

ETOT

A Fortran IV Program to Process Data From the ENDF/B File To Thermal Library Format

Westinghouse Nuclear Energy Systems





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ABSTRACT

ETOT is a digital computer program which processes basic nuclear data in the ENDF/B format and produces library data in thermal library format. ETOT is written entirely in ASA standard FORTRAN and is designed to be computer independent. Along with printed results, the output includes punched cards in the format appropriate to the desired library.

1.0 INTRODUCTION

ETOT was developed to provide a program which would convert the ENDF/B (Reference 1, 2) data into the various thermal libraries. (The name, ETOT, is the mnemonic for ENDF/B TO Thermal.)

The basic frame of ETOT is based on ETOM-1 (Reference 3), a program to process the data from the ENDF/B file to the MUFT format.

In this report, a limited knowledge of the thermal codes (References 4-9) and the ENDF/B structure is assumed. Some ENDF/B notation will be used without a detailed explanation. Likewise the meanings of the thermal parameters will not be explained in detail but only the means of calculating them will be described.

2.0 PROGRAM DESCRIPTION

2.1 General Information

The program is divided into four general parts - input, resonance data, smooth data and output. These sections will be described separately in the following pages.

2.1.1 Average Values

ETOT may be asked to calculate group averaged cross sections. These are calculated as

$$\overline{\sigma} = \frac{\int \sigma(E) W(E) dE}{\int W(E) dE}$$

Here the integral is taken over the appropriate energy range (usually) the group) and W(E) is the weighting function. The present version of the program does the integration by using the specified interpolation schemes associated with the cross sections and the weighting function.

2.1.2 Weighting Functions

At present there are four possible weighting functions. These are 1/E, constant at a value of 1.0, input, or a combination of a Maxwellian distribution joined to 1/E.

For the combination of a Maxwellian distribution joined to 1/E, the joining point is taken at the energy 4kT. The Maxwellian distribution is given by:

$$W(E) = \frac{E}{(kT)^2} \exp(-E/kT)$$

where

k - Boltzmann's constant - 8.6167 x 10^5 ev/°K T - Temperature °K E - energy ev. E₁ - energy ev. at joining point The 1/E part of the function is given by C/E where

$$C = \frac{E_J}{(kT)^2} \exp(-E_J/kT)$$

2.1.3 Point Values

ETOT has to calculate point values of the cross sections. These are found by interpolation of the given function using the interpolation schemes given by the data.

2.2 Resolved Resonance Data

ETOT will calculate KATE type resonance parameters and/or calculate the microscopic cross sections using the single level Breit-Wigner formula.

The resonance parameters are located in file 2 of the ENDF/B tape. Since ETOT does not consider unresolved resonances, only the resolved parameters are read from the ENDF/B tape. This corresponds to the section where LRU=1.

The user inputs through the parameter IRES the number of resonances which will be represented by KATE type resonance parameters.

The KATE resonance parameters are given separately for each type of cross section, capture, fission and scattering. They will only be calculated when the remaining non-resonant cross section can be input to KATE as a single number, i.e. capture or fission being 1/v and scattering being a constant. Otherwise, the cross sections are calculated over the thermal library energy mesh as described in section 2.2.1.

2.2.1 Microscopic Cross Sections

The Breit-Wigner single level formulation is used when the microscopic cross sections are to be computed from the resonance parameters:

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$$\sigma_{c} = \sigma_{o} \left(\frac{|E_{o}|}{E}\right)^{1/2} \frac{\Gamma}{\Gamma} \frac{1}{1+x^{2}}$$

$$\sigma_{f} = \sigma_{o} \left(\frac{|E_{o}|}{E}\right)^{1/2} \frac{\Gamma_{f}}{\Gamma} \frac{1}{1+x^{2}}$$

$$\sigma_{g} = \sigma_{o} \frac{\Gamma_{n}}{\Gamma} \frac{1}{1+x^{2}} + \sqrt{\sigma_{o} \sigma_{p} g \frac{\Gamma_{n}}{\Gamma}} \frac{2x}{1+x^{2}} + \sigma_{p}$$

$$\sigma_{o} = \frac{(2.6036 \times 10^{6})}{|E_{o}|} \frac{\Gamma_{n}}{\Gamma} g \left(\frac{AWR + 1.008665}{AWR}\right)^{2}$$

$$\sigma_{p} = 4\pi R^{2}$$

where R is designated as AP in ENDF/B

$$x = \frac{2(E-E_{o})}{\Gamma}$$
$$g = \frac{2J+1}{2(2I+1)}$$
$$\Gamma = \Gamma_{n} + \Gamma_{\gamma} + \Gamma_{f}$$

The cross section is computed for each resonance of all isotopes in the material. The complete cross section is taken as the sum of the cross sections from each resonance times its relative isotopic abundance. If the cross sections are point values, the cross section is calculated at the energy point. If the cross sections are group averaged values, the cross section is calculated over 100 energy points of equal mesh spacing per group and then averaged over the group.

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All resonances are used when calculating the cross sections; however, it must be remembered that these cross sections are added to the smooth cross sections from file 3 only for points within the resonance region as defined by the ENDF/B tape.

2.2.2 KATE Resonance Parameters

The KATE resonance parameters are denoted* by E_o , Γ_n^o , Γ_a , K_1 , K_2 , and K_3 . If KATE resonance parameters are desired, ETOT will find the IRES largest resonances that are both within the thermal library range and within the ENDF/B defined resonance region. The resonances are compared as to their total peak cross section given by

$$\sigma_{o} = \frac{(2.6036 \times 10^{6})}{|E_{o}|} \frac{\Gamma_{n}}{\Gamma} g \left(\frac{AWR + 1.008665}{AWR}\right)^{2}$$

The IRES largest resonances are converted into KATE parameters if the background cross sections are 1/v. The background is composed of the remaining resonances (usually epithermal) and the smooth cross sections from ENDF/ β file 3.

The single level Breit-Wigner formula, when written using the KATE parameters is given by:

$$E \sigma_{a} = \frac{K_{1}\gamma}{(\Gamma_{a} + \Gamma_{n}^{o}E^{1/2})^{2} + 4(E - E_{o})^{2}}$$

$$E \sigma_{f} = \frac{K_{2}\gamma}{(\Gamma_{a} + \Gamma_{n}^{o}E^{1/2})^{2} + 4(E - E_{o})^{2}}$$

$$\sigma_{s} = \frac{K_{3}\gamma}{(\Gamma_{a} + \Gamma_{n}^{o}E^{1/2})^{2} + 4(E - E_{o})^{2}}$$

In the KATE report (ref. 9), Γ_n^o is denoted by n and Γ_a is denoted by γ .

where

$$\begin{split} \Gamma_{a} &= \Gamma_{\gamma} + \Gamma_{f} \\ \Gamma_{n}^{o} &= \frac{\Gamma_{n}}{|E_{o}|} \\ K_{1} &= \frac{(2.6036 \times 10^{6})}{|E_{o}|} \Gamma_{n} g \left(\frac{AWR + 1.008665}{AWR} \right)^{2} \\ K_{2} &= \frac{(2.6036 \times 10^{6})}{|E_{o}|} \Gamma_{n} g \frac{\Gamma_{f}}{\Gamma_{\gamma} + \Gamma_{f}} \left(\frac{AWR + 1.008665}{AWR} \right)^{2} \\ K_{3} &= \frac{(2.6036 \times 10^{6})}{|E_{o}|} \Gamma_{n} g \frac{\Gamma_{n}}{\Gamma_{\gamma} + \Gamma_{f}} \left(\frac{AWR + 1.008665}{AWR} \right)^{2} \end{split}$$

Since the resonance region usually will not cover the library energy mesh, the tails of the resonances which are put into KATE parameters must be subtracted from the smooth cross sections outside of the resonance region. Also, the scattering cross section does not include the interference term so it must be added to the smooth cross section for these resonances. This corresponds to the second term of the equation for σ_{s} in Section 2.2.1.

2.3 Smooth Cross Sections

The information required for the thermal codes includes the capture, fission, and scattering cross sections as well as the fission neutron yield and the average cosine of scattering. These values can be calculated as group averaged values or point values depending on the input option IAV.

2.3.1 Scattering

In the thermal range, the scattering cross section is taken as the elastic cross section which is obtained from ENDF/B file 3, MT=2.

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2.3.2 Capture

The basic smooth capture is taken as σ_{γ} , but if any other "capturelike" cross section is non-zero, it is added to the capture cross section. If a material index is given in File 1, ETOT will see if the (n,γ) cross section is tabulated. If it is not, and σ_{a} is given, it will calculate σ_{c} by $\sigma_{c} = \sigma_{a} - \sigma_{f}$. σ_{a} is obtained from ENDF/B file 3, MT=27 and σ_{γ} is obtained from ENDF/B file 3, MT=102.

2.3.3 Fission

The fission cross section is taken from ENDF/B file 3, MT=18.

2.3.4 Neutrons per Fission

The number of neutrons per fission is taken as a single point value since it does not vary in the thermal range. v is obtained from ENDF/B file 1, MT=452.

2.3.5 Average Cosine of Scattering

The average cosine of scattering is taken as a point value since it usually does not vary in the thermal range. μ is obtained from ENDF/B file 3, MT=251. If μ is not given on the ENDF/B tape, then

 $\overline{\mu} = \frac{2}{3 \text{ AWR}}$

where AWR is the atomic mass ratio taken from ENDF/B file 1.

2.3.6 Epithermal Scattering and Epithermal Average Logarithmic Energy Change per Collission

Since ETOT cannot find values outside of the energy structure, the epithermal scattering is taken to be equal to the scattering in the highest group. The average logarithmic energy change is calculated using the approximation

$$\xi = 1 + \frac{(AWR - 1)}{2} \log_{e} (\frac{AWR - 1}{AWR + 1})$$

where AWR is the atomic mass ratio taken from ENDF/B file 1.

2.3.7 Extension of the Cross Sections

Frequently the cross sections are not tabulated to a low enough energy on the ENDF/B tape. Rather than assume these cross sections are zero, ETOT extrapolates and calculates these values from a second degree polynomial fitted by least squares to the last ten points for which the cross section is known. The polynomial is of the form $a_0 + a_1 E + a_2 E^2$ and it is fit to the values $\sqrt{E} \sigma_a$, $\sqrt{E} \sigma_f$ and σ_{tr} where $\sigma_{tr} = (1 - \overline{\mu})\sigma_s$. These coefficients correspond to the KATE smooth coefficients designated as R_{ij} .

3.0 EXECUTION INFORMATION AND OUTPUT DESCRIPTION

This section is written so as to be reasonably self-contained in order to provide sufficient information to run problems with the program. The intent is that this section will provide the user with a program running prescription. The other sections of this report should be consulted where further details are required.

3.1 Summary

ETOT is a program to process data from the ENDF/B file and produce thermal library decks for ARK, LASER, TEMPEST, THERMOS and KATE.

3.2 Limitations

Due to the finite storage capacity of the computer, certain limitations are necessary. It is felt that these restrictions are not presently confining. The program is constructed such that these limitations can be easily relaxed to accommodate future needs.

3.2.1 Group Restrictions

- 1) Maximum number of groups 310
- Maximum number of resonances representable in KATE parameters 4 (NOTE: This is a KATE restriction).

3.2.2 ENDF/B Data Restrictions

3.2.2.1 File 1 - General Information

- 1) $_{\rm V}$ Representation by a polynomial: maximum number of coefficients 10.
- 2) v Representation by a tabulation: maximum number of tabulated points - 4000; maximum number of interpolation ranges - 50.

3.2.2.2 File 2 - Resonance Parameters

1) Maximum number of resolved resonances - 500.

3.2.2.3 File 3 - Smooth Cross Sections

- 1) Maximum number of points for each tabulation 4000
- Maximum number of interpolation ranges for each tabulation -50.

3.2.3 Input Option Restrictions

- Maximum number of points in input weighting function tabulation -4000.
- Maximum number of interpolation ranges for the input weighting function tabulation - 50.

3.3 Input Description

In the following input list, the various items are described and the columns to be used for each item designated. Standard FORTRAN input is used. For added convenience the actual program formats and symbols are also listed. The various options are more fully described in the next section.

Card No. 1 (20A4)

Item	Columns	Name	Description
1	1-80	LABEL	General output label
Card No. 2	(715, 13X, E	12.5)	
Item	Columns	Name	Description
1	1-5	INALL	0=only cards number 1-3 are read in. l=all input cards are read.

Item	Columns	Name	Description
2	6-10	MCODE	Program for which the library is intended =1 KATE =2 THERMOS =3 ARK =4 TEMPEST =5 LASER
3	11-15	NMAT	Number of materials
4	16-20	IREW	O=ENDF/B tape is not rewound by ETOT. 1=ENDF/B tape is rewound by ETOT.
5	21-25	IPUN	0=no punched output 1=punched output
6	26-30	IAPX	0=do not try to fit cross sections to 1/v l=try to fit cross sections to 1/v
7	31-35	IRES	Number of resonances which are to be out- put by resonance parameters.
8	49-60	EPSLON	Maximum relative deviation for 1/v fit.
9	61-72	TEMP	Temperature for Maxwellian distribu- tion.

Card No. 2 (715, 13X, E12.5) (cont'd.)

Card No. 3 (4(215, 1X, A4)) or (1215)

•

Item	Columns	Name	Description
1	1-5	MATNOS	ENDF/B tape material number
2	6-10	MATIDS	Principle thermal material number
3	12-15	MAT2ID	Secondary thermal material identifica- tion number. Alphanumeric (A4) for MCODE=1, 3 & 4 and numeric for MCODE= 2 or 5.

The above set is repeated NMAT times with four sets per card.

Card No. 4(515) (If INALL=1)

Item	Columns	Name	Description
1	1-5	IAV	If=0, cross sections will be group averaged If=1, cross sections will be point values.
2	6-10	IEU	Group structure option.
3	11-15	IW	Type of weighting function
4	16-20	MAXG	Number of groups
5	21-25	IGRAPH	Graphing option, graphs made if > 0 .
6	49-60	EPSMIN	Minimum error for combining two TAB1 functions
7	61-72	EPSMAX	Maximum error for combining two TAB1 functions

Card No. 5(415) (If INALL=1)

Item	Columns	Name	Description
1	1-5	NDFB	ENDF/B tape unit
2	6-10	IDTAP	ENDF/B tape ID
3	11-15	MODE	Mode of ENDF/B tape =1 binary =2 BCD
4	16-20	LTAPE	Library tape unit If=O, no library written.

Card No. 6

This is actually a card set and is necessary only if IW=3. The set consists of the desired weighting function as tabulated points plus the interpolation tables defining the interpolation scheme to be used with the tabulated points. The weighting function must be given from low to high in energy. The format of the card set is a standard ENDF/B TAB 1 record.

Card 6.1 (44X, 2111)

Item	Columns	Name	Description
1	45-55	N1	Number of interpolation ranges
2	56-66	N2	Number of weighting function points.

Card	6.2 -	(6I11)	

ard 6.2 -	(6111)		
Item	Columns	Name	Description
1	1-11	NBT(1)	Last point number in 1st interpolation range.
2	12-22	JNT(1)	Interpolation scheme for 1st range
3	23-33	NBT(2)	Last point number in 2nd interpolation range.
4	34-44	JNT(2)	Interpolation scheme for 2nd range.
÷			
etc.			
2*N1-1		NBT (N1)	Last point number in Nl interpolation range.
2*N1		JNT(N1)	Interpolation scheme for the N1 range.

•

Card 6.3 - ... (6E11.4)

Item	Columns	Name	Description
1	1-11	BLOK3(1)	First energy point (<u><</u> lowest energy in group structure).
2	12-22	BLOK4(1)	Weight at this energy.
÷			
etc.	using N2/3	cards	
:			
2*N2-1		BLOK3(N2)	Last energy point (> highest energy in group structure).

Card 6.3 - ... (6E11.4) (cont'd.)

Item	Columns	Name	Description
2*N2		BLOK4 (N2)	Weight at this energy.

Card No. 7

This is actually a card set and is necessary only if INALL=1 and IEU=1,2,3,6,7, or 8. If IEU=1, the set is the energy breakpoints from low to high energy. If IEU=2, the set is the speed breakpoints of the structure given from low to high velocity. If IEU=3, the set is the energy points from low to high energy. If IEU=6, the set is the description of the energy point mesh in terms of the increments and endpoints. If IEU=7, the set is the speed points from low to high in energy. If IEU=8, the set is the description of the speed point mesh in terms of the increments and endpoints. An example best clarifies the increment input. If the input consists of XX(1)=0.0, XX(2)=.005, XX(3)=.1, XX(4)=.05, XX(5)=1.5, the energy array would begin at 0.0, step .005 for each point until .1 and then step .05 until 1.5. See Section 3.4.8 for further explanation.

An energy point or a group breakpoint of zero is allowed.

Card 7.1 (6E11.4)

Item	Columns	Name
1	1-11	XX(1)
2	12-22	XX(2)
: etc. using	g (MAXG+1)/6	cards
•		
MAXG		XX(MAXG)
MAXG1		XX(MAXG1)

NOTE: (MAXG+1)/6 cards must be used, even if blanks must be used.

3.4 Available Options

3.4.1 Read Input Option (INALL)

This option is designed to facilitate stacked cases where several materials are to be processed in about the same way. Complete input is necessary only with the first case (INALL=1) and subsequent cases need only the first few cards (INALL=0).

3.4.2 Thermal Code Option (MCODE)

Since actual processing is the same, this merely controls the punched output formats. The available options are:

1	KATE
2	THERMOS
3	ARK
4	TEMPEST
5	LASER

3.4.3 Tape Rewind Option (IREW)

This is to provide running efficiency by a single pass over the ENDF/B tape during a stack of cases. The first case should request a tape rewind (IREW=1) but subsequent cases should not.

3.4.4 Punch Option (IPUN)

This option merely selects whether or not the results should be punched out on cards.

3.4.5 1/v Approximation Option (IAPX)

This is an option to signal that the cross section is to be tested for a 1/v fit within a relative error of EPSLON.

3.4.6 Resonance Parameter Option (IRES)

This corresponds to the maximum number of resonances which will be given as resonance parameters if the remaining cross section is 1/v. If the remaining cross section is not 1/v, no resonances will be specified by parameters.

3.4.7 Average Option (IAV)

This option determines whether the cross sections will be group averaged (IAV=0) or point values (IAV=1).

3.4.8 Energy Structure Option (IEU)

This option permits the standard thermal structures to be internally generated or allows the structure to be input in a variety of ways.

IEU=1	Input energy breakpoints
IEU=2	Input speed breakpoints
IEU=3	Input energy points
IEU=4	Standard LEOPARD 172 points
IEU=5	Standard LEOPARD 309 points
IEU=6	Energy increment input
IEU=7	Speed points input
IEU=8	Speed increment input
IEU=9	LASER standard 35 points
IEU=10	TEMPEST and KATE standard 246 points.
IEU=11	THERMOS standard 30 points

The speeds as input are in fractions of 2200 m/sec and the energies are in electron volts. The increment inputs are a shortened form by which the structures can be given. The first number is the initial value, the second is the increment, the third is the final value for this increment and the initial value for the next increment, etc. For example, 0.0, 0.1, 0.3, 0.2, 0.9

implies the point values:

0.0, 0.1, 0.2, 0.3, 0.5, 0.7, 0.9

The breakpoints are the end points of the groups while the points are the center points of the group.

3.4.9 Weighting Function Option (IW)

This option chooses the weighting function to be used. The following four are currently available and other built-in functions can be easily added in the future.

IW=1	1/E					
IW=2	1.0					
IW=3	Input					
IW=4	Combination	of	1/E	plus	Maxwellian.	

3.4.10 Graph Option (IGRAPH)

This option allows for the absorption, fission and transport cross section to be graphed (IGRAPH > 1). If IGRAPH=9 only the 9" hard copy will be made and if IGRAPH=35 only the 35 mm film will be used. For any other value, both will be made.

3.4.11 Tape Mode Option (MODE)

The ENDF/B may be either in the standard binary or BCD mode. For compactness and running efficiency, it is recommended that the binary mode be used where possible.

3.5 Output

ETOT gives a very thorough listing of the cross sections and values associated with them, graphs of the absorption, fission and transport cross section, and punches cards in KATE, TEMPEST, LASER, THERMOS, or ARK format.

3.5.1 Printed Output

ETOT first lists the materials for which cross sections are to be found and then gives a summary of the input options. The group structure will then be listed. The energy is in e.v. and the speed is given as fractions of 2200 m/sec. If applicable, the weighting function will then be given.

The data description from file 1 is listed.

The potential scattering and the cross sections resulting from the resonance parameters are then listed.

The smooth coefficients are found and listed for the transport, fission and absorption cross sections.

ETOT will then give the final listing of the cross sections. The first set is the energy (E), square root of the energy (SQRT(E)), absorption cross section (SIGA), fission cross section (SIGF), capture cross section (SIGC), transport cross section (SIGTR), scattering cross section (SIGS) and the average cosine of the scattering angle (MUBAR) for each group, the thermal value of the number of neutrons per fission (NU), and the epithermal values of scattering (XS(EPI)) and average logarithmic energy change per collision times the scattering (XI*XS(EPI)). In the second set is the energy (E), square root of energy (SQRT(E)), number of neutrons per fission times the fission cross section (NUSIGF), the capture to fission ratio (ALPHA), the number of neutrons per absorption (ETA), square root of energy times the absorption cross section (RTE*SIGA), and the square root of energy times the fission cross section (RTE*SIGF).

The punched output is also listed.

3.5.2 Graphical Output

An option is available in ETOT to graph the transport, absorption

3-10

and fission cross sections. This is done using the S-C 4020 film plotting equipment.

3.6 Sample Problem Input

The sample problem processes data for ENDF/B material number 1104 and produces a 246 point TEMPEST deck. The 1104 data is that present on ENDF/B tape 201.

3.7 Sample Problem Output

The sample problem was run on a CDC-6600 using the scope 3.1 operating system. The output is on the following pages and is self-explanatory.



Westinghouse Electric Corporation DATA CODING FORM

		E	гот	S	AMPL	E PI	ROBLE	EM			<u>-</u>								A	NAL	YST.		C.	L.	Веа	ard	73		76		<u>-</u>	DAT	'Е	
												PI	HONE	E					L.	S. N	10				LAB	EL [SHE	ET	1
7	89	10	11 12	2 13	14 15 1	6.17	18 19 20	21 22	2 23	24 25	i 26	27 28	29 30	31	32 33	34	35 30	5 37 3	8 39	40	41 42 4	13 44	45 48	5 47 4	B 49 50	51 52	53 54	1 55 5	6 57 5	68 59 60	61 62	63 64	65 68	67 6 8
:			ET	'OT	SAM	PLE	PROF	LEN	1				2 1					ΡU	J-2	39	END	F/B	11	L04										
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5/27/71

ETUT SAMPLE PROBLEM

ENDF/R 1104

PU-239

TEMPEST

THERMAL MATERIAL PU39 FIHST IN 4 ENUF/R MATERIAL 1104

ENDF/B TAPE NUMBER = 201

ENDF/B-II TAPE 201 REVISION 3 8-28-70 EPSMAX = 0.50E-04ENDF/B TAPE LABEL =

EPSMIN = 0.10E-04

PUNCH OPTION = 1

NO RESONANCE PARAMETERS WILL BE CALCULATED

THE CROSS SECTIONS ARE POINT VALUES

THE CROSS SECTIONS WILL BE GRAPHED

*** EIOI ***

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JGE	.140580	.243492	.314347	.371941	.421741	• 466252	.506870	.544466	.579628	.612776	.644220	.674200	.702902	.730477	.757049	.782718	.A07573	.831685	.855117	.877924	.900154	.921847	.943042	.963771	.984063	1.003945	1.023441	1.042572	1.061359	1.079818	1.097968	1.115822	1.133395	1.150700	1.14748	1.184551
SPEED RAN	0.00000	.140580 -	.243492 -	• 314347 •	.371941 -	- 141141	.466252 -	.506870	•544466 -	579628	.612776 -	• 644220 -	.674200 -	- 202902 .	.730477 -	.757049 -	.782718 -	.807573 -	- 831685 -	.855117 -	. 877924 -	- 900154	.921847 -	.943042	. 963771 -	.984063	1 • 003945 •	1.023441 -	1.042572 -	1.061359 -	1.079818 -	1.097968 -	1.115822 -	1.133395 -	1.150700 -	1.167748 -
ANGE	004000.	.001500	• 005200	005600.	•004500	•005500	.006500	.007500	.008500	003600.	.010500	.011500	012500	004510.	.014500	.015500	.016500	.017500	.018500	.019500	.020500	.021500	005220.	.023500	.024500	.025500	.02650.	005220.	.028500	004620.	030500	031500	.032500	004860.	.034500	.035500
ENERGY R	0.00000	.000500 -	.001500 -	• 002200 -	• 003200 -	• 004500 -	• 005500 •	• 006500 -	• 007500 -	. U08500 -	- 00360n -	• 010500 -	• U11500 -	. U12500 -	• 013500 -	- U]4500 -	• U15500 -	- 016500 -	. U17500 -	- U18500 -	• 019500 -	. 020500 -	 U21500 - 	. U2250n -	- 003E20 -	• 02450n -	• U25500 -	• U26500 -	- U27504 -	.U28500 -	- U29504 -	• U3050n -	- U31500 -	• 03220 •	• 03350n -	• 034200 -
SPEE() PUINT	0.000000	.198A11	.281161	.344350	.397661	•44554	.486985	•526004	•562322	596432	6286¥5	.659380	.6887UU	•7168č2	.143881	146691.	.195243	112618.	.843482	.866596	.889108	.911065	. 932505	.953463	0/6679.	•9940b3	1 • 01374 U	1c0880.1	1.052007	1.070628	1.0889J1	1.106931	1.124643	1.142080	1.159256	1.176180
ENERGY PUINT	0.00000.0	.001000	.002000	.003000	.004000	•005000	.006000	.007000	.008000	000600.	.010000	.011000	.012000	.013000	.014000	.015000	.016000	.017000	.018000	.019000	.020000	.021000	.022000	.023000	.024000	.025000	.026000	.027000	.028000	.029000	.03000	•031000	.032000	•033000	.034000	.035000
GROUP		V.	ſ	4	r	¥	7	α	0	10	11	12	5	14	15	16	17	ыl	61	C C	ر	د ر ک	53	74	ሆ ሲ	75	27	מ גי	σ	30	١٤	32	33	34	Э С	36

