	2.68351E-01	5.49164E-01	2.54892E-01	0.0
15	9.17280E+00	0.0	0.0	9.37328E-02	9.07907E+00	0.0	0.0	2.29966E-01	6.95036E-01	2.15111E-01	0.0
16	9.31669E+00	0.0	0.0	9.97761E-02	9.21691E+00	0.0	0.0	1.95228E-01	7.07283E-01	2.23143E-01	0.0
17	9.34932E+00	0.0	0.0	1.11738E-01	9.23758E+00	0.0	0.0	1.58130E-01	5.72152E-01	2.97682E-01	0.0
18	9.29912E+00	0.0	0.0	1.28899E-01	9.17022E+00	0.0	0.0	1.25389E-01	7.55137E-01	2.23143E-01	0.0
19	9.27215E+00	0.0	0.0	1.44042E-01	9.12811E+00	0.0	0.0	1.04805E-01	9.38352E-01	1.82321E-01	0.0
20	9.18766E+00	0.0	0.0	1.65613E-01	9.02205E+00	0.0	0.0	8.57722E-02	8.67255E-01	2.57476E-01	0.0
21	9.03287E+00	0.0	0.0	1.99124E-01	8.83374E+00	0.0	0.0	6.68697E-02	6.66685E-01	2.56688E-01	0.0
22	8.87073E+00	0.0	0.0	2.39982E-01	8.63074E+00	0.0	0.0	5.22984E-02	6.72396E-01	2.51553E-01	0.0
23	8.71426E+00	0.0	0.0	2.89038E-01	8.42522E+00	0.0	0.0	4.11204E-02	6.52761E-01	2.55923E-01	0.0
24	8.57534E+00	0.0	0.0	3.46905E-01	8.22843E+00	0.0	0.0	3.24969E-02	6.36626E-01	2.58483E-01	0.0
25	8.46412E+00	0.0	0.0	4.14873E-01	8.04925E+00	0.0	0.0	2.60006E-02	6.30857E-01	2.56983E-01	0.0
26	8.39204E+00	0.0	0.0	4.98679E-01	7.89236E+00	0.0	0.0	2.11024E-02	6.17998E-01	2.58650E-01	0.0
27	8.38306E+00	0.0	0.0	6.16767E-01	7.76630E+00	0.0	0.0	1.74871E-02	6.26853E-01	2.52175E-01	0.0
28	8.42883E+00	0.0	0.0	7.61062E-01	7.66777E+00	0.0	0.0	1.48185E-02	6.15184E-01	2.54642E-01	0.0
29	8.51686E+00	0.0	0.0	9.14205E-01	7.60266E+00	0.0	0.0	1.27852E-02	6.05757E-01	2.57476E-01	0.0
30	8.64295E+00	0.0	0.0	1.07156E+00	7.57140E+00	0.0	0.0	7.68460E-03	6.09917E-01	2.56688E-01	0.0
31	8.82686E+00	0.0	0.0	1.24467E+00	7.58219E+00	0.0	0.0	6.93884E-03	6.24767E-01	2.51553E-01	0.0
32	9.08905E+00	0.0	0.0	1.44073E+00	7.64832E+00	0.0	0.0	6.93884E-03	6.20725E-01	2.55923E-01	0.0
33	9.38335E+00	0.0	0.0	1.65840E+00	7.72495E+00	0.0	0.0	6.93884E-03	6.21281E-01	2.58483E-01	0.0
34	9.68561E+00	0.0	0.0	1.83992E+00	7.84570E+00	0.0	0.0	6.93884E-03	6.35794E-01	2.56983E-01	0.0
35	9.15269E+00	0.0	0.0	1.59534E+00	7.55735E+00	0.0	0.0	6.93884E-03	5.56043E-01	2.56650E-01	0.0
36	9.55775E+00	0.0	0.0	1.96001E+00	7.59774E+00	0.0	0.0	6.93884E-03	5.62819E-01	2.51254E-01	0.0
37	1.17343E+01	0.0	0.0	2.44348E+00	9.29083E+00	0.0	0.0	6.93884E-03	5.30499E-01	2.53916E-01	0.0
38	1.16798E+01	0.0	0.0	2.21687E+00	9.46295E+00	0.0	0.0	6.92883E-03	1.91114E+00	2.57476E-01	0.0
39	1.28081E+01	0.0	0.0	3.18739E+00	9.62071E+00	0.0	0.0	6.93884E-03	4.70095E-01	2.56688E-01	0.0
40	2.31232E+01	0.0	0.0	5.38125E+00	1.77420E+01	0.0	0.0	6.93884E-03	3.80997E-01	2.51553E-01	0.0
41	9.82909E+00	0.0	0.0	3.25976E+00	6.56932E+00	0.0	0.0	6.93884E-03	3.90115E-01	2.55923E-01	0.0
42	1.10908E+01	0.0	0.0	4.87508E+00	6.21573E+00	0.0	0.0	6.93884E-03	4.46924E-01	2.58474E-01	0.0
43	7.55813E+00	0.0	0.0	2.55605E+00	5.00207E+00	0.0	0.0	6.93884E-03	3.99289E-01	2.56983E-01	0.0
44	5.26624E+00	0.0	0.0	2.25783E-01	5.04046E+00	0.0	0.0	6.93884E-03	4.04671E-01	2.58650E-01	0.0
45	5.63776E+00	0.0	0.0	5.37699E-01	5.10006E+00	0.0	0.0	6.93884E-03	4.18772E-01	2.52169E-01	0.0
46	5.44373E+00	0.0	0.0	2.85644E-01	5.15809E+00	0.0	0.0	6.92884E-03	4.20694E-01	2.54642E-01	0.0
47	5.53323E+00	0.0	0.0	2.24038E-01	5.30920E+00	0.0	0.0	6.93884E-03	4.44295E-01	2.57476E-01	0.0
48	2.85458E+01	0.0	0.0	2.07226E+01	7.82380E+00	0.0	0.0	6.93884E-03	3.91346E-01	2.56688E-01	0.0
49	5.14418E+00	0.0	0.0	1.73763E-01	4.97042E+00	0.0	0.0	6.93884E-03	4.13691E-01	2.51552E-01	0.0
50	5.12267E+00	0.0	0.0	6.61412E-02	5.05653E+00	0.0	0.0	6.93884E-03	4.09849E-01	2.55923E-01	0.0
51	5.15163E+00	0.0	0.0	6.84639E-02	5.08317E+00	0.0	0.0	6.93884E-03	4.07112E-01	2.59483E-01	0.0
52	5.17176E+00	0.0	0.0	7.49963E-02	5.09676E+00	0.0	0.0	6.93884E-03	4.10172E-01	2.56983E-01	0.0
53	5.19964E+00	0.0	0.0	9.41850E-02	5.10566E+00	0.0	0.0	6.93884E-03	4.07915E-01	2.58650E-01	0.0
54	5.26676E+00	0.0	0.0	1.61564E-01	5.10520E+00	0.0	0.0	6.93884E-03	4.18619E-01	2.52176E-01	0.0
55	5.21347E+00	0.0	0.0	1.05909E-01	5.10756E+00	0.0	0.0	6.92884E-03	4.14719E-01	2.54642E-01	0.0
56	5.22860E+00	0.0	0.0	1.19505E-01	5.10909E+00	0.0	0.0	6.93884E-03	4.10262E-01	2.57476E-01	0.0
57	5.24573E+00	0.0	0.0	1.35554E-01	5.11017E+00	0.0	0.0	6.93884E-03	4.11596E-01	2.56688E-01	0.0
58	5.26401E+00	0.0	0.0	1.52050E-01	5.11096E+00	0.0	0.0	6.93884E-03	4.20053E-01	2.51553E-01	0.0
59	5.28526E+00	0.0	0.0	1.73677E-01	5.11152E+00	0.0	0.0	6.92884E-03	4.12900E-01	2.55924E-01	0.0
60	5.30921E+00	0.0	0.0	1.97245E-01	5.11197E+00	0.0	0.0	6.93884E-03	4.08860E-01	2.58483E-01	0.0
61	5.33601E+00	0.0	0.0	2.23682E-01	5.11233E+00	0.0	0.0	6.93884E-03	4.11272E-01	2.56983E-01	0.0
62	5.36749E+00	0.0	0.0	2.54870E-01	5.11262E+00	0.0	0.0	6.93884E-03	4.08849E-01	2.58650E-01	0.0
63	5.40156E+00	0.0	0.0	2.88669E-01	5.11289E+00	0.0	0.0	6.93884E-03	4.19158E-01	2.52175E-01	0.0
64	5.44081E+00	0.0	0.0	3.27647E-01	5.11317E+00	0.0	0.0	6.92884E-03	4.15139E-01	2.54642E-01	0.0
65	5.48672E+00	0.0	0.0	3.73308E-01	5.11341E+00	0.0	0.0	6.93884E-03	4.10569E-01	2.57476E-01	0.0
66	5.53689E+00	0.0	0.0	4.23175E-01	5.11372E+00	0.0	0.0	6.92884E-03	4.11864E-01	2.56689E-01	0.0
67	5.59558E+00	0.0	0.0	4.81489E-01	5.11409E+00	0.0	0.0	6.92884E-03	4.20294E-01	2.51553E-01	0.0
68	5.66152E+00	0.0	0.0	5.47017E-01	5.11450E+00	0.0	0.0	6.93884E-03	4.12135E-01	2.55923E-01	0.0
69	5.73597E+00	0.0	0.0	6.20938E-01	5.11503E+00	0.0	0.0	6.93884E-03	4.09115E-01	2.58483E-01	0.0
70	5.82316E+00	0.0	0.0	7.07436E-01	5.11573E+00	0.0	0.0	3.22817E-02	4.11557E-01	2.56983E-01	0.0

NUCLID = MO10J2F MAT NO = 1427
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.40119E+00	0.0	0.0	1.65465E-04	2.64659E+00	1.75443E+00	0.0	8.12293E-01	9.20045E-02	1.09399E-02	0.0
2	4.22082E+00	0.0	0.0	6.08746E-04	2.40074E+00	1.81947E+00	0.0	7.36927E-01	8.57325E-02	3.88245E-02	0.0
3	3.97727E+00	0.0	0.0	1.90305E-03	2.10013E+00	1.87523E+00	0.0	6.51547E-01	8.60939E-02	9.31116E-02	0.0
4	3.79406E+00	0.0	0.0	4.56507E-03	1.93625E+00	1.85125E+00	0.0	5.80249E-01	8.53691E-02	1.69748E-01	0.0
5	3.88509E+00	0.0	0.0	8.61210E-03	2.08397E+00	1.79251E+00	0.0	5.46854E-01	9.14356E-02	2.62392E-01	0.0
6	4.14159E+00	0.0	0.0	1.17492E-02	2.44097E+00	1.68867E+00	0.0	5.33362E-01	1.21820E-01	2.71731E-01	0.0
7	4.67608E+00	0.0	0.0	1.19400E-02	3.04883E+00	1.61751E+00	0.0	5.28553E-01	1.20584E-01	3.75412E-01	0.0
8	5.45115E+00	0.0	0.0	1.19536E-02	3.95796E+00	1.48124E+00	0.0	5.17718E-01	1.35495E-01	4.03723E-01	0.0
9	6.17183E+00	0.0	0.0	1.17830E-02	4.84695E+00	1.31314E+00	0.0	5.02505E-01	2.06968E-01	2.80737E-01	0.0
10	6.92950E+00	0.0	0.0	1.40050E-02	5.79113E+00	1.12436E+00	0.0	4.71334E-01	2.17837E-01	3.22046E-01	0.0
11	7.54475E+00	0.0	0.0	1.73241E-02	6.86559E+00	6.61832E-01	0.0	4.15421E-01	2.76204E-01	2.38892E-01	0.0
12	8.08563E+00	0.0	0.0	2.76285E-02	7.87965E+00	1.78353E-01	0.0	3.64797E-01	4.74914E-01	2.21112E-01	0.0
13	8.56525E+00	0.0	0.0	3.80526E-02	8.52720E+00	0.0	0.0	3.24630E-01	5.41333E-01	2.23142E-01	0.0
14	8.91332E+00	0.0	0.0	3.55304E-02	8.67779E+00	0.0	0.0	2.88323E-01	5.20306E-01	2.54892E-01	0.0
15	9.15773E+00	0.0	0.0	3.33779E-02	9.12435E+00	0.0	0.0	2.51142E-01	6.58610E-01	2.15111E-01	0.0
16	9.30315E+00	0.0	0.0	3.18380E-02	9.27135E+00	0.0	0.0	2.16533E-01	6.71863E-01	2.23143E-01	0.0
17	9.36895E+00	0.0	0.0	3.09636E-02	9.33799E+00	0.0	0.0	1.78826E-01	6.49562E-01	2.87682E-01	0.0
18	9.32648E+00	0.0	0.0	3.25704E-02	9.29391E+00	0.0	0.0	1.44604E-01	7.24885E-01	2.23143E-01	0.0
19	9.23526E+00	0.0	0.0	3.57394E-02	9.19952E+00	0.0	0.0	1.20750E-01	8.99664E-01	1.82321E-01	0.0
20	9.15696E+00	0.0	0.0	3.96179E-02	9.11735E+00	0.0	0.0	9.99827E-02	6.46435E-01	2.57476E-01	0.0
21	9.02108E+00	0.0	0.0	4.50622E-02	8.97601E+00	0.0	0.0	7.95349E-02	6.49272E-01	2.54688E-01	0.0
22	8.85233E+00	0.0	0.0	5.28115E-02	8.79951E+00	0.0	0.0	6.28674E-02	6.59645E-01	2.51553E-01	0.0
23	8.68552E+00	0.0	0.0	6.33174E-02	8.62225E+00	0.0	0.0	4.97703E-02	6.43302E-01	2.55933E-01	0.0
24	8.53325E+00	0.0	0.0	7.68891E-02	8.45637E+00	0.0	0.0	3.94356E-02	6.31298E-01	2.58483E-01	0.0
25	8.40504E+00	0.0	0.0	9.42232E-02	8.31062E+00	0.0	0.0	3.14747E-02	6.29402E-01	2.56903E-01	0.0
26	8.30623E+00	0.0	0.0	1.14830E-01	8.19140E+00	0.0	0.0	2.52750E-02	6.20670E-01	2.58650E-01	0.0
27	8.24389E+00	0.0	0.0	1.39841E-01	8.10405E+00	0.0	0.0	2.02759E-02	6.33738E-01	2.52175E-01	0.0
28	8.21396E+00	0.0	0.0	1.68803E-01	8.04515E+00	0.0	0.0	1.72267E-02	6.25551E-01	2.54642E-01	0.0
29	8.22332E+00	0.0	0.0	2.02364E-01	8.02095E+00	0.0	0.0	1.46694E-02	6.19886E-01	2.57476E-01	0.0
30	8.27229E+00	0.0	0.0	2.40761E-01	8.03153E+00	0.0	0.0	1.26571E-02	6.25367E-01	2.56688E-01	0.0
31	8.32231E+00	0.0	0.0	2.82712E-01	8.02960E+00	0.0	0.0	8.42739E-03	6.27745E-01	2.51553E-01	0.0
32	7.69459E+00	0.0	0.0	2.68654E-01	7.42593E+00	0.0	0.0	6.72444E-03	5.55214E-01	2.55933E-01	0.0
33	1.18331E+01	0.0	0.0	3.3227CE-01	1.15009E+01	0.0	0.0	6.72443E-03	3.38466E-01	2.59361E-01	0.0
34	6.75288E+00	0.0	0.0	3.87082E-01	6.36580E+00	0.0	0.0	6.72444E-03	4.27947E-01	2.55968E-01	0.0
35	1.60843E+01	0.0	0.0	9.18622E-01	1.51657E+01	0.0	0.0	6.72442E-03	2.22564E+00	2.56386E-01	0.0
36	5.04870E+00	0.0	0.0	4.98063E-02	5.04372E+00	0.0	0.0	6.72443E-03	4.14227E-01	2.52175E-01	0.0
37	1.33167E+01	0.0	0.0	1.85117E+00	1.14655E+01	0.0	0.0	6.72443E-03	4.23959E-01	2.54536E-01	0.0
38	5.58434E+00	0.0	0.0	1.39071E-01	5.44526E+00	0.0	0.0	6.72444E-03	4.26460E-01	2.57421E-01	0.0
39	5.58782E+00	0.0	0.0	1.65631E-03	5.58596E+00	0.0	0.0	6.72444E-03	4.50509E-01	2.56688E-01	0.0
40	6.65976E+00	0.0	0.0	4.95112E-01	6.16465E+00	0.0	0.0	6.72444E-03	5.23609E-01	2.51553E-01	0.0
41	1.04772E+02	0.0	0.0	7.42523E+00	9.73473E+01	0.0	0.0	6.72440E-03	5.90129E+01	2.55933E-01	0.0
42	3.14904E+00	0.0	0.0	2.85032E-01	2.86401E+00	0.0	0.0	6.72443E-03	2.66877E-01	2.58483E-01	0.0
43	3.93482E+00	0.0	0.0	1.03837E-02	3.92444E+00	0.0	0.0	6.72442E-03	3.24773E-01	2.56983E-01	0.0
44	4.32467E+00	0.0	0.0	5.95783E-03	4.21871E+00	0.0	0.0	6.72443E-03	3.41774E-01	2.58650E-01	0.0
45	4.48666E+00	0.0	0.0	4.93376E-03	4.48173E+00	0.0	0.0	6.72443E-03	3.59783E-01	2.52175E-01	0.0
46	4.57910E+00	0.0	0.0	7.23407E-03	4.57187E+00	0.0	0.0	6.72443E-03	3.61701E-01	2.54642E-01	0.0
47	5.27871E+00	0.0	0.0	6.48428E-01	4.62028E+00	0.0	0.0	6.72443E-03	3.61640E-01	2.57476E-01	0.0
48	4.65975E+00	0.0	0.0	4.97635E-03	4.65477E+00	0.0	0.0	6.72443E-03	3.64356E-01	2.56688E-01	0.0
49	4.66319E+00	0.0	0.0	5.19677E-03	4.67799E+00	0.0	0.0	6.72443E-03	3.73323E-01	2.51553E-01	0.0
50	4.69994E+00	0.0	0.0	5.63695E-03	4.69430E+00	0.0	0.0	6.72443E-03	3.65035E-01	2.55923E-01	0.0
51	4.71241E+00	0.0	0.0	6.19129E-03	4.70622E+00	0.0	0.0	6.72442E-03	3.65196E-01	2.58483E-01	0.0
52	4.72182E+00	0.0	0.0	6.89828E-03	4.71492E+00	0.0	0.0	6.72443E-03	3.67909E-01	2.56983E-01	0.0
53	4.72910E+00	0.0	0.0	7.71035E-03	4.72139E+00	0.0	0.0	6.72442E-03	3.65979E-01	2.56650E-01	0.0
54	4.73485E+00	0.0	0.0	8.64346E-03	4.72621E+00	0.0	0.0	6.72443E-03	3.75706E-01	2.52176E-01	0.0
55	4.73964E+00	0.0	0.0	9.74114E-03	4.72969E+00	0.0	0.0	6.72443E-03	3.72317E-01	2.54642E-01	0.0
56	4.74355E+00	0.0	0.0	1.09672E-02	4.73259E+00	0.0	0.0	6.72443E-03	3.69410E-01	2.57476E-01	0.0
57	4.74714E+00	0.0	0.0	1.24152E-02	4.73473E+00	0.0	0.0	6.72443E-03	3.69688E-01	2.56688E-01	0.0
58	4.75043E+00	0.0	0.0	1.40695E-02	4.73636E+00	0.0	0.0	6.72443E-03	3.77345E-01	2.51553E-01	0.0
59	4.75349E+00	0.0	0.0	1.58744E-02	4.73762E+00	0.0	0.0	6.72443E-03	3.70980E-01	2.55933E-01	0.0
60	4.75666E+00	0.0	0.0	1.80466E-02	4.73861E+00	0.0	0.0	6.72443E-03	3.67364E-01	2.58483E-01	0.0
61	4.75990E+00	0.0	0.0	2.04933E-02	4.73940E+00	0.0	0.0	6.72443E-03	3.69569E-01	2.56983E-01	0.0
62	4.76330E+00	0.0	0.0	2.32552E-02	4.74005E+00	0.0	0.0	6.72443E-03	3.67252E-01	2.56650E-01	0.0
63	4.76703E+00	0.0	0.0	2.64497E-02	4.74059E+00	0.0	0.0	6.72443E-03	3.76719E-01	2.52174E-01	0.0
64	4.77096E+00	0.0	0.0	2.99164E-02	4.74104E+00	0.0	0.0	6.72443E-03	3.73116E-01	2.54642E-01	0.0
65	4.77544E+00	0.0	0.0	3.39843E-02	4.74146E+00	0.0	0.0	6.72444E-03	3.69025E-01	2.57477E-01	0.0
66	4.78062E+00	0.0	0.0	3.87422E-02	4.74188E+00	0.0	0.0	6.72444E-03	3.70223E-01	2.56688E-01	0.0
67	4.78613E+00	0.0	0.0	4.38439E-02	4.74229E+00	0.0	0.0	6.72443E-03	3.77780E-01	2.51553E-01	0.0
68	4.79262E+00	0.0	0.0	4.98622E-02	4.74275E+00	0.0	0.0	6.72443E-03	3.71356E-01	2.55922E-01	0.0
69	4.80011E+00	0.0	0.0	5.67962E-02	4.74321E+00	0.0	0.0	6.72443E-03	3.67739E-01	2.58482E-01	0.0
70	4.80639E+00	0.0	0.0	6.44359E-02	4.74796E+00	0.0	0.0	2.23672E-02	3.69937E-01	2.56983E-01	0.0

NUCLID = TC099J2F MAT NO = 1421
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.39575E+00	0.0	0.0	2.22593E-03	2.64843E+00	1.74510E+00	0.0	8.13146E-01	8.26263E-02	1.09399E-02	0.0
2	4.20261E+00	0.0	0.0	5.81601E-03	2.40543E+00	1.79136E+00	0.0	7.36452E-01	8.82645E-02	3.88245E-02	0.0
3	3.94449E+00	0.0	0.0	1.34023E-02	2.10353E+00	1.82757E+00	0.0	6.47052E-01	8.73880E-02	9.31115E-02	0.0
4	3.88112E+00	0.0	0.0	2.40997E-02	2.02466E+00	1.83256E+00	0.0	5.89691E-01	8.99639E-02	1.69746E-01	0.0
5	3.96604E+00	0.0	0.0	3.45202E-02	2.13020E+00	1.80132E+00	0.0	5.60398E-01	8.86097E-02	2.62391E-01	0.0
6	4.17554E+00	0.0	0.0	4.88689E-02	2.36576E+00	1.76091E+00	0.0	5.40494E-01	1.18289E-01	2.71731E-01	0.0
7	4.67791E+00	0.0	0.0	7.24943E-02	2.99458E+00	1.61083E+00	0.0	5.26820E-01	1.22725E-01	3.75411E-01	0.0
8	5.41978E+00	0.0	0.0	1.17805E-01	4.00853E+00	1.29344E+00	0.0	5.02465E-01	1.47207E-01	4.03723E-01	0.0
9	6.15787E+00	0.0	0.0	1.58984E-01	4.99077E+00	1.00811E+00	0.0	4.81898E-01	2.20741E-01	2.80737E-01	0.0
10	6.92049E+00	0.0	0.0	1.51268E-01	5.82749E+00	9.41736E-01	0.0	4.62514E-01	2.19386E-01	3.22046E-01	0.0
11	7.61350E+00	0.0	0.0	1.45699E-01	6.60898E+00	8.58818E-01	0.0	4.29734E-01	3.42061E-01	2.38892E-01	0.0
12	8.14336E+00	0.0	0.0	1.44355E-01	7.11705E+00	8.81955E-01	0.0	3.97594E-01	3.98396E-01	2.31112E-01	0.0
13	8.57388E+00	0.0	0.0	1.46203E-01	7.52501E+00	9.02665E-01	0.0	3.60662E-01	4.60333E-01	2.23143E-01	0.0
14	8.92980E+00	0.0	0.0	1.53451E-01	7.90668E+00	8.69666E-01	0.0	3.15951E-01	4.55610E-01	2.54692E-01	0.0
15	9.16607E+00	0.0	0.0	1.68604E-01	8.26958E+00	7.47887E-01	0.0	2.69403E-01	5.99127E-01	2.15111E-01	0.0
16	9.33058E+00	0.0	0.0	1.92594E-01	8.60494E+00	5.33049E-01	0.0	2.25820E-01	6.31340E-01	2.23143E-01	0.0
17	9.25808E+00	0.0	0.0	2.31315E-01	8.79676E+00	2.30006E-01	0.0	1.81708E-01	5.25033E-01	2.87682E-01	0.0
18	9.15265E+00	0.0	0.0	2.81933E-01	8.86303E+00	7.69142E-03	0.0	1.44199E-01	7.04455E-01	2.23143E-01	0.0
19	9.23483E+00	0.0	0.0	3.30394E-01	8.90443E+00	0.0	0.0	1.20616E-01	8.84839E-01	1.82321E-01	0.0
20	9.19865E+00	0.0	0.0	3.85469E-01	8.81316E+00	0.0	0.0	9.95687E-02	6.28357E-01	2.57476E-01	0.0
21	9.04106E+00	0.0	0.0	4.57070E-01	8.56399E+00	0.0	0.0	7.89109E-02	6.25422E-01	2.56688E-01	0.0
22	8.87249E+00	0.0	0.0	5.40471E-01	8.33201E+00	0.0	0.0	6.26497E-02	6.28408E-01	2.51553E-01	0.0
23	8.70632E+00	0.0	0.0	6.35771E-01	8.07055E+00	0.0	0.0	4.98925E-02	6.05124E-01	2.55933E-01	0.0
24	8.55589E+00	0.0	0.0	7.41904E-01	7.81399E+00	0.0	0.0	3.98129E-02	5.85793E-01	2.58483E-01	0.0
25	8.42742E+00	0.0	0.0	8.52573E-01	7.57485E+00	0.0	0.0	3.19936E-02	5.76084E-01	2.56983E-01	0.0
26	8.33664E+00	0.0	0.0	9.74834E-01	7.36181E+00	0.0	0.0	2.60041E-02	5.59891E-01	2.56650E-01	0.0
27	8.27652E+00	0.0	0.0	1.09412E+00	7.18240E+00	0.0	0.0	2.14281E-02	5.63888E-01	2.52175E-01	0.0
28	8.25071E+00	0.0	0.0	1.21238E+00	7.03833E+00	0.0	0.0	1.79468E-02	5.50013E-01	2.56642E-01	0.0
29	8.27275E+00	0.0	0.0	1.33994E+00	6.93261E+00	0.0	0.0	1.52447E-02	5.38552E-01	2.57477E-01	0.0
30	8.32493E+00	0.0	0.0	1.46078E+00	6.86415E+00	0.0	0.0	1.31723E-02	5.37411E-01	2.56689E-01	0.0
31	8.42365E+00	0.0	0.0	1.58627E+00	6.82738E+00	0.0	0.0	8.69820E-03	5.50680E-01	2.51553E-01	0.0
32	8.57926E+00	0.0	0.0	1.72436E+00	6.82549E+00	0.0	0.0	6.79854E-03	5.43650E-01	2.55933E-01	0.0
33	8.77678E+00	0.0	0.0	1.89291E+00	6.88386E+00	0.0	0.0	6.79854E-03	5.40998E-01	2.58483E-01	0.0
34	9.09413E+00	0.0	0.0	2.15119E+00	6.94294E+00	0.0	0.0	6.79854E-03	5.49829E-01	2.56983E-01	0.0
35	9.52812E+00	0.0	0.0	2.50386E+00	7.02426E+00	0.0	0.0	6.79854E-03	5.53280E-01	2.56650E-01	0.0
36	9.99721E+00	0.0	0.0	2.88090E+00	7.11631E+00	0.0	0.0	6.79854E-03	5.75591E-01	2.52175E-01	0.0
37	1.03784E+01	0.0	0.0	3.15909E+00	7.21936E+00	0.0	0.0	6.79854E-03	5.77750E-01	2.56642E-01	0.0
38	1.08453E+01	0.0	0.0	3.51927E+00	7.32605E+00	0.0	0.0	6.79854E-03	5.80569E-01	2.57476E-01	0.0
39	1.15037E+01	0.0	0.0	4.06130E+00	7.44240E+00	0.0	0.0	6.79854E-03	5.91357E-01	2.56688E-01	0.0
40	1.27662E+01	0.0	0.0	5.20933E+00	7.55687E+00	0.0	0.0	6.79854E-03	6.12506E-01	2.51554E-01	0.0
41	1.45921E+01	0.0	0.0	6.91822E+00	7.67392E+00	0.0	0.0	6.79854E-03	6.11679E-01	2.55933E-01	0.0
42	1.38643E+01	0.0	0.0	6.36604E+00	7.49831E+00	0.0	0.0	6.79854E-03	5.81631E-01	2.58468E-01	0.0
43	1.18445E+01	0.0	0.0	4.82060E+00	7.02389E+00	0.0	0.0	6.79854E-03	5.91127E-01	2.56975E-01	0.0
44	3.13440E+01	0.0	0.0	1.72970E+01	1.40471E+01	0.0	0.0	6.79854E-03	4.96556E-01	2.58489E-01	0.0
45	2.31558E+01	0.0	0.0	1.24227E+01	1.07331E+01	0.0	0.0	6.79854E-03	3.39219E-01	2.52053E-01	0.0
46	1.56922E+01	0.0	0.0	1.04475E+01	5.24467E+00	0.0	0.0	6.79854E-03	3.20243E-01	2.54572E-01	0.0
47	4.22746E+00	0.0	0.0	2.69081E-02	4.20056E+00	0.0	0.0	6.79854E-03	3.36756E-01	2.57476E-01	0.0
48	4.43038E+00	0.0	0.0	5.19647E-02	4.37842E+00	0.0	0.0	6.79853E-03	3.56747E-01	2.56688E-01	0.0
49	1.19922E+01	0.0	0.0	7.44151E+00	4.55064E+00	0.0	0.0	6.79853E-03	3.54342E-01	2.51553E-01	0.0
50	1.06286E+01	0.0	0.0	6.09554E+00	4.53330E+00	0.0	0.0	6.79853E-03	3.45922E-01	2.55933E-01	0.0
51	4.71983E+00	0.0	0.0	2.15812E-01	4.50402E+00	0.0	0.0	6.79854E-03	3.61126E-01	2.58483E-01	0.0
52	7.78062E+00	0.0	0.0	2.72656E+00	5.05406E+00	0.0	0.0	6.79854E-03	4.72559E-01	2.56983E-01	0.0
53	1.07256E+02	0.0	0.0	1.01322E+02	6.03455E+00	0.0	0.0	6.79854E-03	3.03753E-01	2.56625E-01	0.0
54	5.35880E+00	0.0	0.0	1.25330E+00	4.10550E+00	0.0	0.0	6.79853E-03	3.39356E-01	2.52176E-01	0.0
55	5.53113E+00	0.0	0.0	1.19548E+00	4.33566E+00	0.0	0.0	6.79853E-03	3.52286E-01	2.54642E-01	0.0
56	8.04032E+00	0.0	0.0	3.41037E+00	4.62996E+00	0.0	0.0	6.79854E-03	3.82399E-01	2.57476E-01	0.0
57	5.32642E+01	0.0	0.0	4.70958E+01	6.16837E+00	0.0	0.0	6.79854E-03	7.17702E-01	2.56688E-01	0.0
58	4.92880E+02	0.0	0.0	4.85894E+02	6.98664E+00	0.0	0.0	6.79854E-03	2.29998E-01	2.51553E-01	0.0
59	2.22635E+01	0.0	0.0	1.89683E+01	3.29561E+00	0.0	0.0	6.79853E-03	2.77486E-01	2.55933E-01	0.0
60	1.14161E+01	0.0	0.0	7.78536E+00	3.63076E+00	0.0	0.0	6.79853E-03	2.90333E-01	2.58483E-01	0.0
61	9.08716E+00	0.0	0.0	5.32844E+00	3.75872E+00	0.0	0.0	6.79854E-03	2.99127E-01	2.56983E-01	0.0
62	8.24799E+00	0.0	0.0	4.42500E+00	3.82300E+00	0.0	0.0	6.79853E-03	3.01171E-01	2.56650E-01	0.0
63	7.95457E+00	0.0	0.0	4.09230E+00	3.86227E+00	0.0	0.0	6.79854E-03	3.11345E-01	2.52175E-01	0.0
64	7.91329E+00	0.0	0.0	4.02516E+00	3.88811E+00	0.0	0.0	6.79854E-03	3.09983E-01	2.54642E-01	0.0
65	8.01544E+00	0.0	0.0	4.11114E+00	3.90431E+00	0.0	0.0	6.79853E-03	3.07677E-01	2.57476E-01	0.0
66	8.25280E+00	0.0	0.0	4.33661E+00	3.91619E+00	0.0	0.0	6.79853E-03	3.09424E-01	2.56688E-01	0.0
67	8.57203E+00	0.0	0.0	4.64731E+00	3.92472E+00	0.0	0.0	6.79853E-03	3.16315E-01	2.51554E-01	0.0
68	8.98769E+00	0.0	0.0	5.05664E+00	3.93106E+00	0.0	0.0	6.79853E-03	3.11349E-01	2.55933E-01	0.0
69	9.51680E+00	0.0	0.0	5.58085E+00	3.93596E+00	0.0	0.0	6.79853E-03	3.08621E-01	2.58483E-01	0.0
70	1.01177E+01	0.0	0.0	6.17782E+00	3.93966E+00	0.0	0.0	3.27256E-02	3.10691E-01	2.56983E-01	0.0

NUCLID = RU101J2F MAT NO = 1441
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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.40671E+00	0.0	0.0	2.32524E-03	2.64342E+00	1.76096E+00	0.0	8.10959E-01	8.16793E-02	1.09399E-02	0.0
2	4.19813E+00	0.0	0.0	6.14114E-03	2.38917E+00	1.80282E+00	0.0	7.33859E-01	8.66604E-02	4.88245E-02	0.0
3	3.94704E+00	0.0	0.0	1.50387E-02	2.06697E+00	1.86504E+00	0.0	6.44759E-01	8.54502E-02	9.31115E-02	0.0
4	3.89641E+00	0.0	0.0	2.86296E-02	2.01534E+00	1.85244E+00	0.0	5.92662E-01	8.66642E-02	1.69748E-01	0.0
5	3.99834E+00	0.0	0.0	4.37778E-02	2.13525E+00	1.81932E+00	0.0	5.72824E-01	8.42381E-02	2.62391E-01	0.0
6	4.22944E+00	0.0	0.0	5.90473E-02	2.36437E+00	1.80602E+00	0.0	5.63254E-01	1.08209E-01	2.71731E-01	0.0
7	4.76407E+00	0.0	0.0	6.53275E-02	2.90966E+00	1.78908E+00	0.0	5.67081E-01	1.02936E-01	3.75411E-01	0.0
8	5.52127E+00	0.0	0.0	6.86589E-02	3.66678E+00	1.76564E+00	0.0	5.67441E-01	1.10379E-01	4.03723E-01	0.0
9	6.25261E+00	0.0	0.0	7.37176E-02	4.41978E+00	1.75913E+00	0.0	5.61316E-01	1.62080E-01	2.80737E-01	0.0
10	6.97920E+00	0.0	0.0	9.05367E-02	5.13136E+00	1.75729E+00	0.0	5.39701E-01	1.62307E-01	3.22046E-01	0.0
11	7.64645E+00	0.0	0.0	1.09274E-01	5.80547E+00	1.72860E+00	0.0	5.01968E-01	2.62735E-01	2.38892E-01	0.0
12	8.12632E+00	0.0	0.0	1.38751E-01	6.37103E+00	1.61654E+00	0.0	4.57035E-01	3.21658E-01	2.31112E-01	0.0
13	8.53776E+00	0.0	0.0	1.70372E-01	6.94222E+00	1.42517E+00	0.0	4.04400E-01	3.99316E-01	2.23143E-01	0.0
14	8.83200E+00	0.0	0.0	2.22584E-01	7.65651E+00	9.52901E-01	0.0	3.40636E-01	4.32601E-01	2.54892E-01	0.0
15	9.10798E+00	0.0	0.0	2.86184E-01	8.21921E+00	6.02582E-01	0.0	2.84271E-01	5.68072E-01	2.15111E-01	0.0
16	9.25061E+00	0.0	0.0	3.21260E-01	8.44106E+00	4.88487E-01	0.0	2.43404E-01	5.89606E-01	2.23143E-01	0.0
17	9.23761E+00	0.0	0.0	3.79047E-01	8.56842E+00	2.90149E-01	0.0	1.99426E-01	4.90553E-01	2.87682E-01	0.0
18	9.11995E+00	0.0	0.0	4.55486E-01	8.61184E+00	5.26237E-02	0.0	1.60360E-01	6.58327E-01	2.23143E-01	0.0
19	9.16679E+00	0.0	0.0	5.27622E-01	8.63897E+00	0.0	0.0	1.35797E-01	6.26962E-01	1.82321E-01	0.0
20	9.13770E+00	0.0	0.0	6.06372E-01	8.52933E+00	0.0	0.0	1.13596E-01	5.86340E-01	2.57476E-01	0.0
21	8.98345E+00	0.0	0.0	7.09790E-01	8.27367E+00	0.0	0.0	9.13008E-02	5.82253E-01	2.56668E-01	0.0
22	8.81578E+00	0.0	0.0	8.22588E-01	7.99320E+00	0.0	0.0	7.34137E-02	5.83275E-01	2.51553E-01	0.0
23	8.65186E+00	0.0	0.0	9.44891E-01	7.70697E+00	0.0	0.0	5.90672E-02	5.60005E-01	2.55933E-01	0.0
24	8.49308E+00	0.0	0.0	1.07272E+00	7.42037E+00	0.0	0.0	4.75368E-02	5.40020E-01	2.56463E-01	0.0
25	8.35857E+00	0.0	0.0	1.19595E+00	7.15962E+00	0.0	0.0	3.83519E-02	5.29472E-01	2.56963E-01	0.0
26	8.26297E+00	0.0	0.0	1.33166E+00	6.93131E+00	0.0	0.0	3.12069E-02	5.13431E-01	2.56650E-01	0.0
27	8.19821E+00	0.0	0.0	1.45496E+00	6.74323E+00	0.0	0.0	2.56105E-02	5.16425E-01	2.52175E-01	0.0
28	8.16752E+00	0.0	0.0	1.57235E+00	6.59517E+00	0.0	0.0	2.12636E-02	5.03264E-01	2.54642E-01	0.0
29	8.17299E+00	0.0	0.0	1.68505E+00	6.48794E+00	0.0	0.0	1.78434E-02	4.92627E-01	2.57476E-01	0.0
30	8.21642E+00	0.0	0.0	1.79888E+00	6.41756E+00	0.0	0.0	1.51796E-02	4.91353E-01	2.56668E-01	0.0
31	8.30553E+00	0.0	0.0	1.92015E+00	6.38528E+00	0.0	0.0	1.31469E-02	5.00836E-01	2.51553E-01	0.0
32	8.44957E+00	0.0	0.0	2.06151E+00	6.38606E+00	0.0	0.0	9.36424E-03	4.95925E-01	2.55933E-01	0.0
33	8.62657E+00	0.0	0.0	2.22302E+00	6.40355E+00	0.0	0.0	6.66380E-03	4.92526E-01	2.56463E-01	0.0
34	8.85516E+00	0.0	0.0	2.42154E+00	6.43365E+00	0.0	0.0	6.66380E-03	4.98604E-01	2.56963E-01	0.0
35	9.15422E+00	0.0	0.0	2.67393E+00	6.46029E+00	0.0	0.0	6.66380E-03	4.99310E-01	2.56650E-01	0.0
36	9.50577E+00	0.0	0.0	2.97110E+00	6.53466E+00	0.0	0.0	6.66380E-03	5.16594E-01	2.52175E-01	0.0
37	9.91965E+00	0.0	0.0	3.32990E+00	6.52995E+00	0.0	0.0	6.66380E-03	5.15506E-01	2.54642E-01	0.0
38	1.02729E+01	0.0	0.0	3.60214E+00	6.67072E+00	0.0	0.0	6.66380E-03	5.18276E-01	2.57476E-01	0.0
39	1.39663E+01	0.0	0.0	4.09560E+00	9.87069E+00	0.0	0.0	6.66380E-03	4.17572E-01	2.56668E-01	0.0
40	1.15644E+01	0.0	0.0	5.02075E+00	6.54367E+00	0.0	0.0	6.66380E-03	7.49182E-01	2.51553E-01	0.0
41	3.21999E+01	0.0	0.0	1.70537E+01	1.51413E+01	0.0	0.0	6.66380E-03	3.73164E-01	2.55933E-01	0.0
42	2.64842E+01	0.0	0.0	1.17141E+01	1.47701E+01	0.0	0.0	6.66380E-03	2.56950E-01	2.58463E-01	0.0
43	9.74018E+00	0.0	0.0	4.04709E+00	5.69308E+00	0.0	0.0	6.66380E-03	4.11535E-01	2.56963E-01	0.0
44	1.82254E+01	0.0	0.0	9.91201E+00	8.31340E+00	0.0	0.0	6.66380E-03	3.91651E-01	2.58600E-01	0.0
45	9.37076E+00	0.0	0.0	4.04555E+00	5.32520E+00	0.0	0.0	6.66380E-03	4.15811E-01	2.52148E-01	0.0
46	1.86591E+01	0.0	0.0	1.23157E+01	6.34345E+00	0.0	0.0	6.66380E-03	9.17442E-01	2.54622E-01	0.0
47	6.49196E+00	0.0	0.0	1.09733E+00	5.39463E+00	0.0	0.0	6.66380E-03	4.63328E-01	2.57476E-01	0.0
48	8.15532E+01	0.0	0.0	6.15037E+01	2.00495E+01	0.0	0.0	6.66380E-03	3.06976E-01	2.56668E-01	0.0
49	1.08304E+01	0.0	0.0	5.89795E+00	4.93242E+00	0.0	0.0	6.66380E-03	4.34758E-01	2.51553E-01	0.0
50	7.29924E+01	0.0	0.0	6.44400E+01	8.55237E+00	0.0	0.0	6.66380E-03	3.26765E-01	2.55933E-01	0.0
51	5.00992E+00	0.0	0.0	3.96902E-01	4.61294E+00	0.0	0.0	6.66380E-03	3.65638E-01	2.58463E-01	0.0
52	5.41121E+00	0.0	0.0	4.26075E-01	4.98434E+00	0.0	0.0	6.66380E-03	2.96585E-01	2.56963E-01	0.0
53	1.21235E+01	0.0	0.0	6.07595E+00	6.04757E+00	0.0	0.0	6.66380E-03	6.39776E-01	2.58650E-01	0.0
54	1.78358E+02	0.0	0.0	1.69520E+02	8.83082E+00	0.0	0.0	6.66380E-03	3.15847E-01	2.52131E-01	0.0
55	5.83767E+00	0.0	0.0	1.52278E+00	4.31489E+00	0.0	0.0	6.66380E-03	3.47329E-01	2.54642E-01	0.0
56	5.23533E+00	0.0	0.0	7.00704E-01	4.53463E+00	0.0	0.0	6.66380E-03	3.53678E-01	2.57476E-01	0.0
57	5.13340E+00	0.0	0.0	5.10999E-01	4.62240E+00	0.0	0.0	6.66380E-03	3.59527E-01	2.56689E-01	0.0
58	5.11164E+00	0.0	0.0	4.45581E-01	4.66626E+00	0.0	0.0	6.66380E-03	3.69557E-01	2.51554E-01	0.0
59	5.11891E+00	0.0	0.0	4.25561E-01	4.69335E+00	0.0	0.0	6.66380E-03	3.64931E-01	2.55923E-01	0.0
60	5.14021E+00	0.0	0.0	4.22915E-01	4.71130E+00	0.0	0.0	6.66380E-03	3.62474E-01	2.58483E-01	0.0
61	5.17039E+00	0.0	0.0	4.46075E-01	4.72251E+00	0.0	0.0	6.66380E-03	3.65371E-01	2.56963E-01	0.0
62	5.21047E+00	0.0	0.0	4.78491E-01	4.73193E+00	0.0	0.0	6.66380E-03	3.63569E-01	2.56650E-01	0.0
63	5.25669E+00	0.0	0.0	5.18597E-01	4.73610E+00	0.0	0.0	6.66380E-03	3.73315E-01	2.52175E-01	0.0
64	5.31146E+00	0.0	0.0	5.66002E-01	4.74250E+00	0.0	0.0	6.66380E-03	3.70009E-01	2.54642E-01	0.0
65	5.37784E+00	0.0	0.0	6.21657E-01	4.74598E+00	0.0	0.0	6.66380E-03	3.68157E-01	2.57477E-01	0.0
66	5.45123E+00	0.0	0.0	7.02573E-01	4.74665E+00	0.0	0.0	6.66380E-03	3.67479E-01	2.56668E-01	0.0
67	5.53812E+00	0.0	0.0	7.87270E-01	4.75075E+00	0.0	0.0	6.66380E-03	3.75109E-01	2.51553E-01	0.0
68	5.63684E+00	0.0	0.0	8.84267E-01	4.75243E+00	0.0	0.0	6.66380E-03	3.66623E-01	2.55933E-01	0.0
69	5.74890E+00	0.0	0.0	9.94901E-01	4.75400E+00	0.0	0.0	6.66380E-03	3.65295E-01	2.58483E-01	0.0
70	5.88173E+00	0.0	0.0	1.12631E+00	4.75542E+00	0.0	0.0	3.20813E-02	3.67532E-01	2.56983E-01	0.0

