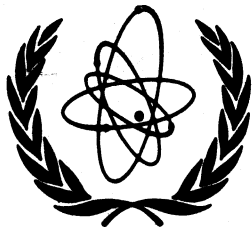


622



International Atomic Energy Agency

INDC(SEC)-38/U

INDC

INTERNATIONAL NUCLEAR DATA COMMITTEE

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WRENDA 74

World Request List for Nuclear Data Measurements

Fission Reactor Programmes

April 1974

NDS LIBRARY COPY

Published on behalf of

USA National Neutron Cross Section Center, Brookhaven
NEA Neutron Data Compilation Centre, Saclay
IAEA Nuclear Data Section, Vienna
USSR Nuclear Data Center, Obninsk

IAEA NUCLEAR DATA SECTION, KÄRNTNER RING 11, A-1010 VIENNA

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I. INTRODUCTION

This issue of WRENDA contains 1190 requests for nuclear data measurements for 632 data types needed in support of the fission reactor development programmes of 21 Member States of the IAEA and one International Organization. This is the first edition to be printed from the computerized data request file maintained by the Agency's Nuclear Data Section (NDS). The input to this data request file is provided by officially constituted bodies in the Member States through the four regional neutron data centres (NNCSC, NDCC, NDS, and CJD)¹⁾. The requests from Australia, Belgium, Bulgaria, Council of the European Communities, Finland, France, Federal Republic of Germany, Italy, Netherlands, Sweden, Switzerland, the United Kingdom, and the United States have been reviewed and updated since the last WRENDA publication.

The use of a "request list" to provide information to measurers of neutron data on the needs of developing technologies for such data is long standing in both the United States and the United Kingdom. In 1968, the Neutron Data Compilation Centre at Saclay initiated publication of a request list from a computerized file, known as RENDA, on behalf of the European-American Nuclear Data Committee (EANDC). The list contained requests from those countries represented on that committee. In 1971, the International Nuclear Data Committee (INDC) recommended that the IAEA assume responsibility for publication of an expanded international request list.

The first international request list was published in 1972 using the Saclay RENDA file with additional requests included, from countries outside the EANDC area. During the transfer of responsibility from NEA to the IAEA, a further edition, WRENDA 73, was published from the RENDA file with assistance of NDCC Saclay in order to take account of a completely revised United States Request List.

- 1)
- NNCSC - National Neutron Cross Section Center, Brookhaven National Laboratory, Upton, L.I., N.Y., USA
 - NDCC - Neutron Data Compilation Centre, Nuclear Energy Agency, Saclay, France
 - NDS - Nuclear Data Section of the International Atomic Energy Agency, Vienna, Austria
 - CJD - Centr po Jadernym Dannym, Obninsk, USSR

For the present edition a new publication format has been adopted whereby all requests for a given material and data type have been blocked together. Status comments no longer apply to a particular request but to the status of a data type for a given material. These comments are printed, where available, following the data measurement request block. Whenever possible coded information appearing in the data file have been expanded to improve the readability of the publication.

The request list is meant to serve as a guide to measurers and scientific and technical administrators in the Agency's Member States when planning nuclear data measurement programmes. Measurers, when initiating an experiment that will provide data requested in this document, are asked to inform the requestor(s) of the planned measurements. Information on such experiments should also be provided to NDS so that status comments can be kept current. The names of the requestors are printed with each request and their addresses are given in Appendix D.

The WRENDA file also contains requests for nuclear data measurements needed in support of fusion reactor and safeguards techniques development. These requests, upon recommendation of the International Nuclear Data Committee (INDC), are published in separate INDC documents. Special retrievals from the file can be obtained from the IAEA Nuclear Data Section upon request.

Future editions of WRENDA will be issued annually in the spring. Before each publication, the local data committees will be asked to review their data requests so that any changes can be made and the list can be kept current. Comments from the users of WRENDA are encouraged, so that the document can meet their needs.

II. DESCRIPTION OF REQUESTS

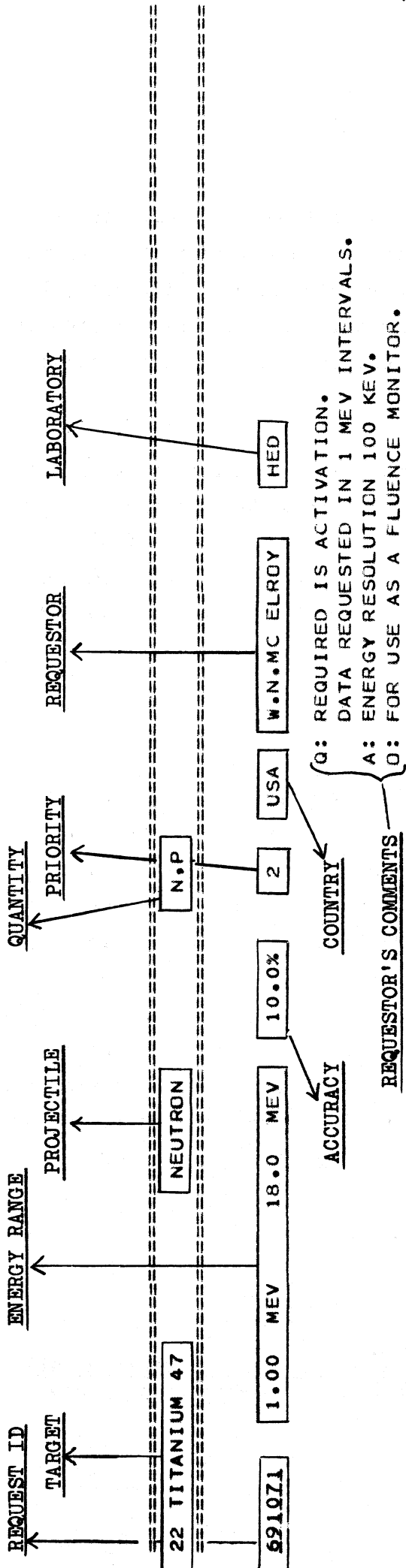
This request list is presented in a sort by increasing target charge (Z) and mass (A) number, then by projectile type starting with the lightest (γ -rays) and sorted by increasing mass, and finally by reaction type. All requests for a single target nuclide, projectile and reaction are blocked together. A sample is shown on the following page.

Each request block consists of two parts separated by a single line. The first part contains all the requests for one target-projectile-quantity combination. The second part called "STATUS" contains comments on the present state of knowledge of this data type. Where there are no status comments in the WRENDA file, this second part is omitted.

Block-heading

The first line of each request block gives, from left to right, the target nuclide, the incident particle, and the quantity. This line of text is enclosed by a double line to make the beginning of each block stand out visually. The meaning of a quantity generally conforms to CINDA ²⁾ usage with the addition of some quantities to describe nuclear structure data and complex reactions. A list of the allowed quantities appears as part of the next section. The target nuclide description consists of the charge number, the element name, and the mass number of the isotope. No mass number is given when the natural element is meant, except in the case where the natural element is monoisotopic. Mixtures and compounds appear at the end of the list.

2) CINDA - An Index to the Literature on Microscopic Neutron Data
published annually by the International Atomic Energy Agency



622070

15.0 MEV

10.0%

2

FR

BRC

Q: PRODUCTION OF SC-47 (3.43 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS

ANL MEADOWS+ - USNDC-3 16(1972), DATA TO 6. MEV.

AUB GHORAI+ - JNE 25 319(1971), DATA TO 6.1 MEV.

STATUS COMMENTS

Identification number

The individual requests then follow in order of increasing identification number. This number appears on the first line of each request at the far left and is underlined. The number assigned is unique and remains associated with a request. When a request is withdrawn, this number is not assigned to another request. The first two digits of the identification number are the last two digits of the year in which the request was originated. The third digit represents the responsible neutron data center (1-NNCSC, 2-NDCC, 3-NDS, 4-CJD) and the final three digits are a sequence number. The neutron data centers are responsible for assigning the identification number.

Energy

The next two entries on the first line of each request give the range of energy of the incident particle for which the measurement is desired. The energy unit is given after each number. Because no lower case is used, we have adopted the symbol, MV, for milli-electron volts, thus preventing confusion with MEV for million electron volts.

If an energy appears in the first field with the second field blank, then the measurement is required at only a single energy. In the case of a resonance integral, the single entry gives the lower energy limit for the integral. A lone entry in the second energy field with the first field blank indicates that measurement is desired for energies up to the specified value. This format appears most frequently for threshold reactions. No alphabetic energies are allowed. Thus thermal is given as 25.3 MV. All spectrum averages and non-standard energy specifications must be explained in the requestor's comments.

Accuracy

The fourth field on the first line gives the accuracy required of the measurement stated in percent. Any accuracy requirements which cannot be stated simply must be given in the requestor's comments. All accuracies are assumed to be one standard deviation. Any other meaning must be explained in the comments.

Priority

The fifth field on the second line gives the priority of the measurement. Requests are assigned priority 1, 2 or 3. These priorities are defined as follows.

* Priority 1 *

Nuclear data which satisfy the criteria of Priority 2 and which have been selected for maximum practicable attention, taking into account the urgency of nuclear energy programme requirements.

For example, the European American Committee for Reactor Physics assigns its highest priorities for reactor measurements as follows:

" The highest priority should be given to requests for nuclear data for reactors to be built in the near future if:

a. These data are still necessary to predict the different reactor properties after all information from integral experiments and operating reactors has been used; or

b. information on an important reactor parameter is in principle attainable through mathematical calculation from nuclear data only; or

c. these data are needed for materials required in reactor physics measurements. "

* Priority 2 *

Nuclear data which will be required during the next few years in the applied nuclear energy programme (e.g. the design of a reactor or fuel processing plant; data needed for optimum use of reactor fuel and construction materials such as neutron moderators, absorbers and radiation shields; space application and biomedical studies; data required for better understanding of some significant aspect of reactor behaviour).

* Priority 3 *

Nuclear data of more general interest and data required to fill out the body of information needed for nuclear technology.

Requestor

The right hand side of the second line is used to identify the requestor. The first piece of information is a three letter code for the country originating the request. The codes and their explanations are given in Appendix A. The country code is followed by the name of the requestor. Mailing addresses for the requestors are given in Appendix D. The last piece of information is a three character code for the requestor's organization. These codes conform to the CINDA codes and are listed along with the organization name in Appendix B. In the case where there is more than one requestor for a request, then their names and organization codes are given on successive lines. However all requestors so combined must come from the same country.

Requestor's comments

Comments by requestors follow below the requestors' names on the right hand side of the page. The comments are grouped into four types

denoted by the characters Q, A, O and S. The group of comments designated by Q refers to further experimental specifications such as details of the quantity to be measured and the energy range of incident or secondary particles. Those denoted by an A refer to further details concerning accuracy or energy resolution required. The category O includes all other comments such as use of or justification for requested data. The last group of comments designated by an M contains statements about modifications which have been made since the previous version of WRENDA, such as "new request" etc.

Status comments

The status comments for a block of requests generally consist of an organization code (see Appendix B for explanations) followed by a name and a comment. In the present edition of WRENDA and for the foreseeable future these comments will be references to related, recently completed experiments or to experiments underway. In some cases, general status comments as to various discrepancies or attained accuracies will appear. It is hoped that more comments of this type will appear in the future.

All references to a publication will use CINDA type codes. These codes and their expanded form are given in Appendix C. The name given at the beginning of a comment is either the author or first author of a publication or the source of the general comment.

III. HOW TO FIND A REQUEST IN WRENDA

As is discussed in the previous section, all data requests for a single target nucleus, projectile, and reaction quantity are blocked together. These blocks are sorted by target - projectile - reaction in that order.

The target nuclei are in increasing order of Z and within Z , A . Elements which are isotope mixtures appear before individual isotopes. Monoisotopic elements appear at their natural position in order of increasing A . Requests for lumped fission products appear at the end followed by compound targets.

In this section are three further tables for assistance. The first table is an index to the request list. This index gives number of the page on which the first block for any target nucleus (Z, A) appears. The second table gives the projectile particle sort order and the third table gives the reaction quantity sort order.

Table I
Index to Request List

TARGET	PAGE	TARGET	PAGE
1 HYDROGEN 1	1	51 ANTIMONY 125	42
1 HYDROGEN 2	1	51 ANTIMONY 127	42
2 HELIUM 3	1	52 TELLURIUM 127	42
3 LITHIUM 3	1	52 TELLURIUM 129	42
3 LITHIUM 6	1	52 TELLURIUM 132	42
3 LITHIUM 7	1	53 IODINE 127	42
4 BERYLLIUM 9	2	53 IODINE 133	42
5 BORON 10	3	54 XENON 131	42
6 CARBON	4	54 XENON 133	43
6 CARBON 12	5	54 XENON 135	43
7 NITROGEN 14	5	55 CESIUM 133	43
8 OXYGEN	5	55 CESIUM 134	44
8 OXYGEN 16	6	55 CESIUM 135	44
8 OXYGEN 17	6	56 BARIUM 136	44
8 OXYGEN 18	6	59 PRASEODYMIUM 141	44
9 FLUORINE	6	59 PRASEODYMIUM 143	44
9 FLUORINE 19	7	60 NEODYMIUM 143	44
11 SODIUM 23	7	60 NEODYMIUM 145	44
13 ALUMINUM 27	9	60 NEODYMIUM 146	45
14 SILICON	10	60 NEODYMIUM 147	45
15 PHOSPHORUS 31	10	60 NEODYMIUM 148	45
16 SULFUR	10	61 PROMETHIUM 147	45
16 SULFUR 32	10	61 PROMETHIUM 148	46
17 CHLORINE	10	61 PROMETHIUM 149	46
17 CHLORINE 36	10	61 PROMETHIUM 151	46
18 ARGON 40	10	62 SAMARIUM	46
19 POTASSIUM	11	62 SAMARIUM 144	46
19 POTASSIUM 41	11	62 SAMARIUM 147	46
20 CALCIUM	11	62 SAMARIUM 149	46
21 SCANDIUM 45	11	62 SAMARIUM 150	47
22 TITANIUM	11	62 SAMARIUM 151	47
22 TITANIUM 46	12	62 SAMARIUM 152	47
22 TITANIUM 47	12	62 SAMARIUM 153	47
22 TITANIUM 48	12	63 EUROPIUM	47
23 VANADIUM	13	63 EUROPIUM 151	48
23 VANADIUM 51	13	63 EUROPIUM 153	49
24 CHROMIUM	14	63 EUROPIUM 154	49
24 CHROMIUM 52	14	63 EUROPIUM 155	49
24 CHROMIUM 53	16	63 EUROPIUM 156	49
25 MANGANESE 54	16	64 GADOLINIUM	49
25 MANGANESE 55	16	64 GADOLINIUM 155	50
26 IRON	17	64 GADOLINIUM 156	50
26 IRON 54	21	64 GADOLINIUM 157	50
26 IRON 56	21	64 GADOLINIUM 158	51
26 IRON 57	21	66 DYSPROSIUM 161	51
26 IRON 58	22	66 DYSPROSIUM 164	51
27 COBALT 58	22	67 HOLMIUM 165	51
27 COBALT 59	22	68 ERBIUM	51
27 COBALT 60	23	68 ERBIUM 166	51
28 NICKEL	23	68 ERBIUM 168	51
28 NICKEL 58	25	69 THULIUM 169	51
28 NICKEL 59	26	69 THULIUM 170	52
28 NICKEL 60	26	69 THULIUM 171	52
28 NICKEL 61	26	70 YTTERBIUM 168	52
28 NICKEL 62	27	70 YTTERBIUM 174	52
28 NICKEL 64	27	71 LUTETIUM 175	52
29 COPPER	27	71 LUTETIUM 176	53
29 COPPER 63	27	72 HAFNIUM	53
29 COPPER 65	28	72 HAFNIUM 174	54
30 ZINC	28	72 HAFNIUM 176	54
30 ZINC 64	29	72 HAFNIUM 177	54
31 GALLIUM	29	72 HAFNIUM 178	54
31 GALLIUM 69	29	72 HAFNIUM 179	55
33 ARSENIC 75	30	72 HAFNIUM 180	55
36 KRYPTON 82	30	73 TANTALUM 181	55
36 KRYPTON 84	30	74 TUNGSTEN	56
37 RUBIDIUM 85	30	74 TUNGSTEN 182	56
39 YTTRIUM 89	30	74 TUNGSTEN 183	57
40 ZIRCONIUM	30	74 TUNGSTEN 184	57
40 ZIRCONIUM 90	31	74 TUNGSTEN 185	57
40 ZIRCONIUM 91	32	76 OSMIUM 186	57
40 ZIRCONIUM 92	32	76 OSMIUM 187	57
40 ZIRCONIUM 94	33	77 IRIDIUM 191	57
40 ZIRCONIUM 95	34	77 IRIDIUM 193	57
40 ZIRCONIUM 96	34	78 PLATINUM	58
41 NIOBIUM 93	35	78 PLATINUM 190	58
41 NIOBIUM 95	36	78 PLATINUM 192	58
42 MOLYBDENUM	36	78 PLATINUM 198	58
42 MOLYBDENUM 92	37	79 GOLD 197	58
42 MOLYBDENUM 95	37	80 MERCURY 198	59
42 MOLYBDENUM 96	38	80 MERCURY 200	59
42 MOLYBDENUM 97	38	80 MERCURY 201	59
42 MOLYBDENUM 98	38	81 THALLIUM 203	59
42 MOLYBDENUM 99	38	81 THALLIUM 204	59
43 TECHNETIUM 99	38	81 THALLIUM 205	60
44 RUTHENIUM 100	39	82 LEAD	60
44 RUTHENIUM 101	39	88 RADIUM 226	60
44 RUTHENIUM 102	39	89 ACTINIUM 227	60
44 RUTHENIUM 103	39	90 THORIUM 232	60
44 RUTHENIUM 104	39	91 PROTACTINIUM 231	62
45 RHODIUM 103	39	91 PROTACTINIUM 233	62
45 RHODIUM 105	40	92 URANIUM 232	62
46 PALLADIUM 105	40	92 URANIUM 233	62
46 PALLADIUM 107	40	92 URANIUM 234	65
46 PALLADIUM 109	41	92 URANIUM 235	66
47 SILVER 107	41	92 URANIUM 236	72
47 SILVER 109	41	92 URANIUM 237	73
48 CADMIUM	41	92 URANIUM 238	73
48 CADMIUM 110	41	92 URANIUM 239	78
48 CADMIUM 113	41	93 NEPTUNIUM 237	78
49 INDIUM	41	93 NEPTUNIUM 238	79
49 INDIUM 115	41	93 NEPTUNIUM 239	79
50 TIN 126	41	94 PLUTONIUM 236	79
51 ANTIMONY 121	42	94 PLUTONIUM 237	79
51 ANTIMONY 123	42	94 PLUTONIUM 238	80
		94 PLUTONIUM 239	80

(Table I cont'd.)

TARGET		PAGE
94 PLUTONIUM 240	.....	86
94 PLUTONIUM 241	.....	88
94 PLUTONIUM 242	.....	91
94 PLUTONIUM 245	.....	91
95 AMERICIUM 241	.....	91
95 AMERICIUM 242	.....	93
95 AMERICIUM 243	.....	94
96 CURIUM 242	.....	94
96 CURIUM 243	.....	95
96 CURIUM 244	.....	95
96 CURIUM 245	.....	96
96 CURIUM 246	.....	96
96 CURIUM 247	.....	96
96 CURIUM 248	.....	97
97 BERKELIUM 249	.....	97
98 CALIFORNIUM 249	.....	97
98 CALIFORNIUM 250	.....	97
98 CALIFORNIUM 251	.....	98
98 CALIFORNIUM 252	.....	98
98 CALIFORNIUM 253	.....	99
99 EINSTEINIUM 253	.....	99
99 EINSTEINIUM 254	.....	99
100 FERMIUM 255	.....	99
100 FERMIUM 257	.....	99
FISSION PRODUCTS	.....	99
STEEL	.....	99

Table II

Incident Particle Sorting Order

- 1 No incident particle (e.g. level structure)
- 2 Photon
- 3 Neutron
- 4 Proton
- 5 Deuteron
- 6 Triton
- 7 Helium-3
- 8 Alpha

Table III

QUANTITY SORT ORDER

LEVEL DENSITY PARAMETERS
DISCRETE LEVEL STRUCTURE (ENERGY, SPIN, PARITY)
HALF LIFE
TOTAL CROSS SECTION
ELASTIC CROSS SECTION
DIFFERENTIAL ELASTIC CROSS SECTION
INELASTIC CROSS SECTION
ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION
THERMAL SCATTERING LAW
TOTAL SCATTERING CROSS SECTION
DIFFERENTIAL TOTAL SCATTERING CROSS SECTION
NON-ELASTIC CROSS SECTION
ABSORPTION CROSS SECTION
CAPTURE CROSS SECTION
ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
DELAYED GAMMA SPECTRUM
PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.
TOTAL PHOTON PRODUCTION CROSS SECTION
TOTAL GAMMA RAY YIELD
X,N
X,N NEUTRON SPECTRA
X,2N
X,3N
NEUTRON EMISSION CROSS SECTION
TOTAL NEUTRON YIELD
DELAYED NEUTRON YIELD
X,P
X,P DELAYED NEUTRON YIELD
X,NP
TOTAL PROTON PRODUCTION CROSS SECTION
X,D
X,ND
X,T
X,NT
X,HELIUM-3
X,ALPHA
X,NALPHA
X,N3ALPHA
TOTAL ALPHA PRODUCTION CROSS SECTION
FISSION CROSS SECTION
SECOND CHANCE FISSION CROSS SECTION
CAPTURE TO FISSION RATIO (ALPHA)
NEUTRONS EMITTED PER NEUTRON ABSORPTION (ETA)
NEUTRONS EMITTED PER NON-ELASTIC PROCESS
NEUTRONS EMITTED PER FISSION (NU BAR)
DELAYED NEUTRONS EMITTED PER FISSION
PROMPT NEUTRONS EMITTED PER FISSION
INFORMATION ON NEUTRONS FROM A FISSION FRAGMENT
ENERGY SPECTRUM OF FISSION NEUTRONS
ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
SPECTRUM OF PROMPT GAMMA RAYS EMITTED IN FISSION
DELAYED GAMMA SPECTRUM FROM FISSION PRODUCTS
FISSION PRODUCT MASS YIELD SPECTRUM
INFORMATION ON KINETICS OF FISSION FRAGMENTS
RESONANCE PARAMETERS
ABSORPTION RESONANCE INTEGRAL
CAPTURE RESONANCE INTEGRAL
FISSION RESONANCE INTEGRAL

=====

1 HYDROGEN 1	NEUTRON	DIFFERENTIAL ELASTIC CROSS SECTION			
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721001	7.00 MEV	20.0 MEV	2.0%	1	USA	R.S.CASWELL	NBS
--------	----------	----------	------	---	-----	-------------	-----

Q: MEASUREMENTS AT 3 ENERGIES - 7, 10, AND 20 MEV SUGGESTED.
 O: FOR USE AS STANDARD.
 M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----STATUS

LAS HOPKINS+ - ND/A 9 137(1971), EVALUATION TO 30 MEV.
 YDK TANAKA+ - JPJ 28 11(1970), DATA AT 14 MEV.
 GEL PAULSEN+ - PL/B 29 562(1969), DATA 1 TO 6 MEV.
 WMU SHAMU - WORK IN PROGRESS.

=====

1 HYDROGEN 2	NEUTRON	ELASTIC CROSS SECTION			
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721002	1.00 EV	1.00 KEV	2.0%	1	USA	R.T.BAYARD	BET
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RPI STOLER+ - PRL 29 1745(1972), DATA 1 KEV TO 1 MEV.

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2 HELIUM 3	NEUTRON	N,P			
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691001	10.0 KEV	3.00 MEV	1.0%	2	USA	L.W.NORDHEIM P.B.HEMMIG	GA AEC
--------	----------	----------	------	---	-----	----------------------------	-----------

Q: ABSOLUTE VALUES REQUIRED.
 A: INTERMEDIATE ACCURACY USEFUL.
 O: FOR USE AS A SECONDARY STANDARD.

691003	1.00 KEV	3.00 MEV	3.0%	2	USA	R.S.CASWELL	NBS
--------	----------	----------	------	---	-----	-------------	-----

Q: ABSOLUTE VALUES REQUIRED.
 A: INTERMEDIATE ACCURACY USEFUL.
 O: FOR USE AS A SECONDARY STANDARD.

691004	100. KEV	10.0 MEV		2	USA	B.C.DIVEN	LAS
--------	----------	----------	--	---	-----	-----------	-----

Q: ABSOLUTE VALUES REQUIRED.
 A: ACCURACY REQUESTED 3. PERCENT UP TO 3.0 MEV, AND 5 PERCENT ABOVE.
 INTERMEDIATE ACCURACY USEFUL.
 O: FOR USE AS SECONDARY STANDARD.

692003	100. KEV	1.00 MEV	2.0%	2	UK	B.ROSE	HAR
--------	----------	----------	------	---	----	--------	-----

A: ENERGY DEPENDENCE NEEDED MORE ACCURATELY
 O: USED AS A STANDARD IN CROSS-SECTION MEASUREMENTS.

713001	100. KEV	10.0 MEV		1	IND	M.P.NAVALKAR	TRM
--------	----------	----------	--	---	-----	--------------	-----

A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT.
 O: FOR NEUTRON SPECTRUM MEASUREMENTS WITH SANDWICHED HE-3 SPECTROMETER.
 PRESENT KNOWLEDGE IS ABOUT 10 PERCENT AND WORSE.

-----STATUS-----STATUS

GA COSTELLO+ - NSE 39 409(1970), DATA 0.3 TO 1.1 MEV WITH 10 PERCENT ACCURACY.
 GA COSTELLO+ - 70 ANL 74(1970), REVIEW.
 GEL LISKIEN+ - EVALUATION IN PROGRESS.

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3 LITHIUM	NEUTRON	TOTAL PHOTON PRODUCTION CROSS SECTION			
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691006	248. KEV	268. KEV	15.0%	2	USA	M.R.FLEISHMAN	SNP
--------	----------	----------	-------	---	-----	---------------	-----

Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA).
 GAMMA-ENERGY RESOLUTION REQUIRED 10 PERCENT.

691007	4.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
--------	----------	----------	-------	---	-----	---------------	-----

Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 A: ALTERNATE ACCURACY 5 MB. GAMMA-ENERGY RESOLUTION REQUIRED, 250 KEV.

-----STATUS-----STATUS

FRK PRESSER+ - NP/A 182 321(1972), PRODUCTION OF 478 KEV GAMMA RAY BETWEEN 1 AND 9 MEV IN LI-7.

=====

3 LITHIUM 6	NEUTRON	ELASTIC CROSS SECTION			
-------------	---------	-----------------------	--	--	--

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691008	1.00 KEV	100. KEV	5.0%	1	USA	R.S.CASWELL	NBS
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Q: DIFFERENTIAL ELASTIC MAY BE REQUIRED AT UPPER END.
 A: ACCURACY TO OBTAIN N,ALPHA TO 2 PERCENT.

-----STATUS-----STATUS

HAR UTTLEY+ - 70 ANL 80(1970), REVIEW.
 HAR ASAMI+ - EANDC(J)-13 (1969), DATA 1 TO 10 KEV WITH 4 PERCENT ACCURACY.

3 LITHIUM 6		NEUTRON			N, ALPHA				
691009	1.00 KEV	3.00 MEV	1.0%	1	USA	R.AVERY P.B.HEMMIG	ANL AEC	A: ACCURACY OF 3 PERCENT USEFUL. ENERGY RESOLUTION MUST REPRODUCE TRUE SHAPE. O: FOR USE AS A STANDARD.	
691011	500. EV	3.00 MEV	3.0%	1	USA	G.HANSEN	LAS	O: FOR USE AS A STANDARD.	
692004	5.00 KEV	15.0 MEV	5.0%	1	GER	M.KUECHLE	KFK	O: STANDARD.	
692005	100. KEV	5.00 MEV	5.0%	3	UK	C.G.CAMPBELL	WIN	Q: SECONDARY ANGULAR DISTRIBUTION REQUIRED. O: FLUX MONITOR FOR NEUTRON SPECTRUM MEASUREMENTS.	
701001	10.0 KEV	3.00 MEV	5.0%	1	USA	R.J.HOWERTON	LRL	O: FOR USE AS STANDARD.	
712002	500. KEV	5.00 MEV	5.0%	1	UK	B.ROSE C.G.CAMPBELL	HAR WIN	O: STANDARD FOR CROSS-SECTION MEASUREMENTS AND FOR NEUTRON SPECTRUM MEASUREMENTS. M: MODIFIED (PARTIALLY FULFILLED).	
713002	100. KEV	10.0 MEV		1	IND	M.P.NAVALKAR	TRM	A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT. O: FOR NEUTRON SPECTRUM MEASUREMENTS WITH SANDWICHED LI-6 SPECTROMETER. PRESENT KNOWLEDGE IS ABOUT 10 PERCENT AND WORSE.	
721008	100. KEV	13.0 MEV	5.0%	1	USA	H.T.MOTZ	LAS	Q: ABSOLUTE VALUES REQUIRED BELOW 150 KEV. O: FOR USE AS STANDARD BELOW 3 MEV. M: SUBSTANTIAL MODIFICATIONS.	
721009	10.0 KEV	14.0 MEV		1	USA	R.S.CASWELL	NBS	A: ACCURACY 1 PERCENT BELOW 100 KEV, 3 PERCENT ABOVE. O: FOR USE AS STANDARD BELOW 3 MEV.	
732038	10.0 KEV	3.00 MEV	2.0%	1	FR	A.SCHMIDT	CAD	O: STANDARD. M: NEW REQUEST.	
742024	5.00 KEV	15.0 MEV	5.0%	1	BLG	G.DELEEUEW-GIERTS	MOL	Q: SECONDARY ANGULAR DISTRIBUTION REQUIRED UP TO 1 MEV WITH EMPHASIS BELOW 100 KEV AND ABOVE 500 KEV. A: ANGULAR RESOLUTION - 10 DEGREES. NEUTRON ENERGY RESOLUTION - 5 KEV UP TO 150 KEV AND 10 KEV UP TO 500 KEV. O: DETERMINATION OF NEUTRON SPECTRA FROM TRITON ENERGY DISTRIBUTIONS. M: NEW REQUEST.	

STATUS-----STATUS

HAR UTTLEY+ - AERE-PR/NP 19(1972), EVALUATION.

HAR COATES+ - AERE-PR/NP 19(1972), DATA FROM 1.5 TO 500 KEV.

CAD FORT+ - EANDC(E)-150(1972), DATA FROM 20 KEV TO 1.7 MEV.

HAR LYNN - EXPERIMENT PLANNED FOR 1974.

ANL POENITZ - TO BE PUBLISHED IN NSE UP TO 1.5 MEV.

IRT FRIESENHAHN - NEW DATA 25 PERCENT HIGHER THAN OTHER RECENT DATA.

3 LITHIUM 6		NEUTRON			TOTAL ALPHA PRODUCTION CROSS SECTION				
691012	1.00 KEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED	O: FOR USE AS A FLUENCE MONITOR. TOTAL HELIUM PRODUCTION FOR MASS SPECTROMETER.	

3 LITHIUM 7		ALPHA			ALPHA,N				
721146	4.00 MEV	6.00 MEV	2.0%	2	USA	R.S.CASWELL	NBS	A: ACCURACY 2 PERCENT FOR INVERSE REACTION. O: ENERGY CORRESPONDS TO 10 KEV TO 1 MEV FOR INVERSE REACTION B-10(N,ALPHA).	

4 BERYLLIUM 9		NEUTRON			DIFFERENTIAL ELASTIC CROSS SECTION				
621001	7.00 MEV	20.0 MEV	10.0%	1	USA	R.J.HOWERTON	LRL	A: ENERGY RESOLUTION - 300 KEV. ANGULAR RESOLUTION - 3 DEGREES. M: NEW REQUEST.	

<u>701003</u>	1.00 KEV	1.00 MEV	5.0%	1	USA	R.J.HOWERTON	LRL
Q: ALPHA(0)/ALPHA(1) RATIO NEEDED FOR BOTH ALPHA AND GAMMA DETECTION.							
<u>721028</u>	50.0 KEV	1.00 MEV	2.0%	1	USA	R.S.CASWELL	NBS
Q: ABSOLUTE CROSS SECTION FOR PRODUCTION OF 480 KEV GAMMA IS REQUIRED. O: FOR USE AS A STANDARD. M: SUBSTANTIAL MODIFICATIONS.							

STATUS-----STATUS

GA FRIESENHAHN+ - GULF-RT-12210 (1972), DATA 4 KEV TO 1 MEV WITH 3-5 PERCENT ACCURACY.
 HAR COATES+ - AERE-PR/NP18 (1972), DATA TO 220 KEV.
 HAR SOWERBY+ - JNE 24 323(1970), DATA TO 200 KEV WITH RECOMMENDED CURVE.
 CAD SZABO+ - EANDC(E)-150 (1972), IN PROGRESS 10 TO 100 KEV.
 IRT FRIESENHAHN+ - USNDC-9 73(1973), IN PROGRESS 1 KEV TO 1 MEV.

5 BORON 10 NEUTRON TOTAL ALPHA PRODUCTION CROSS SECTION

<u>691026</u>	1.00 KEV	18.0 MEV	10.0%	1	USA	W.N.MC ELROY	HED
O: FOR USE AS A FLUENCE MONITOR. TOTAL HELIUM PRODUCTION FOR MASS SPECTROMETER.							

6 CARBON NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

<u>621003</u>	9.00 MEV	14.0 MEV	10.0%	1	USA	R.J.HOWERTON	LRL
M: NEW REQUEST.							
<u>621004</u>	2.00 MEV	14.0 MEV	10.0%	3	USA	R.EHRLICH	KAP
A: ACCURACY 20 PERCENT ACCEPTABLE. O: FOR SHIELDING AND RESONANCE OR OPTICAL MODEL FITTING.							
<u>661002</u>	8.00 MEV	16.0 MEV	5.0%	2	USA	W.A.BIGGERS	LAS
M: NEW REQUEST.							
<u>712003</u>	100. KEV	15.0 MEV	3.0%	2	SWD	H.HAEGGBLOM	AE
O: FOR FAST CRITICAL SYSTEM.							
<u>742025</u>	1.00 KEV	15.0 MEV	5.0%	2	FR	A.MICHAUDON	BRC
O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.							

STATUS-----STATUS

PAD FASOLI+ - NP/A 205 305(1973), DATA FOR 29 ENERGIES BETWEEN 2.1 AND 4.6 MEV.
 KTY GALATI+ - PR/C 5 1508(1972), DATA 3 TO 7 MEV.
 NEL BUCHER+ - USNDC-1 232(1972), SMALL ANGLE DATA.
 ORL PEREY+ - ORNL-4441 (1969), DATA FOR 13 ENERGIES BETWEEN 4.6 AND 8.6 MEV.
 ANL MONAHAN+ - PR 188 1618(1969), DATA TO 2 MEV.
 ANL SMITH+ - USNDC-7 9(1973), WORK UNDERWAY TO 4 MEV.
 ORL MORGAN+ - USNDC-7 166(1973), WORK UNDERWAY TO 20 MEV.
 OHO KNOX+ - COO-1717-6 (1973), DATA AT 2.6 MEV.
 DKE GLASGOW+ - USNDC-9 196(1973), PLANNED 8 TO 15 MEV.

6 CARBON NEUTRON DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION

<u>742026</u>		15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC
O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.							

6 CARBON NEUTRON CAPTURE CROSS SECTION

<u>742027</u>	1.00 KEV	15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC
O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.							

6 CARBON NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

<u>692014</u>	8.00 MEV	15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC
Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED. O: NEUTRON MONITOR AND THRESHOLD DETECTOR. M: SUBSTANTIAL MODIFICATIONS.							

STATUS-----STATUS

ORL MORGAN+ - ORNL-TM-3702 (1972), DATA AT 90 AND 125 DEGREES BETWEEN 5 AND 20 MEV.
 ORL MORGAN+ - USNDC-3 140(1972), WORK IN PROGRESS.
 GA HOOT+ - USNDC-7 88(1973), WORK IN PROGRESS.

6 CARBON 12 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

691031 4.00 MEV 5.50 MEV 15.0% 2 USA R.EHRLICH KAP
 Q: POLARIZATION OF SCATTERED NEUTRONS WANTED.
 A: ENERGY RESOLUTION 50 KEV.
 O: NEEDED TO RESOLVE DISCREPANCY BETWEEN THEORY AND EXPERIMENT.

7 NITROGEN 14 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

692015 1.00 MEV 15.0 MEV 20.0% 2 FR A.MICHAUDON BRC
 A: AVERAGE (1-COS) ACCURACY 10 PERCENT.
 ANGULAR RESOLUTION - 2.5 DEGREES UP TO 20 DEGREES,
 5 DEGREES FROM 20 TO 180 DEGREES.
 O: FOR AIR SCATTERING CALCULATION.
 NEW EVALUATION TO BE DONE IF NEW EXPERIMENTAL DATA.
 M: SUBSTANTIAL MODIFICATIONS.

692016 8.00 MEV 14.0 MEV 10.0% 2 SWD H.O.ZETTERSTROEM FOA
 A: ENERGY RESOLUTION 0.2 MEV.
 O: SHIELDING.

STATUS-----STATUS

NEL BUCHER+ - AD-734877 (1971), SMALL ANGLE SCATTERING 7.5 TO 9.5 MEV.
 NEL BUCHER+ - USNDC-3 211(1972), WORK IN PROGRESS TO 14 MEV.
 ORL KINNEY+ - USNDC-9 141(1973), IN PROGRESS 4.3 TO 8.6 MEV.

7 NITROGEN 14 NEUTRON N,2N

693002 14.0 MEV 10.0% 3 HUN J.CSIKAI KOS
 A: INCIDENT ENERGY RESOLUTION 200 KEV.
 O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION SYSTEMATICS.

7 NITROGEN 14 NEUTRON NEUTRON EMISSION CROSS SECTION

692017 4.00 MEV 15.0 MEV 20.0% 2 FR A.MICHAUDON BRC
 Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 A: AVERAGE (1-COS) ACCURACY 10 PERCENT.
 O: FOR AIR SCATTERING CALCULATION.
 NEW EVALUATION TO BE DONE IF NEW EXPERIMENTAL DATA.
 M: SUBSTANTIAL MODIFICATIONS.

692018 8.00 MEV 14.0 MEV 10.0% 2 SWD H.O.ZETTERSTROEM FOA
 Q: SECONDARY ENERGY DISTRIBUTION ALSO USEFUL.
 A: ENERGY RESOLUTION 0.2 MEV.
 O: SHIELDING.

7 NITROGEN 14 NEUTRON N,P

692020 1.00 KEV 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: EVALUATION MAY BE SUFFICIENT.
 NO MEASUREMENTS EXIST FROM 4.25 TO 15 MEV.
 M: SUBSTANTIAL MODIFICATIONS.

8 OXYGEN NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

691028 4.00 MEV 16.0 MEV 5.0% 1 USA P.B.HEMMIG AEC
 C.E.CLIFFORD ORL
 M: SUBSTANTIAL MODIFICATIONS.

691115 10.0 KEV 1.00 MEV 5.0% 2 USA C.A.PRESKITT IRT
 O: NEEDED FOR FAST REACTOR REFLECTOR WORTHS.

691116 1.00 MEV 4.00 MEV 9.0% 1 USA R.EHRLICH KAP
 M: SUBSTANTIAL MODIFICATIONS.

692021 1.70 MEV 2.20 MEV 10.0% 2 GER F.WELLER KFK
 O: EXPERIMENTAL DATA AVAILABLE IN THIS RANGE NOT SUFFICIENTLY DETAILED TO ACCOUNT FOR RESONANCE STRUCTURE.

692022 4.70 MEV 14.0 MEV 10.0% 2 GER F.WELLER KFK
 A: MEASUREMENTS DESIRED IN ENERGY STEPS INCREASING FROM 30 TO 100 KEV.
 ANGULAR RESOLUTION 5 TO 10 DEGREES.
 O: ONLY FEW MEASUREMENT POINTS AVAILABLE.

8 OXYGEN NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION (CONTINUED)

692023 8.00 MEV 14.0 MEV 10.0% 2 SWD H.O.ZETTERSTROEM FOA
 Q: SECONDARY ENERGY DISTRIBUTION ALSO USEFUL.
 A: ENERGY RESOLUTION 0.2 MEV.
 O: SHIELDING.

712004 100. KEV 15.0 MEV 5.0% 2 SWD H.HAEGGBLOM AE
 O: FOR FAST REACTOR CALCULATIONS.

STATUS-----STATUS

ORL KINNEY+ - ORNL-4780 (1972), DATA FROM 4.3 TO 8.7 MEV.
 NEL BUCHER+ - USNDC-1 232(1972), SMALL ANGLE DATA FROM 7.4 TO 9.6 MEV.
 ORL FOWLER+ - PR/C 2 124(1970), DATA 1.8 TO 3.4 MEV.
 LAS FOSTER+ - LADC-13271 (1971), DATA 5 TO 14 MEV

8 OXYGEN NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

742028 1.00 KEV 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: FOR SHIELDING CALCULATION.
 M: NEW REQUEST.

8 OXYGEN NEUTRON NEUTRON EMISSION CROSS SECTION

691120 14.0 MEV 5.0% 3 USA C.A.PRESKITT IRT
 Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 O: NEEDED FOR FAST REACTOR REFLECTOR WORTHES.
 M: SUBSTANTIAL MODIFICATIONS.

692025 8.00 MEV 14.0 MEV 10.0% 2 SWD H.O.ZETTERSTROEM FOA
 Q: SECONDARY ENERGY DISTRIBUTION ALSO USEFUL.
 A: ENERGY RESOLUTION 0.2 MEV.
 O: SHIELDING.

8 OXYGEN ALPHA ALPHA,N

721029 7.00 MEV 20.0% 2 USA R.EHRLICH KAP
 A: ALPHA ENERGY RESOLUTION 0.1 MEV.
 O: FOR CALCULATION OF NEUTRON SOURCE STRENGTHS.

8 OXYGEN 16 NEUTRON N,P

693003 14.0 MEV 10.0% 3 HUN J.CSIKAI KOS
 A: INCIDENT ENERGY RESOLUTION 200 KEV.
 O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION SYSTEMATICS.

8 OXYGEN 16 NEUTRON N,ALPHA

682006 10.0 MEV 3.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: PRECISE STANDARDIZATION OF EMISSION RATE OF NEUTRON SOURCE.

8 OXYGEN 17 NEUTRON CAPTURE CROSS SECTION

691801 25.3 MV 2 CAN G.C.HANNA CRC
 A: ACCURACY 0.2 BARNS.
 O: FOR UNDERSTANDING ABSORPTION IN HEAVY WATER.

8 OXYGEN 18 ALPHA ALPHA,N

661010 7.00 MEV 10.0% 3 USA R.T.BAYARD BET
 A: ALPHA ENERGY RESOLUTION 0.2 MEV.
 O: TO RESOLVE DISCREPANCIES BETWEEN CROSS SECTION AND NEUTRON YIELD DATA.

692029 4.00 MEV 7.50 MEV 30.0% 2 FR C.DEVILLERS SAC
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
 A: RESOLUTION FOR E AND E', 1.0 MEV.
 O: FOR SHIELDING OF ALPHA EMITTING SAMPLES.
 NEW EVALUATION TO BE DONE IF NEW EXPERIMENTAL DATA.

9 FLUORINE ALPHA ALPHA,N

732032 15.0 MEV 30.0% 2 FR C.DEVILLERS SAC
 Q: ENERGY DISTRIBUTION REQUIRED.
 O: FOR SHIELDING OF ALPHA EMITTING SAMPLES.
 M: NEW REQUEST.

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9 FLUORINE 19 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

691040 3.00 MEV 20.0 MEV 10.0% 1 USA R.J.HOWERTON LRL

A: ENERGY DEPENDENCE SHOULD BE WELL DEFINED.
M: NEW REQUEST.

-----STATUS-----

CRC CLARKE+ - NP/A 147 174(1970), DATA AT 14. MEV.
ANL GUENTHER+ - USNDC-3 13(1973), IN PROGRESS TO 4 MEV.