NGE	1.201119	1.217462	1.233588	1.249506	1.265224	1.280748	1.296087	1.311247	1.326233	1.341051	1.355708	1.370208	1.384556	1.398757	1.412815	1.602863	1.721751	1.832944	1.937767	2.037203	2.132007	2.222771	219905.5	9999998	2.475173	2.553770	2.630018	2.704118	2.776240	2.846536	2.915137	2.982160	3.047710	3.111880	3.174752
AA	1	f	ŧ	ŧ	ŧ	F	t	ŧ	t	ŧ	T	ł	ł	I	F	•	T	I		1	ŧ	ŧ	ł	ŧ	ŧ	ł	ŧ	ŧ	ŧ	ł	t	r	ł	Ŧ	
SPEED	1.184551	1.201119	1.217462	1.233588	1.249506	1.265224	1.280748	1.296087	1.311247	1,326233	1,341051	1,355708	1,370208	1.384556	1.398757	1.412815	1.602863	1,721751	1.832944	1,937767	2.037203	2.132007	2.222771	2.309972	2.393998	2.475173	2.553770	2.630018	2.704118	2.776240	2.846536	2.915137	2,982160	3,047710	3.111880
ANGE	.036500	004160.	.038500	.039500	.040500	.041500	.042500	005540	.044500	.045500	.046500	.047500	04H500	.049500	.05050.	.065000	.075000	.085000	.095000	.105000	.115000	.125000	.135000	.145000	 155000 	.165000	.175000	.185000	•195000	.205000	.215000	.225000	.235000	.245000	.255000
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ENERG	•035500	 U3650n 	.037500	.038500	.039500	-04020u	.041500	.042500	.043500	.044509	.045500	• 04650n	. 047500	.048500	.049500	-U50500	.065000	.075000	.08500	.095000	.105000	.115000	-12500n	•13500n	.145000	.155000	.165001	.175000	•18500n	000S6T.	.205000	.215000	.225000	.235000	.245000
SPEED PUINT	1.192864	1.209318	1.225551	1.241572	1.257389	1.273010],288441	1.303689	1.318761	1,333663	1.348400	1.362977	1.377401	1.39167	1.405804	1.539981	1.6633/0	1.778217	1.886084	1.988107	2.045144	2.177862	2.266791	2.352360	2.434924	2.514778	2.592174	2.667325	2.740415	2.811608	2.881041	2.948839	3.015113	3.079962	3.1434/3
ENFRGY PUINT	.03600	.03700U	.03800	000680.	.04000	•041000	. 42000	.043000	.044000	.04500	.046000	.047000	.048000	.049000	.050000	• 060000	.070000	.090080	000000.	.100000	.110000	.12000J	.130000	•14000	.150000	.160000	.170000	 IRADOU 	.190000	.20000	.210000	.220000	.230000	.240000	.250000
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6E	3.236404	3.296902	3.356311	3.414686	3.472079	3.528540	3.584111	3.638833	3.692745	3.745880	3.798273	3.849953	3.900947	3.951284	4.000988	4.050082	4.098587	4.146526	4.193916	4.240777	4.287126	4.332979	4.378351	4.423259	4.467715	4.511733	4.555325	4.598505	4.641282	4.683669	4.725676	4.767313	4.808589	4.849514	4°890096
SPEED RAN	3.174752 -	3.236404 -	3.296902 -	3.356311 -	3.414686 -	3.472079 -	3.528540 -	3.584111 -	3.638833 -	3.692745 =	3.745880 -	- E738273 -	3.849953 -	3.900947 -	3.951284 -	4 • 000988 -	4.050082 -	4.098587 -	4.146526 -	4,193916 -	4.240777 -	4.287126 -	4.332979 -	4.378351 -	4.423259 -	4.467715 -	4.511733 -	4.555325 -	4.598505 -	4.641282 -	4.683669 -	4.725676 -	4.767313 -	4,808589 -	4.849514 -
ANGE	.265000	.275000	.285000	.295000	.305000	.315000	.325000	.335000	.345000	.355000	.365000	.375000	.385000	•395000	.405000	.415000	.425000	.435000	.445000	.455000	.465000	.475000	.485000	.495000	.505000	.515000	.525000	.535000	•545000	.555000	.565000	.575000	.585000	.595000	.605000
ENERGY RI	.255000 -	- 265000 -	.275000 -	.28500n -	-295000 -	- 305000 -	•315000 -	.325000 -	• 33500n -	- 345000 -	• 355000 -	- 36500n -	- 37500n -	.38500n -	- 195000 -	- 402000 -	• +12000 -	.425000 -	.435000 -	.44500n -	.45500n -	.46500n -	.475000 -	.48500n -	- +95nnn -	•505n00 -	-515000 -	•52500n -	.5350nn -	- 545000 -	- 000334°	- 5650nn -	- 00057c.	•58500n •	- 00036s.
SPEED PUINT	3.205720	3.266793	3.326739	3.385624	3.443502	3.500423	3.556434	3.6115/6	3.665888	3.719407	3.772168	3.824200	3.875534	3,426147	3.976214	4.025610	4.074401	4.122620	4 .17 0289	4.217412	4.264014	4.310113	4.355744	4 . 400862	4 • 4 4 5 5 4 2	4.489778	4.533541	4.576966	4 • 619943	4 • 662524	4.704760	4.746540	4.187996	240958.4	4.849848
ENERGY PUINT	.260000	.270000	.28000J	.290000	.300000	.31000U	.320000	.330000	.340000	.350000	.360000	.370000	.38000U	.390000	.400004	•410009	.420000	.430000	.440000	.450000	.460000	.470000	.4800rU	.49000	-5000CU	.51000U	.520000	.530000	 540000 	.550000	.540000	.570000	.580000	.590000	.600000
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SPEED RAN	4.890096 -	4.930345 -	4.970267 -	5.009872 -	5,049165 -	5,088156 -	5.126849 -	5,165253 -	5.203374 -	5.241217 -	5.278789 -	5.316095 -	5,353142 -	5,389934 -	5.426476 -	5.462774 -	5.498832 -	5.534655 -	570248 -	5.405615 -	5.640761 -	5.675688 -	5.710402 -	5.744907 -	5.779205 -	5. A13301 -	5.847198 -	5,880900 -	5.914409 -	5.947730 -	5,980865 -	6.013818 -	6,046591 -	6.079188 -	6.111610 -
ANGE	.615000	.625000	.635000	.645000	.655000	.665000	.675000	.685000	.695000	.705000	.715000	.725000	.735000	.745000	.755000	.765000	.775000	.785000	.795000	. R (5000	.815000	. R25000	, R35000	. 845000	.855000	.865000	. 875000	.885000	.895000	.905000	.915000	•925000	.935000	.945000	.955000
ENERGY R	- 000209.	•61500g -	- 00022q•	.63500n -	. 64500r -	• 65500n -	 665000 	- 67500 -	.6850nn -	. 69500n -	.705000 -	./15000 -	- 7250nn -	 735000 - 	- 745nnr -	•755non -	./650nn -	- 775000 -	.785nnn -	- 10059j -	- 805000 -	.815000 -	- 82500n -	- 43500n -	- 845000 -	- 855000 -	- 865rnn -	- 875000 -	- 885000 -	- 895nnn -	- 405000 -	- J5000 -	• 425001 -	. 935000 -	.945000 -
SPEE0 PUINT	4.910262	4.950346	4.990109	5 . 029551	5.068694	5.107539	5.146087	5.184349	5.222330	5.260031	5,297475	5.334651	5.371569	5.408240	5 . 444655	5.480833	5.5167/3	5.552480	5.587960	5.623216	5.658252	5.693072	5,127681	5.762081	5.1962/3	5.830274	5.8640/3	5.897678	5.931093	5.964321	5.947364	6.030221	6.062911	6.095420	6.127757
ENERGY POINT	.610000	•620004	.630000	.640000	.650000	. 660000	.670009	.680000	.690000	.700000	.710000	.720000	.730000	.740000	.750000	.760000	.770000	.7R000V	000067.	.400000	.810000	.820000	, 830000	.840000		• B60000	• 87000U	 	000084.	• 90000	000016.	000026.	0000E6 •	.94000	•9500CV
GROUP	107	104	109	110	111	211	٤11	114	115	116	117	113	611	120	וכו	22	521	124	125	126	127	221	129	130	131	132	EEI	134	ן אַ ד ר	136	137	a ال ا	139	140	141

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GROUP STRUCTURE

<u>GF</u>	6.175945	6.207862	4.239616	6.271209	F.302644	6.333923	6.365048	6.396021	6.426846	6.457523	6.488055	6.518444	6.548693	6.578802	6.608774	6.638610	6.668313	6.697885	4.727326	6.756639	4.785826	6.A]4887	6.843825	6.872642	6.901337	6,929915	6.958374	6.986718	7.014947	7.043063	7.071068	7.098962	7,126746	7.154423	7.181993
SPEED RAN	6.143862 -	6.175945 -	6.207862 -	6.239616 -	e.271209 -	6.302644 -	6.333923 -	6.365048 -	6.396021 -	6.426846 -	6.457523 -	6.488055 -	6.518444 -	6.548693 -	6.578802 -	6.608774 -	6.638610 -	6.668313 -	6.697885 -	6.727326 -	6.756639 -	6.785826 -	6.814887 -	6.843825 -	6.872642 -	6.901337 -	6.929915	6.958374 -	6.986718 -	7.014947 -	7.043063 -	7.071068 -	7.098962 -	7.126746 -	7.154423 -
ANGE	.965000	.975000	.985000	.995000	1.005000	1.015000	1.025000	1.035000	1.045000	1.055000	1.065000	1.075000	1.085000	1.095000	1.105000	1.115000	1.125000	1.135000	1.145000	1.155000	1.165000	1.175000	1.185000	1.195000	1.205000	1.215000	1.225000	1.235000	1.245000	1.255000	1.265000	1.275000	1.285000	1.295000	1.305000
ENERGY R	.955000	- 96500n -	- 97500n -	- 98500n -	- 000566.	1.00500n -	1. U15000 -	1.U2500n -	1.035000 -	1.045000 -	1.055000 -	1.065000 -	1.075000 -	l.085000 -	1.095000 -	1.105000 -	1.115000 -	1.125007 -	1.135000 -	1.14500n -	1.155000 -	1.165000 -	1.175009 -	1.185009 -	l.195000 -	1.205000 -	1.215000 -	1.225009 -	1.235000 -	1.245000 -	1.255000 -	1.265000 -	1.27500g -	1.285000 -	1.295000 -
SPEED POINT	6.159924	6.191924	6.223759	6.255432	6.246946	6.318303	6.349504	6.3AU\$53	6.41145Z	6.442203	6.472807	6.50326H	6.533586	6.563704	6.543805	6.623709	6.653478	6.6A3115	6.712622	6.741999	6.771248	6.8003/2	6.829312	6.858249	6.8870U4	6.915641	6.944159	6.972561	7.000847	7.029019	7.057080	7.085028	7.112868	7.140598	7.168221
ENERGY POINT	r00046.	U00074.	.9800rU	000066.	1.000000	1.010000	1.02000U	1.03000U	I.040000	1.050000	1.060000	1.070000	1.680000	1.090000	1.100000	1.110000	1.120000	1.130000	1.140000	1.150000	1.160000	1.170000	1.180000	1.190000	1.200000	1.210009	1.220000	1.230000	1.240000	1.250000	1.250000	1.270000	1.2A000J	1.290000	1.30000
60089	147	F 4 I	144	145	146	147]48	149	ίs Γ	151	с С П	۲ ۲ ۲	154	ן ת ת	156	157	15,2	159	1 CO	141	162	163	164	ן 6 ה	166	167	168	169	170	171	172	173	174	175	175

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GE	7.209458	7.236818	7.264076	165195.7	7.318286	7.345241	7.372098	7.398857	7.425520	7.452087	7.478560	7.504939	7.531226	7.557422	7.583527	7.609543	7.635470	7.661309	7.687061	7.712728	7.738309	7.763806	7.789219	7.814550	7.839799	7.864967	7.890055	7.915063	266666.7	7.964844	7.989618	8.014315	8.038937	8.063483	R.087955
SPEED RAN	7.181993 -	7.209458 -	7.236818 -	7.264076 -	7,291231 -	7.318286 -	7.345241 -	7.372098 -	7,398857 -	7.425520 -	7.452087 -	7.478560 -	7.504939 -	7.531226 -	7.557422 -	7.583527 -	7.609543 -	7.635470 -	7.661309 -	7,687061 -	7.712728 -	7.738309 -	7.763806 -	7.789219 -	7.814550 -	7.839799 -	7.864967 -	7.890055 L	7.915063 -	7.939992 -	7.964844 1	7,989618 -	R.014315 -	8.038937 -	A.063483 -
ANGE	1.315000	1.325000	1.335000	1.345000	1.355000	1.365000	1.375000	1.385000	1.395000	1.405000	1.415000	1.425000	1.435000	1.445000	1.455000	1.465000	1.475000	1.485000	1.495000	1.505000	1.515000	1.525000	1.535000	1.545000	1.555000	1.565000	1.575000	1.585000	1.595000	1.605000	1.615000	1.625000	1.635000	1.645000	1.655000
ENERGY H	1.305000 -	1.315000 -	1.325000 -	1.33500n -	1.345000 -	1.35500n -	1.365000 -	1.375000 -	1.385000 -	1.395000 -	1.4050nn -	l.415000 -	1.425000 -	1.435000 -	1.44500n -	l.455000 -	1.465000 -	1.475nnn -	I.485000 -	l.495000 -	1.505000 -	1.515000 -	1.525000 -	l.53500n -	1.545000 -	1.555nnn =	1.565000 -	1.57500n -	1.585000 -	1.5950nn -	1.605000 -	1.615000 -	1.625000 -	1.03500n -	1.6450 <u>00</u> -
SPEED PUINT	1.195739	141622-7	7.250460	7.277660	7.304771	7,331770	7.358682	7.385489	7.412200	7.438815	7.465335	10/104.7	7.518094	7.544335	7.570480	7.596546	7.622517	7.648400	7.674190	7.699905	7.725529	7.751064	1.1765<3	7.801895	7.827145	7.852343	7.877521	7.402564	7.921531	7.952428	7.977240	8.001970	H.U26636	8.051219	8.075729
ENERGY POINT	1.310000	1.320000	1.330000	1.340000	1.350000	1.360000	1.370000	1.3 A0000	1.390000	1.400000	1.410000	1.420000	1.430000	1.440000	1.450000	1.460000	1.470000	1.48000U	1.490000	1.50000U	1.510000	1.520000	1.530000	1.540000	1.550000	1.560000	1.570000	1.580000	1.590000	1.60000U	1.610000	1.620000	1.630000	1.640000	1.650000
90089	177	178	173	lβΩ	IRI	182	1 A 3	184	1 អភ	186	187	189	189	1 6 1	191	261	193	194	195	196	197	194	6 6 l	いひど	201	202	503	204	205	205	207	208	209	J L C	L L c

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	drifta9	FNERRY PUINT	SPEED PUINT	ENERGY NJ	ANGE	SPEED RAP	JGF
		1.660000	8.100103	1.055000 -	1.665000	R.087955 -	R.112353
	۲ I م	1.670000	8.124525	1.665000 -	1.675000	A.112353 -	8.136678
	214	1.640000	8.148814	1.675000 -	1.685000	R.136678 -	R.160931
	יר	1.690000	8.173030	1.085000 -	1.695000	я.160931 -	R.1R5111
	215	1.700000	61197155	I.095001 -	1.705000	R.185111 -	R.209221
	21d	1.710000	8.221249	1.705010 -	1.715000	8.209221 -	R.233259
	מוכ	1.720060	8.245253	1.715000 -	1.725000	R.233259 -	R.257228
	612	1.730000	8.269187	1.725000 -	1.735000	R.257228 -	R.281128
	223	1.740000	8 . 293052	1.735000 -	1.745000	в. 281128 -	R.304958
	led	1.750000	8,316848	1.745000 -	1.755000	в . 304958 -	R.328721
	277 2	1.760000	8.3405/7	1.755000 -	1.765000	8.328721 -	8.352416
	でんん	1.770000	8 . 364234	1.765000 -	1.775000	8.352416 -	8.376043
	224	1.7A0000	8.397H3Z	1.775000 -	1.785000	8.376043 -	R.399605
	500	1.790000	8.411301	1.78500n -	1.795000	. 8-399605 -	R.423100
	りん	1.800000	8.434823	1.195000 -	1.805000	8.423100 -	8.446530
3	755	1.810000	8.458221	1.805000 -	l.815000	R.446530 -	R.469896
8-2	72 H	1.820000	8.48]554	1.815000 -	1.825000	R.469896 -	R.493197
:0	520	1.830000	8.504823	1.825009 -	1.835000	8.493197 -	8.516434
	530	1.840000	8.524029	1.835000 -	1.845000	R.516434 =	R.539608
	182	1.850000	8.551171	1.84500n -	1.85500Ü	в. 539608 -	R.562719
	532 CEC].860000	8.574251	1.85500n -	1.865000	R.562719 -	8.585768
	r F C	1.870000	8.597270	1.865000 -	1.875000	8.585768 -	8.408756
	234	1,880000	8.62022o	1.875000 -	1.885000	8.408756 -	R.631682
	535	000068.1	8.643122	1.845000 -	1.895000	R.631682 -	R.654547
	236	1.900000	R.665957	1.495000 -	1.905000	R.654547 -	8.677352
	180	1.91000U	8.688732	1.905000 -	1.915000	8.677352 -	R.700098
	235	1.920000	8.711445	1.915000 -	1.925000	н.700098 -	R.722784
	ひそん	1.93000U	8.734105	1.925000 -	1.935000	в. 722784 -	8.745411
	240	1.940000	8.156703	1.935000 -	1.945000	8.745411 -	В.767980
	241	1.950000	8.779242	1.945000	1.955000	. 767980 -	R.790491
	242	1.960000	227108.8	1.9550nn -	1.965000	B.790491 -	8.812944
	243	1.970000	8,824149	1.96500n -	1.975000	R.R12944 -	8.835340
	744	1.980000	8.846517	1.47500n -	1.985000	R_R35340 -	R.857680
	74 J	1.990000	8 . 868829	1.98500n -	1.995000	. 857680 -	R. R79964
	745	2,00000	8,891084	1.495000 -	2.005000	а. 879964 🕳	R.9n2191
IN P206	RAN FTOTI	CP TIME WAS	.8420 SFC EL	APSEU TIME WAS	35.0000 SEC.		

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AND THE FISSILE AND FERTILE TASK FORCE (JUNE-AUG., 1969) AND RADIATIVE CAPTURE CROSS SECTIONS 25 KEV BELOW 1.0 EV WERE PROVIDED BY B.R.LEUNARD.JR. (BNL). (DNPURLISHED WERE DRITATIVED DURING THE 1969 IAEA EVALUATION EFFORT (SEE- HANNA MAT=1051 AND MODIFYING THE SHAPE AND MAGNITUDE OF THESE NATA TO CONFURM IN THE 2200 MISEC PANAMETERS (INCLUDING & FACTORS) THAT BETWFEN 1.0 FV AND 300 EV DATA GIVEN AS SLAW RESOLVED RESONANCE THE PARTIAL X-SEC WERE ONTAINED BY STARTING WITH DATA GIVEN IN ELAL-SEP69 HUTCHINS+LFONARD+CRAVEN+PHINCE THE TOTAL AND ALL PAPIIAL CROSS SECTIONS FOR NEUTRON FNERGIES N. W. GREFNF. J. L. LUCIUS, C. W. CRAVEN, JR. (URNL) - FISSION A.PHINCF (RWL) ALL UTHER CHUSS SECTIONS ARAVE 25 KEV R HUTCHINS(GE-SUNNYVALE) - CRUSS SFCTION FROM]. OFV VARIOUS TWOIVIDUALS CONTRINUTED TO THE EVALUATION ENERG DEPENDENT REDUCED NEUTRON WIDTHS AND FISSION WIDTHS). MATELLOG IS A PARTIAL RE-EVALUATION OF THE DATA IN MATELOSI BETWEFN 300 FV AND 25 KEV ALL DATA GIVEN IN FILE 2 (1 BF=2. B.P.LEONAPP(BNW) - CROSS SECTIONS RELUW 1.0 FV (SHOOTH X-SFC). \$ ≉ ET AL, ATOMIC ENFRGY MEVIEW, VOL VII, NO.4, 1969). OF THE CARS SECTIONS FOR THIS MATERIAL \$ ⇒ PARAMETERS PLUS BACKGROUND X-SEC IN FILE 3. \$ REV-APH70 RELOW 1.0 EV. ALL X-SEC GIVEN IN FILE 3 1104 IS AROVE 25 KEV ALL NATA GIVEN IN FILE 3. \$ \$ UIST-JAN70 0.36583 TU 15 MEV (TAPE) DESCRIPTION OF MATERIAL TO 25 KEV 2.1086 8.626 2.480 THE 2200 MISEC PARAMELERS ANE 1021.53 741.6 271.3 MEMU CSEWG (AUG. 1969). \$ \$ ≉ \$ Ħ FLASTIC= FISSIONE 11 11 H N.GAMMA= TOTAL АЦРНА CSFaG ETA PLUTON1114-239 Ī \$ ⊅ \$ PU-239 \$ ÷

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ADJUSTED BY LEONARD (UMPUBLISHED MEND (1969)) 10 CONFORM TO 1969 **ONA** FVAL. AY LFONAHD (HW-09342(196) AND INCC(US)-58(1959)) AND AS BELGA 1.0 FV THE TOTAL AND FISSION CHOSS SECTION WAS RASED ON X-SEC SECTION WAS HASED ON EVAL. BY P.ALINE (BEAP-5272(1966)) INFA 2290 MICEC VALUES. THE SCATTERLUG AND RADIATIVE CAPTURE AS AUJUSTED BY LEONARD (1969).

BETWEEN 1.U FV AND 300 EV DATA HASED ON EVALUATION AY GREERLEH \$ * ≎ AND HUTCHINS (GEAP-5212(1966)).

S-WAVE STREAGTH FUNCTION ONTAINED OF FITTING TUTAL X-SEC MEASURED FAST DATA HASED ON MEASURED VALUES UNTAIMED BY SOLFTHAC (JNE 23. (NUCLEAD DATA FOR REACIONS 2.117 (1957) . AND GWIN (1969 ORNL-MPI VALUES OF MULE) HASED ON 1969 IAFA RECOMMENDED VALUES AT THERMAL TOTAL AND OTHER PARTIAL X-SEC ORTAIN HY PRINCE (HML-1969) USING 257. 19691. CONDE ET AL (JNE 22. 53. 1968), AND BY HOPKINS AND ARAVE 25 KEV THE N. GAAMA AND FISSION CHOSS SECTIONS TAKEN FROM FISSION FRUT EVALUATING RATIO OF FISS. X-SEC OF PU-239 TO THAT FISSION PRODUCT YTELD UATA FROM RECUMMENDED VALUES OF M.E.MEEK FISSION WINTH ORIVINED BY FIFTING MEASUREMENTS OF SHINK (LADC-DATA). ALSO ALPHA DATA MEASURED AY GAIN (1969 URNL-GUI DATA). EVAL. 44 GHFFNE. LUCIUS, AND CRAVEN (OHNL-IM-2797. IAN.1970) RY NITTLEY (EANDC(NK)-35 L (1964) AND EANNC(UK)- 40 L (1964)) 7620 AMD LA 3584). JAMES (AERE-M2065 (AMENDED 1964). DATRICK N.GAMMA FROM EVALUATING AVALLABLE MEASURED VALUES OF ALPHA BETWEEN 300 FV AMM 25 KEV (UNRESOLVEN) RESOMANCE REGION) ¢ CZIRP (1969 PCAL) . AND SOWERBY (1969 HARWELL DATA). P-WAVE STRENGTH FUNCTION = CONSTANT =(1.5 E-04) Rantation winth = constant = 0.0416 EV OPTICAL MODEL CODES JUPITOR AND AHACUS-NEAREX \$ ≎ ≉ ⊅ DIVEN (NP 48,433, 1943). \$ \$ \$ ≉ 0F U-235 ≎

AND H.F.PIDFR (APFD-5398-4+ REVISED DC1. 1968). YTELDS NORMALIZED TO MAVE A SUM OF 2.0000

FISSION, SIMPLE FISSION SPECTHUM, I(THERMAL)=1.41 MEV BASED ON INELASTIC+ (A+2M)+ AMU (N+3N)+ MAXWELLIAM+ T(F) HASFD ON EVAL+ \$ AY HUTCHINS AND GREEHLER (GEAP-5272 (1966)) VALUE BY HADNAUD FT AL (NP 71-228(1965)). ENERGY DISTRIBUTION OF SECONDARY NEUTHONS \$ ≉

ANGULAR DISTR. OF FLASTICALLY SCATTERED NEUTRON RASED ON JUPITUR ANG. FOR INFLASTIC ASSUMED TO BE ISUINOPIC IN C.M. SYSTEM CALCULATIONS MADE BY PHINCE (BNL) . (1969) .
54.0000 SEC. 29.3840 SEC. . ELAPSEU TIME WAS IN PROGRAM FINTZ CP TIME WAS

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RESONANCE DATA

MICHOSCOPIC CROSS SECTIONS

RESUNANCE REGION IS 0.10F+01 TO 0.30E+03 EV.

