KfK 2386/I
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Status of the Nuclear Data Library KEDAK-3

July 1979

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Abstract

This document summarizes the status and the contents of the lately revised version of KEDAK. This report supersedes the previous report KFK 2234.

Stand der nuklearen Datenbibliothek KEDAK-3 Juli 1979

Zusammenfassung

Dieser Bericht gibt eine Übersicht über den Stand und den Inhalt der neuesten Version von KEDAK. Dieser Bericht ersetzt den früheren Bericht KFK 2234.

List of Tables

The revised version of the Karlsruhe nuclear data library KEDAK-3 was released in July 1979. In this report the status of KEDAK-3 is documented. This report supersedes the previous report /1/ on this subject.

In Table 1 changes made in KEDAK with respect to the previous version of KEDAK /2, 3/ are indicated. Beside these changes for all materials on KEDAK atomic weights and abundancy values have been revised. These data have been taken from Wapstra and Gove /4/ and de Bièvre /5/. In the energy region where the neutron elastic scattering is isotrope in the center of the mass system the value of $\bar{\mu}_\ell$ are corrected for all the isotopes. For fissile and fertile materials the consistency between resonance parameters and point cross sections stored on KEDAK have been generated /6/.

Table 2 gives a list of contents of KEDAK-3 and the nomenclature of the data type on KEDAK is given in Table 3. The relationship among the redundant data on KEDAK is as follows:

absorption cross section (SGA)

$$\sigma_{ab} = \sigma(n,\gamma) + \sigma(n,f) + \sigma(n,p) + \sigma(n,d) + \sigma(n,\alpha)$$

non-elastic cross section (SGX)

$$\sigma_{non} = \sigma_{ab} + \sigma(n,n') + \sigma(n,2n) + \sigma(n,3n)$$

$$= \sigma_t - \sigma(n,n)$$

transport cross section (SGTR)

$$\sigma_{tr} = \sigma_t - \sigma(n,n)\cdot\bar{\mu}_\ell$$

It should be noted that the KEDAK-definition of the absorption cross section differs from that of CINDA. In KEDAK σ_{ab} contains all those processes in which no neutron appears in the exit channel. The only exception is σ_f which is included in σ_{ab}.

For the users of KEDAK reference is made to the KEDAK management and processing codes /7-12/ and related publication /13/.

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TABLE 1: Status of the evaluation for different KEDAK-3 materials (July 1979)

Material name	Comments	References
H 1	Only ISOT1 and ISOT2 are available.	
H H1 (H bound in H_2) H O1 (H bound in H_2O)	1971: Data extended to 15 MeV. Revision of data for σ_t above 700 keV, σ_c throughout the energy range (0.001 eV to 15 MeV), angular distribution for elastic scattering and $\bar{\mu}_1$. 1975: σ_t and $\sigma(n,n)$ revised below 700 keV, for H O1.	2, 14, 15
H 2 (D)	1975: Data extended to 15 MeV and revised for σ_c, σ_t, σ_n and $\sigma(n,2n)$ above 1 keV.	2, 15
He 3	Data completed to 15 MeV.	2, 16
He 4	Data extended to 15 MeV.	2, 16
C 12	1971: Data extended to 15 MeV. Revision of data for $\sigma(n,n')$, $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,3\alpha)$ and 4 levels of inelastic scattering. 1975: Data revised for σ_c above 1 eV and σ_t below 1.4 MeV.	2, 14, 15
N	Only angular distributions of neutron elastic scattering for 48 energies between 100 keV and 15.8 MeV are available.	3

Table 1 cont.

Material name	Comments	References
O 16	1975: Data extended to 15 MeV. Data revised for scattering cross sections, σ_c, $\sigma(n,p)$, $\sigma(n,d)$ and $\sigma(n,\alpha)$.	2, 15
Na 23	1970: Data extended to 15 MeV. New evaluation for $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,2n)$ and σ_c above 1 MeV. 1971: Reevaluation of resonance data in the energy range 1 keV to 60 keV. 1975: Scattering data revised above 4 MeV and σ_c revised between 60 keV and 1 MeV.	2, 14, 15
Al 27	1967 - 1969: Reevaluation of data for resolved and statistical resonance parameter, elastic scattering and its angular distribution above 100 keV. 1975: Data for 5.9 keV resonance revised. σ_c revised between 0.1 eV and 7 keV. The data for $\sigma(n,n')$, $\sigma(n,p)$ and $\sigma(n,\alpha)$ are also modified above 10 MeV.	2, 3, 15
Cl	Data originates from UNC-5067 (1963)	17
Cl 35 Cl 37	Only ISOT1 and ISOT2 are available.	

Table 1 cont.

Material name	Comments	References
Cr	1970: Data extended to 15 MeV. Data improved for σ_c above 1 MeV and for $\sigma(n,p)$, $\sigma(n,\alpha)$ and $\sigma(n,2n)$. 1975: Data revised for σ_c above 100 keV and $\sigma(n,n')$ above 4 MeV. 1978: New evaluation up to 300 keV. No resonance parameters available.	2, 15, 18
Cr 50 Cr 52 Cr 53 Cr 54	Only data for resonance parameters, $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,2n)$, ISOT1 and ISOT2 are available.	15
Fe	1970: Data extended to 15 MeV. Reevaluation of σ_c above 1 MeV and of $\sigma(n,p)$, $\sigma(n,\alpha)$ and $\sigma(n,2n)$ 1978: New evaluation up to 300 keV. No resonance parameters available.	2, 15, 18, 19
Fe 54 Fe 56 Fe 57	Only data for resonance parameters, $\sigma(n,\alpha)$, $\sigma(n,2n)$, ISOT1 and ISOT2 are available.	15
Fe 58	Only data for $\sigma(n,p)$, $\sigma(n,\alpha)$, average level spacing, ISOT1 and ISOT2 are available.	15
Ni	1970: Data extended to 15 MeV. Reevaluation of σ_c above 1 MeV and of $\sigma(n,p)$, $\sigma(n,\alpha)$ and $\sigma(n,2n)$. 1975: σ_c revised above 200 keV. $\sigma(n,n')$ revised above 4 MeV.	2, 15, 18

Table 1 cont.

Material name	Comments	References
Ni	1978: New evaluation up to 300 keV. No resonance parameters available.	
Ni 58	Only data for resonance parameters, $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,2n)$, ISOT1 and ISOT2 are available. 1978: $\sigma(n,\gamma)$	4, 7, 8, 15, 18, 20
Ni 59	1978: New evaluation	20
Ni 60 Ni 61 Ni 62 Ni 64	Only data for resonance parameters, $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,2n)$, ISOT1 and ISOT2 are available.	15
Mo	1970: Data extended to 15 MeV. Reevaluation of σ_c above 1 MeV, and of $\sigma(n,p)$, $\sigma(n,\alpha)$ and $\sigma(n,2n)$.	2, 14, 15
Mo 92 Mo 94 Mo 95 Mo 96 Mo 97 Mo 98 Mo 100	Data available only for resonance parameters, $\sigma(n,p)$, $\sigma(n,\alpha)$, $\sigma(n,2n)$, ISOT1 and ISOT2.	14, 15
Cd	No change in data except that mentioned in introduction.	2

Table 1 cont.

Material name	Comments	References
U 235	1973: New evaluation of $\bar{\nu}$ and all other data above the resolved resonance region. 1975: New evaluation of σ_f and σ_t above 100 keV.	2, 21, 22
U 237	1977: Partial evaluation	23
U 238	1975: Extensive revision of all data	2, 22
Np 237	1977: New evaluation	24
Pu 238	1974: New evaluation	25
Pu 239	1975: Extensive revision of most of the data	2, 22
Pu 240	1975: New evaluation of resonance parameters and capture cross section between 4 keV and 1 MeV	22, 26, 27
Pu 241	1978: New evaluation of fission and capture cross sections below 300 keV	22, 27, 28
Pu 242	1978: New evaluation of capture cross section below 1 MeV	27, 29

TABLE 2: List of contents of KEDAK-3 (July 1979)

