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JAPANESE LIST OF REQUESTS FOR NUCLEAR DATA

April 1981

Compiled by

Sin-iti IGARASI

and

WRENDA Group of Japanese Nuclear Data Committee

日本原子力研究所
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Japanese List of Requests for Nuclear Data

Compiled by

Sin-iti IGARASI

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WRENDA Group of Japanese Nuclear Data Committee *)

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Requests for nuclear data at 1980 are presented. They are 63 for fission reactor, 61 for fusion reactor, and 41 for safeguards. These will be registered in WRENDA 81/82⁺. This report contains these 165 requests, and also 111 requests which were withdrawn from WRENDA. These withdrawn requests are 39 for fission reactor, 44 for fusion reactor and 28 for safeguards.

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+) WRENDA: World Request List for Nuclear Data, see Ref. 1.

核データに対する日本の要求リスト

シグマ研究委員会 WRENDA グループ *

五十嵐信一 (編)

(1981年4月3日受理)

1980年の時点での核データの要求リストをまとめた。ここには核分裂炉関係63件、核融合炉関係61件、保障措置関係41件の要求を載せた。これらの要求は、WRENDA 81/82⁺⁾に登録されることになる。この報告書には、これら165件の要求リストの他にWRENDAから取り下げた111件のリストも載せた。この取り下げ分は核分裂炉で39件、核融合炉で44件、保障措置で28件になっている。

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+) WRENDA: World Request List for Nuclear Data のことである。参考文献1を参照。

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1. Introduction

While the number of the Japanese requests submitted to WRENDA 79/80¹⁾ was 244, the Japanese requests of 245 are registered in the WRENDA 79/80. This is because the WRENDA 79/80 includes one additional request of the resonance parameters which was separated from the original request²⁾ of the ^{131}Xe capture cross section. So, the number of the previous Japanese requests are regarded as 245 in order to avoid any unnecessary confusion.

WRENDA Group of Japanese Nuclear Data Committee was convened in October 1980 to screen new requests, to examine the old Japanese requests and to compile Japanese List of Requests for Nuclear Data in 1980. About 60 new requests were received by the WRENDA Group, and were examined whether or not they were appropriate to the requests from the viewpoint of the present status of the nuclear data. When questions arose about the requests, the WRENDA Group asked the requestors the reasons behind their requests and discussed with them about the questionable matters of their requests. In some cases, the WRENDA Group modified partly the descriptions of the original requests so that they might fit the status quo of the data. Finally, the WRENDA Group adopted 20 requests for fission reactors and 11 for fusion reactors.

The old requests^{1,2)} were returned to the requestors and were reviewed in the light of the data status and needs. The data of the angular distributions for the elastic and inelastic scattering cross sections requested from fusion branch were mostly withdrawn, because the energy-angle double differential cross sections are preferable for the fusion research to the so-called single differential cross sections. The new requests for fusion reactors mentioned above were mostly the double differential cross sections which took the place of the withdrawn differential data.

Many requests for the evaluated data were also withdrawn. This is due to penetration of the JENDL activity into the data users in Japan. Especially, there were many withdrawn requests in the mass region of the fission products. The new requests for the FP nuclides are increasing their accuracies and qualities.

In the present review work, 111 requests were finally withdrawn. Hence, Japanese requests of 165 will be registered in WRENDA. In this report, these requests are presented in the form of the computer output lists. JAERI/NDC made a new computer system³⁾ of storage and retrieval for the nuclear data requests. This system will be used as an archives of Japanese requests for the nuclear data. Various kinds of retrievals are available from this system. Details on this new system will be presented elsewhere.

2. List of Requests Submitted to New WRENDA

In this section, Japanese requests submitted to new WRENDA are presented in the form of output lists from the computer. First line of each request shows, from the left, sequential number for this request list, atomic number, name of element, mass number, incident particle, and physical quantity, respectively. Second line gives generation figure, date of reception at JAERI/NDC, date of revision (if any, with increase of generation figure), date of submission to WRENDA, and date of withdrawal from WRENDA (for only withdrawn requests). Third line is for the energy region, required accuracy, priority, and requestors' names. If requestors are more than three persons, their names are shown in fourth and fifth lines. The next line is for the registration numbers for this storage and retrieval system and for WRENDA entry, and category for application. Comment area is devoted to quantity comment (Q), accuracy comment (A) and other comment (O), respectively. These structures are made so as to reproduce the WRENDA lists.

** REQUESTS REGISTERED TO WRENDA. **

1 001 HYDROGEN 002 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 UP TO 15.00 MEV 15.0% 2 OSA A.TAKAHASHI
 800001 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTION FOR (N,2N) REACTION WANTED.
 O: FOR ESTIMATION OF EMITTED NEUTRON SPECTRA FROM D-T MIXTURE OF INERTIALLY
 CONFINED TARGET PLASMA.

2 001 HYDROGEN 003 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 UP TO 15.00 MEV 15.0% 2 OSA A.TAKAHASHI
 800002 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTION FOR (N,2N) REACTION WANTED.
 O: FOR ESTIMATION OF EMITTED NEUTRON SPECTRA FROM D-T MIXTURE OF INERTIALLY
 CONFINED TARGET PLASMA.

3 003 LITHIUM 006 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 760401 761010
 1.00 MEV 15.00 MEV 15.0% 2 JAE Y.SEKI MAP M.KASAI
 780003 762054 FUSION REACTOR
 O: GAMMA-RAY HEATING CALCULATIONS.

4 003 LITHIUM 006 NEUTRON N,ND
 00 760401 761010
 UP TO 15.00 MEV 10.0% 2 JAE Y.SEKI
 780004 762052 FUSION REACTOR
 O: NEUTRONICS CALCULATIONS AND ENERGY DEPOSITION.

5 003 LITHIUM 006 NEUTRON N,NT
 00 760401 761010
 3.00 MEV 15.00 MEV 5.0% 1 JAE Y.SEKI
 780005 762053 FUSION REACTOR
 O: TRITIUM BREEDING AND ENERGY DEPOSITION CALCULATION.

6 003 LITHIUM 006 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 2.00 MEV 15.00 MEV 10.0% 2 OSA A.TAKAHASHI JAE Y.SEKI
 800003 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS REQUIRED WITH INCIDENT ENERGY STEP OF
 0.5 MEV.
 O: NEUTRON TRANSPORT AND TRITIUM PRODUCTION RATE CALCULATIONS. ANGULAR
 DISTRIBUTIONS OF INELASTICALLY SCATTERED NEUTRONS FOR ALL AVAILABLE DISCRETE
 LEVELS ALSO REQUIRED.

7 003 LITHIUM 007 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 760401 761010
 0.25-1 EV 15.00 MEV 15.0% 2 JAE Y.SEKI
 780010 762059 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

- 8 003 LITHIUM 007 NEUTRON N,NT
 01 760401 801110 761010
 UP TO 15.00 MEV 5.0% 1 JAE Y. SEKI OSA A. TAKAHASHI
 780013 762058 FUSION REACTOR
 Q: NEUTRON SPECTRA WITH ACCURACY 15 PER CENT ALSO REQUIRED.
 O: TRITIUM BREEDING AND ENERGY DEPOSITION CALCULATION.

- 9 003 LITHIUM 007 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 2.00 MEV 15.00 MEV 10.0% 2 JAE Y. SEKI OSA A. TAKAHASHI
 800004 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS REQUIRED.
 O: NEUTRON TRANSPORT AND TRITIUM PRODUCTION RATE CALCULATIONS. ANGULAR DISTRIBUTIONS OF INELASTICALLY SCATTERED NEUTRONS FOR ALL AVAILABLE DISCRETE LEVELS ALSO REQUIRED.

- 10 004 BERYLLIUM 009 NEUTRON N,ALPHA
 00 760401 761010
 8.00 MEV 15.00 MEV 15.0% 3 JAE Y. SEKI
 780018 762063 FUSION REACTOR
 O: HELIUM ACCUMULATION CALCULATIONS.

- 11 004 BERYLLIUM 009 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 1.70 MEV 15.00 MEV 15.0% 2 JAE Y. SEKI OSA A. TAKAHASHI
 800005 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS REQUIRED.
 O: DOUBLE DIFFERENTIAL FOR THE (N,2N) REACTION IS ALSO REQUIRED BY A. TAKAHASHI.
 O: BLANKET NEUTRONICS CALCULATIONS. FOR ALSO NEUTRON MULTIPLICATION CALCULATIONS.

- 12 006 CARBON 012 NEUTRON N,N 3ALPHA
 00 760401 761010
 UP TO 15.00 MEV 15.0% 2 JAE Y. SEKI
 780020 762065 FUSION REACTOR
 Q: TOTAL ALPHA PRODUCTION CROSS SECTION AND SECONDARY NEUTRON ENERGY SPECTRUM REQUIRED.
 O: NEUTRON TRANSPORT AND HELIUM ACCUMULATION CALCULATIONS.

- 13 006 CARBON 012 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225
 7.00 MEV 15.00 MEV 10.0% 2 JAE Y. SEKI OSA A. TAKAHASHI
 800006 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS REQUIRED.
 O: ANGULAR DISTRIBUTIONS OF INELASTIC SCATTERING CROSS SECTIONS FOR ALL AVAILABLE DISCRETE LEVELS ESPECIALLY WANTED BY A. TAKAHASHI.
 O: NEUTRON TRANSPORT CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

14 006 CARBON 012 NEUTRON N,N ALPHA
 00 80110 80125
 UP TO 40.00 MEV 15.0% 2 KTO K.SHIN. TOH H.ORIHARA
 NAG S.ITOH
 800011 FUSION REACTOR
 Q: SECONDARY NEUTRON AND ALPHA-PARTICLE ENERGY SPECTRA ARE REQUIRED.
 O: FOR DETECTOR EFFICIENCY DETERMINATION IN FUSION REACTOR NEUTRONICS EXPERIMENTS.

15 006 CARBON 012 NEUTRON N,P
 00 80110 80125
 5.00 MEV 20.00 MEV 5.0% 2 NAG S.ITOH
 800031 FUSION REACTOR
 O: FOR CALCULATION OF DETECTOR RESPONSE FUNCTION. DISAGREEMENT BETWEEN KREGER AND
 RIMMER ABOVE 16.0 MEV.

16 006 CARBON 013 ALPHA NEUTRON EMISSION CROSS SECTION
 00 780808 781212
 UP TO 10.00 MEV 20.0% 2 SAE N.YAMANO
 780021 792070 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED. ANGULAR DISTRIBUTION ALSO REQUIRED. REQUIRED NEUTRON
 ENERGIES ARE 100 KEV TO 10 MEV.
 O: FOR NEUTRON SHIELDING AND EVALUATION OF NEUTRON SOURCE. FOR EVALUATION OF
 NEUTRON ENERGY SPECTRUM IN FUEL RECYCLE PROCESS.

