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(NCSAC-35)

LOS ALAMOS SCIENTIFIC LABORATORY
of the
University of California
LOS ALAMOS • NEW MEXICO

Compilation of Requests for Nuclear Cross Section Measurements

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Compiled by

Nuclear Cross Sections Advisory Committee

FOREWORD

This compilation is a working document of the U.S. AEC Nuclear Cross-Sections Advisory Committee. It is issued for the purpose of publicizing the needs for and status of cross-section measurements important to the U.S. nuclear energy program. It is the intent of the NCSAC that updated versions of the report will be issued for general distribution approximately annually, after periodic review by requesters and NCSAC working subcommittees. It is assumed that the requester has consulted the published literature and National Neutron Cross Section Center files for available data, listed in CINDA documents which are kept current and available in all AEC depository libraries.

The requests listed in this report have originated from various Atomic Energy Commission contractors, Department of Defense laboratories and contractors, National Aeronautics and Space Administration laboratories and contractors, and other interested groups. Requests were reviewed by the Advisory Committee on Reactor Physics (ACRP), the Nuclear Cross Sections Advisory Committee (NCSAC), the Defense Atomic Support Agency (DASA), and others. A list of requesters is given in Appendix A; a list of sponsoring and/or reviewing agencies is given in Appendix B.

This version of the request compilation was produced by computer printout. The computer program was written by Myron L. Stein specifically for the MANIAC at Los Alamos Scientific Laboratory. The present printout is unretouched and contains slight notation problems which may be confusing. The MANIAC printer contains no provision for Greek characters, so with the exception of σ and θ, Greek letters are denoted by Roman letters with a bar over the top. In particular, $\bar{a}$ is a Greek alpha, $\bar{b}$ is beta, and $\bar{g}$ is gamma.

Reaction types are for the most in part standard notation (see WASH-1078, June 1967). These requests are invariably for microscopic data, and dependence on the incident neutron energy is implied. If the request is for measurement of a cross section as a function of angle or exit particle energy as well as incident energy, this information is given in the column labeled "REACTION TYPE-VARIABLE." All requests are ordered by Z, A, and then by reaction type according to an ordering scheme based on that of Parker at AWRE, Aldermaston. The exceptions are high-energy requests, where the incident energy table headings had to be changed by a factor of 10^3. These requests follow the others and are grouped at the end of the compilation.

Requesters' comments have sometimes been edited to conserve space. Hopefully, the meaning of such comments has not been compromised.

Acknowledgments

The Nuclear Cross Sections Advisory Committee acknowledges the efforts of three persons by whose efforts this Compilation was produced. Mrs. Leona Stewart suggested and initiated the computerized version, Dr. Myron L. Stein developed the computer program, and Mrs. Jane Rasmussen keypunched the majority of the requests. Any errors which remain are, however, the responsibility of the NCSAC.

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
1	$_1H^1$	Total		I		100-	10	0,5				ANL	Avery	DRDT	69
				I		100-	10	0,5				LMFB	Hemmig-AEC	DRDT	69
				I		100-	10	0,5				ORNL	Maienschein	DRDT	69
				I		100-	20	0,5				NCSC	Landon	DR	69
					REQ COM: For use as standard, accuracy of 1 percent useful.										69
					STATUS: Langsford+ AERE-PR/NP 16, 0,5-7MeV.										69
					LASL Hopkins+ NCSAC-33 and Nuc. Data(to be pub.)										70
					report $\sigma(\theta)$ analysis 0,1 to 30MeV.										70
2	$_1H^1$	Elastic	$\sigma(\theta_n)$	I			3-20	0,5				NCSC	Landon	DR	69
					REQ COM: For use as standard, 0,5 per accuracy.										69
					STATUS: Tanaka, J.Phys.Soc.Japan 28,11, at 14MeV.										70
3	$_1H^1$	$\sigma_{n,\bar{g}}$		II			1-15	2				GRT	Russell	OSMM	69
					REQ COM: Required is radiative capture cross section rela-										69
					tive to elastic scattering of hydrogen.										69
					To get $D(\bar{g},n)$ via reciprocity; to have standard										69
					$\sigma(\bar{g},n)$.										69
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
4	$_1H^3$	Elastic	$\sigma(\theta_n)$	II			14			10		LASL	Motz	DMA	65
					REQ COM: Absolute values required.										65
					STATUS: None.										65
5	$_1H^3$	$\sigma_{n,2n}$		III			12.5			10		LASL	Motz	DMA	65
					REQ COM: Absolute cross section required.										65
					STATUS: None.										65
6	$_2He^3$	Total		I		1-	3	1				GRT	Russell	DRDT	69
					REQ COM: As a standard cross section for He^3 detectors. Absolute values are required.										69
					STATUS: None which cover this energy range.										69
7	$_2He^3$	Elastic	$\sigma(\theta_n)$	II		1-	3		7			GRT	Russell	DRDT	69
				III			14			10		LASL	Motz	DMA	67
					REQ COM: As a standard cross section for He^3 detectors GGA. Absolute values are required. Needed to establish limit on non-elastic (LASL).										69
					STATUS: None which cover this energy range.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
8	$_{2}He^{3}$	$\sigma_{n,p}$		II		10-	3	1				GGA	Nordheim	DRDT	69
				II		10-	3	1				LMFB	Hemmig-AEC	DRDT	69
				I		1-	3	3				GRT	Russell	DRDT	69
				I		1-	3	3				NCSC	Landon	DR	69
				II		100-	3	3				LASL	Diven	DMA	69
				II			3-10		5			LASL	Diven	DMA	69

REQ COM: For use as secondary standard. 69
Intermediate accuracy useful. 69
Absolute values required. 69

STATUS: Costello+ Nuc.Sci.Eng. 39,409,0.3-1.1MeV, 5per. 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
9	$_{3}Li$	Tot $\bar{\gamma}$ Prod	$\sigma(E_{\bar{\gamma}})$	II		258±10				15*		SNPO	Fleishman	DSNS	69
				I			4-10			15*		SNPO	Fleishman	DSNS	69

REQ COM: (*) Accuracy 15 percent or 5mb whichever greater. 69
Absolute $\sigma(E\bar{\gamma})$ required for all $E\bar{\gamma}$ > 200keV. 69
Neutron energy intervals required: 69
Res. region: reproduce major variations in $\sigma(E_{\bar{\gamma}})$ 69
> 1 MeV: 500-keV intervals 69
Gamma-energy resolution required: 69
< 2.5 MeV, 10 percent; > 2.5 MeV, 250 keV. 69

STATUS: TNC Tucker, 90 deg data at 1.4,14MeV, ORO-2791-28 69

REQ	TARGET	REACTION TYPE		PRI	INCIDENT ENERGY			PERCENT ACCURACY				REQUESTER		YR
#	# Z A	QUANTITY	VARIABLE	OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB PERSON	ORG	
10	$_3Li^6$	Total		I		0.5-	3	2				LASL Motz	DMA	66
				I	TH-	100		1				NCSC Landon	DR	66
					REQ COM: Needed as an aid to determining$(n,\bar{\alpha})$.									66
					STATUS: ANL Hibdon+, NBS-299, 159.									68
					DUKE Farrell+, NBS-299, 153.									68
					HAR Diment+, AERE-PR/NP 15.									69
11	$_3Li^6$	Elastic	$\sigma(\theta_n)$	I		1-100		1-	5			NCSC Landon	DR	69
					REQ COM: Accuracy 1 to 5 per, to obtain n,alpha to 2 per.									69
					$\sigma(\theta)$ may be required at upper end.									69
					STATUS: Asami+ EANDC(JAP)-131 1-10kev, 4per.									70
12	$_3Li^6$	Emission	$\sigma(\theta_{n'},E_{n'})$	I			8-14			≤10		LASL Motz	DMA	65
					REQ COM: Absolute $\sigma(\theta_{n'},E_{n'})$ at several angles required.									67
					Include (n,2n) neutrons.									67
					STATUS: None.									67
13	$_3Li^6$	$\sigma_{n,2n}$		I			8-16		5			LASL Motz	DMA	66
					REQ COM: Absolute σ'S, coincidence technique required.									66
					Needed to determine true energy dependence.									66
					STATUS: AWRE Mather AWRE-O-47/69, data at 14MeV, 5per.									69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
14	$_3Li^6$	$\sigma_{n,\bar{a}}$		I		1-	3	1				ANL	Avery	DRDT	69
				I		1-	3	1				LMFB	Hemmig-AEC	DRDT	69
				I	500	TO	3	1-3				LASL	Hansen	DMA	69
				I		5-	13		3-5			LASL	Motz	DMA	69
				I	Th-	to	14	1-3				NCSC	Landon	DR	69
				I		1-	3	3				GRT	Russell	DRDT	69
				I		10-	3		5			LRL	Howerton	DMA	70
					REQ COM: For use as standard below 3 MeV.										69
					Accuracy of 3 percent useful.										69
					Energy resolution must reproduce true shape.										69
					Absolute σ'S required standard below 150 kev LASL.										69
					Accuracy 2 per below 100 kev, 3 per above NCSC.										69
					STATUS: Meadows+ Nuc.Sci.Eng. 40,12, thermal, 0.6per.										70
					Sowerby+ Helsinki conf. paper CN-26/26, to 80keV.										70
					AERE Uttley infers from total, EANDC Stds. Conf.										70
					U Kentucky Gabbard+, new data over 250 keV. res.										70
					Conde+ EANDC(OR)83L report new work underway.										70
15	$_3Li^6$	$\sigma_{n,\bar{a}}$ Ratio	wrt B^{10}	I	Th-	100		1-2				NCSC	Landon	DR	69
					REQ COM: Ratio to $B^{10}(n,\bar{a})$ required, to aid in determining possible structure.										69
					STATUS: HAR Sowerby+ AERE-R6316, 10eV-80keV.										70
					BCMN Wartena+ are measuring.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
16	$_3Li^6$	Tot ā Prod		II		1-	18			10		PNWL	McElroy	DRDT	69
					REQ COM: For use as fluence monitor.										69
					Total helium production for mass spectrometer.										69
					STATUS: None.										69
17	$_3Li^7$	Total		I		0.1	3	2				LASL	Motz	DMA	66
					REQ COM: Linac measurement to check Van de Graaff.										66
					STATUS: RPI Block+ NCSAC-33, 125keV-2MeV.										70
					ANL Meadows+ Nuc.Sci.Eng.41,351, 0.1-1.5MeV.										70
18	$_3Li^7$	Emission	$\sigma(\theta_{n'},E_{n'})$	I			5-16			10		LASL	Motz	DMA	63
					REQ COM: Spectrum at several angles required.										63
					STATUS: None.										63
19	$_3Li^7$	$\sigma_{n,2n}$		I			8-16		5			LASL	Motz	DMA	65
					REQ COM: Absolute cross sections required.										69
					Omit 14-MeV point.										69
					STATUS: None.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
20	$_{3}Li^{7}$	$\sigma_{\bar{a},n}$		II			4-6	1				NCSC	Landon	DR	69
					REQ COM: Accuracy for 1 percent-inverse reaction.										69
					Energy to correspond to 10 keV to 1 MeV.										69
					for inverse reaction - $B^{10}(n,\bar{a})$.										69
					STATUS: No new work.										70
					See Macklin+, Phys.Rev.165,1147.										68
21	* $_{4}Be^{7}$	$\sigma_{n,p}$		II	Th-	to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-53 day										69
					STATUS: U. Mich. Carpenter+ are planning thermal and RI.										69
22	$_{4}Be$	Elastic	$\sigma(\theta_n)$	I			7-20			10		LRL	Howerton	DMA	62
					REQ COM: Resolution: $\Delta E = \pm 250$ keV; $\Delta\theta = 3.0^{\circ}$										62
					STATUS: NEL Bucher+ NCSAC-33, meas. planned, small angles.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
23	$_4Be$	Emission	$\sigma(\theta_{n'},E_{n'})$	II			1.8-5			15		AI	Alter	DRDT	62
				II			1.8-5			15		BNL	Chernick	DRDT	62
				II			1.8-5			15		GE	Snyder	DRDT	62
				II			2-20			10		LRL	Howerton	DMA	62
				II			2-16		5			LMFB	Hemmig-AEC	DRDT	67
				II			2-16		5			ORNL	Clifford	DRDT	67

REQ COM: For Be moderated fast spectrum reactors, 62
and for thermal breeders or converters, 62
neutron economy calculations, DRDT, 62
Need secondary neutron energy and angle, 62
distribution, 62
Low energy neutrons must be included, LRL 62
Absolute $\sigma(E_{n'})$ at a few angles may suffice, LRL, 62
Energy resol, 5 per incident; 500 keV on $E_{n'}$, DRDT 69
Accuracy 50 mb at 2-3 MeV, DRDT 69

STATUS: None 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
24	$_4Be$	$\sigma_{n,\gamma}$		II	1-	100				10		GRT	Preskitt	DRDT	69

REQ COM: To resolve discrepancies in thermionic reactor , 69
worths, 69

STATUS: ORNL Macklin+ NCSAC-33, no capture levels <600keV, 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
25	$_4$Be	(n,p)Li^9	$\bar{b}^- \rightarrow Be^{9*} \rightarrow n$	I			14-16		5			LASL	Keepin	OSMM	69
					REQ COM: Accuracy should be 5 percent or a few tenths mb,										69
					Absolute delayed neutron yield required,										69
					Development of nondestructive assay techniques,										69
					STATUS: None which gives energy dependence,										69
26	$_5B^{10}$	Total		I	TH-	100		1				NCSC	Landon	DR	69
				II		100-	1	1-3				NCSC	Landon	DR	69
					REQ COM: Desired for B(n,$\bar{a}$) standard,										69
					STATUS: HAR Diment+, AERE R5224, to 900keV,										69
27	$_5B^{10}$	Elastic	$\sigma(\theta_n)$	I		1-100		1-	5			NCSC	Landon	DR	69
				II		100-	1	1-3				NCSC	Landon	DR	69
					REQ COM: Desired for B(n,$\bar{a}$) standard,										6
					STATUS: HAR Asami+, AERE R5980, in progress, 40-150keV,										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
28	$_5B^{10}$	$\sigma_{n,\bar{a}}$		I		1-	10	1-	5			ANL	Avery	DRDT	69
				I		1-	10	1-	5			LMFB	Hemmig-AEC	DRDT	69
				I		1-	10	1-	5			ORNL	Maienschein	DRDT	69
				I	TH-	100		1				NCSC	Landon	DR	69
				II		100-	1		4			NCSC	Landon	DR	69
				I		1-	1		5			LRL	Howerton	DMA	70
					REQ COM: 1-100 keV, accuracy 1 percent; 3 percent useful,										69
					100-300 keV, accuracy 3 percent;10 percent useful,										69
					0,3-10 Mev, accuracy 5 percent;10 percent useful,										69
					Needed as standard; absolute σ's required, DRDT										69
					$\bar{a}_0/\bar{a}_1$ ratio needed for both $\bar{a}$ and $\bar{g}$ detection,										69
					STATUS: Meadows+ Nuc,Sci,Eng, 40,12, thermal, 0,6per,										70
					Sowerby+ Helsinki conf, paper CN-26/26, to 80keV,										70
					Nellis+, Phys,Rev,10,847, give $\bar{a}_0/\bar{a}_1$,										70
29	$_5B^{10}$	$\sigma_{n,\bar{a}\bar{g}}$ $(\bar{g}_1)$	$E_{\bar{g}}$=480 kev	I		1-	10	1-	5			ANL	Avery	DRDT	69
				I		1-	10	1-	5			LMFB	Hemmig-AEC	DRDT	69
				I		1-	10	1-	5			ORNL	Maienschein	DRDT	69
				I		50-	1		4			NCSC	Landon	DR	69
					REQ COM: 1-100 keV,accuracy 1 percent; 3 percent useful,										69
					100-300 keV,accuracy 3 percent; 10 perecnt useful,										69
					0,3-10 Mev,accuracy 5 percent; 10 percent useful,										69
					Needed as standard; absolute σ's required,										69
					STATUS: TNC Nellis+ Phys,Rev, C1,847, 50keV-5MeV,										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
30	$_5B^{10}$	Tot $\bar{a}$ Prod		II		1-	18			10		PNWL	McElroy	DRDT	69
					REQ COM: For use as a fluence monitor. Total helium production for mass spectrometer.										69
					STATUS: None.										69
31	$_6C$	Elastic	$\sigma(\theta_n)$	II			6-15		5			AFWL	Schaefer	DASA	69
				II			8-16		5			LASL	Biggers	DMA	66
				I			9-14			10		LRL	Howerton	DMA	62
				II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: 250-keV intervals or as dictated by structure.										69
					Res: ΔE(incident and exit)=100 keV or 10 percent.										69
					Res: $\Delta\theta = \pm 2.5^\circ (0-30^\circ)$, $\pm 5^\circ (30-180^\circ)$.										69
					STATUS: Nikolaev, 68 Dubna. data 100keV-15MeV.										68
					PADUA Fasoli, 2.2-8.5MeV. Given as C^{12}, but likely										69
					natural carbon measurement.										69
					NEL Bucher+ NCSAC-33, 7-14MeV, small angles.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
32	$_6C$	Elastic	$\sigma(\theta_n)$	I		1-	2,5	1				LMFB	Hemmig-AEC	DRDT	69
				I		1-	2	1				NCSC	Landon	DR	69
					REQ COM: Need as standard for scattering measurements.										69
					Accuracy of 3 percent useful for near-term.										69
					STATUS: ANL Lane has elastic and polarization data,										69
					from 1/2 to 2 MeV, WASH-1079.										69
					Knitter, EANDC Standards Conf, data 0,5-2,5MeV.										70
					Nikolaev, 68 Dubna, data 100keV-15MeV.										68
33	$_6C$	Elastic	$\sigma(\theta_n)$	III			7-14			10		KAPL	Ehrlich	DRDT	62
					REQ COM: 20 percent accuracy acceptable.										62
					Energy resolution 50 keV from 7 to 8,2MeV,100 keV										62
					from 8,2-10Mev, and larger from 10-14 Mev.										62
					Angular resolution 3^0 from 7 and 8,4 MeV, 10^0,										62
					from 8,4-14MeV.										62
					For shielding and for resonance or optical,										62
					model fitting.										62
					STATUS: Firk YALE NIM 43,312 1,6Mev-10Mev.										66
					NEL Bucher+ NCSAC-33, 7-14MeV, small angles.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
34	$_6C$	Emission	$\sigma(\theta_{n'},E_{n'})$	II			8-15			10		AFWL	Schaefer	DASA	69
				II			7-15		5			LASL	Biggers	DMA	66
				II			6-15			10		NEL	Eccleshall	DASA	66
					REQ COM: Every 250keV; $\sigma(\theta)$ if significantly anisotropic,										66
					$\Delta\sigma=\pm5^0(<30)$ and $\pm10^0(>30)$; ΔE = 250 keV.										66
					All neutrons, including low energy, needed.										66
					Absolute $\sigma(\theta_{n'},E_{n'})$ from $(n,n'3\bar{a})$ must be.										66
					included.										66
					STATUS: None.										66
35	$_6C$	Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	III			6-16			<10		LASL	Biggers	DMA	65
												AFWL	Schaefer	DASA	70
					REQ COM: $\sigma(\theta_{\bar{g}})$ for $E_{\bar{g}}$ = 4.4 MeV required.										69
					Upper limit on other $\bar{g}$'s will suffice.										69
					STATUS: TNC Martin+ at 5,14,8MeV, WASH-1136.										69
					LASL Drake Nuc.Sci.Eng.40.294, 4-7MeV.										70
36	$_6C$	Absorption		II			10-15		5			AFWL	Schaefer	DASA	69
					REQ COM: Three points at 10,12,15Mev might suffice.										69
					STATUS: None.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
37	$_6C^{12}$	Polariz.	$P(\theta_n)$	II			4-5.5				15	KAPL	Ehrlich	DRDT	69
					REQ COM: Energy Resolution ~ 50 keV.										69
					Needed to resolve discrepancy between theory and										69
					experiment. See Reynolds, Phys.Rev. 176,103.										69
					STATUS: None.										70
38	$_7N$	Elastic	$\sigma(\theta_n)$	I			7-15		5			AFWL	Schaefer	DASA	69
							8-15		5			LASL	Biggers	DMA	69
							7-15		5			AC	Greenhow	DASA	69
					REQ COM: Every 500 keV or as dictated by structure.										69
					$\Delta\theta = \pm 2.5^\circ (30^\circ)$ and $\pm 5^\circ (>30^\circ)$; include $\theta<20^\circ$.										69
					$\Delta E_n =$ 100 keV or 10 percent.										69
					More data needed to resolve discrepancies										69
					STATUS: TNC Buchanan+ NCSAC-33, Scattering meas. 9, 11MeV.										70
					NEL Bucher+ NCSAC-33, 7-14MeV, small angles.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI CR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
39	7 N	Elastic	$\sigma(\theta_n)$	I			7-15		5			NEL	Eccleshall	DASA	69
					REQ COM: Every 500 keV with 5 percent energy resolution										69
					$\Delta\theta = \pm 1^\circ$ every 5° for $\theta \leq 20^\circ$; needed to check										69
					importance of small angle data.										69
					$\Delta\theta = \pm 1.5^\circ$ every 10° for $\theta > 20^\circ$										69
					Data needed to resolve discrepancies.										69
					STATUS: TNC Buchanan+ NCSAC-33, Scattering meas. 9, 11MeV.										70
					NEL Bucher+ NCSAC-33, 7-14MeV, small angles.										70
40	7 N	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			7-15			10		AC	Greenhow	DASA	69
				I			7-15			10		AFWL	Schaefer	DASA	69
				I			8-15			10		LASL	Biggers	DMA	69
				I			7-15			10		NEL	Eccleshall	DASA	69
					REQ COM: 250-keV intervals or as dictated by structure.										69
					Res: ΔE = 100 keV or 10 percent, LASL										69
					Res: $\Delta\theta = \pm 2.5^\circ$ ($0-30^\circ$), $\pm 5^\circ$($30-180^\circ$) or as										69
					dictated by the anisotropy.										69
					Low-energy(<1 MeV) neutrons must be included.										69
					STATUS: TNC Buchanan+ NCSAC-33, Scattering meas. 9, 11MeV.										70
					Neutrons >1.5Mev at 3 angles.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
41	$_7N$	Absorption		I			1-15		5			AFWL	Schaefer	DASA	69
				I			2-16		5			LASL	Biggers	DMA	66
				I			1-15		5			AC	Greenhow	DASA	69
					REQ COM: Large discrepancies must be resolved <7.5 MeV.										69
					No data available above ~ 7.5 MeV.										69
					Data on $(n,\bar{\alpha}_0)$, (n,p_0) and (n,d_0) may suffice.										69
					STATUS: None										69
42	$_7N$	Tot γ Prod	$\sigma(\theta_\gamma,E_\gamma)$	I			8-15			10		AC	Greenhow	DASA	69
				I			8-15			10		AFWL	Schaefer	DASA	69
				I			8-20			10		LASL	Biggers	DMA	69
				I			9-20			10		LRL	Howerton	DMA	69
				I			8-15			10		NEL	Eccleshall	DASA	70
					REQ COM: Must include contributions of continuum gammas										69
					Resolution: $\Delta E_n \le 250$ keV, $\Delta E_\gamma \le 250$ keV,										69
					$\Delta\theta = 5^\circ (5-30^\circ)$ and $10^\circ (>30^\circ)$ or as										69
					dictated by anisotropy.										69
					STATUS: GGA:Broad energy spread, σ_{125°, 2-14 MeV, GA-8006										69
					ORNL Dickens+ Nuc.Sci.Eng.40,346, 8-11MeV.										70
					TNC Tucker has 14.8MeV data, NOSAC-33.										70
					SACLAY has work in progress 8-14MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
43	$_{8}$O	Elastic	$\sigma(\theta_n)$	II		10-	1		5			GRT	Preskitt	DRDT	69
				I			1-4		4-9			KAPL	Ehrlich	DRDT	69
				I			4-16	3-	5			LMFB	Hemmig-AEC	DRDT	66
				I			4-16	3-	5			ORNL	Clifford	DRDT	66
				I			8-15		5			AFWL	Schaefer	DASA	69
				I			8-16		5			LASL	Biggers	DMA	62
				I			7-15		5			NEL	Eccleshall	DASA	69
					REQ COM: Needed for fast reactor reflector worths, DRDT.										69
					$\Delta\theta = \pm 2.5^\circ$ ($<30^\circ$), $\pm 5^\circ$ ($>30^\circ$), DASA.										69
					$\Delta\theta = \pm 1^\circ$ every 5° ($<20^\circ$), $\pm 1.5^\circ$ every 10° ($>20^\circ$).										69
					ΔE = 100 keV or 10 percent (every 500 keV). DASA.										69
					STATUS: TNC Buchanan+ NCSAC-33, Scattering meas. 9, 11MeV.										70
					NEL Bucher+ NCSAC-33, 7-14MeV, small angles.										70
44	$_{8}$O	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			8-15			10		AFWL	Schaefer	DASA	69
				III			14		5			GRT	Preskitt	DRDT	69
				I			7-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Needed for fast reactor reflector worths, DRDT.										69
					250-keV intervals or as dictated by structure. DAS										69
					Res: ΔE = 100 keV or 10 percent. DASA.										69
					Low-energy (<1 MeV) neutrons must be included. DAS										69
					STATUS: TNC Buchanan+ NCSAC-33, Scattering meas. 9, 11MeV.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
45	$_{8}O$	Absorption		I			10-15		5			AFWL	Schaefer	DASA	66
				I			8-15		5			LASL	Biggers	DMA	66
					REQ COM: ΔE_n = 250 keV at 250-keV intervals.										69
					Filling the energy gap and supporting evidence										69
					for $(n,\bar{g}_0)$ likely to suffice; if so,										69
					integral of inverse will satisfy.										69
					STATUS: None										69
46	$_{8}O$	Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	I			10-15			10		LASL	Biggers	DMA	62
												AFWL	Schaefer	DASA	70
					REQ COM: Absolute cross sections required.										62
					STATUS: ORNL Dickens+ Nuc.Sci.Eng. 40,283, 6.7-14MeV										70
					SACLAY deLobeau, in progress 10-15MeV.										70
47	$_{8}O^{17}$	$(n,p)N^{17}$	$\beta^- - O^{17*} \to n$	I			8.5-16		5			LASL	Keepin	OSMM	69
					REQ COM: Accuracy should be 5 percent or a few tenths mb.										69
					Absolute delayed neutron yield required.										69
					Development of nondestructive assay techniques.										69
					STATUS: None which gives energy dependence.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
48	${}_{8}O^{17}$	$\sigma_{\alpha,n}$		II			Thr-7				20	KAPL	Ehrlich	DRDT	66
					REQ COM: Alpha energy resolution 0.1 MeV.										66
					For calculation of neutron source strengths										66
					STATUS: None										66
49	${}_{8}O^{18}$	$\sigma_{\alpha,n}$		III			Thr-7			10		BET	Bayard	DRDT	66
					REQ COM: Alpha energy resolution 0.2 MeV.										66
					To resolve discrepancies between cross section										66
					and neutron yield data										66
					STATUS: None										66
50	${}_{9}F$	Elastic	$\sigma(\theta_n)$	I			3-20			10		LRL	Howerton	DMA	69
					REQ COM: Energy dependence of σ_{ELAS} should be well defined										69
					STATUS: None										69
51	${}_{9}F$	Emission	$\sigma(E_{n'})$	I		500-	20			10		LRL	Howerton	DMA	69
					REQ COM: Absolute $\sigma(E_{n'})$ at a few angles may suffice.										69
					STATUS: None										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
52	$_{9}F$	$\sigma_{n,\bar{x}}$		II		1-	1			10		ORNL	Craven	DRDT	66
					REQ COM: To calculate neutron loss in Molten Salt Breeder.										66
					STATUS: ORNL Macklin has experiment in progress.										70
					FOA Nystroem+, EANDC(OR)99L, 20-80keV.										70
53	$_{9}F$	$\sigma_{n,\bar{a}}$		I			9-14			10		LRL	Howerton	DMA	69
					REQ COM: Absolute values at a few energies.										69
					STATUS: None										69
54	$_{11}Na$	Total		I		10-	5	1				ORNL	Clifford	DRDT	69
					REQ COM: Fast reactor deep penetration; 1 percent in valley										69
					STATUS: KFK Cierjacks has unpublished data, EANDC(E)127U.										70
					RPI Clement+, NCSAC-33, 0.5-40MeV.										70
55	$_{11}Na$	Elastic	$\sigma(\theta_n)$	II			8-15		5			NEL	Eccleshall	DASA	69
					REQ COM: Energy resolution 0.25 MeV, angular res. 3 deg.										69
					Energy intervals 0.5 MeV, angular int. 10 deg.										69
					STATUS: None.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
56	$_{11}$Na	Inelastic	$\sigma(E_{n'})$	II			2-10			10		AI	Alter	DRDT	62
												ANL	Avery	DRDT	62
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Total integral over 4π required.										62
					Spectra at several angles if signif. anisotropic										62
					ΔE_o and $\Delta E_{n'}$ $\leq$ 10 percent.										62
					STATUS: ORNL Perey+, ORNL-4518, has results 5.4-8.5MeV.										70
					AWRE Porter has 5 MeV data.										70
57	$_{11}$Na	Emission	$\sigma(\theta_{n'},E_{n'})$	II			4-15			10		NEL	Eccleshall	DASA	69
					REQ COM: $\Delta\theta_{n'}$ = 3^{o}; ΔE_n = 250 keV.										69
					Energy increments 500 keV, every 10 degrees										69
					STATUS: ORNL Perey+, ORNL-4518, has results 5.4-8.5MeV.										70
					AWRE Porter has 5 MeV data.										70
58	$_{11}$Na	Absorption		II		1-100					20	GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy 20per or 0.5mb whichever is greater.										69
					Intermediate accuracy useful.										69
					STATUS: Hockenbury, Phys. Rev. 178,1746, res. params.										69
					and capture areas for 4 resonances.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
59	$_{11}$Na	$\bar{G}_n$ and $\bar{G}_g$		I		3				10		ANL	Avery	DRDT	62
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: $\bar{G}_n$ and $\bar{G}_g$ desired for 3 keV resonance.										62
					STATUS: Yamamuro, Nuc.Sci.Eng.41,445 to 10 per. though discrepancies still exist.										70
60	$_{13}$Al	Elastic	$\sigma(\theta_n)$	I			8-16		5			LASL	Biggers	DMA	66
				II			8-15		5			NEL	Eccleshall	DASA	69
					REQ COM: ΔE_n= 250 keV, 250-keV intervals or as dictated by structure. $\Delta\theta$ - $\pm 2.5^{\circ}$ ($<30^{\circ}$) and $\pm 5^{\circ}$ ($>30^{\circ}$). Omit 14 MeV point.										69
					STATUS: TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV. NEL Bucher+ NCSAC-33, meas. planned, small angles.										70
61	$_{13}$Al	Emission	$\sigma(\theta_{n'},E_{n'})$	I			8-15			10		AFWL	Schaefer	DASA	69
				II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: ΔE_n=250 keV at 250 keV intervals, or as dictated by structure. $\Delta\theta$ = $\pm 2.5^{\circ}$ ($0-30^{\circ}$), $\pm 5^{\circ}$($30-180^{\circ}$) or as dictated by anisotropy.										69
					STATUS: TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
62	$_{13}$Al	Cap Spect	$P(E_\gamma)$	I	Th					10		SNPO	Fleishman	DSNS	69
					REQ COM: For shielding calculations.										69
					Both line and continuum spectra are required.										69
					Available data on intensities not consistent.										69
					STATUS: ORNL Maerker+ have new data, ORNL-4382.										70
					Goteburg Idetjarn, measurement in progress.										70
63	$_{13}$Al	Tot γ Prod	$\sigma(E_\gamma)$	II		5-200				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_\gamma)$										69
					> 1 MeV: 500-keV intervals										69
					Gamma-energy resolution required:										69
					< 2.5 MeV, 10 percent; > 2.5 MeV, 250 keV.										69
					STATUS: TNC Tucker+ report data 3-5, 14MeV, ORO-2791-28.										69
					LASL Drake, Nuc.Sci.Eng. 40,294,4-7.7MeV.										70
					GRT Orphan+ 0.86-16MeV, NCSAC-33.										70
					KFK Voss+, Knoxville conf., 0.8-13MeV.										71

