

**CONFIDENTIAL**

**JEF REPORT 1**

**INDEX TO THE JEF-1  
NUCLEAR DATA LIBRARY**

**VOLUME II**

**SPECIAL PURPOSE FILE**

**SEPTEMBER 1985**

**OECD**

**NEA DATA BANK  
BANQUE DE DONNEES DE L'AEN**

**OCDE**



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## INTRODUCTION

### The Joint Evaluated File Project (JEF)

The JEF project was started in 1981 to bring together European and Japanese effort in reactor physics and nuclear data measurement and evaluation in order to create a comprehensive reference data base for fission reactor applications. Data for core and blanket performance, shielding, fuel recycling and plant decommissioning are included.

The JEF-1 file results from a scientific collaboration between laboratories in Austria, France, F.R. Germany, Italy, Japan, the Netherlands, Sweden, Switzerland and the United Kingdom. The project is supported by all member countries of NEA Data Bank, and the Data Bank is responsible for file assembly, simple data testing, and distribution of the data to users in these member countries.

New evaluation work and data testing against integral experiments is continuing in the participating countries, and it is expected the Data Bank will issue a revised version of JEF in 1987-8.

JEF-1 contains neutron interaction and photon production data in the General Purpose files. The Special Purpose files, indexed in the present volume, contain thermal scattering law data, fission yields, decay data, and photon interaction data. The General Purpose files have been indexed in the first volume of this report.

JEF-1 uses ENDF-5 format; multigroup cross-section data can be prepared from JEF using either the NJOY system (R. MacFarlane et al., LANL) or the family of codes prepared by D.E. Cullen (IAEA). Copies of these and other processing codes can also be obtained from the NEA Data Bank.

Documentation of JEF will be provided to users in the JEF Report series. Tape copies of the JEF-1 General Purpose file have been distributed to national laboratories participating directly in the project. The General file and the present Special files can be supplied on request to users who need the whole library.

**Unless users have an in-house storage and retrieval system for ENDF data, we strongly recommend them to make selective data requests for only those materials required for current use.**

### Structure of an ENDF format Data Tape

A complete evaluated library is normally divided into many different tapes, each one containing evaluations for a number of materials (MAT) in order of increasing MAT numbers. The tape allocations for the JEF-1 materials are shown on page 3. A material is defined as either an isotope or a collection of isotopes. It may be a single nuclide, a natural element containing several isotopes, or a molecule containing several elements. The MAT numbers assigned to each material in the JEF-1 Special Purpose files are given on page 4.

The data for each material is divided into files (MF) and each file contains the data for a certain class of information, for example MF=2 for resonance parameter data and MF=3 for neutron cross sections. The files are then subdivided into sections, each containing data for a particular reaction type (MT). A full explanation of the different MF and MT numbers is given on page 11 and 12 respectively.

### Availability of JEF data

**JEF data is available only to scientists in Data Bank member countries. Users are asked to treat the JEF-1 data and documents they receive as confidential.**

## REQUESTING JEF DATA

JEF data is available from the NEA Data Bank to scientists in member countries. The full library, including Special Purpose files, contains over two million records. Although copies of the full library may be useful to laboratories with their own ENDF format data storage and retrieval system, we recommend selective retrievals of only those materials required for current use. The Data Bank holds a "frozen" copy of JEF-1 on disk, so that data received in answer to later requests will still be compatible with those acquired now.

### Defining data requests

Requests should be defined as precisely as possible to avoid unnecessary manipulation of large amounts of data.

The following quantities can be specified:

Tape number  
Tape category (parameter or pointwise)  
Material number or Z and A (isotopes)  
Reaction or MF and MT

### Restrictions on the use and distribution of JEF-1

Users are asked to treat the JEF-1 data they receive as confidential. Neither the evaluated data themselves nor any multigroup data sets derived from them, nor the JEF documentation should be copied or communicated to any person outside your laboratory: if colleagues in other laboratories wish to have these or other JEF data, they should request them directly from NEA Data Bank.

Small-scale or partial plots of JEF data for single isotopes may be included in publications, where they should be referred to as taken from "the JEF-1 evaluated library", but systematic plots or any other form of publication likely to undermine the confidentiality of JEF is to be avoided. In case of any doubt about publication or quoting from JEF-1 data, please contact NEA Data Bank.

### STRUCTURE OF THE INDEX

The JEF-1 index is ordered by increasing atomic number or element. Within each element the isotopes are ordered by increasing mass number.

Each isotope (or material) begins with a title line:

Isotope name	Tape numbers	Material number
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For each material, the index is ordered by increasing MF and MT numbers. The data on the magnetic tapes follow this order.

Two tape numbers 23 and 24 are given for the fission yield data corresponding to the unadjusted and adjusted data respectively. The adjusted data is preferable for decay heat studies, while the unadjusted yields are more useful to users concerned with a few fission products.

## TAPE ALLOCATION FOR JEF-1 FILES

TAPE NO	Z RANGE	CONTENT	TYPE OF DATA	NUMBER OF RECORDS
---------	---------	---------	--------------	-------------------

## Index: Volume 1

1	1 - 23	Light elements	Res.Param.
2	24 - 30	Structural materials	Res.Param.
3	31 - 47	Fission products 1	Res.Param.
4	48 - 59	Fission products 2	Res.Param.
5	60 - 65	Fission products 3	Res.Param.
6	66 - 83	Heavy elements	Res.Param.
7	90 - 92	Actinides 1	Res.Param.
8	93 - 94	Actinides 2	Res.Param.
9	95 - 99	Actinides 3	Res.Param.
10	not assigned		
11	1 - 23	Light elements	Pointwise
12	24 - 30	Structural materials	Pointwise
13	31 - 47	Fission products 1	Pointwise
14	48 - 59	Fission products 2	Pointwise
15	60 - 65	Fission products 3	Pointwise
16	66 - 83	Heavy elements	Pointwise
17	90 - 92	Actinides 1	Pointwise
18	93 - 94	Actinides 2	Pointwise
19	95 - 99	Actinides 3	Pointwise
20	not assigned		

## Index: Volume 2

21	---	Scattering law data	S( $\alpha, \beta$ )	89 472
22	1 - 103	Radioactive decay data	MF=8, MT=457	166 664
23	90 - 94	Unadj. fission yield data	MF=8, MT=454	5 522
24	90 - 94	Adj. fission yield data	MF=8, MT=454	4 413
25	1 - 94	Photon interaction data	MF=23, MF=27	25 337

## MATERIAL ALLOCATION (MAT)

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
4001	1-H -H20	4623	62-SM- 0	5021	7-N - 13
4002	1-H2-D20	4630	63-EU- 0	5022	7-N - 16
4003	6-C -GRA	4649	64-GD- 0	5023	8-O - 19
4004	1-H -CH2	4659	65-TB-159	5025	9-F - 18
4010	1-H - 0	4665	66-DY- 0	5027	9-F - 20
4020	2-HE- 0	4675	67-HO-165	5029	10-NE- 23
4030	3-LI- 0	4680	68-ER- 0	5031	11-NA- 22
4049	4-BE- 9	4699	69-TM-169	5033	11-NA- 24
4052	5-B - 0	4700	70-YB- 0	5035	11-NA- 24M
4060	6-C - 0	4710	71-LU- 0	5037	11-NA- 25
4070	7-N - 0	4721	72-HF- 0	5039	11-NA- 26
4080	8-O - 0	4730	73-TA- 0	5041	12-MG- 27
4099	9-F - 19	4740	74-W - 0	5042	12-MG- 28
4100	10-NE- 0	4750	75-RE- 0	5043	13-AL- 26
4113	11-NA- 23	4760	76-OS- 0	5045	13-AL- 26M
4120	12-MG- 0	4770	77-IR- 0	5047	13-AL- 28
4137	13-AL- 27	4780	78-PT- 0	5049	13-AL- 29
4140	14-SI- 0	4797	79-AU-197	5051	13-AL- 30
4151	15-P - 31	4800	80-HG- 0	5053	14-SI- 31
4160	16-S - 0	4810	81-TL- 0	5055	14-SI- 32
4170	17-CL- 0	4820	82-PB- 0	5057	15-P - 32
4181	18-AR- 0	4839	83-BI-209	5059	15-P - 33
4190	19-K - 0	4840	84-PO- 0	5061	15-P - 34
4200	20-CA- 0	4850	85-AT- 0	5063	16-S - 35
4215	21-SC- 45	4860	86-RN- 0	5065	16-S - 37
4220	22-TI- 0	4870	87-FR- 0	5067	17-CL- 34
4230	23-V - 0	4880	88-RA- 0	5069	17-CL- 34M
4240	24-CR- 0	4890	89-AC- 0	5071	17-CL- 36
4255	25-MN- 55	4901	90-TH- 0	5073	17-CL- 38
4260	26-FE- 0	4902	90-TH-232	5075	17-CL- 38M
4279	27-CO- 59	4902	90-TH-232	5077	18-AR- 37
4280	28-NI- 0	4910	91-PA- 0	5079	18-AR- 39
4290	29-CU- 0	4920	92-U - 0	5080	18-AR- 41
4300	30-ZN- 0	4923	92-U -233	5081	18-AR- 42
4310	31-GA- 0	4923	92-U -233	5083	19-K - 38
4320	32-GE- 0	4925	92-U -235	5085	19-K - 38M
4335	33-AS- 75	4925	92-U -235	5087	19-K - 40
4341	34-SE- 0	4928	92-U -238	5089	19-K - 42
4350	35-BR- 0	4928	92-U -238	5091	19-K - 43
4361	36-KR- 0	4930	93-NP- 0	5092	19-K - 44
4370	37-RB- 0	4940	94-PU-240	5093	20-CA- 41
4381	38-SR- 0	4940	94-PU-240	5095	20-CA- 45
4399	39-Y - 89	4941	94-PU-241	5096	20-CA- 47
4409	40-ZR- 0	4941	94-PU-241	5097	20-CA- 49
4413	41-NB- 93	4945	94-PU- 0	5099	21-SC- 44
4420	42-MO- 0	4949	94-PU-239	5101	21-SC- 44M
4430	43-TC- 0	4949	94-PU-239	5103	21-SC- 46
4451	44-RU- 0	4950	95-AM- 0	5104	21-SC- 46M
4453	45-RH-103	4960	96-CM- 0	5105	21-SC- 47
4461	46-PD- 0	4970	97-BK- 0	5107	21-SC- 48
4470	47-AG- 0	4985	98-CF- 0	5109	21-SC- 49
4480	48-CD- 0	4990	99-ES- 0	5110	21-SC- 50
4490	49-IN- 0	4999	100-FM- 0	5112	21-SC- 50M
4499	50-SN- 0	5001	1-H - 3	5114	22-TI- 45
4518	51-SB- 0	5003	2-HE- 6	5116	22-TI- 51
4519	52-TE- 0	5004	2-HE- 8	5118	23-V - 48
4533	53-I -127	5006	3-LI- 8	5119	23-V - 49
4539	54-XE- 0	5008	3-LI- 9	5120	23-V - 52
4553	55-CS-133	5010	4-BE- 7	5122	23-V - 53
4561	56-BA- 0	5011	4-BE- 10	5124	23-V - 54
4571	57-LA- 0	5013	4-BE- 11	5125	24-CR- 49
4585	58-CE- 0	5015	5-B - 12	5126	24-CR- 51
4591	59-PR-141	5016	5-B - 13	5128	24-CR- 55
4601	60-ND- 0	5017	6-C - 14	5130	25-MN- 52
4610	61-PM- 0	5019	6-C - 15	5132	25-MN- 52M

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
5134	25-MN- 53	5248	31-GA- 82	5362	35-BR- 92
5136	25-MN- 54	5250	31-GA- 83	5364	36-KR- 79
5138	25-MN- 56	5252	31-GA- 84	5366	36-KR- 79M
5140	25-MN- 57	5253	32-GE- 73M	5368	36-KR- 81
5142	25-MN- 58	5254	32-GE- 75	5369	36-KR- 81M
5144	25-MN- 58M	5256	32-GE- 75M	5371	36-KR- 83M
5146	26-FE- 53	5257	32-GE- 77	5373	36-KR- 85
5148	26-FE- 53M	5259	32-GE- 77M	5375	36-KR- 85M
5149	26-FE- 55	5260	32-GE- 78	5377	36-KR- 87
5151	26-FE- 59	5262	32-GE- 79	5379	36-KR- 88
5152	26-FE- 60	5264	32-GE- 80	5381	36-KR- 89
5154	26-FE- 61	5266	32-GE- 81	5383	36-KR- 90
5156	27-CO- 55	5268	32-GE- 81M	5385	36-KR- 91
5158	27-CO- 56	5270	32-GE- 82	5386	36-KR- 92
5159	27-CO- 57	5272	32-GE- 83	5388	36-KR- 93
5161	27-CO- 58	5274	32-GE- 84	5390	36-KR- 94
5162	27-CO- 58M	5276	32-GE- 85	5392	36-KR- 95
5164	27-CO- 60	5278	32-GE- 86	5394	37-RB- 86
5165	27-CO- 60M	5280	33-AS- 74	5396	37-RB- 86M
5166	27-CO- 61	5281	33-AS- 76	5398	37-RB- 87
5168	27-CO- 62	5283	33-AS- 77	5399	37-RB- 88
5170	27-CO- 62M	5285	33-AS- 78	5401	37-RB- 89
5172	27-CO- 63	5287	33-AS- 79	5403	37-RB- 90
5174	27-CO- 64	5289	33-AS- 80	5405	37-RB- 90M
5176	28-NI- 56	5291	33-AS- 81	5407	37-RB- 91
5178	28-NI- 57	5293	33-AS- 82	5408	37-RB- 92
5180	28-NI- 59	5295	33-AS- 82M	5410	37-RB- 93
5182	28-NI- 63	5297	33-AS- 83	5412	37-RB- 94
5184	28-NI- 65	5299	33-AS- 84	5414	37-RB- 95
5186	28-NI- 66	5300	33-AS- 85	5415	37-RB- 96
5188	28-NI- 67	5302	33-AS- 86	5416	37-RB- 97
5190	29-CU- 62	5304	33-AS- 87	5417	37-RB- 98
5191	29-CU- 64	5306	33-AS- 88	5418	37-RB- 99
5193	29-CU- 66	5308	34-SE- 75	5420	37-RB- 100
5194	29-CU- 67	5310	34-SE- 77M	5422	38-SR- 85
5196	29-CU- 68	5311	34-SE- 79	5424	38-SR- 85M
5198	29-CU- 68M	5312	34-SE- 79M	5426	38-SR- 87M
5200	29-CU- 71	5313	34-SE- 81	5427	38-SR- 89
5202	29-CU- 72	5315	34-SE- 81M	5429	38-SR- 90
5204	29-CU- 73	5317	34-SE- 83	5430	38-SR- 91
5206	30-ZN- 63	5319	34-SE- 83M	5432	38-SR- 92
5207	30-ZN- 65	5320	34-SE- 84	5433	38-SR- 93
5208	30-ZN- 69	5321	34-SE- 85	5434	38-SR- 94
5210	30-ZN- 69M	5322	34-SE- 86	5436	38-SR- 95
5212	30-ZN- 71	5324	34-SE- 87	5438	38-SR- 96
5214	30-ZN- 71M	5326	34-SE- 88	5439	38-SR- 97
5215	30-ZN- 72	5328	34-SE- 89	5441	38-SR- 98
5216	30-ZN- 73	5330	34-SE- 90	5442	38-SR- 99
5217	30-ZN- 74	5332	34-SE- 91	5444	38-SR- 100
5218	30-ZN- 75	5334	34-SE- 92	5445	39-Y - 88
5220	30-ZN- 76	5335	35-BR- 79M	5447	39-Y - 89M
5222	30-ZN- 77	5337	35-BR- 80	5449	39-Y - 90
5224	30-ZN- 78	5339	35-BR- 80M	5451	39-Y - 90M
5226	30-ZN- 79	5341	35-BR- 82	5452	39-Y - 91
5227	31-GA- 72	5343	35-BR- 82M	5454	39-Y - 91M
5229	31-GA- 73	5345	35-BR- 83	5456	39-Y - 92
5231	31-GA- 74	5346	35-BR- 84	5457	39-Y - 93
5233	31-GA- 74M	5348	35-BR- 84M	5459	39-Y - 93M
5235	31-GA- 75	5350	35-BR- 85	5461	39-Y - 94
5236	31-GA- 76	5352	35-BR- 86	5463	39-Y - 95
5238	31-GA- 77	5353	35-BR- 87	5465	39-Y - 96
5240	31-GA- 78	5355	35-BR- 88	5467	39-Y - 96M
5242	31-GA- 79	5357	35-BR- 89	5469	39-Y - 97
5244	31-GA- 80	5359	35-BR- 90	5471	39-Y - 97M
5246	31-GA- 81	5360	35-BR- 91	5473	39-Y - 98