17 008 OXYGEN 016 NEUTRON N,ALPHA
 00 760401 761010
 7.50 MEV 15.00 MEV 15.0% 2 JAE Y.SEKI
 780022 762066 FUSION REACTOR
 Q: TOTAL ALPHA PRODUCTION CROSS SECTION.
 O: HELIUM ACCUMULATION CALCULATION IN LI-OXIDE BLANKETS.

18 008 OXYGEN 016 NEUTRON N,N ALPHA
 00 760401 761010
 UP TO 15.00 MEV 15.0% 2 JAE Y.SEKI
 780023 762067 FUSION REACTOR
 Q: SECONDARY NEUTRON ENERGY SPECTRA REQUIRED.
 O: CALCULATION OF NEUTRON TRANSPORT AND HELIUM ACCUMULATION IN LI-OXIDE BLANKETS.

19 008 OXYGEN 016 TRITON NEUTRON EMISSION CROSS SECTION
 00 780808 781212
 UP TO 12.00 MEV 10.0% 2 JAE K.TANAKA JAE H.KUDO
 780024 792071 FUSION REACTOR
 Q: EXPERIMENTAL DATA WANTED.
 A: 5% ENERGY RESOLUTION DESIRABLE.
 O: FOR PRECISE ESTIMATION OF LI2O BURNUP IN CTR BLANKET. FOR EVALUATION OF NUMBER
 OF O18 ATOMS FROM BETA PLUS DECAY OF F18 PRODUCED THROUGH O16(T,N)F18.

** REQUESTS REGISTERED TO WRENDA. **

20 008 OXYGEN 017 NEUTRON N,ALPHA
 00 780808 781212
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.KAWAKITA
 780025 792073 FISSION REACTOR
 Q: EVALUATED DATA WANTED.
 O: FOR EVALUATION OF QUANTITY OF C14 FROM OXIDE FUEL IN FAST REACTOR. BOTH EVALUATIONS AND MEASUREMENTS ARE SCARCE.

21 008 OXYGEN 017 ALPHA NEUTRON EMISSION CROSS SECTION
 00 780808 781212
 UP TO 10.00 MEV 20.0% 2 SAE N.YAMANO
 780026 792072 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED. ANGULAR DISTRIBUTION ALSO REQUIRED. REQUIRED NEUTRON ENERGIES ARE 100 KEV TO 10 MEV.
 O: FOR NEUTRON SHIELDING AND EVALUATION OF NEUTRON SOURCE. FOR EVALUATION OF NEUTRON ENERGY SPECTRUM IN FUEL RECYCLE PROCE.

22 008 OXYGEN 018 ALPHA NEUTRON EMISSION CROSS SECTION
 00 780808 781212
 UP TO 10.00 MEV 20.0% 2 SAE N.YAMANO
 780027 792074 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED. ANGULAR DISTRIBUTION ALSO REQUIRED. REQUIRED NEUTRON ENERGIES ARE 100 KEV TO 10 MEV.
 O: FOR NEUTRON SHIELDING AND EVALUATION OF NEUTRON SOURCE. FOR EVALUATION OF NEUTRON ENERGY SPECTRUM IN FUEL RECYCLE PROCESS.

23 008 OXYGEN 018 ALPHA TOTAL NEUTRON YIELD
 01 760401 801110 761010
 5.10 MEV 5.50 MEV 5.0% 2 PNC S.SUZUKI
 780028 762041 SAFEGUARDS
 Q: ABSOLUTE NEUTRON YIELD REQUIRED.
 O: DETECTION OF PU BY NEUTRON COINCIDENCE METHOD.

24 009 FLUORINE 019 NEUTRON INELASTIC CROSS SECTION
 00 760401 761010
 1.00 MEV 15.00 MEV 10.0% 3 JAE Y.SEKI
 780029 762068 FISSION REACTOR
 O: POTENTIAL CONSTITUENT IN COOLANT,FLIBE. TRITIUM BREEDING CALCULATIONS.

25 009 FLUORINE 019 NEUTRON ABSORPTION CROSS SECTION
 00 760401 761010
 0.25-1.EV 15.00 MEV 10.0% 3 JAE Y.SEKI
 780030 762069 FISSION REACTOR
 O: POTENTIAL CONSTITUENT IN COOLANT,FLIBE. TRITIUM BREEDING CALCULATIONS.

26 013 ALUMINIUM 027 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 760401 761010
 0.25-1 EV 15.00 MEV 15.0% 3 MAP M.KASAI
 780032 762075 FISSION REACTOR
 O: GAMMA-RAY HEATING CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

27 013 ALUMINIUM 027 NEUTRON N,P
 00 760401 761010
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780035 762072 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

28 013 ALUMINIUM 027 NEUTRON N,T
 00 760401 761010
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780036 762073 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

29 014 SILICON 030 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 1.00-4 EV 100.00 KEV 10.0% 3 JAE N.AOYAGI
 780037 792075 FISSON REACTOR
 Q: EXPERIMENTAL DATA WANTED.
 O: FOR DOPING P31 INTO SINGLECRYSTAL OF SI BY NEUTRON IRRADIATION TO MAKE SEMICONDUCTOR. ONLY A FEW OLD DATA ARE AVAILABLE.

30 018 ARGON 040 NEUTRON CAPTURE CROSS SECTION
 00 710401 711010
 UP TO 10.00 MEV 2 NIG M.KAWAI
 780039 712006 FISSON REACTOR
 A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
 Q: FOR REACTOR HAZARD CALCULATION.

31 019 POTASSIUM 039 NEUTRON N,P
 00 780808 781212
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.KAWAKITA
 780040 792076 FISSON REACTOR
 Q: EVALUATED DATA WANTED.
 O: FOR REACTOR HAZARD CALCULATION. THERE ARE MANY EXPERIMENTAL DATA IN MEV REGION.

32 020 CALCIUM NEUTRON ELASTIC CROSS SECTION
 00 760401 761010
 1.00 MEV 15.00 MEV 15.0% 3 JAE Y.SEKI
 780041 762234 FUSION REACTOR
 O: INCLUDED IN CONCRETE. SHIELDING DESIGN.

33 020 CALCIUM NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 00 760401 761010
 1.00 MEV 15.00 MEV 15.0% 3 JAE Y.SEKI
 780042 762076 FUSION REACTOR
 O: INCLUDED IN CONCRETE. SHIELDING DESIGN.

** REQUESTS REGISTERED TO WRENDA. **

34 020 CALCIUM
 00 760401 NEUTRON 761010 TOTAL PHOTON PRODUCTION CROSS SECTION
 500.00 KEV 15.00 MEV 15.0% 3 JAE Y. SEKI
 780044 762078 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: INCLUDED IN CONCRETE. GAMMA-RAY HEATING CALCULATIONS.

35 022 TITANIUM
 00 760401 NEUTRON 761010 TOTAL PHOTON PRODUCTION CROSS SECTION
 0.25-1 EV 15.00 MEV 15.0% 3 MAP M. KASAI
 780046 762083 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. GAMMA-RAY HEATING CALCULATIONS.

36 022 TITANIUM
 00 760401 NEUTRON N, ALPHA
 UP TO 15.00 MEV 15.0% 3 MAP M. KASAI
 780049 762082 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. HELIUM ACCUMULATION CALCULATIONS.

37 023 VANADIUM
 00 760401 NEUTRON 761010 TOTAL PHOTON PRODUCTION CROSS SECTION
 0.25-1 EV 15.00 MEV 10.0% 2 MAP M. KASAI
 780052 762089 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. GAMMA-RAY HEATING CALCULATIONS.

38 023 VANADIUM
 00 760401 NEUTRON N, 2N
 UP TO 15.00 MEV 10.0% 2 MAP M. KASAI
 780053 762085 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. NEUTRON MULTIPLICATION CALCULATIONS.

39 024 CHROMIUM
 01 760401 NEUTRON 801110 TOTAL PHOTON PRODUCTION CROSS SECTION
 UP TO 15.00 MEV 15.0% 2 JAE Y. SEKI
 780059 762094 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING CALCULATIONS.

40 024 CHROMIUM
 00 760401 NEUTRON N, 2N
 UP TO 15.00 MEV 15.0% 2 JAE Y. SEKI
 780060 762095 FUSION REACTOR
 O: NEUTRON BALANCE CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

41 024 CHROMIUM NEUTRON N,P
 00 760401 761010
 UP TO 15.00 MEV 20.0% 2 JAE Y. SEKI
 780061 762096 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

42 024 CHROMIUM NEUTRON N,ALPHA
 00 760401 761010
 UP TO 15.00 MEV 20.0% 2 JAE Y. SEKI
 780062 762097 FUSION REACTOR
 O: HELIUM ACCUMULATION CALCULATIONS.

43 026 IRON NEUTRON INELASTIC CROSS SECTION NIG M.KAWAI
 01 760401 801110 761010
 UP TO 20.00 MEV 5.0% 1 JAE Y. SEKI
 780064 762099 FUSION REACTOR
 O: INELASTIC GAMMA RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.

44 026 IRON NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 760401 761010
 0.25-1 EV 15.00 MEV 10.0% 2 MAP M.KASAI
 780066 762104 FUSION REACTOR
 O: GAMMA-RAY HEATING CALCULATIONS.

45 026 IRON NEUTRON N,2N
 00 760401 761010
 UP TO 15.00 MEV 10.0% 2 JAE Y. SEKI
 780067 762101 FUSION REACTOR
 O: NEUTRON MULTIPLICATION CALCULATIONS.

46 026 IRON NEUTRON N,P
 00 760401 761010
 UP TO 15.00 MEV 20.0% 2 JAE Y. SEKI
 780068 762102 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

47 026 IRON NEUTRON N,ALPHA
 00 760401 761010
 UP TO 15.00 MEV 20.0% 2 JAE Y. SEKI
 780069 762103 FUSION REACTOR
 O: HELIUM ACCUMULATION CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

48 026 IRON 000
 00 801100 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 800007 UP TO 15.00 MEV 10.0% 2 CSA A.TAKAHASHI
 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR INELASTIC SCATTERING AND (N,2N)
 REACTION ARE ESPECIALLY WANTED.
 O: NEUTRON TRANSPORT CALCULATION.

49 026 IRON 057
 00 801110 NEUTRON INELASTIC CROSS SECTION
 801225 UP TO 800.00 KEV 10.0% 2 NIG M.KAWAI
 FISSION REACTOR
 O: FOR REACTOR SHIELDING CALCULATION.

50 028 NICKEL
 01 760401 NEUTRON INELASTIC CROSS SECTION
 801110 801110 761010 UP TO 20.00 MEV 5.0% 1 JAE Y.SEKI
 760401 NIG M.KAWAI
 780072 762105 FUSION REACTOR
 Q: INELASTIC GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.

51 028 NICKEL
 00 760401 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 761010 UP TO 15.00 MEV 10.0% 2 MAP M.KASAI
 0.25-1 EV FUSION REACTOR
 780074 762111 GAMMA-RAY HEATING CALCULATIONS.
 O: GAMMA-RAY HEATING CALCULATIONS.

52 028 NICKEL
 00 760401 NEUTRON N,2N
 761010 UP TO 15.00 MEV 15.0% 2 JAE Y.SEKI
 780075 762106 FUSION REACTOR
 O: NEUTRON BALANCE CALCULATIONS.