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************          **************************
* H   1    *          ** AVAILABLE DATA TYPES **
************          **************************
```

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISCT2	0	3	1	--	--	--

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************          **************************
* H  H1    *          ** AVAILABLE DATA TYPES **
************          **************************
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TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	81	--	--	--
MUEL	1	1	21	1.00000E-03	1.50000E+07	--
SGA	1	1	100	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGG	1	1	100	1.00000E-03	1.50000E+07	--
SGI	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGN	1	1	77	1.00000E-03	1.50000E+07	--
SGNC	1	1	19 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	76	1.00000E-03	1.50000E+07	--
SGTR	1	1	81	1.00000E-03	1.50000E+07	--
SGX	1	1	100	1.00000E-03	1.50000E+07	--
SG2N	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO

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************          **************************
* H  G1    *          ** AVAILABLE DATA TYPES **
************          **************************
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TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	90	--	--	--
MUEL	1	1	26	1.00000E-03	1.50000E+07	--
SGA	1	1	100	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGG	1	1	100	1.00000E-03	1.50000E+07	--
SGI	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGN	1	1	54	1.00000E-03	1.50000E+07	--
SGNC	1	1	19 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	55	1.00000E-03	1.50000E+07	--
SGTR	1	1	66	1.00000E-03	1.50000E+07	--
SGX	1	1	100	1.00000E-03	1.50000E+07	--
SG2N	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO

Table 2 cont.

********** **********
* H 2 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	54	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	23	1.00000E-03	1.50000E+07	--
SGA	1	1	151	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGG	1	1	151	1.00000E-03	1.50000E+07	--
SGI	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGN	1	1	28	1.00000E-03	1.50000E+07	--
SGNC	1	1	14 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	27	1.00000E-03	1.50000E+07	--
SGTR	1	1	39	1.00000E-03	1.50000E+07	--
SGX	1	1	141	1.00000E-03	1.50000E+07	--
SG2N	1	1	31	1.00000E-03	1.50000E+07	3.33696E+06

********** **********
* HE 3 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	27	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	10	1.00000E-03	1.50000E+07	--
SGA	1	1	89	1.00000E-03	1.50000E+07	--
SGD	1	1	17	1.00000E-03	1.50000E+07	4.30000E+06
SGG	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGI	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGN	1	1	27	1.00000E-03	1.50000E+07	--
SGNC	1	1	8 NAME-COMBINATIONS			
SGP	1	1	79	1.00000E-03	1.50000E+07	--
SGT	1	1	97	1.00000E-03	1.50000E+07	--
SGTR	1	1	97	1.00000E-03	1.50000E+07	--
SGX	1	1	89	1.00000E-03	1.50000E+07	--

********** **********
* HE 4 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	27	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	43	1.00000E-03	1.50000E+07	--
SGA	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGG	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGI	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGN	1	1	53	1.00000E-03	1.50000E+07	--
SGNC	1	1	26 NAME-COMBINATIONS			
SGT	1	1	53	1.00000E-03	1.50000E+07	--
SGTR	1	1	62	1.00000E-03	1.50000E+07	--
SGX	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO

Table 2 cont.

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* C 12 *
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** AVAILABLE DATA TYPES **
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TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	90	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	156	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	14	2.07600E+06	1.20800E+07	--
				2.00000E+00	0.0	--
				2.50000E+00	5.00000E-01	--
SGA	1	1	204	1.00000E-03	1.50000E+07	--
SGALP	1	1	58	9.99999E-04	1.50000E+07	7.10000E+06
SGG	1	1	155	1.00000E-03	1.50000E+07	--
SGI	1	1	122	1.00000E-03	1.50000E+07	4.70000E+06
SGIZ	1	1	5 NAME-COMBINATIONS			
SGI3A	1	1	27	9.99999E-04	1.50000E+07	8.40000E+06
SGN	1	1	233	1.00000E-03	1.50000E+07	--
SGNC	1	1	42 NAME-COMBINATIONS			
SGP	1	1	3	9.99999E-04	1.50000E+07	1.45000E+07
SGT	1	1	219	1.00000E-03	1.50000E+07	--
SGTR	1	1	242	1.00000E-03	1.50000E+07	--
SGX	1	1	270	1.00000E-03	1.50000E+07	--
SG2N	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.43000E+06	117	1.00000E-03	1.50000E+07	4.70000E+06
7.65000E+06	4	1.00000E-03	1.50000E+07	8.40000E+06
9.66000E+06	12	9.99999E-04	1.50000E+07	1.04000E+07
1.08400E+07	6	9.99999E-04	1.50000E+07	1.18000E+07
1.18200E+07	4	9.99999E-04	1.50000E+07	1.28000E+07

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* N *
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** AVAILABLE DATA TYPES **
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TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	18	--	--	--
SGNC	1	1	41 NAME-COMBINATIONS			

Table 2 cont.

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************        ***************************
* 0  16    *        ** AVAILABLE DATA TYPES **
************        ***************************
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TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	45	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	275	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	39	4.42000E+05	1.13000E+07	--
				1.00000E+00	0.0	--
				1.50000E+00	5.00000E-01	--
SGA	1	1	388	1.00000E-03	1.50000E+07	--
SGALP	1	1	219	1.00000E-03	1.50000E+07	3.61000E+06
SGD	1	1	14	1.00000E-03	1.50000E+07	1.05260E+07
SGG	1	1	166	1.00000E-03	1.50000E+07	--
SGI	1	1	130	1.00000E-03	1.50000E+07	6.43400E+06
SGIZ	1	1	24	NAME-COMBINATIONS		
SGN	1	1	407	1.00000E-03	1.50000E+07	--
SGNC	1	1	131	NAME-COMBINATIONS		
SGP	1	1	32	1.00000E-03	1.50000E+07	1.02470E+07
SGT	1	1	488	1.00000E-03	1.50000E+07	--
SGTR	1	1	495	1.00000E-03	1.50000E+07	--
SGX	1	1	460	1.00000E-03	1.50000E+07	--
SG2N	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
6.05200E+06	167	1.00000E-03	1.50000E+07	6.43400E+06
6.13100E+06	150	1.00000E-03	1.50000E+07	6.51800E+06
6.91700E+06	113	1.00000E-03	1.50000E+07	7.35300E+06
7.11900E+06	97	1.00000E-03	1.50000E+07	7.56800E+06
8.87200E+06	41	1.00000E-03	1.50000E+07	9.43100E+06
9.59700E+06	33	1.00000E-03	1.50000E+07	1.02020E+07
9.84700E+06	33	1.00000E-03	1.50000E+07	1.04680E+07
1.03540E+07	27	1.00000E-03	1.50000E+07	1.10070E+07
1.09520E+07	35	1.00000E-03	1.50000E+07	1.16430E+07
1.10800E+07	34	1.00000E-03	1.50000E+07	1.17790E+07
1.10960E+07	34	1.00000E-03	1.50000E+07	1.17960E+07
1.12600E+07	29	1.00000E-03	1.50000E+07	1.19700E+07
1.14400E+07	30	1.00000E-03	1.50000E+07	1.21610E+07
1.15210E+07	29	1.00000E-03	1.50000E+07	1.22480E+07
1.16300E+07	30	1.00000E-03	1.50000E+07	1.23630E+07
1.20530E+07	25	1.00000E-03	1.50000E+07	1.28130E+07
1.24420E+07	20	1.00000E-03	1.50000E+07	1.32270E+07
1.25280E+07	23	1.00000E-03	1.50000E+07	1.33180E+07
1.27950E+07	14	1.00000E-03	1.50000E+07	1.36020E+07
1.29670E+07	15	1.00000E-03	1.50000E+07	1.37850E+07
1.31500E+07	15	1.00000E-03	1.50000E+07	1.39790E+07
1.34500E+07	11	1.00000E-03	1.50000E+07	1.42980E+07
1.37500E+07	7	1.00000E-03	1.50000E+07	1.46170E+07
1.40500E+07	3	1.00000E-03	1.50000E+07	1.49360E+07

Table 2 cont.

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************        **************************
* NA 23    *        ** AVAILABLE DATA TYPES **
************        **************************
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TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	180	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	118	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	233	2.85000E+03	8.57500E+05	--
				0.0	2.00000E+00	--
				1.00000E+00	2.00000E+00	--
SGA	1	1	719	1.00000E-03	1.50000E+07	--
SGALP	1	1	167	1.00000E-03	1.50000E+07	5.71000E+06
SGG	1	1	516	1.00000E-03	1.50000E+07	--
SGI	1	1	246	1.00000E-03	1.50000E+07	4.60000E+05
SGIZ	1	1	7 NAME-COMBINATIONS			
SGN	1	1	839	1.00000E-03	1.50000E+07	--
SGNC	1	1	63 NAME-COMBINATIONS			
SGP	1	1	222	1.00000E-03	1.50000E+07	3.99000E+06
SGT	1	1	853	1.00000E-03	1.50000E+07	--
SGTR	1	1	863	1.00000E-03	1.50000E+07	--
SGX	1	1	828	1.00000E-03	1.50000E+07	--
SG2N	1	1	12	1.00000E-03	1.50000E+07	1.30000E+07
ST	2	6	2	0.0	0.0	--
				1.00000E+00	2.00000E+00	--
STD	0	3	1	--	--	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.39000E+05	216	1.00000E-03	4.00000E+06	4.60000E+05
2.07800E+06	111	1.00000E-03	4.00000E+06	2.16000E+06
2.39300E+06	87	1.00000E-03	4.00000E+06	2.50000E+06
2.64100E+06	52	1.00000E-03	4.00000E+06	2.80000E+06
2.70500E+06	86	1.00000E-03	4.00000E+06	2.82000E+06
2.98300E+06	41	1.00000E-03	4.00000E+06	3.07000E+06
3.68000E+06	8	1.00000E-03	4.00000E+06	3.84000E+06

Table 2 cont.

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* AL 27 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	81	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	210	6.00000E-04	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	62	5.90600E+03	4.45000E+05	--
				1.00000E+00	2.00000E+00	--
				2.00000E+00	3.00000E+00	--
SGA	1	1	340	6.00000E-04	1.50000E+07	--
SGALP	1	1	59	6.00000E-04	1.50000E+07	6.10000E+06
SGG	1	1	280	6.00000E-04	1.50000E+07	--
SGI	1	1	75	6.00000E-04	1.50000E+07	1.05000E+06
SGIZ	1	1	9	NAME-COMBINATIONS		
SGN	1	1	339	6.00000E-04	1.50000E+07	--
SGNC	1	1	36	NAME-COMBINATIONS		
SGP	1	1	100	6.00000E-04	1.50000E+07	2.70000E+06
SGT	1	1	342	6.00000E-04	1.50000E+07	--
SGTR	1	1	354	6.00000E-04	1.50000E+07	--
SGX	1	1	313	6.00000E-04	1.50000E+07	--
SG2N	1	1	4	6.00000E-04	1.50000E+07	1.39000E+07
ST	2	6	2	0.0	0.0	--
				2.00000E+00	3.00000E+00	--
STD	0	3	1	--	--	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
8.42000E+05	62	1.00000E-03	4.50000E+06	1.05000E+06
1.01300E+06	69	1.00000E-03	4.50000E+06	1.05000E+06
2.21000E+06	34	1.00000E-03	4.50000E+06	2.29000E+06
2.73000E+06	24	1.00000E-03	4.50000E+06	2.96000E+06
2.98000E+06	27	1.00000E-03	4.50000E+06	3.18000E+06
3.00000E+06	20	1.00000E-03	4.50000E+06	3.18000E+06
3.68000E+06	9	1.00000E-03	4.50000E+06	4.15000E+06
3.95000E+06	9	1.00000E-03	4.50000E+06	4.15000E+06
4.05000E+06	6	1.00000E-03	4.50000E+06	4.37000E+06

Table 2 cont.

********** **********
* CL * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	18	--	--	--
ISOT1	0	3	1	--	--	--
ISCT2	0	3	1	--	--	--
ISOT3	1	1	2	3.50000E+01	3.70000E+01	--
MUEL	1	1	102	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	27	-2.10000E+02	2.02000E+05	--
				0.0	0.0	--
				2.00000E+00	2.00000E+00	--
SGA	1	1	346	1.90000E-02	1.50000E+07	--
SGALP	1	1	40	1.90000E-02	1.50000E+07	1.90000E+06
SGG	1	1	307	1.90000E-02	1.50000E+07	--
SGI	1	1	50	1.90000E-02	1.50000E+07	9.91000E+05
SGN	1	1	280	1.90000E-02	1.50000E+07	--
SGP	1	1	295	1.90000E-02	1.50000E+07	--
SGT	1	1	263	1.90000E-02	1.50000E+07	--
SGTR	1	1	272	1.90000E-02	1.50000E+07	--
SGX	1	1	340	1.90000E-02	1.50000E+07	--
SG2N	1	1	7	1.90000E-02	1.50000E+07	1.21000E+07

********** **********
* CL 35 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--

********** **********
* CL 37 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--

Table 2 cont.

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* CR *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	81	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
ISOT3	1	1	4	5.00000E+01	5.40000E+01	--
MUEL	1	1	179	1.00000E-03	1.50000E+07	--
SGA	1	1	3342	1.00000E-03	1.50000E+07	--
SGALP	1	1	55	1.00000E-03	1.50000E+07	3.97000E+06
SGG	1	1	3345	1.00000E-03	1.50000E+07	--
SGI	1	1	165	1.00000E-03	1.50000E+07	5.75000E+05
SGIZ	1	1	8 NAME-COMBINATIONS			
SGN	1	1	1619	1.00000E-03	1.50000E+07	--
SGNC	1	1	45 NAME-COMBINATIONS			
SGP	1	1	59	1.00000E-03	1.50000E+07	2.00000E+06
SGT	1	1	1759	1.00000E-03	1.50000E+07	--
SGTR	1	1	516	1.00000E-03	1.50000E+07	--
SG2N	1	1	36	1.00000E-03	1.50000E+07	8.05000E+06

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
5.65000E+05	111	1.00000E-03	3.19000E+06	5.75000E+05
7.82000E+05	85	1.00000E-03	3.19000E+06	7.96000E+05
1.00700E+06	71	1.00000E-03	3.19000E+06	1.02500E+06
1.43400E+06	19	1.00000E-03	3.19000E+06	1.43400E+06
1.83500E+06	38	1.00000E-03	3.19000E+06	1.90000E+06
2.32700E+06	31	1.00000E-03	3.19000E+06	2.35000E+06
2.62000E+06	19	1.00000E-03	3.19000E+06	2.66600E+06
2.96500E+06	12	1.00000E-03	3.19000E+06	3.01000E+06

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* CR 50 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	5	6.60000E+03	9.50000E+04	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	58	1.00000E-03	1.50000E+07	3.97000E+06
SGP	1	1	34	1.00000E-03	1.50000E+07	2.00000E+06
SG2N	1	1	9	1.00000E-03	1.50000E+07	1.32500E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

****
* CR 52 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	58	5.10000E+04	6.36000E+05	--
				0.0	1.00000E+00	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	48	1.00000E-03	1.50000E+07	4.99000E+06
SGP	1	1	68	1.00000E-03	1.50000E+07	4.99000E+06
SG2N	1	1	12	1.00000E-03	1.50000E+07	1.22500E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

****
* CR 53 *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	1	4.25000E+03	4.25000E+03	--
				0.0	0.0	--
				2.00000E+00	2.00000E+00	--
SGALP	1	1	27	1.00000E-03	1.50000E+07	3.99000E+06
SGP	1	1	52	1.00000E-03	1.50000E+07	3.99000E+06
SG2N	1	1	32	1.00000E-03	1.50000E+07	8.05000E+06
ST	2	6	2	0.0	0.0	--
				1.00000E+00	2.00000E+00	--
STD	0	3	1	--	--	--

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* CR 54 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	3	2.35000E+04	1.19000E+05	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	35	1.00000E-03	1.50000E+07	6.96000E+06
SGP	1	1	22	1.00000E-03	1.50000E+07	1.00000E+07
SG2N	1	1	21	1.00000E-03	1.50000E+07	9.88000E+06
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

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* FE *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	54	--	--	--
CHIIZC	1	1	21 NAME-COMBINATIONS			
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
ISOT3	1	1	4	5.40000E+01	5.80000E+01	--
MUEL	1	1	558	1.00000E-03	1.50000E+07	--
SGA	1	1	4156	1.00000E-03	1.50000E+07	--
SGALP	1	1	69	1.00000E-03	1.50000E+07	3.99000E+06
SGG	1	1	4115	1.00000E-03	1.50000E+07	--
SGI	1	1	493	1.00000E-03	1.50000E+07	6.16000E+03
SGIZ	1	1	10 NAME-COMBINATIONS			
SGN	1	1	2650	1.00000E-03	1.50000E+07	--
SGNC	1	1	45 NAME-COMBINATIONS			
SGP	1	1	125	1.00000E-03	1.50000E+07	4.95000E+05
SGT	1	1	2780	1.00000E-03	1.50000E+07	--
SGTR	1	1	1044	1.00000E-03	1.50000E+07	--
SG2N	1	1	37	1.00000E-03	1.50000E+07	7.87000E+06

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
8.45000E+05	222	1.00000E-03	4.99000E+06	8.60600E+05
1.40800E+06	103	1.00000E-03	4.99000E+06	1.43210E+06
2.08000E+06	81	1.00000E-03	4.99000E+06	2.12000E+06
2.65500E+06	53	1.00000E-03	4.99000E+06	2.68000E+06
2.93600E+06	42	1.00000E-03	4.99000E+06	2.93600E+06
3.11800E+06	36	1.00000E-03	4.99000E+06	3.15000E+06
3.36700E+06	29	1.00000E-03	4.99000E+06	3.39000E+06
3.59900E+06	26	1.00000E-03	4.99000E+06	3.65000E+06
3.82500E+06	23	1.00000E-03	4.99000E+06	3.86000E+06
4.03800E+06	19	1.00000E-03	4.99000E+06	4.11000E+06

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* FE 54 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	44	8.00000E+03	5.06500E+05	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	39	1.00000E-03	1.50000E+07	3.99000E+06
SGP	1	1	111	1.00000E-03	1.50000E+07	4.95000E+05
SG2N	1	1	7	1.00000E-03	1.50000E+07	1.37500E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

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* FE 56 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	50	-4.39000E+03	6.45000E+05	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	52	1.00000E-03	1.50000E+07	4.99000E+06
SGP	1	1	69	1.00000E-03	1.50000E+07	4.51000E+06
SG2N	1	1	14	1.00000E-03	1.50000E+07	1.15000E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

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* FE 57 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	2	3.90000E+03	6.00000E+03	--
				0.0	0.0	--
				0.0	1.00000E+00	--
SGALP	1	1	61	1.00000E-03	1.50000E+07	4.99000E+06
SGP	1	1	34	1.00000E-03	1.50000E+07	3.99000E+06
SG2N	1	1	33	1.00000E-03	1.50000E+07	7.87000E+06
ST	2	6	2	0.0	0.0	--
				0.0	1.00000E+00	--
STD	0	3	1	--	--	--

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* FE 58 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
SGALP	1	1	27	1.00000E-03	1.50000E+07	6.94000E+06
SGP	1	1	40	1.00000E-03	1.50000E+07	3.99000E+06
STD	0	3	1	--	--	--

Table 2 cont.

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* NI *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	81	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
ISOT3	1	1	5	5.80000E+01	6.40000E+01	--
MUEL	1	1	302	1.00000E-03	1.50000E+07	--