POTENTIAL SCATTERING = 10.24217

SCATTERING	0.94769E+01	n.94654E+01	n.94540E+01	n.94428E+01	n.94317E+01	n.94208E+01	0.94100E+01	n.93993E+01	0.93887E+01	0.937R3E+01	0.93679E+01	n.93577E+01	0.93476E+01	0.93376E+01	1.93277E+01	0.931R0E+01	0.930A3E+01	0.92987E+01	n.92892E+01	n.92798E+01	n.92705E+01	0.92613E+01	0.92522E+01	n.92432E+01	0.92343E+01	n.92254E+01	0.92167E+01	0.920A0E+01	n.91994E+01	n.919n9E+01	0.91824E+01	0.91740E+01	0.91657E+01	n.91575E+01
CAPTURE	0.45075E+01	0.44381E+01	n.43704E+01	0.43046E+01	0.42404E+01	0.41778E+01	0.41169E+01	0.40574E+01	0.39994E+01	0.39428E+01	0.38876E+01	0.38337E+01	0.37810E+01	0.37296E+01	0.36795E+01	n.36304E+01	0.35825E+01	0.35357E+01	0.34899E+01	0.34452E+01	0.34015E+01	0.33587E+01	0.33168E+01	0.32759E+01	0+32358E+01	n.31966E+01	0.31582E+01	0.31206E+01	0.30838E+01	0.30478E+01	0.30125E+01	0.29779E+01	0.29440E+01	0.29108E+01
FISSION	0.14786E+02	n.]4601E+02	0.14419E+02	0.14241E+02	0.14067E+02	0.13896E+02	0.137296+02	0.13565E+02	0.13405E+02	n.13248E+02	0.13094F+02	n.12943F+02	0.12795E+02	n.12650E+02	0.12508E+02	n.12369E+02	n.12232E+02	0.12098E+02	0.11966E+02	0.11837E+02	0.11710E+02	0.11585E+02	n.11463E+02	0.11343E+02	0.11225E+02	0.11109E+02	0.10995E+02	0.10883E+02	0.107745+02	0.10666E+02	0.10560E+02	0.10455E+02	0.10353E+02	0.10252E+02
dinas	141	192	143	114	1 25	146	147	1 88	1 AG	140	101	192	103	194	1 45	196	197	148	661	0 4 2	luc	202	503	204	205	7 C C	702	208	209	012	211	212	213	214
SCATTERING	U.99887E+01	U.99689E+01	0.99495E+01	U.99304E+01	0-991J8E+01	U.98935F+01	U.98755F+01	0.98579E+01	U-98406F+01	U.98236E+01	0.98070E+01	0.97906E+01	0.97745E+01	0.97587E+01	0.97431E+01	0.97278E+01	0.97128E+01	U.96979E+01	0.96834E+01	v.96690E+01	U-96549E+01	0.96410F+01	0.96272E+01	U-96137E+01	0.96004E+01	U.95873E+01	U.95743E+01	0.95616E+01	0.95490E+01	0.95366E+01	0.95243E+01	U-95122E+01	0.95003E+01	0.94885E+01
CAPTURE	0.87370E+01	0.85266E+01	0.83246E+0]	P+81304E+01	0 • 79436E + 0]	0.77639E+01	0.75909E+01	0+342426+01	n.72636E+01	0.71087E+01	r.69593E+01	0.681505+01	C+66757E+01	6.65412E+01	0.64111E+01	n.62853E+01	0.61637E+01	0+60459E+01	C.+59319E+01	0+3č[58č+0	C+57145E+01	0.56108E+01	0.55103E+01	0.54127E+01	a.53191E+01	0.52252E+01	r.51370E+01	0.50503E+01	0.49661E+01	0.48843E+01	0.48047E+01	(++7273E+01	0.46520E+01	r.45784E+01
NO12214	0.24903F+02	0.24441F+02	0.23995F+02	0.23562F+02	0.23]445+02	0.22739F+02	0.22346F+02	0.21965F+02	0.21595F+02	0.21236F+02	1.20888F+02	r.20550F+02	0.202215+02	n.19901F+02	0.19590F+02	0.19288F+02	n.18994F+02	9.18707F+02	0.184285+02	0.18156F+02	0.17891F+02	0.]7633F+02	n.17381F+02	0.17136F+02	0.16896F+0 2	0.16662F+02	0.16434E+02	0.16211F+02	0.15993F+02	g.15780F+02	0.15572F+02	0.15369F+02	0.15171F+02	n.]4976F+02
GROUP	147	148	149	150	151	152	153	154	155	ገግ	157	85-2	651	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180

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RESONANCE NATA

MICHOSCOPIC CROSS SECTIONS

		6.0000 SEC.	TIME WAS	SEC. • ELAPSEU	WAS 2.8210	ETOT4 CP IIME	IN PROGRAM	
		5.0000 SEC.	TIME WAS	SEC. • ELAPSEU	WA5 3.9630	ETOT3 CP TIME	IN PROGRAM	-
n.89259E+01	0.21199E+01	0.77440E+01	246	0.90348E+01	0.24584E+01	0.88447F+01	000	20
n.89324E+01	0.71385E+01	0.78056E+01	245	U-90420F+01	0.24829E+01	n.89226F+nl	526	<u>~</u> ر
n.89389E+01	0.21573E+01	n.78680E+01	744	U.90493E+01	0.25078E+01	0.90017F+01	228	
0.89454E+01	0.21765E+01	0.79314E+01	243	0.90566F+01	0.25332E+01	n.90820F+01	227	
n.89520E+01	0.21960E+01	0.79956F+01	242	0.90640E+01	C+25590E+01	0.91636F+01	226	
n.89587E+01	0.22159E+01	0.80608E+01	74]	0.90715E+01	n.25854E+01	0.92465F+01	225	
n.89653E+01	0.22361E+01	0.81269E+01	240	0.90790F+01	0.26122E+01	0.93307F+01	224	
n.89721E+01	0.22566E+01	n.81940E+01	939	U.90865E+01	n.26396E+01	0.94]63F+0]	223	
n.89788E+01	n.27775E+01	0.82621E+01	238	0.90942E+01	0.26674E+01	0.95032F+01	222	
n.89856E+01	0.22988E+01	0.63312E+01	737	0.91018E+01	0.26958E+01	0.95915F+01	221	
n.89925E+01	0.23204E+01	0.84013E+01	236	U-91096E+01	0.27247E+01	0.96813F+01	220	
n.89994E+01	0.23424E+01	0.84724E+01	235	0.91174E+01	0.27543E+01	0.97725F+01	219	
0.90064E+01	0.23648E+01	0.85446E+01	234	0.91253E+01	n.27843E+01	0.98653F+0]	218	
0.90134E+01	0.23876E+01	0.8618UE+01	533	0.91332E+01	0.28150E+01	0.99596F+0]	212	
0.90205E+01	0.24108E+01	0.86924E+0]	250	0.91413F+01	0.28463E+01	0.10055F+02	216	
ŋ.90276E+01	0.24344E+01	0.87679E+01	155	0.91493E+01	0.28782E+01	0.10153F+02	215	
SCATTERING	CAPTURE	FISSION	6R011P	SCATTERING	CAPTURE	FISSION	GROUP	

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TRANSPORT MICROSCOPIC CROSS SECTION SMOOTH COEFICIENTS

R 4 -0.48329E+02		R 4 0.28643E+04		R 4 0.25384E+04
n		m	_	m.
а • 0	SECIION	а • •	SECTION	.0
R 2 -0.49347E+01	MICROSCOPIC CROSS SMOOTH COEFICIENTS	R 2 0.23290F+02	MICROSCOPIC CROSS Smooth Coeficients	Р 2 0.30799F+03
к 1 0.	FISSIUN	ч •0	ABSORPTION	н 1 0.
ь U J.8742řE+Ol		н 0 0.11570E+03		р. р. р. 15171£+03

0.307995+03 Λ Ω

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• 0	0.	0.86V32E+01	TRANSPORT	
0•	• 0	0+86274E+01	SCATTERING	
n.28800E+01	0.28800E+U1	0.21088E+01	ETA	
• 5	с •	U • 36574E+U()	ALPHA	
• с	0.	U.27126E+03	CAPTURE	
• ເ	• 0	U•74169E+U3	FISSION	
• 0	0.	U+10130E+04	AUTTORPTION	
EUUIVALENT 2200 m/s	WEIGHTEU Average	2200 M/S		
SUMMARY	SELECTED DATA			