53 028 NICKEL
 00 760401 NEUTRON N,P
 761010 UP TO 15.00 MEV 20.0% 2 JAE Y.SEKI
 780076 762107 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

54 028 NICKEL
 00 760401 NEUTRON N,ALPHA
 761010 UP TO 15.00 MEV 20.0% 2 JAE Y.SEKI
 780078 762108 FUSION REACTOR
 O: HELIUM ACCUMULATION CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

55 029 COPPER
 00 760401 NEUTRON 761010 TOTAL PHOTON PRODUCTION CROSS SECTION
 0.30-1 EV 15.0% 2 JAE Y. SEKI
 780081 762113 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING IN MAGNETS.

56 030 ZINC 064 CAPTURE CROSS SECTION
 00 780808 NEUTRON 780808
 0.25-1 EV 15.00 MEV 20.0% 2 MAP T. KAWAKITA
 780082 792077 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED.
 O: FOR ESTIMATION OF RADIOACTIVITY OF SPENT STRUCTURAL MATERIALS IN FAST REACTORS.
 BOTH EXPERIMENTAL AND EVALUATED DATA ARE SCARCE.

57 035 BROMINE 087 GAMMA RAY YIELD
 00 760401 761010 10.0% 3 TOS H. SHIMOJIMA
 780083 762001 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 1419 KEV GAMMA-RAY REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILED FUEL.

58 035 BROMINE 088 GAMMA RAY YIELD
 00 760401 761010 10.0% 3 TOS H. SHIMOJIMA
 780084 762002 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 767 KEV GAMMA-RAY REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILED FUEL.

59 036 KRYPTON 090 GAMMA RAY YIELD
 00 760401 761010 10.0% 3 TOS H. SHIMOJIMA
 780085 762003 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF MAJOR GAMMA-RAYS REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILED FUEL.

60 040 ZIRCONIUM 093 CAPTURE CROSS SECTION
 01 750401 801110 NEUTRON 751010
 100.00 EV 500.00 KEV 20.0% 2 NIG S. IJIMA SAE H. MATSUNOBU
 780086 752004 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

61 040 ZIRCONIUM 093 NEUTRON RESONANCE PARAMETERS
 01 780808 801110 781212 20.0% 2 SAE H. MATSUNDBU NIG S. IJIMA
 780097 792068 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS. MORE RESONANCE DATA ARE REQUIRED. ONLY ONE RESONANCE LEVEL AT 100 EV. NO KEV DATA.

62 041 NIOBIUM 000 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 00 801110 801225 15.00 MEV 10.0% 2 OSA A. TAKAHASHI
 800009 UP TO FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS REQUIRED.
 Q: FOR NEUTRON MULTIPLICATION CALCULATION OF FUSION BLANKET.

63 041 NIOBIUM 000 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 801110 801225 20.00 MEV 20.0% 2 KTO K. SHIN
 800010 FUSION REACTOR
 Q: LARGE DIFFERENCES BETWEEN EXPERIMENTAL DATA MEASURED AT OPVLASL AND KYOTO UNIVERSITY.
 Q: MORE EXPERIMENTS WANTED.

64 041 NIOBIUM 093 NEUTRON INELASTIC CROSS SECTION
 00 760401 761010 15.00 MEV 20.0% 2 MAP M. KASAI
 780089 762117 FUSION REACTOR
 Q: NB-93M PRODUCTION CROSS SECTION BY INELASTIC.
 A: 15.0% REQUIRED FOR NEUTRON TRANSPORT CALCULATIONS.
 Q: TRANSMUTATION AND NEUTRON TRANSPORT CALCULATIONS.

65 041 NIOBIUM 093 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 00 760401 761010 15.00 MEV 15.0% 2 JAE Y. SEKI
 780092 762124 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 Q: GAMMA-RAY HEATING CALCULATIONS.

66 041 NIOBIUM 093 NEUTRON N,P
 00 760401 761010 15.00 MEV 20.0% 2 MAP M. KASAI MAP K. IOKI
 780094 762119 FUSION REACTOR
 Q: HYDROGEN ACCUMULATION CALCULATIONS.

67 041 NIOBIUM 093 NEUTRON TOTAL ALPHA PRODUCTION CROSS SECTION
 00 760401 761010 15.00 MEV 15.0% 2 MAP K. IOKI
 780096 762121 FUSION REACTOR
 Q: HELIUM ACCUMULATION CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

68 041 NIOBIUM 093 NEUTRON INELASTIC CROSS SECTION
 00 801110 801225
 0.25-1 EV 20.00 MEV 10.0% 1 PNC M.SASAKI JAE K.SAKURAI
 800012 FISSON REACTOR
 Q: PRODUCTION FOR 13.6 YEAR ISOMER.
 O: FOR NEUTRON DOSIMETRY.

69 042 MOLYBDENUM NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 01 760401 801110 761010
 1.00 MEV 15.00 MEV 10.0% 2 JAE Y.SEKI
 780099 762126 FUSION REACTOR
 O: NEUTRON TRANSPORT CALCULATIONS.

70 042 MOLYBDENUM NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 01 760401 801110 761010
 0.25-1 EV 15.00 MEV 15.0% 2 JAE Y.SEKI MAP K.IOKI
 780102 762131 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON BALANCE AND GAMMA-RAY HEATING CALCULATION.

71 042 MOLYBDENUM NEUTRON N,P
 00 760401 UP TO 15.00 MEV 10.0% 2 JAE Y.SEKI MAP K.IOKI
 780104 762129 FUSION REACTOR
 Q: CROSS SECTION FOR EACH ISOTOPE ARE ALSO REQUESTED. ESPECIALLY, DATA OF MO-95,-96
 ARE REQUIRED FOR ESTIMATION OF DOSE RATES AROUND THE MOLYBDENUM STRUCTURES.
 O: HYDROGEN ACCUMULATION CALCULATIONS AND FOR CALCULATION OF INDUCED ACTIVITIES.

72 042 MOLYBDENUM NEUTRON N,ALPHA
 00 760401 761010
 UP TO 15.00 MEV 20.0% 2 JAE Y.SEKI MAP K.IOKI
 780105 762130 FUSION REACTOR
 Q: CROSS SECTIONS FOR EACH ISOTOPE ARE ALSO REQUESTED.
 O: HELIUM ACCUMULATION CALCULATIONS.

73 042 MOLYBDENUM 092 NEUTRON N,P
 00 780803 785212
 UP TO 15.00 MEV 20.0% 2 JAE H.IIDA
 780108 792078 FUSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR CALCULATION OF INDUCED ACTIVITIES AROUND MOLYBDENUM STRUCTURES.

74 042 MOLYBDENUM 094 NEUTRON N,2N
 00 760401 761010
 UP TO 15.00 MEV 10.0% 2 MAP K.IOKI
 780111 762133 FISSON REACTOR
 O: NEUTRON BALANCE AND TRANSMUTATION CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

75 043 TECHNETIUM 099 NEUTRON CAPTURE CROSS SECTION
 01 750401 80110 751010
 25.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780124 752007 FISSION REACTOR
 Q: ONE POINT ABSOLUTE DATA AT 25 KEV IS REQUIRED.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

76 044 RUTHENIUM 102 NEUTRON RESONANCE PARAMETERS
 00 80110 80125
 UP TO 3.00 KEV 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 800028 FISSION REACTOR
 Q: ONLY 3 LEVELS ARE KNOWN UP TO 1.3 KEV.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

77 044 RUTHENIUM 103 GAMMA RAY YIELD
 00 720401 721010
 780126 722002 SAFEGUARDS 1.0% 2 JAE K.TASAKA
 Q: YIELDS PER DISINTEGRATION OF 497 AND 610 KEV GAMMA-RAY REQUIRED. (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

78 044 RUTHENIUM 103 NEUTRON CAPTURE CROSS SECTION
 01 780308 80110 781212
 100.00 EV 500.00 KEV 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 780127 782079 FISSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR FAST REACTOR BURNUP CALCULATIONS. NO DIFFERENTIAL OR INTEGRAL DATA EXIST.
 O: VERY LARGE DISCREPANCIES BETWEEN EVALUATIONS.

79 044 RUTHENIUM 104 NEUTRON RESONANCE PARAMETERS
 00 80110 80125
 UP TO 3.00 KEV 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 800029 FISSION REACTOR
 Q: ONLY 4 LEVELS ARE KNOWN UP TO 1.06 KEV.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

80 046 PALLADIUM 105 NEUTRON RESONANCE PARAMETERS
 00 80110 80125
 2.00 KEV 10.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 800030 FISSION REACTOR
 Q: STAVELCOZ ET AL.(1979) MEASURED RESONANCE PARAMETERS BELOW 2 KEV. ABOVE 3 KEV, CAPTURE DATA OF MACKLIN ET AL. AGREE WITH THOSE BY HOCKENBURY ET AL.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

81 046 PALLADIUM 107 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 500.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780130 752012 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT. NO KEY
 DATA.

82 049 IODINE 115 GAMMA SPECIAL QUANTITY
 00 780808 781212
 500.00 KEV 10.00 MEV 20.0% 3 TOK Y.OKA
 780132 792080 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED FOR (G,G') REACTION.
 O: FOR CORRECTION OF IN-115M PRODUCTION THROUGH IN-115(N,N') IN-115M, FOR REACTOR
 SHIELDING AND DOSIMETRY APPLICATIONS.

83 051 ANTIMONY 124 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 0.25-1 EV 20.0% 3 JAE K.NISHIMURA
 780135 792082 FISSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR ESTIMATION OF SB-124 PRODUCTION IN SB-8E NEUTRON SOURCE. VERY LARG
 DISCREPANCIES EXIST AMONG EXPERIMENTAL DATA.

84 053 IODINE 129 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225
 100.00 EV 500.00 KEV 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 800016 FISSION REACTOR
 Q: NO EXPERIMENTAL DATA.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

85 053 IODINE 129 NEUTRON RESONANCE PARAMETERS
 00 801110 801225
 800017 FISSION REACTOR 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

86 053 IODINE 135 GAMMA RAY YIELD
 00 760401 761010
 780137 762004 SAFEGUARDS 10.0% 3 TOS H.SHIMOJIMA
 Q: YIELD PER DISINTEGRATION OF 527,1132,1260, AND 1458 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: DETECTION OF FAILED FUEL.

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** REQUESTS REGISTERED TO WRENDA.

87 053 IODINE 137
 00 760401
 761010 GAMMA RAY YIELD
 780138 762005 SAFEGUARDS 10.0% 3 TOS H.SHIMOJIMA
 Q: YIELD PER DISINTEGRATION OF MAJOR GAMMA-RAYS REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILED FUEL.

88 053 IODINE 138
 00 760401
 761010 GAMMA RAY YIELD
 780139 762006 SAFEGUARDS 10.0% 3 TOS H.SHIMOJIMA
 Q: YIELD PER DISINTEGRATION OF 589 KEV GAMMA-RAY REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILED FUEL.