SGA	1	1	3872	1.00000E-03	1.50000E+07	--
SGALP	1	1	57	1.00000E-03	1.50000E+07	1.90000E+06
SGG	1	1	3809	1.00000E-03	1.50000E+07	--
SGI	1	1	92	1.00000E-03	1.50000E+07	6.63999E+04
SGIZ	1	1	12 NAME-COMBINATIONS			
SGN	1	1	1586	1.00000E-03	1.50000E+07	--
SGNC	1	1	46 NAME-COMBINATIONS			
SGP	1	1	141	1.00000E-03	1.50000E+07	7.45000E+05
SGT	1	1	1764	1.00000E-03	1.50000E+07	--
SGTR	1	1	912	1.00000E-03	1.50000E+07	--
SG2N	1	1	25	1.00000E-03	1.50000E+07	7.94600E+06

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
1.33200E+06	54	1.00000E-03	3.99300E+06	1.35000E+06
1.45200E+06	38	1.00000E-03	3.99300E+06	1.45200E+06
2.15800E+06	53	1.00000E-03	3.99300E+06	2.15800E+06
2.28700E+06	41	1.00000E-03	3.99300E+06	2.28700E+06
2.45800E+06	53	1.00000E-03	3.99300E+06	2.49900E+06
2.55200E+06	59	1.00000E-03	3.99300E+06	2.55000E+06
2.63000E+06	37	1.00000E-03	3.99300E+06	2.67600E+06
2.77200E+06	43	1.00000E-03	3.99300E+06	2.81000E+06
3.03500E+06	40	1.00000E-03	3.99300E+06	3.07600E+06
3.13000E+06	30	1.00000E-03	3.99300E+06	3.18500E+06
3.26000E+06	26	1.00000E-03	3.99300E+06	3.31800E+06
3.52000E+06	26	1.00000E-03	3.99300E+06	3.58800E+06

****
* NI 58 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	9	-2.85000E+04	2.06500E+05	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	56	1.00000E-03	1.50000E+07	1.90000E+06
SGG	1	1	1176	1.00000E-03	1.50000E+07	--
SGP	1	1	143	1.00000E-03	1.50000E+07	7.45000E+05
SG2N	1	1	12	1.00000E-03	1.50000E+07	1.25000E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

****
* NI 59 *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RES	3	8	5	2.03400E+02	9.10000E+03	--
				0.0	0.0	--
				1.00000E+00	1.50000E+00	--
SGALP	1	1	294	1.00000E-03	1.50000E+07	--
SGG	1	1	264	1.00000E-03	9.90000E+03	--
SGN	1	1	264	1.00000E-03	9.90000E+03	--
SGP	1	1	264	1.00000E-03	9.90000E+03	--
SGT	1	1	264	1.00000E-03	9.90000E+03	--

****
* NI 60 *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISCT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	9	1.25000E+04	1.99000E+05	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	38	1.00000E-03	1.50000E+07	4.00000E+06
SGP	1	1	72	1.00000E-03	1.50000E+07	4.00000E+06
SG2N	1	1	12	1.00000E-03	1.50000E+07	1.15000E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

****
* NI 61 *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISCT2	0	3	1	--	--	--
SGALP	1	1	36	1.00000E-03	1.50000E+07	5.96900E+06
SGP	1	1	70	1.00000E-03	1.50000E+07	4.00000E+06
SG2N	1	1	27	1.00000E-03	1.50000E+07	7.94600E+06
STD	0	3	1	--	--	--

Table 2 cont.

********** **********
* NI 62 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	1	4.60000E+03	4.60000E+03	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	42	1.00000E-03	1.50000E+07	7.94600E+06
SGP	1	1	66	1.00000E-03	1.50000E+07	6.02100E+06
SG2N	1	1	17	1.00000E-03	1.50000E+07	1.07500E+07
STD	0	3	1	--	--	--

********** **********
* NI 64 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
SGALP	1	1	12	1.00000E-03	1.50000E+07	1.25000E+07
SGP	1	1	14	1.00000E-03	1.50000E+07	1.20000E+07
SG2N	1	1	21	1.00000E-03	1.50000E+07	9.84700E+06
STD	0	3	1	--	--	--

Table 2 cont.

****
* MO *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	63	--	--	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
ISOT3	1	1	7	9.20000E+01	1.00000E+02	--
MUEL	1	1	139	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	51	1.20000E+01	1.66600E+04	--
				1.00000E+00	0.0	--
				5.00000E-01	5.00000E-01	--
SGA	1	1	1356	1.00000E-03	1.50000E+07	--
SGALP	1	1	64	1.00000E-03	1.50000E+07	4.79800E+06
SGG	1	1	1390	1.00000E-03	1.50000E+07	--
SGI	1	1	107	1.00000E-03	1.50000E+07	2.05000E+05
SGIZ	1	1	8 NAME-COMBINATIONS			
SGN	1	1	1378	1.00000E-03	1.50000E+07	--
SGNC	1	1	39 NAME-COMBINATIONS			
SGP	1	1	53	1.00000E-03	1.50000E+07	1.50000E+06
SGT	1	1	1585	1.00000E-03	1.50000E+07	--
SGTR	1	1	1582	1.00000E-03	1.50000E+07	--
SGX	1	1	1338	1.00000E-03	1.50000E+07	--
SG2N	1	1	38	1.00000E-03	1.50000E+07	6.99100E+06

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
2.03000E+05	59	1.00000E-03	2.06000E+06	2.05000E+05
5.30000E+05	42	1.00000E-03	2.06000E+06	5.30000E+05
7.80000E+05	33	1.00000E-03	2.06000E+06	7.85000E+05
9.30000E+05	23	1.00000E-03	2.06000E+06	9.30000E+05
1.10000E+06	14	1.00000E-03	2.06000E+06	1.11000E+06
1.26000E+06	11	1.00000E-03	2.06000E+06	1.26000E+06
1.50000E+06	8	1.00000E-03	2.06000E+06	1.50000E+06
1.86000E+06	4	1.00000E-03	2.06000E+06	1.86000E+06

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* MO 92 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	5	3.46800E+02	1.66600E+04	--
				1.00000E+00	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	37	1.00000E-03	1.50000E+07	7.77800E+06
SGP	1	1	44	1.00000E-03	1.50000E+07	1.50000E+06
SG2N	1	1	10	1.00000E-03	1.50000E+07	1.28000E+07
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

****
* MO 94 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	3	1.51900E+03	5.38000E+03	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	55	1.00000E-03	1.50000E+07	5.95500E+06
SGP	1	1	47	1.00000E-03	1.50000E+07	7.44400E+06
SG2N	1	1	30	1.00000E-03	1.50000E+07	9.74800E+06
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

****
* MO 95 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	14	4.51000E+01	7.40000E+03	--
				0.0	0.0	--
				2.50000E+00	2.50000E+00	--
SGALP	1	1	35	1.00000E-03	1.50000E+07	4.79800E+06
SGP	1	1	44	1.00000E-03	1.50000E+07	5.95500E+06
SG2N	1	1	40	1.00000E-03	1.50000E+07	7.18000E+06
ST	2	6	2	0.0	0.0	--
				2.00000E+00	3.00000E+00	--
STD	0	3	1	--	--	--

****
* MO 96 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	4	1.13500E+02	3.30000E+03	--
				1.00000E+00	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	43	1.00000E-03	1.50000E+07	6.46600E+06
SGP	1	1	49	1.00000E-03	1.50000E+07	7.44400E+06
SG2N	1	1	30	1.00000E-03	1.50000E+07	9.17500E+06
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

********** **********
* MO 97 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	10	7.09000E+01	1.25500E+03	--
				0.0	0.0	--
				2.50000E+00	2.50000E+00	--
SGALP	1	1	52	1.00000E-03	1.50000E+07	6.15200E+06
SGP	1	1	47	1.00000E-03	1.50000E+07	7.92700E+06
SG2N	1	1	25	1.00000E-03	1.50000E+07	6.99100E+06
ST	2	6	2	0.0	0.0	--
				2.00000E+00	3.00000E+00	--
STD	0	3	1	--	--	--

********** **********
* MO 98 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	9	1.20000E+01	9.00000E+03	--
				1.00000E+00	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	26	1.00000E-03	1.50000E+07	7.92700E+06
SGP	1	1	19	1.00000E-03	1.50000E+07	1.00000E+07
SG2N	1	1	29	1.00000E-03	1.50000E+07	8.39900E+06
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

********** **********
* MO100 * ** AVAILABLE DATA TYPES **
********** **********

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ISCT1	0	3	1	--	--	--
ISCT2	0	3	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	6	9.77000E+01	1.93600E+03	--
				1.00000E+00	0.0	--
				5.00000E-01	5.00000E-01	--
SGALP	1	1	39	1.00000E-03	1.50000E+07	8.48200E+06
SGP	1	1	20	1.00000E-03	1.50000E+07	1.10000E+07
SG2N	1	1	28	1.00000E-03	1.50000E+07	8.39900E+06
ST	2	6	1	0.0	0.0	--
				5.00000E-01	5.00000E-01	--
STD	0	3	1	--	--	--

Table 2 cont.

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************        ***************************
* CD       *        ** AVAILABLE DATA TYPES **
************        ***************************
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TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	36	--	--	--
ISOT1	0	3	1	--	--	--
ISOT3	1	1	8	1.06000E+02	1.16000E+02	--
MUEL	1	1	46	1.00000E-03	1.50000E+07	--
RANGRES	0	4	1	--	--	--
RES	3	8	60	1.78000E-01	1.12500E+03	--
				0.0	0.0	--
				1.00000E+00	5.00000E-01	--
SGA	1	1	4160	1.00000E-03	1.50000E+07	--
SGALP	1	1	11	1.00000E-03	1.50000E+07	6.50000E+06
SGG	1	1	4150	1.00000E-03	1.50000E+07	--
SGI	1	1	44	1.00000E-03	1.50000E+07	3.00000E+05
SGIZ	1	1	4 NAME-COMBINATIONS			
SGN	1	1	3175	1.00000E-03	1.50000E+07	--
SGP	1	1	19	1.00000E-03	1.50000E+07	3.50000E+06
SGT	1	1	3673	1.00000E-03	1.50000E+07	--
SGTR	1	1	3690	1.00000E-03	1.50000E+07	--
SGX	1	1	4145	1.00000E-03	1.50000E+07	--
SG2N	1	1	17	1.00000E-03	1.50000E+07	7.50000E+06

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
3.00000E+05	19	1.00000E-03	1.40000E+06	3.00000E+05
6.00000E+05	13	1.00000E-03	1.40000E+06	6.00000E+05
1.20000E+06	4	1.00000E-03	1.40000E+06	1.20000E+06
1.30000E+06	3	1.00000E-03	1.40000E+06	1.30000E+06

Table 2 cont.

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* U 235 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	234	--	--	--
ALPHA	1	1	5286	1.00000E-03	1.50000E+07	--
CHICR	1	3	1	0.0	0.0	--
CHIF	1	1	219	1.00000E-03	1.00000E+07	--
ETA	1	1	3870	1.00000E-03	1.50000E+07	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	52	1.00000E-03	1.50000E+07	--
NUE	1	1	16	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	197	-9.50000E-01	1.47330E+02	--
				0.0	0.0	--
				3.50000E+00	3.50000E+00	--
SGA	1	1	12629	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGF	1	1	13339	1.00000E-03	1.50000E+07	--
SGG	1	1	13722	1.00000E-03	1.50000E+07	--
SGI	1	1	131	1.00000E-03	1.50000E+07	2.09829E+04
SGIZ	1	1	10 NAME-COMBINATIONS			
SGN	1	1	9690	1.00000E-03	1.50000E+07	--
SGNC	1	1	43 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	13434	1.00000E-03	1.50000E+07	--
SGTR	1	1	12843	1.00000E-03	1.50000E+07	--
SG2N	1	1	60	1.00000E-03	1.50000E+07	5.30000E+06
SG3N	1	1	21	1.00000E-03	1.50000E+07	1.25000E+07
ST	2	6	6	0.0	1.00000E+00	--
				3.00000E+00	5.00000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	66	5.00000E+01	2.50000E+05	--
				0.0	1.00000E+00	--
				3.00000E+00	5.00000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
1.00000E+04	53	1.00000E-03	2.40000E+06	2.09829E+04
6.00000E+04	43	1.00000E-03	2.40000E+06	8.00000E+04
9.00000E+04	43	1.00000E-03	2.40000E+06	1.00000E+05
2.00000E+05	26	1.00000E-03	2.40000E+06	2.20000E+05
3.00000E+05	38	1.00000E-03	2.40000E+06	3.00000E+05
5.00000E+05	37	1.00000E-03	2.40000E+06	5.00000E+05
1.00000E+06	15	1.00000E-03	2.40000E+06	1.00000E+06
1.50000E+06	11	1.00000E-03	2.40000E+06	1.50000E+06
1.75000E+06	9	1.00000E-03	2.40000E+06	1.75000E+06
2.00000E+06	6	1.00000E-03	2.40000E+06	2.00000E+06

Table 2 cont.

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* U 237 *
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****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ALPHA	1	1	51	1.10000E+04	7.00000E+05	--
SGA	1	1	51	1.10000E+04	7.00000E+05	--
SGF	1	1	51	1.10000E+04	7.00000E+05	--
SGG	1	1	51	1.10000E+04	7.00000E+05	--
SGI	1	1	52	9.99999E-04	7.00000E+05	1.10000E+04
SGIZ	1	1	17 NAME-COMBINATIONS			
SGN	1	1	51	1.10000E+04	7.00000E+05	--
SGT	1	1	51	1.10000E+04	7.00000E+05	--
SGX	1	1	51	1.10000E+04	7.00000E+05	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
1.10000E+04	51	1.10000E+04	7.00000E+05	1.10000E+04
5.60000E+04	35	5.60000E+04	7.00000E+05	5.60000E+04
8.20000E+04	31	8.20000E+04	7.00000E+05	8.20000E+04
1.60000E+05	25	1.60000E+05	7.00000E+05	1.60000E+05
1.62000E+05	23	1.63000E+05	7.00000E+05	2.05000E+05
2.03000E+05	22	2.03000E+05	7.00000E+05	2.03000E+05
2.04000E+05	21	2.04000E+05	7.00000E+05	2.20000E+05
2.61000E+05	18	2.62000E+05	7.00000E+05	2.75000E+05
2.74000E+05	17	2.75000E+05	7.00000E+05	2.75000E+05
3.16000E+05	15	3.17000E+05	7.00000E+05	3.17000E+05
3.26000E+05	14	3.27000E+05	7.00000E+05	3.68000E+05
3.67000E+05	12	3.68000E+05	7.00000E+05	5.10000E+05
4.32000E+05	10	4.34000E+05	7.00000E+05	6.70000E+05
4.82000E+05	9	4.84000E+05	7.00000E+05	4.84000E+05
5.41000E+05	7	5.43000E+05	7.00000E+05	5.43000E+05
5.51000E+05	6	5.53000E+05	7.00000E+05	5.57000E+05
5.55000E+05	5	5.57000E+05	7.00000E+05	5.57000E+05

Table 2 cont.

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* U 238 *
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****
** AVAILABLE DATA TYPES **
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TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	90	--	--	--
CHICR	1	3	1	0.0	0.0	--
CHIF	1	1	206	1.00000E-03	1.00000E+07	--
CHI2N	1	1	9 NAME-COMBINATIONS			
CHI3N	1	1	5 NAME-COMBINATIONS			
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	55	1.00000E-03	1.50000E+07	--
NUE	1	1	8	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	319	-1.27350E+02	4.59270E+03	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGA	1	1	19400	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGF	1	1	112	1.00000E-03	1.50000E+07	4.80000E+05
SGG	1	1	19641	1.00000E-03	1.50000E+07	--
SGI	1	1	95	1.00000E-03	1.50000E+07	4.49000E+04
SGIZ	1	1	26 NAME-COMBINATIONS			
SGIZC	1	1	60	1.00000E-03	1.50000E+07	2.20000E+06
SGN	1	1	10718	1.00000E-03	1.50000E+07	--
SGNC	1	1	42 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	11820	1.00000E-03	1.50000E+07	--
SGTR	1	1	11619	1.00000E-03	1.50000E+07	--
SG2N	1	1	32	1.00000E-03	1.50000E+07	6.16000E+06
SG3N	1	1	15	1.00000E-03	1.50000E+07	1.16000E+07
ST	2	6	5	0.0	2.00000E+00	--
				5.00000E-01	2.50000E+00	--
STD	0	3	1	--	--	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.50000E+04	49	1.00000E-03	4.50000E+06	4.51000E+04
1.46000E+05	17	1.00000E-03	3.80000E+06	1.47000E+05
3.08000E+05	8	1.00000E-03	3.80000E+06	3.09000E+05
6.80000E+05	20	1.00000E-03	3.80000E+06	6.83000E+05
7.32000E+05	17	1.00000E-03	3.80000E+06	7.35000E+05
8.27000E+05	14	1.00000E-03	3.80000E+06	8.30000E+05
9.30000E+05	18	1.00000E-03	3.80000E+06	9.34000E+05
9.67000E+05	17	1.00000E-03	3.80000E+06	9.71000E+05
1.00000E+06	17	1.00000E-03	3.80000E+06	1.00400E+06
1.04100E+06	20	1.00000E-03	3.80000E+06	1.04500E+06
1.06000E+06	21	1.00000E-03	3.80000E+06	1.06500E+06
1.12000E+06	18	1.00000E-03	3.80000E+06	1.12500E+06
1.16000E+06	11	1.00000E-03	3.80000E+06	1.16500E+06
1.22000E+06	12	1.00000E-03	3.80000E+06	1.22500E+06
1.27000E+06	11	1.00000E-03	3.80000E+06	1.27500E+06
1.30000E+06	10	1.00000E-03	3.80000E+06	1.30600E+06
1.36100E+06	10	1.00000E-03	3.80000E+06	1.36700E+06
1.40900E+06	9	1.00000E-03	3.80000E+06	1.41500E+06
1.43700E+06	10	1.00000E-03	3.80000E+06	1.44300E+06
1.47000E+06	12	1.00000E-03	3.80000E+06	1.47600E+06
1.62500E+06	14	1.00000E-03	4.50000E+06	1.63200E+06
1.87500E+06	12	1.00000E-03	4.50000E+06	1.88300E+06
1.95000E+06	28	1.00000E-03	1.50000E+07	2.00000E+06
2.95000E+06	23	1.00000E-03	1.50000E+07	3.00000E+06
3.95000E+06	20	1.00000E-03	1.50000E+07	4.00000E+06
4.95000E+06	18	1.00000E-03	1.50000E+07	5.00000E+06

Table 2 cont.

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************          **************************
* NP237    *          ** AVAILABLE DATA TYPES **
************          **************************
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TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
ALPHA	1	1	108	2.00000E+02	1.50000E+07	--
CHICR	1	3	2	1.00000E-03	1.50000E+07	--
ETA	1	1	108	2.00000E+02	1.50000E+07	--
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	108	2.00000E+02	1.50000E+07	--
NUE	1	1	108	2.00000E+02	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RES	3	8	251	-2.94000E+00	2.35300E+02	--
				0.0	0.0	--
				2.50000E+00	2.50000E+00	--
SGA	1	1	108	2.00000E+02	1.50000E+07	--
SGF	1	1	108	2.00000E+02	1.50000E+07	--
SGG	1	1	108	2.00000E+02	1.50000E+07	--
SGI	1	1	89	9.99999E-04	1.50000E+07	3.33500E+04
SGIZ	1	1	22	NAME-COMBINATIONS		
SGN	1	1	108	2.00000E+02	1.50000E+07	--
SGNC	1	1	108	NAME-COMBINATIONS		
SGT	1	1	108	2.00000E+02	1.50000E+07	--
SGTR	1	1	108	2.00000E+02	1.50000E+07	--
SGX	1	1	108	2.00000E+02	1.50000E+07	--
SG2N	1	1	21	9.99999E-04	1.50000E+07	6.78900E+06
SG3N	1	1	8	9.99999E-04	1.50000E+07	1.25000E+07
ST	2	6	6	0.0	1.00000E+00	--
				2.00000E+00	4.00000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	60	5.00000E+01	4.00000E+04	--
				0.0	1.00000E+00	--
				2.00000E+00	4.00000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
3.32100E+04	34	3.33500E+04	5.50000E+05	3.33500E+04
5.95400E+04	31	5.97900E+04	5.50000E+05	5.97900E+04
7.60000E+04	29	7.63200E+04	5.50000E+05	7.63200E+04
1.02960E+05	25	1.03390E+05	5.50000E+05	1.03390E+05
1.30000E+05	24	1.30550E+05	5.50000E+05	1.30550E+05
1.58500E+05	23	1.59170E+05	5.50000E+05	1.59170E+05
1.90500E+05	22	1.91300E+05	5.50000E+05	2.26950E+05
2.26000E+05	20	2.26950E+05	5.50000E+05	2.26950E+05
2.67540E+05	19	2.68670E+05	5.50000E+05	2.68670E+05
2.81350E+05	18	2.82540E+05	5.50000E+05	2.82540E+05
3.05100E+05	17	3.06390E+05	5.50000E+05	3.06390E+05
3.28000E+05	16	3.29380E+05	5.50000E+05	3.29380E+05
3.32360E+05	15	3.33760E+05	5.50000E+05	3.33760E+05
3.58000E+05	14	3.59510E+05	5.50000E+05	3.59510E+05
3.68590E+05	13	3.70150E+05	5.50000E+05	3.70150E+05
3.70940E+05	12	3.72510E+05	5.50000E+05	3.72510E+05
4.37500E+05	9	4.39350E+05	5.50000E+05	4.39350E+05
4.52600E+05	8	4.54510E+05	5.50000E+05	4.54510E+05
4.59400E+05	7	4.61340E+05	5.50000E+05	4.61340E+05
4.84500E+05	6	4.86540E+05	5.50000E+05	4.86540E+05
5.14000E+05	3	5.16170E+05	5.50000E+05	5.16170E+05
5.45000E+05	2	5.47300E+05	5.50000E+05	5.47300E+05

Table 2 cont.

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************        ***************************
* PU238    *        ** AVAILABLE DATA TYPES **
************        ***************************
```