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• • • MATERIAL NUMBER

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<pre>1 0. 1000FC-02 0. 31673F-01 0.480(4€.04 v.33596F.01 0.81376F.01 0.87720F.01 0.87750F.01 3 0.3000FC-02 0.44777F-01 0.34054E.04 v.35596F.01 0.81770F.01 0.87750F.01 5 0.3000FC-02 0.44777F-01 0.24196E.04 v.13549F.01 0.54740F.03 0.87720F.01 0.87750FE.01 5 0.5000FC-02 0.44777F-01 0.24196E.04 v.13549F.03 0.54740F.03 0.87720F.01 0.87750FE.01 6 0.5000FC-02 0.44777F-01 0.24196F.04 v.13549F.03 0.54740F.03 0.87720FE.01 0.87750FE.01 7 0.5000FC-02 0.44777F-01 0.24196F.04 v.13549F.03 0.54740F.03 0.87720FE.01 0.87750FE.01 8 0.7000FC-02 0.44777F-01 0.24196F.04 v.13549F.03 0.54740FE.03 0.67195F.01 0.87750FE.01 10 7.000FC-02 0.97756F.04 0.1726FF.04 0.11246FF.04 0.45975F.01 0.87795FE.01 11 0.1100FC-01 0.110757F-03 0.18227FF.04 0.12347FF.04 0.4593FE.01 0.87730FE.01 11 0.1100FC-01 0.110757F-00 0.18227FF.04 0.172795F.03 0.650395F.01 0.87730FE.01 11 0.1100FC-01 0.110757F-00 0.12227FF.04 0.7340FF.03 0.45693FE.01 0.87730FE.01 11 0.1100FC-01 0.110757F-00 0.12227FF.04 0.9770FF.03 0.45693FE.01 0.87730FE.01 11 0.1100FC-01 0.11075FF.04 0.97237FF.04 0.3450FE.03 0.45693FE.01 0.87730FE.01 11 0.1100FC-01 0.12327FF.00 0.12033FE.04 0.9770FF.03 0.45693FE.01 0.86732FE.01 11 0.1100FC-01 0.12347FF.00 0.12033FF.04 0.97236FF.03 0.45693FE.01 0.86732FE.01 11 0.1700FC-01 0.12347FF.00 0.12033FF.04 0.97236FF.03 0.756495FE.01 0.86732FE.01 11 0.1700FC-01 0.12347FF.00 0.12037FF.04 0.75246FF.03 0.24693FE.01 0.86537FE.01 12 0.1500FC-01 0.12447FF.00 0.10758FF.04 0.7673FF.03 0.24642FE.01 0.46534FE.01 12 0.1900FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.24642FE.01 0.46534FE.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.24545FE.01 0.46534FE.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.245045FF.01 0.46545FE.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.245045FF.01 0.46545FF.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.245045FF.01 0.46545FF.01 0.46555FF.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.245045FF.01 0.46595FF.01 12 0.7700FC-01 0.14427FF.00 0.10758FF.04 0.77546FF.03 0.25407FF.01 0.4659</pre>	d 00	Ŀ.	NU = 2.8800 SONT(E)	JU SIGA	XS(EPT) = SIGF	0.10526E+02 SIGC	SIGIR	(1) = 0.894	IGF-01 MUBAR
9 0. 1000F-05 0.4477F-01 0.40064.04 v.258446.00 0.114746604 0.47546601 0.475506601 4 0.2000F-07 0.5477F-01 0.241082-04 v.1238446.04 0.6574066.07 0.87246601 0.477506601 6 0.65000F-07 0.7746.F-01 0.241082-04 v.1238446.04 0.4574066.07 0.872167601 0.4773065601 7 0.65000F-07 0.7746.F-01 0.194376.04 v.123846.04 0.4574066.07 0.872167601 0.477306501 8 0.75000F-07 0.7746.F-01 0.194376.04 v.123846.04 0.4574056.07 0.871466.01 0.477306501 8 0.75000F-07 0.48766F-01 0.18406F-04 v.123846.04 0.4574056.01 0.477306501 8 0.75000F-07 0.88366.F-01 0.18406F-04 v.123846.04 0.4534766.01 0.477306501 0.9000F-07 0.89466F-01 0.18406F-04 v.123846.04 0.4554766 0.9000F-07 0.89466F-01 0.18406F-04 v.123846.04 0.455466 0.11700F-01 0.11046F-01 0.15306F-04 v.1102276.04 0.4554166.01 0.477306501 0.91700F-01 0.11046F-01 0.1123956.04 v.1102276.04 0.4554166.01 0.477306501 0.91700F-01 0.11046F-00 0.14220610 v.0.1108476.04 0.454766.01 0.477306501 0.13700F-01 0.11046F-00 0.14220610 v.0.1108476.04 0.3844166.01 0.487365601 0.47006F-01 0.118477-00 0.1211640 v.0.27230770 0.3344666.07 0.46575601 0.477306501 0.11800F-01 0.11847740 0.011730956.04 v.428256703 0.3864356601 0.486736601 0.4800F-01 0.11847740 0.011730956.04 v.42826670 0.3844166.07 0.46575601 0.486736601 0.4800F-01 0.1184377400 0.112395404 v.499256703 0.384466.07 0.48674601 0.486736601 0.4800F-01 0.1184377400 0.103646440 0.72846703 0.269386601 0.486546601 0.4800F-01 0.1184377400 0.103646440 0.72846703 0.269386601 0.48654601 0.4800F-01 0.1184377400 0.103646440 0.72846703 0.269386601 0.48654601 0.4800F-01 0.1184377400 0.103646440 0.728466703 0.269386601 0.486546601 0.4800F-01 0.1184377400 0.103646440 0.728466703 0.269386601 0.48654601 0.23000F-01 0.1184377400 0.103646440 0.728466703 0.269386601 0.486546601 0.486546601 0.23000F-01 0.1184377400 0.1018547444 0.70076601 0.269386601 0.486546601 0.486546601 0.23000F-01 0.1184377400 0.1018547444 0.700772396607 0.0269366601 0.486546601 0.486546601 0.23000F-01 0.1184377400 0.10056603 0.0572396607 0.0269366010 0.486546601 0.486546601 0.43000F-01 0.1184377400	_	ں •	• 0	0.		0.	0.8742UE+01	0.87666E+01	0.28130E-02
3 0.2000FE-07 0.4777F-01 0.24198E-04 0.18315E+09 0.657406E+07 0.4773FE+01 0.477350E+01 6.05000FE-07 0.4777F-01 0.24198E-04 0.18315E+09 0.657406E+07 0.47724E+01 0.477596E+01 0.6000FE-07 0.5777F-01 0.241987E-04 0.13847E+04 0.45477E+07 0.47705FE+01 0.473950E+01 0.6000FE-07 0.5776F-01 0.17260F+04 0.13847E+04 0.45477E+07 0.45705E+01 0.473950E+01 0.7000FE-07 0.47846F-01 0.17260F+04 0.123845E+04 0.45477E+07 0.45705E+01 0.477306E+01 0.1000FE-07 0.4844FE-01 0.17260F+04 0.17276F04 0.4577E+01 0.47700E+01 0.1700FE-01 0.10054F+00 0.14270F+04 0.172756F04 0.45777E+01 0.47700E+01 0.1100FF-01 0.10054F+00 0.14270E+04 0.172756F04 0.45777E+01 0.457356F01 0.477306E+01 0.1100FF-01 0.10054F+00 0.132276E+04 0.17257570 0.538434E+07 0.456735E+01 0.47700E+01 0.14005F-01 0.10054F+00 0.12811E+04 0.95236F+03 0.538431E+07 0.456735E+01 0.47700E+01 0.14005F-01 0.110757F+00 0.128276E+04 0.17257570 0.538431E+01 0.486735E+01 0.14005F-01 0.11747F+00 0.12831E+04 0.45245F03 0.45735E+01 0.486735E+01 0.1500FF-01 0.11747F+00 0.12831E+04 0.45245F03 0.45735E+01 0.486735E+01 0.1500FF-01 0.117415F+00 0.12831E+04 0.45245F03 0.538431E+07 0.466736E+01 0.485326F01 0.4900FF-01 0.117415F+00 0.11285E+04 0.4716F03 0.26345E+07 0.46532E+01 0.48532E+01 0.1800FF-01 0.117415F+00 0.11285E+04 0.4716F03 0.26345E+07 0.46532E+01 0.48532E+01 0.1800FF-01 0.113415F+00 0.11285E+04 0.4716F03 0.26345E+01 0.48532E+01 0.1800FF-01 0.113415F+00 0.11285E+04 0.4716F03 0.26345E+01 0.48532E+01 0.2500FF-01 0.113415F+00 0.10285E+04 0.4716F03 0.25045E+01 0.48532E+01 0.2500FF-01 0.113415F+00 0.10285E+04 0.4716F03 0.25045E+01 0.48532E+01 0.2500FF-01 0.11442F+00 0.10285E+04 0.47645F+03 0.26448E+07 0.48532E+01 0.48532E+01 0.2500FF-01 0.11442F+00 0.10285E+04 0.4716F03 0.25448E+01 0.48532E+01 0.48532E+01 0.2500FF-01 0.11442F+00 0.10285E+04 0.77539E+01 0.28448E+01 0.48532E+01 0.48532E+01 0.2500FF-01 0.11747F+00 0.10285E+04 0.775346E+03 0.26432E+01 0.48532E+01 0.48532E+01 0.2500FF-01 0.11747F+00 0.10285E+04 0.775346F+03 0.265442E+01 0.48532E+01 0.2500FF-01 0.11747F+00 0.10285E+04 0.775346F+03 0.	<u>م</u>	0.1000rE-02	0.316235-01	0.480/4E+04	U.36596F+04	0.11479E+04	0.87374E+01	0.87620E+01	0.281305-02
<pre>6 0.30000F=07 0.63346F=01 0.278776+04 0.18316F+04 0.53340E+03 0.8716F+01 0.87548E+01 6 0.50000F=07 0.7771F=01 0.198437E+04 0.16349F+04 0.554340E+03 0.871646+01 0.87740E+01 7 0.70007E=07 0.87746F=01 0.129437E+04 0.15397E+04 0.454995E+01 0.87746F+01 0.87740E+01 7 0.70007E=07 0.87447E=01 0.18049E+04 0.13397E+04 0.455476+01 0.87740E+01 0.70007E=07 0.87447E=01 0.18049E+04 0.123975E+04 0.455476+01 0.87740E+01 0.70007E=07 0.87047E+01 0.18057E+04 0.123975E+06 0.455476+01 0.87740E+01 0.10007E=01 0.10007E+00 0.18057E+04 0.123275E+04 0.373746E+03 0.454995E+01 0.87740E+01 0.11007E=01 0.10007E+00 0.18057E+04 0.1102775+04 0.373746E+03 0.454995E+01 0.87740E+01 0.11007E=01 0.110437E+00 0.18217E+04 0.1102775+04 0.373746E+03 0.45495E+01 0.87730E+01 0.11007E=01 0.1114377+00 0.12317E+04 0.1102775+04 0.373746E+03 0.456195E+01 0.87730E+01 0.15007E=01 0.1114327F+00 0.12317E+04 0.4273575+03 0.35745E+01 0.877330E+01 0.15007E=01 0.1114327F+00 0.12317E+04 0.4273575+01 0.3573559E+01 0.15007E=01 0.1114327F+00 0.12317E+04 0.4273756073 0.456195E+01 0.877330E+01 0.15007E=01 0.1114327F+00 0.12317E+04 0.4273756+03 0.35454E+03 0.456137E+01 0.84539E+01 0.170076=01 0.1114327F+00 0.12318E+04 0.923475+03 0.30445E+01 0.84539E+01 0.16007E=01 0.1114327F+00 0.112318E+04 0.923475+01 0.35454E+03 0.35454E+01 0.845359E+01 0.2100775=01 0.113747F+00 0.10258E+04 0.425475+03 0.304545E+01 0.8453559E+01 0.2100775=01 0.113747F+00 0.10258E+04 0.425475+03 0.25437E+01 0.8453556+01 0.2100775=01 0.113747F+00 0.1012826+04 0.425475+03 0.254345E+01 0.8453556+01 0.2200775=01 0.1137475+00 0.100586E+04 0.4745455+03 0.254315E+01 0.8453556+01 0.2200775=01 0.11443775+00 0.100586E+04 0.4745455+03 0.254315E+01 0.2200775=01 0.11443775+00 0.1012826+04 0.4745455+03 0.254315E+01 0.84535556+01 0.230076=01 0.1173775+00 0.1012826+04 0.4745455+03 0.254315E+01 0.84535556+01 0.230076=01 0.1173775+00 0.1012826+03 0.2543755+03 0.2543155+01 0.84535556+01 0.230076=01 0.1173775+00 0.1012826+03 0.2543755+03 0.2543755901 0.8453255+01 0.230076=01 0.11443775+00 0.24055643 0.255066407 0.2550756</pre>	m	0.2000rE-02	0.4472]F-01	0.34U64E+04	U.25884F+04	0.81801E+03	0.07311E+01	0.87547E+01	0.28130E-02
6 0.500005-07 0.771116-01 0.241966+04 0.15395+04 0.554975-01 0.871645+01 0.8774601 0.877905+01 7 0.500005-02 0.777116-01 0.193475+04 0.149645+04 0.554975+03 0.8976455+01 0.8773656+01 9 0.700075-07 0.893457-01 0.180405+04 0.129755+04 0.454975+01 0.877055+01 0.8773605+01 9 0.700075-07 0.943457-01 0.165055+04 0.129755+04 0.454975+01 0.877055+01 0.877365 0.100075-01 0.100475+00 0.155055+04 0.110875+04 0.730455+01 0.8773691 0.877365 0.1100075-01 0.1014075+00 0.155055+04 0.110875+04 0.733055+01 0.110075-01 0.1104075+00 0.122055+04 0.110875+04 0.733055+01 0.110075-01 0.1104075+00 0.122055+04 0.110875+04 0.733055+01 0.869355+01 0.847355 0.156075-01 0.1104075+00 0.122055+04 0.953055+01 0.869355+01 0.8473355+01 0.110075-01 0.1104075+00 0.122115+04 0.9530555+01 0.869355+01 0.8473355+01 0.110075-01 0.1104075+00 0.122115+04 0.953055+01 0.869355+01 0.8473355+01 0.110075-01 0.1104075+00 0.122115+04 0.953055+01 0.869355+01 0.845355+01 0.110075-01 0.1114075+00 0.123175+01 0.953055+01 0.865355+01 0.845355+01 0.110075-01 0.1130387+00 0.123275+04 0.953055+01 0.865355+01 0.8453555+01 0.110075-01 0.1130387+00 0.123275+04 0.953055+01 0.865355+01 0.8453555+01 0.11407501 0.1130387+00 0.123275+04 0.952455+03 0.865355+01 0.8453555+01 0.11407501 0.1130387+00 0.117875+04 0.873456+03 0.865355+01 0.8453555+01 0.2500075-01 0.1130455+04 0.823655+04 0.9230755+01 0.8653555+01 0.8453555+01 0.2500075-01 0.1130455+04 0.01012555+04 0.8234555+03 0.8653555+01 0.8653555+01 0.2500075-01 0.1144275+00 0.10127555+04 0.0250456+03 0.8553555+01 0.2500075-01 0.1144275+00 0.1012555+04 0.0250456+03 0.8593555+01 0.2500075-01 0.1144275+00 0.4012555+04 0.2500555+03 0.8653555+01 0.8653555+01 0.2500075-01 0.1144275+00 0.1012555+04 0.02723565+03 0.8653555+01 0.8653555+01 0.2500075-01 0.1144275+00 0.925555+04 0.0250455+03 0.8593555+01 0.8653555+01 0.2500075-01 0.1144475+00 0.401255+03 0.8524555+03 0.8555555+01 0.8655555+01 0.2500075-01 0.1144475+00 0.401255+03 0.8524555+01 0.8555555+01 0.2500075-01 0.1144475+00 0.401255+03 0.8554555+03 0.8557555+01 0.8555555+01 0.23	4	0.3000F-02	n.54772F-Ul	0.278/2E+04	0.21141F+04	0.67306E+03	0.87274E+01	0.87520E+01	0.28130E-n2
 6. 6. 6. 6. 6. 6. 774.6. F-01 7. 6. 6. 6. 6. 7. 774.6. F-01 7. 6. 6. 6. 6. 7. 774.6. F-01 7. 6. 6. 6. 7. 774.6. F-01 7. 6. 6. 7. 6. 7. 774.6. F-01 7. 7. 6. 6. 7. 774.6. F-01 7. 7. 6. 6. 7. 7. 74.6. F-01 7. 7. 6. 6. 7. 7. 74.6. F-01 7. 7. 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	ŝ	0.4000F-02	n.63246F-UI	0.241896+04	U.18315E+04	0.59740E+03	0.87212E+01	0.87458E+01	0.28130F-02
7 0.6.000FF0/2 n.7746/FF-01 0.1040/6F-04 0.12976F-04 0.45477E-03 0.457716F-01 0.477400E-01 8 0.9000FF0/2 n.8746/FF-01 0.105305F-04 0.12976F-04 0.42797E-03 0.46995F-01 0.87790E-010 0.9000FF-07 0.99464F-01 0.105305F-04 0.12975F-09 0.46995F-01 0.87790E-010 1 0.9000FF-01 0.10954F-00 0.105305F-04 0.10527F+04 0.737955E-03 0.46995F-01 0.877085F-01 3 0.1200FF-01 0.10954F-00 0.122305F-04 0.10627F+04 0.737955E-03 0.46995F-01 0.877035F-01 6 0.9000FF-01 0.10954F-00 0.122305F-04 0.10627F+04 0.737955E-03 0.466938F-01 0.877035F-01 6 0.1500FF-01 0.11437F-00 0.122305F-04 0.10724F+04 0.73756F-03 0.466938F-01 0.847035F-01 7 0.1500FF-01 0.11437F-00 0.122315F-04 0.10724F+04 0.73756F-03 0.466785F-01 0.846938F-01 7 0.1500FF-01 0.11737F+00 0.12235F-04 0.97725F-03 0.36578E-01 0.86738F-01 7 0.1500FF-01 0.11737F+00 0.12235F-04 0.9775F-03 0.36578E-01 0.86738F-01 7 0.1500FF-01 0.11737F+00 0.122455F-04 0.8775F+03 0.36578E-01 0.86538F-01 7 0.1500FF-01 0.11747F+00 0.12245F-04 0.84275F+03 0.36578E-01 0.86538F-01 0.865375F-01 0.84575F-00 0.12845F-04 0.84275F+03 0.23458E-03 0.465045F-01 0.86538F-01 7 0.17700F-01 0.11747F+00 0.112675F-04 0.84275F+03 0.23458E-03 0.465045F-01 0.86538F-01 0.2600FF-01 0.11447F+00 0.111787F-04 0.84275F+03 0.23458E-03 0.465045F-01 0.86538F-01 0.857095F-01 0.16447F+00 0.11275F+04 0.775445F-03 0.23458E-03 0.465045F-01 0.845374E-01 0.2600FF-01 0.14427F+00 0.101928F+04 0.755487F+03 0.23458E-03 0.465375F-01 0.845374E-01 0.2600FF-01 0.14427F+00 0.101928F+04 0.75548F+03 0.254716E-03 0.465375E-01 0.845374E-01 0.22400FF-01 0.14437F+00 0.101928F+04 0.75548F+03 0.254716E-03 0.465375E+01 0.845375E+01 0.22400FF-01 0.14437F+00 0.101928F+04 0.75548F+03 0.25474E+03 0.455745E+01 0.845374E+01 0.22400FF-01 0.14437F+00 0.101928F+04 0.75548F+03 0.25474E+03 0.455745E+01 0.845374E+01 0.22400FF-01 0.14437F+00 0.910928F+04 0.75239F+03 0.254716E+03 0.455745E+01 0.845374E+01 0.22400FF-01 0.1737F+00 0.90545E+03 0.46576F+03 0.254745E+03 0.455745E+01 0.845374E+01 0.23400FF-01 0.17437F+00 0.90545E+03 0.46576F+03 0.254745E+01 0.845374E+01 0.93400F	¢	0.50000E-02	0.70711F-01	0.21682E+04	0.16389E+34	0.52930E+03	0.87164E+01	0.87410E+01	0.2A130E-02
<pre>8 0.7000F=0.7 0.8366F6F4U 0.18406F4U 0.13756F4U 0.4547F607 0.65495E401 0.87386F01 0.9000F=0.7 0.8464F=01 0.17556F4U 0.15536F4U 0.12752F540 0.39431E407 0.65495E401 0.87188E401 0.9000F=0.7 0.9004F6F400 0.15536F4U 0.11057F404 0.39431E407 0.65495E401 0.87188E401 2 0.1100F=01 0.11407F4U0 0.15536F4U 0.11057F404 0.334346E47 0.56595E401 0.873335F1 2 0.11500F=01 0.11407F4U0 0.12232F4U 0.10527F404 0.334346E47 0.36585E401 0.873335F1 2 0.1500F=01 0.11407F4U0 0.12328E4U4 0.410214F404 0.334546E47 0.66675F601 0.873335F1 2 0.1500F=01 0.11407F4U0 0.12328E4U4 0.49257673 0.337364E473 0.66675F601 0.86518E401 2 0.1500F=01 0.11407F4U0 0.12328E4U4 0.49257673 0.337364E473 0.666757E401 0.86518E401 2 0.1500F=01 0.11338F4U0 0.12033264U4 0.49257673 0.337364E473 0.666757E401 0.86535E401 2 0.1700F=01 0.11338F4U0 0.12043E404 0.492757613 0.337364E473 0.666757E401 0.86535E401 2 0.1700F=01 0.13338F4U0 0.12043E404 0.49274573 0.33764E473 0.665456601 0.865306401 2 0.1700F=01 0.11338F4U0 0.100927E404 0.49716763 0.33764E473 0.665456601 0.865456401 0.1700F=01 0.114775400 0.10058E404 0.477546F403 0.264426473 0.665456601 0.86535E401 0.22000F=01 0.1147754U0 0.10058E404 0.470191777546F403 0.865456F401 0.86535E401 0.22000F=01 0.1147754U0 0.10058E404 0.47019177754761603 0.865456101 0.86535E401 0.27000F=01 0.1147770100 0.10058E404 0.470191777546F403 0.254426F403 0.8654566601 0.27000F=01 0.114777010 0.10058E404 0.470191777546F403 0.254426F401 0.86535E401 0.27000F=01 0.114777010 0.10058E404 0.470191777546F403 0.254426F401 0.86535E401 0.27000F=01 0.114777400 0.001025444 0.476414743 0.254426F403 0.855494E401 0.84535E601 0.27000F=01 0.114777400 0.0010254440 0.47614743 0.254426F403 0.855494E401 0.84535E601 0.27000F=01 0.116397F400 0.001726441 0.4761043 0.7554056F403 0.855494E401 0.84535E601 0.27000F=01 0.117377400 0.000726E403 0.56486F43 0.755405E403 0.855494E401 0.84535E601 0.27000F=01 0.117377400 0.000726E403 0.464197463 0.755405E403 0.855949E401 0.84535E601 0.23000F=01 0.117477400 0.900426E403 0.4641977766203 0.755405E403 0.855406E401 0.845555640 0.33000F</pre>	~	0.6000F-02	0.77460F-01	0.1983/E+04	U.14968F+04	0.4ac86E+03	0.87105E+01	0.87350E+01	0.28130E-02
9 0.#8000FF-07 0.#9444F-01 0.17256F+04 0.122976F04 0.42797F03 0.45995F01 0.#87188E+01 0.9000FF-01 0.10954FF-00 0.15805E+04 0.122975F04 0.38831E+03 0.456995F01 0.877035F01 2 0.11970FF-01 0.10954FF+00 0.15805E+04 0.10627F+04 0.38831E+03 0.456935F01 0.877035F01 3 0.1200FF-01 0.1095FF+00 0.18807E+04 0.10027FF+04 0.348476F03 0.456935F01 0.877035F01 5 0.1700FF-01 0.11937FF+00 0.12801E+04 0.407235F194 0.379565F03 0.45615F601 0.86725F01 6 0.1700FF-01 0.11837F+00 0.12801E+04 0.47151F703 0.337865F03 0.45615F601 0.86735F01 6 0.1700FF-01 0.13937F900 0.12801E+04 0.4977519 0.337865F03 0.45615F601 0.86735F01 6 0.1700FF-01 0.13437FF+00 0.12801E+04 0.4977519 0.337865F03 0.45615F601 0.86535F61 7 0.1700FF-01 0.13784F90 0.12993F404 0.47151F1403 0.357645E603 0.45615F611 0.86535F61 0.19900FF-01 0.13437FF100 0.12993F404 0.47151F1503 0.3504566101 0.86535F61 0.19900FF-01 0.13784F90 0.12993F404 0.4275575603 0.373785F03 0.456135F01 0.86535F61 0.19900FF-01 0.13787F90 0.12995F404 0.8294825F03 0.360536F611 0.86535F61 0.23000FF-01 0.15517570 0.120958F404 0.759495E703 0.2649326F01 0.86535F61 0.23000FF-01 0.155175400 0.10758F404 0.775495E03 0.28482E03 0.4569326F01 0.8653735F01 0.22100FF-01 0.15437F400 0.101825F403 0.272395E03 0.4569326F01 0.865375F61 0.22000FF-01 0.15437F400 0.101825F403 0.272395E03 0.4569326F01 0.865375F61 0.22000FF-01 0.15437F400 0.101827F403 0.272395E03 0.4569326F01 0.865375F61 0.22000FF-01 0.15437F400 0.101827F403 0.272395E03 0.245657661 0.865375E601 0.27000FF-01 0.17707FF400 0.970167E403 0.775495E03 0.24556561 0.855745E01 0.27000FF-01 0.17707FF400 0.970167F403 0.775495E03 0.2554876F01 0.855745E01 0.27000FF-01 0.17707FF400 0.970167F403 0.775495E03 0.2558766F01 0.855746F01 0.27000FF-01 0.17707FF400 0.970167F403 0.775495E03 0.2558766F01 0.855746F01 0.27000FF-01 0.17707FF400 0.970167F403 0.7554876F03 0.855465E01 0.855746F01 0.27000FF-01 0.17707FF400 0.970167F403 0.556470E13 0.2558766F01 0.855746F01 0.855746F03 0.27000FF-01 0.177077F400 0.970167F403 0.556470E13 0.255876F01 0.855746F01 0.855746F01 0.27000FF01 0.17607F400 0.9	x	0.700075-02	0.83666F-01	0.18406E+04	U.13864E+04	0.45417E+03	0.87054E+01	0.87300E+01	0.281305-02
<pre>0 0.9000FF=07 0.94%AFF=01 0.16306F+04 0.1724FF=04 0.34346F01 0.47140EF01 0 0.1000FF=01 0.1040FF=01 0.15305F+04 0.1102FF=04 0.34346F01 0.47140EF01 0 0.1100FF=01 0.11405FF=00 0.14220E+04 0.1102FF=04 0.34346F01 0.477030E401 3 0.1200FF=01 0.11405FF=00 0.14220E+04 0.1027F+04 0.343466F01 0.347030E401 5 0.1500FF=01 0.11405F+00 0.12841E404 0.95236F1+03 0.337786F6=03 0.46674E401 0.48603E401 7 0.1700FF=01 0.173744F+00 0.12841E404 0.95236F+03 0.337786F6=03 0.46674E401 0.486356F01 7 0.1700FF=01 0.13446F+00 0.12841E404 0.952367+03 0.337786F6=03 0.46674E401 0.486356F01 7 0.1700FF=01 0.13446F+00 0.12841E404 0.45236F1+03 0.337786F6=03 0.46674E601 0.486356F01 7 0.1700FF=01 0.13446F+00 0.112435F+04 0.490035F+03 0.337786F6=03 0.466746F01 0.486356F01 7 0.2700FF=01 0.13446F+00 0.112497E+04 0.490052F+03 0.30448E603 0.4603466F01 0.486336F01 0.22000FF=01 0.13446F+00 0.101497F+04 0.490052F+03 0.30448E603 0.460346F01 0.486336F01 0.22000FF=01 0.13446F+00 0.101858F+04 0.47049671 0.260748E603 0.460345601 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.760195776+03 0.260348E603 0.4603426F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.76019577603 0.260376F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.76018748E603 0.260486603 0.460346F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.7754976F03 0.27336F03 0.4603426F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.76018748E603 0.2603746F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.7754976F03 0.27336F603 0.450376F01 0.4863356F01 0.27000FF=01 0.14437F+00 0.101858F+04 0.7754976F03 0.273956F03 0.450376F01 0.4863746F03 0.27000FF=01 0.14437F+00 0.101858F+04 0.775496E603 0.250376F01 0.486376F610 0.27000FF=01 0.15437F+00 0.101858F+04 0.775496E603 0.250376F01 0.486376E601 0.28000FF=01 0.15437F+00 0.970167E403 0.2753956613 0.450376F01 0.486376E601 0.23000FF=01 0.1770797F00 0.97559566F03 0.25038F693 0.4505595601 0.33000FF=01 0.1774897F00 0.917805F403 0.556476F03 0.255036F03 0.8557466F01 0.485776F01 0.33000FF01 0.178476F403 0.9555866F03 0.255036F01 0.48</pre>	6	0.80000F-02	n.89443E-Ul	0.17256F+04	0.12976E+04	0.42797E+03	0.86995E+01	0.87240E+01	0.28130E-02
<pre>1 0.11000FF-01 0.10448F+00 0.15505F+04 0.1108AFF+04 0.33431E+03 0.466434E+01 0.471402F+01 0.10448F+01 0.11442F+04 0.116287E+04 0.1108467+04 0.14220E-01 0.47733E+01 0.47033E+01 2 0.12007F-01 0.110948F+00 0.14220E+04 0.106214F+04 0.33476E+03 0.46678E+01 0.46732E+01 4 0.13007F-01 0.110946F+00 0.12328E+04 0.97233EF+03 0.33776E+03 0.46501E+01 0.46592E+01 6 0.16600FF-01 0.17441F+00 0.12337E+04 0.97233EF+03 0.33776E+03 0.46501E+01 0.46592E+01 7 0.16600FF-01 0.17441F+00 0.12032E+04 0.457161F+03 0.337641E+03 0.46501E+01 0.46592E+01 7 0.17000FF-01 0.13038F+00 0.12935E+04 0.457161F+03 0.337641E+03 0.46501E+01 0.46592E+01 0 0.19000FF-01 0.13744F+00 0.112355+04 0.46903F+03 0.33744E+03 0.46539E+01 0.465392E+01 0 0.19000FF-01 0.117441F+00 0.112355E+04 0.487161F+03 0.244822E+03 0.460396E+01 0.465392E+01 0 0.19000FF-01 0.112435F+00 0.10928F+04 0.46903F+03 0.30442E+03 0.460396E+01 0.465392E+01 0 0.23000FF-01 0.112435F+00 0.10928F+04 0.40902FF+03 0.2448246+03 0.460396E+01 0.465373E+01 0 0.23000FF-01 0.112437F+00 0.101928F+04 0.775495F+03 0.2448261 0.460352E+01 0.465373E+01 0 0.23000FF-01 0.112437F+00 0.101928F+04 0.775495F+03 0.25438E+03 0.46032E+01 0.465776E+01 0 0.23000FF-01 0.115477F+00 0.101928F+04 0.775492F+03 0.25438E+03 0.46032E+01 0.465776E+01 0 0.23000FF-01 0.115477F+00 0.101928F+04 0.775495F+03 0.25438E+03 0.45032E+01 0.465776E+01 0 0.23000FF-01 0.115477F+00 0.910172E+04 0.72496E+03 0.25538E+03 0.45032E+01 0.465776E+01 0 0.23000FF-01 0.117477F+00 0.91025E+03 0.72239E+03 0.45032E+01 0.465776E+01 0 0.24000FF-01 0.117737F+00 0.90125E+03 0.72539E+03 0.255032E+01 0.465776E+01 0.455745E+01 0.465776E+01 0.455745E+01 0.455746E+01 0 0.24000FF-01 0.117737F+00 0.9955955+03 0.55548E+03 0.255032E+01 0.455746E+01 0.455746E+01 0.455745E+01 0.455746E+01 0.455745E+01 0.457</pre>	0	0-90000F-02	0.94848F-UI	0.16306E+04	0.12242F+04	0.41440E+03	0.46942F+01	0.87188E+01	0.28130F-02
 0.1100005-01 0.10488F400 0.142358404 0.11088F004 0.3739556403 0.4667855401 0.870335601 0.120005-01 0.11942545400 0.142205404 0.106275404 0.3749655403 0.4667855401 0.869385601 0.130005-01 0.1144275400 0.122316404 0.952305403 0.3748654613 0.46657456101 0.866956401 0.150005-01 0.1176454910 0.1234355404 0.952305403 0.374865473 0.4665745701 0.868955401 0.150005-01 0.124457400 0.123455404 0.952305403 0.374865403 0.465566745401 0.170005-01 0.134387400 0.12345544 0.952825403 0.374865403 0.465566401 0.170005-01 0.1344575400 0.1178255444 0.439054514 0.220005-01 0.1444375400 0.117825544 0.4039555403 0.305455666401 0.220005-01 0.1444375400 0.117855444 0.4849555403 0.35445673 0.4654656401 0.220005-01 0.1444375400 0.103955644 0.4090555403 0.378445403 0.4654656401 0.220005-01 0.1444375400 0.103555644 0.4090555643 0.378445673 0.4654556401 0.220005-01 0.1444375400 0.103555644 0.4069555643 0.25753956673 0.4654556401 0.220005-01 0.1584154400 0.1035556444 0.60195566403 0.465455666401 0.220005-01 0.1584154400 0.1035556444 0.60195566443 0.255456643 0.4654556401 0.220005-01 0.1584154400 0.1035556444 0.6019556643 0.2554456643 0.45545666401 0.220005-01 0.1584154400 0.10035556403 0.775495643 0.25548766673 0.4554566401 0.220005-01 0.1584154400 0.1018556644 0.7755495643 0.25548766673 0.4554566401 0.220005-01 0.1584154400 0.1018556444 0.7019556444 0.70057643 0.25548766673 0.4555766666401 0.270005-01 0.1544575400 0.995556403 0.7754956673 0.2554876673 0.455755601 0.270005-01 0.1544555400 0.495556404 0.7755495666403 0.25548766673 0.455576601 0.4657766666601 0.270005-01 0.1544555400 0.495555643 0.25548766673 0.25548766673 0.4555766667401 0.270005-01 0.1544555400 0.49555643 0.25548766673 0.25548766673 0.4555676667401 0.270005-01 0.1764755400 0.495555643 0.255487666746613 0.2554876667466101 0.4657466674661 0.2300005-01 0.1764755400 0	,	0.10000F-01	0.10600F+00	0.15505F+04	U.11622F+04	0.39831E+03	U.46895E+01	0.87140E+01	0.28130E-n2
<pre>3 0.12000F-01 0.10954E+00 0.4220E+04 0.10623E+04 0.3596bE+03 0.4678E+01 0.87030E+01 4 0.13600F-01 0.11402F+00 0.13228E+04 0.95430F+03 0.33954E+03 0.46678E+01 0.86938E+01 6 0.14600F-01 0.11843F+00 0.122435E+04 0.95282F+03 0.35054E+03 0.46678E+01 0.86698E+01 7 0.16600F-01 0.12447E+00 0.12435E+04 0.92282F+03 0.37054E+03 0.46501E+01 0.86698E+01 7 0.16600F-01 0.13744F+00 0.12435E+04 0.92282F+03 0.31328E+03 0.46501E+01 0.86698E+01 0.18600F-01 0.13744F+00 0.12435E+04 0.87151F+03 0.31328E+03 0.46501E+01 0.86699E+01 0.18600F-01 0.13744F+00 0.11235E+04 0.8475151F+03 0.35054E+03 0.46538E+01 0.86699E+01 0.23000F-01 0.13744F+00 0.11235E+04 0.84956F+03 0.25438E+03 0.46538E+01 0.86538E+01 0.22000F-01 0.14437E+00 0.10768E+04 0.69962F+03 0.25438E+03 0.46538E+01 0.86538E+01 0.22000F-01 0.15437E+00 0.10768E+04 0.77546F+03 0.25038E+03 0.46538E+01 0.86538E+01 0.22000F-01 0.15437E+00 0.10768E+04 0.70348E+03 0.25038E+01 0.86538E+01 0.22000F-01 0.15437E+00 0.10768E+04 0.7244E+03 0.25038E+03 0.46032E+01 0.86538E+01 6 0.23000F-01 0.151737E+00 0.01078E+04 0.72246E+03 0.25038E+03 0.46032E+01 0.86538E+01 8 0.27600FF-01 0.151737E+00 0.910768E+03 0.7248E+03 0.45034E+01 0.86538E+01 8 0.27600FF-01 0.151737E+00 0.91078E+04 0.72246E+03 0.25538F+03 0.45032E+01 0.86537E+01 8 0.27000FF-01 0.151737E+00 0.91078E+04 0.72246E+03 0.25538F+03 0.45032E+01 0.865372E+01 0 0.29000FF-01 0.15737E+00 0.91078E+03 0.77246E+03 0.25538F+03 0.45032E+01 0.865372E+01 0 0.30000FF-01 0.17737F+00 0.91786F+03 0.75588F+03 0.45037E+01 0.85536E+01 2 0.330000FF-01 0.17737F+00 0.91778F+03 0.45536E+03 0.450372E+01 0.85540E+01 2 0.330000FF-01 0.17737F+00 0.91778F+03 0.45536E+03 0.45556F+01 0.85540E+01 2 0.330000FF-01 0.17847F+00 0.90562E+03 0.75588F+03 0.45036E+01 0.85540E+01 2 0.330000FF-01 0.17847F+00 0.90546E+03 0.75598F+03 0.45036E+01 0.85586E+01 0.85586F+01 2 0.330000FF-01 0.17847F+00 0.90464E+03 0.45498E+03 0.45556F+01 0.85586F+01 0.85556F+01 0.85556</pre>	N	0.11000E-01	0.10488F+UU	0.14817F.+U4	U • 1 1 U 8 4 E + 0 4	0.37295E+03	0.86838E+01	0.87083E+01	0.28130E-02
 6.135000F-01 0.11402F+00 0.13288E-04 0.10214F+04 0.343786E+03 0.46672F+01 0.866918E-01 6.146000F-01 0.12247F+00 0.13228E+04 0.952390F+03 0.33786E+03 0.466915E+01 0.866918E-01 6.156000F-01 0.1244F+00 0.122093E+04 0.952835F+03 0.33784E+03 0.46690E+01 0.86699E+01 7.0.156000F-01 0.13446F+00 0.122093E+04 0.972836F+03 0.33784E+03 0.465015F+01 0.86595E+01 0.176000F-01 0.13446F+00 0.11235E+04 0.87161F+03 0.33764E+03 0.46596E+01 0.86595E+01 0.18600F-01 0.13446F+00 0.11235E+04 0.87161F+03 0.33764E+03 0.46596E+01 0.86595E+01 0.216000F-01 0.13446F+00 0.11235E+04 0.87161F+03 0.37641E+03 0.46596E+01 0.865395E+01 0.216000F-01 0.14493F+00 0.11235E+04 0.82864E+03 0.239548E+03 0.46546E+01 0.865395E+01 0.216000F-01 0.14493F+00 0.10768F+04 0.82864E+03 0.24942E+03 0.4653956+01 0.865395E+01 0.226000F-01 0.15146F+00 0.10758F+04 0.875364E+03 0.26136611 0.865395E+01 0.22600F-01 0.15146F+00 0.100758F+04 0.723954F+03 0.26125E+01 0.865395E+01 0.22600F-01 0.151475+00 0.100726+04 0.72346E+03 0.26125E+01 0.8653556+01 0.23000F-01 0.151475+00 0.100122+04 0.72346E+03 0.26125E+01 0.8653556+01 0.25600F-01 0.15175F+00 0.100122+04 0.72346E+03 0.26125E+01 0.8653556+01 0.25600F-01 0.15175F+00 0.100122+04 0.72346E+03 0.261355001 0.27600F-01 0.15175F+00 0.995595E+04 0.72346E+03 0.255156+03 0.86525E+01 0.27600F-01 0.15175F+00 0.995595E+03 0.6254656+03 0.2654756+01 0.8603255+01 0.27600F-01 0.157767+03 0.955935503 0.2250465+03 0.85595656+01 0.23000F-01 0.17575F+00 0.99559556+03 0.8656856+03 0.85590556+01 0.23000F-01 0.1773775+00 0.99559556+03 0.8558656+03 0.8559656+01 0.23000F-01 0.177775+00 0.99559556+03 0.855965656+01 0.23000F-01 0.17675540 0.995556+03 0.8558656+03 0.85590556+01 0.23000F-01 0.177675540 0.9955956+03 0.8558656+03 0.855965656+01 0.23000F-01 0.177675540 0.995556+03 0.8558656+03 0.85556476600 0.85556476 0.23000F-01 0.177	ო	0.1200ºE-01	0.10954E+00	0.14220E+04	0.10623E+04	0.35965E+03	0.46785E+01	0.87030E+01	0.2A130E-02
5 0.1500FF-01 0.11H32F+00 0.12278E+04 0.98497F+03 0.337786E+03 0.46674E+01 0.86478E+01 0.86459E+01 7 0.15600FF-01 0.17247F+00 0.12043EE+04 0.925230F+03 0.35047E+03 0.465060E+01 0.866465401 7 0.17600FF-01 0.13038F+00 0.12043E+04 0.925230F+03 0.37044E+03 0.465060E+01 0.866596E+01 7 0.17600FF-01 0.13784F+00 0.11782E+04 0.87161F+03 0.37044E+03 0.465406E+01 0.866596E+01 7 0.17600FF-01 0.13784F+00 0.11782E+04 0.87161F+03 0.37044E+03 0.46540E+01 0.86659E+01 7 0.17600FF-01 0.13784F+00 0.11782E+04 0.84924F+03 0.37044E+03 0.465306E+01 0.86530E+01 1 0.20000FF-01 0.14427F+00 0.11782E+04 0.84924F+03 0.26432E+03 0.465369E+01 0.86536E+01 0.27000FF-01 0.14432F+00 0.10192E+04 0.619194F+03 0.26432E+03 0.465369E+01 0.86536E+01 0.22000FF-01 0.15432F+00 0.10182E+04 0.791546+03 0.27446E+03 0.460312E+01 0.86535E+01 0.22000FF-01 0.151545F+00 0.10182E+04 0.72046E+03 0.27436E+03 0.460312E+01 0.86535E+01 0.22000FF-01 0.151575F+00 0.10182E+04 0.72046E+03 0.27548E+03 0.460312E+01 0.86535E+01 0.22000FF-01 0.151757F+00 0.10182E+04 0.72046E+03 0.27548E+03 0.450312E+01 0.86535E+01 0.22000FF-01 0.161737F+00 0.10182E+04 0.72046E+03 0.27548E+03 0.450312E+01 0.86535E+01 0.22000FF-01 0.161737F+00 0.97016E+03 0.7548E+03 0.27539E+03 0.450312E+01 0.86535E+01 0.22000FF-01 0.16737F+00 0.995315E+03 0.75548E+03 0.25538E+03 0.455971E+01 0.865725F+01 0.22000FF-01 0.17321F+00 0.995315E+03 0.75548E+03 0.755398E+03 0.455971E+01 0.865725F+01 0.22000FF-01 0.17321F+00 0.995315E+03 0.75538E+03 0.75539E+03 0.85594E+01 0.865725F+01 0.30000FF-01 0.17371F+00 0.995315E+03 0.655775F+03 0.75539E+03 0.85594E+01 0.865725F+01 0.30000FF-01 0.17371F+00 0.995315E+03 0.65577F+03 0.75539E+03 0.85594E+01 0.865725F+01 0.30000FF-01 0.173717F+00 0.99542E+03 0.65577F+03 0.75539E+03 0.85594E+01 0.855705E+01 0.33000FF-01 0.17387E+00 0.99562E+03 0.665777F+03 0.75539E+03 0.85594E+01 0.85576E+01 0.33000FF-01 0.18439E+00 0.99562E+03 0.665777F+03 0.75539E+03 0.85594E+01 0.85576E+01 0.34100FF-01 0.18439E+00 0.99562E+03 0.665686E+03 0.75573E+03 0.85594E+01 0.8557256+01 0.34000FF-01 0.18439	4	0.130005-01	n.11402F+UU	0.13695E+04	U.10214F+04	0.34806E+03	0.86127E+01	0.86972E+01	0.28130E-02
<pre>6 0.1560^F=01 0.12247F+00 0.12811E+04 0.95230F+03 0.37377E+03 0.36501E+01 0.86895E+01 7 0.1760^F=01 0.13938F+00 0.11787E+04 0.92282F+03 0.373744E+03 0.36501E+01 0.86595E+01 8 0.1760^F=01 0.13846F+00 0.11787E+04 0.84924E+03 0.3744E+03 0.36501E+01 0.86595E+01 9 0.1860^F=01 0.13744F+00 0.11787E+04 0.84924E+03 0.3744E+03 0.36531E+01 0.86595E+01 1 0.200^F=01 0.13746F+00 0.11787E+04 0.84924E+03 0.37674E+03 0.36531E+01 0.86533E+01 1 0.200^F=01 0.13746F+00 0.11787E+04 0.80962F+03 0.28482E+03 0.36531E+01 0.86533E+01 2 0.2200^F=01 0.14491F+00 0.10798F+04 0.77549E+03 0.28482E+03 0.86534E+01 0.86533E+01 2 0.2200^F=01 0.14491F+00 0.10788F+04 0.77549E+03 0.28482E+03 0.86524E+01 0.86533E+01 5 0.2200^F=01 0.15497E+00 0.10788F+04 0.77549E+03 0.28487E+03 0.86524E+01 0.86533E+01 7 0.28400^E=01 0.15497E+00 0.10182E+04 0.77549E+03 0.28487E+03 0.86524E+01 0.86534E+01 7 0.28400^E=01 0.15497E+00 0.10182E+04 0.77549E+03 0.28487E+03 0.86524E+01 0.86534E+01 7 0.28400^E=01 0.15797F+00 0.10182E+04 0.72549E+03 0.26471E+01 0.86336E+01 7 0.28400^E=01 0.16432E+00 0.97010E+03 0.728486E+03 0.26471E+01 0.86034E+01 0.28600^E=01 0.17707F+00 0.97106E+03 0.75549E+03 0.26471E+01 0.86526E+01 0.83000^E=01 0.17707F+00 0.99594E+03 0.66577E+03 0.26470E+03 0.8554E+01 0.85546E+01 0.83000^E=01 0.1780F+00 0.91780F+03 0.65586E+03 0.264377E+03 0.8554E+01 0.8554E+01 0.83000^E=01 0.1780F+00 0.91780F+03 0.65586E+03 0.264377E+03 0.8554E+01 0.85546E+01 0.33000^E=01 0.1780F+00 0.91780F+03 0.65586E+03 0.264377E+03 0.8554E+01 0.8554E+01 0.33000^E=01 0.178097+01 0.91780F+03 0.65586E+03 0.264076+01 0.8554E+01 0.8554E+01 0.33000^E=01 0.17800F+03 0.95586E+03 0.65566+03 0.85540E+01 0.8554E+01 0.85540E+01 0.33000^E=01 0.18439E+00 0.927846E+03 0.65586E+03 0.264377E+01 0.8554E+01 0.85546E+01 0.33000^E=01 0.18439E+00 0.9428+03 0.95586E+03 0.264377E+01 0.85546E+01 0.85546E+01 0.33000^E=01 0.18439E+00 0.9428+03 0.95586E+03 0.264377E+03 0.85546E+01 0.85546E+01 0.34000FE+01 0.18708F+01 0.94294E+03 0.95586E+03 0.264577E+03 0.85546E+01 0.85546E+01 0.34000FE+01 0.18708F+00 0.9428+</pre>	л С	0.1400F-01	0.11832F+00	0.13228E+04	U.98497E+03	0.33786E+n3	0.46674E+01	0.86918E+01	0.28130E-02
7 0. [fc0nf=01] n.1749F+U0 0. [2435E+U4 0.92282F+U3 0.370,4E+03 0.3650E+01] n.86805E+01 0. 1760nF=01 n.1344F+UU 0.11782E+04 0.49503F+0.3 0.31328E+03 0.36540E+01 n.86590E+01 0. 19800F=01 n.1374F+UU 0.11782E+04 0.89728F+0.3 0.370,4E+03 0.36540E+01 n.86590E+01 0.2000nF=01 n.1442F+UU 0.11782E+04 0.88785E+0.3 0.370,4E+0.3 0.36540E+01 n.86530E+01 1 0.2200nF=01 n.1442F+0U 0.110997E+04 0.80982F+0.3 0.29482E+03 0.46530E+01 n.86530E+01 2 0.22400F=01 n.1442F+0U 0.10997E+04 0.80982F+0.3 0.29482E+03 0.46530E+01 n.86530E+01 2 0.22400F=01 n.1443F+0U 0.10997E+04 0.69194F+0.3 0.23482E+03 0.46530E+01 n.86530E+01 4 0.22600F=01 n.1581F+00 0.101926F+04 0.69194F+0.3 0.27436E+03 0.46532E+01 n.86532E+01 5 0.22400F=01 n.1581F+00 0.101926+04 0.72549E+03 0.254716E+01 0.86532E+01 6 0.22000F=01 n.161737F+00 0.101926+04 0.72249E+03 0.25471E+01 0.8633EE+01 7 0.2600F=01 n.161737F+00 0.9101926+04 0.7225646F+3 0.256716E+03 0.45574E+01 n.8653EE+01 7 0.2600F=01 n.161737F+00 0.97016E+03 0.728549E+03 0.45574E+01 n.8653EE+01 0 0.27000F=01 n.1737F+00 0.97016E+03 0.728549E+03 0.455746E+01 n.8657EE+01 0 0.27000F=01 n.1737F+00 0.97016E+03 0.728549E+03 0.45579E+01 n.8657EE+01 0 0.27000F=01 n.1737F+00 0.97016E+03 0.728549E+03 0.45579E+01 n.8657EE+01 0 0.26000F=01 n.1737F+00 0.97016E+03 0.728549E+03 0.45579E+01 n.8577EE+01 0 0.26000F=01 n.1787F+00 0.91016E+03 0.65578E+04 0.25503E+03 0.85579E+01 n.85576E+01 0 0.33000F=01 n.1787F+00 0.91016E+03 0.65578E+04 0.25503E+01 n.85579E+01 0 0.33000F=01 n.17879F+00 0.912646E+03 0.65578E+04 0.25503E+01 n.85579E+01 2 0.33000F=01 n.1885F+00 0.912646E+03 0.65578E+04 0.25503E+01 n.85570E+01 2 0.33000F=01 n.1885F+00 0.912646E+03 0.6558E+04 0.25503E+01 n.855756E+01 2 0.34000F=01 n.1885F+00 0.9105462E+03 0.65586E+03 0.85556E+01 n.855756E+01 2 0.34000F=01 n.18856F+00 0.9105462E+03 0.65586E+01 n.855756E+01 n.855756E+01 2 0.34000F=01 n.18856F+00 0.89556E+03 0.65586E+03 0.655561E+03 0.855756E+01 n.855756E+01 2 0.65506F+01 0.89556E+03 0.05556E+03 0.52456E+03 0.85556E+01 n.855756E+01 2 0.26500F+01 0.88556E+01 0.89556E+03 0.52456	s	0.1500F-01	0.12247F+00	0.12811E+04	0.95230F+03	U.37877E+03	0.46615E+01	0.86859E+01	0.2A130E-02
 0.17007F-01 0.13038F400 0.12093E404 0.47161F403 0.31328E403 0.46500E401 0.86630E401 0.180077F-01 0.13446F400 0.117825E404 0.47161F403 0.37641E403 0.465386E401 0.86630E401 0.200707F-01 0.14427E400 0.11235E404 0.489962F403 0.26948E673 0.46538E6701 0.86630E401 1 0.200707F-01 0.14437E400 0.11235E404 0.489962F403 0.26948E673 0.46538E6701 0.86537E401 2 0.210707F-01 0.14437E400 0.102927E404 0.40962F403 0.289482E473 0.46538E6701 0.86537E401 3 0.220075F-01 0.14437E400 0.10258E404 0.409962F403 0.289482E473 0.46538E401 0.86537E401 3 0.220075F-01 0.14437E400 0.101825404 0.40962F403 0.284982E473 0.86531E401 0.865376E401 4 0.220075F-01 0.151645740 0.10558E404 0.775497453 0.27539E403 0.860322E601 0.86537E6401 6 0.224077F-01 0.15164720 0.901122404 0.726476E403 0.25470E403 0.860322E401 0.86574E601 6 0.224077F-01 0.157375401 0.00122404 0.775495403 0.27239E403 0.8603222E401 0.86574E601 7 0.2767756401 0.157375401 0.00122404 0.775495403 0.272395403 0.85037865401 0.86574E601 0 0.2769776-01 0.157375401 0.00122404 0.775495403 0.272395403 0.8504565401 0.86574E601 0 0.2769776-01 0.157375401 0.970105403 0.726465403 0.254305403 0.8554656401 0 0.276976741 0.157375491 0.970105403 0.72548756403 0.85548766401 0.865746501 0 0.276976701 0.1573756403 0.955935403 0.2550356403 0.85573656401 0.8657665401 0 0.276976701 0.177776403 0.9559456403 0.255035602401 0.8557665401 0 0.300075-01 0.177077400 0.91780745403 0.55503566403 0.85578674101 0.8557665401 0 0.300075-01 0.177077400 0.91780745403 0.554956703 0.8557867401 0.8557665401 0 0.300075-01 0.177077400 0.91286743 0.55503566403 0.2545656401 0 0.300075-01 0.177077400 0.91286403 0.554565403 0.2550366401 0.85576666401 0 0.300075-01 0.17807456403 0.554565403 0.2550366401 0.8557666401 0 0.300075-01 0.017807456403 0.554565403 0.855786766401 0.8557666401 0 0.300075-01 0.17807445403 0.5550366403 0.2550364	2	0.160005-01	r.12649F+00	0.12435E+04	U.922825+13	0.32044E+03	0.46060E+01	0.86805E+01	0.28130E-02
 0. [RGOTE-01] 0. [34465400 0.117825404 0.871615403 0.304415403 0.4638656601 0.865905401 0. 200005-01] 0. [144975400 0.112355404 0.849245403 0.2948256403 0.4638656610 0.865356401 0. 200005-01] 0. [44915400 0.107885404 0.809625403 0.2948256403 0.465345401 0.865756401 0. 200005-01] 0. [44915400 0.107885404 0.775495403 0.2849826403 0.4653556401 0.8657556401 0. 200005-01] 0. [44915400 0.107885404 0.775495403 0.2849826403 0.4653556401 0.8657556401 0. 2200055-01] 0. [44915400 0.107885404 0.775495403 0.2849826403 0.4653556401 0.8653556401 0. 2200055-01] 0. [54875400 0.101825404 0.77549546403 0.276155403 0.4603256401 0.8653556401 0. 2200055-01] 0. [54375400 0.101825404 0.725465403 0.276155403 0.4603256401 0.8653556401 0. 2200055-01] 0. [54375400 0.101825403 0.7228665403 0.2563155403 0.4603256401 0.8653556401 0. 2200055-01] 0. [54375400 0.101825403 0.7228655403 0.2563155403 0.4502156401 0.8653566401 0. 2200055-01] 0. [151555403 0.70065403 0.7258655403 0.2573365401 0.86525666101 0. 2000055-01] 0.15375400 0.970105403 0.720065403 0.2551856403 0.455766401 0.86526666401 0. 2200055-01] 0.178875400 0.970105403 0.755865403 0.2553056401 0.855786501 0. 2200055-01] 0.178875400 0.995555466403 0.5558656403 0.2550356401 0.855765601 0. 2000055-01] 0.178875400 0.9917805465403 0.9655775403 0.2550356401 0.855765601 0. 2000055-01] 0.178875400 0.9917805465403 0.9655775403 0.8555056601 0. 2000055-01] 0.178875401 0.995595465403 0.2550356601 0. 2000055-01] 0.184395400 0.991786603 0.25503566010 0.855765601 0. 2000055-01] 0.184395400 0.9917805403 0.9655775403 0.2550356601 0. 2000055-01] 0.184395400 0.99178603 0. 200005501 0.0184395400 0.991786603 0.2550356601 0. 200005501 0.0184395400 0.991786702 0. 200005501 0.0184395400 0.991786603 0.2550356601 0. 200005501 0.01849565603 0.95656777603 0.2557036601 0. 200005501 0.0184595600	χ	0.17000F-01	0.13038F+00	0.12093E+04	U. 49003F+03	0.3132AE+03	0.8650lF+0l	0.86745E+01	0.28130E-02
<pre>0 0.190006-01 0.13784F+UU 0.1149/F+U4 U.84924F+U3 U.37044E+O3 U.46330E+O1 0.86533E+O1 0.220009F-01 0.14142F+UU 0.11235E+U4 U.82864E+O3 U.29482E+O3 U.46533UE+O1 0.86573E+O1 2 U.271007F-01 0.14142F+UU 0.10768F+U4 U.49194F+O3 U.27495E+O3 U.46513E+O1 0.86536F+O1 0.23007F-01 0.151645F+UU 0.10768F+U4 U.77549E+O3 U.27739E+O3 U.46513E+O1 0.86535E+O1 4 U.255007F-01 0.15492F+UU 0.10182E+U4 U.77549E+O3 U.27739E+O3 U.46513E+O1 0.86535E+O1 7 0.27607F-01 0.15492E+UU 0.10182E+U4 U.77549E+O3 U.27739E+O3 U.46593E+O1 0.86535E+O1 7 0.27607F-01 0.15492E+UU 0.10182E+U4 U.77549E+O3 U.77549E+O3 U.25539E+O1 0.86535E+O1 7 0.27607F-01 0.15492E+UU 0.10182E+U4 U.77549E+O3 U.77549E+O3 U.45971E+O1 0.86535E+O1 7 0.27607F-01 0.16733F+UU 0.10182E+U4 U.72206F+O3 U.72539E+O3 U.45971E+O1 0.86535E+O1 0 0.28007F-01 0.16733F+UU 0.97010E+O3 U.72246E+O3 U.725487E+O3 U.45971E+O1 0.86535E+O1 0 0.28007F-01 0.1737F+U0 0.99535E+O3 U.72206F+O3 U.725487E+O3 U.45971E+O1 0.85636E+O1 0 0.28007F-01 0.1737F+UU 0.97010E+O3 U.72206F+O3 U.725500E+O3 U.45971E+O1 0.85746E+O1 0 0.32007F-01 0.1737F+UU 0.94244E+O3 U.95546E+O3 U.755398E+O3 0.85736E+O1 0.85746E+O1 0 0.85007F-O1 0.1737F+UU 0.94244E+O3 U.955576E+O3 U.755398E+O3 0.855786E+O1 0.85726F+O1 0 0.32007F-O1 0.1737F+UU 0.94244E+O3 U.955576E+O3 U.755398E+O3 0.855786E+O1 0.85726F+O1 0 0.32007F-O1 0.17887F+UU 0.9962E+O3 U.65686E+O3 0.255398E+O3 0.855786F+O1 0.85576E+O1 0 0.32007F-O1 0.17887F+UU 0.9962E+O3 U.65686E+O3 0.255398E+O3 0.855786F+O1 0.85772F+O1 0.855775E+O1 0 0.32007F-O1 0.18164F+UU 0.9962E+O3 U.64902E+O3 0.244576F+O1 0.855775E+O1 0 0.34007F-O1 0.18166F+UU 0.99565E+O3 U.644092E+O3 0.244576F+O1 0.855775E+O1 0 0.34007F-O1 0.18165F+UU 0.89556F+O3 U.644092E+O3 0.244576F+O1 0.855775E+O1 0 0.34007F-O1 0.18165F+UU 0.89556F+O3 U.644092E+O3 0.244576F+O1 0.855775E+O1 0 0.34007F-O1 0.18165F+UU 0.89556F+O3 U.644092E+O3 0.244576F+O1 0.855775E+O1 0 0.34007F+O1 0.18779F+UU 0.99562F+O3 0.644092E+O3 0.24477E+O1 0.855775E+O1 0 0.45056F+O1 0.18779F+UU 0.89556F+O1 0.02440776F+O1 0.855775E+O1 0 0.441497F+O1 0.18779F+O1 0.8457</pre>	σ	0.18007E-01	0.13416F+UU	0.11782E+04	0.87161F+03	0.30461E+03	0.86446E+01	0.86690E+01	0.281305-02
<pre>1 0.20000F-01 0.14142F+UU 0.11235E+U4 0.80962E+03 0.29482E+03 0.8653E+01 0.86513E+01 2 0.21000F-01 0.14491F+UU 0.10992E+04 0.80962E+03 0.28058E+03 0.86254E+01 0.86513E+01 3 0.22809F-01 0.1546F+UU 0.10558E+U4 0.77549E+03 0.28058E+03 0.86151E+01 0.86335E+01 4 0.23809F-01 0.15811F+U0 0.10158E+U4 0.77549E+03 0.277515E+03 0.86032E+01 0.86335E+01 5 0.24006E-01 0.15811F+U0 0.10182E+04 0.77549E+03 0.2618E+03 0.86032E+01 0.86335E+01 7 0.256006E-01 0.16733E+00 0.10012E+04 0.77549E+03 0.2618E+03 0.86032E+01 0.86335E+01 8 0.276006E-01 0.16733E+00 0.97010E+03 0.722646E+03 0.2618E+03 0.85032E+01 0.86574E+01 0.280006E-01 0.17677E+00 0.97010E+03 0.72646E+03 0.25618E+03 0.85032E+01 0.8602E+01 0.280006E-01 0.17837E+00 0.97205E+03 0.26518E+03 0.855356E+01 0.8602E+01 0 0.280006E-01 0.17889F+00 0.91780F+03 0.95786E+03 0.25687E+03 0.85032E+01 0 0.30006E-01 0.17889F+00 0.91780F+03 0.95786E+03 0.25539EE+03 0.855356E+01 0.8566E+01 0 0.30006E-01 0.17889F+00 0.91780F+03 0.95586E+03 0.25539EE+03 0.855356E+01 0.85566E+01 2 0.310006E-01 0.17889F+00 0.90642E+03 0.95586E+03 0.25539EE+03 0.85534E+01 0.865775E+01 2 0.310006E-01 0.17889F+00 0.90642E+03 0.965776F+03 0.25503E+03 0.85534E+01 0.855756E+01 0 0.336006E-01 0.18166F+00 0.90642E+03 0.96586E+03 0.25503E+03 0.85534E+01 0.85575E+01 2 0.336006E-01 0.18166F+00 0.90642E+03 0.96586E+03 0.25503E+03 0.85534E+01 0.85575E+01 2 0.336006E-01 0.18166F+00 0.90642E+03 0.96586E+03 0.25636E+03 0.85575E+01 2 0.336006E-01 0.18166F+00 0.90642E+03 0.96586E+03 0.25636E+03 0.85575E+01 2 0.336006E-01 0.18708F+00 0.90642E+03 0.96496E+03 0.26561E+03 0.85575E+01 2 0.350006E-01 0.18708F+00 0.90642E+03 0.96496E+03 0.264956E+03 0.85575E+01 2 0.350006E-01 0.18708F+00 0.90642E+03 0.96496E+03 0.264956E+03 0.85575E+01 0.85575E+01 2 0.350006E-01 0.18708F+00 0.90642E+03 0.96496E+03 0.264956E+03 0.85575E+01 0.85575E+01 2 0.350006E-01 0.18708F+00 0.90642E+03 0.96496E+03 0.264956E+03 0.85676E+01 0.85575E+01</pre>	С	0.19000E-01	0.13784F+UU	0.1149/E+04	0.84924E+03	U.3n044E+03	0.46386E+01	0.86630E+01	0.28130E-02
<pre>2 0.27(00F=01 0.1443)F+90 0.10992F+04 0.80962F+03 0.28435E+03 0.86264F+01 0.8653E+01 3 0.224007E-01 0.15166F+90 0.10558E+04 0.7549E+03 0.28432E+03 0.86151E+01 0.86455E+01 5 0.224006E-01 0.15166F+90 0.10384E+04 0.7549E+03 0.27539E+03 0.86131E+01 0.86335E+01 5 0.24006E-01 0.15813F+00 0.10182E+04 0.7649E+03 0.27539E+03 0.86032E+01 0.86335E+01 7 0.26007E-01 0.16125F+00 0.10182E+04 0.72465E+03 0.27539E+03 0.86032E+01 0.86574E+01 7 0.26007E-01 0.16125F+00 0.10182E+04 0.72456E+03 0.26470E+03 0.8534649E+01 0.86574E+01 7 0.276007E-01 0.16125F+00 0.10182E+04 0.72456E+03 0.26438E+03 0.85849E+01 0.86574E+01 9 0.276007E-01 0.16733F+00 0.97010E+03 0.76578E+03 0.25638E+01 0.85674E+01 0 0.230007E-01 0.17327F+90 0.942844E+03 0.26478E+03 0.855386F+01 0.85676E+01 1 0.300005E-01 0.17889F+00 0.94786E+03 0.264388E+03 0.855386F+01 0.85696E+01 3 0.320005E-01 0.17889F+00 0.94786E+03 0.655886E+03 0.255398E+03 0.855394E+01 0.855966E+01 3 0.320005E-01 0.17889F+00 0.945686E+03 0.264966E+03 0.855334E+01 0.855965E+01 3 0.320005E-01 0.17889F+00 0.945686E+03 0.264966E+03 0.855334E+01 0.855965E+01 3 0.320005E-01 0.17889F+00 0.945686E+03 0.264956E+03 0.855334E+01 0.855965E+01 3 0.320005E-01 0.186439E+00 0.945686E+03 0.264956E+03 0.855334E+01 0.8557556+01 3 0.320005E-01 0.186459E+00 0.9456656+03 0.264956E+03 0.8557356+01 0.8557556+01 3 0.330005E-01 0.186459E+00 0.9456656+03 0.624956E+03 0.8557356+01 0.8557556+01 4 0.330005E-01 0.186459E+00 0.9456565+03 0.624956E+03 0.85576601 0.85576601 0.85576601 5 0.3560075E-01 0.186439E+00 0.945656+03 0.6245615+03 0.85576601 0.85576601 0.85576601</pre>		0.200005-01	0.14142F+00	0.112356+04	0.82864E+03	0.29482E+03	U.8633UE+01	0.46573E+01	0.28130E-02
3 0.220005-01 0.14832F+00 0.10768F+04 0.77549E+03 0.28482E+03 0.8615E+01 0.86455E+01 4 0.230005-01 0.15166F+00 0.10558E+04 0.77549E+03 0.27616E+03 0.8615E+01 0.86335E+01 5 0.240065-01 0.15411E+00 0.10182E+04 0.74576E+03 0.27616E+03 0.46092E+01 0.86335E+01 7 0.250065-01 0.15811E+00 0.10182E+04 0.74576E+03 0.27616E+03 0.46092E+01 0.86374E+01 7 0.250065-01 0.16125E+00 0.10182E+04 0.74576E+03 0.27639E+03 0.45092E+01 0.86374E+01 8 0.270065-01 0.16125E+00 0.10182E+04 0.74576E+03 0.27639E+03 0.45092E+01 0.86774E+01 9 0.270065-01 0.16123E+00 0.97016E+03 0.72205401 0.85745E+03 0.85745E+01 0.8602E+01 9 0.280065-01 0.16733E+00 0.97016E+03 0.72065E+03 0.25615E+03 0.85745E+01 0.8602E+01 9 0.280065-01 0.170295+00 0.97016E+03 0.72065E+03 0.25615E+03 0.85786E+01 0.8602E+01 9 0.280065-01 0.170295+00 0.97016E+03 0.77565+03 0.255036E+03 0.85786E+01 0.85026E+01 1 0.300095-01 0.170295+00 0.917805+03 0.0575865+03 0.255035E+03 0.855786E+01 0.855066E+01 1 0.300095-01 0.170295+00 0.917805+03 0.0558865+03 0.255035E+03 0.855786E+01 0.855465+01 2 0.380005-01 0.170295+00 0.917805+03 0.0558865+03 0.255035E+03 0.855786E+01 0.855765+01 2 0.380005-01 0.170295+00 0.917805+03 0.0558865+03 0.255035E+03 0.8553985+01 0.855765+01 3 0.380005-01 0.1707975+0 0 0.917805+03 0.0558865+03 0.255035E+03 0.855765+01 0.8557656+01 3 0.380005-01 0.1707975+0 0 0.917805+03 0.05588655+03 0.255035E+01 0.8557555+01 5 0.340005-01 0.181665+00 0.917805+03 0.05588655+03 0.2550355+03 0.8559455+01 0.8557555+01 5 0.340005-01 0.1845755+00 0.917805+03 0.0568865+03 0.2549565+03 0.85594565+01 0.8557555+01 6 0.340005-01 0.184555+00 0.917805+03 0.0568865+03 0.2549565+03 0.85594565+01 0.8559655+01 6 0.340005-01 0.184555+00 0.9178055+03 0.0568865+03 0.2549565+03 0.855955+01 0.8557556+01 6 0.340005-01 0.1845555+03 0.0568656+03 0.2549565+03 0.855955+01 0.8557556+01 7 0 0.350005-01 0.1845555+00 0.9178055+03 0.0565865+03 0.2549565+03 0.85	2	0.21C00F-01	0.1449]F+U0	0.10992F+04	0.80962F+03	0.28958E+03	0.86269E+01	0.46513E+01	0.28130E-02
 4 0.23007F-01 0.15166F+00 0.10558E+04 0.77549E+03 0.27616E+03 0.46151E+01 0.86394E+01 5 0.24006F-01 0.15811F+00 0.10364E+04 0.74576E+03 0.27539E+03 0.46092E+01 0.86335E+01 7 0.256006F-01 0.15811F+00 0.10142E+04 0.74576E+03 0.27239E+03 0.46092E+01 0.86274E+01 7 0.26006F-01 0.16125E+00 0.10142E+04 0.74576E+03 0.27239E+03 0.45032E+01 0.86274E+01 8 0.270006F-01 0.16733F+00 0.10012E+04 0.72006F+03 0.26515E+03 0.45074E+01 0.86515E+01 9 0.280006F-01 0.16733F+00 0.97010E+03 0.72066E+03 0.26515E+03 0.45776E+01 0.86024E+01 1 0.30000F-01 0.17321F+00 0.95593F+03 0.47086E+03 0.25487E+03 0.45776E+01 0.86024E+01 1 0.30000F-01 0.17321F+00 0.97010E+03 0.47586E+03 0.255398E+03 0.457756+01 0.856966E+01 2 0.320006F-01 0.17889F+00 0.91780F+03 0.45586E+03 0.25503E+03 0.457756F+01 0 0.320006F-01 0.17889F+00 0.91780F+03 0.45586E+03 0.25503E+03 0.457756F+01 0 30000F-01 0.17889F+00 0.91780F+03 0.45586E+03 0.25503E+01 0.855756F+01 0 330006F-01 0.18166F+00 0.91780F+03 0.45586E+03 0.25503E+01 0.855756F+01 0 330006F-01 0.18166F+00 0.91780F+03 0.45586E+03 0.25498E+03 0.85594E+01 0.85540E+01 0 330006F-01 0.18166F+00 0.91780F+03 0.45586E+03 0.25498E+03 0.85594E+01 0.85540E+01 0 330006F-01 0.18166F+00 0.91780F+03 0.45586E+03 0.26456E+03 0.855056E+01 0 350006F-01 0.18166F+00 0.91780F+03 0.455686E+03 0.254956E+03 0.85594E+01 0.85546E+01 	m	0.220095-01	0.14H32F+U0	0.107685+04	U . (9194E+03	0.294825+03	0.862]2E+0]	0.86455E+01	0.28130E-02
5 0.25000F-01 0.15492E+00 0.10364E+04 0.74576E+03 0.27239E+03 0.46094E+01 0.86335E+01 6 0.25000F-01 0.16175F+00 0.10132E+04 0.74576E+03 0.27239E+03 0.45971E+01 0.86274E+01 7 0.26000F-01 0.16175F+00 0.10012E+04 0.72206E+03 0.26515E+03 0.45971E+01 0.86514E+01 8 0.276000F-01 0.161733F+00 0.98515E+03 0.72000F+03 0.26515E+03 0.45949E+01 0.86091E+01 9 0.28000F-01 0.17707F+00 0.97010E+03 0.7706E+03 0.25688F+03 0.45786E+01 0.86091E+01 0 0.29000F-01 0.17707F+00 0.977010E+03 0.05688F+03 0.255887E+03 0.45786E+01 0.86094E+01 1 0.30000F-01 0.17707F+00 0.97294E+03 0.059706E+03 0.255887E+03 0.45586E+01 0.85966E+01 2 0.31000F-01 0.17889F+00 0.91780F+03 0.05686E+03 0.255887E+03 0.455966E+01 0.85946E+01 2 0.32000F-01 0.17889F+00 0.91780F+03 0.05686E+03 0.255887E+03 0.855994E+01 0.85746E+01 3 0.32000F-01 0.17889F+00 0.91780F+03 0.05686E+03 0.25503E+03 0.85594E+01 0.85746E+01 3 0.32000F-01 0.17889F+00 0.91780F+03 0.05686E+03 0.256398E+03 0.855394E+01 0.85746E+01 3 0.35000F-01 0.18166F+00 0.90642E+03 0.05686E+03 0.245566E+03 0.85534E+01 0.85576E+01 5 0.34000F-01 0.18166F+00 0.90562E+03 0.05686E+03 0.24556E+03 0.85534E+01 0.85576E+01 5 0.34000F-01 0.18708F+00 0.89556E+03 0.054976E+03 0.24556E+01 0.85576E+01 0.85775E+01	t	0.23000F-01	r.15144F+U0	0.10558E+04	0.77549E+03	0.28034E+03	0.86151E+01	0.86394E+01	0.28130E-02
 6 0.25000F-01 0.15811F+00 0.10182E+04 0.74576E+03 0.27239E+03 0.4603ZE+01 0.86274E+01 7 0.26000F-01 0.16125E+00 0.10012E+04 0.73246E+03 0.26870E+03 0.45971E+01 0.86151E+01 9 0.27000E-01 0.16432E+00 0.98515E+03 0.72000E+03 0.2618E+03 0.45548E+01 0.86151E+01 0 0.28000E-01 0.16733F+00 0.97010E+03 0.7000E+03 0.26188E+03 0.455849E+01 0.86091E+01 0 0.29000E-01 0.17371F+00 0.97010E+03 0.7085E+03 0.26188E+03 0.85786E+01 0.86028E+01 0 0.32000E-01 0.17371F+00 0.972984E+03 0.69706E+03 0.255487E+03 0.85786E+01 0.85666E+01 0 0.32000E-01 0.17371F+00 0.972984E+03 0.65586E+03 0.255487E+03 0.85786E+01 0.85666E+01 0 0.32000E-01 0.17889F+00 0.91780F+03 0.65586E+03 0.25503E+03 0.85786E+01 0.85546E+01 0 0.33000E-01 0.17889F+00 0.91780F+03 0.65586E+03 0.25503E+03 0.85786E+01 0.857666E+01 0 0.33000E-01 0.17889F+00 0.91780F+03 0.65586E+03 0.25503E+03 0.85786E+01 0.85775E+01 0 0.32000E-01 0.17889F+00 0.90642E+03 0.65586E+03 0.25503E+03 0.85786E+01 0.85775E+01 0 0.33000E-01 0.17889F+00 0.90642E+03 0.65586E+03 0.254577E+03 0.855998E+01 0.85775E+01 0 0.35000E-01 0.17889F+00 0.90562E+03 0.665776E+03 0.254577E+03 0.85594E+01 0.85775E+01 0 0.35000F-01 0.18166F+00 0.90562E+03 0.66586E+03 0.254577E+03 0.85594E+01 0.85775E+01 0 0.35000F-01 0.18708F+00 0.89556E+03 0.64149F+03 0.24577E+03 0.85465E+01 0.85775E+01 	វា	0.24000F-01	0.15492E+UU	0.10364E+04	U. (6019F+03	0.27416E+03	0.46092E+01	0.86335E+01	0.29130E-02
7 0.2660nF-01 0.161255400 0.100125404 0.132465403 0.2663155403 0.45515401 0.462145401 0.861515401 8 0.2760n5-01 0.164325400 0.985155403 0.72006403 0.261885473 0.458495401 0.860915401 9 0.280005-01 0.167335400 0.970105403 0.708225403 0.261885473 0.458495401 0.860915401 0 0.290005-01 0.173215400 0.955935403 0.0597065443 0.254875403 0.457865401 0.860245401 1 0.300005-01 0.173215490 0.9422445403 0.05866463 0.2553985403 0.457865401 0.8559655401 2 0.310005-01 0.178895400 0.929945403 0.058665403 0.2553985403 0.857255401 0.8559655401 2 0.320005-01 0.178895400 0.917805463 0.0565775403 0.2553985403 0.8552945401 0.8554055401 3 0.320005-01 0.178895400 0.917805463 0.0565775403 0.255035403 0.8552945401 0.857755401 3 0.330005-01 0.181665400 0.906425403 0.0655665403 0.2549565403 0.855345401 0.857755401 5 0.340005-01 0.181665400 0.905425403 0.055865403 0.2549565403 0.855345401 0.857755401 5 0.340005-01 0.181665400 0.905625403 0.055665666 0.20249565403 0.855345401 0.857755401 5 0.350005-01 0.181665400 0.905625403 0.0556656603 0.2243775403 0.8554655401 0.8554655401	s	0.2500F-01	0.15811F+60	0.10182E+04	0.74576E+03	0.27239E+03	0.86032E+01	0.86274E+01	0.281305-02
 R 0.27007F-01 0.16432E+00 0.98515E+03 0.72007F+03 0.2618E+03 0.45909E+01 0.86091E+01 9 0.28000F-01 0.16733F+00 0.97010E+03 0.70822E+03 0.26188E+03 0.45786E+01 0.86091E+01 0 0.29000F-01 0.17029F+00 0.95593F+03 0.69706E+03 0.25487E+03 0.45786E+01 0.86024E+01 1 0.30000E-01 0.17877F+00 0.94244E+03 0.05866E+03 0.255400E+03 0.45786E+01 0.85966E+01 2 0.32000E-01 0.17889F+00 0.91780F+03 0.05586E+03 0.255400E+03 0.85786E+01 0.85966E+01 3 0.32000E-01 0.17889F+00 0.91780F+03 0.05586E+03 0.25598E+03 0.85786E+01 0.85966E+01 3 0.32000E-01 0.17889F+00 0.91780F+03 0.05586E+03 0.25598E+03 0.855765E+01 0.855406E+01 6 0.33000E-01 0.17889F+00 0.90642E+03 0.05586E+03 0.25503E+03 0.85594E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90642E+03 0.056586E+03 0.254956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90542E+03 0.056586E+03 0.254956E+03 0.85534E+01 0.85775E+01 5 0.35000E-01 0.18166F+00 0.90562E+03 0.056586E+03 0.224956E+03 0.85571E+01 0.85775E+01 5 0.35000F-01 0.18166F+00 0.90562E+03 0.05656E+03 0.244561E+03 0.85594E+01 0.85775E+01 	~	0.26000E-01	0.16125E+00	0.10v]2t+04	U.13246E+03	0.26470E+03	0.45971E+01	0.46214E+01	0.28130E-02
 9 0.28000E-01 0.16733F+00 0.97010E+03 0.70822E+03 0.26188E+03 0.45849E+01 0.86091E+01 0 0.29000E-01 0.17029F+00 0.95593F+03 0.69706E+03 0.25487E+03 0.45786E+01 0.86024E+01 1 0.30000E-01 0.17371E+00 0.94244E+03 0.058644F+03 0.25400E+03 0.45786E+01 0.85966E+01 2 0.31000E-01 0.17607F+00 0.92984E+03 0.058586E+03 0.25398E+03 0.85725E+01 0.85966E+01 3 0.32000E-01 0.17889F+00 0.91780F+03 0.05686E+03 0.25503E+03 0.85599E+01 0.85540E+01 4 0.33000E-01 0.17889F+00 0.91780F+03 0.05686E+03 0.25503E+03 0.85594E+01 0.85540E+01 5 0.34000E-01 0.18166F+00 0.90642E+03 0.05686E+03 0.24956E+03 0.855394E+01 0.85745E+01 5 0.34000E-01 0.18166F+00 0.90642E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90542E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90542E+03 0.05656E+03 0.24456E+03 0.85534E+01 0.85775E+01 	a	0.27000E-01	0.16432E+00	0.985]5£+03	U. / 2000E+03	0.26515E+03	0.45909E+01	0.86151E+01	0.28130E-02
0 0.29000F-01 0.17029F+00 0.95593F+03 0.00706E+03 0.25487E+03 0.05786E+01 0.86028E+01 1 0.30000E-01 0.17321E+90 0.94244E+03 0.08644F+03 0.25500E+03 0.85725E+01 0.8596E+01 2 0.31000E-01 0.17889F+00 0.92984E+03 0.07586E+03 0.25398E+03 0.85565E+01 0.85902E+01 3 0.32000E-01 0.17889F+00 0.91780F+03 0.06577E+03 0.25503E+03 0.85599E+01 0.85740E+01 4 0.33000E-01 0.18166F+00 0.90642E+03 0.06656E+03 0.24956E+03 0.855394E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90642E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18439E+00 0.90642E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18708F+00 0.90642E+03 0.054902E+03 0.24551E+03 0.85546E+01 0.85775E+01	5	0.28000E-01	0.16733F+U0	0.97010E+03	U. / 0822E+03	0.26188E+03	0.85849E+01	0.86091E+01	0.28130E-02
 0.30000E-01 0.17321F+90 0.94244E+03 0.08644E+03 0.25400E+03 0.85725E+01 0.85966E+01 0.31000E-01 0.17607E+00 0.92964E+03 0.07586E+03 0.25398E+03 0.855641E+01 0.85902E+01 3 0.32000E-01 0.17889F+00 0.91780F+03 0.065577E+03 0.25203E+03 0.855994E+01 0.85840E+01 4 0.33000E-01 0.18166E+00 0.90642E+03 0.065686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90562E+03 0.055686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18166F+00 0.90562E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 6 0.35000F-01 0.18708F+00 0.89526F+03 0.04949F+03 0.24377E+03 0.85546E+01 0.85546E+01 	C	0-300065-01	0.17029F+00	0.95593F+03	v.69706E+03	0.25487E+03	0.85786E+01	0.86028E+01	0.28130E-02
2 0.3100nE-01 0.176n7F+UU 0.92954E+U3 U.07586E+U3 0.25398E+03 0.85564E+01 0.85902E+01 3 0.3200nE-01 0.17889F+UU 0.91780F+U3 0.66577F+U3 0.25203E+03 0.855994E+01 0.85840E+01 4 0.3300nE-01 0.18166F+UU 0.90642E+03 0.65586E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.3400nE-01 0.18439E+UU 0.89562E+03 0.65686E+03 0.24456E+03 0.85534E+01 0.85775E+01 5 0.3400nE-01 0.18439E+UU 0.89562E+03 0.64902E+03 0.24456E+03 0.85586E+01 0.85775E+01 6 0.3500nF-01 0.18439E+UU 0.89562E+03 0.64902E+03 0.24377E+03 0.8554E+01 0.85775E+01	I	0.30000E-01	0.17321F+00	0.94244E+03	U.*88644F473	0.25400E+03	0+3c27c8+01	n.85966E+n1	0.281305-02
<pre>3 0.3200^E_01 0.17889F+00 0.91780F+03 0.06577E+03 0.25203E+03 0.85599E+01 0.85840E+01 4 0.3300^E_01 0.18164F+00 0.90642E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.3400^E_01 0.18439E+00 0.89562E+03 0.04902E+03 0.24461E+03 0.85471E+01 0.85712E+01 6 0.3500^F_01 0.18708F+00 0.88526E+03 0.04149F+03 0.24377E+03 0.8540E+01 0.85646E+01 </pre>	¢.	0.31000E-01	0.17607F+UU	0.92964E+03	U + b7586E+()3	0.253986+03	0.85661E+01	n.85902E+01	0.28130E-02
4 0.33000E-01 0.18166F+00 0.90642E+03 0.05686E+03 0.24956E+03 0.85534E+01 0.85775E+01 5 0.34000E-01 0.18439E+00 0.89562E+03 0.04902E+03 0.24461E+03 0.85471E+01 0.85712E+01 6 0.35000F-01 0.18708F+00 0.88526E+03 0.04149F+03 0.24377E+03 0.85405E+01 0.85546E+01	m	0.320005-01	0.17889F+00	0.91780F+63	0.66577E+03	0.25203E+03	0.85294E+01	0.85840E+01	0.28130E-02
5 0.34000E_01 0.18439E+UU 0.89562E+U3 0.04902E+03 0.24x61E+03 0.85471E+01 0.85712E+01 6 0.35000F=01 0.18708F+UU 0.88526E+U3 0.04149F+03 0.24377E+03 0.85405E+01 0.85646E+01	4	0.33000E-01	0.18166F+00	0.90642E+03	U.+65686E+03	0.24956E+03	0.85534E+01	0.85775E+01	0.28130E-n2
6 0.3500nF=01 0.8870RF+00 0.48526F+03 0.04149F+03 0.24377E+03 0.45405E+01 0.85646E+01	រា	0.34000E-01	0.•18439E+00	0.89562E+03	V • 64902E+03	0.24461E+03	0.85471E+01	0.85712E+01	0.28130E-02
	s	0.3500nF-01	0.18708F+UU	0.485266+03	U.04149F+03	0.24377E+03	0.85405E+01	0.85646E+01	0.28130E-02