NUCLID = RU102J2F MAT NO = 1442
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.41267E+00	0.0	0.0	1.83324E-03	2.64116E+00	1.76988E+00	0.0	8.10058E-01	8.11739E-02	1.09399E-02	0.0
2	4.19804E+00	0.0	0.0	5.10451E-03	2.38375E+00	1.80919E+00	0.0	7.32561E-01	8.60701E-02	3.88245E-02	0.0
3	3.95111E+00	0.0	0.0	1.34885E-02	2.08456E+00	1.85307E+00	0.0	6.43242E-01	8.49228E-02	9.31115E-02	0.0
4	3.89479E+00	0.0	0.0	2.76710E-02	2.02866E+00	1.82846E+00	0.0	5.86886E-01	8.87165E-02	1.69748E-01	0.0
5	4.00103E+00	0.0	0.0	4.59423E-02	2.19980E+00	1.75529E+00	0.0	5.59409E-01	9.03454E-02	2.62291E-01	0.0
6	4.25472E+00	0.0	0.0	6.56613E-02	2.51022E+00	1.67904E+00	0.0	5.40893E-01	1.22229E-01	2.71771E-01	0.0
7	4.75908E+00	0.0	0.0	7.19340E-02	3.15845E+00	1.52869E+00	0.0	5.32907E-01	1.21323E-01	2.75412E-01	0.0
8	5.54149E+00	0.0	0.0	7.04178E-02	4.07527E+00	1.395E0E+00	0.0	5.22149E-01	1.36176E-01	4.03724E-01	0.0
9	6.25508E+00	0.0	0.0	7.00414E-02	4.98820E+00	1.19683E+00	0.0	5.04468E-01	2.09785E-01	2.80737E-01	0.0
10	6.98789E+00	0.0	0.0	7.73393E-02	5.95165E+00	9.58907E-01	0.0	4.70904E-01	2.13217E-01	3.22046E-01	0.0
11	7.66015E+00	0.0	0.0	7.40590E-02	6.75391E+00	8.32184E-01	0.0	4.26529E-01	3.41762E-01	2.38692E-01	0.0
12	8.14261E+00	0.0	0.0	8.59540E-02	7.60191E+00	4.5474RE-01	0.0	3.87943E-01	4.38598E-01	2.31112E-01	0.0
13	8.45608E+00	0.0	0.0	1.09454E-01	8.33211E+00	1.35090E-02	0.0	3.41213E-01	5.10515E-01	2.23143E-01	0.0
14	8.83404E+00	0.0	0.0	1.12987E-01	8.72105E+00	0.0	0.0	3.02561E-01	4.91188E-01	2.54892E-01	0.0
15	9.05782E+00	0.0	0.0	1.08107E-01	8.94972E+00	0.0	0.0	2.65374E-01	5.22195E-01	2.15111E-01	0.0
16	9.18959E+00	0.0	0.0	1.07714E-01	9.08188E+00	0.0	0.0	2.30676E-01	5.34075E-01	2.23143E-01	0.0
17	9.22447E+00	0.0	0.0	1.14262E-01	9.11011E+00	0.0	0.0	1.91771E-01	5.17060E-01	2.87682E-01	0.0
18	9.18500E+00	0.0	0.0	1.26183E-01	9.05881E+00	0.0	0.0	1.56325E-01	6.85742E-01	2.22143E-01	0.0
19	9.16328E+00	0.0	0.0	1.36529E-01	9.02675E+00	0.0	0.0	1.24040E-01	8.54782E-01	1.82321E-01	0.0
20	9.08340E+00	0.0	0.0	1.52247E-01	8.93108E+00	0.0	0.0	1.12559E-01	6.11465E-01	2.57476E-01	0.0
21	8.93226E+00	0.0	0.0	1.79899E-01	8.75236E+00	0.0	0.0	9.00236E-02	6.13916E-01	2.56688E-01	0.0
22	8.76684E+00	0.0	0.0	2.13968E-01	8.55287E+00	0.0	0.0	7.19478E-02	6.22473E-01	2.51552E-01	0.0
23	8.60069E+00	0.0	0.0	2.55249E-01	8.34544E+00	0.0	0.0	5.75194E-02	6.05097E-01	2.55933E-01	0.0
24	8.44682E+00	0.0	0.0	3.03940E-01	8.14288E+00	0.0	0.0	4.59467E-02	5.91285E-01	2.58483E-01	0.0
25	8.31638E+00	0.0	0.0	3.60751E-01	7.95563E+00	0.0	0.0	3.68528E-02	5.86660E-01	2.56983E-01	0.0
26	8.21692E+00	0.0	0.0	4.26004E-01	7.79092E+00	0.0	0.0	2.98196E-02	5.75096E-01	2.58650E-01	0.0
27	8.14891E+00	0.0	0.0	4.93788E-01	7.65513E+00	0.0	0.0	2.43938E-02	5.83592E-01	2.52175E-01	0.0
28	8.11388E+00	0.0	0.0	5.64960E-01	7.54892E+00	0.0	0.0	2.02367E-02	5.72888E-01	2.54642E-01	0.0
29	8.11880E+00	0.0	0.0	6.40775E-01	7.47803E+00	0.0	0.0	1.69887E-02	5.64255E-01	2.57476E-01	0.0
30	8.16388E+00	0.0	0.0	7.20609E-01	7.44327E+00	0.0	0.0	1.44803E-02	5.66433E-01	2.56688E-01	0.0
31	8.25230E+00	0.0	0.0	7.98154E-01	7.45414E+00	0.0	0.0	1.25744E-02	5.81454E-01	2.51552E-01	0.0
32	8.40063E+00	0.0	0.0	8.73298E-01	7.52734E+00	0.0	0.0	9.05232E-03	5.81362E-01	2.55933E-01	0.0
33	8.56775E+00	0.0	0.0	9.55094E-01	7.61265E+00	0.0	0.0	6.59902E-03	5.82961E-01	2.58483E-01	0.0
34	8.79222E+00	0.0	0.0	1.04206E+00	7.75016E+00	0.0	0.0	6.59902E-03	5.99358E-01	2.56983E-01	0.0
35	9.08761E+00	0.0	0.0	1.14255E+00	7.94505E+00	0.0	0.0	6.59902E-03	6.12107E-01	2.58650E-01	0.0
36	1.38237E+01	0.0	0.0	1.87530E+00	1.19484E+01	0.0	0.0	6.59902E-03	3.36871E+00	2.52129E-01	0.0
37	4.79758E+00	0.0	0.0	3.25954E-02	4.76499E+00	0.0	0.0	6.59902E-03	4.05485E-01	2.54642E-01	0.0
38	5.32340E+00	0.0	0.0	7.37629E-03	5.31602E+00	0.0	0.0	6.59902E-03	4.09956E-01	2.57476E-01	0.0
39	5.38371E+00	0.0	0.0	6.17074E-03	5.37554E+00	0.0	0.0	6.59903E-03	4.13172E-01	2.56688E-01	0.0
40	5.42967E+00	0.0	0.0	9.52549E-03	5.42014E+00	0.0	0.0	6.59902E-03	4.25281E-01	2.51553E-01	0.0
41	6.56456E+00	0.0	0.0	1.09505E+00	5.46953E+00	0.0	0.0	6.59902E-03	4.11989E-01	2.55933E-01	0.0
42	5.39296E+00	0.0	0.0	1.21991E-02	5.38076E+00	0.0	0.0	6.59902E-03	4.10474E-01	2.58483E-01	0.0
43	5.41471E+00	0.0	0.0	1.35599E-02	5.40115E+00	0.0	0.0	6.59902E-03	4.13732E-01	2.56983E-01	0.0
44	5.62399E+00	0.0	0.0	1.89676E-01	5.43431E+00	0.0	0.0	6.59903E-03	4.20380E-01	2.58650E-01	0.0
45	5.56841E+00	0.0	0.0	1.97653E-01	5.37076E+00	0.0	0.0	6.59902E-03	4.21612E-01	2.52175E-01	0.0
46	5.42851E+00	0.0	0.0	1.98062E-02	5.40871E+00	0.0	0.0	6.59902E-03	4.17073E-01	2.54642E-01	0.0
47	5.43407E+00	0.0	0.0	2.23870E-02	5.41168E+00	0.0	0.0	6.59903E-03	4.13453E-01	2.57476E-01	0.0
48	5.43895E+00	0.0	0.0	2.54174E-02	5.41353E+00	0.0	0.0	6.59903E-03	4.14929E-01	2.56689E-01	0.0
49	5.44364E+00	0.0	0.0	2.88710E-02	5.41477E+00	0.0	0.0	6.59903E-03	4.23381E-01	2.51552E-01	0.0
50	5.44847E+00	0.0	0.0	3.28142E-02	5.41566E+00	0.0	0.0	6.59902E-03	4.16195E-01	2.55933E-01	0.0
51	5.45360E+00	0.0	0.0	3.72820E-02	5.41632E+00	0.0	0.0	6.59902E-03	4.12139E-01	2.58483E-01	0.0
52	5.45916E+00	0.0	0.0	4.23349E-02	5.41682E+00	0.0	0.0	6.59902E-03	4.14577E-01	2.56983E-01	0.0
53	5.46546E+00	0.0	0.0	4.82707E-02	5.41719E+00	0.0	0.0	6.59902E-03	4.11925E-01	2.58650E-01	0.0
54	5.47221E+00	0.0	0.0	5.47224E-02	5.41748E+00	0.0	0.0	6.59903E-03	4.22517E-01	2.52176E-01	0.0
55	5.47999E+00	0.0	0.0	6.21072E-02	5.41769E+00	0.0	0.0	6.59903E-03	4.18441E-01	2.54642E-01	0.0
56	5.48870E+00	0.0	0.0	7.08128E-02	5.41789E+00	0.0	0.0	6.59903E-03	4.12552E-01	2.57476E-01	0.0
57	5.49831E+00	0.0	0.0	8.02701E-02	5.41804E+00	0.0	0.0	6.59902E-03	4.15122E-01	2.56688E-01	0.0
58	5.50946E+00	0.0	0.0	9.12843E-02	5.41818E+00	0.0	0.0	6.59902E-03	4.23616E-01	2.51552E-01	0.0
59	5.52199E+00	0.0	0.0	1.03698E-01	5.41829E+00	0.0	0.0	6.59903E-03	4.16373E-01	2.55934E-01	0.0
60	5.53605E+00	0.0	0.0	1.17664E-01	5.41839E+00	0.0	0.0	6.59903E-03	4.12271E-01	2.58483E-01	0.0
61	5.55277E+00	0.0	0.0	1.34261E-01	5.41851E+00	0.0	0.0	6.59903E-03	4.14692E-01	2.56983E-01	0.0
62	5.57090E+00	0.0	0.0	1.52280E-01	5.41862E+00	0.0	0.0	6.59902E-03	4.12029E-01	2.58650E-01	0.0
63	5.59192E+00	0.0	0.0	1.73171E-01	5.41875E+00	0.0	0.0	6.59903E-03	4.22619E-01	2.52175E-01	0.0
64	5.61592E+00	0.0	0.0	1.97008E-01	5.41891E+00	0.0	0.0	6.59902E-03	4.18553E-01	2.54642E-01	0.0
65	5.64237E+00	0.0	0.0	2.23269E-01	5.41910E+00	0.0	0.0	6.59903E-03	4.12943E-01	2.57477E-01	0.0
66	5.67378E+00	0.0	0.0	2.54415E-01	5.41937E+00	0.0	0.0	6.59902E-03	4.15245E-01	2.56688E-01	0.0
67	5.70868E+00	0.0	0.0	2.89010E-01	5.41967E+00	0.0	0.0	6.59903E-03	4.23736E-01	2.51552E-01	0.0
68	5.74774E+00	0.0	0.0	3.27677E-01	5.42006E+00	0.0	0.0	6.59903E-03	4.16522E-01	2.55933E-01	0.0
69	5.79399E+00	0.0	0.0	3.73398E-01	5.42059E+00	0.0	0.0	6.59903E-03	4.12457E-01	2.58483E-01	0.0
70	5.84569E+00	0.0	0.0	4.24454E-01	5.42124E+00	0.0	0.0	3.17725E-02	4.14908E-01	2.56983E-01	0.0

NUCLIDE = RU104J2F MAT NO = 1443
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.42781E+00	0.0	0.0	8.91086E-04	2.63371E+00	1.79320E+00	0.0	8.07338E-01	8.04081E-02	1.09399E-02	0.0
2	4.19832E+00	0.0	0.0	2.78962E-03	2.36708E+00	1.82845E+00	0.0	7.29556E-01	8.46262E-02	3.88245E-02	0.0
3	3.96401E+00	0.0	0.0	8.22260E-03	2.07345E+00	1.88233E+00	0.0	6.41227E-01	8.32834E-02	9.31115E-02	0.0
4	3.92090E+00	0.0	0.0	1.74504E-02	2.03387E+00	1.86958E+00	0.0	5.88223E-01	8.70008E-02	1.69748E-01	0.0
5	4.04329E+00	0.0	0.0	2.81511E-02	2.23641E+00	1.77872E+00	0.0	5.66017E-01	8.89215E-02	2.62391E-01	0.0
6	4.31555E+00	0.0	0.0	3.80670E-02	2.57742E+00	1.70007E+00	0.0	5.50785E-01	1.20544E-01	2.71751E-01	0.0
7	4.88851E+00	0.0	0.0	3.79891E-02	3.24817E+00	1.60235E+00	0.0	5.42470E-01	1.20052E-01	3.75411E-01	0.0
8	5.65692E+00	0.0	0.0	3.44418E-02	4.14608E+00	1.47640E+00	0.0	5.32551E-01	1.21741E-01	4.03723E-01	0.0
9	6.37825E+00	0.0	0.0	3.18358E-02	5.01242E+00	1.33399E+00	0.0	5.15916E-01	2.00318E-01	2.80727E-01	0.0
10	7.04801E+00	0.0	0.0	3.68189E-02	5.94039E+00	1.07080E+00	0.0	4.81707E-01	2.04959E-01	2.22045E-01	0.0
11	7.63997E+00	0.0	0.0	3.81928E-02	6.64249E+00	9.59294E-01	0.0	4.51662E-01	3.14008E-01	2.38892E-01	0.0
12	8.06569E+00	0.0	0.0	3.76641E-02	7.17718E+00	8.50841E-01	0.0	4.17643E-01	3.74101E-01	2.71112E-01	0.0
13	8.41110E+00	0.0	0.0	4.28387E-02	7.83535E+00	5.32911E-01	0.0	3.70355E-01	4.62052E-01	2.22143E-01	0.0
14	8.57701E+00	0.0	0.0	5.71123E-02	8.45839E+00	6.15058E-02	0.0	3.19951E-01	4.63322E-01	2.54892E-01	0.0
15	8.87724E+00	0.0	0.0	6.95146E-02	8.80773E+00	0.0	0.0	2.78067E-01	5.90066E-01	2.15111E-01	0.0
16	8.99551E+00	0.0	0.0	6.76649E-02	8.92785E+00	0.0	0.0	2.43728E-01	6.00687E-01	2.22143E-01	0.0
17	9.02578E+00	0.0	0.0	6.94271E-02	8.95636E+00	0.0	0.0	2.04461E-01	4.91450E-01	2.87682E-01	0.0
18	8.98996E+00	0.0	0.0	7.41475E-02	8.91581E+00	0.0	0.0	1.68788E-01	6.53145E-01	2.23143E-01	0.0
19	8.96860E+00	0.0	0.0	7.81315E-02	8.89047E+00	0.0	0.0	1.45383E-01	6.15251E-01	1.82321E-01	0.0
20	8.89444E+00	0.0	0.0	8.54936E-02	8.80894E+00	0.0	0.0	1.23034E-01	5.85545E-01	2.87476E-01	0.0
21	8.75416E+00	0.0	0.0	9.97494E-02	8.65441E+00	0.0	0.0	9.91252E-02	5.90518E-01	2.56688E-01	0.0
22	8.59947E+00	0.0	0.0	1.18374E-01	8.48110E+00	0.0	0.0	7.96670E-02	6.01465E-01	2.51553E-01	0.0
23	8.44316E+00	0.0	0.0	1.41975E-01	8.30119E+00	0.0	0.0	6.39694E-02	5.87436E-01	2.55923E-01	0.0
24	8.29795E+00	0.0	0.0	1.70998E-01	8.12695E+00	0.0	0.0	5.12184E-02	5.76720E-01	2.58483E-01	0.0
25	8.17425E+00	0.0	0.0	2.06420E-01	7.96783E+00	0.0	0.0	4.10842E-02	5.74786E-01	2.56983E-01	0.0
26	8.07773E+00	0.0	0.0	2.47167E-01	7.82056E+00	0.0	0.0	3.31872E-02	5.66001E-01	2.58650E-01	0.0
27	8.01511E+00	0.0	0.0	2.94040E-01	7.72107E+00	0.0	0.0	2.70283E-02	5.76723E-01	2.52175E-01	0.0
28	7.98413E+00	0.0	0.0	3.45580E-01	7.63855E+00	0.0	0.0	2.22942E-02	5.68152E-01	2.54642E-01	0.0
29	7.99123E+00	0.0	0.0	4.02309E-01	7.58892E+00	0.0	0.0	1.85694E-02	5.61537E-01	2.57476E-01	0.0
30	8.03628E+00	0.0	0.0	4.63241E-01	7.57304E+00	0.0	0.0	1.56771E-02	5.65123E-01	2.56688E-01	0.0
31	8.12604E+00	0.0	0.0	5.26595E-01	7.59945E+00	0.0	0.0	1.34711E-02	5.61351E-01	2.51553E-01	0.0
32	8.27827E+00	0.0	0.0	5.90716E-01	7.68755E+00	0.0	0.0	9.24706E-03	5.82745E-01	2.55923E-01	0.0
33	8.44600E+00	0.0	0.0	6.59672E-01	7.78633E+00	0.0	0.0	6.47143E-03	5.85225E-01	2.58483E-01	0.0
34	8.67109E+00	0.0	0.0	7.30246E-01	7.94084E+00	0.0	0.0	4.47142E-03	6.02905E-01	2.56983E-01	0.0
35	8.96711E+00	0.0	0.0	8.06548E-01	8.16056E+00	0.0	0.0	6.47142E-03	6.17545E-01	2.58650E-01	0.0
36	8.81345E+00	0.0	0.0	7.46078E-01	8.06737E+00	0.0	0.0	6.47142E-03	5.72447E-01	2.52175E-01	0.0
37	1.80248E+01	0.0	0.0	2.02254E+00	1.60023E+01	0.0	0.0	6.47142E-03	2.74929E-01	2.54594E-01	0.0
38	5.45754E+00	0.0	0.0	9.09257E-03	5.44845E+00	0.0	0.0	6.47143E-03	4.49615E-01	2.57476E-01	0.0
39	3.46719E+01	0.0	0.0	5.44538E+00	2.92265E+01	0.0	0.0	6.47142E-03	1.21628E-01	2.56688E-01	0.0
40	4.35153E+00	0.0	0.0	2.59985E-02	4.32553E+00	0.0	0.0	6.47142E-03	3.75021E-01	2.51553E-01	0.0
41	5.17591E+00	0.0	0.0	1.05576E-02	5.16535E+00	0.0	0.0	6.47142E-03	4.08521E-01	2.55934E-01	0.0
42	1.02593E+01	0.0	0.0	4.19317E+00	6.06610E+00	0.0	0.0	6.47142E-03	3.50719E-01	2.58483E-01	0.0
43	1.79685E+01	0.0	0.0	1.01653E+01	7.80318E+00	0.0	0.0	6.47142E-03	2.99322E-01	2.56983E-01	0.0
44	4.92817E+00	0.0	0.0	3.34255E-02	4.89474E+00	0.0	0.0	6.47142E-03	2.77771E-01	2.58650E-01	0.0
45	5.13376E+00	0.0	0.0	9.78297E-03	5.12398E+00	0.0	0.0	6.47142E-03	3.94748E-01	2.52175E-01	0.0
46	5.19357E+00	0.0	0.0	8.44983E-03	5.18512E+00	0.0	0.0	6.47142E-03	3.94233E-01	2.54642E-01	0.0
47	5.22710E+00	0.0	0.0	8.52535E-03	5.21857E+00	0.0	0.0	6.47142E-03	3.91807E-01	2.57477E-01	0.0
48	5.24825E+00	0.0	0.0	9.09900E-03	5.23915E+00	0.0	0.0	6.47142E-03	3.94262E-01	2.56689E-01	0.0
49	5.26279E+00	0.0	0.0	9.95175E-03	5.25284E+00	0.0	0.0	6.47142E-03	4.02174E-01	2.51553E-01	0.0
50	5.27342E+00	0.0	0.0	1.09866E-02	5.26243E+00	0.0	0.0	6.47142E-03	3.96902E-01	2.55934E-01	0.0
51	5.28176E+00	0.0	0.0	1.22696E-02	5.26949E+00	0.0	0.0	6.47142E-03	3.93438E-01	2.58483E-01	0.0
52	5.28849E+00	0.0	0.0	1.38324E-02	5.27466E+00	0.0	0.0	6.47142E-03	3.96074E-01	2.56983E-01	0.0
53	5.29403E+00	0.0	0.0	1.55352E-02	5.27850E+00	0.0	0.0	6.47142E-03	3.93772E-01	2.58650E-01	0.0
54	5.29894E+00	0.0	0.0	1.75607E-02	5.28138E+00	0.0	0.0	6.47142E-03	4.04072E-01	2.52176E-01	0.0
55	5.30414E+00	0.0	0.0	1.98355E-02	5.28431E+00	0.0	0.0	6.47142E-03	4.00302E-01	2.54642E-01	0.0
56	5.30764E+00	0.0	0.0	2.24227E-02	5.28522E+00	0.0	0.0	6.47142E-03	3.96004E-01	2.57476E-01	0.0
57	5.31201E+00	0.0	0.0	2.54903E-02	5.28652E+00	0.0	0.0	6.47142E-03	3.97306E-01	2.56689E-01	0.0
58	5.31634E+00	0.0	0.0	2.88193E-02	5.28752E+00	0.0	0.0	6.47142E-03	4.05482E-01	2.51554E-01	0.0
59	5.32096E+00	0.0	0.0	3.26445E-02	5.28831E+00	0.0	0.0	6.47142E-03	3.98602E-01	2.55933E-01	0.0
60	5.32611E+00	0.0	0.0	3.71802E-02	5.28893E+00	0.0	0.0	6.47142E-03	3.94705E-01	2.58483E-01	0.0
61	5.33157E+00	0.0	0.0	4.21376E-02	5.28943E+00	0.0	0.0	6.47142E-03	3.97044E-01	2.56983E-01	0.0
62	5.33780E+00	0.0	0.0	4.79372E-02	5.28986E+00	0.0	0.0	6.47142E-03	3.94522E-01	2.58650E-01	0.0
63	5.34481E+00	0.0	0.0	5.45744E-02	5.29023E+00	0.0	0.0	6.47142E-03	4.04476E-01	2.52175E-01	0.0
64	5.35234E+00	0.0	0.0	6.17717E-02	5.29057E+00	0.0	0.0	6.47142E-03	4.00795E-01	2.54642E-01	0.0
65	5.36121E+00	0.0	0.0	7.03147E-02	5.29090E+00	0.0	0.0	6.47142E-03	3.96388E-01	2.57476E-01	0.0
66	5.37117E+00	0.0	0.0	7.99264E-02	5.29125E+00	0.0	0.0	6.47142E-03	3.97641E-01	2.56688E-01	0.0
67	5.38221E+00	0.0	0.0	9.05811E-02	5.29163E+00	0.0	0.0	6.47142E-03	4.05782E-01	2.51553E-01	0.0
68	5.39517E+00	0.0	0.0	1.03096E-01	5.29207E+00	0.0	0.0	6.47142E-03	3.98875E-01	2.55933E-01	0.0
69	5.40949E+00	0.0	0.0	1.16892E-01	5.29260E+00	0.0	0.0	6.47142E-03	3.94982E-01	2.58483E-01	0.0
70	5.42644E+00	0.0	0.0	1.33179E-01	5.29326E+00	0.0	0.0	9.11679E-02	3.97334E-01	2.56983E-01	0.0

NUCLID = AM103U2F MAT NO = 1451
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.42090E+00	0.0	0.0	1.38204E-03	2.63796E+00	1.78155E+00	0.0	8.08780E-01	8.07638E-02	1.09399E-02	0.0
2	4.19902E+00	0.0	0.0	3.30017E-03	2.37391E+00	1.82181E+00	0.0	7.31755E-01	8.49257E-02	3.88245E-02	0.0
3	3.95862E+00	0.0	0.0	8.58822E-03	2.07375E+00	1.87628E+00	0.0	6.43996E-01	8.33683E-02	9.31115E-02	0.0
4	3.92170E+00	0.0	0.0	1.68786E-02	2.01508E+00	1.88974E+00	0.0	5.95984E-01	8.41866E-02	1.69748E-01	0.0
5	4.03897E+00	0.0	0.0	2.60434E-02	2.15741E+00	1.85551E+00	0.0	5.82561E-01	8.14695E-02	2.62391E-01	0.0
6	4.28498E+00	0.0	0.0	3.81280E-02	2.40795E+00	1.83687E+00	0.0	5.76351E-01	1.05138E-01	2.71731E-01	0.0
7	4.66003E+00	0.0	0.0	5.61093E-02	3.00671E+00	1.79722E+00	0.0	5.75380E-01	1.03564E-01	3.75411E-01	0.0
8	5.61545E+00	0.0	0.0	7.67933E-02	3.65505E+00	1.88361E+00	0.0	5.62370E-01	1.17052E-01	4.03723E-01	0.0
9	6.32249E+00	0.0	0.0	8.41317E-02	4.68189E+00	1.55646E+00	0.0	5.44801E-01	1.76490E-01	2.80727E-01	0.0
10	7.02096E+00	0.0	0.0	9.42193E-02	5.50442E+00	1.42232E+00	0.0	5.16427E-01	1.81898E-01	3.22046E-01	0.0
11	7.65347E+00	0.0	0.0	1.06533E-01	6.20512E+00	1.34181E+00	0.0	4.79284E-01	2.82565E-01	2.38892E-01	0.0
12	8.09411E+00	0.0	0.0	1.23171E-01	6.71556E+00	1.25538E+00	0.0	4.42668E-01	3.39714E-01	2.31112E-01	0.0
13	8.46989E+00	0.0	0.0	1.57220E-01	7.32394E+00	9.8873UE-01	0.0	3.92302E-01	4.21689E-01	2.23143E-01	0.0
14	8.72535E+00	0.0	0.0	2.19519E-01	8.08685E+00	4.18983E-01	0.0	3.31546E-01	4.52322E-01	2.54892E-01	0.0
15	8.96955E+00	0.0	0.0	2.84999E-01	8.62078E+00	5.87693E-02	0.0	2.80141E-01	5.82005E-01	2.15111E-01	0.0
16	9.09816E+00	0.0	0.0	3.22790E-01	8.73807E+00	3.72981E-02	0.0	2.44687E-01	5.92972E-01	2.23143E-01	0.0
17	9.12322E+00	0.0	0.0	3.71336E-01	8.72804E+00	2.38467E-02	0.0	2.05043E-01	4.81504E-01	2.87682E-01	0.0
18	9.07901E+00	0.0	0.0	4.30929E-01	8.63251E+00	1.55718E-02	0.0	1.66793E-01	6.36713E-01	2.23143E-01	0.0
19	9.06726E+00	0.0	0.0	4.85454E-01	8.57278E+00	9.00418E-03	0.0	1.46003E-01	7.92068E-01	1.82321E-01	0.0
20	8.99330E+00	0.0	0.0	5.49982E-01	8.43894E+00	4.38082E-03	0.0	1.23865E-01	5.63272E-01	2.57476E-01	0.0
21	8.84739E+00	0.0	0.0	6.41017E-01	8.20434E+00	2.03234E-03	0.0	1.00277E-01	5.61568E-01	2.56668E-01	0.0
22	8.68709E+00	0.0	0.0	7.41529E-01	7.94491E+00	6.58020E-04	0.0	8.11154E-02	5.64753E-01	2.51553E-01	0.0
23	8.52532E+00	0.0	0.0	8.49881E-01	7.67537E+00	7.08627E-05	0.0	6.55932E-02	5.44052E-01	2.55933E-01	0.0
24	8.37658E+00	0.0	0.0	9.64229E-01	7.41235E+00	0.0	0.0	5.29209E-02	5.26862E-01	2.58483E-01	0.0
25	8.25232E+00	0.0	0.0	1.08220E+00	7.17013E+00	0.0	0.0	4.27365E-02	5.18372E-01	2.56983E-01	0.0
26	8.14912E+00	0.0	0.0	1.19029E+00	6.95883E+00	0.0	0.0	3.47629E-02	5.04372E-01	2.58650E-01	0.0
27	8.08440E+00	0.0	0.0	1.29733E+00	6.78707E+00	0.0	0.0	2.84450E-02	5.08955E-01	2.52175E-01	0.0
28	8.05248E+00	0.0	0.0	1.39637E+00	6.65411E+00	0.0	0.0	2.35005E-02	4.97382E-01	2.54642E-01	0.0
29	8.05659E+00	0.0	0.0	1.49389E+00	6.56270E+00	0.0	0.0	1.95842E-02	4.88459E-01	2.57476E-01	0.0
30	8.09836E+00	0.0	0.0	1.58670E+00	6.50966E+00	0.0	0.0	1.65113E-02	4.88847E-01	2.56668E-01	0.0
31	8.49467E+00	0.0	0.0	1.78066E+00	6.71401E+00	0.0	0.0	1.41347E-02	5.92386E-01	2.51553E-01	0.0
32	1.37357E+01	0.0	0.0	3.42022E+00	1.03155E+01	0.0	0.0	1.22857E-02	9.26407E-01	2.55933E-01	0.0
33	1.00647E+01	0.0	0.0	1.98135E+00	8.08331E+00	0.0	0.0	3.85685E-03	6.31917E-01	2.57826E-01	0.0
34	1.03886E+01	0.0	0.0	2.44877E+00	7.93979E+00	0.0	0.0	6.53428E-03	4.93821E-01	2.56458E-01	0.0
35	1.11259E+01	0.0	0.0	2.71962E+00	8.40630E+00	0.0	0.0	6.53428E-03	6.93109E-01	2.57020E-01	0.0
36	1.04447E+01	0.0	0.0	2.70486E+00	7.73984E+00	0.0	0.0	6.53428E-03	6.39670E-01	2.50924E-01	0.0
37	1.20727E+01	0.0	0.0	3.30322E+00	8.76951E+00	0.0	0.0	6.53427E-03	3.95298E-01	2.53265E-01	0.0
38	1.04673E+01	0.0	0.0	3.17579E+00	7.29156E+00	0.0	0.0	6.53428E-03	4.49676E-01	2.57469E-01	0.0
39	1.73231E+01	0.0	0.0	6.20928E+00	1.11138E+01	0.0	0.0	6.53428E-03	3.69807E-01	2.56668E-01	0.0
40	9.16177E+00	0.0	0.0	2.83995E+00	6.32182E+00	0.0	0.0	6.53428E-03	4.39850E-01	2.51553E-01	0.0
41	1.93654E+01	0.0	0.0	8.23555E+00	1.11298E+01	0.0	0.0	6.53427E-03	3.90152E-01	2.55929E-01	0.0
42	1.92573E+01	0.0	0.0	9.57904E+00	9.67825E+00	0.0	0.0	6.53428E-03	3.92606E-01	2.58463E-01	0.0
43	2.07900E+01	0.0	0.0	1.27900E+01	8.00000E+00	0.0	0.0	6.53428E-03	3.56441E-01	2.56963E-01	0.0
44	1.65467E+01	0.0	0.0	9.67008E+00	6.87660E+00	0.0	0.0	6.53428E-03	3.93441E-01	2.58807E-01	0.0
45	3.01891E+01	0.0	0.0	1.37613E+01	1.64279E+01	0.0	0.0	6.53428E-03	3.43277E-01	2.52169E-01	0.0
46	1.00710E+01	0.0	0.0	5.55631E+00	4.51471E+00	0.0	0.0	6.53428E-03	3.44804E-01	2.54626E-01	0.0
47	7.68742E+00	0.0	0.0	3.09414E+00	4.59329E+00	0.0	0.0	6.53428E-03	3.44519E-01	2.57476E-01	0.0
48	5.11571E+00	0.0	0.0	5.41961E-01	4.57375E+00	0.0	0.0	6.53428E-03	3.47038E-01	2.56668E-01	0.0
49	7.04092E+00	0.0	0.0	2.35116E+00	4.68977E+00	0.0	0.0	6.53428E-03	3.94320E-01	2.51553E-01	0.0
50	5.23790E+00	0.0	0.0	6.16034E-01	4.62186E+00	0.0	0.0	6.53427E-03	3.56395E-01	2.55929E-01	0.0
51	4.88518E+00	0.0	0.0	1.87674E-01	4.69751E+00	0.0	0.0	6.53428E-03	3.54762E-01	2.58483E-01	0.0
52	4.74996E+00	0.0	0.0	3.05350E-02	4.71943E+00	0.0	0.0	6.53428E-03	3.58321E-01	2.56983E-01	0.0
53	4.78429E+00	0.0	0.0	4.35901E-02	4.74070E+00	0.0	0.0	6.53428E-03	3.57715E-01	2.58650E-01	0.0
54	4.83769E+00	0.0	0.0	7.12678E-02	4.76642E+00	0.0	0.0	6.53427E-03	3.69063E-01	2.52176E-01	0.0
55	4.92498E+00	0.0	0.0	1.25664E-01	4.79930E+00	0.0	0.0	6.53427E-03	3.68326E-01	2.54642E-01	0.0
56	5.08490E+00	0.0	0.0	2.39670E-01	4.84523E+00	0.0	0.0	6.53428E-03	3.68277E-01	2.57477E-01	0.0
57	5.39052E+00	0.0	0.0	4.80362E-01	4.91016E+00	0.0	0.0	6.53428E-03	3.75067E-01	2.56669E-01	0.0
58	6.02511E+00	0.0	0.0	1.02311E+00	5.00200E+00	0.0	0.0	6.53428E-03	3.91304E-01	2.51554E-01	0.0
59	7.43684E+00	0.0	0.0	2.30742E+00	5.12942E+00	0.0	0.0	6.53428E-03	3.95247E-01	2.55933E-01	0.0
60	1.11889E+01	0.0	0.0	5.85989E+00	5.32902E+00	0.0	0.0	6.53428E-03	4.11749E-01	2.58463E-01	0.0
61	2.32194E+01	0.0	0.0	1.74542E+01	5.76524E+00	0.0	0.0	6.53428E-03	4.61152E-01	2.56983E-01	0.0
62	8.28287E+01	0.0	0.0	7.58815E+01	6.94724E+00	0.0	0.0	6.53428E-03	6.01162E-01	2.58650E-01	0.0
63	1.15161E+03	0.0	0.0	1.13792E+03	1.36850E+01	0.0	0.0	6.53427E-03	1.73400E+00	2.52175E-01	0.0
64	2.25737E+03	0.0	0.0	2.25014E+03	7.22558E+00	0.0	0.0	6.53428E-03	1.39192E-01	2.54642E-01	0.0
65	2.69426E+02	0.0	0.0	2.67112E+02	2.31405E+00	0.0	0.0	6.53427E-03	2.01429E-01	2.57477E-01	0.0
66	1.35019E+02	0.0	0.0	1.32070E+02	2.94676E+00	0.0	0.0	6.53427E-03	2.37165E-01	2.56669E-01	0.0
67	9.72328E+01	0.0	0.0	9.39666E+01	3.26616E+00	0.0	0.0	6.53428E-03	2.60889E-01	2.51554E-01	0.0
68	8.20146E+01	0.0	0.0	7.85668E+01	3.44780E+00	0.0	0.0	6.53428E-03	2.66738E-01	2.55933E-01	0.0
69	7.52983E+01	0.0	0.0	7.17354E+01	3.56268E+00	0.0	0.0	6.53428E-03	2.71330E-01	2.58463E-01	0.0
70	7.38053E+01	0.0	0.0	7.01690E+01	3.63635E+00	0.0	0.0	3.16267E-02	2.77463E-01	2.56963E-01	0.0

NUCLID = PD105J2F MAT NO = 1461
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.43460E+00	0.0	0.0	1.81377E-03	2.63090E+00	1.80189E+00	0.0	8.06299E-01	7.99541E-02	1.09399E-02	0.0
2	4.19856E+00	0.0	0.0	5.25791E-03	2.35976E+00	1.83354E+00	0.0	7.29071E-01	8.35352E-02	3.88245E-02	0.0
3	3.96946E+00	0.0	0.0	1.44255E-02	2.06619E+00	1.88884E+00	0.0	6.42390E-01	8.18520E-02	9.31115E-02	0.0
4	3.93333E+00	0.0	0.0	2.92364E-02	2.01533E+00	1.88877E+00	0.0	5.95951E-01	8.26254E-02	1.69748E-01	0.0
5	4.06149E+00	0.0	0.0	4.57105E-02	2.19198E+00	1.82379E+00	0.0	5.84417E-01	8.16593E-02	2.62391E-01	0.0
6	4.33866E+00	0.0	0.0	6.40040E-02	2.49232E+00	1.78234E+00	0.0	5.78852E-01	1.06539E-01	2.71731E-01	0.0
7	4.91841E+00	0.0	0.0	7.65709E-02	3.09379E+00	1.74805E+00	0.0	5.78829E-01	1.03268E-01	3.75411E-01	0.0
8	5.69692E+00	0.0	0.0	8.86437E-02	3.90767E+00	1.70060E+00	0.0	5.71948E-01	1.11541E-01	4.03723E-01	0.0
9	6.38857E+00	0.0	0.0	9.73284E-02	4.62999E+00	1.66125E+00	0.0	5.62751E-01	1.61819E-01	2.80737E-01	0.0
10	7.04946E+00	0.0	0.0	1.00037E-01	5.28070E+00	1.66872E+00	0.0	5.44270E-01	1.56775E-01	3.22046E-01	0.0
11	7.60121E+00	0.0	0.0	1.22912E-01	5.88700E+00	1.59129E+00	0.0	5.11076E-01	2.49307E-01	2.38892E-01	0.0
12	8.01488E+00	0.0	0.0	1.57582E-01	6.38727E+00	1.47003E+00	0.0	4.70430E-01	3.01814E-01	2.31112E-01	0.0
13	8.31761E+00	0.0	0.0	2.01349E-01	6.95088E+00	1.16538E+00	0.0	4.18546E-01	3.76750E-01	2.23143E-01	0.0
14	8.54934E+00	0.0	0.0	2.78714E-01	7.75821E+00	5.12422E-01	0.0	3.51620E-01	4.19468E-01	2.54892E-01	0.0
15	8.75346E+00	0.0	0.0	3.66777E-01	8.36681E+00	1.98730E-02	0.0	2.94785E-01	5.43230E-01	2.15111E-01	0.0
16	8.88235E+00	0.0	0.0	4.06066E-01	8.47629E+00	0.0	0.0	2.59066E-01	5.52760E-01	2.23143E-01	0.0
17	8.91588E+00	0.0	0.0	4.63405E-01	8.45247E+00	0.0	0.0	2.18695E-01	4.49222E-01	2.87682E-01	0.0
18	8.87214E+00	0.0	0.0	5.32700E-01	8.33944E+00	0.0	0.0	1.82043E-01	5.93547E-01	2.23143E-01	0.0
19	8.86244E+00	0.0	0.0	5.93684E-01	8.26875E+00	0.0	0.0	1.58875E-01	7.37935E-01	1.82321E-01	0.0
20	8.79849E+00	0.0	0.0	6.71821E-01	8.12667E+00	0.0	0.0	1.36031E-01	5.24611E-01	2.57476E-01	0.0
21	8.66370E+00	0.0	0.0	7.78864E-01	7.88484E+00	0.0	0.0	1.11199E-01	5.22840E-01	2.56668E-01	0.0
22	8.51498E+00	0.0	0.0	8.96692E-01	7.61829E+00	0.0	0.0	9.07534E-02	5.25378E-01	2.51553E-01	0.0
23	8.36778E+00	0.0	0.0	1.02263E+00	7.34515E+00	0.0	0.0	7.39213E-02	5.05815E-01	2.55933E-01	0.0
24	8.22372E+00	0.0	0.0	1.15285E+00	7.07087E+00	0.0	0.0	6.00515E-02	4.88925E-01	2.58483E-01	0.0
25	8.10070E+00	0.0	0.0	1.27906E+00	6.82163E+00	0.0	0.0	4.86958E-02	4.80412E-01	2.56983E-01	0.0
26	8.01459E+00	0.0	0.0	1.41060E+00	6.60398E+00	0.0	0.0	3.97189E-02	4.66779E-01	2.58650E-01	0.0
27	7.95712E+00	0.0	0.0	1.53117E+00	6.42595E+00	0.0	0.0	3.24906E-02	4.70389E-01	2.52175E-01	0.0
28	7.93183E+00	0.0	0.0	1.64502E+00	6.28681E+00	0.0	0.0	2.67561E-02	4.59152E-01	2.54642E-01	0.0
29	7.94169E+00	0.0	0.0	1.75472E+00	6.18696E+00	0.0	0.0	2.21768E-02	4.50154E-01	2.57476E-01	0.0
30	7.98864E+00	0.0	0.0	1.86639E+00	6.12225E+00	0.0	0.0	1.85484E-02	4.49554E-01	2.56688E-01	0.0
31	8.08050E+00	0.0	0.0	1.98736E+00	6.09314E+00	0.0	0.0	1.57374E-02	4.58634E-01	2.51553E-01	0.0
32	8.22628E+00	0.0	0.0	2.13097E+00	6.09531E+00	0.0	0.0	1.35640E-02	4.52488E-01	2.55933E-01	0.0
33	8.40466E+00	0.0	0.0	2.29576E+00	6.10890E+00	0.0	0.0	1.11433E-02	4.51666E-01	2.58483E-01	0.0
34	8.63457E+00	0.0	0.0	2.49958E+00	6.13499E+00	0.0	0.0	6.40970E-03	4.57328E-01	2.56983E-01	0.0
35	8.93469E+00	0.0	0.0	2.75919E+00	6.17530E+00	0.0	0.0	6.40970E-03	4.57643E-01	2.58650E-01	0.0
36	9.28626E+00	0.0	0.0	3.06428E+00	6.22198E+00	0.0	0.0	6.40970E-03	4.73058E-01	2.52175E-01	0.0
37	9.70059E+00	0.0	0.0	3.43176E+00	6.26882E+00	0.0	0.0	6.40970E-03	4.71890E-01	2.54642E-01	0.0
38	1.01937E+01	0.0	0.0	3.87611E+00	6.31755E+00	0.0	0.0	6.40970E-03	4.70572E-01	2.57476E-01	0.0
39	1.07677E+01	0.0	0.0	4.39902E+00	6.36872E+00	0.0	0.0	6.40970E-03	4.75706E-01	2.56688E-01	0.0
40	1.14354E+01	0.0	0.0	5.01792E+00	6.41746E+00	0.0	0.0	6.40970E-03	4.89017E-01	2.51553E-01	0.0
41	1.22147E+01	0.0	0.0	5.74917E+00	6.46554E+00	0.0	0.0	6.40970E-03	4.84314E-01	2.55933E-01	0.0
42	1.31006E+01	0.0	0.0	6.59023E+00	6.51039E+00	0.0	0.0	6.40970E-03	4.82581E-01	2.58483E-01	0.0
43	1.41093E+01	0.0	0.0	7.55704E+00	6.55225E+00	0.0	0.0	6.40970E-03	4.88574E-01	2.56983E-01	0.0
44	1.43018E+01	0.0	0.0	8.14306E+00	6.15879E+00	0.0	0.0	6.40970E-03	4.07930E-01	2.58650E-01	0.0
45	1.26291E+01	0.0	0.0	7.58650E+00	5.04264E+00	0.0	0.0	6.40970E-03	3.75068E-01	2.52105E-01	0.0
46	6.85174E+00	0.0	0.0	1.68757E+00	5.16417E+00	0.0	0.0	6.40970E-03	4.16003E-01	2.54618E-01	0.0
47	5.11365E+01	0.0	0.0	4.12402E+01	9.69627E+00	0.0	0.0	6.40970E-03	2.01289E+00	2.57476E-01	0.0
48	9.95896E+00	0.0	0.0	5.38482E+00	4.57414E+00	0.0	0.0	6.40970E-03	3.74051E-01	2.56688E-01	0.0
49	2.74136E+01	0.0	0.0	2.17167E+01	5.69688E+00	0.0	0.0	6.40970E-03	3.55855E-01	2.51553E-01	0.0
50	7.10933E+00	0.0	0.0	2.24971E+00	4.85963E+00	0.0	0.0	6.40970E-03	3.65383E-01	2.55933E-01	0.0
51	8.38809E+00	0.0	0.0	3.27495E+00	5.11313E+00	0.0	0.0	6.40970E-03	3.93247E-01	2.58483E-01	0.0
52	5.57709E+01	0.0	0.0	4.98074E+01	5.96351E+00	0.0	0.0	6.40970E-03	3.42424E-01	2.56983E-01	0.0
53	5.99023E+00	0.0	0.0	1.10726E+00	4.88296E+00	0.0	0.0	6.40970E-03	3.75342E-01	2.58650E-01	0.0
54	1.19116E+02	0.0	0.0	1.11395E+02	7.72098E+00	0.0	0.0	6.40968E-03	9.61048E-01	2.52154E-01	0.0
55	2.90719E+01	0.0	0.0	2.51012E+01	3.97078E+00	0.0	0.0	6.40970E-03	3.24442E-01	2.54642E-01	0.0
56	6.08912E+00	0.0	0.0	1.61107E+00	4.47805E+00	0.0	0.0	6.40970E-03	3.38127E-01	2.57477E-01	0.0
57	5.83138E+00	0.0	0.0	1.22864E+00	4.60274E+00	0.0	0.0	6.40970E-03	3.44965E-01	2.56688E-01	0.0
58	5.85732E+00	0.0	0.0	1.20122E+00	4.65609E+00	0.0	0.0	6.40970E-03	3.54942E-01	2.51554E-01	0.0
59	5.95211E+00	0.0	0.0	1.26588E+00	4.68622E+00	0.0	0.0	6.40970E-03	3.50636E-01	2.55933E-01	0.0
60	6.08503E+00	0.0	0.0	1.37998E+00	4.70506E+00	0.0	0.0	6.40970E-03	3.48287E-01	2.58483E-01	0.0
61	6.24721E+00	0.0	0.0	1.52971E+00	4.71750E+00	0.0	0.0	6.40970E-03	3.51089E-01	2.56983E-01	0.0
62	6.43129E+00	0.0	0.0	1.70508E+00	4.72621E+00	0.0	0.0	6.40970E-03	3.49362E-01	2.58645E-01	0.0
63	6.64903E+00	0.0	0.0	1.91671E+00	4.73232E+00	0.0	0.0	6.40970E-03	3.58718E-01	2.52169E-01	0.0
64	6.89424E+00	0.0	0.0	2.15742E+00	4.73683E+00	0.0	0.0	6.40970E-03	3.55549E-01	2.54633E-01	0.0
65	7.17226E+00	0.0	0.0	2.43203E+00	4.74023E+00	0.0	0.0	6.40970E-03	3.51847E-01	2.57467E-01	0.0
66	7.50220E+00	0.0	0.0	2.75937E+00	4.74282E+00	0.0	0.0	6.40970E-03	3.53105E-01	2.56681E-01	0.0
67	7.85806E+00	0.0	0.0	3.11316E+00	4.74491E+00	0.0	0.0	6.40970E-03	3.60443E-01	2.51544E-01	0.0
68	8.27673E+00	0.0	0.0	3.53000E+00	4.74673E+00	0.0	0.0	6.40970E-03	3.54390E-01	2.55917E-01	0.0
69	8.76261E+00	0.0	0.0	4.01470E+00	4.74791E+00	0.0	0.0	6.40970E-03	3.51005E-01	2.58483E-01	0.0
70	9.29841E+00	0.0	0.0	4.54850E+00	4.74992E+00	0.0	0.0	3.08735E-02	3.53148E-01	2.56976E-01	0.0