TYPE	NUMBER OF ARGU-MENTS	FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	27	--	--	--
ALPHA	1	1	1478	1.00000E-03	1.50000E+07	--
CHICR	1	3	2	1.00000E-03	1.50000E+07	--
ETA	1	1	1179	1.00000E-03	1.50000E+07	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	70	1.00000E-03	1.50000E+07	--
NUE	1	1	2	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	52	-4.00000E-01	4.96000E+02	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGA	1	1	5332	1.00000E-03	1.50000E+07	--
SGF	1	1	4991	1.00000E-03	1.50000E+07	--
SGG	1	1	5502	1.00000E-03	1.50000E+07	--
SGI	1	1	71	9.99999E-04	1.50000E+07	4.42000E+04
SGIZ	1	1	19 NAME-COMBINATIONS			
SGN	1	1	3106	1.00000E-03	1.50000E+07	--
SGNC	1	1	126 NAME-COMBINATIONS			
SGT	1	1	3596	1.00000E-03	1.50000E+07	--
SGTR	1	1	3418	1.00000E-03	1.50000E+07	--
SG2N	1	1	15	9.99999E-04	1.50000E+07	7.00000E+06
SG3N	1	1	6	9.99999E-04	1.50000E+07	1.30000E+07
ST	2	6	3	0.0	1.00000E+00	--
				5.00000E-01	1.50000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	33	5.00000E+01	2.50000E+05	--
				0.0	1.00000E+00	--
				5.00000E-01	1.50000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.40800E+04	48	1.00000E-03	1.70000E+06	4.42000E+04
1.45960E+05	34	1.00000E-03	1.70000E+06	1.83000E+05
3.03600E+05	21	1.00000E-03	1.70000E+06	6.07000E+05
6.05180E+05	22	1.00000E-03	1.70000E+06	6.07000E+05
6.61450E+05	23	1.00000E-03	1.70000E+06	6.64000E+05
9.41500E+05	18	1.00000E-03	1.70000E+06	9.45000E+05
9.62770E+05	18	1.00000E-03	1.70000E+06	9.66000E+05
9.68900E+05	17	1.00000E-03	1.70000E+06	9.73000E+05
9.83000E+05	16	1.00000E-03	1.70000E+06	9.87000E+05
9.85460E+05	14	1.00000E-03	1.70000E+06	9.89000E+05
1.02850E+06	13	1.00000E-03	1.70000E+06	1.03200E+06
1.06990E+06	11	1.00000E-03	1.70000E+06	1.07400E+06
1.08260E+06	11	1.00000E-03	1.70000E+06	1.08700E+06
1.20270E+06	10	1.00000E-03	1.70000E+06	1.20700E+06
1.22860E+06	8	1.00000E-03	1.70000E+06	1.23300E+06
1.26420E+06	8	1.00000E-03	1.70000E+06	1.26900E+06
1.44730E+06	6	1.00000E-03	1.70000E+06	1.45300E+06
1.62140E+06	4	1.00000E-03	1.70000E+06	1.62800E+06
1.63660E+06	3	1.00000E-03	1.70000E+06	1.64300E+06