89 053 IODINE 139
 00 760401
 761010 HALF LIFE
 780140 762013 SAFEGUARDS 10.0% 3 TOS H.SHIMOJIMA
 Q: DETECTION OF FAILED FUEL.

90 053 IODINE 139
 00 760401
 761010 GAMMA RAY YIELD
 780141 762007 SAFEGUARDS 10.0% 3 TOS H.SHIMOJIMA
 Q: YIELD PER DISINTEGRATION OF MAJOR GAMMA-RAYS REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: DETECTION OF FAILE FUEL.

91 054 XENON 131
 01 750401 801110 NEUTRON CAPTURE CROSS SECTION
 100.00 EV 500.00 KEV 20.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780142 752014 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS. NO EXPERIMENTAL DATA IN KEV REGION.
 O: RESONANCE PARAMETERS ARE KNOWN UP TO 4 KEV.

92 054 XENON 132
 00 801110 NEUTRON CAPTURE CROSS SECTION
 100.00 EV 500.00 KEV 20.0% 2 NIG S.I-IJIMA SAE H.MATSUNOBU
 800018 FISSION REACTOR
 Q: NO EXPERIMENTAL DATA.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

93 054 XENON 132
 00 801110 NEUTRON RESONANCE PARAMETERS
 801225 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOBU
 800019 FISSION REACTOR
 Q: ONLY 3 LEVELS BELOW 4.0 KEV.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

94 054 XENON 139 761010 GAMMA RAY YIELD
 00 760401 10.0% 3 TOS H.SHIMOMIJA
 780144 762008 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 175,219,290,297 AND 393 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: DETECTION OF FAILED FUEL.

95 055 CESIUM 134 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010
 0.25-1 EV 3.0% 1 JAE H.OKASHITA
 780148 722022 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

96 055 CESIUM 134 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010
 C-25-1 EV 10.00 MEV 20.0% 1 JAE K.TASAKA
 780149 762024 SAFEGUARDS
 Q: CROSS-SECTION VALUES AT HIGHER NEUTRON ENERGIES ARE NEEDED, AS WELL AS AT THERMAL ENERGY.
 A: 10 PER CENT ACCURACY FOR 25.3 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY REGION.
 O: BURNUP DETERMINATION BASED ON ABSOLUTE MEASUREMENT OF ACTIVITY RATIO CS-134/CS-137 ESTIMATION OF THE DECAY POWER OF FISSION PRODUCTS.

97 055 CESIUM 135 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780150 752016 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT. NO DATA AT ALL. NO EXPERIMENTAL DATA FROM 100 EV TO 400 KEV.

98 055 CESIUM 135 NEUTRON RESONANCE PARAMETERS
 00 801110 801225 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800020 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

99 061 PROMETHIUM 147 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780158 752019 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

100 062 SAMARIUM 149 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 25.00 KEV 5.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780159 752020 FISSION REACTOR
 Q: ONE POINT PRECISE MEASUREMENT AT 25 KEV IS REQUIRED.
 O: FOR FAST REACTOR BURNUP CALCULATIONS. DISCREPANCY BETWEEN STEK DATA AND RECENT DIFFERENTIAL DATA.

101 062 SAMARIUM 151 NEUTRON CAPTURE CROSS SECTION
 00 750401 801110 751010
 100.00 EV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780160 752021 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. NO KEV DATA.

102 063 EUROPIUM 152 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225 801225
 100.00 EV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800021 FISSION REACTOR
 Q: NO KEV DATA.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

103 063 EUROPIUM 152 NEUTRON RESONANCE PARAMETERS
 00 801110 801225 801225
 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800022 FISSION REACTOR
 Q: THERE EXIST NO DATA EXCEPT THOSE BY VERTEBNYJ ET AL.(19 77) IN 0.88 TO 17 EV.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

104 063 EUROPIUM 154 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010 721010
 0.25-1 EV 5.0% 1 JAE H.CKASHITA
 780162 722039 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

105 063 EUROPIUM 154 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225 801225
 100.00 EV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800023 FISSION REACTOR
 Q: NO EXPERIMENTAL DATA.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

106 063 EUROPIUM 154 NEUTRON RESONANCE PARAMETERS
 00 801110 801225 801225
 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800024 FISSION REACTOR
 Q: INSUFFICIENT RESONANCE PARAMETERS.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

** REQUESTS REGISTERED TO WRENDA. **

107 063 EUROPIUM 155 GAMMA RAY YIELD
 00 720401 721010
 1.0% 2 JAE K.TASAKA
 780163 722015 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 26.5 AND 105.3 KEV GAMMA-RAYS REQUIRED. (FOLLOWING
 BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

108 063 EUROPIUM 155 CAPTURE CROSS SECTION
 00 801110 801225
 500.00 KEV 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOSU
 FISSON REACTOR
 800025 Q: NO EXPERIMENTAL DATA.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

109 063 EUROPIUM 155 RESONANCE PARAMETERS
 00 801110 801225
 20.0% 2 NIG S.IIJIMA SAE H.MATSUNOSU
 FISSON REACTOR
 800026 Q: INSUFFICIENT RESONANCE PARAMETERS.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

110 073 TANTALUM 182 CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 10.0% 3 KTO M.KOYAMA
 FISSON REACTOR
 780164 792084 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR ESTIMATION OF NEUTRON FLUENCE AND SPECTRUM.

111 079 GOLD 198 CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 10.0% 3 KTO M.KOYAMA
 FISSON REACTOR
 780165 792085 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR ESTIMATION OF NEUTRON FLUENCE AND SPECTRUM.

112 080 MERCURY 199 INELASTIC CROSS SECTION
 00 801110 801225
 14.00 KEV 10.0% 3 JAE K.SAKURAI
 FISSON REACTOR
 800013 Q: PRODUCTION CROSS SECTION FOR 42.6 MIN ISOMER THROUGH INELASTIC SCATTERING.
 O: FOR NEUTRON DOSIMETRY.

** REQUESTS REGISTERED TO WRENDA. **

113 082 LEAD
 00 760401 NEUTRON TOTAL PHOTON PRODUCTION CROSS SECTION
 0.25-1 EV 761010 15.00 MEV 15.0% 2 JAE Y. SEKI
 780166 762134 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 A: AN UPPER LIMIT OF THE CROSS SECTION OR ACCURACY 20 PER CENT USEFUL. NEUTRON
 ENERGY RESOLUTION 300 KEV ABOVE 100 KEV AND 10 PER CENT OTHERWISE. GAMMA ENERGY
 RESOLUTION 1 MEV.
 O: SHIELDING DESIGN AND GAMMA-RAY HEATING CALCULATION.

114 082 LEAD 000
 00 801110 NEUTRON DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
 800008 UP TO 15.00 MEV 10.0% 2 OSA A. TAKAHASHI
 FUSION REACTOR
 Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS REQUIRED.
 O: FOR NEUTRON MULTIPLICATION CALCULATION OF FUSION BLANKET.

115 082 LEAD 206
 00 780808 NEUTRON N, ALPHA
 780167 792091 UP TO 15.00 MEV 20.0% 2 JAE H. IIDA
 FUSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.
 O: FOR FUSION REACTOR SHIELDING CALCULATION. FOR CALCULATION OF RESIDUAL ACTIVITY.
 NO EXPERIMENTAL DATA EXCEPT FOR A FEW AT 14 MEV.

116 091 PROTACTINIUM 233
 00 760401 NEUTRON CAPTURE CROSS SECTION
 20.00 EV 761010 15.00 MEV 10.0% 1 JAE R. SHINDO
 780168 762208 FISSON REACTOR
 O: FOR BURNUP CALCULATION OF THORIUM FUELED THERMAL REACTORS.

117 092 URANIUM 233
 00 780808 NEUTRON CAPTURE CROSS SECTION
 1.00 MEV 781212 20.00 MEV 10.0% 1 SAE N. ASANO
 780169 792083 FISSON REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.

118 092 URANIUM 233
 00 780808 NEUTRON N, 2N
 781212 20.00 MEV 10.0% 1 SAE N. ASANO
 780170 792092 FISSON REACTOR
 Q: EXPERIMENTAL DATA WANTED.

119 092 URANIUM 235
 00 680401 NEUTRON CAPTURE CROSS SECTION
 1.00 MEV 681010 10.00 MEV 10.0% 1 JAE S. KATSURAGI SAE H. MATSUNOBU
 780173 682055 FISSON REACTOR
 Q: ALPHA ALSO WANTED.
 A: REQUIRED ACCURACY - 5 TO 10 PER CENT. RESOLUTION - 1 TO 2 PER CENT.
 O: FOR FAST REACTORS. NUCLEAR DATA EVALUATION. NO EXPERIMENTAL DATA ABOVE 2.6 MEV.

** REQUESTS REGISTERED TO WRENDA. **

120 092 URANIUM 235 DELAYED NEUTRONS EMITTED PER FISSION
 00 760401
 0.25-1 EV 10.00 MEV 5.0% 2 NIG T.MURATA
 780174 762046 SAFEGUARDS
 Q: THE REQUESTED QUANTITIES ARE THE GROUP HALF LIVES AND GROUP YIELDS (NORMALIZED TO 1 FISSION) WHICH CAN BE USED TO FIT THE DECAY CURVE OF DELAYED NEUTRONS FOR THE TIME RANGE 0.1-300 SEC WITHIN AN ACCURACY OF 5 PER CENT.
 O: INCIDENT ENERGY STEP LESS THAN 2 MEV. ACTIVE ASSAY OF MIXED FRESH AND IRRADIATED FUEL.

121 092 URANIUM 236 CAPTURE CROSS SECTION
 00 720401 721010
 0.25-1 EV 14.00 MEV 2 JAE Y.NAITO
 780175 722040 SAFEGUARDS
 A: ACCURACY REQUIRED AT THERMAL IS 3 PER CENT, 10 PER CENT ABOVE.
 O: FOR BURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

122 092 URANIUM 237 GAMMA RAY YIELD
 00 780808 781212
 780176 792090 FISSION REACTOR
 Q: YIELD PER DISINTEGRATION OF 59.5 AND 208 KEV GAMMA RAYS.
 O: RADIATION DOSE CALCULATION FOR PU-241 CAUGHTER. STATUS NUCLEAR DATA SHEETS, 23 73 (1978) EVALUATION 10 %.

123 092 URANIUM 238 DELAYED NEUTRONS EMITTED PER FISSION
 00 760401 761010
 0.25-1 EV 10.00 MEV 5.0% 2 NIG T.MURATA
 780179 762047 SAFEGUARDS
 Q: THE REQUESTED QUANTITIES ARE THE GROUP HALF LIVES AND GROUP YIELDS (NORMALIZED TO 1 FISSION) WHICH CAN BE USED TO FIT THE DECAY CURVE OF DELAYED NEUTRONS FOR THE TIME RANGE 0.1 - 300 SEC WITHIN AN ACCURACY OF 5.0 PER CENT.
 O: INCIDENT ENERGY STEP LESS THAN 2 MEV. ACTIVE ASSAY OF MIXED FRESH AND IRRADIATED FUEL.