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GROUP	iL	S0RT(F)	SIGA	SIGE	s16C	SIGIR	516S	MUBAR
37	0.36001F-01	0.18974E+00	0.87554E+03	u • 63350E+03	0.24204E+03	0.85342E+01	0.85582E+01	0.281305-02
ε	0.37000E-01	n.19235F+00	0.H6619E+03	U.62582F.+63	U.24137E+03	0.852756+01	0.85516E+01	0.28130E-02
9 G	0.3H000F-01	0.19494E+U0	0.85729E+03	0.61848F+03	0.23881E+03	0.85211E+01	0.85451E+01	0.2A130E-02
40	0.39000E-01	n.19748E+00	0.84862E+03	0.61147E+03	0.237346+03	0.85143E+01	0.85383E+01	0.28130E-02
[1	0.40000F-01	0.20000F+00	() • 84 U 0 4E + () 3	0.00472E+03	0.23592E+03	0.85078E+01	0.85318E+01	0.28130E-P2
40	0.410005-01	0.20248F+UU	0.83294E+03	U.59885E+03	0.23409E+03	0.85009E+01	0.85249E+01	0.291306-02
ф Ф	0.420905-01	0.20494E+UU	0.82550E+03	U.59318F+63	0.23231E+03	0.84943E+01	0.85183E+01	0.291305-02
44	0.43000E-01	n.2n736F+00	0.81839E+03	0.98725F+03	0.23114E+03	U.84874E+01	0.85113E+01	0.28130E-02
4 ቢ	0-44007F-01	0.209765+00	0.81162E+03	0.08107F+03	0.23055E+03	0.84806E+01	0.85046E+01	0.28130E-02
4 C	0.45000E-01	0.21213E+00	0.80507E+03	0.07510F+03	0.229975+03	() • 84 /37E+01	0.84976E+01	0.281305-02
47	0-46000F-01	0.21448F+00	0.79892E+03	0+304074.V	0.22441E+03	0.84068E+01	0.84907E+01	0.28130E-n2
4 00	0.47C00E-01	0.21679F+00	0.79294F+03	U.56604E+03	0.22490E+03	0.84597E+01	n.84836E+01	0.28130E-02
4 0	0.4800rF-01	0.4390915.0	0.78725E+03	6.*56155E+03	0.22570E+03	0.84528E+01	0.84766E+01	0.28130E-02
5 C	0.490005-01	0.22134F+UU	0.78182E+03	0.55702F+03	0.22480E+03	() • 84456E+01	0.84694E+0]	0.2A130E-02
5 ا	0.500005-01	0.22361E+00	0.77654E+03	U.=5263E+03	0.27392E+03	0.84386E+01	n.84624E+01	0.28130F+02
52	0.6000E-01	n.24495E+U0	0.73552E+03	0.51789E+03	0.21763E+03	0.43646E+01	0.83882E+01	0.2A130E-02
ы С	0.70000F-01	0.26458F+00	0.71053E+03	0.49542F+03	0.21511E+03	0.82854E+01	0.83088E+01	0.28130E+02
ر 5 4	0.8000rF-01	0.28284E+U0	0.69778E+03	0.47908F+03	0.21a70E+03	0.82007E+01	0.82239E+01	0.28130E-02
හ ග -29	0.9000rF-01	0.30000F+UU	0.69493E+03	0.47193E+03	0.22300E+03	0.81100E+01	n.81329E+01	0.28130E-02
5.5	0.10000E+00	0.31623E+00	0.70092E+03	0.47091E+63	0.23001E+03	0.80129E+01	n.80355E+01	0.291305-02
57	0.11000E+00	0.33146F+U0	0.714696+03	U.47091E+03	0.24379E+03	0.78996E+01	n.79218E+01	0.28130E-02
58	0.12000E+00	0.34641F+00	0.73595E+03	0.47805E+U3	0.25789E+03	0.77775E+01	n.78195E+n1	0.28130E-02
59	0.13000E+00	0.36056F+00	0.76644E+03	U.49134E+03	0.27510E+03	0.76687E+01	0.76403E+01	0.28130E-n2
6 Q	0.14000F+00	0.37417F+00	0.80459E+03	0.00768F+03	0.29491E+03	0.75513E+01	0.75726E+01	0.2A130E-n2
61	0.15agnE+00	0.38730F+00	0.85721E+03	0+305/30F+03	0.31990E+03	0.74151E+01	0.74360E+01	0.281305-02
62	0.16000E+00	0.40000F+UU	0.92328F+03	0.\$7305E+03	0.35022E+03	0.72/34E+01	0.72939E+01	0.28130E-02
63	0.17000F+00	0.41231F+UU	0.10109E+04	U. 02209E+03	0.3A477E+03	0.71159E+01	0.71360E+01	0.28130E-02
64	0.18000E+00	0.42426F+00	0.1121/E+04	U.68440E+r3	0.43728E+03	0.69706E+01	0.69903E+01	0.281305-02
65	0.19000E+00	0.43589F+00	0.12666E+04	0.768165+03	0.49845E+03	0.68159E+01	0.68352E+01	0.28130E-02
6 6	0.20000E+00	0.4472]E+00	0.144765+04	0.87337E+03	0.57426E+03	0.66724E+01	0.66912E+01	0.28130E-02
67	0.21000E+00	0.458245400	0.16502E+04	0.99084E+03	0.459326+03	0.65506E+01	0.65690E+01	0.28130E-02
68	0.22000E+00	0.469045+00	0.191995+04	U.11481E+04	0.77176E+03	0.64717E+01	0.64900E+01	0.28130E-02
69	0.23000E+00	0.47958E+UU	0.22438E+04	U.13371F+04	0.9n463E+03	0.64929E+01	0.65113E+01	0.28130E-02
7.0	0.240005+00	0.48990F+00	0.26833E+04	0.15945E+04	0.17888E+04	0.66331E+01	0,66518E+01	0.28130E-02
71	0.25000F+00	0.50000F+00	0.32098E+04	0.19010E+0+	0.13088E+04	0.70834E+01	0.71034E+01	0.28130E-02
12	0.240075+00	n.50990F+0U	0.38462E+04	0.22774E+04	0.15483E+04	0.78148E+01	0.78369E+01	0.28130E-02