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9 FLUORINE 19 NEUTRON CAPTURE CROSS SECTION

661011 1.00 KEV 1.00 MEV 10.0% 2 USA A.M.PERRY ORL

O: TO CALCULATE NEUTRON LOSS IN MOLTEN SALT BREEDER.

-----STATUS-----

FOA NYSTROEM+ - PS 4 95(1971), DATA 20 TO 65 KEV.
ORL MACKLIN+ - USNDC-3 148(1972), WORK IN PROGRESS FROM 3 TO 500 KEV.

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9 FLUORINE 19 NEUTRON N,2N

693004 14.0 MEV 10.0% 3 HUN J.CSIKAI KOS

A: INCIDENT ENERGY RESOLUTION 200 KEV.
O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION SYSTEMATICS.

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9 FLUORINE 19 NEUTRON NEUTRON EMISSION CROSS SECTION

691041 500. KEV 20.0 MEV 10.0% 1 USA R.J.HOWERTON LRL

Q: ANGULAR DISTRIBUTION OF NEUTRONS WANTED. ABSOLUTE CROSS SECTION AT A FEW ANGLES MAY SUFFICE.
M: NEW REQUEST.

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9 FLUORINE 19 NEUTRON N,ALPHA

691042 9.00 MEV 14.0 MEV 10.0% 1 USA R.J.HOWERTON LRL

Q: ABSOLUTE VALUES AT A FEW ENERGIES NEEDED.
M: NEW REQUEST.

-----STATUS-----

BIR CRUMPTON+ - NIM 92 533(1971), DATA 13 TO 15 MEV.

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11 SODIUM 23 NEUTRON TOTAL CROSS SECTION

691043 10.0 KEV 5.00 MEV 5.0% 1 USA C.E.CLIFFORD ORL

A: REQUIRE 1 PERCENT ACCURACY IN VALLEY.
Q: FAST REACTOR DEEP PENETRATION.
M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----

BNW FOSTER+ - PR/C 3 576(1971), DATA 2.5 TO 15 MEV.
RPI CLEMENT+ - RPI-328-218 7(1971), .7 TO 40 MEV.
COL RAHN+ - USNDC-1 59(1972), WORK IN PROGRESS.

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11 SODIUM 23 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

692032 2.20 MEV 10.0 MEV 2 GER F.WELLER KFK

Q: SEPARATION OF ELASTIC AND INELASTIC ANGULAR DEPENDENCES DESIRED.
MEASUREMENTS IN STEPS OF SEVERAL 100 KEV.
A: ACCURACY REQUIRED TO BETTER THAN 10. PERCENT. INCIDENT NEUTRON RESOLUTION 100 KEV. ANGULAR RESOLUTION 5 - 10 DEGREES.
O: BECAUSE OF RESONANCES IN TOTAL CROSS SECTION, FLUCTUATIONS IN ANGULAR DISTRIBUTION EXPECTED. THEREFORE, MORE EXPERIMENTAL DATA NEEDED.

-----STATUS-----

FEI POPOV+ - 71 KIEV (1971), DATA AT 4.4 MEV.
ALD COLES+ - AWRE/O-3/71, DATA AT 5.0 MEV.
PAD FASOLI+ - EANDC(E)-140 (1971), DATA 8 TO 9 MEV.
ORL PEREY+ - ORNL-4518 (1970), DATA 5.4 TO 8.5 MEV.
PAD FASOLI+ - NP/A 125 227(1969), DATA 1.5 TO 6.4 MEV.

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11 SODIUM 23 NEUTRON ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION

692035 4.00 MEV 15.0 MEV 10.0% 2 GER F.WELLER KFK

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11 SODIUM 23	NEUTRON		RESONANCE PARAMETERS			
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621008	2.95 KEV	10.0%	1	USA	R.AVERY P.B.HEMMIG	ANL AEC
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Q: NEUTRON AND CAPTURE WIDTH NEEDED.

714001	2.90 KEV	100. KEV	1	CCP	M.N.NIKOLAEV	FEI
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Q: NEUTRON AND CAPTURE WIDTHS WANTED.
A: NEUTRON WIDTH FOR 2.95 KEV LEVEL WANTED WITH 5 PERCENT ACCURACY.
ALL OTHER WIDTHS REQUIRED WITH 10 PERCENT ACCURACY.
Q: FOR FAST REACTOR CALCULATION.

-----STATUS-----STATUS

AUA CLAYTON - AUJ 23 823(1970), FITS TOTAL SIGMA NEAR 2.85 KEV WITH CAPTURE WIDTH OF .36 EV.
RPI YAMAMURO+ - NSE 41 445(1970), FINDS CAPTURE WIDTH IS .47 EV AT 2.85 KEV.
RPI HOCKENBURY+ - PR 178 1746(1969), FINDS CAPTURE WIDTH OF .45 EV AT 2.85 KEV.
GA FRIESENHAN+ - 68 WASHINGTON PAPER 5(1968), FINDS CAPTURE WIDTH OF .34 EV AT 2.85 KEV.
COL RAHN+ - USNDC-3 66(1972), WORK IN PROGRESS.
USA USNDC - CAPTURE WIDTH DISCREPANCY REMAINS.

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13 ALUMINUM 27	NEUTRON		DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION			
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693007	5.00 MEV	10.0%	2	SAF	G.P.DE BEER	PEL
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Q: FOR SHIELDING CALCULATIONS.

-----STATUS-----STATUS

KIL WOLLESEN - AKE 20 245(1972), DATA AT 4.2 MEV.
AE ALMEN+ - EANDC(OR)-115 (1972), DATA FROM 2 TO 4.5 MEV.
ORL KINNEY+ - ORNL-4516 (1970), DATA 4.2 TO 8.6 MEV.
KFK VOSS+ - EANDC(E)-157 (1973), WORK IN PROGRESS.

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13 ALUMINUM 27	NEUTRON		ENERGY DIFFERENTIAL CAPTURE CROSS SECTION			
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691052	25.3 MV	10.0%	1	USA	M.R.FLEISHMAN	SNP
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Q: GAMMA SPECTRUM WANTED.
Q: FOR SHIELDING CALCULATIONS.

-----STATUS-----STATUS

RCN STECHER-RASMUSSEN+ - NP/A 181 225(1972), THERMAL SPECTRUM.
MCM ISHAQ+ - CJP 50 2845(1972), THERMAL SPECTRUM
GA ORPHAN+ - GA-10248.

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13 ALUMINUM 27	NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION			
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691053	5.00 KEV	200. KEV	15.0%	2	USA	M.R.FLEISHMAN	SNP
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Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
A: ALTERNATE ACCURACY 5 MB.
ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA).
GAMMA-ENERGY RESOLUTION - 10 PERCENT.

691054	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
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Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
A: ALTERNATE ACCURACY 5 MB.
GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.

693006	5.00 MEV	10.0%	2	SAF	G.P.DE BEER	PEL
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Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
Q: FOR SHIELDING CALCULATIONS.

-----STATUS-----STATUS

ORL DICKENS - PR/C 5 100(1972), DATA FROM 5.3 TO 9 MEV.
CCP KRAVCOV+ - 72 KIEV (1972).
GA ORPHAN+ - GULF-RT-10743 (1971), DATA FROM .9 TO 16.7 MEV.

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13 ALUMINUM 27	NEUTRON		N, ALPHA			
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682007	8.00 MEV	12.0 MEV	4.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
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Q: FOR NEUTRON YIELD MONITOR.

742114			2.0%	1	EUR	NEUTRON DOSIMETRY GROUP	GEL
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Q: AVERAGE CROSS SECTION IN A U-235 FISSION SPECTRUM DESIRED.
Q: FOR NORMALIZATION OF AVERAGE CROSS SECTIONS FOR DOSIMETRY PURPOSES.
M: NEW REQUEST.

742123 6.40 MEV 11.9 MEV 5.0X 2 EUR NEUTRON DOSIMETRY GROUP GEL
 O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS.
 GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

14 SILICON NEUTRON CAPTURE CROSS SECTION

691058 25.3 MV 15.0 MEV 3 USA R.J.HOWERTON LRL
 Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF SI-31 IN NATURALLY OCCURRING ELEMENT.
 A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
 ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.
 M: NEW REQUEST.

15 PHOSPHORUS 31 NEUTRON N,P

692050 15.0 MEV 2 SWT J.BRUNNER WUR
 A: REQUIRED 5. PERCENT ACCURACY TO 6. MEV AND 10. PERCENT ABOVE.
 O: FAST FLUX MEASUREMENTS IN SHIELDS. DISAGREEMENT BETWEEN DIFFERENT MEASUREMENTS OF INSUFFICIENT ACCURACY.
 NO DATA BETWEEN 10 AND 14 MEV.

742124 2.20 MEV 7.00 MEV 5.0X 2 EUR NEUTRON DOSIMETRY GROUP GEL
 O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS.
 GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

16 SULFUR NEUTRON CAPTURE CROSS SECTION

691059 25.3 MV 15.0 MEV 1 USA R.J.HOWERTON LRL
 Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF S-35 IN NATURALLY OCCURRING ELEMENT.
 A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
 ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.

16 SULFUR 32 NEUTRON N,P

692053 15.0 MEV 2 SWT J.BRUNNER WUR
 A: REQUIRED 5. PERCENT ACCURACY TO 6. MEV AND 10. PERCENT ABOVE.
 O: STANDARD FOR FLUX MEASUREMENTS.

742125 2.50 MEV 7.50 MEV 5.0X 2 EUR NEUTRON DOSIMETRY GROUP GEL
 O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS.
 GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

STATUS-----STATUS

NEU FOROUGH1+ - HPA 45 439(1972), DATA AT 6 MEV.
 NRD RAGO+ - HP 14 595(1968), DATA FROM 2.2 TO 18 MEV.

17 CHLORINE NEUTRON N,P

692054 10.0 KEV 2.00 MEV 10.0X 3 UK J.SMITH WIN
 O: FOR FUSED SALT REACTORS.

17 CHLORINE 36 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

693008 3 BZL L.O.B.AGHINA IEN
 Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED.
 O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.

18 ARGON 40 NEUTRON CAPTURE CROSS SECTION

712006 10.0 MEV 2 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
 O: FOR REACTOR HAZARD CALCULATION.

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18 ARGON 40	NEUTRON			N,P		
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693009	14.0 MEV	10.0%	3	HUN	J.CSIKAI	KOS
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A: INCIDENT ENERGY RESOLUTION 200 KEV.
O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION SYSTEMATICS.

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19 POTASSIUM	NEUTRON			CAPTURE CROSS SECTION		
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691060	25.3 MV	15.0 MEV		1	USA	R.J.HOWERTON	LRL
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Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF K-42 IN NATURALLY OCCURRING ELEMENT.
A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.
M: NEW REQUEST.

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19 POTASSIUM 41	NEUTRON			N,P		
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693010	14.0 MEV	10.0%	3	HUN	J.CSIKAI	KOS
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A: INCIDENT ENERGY RESOLUTION 200 KEV.
O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION SYSTEMATICS.

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20 CALCIUM	NEUTRON			CAPTURE CROSS SECTION		
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691064	25.3 MV	15.0 MEV		1	USA	R.J.HOWERTON	LRL
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Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF CA-45 IN NATURALLY OCCURRING ELEMENT.
A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.
M: NEW REQUEST.

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21 SCANDIUM 45	NEUTRON			CAPTURE CROSS SECTION		
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691065	1.00 KEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED
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O: FOR USE AS A FLUENCE MONITOR.

692062	1.00 KEV	3.00 MEV	10.0%	2	FR	A.MICHAUDON	BRC
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Q: PRODUCTION OF SC-46 (84 DAY).
O: DOSIMETRY.
M: SUBSTANTIAL MODIFICATIONS.

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21 SCANDIUM 45	NEUTRON			N,2N		
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692061	15.0 MEV	5.0%	2	FR	A.MICHAUDON	BRC
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Q: PRODUCTION OF SC-44 (2.44 DAY AND 3.9 HOUR).
O: DOSIMETRY.
M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----STATUS

ALD MATHER+ - AWRE/O-72/72, VALUE AT 12.3 MEV.

LRL NETHAWAY - NP/A 190 635(1972), AT 14 MEV.

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21 SCANDIUM 45	NEUTRON			N,ALPHA		
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692064	15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC
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Q: PRODUCTION OF K-42 (12.4 HOUR).
O: DOSIMETRY.

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22 TITANIUM	NEUTRON			ABSORPTION CROSS SECTION		
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712007	500. EV	15.0 MEV	25.0%	3	FR	J.Y.BARRE	CAD
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O: FOR FAST REACTOR CALCULATIONS.
M: SUBSTANTIAL MODIFICATIONS.

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22 TITANIUM	NEUTRON			CAPTURE CROSS SECTION		
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692065	100. EV	100. KEV	20.0%	1	UK	C.G.CAMPBELL	WIN
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O: FOR FAST REACTORS.

702005	500. EV	1.00 MEV	25.0%	3	FR	J.Y.BARRE	CAD
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O: FOR FAST REACTOR CALCULATIONS.
M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----STATUS

ORL ALLEN+ - NCSAC-33 171(1970), DATA 30 KEV TO 3 MEV.

HAR COATES - MEASUREMENT PLANNED.

22 TITANIUM		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION				
691066	1.00 KEV	100. KEV	15.0%	2	USA	M.R.FLEISHMAN	SNP	
								Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA ENERGY RESOLUTION - 10 PERCENT.
691067	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP	
								Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
691068	10.0 KEV	16.0 MEV	20.0%	1	USA	C.E.CLIFFORD	ORL	
								Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED. O: FOR USE IN REACTOR SHIELDING CALCULATIONS.

STATUS-----STATUS
 ORL DICKENS+ - NCSAC-42 195(1971), WORK IN PROGRESS.

22 TITANIUM		NEUTRON		N,P				
712008		15.0 MEV	30.0%	3	FR	J.Y.BARRE	CAD	
								O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
742118	3.40 MEV	9.10 MEV	5.0%	1	EUR	NEUTRON DOSIMETRY GROUP		GEL
								O: ROUTINE FAST NEUTRON FLUENCE MONITOR. M: NEW REQUEST.

22 TITANIUM		NEUTRON		N,ALPHA				
712009		15.0 MEV	30.0%	3	FR	J.Y.BARRE	CAD	
								O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.

22 TITANIUM 46		NEUTRON		N,P				
691069	1.00 MEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED	
								Q: REQUIRED IS ACTIVATION. DATA REQUIRED AT 500 KEV INTERVALS. A: ENERGY RESOLUTION 100 KEV. O: FOR USE AS A FLUENCE MONITOR.
692067		15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC	
								Q: PRODUCTION OF SC-46 (85 DAY). O: ACTIVATION DETECTOR. M: SUBSTANTIAL MODIFICATIONS.
742126	3.40 MEV	9.10 MEV	5.0%	2	EUR	NEUTRON DOSIMETRY GROUP		GEL
								O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS. GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS. M: NEW REQUEST.

STATUS-----STATUS
 ANL MEADOWS+ - USNDC-3 16(1972), DATA TO 6. MEV.
 AUB GHORAI+ - JNE 25 319(1971), DATA TO 6.1 MEV.

22 TITANIUM 47		NEUTRON		N,P				
691071	1.00 MEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED	
								Q: REQUIRED IS ACTIVATION. DATA REQUESTED IN 1 MEV INTERVALS. A: ENERGY RESOLUTION 100 KEV. O: FOR USE AS A FLUENCE MONITOR.
692070		15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC	
								Q: PRODUCTION OF SC-47 (3.43 DAY). O: ACTIVATION DETECTOR. M: SUBSTANTIAL MODIFICATIONS.
742127	2.10 MEV	7.00 MEV	5.0%	2	EUR	NEUTRON DOSIMETRY GROUP		GEL
								O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS. GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS. M: NEW REQUEST.

STATUS-----STATUS
 ANL MEADOWS+ - USNDC-3 16(1972), DATA TO 6. MEV.
 AUB GHORAI+ - JNE 25 319(1971), DATA TO 6.1 MEV.

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22 TITANIUM 48          NEUTRON          N,P
=====
691073  1.00 MEV    18.0 MEV    10.0%    2   USA   W.N.MC ELROY    HED
      Q: REQUIRED IS ACTIVATION.
      DATA REQUIRED AT 500 KEV INTERVALS.
      A: ENERGY RESOLUTION 100 KEV.
      O: FOR USE AS FLUENCE MONITOR.

691074  3.20 MEV    10.0 MEV    20.0%    2   USA   R.EHRLICH      KAP
      Q: REQUIRED IS ACTIVATION.

692072          15.0 MEV    10.0%    2   FR    A.MICHAUDON    BRC
      Q: PRODUCTION OF SC-48 (1.83 DAY).
      O: ACTIVATION DETECTOR.
      M: SUBSTANTIAL MODIFICATIONS.

742128  6.60 MEV    12.8 MEV    5.0%    2   EUR   NEUTRON DOSIMETRY GROUP          GEL
      O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING
      METHODS.
      GREATER THAN 10 PERCENT DISCREPANCY BETWEEN
      INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
      M: NEW REQUEST.

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-----STATUS-----STATUS
ANL  MEADOWS+ - USNDC-3 16(1972), DATA TO 6. MEV.
AUB  GHORAI+ - JNE 25 319(1971), DATA TO 6.1 MEV.

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23 VANADIUM          NEUTRON          DIFFERENTIAL ELASTIC CROSS SECTION
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621009  1.40 MEV    10.0 MEV    10.0%    3   USA   R.AVERY        ANL
      P.B.HEMMIG    AEC
      A: ENERGY RESOLUTION 500 KEV.
      ANGULAR RESOLUTION 10 DEGREES.

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-----STATUS-----STATUS
ORL  PEREY+ - ORNL-4551 (1970), DATA 4.2 TO 8.6 MEV.
AE   HOLMQVIST+ - NP/A 146 321(1970), DATA 2.5 TO 8.0 MEV.
ANL  SMITH+ - PR/C 1 581(1970), DATA TO 1.5 MEV.
ANL  SMITH+ - USNDC-7 9(1973), WORK IN PROGRESS TO 3.8 MEV.

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23 VANADIUM          NEUTRON          ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
=====
621011  1.50 MEV    10.0 MEV    15.0%    3   USA   R.AVERY        ANL
      T.SNYDER      GEC
      P.B.HEMMIG    AEC
      Q: TOTAL INTEGRAL OVER 4 PI REQUIRED.
      SPECTRA AT SEVERAL ANGLES IF SIGNIFICANTLY
      ANISOTROPIC.
      M: SUBSTANTIAL MODIFICATIONS.

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-----STATUS-----STATUS
AE   ALMEN+ - 70 HELSINKI 2 349(1970), 15 LEVELS FROM 2 TO 4.5 MEV
ANL  SMITH+ - USNDC-7 9(1973), WORK IN PROGRESS TO 4 MEV.

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23 VANADIUM          NEUTRON          ABSORPTION CROSS SECTION
=====
621015  1.00 KEV    150. KEV    10.0%    3   USA   R.AVERY        ANL
      T.SNYDER      GEC
      P.B.HEMMIG    AEC
      A: ENERGY RESOLUTION 10 PERCENT.
      O: TO RESOLVE DISCREPANCIES IN EXISTING DATA.

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712010  500. EV    15.0 MEV    25.0%    3   FR    J.Y.BARRE      CAD
      O: FOR FAST REACTOR CALCULATIONS.
      M: SUBSTANTIAL MODIFICATIONS.

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-----STATUS-----STATUS
RPI  STEIGLITZ - NP/A 163 592(1971), DATA 100 EV TO 200 KEV.
ORL  MACKLIN+ - USNDC-3 148(1972), DATA 3 TO 500 KEV IN PROGRESS.
HAR  MOXEN+ - AERE-PR/NP17 (1970), EXPERIMENT IN KEV REGION IN PROGRESS.
HAR  COATES - MEASUREMENT PLANNED.

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23 VANADIUM          NEUTRON          CAPTURE CROSS SECTION
=====
692073  100. EV    100. KEV    10.0%    1   UK    C.G.CAMPBELL    WIN
      O: FOR FAST REACTORS.

702006  500. EV    1.00 MEV    25.0%    3   FR    J.Y.BARRE      CAD
      O: FOR FAST REACTOR CALCULATIONS.
      M: SUBSTANTIAL MODIFICATIONS.

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STATUS-----STATUS

RPI STEIGLITZ - NP/A 163 592(1971), DATA 100 EV TO 200 KEV.
 ORL MACKLIN+ - USNDC-3 148(1972), DATA 3 TO 500 KEV IN PROGRESS.
 HAR MOXEN+ - AERE-PR/NP17 (1970), EXPERIMENT IN KEV REGION IN PROGRESS.

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23 VANADIUM NEUTRON N,P
 =====
 712011 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

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23 VANADIUM NEUTRON N,ALPHA
 =====
 712012 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

=====

23 VANADIUM 51 NEUTRON N,ALPHA
 =====
 692075 15.0 MEV 5.0% 2 FR A.MICHAUDON BRC
 O: PRODUCTION OF SC-48 (1.83 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

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24 CHROMIUM NEUTRON TOTAL CROSS SECTION
 =====
 721035 1.00 KEV 20.0 MEV 3.0% 2 USA P.B.HEMMIG AEC
 A: ONE PERCENT ACCURACY IN DEEP MINIMA.
 ENERGY RESOLUTION SUFFICIENT TO RESOLVE MAJOR
 STRUCTURE.
 M: SUBSTANTIAL MODIFICATIONS.

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24 CHROMIUM NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 =====
 691076 2.00 MEV 14.0 MEV 9.0% 2 USA R.EHRLICH KAP
 A: ENERGY RESOLUTION 100 KEV.
 M: SUBSTANTIAL MODIFICATIONS.

692076 1.50 MEV 3.00 MEV 15.0% 2 GER B.GOEL KFK
 A: ABOUT 100 KEV ENERGY RESOLUTION NEEDED.
 ABOUT 10 DEGREE ANGULAR RESOLUTION REQUIRED.

692077 2.00 MEV 16.0 MEV 20.0% 2 FR C.DEVILLERS SAC
 A: ACCURACY 10 PERCENT PREFERRED.
 ENERGY RESOLUTION 0.5 MEV.
 ANGULAR RESOLUTION 5 TO 10 DEGREES.
 O: EVALUATION MAY BE SUFFICIENT.
 M: SUBSTANTIAL MODIFICATIONS.

692078 8.00 MEV 16.0 MEV 20.0% 2 GER B.GOEL KFK
 A: ENERGY RESOLUTION .5 MEV.
 ANGULAR RESOLUTION 5 TO 10 DEGREES.

STATUS-----STATUS

IJI KORZH+ - 72 KIEV, DATA POINT AT 15 MEV.
 IFU PASECHNIK+ - YF 11 958(1970), DATA TO 4.1 MEV.
 AE HOLMQVIST+ - AE-366 (1969), DATA 2.5 TO 8 MEV.
 AE MALMSKOG - EANDC(OR)-115 (1972), WORK IN PROGRESS.
 ANL SMITH - WORK IN PROGRESS.

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24 CHROMIUM NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
 =====
 661012 500. KEV 10.0 MEV 10.0% 2 USA T.SNYDER GEC
 P.B.HEMMIG AEC
 O: TOTAL INTEGRAL OVER 4 PI REQUIRED.
 SPECTRA AT SEVERAL ANGLES IF SIGNIFICANTLY
 ANISOTROPIC.

732040 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

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24 CHROMIUM NEUTRON ABSORPTION CROSS SECTION
 =====
 712014 500. EV 15.0 MEV 5.0% 1 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

24 CHROMIUM		NEUTRON		CAPTURE CROSS SECTION			
692082	100. EV	100. KEV	20.0%	1	UK	C.G.CAMPBELL	WIN
						O: FOR FAST REACTORS.	
692083	1.00 KEV	200. KEV	10.0%	2	GER	B.GOEL	KFK
						Q: RESONANCE PARAMETERS ALSO REQUIRED PARTICULARY FOR CR-53, ADDITIONAL CAPTURE MEASUREMENTS AND CAPTURE WIDTH DETERMINATIONS FOR INDIVIDUAL RESONANCES WANTED.	
						O: CAPTURE WIDTHS NEEDED BECAUSE OF LARGE DISCREPANCIES BETWEEN DIRECTLY MEASURED INFINITE CAPTURE RESONANCE INTEGRAL AND THAT CALCULATED FROM DIFFERENTIAL CAPTURE MEASUREMENTS.	
						M: SUBSTANTIAL MODIFICATIONS.	
692084	500. EV	1.00 MEV	5.0%	1	FR	J.Y.EARRE	CAD
						Q: NEED OF RESONANCE PARAMETERS FOR THE MAIN ISOTOPES.	
						O: FAST REACTOR CALCULATIONS. EVALUATION AND EXPERIMENT NEEDED.	
						M: SUBSTANTIAL MODIFICATIONS.	
692085	1.00 KEV	600. KEV	25.0%	2	FR	C.DEVILLERS	SAC
						O: FOR HEATING AND CIRCUIT ACTIVATION CALCULATION. EVALUATION MAY BE SUFFICIENT.	
712015		10.0 MEV		2	JAP	JAPAN NUCLEAR DATA COMMITTEE JAE	
						A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.	
						O: FOR FUEL CASK DESIGN AND CONTROL ROD DESIGN.	
721036	1.00 KEV	1.00 MEV	15.0%	2	USA	T.SNYDER P.B.HEMMIG C.E.CLIFFORD	GEC AEC ORL
						A: ENERGY RESOLUTION 20 PERCENT.	

STATUS-----STATUS

RPI STIEGLITZ+ - NP/A 163 592(1971), HIGH RESOLUTION DATA FROM SEPARATED ISOTOPES UP TO 200 KEV.

KFK BEER+ - EANDC(E)-157 (1973), MEASUREMENTS IN PROGRESS ON SEPARATED ISOTOPES.

CAD LE RIGOLEUR - EANDC(E)-150 (1972), MEASUREMENT IN PROGRESS FROM 10 TO 200 KEV.

HAR COATES - MEASUREMENT PLANNED.

24 CHROMIUM		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION			
691078	500. EV	20.0 KEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
						Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.	
						A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA RESOLUTION REQUIRED - 10 PERCENT.	
691079	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
						Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.	
						A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.	
691080		10.0 MEV	10.0%	2	USA	R.T.BAYARD P.B.HEMMIG	BET AEC
						Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.	
						O: FOR SHIELDING.	
692080	1.00 KEV	15.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC
						Q: GAMMA SPECTRA REQUIRED.	
						A: ENERGY RESOLUTION OF 250 KEV FOR GAMMA RAYS LESS THAN 1 MEV AND 500 KEV FOR ENERGIES GREATER THAN 1 MEV.	
						O: EVALUATION MAY BE SUFFICIENT.	

STATUS-----STATUS

CCP DEGTJAREV+ - IZV 35 2341(1971), DATA 1 TO 3.4 MEV.

24 CHROMIUM		NEUTRON		NEUTRON EMISSION CROSS SECTION			
692079	2.00 MEV	14.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC
						Q: SECONDARY ENERGY-ANGLE DISTRIBUTION REQUIRED.	
						A: ENERGY RESOLUTION 10 PERCENT.	
						O: FOR FAST REACTOR SHIELDING CALCULATIONS. EVALUATION MAY BE SUFFICIENT.	

24 CHROMIUM		NEUTRON		N,P			
692086			30.0%	3	UK	C.G.CAMPBELL	WIN
						Q: FISSION SPECTRUM AVERAGE WANTED.	
						O: FOR FAST REACTORS.	

712016 15.0 MEV 10.0% 1 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS
 UK UKNDC - AVAILABLE ESTIMATES OF FISSION SPECTRUM AVERAGE DIFFER BY A FACTOR OF 5, MAINLY DUE TO
 UNCERTAINTY IN CR-50(N,P).

682008 3.00 MEV 15.0 MEV 20.0% 2 FR C.DEVILLERS SAC
 O: EVALUATION MAY BE SUFFICIENT.
 M: SUBSTANTIAL MODIFICATIONS.

732041 3.00 MEV 15.0 MEV 10.0% 1 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

STATUS-----STATUS
 AE WEITMAN+ - ANS 13 558(1970), FE PRODUCTION IN A FISSION SPECTRUM.
 ALD FREEMAN+ - JNE 23 713(1969), FISSION SPECTRUM AVERAGE.

691077 0.50 EV 15.0% 1 USA R.EHRLICH KAP
 O: REMOVE OR CORRECT FOR (N,P) CONTRIBUTION.

STATUS-----STATUS
 RPI STIEGLITZ+ - NP/A 163 592(1971), 1.6 BARNS FROM RESONANCE PARAMETERS.

692088 15.0 MEV 2 GER B.GOEL KFK
 A: ACCURACY 10-20 PERCENT DESIRED.
 O: MAIN ABSORPTION PROCESS IN MEV RANGE.
 M: SUBSTANTIAL MODIFICATIONS.

691081 1.00 KEV 600. KEV 9.0% 2 USA R.EHRLICH KAP
 Q: RADIATION WIDTH NEEDED.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS
 KFK MUELLER+ - NP/A 164 97(1971), ANALYZES 30 RESONANCES BETWEEN 17 AND 250 KEV.
 RPI STIEGLITZ+ - NP/A 163 592(1971), DATA FOR 9 S-WAVE AND 16 P-WAVE RESONANCES.
 KFK BEER+ - 72 BUDAPEST 218(1972), EXPERIMENT IN PROGRESS.

692092 25.3 MV 5.0% 2 BLG N.MAENE MCL
 O: FOR BURN-UP CALCULATION OF FE-54(N,P) MN-54
 REACTION PRODUCT.

712017 500. EV 15.0 MEV 20.0% 2 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

661014 25.3 MV 1.00 KEV 10.0% 2 USA R.J.HOWERTON LRL
 A: ENERGY DEPENDENCE SHOULD BE WELL DEFINED.
 M: NEW REQUEST.

682009 25.3 MV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY REQUIRED TO BETTER THAN 0.3 PERCENT.
 O: PRECISE STANDARDIZATION OF EMISSION RATE OF
 NEUTRON SOURCE.

682010 100. EV 100. KEV 20.0% 1 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.

692090 500. EV 1.00 MEV 20.0% 2 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

712018 10.0 MEV 2 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
 O: FOR FUEL CASK DESIGN AND CONTROL ROD DESIGN.

STATUS-----STATUS

ORL MACKLIN+ - USNC-3 148(1972), WORK IN PROGRESS 3 TO 500 KEV.
 HAR COATES - MEASUREMENT PLANNED.

25 MANGANESE 55 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

691082	300. EV	120. KEV	15.0%	1	USA	M.R.FLEISHMAN	SNP	
								Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA-RESOLUTION REQUIRED - 10 PERCENT.
691083	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP	
								Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
693012				3	BZL	L.O.B.AGHINA	IEN	
								Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.

25 MANGANESE 55 NEUTRON N,2N

742129		13.0 MEV	5.0%	2	EUR	NEUTRON DOSIMETRY GROUP		GEL
								O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS. GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS. M: NEW REQUEST.

25 MANGANESE 55 NEUTRON N,P

712019		15.0 MEV	25.0%	2	FR	J.Y.BARRE	CAD	
								O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.

25 MANGANESE 55 NEUTRON N,ALPHA

712020		15.0 MEV	25.0%	2	FR	J.Y.BARRE	CAD	
								O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.

26 IRON NEUTRON TOTAL CROSS SECTION

712021	500. EV	15.0 MEV	1.0%	2	FR	J.Y.BARRE	CAD	
								O: FOR FAST REACTOR CALCULATIONS.
714003	10.0 KEV	100. KEV	5.0%	1	CCP	M.N.NIKOLAEV	FEI	
								Q: CAREFUL MEASUREMENTS OF INTERFERENCE MINIMA NEEDED. O: FOR ACCURACY OF 1.6 PERCENT IN BREEDING RATIO OF FAST REACTORS.
721038	1.00 MV	1.00 MEV	5.0%	1	USA	R.EHRLICH	KAP	
								A: ACCURATE VALUES IN MINIMA REQUIRED. O: SHAPE OF RESOLUTION FUNCTION IMPORTANT SO MEANINGFUL BROADENING CAN BE APPLIED TO THEORETICAL VALUES TO COMPARE WITH EXPERIMENT. SAMPLE COMPOSITION SHOULD BE WELL KNOWN ENOUGH TO PERMIT ISOTOPE SYNTHESIS OF THEORETICAL CROSS SECTION. FOR SHIELDING

STATUS-----STATUS

RPI ALFIERI+ - NSE 51 25(1973), DATA AT 24 KEV.
 COL RAHN+ - NSE 47 372(1972), DATA NEAR RESONANCE MINIMA.
 ORL HARVEY+ - ORNL-474352 (1971), PRECISE DATA NEAR RESONANCE MINIMA.

26 IRON NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

691084	7.00 MEV	14.0 MEV	9.0%	1	USA	R.T.EHRLICH	KAP	
								A: ENERGY RESOLUTION 100 KEV. ANGULAR RESOLUTION 5 DEGREES.
691085	500. KEV	3.00 MEV	5.0%	1	USA	C.E.CLIFFORD	ORL	
								Q: REQUIRED AT SEVERAL PEAKS AND VALLEYS. A: ENERGY RESOLUTION 1 PERCENT. O: REQUIRED FOR SHIELDING.

26 IRON NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION (CONTINUED)

IRON	NEUTRON	DIFFERENTIAL ELASTIC CROSS SECTION	(CONTINUED)
691086	1.00 KEV 10.0 MEV 10.0%	1 USA R.AVERY P.B.HEMMIG ANL AEC	A: RESOLUTION AT LEAST TO RESOLVE INTERMEDIATE STRUCTURE.
692094	8.00 MEV 15.0 MEV 10.0%	2 GER E.GOEL KFK	Q: MEASUREMENTS DESIRED IN ENERGY STEPS OF 1 MEV, AND ANGULAR STEPS OF 10 DEGREES. O: FOR SHIELDING CALCULATIONS.
742029	1.00 KEV 15.0 MEV 5.0%	2 FR A.MICHAUDON BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

KGU LESHCHENKO+ YF 15 10(1972), DATA AT 14. MEV.
 IJI KORZH+ - YFI-12 84(1972), DATA AT 15 MEV.
 TNC TUCKER+ - NCSAC-42 181(1971), DATA 9 TO 11 MEV.
 ORL PEREY+ - ORNL-4515 (1970), DATA 4.2 TO 8.6 MEV.
 AE HOLMQVIST+ - AE-366 (1969), DATA 3. TO 8. MEV.
 ANL SMITH+ - USNDC-7 9(1973), IN PROGRESS TO 4 MEV.
 AE MALMSKOG - EANDC(OR)-115 (1972), IN PROGRESS TO 1.4 MEV.

26 IRON NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

661016	850. KEV 2.00 MEV 5.0%	1 USA T.SNYDER P.B.HEMMIG GEC AEC	Q: TOTAL INTEGRAL OVER 4 PI WANTED. SPECTRA AT SEVERAL ANGLES IF SIGNIFICANTLY ANISOTROPIC. A: RESOLUTION 20 KEV FOR INCIDENT AND SCATTERED NEUTRONS.
661018	2.00 MEV 10.0 MEV 10.0%	2 USA T.SNYDER P.B.HEMMIG GEC AEC	Q: TOTAL INTEGRAL OVER 4 PI WANTED. SPECTRA AT SEVERAL ANGLES IF SIGNIFICANTLY ANISOTROPIC. A: RESOLUTION 20 KEV FOR INCIDENT AND SCATTERED NEUTRONS.
702007	14.0 MEV 5.0%	2 FR J.Y.BARRE CAD	O: FOR FAST REACTOR CALCULATIONS.
712022	1.50 MEV 15.0 MEV 10.0%	2 SWD H.HAEGGBLOM AE	O: FOR FAST REACTOR CALCULATIONS.
714004	1.40 MEV 15.0 MEV 5.0%	1 CCP M.N.NIKOLAEV FEI	Q: IN CONTINUUM REGION ENERGY DEPENDENCE OF NUCLEAR TEMPERATURE WANTED. A: CROSS SECTION FOR INELASTIC REMOVAL BLOW FISSION THRESHOLD OF U-238 WANTED WITH 5.0 PERCENT ACCURACY. LEVEL EXCITATION CROSS SECTION DESIRED WITH 10 PERCENT ACCURACY. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.

STATUS-----STATUS

ORL KINNEY+ - ORNL-4515 (1970), DATA 4 TO 8.5 MEV.
 AE ALMEN+ - 70 HELSINKI 2 349(1970), DATA FOR 12 LEVELS FROM 2. TO 3.5 MEV.
 CSE LINDOW+ - NCSAC-31 (1970), DATA 5 TO 5.5 MEV.
 ANL SMITH+ - USNDC-7 9(1973), MEASUREMENTS TO 4 MEV IN PROGRESS.

26 IRON NEUTRON DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION

692098	10.0 MEV	3 UK C.G.CAMPBELL J.BUTLER WIN WIN	A: ACCURACY REQUIRED IS 5 PERCENT TO 4 MEV AND 5 TO 10 PERCENT ABOVE O: FOR FAST REACTORS AND SHIELDING.
742030	15.0 MEV 5.0%	2 FR A.MICHAUDON BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

ORL KINNEY+ - ORNL-4515 (1970), DATA 4 TO 8.5 MEV.
 AE ALMEN+ - 70 HELSINKI 2 349(1970), DATA FOR 12 LEVELS FROM 2. TO 3.5 MEV.
 CSE LINDOW+ - NCSAC-31 (1970), DATA 5 TO 5.5 MEV.
 ANL SMITH+ - USNDC-7 9(1973), MEASUREMENTS TO 4 MEV IN PROGRESS.

26 IRON		NEUTRON		ABSORPTION CROSS SECTION				
691090	1.00 KEV	1.50 MEV		1	USA	R.AVERY T.SNYDER P.B.HEMMIG	ANL GEC AEC	A: ACCURACY 5 PERCENT BELOW 175 KEV, 20 PERCENT ABOVE. RESOLUTION 20 PERCENT.
712023	500. EV	15.0 MEV	5.0%	1	FR	J.Y.EARRE	CAD	Q: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
26 IRON		NEUTRON		CAPTURE CROSS SECTION				
691103	25.3 MV	15.0 MEV		2	USA	R.J.HOWERTON	LRL	Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF FE-59 IN NATURALLY OCCURRING ELEMENT. A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB. ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.
692101	100. EV	1.00 MEV		1	UK	C.G.CAMPBELL	WIN	A: ACCURACY REQUIRED 10 PERCENT TO 100 KEV, 20. PERCENT ABOVE. O: FOR FAST REACTORS.
692102	1.00 KEV	200. KEV	10.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE	O: FOR FAST REACTORS. DISCREPANCIES EXIST AMONG EXPERIMENTAL DATA.
692103	1.00 KEV	100. KEV	10.0%	2	GER	B.GOEL	KFK	O: EXISTING DATA DISAGREE UP TO 200 PERCENT. STRONG DISAGREEMENT BETWEEN 10 AND 100 KEV. M: SUBSTANTIAL MODIFICATIONS.
692104	500. EV	1.00 MEV	5.0%	1	FR	J.Y.EARRE	CAD	Q: NEED OF RESONANCE PARAMETERS FOR THE MAIN ISOTOPES. O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
712024	1.00 EV	1.00 MEV	10.0%	2	SWD	H.HAEGGBLOM	AE	O: FOR FAST REACTOR CALCULATIONS.
714005	500. EV	500. KEV	10.0%	1	CCP	M.N.NIKOLAEV	FEI	Q: ALL MEASUREMENTS WANTED RELATIVE TO FISSION CROSS SECTION OF U-235. SELFSHIELDING OF CAPTURE CROSS SECTION MUST BE KNOWN. FOR THIS RESONANCE PARAMETERS INCLUDING CAPTURE WIDTHS OF ALL STRONG S WAVE RESONANCES MUST BE DETERMINED. CONTRIBUTION OF MAJORITY OF P WAVE AND NARROW S WAVE RESONANCES TO AVERAGE CROSS SECTION IS SUFFICIENT. O: FOR ACCURACY OF 1.6 PERCENT IN BREEDING RATIO OF FAST REACTORS.
721039	1.00 MV	1.00 MEV	10.0%	2	USA	R.EHRLICH	KAP	Q: VALUES NEEDED IN MINIMA. O: SHAPE OF RESOLUTION FUNCTION IMPORTANT SO MEANINGFUL BROADENING CAN BE APPLIED TO THEORETICAL VALUES TO COMPARE WITH EXPERIMENT. SAMPLE COMPOSITION SHOULD BE KNOWN WELL ENOUGH TO PERMIT ISOTOPE SYNTHESIS OF THEORETICAL CROSS SECTION. FOR SHIELDING CALCULATIONS.
721043	25.3 MV	15.0 MEV		2	USA	R.J.HOWERTON	LRL	Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF FE-55 IN NATURALLY OCCURRING ELEMENT. A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB. ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB. M: NEW REQUEST.
742032	1.00 KEV	3.00 MEV	10.0%	2	FR	A.MICHAUDON	BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

HAR MOXON - EVALUATION INDICATES 20 PERCENT UNCERTAINTY BELOW 100 KEV.

CAD LE RIGOLEUR - EANDC(E)-150 (1972), MEASUREMENTS IN PROGRESS 10 TO 200 KEV.

HAR COATES - MEASUREMENT PLANNED.

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26 IRON	NEUTRON		TOTAL PHOTGN PRODUCTION CROSS SECTION		
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<u>661022</u>	25.3 MV	10.0 MEV		1	USA	P.B.HEMMIG	AEC	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT. O: FOR USE IN SHIELDING CALCULATIONS.
<u>691093</u>	1.00 KEV	650. KEV	15.0%	2	USA	M.R.FLEISHMAN	SNP	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA RESOLUTION REQUIRED - 10 PERCENT.
<u>691094</u>	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. A: ACCURACY COMMENT OR 5 MB GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
<u>692096</u>	1.00 KEV	15.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC	Q: GAMMA SPECTRA REQUIRED. A: ENERGY RESOLUTION OF 250 KEV FOR GAMMA RAYS LESS THAN 1 MEV AND 500 KEV FOR ENERGIES GREATER THAN 1 MEV. O: FOR SHIELDING CALCULATIONS. EVALUATION MAY BE SUFFICIENT.

-----STATUS-----STATUS

ORL DICKENS - PR/C 5 100(1972), DATA FROM 5.3 TO 9 MEV.
CCP KRAVCOV+ - 72 KIEV (1972).
GA ORPHAN+ - GULF-RT-10743 (1971), DATA FROM .9 TO 16.7 MEV.
KFK VOSS+ - 71 KNOXVILLE 218(1971), DATA .8 TO 13 MEV.
IRT HARRIS+ - WORK IN PROGRESS 4 TO 15 MEV AT 125 DEGREES.

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26 IRON	NEUTRON		N,2N		
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<u>691101</u>		15.0 MEV		2	USA	R.J.HOWERTON	LRL	Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF FE-55 IN NATURALLY OCCURRING ELEMENT. A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB. ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB. M: NEW REQUEST.
<u>742031</u>		15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

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26 IRON	NEUTRON		NEUTRON EMISSION CROSS SECTION		
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<u>701008</u>	5.00 MEV	15.0 MEV	20.0%	1	USA	R.J.HOWERTON	LRL	Q: ENERGY DISTRIBUTION OF NEUTRONS WANTED FOR SECONDARY ENERGIES GREATER THAN 200 KEV. M: NEW REQUEST.
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26 IRON	NEUTRON		N,P		
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<u>712025</u>		15.0 MEV	10.0%	2	SWD	H.HAEGGBLOM	AE	O: FOR FAST REACTOR CALCULATIONS.
<u>712026</u>		15.0 MEV	10.0%	1	FR	J.Y.BARRE	CAD	O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.

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26 IRON	NEUTRON		N,ALPHA		
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<u>692105</u>	25.3 MV	15.0 MEV	20.0%	2	GER	E.GOEL	KFK	O: FOR THE THERMAL VALUE ONLY AN UPPER-LIMIT OF 0.01 MB IS AVAILABLE. M: SUBSTANTIAL MODIFICATIONS.
<u>692107</u>		15.0 MEV	20.0%	2	FR	C.DEVILLERS	SAC	O: EVALUATION MAY BE SUFFICIENT. M: SUBSTANTIAL MODIFICATIONS.
<u>732042</u>		15.0 MEV	10.0%	1	FR	J.Y.BARRE	CAD	O: FOR FAST REACTOR CALCULATIONS. M: NEW REQUEST.