Table 2 cont.

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************          ****************************
* PU239    *          ** AVAILABLE DATA TYPES **
************          ****************************
```

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	117	--	--	--
ALPHA	1	1	8503	1.00000E-03	1.50000E+07	--
CHICR	1	3	1	0.0	0.0	--
CHIF	1	1	175	1.00000E-03	1.00000E+07	--
ETA	1	1	4345	1.00000E-03	1.50000E+07	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	48	1.00000E-03	1.50000E+07	--
NUE	1	1	6	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	258	-1.20000E+00	6.58290E+02	--
				0.0	0.0	--
				1.00000E+00	1.00000E+00	--
SGA	1	1	12239	1.00000E-03	1.50000E+07	--
SGALP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGF	1	1	10308	1.00000E-03	1.50000E+07	--
SGG	1	1	14413	1.00000E-03	1.50000E+07	--
SGI	1	1	110	1.00000E-03	1.50000E+07	8.00000E+03
SGIZ	1	1	7 NAME-COMBINATIONS			
SGN	1	1	6729	1.00000E-03	1.50000E+07	--
SGNC	1	1	43 NAME-COMBINATIONS			
SGP	1	1	2	1.00000E-03	1.50000E+07	ALL FUNCTIONAL VALUES ARE ZERO
SGT	1	1	9525	1.00000E-03	1.50000E+07	--
SGTR	1	1	8944	1.00000E-03	1.50000E+07	--
SG2N	1	1	30	1.00000E-03	1.50000E+07	5.68000E+06
SG3N	1	1	8	1.00000E-03	1.50000E+07	1.27100E+07
ST	2	6	5	0.0	1.00000E+00	--
				0.0	2.00000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	55	5.00000E+01	2.50000E+05	--
				0.0	1.00000E+00	--
				0.0	2.00000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
8.00000E+03	37	1.00000E-03	5.50000E+05	8.00000E+03
5.70000E+04	22	1.00000E-03	5.50000E+05	5.70000E+04
7.60000E+04	24	1.00000E-03	5.50000E+05	7.60000E+04
1.64000E+05	15	1.00000E-03	5.50000E+05	1.64000E+05
2.86000E+05	12	1.00000E-03	5.50000E+05	2.86000E+05
3.31000E+05	8	1.00000E-03	5.50000E+05	3.31000E+05
3.92000E+05	6	1.00000E-03	5.50000E+05	3.92000E+05

Table 2 cont.

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************          **************************
* PU240    *          ** AVAILABLE DATA TYPES **
************          **************************
```