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
5475	39-Y - 98M	5593	43-TC- 99M	5703	47-AG- 110
5477	39-Y - 99	5595	43-TC- 100	5705	47-AG- 110M
5479	39-Y - 100	5596	43-TC- 101	5706	47-AG- 111
5481	39-Y - 100M	5598	43-TC- 102	5708	47-AG- 111M
5482	39-Y - 101	5600	43-TC- 102M	5710	47-AG- 112
5484	39-Y - 102	5601	43-TC- 103	5712	47-AG- 113
5486	40-ZR- 88	5603	43-TC- 104	5713	47-AG- 113M
5488	40-ZR- 89	5605	43-TC- 105	5715	47-AG- 114
5490	40-ZR- 89M	5607	43-TC- 106	5716	47-AG- 114M
5492	40-ZR- 90M	5609	43-TC- 107	5718	47-AG- 115
5494	40-ZR- 93	5611	43-TC- 108	5720	47-AG- 115M
5496	40-ZR- 95	5612	43-TC- 109	5722	47-AG- 116
5498	40-ZR- 97	5614	43-TC- 110	5723	47-AG- 116M
5500	40-ZR- 98	5616	43-TC- 112	5725	47-AG- 117
5501	40-ZR- 99	5618	44-RU- 97	5727	47-AG- 117M
5502	40-ZR- 100	5619	44-RU- 103	5729	47-AG- 118
5504	40-ZR- 101	5621	44-RU- 105	5731	47-AG- 118M
5506	40-ZR- 102	5623	44-RU- 106	5733	47-AG- 119
5508	40-ZR- 103	5624	44-RU- 107	5735	47-AG- 120
5510	40-ZR- 104	5626	44-RU- 108	5737	47-AG- 120M
5512	41-NB- 91	5628	44-RU- 109	5738	47-AG- 121
5514	41-NB- 91M	5630	44-RU- 109M	5740	47-AG- 122
5516	41-NB- 92	5632	44-RU- 110	5742	47-AG- 123
5518	41-NB- 92M	5634	44-RU- 111	5744	47-AG- 125
5520	41-NB- 93M	5636	44-RU- 112	5746	48-CD- 107
5521	41-NB- 94	5638	44-RU- 113	5747	48-CD- 109
5522	41-NB- 95	5640	45-RH- 102	5749	48-CD- 111M
5524	41-NB- 95M	5642	45-RH- 102M	5751	48-CD- 113
5525	41-NB- 96	5643	45-RH- 103M	5752	48-CD- 113M
5527	41-NB- 97	5644	45-RH- 104	5754	48-CD- 115
5529	41-NB- 97M	5645	45-RH- 104M	5755	48-CD- 115M
5531	41-NB- 98	5646	45-RH- 105	5757	48-CD- 117
5533	41-NB- 98M	5648	45-RH- 105M	5759	48-CD- 117M
5534	41-NB- 99	5650	45-RH- 106	5760	48-CD- 118
5536	41-NB- 99M	5652	45-RH- 106M	5761	48-CD- 119
5538	41-NB- 100	5654	45-RH- 107	5763	48-CD- 119M
5540	41-NB- 100M	5656	45-RH- 108	5765	48-CD- 120
5542	41-NB- 101	5658	45-RH- 108M	5767	48-CD- 121
5544	41-NB- 102	5659	45-RH- 109	5769	48-CD- 121M
5546	41-NB- 102M	5661	45-RH- 110	5770	48-CD- 122
5548	41-NB- 103	5663	45-RH- 110M	5772	48-CD- 123
5550	41-NB- 104	5664	45-RH- 111	5774	48-CD- 124
5552	41-NB- 104M	5666	45-RH- 112	5776	48-CD- 125
5554	41-NB- 105	5668	45-RH- 113	5777	48-CD- 126
5556	41-NB- 106	5670	45-RH- 114	5778	48-CD- 128
5558	42-MO- 91	5671	46-PD- 103	5780	49-IN- 111
5560	42-MO- 91M	5672	46-PD- 107	5782	49-IN- 111M
5561	42-MO- 93	5674	46-PD- 107M	5784	49-IN- 112
5563	42-MO- 93M	5675	46-PD- 109	5786	49-IN- 112M
5564	42-MO- 99	5676	46-PD- 109M	5787	49-IN- 113M
5565	42-MO- 101	5678	46-PD- 111	5788	49-IN- 114
5567	42-MO- 102	5679	46-PD- 111M	5790	49-IN- 114M
5568	42-MO- 103	5680	46-PD- 112	5791	49-IN- 115
5570	42-MO- 104	5682	46-PD- 113	5793	49-IN- 115M
5572	42-MO- 105	5684	46-PD- 114	5794	49-IN- 116
5574	42-MO- 106	5686	46-PD- 115	5795	49-IN- 116M
5576	42-MO- 107	5688	46-PD- 116	5797	49-IN- 116M
5578	42-MO- 108	5690	46-PD- 117	5798	49-IN- 117
5580	42-MO- 110	5692	46-PD- 118	5800	49-IN- 117M
5582	43-TC- 96	5694	46-PD- 119	5802	49-IN- 118
5584	43-TC- 96M	5696	46-PD- 120	5804	49-IN- 118M
5586	43-TC- 97	5698	47-AG- 107M	5805	49-IN- 118M
5588	43-TC- 97M	5700	47-AG- 108	5807	49-IN- 119
5590	43-TC- 98	5701	47-AG- 108M	5808	49-IN- 119M
5592	43-TC- 99	5702	47-AG- 109M	5810	49-IN- 120

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
5812	49-IN-120M	5923	51-SB-131	6025	54-XE-140
5813	49-IN-121	5925	51-SB-132	6027	54-XE-141
5815	49-IN-121M	5927	51-SB-132M	6028	54-XE-142
5817	49-IN-122	5928	51-SB-133	6030	54-XE-143
5819	49-IN-122M	5930	51-SB-134	6032	54-XE-144
5821	49-IN-123	5931	51-SB-134M	6034	54-XE-145
5822	49-IN-123M	5932	51-SB-135	6036	54-XE-147
5824	49-IN-124	5934	51-SB-136	6038	55-CS-131
5826	49-IN-124M	5936	51-SB-137	6039	55-CS-132
5827	49-IN-125	5938	51-SB-138	6041	55-CS-134
5828	49-IN-125M	5940	52-TE-123	6043	55-CS-134M
5830	49-IN-126	5942	52-TE-123M	6044	55-CS-135
5832	49-IN-126M	5944	52-TE-125M	6045	55-CS-135M
5834	49-IN-127	5946	52-TE-127	6047	55-CS-136
5836	49-IN-127M	5948	52-TE-127M	6048	55-CS-136M
5838	49-IN-128	5949	52-TE-129	6049	55-CS-137
5840	49-IN-128M	5951	52-TE-129M	6050	55-CS-138
5842	49-IN-129	5953	52-TE-131	6052	55-CS-138M
5844	49-IN-129M	5954	52-TE-131M	6053	55-CS-139
5846	49-IN-130	5956	52-TE-132	6055	55-CS-140
5848	49-IN-131	5958	52-TE-133	6057	55-CS-141
5850	49-IN-131M	5959	52-TE-133M	6059	55-CS-142
5852	49-IN-132	5961	52-TE-134	6061	55-CS-143
5854	50-SN-111	5963	52-TE-135	6063	55-CS-144
5856	50-SN-113	5965	52-TE-136	6064	55-CS-145
5858	50-SN-113M	5966	52-TE-137	6066	55-CS-146
5859	50-SN-117M	5968	52-TE-138	6068	55-CS-147
5860	50-SN-119M	5970	52-TE-139	6070	56-BA-131
5861	50-SN-121	5972	52-TE-140	6072	56-BA-133
5863	50-SN-121M	5974	52-TE-141	6074	56-BA-133M
5865	50-SN-123	5976	53-I -125	6076	56-BA-135M
5866	50-SN-123M	5978	53-I -126	6077	56-BA-136M
5868	50-SN-125	5979	53-I -128	6079	56-BA-137M
5870	50-SN-125M	5980	53-I -129	6081	56-BA-139
5871	50-SN-126	5981	53-I -130	6083	56-BA-140
5873	50-SN-127	5982	53-I -130M	6085	56-BA-141
5874	50-SN-127M	5983	53-I -131	6086	56-BA-142
5875	50-SN-128	5985	53-I -132	6087	56-BA-143
5876	50-SN-129	5986	53-I -132M	6089	56-BA-144
5878	50-SN-129M	5987	53-I -133	6091	56-BA-145
5880	50-SN-130	5988	53-I -133M	6092	56-BA-146
5882	50-SN-130M	5989	53-I -134	6094	56-BA-147
5884	50-SN-131	5991	53-I -134M	6096	56-BA-148
5886	50-SN-131M	5992	53-I -135	6098	57-LA-137
5888	50-SN-132	5993	53-I -136	6099	57-LA-138
5890	50-SN-133	5994	53-I -136M	6101	57-LA-140
5892	50-SN-134	5995	53-I -137	6103	57-LA-141
5894	50-SN-135	5997	53-I -138	6105	57-LA-142
5896	50-SN-136	5998	53-I -139	6107	57-LA-143
5898	51-SB-122	6000	53-I -140	6109	57-LA-144
5900	51-SB-122M	6002	53-I -141	6111	57-LA-145
5902	51-SB-124	6004	54-XE-125	6112	57-LA-146
5903	51-SB-124M	6006	54-XE-125M	6114	57-LA-146M
5904	51-SB-124M	6008	54-XE-127	6116	57-LA-147
5906	51-SB-125	6010	54-XE-127M	6117	57-LA-148
5908	51-SB-126	6011	54-XE-129M	6118	57-LA-149
5910	51-SB-126M	6012	54-XE-131M	6120	57-LA-150
5911	51-SB-126M	6014	54-XE-133	6122	58-CE-139
5912	51-SB-127	6015	54-XE-133M	6124	58-CE-139M
5914	51-SB-128	6017	54-XE-134M	6125	58-CE-141
5916	51-SB-128M	6018	54-XE-135	6126	58-CE-142
5918	51-SB-129	6019	54-XE-135M	6127	58-CE-143
5920	51-SB-129M	6020	54-XE-137	6129	58-CE-144
5921	51-SB-130	6021	54-XE-138	6131	58-CE-145
5922	51-SB-130M	6023	54-XE-139	6132	58-CE-146

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
6134	58-CE-147	6246	63-EU-157	6355	73-TA-182M
6136	58-CE-148	6248	63-EU-158	6356	73-TA-183
6138	58-CE-149	6249	63-EU-159	6358	73-TA-184
6140	58-CE-150	6250	63-EU-160	6360	73-TA-185
6142	58-CE-151	6252	63-EU-161	6362	73-TA-186
6144	59-PR-142	6254	63-EU-162	6363	74-W -181
6145	59-PR-142M	6256	64-GD-150	6364	74-W -185
6147	59-PR-143	6258	64-GD-151	6365	74-W -185M
6149	59-PR-144	6260	64-GD-152	6367	74-W -187
6151	59-PR-144M	6262	64-GD-153	6368	75-RE-187
6153	59-PR-145	6264	64-GD-159	6370	76-OS-194
6154	59-PR-146	6265	64-GD-161	6372	77-IR-192
6155	59-PR-147	6267	64-GD-162	6374	77-IR-192M
6157	59-PR-148	6268	64-GD-163	6376	77-IR-192M
6159	59-PR-148M	6270	64-GD-164	6378	79-AU-198
6161	59-PR-149	6271	65-TB-157	6380	79-AU-198M
6162	59-PR-150	6272	65-TB-158	6382	79-AU-199
6164	59-PR-151	6274	65-TB-158M	6384	80-HG-197
6166	59-PR-152	6276	65-TB-160	6385	80-HG-197M
6168	59-PR-153	6277	65-TB-161	6386	80-HG-199M
6170	60-ND-144	6279	65-TB-162	6387	80-HG-203
6171	60-ND-147	6280	65-TB-163	6388	80-HG-205
6173	60-ND-149	6281	65-TB-164	6389	80-HG-206
6175	60-ND-151	6282	65-TB-165	6390	81-TL-202
6176	60-ND-152	6284	65-TB-166	6392	81-TL-204
6178	60-ND-153	6286	66-DY-157	6393	81-TL-206
6180	60-ND-154	6288	66-DY-159	6395	81-TL-206M
6182	60-ND-155	6289	66-DY-165	6397	81-TL-207
6183	61-PM-145	6291	66-DY-165M	6399	81-TL-207M
6184	61-PM-146	6292	66-DY-166	6400	81-TL-208
6185	61-PM-147	6293	66-DY-167	6401	81-TL-209
6186	61-PM-148	6294	66-DY-168	6403	81-TL-210
6188	61-PM-148M	6296	66-DY-169	6404	82-PB-203
6190	61-PM-149	6298	66-DY-170	6406	82-PB-203M
6192	61-PM-150	6300	67-HO-163	6408	82-PB-203M
6193	61-PM-151	6302	67-HO-163M	6410	82-PB-204M
6194	61-PM-152	6304	67-HO-166	6412	82-PB-205
6196	61-PM-152M	6305	67-HO-166M	6413	82-PB-209
6198	61-PM-153	6306	67-HO-167	6414	82-PB-210
6199	61-PM-154	6308	67-HO-168	6415	82-PB-211
6201	61-PM-154M	6310	67-HO-169	6416	82-PB-212
6202	61-PM-155	6312	67-HO-170	6418	82-PB-213
6204	61-PM-156	6314	67-HO-170M	6420	82-PB-214
6206	61-PM-157	6316	68-ER-167M	6422	83-BI-207
6208	62-SM-145	6318	68-ER-169	6424	83-BI-208
6210	62-SM-146	6320	69-TM-170	6425	83-BI-210
6212	62-SM-147	6322	70-YB-169	6427	83-BI-210M
6214	62-SM-148	6324	70-YB-169M	6429	83-BI-211
6216	62-SM-149	6326	71-LU-155	6431	83-BI-212
6218	62-SM-151	6328	72-HF-173	6433	83-BI-212M
6220	62-SM-153	6330	72-HF-174	6435	83-BI-212M
6222	62-SM-155	6331	72-HF-175	6437	83-BI-213
6224	62-SM-156	6332	72-HF-178M	6439	83-BI-214
6225	62-SM-157	6334	72-HF-178M	6441	83-BI-215
6226	62-SM-158	6336	72-HF-179M	6443	84-PO-209
6228	62-SM-159	6338	72-HF-179M	6445	84-PO-210
6230	63-EU-150	6340	72-HF-180M	6447	84-PO-211
6232	63-EU-150M	6341	72-HF-181	6449	84-PO-211M
6234	63-EU-152	6342	72-HF-182	6451	84-PO-212
6235	63-EU-152M	6344	72-HF-182M	6453	84-PO-212M
6237	63-EU-152M	6346	72-HF-183	6455	84-PO-213
6239	63-EU-154	6348	73-TA-179	6457	84-PO-214
6241	63-EU-154M	6350	73-TA-180M	6459	84-PO-215
6242	63-EU-155	6352	73-TA-182	6460	84-PO-216
6244	63-EU-156	6353	73-TA-182M	6462	84-PO-217

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
6463	84-PO-218	6577	89-AC-225	6691	92-U -240
6464	85-AT-212	6578	89-AC-226	6692	93-NP-229
6466	85-AT-212M	6580	89-AC-227	6694	93-NP-230
6468	85-AT-213	6581	89-AC-228	6696	93-NP-231
6470	85-AT-214	6582	89-AC-229	6698	93-NP-232
6471	85-AT-215	6584	89-AC-230	6700	93-NP-233
6472	85-AT-216	6586	89-AC-231	6702	93-NP-234
6473	85-AT-217	6588	90-TH-213	6704	93-NP-235
6475	85-AT-218	6590	90-TH-214	6706	93-NP-236
6477	85-AT-219	6592	90-TH-215	6707	93-NP-236M
6478	86-RN-213	6594	90-TH-216	6708	93-NP-237
6480	86-RN-214	6596	90-TH-217	6709	93-NP-238
6482	86-RN-215	6598	90-TH-218	6711	93-NP-239
6484	86-RN-216	6600	90-TH-219	6713	93-NP-240
6485	86-RN-217	6602	90-TH-220	6714	93-NP-240M
6487	86-RN-218	6604	90-TH-221	6715	93-NP-241
6489	86-RN-219	6606	90-TH-222	6716	94-PU-232
6491	86-RN-220	6608	90-TH-223	6718	94-PU-233
6492	86-RN-221	6610	90-TH-224	6720	94-PU-234
6493	86-RN-222	6612	90-TH-225	6722	94-PU-235
6494	86-RN-224	6614	90-TH-226	6723	94-PU-236
6496	86-RN-226	6616	90-TH-227	6724	94-PU-237
6498	87-FR-214	6617	90-TH-228	6725	94-PU-238
6500	87-FR-214M	6618	90-TH-229	6727	94-PU-239
6502	87-FR-215	6619	90-TH-230	6729	94-PU-240
6504	87-FR-216	6621	90-TH-231	6731	94-PU-241
6506	87-FR-217	6623	90-TH-232	6733	94-PU-242
6508	87-FR-218	6625	90-TH-233	6735	94-PU-243
6510	87-FR-219	6626	90-TH-234	6737	94-PU-244
6512	87-FR-220	6627	90-TH-235	6738	94-PU-245
6513	87-FR-221	6628	90-TH-236	6739	94-PU-246
6514	87-FR-222	6630	91-PA-216	6740	95-AM-234
6516	87-FR-223	6632	91-PA-217	6742	95-AM-237
6518	87-FR-224	6634	91-PA-222	6744	95-AM-238
6520	87-FR-225	6636	91-PA-223	6746	95-AM-239
6522	87-FR-226	6638	91-PA-224	6747	95-AM-240
6524	87-FR-228	6640	91-PA-225	6749	95-AM-241
6526	88-RA-214	6642	91-PA-226	6751	95-AM-242
6528	88-RA-215	6644	91-PA-227	6753	95-AM-242M
6530	88-RA-216	6646	91-PA-228	6755	95-AM-243
6532	88-RA-217	6648	91-PA-229	6757	95-AM-244
6534	88-RA-218	6650	91-PA-230	6759	95-AM-244M
6536	88-RA-219	6651	91-PA-231	6761	95-AM-245
6538	88-RA-220	6653	91-PA-232	6763	95-AM-246
6540	88-RA-221	6654	91-PA-233	6764	95-AM-246M
6542	88-RA-222	6655	91-PA-234	6766	95-AM-247
6544	88-RA-223	6657	91-PA-234M	6768	96-CM-238
6545	88-RA-224	6659	91-PA-235	6770	96-CM-239
6546	88-RA-225	6660	91-PA-236	6772	96-CM-240
6548	88-RA-226	6662	91-PA-238	6773	96-CM-241
6550	88-RA-227	6664	92-U -226	6775	96-CM-242
6551	88-RA-228	6666	92-U -227	6776	96-CM-243
6552	88-RA-229	6668	92-U -228	6777	96-CM-244
6554	89-AC-214	6670	92-U -229	6778	96-CM-245
6556	89-AC-215	6672	92-U -230	6779	96-CM-246
6558	89-AC-216	6674	92-U -231	6781	96-CM-247
6560	89-AC-217	6675	92-U -232	6783	96-CM-248
6562	89-AC-218	6677	92-U -233	6785	96-CM-249
6564	89-AC-219	6679	92-U -234	6787	96-CM-250
6566	89-AC-220	6681	92-U -235	6788	97-BK-243
6568	89-AC-221	6683	92-U -235M	6790	97-BK-244
6570	89-AC-222	6685	92-U -236	6792	97-BK-245
6572	89-AC-222M	6686	92-U -237	6794	97-BK-246
6574	89-AC-223	6687	92-U -238	6796	97-BK-247
6576	89-AC-224	6689	92-U -239	6798	97-BK-248

MAT	ISOTOPE	MAT	ISOTOPE	MAT	ISOTOPE
6799	97-BK-249	6848	99-ES-249M	6898	101-MD-250
6801	97-BK-250	6850	99-ES-250	6900	101-MD-251
6802	97-BK-251	6852	99-ES-250M	6902	101-MD-252
6804	98-CF-240	6854	99-ES-251	6904	101-MD-254
6806	98-CF-241	6856	99-ES-252	6906	101-MD-255
6808	98-CF-242	6857	99-ES-253	6908	101-MD-256
6810	98-CF-243	6858	99-ES-254	6910	101-MD-257
6812	98-CF-244	6860	99-ES-254M	6912	101-MD-258
6814	98-CF-245	6862	99-ES-255	6914	101-MD-258M
6816	98-CF-246	6864	99-ES-256	6916	102-NO-250
6818	98-CF-247	6866	99-ES-256M	6918	102-NO-251
6820	98-CF-248	6868	100-FM-245	6920	102-NO-252
6821	98-CF-249	6870	100-FM-246	6922	102-NO-253
6823	98-CF-250	6872	100-FM-247	6924	102-NO-254
6825	98-CF-251	6874	100-FM-248	6926	102-NO-255
6827	98-CF-252	6876	100-FM-249	6928	102-NO-256
6829	98-CF-253	6878	100-FM-250	6930	102-NO-257
6830	98-CF-254	6880	100-FM-251	6932	102-NO-259
6832	98-CF-255	6882	100-FM-252	6934	103-LR-255
6834	99-ES-243	6884	100-FM-253	6936	103-LR-256
6836	99-ES-244	6886	100-FM-254	6938	103-LR-257
6838	99-ES-245	6888	100-FM-255	6940	103-LR-258
6840	99-ES-246	6890	100-FM-256	6942	103-LR-259
6842	99-ES-247	6892	100-FM-257	6944	103-LR-260
6844	99-ES-248	6894	101-MD-248		
6846	99-ES-249	6896	101-MD-249		