STATUS-----STATUS

AE WEITMAN+ - ANS 13 558(1970), HE PRODUCTION IN A FISSION SPECTRUM.
 ALD FREEMAN+ - JNE 23 713(1969), FISSION SPECTRUM AVERAGE.

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 26 IRON NEUTRON RESONANCE PARAMETERS
 =====

721041 1.00 MEV 10.0% 2 USA R.EHRLICH KAP
 Q: NEUTRON AND CAPTURE WIDTHS NEEDED.

721042 1.00 MEV 3 USA R.EHRLICH KAP
 Q: SPIN AND PARITY OF RESONANCES REQUIRED.

=====
 26 IRON NEUTRON CAPTURE RESONANCE INTEGRAL
 =====

691098 0.50 EV 15.0% 1 USA R.EHRLICH KAP
 O: REMOVE OR CORRECT FOR (N,P) CONTRIBUTION.

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 26 IRON 54 NEUTRON CAPTURE CROSS SECTION
 =====

742033 1.00 KEV 3.00 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: ACTIVATION DETECTOR.
 M: NEW REQUEST.

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 26 IRON 54 NEUTRON N,P
 =====

691099 1.00 MEV 18.0 MEV 10.0% 2 USA W.N.MC ELROY HED
 Q: REQUIRED IS ACTIVATION.
 ENERGY STEPS OF 500 KEV.
 A: ENERGY RESOLUTION 250 KEV.
 O: FOR USE AS A FLUENCE MONITOR.

721044 1.00 MEV 18.0 MEV 15.0% 3 USA R.T.BAYARD BET
 Q: REQUIRED IS ACTIVATION.
 A: ENERGY RESOLUTION 250 KEV.

742119 2.30 MEV 7.80 MEV 5.0% 1 EUR NEUTRON DOSIMETRY GEL
 O: ROUTINE FAST NEUTRON FLUENCE MONITOR.
 M: NEW REQUEST.

STATUS-----STATUS

ANL MEADOWS+ - USNDC-3 16(1972), MEASUREMENT IN PROGRESS 1.5 TO 5.8 MEV.
 GEL PAULSEN+ - EANDC(E)-150 (1972), MEASUREMENT IN PROGRESS 1.5 TO 6 AND 12 TO 20 MEV.

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 26 IRON 56 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
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693014 3 BZL L.O.B.AGHINA IEN
 Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED.
 O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.

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 26 IRON 56 NEUTRON N,2N
 =====

742034 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: ACTIVATION DETECTOR.
 M: NEW REQUEST.

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 26 IRON 56 NEUTRON N,P
 =====

682012 8.00 MEV 12.0 MEV 4.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR NEUTRON YIELD MONITOR.
 DATA AVAILABLE 5 PERCENT TO 7 PERCENT.

692111 15.0 MEV 5.0% 2 FR A.MICHAUDON BRC
 Q: PRODUCTION OF MN-56 (2.58 HOUR).
 O: ACTIVATION DETECTOR.

STATUS-----STATUS

GEL EURATOM NEUTRON DOSIMETRY GROUP, CURRENT ACCURACY IS 8 PERCENT.

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 26 IRON 56 NEUTRON N,ALPHA
 =====

721040 10.0 MEV 15.0% 2 USA B.HUTCHINS GEB
 O: TO DETERMINE HE PRODUCTION IN FAST REACTORS.

26 IRON 57		NEUTRON		RESONANCE PARAMETERS			
691702	1.00 KEV	600. KEV	9.0%	1	USA	R.EHRLICH	KAP
Q: NEUTRON WIDTH NEEDED. O: NEEDED FOR EVALUATIONS.							
26 IRON 58		NEUTRON		CAPTURE CROSS SECTION			
691104	1.00 KEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED
Q: REQUIRED IS ACTIVATION. O: FOR USE AS A FLUENCE MONITOR.							
STATUS-----				-----STATUS			
RPI	HOCKENBURY+ - USNDC-3 155(1972), WORK IN PROGRESS 0.1 TO 200 KEV.						
KFK	BEER+ - EANDC(E)-157 (1973), EXPERIMENT PLANNED.						
27 COBALT 58		NEUTRON		DISCRETE LEVEL STRUCTURE (ENERGY, SPIN, PARITY)			
661023				3	USA	R.EHRLICH	KAP
Q: J AND PI FOR ALL LEVELS LESS THAN 3 MEV REQUIRED. O: FOR CALCULATION OF THRESHOLD REACTION NI-58(N,P).							
STATUS-----				-----STATUS			
WWA	DECOWSKI - NP/A 112 513, REVIEW.						
27 COBALT 58		NEUTRON		CAPTURE CROSS SECTION			
721045	25.3 MV	10.0 MEV	10.0%	2	USA	R.T.BAYARD	BET
Q: WANTED FOR BOTH 71.4 DAY RADIOACTIVE TARGET AND THE 9 HOUR ISOMER. THERMAL CROSS SECTION MOST IMPORTANT. RESONANCE INTEGRAL ALSO NEEDED. O: FOR INTERPRETATION OF NI-58(N,P) FLUENCE MONITOR DATA.							
27 COBALT 59		NEUTRON		ABSORPTION CROSS SECTION			
712027	500. EV	15.0 MEV	25.0%	3	FR	J.Y.BARRE	CAD
Q: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.							
27 COBALT 59		NEUTRON		CAPTURE CROSS SECTION			
691105	25.3 MV	15.0 MEV	30.0%	1	USA	R.J.HOWERTON	LRL
Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF CO-60 IN NATURALLY OCCURRING ELEMENT. A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB. ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.							
691106	1.00 KEV	18.0 MEV	10.0%	2	USA	W.N.MC ELROY	HED
Q: REQUIRED IS ACTIVATION OF BOTH GROUND AND METASTABLE STATES. O: FOR USE AS A FLUENCE MONITOR.							
712028		10.0 MEV		2	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT. O: FOR FUEL CASK DESIGN AND CONTROL ROD DESIGN.							
STATUS-----				-----STATUS			
AUW	MURTY+ - JPJ 35 8(1973), VALUE AT 24 KEV.						
ORL	MACKLIN+ - USNDC-3 148(1972), WORK IN PROGRESS.						
27 COBALT 59		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION			
691107	100. EV	100. KEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA RESOLUTION REQUIRED - 10 PERCENT.							
691108	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.							

27 COBALT 59		NEUTRON		N,2N		
692114	15.0 MEV	10.0%	2	FR	A.MICHAUDON BRC	
Q: PRODUCTION OF CO-55 (72 DAY). O: ACTIVATION DETECTOR. M: SUBSTANTIAL MODIFICATIONS.						
27 COBALT 59		NEUTRON		N,P		
692119	15.0 MEV	10.0%	2	FR	A.MICHAUDON BRC	
Q: PRODUCTION OF FE-59 (45.1 DAY). O: ACTIVATION DETECTOR. MEASUREMENTS DIFFER BY FACTOR 10. M: SUBSTANTIAL MODIFICATIONS.						
712029	15.0 MEV	30.0%	3	FR	J.Y.EARRE CAD	
Q: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.						
27 COBALT 59		NEUTRON		N,ALPHA		
712030	15.0 MEV	30.0%	3	FR	J.Y.EARRE CAD	
Q: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.						
27 COBALT 59		NEUTRON		RESONANCE PARAMETERS		
621018	132. EV	1.0%	2	USA	R.M.BRUGGER ANC	
Q: CAPTURE WIDTH ESPECIALLY REQUIRED. O: NEEDED AS FLUX MONITOR.						
27 COBALT 60		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION		
693016			3	BZL	L.O.B.AGHINA IEN	
Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.						
28 NICKEL		NEUTRON		TOTAL CROSS SECTION		
721047	1.00 KEV	20.0 MEV	3.0%	2	USA C.E.CLIFFORD ORL	
A: ACCURACY OF 1 PERCENT IN DEEP MINIMA REQUIRED. ENERGY RESOLUTION SUFFICIENT TO RESOLVE MAJOR STRUCTURE. O: FOR FAST REACTOR SHIELDING.						
28 NICKEL		NEUTRON		DIFFERENTIAL ELASTIC CROSS SECTION		
691110	1.50 MEV	14.0 MEV	9.0%	1	USA R.EHRLICH KAP	
A: ENERGY RESOLUTION 100 KEV. ANGULAR RESOLUTION 5 DEGREES.						
692120	1.50 MEV	3.00 MEV	15.0%	2	GER B.GOEL KFK	
A: ABOUT 100 KEV ENERGY RESOLUTION AND ABOUT 5 DEGREES ANGULAR. RESOLUTION 10 PERCENT ON AVERAGE (COS).						
692123	8.00 MEV	15.0 MEV	20.0%	2	FR C.DEVILLERS SAC	
A: ACCURACY 10 PERCENT PREFERRED. ENERGY RESOLUTION - 500 KEV. ANGULAR RESOLUTION - 10 DEGREES. O: FOR FAST REACTOR SHIELDING CALCULATIONS. EVALUATION MAY BE SUFFICIENT. M: SUBSTANTIAL MODIFICATIONS.						
721048	1.50 MEV	3.00 MEV	10.0%	2	USA R.AVERY ANL P.B.HEMMIG AEC	
A: RESOLUTION OF INTERMEDIATE STRUCTURE PROBABLY ADEQUATE. M: SUBSTANTIAL MODIFICATIONS.						
STATUS						STATUS
ORL	PEREY+ - ORNL-4515 (1970), DATA 4.2 TO 8.6 MEV.					
AE	HOLMQVIST+ - AE-366 (1969), DATA 3. TO 8. MEV.					
ANL	SMITH+ - USNDC-7 9(1973), IN PROGRESS TO 4 MEV.					
AE	MALMSKOG - EANDC(OR)-115 (1972), IN PROGRESS TO 1.4 MEV.					

28 NICKEL NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION (CONTINUED)

691124	12.0 KEV	340. KEV	15.0%	2	USA	M.R.FLEISHMAN	SNP	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA). GAMMA RESOLUTION REQUIRED - 10 PERCENT.
691125	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV. NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV. A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
692125	1.00 KEV	15.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC	Q: GAMMA SPECTRA REQUIRED. A: ENERGY RESOLUTION OF 250 KEV FOR GAMMA RAYS LESS THAN 1 MEV AND 500 KEV FOR ENERGIES GREATER THAN 1 MEV. O: FOR FAST REACTOR SHIELDING CALCULATIONS. EVALUATION MAY BE SUFFICIENT.
721052	25.3 MV	10.0 MEV	20.0%	2	USA	P.B.HEMMIG	AEC	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. O: FOR SHIELDING AND GAMMA HEATING CALCULATIONS.

STATUS-----STATUS

ORL DICKENS+ - NCSAC-42 195(1971), IN PROGRESS.

28 NICKEL NEUTRON NEUTRON EMISSION CROSS SECTION

692124	2.00 MEV	15.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC	Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. A: RESOLUTION FOR PRIMARY AND SECONDARY NEUTRONS 10 PERCENT. O: FOR FAST REACTOR SHIELDING CALCULATIONS. EVALUATION MAY BE SUFFICIENT. M: SUBSTANTIAL MODIFICATIONS.
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28 NICKEL NEUTRON N,P

702010	15.0 MEV	10.0%	1	FR	J.Y.BARRE	CAD	O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
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28 NICKEL NEUTRON N,ALPHA

692132	15.0 MEV	20.0%	2	FR	C.DEVILLERS	SAC	O: FOR FAST REACTOR CALCULATIONS. EVALUATION MAY BE SUFFICIENT. M: SUBSTANTIAL MODIFICATIONS.
721051	10.0 MEV	15.0%	2	USA	B.HUTCHINS	GEB	O: TO DETERMINE HE PRODUCTION IN FAST REACTORS.
732044	15.0 MEV	10.0%	1	FR	J.Y.BARRE	CAD	O: FOR FAST REACTOR CALCULATIONS. M: NEW REQUEST.

28 NICKEL NEUTRON CAPTURE RESONANCE INTEGRAL

691109	0.50 EV	15.0%	1	USA	R.EHRLICH	KAP	O: REMOVE OR CORRECT FOR N,P CONTRIBUTION. M: SUBSTANTIAL MODIFICATIONS.
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28 NICKEL 58 NEUTRON CAPTURE CROSS SECTION

702011	1.00 KEV	10.0 KEV		1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE	A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT. O: FOR FAST REACTOR CALCULATIONS.
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STATUS-----STATUS

KFK ERNST+ - KFK-1231 (1970), DATA 12 TO 220 KEV.

AUA BROOMHALL+ - AEC/PR34 (1971), IN PROGRESS 10 TO 50 KEV.

HAR AXMANN+ - AERE-PR/NP18 (1972), IN PROGRESS TO 100 KEV.

28 NICKEL 58 NEUTRON N,2N

692133	15.0 MEV	10.0%	2	FR	A.MICHAUDON	BRC	Q: PRODUCTION OF NI-57 (36.4 HOUR). O: ACTIVATION DETECTOR. EVALUATION MAY BE SUFFICIENT. DISAGREEMENT BETWEEN JERONYMO(SACLAY) AND OTHERS.
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28 NICKEL 58          NEUTRON          N,P
=====
721955              10.0 MEV      5.0%      2   USA   R.T.BAYARD      BET
                   O: FOR USE AS FAST FLUENCE MONITOR.

742115              2.0%         1   EUR   NEUTRON DOSIMETRY GROUP      GEL
                   Q: AVERAGE CROSS SECTION IN A U-235 FISSION SPECTRUM
                   DESIRED.
                   O: FOR NORMALIZATION OF AVERAGE CROSS SECTIONS FOR
                   DOSIMETRY PURPOSES.
                   M: NEW REQUEST.

742117      2.10 MEV      7.00 MEV      5.0%      1   EUR   NEUTRON DOSIMETRY GROUP      GEL
                   O: ROUTINE FAST NEUTRON FLUENCE MONITOR.
                   STRONG DISCREPANCY BETWEEN DIFFERENTIAL DATA AND
                   AVERAGE VALUE IN U-235 FISSION NEUTRON SPECTRUM.
                   M: NEW REQUEST.

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-----STATUS-----STATUS
IRK  WAGNER+ - APA 37 288(1973), DATA 2 TO 20 MEV.
ANL  MEADOWS+ - USNDC-3 16(1972), DATA TO 5.9 MEV.
GEL  PAULSEN+ - EANDC(E)-150 (1972), MEASUREMENT IN PROGRESS.

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=====
28 NICKEL 58          NEUTRON          N,NP
=====
692136              15.0 MEV      10.0%      2   FR    A.MICHAUDON     BRC
                   Q: PRODUCTION OF CO-57 (270 DAY) THROUGH
                   SIGMA(N,NP)+SIGMA(N,D).
                   O: ACTIVATION DETECTOR.
                   CIRCUIT ACTIVATION.
                   DISAGREEMENT BETWEEN JERONYMO(SACLAY) AND OTHERS.

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=====
28 NICKEL 58          NEUTRON          N,ALPHA
=====
692135              14.0 MEV      2   GER   B.GOEL          KFK
                   A: ACCURACY REQUIRED TO BETTER THAN 20. PERCENT.
                   O: VERIFICATION OF EVAPORATION THEORY CALCULATIONS.

693017              1.00 MEV      20.0%      2   IND   G.K.MEHTA       ITK

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=====
28 NICKEL 59          NEUTRON          N,ALPHA
=====
742023      25.3 MV      500. EV      20.0%      2   BLG   N.MAENE         MCL
                   A: EVEN AN ACCURACY OF 50 PERCENT WOULD BE USEFUL.
                   O: EVALUATION OF HE PRODUCTION IN STEEL IN HIGH FLUX
                   REACTORS THROUGH THE REACTION CHAIN
                   NI-58(N,GAMMA)NI-59(N,ALPHA)FE-56.
                   M: NEW REQUEST.

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-----STATUS-----STATUS
MOL  MAENE - THEORETICAL EVALUATION OF THERMAL CROSS SECTION BY KIROUAC (NSE 46 427) YIELDS 30 BARNS.
      TO BE COMPARED WITH A VALUE OF 11 BARNS DEDUCED BY WEITMAN FROM ANOMALOUS HELIUM PRODUCTION
      RATE IN STEEL IRRADIATED IN A FILE SPECTRUM.

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=====
28 NICKEL 60          NEUTRON          CAPTURE CROSS SECTION
=====
702012      1.00 KEV      1.00 MEV      1   JAP   JAPAN NUCLEAR DATA COMMITTEE      JAE
                   A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
                   O: FOR FAST REACTOR CALCULATIONS.

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-----STATUS-----STATUS
RPI  STIEGLITZ+ - NP/A 163 592(1970), DATA TO 200 KEV.
KFK  ERNST+ - KFK-1231 (1970), DATA 12 TO 220 KEV.

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=====
28 NICKEL 60          NEUTRON          N,P
=====
692137              15.0 MEV      10.0%      2   FR    A.MICHAUDON     BRC
                   Q: PRODUCTION OF CO-60 (5.3 YEAR).
                   O: ACTIVATION DETECTOR.

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=====
28 NICKEL 60          NEUTRON          N,ALPHA
=====
692138              14.0 MEV      2   GER   B.GOEL          KFK
                   A: ACCURACY REQUIRED TO BETTER THAN 20. PERCENT.
                   O: VERIFICATION OF EVAPORATION THEORY CALCULATIONS.

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28 NICKEL 61          NEUTRON          RESONANCE PARAMETERS
=====
691128      1.00 KEV      600. KEV      9.0%      1   USA   R.EHRLICH       KAP
                   Q: NEUTRON WIDTH NEEDED.

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STATUS-----STATUS
 KFK ERNST+ - KFK-1231 (1970), CAPTURE WIDTHS FOR 14 RESONANCES.
 KFK CHO+ - KFK-1230 (1970), NEUTRON WIDTHS AND J.
 RPI HOCKENBURY+ - USNDC-3 155(1972), WORK IN PROGRESS.
 KFK BEER+ - KFK-1272 3(1972), WORK IN PROGRESS.

28 NICKEL 62 NEUTRON CAPTURE CROSS SECTION

682013 1.00 KEV 1.00 MEV 20.0% 2 FR A.MICHAUDON BRC
 Q: PRODUCTION OF NI-63 (92 YEAR).
 O: ACTIVATION DETECTOR.

STATUS-----STATUS
 KFK BEER+ - EANDC(E)-157 (1973), MEASUREMENT RELATIVE TO GOLD IN PROGRESS 5 TO 200 KEV.

28 NICKEL 64 NEUTRON CAPTURE CROSS SECTION

682014 1.00 KEV 1.00 MEV 20.0% 2 FR A.MICHAUDON BRC
 Q: PRODUCTION OF NI-65 (2.56 HOUR).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS
 KFK BEER+ - EANDC(E)-157 (1973), MEASUREMENT RELATIVE TO GOLD IN PROGRESS 5 TO 200 KEV.

28 NICKEL 64 NEUTRON N,2N

692139 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 Q: PRODUCTION OF NI-63 (92 YEAR).
 O: ACTIVATION DETECTOR.

29 COPPER NEUTRON CAPTURE CROSS SECTION

691131 25.3 MV 15.0 MEV 3 USA R.J.HOWERTON LRL
 Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF CU-64 IN NATURALLY OCCURRING ELEMENT.
 A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
 ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.

29 COPPER NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

691129 200. EV 50.0 KEV 15.0% 2 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA).
 GAMMA RESOLUTION REQUIRED - 10 PERCENT.

691130 1.00 MEV 10.0 MEV 15.0% 1 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED. ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
 A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.

29 COPPER NEUTRON N,2N

691134 15.0 MEV 3 USA R.J.HOWERTON LRL
 Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF CU-64 IN NATURALLY OCCURRING ELEMENT.
 A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN 25 AND 100 MB.
 ACCURACY TO A FACTOR OF 2 IF CROSS SECTION BETWEEN 1 AND 25 MB.
 M: NEW REQUEST.

29 COPPER 63 NEUTRON CAPTURE CROSS SECTION

671001 25.3 MV 1.00 KEV 2 USA W.H.HANNUM AEC
 A: ACCURACY 2 PERCENT NEAR THERMAL, 5 PERCENT ABOVE THERMAL.
 O: FOR DETECTOR APPLICATIONS.

691132 1.00 KEV 18.0 MEV 10.0% 2 USA W.N.MC ELROY HED
 Q: REQUIRED IS ACTIVATION.
 O: FOR USE AS A FLUENCE MONITOR.

732043 10.0 KEV 3.0% 2 FR H.TELLIER SAC
 Q: DETECTOR.
 M: NEW REQUEST.

STATUS-----STATUS

HAR MOXON+ - AERE-PR/NP13 (1968), MEASUREMENTS IN PROGRESS TO 100 KEV.

ORL MACKLIN+ - NCSAC-42 185(1971), MEASUREMENTS IN PROGRESS TO 500 KEV.

=====

29 COPPER 63 NEUTRON N,2N

682015 12.0 MEV 5.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR NEUTRON YIELD MONITOR.
 A FEW DATA AVAILABLE.

682016 14.0 MEV 20.0 MEV 5.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR NEUTRON YIELD MONITOR.
 LARGE DISCREPANCIES AMONG DATA.

742130 11.9 MEV 16.4 MEV 5.0% 2 EUR NEUTRON DOSIMETRY GROUP GEL
 O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING
 METHODS.
 GREATER THAN 10 PERCENT DISCREPANCY BETWEEN
 INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

=====

29 COPPER 63 NEUTRON N,ALPHA

691133 6.00 MEV 18.0 MEV 10.0% 2 USA W.N.MC ELROY HED
 Q: REQUIRED IS ACTIVATION.
 O: FOR USE AS A FLUENCE MONITOR.

742120 6.10 MEV 11.3 MEV 5.0% 1 EUR NEUTRON DOSIMETRY GROUP GEL
 O: ROUTINE FAST NEUTRON FLUENCE MONITOR.
 M: NEW REQUEST.

STATUS-----STATUS

GEL LISKIEN+ - JNE 27 39(1973), DATA AT 8.1 MEV.

HAM BORMANN+ - NP/A 186 65(1972), DATA AT 14 MEV.

=====

29 COPPER 65 NEUTRON CAPTURE CROSS SECTION

671002 25.3 MV 1.00 KEV 2 USA W.H.HANNUM AEC
 A: ACCURACY 2 PERCENT NEAR THERMAL, 5 PERCENT ABOVE.
 O: FOR DETECTOR APPLICATIONS.

STATUS-----STATUS

HAR MOXON+ - AERE-PR/NP13 (1968), MEASUREMENTS IN PROGRESS TO 100 KEV.

ORL MACKLIN+ - NCSAC-42 185(1971), MEASUREMENTS IN PROGRESS TO 500 KEV.

=====

29 COPPER 65 NEUTRON N,2N

682017 12.0 MEV 5.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR NEUTRON YIELD MONITOR.

682018 15.0 MEV 20.0 MEV 5.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR NEUTRON YIELD MONITOR.
 LARGE DISCREPANCIES AMONG DATA.

STATUS-----STATUS

JUL QAIM - NP/A 185 614(1972), DATA AT 15.0 MEV.

HAM MOGHARRAB+ - AKE 19 107(1972), DATA AT 14 MEV.

JAE KANDA+ - JAERI-1207 (1972), EVALUATION 11 TO 20 MEV.

=====

30 ZINC NEUTRON CAPTURE CROSS SECTION

691138 25.3 MV 15.0 MEV 1 USA R.J.HOWERTON LRL
 Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF ZN-65
 IN NATURALLY OCCURRING ELEMENT.
 A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS
 GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN
 25 AND 100 MB.
 ACCURACY TO A FACTOR OF 2 IF CROSS SECTION
 BETWEEN 1 AND 25 MB.
 M: NEW REQUEST.

=====

30 ZINC NEUTRON ENERGY DIFFERENTIAL CAPTURE CROSS SECTION

691135 25.3 MV 10.0% 1 USA M.R.FLEISHMAN SNP
 Q: BOTH LINE AND CONTINUUM SPECTRA ARE REQUIRED.
 O: FOR SHIELDING CALCULATIONS.

STATUS-----STATUS

ORL MAERKER+ - ORNL-4382 (1969), THERMAL SPECTRUM FOR GAMMA RAY ENERGIES ABOVE 1.06 MEV.

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30 ZINC                NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
=====
691136    200. EV          250. KEV    15.0%    1    USA    M.R.FLEISHMAN    SNP
Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
  ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR
  ALL E-GAMMA GREATER THAN 200 KEV.
A: ALTERNATE ACCURACY 5 MB.
  ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN
  SIGMA(E-GAMMA).
  GAMMA RESOLUTION REQUIRED - 10 PERCENT.

691137    1.00 MEV        10.0 MEV    15.0%    1    USA    M.R.FLEISHMAN    SNP
Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
  ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR
  ALL E-GAMMA GREATER THAN 200 KEV.
  NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
A: ALTERNATE ACCURACY 5 MB.
  GAMMA ENERGY RESOLUTION - LESS THAN 2.5
  MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.

STATUS-----STATUS
ORL    DICKENS+ - ORNL-TM-4464 (1973), DATA 1 TO 20 MEV.
=====
30 ZINC                NEUTRON                N,2N
=====
721057                15.0 MEV                1    USA    R.J.HOWERTON    LRL
Q: REQUIRED IS CROSS SECTION FOR ACTIVATION OF ZN-65
  IN NATURALLY OCCURRING ELEMENT.
A: ACCURACY 30 PERCENT IF THE CROSS SECTION IS
  GREATER THAN 100 MB, AND 50 PERCENT IF BETWEEN
  25 AND 100 MB.
  ACCURACY TO A FACTOR OF 2 IF CROSS SECTION
  BETWEEN 1 AND 25 MB.
M: NEW REQUEST.

=====
30 ZINC 64            NEUTRON                CAPTURE CROSS SECTION
=====
702013    24.0 KEV                10.0%    3    JAP    JAPAN NUCLEAR DATA COMMITTEE    JAE
O: FOR NORMALIZATION OF THE CALCULATED CROSS SECTION
  CURVE.

=====
30 ZINC 64            NEUTRON                N,2N
=====
693018    14.0 MEV                10.0%    3    HUN    J.CSIKAI        KOS
A: INCIDENT ENERGY RESOLUTION 200 KEV.
O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS
  SECTION SYSTEMATICS.

=====
30 ZINC 64            NEUTRON                N,P
=====
742131    2.30 MEV        7.80 MEV    5.0%    2    EUR    NEUTRON DOSIMETRY GROUP    GEL
O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING
  METHODS.
  ABOUT 20 PERCENT DISCREPANCY BETWEEN INTEGRAL
  AND DIFFERENTIAL MEASUREMENTS.
M: NEW REQUEST.

=====
31 GALLIUM            NEUTRON                DIFFERENTIAL ELASTIC CROSS SECTION
=====
742036    1.00 KEV        15.0 MEV    15.0%    2    FR    A.MICHAUDON    BRC
M: NEW REQUEST.

=====
31 GALLIUM            NEUTRON                DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION
=====
742037                15.0 MEV        15.0%    2    FR    A.MICHAUDON    BRC
M: NEW REQUEST.

=====
31 GALLIUM            NEUTRON                CAPTURE CROSS SECTION
=====
742039    1.00 KEV        3.00 MEV    20.0%    2    FR    A.MICHAUDON    BRC
M: NEW REQUEST.

=====
31 GALLIUM            NEUTRON                N,2N
=====
742038                15.0 MEV        20.0%    2    FR    A.MICHAUDON    BRC
M: NEW REQUEST.

=====
31 GALLIUM 69        NEUTRON                N,2N
=====
693019    14.0 MEV                10.0%    3    HUN    J.CSIKAI        KOS
A: INCIDENT ENERGY RESOLUTION 200 KEV.
O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS
  SECTION SYSTEMATICS.
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=====
33 ARSENIC 75          NEUTRON          N,2N
=====
692145          15.0 MEV    10.0%    3    FR    A.MICHAUDON    BRC
                Q: PRODUCTION OF AS-74 (17.9 DAY).
                O: ACTIVATION DETECTOR.
                M: SUBSTANTIAL MODIFICATIONS.
=====
36 KRYPTON 83          NEUTRON          TOTAL CROSS SECTION
=====
671118    1.00 MV    1.00 KEV    10.0%    2    USA    R.T.BAYARD    BET
                R.EHRLICH    KAP
                A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE
                INTEGRAL TO 10 PERCENT.
                O: FOR FISSION PRODUCT ABSORPTION CALCULATION.
=====
36 KRYPTON 83          NEUTRON          CAPTURE CROSS SECTION
=====
671190    1.00 MV    1.00 KEV    10.0%    2    USA    R.T.BAYARD    BET
                R.EHRLICH    KAP
                A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE
                INTEGRAL TO 10 PERCENT.
                O: FOR FISSION PRODUCT ABSORPTION CALCULATION.
=====
36 KRYPTON 84          NEUTRON          CAPTURE CROSS SECTION
=====
742040    1.00 KEV    3.00 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                O: FOR ACTIVATION.
                M: NEW REQUEST.
=====
37 RUBIDIUM 85          NEUTRON          CAPTURE CROSS SECTION
=====
692148    1.00 KEV    3.00 MEV    10.0%    2    FR    A.MICHAUDON    BRC
                Q: PRODUCTION OF RB-86 (18.6 DAY).
                O: ACTIVATION DETECTOR.
                M: SUBSTANTIAL MODIFICATIONS.
=====
37 RUBIDIUM 85          NEUTRON          N,2N
=====
692147    10.0 MEV    15.0 MEV    5.0%    2    FR    A.MICHAUDON    BRC
                Q: PRODUCTION OF RB-84 (33 DAY).
                O: ACTIVATION DETECTOR.
=====
STATUS-----STATUS
HAM    BORMANN+ - EANDC(E)-150 (1972), ACTIVATION MEASUREMENT IN PROGRESS 13 TO 18 MEV.
AUB    ALFORD+ - BAP 18 537(1973), DATA AT 3 ENERGIES FROM 15 TO 17 MEV.
=====
39 YTTRIUM 89          NEUTRON          CAPTURE CROSS SECTION
=====
682019    1.00 KEV    3.00 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                Q: PRODUCTION OF Y-90 (64.2 HOUR).
                O: ACTIVATION DETECTOR.
                M: SUBSTANTIAL MODIFICATIONS.
=====
39 YTTRIUM 89          NEUTRON          N,2N
=====
692149          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                Q: PRODUCTION OF Y-89 (104 DAY).
                O: ACTIVATION DETECTOR.
                M: SUBSTANTIAL MODIFICATIONS.
=====
STATUS-----STATUS
HAM    BORMANN+ - EANDC(E)-150 (1972), ACTIVATION MEASUREMENT IN PROGRESS 13 TO 18 MEV.
=====
40 ZIRCONIUM          NEUTRON          DIFFERENTIAL ELASTIC CROSS SECTION
=====
691295    200. KEV    1.50 MEV    10.0%    2    USA    R.EHRLICH    KAP
                A: ENERGY RESOLUTION 5.0 PERCENT.
                O: TO RESOLVE DISCREPANCIES IN EXISTING DATA.
691296    7.00 MEV    14.0 MEV    20.0%    2    USA    R.EHRLICH    KAP
                A: ENERGY RESOLUTION 2.5 PERCENT.
=====
STATUS-----STATUS
ANL    GUENTHER+ - USNDC-3 13(1972), WORK IN PROGRESS 1.5 TO 4.0 MEV.
=====
40 ZIRCONIUM          NEUTRON          ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
=====
702014    4.00 MEV    7.00 MEV          3    JAP    JAPAN NUCLEAR DATA COMMITTEE    JAE
                A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
                O: FOR INVESTIGATIONS OF LEVEL DENSITY PARAMETERS.
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40 ZIRCONIUM          NEUTRON          ABSORPTION CROSS SECTION
=====
712034    500.  EV      15.0  MEV      25.0%      3   FR   J.Y.BARRE      CAD
                                         O: FOR FAST REACTOR CALCULATIONS.
                                         M: SUBSTANTIAL MODIFICATIONS.
=====
40 ZIRCONIUM          NEUTRON          CAPTURE CROSS SECTION
=====
671005    25.3  MV       1.00  KEV       5.0%       2   USA  B.R.LEONARD     BNW
                                         O: FOR REACTOR MODERNIZATION AND REACTIVITY EFFECTS.
691142    3.00  KEV      10.0  MEV      15.0%      2   USA  R.EHRLICH      KAP
-----STATUS-----
ANL      PDENITZ - USNDC-1 8(1972), WORK IN PROGRESS 400 KEV TO 1.5 MEV.
LRL      CZIRR+ - USNDC-1 94(1972), WORK IN PROGRESS 100 EV TO 1 MEV.
=====
40 ZIRCONIUM          NEUTRON          ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
=====
691144    25.3  MV              10.0%      1   USA  M.R.FLEISHMAN  SNP
                                         Q: BOTH LINE AND CONTINUUM SPECTRA ARE REQUIRED.
                                         O: FOR SHIELDING CALCULATIONS.
-----STATUS-----
GA      RASMUSSEN+ - GA-10248, THERMAL CAPTURE SPECTRUM.
=====
40 ZIRCONIUM          NEUTRON          TOTAL PHOTON PRODUCTION CROSS SECTION
=====
691145    100.  EV      20.0  KEV      15.0%      2   USA  M.R.FLEISHMAN  SNP
                                         Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
                                         ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR
                                         ALL E-GAMMA GREATER THAN 200 KEV.
                                         A: ALTERNATE ACCURACY 5 MB.
                                         ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN
                                         SIGMA(E-GAMMA).
                                         GAMMA RESOLUTION REQUIRED - 10 PERCENT.
691146    1.00  MEV      10.0  MEV      15.0%      1   USA  M.R.FLEISHMAN  SNP
                                         Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
                                         ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR
                                         ALL E-GAMMA GREATER THAN 200 KEV.
                                         NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
                                         A: ALTERNATE ACCURACY 5 MB.
                                         GAMMA ENERGY RESOLUTION - LESS THAN 2.5
                                         MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
=====
40 ZIRCONIUM          NEUTRON          NEUTRON EMISSION CROSS SECTION
=====
671003    2.00  MEV      14.0  MEV      10.0%      1   USA  R.EHRLICH      KAP
                                         R.AVERY        ANL
                                         Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
                                         A: INCIDENT AND EXIT ENERGY RESOLUTION 10 PERCENT.
                                         O: FOR DESIGN OF PRESSURIZED WATER REACTORS USING ZR.
691141    1.50  MEV      15.0  MEV      10.0%      1   USA  J.R.STREETMAN  LAS
                                         Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
                                         LOW ENERGY NEUTRONS MUST BE INCLUDED.
                                         ABSOLUTE SPECTRA AT 30 AND 70 DEGREES
                                         MAY SUFFICE.
                                         A: INCIDENT AND EXIT ENERGY RESOLUTION 10 PERCENT.
=====
40 ZIRCONIUM          NEUTRON          N,P
=====
712035    15.0  MEV      30.0%      3   FR   J.Y.BARRE      CAD
                                         O: FOR FAST REACTOR CALCULATIONS.
                                         M: SUBSTANTIAL MODIFICATIONS.
=====
40 ZIRCONIUM          NEUTRON          N,ALPHA
=====
712036    15.0  MEV      30.0%      3   FR   J.Y.BARRE      CAD
                                         O: FOR FAST REACTOR CALCULATIONS.
                                         M: SUBSTANTIAL MODIFICATIONS.
=====
40 ZIRCONIUM          NEUTRON          CAPTURE RESONANCE INTEGRAL
=====
691143    0.50  EV              5.0%       1   USA  R.EHRLICH      KAP
                                         O: TO RESOLVE DISCREPANCIES IN EXISTING DATA.
=====
40 ZIRCONIUM 90          DISCRETE LEVEL STRUCTURE (ENERGY, SPIN, PARITY)
=====
691152    2   USA  R.EHRLICH      KAP
                                         Q: J AND PI FOR ALL LEVELS LESS THAN 5 MEV REQUIRED.
                                         O: FOR CALCULATING COMPOUND ELASTIC AND INELASTIC
                                         AND N,P.
=====

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-----STATUS-----

ORL MACKLIN+ - WORK IN PROGRESS.

=====
 40 ZIRCONIUM 92 NEUTRON CAPTURE RESONANCE INTEGRAL
 =====

691159 0.50 EV 20.0% 2 USA R.EHRLICH KAP
 O: NEEDED FOR EVALUATING MEASUREMENTS, AND
 RESONANCE PARAMETERS.

=====
 40 ZIRCONIUM 94 DISCRETE LEVEL STRUCTURE (ENERGY, SPIN, PARITY)
 =====

691163 2 USA R.EHRLICH KAP
 Q: J AND PI FOR ALL LEVELS LESS THAN 4 MEV REQUIRED.
 O: FOR CALCULATING COMPOUND ELASTIC AND INELASTIC.

=====
 40 ZIRCONIUM 94 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 =====

671008 100. KEV 10.0 MEV 10.0% 1 USA R.T.BAYARD BET
 Q: SCATTERING FROM SEPARATED ISOTOPES 90-91, 92-94,
 AND 96 IS DESIRED.
 O: TO CHECK THE SHELL EFFECT ON THE OPTICAL
 POTENTIAL.
 TO DERIVE USEFUL OPTICAL MODEL PARAMETERS.

-----STATUS-----

KTY MC ELLISTREM+ - WORK IN PROGRESS 1.5 TO 6 MEV.

=====
 40 ZIRCONIUM 94 NEUTRON ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
 =====

671009 14.0 MEV 15.0% 2 USA R.EHRLICH KAP
 Q: RESOLVE DISCRETE LEVELS UP TO 2 MEV EXCITATION.
 O: TO COMPUTE DIRECT INELASTIC SCATTERING AND
 INVESTIGATE ISOTOPIC SPIN-DEPENDENT COUPLING
 BETWEEN GROUND AND EXCITED STATES.

=====
 40 ZIRCONIUM 94 NEUTRON CAPTURE CROSS SECTION
 =====

732045 10.0 KEV 5.0% 2 FR H.TELLIER SAC
 O: DETECTOR.
 M: NEW REQUEST.

=====
 40 ZIRCONIUM 94 NEUTRON RESONANCE PARAMETERS
 =====

691162 15.0 MEV 10.0% 2 USA R.EHRLICH KAP
 Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 O: VERIFICATION REQUIRED INCLUDES RECENT RPI RESULTS.
 M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----

ORL MACKLIN+ - WORK IN PROGRESS.

=====
 40 ZIRCONIUM 95 NEUTRON CAPTURE CROSS SECTION
 =====

671010 0.50 EV 10.0 MEV 2 USA R.T.BAYARD R.EHRLICH BET KAP
 Q: RADIOACTIVE TARGET, 65 DAY.
 A: ACCURACY 10 PERCENT IF CROSS SECTION GREATER THAN
 100 BARNS AND 20 PERCENT IF BETWEEN 10 AND 100
 BARNS.
 ENERGIES ABOVE 1 EV OF INTEREST TO GIVE 10 PERCENT
 IN RESONANCE INTEGRAL IF GREATER THAN 1000
 BARNS AND 20 PERCENT IF BETWEEN 100 AND 1000
 BARNS.
 O: THE DECAY IS TO AN IMPORTANT FISSION PRODUCT.
 M: SUBSTANTIAL MODIFICATIONS.

691802 25.3 MV 2 CAN W.H.WALKER CRC
 A: ACCURACY REQUIRED 20 BARNS.
 O: FISSION PRODUCT, UNKNOWN CROSS SECTION.

=====
 40 ZIRCONIUM 96 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 =====

721069 100. KEV 10.0 MEV 10.0% 1 USA R.T.BAYARD BET
 Q: SCATTERING FROM SEPARATED ISOTOPES 90-91, 92-94, AND
 96 IS DESIRED.
 O: TO CHECK THE SHELL EFFECT ON THE OPTICAL
 POTENTIAL.
 TO DERIVE USEFUL OPTICAL MODEL PARAMETERS.

=====
 40 ZIRCONIUM 96 NEUTRON CAPTURE CROSS SECTION
 =====

691164 25.3 MV 5.0% 2 USA R.EHRLICH KAP
 Q: ZR-97 PRODUCT HALF LIFE IS 16.8 HOURS.
 PREFERABLY MEASUREMENTS WITH NATURAL TARGET OR
 OTHER ISOTOPES.
 O: TO RESOLVE DISCREPANCIES IN EXISTING DATA.

732046 10.0 KEV 5.0% 2 FR H.TELLIER SAC
 O: DETECTOR.
 M: NEW REQUEST.

41 NIOBIUM 93 NEUTRON INELASTIC CROSS SECTION

691165 15.0 MEV 20.0% 1 USA R.J.HOWERTON LRL
 Q: PRODUCTION OF 13.6 YEAR NB-93 ISOMER WANTED.
 M: NEW REQUEST.

742121 8.00 MEV 5.0% 1 EUR NEUTRON DOSIMETRY GROUP GEL
 Q: PRODUCTION OF 3.7 YEAR ISOMER NEEDED.
 O: PROMISING FAST NEUTRON FLUENCE MONITOR DUE TO LOW THRESHOLD ENERGY.
 M: NEW REQUEST.

STATUS-----STATUS

ALD COLES - AWRE/O-66/71, DATA 1 TO 5 MEV.
 AE ALMEN+ - EANDC(OR)-115 (1972), WORK IN PROGRESS.

41 NIOBIUM 93 NEUTRON ABSORPTION CROSS SECTION

712037 500. EV 15.0 MEV 25.0% 3 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

41 NIOBIUM 93 NEUTRON CAPTURE CROSS SECTION

621049 1.00 KEV 100. KEV 10.0% 2 USA H.ALTER AEC
 R.AVERY ANL
 C.A.PRESKITT IRT

682020 100. EV 100. KEV 20.0% 1 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.

702015 500. EV 1.00 MEV 30.0% 3 FR J.Y.BARRE CAD
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

742132 1.00 EV 10.0 KEV 5.0% 2 EUR NEUTRON DOSIMETRY GROUP GEL
 Q: PRODUCTION OF NB-94 (20000 YEARS) WANTED.
 O: POSSIBLE LONG TERM FLUENCE MONITOR.
 M: NEW REQUEST.

STATUS-----STATUS

ORL MACKLIN+ - USNDC-3 148(1972), WORK IN PROGRESS 3 TO 500 KEV.
 ANL POENITZ - USNDC-1 8(1972), WORK IN PROGRESS 400 KEV TO 1.5 MEV.
 HAR COATES - MEASUREMENT PLANNED.

41 NIOBIUM 93 NEUTRON ENERGY DIFFERENTIAL CAPTURE CROSS SECTION

691297 25.3 MV 10.0% 1 USA M.R.FLEISHMAN SNP
 Q: BOTH LINE AND CONTINUUM SPECTRA ARE REQUIRED.
 O: FOR SHIELDING CALCULATIONS.

STATUS-----STATUS

MIT RASMUSSEN+ - GA-10248, THERMAL CAPTURE SPECTRUM.

41 NIOBIUM 93 NEUTRON PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.

692155 15.0 MEV 10.0% 2 SWT J.BRUNNER WUR
 Q: FORMATION OF THE 3.7 YEAR ISOMER (E' = 29 KEV).
 O: FOR FAST FLUX MEASUREMENTS.

41 NIOBIUM 93 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

691167 30.0 EV 75.0 KEV 15.0% 2 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
 ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 A: ALTERNATE ACCURACY 5 MB.
 ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA).
 GAMMA RESOLUTION REQUIRED - 10 PERCENT.

691168 1.00 MEV 10.0 MEV 15.0% 1 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
 ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
 A: ALTERNATE ACCURACY 5 MB.
 GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.

STATUS-----STATUS

ORL DICKENS+ - NCSAC-42 195(1971), IN PROGRESS.

41 NIOBIUM 93 NEUTRON N,2N

701037 15.0 MEV 5.0% 1 USA R.J.HOWERTON. LRL
 Q: PRODUCTION OF NB-92 REQUIRED.
 M: NEW REQUEST.