124 092 URANIUM 238 FISSION PRODUCT MASS YIELD SPECTRUM
 00 760401 761010
 780180 762044 SAFEGUARDS
 Q: CUMULATIVE YIELDS OF BR-87, BR-88, KR-90, I-137, I-138, I-139, XE-137, XE-138 FOR FISSION NEUTRON AND 1 - 24 KEV NEUTRON SPECTRA.
 O: DETECTION OF FAILED FUEL.

125 093 NEPTUNIUM 237 CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 1.00 KEV 10.0% 1 PNC I.OHTAKE
 780181 792086 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED. EVALUATION DESIRABLE. RESONANCE PARAMETERS ARE ALSO REQUIRED.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

** REQUESTS REGISTERED TO WRENDA. **

126 093 NEPTUNIUM 237 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 1.00 KEV 15.00 MEV 20.0% 1 PNC I.OHTAKE
 780182 792089 FISSON REACTOR
 Q: EXPERIMENTAL DATA REQUIRED. EVALUATION DESIRABLE.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

127 093 NEPTUNIUM 237 NEUTRON FISSION CROSS SECTION
 00 760401 UP TO 761010
 780183 762135 15.00 MEV 1.0% 2 JAE Y.SEKI
 FUSION REACTOR
 Q: RATIO TO U-235 FISSION USEFUL.
 A: ACCURACY 3 PER CENT USEFUL. NEUTRON ENERGY RESOLUTION 300 KEV.
 O: FOR MONITOR REACTION AND RADIATION DOSIMETRY IN NEUTRONICS EXPERIMENTS ON
 BLANKET SYSTEM OF FUSION REACTORS.

128 093 NEPTUNIUM 239 NEUTRON CAPTURE CROSS SECTION
 00 710401 711010
 10.00 KEV 5.00 MEV 20.0% 3 KYU M.OHTA
 780184 712075 FISSON REACTOR
 Q: SOME POINT DATA ARE ALSO USEFUL.
 O: FOR NORMALIZATION OF CALCULATED CAPTURE CROSS SECTION. FOR BURNUP CALCULATION.

129 093 NEPTUNIUM 239 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010
 0.25-1 EV 15.00 MEV 20.0% 2 JAE R.SHINDO
 780156 762209 FISSON REACTOR
 Q: FOR BURNUP CALCULATION OF THERMAL REACTOR.

130 094 PLUTONIUM 238 SPONTANEOUS FISSION HALF LIFE
 01 760401 801110 761010
 780188 762014 SAFEGUARDS 1.0% 2 PNC S.SUZUKI
 O: DETECTION OF PU BY NEUTRON COINCIDENCE METHOD.

131 094 PLUTONIUM 238 GAMMA RAY YIELD
 00 760401 761010
 780189 762009 SAFEGUARDS 1.0% 1 JAE T.SUZUKI
 Q: YIELD PER DISINTEGRATION OF 43.45-99.7-152.7 KEV GAMMA RAYS REQUIRED.
 (FOLLOWING ALPHA DECAY EVENT).
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
 REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

132 094 PLUTONIUM 238 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 500.00 KEV 20.0% 2 PNC I.OHTAKE
 780191 792087 FISSON REACTOR
 Q: EXPERIMENTAL DATA DESIRED. EVALUATED DATA ALSO REQUIRED.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

** REQUESTS REGISTERED TO WRENDA. **

133 094 PLUTONIUM 238 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 500.00 KEV 15.00 MEV 10.0% 2 PNC 1.0HTAKE
 780192 792088 FISSION REACTOR
 G: EXPERIMENTAL DATA DESIRED. EVALUATED DATA ALSO REQUIRED.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

134 094 PLUTONIUM 238 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S.SUZUKI
 780193 762018 SAFEGUARDS
 G: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

135 094 PLUTONIUM 239 GAMMA RAY YIELD
 00 760401 761010 1.0% 1 JAE T.SUZUKI
 780195 762010 SAFEGUARDS
 G: YIELD PER DISINTEGRATION OF 45.2,104.2 AND 642.3 KEV GAMMA RAYS REQUIRED.
 (FOLLOWING ALPHA DECAY EVENT)
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
 REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

136 094 PLUTONIUM 239 NEUTRON TOTAL CROSS SECTION
 01 760401 801110 761010
 1.00 KEV 200.00 KEV 2.0% 1 NIG M.KAWAI
 780198 762210 FISSION REACTOR
 O: FISSION REACTOR CALCULATIONS.

137 094 PLUTONIUM 239 NEUTRON FISSION CROSS SECTION
 01 760401 801110 761010
 10.00 KEV 20.00 MEV 3.0% 1 NIG M.KAWAI
 780199 762211 FISSION REACTOR
 O: FISSION REACTOR CORE DESIGN AND ANALYSIS. LARGE DISCREPANCY BETWEEN
 EXPERIMENTAL DATA FROM 50 KEV TO 1.0 MEV.

138 094 PLUTONIUM 239 NEUTRON CAPTURE TO FISSION RATIO(ALPHA)
 00 720401 721010
 0.25-1 EV 14.00 MEV 2 JAE Y.NAITO
 780200 722046 SAFEGUARDS
 A: ACCURACY REQUIRED AT THERMAL IS 1 PER CENT, 5 PER CENT ABOVE.
 C: FOR BURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

139 094 PLUTONIUM 239 NEUTRON NEUTRONS EMITTED PER FISSION(NJ BAR)
 01 700401 801110 701010
 UP TO 15.00 MEV 0.5% 1 NIG M.KAWAI
 780201 702037 FISSION REACTOR
 A: ACCURAY REQUIRED TO BETTER THAN 0.2 PER CENT, IF POSSIBLE.
 O: FOR FAST AND HYBRID FISSION REACTOR CALCULATIONS. DISCREPANCY EXISTS BETWEEN
 EXPERIMENTAL DATA.

** REQUESTS REGISTERED TO WRENDA. **

140 094 PLUTONIUM 239 NEUTRON NEUTRONS EMITTED PER FISSION<NU BAR>
 00 720401 721010
 0.25-1 EV 0.25-1 EV 0.5% 2 JAE Y.NAITO
 782022 722048 SAFEGUARDS
 Q: DATA WANTED FOR EPI-THERMAL NEUTRONS ALSO.
 O: FOR BURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

141 094 PLUTONIUM 239 DELAYED NEUTRONS EMITTED PER FISSION
 00 760401 761010
 0.25-1 EV 10.00 MEV 5.0% 2 NIG T.MURATA
 782023 762048 SAFEGUARDS
 Q: THE REQUESTED QUANTITIES ARE THE GROUP HALF LIVES AND GROUP YIELDS (NORMALIZED TO 1 FISSION) WHICH CAN BE USED TO FIT THE DECAY CURVE OF DELAYED NEUTRONS FOR THE TIME RANGE 0.1 - 300 SEC WITHIN AN ACCURACY OF 5 PER CENT.
 O: INCIDENT ENERGY STEP LESS THAN 2 MEV. ACTIVE ASSAY OF MIXED FRESH AND IRRADIATED FUEL.

142 094 PLUTONIUM 239 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S.SUZUKI
 782024 762019 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

143 094 PLUTONIUM 239 CAPTURE TO FISSION RATIO<ALPHA>
 00 801110 801225
 1.00 MEV 20.00 MEV 10.0% 2 PNC M.SASAKI
 800015 FISSION REACTOR
 Q: INSUFFICIENT EXPERIMENTAL DATA.
 O: FOR CALCULATION OF FBR BREEDING RATIO. EVALUATED DATA WANTED.

144 094 PLUTONIUM 240 SPONTANEOUS FISSION HALF LIFE
 01 760401 801110 761010 1.0% 2 PNC S.SUZUKI
 782025 762016 SAFEGUARDS
 Q: DETECTION OF PU BY NEUTRON COINCIDENCE METHOD.

145 094 PLUTONIUM 240 GAMMA RAY YIELD
 00 760401 761010 1.0% 1 JAE T.SUZUKI
 782026 762011 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 45.2-104.2 AND 642.3 KEV GAMMA-RAYS REQUIRED. (FOLLOWING ALPHA DECAY EVENT).
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

** REQUESTS REGISTERED TO WRENDA. **

146 094 PLUTONIUM 240 NEUTRON FISSIION CROSS SECTION
 C1 760401 801110 761010
 0.25-1 EV 1.00 MEV 10.0% 1 PNC M.SASAKI
 780209 762213 FISSIION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

147 094 PLUTONIUM 240 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION
 00 760401 801110 761010
 0.25-1 EV 10.00 MEV 5.0% 2 NIG T.MURATA
 780210 762049 SAFEGUARDS
 O: THE REQUESTED QUANTITIES ARE THE GROUP HALF LIVES AND GROUP YIELDS (NORMALIZED TO 1 FISSION) WHICH CAN BE USED TO FIT THE DECAY CURVE OF DELAYED NEUTRONS FOR THE TIME RANGE 0.1-300 SEC WITHIN AN ACCURACY OF 5 PER CENT.
 O: INCIDENT ENERGY STEP LESS THAN 2 MEV. ACTIVE ASSAY OF MIXED FRESH AND IRRADIATED FUEL.

148 094 PLUTONIUM 240 NEUTRON RESONANCE PARAMETERS
 01 760401 801110 761010
 1.00 EV 10.00 KEV 1 PNC M.SASAKI
 780211 762215 FISSIION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

149 094 PLUTONIUM 240 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S.SUZUKI
 780212 762020 SAFEGUARDS
 O: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

150 094 PLUTONIUM 241 NEUTRON GAMMA RAY YIELD
 00 760401 801110 761010 5.0% 1 JAE T.SUZUKI
 780213 762012 SAFEGUARDS
 O: YIELD PER DISINTEGRATION OF 56.4,77,103.5,148.6 AND 160 KEV GAMMA-RAYS REQUIRED. (FOLLOWING ALPHA DECAY EVENT).
 A: 1 PER CENT ACCURACY FOR 103.5 AND 148.6 KEV GAMMA RAYS, 5 PER CENT ACCURACY FOR 56.4,77 AND 160 KEV GAMMA RAYS.
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

151 094 PLUTONIUM 241 NEUTRON CAPTURE TO FISSION RATIO(ALPHA)
 00 760401 801110 721010
 0.25-1 EV 14.00 MEV 2 JAE Y.MAITO
 780218 722047 SAFEGUARDS
 A: ACCURACY REQUIRED AT THERMAL IS 1 PER CENT, 5 PER CENT ABOVE.
 O: FOR DURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

** REQUESTS REGISTERED TO WRENDA. **

152 094 PLUTONIUM 241 NEUTRON DELAYED NEUTRONS EMITTED PER FISSION
 00 760401 761010
 0.25-1 EV 10.00 MEV 5.0% 2 NIG T.MURATA
 780220 762050 SAFEGUARDS
 Q: THE REQUESTED QUANTITIES ARE THE GROUP HALF LIVES AND GROUP YIELDS (NORMALIZED TO 1 FISSION) WHICH CAN BE USED TO FIT THE DECAY CURVE OF DELAYED NEUTRONS FOR THE TIME RANGE 0.1 - 300 SEC WITHIN AN ACCURACY OF 5 PER CENT.
 O: ACTIVE ASSAY OF MIXED FRESH AND IRRADIATED FUEL INCIDENT ENERGY STEP LESS THAN 2 MEV.