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
64	13^{Al}	$\sigma_{n,p}$	Act	III			5-11.9			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution in energy 5 per, 500-keV intervals										69
					STATUS: FRK Bass+ EUR119,c, have data 6-9MeV.										67
65	14^{Si}	Elastic	$\sigma(\theta_n)$	II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution: energy, 0.25 MeV; angular, 3°.										69
					Increments: energy, 0.5 MeV; angular, 10°.										69
					STATUS: TNO Williams+ NCSAC-33, Scattering meas, 9, 11MeV.										70
66	14^{Si}	Emission	$\sigma(\theta_{n'},E_{n'})$	II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: ΔE_n=250 keV, 500 keV intervals or as dictated,										69
					$\Delta\theta = \pm 2.5^{\circ} (<30^{\circ})$ and $\pm 5^{\circ} (>30^{\circ})$										69
					STATUS: TNO Williams+ NCSAC-33, Scattering meas, 9, 11MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
67	$_{14}Si^{30}$	$\sigma_{n,\gamma}$	Act	III	.025-	to	15				30	LRL	Howerton	DMA	69

REQ COM: Required is cross section for activation of Si^{31}, 69
in naturally occurring element. 69
Accuracy 30 per if σ > 100 mb, 50 per if 69
25 mb < σ < 100 mb. Accuracy to a factor 69
of 2 if 1 mb < σ < 25 mb; to a factor of 10 69
if σ < 1 mb. 69

STATUS: FOA Nystroem+, EANDC(OR)99L, 20-80keV. 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
68	$_{16}S^{34}$	$\sigma_{n,\gamma}$	Act	I	.025-	to	15				30	LRL	Howerton	DMA	69

REQ COM: Required is cross section for activation of S^{35} 69
in naturally occurring element. 69
Accuracy 30 per if σ > 100 mb, 50 per if 69
25 mb < σ < 100 mb. Accuracy to a factor 69
of 2 if 1 mb < σ < 25 mb; to a factor of 10 69
if σ < 1 mb. 69

STATUS: Kappe, Diss. Abstr. 27B 919 gives thermal value. 70
FOA Nystroem+, EANDC(OR)99L, 20-80keV. 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
69	$_{16}S^{36}$	$\sigma_{n,2n}$	Act.	I			Thr-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of S^{35}										69
					in naturally occurring element.										69
					Accuracy 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: none.										69
70	$_{19}K^{41}$	$\sigma_{n,\bar{g}}$	Act	II	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of K^{42}										69
					in naturally occurring element.										69
					Accuracy 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: Kappe, Diss. Abstr. 27B 919 gives thermal value.										70
					Stupegia+ J.Nuc.En.22,267, 0.16-2.5MeV, to 10per.										68
					INC Schuman WASH-1127 gives 2keV value, 310±100mb.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
71	$_{20}Ca$	Elastic	$\sigma(\theta_n)$	II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution: Energy 0.25 MeV; angular 3 degrees										69
					Intervals: Energy 0.5 MeV; angular 10 degrees.										69
					STATUS: TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV.										70
72	$_{20}Ca$	Emission	$\sigma(\theta_{n'}, E_{n'})$	II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution: Energy 0.25 MeV; angular 3 degrees.										69
					Increments: Energy 0.5 MeV; angular 10 degrees.										69
					STATUS: TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV.										70
73	$_{20}Ca$	Tot γ Prod	$\sigma(\theta_\gamma, E_\gamma)$	II			5-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Need energy spectrum of all gammas.										69
					Resolution: 5 per in E_γ, 5 degrees in θ.										69
					Increments of 0.5 MeV, 10 degrees.										69
					STATUS: ORNL Dickens+, Knoxville conf., at 5.9MeV.										71
					**										
74	$_{20}Ca^{40}$	$\sigma_{n,\gamma}$	Act	III			Ths-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is activation of Ar^{37}, 35.1 day.										69
					STATUS: FRK Bass+ EANDC(E)66U, 2.6 and 6MeV.										67

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
75	$_{20}Ca^{44}$	$\sigma_{n,\bar{\gamma}}$	Aot	I	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Ca^{45}										69
					in naturally occurring element.										69
					Accuracy 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb.; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: None.										69
76	$_{20}Ca^{46}$	$\sigma_{n,2n}$	Aot.	I			Thr-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Ca^{45}										69
					in naturally occurring element.										69
					Accuracy 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: none.										69
77	$_{21}Sc$	$\sigma_{n,\bar{\gamma}}$	Act	II		1-	18			10		PNWL	McElroy	DRDT	69
					REQ COM: For use as fluence monitor.										69
					STATUS: None										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
78	$_{22}$Ti	Tot γ Prod	$\sigma(E_{\gamma})$	II		1-100				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_{\gamma})$ required for all E_{γ} > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in (E_{γ})										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: NRDL Engesser, data at 2.8MeV, USNRDL-TR-68-78.										69
79	$_{22}$Ti	Tot γ Prod	$\sigma(\theta_{\gamma},E_{\gamma})$	I		10-	16				20	ORNL	Clifford	DRDT	69
					REQ COM: Needed for space reactor shielding.										69
					STATUS: NRDL Engesser, data at 2.8MeV, USNRDL-TR-68-78.										69
80	$_{22}$Ti	Tot γ Prod	$\sigma(\theta_{\gamma},E_{\gamma})$	III			4-14				20	GDFW	Western	DASA	63
					REQ COM: $\Delta E = \pm 250$ keV at 500-keV intervals										63
					$\Delta\theta = \pm 5^{\circ}$; $\sigma(\theta)$ only if significantly anisotropic.										63
					STATUS: None										63

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
81	$_{22}Ti^{46}$	$\sigma_{n,p}$	Act	II			1-18			10		PNWL	McElroy	DRDT	69
				III			1-12.5			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution in energy 100 keV, 500-keV intervals										69
					For use as a fluence monitor.										69
					STATUS: U. Florida Lucic, Trans.ANS 12,283,4.9-7MeV.										69
					U. Toronto Hsiang Diss.Abstr.28B,3189, 14-20MeV.										68
82	$_{22}Ti^{47}$	$\sigma_{n,p}$	Act	II			>1			10		PNWL	McElroy	DRDT	69
				III			1-15			*		NEL	Eccleshall	DASA	69
					REQ COM: Resolution in energy 100 keV, 1-MeV intervals										69
					* For σ > 5 mb, $\Delta\sigma$ = 2.5 mb.										69
					For use as fluence monitor.										69
					STATUS: U. Toronto Hsiang Diss.Abstr.28B,3189, 14-20MeV.										68
83	$_{22}Ti^{48}$	$\sigma_{n,p}$	Act	II			3.2-10				20	KAPL	Ehrlich	DRDT	69
				II			>1			10		PNWL	McElroy	DRDT	69
				III			3-12.5			10		NEL	Eccleshall	DASA	69
					REQ COM: Resolution in energy 100 keV, 500-keV intervals.										69
					For use as fluence monitor, activation analysis.										69
					STATUS: U. Toronto Hsiang Diss.Abstr.28B,3189, 14-20MeV.										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
84	23^{V}	Elastic	$\sigma(\theta_n)$	III			1.4-10			10		ANL	Avery	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
					REQ COM: Resolution ΔE_n = 500 keV, $\Delta\theta$ = 10°										62
					STATUS: None.										70
85	23^{V}	Inelastic	$\sigma(E_{n'})$	III			1.5-10				15	ANL	Avery	DRDT	62
												GE	Snyder	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
					REQ COM: Total integral over $h\gamma$ required.										62
					Spectra at several angles if significantly										62
					anisotropic										62
					STATUS: AWRE Porter has data for $(n,n'\bar{\gamma})$, 0.3-4MeV.										70
86	23^{V}	$\sigma_{n,\bar{\gamma}}$	Act	II	Th				5			AFIT	Dooley	DASA	62
					REQ COM: Activation cross section desired at 0.025 eV										62
					STATUS: Probably satisfied, see Ryves, J.Nuc.En.24,35.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
87	$_{23}V$	Absorption		III		1-150				10		ANL	Avery	DRDT	62
												GE	Snyder	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
					REQ COM: Available data inconsistent.										62
					Energy resolution 10 percent.										62
					STATUS: RPI Stieglitz+, Nuc.Phys.(to be publ.) 1-200keV.										70
					HAR Moxon+ have data 0.1-100keV.										69
88	$_{24}Cr$	Elastic	$\sigma(\theta_n)$	II			2-14		4-9			KAPL	Ehrlich	DRDT	69
					REQ COM: Res: 100keV, $\Delta\theta = 5^{o}$										69
					STATUS: Wiedling+, Helsinki Conf. CN 26/54, 1.8-8.1MeV.										70
89	$_{24}Cr$	Inelastic	$\sigma(E_{n'})$	II		500	-10			10		GE	Snyder	DRDT	66
												LMFB	Hemmig-AEC	DRDT	66
					REQ COM: Total integral over 4π required.										66
					Spectra at several angles if significantly										66
					anisotropic.										66
					Required energy resolution has not been determined										66
					STATUS: None.										66

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
90	24 Cr	$\sigma_{n,\bar{\gamma}}$		II		1-600				20		GE	Snyder	DRDT	65
												LMFB	Hennig-AEC	DRDT	65
												ORNL	Clifford	DRDT	65
					REQ COM: Incident resolution 20 percent.										69
					Resonance parameters needed, espec. gamma widths.										69
					STATUS: RPI Stieglitz+ Nuc.Phys.(to be pub.) to 200keV.										70
					KFK Froehner+, plan meas., sep. isotopes, 7-200keV										70
					LRL Baglan+ NCSAO-33, from threshold photoneut.										70
91	24 Cr	Res Int	Capture	I	.5-	up				10-	15	KAPL	Ehrlich	DRDT	69
					REQ COM: Remove or correct for (n,p) contribution.										69
					STATUS: RPI Stieglits calculates 1.6±0.2b from res. param.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
92	24 Cr	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	I	500-	20				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater,										69
					Absolute $\sigma(E_{\bar{g}})$ required for all E_g > 200 keV,										69
					Neutron Energy intervals required:										69
					Res, region: reproduce major variations in $(E_{\bar{g}})$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2,5MeV, 10 percent; >2,5MeV, 250keV,										69
					STATUS: TNC Tucker, 55deg data at 5MeV, WASH-1136,										69
					NRDL Engesser has data at 2,8MeV, USNRDL-TR-68-78										69
93	24 Cr	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	II	up	to	10			10		BET	Bayard	DRDT	69
					REQ COM: The above accuracy (10 percent) is requested,										66
					in 0,5 MeV gamma-ray resolution intervals,										66
					For shielding calculations,										66
					STATUS: TNC Tucker, 55deg data at 5MeV, WASH-1136,										69
					NRDL Engesser has data at 2,8MeV, USNRDL-TR-68-78										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB PERSON ORG	YR
94	$_{24}Cr^{53}$	$\bar{\bar{G}}_{\gamma}$		II		1-600			4-9			KAPL Ehrlich DRDT	69
					REQ COM: None.								69
					STATUS: RPI Stieglitz+ Nuc.Phys.(to be pub.) to 200keV.								70
					Res. params. to 10percent for 25 resonances.								70
					KFK Froehner+, plan meas., sep. isotopes, 7-200keV								70
95	$_{25}Mn^{55}$	$\sigma_{n,\gamma}$		II	Th-	1				10		LRL Howerton DMA	66
					REQ COM: Energy dependence of $\sigma_{n,\gamma}$ should be well defined.								69
					STATUS: None.								69
96	$_{25}Mn$	Tot γ Prod	$\sigma(E_{\gamma})$	I	300-	120				15*		SNPO Fleishman DSNS	69
				I			1-10			15*		SNPO Fleishman DSNS	69
				II			1-14			15*		NEL Eccleshall DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.								69
					Absolute $\sigma(E_{\gamma})$ required for all E_{γ} > 200 keV.								69
					Neutron Energy intervals required:								69
					Res. region: reproduce major variations in (E_{γ})								69
					> 1 Mev: 500-keV intervals								69
					Gamma-energy resolution required:								69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.								69
					STATUS: BNL Chrien reports spectra for 4 res. WASH-1136.								69

REQ #	TARGET Z A	QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
97	$_{26}Fe$	Elastic	$\sigma(\theta_n)$	I			7-14		4-9			KAPL	Ehrlich	DRDT	69
				I		500-	3		5			ORNL	Clifford	DRDT	69
				I		1-	10			10		ANL	Avery	DRDT	69
				I		1-	10			10		LMFB	Hemmig-AEC	DRDT	69

REQ COM: Resolution: 100keV, $\Delta\theta = 5^\circ$, KAPL. 69
Resolution: 1 percent energy at several peaks, 69
and valleys: $\sigma(\theta_n)$ required in valleys 69
for shielding, ORNL. 69
Resolution to at least resolve intermediate 69
structure. ANL. 69

STATUS: ANL Smith, Nuc.Phys. A118,321 satisfies to 1.5MeV. 68
ORNL Perey ORNL-4515, 4.19-8.56MeV. 69
SWEDEN, Holmqvist AE-337 reviews 3-6 MeV. 69
TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV. 70

REQ #	TARGET Z A	QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
98	$_{26}Fe$	Elastic	$\sigma(\theta_n)$	I			8-16		5			LASL	Biggers	DMA	66

REQ COM: ΔE_n = 250keV, intervals dictated by structure. 66
$\Delta\theta = \pm 2.5^\circ (\leq 30^\circ)$, $\pm 5^\circ (> 30^\circ)$. 62

STATUS: TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV. 70
NEL Bucher+ NCSAC-33, meas. planned, small angles. 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
99	$_{26}$Fe	Inelastic	$\sigma(E_{n'})$	I		850-	2		5			GE	Snyder	DRDT	66
				I		850-	2		5			LMFB	Hemmig-AEC	DRDT	66
				II			2-10			10		GE	Snyder	DRDT	66
				II			2-10			10		LMFB	Hemmig-AEC	DRDT	66
					REQ COM: Required resolution has not been determined.										66
					Total integral over 4π required.										66
					Spectra at several angles if significantly										66
					anisotropic.										66
					STATUS: Barnard+Nuc. Phys. A118, 321(1968) should satisfy										70
					this below 2Mev with modest extrapolation.										70
					ORNL Dickens+ have data 4-8.5Mev ORNL-4515										70
					CASE Lindow+ NCSAC-31, have data 5.0-5.5MeV.										70
					TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV.										70
					CEA Haouat+, Knoxville conf., 2.5-14.1MeV.										71
100	$_{26}$Fe	Emission	$\sigma(E_{n'})$	I			5-15				20	LRL	Howerton	DMA	70
					REQ COM: Energy range of interest: $0.2\text{MeV} \leq E_{n'} \leq E_n$.										70
					STATUS: None.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
101	$_{26}Fe$	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			7-15			10		AFWL	Schaefer	DASA	69
				III			8-16			10		GDFW	Western	DASA	66
				I			8-16			10		LASL	Biggers	DMA	66
				II			7-15			10		NEL	Eccleshall	DASA	69
					REQ COM: ΔE=500kev, 500kev intervals as dictated by structure.										69
					Δθ = ± 5 degrees, σ(θ) as dictated by anisotropy.										69
					STATUS: ORNL Perey's data may satisfy to 12MeV										69
					TNC Williams+ NCSAC-33, Scattering meas. 9, 11MeV.										70
102	$_{26}Fe$	Absorption		I		1-	1.5		5	to	20	ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Capture in 1-5 keV range of particular intrest.										69
					Accuracy 5 per below 175 keV, 20 per above.										69
					STATUS: Hockenbury+ Phys.Rev. 178,1746 to 200keV.										69
					Ernst+, Helsinki conf. CN-26/11, 7-200keV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
103	$_{26}Fe$	Tot γ Prod	$\sigma(E_\gamma)$	II		1-650				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in (E_γ)										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: ORT Orphan+ 0.86-16MeV, NCSAC-33.										70
					LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV.										70
					KFK Voss+, Knoxville conf., 0.8-13MeV.										71
104	$_{26}Fe$	Tot γ Prod	$\sigma(\theta_\gamma, E_\gamma)$	I	Th-	to	10				20	BET	Bayard	DRDT	66
					REQ COM: All gamma energies of interest for fast reactor shielding.										66
					STATUS: ORT Orphan+ 0.86-16MeV, NCSAC-33.										70
					LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV.										70
					KFK Voss+, Knoxville conf., 0.8-13MeV.										71

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
105	$_{26}Fe$	Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	II			8-15			10		GDFW	Western	DASA	69
				I			8-16			10		LASL	Biggers	DMA	69
				II			7-15			10		NEL	Eccleshall	DASA	69
												AFWL	Schaefer	DASA	70
					REQ COM: ΔE = 250 keV at 500-keV intervals										69
					Δθ = $\pm 5^\circ (<30^\circ)$, $\pm 10^\circ (>30^\circ)$										69
					σ(55°) only unless significantly anisotropic.										69
					STATUS: TNC, 14.8-MeV data ORO-2791-28										69
					GRT Orphan+ 0.86-16MeV, NOSAC-33.										70
					LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV.										70
					KFK Voss+, Knoxville conf., 0.8-13MeV.										71
106	$_{26}Fe$	Res Int	Capture	I	.5-	up				10-	15	KAPL	Ehrlich	DRDT	69
					REQ COM: Remove or correct for n,p contribution.										69
					STATUS: Hockenbury+ Phys.Rev.178,1746. res. par. to 100keV										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
107	$_{26}Fe^{54}$	$\sigma_{n,\gamma}$	Act	II	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Fe^{55}										69
					in naturally occurring element.										69
					Accuracy 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb; Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: KFK Ernst+, measurements 7-200keV in progress.										70
108	$_{26}Fe^{54}$	$\sigma_{n,p}$	Act	II			1-18			10		PNWL	McElroy	DRDT	69
				III			6.2-13			10		NEL	Eccleshall	DASA	69
					REQ COM: Energy resolution 250 keV, 500-keV intervals										69
					For use as fluence monitor.										69
					STATUS: Barrall, Nuc.Phys.A138,387 has data at 14.8MeV.										69
					BCMN Paulsen is measuring, 1.5MeV and 12-20MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
109	$_{26}Fe^{56}$	$\sigma_{n,2n}$	Act.	II			Thr-15				30	LRL	Howerton	DMA	69

REQ COM: Required is cross section for activation of Fe^{55} 69
in naturally occurring element. 69
Accuracy 30 per if σ > 100 mb, 50 per if 69
25 mb < σ < 100 mb. Accuracy to a factor 69
of 2 if 1 mb < σ < 25 mb; to a factor of 10 69
if σ < 1 mb. 69

STATUS: none. 69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
110	$_{26}Fe^{57}$	$\bar{\Gamma}_n$		I		1-600			4-9			KAPL	Ehrlich	DRDT	69

REQ COM: Needed for evaluations 69

STATUS: KFK Mueller, Z.Phys.277,1, 19Γ_n's, 2.3-25keV. 69
Hockenbury+ Phys.Rev.178,1746, capture to 40keV. 69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
111	$_{26}Fe^{58}$	$\sigma_{n,\gamma}$	Act	II	.025-	to	15				30	LRL	Howerton	DMA	69
				II		1-	18			10		PNWL	McElroy	DRDT	69

REQ COM: Required is cross section for activation of Fe^{59} in naturally occurring element. (LRL) 69 69

Accuracy 30 per if σ > 100 mb, 50 per if 25 mb < σ < 100 mb. Accuracy to a factor of 2 if 1 mb < σ < 25 mb; to a facotr of 10 if σ < 1 mb. (LRL) 69 69 69 69

For use as fluence monitor (PNWL) 69

STATUS: Hockenbury+ Phys.Rev.178,1746. res. par. to 100keV 69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
112	$_{27}Co$	Res Par		II	132			1				INC	Brugger	DRDT	62

REQ COM: 1 percent in parameters of this resonance. 62

Needed as flux monitor. 62

STATUS: Nakajima, J.Nuc.Sci.Tech. 7,7 inconsistent with older work by Jain(BNL) and Moxon(Harwell). 70 70

Present techniques not capable of 1percent. 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
113	$_{27}$Co	$\sigma_{n,\gamma}$		II	132			1				INC	Brugger	DRDT	62
					REQ COM: 1 percent in $\bar{\sigma}_{\gamma}$ for this resonance.										62
					Needed as flux monitor.										62
					STATUS: Nakajima, J.Nuc.Sci.Tech. 7,7 inconsistent with										70
					older work by Jain(BNL) and Moxon(Harwell).										70
					Present techniques not capable of 1percent.										70
114	$_{27}$Co	$\sigma_{n,\gamma}$	Act	I	.025-	to	15				30	LRL	Howerton	DMA	69
				II		1-	18			10		PNWL	McElroy	DRDT	69
					REQ COM: Required is cross section for activation of Co^{60}										69
					in ground plus isomeric states.										69
					Accuracy 30 per if > 100 mb, 50 per if										69
					25 mb < σ < 100 mb, Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb. (LRL)										69
					For use as fluence monitors. (PNWL)										69
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
115	$_{27}Co$	Tot $\bar{g}$ Prod	$\sigma(E_{g})$	I	100-	100				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater,										69
					Absolute $\sigma(E_{g})$ required for all E_{g} > 200 keV,										69
					Neutron Energy intervals required:										69
					Res, region: reproduce major variations in (E_{g})										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2,5MeV, 10 percent; >2,5MeV, 250keV,										69
					STATUS: TNC Tucker, 90deg data 1-5MeV, ORO-2791-28,										69
116	* $_{27}Co^{58}$	J,π		III		25-	3					KAPL	Ehrlich	DRDT	66
					REQ COM: Need spins and parities of excited states for										66
					Calculation of threshold reaction Ni^{58}(n,p),										66
					STATUS: Decowski, NP A112 513, reviews status,										68
117	$_{28}Ni$	Total		II		350-	3,2	1				ORNL	Clifford	DRDT	69
					REQ COM: One percent in minima for fast reactor shielding,										69
					STATUS: KFK Cierjacks has unpublished data, EANDC(E)127U,										70
					NBS Schwartz has unpublished data, WASH-1127,										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
118	28 Ni	Elastic	σ(θ$_n$)	II		10-	3		5-	10		ANL	Avery	DRDT	65
				II		10-	3		5-	10		LMFB	Hemmig-AEC	DRDT	65
				I			1,5-14		4-9			KAPL	Ehrlich	DRDT	69
					REQ COM: Resolution: 100 keV, Δθ = 5°, KAPL.										65
					Energy resolution not determined, ANL, LMFB.										69
					Res. of inter. structure probably adequate, ANL, L										69
					10-100 keV, accuracy 5 percent, ANL, LMFB.										69
					100keV-3MeV, accuracy 10 per, ANL,LMFB.										69
					STATUS: Holmqvist+, Helsinki Conf, CN-26/54, 1,8-8,1MeV.										70
					ANL Cox, WASH-1079, 0,4-1,5MeV, 8 angles.										69
					CASE Lindow+ NCSAC-31, have data 5,0-5,5MeV.										70
					ORNL Perey+ ORNL-4523, 6,5-8,5MeV.										70
					RPI Zuhr NCSAC-33, 5 angles, keV region, in prog.										70
119	28 Ni	Inelastic	σ(E$_{n'}$)	II			1-10			10		GE	Snyder	DRDT	66
												LMFB	Hemmig-AEC	DRDT	66
					REQ COM: ΔE_o and $\Delta E_{n'}$ = 10 percent.										69
					Total integral over 4π required.										69
					Spectra at several angles if significantly										69
					anisotropic.										69
					STATUS: Holmqvist+, Helsinki Conf. CN-26/54, 1,8-8,1MeV.										70
					CASE Lindow+ NCSAC-31, have data 5,0-5,5MeV.										70
					ORNL Perey+ ORNL-4523, 6,5-8,5MeV.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
120	$_{28}$Ni	Absorption		II		1-150				10		ANL	Avery	DRDT	66
												LMFB	Hemmig-AEC	DRDT	66
					REQ COM: Energy resolution 10 percent.										66
					STATUS: Hockenbury+ Phys.Rev. 178,1746 to 200keV.										69
					Ernst+, Helsinki conf. CN-26/11, 7-200keV.										70
121	$_{28}$Ni	Res Int	Capture	I	.5-	up				10-	15	KAPL	Ehrlich	DRDT	69
					REQ COM: Remove or correct for n,p contribution.										69
					STATUS: None										69
122	$_{28}$Ni	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	II	Th-	to	10			10		BET	Bayard	DRDT	66
				I	Th-	300					20	ORNL	Clifford	DRDT	62
		Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	II			2-14				20	ORNL	Clifford	DRDT	63
					REQ COM: Gamma resolution 0.5 MeV.										66
					All gammas are of interest.										66
					For shielding and gamma heating										66
					calculations.										66
					STATUS: LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV										70
					TNC Tucker, 4.1 and 14.8 MeV, WASH-1136.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
123	$_{28}$Ni	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	II		12-340				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70

REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater. 69
Absolute $\sigma(E_{\bar{g}})$ required for all $E_{\bar{g}}$ > 200 keV. 69
Neutron Energy intervals required: 69
Res. region: reproduce major variations in $(E_{\bar{g}})$ 69
> 1 Mev: 500-keV intervals 69
Gamma-energy resolution required: 69
<2.5MeV, 10 percent; >2.5MeV, 250keV. 69

STATUS: LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV 70
TNC Tucker has data at 4.1MeV, WASH-1136 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
124	$_{28}$Ni^{58}	$\sigma_{n,p}$	Act	III			9.4-14			10		NEL	Eccleshall	DASA	69

REQ COM: Resolution in energy 5 per, 500-keV intervals 69

STATUS: none. 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
125	$_{28}$Ni^{60}	$\sigma_{n,p}$	Act	III			2-12.5			10		NEL	Eccleshall	DASA	69

REQ COM: Resolution in energy 5 per, 500-keV intervals 69

STATUS: none. 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
126	$_{28}Ni^{61}$	$\bar{\sigma}_n$		I		1-600			4-9			KAPL	Ehrlich	DRDT	69
					REQ COM: None										69
					STATUS: ORNL Good, PR 151 912, 7-48 keV										69
					RPI plans new capture and total measurements.										70
					Cho+, Helsinki conf, CN-26/11, KFK-1230.										70
127	$_{29}Cu$	Tot $\bar{\gamma}$ Prod	$\sigma(E_{\gamma})$	II	200-	50				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_{\gamma})$ required for all E_{γ} > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in (E_{γ})										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: none which satisfy criteria.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB PERSON ORG	YR
128	$_{29}Cu^{63}$	$\sigma_{n,\bar{\gamma}}$		II	Th-	1		2-	5			AORP Hannum DRDT	67
					REQ COM: Accuracy 2 per near thermal.								67
					Accuracy 5 per above thermal.								67
					For detector applications.								67
					STATUS: Weigmann+, Z.Phys.213,411, 211eV-17keV.								68
					HAR Moxon has data 5eV-100keV in progress.								70
129	$_{29}Cu^{63}$	$\sigma_{n,\bar{\gamma}}$	Act	III	.025-	to	15				30	LRL Howerton DMA	69
				II		1-	18			10		PNWL McElroy DRDT	69
					REQ COM: Required is cross section for activation of Cu^{64}								69
					in naturally occurring element. (LRL)								69
					Accuracy 30 per if σ > 100 mb, 50 per if								69
					25 mb < σ < 100 mb. Accuracy to a factor								69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10								69
					if σ < 1 mb. (LRL)								69
					For use as fluence monitor (PNWL)								69
					STATUS: Weigmann+, Z.Phys.213,411, 211eV-17keV.								68
					HAR Moxon has data 5eV-100keV in progress.								70
130	$_{29}Cu^{63}$	$\sigma_{n,\bar{a}}$	Act	II			>6			10		PNWL McElroy DRDT	69
					REQ COM: For use as fluence monitor.								69
					STATUS: Barrall, Nuc.Phys.A138,387 has data at 14.8MeV.								69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
131	$_{29}Cu^{65}$	$\sigma_{n,2n}$	Act.	III			Thr-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Cu^{64}										69
					in naturally occurring element.										69
					Accuracy of 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: Bormann+, Nuc.Phys.A130,195, 13-18MeV.										69
132	$_{29}Cu^{65}$	$\sigma_{n,\gamma}$		II	Th-	1		2-	5			ACRP	Hannum	DRDT	67
					REQ COM: Accuracy 2 per near thermal										67
					Accuracy 5 per near above thermal										67
					For detector applications										67
					STATUS: Weigmann+, Z.Phys.213,411. 211eV-17keV.										68
					HAR Moxon has data 5eV-100keV in progress.										70
133	$_{30}Zn$	Cap Spect	$P(E_g)$	I	Th					10		SNPO	Fleishman	DSNS	69
					REQ COM: For shielding calculations.										69
					Both line and continuum spectra are required.										69
					Bartholomew's spectrum does not give correct B.E.										69
					STATUS: ORNL Maerker+ ORNL-4382, appear to fill this.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
134	$_{30}Zn$	Tot γ Prod	$\sigma(E_\gamma)$	I	200-	25				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in (E_γ)										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: none which satisfy criteria.										69
135	$_{30}Zn^{64}$	$\sigma_{n,\gamma}$	Act	I	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Zn^{65}										69
					in naturally occurring element.										69
					Accuracy of 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: INC Schuman, activ. in AFSR spectrum, WASH-1136.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB PERSON ORG	YR
136	$_{30}Zn^{66}$	$\sigma_{n,2n}$	Act.	I			Thr-15				30	LRL Howerton DMA	69
					REQ COM: Required is cross section for activation of Zn^{65} in naturally occurring element. Accuracy of 30 per if σ > 100 mb, 50 per if 25 mb < σ < 100 mb. Accuracy to a factor of 2 if 1 mb < σ < 25 mb; to a factor of 10 if σ < 1 mb.								69
					STATUS: Bormann+, Nuc.Phys.A130,161,195 have exc. functs.								69
137	$_{32}Ge$	Emission	$\sigma(\theta_{n'},E_{n'})$	II			1-15			10		NEL Eccleshall DASA	69
					REQ COM: Resolution: .25 MeV in energy, 5° in angle. Energy intervals 2 MeV; angular intervals 20°.								69
					STATUS: None								69
138	$_{32}Ge$	Tot $\bar{\gamma}$ Prod	$\sigma(\theta_{\bar{\gamma}},E_{\bar{\gamma}})$	II			1-15			10		NEL Eccleshall DASA	69
					REQ COM: Need energy spectrum of gammas Resolution: 5 per in energy; 5° in angle. Energy intervals 2 MeV; angular intervals 20°								69
					STATUS: None.								69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
139	$_{33}As$	Elastic	$\sigma(\theta_n)$	II	Th	to	14			15		GRT	Russell	DASA	69
					REQ COM: For radiation effects.										69
					STATUS: none.										69
140	$_{33}As$	Emission	$\sigma(\theta_{n'})$	II		Thr-	14			15		GRT	Russell	DASA	69
					REQ COM: For radiation effects.										69
					STATUS: none.										69
141	$_{36}Kr^{83}$	Total		II	.001-	1				10		BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 10 per thermal										67
					Accuracy 10 percent in RI above 1 eV.										67
					For fission product absorption calculation										67
					STATUS: None										69
142	$_{36}Kr^{83}$	$\sigma_{n,\bar{g}}$		II	.001-	1				10		BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 10 per thermal										67
					Accuracy 10 percent in RI above 1 eV.										67
					For fission product absorption calculation										67
					STATUS: None										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRIOR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
143	* $_{37}Rb^{83}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-83 day (neutron deficient.)										69
					STATUS: none.										69
144	* $_{37}Rb^{83}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-83 day(neutron deficient)										69
					STATUS: none										69
145	* $_{37}Rb^{83}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-83 day (neutron deficient)										69
					STATUS: none.										69
146	* $_{37}Rb^{84}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-33 day(neutron deficient)										69
					STATUS: none										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
147	* $_{37}Rb^{84}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-33 day(neutron deficient)										69
					STATUS: none.										69
148	* $_{37}Rb^{84}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-33 day(neutron deficient)										69
					STATUS: none.										69
149	* $_{39}Y^{87}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-80 hour(neutron deficient)										69
					STATUS: none.										69
150	* $_{39}Y^{87}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-80 hour(neutron deficient)										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
151	* $_{39}Y^{88}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-107 day.(neutron deficient)										69
					STATUS: none.										69
152	* $_{39}Y^{88}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-107 days(neutron deficient)										69
					STATUS: none										69
153	$_{40}Zr$	Elastic	$\sigma(\theta_n)$	II		200-	1.5			10		KAPL	Ehrlich	DRDT	69
				II			7-14				20	KAPL	Ehrlich	DRDT	69
					REQ COM: <1.5 MeV: Resolution ± 5 per cent; systematic diff										69
					exist in available data.										69
					>7 MeV: Resolution ± 2.5 percent; no data.										69
					STATUS: ANL Smith is working on it.										70

REQ #	TARGET # Z A	QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
154	$_{40}Zr$	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			2-14			10		KAPL	Ehrlich	DRDT	67
				I			2-14			10		ANL	Avery	DRDT	67
				I			1.5-15			10		LASL	Streetman	DSNS	69
					REQ COM: For design of pressurized water reactors using Zr										67
					Incident and exit energy resolution 10 per										67
					Low energy neutrons must be included, LASL.										69
					Absolute spectra at 30° and 70° may suffice, LASL.										69
					Time scale not yet established for										69
					requiring associated gamma-production data.										69
					STATUS: ANL Smith is working on it.										70
155	$_{40}Zr$	$\sigma_{n,\gamma}$		II	Th-	1			5			PNWL	Dawson	DP	67
				II		3-	10			15		KAPL	Ehrlich	DRDT	69
					REQ COM: For reactor modernization and reactivity effects										67
					Need verification for energies <25 keV.										69
					Discrepancies exist 25 keV-1 MeV										69
					No data > 1 MeV available										69
					STATUS: GGA Lopez NBS Spec.Pub.299, to 1eV.										68
156	$_{40}Zr$	Res Int	Capture	I	.5-	up			5			KAPL	Ehrlich	DRDT	69
					REQ COM: Discrepancies in existing measurements.										69
					STATUS: None.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
157	$_{40}Zr$	Cap Spect	$P(E_\gamma)$	I	Th					10		SNPO	Fleishman	DSNS	69
					REQ COM: For shielding calculations.										69
					Both line and continuum spectra are required.										69
					Bartholomew's spectrum does not give correct B.E.										69
					STATUS: MIT Rasmussen has complete GeLi spectrum.										70
158	$_{40}Zr$	Tot γ Prod	$\sigma(E_\gamma)$	II	100-	20				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in (E_γ)										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: none which satisfy criteria.										69
159	* $_{40}Zr^{88}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-85 day.(neutron deficient)										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
160	* $_{40}Zr^{88}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-85 day(neutron deficient)										69
					STATUS: none.										69
161	* $_{40}Zr^{88}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-85 day(neutron deficient)										69
					STATUS: none.										69
					******	******	******	******	******	******					
162	* $_{40}Zr^{89}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-78 hour.(neutron deficient)										69
					STATUS: none.										69
163	* $_{40}Zr^{89}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-78 hour(neutron deficient)										69
					STATUS: none.										69

REQ #	TARGET *	Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
164	*	$_{40}Zr^{89}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
						REQ COM: Needed for evaluation.										69
						* Radioactive target-78 hour(neutron deficient)										69
						STATUS: Johnson, Nuc.Phys.A107,21, studies inverse react.										68
165		$_{40}Zr^{90}$	Total		I	.5-	10				10		GE	Snyder	DRDT	67
													BET	Bayard	DRDT	67
						REQ COM: Accuracy 10 per in parameters										67
						Design of pressurized water reactors										67
						Individual and average resonance parameters wanted										67
						STATUS: Bartolome+ Nuc.Sci.Eng.37,137 has res. params.										69
						from capture data										69
166		$_{40}Zr^{90}$	Elastic	$\sigma(\theta_n)$	I	.5-	to	10			10		BET	Bayard	DRDT	67
						REQ COM: Scattering from the separated isotopes 90-91										67
						92-94 and 96 is desired to check the										67
						shell effect on the optical potential and										67
						derive useful parameters										67
						STATUS: ANL Smith is working on it.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
167	$_{40}Zr^{90}$	Inelastic	$\sigma(\theta_{n'})$	II			14				15	KAPL	Ehrlich	DRDT	69
					REQ COM: Resolve discrete levels up to 3 MeV excitation.										69
					To compute direct inelastic scattering and										69
					investigate isotopic spin-dependent coupling										69
					between ground and excited states.										69
					STATUS: ANL Smith is working on it.										70
168	$_{40}Zr^{90}$	Emission	$\sigma(\theta_{n'},E_{n'})$	I			1-15			10		BET	Bayard	DRDT	67
					REQ COM: Individual excitation cross sections										67
					desired to 20 per accuracy										67
					Needed for the design of pressurized										67
					water reactors with Zr										67
					Wanted from threshold up										67
					STATUS: ANL Smith is working on it.										70
169	$_{40}Zr^{90}$	$\sigma_{n,\bar{g}}$		I	.5	10				10		GE	Snyder	DRDT	67
												BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average resonance parameters wanted										67
					Is gamma-gamma same for S and P waves										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
170	$_{40}Zr^{90}$	Res Int	Capture	II	.5-	up					20	KAPL	Ehrlich	DRDT	69
					REQ COM: Needed for evaluating meas. resonance parameters.										69
					STATUS: No active work										69
171	$_{40}Zr^{90}$	$\bar{G}_n$ and $\bar{G}_g$		II	*	-15				10		KAPL	Ehrlich	DRDT	69
					REQ COM: Needed to verify existing measurements.										69
					(*): energy to include lowest resolved resonance.										69
					Discrepancies still exist. incl. recent RPI work.										70
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
172	$_{40}Zr^{90}$	J,π		II			1,8-5					KAPL	Ehrlich	DRDT	69
					REQ COM: J,π of all Zr^{90} levels <5 MeV desired										69
					for calculating compound elastic and inelastic										69
					and n,p.										69
					STATUS: None										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
173	$_{40}Zr^{91}$	Total		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Attention to resonances at 180,291,675,1518eV										67
					Individual and average parameters of interest										67
					Gamma-n results disagree by 10 per										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137 has res. params.										69
					GGA Lopez, NBS-299, has res. param.										69
174	$_{40}Zr^{91}$	Elastic	$\sigma(\theta_n)$	I	.5-	to	10			10		BET	Bayard	DRDT	67
					REQ COM: Scattering from the separated isotopes 90-91										67
					92-94 and 96 is desired to check the										67
					shell effect on the optical potential										67
					and derive useful parameters										67
					STATUS: ANL Smith is working on it.										70
175	$_{40}Zr^{91}$	Inelastic	$\sigma(\theta_{n'})$	II			14				15	KAPL	Ehrlich	DRDT	69
					REQ COM: Resolve discrete levels up to 2 MeV excitation.										69
					To compute direct inelastic scattering and										69
					investigate isotopic spin-dependent coupling										69
					between ground and excited states.										69
					STATUS: ANL Smith is working on it.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
176	$_{40}Zr^{91}$	$\sigma_{n,\gamma}$		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Attention to resonances at 180,291,675,1518eV										67
					Individual and average resonances of interest										67
					Is gamma-gamma same for S and P waves										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
					GGA Lopez, NBS-299, to 4 keV										69
177	$_{40}Zr^{91}$	$\sigma_{n,\gamma}$		III			14				30	KAPL	Ehrlich	DRDT	69
					REQ COM: No data available.										69
					STATUS: None.										69
178	$_{40}Zr^{91}$	Res Int	Capture	I	.5	up			5			KAPL	Ehrlich	DRDT	69
					REQ COM: Verification of existing data required.										69
					STATUS: No active work										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
179	$_{40}Zr^{91}$	Res Par		I	.5-	2				10		BET	Bayard	DRDT	69
					REQ COM: Accuracy 10 per in Resonance parameters										67
					$\bar{\Gamma}_g$ and $\bar{\Gamma}_n$ wanted for resonances at 180,										69
					291,675 and 1518eV										67
					Needed for pressurized water reactors to										67
					remove discrepancies in measured values.										67
					STATUS: GGA Lopez, NBS-Spec. Pub. 299.										69
					Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
180	$_{40}Zr^{91}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_g$		I	*	-10				10		KAPL	Ehrlich	DRDT	69
					REQ COM: Needed to resolve serious discrepencies <4 keV										69
					and extend resolved resonance data to 10 keV.										69
					(*): energy to include lowest resolved resonance.										69
					Discrepancies still exist, incl. RPI, GGA work.										70
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
					GGA Lopez, NBS Spec. Pub. 299.										69
181	$_{40}Zr^{91}$	J,π		II			1-4					KAPL	Ehrlich	DRDT	69
					REQ COM: J,π of all Zr^{91} levels <4 MeV desired										69
					for calculating compound elastic and inelastic.										69
					STATUS: None										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
182	$_{40}Zr^{92}$	Total		I	.5	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average resonances needed										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37.137. has res. par.										69
183	$_{40}Zr^{92}$	Elastic	$\sigma(\theta_n)$	I	.5	to	10			10		BET	Bayard	DRDT	67
					REQ COM: Scattering from the separated isotopes										67
					90-91, 92-94 and 96 is desired to										67
					check the shell effect on optical										67
					potential and derive useful parameters										67
					STATUS: ANL Smith is working on it.										70
184	$_{40}Zr^{92}$	Inelastic	$\sigma(\theta_{n'})$	II			14				15	KAPL	Ehrlich	DRDT	69
					REQ COM: Resolve discrete levels up to 2 MeV excitation.										69
					To compute direct inelastic scattering and										69
					investigate isotopic spin-dependent coupling										69
					between ground and excited states.										69
					STATUS: ANL Smith is working on it.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
185	$_{40}Zr^{92}$	$\sigma_{n,\gamma}$		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average resonances needed										67
					Is capture width the same for s and p waves.										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
186	$_{40}Zr^{92}$	Res Int	Capture	II	.5-	up					20	KAPL	Ehrlich	DRDT	69
					REQ COM: Needed for evaluating meas. resonance parameters.										69
					STATUS: No active work										69
187	$_{40}Zr^{92}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_\gamma$		I	*-	15				10		KAPL	Ehrlich	DRDT	69
					REQ COM: (*): energy to include lowest resolved resonance.										69
					Needed for verification of existing data, incl.										70
					recent RPI results.										70
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
188	$_{40}Zr^{92}$	J,π		II			1-4					KAPL	Ehrlich	DRDT	69
					REQ COM: J,π of all Zr^{92} levels <4 MeV desired										69
					for calculating compound elastic and inelastic.										69
					STATUS: None										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
189	$_{40}Zr^{94}$	Total		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average resonances wanted										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
190	$_{40}Zr^{94}$	Elastic	$\sigma(\theta_n)$	I	.5	to	10			10		BET	Bayard	DRDT	67
					REQ COM: Scattering from the separated isotopes 90-91										67
					92-94 and 96 is desired to check the										67
					shell effect on the optical potential										67
					and derive useful parameters.										67
					STATUS: ANL Smith is working on it.										70
191	$_{40}Zr^{94}$	Inelastic	$\sigma(\theta_{n'})$	II			14			15		KAPL	Ehrlich	DRDT	67
					REQ COM: Resolve discrete levels up to 2 MeV excitation.										69
					To compute direct inelastic scattering and										69
					investigate isotopic spin-dependent coupling										69
					between ground and excited states.										69
					STATUS: ANL Smith is working on it.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
192	$_{40}Zr^{94}$	$\sigma_{n,\gamma}$		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average resonances wanted										67
					Is capture width the same for s and p waves.										67
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
193	$_{40}Zr^{94}$	Res Int	Capture	II	.5-	up					20	KAPL	Ehrlich	DRDT	69
					REQ COM: Needed for evaluating meas. resonance parameters.										69
					STATUS: No active work										69
194	$_{40}Zr^{94}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_\gamma$		II	*	-15				10		KAPL	Ehrlich	DRDT	69
					REQ COM: (*): energy to include lowest resolved resonance.										69
					Needed for verification of existing data, incl.										70
					recent RPI results.										70
					STATUS: Bartolome+ Nuc.Sci.Eng.37,137, has res. par.										69
195	$_{40}Zr^{94}$	J,π		II		950-	4					KAPL	Ehrlich	DRDT	69
					REQ COM: J,π of all Zr^{94} levels <4 MeV desired										69
					for calculating compound elastic and inelastic.										69
					STATUS: None										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
196	* $_{40}Zr^{95}$	$\sigma_{n,g}$		II	.5-	10				10-	20	BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy: 10 percent in σ_{ABS}, if > 100 barns;										69
					20 percent in σ_{ABS}, if from 10-100 barns										69
					Above 1 eV:										69
					10 percent in RI, if > 1000 barns;										69
					20 percent in RI, if from 100-1000 barns										69
					The decay is to an important fission product.										69
					*Radioactive target, 65 day.										69
					STATUS: INC Scoville plans integral measurements.										70
197	$_{40}Zr^{96}$	Total		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average parameters wanted										67
					STATUS: ORNL Good has data, 2.5-70 keV, PR165 1329.										67

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
198	$_{40}Zr^{96}$	$\sigma_{n,\bar{\gamma}}$		I	.5-	10				10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in parameters										67
					Design of pressurized water reactors										67
					Individual and average parameters wanted										67
					Is capture width the same for s and p waves.										67
					STATUS: None										67
199	$_{40}Zr^{96}$	Elastic	$\sigma(\theta_n)$	I	.5-	to	10			10		BET	Bayard	DRDT	67
					REQ COM: Scattering from the separated isotopes 90-91										67
					92-94 and 96 is desired to check the										67
					shell effect on optical potential and										67
					derive useful parameters										67
					STATUS: ANL Smith is working on it.										70
200	$_{40}Zr^{96}$	$\sigma_{n,\bar{\gamma}}$		II	Th				5			KAPL	Ehrlich	DRDT	69
					REQ COM: Need to resolve discrepancies in σ's and res. par.										69
					Preferably meas. with natural target or other										69
					isotopes. Note: Zr^{97} half-life is 16.8 hours.										69
					STATUS: None										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
201	$_{40}Zr^{96}$	Res Int	Capture	I	.5-	up					15	KAPL	Ehrlich	DRDT	69
					REQ COM: Needed for evaluating meas. resonance parameters.										69
					STATUS: None										69
202	$_{40}Zr^{96}$	$\bar{G}_n$ and $\bar{G}_g$		I	300					10		BET	Bayard	DRDT	67
				I	300					10		KAPL	Ehrlich	DRDT	69
					REQ COM: Accuracy 10per in $\bar{G}_n$ and $\bar{G}_g$ for 300-eV resonance										67
					Needed to verify previous measurements and										67
					remove descrepancies										67
					STATUS: Morgenstern+ Nuc.Phys.A.123,561 gives res. par.										69
203	$_{41}Nb$	Elastic	$\sigma(\theta_n)$	II			1-5			10		BET	Bayard	DRDT	67
					REQ COM: Error is in ave. of (1-Cos)										67
					STATUS: AWRE Porter has data 1.5-5MeV, ΔE-0.5MeV.										70
204	$_{41}Nb$	$\sigma_{n,n'}$	Isom State	I		Ths-	15				20	LRL	Howerton	DMA	69
					REQ COM: Needed is inelastic cross section to 13.6y isomer										69
					of Nb^{93}.										69
					STATUS: TNC Williams has (n,n'g) to 5.5MeV, NCSAC-31.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
205	$_{41}$Nb	Emission	$\sigma(\theta_{n'},E_{n'})$	II			1-10			10		BET	Bayard	DRDT	67
				I			1.5-15			10		LASL	Streetman	DSNS	69
					REQ COM: Low-energy neutrons must be included.										69
					Absolute spectra at 30° and 75° may suffice.										69
					Time scale requiring associated γ-production data										69
					not yet established.										69
					Incident and exit energy resol. 10 per										67
					STATUS: AWRE Porter has data 1.5-5MeV, ΔE=0.5MeV.										70
206	$_{41}$Nb	$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Measurements with less accuracy not helpful.										70
					STATUS: None.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
207	$_{41}$Nb	$\sigma_{n,\gamma}$		II		1-100				10		AI	Alter	DRDT	62
				II		1-100				10		ANL	Avery	DRDT	62
				II		1-100				10		BET	Bayard	DRDT	62
				II		1-100				10		GRT	Preskitt	DRDT	62
				II	Cold-1				5			BET	Bayard	DRDT	69
				II	1-	10			5			BET	Bayard	DRDT	69

REQ COM: Look for non-1/v below 1 eV. 69
For fast reactor calculations, to resolve 69
discrepancies in thermionic reactor worths. 69
Accuracy: 5 per in calculated dilute and self- 67
shielded resonance integral 67

STATUS: LASL Harlow+ NCSAC-33, 34eV-10keV from Physics-8. 70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
208	$_{41}$Nb	Cap Spect	$P(E_\gamma)$	I	Th					10		SNPO	Fleishman	DSNS	69

REQ COM: For shielding calculations. 69
Both line and continuum spectra are required. 69
Bartholomew's spectrum does not give correct B.E. 69

STATUS: MIT Rasmussen has complete GeLi spectrum. 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
209	$_{41}Nb$	Tot γ Prod	$\sigma(E_\gamma)$	II	30-	75				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_\gamma)$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: TNC Nellis, 0.6-1.6MeV, WASH-1136.										69
					LASL Drake, Nuc.Sci.Eng. 40,294, 4-7.5MeV.										70
210	* $_{41}Nb^{91}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-neutron deficient.										69
					STATUS: none.										69
211	* $_{41}Nb^{91}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-neutron deficient.										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
212	* $_{41}Nb^{91}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-neutron deficient										69
					STATUS: none.										69
213	* $_{41}Nb^{92}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-10^7 year. Neutron deficient										69
					STATUS: none.										69
214	* $_{41}Nb^{92}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-10^7 year (neutron deficient)										69
					STATUS: none.										69
215	* $_{41}Nb^{92}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-10^7 year(neutron deficient)										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
216	* $_{41}Nb^{93}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-required is the cross										69
					section for capture by the 13.6 year Nb^{93} isomer										69
					STATUS: none.										69
217	* $_{41}Nb^{94}$	$\sigma_{n,\bar{\gamma}}$		I	.001-	10				10		BET	Bayard	DRDT	67
					REQ COM: For thermal reactor calculations										67
					*Radioactive target (2×10^4 year)										69
					Want res. int to 10 per.										67
					STATUS: INC Schuman reports RI of 122±10b WASH-1136.										70
					INC Simpson has total cross section to 100eV.										70
218	* $_{41}Nb^{95}$	$\sigma_{n,\bar{\gamma}}$		I	Th						20	KAPL	Ehrlich	DRDT	67
					REQ COM: Thermal average will be useful										67
					Want 20 per accuracy if absorption										67
					cross section is 10-100 barns										67
					10 per if greater										67
					Decays to an important fission product poison.										67
					*Radioactive target - 35d.										69
					STATUS: Halperin, ORNL-3488, finds ≤7b, too low to bother.										63