742133 15.0 MEV 5.0% 2 EUR NEUTRON DOSIMETRY GROUP GEL
 Q: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS.
 GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

41 NIOBIUM 93 NEUTRON NEUTRON EMISSION CROSS SECTION

691166 1.50 MEV 15.0 MEV 10.0% 1 USA J.R.STREETMAN LAS
 Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 LOW-ENERGY NEUTRONS MUST BE INCLUDED.
 ABSOLUTE SPECTRA AT 30 DEGREES AND 75 DEGREES MAY SUFFICE.
 A: INCIDENT AND EXIT ENERGY RESOLUTION 10 PERCENT.

41 NIOBIUM 93 NEUTRON N,P

712038 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD
 Q: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

41 NIOBIUM 93 NEUTRON N,ALPHA

712039 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD
 Q: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

41 NIOBIUM 95 NEUTRON CAPTURE CROSS SECTION

671012 25.3 MV 1 USA R.EHRLICH KAP
 Q: RADIOACTIVE TARGET - 35 D.
 THERMAL AVERAGE WILL BE USEFUL.
 A: WANT 20 PERCENT ACCURACY IF ABSORPTION CROSS SECTION IS 10 TO 100 B. 10 PERCENT IF GREATER.
 Q: DECAYS TO AN IMPORTANT FISSION PRODUCT POISON.

42 MOLYBDENUM NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

721070 1.50 MEV 3.00 MEV 20.0% 3 USA R.AVERY ANL
 P.B.HEMMIG AEC
 Q: TOTAL INTEGRAL OVER 4 PI REQUIRED.
 SPECTRA AT SEVERAL ANGLES IF SIGNIFICANTLY ANISOTROPIC.
 A: ENERGY RESOLUTION OF PRIMARY AND SCATTERED NEUTRONS 20 PERCENT.

STATUS-----STATUS

ALD COLES+ - AWRE/O-89/70, DATA FOR 10 LEVELS AND CONTINUUM 1.5 TO 6 MEV.

ANL SMITH+ - WORK UNDERWAY FOR EVEN ISOTOPES TO 5 MEV

KTY MC ELLISTREM+ - WORK UNDERWAY FOR EVEN ISOTOPES TO 6 MEV.

42 MOLYBDENUM NEUTRON ABSORPTION CROSS SECTION

712040 500. EV 15.0 MEV 20.0% 2 FR J.Y.BARRE CAD
 Q: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

42 MOLYBDENUM NEUTRON CAPTURE CROSS SECTION

692157 100. EV 1.00 MEV 1 UK C.G.CAMPBELL WIN
 A: ACCURACY 10 PERCENT TO 100 KEV, 20 PERCENT ABOVE.
 Q: FOR FAST REACTORS.

702016 500. EV 1.00 MEV 25.0% 2 FR J.Y.BARRE CAD
 Q: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

721072 1.00 KEV 1.00 MEV 10.0% 3 USA W.H.HANNUM AEC
 Q: TO RESOLVE DISCREPANCY IN REACTIVITY WORTH MEASUREMENTS.

STATUS-----STATUS

ANL POENITZ - USNDC-1 8(1972), WORK IN PROGRESS 40 KEV TO 1.5 MEV.
 HAR COATES - MEASUREMENT PLANNED.

42 MOLYBDENUM NEUTRON ENERGY DIFFERENTIAL CAPTURE CROSS SECTION

691172 25.3 MV 10.0% 1 USA M.R.FLEISHMAN SNP
 O: BOTH LINE AND CONTINUUM SPECTRA ARE REQUIRED.

42 MOLYBDENUM NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

691173 10.0 EV 9.00 KEV 15.0% 1 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
 ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 A: ALTERNATE ACCURACY 5 MB. ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN SIGMA(E-GAMMA).
 GAMMA RESOLUTION REQUIRED - 10 PERCENT.

691174 1.00 MEV 10.0 MEV 15.0% 1 USA M.R.FLEISHMAN SNP
 Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
 ABSOLUTE SIGMA(E-GAMMA) REQUIRED FOR ALL E-GAMMA GREATER THAN 200 KEV.
 NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
 A: ALTERNATE ACCURACY 5 MB. GAMMA ENERGY RESOLUTION - LESS THAN 2.5 MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.

42 MOLYBDENUM NEUTRON NEUTRON EMISSION CROSS SECTION

691224 1.50 MEV 15.0 MEV 10.0% 2 USA J.R.STREETMAN LAS
 Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 ABSOLUTE SPECTRA AT 30 AND 75 DEGREES MAY SUFFICE.
 LOW ENERGY NEUTRONS MUST BE INCLUDED.

42 MOLYBDENUM NEUTRON N,P

692159 14.0 MEV 10.0% 2 GER F.WELLER KFK
 712041 15.0 MEV 25.0% 2 FR J.Y.BARRE CAD

O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

42 MOLYBDENUM NEUTRON N,ALPHA

712042 15.0 MEV 25.0% 2 FR J.Y.BARRE CAD

O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

42 MOLYBDENUM 92 NEUTRON N,P

692160 15.0 MEV 10.0% 3 FR A.MICHAUDON BRC
 Q: PRODUCTION OF NB-92 (10.1 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS

KYU KANDA - NP/A 185 177(1972), DATA 13 TO 15 MEV.
 GIT FINK+ - PR/C 1 358(1970), DATA AT 14.4 MEV.

42 MOLYBDENUM 92 NEUTRON N,ALPHA

692161 15.0 MEV 10.0% 3 FR A.MICHAUDON BRC
 Q: PRODUCTION OF ZR-89 (79 HOUR).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS

KYU KANDA - NP/A 185 177(1972), DATA 13 TO 15 MEV.
 GIT FINK+ - PR/C 1 358(1970), DATA AT 14.4 MEV.

42 MOLYBDENUM 95 NEUTRON INELASTIC CROSS SECTION

732047 15.0 MEV 50.0% 1 FR J.Y.BARRE CAD
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS

SAC EVALUATION IN PROGRESS (1973).

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=====
42 MOLYBDENUM 95      NEUTRON      CAPTURE CROSS SECTION
=====
732048      500.  EV      200.  KEV      30.0%      2      FR      J.Y.BARRE      CAD
Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
  TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
=====
42 MOLYBDENUM 95      NEUTRON      N,P
=====
692164      15.0  MEV      10.0%      3      FR      A.MICHAUDON      BRC
Q: PRODUCTION OF NB-95 (35 DAY).
O: ACTIVATION DETECTOR.
=====
42 MOLYBDENUM 96      NEUTRON      CAPTURE CROSS SECTION
=====
693020      10.0  KEV      100.  KEV      10.0%      2      AUL      J.L.SYMONDS      AUA
Q: RESONANCE PARAMETERS AND P-WAVE STRENGTH FUNCTION
  ALSO REQUIRED.
O: FOR FISSION PRODUCT CALCULATIONS AND ASTROPHYSICS.
=====
42 MOLYBDENUM 97      NEUTRON      INELASTIC CROSS SECTION
=====
732049      15.0  MEV      50.0%      1      FR      J.Y.BARRE      CAD
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
-----STATUS-----
SAC      EVALUATION IN PROGRESS (1973).
=====
42 MOLYBDENUM 97      NEUTRON      CAPTURE CROSS SECTION
=====
732050      500.  EV      200.  KEV      30.0%      2      FR      J.Y.BARRE      CAD
Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
  TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
=====
42 MOLYBDENUM 98      NEUTRON      CAPTURE CROSS SECTION
=====
732051      500.  EV      200.  KEV      30.0%      2      FR      J.Y.BARRE      CAD
Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
  TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
=====
42 MOLYBDENUM 99      NEUTRON      CAPTURE CROSS SECTION
=====
671013      1.00  MV      1.00  KEV      2      USA      R.T.BAYARD      BET
R.EHRLICH      KAP
Q: RADIOACTIVE TARGET 67 HOURS.
A: WANT 20 PERCENT ACCURACY IF ABSORPTION CROSS
  SECTION IS 10 TO 100 B, 10 PERCENT IF GREATER.
  ENERGIES ABOVE 1 EV OF INTEREST TO GIVE 10 PERCENT
  IN RESONANCE INTEGRAL IF GREATER THAN 1000
  BARNS AND 20 PERCENT IF BETWEEN 100 AND 1000
  BARNS.
O: THE DECAY IS TO AN IMPORTANT FISSION PRODUCT.
691803      25.3  MV      2      CAN      W.H.WALKER      CRC
A: ACCURACY REQUIRED 600 B.
O: FISSION PRODUCT, UNKNOWN CROSS SECTION.
=====
43 TECHNETIUM 99      NEUTRON      INELASTIC CROSS SECTION
=====
732052      15.0  MEV      50.0%      1      FR      J.Y.BARRE      CAD
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
-----STATUS-----
SAC      EVALUATION IN PROGRESS (1973).
=====
43 TECHNETIUM 99      NEUTRON      CAPTURE CROSS SECTION
=====
692024      100.  EV      1.00  MEV      20.0%      3      UK      C.G.CAMPBELL      WIN
A: ACCURACY IS FOR AVERAGE VALUE OF THE ERROR BETWEEN
  E AND 2E.
O: FOR FAST REACTORS.
692168      1.00  MV      50.0  KEV      1      JAP      JAPAN NUCLEAR DATA COMMITTEE      JAE
A: ACCURACY 5. PERCENT TO 10 EV, 20. PERCENT ABOVE.
O: FISSION PRODUCT IN BURNUP CALCULATION.
732053      500.  EV      200.  KEV      20.0%      1      FR      J.Y.BARRE      CAD
Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
  TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.
=====

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45 RHODIUM 103 NEUTRON CAPTURE CROSS SECTION (CONTINUED)

712044 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS
 O: WANTED FOR FISSION PRODUCT CALCULATIONS.

732058 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC
 O: REACTOR CALCULATIONS.
 M: NEW REQUEST.

732059 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD
 Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
 TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS

GA CARLSON+ - GULF-10739R (1971), DATA 1 KEV TO 1 MEV.
 SAC EVALUATION IN PROGRESS
 RPI KNOX+ - USNDC-9 168(1973), IN PROGRESS 20 EV TO 100 KEV.

45 RHODIUM 103 NEUTRON PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.

692179 15.0 MEV 10.0% 2 SWT J.BRUNNER WUR
 Q: FORMATION OF THE 57 MINUTE ISOMER (E' = 40 KEV).
 O: FOR FAST FLUX MEASUREMENT.

45 RHODIUM 103 NEUTRON N,2N

742041 15.0 MEV 15.0% 1 FR A.MICHAUDON BRC
 O: FOR ACTIVATION.
 M: NEW REQUEST.

STATUS-----STATUS

GEL PAULSEN+ - ZP 238 23(1970), DATA 10 TO 20 MEV.
 ALD MATHER+ - AWRE/O-72/72, WORK IN PROGRESS.

45 RHODIUM 105 NEUTRON CAPTURE CROSS SECTION

671019 1.00 MV 1.00 EV 10.0% 2 USA T.SNYDER GEC
 Q: RADIOACTIVE TARGET 36 HOURS.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

691805 10.0 MV 500. EV 2 CAN W.H.WALKER CRC
 A: ACCURACY 5. PERCENT TO 10 EV, 20 PERCENT ABOVE.
 O: AVAILABLE DATA SUGGEST LARGE RESONANCE NEAR
 CADMIUM CUT-OFF.
 ADDITIONAL DATA NEEDED TO DETERMINE DEPENDANCE ON
 NEUTRON TEMPERATURE AND EPITHERMAL FLUX.

692181 1.00 MV 50.0 KEV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY 5. PERCENT TO 10 EV, 20 PERCENT ABOVE.
 O: FISSION PRODUCT IN BURNUP CALCULATION.

46 PALLADIUM 105 NEUTRON CAPTURE CROSS SECTION

732060 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD
 Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
 TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS

SAC EVALUATION IN PROGRESS (1973).

46 PALLADIUM 107 NEUTRON CAPTURE CROSS SECTION

671020 1.00 MV 10.0 KEV 10.0% 2 USA R.T.BAYARD BET
 Q: RADIOACTIVE TARGET - 7 MILLION YEARS.
 A: ABOVE 1 EV WANT RESONANCE INTEGRAL TO 10 PERCENT.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

691806 25.3 MV 2 CAN W.H.WALKER CRC
 A: ACCURACY REQUIRED 10 BARNS.
 O: PU FISSION PRODUCT, UNKNOWN CROSS SECTION.

732061 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD
 Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
 TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS

SAC EVALUATION IN PROGRESS (1973).


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46 PALLADIUM 109          NEUTRON          RESONANCE PARAMETERS
=====
692478    400. EV          2.00 KEV          10.0%          2    ITY    V.BENZI          BOL
                                           Q: NEUTRON AND CAPTURE WIDTH NEEDED.
                                           O: FISSION PRODUCT IMPORTANT IN FAST REACTOR BURNUP
                                           CALCULATIONS.
=====
47 SILVER 107            NEUTRON          N.ALPHA
=====
693021    25.3 MV              10.0%          3    HUN    J.CSIKAI          KOS
                                           O: FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION
                                           SYSTEMATICS WANTED.
=====
47 SILVER 109            NEUTRON          CAPTURE CROSS SECTION
=====
671021    1.00 MV              1.00 EV          10.0%          2    USA    T.SNYDER          GEC
                                           O: FISSION PRODUCT POISON.
732062    500. EV              200. KEV          30.0%          2    FR     J.Y.BARRE          CAD
                                           Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
                                           TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
                                           O: FISSION PRODUCT EFFECT IN FAST REACTORS.
                                           M: NEW REQUEST.
=====
48 CADMIUM                NEUTRON          ABSORPTION CROSS SECTION
=====
692191    1.00 MV              0.50 EV          1.0%           2    SWT    F.WIDDER          WUR
                                           O: SPECTRUM MEASUREMENTS IN POISONED MODERATORS.
STATUS-----STATUS
KIG    MEASUREMENT IN PROGRESS.
=====
48 CADMIUM 110           NEUTRON          CAPTURE CROSS SECTION
=====
693022    10.0 KEV             100. KEV          10.0%          2    AUL    J.L.SYMONDS          AUA
                                           Q: RESONANCE PARAMETERS AND P WAVE STRENGTH FUNCTION
                                           ALSO REQUIRED.
                                           O: FOR FISSION PRODUCT CALCULATIONS AND ASTROPHYSICS.
=====
48 CADMIUM 113           NEUTRON          CAPTURE CROSS SECTION
=====
732063                100. EV          5.0%           3    FR     H.TELLIER          SAC
                                           O: CONTROL AND POISON.
                                           M: NEW REQUEST.
=====
49 INDIUM                NEUTRON          ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
=====
702017    4.00 MEV             7.00 MEV          3    JAP    JAPAN NUCLEAR DATA COMMITTEE          JAE
                                           A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
                                           O: FOR INVESTIGATION OF LEVEL DENSITY PARAMETERS.
=====
49 INDIUM 115            NEUTRON          INELASTIC CROSS SECTION
=====
692180                15.0 MEV          3.0%           1    GER    M.KUECHLE          KFK
                                           Q: CROSS SECTION LEADING TO ISOMERIC STATE AFTER
                                           GAMMA DE-EXCITATION IS NEEDED.
                                           O: THRESHOLD DETECTOR.
742116                2.0%           1    EUR    NEUTRON DOSIMETRY GROUP          GEL
                                           Q: PRODUCTION OF IN-115 (4.5 HOUR) ISOMER.
                                           AVERAGE CROSS SECTION IN A U-235 FISSION SPECTRUM
                                           DESIRED.
                                           O: FOR NORMALIZATION OF AVERAGE CROSS SECTIONS FOR
                                           DOSIMETRY PURPOSES.
                                           M: NEW REQUEST.
STATUS-----STATUS
MOL    FABRY+ - 70 HELSINKI 2 535(1970), EVALUATION.
KTO    KOBAYASHI+ - EANDC(J)-26 (1972), WORK IN PROGRESS 3.4 TO 4.9 MEV.
=====
49 INDIUM 115            NEUTRON          PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.
=====
692194    5.00 MEV             15.0 MEV          10.0%          2    SWT    J.BRUNNER          WUR
                                           Q: FORMATION OF THE 4.5 HOUR ISOMER (E' = .335 MEV).
                                           O: FOR FAST FLUX MEASUREMENTS.
=====
50 TIN 126                NEUTRON          CAPTURE CROSS SECTION
=====
691807    25.3 MV              2    CAN    W.H.WALKER          CRC
                                           A: ACCURACY REQUIRED 120 BARNs.
                                           O: FISSION PRODUCT, UNKNOWN CROSS SECTION.
=====

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51 ANTIMONY 121          NEUTRON          N,2N
=====
742042          15.0 MEV      20.0%      3   FR   A.MICHAUDON      BRC
                                Q: FOR ACTIVATION.
                                M: NEW REQUEST.
=====
51 ANTIMONY 123          NEUTRON          N,2N
=====
742043          15.0 MEV      20.0%      3   FR   A.MICHAUDON      BRC
                                Q: FOR ACTIVATION.
                                M: NEW REQUEST.
=====
51 ANTIMONY 125          NEUTRON          CAPTURE CROSS SECTION
=====
691808          25.3 MV
                                3   CAN   W.H.WALKER        CRC
                                A: ACCURACY REQUIRED 300 BARNS.
                                O: FISSION PRODUCT, UNKNOWN CROSS SECTION.
=====
51 ANTIMONY 127          NEUTRON          CAPTURE CROSS SECTION
=====
691809          25.3 MV
                                3   CAN   W.H.WALKER        CRC
                                A: ACCURACY REQUIRED 4000 BARNS.
                                O: FISSION PRODUCT, UNKNOWN CROSS SECTION.
=====
52 TELLURIUM 127        NEUTRON          CAPTURE CROSS SECTION
=====
671022          1.00 MV      1.00 EV      20.0%      2   USA   R.EHRLICH         KAP
                                Q: RADIOACTIVE TARGET 105 DAY ISOMER.
                                THERMAL OR THERMAL AVERAGE VALUE USEFUL.
                                O: NEEDED FOR CALCULATION OF FISSION PRODUCT POISONS.
691810          25.3 MV
                                3   CAN   W.H.WALKER        CRC
                                Q: FOR THE ISOMERIC STATE (105 D).
                                A: ACCURACY REQUIRED 900 BARNS.
                                O: FISSION PRODUCT.
=====
52 TELLURIUM 129        NEUTRON          CAPTURE CROSS SECTION
=====
691811          25.3 MV
                                3   CAN   W.H.WALKER        CRC
                                Q: FOR THE ISOMERIC STATE (33 D).
                                A: ACCURACY REQUIRED 1000 BARNS.
                                O: FISSION PRODUCT.
=====
52 TELLURIUM 132        NEUTRON          CAPTURE CROSS SECTION
=====
671023          1.00 MV      1.00 EV      20.0%      2   USA   R.T.BAYARD        BET
                                Q: RADIOACTIVE TARGET 78 HOURS.
                                A: ACCURACY 10 PERCENT IF CROSS SECTION LARGER THAN
                                  2500 BARNS.
                                ABOVE 1 EV RESONANCE INTEGRAL WANTED TO 20 PERCENT
                                  IF BETWEEN 2500 AND 25000 BARNS AND 10 PERCENT
                                  IF LARGER THAN 25000 BARNS.
                                O: FOR CALCULATION OF FISSION PRODUCT POISONS.
=====
53 IODINE 127           NEUTRON          N,2N
=====
742134          10.0 MEV     14.6 MEV     5.0%      2   EUR   NEUTRON DOSIMETRY GROUP      GEL
                                Q: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING
                                  METHODS.
                                MORE THAN 25 PERCENT DISCREPANCY BETWEEN INTEGRAL
                                  AND DIFFERENTIAL MEASUREMENTS.
                                M: NEW REQUEST.
=====
53 IODINE 133           NEUTRON          CAPTURE CROSS SECTION
=====
671024          1.00 MV      1.00 KEV     20.0%      2   USA   R.T.BAYARD        BET
                                Q: RADIOACTIVE TARGET 21 HOURS.
                                A: ACCURACY 10 PERCENT IF CROSS SECTION LARGER THAN
                                  9000 BARNS.
                                ABOVE 1 EV RESONANCE INTEGRAL WANTED TO 20 PERCENT
                                  IF BETWEEN 9000 AND 90000 BARNS AND 10 PERCENT
                                  IF LARGER THAN 90000 BARNS.
                                O: WANTED FOR FISSION PRODUCT POISON CALCULATIONS.
=====
54 XENON 131            NEUTRON          ABSORPTION CROSS SECTION
=====
692198          25.3 MV
                                10.0%      2   UK    J.G.TYROR         WIN
                                Q: FOR THERMAL REACTORS.
=====

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54 XENON 131 NEUTRON CAPTURE CROSS SECTION

671025 1.00 MV 1.00 KEV 10.0% 2 USA R.T.BAYARD BET
T.SNYDER GEC
A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE 10 PERCENT
ACCURACY IN RESONANCE INTEGRAL.
O: FISSION PRODUCT.

732064 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC
O: REACTOR CALCULATIONS.
M: NEW REQUEST.

=====

54 XENON 131 NEUTRON ABSORPTION RESONANCE INTEGRAL

682032 0.55 EV 2.00 MEV 10.0% 2 UK J.G.TYROR WIN
O: FOR THERMAL REACTORS.

=====

54 XENON 133 NEUTRON CAPTURE CROSS SECTION

671027 25.3 MV 10.0% 2 USA T.SNYDER GEC
Q: RADIOACTIVE TARGET 5.3 DAYS.
THERMAL OR THERMAL AVERAGE VALUE WANTED.
O: WANTED FOR FISSION PRODUCT POISON CALCULATIONS.

692202 1.00 MV 50.0 KEV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
A: ACCURACY 5. PERCENT TO 10 EV, 20. PERCENT ABOVE.
O: FISSION PRODUCT IN BURNUP CALCULATION.

712045 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS
O: WANTED FOR FISSION PRODUCT CALCULATIONS.

=====

54 XENON 135 NEUTRON CAPTURE CROSS SECTION

671028 1.00 MV 2.00 EV 5.0% 2 USA L.W.NORDHEIM GA
Q: RADIOACTIVE TARGET 9.3 HOURS.
O: FOR DESIGN OF THORIUM CYCLE REACTORS.

732065 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC
O: REACTOR CALCULATIONS.
M: NEW REQUEST.

=====

54 XENON 135 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

671029 25.3 MV 2 USA R.EHRLICH KAP
Q: RADIOACTIVE TARGET 9.2 HOURS.
GAMMA RAY SPECTRA WANTED FOR GAMMA RAY ENERGIES
BETWEEN 1 AND 8 MEV.
A: GAMMA RESOLUTION 10-20 PERCENT.
O: NEEDED FOR GAMMA SHIELDING AND HEATING
CALCULATIONS.

=====

55 CESIUM 133 NEUTRON INELASTIC CROSS SECTION

732066 15.0 MEV 50.0% 1 FR J.Y.BARRE CAD
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.

-----STATUS-----

SAC EVALUATION IN PROGRESS (1973).

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55 CESIUM 133 NEUTRON ABSORPTION CROSS SECTION

732069 500. EV 15.0 MEV 30.0% 2 FR C.DEVILLERS SAC
O: FOR FAST REACTOR CALCULATIONS.
M: NEW REQUEST.

=====

55 CESIUM 133 NEUTRON CAPTURE CROSS SECTION

671030 1.00 MV 1.00 EV 10.0% 1 USA T.SNYDER GEC
R.T.BAYARD BET
Q: THERMAL OR THERMAL AVERAGE VALUE USEFUL.
O: FOR FISSION PRODUCT POISON CALCULATIONS.

671032 0.50 EV 1.00 KEV 10.0% 1 USA T.SNYDER GEC
R.T.BAYARD BET
A: ENERGIES ABOVE 1.0 EV OF INTEREST TO GIVE 10
PERCENT IN RESONANCE INTEGRAL.
O: FOR CALCULATION OF FISSION PRODUCT POISONS.

732067 10.0 MV 5.00 KEV 10.0% 1 FR H.TELLIER SAC
O: BURN UP PHYSICS.
M: NEW REQUEST.

55 CESIUM 133 NEUTRON CAPTURE CROSS SECTION (CONTINUED)

732068 500. EV 200. KEV 10.0% 1 FR J.Y.BARRE CAD

Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.

-----STATUS-----

SAC EVALUATION IN PROGRESS (1973).

55 CESIUM 134 NEUTRON CAPTURE CROSS SECTION

692206 1.00 MV 50.0 KEV 2 JAP JAPAN NUCLEAR DATA COMMITTEE JAE

A: ACCURACY 10. PERCENT BELOW 10 EV, 25. PERCENT
ABOVE.
O: FISSION PRODUCT IN BURNUP CALCULATION.

55 CESIUM 135 NEUTRON CAPTURE CROSS SECTION

732070 500. EV 200. KEV 30.0% 2 FR J.Y.BARRE CAD

Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.

56 BARIUM 136 NEUTRON CAPTURE CROSS SECTION

693023 10.0 KEV 100. KEV 10.0% 2 AUL J.L.SYMONDS AUA

Q: RESONANCE PARAMETERS ALSO REQUIRED.
P AND D WAVE STRENGTH FUNCTIONS ALSO NEEDED.
O: FOR FISSION PRODUCT CALCULATIONS AND ASTROPHYSICS.

59 PRASEODYMIUM 141 NEUTRON RESONANCE PARAMETERS

692214 5.00 KEV 3 ITY V.BENZI BOL

Q: PARTIAL RADIATION WIDTHS NEEDED.
A: ACCURACY REQUIRED TO BETTER THAN 15 PERCENT.

59 PRASEODYMIUM 143 NEUTRON CAPTURE CROSS SECTION

692217 1.00 MV 50.0 KEV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE

A: ACCURACY 5 PERCENT TO 10 EV, 20 PERCENT ABOVE.
O: FISSION PRODUCT IN BURNUP CALCULATION.

60 NEODYMIUM 143 NEUTRON CAPTURE CROSS SECTION

671034 1.00 MV 1.00 KEV 10.0% 1 USA R.T.BAYARD BET
T.SNYDER GEC

A: ENERGIES ABOVE 1.0 EV OF INTEREST TO GIVE 10
PERCENT IN RESONANCE INTEGRAL.
O: FOR CALCULATION OF FISSION PRODUCT POISONS.

702018 1.00 EV 50.0 KEV 20.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE

O: FISSION PRODUCT IN BURNUP CALCULATIONS.

732071 10.0 MV 5.00 KEV 10.0% 1 FR H.TELLIER SAC

O: BURN UP PHYSICS.
M: NEW REQUEST.

732072 500. EV 200. KEV 10.0% 2 FR J.Y.BARRE CAD

O: BURN UP PHYSICS.
M: NEW REQUEST.

-----STATUS-----

SAC EVALUATION IN PROGRESS (1973).

60 NEODYMIUM 145 NEUTRON CAPTURE CROSS SECTION

671036 1.00 MV 1.00 KEV 10.0% 1 USA R.T.BAYARD BET
T.SNYDER GEC
R.EHRLICH KAP

A: ENERGIES ABOVE 1.0 EV OF INTEREST TO GIVE 10
PERCENT IN RESONANCE INTEGRAL.
O: FOR CALCULATION OF FISSION PRODUCT POISONS.

732073 10.0 MV 5.00 KEV 10.0% 1 FR H.TELLIER SAC

O: BURN UP STUDY.
M: NEW REQUEST.

732074 500. EV 200. KEV 10.0% 2 FR J.Y.BARRE CAD

O: BURN UP STUDY.
M: NEW REQUEST.

STATUS-----STATUS

SAC EVALUATION IN PROGRESS (1973).

=====

60 NEODYMIUM 146 NEUTRON CAPTURE CROSS SECTION

=====

732075 500. EV 200. KEV 20.0% 2 FR J.Y.BARRE CAD

O: BURN UP STUDY.
M: NEW REQUEST.

STATUS-----STATUS

SAC EVALUATION IN PROGRESS (1973).

=====

60 NEODYMIUM 147 NEUTRON CAPTURE CROSS SECTION

=====

671039 1.00 MV 1.00 KEV 1 USA R.EHRLICH KAP
R.T.BAYARD BET
T.SNYDER GEC

Q: RADIOACTIVE TARGET, 11 DAYS.
THERMAL AVERAGE OR 0.025 EV VALUE WANTED.
A: ACCURACY 20 PERCENT IF ABSORPTION CROSS SECTION
IN RANGE 10 TO 100 BARNS, 10 PERCENT IF BETWEEN
100 AND 1000 BARNS AND 5 PERCENT IF LARGER.
ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE
INTEGRAL TO 20 PERCENT IF BETWEEN 100 AND 1000
BARNS, 10 PERCENT IF 1000 TO 10000 BARNS AND
5 PERCENT IF LARGER.
O: DECAYS TO IMPORTANT FISSION PRODUCT.

691812 25.3 MV 2 CAN W.H.WALKER CRC

A: REQUIRED WITH 350 BARN ACCURACY.
O: FISSION PRODUCT WITH UNKNOWN CROSS SECTION.

712046 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS

O: WANTED FOR FISSION PRODUCT CALCULATIONS.

732076 10.0 MV 5.00 KEV 10.0% 1 FR H.TELLIER SAC

O: BURN UP PHYSICS.
M: NEW REQUEST.

=====

60 NEODYMIUM 148 NEUTRON CAPTURE CROSS SECTION

=====

732077 500. EV 200. KEV 20.0% 2 FR J.Y.BARRE CAD

O: BURN UP STUDY.
M: NEW REQUEST.

=====

61 PROMETHIUM 147 NEUTRON ABSORPTION CROSS SECTION

=====

682033 25.3 MV 10.0% 2 UK J.G.TYROR WIN

O: FOR THERMAL REACTORS.

STATUS-----STATUS

HAR MACMILLAN - WORK IN PROGRESS.

=====

61 PROMETHIUM 147 NEUTRON CAPTURE CROSS SECTION

=====

671042 1.00 MV 1.00 KEV 10.0% 1 USA R.T.BAYARD BET
T.SNYDER GEC

Q: RADIOACTIVE TARGET - 2.6 YEAR.
WANT FORMATION OF BOTH PM-148 (5.4 DAYS) AND THE
PM-148 ISOMER (41.5 DAYS).
A: ENERGIES ABOVE 1.0 EV OF INTEREST TO GIVE 10
PERCENT IN RESONANCE INTEGRAL.
O: NEEDED FOR CALCULATION OF FISSION PRODUCT POISONS.

682034 100. EV 1.00 MEV 20.0% 3 UK C.G.CAMPBELL WIN

A: ACCURACY IS FOR AVERAGE VALUE OF THE ERROR BETWEEN
E AND 2E.
O: FOR FAST REACTORS.

702019 1.00 EV 50.0 KEV 20.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE

O: FISSION PRODUCT IN BURNUP CALCULATIONS.

712047 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS

O: WANTED FOR FISSION PRODUCT CALCULATIONS.

732078 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD

Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
O: FISSION PRODUCT EFFECT IN FAST REACTORS.
M: NEW REQUEST.

STATUS-----STATUS

MTR CODDING+ - NSE 43 58(1971), RESONANCE PARAMETERS.

SAC EVALUATION IN PROGRESS (1973).

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=====
61 PROMETHIUM 147          NEUTRON          ABSORPTION RESONANCE INTEGRAL
=====
692226  0.55 EV          2.00 MEV          10.0%          2      UK      J.G.TYROR          WIN
                                         O: FOR THERMAL REACTORS.
-----STATUS-----
MTR      CODDING+ - NSE 43 58(1971).
=====
61 PROMETHIUM 148          NEUTRON          CAPTURE CROSS SECTION
=====
671044  1.00 MV          1.00 KEV          10.0%          1      USA      R.T.BAYARD          BET
                                         T.SNYDER            GEC
                                         Q: RADIOACTIVE TARGET - 41 DAY ISOMER.
                                         A: ENERGIES ABOVE 1.0 EV OF INTEREST TO GIVE 10
                                         PERCENT IN RESONANCE INTEGRAL.
                                         O: FOR CALCULATION OF FISSION PRODUCT POISONS.
671046  1.00 MV          1.00 EV          10.0%          1      USA      R.T.BAYARD          BET
                                         T.SNYDER            GEC
                                         R.EHRLICH           KAP
                                         Q: CROSS SECTION IS WANTED FOR THE 5.4 D ISOMER.
                                         VALUE AT 0.025 EV OR THERMAL AVERAGE WANTED.
                                         O: FOR FISSION PRODUCT POISON CALCULATIONS.
691813  5.00 EV          500. EV          20.0%          3      CAN      W.H.WALKER          CRC
                                         Q: FOR THE ISOMERIC STATE (42 D).
                                         ADDITIONAL DATA NEEDED TO DETERMINE DEPENDENCE ON
                                         NEUTRON TEMPERATURE AND EPITHERMAL FLUX.
692229  1.00 MV          50.0 KEV          1.00%          1      JAP      JAPAN NUCLEAR DATA COMMITTEE          JAE
                                         A: ACCURACY 5 PERCENT TO 10 EV, 20 PERCENT ABOVE.
                                         O: FISSION PRODUCT IN BURNUP CALCULATION.
=====
61 PROMETHIUM 149          NEUTRON          CAPTURE CROSS SECTION
=====
671049  1.00 MV          1.00 KEV          20.0%          1      USA      R.T.BAYARD          BET
                                         T.SNYDER            GEC
                                         R.EHRLICH           KAP
                                         Q: RADIOACTIVE TARGET - 53 HOUR.
                                         0.025 EV VALUE OR THERMAL AVERAGE WANTED.
                                         A: ACCURACY 10 PERCENT WANTED IF CROSS SECTION
                                         GREATER THAN 1000 BARNS.
                                         ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE
                                         INTEGRAL TO 10 PERCENT IF GREATER THAN 10000
                                         BARNS OR 20 PERCENT IF BETWEEN 1000 AND 10000
                                         BARNS.
=====
61 PROMETHIUM 151          NEUTRON          CAPTURE CROSS SECTION
=====
671057  1.00 MV          1.00 KEV          10.0%          2      USA      R.T.BAYARD          BET
                                         T.SNYDER            GEC
                                         Q: RADIOACTIVE TARGET 28 HOUR.
                                         0.025 EV OR THERMAL AVERAGE WANTED.
                                         A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE
                                         INTEGRAL TO 10 PERCENT.
                                         O: FOR CALCULATION OF FISSION PRODUCT POISONS.
=====
62 SAMARIUM                NEUTRON          RESONANCE PARAMETERS
=====
692230          200. EV          3      ITY      V.BENZI            BOL
                                         Q: PARTIAL RADIATION WIDTHS NEEDED.
                                         A: ACCURACY REQUIRED TO BETTER THAN 15 PERCENT.
=====
62 SAMARIUM 144            NEUTRON          N,2N
=====
693024  14.0 MEV          10.0%          3      HUN      J.CSIKAI           KOS
                                         A: INCIDENT ENERGY RESOLUTION 200 KEV.
                                         O: NEEDED FOR NEUTRON ACTIVATION ANALYSIS AND CROSS
                                         SECTION SYSTEMATICS.
=====
62 SAMARIUM 147            NEUTRON          CAPTURE CROSS SECTION
=====
732079  500. EV          200. KEV          20.0%          1      FR       J.Y.BARRE          CAD
                                         Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE
                                         TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
                                         O: FISSION PRODUCT EFFECT IN FAST REACTORS.
                                         M: NEW REQUEST.
=====
62 SAMARIUM 149            NEUTRON          CAPTURE CROSS SECTION
=====
712048  1.00 MV          1.00 KEV          5.0%          3      DEN      F.HOEJERUP          RIS
                                         O: WANTED FOR FISSION PRODUCT CALCULATIONS.
732080  10.0 MV          5.00 KEV          10.0%          2      FR       H.TELLIER           SAC
                                         Q: REACTOR CALCULATIONS.
                                         M: NEW REQUEST.

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732081 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD
 Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS
 SAC EVALUATION IN PROGRESS (1973).

62 SAMARIUM 150 NEUTRON CAPTURE CROSS SECTION

671052 1.00 MV 1.00 KEV 5.0% 1 USA R.T.BAYARD T.SNYDER BET GEC
 A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO BETWEEN 2 AND 5 PERCENT.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

692245 1.00 MV 50.0 KEV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY 5 PERCENT TO 10 EV, 20 PERCENT ABOVE.
 O: FISSION PRODUCT IN BURNUP CALCULATION.

62 SAMARIUM 151 NEUTRON CAPTURE CROSS SECTION

671054 1.00 MV 1.00 KEV 5.0% 1 USA R.T.BAYARD T.SNYDER R.EHRLICH BET GEC KAP
 Q: RADIOACTIVE TARGET 90 YEAR.
 A: DESIRED ENERGY RESOLUTION 5 PERCENT.
 ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO BETWEEN 2 AND 5 PERCENT.
 O: WANTED FOR CALCULATION OF FISSION PRODUCT POISONS.

682035 100. EV 1.00 MEV 20.0% 3 UK C.G.CAMPBELL WIN
 A: ACCURACY IS FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E.
 O: FOR FAST REACTORS.

732082 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC
 O: REACTOR CALCULATIONS.
 M: NEW REQUEST.

732083 500. EV 200. KEV 20.0% 1 FR J.Y.BARRE CAD
 Q: RELATIVE VALUE VERSUS ENERGY OR VALUE RELATIVE TO CAPTURE IN ANOTHER NUCLEUS SUCH AS U-238.
 O: FISSION PRODUCT EFFECT IN FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS
 SAC EVALUATION IN PROGRESS (1973).

62 SAMARIUM 152 NEUTRON CAPTURE CROSS SECTION

671059 1.00 MV 1.00 KEV 10.0% 2 USA R.T.BAYARD T.SNYDER BET GEC
 A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 10 PERCENT.
 O: FISSION PRODUCT POISON.

692250 1.00 MV 10.0 EV 5.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FISSION PRODUCT IN BURNUP CALCULATION.

62 SAMARIUM 152 NEUTRON N,P

702020 16.0 MEV 10.0% 3 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR ACTIVATION ANALYSIS.

62 SAMARIUM 153 NEUTRON CAPTURE CROSS SECTION

671061 1.00 MV 1.00 KEV 20.0% 2 USA R.T.BAYARD R.EHRLICH BET KAP
 Q: RADIOACTIVE TARGET - 47 HOURS.
 A: ACCURACY OF 10 PERCENT REQUIRED IF CROSS SECTION GREATER THAN 30000 BARNS.
 ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 20 PERCENT IF BETWEEN 300 AND 300 BARNS OR 10 PERCENT IF LARGER.
 O: FOR CALCULATION OF FISSION PRODUCT POISON.

691814 25.3 MV 3 CAN W.H.WALKER CRC
 A: REQUIRED WITH A 10000 BARN ACCURACY.
 O: FISSION PRODUCT WITH UNKNOWN CROSS SECTION.

63 EUROPIUM NEUTRON TOTAL CROSS SECTION

692253 10.0 KEV 2.00 MEV 5.0% 2 GER F.WELLER KFK

STATUS-----STATUS

COL RAHN+ - PR/C 6 251(1972), PARAMETERS FROM 0.32 TO 99 EV.

63 EUROPIUM 151 NEUTRON CAPTURE RESONANCE INTEGRAL

693027 25.3 MV 10.0 KEV 5.0% 2 DDR D.ALBERT ROS
 O: CROSS SECTION DATA NEEDED FOR EVALUATION OF MEASURED ACTIVATION RATES BY MEANS OF FOILS (ESPECIALLY SPECTRAL INDICES) FOR THERMAL NEUTRON FLUXES.

693028 1.00 EV 5.0% 2 BUL V.CHRISTOV BAC
 O: FOR ACTIVATION DETECTORS FOR THERMAL NEUTRON FLUX DETERMINATION.

63 EUROPIUM 153 NEUTRON CAPTURE CROSS SECTION

671064 1.00 MV 1.00 KEV 2 USA T.SNYDER GEC
 G.DESSAUER SRL
 A: ACCURACY OF 2 PERCENT NEAR THERMAL AND 5 PERCENT ABOVE.
 ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 10 PERCENT.
 O: FOR CALCULATION OF FISSION PRODUCT POISON.

732085 1.00 EV 5.00 KEV 10.0% 3 FR H.TELLIER SAC
 O: REACTOR CALCULATIONS.
 M: NEW REQUEST.

STATUS-----STATUS

RPI KNOX+ - USDC-9 168(1973), IN PROGRESS.

63 EUROPIUM 153 NEUTRON RESONANCE PARAMETERS

692263 25.0 EV 200. EV 10.0% 2 GER F.WELLER KFK
 Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 O: FISSION PRODUCT IMPORTANT IN FAST REACTOR BURNUP CALCULATIONS.

63 EUROPIUM 154 NEUTRON CAPTURE CROSS SECTION

671066 1.00 MV 1.00 KEV 10.0% 2 USA R.T.BAYARD BET
 T.SNYDER GEC
 Q: RADIOACTIVE TARGET 16 YEARS.
 RESONANCE PARAMETERS WANTED.
 A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 10 PERCENT.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

692267 1.00 MV 50.0 KEV 2 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY 10 PERCENT TO 10 EV, 25 PERCENT ABOVE.
 O: FISSION PRODUCT IN BURNUP CALCULATION.

63 EUROPIUM 155 NEUTRON CAPTURE CROSS SECTION

671068 1.00 MV 1.00 KEV 10.0% 2 USA R.T.BAYARD BET
 T.SNYDER GEC
 Q: RADIOACTIVE TARGET 1.8 YEARS.
 RESONANCE PARAMETERS NEEDED.
 A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 10 PERCENT.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

712050 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS
 O: WANTED FOR FISSION PRODUCT CALCULATIONS.

63 EUROPIUM 156 NEUTRON CAPTURE CROSS SECTION

691815 25.3 MV 3 CAN W.H.WALKER CRC
 A: REQUIRED WITH A 700 BARN ACCURACY.
 O: FISSION PRODUCT WITH UNKNOWN CROSS SECTION.

64 GADOLINIUM NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

671070 1.50 MEV 10.0 MEV 10.0% 1 USA T.SNYDER GEC

64 GADOLINIUM NEUTRON CAPTURE CROSS SECTION

742044 3.00 MEV 10.0% 2 FR A.MICHAUDON BRC
 M: NEW REQUEST.

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64 GADOLINIUM NEUTRON NEUTRON EMISSION CROSS SECTION

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671071 1.50 MEV 10.0 MEV 15.0% 1 USA T.SNYDER GEC

Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 A: INCIDENT AND EXIT RESOLUTION 15 PERCENT.
 O: FOR DESIGN OF THERMAL REACTORS HAVING APPRECIABLE QUANTITIES OF GD.

=====

64 GADOLINIUM NEUTRON RESONANCE PARAMETERS

=====

692270 200. EV 3 ITY V.BENZI BOL

Q: PARTIAL RADIATION WIDTHS NEEDED.
 A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT.

=====

64 GADOLINIUM NEUTRON CAPTURE RESONANCE INTEGRAL

=====

691180 0.50 EV 5.0% 1 USA T.SNYDER GEC

O: FOR EVALUATING RESONANCE PARAMETERS.

=====

64 GADOLINIUM 155 NEUTRON CAPTURE CROSS SECTION

=====

671072 0.50 EV 1.00 KEV 5.0% 1 USA T.SNYDER GEC

A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 5 PERCENT.
 O: FOR CALCULATING BURN UP IN THERMAL REACTORS.

732086 10.0 MV 5.00 KEV 5.0% 2 FR H.TELLIER SAC

O: CONSUMABLE POISON.
 M: NEW REQUEST.

742001 10.0 KEV 2 SWD H.HAEGGBLOM AE

A: ACCURACY 3 PERCENT TO 10 EV, 10 PERCENT ABOVE.
 O: THERMAL REACTOR CALCULATIONS.
 M: NEW REQUEST.

=====

64 GADOLINIUM 155 NEUTRON RESONANCE PARAMETERS

=====

691182 500. EV 10.0% 1 USA T.SNYDER GEC

Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 MINIMUM ENERGY MUST INCLUDE LOWEST RESOLVED RESONANCE.
 O: REQUIRED TO VERIFY EXISTING MEASUREMENTS.

=====

64 GADOLINIUM 155 NEUTRON CAPTURE RESONANCE INTEGRAL

=====

691181 0.50 EV 5.0% 1 USA T.SNYDER GEC

O: FOR EVALUATING RESONANCE PARAMETERS.