NUCLID = PD107J2F MAT NO = 1462
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL NU	EL REMOVAL	FLUX	CHI
1	4.45152E+00	0.0	0.0	1.20244E-03	2.62385E+00	1.82648E+00	0.0	8.03816E-01	7.91731E-02	1.09399E-02	0.0
2	4.20364E+00	0.0	0.0	3.25454E-03	2.34633E+00	1.85406E+00	0.0	7.27116E-01	8.18834E-02	3.88245E-02	0.0
3	3.98841E+00	0.0	0.0	1.01499E-02	2.06012E+00	1.91814E+00	0.0	6.42960E-01	7.99170E-02	9.31115E-02	0.0
4	3.96385E+00	0.0	0.0	2.29816E-02	2.02295E+00	1.91792E+00	0.0	5.99994E-01	8.05912E-02	1.69748E-01	0.0
5	4.10565E+00	0.0	0.0	4.00707E-02	2.22322E+00	1.84235E+00	0.0	5.92650E-01	7.97644E-02	2.62391E-01	0.0
6	4.39771E+00	0.0	0.0	6.03235E-02	2.54459E+00	1.79279E+00	0.0	5.89500E-01	1.04053E-01	2.71731E-01	0.0
7	4.99040E+00	0.0	0.0	7.36877E-02	3.15849E+00	1.75822E+00	0.0	5.88303E-01	1.01130E-01	3.75411E-01	0.0
8	5.77063E+00	0.0	0.0	8.55319E-02	3.96675E+00	1.71835E+00	0.0	5.78935E-01	1.09214E-01	4.03723E-01	0.0
9	6.43819E+00	0.0	0.0	8.96802E-02	4.66047E+00	1.68804E+00	0.0	5.68712E-01	1.56464E-01	2.80737E-01	0.0
10	7.05265E+00	0.0	0.0	8.56860E-02	5.24076E+00	1.72620E+00	0.0	5.53720E-01	1.47680E-01	3.22046E-01	0.0
11	7.55360E+00	0.0	0.0	9.86632E-02	5.72859E+00	1.72635E+00	0.0	5.27832E-01	2.27209E-01	2.38892E-01	0.0
12	7.90801E+00	0.0	0.0	1.19093E-01	6.13400E+00	1.65491E+00	0.0	4.91479E-01	2.72627E-01	2.31112E-01	0.0
13	8.18590E+00	0.0	0.0	1.65295E-01	6.71016E+00	1.31045E+00	0.0	4.35395E-01	3.51172E-01	2.23143E-01	0.0
14	8.31458E+00	0.0	0.0	2.56130E-01	7.46169E+00	5.96756E-01	0.0	3.67174E-01	3.83189E-01	2.54892E-01	0.0
15	8.55844E+00	0.0	0.0	3.49677E-01	7.96837E+00	2.40387E-01	0.0	3.12148E-01	4.95435E-01	2.15111E-01	0.0
16	8.65205E+00	0.0	0.0	3.91061E-01	8.06440E+00	1.96590E-01	0.0	2.75761E-01	5.05603E-01	2.23143E-01	0.0
17	8.65758E+00	0.0	0.0	4.51514E-01	8.07651E+00	1.29551E-01	0.0	2.33599E-01	6.15956E-01	2.87682E-01	0.0
18	8.60060E+00	0.0	0.0	5.25484E-01	8.02953E+00	4.55853E-02	0.0	1.94232E-01	5.54513E-01	2.23143E-01	0.0
19	8.59121E+00	0.0	0.0	5.90391E-01	8.00016E+00	6.62030E-04	0.0	1.69481E-01	6.93449E-01	1.82321E-01	0.0
20	8.55163E+00	0.0	0.0	6.69639E-01	7.88199E+00	0.0	0.0	1.45509E-01	6.94379E-01	2.57476E-01	0.0
21	8.43052E+00	0.0	0.0	7.74395E-01	7.65612E+00	0.0	0.0	1.19602E-01	6.94067E-01	2.56688E-01	0.0
22	8.29714E+00	0.0	0.0	8.89734E-01	7.40740E+00	0.0	0.0	9.80616E-02	6.97861E-01	2.51553E-01	0.0
23	8.16150E+00	0.0	0.0	1.01245E+00	7.14905E+00	0.0	0.0	8.02030E-02	6.80450E-01	2.55933E-01	0.0
24	8.03762E+00	0.0	0.0	1.14056E+00	6.89706E+00	0.0	0.0	6.52859E-02	6.65953E-01	2.58483E-01	0.0
25	7.92960E+00	0.0	0.0	1.26442E+00	6.66518E+00	0.0	0.0	5.30041E-02	6.59044E-01	2.56983E-01	0.0
26	7.85745E+00	0.0	0.0	1.39381E+00	6.46364E+00	0.0	0.0	4.32415E-02	6.47168E-01	2.58650E-01	0.0
27	7.81323E+00	0.0	0.0	1.51312E+00	6.30011E+00	0.0	0.0	3.53229E-02	6.51700E-01	2.52175E-01	0.0
28	7.80045E+00	0.0	0.0	1.62688E+00	6.17356E+00	0.0	0.0	2.90052E-02	6.41813E-01	2.54642E-01	0.0
29	7.82237E+00	0.0	0.0	1.73771E+00	6.08467E+00	0.0	0.0	2.39404E-02	6.34011E-01	2.57476E-01	0.0
30	7.88123E+00	0.0	0.0	1.85185E+00	6.02937E+00	0.0	0.0	1.99103E-02	6.34172E-01	2.56688E-01	0.0
31	7.98475E+00	0.0	0.0	1.97682E+00	6.00794E+00	0.0	0.0	1.67779E-02	6.43568E-01	2.51553E-01	0.0
32	8.14238E+00	0.0	0.0	2.12588E+00	6.01649E+00	0.0	0.0	1.43476E-02	6.38169E-01	2.55933E-01	0.0
33	8.33285E+00	0.0	0.0	2.29744E+00	6.03541E+00	0.0	0.0	1.24327E-02	6.36226E-01	2.58483E-01	0.0
34	8.57537E+00	0.0	0.0	2.50938E+00	6.06600E+00	0.0	0.0	7.37414E-03	4.44017E-01	2.56983E-01	0.0
35	8.88899E+00	0.0	0.0	2.77868E+00	6.11030E+00	0.0	0.0	6.28978E-03	4.44549E-01	2.58650E-01	0.0
36	9.25495E+00	0.0	0.0	3.09436E+00	6.16059E+00	0.0	0.0	6.28978E-03	4.59814E-01	2.52175E-01	0.0
37	9.68442E+00	0.0	0.0	3.47378E+00	6.21064E+00	0.0	0.0	6.28978E-03	4.58938E-01	2.54642E-01	0.0
38	1.01945E+01	0.0	0.0	3.93205E+00	6.26242E+00	0.0	0.0	6.28978E-03	4.57913E-01	2.57476E-01	0.0
39	1.07874E+01	0.0	0.0	4.47073E+00	6.31665E+00	0.0	0.0	6.28978E-03	4.63161E-01	2.56688E-01	0.0
40	1.14757E+01	0.0	0.0	5.10737E+00	6.36834E+00	0.0	0.0	6.28978E-03	4.76363E-01	2.51553E-01	0.0
41	1.22781E+01	0.0	0.0	5.85880E+00	6.41927E+00	0.0	0.0	6.28978E-03	4.72014E-01	2.55934E-01	0.0
42	1.31901E+01	0.0	0.0	6.72338E+00	6.46676E+00	0.0	0.0	6.28978E-03	4.70524E-01	2.58483E-01	0.0
43	1.42278E+01	0.0	0.0	7.71675E+00	6.51104E+00	0.0	0.0	6.28978E-03	4.76566E-01	2.56983E-01	0.0
44	1.54593E+01	0.0	0.0	8.90400E+00	6.55527E+00	0.0	0.0	6.28978E-03	4.76660E-01	2.58650E-01	0.0
45	1.68030E+01	0.0	0.0	1.02059E+01	6.59716E+00	0.0	0.0	6.28978E-03	4.91891E-01	2.52176E-01	0.0
46	1.83317E+01	0.0	0.0	1.16970E+01	6.63466E+00	0.0	0.0	6.28978E-03	4.89716E-01	2.54642E-01	0.0
47	2.01360E+01	0.0	0.0	1.34640E+01	6.67202E+00	0.0	0.0	6.28978E-03	4.87228E-01	2.57476E-01	0.0
48	2.21784E+01	0.0	0.0	1.54709E+01	6.70744E+00	0.0	0.0	6.28978E-03	4.91008E-01	2.56688E-01	0.0
49	2.44305E+01	0.0	0.0	1.76939E+01	6.73665E+00	0.0	0.0	6.28978E-03	5.03053E-01	2.51553E-01	0.0
50	2.70323E+01	0.0	0.0	2.02664E+01	6.76594E+00	0.0	0.0	6.28978E-03	4.96746E-01	2.55933E-01	0.0
51	3.00338E+01	0.0	0.0	2.32403E+01	6.79353E+00	0.0	0.0	6.28978E-03	4.93621E-01	2.58483E-01	0.0
52	3.34303E+01	0.0	0.0	2.66154E+01	6.81492E+00	0.0	0.0	6.28978E-03	4.97880E-01	2.56983E-01	0.0
53	3.73749E+01	0.0	0.0	3.05400E+01	6.83483E+00	0.0	0.0	6.28978E-03	4.96192E-01	2.58650E-01	0.0
54	4.17663E+01	0.0	0.0	3.49117E+01	6.85460E+00	0.0	0.0	6.28978E-03	5.10308E-01	2.52176E-01	0.0
55	4.65964E+01	0.0	0.0	3.97255E+01	6.87092E+00	0.0	0.0	6.28978E-03	5.06435E-01	2.54642E-01	0.0
56	5.21530E+01	0.0	0.0	4.54820E+01	6.87108E+00	0.0	0.0	6.28978E-03	4.73186E-01	2.57476E-01	0.0
57	5.82688E+01	0.0	0.0	5.19505E+01	6.31833E+00	0.0	0.0	6.28978E-03	4.51785E-01	2.56688E-01	0.0
58	4.43689E+01	0.0	0.0	3.78853E+01	6.48355E+00	0.0	0.0	6.28978E-03	6.22628E-01	2.51553E-01	0.0
59	2.38874E+01	0.0	0.0	1.04279E+01	1.34595E+01	0.0	0.0	6.28977E-03	1.26083E+00	2.55934E-01	0.0
60	2.20874E+01	0.0	0.0	9.02157E-01	2.11852E+01	0.0	0.0	6.28977E-03	1.75002E+00	2.58483E-01	0.0
61	2.82138E+01	0.0	0.0	1.02186E+00	2.71920E+01	0.0	0.0	6.28977E-03	2.14793E+00	2.56983E-01	0.0
62	3.29678E+01	0.0	0.0	1.16663E+00	3.18012E+01	0.0	0.0	6.28978E-03	2.43365E+00	2.58650E-01	0.0
63	3.66679E+01	0.0	0.0	1.32102E+00	3.53469E+01	0.0	0.0	6.28978E-03	2.72820E+00	2.52175E-01	0.0
64	3.95815E+01	0.0	0.0	1.49915E+00	3.80824E+01	0.0	0.0	6.28978E-03	2.88188E+00	2.54642E-01	0.0
65	4.19336E+01	0.0	0.0	1.70829E+00	4.02253E+01	0.0	0.0	6.28977E-03	2.98946E+00	2.57476E-01	0.0
66	4.38104E+01	0.0	0.0	1.94652E+00	4.18638E+01	0.0	0.0	6.28978E-03	3.10651E+00	2.56689E-01	0.0
67	4.53458E+01	0.0	0.0	2.19975E+00	4.31461E+01	0.0	0.0	6.28978E-03	3.25345E+00	2.51553E-01	0.0
68	4.66365E+01	0.0	0.0	2.50017E+00	4.41363E+01	0.0	0.0	6.28978E-03	3.26265E+00	2.55933E-01	0.0
69	4.77587E+01	0.0	0.0	2.84446E+00	4.49143E+01	0.0	0.0	6.28978E-03	3.28064E+00	2.58483E-01	0.0
70	4.87572E+01	0.0	0.0	3.23974E+00	4.55174E+01	0.0	0.0	3.04240E-02	3.23853E+00	2.56983E-01	0.0

NUCLID = AG109J2F MAT NO = 1471
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.46792E+00	0.0	0.0	1.74487E-03	2.61318E+00	1.85300E+00	0.0	8.00630E-01	7.85799E-02	1.09399E-02	0.0
2	4.20685E+00	0.0	0.0	4.42617E-03	2.32475E+00	1.87288E+00	0.0	7.24462E-01	8.03280E-02	3.88245E-02	0.0
3	4.00716E+00	0.0	0.0	1.36208E-02	2.05389E+00	1.93964E+00	0.0	6.43444E-01	7.80582E-02	9.31115E-02	0.0
4	3.99800E+00	0.0	0.0	3.04618E-02	2.03295E+00	1.93459E+00	0.0	6.04155E-01	7.87249E-02	1.69748E-01	0.0
5	4.15724E+00	0.0	0.0	5.22973E-02	2.26009E+00	1.84486E+00	0.0	6.00739E-01	7.81202E-02	2.62391E-01	0.0
6	4.46639E+00	0.0	0.0	8.01515E-02	2.60865E+00	1.77558E+00	0.0	5.98888E-01	1.02747E-01	2.71731E-01	0.0
7	5.06445E+00	0.0	0.0	1.03997E-01	3.24840E+00	1.71205E+00	0.0	5.93747E-01	1.01727E-01	3.75411E-01	0.0
8	5.83893E+00	0.0	0.0	1.20778E-01	4.09690E+00	1.62125E+00	0.0	5.75438E-01	1.13114E-01	4.03723E-01	0.0
9	6.48775E+00	0.0	0.0	1.27619E-01	4.84517E+00	1.51496E+00	0.0	5.55357E-01	1.67017E-01	2.80737E-01	0.0
10	7.03834E+00	0.0	0.0	1.54603E-01	5.53910E+00	1.34464E+00	0.0	5.27243E-01	1.66144E-01	3.22046E-01	0.0
11	7.47412E+00	0.0	0.0	2.02386E-01	6.17598E+00	1.09575E+00	0.0	4.90146E-01	2.59081E-01	2.38892E-01	0.0
12	7.77960E+00	0.0	0.0	2.23917E-01	6.58466E+00	9.71025E-01	0.0	4.57263E-01	3.03020E-01	2.31112E-01	0.0
13	7.96467E+00	0.0	0.0	2.71424E-01	7.03573E+00	6.77715E-01	0.0	4.13977E-01	3.66689E-01	2.23143E-01	0.0
14	8.13411E+00	0.0	0.0	3.51777E-01	7.51707E+00	2.65258E-01	0.0	3.63106E-01	3.70353E-01	2.54892E-01	0.0
15	8.26646E+00	0.0	0.0	4.26400E-01	7.81239E+00	4.76706E-02	0.0	3.18393E-01	4.70460E-01	2.15111E-01	0.0
16	8.35552E+00	0.0	0.0	4.68431E-01	7.85644E+00	3.06413E-02	0.0	2.84011E-01	4.76514E-01	2.23143E-01	0.0
17	8.35332E+00	0.0	0.0	5.30707E-01	7.80538E+00	1.72405E-02	0.0	2.43381E-01	3.87638E-01	2.87682E-01	0.0
18	8.30948E+00	0.0	0.0	6.06127E-01	7.69437E+00	8.97693E-03	0.0	2.05052E-01	5.13087E-01	2.23143E-01	0.0
19	8.24970E+00	0.0	0.0	6.71281E-01	7.62496E+00	3.46264E-03	0.0	1.80955E-01	6.38593E-01	1.82321E-01	0.0
20	8.25055E+00	0.0	0.0	7.52073E-01	7.49624E+00	2.35143E-04	0.0	1.56598E-01	4.56237E-01	2.57476E-01	0.0
21	8.14574E+00	0.0	0.0	8.55264E-01	7.29048E+00	0.0	0.0	1.29352E-01	4.57400E-01	2.56688E-01	0.0
22	8.03158E+00	0.0	0.0	9.65024E-01	7.06656E+00	0.0	0.0	1.06430E-01	4.62773E-01	2.51553E-01	0.0
23	7.91800E+00	0.0	0.0	1.07684E+00	6.83515E+00	0.0	0.0	8.72141E-02	4.48786E-01	2.55933E-01	0.0
24	7.81698E+00	0.0	0.0	1.19387E+00	6.62211E+00	0.0	0.0	7.10102E-02	4.37721E-01	2.58483E-01	0.0
25	7.73755E+00	0.0	0.0	1.30701E+00	6.43054E+00	0.0	0.0	5.75699E-02	4.33856E-01	2.56983E-01	0.0
26	7.67791E+00	0.0	0.0	1.40812E+00	6.26979E+00	0.0	0.0	4.66175E-02	4.25553E-01	2.58650E-01	0.0
27	7.64986E+00	0.0	0.0	1.50503E+00	6.14459E+00	0.0	0.0	3.80876E-02	4.32657E-01	2.52175E-01	0.0
28	7.65930E+00	0.0	0.0	1.59847E+00	6.06083E+00	0.0	0.0	3.10857E-02	4.26067E-01	2.54642E-01	0.0
29	7.70078E+00	0.0	0.0	1.69123E+00	6.00955E+00	0.0	0.0	2.54874E-02	4.21357E-01	2.57476E-01	0.0
30	7.77986E+00	0.0	0.0	1.79087E+00	5.98579E+00	0.0	0.0	2.10397E-02	4.24063E-01	2.56688E-01	0.0
31	7.90359E+00	0.0	0.0	1.90358E+00	6.00000E+00	0.0	0.0	1.75955E-02	4.35537E-01	2.51553E-01	0.0
32	8.06430E+00	0.0	0.0	2.04554E+00	6.03876E+00	0.0	0.0	1.49324E-02	4.32413E-01	2.55933E-01	0.0
33	8.29566E+00	0.0	0.0	2.21094E+00	6.08473E+00	0.0	0.0	1.28345E-02	4.32371E-01	2.58483E-01	0.0
34	8.56045E+00	0.0	0.0	2.41950E+00	6.14094E+00	0.0	0.0	9.90556E-03	4.41903E-01	2.56983E-01	0.0
35	8.89988E+00	0.0	0.0	2.68794E+00	6.21193E+00	0.0	0.0	6.17432E-03	4.44539E-01	2.58650E-01	0.0
36	9.17517E+00	0.0	0.0	3.00454E+00	6.17063E+00	0.0	0.0	6.17432E-03	4.35985E-01	2.52175E-01	0.0
37	8.35734E+00	0.0	0.0	2.65200E+00	5.70534E+00	0.0	0.0	6.17432E-03	3.98036E-01	2.54642E-01	0.0
38	1.44093E+01	0.0	0.0	3.99011E+00	1.04192E+01	0.0	0.0	6.17431E-03	1.67682E+00	2.57476E-01	0.0
39	1.22783E+01	0.0	0.0	4.26087E+00	8.01736E+00	0.0	0.0	6.17432E-03	4.38458E-01	2.56681E-01	0.0
40	2.64203E+01	0.0	0.0	9.97709E+00	1.64432E+01	0.0	0.0	6.17431E-03	1.10907E+00	2.51553E-01	0.0
41	1.56281E+01	0.0	0.0	7.07901E+00	8.54506E+00	0.0	0.0	6.17432E-03	3.24239E-01	2.55905E-01	0.0
42	2.69272E+01	0.0	0.0	1.09762E+01	1.60511E+01	0.0	0.0	6.17432E-03	2.75764E-01	2.58447E-01	0.0
43	7.31637E+00	0.0	0.0	2.57172E+00	4.74464E+00	0.0	0.0	6.17432E-03	3.78220E-01	2.56983E-01	0.0
44	3.08748E+01	0.0	0.0	2.00634E+01	1.08114E+01	0.0	0.0	6.17432E-03	2.20319E-01	2.58623E-01	0.0
45	6.10598E+01	0.0	0.0	3.40975E+01	2.69623E+01	0.0	0.0	6.17432E-03	4.69727E-01	2.51814E-01	0.0
46	4.06575E+00	0.0	0.0	3.97713E-01	3.66804E+00	0.0	0.0	6.17432E-03	3.15121E-01	2.54642E-01	0.0
47	1.46838E+01	0.0	0.0	9.62965E+00	5.25420E+00	0.0	0.0	6.17432E-03	3.85528E-01	2.57476E-01	0.0
48	6.90311E+01	0.0	0.0	5.29400E+01	1.60911E+01	0.0	0.0	6.17432E-03	3.42893E-01	2.56688E-01	0.0
49	5.33674E+01	0.0	0.0	3.90823E+01	1.42795E+01	0.0	0.0	6.17433E-03	3.02527E-01	2.51553E-01	0.0
50	4.23772E+01	0.0	0.0	3.66730E+01	5.70422E+00	0.0	0.0	6.17433E-03	2.99086E-01	2.55933E-01	0.0
51	9.93502E+01	0.0	0.0	9.00564E+01	9.29177E+00	0.0	0.0	6.17432E-03	2.07324E-01	2.58466E-01	0.0
52	4.90416E+00	0.0	0.0	1.01917E+00	3.89495E+00	0.0	0.0	6.17432E-03	3.05503E-01	2.56983E-01	0.0
53	5.29600E+00	0.0	0.0	7.16692E-01	4.57920E+00	0.0	0.0	6.17432E-03	3.44185E-01	2.58650E-01	0.0
54	6.56039E+00	0.0	0.0	1.32240E+00	5.23500E+00	0.0	0.0	6.17432E-03	4.10164E-01	2.52176E-01	0.0
55	9.59349E+00	0.0	0.0	3.27314E+00	6.32035E+00	0.0	0.0	6.17433E-03	5.08808E-01	2.54642E-01	0.0
56	1.99001E+01	0.0	0.0	1.10582E+01	8.84193E+00	0.0	0.0	6.17432E-03	7.86336E-01	2.57476E-01	0.0
57	9.93240E+01	0.0	0.0	7.83504E+01	2.09736E+01	0.0	0.0	6.17431E-03	2.83635E+00	2.56688E-01	0.0
58	5.42841E+03	0.0	0.0	4.95954E+03	4.68573E+02	0.0	0.0	6.17432E-03	3.47827E+00	2.51553E-01	0.0
59	2.12366E+02	0.0	0.0	2.04399E+02	7.96823E+00	0.0	0.0	6.17432E-02	1.33040E-01	2.55933E-01	0.0
60	5.53338E+01	0.0	0.0	5.41215E+01	1.21285E+00	0.0	0.0	6.17432E-03	7.61280E-02	2.58483E-01	0.0
61	3.35509E+01	0.0	0.0	3.22133E+01	1.13766E+00	0.0	0.0	6.17432E-03	8.66308E-02	2.56983E-01	0.0
62	2.70145E+01	0.0	0.0	2.57007E+01	1.31261E+00	0.0	0.0	6.17432E-03	9.89447E-02	2.58650E-01	0.0
63	2.43168E+01	0.0	0.0	2.28538E+01	1.46299E+00	0.0	0.0	6.17431E-03	1.10657E-01	2.52167E-01	0.0
64	2.35422E+01	0.0	0.0	2.19644E+01	1.57778E+00	0.0	0.0	6.17431E-03	1.17456E-01	2.54642E-01	0.0
65	2.36784E+01	0.0	0.0	2.20091E+01	1.66965E+00	0.0	0.0	6.17431E-03	1.21872E-01	2.57477E-01	0.0
66	2.40699E+01	0.0	0.0	2.29129E+01	1.73725E+00	0.0	0.0	6.17432E-03	1.26356E-01	2.56688E-01	0.0
67	2.61764E+01	0.0	0.0	2.49396E+01	1.78478E+00	0.0	0.0	6.17431E-03	1.31977E-01	2.51553E-01	0.0
68	2.81282E+01	0.0	0.0	2.69074E+01	1.82075E+00	0.0	0.0	6.17432E-03	1.31977E-01	2.55933E-01	0.0
69	3.07214E+01	0.0	0.0	2.88735E+01	1.84795E+00	0.0	0.0	6.17432E-03	1.32370E-01	2.58483E-01	0.0
70	3.37755E+01	0.0	0.0	3.19069E+01	1.86859E+00	0.0	0.0	2.98535E-02	1.34429E-01	2.56983E-01	0.0

NUCLID = 0S133J2F MAT NO = 1551
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.55209E+00	0.0	0.0	3.12671E-04	2.48246E+00	2.06931E+00	0.0	7.68033E-01	7.11679E-02	1.09399E-02	0.0
2	4.39810E+00	0.0	0.0	9.50654E-04	2.27976E+00	2.11739E+00	0.0	7.06768E-01	6.69594E-02	3.88245E-02	0.0
3	4.38471E+00	0.0	0.0	2.37005E-03	2.24461E+00	2.13723E+00	0.0	6.75811E-01	6.37751E-02	9.31115E-02	0.0
4	4.61424E+00	0.0	0.0	6.48110E-03	2.44787E+00	2.15969E+00	0.0	6.72498E-01	6.48699E-02	1.69748E-01	0.0
5	5.16504E+00	0.0	0.0	1.15785E-02	2.96884E+00	2.18662E+00	0.0	6.93028E-01	6.55409E-02	2.62392E-01	0.0
6	5.75092E+00	0.0	0.0	1.57263E-02	2.54784E+00	2.18438E+00	0.0	6.95049E-01	8.77256E-02	2.71731E-01	0.0
7	6.25217E+00	0.0	0.0	2.69457E-02	4.13822E+00	2.08841E+00	0.0	6.62653E-01	8.85801E-02	3.75411E-01	0.0
8	6.63769E+00	0.0	0.0	3.77910E-02	4.67309E+00	1.92682E+00	0.0	6.00469E-01	9.98878E-02	4.03723E-01	0.0
9	6.74069E+00	0.0	0.0	4.92925E-02	4.99075E+00	1.70084E+00	0.0	5.35251E-01	1.44917E-01	2.80737E-01	0.0
10	6.59344E+00	0.0	0.0	6.44172E-02	5.15643E+00	1.37259E+00	0.0	4.80133E-01	1.35022E-01	3.22046E-01	0.0
11	6.30252E+00	0.0	0.0	9.09554E-02	5.29500E+00	9.13565E-01	0.0	4.33400E-01	1.96788E-01	2.38892E-01	0.0
12	6.08625E+00	0.0	0.0	1.21127E-01	5.28525E+00	6.75857E-01	0.0	4.07582E-01	2.05628E-01	2.31112E-01	0.0
13	5.88678E+00	0.0	0.0	1.26059E-01	5.15994E+00	6.00764E-01	0.0	3.90221E-01	2.14682E-01	2.23143E-01	0.0
14	5.72490E+00	0.0	0.0	1.34350E-01	5.05965E+00	5.31493E-01	0.0	3.65413E-01	1.93573E-01	2.54892E-01	0.0
15	5.63635E+00	0.0	0.0	1.45599E-01	5.01214E+00	4.78607E-01	0.0	3.34136E-01	2.41297E-01	2.15111E-01	0.0
16	5.60385E+00	0.0	0.0	1.59773E-01	5.02340E+00	4.20712E-01	0.0	2.99649E-01	2.44081E-01	2.23143E-01	0.0
17	5.60699E+00	0.0	0.0	1.82961E-01	5.13039E+00	2.93637E-01	0.0	2.54509E-01	2.11963E-01	2.87682E-01	0.0
18	5.70902E+00	0.0	0.0	2.12659E-01	5.28626E+00	2.10157E-01	0.0	2.00676E-01	2.92074E-01	2.23143E-01	0.0
19	5.80257E+00	0.0	0.0	2.38684E-01	5.28525E+00	1.78527E-01	0.0	1.61728E-01	3.73285E-01	1.82321E-01	0.0
20	5.92625E+00	0.0	0.0	2.78456E-01	5.30563E+00	1.16665E-02	0.0	1.51940E-01	2.90856E-01	2.57476E-01	0.0
21	6.14497E+00	0.0	0.0	3.20820E-01	5.31415E+00	0.0	0.0	1.20194E-01	3.10952E-01	2.56688E-01	0.0
22	6.39721E+00	0.0	0.0	3.80146E-01	5.40171E+00	0.0	0.0	9.54111E-02	3.37669E-01	2.51553E-01	0.0
23	6.70327E+00	0.0	0.0	4.38579E-01	5.26469E+00	0.0	0.0	7.49607E-02	3.53306E-01	2.55933E-01	0.0
24	7.06520E+00	0.0	0.0	5.08340E-01	5.55268E+00	0.0	0.0	5.83026E-02	3.73747E-01	2.58483E-01	0.0
25	7.50582E+00	0.0	0.0	5.82249E-01	5.92357E+00	0.0	0.0	4.51336E-02	4.01364E-01	2.56983E-01	0.0
26	7.96943E+00	0.0	0.0	6.72219E-01	7.29721E+00	0.0	0.0	3.49200E-02	4.26389E-01	2.58650E-01	0.0
27	8.52746E+00	0.0	0.0	7.71598E-01	7.95566E+00	0.0	0.0	2.71798E-02	4.70012E-01	2.52175E-01	0.0
28	9.17127E+00	0.0	0.0	8.57514E-01	8.25266E+00	0.0	0.0	2.13860E-02	4.96575E-01	2.54642E-01	0.0
29	9.89471E+00	0.0	0.0	1.02931E+00	8.86490E+00	0.0	0.0	1.69706E-02	5.31540E-01	2.57476E-01	0.0
30	1.07228E+01	0.0	0.0	1.20246E+00	9.52037E+00	0.0	0.0	1.36642E-02	5.76105E-01	2.56688E-01	0.0
31	1.16663E+01	0.0	0.0	1.41601E+00	1.02543E+01	0.0	0.0	1.13102E-02	6.32891E-01	2.51553E-01	0.0
32	1.27523E+01	0.0	0.0	1.66543E+00	1.10666E+01	0.0	0.0	7.57233E-03	6.76739E-01	2.55933E-01	0.0
33	1.39926E+01	0.0	0.0	2.01461E+00	1.19766E+01	0.0	0.0	5.05598E-03	7.24994E-01	2.58483E-01	0.0
34	1.54063E+01	0.0	0.0	2.42366E+00	1.29861E+01	0.0	0.0	5.05598E-03	7.91679E-01	2.56983E-01	0.0
35	1.70410E+01	0.0	0.0	2.93597E+00	1.41167E+01	0.0	0.0	5.05598E-03	8.55751E-01	2.58650E-01	0.0
36	1.86066E+01	0.0	0.0	3.49099E+00	1.53156E+01	0.0	0.0	5.05598E-03	9.45480E-01	2.52175E-01	0.0
37	1.24095E+01	0.0	0.0	3.90482E+00	8.30470E+00	0.0	0.0	5.05598E-03	3.50991E-01	2.51792E-01	0.0
38	1.19668E+01	0.0	0.0	3.58035E+00	8.38640E+00	0.0	0.0	5.05598E-03	3.39046E-01	2.57476E-01	0.0
39	7.51246E+00	0.0	0.0	2.46203E+00	5.05543E+00	0.0	0.0	5.05598E-03	2.47195E-01	2.56688E-01	0.0
40	2.13058E+01	0.0	0.0	9.08058E+00	1.22652E+01	0.0	0.0	5.05598E-03	1.11299E+00	2.51553E-01	0.0
41	2.24065E+01	0.0	0.0	8.14151E+00	1.42670E+01	0.0	0.0	5.05598E-03	2.25017E-01	2.55923E-01	0.0
42	1.51436E+01	0.0	0.0	7.29266E+00	7.85491E+00	0.0	0.0	5.05598E-03	1.88041E-01	2.58483E-01	0.0
43	7.22043E+01	0.0	0.0	2.01251E+01	5.20792E+01	0.0	0.0	5.05598E-03	1.92596E-01	2.56907E-01	0.0
44	9.80717E+00	0.0	0.0	6.34425E+00	3.41269E+00	0.0	0.0	5.05598E-03	1.60175E-01	2.58510E-01	0.0
45	1.79755E+01	0.0	0.0	1.22633E+01	5.71236E+00	0.0	0.0	5.05598E-03	3.93558E-01	2.52041E-01	0.0
46	5.80411E+01	0.0	0.0	3.02251E+01	2.72106E+01	0.0	0.0	5.05598E-03	1.64917E-01	2.54276E-01	0.0
47	2.99906E+01	0.0	0.0	2.44096E+01	5.58695E+00	0.0	0.0	5.05598E-03	1.28593E-01	2.57476E-01	0.0
48	2.91055E+00	0.0	0.0	3.55773E+01	2.55477E+01	0.0	0.0	5.05598E-03	1.63073E-01	2.56688E-01	0.0
49	7.05503E+01	0.0	0.0	5.83550E+01	1.21864E+01	0.0	0.0	5.05598E-03	1.21903E+00	2.51553E-01	0.0
50	3.56532E+00	0.0	0.0	1.53112E+01	2.03421E+00	0.0	0.0	5.05598E-03	1.41461E-01	2.55933E-01	0.0
51	3.24132E+00	0.0	0.0	6.24725E+01	2.61155E+00	0.0	0.0	5.05598E-03	1.64771E-01	2.58483E-01	0.0
52	1.04860E+02	0.0	0.0	9.59595E+01	9.91957E+00	0.0	0.0	5.05598E-03	8.10461E-02	2.56983E-01	0.0
53	4.50097E+00	0.0	0.0	2.37269E+01	2.12029E+00	0.0	0.0	5.05598E-03	1.41490E-01	2.58641E-01	0.0
54	3.66705E+00	0.0	0.0	1.10162E+01	2.55546E+00	0.0	0.0	5.05598E-03	1.62451E-01	2.52168E-01	0.0
55	4.58942E+00	0.0	0.0	1.67003E+01	2.91933E+00	0.0	0.0	5.05598E-03	1.84894E-01	2.54633E-01	0.0
56	8.49304E+00	0.0	0.0	4.54640E+01	5.64469E+00	0.0	0.0	5.05598E-03	2.57406E-01	2.57477E-01	0.0
57	2.83405E+02	0.0	0.0	2.61751E+02	2.17379E+01	0.0	0.0	5.05598E-03	7.36623E+00	2.56688E-01	0.0
58	9.72748E+02	0.0	0.0	9.26131E+02	4.86170E+01	0.0	0.0	5.05598E-03	7.96356E-02	2.51553E-01	0.0
59	1.66703E+01	0.0	0.0	1.52571E+01	1.41525E+00	0.0	0.0	5.05598E-03	9.01165E-02	2.55933E-01	0.0
60	9.42159E+00	0.0	0.0	7.79405E+01	1.62775E+01	0.0	0.0	5.05598E-03	9.93776E-02	2.58483E-01	0.0
61	7.79139E+00	0.0	0.0	6.02287E+01	1.76525E+00	0.0	0.0	5.05598E-03	1.09756E-01	2.58650E-01	0.0
62	7.32445E+00	0.0	0.0	5.47120E+01	1.85525E+00	0.0	0.0	5.05598E-03	1.15040E-01	2.52175E-01	0.0
63	7.30383E+00	0.0	0.0	5.44054E+01	1.90249E+00	0.0	0.0	5.05598E-03	1.15612E-01	2.54642E-01	0.0
64	7.51437E+00	0.0	0.0	5.57667E+01	1.95769E+00	0.0	0.0	5.05598E-03	1.15478E-01	2.57477E-01	0.0
65	7.88924E+00	0.0	0.0	5.92794E+01	1.96126E+00	0.0	0.0	5.05598E-03	1.16645E-01	2.56689E-01	0.0
66	8.46017E+00	0.0	0.0	6.44252E+01	1.97716E+00	0.0	0.0	5.05597E-03	1.19620E-01	2.51553E-01	0.0
67	9.04333E+00	0.0	0.0	7.05355E+01	1.98935E+00	0.0	0.0	5.05598E-03	1.18012E-01	2.55933E-01	0.0
68	9.81801E+00	0.0	0.0	7.82206E+01	1.99793E+00	0.0	0.0	5.05598E-03	1.17180E-01	2.58483E-01	0.0
69	1.07475E+01	0.0	0.0	8.74305E+01	2.00441E+00	0.0	0.0	2.44510E-02	1.18115E-01	2.56983E-01	0.0
70	1.17891E+01	0.0	0.0	9.77975E+01	2.00934E+00	0.0	0.0				

NUCLID = CS135J2F MAT NO = 1552
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.54494E+00	0.0	0.0	2.72962E-04	2.47086E+00	2.07280E+00	0.0	7.65675E-01	7.05175E-02	1.09299E-02	0.0
2	4.40858E+00	0.0	0.0	7.12347E-04	2.28348E+00	2.12439E+00	0.0	7.05639E-01	6.63700E-02	3.88245E-02	0.0
3	4.41888E+00	0.0	0.0	1.69421E-03	2.27333E+00	2.14366E+00	0.0	6.77757E-01	6.33316E-02	9.31115E-02	0.0
4	4.66850E+00	0.0	0.0	3.30323E-03	2.49847E+00	2.16674E+00	0.0	6.95301E-01	6.60172E-02	2.62356E-01	0.0
5	5.24389E+00	0.0	0.0	5.65172E-03	3.04402E+00	2.19442E+00	0.0	6.94940E-01	6.97551E-02	2.71721E-01	0.0
6	5.85272E+00	0.0	0.0	8.72878E-03	3.65497E+00	2.19902E+00	0.0	6.51082E-01	9.72195E-02	2.75411E-01	0.0
7	6.35568E+00	0.0	0.0	1.51590E-02	4.31134E+00	2.02918E+00	0.0	5.60876E-01	1.22162E-01	4.03723E-01	0.0
8	6.72810E+00	0.0	0.0	3.01344E-02	5.06351E+00	1.63446E+00	0.0	4.77033E-01	1.76656E-01	2.50737E-01	0.0
9	6.78294E+00	0.0	0.0	4.75196E-02	5.58358E+00	1.15185E+00	0.0	4.25788E-01	1.57909E-01	3.22046E-01	0.0
10	6.60151E+00	0.0	0.0	5.21540E-02	5.69862E+00	8.49735E-01	0.0	3.90609E-01	2.18669E-01	2.38892E-01	0.0
11	6.27333E+00	0.0	0.0	6.41886E-02	5.68097E+00	5.28176E-01	0.0	3.71731E-01	2.25445E-01	2.31112E-01	0.0
12	6.01485E+00	0.0	0.0	6.72222E-02	5.56406E+00	3.82574E-01	0.0	3.54645E-01	2.35555E-01	2.23142E-01	0.0
13	5.79043E+00	0.0	0.0	7.08690E-02	5.42689E+00	2.92673E-01	0.0	3.30215E-01	2.12715E-01	2.54892E-01	0.0
14	5.62713E+00	0.0	0.0	7.77548E-02	5.34216E+00	2.07218E-01	0.0	3.00156E-01	2.65578E-01	2.15111E-01	0.0
15	5.49635E+00	0.0	0.0	8.65012E-02	5.32299E+00	8.68648E-02	0.0	2.67524E-01	2.69075E-01	2.23143E-01	0.0
16	5.46748E+00	0.0	0.0	9.76552E-02	5.36982E+00	0.0	0.0	2.27566E-01	2.28006E-01	2.87682E-01	0.0
17	5.57713E+00	0.0	0.0	1.10812E-01	5.46632E+00	0.0	0.0	1.89447E-01	2.09623E-01	2.23142E-01	0.0
18	5.70234E+00	0.0	0.0	1.23489E-01	5.57885E+00	0.0	0.0	1.65413E-01	2.92081E-01	1.82321E-01	0.0
19	5.78557E+00	0.0	0.0	1.34692E-01	5.65088E+00	0.0	0.0	1.40041E-01	2.96044E-01	2.57476E-01	0.0
20	5.92900E+00	0.0	0.0	1.48548E-01	5.78045E+00	0.0	0.0	1.11513E-01	3.20992E-01	2.56688E-01	0.0
21	6.17985E+00	0.0	0.0	1.70038E-01	6.00982E+00	0.0	0.0	8.75411E-02	3.51782E-01	2.51553E-01	0.0
22	6.48082E+00	0.0	0.0	1.96515E-01	6.28431E+00	0.0	0.0	6.85220E-02	3.71976E-01	2.55933E-01	0.0
23	6.83915E+00	0.0	0.0	2.28701E-01	6.61045E+00	0.0	0.0	5.29415E-02	3.96726E-01	2.54893E-01	0.0
24	7.26295E+00	0.0	0.0	2.67164E-01	6.99578E+00	0.0	0.0	4.07882E-02	4.29786E-01	2.56983E-01	0.0
25	7.77537E+00	0.0	0.0	3.13206E-01	7.46217E+00	0.0	0.0	3.14146E-02	4.60711E-01	2.58650E-01	0.0
26	8.30702E+00	0.0	0.0	3.67233E-01	7.93979E+00	0.0	0.0	2.43941E-02	5.12753E-01	2.52175E-01	0.0
27	8.95021E+00	0.0	0.0	4.26867E-01	8.52335E+00	0.0	0.0	1.91921E-02	5.46186E-01	2.54642E-01	0.0
28	9.69010E+00	0.0	0.0	4.95336E-01	9.19476E+00	0.0	0.0	1.52530E-02	5.90889E-01	2.57476E-01	0.0
29	1.05163E+01	0.0	0.0	5.76802E-01	9.93947E+00	0.0	0.0	1.23460E-02	6.47266E-01	2.56688E-01	0.0
30	1.14596E+01	0.0	0.0	6.74009E-01	1.07856E+01	0.0	0.0	7.09072E-03	7.21751E-01	2.51553E-01	0.0
31	1.25348E+01	0.0	0.0	7.90708E-01	1.17441E+01	0.0	0.0	4.98107E-03	7.76959E-01	2.55923E-01	0.0
32	1.37629E+01	0.0	0.0	9.39915E-01	1.28230E+01	0.0	0.0	4.98105E-03	8.42631E-01	2.58483E-01	0.0
33	1.51697E+01	0.0	0.0	1.12025E+00	1.40495E+01	0.0	0.0	4.98107E-03	9.22719E-01	2.56983E-01	0.0
34	1.67730E+01	0.0	0.0	1.34879E+00	1.54242E+01	0.0	0.0	4.98107E-03	1.02306E+00	2.58650E-01	0.0
35	1.86362E+01	0.0	0.0	1.63527E+00	1.69989E+01	0.0	0.0	4.98107E-03	1.15123E+00	2.52175E-01	0.0
36	2.06982E+01	0.0	0.0	2.00213E+00	1.86961E+01	0.0	0.0	4.98106E-03	1.25425E+00	2.54642E-01	0.0
37	2.30326E+01	0.0	0.0	2.455566+00	2.05771E+01	0.0	0.0	4.98106E-03	1.37927E+00	2.57476E-01	0.0
38	2.56287E+01	0.0	0.0	3.02379E+00	2.28049E+01	0.0	0.0	4.98106E-03	1.52692E+00	2.56688E-01	0.0
39	2.88672E+01	0.0	0.0	3.74062E+00	2.51266E+01	0.0	0.0	4.98106E-03	1.70909E+00	2.51553E-01	0.0
40	3.23174E+01	0.0	0.0	4.61812E+00	2.76993E+01	0.0	0.0	4.98106E-03	1.85290E+00	2.55933E-01	0.0
41	3.62077E+01	0.0	0.0	5.71444E+00	3.04933E+01	0.0	0.0	4.98107E-03	2.02332E+00	2.58483E-01	0.0
42	4.07124E+01	0.0	0.0	7.06141E+00	3.36510E+01	0.0	0.0	4.98106E-03	2.24582E+00	2.56983E-01	0.0
43	4.58722E+01	0.0	0.0	8.77166E+00	3.71006E+01	0.0	0.0	4.98107E-03	2.44396E+00	2.55650E-01	0.0
44	5.17556E+01	0.0	0.0	1.08106E+01	4.09650E+01	0.0	0.0	4.98107E-03	2.76655E+00	2.52176E-01	0.0
45	5.83328E+01	0.0	0.0	1.33399E+01	4.49929E+01	0.0	0.0	4.98107E-03	3.00471E+00	2.54642E-01	0.0
46	6.57410E+01	0.0	0.0	1.63761E+01	4.93648E+01	0.0	0.0	4.98107E-03	3.27555E+00	2.57476E-01	0.0
47	7.44175E+01	0.0	0.0	2.00799E+01	5.42376E+01	0.0	0.0	4.98107E-03	3.60304E+00	2.56689E-01	0.0
48	8.40797E+01	0.0	0.0	2.45894E+01	5.94903E+01	0.0	0.0	4.98107E-03	3.99268E+00	2.51553E-01	0.0
49	9.50867E+01	0.0	0.0	3.00450E+01	6.50417E+01	0.0	0.0	4.98107E-03	3.64783E+00	2.55933E-01	0.0
50	1.05267E+02	0.0	0.0	3.65486E+01	6.87181E+01	0.0	0.0	4.98107E-03	2.29775E+00	2.54893E-01	0.0
51	7.80262E+01	0.0	0.0	3.03427E+01	4.76834E+01	0.0	0.0	4.98106E-03	2.13554E+00	2.56983E-01	0.0
52	4.55861E+01	0.0	0.0	7.35078E+00	3.82354E+01	0.0	0.0	4.98107E-03	1.98611E+00	2.58650E-01	0.0
53	3.59024E+01	0.0	0.0	3.20927E-01	3.55815E+01	0.0	0.0	4.98106E-03	1.93195E+00	2.52176E-01	0.0
54	3.39090E+01	0.0	0.0	3.63063E-01	3.35460E+01	0.0	0.0	4.98106E-03	1.82170E+00	2.54642E-01	0.0
55	3.23941E+01	0.0	0.0	4.13594E-01	3.19805E+01	0.0	0.0	4.98107E-03	1.74943E+00	2.57476E-01	0.0
56	3.12381E+01	0.0	0.0	4.68443E-01	3.07697E+01	0.0	0.0	4.98106E-03	1.70496E+00	2.56688E-01	0.0
57	3.03470E+01	0.0	0.0	5.33118E-01	2.98139E+01	0.0	0.0	4.98107E-03	1.73197E+00	2.51554E-01	0.0
58	2.96876E+01	0.0	0.0	6.06104E-01	2.90615E+01	0.0	0.0	4.98106E-03	1.64227E+00	2.55933E-01	0.0
59	2.92048E+01	0.0	0.0	6.89492E-01	2.85153E+01	0.0	0.0	4.98106E-03	1.60445E+00	2.54893E-01	0.0
60	2.88510E+01	0.0	0.0	7.80617E-01	2.80704E+01	0.0	0.0	4.98106E-03	1.59427E+00	2.56983E-01	0.0
61	2.86137E+01	0.0	0.0	8.88336E-01	2.77254E+01	0.0	0.0	4.98107E-03	1.57240E+00	2.58650E-01	0.0
62	2.84702E+01	0.0	0.0	1.01133E+00	2.74588E+01	0.0	0.0	4.98106E-03	1.60225E+00	2.52175E-01	0.0
63	2.84041E+01	0.0	0.0	1.14967E+00	2.72542E+01	0.0	0.0	4.98106E-03	1.57662E+00	2.54642E-01	0.0
64	2.84043E+01	0.0	0.0	1.30717E+00	2.70971E+01	0.0	0.0	4.98107E-03	1.55497E+00	2.57477E-01	0.0
65	2.84622E+01	0.0	0.0	1.48816E+00	2.69740E+01	0.0	0.0	4.98106E-03	1.55482E+00	2.56689E-01	0.0
66	2.85663E+01	0.0	0.0	1.68793E+00	2.68784E+01	0.0	0.0	4.98107E-03	1.55272E+00	2.51553E-01	0.0
67	2.87180E+01	0.0	0.0	1.91302E+00	2.68050E+01	0.0	0.0	4.98107E-03	1.55270E+00	2.55933E-01	0.0
68	2.89222E+01	0.0	0.0	2.17385E+00	2.67484E+01	0.0	0.0	4.98107E-03	1.52713E+00	2.54483E-01	0.0
69	2.91779E+01	0.0	0.0	2.47401E+00	2.67039E+01	0.0	0.0	2.40657E-02	1.54230E+00	2.56983E-01	0.0
70	2.94850E+01	0.0	0.0	2.81568E+00	2.66693E+01	0.0	0.0				