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
219	* $_{41}Nb^{95}$	Res Int	Capture	I	.5-	up				10-	20	BET	Bayard	DRDT	69
					REQ COM: Desire res. integral to 20percent if 100-1000b,										69
					10 percent if >1000 barns.										69
					*Radioactive target - 35d.										69
					STATUS: INC Scoville plans integral measurements.										70
220	$_{42}Mo$	Inelastic	$\sigma(E_{n'})$	III			1-3				20	ANL	Avery	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
					REQ COM: ΔE_o and $\Delta E_{n'}$= 20 percent.										62
					Total integral over 4π required.										62
					Spectra at several angles if significantly										62
					anisotropic.										62
					STATUS: AWRE Porter has data 1.5-5MeV, ΔE=0.5MeV.										70
					ANL Lambropoulos NCASC-33, even isotopes to 1.6MeV										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
221	42 Mo	Emission	$\sigma(\theta_{n'},E_{n'})$	II			1.5-15			10		LASL	Streetman	DSNS	69
					REQ COM: Low-energy neutrons must be included.										69
					Absolute spectra at 30° and 75° may suffice.										69
					Time scale requiring associated γ-production data										69
					not yet established.										69
					STATUS: AWRE Porter has data 1.5-5MeV, ΔE=0.5MeV.										70
222	42 Mo	$\sigma_{n,\gamma}$			1-	100				10		ACRP	Hannum	DRDT	69
					REQ COM: To resolve discrepancy in thermionic reactor worth										69
					STATUS: Fricke+ Helsinki conf. paper CN-26/43, 1keV-1MeV.										70
					Probably filled. Weigmann and Kompe(KFK-635) in										70
					good agreement over overlapping range 10-25keV.										70
					H1a Shwe, Phys.Rev.179,1148, res. par. to 1.5keV.										69
					ORNL Macklin+ plan ORELA measurements NCSAC-33.										70
223	42 Mo	Cap Spect	$P(E_{\gamma})$	I	Th					10		SNPO	Fleishman	DSNS	69
					REQ COM: None which satisfy criteria.										69
					Both line and continuum spectra are required.										69
					Bartholomew's spectrum does not give correct B.E.										69
					STATUS: Probably filled. See Nuclear Data 3,600(1967).										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
224	$_{42}Mo$	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	I	10-	9				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_{\bar{g}})$ required for all $E_{\bar{g}}$ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_{\bar{g}})$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: BNL Chrien+ NCSAC-33, spectra in MO^{98} resonances.										70
225	* $_{42}Mo^{99}$	$\sigma_{n,\bar{g}}$		II	.001-	1					20	BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 20 per if absorption x-sec in										67
					range of 10-100 barns.										67
					10 per if larger										67
					Above 1eV want 20 per in RI if in range										67
					100-1000 Barns										67
					10 per if larger										67
					Decays to important fission product										67
					*Radioactive target - 67h.										67
					STATUS: None										67

REQ #	TARGET *	Z	A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
226	*	44	Ru 103	$\sigma_{n,\bar{\gamma}}$		II	.001-	1					20	BET	Bayard	DRDT	67
														KAPL	Ehrlich	DRDT	67
							REQ COM: 20 per accuracy desired if cross section in										67
							range 10-100 Barns										67
							10 per if larger										67
							Above 1eV want 20 per in RI if in range										67
							100-1000 Barns										67
							10 per if larger										67
							Wanted for fission product poison calculations										67
							in thermal reactors										67
							*Radioactive target - 40d.										67
							STATUS: None										70
227		45	Rh	$\sigma_{n,\bar{\gamma}}$		II	.5-	1				10		KAPL	Ehrlich	DRDT	67
						II	.001-1					10		GE	Snyder	DRDT	67
							REQ COM: Accuracy 10 per in RI KAPL.										67
							Energies above 1eV of interest KAPL.										67
							Want to calculate fission product poisons										67
							STATUS: Fricke+ Helsinki conf. paper CN-26/43, 1keV-1MeV.										70
							GRT Carlson has new data above 1eV.										70
							LASL Glass+ have data > 30eV, WASH-1136.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
228	* $_{45}Rh^{105}$	$\sigma_{n,\gamma}$		II	.001-1					10		GE	Snyder	DRDT	67
					REQ COM: Fission product										67
					*Radioactive target - 36h.										69
					STATUS: Glendenin+, Nuc.Sci.Eng.29,147 report 19±1.9kb.										67
229	* $_{46}Pd^{107}$	$\sigma_{n,\gamma}$		II	.001-	10				10		BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons										67
					Above 1eV want RI to 10 per										67
					*Radioactive target - 7×10^6 y.										69
					STATUS: None										67
230	$_{47}Ag^{109}$	$\sigma_{n,\gamma}$		II	.001-1					10		GE	Snyder	DRDT	67
					REQ COM: Fission product poison										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
231	* $_{52}Te^{127}$	$\sigma_{n,\bar{\gamma}}$		II	.001-1						20	KAPL	Ehrlich	DRDT	67
					REQ COM: 0.025eV value or thermal average useful										67
					Request pertains to the metastable state										67
					Needed for calculation of fission product poisons										67
					*Radioactive target - 105d isomer										69
					STATUS: None										69
232	* $_{52}Te^{132}$	$\sigma_{n,\bar{\gamma}}$		II	.001-1						20	BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per if X-sec larger than 2500 barns										67
					For calculation of fission product poison										67
					Above 1eV RI wanted to 20 per if in range										67
					2500-25000 barns										67
					10 per if larger										67
					*Radioactive target - 78h.										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
233	* ${}_{53}I^{133}$	$\sigma_{n,\gamma}$		II	.001-	1					20	BET	Bayard	DRDT	67

REQ COM: Accuracy 10 per if X-sec larger than 9000 barns 67
Wanted for fission product poison calculations 67
Above 1eV RI wanted to 20 per if in range 67
9000-90000 barns 67
10 per if larger 67
*Radioactive target - 21h. 67

STATUS: None 67

REQ #	TARGET * Z A	QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
234	${}_{54}Xe^{131}$	$\sigma_{n,\gamma}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67

REQ COM: Fission product 67
Above 1eV want RI to 10 per 67

STATUS: Ribon, 66 Paris conf., 119, to 500eV. 67

REQ #	TARGET * Z A	QUANTITY	VARIABLE	PRI OR.	eV	keV	MeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
235	* ${}_{54}Xe^{133}$	$\sigma_{n,\gamma}$		II	Th					10		GE	Snyder	DRDT	67

REQ COM: Thermal average or 0.025eV value wanted 67
Wanted for fission product poison calculations 67
*Radioactive target - 5.3d. 67

STATUS: No work in progress 67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
236	* $_{54}Xe^{135}$	$\sigma_{n,\gamma}$		II	.001-2				5			GGA	Nordheim	DRDT	67
					REQ COM: For design of thorium cycle reactors.										67
					*Radioactive target - 9.3h.										67
					STATUS: None										67
237	* $_{54}Xe^{135}$	Tot γ Prod	$\sigma(E_{\gamma})$	II	Th					10-	20	KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 10-20 per in spectrum										67
					Spectral distribution of γrays is wanted for										67
					energies 1-8 MeV.										67
					Incident energy of neutron should be thermal										67
					Needed for γ shielding and heating calculations										67
					γ resolution 10-20 per										67
					*Radioactive target - 9.2h.										67
					STATUS: None										67
238	$_{55}Cs$	$\sigma_{n,\gamma}$		I	.001-1					10		GE	Snyder	DRDT	67
												BET	Bayard	DRDT	67
					REQ COM: Thermal average, 0.025eV, and interval										67
					0-1eV useful										67
					For fission product poison product calculation										67
					STATUS: None										67

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
239	$_{55}Cs$	$\sigma_{n,\gamma}$		I	.5-	1				10		GE	Snyder	DRDT	67
												BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in RI										67
					Energies above 1eV of interest										67
					For fission product poison calculations										67
					STATUS: None										67
240	$_{60}Nd^{143}$	$\sigma_{n,\gamma}$		I	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Accuracy 10 per in RI										67
					Energies above 1eV of interest										67
					Needed for fission product poison calculations										67
					Energy 0-1eV, 10 per in cross section										67
					STATUS: Walker, AECL-3037 recommends 325b th., 60b RI.										69
					BCMN Rohr+, Knoxville conf. resolved res. region.										71

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
241	$_{60}Nd^{145}$	$\sigma_{n,\gamma}$		I	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 10 per in RI										67
					Wanted for fission product calculations										67
					Energies above 1eV of interest										67
					Energy 0-1eV, 10 per in cross section										67
					STATUS: Walker, AECL-3037 recommends 40b th., 250b RI,										69
					BOMN Rohr+, Knoxville conf, resolved res. region.										71
242	$_{60}Nd^{146}$	$\sigma_{n,\gamma}$		II	Th-	10			5			BET	Bayard	DRDT	67
					REQ COM: For production of Pm-147										67
					In interval 0-1eV X-sec wanted to 5 per										67
					Above 1eV RI wanted to 5 per										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
243	* $_{60}Nd^{147}$	$\sigma_{n,\bar{\gamma}}$		I	.001-	1			5-	to	20	KAPL	Ehrlich	DRDT	67
												BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67

REQ COM: Thermal average or 0.025eV value wanted 67
Accuracy 20 per if absorption X-sec in range 67
10-100 barns 67
10 per if in range 100-1000 barns 67
5 per if larger 67
Above 1eV want RI to 20 per if in range 67
100-1000 barns 67
10 per if in range 1000-10000 barns 67
5 per if larger 67
Decays to important fission product 67
*Radioactive target - 11.d. 67

STATUS: None 67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
244	* $_{61}Pm^{147}$	$\sigma_{n,\gamma}$		I	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Needed for calculation of fission poison										67
					Want interval 0-1eV to 10 per										67
					Above 1eV to 10 per in RI										67
					Want total and n,γ for formation of										67
					Pm-148 and Pm-148M										67
					*Radioactive target - 2.6y										67
					STATUS: KAPL-RPI Eiland, WASH 1079, has res. param.										69
					INC Codding, WASH 1124, has res. param.										69
					LASL Beery has data >30eV.										69
					Possibly satisfied, see Walker, AECL-3037.										69
					HAR Cabell, AERE-R6384.										70
245	* $_{61}Pm^{148}$	$\sigma_{n,\gamma}$		I	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Calculation of fission product poisons										67
					Cross section is wanted for the 41D isomer										67
					*Radioactive target - 41d.										67
					< 1 eV 10 percent in σ; > 10 eV, 10 percent in RI										67
					STATUS: Walker, AECL-3037 recommends 24kb th.										69
					RPI Kirouac, WASH-1127, has data, res. par.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
246	* $_{61}Pm^{148}$	$\sigma_{n,\gamma}$		I	.001-1					10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Cross Section for 5.4D isotope										67
					Value at 0.025 or thermal wanted										67
					Interval .001-1eV of interest										67
					For fission product poison calculations										67
					Is X-sec 1/V, above 1 eV										67
					*Radioactive target - 5.4d.										67
					STATUS: None										67
247	* $_{61}Pm^{149}$	$\sigma_{n,\gamma}$		I	.001-	1					20	BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: 0.025eV value or thermal average wanted										67
					For 0-1eV want 20 per if X-sec in range										67
					10-1000 barns										67
					10 per if larger										67
					Above 1eV want RI to 20 per if in										67
					range 1000-10000 barns										67
					10 per if larger										67
					*Radioactive target - 53h.										67
					STATUS: Mowatt+, NBS-299,1291 reports 1000b.										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
248	* $_{61}Pm^{151}$	$\sigma_{n,\bar{\gamma}}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67

REQ COM: Needed for calculation of fission product poisons — 67
0.025eV or thermal average wanted — 67
Interval 0-1eV of interest — 67
Above 1eV want RI to 10 per — 67
Radioactive target - 28h. — 67

STATUS: Mowatt+, NBS-299,1291 reports <700b. — 68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
249	$_{62}Sm^{147}$	$\sigma_{n,\bar{\gamma}}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67

REQ COM: 0.025eV and thermal average of interest — 67
Interval .001-1eV of interest — 67
For calculation of fission product poisons — 67
Above 1eV want RI to 10 per — 67

STATUS: Walker, AECL-3037 recommends 55b th. 600b RI. — 69
KAPL Eiland+, Knoxville conf., strength funct. — 71

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
250	$_{62}Sm^{150}$	$\sigma_{n,\gamma}$		I	.001-	1		2-	5			BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: For calculation of fission product poisons										67
					Above 1eV want RI to 2-5 per										67
					STATUS: Walker, AECL-3037 recommends 100b th, 240b RI,										69
					KAPL Eiland+, Knoxville conf., strength funct.										71
251	* $_{62}Sm^{151}$	$\sigma_{n,\gamma}$		I	.001-	1			5			BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Desired energy resolution 5 per										67
					Wanted for calculation of fission product poisons										67
					Energies above 2eV of interest										67
					Want RI to 10 per										67
					*Radioactive target = 90y.										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
252	* $_{62}Sm^{151}$	Total		I	.001-	1			5			BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Need RI to 10 per, σ_T to 10 per below 2eV										67
					Wanted for calculation of fission product poisons										67
					Energies above 2eV of interest										67
					*Radioactive target - 90y.										67
					STATUS: None										67
253	$_{62}Sm^{152}$	$\sigma_{n,\gamma}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Fission product poison										67
					Above 1eV want RI to 10 per										67
					Below 1eV, want σ to 10 per										67
					STATUS: Walker, AECL-3037 recommends 206b th, 3000b RI.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG.	YR
254	* $_{62}Sm^{153}$	$\sigma_{n,\bar{\gamma}}$		II	.001-	1					20	BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: For calculation of fission product poison										67
					10 per error if X-sec is above 30000 barns										67
					Above 1eV want RI to 20 per if in range										67
					30-300 barns										67
					10 per if larger										67
					*Radioactive target - 47h.										67
					STATUS: None										67
255	$_{63}Eu$	$\sigma_{n,\bar{\gamma}}$		II	100-	200				10		LASL	Motz	DMA	66
					REQ COM: Capture spectrum also desired to 40 per accuracy.										66
					STATUS: LRL Czirr reports data 0.1-15keV WASH-1124.										68
256	$_{63}Eu$	Tot $\bar{\gamma}$ Prod	$\sigma(E_{\bar{\gamma}})$	III		1-	15				*	LASL	Motz	DMA	66
					REQ COM: (*): An upper limit on $\sigma(E_{\bar{\gamma}})$ spectrum as a										66
					function of neutron energy will suffice.										66
					STATUS: none.										66

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
257	* $_{63}Eu^{148}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Desire res. integral to 20 percent of 100-1000 b;										69
					* Radioactive target-54 day(neutron deficient)										69
					STATUS: none.										69
258	* $_{63}Eu^{148}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-54 day(neutron deficient)										69
					STATUS: none.										69
259	* $_{63}Eu^{149}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-97day(neutron deficient).										70
					STATUS: none.										69
260	* $_{63}Eu^{149}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-97day(neutron deficient).										70
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
261	* $_{63}Eu^{150}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-35 year(neutron deficient).										70
					STATUS: none.										69
262	* $_{63}Eu^{150}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-35 year(neutron deficient).										70
					STATUS: none.										69
					**********************************										
263	$_{63}Eu^{151}$	$\sigma_{n,2n}$	Act.	I			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation. Required is the n, 2n										69
					cross section to each isomer of Eu^{150}.										69
					STATUS: LASL Barr obtains 1820mb for activ. 35yr. Eu^{150}.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
264	$_{63}Eu^{151}$	$\sigma_{n,\bar{\gamma}}$		II	.001-	1		2-	5			SRL	Dessauer	DP	67
					REQ COM: Accuracy 2 per near thermal										67
					Accuracy 5 per in resonance region										67
					For calculation of fission product poison										67
					Energies greater than 1eV of interest to										67
					give RI to 10 per.										67
					STATUS: LASL Glass has data above 40eV WASH-1124										69
					LRL Czirr reports data 0.1-15keV WASH-1124.										68
265	$_{63}Eu^{151}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					20	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: LASL Glass has data above 40eV, WASH-1124										69
					LRL Czirr reports data 0.1-15keV WASH-1124.										68
266	* $_{63}Eu^{152}$	$\sigma_{n,\bar{\gamma}}$		I		.1-300					30	LASL	Bell	DMA	70
					REQ COM: Needed for evaluation.										70
					*Radioactive target, 12.4y.										70
					STATUS: LASL Harlow+ WASH-1127, prelim. data to 6keV.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
267	$_{63}Eu^{153}$	$\sigma_{n,\gamma}$		II	.001-	1		2-	5			GE	Snyder	DRDT	67
												SRL	Dessauer	DP	67
					REQ COM: 2 per near thermal										67
					5 percent accuracy in resonance region										67
					For calculation of fission product poison										67
					Energies above 1eV of interest to give										67
					RI to 10 per										67
					STATUS: LASL Glass has data above 40eV WASH-1124										69
268	* $_{63}Eu^{154}$	Total		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Resonance parameters wanted for the										67
					calculation of fission product poisons										67
					RI wanted to 10 per										67
					Region above 1eV of interest										67
					*Radioactive target - 16y.										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
269	* $_{63}Eu^{154}$	$\sigma_{n,\gamma}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Resonance parameters wanted for the calculation										67
					of fission product poisons										67
					RI wanted to 10 per										67
					Interval above 1eV of interest										67
					*Radioactive target - 16y.										67
					STATUS: None										67
270	* $_{63}Eu^{154}$	$\sigma_{n,\gamma}$		I		.1-300					30	LASL	Bell	DMA	70
					REQ COM: Needed for evaluation.										70
					*Radioactive target-16y.										70
					STATUS: None.										70
271	* $_{63}Eu^{155}$	Total		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Res. param. needed to calculate										67
					fission product poisons										67
					Region below 1eV and res. integral to 10 per.										67
					*Radioactive target - 1.8y.										67
					STATUS: None										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
272	* $_{63}Eu^{155}$	$\sigma_{n,\bar{\gamma}}$		II	.001-	1				10		BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Res. param needed to calculate fission product poisons										67
					Resonance integral wanted to 10 per.										67
					*Radioactive target - 1.8y.										67
					STATUS: U. Mich. Carpenter+ are planning thermal and RI.										69
273	$_{64}Gd$	Elastic	$\sigma(\theta_n)$	I			1-10			10		BNL	Chernick	DRDT	67
												GE	Snyder	DRDT	67
					REQ COM: Desired error in (1-Cosθ)										67
					STATUS: ANL Sherwood+ Nuc.Sci.Eng.39,67, to 1.5MeV.										70
274	$_{64}Gd$	Emission	$\sigma(\theta_{n'},E_{n'})$	I			1-10			15		KAPL	Ehrlich	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: For design of thermal reactors having appreciable quantities of Gd.										67
					Incident and exit resolution 15 per										67
					STATUS: ANL Sherwood+ Nuc.Sci.Eng.39,67, to 1.5MeV.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR,	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
275	64 Gd	$\sigma_{n,\gamma}$		II	100-	200				10		LASL	Motz	DMA	66
					REQ COM: Capture spectrum also desired to 40 per accuracy,										66
					STATUS: Fricke+ Helsinki conf, paper CN-26/43, 1keV-1MeV,										70
					Friesenhahn+, Nuc,Phys,A146,337, 3eV-750keV,										70
276	64 Gd	Tot γ Prod	$\sigma(E_\gamma)$	III		1-	15				*	LASL	Motz	DMA	66
					REQ COM: (*): An upper limit on $\sigma(E_\gamma)$ spectrum as a function of neutron energy will suffice,										66
					STATUS: none,										66
277	64 Gd	Res Int	Capture	I	,5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters,										69
					STATUS: None										69
278	64 Gd 154	$\bar{\sigma}_n$ and $\bar{\sigma}_\gamma$		I	*-	2				10		BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements, * energy to include lowest resolved resonance, Want resolved region extended to higher energy,										69
					STATUS: DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV, IFU Vertebny+, UFZ 13,2085 give res, par,										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
279	64 Gd^{155}	$\sigma_{n,\gamma}$		I	.5-	1			5			GE	Snyder	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: Accuracy 5 per in RI										67
					Energies above 1eV of interest										67
					STATUS: GRT Friesenhahn+, res. params. to 200eV WASH-1136.										69
280	64 Gd^{155}	Res Int	Capture	I	.5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters.										69
					STATUS: None										69
281	64 Gd^{155}	$\bar{\delta}_n$ and $\bar{\delta}_\gamma$		I	*-	.5				10		BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements.										69
					* energy to include lowest resolved resonance.										69
					STATUS: GRT Friesenhahn+, res. params. to 200eV WASH-1136.										69
					DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV.										68
					Julien+, Nuc.Phys.A132,129 give res. par.										69
					Mughabghab+, Phys.Rev. 180,1131 gives res. par.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
282	$_{64}Gd^{156}$	$\sigma_{n,\gamma}$		I	.001-	1			5			GE	Snyder	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: In range .001-1eV 5 per accuracy is wanted										67
					Above 1eV want to calculate RI to 5 per										67
					For calculation of burn up in thermal reactors										67
					STATUS: None										67
283	$_{64}Gd^{156}$	Res Int	Capture	I	.5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters.										69
					STATUS: None										69
284	$_{64}Gd^{156}$	$\bar{\sigma}_n$ and $\bar{\sigma}_\gamma$		I	*-	2			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements.										69
					* energy to include lowest resolved resonance.										69
					STATUS: DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV.										68
					Mughabghab+, Phys.Rev. 180,1131 gives res. par.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
285	$_{64}Gd^{157}$	$\sigma_{n,\bar{\gamma}}$		I	.5-	1			5			GE	Snyder	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: To yield 5 per in calculated RI										67
					For calculation of burn up in thermal reactors										67
					Energies above 1eV of interest										67
					STATUS: GRT Friesenhahn+, res. params. to 200eV WASH-1136.										69
286	$_{64}Gd^{157}$	Res Int	Capture	I	.5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters.										69
					STATUS: None										69
287	$_{64}Gd^{157}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_{\gamma}$		I	*-	1				10		BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements.										69
					* energy to include lowest resolved resonance.										69
					STATUS: GRT Friesenhahn+, res. params. to 200eV WASH-1136.										69
					DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV.										68
					Julien+, Nuc.Phys.A132,129 give res. par.										69
					Mughabghab+, Phys.Rev. 180,1131 gives res. par.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
288	$_{64}Gd^{158}$	$\sigma_{n,\gamma}$		I	.001-	1			5			GE	Snyder	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: In range .001-1eV 5 per accuracy is wanted										67
					Above 1 ev want to calculate RI to 5 per.										67
					For calculation of burn up in reactors										67
					STATUS: COL Rahn+ have new data, NCSAC-33.										70
289	$_{64}Gd^{158}$	Res Int	Capture	I	.5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters.										69
					STATUS: None										69
290	$_{64}Gd^{158}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_\gamma$		I	*-	2				10		BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements.										69
					* energy to include lowest resolved resonance.										69
					STATUS: COL Rahn+ have new data, NCSAC-33.										70
					DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV.										68
					Mughabghab+, Phys.Rev. 180,1131 gives res. par.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRIOR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
291	$_{64}Gd^{160}$	Res Int	Capture	I	.5-	up			5			BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: For evaluating resonance parameters.										69
					STATUS: None										69
292	$_{64}Gd^{160}$	$\bar{\Gamma}_n$ and $\bar{\Gamma}_\gamma$		I	*-	2				10		BNL	Chernick	DRDT	69
												GE	Snyder	DRDT	69
					REQ COM: Required to verify existing measurements.										69
					* energy to include lowest resolved resonance.										69
					STATUS: DUBNA Karzhavina+ (See BNL-TR-222) 11-220eV.										68
					Mughabghab+, Phys.Rev. 180,1131 gives res. par.										69
293	$_{66}Dy$	$\sigma_{n,\gamma}$		II	100-	200				10		LASL	Motz	DMA	66
					REQ COM: Capture spectrum also desired to 40 per accuracy.										66
					STATUS: none.										66
294	$_{66}Dy$	Tot γ Prod	$\sigma(E_\gamma)$	III		1-	15				*	LASL	Motz	DMA	66
					REQ COM: (*): An upper limit on $\sigma(E_\gamma)$ spectrum as a										66
					function of neutron energy will suffice.										66
					STATUS: none.										66

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
295	$_{68}Er^{166}$	$\sigma_{n,\bar{g}}$		I	.5-	10			5*			BET	Bayard	DRDT	66
				II	Cold-1					10		BET	Bayard	DRDT	66
					REQ COM: 5* percent refers to resonance integral error.										66
					STATUS: None										66
296	$_{68}Er^{167}$	$\sigma_{n,\bar{g}}$		I	Th-	10			5*			BET	Bayard	DRDT	69
					REQ COM: 5* percent refers to resonance integral error.										69
					STATUS: None										69
297	* $_{69}Tm^{167}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-9.3day(neutron deficient).										70
					STATUS: none.										69
298	* $_{69}Tm^{167}$	$\sigma_{n,\bar{g}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-9.3day(neutron deficient).										70
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
299	* $_{69}Tm^{168}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-93day(neutron deficient).										70
					STATUS: none.										69
300	* $_{69}Tm^{168}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-93day(neutron deficient).										70
					STATUS: none.										69
301	$_{69}Tm$	$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Measurements with less accuracy not helpful.										70
					STATUS: None.										70
302	$_{69}Tm$	$\sigma_{n,\gamma}$		I	Th-	1			5			PNWL	Dawson	DP	67
					REQ COM: For production and burn up of Thulium										67
					STATUS: SACLAY Julien CEA-R-3385 gives										69
					res. param. to 760eV.										69
					COL Rahn+ have new data. NCSAC-33.										70
					SAC Tellier+. Knoxville conf. analysis of σ_T.										71

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
303	* $_{69}Tm^{170}$	$\sigma_{n,\gamma}$		I	Th-	1				10		PNWL	Dawson	DP	67
												SRL	Dessauer	DP	67
					REQ COM: For production and burnup of thulium.										66
					*Radioactive target - 125 day.										69
					STATUS: Stokes, INC, has totals to 1 keV, res.										69
					params. to 100 eV.										69
					RISO sees four lines from neut cap. on Tm^{170}										69
					at thermal, PR 143 857										69
304	* $_{69}Tm^{171}$	$\sigma_{n,\gamma}$		I	Th-	1				10		PNWL	Dawson	DP	67
												SRL	Dessauer	DP	67
					REQ COM: For production and burn up of thulium.										66
					*Radioactive target - 1.9 year.										69
					STATUS: INC Simpson has some res. par. to 60eV.										69
305	* $_{71}Lu^{173}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-1.4 year(neutron deficient)										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
306	* $_{71}Lu^{173}$	$\sigma_{n,\bar{g}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					* Radioactive target-1.4 year(neutron deficient)										69
					STATUS: none.										69
307	* $_{71}Lu^{174}$	$\sigma_{n,2n}$	Act.	II			14			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-isomeric pair. Lu^{174m} 140day/										70
					Lu^{174g} 1200day.										70
					STATUS: none.										69
308	* $_{71}Lu^{174}$	$\sigma_{n,\bar{g}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					*Radioactive target-isomeric pair. Lu^{174m} 140day/										70
					Lu^{174g} 1200day.										70
					STATUS: none.										69
309	$_{71}Lu^{175}$	$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Measurements with less accuracy not helpful.										70
					STATUS: None.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
310	$_{71}Lu^{175}$	$\sigma_{n,\bar{\gamma}}$		I		1.-300					20	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: COL Camarda+ has new data, WASH-1136.										69
311	$_{72}Hf$	Elastic	$\sigma(\theta_n)$	II		10-	10			10		BET	Bayard	DRDT	66
					REQ COM: Accuracy 10 per in avg. (1-cos).										66
					Wanted for thermal reactor design.										66
					Energy resolution 10 percent.										66
					STATUS: ANL Sherwood+ Nuc.Sci.Eng.39,67, to 1.5MeV.										70
312	$_{72}Hf$	Emission	$\sigma(E_{n'})$	II		10-	10			15		BET	Bayard	DRDT	66
					REQ COM: For design of thermal reactors having										66
					appreciable quantities of Hf.										66
					Incident and exit energy resolution 15 per.										66
					STATUS: ANL Sherwood+ Nuc.Sci.Eng.39,67, to 1.5MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
313	72^{Hf}	$\sigma_{n,\gamma}$		II	.001-1			2				BET	Bayard	DRDT	62
				II	.001-1			2				KAPL	Ehrlich	DRDT	62
				II	200-	50					20	BET	Bayard	DRDT	62