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MATERIAL NUMBER

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WUBAR 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 1.28130E-02 1.28130E-02	0.28130E-02 0.28130E-02 1.28130E-02 1.28130E-02 0.28130E-02	0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02	0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02	0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02
SIGS 0.91765E+01 0.11075E+02 0.13446E+02 0.13496E+02 0.17595E+02 0.18641E+02	0.18861E+02 0.18749E+02 0.18755E+02 0.17788E+02 0.17245E+02	0.154526402 0.1545266402 0.1545266402 0.154526402 0.154026402 0.148026402	0.14529E+02 0.14293E+02 0.14068E+02 0.13877E+02 0.13534E+02 0.13534E+02 0.13534E+02	0.13?52E+02 0.13124E+02 0.13013E+02 0.12808E+02 0.12717E+02 0.12554E+02 0.12554E+02 0.12482E+02 0.12482E+02 0.12482E+02 0.12482E+02
S1GTR 0.91506E+01 0.11044E+02 0.13406E+02 0.15765E+02 0.17546E+02 0.17546E+02	0.18808E+02 0.18696E+02 0.18204E+02 0.17738E+02 0.17738E+02	0.15782E+02 0.15782E+02 0.15782E+02 0.15909E+02 0.15061E+02	0.144865402 0.142535402 0.140285402 0.138385402 0.138385402 0.134965402 0.134965402 0.133465402	0.132156+02 0.130876+02 0.129776+02 0.128696+02 0.120916+02 0.125996+02 0.125996+02 0.125996+02 0.123776+02 0.123776+02 0.123576+02
SIGC 0.18053E+04 0.20199E+04 0.21330E+04 0.21365E+04 0.20240E+04 0.17997E+04	0.15191E+04 0.12449E+04 0.17235E+04 0.83141E+03 0.49447E+03	0.25546403 0.44702E+03 0.364]1E+03 0.30419E+03 0.25877E+03 0.255477E+03	0.19198E+03 0.16761E+03 0.14864E+03 0.13357E+03 0.12185E+03 0.17185E+03 0.17091E+03 0.17057E+03	0.89435E+02 0.83158E+02 0.74514E+02 0.75514E+02 0.75018E+02 0.57106E+02 0.57106E+02 0.57413E+02 0.57413E+02 0.57413E+02 0.57531E+02 0.44138E+02 0.44138E+02
SIGF 0.26222E+04 0.29337E+04 0.30982E+04 0.31033E+04 0.29398E+04 0.26140F+04	U.22064E+04 U.18111F+04 U.14995E+04 U.12319E+04 U.10409E+04	0.744676403 0.744676403 0.534346403 0.547526403 0.547526403 0.468866403 0.468866403	0.34161E+03 0.32075E+03 0.28806E+03 0.26252E+03 0.26252E+03 0.22269F+03 0.222269F+03 0.222269F+03	0.183875+03 0.172635+03 0.150375+03 0.150375+03 0.1329455+03 0.132795+03 0.1325645+03 0.1325645+03 0.113395+03 0.113395+03 0.101035+03 0.101035+03
SIGA 0.44275E+04 0.49536E+04 0.52312E+04 0.52398E+04 0.49639E+04 0.49639E+04	0.37255E+04 0.30580E+04 0.25530E+04 0.20635E+04 0.17254E+04	0.11917E+04 0.11917E+04 0.10025E+04 0.85671E+03 0.72764E+03 0.63420E+03	$\begin{array}{c} 0.55359E+03\\ 0.48836E+03\\ 0.48836E+03\\ 0.436/0E+03\\ 0.39609E+03\\ 0.33359E+03\\ 0.33359E+03\\ 0.30589E+03\\ 0.30589E+03\\ \end{array}$	0.27350E+03 0.255579E+03 0.235699E+03 0.235699E+03 0.22227E+03 0.19374E+03 0.17343E+03 0.17343E+03 0.15310E+03 0.15310E+03 0.15516E+03 0.155266+03
SQRT(E) 0.51962F+00 0.52915E+00 0.53852F+00 0.53852F+00 0.55678F+00 0.55678F+00	0.57446E+00 0.58310E+00 0.59161E+00 0.60000E+00 0.60000E+00	0.65574F+00 0.632450F+00 0.63245F+00 0.648031F+00 0.64807E+00 0.65574F+00	0.65332F+UU 0.67082E+UU 0.67823F+UU 0.68557F+UU 0.68557F+UU 0.69282F+UU 0.7000F+UU 0.7711F+UU	0.71414F+00 0.72111F+00 0.72801F+00 0.73485F+00 0.74142F+00 0.74833F+00 0.75498E+00 0.75158F+00 0.75158F+00 0.751158F+00 0.78102F+00 0.78102F+00
E 0.27000E+00 0.28000E+00 0.29000E+00 0.31000E+00 0.31000E+00 0.32000E+00	0.330095+00 0.340095+00 0.350095+00 0.360005+00 0.370095+00	0.3900015+00 0.390005+00 0.4000015+00 0.410005+00 0.425005+00 0.435005+00	0.44000E+00 0.455000E+00 0.455000E+00 0.47000E+00 0.48000E+00 0.48000E+00 0.49000E+00 0.50000E+00	0.52000E+00 0.52000E+00 0.53000E+00 0.55000E+00 0.55000E+00 0.57000E+00 0.57000E+00 0.57000E+00 0.57000E+00 0.59000E+00 0.59000E+00 0.51000E+00
68000 73 75 75 77 78	00100 2000 2000	1 II C P C O 1 II C P C O	6 - 0 m 4 m 9 5 5 5 5 5 5 5 3-30	66700000000000000000000000000000000000

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GROUP	14.2	SQRT (F)	SIGA	SIGF	S16C	SIGIR	S 16S	MUBAR
109	0.63000E+00	0.79373F+00	0.13101E+03	0.91/30F+02	0.39281E+02	0.12197E+02	0.12231E+02	0.28130E-02
110	0.64000E+00	0.8000000400	0.125/2E+03	U.88354E+02	0.37361E+02	0.12142E+02	0.12176E+02	0.28130E-02
111	0.65000E+00	0.806235+00	0.11931E+03	0.84477E+02	0.34832E+02	0.12092E+02	0.12126E+02	0.28130E-02
112	0.44000F+00	0.431240F+30	0.11495E+03	0.81208E+02	0.33740E+02	0.12043E+02	0.12077E+02	0.28130E-02
113	0.67000F+00	0.81854F+UU	0.11109E+03	U. / 8655E+02	0.32433E+02	0.11998E+02	0.12032E+02	0.28130E-02
114	0.64000E+00	0.82442E+30	0.10641E+03	U.75488F+02	0.31919E+02	0.11954E+02	0.11988E+02	0.28130E-02
115	0.69000E+00	0.83066F+J0	0.10285E+03	U.73036F+02	0.29H10E+02	0.11914E+02	0.11947E+02	0.281305-02
116	0.70000F+00	0.83666F+00	0.987265.+02	U. (0687F+02	0.29039E+02	0.11874E+02	0.11907E+02	0.291305-02
117	0.71000E+00	n.84261F+00	0.96015E+02	U.08746E+02	0.27269E+02	0.11837E+02	0.11870E+02	0.281305-02
118	0.72000E+00	0.84853F+00	0.93015E+02	0.06501E+02	0.26414E+02	0.11801E+02	0.11934E+02	0.28130E-02
119	0.7300rF+00	0.85440F+00	0.89914E+02	U.64354E+02	0.25550E+02	0.11768E+02	0.11801E+02	0.28130E-02
120	0.74600E+00	0.86023F+00	0.87464E+U2	U-02617E+02	0.24847E+02	0.11735E+02	0.11768E+n2	0.28130E-02
121	0.75000F+00	0.86603F+U0	0.45174E+02	u+6n983E+02	0.24191E+02	0.11704E+02	0.11737E+02	0.241305-02
122	0.76000E+00	0.87178E+00	0.82893E+02	U.59349E+n2	0.23545E+02	0.11074E+02	0.11707E+02	0.28130E-02
123	0.77000F+00	0.87750F+UU	0.80613E+02	U.\$7714E+02	0.228995+02	0.11646E+02	0.11679E+02	0.28130E-02
124	0.78000E+00	0.88318F+00	0.78473E+02	U. 56182E+02	0.22291E+02	0.11018E+02	0.11651E+02	0.29130E-02
125	0.79007+00	0.88882F+00	0.77142E+02	0.55263E+02	0.21920E+02	0.11592E+02	0.11625E+02	0.28130E-D2
<mark>е]</mark> 26	0.80000F+00	0.89443F+UU	0.75762E+02	0.54241F+02	0.21521E+02	0.11966E+02	0.11599E+02	0.28130E-02
27	0.81000E+00	0.+30000¢+00	0.73762E+02	0.52811E+02	0.20451E+02	0.11543E+02	0.11575E+02	0.28130E-02
128	0.42000E+00	0.90554F+00	0.71621E+02	0.51274F+02	0.20343E+02	0.11519E+02	0.11551E+02	0.29130E-02
129	0.83007E+00	0.91104F+U0	0.70341E+02	0. DA399F+02	0.19982E+02	0.11497E+02	0.11529E+02	0.28130E-02
130	0.84000F+00	0.91652F+U0	0.69201E+U2	0.49542E+02	0.19459E+02	0.11475E+02	0.11507E+02	0.28130E-02
131	0.8500nE+00	0.4321956400	0.67201E+02	U.44112E+02	0.19089E+02	0.11454E+02	0.11486E+02	0.28130E-02
132	0.86000F+00	0.42736F+UU	0.66060E+02	0.472956+02	0.12766E+02	0.11434E+02	n.11466E+n2	0.28130E-02
133	0.87000E+00	0.93274F+UU	0.64920E+02	0.46478E+02	0.]A443E+02	0.11414E+02	0.11446E+02	0.28130E-02
134	0.48000F+00	n.93808E+00	0.434906+02	0.45454E+02	0.18034E+02	0.11395E+02	0.11427E+02	0.281305-02
135	0.89.00F+00	0.94340F+UU	0.62060E+02	U.44435F+02	0.17425E+02	0.11377E+02	0.11409E+02	0.28130E-n2
136	0.49000F+00	0.94868F+00	0.61870E+02	0+3413F+02	0.18456E+02	0.11359E+02	0.11391E+02	0.281305-02
137	0.91000E+00	n.95394F+UU	0.59920E+02	U+42903F+02	0.17017E+02	0.11342E+02	0.11374E+n2	0.28130E-02
138	0.9200nF+00	n.95917F+UU	0.58349E+02	0.41779E+02	0.16571E+02	0.11326E+02	0.11358E+02	0.28130E-n2
139	0.93000F+00	r.96437F+00	0.57639F+02	0.4126HF+02	0.14771E+02	0.11310E+02	0.11342E+02	0.28130F-02
140	0.94000F+00	0.96954F+00	0.56359E+02	0.40349F+02	0.14010E+02	0.11294E+02	0.11326E+02	0.28130E-02
141	0.95000F+00	0.97468F+UU	0.55639E+02	0.39838F+n2	0.15401E+02	0.11279E+02	0.11311E+02	0.2A130E-02
142	0.960005+00	0.479R0F+00	0.543595+02	0.38919E+02	0.15440E+02	0.11265E+02	0.11296E+02	0.28130E-02
143	0.97900F+00	0.98489F+00	0.53929E+02	U.38612F+02	0.15316E+02	0.11250E+02	0.112A2E+02	0.28130E-02
144	0.48000E+00	n.98995F+U0	0.52938E+02	U.37897E+02	0.15441E+02	0.11237E+02	n.11268E+02	0.281306-02