NUCLID = PR141J2F MAT NO = 5941
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.54199E+00	0.0	0.0	5.84326E-05	2.44066E+00	2.10127E+00	0.0	7.61924E-01	6.79712E-02	1.09399E-02	0.0
2	4.35827E+00	0.0	0.0	2.15741E-04	2.20224E+00	2.15582E+00	0.0	6.87798E-01	6.52561E-02	3.88245E-02	0.0
3	4.43967E+00	0.0	0.0	6.56678E-04	2.27232E+00	2.16669E+00	0.0	6.69775E-01	6.21042E-02	9.31116E-02	0.0
4	4.88082E+00	0.0	0.0	1.53949E-03	2.67639E+00	2.20289E+00	0.0	6.92602E-01	6.19726E-02	1.69748E-01	0.0
5	5.50136E+00	0.0	0.0	2.99923E-03	3.27494E+00	2.22342E+00	0.0	7.10798E-01	6.59952E-02	2.62392E-01	0.0
6	6.09975E+00	0.0	0.0	5.31980E-03	3.93383E+00	2.16060E+00	0.0	6.92853E-01	9.72958E-02	2.71731E-01	0.0
7	6.62112E+00	0.0	0.0	1.00013E-02	4.65597E+00	1.95515E+00	0.0	6.35546E-01	1.05630E-01	3.75411E-01	0.0
8	7.00454E+00	0.0	0.0	2.14913E-02	5.55282E+00	1.42923E+00	0.0	5.31657E-01	1.38478E-01	4.03723E-01	0.0
9	6.99608E+00	0.0	0.0	2.70125E-02	6.02657E+00	9.42502E-01	0.0	4.40529E-01	1.95934E-01	2.80737E-01	0.0
10	6.69643E+00	0.0	0.0	2.50259E-02	5.68590E+00	7.85511E-01	0.0	3.67536E-01	1.60772E-01	3.22046E-01	0.0
11	6.26379E+00	0.0	0.0	2.11602E-02	5.55403E+00	6.88605E-01	0.0	3.55500E-01	2.12432E-01	2.38892E-01	0.0
12	5.90867E+00	0.0	0.0	1.99365E-02	5.25307E+00	6.05860E-01	0.0	3.37650E-01	2.14678E-01	2.31112E-01	0.0
13	5.66129E+00	0.0	0.0	2.01619E-02	5.10635E+00	5.34775E-01	0.0	3.18015E-01	2.24506E-01	2.23143E-01	0.0
14	5.43419E+00	0.0	0.0	2.15749E-02	4.99248E+00	4.70138E-01	0.0	2.95781E-01	1.98196E-01	2.54892E-01	0.0
15	5.37146E+00	0.0	0.0	2.36734E-02	4.93925E+00	4.08544E-01	0.0	2.78259E-01	2.43614E-01	2.15111E-01	0.0
16	5.37963E+00	0.0	0.0	2.75256E-02	5.00193E+00	3.50175E-01	0.0	2.62835E-01	2.49703E-01	2.23143E-01	0.0
17	5.44251E+00	0.0	0.0	3.49193E-02	5.17929E+00	2.82946E-01	0.0	2.02721E-01	2.15292E-01	2.87662E-01	0.0
18	5.53658E+00	0.0	0.0	4.92221E-02	5.47999E+00	7.36543E-02	0.0	1.61644E-01	3.02216E-01	2.23143E-01	0.0
19	5.62197E+00	0.0	0.0	5.43313E-02	5.56764E+00	0.0	0.0	1.36597E-01	3.83157E-01	1.82321E-01	0.0
20	5.71907E+00	0.0	0.0	6.01647E-02	5.65891E+00	0.0	0.0	1.12862E-01	2.86083E-01	2.57476E-01	0.0
21	5.92184E+00	0.0	0.0	6.80624E-02	5.85376E+00	0.0	0.0	8.80143E-02	3.06221E-01	2.56688E-01	0.0
22	6.14348E+00	0.0	0.0	7.73553E-02	6.06612E+00	0.0	0.0	6.83121E-02	3.31540E-01	2.51553E-01	0.0
23	6.50704E+00	0.0	0.0	8.89685E-02	6.41407E+00	0.0	0.0	5.25826E-02	3.51445E-01	2.55933E-01	0.0
24	6.86763E+00	0.0	0.0	1.02928E-01	6.76470E+00	0.0	0.0	4.01294E-02	3.70685E-01	2.58483E-01	0.0
25	7.30132E+00	0.0	0.0	1.20181E-01	7.18113E+00	0.0	0.0	3.05979E-02	4.01356E-01	2.56983E-01	0.0
26	7.82404E+00	0.0	0.0	1.41205E-01	7.68919E+00	0.0	0.0	2.34723E-02	4.30994E-01	2.58650E-01	0.0
27	8.43278E+00	0.0	0.0	1.66454E-01	8.26833E+00	0.0	0.0	1.82532E-02	4.79429E-01	2.52175E-01	0.0
28	9.12290E+00	0.0	0.0	1.95697E-01	8.92721E+00	0.0	0.0	1.44754E-02	5.10474E-01	2.54642E-01	0.0
29	9.82719E+00	0.0	0.0	2.30290E-01	9.59690E+00	0.0	0.0	1.16403E-02	5.33850E-01	2.57476E-01	0.0
30	8.85664E+00	0.0	0.0	2.31354E-01	8.62529E+00	0.0	0.0	7.62906E-03	4.31574E-01	2.56688E-01	0.0
31	1.05077E+01	0.0	0.0	2.88312E-01	1.02194E+01	0.0	0.0	4.77223E-03	6.05013E-01	2.51322E-01	0.0
32	1.78015E+01	0.0	0.0	3.50525E-01	1.74509E+01	0.0	0.0	4.77223E-03	1.75884E+00	2.55607E-01	0.0
33	7.29788E+00	0.0	0.0	5.48322E-01	6.74956E+00	0.0	0.0	4.77223E-03	1.88226E-01	2.58075E-01	0.0
34	7.39334E+00	0.0	0.0	3.57681E-01	7.03566E+00	0.0	0.0	4.77223E-03	5.53734E-01	2.56763E-01	0.0
35	2.82645E+01	0.0	0.0	9.29166E-01	2.73653E+01	0.0	0.0	4.77223E-03	1.88644E-01	2.57448E-01	0.0
36	2.30369E+01	0.0	0.0	6.74863E-01	2.23621E+01	0.0	0.0	4.77223E-03	1.59103E-01	2.50896E-01	0.0
37	1.31319E+01	0.0	0.0	8.71251E-01	1.22607E+01	0.0	0.0	4.77223E-03	4.61169E-01	2.54034E-01	0.0
38	9.00453E+01	0.0	0.0	1.99378E+00	8.80515E+01	0.0	0.0	4.77223E-03	1.50986E-01	2.57476E-01	0.0
39	9.52675E+01	0.0	0.0	3.38243E+00	9.18851E+01	0.0	0.0	4.77223E-03	8.79822E-02	2.56688E-01	0.0
40	2.65000E+01	0.0	0.0	2.11318E+00	2.43869E+01	0.0	0.0	4.77223E-03	7.20367E-02	2.51545E-01	0.0
41	3.63327E+01	0.0	0.0	3.36164E+00	3.29511E+01	0.0	0.0	4.77223E-03	1.44866E+01	2.55913E-01	0.0
42	5.80797E+01	0.0	0.0	2.98769E+00	5.50920E+01	0.0	0.0	4.77223E-03	1.81259E-01	2.58440E-01	0.0
43	3.43993E+02	0.0	0.0	2.66997E+01	3.17293E+02	0.0	0.0	4.77223E-03	7.94749E+01	2.56974E-01	0.0
44	1.42065E+01	0.0	0.0	8.82159E-01	1.33243E+01	0.0	0.0	4.77223E-03	7.16457E-02	2.58579E-01	0.0
45	1.03275E+00	0.0	0.0	2.05071E-01	8.27679E-01	0.0	0.0	4.77223E-03	3.76713E-02	2.52168E-01	0.0
46	1.10160E+00	0.0	0.0	4.50693E-01	6.50908E-01	0.0	0.0	4.77223E-03	3.72252E-02	2.54527E-01	0.0
47	8.49158E+00	0.0	0.0	7.15739E-01	1.33419E+00	0.0	0.0	4.77223E-03	3.04632E-02	2.57476E-01	0.0
48	8.70701E-01	0.0	0.0	2.45111E-01	6.25589E-01	0.0	0.0	4.77223E-03	3.65285E-02	2.56688E-01	0.0
49	9.48294E-01	0.0	0.0	2.64115E-01	6.84175E-01	0.0	0.0	4.77223E-03	3.98585E-02	2.51553E-01	0.0
50	1.01563E+00	0.0	0.0	2.96005E-01	7.19630E-01	0.0	0.0	4.77223E-03	4.06461E-02	2.55933E-01	0.0
51	1.07432E+00	0.0	0.0	3.33289E-01	7.41031E-01	0.0	0.0	4.77223E-03	4.14442E-02	2.58483E-01	0.0
52	1.13927E+00	0.0	0.0	3.77084E-01	7.62186E-01	0.0	0.0	4.77223E-03	4.27446E-02	2.56983E-01	0.0
53	1.20619E+00	0.0	0.0	4.28125E-01	7.78067E-01	0.0	0.0	4.77223E-03	4.31932E-02	2.58650E-01	0.0
54	1.27286E+00	0.0	0.0	4.83795E-01	7.89081E-01	0.0	0.0	4.77223E-03	4.48213E-02	2.52176E-01	0.0
55	1.34478E+00	0.0	0.0	5.47910E-01	7.96668E-01	0.0	0.0	4.77223E-03	4.47598E-02	2.54642E-01	0.0
56	1.42354E+00	0.0	0.0	6.20955E-01	8.02587E-01	0.0	0.0	4.77223E-03	4.45402E-02	2.57476E-01	0.0
57	1.51190E+00	0.0	0.0	7.05096E-01	8.08809E-01	0.0	0.0	4.77223E-03	4.48784E-02	2.56688E-01	0.0
58	1.61071E+00	0.0	0.0	8.00726E-01	8.09925E-01	0.0	0.0	4.77223E-03	4.59461E-02	2.51553E-01	0.0
59	1.72185E+00	0.0	0.0	9.09594E-01	8.12258E-01	0.0	0.0	4.77223E-03	4.52738E-02	2.55933E-01	0.0
60	1.84833E+00	0.0	0.0	1.03428E+00	8.14047E-01	0.0	0.0	4.77223E-03	4.49138E-02	2.58483E-01	0.0
61	1.99034E+00	0.0	0.0	1.17493E+00	8.15412E-01	0.0	0.0	4.77223E-03	4.52417E-02	2.56983E-01	0.0
62	2.15272E+00	0.0	0.0	1.33627E+00	8.16454E-01	0.0	0.0	4.77223E-03	4.50011E-02	2.58650E-01	0.0
63	2.33842E+00	0.0	0.0	1.52117E+00	8.17252E-01	0.0	0.0	4.77223E-03	4.61459E-02	2.52175E-01	0.0
64	2.54749E+00	0.0	0.0	1.72963E+00	8.17863E-01	0.0	0.0	4.77223E-03	4.57799E-02	2.54642E-01	0.0
65	2.77748E+00	0.0	0.0	1.95914E+00	8.18343E-01	0.0	0.0	4.77223E-03	4.52980E-02	2.57476E-01	0.0
66	3.03316E+00	0.0	0.0	2.23443E+00	8.18730E-01	0.0	0.0	4.77223E-03	4.56575E-02	2.56688E-01	0.0
67	3.35725E+00	0.0	0.0	2.53822E+00	8.19037E-01	0.0	0.0	4.77223E-03	4.63998E-02	2.51553E-01	0.0
68	3.69625E+00	0.0	0.0	2.87696E+00	8.19291E-01	0.0	0.0	4.77223E-03	4.56190E-02	2.55933E-01	0.0
69	4.09629E+00	0.0	0.0	3.27677E+00	8.19514E-01	0.0	0.0	4.77223E-03	4.51809E-02	2.58483E-01	0.0
70	4.54313E+00	0.0	0.0	3.72342E+00	8.19714E-01	0.0	0.0	2.30794E-02	4.54544E-02	2.56983E-01	0.0

NUCLID = ND143J2F MAT NO = 1601
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.54270E+00	0.0	0.0	7.05667E-05	2.43291E+00	2.10972E+00	0.0	7.58857E-01	6.74572E-02	1.09399E-02	0.0
2	4.48361E+00	0.0	0.0	2.40866E-04	2.32185E+00	2.16153E+00	0.0	7.06293E-01	6.38475E-02	3.68245E-02	0.0
3	4.59966E+00	0.0	0.0	8.79553E-04	2.42177E+00	2.17701E+00	0.0	6.90727E-01	6.14223E-02	9.31115E-02	0.0
4	4.91876E+00	0.0	0.0	3.22557E-03	2.73652E+00	2.17902E+00	0.0	6.90256E-01	6.51360E-02	1.69748E-01	0.0
5	5.56879E+00	0.0	0.0	1.23855E-02	3.39035E+00	2.16606E+00	0.0	7.02097E-01	6.89640E-02	2.62392E-01	0.0
6	6.22147E+00	0.0	0.0	5.83347E-02	4.26984E+00	1.89329E+00	0.0	6.65411E-01	1.23983E-01	2.71731E-01	0.0
7	6.69707E+00	0.0	0.0	1.21539E-01	5.31931E+00	1.25623E+00	0.0	5.77714E-01	1.36914E-01	3.75412E-01	0.0
8	7.08617E+00	0.0	0.0	1.20954E-01	6.18926E+00	7.55952E-01	0.0	4.83037E-01	1.60103E-01	4.03723E-01	0.0
9	7.02245E+00	0.0	0.0	1.23796E-01	6.61443E+00	2.84222E-01	0.0	4.00725E-01	2.25765E-01	2.80727E-01	0.0
10	6.73671E+00	0.0	0.0	1.05573E-01	6.51377E+00	1.17363E-01	0.0	3.43530E-01	1.66862E-01	3.22046E-01	0.0
11	6.27551E+00	0.0	0.0	9.37287E-02	6.17250E+00	9.27379E-03	0.0	3.07551E-01	2.49003E-01	2.36892E-01	0.0
12	5.91053E+00	0.0	0.0	8.64103E-02	5.82213E+00	0.0	0.0	2.90852E-01	2.47647E-01	2.31112E-01	0.0
13	5.62743E+00	0.0	0.0	8.70011E-02	5.54043E+00	0.0	0.0	2.77751E-01	2.50348E-01	2.23143E-01	0.0
14	5.44936E+00	0.0	0.0	8.91488E-02	5.36022E+00	0.0	0.0	2.60418E-01	2.19829E-01	2.54892E-01	0.0
15	5.39291E+00	0.0	0.0	9.39426E-02	5.29897E+00	0.0	0.0	2.36178E-01	2.69880E-01	2.15111E-01	0.0
16	5.44057E+00	0.0	0.0	1.00225E-01	5.34034E+00	0.0	0.0	2.13203E-01	2.69955E-01	2.23143E-01	0.0
17	5.63015E+00	0.0	0.0	1.09392E-01	5.52076E+00	0.0	0.0	1.77967E-01	2.32733E-01	2.87662E-01	0.0
18	5.91660E+00	0.0	0.0	1.20399E-01	5.79820E+00	0.0	0.0	1.46950E-01	3.23440E-01	2.23143E-01	0.0
19	6.15616E+00	0.0	0.0	1.29963E-01	6.02617E+00	0.0	0.0	1.26266E-01	4.16389E-01	1.82321E-01	0.0
20	6.48268E+00	0.0	0.0	1.41439E-01	6.34124E+00	0.0	0.0	1.04802E-01	3.25578E-01	2.57476E-01	0.0
21	6.99264E+00	0.0	0.0	1.58719E-01	6.83393E+00	0.0	0.0	8.16202E-02	3.60974E-01	2.56668E-01	0.0
22	7.58601E+00	0.0	0.0	1.79688E-01	7.40612E+00	0.0	0.0	6.29790E-02	4.07689E-01	2.51553E-01	0.0
23	8.27423E+00	0.0	0.0	2.05962E-01	8.06827E+00	0.0	0.0	4.62703E-02	4.44318E-01	2.55933E-01	0.0
24	9.08858E+00	0.0	0.0	2.37644E-01	8.83074E+00	0.0	0.0	3.67692E-02	4.86316E-01	2.58463E-01	0.0
25	9.96497E+00	0.0	0.0	2.75339E-01	9.66963E+00	0.0	0.0	2.80831E-02	5.42141E-01	2.56968E-01	0.0
26	1.10051E+01	0.0	0.0	3.21347E-01	1.06837E+01	0.0	0.0	2.15301E-02	5.99229E-01	2.58650E-01	0.0
27	1.21536E+01	0.0	0.0	3.73758E-01	1.17799E+01	0.0	0.0	1.67921E-02	6.79300E-01	2.52175E-01	0.0
28	1.34537E+01	0.0	0.0	4.35933E-01	1.30179E+01	0.0	0.0	1.33731E-02	7.45446E-01	2.54642E-01	0.0
29	1.50255E+01	0.0	0.0	5.11680E-01	1.45138E+01	0.0	0.0	1.08422E-02	8.26885E-01	2.57476E-01	0.0
30	1.67091E+01	0.0	0.0	6.04925E-01	1.61042E+01	0.0	0.0	5.64664E-03	9.28480E-01	2.56668E-01	0.0
31	1.74078E+01	0.0	0.0	6.66456E-01	1.67414E+01	0.0	0.0	4.70238E-03	6.67862E-01	2.51553E-01	0.0
32	2.03360E+01	0.0	0.0	9.83939E-01	1.94520E+01	0.0	0.0	4.70238E-03	7.52472E-01	2.55623E-01	0.0
33	2.21935E+01	0.0	0.0	9.70196E-01	2.12233E+01	0.0	0.0	4.70238E-03	6.40869E-01	2.56379E-01	0.0
34	3.06053E+01	0.0	0.0	1.04052E+00	2.95648E+01	0.0	0.0	4.70238E-03	2.01250E+00	2.56952E-01	0.0
35	4.42027E+01	0.0	0.0	1.62530E+00	4.25774E+01	0.0	0.0	4.70238E-03	6.29863E+00	2.58308E-01	0.0
36	3.61884E+01	0.0	0.0	2.31339E+00	3.38750E+01	0.0	0.0	4.70239E-03	5.41797E+00	2.51501E-01	0.0
37	5.10626E+01	0.0	0.0	2.79014E+00	4.82725E+01	0.0	0.0	4.70238E-03	1.92123E-01	2.53604E-01	0.0
38	3.51187E+01	0.0	0.0	3.30229E+00	3.18164E+01	0.0	0.0	4.70238E-03	1.10005E+01	2.57475E-01	0.0
39	1.60779E+01	0.0	0.0	2.16723E+00	1.38907E+01	0.0	0.0	4.70238E-03	1.91969E-01	2.56668E-01	0.0
40	1.60995E+01	0.0	0.0	3.61956E+00	1.24800E+01	0.0	0.0	4.70238E-03	1.12101E+00	2.51553E-01	0.0
41	1.59264E+02	0.0	0.0	1.00240E+01	1.49240E+02	0.0	0.0	4.70238E-03	6.38702E-01	2.55933E-01	0.0
42	2.28708E+02	0.0	0.0	1.66768E+01	2.10032E+02	0.0	0.0	4.70238E-03	1.55162E-02	2.58483E-01	0.0
43	4.19768E+00	0.0	0.0	4.35752E-01	3.76193E+00	0.0	0.0	4.70238E-03	5.70801E-01	2.56953E-01	0.0
44	4.82150E+02	0.0	0.0	3.57314E+01	4.46419E+02	0.0	0.0	4.70238E-03	7.64648E-01	2.58573E-01	0.0
45	4.52840E+02	0.0	0.0	3.96198E+01	4.13220E+02	0.0	0.0	4.70239E-03	2.46436E+00	2.51833E-01	0.0
46	1.61875E+02	0.0	0.0	2.43824E+01	1.37493E+02	0.0	0.0	4.70238E-03	7.39594E-02	2.54493E-01	0.0
47	1.20409E+00	0.0	0.0	5.47698E-01	6.56396E-01	0.0	0.0	4.70238E-03	1.91799E-02	2.57476E-01	0.0
48	9.97804E-01	0.0	0.0	7.25675E-01	2.72128E-01	0.0	0.0	4.70238E-03	1.95403E-02	2.56668E-01	0.0
49	1.11621E+02	0.0	0.0	7.50693E+01	3.65512E+01	0.0	0.0	4.70238E-03	3.89099E-02	2.51553E-01	0.0
50	1.51865E+00	0.0	0.0	6.35268E-01	6.83368E-01	0.0	0.0	4.70238E-03	4.17053E-02	2.55934E-01	0.0
51	1.86655E+00	0.0	0.0	9.23217E-01	9.45332E-01	0.0	0.0	4.70237E-03	6.21125E-02	2.58483E-01	0.0
52	2.60037E+00	0.0	0.0	1.15284E+00	1.44753E+00	0.0	0.0	4.70237E-03	9.51290E-02	2.56983E-01	0.0
53	3.69360E+00	0.0	0.0	1.51335E+00	2.18025E+00	0.0	0.0	4.70238E-03	1.41037E-01	2.58639E-01	0.0
54	5.22613E+00	0.0	0.0	2.04783E+00	3.17630E+00	0.0	0.0	4.70238E-03	2.05989E-01	2.52176E-01	0.0
55	7.29532E+00	0.0	0.0	2.82060E+00	4.47472E+00	0.0	0.0	4.70238E-03	2.86531E-01	2.54633E-01	0.0
56	1.01096E+01	0.0	0.0	3.94396E+00	6.16164E+00	0.0	0.0	4.70239E-03	3.84816E-01	2.57476E-01	0.0
57	1.37054E+01	0.0	0.0	5.52296E+00	8.18248E+00	0.0	0.0	4.70238E-03	5.02190E-01	2.56668E-01	0.0
58	1.81606E+01	0.0	0.0	7.61341E+00	1.05472E+01	0.0	0.0	4.70238E-03	6.53231E-01	2.51554E-01	0.0
59	2.34039E+01	0.0	0.0	1.03190E+01	1.30850E+01	0.0	0.0	4.70238E-03	7.84056E-01	2.55933E-01	0.0
60	2.96217E+01	0.0	0.0	1.36057E+01	1.58160E+01	0.0	0.0	4.70238E-03	9.30640E-01	2.58483E-01	0.0
61	3.67805E+01	0.0	0.0	1.80994E+01	1.86811E+01	0.0	0.0	4.70237E-03	1.09135E+00	2.56983E-01	0.0
62	4.45925E+01	0.0	0.0	2.32389E+01	2.13536E+01	0.0	0.0	4.70237E-03	1.21959E+00	2.58650E-01	0.0
63	5.27516E+01	0.0	0.0	2.90430E+01	2.37167E+01	0.0	0.0	4.70237E-03	1.37793E+00	2.52175E-01	0.0
64	6.16910E+01	0.0	0.0	3.57834E+01	2.59075E+01	0.0	0.0	4.70238E-03	1.48056E+00	2.54633E-01	0.0
65	7.13228E+01	0.0	0.0	4.34580E+01	2.78648E+01	0.0	0.0	4.70238E-03	1.56496E+00	2.57477E-01	0.0
66	8.16364E+01	0.0	0.0	5.20662E+01	2.95702E+01	0.0	0.0	4.70238E-03	1.65639E+00	2.56668E-01	0.0
67	9.27977E+01	0.0	0.0	6.18156E+01	3.09820E+01	0.0	0.0	4.70238E-03	1.76263E+00	2.51545E-01	0.0
68	1.04932E+02	0.0	0.0	7.27654E+01	3.21662E+01	0.0	0.0	4.70238E-03	1.79224E+00	2.55933E-01	0.0
69	1.17946E+02	0.0	0.0	8.47944E+01	3.31466E+01	0.0	0.0	4.7023BE-03	1.82274E+00	2.58483E-01	0.0
70	1.32444E+02	0.0	0.0	9.85047E+01	3.39397E+01	0.0	0.0	2.29113E-02	1.87228E+00	2.56983E-01	0.0

NUCLID = ND145J2F MAT NO = 1603
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.54728E+00	0.0	0.0	3.14759E-05	2.42636E+00	2.12088E+00	0.0	7.57839E-01	6.66037E-02	1.09399E-02	0.0
2	4.50526E+00	0.0	0.0	1.30727E-04	2.33425E+00	2.17087E+00	0.0	7.07204E-01	6.32143E-02	3.88245E-02	0.0
3	4.66397E+00	0.0	0.0	5.14523E-04	2.45922E+00	2.18423E+00	0.0	6.93907E-01	6.09608E-02	9.31115E-02	0.0
4	4.98776E+00	0.0	0.0	1.51289E-03	2.77459E+00	2.21166E+00	0.0	6.98589E-01	6.22663E-02	1.69748E-01	0.0
5	5.65159E+00	0.0	0.0	3.62605E-03	3.29181E+00	2.25616E+00	0.0	7.19136E-01	6.31213E-02	2.62392E-01	0.0
6	6.32901E+00	0.0	0.0	7.79902E-03	4.02387E+00	2.29734E+00	0.0	7.21485E-01	8.23555E-02	2.71731E-01	0.0
7	6.82975E+00	0.0	0.0	1.62801E-02	4.55028E+00	2.26121E+00	0.0	6.83609E-01	8.58316E-02	3.75411E-01	0.0
8	7.12659E+00	0.0	0.0	5.29204E-02	5.20899E+00	1.88268E+00	0.0	5.78144E-01	1.15569E-01	4.03722E-01	0.0
9	7.04267E+00	0.0	0.0	8.87735E-02	5.61578E+00	1.33612E+00	0.0	4.71049E-01	1.70549E-01	2.80727E-01	0.0
10	6.77318E+00	0.0	0.0	9.17077E-02	5.60584E+00	1.07563E+00	0.0	3.92325E-01	1.52257E-01	1.72046E-01	0.0
11	6.30869E+00	0.0	0.0	8.55442E-02	5.35844E+00	8.64710E-01	0.0	3.41804E-01	2.04426E-01	2.39892E-01	0.0
12	5.93583E+00	0.0	0.0	8.18502E-02	5.09013E+00	7.63856E-01	0.0	3.16993E-01	2.07616E-01	2.31112E-01	0.0
13	5.64786E+00	0.0	0.0	8.21699E-02	4.89439E+00	6.71259E-01	0.0	2.97416E-01	2.14108E-01	2.23142E-01	0.0
14	5.47609E+00	0.0	0.0	9.60988E-02	4.79970E+00	5.90294E-01	0.0	2.74397E-01	1.92515E-01	2.54892E-01	0.0
15	5.43750E+00	0.0	0.0	9.23099E-02	4.81699E+00	5.28200E-01	0.0	2.47272E-01	2.41334E-01	2.15111E-01	0.0
16	5.51089E+00	0.0	0.0	1.00344E-01	4.92455E+00	4.66001E-01	0.0	2.18709E-01	2.45691E-01	2.23147E-01	0.0
17	5.73806E+00	0.0	0.0	1.12550E-01	5.18113E+00	4.44381E-01	0.0	1.82125E-01	2.17159E-01	2.87682E-01	0.0
18	6.07646E+00	0.0	0.0	1.27314E-01	5.54004E+00	4.09103E-01	0.0	1.46693E-01	3.07547E-01	2.23142E-01	0.0
19	6.36424E+00	0.0	0.0	1.40026E-01	5.84316E+00	3.81073E-01	0.0	1.24452E-01	4.01158E-01	1.82321E-01	0.0
20	6.73910E+00	0.0	0.0	1.58825E-01	6.26595E+00	3.14332E-01	0.0	1.01547E-01	3.24820E-01	2.57476E-01	0.0
21	7.31020E+00	0.0	0.0	1.93707E-01	7.09087E+00	2.56209E-02	0.0	7.5809BE-02	3.74969E-01	2.56698E-01	0.0
22	8.00891E+00	0.0	0.0	2.23522E-01	7.78529E+00	0.0	0.0	5.8001CE-02	4.26070E-01	2.51552E-01	0.0
23	8.79576E+00	0.0	0.0	2.54867E-01	8.54069E+00	0.0	0.0	4.42702E-02	4.67028E-01	2.55923E-01	0.0
24	9.70164E+00	0.0	0.0	2.93137E-01	9.40850E+00	0.0	0.0	3.27709E-02	5.13789E-01	2.58483E-01	0.0
25	1.07209E+01	0.0	0.0	3.38292E-01	1.03826E+01	0.0	0.0	2.55094E-02	5.75603E-01	2.56983E-01	0.0
26	1.19046E+01	0.0	0.0	3.94010E-01	1.15106E+01	0.0	0.0	1.98228E-02	6.39173E-01	2.58650E-01	0.0
27	1.32075E+01	0.0	0.0	4.58301E-01	1.27492E+01	0.0	0.0	1.55184E-02	7.27264E-01	2.52175E-01	0.0
28	1.46817E+01	0.0	0.0	5.26039E-01	1.41457E+01	0.0	0.0	1.24237E-02	8.00983E-01	2.54642E-01	0.0
29	1.64651E+01	0.0	0.0	6.32336E-01	1.58327E+01	0.0	0.0	7.69177E-03	8.95508E-01	2.57476E-01	0.0
30	1.83746E+01	0.0	0.0	7.52894E-01	1.76217E+01	0.0	0.0	4.63754E-03	1.00311E+00	2.56688E-01	0.0
31	2.02148E+01	0.0	0.0	9.02693E-01	1.93121E+01	0.0	0.0	4.63754E-03	1.02786E+00	2.51553E-01	0.0
32	1.69357E+01	0.0	0.0	9.27436E-01	1.60063E+01	0.0	0.0	4.63755E-03	7.55221E-01	2.55933E-01	0.0
33	4.70790E+01	0.0	0.0	1.36050E+00	4.57185E+01	0.0	0.0	4.63754E-03	4.51093E+00	2.57748E-01	0.0
34	3.21358E+01	0.0	0.0	1.73115E+00	3.04046E+01	0.0	0.0	4.63755E-03	1.13457E+00	2.56717E-01	0.0
35	4.46860E+01	0.0	0.0	2.64475E+00	4.20413E+01	0.0	0.0	4.63754E-03	4.62821E-01	2.57790E-01	0.0
36	3.25635E+01	0.0	0.0	2.94528E+00	2.96182E+01	0.0	0.0	4.63754E-03	2.58216E+00	2.51545E-01	0.0
37	3.79218E+01	0.0	0.0	3.70311E+00	3.42157E+01	0.0	0.0	4.63755E-03	7.62022E+00	2.53765E-01	0.0
38	6.06009E+01	0.0	0.0	5.86344E+00	5.47275E+01	0.0	0.0	4.63755E-03	1.27655E-01	2.57272E-01	0.0
39	2.98148E+01	0.0	0.0	4.94879E+00	2.48660E+01	0.0	0.0	4.63755E-03	2.23175E-01	2.56587E-01	0.0
40	1.09205E+02	0.0	0.0	8.87663E+00	1.00426E+02	0.0	0.0	4.63755E-03	2.85257E+00	2.51468E-01	0.0
41	4.68697E+01	0.0	0.0	1.03666E+01	3.65231E+01	0.0	0.0	4.63755E-03	2.80914E-02	2.55840E-01	0.0
42	3.74919E+01	0.0	0.0	8.43797E+00	2.90540E+01	0.0	0.0	4.63755E-03	1.41571E-01	2.58445E-01	0.0
43	4.04566E+01	0.0	0.0	1.33569E+01	2.70997E+01	0.0	0.0	4.63755E-03	3.61023E-02	2.56860E-01	0.0
44	9.12054E+00	0.0	0.0	4.87624E+00	4.24429E+00	0.0	0.0	4.63755E-03	6.63204E-02	2.56598E-01	0.0
45	1.61195E+01	0.0	0.0	1.09967E+01	5.12285E+00	0.0	0.0	4.63755E-03	1.08947E-01	2.52175E-01	0.0
46	2.03212E+02	0.0	0.0	7.37149E+01	1.29597E+02	0.0	0.0	4.63754E-03	2.21341E+01	2.54058E-01	0.0
47	2.14510E+01	0.0	0.0	1.76735E+01	3.77747E+00	0.0	0.0	4.63755E-03	7.48386E-02	2.57464E-01	0.0
48	3.75258E+00	0.0	0.0	9.29886E-01	2.82269E+00	0.0	0.0	4.63755E-03	2.51430E-01	2.56688E-01	0.0
49	2.02236E+01	0.0	0.0	2.66074E+00	1.73629E+01	0.0	0.0	4.63754E-03	2.83534E+00	2.51553E-01	0.0
50	1.34428E+03	0.0	0.0	1.92697E+02	1.15159E+03	0.0	0.0	4.63754E-03	1.01597E+00	2.55923E-01	0.0
51	8.84842E+00	0.0	0.0	2.67029E+00	6.17813E+00	0.0	0.0	4.63755E-03	1.31651E-01	2.58483E-01	0.0
52	3.20369E+00	0.0	0.0	1.73252E+00	1.46997E+00	0.0	0.0	4.63754E-03	6.28250E-02	2.56983E-01	0.0
53	2.41104E+00	0.0	0.0	1.67998E+00	7.31056E-01	0.0	0.0	4.63755E-03	3.13862E-02	2.58645E-01	0.0
54	2.28943E+00	0.0	0.0	1.79080E+00	4.98634E-01	0.0	0.0	4.63755E-03	2.42234E-02	2.52176E-01	0.0
55	2.38521E+00	0.0	0.0	1.98749E+00	3.97714E-01	0.0	0.0	4.63755E-03	1.98995E-02	2.54642E-01	0.0
56	2.64890E+00	0.0	0.0	2.30417E+00	3.44735E-01	0.0	0.0	4.63755E-03	1.77023E-02	2.57476E-01	0.0
57	3.26646E+00	0.0	0.0	2.97139E+00	3.15065E-01	0.0	0.0	4.63755E-03	1.65229E-02	2.56688E-01	0.0
58	7.06569E+00	0.0	0.0	6.74742E+00	3.18271E-01	0.0	0.0	4.63755E-03	2.48969E-02	2.51552E-01	0.0
59	5.93081E+02	0.0	0.0	5.77016E+02	1.60552E+01	0.0	0.0	4.63755E-03	8.60672E-02	2.55933E-01	0.0
60	1.41869E+01	0.0	0.0	1.34487E+01	7.78234E-01	0.0	0.0	4.63755E-03	2.80121E-02	2.58483E-01	0.0
61	7.08032E+00	0.0	0.0	6.61592E+00	4.64392E-01	0.0	0.0	4.63755E-03	2.32765E-02	2.56983E-01	0.0
62	6.48102E+00	0.0	0.0	6.06943E+00	4.11593E-01	0.0	0.0	4.63755E-03	2.14594E-02	2.58639E-01	0.0
63	6.70112E+00	0.0	0.0	6.20621E+00	3.94915E-01	0.0	0.0	4.63755E-03	2.13654E-02	2.52175E-01	0.0
64	7.21531E+00	0.0	0.0	6.83440E+00	3.80907E-01	0.0	0.0	4.63755E-03	2.03489E-02	2.54662E-01	0.0
65	7.93488E+00	0.0	0.0	7.56191E+00	3.72974E-01	0.0	0.0	4.63755E-03	2.00151E-02	2.57475E-01	0.0
66	8.83059E+00	0.0	0.0	9.45978E+00	3.70812E-01	0.0	0.0	4.63755E-03	1.99460E-02	2.56688E-01	0.0
67	9.86053E+00	0.0	0.0	9.49219E+00	3.68232E-01	0.0	0.0	4.63755E-03	2.02132E-02	2.51543E-01	0.0
68	1.10462E+01	0.0	0.0	1.06803E+01	3.65864E-01	0.0	0.0	4.63755E-03	1.97377E-02	2.55923E-01	0.0
69	1.24528E+01	0.0	0.0	1.20892E+01	3.63627E-01	0.0	0.0	4.63755E-03	1.96313E-02	2.58483E-01	0.0
70	1.40426E+01	0.0	0.0	1.36819E+01	3.61755E-01	0.0	0.0	2.23965E-02	1.94526E-02	2.56983E-01	0.0

NUCLID = PM147J2F MAT NO = 1611
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.65172E+00	0.0	0.0	4.44640E-04	2.50022E+00	2.18106E+00	0.0	7.71073E-01	6.40345E-02	1.09399E-02	0.0
2	4.64893E+00	0.0	0.0	1.31320E-03	2.41998E+00	2.22763E+00	0.0	7.22811E-01	8.17458E-02	3.88245E-02	0.0
3	4.80193E+00	0.0	0.0	4.47165E-03	2.55719E+00	2.24028E+00	0.0	7.06043E-01	6.04401E-02	9.31115E-02	0.0
4	5.14243E+00	0.0	0.0	1.13406E-02	2.87668E+00	2.25443E+00	0.0	7.06147E-01	6.23674E-02	1.69748E-01	0.0
5	5.78173E+00	0.0	0.0	2.29433E-02	3.48774E+00	2.27105E+00	0.0	7.21227E-01	6.37836E-02	2.62392E-01	0.0
6	6.43249E+00	0.0	0.0	4.07604E-02	4.09958E+00	2.29143E+00	0.0	7.22192E-01	6.18682E-02	2.71731E-01	0.0
7	6.89919E+00	0.0	0.0	6.24483E-02	4.53294E+00	2.30360E+00	0.0	6.97117E-01	7.65029E-02	3.75411E-01	0.0
8	7.19153E+00	0.0	0.0	1.01100E-01	4.82357E+00	2.28688E+00	0.0	6.35303E-01	8.55055E-02	4.03723E-01	0.0
9	7.16423E+00	0.0	0.0	1.55706E-01	4.96243E+00	2.04614E+00	0.0	5.46650E-01	1.31955E-01	2.60737E-01	0.0
10	6.91063E+00	0.0	0.0	2.39518E-01	5.11533E+00	1.55777E+00	0.0	4.44940E-01	1.33010E-01	3.22046E-01	0.0
11	6.49321E+00	0.0	0.0	3.08642E-01	5.15198E+00	1.03259E+00	0.0	3.68328E-01	1.91116E-01	2.38892E-01	0.0
12	6.17179E+00	0.0	0.0	3.28144E-01	5.07017E+00	7.73468E-01	0.0	3.29287E-01	2.06568E-01	2.31112E-01	0.0
13	5.84660E+00	0.0	0.0	3.47265E-01	5.05270E+00	4.96529E-01	0.0	2.98195E-01	2.21442E-01	2.23143E-01	0.0
14	5.83209E+00	0.0	0.0	3.68130E-01	5.03395E+00	4.37843E-01	0.0	2.71621E-01	2.00373E-01	2.54892E-01	0.0
15	5.84717E+00	0.0	0.0	3.72516E-01	5.07645E+00	3.97870E-01	0.0	2.45050E-01	2.52045E-01	2.15111E-01	0.0
16	5.97361E+00	0.0	0.0	3.89140E-01	5.21163E+00	3.72938E-01	0.0	2.17247E-01	2.57287E-01	2.23143E-01	0.0
17	6.26995E+00	0.0	0.0	4.18842E-01	5.51753E+00	3.58579E-01	0.0	1.81232E-01	2.29029E-01	2.67682E-01	0.0
18	6.66053E+00	0.0	0.0	4.57565E-01	5.93581E+00	2.87160E-01	0.0	1.46265E-01	3.26067E-01	2.23143E-01	0.0
19	7.03373E+00	0.0	0.0	4.91064E-01	6.29283E+00	2.49818E-01	0.0	1.24315E-01	4.26929E-01	1.82321E-01	0.0
20	7.47095E+00	0.0	0.0	5.54216E-01	6.87752E+00	2.91126E-02	0.0	1.00211E-01	3.49275E-01	2.57476E-01	0.0
21	8.15905E+00	0.0	0.0	6.20751E-01	7.53380E+00	0.0	0.0	7.75383E-02	3.90515E-01	2.56688E-01	0.0
22	8.93529E+00	0.0	0.0	6.97233E-01	8.23505E+00	0.0	0.0	5.98816E-02	4.43676E-01	2.51553E-01	0.0
23	9.62540E+00	0.0	0.0	7.64377E-01	9.00102E+00	0.0	0.0	4.59815E-02	4.85956E-01	2.55923E-01	0.0
24	1.08435E+01	0.0	0.0	9.16970E-01	9.92653E+00	0.0	0.0	3.51266E-02	5.33216E-01	2.58483E-01	0.0
25	1.19801E+01	0.0	0.0	1.06936E+00	1.09108E+01	0.0	0.0	2.69342E-02	5.94808E-01	2.56983E-01	0.0
26	1.32910E+01	0.0	0.0	1.25625E+00	1.20225E+01	0.0	0.0	2.07528E-02	6.56493E-01	2.58650E-01	0.0
27	1.47373E+01	0.0	0.0	1.50117E+00	1.32386E+01	0.0	0.0	1.62758E-02	7.41513E-01	2.52175E-01	0.0
28	1.63664E+01	0.0	0.0	1.80386E+00	1.45683E+01	0.0	0.0	1.30330E-02	8.09980E-01	2.54642E-01	0.0
29	1.83093E+01	0.0	0.0	2.18436E+00	1.61276E+01	0.0	0.0	1.06232E-02	8.90866E-01	2.57476E-01	0.0
30	2.04109E+01	0.0	0.0	2.66114E+00	1.77495E+01	0.0	0.0	5.51436E-03	9.90908E-01	2.56688E-01	0.0
31	2.27917E+01	0.0	0.0	3.25196E+00	1.95297E+01	0.0	0.0	4.57445E-03	1.10733E+00	2.51553E-01	0.0
32	2.54746E+01	0.0	0.0	3.99508E+00	2.14795E+01	0.0	0.0	4.57444E-03	1.19936E+00	2.55923E-01	0.0
33	2.85749E+01	0.0	0.0	4.90865E+00	2.36610E+01	0.0	0.0	4.57444E-03	1.30692E+00	2.58483E-01	0.0
34	3.21191E+01	0.0	0.0	6.06784E+00	2.60512E+01	0.0	0.0	4.57444E-03	1.44812E+00	2.56983E-01	0.0
35	3.61568E+01	0.0	0.0	7.45634E+00	2.87005E+01	0.0	0.0	4.57444E-03	1.58591E+00	2.58650E-01	0.0
36	4.06653E+01	0.0	0.0	9.18063E+00	3.14946E+01	0.0	0.0	4.57444E-03	1.77805E+00	2.52175E-01	0.0
37	4.57421E+01	0.0	0.0	1.12529E+01	3.44892E+01	0.0	0.0	4.57445E-03	1.92786E+00	2.54642E-01	0.0
38	5.17437E+01	0.0	0.0	1.37377E+01	3.79557E+01	0.0	0.0	4.57444E-03	2.10036E+00	2.57476E-01	0.0
39	5.83621E+01	0.0	0.0	1.65914E+01	4.14767E+01	0.0	0.0	4.57444E-03	2.30449E+00	2.56688E-01	0.0
40	6.58434E+01	0.0	0.0	2.05955E+01	4.52405E+01	0.0	0.0	4.57445E-03	2.55249E+00	2.51553E-01	0.0
41	7.30738E+01	0.0	0.0	2.50826E+01	4.79912E+01	0.0	0.0	4.57444E-03	2.37936E+00	2.55933E-01	0.0
42	6.71247E+01	0.0	0.0	2.42687E+01	4.28700E+01	0.0	0.0	4.57444E-03	2.70953E+00	2.58460E-01	0.0
43	9.09356E+01	0.0	0.0	2.72804E+01	6.36152E+01	0.0	0.0	4.57444E-03	1.74001E+00	2.56954E-01	0.0
44	1.95144E+02	0.0	0.0	5.12971E+01	1.43847E+02	0.0	0.0	4.57444E-03	2.55020E-01	2.57286E-01	0.0
45	1.47789E+02	0.0	0.0	5.0842?E+01	9.69464E+01	0.0	0.0	4.57445E-03	2.63434E+01	2.51080E-01	0.0
46	4.34555E+01	0.0	0.0	2.09215E+01	2.25340E+01	0.0	0.0	4.57445E-03	4.73236E-01	2.54274E-01	0.0
47	1.17588E+02	0.0	0.0	7.90087E+01	3.85737E+01	0.0	0.0	4.57445E-03	4.65687E-02	2.57476E-01	0.0
48	1.04365E+02	0.0	0.0	5.50847E+01	4.92705E+01	0.0	0.0	4.57445E-03	5.64423E-02	2.56688E-01	0.0
49	8.09964E+01	0.0	0.0	6.25914E+01	1.84050E+01	0.0	0.0	4.57445E-03	3.38914E-01	2.51553E-01	0.0
50	3.12428E+02	0.0	0.0	2.30427E+02	8.20017E+01	0.0	0.0	4.57444E-03	6.82220E-02	2.55928E-01	0.0
51	2.04455E+01	0.0	0.0	1.92124E+01	1.23342E+00	0.0	0.0	4.57445E-03	4.99134E-02	2.58473E-01	0.0
52	2.52428E+00	0.0	0.0	9.03375E-01	1.62091E+00	0.0	0.0	4.57444E-03	1.19786E-01	2.56963E-01	0.0
53	9.11316E+01	0.0	0.0	8.34306E+01	7.70094E+00	0.0	0.0	4.57445E-03	1.31767E-01	2.58567E-01	0.0
54	4.77820E+01	0.0	0.0	4.38747E+01	3.90727E+00	0.0	0.0	4.57445E-03	2.09466E-01	2.52163E-01	0.0
55	1.02363E+01	0.0	0.0	4.40086E+00	5.83546E+00	0.0	0.0	4.57445E-03	4.34095E-01	2.54642E-01	0.0
56	3.40739E+01	0.0	0.0	1.66966E+01	1.54271E+01	0.0	0.0	4.57443E-03	1.44806E+00	2.57476E-01	0.0
57	1.24211E+02	0.0	0.0	1.12517E+02	1.16795E+02	0.0	0.0	4.57445E-03	8.29350E+00	2.56669E-01	0.0
58	9.42493E+03	0.0	0.0	8.30371E+02	2.12122E+03	0.0	0.0	4.57445E-03	6.77656E+00	2.51553E-01	0.0
59	1.64561E+02	0.0	0.0	1.33955E+02	5.08200E+01	0.0	0.0	4.57444E-03	1.07185E+00	2.55933E-01	0.0
60	5.74503E+01	0.0	0.0	4.53894E+01	1.20869E+01	0.0	0.0	4.57445E-03	4.21565E-01	2.58483E-01	0.0
61	3.60132E+01	0.0	0.0	3.01489E+01	5.86429E+00	0.0	0.0	4.57445E-03	2.44184E-01	2.56983E-01	0.0
62	2.93309E+01	0.0	0.0	2.55545E+01	3.74805E+00	0.0	0.0	4.57445E-03	1.68270E-01	2.58640E-01	0.0
63	2.74869E+01	0.0	0.0	2.46397E+01	2.49927E+00	0.0	0.0	4.57444E-03	1.38970E-01	2.52175E-01	0.0
64	2.80073E+01	0.0	0.0	2.57049E+01	2.30241E+00	0.0	0.0	4.57444E-03	1.14714E-01	2.54642E-01	0.0
65	3.00948E+01	0.0	0.0	2.80926E+01	2.00222E+00	0.0	0.0	4.57444E-03	1.00939E-01	2.57476E-01	0.0
66	3.34195E+01	0.0	0.0	3.16625E+01	1.75265E+00	0.0	0.0	4.57444E-03	9.34486E-02	2.56688E-01	0.0
67	3.77059E+01	0.0	0.0	3.66035E+01	1.70260E+00	0.0	0.0	4.57444E-03	9.02271E-02	2.51545E-01	0.0
68	4.28815E+01	0.0	0.0	4.12655E+01	1.62652E+00	0.0	0.0	4.57444E-03	8.53205E-02	2.55933E-01	0.0
69	4.93090E+01	0.0	0.0	4.77335E+01	1.57525E+00	0.0	0.0	4.57444E-03	8.23746E-02	2.58483E-01	0.0
70	5.85375E+01	0.0	0.0	5.69955E+01	1.54937E+00	0.0	0.0	2.20143E-02	8.14962E-02	2.56983E-01	0.0