**DEFINITION OF FILE NUMBERS (MF)**

MF	Class of Data - Abbreviation used in the index
1	General Information - Information
2	Resonance Parameters - Res. parm.
3	Neutron Cross Sections - $\sigma(E)$
4	Angular Distributions of Secondary Neutrons - $d\sigma/d\theta$
5	Energy Distributions of Secondary Neutrons - $d\sigma/dE$
6	Energy-Angular Distributions for Secondary Neutrons
7	Thermal Neutron Scattering Law Data - $S(\alpha, \beta)$
8	Radioactive Decay and Fission Product Yield Data - Rdd,Fpy
9	Multiplicities for Production of Radioactive Nuclides
10	Cross Sections for Production of Radioactive Nuclides
11	General Comments of Photon Production
12	Photon Production Multiplicities and Transition Probability - mult( $\gamma$ )
13	Photon Production Cross Section - $\sigma(E)(\gamma)$
14	Photon Angular Distributions - $d\sigma/d\theta(\gamma)$
15	Continuous Photon Energy Spectra - $d\sigma/dE(\gamma)$
16	Photon Energy-Angle Distributions
17	Discrete Delayed Gamma Rays
18	Continuous Spectra of Delayed-Photon Emission
19	Electron Multiplicities and Transition Probability Arrays
20	Electron Production Cross Sections
21	Electron Angular Distributions
22	Continuous Electron Energy Spectra
23	"Smooth" Photon Interaction Cross Sections - $\sigma(E\gamma)$
24	Secondary Angular Distributions for Photon Interaction - $d\sigma(\gamma)/d\theta$
25	Secondary Energy Distributions for Photon Interaction - $d\sigma(\gamma)/dE$
26	Secondary Energy-Angle Distributions for Photon Interaction
27	Atomic Form Factors or Scattering Functions for Photon Interaction - Aff
28	Not used
29	Not used
30	Not used
31	Covariances of the Average Number of Neutrons per Fission
32	Covariances of Resonance
33	Covariances of Neutron Cross Sections

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## DEFINITION OF REACTION TYPES

MT (Range)	Description of Class of Reactions
1 - 100	Reaction Types in which Secondary Particles of the same Type as the Incident Particles are Emitted
101-150	Reaction Types in which no Secondary Particles of the same Type as the Incident Particles are Emitted
151-200	Resonance Region Information
201-450	Additional Quantities Derived from the Basic Data
451-699	Miscellaneous Quantities
700-799	Excitation Cross Sections for the Reactions that Emit Charged Particles
800-999	(not assigned)
MT	Description
1	Total Cross Section
2	Elastic Cross Section
3	Nonelastic Cross Section
4	Total Inelastic Cross Section
5	(not assigned)
6 - 9	(n,2n) Cross Section for 1st to 4th Excited State (Describes First Neutron)
10 - 15	to be assigned
16	Direct (n,2n) Cross Section ( Total (n,2n) Cross Section is Sum of MT= 6,7,8,9,16
17	(n,3n) Cross Section
18	Total Fission Cross Section (Sum of MT=19,20,21,38)
19	(n,f) Cross Section (First Chance Fission)
20	(n,n'+f) Cross Section (Second Chance Fission)
21	(n,2n+f) Cross Section (Third Chance Fission)
22	(n,n'+alpha) Cross Section
23	(n,n'+3alpha) Cross Section
24	(n,2n+alpha) Cross Section
25	(n,3n+alpha) Cross Section
26	(n,2n) Isomeric State Cross Section
27	Absorption Cross Section (Sum of MT=18 and 101)
28	(n,n'+p) Cross Section
29	(n,n'+2alpha) Cross Section
30	(n,2n+2alpha) Cross Section
31	to be used as *LR* flag only
32	(n,n'+d) Cross Section
33	(n,n'+t) Cross Section
34	(n,n'+He3) Cross Section
35	(n,n'+d+2alpha) Cross Section
36	(n,n'+t+2alpha) Cross Section
37	(n,4n) Cross Section
38	(n,3n+f)Cross Section (4th Chance Fission)
39 - 40	to be used as *LR* flag only
41 - 45	not assigned
46 - 49	Cross Section for Describing the Second Neutron from (n,2n) Reaction for the 1st to the 4th Excited State
50	not assigned
51 - 90	(n,n') to the 1st up to the 40th Excited State
91	(n,n') to the Continuum
92 - 100	not assigned
101	Neutron Disappearance (Sum of all Cross Sections in which a Neutron is not in the Exit Channel (101 Sum of MT=102 through MT=114))
102	(n,gamma) Radiative Capture Cross Section
103	(n,p) Cross Section
104	(n,d) Cross Section
105	(n,t) Cross Section
106	(n,He3) Cross Section
107	(n,alpha) Cross Section
108	(n,2alpha) Cross Section
109	(n,3alpha) Cross Section
110	not assigned
111	(n,2p) Cross Section
112	(n,p+alpha) Cross Section
113	(n,t+2alpha) Cross Section
114	(n,d+2alpha) Cross Section
115 - 119	not assigned
120	Target Destruction = Nonelastic less Total (n,n'gamma)
121 - 150	not assigned

MT	Description
151	General Designation for Resonance Information
152 - 202	not assigned
203	Total Hydrogen Production
203	Total Deuterium Production
204	Total Deuterium Production
205	Total Tritium Production
206	Total He3 Production
207	Total He4 Production
208 - 250	not assigned
251	The Average Cosine of the Scattering Angle ( $\lambda_{ab}$ ) for Elastic Scattering
252	The Average Logarithmic Energy Decrement for Elastic Scattering
253	The Average of the Square of the Logarithmic Energy Decrement for Elastic Scattering, Divided by Twice the Average Logarithmic Decrement for Elastic Scattering
254 - 300	not assigned
301 - 450	Energy Release Rate Parameters, Average( $E \cdot \sigma$ ), for Total and Partial Cross Sections. Subtract 300 from this Number to obtain the Specific Reaction Type Identification. for example MT=302=(300+2) denotes Elastic Scattering
451	Heading or Title Information (given only in MF=1)
452	Average Total (Prompt + Delayed) Number of Neutrons Released per Fission Event
454	Independent Fission Product Yield Data
455	Delayed Neutrons from Fission
456	Prompt Neutron from Fission
457	Radioactive Decay Data
458	Energy Release in Fission
459	Cumulative Fission Product Yield Data
460 - 464	not assigned
465	Delayed Neutrons from Spontaneous Fission
466	Prompt Neutrons from Spontaneous Fission
467 - 500	not assigned
501	Total Photon Interaction Cross Section
502	Photon Coherent Scattering
503	not assigned
504	Photon Coherent Scattering
505 - 514	not assigned
515	Pair Production, Electron Field
516	Pair Production, Nuclear and Electron Field (i.e., Pair +Triplet Production)
517	Pair Production Nuclear Field
518	Photofission (gamma,f)
519 - 531	not assigned
532	Photoneutron (gamma,n)
533	Total Photonuclear
534 - 601	not assigned
602	Photoelectric
603 - 699	not assigned
700	(n,p) Cross Section (Cross Section for Leaving the Residual Nucleus in the Ground State)
701 - 717	(n,p) Cross Section for the 1st to the 17th Excited State
718	(n,p) Cross Section for the Continuum Excited State
719	(n,p) Cross Section for Continuum Specifically not Included in Sigma Total (Redundant used for Describing Outgoing Proton)
720	(n,d) Cross Section for the Ground State
721 - 737	(n,d) Cross Section for the 1st to the 17th Excited State
738	(n,d) Cross Section for the Continuum Excited State
739	(n,d) Cross Section for Continuum Specifically not Included in Sigma Total (Redundant, used for Describing Outgoing Neutron)
740	(n,t) Cross Section for the Ground State
741 - 757	(n,t) Cross Section for the 1st to the 17th Excited State
758	(n,t) Cross Section for the Continuum Excited State
759	(n,t) Cross Section for Continuum Specifically not Included in Sigma Total (Redundant, used for Describing Outgoing Triton)
760	(n,He3) Cross Section for the Ground State
761 - 777	(n,He3) Cross Section for the 1st to the 17th Excited State
778	(n,He3) Cross Section for the Continuum Excited State
779	(n,He3) Cross Section for Continuum Specifically not Included in Sigma Total (Redundant, used for Describing Outgoing He3)
780	(n,alpha) Cross Section for the Ground State
781 - 797	(n,alpha) Cross Section for 1st to the 17th Excited State
798	(n,alpha) Cross Section for the Continuum Excited State
799	(n,alpha) Cross Section for Continuum Specifically not Included in Sigma Total (Redundant, used to Describe Outgoing Alpha)
800 - 999	not assigned

**Symbols used for TAPE 22 descriptions**

$\gamma$	Gamma ray
$\beta^-$	Beta decay
e.c./ $\beta^+$	Electron capture and/or positron emission
$\alpha$	Alpha decay
n	Neutron emission
SF	Spontaneous fission
p	Proton emission
e-	Discrete electrons
X	X-rays and annihilation radiation
IT	Isomeric transition
( $\beta^-$ ,n)	Beta decay followed by neutron emission
( $\beta^-$ , $\alpha$ )	Beta decay followed by alpha emission
( $\beta^+$ , $\alpha$ )	Positron decay followed by alpha emission

## **TAPE 21**

**THERMAL SCATTERING LAW DATA**



## JOINT EVALUATED FILE INDEX

1-H -D20

	MF	MT	MT
1-H -H2O		Tape no: 21	Material no: 4001
	1:Information	451:(Gen. info.)	
	3: $\sigma(E)$	102:(n, $\gamma$ )	
	7:S( $\alpha,\beta$ )	4:(n,inel)	
1-H -CH2		Tape no: 21	Material no: 4004
	1:Information	451:(Gen. info.)	
	3: $\sigma(E)$	102:(n, $\gamma$ )	
	7:S( $\alpha,\beta$ )	4:(n,inel)	
1-H2-D20		Tape no: 21	Material no: 4002
	1:Information	451:(Gen. info.)	
	3: $\sigma(E)$	102:(n, $\gamma$ )	
	7:S( $\alpha,\beta$ )	4:(n,inel)	
6-C -GRA		Tape no: 21	Material no: 4003
	1:Information	451:(Gen. info.)	
	7:S( $\alpha,\beta$ )	4:(n,inel)	

The above mentioned JEF-1 Thermal Scattering Data are also available from the NEA Data Bank in a pointwise form. The S( $\alpha,\beta$ ) data have been processed with the code NJOY(6/83-2+) by IKE Stuttgart, and the output is in the PENDF card image format. The files, containing data for MF=3 and MF=6, can be directly used for further processing with the NJOY GROUPR module after conversion to binary form using the MODER module.

The following temperatures and MT numbers are given:

## H-1 (MAT=4011) bound in light water (H2O) and polyethylene (CH2)

T Kelvin	MT	Comments
293.6	222	H-1 in H2O incoherent scattering
	223	H-1 in CH2 incoherent inelastic scattering
	224	H-1 in CH2 incoherent elastic scattering
323.6	222	H-1 in H2O incoherent scattering
350.	223	H-1 in CH2 incoherent inelastic scattering
	224	H-1 in CH2 incoherent elastic scattering
373.6	222	H-1 in H2O incoherent scattering
423.6	222	H-1 in H2O incoherent scattering
473.6	222	H-1 in H2O incoherent scattering
523.6	222	H-1 in H2O incoherent scattering
573.6	222	H-1 in H2O incoherent scattering
623.6	222	H-1 in H2O incoherent scattering

**H-2 (MAT=4012) bound in heavy water (D2O)**

T Kelvin	MT	Comments
293.6	228	H-2 in D2O incoherent scattering
323.6	228	H-2 in D2O incoherent scattering
373.6	228	H-2 in D2O incoherent scattering
423.6	228	H-2 in D2O incoherent scattering
473.6	228	H-2 in D2O incoherent scattering
523.6	228	H-2 in D2O incoherent scattering
573.6	228	H-2 in D2O incoherent scattering
623.6	228	H-2 in D2O incoherent scattering

**C (MAT=4060) bound in graphite**

T Kelvin	MT	Comments
293.6	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
400.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
500.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
600.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
700.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
800.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
1000.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
1200.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
1600.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
2000.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering
3000.	229	C in graphite incoherent inelastic scattering
	230	C in graphite coherent elastic scattering

TAPE 22

DECAY DATA



## JOINT EVALUATED FILE INDEX

1-H - 3	Tape no: 22	Material no: 5001
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
2-HE- 6	Tape no: 22	Material no: 5003
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
2-HE- 8	Tape no: 22	Material no: 5004
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
3-LI- 8	Tape no: 22	Material no: 5006
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
3-LI- 9	Tape no: 22	Material no: 5008
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
4-BE- 7	Tape no: 22	Material no: 5010
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
4-BE- 10	Tape no: 22	Material no: 5011
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
4-BE- 11	Tape no: 22	Material no: 5013
	Decay modes : $\beta^- (\beta^-, \alpha)$	
	Radiation spectra: $\gamma \beta^- \alpha$	
5-B - 12	Tape no: 22	Material no: 5015
	Decay modes : $\beta^- (\beta^-, \alpha)$	
	Radiation spectra: $\gamma \beta^- \alpha$	
5-B - 13	Tape no: 22	Material no: 5016
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
6-C - 14	Tape no: 22	Material no: 5017
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
6-C - 15	Tape no: 22	Material no: 5019
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
7-N - 13	Tape no: 22	Material no: 5021
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+ X$	

## JOINT EVALUATED FILE INDEX

<b>7-N - 16</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5022
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^-$	
<b>8-O - 19</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5023
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>9-F - 18</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5025
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+ X$	
<b>9-F - 20</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5027
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>10-NE- 23</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5029
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>11-NA- 22</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5031
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>11-NA- 24</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5033
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
<b>11-NA- 24M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5035
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^-$	
<b>11-NA- 25</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5037
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>11-NA- 26</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5039
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>12-MG- 27</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5041
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>12-MG- 28</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5042
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
<b>13-AL- 26</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5043
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	

## JOINT EVALUATED FILE INDEX

<b>13-AL- 26M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5045
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ X	
<b>13-AL- 28</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5047
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>13-AL- 29</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5049
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>13-AL- 30</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5051
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>14-SI- 31</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5053
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>14-SI- 32</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5055
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>15-P - 32</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5057
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>15-P - 33</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5059
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>15-P - 34</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5061
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>16-S - 35</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5063
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>16-S - 37</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5065
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>17-CL- 34</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5067
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ X	
<b>17-CL- 34M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5069
	Decay modes : e.c./ $\beta^+$ IT	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	

## JOINT EVALUATED FILE INDEX

<b>17-CL- 36</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5071
	Decay modes :	$\beta^-$ e.c./ $\beta^+$
	Radiation spectra:	$\beta^-$ e.c./ $\beta^+$ e- X
<b>17-CL- 38</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5073
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>17-CL- 38M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5075
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>18-AR- 37</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5077
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	e.c./ $\beta^+$ e- X
<b>18-AR- 39</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5079
	Decay modes :	$\beta^-$
	Radiation spectra:	$\beta^-$
<b>18-AR- 41</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5080
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>18-AR- 42</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5081
	Decay modes :	$\beta^-$
	Radiation spectra:	$\beta^-$
<b>19-K - 38</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5083
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ X
<b>19-K - 38M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5085
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	e.c./ $\beta^+$ X
<b>19-K - 40</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5087
	Decay modes :	$\beta^-$ e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X
<b>19-K - 42</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5089
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>19-K - 43</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5091
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>19-K - 44</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5092
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$

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20-CA- 41	Tape no: 22	Material no: 5093
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ e- X	
20-CA- 45	Tape no: 22	Material no: 5095
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
20-CA- 47	Tape no: 22	Material no: 5096
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
20-CA- 49	Tape no: 22	Material no: 5097
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
21-SC- 44	Tape no: 22	Material no: 5099
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
21-SC- 44M	Tape no: 22	Material no: 5101
	Decay modes : e.c./ $\beta^+$ IT	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
21-SC- 46	Tape no: 22	Material no: 5103
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
21-SC- 46M	Tape no: 22	Material no: 5104
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
21-SC- 47	Tape no: 22	Material no: 5105
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
21-SC- 48	Tape no: 22	Material no: 5107
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
21-SC- 49	Tape no: 22	Material no: 5109
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
21-SC- 50	Tape no: 22	Material no: 5110
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
21-SC- 50M	Tape no: 22	Material no: 5112
	Decay modes : IT	
	Radiation spectra: $\gamma$	

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**22-TI- 45**      **Tape no:** 22      **Material no:** 5114  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ + e- X

**22-TI- 51**      **Tape no:** 22      **Material no:** 5116  
 Decay modes :  $\beta$ -  
 Radiation spectra:  $\gamma$   $\beta$ -

**23-V - 48**      **Tape no:** 22      **Material no:** 5118  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ +

**23-V - 49**      **Tape no:** 22      **Material no:** 5119  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra: e.c./ $\beta$ + e- X

**23-V - 52**      **Tape no:** 22      **Material no:** 5120  
 Decay modes :  $\beta$ -  
 Radiation spectra:  $\gamma$   $\beta$ -

**23-V - 53**      **Tape no:** 22      **Material no:** 5122  
 Decay modes :  $\beta$ -  
 Radiation spectra:  $\gamma$   $\beta$ -

**23-V - 54**      **Tape no:** 22      **Material no:** 5124  
 Decay modes :  $\beta$ -  
 Radiation spectra:  $\gamma$   $\beta$ -

**24-CR- 49**      **Tape no:** 22      **Material no:** 5125  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ + e- X

**24-CR- 51**      **Tape no:** 22      **Material no:** 5126  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ + e- X

**24-CR- 55**      **Tape no:** 22      **Material no:** 5128  
 Decay modes :  $\beta$ -  
 Radiation spectra:  $\gamma$   $\beta$ -

**25-MN- 52**      **Tape no:** 22      **Material no:** 5130  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ + e- X

**25-MN- 52M**      **Tape no:** 22      **Material no:** 5132  
 Decay modes : IT e.c./ $\beta$ +  
 Radiation spectra:  $\gamma$  e.c./ $\beta$ + e- X

**25-MN- 53**      **Tape no:** 22      **Material no:** 5134  
 Decay modes : e.c./ $\beta$ +  
 Radiation spectra: e.c./ $\beta$ + e- X

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<b>25-MN- 54</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5136
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>25-MN- 56</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5138
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>25-MN- 57</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5140
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>25-MN- 58</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5142
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>25-MN- 58M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5144
	Decay modes :	$\beta^-$
	Radiation spectra:	$\beta^-$
<b>26-FE- 53</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5146
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>26-FE- 53M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5148
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>26-FE- 55</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5149
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	e.c./ $\beta^+$ e- X
<b>26-FE- 59</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5151
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>26-FE- 60</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5152
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>26-FE- 61</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5154
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>27-CO- 55</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5156
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>27-CO- 56</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5158
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X