153 094 PLUTONIUM 241 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S.SUZUKI
 780222 762021 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

154 094 PLUTONIUM 242 SPONTANEOUS FISSION HALF LIFE
 01 760401 801110 761010 1.0% 2 PNC S.SUZUKI
 780223 762017 SAFEGUARDS
 O: DETECTION OF PU BY NEUTRON COINCIDENCE METHOD.

155 094 PLUTONIUM 242 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010
 0.25-1 EV 14.00 MEV 2 JAE Y.NAITO
 780224 722043 SAFEGUARDS
 A: ACCURACY REQUIRED AT THERMAL IS 5 PER CENT, 10 PER CENT ABOVE.
 O: FOR BURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

156 094 PLUTONIUM 242 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S.SUZUKI
 780227 762022 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

157 095 AMERICIUM 241 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 500.00 KEV 15.00 MEV 10.0% 1 PNC R.YUMOTO SAE H.MATSUNOBU
 780230 752033 FISSION REACTOR
 Q: PRODUCTION OF AM-242 AND AM-242M WANTED.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS-URANIUM NUCLIDE BUILD-UP IN SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

** REQUESTS REGISTERED TO WRENDA. **

158 095 AMERICIUM 241 SPECIAL QUANTITY
 01 760401 801110 761010
 0.5% 1 PNC S.SUZUKI

780231 762023 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

159 095 AMERICIUM 242 CAPTURE CROSS SECTION
 00 760401 761010
 0.25-1 EV 10.00 MEV 10.0% 3 NFI M.YADA
 780234 762027 SAFEGUARDS
 O: FOR HIGHER BURNUP CALCULATIONS.

160 095 AMERICIUM 243 CAPTURE CROSS SECTION
 00 760401 761010 TIT K.EBIZUKA
 0.25-1 EV 2.00 MEV 20.0% 3 NFI M.YADA
 780236 762028 SAFEGUARDS
 Q: TOTAL ELASTIC AND INELASTIC CROSS SECTIONS ARE ALSO REQUIRED BY K.EBIZUKA TIT.
 A: 10 PER CENT ACCURACY FOR 25 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY REGION.
 O: BURNUP ANALYSIS OF FAST BREEDER REACTORS.

161 095 AMERICIUM 243 CAPTURE CROSS SECTION
 00 801110 801225
 20.00 EV 15.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 JAE R.SHINDO MAP T.HOJUYAMA

800027 FISSION REACTOR
 Q: CAPTURE CROSS SECTIONS TO GROUND AND ISOMER STATES OF AM-244 REQUIRED. THE
 EXPERIMENTAL DATA ARE VERY SCARCE IN KEV AND MEV REGIONS.
 O: FOR BURNUP CALCULATIONS OF THERMAL AND FAST REACTORS, ESTIMATION FOR BUILD-UP OF
 TRANSURANIUM NUCLIDES IN SPENT FUEL, AND NEUTRON SHIELDING DESIGN FOR TRANSPORT
 CASK OF SPENT FUEL.

162 096 CURIUM 242 CAPTURE CROSS SECTION
 00 750401 751010
 0.25-1 EV 15.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 MAP T.HOJUYAMA

780238 752042 FISSION REACTOR
 A: ACCURACY REQUIRED 10 TO 20 PER CENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

163 096 CURIUM 242 FISSION CROSS SECTION
 00 750401 751010
 0.25-1 EV 15.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 MAP T.HOJUYAMA

780240 752041 FISSION REACTOR
 A: ACCURACY REQUIRED 10 TO 20 PER CENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

** REQUESTS REGISTERED TO WRENDA. **

164 096 CURIUM 243 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010
 20.00 EV 10.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 780241 752047 FISSION REACTOR
 A: ACCURACY REQUIRED 10 TO 20 PER CENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

165 096 CURIUM 243 NEUTRON FISSION CROSS SECTION
 00 750401 751010
 3.00 MEV 10.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 780243 752045 FISSION REACTOR
 A: ACCURACY REQUIRED 10 TO 20 PER CENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

3. High Priority Requests

Requests of priority 1 are presented in this section. Among these, 30 requests are submitted to NEANDC as the high priority requests. They are those having the following sequential number:

1, 2, 6, 7, 8, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21,
22, 23, 25, 26, 27, 31, 32, 33, 36, 42, 44, 45, 46, 47, 48.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

1	003	LITHIUM 006	NEUTRON	N,NT					
	00	760401	761010						
		3.00 MEV	15.00 MEV	5.0%	1	JAE	Y.SEKI		
		780005	762053	FUSION REACTOR					
				O: TRITIUM BREEDING AND ENERGY DEPOSITION CALCULATION.					
2	003	LITHIUM 007	NEUTRON	N,NT					
	01	760401	801110	761010					
		UP TO	15.00 MEV	5.0%	1	JAE	Y.SEKI	OSA A.TAKAHASHI	
		780013	762058	FUSION REACTOR					
				G: NEUTRON SPECTRA WITH ACCURACY 15 PER CENT ALSO REQUIRED.					
				O: TRITIUM BREEDING AND ENERGY DEPOSITION CALCULATION.					
3	026	IRON	NEUTRON						
	01	760401	801110	761010					
		UP TO	20.00 MEV	5.0%	1	JAE	Y.SEKI		
		780064	762099	FUSION REACTOR					NIG M.KAWAI
				G: INELASTIC GAMMA RAY SPECTRA ALSO REQUIRED.					
				O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.					
4	028	NICKEL	NEUTRON						
	01	760401	801110	761010					
		UP TO	20.00 MEV	5.0%	1	JAI	Y.SEKI		
						NIG	M.KAWAI		
		780072	762105	FUSION REACTOR					MAP M.KASAI
				G: INELASTIC GAMMA-RAY SPECTRA ALSO REQUIRED.					
				O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.					
5	041	NIObIUM 093	NEUTRON						
	00	801110	801225						
		0.25-1 EV	20.00 MEV	10.0%	1	PNC	M.SAKAKI	JAE K.SAKURAI	
		800012		FISSION REACTOR					
				G: PRODUCTION FOR 13.6 YEAR ISOMER.					
				O: FOR NEUTRON DOSIMETRY.					
6	043	TECHNETIUM 099	NEUTRON						
	01	750401	801110	751010					
		25.00 KEV	25.00 KEV	10.0%	1	NIG	S.IIJIMA	SAE H.MATSUNOBU	
		780124	752007	FISSION REACTOR					
				G: ONE POINT ABSOLUTE DATA AT 25 KEV IS REQUIRED.					
				O: FOR FAST REACTOR BURNUP CALCULATIONS.					
7	046	PALLADIUM 107	NEUTRON						
	01	750401	801110	751010					
		500.00 EV	500.00 KEV	10.0%	1	NIG	S.IIJIMA	SAE H.MATSUNOBU	
		780130	752012	FISSION REACTOR					
				O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT. NO KEV DATA.					

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

8 054 XENON 131 801110 NEUTRON CAPTURE CROSS SECTION
 01 750401 751010 500.00 KEV 20.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 100.00 EV
 780142 752014 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. NO EXPERIMENTAL DATA IN KEV REGION.
 O: RESONANCE PARAMETERS ARE KNOWN UP TO 4 KEV.

9 055 CESIUM 134 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010 0.25-1 EV 3.0% 1 JAE H.OKASHITA
 0.25-1 EV SAFEGUARDS
 780148 722022 O: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

10 055 CESIUM 134 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010 10.00 MEV 20.0% 1 JAE K.TASAKA
 0.25-1 EV SAFEGUARDS
 780149 762024 O: CROSS-SECTION VALUES AT HIGHER NEUTRON ENERGIES ARE NEEDED, AS WELL AS AT
 THERMAL ENERGY.
 A: 10 PER CENT ACCURACY FOR 25.3 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY REGION.
 O: BURNUP DETERMINATION BASED ON ABSOLUTE MEASUREMENT OF ACTIVITY RATIO
 CS-134/CS-137 ESTIMATION OF THE DECAY POWER OF FISSION PRODUCTS.

11 055 CESIUM 135 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 100.00 EV FISSION REACTOR
 780150 752016 O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT. NO DATA
 AT ALL. NO EXPERIMENTAL DATA FROM 100 EV TO 400 KEV.

12 055 CESIUM 135 NEUTRON RESONANCE PARAMETERS
 00 801110 801225 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800020 O: FOR FAST REACTOR BURNUP CALCULATIONS.

13 059 PRASEODYMIUM 144 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010 1.0% 1 JAE H.OKASHITA
 780155 722012 SAFEGUARDS
 O: YIELD PER DISINTEGRATION OF 696.5, 1498.1 AND 2185.7 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

14 061 PROMETHIUM 147 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780158 752019 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

15 062 SAMARIUM 149 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010
 25.00 KEV 25.00 KEV 5.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780159 752020 FISSION REACTOR
 Q: ONE POINT PRECISE MEASUREMENT AT 25 KEV IS REQUIRED.
 O: FOR FAST REACTOR BURNUP CALCULATIONS. DISCREPANCY BETWEEN STEK DATA AND RECENT DIFFERENTIAL DATA.

16 062 SAMARIUM 151 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780160 752021 FISSION REACTOR
 Q: FOR FAST REACTOR BURNUP CALCULATIONS. NO KEV DATA.
 O: FOR FAST REACTOR BURNUP CALCULATIONS.

17 063 EUROPIUM 152 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800021 FISSION REACTOR
 Q: NO KEV DATA.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

18 063 EUROPIUM 152 NEUTRON RESONANCE PARAMETERS
 00 801110 801225
 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800022 FISSION REACTOR
 Q: THERE EXIST NO DATA, EXCEPT THOSE BY VERTEBNYJ ET AL.(19 77) IN 0.88 TO 17 EV.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

19 063 EUROPIUM 154 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010
 0.25-1 EV 0.25-1 EV 5.0% 1 JAE H.OKASHITA
 780162 722039 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

20 063 EUROPIUM 154 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800023 FISSION REACTOR
 Q: NO EXPERIMENTAL DATA.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

21 063 EUROPIUM 154 NEUTRON RESONANCE PARAMETERS
 00 801110 801225 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 800024 FISSION REACTOR
 Q: INSUFFICIENT RESONANCE PARAMETERS.
 O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

22 091 PROTACTINIUM 233 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010
 20.00 EV 15.00 MEV 10.0% 1 JAE R.SHINDO
 780168 762208 FISSION REACTOR
 O: FOR BURNUP CALCULATION OF THORIUM FUELED THERMAL REACTORS.