REQ COM: Needed for Monte Carlo calculations of burn up 62
in thermal reactors, <1eV, 62
S-wave strength functions are wanted 62
to 20 per at energies > 1ev, 62
For fast reactor calc, incl, burn up, > 200 eV, 62

STATUS: None, 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
314	$72^{Hf^{174}}$	$\sigma_{n,\gamma}$		I	.001-	5				10-	20	KAPL	Ehrlich	DRDT	66

REQ COM: Thermal value wanted to 20 percent, 66
10-100 eV, $\bar{\sigma}_{tot}$, $\bar{\sigma}_{n}$, and $\bar{\sigma}_{\gamma}$ to 10 percent, 66
0,1- 5 keV, $\bar{\sigma}_{tot}$, $\bar{\sigma}_{n}$, and $\bar{\sigma}_{\gamma}$ to 20 percent, 66
Needed for Monte Carlo burn up calculations, 66
Need average p-wave capture width to 20 per, 66

STATUS: None, 70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
315	$_{72}Hf^{176}$	$\sigma_{n,\bar{\gamma}}$		I	.001-	5				10-	40	BET	Bayard	DRDT	62
												KAPL	Ehrlich	DRDT	62
					REQ COM: Detailed accuracies as stated below:										66
					Thermal value wanted to 20 percent.										66
					Less than 1 eV to 40 percent.										66
					10-100 eV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\bar{\gamma}}$ to 10 percent.										66
					0.1- 5 keV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\bar{\gamma}}$ to 20 percent.										66
					P-wave $\bar{\Gamma}_{\bar{\gamma}}$ avg. to 20 percent.										66
					S-wave strength function to 40 percent.										66
					Needed for Monte Carlo burn up calculations.										66
					STATUS: RPI, Kirouac et al, data to 100 eV, WASH-1127.										69
316	$_{72}Hf^{177}$	$\sigma_{n,\bar{\gamma}}$		I	.001-	5			4-	to	20	BET	Bayard	DRDT	62
												KAPL	Ehrlich	DRDT	62
					REQ COM: Detailed accuracies as stated below:										66
					Less than 1 eV to 4 percent.										66
					10-100 eV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\bar{\gamma}}$ to 10 percent.										66
					0.1- 5 keV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\bar{\gamma}}$ to 20 percent.										66
					5.89, 6.57, and 8.87 eV res. widths to 5 per.										66
					1.099 and 2.385 eV res. widths to 3 percent.										66
					S-wave strength function to 20 percent.										66
					Needed for Monte Carlo burn up calculations.										66
					Need average p-wave capture width to 20 per.										66
					STATUS: RPI, Kirouac et al, data to 100 eV, WASH-1127.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
317	$_{72}Hf^{178}$	$\sigma_{n,\gamma}$		I	.001-	5		3-	-	to	20	BET	Bayard	DRDT	62
												KAPL	Ehrlich	DRDT	62

REQ COM: Detailed accuracies as stated below: 66
Less than 1 eV to 5 percent. 66
10-100 eV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\gamma}$ to 10 percent. 66
0.1- 5 keV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\gamma}$ to 20 percent. 66
P-wave $\bar{\Gamma}_{\gamma}$ avg. to 20 percent. 66
7.78 - eV res. width to 3 percent. 66
S-wave strength function to 20 percent. 66
Needed for Monte Carlo burn up calculations. 66

STATUS: RPI, Kirouac et al, data to 100 eV, WASH-1127. 69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
318	$_{72}Hf^{179}$	$\sigma_{n,\gamma}$		I	.001-	5			5-	to	20	BET	Bayard	DRDT	62
												KAPL	Ehrlich	DRDT	62

REQ COM: Detailed accuracies as stated below: 66
Less than 1 eV to 5 percent. 66
10-100 eV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\gamma}$ to 10 percent. 66
0.1- 5 keV, $\bar{\Gamma}_{tot}$, $\bar{\Gamma}_n$, and $\bar{\Gamma}_{\gamma}$ to 20 percent. 66
P-wave $\bar{\Gamma}_{\gamma}$ wanted to 20 percent. 66
5.68 - eV res. widths to 5 per. 66
S-wave strength function to 20 percent. 66
Needed for Monte Carlo burn up calculations. 66

STATUS: RPI, Kirouac et al, data to 100 eV, WASH-1127. 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
319	$_{72}Hf^{180}$	$\sigma_{n,\bar{\gamma}}$		I	.001-	5			4-	to	20	BET	Bayard	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Detailed accuracies as stated below:										66
					Less than 1 eV to 4 percent.										66
					10-100 eV, $\bar{\delta}_{tot}$, $\bar{\delta}_{n}$, and $\bar{\delta}_{\gamma}$ to 10 percent.										66
					0.1- 5 keV, $\bar{\delta}_{tot}$, $\bar{\delta}_{n}$, and $\bar{\delta}_{\gamma}$ to 20 percent.										66
					P-wave $\bar{\delta}_{\gamma}$ wanted to 20 percent.										66
					S-wave strength function to 20 percent.										66
					Needed for Monte Carlo burn up calculations.										66
					STATUS: RPI, Kirouac et al, data to 100 eV, WASH-1127.										69
320	$_{73}Ta$	Emission	$\sigma(\theta_{n'},E_{n'})$	III			1.5-15			10		LASL	Streetman	DSNS	69
					REQ COM: Low-energy neutrons must be included.										69
					Absolute spectra at 30° and 75° may suffice.										69
					Time scale requiring associated $\bar{\gamma}$-production data										69
					not yet established.										69
					STATUS: None which satisfy criteria.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
321	$_{73}Ta$	$\sigma_{n,\gamma}$		I		1-	10		5-	10		AI	Alter	DRDT	69
				II	1-	500			5-	10		KAPL	Ehrlich	DRDT	69
				II	1-	500			5-	10		LMFB	Hemmig-AEC	DRDT	69
					REQ COM: ~1 eV- 1 keV, accuracy 10 percent, 20 useful.										69
					1- 150 keV, accuracy 5 percent, 10 useful,										69
					150-500 keV, accuracy 10 percent, 20 useful,										69
					For fast breeder control and burnup calculation.										69
					STATUS: Fricke+ Helsinki conf, paper CN-26/43, 1keV-1MeV,										70
					Kompe, Nuc.Phys.A133,513, 10-170keV rel. to Au.										69
					HAR Riehs+, in progress below 100eV,										70
					RPI Block+, Knoxville conf, transm., self indic.										71
322	$_{73}Ta$	Tot γ Prod	$\sigma(E_\gamma)$	I	4-	1,4				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_\gamma)$ required for all E_γ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_\gamma)$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2,5MeV, 10 percent; >2,5MeV, 250keV,										69
					STATUS: ANL Bollinger is doing resonance averaged spectra.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
323	^{74}W	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			4-14			10		AFWL	Schaefer	DASA	69
				II			4-14			10		GDFW	Western	DASA	66
				III			1.5-15			10		LASL	Streetman	DSNS	69
				II			2-15			10		NEL	Eccleshall	DASA	69
				I			4-16		5			ORNL	Clifford	DRDT	66

REQ COM: $\Delta\theta = 10^\circ$; spectra at a few angles <u>may</u> suffice. 69

ΔE (Inc. and Exit) = 500 keV; 500-keV increments 69

or as required by structure. DASA, DSNS 69

ΔE (Inc.) $\leq$ 5 per; $\Delta E_{n'}$ < 500 keV. DRDT 69

Low-energy neutrons must be included. 69

Absolute σ's for shielding required. 69

Time scale requiring associated gamma production 69

data not yet established. DSNS 69

STATUS: None which satisfy the above criteria. 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
324	74 W	Tot $\bar{g}$ Prod	$\sigma(E_{\bar{g}})$	I	2-	2.5				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
				II			1-14			15*		NEL	Eccleshall	DASA	70
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_{\bar{g}})$ required for all $E_{\bar{g}}$ > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_{\bar{g}})$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: TNC Nellis 0.3-11MeV, WASH-1136.										70
					LASL Drake Nuc.Sci.Eng.40,294. 4-7.5MeV.										70
					ANL Bollinger is doing resonance averaged spectra.										70
					GRT Orphan+ have spectra, 2eV-100keV, WASH-1127.										69
325	74 W	Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	I		100-	16				20	ORNL	Clifford	DRDT	63
					REQ COM: For space reactor shielding.										69
					All gamma energies of interest.										69
					STATUS: none.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
326	74 W^{180}	$\sigma_{n,\gamma}$	Act	I	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of W^{181},										69
					in naturally occurring element.										69
					Accuracy of 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: none.										69
327	74 W^{182}	$\sigma_{n,2n}$	Act.	I			Thr-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of W^{181},										69
					in naturally occurring element.										69
					Accuracy of 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: Dilg+, Nuc.Phys.A118,9, at 14.7MeV.										68
328	74 W^{182}	$\sigma_{n,\gamma}$		I		1-	10			10		AI	Alter	DRDT	69
					REQ COM: Fast breeder control and burn up calculations.										69
					STATUS: RPI Bartolome+, Nuc.Sci.Eng. 37,137. 1-100keV.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
329	$_{74}W^{183}$	$\sigma_{n,\gamma}$		I		1-	10			10		AI	Alter	DRDT	69
					REQ COM: Fast breeder control and burn up calculations.										69
					STATUS: RPI Bartolome+, Nuc.Sci.Eng. 37,137, 1-100keV.										69
330	$_{74}W^{184}$	$\sigma_{n,\gamma}$		I		10-	10			10		AI	Alter	DRDT	69
					REQ COM: Fast breeder control and burn up calculations.										69
					STATUS: RPI Bartolome+, Nuc.Sci.Eng. 37,137, 1-100keV.										69
331	$_{74}W^{184}$	$\sigma_{n,\gamma}$	Act	I	.025-	100					30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of W^{185}, in naturally occurring element.										69
					STATUS: RPI Bartolome+, Nuc.Sci.Eng. 37,137, 1-100keV.										69
332	$_{74}W^{186}$	$\sigma_{n,2n}$	Act.	I			Thr-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of W^{185}, in naturally occurring element. Accuracy of 30 per if σ > 100 mb, 50 per if 25 mb < σ < 100 mb. Accuracy to a factor of 2 if 1 mb < σ < 25 mb; to a factor of 10 if σ < 1 mb.										69
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
333	$_{74}W^{186}$	$\sigma_{n,\bar{\gamma}}$		I		10-	10			10		AI	Alter	DRDT	69
					REQ COM: Fast breeder control and burn up calculations.										69
					STATUS: RPI Bartolome+, Nuc.Sci.Eng. 37,137, 1-100keV.										69
					Diksic+, Acta Phys. Hungar.28,257, at 3MeV.										70
334	$_{76}Os^{186}$	$\sigma_{n,\bar{\gamma}}$		III		1-100			4-9			ORNL	Macklin	DR	70
					REQ COM: Need avg. capture for Maxwellian spectrum with										70
					kT=30keV, for nucleosynthesis studies.										70
					STATUS: No measurements. Systematics good to 20 per.										70
335	$_{76}Os^{187}$	$\sigma_{n,\bar{\gamma}}$		III		1-100			4-9			ORNL	Macklin	DR	70
					REQ COM: Need avg. capture for Maxwellian spectrum with										70
					kT=30keV, for nucleosynthesis studies.										70
					STATUS: No measurements. Systematics good to 20 per.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
336	$_{79}Au$	$\sigma_{n,\bar{\gamma}}$		II	.5-	1*		1				BET	Bayard	DRDT	67
				II		1-500		2				NCSC	Landon	DR	69
				I		1-	1		5			LRL	Howerton	DMA	70
					REQ COM: *Energies above 0.5eV wanted so as to give infinite dilution RI to 1 per										67
					Individual and average resonance parameters required as primary standard										67
					STATUS: Fricke+ Helsinki conf. paper CN-26/43, 1keV-1MeV,										70
					LOCKHEED Vaughn+ "best fit" 10keV-5.4MeV,										70
					NCSAC-33.										70
					Kompe, Nuc.Phys.A133,513, 10-170keV.										69
					AERE Moxon has data rel. to B^{10}.										69
					KFK Froehner, meas. rel. to H is in progress.										70
337	* $_{81}Tl^{204}$	$\sigma_{n,\bar{\gamma}}$		II	Th					10		PNWL	Dawson	DP	65
					REQ COM: Wanted to test feasibility of Tl^{204} production.										65
					*Radioactive target - 3.8y.										69
					STATUS: INC; total and res. param. 0.2-1000eV, WASH-1093										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
338	$_{82}Pb$	Emission	$\sigma(\theta_{n'},E_{n'})$	II			3-15			10		NEL	Eccleshall	DASA	69
				II			2-16		5			ORNL	Clifford	DRDT	63
					REQ COM: Energy intervals 500 keV; ΔE (res.)=250 keV.										69
					$\sigma(\theta)$ only if significantly anisotropic; then										69
					$\Delta\theta = \pm 3^{\circ}$ at 10-degree intervals.										69
					STATUS: none.										69
339	$_{82}Pb$	Tot γ Prod	$\sigma(E_{\gamma})$	II			8-15			10		NEL	Eccleshall	DASA	69
					REQ COM: Spectra at a few energies would suffice.										69
					ΔE_n= 1 MeV, ΔE_{γ} = 500 keV										69
					Omit 14.8 MeV point.										69
					STATUS: None										69
340	$_{82}Pb$	Tot γ Prod	$\sigma(E_{\gamma})$	II	80-	800				15*		SNPO	Fleishman	DSNS	69
				I			1-10			15*		SNPO	Fleishman	DSNS	69
					REQ COM: (*) Accuracy 15 per or 5 mb whichever is greater.										69
					Absolute $\sigma(E_{\gamma})$ required for all E_{γ} > 200 keV.										69
					Neutron Energy intervals required:										69
					Res. region: reproduce major variations in $\sigma(E_{\gamma})$										69
					> 1 Mev: 500-keV intervals										69
					Gamma-energy resolution required:										69
					<2.5MeV, 10 percent; >2.5MeV, 250keV.										69
					STATUS: USSR, Helsinki conf. CN-26/121, to 30keV.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
341	$_{82}Pb^{204}$	$\sigma_{n,n'}$	Isom State	I			Ths-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is $\sigma_{n,n'}$ to 2.2 MeV isomer (67 min.)										69
					STATUS: none.										69
342	$_{82}Pb^{206}$	$\sigma_{n,\alpha}$	Act	I			Ths-15				30	LRL	Howerton	DMA	69
					REQ COM: Required is activation of Hg^{203}, 46.6 day.										69
					STATUS: none.										69
343	$_{82}Pb^{208}$	$\sigma_{n,\gamma}$	Act	II	.025-	to	15				30	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for activation of Pb^{209},										69
					in naturally occurring element.										69
					Accuracy of 30 per if σ > 100 mb, 50 per if										69
					25 mb < σ < 100 mb. Accuracy to a factor										69
					of 2 if 1 mb < σ < 25 mb; to a factor of 10										69
					if σ < 1 mb.										69
					STATUS: ORNL Macklin+ 10-200kev, Phys. Rev. 181, 1639(1969										69
					Further work planned by Macklin, NCSAC-33.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
344	$_{90}$Th	Elastic	$\sigma(\theta_n)$	II			1-5			10		ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: None										69
					STATUS: ANL Kuchnir PR 176 1405, 600 keV to 1.6 MeV										69
					ANL Smith has new data to 1.7MeV.										70
345	$_{90}$Th	Inelastic	$\sigma(E_{n'})$	II			1-4		5			ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy 20 percent in (1-cosθ) if anisotropic.										69
					Incident and exit energy resolution 20 per.										69
					STATUS: Sweden, Holmberg, EANDC(OR)59L, 1-2 MeV										69
					ANL Smith has new data to 1.7MeV.										70
346	$_{90}$Th	$\sigma_{n,2n}$		I			Ths-10			10		GE	Snyder	DRDT	67
					REQ COM: Needed for control of U^{232} production.										69
					STATUS: INC Schuman gets 10mb for AFSR spectrum, WASH-1136										70
347	$_{90}$Th	$\sigma_{n,\bar{\gamma}}$		I	.5-	2			5-	10		BET	Bayard	DRDT	62
					REQ COM: Need < 5 per in res. integ.; 10 per useful										62
					For thermal breeder calculations.										62
					STATUS: COL, Camarda+ have new data to 5keV. NCSAC-33.										70
					LASL Forman+ have new data. NCSAC-33.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
348	90 Th	Absorption		II	100-	to	1	3-	5			ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy 5 per below 10 keV, 3 per above.										69
					Intermediate accuracy would be useful.										69
					STATUS: LASL Forman+ have capture data, res. par. NCSAC-31										70
349	90 Th	Tot γ Prod	$\sigma(E_\gamma)$	II		500	-15			10		AFWL	Schaefer	DASA	69
					REQ COM: Spectra at a few energies may suffice.										69
					ΔE_n = 10 percent; ΔE_γ = 250 keV.										69
					STATUS: None										69
350	90 Th	Tot γ Prod	$\sigma(\theta_\gamma,E_\gamma)$	II	.5-	to	10			10		BET	Bayard	DRDT	67
					REQ COM: Need gamma spectrum at intervals of 0.5 MeV. DRDT										67
					Gammas of all energies of interest. DRDT										67
					Data needed for shielding and gamma heating calc.										67
					STATUS: BNL Wasson+, Knoxville conf., spectra at resonance										71

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
351	$_{90}Th$	Delayd n Y	$P(E_{n'})$	II			2,2,14			10		BNL	Kouts	OSMM	69
				II	Fis.	Spect.	Source			10		BNL	Kouts	OSMM	69
					REQ COM: Need spectrum of neutrons in different groups										69
					characterised by different decay constants.										69
					STATUS: LASL Krick+ have data at 3.1 and 14.1MeV NCSAC-31.										70
352	$_{90}Th$	Delayd $\bar{\gamma}$ Y	$P(E_{\bar{\gamma}},T^{1/2})$	I			2,2,14				35	BNL	Kouts	OSMM	69
				I	Fis.	Spect.	Source				35	BNL	Kouts	OSMM	69
					REQ COM: (*): Delayed $\bar{\gamma}$ yields with factors of two from										69
					neutron-induced fission products.										69
					For $E_{\bar{\gamma}}$ > 2 MeV, energy distributions and half-										69
					lives required.										69
					STATUS: None.										69
353	$_{91}Pa^{231}$	$\sigma_{n,\bar{\gamma}}$		II	Th-	to	10			10		GE	Snyder	DRDT	69
					REQ COM: Needed for control of U^{232} production										69
					STATUS: None										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
354	* $_{91}Pa^{233}$	$\sigma_{n,\gamma}$		II	.001-2				5			GRT	Preskitt	DRDT	67
				II	2-	1				10		GRT	Preskitt	DRDT	69
				II	.001-	.1				10		ORNL	Craven	DRDT	69
					REQ COM: Thorium cycle designs.										69
					STATUS: No active work.										70
355	$_{92}U^{233}$	Inelastic	$\sigma(E_{n'})$	II		40-	7		5-	10		ANL	Avery	DRDT	67
					REQ COM: Need energy dependence to 5-10 per above 0.5 MeV										67
					STATUS: None										67
356	$_{92}U^{233}$	Emission	$\sigma(E_{n'})$	I			5-15				20	LRL	Howerton	DMA	70
					REQ COM: Energy range of interest: $0.2 MeV \leq E_{n'} \leq E_n$.										70
					STATUS: None.										70
357	$_{92}U^{233}$	$\sigma_{n,2n}$		II			Thr-15			10		LASL	Barr	DMA	67
				III			Thr-15			10		ACRP	Hannum	DRDT	67
					REQ COM: For contamination of U^{233} by U^{232}. DRDT.										67
					STATUS: Barr, LASL, activ. data at 14 MeV										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
358	$_{92}U^{233}$	$\sigma_{n,f}$		I	.001-	1		.5-	5			AI	Alter	DRDT	62
												ANL	Avery	DRDT	62
												BET	Bayard	DRDT	62
										10		GGA	Nordheim	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
												ORNL	Craven	DRDT	62

REQ COM: Want eta to 1/4 per below 1eV 69
Want integral eta to 1 per below 1 keV 69

STATUS: Hanna+ L.S. eval. of 2200m/sec value, At.En.Rev.7. 69
SAC Blons+, Knoxville conf., to 30keV. 71
COL Felvinci+, Knoxville conf. 71

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
359	$_{92}U^{233}$	$\sigma_{n,f}$		II		1-30			5			AI	Alter	DRDT	62
												ANL	Avery	DRDT	62
												BET	Bayard	DRDT	62
												GGA	Nordheim	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
												ORNL	Craven	DRDT	62

REQ COM: Want 2 per in eta and integral eta 69

STATUS: ORNL Weston, WASH-1124, has data to 2 keV 69
SAC Blons+, Knoxville conf., to 30keV. 71

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
360	$_{92}U^{233}$	Fis Ratio	wrt U^{235}	I		10-	15	1				LASL	Hansen	DMA	67
				II		1-	10	1				LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Calibration in energy 1 per, resolution 3 per										69
					Accuracy of 2-3 per would be useful										69
					STATUS: KFK Pfletschinger+ Nuc.Sci.Eng.40,375,5keV-1MeV.										70
					ANL Meadows is measuring below 1.5MeV, NCSAC-31.										70
361	$_{92}U^{233}$	Nu Bar		I	.001-	30		.25	-2			ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												GGA	Nordheim	DRDT	66
												LMFB	Hemmig-AEC	DRDT	66
												ORNL	Craven	DRDT	69
					REQ COM: Need 1/4 per to 30 eV, 1 per 0.3 eV - 1 keV										69
					Need 2 per 1-30 keV										69
					Intermediate accuracy of 1.5 per useful										69
					STATUS: Hanna+ L.S. eval. of 2200m/sec value, At.En.Rev.7.										69
					Weinstein, Vienna conf. SM-122/113, to 5eV.										69
					IAEA Konshin+ INDC(NDS)19-N give compilation.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
362	$_{92}U^{233}$	Nu Bar		II		30-	3	1-3				ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												GGA	Nordheim	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Craven	DRDT	69
					REQ COM: Is there structure below 1 MeV,										69
					STATUS: No work in progress										69
363	$_{92}U^{233}$	Alpha		I	.001-	1		2-	8			ANL	Avery	DRDT	62
												BET	Bayard	DRDT	62
												GGA	Nordheim	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
												ORNL	Craven	DRDT	62
					REQ COM: 1/4 per in eta below 1eV, 1 per useful										69
					1/4 per in eta to 3eV,										69
					1 per in eta 30eV to 1 keV, 5 per useful										69
					Capture cross section equally useful,										69
					STATUS: ORNL Weston+ Nuc, Sci, Eng, 34,1(1968), 0,4-2000eV										70
					ORNL Weston+ Nuc, Sci, Eng,42,143(1970), <1eV,										70
					INC Smith+ have absolute eta <1eV, NCSAC-33,										70
					Hanna+ L,S, eval, of 2200m/sec value, At,En,Rev,7,										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
364	$_{92}U^{233}$	Alpha		II		1-	3			10-	20	ANL	Avery	DRDT	62
												BET	Bayard	DRDT	62
												GGA	Nordheim	DRDT	62
												LMFB	Hemmig-AEC	DRDT	62
												ORNL	Craven	DRDT	62
					REQ COM: Want 2 per in eta and integral eta										69
					from 1 keV to 30 keV										69
					Capture cross section equally useful										69
					STATUS: ORNL Weston+ Nuc. Sci. Eng. 34,1(1968), 0.4-2000eV										70
365	$_{92}U^{233}$	Nu Bar	Prompt	I			7-20	3				LRL	Howerton	DMA	62
					REQ COM: Inconsistent results obscure energy dependence.										62
					STATUS: None.										69
366	$_{92}U^{233}$	Delayd n Y	$P(E_{n'})$	II	Th.,		2,2,14			10		BNL	Kouts	OSMM	69
				II	Fis.	Spect.	Source			10		BNL	Kouts	OSMM	69
				I	Th-	to	15		5			LASL	Keepin	OSMM	69
					REQ COM: Need spectrum of neutrons in different										69
					groups characterized by different decay constants										69
					Absolute number of delayed neutrons required. LAS										69
					Isotopic signatures for nondestructive assay. LAS										69
					STATUS: LASL Krick+ NCSAC-33 have some data.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
367	$_{92}U^{233}$	Res Par		II	Th-	5				10-	30	ANL	Avery	DRDT	67
												BET	Bayard	DRDT	67
												LMFB	Hemmig-AEC	DRDT	67
					REQ COM: For thermal breeder calculations										67
					Multilevel params., statistical dist. in eV range.										67
					Want 10 per accuracy to 100 eV, 20-30 per to 5 keV										67
					STATUS: COL Felvinci has new data on res. params. from										70
					kinetic energy studies, NCSAC-31.										70
					BCMN Cao, Helsinki conf. CN-26/19, res. par.<65eV										70
					BCMN Kolar, Helsinki conf. CN-26/16, params.<94eV										70
368	$_{92}U^{233}$	Cap Spect	$P(E_\gamma)$	II	.01-15						15	BET	Bayard	DRDT	67
					REQ COM: $\Delta N(E)/N(E)$ needed to 15 per every 50keV in E_γ.										67
					Gammas of 100 keV and above desired, for shielding										67
					Is thermal and resonance spectrum the same.										67
					STATUS: COL Felvinci plans measurement, NCSAC-31.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
369	$_{92}U^{233}$	Delayd γ Y	P($E_γ$)	II	Th-	to	15		5			LASL	Keepin	OSMM	69
				I	Th.		2,2,14				35	BNL	Kouts	OSMM	69
				I	Fiss.	Spect.	Source				35*	BNL	Kouts	OSMM	69
					REQ COM: High-resolution absolute γ-ray yields required.										69
					Ultimately, assign disc. γ's to specif. fis. prod.										69
					Isotopic signatures for nondestructive assay tech.										69
					*Need delayed gamma yields within factors of two										69
					from neutron induced fission products. BNL										69
					Half-life and energy distributions required										69
					for $E_γ$<2MeV										69
					STATUS: LRL John is planning a meas. at thermal.										70
370	$_{92}U^{233}$	Fis Prod Y	of Xe^{135}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons.										67
					Cumulative and direct yields required, inclusive										67
					of 15 minute isomer.										67
					STATUS: none.										67
371	$_{92}U^{233}$	Fis Prod Y	of Cs^{137}	II	Th			1				BET	Bayard	DRDT	67
					REQ COM: For burnup indicator standards.										67
					STATUS: none.										67