NUCLID = SM149J2F MAT NO = 1622
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.68394E+00	0.0	0.0	1.87805E-03	2.48927E+00	2.19279E+00	0.0	7.69214E-01	6.33116E-02	1.09399E-02	0.0
2	4.65615E+00	0.0	0.0	5.37063E-03	2.42168E+00	2.22911E+00	0.0	7.23956E-01	6.05297E-02	3.88245E-02	0.0
3	4.63723E+00	0.0	0.0	1.91007E-02	2.59080E+00	2.22733E+00	0.0	7.10535E-01	5.97715E-02	9.31115E-02	0.0
4	5.20776E+00	0.0	0.0	4.78544E-02	2.94361E+00	2.21630E+00	0.0	7.10745E-01	6.22015E-02	1.69748E-01	0.0
5	5.85466E+00	0.0	0.0	9.12775E-02	3.56859E+00	2.19479E+00	0.0	7.23372E-01	6.41022E-02	2.62392E-01	0.0
6	6.51468E+00	0.0	0.0	1.52603E-01	4.18639E+00	2.17569E+00	0.0	7.22368E-01	8.25329E-02	2.71731E-01	0.0
7	6.95470E+00	0.0	0.0	2.15052E-01	4.60369E+00	2.13595E+00	0.0	6.95560E-01	7.68309E-02	3.75411E-01	0.0
8	7.22817E+00	0.0	0.0	2.89744E-01	4.84380E+00	2.09463E+00	0.0	6.35589E-01	8.32291E-02	4.03723E-01	0.0
9	7.19876E+00	0.0	0.0	3.62601E-01	4.87027E+00	1.96590E+00	0.0	5.53822E-01	1.22197E-01	2.80737E-01	0.0
10	6.93471E+00	0.0	0.0	4.36439E-01	4.78667E+00	1.71140E+00	0.0	4.65479E-01	1.14743E-01	3.22046E-01	0.0
11	6.53103E+00	0.0	0.0	5.01325E-01	4.66761E+00	1.36210E+00	0.0	3.91446E-01	1.65962E-01	2.38892E-01	0.0
12	6.17486E+00	0.0	0.0	5.44476E-01	4.59882E+00	1.03155E+00	0.0	3.45011E-01	1.80296E-01	2.31112E-01	0.0
13	5.99707E+00	0.0	0.0	5.70084E-01	4.54378E+00	8.83203E-01	0.0	3.12653E-01	1.91780E-01	2.23143E-01	0.0
14	5.88718E+00	0.0	0.0	5.96260E-01	4.56500E+00	7.25923E-01	0.0	2.81838E-01	1.79715E-01	2.54892E-01	0.0
15	5.83677E+00	0.0	0.0	6.38662E-01	4.71353E+00	4.84580E-01	0.0	2.48856E-01	2.32736E-01	2.15111E-01	0.0
16	6.05683E+00	0.0	0.0	6.83408E-01	4.94292E+00	4.30504E-01	0.0	2.16765E-01	2.43393E-01	2.23143E-01	0.0
17	6.45365E+00	0.0	0.0	7.23568E-01	5.28133E+00	4.38933E-01	0.0	1.79573E-01	2.16728E-01	2.87582E-01	0.0
18	6.92974E+00	0.0	0.0	7.85974E-01	5.68785E+00	4.55906E-01	0.0	1.45439E-01	3.08627E-01	2.23143E-01	0.0
19	7.33499E+00	0.0	0.0	9.30320E-01	6.03530E+00	4.69370E-01	0.0	1.23979E-01	4.04175E-01	1.82321E-01	0.0
20	7.84933E+00	0.0	0.0	8.95462E-01	6.46089E+00	4.92475E-01	0.0	1.02313E-01	3.21827E-01	2.57476E-01	0.0
21	8.61549E+00	0.0	0.0	1.00995E+00	7.07462E+00	5.30923E-01	0.0	7.95418E-02	3.61693E-01	2.56668E-01	0.0
22	9.49139E+00	0.0	0.0	1.15691E+00	7.76598E+00	5.66498E-01	0.0	6.13513E-02	4.13098E-01	2.51553E-01	0.0
23	1.04913E+01	0.0	0.0	1.34667E+00	8.59164E+00	5.92981E-01	0.0	4.70298E-02	4.54844E-01	2.55933E-01	0.0
24	1.16254E+01	0.0	0.0	1.59821E+00	9.46613E+00	5.59030E-01	0.0	3.57693E-02	5.05282E-01	2.58483E-01	0.0
25	1.27793E+01	0.0	0.0	1.98349E+00	1.06283E+01	1.67584E-01	0.0	2.70283E-02	5.78491E-01	2.56983E-01	0.0
26	1.43598E+01	0.0	0.0	2.44874E+00	1.19111E+01	0.0	0.0	2.05376E-02	6.40312E-01	2.58650E-01	0.0
27	1.60339E+01	0.0	0.0	2.95561E+00	1.30763E+01	0.0	0.0	1.61675E-02	7.24109E-01	2.52175E-01	0.0
28	1.79019E+01	0.0	0.0	3.57143E+00	1.43305E+01	0.0	0.0	1.30125E-02	7.79950E-01	2.54642E-01	0.0
29	1.99765E+01	0.0	0.0	4.33134E+00	1.56472E+01	0.0	0.0	1.06506E-02	8.49154E-01	2.57476E-01	0.0
30	2.23346E+01	0.0	0.0	5.27301E+00	1.70616E+01	0.0	0.0	5.47444E-03	9.34906E-01	2.56688E-01	0.0
31	2.49944E+01	0.0	0.0	6.40948E+00	1.85849E+01	0.0	0.0	4.51303E-03	1.03391E+00	2.51553E-01	0.0
32	2.79934E+01	0.0	0.0	7.80426E+00	2.01891E+01	0.0	0.0	4.51304E-03	1.10583E+00	2.55933E-01	0.0
33	3.14561E+01	0.0	0.0	9.48969E+00	2.19665E+01	0.0	0.0	4.51303E-03	1.18961E+00	2.58483E-01	0.0
34	3.54421E+01	0.0	0.0	1.15983E+01	2.38549E+01	0.0	0.0	4.51304E-03	1.29898E+00	2.56983E-01	0.0
35	3.99107E+01	0.0	0.0	1.40381E+01	2.58727E+01	0.0	0.0	4.51304E-03	1.40004E+00	2.58650E-01	0.0
36	4.50152E+01	0.0	0.0	1.70191E+01	2.79960E+01	0.0	0.0	4.51304E-03	1.55432E+00	2.52175E-01	0.0
37	5.07603E+01	0.0	0.0	2.05327E+01	3.02276E+01	0.0	0.0	4.51303E-03	1.64861E+00	2.54642E-01	0.0
38	5.72558E+01	0.0	0.0	2.47361E+01	3.25177E+01	0.0	0.0	4.51303E-03	1.76056E+00	2.57477E-01	0.0
39	6.46695E+01	0.0	0.0	2.97765E+01	3.48911E+01	0.0	0.0	4.51304E-03	1.89500E+00	2.56668E-01	0.0
40	7.30303E+01	0.0	0.0	3.58824E+01	3.73479E+01	0.0	0.0	4.51303E-03	2.06079E+00	2.51553E-01	0.0
41	8.25478E+01	0.0	0.0	4.27289E+01	3.98168E+01	0.0	0.0	4.51304E-03	2.16121E+00	2.55933E-01	0.0
42	9.35283E+01	0.0	0.0	5.10500E+01	4.24783E+01	0.0	0.0	4.51304E-03	2.27943E+00	2.58483E-01	0.0
43	1.05924E+02	0.0	0.0	6.07529E+01	4.51709E+01	0.0	0.0	4.51304E-03	2.43538E+00	2.56983E-01	0.0
44	1.17665E+02	0.0	0.0	7.15457E+01	4.61192E+01	0.0	0.0	4.51304E-03	2.32251E+00	2.58650E-01	0.0
45	2.13649E+02	0.0	0.0	8.27029E+01	1.30546E+02	0.0	0.0	4.51304E-03	4.37454E-01	2.51969E-01	0.0
46	9.96067E+01	0.0	0.0	6.58755E+01	3.37312E+01	0.0	0.0	4.51303E-03	1.61862E+00	2.54310E-01	0.0
47	3.32443E+02	0.0	0.0	1.57394E+02	1.75050E+02	0.0	0.0	4.51304E-03	1.94218E+00	2.57476E-01	0.0
48	7.88663E+02	0.0	0.0	3.76217E+02	4.12446E+02	0.0	0.0	4.51304E-03	2.18066E+01	2.56688E-01	0.0
49	3.41833E+02	0.0	0.0	2.16360E+02	1.25474E+02	0.0	0.0	4.51304E-03	1.12938E+00	2.51544E-01	0.0
50	7.78635E+02	0.0	0.0	4.21732E+02	3.56543E+02	0.0	0.0	4.51304E-03	1.17187E-02	2.55933E-01	0.0
51	1.79262E+02	0.0	0.0	1.59383E+02	1.98792E+01	0.0	0.0	4.51304E-03	1.96199E-01	2.58483E-01	0.0
52	2.66899E+02	0.0	0.0	2.20479E+02	4.64194E+01	0.0	0.0	4.51304E-03	9.85718E-02	2.56962E-01	0.0
53	8.07166E+01	0.0	0.0	7.42811E+01	6.43548E+00	0.0	0.0	4.51304E-03	2.39907E-01	2.56606E-01	0.0
54	2.32570E+02	0.0	0.0	2.12227E+02	2.03436E+01	0.0	0.0	4.51304E-03	2.10632E-01	2.52061E-01	0.0
55	8.95805E+01	0.0	0.0	8.24007E+01	7.17979E+00	0.0	0.0	4.51304E-03	4.64618E-01	2.54524E-01	0.0
56	9.33999E+02	0.0	0.0	8.18267E+02	1.15732E+02	0.0	0.0	4.51304E-03	1.34491E-01	2.57476E-01	0.0
57	1.33878E+02	0.0	0.0	1.29223E+02	4.65504E+00	0.0	0.0	4.51304E-03	1.61430E-01	2.56668E-01	0.0
58	8.08368E+02	0.0	0.0	7.78969E+02	2.93967E+01	0.0	0.0	4.51304E-03	2.69958E-01	2.51553E-01	0.0
59	3.68606E+01	0.0	0.0	3.39235E+01	2.93712E+00	0.0	0.0	4.51303E-03	1.80937E-01	2.55933E-01	0.0
60	1.69925E+01	0.0	0.0	1.28943E+01	4.09423E+00	0.0	0.0	4.51304E-03	2.41082E-01	2.58483E-01	0.0
61	2.24390E+01	0.0	0.0	1.71335E+01	5.30547E+00	0.0	0.0	4.51304E-03	3.11128E-01	2.56983E-01	0.0
62	3.69051E+01	0.0	0.0	3.19208E+01	6.98425E+00	0.0	0.0	4.51304E-03	4.18634E-01	2.58650E-01	0.0
63	8.76843E+01	0.0	0.0	7.76778E+01	1.00065E+01	0.0	0.0	4.51304E-03	6.55373E-01	2.52175E-01	0.0
64	4.11233E+02	0.0	0.0	3.91038E+02	2.01954E+01	0.0	0.0	4.51303E-03	1.84554E+00	2.54642E-01	0.0
65	7.43265E+03	0.0	0.0	7.33213E+03	1.00520E+02	0.0	0.0	4.51304E-03	9.13980E-01	2.57476E-01	0.0
66	9.43156E+02	0.0	0.0	9.24904E+02	8.24724E+00	0.0	0.0	4.51304E-03	4.54396E-01	2.56668E-01	0.0
67	5.95437E+02	0.0	0.0	5.86775E+02	1.16629E+01	0.0	0.0	4.51304E-03	7.83619E-01	2.51553E-01	0.0
68	9.07900E+02	0.0	0.0	8.88374E+02	1.95257E+01	0.0	0.0	4.51303E-03	1.28423E+00	2.55933E-01	0.0
69	1.77882E+03	0.0	0.0	1.74504E+03	3.27295E+01	0.0	0.0	4.51304E-03	2.27431E+00	2.58483E-01	0.0
70	4.05692E+03	0.0	0.0	3.99303E+03	6.38961E+01	0.0	0.0	2.77548E-02	4.56117E+00	2.56983E-01	0.0

NUCLID = SM151J2F MAT NO = 1623
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.72979E+00	0.0	0.0	1.56102E-03	2.52215E+00	2.20608E+00	0.0	7.72381E-01	6.25391E-02	1.09399E-02	0.0
2	4.70088E+00	0.0	0.0	5.57733E-03	2.45322E+00	2.24208E+00	0.0	7.25726E-01	6.04124E-02	3.88245E-02	0.0
3	4.86773E+00	0.0	0.0	1.81085E-02	2.60645E+00	2.24917E+00	0.0	7.10052E-01	5.92422E-02	9.31115E-02	0.0
4	5.21517E+00	0.0	0.0	4.56478E-02	2.93918E+00	2.23034E+00	0.0	7.09702E-01	6.14519E-02	1.69748E-01	0.0
5	5.86153E+00	0.0	0.0	9.52362E-02	3.56462E+00	2.20168E+00	0.0	7.23136E-01	6.31838E-02	2.62392E-01	0.0
6	6.53074E+00	0.0	0.0	1.67251E-01	4.18692E+00	2.17657E+00	0.0	7.22905E-01	8.12588E-02	2.71731E-01	0.0
7	6.98913E+00	0.0	0.0	2.28142E-01	4.61031E+00	2.15068E+00	0.0	6.98115E-01	7.48940E-02	3.75411E-01	0.0
8	7.26887E+00	0.0	0.0	2.74910E-01	4.82126E+00	2.17270E+00	0.0	6.44853E-01	7.80487E-02	4.03723E-01	0.0
9	7.25058E+00	0.0	0.0	2.89411E-01	4.75208E+00	2.20908E+00	0.0	5.75439E-01	1.09470E-01	2.80737E-01	0.0
10	6.99240E+00	0.0	0.0	2.93631E-01	4.51600E+00	2.18276E+00	0.0	5.02199E-01	9.67464E-02	3.22045E-01	0.0
11	6.60372E+00	0.0	0.0	3.01251E-01	4.23819E+00	2.06428E+00	0.0	4.40070E-01	1.34089E-01	2.38892E-01	0.0
12	6.27650E+00	0.0	0.0	3.13553E-01	4.03592E+00	1.92703E+00	0.0	4.01813E-01	1.40407E-01	2.31112E-01	0.0
13	6.04583E+00	0.0	0.0	3.30522E-01	3.90921E+00	1.80609E+00	0.0	3.71586E-01	1.48511E-01	2.23143E-01	0.0
14	5.90895E+00	0.0	0.0	3.61922E-01	3.87667E+00	1.67036E+00	0.0	3.29169E-01	1.38061E-01	2.54892E-01	0.0
15	5.96557E+00	0.0	0.0	3.99589E-01	3.94473E+00	1.62125E+00	0.0	3.03482E-01	1.77824E-01	2.15111E-01	0.0
16	6.11346E+00	0.0	0.0	4.25826E-01	4.08308E+00	1.59455E+00	0.0	2.67485E-01	1.85167E-01	2.23143E-01	0.0
17	6.32216E+00	0.0	0.0	5.06898E-01	4.28990E+00	1.42536E+00	0.0	2.20891E-01	1.71933E-01	2.87682E-01	0.0
18	6.78390E+00	0.0	0.0	6.07926E-01	4.81603E+00	1.35995E+00	0.0	1.75613E-01	2.52051E-01	2.23143E-01	0.0
19	7.25999E+00	0.0	0.0	7.03286E-01	5.18772E+00	1.36898E+00	0.0	1.47121E-01	3.36446E-01	1.82321E-01	0.0
20	7.82632E+00	0.0	0.0	8.21046E-01	5.63728E+00	1.36800E+00	0.0	1.19186E-01	2.78131E-01	2.57476E-01	0.0
21	8.53561E+00	0.0	0.0	1.07645E+00	6.58136E+00	7.77600E-01	0.0	8.70549E-02	3.37079E-01	2.56688E-01	0.0
22	9.43367E+00	0.0	0.0	1.29484E+00	7.35354E+00	7.85291E-01	0.0	6.58185E-02	3.82111E-01	2.51553E-01	0.0
23	1.04129E+01	0.0	0.0	1.50502E+00	8.03517E+00	8.72685E-01	0.0	5.06804E-02	4.18193E-01	2.55933E-01	0.0
24	1.15348E+01	0.0	0.0	1.77177E+00	8.79393E+00	9.69076E-01	0.0	3.88172E-02	4.58442E-01	2.58483E-01	0.0
25	1.28495E+01	0.0	0.0	2.12038E+00	9.65768E+00	1.07148E+00	0.0	2.98247E-02	5.08044E-01	2.56983E-01	0.0
26	1.42263E+01	0.0	0.0	2.54202E+00	1.05104E+01	1.17388E+00	0.0	2.29900E-02	5.54753E-01	2.58650E-01	0.0
27	1.58450E+01	0.0	0.0	3.08672E+00	1.14912E+01	1.26710E+00	0.0	1.79912E-02	6.26308E-01	2.52175E-01	0.0
28	1.76713E+01	0.0	0.0	3.76166E+00	1.25720E+01	1.33766E+00	0.0	1.43384E-02	6.74068E-01	2.54642E-01	0.0
29	1.97085E+01	0.0	0.0	4.61750E+00	1.37358E+01	1.35522E+00	0.0	1.15897E-02	7.35700E-01	2.57476E-01	0.0
30	2.20244E+01	0.0	0.0	5.74130E+00	1.50604E+01	1.22270E+00	0.0	8.16750E-03	8.20256E-01	2.56688E-01	0.0
31	2.45077E+01	0.0	0.0	7.25585E+00	1.66559E+01	5.96012E-01	0.0	4.45325E-03	9.17968E-01	2.51553E-01	0.0
32	2.71865E+01	0.0	0.0	9.00320E+00	1.81833E+01	0.0	0.0	4.45326E-03	9.83780E-01	2.55933E-01	0.0
33	3.08882E+01	0.0	0.0	1.10713E+01	1.98169E+01	0.0	0.0	4.45325E-03	1.05756E+00	2.58483E-01	0.0
34	3.48771E+01	0.0	0.0	1.34842E+01	2.13930E+01	0.0	0.0	4.45325E-03	1.14595E+00	2.56983E-01	0.0
35	3.92617E+01	0.0	0.0	1.62319E+01	2.30298E+01	0.0	0.0	4.45326E-03	1.22523E+00	2.58650E-01	0.0
36	4.42644E+01	0.0	0.0	1.95427E+01	2.47218E+01	0.0	0.0	4.45326E-03	1.34894E+00	2.52175E-01	0.0
37	4.98880E+01	0.0	0.0	2.34142E+01	2.64739E+01	0.0	0.0	4.45326E-03	1.42066E+00	2.54642E-01	0.0
38	5.62600E+01	0.0	0.0	2.80120E+01	2.82479E+01	0.0	0.0	4.45326E-03	1.50343E+00	2.57476E-01	0.0
39	6.35418E+01	0.0	0.0	3.34799E+01	3.00620E+01	0.0	0.0	4.45325E-03	1.60460E+00	2.56688E-01	0.0
40	7.17484E+01	0.0	0.0	3.98345E+01	3.19139E+01	0.0	0.0	4.45326E-03	1.73549E+00	2.51553E-01	0.0
41	8.13018E+01	0.0	0.0	4.73593E+01	3.39426E+01	0.0	0.0	4.45326E-03	1.81085E+00	2.55933E-01	0.0
42	9.19269E+01	0.0	0.0	5.61854E+01	3.57435E+01	0.0	0.0	4.45325E-03	1.88242E+00	2.58483E-01	0.0
43	1.04024E+02	0.0	0.0	6.64014E+01	3.76223E+01	0.0	0.0	4.45326E-03	1.99380E+00	2.56983E-01	0.0
44	1.17793E+02	0.0	0.0	7.82312E+01	3.95615E+01	0.0	0.0	4.45325E-03	2.08121E+00	2.58650E-01	0.0
45	1.33536E+02	0.0	0.0	9.20777E+01	4.14560E+01	0.0	0.0	4.45326E-03	2.23547E+00	2.52176E-01	0.0
46	1.51194E+02	0.0	0.0	1.07882E+02	4.33114E+01	0.0	0.0	4.45325E-03	2.30388E+00	2.54642E-01	0.0
47	1.71522E+02	0.0	0.0	1.26437E+02	4.50859E+01	0.0	0.0	4.45325E-03	2.37025E+00	2.57476E-01	0.0
48	1.94590E+02	0.0	0.0	1.47777E+02	4.68135E+01	0.0	0.0	4.45325E-03	2.47191E+00	2.56688E-01	0.0
49	2.20342E+02	0.0	0.0	1.71748E+02	4.85944E+01	0.0	0.0	4.45326E-03	2.60933E+00	2.51553E-01	0.0
50	2.49834E+02	0.0	0.0	1.99665E+02	5.01691E+01	0.0	0.0	4.45326E-03	2.64377E+00	2.55933E-01	0.0
51	2.83372E+02	0.0	0.0	2.31701E+02	5.16714E+01	0.0	0.0	4.45326E-03	2.70087E+00	2.58483E-01	0.0
52	3.22027E+02	0.0	0.0	2.68721E+02	5.33058E+01	0.0	0.0	4.45325E-03	2.79514E+00	2.56983E-01	0.0
53	3.62923E+02	0.0	0.0	3.11547E+02	5.13755E+01	0.0	0.0	4.45326E-03	2.40392E+00	2.58650E-01	0.0
54	3.28250E+02	0.0	0.0	2.87863E+02	4.03874E+01	0.0	0.0	4.45325E-03	1.63194E+00	2.52176E-01	0.0
55	1.48505E+03	0.0	0.0	1.31751E+03	1.67543E+02	0.0	0.0	4.45326E-03	1.35681E+00	2.54251E-01	0.0
56	1.97016E+02	0.0	0.0	1.90478E+02	6.53811E+00	0.0	0.0	4.45326E-03	4.72053E-01	2.57476E-01	0.0
57	1.11619E+03	0.0	0.0	1.05043E+03	6.57663E+01	0.0	0.0	4.45326E-03	2.64511E-01	2.56689E-01	0.0
58	3.75433E+02	0.0	0.0	3.69485E+02	5.94769E+00	0.0	0.0	4.45326E-03	3.57381E-01	2.51554E-01	0.0
59	7.05352E+02	0.0	0.0	5.96092E+02	9.26002E+00	0.0	0.0	4.45326E-03	2.51916E-01	2.55933E-01	0.0
60	2.97249E+02	0.0	0.0	2.90794E+02	6.45535E+00	0.0	0.0	4.45326E-03	3.93273E-01	2.58483E-01	0.0
61	4.18010E+02	0.0	0.0	4.07222E+02	1.07882E+01	0.0	0.0	4.45323E-03	9.37684E-01	2.56983E-01	0.0
62	1.86381E+03	0.0	0.0	1.84678E+03	1.70303E+01	0.0	0.0	4.45326E-03	5.63446E-01	2.58645E-01	0.0
63	7.36197E+02	0.0	0.0	7.27957E+02	8.24015E+00	0.0	0.0	4.45326E-03	7.19800E-01	2.52175E-01	0.0
64	4.15287E+03	0.0	0.0	4.11450E+03	3.83696E+01	0.0	0.0	4.45325E-03	4.81766E-01	2.54614E-01	0.0
65	1.02968E+03	0.0	0.0	1.02629E+03	3.39571E+00	0.0	0.0	4.45326E-03	1.66492E-01	2.57476E-01	0.0
66	7.45212E+02	0.0	0.0	7.41448E+02	3.76391E+00	0.0	0.0	4.45326E-03	2.16945E-01	2.56688E-01	0.0
67	7.97774E+02	0.0	0.0	7.93206E+02	4.56880E+00	0.0	0.0	4.45326E-03	2.57266E-01	2.51554E-01	0.0
68	9.13307E+02	0.0	0.0	9.08126E+02	5.18072E+00	0.0	0.0	4.45326E-03	2.82976E-01	2.55933E-01	0.0
69	1.08627E+03	0.0	0.0	1.08052E+03	5.74665E+00	0.0	0.0	4.45326E-03	3.09288E-01	2.58483E-01	0.0
70	1.33735E+03	0.0	0.0	1.33098E+03	6.36216E+00	0.0	0.0	2.23513E-02	3.45350E-01	2.56983E-01	0.0

NUCLID = EU153J2F MAT NO = 1621
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.73382E+00	0.0	0.0	8.31688E-04	2.51156E+00	2.22143E+00	0.0	7.70446E-01	6.18715E-02	1.09399E-02	0.0
2	4.71254E+00	0.0	0.0	3.32904E-03	2.45394E+00	2.25527E+00	0.0	7.26898E-01	5.91822E-02	3.88245E-02	0.0
3	4.90959E+00	0.0	0.0	1.18245E-02	2.63865E+00	2.25911E+00	0.0	7.14547E-01	5.85594E-02	9.31115E-02	0.0
4	5.28529E+00	0.0	0.0	3.35125E-02	3.00405E+00	2.24773E+00	0.0	7.14578E-01	6.10924E-02	1.69748E-01	0.0
5	5.93864E+00	0.0	0.0	8.13944E-02	3.63528E+00	2.21897E+00	0.0	7.26069E-01	6.30999E-02	2.62392E-01	0.0
6	6.60615E+00	0.0	0.0	1.64289E-01	4.25968E+00	2.18420E+00	0.0	7.24347E-01	6.11825E-02	2.71731E-01	0.0
7	7.04220E+00	0.0	0.0	2.62156E-01	4.66561E+00	2.11444E+00	0.0	6.97590E-01	7.50990E-02	3.75411E-01	0.0
8	7.29795E+00	0.0	0.0	3.72035E-01	4.87233E+00	2.05279E+00	0.0	6.40024E-01	7.95536E-02	4.03723E-01	0.0
9	7.28806E+00	0.0	0.0	4.34932E-01	4.52118E+00	2.01294E+00	0.0	5.64205E-01	1.13276E-01	2.80737E-01	0.0
10	7.01273E+00	0.0	0.0	4.61051E-01	4.61041E+00	1.94127E+00	0.0	4.83288E-01	1.02164E-01	3.22046E-01	0.0
11	6.62470E+00	0.0	0.0	4.75313E-01	4.36202E+00	1.78736E+00	0.0	4.13674E-01	1.43474E-01	2.38891E-01	0.0
12	6.31995E+00	0.0	0.0	4.78699E-01	4.17805E+00	1.66500E+00	0.0	3.70735E-01	1.51346E-01	2.31112E-01	0.0
13	6.10639E+00	0.0	0.0	4.78974E-01	4.07016E+00	1.55923E+00	0.0	3.38340E-01	1.61187E-01	2.23143E-01	0.0
14	6.02187E+00	0.0	0.0	4.91583E-01	4.06677E+00	1.46652E+00	0.0	3.05813E-01	1.5042UE-01	2.54892E-01	0.0
15	6.03717E+00	0.0	0.0	5.26044E-01	4.19618E+00	1.31155E+00	0.0	2.70613E-01	1.97244E-01	2.15111E-01	0.0
16	6.24700E+00	0.0	0.0	5.94385E-01	4.43108E+00	1.22153E+00	0.0	2.34795E-01	2.08670E-01	2.23143E-01	0.0
17	6.39905E+00	0.0	0.0	7.19181E-01	4.66661E+00	1.11341E+00	0.0	1.90503E-01	1.97540E-01	2.87682E-01	0.0
18	6.44117E+00	0.0	0.0	8.45937E-01	5.48691E+00	5.58327E-01	0.0	1.46881E-01	2.93053E-01	2.23143E-01	0.0
19	7.53843E+00	0.0	0.0	1.06919E+00	6.81522E+00	4.53916E-01	0.0	1.22604E-01	4.00067E-01	1.82321E-01	0.0
20	8.18276E+00	0.0	0.0	1.31613E+00	6.69123E+00	3.75391E-01	0.0	9.78078E-02	3.33510E-01	2.57476E-01	0.0
21	9.06222E+00	0.0	0.0	1.57465E+00	7.48754E+00	0.0	0.0	7.47856E-02	3.74494E-01	2.56688E-01	0.0
22	1.00207E+01	0.0	0.0	1.80997E+00	8.21069E+00	0.0	0.0	5.74648E-02	4.26039E-01	2.51553E-01	0.0
23	1.11113E+01	0.0	0.0	2.11115E+00	9.06113E+00	0.0	0.0	4.47610E-02	4.65328E-01	2.55933E-01	0.0
24	1.23572E+01	0.0	0.0	2.45934E+00	9.86787E+00	0.0	0.0	3.44442E-02	5.09826E-01	2.58483E-01	0.0
25	1.38147E+01	0.0	0.0	2.97795E+00	1.08567E+01	0.0	0.0	2.66360E-02	5.64116E-01	2.56983E-01	0.0
26	1.53431E+01	0.0	0.0	3.56176E+00	1.17913E+01	0.0	0.0	2.07039E-02	6.14264E-01	2.58650E-01	0.0
27	1.71362E+01	0.0	0.0	4.29517E+00	1.28410E+01	0.0	0.0	1.63649E-02	6.89994E-01	2.52175E-01	0.0
28	1.91593E+01	0.0	0.0	5.15093E+00	1.39724E+01	0.0	0.0	1.31951E-02	7.36852E-01	2.54642E-01	0.0
29	2.14116E+01	0.0	0.0	6.26122E+00	1.51504E+01	0.0	0.0	1.08031E-02	7.97754E-01	2.57477E-01	0.0
30	2.39737E+01	0.0	0.0	7.58223E+00	1.63496E+01	0.0	0.0	8.40384E-03	8.71105E-01	2.56668E-01	0.0
31	2.68201E+01	0.0	0.0	9.11869E+00	1.77014E+01	0.0	0.0	4.39503E-03	9.55322E-01	2.51553E-01	0.0
32	2.93525E+01	0.0	0.0	1.03094E+01	1.90430E+01	0.0	0.0	4.39503E-03	1.01187E+00	2.55933E-01	0.0
33	3.24331E+01	0.0	0.0	1.19059E+01	2.05272E+01	0.0	0.0	4.39503E-03	1.07790E+00	2.58483E-01	0.0
34	3.59042E+01	0.0	0.0	1.38492E+01	2.20550E+01	0.0	0.0	4.39503E-03	1.16438E+00	2.56983E-01	0.0
35	3.98864E+01	0.0	0.0	1.62213E+01	2.36651E+01	0.0	0.0	4.39503E-03	1.24066E+00	2.58650E-01	0.0
36	4.45167E+01	0.0	0.0	1.92015E+01	2.53149E+01	0.0	0.0	4.39503E-03	1.36089E+00	2.52175E-01	0.0
37	4.96426E+01	0.0	0.0	2.26329E+01	2.70059E+01	0.0	0.0	4.39503E-03	1.42839E+00	2.54642E-01	0.0
38	5.53983E+01	0.0	0.0	2.66962E+01	2.86706E+01	0.0	0.0	4.39504E-03	1.50566E+00	2.57476E-01	0.0
39	6.17066E+01	0.0	0.0	3.12742E+01	3.04324E+01	0.0	0.0	4.39503E-03	1.60063E+00	2.56688E-01	0.0
40	6.84511E+01	0.0	0.0	3.62614E+01	3.21597E+01	0.0	0.0	4.39504E-03	1.72435E+00	2.51553E-01	0.0
41	7.39228E+01	0.0	0.0	3.95466E+01	3.40859E+01	0.0	0.0	4.39504E-03	1.79138E+00	2.55924E-01	0.0
42	7.90830E+01	0.0	0.0	4.33084E+01	3.57596E+01	0.0	0.0	4.39503E-03	1.85558E+00	2.58483E-01	0.0
43	8.46303E+01	0.0	0.0	4.71420E+01	3.74383E+01	0.0	0.0	4.39503E-03	1.95715E+00	2.56983E-01	0.0
44	9.12387E+01	0.0	0.0	5.15612E+01	3.92575E+01	0.0	0.0	4.39504E-03	2.03427E+00	2.58650E-01	0.0
45	1.00572E+02	0.0	0.0	5.68040E+01	4.09562E+01	0.0	0.0	4.39504E-03	2.17593E+00	2.52175E-01	0.0
46	1.41413E+02	0.0	0.0	7.87268E+01	4.26764E+01	0.0	0.0	4.39503E-03	2.23442E+00	2.54642E-01	0.0
47	1.39727E+02	0.0	0.0	1.04851E+02	3.48753E+01	0.0	0.0	4.39504E-03	8.80096E-01	2.57476E-01	0.0
48	1.83900E+02	0.0	0.0	1.43565E+02	4.03351E+01	0.0	0.0	4.39504E-03	6.48700E+00	2.56688E-01	0.0
49	1.72630E+02	0.0	0.0	1.52615E+02	2.00127E+01	0.0	0.0	4.39504E-03	4.26483E-01	2.51553E-01	0.0
50	1.50438E+02	0.0	0.0	1.34017E+02	1.52205E+01	0.0	0.0	4.39503E-03	6.10947E-01	2.55923E-01	0.0
51	9.33361E+01	0.0	0.0	9.26705E+01	1.06057E+01	0.0	0.0	4.39504E-03	9.98354E-01	2.58483E-01	0.0
52	1.12293E+02	0.0	0.0	9.51491E+01	1.41437E+01	0.0	0.0	4.39504E-03	5.66161E-01	2.56965E-01	0.0
53	4.50953E+02	0.0	0.0	4.16823E+02	2.41201E+01	0.0	0.0	4.39504E-03	6.31165E-01	2.58414E-01	0.0
54	5.87697E+01	0.0	0.0	5.14656E+01	7.28411E+00	0.0	0.0	4.39505E-03	5.07304E-01	2.52155E-01	0.0
55	2.64641E+02	0.0	0.0	2.47101E+02	1.75395E+01	0.0	0.0	4.39504E-03	4.42749E-01	2.54573E-01	0.0
56	3.43867E+02	0.0	0.0	3.72961E+02	1.99641E+01	0.0	0.0	4.39504E-03	4.89978E-01	2.57476E-01	0.0
57	1.55052E+02	0.0	0.0	1.46874E+02	8.20847E+00	0.0	0.0	4.39504E-03	3.02629E-01	2.56688E-01	0.0
58	6.65065E+01	0.0	0.0	6.05292E+01	7.95933E+00	0.0	0.0	4.39504E-03	5.15398E-01	2.51553E-01	0.0
59	5.92772E+02	0.0	0.0	5.76504E+02	1.62605E+01	0.0	0.0	4.39504E-03	4.30146E-01	2.55933E-01	0.0
60	7.21973E+02	0.0	0.0	7.16995E+02	1.29720E+01	0.0	0.0	4.39504E-02	4.70143E-01	2.58483E-01	0.0
61	1.62306E+03	0.0	0.0	1.59962E+03	2.34377E+01	0.0	0.0	4.39504E-03	1.44379E-01	2.56983E-01	0.0
62	2.19729E+02	0.0	0.0	2.15955E+02	3.87243E+00	0.0	0.0	4.39504E-03	1.40517E-01	2.58645E-01	0.0
63	8.91434E+01	0.0	0.0	8.47665E+01	4.35959E+00	0.0	0.0	4.39504E-03	2.47821E-01	2.52175E-01	0.0
64	5.61548E+01	0.0	0.0	5.11136E+01	5.04102E+00	0.0	0.0	4.39504E-03	2.69389E-01	2.54642E-01	0.0
65	5.59296E+01	0.0	0.0	5.05501E+01	5.65955E+00	0.0	0.0	4.39504E-03	2.79344E-01	2.57476E-01	0.0
66	6.65135E+01	0.0	0.0	6.04711E+01	5.60223E+00	0.0	0.0	4.39504E-03	2.91890E-01	2.56688E-01	0.0
67	1.69199E+02	0.0	0.0	1.63243E+02	5.55505E+00	0.0	0.0	4.39504E-03	3.04771E-01	2.51553E-01	0.0
68	2.27793E+02	0.0	0.0	2.22309E+02	5.45420E+00	0.0	0.0	4.39505E-03	2.80559E-01	2.55933E-01	0.0
69	1.06105E+02	0.0	0.0	9.65426E+01	5.56249E+00	0.0	0.0	4.39505E-03	2.86036E-01	2.58483E-01	0.0
70	9.02939E+01	0.0	0.0	8.48152E+01	5.68794E+00	0.0	0.0	2.13739E-02	2.91982E-01	2.56983E-01	0.0

NUCLID = EU155GEF MAT NO = 1632
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.9284UE+00	0.0	0.0	5.06017E-04	2.68083E+00	2.24707E+00	0.0	7.71653E-01	6.45429E-02	1.09399E-02	0.0
2	4.8914VE+00	0.0	0.0	1.91638E-03	2.60740E+00	2.28218E+00	0.0	7.30886E-01	6.09465E-02	3.86245E-02	0.0
3	5.0564UE+00	0.0	0.0	6.37884E-03	2.73762E+00	2.31240E+00	0.0	7.17238E-01	5.87893E-02	9.31115E-02	0.0
4	5.39357E+00	0.0	0.0	1.75269E-02	3.06077E+00	2.31527E+00	0.0	7.15691E-01	6.11601E-02	1.69748E-01	0.0
5	6.01472E+00	0.0	0.0	4.22966E-02	3.68833E+00	2.28610E+00	0.0	7.25332E-01	6.31266E-02	2.62392E-01	0.0
6	6.65115E+00	0.0	0.0	8.98992E-02	4.30258E+00	2.25667E+00	0.0	7.23025E-01	6.14848E-02	2.71731E-01	0.0
7	7.08514E+00	0.0	0.0	2.04868E-01	4.75905E+00	2.12122E+00	0.0	6.92245E-01	7.88431E-02	3.75411E-01	0.0
8	7.34944E+00	0.0	0.0	4.87659E-01	5.14501E+00	1.71673E+00	0.0	6.20067E-01	6.91294E-02	4.03723E-01	0.0
9	7.32728E+00	0.0	0.0	5.36459E-01	5.18614E+00	1.60468E+00	0.0	5.43999E-01	1.25258E-01	2.80727E-01	0.0
10	7.10775E+00	0.0	0.0	4.82571E-01	5.00076E+00	1.62441E+00	0.0	4.67651E-01	1.12811E-01	9.22046E-01	0.0
11	6.78555E+00	0.0	0.0	4.5956IE-01	4.75139E+00	1.55458E+00	0.0	3.99532E-01	1.57609E-01	2.36892E-01	0.0
12	6.45645E+00	0.0	0.0	4.52773E-01	4.54364E+00	1.46004E+00	0.0	3.56812E-01	1.65680E-01	2.31112E-01	0.0
13	6.22807E+00	0.0	0.0	4.54676E-01	4.41466E+00	1.35874E+00	0.0	3.23989E-01	1.75997E-01	2.23143E-01	0.0
14	6.10589E+00	0.0	0.0	4.80334E-01	4.46205E+00	1.16350E+00	0.0	2.87812E-01	1.69526E-01	2.54892E-01	0.0
15	6.12656E+00	0.0	0.0	5.22688E-01	4.67602E+00	9.27864E-01	0.0	2.49592E-01	2.23286E-01	2.15111E-01	0.0
16	6.28737E+00	0.0	0.0	5.88376E-01	4.95499E+00	7.84008E-01	0.0	2.15301E-01	2.36209E-01	2.23143E-01	0.0
17	6.64759E+00	0.0	0.0	6.47999E-01	5.36858E+00	6.30925E-01	0.0	1.76448E-01	2.14310E-01	2.87882E-01	0.0
18	7.15138E+00	0.0	0.0	7.53567E-01	5.86709E+00	5.30717E-01	0.0	1.41458E-01	3.09599E-01	2.23143E-01	0.0
19	7.61681E+00	0.0	0.0	8.45617E-01	6.29987E+00	4.71020E-01	0.0	1.19448E-01	4.09387E-01	1.82321E-01	0.0
20	8.18702E+00	0.0	0.0	9.59939E-01	6.85271E+00	3.74374E-01	0.0	9.72257E-02	3.35745E-01	2.57476E-01	0.0
21	8.97885E+00	0.0	0.0	1.17302E+00	7.75998E+00	5.85226E-03	0.0	7.31502E-02	3.87793E-01	2.56668E-01	0.0
22	9.95703E+00	0.0	0.0	1.34825E+00	8.60878E+00	0.0	0.0	5.63256E-02	4.42269E-01	2.51553E-01	0.0
23	1.10283E+01	0.0	0.0	1.55979E+00	9.46654E+00	0.0	0.0	4.33746E-02	4.84776E-01	2.55923E-01	0.0
24	1.22479E+01	0.0	0.0	1.83054E+00	1.04174E+01	0.0	0.0	3.32727E-02	5.31498E-01	2.58483E-01	0.0
25	1.36165E+01	0.0	0.0	2.18437E+00	1.14342E+01	0.0	0.0	2.56379E-02	5.91380E-01	2.56963E-01	0.0
26	1.51851E+01	0.0	0.0	2.61038E+00	1.25747E+01	0.0	0.0	1.98664E-02	6.49919E-01	2.58650E-01	0.0
27	1.69549E+01	0.0	0.0	3.15353E+00	1.38014E+01	0.0	0.0	1.56623E-02	7.35215E-01	2.52175E-01	0.0
28	1.89467E+01	0.0	0.0	3.81772E+00	1.51310E+01	0.0	0.0	1.26041E-02	7.92166E-01	2.54642E-01	0.0
29	2.11646E+01	0.0	0.0	4.63682E+00	1.65278E+01	0.0	0.0	1.03129E-02	8.62718E-01	2.57476E-01	0.0
30	2.36779E+01	0.0	0.0	5.65090E+00	1.80270E+01	0.0	0.0	5.27536E-03	9.49936E-01	2.56668E-01	0.0
31	2.65134E+01	0.0	0.0	6.87347E+00	1.96399E+01	0.0	0.0	4.33835E-03	1.05067E+00	2.51553E-01	0.0
32	2.97066E+01	0.0	0.0	8.37179E+00	2.13366E+01	0.0	0.0	4.33835E-03	1.12383E+00	2.55933E-01	0.0
33	3.33980E+01	0.0	0.0	1.01817E+01	2.32162E+01	0.0	0.0	4.33824E-03	1.20896E+00	2.58483E-01	0.0
34	3.76358E+01	0.0	0.0	1.24337E+01	2.52021E+01	0.0	0.0	4.33835E-03	1.32008E+00	2.56983E-01	0.0
35	4.24041E+01	0.0	0.0	1.50607E+01	2.73434E+01	0.0	0.0	4.33835E-03	1.42273E+00	2.58650E-01	0.0
36	4.78413E+01	0.0	0.0	1.82556E+01	2.95858E+01	0.0	0.0	4.33835E-03	1.57933E+00	2.52175E-01	0.0
37	5.39574E+01	0.0	0.0	2.20181E+01	3.19393E+01	0.0	0.0	4.33835E-03	1.67485E+00	2.54642E-01	0.0
38	6.08723E+01	0.0	0.0	2.65192E+01	3.43931E+01	0.0	0.0	4.33835E-03	1.78825E+00	2.57476E-01	0.0
39	6.87655E+01	0.0	0.0	3.19112E+01	3.68542E+01	0.0	0.0	4.33835E-03	1.92455E+00	2.56668E-01	0.0
40	7.76690E+01	0.0	0.0	3.82247E+01	3.94443E+01	0.0	0.0	4.33835E-03	2.09265E+00	2.51553E-01	0.0
41	8.78051E+01	0.0	0.0	4.57567E+01	4.20484E+01	0.0	0.0	4.33835E-03	2.19432E+00	2.55924E-01	0.0
42	9.94970E+01	0.0	0.0	5.48472E+01	4.48498E+01	0.0	0.0	4.33835E-03	2.31388E+00	2.58483E-01	0.0
43	1.12684E+02	0.0	0.0	6.50046E+01	4.76796E+01	0.0	0.0	4.33835E-03	2.47147E+00	2.56983E-01	0.0
44	1.27638E+02	0.0	0.0	7.70763E+01	5.05617E+01	0.0	0.0	4.33835E-03	2.60199E+00	2.58650E-01	0.0
45	1.44715E+02	0.0	0.0	9.12923E+01	5.34266E+01	0.0	0.0	4.33835E-03	2.8186UE+00	2.52176E-01	0.0
46	1.63923E+02	0.0	0.0	1.07604E+02	5.63190E+01	0.0	0.0	4.33835E-03	2.92621E+00	2.54642E-01	0.0
47	1.85905E+02	0.0	0.0	1.26866E+02	5.90391E+01	0.0	0.0	4.33835E-03	3.03502E+00	2.57477E-01	0.0
48	2.10838E+02	0.0	0.0	1.49114E+02	6.17745E+01	0.0	0.0	4.33835E-03	3.19058E+00	2.56669E-01	0.0
49	2.38906E+02	0.0	0.0	1.74274E+02	6.46257E+01	0.0	0.0	4.33835E-03	3.39229E+00	2.51554E-01	0.0
50	2.70897E+02	0.0	0.0	2.03654E+02	6.72430E+01	0.0	0.0	4.33835E-03	3.46188E+00	2.55933E-01	0.0
51	3.07192E+02	0.0	0.0	2.37455E+02	6.96966E+01	0.0	0.0	4.33835E-03	3.56291E+00	2.58483E-01	0.0
52	3.49269E+02	0.0	0.0	2.76795E+02	7.24743E+01	0.0	0.0	4.33835E-03	3.71199E+00	2.56983E-01	0.0
53	3.97930E+02	0.0	0.0	3.22963E+02	7.49476E+01	0.0	0.0	4.33835E-03	3.8197EE+00	2.56650E-01	0.0
54	4.51758E+02	0.0	0.0	3.74309E+02	7.74486E+01	0.0	0.0	4.33835E-03	4.03329E+00	2.52176E-01	0.0
55	5.11393E+02	0.0	0.0	4.31959E+02	7.94338E+01	0.0	0.0	4.33835E-03	4.08385E+00	2.54642E-01	0.0
56	5.81454E+02	0.0	0.0	5.00166E+02	8.12866E+01	0.0	0.0	4.33835E-03	4.13759E+00	2.57476E-01	0.0
57	6.60674E+02	0.0	0.0	5.77441E+02	8.30332E+01	0.0	0.0	4.33835E-03	4.22768E+00	2.56668E-01	0.0
58	7.46494E+02	0.0	0.0	6.61652E+02	8.47621E+01	0.0	0.0	4.33835E-03	4.41783E+00	2.51553E-01	0.0
59	8.50674E+02	0.0	0.0	7.63977E+02	8.66978E+01	0.0	0.0	4.33835E-03	4.43073E+00	2.55933E-01	0.0
60	9.65019E+02	0.0	0.0	8.77515E+02	8.75046E+01	0.0	0.0	4.33835E-03	4.23418E+00	2.58483E-01	0.0
61	1.08689E+03	0.0	0.0	1.01005E+03	7.68375E+01	0.0	0.0	4.33835E-03	3.57091E+00	2.56983E-01	0.0
62	1.22274E+03	0.0	0.0	1.15786E+03	6.48794E+01	0.0	0.0	4.33835E-03	3.01625E+00	2.56650E-01	0.0
63	1.22972E+03	0.0	0.0	1.17400E+03	5.57203E+01	0.0	0.0	4.33835E-03	2.66166E+00	2.52175E-01	0.0
64	9.45215E+02	0.0	0.0	8.93453E+02	5.17620E+01	0.0	0.0	4.33835E-03	2.67204E+00	2.54642E-01	0.0
65	7.60538E+02	0.0	0.0	7.07263E+02	5.32547E+01	0.0	0.0	4.33835E-03	2.71281E+00	2.57475E-01	0.0
66	8.39518E+02	0.0	0.0	7.85039E+02	5.44791E+01	0.0	0.0	4.33835E-03	2.77554E+00	2.56668E-01	0.0
67	9.47034E+02	0.0	0.0	8.91617E+02	5.54171E+01	0.0	0.0	4.33835E-03	2.87424E+00	2.51553E-01	0.0
68	1.06856E+03	0.0	0.0	1.01244E+03	5.61413E+01	0.0	0.0	4.33835E-03	2.85774E+00	2.55933E-01	0.0
69	1.20494E+03	0.0	0.0	1.14823E+03	5.67111E+01	0.0	0.0	4.33835E-03	2.85466E+00	2.58483E-01	0.0
70	1.35706E+03	0.0	0.0	1.29991E+03	5.71526E+01	0.0	0.0	2.10512E-02	2.84099E+00	2.56983E-01	0.0