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27-CO- 57	Tape no: 22	Material no: 5159
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
27-CO- 58	Tape no: 22	Material no: 5161
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
27-CO- 58M	Tape no: 22	Material no: 5162
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
27-CO- 60	Tape no: 22	Material no: 5164
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
27-CO- 60M	Tape no: 22	Material no: 5165
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
27-CO- 61	Tape no: 22	Material no: 5166
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
27-CO- 62	Tape no: 22	Material no: 5168
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
27-CO- 62M	Tape no: 22	Material no: 5170
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$	
27-CO- 63	Tape no: 22	Material no: 5172
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
27-CO- 64	Tape no: 22	Material no: 5174
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
28-NI- 56	Tape no: 22	Material no: 5176
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
28-NI- 57	Tape no: 22	Material no: 5178
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
28-NI- 59	Tape no: 22	Material no: 5180
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ e- X	

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28-NI- 63	Tape no: 22	Material no: 5182
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
28-NI- 65	Tape no: 22	Material no: 5184
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
28-NI- 66	Tape no: 22	Material no: 5186
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
28-NI- 67	Tape no: 22	Material no: 5188
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
29-CU- 62	Tape no: 22	Material no: 5190
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
29-CU- 64	Tape no: 22	Material no: 5191
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
29-CU- 66	Tape no: 22	Material no: 5193
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
29-CU- 67	Tape no: 22	Material no: 5194
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
29-CU- 68	Tape no: 22	Material no: 5196
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
29-CU- 68M	Tape no: 22	Material no: 5198
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^-$ e- X	
29-CU- 71	Tape no: 22	Material no: 5200
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
29-CU- 72	Tape no: 22	Material no: 5202
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
29-CU- 73	Tape no: 22	Material no: 5204
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	

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<b>30-ZN- 63</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5206
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>30-ZN- 65</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5207
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>30-ZN- 69</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5208
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>30-ZN- 69M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5210
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>30-ZN- 71</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5212
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>30-ZN- 71M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5214
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$
<b>30-ZN- 72</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5215
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>30-ZN- 73</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5216
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>30-ZN- 74</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5217
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>30-ZN- 75</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5218
<b>30-ZN- 76</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5220
<b>30-ZN- 77</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5222
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
<b>30-ZN- 78</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5224
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>30-ZN- 79</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5226

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31-GA- 72	Tape no: 22	Material no: 5227
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 73	Tape no: 22	Material no: 5229
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
31-GA- 74	Tape no: 22	Material no: 5231
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 74M	Tape no: 22	Material no: 5233
	Decay modes : IT	
	Radiation spectra: $\gamma e^- X$	
31-GA- 75	Tape no: 22	Material no: 5235
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 76	Tape no: 22	Material no: 5236
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 77	Tape no: 22	Material no: 5238
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 78	Tape no: 22	Material no: 5240
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 79	Tape no: 22	Material no: 5242
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 80	Tape no: 22	Material no: 5244
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 81	Tape no: 22	Material no: 5246
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
31-GA- 82	Tape no: 22	Material no: 5248
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
31-GA- 83	Tape no: 22	Material no: 5250

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<b>31-GA- 84</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5252
<b>32-GE- 73M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5253
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>32-GE- 75</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5254
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>32-GE- 75M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5256
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>32-GE- 77</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5257
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 77M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5259
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>32-GE- 78</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5260
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 79</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5262
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 80</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5264
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 81</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5266
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 81M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5268
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 82</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5270
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>32-GE- 83</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5272
<b>32-GE- 84</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5274

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32-GE- 85	Tape no: 22	Material no: 5276
32-GE- 86	Tape no: 22	Material no: 5278
33-AS- 74	Tape no: 22	Material no: 5280
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X	
33-AS- 76	Tape no: 22	Material no: 5281
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 77	Tape no: 22	Material no: 5283
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
33-AS- 78	Tape no: 22	Material no: 5285
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 79	Tape no: 22	Material no: 5287
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 80	Tape no: 22	Material no: 5289
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 81	Tape no: 22	Material no: 5291
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 82	Tape no: 22	Material no: 5293
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 82M	Tape no: 22	Material no: 5295
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 83	Tape no: 22	Material no: 5297
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 84	Tape no: 22	Material no: 5299
	Decay modes : $\beta^-$ ( $\beta^-$ ,n)	
	Radiation spectra: $\gamma$ $\beta^-$	
33-AS- 85	Tape no: 22	Material no: 5300

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	Decay modes : $\beta^-$ ( $\beta^-$ , n)	
	Radiation spectra: $\gamma$	
<b>33-AS- 86</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5302
<b>33-AS- 87</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5304
<b>33-AS- 88</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5306
<b>34-SE- 75</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5308
	Decay modes :      e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>34-SE- 77M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5310
	Decay modes :      IT	
	Radiation spectra: $\gamma$	
<b>34-SE- 79</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5311
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>34-SE- 79M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5312
	Decay modes :      IT	
	Radiation spectra: $\gamma$	
<b>34-SE- 81</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5313
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>34-SE- 81M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5315
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>34-SE- 83</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5317
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>34-SE- 83M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5319
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>34-SE- 84</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5320
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>34-SE- 85</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5321
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	

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<b>34-SE- 86</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5322
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>34-SE- 87</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5324
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
<b>34-SE- 88</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5326
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
<b>34-SE- 89</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5328
<b>34-SE- 90</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5330
<b>34-SE- 91</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5332
<b>34-SE- 92</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5334
<b>35-BR- 79M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5335
	Decay modes : IT	
	Radiation spectra: $\gamma e^- X$	
<b>35-BR- 80</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5337
	Decay modes : $\beta^- e.c./\beta^+$	
	Radiation spectra: $\gamma \beta^- e.c./\beta^+ e^- X$	
<b>35-BR- 80M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5339
	Decay modes : IT	
	Radiation spectra: $\gamma e^- X$	
<b>35-BR- 82</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5341
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>35-BR- 82M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5343
	Decay modes : $\beta^- IT$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>35-BR- 83</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5345
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 84</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5346
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	

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<b>35-BR- 84M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5348
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 85</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5350
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 86</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5352
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 87</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5353
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 88</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5355
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 89</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5357
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 90</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5359
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>35-BR- 91</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5360
<b>35-BR- 92</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5362
<b>36-KR- 79</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5364
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>36-KR- 79M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5366
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>36-KR- 81</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5368
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>36-KR- 81M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5369
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>36-KR- 83M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5371
	Decay modes : IT	

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Radiation spectra:  $\gamma$  e- X

<b>36-KR- 85</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5373
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>36-KR- 85M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5375
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 87</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5377
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 88</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5379
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 89</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5381
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>36-KR- 90</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5383
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 91</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5385
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 92</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5386
	Decay modes :	$\beta^-$ ( $\beta^-$ ,n)
	Radiation spectra:	$\gamma \beta^-$
<b>36-KR- 93</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5388
	Decay modes :	$\beta^-$ ( $\beta^-$ ,n)
	Radiation spectra:	$\gamma \beta^-$ e- X
<b>36-KR- 94</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5390
	Decay modes :	$\beta^-$ ( $\beta^-$ ,n)
	Radiation spectra:	$\gamma$
<b>36-KR- 95</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5392
<b>37-RB- 86</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5394
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>37-RB- 86M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5396
	Decay modes :	IT
	Radiation spectra:	$\gamma$

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<b>37-RB- 87</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5398
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>37-RB- 88</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5399
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>37-RB- 89</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5401
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>37-RB- 90</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5403
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>37-RB- 90M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5405
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 91</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5407
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 92</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5408
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>37-RB- 93</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5410
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 94</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5412
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
<b>37-RB- 95</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5414
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 96</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5415
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 97</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5416
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>37-RB- 98</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5417
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	

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37-RB- 99

Tape no: 22

Material no: 5418

37-RB-100

Tape no: 22

Material no: 5420

Decay modes :  $\beta^-$  ( $\beta^-, n$ )Radiation spectra:  $\gamma$ 

38-SR- 85

Tape no: 22

Material no: 5422

Decay modes : e.c./ $\beta^+$ Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

38-SR- 85M

Tape no: 22

Material no: 5424

Decay modes : IT e.c./ $\beta^+$ Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

38-SR- 87M

Tape no: 22

Material no: 5426

Decay modes : IT e.c./ $\beta^+$ Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

38-SR- 89

Tape no: 22

Material no: 5427

Decay modes :  $\beta^-$ Radiation spectra:  $\beta^-$ 

38-SR- 90

Tape no: 22

Material no: 5429

Decay modes :  $\beta^-$ Radiation spectra:  $\beta^-$ 

38-SR- 91

Tape no: 22

Material no: 5430

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$  e- X

38-SR- 92

Tape no: 22

Material no: 5432

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$ 

38-SR- 93

Tape no: 22

Material no: 5433

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$  e- X

38-SR- 94

Tape no: 22

Material no: 5434

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$ 

38-SR- 95

Tape no: 22

Material no: 5436

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$  e- X

38-SR- 96

Tape no: 22

Material no: 5438

Decay modes :  $\beta^-$ Radiation spectra:  $\gamma$   $\beta^-$  e- X

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**38-SR- 97**            **Tape no:** 22            **Material no:** 5439  
     Decay modes :         $\beta^-$  ( $\beta^-, n$ )  
     Radiation spectra:     $\gamma \beta^-$

**38-SR- 98**            **Tape no:** 22            **Material no:** 5441  
     Decay modes :         $\beta^-$  ( $\beta^-, n$ )  
     Radiation spectra:     $\gamma \beta^- e^- X$

**38-SR- 99**            **Tape no:** 22            **Material no:** 5442  
     Decay modes :         $\beta^-$  ( $\beta^-, n$ )  
     Radiation spectra:     $\gamma$

**38-SR-100**            **Tape no:** 22            **Material no:** 5444  
     Decay modes :         $\beta^-$   
     Radiation spectra:     $\gamma$

**39-Y - 88**            **Tape no:** 22            **Material no:** 5445  
     Decay modes :        e.c./ $\beta^+$   
     Radiation spectra:     $\gamma$  e.c./ $\beta^+$  e- X

**39-Y - 89M**            **Tape no:** 22            **Material no:** 5447  
     Decay modes :        IT  
     Radiation spectra:     $\gamma e^- X$

**39-Y - 90**            **Tape no:** 22            **Material no:** 5449  
     Decay modes :         $\beta^-$   
     Radiation spectra:     $\gamma \beta^-$

**39-Y - 90M**            **Tape no:** 22            **Material no:** 5451  
     Decay modes :         $\beta^-$  IT  
     Radiation spectra:     $\gamma \beta^- e^- X$

**39-Y - 91**            **Tape no:** 22            **Material no:** 5452  
     Decay modes :         $\beta^-$   
     Radiation spectra:     $\gamma \beta^-$

**39-Y - 91M**            **Tape no:** 22            **Material no:** 5454  
     Decay modes :        IT  
     Radiation spectra:     $\gamma e^- X$

**39-Y - 92**            **Tape no:** 22            **Material no:** 5456  
     Decay modes :         $\beta^-$   
     Radiation spectra:     $\gamma \beta^-$

**39-Y - 93**            **Tape no:** 22            **Material no:** 5457  
     Decay modes :         $\beta^-$   
     Radiation spectra:     $\gamma \beta^- e^- X$

**39-Y - 93M**            **Tape no:** 22            **Material no:** 5459  
     Decay modes :        IT  
     Radiation spectra:     $\gamma e^- X$

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39-Y - 94	Tape no: 22	Material no: 5461
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 95	Tape no: 22	Material no: 5463
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 96	Tape no: 22	Material no: 5465
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
39-Y - 96M	Tape no: 22	Material no: 5467
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 97	Tape no: 22	Material no: 5469
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 97M	Tape no: 22	Material no: 5471
	Decay modes : $\beta^- IT (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 98	Tape no: 22	Material no: 5473
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 98M	Tape no: 22	Material no: 5475
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
39-Y - 99	Tape no: 22	Material no: 5477
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
39-Y - 100	Tape no: 22	Material no: 5479
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
39-Y - 100M	Tape no: 22	Material no: 5481
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
39-Y - 101	Tape no: 22	Material no: 5482
39-Y - 102	Tape no: 22	Material no: 5484
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
40-ZR- 88	Tape no: 22	Material no: 5486

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	Decay modes : e.c./ $\beta$ +	
	Radiation spectra: $\gamma$ e.c./ $\beta$ + e- X	
<b>40-ZR- 89</b>	<b>Tape no: 22</b>	<b>Material no: 5488</b>
	Decay modes : e.c./ $\beta$ +	
	Radiation spectra: $\gamma$ e.c./ $\beta$ + e- X	
<b>40-ZR- 89M</b>	<b>Tape no: 22</b>	<b>Material no: 5490</b>
	Decay modes : IT e.c./ $\beta$ +	
	Radiation spectra: $\gamma$ e.c./ $\beta$ + e- X	
<b>40-ZR- 90M</b>	<b>Tape no: 22</b>	<b>Material no: 5492</b>
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>40-ZR- 93</b>	<b>Tape no: 22</b>	<b>Material no: 5494</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\beta$ -	
<b>40-ZR- 95</b>	<b>Tape no: 22</b>	<b>Material no: 5496</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ -	
<b>40-ZR- 97</b>	<b>Tape no: 22</b>	<b>Material no: 5498</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>40-ZR- 98</b>	<b>Tape no: 22</b>	<b>Material no: 5500</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\beta$ -	
<b>40-ZR- 99</b>	<b>Tape no: 22</b>	<b>Material no: 5501</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>40-ZR-100</b>	<b>Tape no: 22</b>	<b>Material no: 5502</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$	
<b>40-ZR-101</b>	<b>Tape no: 22</b>	<b>Material no: 5504</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ -	
<b>40-ZR-102</b>	<b>Tape no: 22</b>	<b>Material no: 5506</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$	
<b>40-ZR-103</b>	<b>Tape no: 22</b>	<b>Material no: 5508</b>
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$	
<b>40-ZR-104</b>	<b>Tape no: 22</b>	<b>Material no: 5510</b>

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	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$		
<b>41-NB- 91</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5512</b>
	Decay modes :	e.c./ $\beta^+$		
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X		
<b>41-NB- 91M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5514</b>
	Decay modes :	IT e.c./ $\beta^+$		
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X		
<b>41-NB- 92</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5516</b>
	Decay modes :	e.c./ $\beta^+$		
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X		
<b>41-NB- 92M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5518</b>
	Decay modes :	IT e.c./ $\beta^+$		
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X		
<b>41-NB- 93M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5520</b>
	Decay modes :	IT		
	Radiation spectra:	$\gamma$ e- X		
<b>41-NB- 94</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5521</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$ $\beta^-$		
<b>41-NB- 95</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5522</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$ $\beta^-$		
<b>41-NB- 95M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5524</b>
	Decay modes :	IT		
	Radiation spectra:	$\gamma$ e- X		
<b>41-NB- 96</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5525</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$ $\beta^-$ e- X		
<b>41-NB- 97</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5527</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$ $\beta^-$ e- X		
<b>41-NB- 97M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5529</b>
	Decay modes :	IT		
	Radiation spectra:	$\gamma$ e- X		
<b>41-NB- 98</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5531</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma$ $\beta^-$		
<b>41-NB- 98M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5533</b>

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	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>41-NB- 99</b>	<b>Tape no: 22</b>	<b>Material no: 5534</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>41-NB- 99M</b>	<b>Tape no: 22</b>	<b>Material no: 5536</b>
	Decay modes : $\beta^-$ IT Radiation spectra: $\gamma \beta^- e^- X$	
<b>41-NB-100</b>	<b>Tape no: 22</b>	<b>Material no: 5538</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>41-NB-100M</b>	<b>Tape no: 22</b>	<b>Material no: 5540</b>
<b>41-NB-101</b>	<b>Tape no: 22</b>	<b>Material no: 5542</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>41-NB-102</b>	<b>Tape no: 22</b>	<b>Material no: 5544</b>
<b>41-NB-102M</b>	<b>Tape no: 22</b>	<b>Material no: 5546</b>
<b>41-NB-103</b>	<b>Tape no: 22</b>	<b>Material no: 5548</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma$	
<b>41-NB-104</b>	<b>Tape no: 22</b>	<b>Material no: 5550</b>
<b>41-NB-104M</b>	<b>Tape no: 22</b>	<b>Material no: 5552</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma$	
<b>41-NB-105</b>	<b>Tape no: 22</b>	<b>Material no: 5554</b>
<b>41-NB-106</b>	<b>Tape no: 22</b>	<b>Material no: 5556</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma$	
<b>42-MO- 91</b>	<b>Tape no: 22</b>	<b>Material no: 5558</b>
	Decay modes :           e.c./ $\beta^+$ Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>42-MO- 91M</b>	<b>Tape no: 22</b>	<b>Material no: 5560</b>
	Decay modes :           IT e.c./ $\beta^+$	

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	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
42-MO- 93	Tape no:	22 Material no: 5561
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	e.c./ $\beta^+$ e- X
42-MO- 93M	Tape no:	22 Material no: 5563
	Decay modes :	IT
	Radiation spectra:	$\gamma$ e- X
42-MO- 99	Tape no:	22 Material no: 5564
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
42-MO-101	Tape no:	22 Material no: 5565
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
42-MO-102	Tape no:	22 Material no: 5567
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
42-MO-103	Tape no:	22 Material no: 5568
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
42-MO-104	Tape no:	22 Material no: 5570
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
42-MO-105	Tape no:	22 Material no: 5572
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
42-MO-106	Tape no:	22 Material no: 5574
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
42-MO-107	Tape no:	22 Material no: 5576
42-MO-108	Tape no:	22 Material no: 5578
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
42-MO-110	Tape no:	22 Material no: 5580
43-TC- 96	Tape no:	22 Material no: 5582
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X

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<b>43-TC- 96M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5584
	Decay modes :	IT e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$
<b>43-TC- 97</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5586
<b>43-TC- 97M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5588
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>43-TC- 98</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5590
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>43-TC- 99</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5592
	Decay modes :	$\beta^-$
	Radiation spectra:	$\beta^-$
<b>43-TC- 99M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5593
	Decay modes :	IT
	Radiation spectra:	$\gamma e^- X$
<b>43-TC-100</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5595
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>43-TC-101</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5596
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>43-TC-102</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5598
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>43-TC-102M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5600
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma \beta^-$
<b>43-TC-103</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5601
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>43-TC-104</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5603
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>43-TC-105</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5605
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>43-TC-106</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5607