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
372	$_{92}U^{233}$	Fis Prod Y	of Nd^{147}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons.										67
					STATUS: none.										67
373	$_{92}U^{233}$	Fis Prod Y	of Sm^{149}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons.										67
					STATUS: none.										67
374	$_{92}U^{233}$	Delayd f Y		III	Th-	to	15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times										69
					(>10 ns) required.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69
375	$_{92}U^{234}$	Total		II	Th-	1			5-	10		BNL	Chernick	DRDT	62
					REQ COM: Accuracy 10 per in $\bar{\sigma}_{\gamma}$, 5 per in $\bar{\sigma}_{n}$'										62
					For isotope buildup in thermal reactors.										62
					STATUS: HAR James+, AERE-R 6039 have data, res, params.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
376	$_{92}U^{234}$	$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Measurements with less accuracy not helpful.										70
					STATUS: None.										70
377	$_{92}U^{234}$	$\sigma_{n,3n}$		II			Ths-15				20	LASL	Barr	DMA	67
					REQ COM: None.										67
					STATUS: None.										69
378	$_{92}U^{234}$	$\sigma_{n,\gamma}$		II	.001-	to	10	3	to	10		AI	Alter	DRDT	69
												ANL	Avery	DRDT	69
												BNL	Chernick	DRDT	69
												GRT	Preskitt	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: To evaluate isotope buildup in thermal reactors.										67
					Accuracy 3 per below 2 eV, 6 per below 10 keV.										69
					STATUS: Lounsbury, EANDC(CAN) 38-L, thermal value, 1per.										70
					James+Nuc.Phys. A139,471. Res. params. to 687eV.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
379	$_{92}U^{234}$	Nu Bar		II		300				10		ANL	Avery	DRDT	67
					REQ COM: One point above threshold wanted for fast breeder calculations										67
					STATUS: Should be satisfied by Mather+Nuc. Phys. 66, 149 (1965) and linear extrapolation to 300 kev.										70
380	$_{92}U^{234}$	Nu Bar	Prompt	I		500-	20	3				LRL	Howerton	DMA	62
					REQ COM: None.										62
					STATUS: Should be satisfied to 4Mev. by Mather+Nuc. Phys. 66, 149(1965) and linear extrapolation below 1Mev.										70
381	$_{92}U^{235}$	Elastic	$\sigma(\theta_n)$	II			1-5				20	ANL	Avery	DRDT	69
				II			1-5				20	LMFB	Hemmig-AEC	DRDT	69
				II			1-7			10		LASL	Diven	DMA	66
					REQ COM: Needed for analyzing fast critical experiments. Energy resolution at least 0.5 MeV										69
					STATUS: None.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
382	$_{92}U^{235}$	Inelastic	$\sigma(E_{n'})$	II		100-	6			10		ANL	Avery	DRDT	69
				II		100-	6			10		LMFB	Hemmig-AEC	DRDT	69
				I			1.5-6		5			LRL	Howerton	DMA	69
					REQ COM: Incident and exit energy resolutions 10 per. DRDT										69
					Discrim. between inelastic and fission neuts.										69
					required. LRL.										69
					Low energy neutrons must be included (∼300 keV).										69
					Absolute spectra at 30° and 75° may suffice.										69
					STATUS: BCMN Coppola+ at 1.5, 1.9, and 2.3MeV, in progress										70
					ANL Smith has data to 1.5MeV.										70
383	$_{92}U^{235}$	Emission	$\sigma(E_{n'})$	I			5-15				20	LRL	Howerton	DMA	70
					REQ COM: Energy range of interest: $0.2 MeV \leq E_{n'} \leq E_n$.										70
					STATUS: None.										70
384	$_{92}U^{235}$	Emission	$\sigma(\theta_{n'}, E_{n'})$	I			6-20		5			LRL	Howerton	DMA	62
				I			6-16		5			LASL	Goad	DMA	69
				II			1-7		5-	10		LASL	Goad	DMA	69
					REQ COM: Low-energy neutrons must be included (∼300 keV).										69
					Absolute spectra at 30° and 75° may suffice.										69
					STATUS: None.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
385	$_{92}U^{235}$	$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Needed for evaluation.										69
					Measurements with less accuracy not helpful.										70
					STATUS: AWRE Mather plans meas. 7,8,9,12.3, and 14MeV.										70
386	$_{92}U^{235}$	$\sigma_{n,3n}$		II			Ths-16			10		LASL	Barr	DMA	67
					REQ COM: None										69
					STATUS: None										69
387	$_{92}U^{235}$	$\sigma_{n,f}$		II	1-	1		3				GE	Snyder	DRDT	69
					REQ COM: Used as standard at higher energies.										69
					STATUS: ORNL deSaussure NCSAC-33, to 100 keV in progress.										70
					Harwell James AERE-2157 Rev. reviews data.										69
					LRL Czirr, fission and capture to 28keV, NCSAC-31.										70
					SAC Blons, Helsinki conf. CN-26/60, to 30keV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB PERSON ORG	YR
386	$_{92}U^{235}$	$\sigma_{n,f}$		II	1,10 100	1,10 100	1,10	3				KAPL Ehrlich DRDT	69
					REQ COM: Isolated values needed for normalization purposes.								69
					Choice of energy is influenced by experimental								69
					requirements, but values every decade useful.								69
					Where cross section has structure, energy average								69
					over carefully specified range is desired.								69
					STATUS: This is essentially what is done for groups of								70
					resonances by Deruytter, Helsinki conf.CN-26/100.								70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
389	$_{92}U^{235}$	$\sigma_{n,f}$		I		1-	14	1-2				GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Of highest priority for fast reactor calculations										69
					and as standard.										69
					From 1-20 keV, accuracy 2 per, 5 per useful.										69
					From 20 keV-3 MeV, accuracy 1 per, 3 per useful.										69
					From 3-14 MeV, accuracy 2 per, 5 per useful.										69
					Resolution needed below 20 keV not yet determined										69
					Absolute values required.										69
					STATUS: U. Mich. Knoll+ absolute meas. 24,140,261,966keV.										70
					ANL Poenitz, 500-700keV using V(p,n), NCSAC-31.										70
					LRL Czirr, fission and capture to 28keV, NCSAC-31.										70
					LASL Barton+ are planning rel. to H,2-20MeV.										70
					SAC Blons+, Knoxville conf., to 30keV.										71
					CEN Szabo+, Knoxville conf., 10-200keV.										71
					KFK Kappeler+, Knoxville conf., 300-1200keV.										71
390	$_{92}U^{235}$	$\sigma_{n,f}$		I		10-	15	1				LASL	Hansen	DMA	66
				I		10-	14	1				NCSC	Landon	DR	69
					REQ COM: Excitation cross sections at many energies req.										69
					Absolute calibration at several different energies										69
					Energy resolution 3 per, energy calibration 1 per										69
					STATUS: U. Mich. Knoll+ absolute meas. 24,140,261,966keV.										70
					LASL Barton+ are planning rel. to H,2-20MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
391	$_{92}U^{235}$	$\sigma_{n,f}$ Ratio	wrt H, B^{10}	I		1-	14	1				ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Maienschein	DRDT	69
					REQ COM: Required is ratio of $U^{235}(n,f)$ to $B^{10}(n,\alpha)$										69
					and to $H^1(n,p)$ to 1 percent.										69
					Intermediate accuracy of 3 per would be useful.										69
					Needed to compare standards.										69
					STATUS: LASL Barton+ are planning rel. to H,2-20MeV.										70
392	$_{92}U^{235}$	Eta		I	Th-	50		.5				ANL	Avery	DRDT	67
												GE	Snyder	DRDT	67
												LMFB	Hemmig-AEC	DRDT	67
					REQ COM: Accuracy 0.5 per at thermal, 2 per elsewhere										67
					STATUS: INC Smith+ have absolute eta <1eV, NCSAC-33.										70
					Hanna+ L.S. eval. of 2200m/sec value. At.En.Rev.7.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
393	$_{92}U^{235}$	Alpha		II	.001	to	7	3	to	10		ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Capture cross section equally useful.										69
					Accuracy 3 per to 30 keV, 4 per to 150 keV,										69
					5 to 10 per to 7 MeV.										69
					STATUS: ORNL deSaussure NCSAC-33, to 100 keV in progress.										70
					Hanna+ L.S. eval. of 2200m/sec value. At.En.Rev.7.										69
					LRL Czirr, fission and capture to 28keV, NCSAC-31.										70
					KFK Bandl+, Knoxville conf. 15-60keV.										71
394	$_{92}U^{235}$	$\sigma_{n,f}+\sigma_{n,g}$	at 77°K	II	Th-	1		3-	5			SNPO	Fleishman	DSNS	69
					REQ COM: Required are simultaneous measurements of capture										69
					and fission cross sections at low temperature,										69
					77°K, to validate Doppler broadening										69
					calculations.										69
					STATUS: SAC Blons has total and fission at 77°K, Derrien										70
					is doing multilevel fit. Helsinki conf. CN-26/60										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
395	$_{92}U^{235}$	Nu Bar		I	Th-	to	3	1				ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Needed as a cross check with other isotopes.										69
					Accuracy of 1.5 to 2 per would be useful.										69
					STATUS: RPI Reed+ have new data to 25eV, NCSAC-31.										70
					Hanna+ L.S. eval. of 2200m/sec value, At.En.Rev.7.										69
					IAEA Konshin+ INDC(NDS)19-N give compilation.										70
396	$_{92}U^{235}$	Fis n Y	$P(E_{n'})$	II	Th-	to	3		5			ANL	Avery	DRDT	69
				II	Th					10		KAPL	Ehrlich	DRDT	69
				II	Th-	to	3		5			LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Verification of fission spectrum needed.										69
					$\Delta E_{n'}$=5per for $E_{n'}$<0.3MeV and from 10-20MeV. KAPL.										69
					STATUS: ANL Smith is measuring below 1.5 Mev. NCSAC-33.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
397	$_{92}U^{235}$	Delayd n Y	$P(E_{n'})$	II	Th					15		KAPL	Ehrlich	DRDT	69
				II	Th-	to	5		5			LMFB	Hemmig-AEC	DRDT	69
				I	Th-	to	15		5			LASL	Keepin	OSMM	69
				II	Th,		2,2,14			10		BNL	Kouts	OSMM	69
				II	Fiss.	Spect.	Source			10		BNL	Kouts	OSMM	69

REQ COM: Needed for analysis of fast criticals, and to check existing data, DRDT 69 69

Yield, half-life, and energy needed, DRDT 69

Absolute numbers of delayed neutrons required, LAS 69

Isotopic signatures for nondestructive assay, LASL 69

Need spectrum of neutrons in different groups characterized by differing decay constants, BNL 69 69

STATUS: LASL Krick+ have probably filled this, NCSAC-33. 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
398	$_{92}U^{235}$	Cap Spect	$P(E_\gamma)$	II	Th-15					10		BET	Sayard	DRDT	67
				II	Th						20	KAPL	Ehrlich	DRDT	67

REQ COM: E_n thermal, gamma resol, dn(E)/n(E) = 20 per,KAPL 67

E_n 0.001 to 15 eV, dn(E)/n(E) = 10 per at 67

50 keV intervals for E_γ above 100 keV, BAPL 67

Does spectrum change for thermal and resonances, 67

STATUS: COL Felvinci plans measurement, NCSAC-31, 70

BNL Chrien+ have data, 2-34keV, NCSAC-33, 70

BNL Kane has data 1-6eV, NCSAC-33, See also Phys, 70

Rev, Lett, 25, 953(1970), 70

LASL Jurney NCSAC-33, high energy spect,, thermal, 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
399	$_{92}U^{235}$	Delayd γ Y	$P(E_\gamma)$	I	Th-	to	15		5			LASL	Keepin	OSMM	69
				I	Th.		2.2,14				35*	BNL	Kouts	OSMM	69
				I	Fiss.	Spect.	Source				35*	BNL	Kouts	OSMM	69

REQ COM: (*): Delayed γ yields within factors of two from 69
neutron-induced fission products. BNL. 69
For E_γ > 2 MeV, energy distributions and half- 69
lives required. BNL. 69
High-resolution absolute γ-ray yields required. 69
Ultimately, assign disc. γ's to specif. fis. prod. 69
Isotopic signatures for nondestructive assay tech. 69

STATUS: BNL Chrien+ report delayed spectra, thermal and 70
resonance. NCSAC-33. 70
KFK Matussek, IAEA Safeguards Conf. July 1970. 70
LRL John has measurement at thermal in progress. 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
400	$_{92}U^{235}$	Res Par		I	Th-200					10		ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Needed for extrapolation to unresolved resonance region.										69
					Multilevel fit wanted where feasible.										69
					Need 10 per accuracy below 100 eV.										69
					Needed to as high an energy as possible.										69
					STATUS: ORNL deSaussure has res. par. to 100eV, ORNL-1804.										69
					MOL Poortmans+ have scatterinr, some spins,										70
					Helsinki conf. paper CN-26/20.										70
					SAC Ribon has evaluation in progress.										70
					See Helsinki conf. CN-26/208 for data comparison										70
					SAC Krebs+, Knoxville conf., to 100eV.										71
401	$_{92}U^{235}$	Fis Prod Y	of Xe^{135}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons										67
					Cumulative and direct (inclusive of 15M										67
					isomer) yields wanted										67
					STATUS: None										67

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
402	$_{92}U^{235}$	Fis Prod Y	of Cs^{137}	II	Th			1				BET	Bayard	DRDT	67
					REQ COM: For burn up indicator standards.										67
					STATUS: None										67
403	$_{92}U^{235}$	Fis Prod Y	of Sm^{149}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons										67
					STATUS: None										67
404	$_{92}U^{235}$	Fis Prod Y	of Nd^{147}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poisons										67
					STATUS: None										67
405	$_{92}U^{235}$	Delayd f Y		II	Th-	to	15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times (>10 ns) required. Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
406	$_{92}U^{236}$	Total		I	Th-	1			5-	10		BNL	Chernick	DRDT	67
												GE	Snyder	DRDT	67
												KAPL	Ehrlich	DRDT	67
					REQ COM: Accuracy 5 percent in neutron width.										67
					For isotope build up in thermal reactors and										67
					production of Np-237										67
					Want 10 percent in capture width.										67
					STATUS: GGA Carlson, WASH 1124, has complete data										67
					and resonance parameters to 420eV.										69
407	$_{92}U^{236}$	Nu Bar	Prompt	I		500-	14	3				LRL	Howerton	DMA	62
					REQ COM: None.										69
					STATUS: FOA Holmberg+, EANDC(OR)99L, .8-6.5MeV in progress										70
408	$_{92}U^{236}$	Res Int		II	.5-	up				10		GE	Snyder	DRDT	69
					REQ COM: Needed for control of U^{232} production.										69
					STATUS: GGA Carlson, Nuc.Phys.A141,577 has res. par. RI.										70
					to 20keV, calculates res. integral.										69
					SRL Baumann NSE 32 265 gets 417,419 b by 2 methods										69
					INC Schuman reports RI=381±20b, IN-1296.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
409	$_{92}U^{236}$	$\sigma_{n,\gamma}$		I	Th-	1				10		BNL	Chernick	DRDT	69
				I	Th-	1				10		GE	Snyder	DRDT	69
				I	Th-	1				10		KAPL	Ehrlich	DRDT	69
				II		1-	10				20	ANL	Avery	DRDT	69
					REQ COM: Needed for control of U^{232} production GE										69
					Needed for isotope build up in thermal										69
					and fast reactors and for Np^{237} production.										69
					Required 10 percent accuracy in capture widths.										69
					STATUS: GGA Carlson, Nuc.Phys.A141,577 has res. par. RI.										70
410	* $_{92}U^{237}$	$\sigma_{n,f}$		II	100-		16			10		LASL	Barr	DMA	67
					REQ COM: *Short-lived radioactive target, 6.7d										69
					STATUS: LASL McNally, BAPS 13,1665, Pommard data >30 eV										68
					Barr, LASL, crit. assembly core and reflector meas										69
411	* $_{92}U^{237}$	Destruct	of Target	I		1-	15			10		LRL	Howerton	DMA	70
					REQ COM: Needed for evaluation.										69
					* Radioactive target-6.7 day.										69
					STATUS: LASL McNally, Barr fission data available.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
412	$_{92}U^{238}$	Elastic	$\sigma(\theta_n)$	I		1-	10		5-	10		ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Craven	DRDT	69
					REQ COM: Accuracy 10 per in energy region 1-300keV.										69
					Accuracy 5 per in energy region 300keV to 2MeV.										69
					Accuracy 10 per in energy region 2-10MeV.										69
					Factors of 2 lower accuracy would be useful										69
					on short term.										69
					STATUS: ANL Lambropoulos+ reports analysis of total,										70
					elastic and inelastic 0.1-10 Mev. NCSAC-33.										70
					BCMN Ahmed has data at 1.5,1.9, and 2.3MeV.										70
413	$_{92}U^{238}$	Inelastic	$\sigma(E_{n'})$	I		100-	10		5			ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Energy resolution should be 5 percent										69
					Emission cross sections instead of inelastic and										69
					n,2n might be useful										69
					Accuracy of 20 per would be useful.										69
					STATUS: BCMN Ahmed has data at 1.5,1.9, and 2.3MeV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
414	$_{92}U^{238}$	Emission	$\sigma(E_{n'})$	I			5-15				20	LRL	Howerton	DMA	70
					REQ COM: Energy range of interest: 0.2MeV$\leq E_{n'} \leq E_n$.										70
					STATUS: None.										70
415	$_{92}U^{238}$	$\sigma_{n,2n}$		II			Thr-10			10		GE	Snyder	DRDT	69
					REQ COM: Needed for control of U-232 production										69
					STATUS: Frehaut+, Helsinki conf. CN26/66.										70
416	$_{92}U^{238}$	$\sigma_{n,3n}$		II			Ths-15				20	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: AWRE Mather gets 494±21mb at 14MeV, priv. comm.										70
417	$_{92}U^{238}$	Fis Ratio	wrt U^{235}	I		500-	15	1-	5			LASL	Hansen	DMA	67
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy 5 per below 1.3 MeV, 1 per above.										67
					Energy resolution 3 per, energy calibration 1 per.										69
					Intermediate accuracy would be useful.										69
					STATUS: ANL Meadows has results to 1.5MeV, NCSAC-31.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
418	$_{92}U^{238}$	Fis Ratio	wrt Pu^{239}	I		500-	14	1-3				LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy 3 per below 1.3 MeV, 1 per above.										69
					Energy resolution 3 per, energy calibration 1 per.										69
					Intermediate accuracy would be useful.										69
					STATUS: None										69
419	$_{92}U^{238}$	Nu Bar		I			1-10	2				ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Craven	DRDT	69
					REQ COM: None										69
					STATUS: Soleilhac, J.Nuc.En. 23,257 appear to satisfy this										69
					BRC Soleilhac J.Nuc.En.AB 22.79. 1.4-15MeV. 1per.										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
420	$_{92}U^{238}$	Delayd n Y	P(E$_n$,)	I	Th-	to	15		5			LASL	Keepin	OSMM	69
				II			2,2,14			10		BNL	Kouts	OSMM	69
				II	Fiss,	Spect,	Source			10		BNL	Kouts	OSMM	69

REQ COM: Absolute numbers of delayed neutrons required, 69
High res, Time and Energy spectra also of interest 69
Isotopic signatures for nondestructive assay tech, 69
Need to confirm ANL results using smaller samples, 69
Needed are spectra of neutrons in different groups 69
characterized by different decay constants, 69

STATUS: LASL Krick+ NCSAC-33 have some data, 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
421	$_{92}U^{238}$	$\sigma_{n,\bar{\gamma}}$		I	500-	to	10	2-	to	10		AI	Alter	DRDT	69
												ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69

REQ COM: Highest priority need for fast reactor calculation 69
Accuracy 3 per from 500 eV to 1 keV. 69
Accuracy 2 per from 1-300 keV. 69
Accuracy 3 per from 300-500 keV. 69
Accuracy 10 per from 500 keV to 10 MeV. 69
Accuracies of 10 per from 1-300 keV and 20 per 69
from 0.3 to 10 MeV would be useful. 69

STATUS: GRT Fricke+ report new data 1 keV-1 Mev, Helsinki 70
conference paper CN-26/43. 70
ORNL de Saussure+ have data to 100 kev, NCSAC-33. 70
COL Camarda+ have new data, NCSAC-33. 70
ANL Poenitz, Nuc. Sci. Eng. 40,383(1970), 130-1400 70
BCMN Rohr+, Helsinki conf. CN-26/18, par. to 1keV. 70
USSR Helsinki conf. 26/77,26/78, to 150keV. 70
NPL Ryves plan activ. meas., 120-600keV. 70
KFK Froehner+ plan meas. rel. to H, 100-500keV. 70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
422	$_{92}U^{238}$	$\sigma_{n,\gamma}$		I	Th-	to	15			10		LRL	Howerton	DNA	69
					REQ COM: Needed for evaluation, Disagreements and										69
					gaps in existing data need to be resolved,										69
					STATUS: GRT, Fricke+ report new data 1 kev -1MeV, Helsinki										70
					conference, paper CN-26/43,										70
					ORNL deSaussure+ have data to 100 keV, NCSAC-33,										70
					COL Camarda+ have new data, NCSAC-33,										70
					ANL Poenitz, Nuc, Sci, Eng, 40,383(1970), 130-1400										70
					BOMN Rohr+, Helsinki conf, CN-26/18, par, to 1keV,										70
					USSR Helsinki conf, 26/77,26/78, to 150keV,										70
					NPL Ryves plan activ, meas,, 120-600keV,										70
					KFK Froehner+ plan meas, rel, to H, 100-500keV,										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
423	$_{92}U^{238}$	Tot $\bar{g}$ Prod	$\sigma(\theta_{\bar{g}},E_{\bar{g}})$	II	.001-		10			10		BET	Bayard	DRDT	67
					REQ COM: Accuracy 10 per in spectrum										67
					Gamma ray spectrum desired at intervals of 0.5 MeV										67
					in gamma energy										67
					Gammas of all energies wanted										67
					For shielding and $\bar{g}$ heating calculations										67
					STATUS: GRT John+ report capture spectra to neutron energy										70
					of 100 kev, NCSAC-33.										70
					BNL Chrien+ report spectra 6-600eV, NCSAC-33.										70
					TNC Tucker+, data at 1.09,2.1,3,4,5,14.8MeV.										69
					ORO-2791-17.										69
					ANL Bollinger is doing resonance averaged spectra.										70
424	$_{92}U^{238}$	$\sigma_{n,\bar{g}}$ wrt	$\sigma_{n,f}$ Pu^{239}	I		10-	10	1.5	-7			ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Craven	DRDT	69
					REQ COM: Needed is ratio of capture cross section of										69
					U^{238} to fission cross section of Pu^{239}.										69
					Direct ratio needed to supplement separate measure										69
					Accuracy 1.5 per below 300 keV, 7 per above.										69
					Intermediate accuracy would be useful on near term										69
					STATUS: ANL Poenitz reports ratio 400-1400kev, Nuc. Sci.										70
					Eng. 40. 383(1970).										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
425	$_{92}U^{238}$	Delayd $\bar{\gamma}$ Y	$P(E_{\bar{\gamma}},T^{1/2})$	I	Th-	to	15		5			LASL	Keepin	OSMM	69
				I			2,2,14				35*	BNL	Kouts	OSMM	69
				I	Fiss.	Spect.	Source				35*	BNL	Kouts	OSMM	69
					REQ COM: High-resolution absolute $\bar{\gamma}$-ray yields required.										69
					Time and energy spectra also of interest.										69
					Ultimately, assign disc. $\bar{\gamma}$'s to specif. fis. prod.										69
					Isotopic signatures for nondestructive assay tech.										69
					(*): Delayed $\bar{\gamma}$ yields with factors of two from										69
					neutron-induced fission products.										69
					For $E_{\bar{\gamma}}$ > 2 MeV, energy distributions and half-										69
					lives required.										69
					STATUS: BNL Chrien+ report delayed spectra, thermal and										70
					resonance, NCSAC-33.										70
426	$_{92}U^{238}$	Delayd f Y		II	Th-		15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times										69
					(>10 ns) required.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
427	$_{92}U^{238}$	Res Par		I		*				10		AI	Alter	DRDT	69
												ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69

REQ COM: *Needed for Doppler effect on fast reactors, 69
to as high energy as can be measured, 69
Need answers to questions of missing p-wave 69
levels and uncertainty of gamma-widths, 69
Accuracy of 20 percent would be useful, 69

STATUS: LASL Glass, NBS Spec, Pub, 299, 30 eV to 2 keV 68
ANL Bollinger, PR171 1293, 4-170 eV 68
RPI Block plans average capture, total vs temp, 70
COL Arbo+ analysis in progress, NCSAC-33, 70
BCMN Carraro+ Helsinki conf, CN-26/17, to 6keV, 70
BCMN Rohr, Helsinki conf, CN-26/18, $\bar{\Gamma}_{\gamma}$ for 28 res, 70
HAR Moxon, AERE-PR/NP 16 will get param, to 300eV, 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
428	$_{93}Np^{237}$	$\sigma_{n,2n}$		II			Ths-15			10		SRL	Dessauer	DP	67
				II			Ths-10			10		GE	Snyder	DRDT	69
		$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70

REQ COM: To evaluate contamination of Pu^{238} by Pu^{236} 67
Also needed for control of U-232 production 69
Measurements with lower accuracy not helpful, LRL, 70

STATUS: No active work 69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
429	$_{93}Np^{237}$	$\sigma_{n,f}$		II		1-	5			10		SRL	Dessauer	DP	67
					REQ COM: Subthreshold to several MeV, for Pu^{238} production.										67
					STATUS: LASL Brown+ LA-4372, to 3MeV, probably fill this.										70
					LASL Hoffman+ from Physics-8 event, NCSAC-31.										70
430	$_{93}Np^{237}$	Fis Ratio	wrt U^{235}	III	20-	50				10		LASL	Hansen	DMA	66
				I		50-	1		5			LASL	Hansen	DMA	66
				II			1-15	1				LASL	Hansen	DMA	66
					REQ COM: < 50 keV; E_n(res) = 30 per; E_n(calib) = 10 per.										69
					> 50 keV; E_n(res) = 3 per; E_n(calib) = 1 per.										69
					STATUS: None which satisfy accuracy requirements.										69
431	$_{93}Np^{237}$	$\sigma_{n,\gamma}$		I	.001-	1		3-	to	10		PNWL	Dawson	DP	67
				I	.001-	1						GE	Snyder	DRDT	67
				II		1-	5					SRL	Dessauer	DP	67
					REQ COM: Accuracy 3 per interval Th-10 eV										67
					Accuracy 5 per in $\bar{\sigma}_n$.										67
					Accuracy 10 per in $\bar{\sigma}_\gamma$, from thermal to 1keV,										67
					For thermal reactor calc. and Pu-238 prod.										67
					STATUS: COL Camarda+ NCSAC-33, total, capture to 5 keV.										70
					LASL Hoffman+ from Physics-8 event, NCSAC-31.										70
					MOL Poortmans+, Knoxville conf. res. par. to 70eV.										71

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
432	* $_{93}Np^{238}$	$\sigma_{n,\gamma}$		II	Th-	1				10		PNWL	Dawson	DP	67
					REQ COM: Needed to evaluate Pu^{238} production.										67
					*Radioactive sample - 2.1 days										67
					STATUS: None										69
433	$_{94}Pu^{238}$	$\sigma_{n,2n}$		I			Thr-15			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
434	$_{94}Pu^{238}$	$\sigma_{n,3n}$		I			14				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
435	$_{94}Pu^{238}$	$\sigma_{n,f}$		I			1-10			10		AI	Alter	DRDT	69
					REQ COM: Needed for criticality of isotopic heat sources.										69
					STATUS: LASL Silbert+ LA-4108-MS gives tabulation.										69
					LASL Drake has data from Pomma rd event										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
436	$_{94}Pu^{238}$	Fis Ratio	wrt U^{235}	I		10-	5	3				LASL	Hansen	DMA	66
					REQ COM: Appropriate calibration and resolution on E_n.										69
					STATUS: None which satisfy accuracy requirements.										69
437	$_{94}Pu^{238}$	Nu Bar		II		10-	10		5			AI	Alter	DRDT	67
					REQ COM: Needed to determine criticality of isotopic										67
					heat sources										67
					STATUS: LRL Alvarez will try NU*σ_f rel. to U^{235} to 3MeV.										70
438	$_{94}Pu^{238}$	Nu Bar	Prompt	I		10-	15	3				LRL	Howerton	DMA	62
					REQ COM: None.										69
					STATUS: None.										69
439	$_{94}Pu^{238}$	$\sigma_{n,\gamma}$		I	Th-	1				10		PNWL	Dawson	DP	67
				II		1-	10			10		AI	Alter	DRDT	69
					REQ COM: Pu-238 production and to determine criticality										69
					of isotopic heat sources.										69
					STATUS: LASL Silbert+ gives res. params to 200eV,NCSAC-33.										70
					INC Young,NSE 30, 365, resonance par. to 190 eV.										69