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NUMBER

MATERIAL

201 0.28130E-02 0.28130E-02 N 0.28130E-02 0.28130E-02 0.29130E-02 0.28130E-02 0.29130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.29130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-p2 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 201 0.28130E-02 0.28130E-02 0.28130E-02 0.29130E+n2 0.28130E-n2 0.28130E-02 0.29130E-02 0.28130E-02 0.28130F-0 0.28130E-0 0.28130E+0 0.28130E-n 0.28130E-0 0.28130E-0 0.2R130E MUBAR 0.28130E 0.11254E+02 0.11689E+02 669E+02 0.11649E+02 n.11630E+02 0.11612E+02 593E+02 0.11576E+02 0.11558E+02 0.11541E+02 0.11524E+02 0.11507E+02 0.11491E+02 0.11474E+02 459E+02 0.11443E+02 0.11428E+02 0.11413E+02 0.11398E+02 0.11369E+02 0.11355E+02 0.11341E+02 0.11327E+02 0.11314E+02 0.11300E+02 0.11249E+02 0.11237E+02 0.11224E+02 0.11212E+02 0.11188E+02 0.11240E+02 0.113A3E+02 0.11287E+02 0.11274E+02 0.11262E+02 0.11200E+02 **S16S** 0.110 0.11 0.11 0+11323E+02 0.11222E+02 0.11208E+02 0.11056E+02 0.11636E+02 0.11617E+02 579E+02 0.11561E+02 0.11543E+02 0.11225E+02 0.1150dE+02 0.11475E+02 0.11458E+02 U.11426E+02 0.11411E+02 0.11396E+02 0.11381E+02 0+11366E+02 0.11337E+02 0.11309E+02 0.11295E+02 0.11282E+02 0.11269E+02 0.11256E+02 0.11243E+02 0.11230E+02 0.1121/E+02 0.11205E+02 0.11181E+02 0.11157E+02 0.11598E+02 0.11491E+02 0.11442E+02 0.11351E+02 0.11193E+02 0.11169E+02 SIGTR 0.11 0.13710E+02 0.13469E+02 0.1278AE+02 0.12573E+02 0.12365E+02 0.12161E+02 0.11963E+02 0.11770E+02 9.11581E+02 U.11042E+02 0.11538E+02 0.1n377E+02 0.17219E+02 0.1r065E+02 0.14746E+02 0.14461E+02 0.14478E+02 0.14214E+02 0.13958E+02 0.13236E+02 0.13009E+02 0.11397E+02 0.11217E+02 0.10870E+02 0.1n702E+U2 ()+99132E+01 0.97446E+01 0.96JARE+01 0.94756E+01 0.91968E+01 0.87462E+01 0.9n4]1E+01 0.892756+01 0.86470E+01 0.85398E+0] 0.93350E+01 ۶16C U-32816F+02 0.32060E+02 U-31697E+02 U.31344E+02 U.28260F+02 0.26028E+02 U.37182F+02 U + 36467F+02 0.36318F+02 U.35832E+02 U.35361F+02 0.34905E+02 U-34462F+02 0.34032E+02 0.33615E+02 U.3321.0F+02 0.32432F+02 U.31000E+02 U.30664F.+02 U.30338E+02 U+30019E+02 0.2970AF+02 U.29404F+02 U+29108E+02 0.28819F+02 U.28536F+02 U+27990E+02 U.27726F+02 0.27468E+02 0.26968E+02 U-26725+U2 U.26488E+02 U.Z6256F+02 0.25805E+02 0.25587E+02 0.27215F+02 SIGE 0.49319E+02 0.47931E+02 0.45998E+02 0.45389F+02 0.44221E+02 0.42581E+02 0.42062E+02 0.41555E+02 0.36303E+02 0.35184E+02 0.34412E+02 0.51928E+02 0.50928E+02 0.50797E+02 0. 50046E+U2 0.48615E+02 0.47268E+02 0.46624E+U2 0.44797E+02 0.43660E+02 0.43113E+U2 0.41061E+02 0.40578E+02 0.40107E+02 0.39646E+U2 0.39196E+02 50+354786.0 0.38325E+02 0.37903E+02 0.37490E+02 0.37086E+02 0.36690E+02 0.35922E+02 0.35549E+02 0.34825E+U2 0.34127E+02 SIGA 0.99499F+UU 0.ln296E+01 0.10344E+01 0.10392E+01 0.]0440F+U1 0.10488F+01 0.10583E+01 0.10630F+U1 0.]0477F+U1 0.10724F+01 0.10770E+U1 0.10817F+01 0.11000F+01 0.11045E+01 0.11091F+01 0.11134F+U1 0.11402F+Ul 0.11574F+U1 0.10050F+01 0.10534F+01 n.ln8k7F+UÌ 0.11314F+01 0.1135AF+U1 0.]]446F+U] n.11489E+01 0.11533F+U1 0.10000F+U1 0.10100E+01 0.10149E+01 0.11225E+U1 0.11269F+U1 0.10198F+U1 n.]n247F+U] 0.10409F+U] n . 10954F+U] 0.111A0F+01 SORT (E) 0.99000E+00 0+]1000E+01 0.11100F.+01 0.11200E+01 0.11600F+01 0.11800F+01 0.12000E+01 0.1220rE+01 0.12507E+01 0.12600E+01 0.13400F+01 0.10000E+01 0.10100F+01 0.10200E+01 0.10300E+01 0.10A0rE+01 0.11300F+01 0.11500E+01 0.1170nE+01 0.11900F+01 0.12300E+01 0.]2400F+0] 0.12900F+01 0.]3conF+01 0.13300F+01 0.10400E+0] 0.10900F+0 0.11409E+0 0.12100E+0 0.12707F+01 0.12800E+0 0.13100F+0 0.13200E+0 0.10500E+0 0.10407E+0 0.10700F+0 LL. GROUP 291 3-32 101 175 145 146 147 148 8 46 50 0 10 160 66 67 68 69 7.8 80 57 5 9 6 4 ទ 500 165 7.0 72 74 176 77 79 171