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	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
43-TC-107	Tape no: 22            Material no: 5609 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
43-TC-108	Tape no: 22            Material no: 5611 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
43-TC-109	Tape no: 22            Material no: 5612	
43-TC-110	Tape no: 22            Material no: 5614	
43-TC-112	Tape no: 22            Material no: 5616	
44-RU- 97	Tape no: 22            Material no: 5618 Decay modes :            e.c./ $\beta^+$ Radiation spectra: $\gamma$ e.c./ $\beta^+$	
44-RU-103	Tape no: 22            Material no: 5619 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
44-RU-105	Tape no: 22            Material no: 5621 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
44-RU-106	Tape no: 22            Material no: 5623 Decay modes : $\beta^-$ Radiation spectra: $\beta^-$	
44-RU-107	Tape no: 22            Material no: 5624 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
44-RU-108	Tape no: 22            Material no: 5626 Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
44-RU-109	Tape no: 22            Material no: 5628 Decay modes : $\beta^-$ Radiation spectra: $\gamma$	
44-RU-109M	Tape no: 22            Material no: 5630	
44-RU-110	Tape no: 22            Material no: 5632	

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<b>44-RU-111</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5634
<b>44-RU-112</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5636
<b>44-RU-113</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5638
<b>45-RH-102</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5640
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>45-RH-102M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5642
	Decay modes :	$\beta^-$ IT e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ $\beta^-$ e.c./ $\beta^+$
<b>45-RH-103M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5643
	Decay modes :	IT
	Radiation spectra:	$\gamma$ e- X
<b>45-RH-104</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5644
	Decay modes :	$\beta^-$ e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X
<b>45-RH-104M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5645
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>45-RH-105</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5646
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>45-RH-105M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5648
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>45-RH-106</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5650
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>45-RH-106M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5652
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>45-RH-107</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5654
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>45-RH-108</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5656

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	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>45-RH-108M</b>	<b>Tape no: 22</b>	<b>Material no: 5658</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>45-RH-109</b>	<b>Tape no: 22</b>	<b>Material no: 5659</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
<b>45-RH-110</b>	<b>Tape no: 22</b>	<b>Material no: 5661</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>45-RH-110M</b>	<b>Tape no: 22</b>	<b>Material no: 5663</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>45-RH-111</b>	<b>Tape no: 22</b>	<b>Material no: 5664</b>
<b>45-RH-112</b>	<b>Tape no: 22</b>	<b>Material no: 5666</b>
<b>45-RH-113</b>	<b>Tape no: 22</b>	<b>Material no: 5668</b>
<b>45-RH-114</b>	<b>Tape no: 22</b>	<b>Material no: 5670</b>
<b>46-PD-103</b>	<b>Tape no: 22</b>	<b>Material no: 5671</b>
	Decay modes :            e.c./ $\beta^+$ Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>46-PD-107</b>	<b>Tape no: 22</b>	<b>Material no: 5672</b>
	Decay modes : $\beta^-$ Radiation spectra: $\beta^-$	
<b>46-PD-107M</b>	<b>Tape no: 22</b>	<b>Material no: 5674</b>
	Decay modes :            IT Radiation spectra: $\gamma$	
<b>46-PD-109</b>	<b>Tape no: 22</b>	<b>Material no: 5675</b>
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
<b>46-PD-109M</b>	<b>Tape no: 22</b>	<b>Material no: 5676</b>
	Decay modes :            IT Radiation spectra: $\gamma$	
<b>46-PD-111</b>	<b>Tape no: 22</b>	<b>Material no: 5678</b>

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	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>46-PD-111M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5679
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>46-PD-112</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5680
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>46-PD-113</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5682
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>46-PD-114</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5684
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>46-PD-115</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5686
<b>46-PD-116</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5688
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>46-PD-117</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5690
<b>46-PD-118</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5692
<b>46-PD-119</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5694
<b>46-PD-120</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5696
<b>47-AG-107M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5698
	Decay modes :           IT	
	Radiation spectra: $\gamma$	
<b>47-AG-108</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5700
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X	
<b>47-AG-108M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5701
	Decay modes :           e.c./ $\beta^+$ IT	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>47-AG-109M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5702
	Decay modes :           IT	

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Radiation spectra:  $\gamma$

<b>47-AG-110</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5703
	Decay modes :	$\beta^-$ e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X
<b>47-AG-110M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5705
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-111</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5706
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-111M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5708
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-112</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5710
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-113</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5712
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-113M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5713
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-114</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5715
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-114M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5716
<b>47-AG-115</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5718
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>47-AG-115M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5720
<b>47-AG-116</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5722
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>47-AG-116M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5723
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$

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<b>47-AG-117</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5725
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-117M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5727
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-118</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5729
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-118M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5731
	Decay modes : $\beta^- IT$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-119</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5733
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-120</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5735
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>47-AG-120M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5737
	Decay modes : $\beta^- IT$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>47-AG-121</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5738
	Decay modes : $\beta^- (\beta-, n)$	
	Radiation spectra: $\gamma$	
<b>47-AG-122</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5740
<b>47-AG-123</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5742
<b>47-AG-125</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5744
<b>48-CD-107</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5746
	Decay modes : $e.c./\beta^+$	
	Radiation spectra: $\gamma e.c./\beta^+$	
<b>48-CD-109</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5747
	Decay modes : $e.c./\beta^+$	
	Radiation spectra: $e.c./\beta^+ e^- X$	
<b>48-CD-111M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5749
	Decay modes : $IT$	
	Radiation spectra: $\gamma e^- X$	

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<b>48-CD-113</b>	<b>Tape no: 22</b>	<b>Material no: 5751</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\beta^-$	
<b>48-CD-113M</b>	<b>Tape no: 22</b>	<b>Material no: 5752</b>
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-115</b>	<b>Tape no: 22</b>	<b>Material no: 5754</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>48-CD-115M</b>	<b>Tape no: 22</b>	<b>Material no: 5755</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-117</b>	<b>Tape no: 22</b>	<b>Material no: 5757</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-117M</b>	<b>Tape no: 22</b>	<b>Material no: 5759</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>48-CD-118</b>	<b>Tape no: 22</b>	<b>Material no: 5760</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\beta^-$	
<b>48-CD-119</b>	<b>Tape no: 22</b>	<b>Material no: 5761</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-119M</b>	<b>Tape no: 22</b>	<b>Material no: 5763</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>48-CD-120</b>	<b>Tape no: 22</b>	<b>Material no: 5765</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\beta^-$	
<b>48-CD-121</b>	<b>Tape no: 22</b>	<b>Material no: 5767</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-121M</b>	<b>Tape no: 22</b>	<b>Material no: 5769</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>48-CD-122</b>	<b>Tape no: 22</b>	<b>Material no: 5770</b>

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**48-CD-123**            **Tape no:** 22            **Material no:** 5772

**48-CD-124**            **Tape no:** 22            **Material no:** 5774  
 Decay modes :             $\beta^-$   
 Radiation spectra:       $\gamma \beta^-$

**48-CD-125**            **Tape no:** 22            **Material no:** 5776

**48-CD-126**            **Tape no:** 22            **Material no:** 5777  
 Decay modes :             $\beta^-$   
 Radiation spectra:       $\gamma \beta^-$

**48-CD-128**            **Tape no:** 22            **Material no:** 5778

**49-IN-111**            **Tape no:** 22            **Material no:** 5780  
 Decay modes :            e.c./ $\beta^+$   
 Radiation spectra:       $\gamma$  e.c./ $\beta^+$  e- X

**49-IN-111M**            **Tape no:** 22            **Material no:** 5782  
 Decay modes :            IT  
 Radiation spectra:       $\gamma$  e- X

**49-IN-112**            **Tape no:** 22            **Material no:** 5784  
 Decay modes :             $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:       $\gamma \beta^-$  e.c./ $\beta^+$  e- X

**49-IN-112M**            **Tape no:** 22            **Material no:** 5786  
 Decay modes :            IT  
 Radiation spectra:       $\gamma$  e- X

**49-IN-113M**            **Tape no:** 22            **Material no:** 5787  
 Decay modes :            IT  
 Radiation spectra:       $\gamma$  e- X

**49-IN-114**            **Tape no:** 22            **Material no:** 5788  
 Decay modes :             $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:       $\gamma \beta^-$  e.c./ $\beta^+$  e- X

**49-IN-114M**            **Tape no:** 22            **Material no:** 5790  
 Decay modes :            IT e.c./ $\beta^+$   
 Radiation spectra:       $\gamma$  e.c./ $\beta^+$  e- X

**49-IN-115**            **Tape no:** 22            **Material no:** 5791  
 Decay modes :             $\beta^-$   
 Radiation spectra:       $\beta^-$

**49-IN-115M**            **Tape no:** 22            **Material no:** 5793  
 Decay modes :             $\beta^-$  IT  
 Radiation spectra:       $\gamma \beta^-$  e- X

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<b>49-IN-116</b>	<b>Tape no: 22</b>	<b>Material no: 5794</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-116M</b>	<b>Tape no: 22</b>	<b>Material no: 5795</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-116M</b>	<b>Tape no: 22</b>	<b>Material no: 5797</b>
Decay modes :	IT	
Radiation spectra:	$\gamma e^- X$	
<b>49-IN-117</b>	<b>Tape no: 22</b>	<b>Material no: 5798</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-117M</b>	<b>Tape no: 22</b>	<b>Material no: 5800</b>
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-118</b>	<b>Tape no: 22</b>	<b>Material no: 5802</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>49-IN-118M</b>	<b>Tape no: 22</b>	<b>Material no: 5804</b>
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^-$	
<b>49-IN-118M</b>	<b>Tape no: 22</b>	<b>Material no: 5805</b>
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-119</b>	<b>Tape no: 22</b>	<b>Material no: 5807</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>49-IN-119M</b>	<b>Tape no: 22</b>	<b>Material no: 5808</b>
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>49-IN-120</b>	<b>Tape no: 22</b>	<b>Material no: 5810</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>49-IN-120M</b>	<b>Tape no: 22</b>	<b>Material no: 5812</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>49-IN-121</b>	<b>Tape no: 22</b>	<b>Material no: 5813</b>
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	

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**49-IN-121M**      **Tape no:** 22      **Material no:** 5815  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma \beta^- e^- X$

**49-IN-122**      **Tape no:** 22      **Material no:** 5817  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-122M**      **Tape no:** 22      **Material no:** 5819  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**49-IN-123**      **Tape no:** 22      **Material no:** 5821  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-123M**      **Tape no:** 22      **Material no:** 5822  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma \beta^- e^- X$

**49-IN-124**      **Tape no:** 22      **Material no:** 5824  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**49-IN-124M**      **Tape no:** 22      **Material no:** 5826  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-125**      **Tape no:** 22      **Material no:** 5827  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-125M**      **Tape no:** 22      **Material no:** 5828  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma \beta^-$

**49-IN-126**      **Tape no:** 22      **Material no:** 5830  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-126M**      **Tape no:** 22      **Material no:** 5832  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma \beta^-$

**49-IN-127**      **Tape no:** 22      **Material no:** 5834  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma \beta^-$

**49-IN-127M**      **Tape no:** 22      **Material no:** 5836  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma \beta^-$

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<b>49-IN-128</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5838
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>49-IN-128M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5840
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$
<b>49-IN-129</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5842
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$
<b>49-IN-129M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5844
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$
<b>49-IN-130</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5846
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>49-IN-131</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5848
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$
<b>49-IN-131M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5850
	Decay modes :	$\beta^-$ ( $\beta^-, n$ )
	Radiation spectra:	$\gamma$ $\beta^-$
<b>49-IN-132</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5852
<b>50-SN-111</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5854
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>50-SN-113</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5856
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>50-SN-113M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5858
<b>50-SN-117M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5859
	Decay modes :	IT
	Radiation spectra:	$\gamma$ e- X
<b>50-SN-119M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5860
	Decay modes :	IT
	Radiation spectra:	$\gamma$ e- X
<b>50-SN-121</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5861

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	Decay modes :	$\beta^-$		
	Radiation spectra:	$\beta^-$		
<b>50-SN-121M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5863</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-123</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5865</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-123M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5866</b>
	Decay modes :	$\beta^- IT$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-125</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5868</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-125M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5870</b>
	Decay modes :	$\beta^- IT$		
	Radiation spectra:	$\gamma \beta^-$		
<b>50-SN-126</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5871</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-127</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5873</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^-$		
<b>50-SN-127M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5874</b>
	Decay modes :	$\beta^- IT$		
	Radiation spectra:	$\gamma \beta^-$		
<b>50-SN-128</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5875</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-129</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5876</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^-$		
<b>50-SN-129M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5878</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^-$		
<b>50-SN-130</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5880</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>50-SN-130M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>5882</b>

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	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>50-SN-131</b>	<b>Tape no: 22</b>	<b>Material no: 5884</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>50-SN-131M</b>	<b>Tape no: 22</b>	<b>Material no: 5886</b>
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$	
<b>50-SN-132</b>	<b>Tape no: 22</b>	<b>Material no: 5888</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>50-SN-133</b>	<b>Tape no: 22</b>	<b>Material no: 5890</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>50-SN-134</b>	<b>Tape no: 22</b>	<b>Material no: 5892</b>
<b>50-SN-135</b>	<b>Tape no: 22</b>	<b>Material no: 5894</b>
<b>50-SN-136</b>	<b>Tape no: 22</b>	<b>Material no: 5896</b>
<b>51-SB-122</b>	<b>Tape no: 22</b>	<b>Material no: 5898</b>
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ $\beta^-$ e.c./ $\beta^+$ e- X	
<b>51-SB-122M</b>	<b>Tape no: 22</b>	<b>Material no: 5900</b>
	Decay modes :      IT	
	Radiation spectra: $\gamma$	
<b>51-SB-124</b>	<b>Tape no: 22</b>	<b>Material no: 5902</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>51-SB-124M</b>	<b>Tape no: 22</b>	<b>Material no: 5903</b>
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>51-SB-124M</b>	<b>Tape no: 22</b>	<b>Material no: 5904</b>
	Decay modes :      IT	
	Radiation spectra: $\gamma$	
<b>51-SB-125</b>	<b>Tape no: 22</b>	<b>Material no: 5906</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	

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**51-SB-126**      **Tape no:** 22      **Material no:** 5908  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-126M**      **Tape no:** 22      **Material no:** 5910  
 Decay modes :  $\beta^- IT$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-126M**      **Tape no:** 22      **Material no:** 5911  
 Decay modes : IT  
 Radiation spectra:  $\gamma e^- X$

**51-SB-127**      **Tape no:** 22      **Material no:** 5912  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-128**      **Tape no:** 22      **Material no:** 5914  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**51-SB-128M**      **Tape no:** 22      **Material no:** 5916  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**51-SB-129**      **Tape no:** 22      **Material no:** 5918  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**51-SB-129M**      **Tape no:** 22      **Material no:** 5920  
 Decay modes :  $\beta^- IT$   
 Radiation spectra:  $\gamma$

**51-SB-130**      **Tape no:** 22      **Material no:** 5921  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-130M**      **Tape no:** 22      **Material no:** 5922  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-131**      **Tape no:** 22      **Material no:** 5923  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**51-SB-132**      **Tape no:** 22      **Material no:** 5925  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**51-SB-132M**      **Tape no:** 22      **Material no:** 5927  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

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<b>51-SB-133</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5928
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>51-SB-134</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5930
Decay modes :	$\beta^- (\beta^-, n)$	
Radiation spectra:	$\gamma \beta^-$	
<b>51-SB-134M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5931
Decay modes :	$\beta^-$	
Radiation spectra:	$\beta^-$	
<b>51-SB-135</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5932
<b>51-SB-136</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5934
<b>51-SB-137</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5936
<b>51-SB-138</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5938
<b>52-TE-123</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5940
Decay modes :	e.c./ $\beta^+$	
Radiation spectra:	e.c./ $\beta^+$ e- X	
<b>52-TE-123M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5942
Decay modes :	IT	
Radiation spectra:	$\gamma e^-$ X	
<b>52-TE-125M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5944
Decay modes :	IT	
Radiation spectra:	$\gamma e^-$ X	
<b>52-TE-127</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5946
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^-$ X	
<b>52-TE-127M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5948
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^-$ X	
<b>52-TE-129</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5949
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^-$ X	
<b>52-TE-129M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 5951
Decay modes :	$\beta^-$ IT	
Radiation spectra:	$\gamma \beta^- e^-$ X	

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52-TE-131            Tape no: 22            Material no: 5953  
                 Decay modes :         $\beta^-$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-131M          Tape no: 22            Material no: 5954  
                 Decay modes :         $\beta^- IT$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-132          Tape no: 22            Material no: 5956  
                 Decay modes :         $\beta^-$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-133          Tape no: 22            Material no: 5958  
                 Decay modes :         $\beta^-$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-133M        Tape no: 22            Material no: 5959  
                 Decay modes :         $\beta^- IT$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-134          Tape no: 22            Material no: 5961  
                 Decay modes :         $\beta^-$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-135          Tape no: 22            Material no: 5963  
                 Decay modes :         $\beta^-$   
                 Radiation spectra:  $\gamma \beta^-$

52-TE-136          Tape no: 22            Material no: 5965  
                 Decay modes :         $\beta^- (\beta^-, n)$   
                 Radiation spectra:  $\gamma \beta^- e^- X$

52-TE-137          Tape no: 22            Material no: 5966  
                 Decay modes :         $\beta^- (\beta^-, n)$   
                 Radiation spectra:  $\gamma$

52-TE-138          Tape no: 22            Material no: 5968

52-TE-139          Tape no: 22            Material no: 5970

52-TE-140          Tape no: 22            Material no: 5972

52-TE-141          Tape no: 22            Material no: 5974

53-I -125          Tape no: 22            Material no: 5976  
                 Decay modes :        e.c./ $\beta^+$   
                 Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

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**53-I -126**      **Tape no: 22**      **Material no: 5978**  
 Decay modes :  $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$   $\beta^-$  e.c./ $\beta^+$  e- X

**53-I -128**      **Tape no: 22**      **Material no: 5979**  
 Decay modes :  $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$   $\beta^-$  e.c./ $\beta^+$  e- X

**53-I -129**      **Tape no: 22**      **Material no: 5980**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -130**      **Tape no: 22**      **Material no: 5981**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -130M**      **Tape no: 22**      **Material no: 5982**  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -131**      **Tape no: 22**      **Material no: 5983**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -132**      **Tape no: 22**      **Material no: 5985**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -132M**      **Tape no: 22**      **Material no: 5986**  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -133**      **Tape no: 22**      **Material no: 5987**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -133M**      **Tape no: 22**      **Material no: 5988**  
 Decay modes : IT  
 Radiation spectra:  $\gamma$  e- X

**53-I -134**      **Tape no: 22**      **Material no: 5989**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -134M**      **Tape no: 22**      **Material no: 5991**  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**53-I -135**      **Tape no: 22**      **Material no: 5992**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$

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53-I -136	Tape no: 22	Material no: 5993
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
53-I -136M	Tape no: 22	Material no: 5994
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^-$	
53-I -137	Tape no: 22	Material no: 5995
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
53-I -138	Tape no: 22	Material no: 5997
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^-$	
53-I -139	Tape no: 22	Material no: 5998
53-I -140	Tape no: 22	Material no: 6000
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
53-I -141	Tape no: 22	Material no: 6002
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
54-XE-125	Tape no: 22	Material no: 6004
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
54-XE-125M	Tape no: 22	Material no: 6006
	Decay modes : IT	
	Radiation spectra: $\gamma$	
54-XE-127	Tape no: 22	Material no: 6008
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
54-XE-127M	Tape no: 22	Material no: 6010
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
54-XE-129M	Tape no: 22	Material no: 6011
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
54-XE-131M	Tape no: 22	Material no: 6012
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
54-XE-133	Tape no: 22	Material no: 6014