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
440	$_{94}Pu^{238}$	$\sigma_{n,\gamma}$		II	Th-	to	2			10		GRT	Russell	OSMM	69
					REQ COM: Needed for comparison with Pu^{239} $\sigma_{\gamma,n}$.										69
					STATUS: LASL, Silbert, WASH-1124, has data to be analyzed.										69
441	$_{94}Pu^{238}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: LASL Silbert has capture data to be analyzed.										69
442	$_{94}Pu^{238}$	$\sigma_{n,p}$		II		to	15				50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
443	$_{94}Pu^{238}$	Destruct	of Target	I		1-	1		5			LASL	Motz	DMA	66
				I		1-	15			10		LRL	Howerton	DMA	70
					REQ COM: None.										66
					STATUS: LASL Silbert+, Drake fission data available.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
444	$_{94}Pu^{239}$	Elastic	$\sigma(\theta_n)$	I			1-3			10		ANL	Avery	DRDT	69
				I			1-3			10		LMFB	Hemmig-AEC	DRDT	69
				II			1-7			10		LASL	Diven	DMA	67
					REQ COM: Energy resolution 500 keV or better.										69
					STATUS: ANL Smith has new data to 1.5MeV.										70
445	$_{94}Pu^{239}$	Inelastic	$\sigma(E_{n'})$	I		100-	10				20	KAPL	Ehrlich	DRDT	67
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: None										69
					STATUS: ANL Smith has new data to 1.5MeV.										70
					HAR Cavanaugh AERE-R 5972, 1.5-5.5MeV in progress.										70
446	$_{94}Pu^{239}$	Emission	$\sigma(E_{n'})$	I			5-15				20	LRL	Howerton	DMA	70
					REQ COM: Energy range of interest: $0.2MeV \leq E_{n'} \leq E_n$.										70
					STATUS: None.										70
447	$_{94}Pu^{239}$	$\sigma_{n,2n}$		I			Ths-15			10		LASL	Barr	DMA	67
				II			6-10			10		LMFB	Hemmig-AEC	DRDT	69
		$\sigma_{n,2n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: Needed to predict buildup of Pu^{238}. LMFBR										67
					STATUS: LASL Barr gets 150mb ±20per at 14MeV, priv. comm.										70
					Measurements with lower accuracy not helpful. LRL.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
448	$_{94}Pu^{239}$	$\sigma_{n,3n}$		II			Ths-15				20	LASL	Barr	DMA	67
		$\sigma_{n,3n}$	Act.	I			Ths-15		≤5			LRL	Howerton	DMA	70
					REQ COM: None										67
					STATUS: None										67
449	$_{94}Pu^{239}$	$\sigma_{n,f}$		I	Th-1			1				BET	Bayard	DRDT	67
												GE	Snyder	DRDT	67
												BNL	Chernick	DRDT	67
					REQ COM: Standard parameter for Pu-fueled reactor										67
					Direct measurements disagree										67
					Improved precision needed for thermal reactors										67
					STATUS: Hanna+ L.S. eval. of 2200m/sec value. At.En.Rev.7.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
450	$_{94}Pu^{239}$	$\sigma_{n,f}$		I	1-	to	10	2-	5			ANL	Avery	DRDT	69
				I	1-	to	10	2-	5			BET	Bayard	DRDT	69
				I	1-	to	10	2-	5			GE	Snyder	DRDT	69
				I	1-	to	10	2-	5			LMFB	Hemmig-AEC	DRDT	69
				I		50-	8	1				NCSC	Landon	DR	69
					REQ COM: Highest priority for fast reactor calculations,										69
					Accuracy 3 per below 20 keV, 2 per 20 keV to 3 MeV										69
					Accuracy 5 per in energy range 3-6 MeV										69
					Verification of current accuracy or intermediate										69
					improvement would be useful,										69
					Even higher accuracy may be needed, long term,										69
					STATUS: U, Mich, Knoll+ absolute meas, 24,140,261,966keV,										70
					LASL Farrell+ from Physics-8 event, NCSAC-33,										70
					LRL Czirr+, Nuc,Sci,Eng,41,56, 100eV to 30keV,										70
					ORNL Gwin+ Nuc,Sci,Eng,40,306, and ORNL-4592,										70
451	$_{94}Pu^{239}$	Fis Ratio	wrt U^{235}	I		1-	14	1				LMFB	Hemmig-AEC	DRDT	69
				I		10-	15	1				LASL	Hansen	DMA	66
					REQ COM: Energy resolution 3 per,, energy calibration 1 per										69
					STATUS: No measurements which approach 1 percent,										71

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
452	$_{94}Pu^{239}$	Nu Bar		I	Th-	to	10	≤1*				AI	Alter	DRDT	66
												ANL	Avery	DRDT	66
												GE	Snyder	DRDT	66
												LMFB	Hemmig-AEC	DRDT	66
												ORNL	Craven	DRDT	66

REQ COM: *Requested accuracy 1/2 percent 1 keV to 3 MeV; 69
otherwise 1 percent. Accuracy of 1.5 percent 69
would be useful. 69
Highest priority for fast reactor calculations. 69

STATUS: AWRE Mather+, EANDC(UK)121AL, 40keV-1.2MeV. 70
BRC Soleilhac planning res. meas. at Saclay linac. 70
ORNL Weston NCSAC-33, in progress over resonances. 70
Hanna+ L.S. eval. of 2200m/sec value. At.En.Rev.7. 69
IAEA Konshin+ INDC(NDS)19-N give compilation. 70
AWRE Mather+ AWRE 086/70 gives recomm. values. 70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
453	$_{94}Pu^{239}$	Delayd n Y	$P(E_{n'})$	II	Th-	to	5		5			ANL	Avery	DRDT	69
				II	Th-	to	5		5			LMFB	Hemmig-AEC	DRDT	69
				I	Th-	to	15		5			LASL	Keepin	OSMM	69
				II	Th,		2,2,14			10		BNL	Kouts	OSMM	69
				II	Fiss,	Spect,	Source			10		BNL	Kouts	OSMM	69
					REQ COM: Needed for analysis of fast criticals and										69
					fast reactor calculations,										69
					Yield, half life, and energy needed, DRDT										69
					Spectrum of neutrons in different groups character										69
					by differing decay constants, BNL										69
					Absolute numbers of delayed neutrons required,										69
					High res, Time and Energy spectra also of interest										69
					Isctopic signatures for nondestructive assay, LASL										69
					STATUS: LASL Krick+ have probably filled this, NCSAC-33,										70
454	$_{94}Pu^{239}$	Eta		I	Th-1			1				BNL	Chernick	DRDT	67
				I	Th-1			1				GE	Snyder	DRDT	67
				II	1-10			3				GE	Snyder	DRDT	67
				II	1-10			3				ORNL	Maienschein	DRDT	67
					REQ COM: For Pu-fueled reactor calculations										67
					Desire accuracy to 0,5 per, Th-1 eV										67
					Standard parameter, want value at 0,025 eV,										67
					STATUS: Hanna+ L,S, eval, of 2200m/sec value, At,En,Rev,7,										69
					ANL deVolpi has unpublished data at thermal										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
455	$_{94}Pu^{239}$	Alpha		I	100-	to	10	3	to	10		ANL	Avery	DRDT	67
												BET	Bayard	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
												ORNL	Maienschein	DRDT	69

REQ COM: Accuracy 5 per in range 100 eV to 1 keV, 69
Accuracy 3 per in range 1 keV to 50 keV, 69
Accuracy 5 per in range 50 to 600 keV, 69
Accuracy 10 per in range 600 keV-10 MeV, 69
Accuracy 20 per in range 100 eV to 600 keV useful, 69
Energy resol, needed below 20keV to be determined, 69
Capture cross section would be equally useful, 69

STATUS: AERE Sowerby+ Helsinki conf, CN-26/33, 100eV-30keV 70
USSR Ryabov, Helsinki conf, CN-26/47 to 30keV, 70
ORNL Gwin+ Nuc,Sci,Eng,40,306 reports data <30keV, 70
LRL Czirr+Nuc, Sci, Eng,41,56(1970), 100eV-30keV, 70
LASL Farrell+ to 10keV NCSAC-33, 70
SACLAY Blons+ have measurements in progress, 70
KFK Bandl is measuring 15-60keV, 70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
456	$_{94}Pu^{239}$	Delayd $\bar{g}$ Y	$P(E_{\bar{g}}, T^{1/2})$	I	Th-		15		5			LASL	Keepin	OSMM	69
				I	Th,		2,2,14				35*	BNL	Kouts	OSMM	69
				I	Fiss.	Spect.	Source				35*	BNL	Kouts	OSMM	69

REQ COM: High-resolution absolute $\bar{g}$-ray yields required. 69
Time and energy spectra also of interest. 69
Ultimately, assign disc. $\bar{g}$'s to specif. fis. prod. 69
Isotopic signatures for nondestructive assay. LASL 69
(*): Delayed $\bar{g}$ yields within factors of two from 69
neutron-induced fission products. 69
For $E_{\bar{g}}$ > 2 MeV, energy distributions and half- 69
lives required. BNL 69

STATUS: None 69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
457	$_{94}Pu^{239}$	Res Par		I	Th-500					10		ANL	Avery	DRDT	69
												BET	Bayard	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: For thermal reactors, and to determine statistical										69
					parameters for extrapolation to higher energy for										69
					fast reactor calculations.										69
					Exact requirements on accuracy not yet established										69
					STATUS: Lambropoulos gives L.S. Adler fit 40-100eV.										70
					Nuc. Sci. Eng. 40, 342(1970).										70
					BNL Ohrien infers spins from (n,γ) spectrum.										70
					SAC Blons, Helsinki conf. CN-26/63, to 660eV.										70
					SAC Trochon, Helsinki conf. CN-26/61, J to 660eV.										70
					SAC Derrien, Helsinki conf. CN-26/61, multilevel										70
					analysis to 160eV, in progress above.										70
					SAC Ribon has evaluation of SL res. par. in prog.										70
458	$_{94}Pu^{239}$	Fis Prod Y	of Xe^{135}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of fission product poison										67
					Cumulative and direct (inclusive of										67
					15 M isomer) is wanted.										67
					STATUS: None.										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
459	$_{94}Pu^{239}$	Fis Prod Y	of Cs^{137}	II	Th			1				BET	Bayard	DRDT	67
												SRL	Dessauer	DP	67
					REQ COM: For burnup indicator standard.										67
					STATUS: None.										67
460	$_{94}Pu^{239}$	Fis Prod Y	of Nd^{147}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of Fission product poisons.										67
					STATUS: None.										67
461	$_{94}Pu^{239}$	Fis Prod Y	of Sm^{149}	II	Th			3				BET	Bayard	DRDT	67
					REQ COM: For calculation of Fission product poisons										67
					STATUS: None.										67
462	$_{94}Pu^{239}$	Delayd f Y		II	Th-	to	15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times										69
					(>10 ns) required.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
463	$_{94}Pu^{240}$	Inelastic		II		45-	10				20	GE	Snyder	DRDT	66
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Emission σ's might be equally useful at the higher energies.										69
					STATUS: ANL Lambropoulos+ have data 0.1-1.5Mev,NCSAC-33.										70
464	$_{94}Pu^{240}$	$\sigma_{n,f}$		I		500-	10		4			GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Important for fast reactor calculations.										69
					STATUS: None to 4 percent accuracy.										69
465	$_{94}Pu^{240}$	Fis Ratio	wrt U^{235}	III		1-100		2				ACRP	Hannum	DRDT	67
				II		1-100		2				LASL	Hansen	DMA	67
				II		100-	15	2				LASL	Hansen	DMA	67
					REQ COM: < 100 keV; E_n(res) = 6 per; E_n(calib) = 2 per.										67
					> 100 keV; E_n(res) = 3 per; E_n(calib) = 2 per.										67
					STATUS: None which satisfy accuracy requirements.										69
466	$_{94}Pu^{240}$	Nu Bar		II		Thr-	10		5			ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy of 2 per may ultimately be needed.										69
					STATUS: IAEA Konshin+ INDC(NDS)19-N give compilation.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
467	$_{94}Pu^{240}$	Delayd n Y	$P(E_{n'})$	II		Thr-	15		5			LASL	Keepin	OSMM	69
				II			2,2,14			10		BNL	Kouts	OSMM	69
				II	Fiss.	Spect.	Source			10		BNL	Kouts	OSMM	69
					REQ COM: Absolute numbers of delayed neutrons required.										69
					High res. Time and energy spectra also of interest										69
					Isotopic signatures for nondestructive assay. LASL										69
					Spectrum of neutrons in the different groups.										69
					Characterized by differing decay constants. BNL.										69
					STATUS: None.										69
468	$_{94}Pu^{240}$	$\sigma_{n,\gamma}$		I	Th-100			3				GE	Snyder	DRDT	67
					REQ COM: Improved precision needed for thermal reactors.										67
					STATUS: RPI Hockenbury+ NCSAC-33, 60eV-90keV, res. param.										70
469	$_{94}Pu^{240}$	$\sigma_{n,\gamma}$		I	500-	150			5			ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy of 15 per would be useful.										69
					High priority for fast reactor calculations										69
					STATUS: RPI Hockenbury+ NCSAC-33, 60eV-90keV, res. param.										70
					HAR Moxon+ have data 0.5keV, AERE-R5945.										70
					KFK Froehner+ plan measurements 10-200keV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
470	$_{94}Pu^{240}$	Alpha		II		150-	7			10		LRL	Howerton	DMA	62
					REQ COM: None.										62
					STATUS: None.										62
471	$_{94}Pu^{240}$	Res Par		III	100-	5				10		ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Needed for fast calculations including Doppler eff										69
					STATUS: BCMN Weigmann JNE 22 317, 38-820eV.										68
					BCMN Kolar JNE 22 299, 20eV-5.7keV.										68
					BCMN Migneco, NP A112 527, fission to 3.4 keV.										69
					RPI Hockenbury has capture data to be analyzed.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
472	$_{94}Pu^{240}$	Delayd $\bar{\gamma}$ Y	$P(E_{\bar{\gamma}}, T^{1/2})$	II		Thr-	15		5			LASL	Keepin	OSMM	69
				I			2,2,14				35*	BNL	Kouts	OSMM	69
				I	Fiss.	Spect.	Source				35*	BNL	Kouts	OSMM	69
					REQ COM: High-resolution absolute gamma-ray yields required										69
					Time and energy spectra also of interest,										69
					Ultimately, assign discrete $\bar{\gamma}$'s to specific prod.										69
					Isotopic signatures for nondustructive assay. LASL										69
					(*): Delayed gamma yields with factors of two from										69
					neutron-induced fission products.										69
					For $E_{\bar{\gamma}}$ > 2 MeV, energy distributions and half-										69
					lives required. BNL.										69
					STATUS: None.										69
473	$_{94}Pu^{240}$	Delayd γ Y		III	Th-	to	15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times										69
					(>10) NS) required.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
474	$_{94}Pu^{241}$	$\sigma_{n,f}$		I	Th-	30		3	to	10		ANL	Avery	DRDT	69
												GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy to 3 per from thermal to 10 eV,										69
					10 per from 10eV to 30keV,										69
					Ratio to U^{235} or Pu^{239} would be useful										69
					STATUS: Hanna+ L.S. eval. of 2200m/sec value, At.En.Rev.7,										69
					U. Mich. Knoll+ absolute meas. 24,140,261,966keV.										70
					AWRE Moat+ have capture and fission, Physics-7.										69
					BCMN Migneco+. Helsinki conf. CN-26/95, to 2keV.										70
					SAC Blons. Helsinki conf. CN-26/60, to 30keV.										70
475	$_{94}Pu^{241}$	Fis Ratio	wrt U^{235}	II		10-	15	1				LASL	Hansen	DMA	66
					REQ COM: Energy resolution 3 per, energy calibration 1 per.										69
					STATUS: None which satisfy accuracy requirements.										69
476	$_{94}Pu^{241}$	Nu Bar		II	Th-	to	10	3				AI	Alter	DRDT	69
												ANL	Avery	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy of 6 per would be useful.										69
					STATUS: Hanna+ L.S. eval. of 2200m/sec value. At.En.Rev.7.										69
					Conde+. J.Nuc.En. 22,53, 5 values from 0.52-15MeV.										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
477	$_{94}Pu^{241}$	Nu Bar	Prompt	II		500-	14	3				LRL	Howerton	DMA	62
					REQ COM: None.										62
					STATUS: Conde, JNE 22 53, 0.52-15 MeV										68
478	$_{94}Pu^{241}$	$\sigma_{n,\bar{\eta}}$		I	Th-	30		3				GE	Snyder	DRDT	67
					REQ COM: Accuracy to 3 per in Eta.										67
					Improved precision needed for thermal reactors.										67
					Also wanted for fast reactors.										67
					X-Sec. or Alpha wanted.										67
					STATUS: INC Smith+ have absolute eta <1eV, NCSAC-33.										70
					AWRE Moat+ have capture and fission, Physics-7.										69
479	$_{94}Pu^{241}$	Alpha		II		1-	2				20	GE	Snyder	DRDT	69
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Capture cross section would be equally useful.										69
					STATUS: AWRE Moat+ have capture and fission, Physics-7.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
480	$_{94}Pu^{241}$	Res Par		II	Th-400				5-	10		KAPL	Ehrlich	DRDT	67
												ANL	Avery	DRDT	67
					REQ COM: Accuracy 5 per from thermal to 100 eV,										67
					Accuracy 10 per from 100 eV to 400 eV,										67
					20 per would be useful for thermal										67
					and fast reactor calculations,										67
					STATUS: INC Smith, WASH-1136 is evaluating for ENDF/B,										69
					BCMN Kolar is analysing total and fission<2keV,										70
					SAC Blons+, Knoxville conf., anal. σ_T and σ_f.										71
481	$_{94}Pu^{241}$	Delayd n Y	$P(E_{n'})$	II	Th-	to	15		5			LASL	Keepin	OSMM	69
					REQ COM: Absolute numbers of delayed neutrons required,										69
					High res, Time and energy spectra also of interest										69
					Isotopic signatures for nondestructive assay tech,										69
					STATUS: LASL Krick+ have data to 1.8 Mev, NCSAC-33.										70
482	$_{94}Pu^{241}$	Delayd $\bar{g}$ Y	$P(E_{\bar{g}}, T^{1/2})$	II	Th-	to	15		5			LASL	Keepin	OSMM	69
					REQ COM: High-resolution absolute gamma-ray yield required										69
					Time and energy spectra also of interest,										69
					Ultimately assign disc, gamma's to specif. fis. pr										69
					Isotopic signatures for nondestructive assay tech,										69
					STATUS: None which meet the accuracy requirements,										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
483	$_{94}Pu^{241}$	Delayd f Y		III	Th-	to	15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times (>10 ns) required. Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69
484	$_{94}Pu^{242}$	$\sigma_{n,2n}$		I			Thr-15			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
485	$_{94}Pu^{242}$	$\sigma_{n,f}$		I	Th			2				SRL	Dessauer	DP	67
					REQ COM: To evaluate Cm and Cf production.										67
					STATUS: None.										69
486	$_{94}Pu^{242}$	Nu Bar		II		500-	10		5			LMFB	Hemmig-AEC	DRDT	69
					REQ COM: None										69
					STATUS: None										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
487	$_{94}Pu^{242}$	Nu Bar	Prompt	II		500-	14	3				LRL	Howerton	DMA	62
					REQ COM: None.										69
					STATUS: None.										69
488	$_{94}Pu^{242}$	Delayd n Y	$P(E_{n'})$	II	Th-		15		5			LASL	Keepin	OSMM	69
					REQ COM: Absolute numbers of delayed neutrons required.										69
					High res. Time and Energy spectra also of interest										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which meets the accuracy requirements.										69
489	$_{94}Pu^{242}$	$\sigma_{n,\gamma}$		I	Th-	to	7	3-			20	GE	Snyder	DRDT	67
												PNWL	Dawson	DP	67
												SRL	Dessauer	DP	67
												LMFB	Hemmig-AEC	DRDT	69
					REQ COM: Accuracy: 3 per to 100 eV; 10 per. 100 eV to 1 keV										67
					Accuracy: 15-20 per from 1 keV to 7 MeV, prior. 2.										67
					Accuracy: Res. params. to 10-20 per below 10 keV.										67
					For fast breeder calc., Cm. Cf production.										67
					STATUS: James. Nuc.Phys. A123,24 report data to 29keV.										69
					INC Young. IN-1132 reports res. params. to 150eV.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
490	$_{94}Pu^{242}$	$\sigma_{n,\gamma}$	Act	I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
491	$_{94}Pu^{242}$	Delayd γ Y	$P(E_\gamma, T^{1/2})$	II	Th-		15		5			LASL	Keepin	OSMM	69
					REQ COM: High-resolution absolute γ-ray yields required.										69
					Time and energy spectra also of interest.										69
					Ultimately, assign disc. γ's to specif. fis. prod.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which meet the accuracy requirements.										69
492	$_{94}Pu^{242}$	$\sigma_{n,p}$		II			14				20	LASL	Bell	DMA	67
					REQ COM: For interpretation of heavy element production.										67
					STATUS: None										69
493	$_{94}Pu^{242}$	Delayd f Y		III	Th-		15			15		LASL	Keepin	OSMM	69
					REQ COM: Absolute yields of fission isomers versus times										69
					(>10 ns) required.										69
					Isotopic signatures for nondestructive assay tech.										69
					STATUS: None which gives the necessary energy dependence.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
494	$_{95}Am^{241}$	Total		II	Th			2-3				PNWL	Dawson	DP	69
					REQ COM: Accuracy 2-3 per in thermal energy range										69
					STATUS: No active work.										69
495	$_{95}Am^{241}$	$\sigma_{n,2n}$		I			Thr-15			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: LASL Barr gets 250mb ±20per at 14MeV, priv. comm.										70
496	$_{95}Am^{241}$	$\sigma_{n,\bar{E}}$		I	Th-	1				10		SRL	Dessauer	DP	67
												PNWL	Dawson	DP	67
												LRL	Howerton	DMA	70
					REQ COM: Production of both Am^{242} and Am^{242m} wanted.										67
					PNW needs values at 0.0253 eV, priority 2.										67
					Needed for Pu^{238} program, and production of Cm^{244}.										67
					STATUS: INC Schuman reports new RI measurement, WASH-1136.										69
497	$_{95}Am^{241}$	$\sigma_{n,\bar{E}}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Required is cross section for production of both										69
					Am^{242} and Am^{242m}.										69
					STATUS: none.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
498	$_{95}Am^{242}$	Total		II	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: Resonance energies needed to determine C_m^{244} prod.										67
					STATUS: No active work.										70
					Probably satisfied by existing fission data.										70
499	$_{95}Am^{242}$	$\sigma_{n,f}$		II	Th-	10				10-	20	SRL	Dessauer	DP	69
					REQ COM: Cross section needed for 150 year isomer.										69
					Require accuracy 10 per in thermal value and RI.										69
					Needed to determine Cm^{244} production.										69
					STATUS: INC Schuman reports new RI measurement, WASH-1136.										69
500	$_{95}Am^{242}$	$\sigma_{n,\bar{\gamma}}$		I	Th-	to	5			<10		LRL	Howerton	DMA	69
				II	Th-	10				10-	20	SRL	Dessauer	DP	69
					REQ COM: Needed for evaluation. LRL.										69
					Cross section wanted for 152 year isomer.										69
					Need resonance integral and thermal value to										69
					10 percent, to evaluate Cm^{244} production. SRL.										69
					STATUS: INC Schuman reports new RI measurement, WASH-1136.										69
					Bowman, Phys.Rev.166,1219 gives res. par. to 4eV.										68

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
501	$_{95}Am^{243}$	Total		I	Th-	10				10		SRL	Dessauer	DP	67
				I	Th-	10		2				PNWL	Dawson	DP	67
					REQ COM: Res. int. wanted, for C_m^{244} production										67
					Needed for long term reactivity calculations.										67
					STATUS: ORNL Harvey+ NCSAC-33, totals to 1kev, res. par.										70
502	$_{95}Am^{243}$	$\sigma_{n,\bar{g}}$		I	Th-	10				10		SRL	Dessauer	DP	67
												GE	Snyder	DRDT	67
					REQ COM: Res. int. wanted to determine Cm^{244} production.										67
					Needed for long term reactivity calculations										67
					Require 5-10 per in both thermal value and RI.										67
					STATUS: ORNL Harvey+ NCSAC-33, totals to 1kev, res. par.										70
503	* $_{96}Cm^{242}$	$\sigma_{n,\bar{g}}$		II	Th						20	SRL	Dessauer	DP	67
					REQ COM: Needed to evaluate production of C_m^{244}.										67
					*Target half-life 163d.										67
					STATUS: None.										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
504	* $_{96}Cm^{242}$	Res Par		II	Th-	1					20	PNWL	Dawson	DP	67
					REQ COM: Radiative capture and neutron widths wanted,										67
					Pu-238 prod,										67
					Accuracy 20 per in widths										67
					*Target half-life 163d,										67
					STATUS: None,										67
505	$_{96}Cm^{243}$	Total		II	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: Resonance energies wanted to evaluate Cm^{244} prod,										67
					Accuracy 10 per in res, integral										67
					STATUS: INC Berreth+ Trans, ANS 12,280(1969), res, params,										69
506	$_{96}Cm^{243}$	$\sigma_{n,f}$		II	Th-	10				10		SRL	Dessauer	DP	67
				I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: Needed to evaluate Cm^{244} production,										67
					Accuracy 10 per in resonance integral										67
					STATUS: INC Simpson has res, param, to 6 eV,										69
					LASL Fullwood has data from 30 eV up,										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
507	$_{96}Cm^{243}$	$\sigma_{n,\bar{\varepsilon}}$		II	Tn-	10			5-	10		SRL	Dessauer	DP	69
					REQ COM: Require alpha to 10 percent.										69
					Accuracy 5-10 per in thermal value and R.I.										69
					STATUS: INC Simpson, WASH-1136, has res. param. to 6 eV.										69
508	$_{96}Cm^{244}$	Total		II	Th-	10			5			SRL	Dessauer	DP	67
					REQ COM: Need 5 per in R. I. to evaluate Cm^{244}, Cf^{252} prod.										67
					STATUS: INC Berreth+ Trans. ANS 12,280(1969), res. params.										69
					LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
509	$_{96}Cm^{244}$	$\sigma_{n,2n}$		I			Tnr-15			15		LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: none.										69
510	$_{96}Cm^{244}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: Needed to evaluate Cf production.										69
					STATUS: LASL Fullwood WASH 1136 has data 30 eV up.										69
					LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
					LASL Barton+ NCSAC-33, above threshold in progress										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
511	$_{96}Cm^{244}$	Nu Bar		II		10-	10			10		AI	Alter	DRDT	67
					REQ COM: For criticality of isotopic heat sources										67
					STATUS: None										67
512	$_{96}Cm^{244}$	$\sigma_{n,\gamma}$		I		10-	10			10		GE	Snyder	DRDT	67
				I		10-	10			10		AI	Alter	DRDT	67
				II	Th-	10			5-	10		SRL	Dessauer	DP	69
					REQ COM: For criticality of isotopic heat sources										67
					Accuracy 5-10 per in resonance integral.										67
					Needed to evaluate Cf production.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
					INC Schuman reports resonance integral, WASH-1136.										69
513	$_{96}Cm^{244}$	$\sigma_{n,\gamma}$		I		.1-300					50	LRL	Howerton	DMA	69
					REQ COM: Needed for evaluation.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
514	$_{96}Cm^{245}$	Total		I	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: Need 10 per in res. int., to evaluate Cf prod.										67
					STATUS: INC Berreth+ Trans. ANS 12,280(1969), res. params.										69
					LASL Keyworth+ NCSAC-33, res. param. >20eV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
515	$_{96}Cm^{245}$	$\sigma_{n,f}$		I	Th-	10				10		SRL	Dessauer	DP	67
				I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: Need 10 per in σ and res. int., to evaluate C_f pro										67
					Need integral alpha to 10 per, thermal and res.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
516	$_{96}Cm^{245}$	$\sigma_{n,\bar{\gamma}}$		I	Th-	10				10		SRL	Dessauer	DP	69
					REQ COM: Need 10 per in res. int., to evaluate Cf prod.										69
					Need integral alpha to 10 per, thermal and res.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
517	$_{96}Cm^{246}$	Total		I	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: Resonance structure desired, to evaluate Cf prod.										67
					Accuracy 10 per in resonance integral										67
					STATUS: INC Berreth+ Trans.ANS 12,280, res. params.										69
					LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
518	$_{96}Cm^{246}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: To evaluate Cf^{252} production by R-process.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
519	$_{96}Cm^{246}$	$\sigma_{n,\gamma}$		I	Th-	10				10		SRL	Dessauer	DP	69
					REQ COM: Need accuracy 10 per in resonance integral,										69
					Resonance structure desired, to evaluate Cf prod.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
					INC Schuman reports resonance integral, WASH-1136.										69
520	$_{96}Cm^{247}$	Total		I	Th-	10					20	SRL	Dessauer	DP	67
					REQ COM: Need 20 per in res. int. to evaluate Cf prod.										67
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
521	$_{96}Cm^{247}$	$\sigma_{n,f}$		I	Th-	10			5-	10		SRL	Dessauer	DP	67
				I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: Need 5-10 per in thermal value and RI. SRL.										67
					Need 10 per in σ to evaluate Cf prod. by										69
					R-process. LASL.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
522	$_{96}Cm^{247}$	$\sigma_{n,\gamma}$		I	Th-	10			5-	10		SRL	Dessauer	DP	69
					REQ COM: Need 5-10 per in res. int. and thermal value,										69
					to evaluate Cf production.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
523	$_{96}Cm^{248}$	Total		I	Th-	10					20	SRL	Dessauer	DP	67
					REQ COM: Need 50 per accuracy at thermal										67
					Need 20 per in res. int. to evaluate Cf prod.										67
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
524	$_{96}Cm^{248}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: To evaluate Cf production.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
					LASL Barton+ NCSAC-33, above threshold in progress										70
525	$_{96}Cm^{248}$	$\sigma_{n,\gamma}$		I	Th-	10				10		SRL	Dessauer	DP	69
					REQ COM: Need 10 per at thermal and in resonance integral										69
					to evaluate Cf production.										69
					STATUS: LASL Keyworth+ NCSAC-33, res. param. >20eV.										70
526	$_{97}Bk^{249}$	Total		I	Th-	10					20	SRL	Dessauer	DP	67
					REQ COM: Res. param. desired to evaluate Cf production.										67
					Need 20 per in resonance integral.										67
					STATUS: None.										70