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	72	--	--	--
ALPHA	1	1	4323	1.00000E-03	1.50000E+07	--
CHICR	1	3	2	1.00000E-03	1.50000E+07	--
ETA	1	1	4270	1.00000E-03	1.50000E+07	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	46	1.00000E-03	1.50000E+07	--
NUE	1	1	2	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	204	1.05800E+00	3.99000E+03	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGA	1	1	16685	1.00000E-03	1.50000E+07	--
SGF	1	1	15783	1.00000E-03	1.50000E+07	--
SGG	1	1	16965	1.00000E-03	1.50000E+07	--
SGI	1	1	57	1.00000E-03	1.50000E+07	4.30000E+04
SGIZ	1	1	20 NAME-COMBINATIONS			
SGN	1	1	10142	1.00000E-03	1.50000E+07	--
SGNC	1	1	70 NAME-COMBINATIONS			
SGT	1	1	9945	1.00000E-03	1.50000E+07	--
SGTR	1	1	9725	1.00000E-03	1.50000E+07	--
SG2N	1	1	12	1.00000E-03	1.50000E+07	6.48000E+06
SG3N	1	1	5	1.00000E-03	1.50000E+07	1.21000E+07
ST	2	6	5	0.0	2.00000E+00	--
				5.00000E-01	2.50000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	55	5.00000E+01	2.50000E+05	--
				0.0	2.00000E+00	--
				5.00000E-01	2.50000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.30000E+04	35	1.00000E-03	1.50000E+06	4.30000E+04
1.42000E+05	23	1.00000E-03	1.50000E+06	2.02000E+05
2.94000E+05	23	1.00000E-03	1.50000E+06	4.50000E+05
5.97000E+05	21	1.00000E-03	1.50000E+06	5.97000E+05
6.49000E+05	19	1.00000E-03	1.50000E+06	6.49000E+05
7.42000E+05	18	1.00000E-03	1.50000E+06	8.05000E+05
8.61000E+05	17	1.00000E-03	1.50000E+06	8.61000E+05
9.00000E+05	15	1.00000E-03	1.50000E+06	9.00000E+05
9.38000E+05	13	1.00000E-03	1.50000E+06	9.38000E+05
9.59000E+05	14	1.00000E-03	1.50000E+06	9.59000E+05
1.00200E+06	13	1.00000E-03	1.50000E+06	1.00200E+06
1.03100E+06	11	1.00000E-03	1.50000E+06	1.03100E+06
1.03800E+06	11	1.00000E-03	1.50000E+06	1.03800E+06
1.09100E+06	10	1.00000E-03	1.50000E+06	1.09100E+06
1.11600E+06	5	1.00000E-03	1.50000E+06	1.20500E+06
1.13700E+06	8	1.00000E-03	1.50000E+06	1.13700E+06
1.16100E+06	4	1.00000E-03	1.50000E+06	1.30800E+06
1.30800E+06	4	1.00000E-03	1.50000E+06	1.41100E+06
1.41100E+06	4	1.00000E-03	1.50000E+06	1.41100E+06
1.43800E+06	3	1.00000E-03	1.50000E+06	1.43800E+06

Table 2 cont.