23 092 URANIUM 233 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 1.00 MEV 20.00 MEV 10.0% 1 SAE N.ASANO
 780169 792083 FISSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED.

24 092 URANIUM 233 NEUTRON N,2N
 00 780808 781212
 UP TO 20.00 MEV 10.0% 1 SAE N.ASANO
 780170 792092 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED.

25 092 URANIUM 235 NEUTRON CAPTURE CROSS SECTION
 00 680401 681010
 1.00 MEV 10.00 MEV 10.0% 1 JAE S.KATSURAGI SAE H.MATSUNOBU
 780173 682055 FISSION REACTOR
 Q: ALPHA ALSO WANTED.
 A: REQUIRED ACCURACY - 5 TO 10 PER CENT. RESOLUTION - 1 TO 2 PER CENT.
 O: FOR FAST REACTORS. NUCLEAR DATA EVALUATION. NO EXPERIMENTAL DATA ABOVE 2.6 MEV.

26 093 NEPTUNIUM 237 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 0.25-1 EV 1.00 KEV 10.0% 1 PNC I.OHTAKE
 780181 792086 FISSION REACTOR
 Q: EXPERIMENTAL DATA WANTED. EVALUATION DESIRABLE. RESONANCE PARAMETERS ARE ALSO
 REQUIRED.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

27 093 NEPTUNIUM 237 NEUTRON CAPTURE CROSS SECTION
 00 780808 781212
 1.00 KEV 15.00 MEV 20.0% 1 PNC I.OHTAKE
 780182 792089 FISSION REACTOR
 Q: EXPERIMENTAL DATA REQUIRED. EVALUATION DESIRABLE.
 O: FOR BURNUP CALCULATION OF THERMAL AND FAST REACTORS.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

28 094 PLUTONIUM 238
00 760401

GAMMA RAY YIELD
761010

1.0% 1 JAE T.SUZUKI

780189 762009 SAFEGUARDS

Q: YIELD PER DISINTEGRATION OF 43.45,99.7,152.7 KEV GAMMA RAYS REQUIRED.
(FOLLOWING ALPHA DECAY EVENT).

O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

29 094 PLUTONIUM 238
01 760401 801110

SPECIAL QUANTITY
761010

0.5% 1 PNC S.SUZUKI

780193 762018 SAFEGUARDS

Q: DECAY HEAT (W/G) REQUIRED.

O: ASSAY OF PU BY CALORIMETRY.

30 094 PLUTONIUM 239
00 760401

GAMMA RAY YIELD
761010

1.0% 1 JAE T.SUZUKI

780195 762010 SAFEGUARDS

Q: YIELD PER DISINTEGRATION OF 45.2,104.2 AND 642.3 KEV GAMMA RAYS REQUIRED.
(FOLLOWING ALPHA DECAY EVENT).

O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

31 094 PLUTONIUM 239
01 760401 801110

NEUTRON TOTAL CROSS SECTION
761010

1.00 KEV 200.00 KEV 2.0% 1 NIG M.KAWAI

780198 762210

FISSION REACTOR
O: FISSION REACTOR CALCULATIONS.

32 094 PLUTONIUM 239
01 760401 801110

NEUTRON FISSION CROSS SECTION
761010

10.00 KEV 20.00 MEV 3.0% 1 NIG M.KAWAI

780199 762211

FISSION REACTOR
O: FISSION REACTOR CORE DESIGN AND ANALYSIS. LARGE DISCREPANCY BETWEEN
EXPERIMENTAL DATA FROM 50 KEV TO 1.0 MEV.

33 094 PLUTONIUM 239
01 700401 801110

NEUTRON NEUTRONS EMITTED PER FISSION(NU BAR)
701010

UP TO 15.00 MEV 0.5% 1 NIG M.KAWAI

780201 702037

FISSION REACTOR
A: ACCURACY REQUIRED TO BETTER THAN 0.2 PER CENT, IF POSSIBLE.

O: FOR FAST AND HYBRID FISSION REACTOR CALCULATIONS. DISCREPANCY EXISTS BETWEEN
EXPERIMENTAL DATA.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

- 34 094 PLUTONIUM 239 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S-SUZUKI
 780204 762019 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.
- 35 094 PLUTONIUM 240 GAMMA RAY YIELD
 00 760401 761010 1.0% 1 JAE T-SUZUKI
 780206 762011 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 45.2,104.2 AND 642.3 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING ALPHA DECAY EVENT).
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
 REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.
- 36 094 PLUTONIUM 240 NEUTRON FISSION CROSS SECTION
 01 760401 801110 761010
 0.25-1 EV 1.00 MEV 10.0% 1 PNC M.SASAKI
 780209 762213 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.
- 37 094 PLUTONIUM 240 NEUTRON RESONANCE PARAMETERS
 01 760401 801110 761010
 1.00 EV 10.00 KEV 1 PNC M.SASAKI
 780211 762215 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.
- 38 094 PLUTONIUM 240 SPECIAL QUANTITY
 01 760401 801110 761010 0.5% 1 PNC S-SUZUKI
 780212 762020 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.
- 39 094 PLUTONIUM 241 GAMMA RAY YIELD
 00 760401 NEUTRON 761010 5.0% 1 JAE T-SUZUKI
 780213 762012 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 56.4,77,103.5,148.6 AND 160 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING ALPHA DECAY EVENT).
 A: 1 PER CENT ACCURACY FOR 103.5 AND 148.6 KEV GAMMA RAYS, 5 PER CENT ACCURACY FOR
 56.4,77 AND 160 KEV GAMMA RAYS.
 O: THOUGH PRESENT STATUS OF ACCURACY SEEMED TO MEET THE REQUIREMENT CONFIRMATION IS
 REQUIRED. ASSAY OF PU ISOTOPES BY GAMMA-RAY SPECTROSCOPY.

** SPECIAL RETRIEVAL FROM JAPANESE REQUEST. **

40 094 PLUTONIUM 241 SPECIAL QUANTITY
 01 760401 801110 761010
 0.5% 1 PNC S.SUZUKI
 780222 762021 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

41 094 PLUTONIUM 242 SPECIAL QUANTITY
 01 760401 801110 761010
 0.5% 1 PNC S.SUZUKI
 780227 762022 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

42 095 AMERICIUM 241 NEUTRON CAPTURE CROSS SECTION
 01 750401 801110 751010 SAE H.MATSUNOBU
 500.00 KEV 15.00 MEV 10.0% 1 PNC R.YUMOTO
 MAP T.HOJUYAMA
 780230 752033 FISSION REACTOR
 Q: PRODUCTION OF AM-242 AND AM-242M WANTED.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

43 095 AMERICIUM 241 SPECIAL QUANTITY
 01 760401 801110 761010
 0.5% 1 PNC S.SUZUKI
 780231 762023 SAFEGUARDS
 Q: DECAY HEAT (W/G) REQUIRED.
 O: ASSAY OF PU BY CALORIMETRY.

44 095 AMERICIUM 243 NEUTRON CAPTURE CROSS SECTION
 00 801110 801225
 20.00 EV 15.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 JAE R.SHINDO MAP T.HOJUYAMA
 800027 FISSION REACTOR
 Q: CAPTURE CROSS SECTIONS TO GROUND AND ISOMER STATES OF AM-244 REQUIRED. THE
 EXPERIMENTAL DATA ARE VERY SCARCE IN KEV AND MEV REGIONS.
 O: FOR BURNUP CALCULATIONS OF THERMAL AND FAST REACTORS, ESTIMATION FOR BUILD-UP OF
 TRANSURANIUM NUCLIDES IN SPENT FUEL, AND NEUTRON SHIELDING DESIGN FOR TRANSPORT
 CASK OF SPENT FUEL.

45 096 CURIUM 242 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010
 0.25-1 EV 15.00 MEV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 MAP T.HOJUYAMA
 780238 752042 FISSION REACTOR
 A: ACCURACY REQUIRED 10 TO 20 PER CENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

46 096	CURIUM 242	NEUTRON	FISSION CROSS SECTION	
00	750401	751010		
	0.25-1 EV	15.00 MEV		SAE H.MATSUNOBU
			1 PNC R.YUMOTO	
			MAP T.HOJUYAMA	
780240	752041	FISSION REACTOR		
		A: ACCURACY REQUIRED 10 TO 20 PER CENT.		
		O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.		
47 096	CURIUM 243	NEUTRON	CAPTURE CROSS SECTION	
00	750401	751010		
	20.00 EV	10.00 MEV		SAE H.MATSUNOBU
			1 PNC R.YUMOTO	
780241	752047	FISSION REACTOR		
		A: ACCURACY REQUIRED 10 TO 20 PER CENT.		
		O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.		
48 096	CURIUM 243	NEUTRON	FISSION CROSS SECTION	
00	750401	751010		
	3.00 MEV	10.00 MEV		SAE H.MATSUNOBU
			1 PNC R.YUMOTO	
780243	752045	FISSION REACTOR		
		A: ACCURACY REQUIRED 10 TO 20 PER CENT.		
		O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.		

4. List of Withdrawn Requests from WRENDA 79/80

Withdrawn requests of 111 are shown in this section. They were carefully reviewed by the requestors before they were decided to be withdrawn. Reasons for withdrawal are satisfaction of the requirements, changes of the requestors' plan in which they were going to use the data, amalgamation of some requests which were made for similar quantities, and so forth.

** REQUESTS WITHDRAWN FROM WRENDA. **

- 1 003 LITHIUM 006 NEUTRON ELASTIC CROSS SECTION
 00 760401 761010 801110
 7.50 MEV 15.00 MEV 10.0% 2 JAE Y-SEKI
 780001 762168 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 2 003 LITHIUM 006 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 00 760401 761010 801110
 7.50 MEV 15.00 MEV 10.0% 2 JAE Y-SEKI
 780002 762051 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 3 003 LITHIUM 007 NEUTRON ELASTIC CROSS SECTION
 00 760401 761010 801110
 7.50 MEV 15.00 MEV 5.0% 2 JAE Y-SEKI
 780006 762230 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 4 003 LITHIUM 007 NEUTRON DIFFERENTIAL ELASTIC CROSS SECTION
 00 760401 761010 801110
 7.50 MEV 15.00 MEV 10.0% 2 JAE Y-SEKI
 780007 762055 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 5 003 LITHIUM 007 NEUTRON INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y-SEKI
 780008 762231 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 6 003 LITHIUM 007 NEUTRON ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y-SEKI
 780009 762056 FUSION REACTOR
 0: NEUTRON TRANSPORT CALCULATIONS.

- 7 003 LITHIUM 007 NEUTRON N,2N ANGULAR DISTRIBUTION
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y-SEKI
 780011 762232 FUSION REACTOR
 0: BLANKET NEUTRONICS CALCULATIONS.