NUCLID = ZR093J2F MAT.NO = 1401
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.25935E+00	0.0	0.0	1.26379E-03	2.49077E+00	1.75931E+00	0.0	7.62682E-01	7.22713E-02	4.97643E-02	0.0
2	3.66585E+00	0.0	0.0	6.68252E-03	2.13529E+00	1.74387E+00	0.0	6.03986E-01	7.13425E-02	2.62860E-01	0.0
3	3.67971E+00	0.0	0.0	4.38373E-02	2.45186E+00	1.38422E+00	0.0	4.55850E-01	6.81456E-02	5.34123E-01	0.0
4	4.70790E+00	0.0	0.0	5.61085E-02	3.69454E+00	9.57256E-01	0.0	4.16275E-01	9.71661E-02	7.79139E-01	0.0
5	6.13870E+00	0.0	0.0	4.64507E-02	5.50593E+00	5.86323E-01	0.0	4.01183E-01	1.39089E-01	6.02782E-01	0.0
6	7.75773E+00	0.0	0.0	4.13827E-02	7.16979E+00	5.46778E-01	0.0	3.28573E-01	1.81756E-01	6.93147E-01	0.0
7	8.79722E+00	0.0	0.0	4.56066E-02	8.63189E+00	1.19921E-01	0.0	2.00384E-01	2.40047E-01	6.93147E-01	0.0
8	9.00039E+00	0.0	0.0	6.08579E-02	8.93953E+00	0.0	0.0	1.04430E-01	2.58025E-01	6.93147E-01	0.0
9	8.77951E+00	0.0	0.0	9.59169E-02	8.68360E+00	0.0	0.0	4.88762E-02	2.32928E-01	7.65717E-01	0.0
10	8.48583E+00	0.0	0.0	1.72572E-01	8.31326E+00	0.0	0.0	2.25664E-02	2.26570E-01	7.71398E-01	0.0
11	8.42581E+00	0.0	0.0	3.03156E-01	8.12265E+00	0.0	0.0	1.09608E-02	2.28263E-01	7.65468E-01	0.0
12	8.69752E+00	0.0	0.0	4.93361E-01	8.20414E+00	0.0	0.0	7.23758E-03	2.35183E-01	7.65717E-01	0.0
13	9.39059E+00	0.0	0.0	7.46539E-01	8.64405E+00	0.0	0.0	7.23758E-03	2.50673E-01	7.71398E-01	0.0
14	1.06015E+01	0.0	0.0	1.10949E+00	9.49203E+00	0.0	0.0	7.23757E-03	2.82228E-01	7.65467E-01	0.0
15	1.25179E+01	0.0	0.0	1.73707E+00	1.07809E+01	0.0	0.0	7.23756E-03	3.25264E-01	7.65717E-01	0.0
16	1.25568E+01	0.0	0.0	1.94007E+00	1.06167E+01	0.0	0.0	7.23757E-03	1.82081E-01	7.71399E-01	0.0
17	6.61322E+01	0.0	0.0	3.17500E+01	3.63822E+01	0.0	0.0	7.23758E-03	8.48541E-02	7.65141E-01	0.0
18	4.98699E+00	0.0	0.0	3.62002E-01	4.62499E+00	0.0	0.0	7.23757E-03	1.45988E-01	7.65717E-01	0.0
19	5.40054E+00	0.0	0.0	7.71748E-02	5.32336E+00	0.0	0.0	7.23757E-03	1.51067E-01	7.71398E-01	0.0
20	5.52082E+00	0.0	0.0	7.47334E-02	5.44609E+00	0.0	0.0	7.23758E-03	1.54143E-01	7.65468E-01	0.0
21	5.58255E+00	0.0	0.0	9.33329E-02	5.48922E+00	0.0	0.0	7.23758E-03	1.54851E-01	7.65719E-01	0.0
22	5.63517E+00	0.0	0.0	1.27825E-01	5.50734E+00	0.0	0.0	7.23757E-03	1.54044E-01	7.71399E-01	0.0
23	5.69763E+00	0.0	0.0	1.82052E-01	5.51558E+00	0.0	0.0	7.23758E-03	1.55401E-01	7.65467E-01	0.0
24	5.78313E+00	0.0	0.0	2.63328E-01	5.51980E+00	0.0	0.0	7.23758E-03	1.55437E-01	7.65718E-01	0.0
25	5.90704E+00	0.0	0.0	3.84220E-01	5.52282E+00	0.0	0.0	1.64196E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I — EXIT GROUP J= 1 2 11 12 — ** KK ** KK = I + J - 1 3 4 5 6 7 8 9 10

1
9.53868E-04 5.63448E-02 2.66837E-01 5.33693E-01 4.50156E-01 2.98523E-01 1.08136E-01 3.28036E-02 9.37347E-03 2.13671E-03
4.65485E-04 9.86754E-05

2
1.91988E-02 1.40656E-01 3.71399E-01 5.49967E-01 4.21858E-01 1.67611E-01 5.29892E-02 1.56107E-02 3.60403E-03 7.90672E-04
1.73387E-04 2.74549E-05

3
1.25955E-01 3.92273E-01 3.34691E-01 2.83064E-01 1.36254E-01 6.60096E-02 3.49262E-02 8.17032E-03 1.79858E-03 3.94312E-04
6.56781E-05 6.22995E-06

4
2.21427E-01 2.45573E-01 2.67582E-01 1.40529E-01 5.86088E-02 1.78112E-02 4.05317E-03 1.09459E-03 3.14415E-04 1.83228E-04
4.22776E-05 0.0

5
2.52195E-01 2.88207E-01 2.76704E-02 1.14864E-02 5.23078E-03 1.19837E-03 2.60782E-04 5.70127E-05 1.32054E-05 2.66483E-06
6.57843E-07 0.0

6
1.45642E-01 2.90853E-01 1.10283E-01 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

7
0.0 4.27628E-02 5.70596E-02 1.53712E-02 3.68367E-03 8.14106E-04 1.79316E-04 3.86601E-05 8.74311E-06 2.14134E-06
3.83384E-07 0.0

NUCLID = MO095J2F MAT.NO = 1423
INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.25364E+00	0.0	0.0	3.18446E-03	2.48678E+00	1.76368E+00	0.0	7.60013E-01	7.11861E-02	4.97643E-02	0.0
2	3.89154E+00	0.0	0.0	1.01656E-02	2.07060E+00	1.81077E+00	0.0	6.15080E-01	6.01110E-02	2.62666E+01	0.0
3	3.97660E+00	0.0	0.0	2.13630E-02	2.14336E+00	1.81190E+00	0.0	5.36954E-01	6.00643E-02	5.34122E-01	0.0
4	4.82688E+00	0.0	0.0	3.54008E-02	3.13432E+00	1.65716E+00	0.0	5.17449E-01	6.70853E-02	7.79134E-01	0.0
5	6.27342E+00	0.0	0.0	5.86287E-02	5.07296E+00	1.14183E+00	0.0	4.59776E-01	1.31766E-01	6.02783E-01	0.0
6	7.92130E+00	0.0	0.0	8.28035E-02	7.21052E+00	6.27978E-01	0.0	2.49906E-01	1.71284E-01	6.93147E-01	0.0
7	9.00404E+00	0.0	0.0	9.20221E-02	8.59622E+00	3.15797E-01	0.0	2.22642E-01	2.33605E-01	6.93146E-01	0.0
8	9.18310E+00	0.0	0.0	1.34792E-01	9.04931E+00	0.0	0.0	1.18642E-01	2.51750E-01	6.93147E-01	0.0
9	8.92339E+00	0.0	0.0	2.16812E-01	8.70658E+00	0.0	0.0	5.82622E-02	2.25072E-01	7.65717E-01	0.0
10	8.54227E+00	0.0	0.0	3.74245E-01	8.16802E+00	0.0	0.0	2.75501E-02	2.14617E-01	7.71398E-01	0.0
11	8.39045E+00	0.0	0.0	6.06893E-01	7.78355E+00	0.0	0.0	1.41795E-02	2.11512E-01	7.65468E-01	0.0
12	8.57045E+00	0.0	0.0	8.99394E-01	7.67106E+00	0.0	0.0	7.08506E-03	2.12965E-01	7.65717E-01	0.0
13	9.03365E+00	0.0	0.0	1.18449E+00	7.84915E+00	0.0	0.0	7.08506E-03	2.08630E-01	7.71398E-01	0.0
14	1.26579E+01	0.0	0.0	1.95781E+00	1.07001E+01	0.0	0.0	7.08506E-03	2.03307E-01	7.63427E-01	0.0
15	1.47076E+01	0.0	0.0	2.81352E+00	1.18941E+01	0.0	0.0	7.08506E-03	1.75538E-01	7.66709E-01	0.0
16	1.33858E+01	0.0	0.0	2.67419E+00	1.07116E+01	0.0	0.0	7.08505E-03	1.67846E-01	7.71393E-01	0.0
17	8.20237E+00	0.0	0.0	1.65140E+00	6.55097E+00	0.0	0.0	7.08506E-03	1.92591E-01	7.65434E-01	0.0
18	2.00473E+01	0.0	0.0	4.04877E+00	1.59986E+01	0.0	0.0	7.08505E-03	2.75285E+00	7.65718E-01	0.0
19	2.88899E+02	0.0	0.0	1.29822E+02	1.59077E+02	0.0	0.0	7.08506E-03	1.01242E-01	7.71399E-01	0.0
20	4.98234E+00	0.0	0.0	8.91669E-01	4.09067E+00	0.0	0.0	7.08506E-03	1.19001E-01	7.65461E-01	0.0
21	5.43979E+00	0.0	0.0	1.01620E+00	4.42359E+00	0.0	0.0	7.08506E-03	1.23925E-01	7.65719E-01	0.0
22	5.91459E+00	0.0	0.0	1.37815E+00	4.53643E+00	0.0	0.0	7.08506E-03	1.24897E-01	7.71399E-01	0.0
23	6.54451E+00	0.0	0.0	1.96242E+00	4.58209E+00	0.0	0.0	7.08505E-03	1.26674E-01	7.65462E-01	0.0
24	7.44163E+00	0.0	0.0	2.83969E+00	4.60194E+00	0.0	0.0	7.08506E-03	1.27003E-01	7.65712E-01	0.0
25	8.75801E+00	0.0	0.0	4.14609E+00	4.61192E+00	0.0	0.0	1.60815E-02	0.0	7.71390E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

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GROUP I J= EXIT 1 GROUP 2 ** KK ** KK = I + J - 1 3 4 5 6 7 8 9 10 11 12

1
3.74637E-03 7.60286E-02 2.47321E-01 5.19678E-01 4.52322E-01 3.05827E-01 1.12118E-01 3.40118E-02 9.80913E-03 2.23968E-03
4.88816E-04 1.03494E-04

2
2.97974E-02 2.15128E-01 4.50050E-01 4.96958E-01 3.91516E-01 1.57819E-01 5.02654E-02 1.48651E-02 3.43875E-03 7.55117E-04
1.65662E-04 2.61227E-05

3
9.78984E-02 5.10266E-01 6.74424E-01 4.37286E-01 1.98277E-01 6.71086E-02 2.04795E-02 4.81578E-03 1.06564E-03 2.34615E-04
5.13023E-05 9.14722E-06

4
1.70022E-01 5.47542E-01 5.90901E-01 2.38651E-01 7.51702E-02 2.68662E-02 6.26032E-03 1.28491E-03 2.93524E-04 6.57498E-05
1.18186E-05 0.0

5
1.83197E-01 3.64459E-01 3.30657E-01 1.72216E-01 6.19083E-02 1.66945E-02 4.93056E-03 2.90284E-03 6.87257E-04 1.57055E-04
2.75651E-05 0.0

6
2.31343E-01 3.66464E-01 1.90524E-02 0.0 3.05364E-03 6.02960E-03 1.40328E-03 4.92624E-04 1.12779E-04 2.67932E-05
0.0 0.0

7
0.0 1.90593E-01 9.23654E-02 2.53543E-02 5.92850E-03 1.29194E-03 2.84703E-04 6.22026E-05 1.35162E-05 3.11584E-06
5.68240E-07 0.0

NUCLID = MD097J2F MAT NO = 1425
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.24721E+00	0.0	0.0	1.54183E-03	2.47102E+00	1.77464E+00	0.0	7.57068E-01	6.99749E-02	4.97643E-02	0.0
2	3.89360E+00	0.0	0.0	6.31030E-03	2.05240E+00	1.83489E+00	0.0	6.13472E-01	5.83048E-02	2.62860E-01	0.0
3	4.02489E+00	0.0	0.0	1.42228E-02	2.16962E+00	1.84105E+00	0.0	5.50039E-01	5.76572E-02	5.34122E-01	0.0
4	4.95110E+00	0.0	0.0	2.74111E-02	3.22843E+00	1.69526E+00	0.0	5.32292E-01	6.57215E-02	7.79134E-01	0.0
5	6.43611E+00	0.0	0.0	5.59164E-02	5.07039E+00	1.30981E+00	0.0	4.85716E-01	1.18632E-01	6.02782E-01	0.0
6	8.03828E+00	0.0	0.0	8.48291E-02	7.68685E+00	2.66598E-01	0.0	3.49671E-01	1.8311CE-01	6.93147E-01	0.0
7	9.12553E+00	0.0	0.0	9.44369E-02	9.03109E+00	0.0	0.0	2.32350E-01	2.27694E-01	6.93146E-01	0.0
8	9.31286E+00	0.0	0.0	1.25759E-01	9.18710E+00	0.0	0.0	1.33673E-01	2.46819E-01	6.93147E-01	0.0
9	9.03165E+00	0.0	0.0	2.01278E-01	8.83037E+00	0.0	0.0	6.86849E-02	2.21222E-01	7.65717E-01	0.0
10	8.58437E+00	0.0	0.0	3.50349E-01	8.23402E+00	0.0	0.0	3.33088E-02	2.10162E-01	7.71398E-01	0.0
11	8.40132E+00	0.0	0.0	6.24867E-01	7.77645E+00	0.0	0.0	1.76517E-02	2.04648E-01	7.65468E-01	0.0
12	8.66097E+00	0.0	0.0	1.07552E+00	7.58545E+00	0.0	0.0	9.22698E-03	2.05248E-01	7.65717E-01	0.0
13	9.38640E+00	0.0	0.0	1.64665E+00	7.73975E+00	0.0	0.0	6.93884E-03	2.12137E-01	7.71399E-01	0.0
14	1.01441E+01	0.0	0.0	1.99724E+00	8.14689E+00	0.0	0.0	6.93884E-03	1.76253E-01	7.63821E-01	0.0
15	1.58174E+01	0.0	0.0	3.58177E+00	1.22356E+01	0.0	0.0	6.93883E-03	1.25160E-01	7.65718E-01	0.0
16	9.49530E+00	0.0	0.0	3.56658E+00	5.92872E+00	0.0	0.0	6.93882E-03	1.23020E-01	7.71390E-01	0.0
17	5.44767E+00	0.0	0.0	3.48452E-01	5.09922E+00	0.0	0.0	6.93883E-03	1.39753E-01	7.65461E-01	0.0
18	1.31198E+01	0.0	0.0	7.07898E+00	6.04086E+00	0.0	0.0	6.93884E-03	1.35903E-01	7.65718E-01	0.0
19	5.14872E+00	0.0	0.0	6.98695E-02	5.07886E+00	0.0	0.0	6.93884E-03	1.36649E-01	7.71399E-01	0.0
20	5.22635E+00	0.0	0.0	1.20282E-01	5.10607E+00	0.0	0.0	6.93883E-03	1.37961E-01	7.65468E-01	0.0
21	5.24597E+00	0.0	0.0	1.35905E-01	5.11007E+00	0.0	0.0	6.93884E-03	1.37997E-01	7.65717E-01	0.0
22	5.31017E+00	0.0	0.0	1.98233E-01	5.11194E+00	0.0	0.0	6.93884E-03	1.37012E-01	7.71400E-01	0.0
23	5.40310E+00	0.0	0.0	2.90215E-01	5.11289E+00	0.0	0.0	6.93883E-03	1.28100E-01	7.65467E-01	0.0
24	5.53930E+00	0.0	0.0	4.25564E-01	5.11373E+00	0.0	0.0	6.93884E-03	1.38076E-01	7.65716E-01	0.0
25	5.74031E+00	0.0	0.0	6.25228E-01	5.11508E+00	0.0	0.0	1.57491E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP J= EXIT GROUP ** KK ** KK = I + J - 1

GROUP J=	1	2	3	4	5	6	7	8	9	10	11	12
1	2.22318E-03	5.92602E-02	2.24507E-01	5.12576E-01	4.71205E-01	3.29544E-01	1.23364E-01	3.78254E-02	1.09691E-02	2.51170E-03	5.48917E-04	1.16296E-04
2	1.92197E-02	1.76579E-01	4.37894E-01	5.19172E-01	4.26579E-01	1.76491E-01	5.69713E-02	1.69652E-02	3.93673E-03	8.66366E-04	1.90216E-04	3.00408E-05
3	7.20037E-02	4.32045E-01	4.98098E-01	4.95092E-01	2.31946E-01	7.98468E-02	2.45817E-02	5.80698E-03	1.28773E-03	2.83793E-04	6.20845E-05	3.87530E-06
4	1.45334E-01	6.04328E-01	5.50473E-01	2.51926E-01	7.42878E-02	4.52079E-02	1.84312E-02	4.12453E-03	9.15624E-04	2.02901E-04	3.99974E-05	0.0
5	2.74155E-02	5.54003E-01	4.79030E-01	1.83540E-01	5.01734E-02	1.22552E-02	2.64934E-03	5.84981E-04	1.28417E-04	3.09128E-05	4.29901E-06	0.0
6	0.0	7.02597E-02	8.99984E-02	7.49775E-02	2.45200E-02	5.29743E-03	1.20435E-03	2.67169E-04	5.83086E-05	1.43234E-05	6.84773E-07	0.0

NUCLID = MO100J2F MAT NO = 1427
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.26047E+00	0.0	0.0	5.11297E-04	2.45479E+00	1.80517E+00	0.0	7.56315E-01	6.68850E-02	4.97643E-02	0.0
2	3.85895E+00	0.0	0.0	3.62212E-03	1.99559E+00	1.85974E+00	0.0	6.06827E-01	5.51424E-02	2.62860E-01	0.0
3	4.01558E+00	0.0	0.0	1.02081E-02	2.26559E+00	1.73978E+00	0.0	5.39459E-01	6.19755E-02	5.34123E-01	0.0
4	5.07769E+00	0.0	0.0	1.19470E-02	3.51885E+00	1.54690E+00	0.0	5.22238E-01	7.02085E-02	7.79135E-01	0.0
5	8.57662E+00	0.0	0.0	1.29468E-02	5.35139E+00	1.21229E+00	0.0	4.84904E-01	1.16384E-01	6.02782E-01	0.0
6	8.05362E+00	0.0	0.0	2.74329E-02	7.73862E+00	2.87568E-01	0.0	3.66027E-01	1.74270E-01	6.93147E-01	0.0
7	9.11468E+00	0.0	0.0	3.36737E-02	9.06100E+00	0.0	0.0	2.53134E-01	2.16291E-01	6.93147E-01	0.0
8	9.32011E+00	0.0	0.0	3.27371E-02	9.28737E+00	0.0	0.0	1.52670E-01	2.36642E-01	6.93146E-01	0.0
9	9.01133E+00	0.0	0.0	4.57773E-02	8.96555E+00	0.0	0.0	8.11527E-02	2.16706E-01	7.65717E-01	0.0
10	8.54105E+00	0.0	0.0	7.81609E-02	8.46289E+00	0.0	0.0	4.03246E-02	2.09678E-01	7.71398E-01	0.0
11	8.25699E+00	0.0	0.0	1.41024E-01	8.11397E+00	0.0	0.0	2.12070E-02	2.08097E-01	7.65468E-01	0.0
12	8.27225E+00	0.0	0.0	2.41691E-01	8.03062E+00	0.0	0.0	1.19419E-02	2.06225E-01	7.65717E-01	0.0
13	8.76718E+00	0.0	0.0	3.29422E-01	8.43776E+00	0.0	0.0	6.72443E-03	1.42583E-01	7.71262E-01	0.0
14	1.15262E+01	0.0	0.0	9.27731E-01	1.05985E+01	0.0	0.0	6.72442E-03	1.41044E-01	7.65097E-01	0.0
15	5.93882E+00	0.0	0.0	2.10045E-01	5.72878E+00	0.0	0.0	6.72443E-03	1.72029E-01	7.65663E-01	0.0
16	3.71272E+01	0.0	0.0	2.56250E+00	3.45647E+01	0.0	0.0	6.72440E-03	1.08200E-01	7.71399E-01	0.0
17	4.46267E+00	0.0	0.0	6.04500E-03	4.45663E+00	0.0	0.0	6.72443E-03	1.20325E-01	7.65468E-01	0.0
18	4.87557E+00	0.0	0.0	2.21412E-01	4.65416E+00	0.0	0.0	6.72443E-03	1.22644E-01	7.65717E-01	0.0
19	4.71140E+00	0.0	0.0	6.24289E-03	4.70516E+01	0.0	0.0	6.72443E-03	1.22566E-01	7.71399E-01	0.0
20	4.73450E+00	0.0	0.0	8.69332E-03	4.72580E+00	0.0	0.0	6.72443E-03	1.23857E-01	7.65468E-01	0.0
21	4.74701E+00	0.0	0.0	1.24718E-02	4.73454E+00	0.0	0.0	6.72443E-03	1.22965E-01	7.65718E-01	0.0
22	4.75668E+00	0.0	0.0	1.81410E-02	4.73854E+00	0.0	0.0	6.72443E-03	1.23124E-01	7.71399E-01	0.0
23	4.76707E+00	0.0	0.0	2.65235E-02	4.74055E+00	0.0	0.0	6.72443E-03	1.24128E-01	7.65467E-01	0.0
24	4.78068E+00	0.0	0.0	3.86183E-02	4.74187E+00	0.0	0.0	6.72443E-03	1.24110E-01	7.65718E-01	0.0
25	4.80038E+00	0.0	0.0	5.70416E-02	4.74334E+00	0.0	0.0	1.52682E-02	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

GROUP I J= EXIT 1 GROUP 2 ** KK ** KK = I + J - 1

	1	2	3	4	5	6	7	8	9	10
	11	12								
1										
	7.25971E-04	3.97825E-02	2.08003E-01	5.11628E-01	4.94378E-01	3.56610E-01	1.36074E-01	4.21329E-02	1.22799E-02	2.81922E-03
	6.16879E-04	1.30811E-04								
2										
	1.24409E-02	1.27826E-01	3.94847E-01	5.56963E-01	4.75047E-01	2.01279E-01	6.57750E-02	1.97113E-02	4.59141E-03	1.01149E-03
	2.22238E-04	3.51610E-05								
3										
	8.81416E-02	5.29478E-01	3.74522E-01	4.58432E-01	1.59102E-01	5.12321E-02	5.65623E-02	1.73982E-02	3.86794E-03	8.53256E-04
	1.86388E-04	1.69057E-05								
4										
	1.84579E-01	6.27216E-01	4.16919E-01	2.00074E-01	5.73962E-02	3.74200E-02	1.02582E-02	2.24494E-03	5.32076E-04	2.18825E-04
	4.92657E-05	0.0								
5										
	4.47526E-02	6.36288E-01	4.00055E-01	9.82777E-02	1.68949E-02	6.44775E-03	7.46825E-03	1.64448E-03	3.67047E-04	8.35901E-05
	1.54396E-05	0.0								
6										
	0.0	7.64481E-02	1.13217E-01	7.29710E-02	1.95817E-02	4.25342E-03	9.32176E-04	2.06849E-04	4.49737E-05	1.07917E-05
	1.82067E-06	0.0								

NUCLID = TC099J2F MAT NO = 1431
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.24506E+00	0.0	0.0	5.02676E-03	2.45885E+00	1.76119E+00	0.0	7.54612E-01	6.88610E-02	4.97643E-02	0.0
2	3.90357E+00	0.0	0.0	2.03104E-02	2.05247E+00	1.83079E+00	0.0	6.10515E-01	5.80969E-02	2.62860E-01	0.0
3	4.07262E+00	0.0	0.0	4.18200E-02	2.25004E+00	1.78076E+00	0.0	5.49751E-01	6.01788E-02	5.34122E-01	0.0
4	5.06232E+00	0.0	0.0	9.59728E-02	3.51998E+00	1.44627E+00	0.0	5.12446E-01	7.62768E-02	7.79134E-01	0.0
5	6.56531E+00	0.0	0.0	1.54861E-01	5.43780E+00	9.72649E-01	0.0	4.70800E-01	1.17209E-01	6.02783E-01	0.0
6	8.09934E+00	0.0	0.0	1.45413E-01	7.07328E+00	6.80648E-01	0.0	3.95295E-01	1.48194E-01	6.93147E-01	0.0
7	9.13835E+00	0.0	0.0	1.70755E-01	8.24409E+00	7.23507E-01	0.0	2.71175E-01	2.03245E-01	6.93146E-01	0.0
8	9.21802E+00	0.0	0.0	2.73671E-01	8.84641E+00	9.79369E-02	0.0	1.53435E-01	2.32742E-01	6.93147E-01	0.0
9	9.03867E+00	0.0	0.0	4.60399E-01	8.57827E+00	0.0	0.0	8.08585E-02	2.06445E-01	7.65717E-01	0.0
10	8.56200E+00	0.0	0.0	7.43560E-01	7.81944E+00	0.0	0.0	4.07414E-02	1.91916E-01	7.71398E-01	0.0
11	8.26825E+00	0.0	0.0	1.09315E+00	7.19509E+00	0.0	0.0	2.18773E-02	1.82967E-01	7.65468E-01	0.0
12	8.33981E+00	0.0	0.0	1.46137E+00	6.87844E+00	0.0	0.0	1.24136E-02	1.80909E-01	7.65718E-01	0.0
13	8.81697E+00	0.0	0.0	1.92303E+00	6.89393E+00	0.0	0.0	6.79854E-03	1.83171E-01	7.71398E-01	0.0
14	9.96552E+00	0.0	0.0	2.64604E+00	7.31948E+00	0.0	0.0	6.79854E-03	1.92197E-01	7.65467E-01	0.0
15	1.16971E+01	0.0	0.0	4.25619E+00	7.44089E+00	0.0	0.0	6.79854E-03	2.01221E-01	7.65718E-01	0.0
16	1.34329E+01	0.0	0.0	6.03440E+00	7.39852E+00	0.0	0.0	6.79854E-03	1.20299E-01	7.71376E-01	0.0
17	2.34388E+01	0.0	0.0	1.34123E+01	1.00266E+01	0.0	0.0	6.79853E-03	1.06552E-01	7.65115E-01	0.0
18	6.84633E+00	0.0	0.0	2.47115E+00	4.37519E+00	0.0	0.0	6.79853E-03	1.16406E-01	7.65718E-01	0.0
19	7.69997E+00	0.0	0.0	3.00300E+00	4.69697E+00	0.0	0.0	6.79853E-03	1.57763E-01	7.71399E-01	0.0
20	3.98796E+01	0.0	0.0	3.50457E+01	4.83386E+00	0.0	0.0	6.79853E-03	1.17195E-01	7.65453E-01	0.0
21	1.82480E+02	0.0	0.0	1.76560E+02	5.91989E+00	0.0	0.0	6.79853E-03	7.55596E-02	7.65718E-01	0.0
22	1.42393E+01	0.0	0.0	1.06771E+01	3.56219E+00	0.0	0.0	6.79853E-03	9.96513E-02	7.71399E-01	0.0
23	8.03998E+00	0.0	0.0	4.18239E+00	3.85759E+00	0.0	0.0	6.79854E-03	1.03121E-01	7.65468E-01	0.0
24	8.27785E+00	0.0	0.0	4.36286E+00	3.91499E+00	0.0	0.0	6.79853E-03	1.03915E-01	7.65718E-01	0.0
25	9.54142E+00	0.0	0.0	5.60580E+00	3.93563E+00	0.0	0.0	1.54451E-02	0.0	7.71398E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I J= EXIT 1 11 GROUP 2 12 ** KA ** KK = I + J - 1 3 4 5 6 7 8 9 10

1
2.64466E-03 5.33025E-02 2.18566E-01 5.11220E-01 4.77492E-01 3.37249E-01 1.27020E-01 3.90683E-02 1.13477E-02 2.60056E-03
5.68559E-04 1.20471E-04

2
2.54356E-02 1.40679E-01 4.34786E-01 5.26809E-01 4.38251E-01 1.82717E-01 5.92148E-02 1.76693E-02 4.10656E-03 9.03731E-04
1.98466E-04 3.13677E-05

3
1.01872E-01 3.26970E-01 4.95717E-01 5.03100E-01 2.37799E-01 8.22403E-02 2.53792E-02 6.00287E-03 1.33194E-03 2.93617E-04
6.42419E-05 3.96217E-06

4
3.06742E-01 3.71783E-01 3.30583E-01 2.85216E-01 1.06735E-01 3.45365E-02 8.37618E-03 1.88048E-03 4.16791E-04 9.14228E-05
1.80235E-05 0.0

5
3.81151E-01 3.78381E-01 1.34550E-01 4.68097E-02 1.06957E-02 9.41406E-04 1.41642E-02 4.68069E-03 1.02940E-03 2.21180E-04
2.53050E-05 0.0

6
4.12997E-01 4.33703E-01 9.83763E-03 1.33190E-02 7.89660E-03 2.25909E-03 4.95815E-04 1.10585E-04 2.41220E-05 5.54351E-06
0.0 0.0

7
1.58290E-01 3.66536E-01 1.66099E-01 1.13421E-02 1.23968E-03 0.0 0.0 0.0 0.0 0.0
0.0 0.0

8
0.0 2.90810E-02 4.75171E-02 1.52525E-02 4.65913E-03 1.11738E-03 2.41704E-04 5.33732E-05 1.20073E-05 2.82222E-06
1.79674E-07 0.0

NUCLID = RU101J2F MAT NO = 1441
INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.24398E+00	0.0	0.0	5.30227E-03	2.44506E+00	1.79361E+00	0.0	7.52190E-01	6.76107E-02	4.97643E-02	0.0
2	3.91435E+00	0.0	0.0	2.38153E-02	2.04071E+00	1.84982E+00	0.0	6.11534E-01	5.59654E-02	2.62860E-01	0.0
3	4.11591E+00	0.0	0.0	5.15460E-02	2.25181E+00	1.81255E+00	0.0	5.67712E-01	5.50508E-02	5.34122E-01	0.0
4	5.15642E+00	0.0	0.0	6.70537E-02	3.31234E+00	1.77704E+00	0.0	5.67288E-01	5.71947E-02	7.79134E-01	0.0
5	6.64080E+00	0.0	0.0	8.27034E-02	4.79995E+00	1.75815E+00	0.0	5.46970E-01	6.67147E-02	6.02782E-01	0.0
6	8.09338E+00	0.0	0.0	1.38806E-01	6.36102E+00	1.59356E+00	0.0	4.52669E-01	1.28551E-01	6.93146E-01	0.0
7	9.05247E+00	0.0	0.0	2.74086E-01	8.08370E+00	6.94675E-01	0.0	2.90165E-01	1.69875E-01	6.93146E-01	0.0
8	9.18110E+00	0.0	0.0	4.42767E-01	8.60095E+00	1.37364E-01	0.0	1.70024E-01	2.17520E-01	6.93147E-01	0.0
9	8.98023E+00	0.0	0.0	7.12744E-01	8.26749E+00	0.0	0.0	9.33543E-02	1.91618E-01	7.65717E-01	0.0
10	8.50095E+00	0.0	0.0	1.07236E+00	7.42859E+00	0.0	0.0	4.85566E-02	1.76387E-01	7.71398E-01	0.0
11	8.20988E+00	0.0	0.0	1.45235E+00	6.75753E+00	0.0	0.0	2.61395E-02	1.67416E-01	7.65468E-01	0.0
12	8.23109E+00	0.0	0.0	1.80044E+00	6.43065E+00	0.0	0.0	1.54202E-02	1.64534E-01	7.65716E-01	0.0
13	8.64400E+00	0.0	0.0	2.23556E+00	6.40844E+00	0.0	0.0	7.55690E-03	1.66103E-01	7.71398E-01	0.0
14	9.52473E+00	0.0	0.0	2.99005E+00	6.53468E+00	0.0	0.0	6.66380E-03	1.71591E-01	7.65467E-01	0.0
15	1.19353E+01	0.0	0.0	3.57656E+00	8.35873E+00	0.0	0.0	6.66380E-03	2.46119E-01	7.65717E-01	0.0
16	2.28025E+01	0.0	0.0	9.60603E+00	1.31964E+01	0.0	0.0	6.66379E-03	1.37102E-01	7.71399E-01	0.0
17	1.54526E+01	0.0	0.0	8.77999E+00	6.67259E+00	0.0	0.0	6.66379E-03	3.05214E-01	7.65370E-01	0.0
18	3.30796E+01	0.0	0.0	2.29241E+01	1.01555E+01	0.0	0.0	6.66380E-03	1.42831E-01	7.65718E-01	0.0
19	2.76987E+01	0.0	0.0	2.15223E+01	6.17639E+00	0.0	0.0	6.66379E-03	1.32784E-01	7.71399E-01	0.0
20	6.47902E+01	0.0	0.0	5.83996E+01	6.39058E+00	0.0	0.0	6.66380E-03	1.15550E-01	7.65423E-01	0.0
21	5.16052E+00	0.0	0.0	5.53231E-01	4.60729E+00	0.0	0.0	6.66379E-03	1.21408E-01	7.65718E-01	0.0
22	5.14320E+00	0.0	0.0	4.33787E-01	4.70941E+00	0.0	0.0	6.66380E-03	1.21718E-01	7.71399E-01	0.0
23	5.25929E+00	0.0	0.0	5.21773E-01	4.73752E+00	0.0	0.0	6.66379E-03	1.23089E-01	7.65468E-01	0.0
24	5.45509E+00	0.0	0.0	7.06651E-01	4.74844E+00	0.0	0.0	6.66379E-03	1.23230E-01	7.65718E-01	0.0
25	5.75597E+00	0.0	0.0	1.00200E+00	4.75396E+00	0.0	0.0	1.51340E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

PAGE 1 OF 1

GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	3.25719E-03	5.11364E-02	2.08940E-01	5.07386E-01	4.65748E-01	3.43375E-01	1.32460E-01	4.09395E-02	1.19209E-02	2.73548E-03	5.98419E-04	1.26816E-04
2	3.48313E-02	1.63685E-01	4.17772E-01	5.21162E-01	4.41635E-01	1.86251E-01	6.07178E-02	1.81731E-02	4.23039E-03	9.31676E-04	2.04673E-04	3.22821E-05
3	1.49725E-01	4.59362E-01	4.32715E-01	4.49950E-01	2.15472E-01	7.50263E-02	2.32347E-02	5.50575E-03	1.22270E-03	2.69641E-04	5.90070E-05	3.50938E-06
4	3.74074E-01	6.91646E-01	4.24785E-01	1.65764E-01	7.05091E-02	2.26913E-02	5.56006E-03	1.24915E-03	2.76957E-04	6.07596E-05	1.18174E-05	0.0
5	3.34239E-01	8.35466E-01	3.60361E-01	1.25943E-01	4.01863E-02	8.97478E-03	2.30605E-03	5.29128E-04	1.15911E-04	2.70174E-05	4.10406E-06	0.0
6	3.15468E-01	7.46676E-01	4.02829E-01	1.00929E-01	2.02359E-02	4.36903E-03	1.94022E-03	7.04663E-04	1.54464E-04	3.57244E-05	4.35102E-06	0.0
7	1.57591E-01	3.08229E-01	1.65560E-01	3.27341E-02	7.41591E-03	1.62362E-03	3.61206E-04	7.79365E-05	1.80153E-05	3.85927E-05	2.03253E-05	0.0
8	0.0	7.26630E-02	4.75928E-02	1.32464E-02	3.01136E-03	6.65447E-04	1.43591E-04	3.16437E-05	7.49357E-06	1.46573E-06	2.74976E-07	0.0

NUCLID = RU102J2F MAT NO = 1442
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.24522E+00	0.0	0.0	4.38538E-03	2.44033E+00	1.80050E+00	0.0	7.50999E-01	6.71482E-02	4.97643E-02	0.0
2	3.91474E+00	0.0	0.0	2.26472E-02	2.04846E+00	1.84362E+00	0.0	6.07201E-01	5.72920E-02	2.62560E-01	0.0
3	4.13009E+00	0.0	0.0	5.58724E-02	2.35772E+00	1.71650E+00	0.0	5.49260E-01	6.21834E-02	5.34122E-01	0.0
4	5.16450E+00	0.0	0.0	7.11483E-02	3.63352E+00	1.45983E+00	0.0	5.26655E-01	7.05624E-02	7.79135E-01	0.0
5	6.64659E+00	0.0	0.0	7.39404E-02	5.50293E+00	1.06972E+00	0.0	4.95073E-01	1.13967E-01	6.02782E-01	0.0
6	8.07724E+00	0.0	0.0	8.94198E-02	7.56504E+00	4.42783E-01	0.0	3.86320E-01	1.64348E-01	6.93147E-01	0.0
7	9.01795E+00	0.0	0.0	1.09775E-01	8.90817E+00	0.0	0.0	2.67274E-01	2.04126E-01	6.92146E-01	0.0
8	9.19566E+00	0.0	0.0	1.23998E-01	9.07166E+00	0.0	0.0	1.65266E-01	2.24936E-01	6.93147E-01	0.0
9	8.92874E+00	0.0	0.0	1.81827E-01	8.74691E+00	0.0	0.0	9.19544E-02	2.04494E-01	7.65717E-01	0.0
10	8.45441E+00	0.0	0.0	3.06711E-01	8.14770E+00	0.0	0.0	4.69214E-02	1.95439E-01	7.71398E-01	0.0
11	8.16024E+00	0.0	0.0	4.94560E-01	7.66568E+00	0.0	0.0	2.48952E-02	1.90578E-01	7.65468E-01	0.0
12	8.17776E+00	0.0	0.0	7.19239E-01	7.45853E+00	0.0	0.0	1.47002E-02	1.91018E-01	7.65717E-01	0.0
13	8.58708E+00	0.0	0.0	9.56926E-01	7.63015E+00	0.0	0.0	7.40223E-03	1.99669E-01	7.71398E-01	0.0
14	9.22044E+00	0.0	0.0	1.01466E+00	8.20579E+00	0.0	0.0	6.59902E-03	1.34898E-01	7.65421E-01	0.0
15	5.37852E+00	0.0	0.0	8.34886E-03	5.37018E+00	0.0	0.0	6.59902E-03	1.29708E-01	7.65718E-01	0.0
16	5.78892E+00	0.0	0.0	3.71918E-01	5.41700E+00	0.0	0.0	6.59902E-03	1.27832E-01	7.71399E-01	0.0
17	5.54065E+00	0.0	0.0	1.35795E-01	5.40465E+00	0.0	0.0	6.59902E-03	1.29013E-01	7.65468E-01	0.0
18	5.43884E+00	0.0	0.0	2.55330E-02	5.41331E+00	0.0	0.0	6.59902E-03	1.29090E-01	7.65718E-01	0.0
19	5.45375E+00	0.0	0.0	3.74830E-02	5.41626E+00	0.0	0.0	6.59902E-03	1.29113E-01	7.71396E-01	0.0
20	5.47251E+00	0.0	0.0	5.49990E-02	5.41751E+00	0.0	0.0	6.59902E-03	1.29201E-01	7.65468E-01	0.0
21	5.49874E+00	0.0	0.0	8.07084E-02	5.41803E+00	0.0	0.0	6.59902E-03	1.29167E-01	7.65718E-01	0.0
22	5.53695E+00	0.0	0.0	1.18560E-01	5.41839E+00	0.0	0.0	6.59902E-03	1.29150E-01	7.71400E-01	0.0
23	5.59280E+00	0.0	0.0	1.74041E-01	5.41876E+00	0.0	0.0	6.59902E-03	1.29226E-01	7.65467E-01	0.0
24	5.67468E+00	0.0	0.0	2.55307E-01	5.41937E+00	0.0	0.0	6.59902E-03	1.29207E-01	7.65718E-01	0.0
25	5.79587E+00	0.0	0.0	3.75238E-01	5.42063E+00	0.0	0.0	1.49662E-02	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12								
1		1.46102E-03	4.99993E-02	2.00405E-01	5.02986E-01	4.92124E-01	3.57752E-01	1.37168E-01	4.25768E-02	1.24250E-02	2.85443E-03
		6.24777E-04	1.32422E-04								
2		2.14611E-02	1.74720E-01	4.14155E-01	5.14962E-01	4.43452E-01	1.88892E-01	6.18969E-02	1.85754E-02	4.33005E-03	9.54243E-04
		2.09694E-04	3.29867E-05								
3		1.07525E-01	5.19283E-01	4.11887E-01	3.38975E-01	2.23006E-01	8.26492E-02	2.54348E-02	6.04097E-03	1.34311E-03	2.96356E-04
		6.48696E-05	4.33138E-06								
4		1.86703E-01	5.57984E-01	4.16442E-01	1.98852E-01	6.69063E-02	2.25025E-02	7.95895E-03	1.85895E-03	4.17766E-04	9.48826E-05
		2.16972E-05	0.0								
5		1.12267E-01	5.81592E-01	2.52742E-01	8.27496E-02	3.07430E-02	7.53748E-03	1.62849E-03	3.60865E-04	7.81990E-05	1.99311E-05
		2.67257E-06	0.0								
6		0.0	2.05570E-01	1.60239E-01	5.81034E-02	1.40861E-02	3.68586E-03	4.59937E-04	1.89466E-04	4.14443E-05	9.54747E-06
		1.78641E-06	0.0								