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E 13507E+01	5027(E) C.11619E+01	51GA 0.3378/E+02	0.25372F+02	sIGC 0.84145E+01	SIGIR 0.11145E+02	5165 0.11177E+02	MIJBAR 0.28130E-02
	0.11662E+01	0.33453E+02	0.25162E+02	0-829116+01	0.11134E+02	0.11165E+02	0.28130E-02
	0.11705E+01	0.33126E+U2	0.249565+02	0.81495E+01	0+11123E+02	0.11154E+02	0.28130E-02
	0.1]747F+01	0.32803E+02	0.24754F+02	0.8n497E+01	0.11111E+02	0.11143E+02	0.28130E-02
	0.11790F+01	0.32487E+U2	U-24555F+02 0 24255F+02	0.79316E+01	0.11100E+02	0.111325+02	0.28130E-n2
	0.118745401	0.31869F+02	0.24169F+02	0.77001F+01	0.110795+02	0 11110F402	0.201305-02
	0.11916E+01	0.31567E+02	U-23981F+02	0.75867E+01	0.11068E+02	0.11099E+02	0.281305-02
	n.11958F+UI	0.312/1E+02	0.23796E+02	0.74747E+01	0.11058E+02	0.11089E+02	0.281305-02
	0.12000E+01	0.309/9E+02	0.23614F+02	0.73642E+01	0.11047E+02	0.11078E+02	0.28130E-02
	n.12042F+01	0.30691E+02	U.23436F+02	0.72550E+01	0.11037E+02	0.11068E+02	0.28130E-02
	0.12083E+U1	0.30408E+02	0.23261F+02	0.71472E+01	0.11027E+02	0.11058E+02	0.28130E-02
	0.12124F+U1	0.301296+02	U.23UR9E+02	0.70406E+01	0.11017E+02	0.11048E+02	0.281305-02
, - 4	0.12166E+U1	0.29854E+02	0.22919E+02	0.49352E+01	0.1100/F+02	0.11038E+n2	0.28130E-02
1	0.12207F+U1	0.29584E+02	U+22753E+02	0.64311E+01	0.10997E+02	0.11028E+02	0.28130E-02
	0.12247F+01	0.29317E+02	0.22589F+02	0.47281E+01	0.10987E+02	0.11018E+02	0.28130E-02
~~~	0.12288F+U1	0.29054E+02	0.22427F+02	0.66263E+01	0.10977E+02	0.11008E+02	0.28130F-02
<b>ب</b> سر	0.12329F+U1	0.28794E+02	J.22269E+02	0.45255E+01	0.10968E+02	n.1099E+02	0.28130E-02
	n.12369E+01	0.285395.+02	0.22113E+02	0.44258E+01	0.10958E+02	0.10989E+02	0.28130E-02
٦	0.12410F+01	0.28286E+02	0.21959E+02	0.43271E+01	0 • 1 0 9 4 9 E + 0 2	0.10980E+02	0.28130E-02
-	0.12450F+U1	0.28037E+02	U+21808F+02	0.62294E+01	0.10940E+02	0.10971E+02	0.281305-02
parent.	0.12490E+01	0.27791E+02	0.21659F+02	0.41327E+01	0.10931E+02	n.10961E+n2	0.28130E-02
, <b></b> .	0.12530F+01	0.27549E+02	0.21512E+02	0.40368E+01	0.10921E+02	0.10952E+02	0.28130E-02
, <b></b> ,	0.12570E+01	0.27310E+02	0.21368F+02	0.59419E+01	0.10912E+02	0.10943E+02	0.28130E-02
~	0.12610F+01	0.27073E+U2	0.21225F+02	0.58479E+01	0.10904E+02	0.10934E+02	0.28130E-02
-	0.12649E+U1	0.26840E+02	U+21085F+D2	U.57547E+01	0.10895E+02	0.10925E+02	0.28130F-02
	0.12689F+01	0.26609E+02	U.Z0947E+02	9.56424E+01	0.10886E+02	0.10917E+02	0.2A130F-02
1	n.12728F+01	0.263825+02	0.20811F+02	0.55709E+01	0.10877E+02	0.10908E+02	0.28130E-02
-	0.12767F+U1	0.26157E+02	U.Z0676F+02	0.54801E+01	0.10869E+02	0.10899E+02	0.28130F-02
	0.12804F+01	0.25934E+02	U.20544E+02	0.53401E+01	0.1086UE+02	0.10891E+02	0.28130F-02
-	0.12845F+U1	0.25714F+02	U.20414E+02	0.53008E+01	0.10852E+02	0.10882E+02	0.281305-02
	0.12884F+U1	0.25497E+02	0.20285E+02	().52123E+01	0.10843E+02	0.10874E+02	0.29130F-02
Ξ	n.12923E+01	0.25282E+02	0.20158E+02	0.51245E+01	0.10835E+02	0.10966E+02	0.281305-02
1	0.12961F+U1	0.250/0E+02	0.20033F+02	0.50373E+01	0.10827E+02	0.10858E+02	0.28130E-02
Ξ	0.13000E+01	0.24860E+02	U.19909E+U2	0.49508E+01	0.10819E+02	n.10849E+02	0.28130E-02
	0.1303AE+U1	0.24652E+02	U.19787E+02	0.48449E+01	0.10811E+02	0.10841E+02	0.28130E-02

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0.28130E+02 0.28130E+02 0.29130E=02 0.2A130E-02 0.28130E-02 0.28130E-02 0.28130F-02 0.29130E-02 0.28130E-02 0.28130F-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-02 0.28130E-n2 0.28130E-02 0.28130E-02 0.28130E-n2 0.2A130E-02 0.28130E-02 0.28130E-02 0.28130E-02 .28130E-02 .28130E-02 30E-02 0.281305-02 0.28130E-02 0.28130E-02 0.28130E-02 MUBAR 0.281 0833E+02 0.10825E+02 0.10817E+02 0.91 UE+02 0802E+02 0794E+02 0787E+02 0779E+02 0.10771E+02 0764E+02 0.10757E+02 0749E+02 0742E+02 0.10735E+02 .10728E+02 0.10720E+02 0713E+02 0706E+02 .10686E+02 0.10679E+02 0672E+02 0.10665E+02 0.10659E+02 0652E+02 0.10645E+02 0639E+02 .10632E+02 0.10626E+02 0699E+02 0.10693E+02 S01S 0.1 0.1 0.1 0.1 - --0.1 0.1 --5.1 : --0.10795E+02 0.10787E+02 0.10779E+02 0.10749E+02 0.10/41E+02 0.10734E+02 .10712E+02 0.10705E+02 0.10697E+02 0.10090E+02 0.10683E+02 10662E+02 .10656E+02 0.10649E+02 0.10642E+02 0.10635E+02 0.10022E+02 10002E+02 U.10803E+02 0.10771E+02 0.10764E+02 0.10756E+02 0.10726E+02 0719E+02 .10676E+02 0.10669E+02 0.10629E+02 0.10615E+02 .10009E+02 0.10596E+02 SIGIR 0.1 0.46950E+01 0.36437E+01 0.31091E+01 0.47797E+01 0.461]0E+01 0.45276E+01 0.41184E+01 0.37217E+01 0.35661E+01 0.34890E+01 0.30343E+01 0.29598E+01 0.28857E+01 0.25199E+01 0.44447E+0] 0.43523E+01 0.42805E+01 0.41992E+01 .40381E+01 0.39583E+01 0.3A790E+01 . 78001E+01 0.34122E+01 0.33359E+01 0.32599E+01 0.31H43E+01 0.28119E+01 .25924E+01 0.27384E+01 0.26452E+0] s160 0+18977E+02 U.18546F+02 0.1A235E+02 U . 1 8 U 3 4 E + 0 2 0.17935E+02 0.17837F+02 U-17093F+02 0.19667E+02 U . 19548E+02 0.19431E+02 9316E+02 0.19202E+02 U+19089E+02 U.18759E+02 0.18652E+02 844]F+02 A337E+02 U . 1 8 1 3 4 E + 0 2 U • 17741F+02 0.17645F+02 U.17551E+02 0.17457F+02 0.17365E+02 0 • 17273E + 02 0.17183E+02 U.17005F+02 0.16917E+02 0 . 16 744F + 02 **U • 18868F + 02 U • 16830E + 02** SIGF . . **.** . 0.1 -24447E+02 .20566E+02 0.24042E+02 0.23843E+02 0.23258E+02 0.23067E+02 0.22877E+02 .21957E+02 0.217/8E+02 0.21600E+02 -20735E+02 0.20399E+02 0.20068E+U2 0.24244E+02 0.23646E+02 0.23451E+02 0.22690E+02 0.22504E+02 0.22320E+02 0.21424E+02 0.212506+02 .21071E+02 .20905E+02 0.202335+02 0.19905E+02 19743E+02 194226+02 0.19264E+02 .22137E+02 19582E+02 SIGA 0 0.13077F+01 0.13115E+01 0.13856F+01 0.13928F+U1 0.14107E+01 0.14142F+01 n.13379E+U1 n.13601F+01 0.13675E+U1 0.13711F+U1 n.13784E+U1 0.13820E+Ul 0.13892F+U1 1.13964F+01 0.13266E+U1 n.13638F+01 0.13748F+01 n.133n4E+U] n.13342F+U1 0.13416F+U1 n.13545F+U1 n.14000F+U] n.14034E+01 0.13153E+0] 0.13191F+U n.13229F+0 0.13454E+0 0-13491F+0 0.13528F+0 0.14071F+0 ( 1) THOS 0.18700F+01 7100E+01 0.17200E+01 0.1790nE+01 0.18400E+01 0.1940rE+01 0.19400F+01 0.18009F+01 8500E+0] 0.19500F+01 0.2000rE+01 0 • ] 7800F + 0] 0.18100E+01 8300E+0] 8400E+0] 0.18800F+01 0.18900F+01 0.1920^F+01 0.19700E+01 0.19R00E+01 7400E+0 750.0E+0] 7600E+0] 0.18200F+0] 9000E+0] 0*1910/E+01 0.1930^E+0] 0.19907E+0 7300F+0 0 • ] 770 7E + 0 4 0.14 0.1 .1.0 **.** GROUP 238 239 217 223 242 243 218 219 220 222 240 244 245 N 4 C 221 231 241

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TE*SIGA RTE*SIGE	.15171E+03 0.11570E+0 .15202E+03 0.11573E+0	<pre>.15234E+03 0.11576E+0</pre>	<pre>.15266E+03 0.11580E+0</pre>	.15299E+03 0.11584E+0	.15332F+03 0.11589E+0	<pre>.15365E+03 0.11594E+0</pre>	<pre>.15399E+03 0.11599E+0</pre>	<pre>.15434E+03 0.11606E+0</pre>	<pre>.15469E+03 0.11614E+0</pre>	<pre>.15&gt;05E+03 0.11622E+0</pre>	<pre>.15&gt;41E+03 0.11629E+0</pre>	<pre>.15577E+03 0.11637E+0</pre>	<pre>.15bl4E+03 0.11646E+0</pre>	<pre>.15652E+03 0.11654E+0</pre>	<pre>.15090E+03 0.11663E+0</pre>	<pre>.15729E+03 0.11673E+0</pre>	I57686+03 0.116836+0	.15808E+03 0.11694E+0	<pre>.15847E+03 0.11706E+0</pre>	<pre>.15888E+03 0.11719E+0</pre>	.15929E+03 0.11732E+0	<pre>.15971E+03 0.11746E+0</pre>	<pre>.1601<e+03 0.11761e+0<="" pre=""></e+03></pre>	.16055E+03 0.11777E+0	.16098E+03 0.11792E+0	<pre>.l6143E+03 0.11811E+0</pre>	.16188E+03 0.11831E+0	<pre>.16233E+03 0.11451E+0</pre>	.16279E+03 0.11A70E+0	.16324E+03 0.11889E+0	<pre>.16371E+03 0.11900E+6</pre>	.16418E+03 0.11910E+0	•16466E+03 0.11932E+0	<pre>.l6514E+03 0.11967E+0</pre>	<pre>.16562E+03 0.12001E+0</pre>
ETA R	0.28800E+01 0 0.21923E+01 0	0.21884E+01 0	0.21845E+01 0	0.21A06E+01 0	0.21769E+01 0	0.21731E+01 0	0.21493E+01 0	0.21457E+01 0	0.21622E+01 0	0.21587E+01 0	0.21551E+01 0	0.21516E+01 0	0.21480E+01 0	0.21444E+01 0	0.21409E+01 0	0.213746+01 0	0.21339E+01 0	0.21305E+01 0	0.21274E+01 0	0.21242E+01 0	0.21213E+01 0	0.21182E+01 0	0.21153E+01 0	0.21125E+01 0	0.21095E+01 0	0.21070E+01 0	0.21049E+01 0	0.21025E+01 0	0.21001E+01 0	0.2ng77E+01 0	0.21934E+01 0	0.27891E+01 0	0.20871E+01 0	0.20870E+01 0	0.20470E+01 0
АЦРНА	u. U.31366E+0U	0.31603F+00	U.31837E+00	U • 32072E + 00	u.32295E+00	0.32527F+00	U.32759E+0U	0.329A2E+00	0.33198E+0U	0.33413E+00	0.33635E+0U	0.33854E+00	U • 34077E + 00	0.34301E+00	U.34524E+0U	U.34745F+00	U.34963F+00	0.35178F+00	0.35377E+00	U.35579F+0U	U.35768F+00	0.35964F+00	U.36149E+0V	0.36328F+00	0.36525E+00	0.36685F+00	U.36826F+00	0.36977F+00	0.37138E+00	U.37294F+00	0.37578F+00	U.37855F+0U	U•37993E+00	0.37997F+00	0.38000E+00
NUSIGE	0. 0.10540E+05	0.74546E+04	0.60887E+04	0.52748F+04	0.47201E+04	0.43108E+04	0.39928E+04	0.3737]E+04	0.35256E+04	0.33470E+04	0.31933E+04	0.30596E+04	0.29416E+04	0.28367E+04	0.27426E+04	0.26577E+04	0.258066+04	0.25102E+04	0.24458E+04	0.23865E+04	0.23317E+04	0.22808E+04	0.22334E+04	0.21893E+04	0.21478E+04	0.21095E+04	0.20736E+04	0.20397E+04	0.200/5E+04	0.19769E+04	0.19465E+04	0.19174E+04	0.18917E+04	0.18692E+04	0.184755+04
SORT (F)	0. 0.31623E-01	0.4472]F-01	0.54772F-01	n.63246F-01	0.70711F=01	0.77460F-01	0.83666F-01	0.89443F-01	n.94868E-01	0.10000F+00	0.10488E+00	n.10954F+00	0.11402F+00	0.11832E+00	n.12247F+00	0.12449F+U0	0.13038E+00	0.13414E+00	n.13784F+00	0.14142F+00	0.14491F+00	0.14832F+UU	0.15146F+U0	r.15492E+00	0.158]]F+00	0.16125E+00	0.16432F+00	r.16733F+00	0.17029E+00	0.17321F+00	0.17607E+UU	0.17889F+U0	n.18166F+00	n.18439F+00	0.1870RE+00
LL.	0. 0.10001E-02	0.20000E-02	0.30000E-02	0.400005=02	0.50000E-02	0.6000nE-02	0.70000E-02	0.8000nF-02	0.90000E-02	0.1000cE-01	0.11000F-01	0.120005-01	0.13000F-01	0.14000F-01	0.15000E-01	0.16000E-01	0.17000F-01	0.18007F-01	0.19000F-01	0.2000nE-01	0.21000E-01	0.22000F-01	0.23000F-01	0.24000F-01	0.25000E-01	0.26000F-01	0.27000F-01	0.28000E-01	0.29600E-01	0.30001E-01	0.31000E-01	0.32000F-01	0.33000E-01	0.34000F-01	0.35000F-01
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$\begin{array}{c} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 &$	SQRT(E) D.18974F+UU D.19235F+UU D.19494F+UU D.19748F+UU D.20000F+UU D.20200F+UU D.20248F+UU
0.16735E+04 0.16735E+04 0.16735E+04 0.16735E+04 0.16735E+04 0.161735E+04 0.161735E+04 0.142916E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.13592E+04 0.145923EE+04 0.15592E+04 0.15592E+04 0.1559253EE+04 0.15592E+04 0.15592E+04 0.1559253EE+04 0.15592E+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253EE+04 0.1559253555555555555555555555555555555555	NUSIGF 0.18245E+04 0.18023E+04 0.17812E+04 0.17610E+04 0.17610E+04 0.17416E+04 0.17247E+04
00000000000000000000000000000000000000	ALPHA 0.38207E+00 0.38410E+00 0.38612E+00 0.38815E+00 0.39089E+00 0.39089E+00 0.39089E+00
0       1       2       2       3       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5	ETA 0.27838E+01 0.27808E+01 0.27777E+01 0.27777E+01 0.277747E+01 0.277717E+01 0.277706E+01
0.171078E+03 0.171078E+03 0.171078E+03 0.171078E+03 0.171078E+03 0.17248E+03 0.17248E+03 0.17248E+03 0.173648E+03 0.275494E+03 0.275494E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475976E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+03 0.475894E+044444444444444444444444444444444444	RTE*SIGA 0.16612E+03 0.1661E+03 0.16712E+03 0.16763E+03 0.16866E+03 0.16813E+03 0.16818E+03
$\begin{array}{c} 0 & 121217420 \\ 0 & 12217200 \\ 0 & 12200 \\ 0 & 12200 \\ 0 & 12200 \\ 0 & 122302 \\ 0 & 122302 \\ 0 & 122302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 123302 \\ 0 & 12330$	RTE*SIGF 0.12020E+03 0.12038E+03 0.12056E+03 0.12076E+03 0.12094E+03 0.12196E+03

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RTE*SIGF 0.72808E+02 0.70687E+02 0.68108E+02 0.65974E+02 0.64382E+02 0.64382E+02	0.60695402 0.606695402 0.591416402 0.579266402 0.555136402	0.53865E+02 0.53865E+02 0.52813E+02 0.51739E+02 0.50644E+02 0.49618E+02	0.49118E+02 0.48515E+02 0.47530E+02 0.46435E+02 0.45880E+02	0.45406E+02 0.44357E+02 0.43559E+02 0.43352E+02 0.43352E+02 0.41920E+02 0.41920E+02	0.41185E402 0.40926E402 0.40073E402 0.39798E402 0.39120E402 0.38829E402 0.38132E402 0.38132E402 0.387516E402 0.37516E402
HTE *SIGA 0.10399E+03 0.10058E+03 0.96190E+02 0.93384E+02 0.90929E+02	0.854306402 0.854306402 0.809066402 0.7899066402	0.75239E+02 0.75239E+02 0.73762E+02 0.72265E+02 0.70737E+02 0.69305E+02	0.68601E+02 0.67764E+02 0.653856E+02 0.64855E+02 0.64856E+02 0.64856E+02	0.63424E+02 0.61255E+02 0.61262E+02 0.60554E+02 0.59559E+02 0.58959E+02	$\begin{array}{c} 0.58695E+02\\ 0.57160E+02\\ 0.559667E+02\\ 0.55595E+02\\ 0.55595E+02\\ 0.55535E+02\\ 0.55235E+02\\ 0.53260E+02\\ 0.53114E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.52406E+02\\ 0.55406E+02\\ 0.55406E+02\\ 0.55406E+02\\ 0.55566E+02\\ 0.55666E+02\\ 0.55666E+02\\ 0.55666E+02\\ 0.55666E+02\\ 0.55666E+02\\ 0.55666E+02\\ 0.555666E+02\\ 0.55666E+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.55666+02\\ 0.5566+02\\ 0.5$
ETA 0.20165E+01 0.203641E+01 0.20392E+01 0.20367E+01 0.20392E+01	0.20421E+01 0.20421E+01 0.20421E+01 0.20421E+01	0.204135401 0.204205401 0.204205401 0.204205401 0.204195401 0.204195401	0.20419E+01 0.20419E+01 0.20420E+01 0.20419E+01	0.20418E+01 0.20419E+01 0.20419E+01 0.20418E+01 0.20420E+01 0.20420E+01	0.202096+01 0.204216+01 0.204216+01 0.204206+01 0.204216+01 0.204216+01 0.204206+01 0.204206+01 0.204206+01
ALPHA 0.428225+00 0.4228455+00 0.4123255+00 0.4123255+00 0.412355+00 0.412355+00	U-40815E+00 U-40815E+00 U-39666F+00 U-39667E+00 U-39659F+00	U.396719F +00 U.39680E+00 U.39668F+00 U.39672E+00 U.39676F+00 U.39676F+00	0.396656+00 0.396776+00 0.396776+00 0.396776+00 0.396776+00 0.396776+00	U.39681F+00 U.39675F+00 U.39678F+00 U.39681F+00 U.39681F+00 U.39665F+00	0.42513F+00 0.39664E+00 0.39662F+00 0.39679F+00 0.39663F+00 0.39663F+00 0.396675F+00 0.39667F+00 0.39667F+00
NUSIGF 0.26418E+03 0.25447E+03 0.24329E+03 0.23388E+03 0.22653E+03 0.22653E+03	0.21034E+03 0.21034E+03 0.19799E+63 0.19181E+63	0.18534F+03 0.18034E+03 0.17563E+03 0.17092E+03 0.17092E+03 0.16622E+03 0.16180E+03	0.15916E+03 0.15621E+03 0.15621E+03 0.15210E+03 0.14768E+03 0.14504E+03	0.14268E+03 0.13856E+03 0.13621E+03 0.13386E+03 0.13386E+03 0.12797E+03	0.12503E+03 0.12356E+03 0.12032E+03 0.11885E+03 0.11620E+03 0.11673E+03 0.1120E+03 0.1120E+03 0.1120E+03 0.1120E+03
S0HT(E) 0.79373E+00 0.80000F+00 0.80623F+00 0.81240F+00 0.81240F+00 0.81240F+00	0.8366617.00 0.836667.00 0.8466617.00 0.842617.00 0.842617.00 0.842617.00	0.85440F400 0.86023F400 0.86603F400 0.87178F400 0.87750F400 0.88318F400	0.991104F+00	0.91652F+00 0.92195F+00 0.92736F+00 0.93274F+00 0.93808F+00 0.94340F+00	0.94868F+00 0.95394F+00 0.95917F+00 0.96437F+00 0.96437F+00 0.97468F+00 0.97468F+00 0.97468F+00 0.98489F+00 0.98489F+00 0.984995F+00
E 0.63000E+00 0.65000E+00 0.65000E+00 0.65000E+00 0.67000E+00 0.67000E+00	0.69000F+00 0.70000F+00 0.71000F+00 0.72000F+00	0. 73000F +00 0. 74000F +00 0. 75000F +00 0. 76000F +00 0. 77000F +00 0. 78000F +00	0.82000F+00 0.81000F+00 0.82000F+00 0.82000F+00 0.82007F+00	0.850075+00 0.850075+00 0.870075+00 0.870075+00 0.890095+00 0.890095+00	0.900005+00 0.910005+00 0.920005+00 0.930005+00 0.950005+00 0.950005+00 0.970005+00 0.970005+00 0.980005+00
6R0UP 1109 1112 1113 1113	1116 1116 118	121	10 9 2 8 6 2 2 2 2 2 3-38	132 132 134 135 137 137 137 137 137 137 137 137 137 137	111111111 9001094444 901094444

### *** ETOT ***

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### MATERIAL NUMBER 4

р	E	SQPT(F)	NUSIGF	ALPHA	ETA	RTE#SIGA	RTE#SIGF
	0.99000E+00	0.99499E+00	0.10708E+03	0.39659E+00	0.20422E+01	0.51668E+02	0.36996E+02
	0.10000F+01	0.10000E+01	0.10503E+03	0.39655E+00	0.20622E+01	0.50928E+02	0.36467E+02
	0.10100F+01	0.10050F+01	0.10460E+03	0.39865E+00	0.20591E+01	0.51050E+02	0.36499E+02
	10+3005+01	0.10100F+01	0.10320E+03	0.39668E+00	0.20420E+01	0.50544E+02	0.36189E+02
	0.10300E+01	0.10149E+01	0.10184E+03	0.39473F+00	0.20449E+01	0.50054E+02	0.35888E+02
	0.10400E+01	0.10198E+01	0.10053E+03	0.39278E+00	0.20478E+01	0.49578E+02	0.35596E+02
	0.10500E+01	n.10247E+01	0,99251E+02	0.39084E+00	0.20707E+01	0.49115E+02	0.35313E+02
	0.106005+01	0.10296E+01	0.98013E+02	0.38891E+00	0+20736E+01	0.48665E+02	0.35038E+02
	0.10700F+01	0.10344E+01	0.96811E+02	0.38699E+00	0.20764E+01	0.48228E+02	0.34772E+02
	0.10800E+01	0.10392E+01	0.95644E+02	0.38507E+00	0.20793E+01	0.47802E+02	0.34512E+02
	0.10900E+01	0.10440F+01	0.94509E+02	0.38315E+00	0.20925+01	0.47388E+02	0.34261E+02
ł.	0.11000E+01	0.10488E+01	0.93406E+02	0.38124E+00	0.20851E+01	0.46984E+02	0,34015E+02
,	0.11100F+01	0.10536F+01	0.92332E+02	0.37933E+00	0.20880E+01	0.46590E+02	0.33777E+02
	10+3002+01	0.10583E+01	0.91287E+02	0.37742E+00	0.20909E+01	0.46205E+02	0.33545E+02
•	0.11300E+01	0.10630F+01	0.90270E+02	0.37551F+00	0.20938E+01	0+45830E+02	0.33319E+02
	0.11400F+01	0.10677F+01	0.89279E+02	0•37359E+00	0.20967E+01	0.45464E+02	0.33099E+02
	0.11500F+01	0+10724E+01	0.88314E+02	0.37168E+00	0.20996E+01	0.45106E+02	0.32884E+02
	0.11600E+01	0.10770E+01	0.873/2E+02	0.36976F+00	0.21026E+01	0.44756E+02	0.32675E+02
	0.11700F+01	0.10817E+01	0.86454E+02	0.36783E+00	0.21055E+01	0.44414E+02	0.32470E+02
	0.11800E+01	0.10863E+01	0.85559E+02	0.36590E+00	0.21085E+01	0+44079E+02	0+35521E+05
	0.119005+01	0.10909F+01	0.84685E+02	0.36397F+00	0.21115E+01	0+43751E+02	0.32076E+02
	0.12000F+01	n.10954F+01	0+83831E+02	0.436202E+00	0.21145E+01	0.43430E+02	0.31886E+02
	0.12100F+01	0•11000E+01	0.82998E+02	0.36007E+00	0.21175E+01	0.43115E+02	0.31701E+02
	0.15500E+01	0.11045F+01	0.82184E+02	0.35811F+00	0.21206E+01	0.42807E+02	0.31519E+02
	0.12300E+01	0.11091E+01	0.81389E+02	0.35615E+0U	0.21237E+01	0.42504E+02	0.31342E+02
	0.12400E+01	0.11136E+01	0.80611E+02	0.35417E+00	0.21268E+01	0.4220/E+02	0,31168E+02
	0.12500F+01	0.11180F+01	0.79851E+02	0.35218E+00	0.21299E+01	0.41916E+02	0.30998E+02
	0.12600E+01	0.11225E+01	0.7910/E+02	0.35019F+00	0+21330E+01	0.41629E+02	0.30832E+02
	0.12700E+01	0.11269F+01	0.78379E+02	0.34818E+00	0.21362E+01	0.41348E+02	0.30670E+02
	0.12800E+01	0.11314F+01	0.77667E+02	0.34616E+00	0.21394E+01	0.41072E+02	0.30510E+02
	0.12900E+01	0.11358E+01	0.76969E+02	U-34412E+00	0.21427E+01	0.40800E+02	0.30354E+02
	0 • 13000E + 01	0.11402E+01	0.76286E+02	0.34208E+00	0.21459E+01	0.40533E+02	0.30201E+02
	0.13100E+01	0.11446E+01	0./561/1+02	U.34002E+00	0.214921+01	0.40267E+02	0.30051E+02
	0.13200E+01	0.11489F+01	0.14902E+02	0.33795E+00	0.215262+01	0+40011E+02	0.29904E+02
	0.13300F+01	0+11533F+01	0.14320E+02	U-33586E+00	0.21559E+01	0+39/501+02	0.29760E+02
	0.13400E+01	0+11576E+01	0.13690E+02	0.33376E+00	0.215936+01	0.395041+02	0.296198+02

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				MATERIAL	NUMBER 4		
GROUP	تعا	SQHT(E)	NUSIGE	ALPHA	ETA	R1E*SIGA	RTE*SIGF
181	0.13500E+01	0.11619E+01	0.730736+02	0.33164E+00	0.21427E+01	0.39257E+02	0.29480E+02
182	0.13600E+01	0.11662E+01	0.72467E+02	0.32951F+00	0.21462E+01	0.39013E+02	0.29344E+02
183	0.13700F+01	0.11705F+01	0.718/3E+02	0.32736F+00	0.21497E+01	0.38772E+02	0.29210E+02
184	0.13800E+01	0.11747F+U1	0.712905+02	0.32519E+00	0.21733E+01	0.38535E+02	0.29079E+02
185	0.13900E+01	0.11790F+01	0.70718E+02	0.32301F+00	0.21768E+01	0.38301E+02	0.28950E+02
186	0.14000F+01	0.11A32F+01	0.7015/E+02	0.32082E+00	10+350¤15•0	0.38070E+02	0.28823E+02
187	0.14100F+01	0.11874F+U1	0.69605E+02	0.31860E+0U	0.21441E+01	0.37842E+02	0.28699E+02
188	0.14200F+01	0.11916F+01	0.69064E+02	0.31637E+00	0.21A78E+01	0.37617E+02	0.28576E+02
189	0.14307E+01	0.11958F+U1	0.68532E+02	0.31412E+00	0.21916E+01	0.37394E+02	0.28456E+02
190	0.14400E+01	0.12000E+01	0.68009E+02	0.31185F+00	0.21954E+01	0.37174E+02	0.28337E+02
191	0.14500E+01	0.12042F+01	0.07496E+02	0.30957F+00	0.21992E+01	0.36957E+02	0.28221E+02
192	0.14600E+01	0.12083E+01	0.66991E+02	0.30726E+00	0.22031E+01	0.36742E+02	0.28106E+02
193	0.14700F+01	0.12124E+01	0.66495E+02	J.30494E+00	0.22070E+01	0.36530E+02	0.27993E+02
194	0.14800E+01	n.12166F+01	0.66007E+02	U.30260E+00	0.27110E+01	0.36319E+02	0.27982E+02
195	0.14900E+01	0.12207E+U1	0.655276+02	0.30023F+00	0.22150E+01	0.36111E+02	0.27773E+02
196	0.15000F+01	0.12247F+U1	0.45055£+02	0.29785E+00	0.22190E+01	0.35906E+02	0.27665E+02
791 cu	0.15100F+01	n.12288E+01	0.64591E+02	U.29545E+00	0.2222E+01	0.35702E+02	0.27559E+02
8614	0.15200E+01	0.12329E+01	0.64134E+02	0.29303F+00	0.22273E+01	0.35500E+02	0.27455E+02
66 lo	0.15300E+01	0.12369F+01	0.63685E+02	0.29059E+00	0.22315E+01	0+35300E+02	0.27352E+02
200	0.15400F+01	0.17410F+01	0.63242E+02	0.28813E+00	0.2235RE+01	0.35102E+02	0.27250E+02
201	0.15500E+01	0.12450F+01	0.62806E+02	U.28565F+00	0.22401E+01	0.34906E+02	0.27150E+02
202	0.15609E+01	n.12490F+01	0.623776+02	U.28315E+0U	0.22445E+01	0.34712E+02	0.27052E+02
203	0.15700F+01	0.12530F+01	0.61955E+02	U.2A063E+00	0.22489E+01	0.34519E+02	0.26955E+02
204	0.15H0rF+01	0.12570F+U1	0.61539E+02	0.27808E+00	0.22534E+01	0.34328E+02	0.26459E+02
205	0.15900E+01	r.12610E+01	0.61129E+02	0.27552E+00	0.22579E+01	0.34138E+02	0.26764E+02
206	0.16000E+01	n.12649F+U1	0.60725E+02	U-27293E+0U	0.22425E+01	0.33950E+02	0.26671E+02
207	0.16100E+01	n.12689F+01	0+60327E+02	0.27032F+00	0.22471E+01	0.33763E+02	0.26579E+02
208	0.16200E+01	0.12728F+01	0.59935E+02	0+26769E+00	0.22718E+01	0.33578F+02	0.26488E+02
209	0.16300E+01	0.12767F+01	0.59548E+02	U-26504E+0U	0.22766E+01	0.33394E+02	0.26398E+02
210	0.16406E+01	0.12806F+01	0.59167E+02	0.26237E+00	0.22414E+01	0.33212E+02	0.26309E+02
211	0.165005+01	n.12845E+01	0.58791E+02	0.25967E+00	0.22863E+01	0.33031E+02	0.26222E+02
212	0.16600E+01	n.12884F+01	0.58421E+02	U.25695E+00	0.27913E+01	0.32851E+02	0.26135E+02
213	0.16700F+01	0.12923E+01	0.58055E+02	0.25421F+00	0.22963E+01	0.32672E+02	0.26050E+02
214	0.16800F+01	0.12961E+U1	0.57694E+02	0.25145F+00	0.23013E+01	0.32495E+02	0.25965E+02
215	0.16903E+01	0.13000E+01	0.57339E+02	0.24867F+00	0.23065E+01	0.32318E+02	0.25982E+02
216	0.17000E+01	0.13038E+01	0.56988E+02	0.24586E+00	0.23117E+01	0.32143E+02	0.25A00E+02

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MATERIAL NUMBFA 4

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/12	0.17100E+01	0.13077E+U1	0.56641E+02 0.56300F+03	0.24303E+00	0.23169E+01 0 22222E+01	0.31968E+02	0.23718E+02
219	0.17300E+01	0.13153F+01	0.55962E+02	0.23730E+00	0.232776+01	0.31623E+02	0.25558E+02
220	0.1740nE+01	0.13191E+01	0.55629£+02	0.23440F+00	0.23331E+01	0.31451E+02	0.25479E+02
221	0.17500E+01	n.13229E+01	0.55300E+02	U.23147E+00	0.23387E+01	0.31281E+02	0.25401E+02
222	0.1740rE+01	0.13264E+01	0.54976E+02	U.S2853E+0U	0.23443E+01	0.31111E+02	0.25324E+02
223	0.17700E+01	n.13304F+U1	0.54655E+02	0.225556F+00	0.23500E+01	0.30443E+02	0.25248E+02
224	0.17800E+01	n.13342E+01	0.54338E+02	0.22256F+0U	0.23557E+01	0.30756+02	0.25172E+02
225	0.17900E+01	0.13379F+01	0.54026E+02	U•21954E+00	0.23415E+01	0.30608E+02	0.25098E+02
226	0.1800rE+01	n.13414E+01	0.53717E+02	0.21650E+00	0.23474E+01	0.30441E+02	0.25024E+02
227	0.181005+01	0.13454F+01	0.53411E+02	U•21344E+00	0.23734E+01	0.30276E+02	0.24951E+02
22A	0.18200E+01	n.1349]F+U1	0.53110E+02	0.21035F+00	10+3467F5.0	0.30111E+02	0.24A78E+02
229	0.18300E+01	0.13528F+U1	0.52812E+02	0.20723E+00	0.23456E+01	0.29947E+02	0.24806E+02
230	0.18400F+01	0.13545F+01	0.52517E+02	0.20409F+00	0.23918E+01	0.29784E+02	0.24735E+02
231	0.185075+01	n.13501E+U1	0.52226€+02	U.20093E+00	0.23981E+01	0.29621E+02	0.24665E+02
232	0.18400E+01	n.13638E+U1	0.51938E+02	0.19774E+0U	0.24045E+01	0.29454E+02	0.24595E+02
<b>662</b> 3-	0.18700F+01	0.13675F+01	0.51653E+02	0.19453E+00	0.24110E+01	0.29297E+02	0.24526E+02
76241	0.18800E+01	n.13711E+01	0.513/2E+02	U.19130E+00	0.24175E+01	0.29136E+02	0.24457E+02
235	0.18900F+01	0.13748F+01	0.51094E+02	U • 1 880 3 E + 0 0	0.24242E+01	0.289765+02	n.24390E+02
236	0.19000F+01	0.13784F+U1	0.50818E+02	U.18475E+0U	0.24309E+01	0.28816E+02	n.24322E+02
237	0.19100E+01	n.13820E+01	0.50546E+02	0.18144F+00	0.24377E+01	0.28656E+02	0.24256E+02
238	0.19200E+01	n.13856F+01	0,502776+02	0.17810E+00	0.24446E+01	0.28498E+02	0.24190E+02
239	0.19307E+01	0.13892E+U1	0.50011E+02	U • 17474E + 00	0.24516E+01	0.28339E+02	0.24124E+02
240	0.1940CF+01	r.13928F+01	0.4974/E+02	0.17135F+00	0.24587E+01	0.28181E+02	0.24059E+02
24]	0.19500E+01	n.13964F+01	0.49486E+02	0.16794E+00	0.24459E+01	0.28024E+02	0.23994E+02
242	0.19600E+01	0.14000F+Ul	0.49228E+02	U•16450F+0U	0.24732E+01	0.27867E+02	0.23930E+02
243	0.19700F+01	0.14036F+01	0.48973E+02	U.14104F+00	0.24805E+01	0.27711E+02	0.23867E+02
244	0.19800F+01	0.14071F+01	0.48720E+02	0.15755F+00	0.24880E+01	0.27554E+02	0.23804E+02
245	0.19900F+01	0.14107F+01	0.48470E+02	U.15404F+0U	U.24456E+01	0.27399E+02	0.23742E+02
246	0.2000^F+01	0.14142F+01	0.48223E+02	U.15049F+00	0.25033E+01	0.27243E+02	0.23680E+02

*** [0] ***

PUNCHED OUTPUT FOR TEMPEST

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).1479E+040.1267F+040.1056E+040.8871E+030.7391E+030.6332E+030.5434E+03	104 15
).4650E+030.4012E+030.3506E+030.3039E+030.2699E+n30.2399E+030.2152E+03	104 16
).1954F+030.1800F+030.1677E+030.1559F+030.1452F+n30.1313E+030.1245E+03	104 17
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J.4753F+020.4643F+U2U.4588E+U2U.454E+U2U.4541F+020.4436F+020.4335E+02	104 22
).4264E+020.4192E+020.4119E+U20.4093F+020.4007E+020.3980E+020.3912E+02	104 23
J.3983E+020.3813E+U2U.3803E+U20.5152E+020.3700F+020.3647E+020.3650E+02	104 24
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).P460F+020.P453F+020.2446E+020.E439F+020.2432F+020.2432F+020.2419F+02	104 37
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### 4.0 PROGRAMMER'S INFORMATION

This section contains many of the internal details of the program. The intent is that this section will provide the programmer with information that will prove helpful for making additions or modifications and also assist in making the program operational at other installations.

### 4.1 General Program Design Philosophy

This program was written with the assumption that it would likely be used at many installations with a variety of computing machinery. Also it is not primarily a production program but one that will simply be used from time to time to generate new libraries or update old ones. Hence, a basic aim was to produce straightforward, clear programming that would be readily understood. The program is entirely in ASA standard FORTRAN (FORTRAN IV) and uses no programming tricks and takes no advantage of any particular hardware or software. Also in the spirit of simplicity, variable dimensioning was not used.

The program was written with the expectation that there will be future additions and modifications. Some of these are anticipated with statement allocations and comments. Others are already wholly or partially included. In any case, adequate storage remains to handle any foreseeable contingency.

The main program is simply a series of tests and calls. It is quite straightforward and serves as a gross flow diagram. The flow is in a straight line with few deviations hence segmenting is readily accomplished. The program as distributed is segmented according to the overlay structure given in Section 4.3.

Many of the subroutines used by the program may be useful in other (present and future) codes connected with the ENDF/B system. Hence an attempt has been made to write these routines with general use in mind and they are self-contained (or nearly so). Some ETOT subroutines may be replaced by similar routines from other ENDF/B codes when they become available.

Most of the data handling is done with large common storage blocks. All tape data are first read into these blocks before processing. When data are manipulated, they are done in blocks. The blocks also serve as temporary space for some processed results before they are output. These blocks are the device which permits the general purpose subroutines to be self-contained. At present there are 4 floating point blocks, two of length 4000 and 2 of length 1000. Associated with each of the four is a fixed point block of length 50.

The logical flow of the program is designed so that the ENDF/B library tape will be scanned only once; hence, the library tape is never backspaced and is only read forward. Thus, the data are processed in the order they appear on the ENDF/B tape.

### 4.2 Labeled COMMON Variables

/TAPES/	
MODE	mode of the ENDF/B library tape
105	input tape
106	output print tape
107	output punch tape
NDFB	ENDF/B library tape
LTAPE	thermal library tape
/DENS/*	
JMT	record identifier
$\mathbf{JAT}$	record starting location
$_{ m JTT}$	record type
JLT	record length
А	bulk storage array
JNS,MNS	pointers for next record
JX	maximum length of A array
MX	maximum length of JMT, JAT, JTT, and JLT arrays
/RECS/*	
MAT	material number
MF	file number
MT	reaction type number
C1,C2	floating point constants
L1,L2	integer constants
	-

^{*}This common block is part of the package of Retrieval Subroutines for the ENDF/B system written by H. C. Honeck (Reference 10).

/RECS/* (con	t'd.)
Nl	count of items in a list to follow
N2	count of items in a second list to follow
NBTINT	general integer storage space
X V B	general floating point storage space
NTV	maximum longth of the NBT and INT arrays
	maximum length of the V and V arrays
NZX	maximum length of the x and 1 arrays
NS	card sequence number
/GROUPS/	
EGRP	energy breakpoints
VGRP	speed breakpoints
EPTS	energy points
v	speed points
/	
VC VC	agettoring gross soction
л5 хо	scattering cross section
XC	capture cross section
XF	fission cross section
XSMU	average cosine of the scattering angle
ZETA	weighting function
/FILE6/	
TRUM	extra cross section storage
/RESP/	
NDFF	number of resonances
NKEP EZEDO	energy at resonances park (F)
ELERU	energy at resonance peak (1)
GAMIN	neutron width evaluated at $E_0$
GAMG	radiation width evaluated at E _O
GAMF	fission width evaluated at E _o
G	spin factor
ELOW	lower bound of resonance region
EHIGH	upper bound of resonance region
SIGP	potential scattering
/OPTION/	
IDTAP	ENDF/B tape ID
MCODE	output format
MAXG	number of groups
MAXG1	MAXG+1
MAXG2	MAXG+2
TU	type of weight
TEII	opergy structure
TCDDE	if lower aroun is at 0 a v
IGKPL	II lower group is at 0 e.v.
IKES	maximum number or resonance parameters
TPUN	punch option flag
IAV	group averaged or point values
IAPX	test l/v approximation fit
TEMP	temperature (°K) for Maxwellian distribution
IGRAPH	graph option flag

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/MATS/	
NMAT	number of materials
IMAT	number of current material being processed
MATNOS	ENDF/B material numbers
MATIDS	thermal material numbers
MAT2ID	second thermal ID
/LABL/	
LABEL	Punched output label
/FLAGS/	
KEY	data presence indicator
NOXF	fission cross section indicator
IVA	<pre>1/v fit to absorption cross section</pre>
IVF	<pre>1/v fit to fission cross section</pre>
IVS	constant fit to scattering cross section
/ENDS/	(lowest group where data is tabulated)
/CONTF1/	
ZA	material (Z,A) designation
AWR	atomic weight ratio
LRP	resonance indicator

NOTE: In ETOT5, the /RECS/ labeled common is used as storage for various cross sections and other nuclear data which are edited by ETOT.

### 4.3 Overlay Structure and Routine List

Following is a list of the programs, subroutines, and functions used by ETOT. A brief summary of the purpose of each is included. The order of the list is the same as that of the physical deck. It is arranged by program segment. Hence this list also serves as the overlay structure description. The subroutines with an asterisk are part of the package of Retrieval Subroutines for the ENDF/B System written by H. C. Honeck (Reference 10).

Overlay (0,0)

FLOW control flow of ETOT

ERR print error message ERROR print error message *

TIMEIT	compute and print elapsed time
STORE	store record in dense storage*
FETCH	fetch record from dense storage*
DELETE	delete record from dense storage*
LRIDS	locate record in dense storage*
FPDS	fetch point from dense storage*
IPDS	interpolate point in dense storage *
TPOS	position ENDF/B tape to file (MF) and reaction (MT)
CONT	read control (CONT) record
HOLL	read hollerith material description
LIST	read LIST record
TAB1	read TAB1 record
TAB2	read TAB2 record
COMBP	combine one panel of two TAB1 functions*
COMB	combine two TABL functions *
ADD	combining function for addition*
SUB	combining function for subtraction *
мшт	combining function for multiplication *
	combining function for division*
DIV	combining runceion for division."
TERP	interpolate between two points*
TERP1	interpolate one point*
TERP2	form new table by interpolation*
TERPO	interpolate data array
XTND	extend data array
ECSI	compute integral of y(K)*
GRATE	integrate TAB1 function*
AVRG	average over a selected range
GPAV	average over selected groups
POINT	calculate cross sections at energy points
RES	calculate resolved resonance cross sections
OVERLAY(1,0)	
ETOT1	read input
EU	construct group structure
WEIGHT	construct weight and weight averages
GENT1	generate TAB1 function*
WELL	generating function for Maxwellian distribution
TRID	read ENDF/B tape I.D.
OUT 1	print input data
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0verlay (2,0)control flow of program in overlay (2,0) ETOT2 ZERO initialize position ENDF/B tape to material TMAT read ENDF/B file 1 TMF1 Overlay (3,0) control flow of program in overlay (3,0) ETOT3 TMF2 read ENDF/B file 2 RESCAL calculate resonance data print resonance data OUT3 Overlay (4,0) ETOT4 control flow of program in Overlay (4,0) read ENDF/B file 3 TMF3 calculate smooth cross sections CROSS Overlay (5,0) control flow of program in overlay (5,0) ETOT5 calculate coefficients and resonance parameters (KATE type) PRELIM FIT2V tests for fit to 1/vcalculate second order least squares polynomial FINDC simultaneous equation solver SIMQ extends and prints cross sections and related data SETUP graph the cross sections GRAPH graph data array PLOT LOUT punch in ARK format punch in KATE format KOUT convert real into decimal and exponent CVRT convert integer into alphanumeric ALPHA CARD punch one KATE card punch in LASER or THERMOS format. LAUT

4.4 Error Stops

If certain errors are detected, an error message will be printed. Some messages are printed directly from the routine where they are detected. Others are printed by one of the error printing subroutines. Subroutine ERR will print an error number, the subroutine and the statement number where the error <u>occurred</u> and the control words, MAT, MF, MT, Cl, C2, Ll,

L2, N1 and N2. Subroutine ERROR prints only the error number and the control words, MAT, MF, and MT. Following is a list of the error numbers, the subroutine which <u>detects</u> the error and an explanation of the error.

Error Number	Detecting Subroutine	Explanation
110	ECSI	Interpolation code out of range
130	TERP2	X(N) not in increasing order
131	TERP2	XP(N) not in increasing order
132	TERP2	Interpolation table incorrect
133	TERP1	Interpolation code not in range 1-5
134	TERP1	X $\leq$ 0 cannot be interpolated by logs
135	TERP1	X1=X2, discontinuity
300	STORE	JT not in range 1-6
301	STORE	MA=0 not allowed
302	STORE	Overflow, record will not fit
303	FETCH	MA=0, record not in /DENS/
308	COMB	Overflow, answer will not fit in /RECS/
309	COMB	MA or MB not in /DENS/
310	COMB	$XL \geq XH$
311	COMB	MA or MB is zero
314	IPDS	Improper interpolation table
315	GRATE	Interpolation table incorrect.

### 5.0 ENVIRONMENT INFORMATION

ETOT requires approximately 50,000₁₀ locations and uses the ENDF/B data tape and produces a library tape. It also requires standard system input, output, and punch units. Since the program is entirely in FORTRAN IV, it should compile and execute on any configuration meeting these requirements. The only possible difficulty is that ETOT calls the SC-4020 plotting routine AICRT3.

### 6.0 ACKNOWLEDGMENTS

The authors would like to thank D. E. Kusner for discussions concerning the ETOM-1 program on which ETOT is based.

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