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	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-133M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6015</b>
	Decay modes :	IT		
	Radiation spectra:	$\gamma e^- X$		
<b>54-XE-134M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6017</b>
	Decay modes :	IT		
	Radiation spectra:	$\gamma e^- X$		
<b>54-XE-135</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6018</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-135M</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6019</b>
	Decay modes :	$\beta^-$ IT		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-137</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6020</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-138</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6021</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-139</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6023</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^-$		
<b>54-XE-140</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6025</b>
	Decay modes :	$\beta^-$		
	Radiation spectra:	$\gamma \beta^- e^- X$		
<b>54-XE-141</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6027</b>
	Decay modes :	$\beta^- (\beta^-, n)$		
	Radiation spectra:	$\gamma \beta^-$		
<b>54-XE-142</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6028</b>
	Decay modes :	$\beta^- (\beta^-, n)$		
	Radiation spectra:	$\gamma \beta^-$		
<b>54-XE-143</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6030</b>
	Decay modes :	$\beta^- (\beta^-, n)$		
	Radiation spectra:	$\gamma$		
<b>54-XE-144</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6032</b>
<b>54-XE-145</b>	<b>Tape no:</b>	<b>22</b>	<b>Material no:</b>	<b>6034</b>

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54-XE-147	Tape no: 22	Material no: 6036
55-CS-131	Tape no: 22	Material no: 6038
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ e- X	
55-CS-132	Tape no: 22	Material no: 6039
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
55-CS-134	Tape no: 22	Material no: 6041
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
55-CS-134M	Tape no: 22	Material no: 6043
	Decay modes : IT	
	Radiation spectra: $\gamma e^-$ X	
55-CS-135	Tape no: 22	Material no: 6044
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
55-CS-135M	Tape no: 22	Material no: 6045
	Decay modes : IT	
	Radiation spectra: $\gamma e^-$ X	
55-CS-136	Tape no: 22	Material no: 6047
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^-$ X	
55-CS-136M	Tape no: 22	Material no: 6048
55-CS-137	Tape no: 22	Material no: 6049
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
55-CS-138	Tape no: 22	Material no: 6050
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^-$ X	
55-CS-138M	Tape no: 22	Material no: 6052
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^- e^-$ X	
55-CS-139	Tape no: 22	Material no: 6053
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^-$ X	
55-CS-140	Tape no: 22	Material no: 6055

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	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>55-CS-141</b>	<b>Tape no: 22</b>	<b>Material no: 6057</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>55-CS-142</b>	<b>Tape no: 22</b>	<b>Material no: 6059</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>55-CS-143</b>	<b>Tape no: 22</b>	<b>Material no: 6061</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>55-CS-144</b>	<b>Tape no: 22</b>	<b>Material no: 6063</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>55-CS-145</b>	<b>Tape no: 22</b>	<b>Material no: 6064</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
<b>55-CS-146</b>	<b>Tape no: 22</b>	<b>Material no: 6066</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma$	
<b>55-CS-147</b>	<b>Tape no: 22</b>	<b>Material no: 6068</b>
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>56-BA-131</b>	<b>Tape no: 22</b>	<b>Material no: 6070</b>
	Decay modes :           e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>56-BA-133</b>	<b>Tape no: 22</b>	<b>Material no: 6072</b>
	Decay modes :           e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>56-BA-133M</b>	<b>Tape no: 22</b>	<b>Material no: 6074</b>
	Decay modes :           IT e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>56-BA-135M</b>	<b>Tape no: 22</b>	<b>Material no: 6076</b>
	Decay modes :           IT	
	Radiation spectra: $\gamma$ e- X	
<b>56-BA-136M</b>	<b>Tape no: 22</b>	<b>Material no: 6077</b>
	Decay modes :           IT	
	Radiation spectra: $\gamma$ e- X	
<b>56-BA-137M</b>	<b>Tape no: 22</b>	<b>Material no: 6079</b>

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Decay modes : IT  
 Radiation spectra:  $\gamma$  e- X

**56-BA-139**            Tape no: 22            Material no: 6081  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-140**            Tape no: 22            Material no: 6083  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-141**            Tape no: 22            Material no: 6085  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-142**            Tape no: 22            Material no: 6086  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-143**            Tape no: 22            Material no: 6087  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-144**            Tape no: 22            Material no: 6089  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-145**            Tape no: 22            Material no: 6091  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$  e- X

**56-BA-146**            Tape no: 22            Material no: 6092  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma$

**56-BA-147**            Tape no: 22            Material no: 6094  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma$

**56-BA-148**            Tape no: 22            Material no: 6096

**57-LA-137**            Tape no: 22            Material no: 6098  
 Decay modes : e.c./ $\beta^+$   
 Radiation spectra: e.c./ $\beta^+$  e- X

**57-LA-138**            Tape no: 22            Material no: 6099  
 Decay modes :  $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:  $\gamma \beta^-$  e.c./ $\beta^+$  e- X

**57-LA-140**            Tape no: 22            Material no: 6101  
 Decay modes :  $\beta^-$

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Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-141      Tape no: 22      Material no: 6103  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

57-LA-142      Tape no: 22      Material no: 6105  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-143      Tape no: 22      Material no: 6107  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

57-LA-144      Tape no: 22      Material no: 6109  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-145      Tape no: 22      Material no: 6111  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-146      Tape no: 22      Material no: 6112  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma$

57-LA-146M      Tape no: 22      Material no: 6114  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$

57-LA-147      Tape no: 22      Material no: 6116  
 Decay modes :  $\beta^- (\beta^-, n)$   
 Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-148      Tape no: 22      Material no: 6117  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

57-LA-149      Tape no: 22      Material no: 6118

57-LA-150      Tape no: 22      Material no: 6120

58-CE-139      Tape no: 22      Material no: 6122  
 Decay modes : e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

58-CE-139M      Tape no: 22      Material no: 6124  
 Decay modes : IT  
 Radiation spectra:  $\gamma$  e- X

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<b>58-CE-141</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6125
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-142</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6126
<b>58-CE-143</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6127
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-144</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6129
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-145</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6131
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-146</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6132
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-147</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6134
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>58-CE-148</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6136
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>58-CE-149</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6138
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>58-CE-150</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6140
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>58-CE-151</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6142
<b>59-PR-142</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6144
	Decay modes : $\beta^- e.c./\beta^+$	
	Radiation spectra: $\gamma \beta^- e.c./\beta^+ e^- X$	
<b>59-PR-142M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6145
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>59-PR-143</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6147
	Decay modes : $\beta^-$	

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	Radiation spectra: $\gamma \beta-$	
<b>59-PR-144</b>	<b>Tape no: 22</b>	<b>Material no: 6149</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-144M</b>	<b>Tape no: 22</b>	<b>Material no: 6151</b>
	Decay modes : $\beta- IT$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-145</b>	<b>Tape no: 22</b>	<b>Material no: 6153</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-146</b>	<b>Tape no: 22</b>	<b>Material no: 6154</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta-$	
<b>59-PR-147</b>	<b>Tape no: 22</b>	<b>Material no: 6155</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-148</b>	<b>Tape no: 22</b>	<b>Material no: 6157</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-148M</b>	<b>Tape no: 22</b>	<b>Material no: 6159</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta- e- X$	
<b>59-PR-149</b>	<b>Tape no: 22</b>	<b>Material no: 6161</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma \beta-$	
<b>59-PR-150</b>	<b>Tape no: 22</b>	<b>Material no: 6162</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma$	
<b>59-PR-151</b>	<b>Tape no: 22</b>	<b>Material no: 6164</b>
	Decay modes : $\beta-$	
	Radiation spectra: $\gamma$	
<b>59-PR-152</b>	<b>Tape no: 22</b>	<b>Material no: 6166</b>
<b>59-PR-153</b>	<b>Tape no: 22</b>	<b>Material no: 6168</b>
<b>60-ND-144</b>	<b>Tape no: 22</b>	<b>Material no: 6170</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	

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<b>60-ND-147</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6171
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>60-ND-149</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6173
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>60-ND-151</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6175
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>60-ND-152</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6176
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>60-ND-153</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6178
<b>60-ND-154</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6180
<b>60-ND-155</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6182
<b>61-PM-145</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6183
	Decay modes : e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+ \alpha e^- X$	
<b>61-PM-146</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6184
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+ e^- X$	
<b>61-PM-147</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6185
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>61-PM-148</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6186
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>61-PM-148M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6188
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>61-PM-149</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6190
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>61-PM-150</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6192
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	

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<b>61-PM-151</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6193
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>61-PM-152</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6194
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>61-PM-152M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6196
Decay modes :	$\beta^- IT$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>61-PM-153</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6198
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>61-PM-154</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6199
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>61-PM-154M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6201
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^- e^- X$	
<b>61-PM-155</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6202
Decay modes :	$\beta^-$	
Radiation spectra:	$\gamma \beta^-$	
<b>61-PM-156</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6204
<b>61-PM-157</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6206
<b>62-SM-145</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6208
Decay modes :	e.c./ $\beta^+$	
Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X	
<b>62-SM-146</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6210
Decay modes :	$\alpha$	
Radiation spectra:	$\alpha$	
<b>62-SM-147</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6212
Decay modes :	$\alpha$	
Radiation spectra:	$\alpha$	
<b>62-SM-148</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6214
Decay modes :	$\alpha$	
Radiation spectra:	$\alpha$	
<b>62-SM-149</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6216

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<b>62-SM-151</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6218
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>62-SM-153</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6220
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>62-SM-155</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6222
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>62-SM-156</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6224
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>62-SM-157</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6225
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>62-SM-158</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6226
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
<b>62-SM-159</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6228
<b>63-EU-150</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6230
	Decay modes :	$\beta^- e.c./\beta^+$
	Radiation spectra:	$\gamma \beta^- e.c./\beta^+$
<b>63-EU-150M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6232
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$
<b>63-EU-152</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6234
	Decay modes :	$\beta^- e.c./\beta^+$
	Radiation spectra:	$\gamma \beta^- e.c./\beta^+$
<b>63-EU-152M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6235
	Decay modes :	$\beta^- e.c./\beta^+$
	Radiation spectra:	$\gamma \beta^- e.c./\beta^+ e^- X$
<b>63-EU-152M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6237
	Decay modes :	IT
	Radiation spectra:	$\gamma e^- X$
<b>63-EU-154</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6239
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$

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<b>63-EU-154M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6241
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>63-EU-155</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6242
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>63-EU-156</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6244
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>63-EU-157</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6246
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>63-EU-158</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6248
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>63-EU-159</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6249
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>63-EU-160</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6250
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>63-EU-161</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6252
<b>63-EU-162</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6254
<b>64-GD-150</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6256
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>64-GD-151</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6258
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>64-GD-152</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6260
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>64-GD-153</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6262
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>64-GD-159</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6264

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	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
<b>64-GD-161</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6265	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
<b>64-GD-162</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6267	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^- e^- X$	
<b>64-GD-163</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6268	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma$	
<b>64-GD-164</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6270	
<b>65-TB-157</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6271	
	Decay modes :           e.c./ $\beta^+$ Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>65-TB-158</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6272	
	Decay modes : $\beta^-$ e.c./ $\beta^+$ Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
<b>65-TB-158M</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6274	
	Decay modes :           IT Radiation spectra: $\gamma$ e- X	
<b>65-TB-160</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6276	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$ e- X	
<b>65-TB-161</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6277	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$ e- X	
<b>65-TB-162</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6279	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$ e- X	
<b>65-TB-163</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6280	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>65-TB-164</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6281	
	Decay modes : $\beta^-$ Radiation spectra: $\gamma \beta^-$	
<b>65-TB-165</b>	<b>Tape no:</b> 22 <b>Material no:</b> 6282	

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<b>65-TB-166</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6284
<b>66-DY-157</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6286
	Decay modes : e.c./ $\beta$ +	
	Radiation spectra: $\gamma$ e.c./ $\beta$ + e- X	
<b>66-DY-159</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6288
	Decay modes : e.c./ $\beta$ +	
	Radiation spectra: $\gamma$ e.c./ $\beta$ + e- X	
<b>66-DY-165</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6289
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>66-DY-165M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6291
	Decay modes : $\beta$ - IT	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>66-DY-166</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6292
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>66-DY-167</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6293
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>66-DY-168</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6294
<b>66-DY-169</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6296
<b>66-DY-170</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6298
<b>67-HO-163</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6300
	Decay modes : e.c./ $\beta$ +	
	Radiation spectra: e.c./ $\beta$ +	
<b>67-HO-163M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6302
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>67-HO-166</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6304
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	
<b>67-HO-166M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6305
	Decay modes : $\beta$ -	
	Radiation spectra: $\gamma$ $\beta$ - e- X	

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<b>67-HO-167</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6306
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>67-HO-168</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6308
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>67-HO-169</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6310
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>67-HO-170</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6312
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>67-HO-170M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6314
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>68-ER-167M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6316
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>68-ER-169</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6318
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>69-TM-170</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6320
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
<b>70-YB-169</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6322
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>70-YB-169M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6324
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>71-LU-155</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6326
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>72-HF-173</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6328
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>72-HF-174</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6330
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	

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<b>72-HF-175</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6331
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ e- X
<b>72-HF-178M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6332
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>72-HF-178M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6334
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>72-HF-179M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6336
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>72-HF-179M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6338
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>72-HF-180M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6340
	Decay modes :	IT
	Radiation spectra:	$\gamma$
<b>72-HF-181</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6341
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>72-HF-182</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6342
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>72-HF-182M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6344
	Decay modes :	$\beta^-$ IT
	Radiation spectra:	$\gamma$ $\beta^-$
<b>72-HF-183</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6346
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$
<b>73-TA-179</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6348
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	e.c./ $\beta^+$
<b>73-TA-180M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6350
	Decay modes :	$\beta^-$ IT e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ $\beta^-$ e.c./ $\beta^+$
<b>73-TA-182</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6352
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X

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<b>73-TA-182M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6353
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>73-TA-182M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6355
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>73-TA-183</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6356
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>73-TA-184</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6358
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>73-TA-185</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6360
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>73-TA-186</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6362
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>74-W -181</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6363
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>74-W -185</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6364
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>74-W -185M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6365
	Decay modes : IT	
	Radiation spectra: $\gamma$ e- X	
<b>74-W -187</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6367
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$ e- X	
<b>75-RE-187</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6368
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>76-OS-194</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6370
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$ $\beta^-$	
<b>77-IR-192</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6372
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ $\beta^-$ e.c./ $\beta^+$	

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<b>77-IR-192M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6374
	Decay modes : $\beta^-$ IT	
	Radiation spectra: $\gamma \beta^-$	
<b>77-IR-192M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6376
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>79-AU-198</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6378
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>79-AU-198M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6380
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>79-AU-199</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6382
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>80-HG-197</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6384
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>80-HG-197M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6385
	Decay modes : e.c./ $\beta^+$ IT	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>80-HG-199M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6386
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>80-HG-203</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6387
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
<b>80-HG-205</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6388
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>80-HG-206</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6389
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$ e- X	
<b>81-TL-202</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6390
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>81-TL-204</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6392
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$ e- X	

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<b>81-TL-206</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6393
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>81-TL-206M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6395
	Decay modes : IT	
	Radiation spectra: $\gamma e^- X$	
<b>81-TL-207</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6397
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>81-TL-207M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6399
	Decay modes : IT	
	Radiation spectra: $\gamma e^- X$	
<b>81-TL-208</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6400
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>81-TL-209</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6401
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>81-TL-210</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6403
	Decay modes : $\beta^- (\beta^-, n)$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>82-PB-203</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6404
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>82-PB-203M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6406
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>82-PB-203M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6408
	Decay modes : IT	
	Radiation spectra: $\gamma$	
<b>82-PB-204M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6410
<b>82-PB-205</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6412
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$	
<b>82-PB-209</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6413
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	

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82-PB-210	Tape no: 22	Material no: 6414
	Decay modes :	$\beta^- \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha$
82-PB-211	Tape no: 22	Material no: 6415
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
82-PB-212	Tape no: 22	Material no: 6416
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
82-PB-213	Tape no: 22	Material no: 6418
82-PB-214	Tape no: 22	Material no: 6420
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
83-BI-207	Tape no: 22	Material no: 6422
	Decay modes :	e.c./ $\beta^+$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$
83-BI-208	Tape no: 22	Material no: 6424
83-BI-210	Tape no: 22	Material no: 6425
	Decay modes :	$\beta^- \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha e^- X$
83-BI-210M	Tape no: 22	Material no: 6427
	Decay modes :	$\alpha$
	Radiation spectra:	$\gamma \alpha e^- X$
83-BI-211	Tape no: 22	Material no: 6429
	Decay modes :	$\beta^- \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha e^- X$
83-BI-212	Tape no: 22	Material no: 6431
	Decay modes :	$\beta^- (\beta^-, \alpha) \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha e^- X$
83-BI-212M	Tape no: 22	Material no: 6433
	Decay modes :	$(\beta^-, \alpha) \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha e^- X$
83-BI-212M	Tape no: 22	Material no: 6435
	Decay modes :	$\beta^-$
	Radiation spectra:	$\beta^-$
83-BI-213	Tape no: 22	Material no: 6437
	Decay modes :	$\beta^- \alpha$

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Radiation spectra:  $\gamma \beta^- \alpha e^- X$

**83-BI-214**      Tape no: 22      Material no: 6439  
 Decay modes :  $\beta^- \alpha$   
 Radiation spectra:  $\gamma \beta^- \alpha e^- X$

**83-BI-215**      Tape no: 22      Material no: 6441

**84-PO-209**      Tape no: 22      Material no: 6443  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma e.c./\beta^+ \alpha e^- X$

**84-PO-210**      Tape no: 22      Material no: 6445  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-211**      Tape no: 22      Material no: 6447  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-211M**      Tape no: 22      Material no: 6449  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-212**      Tape no: 22      Material no: 6451  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**84-PO-212M**      Tape no: 22      Material no: 6453  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-213**      Tape no: 22      Material no: 6455  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-214**      Tape no: 22      Material no: 6457  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma \alpha e^- X$

**84-PO-215**      Tape no: 22      Material no: 6459  
 Decay modes :  $\beta^- \alpha$   
 Radiation spectra:  $\gamma \beta^- \alpha e^- X$

**84-PO-216**      Tape no: 22      Material no: 6460  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**84-PO-217**      Tape no: 22      Material no: 6462  
 Decay modes :  $\beta^- \alpha$   
 Radiation spectra:  $\alpha$