=====

64 GADOLINIUM 156 NEUTRON CAPTURE CROSS SECTION

=====

671073 1.00 MV 1.00 KEV 5.0% 1 USA T.SNYDER GEC

A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 5 PERCENT.
 O: FOR CALCULATING OF BURN UP IN THERMAL REACTORS.

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64 GADOLINIUM 156 NEUTRON RESONANCE PARAMETERS

=====

691183 2.00 KEV 5.0% 1 USA T.SNYDER GEC

Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 MINIMUM ENERGY TO INCLUDE LOWEST RESOLVED RESONANCE.
 O: REQUIRED TO VERIFY EXISTING MEASUREMENTS.

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64 GADOLINIUM 156 NEUTRON CAPTURE RESONANCE INTEGRAL

=====

691298 0.50 EV 5.0% 1 USA T.SNYDER GEC

O: FOR EVALUATING RESONANCE PARAMETERS.

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64 GADOLINIUM 157 NEUTRON CAPTURE CROSS SECTION

=====

671074 0.50 EV 1.00 KEV 5.0% 1 USA T.SNYDER GEC

A: ENERGIES ABOVE 1 EV OF INTEREST TO GIVE RESONANCE INTEGRAL TO 5 PERCENT.
 O: FOR CALCULATION OF BURN UP IN THERMAL REACTORS.

712051 1.00 MV 1.00 KEV 5.0% 3 DEN F.HOEJERUP RIS

O: WANTED FOR FISSION PRODUCT CALCULATIONS.

732087 10.0 MV 5.00 KEV 5.0% 2 FR H.TELLIER SAC

O: CONSUMABLE POISON.
 M: NEW REQUEST.

742003 10.0 KEV 2 SWD H.HAEGGBLOM AE
 A: ACCURACY 3 PERCENT TO 10 EV, 10 PERCENT ABOVE.
 O: THERMAL REACTOR CALCULATIONS.
 M: NEW REQUEST.

64 GADOLINIUM 157 NEUTRON RESONANCE PARAMETERS

691185 1.00 KEV 10.0% 1 USA T.SNYDER GEC
 Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 MINIMUM ENERGY TO INCLUDE LOWEST RESOLVED
 RESONANCE.
 O: REQUIRED TO VERIFY EXISTING MEASUREMENTS.

64 GADOLINIUM 157 NEUTRON CAPTURE RESONANCE INTEGRAL

691184 0.50 EV 5.0% 1 USA T.SNYDER GEC
 O: FOR EVALUATING RESONANCE PARAMETERS.

64 GADOLINIUM 158 NEUTRON N,P

702021 16.0 MEV 10.0% 3 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR ACTIVATION ANALYSIS.

66 DYSPROSIUM 161 NEUTRON RESONANCE PARAMETERS

692283 200. EV 3 ITY V.BENZI BOL
 Q: PARTIAL RADIATION WIDTHS NEEDED.
 A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT.

66 DYSPROSIUM 164 NEUTRON CAPTURE CROSS SECTION

692284 2.00 EV 250. EV 5.0% 2 SWT J.BRUNNER WUR
 Q: PRODUCTION OF DY-165 (139 MINUTES).
 O: THERMAL FLUX MEASUREMENTS.

693029 1.00 MV 10.0 EV 5.0% 2 DDR D.ALBERT ROS
 O: CROSS SECTION DATA NEEDED FOR EVALUATION OF
 MEASURED ACTIVATION RATES BY MEANS OF FOILS
 (ESPECIALLY SPECTRAL INDICES) FOR THERMAL
 NEUTRON FLUXES.

STATUS-----STATUS

WUR BRUNNER - MEASUREMENT IN PROGRESS ON NATURAL DY FROM .01 TO 10 EV.

67 HOLMIUM 165 NEUTRON RESONANCE PARAMETERS

692285 200. EV 3 ITY V.BENZI BOL
 Q: PARTIAL RADIATION WIDTHS NEEDED.
 A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT.

68 ERBIUM NEUTRON RESONANCE PARAMETERS

692286 200. EV 3 ITY V.BENZI BOL
 Q: PARTIAL RADIATION WIDTHS NEEDED.
 A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT.

68 ERBIUM 166 NEUTRON N,P

702022 16.0 MEV 10.0% 3 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR ACTIVATION ANALYSIS.

68 ERBIUM 168 NEUTRON N,P

702023 16.0 MEV 10.0% 3 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR ACTIVATION ANALYSIS.

68 ERBIUM 168 NEUTRON N,ALPHA

693030 25.3 MV 10.0% 3 HUN J.CSIKAI KOS
 O: FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION
 SYSTEMATICS WANTED.

69 THULIUM 169 NEUTRON CAPTURE CROSS SECTION

671075 25.3 MV 1.00 KEV 5.0% 1 USA B.R.LEONARD BNW
 O: FOR PRODUCTION AND BURNUP OF THULIUM.

692289 1.00 KEV 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
 Q: PRODUCTION OF TM-170 (130 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

STATUS-----STATUS
 OSL ALSTAD+ - INDC(NOR)-1 1(1972), THERMAL AVERAGE.

69 THULIUM 169 NEUTRON N,2N

692288 15.0 MEV 5.0% 1 FR A.MICHAUDON BRC
 Q: PRODUCTION OF TM-168 (85 DAY).
 O: ACTIVATION DETECTOR.

STATUS-----STATUS

AUB ALFORD+ - BAP 18 775(1973), DATA 13 TO 15 MEV.
 HAR MATHER+ - AWRE/O-72/72, IN PROGRESS 12 TO 14 MEV.
 LRL NETHAWAY - NP/A 190 635(1972), DATA AT 14.4 MEV.

69 THULIUM 169 NEUTRON N,P

692290 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
 Q: PRODUCTION OF ER-169 (9.4 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

69 THULIUM 169 NEUTRON N,ALPHA

692291 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 Q: PRODUCTION OF HO-166 (27 HOUR).
 O: ACTIVATION DETECTOR.

69 THULIUM 169 NEUTRON RESONANCE PARAMETERS

692287 130. EV 200. EV 3 ITY V.BENZI BOL
 Q: RADIATION WIDTH NEEDED.
 A: ACCURACY REQUIRED TO BETTER THAN 15. PERCENT.

69 THULIUM 170 NEUTRON CAPTURE CROSS SECTION

671076 25.3 MV 1.00 KEV 10.0% 1 USA B.R.LEONARD BNW
 G.DESSAUER SRL
 Q: RADIOACTIVE TARGET 125 DAY.
 O: FOR PRODUCTION AND BURNUP OF THULIUM.

69 THULIUM 171 NEUTRON CAPTURE CROSS SECTION

671078 25.3 MV 1.00 KEV 10.0% 1 USA B.R.LEONARD BNW
 G.DESSAUER SRL
 Q: RADIOACTIVE TARGET 1.9 YEAR.
 O: FOR PRODUCTION AND BURNUP OF THULIUM.

70 YTTERBIUM 168 NEUTRON CAPTURE CROSS SECTION

693032 1.00 EV 5.0% 2 BUL V.CHRISTOV BAC
 O: FOR ACTIVATION DETECTORS FOR THERMAL NEUTRON FLUX DETERMINATION.

70 YTTERBIUM 168 NEUTRON CAPTURE RESONANCE INTEGRAL

693031 1.00 EV 5.0% 2 BUL V.CHRISTOV BAC
 O: FOR ACTIVATION DETECTORS FOR THERMAL NEUTRON FLUX DETERMINATION.

70 YTTERBIUM 174 NEUTRON N,P

702024 16.0 MEV 10.0% 3 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 O: FOR ACTIVATION ANALYSIS.

71 LUTETIUM 175 NEUTRON CAPTURE CROSS SECTION

682037 1.00 KEV 1.00 MEV 20.0% 3 FR A.MICHAUDON BRC
 Q: PRODUCTION OF LU-176 (30 THOUSAND-MILLION YEARS) AND LU-176M (3.7 HOURS).
 O: ACTIVATION DETECTOR.
 DISCREPANCY AT 10 KEV (2.5 AND 7 B).
 M: SUBSTANTIAL MODIFICATIONS.

692294 5.00 MV 250. EV 2 SWT J.BRUNNER WUR
 A: ACCURACY 2 PERCENT AT THERMAL, 5 PERCENT ABOVE.
 O: NEUTRON THERMOMETER.

STATUS-----STATUS
 CAS PUBINI+ - NC/A 8 748(1972), THERMAL AVERAGE VALUE.
 MTR YOUNG - BNL-50276 89(1970), THERMAL AVERAGE VALUE.
 WUR BRUNNER + MEASUREMENTS IN PROGRESS .01 TO 10 EV.

71 LUTETIUM 175 NEUTRON N,2N

682036 15.0 MEV 10.0% 3 FR A.MICHAUDON BRC
 Q: PRODUCTION OF LU-174 (165 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

71 LUTETIUM 176 NEUTRON CAPTURE CROSS SECTION

682039 1.00 KEV 3.00 MEV 20.0% 3 FR A.MICHAUDON BRC
 Q: PRODUCTION OF LU-177 (6.2 DAY).
 O: ACTIVATION DETECTOR.
 M: SUBSTANTIAL MODIFICATIONS.

692296 5.00 MV 250. EV 2 SWT J.BRUNNER WUR
 Q: ACTIVATION IS REQUIRED.
 A: ACCURACY 2 PERCENT THERMAL, 5 PERCENT ABOVE.
 O: NEUTRON THERMOMETER.

693033 1.00 EV 5.0% 2 BUL V.CHRISTOV BAC
 O: FOR ACTIVATION DETECTORS FOR THERMAL NEUTRON FLUX DETERMINATION.

693036 1.00 MV 10.0 EV 5.0% 2 DDR D.ALBERT ROS
 O: CROSS SECTION DATA NEEDED FOR EVALUATION OF MEASURED ACTIVATION RATES BY MEANS OF FOILS (ESPECIALLY SPECTRAL INDICES) FOR THERMAL NEUTRON FLUXES.

STATUS-----STATUS
 MTR YOUNG - BNL-50276 89(1970), THERMAL AVERAGE VALUE.
 WUR BRUNNER - MEASUREMENTS IN PROGRESS .01 TO 2 EV.

71 LUTETIUM 176 NEUTRON N,2N

682038 15.0 MEV 10.0% 3 FR A.MICHAUDON BRC

71 LUTETIUM 176 NEUTRON CAPTURE RESONANCE INTEGRAL

693034 25.3 MV 10.0 KEV 5.0% 2 DDR D.ALBERT ROS
 O: CROSS SECTION DATA NEEDED FOR EVALUATION OF MEASURED ACTIVATION RATES BY MEANS OF FOILS (ESPECIALLY SPECTRAL INDICES) FOR THERMAL NEUTRON FLUXES.

693035 1.00 EV 5.0% 2 BUL V.CHRISTOV BAC
 O: FOR ACTIVATION DETECTORS FOR THERMAL NEUTRON FLUX DETERMINATION.

72 HAFNIUM NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

661036 1.50 MEV 10.0 MEV 10.0% 2 USA R.T.BAYARD BET
 A: ACCURACY IN AVERAGE (1-COS) 10 PERCENT.
 ENERGY RESOLUTION - 10 PERCENT.
 O: WANTED FOR THERMAL REACTOR DESIGN.

STATUS-----STATUS
 AE HOLMQVIST+ - AE 430 (1970).
 ANL SHERWOOD+ - NSE 39 67(1969), DATA TO 1.5 MEV.

72 HAFNIUM NEUTRON CAPTURE CROSS SECTION

621023 200. EV 50.0 KEV 20.0% 2 USA R.T.BAYARD BET

621024 1.00 MV 1.00 EV 2.0% 1 USA R.T.BAYARD R.EHRLICH BET KAP
 O: NEEDED FOR MONTE CARLO CALCULATIONS OF BURNUP IN THERMAL REACTORS.


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73 TANTALUM 181          NEUTRON          NEUTRON EMISSION CROSS SECTION
=====
691191  1.50 MEV    15.0 MEV    10.0%    3    USA    J.R.STREETMAN    LAS
          Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
          LOW ENERGY NEUTRONS MUST BE INCLUDED.
          ABSOLUTE SPECTRA AT 30 AND 75 DEGREES MAY SUFFICE.
=====
74 TUNGSTEN            NEUTRON          DIFFERENTIAL ELASTIC CROSS SECTION
=====
742046  1.00 KEV      15.0 MEV    10.0%    1    FR     A.MICHAUDON     BRC
          Q: FOR CRITICAL ASSEMBLIES.
          M: NEW REQUEST.
=====
74 TUNGSTEN            NEUTRON          DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION
=====
742047              15.0 MEV    10.0%    1    FR     A.MICHAUDON     BRC
          Q: FOR CRITICAL ASSEMBLIES.
          M: NEW REQUEST.
=====
74 TUNGSTEN            NEUTRON          CAPTURE CROSS SECTION
=====
742049  1.00 KEV      3.00 MEV    10.0%    1    FR     A.MICHAUDON     BRC
          Q: FOR CRITICAL ASSEMBLIES.
          M: NEW REQUEST.
=====
74 TUNGSTEN            NEUTRON          TOTAL PHOTON PRODUCTION CROSS SECTION
=====
631004  100. KEV      16.0 MEV    20.0%    1    USA    C.E.CLIFFORD    ORL
          Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
          Q: FOR SPACE REACTOR SHIELDING.
691198  2.00 EV       2.50 KEV    15.0%    1    USA    M.R.FLEISHMAN   SNP
          Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
          ABSOLUTE SIGMA(E GAMMA) REQUIRED FOR
          ALL E-GAMMA GREATER THAN 200 KEV.
          A: ALTERNATE ACCURACY 5 MB.
          ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN
          SIGMA(E-GAMMA).
          GAMMA RESOLUTION REQUIRED - 10 PERCENT.
691199  1.00 MEV      10.0 MEV    15.0%    1    USA    M.R.FLEISHMAN   SNP
          Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
          ABSOLUTE SIGMA(E GAMMA) REQUIRED FOR
          ALL E-GAMMA GREATER THAN 200 KEV.
          NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
          A: ALTERNATE ACCURACY 5 MB.
          GAMMA ENERGY RESOLUTION - LESS THAN 2.5
          MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
STATUS-----STATUS
ORL    DICKENS+ - ORNL-4847 (1973), DATA FROM .7 TO 20 MEV AT 125 DEGREES.
=====
74 TUNGSTEN            NEUTRON          N,2N
=====
742048              15.0 MEV    20.0%    1    FR     A.MICHAUDON     BRC
          Q: FOR CRITICAL ASSEMBLIES.
          M: NEW REQUEST.
=====
74 TUNGSTEN            NEUTRON          NEUTRON EMISSION CROSS SECTION
=====
661040  4.00 MEV      16.0 MEV    5.0%     1    USA    C.E.CLIFFORD    ORL
          A: ENERGY RESOLUTION 5 PERCENT.
          Q: FOR SHIELDING.
691196  1.50 MEV      15.0 MEV    10.0%    3    USA    J.R.STREETMAN   LAS
          Q: ABSOLUTE CROSS SECTIONS REQUIRED.
          SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
          500 KEV INCREMENTS OR AS REQUIRED BY STRUCTURE.
          SPECTRA AT A FEW ANGLES MAY SUFFICE.
          A: INCIDENT AND FINAL ENERGY RESOLUTION 500 KEV.
          ANGULAR RESOLUTION - 10 DEGREES.
          Q: FOR SHIELDING.
=====
74 TUNGSTEN 182        NEUTRON          CAPTURE CROSS SECTION
=====
691202  1.00 KEV      10.0 MEV    10.0%    1    USA    H.ALTER          AEC
          Q: FAST BREEDER CONTROL AND BURNUP CALCULATIONS.
=====
74 TUNGSTEN 182        NEUTRON          N,2N
=====
692308              15.0 MEV    20.0%    1    FR     A.MICHAUDON     BRC
          Q: PRODUCTION OF W-181 (140 DAY).
          Q: ACTIVATION DETECTOR.
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74 TUNGSTEN 182          NEUTRON          N,ALPHA
=====
693040  25.3  MV          10.0%      3  HUN  J.CSIKAI      KOS
                                O: FOR NEUTRON ACTIVATION ANALYSIS AND CROSS SECTION
                                SYSTEMATICS WANTED.
=====
74 TUNGSTEN 183          NEUTRON          CAPTURE CROSS SECTION
=====
691203  1.00  KEV          10.0  MEV   10.0%      1  USA  H.ALTER      AEC
                                O: FAST BREEDER CONTROL AND BURN UP CALCULATIONS.
=====
74 TUNGSTEN 184          NEUTRON          CAPTURE CROSS SECTION
=====
691204  10.0  KEV          10.0  MEV   10.0%      1  USA  H.ALTER      AEC
                                O: FAST BREEDER CONTROL AND BURNUP CALCULATIONS.
                                M: SUBSTANTIAL MODIFICATIONS.
692309  1.00  KEV          3.00  MEV   10.0%      1  FR   A.MICHAUDON  BRC
                                Q: PRODUCTION OF W-185 (74 DAY).
                                O: ACTIVATION DETECTOR.
                                M: SUBSTANTIAL MODIFICATIONS.
=====
74 TUNGSTEN 186          NEUTRON          CAPTURE CROSS SECTION
=====
691207  10.0  KEV          10.0  MEV   10.0%      1  USA  H.ALTER      AEC
                                O: FAST BREEDER CONTROL AND BURNUP CALCULATIONS.
                                M: SUBSTANTIAL MODIFICATIONS.
692313  1.00  KEV          3.00  MEV   10.0%      1  FR   A.MICHAUDON  BRC
                                Q: PRODUCTION OF W-187 (24 HOUR).
                                O: ACTIVATION DETECTOR.
                                M: SUBSTANTIAL MODIFICATIONS.
=====
74 TUNGSTEN 186          NEUTRON          N,2N
=====
692312          15.0  MEV          20.0%      1  FR   A.MICHAUDON  BRC
                                Q: PRODUCTION OF W-185 (74 DAY).
                                O: ACTIVATION DETECTOR.
=====
76 OSMIUM 186           NEUTRON          CAPTURE CROSS SECTION
=====
701023  1.00  KEV          100.  KEV    9.0%       3  USA  R.L.MACKLIN  ORL
                                Q: NEED AVERAGE CAPTURE FOR A MAXWELLIAN WITH A
                                TEMPERATURE OF 30 KEV.
                                O: FOR NUCLEOSYNTHESIS STUDIES.
                                M: NEW REQUEST.
STATUS-----STATUS
ORL  PEREY+ - ORNL 4803 (1974), DATA 4.8 TO 8.5 MEV.
LRL  BROWN+ - MEASUREMENTS PLANNED TO 100 KEV.
=====
76 OSMIUM 187           NEUTRON          CAPTURE CROSS SECTION
=====
701024  1.00  KEV          100.  KEV    9.0%       3  USA  R.L.MACKLIN  ORL
                                Q: NEED AVERAGE CAPTURE FOR A MAXWELLIAN WITH A
                                TEMPERATURE OF 30 KEV.
                                O: FOR NUCLEOSYNTHESIS STUDIES.
                                M: NEW REQUEST.
STATUS-----STATUS
ORL  PEREY+ - ORNL 4803 (1974), DATA 4.8 TO 8.5 MEV.
LRL  BROWN+ - MEASUREMENTS PLANNED TO 100 KEV.
=====
77 IRIDIUM 191          NEUTRON          CAPTURE CROSS SECTION
=====
742051  1.00  KEV          3.00  MEV   15.0%      1  FR   A.MICHAUDON  BRC
                                O: FOR ACTIVATION.
                                M: NEW REQUEST.
=====
77 IRIDIUM 191          NEUTRON          N,2N
=====
742050          15.0  MEV          10.0%      1  FR   A.MICHAUDON  BRC
                                O: FOR ACTIVATION.
                                M: NEW REQUEST.
=====
77 IRIDIUM 193          NEUTRON          CAPTURE CROSS SECTION
=====
742053  1.00  KEV          3.00  MEV   20.0%      2  FR   A.MICHAUDON  BRC
                                O: FOR ACTIVATION.
                                M: NEW REQUEST.
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77 IRIDIUM 193          NEUTRON          N,2N
=====

742052          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     O: FOR ACTIVATION.
                                     M: NEW REQUEST.

=====
78 PLATINUM          NEUTRON          DIFFERENTIAL ELASTIC CROSS SECTION
=====

742054    1.00 KEV    15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
78 PLATINUM          NEUTRON          DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION
=====

742055          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
78 PLATINUM          NEUTRON          CAPTURE CROSS SECTION
=====

742058    1.00 KEV    3.00 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
78 PLATINUM          NEUTRON          TOTAL PHOTON PRODUCTION CROSS SECTION
=====

742056    1.00 KEV    15.0 MEV    20.0%    2    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
78 PLATINUM          NEUTRON          N,2N
=====

742057          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
78 PLATINUM 190      NEUTRON          N,P
=====

742059          15.0 MEV    20.0%    2    FR    A.MICHAUDON    BRC
                                     O: FOR ACTIVATION.
                                     M: NEW REQUEST.

=====
78 PLATINUM 192      NEUTRON          N,P
=====

742060          15.0 MEV    20.0%    2    FR    A.MICHAUDON    BRC
                                     O: FOR ACTIVATION.
                                     M: NEW REQUEST.

=====
78 PLATINUM 198      NEUTRON          CAPTURE CROSS SECTION
=====

742061    1.00 KEV    3.00 MEV    20.0%    2    FR    A.MICHAUDON    BRC
                                     O: FOR ACTIVATION.
                                     M: NEW REQUEST.

=====
79 GOLD 197          NEUTRON          DIFFERENTIAL ELASTIC CROSS SECTION
=====

742062    1.00 KEV    15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
79 GOLD 197          NEUTRON          DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION
=====

742063          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
                                     M: NEW REQUEST.

=====
79 GOLD 197          NEUTRON          CAPTURE CROSS SECTION
=====

671082    0.50 EV    1.00 KEV    1.0%    2    USA    R.T.BAYARD    BET
                                     O: INDIVIDUAL AND AVERAGE RESONANCE PARAMETERS
                                     REQUIRED.
                                     A: ENERGIES ABOVE 0.5 EV WANTED SO AS TO GIVE
                                     INFINITE DILUTION RESONANCE INTEGRAL TO
                                     1 PERCENT.
                                     O: FOR USE AS A STANDARD.

682040    25.3 MV          0.1%    1    JAP    JAPAN NUCLEAR DATA COMMITTEE    JAE
                                     O: PRECISE STANDARDIZATION OF THERMAL NEUTRON FLUX
                                     DENSITY.