NUCLID = RU104J2F MAT NO = 1442
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.24877E+00	0.0	0.0	2.37226E-03	2.42569E+00	1.82070E+00	0.0	7.48121E-01	6.60219E-02	4.97643E-02	0.0
2	3.93617E+00	0.0	0.0	1.41817E-02	2.04789E+00	1.87410E+00	0.0	6.07236E-01	5.61838E-02	2.52860E-01	0.0
3	4.18180E+00	0.0	0.0	3.31957E-02	2.40969E+00	1.73871E+00	0.0	5.57729E-01	6.13260E-02	5.36122E-01	0.0
4	5.28667E+00	0.0	0.0	3.61510E-02	3.71344E+00	1.53708E+00	0.0	5.26731E-01	6.82631E-02	7.79124E-01	0.0
5	6.73608E+00	0.0	0.0	3.44990E-02	5.50820E+00	1.19338E+00	0.0	4.96206E-01	1.09502E-01	6.02782E-01	0.0
6	8.03016E+00	0.0	0.0	3.95121E-02	7.20478E+00	7.85868E-01	0.0	4.11897E-01	1.48747E-01	6.92147E-01	0.0
7	8.80491E+00	0.0	0.0	6.43584E-02	8.71793E+00	2.26176E-02	0.0	2.81696E-01	1.92377E-01	6.92146E-01	0.0
8	8.99921E+00	0.0	0.0	7.32362E-02	8.92597E+00	0.0	0.0	1.77319E-01	2.14438E-01	6.92147E-01	0.0
9	8.75051E+00	0.0	0.0	1.01074E-01	8.64942E+00	0.0	0.0	1.01051E-01	1.97593E-01	7.65717E-01	0.0
10	8.30491E+00	0.0	0.0	1.73169E-01	8.13175E+00	0.0	0.0	5.22284E-02	1.91483E-01	7.71398E-01	0.0
11	8.02596E+00	0.0	0.0	2.95347E-01	7.73061E+00	0.0	0.0	2.75835E-02	1.69003E-01	7.65468E-01	0.0
12	8.05062E+00	0.0	0.0	4.63565E-01	7.59705E+00	0.0	0.0	1.59240E-02	1.90965E-01	7.65716E-01	0.0
13	8.46533E+00	0.0	0.0	6.60305E-01	7.80503E+00	0.0	0.0	7.41113E-03	2.00851E-01	7.71398E-01	0.0
14	1.19293E+01	0.0	0.0	1.19109E+00	1.07382E+01	0.0	0.0	6.47142E-03	9.14478E-02	7.65420E-01	0.0
15	1.48876E+01	0.0	0.0	1.83703E+00	1.20506E+01	0.0	0.0	6.47141E-03	1.22208E-01	7.65718E-01	0.0
16	1.11410E+01	0.0	0.0	4.79502E+00	6.34594E+00	0.0	0.0	6.47142E-03	9.97162E-02	7.71399E-01	0.0
17	5.08419E+00	0.0	0.0	1.73283E-02	5.06686E+00	0.0	0.0	6.47142E-03	1.21145E-01	7.65468E-01	0.0
18	5.24591E+00	0.0	0.0	9.18625E-03	5.23572E+00	0.0	0.0	6.47142E-03	1.32450E-01	7.65719E-01	0.0
19	5.28123E+00	0.0	0.0	1.23645E-02	5.26886E+00	0.0	0.0	6.47142E-03	1.31944E-01	7.71399E-01	0.0
20	5.29901E+00	0.0	0.0	1.76330E-02	5.28137E+00	0.0	0.0	6.47142E-03	1.33164E-01	7.65468E-01	0.0
21	5.31196E+00	0.0	0.0	2.55524E-02	5.28641E+00	0.0	0.0	6.47142E-03	1.33213E-01	7.65719E-01	0.0
22	5.32621E+00	0.0	0.0	3.73268E-02	5.28889E+00	0.0	0.0	6.47142E-03	1.32771E-01	7.71400E-01	0.0
23	5.34494E+00	0.0	0.0	5.47259E-02	5.29021E+00	0.0	0.0	6.47142E-03	1.33329E-01	7.65468E-01	0.0
24	5.37145E+00	0.0	0.0	8.01947E-02	5.29125E+00	0.0	0.0	6.47142E-03	1.33307E-01	7.65718E-01	0.0
25	5.41038E+00	0.0	0.0	1.17741E-01	5.29264E+00	0.0	0.0	1.46997E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP ** KK ** 2	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12								
1		2.08769E-03	3.95235E-02	1.83077E-01	4.94656E-01	5.07943E-01	3.90543E-01	1.49691E-01	4.65839E-02	1.36614E-02	3.14652E-03
		6.89534E-04	1.46226E-04								
2		2.73744E-02	1.52766E-01	3.90007E-01	5.29267E-01	4.72147E-01	2.06285E-01	6.84116E-02	2.06591E-02	4.83111E-03	1.06628E-03
		2.34477E-04	3.69387E-05								
3		1.43205E-01	4.69428E-01	3.83536E-01	4.24921E-01	2.11658E-01	7.52256E-02	2.35457E-02	5.61057E-03	1.24922E-03	2.75923E-04
		6.03937E-05	3.43788E-06								
4		3.04218E-01	6.00135E-01	4.15527E-01	1.39448E-01	5.42885E-02	1.76541E-02	4.36601E-03	9.84022E-04	2.18469E-04	4.79657E-05
		9.25866E-06	0.0								
5		2.25065E-01	6.02244E-01	1.98662E-01	1.04215E-01	4.94521E-02	1.13039E-02	2.61464E-03	6.37855E-04	1.53309E-04	3.60890E-05
		4.12748E-06	0.0								
6		6.19304E-02	4.18177E-01	2.13714E-01	8.30532E-02	8.99234E-03	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
7		0.0	0.0	0.0	1.52053E-02	5.74350E-03	1.27091E-03	2.80345E-04	6.07630E-05	1.24940E-05	2.83391E-06
		0.0	0.0								

NUCLID = RH103J2F MAT NO = 1451
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL NU	EL REMOVAL	FLUX	CHI
1	4.24779E+00	0.0	0.0	2.87850E-03	2.43196E+00	1.81296E+00	0.0	7.50121E-01	6.62565E-02	4.97643E-02	0.0
2	3.93478E+00	0.0	0.0	1.39419E-02	2.03586E+00	1.88497E+00	0.0	6.13308E-01	5.43652E-02	2.62860E-01	0.0
3	4.16412E+00	0.0	0.0	3.21913E-02	2.28489E+00	1.84704E+00	0.0	5.79231E-01	5.34897E-02	5.34122E-01	0.0
4	5.25147E+00	0.0	0.0	6.68271E-02	3.44629E+00	1.73835E+00	0.0	5.67839E-01	6.06527E-02	7.79134E-01	0.0
5	6.69565E+00	0.0	0.0	8.95212E-02	5.12134E+00	1.48479E+00	0.0	5.27359E-01	9.71823E-02	6.02782E-01	0.0
6	8.06321E+00	0.0	0.0	1.28398E-01	6.73549E+00	1.19932E+00	0.0	4.36596E-01	1.35755E-01	6.93147E-01	0.0
7	8.92115E+00	0.0	0.0	2.74638E-01	8.46219E+00	1.84314E-01	0.0	2.86420E-01	1.90894E-01	6.93146E-01	0.0
8	9.09426E+00	0.0	0.0	4.20537E-01	8.65644E+00	1.72787E-02	0.0	1.78026E-01	2.08341E-01	6.93147E-01	0.0
9	8.84379E+00	0.0	0.0	6.43426E-01	8.19799E+00	2.37054E-03	0.0	1.02341E-01	1.85533E-01	7.65717E-01	0.0
10	8.38453E+00	0.0	0.0	9.65591E-01	7.41892E+00	2.35107E-05	0.0	5.39922E-02	1.72689E-01	7.71398E-01	0.0
11	8.09565E+00	0.0	0.0	1.29677E+00	6.80087E+00	0.0	0.0	2.90200E-02	1.65461E-01	7.65468E-01	0.0
12	8.21451E+00	0.0	0.0	1.61988E+00	6.59462E+00	0.0	0.0	1.67447E-02	1.94611E-01	7.65717E-01	0.0
13	1.13924E+01	0.0	0.0	2.61511E+00	8.77725E+00	0.0	0.0	7.95494E-03	1.64428E-01	7.70215E-01	0.0
14	1.12164E+01	0.0	0.0	2.90892E+00	8.30745E+00	0.0	0.0	6.53427E-03	1.31521E-01	7.61209E-01	0.0
15	1.23367E+01	0.0	0.0	4.08237E+00	8.25430E+00	0.0	0.0	6.53428E-03	1.44501E-01	7.65710E-01	0.0
16	1.98037E+01	0.0	0.0	1.02030E+01	9.60074E+00	0.0	0.0	6.53427E-03	1.18745E-01	7.71394E-01	0.0
17	1.68870E+01	0.0	0.0	9.64943E+00	9.23762E+00	0.0	0.0	6.53427E-03	1.14712E-01	7.65403E-01	0.0
18	6.61293E+00	0.0	0.0	1.99450E+00	4.61843E+00	0.0	0.0	6.53427E-03	1.29544E-01	7.65718E-01	0.0
19	4.95715E+00	0.0	0.0	2.77445E-01	4.67971E+00	0.0	0.0	6.53427E-03	1.19371E-01	7.71399E-01	0.0
20	4.84868E+00	0.0	0.0	8.00176E-02	4.76866E+00	0.0	0.0	6.53427E-03	1.22526E-01	7.65468E-01	0.0
21	5.49622E+00	0.0	0.0	5.77730E-01	4.91849E+00	0.0	0.0	6.53427E-03	1.28551E-01	7.65719E-01	0.0
22	1.39519E+01	0.0	0.0	8.54376E+00	5.40811E+00	0.0	0.0	6.53427E-03	1.53630E-01	7.71400E-01	0.0
23	1.15831E+03	0.0	0.0	1.14905E+03	9.25952E+00	0.0	0.0	6.53427E-03	4.63028E-02	7.65467E-01	0.0
24	1.74526E+02	0.0	0.0	1.71686E+02	2.83961E+00	0.0	0.0	6.53427E-03	6.57077E-02	7.65720E-01	0.0
25	7.70292E+01	0.0	0.0	7.34800E+01	3.54917E+00	0.0	0.0	1.50988E-02	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

GROUP I — EXIT GROUP ** KK ** KK = I + J - 1

I	J=	1	2	3	4	5	6	7	8	9	10	11	12
1		1.90030E-03	4.39478E-02	2.01581E-01	5.07515E-01	4.97536E-01	3.62130E-01	1.38952E-01	4.31471E-02	1.25940E-02	2.89354E-03	6.33368E-04	1.34264E-04
2		1.98251E-02	1.28384E-01	4.25271E-01	5.46501E-01	4.71898E-01	2.01344E-01	6.60336E-02	1.98256E-02	4.62252E-03	1.01880E-03	2.23892E-04	3.54057E-05
3		9.07764E-02	3.18336E-01	5.10835E-01	5.36997E-01	2.61209E-01	9.16948E-02	2.85167E-02	6.77228E-03	1.50551E-03	3.32169E-04	7.27065E-05	4.50763E-06
4		3.03809E-01	5.24918E-01	4.66079E-01	2.56025E-01	1.19183E-01	3.67937E-02	8.96658E-03	2.01762E-03	4.47660E-04	9.82420E-05	1.93022E-05	0.0
5		3.58559E-01	7.32301E-01	2.34382E-01	1.04732E-01	3.96777E-02	1.16381E-02	2.56858E-03	5.66548E-04	1.24496E-04	3.09501E-05	2.41912E-06	0.0
6		2.39946E-01	5.61927E-01	3.33958E-01	5.46399E-02	7.96695E-03	6.98142E-04	1.52949E-04	3.38590E-05	6.43687E-06	8.94470E-07	0.0	0.0
7		3.49351E-02	1.24358E-02	8.39790E-02	3.40036E-02	1.05286E-02	6.25055E-03	1.71056E-03	3.72108E-04	8.27612E-05	1.94552E-05	1.92612E-06	0.0
8		9.99000E-03	6.73790E-03	4.29629E-04	1.00594E-04	1.25375E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9		9.04785E-04	1.16860E-03	2.44522E-04	4.05163E-05	9.49273E-06	2.05336E-06	4.51511E-07	9.96690E-08	2.24735E-08	3.04807E-09	0.0	0.0
10		0.0	0.0	9.25983E-06	1.11341E-05	2.43176E-06	5.34191E-07	1.17969E-07	2.55882E-08	5.34629E-09	1.68916E-09	0.0	0.0

NUCLID = PD105J2F MAT NO = 1461

INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.25045E+00	0.0	0.0	4.50077E-03	2.41936E+00	1.82658E+00	0.0	7.47532E-01	6.51722E-02	4.97643E-02	0.0
2	3.94613E+00	0.0	0.0	2.39900E-02	2.03335E+00	1.88879E+00	0.0	6.12667E-01	5.33581E-02	2.62860E-01	0.0
3	4.20250E+00	0.0	0.0	5.50172E-02	2.34477E+00	1.80270E+00	0.0	5.81408E-01	5.42002E-02	5.34122E-01	0.0
4	5.32181E+00	0.0	0.0	8.28266E-02	3.51552E+00	1.72346E+00	0.0	5.74865E-01	5.77965E-02	7.79134E-01	0.0
5	6.74166E+00	0.0	0.0	9.87756E-02	4.97764E+00	1.66524E+00	0.0	5.52276E-01	8.37612E-02	6.02782E-01	0.0
6	7.96976E+00	0.0	0.0	1.59723E-01	6.39629E+00	1.41374E+00	0.0	4.65172E-01	1.21286E-01	6.93147E-01	0.0
7	8.71989E+00	0.0	0.0	3.47041E-01	8.17825E+00	1.94601E-01	0.0	3.02693E-01	1.78271E-01	6.93147E-01	0.0
8	8.88773E+00	0.0	0.0	5.19981E-01	8.36775E+00	0.0	0.0	1.91471E-01	1.94100E-01	6.93147E-01	0.0
9	8.66016E+00	0.0	0.0	7.81579E-01	7.87858E+00	0.0	0.0	1.13317E-01	1.72597E-01	7.65717E-01	0.0
10	8.23053E+00	0.0	0.0	1.15169E+00	7.07884E+00	0.0	0.0	6.11807E-02	1.60044E-01	7.71398E-01	0.0
11	7.96812E+00	0.0	0.0	1.52830E+00	6.43982E+00	0.0	0.0	3.31330E-02	1.52742E-01	7.65468E-01	0.0
12	8.00302E+00	0.0	0.0	1.86858E+00	6.13444E+00	0.0	0.0	1.88616E-02	1.50670E-01	7.65717E-01	0.0
13	8.42206E+00	0.0	0.0	2.30898E+00	6.11308E+00	0.0	0.0	1.03615E-02	1.52353E-01	7.71398E-01	0.0
14	9.30522E+00	0.0	0.0	3.08344E+00	6.22179E+00	0.0	0.0	6.40970E-03	1.56981E-01	7.65467E-01	0.0
15	1.07940E+01	0.0	0.0	4.42651E+00	6.36752E+00	0.0	0.0	6.40970E-03	1.60651E-01	7.65717E-01	0.0
16	1.31427E+01	0.0	0.0	6.63326E+00	6.50945E+00	0.0	0.0	6.40969E-03	1.62764E-01	7.71399E-01	0.0
17	1.12724E+01	0.0	0.0	5.81217E+00	5.46026E+00	0.0	0.0	6.40970E-03	1.38393E-01	7.65373E-01	0.0
18	2.95393E+01	0.0	0.0	2.28067E+01	6.73257E+00	0.0	0.0	6.40969E-03	1.16908E-01	7.65718E-01	0.0
19	2.37489E+01	0.0	0.0	1.84366E+01	5.31231E+00	0.0	0.0	6.40969E-03	1.14074E-01	7.71399E-01	0.0
20	5.09349E+01	0.0	0.0	4.54205E+01	5.51440E+00	0.0	0.0	6.40969E-03	1.07935E-01	7.65446E-01	0.0
21	5.92656E+00	0.0	0.0	1.34823E+00	4.57834E+00	0.0	0.0	6.40969E-03	1.16607E-01	7.65719E-01	0.0
22	6.09495E+00	0.0	0.0	1.39200E+00	4.70295E+00	0.0	0.0	6.40969E-03	1.16961E-01	7.71399E-01	0.0
23	6.65703E+00	0.0	0.0	1.92527E+00	4.73175E+00	0.0	0.0	6.40969E-03	1.18278E-01	7.65446E-01	0.0
24	7.50816E+00	0.0	0.0	2.76553E+00	4.74263E+00	0.0	0.0	6.40969E-03	1.18413E-01	7.65692E-01	0.0
25	8.77990E+00	0.0	0.0	4.03172E+00	4.74818E+00	0.0	0.0	1.45625E-02	0.0	7.71375E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

PAGE 1 OF 1

GROUP I ; EXIT GROUP ** KK ** ; KK = I + J - 1

GROUP I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	2.35567E-03	4.23376E-02	1.93721E-01	5.04172E-01	5.05146E-01	3.72692E-01	1.44211E-01	4.49732E-02	1.31561E-02	3.02618E-03	6.62759E-04	1.40504E-04
2	2.70340E-02	1.42392E-01	4.09073E-01	5.39340E-01	4.73378E-01	2.04032E-01	6.72663E-02	2.02504E-02	4.72822E-03	1.04279E-03	2.29233E-04	3.61758E-05
3	1.28757E-01	4.14076E-01	4.37122E-01	4.73890E-01	2.32075E-01	8.22914E-02	2.56690E-02	6.10555E-03	1.35829E-03	2.99788E-04	6.56291E-05	3.89561E-06
4	3.47294E-01	6.79420E-01	3.80853E-01	2.05252E-01	7.73404E-02	2.53454E-02	6.18642E-03	1.39307E-03	3.09195E-04	6.78658E-05	1.32152E-05	0.0
5	2.82441E-01	9.26006E-01	3.21185E-01	8.95483E-02	3.56781E-02	8.05050E-03	1.78458E-03	3.74951E-04	8.62356E-05	6.60540E-05	2.84421E-05	0.0
6	1.57489E-01	6.56020E-01	4.58903E-01	1.07195E-01	2.56055E-02	5.88777E-03	1.80157E-03	5.12497E-04	1.12430E-04	2.64075E-05	2.37369E-06	0.0
7	0.0	1.56364E-02	1.19749E-01	4.51932E-02	1.07585E-02	2.38453E-03	5.20813E-04	1.21145E-04	1.60331E-04	6.90424E-05	7.89635E-06	0.0

NUCLID = PD107J2F MAT NO = 1462
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.25813E+00	0.0	0.0	2.80342E-03	2.40733E+00	1.84799E+00	0.0	7.45493E-01	6.38828E-02	4.97643E-02	0.0
2	3.97255E+00	0.0	0.0	1.84362E-02	2.03612E+00	1.91800E+00	0.0	6.15393E-01	5.20449E-02	2.62860E-01	0.0
3	4.25623E+00	0.0	0.0	5.03741E-02	2.38672E+00	1.81714E+00	0.0	5.90942E-01	5.29366E-02	5.34122E-01	0.0
4	5.39468E+00	0.0	0.0	7.98249E-02	3.57730E+00	1.73756E+00	0.0	5.82920E-01	5.65910E-02	7.79134E-01	0.0
5	6.76647E+00	0.0	0.0	8.75462E-02	4.97050E+00	1.70843E+00	0.0	5.60267E-01	7.89013E-02	6.02783E-01	0.0
6	7.87532E+00	0.0	0.0	1.26926E-01	6.17975E+00	1.56864E+00	0.0	4.83489E-01	1.13051E-01	6.93147E-01	0.0
7	8.49890E+00	0.0	0.0	3.28600E-01	7.81296E+00	3.57336E-01	0.0	3.19382E-01	1.62767E-01	6.93146E-01	0.0
8	8.62177E+00	0.0	0.0	5.11856E-01	8.04130E+00	6.86177E-02	0.0	2.04165E-01	1.82401E-01	6.93147E-01	0.0
9	8.42742E+00	0.0	0.0	7.77061E-01	7.65036E+00	0.0	0.0	1.21725E-01	1.63557E-01	7.65717E-01	0.0
10	8.04273E+00	0.0	0.0	1.13932E+00	6.90341E+00	0.0	0.0	6.64608E-02	1.52925E-01	7.71398E-01	0.0
11	7.82391E+00	0.0	0.0	1.51065E+00	6.31326E+00	0.0	0.0	3.60071E-02	1.46974E-01	7.65468E-01	0.0
12	7.89544E+00	0.0	0.0	1.85452E+00	6.04092E+00	0.0	0.0	2.02518E-02	1.45720E-01	7.65717E-01	0.0
13	8.35044E+00	0.0	0.0	2.31112E+00	6.03932E+00	0.0	0.0	1.13730E-02	1.47919E-01	7.71398E-01	0.0
14	9.27415E+00	0.0	0.0	3.11391E+00	6.16024E+00	0.0	0.0	6.28978E-03	1.52670E-01	7.65467E-01	0.0
15	1.08141E+01	0.0	0.0	4.49874E+00	6.31539E+00	0.0	0.0	6.28978E-03	1.56495E-01	7.65717E-01	0.0
16	1.32332E+01	0.0	0.0	6.76745E+00	6.46575E+00	0.0	0.0	6.28978E-03	1.58762E-01	7.71399E-01	0.0
17	1.68575E+01	0.0	0.0	1.02620E+01	6.59548E+00	0.0	0.0	6.28978E-03	1.62909E-01	7.65468E-01	0.0
18	2.22315E+01	0.0	0.0	1.55264E+01	6.70512E+00	0.0	0.0	6.28978E-03	1.65262E-01	7.65717E-01	0.0
19	3.01695E+01	0.0	0.0	2.33780E+01	6.79150E+00	0.0	0.0	6.28978E-03	1.65864E-01	7.71399E-01	0.0
20	4.18892E+01	0.0	0.0	3.50358E+01	6.85235E+00	0.0	0.0	6.28978E-03	1.68474E-01	7.65468E-01	0.0
21	5.16459E+01	0.0	0.0	4.51547E+01	6.49122E+00	0.0	0.0	6.28978E-03	2.04612E-01	7.65718E-01	0.0
22	2.47255E+01	0.0	0.0	4.10247E+00	2.06230E+01	0.0	0.0	6.28977E-03	7.15561E-01	7.71400E-01	0.0
23	3.63869E+01	0.0	0.0	1.32811E+00	3.50588E+01	0.0	0.0	6.28978E-03	9.58725E-01	7.65467E-01	0.0
24	4.36837E+01	0.0	0.0	1.94960E+00	4.17341E+01	0.0	0.0	6.28978E-03	1.06885E+00	7.65718E-01	0.0
25	4.77190E+01	0.0	0.0	2.86191E+00	4.48571E+01	0.0	0.0	1.44482E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP EXIT GROUP ** KK ** KK = I + J - 1

GROUP I	J=	EXIT 1	GROUP 2	KK = 3	4	5	6	7	8	9	10
		11	12								
1		1.95285E-03	3.60489E-02	1.81177E-01	4.98754E-01	5.18467E-01	3.91413E-01	1.53624E-01	4.82594E-02	1.41705E-02	3.26590E-03
		7.15913E-04	1.51829E-04								
2		2.51119E-02	1.24317E-01	3.99838E-01	5.51280E-01	4.97842E-01	2.12401E-01	7.26638E-02	2.19787E-02	5.14442E-03	1.13589E-03
		2.49831E-04	3.94496E-05								
3		1.33238E-01	3.69428E-01	4.42045E-01	4.96925E-01	2.49770E-01	8.91902E-02	2.79850E-02	6.67689E-03	1.48753E-03	3.28532E-04
		7.19441E-05	4.27507E-06								
4		3.98421E-01	6.49399E-01	3.51457E-01	2.17214E-01	8.44086E-02	2.78691E-02	6.82910E-03	1.54062E-03	3.42233E-04	7.51474E-05
		1.46349E-05	0.0								
5		3.92680E-01	9.92946E-01	2.14129E-01	7.68391E-02	2.32730E-02	6.59143E-03	1.38430E-03	3.88764E-04	8.61222E-05	1.86927E-05
		2.09406E-06	0.0								
6		1.84097E-01	7.38931E-01	4.65270E-01	1.43078E-01	2.74791E-02	7.47032E-03	1.66463E-03	3.66424E-04	7.68373E-05	1.82052E-05
		1.26867E-06	0.0								
7		6.22858E-02	1.24084E-01	1.05265E-01	4.25344E-02	1.39777E-02	4.14673E-03	3.66824E-03	1.07342E-03	2.41473E-04	5.54979E-05
		3.38111E-06	0.0								
8		0.0	4.26502E-02	1.93464E-02	5.12935E-03	1.15178E-03	2.57947E-04	6.39845E-05	1.40701E-05	3.13390E-06	7.02423E-07
		1.36117E-07	0.0								

NUCLID = AG109J2F MAT NO = 1471
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.26424E+00	0.0	0.0	3.83673E-03	2.39205E+00	1.86835E+00	0.0	7.42753E-01	6.26688E-02	4.97643E-02	0.0
2	4.00124E+00	0.0	0.0	2.44963E-02	2.04037E+00	1.93638E+00	0.0	6.18164E-01	5.08385E-02	2.62860E-01	0.0
3	4.31350E+00	0.0	0.0	6.64679E-02	2.43742E+00	1.80961E+00	0.0	5.99731E-01	5.22728E-02	5.34122E-01	0.0
4	5.46576E+00	0.0	0.0	1.12692E-01	3.68807E+00	1.66500E+00	0.0	5.83208E-01	5.86119E-02	7.79134E-01	0.0
5	6.78191E+00	0.0	0.0	1.42035E-01	5.21591E+00	1.42397E+00	0.0	5.39406E-01	8.87671E-02	6.02782E-01	0.0
6	7.74039E+00	0.0	0.0	2.31790E-01	6.58902E+00	9.19587E-01	0.0	4.53006E-01	1.17403E-01	6.93147E-01	0.0
7	8.25266E+00	0.0	0.0	4.12469E-01	7.71797E+00	1.22202E-01	0.0	3.23140E-01	1.53401E-01	6.93146E-01	0.0
8	8.32510E+00	0.0	0.0	5.91962E-01	7.72218E+00	1.09561E-02	0.0	2.14873E-01	1.67971E-01	6.93147E-01	0.0
9	8.14367E+00	0.0	0.0	5.56624E-01	7.28677E+00	7.90677E-05	0.0	1.31476E-01	1.52030E-01	7.65717E-01	0.0
10	7.82603E+00	0.0	0.0	1.19340E+00	6.63063E+00	0.0	0.0	7.22129E-02	1.44534E-01	7.71398E-01	0.0
11	7.66241E+00	0.0	0.0	1.50386E+00	6.15903E+00	0.0	0.0	3.87963E-02	1.41736E-01	7.65468E-01	0.0
12	7.79391E+00	0.0	0.0	1.79412E+00	5.99979E+00	0.0	0.0	2.14062E-02	1.43083E-01	7.65716E-01	0.0
13	8.31374E+00	0.0	0.0	2.22554E+00	6.08820E+00	0.0	0.0	1.25407E-02	1.47215E-01	7.71398E-01	0.0
14	8.81008E+00	0.0	0.0	2.76026E+00	6.02960E+00	0.0	0.0	6.17432E-03	1.32413E-01	7.65467E-01	0.0
15	1.76409E+01	0.0	0.0	6.04778E+00	1.15931E+01	0.0	0.0	6.17431E-03	3.64364E-01	7.65693E-01	0.0
16	1.66448E+01	0.0	0.0	6.64962E+00	9.79522E+00	0.0	0.0	6.17432E-03	1.26015E-01	7.71335E-01	0.0
17	3.18868E+01	0.0	0.0	1.81371E+01	1.37497E+01	0.0	0.0	6.17431E-03	1.04887E-01	7.65079E-01	0.0
18	4.56781E+01	0.0	0.0	3.38261E+01	1.18520E+01	0.0	0.0	6.17432E-03	9.93900E-02	7.65718E-01	0.0
19	4.69830E+01	0.0	0.0	4.26528E+01	4.30021E+00	0.0	0.0	6.17432E-03	1.01776E-01	7.71383E-01	0.0
20	7.14215E+00	0.0	0.0	1.76667E+00	5.37548E+00	0.0	0.0	6.17432E-03	1.69261E-01	7.65468E-01	0.0
21	1.82333E+03	0.0	0.0	1.65939E+03	1.63941E+02	0.0	0.0	6.17432E-03	1.14259E+00	7.65718E-01	0.0
22	1.00310E+02	0.0	0.0	9.68818E+01	3.42822E+00	0.0	0.0	6.17432E-03	2.88601E-02	7.71399E-01	0.0
23	2.49706E+01	0.0	0.0	2.35199E+01	1.45077E+00	0.0	0.0	6.17431E-03	3.90739E-02	7.65459E-01	0.0
24	2.48255E+01	0.0	0.0	2.30953E+01	1.73020E+00	0.0	0.0	6.17431E-03	4.33578E-02	7.65718E-01	0.0
25	3.08784E+01	0.0	0.0	2.90327E+01	1.84579E+00	0.0	0.0	1.41600E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP EXIT GROUP ** KK ** KK = I + J - 1

I	J=	1	2	3	4	5	6	7	8	9	10
		11	12								
1		1.37196E-03	3.52410E-02	1.81134E-01	5.02736E-01	5.25426E-01	3.98004E-01	1.56536E-01	4.92270E-02	1.44626E-02	3.33418E-03
		7.30978E-04	1.55018E-04								
2		1.73638E-02	1.19806E-01	4.03592E-01	5.60241E-01	5.09125E-01	2.23510E-01	7.44666E-02	2.25401E-02	5.27779E-03	1.16554E-03
		2.56374E-04	4.05000E-05								
3		9.27192E-02	3.65146E-01	4.52509E-01	5.11338E-01	2.57845E-01	9.22289E-02	2.89638E-02	6.91358E-03	1.54060E-03	3.40285E-04
		7.45212E-05	4.42898E-06								
4		2.67500E-01	5.71736E-01	4.8495dE-01	2.17663E-01	6.58281E-02	2.63625E-02	6.95318E-03	1.56895E-03	3.48561E-04	7.65404E-05
		1.48849E-05	0.0								
5		2.63691E-01	6.50579E-01	3.60140E-01	1.52535E-01	4.44572E-02	9.75665E-03	2.19669E-03	4.86197E-04	1.07895E-04	2.56235E-05
		2.40376E-06	0.0								
6		1.65457E-01	4.16071E-01	2.32558E-01	7.96742E-02	1.99707E-02	4.33623E-03	9.52718E-04	2.08907E-04	4.61146E-05	1.09379E-05
		9.81760E-07	0.0								
7		2.62140E-02	2.07667E-02	5.61688E-02	1.95490E-02	4.29128E-03	9.46435E-04	2.09255E-04	4.67147E-05	1.05306E-05	1.76182E-06
		0.0	0.0								
8		1.44296E-03	6.84965E-03	2.16431E-03	4.49572E-04	3.92135E-05	3.65122E-06	1.87643E-06	4.08288E-07	8.88862E-08	2.14159E-08
		3.12364E-09	0.0								
9		0.0	0.0	1.9783EE-05	5.29007E-05	1.06739E-05	1.87640E-06	3.37566E-07	7.39306E-08	1.74074E-08	3.86971E-09
		0.0	0.0								

NUCLID = CS133U2F MAT NO = 1551
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.43195E+00	0.0	0.0	8.10448E-04	2.32432E+00	2.10662E+00	0.0	7.21152E-01	5.22394E-02	4.97643E-02	0.0
2	4.53293E+00	0.0	0.0	5.20197E-03	2.37587E+00	2.15186E+00	0.0	6.73606E-01	4.18911E-02	2.62860E-01	0.0
3	5.46310E+00	0.0	0.0	1.52149E-02	3.26241E+00	2.18547E+00	0.0	8.94146E-01	4.46301E-02	5.34122E-01	0.0
4	6.49193E+00	0.0	0.0	3.25644E-02	4.41566E+00	2.00371E+00	0.0	6.28552E-01	5.17597E-02	7.79134E-01	0.0
5	6.66201E+00	0.0	0.0	5.73731E-02	5.07927E+00	1.52538E+00	0.0	5.05356E-01	7.21369E-02	6.02782E-01	0.0
6	6.09657E+00	0.0	0.0	1.12316E-01	5.25064E+00	7.93614E-01	0.0	4.11066E-01	6.91118E-02	6.93147E-01	0.0
7	5.65845E+00	0.0	0.0	1.46025E-01	5.03301E+00	4.79417E-01	0.0	3.34616E-01	7.85751E-02	6.93146E-01	0.0
8	5.69128E+00	0.0	0.0	2.07160E-01	5.24761E+00	2.30484E-01	0.0	2.20388E-01	9.81874E-02	6.93147E-01	0.0
9	6.15429E+00	0.0	0.0	3.29568E-01	5.79724E+00	2.74609E-02	0.0	1.21992E-01	1.10931E-01	7.65717E-01	0.0
10	7.09190E+00	0.0	0.0	5.09145E-01	6.58276E+00	0.0	0.0	5.89481E-02	1.33712E-01	7.71398E-01	0.0
11	8.55307E+00	0.0	0.0	7.76711E-01	7.77636E+00	0.0	0.0	2.75810E-02	1.65192E-01	7.65468E-01	0.0
12	1.07550E+01	0.0	0.0	1.21390E+00	9.54106E+00	0.0	0.0	1.38727E-02	2.07917E-01	7.65717E-01	0.0
13	1.40521E+01	0.0	0.0	2.04233E+00	1.20057E+01	0.0	0.0	5.82530E-03	2.63736E-01	7.71399E-01	0.0
14	1.53684E+01	0.0	0.0	3.27404E+00	1.20944E+01	0.0	0.0	5.05598E-03	1.15885E-01	7.62617E-01	0.0
15	1.35416E+01	0.0	0.0	5.01234E+00	8.52922E+00	0.0	0.0	5.05596E-03	3.65640E-01	7.65718E-01	0.0
16	3.65597E+01	0.0	0.0	1.18485E+01	2.47112E+01	0.0	0.0	5.0559BE-03	6.41632E-02	7.71313E-01	0.0
17	2.85350E+01	0.0	0.0	1.64507E+01	1.20843E+01	0.0	0.0	5.05598E-03	5.48239E-02	7.64828E-01	0.0
18	3.42373E+01	0.0	0.0	2.75079E+01	6.72943E+00	0.0	0.0	5.05596E-03	4.00476E-01	7.65718E-01	0.0
19	3.72084E+01	0.0	0.0	3.28686E+01	4.52159E+00	0.0	0.0	5.05598E-03	2.70004E-02	7.71399E-01	0.0
20	4.26225E+00	0.0	0.0	1.72021E+00	2.54204E+00	0.0	0.0	5.0559BE-03	6.15082E-02	7.65442E-01	0.0
21	4.17455E+02	0.0	0.0	3.93827E+02	2.38274E+01	0.0	0.0	5.05598E-03	2.61688E-02	7.65719E-01	0.0
22	1.12835E+01	0.0	0.0	9.68805E+00	1.60342E+00	0.0	0.0	5.05597E-03	3.55139E-02	7.71399E-01	0.0
23	7.38083E+00	0.0	0.0	5.48294E+00	1.89782E+00	0.0	0.0	5.05597E-03	3.84598E-02	7.65468E-01	0.0
24	8.44636E+00	0.0	0.0	6.47038E+00	1.97598E+00	0.0	0.0	5.05598E-03	3.92971E-02	7.65719E-01	0.0
25	1.07861E+01	0.0	0.0	8.78220E+00	2.00390E+00	0.0	0.0	1.15347E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12								
1		2.22015E-03	5.53226E-02	2.42179E-01	5.44567E-01	5.73857E-01	4.12502E-01	1.57680E-01	4.88066E-02	1.42226E-02	3.26493E-03
		7.14377E-04	1.51411E-04								
2		2.49959E-02	1.63972E-01	4.91264E-01	6.10972E-01	5.27502E-01	2.23468E-01	7.24965E-02	2.16708E-02	5.09369E-03	1.12213E-03
		2.46941E-04	3.59707E-05								
3		1.21542E-01	4.78775E-01	5.66583E-01	5.94221E-01	2.86078E-01	9.69882E-02	3.05778E-02	7.34606E-03	1.63196E-03	3.59954E-04
		7.87766E-05	4.79087E-06								
4		3.59653E-01	7.02940E-01	5.45027E-01	2.56270E-01	9.79913E-02	3.18853E-02	7.74638E-03	1.74103E-03	3.86085E-04	8.47078E-05
		1.64880E-05	0.0								
5		3.76585E-01	5.88215E-01	3.43187E-01	1.45209E-01	4.82337E-02	1.44142E-02	3.15523E-03	6.57564E-04	1.27685E-04	3.10626E-05
		2.00712E-06	0.0								
6		3.70626E-01	2.50009E-01	4.94594E-02	3.62052E-02	1.24502E-02	3.76350E-03	8.02665E-03	1.66300E-03	3.67140E-04	8.31475E-05
		6.90052E-07	0.0								
7		1.83967E-01	2.36088E-01	5.04342E-02	8.91262E-03	9.05940E-04	7.88233E-04	1.72645E-04	3.74466E-05	8.25496E-06	1.88374E-06
		0.0	0.0								
8		3.59181E-02	1.11804E-01	7.40108E-02	1.35923E-02	1.37795E-03	8.03018E-04	6.57119E-05	1.43023E-05	3.16746E-06	3.23906E-07
		0.0	0.0								
9		0.0	0.0	1.70966E-02	8.02750E-03	1.92916E-03	3.97434E-04	8.72211E-05	1.85629E-05	4.07301E-06	3.18887E-07
		0.0	0.0								

NUCLID = CS135J2F MAT NO = 1552
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.43856E+00	0.0	0.0	6.15755E-04	2.32467E+00	2.11327E+00	0.0	7.19666E-01	5.17788E-02	4.97643E-02	0.0
2	4.58008E+00	0.0	0.0	2.73327E-03	2.41872E+00	2.15863E+00	0.0	6.76207E-01	4.18711E-02	2.62860E-01	0.0
3	5.55362E+00	0.0	0.0	7.11890E-03	3.35683E+00	2.19167E+00	0.0	6.95101E-01	4.56619E-02	5.34122E-01	0.0
4	6.54865E+00	0.0	0.0	2.29188E-02	4.70109E+00	1.82465E+00	0.0	6.00737E-01	6.23011E-02	7.79134E-01	0.0
5	6.66600E+00	0.0	0.0	5.05299E-02	5.66504E+00	9.90439E-01	0.0	4.69395E-01	8.43658E-02	6.02783E-01	0.0
6	6.03168E+00	0.0	0.0	6.73507E-02	5.56019E+00	4.04145E-01	0.0	3.73010E-01	7.58305E-02	6.93147E-01	0.0
7	5.53514E+00	0.0	0.0	8.68756E-02	5.34511E+00	1.03158E-01	0.0	3.00650E-01	8.66232E-02	6.93147E-01	0.0
8	5.67226E+00	0.0	0.0	1.21175E-01	5.55109E+00	0.0	0.0	1.98591E-01	1.03130E-01	6.93147E-01	0.0
9	6.19437E+00	0.0	0.0	1.71510E-01	6.02286E+00	0.0	0.0	1.12605E-01	1.15567E-01	7.65717E-01	0.0
10	7.29305E+00	0.0	0.0	2.69741E-01	7.02331E+00	0.0	0.0	5.35083E-02	1.43178E-01	7.71399E-01	0.0
11	8.97901E+00	0.0	0.0	4.29494E-01	8.54951E+00	0.0	0.0	2.47360E-02	1.81696E-01	7.65468E-01	0.0
12	1.14956E+01	0.0	0.0	6.79660E-01	1.08160E+01	0.0	0.0	1.13697E-02	2.27109E-01	7.65716E-01	0.0
13	1.52371E+01	0.0	0.0	1.13655E+00	1.41005E+01	0.0	0.0	4.98106E-03	2.10724E-01	7.71399E-01	0.0
14	2.07773E+01	0.0	0.0	2.02901E+00	1.87483E+01	0.0	0.0	4.98106E-03	4.17282E-01	7.65467E-01	0.0
15	2.89790E+01	0.0	0.0	3.78786E+00	2.51911E+01	0.0	0.0	4.98106E-03	5.81478E-01	7.65716E-01	0.0
16	4.09368E+01	0.0	0.0	7.18426E+00	3.37525E+01	0.0	0.0	4.98106E-03	7.48154E-01	7.71399E-01	0.0
17	5.85747E+01	0.0	0.0	1.34953E+01	4.50795E+01	0.0	0.0	4.98107E-03	9.99573E-01	7.65468E-01	0.0
18	8.44467E+01	0.0	0.0	2.48653E+01	5.95814E+01	0.0	0.0	4.98106E-03	1.31162E+00	7.65719E-01	0.0
19	7.62569E+01	0.0	0.0	2.47421E+01	5.15147E+01	0.0	0.0	4.98107E-03	7.11426E-01	7.71398E-01	0.0
20	3.40786E+01	0.0	0.0	3.65625E-01	2.37130E+01	0.0	0.0	4.98106E-03	6.0936CE-01	7.65468E-01	0.0
21	3.04300E+01	0.0	0.0	5.35348E-01	2.98947E+01	0.0	0.0	4.98106E-03	5.59097E-01	7.65718E-01	0.0
22	2.88893E+01	0.0	0.0	7.86269E-01	2.81030E+01	0.0	0.0	4.98106E-03	5.21784E-01	7.71399E-01	0.0
23	2.84264E+01	0.0	0.0	1.15529E+00	2.72711E+01	0.0	0.0	4.98106E-03	5.25162E-01	7.65468E-01	0.0
24	2.85811E+01	0.0	0.0	1.69470E+00	2.68864E+01	0.0	0.0	4.98106E-03	5.19958E-01	7.65719E-01	0.0
25	2.91954E+01	0.0	0.0	2.48825E+00	2.67071E+01	0.0	0.0	1.13299E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I	J=	EXIT I	GROUP	** KK **	KK = I + J - 1						
		11		12	3	4	5	6	7	8	9	10
1		2.59539E-03	7.80536E-02	2.93639E-01	6.24581E-01	5.49019E-01	3.72375E-01	1.36934E-01	4.16053E-02	1.20088E-02	2.74308E-03
		5.98800E-04	1.26792E-04								
2		1.82288E-02	1.77089E-01	5.55226E-01	6.24041E-01	4.95097E-01	2.00438E-01	6.39618E-02	1.89432E-02	4.28479E-03	9.63118E-04
		2.11322E-04	3.34545E-05								
3		5.95569E-02	3.82205E-01	6.70794E-01	6.45106E-01	2.94322E-01	9.99354E-02	3.05477E-02	7.19954E-03	1.59154E-03	3.50467E-04
		7.66418E-05	4.88223E-06								
4		2.21948E-01	5.11001E-01	4.70922E-01	4.08104E-01	1.49891E-01	4.79332E-02	1.15507E-02	2.58541E-03	5.72240E-04	1.25429E-04
		2.48015E-05	0.0								
5		2.47589E-01	4.95837E-01	1.51303E-01	3.95162E-02	1.37579E-02	2.42957E-02	1.43021E-02	3.02025E-03	6.63472E-04	1.42515E-04
		1.64973E-05	0.0								
6		9.47183E-02	1.96658E-01	8.04630E-02	1.48541E-02	3.54153E-03	7.40591E-03	5.08518E-03	1.11829E-03	2.42740E-04	5.54515E-05
		1.05513E-06	0.0								
7		0.0		4.38044E-02	4.12862E-02	1.40799E-02	3.11328E-03	6.82328E-04	1.50027E-04	3.35260E-05	6.76731E-06	2.11636E-06
		0.0		0.0								

NUCLID = PM141J2F MAT NO = 5441
INFINITE DILUTION CROSS SECTION

PAGE 1 OF 1

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.39865E+00	0.0	0.0	1.81159E-04	2.25465E+00	2.14382E+00	0.0	7.05438E-01	5.09100E-02	4.97644E-02	0.0
2	4.72455E+00	0.0	0.0	1.22684E-03	2.53326E+00	2.19007E+00	0.0	6.85485E-01	4.00209E-02	2.62860E-01	0.0
3	5.80578E+00	0.0	0.0	4.17980E-03	3.61014E+00	2.19146E+00	0.0	7.00850E-01	4.94976E-02	5.34122E-01	0.0
4	6.81979E+00	0.0	0.0	1.59551E-02	5.12120E+00	1.68263E+00	0.0	5.77166E-01	7.17545E-02	7.79134E-01	0.0
5	6.83599E+00	0.0	0.0	2.59508E-02	5.95141E+00	8.58627E-01	0.0	4.12528E-01	8.58955E-02	6.02782E-01	0.0
6	5.95148E+00	0.0	0.0	2.04308E-02	5.31956E+00	6.11493E-01	0.0	3.38005E-01	7.22742E-02	6.93146E-01	0.0
7	5.41554E+00	0.0	0.0	2.41416E-02	4.97900E+00	4.12403E-01	0.0	2.71724E-01	8.03881E-02	6.93146E-01	0.0
8	5.51999E+00	0.0	0.0	4.46298E-02	5.37824E+00	9.71224E-02	0.0	1.71242E-01	1.00783E-01	6.93147E-01	0.0
9	5.92647E+00	0.0	0.0	6.84663E-02	5.85800E+00	0.0	0.0	8.93629E-02	1.08919E-01	7.65717E-01	0.0
10	6.89247E+00	0.0	0.0	1.04044E-01	6.78842E+00	0.0	0.0	4.06767E-02	1.33706E-01	7.71398E-01	0.0
11	8.45881E+00	0.0	0.0	1.67650E-01	8.29116E+00	0.0	0.0	1.85356E-02	1.69814E-01	7.65468E-01	0.0
12	9.72515E+00	0.0	0.0	2.49696E-01	9.47546E+00	0.0	0.0	7.98347E-03	1.98636E-01	7.65486E-01	0.0
13	1.08147E+01	0.0	0.0	4.19170E-01	1.03455E+01	0.0	0.0	4.77223E-03	1.84516E-01	7.70385E-01	0.0
14	2.15017E+01	0.0	0.0	8.26177E-01	2.06756E+01	0.0	0.0	4.77223E-03	1.53656E-01	7.62377E-01	0.0
15	7.09205E+01	0.0	0.0	2.49852E+00	6.84220E+01	0.0	0.0	4.77223E-03	2.36816E-02	7.65709E-01	0.0
16	1.46119E+02	0.0	0.0	1.10183E+01	1.35100E+02	0.0	0.0	4.77223E-03	2.64777E+01	7.71327E-01	0.0
17	5.50892E+00	0.0	0.0	5.15546E-01	4.99127E+00	0.0	0.0	4.77223E-03	1.23816E-02	7.65274E-01	0.0
18	3.45874E+00	0.0	0.0	2.57564E+00	8.83106E-01	0.0	0.0	4.77223E-03	1.30945E-02	7.65718E-01	0.0
19	1.07649E+00	0.0	0.0	3.35508E-01	7.40978E-01	0.0	0.0	4.77223E-03	1.42398E-02	7.71399E-01	0.0
20	1.27425E+00	0.0	0.0	4.86313E-01	7.87943E-01	0.0	0.0	4.77223E-03	1.48899E-02	7.65468E-01	0.0
21	1.51465E+00	0.0	0.0	7.08239E-01	8.06413E-01	0.0	0.0	4.77223E-03	1.50942E-02	7.65718E-01	0.0
22	1.85367E+00	0.0	0.0	1.03977E+00	8.13908E-01	0.0	0.0	4.77223E-03	1.50717E-02	7.71399E-01	0.0
23	2.34522E+00	0.0	0.0	1.52804E+00	8.17165E-01	0.0	0.0	4.77223E-03	1.52292E-02	7.65467E-01	0.0
24	3.06036E+00	0.0	0.0	2.24166E+00	8.18700E-01	0.0	0.0	4.77223E-03	1.52434E-02	7.65718E-01	0.0
25	4.11242E+00	0.0	0.0	3.29292E+00	8.19506E-01	0.0	0.0	1.08726E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