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<b>84-PO-218</b>	<b>Tape no: 22</b>	<b>Material no: 6463</b>
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^- \alpha e^- X$	
<b>85-AT-212</b>	<b>Tape no: 22</b>	<b>Material no: 6464</b>
	Decay modes : $\beta^- e.c./\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>85-AT-212M</b>	<b>Tape no: 22</b>	<b>Material no: 6466</b>
	Decay modes : IT $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>85-AT-213</b>	<b>Tape no: 22</b>	<b>Material no: 6468</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>85-AT-214</b>	<b>Tape no: 22</b>	<b>Material no: 6470</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>85-AT-215</b>	<b>Tape no: 22</b>	<b>Material no: 6471</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>85-AT-216</b>	<b>Tape no: 22</b>	<b>Material no: 6472</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>85-AT-217</b>	<b>Tape no: 22</b>	<b>Material no: 6473</b>
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^- \alpha e^- X$	
<b>85-AT-218</b>	<b>Tape no: 22</b>	<b>Material no: 6475</b>
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^- \alpha e^- X$	
<b>85-AT-219</b>	<b>Tape no: 22</b>	<b>Material no: 6477</b>
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\beta^- \alpha$	
<b>86-RN-213</b>	<b>Tape no: 22</b>	<b>Material no: 6478</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>86-RN-214</b>	<b>Tape no: 22</b>	<b>Material no: 6480</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>86-RN-215</b>	<b>Tape no: 22</b>	<b>Material no: 6482</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	

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<b>86-RN-216</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6484
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>86-RN-217</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6485
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>86-RN-218</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6487
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>86-RN-219</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6489
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>86-RN-220</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6491
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>86-RN-221</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6492
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^- \alpha e^- X$	
<b>86-RN-222</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6493
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>86-RN-224</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6494
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>86-RN-226</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6496
<b>87-FR-214</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6498
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-214M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6500
	Decay modes : IT $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-215</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6502
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-216</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6504
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	

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<b>87-FR-217</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6506
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-218</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6508
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-219</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6510
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>87-FR-220</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6512
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>87-FR-221</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6513
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>87-FR-222</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6514
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>87-FR-223</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6516
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^-$	
<b>87-FR-224</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6518
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>87-FR-225</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6520
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>87-FR-226</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6522
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma$	
<b>87-FR-228</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6524
<b>88-RA-214</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6526
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-215</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6528
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-216</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6530

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	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-217</b>	<b>Tape no: 22</b>	<b>Material no: 6532</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-218</b>	<b>Tape no: 22</b>	<b>Material no: 6534</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-219</b>	<b>Tape no: 22</b>	<b>Material no: 6536</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>88-RA-220</b>	<b>Tape no: 22</b>	<b>Material no: 6538</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>88-RA-221</b>	<b>Tape no: 22</b>	<b>Material no: 6540</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>88-RA-222</b>	<b>Tape no: 22</b>	<b>Material no: 6542</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>88-RA-223</b>	<b>Tape no: 22</b>	<b>Material no: 6544</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>88-RA-224</b>	<b>Tape no: 22</b>	<b>Material no: 6545</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>88-RA-225</b>	<b>Tape no: 22</b>	<b>Material no: 6546</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>88-RA-226</b>	<b>Tape no: 22</b>	<b>Material no: 6548</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>88-RA-227</b>	<b>Tape no: 22</b>	<b>Material no: 6550</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^-$	
<b>88-RA-228</b>	<b>Tape no: 22</b>	<b>Material no: 6551</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>88-RA-229</b>	<b>Tape no: 22</b>	<b>Material no: 6552</b>

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<b>89-AC-214</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6554
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-215</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6556
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-216</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6558
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-217</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6560
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-218</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6562
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-219</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6564
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-220</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6566
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-221</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6568
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-222</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6570
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-222M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6572
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\alpha$
<b>89-AC-223</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6574
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\gamma$ $\alpha$
<b>89-AC-224</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6576
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ $\alpha$
<b>89-AC-225</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6577
	Decay modes :	$\alpha$

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	Radiation spectra:	$\gamma \alpha e^- X$
89-AC-226	Tape no:	22 Material no: 6578
	Decay modes :	$\beta^- e.c./\beta^+ \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha$
89-AC-227	Tape no:	22 Material no: 6580
	Decay modes :	$\beta^- \alpha$
	Radiation spectra:	$\gamma \beta^- \alpha$
89-AC-228	Tape no:	22 Material no: 6581
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
89-AC-229	Tape no:	22 Material no: 6582
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
89-AC-230	Tape no:	22 Material no: 6584
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$
89-AC-231	Tape no:	22 Material no: 6586
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
90-TH-213	Tape no:	22 Material no: 6588
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
90-TH-214	Tape no:	22 Material no: 6590
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
90-TH-215	Tape no:	22 Material no: 6592
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\alpha$
90-TH-216	Tape no:	22 Material no: 6594
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
90-TH-217	Tape no:	22 Material no: 6596
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
90-TH-218	Tape no:	22 Material no: 6598
	Decay modes :	$\alpha$
	Radiation spectra:	$\alpha$
90-TH-219	Tape no:	22 Material no: 6600
	Decay modes :	$\alpha$

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	Radiation spectra: $\alpha$	
<b>90-TH-220</b>	<b>Tape no: 22</b>	<b>Material no: 6602</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>90-TH-221</b>	<b>Tape no: 22</b>	<b>Material no: 6604</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>90-TH-222</b>	<b>Tape no: 22</b>	<b>Material no: 6606</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>90-TH-223</b>	<b>Tape no: 22</b>	<b>Material no: 6608</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>90-TH-224</b>	<b>Tape no: 22</b>	<b>Material no: 6610</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>90-TH-225</b>	<b>Tape no: 22</b>	<b>Material no: 6612</b>
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>90-TH-226</b>	<b>Tape no: 22</b>	<b>Material no: 6614</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>90-TH-227</b>	<b>Tape no: 22</b>	<b>Material no: 6616</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>90-TH-228</b>	<b>Tape no: 22</b>	<b>Material no: 6617</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>90-TH-229</b>	<b>Tape no: 22</b>	<b>Material no: 6618</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>90-TH-230</b>	<b>Tape no: 22</b>	<b>Material no: 6619</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF $e^- X$	
<b>90-TH-231</b>	<b>Tape no: 22</b>	<b>Material no: 6621</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
<b>90-TH-232</b>	<b>Tape no: 22</b>	<b>Material no: 6623</b>
	Decay modes : $\alpha$ SF	

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Radiation spectra:  $\gamma \alpha n$  SF e- X

**90-TH-233**      Tape no: 22      Material no: 6625  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**90-TH-234**      Tape no: 22      Material no: 6626  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**90-TH-235**      Tape no: 22      Material no: 6627

**90-TH-236**      Tape no: 22      Material no: 6628  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**91-PA-216**      Tape no: 22      Material no: 6630  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-217**      Tape no: 22      Material no: 6632  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-222**      Tape no: 22      Material no: 6634  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-223**      Tape no: 22      Material no: 6636  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-224**      Tape no: 22      Material no: 6638  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\alpha$

**91-PA-225**      Tape no: 22      Material no: 6640  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-226**      Tape no: 22      Material no: 6642  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**91-PA-227**      Tape no: 22      Material no: 6644  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma \alpha$

**91-PA-228**      Tape no: 22      Material no: 6646  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma$  e.c./ $\beta^+ \alpha$

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**91-PA-229**      **Tape no:** 22      **Material no:** 6648  
 Decay modes : e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\gamma$   $\alpha$

**91-PA-230**      **Tape no:** 22      **Material no:** 6650  
 Decay modes :  $\beta^-$  e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\gamma$   $\beta^-$  e.c./ $\beta^+$   $\alpha$

**91-PA-231**      **Tape no:** 22      **Material no:** 6651  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma$   $\alpha$  e- X

**91-PA-232**      **Tape no:** 22      **Material no:** 6653  
 Decay modes :  $\beta^-$  e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$   $\beta^-$  e.c./ $\beta^+$  e- X

**91-PA-233**      **Tape no:** 22      **Material no:** 6654  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**91-PA-234**      **Tape no:** 22      **Material no:** 6655  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**91-PA-234M**      **Tape no:** 22      **Material no:** 6657  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**91-PA-235**      **Tape no:** 22      **Material no:** 6659  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**91-PA-236**      **Tape no:** 22      **Material no:** 6660  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$  e- X

**91-PA-238**      **Tape no:** 22      **Material no:** 6662  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma$   $\beta^-$

**92-U -226**      **Tape no:** 22      **Material no:** 6664  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**92-U -227**      **Tape no:** 22      **Material no:** 6666  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**92-U -228**      **Tape no:** 22      **Material no:** 6668  
 Decay modes : e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\gamma$   $\alpha$

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<b>92-U -229</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6670
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\alpha$
<b>92-U -230</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6672
	Decay modes :	$\alpha$
	Radiation spectra:	$\gamma$ $\alpha$
<b>92-U -231</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6674
	Decay modes :	e.c./ $\beta^+$ $\alpha$
	Radiation spectra:	$\gamma$ e.c./ $\beta^+$ $\alpha$ e- X
<b>92-U -232</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6675
	Decay modes :	$\alpha$ SF
	Radiation spectra:	$\gamma$ $\alpha$ n SF e- X
<b>92-U -233</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6677
	Decay modes :	$\alpha$
	Radiation spectra:	$\gamma$ $\alpha$ e- X
<b>92-U -234</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6679
	Decay modes :	$\alpha$ SF
	Radiation spectra:	$\gamma$ $\alpha$ n SF e- X
<b>92-U -235</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6681
	Decay modes :	$\alpha$ SF
	Radiation spectra:	$\gamma$ $\alpha$ n SF e- X
<b>92-U -235M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6683
	Decay modes :	IT
	Radiation spectra:	$\gamma$ e-
<b>92-U -236</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6685
	Decay modes :	$\alpha$ SF
	Radiation spectra:	$\gamma$ $\alpha$ n SF e- X
<b>92-U -237</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6686
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>92-U -238</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6687
	Decay modes :	$\alpha$ SF
	Radiation spectra:	$\gamma$ $\alpha$ n SF e- X
<b>92-U -239</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6689
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X
<b>92-U -240</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6691
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma$ $\beta^-$ e- X

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<b>93-NP-229</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6692
	Decay modes :	e.c./ $\beta$ + $\alpha$
	Radiation spectra:	$\alpha$
<b>93-NP-230</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6694
	Decay modes :	e.c./ $\beta$ + $\alpha$
	Radiation spectra:	$\alpha$
<b>93-NP-231</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6696
	Decay modes :	e.c./ $\beta$ + $\alpha$
	Radiation spectra:	$\gamma$ e.c./ $\beta$ + $\alpha$
<b>93-NP-232</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6698
	Decay modes :	e.c./ $\beta$ +
	Radiation spectra:	$\gamma$ e.c./ $\beta$ + e- X
<b>93-NP-233</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6700
	Decay modes :	e.c./ $\beta$ + $\alpha$
	Radiation spectra:	$\gamma$ e.c./ $\beta$ + $\alpha$
<b>93-NP-234</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6702
	Decay modes :	e.c./ $\beta$ +
	Radiation spectra:	$\gamma$ e.c./ $\beta$ +
<b>93-NP-235</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6704
	Decay modes :	e.c./ $\beta$ + $\alpha$
	Radiation spectra:	$\gamma$ e.c./ $\beta$ + $\alpha$ e- X
<b>93-NP-236</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6706
	Decay modes :	$\beta$ - e.c./ $\beta$ +
	Radiation spectra:	$\gamma$ $\beta$ - e.c./ $\beta$ + e- X
<b>93-NP-236M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6707
	Decay modes :	$\beta$ - e.c./ $\beta$ +
	Radiation spectra:	$\gamma$ $\beta$ - e.c./ $\beta$ + e- X
<b>93-NP-237</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6708
	Decay modes :	$\alpha$
	Radiation spectra:	$\gamma$ $\alpha$ e- X
<b>93-NP-238</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6709
	Decay modes :	$\beta$ -
	Radiation spectra:	$\gamma$ $\beta$ - e- X
<b>93-NP-239</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6711
	Decay modes :	$\beta$ -
	Radiation spectra:	$\gamma$ $\beta$ - e- X
<b>93-NP-240</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6713
	Decay modes :	$\beta$ -
	Radiation spectra:	$\gamma$ $\beta$ - e- X

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**93-NP-240M**      **Tape no:** 22      **Material no:** 6714  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**93-NP-241**      **Tape no:** 22      **Material no:** 6715  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**94-PU-232**      **Tape no:** 22      **Material no:** 6716  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra: e.c./ $\beta^+ \alpha$

**94-PU-233**      **Tape no:** 22      **Material no:** 6718  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma \alpha$

**94-PU-234**      **Tape no:** 22      **Material no:** 6720  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\alpha$

**94-PU-235**      **Tape no:** 22      **Material no:** 6722  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma e.c./\beta^+ \alpha e^- X$

**94-PU-236**      **Tape no:** 22      **Material no:** 6723  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

**94-PU-237**      **Tape no:** 22      **Material no:** 6724  
 Decay modes : e.c./ $\beta^+ \alpha$   
 Radiation spectra:  $\gamma e.c./\beta^+ \alpha e^- X$

**94-PU-238**      **Tape no:** 22      **Material no:** 6725  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

**94-PU-239**      **Tape no:** 22      **Material no:** 6727  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

**94-PU-240**      **Tape no:** 22      **Material no:** 6729  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

**94-PU-241**      **Tape no:** 22      **Material no:** 6731  
 Decay modes :  $\beta^- \alpha$   
 Radiation spectra:  $\gamma \beta^- \alpha e^- X$

**94-PU-242**      **Tape no:** 22      **Material no:** 6733  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

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<b>94-PU-243</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6735
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>94-PU-244</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6737
	Decay modes :	$\alpha SF$
	Radiation spectra:	$\gamma \alpha n SF e^- X$
<b>94-PU-245</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6738
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^-$
<b>94-PU-246</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6739
	Decay modes :	$\beta^-$
	Radiation spectra:	$\gamma \beta^- e^- X$
<b>95-AM-234</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6740
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\alpha$
<b>95-AM-237</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6742
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\gamma e.c./\beta^+ \alpha e^- X$
<b>95-AM-238</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6744
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\gamma e.c./\beta^+ \alpha e^- X$
<b>95-AM-239</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6746
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\gamma e.c./\beta^+ \alpha e^- X$
<b>95-AM-240</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6747
	Decay modes :	e.c./ $\beta^+ \alpha$
	Radiation spectra:	$\gamma e.c./\beta^+ \alpha e^- X$
<b>95-AM-241</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6749
	Decay modes :	$\alpha SF$
	Radiation spectra:	$\gamma \alpha n SF e^- X$
<b>95-AM-242</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6751
	Decay modes :	$\beta^- e.c./\beta^+$
	Radiation spectra:	$\gamma \beta^- e.c./\beta^+ e^- X$
<b>95-AM-242M</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6753
	Decay modes :	IT $\alpha SF$
	Radiation spectra:	$\gamma \alpha n SF e^- X$
<b>95-AM-243</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6755
	Decay modes :	$\alpha SF$
	Radiation spectra:	$\gamma \alpha n SF e^- X$

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**95-AM-244**      **Tape no:** 22      **Material no:** 6757  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**95-AM-244M**      **Tape no:** 22      **Material no:** 6759  
 Decay modes :  $\beta^- e.c./\beta^+$   
 Radiation spectra:  $\gamma \beta^- e.c./\beta^+ e^- X$

**95-AM-245**      **Tape no:** 22      **Material no:** 6761  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**95-AM-246**      **Tape no:** 22      **Material no:** 6763  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**95-AM-246M**      **Tape no:** 22      **Material no:** 6764  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^- e^- X$

**95-AM-247**      **Tape no:** 22      **Material no:** 6766  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\gamma \beta^-$

**96-CM-238**      **Tape no:** 22      **Material no:** 6768  
 Decay modes :  $e.c./\beta^+ \alpha$   
 Radiation spectra:  $\alpha$

**96-CM-239**      **Tape no:** 22      **Material no:** 6770  
 Decay modes :  $e.c./\beta^+$   
 Radiation spectra:  $\gamma e.c./\beta^+$

**96-CM-240**      **Tape no:** 22      **Material no:** 6772  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\alpha$

**96-CM-241**      **Tape no:** 22      **Material no:** 6773  
 Decay modes :  $e.c./\beta^+ \alpha$   
 Radiation spectra:  $\gamma e.c./\beta^+ \alpha e^- X$

**96-CM-242**      **Tape no:** 22      **Material no:** 6775  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

**96-CM-243**      **Tape no:** 22      **Material no:** 6776  
 Decay modes :  $e.c./\beta^+ \alpha$   
 Radiation spectra:  $\gamma e.c./\beta^+ \alpha e^- X$

**96-CM-244**      **Tape no:** 22      **Material no:** 6777  
 Decay modes :  $\alpha SF$   
 Radiation spectra:  $\gamma \alpha n SF e^- X$

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<b>96-CM-245</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6778
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>96-CM-246</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6779
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF e- X	
<b>96-CM-247</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6781
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e-$ X	
<b>96-CM-248</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6783
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF e- X	
<b>96-CM-249</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6785
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e-$ X	
<b>96-CM-250</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6787
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF	
<b>97-BK-243</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6788
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>97-BK-244</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6790
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma$	
<b>97-BK-245</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6792
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ $\alpha$	
<b>97-BK-246</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6794
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ e- X	
<b>97-BK-247</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6796
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>97-BK-248</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6798
	Decay modes : $\beta^-$ e.c./ $\beta^+$	
	Radiation spectra: $\gamma \beta^-$ e.c./ $\beta^+$ e- X	
<b>97-BK-249</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6799
	Decay modes : $\beta^-$ $\alpha$ SF	
	Radiation spectra: $\gamma \beta^-$ $\alpha n$ SF e- X	

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97-BK-250	Tape no: 22	Material no: 6801
	Decay modes : $\beta^-$	
	Radiation spectra: $\gamma \beta^- e^- X$	
97-BK-251	Tape no: 22	Material no: 6802
98-CF-240	Tape no: 22	Material no: 6804
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-241	Tape no: 22	Material no: 6806
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-242	Tape no: 22	Material no: 6808
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-243	Tape no: 22	Material no: 6810
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-244	Tape no: 22	Material no: 6812
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-245	Tape no: 22	Material no: 6814
98-CF-246	Tape no: 22	Material no: 6816
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha$	
98-CF-247	Tape no: 22	Material no: 6818
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
98-CF-248	Tape no: 22	Material no: 6820
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
98-CF-249	Tape no: 22	Material no: 6821
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF $e^- X$	
98-CF-250	Tape no: 22	Material no: 6823
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma \alpha n$ SF $e^- X$	
98-CF-251	Tape no: 22	Material no: 6825