682041    10.0 KEV    3.00 MEV          1    BLG    A.FABRY    MQL
                                     A: ACCURACY 5 PERCENT TO 200 KEV, 2 PERCENT ABOVE.
                                     O: DETECTOR APPLICATIONS.

```

692317	1.00 KEV	3.00 MEV	10.0%	1	FR	A.MICHAUDON	BRC
Q: PRODUCTION OF AU-198 (2.7 DAY). O: ACTIVATION DETECTOR. M: SUBSTANTIAL MODIFICATIONS.							
701025	1.00 KEV	1.00 MEV	5.0%	1	USA	W.GRAYSON	LRL
O: REQUIRED AS PRIMARY STANDARD.							
721073	10.0 KEV	1.00 MEV	2.0%	2	USA	R.S.CASWELL	NBS
O: REQUIRED AS PRIMARY STANDARD.							

STATUS-----STATUS

AE HELLSTROM - JNE 27 71(1973), DATA 30 KEV TO 1.5 MEV.
 LRL CZIRR+ - NSE 52 299(1973), DATA 167 EV TO 600 KEV.
 RPI BLOCK - USNDC-3 164(1972), IN PROGRESS TO 80 KEV.
 GEL LISKIEN+ - EANDC(E)-157 (1973), IN PROGRESS 100 KEV TO 2.2 MEV.

79 GOLD 197 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

693042				3	BZL	L.O.B.AGHINA	IEN
Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.							

79 GOLD 197 NEUTRON N,2N

692315	15.0 MEV	10.0%		1	FR	A.MICHAUDON	BRC
Q: PRODUCTION OF AU-196 M(9.7 H) AND AU-196 (6.18 D). O: ACTIVATION DETECTOR.							

79 GOLD 197 NEUTRON RESONANCE PARAMETERS

693041	2.00 KEV			3	BZL	L.O.B.AGHINA	IEN
O: SPECIAL INTEREST IN THE RATIO OF S WAVE STRENGTH FUNCTIONS S(J=1)/S(J=2) AND ITS VARIATION AS A FUNCTION OF THE ENERGY INTERVAL.							

80 MERCURY 198 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

693043				3	BZL	L.O.B.AGHINA	IEN
Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.							

80 MERCURY 200 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

693044				3	BZL	L.O.B.AGHINA	IEN
Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.							

80 MERCURY 201 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

693045				3	BZL	L.O.B.AGHINA	IEN
Q: GAMMA SPECTRA BETWEEN RESONANCES WANTED. O: SPECIAL INTEREST ON INTERFERENCE AND DIRECT CAPTURE.							

81 THALLIUM 203 NEUTRON CAPTURE CROSS SECTION

682044	1.00 KEV	3.00 MEV	10.0%	1	FR	A.MICHAUDON	BRC
Q: PRODUCTION OF TL-204 (3 YEAR). O: ACTIVATION DETECTOR. M: SUBSTANTIAL MODIFICATIONS.							

81 THALLIUM 203 NEUTRON N,2N

682043	15.0 MEV	10.0%		1	FR	A.MICHAUDON	BRC
Q: PRODUCTION OF TL-202 (12 DAY). O: ACTIVATION DETECTOR.							

81 THALLIUM 204 NEUTRON CAPTURE CROSS SECTION

651008	25.3 MV		10.0%	2	USA	B.R.LEONARD	BNW
Q: RADIOACTIVE TARGET - 3.8 YEAR. O: WANTED TO TEST FEASIBILITY OF TL-204 PRODUCTION.							

81 THALLIUM 205		NEUTRON		CAPTURE CROSS SECTION			
682046	1.00 KEV	3.00 MEV	10.0%	1	FR	A.MICHAUDON	BRC
							Q: PRODUCTION OF TL-206 (4.2 MINUTE).
							O: ACTIVATION DETECTOR.
							M: SUBSTANTIAL MODIFICATIONS.
81 THALLIUM 205		NEUTRON		N.2N			
682045		15.0 MEV	10.0%	1	FR	A.MICHAUDON	BRC
							Q: PRODUCTION OF TL-204 (3 YEAR).
							O: ACTIVATION DETECTOR.
							M: SUBSTANTIAL MODIFICATIONS.
82 LEAD		NEUTRON		TOTAL CROSS SECTION			
682047		10.0 KEV	2.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
							O: FOR STANDARD CROSS SECTION.
82 LEAD		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION			
691212	80.0 EV	800. KEV	15.0%	2	USA	M.A.FLEISHMAN	SNP
							Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
							ABSOLUTE SIGMA (E-GAMMA) REQUIRED FOR
							ALL E-GAMMA GREATER THAN 200 KEV.
							A: ALTERNATE ACCURACY 5 MB.
							ENERGY RESOLUTION TO REPRODUCE MAJOR VARIATIONS IN
							SIGMA(E-GAMMA).
							GAMMA RESOLUTION REQUIRED - 10 PERCENT.
691213	1.00 MEV	10.0 MEV	15.0%	1	USA	M.R.FLEISHMAN	SNP
							Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
							ABSOLUTE SIGMA (E-GAMMA) REQUIRED FOR
							ALL E-GAMMA GREATER THAN 200 KEV.
							NEUTRON ENERGY INTERVAL REQUIRED - 500 KEV.
							A: ALTERNATE ACCURACY 5 MB.
							GAMMA ENERGY RESOLUTION - LESS THAN 2.5
							MEV, 10 PERCENT, GREATER THAN 2.5 MEV, 250 KEV.
692319	1.00 KEV	16.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC
							Q: GAMMA SPECTRA REQUIRED.
							A: NEUTRON AND GAMMA ENERGY RESOLUTION 500 KEV.
							O: FOR SHIELDING CALCULATION.
							NEW EVALUATION TO BE DONE IF NEW EXPERIMENTAL
							DATA.
82 LEAD		NEUTRON		NEUTRON EMISSION CROSS SECTION			
631005	2.00 MEV	16.0 MEV	5.0%	2	USA	C.E.CLIFFORD	ORL
							Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
692318	500. KEV	16.0 MEV	10.0%	2	FR	C.DEVILLERS	SAC
							Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
							ENERGY STEP - 500 KEV (INCIDENT NEUTRONS).
							A: ENERGY RESOLUTION - 250 KEV (EMITTED NEUTRONS)
							O: FOR SHIELDING CALCULATION.
							NEW EVALUATION TO BE DONE IF NEW EXPERIMENTAL
							DATA.
88 RADIUM 226		NEUTRON		CAPTURE CROSS SECTION			
682048	25.3 MV		3.0%	3	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
							O: PRECISE STANDARDIZATION OF EMISSION RATE OF
							NEUTRON SOURCE.
89 ACTINIUM 227		NEUTRON		RESONANCE PARAMETERS			
692322		20.0 EV	20.0%	2	BLG	A.DE TROYER	UMK
							Q: NEUTRON AND CAPTURE WIDTH NEEDED.
							O: ISOTOPE CONTEMPLATED AS POWER SOURCE FOR
							SATELLITES.
							DATA NEEDED FOR EVALUATION OF BURN-UP DURING
							PRODUCTION BY REACTOR IRRADIATION OF RA-226.
90 THORIUM 232		NEUTRON		DIFFERENTIAL ELASTIC CROSS SECTION			
721074	1.00 MEV	5.00 MEV	10.0%	3	USA	R.AVERY	ANL
							STATUS-----STATUS
							ANL SMITH+ - WORK IN PROGRESS TO 4.0 MEV.
90 THORIUM 232		NEUTRON		ENERGY DIFFERENTIAL INELASTIC CROSS SECTION			
682049	10.0 KEV	10.0 MEV	10.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
							Q: LEVEL EXCITATION CROSS SECTIONS DESIRABLE.
							O: FOR FAST REACTORS.

90 THORIUM 232 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION (CONTINUED)

692325 10.0 MEV 10.0% 3 GER H.GERWIN JUL
 721075 1.00 MEV 4.00 MEV 5.0% 3 USA R.AVERY ANL

A: IF ANISOTROPIC, NEED 20 PERCENT ACCURACY IN (1-COS). INCIDENT AND EXIT ENERGY RESOLUTION 20 PERCENT.

-----STATUS-----

FEI ZHURAVLEV+ - 71 KIEV, DATA AT 9.2 MEV.
 FOA HOLMBERG+ - NP/A 127 149(1969), DATA 1 TO 2.2 MEV.
 SUN MC MURRY+ - INDC(SAF)-4 5(1972), IN PROGRESS.
 ANL SMITH+ - WORK IN PROGRESS TO 4.0 MEV.

90 THORIUM 232 NEUTRON ABSORPTION CROSS SECTION

691398 100. EV 1.00 MEV 2 USA R.T.BAYARD BET

A: ACCURACY 5 PERCENT BELOW 10 KEV AND 3 PERCENT ABOVE. INTERMEDIATE ACCURACY WOULD BE USEFUL.

90 THORIUM 232 NEUTRON CAPTURE CROSS SECTION

621034 0.50 EV 2.00 KEV 1 USA R.T.BAYARD BET

A: NEED LESS THAN 5 PERCENT IN RESONANCE INTEGRAL BUT 10 PERCENT IS USEFUL.
 O: FOR THERMAL BREEDER CALCULATIONS.

692329 1.00 KEV 1.00 MEV 3.0% 3 UK C.G.CAMPBELL WIN

O: FOR FAST REACTORS.

692330 4.00 KEV 10.0 MEV 1 GER H.GERWIN JUL

A: ACCURACY 5 PERCENT TO 2 MEV AND 10 PERCENT ABOVE.

732090 25.3 MV 2.0% 3 FR H.TELLIER SAC

M: NEW REQUEST.

-----STATUS-----

FEI CHELNOKOV+ - YFI-13 6(1972), DATA 200 EV TO 35 KEV.
 CCP STAVISKY+ - AE 31 107(1970), RELATIVE TO AU.
 COL RAHN+ - BNL-50276 44(1970), WORK IN PROGRESS.

90 THORIUM 232 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

671084 0.50 EV 10.0 MEV 10.0% 2 USA R.T.BAYARD BET

Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
 O: DATA NEEDED FOR SHIELDING AND GAMMA HEATING CALCULATIONS.

90 THORIUM 232 NEUTRON N,2N

671083 10.0 MEV 10.0% 1 USA T.SNYDER GEC

O: NEEDED FOR CONTROL OF U-232 PRODUCTION.

692326 10.0 MEV 20.0% 3 GER H.GERWIN JUL

Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.

90 THORIUM 232 NEUTRON FISSION CROSS SECTION

692328 25.3 MV 10.0 MEV 5.0% 2 GER H.GERWIN JUL

O: SPECTRUM INDEX.

732091 100. KEV 10.0 MEV 10.0% 3 FR H.TELLIER SAC

M: NEW REQUEST.

742135 1.50 MEV 7.20 MEV 5.0% 2 EUR NEUTRON DOSIMETRY GROUP GEL

O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS. GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.
 M: NEW REQUEST.

90 THORIUM 232 NEUTRON RESONANCE PARAMETERS

692323 4.00 KEV 10.0% 1 GER H.GERWIN JUL

Q: RADIATION WIDTH NEEDED.

712053 10.0 EV 10.0 KEV 5.0% 3 FR J.Y.BARRE CAD

O: FOR FAST REACTOR CALCULATIONS.

STATUS-----STATUS

COL RAHN+ - C00-2176 4 (1972).
 SAC RIBON+ - 71 KNOXVILLE 438, EVALUATION.

91 PROTACTINIUM 231 NEUTRON CAPTURE CROSS SECTION

691219 25.3 MV 10.0 MEV 10.0% 2 USA T.SNYDER GEC
 O: NEEDED FOR CONTROL OF U-232 PRODUCTION.

91 PROTACTINIUM 233 NEUTRON ABSORPTION CROSS SECTION

692333 25.3 MV 500. EV 5.0% 1 GER MAERKL SRE
 692483 25.3 MV 500. EV 5.0% 3 NED M.E.A.HERMANS VDN
 M: SUBSTANTIAL MODIFICATIONS.

91 PROTACTINIUM 233 NEUTRON CAPTURE CROSS SECTION

671085 1.00 MV 1.00 KEV 2 USA C.A.PRESKITT IRT
 A: ACCURACY 5 PERCENT BELOW 2 EV, 10 PERCENT ABOVE.
 O: DESIGN OF THORIUM CYCLE REACTORS.
 691221 1.00 MV 100. EV 10.0% 2 USA A.M.PERRY ORL
 O: THORIUM CYCLE DESIGNS.

STATUS-----STATUS

BET CONNER - WAPD-TM-837 (1970), THERMAL VALUE.

91 PROTACTINIUM 233 NEUTRON RESONANCE PARAMETERS

692332 100. EV 10.0% 3 NED M.E.A.HERMANS VDN
 Q: NEUTRON AND CAPTURE WIDTH NEEDED.
 M: SUBSTANTIAL MODIFICATIONS.

91 PROTACTINIUM 233 NEUTRON ABSORPTION RESONANCE INTEGRAL

692334 0.50 EV 10.0% 1 GER MAERKL SRE

STATUS-----STATUS

BET CONNER - WAPD-TM-837 (1970).

92 URANIUM 232 NEUTRON CAPTURE CROSS SECTION

742065 1.00 KEV 3.00 MEV 20.0% 2 FR A.MICHAUDON BRC
 O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

92 URANIUM 232 NEUTRON FISSION CROSS SECTION

742064 1.00 KEV 15.0 MEV 20.0% 2 FR A.MICHAUDON BRC
 O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

92 URANIUM 233 NEUTRON ELASTIC CROSS SECTION

642005 25.3 MV 10.0% 3 UK J.G.TYROR WIN
 O: FOR LONG TERM IMPROVEMENT OF THE ABSORPTION CROSS SECTION.

92 URANIUM 233 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

671086 40.0 KEV 7.00 MEV 20.0% 3 USA R.AVERY ANL
 A: NEED ENERGY DEPENDENCE TO 5 TO 10 PERCENT ABOVE 0.5 MEV.

692339 5.00 MEV 20.0% 3 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.

92 URANIUM 233 NEUTRON CAPTURE CROSS SECTION

692350 25.3 MV 1.00 MEV 20.0% 1 GER H.GERWIN JUL
 O: ACCURACY INSUFFICIENT.

692351 1.00 KEV 3.00 MEV 20.0% 2 FR A.MICHAUDON BRC
 M: SUBSTANTIAL MODIFICATIONS.

92 URANIUM 233 NEUTRON CAPTURE CROSS SECTION (CONTINUED)

692352 1.00 MEV 10.0 MEV 20.0% 2 GER H.GERWIN JUL
 Q: ALPHA ALSO USEFUL.
 O: ACCURACY INSUFFICIENT.

692487 25.3 MV 1.00 MEV 20.0% 3 NED M.E.A.HERMANS VDN
 Q: ALPHA ALSO USEFUL.
 M: SUBSTANTIAL MODIFICATIONS.

732093 10.0 KEV 3.0% 3 FR H.TELLIER SAC
 O: EVALUATION PROBABLY NOT SUFFICIENT.
 M: NEW REQUEST.

STATUS-----STATUS

ORL WESTON+ - NSE 42 143(1970), DATA THERMAL TO 1 EV.

GEL CAD+ - JNE 24 111(1970), DATA 18 EV TO 1.2 KEV.

HAR ELWYN+ - NP/A 148 337(1970), DATA TO 2.2 MEV.

92 URANIUM 233 NEUTRON ENERGY DIFFERENTIAL CAPTURE CROSS SECTION

671094 10.0 MV 15.0 EV 15.0% 2 USA R.T.BAYARD BET
 Q: GAMMA SPECTRUM REQUIRED.
 O: FOR USE IN SHIELDING CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

92 URANIUM 233 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

692337 120. KEV 20.0% 3 UK C.G.CAMPBELL WIN
 Q: GAMMA SPECTRUM WANTED.
 A: LOW RESOLUTION FOR INCIDENT ENERGY ADEQUATE.
 O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE.

92 URANIUM 233 NEUTRON N,2N

671087 15.0 MEV 10.0% 2 USA D.W.BARR LAS

671088 15.0 MEV 10.0% 3 USA W.H.HANNUM AEC
 O: FOR CONTAMINATION OF U-233 BY U-232.

692341 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
 M: SUBSTANTIAL MODIFICATIONS.

92 URANIUM 233 NEUTRON FISSION CROSS SECTION

621035 1.00 MV 1.00 KEV 5.0% 1 USA R.T.BAYARD BET
 Q: WANT .25 PERCENT IN ETA BELOW 1 EV.
 WANT INTEGRAL ETA TO 1 PERCENT BELOW 1 KEV.
 M: SUBSTANTIAL MODIFICATIONS.

621036 1.00 MV 1.00 KEV 5.0% 1 USA L.W.NORDHEIM GA
 A.M.PERRY ORL
 Q: WANT .25 PERCENT IN ETA BELOW 1 EV.
 WANT INTEGRAL ETA TO 1 PERCENT BELOW 1 KEV.
 M: SUBSTANTIAL MODIFICATIONS.

621037 1.00 KEV 30.0 KEV 5.0% 3 USA R.AVERY ANL
 R.W.BAYARD BET
 L.W.NORDHEIM GA
 P.B.HEMMIG AEC
 A.M.PERRY ORL
 A: WANT 2 PERCENT IN ETA AND INTEGRAL DATA.

671089 10.0 KEV 15.0 MEV 1.0% 1 USA G.HANSEN LAS
 Q: RATIO WANTED RELATIVE TO U-235.

691226 1.00 KEV 10.0 MEV 1.0% 2 USA P.B.HEMMIG AEC
 Q: RATIO WANTED RELATIVE TO U-235.
 A: CALIBRATION IN ENERGY 1 PERCENT.
 RESOLUTION 3 PERCENT.
 ACCURACY OF 2 TO 3 PERCENT WOULD BE USEFUL.

692342 25.3 MV 50.0 EV 2.0% 2 GER H.GERWIN JUL

692343 50.0 EV 10.0 MEV 2 GER H.GERWIN JUL
 A: ACCURACY REQUIRED TO BETTER THAN 10.0 PERCENT.
 O: SPECTRUM INDEX.

692344 100. EV 15.0 MEV 5.0% 3 FR J.Y.BARRE CAD
 A: THIS ACCURACY CONCERNS THE FISSION RATIO U-233
 U-235.
 ACCURACY OF 2 PERCENT NEEDED BETWEEN 10 KEV AND
 1 MEV.

92 URANIUM 233 NEUTRON FISSION CROSS SECTION (CONTINUED)

693046 20.0 KEV 2.00 MEV 3.0% 2 IND G.K.MEHTA ITK
 Q: CROSS SECTION REQUIRED AT 60, 150, 200, 500 KEV AND 1 MEV.
 A: ENERGY RESOLUTION OF 5 PERCENT.

732092 10.0 KEV 3.0% 3 FR H.TELLIER SAC
 M: NEW REQUEST.

742066 1.00 KEV 15.0 MEV 5.0% 2 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

-----STATUS-----STATUS

SAC BLONS - NSE 51 130(1973), DATA 8 EV TO 30 KEV.
 GEL DERUYTTER+ - EANDC(E)-150 (1972), DATA IN THERMAL RANGE RELATIVE TO B-10(N,A).
 ORL WESTON+ - NSE 42 143(1970), DATA THERMAL TO 1 EV.
 KFK KAEPPELER+ - KFK-1240 (1970), DATA 5 KEV TO 1 MEV.
 LRL BEHRENS+ - NCSAC-42 130(1971), EXPERIMENT IN PROGRESS 1 KEV TO 15 MEV.
 ANL MEADOWS - USNDC-7 10(1973), IN PROGRESS 1.5 TO 3.0 MEV.

92 URANIUM 233 NEUTRON CAPTURE TO FISSION RATIO (ALPHA)

621041 1.00 MV 1.00 KEV 8.0% 1 USA R.T.BAYARD BET
 L.W.NORDHEIM GA
 A.M.PERRY ORL
 Q: CAPTURE CROSS SECTION EQUALLY USEFUL.
 A: 1/4 PERCENT IN ETA BELOW 1 EV, 1 PERCENT USEFUL.
 1/4 PERCENT IN ETA TO 3 EV.
 1 PERCENT IN ETA 30 EV TO 1 KEV, 5 PERCENT USEFUL.
 M: SUBSTANTIAL MODIFICATIONS.

621043 1.00 KEV 3.00 MEV 20.0% 2 USA R.AVERY ANL
 R.T.BAYARD BET
 L.W.NORDHEIM GA
 P.B.HEMMIG AEC
 A.M.PERRY ORL
 Q: CAPTURE CROSS SECTION EQUALLY USEFUL.
 A: WANT 2 PERCENT IN ETA AND INTEGRAL DATA.
 M: SUBSTANTIAL MODIFICATIONS.

692346 1.00 KEV 100. KEV 5.0% 3 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.

92 URANIUM 233 NEUTRON NEUTRONS EMITTED PER NEUTRON ABSORPTION (ETA)

692345 10.0 MV 0.20 EV 0.5% 2 UK J.G.TYROR WIN
 Q: VALUE RELATIVE TO THERMAL ETA WANTED.
 ENERGY IN .02 EV STEPS.
 O: FOR THERMAL REACTORS.
 M: SUBSTANTIAL MODIFICATIONS.

92 URANIUM 233 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

691229 30.0 KEV 3.00 MEV 3.0% 2 USA R.T.BAYARD BET
 L.W.NORDHEIM GA
 A.M.PERRY ORL

691443 1.00 MV 30.0 KEV 1 USA R.T.BAYARD BET
 L.W.NORDHEIM GA
 A.M.PERRY ORL
 A: REQUIRE 0.25 PERCENT ACCURACY TO 30 EV, 1 PERCENT FROM 30 EV TO 1 KEV, AND 2 PERCENT ABOVE. INTERMEDIATE ACCURACY OF 1.5 PERCENT USEFUL.

692486 30.0 KEV 10.0 MEV 1.0% 2 GER H.GERWIN JUL

-----STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.
 RPI REED+ - USNDC-7 202(1973), IN PROGRESS THERMAL TO 100 EV.
 FOA CONDE - MORE WORK REQUIRED ON CF-252 NU STANDARD AND ENERGY DEPENDENCE TO GET 0.25 PERCENT ACCURACY.
 MORE WORK REQUIRED IN 30 EV TO 1 KEV RANGE TO REACH 1 PERCENT ACCURACY.
 BELOW 4 MEV MORE WORK REQUIRED FOR BETTER THAN 2 PERCENT ACCURACY.
 NO DATA AVAILABLE BETWEEN 4.5 AND 14 MEV.

92 URANIUM 233 NEUTRON PROMPT NEUTRONS EMITTED PER FISSION

621046 7.00 MEV 20.0 MEV 3.0% 1 USA R.J.HOWERTON LRL
 O: INCONSISTENT RESULTS OBSCURE ENERGY DEPENDENCE.
 M: NEW REQUEST.

92 URANIUM 233 NEUTRON INFORMATION ON NEUTRONS FROM A FISSION FRAGMENT

693048 50.0 KEV 1.00 MEV 10.0% 2 IND G.K.MEHTA ITK
 Q: PROMPT NEUTRONS AS A FUNCTION OF FISSION PRODUCT MASS WANTED.

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92 URANIUM 235 DISCRETE LEVEL STRUCTURE (ENERGY, SPIN, PARITY)

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692379 2 GER F.WELLER KFK
 Q: ENERGY, SPIN AND PARITY WANTED FOR LEVELS BELOW 1.0 MEV.

-----STATUS-----
 LAS RICKEY+ - FR/C 5 2072(1972).

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92 URANIUM 235 NEUTRON ELASTIC CROSS SECTION

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692360 25.3 MV 10.0% 3 UK J.G.TYROR WIN
 O: FOR LONG TERM IMPROVEMENT OF THE ABSORPTION CROSS SECTION.

742067 1.00 KEV 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

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92 URANIUM 235 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION

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661042 1.00 MEV 7.00 MEV 10.0% 2 USA B.C.DIVEN LAS

691237 1.00 MEV 5.00 MEV 20.0% 2 USA R.AVERY P.B.HEMMIG ANL AEC
 A: ENERGY RESOLUTION AT LEAST 0.5 MEV.
 O: NEEDED FOR ANALYZING FAST CRITICAL EXPERIMENTS.

742068 1.00 KEV 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

-----STATUS-----

GEL KNITTER+ - ZP 257 108(1972), DATA 1.6 TO 5.5 MEV.
 ANL GUENTHER+ - USNDC-3 13(1972), IN PROGRESS TO 4.0 MEV.

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92 URANIUM 235 NEUTRON INELASTIC CROSS SECTION

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692363 15.0 MEV 10.0% 2 SWD H.HAEGGBLOM AE
 O: FAST CRITICAL SYSTEMS.
 M: SUBSTANTIAL MODIFICATIONS.

742070 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

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92 URANIUM 235 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

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682052 300. KEV 10.0 MEV 10.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 Q: CROSS SECTIONS FOR EXCITATION OF INDIVIDUAL LEVELS ALSO WANTED.
 O: FOR FAST REACTORS.

691240 1.50 MEV 6.00 MEV 5.0% 1 USA R.HOWERTON LRL

692364 15.0 MEV 20.0% 2 GER F.WELLER KFK
 A: ACCURACY OF 10 PERCENT REQUIRED BELOW 1.5 MEV. RESOLUTION FOR INCIDENT AND EXIT NEUTRON ENERGIES 100 KEV.
 O: FAST REACTOR CALCULATIONS.

714006 15.0 MEV 1 CCP M.N.NIKOLAEV FEI
 Q: CROSS SECTION FOR INELASTIC REMOVAL BELOW FISSION THRESHOLDS OF U-238 (7 PERCENT ACCURACY) AND OF PU-240 OR NP-237 (10 PERCENT ACCURACY) WANTED. EXCITATION CROSS SECTION FOR LOW LYING LEVELS REQUESTED WITH 15 PERCENT ACCURACY.
 O: FOR 1. PERCENT ACCURACY IN K-EFF OF U-235 FUELLED FAST CONVERTERS.

721076 50.0 KEV 6.00 MEV 10.0% 2 USA R.AVERY P.B.HEMMIG ANL AEC
 Q: LOW ENERGY NEUTRONS MUST BE INCLUDED. ABSOLUTE SPECTRA AT 30 AND 75 DEGREES MAY SUFFICE.
 A: INCIDENT AND EXIT ENERGY RESOLUTIONS 10. PERCENT.

-----STATUS-----

GEL KNITTER+ - ZP 257 108(1972), DATA 1.5 TO 2.3 MEV.
 LRL KAMMERDIENER - UCRL-51232 (1972), DATA AT 14 MEV.
 ALD BATCHELOR+ - AWRE/O-55/69, DATA 2 TO 4 MEV.
 ANL GUENTHER+ - USNDC-3 13(1972), IN PROGRESS TO 4.0 MEV.

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92 URANIUM 235		NEUTRON		DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION				
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693052 300. KEV 10.0 MEV 10.0% 1 BAN M.M.ISLAM RAM
O: FOR FAST REACTORS.

742071 15.0 MEV 20.0% 2 FR A.MICHAUDON BRC
O: FOR CRITICAL ASSEMBLIES.
M: NEW REQUEST.

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92 URANIUM 235		NEUTRON		NON-ELASTIC CROSS SECTION				
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692361 15.0 MEV 2 GER F.WELLER KFK
A: ACCURACY 10 PERCENT REQUIRED TO 1.5 MEV AND 20 PERCENT ABOVE.
ENERGY RESOLUTION ABOUT 100 KEV.

693051 100. KEV 10.0 MEV 10.0% 2 BAN M.M.ISLAM RAM
O: FOR FAST REACTORS.

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92 URANIUM 235		NEUTRON		CAPTURE CROSS SECTION				
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682055 1.00 KEV 100. KEV 10.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
Q: ALPHA ALSO WANTED.
O: FOR FAST REACTORS.

692378 10.0 KEV 10.0 MEV 2 GER H.GERWIN JUL
A: ACCURACY TO OBTAIN 1 PERCENT IN ALPHA.
O: ANALYSIS OF CRITICAL EXPERIMENTS.

693060 25.3 MV 30.0 KEV 3.0% 2 BAN M.M.ISLAM RAM
O: FOR FAST REACTORS.

742005 200. EV 500. KEV 3.0% 2 SWD H.HAEGGBLOM AE
O: FAST REACTOR CALCULATIONS.
M: NEW REQUEST.

742078 3.00 MEV 5.0% 1 FR A.MICHAUDON BRC
O: FOR CRITICAL ASSEMBLIES.
M: NEW REQUEST.

-----STATUS-----STATUS

ORL PEREZ+ - USNDC-1 145(1972), DATA 8. EV TO 10 KEV.
ORL DE SAUSSURE+ - PR/C 7 2018(1973), ANALYSIS TO 60 EV.

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92 URANIUM 235		NEUTRON		ENERGY DIFFERENTIAL CAPTURE CROSS SECTION				
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671103 25.3 MV 15.0 EV 10.0% 2 USA R.T.BAYARD BET
Q: GAMMA SPECTRUM WANTED.

671104 25.3 MV 20.0% 2 USA R.EHRLICH KAP
Q: GAMMA SPECTRUM WANTED.

-----STATUS-----STATUS

ATI FLECK+ - AKE 21 136(1973).
GEL CORVI+ - NP/A 203 145(1973), DATA FOR 14 RESONANCES.
NYU GRAVES - DA/B 32 4793(1972), EPITHERMAL NEUTRONS.

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92 URANIUM 235		NEUTRON		PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.				
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693053 300. KEV 4.00 MEV 10.0% 1 BAN M.M.ISLAM RAM
Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
O: FOR FAST REACTORS.

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92 URANIUM 235		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION				
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692362 120. KEV 20.0% 3 UK C.G.CAMPBELL WIN
A.WHITTAKER UKW
Q: GAMMA SPECTRUM WANTED.
A: LOW RESOLUTION FOR INCIDENT ENERGY ADEQUATE.
O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE.

742069 1.00 KEV 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC
O: FOR SHIELDING.
M: NEW REQUEST.

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92 URANIUM 235		NEUTRON		N.3N				
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742072 15.0 MEV 15.0% 1 FR A.MICHAUDON BRC
O: FOR CRITICAL ASSEMBLIES.
M: NEW REQUEST.

92 URANIUM 235		NEUTRON		FISSION CROSS SECTION	
661043	10.0 KEV	15.0 MEV	1.0%	1	USA G.E.HANSON LAS M: NEW REQUEST.
691241	1.00 EV	1.00 KEV	3.0%	2	USA T.SNYDER GEC O: USED AS STANDARD AT HIGHER ENERGIES.
691242	1.10 EV	1.10 MEV	3.0%	2	USA R.EHRLICH KAP Q: FOR ENERGIES OF 1.1 EV, 100 EV, 1.1 KEV, 100 KEV AND 1.1 MEV. VALUES EVERY DECADE USEFUL. WHERE CROSS SECTION HAS STRUCTURE, ENERGY AVERAGE OVER CAREFULLY SPECIFIED RANGE IS DESIRED. O: FOR USE AS A STANDARD. M: SUBSTANTIAL MODIFICATIONS.
691245	10.0 KEV	14.0 MEV	1.0%	1	USA R.S.CASWELL NBS A: ENERGY RESOLUTION 3 PERCENT. M: SUBSTANTIAL MODIFICATIONS.
691246	1.00 KEV	14.0 MEV	1.0%	1	USA R.AVERY ANL P.B.HEMMIG AEC F.C.MAIENSHEIN ORL Q: REQUIRED IS RATIO OF U-235(N,F) TO B-10(N,ALPHA), AND TO H-1(N,P) TO 1 PERCENT. A: INTERMEDIATE ACCURACY OF 3 PERCENT USEFUL. O: NEEDED TO COMPARE STANDARDS.
691449	1.00 KEV	14.0 MEV		1	USA T.SNYDER GEC P.B.HEMMIG AEC Q: ABSOLUTE VALUES REQUIRED. A: FROM 1-20 KEV, ACCURACY 2 PERCENT, 5 PERCENT USEFUL. FROM 20 KEV - 3 MEV, ACCURACY 1 PERCENT, 3 PERCENT USEFUL. FROM 3-14 MEV, ACCURACY 2 PERCENT, 5 PERCENT USEFUL. O: FOR FAST REACTOR CALCULATIONS AND FOR USE AS A STANDARD.
692366	100. EV	10.0 MEV		1	GER H.GERWIN JUL A: ACCURACY 5 PERCENT FOR 100 EV - 10 KEV, 2 PERCENT FOR 10 KEV - 1 MEV AND 5 PERCENT FOR 1-10 MEV. O: SPECTRUM INDEX. STANDARD CROSS SECTION.
692368	1.00 MEV	5.00 MEV	3.0%	1	UK C.G.CAMPBELL WIN A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E. O: STANDARD FOR PU CROSS-SECTIONS. FOR FAST REACTORS. M: MODIFIED (PARTIALLY FULFILLED).
692496	200. EV	500. KEV	2.0%	2	SWD H.HAEGGBLOM AE O: FAST REACTOR CALCULATIONS. M: NEW REQUEST.
693054	25.3 MV	15.0 MEV	5.0%	1	BAN M.M.ISLAM RAM O: FOR FAST REACTORS.
693055	1.00 EV	5.00 MEV	5.0%	2	SAF J.KOEN UPR O: FOR CALCULATIONS OF PULSED HETEROGENEOUS SYSTEMS.
693056	20.0 KEV	2.00 MEV	3.0%	2	IND G.K.MEHTA ITK Q: CROSS SECTION REQUIRED AT 60, 150, 200, 500 KEV AND 1 MEV. A: ENERGY RESOLUTION OF 5 PERCENT.
702027	10.0 KEV	1.00 MEV	1.0%	1	JAP JAPAN NUCLEAR DATA COMMITTEE JAE O: SPECTRUM INDEX IN FAST REACTORS.
712056	10.0 KEV	20.0 MEV		1	JAP JAPAN NUCLEAR DATA COMMITTEE JAE A: ACCURACY REQUIRED TO BETTER THAN 2.0 PERCENT. O: FOR STANDARD CROSS SECTION AND FOR RADIATION DOSIMETRY.

714007 5.00 KEV 7.00 MEV 3.0% 1 CCP M.N.NIKOLAEV FEI
 Q: BELOW 20 KEV MEASUREMENTS OF TRANSMISSION CURVES BY FLAT RESPONSE DETECTOR AND BY SELF DETECTION METHOD WITH FISSION DETECTOR WANTED FOR SELFSHIELDING EVALUATION.
 THESE CURVES MUST BE MEASURED WITH ATTENUATIONS OF THE PRIMARY BEAM DOWN TO 1. PERCENT.
 A: ACCURACY DETERMINED BY USE OF THIS CROSS SECTION AS STANDARD IN FISSION AND CAPTURE MEASUREMENTS FOR OTHER ISOTOPES.
 IF MEASUREMENT IS ABSOLUTE AND PU-239 AND U-238 FISSION CROSS SECTIONS ARE MEASURED RELATIVE TO U-235 FISSION, THEN 2.0 PERCENT ACCURACY IS REQUIRED.
 BEST ACCURACY OF 1.5 PERCENT DESIRABLE IN 1.2 TO 2.5 MEV REGION BECAUSE OF U-238 FISSION CROSS SECTION NORMALIZATION.
 O: FOR ACCURACY OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS. REQUEST CONSIDERED FULFILLED, WHEN AT LEAST THREE MEASUREMENTS WITH DIFFERENT METHODS AGREE WITHIN REQUESTED ACCURACY.

742073 15.0 MEV 1 FR A.MICHAUDON BRC
 A: ACCURACY 3 PERCENT TO 1 KEV, 2 PERCENT ABOVE.
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

742113 2.0% 1 EUR NEUTRON DOSIMETRY GROUP GEL
 Q: AVERAGE CROSS SECTION IN A U-235 FISSION SPECTRUM DESIRED.
 O: FOR NORMALIZATION OF AVERAGE CROSS SECTIONS FOR DOSIMETRY PURPOSES.
 M: NEW REQUEST.

-----STATUS-----STATUS

SAC BLONS - NSE 51 130(1973), DATA 18 EV TO 30 KEV.
 ANL POENITZ - USNDC-7 11(1973), FINAL DATA 35 KEV TO 3.5 MEV.
 KFK KAEPPELER - KFK-1772(1973), DATA 500 KEV TO 1.2 MEV.
 GEL KNITTER+ - ZP 257 108(1972), DATA 1.5 TO 2.3 MEV.
 ANL MEADOWS - NSE 49 310(1972), DATA 1 TO 5 MEV.
 HAR GAYTHER+ - AERE-PR/NP19 (1972), DATA 1 KEV TO 1 MEV.
 LRL CZIRR+ - USNDC-7 105(1973), IN PROGRESS THERMAL TO 20 MEV.
 LAS BARTON+ - USNDC-3 120(1972), IN PROGRESS 1 TO 6 MEV.
 ORL GWIN+ - USNDC-3 149(1972), IN PROGRESS THERMAL TO 200 KEV.
 ORL PEELLE+ - USNDC-3 150(1972), PLANNED TO 15 MEV.
 GEL THEOBALD+ - EANDC(E)-157 (1973), IN PROGRESS 1 TO 500 KEV.
 KFK CIERJACKS - EANDC(E)-157 (1973), PLANNED TO 30 MEV.
 HAR LYNN - MEASUREMENT PLANNED.

-----92 URANIUM 235 NEUTRON CAPTURE TO FISSION RATIO (ALPHA)-----

691249 1.00 MV 7.00 MEV 10.0% 2 USA R.AVERY ANL
 T.SNYDER GEC
 P.B.HEMMIG AEC
 Q: CAPTURE CROSS SECTION EQUALLY USEFUL.
 M: SUBSTANTIAL MODIFICATIONS.

691252 25.3 MV 1.00 KEV 5.0% 2 USA M.R.FLEISHMAN SNP
 Q: REQUIRED ARE SIMULTANEOUS MEASUREMENTS OF CAPTURE AND FISSION CROSS SECTIONS AT 77 DEGREES K.
 O: TO VALIDATE DOPPLER BROADENING CALCULATIONS.

692373 100. EV 1.00 MEV 5.0% 2 UK C.G.CAMPBELL WIN
 A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E.
 O: FOR FAST REACTORS.

714008 100. EV 800. KEV 7.0% 1 CCP M.N.NIKOLAEV FEI
 Q: MEASUREMENT OF TRANSMISSION CURVES BY SELF-DETECTION METHOD WITH CAPTURE OR ABSORPTION DETECTORS DESIRABLE FOR EVALUATION OF DIFFERENCES IN CAPTURE AND FISSION RESONANCE SELFSHIELDING.
 BEAM ATTENUATION DOWN TO 1 PERCENT WANTED.
 A: IN REGION 1-100 KEV BETTER ACCURACY DESIRABLE (ABOUT 5 PERCENT).
 O: FOR ACCURACY OF 1.5 PERCENT IN CONVERSION RATIO FOR U-235 OXIDE FUELLED FAST CONVERTERS. ALSO NEEDED FOR COMPARISON WITH ALPHA PU-239 FOR TEST OF MEASUREMENT METHODS.
 AT LEAST THREE DIFFERENT RESULTS MUST COINCIDE WITHIN REQUESTED ACCURACY.

721077 1.00 MV 1.00 EV 1.0% 1 USA R.T.BAYARD BET
 Q: CAPTURE CROSS SECTION EQUALLY USEFUL.

92 URANIUM 235 NEUTRON CAPTURE TO FISSION RATIO (ALPHA) (CONTINUED)

-----STATUS-----

FEI KONONOV+ - AE 32 85(1972), DATA 10 KEV TO 1 MEV.
 KFK BANDL+ - KFK-1563 (1972), DATA 8 TO 60 KEV.
 ORL GWIN+ - NCSAC-42 199(1971), DATA THERMAL TO 400 KEV.
 ORL PEREZ+ - USNDC-7 176(1973), WORK IN PROGRESS.
 SAC BLONS+ - NSE 51 130(1973), DATA 18 EV TO 30 KEV.

92 URANIUM 235 NEUTRON NEUTRONS EMITTED PER NEUTRON ABSORPTION (ETA)

671100 25.3 MV 50.0 KEV 2 USA R.AVERY ANL
 T.SNYDER GEC
 P.B.HEMMIG AEC
 A: ACCURACY 1/2 PERCENT AT THERMAL, 2 PERCENT ELSEWHERE.

692370 10.0 MV 0.40 EV 0.5% 1 UK J.G.TYROR WIN
 Q: VALUE RELATIVE TO THERMAL ETA WANTED.
 DATA WANTED IN .02 EV STEPS UP TO .2 EV AND
 IN .05 EV STEPS ABOVE.
 O: FOR TEMPERATURE COEFFICIENT WORK.

92 URANIUM 235 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

691253 25.3 MV 3.00 MEV 1.0% 1 USA R.AVERY ANL
 T.SNYDER GEC
 P.B.HEMMIG AEC
 A: ACCURACY OF 2 PERCENT USEFUL.
 O: NEEDED AS A CROSS CHECK WITH OTHER ISOTOPES.

714009 25.3 MV 2.50 MEV 0.5% 1 CCP M.N.NIKOLAEV FEI
 Q: RATIO TO CF-252 NU REQUIRED.
 A: ENERGY DEPENDENCE OF NU IS WANTED WITH 0.7
 PERCENT ACCURACY.
 ENERGY RESOLUTION OF 10. PERCENT REQUIRED BELOW
 2.5 MEV.
 O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.5
 PERCENT IN CONVERSION RATIO FOR U-235 FUELLED
 FAST CONVERTER REACTORS.

714010 25.3 MV 2.50 MEV 0.1% 2 CCP M.N.NIKOLAEV FEI
 Q: RATIO TO CF-252 NU REQUIRED.
 A: ACCURACY REQUIREMENT EVALUATED FROM OPTIMUM
 DISTRIBUTION OF UNCERTAINTIES OVER UNCORRELATED
 NUCLEAR DATA.
 O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.5
 PERCENT IN CONVERSION RATIO FOR U-235 FUELLED
 FAST CONVERTER REACTORS.

742075 15.0 MEV 1 FR A.MICHAUDON BRC
 A: ACCURACY 2 PERCENT TO 1 KEV, 1 PERCENT ABOVE.
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

-----STATUS-----

IAE MANERO+ - REA 10 637(1972), REVIEW.
 KFK BANDL+ - EANDC(E)-157 (1973), IN PROGRESS TO 1.3 MEV.
 LRL HOWE+ - USNDC-7 105(1973), IN PROGRESS TO 100 EV.
 RPI REED+ - USNDC-7 202(1973), IN PROGRESS TO 40 EV.
 FOA CONDE - STILL DISCUSSION ABOUT STRUCTURE OF 1 TO 1.5 PERCENT BELOW 2 MEV.

92 URANIUM 235 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION

691259 25.3 MV 15.0% 2 USA R.EHRLICH KAP
 Q: DELAYED NEUTRON ENERGY SPECTRUM WANTED.

691260 25.3 MV 5.00 MEV 5.0% 2 USA P.B.HEMMIG AEC
 Q: DELAYED NEUTRON ENERGY SPECTRUM WANTED.
 YIELD, HALF-LIFE, AND ENERGY NEEDED.
 O: NEEDED FOR ANALYSIS OF FAST CRITICALS AND TO CHECK
 EXISTING DATA.

712061 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 Q: DELAYED NEUTRON FRACTIONS (BETA) WANTED.
 A: ACCURACY REQUIRED TO BETTER THAN 3.0 PERCENT.
 O: FOR FAST REACTOR MEASUREMENTS.

-----STATUS-----

HFA SHALEV+ - NSE 51 52(1973), SPECTRUM AVERAGE.
 IAE MANERO+ - REA 10 637(1972), REVIEW.
 KFK FIEG - EANDC(E)-157 (1973), WORK IN PROGRESS.
 FEI TARASKO+ - YF 17 1149(1973), IN PROGRESS.

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92 URANIUM 236 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

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714012 5.00 MEV 10.0% 1 CCP M.N.NIKOLAEV FEI

Q: CROSS SECTION FOR INELASTIC REMOVAL BELOW FISSION THRESHOLDS OF U-236 AND U-238 WANTED.
O: FOR CALCULATION OF FAST U-235 FUELLED CONVERTERS.

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92 URANIUM 236 NEUTRON CAPTURE CROSS SECTION

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671109 25.3 MV 1.00 KEV 10.0% 1 USA T.SNYDER GEC

A: REQUIRED 10 PERCENT ACCURACY IN CAPTURE WIDTHS.
O: NEEDED FOR CONTROL OF U-232 PRODUCTION.
NEEDED FOR ISOTOPE BUILD UP IN THERMAL AND FAST REACTORS AND FOR NP-237 PRODUCTION.

681801 1.00 EV 500. EV 5.0% 2 CAN W.H.WALKER CRC

O: DISAGREEMENT BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS.

682060 1.00 KEV 3.00 MEV 10.0% 1 FR A.MICHAUDON BRC

M: SUBSTANTIAL MODIFICATIONS.

692381 1.00 EV 10.0 MEV 20.0% 2 GER H.GERWIN JUL

712064 500. EV 1.00 MEV 10.0% 3 FR J.Y.BARRE CAD

Q: RATIO TO U-235 FISSION OR U-238 CAPTURE NEEDED.
O: FOR FAST REACTOR CALCULATIONS.
M: SUBSTANTIAL MODIFICATIONS.

714015 500. EV 1.40 MEV 7.0% 1 CCP M.N.NIKOLAEV FEI

Q: RATIO WANTED RELATIVE TO U-235 FISSION.
O: FOR CALCULATION OF FAST U-235 FUELLED CONVERTERS.

-----STATUS-----

GA CARLSON+ - NP/A 141 577(1970), DATA THERMAL TO 20 KEV.
GEL ROHR+ - EANDC(E)-157 (1973), IN PROGRESS 5 EV TO 2 KEV.
SGA EDER+ - 73 PARIS PAPER 12, COMPILATION.

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92 URANIUM 236 NEUTRON FISSION CROSS SECTION

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682058 15.0 MEV 10.0% 1 FR A.MICHAUDON BRC

O: EVALUATION MAY BE SUFFICIENT.
M: SUBSTANTIAL MODIFICATIONS.

692380 4.00 MEV 10.0 MEV 5.0% 2 GER H.GERWIN JUL

712062 500. EV 15.0 MEV 3.0% 3 FR J.Y.BARRE CAD

Q: WANTED RELATIVE TO U-235 FISSION CROSS SECTION.
O: FOR FAST REACTOR CALCULATIONS.
M: SUBSTANTIAL MODIFICATIONS.

714013 100. KEV 5.00 MEV 5.0% 1 CCP M.N.NIKOLAEV FEI

Q: RATIO WANTED RELATIVE TO U-235.
O: FOR CALCULATION OF FAST U-235 FUELLED CONVERTERS.

-----STATUS-----

LAS CRAMER+ - LA-4420 (1970), DATA 35 EV TO 2.9 MEV.
ORL ROSLER+ - USNDC-1 148(1972), WORK IN PROGRESS 500 KEV TO 8 MEV.
GEL THEOBALD+ - EANDC(E)-157 (1973), IN PROGRESS IN SUBTHRESHOLD REGION.

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92 URANIUM 236 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

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712063 500. EV 15.0 MEV 3.0% 3 FR J.Y.BARRE CAD

A: ACCURACY RELATIVE TO NU CF-252.
O: FOR FAST REACTOR CALCULATIONS.
M: SUBSTANTIAL MODIFICATIONS.

714014 5.00 MEV 1.0% 1 CCP M.N.NIKOLAEV FEI

O: FOR CALCULATION OF FAST U-235 FUELLED CONVERTERS.

-----STATUS-----

IAE MANERO+ - REA 10 637(1972), REVIEW.

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92 URANIUM 236 NEUTRON PRMPT NEUTRONS EMITTED PER FISSION

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621048 500. KEV 14.0 MEV 3.0% 1 USA R.J.HOWERTON LRL

M: NEW REQUEST.

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92 URANIUM 236	NEUTRON		RESONANCE PARAMETERS				
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714011	10.0 EV	5.00 KEV		1	CCP	M.N.NIKOLAEV	FEI
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Q: NEUTRON AND CAPTURE WIDTHS WANTED FOR EVALUATION OF SELFSHIELDING IN RESOLVED RESONANCE REGION.
 O: FOR CALCULATION OF FAST U-235 FUELLED CONVERTERS. STATISTICAL ANALYSIS OF MEASURED RESONANCE PARAMETERS WANTED.
 AVERAGE S AND P WAVE RESONANCE PARAMETERS SHOULD BE DERIVED.

STATUS-----STATUS

GEL CARRARO+ - 72 BUDAPEST 200, 39 RESONANCES.
 GEL THEOBALD+ - EANDC(E)-157 (1973), IN PROGRESS.

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92 URANIUM 237	NEUTRON		CAPTURE CROSS SECTION				
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742080	1.00 KEV	3.00 MEV	20.0%	1	FR	A.MICHAUDON	BRC
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O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

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92 URANIUM 237	NEUTRON		FISSION CROSS SECTION				
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742079	1.00 KEV	15.0 MEV	20.0%	1	FR	A.MICHAUDON	BRC
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O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

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92 URANIUM 238	NEUTRON		TOTAL CROSS SECTION				
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712065	500. EV	15.0 MEV	1.0%	2	FR	J.Y.BARRE	CAD
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O: FOR FAST REACTOR CALCULATIONS.

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92 URANIUM 238	NEUTRON		ELASTIC CROSS SECTION				
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742081	1.00 KEV	15.0 MEV	5.0%	2	FR	A.MICHAUDON	BRC
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O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