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* PU241 *
****

****
** AVAILABLE DATA TYPES **
****

TYPE	NUMBER OF ARGUMENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	54	--	--	--
ALPHA	1	1	2128	1.00000E-03	1.50000E+07	--
CHICR	1	3	2	1.00000E-03	1.50000E+07	--
ETA	1	1	820	1.00000E-03	1.50000E+07	--
ISOT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	54	1.00000E-03	1.50000E+07	--
NUE	1	1	2	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	123	2.60000E-01	1.60500E+02	--
				0.0	0.0	--
				3.00000E+00	2.00000E+00	--
SGA	1	1	3910	1.00000E-03	1.50000E+07	--
SGF	1	1	3869	1.00000E-03	1.50000E+07	--
SGG	1	1	4326	1.00000E-03	1.50000E+07	--
SGI	1	1	48	9.99999E-04	1.50000E+07	4.00000E+04
SGIZ	1	1	19 NAME-COMBINATIONS			
SGN	1	1	1582	1.00000E-03	1.50000E+07	--
SGNC	1	1	72 NAME-COMBINATIONS			
SGT	1	1	3563	1.00000E-03	1.50000E+07	--
SGTR	1	1	3251	1.00000E-03	1.50000E+07	--
SG2N	1	1	16	9.99999E-04	1.50000E+07	5.41000E+06
SG3N	1	1	7	9.99999E-04	1.50000E+07	1.19000E+07
ST	2	6	6	0.0	1.00000E+00	--
				2.00000E+00	4.00000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	66	5.00000E+01	2.50000E+05	--
				0.0	1.00000E+00	--
				2.00000E+00	4.00000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.00000E+04	25	1.00000E-03	1.00000E+06	4.00000E+04
9.20000E+04	24	1.00000E-03	1.00000E+06	9.20000E+04
1.63000E+05	22	1.00000E-03	1.00000E+06	1.63000E+05
1.67000E+05	17	1.00000E-03	1.00000E+06	1.69000E+05
1.69000E+05	19	1.00000E-03	1.00000E+06	1.69000E+05
1.72000E+05	18	1.00000E-03	1.00000E+06	1.72000E+05
2.30000E+05	17	1.00000E-03	1.00000E+06	2.30000E+05
2.35000E+05	14	1.00000E-03	1.00000E+06	2.35000E+05
2.35100E+05	13	1.00000E-03	1.00000E+06	2.44000E+05
2.44000E+05	14	1.00000E-03	1.00000E+06	2.44000E+05
2.96000E+05	13	1.00000E-03	1.00000E+06	2.96000E+05
3.34000E+05	13	1.00000E-03	1.00000E+06	3.34000E+05
4.44000E+05	11	1.00000E-03	1.00000E+06	4.44000E+05
4.99000E+05	10	1.00000E-03	1.00000E+06	4.99000E+05
5.68000E+05	8	1.00000E-03	1.00000E+06	6.50000E+05
8.09000E+05	7	1.00000E-03	1.00000E+06	8.09000E+05
8.35000E+05	6	1.00000E-03	1.00000E+06	8.35000E+05
8.75000E+05	5	1.00000E-03	1.00000E+06	8.75000E+05
9.31000E+05	4	1.00000E-03	1.00000E+06	9.31000E+05

Table 2 cont.