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	Decay modes : $\alpha$	
	Radiation spectra: $\gamma \alpha e^- X$	
<b>98-CF-252</b>	<b>Tape no: 22</b>	<b>Material no: 6827</b>
	Decay modes : $\alpha SF$	
	Radiation spectra: $\gamma \alpha n SF e^- X$	
<b>98-CF-253</b>	<b>Tape no: 22</b>	<b>Material no: 6829</b>
	Decay modes : $\beta^- \alpha$	
	Radiation spectra: $\gamma \beta^- \alpha e^- X$	
<b>98-CF-254</b>	<b>Tape no: 22</b>	<b>Material no: 6830</b>
	Decay modes : $\alpha SF$	
	Radiation spectra: $\alpha$	
<b>98-CF-255</b>	<b>Tape no: 22</b>	<b>Material no: 6832</b>
	Decay modes : $\beta^-$	
	Radiation spectra: $\beta^-$	
<b>99-ES-243</b>	<b>Tape no: 22</b>	<b>Material no: 6834</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-244</b>	<b>Tape no: 22</b>	<b>Material no: 6836</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-245</b>	<b>Tape no: 22</b>	<b>Material no: 6838</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-246</b>	<b>Tape no: 22</b>	<b>Material no: 6840</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-247</b>	<b>Tape no: 22</b>	<b>Material no: 6842</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-248</b>	<b>Tape no: 22</b>	<b>Material no: 6844</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\alpha$	
<b>99-ES-249</b>	<b>Tape no: 22</b>	<b>Material no: 6846</b>
	Decay modes :           e.c./ $\beta^+ \alpha$	
	Radiation spectra: $\gamma \alpha$	
<b>99-ES-249M</b>	<b>Tape no: 22</b>	<b>Material no: 6848</b>
	Decay modes :           e.c./ $\beta^+$	
	Radiation spectra: $\gamma$	
<b>99-ES-250</b>	<b>Tape no: 22</b>	<b>Material no: 6850</b>

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Decay modes : e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

**99-ES-250M**      **Tape no: 22**      **Material no: 6852**  
 Decay modes : e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$  e.c./ $\beta^+$  e- X

**99-ES-251**      **Tape no: 22**      **Material no: 6854**  
 Decay modes : e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\alpha$

**99-ES-252**      **Tape no: 22**      **Material no: 6856**  
 Decay modes : e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\gamma$  e.c./ $\beta^+$   $\alpha$  e- X

**99-ES-253**      **Tape no: 22**      **Material no: 6857**  
 Decay modes :  $\alpha$  SF  
 Radiation spectra:  $\gamma$   $\alpha$  n SF e- X

**99-ES-254**      **Tape no: 22**      **Material no: 6858**  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\gamma$   $\alpha$  e- X

**99-ES-254M**      **Tape no: 22**      **Material no: 6860**  
 Decay modes :  $\beta^-$  IT e.c./ $\beta^+$   
 Radiation spectra:  $\gamma$   $\beta^-$  e.c./ $\beta^+$  e- X

**99-ES-255**      **Tape no: 22**      **Material no: 6862**  
 Decay modes :  $\beta^-$   $\alpha$  SF  
 Radiation spectra:  $\gamma$   $\beta^-$

**99-ES-256**      **Tape no: 22**      **Material no: 6864**  
 Decay modes :  $\beta^-$   
 Radiation spectra:  $\beta^-$

**99-ES-256M**      **Tape no: 22**      **Material no: 6866**  
 Decay modes :  $\beta^-$  IT  
 Radiation spectra:  $\gamma$   $\beta^-$

**100-FM-245**      **Tape no: 22**      **Material no: 6868**  
 Decay modes :  $\alpha$   
 Radiation spectra:  $\alpha$

**100-FM-246**      **Tape no: 22**      **Material no: 6870**  
 Decay modes : e.c./ $\beta^+$   $\alpha$  SF  
 Radiation spectra:  $\alpha$

**100-FM-247**      **Tape no: 22**      **Material no: 6872**  
 Decay modes : e.c./ $\beta^+$   $\alpha$   
 Radiation spectra:  $\alpha$

**100-FM-248**      **Tape no: 22**      **Material no: 6874**

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	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>100-FM-249</b>	<b>Tape no: 22</b>	<b>Material no: 6876</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>100-FM-250</b>	<b>Tape no: 22</b>	<b>Material no: 6878</b>
	Decay modes :      e.c./ $\beta^+$ $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>100-FM-251</b>	<b>Tape no: 22</b>	<b>Material no: 6880</b>
	Decay modes :      e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma$ $\alpha$	
<b>100-FM-252</b>	<b>Tape no: 22</b>	<b>Material no: 6882</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>100-FM-253</b>	<b>Tape no: 22</b>	<b>Material no: 6884</b>
	Decay modes :      e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$ $\alpha$ e- X	
<b>100-FM-254</b>	<b>Tape no: 22</b>	<b>Material no: 6886</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma$ $\alpha$ e- X	
<b>100-FM-255</b>	<b>Tape no: 22</b>	<b>Material no: 6888</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma$ $\alpha$	
<b>100-FM-256</b>	<b>Tape no: 22</b>	<b>Material no: 6890</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>100-FM-257</b>	<b>Tape no: 22</b>	<b>Material no: 6892</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\gamma$ $\alpha$	
<b>101-MD-248</b>	<b>Tape no: 22</b>	<b>Material no: 6894</b>
	Decay modes :      e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>101-MD-249</b>	<b>Tape no: 22</b>	<b>Material no: 6896</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>101-MD-250</b>	<b>Tape no: 22</b>	<b>Material no: 6898</b>
	Decay modes :      e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>101-MD-251</b>	<b>Tape no: 22</b>	<b>Material no: 6900</b>

## JOINT EVALUATED FILE INDEX

	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>101-MD-252</b>	<b>Tape no: 22</b>	<b>Material no: 6902</b>
<b>101-MD-254</b>	<b>Tape no: 22</b>	<b>Material no: 6904</b>
<b>101-MD-255</b>	<b>Tape no: 22</b>	<b>Material no: 6906</b>
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\gamma$ e.c./ $\beta^+$	
<b>101-MD-256</b>	<b>Tape no: 22</b>	<b>Material no: 6908</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>101-MD-257</b>	<b>Tape no: 22</b>	<b>Material no: 6910</b>
	Decay modes : e.c./ $\beta^+$ $\alpha$ SF	
	Radiation spectra: e.c./ $\beta^+$ $\alpha$	
<b>101-MD-258</b>	<b>Tape no: 22</b>	<b>Material no: 6912</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>101-MD-258M</b>	<b>Tape no: 22</b>	<b>Material no: 6914</b>
	Decay modes : e.c./ $\beta^+$	
	Radiation spectra: e.c./ $\beta^+$	
<b>102-NO-250</b>	<b>Tape no: 22</b>	<b>Material no: 6916</b>
	Decay modes : e.c./ $\beta^+$ $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>102-NO-251</b>	<b>Tape no: 22</b>	<b>Material no: 6918</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>102-NO-252</b>	<b>Tape no: 22</b>	<b>Material no: 6920</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>102-NO-253</b>	<b>Tape no: 22</b>	<b>Material no: 6922</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>102-NO-254</b>	<b>Tape no: 22</b>	<b>Material no: 6924</b>
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>102-NO-255</b>	<b>Tape no: 22</b>	<b>Material no: 6926</b>
	Decay modes : $\alpha$	
	Radiation spectra: $\gamma$ $\alpha$	

**JOINT EVALUATED FILE INDEX**

<b>102-NO-256</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6928
	Decay modes : $\alpha$ SF	
	Radiation spectra: $\alpha$	
<b>102-NO-257</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6930
	Decay modes : $\alpha$	
	Radiation spectra: $\alpha$	
<b>102-NO-259</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6932
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-255</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6934
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-256</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6936
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-257</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6938
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-258</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6940
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-259</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6942
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	
<b>103-LW-260</b>	<b>Tape no:</b> 22	<b>Material no:</b> 6944
	Decay modes : e.c./ $\beta^+$ $\alpha$	
	Radiation spectra: $\alpha$	



**TAPE 23,24**

**FISSION YIELD DATA**



## JOINT EVALUATED FILE INDEX

90-Th-232

	MF	MT	MT
<b>90-Th-232</b>		<b>Tape no: 23,24</b>	<b>Material no: 4902</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>92-U -233</b>		<b>Tape no: 23,24</b>	<b>Material no: 4923</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>92-U -235</b>		<b>Tape no: 23,24</b>	<b>Material no: 4925</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>92-U -238</b>		<b>Tape no: 23,24</b>	<b>Material no: 4928</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>94-Pu-239</b>		<b>Tape no: 23,24</b>	<b>Material no: 4949</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>94-Pu-240</b>		<b>Tape no: 23,24</b>	<b>Material no: 4940</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	
<b>94-Pu-241</b>		<b>Tape no: 23,24</b>	<b>Material no: 4941</b>
	1:Information	451:(Gen. info.)	
	8:Rdd,Fpy	454:(n,f)indp.yield	



# **TAPE 25**

## **PHOTON PRODUCTION DATA**



## JOINT EVALUATED FILE INDEX

1-H - 0

	MF	MT	MT
1-H - 0	<b>Tape no: 25</b>	<b>Material no: 4010</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
2-He- 0	<b>Tape no: 25</b>	<b>Material no: 4020</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
3-Li- 0	<b>Tape no: 25</b>	<b>Material no: 4030</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
4-Be- 9	<b>Tape no: 25</b>	<b>Material no: 4049</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
5-B - 0	<b>Tape no: 25</b>	<b>Material no: 4052</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
6-C - 0	<b>Tape no: 25</b>	<b>Material no: 4060</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)	502:( $\gamma$ ,el)
		504:( $\gamma$ ,inl)	515:( $\gamma$ ,pair)
		516:( $\gamma$ ,pair)	517:( $\gamma$ ,pair)
		602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
7-N - 0	<b>Tape no: 25</b>	<b>Material no: 4070</b>	
	1:Information	451:(Gen. info.)	

7-N - 0

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
7-N - 0	Tape no: 25	Material no: 4070	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
8-O - 0	Tape no: 25	Material no: 4080	
	1:Information 23: $\sigma$ (E)	451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
9-F - 19	Tape no: 25	Material no: 4099	
	1:Information 23: $\sigma$ (E)	451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
10-Ne- 0	Tape no: 25	Material no: 4100	
	1:Information 23: $\sigma$ (E)	451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
11-Na- 23	Tape no: 25	Material no: 4113	
	1:Information 23: $\sigma$ (E)	451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
12-Mg- 0	Tape no: 25	Material no: 4120	
	1:Information 23: $\sigma$ (E)	451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	

## JOINT EVALUATED FILE INDEX

13-AI- 27

	MF	MT	MT
13-AI- 27	Tape no: 25	Material no: 4137	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
14-Si- 0	Tape no: 25	Material no: 4140	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
15-P - 31	Tape no: 25	Material no: 4151	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
16-S - 0	Tape no: 25	Material no: 4160	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
17-Cl- 0	Tape no: 25	Material no: 4170	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
18-Ar- 0	Tape no: 25	Material no: 4181	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
19-K - 0	Tape no: 25	Material no: 4190	
	1:Information	451:(Gen. info.)	

19-K - 0

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
19-K - 0	Tape no: 25	Material no: 4190	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
20-Ca- 0	Tape no: 25	Material no: 4200	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
21-Sc- 45	Tape no: 25	Material no: 4215	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
22-Ti- 0	Tape no: 25	Material no: 4220	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
23-V - 0	Tape no: 25	Material no: 4230	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	
24-Cr- 0	Tape no: 25	Material no: 4240	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair) 504:( $\gamma$ ,inl)
	27:Form factor	502:( $\gamma$ ,el)	

## JOINT EVALUATED FILE INDEX

25-Mn- 55

	MF	MT	MT
25-Mn- 55		<b>Tape no: 25</b>	<b>Material no: 4255</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
26-Fe- 0		<b>Tape no: 25</b>	<b>Material no: 4260</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
27-Co- 59		<b>Tape no: 25</b>	<b>Material no: 4279</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
28-Ni- 0		<b>Tape no: 25</b>	<b>Material no: 4280</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
29-Cu- 0		<b>Tape no: 25</b>	<b>Material no: 4290</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
30-Zn- 0		<b>Tape no: 25</b>	<b>Material no: 4300</b>
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
31-Ga- 0		<b>Tape no: 25</b>	<b>Material no: 4310</b>
	1:Information	451:(Gen. info.)	

31-Ga- 0

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
31-Ga- 0	Tape no: 25	Material no: 4310	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
32-Ge- 0	Tape no: 25	Material no: 4320	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
33-As- 75	Tape no: 25	Material no: 4335	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
34-Se- 0	Tape no: 25	Material no: 4341	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
35-Br- 0	Tape no: 25	Material no: 4350	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
36-Kr- 0	Tape no: 25	Material no: 4361	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

**JOINT EVALUATED FILE INDEX****37-Rb- 0**

	MF	MT	MT
<b>37-Rb- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4370</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>38-Sr- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4381</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>39-Y - 89</b>	<b>Tape no: 25</b>	<b>Material no: 4399</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>40-Zr- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4409</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>41-Nb- 93</b>	<b>Tape no: 25</b>	<b>Material no: 4413</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>42-Mo- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4420</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>43-Tc- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4430</b>	
	1:Information	451:(Gen. info.)	

43-Tc- 0

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
43-Tc- 0	Tape no: 25	Material no: 4430	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
44-Ru- 0	Tape no: 25	Material no: 4451	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
45-Rh-103	Tape no: 25	Material no: 4453	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
46-Pd- 0	Tape no: 25	Material no: 4461	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
47-Ag- 0	Tape no: 25	Material no: 4470	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
48-Cd- 0	Tape no: 25	Material no: 4480	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

## JOINT EVALUATED FILE INDEX

49-In- 0

	MF	MT	MT
49-In- 0	Tape no: 25	Material no: 4490	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
50-Sn- 0	Tape no: 25	Material no: 4499	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
51-Sb- 0	Tape no: 25	Material no: 4518	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
52-Te- 0	Tape no: 25	Material no: 4519	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
53-I -127	Tape no: 25	Material no: 4533	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
54-Xe- 0	Tape no: 25	Material no: 4539	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
55-Cs-133	Tape no: 25	Material no: 4553	
	1:Information	451:(Gen. info.)	

55-Cs-133

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
55-Cs-133	Tape no: 25	Material no: 4553	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
56-Ba- 0	Tape no: 25	Material no: 4561	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
57-La- 0	Tape no: 25	Material no: 4571	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
58-Ce- 0	Tape no: 25	Material no: 4585	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
59-Pr-141	Tape no: 25	Material no: 4591	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
60-Nd- 0	Tape no: 25	Material no: 4601	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

## JOINT EVALUATED FILE INDEX

61-Pm- 0

	MF	MT	MT
61-Pm- 0	<b>Tape no: 25</b>	<b>Material no: 4610</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
62-Sm- 0	<b>Tape no: 25</b>	<b>Material no: 4623</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
63-Eu- 0	<b>Tape no: 25</b>	<b>Material no: 4630</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
64-Gd- 0	<b>Tape no: 25</b>	<b>Material no: 4649</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
65-Tb-159	<b>Tape no: 25</b>	<b>Material no: 4659</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
66-Dy- 0	<b>Tape no: 25</b>	<b>Material no: 4665</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot)      502:( $\gamma$ ,el) 504:( $\gamma$ ,inl)      515:( $\gamma$ ,pair) 516:( $\gamma$ ,pair)      517:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	
	27:Form factor	502:( $\gamma$ ,el)      504:( $\gamma$ ,inl)	
67-Ho-165	<b>Tape no: 25</b>	<b>Material no: 4675</b>	
	1:Information	451:(Gen. info.)	

67-Ho-165

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
<b>67-Ho-165</b>	<b>Tape no: 25</b>	<b>Material no: 4675</b>	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>68-Er- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4680</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>69-Tm-169</b>	<b>Tape no: 25</b>	<b>Material no: 4699</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>70-Yb- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4700</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>71-Lu- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4710</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>72-Hf- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4721</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

## JOINT EVALUATED FILE INDEX

73-Ta- 0

	<b>MF</b>	<b>MT</b>	<b>MT</b>
<b>73-Ta- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4730</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>74-W - 0</b>	<b>Tape no: 25</b>	<b>Material no: 4740</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>75-Re- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4750</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>76-Os- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4760</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>77-Ir- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4770</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>78-Pt- 0</b>	<b>Tape no: 25</b>	<b>Material no: 4780</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
<b>79-Au-197</b>	<b>Tape no: 25</b>	<b>Material no: 4797</b>	
	1:Information	451:(Gen. info.)	

79-Au-197

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
79-Au-197		Tape no: 25	Material no: 4797
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
80-Hg- 0		Tape no: 25	Material no: 4800
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
81-Tl- 0		Tape no: 25	Material no: 4810
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
82-Pb- 0		Tape no: 25	Material no: 4820
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
83-Bi-209		Tape no: 25	Material no: 4839
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
84-Po- 0		Tape no: 25	Material no: 4840
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

## JOINT EVALUATED FILE INDEX

85-At- 0

	MF	MT	MT
85-At- 0	Tape no: 25	Material no: 4850	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
86-Rn- 0	Tape no: 25	Material no: 4860	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
87-Fr- 0	Tape no: 25	Material no: 4870	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
88-Ra- 0	Tape no: 25	Material no: 4880	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
89-Ac- 0	Tape no: 25	Material no: 4890	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
90-Th- 0	Tape no: 25	Material no: 4901	
	1:Information	451:(Gen. info.)	
	23: $\sigma$ (E)	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
91-Pa- 0	Tape no: 25	Material no: 4910	
	1:Information	451:(Gen. info.)	

91-Pa- 0

## JOINT EVALUATED FILE INDEX

	MF	MT	MT
(contd)			
91-Pa- 0	Tape no: 25 23: $\sigma$ (E)  27:Form factor	Material no: 4910 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)
92-U - 0	Tape no: 25 1:Information 23: $\sigma$ (E)  27:Form factor	Material no: 4920 451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)
93-Np- 0	Tape no: 25 1:Information 23: $\sigma$ (E)  27:Form factor	Material no: 4930 451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)
94-Pu- 0	Tape no: 25 1:Information 23: $\sigma$ (E)  27:Form factor	Material no: 4945 451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)
95-Am- 0	Tape no: 25 1:Information 23: $\sigma$ (E)  27:Form factor	Material no: 4950 451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)
96-Cm- 0	Tape no: 25 1:Information 23: $\sigma$ (E)  27:Form factor	Material no: 4960 451:(Gen. info.) 501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)  502:( $\gamma$ ,el)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)  504:( $\gamma$ ,inl)

## JOINT EVALUATED FILE INDEX

97-Bk- 0

	MF	MT	MT
97-Bk- 0	<b>Tape no: 25</b>	<b>Material no: 4970</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
98-Cf- 0	<b>Tape no: 25</b>	<b>Material no: 4985</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
99-Es- 0	<b>Tape no: 25</b>	<b>Material no: 4990</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)
100-Fm- 0	<b>Tape no: 25</b>	<b>Material no: 4999</b>	
	1:Information	451:(Gen. info.)	
	23: $\sigma(E)$	501:( $\gamma$ ,tot) 504:( $\gamma$ ,inl) 516:( $\gamma$ ,pair) 602:( $\gamma$ ,e)	502:( $\gamma$ ,el) 515:( $\gamma$ ,pair) 517:( $\gamma$ ,pair)
	27:Form factor	502:( $\gamma$ ,el)	504:( $\gamma$ ,inl)