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
527	$_{97}Bk^{249}$	$\sigma_{n,\bar{g}}$		I	Th-	10				10		SRL	Dessauer	DP	69
					REQ COM: For Cf production, 10 per thermal and RI.										69
					STATUS: None										69
528	$_{98}Cf^{249}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: None.										69
					STATUS: LASL Silbert+ NCSAC-33, data and res. param. >20eV										70
529	$_{98}Cf^{250}$	Total		I	Th-	10					20	SRL	Dessauer	DP	67
					REQ COM: Resonances desired to evaluate Cf production.										67
					Need 20 per in res. to evaluate Cf^{252} prod.										67
					STATUS: None.										69
530	$_{98}Cf^{250}$	$\sigma_{n,f}$		I	Th-	10				10		SRL	Dessauer	DP	67
				I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: To evaluate Cf production.										67
					Accuracy 10 per in res. integral. SRL.										67
					STATUS: None.										67

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
531	$_{98}Cf^{250}$	$\sigma_{n,\gamma}$		I	Th-	10				10		SRL	Dessauer	DP	69
					REQ COM: Need 10 per in res. int. to eval. Cf^{252} prod.										69
					STATUS: None										69
532	$_{98}Cf^{251}$	$\sigma_{n,\gamma}$		I	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: To evaluate Cf production.										67
					Accuracy 10 per in resonance integral.										67
					STATUS: None.										67
533	$_{98}Cf^{252}$	$\sigma_{n,f}$		I		10-100			10			LASL	Cowan	DMA	69
					REQ COM: None.										69
					STATUS: LASL Moore, WASH 1136 has data 30 eV up.										69
534	$_{98}Cf^{252}$	Nu Bar		I				.25				NCSC	Landon	DR	69
					REQ COM: Required is nubar for spontaneous fission of Cf^{252}										69
					as primary standard.										69
					STATUS: Hanna+ L.S. eval. of 2200m/sec value, At.En.Rev.7.										69
					NPL Axton has work in progress.										70

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
535	$_{98}Cf^{252}$	Nu Bar		II	Th-	to	10	<1				AI	Alter	DRDT	67
					REQ COM: Needed for isotope heat source work,										67
					A few points wanted in range 1-10 MeV										67
					STATUS: None,										67
536	$_{98}Cf^{252}$	$\sigma_{n,\gamma}$		I	Th-	10				10		SRL	Dessauer	DP	67
					REQ COM: To evaluate Cf production										67
					Accuracy 10 per in resonance integral,										67
					STATUS: None										67
537	* $_{98}Cf^{253}$	$\sigma_{n,\gamma}$		II	Th-	10					20	SRL	Dessauer	DP	67
					REQ COM: To evaluate Cf production										67
					Accuracy 20 per in res, integral										67
					*Target half-life 18d,										67
					Want to confirm that thermal cross sect, < 3b,										67
					STATUS: None,										69
538	* $_{99}Es^{253}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: *Target half-life 20d,										69
					STATUS: LASL Silbert WASH-1136 has data 30 eV up,										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY eV	keV	MeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
539	* $_{99}Es^{254}$	Alpha		II	Th-	20					20	LASL	Bell	DMA	67
					REQ COM: Needed to plan for production of Fm^{257}										67
					*Target half-life 480d.										67
					STATUS: None										69
540	* $_{100}Fm^{255}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: Measurement in presence of Es^{255} parent.										69
					*Target half-life 40d.										69
					STATUS: None										69
541	* $_{100}Fm^{257}$	$\sigma_{n,f}$		I		10-100				10		LASL	Cowan	DMA	69
					REQ COM: *Target half-life 94d.										69
					STATUS: ORNL Bemis+ ORNL-4581, 6100±600b σ_{abs}, pile neuts.										70
					LRL Wild NCSAC-33 find 3080±200b, thermal neuts.										70

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRIOR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
542	$_{2}He^{4}$	$\sigma_{p,x}$	$\sigma(E_x)$	II		25-100				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: D, T, and He^3.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
543	$_{2}He^{4}$	$\sigma_{p,x}$	$\sigma(E_x)$	II		300-	.6			10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: D, T, and He^3.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
544	$_{2}He^{4}$	$\sigma_{a,x}$	$\sigma(E_x)$	II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: D, T, and He^3.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
545	$_{3}Li^{6}$	Tot p Reac		III		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: (*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB PERSON ORG	YR
546	$_3Li^7$	Tot p Reac		III		25-600				10*		GSFC Reames NASA	67
					REQ COM: (*): requested accuracy 10 percent or a few mb.								69
					STATUS: none.								69
547	$_3Li^7$	$\sigma_{p,x}$		II		25-600				10*		GSFC Reames NASA	67
					REQ COM: x = each of the nuclides Li^6 and Be^7.								67
					(*): requested accuracy 10 percent or a few mb.								69
					STATUS: none.								69
548	$_4Be^7$	σ_{p,Li^6}		II		25-600					est.,*	GSFC Reames NASA	67
					REQ COM: (*): need an estimate of the amount of Li^6 formed.								67
					STATUS: none.								69
549	$_4Be^9$	Tot p Reac		III		25-600				10*		GSFC Reames NASA	67
					REQ COM: (*): requested accuracy 10 percent or a few mb.								69
					STATUS: none.								69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	INCIDENT ENERGY GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
550	$_5B^{10}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: Li^6, Li^7, Be^7, Be^9										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
551	$_5B^{11}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: Li^6, Li^7, Be^7, Be^9,										67
					Be^{10}, B^{10}.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
552	$_6C$	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I		~50					25	HASL	O'Brien	DBM	67
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					STATUS: none.										69

REQ #	TARGET Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
553	$_6C$	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	II		600-	2				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: One energy in interval.										66
					Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutron.										66
					STATUS: none.										69
554	$_6C^{12}$	$\sigma_{p,x}$		II		25-	1			10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: Li^6, Li^7, Be^7, Be^9,										67
					Be^{10}, Be^{11}, B^{10}, B^{11}, C^{10}, C^{11}.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
555	$_6C^{12}$	$\sigma_{\alpha,x}$		I		25-	1,2			10*		GSFC	Reames	NASA	69
					REQ COM: x = each of the stable and particle-stable isotopes with $3 \leq Z \leq 6$.										69
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
556	$_{6}C^{13}$	$\sigma_{p,x}$		I		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides Li^6, Li^7, Be^7, Be^{10}, Be^{11}										67
					B^{10}, B^{11}, B^{12}, C^{10}, C^{11}, C^{12}										67
					(*): requested accuracy 10 percent or a few mb.										67
					STATUS: none.										67
557	$_{7}N^{14}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the stable and particle-stable iso-										67
					topes with $3 \le Z$ 6.										67
					For Li^6 and Be^7 isotopes, below 100 MeV, only.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										67
558	$_{7}N^{15}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the stable and particle-stable iso-										67
					topes with $3 \le Z \le 7$.										67
					(*): requested accuracy 10 percent or a few mb.										67
					STATUS: none.										67

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
559	8 O	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I		~50					25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					STATUS: none.										69
560	8 O	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	II		600-	2				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: One energy in interval.										66
					Measurements at a few angles, one near 0°.										66
					Include very low (~1 MeV) neutrons.										66
					STATUS: none.										69
561	8 O	$\sigma_{\pi^{\pm},k\pi^{\pm}y}$	$\sigma(\theta_{\pi},E_{\pi})$	II			1-2				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Cross section for $\pi^{\pm}$ at one energy in interval.										66
					Measurements at a few angles, one near 0°.										66
					Low-energy (~50 MeV) pions should be included.										66
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
562	$_{8}O^{16}$	$\sigma_{p,x}$		I		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: Li^6, Li^7, Be^9, Be^{10},										67
					B^{10}, B^{11}, C^{10}, C^{11}.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
563	$_{8}O^{16}$	$\sigma_{p,x}$		I		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: C^{12}, C^{13}, C^{14}, N^{13}, N^{14},										67
					N^{15}, O^{15}.										67
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69
564	$_{8}O^{16}$	$\sigma_{\bar{a},x}$		I		25-	1.2			10*		GSFC	Reames	NASA	69
					REQ COM: x - each of the stable and particle-stable iso-										69
					topes with $3 \leq Z \leq 7$.										69
					(*): requested accuracy 10 percent or a few mb.										69
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
565	$_{8}O^{18}$	$\sigma_{p,x}$		I		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: $Li^{6,7}$, Be^{7-10}, $B^{10,11}$, C^{10-14}, N^{13-16}, $O^{16,17}$. (*): requested accuracy 10 percent or a few mb. STATUS: none.										67 67 69 69
566	$_{10}Ne^{20}$	$\sigma_{p,A=19}$		I		25-600				10		GSFC	Reames	NASA	67
					REQ COM: Production of O^{19}, F^{19}, and Ne^{19}; Upper limits useful. STATUS: none.										67 67 69
567	$_{12}Mg^{24}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the stable and particle-stable isotopes with $3 \leq Z \leq 11$. (*): requested accuracy 10 percent or a few mb. STATUS: none.										67 67 69 69

REQ #	TARGET Z A	QUANTITY	VARIABLE	PRI OR.	keV	MeV	GeV	1-3	4-9	≤15	>15	LAB	PERSON	ORG	YR
568	$_{13}$Al	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I		600-	2				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69
569	$_{13}$Al	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I			~10,30				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69
570	$_{13}$Al	$\sigma_{p,kpy}$	$\sigma(\theta_{p},E_{p})$	II		~2000,	~10,30				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Include low-energy (~50 MeV) protons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	INCIDENT ENERGY GeV	PERCENT ACCURACY 1-3	PERCENT ACCURACY 4-9	PERCENT ACCURACY ≤15	PERCENT ACCURACY >15	REQUESTER LAB	REQUESTER PERSON	REQUESTER ORG	YR
571	$_{13}Al$	$\sigma_{a,kny}$	$\sigma(\theta_{n'},E_{n'})$	II		100-	1					HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Include very low-energy (~1 MeV) neutrons.										66
					STATUS: none.										69
572	$_{20}Ca^{40}$	$\sigma_{p,x}$		III		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the stable and particle-stable isotopes with 3 ≤ Z ≤ 11.										67
					(*): requested accuracy 10 percent or a few mb.										67
					STATUS: none.										67
573	$_{26}Fe^{56}$	$\sigma_{p,x}$		II		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the stable and particle stable isotopes with 3 ≤ Z ≤ 11.										67
					(*): requested accuracy 10 percent or a few mb.										67
					STATUS: none.										67

REQ #	TARGET * Z A	REACTION TYPE QUANTITY	REACTION TYPE VARIABLE	PRI OR.	INCIDENT ENERGY keV	INCIDENT ENERGY MeV	INCIDENT ENERGY GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
574	$_{26}Fe^{56}$	$\sigma_{p,x}$		I		25-600				10*		GSFC	Reames	NASA	67
					REQ COM: x = each of the nuclides: Ca^{40-46}, Sc^{45}, Ti^{46-50},										67
					$V^{50,51}$, Cr^{52-54}, $Mn^{54,55}$, and $Fe^{54,55}$.										67
					(*): required accuracy 10 percent or a few mb.										67
					STATUS: none.										67
575	$_{27}Co$	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I		600-	2				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: One energy in interval wanted.										66
					Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69
576	$_{27}Co$	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	I			~10,30				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
577	$_{27}Co$	$e_{p,kpy}$	$\sigma(e_p,E_p)$	II		~2000,	~10,30				25	HASL	O'Brien		66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Include low-energy (~50 MeV) protons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69
578	$_{83}Bi$	$e_{p,kny}$	$\sigma(e_{n'},E_{n'})$	I		600-	2				25	HASL	O'Brien	DBH	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: One energy (only) within energy range.										66
					Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutrons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69

REQ #	TARGET # Z A	REACTION TYPE QUANTITY	VARIABLE	PRI OR.	INCIDENT ENERGY keV	MeV	GeV	PERCENT ACCURACY 1-3	4-9	≤15	>15	REQUESTER LAB	PERSON	ORG	YR
579	$_{83}Bi$	$\sigma_{p,kny}$	$\sigma(\theta_{n'},E_{n'})$	II			~10,30				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Measurements should include 1-MeV neutron.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69
580	$_{83}Bi$	$\sigma_{p,kpy}$	$\sigma(\theta_p,E_p)$	II		~2000.	~10,30				25	HASL	O'Brien	DBM	66
												NASA	Reetz	NASA	66
												ORNL	Alsmiller	DR	66
					REQ COM: Measurements at a few angles, one near 0°.										66
					Include low-energy (~50 MeV) protons.										66
					Data on an adjacent element would suffice.										66
					STATUS: none.										69

APPENDIX A

IAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
AC 005	Greenhow 01	DASA 205	Charles R. Greenhow Phone:	Nuclear Effects Department AEROSPACE CORPORATION P. O. Box 1308 San Bernadino, California 92401	
ACRP 010	Hannum 01	DRDT 135	W. H. Hannum Chairman, ACRP Phone: 301-973-4181	Division of Reactor Development and Technology Reactor Physics Branch Reactor Technology U. S. Atomic Energy Commission Washington, D. C. 20545	
AGC 015	Koebberling 01	DSNS 165	Karl O. Koebberling Phone: 916-449-2000 Ask for: 355-3529	Aerojet-General Corporation P. O. Box 15847 Sacramento, California 95813	
AFIT 020	Dooley 01	DOD 201	John A. Dooley Phone: 513-257-7266	Air Force Institute of Technology Wright Patterson Air Force Base Space Systems Division Ohio 45433	
AFWK 025	Rizzo 12	DASA 205	Lt. Col. Harry F. Rizzo Chief, Physics Branch Research Division Attention: WLRP Phone:	USAF, Department of the Air Force Air Force Weapons Laboratory (AFSC), Kirtland Air Force Base New Mexico 87117	
AFWK 025	Rogers 05	DASA 205	Capt. Brown B. Rogers Project Officer High Altitude Group Attention: WLRTH Phone: 505-247-1711 Ask for: Ext-2727	USAF, Department of the Air Force Air Force Weapons Laboratory (AFSC), Kirtland Air Force Base 87117	

LAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
AFWK 025	Schaefer 01	DASA 205	Richard R. Schaefer Project Officer Physics Branch Phone: 505-247-1711 Ask for: Ext-2582 or Ext-2776	Department of the Air Force Air Force Weapons Laboratory (AFSC), Kirtland Air Force Base 87117	
AI 030	Alter 01	DRDT 135	Harry Alter Phone: 213-341-1000 Ask for: Ext-1402	Atomics International P. O. Box 309 Canoga Park, California 91305	
ANL 035	Avery 01	DRDT 135	Robert Avery Phone: 312-739-2275	Argonne National Laboratory 9700 S. Cass Ave. Argonne, Illinois 60439	
BET 040	Bayard 01	DRDT 135	R. T. Bayard Phone: 412-462-0234	Westinghouse Electric Company Bettis Atomic Power Lab P. O. Box 79 West Mifflin, Pennsylvania 15122	
BNL 045	Chernick 01	DRDT 135	Jack Chernick Phone: 516-924-2121	Brookhaven National Laboratory Upton, New York 11973	
BNL 045	Kouts 05	OSMM 155	Herbert J. Kouts Phone: 516-924-7796	Brookhaven National Laboratory Upton, New York 11973	
COL 050	Goldstein 01	DASA 205	Herbert Goldstein Phone: 212-460-0100 Ask for: 280-4458	Columbia University New York, New York 10027	
DASA 055	Northrop 01	DASA 205	John A. Northrop Phone: 202-694-5044	HQ, Defense Atomic Support Agency Department of Defense Washington, D. C. 20305	

LAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
DASA 055	Kalos 02	DASA 205	Malvin H. Kalos Phone: 212-460-0100 Ask for: 460-7164	Courant Institute of Mathematical Sciences New York University New York, New York 10012	
DASA 055	Kaul 03	DASA 205	Captain Dean Kaul Phone: 202-694-5395	HQ, Defense Atomic Support Agency Department of Defense Washington, D. C. 20305	
GDFW 060	Western 01	DOD 201	G. T. Western Phone: 817-334-3011 Ask for: 732-4811 Ext-2895 or 2000 Others: Ernest Jones H. R. Dvorak	Nuclear Radiation Transport and Safety General Dynamics Fort Worth Division P. O. Box 748 Fort Worth, Texas 76101	
GE 065	Snyder 01	DRDT 135	Thoma Snyder Phone: 408-286-2525 Ask for: 297-3000 Ext-2404 or 2292	General Electric Company Nuclear Energy Division Mail Code 581 175 Curtner Avenue San Jose, California 95125	
GRT 070	Preskitt 01	DRDT 135	C. A. Preskitt Phone: 714-293-5000 Ask for: 453-1000 Ext- 278	Gulf Radiation Technology P. O. Box 608 San Diego, California 92112	
GRT 070	Russell 05	OSMM 155	John Russell Phone: 714-293-5000 Ask for: 453-1000 Ext-1001	Gulf Radiation Technology Accelerator Physics Department P. O. Box 608 San Diego, California 92112	

LAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
GGA 070	Nordheim 10	DRDT 135	L. W. Nordheim Phone: 714-293-5000 Ask for: 453-1000	Gulf General Atomic P. O. Box 608 San Diego, California 92112	
GSFC 075	Reames 01	NASA 305	D. V. Reames Phone: 301-982-4917	Goddard Space Flight Center Greenbelt, Maryland 20771	
HASL 080	O'Brien 01	DBM 105	Keran O'Brien Phone: 212-989-1210	Radiation Physics Division, NYOO Health and Safety Laboratory U. S. Atomic Energy Commission 376 Hudson Street New York, New York 10014	
INC 085	Brugger 01	DRDT 135	Robert M. Brugger Phone: 208-526-4387	Idaho Nuclear Corporation P. O. Box 1845 Idaho Falls, Idaho 83401	
INC 085	Heath 05	OSMM 155	Russell Heath Phone: 208-526-4447	Idaho Nuclear Corporation P. O. Box 1845 Idaho Falls, Idaho 83401	
KAPL 090	Ehrlich 01	DRDT 135	Richard Ehrlich Phone: 518-393-4312	Knolls Atomic Power Lab P. O. Box 1072 Schenectady, New York 12301	

LAB	NAME		SPONSORING AND/OR REVIEWING AGENCY		FULL NAME OF CONTACT AND PHONE NUMBER		COMPLETE ADDRESS	STATUS
LASL	Various Motz		DMA		H. T. Motz (Contact)		Los Alamos Scientific Laboratory P. O. Box 1663 Los Alamos, New Mexico 87544	
100	28		115		Phone:	505-667-6162		
					Others:			
100	Barr	12	DMA	115	Donald W. Barr	5328		
	Bell	14	DMA	115	George I. Bell	5444		
	Bennett	16	DMA	115	Elbert W. Bennett	4143		
	Biggers	18	DMA	115	Wendell Biggers	5201		
	Cowan	19	DMA	115	George A. Cowan	4546		
	Diven	20	DMA	115	Ben C. Diven	4504		
	Goad	22	DMA	115	Walter B. Goad	5304		
	Hansen	24	DMA	115	Gordon Hansen	4610		
	Keepin	05	OSMM	155	G. Robt. Keepin	4042		
	Moore	26	DMA	115	Michael S. Moore	4504		
	Motz	28	DMA	115	Henry T. Motz	6162		
	Streetman	07	DSNS	165	J. Robt. Streetman	4920		
LMFB	Hemmig-AEC		DRDT		Philip B. Hemmig		Division of Reactor Development and Technology U. S. Atomic Energy Commission Washington, D. C. 20545	
105	01		135		Phone:	301-973-4181		
LRC	Westfall		DSNS		Robert M. Westfall		Reactor Section, Nuclear Systems Div. National Aeronautics and Space Admin. Lewis Research Center 21000 Brookpark Road Cleveland, Ohio 44135	
110	01		165		Phone:	216-433-4000 Ext-394		
LRL	Grayson		DMA		William C. Grayson		Lawrence Radiation Laboratory P. O. Box 808 Livermore, California 94550	
115	01		115		Phone:	415-447-8585		
LRL	Howerton		DMA		Robert J. Howerton		Lawrence Radiation Laboratory P. O. Box 808 Livermore, California 94550	
115	02		115		Phone:	415-447-8583		

LAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
NASA 120	Reetz 12	NASA 305	A. Reetz Phone:	National Aeronautics and Space Admin. Hq. Washington, D. C. 20546	
NBS 125	Caswell 01	DR 145	Randall S. Caswell Phone: 301-921-2551 or 2234	National Bureau of Standards Washington, D. C. 20234	
NCSC 130	Landon 02	DR 145	Harry H. Landon Phone: 301-921-2234	National Bureau of Standards Washington, D. C. 20234	
NDL 135	Eccleshall 01	DASA 205	Donald Eccleshall Phone: 301-597-3311 Ask for: 676-1000	Deputy Chief, Nuclear Effects Laboratory U. S. Army Ballistic Research Laboratories Aberdeen Proving Ground, Maryland 21005	
ORNL 145	Maienschein 05	DASA 205	F. C. Maienschein Phone: 615-483-	Oak Ridge National Laboratory P. O. Box X Oak Ridge, Tennessee 37830	
ORNL 145	Alsmiller 09	DR 144	R. G. Alsmiller Phone: 615-483-1126	Oak Ridge National Laboratory P. O. Box X Oak Ridge, Tennessee 37830	
ORNL 145	Craven 01	DRDT 135	C. W. Craven Phone: 615-483-7620	Oak Ridge National Laboratory P. O. Box X Oak Ridge, Tennessee 37830	
ORNL 145	Clifford 02	DRDT 135	C. E. Clifford Phone: 615-483-6881	Oak Ridge National Laboratory P. O. Box X Oak Ridge, Tennessee 37830	
ORNL 145	Macklin 04	DR 145	R. L. Macklin Phone: 615-483-1967	Oak Ridge National Laboratory P. O. Box X Oak Ridge, Tennessee 37830	

LAB	NAME	SPONSORING AND/OR REVIEWING AGENCY	FULL NAME OF CONTACT AND PHONE NUMBER	COMPLETE ADDRESS	STATUS
PNWL 150	Dawson 01	DP 125	F. G. Dawson Phone: 509-942-1111 Ext-946-2230	Battelle Memorial Institute Pacific Northwest Laboratory P. O. Box 999 Richland, Washington 99352	
PNWL 150	McElroy 02	DRDT 135	W. N. McElroy Phone: 509-942-1111	Battelle Memorial Institute Pacific Northwest Laboratory P. O. Box 999 Richland, Washington 99352	
SNS 155	McCallum 01	DSNS 165	Charles P. McCallum Phone: 301-973-4558	Division of Space Nuclear Systems U. S. Atomic Energy Commission Washington, D. C. 20545	
SNS 155	Beard 02	DSNS 165	Donald S. Beard Phone: 301-973-4558	Division of Space Nuclear Systems U. S. Atomic Energy Commission Washington, D. C. 20545	
SNPO 156	Fleishman 01	DSNS 165	Morton R. Fleishman Phone: 216-443-6677	Space Nuclear Propulsion Office Cleveland Extension National Aeronautics and Space Administration 21000 Brookpark Road Cleveland, Ohio 44135	
SRL 160	Dessauer 01	DP 125	Gerhard Dessauer Phone: 803-642-2195	Savannah River Laboratory E. I. dePont de Nemours and Co. Aiken, South Carolina 29801	
WAL 165	Drawbaugh 01	DSNS 165	Donald W. Drawbaugh Phone: 412-384-6520	Westinghouse Astronuclear Lab P. O. Box 10864 Pittsburgh, Pennsylvania 15236	

APPENDIX B

SPONSORING AND/OR REVIEWING AGENCIES

A. USAEC, Washington, D. C. 20545 (only AEC personnel contacts listed below):

DBM 1. Division of Biology and Medicine

105 J. R. Totter, Director
Phone: 301-973-3208

Contacts:

a. HASL; Keran O'Brien, NYOO
Phone: 212-989-1210

DMA 2. Division of Military Application

115 Maj. Gen. E. B. Giller, USAF, Assistant General Manager
Phone: 301-973-4221

DP 3. Division of Production

125 F. P. Baranowski, Director
Phone: 301-973-4413

DRDT 4. Division of Reactor Development and Technology

Milton Shaw, Director

Contacts:

135 a. William H. Hannum, Reactor Physics Branch
Phone: 301-973-4181

DR 5. Division of Research

Paul W. McDaniel, Director

Contacts:

144 a. W. A. Wallenmeyer, Assistant Director, High-Energy Physics Programs
Phone: 301-973-3624

145 b. George A. Kolstad, Assistant Director, Physics and Mathematics Programs
Phone: 301-973-3613

OSMM 6. Office of Safeguards and Materials Management

155 Delmar L. Crowson, Director
Phone: 301-973-3671

Contacts set up by Crowson at LASL, GGA, BNL, and INC

DSNS 7. Division of Space Nuclear Systems

165 Milton Klein, Director
Phone: 301-973-3027

Contacts set up by Klein at AGC and WAL along with the following people in the above USAEC Division:

a. Charles P. McCallum)
b. Donald S. Beard) Phone: 301-973-4558

DOD
201 B. Department of Defense

DASA 1. Defense Atomic Support Agency
Washington, D. C. 20305

205 DASA will review all DOD requests and the following people are listed as DASA contacts:

a. John A. Northrop, DASA
Phone: 202-694-5044

b. Malvin H. Kalos, Courant Institute, New York University, New York, New York 10012
Phone: 212-460-0100; ask for: 460-7100

c. Major Richard Enz, DASA
Phone: 202-694-5395

NASA C. National Aeronautics and Space Administration

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