PAGE 1 OF 1

GROUP I	J=	EXIT 1	GROUP 2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12								
1		8.17935E-04	4.41093E-02	2.26298E-01	5.92327E-01	5.95665E-01	4.40506E-01	1.70694E-01	5.32709E-02	1.55893E-02	3.58657E-03
		7.65560E-04	1.66600E-04								
2		6.77894E-03	1.14043E-01	4.68976E-01	6.46569E-01	5.71454E-01	2.46890E-01	6.14950E-02	2.45493E-02	5.73384E-03	1.26477E-03
		2.78049E-04	4.40886E-05								
3		4.61425E-02	2.73934E-01	6.55781E-01	6.96687E-01	3.45063E-01	1.22053E-01	3.61266E-02	9.07392E-03	2.01921E-03	4.45716E-04
		9.75811E-05	6.08367E-06								
4		3.00702E-01	2.54036E-01	4.88486E-01	3.21049E-01	1.67295E-01	1.13596E-01	2.86059E-02	6.69597E-03	1.54592E-03	3.71242E-04
		5.76272E-05	0.0								
5		5.65230E-01	2.12997E-01	1.94617E-02	2.36554E-02	2.60085E-02	7.77635E-03	2.38888E-03	6.33061E-04	2.20663E-04	5.07294E-05
		4.43359E-06	0.0								
6		3.62131E-01	2.49362E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
7		1.01027E-01	2.04157E-01	1.07219E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
8		0.0	1.63637E-02	5.25920E-02	1.78215E-02	6.81717E-03	2.61213E-03	7.15816E-04	1.56792E-04	3.47332E-05	7.70781E-06
		9.02348E-07	0.0								

NUCLID = ND143J2F MAT NO = 1601
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.49660E+00	0.0	0.0	2.03428E-04	2.34626E+00	2.15014E+00	0.0	7.18275E-01	4.98114E-02	4.97643E-02	0.0
2	4.80572E+00	0.0	0.0	2.39455E-03	2.62502E+00	2.17831E+00	0.0	6.90410E-01	4.20771E-02	2.62860E-01	0.0
3	5.90063E+00	0.0	0.0	3.57618E-02	3.83778E+00	2.02729E+00	0.0	6.81331E-01	6.30760E-02	5.34122E-01	0.0
4	6.88832E+00	0.0	0.0	1.21236E-01	5.77009E+00	9.97001E-01	0.0	5.25091E-01	8.29601E-02	7.79136E-01	0.0
5	6.86978E+00	0.0	0.0	1.14060E-01	6.56065E+00	1.95075E-01	0.0	3.70386E-01	1.00772E-01	6.02782E-01	0.0
6	5.94518E+00	0.0	0.0	8.97696E-02	5.85219E+00	3.19619E-03	0.0	2.92929E-01	8.05931E-02	6.93147E-01	0.0
7	5.42901E+00	0.0	0.0	9.42022E-02	5.33481E+00	0.0	0.0	2.38347E-01	8.69055E-02	6.93146E-01	0.0
8	5.86136E+00	0.0	0.0	1.18351E-01	5.74301E+00	0.0	0.0	1.54414E-01	1.09524E-01	6.93147E-01	0.0
9	7.01610E+00	0.0	0.0	1.59863E-01	6.85623E+00	0.0	0.0	8.22145E-02	1.33934E-01	7.65717E-01	0.0
10	9.10365E+00	0.0	0.0	2.39757E-01	8.86390E+00	0.0	0.0	3.70793E-02	1.80608E-01	7.71396E-01	0.0
11	1.21980E+01	0.0	0.0	3.76748E-01	1.18213E+01	0.0	0.0	1.69865E-02	2.47981E-01	7.65468E-01	0.0
12	1.63725E+01	0.0	0.0	5.93785E-01	1.57768E+01	0.0	0.0	6.92447E-03	2.19401E-01	7.65717E-01	0.0
13	2.43812E+01	0.0	0.0	9.65035E-01	2.34162E+01	0.0	0.0	4.70238E-03	6.70761E-01	7.70956E-01	0.0
14	4.38412E+01	0.0	0.0	2.23644E+00	4.16023E+01	0.0	0.0	4.70238E-03	6.38580E-02	7.63412E-01	0.0
15	2.24875E+01	0.0	0.0	3.03272E+00	1.94548E+01	0.0	0.0	4.70238E-03	3.66271E-01	7.65718E-01	0.0
16	1.30875E+02	0.0	0.0	9.72921E+00	1.21146E+02	0.0	0.0	4.70238E-03	1.90170E-01	7.71399E-01	0.0
17	3.65940E+02	0.0	0.0	3.32356E+01	3.32705E+02	0.0	0.0	4.70238E-03	2.46582E-02	7.64901E-01	0.0
18	3.74088E+01	0.0	0.0	2.50891E+01	1.23147E+01	0.0	0.0	4.70238E-03	1.27821E-02	7.65718E-01	0.0
19	1.99626E+00	0.0	0.0	9.70532E-01	1.02573E+00	0.0	0.0	4.70237E-03	3.16905E-02	7.71399E-01	0.0
20	5.39597E+00	0.0	0.0	2.12430E+00	3.27167E+00	0.0	0.0	4.70238E-03	9.53178E-02	7.65447E-01	0.0
21	1.39586E+01	0.0	0.0	5.67877E+00	8.27980E+00	0.0	0.0	4.70238E-03	2.14633E-01	7.65718E-01	0.0
22	2.99436E+01	0.0	0.0	1.40793E+01	1.58644E+01	0.0	0.0	4.70237E-03	3.63568E-01	7.71399E-01	0.0
23	5.29716E+01	0.0	0.0	2.93240E+01	2.36476E+01	0.0	0.0	4.70237E-03	4.92661E-01	7.65459E-01	0.0
24	8.18349E+01	0.0	0.0	5.23744E+01	2.94605E+01	0.0	0.0	4.70237E-03	5.79056E-01	7.65710E-01	0.0
25	1.18458E+02	0.0	0.0	8.53725E+01	3.30855E+01	0.0	0.0	1.09251E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I	J=	EXIT 1	GROUP 2	** KK **	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12									
1												
		1.83198E-04	2.56455E-02	1.60981E-01	5.54434E-01	6.18138E-01	4.87561E-01	1.96620E-01	6.26318E-02	1.85231E-02	4.28503E-03	
		9.40956E-04	1.99787E-04									
2												
		1.26383E-03	6.76793E-02	3.99518E-01	6.59562E-01	6.29404E-01	2.85719E-01	9.67570E-02	2.95351E-02	6.94615E-03	1.53714E-03	
		3.38432E-04	5.37167E-05									
3												
		1.54950E-02	2.17771E-01	4.33800E-01	4.93706E-01	5.01287E-01	2.57974E-01	8.19417E-02	1.97073E-02	4.40704E-03	9.75010E-04	
		2.13687E-04	1.69956E-05									
4												
		4.98258E-02	3.37036E-01	3.57205E-01	1.66441E-01	5.97355E-02	1.88171E-02	4.79025E-03	2.27560E-03	7.00625E-04	1.60498E-04	
		2.77401E-05	0.0									
5												
		0.0	7.19627E-02	5.05845E-02	4.03016E-02	2.33036E-02	5.75216E-03	2.04132E-03	8.14814E-04	2.47488E-04	5.60755E-05	
		1.12449E-05	0.0									
6												
		0.0	0.0	0.0	6.49760E-04	1.99461E-03	4.31291E-04	9.42760E-05	2.06605E-05	4.53676E-06	1.06298E-06	
		0.0	0.0									

NUCLID = ND145J2F MAT NO = 1603
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.51449E+00	0.0	0.0	1.08908E-04	2.35450E+00	2.15968E+00	0.0	7.1E674E-01	4.93183E-02	4.97643E-02	0.0
2	4.86598E+00	0.0	0.0	1.15928E-03	2.66288E+00	2.20194E+00	0.0	6.970575E-01	4.02098E-02	2.62860E-01	0.0
3	5.99622E+00	0.0	0.0	5.74902E-03	3.71336E+00	2.27711E+00	0.0	7.2043CE-01	4.18987E-02	5.34122E-01	0.0
4	6.98252E+00	0.0	0.0	3.62200E-02	4.89160E+00	2.05470E+00	0.0	6.255036-01	5.98850E-02	7.79134E-01	0.0
5	6.89869E+00	0.0	0.0	9.03407E-02	5.61047E+00	1.19766E+00	0.0	4.290245-01	8.13446E-02	6.02782E-01	0.0
6	5.97163E+00	0.0	0.0	8.32262E-02	5.11958E+00	7.68818E-01	0.0	3.19897E-01	6.89278E-02	6.93147E-01	0.0
7	5.47532E+00	0.0	0.0	9.26121E-02	4.84525E+00	5.27448E-01	0.0	2.478296-01	7.90958E-02	6.93146E-01	0.0
8	6.01170E+00	0.0	0.0	1.24530E-01	5.47086E+00	4.16372E-01	0.0	1.543716-01	1.05519E-01	6.93147E-01	0.0
9	7.34770E+00	0.0	0.0	1.91772E-01	7.04165E+00	1.14286E-01	0.0	7.70421E-02	1.39972E-01	7.65717E-01	0.0
10	9.74063E+00	0.0	0.0	2.95483E-01	9.44515E+00	0.0	0.0	3.40354E-02	1.91755E-01	7.71399E-01	0.0
11	1.32577E+01	0.0	0.0	4.62437E-01	1.27952E+01	0.0	0.0	1.58887E-02	2.66458E-01	7.65468E-01	0.0
12	1.83370E+01	0.0	0.0	7.61567E-01	1.75755E+01	0.0	0.0	5.56270E-03	3.37662E-01	7.65716E-01	0.0
13	3.20856E+01	0.0	0.0	1.34014E+00	3.07455E+01	0.0	0.0	4.63754E-03	3.78082E-01	7.70398E-01	0.0
14	3.84406E+01	0.0	0.0	3.09577E+00	3.53446E+01	0.0	0.0	4.63754E-03	2.53407E+00	7.63100E-01	0.0
15	6.62823E+01	0.0	0.0	6.54757E+00	5.97348E+01	0.0	0.0	4.63755E-03	9.37286E-01	7.65327E-01	0.0
16	4.15906E+01	0.0	0.0	1.07096E+01	3.08810E+01	0.0	0.0	4.63755E-03	1.20239E-02	7.71146E-01	0.0
17	7.59339E+01	0.0	0.0	2.97607E+01	4.61721E+01	0.0	0.0	4.63754E-03	7.3524CE+00	7.64821E-01	0.0
18	1.51147E+01	0.0	0.0	7.19417E+00	7.92054E+00	0.0	0.0	4.63754E-03	9.31479E-01	7.65706E-01	0.0
19	4.50024E+02	0.0	0.0	6.54034E+01	3.84620E+02	0.0	0.0	4.63754E-03	1.75781E-02	7.71389E-01	0.0
20	2.36238E+00	0.0	0.0	1.81879E+00	5.43559E-01	0.0	0.0	4.63755E-03	6.61981E-03	7.65463E-01	0.0
21	4.32020E+00	0.0	0.0	3.98753E+00	3.32665E-01	0.0	0.0	4.63755E-03	8.17919E-03	7.65718E-01	0.0
22	2.03884E+02	0.0	0.0	1.98151E+02	5.73217E+00	0.0	0.0	4.63755E-03	7.79533E-03	7.71499E-01	0.0
23	6.79780E+00	0.0	0.0	6.40191E+00	3.95890E-01	0.0	0.0	4.63755E-03	6.76942E-03	7.65456E-01	0.0
24	8.86774E+00	0.0	0.0	8.49702E+00	3.70724E-01	0.0	0.0	4.63755E-03	6.64026E-03	7.65707E-01	0.0
25	1.25161E+01	0.0	0.0	1.21523E+01	3.62749E-01	0.0	0.0	1.05214E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

GROUP I J= EXIT GROUP 1 11 12 ** KK ** KK = I + J - 1 2 3 4 5 6 7 8 9 10

1
6.64844E-04 3.56949E-02 2.02578E-01 5.75958E-01 6.11508E-01 4.67787E-01 1.65104E-01 5.82927E-02 1.71830E-02 3.96465E-03
8.69542E-04 1.84510E-04

2
6.23422E-03 9.69660E-02 4.59890E-01 6.51282E-01 5.58413E-01 2.65322E-01 6.87602E-02 2.69226E-02 6.21115E-03 1.39446E-03
3.06801E-04 4.86380E-05

3
3.44677E-02 2.09125E-01 6.65550E-01 7.72579E-01 3.94699E-01 1.42144E-01 4.47970E-02 1.07126E-02 2.38922E-03 5.27938E-04
1.15638E-04 7.49334E-06

4
3.01640E-01 2.59169E-01 6.55795E-01 3.70958E-01 3.24288E-01 1.08505E-01 2.66600E-02 6.02520E-03 1.33582E-03 2.96426E-04
5.81592E-05 0.0

5
6.89804E-01 2.22436E-01 1.44831E-01 9.00216E-02 3.85059E-02 9.68129E-03 2.03888E-03 4.46624E-04 9.92291E-05 2.26232E-05
2.40365E-06 0.0

6
5.95493E-01 1.62275E-01 0.0 9.56015E-03 8.42958E-03 1.97326E-03 4.21081E-04 9.51025E-05 2.07019E-05 4.51762E-06
0.0 0.0

7
3.17122E-01 2.20326E-01 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

8
1.01848E-01 2.19162E-01 9.53613E-02 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

9
0.0 3.20911E-02 5.49272E-02 1.95801E-02 5.99227E-03 1.32313E-03 2.89900E-04 6.32204E-05 1.38624E-05 3.21818E-06
2.48350E-07 0.0

NUCLID = PM147J2F MAT NO = 1611
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.65614E+00	0.0	0.0	1.12226E-03	2.43762E+00	2.21739E+00	0.0	7.33693E-01	4.81720E-02	4.97643E-02	0.0
2	5.02181E+00	0.0	0.0	8.90742E-03	2.76350E+00	2.24941E+00	0.0	7.06113E-01	4.02765E-02	2.62860E-01	0.0
3	6.11279E+00	0.0	0.0	3.20079E-02	3.79912E+00	2.28167E+00	0.0	7.21758E-01	4.16489E-02	5.34122E-01	0.0
4	7.05067E+00	0.0	0.0	8.24765E-02	4.68353E+00	2.29466E+00	0.0	6.64129E-01	4.43068E-02	7.79136E-01	0.0
5	7.02878E+00	0.0	0.0	2.00483E-01	5.04305E+00	1.78523E+00	0.0	4.91336E-01	7.10630E-02	6.02782E-01	0.0
6	6.19397E+00	0.0	0.0	3.27612E-01	5.09274E+00	7.73620E-01	0.0	3.32968E-01	7.12881E-02	6.93147E-01	0.0
7	5.88232E+00	0.0	0.0	3.73469E-01	5.10434E+00	4.06511E-01	0.0	2.45547E-01	8.28266E-02	6.93146E-01	0.0
8	6.60302E+00	0.0	0.0	4.50310E-01	5.85611E+00	2.96603E-01	0.0	1.53741E-01	1.12296E-01	6.93147E-01	0.0
9	8.18268E+00	0.0	0.0	6.23533E-01	7.54599E+00	1.91518E-02	0.0	7.81541E-02	1.45822E-01	7.65716E-01	0.0
10	1.08844E+01	0.0	0.0	9.27065E-01	9.95730E+00	0.0	0.0	3.54024E-02	1.98153E-01	7.71399E-01	0.0
11	1.47907E+01	0.0	0.0	1.51962E+00	1.32711E+01	0.0	0.0	1.66636E-02	2.69416E-01	7.65468E-01	0.0
12	2.04864E+01	0.0	0.0	2.69419E+00	1.77922E+01	0.0	0.0	6.73235E-03	3.63770E-01	7.65717E-01	0.0
13	2.87269E+01	0.0	0.0	4.99111E+00	2.37358E+01	0.0	0.0	4.57444E-03	4.82437E-01	7.71399E-01	0.0
14	4.08307E+01	0.0	0.0	9.28736E+00	3.15434E+01	0.0	0.0	4.57444E-03	6.41362E-01	7.65467E-01	0.0
15	5.85943E+01	0.0	0.0	1.70647E+01	4.15296E+01	0.0	0.0	4.57444E-03	8.38562E-01	7.65716E-01	0.0
16	7.70305E+01	0.0	0.0	2.55353E+01	5.14953E+01	0.0	0.0	4.57444E-03	5.79651E-01	7.71347E-01	0.0
17	1.28976E+02	0.0	0.0	4.10195E+01	8.79565E+01	0.0	0.0	4.57444E-03	1.57776E-01	7.62610E-01	0.0
18	1.01134E+02	0.0	0.0	6.55954E+01	3.55386E+01	0.0	0.0	4.57445E-03	1.10703E-01	7.65718E-01	0.0
19	1.11349E+02	0.0	0.0	8.31690E+01	2.81596E+01	0.0	0.0	4.57444E-03	3.99017E-02	7.71384E-01	0.0
20	4.99352E+01	0.0	0.0	4.41048E+01	5.83041E+00	0.0	0.0	4.57444E-03	1.44624E-01	7.65372E-01	0.0
21	3.52412E+03	0.0	0.0	2.45435E+03	1.06977E+03	0.0	0.0	4.57444E-03	2.88379E+00	7.65718E-01	0.0
22	9.24877E+01	0.0	0.0	5.46961E+01	2.27916E+01	0.0	0.0	4.57444E-03	8.13906E-02	7.71399E-01	0.0
23	2.82837E+01	0.0	0.0	2.53298E+01	2.95390E+00	0.0	0.0	4.57444E-03	3.81632E-02	7.65457E-01	0.0
24	3.37097E+01	0.0	0.0	3.18661E+01	1.64157E+00	0.0	0.0	4.57444E-03	2.96412E-02	7.65710E-01	0.0
25	4.95845E+01	0.0	0.0	4.80035E+01	1.56129E+00	0.0	0.0	1.02463E-02	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

GROUP	J=	EXIT GROUP 1	** KK ** 2	KK = I + J - 1 3	4	5	6	7	8	9	10
		11	12								
1		6.97709E-04	2.99776E-02	1.84637E-01	5.88944E-01	6.35749E-01	5.03452E-01	2.03331E-01	6.46195E-02	1.91777E-02	4.43736E-03
		9.74503E-04	2.06890E-04								
2		7.57701E-03	9.44884E-02	4.36500E-01	6.56624E-01	6.30092E-01	2.88482E-01	9.70947E-02	2.96508E-02	6.97491E-03	1.54366E-03
		3.39865E-04	5.38427E-05								
3		4.00699E-02	3.00241E-01	6.10986E-01	7.29067E-01	3.59229E-01	1.42365E-01	4.52304E-02	1.08620E-02	2.42733E-03	5.36850E-04
		1.17640E-04	7.37933E-06								
4		1.58038E-01	5.48357E-01	7.88289E-01	4.97594E-01	2.02569E-01	6.80777E-02	1.88366E-02	3.81478E-03	8.49118E-04	1.86624E-04
		3.68980E-05	0.0								
5		3.07448E-01	6.36422E-01	4.20127E-01	2.40091E-01	9.82533E-02	2.53514E-02	5.85963E-03	1.31637E-03	2.90567E-04	6.24241E-05
		9.46289E-06	0.0								
6		3.03958E-01	2.44318E-01	1.03423E-01	6.71752E-02	2.99543E-02	9.29670E-03	1.14258E-02	5.53080E-03	1.19580E-03	2.68430E-04
		4.69057E-05	0.0								
7		1.94161E-01	2.10349E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
8		2.08767E-02	1.53721E-01	7.87614E-02	2.77151E-02	5.51356E-03	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
9		0.0	0.0	0.0	5.85014E-02	2.37115E-03	7.27436E-04	1.56525E-04	3.51416E-05	7.50690E-06	1.89879E-06
		0.0	0.0								

NUCLID = SM149J2F MAT NO = 1622
INFINITE DILUTION CROSS SECTION

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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL NU	EL REMOVAL	FLUX	CHI
1	4.66226E+00	0.0	0.0	4.60285E-03	2.43653E+00	2.22112E+00	0.0	7.34120E-01	4.72231E-02	4.97643E-02	0.0
2	5.07651E+00	0.0	0.0	3.76691E-02	2.81863E+00	2.22021E+00	0.0	7.10676E-01	4.01688E-02	2.62860E-01	0.0
3	6.19044E+00	0.0	0.0	1.22476E-01	3.68288E+00	2.18508E+00	0.0	7.22821E-01	4.19874E-02	5.34122E-01	0.0
4	7.09640E+00	0.0	0.0	2.53755E-01	4.72811E+00	2.11454E+00	0.0	6.63724E-01	4.31252E-02	7.79134E-01	0.0
5	7.05788E+00	0.0	0.0	4.02050E-01	4.62571E+00	1.82993E+00	0.0	5.07003E-01	6.13022E-02	6.02782E-01	0.0
6	6.24037E+00	0.0	0.0	5.37848E-01	4.60460E+00	1.09772E+00	0.0	3.50954E-01	6.17390E-02	6.93147E-01	0.0
7	5.92615E+00	0.0	0.0	6.37474E-01	4.73275E+00	5.55921E-01	0.0	2.49765E-01	7.83348E-02	6.93146E-01	0.0
8	6.83882E+00	0.0	0.0	7.75895E-01	5.61052E+00	4.52403E-01	0.0	1.52702E-01	1.06313E-01	6.93147E-01	0.0
9	8.64561E+00	0.0	0.0	1.01973E+00	7.09537E+00	5.30507E-01	0.0	7.99732E-02	1.35711E-01	7.65717E-01	0.0
10	1.16335E+01	0.0	0.0	1.64311E+00	9.55054E+00	4.39888E-01	0.0	3.58732E-02	1.92718E-01	7.71399E-01	0.0
11	1.60897E+01	0.0	0.0	2.98920E+00	1.31005E+01	0.0	0.0	1.63620E-02	2.59459E-01	7.65468E-01	0.0
12	2.24161E+01	0.0	0.0	5.32972E+00	1.70864E+01	0.0	0.0	6.72486E-03	3.39661E-01	7.65716E-01	0.0
13	3.16355E+01	0.0	0.0	9.62962E+00	2.20059E+01	0.0	0.0	4.51304E-03	4.32739E-01	7.71399E-01	0.0
14	4.52016E+01	0.0	0.0	1.71807E+01	2.80209E+01	0.0	0.0	4.51304E-03	5.48447E-01	7.65468E-01	0.0
15	6.49232E+01	0.0	0.0	3.06232E+01	3.49061E+01	0.0	0.0	4.51303E-03	6.77032E-01	7.65717E-01	0.0
16	9.40146E+01	0.0	0.0	5.15216E+01	4.24930E+01	0.0	0.0	4.51304E-03	8.11340E-01	7.71399E-01	0.0
17	1.43279E+02	0.0	0.0	7.33357E+01	6.99428E+01	0.0	0.0	4.51303E-03	5.38132E-01	7.64929E-01	0.0
18	4.88466E+02	0.0	0.0	2.50121E+02	2.38346E+02	0.0	0.0	4.51304E-03	3.71094E-01	7.65708E-01	0.0
19	4.07320E+02	0.0	0.0	2.66779E+02	1.40540E+02	0.0	0.0	4.51304E-03	3.29285E-02	7.71378E-01	0.0
20	1.33687E+02	0.0	0.0	1.22422E+02	1.12645E+01	0.0	0.0	4.51304E-03	1.54552E-01	7.65191E-01	0.0
21	6.24505E+02	0.0	0.0	5.74371E+02	5.01340E+01	0.0	0.0	4.51303E-03	8.87146E-02	7.65718E-01	0.0
22	2.53987E+01	0.0	0.0	2.12849E+01	4.11384E+00	0.0	0.0	4.51304E-03	1.03648E-01	7.71400E-01	0.0
23	1.78834E+02	0.0	0.0	1.66460E+02	1.23747E+01	0.0	0.0	4.51303E-03	6.13935E-01	7.65468E-01	0.0
24	3.01203E+03	0.0	0.0	2.97164E+03	4.03966E+01	0.0	0.0	4.51303E-03	2.57446E-01	7.65718E-01	0.0
25	2.24879E+03	0.0	0.0	2.20972E+03	3.90666E+01	0.0	0.0	1.71768E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

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GROUP I	J=	EXIT GROUP 1	2	** KK ** 3	KK = I + J - 1 4	5	6	7	8	9	10
		11	12								
1		7.44700E-04	2.51656E-02	1.68047E-01	5.51677E-01	6.43529E-01	5.22237E-01	2.14346E-01	6.88997E-02	2.04721E-02	4.74744E-03
		1.04369E-03	2.21654E-04								
2		1.02694E-02	9.67432E-02	4.06375E-01	6.44214E-01	6.36206E-01	2.95023E-01	1.01018E-01	3.10127E-02	7.31547E-03	1.62113E-03
		3.57156E-04	5.65088E-05								
3		6.79561E-02	2.91567E-01	5.54687E-01	6.97521E-01	3.75670E-01	1.39194E-01	4.45093E-02	1.07250E-02	2.40050E-03	5.31304E-04
		1.16465E-04	7.16790E-06								
4		3.00145E-01	5.95300E-01	5.96175E-01	3.90048E-01	1.60956E-01	5.44718E-02	1.35218E-02	3.06908E-03	6.83689E-04	1.50321E-04
		2.94813E-05	0.0								
5		5.06993E-01	7.61215E-01	3.45496E-01	1.46751E-01	5.12455E-02	1.32811E-02	3.07617E-03	6.91734E-04	1.52758E-04	3.28248E-05
		4.83974E-06	0.0								
6		4.91188E-01	3.16134E-01	1.93910E-01	5.36689E-02	3.26224E-02	7.79510E-03	1.72194E-03	3.79537E-04	8.21946E-05	1.71040E-05
		1.56179E-06	0.0								
7		3.39580E-01	8.71321E-02	6.43994E-02	2.97642E-02	2.59999E-02	7.07908E-03	1.54479E-03	3.34594E-04	7.28408E-05	1.68235E-05
		1.29433E-06	0.0								
8		3.09576E-01	1.42827E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
9		2.41250E-01	2.89257E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0								
10		3.88014E-02	2.35305E-01	1.19039E-01	3.63941E-02	8.07333E-03	1.77942E-03	3.89284E-04	8.38602E-05	1.72837E-05	5.68651E-06
		0.0	0.0								

NUCLID = SM151J2F MAT NO = 1623
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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.70723E+00	0.0	0.0	4.69441E-03	2.46837E+00	2.23417E+00	0.0	7.36206E-01	4.71325E-02	4.97643E-02	0.0
2	5.09209E+00	0.0	0.0	3.58927E-02	2.82131E+00	2.23489E+00	0.0	7.09817E-01	3.96843E-02	2.62860E-01	0.0
3	6.20198E+00	0.0	0.0	1.31873E-01	3.88121E+00	2.18890E+00	0.0	7.23009E-01	4.13399E-02	5.34122E-01	0.0
4	7.13408E+00	0.0	0.0	2.52376E-01	4.71961E+00	2.16209E+00	0.0	6.69922E-01	4.04415E-02	7.79134E-01	0.0
5	7.11263E+00	0.0	0.0	2.91665E-01	4.62595E+00	2.19502E+00	0.0	5.37239E-01	5.16891E-02	6.02782E-01	0.0
6	6.31501E+00	0.0	0.0	3.14776E-01	4.06484E+00	1.93540E+00	0.0	4.06202E-01	4.78106E-02	6.93147E-01	0.0
7	5.99235E+00	0.0	0.0	3.97403E-01	3.96424E+00	1.63071E+00	0.0	3.04380E-01	5.96104E-02	6.93146E-01	0.0
8	6.71748E+00	0.0	0.0	5.91078E-01	4.73693E+00	1.38947E+00	0.0	1.84821E-01	8.84972E-02	6.93147E-01	0.0
9	8.59207E+00	0.0	0.0	1.06231E+00	6.51758E+00	1.01217E+00	0.0	8.85285E-02	1.25859E-01	7.65717E-01	0.0
10	1.16005E+01	0.0	0.0	1.79940E+00	8.82994E+00	9.71210E-01	0.0	3.91223E-02	1.69248E-01	7.71399E-01	0.0
11	1.59056E+01	0.0	0.0	2.12719E+00	1.15193E+01	1.25907E+00	0.0	1.82061E-02	2.24236E-01	7.65468E-01	0.0
12	2.20615E+01	0.0	0.0	5.86097E+00	1.51292E+01	1.06138E+00	0.0	7.86911E-03	3.01571E-01	7.65717E-01	0.0
13	3.09869E+01	0.0	0.0	1.11890E+01	1.97999E+01	0.0	0.0	4.45325E-03	3.81775E-01	7.71398E-01	0.0
14	4.44448E+01	0.0	0.0	1.97119E+01	2.47329E+01	0.0	0.0	4.45325E-03	4.72534E-01	7.65467E-01	0.0
15	6.37892E+01	0.0	0.0	3.27289E+01	3.00604E+01	0.0	0.0	4.45325E-03	5.70145E-01	7.65718E-01	0.0
16	9.24323E+01	0.0	0.0	5.66604E+01	3.57719E+01	0.0	0.0	4.45326E-03	6.64246E-01	7.71399E-01	0.0
17	1.34090E+02	0.0	0.0	9.26565E+01	4.14337E+01	0.0	0.0	4.45325E-03	7.66449E-01	7.65468E-01	0.0
18	1.95294E+02	0.0	0.0	1.48476E+02	4.68176E+01	0.0	0.0	4.45325E-03	8.57239E-01	7.65717E-01	0.0
19	2.85122E+02	0.0	0.0	2.33405E+02	5.17174E+01	0.0	0.0	4.45326E-03	9.3119BE-01	7.71399E-01	0.0
20	7.24399E+02	0.0	0.0	6.38041E+02	8.63584E+01	0.0	0.0	4.45326E-03	4.50897E-01	7.65076E-01	0.0
21	5.63760E+02	0.0	0.0	5.37562E+02	2.61989E+01	0.0	0.0	4.45326E-03	1.17416E-01	7.65719E-01	0.0
22	4.72878E+02	0.0	0.0	4.64049E+02	8.82931E+00	0.0	0.0	4.45325E-03	3.12379E-01	7.71399E-01	0.0
23	2.25375E+03	0.0	0.0	2.22252E+03	2.12327E+01	0.0	0.0	4.45325E-03	1.60248E-01	7.65435E-01	0.0
24	8.58134E+02	0.0	0.0	8.54229E+02	3.90449E+00	0.0	0.0	4.45326E-03	8.45175E-02	7.65718E-01	0.0
25	1.11253E+03	0.0	0.0	1.10676E+03	5.76394E+00	0.0	0.0	1.10346E-02	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

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GROUP I — EXIT GROUP ** KK ** KK = I + J - 1

J= 1 2 3 4 5 6 7 8 9 10 11 12

1
9.34014E-04 2.30755E-02 1.61380E-01 5.46011E-01 6.49591E-01 5.33738E-01 2.20756E-01 7.12411E-02 2.12111E-02 4.92403E-03
1.08304E-03 2.30063E-04

2
1.78152E-02 7.98872E-02 3.97303E-01 6.44826E-01 6.46543E-01 3.02652E-01 1.04128E-01 3.20515E-02 7.57051E-03 1.67869E-03
3.69942E-04 5.85164E-05

3
1.26614E-01 2.68611E-01 5.35964E-01 6.86111E-01 3.72844E-01 1.29251E-01 4.46827E-02 1.07790E-02 2.41439E-03 5.34562E-04
1.17198E-04 7.13218E-06

4
6.27099E-01 4.80387E-01 5.09584E-01 3.40294E-01 1.43282E-01 4.79597E-02 1.19244E-02 2.70854E-03 6.03582E-04 1.32730E-04
2.58924E-05 0.0

5
1.19808E+00 6.59650E-01 1.95649E-01 9.45945E-02 2.49728E-02 9.07927E-03 2.10464E-03 4.73444E-04 1.04571E-04 2.24721E-05
2.50508E-06 0.0

6
1.12294E+00 6.45739E-01 1.14584E-01 4.19148E-02 7.80838E-03 1.97161E-03 4.27622E-04 9.51388E-05 2.05146E-05 2.28993E-06
0.0 0.0

7
7.41634E-01 6.74009E-01 1.56838E-01 4.98107E-02 6.41426E-03 1.42129E-03 3.14009E-04 1.30158E-04 1.21236E-04 2.63233E-05
2.79820E-06 0.0

8
5.42718E-01 5.58325E-01 2.43692E-01 3.39449E-02 8.50741E-03 1.79683E-03 3.88999E-04 8.27409E-05 1.83921E-05 4.19843E-06
3.76320E-07 0.0

9
5.31316E-01 2.25474E-01 1.37979E-01 7.93386E-02 2.96F73E-02 6.55283E-03 1.42768E-03 3.13046E-04 6.74551E-05 1.71112E-05
1.66704E-06 0.0

10
6.78710E-01 2.92500E-01 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

11
5.77052E-01 6.82024E-01 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0

12
8.99581E-02 5.44349E-01 2.58289E-01 1.07537E-01 4.0F444E-02 1.56467E-02 3.89468E-03 8.36820E-04 1.67603E-04 5.69064E-05
0.0 0.0

NUCLID = EU153J2F MAT NO = 1631
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GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N
1	4.71721E+00	0.0	0.0	2.77955E-03	2.46660E+00	2.24783E+00	0.0
2	5.15221E+00	0.0	0.0	2.58302E-02	2.87452E+00	2.25176E+00	0.0
3	6.27924E+00	0.0	0.0	1.23556E-01	3.95441E+00	2.20128E+00	0.0
4	7.17472E+00	0.0	0.0	3.19506E-01	4.77272E+00	2.08249E+00	0.0
5	7.13164E+00	0.0	0.0	4.48886E-01	4.70811E+00	1.97465E+00	0.0
6	6.35622E+00	0.0	0.0	4.76376E-01	4.20673E+00	1.67312E+00	0.0
7	6.09909E+00	0.0	0.0	5.36304E-01	4.22421E+00	1.33858E+00	0.0
8	6.87328E+00	0.0	0.0	8.68126E-01	5.45725E+00	6.35873E-01	0.0
9	9.08136E+00	0.0	0.0	1.56504E+00	7.45734E+00	5.89762E-02	0.0
10	1.24294E+01	0.0	0.0	2.52632E+00	9.90305E+00	0.0	0.0
11	1.72013E+01	0.0	0.0	4.34201E+00	1.24593E+01	0.0	0.0
12	2.40473E+01	0.0	0.0	7.64299E+00	1.64043E+01	0.0	0.0
13	3.25674E+01	0.0	0.0	1.20236E+01	2.05438E+01	0.0	0.0
14	4.46574E+01	0.0	0.0	1.93361E+01	2.53213E+01	0.0	0.0
15	6.18010E+01	0.0	0.0	3.13718E+01	3.04293E+01	0.0	0.0
16	7.92155E+01	0.0	0.0	4.24353E+01	3.67602E+01	0.0	0.0
17	1.11005E+02	0.0	0.0	7.00463E+01	4.09584E+01	0.0	0.0
18	1.65344E+02	0.0	0.0	1.33521E+02	3.18229E+01	0.0	0.0
19	1.18596E+02	0.0	0.0	1.05061E+02	1.35347E+01	0.0	0.0
20	2.59719E+02	0.0	0.0	2.39956E+02	1.97630E+01	0.0	0.0
21	2.06923E+02	0.0	0.0	1.94542E+02	1.23808E+01	0.0	0.0
22	9.79294E+02	0.0	0.0	9.61740E+02	1.75541E+01	0.0	0.0
23	1.22293E+02	0.0	0.0	1.17672E+02	4.47119E+00	0.0	0.0
24	9.66888E+01	0.0	0.0	9.10815E+01	5.60729E+00	0.0	0.0
25	1.40541E+02	0.0	0.0	1.34966E+02	5.57525E+00	0.0	0.0

GROUP	EL MU	EL REMOVAL	FLUX	CHI
1	7.36657E-01	4.61712E-02	4.97643E-02	0.0
2	7.14568E-01	3.94526E-02	2.62860E-01	0.0
3	7.25126E-01	4.12998E-02	5.34122E-01	0.0
4	6.67139E-01	4.12226E-02	7.79134E-01	0.0
5	5.21870E-01	5.45855E-02	6.02782E-01	0.0
6	3.75919E-01	5.18913E-02	6.93147E-01	0.0
7	2.70979E-01	6.71778E-02	6.93146E-01	0.0
8	1.56801E-01	1.05235E-01	6.93147E-01	0.0
9	7.56474E-02	1.39962E-01	7.65717E-01	0.0
10	3.47089E-02	1.87929E-01	7.71399E-01	0.0
11	1.65624E-02	2.45721E-01	7.65468E-01	0.0
12	6.72299E-03	3.13828E-01	7.65718E-01	0.0
13	4.39503E-03	3.87894E-01	7.71399E-01	0.0
14	4.39503E-03	4.75189E-01	7.65467E-01	0.0
15	4.39503E-03	5.66498E-01	7.65717E-01	0.0
16	4.39503E-03	6.52023E-01	7.71399E-01	0.0
17	4.39503E-03	7.43317E-01	7.65468E-01	0.0
18	4.39504E-03	1.40106E-01	7.65718E-01	0.0
19	4.39503E-03	1.88603E-01	7.71371E-01	0.0
20	4.39503E-03	1.47324E-01	7.65142E-01	0.0
21	4.39504E-03	1.69323E-01	7.65718E-01	0.0
22	4.39504E-03	4.80957E-02	7.71400E-01	0.0
23	4.39504E-03	8.96158E-02	7.65463E-01	0.0
24	4.39504E-03	1.00122E-01	7.65718E-01	0.0
25	1.01564E-02	0.0	7.71399E-01	0.0

TABLE OF INELA+(N,2N) MATRICES

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GROUP I, EXIT GROUP ** KK ** KK = I + J - 1

I	J= 1	2	3	4	5	6	7	8	9	10	11	12
1	5.68510E-04	2.28691E-02	1.61148E-01	5.47953E-01	6.54029E-01	5.39491E-01	2.23005E-01	7.20142E-02	2.14485E-02	4.98002E-03	1.09545E-03	2.32701E-04
2	1.09482E-02	7.86466E-02	2.99555E-01	6.51694E-01	6.55194E-01	3.07214E-01	1.05799E-01	3.25774E-02	7.69654E-03	1.70682E-03	3.76161E-04	5.95293E-05
3	7.89455E-02	2.62981E-01	5.53612E-01	7.11391E-01	3.88520E-01	1.44900E-01	4.65040E-02	1.12271E-02	2.51516E-03	5.56915E-04	1.22103E-04	7.48969E-05
4	4.51164E-01	4.78438E-01	5.67538E-01	3.68448E-01	1.52164E-01	5.20352E-02	1.29432E-02	2.94055E-03	6.55345E-04	1.44119E-04	2.81345E-05	0.0
5	9.90525E-01	6.28100E-01	1.77763E-01	1.23827E-01	4.07963E-02	1.05061E-02	2.43869E-03	5.48340E-04	1.21129E-04	2.60321E-05	2.90200E-06	0.0
6	9.20283E-01	6.83071E-01	5.07431E-02	1.08075E-02	5.99294E-03	1.73892E-03	4.15268E-04	9.55725E-05	2.20279E-05	6.01694E-06	0.0	0.0
7	3.73514E-01	6.78747E-01	2.01113E-01	7.36155E-02	9.24416E-03	1.95596E-03	3.10430E-04	6.70983E-05	1.41640E-05	3.29411E-06	0.0	0.0
8	4.07651E-02	2.93765E-01	1.95297E-01	8.11960E-02	1.76378E-02	5.82180E-03	9.92402E-04	1.92400E-04	4.15714E-05	1.03923E-05	2.47802E-07	0.0
9	0.0	0.0	2.65985E-02	2.03020E-02	5.37076E-03	4.94054E-03	1.38940E-03	3.08240E-04	6.68842E-05	1.46893E-05	0.0	0.0

NUCLID = EU155J2F MAT NO = 1632
INFINITE DILUTION CROSS SECTION

GROUP	TOTAL	FISSION	NU	CAPTURE	ELASTIC	INELA	N2N	EL MU	EL REMOVAL	FLUX	CHI
1	4.89960E+00	0.0	0.0	1.60833E-03	2.82354E+00	2.27446E+00	0.0	7.40043E-01	4.75492E-02	4.97643E-02	0.0
2	5.27413E+00	0.0	0.0	1.35780E-02	2.94630E+00	2.31425E+00	0.0	7.16200E-01	3.94964E-02	2.62860E-01	0.0
3	6.33850E+00	0.0	0.0	6.65150E-02	3.99984E+00	2.27214E+00	0.0	7.24069E-01	4.14534E-02	5.34122E-01	0.0
4	7.22207E+00	0.0	0.0	3.51401E-01	4.95504E+00	1.91162E+00	0.0	6.53442E-01	4.61836E-02	7.79134E-01	0.0
5	7.20999E+00	0.0	0.0	5.07666E-01	5.06710E+00	1.61522E+00	0.0	5.03901E-01	6.02713E-02	6.02782E-01	0.0
6	6.48966E+00	0.0	0.0	4.55732E-01	4.57372E+00	1.46001E+00	0.0	3.61908E-01	5.66587E-02	6.93147E-01	0.0
7	6.17072E+00	0.0	0.0	5.21619E-01	4.68714E+00	9.61786E-01	0.0	2.51302E-01	7.60431E-02	6.93147E-01	0.0
8	7.06467E+00	0.0	0.0	7.34043E-01	5.77402E+00	5.56605E-01	0.0	1.48644E-01	1.07682E-01	6.93147E-01	0.0
9	9.03394E+00	0.0	0.0	1.15894E+00	7.74716E+00	1.27846E-01	0.0	7.41691E-02	1.45293E-01	7.65717E-01	0.0
10	1.22999E+01	0.0	0.0	1.85658E+00	1.04413E+01	0.0	0.0	3.35267E-02	1.97012E-01	7.71399E-01	0.0
11	1.70202E+01	0.0	0.0	3.19095E+00	1.38292E+01	0.0	0.0	1.58408E-02	2.63524E-01	7.65468E-01	0.0
12	2.37643E+01	0.0	0.0	5.71155E+00	1.80527E+01	0.0	0.0	6.49127E-03	3.45169E-01	7.65716E-01	0.0
13	3.35857E+01	0.0	0.0	1.08314E+01	2.32543E+01	0.0	0.0	4.33835E-03	4.39789E-01	7.71398E-01	0.0
14	4.80386E+01	0.0	0.0	1.84277E+01	2.96110E+01	0.0	0.0	4.33835E-03	5.57175E-01	7.65468E-01	0.0
15	6.90363E+01	0.0	0.0	3.21722E+01	3.68641E+01	0.0	0.0	4.33835E-03	6.87500E-01	7.65717E-01	0.0
16	1.00011E+02	0.0	0.0	5.51479E+01	4.48631E+01	0.0	0.0	4.33835E-03	8.23364E-01	7.71400E-01	0.0
17	1.45336E+02	0.0	0.0	9.19146E+01	5.34208E+01	0.0	0.0	4.33835E-03	9.73480E-01	7.65468E-01	0.0
18	2.11691E+02	0.0	0.0	1.49689E+02	6.17927E+01	0.0	0.0	4.33835E-03	1.11444E+00	7.65719E-01	0.0
19	3.09167E+02	0.0	0.0	2.39360E+02	6.98079E+01	0.0	0.0	4.33835E-03	1.23663E+00	7.71399E-01	0.0
20	4.52408E+02	0.0	0.0	3.76144E+02	7.72639E+01	0.0	0.0	4.33835E-03	1.35854E+00	7.65468E-01	0.0
21	6.62149E+02	0.0	0.0	5.79135E+02	8.30145E+01	0.0	0.0	4.33835E-03	1.45132E+00	7.65717E-01	0.0
22	9.67682E+02	0.0	0.0	8.83999E+02	8.36832E+01	0.0	0.0	4.33835E-03	1.18964E+00	7.71399E-01	0.0
23	1.13272E+03	0.0	0.0	1.07522E+03	5.74962E+01	0.0	0.0	4.33835E-03	6.88401E-01	7.65467E-01	0.0
24	8.48201E+02	0.0	0.0	7.93906E+02	5.43755E+01	0.0	0.0	4.33835E-03	9.44275E-01	7.65717E-01	0.0
25	1.21371E+03	0.0	0.0	1.15704E+03	5.66693E+01	0.0	0.0	9.95854E-03	0.0	7.71399E-01	0.0

TABLE OF INELA*(N,2N) MATRICES

GROUP I J= EXIT GROUP ** KK ** KK = I + J - 1

I	J=	1	2	3	4	5	6	7	8	9	10
		11	12								
1		4.58094E-04	2.60836E-02	1.76055E-01	5.69556E-01	6.58059E-01	5.30821E-01	2.17058E-01	6.96376E-02	2.06710E-02	4.79169E-03
		1.05303E-03	2.23611E-04								
2		6.11370E-03	7.61018E-02	4.32939E-01	6.78935E-01	6.65823E-01	3.67418E-01	1.05024E-01	3.22050E-02	7.59207E-03	1.68194E-03
		3.70505E-04	5.87045E-05								
3		4.15812E-02	1.67543E-01	6.14638E-01	7.96603E-01	4.27633E-01	1.56047E-01	5.04847E-02	1.21561E-02	2.72058E-03	6.02077E-04
		1.31971E-04	8.43201E-06								
4		4.09693E-01	3.27073E-01	4.72827E-01	2.89192E-01	2.63114E-01	1.13366E-01	2.81702E-02	6.39684E-03	1.42531E-03	3.13411E-04
		6.33551E-05	0.0								
5		9.44107E-01	5.53819E-01	5.99605E-02	3.54601E-02	1.51189E-02	4.85525E-03	1.28365E-03	2.88326E-04	1.61647E-04	1.38139E-04
		2.25648E-05	0.0								
6		7.60161E-01	5.64316E-01	1.23194E-01	1.12965E-02	8.38686E-04	3.15226E-04	6.69330E-05	1.51069E-05	2.26949E-06	0.0
		0.0	0.0								
7		3.48497E-01	4.40678E-01	1.24238E-01	3.90084E-02	6.26209E-03	1.37413E-03	3.94685E-04	1.01452E-03	2.42803E-04	5.26248E-05
		9.56691E-06	0.0								
8		6.76709E-02	2.90969E-01	1.59822E-01	1.38032E-02	3.54327E-03	7.82055E-04	1.66271E-04	3.68209E-05	7.92418E-06	2.03295E-06
		2.08582E-07	0.0								
9		0.0	1.64851E-02	7.09904E-02	2.70342E-02	8.79553E-03	1.92502E-03	4.81958E-04	1.05627E-04	2.29916E-05	5.11767E-06
		6.01821E-07	0.0								