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92 URANIUM 238	NEUTRON		DIFFERENTIAL ELASTIC CROSS SECTION				
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691407	1.00 KEV	10.0 MEV		1	USA	R.AVERY T.SNYDER P.B.HEMMIG A.M.PERRY	ANL GEC AEC ORL
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A: ACCURACY 10 PERCENT FROM 1 TO 300 KEV.
 5 PERCENT FROM 300 KEV TO 2 MEV.
 10 PERCENT FROM 2 TO 10 MEV.
 FACTORS OF 2 LOWER ACCURACY WOULD BE USEFUL ON SHORT TERM.

742082	1.00 KEV	15.0 MEV	5.0%	2	FR	A.MICHAUDON	BRC
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O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

STATUS-----STATUS

GEL KNITTER+ - ZP 244 358(1970), DATA 1.5 TO 5.5 MEV.
 ANL GUENTHER+ - USNDC-3 13(1972), IN PROGRESS TO 4.0 MEV.
 GEL KNITTER+ - EANDC(E)-150 (1972), WORK CONTINUES.

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92 URANIUM 238	NEUTRON		INELASTIC CROSS SECTION				
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692387		15.0 MEV	5.0%	2	FR	J.Y.BARRE	CAD
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Q: ALTERNATE QUANTITY - NONELASTIC CROSS SECTION.
 O: FOR FAST REACTOR CALCULATIONS.

692389	80.0 KEV	500. KEV		2	SWD	H.HAEGGBLOM	AE
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A: ACCURACY REQUIRED TO BETTER THAN 10 PERCENT.
 O: NEEDED FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

692393	1.20 MEV	2.00 MEV	10.0%	2	GER	F.WELLER	KFK
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Q: LEVEL EXCITATION CROSS SECTIONS FOR THE 45 AND 148 KEV LEVELS WANTED.

742083		15.0 MEV	5.0%	2	FR	A.MICHAUDON	BRC
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O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

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92 URANIUM 238	NEUTRON		ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION				
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692390		2.00 MEV	10.0%	2	GER	F.WELLER	KFK
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Reference	Energy (KEV)	Energy (MEV)	Accuracy (%)	Country	Author(s)	Notes
691435	10.0	10.0		USA	R.T.AVERY T.SNYDER P.B.HEMMIG A.M.PERRY	ANL GEC AEC ORL Q: NEEDED IS RATIO OF CAPTURE CROSS SECTION U-238 TO FISSION CROSS SECTION OF PU-239 OR U-235. DIRECT RATIO NEEDED TO SUPPLEMENT SEPARATE MEASUREMENT. A: ACCURACY 1.5 PERCENT BELOW 300 KEV, 7 PERCENT ABOVE. O: INTERMEDIATE ACCURACY USEFUL NEAR TERM.
691816	25.3			CAN	G.C.HANNA	CRC A: ACCURACY REQUIRED 0.5 - 1. PERCENT. O: FOR ACCURATE ALPHA OF NATURAL URANIUM.
692401	5.00	6.00		UK	J.G.TYROR	WIN A: ACCURACY REQUIRED .03 BARNS. O: FOR THERMAL REACTORS.
692402	4.00	500.	2.0%	FR	H.TELLIER	SAC Q: RELATIVE TO SIGMA(N,G) AT THERMAL. O: FOR CALCULATION OF IEFF. EVALUATION MAY SUFFICE IF IT EXPLAINS DISCREPANCIES. M: SUBSTANTIAL MODIFICATIONS.
692403	500.	800.		GER	H.GERWIN	JUL A: ACCURACY 2 PERCENT 10 TO 400 KEV, 3 PERCENT ELSEWHERE. O: FAST REACTOR CALCULATIONS.
692404	500.	1.00	5.0%	FR	H.TELLIER	SAC Q: RELATIVE TO SIGMA(N,G) AT THERMAL. O: EVALUATION MAY SUFFICE IF IT EXPLAINS DISCREPANCIES. M: SUBSTANTIAL MODIFICATIONS.
692405	10.0	2.00	3.0%	UK	C.G.CAMPBELL	WIN A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E. O: FOR FAST REACTORS. M: MODIFIED (PARTIALLY FULFILLED).
692406	5.00	1.00	3.0%	SWD	H.HAEGGBLOM	AE Q: NEEDED FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
693066	25.3	30.0	3.0%	BAN	M.M.ISLAM	RAM O: FOR FAST REACTORS.
702032	1.00	1.00		JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT. O: FOR FAST REACTOR CALCULATIONS.
714022	500.	1.40	3.0%	CCP	M.N.NIKOLAEV	FEI Q: RATIO TO U-235 FISSION CROSS SECTION WANTED. TRANSMISSION MEASUREMENTS REQUESTED WITH FLAT RESPONSE AND CAPTURE DETECTORS FOR SELFSHIELDING EVALUATION. ATTENUATION OF PRIMARY BEAM DOWN TO 1 AND .1 PERCENT. EXPERIMENTS WANTED AT DIFFERENT TEMPERATURES FROM 70 TO 2500 DEGREES K. A: BETWEEN 1 AND 100 KEV INFORMATION ON RESONANCE SELFSHIELDING FACTORS (SEE BOOK BY ABAGYAN ET AL., CONSULTANTS BUREAU, NEW YORK, 1964) WITH 2 PERCENT ACCURACY AND AVERAGED OVER 0.2 LETHARGY INTERVALS DESIRED. TEMPERATURE DIFFERENCES OF SELFSHIELDING FACTORS MUST BE KNOWN WITH 7 PERCENT ACCURACY. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
742087	1.00	3.00	5.0%	FR	A.MICHAUDON	BRC O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS	Reference	Notes	STATUS
KFK	BLUHM - KFK-1798 (1973)	DATA 10 KEV TO 5 MEV.	
FEI	PANITKIN - AE 33 782(1972)	DATA 1.2 TO 4 MEV.	
FEI	CHELNOKOV+ - YF1-13 6(1972)	DATA 200 EV TO 35 KEV.	
CCP	STAVISSKY+ - AE 31 107(1971)	DATA TO 40 KEV.	
ANL	POENITZ - USNDC-1 8(1972)	IN PROGRESS 400 KEV TO 1.5 MEV.	
GEL	ROHR+ - EANDC(E)-150 (1972)	IN PROGRESS.	
LRL	CZIRR+ - USNDC-1 94(1972)	IN PROGRESS TO 1 MEV.	
NPL	RYVES+ - IN PROGRESS	150 TO 630 KEV.	
ORL	DE SAUSSURE+ - USNDC-7 175(1973)	IN PROGRESS.	
HAR	SOWERBY+ AERE-R-7273 (1973)	EVALUATION	

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92 URANIUM 238          NEUTRON          PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.
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693063    300. KEV    4.00 MEV    10.0%    1    BAN    M.M.ISLAM    RAM
          Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
          O: FOR FAST REACTORS.
-----STATUS-----
SUN    MC MURRY+ - 72 BUDAPEST 10, DATA 700 KEV TO 1.9 MEV.
=====
92 URANIUM 238          NEUTRON          TOTAL PHOTON PRODUCTION CROSS SECTION
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712066          200. KEV    15.0%    2    UK    C.G.CAMPBELL    WIN
          Q: GAMMA SPECTRUM WANTED.
          O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE.
721079    1.00 MV    10.0 MEV    10.0%    2    USA    P.B.HEMMIG    AEC
          Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED.
          A: ACCURACY 10 PERCENT IN SPECTRUM.
          O: FOR SHIELDING AND GAMMA-HEATING CALCULATIONS.
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92 URANIUM 238          NEUTRON          N,2N
=====
692396          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
714019          15.0 MEV    10.0%    1    CCP    M.N.NIKOLAEV    FEI
          Q: SECONDARY ENERGY DISTRIBUTION REQUIRED.
          A: ACCURACY 5 TO 10 PERCENT WANTED.
          ENERGY SPECTRA OF SECONDARY NEUTRONS DESIRABLE
          WITH 5 PERCENT ACCURACY AND 0.2 RESOLUTION IN
          LETHARGY.
          O: FOR FAST REACTORS.
721078          10.0 MEV    10.0%    2    USA    T.SNYDER    GEC
          O: NEEDED FOR CONTROL OF U-232 IN PU-238 PRODUCTION.
-----STATUS-----
ALD    MATHER+ - AWRE/O-72/72, DATA 7.0 TO 12 MEV.
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92 URANIUM 238          NEUTRON          N,3N
=====
742085          15.0 MEV    10.0%    1    FR    A.MICHAUDON    BRC
          M: NEW REQUEST.
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92 URANIUM 238          NEUTRON          FISSION CROSS SECTION
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671203    500. KEV    15.0 MEV    10.0%    1    USA    G.E.HANSEN    LAS
          Q: RATIO TO U-235 FISSION WANTED.
          A: ACCURACY 5 PERCENT TO 1.3 MEV AND 1 PERCENT ABOVE.
          ENERGY RESOLUTION - 3 PERCENT.
          ENERGY CALIBRATION - 1 PERCENT.
          O: FOR FAST BREEDER CALCULATIONS.
          FOR CURIUM AND CALIFORNIUM PRODUCTION.
          M: NEW REQUEST.
691416    500. EV    14.0 MEV    10.0%    1    USA    P.B.HEMMIG    AEC
          Q: RATIO WANTED RELATIVE TO U-235 FISSION.
          A: ACCURACY 4 PERCENT BELOW 1.3 MEV, 2 PERCENT 1.3 TO
          5. MEV, 3 PERCENT ABOVE 5. MEV.
          ENERGY RESOLUTION 3 PERCENT, ENERGY
          CALIBRATION 1 PERCENT.
          INTERMEDIATE ACCURACY USEFUL.
          M: SUBSTANTIAL MODIFICATIONS.
693064          6.00 MEV    5.0%    2    SAF    J.KOEN    UPR
          O: FOR CALCULATIONS OF PULSED HETEROGENEOUS SYSTEMS.
693065          15.0 MEV    5.0%    1    BAN    M.M.ISLAM    RAM
          O: FOR FAST REACTORS.
712067          2.0%    2    UK    C.G.CAMPBELL    WIN
          J.G.TYROR    WIN
          Q: FISSION SPECTRUM AVERAGE WANTED.
          O: FOR FAST AND THERMAL REACTORS.
712068          20.0 MEV    10.0%    1    JAP    JAPAN NUCLEAR DATA COMMITTEE    JAE
          A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT.
          O: FOR FAST REACTOR AND FOR RADIATION DOSIMETRY.
714020    800. KEV    15.0 MEV    10.0%    1    CCP    M.N.NIKOLAEV    FEI
          Q: RATIO TO U-235 FISSION CROSS SECTION WANTED.
          ABSOLUTE FISSION CROSS SECTION MEASUREMENT
          DESIRABLE.
          A: REQUESTED ACCURACIES - 5 PERCENT BELOW 1.3 MEV,
          AND ABOVE 6.5 MEV, AND 2 PERCENT BETWEEN
          1.3 AND 6.5 MEV.
          ABSOLUTE VALUES WITH 2 TO 3 PERCENT ACCURACY.
          O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6
          PERCENT IN BREEDING RATIO FOR FAST REACTORS.
          AT LEAST THREE DIFFERENT MEASUREMENTS WITH THESE
          ACCURACIES WANTED.

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92 URANIUM 238	NEUTRON	FISSION CROSS SECTION	(CONTINUED)
732112	5.00 MEV	3.0% 1 UK C.G.CAMPBELL WIN	Q: VALUE RELATIVE TO U-235 FISSION WANTED. O: FOR FAST REACTORS. M: NEW REQUEST.
742086	15.0 MEV	3.0% 1 FR A.MICHAUDON BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.
742112		2.0% 1 EUR NEUTRON DOSIMETRY GROUP GEL	Q: RATIO OF AVERAGE CROSS SECTION IN A U-235 FISSION SPECTRUM TO AVERAGE U-235 FISSION CROSS SECTION IS WANTED. O: FOR NORMALIZATION OF AVERAGE CROSS SECTIONS FOR DOSIMETRY PURPOSES. M: NEW REQUEST.
742136	1.50 MEV 6.70 MEV	5.0% 2 EUR NEUTRON DOSIMETRY GROUP GEL	O: FOR NEUTRON DOSIMETRY USING SPECTRUM UNFOLDING METHODS. GREATER THAN 10 PERCENT DISCREPANCY BETWEEN INTEGRAL AND DIFFERENTIAL MEASUREMENTS. M: NEW REQUEST.

STATUS-----STATUS

ANL MEADOWS - NSE 49 310(1972), DATA 1. TO 5. MEV.
 ANL POENITZ+ - JNE 26 483(1972), DATA 2 TO 3 MEV.
 LRL BEHRENS+ - NCSAC-42 130(1970), WORK IN PROGRESS TO 15 MEV.
 KFK CIERJACKS+ - EANDC(E)-157 (1973), IN PROGRESS .8 TO 30 MEV.
 RPI BLOCK+ - USNDC-7 207(1973), IN PROGRESS IN SUBTHRESHOLD REGION.
 HAR COATES - MEASUREMENT IN PROGRESS.

92 URANIUM 238 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

691275	1.00 MEV	10.0 MEV	1.0% 1 USA R.AVERY P.B.HEMMIG ANL AEC	Q: RATIO TO CF-252 NU WANTED. O: CONFIRMATION OF SOLEILHAC DATA REQUESTED.
714021	5.00 MEV	0.7%	1 CCP M.N.NIKOLAEV FEI	Q: RATIO TO CF-252 NU WANTED. A: ENERGY DEPENDENCE MUST BE KNOWN WITH 0.7 PERCENT ACCURACY AND ABOUT 10 PERCENT ENERGY RESOLUTION. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
742088	15.0 MEV	1.0%	1 FR A.MICHAUDON BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.
 LRL HOWE+ - NCSAC-42 130(1971), IN PROGRESS.

92 URANIUM 238 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION

692397	2.00 MEV	5.0%	2 UK C.G.CAMPBELL J.G.TYROR WIN WIN	O: FOR FAST AND THERMAL REACTORS.
712070			1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE	Q: DELAYED NEUTRON FRACTIONS (BETA) WANTED. A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT. O: FOR FAST REACTOR MEASUREMENTS.

STATUS-----STATUS

HFA SHALEV+ - NSE 51 52(1973).
 IAE MANERO+ - REA 10 637(1972), REVIEW.
 LAS EVANS+ - USNDC-3 127(1972), REVISED OLDER WORK.
 ANL COX - USNDC-3 18(1972), WORK IN PROGRESS.
 HAR MCTAGGART - MEASUREMENT IN PROGRESS.

92 URANIUM 238 NEUTRON ENERGY SPECTRUM OF FISSION NEUTRONS

692400	2.00 MEV	2.0%	3 UK C.G.CAMPBELL WIN	A: ACCURACY FOR AVERAGE E'. ACCURACY 10 PERCENT ON NUMBER OF NEUTRONS ABOVE 5. MEV AND BELOW .25 MEV. O: FOR FAST REACTORS.
721145	5.00 MEV	5.0%	1 USA P.B.HEMMIG AEC	O: TO RESOLVE DISCREPANCIES IN EXISTING DATA.

92 URANIUM 238 NEUTRON ENERGY SPECTRUM OF FISSION NEUTRONS (CONTINUED)

742089 15.0 MEV 2.0% 1 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

92 URANIUM 238 NEUTRON RESONANCE PARAMETERS

691286 1.00 EV 20.0 KEV 10.0% 1 USA H.ALTER AEC
 R.AVERY ANL
 T.SNYDER GEC
 P.B.HEMMIG AEC
 Q: WANTED TO AS HIGH AN ENERGY AS CAN BE MEASURED.
 O: NEEDED FOR DOPPLER EFFECT IN FAST REACTORS.
 NEED ANSWERS TO QUESTIONS OF MISSING P-WAVE LEVELS
 AND UNCERTAINTY OF GAMMA WIDTHS.
 M: SUBSTANTIAL MODIFICATIONS.

692385 2.00 KEV 5.00 KEV 3.0% 2 SWD H.HAEGGBLOM AE
 Q: NEUTRON CAPTURE AND FISSION WIDTH NEEDED.
 O: NEEDED FOR FAST REACTOR CALCULATIONS.

702029 5.00 EV 4.00 KEV 2.0% 2 FR H.TELLIER SAC
 O: FOR RESONANCE SELF SHIELDING AND DOPPLER EFFECT.
 M: SUBSTANTIAL MODIFICATIONS.

714016 5.00 KEV 1 CCP M.N.NIKOLAEV FEI
 O: CAREFUL IDENTIFICATION OF S AND P WAVE RESONANCES
 NEEDED FOR DETERMINATION OF P WAVE STRENGTH
 FUNCTION.
 ATTENTION TO BE PAID TO DISTRIBUTION OF REDUCED
 NEUTRON WIDTHS OF P WAVE RESONANCES AND ITS
 AGREEMENT WITH THE PORTER-THOMAS DISTRIBUTION.
 REQUEST CONNECTED WITH PROBLEM OF SELF SHIELDING
 EVALUATION IN UNRESOLVED RESONANCE REGION.

732113 6.00 EV 10.0 KEV 3.0% 1 UK C.G.CAMPBELL WIN
 A: ACCURACY IS FOR THE AVERAGE ERROR BETWEEN E AND
 2E.
 BROAD RESOLUTION MEASUREMENTS COULD SUFFICE.
 O: FOR FAST REACTORS.
 TO GIVE SHIELDED CROSS SECTIONS TO 3 PERCENT.
 TO GIVE DOPPLER CHANGE TO 5 PERCENT FOR
 TEMPERATURES BETWEEN 300 AND 1200 DEGREES K.
 M: NEW REQUEST.

STATUS-----STATUS

COL RAHN+ - USNDC-1 67(1972), 74 P-WAVE RESONANCES.
 DUB MALECKY+ - AE 32 49(1972), DATA TO 1.2 KEV.
 BNL CHRLEN+ - PR/C 4 900(1971), DATA TO 600 EV.
 RPI BYOUN+ - USNDC-3 166(1972), IN PROGRESS.

92 URANIUM 239 NEUTRON CAPTURE CROSS SECTION

742091 1.00 KEV 3.00 MEV 20.0% 2 FR A.MICHAUDON BRC
 O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

92 URANIUM 239 NEUTRON FISSION CROSS SECTION

742090 1.00 KEV 15.0 MEV 20.0% 1 FR A.MICHAUDON BRC
 O: EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

93 NEPTUNIUM 237 GAMMA GAMMA,N

692409 20.0% 3 UK A.WHITTAKER UKW
 Q: PRODUCTION OF PU-236.
 FOR AN AVERAGE GAMMA RAY ENERGY FROM MO, C,
 ZIRCALOY AND STAINLESS STEEL(20/25).
 O: FOR ISOTOPE PRODUCTION.
 M: SUBSTANTIAL MODIFICATIONS.

93 NEPTUNIUM 237 NEUTRON CAPTURE CROSS SECTION

671114 1.00 MV 1.00 KEV 10.0% 1 USA B.R.LEONARD BNW
 T.SNYDER GEC
 A: ACCURACY OF 5 PERCENT IN NEUTRON WIDTH WANTED.
 ACCURACY OF 10 PERCENT IN GAMMA WIDTH WANTED.
 O: FOR THERMAL REACTOR CALCULATIONS AND PU-238
 PRODUCTION.
 M: SUBSTANTIAL MODIFICATIONS.

671116 1.00 KEV 5.00 MEV 10.0% 2 USA G.DESSAUER SRL
 O: FOR PU-238 PRODUCTION.
 M: SUBSTANTIAL MODIFICATIONS.

94 PLUTONIUM 239 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION (CONTINUED)

742095 1.00 KEV 15.0 MEV 5.0% 1 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

STATUS-----STATUS

GEL COPPOLA+ - ZP 232 286(1970), DATA 1.5 TO 5.5 MEV.
 ANL GUENTHER+ - USNDC-3 13(1972), IN PROGRESS TO 4. MEV.

94 PLUTONIUM 239 NEUTRON INELASTIC CROSS SECTION

692419 15.0 MEV 25.0% 1 GER B.GOEL KFK
 Q: TOTAL INELASTIC OR NONELASTIC CROSS SECTION.
 M: SUBSTANTIAL MODIFICATIONS.

742097 15.0 MEV 10.0% 2 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

94 PLUTONIUM 239 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION

682066 10.0 KEV 10.0 MEV 10.0% 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 Q: CROSS SECTIONS FOR EXCITATION OF INDIVIDUAL LEVELS DESIRED.
 O: FOR FAST REACTORS.

692421 15.0 MEV 2 GER B.GOEL KFK
 Q: SEPARATION OF LEVELS UP TO 1 MEV REQUIRED.
 A: ACCURACY 20 PERCENT UP TO 1.4 MEV AND 10 PERCENT ABOVE.
 ACCURACY ON NUCLEAR TEMPERATURE 10 PERCENT.
 PRIMARY AND SECONDARY ENERGY RESOLUTION 100 KEV.
 M: SUBSTANTIAL MODIFICATIONS.

714023 15.0 MEV 1 CCP M.N.NIKOLAEV FEI
 A: CROSS SECTION FOR INELASTIC REMOVAL BELOW FISSION THRESHOLDS OF U-238 AND OF PU-240 OR NP-237 DESIRED WITH 10 PERCENT ACCURACY.
 EXCITATION CROSS SECTION FOR LOW LYING LEVELS REQUIRED WITH 15 PERCENT ACCURACY.
 O: FOR 1.0 PERCENT ACCURACY IN K-EFF OF FAST BREEDERS.

721084 10.0 KEV 10.0 MEV 20.0% 1 USA R.EHRLICH KAP
 P.B.HEMMIG AEC

STATUS-----STATUS

GEL COPPOLA+ - ZP 232 286(1970), DATA 1.9 TO 5.5 MEV.
 ANL GUENTHER+ - USNDC-3 13(1972), IN PROGRESS TO 4. MEV.

94 PLUTONIUM 239 NEUTRON DOUBLE DIFFERENTIAL INELASTIC CROSS SECTION

693068 300. KEV 10.0 MEV 10.0% 1 BAN M.M.ISLAM RAM
 O: FOR FAST REACTORS.

742098 15.0 MEV 20.0% 2 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

94 PLUTONIUM 239 NEUTRON NON-ELASTIC CROSS SECTION

693067 100. KEV 10.0 MEV 10.0% 2 BAN M.M.ISLAM RAM
 O: FOR FAST REACTORS.

94 PLUTONIUM 239 NEUTRON CAPTURE CROSS SECTION

691817 25.3 MV 1.0% 2 CAN G.C.HANNA CRC
 O: CONFIRMATION OF EXISTING ALPHA VALUES DESIRABLE.

691818 1.00 EV 500. EV 5.0% 2 CAN G.C.HANNA CRC
 Q: RESONANCE INTEGRAL REQUIRED.

692437 1.00 KEV 500. KEV 3.0% 2 SWD H.HAEGGBLOM AE
 O: NEEDED FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

693078 25.3 MV 30.0 KEV 3.0% 2 BAN M.M.ISLAM RAM
 O: FOR FAST REACTORS.

693079 100. EV 1.00 MEV 5.0% 2 IND G.K.MEHTA ITK
 Q: ENERGY DEPENDENCE REQUIRED.

94 PLUTONIUM 239		NEUTRON		CAPTURE CROSS SECTION			(CONTINUED)
702039	1.00 KEV	200. KEV	5.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE
						Q: ALPHA ALSO USEFUL. O: FOR FAST REACTORS.	
712082	30.0 KEV	15.0 MEV	10.0%	2	GER	B.GOEL KFK	
						Q: ALPHA ALSO USEFUL. A: PREFER 5 PERCENT ACCURACY UP TO 100 KEV. O: FOR BURNUP CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.	
742104	1.00 KEV	3.00 MEV	5.0%	1	FR	A.MICHAUDON BRC	
						O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.	

STATUS-----STATUS
 FEI CHELNOKOV+ - YFI-13 6(1972), DATA 200 EV TO 12 KEV.
 ORL GWIN+ - NSE 45 25(1971), DATA THERMAL TO 30 KEV.
 ORL WESTON+ - USNDC-3 149(1972), WORK IN PROGRESS.

94 PLUTONIUM 239		NEUTRON		PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT.		
693069	300. KEV	4.00 MEV	10.0%	1	BAN	M.M.ISLAM RAM
						Q: SECONDARY ENERGY-ANGLE DISTRIBUTIONS REQUIRED. O: FOR FAST REACTORS.

STATUS-----STATUS
 LAS DRAKE+ - NSE 40 294(1970), DATA 4 TO 7.7 MEV.

94 PLUTONIUM 239		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION		
692418	120. KEV		20.0%	2	UK	C.G.CAMPBELL WIN
						Q: GAMMA SPECTRUM WANTED. A: LOW RESOLUTION FOR INCIDENT ENERGY ADEQUATE. O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE. M: SUBSTANTIAL MODIFICATIONS.
742096	1.00 KEV	15.0 MEV	10.0%	1	FR	A.MICHAUDON BRC
						O: FOR SHIELDING. M: NEW REQUEST.

94 PLUTONIUM 239		NEUTRON		N, 2N		
682067		15.0 MEV	10.0%	1	FR	A.MICHAUDON BRC
691306	6.00 MEV	10.0 MEV	10.0%	2	USA	P.B.HEMMIG AEC
						O: NEEDED TO PREDICT BUILDUP OF PU-236.

STATUS-----STATUS
 ALD MATHER+ - AWRE/O-72/72, IN PROGRESS 6 TO 13 MEV.

94 PLUTONIUM 239		NEUTRON		N, 3N		
682068		15.0 MEV	20.0%	1	FR	A.MICHAUDON BRC

STATUS-----STATUS
 ALD MATHER+ - AWRE/O-72/72, IN PROGRESS 6 TO 13 MEV.

94 PLUTONIUM 239		NEUTRON		NEUTRON EMISSION CROSS SECTION		
701039	5.00 MEV	15.0 MEV	20.0%	1	USA	R.J.HOWERTON LRL
						Q: ENERGY DISTRIBUTION OF NEUTRONS WANTED FOR SECONDARY ENERGIES GREATER THAN 200 KEV. M: NEW REQUEST.

94 PLUTONIUM 239		NEUTRON		FISSION CROSS SECTION		
661049	10.0 KEV	15.0 MEV	1.0%	1	USA	G.HANSEN LAS
						Q: RELATIVE TO U-235. A: ENERGY RESOLUTION 3 PERCENT, ENERGY CALIBRATION 1 PERCENT.
682069	440. EV	800. EV	10.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE JAE
						O: FOR FAST REACTORS.
691467	1.00 EV	10.0 MEV		1	USA	R.AVERY ANL T.SNYDER GEC P.B.HEMMIG AEC
						A: ACCURACY 3 PERCENT BELOW 20 KEV, 2 PERCENT, 20 KEV TO 3 MEV, 5 PERCENT, 3 MEV TO 10 MEV. O: HIGHEST PRIORITY FOR FAST REACTOR CALCULATIONS.
691819	25.3 MV		1.0%	2	CAN	G.C.HANNA CRC
						O: SERIOUS DISCREPANCIES BETWEEN AVAILABLE DIRECT MEASUREMENTS.

Reference	Energy	Neutron Energy	Accuracy	Order	Country	Author	Agency	Notes
692426	100. EV	5.00 MEV	3.0%	1	UK	C.G.CAMPBELL	WIN	Q: RATIO TO U-235 FISSION CROSS SECTION ACCEPTABLE. A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E. O: FOR FAST REACTORS.
693070	25.3 MV	15.0 MEV	5.0%	1	BAN	M.M.ISLAM	RAM	O: FOR FAST REACTORS.
693071	20.0 KEV	2.00 MEV	3.0%	2	IND	G.K.MEHTA	ITK	Q: CROSS SECTION REQUIRED AT 60, 150, 200, 500 KEV AND 1 MEV. A: ENERGY RESOLUTION OF 5 PERCENT.
714024	1.00 KEV	4.00 MEV		1	CCP	M.N.NIKOLAEV	FEI	Q: MEASUREMENTS MAINLY WANTED RELATIVE TO FISSION CROSS SECTION OF U-235. BELOW 30 KEV MEASUREMENTS OF TRANSMISSION CURVES BY FLAT RESPONSE DETECTOR AND BY SELF DETECTION METHOD WITH FISSION DETECTOR WANTED FOR SELFSHIELDING EVALUATION. THESE CURVES MUST BE MEASURED WITH ATTENUATIONS OF THE PRIMARY BEAM DOWN TO 1 PERCENT. A: ACCURACY REQUIRED TO BETTER THAN 2.0 PERCENT. OPTIMUM PRECISION OF 1.5 PERCENT DESIRED IN REGION 20 KEV TO 1 MEV. LETHARGY RESOLUTION OF ABOUT 0.2 CONSIDERED SUFFICIENT FOR SUCH MEASUREMENTS. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS. REQUEST CONSIDERED FULFILLED, WHEN AT LEAST THREE MEASUREMENTS WITH DIFFERENT METHODS AGREE WITHIN REQUESTED ACCURACY.
721085	25.3 MV	1.00 KEV	1.0%	1	USA	T.SNYDER	GEC	Q: U AND PU HALF LIVES SHOULD BE CONFIRMED AS THEY AFFECT THIS MEASUREMENT. O: STANDARD PARAMETER FOR PU-FUELED REACTOR. DIRECT MEASUREMENTS DISAGREE. IMPROVED PRECISION NEEDED FOR THERMAL REACTORS.
721086	10.0 KEV	14.0 MEV	2.0%	1	USA	P.B.HEMMIG	AEC	Q: RELATIVE TO U-235. AVERAGES OVER 10 TO 20 PERCENT ENERGY INTERVALS WANTED. A: ENERGY RESOLUTION 3 PERCENT, ENERGY CALIBRATION 1 PERCENT.
742006	1.00 KEV	5.00 MEV		2	SWD	H.HAEGGBLOM	AE	A: ACCURACY 2 PERCENT TO 500 KEV, 5 PERCENT ABOVE. O: FAST REACTOR CALCULATIONS. M: NEW REQUEST.
742099		15.0 MEV		1	FR	A.MICHAUDON	BRC	A: ACCURACY 5 PERCENT TO 1 KEV, 2 PERCENT ABOVE. O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

- SAC BLONS - NSE 51 130(1973), DATA 39 EV TO 30 KEV.
- FEI CHELNOKOV+ - YFI-13 6(1972), DATA 200 EV TO 35 KEV.
- GEL DERUYTTER - JNE 26 293(1972), DATA .1 TO 30 EV.
- ANL POENITZ - NSE 47 228(1972), DATA .5 TO 5.4 MEV.
- LRL BEHRENS+ - NCSAC-42 130(1971), WORK IN PROGRESS 1 KEV TO 15 MEV.
- GEL THEOBALD+ - EANDC(E)-150 (1972), IN PROGRESS 50 EV TO 2 KEV.
- HAR GAYTHER+ - AERE-PR/NP19(1972), IN PROGRESS 1 KEV TO 1 MEV.
- ORL GWIN+ - USNDC-3 149(1972), IN PROGRESS THERMAL TO 200 KEV.
- NBS BOWMAN - WORK PLANNED.
- HAR LYNN - MEASUREMENT PLANNED.

Reference	Energy	Neutron Energy	Accuracy	Order	Country	Author	Agency	Notes
691314	100. EV	10.0 MEV		1	USA	R.AVERY T.SNYDER P.B.HEMMIG F.C.MAIENSCHIN	ANL GEC AEC ORL	Q: CAPTURE CROSS SECTION EQUALLY USEFUL. A: ACCURACY 100 EV TO 1 KEV, 8 PERCENT 1 KEV TO 50 KEV, 4 PERCENT 50 KEV TO 600 KEV, 6 PERCENT 600 KEV TO 10 MEV, 10 PERCENT.
693073	100. EV	10.0 MEV	5.0%	2	SAF	R.VAN DER WALT	PEL	O: FOR FAST REACTOR CALCULATIONS.
702035	500. EV	1.00 MEV	5.0%	2	FR	J.Y.BARRE	CAD	Q: ABSOLUTE VALUES USEFUL BUT REQUEST CONCERNS MAINLY RELATIVE VALUES VERSUS ENERGY. O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.

Reference	Energy	Neutron Energy	Accuracy	Count	Country	Author	Method	Notes
712078	20.0 KEV	100. KEV	10.0%	3	UK	C.G.CAMPBELL	WIN	A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E. O: FOR FAST REACTORS. M: MODIFIED (PARTIALLY FULFILLED).
714025	100. EV	800. KEV	7.0%	1	CCP	M.N.NIKOLAEV	FEI	Q: FOR EVALUATION OF DIFFERENCES IN CAPTURE AND FISSION RESONANCE SELFSHIELDING, MEASUREMENTS OF TRANSMISSION CURVES BY SELF-DETECTION METHOD WITH FISSION AND ABSORPTION DETECTORS DESIRABLE. BEAM ATTENUATION DOWN TO 1 PERCENT WANTED. A: IN REGION 1 TO 100 KEV, 4 TO 5 PERCENT ACCURACY DESIRABLE. LETHARGY RESOLUTION OF 0.2 SUFFICIENT FOR REGION 0.1 TO 30 KEV. O: FOR ACCURACY OF 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS. AT LEAST THREE DIFFERENT RESULTS MUST COINCIDE WITHIN REQUESTED ACCURACY.

STATUS-----STATUS

FEI CHELNOKOV+ - YFI-13 6(1972), DATA 200 EV TO 12 KEV.
 FEI KONONOV+ - AE 32 85(1972), DATA 10 KEV TO 1 MEV.
 ORL WESTON+ - USNDC-7 179(1973), IN PROGRESS THERMAL TO 20 KEV.
 KFK BANDL+ - EANDC(E)-157 (1973), IN PROGRESS 8.1 TO 60 KEV.

94 PLUTONIUM 239 NEUTRON NEUTRONS EMITTED PER NEUTRON ABSORPTION (ETA)

642006	10.0 MV	0.50 EV	0.8%	1	UK	J.G.TYROR	WIN	Q: VALUE RELATIVE TO THERMAL ETA WANTED. ENERGY IN .02 EV STEPS. O: FOR TEMPERATURE COEFFICIENT WORK.
671124	25.3 MV	1.00 EV	0.5%	1	USA	T.SNYDER	GEC	O: FOR PU-FUELED REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
691820	10.0 MV	1.00 EV	0.5%	2	CAN	G.C.HANNA	CRC	O: ORNL MN BATH MEASUREMENT (NSE 14 101) HAS IMPORTANT UNCERTAINTY ASSOCIATED WITH NEUTRON SPECTRUM AND VALUE IS HIGHER THAN RECENT MONOKINETIC MEASUREMENT AT MTR (ID0-17083).

94 PLUTONIUM 239 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

661063	25.3 MV	10.0 MEV		1	USA	H.ALTER R.AVERY T.SNYDER P.B.HEMMIG A.M.PERRY	AEC ANL GEC AEC ORL	Q: MEASUREMENT SHOULD INCLUDE LOW ENERGY NEUTRONS (TO APPROXIMATELY 100 KEV). A: ACCURACY 1 KEV TO 3 MEV, 0.5 PERCENT, OTHERWISE 1 PERCENT. ACCURACY OF 1.5 PERCENT WOULD BE USEFUL. REQUIRE RESOLUTION OF SIGNIFICANT STRUCTURE UP TO 500 KEV. O: HIGHEST PRIORITY FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.
702037		15.0 MEV		1	JAP	JAPAN NUCLEAR DATA COMMITTEE	JAE	A: ACCURACY REQUIRED TO BETTER THAN 0.5 PERCENT. O: FOR FAST REACTORS CALCULATIONS.
714026	25.3 MV	2.50 MEV	0.5%	1	CCP	M.N.NIKOLAEV	FEI	Q: RATIO TO CF-252 NU REQUIRED. A: ENERGY DEPENDENCE OF NU IS WANTED WITH 0.7 PERCENT ACCURACY. ENERGY RESOLUTION OF 10. PERCENT REQUIRED BELOW 2.5 MEV. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
714027	25.3 MV	2.50 MEV	0.1%	2	CCP	M.N.NIKOLAEV	FEI	Q: RATIO TO CF-252 NU REQUIRED. A: ACCURACY REQUIREMENT EVALUATED FROM OPTIMUM DISTRIBUTION OF UNCERTAINTIES OVER UNCORRELATED NUCLEAR DATA. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
742101		15.0 MEV		1	FR	A.MICHAUDON	BRC	A: ACCURACY 2 PERCENT TO 1 KEV, 1 PERCENT ABOVE. O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.
 CCP VOLODIN+ - AE 33 901(1972), DATA TO 1.6 MEV.
 BRC FREHAUT+ - EANDC(E)-150(1972), IN PROGRESS 7 EV TO 40 KEV.
 LRL HOWE+ - USNDC-7 105(1973), IN PROGRESS THERMAL TO 15 MEV.
 RPI REED+ - USNDC-7 202(1973), IN PROGRESS THERMAL TO 100 EV.
 ORL WESTON - IN PROGRESS TO 200 EV, PLANNED TO 1.5 MEV.

94 PLUTONIUM 239 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION

691312 25.3 MV 5.00 MEV 5.0% 2 USA R.AVERY ANL
 P.B.HEMMIG AEC
 Q: NEUTRON SPECTRUM WANTED.
 YIELD, HALF LIFE, AND ENERGY NEEDED.
 O: NEEDED FOR ANALYSIS OF FAST CRITICALS AND FAST REACTOR CALCULATIONS.

712084 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 Q: DELAYED NEUTRON FRACTIONS (BETA) WANTED.
 A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT.
 O: FOR FAST REACTOR MEASUREMENTS.

732114 100. KEV 5.0% 2 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.
 M: NEW REQUEST.

STATUS-----STATUS

FEI TARASKO+ - YF 17 1149(1973), IN THERMAL AND FISSION SPECTRUM.
 HFA SHALEV+ - NSE 51 52(1973).
 IAE MANERO+ - REA 10 637(1972), REVIEW.
 KFK FIEG - EANDC(E)-157 (1973), IN PROGRESS.

94 PLUTONIUM 239 NEUTRON INFORMATION ON NEUTRONS FROM A FISSION FRAGMENT

693075 50.0 KEV 1.00 MEV 10.0% 2 IND G.K.MEHTA ITK
 O: PROMPT NEUTRONS AS A FUNCTION OF FISSION PRODUCT MASS WANTED.

94 PLUTONIUM 239 NEUTRON ENERGY SPECTRUM OF FISSION NEUTRONS

692433 100. KEV 2.0% 1 UK C.G.CAMPBELL WIN
 A.WHITTAKER UKW
 S.B.WRIGHT HAR
 A: ACCURACY 2 PERCENT AVERAGE E¹.
 10 PERCENT ON THE NUMBER OF NEUTRONS ABOVE 5 MEV AND BELOW .25 MEV.
 O: FOR FAST REACTORS.
 FOR REACTION RATE ANALYSIS.
 M: SUBSTANTIAL MODIFICATIONS.

712080 25.3 MV 2 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY OF NUCLEAR TEMPERATURE FOR MAXWELL DISTRIBUTION IS REQUIRED WITHIN 30 KEV.
 O: FOR FAST REACTORS.

742103 15.0 MEV 1.0% 1 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

STATUS-----STATUS

KFK WERLE+ - JNE 26 165(1972), DATA 100 KEV TO 10 MEV.
 ANL SMITH - ANL-7910 18(1972), DATA 300 KEV TO 8 MEV.
 HAR ROSE+ - PRELIMINARY DATA AVAILABLE.

94 PLUTONIUM 239 NEUTRON FISSION PRODUCT MASS YIELD SPECTRUM

671125 25.3 MV 3.0% 2 USA R.T.BAYARD BET
 Q: CUMULATIVE AND DIRECT YIELD OF XE-135 INCLUSIVE OF 15 MINUTE ISOMER IS WANTED.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

671126 25.3 MV 1.0% 2 USA R.T.BAYARD BET
 G.DESSAUER SRL
 Q: FISSION PRODUCT YIELD OF CS-137 WANTED.
 O: FOR BURN UP INDICATOR STANDARD.

671128 25.3 MV 3.0% 2 USA R.T.BAYARD BET
 Q: FISSION PRODUCT YIELD OF ND-147 AND SM-149 WANTED.
 O: FOR CALCULATION OF FISSION PRODUCT POISONS.

711803 25.3 MV 1.0% 2 CAN W.H.WALKER CRC
 Q: YIELD OF XE-135 WANTED.
 O: FOR CALCULATION OF FISSION PRODUCT ABSORPTION.

94 PLUTONIUM 240 NEUTRON CAPTURE CROSS SECTION (CONTINUED)

Reference	Energy	Unit	Neutron Energy	Percentage	Order	Country	Author(s)	Institution	Notes
692453	5.00	KEV	1.00	MEV 10.0%	2	GER	B.GOEL	KFK	A: 1 NS/M RESOLUTION NEEDED. M: SUBSTANTIAL MODIFICATIONS.
712088	100.	EV	1.00	MEV	1	JAP	JAPAN NUCLEAR DATA COMMITTEE		JAE A: ACCURACY REQUIRED TO BETTER THAN 10.0 PERCENT. O: FOR FAST REACTOR CALCULATIONS.
712089	1.00	MEV	10.0	MEV 20.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE		JAE O: FOR FAST REACTORS.
714032	500.	EV	1.40	MEV 7.0%	1	CCP	M.N.NIKOLAEV	FEI	Q: RATIO WANTED RELATIVE TO U-235 FISSION. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
721137	150.	KEV	1.00	MEV 10.0%	1	USA	T.SNYDER P.B.HEMMIG	GEC AEC	A: ACCURACY OF 15 PERCENT USEFUL. O: HIGH PRIORITY FOR FAST REACTOR CALCULATIONS.

STATUS-----STATUS

RPI HOCKENBURY+ - NSE 49 153(1972), PREVIOUS DISCREPANCIES RESOLVED.
 HAR MOXEN+ - AERE-PR/NP19 (1972), WORK IN PROGRESS.
 ORL WESTON+ - MEASUREMENT IN PROGRESS.

94 PLUTONIUM 240 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION

692442	120.	KEV		20.0%	3	UK	C.G.CAMPBELL	WIN	Q: GAMMA SPECTRUM WANTED. A: LOW RESOLUTION FOR INCIDENT ENERGY ADEQUATE. O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE.
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94 PLUTONIUM 240 NEUTRON FISSION CROSS SECTION

671130	1.00	KEV	15.0	MEV 2.0%	2	USA	G.HANSEN	LAS	Q: RATIO WANTED RELATIVE TO U-235.
712086	100.	EV	10.0	MEV	1	JAP	JAPAN NUCLEAR DATA COMMITTEE		JAE A: ACCURACY REQUIRED TO BETTER THAN 5.0 PERCENT. O: FOR FAST REACTOR CALCULATIONS.
714030	100.	KEV	5.00	MEV 5.0%	1	CCP	M.N.NIKOLAEV	FEI	Q: RATIO WANTED RELATIVE TO U-235 FISSION. O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
721088	500.	KEV	10.0	MEV 5.0%	2	USA	T.SNYDER	GEC	O: IMPORTANT FOR FAST REACTOR CALCULATIONS.
721089	500.	EV	100.	KEV 9.0%	2	USA	P.B.HEMMIG	AEC	O: FOR FAST REACTOR CALCULATIONS. M: NEW REQUEST.
721090	1.00	KEV	100.	KEV 5.0%	3	USA	W.H.HANNUM	AEC	Q: RATIO WANTED RELATIVE TO U-235.
721091	100.	KEV	5.00	MEV 3.0%	2	USA	P.B.HEMMIG	AEC	Q: RATIO WANTED RELATIVE TO U-235. A: ACCURACY OF 5 PERCENT USEFUL.
742008			5.00	MEV 10.0%	2	SWD	H.HAEGGBLOM	AE	O: FAST REACTOR CALCULATIONS. M: NEW REQUEST.
742022	1.00	KEV	15.0	MEV 5.0%	1	GER	B.GOEL	KFK	M: NEW REQUEST.
742105	1.00	KEV	15.0	MEV 3.0%	2	FR	A.MICHAUDON	BRC	O: FOR CRITICAL ASSEMBLIES. M: NEW REQUEST.

STATUS-----STATUS

RPI HOCKENBURY+ - NSE 49 153(1972), DATA 20 EV TO 30 KEV.
 HAR BELCHER+ - AERE-PR/NP19 (1972), IN PROGRESS TO 1 MEV.
 KFK CIERJACKS+ - EANDC(E)-157 (1973), IN PROGRESS .8 TO 30 MEV.
 ORL WESTON+ - USNDC-7 179(1973), IN PROGRESS THERMAL TO 20 KEV.
 LRL BEHRENS+ - NCSAC-42 130(1971), IN PROGRESS 1 KEV TO 15 MEV.

94 PLUTONIUM 240 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

692446 5.00 MEV 2.0% 3 UK C.G.CAMPBELL WIN
 O: FOR FAST REACTORS.
 692448 500. KEV 15.0 MEV 5.0% 1 GER B.GOEL KFK
 714031 5.00 MEV 1.0% 1 CCP M.N.NIKOLAEV FEI
 O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND
 1.6 PERCENT IN BREEDING RATIO FOR FAST REACTORS.
 721092 10.0 MEV 3.0% 2 USA R.AVERY ANL
 P.B.HEMMIG AEC
 A: ACCURACY OF 5 PERCENT WOULD BE USEFUL.
 742106 1.00 KEV 15.0 MEV 1.0% 2 FR A.MICHAUDON BRC
 O: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.
 BRC FREHAUT+ - EANDC(E)-150 (1972), WORK IN PROGRESS 1.5 TO 15 MEV.

94 PLUTONIUM 240 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION

712090 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 Q: DELAYED NEUTRON FRACTION (BETA).
 A: ACCURACY REQUIRED TO BETTER THAN 10.0 PERCENT.
 O: FOR FAST REACTOR MEASUREMENTS.

STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.

94 PLUTONIUM 240 NEUTRON ENERGY SPECTRUM OF FISSION NEUTRONS

732098 15.0 MEV 3.0% 2 FR J.Y.BARRE CAD
 A: ACCURACY FOR AVERAGE E' RELATIVE TO AVERAGE E'
 U-235 OR PU-239.
 M: NEW REQUEST.

94 PLUTONIUM 240 NEUTRON RESONANCE PARAMETERS

691391 100. EV 5.00 KEV 10.0% 2 USA R.AVERY ANL
 P.B.HEMMIG AEC
 O: NEEDED FOR FAST REACTOR CALCULATIONS INCLUDING
 DOPPLER EFFECT.
 714028 10.0 EV 5.00 KEV 1 CCP M.N.NIKOLAEV FEI
 Q: NEUTRON AND CAPTURE WIDTHS WANTED FOR EVALUATION
 OF SELF SHIELDING IN RESOLVED RESONANCE REGION.
 O: AVERAGE S AND P WAVE RESONANCE PARAMETERS SHOULD
 BE DERIVED.
 STATISTICAL ANALYSIS OF MEASURED RESONANCE
 PARAMETERS WANTED.

STATUS-----STATUS

RPI HOCKENBURY+ - NSE 49 153(1972), PARAMETERS FOR 35 RESONANCES.

94 PLUTONIUM 241 NEUTRON TOTAL CROSS SECTION

692455 1.00 KEV 1.00 MEV 10.0% 2 GER B.GOEL KFK
 692457 1.00 MEV 15.0 MEV 10.0% 3 GER B.GOEL KFK
 712091 10.0 MEV 1 JAP JAPAN NUCLEAR DATA COMMITTEE JAE
 A: ACCURACY REQUIRED TO BETTER THAN 10.0 PERCENT.
 O: FOR FAST REACTORS.

STATUS-----STATUS

GEL BOECKHOFF+ - EANDC(E)-150 (1972), WORK IN PROGRESS .7 TO 700 EV.
 ORL SIMPSON+ - IN PROGRESS TO 8 MEV.

94 PLUTONIUM 241		NEUTRON		ABSORPTION CROSS SECTION			
712095	15.0 EV	300. EV	8.0%	3	UK	J.G.TYROR	WIN
							A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E.
							O: FOR THERMAL REACTORS.
712096	1.00 KEV	2.00 KEV	20.0%	3	UK	J.G.TYROR	WIN
							A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E.
							O: FOR THERMAL REACTORS.
94 PLUTONIUM 241		NEUTRON		CAPTURE CROSS SECTION			
671132	25.3 MV	30.0 KEV	3.0%	1	USA	T.SNYDER	GEC
							Q: ALPHA ALSO USEFUL.
							A: ACCURACY TO 3 PERCENT IN ETA.
							O: IMPROVED PRECISION NEEDED FOR THERMAL REACTORS. ALSO WANTED FOR FAST REACTORS.
692470	1.00 KEV	5.00 MEV	10.0%	2	SWD	H.HAEGGBLOM	AE
							O: FAST REACTOR CALCULATIONS.
							M: SUBSTANTIAL MODIFICATIONS.
692471	200. EV	1.00 MEV	10.0%	2	GER	B.GOEL	KFK
							Q: ALPHA IS USEFUL.
712098		10.0 MEV		1	JAP	JAPAN NUCLEAR DATA COMMITTEE JAE	
							A: ACCURACY REQUIRED TO BETTER THAN 10.0 PERCENT.
							O: FOR FAST REACTORS.
STATUS-----STATUS							
ORL WESTON+ - USNDC-3 149(1972), WORK IN PROGRESS THERMAL TO 30 KEV.							
94 PLUTONIUM 241		NEUTRON		TOTAL PHOTON PRODUCTION CROSS SECTION			
692460	120. KEV		20.0%	3	UK	C.G.CAMPBELL	WIN
							Q: GAMMA SPECTRUM WANTED.
							A: LOW RESOLUTION FOR INCIDENT ENERGY ADEQUATE.
							O: FOR STUDY OF ACTIVATION AND HEAT RELEASE IN CORE.
94 PLUTONIUM 241		NEUTRON		FISSION CROSS SECTION			
661055	100. EV	15.0 MEV	1.0%	2	USA	G.E.HANSEN	LAS
							Q: RATIO TO U-235 FISSION WANTED.
							A: ENERGY RESOLUTION - 3 PERCENT.
							M: NEW REQUEST.
682072	25.3 MV	100. EV	10.0%	1	JAP	JAPAN NUCLEAR DATA COMMITTEE JAE	
							Q: RESONANCE PARAMETERS ALSO REQUIRED.
							O: FOR FAST REACTOR.