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***********          **************************
* PU242   *          ** AVAILABLE DATA TYPES **
***********          **************************
```

TYPE	NUMBER OF ARGU-MENTS	NUMBER OF FUNCT. VALUES	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
AASTATUS	1	1	36	--	--	--
CHICR	1	3	2	1.00000E-03	1.50000E+07	--
ISCT1	0	3	1	--	--	--
ISOT2	0	3	1	--	--	--
MUEL	1	1	53	1.00000E-03	1.50000E+07	--
NUE	1	1	2	1.00000E-03	1.50000E+07	--
PLNUE	0	4	1	--	--	--
RANGRES	0	4	1	--	--	--
RES	3	8	37	2.65000E+00	4.94800E+02	--
				0.0	0.0	--
				5.00000E-01	5.00000E-01	--
SGA	1	1	4358	1.00000E-03	1.50000E+07	--
SGF	1	1	2816	1.00000E-03	1.50000E+07	4.90000E-02
SGG	1	1	4489	1.00000E-03	1.50000E+07	--
SGI	1	1	52	1.00000E-03	1.50000E+07	4.40000E+04
SGIZ	1	1	17 NAME-COMBINATIONS			
SGN	1	1	2156	1.00000E-03	1.50000E+07	--
SGNC	1	1	74 NAME-COMBINATIONS			
SGT	1	1	2513	1.00000E-03	1.50000E+07	--
SGTR	1	1	2362	1.00000E-03	1.50000E+07	--
SG2N	1	1	12	1.00000E-03	1.50000E+07	6.29000E+06
SG3N	1	1	5	1.00000E-03	1.50000E+07	1.17000E+07
ST	2	6	3	0.0	1.00000E+00	--
				5.00000E-01	1.50000E+00	--
STD	0	3	1	--	--	--
STGF	3	8	33	5.00000E+01	2.50000E+05	--
				0.0	1.00000E+00	--
				5.00000E-01	1.50000E+00	--

ADDITIONAL INFORMATION FOR TYPE=SGIZ

LEVEL ENERGY	NUMBER OF DATA ITEMS	ARGUMENT(S) FIRST	ARGUMENT(S) LAST	LAST ARGUMENT(S) WITH ZERO FUNCT. VALUE
4.40000E+04	33	1.00000E+03	1.50000E+06	4.40000E+04
1.46000E+05	23	1.00000E-03	1.50000E+06	2.02000E+05
2.94000E+05	23	1.00000E-03	1.50000E+06	4.50000E+05
5.97000E+05	20	1.00000E-03	1.50000E+06	5.97000E+05
6.49000E+05	18	1.00000E-03	1.50000E+06	6.49000E+05
7.42000E+05	17	1.00000E-03	1.50000E+06	8.05000E+05
9.56000E+05	12	1.00000E-03	1.50000E+06	9.56000E+05
9.95000E+05	12	1.00000E-03	1.50000E+06	9.95000E+05
1.00200E+06	11	1.00000E-03	1.50000E+06	1.00200E+06
1.03100E+06	10	1.00000E-03	1.50000E+06	1.03100E+06
1.03800E+06	9	1.00000E-03	1.50000E+06	1.03800E+06
1.09100E+06	8	1.00000E-03	1.50000E+06	1.09100E+06
1.10700E+06	7	1.00000E-03	1.50000E+06	1.10700E+06
1.16100E+06	5	1.00000E-03	1.50000E+06	1.30800E+06
1.30800E+06	5	1.00000E-03	1.50000E+06	1.30800E+06
1.41100E+06	4	1.00000E-03	1.50000E+06	1.41100E+06
1.43800E+06	3	1.00000E-03	1.50000E+06	1.43800E+06

TABLE 3: Nomenclature of data types on KEDAK

Name of data type	Further names	Arguments	Functional values	
AASTATUS	-	1	1	bibliographic information giving data types and energy regions of recent evaluations. (1)
ISØT 1	-	-	1. 2. 3.	Atomic (Isotopic) weight (A) Atomic number (Z) Nuclear spin of ground state (I)
ISØT 2	-	-	1.	$\lambda \cdot \sqrt{E} = h / \sqrt{2m_n} \cdot \frac{A+m_n}{A}$ = reduced neutron wave length $[eV^{1/2}\ b^{1/2}]$
			2.	R = nuclear radius $[b^{1/2}]$
			3.	E_B = binding energy of the last neutron in compound nucleus
ISØT 3	-	Isotopic weight		Isotopic abundance (%)
CHICR	-	1. Neutron incident energy	1. c 2. a 3. b	Parameters of the Watt-Cranberg fission spectrum $\chi(E) = c \cdot \exp(-aE)\sinh(\sqrt{bE})$ $c = 2a\sqrt{\frac{a}{\pi b}} \cdot \exp(-b/4a)$ The mean energy of fission neutrons is given by $\bar{E} = \frac{1}{a}(\frac{3}{2} + \frac{1}{4}\frac{b}{a})$ eV
CHIF	-	neutron outgoing energy		energy spectrum of prompt fission neutrons (thermal fission)
CHIFD	-	"		energy spectrum of delayed fission neutrons (thermal fission)
CHIFZ	E_o	"		energy spectrum of prompt fission neutrons at the neutron incident energy E_o
CHIFDZ	E_o	"		energy spectrum of delayed fission neutrons at the neutron incident energy E_o
CHIIZC	E_o	"		energy spectrum of inelastically scattered neutrons at the neutron incident energy E_o
CHI2N	E_o	"		energy spectrum of the two neutrons emitted in the (n,2n) process at the neutron incident energy E_o

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
CHI3N	E_o	"	energy spectrum of the three neutrons emitted in the (n,3n) process at the neutron incident energy E_o
RANGRES	-	-	1. E_L - lower 2. E_U - upper } energy boundaries of the region in which resolved resonance parameters given under "RES" are valid. 3. number of resolved resonances given by "RES" 4. flag which indicates whether resolved resonance parameters should preferable be taken for group constant calculations or pointwise given cross section values. It may have the following values. 2. - cross section values 1. - resolved resonance parameters } should be taken 0. - no preference can be recommended
RES	-	1. Resonance energy 2. Neutron orbital angular momentum (L) 3. Compound nucleus spin (J)	1. $g_J = (2J+1)/(2(2I+1)\cdot$abundance 2. total width Γ 3. neutron width Γ_n 4. capture width Γ_γ 5. fission width Γ_f 6. (n,p)-width Γ_p 7. (n,α)-width Γ_α 8. (n,n')-width $\Gamma_{n'}$
ST	-	1. L 2. J	1. average capture width $\overline{\Gamma}_\gamma$ 2. average level spacing $\overline{D}$ 3. average reduced neutron width $\overline{\Gamma}_n^{\ell}$

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
			4. strength function $S_\ell = \frac{\langle \Gamma_n^\ell \rangle_j}{(\nu_n)_{\ell j} \langle D \rangle_j}$
			5. number of exit channels in fission ν_f
			6. number of exit channels in neutron elastic scattering $(\nu_n)_{\ell J}$
STD	-	-	1. average observed level spacing
			2. a level density parameter
			3. $2\sigma^2$ spin cut-off parameter
STGF	-	1. neutron incident energy	1. number of exit channels in fission ν_f
		2. L	2. average fission width $\overline{\Gamma_f}$ for the number of exit channels ν_f
		3. J	3. average capture width $\overline{\Gamma_\gamma}$
			4. average neutron width $\overline{\Gamma_n}$
			5. S_f } statistical fluctuation factors Definition see reference 7
			6. S_γ
			7. R_f
			8. R_γ
ALPHA	-	neutron incident energy	ratio of capture to fission cross section
ETA	-	"	average number of fission neutrons per neutron absorption
MUEL	-	"	average cosine of the elastic scattering angle in the laboratory system $\overline{\cos \theta_L} = \overline{\mu_L}$
NUE	-	"	average number of fission neutrons
NUEP	-	"	average number of prompt fission neutrons

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
PLNUE	-	-	1. ν_o 2. ν_1 3. ν_2 4. ν_3 where $\nu = \nu_o + \nu_1 E + \nu_2 E^2 + \nu_3 E^3$ average total number of fission neutrons
SGA	-	neutron incident energy	absorption cross section
SGALP	-	"	cross section for the (n,α)-process
SGD	-	"	" " " " (n,d)- "
SGP	-	"	" " " " (n,p)- "
SGF	-	"	fission cross section
SGG	-	"	cross section for the (n,γ)-process
SGHE3	-	"	" " " " (n,He^3)- "
SGH3	-	"	" " " " (n,H^3)- "
SGI	-	"	total inelastic cross section
SGIA	-	"	cross section for the (n,n'α)-process
SGI2A	-	"	" " " " (n,n'2α)- "
SGI3A	-	"	" " " " (n,n'3α)- "
SGIP	-	"	" " " " (n,n'p)- "
SGIZ	E_i	"	inelastic cross section for excitation of rest nucleus level E_i
SGIZC	-	"	inelastic scattering cross section to the continuum
SGN	-	"	elastic scattering cross section
SGT	-	"	total cross section
SGTR	-	"	transport cross section
SGX	-	"	non-elastic cross section
SG2HE	-	"	cross section for the (n,2α)-process
SG2N	-	"	" " " " (n,2n)-process

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
SG3N	-	neutron incident energy	cross section for the (n,3n) -process
SG2NA	-	"	" " " " (n,2nα)-process
SG3NA	-	"	" " " " (n,3nα)-process
SGNL	E_o (2)	cosine of scattering angle	differential elastic scattering cross section at the neutron incident energy E_o in the laboratory system
SGNC	E_o	"	differential elastic scattering cross section at the neutron incident energy E_o in the center-of-mass system (normalised to 1)
SGIL	E_o	"	differential inelastic scattering cross section at the neutron incident energy E_o in the laboratory system
SGIC	E_o	"	differential inelastic scattering cross section at the neutron incident energy E_o in the center-of-mass system
SGILZ	1. E_i 2. E_o	"	differential inelastic scattering cross section for excitation of the rest nucleus level E_i at the neutron incident energy E_o in the laboratory system
SGICZ	1. E_i 2. E_o	"	differential inelastic cross section for excitation of the rest nucleus level E_i at the neutron incident energy E_o in the center-of-mass system
SGNIL	1. E_2 2. E_o	"	differential cross section for elastic and inelastic scattering at the neutron incident energy E_o to neutron outgoing energies between E_o and E_2 in the laboratory system
SGNIC	1. E_2 2. E_o	"	differential cross section for elastic and inelastic scattering at the neutron incident energy E_o to neutron outgoing energies between E_o and E_2 in the center-of-mass system

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
LEGNL	1. E_o 2. order L_m	L	coefficient f_L in the Legendre-polynomial expansion of the differential elastic scattering cross section $\sigma_n(\theta) = \frac{\sigma_n}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L(E)\, P_L(\cos\theta)$ in the laboratory system
LEGNC	1. E_o 2. order L_m	L	coefficient f_L in the Legendre-polynomial expansion of the differential elastic scattering cross section $\sigma_n(\theta) = \frac{\sigma_n}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L(E)\, P_L(\cos\theta)$ in the center-of-mass system
LEGIL	1. E_o 2. order L_m	L	coefficient f_L^i in the Legendre-polynomial expansion of the differential inelastic scattering cross section $\sigma_{n'}(\theta) = \frac{\sigma_{n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^i(E)\, P_L(\cos\theta)$ in the laboratory system
LEGIC	1. E_o 2. order L_m	L	coefficient f_L^i in the Legendre-polynomial expansion of the differential inelastic scattering cross section $\sigma_{n'}(\theta) = \frac{\sigma_{n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^i(E)\, P_L(\cos\theta)$ in the center-of-mass system
LEGILZ	1. E_i 2. E_o 3. order L_m	L	coefficient f_L^i in the Legendre-polynomial expansion of the differential inelastic cross section for excitation of the rest nucleus level E_i $\sigma_{n'}^{E_i}(\theta) = \frac{\sigma_{n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^i(E)\, P_L(\cos\theta)$ in the laboratory system

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
LEGICZ	1. E_i 2. E_o 3. order L_m	L	coefficient f_L^i in the Legendre-polynomial expansion of the differential inelastic cross section for excitation of the rest nucleus level E_i $\sigma_{n'}^{E_i}(\theta) = \frac{\sigma_{n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^i(E)\, P_L(\cos\theta)$ in the center-of-mass system
LGNIL	1. E_2 2. E_o 3. order L_m	L	coefficient f_L^{o2} in the Legendre-polynomial expansion of the differential cross section for elastic and inelastic scattering at the neutron incident energy E_o to neutron outgoing energies between E_o and E_2 $\sigma_{n+n'}^{o2}(\theta) = \frac{\sigma^{o2}_{n+n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^{o2}(E)\, P_L(\cos\theta)$ in the laboratory system
LGNIC	1. E_2 2. E_o 3. order L_m	L	coefficient f_L^{o2} in the Legendre-polynomial expansion of the differential cross section for elastic and inelastic scattering at the neutron incident energy E_o and E_2 $\sigma_{n+n'}^{o2}(\theta) = \frac{\sigma^{o2}_{n+n'}}{4\pi} \sum_{L=o}^{L_m} (2L+1)\, f_L^{o2}(E)\, P_L(\cos\theta)$ in the center-of-mass system
			parametric representation of energy spectra at incident neutron energy E_o
SEDIC	E_o	K-identification number for the model used for description:	of neutrons inelastically scattered to a continuum of levels
SED2N	"		of the two neutrons emitted by the (n,2n) process
SED3N	"		of the three neutrons emitted by the (n,3n) process
SEDF	"		of fission neutrons
SEDFP	"		of prompt fission neutrons
SEDFD	"		of delayed fission neutrons

Table 3 cont.

Name of data type	Further names	Arguments	Functional values
K=1 Evaporation spectrum $\chi(E') = \frac{E'*\exp(E'/\theta)}{\theta^2*[1-\exp(-\frac{E_o-U}{\theta})*(1+\frac{E_o-U}{\theta})]}$ K=2 Maxwellian spectrum $(E') = \frac{\sqrt{E'}*\exp(-E'/\theta)}{\theta^{3/2}*[\frac{\pi}{2}*\mathrm{erf}(\sqrt{\frac{E_o-U}{\theta}} - \sqrt{\frac{E_o-U}{\theta}}*\exp(-\frac{E_o-U}{\theta})]}$ K=3 Watt-Cranberg spectrum See formula for CHICR K=4 Excitation of discrete levels $\chi(E) = \delta[E'-\frac{A^2+1}{(A+1)^2}E_o + \frac{A}{A+1} * EC]$			3 functional values: 1. p - fraction of the spectrum of type K to the total energy distribution 2. θ (nuclear temperature) - for K = 1, 2 a (spectrum parameter) - for K = 3 EC (level excitation energy) - for K = 4 3. U - upper limit for the final neutron energy - for K = 1, 2 $0 \leq E' \leq E_o - U$ or b (spectrum parameter) - for K = 3 or A (atomic weight)- for K = 4

(1) The data items of AASTATUS are only formally divided into argument and functional value. They contain the indicated text in successive order.

(2) E_o for this and all pertinent further data types in the laboratory system. This is also true for E_2.