691328	25.3 MV	30.0 KEV		1	USA	R.AVERY T.SNYDER	ANL GEC
							Q: RATIO TO U-235 OR PU-239 USEFUL.
							A: ACCURACY 3 PERCENT BELOW 10 EV, 10 PERCENT ABOVE 10 EV.
691821		20.0 MV	1.0%	3	CAN	G.C.HANNA	CRC
							Q: ETA AND ALPHA ALSO WANTED.
							BELOW .02 EV, WANTED RELATIVE TO THERMAL VALUE TO ESTABLISH SHAPE OF CROSS SECTION VERSUS ENERGY CURVE.
692462	100. EV	150. KEV	5.0%	2	UK	C.G.CAMPBELL	WIN
							A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E.
							O: FOR FAST REACTORS.
692463	1.00 KEV	5.00 MEV	10.0%	2	SWD	H.HAEGGBLOM	AE
							O: NEEDED FOR FAST REACTOR CALCULATIONS.
							M: SUBSTANTIAL MODIFICATIONS.
721094	1.00 KEV	10.0 MEV	5.0%	1	USA	P.B.HEMMIG	AEC
							Q: RATIO WANTED RELATIVE TO U-235.
732099		5.00 KEV	5.0%	2	FR	H.TELLIER	SAC
							O: REACTOR CALCULATIONS.
							M: NEW REQUEST.
742013	1.00 KEV	15.0 MEV	10.0%	2	GER	B.GOEL	KFK
							M: NEW REQUEST.

-----STATUS-----STATUS

SAC BLONS+ - NSE 51 130(1973), DATA 1 EV TO 30 KEV.
 KFK KAEPPELER+ - NSE 15 124(1973), DATA 10 KEV TO 1.2 MEV RELATIVE TO U-235.
 LRL BEHRENS+ - NCSAC-42 130(1971), IN PROGRESS 1 KEV TO 15 MEV.
 GEL THEOBALD+ - EANDC(E)-150 (1972), IN PROGRESS.
 ORL WESTON+ - USNDC-7 179(1973), IN PROGRESS THERMAL TO 20 KEV.

=====94 PLUTONIUM 241 NEUTRON CAPTURE TO FISSION RATIO (ALPHA)=====

691331	1.00 KEV	2.00 MEV	20.0%	2	USA	T.SNYDER P.B.HEMMIG	GEC AEC
Q: CAPTURE CROSS SECTION EQUALLY USEFUL.							
692465	100. EV	1.00 MEV	20.0%	3	UK	C.G.CAMPBELL	WIN
A: ACCURACY FOR AVERAGE VALUE OF THE ERROR BETWEEN E AND 2E. O: FOR FAST REACTORS.							
702043	25.3 MV		1.0%	2	FR	H.TELLIER	SAC
O: EVALUATION MAY SUFFICE IF IT EXPLAINS DISCREPANCIES. M: SUBSTANTIAL MODIFICATIONS.							
702044	500. EV	1.00 MEV	15.0%	2	FR	J.Y.BARRE	CAD
Q: ABSOLUTE VALUES USEFUL BUT REQUEST CONCERNS MAINLY RELATIVE VALUES VERSUS ENERGY. O: FOR FAST REACTOR CALCULATIONS. M: SUBSTANTIAL MODIFICATIONS.							

-----STATUS-----STATUS

ORL WESTON+ - USNDC-7 179(1973), IN PROGRESS THERMAL TO 200 KEV.

=====94 PLUTONIUM 241 NEUTRON NEUTRONS EMITTED PER NEUTRON ABSORPTION (ETA)=====

642007	10.0 MV	15.0 EV		2	UK	J.G.TYROR	WIN
Q: VALUE RELATIVE TO THERMAL ETA WANTED. A: ACCURACY 2 PERCENT TO 1 EV, 6 PERCENT ABOVE. O: FOR THERMAL REACTORS.							
691922	25.3 MV		1.5%	2	CAN	G.C.HANNA	CRC
O: FOR THERMAL REACTORS.							
691923	1.00 EV	500. EV	5.5%	2	CAN	G.C.HANNA	CRC
Q: ALPHA MEASUREMENT WOULD BE ACCEPTABLE. O: FOR THERMAL REACTORS.							
692464	25.3 MV		1.0%	2	FR	H.TELLIER	SAC
O: FOR THERMAL REACTOR CALCULATIONS. EVALUATION MAY SUFFICE IF IT EXPLAINS DISCREPANCIES. M: SUBSTANTIAL MODIFICATIONS.							

=====94 PLUTONIUM 241 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)=====

691330	1.00 KEV	1.00 MEV	4.0%	2	USA	P.B.HEMMIG	AEC
692466	1.00 KEV	15.0 MEV	5.0%	2	GER	B.GOEL	KFK
M: SUBSTANTIAL MODIFICATIONS.							
721095	1.00 MEV	10.0 MEV	6.0%	2	USA	R.AVERY	ANL

-----STATUS-----STATUS

IAE MANERO+ - REA 10 637(1972), REVIEW.
 LRL HOWE+ - NCSAC-42 130(1971), IN PROGRESS TO 15 MEV.

=====94 PLUTONIUM 241 NEUTRON FISSION PRODUCT MASS YIELD SPECTRUM=====

711904	25.3 MV		1.0%	2	CAN	W.H.WALKER	CRC
Q: YIELD OF X-135 WANTED. O: FOR CALCULATION OF FISSION PRODUCT ABSORPTION.							

=====94 PLUTONIUM 241 NEUTRON RESONANCE PARAMETERS=====

692459	35.0 EV	200. EV	10.0%	2	GER	B.GOEL	KFK
Q: NEUTRON WIDTHS NEEDED.							
721140	25.3 MV	400. EV		2	USA	R.AVERY	ANL
A: ACCURACY 5 PERCENT TO 100 EV AND 10 PERCENT ABOVE. ACCURACY 20 PERCENT USEFUL. O: FOR THERMAL AND FAST REACTOR CALCULATIONS.							

=====

94 PLUTONIUM 242 NEUTRON CAPTURE CROSS SECTION

671199 25.3 MV 7.00 MEV 1 USA B.R.LEONARD BNW
 A: ACCURACY 3 PERCENT TO 100 EV, 10 PERCENT 100 EV TO
 1 KEV, 15-20 PERCENT 1 KEV TO 7 MEV.
 RESONANCE PARAMETERS TO 10-20 PERCENT BELOW
 10 KEV.
 O: FOR CM AND CF PRODUCTION.

702047 25.3 MV 5.0% 1 FR H.TELLIER SAC
 O: EVALUATION MAY SUFFICE IF IT EXPLAINS
 DISCREPANCIES.

702048 5.00 KEV 5.0% 2 FR H.TELLIER SAC
 A: ACCURACY FOR RATIO TO THERMAL CROSS SECTION.
 O: EVALUATION MAY SUFFICE IF IT EXPLAINS
 DISCREPANCIES.
 M: SUBSTANTIAL MODIFICATIONS.

712102 500. EV 1.00 MEV 15.0% 2 FR J.Y.BARRE CAD
 Q: RELATIVE VALUES VERSUS ENERGY OR TO U-238 CAPTURE.
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

721098 1.00 KEV 7.00 MEV 20.0% 1 USA P.B.HEMMIG AEC
 O: FOR FAST BREEDER CALCULATIONS, CM AND CF
 PRODUCTION.
 M: SUBSTANTIAL MODIFICATIONS.

721142 25.3 MV 7.00 MEV 1 USA B.HUTCHINS GEB
 A: ACCURACY 3 PERCENT TO 100 EV, 10 PERCENT 100 EV TO
 1 KEV, 15-20 PERCENT 1 KEV TO 7 MEV.
 RESONANCE PARAMETERS TO 10-20 PERCENT BELOW
 10 KEV.
 O: FOR FAST BREEDER CALCULATIONS, CM AND CF
 PRODUCTION.
 M: SUBSTANTIAL MODIFICATIONS.

742010 1.00 KEV 5.00 MEV 10.0% 3 SWD H.HAEGGBLOM AE
 O: FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

STATUS-----STATUS

GEL POORTMANS+ - NP/A 207 342(1973), DATA 2 EV TO 1.3 KEV.
 RPI HOCKENBURY+ - USNDC-3 155(1972), IN PROGRESS 3 TO 60 KEV.

=====

94 PLUTONIUM 242 NEUTRON N,P

671134 14.0 MEV 20.0% 2 USA G.I.BELL LAS
 M: NEW REQUEST.

=====

94 PLUTONIUM 242 NEUTRON FISSION CROSS SECTION

742009 1.00 KEV 5.00 MEV 10.0% 3 SWD H.HAEGGBLOM AE
 O: FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

=====

94 PLUTONIUM 242 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

691334 500. KEV 10.0 MEV 5.0% 2 USA P.B.HEMMIG AEC

712100 500. EV 15.0 MEV 5.0% 2 FR J.Y.BARRE CAD
 Q: RELATIVE TO CF-252 NU.
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

=====

94 PLUTONIUM 242 NEUTRON PROMPT NEUTRONS EMITTED PER FISSION

621055 500. KEV 14.0 MEV 3.0% 2 USA R.J.HOWERTON LRL
 O: THERMAL REACTORS.
 M: NEW REQUEST.

=====

94 PLUTONIUM 245 NEUTRON FISSION CROSS SECTION

681804 25.3 MV 2 CAN W.H.WALKER CRC
 A: ACCURACY REQUIRED 200 B.
 O: UNKNOWN CROSS SECTION.

=====

95 AMERICIUM 241 NEUTRON TOTAL CROSS SECTION

691336 25.3 MV 3.0% 2 USA B.R.LEONARD BNW
 M: SUBSTANTIAL MODIFICATIONS.

=====

742107 1.00 KEV 15.0 MEV 3.0% 1 FR A.MICHAUDON BRC
 Q: FOR CRITICAL ASSEMBLIES.
 M: NEW REQUEST.

STATUS-----STATUS
 ORL WESTON+ - USNDC-7 179(1973), IN PROGRESS THERMAL TO 200 KEV.
 HAR LYNN - MEASUREMENT PLANNED.

95 AMERICIUM 241 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

712104 100. KEV 1.00 MEV 5.0% 1 GER B.GOEL KFK
 Q: FOR FAST REACTOR DESIGN.
 M: SUBSTANTIAL MODIFICATIONS.

712105 500. EV 14.0 MEV 5.0% 2 FR J.Y.BARRE CAD
 Q: RELATIVE TO CF-252 NU.
 Q: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

742016 25.3 MV 100. KEV 10.0% 2 GER B.GOEL KFK
 Q: FAST REACTOR DESIGN.
 M: NEW REQUEST.

742017 1.00 MEV 10.0 MEV 10.0% 2 GER B.GOEL KFK
 Q: FAST REACTOR DESIGN.
 M: NEW REQUEST.

95 AMERICIUM 241 NEUTRON ABSORPTION RESONANCE INTEGRAL

712107 10.0% 2 FR H.TELLIER SAC
 M: SUBSTANTIAL MODIFICATIONS.

95 AMERICIUM 242 NEUTRON TOTAL CROSS SECTION

671137 25.3 MV 10.0 KEV 10.0% 2 USA G.DESSAUER SRL
 Q: RESONANCE ENERGIES NEEDED.
 Q: TO DETERMINE CM-244 PRODUCTION.

95 AMERICIUM 242 NEUTRON CAPTURE CROSS SECTION

691341 25.3 MV 10.0 KEV 20.0% 2 USA G.DESSAUER SRL
 Q: CROSS SECTION WANTED FOR 152 YEAR ISOMER.
 Q: TO EVALUATE CM-244 PRODUCTION.

711805 25.3 MV 2 CAN W.H.WALKER CRC
 Q: FOR 16 HOUR ISOMER.
 A: ACCURACY REQUIRED 500 B.
 Q: UNKNOWN CROSS SECTION.

721100 25.3 MV 10.0 MEV 15.0% 2 USA B.HUTCHINS GEC
 Q: FOR SPENT FUEL SHIELDING.

732101 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC
 Q: FOR METASTABLE STATE OF AM-242 (152 YEARS).
 Q: FOR BURN UP PHYSICS.
 EVALUATION MAY BE SUFFICIENT.
 M: NEW REQUEST.

732102 500. EV 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD
 Q: FOR METASTABLE STATE OF AM-242 (152 YEARS).
 VALUE RELATIVE TO U-238 CAPTURE CROSS SECTION.
 Q: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

95 AMERICIUM 242 NEUTRON FISSION CROSS SECTION

691339 25.3 MV 10.0 KEV 2 USA G.DESSAUER SRL
 Q: CROSS SECTION NEEDED FOR 152 YEAR ISOMER.
 Q: NEEDED TO DETERMINE CM-244 PRODUCTION.

732100 500. EV 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD
 Q: FOR METASTABLE STATE OF AM-242 (152 YEARS).
 VALUE RELATIVE TO U-235 FISSION CROSS SECTION.
 Q: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

STATUS-----STATUS
 LRL BROWNE+ - NCSAC-42 135(1971), IN PROGRESS TO 14 MEV.

=====

95 AMERICIUM 242 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

732103 500. EV 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD

Q: FOR METASTABLE STATE OF AM-242 (152 YEARS).
 VALUE RELATIVE TO CF-252 NU.
 O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

=====

95 AMERICIUM 243 NEUTRON TOTAL CROSS SECTION

671138 25.3 MV 10.0 KEV 2.0% 1 USA B.R.LEONARD BNW

Q: RESONANCE INTEGRAL NEEDED.
 O: FOR CM-244 PRODUCTION.
 NEEDED FOR LONG TERM REACTIVITY CALCULATIONS.

-----STATUS-----

ANC SIMPSON+ - ANCR-1060 (1972), DATA .5 EV TO 1 KEV.

=====

95 AMERICIUM 243 NEUTRON ABSORPTION CROSS SECTION

712113 25.3 MV 5.0% 2 FR H.TELLIER SAC

M: SUBSTANTIAL MODIFICATIONS.

732104 500. EV 15.0 MEV 20.0% 2 FR J.Y.BARRE CAD

O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

=====

95 AMERICIUM 243 NEUTRON CAPTURE CROSS SECTION

711906 25.3 MV 5.0% 2 CAN W.H.WALKER CRC

O: DISAGREEMENT BETWEEN INTEGRAL (90 B) AND
 DIFFERENTIAL MEASUREMENTS (180 B).

721101 25.3 MV 10.0 MEV 15.0% 2 USA T.SNYDER GEC

A: WANT 5 TO 10 PERCENT ACCURACY IN THERMAL VALUE
 AND RESONANCE INTEGRAL.
 O: NEEDED FOR LONG TERM REACTIVITY CALCULATIONS AND
 FOR SPENT FUEL SHIELDING.
 TO DETERMINE CM-244 PRODUCTION.

-----STATUS-----

ANC SIMPSON+ - ANCR-1060 (1972), DATA .5 EV TO 1 KEV.

=====

95 AMERICIUM 243 NEUTRON FISSION CROSS SECTION

712111 500. EV 15.0 MEV 15.0% 2 FR J.Y.BARRE CAD

Q: RELATIVE TO U-235 FISSION.
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

-----STATUS-----

LAS SEEGER - LA-4420 (1970), DATA TO 3.0 MEV.

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95 AMERICIUM 243 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

712112 500. EV 15.0 MEV 10.0% 3 FR J.Y.BARRE CAD

Q: RELATIVE TO CF-252 NU.
 O: FOR FAST REACTOR CALCULATIONS.
 M: SUBSTANTIAL MODIFICATIONS.

=====

95 AMERICIUM 243 NEUTRON ABSORPTION RESONANCE INTEGRAL

712114 10.0% 2 FR H.TELLIER SAC

M: SUBSTANTIAL MODIFICATIONS.

=====

96 CURIUM 242 NEUTRON CAPTURE CROSS SECTION

671139 25.3 MV 20.0% 2 USA G.DESSAUER SRL

Q: TARGET HALF-LIFE 163 D.
 O: NEEDED TO EVALUATE PRODUCTION OF CM-244.

712118 10.0 KEV 1.00 MEV 10.0% 1 GER B.GOEL KFK

O: FOR CALCULATIONS OF SPONTANEOUS FISSION IN FAST
 REACTORS.
 M: SUBSTANTIAL MODIFICATIONS.

732107 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC

O: BURN UP PHYSICS.
 M: NEW REQUEST.

742020 25.3 MV 100. KEV 10.0% 2 GER B.GOEL KFK

O: CALCULATIONS OF SPONTANEOUS FISSION
 IN FAST REACTORS.
 M: NEW REQUEST.

96 CURIMUM 242 NEUTRON CAPTURE CROSS SECTION (CONTINUED)

742021 1.00 MEV 15.0 MEV 10.0% 2 GER B.GOEL KFK
 O: CALCULATIONS OF SPONTANEOUS FISSION
 IN FAST REACTORS.
 M: NEW REQUEST.

96 CURIMUM 242 NEUTRON FISSION CROSS SECTION

712116 100. KEV 15.0 MEV 10.0% 1 GER B.GOEL KFK
 O: FOR CALCULATIONS OF SPONTANEOUS FISSION IN FAST
 REACTORS.
 M: SUBSTANTIAL MODIFICATIONS.

732105 500. EV 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD
 Q: VALUE RELATIVE TO U-235 FISSION CROSS SECTION.
 O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

742012 25.3 MV 100. KEV 10.0% 2 GER B.GOEL KFK
 O: CALCULATIONS OF SPONTANEOUS FISSION
 IN FAST REACTORS AND CALIBRATION.
 M: NEW REQUEST.

96 CURIMUM 242 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

712117 100. KEV 15.0 MEV 5.0% 1 GER B.GOEL KFK
 O: FOR CALCULATIONS OF SPONTANEOUS FISSION IN
 FAST REACTORS.
 M: SUBSTANTIAL MODIFICATIONS.

732106 500. EV 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD
 Q: VALUE RELATIVE TO CF-252 NU.
 O: FOR FAST REACTOR CALCULATIONS.
 M: NEW REQUEST.

742019 25.3 MV 100. KEV 10.0% 2 GER B.GOEL KFK
 O: CALCULATIONS OF SPONTANEOUS FISSION
 IN FAST REACTORS.
 M: NEW REQUEST.

96 CURIMUM 242 NEUTRON RESONANCE PARAMETERS

671192 25.3 MV 1.00 KEV 20.0% 2 USA B.R.LEONARD BNW
 Q: TARGET HALF LIFE 163 DAYS.
 RADIATIVE CAPTURE AND NEUTRON WIDTHS WANTED.
 O: FOR PU-238 PRODUCTION.

96 CURIMUM 243 NEUTRON TOTAL CROSS SECTION

671140 25.3 MV 10.0 KEV 10.0% 2 USA G.DESSAUER SRL
 A: ACCURACY 10 PERCENT IN RESONANCE INTEGRAL.
 O: TO EVALUATE CM-244 PRODUCTION.

96 CURIMUM 243 NEUTRON CAPTURE CROSS SECTION

691343 25.3 MV 10.0 KEV 10.0% 2 USA G.DESSAUER SRL
 A: REQUIRE ALPHA TO 10 PERCENT.
 ACCURACY 5 TO 10 PERCENT IN THERMAL VALUE AND
 RESONANCE INTEGRAL.

711807 25.3 MV 2 CAN W.H.WALKER CRC
 A: ACCURACY REQUIRED 50 B.
 O: UNKNOWN CROSS SECTION.

96 CURIMUM 243 NEUTRON FISSION CROSS SECTION

671141 25.3 MV 10.0 KEV 10.0% 2 USA G.DESSAUER SRL
 A: ACCURACY 10 PERCENT IN RESONANCE INTEGRAL.
 O: NEEDED TO EVALUATE PRODUCTION OF CM-244.

691342 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS
 A: ACCURACY 10 PERCENT IN RESONANCE INTEGRAL.
 O: NEEDED TO EVALUATE PRODUCTION OF CM-244.

STATUS-----STATUS

LAS FULLWOOD+ - LA-4420 (1970), DATA .11 TO 2.9 MEV.

LRL BROWNE+ - NCSAC-42 135(1971), MEASUREMENT THERMAL TO 14 MEV PLANNED.

96 CURIMUM 244 NEUTRON CAPTURE CROSS SECTION

671142 10.0 KEV 10.0 MEV 10.0% 2 USA H.ALTER AEC
 T.SNYDER GEC
 O: FOR SPENT FUEL SHIELDING.

732109 10.0 MV 5.00 KEV 10.0% 2 FR H.TELLIER SAC

O: BURN UP PHYSICS.
M: NEW REQUEST.

96 CURIMUM 244 NEUTRON FISSION CROSS SECTION

691345 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

O: TO EVALUATE CALIFORNIUM PRODUCTION.
M: NEW REQUEST.

732108 500. EV 15.0 MEV 30.0% 3 FR J.Y.BARRE CAD

Q: VALUE RELATIVE TO U-235 FISSION CROSS SECTION.
O: FOR FAST REACTOR CALCULATIONS.
M: NEW REQUEST.

96 CURIMUM 244 NEUTRON NEUTRONS EMITTED PER FISSION (NU BAR)

732110 500. EV 15.0 MEV 20.0% 3 FR J.Y.BARRE CAD

Q: VALUE RELATIVE TO CF-252 NU.
O: FOR FAST REACTOR CALCULATIONS.
M: NEW REQUEST.

96 CURIMUM 245 NEUTRON TOTAL CROSS SECTION

671144 25.3 MV 10.0 KEV 10.0% 1 USA G.DESSAUER SRL

A: NEED 10 PERCENT IN RESONANCE INTEGRAL.
O: TO EVALUATE CF PRODUCTION.

96 CURIMUM 245 NEUTRON CAPTURE CROSS SECTION

691348 25.3 MV 10.0 KEV 10.0% 1 USA G.DESSAUER SRL

A: NEED 10 PERCENT IN RESONANCE INTEGRAL.
NEED INTEGRAL ALPHA TO 10 PERCENT THERMAL AND
RESONANCE.
O: TO EVALUATE CF PRODUCTION.

96 CURIMUM 245 NEUTRON FISSION CROSS SECTION

671145 25.3 MV 10.0 KEV 10.0% 1 USA G.DESSAUER SRL

A: NEED 10 PERCENT IN RESONANCE INTEGRAL.
NEED INTEGRAL ALPHA TO 10 PERCENT THERMAL AND
RESONANCE.
O: TO EVALUATE CF PRODUCTION.

691347 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

A: NEED INTEGRAL ALPHA TO 10 PERCENT THERMAL AND
RESONANCE.
O: TO EVALUATE CF PRODUCTION.

STATUS-----STATUS

CCP FORMUSHKIN+ - YF 17 24(1973).

LRL BROWNE+ - NCSAC-42 135(1971), WORK PLANNED.

96 CURIMUM 246 NEUTRON TOTAL CROSS SECTION

671146 25.3 MV 10.0 KEV 10.0% 1 USA G.DESSAUER SRL

Q: RESONANCE STRUCTURE DESIRED.
A: ACCURACY 10 PERCENT IN RESONANCE INTEGRAL.
O: TO EVALUATE CF PRODUCTION.

96 CURIMUM 246 NEUTRON CAPTURE CROSS SECTION

691350 25.3 MV 10.0 KEV 10.0% 1 USA G.DESSAUER SRL

Q: RESONANCE STRUCTURE DESIRED.
A: NEED ACCURACY 10 PERCENT IN RESONANCE INTEGRAL.
O: TO EVALUATE CF PRODUCTION.

96 CURIMUM 246 NEUTRON FISSION CROSS SECTION

691349 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

O: TO EVALUATE CF-252 PRODUCTION BY R-PROCESS.
M: NEW REQUEST.

96 CURIMUM 247 NEUTRON TOTAL CROSS SECTION

671147 25.3 MV 10.0 KEV 20.0% 1 USA G.DESSAUER SRL

A: NEED 20 PERCENT IN RESONANCE INTEGRAL.
O: TO EVALUATE CF PRODUCTION.


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96 CURIUM 247          NEUTRON          CAPTURE CROSS SECTION
=====
671149    25.3 MV      10.0 KEV      10.0%      1    USA    G.DESSAUER    SRL
                                     A: NEED 5 TO 10 PERCENT IN RESONANCE INTEGRAL AND
                                     THERMAL VALUE.
                                     O: NEEDED TO EVALUATE CF PRODUCTION.
=====
96 CURIUM 247          NEUTRON          FISSION CROSS SECTION
=====
671148    25.3 MV      10.0 KEV      10.0%      1    USA    G.DESSAUER    SRL
                                     A: NEED 5 TO 10 PERCENT IN THERMAL VALUE AND
                                     RESONANCE INTEGRAL.
691351    10.0 KEV      100. KEV      10.0%      1    USA    G.A.COWAN     LAS
                                     O: TO EVALUATE CF PRODUCTION BY R-PROCESS.
-----STATUS-----STATUS
CCP    FORMUSHKIN+ - YF 17 24(1973).
LRL    BROWNE+ - NCSAC-42 135(1971), WORK PLANNED.
=====
96 CURIUM 248          NEUTRON          TOTAL CROSS SECTION
=====
671150    25.3 MV      10.0 KEV          1    USA    G.DESSAUER    SRL
                                     A: NEED 50 PERCENT ACCURACY AT THERMAL.
                                     NEED 20 PERCENT IN RESONANCE INTEGRAL.
                                     O: TO EVALUATE CF PRODUCTION.
-----STATUS-----STATUS
ORL    BENJAMIN+ - USNDC-7 170(1973), IN PROGRESS.
=====
96 CURIUM 248          NEUTRON          CAPTURE CROSS SECTION
=====
691353    25.3 MV      10.0 KEV      10.0%      1    USA    G.DESSAUER    SRL
                                     A: NEED 10 PERCENT AT THERMAL AND RESONANCE INTEGRAL.
                                     O: NEEDED TO EVALUATE CF PRODUCTION.
=====
96 CURIUM 248          NEUTRON          FISSION CROSS SECTION
=====
691352    10.0 KEV      100. KEV      10.0%      1    USA    G.A.COWAN     LAS
                                     O: TO EVALUATE CALIFORNIUM PRODUCTION.
                                     M: NEW REQUEST.
-----STATUS-----STATUS
CCP    FORMUSHKIN+ - YF 17 24(1973).
LRL    BENJAMIN+ - USNDC-7 170(1973), IN PROGRESS.
=====
97 BERKELIUM 249       NEUTRON          TOTAL CROSS SECTION
=====
671151    25.3 MV      10.0 KEV      20.0%      1    USA    G.DESSAUER    SRL
                                     Q: RESONANCE PARAMETERS WANTED.
                                     A: NEED 20 PERCENT IN RESONANCE INTEGRAL.
                                     O: TO EVALUATE CF PRODUCTION.
=====
97 BERKELIUM 249       NEUTRON          CAPTURE CROSS SECTION
=====
691354    25.3 MV      10.0 KEV      10.0%      1    USA    G.DESSAUER    SRL
                                     A: 10 PERCENT THERMAL AND RESONANCE INTEGRAL.
                                     O: FOR CF PRODUCTION.
=====
98 CALIFORNIUM 249     NEUTRON          FISSION CROSS SECTION
=====
691355    10.0 KEV      100. KEV      10.0%      1    USA    G.A.COWAN     LAS
                                     M: NEW REQUEST.
=====
98 CALIFORNIUM 250     NEUTRON          TOTAL CROSS SECTION
=====
671152    25.3 MV      10.0 KEV      20.0%      1    USA    G.DESSAUER    SRL
                                     Q: RESONANCE ENERGIES DESIRED.
                                     A: NEED 20 PERCENT IN RESONANCE.
                                     O: TO EVALUATE CF PRODUCTION.
=====
98 CALIFORNIUM 250     NEUTRON          CAPTURE CROSS SECTION
=====
691357    25.3 MV      10.0 KEV      10.0%      1    USA    G.DESSAUER    SRL
                                     A: NEED 10 PERCENT IN RESONANCE INTEGRAL.
                                     O: TO EVALUATE CF PRODUCTION.
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98 CALIFORNIUM 253 NEUTRON CAPTURE CROSS SECTION

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671156 25.3 MV 10.0 KEV 20.0% 2 USA G.DESSAUER SRL

Q: TARGET HALF-LIFE 18 D.
 A: ACCURACY 20 PERCENT IN RESONANCE INTEGRAL.
 O: TO EVALUATE CF PRODUCTION.
 WANT TO CONFIRM THAT THERMAL CROSS SECTION LESS THAN 3 B.

=====

99 EINSTEINIUM 253 NEUTRON FISSION CROSS SECTION

=====

691360 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

Q: TARGET HALF-LIFE 20 D.

=====

99 EINSTEINIUM 254 NEUTRON CAPTURE TO FISSION RATIO (ALPHA)

=====

671157 25.3 MV 20.0 KEV 20.0% 2 USA G.I.BELL LAS

Q: TARGET HALF-LIFE 480 D.
 O: NEEDED TO PLAN FOR PRODUCTION OF FM-257.

=====

100 FERMIUM 255 NEUTRON FISSION CROSS SECTION

=====

691361 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

Q: TARGET HALF-LIFE - 40 DAYS.
 MEASUREMENT SHOULD BE PERFORMED IN PRESENCE OF ES-255 PARENT.
 M: NEW REQUEST.

=====

100 FERMIUM 257 NEUTRON FISSION CROSS SECTION

=====

691362 10.0 KEV 100. KEV 10.0% 1 USA G.A.COWAN LAS

Q: TARGET HALF-LIFE - 94 DAYS.
 M: NEW REQUEST.

=====

FISSION PRODUCTS NEUTRON ABSORPTION CROSS SECTION

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692476 25.3 MV 5.0% 2 UK J.G.TYROR WIN

O: FOR THERMAL REACTORS.

=====

FISSION PRODUCTS NEUTRON CAPTURE CROSS SECTION

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693089 25.3 MV 100. KEV 2 AUL J.L.SYMONDS AUA

Q: RESONANCE PARAMETERS ALSO REQUIRED.
 S, P AND D WAVE STRENGTH FUNCTIONS NEEDED.
 O: DESIRED FOR THEORETICAL PREDICTIONS OF CROSS SECTIONS FOR MASSES 80-160.

714036 100. EV 100. KEV 20.0% 1 CCP M.N.NIKOLAEV FEI

Q: AVERAGE CAPTURE CROSS SECTION FOR LUMPED FISSION PRODUCTS, STABLE, LONG-LIVED AND EQUILIBRIUM FISSION PRODUCTS
 DATA FOR FISSION PRODUCTS OF U-235, U-238, PU-239 AND PU-240 ARE OF GREAT INTEREST.
 O: FOR ACCURACIES OF 1.0 PERCENT IN K-EFF AND 1.6 PERCENT IN BREEDING RATIO OF FAST REACTORS.

=====

FISSION PRODUCTS NEUTRON ABSORPTION RESONANCE INTEGRAL

=====

692495 0.55 EV 2.00 MEV 10.0% 2 UK J.G.TYROR WIN

O: FOR THERMAL REACTORS.

=====

STEEL NEUTRON CAPTURE CROSS SECTION

=====

714035 500. EV 500. KEV 10.0% 1 CCP M.N.NIKOLAEV FEI

Q: RATIO WANTED RELATIVE TO U-235 FISSION.
 O: FOR FAST REACTOR BREEDING RATIO PREDICTION WITH 1.5 PERCENT ACCURACY.
 ANALYSIS OF FAST CRITICAL ASSEMBLIES INDICATES THAT THE CAPTURE CROSS SECTION OF STAINLESS STEEL IS MUCH GREATER THAN CALCULATED FROM MICROSCOPIC DATA.

V. LIST OF SATISFIED REQUESTS

5 BORON 10		NEUTRON		ABSORPTION CROSS SECTION		
692011	200. KEV	5.00 MEV		3	UK	C.G.CAMPBELL WIN ACCURACY 5 PERCENT TO 1 MEV, 10 PERCENT ABOVE. FOR FAST REACTORS.
11 SODIUM 23		NEUTRON		CAPTURE CROSS SECTION		
693005	100. EV	65.0 KEV	10.0%	2	AUL	J.L.SYMONDS AUA NEUTRON AND CAPTURE WIDTHS AND J FOR 2.85 KEV RESONANCE WANTED. ALSO PARAMETERS FOR 35 KEV RESONANCE WANTED. AVAILABLE INFORMATION ON CAPTURE WIDTH INCONSISTENT.
22 TITANIUM		NEUTRON		CAPTURE CROSS SECTION		
693011	10.0 KEV	100. KEV	20.0%	2	AUL	J.L.SYMONDS AUA AVAILABLE DATA NOT SATISFACTORY.
45 RHODIUM 103		NEUTRON		N _n 2N		
712043			10.0%	2	UK	A.WHITTAKER UKW CROSS SECTION FOR PRODUCTION OF 206 D. AND 2.9 Y. ISOMERS OF RH-102. FOR DOSE RATE MEASUREMENTS.
62 SAMARIUM		NEUTRON		ABSORPTION CROSS SECTION		
692236	1.00 MV	0.20 EV	1.0%	2	SWT	F.WIDDER WUR SPECTRUM MEASUREMENTS IN POISONED MODERATORS.
63 EUROPIUM 151		NEUTRON		CAPTURE CROSS SECTION		
662001	5.00 MV	10.0 EV		1	BLG	F.MOTTE MOL ACCURACY 2 PERCENT THERMAL, 5 PERCENT ABOVE.
88 RADIUM 226		NEUTRON		CAPTURE CROSS SECTION		
692321	25.3 MV		20.0%	2	BLG	A.DE TROYER UMK PRODUCTION OF AC-227 VIA RA-226. ABSOLUTE THERMAL VALUE POORLY KNOWN.
92 URANIUM 233		NEUTRON		NEUTRONS EMITTED PER FISSION (NU BAR)		
692348	40.0 KEV	5.00 MEV	1.0%	3	UK	C.G.CAMPBELL WIN FOR FAST REACTORS.
92 URANIUM 235		NEUTRON		NEUTRONS EMITTED PER FISSION (NU BAR)		
693057	25.3 MV	10.0 MEV	1.0%	2	AUL	J.L.SYMONDS AUA STILL INCONSISTENCIES IN AVAILABLE DATA.
94 PLUTONIUM 239		NEUTRON		CAPTURE TO FISSION RATIO (ALPHA)		
693074	100. EV	100. KEV	5.0%	2	AUL	J.L.SYMONDS AUA AVAILABLE DATA DO NOT SATISFY REQUEST.
94 PLUTONIUM 239		NEUTRON		RESONANCE PARAMETERS		
692413	200. EV	1.00 KEV	10.0%	1	GER	J.J.SCHMIDT KFK NEUTRON, CAPTURE AND FISSION WIDTHS REQUIRED. DOPPLER EFFECT IN FAST REACTORS.

VI. LIST OF WITHDRAWN REQUESTS

Due to the extensive revisions made to WRENDA 73, more than 400 requests have been withdrawn. Because the list is so extensive and because the request numbering system has been changed (making cross referencing very awkward) the list of withdrawn requests will not be published in this edition. However the previous practice will be resumed in the next edition where the identification numbers and the target, projectile and quantity will be given for each withdrawn request.

LIST OF COUNTRY CODES

APPENDIX A

ARG	ARGENTINA
AUL	AUSTRALIA
AUS	AUSTRIA
BAN	BANGLA DESH
BLG	BELGIUM
BUL	BULGARIA
BZL	BRAZIL
CAN	CANADA
CCP	SOVIET UNION
DDR	GERMAN DEMOCRATIC REPUBLIC
DEN	DENMARK
EUR	CCMISSION OF THE EUROPEAN COMMUNITIES
FR	FRANCE
GER	FEDERAL REPUBLIC OF GERMANY
HUN	HUNGARY
IND	INDIA
ISL	ISRAEL
ITY	ITALY
JAP	JAPAN
NED	NETHERLANDS
NOR	NORWAY
POL	POLAND
RUM	RCMANIA
SAF	REPUBLIC OF SOUTH AFRICA
SF	FINLAND
SWD	SWEDEN
SWT	SWITZERLAND
UK	UNITED KINGDOM
UNO	UNITED NATIONS ORGANIZATION
USA	UNITED STATES
YUG	YUGOSLAVIA
ZZZ	INTERNATIONAL ORGANIZATION

APPENDIX B

LIST OF LABORATORY CODES

AE	AKTIEBOLAGET ATOMENERGI, STUDEVIK	SWD
AEC	UNITED STATES ATOMIC ENERGY COMMISSION, WASHINGTON, DC	USA
ALD	UK AWRE, ALDERMASTON	UK
ANC	AEROJET NUCLEAR CORP., IDAHO FALLS, IDAHO	USA
ANL	ARGONNE NATIONAL LABORATORY, LEMONT, ILLINOIS	USA
ARK	UNIVERSITY OF ARKANSAS, FAYETTEVILLE	USA
ATI	ATOMINST. DER OESTERREICHISCHEN HOCHSCHULEN, VIENNA	AUS
AUA	AUSTRALIAN AEC RESEARCH ESTABLISHMENT, LUCAS HEIGHTS	AUL
AUB	AUBURN UNIVERSITY, ALABAMA	USA
AUW	ANDRAH U., NUCLEAR RESEARCH LAB., WALTAIR	IND
BAC	BULGARIAN ACADEMY OF SCIENCES, SOFIA	BUL
BET	WESTINGHOUSE, BETTIS ATOMIC POWER LAB., PITTSBURGH, PA.	USA
BHU	BANARAS HINDU UNIVERSITY, VARANASI	IND
BIR	UNIVERSITY OF BIRMINGHAM, ENGLAND	UK
BNL	BROOKHAVEN NATIONAL LABORATORY, UPTON, NEW YORK	USA
BNW	BATTELLE NORTHWEST LABORATORY, RICHLAND, WASHINGTON	USA
BOL	COMISION NACIONAL DE ENERGIA ATOMICA, BOLOGNA	ITY
BRC	CEN BRUYERE LE CHATEL	FR
BUC	INSTITUTE FOR ATOMIC PHYSICS, BUCHAREST	RUM
CAD	CADARACHE, BOUCHES-DU-RHONE	FR
CAS	CENTRO DI STUDI NUCLEARI DELLA CASACCIA, ROME	ITY
CC	SOVIET UNION	CCP
COL	COLUMBIA UNIVERSITY, NEW YORK CITY, NEW YORK	USA
CRC	CHALK RIVER NUCLEAR LABORATORIES, ONTARIO	CAN
CSE	CASE INSTITUTE OF TECHNOLOGY, CLEVELAND, OHIO	USA
DKE	DUKE UNIVERSITY, DURHAM, NORTH CAROLINA	USA
DUB	JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA	ZZZ
FAR	CEA FONTENAY-AUX-ROSES, SEINE	FR
FEI	FIZIKO-ENERGETICHESKIY INSTITUT, OBNINSK	CCP
FOA	RESEARCH INSTITUTE OF NATIONAL DEFENSE, STOCKHOLM	SWD
FRK	J.W.GOETHE UNIVERSITY, FRANKFURT	GER
GA	GENERAL ATOMIC, SAN DIEGO, CALIFORNIA	USA
GEB	GENERAL ELECTRIC, BRDO, SUNNYVALE, CALIF.	USA
GEC	GENERAL ELECTRIC COMPANY, SAN JOSE, CALIF.	USA
GEL	B.C.M.N. EURATOM, GEEL	EUR
GIT	GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GEORGIA	USA
GLS	UNIVERSITY OF GLASGOW, SCOTLAND	UK
HAM	INSTITUT FUER EXPERIMENTALPHYSIK, HAMBURG	GER
HAR	UK ATOMIC ENERGY RESEARCH ESTABLISHMENT, HARWELL	UK
HED	HANFORD ENGINEERING DEVELOPMENT LAB., RICHLAND, WASH.	USA
HFA	TECHNIG. HAIFA	ISL
HLT	HELSINKI TECHNICAL UNIVERSITY, OTANIEMI	SF
IAE	INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA	UND
IEN	INSTITUTO DE ENGENHARIA NUCLEAR, RIO DE JANEIRO	BZL
IFU	INSTITUT FIZIKI AN UKRAINSKOI SSR, KIEV	CCP
IJI	INSTITUT JADERNYKH ISSLEDOVANIY, KIEV	CCP
IRK	INSTITUT FUER RADIUMFORSCHUNG UND KERNPHYSIK, VIENNA	AUS
IRT	INTELCOM RADIATION TECHNOLOGY, SAN DIEGO, CALIF.	USA
ISP	EURATOM, ISPRA	EUR
ITK	INDIAN INSTITUTE OF TECHNOLOGY, KANPUR	IND
JAE	JAPAN ATOMIC ENERGY RESEARCH INSTITUTE, TOKAI	JAP
JUL	KERNFORSCHUNGSANLAGE, JUELICH	GER
KAP	KNOLLS ATOMIC POWER LABORATORY, SCHENECTADY, NEW YORK	USA
KFK	KERNFORSCHUNGSZENTRUM, KARLSRUHE	GER
KGU	GOSUDARSTVENNYJ UNIVERSITY, KIEV	CCP
KIG	GKSS, GEESTHACHT	GER
KIL	UNIVERSITY OF KIEL	GER
KOS	KOSSUTH UNIVERSITY, DEBRECEN	HUN
KTO	KYOTO UNIVERSITY	JAP
KTY	UNIVERSITY OF KENTUCKY, LEXINGTON, KENTUCKY	USA

LIST OF LABORATORY CODES

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KYU	KYUSHU UNIVERSITY, FUKUOKA	JAP
LAS	LOS ALAMOS SCIENTIFIC LABORATORY, NEW MEXICO	USA
LND	LUND UNIVERSITY	SWD
LRL	LAWRENCE LIVERMORE LABORATORY, LIVERMORE, CALIFORNIA	USA
MCM	MCMASTER UNIVERSITY, HAMILTON, ONTARIO	CAN
MIT	MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASS.	USA
MOL	C.E.N., MOL	BLG
MTR	IDAHO NUCLEAR CORP., IDAHO FALLS, IDAHO	USA
MUA	MUSLIM UNIVERSITY, ALIGARH	IND
MUN	TECHNISCHE HOCHSCHULE MUENCHEN	GER
NBS	NATIONAL BUREAU OF STANDARDS, WASHINGTON, D.C.	USA
NEL	U.S. ARMY NUCLEAR EFFECTS LABORATORY, ABERDEEN, MARYLAND	USA
NEU	UNIVERSITY OF NEUCHATEL	SWT
NPL	NATIONAL PHYSICAL LABORATORY, TEDDINGTON	UK
NRD	U.S. NAVAL RADIOLOGICAL DEFENSE LAB., SAN FRANCISCO	USA
NYU	NEW YORK UNIVERSITY, NEW YORK CITY	USA
OHO	OHIO UNIVERSITY, ATHENS, OHIO	USA
ORL	OAK RIDGE NATIONAL LABORATORY, TENNESSEE	USA
OSL	UNIVERSITY OF OSLO	NOR
PAD	UNIVERSITY OF PADUA	ITY
PEL	AE BOARD, PELINDABA, PRETORIA	SAF
RAM	ATOMIC ENERGY CENTRE, RAMNA, DACCA	BAN
RCN	REACTOR CENTRUM NEDERLAND, PETTEN	NED
RI	KHLOPIN RADIUM INSTITUTE, LENINGRAD	CCP
RIS	RISO, ROSKILDE	DEN
ROS	ROSSENDORF BEI DRESDEN	DDR
RPI	RENSELAER POLYTECHNIC INSTITUTE, TROY, NEW YORK	USA
SAC	C.E.N. SACLAY, GIF-SUR-YVETTE	FR
SGA	OEST.STUDIENGES.F.ATOMENERGIE, VIENNA	AUS
SMU	SOUTHERN METHCDIST UNIV., DALLAS, TEXAS	USA
SNP	SPACE NUCLEAR PROPULSION OFFICE, CLEVELAND, OHIO	USA
SRE	SIEMENS REAKTORENTWICKLUNG, ERLANGEN	GER
SRL	SAVANNAH RIVER LABORATORIES, AIKEN, S.C.	USA
SUN	SOUTHERN UNIVERSITIES NUCLEAR INST., FAURE, CAPE PROV.	SAF
TNC	TEXAS NUCLEAR CORPORATION, AUSTIN, TEXAS	USA
TRM	BHABHA ATOMIC RESEARCH CENTRE, TROMBAY	IND
UK	UNITED KINGDOM	UK
UKW	WINDSCALE REACTOR DEVELOPMENT LABS., UKAEA	UK
UMK	UNION MINIERE DU HAUT KATANGA, BRUSSELS	BLG
UPR	UNIVERSITY OF PRETORIA	SAF
USA	UNITED STATES OF AMERICA	USA
VSP	UNIVERSITY OF SAO PAULO, SAO PAULO	BZL
VDN	CENTRAL BUREAU DER V.D.E.N., ARNHEN	NED
WEW	WESTINGHOUSE ADVANCED REACTORS DIV., PITTSBURGH, PA.	USA
WIN	UK ATOMIC ENERGY ESTABLISHMENT, WINFRITH	UK
WMU	WESTERN MICHIGAN UNIVERSITY	USA
WUR	EIDG. INSTITUT FUER REAKTORFORSCHUNG, WUERENLINGEN	SWT
WWA	WARSAW UNIVERSITY	POL
YOK	RIKKYO UNIVERSITY, YOKOSUKA	JAP

LIST OF CONFERENCE REFERENCES

- 68 WASHINGTON SECOND CONFERENCE ON NEUTRON CROSS SECTIONS AND TECHNOLOGY, WASHINGTON 1968, (NBS-299)
- 70 ANL EANDC SYMPOSIUM ON NEUTRON STANDARDS AND FLUX NORMALIZATION, ARGONNE 1970, (CONF-701002)
- 70 HELSINKI SECOND IAEA CONFERENCE ON NUCLEAR DATA FOR REACTORS, HELSINKI 1970, (STI/PUB/259)
- 71 KIEV ALL USSR NEUTRON PHYSICS CONFERENCE, KIEV 1971, (NEJTRONNAYA FIZIKA, KIEV 1972)
- 71 KNOXVILLE THIRD CONFERENCE ON NEUTRON CROSS SECTIONS AND TECHNOLOGY, KNOXVILLE 1971, (CONF-710301)
- 72 BUDAPEST CONFERENCE ON NUCLEAR STRUCTURE AND STUDY WITH NEUTRONS, BUDAPEST 1972
- 72 KIEV 22ND CONFERENCE ON NUCLEAR SPECTROSCOPY AND NUCLEAR STRUCTURE, KIEV 1972
- 73 PARIS IAEA SYMPOSIUM ON APPLICATIONS OF NUCLEAR DATA IN SCIENCE AND TECHNOLOGY, PARIS 1973, (STI/PUB/343)

LIST OF JOURNAL REFERENCES

APPENDIX C
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AE ATOMNAJA ENERGIJA
AKE ATOMKERNENERGIE
ANS TRANSACTIONS OF THE AMERICAN NUCLEAR SOCIETY
APA ACTA PHYSICA AUSTRIACA
AUJ AUSTRALIAN JOURNAL OF PHYSICS
BAP BULLETIN OF THE AMERICAN PHYSICAL SOCIETY
CJP CANADIAN JOURNAL OF PHYSICS
DA/B DISSERTATION ABSTRACTS INTERNATIONAL B
HP HEALTH PHYSICS
HPA HELVETICA PHYSICA ACTA
IZV IZVESTIYA AKADEMII NAUK SSSR
JNE JOURNAL OF NUCLEAR ENERGY
JPJ JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN
NC/A NUOVO CIMENTO SECTION A
ND/A NUCLEAR DATA TABLES
NIM NUCLEAR INSTRUMENTS AND METHODS
NP/A NUCLEAR PHYSICS SECTION A
NSE NUCLEAR SCIENCE AND ENGINEERING
PL/B PHYSICS LETTERS SECTION B
PR PHYSICAL REVIEW
PR/C PHYSICAL REVIEW PART C
PRL PHYSICAL REVIEW LETTERS
PS PHYSICA SCRIPTA
REA ATOMIC ENERGY REVIEW
SCF STUDI SI CERCETARI DE FIZICA
YF YADERNAYA FIZIKA
ZN/A ZIETSCHRIFT FUER NATURFORSCHUNG SECTION A
ZP ZIETSCHRIFT FUER PHYSIK

LIST OF LABORATORY REPORTS

AAEC/PR-	AUSTRALIAN AEC PROGRESS REPORTS
AD-	U.S. DEPARTMENT OF DEFENCE REPORTS
AE-	AKTIEBOLAGET ATOMENERGI REPORTS
AERE-PR/NP-	AERE HARWELL REPORTS
AERE-R-	AERE HARWELL REPORTS
ANCR-	AEROJET NUCLEAR CORPORATION REPORTS
ANL-	ARGONNE NATIONAL LABORATORY REPORTS
AWRE-O-	AWRE ALDERMASTON REPORTS
BNL-	BROOKHAVEN NATIONAL LABORATORY REPORTS
COO-	USAEC CHICAGO OPERATIONS OFFICE REPORTS
EANDC(E)-	EUROPEAN-AMERICAN NUCLEAR DATA COMMITTEE REPORTS
EANDC(J)-	EUROPEAN-AMERICAN NUCLEAR DATA COMMITTEE REPORTS
EANDC(OR)-	EUROPEAN-AMERICAN NUCLEAR DATA COMMITTEE REPORTS
GA-	GENERAL ATOMICS REPORTS
GULF-	GULF RADIATION TECHNOLOGY REPORTS
GULF-RT-	GULF RADIATION TECHNOLOGY REPORTS
IDO-	PHILLIPS PETROLEUM COMPANY REPORTS, IDAHO FALLS
INDC(NOR)-	INTERNATIONAL NUCLEAR DATA COMMITTEE REPORTS
INDC(SAF)-	INTERNATIONAL NUCLEAR DATA COMMITTEE REPORTS
INDC(SEC)-	INTERNATIONAL NUCLEAR DATA COMMITTEE REPORTS
JAERI-	JAPANESE ATOMIC ENERGY RESEARCH INSTITUTE REPORTS
KFK-	KERNFORSCHUNGSZENTRUM KARLSRUHE REPORTS
LA-	LOS ALAMOS SCIENTIFIC LABORATORY REPORTS
LADC-	LOS ALAMOS SCIENTIFIC LABORATORY REPORTS
NCSAC-	USAEC NUCLEAR CROSS SECTION ADVISORY COMMITTEE REPORTS
OFNL-	OAK RIDGE NATIONAL LABORATORY REPORTS
ORNL-TM-	OAK RIDGE NATIONAL LABORATORY TECHNICAL MEMOS
RPI-	RENSSELAER POLYTECHNIC INSTITUTE REPORTS
UCRL-	LAWRENCE RADIATION LABORATORY REPORTS
USNDC-	UNITED STATES NUCLEAR DATA COMMITTEE REPORTS
WAPD-TM-	BETTIS ATOMIC POWER LABORATORY TECHNICAL MEMOS
WASH-	USAEC WASHINGTON OFFICE REPORTS
YFI-	JADERNO-FIZICHESKIE ISSLEDOVANIJA REPORTS

NAMES AND ADDRESSES OF REQUESTORS

APPENDIX D

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LIST OF ELEMENTS

H	1	HYDROGEN	KR	36	KRYPTON	LU	71	LUTETIUM
HE	2	HELIUM	RB	37	RUBIDIUM	HF	72	HAFNIUM
LI	3	LITHIUM	SR	38	STRONTIUM	TA	73	TANTALUM
BE	4	BERYLLIUM	Y	39	YTTRIUM	W	74	TUNGSTEN
B	5	BORON	ZR	40	ZIRCONIUM	RE	75	RHENIUM
C	6	CARBON	NB	41	NIOBIUM	OS	76	OSMIUM
N	7	NITROGEN	MO	42	MOLYBDENUM	IR	77	IRIDIUM
O	8	OXYGEN	TC	43	TECHNETIUM	PT	78	PLATINUM
F	9	FLUORINE	RU	44	RUTHENIUM	AU	79	GOLD
NE	10	NEON	RH	45	RHODIUM	HG	80	MERCURY
NA	11	SODIUM	PD	46	PALLADIUM	TL	81	THALLIUM
MG	12	MAGNESIUM	AG	47	SILVER	PB	82	LEAD
AL	13	ALUMINUM	CD	48	CADMIUM	BI	83	BISMUTH
SI	14	SILICON	IN	49	INDIUM	PO	84	POLONIUM
P	15	PHOSPHORUS	SN	50	TIN	AT	85	ASTATINE
S	16	SULFUR	SB	51	ANTIMONY	RN	86	RADON
CL	17	CHLORINE	TE	52	TELLURIUM	FR	87	FRANCIUM
AR	18	ARGON	I	53	IODINE	RA	88	RADIUM
K	19	POTASSIUM	XE	54	XENON	AC	89	ACTINIUM
CA	20	CALCIUM	CS	55	CESIUM	TH	90	THORIUM
SC	21	SCANDIUM	BA	56	BARIUM	PA	91	PROTACTINIUM
TI	22	TITANIUM	LA	57	LANTHANUM	U	92	URANIUM
V	23	VANADIUM	CE	58	CERIUM	NP	93	NEPTUNIUM
CR	24	CHROMIUM	PR	59	PRASEODYMIUM	PU	94	PLUTONIUM
MN	25	MANGANESE	ND	60	NEODYMIUM	AM	95	AMERICIUM
FE	26	IRON	PM	61	PROMETHIUM	CM	96	CURIUM
CO	27	COBALT	SM	62	SAMARIUM	BK	97	BERKELIUM
NI	28	NICKEL	EU	63	EUROPIUM	CF	98	CALIFORNIUM
CU	29	COPPER	GD	64	GADOLINIUM	E	99	EINSTEINIUM
ZN	30	ZINC	TB	65	TERBIUM	FM	100	FERMIUM
GA	31	GALLIUM	DY	66	DYSPROSIUM	MD	101	MENDELEVIUM
GE	32	GERMANIUM	HO	67	HOLMIUM	NO	102	NOBELIUM
AS	33	ARSENIC	ER	68	ERBIUM	LR	103	LAWRENCIUM
SE	34	SELENIUM	TM	69	THULIUM	KU	104	KURCHATOVIIUM
BR	35	BROMINE	YB	70	YTTERIUM			