- 8 003 LITHIUM 007 NEUTRON N,2N NEUTRON SPECTRA
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y-SEKI
 780012 762057 FUSION REACTOR
 0: BLANKET NEUTRONICS CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

9 004	BERYLLIUM 009	NEUTRON	801110							
00	760401	761010	15.0%	2	JAE	Y-SEKI				
	780014	762060	FUSION REACTOR							
			O: BLANKET NEUTRONICS CALCULATIONS.							
10 004	BERYLLIUM 009	NEUTRON	801110							
00	760401	761010	15.0%	3	JAE	Y-SEKI			MAP M.KASAI	
	780015	762061	FUSION REACTOR							
			O: NEUTRON MULTIPLICATION CALCULATIONS.							
11 004	BERYLLIUM 009	NEUTRON	801110							
00	760401	761010	15.0%	2	JAE	Y-SEKI				
	780016	762233	FUSION REACTOR							
			O: NEUTRON TRANSPORT CALCULATIONS.							
12 004	BERYLLIUM 009	NEUTRON	801110							
00	760401	761010	15.0%	3	JAE	Y-SEKI				
	780017	762062	FUSION REACTOR							
			O: NEUTRON TRANSPORT CALCULATIONS.							
13 006	CARBON 012	NEUTRON	801110							
00	760401	761010	15.0%	2	JAE	Y-SEKI				
	780019	762064	FUSION REACTOR							
			O: INELASTICALLY SCATTERED NEUTRON SPECTRA REQUIRED WITH INCIDENT ENERGY STEPS 0.5 MEV.							
			O: NEUTRON TRANSPORT CALCULATIONS.							
14 013	ALUMINIUM 027	NEUTRON	801110							
00	760401	761010	15.0%	3	MAP	M.KASAI				
	780031	762074	FUSION REACTOR							
			O: GAMMA-RAY HEATING CALCULATIONS.							
15 013	ALUMINIUM 027	NEUTRON	801110							
00	760401	761010	15.0%	3	MAP	M.KASAI				
	780033	762070	FUSION REACTOR							
			O: POTENTIAL CONSTITUENT FOR STRUCTURAL MATERIAL. NEUTRON MULTIPLICATION CALCULATIONS.							

** REQUESTS WITHDRAWN FROM WRENDA. **

16 013 ALUMINIUM 027 NEUTRON N,P
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780034 762071 FUSION REACTOR
 O: HYDROGEN ACCUMULATION CALCULATIONS.

17 018 ARGON 036 NEUTRON N,P
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.NISIMURA
 780038 762177 FISSION REACTOR
 O: FOR FBR SHIELDING CALCULATIONS. FOR FBR SAFETY ANALYSIS.

18 020 CALCIUM CAPTURE CROSS SECTION
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 15.0% 3 JAE Y.SEKI
 780043 762077 FUSION REACTOR
 O: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: INCLUDED IN CONCRETE. SHIELDING DESIGN AND GAMMA-RAY HEATING CALCULATION.

19 022 TITANIUM INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780045 762079 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. NEUTRON TRANSPORT CALCULATIONS.

20 022 TITANIUM N,ZN
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780047 762080 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. NEUTRON MULTIPLICATION CALCULATIONS.

21 022 TITANIUM N,P
 00 760401 761010 801110
 UP TO 15.00 MEV 15.0% 3 MAP M.KASAI
 780048 762081 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. HYDROGEN ACCUMULATION CALCULATIONS.

22 023 VANADIUM INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 10.0% 2 MAP M.KASAI
 780050 762084 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. NEUTRON TRANSPORT CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

23 023 VANADIUM NEUTRON 801110 CAPTURE CROSS SECTION
 00 760401 761010 15.00 MEV 10.0% 2 MAP K.IOKI
 0.25-1 EV FUSION REACTOR
 780051 762088 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. GAMMA-RAY HEATING CALCULATIONS.

24 023 VANADIUM NEUTRON N,P 801110
 00 760401 761010 15.00 MEV 10.0% 2 MAP M.KASAI
 780054 762086 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. HYDROGEN ACCUMULATION CALCULATIONS.

25 023 VANADIUM NEUTRON N,ALPHA 801110
 00 760401 761010 15.00 MEV 10.0% 2 MAP M.KASAI
 780055 762087 FUSION REACTOR
 O: POTENTIAL CONSTITUENT OF STRUCTURAL MATERIAL. HELIUM ACCUMULATION AND NEUTRON TRANSPORT CALCULATIONS.

26 023 VANADIUM 050 NEUTRON N,2N 801110
 00 760401 761010 15.00 MEV 10.0% 3 MAP M.KASAI
 780056 762091 FUSION REACTOR
 O: TRANSMUTATION CALCULATIONS.

27 023 VANADIUM 050 NEUTRON N,ALPHA 801110
 00 760401 761010 15.00 MEV 10.0% 3 MAP K.IOKI
 780057 762092 FUSION REACTOR
 O: TRANSMUTATION CALCULATIONS.

28 024 CHROMIUM INELASTIC CROSS SECTION
 00 760401 761010 801110
 780058 762093 UP TO 15.00 MEV 15.0% 2 JAE Y.SEKI
 FUSION REACTOR
 O: INELASTIC GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.

29 024 CHROMIUM 052 NEUTRON N,2N 801110
 00 760401 761010 15.00 MEV 15.0% 3 MAP M.KASAI
 780063 762098 FUSION REACTOR
 O: TRANSMUTATION CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

30 026 IRON
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 761010 761010
 0.25-1 EV 15.00 MEV 15.0% 2 JAE Y. SEKI
 780065 762100 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON TRANSPORT AND GAMMA-RAY HEATING CALCULATIONS.

31 026 IRON 058
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 761010 761010
 0.25-1 EV 15.00 MEV 20.0% 2 NIG M. KAWAI
 780070 762179 FISSION REACTOR
 O: FOR RADIATION SHIELDING TO 1.2916 MEV GAMMA-RAY FROM IRON-59 IN CORROSION PRODUCTS.

32 027 COBALT 059
 00 710501 NEUTRON 801110 CAPTURE CROSS SECTION
 711010 711010
 UP TO 10.00 MEV 2 NIG M. KAWAI
 780071 712028 FISSION REACTOR
 A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
 O: FOR FUEL CASK DESIGN AND CONTROL ROD DESIGN.

33 028 NICKEL
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 761010 761010
 0.25-1 EV 15.00 MEV 15.0% 2 JAE Y. SEKI
 780073 762110 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING CALCULATIONS.

34 028 NICKEL N,T
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 761010 761010
 UP TO 15.00 MEV 15.0% 3 MAP M. KASAI
 780077 762109 FUSION REACTOR
 O: TRANSMUTATION CALCULATIONS.

35 029 COPPER
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 761010 761010
 0.25-1 EV 15.00 MEV 15.0% 2 JAE Y. SEKI
 780079 762114 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING IN MAGNETS.

36 029 COPPER
 00 760401 NEUTRON 801110 PHOTON PRODUCTION CROSS SECTION IN INELASTIC SCAT
 761010 761010
 UP TO 15.00 MEV 15.0% 2 JAE Y. SEKI
 780080 762112 FUSION REACTOR
 Q: GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: GAMMA-RAY HEATING IN MAGNETS.

** REQUESTS WITHDRAWN FROM WRENDA. **

37 041 NIOBIUM 092	NEUTRON	801110	N,ALPHA
00 760401	761010		
	UP TO 15.00 MEV	30.0%	3 MAP K.IOKI
780088 762115	FUSION REACTOR		
	Q: TRANSMUTATION CALCULATIONS.		
38 041 NIOBIUM 093	NEUTRON	801110	CAPTURE CROSS SECTION
00 760401	761010		
	0.25-1 EV	15.0%	2 JAE Y.SEKI
780090 762122	FUSION REACTOR		
	Q: GAMMA-RAY SPECTRA ALSO REQUIRED.		
	Q: GAMMA-RAY HEATING CALCULATIONS.		
39 041 NIOBIUM 093	NEUTRON	801110	CAPTURE CROSS SECTION
00 760401	761010		
	0.25-1 EV	15.0%	3 MAP M.KASAI
780091 762123	FUSION REACTOR		
	Q: CAPTURE CROSS SECTION TO NB-94M IS REQUIRED.		
	Q: TRANSMUTATION CALCULATIONS.		
40 041 NIOBIUM 093	NEUTRON	801110	N,2N
00 760401	761010		
	UP TO 15.00 MEV	10.0%	2 MAP M.KASAI
780093 762118	FUSION REACTOR		
	Q: NEUTRON MULTIPLICATION CALCULATIONS.		
41 041 NIOBIUM 093	NEUTRON	801110	N,ALPHA
00 760401	761010		
	UP TO 15.00 MEV	15.0%	2 MAP M.KASAI
780095 762120	FUSION REACTOR		
	Q: HELIUM ACCUMULATION CALCULATIONS.		
42 041 NIOBIUM 094	NEUTRON	801110	CAPTURE CROSS SECTION
00 760401	761010		
	0.25-1 EV	15.0%	3 MAP M.KASAI
780097 762125	FUSION REACTOR		
	Q: TRANSMUTATION CALCULATIONS.		
43 042 MOLYBDENUM	NEUTRON	801110	ELASTIC CROSS SECTION
00 760401	761010		
	1.00 MEV	15.0%	2 JAE Y.SEKI
780098 762235	FUSION REACTOR		
	Q: CROSS SECTIONS FOR EACH ISOTOPE ARE REQUESTED.		
	Q: NEUTRON TRANSPORT CALCULATIONS.		

MAP K.IOKI

** REQUESTS WITHDRAWN FROM WRENDA. **

44 042 MOLYBDENUM INELASTIC CROSS SECTION
 00 760401 NEUTRON 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y.SEKI
 780100 762236 FUSION REACTOR
 Q: CROSS SECTIONS FOR EACH ISOTOPE ARE REQUESTED. GAMMA-RAY SPECTRA ALSO REQUIRED.
 O: NEUTRON TRANSPORT CALCULATIONS.

45 042 MOLYBDENUM ENERGY DIFFERENTIAL INELASTIC CROSS SECTION
 00 760401 NEUTRON 761010 801110
 UP TO 15.00 MEV 15.0% 2 JAE Y.SEKI
 780101 762127 FUSION REACTOR
 Q: CROSS SECTIONS FOR EACH ISOTOPE ARE ALSO REQUESTED. GAMMA-RAY SPECTRA ALSO
 REQUIRED.
 O: NEUTRON TRANSPORT CALCULATIONS.

46 042 MOLYBDENUM N,2N
 00 760401 NEUTRON 761010 801110
 UP TO 15.00 MEV 10.0% 2 JAE Y.SEKI
 780103 762128 FUSION REACTOR
 Q: CROSS SECTIONS FOR EACH ISOTOPE ARE ALSO REQUESTED.
 O: NEUTRON TRANSPORT CALCULATIONS.

47 042 MOLYBDENUM 092 CAPTURE CROSS SECTION
 00 760401 NEUTRON 761010 801110
 0.25-1 EV 15.00 MEV 10.0% 2 MAP K.IOKI
 780106 762132 FUSION REACTOR
 O: NEUTRON BALANCE AND TRANSMUTATION CALCULATIONS.

48 042 MOLYBDENUM 092 CAPTURE CROSS SECTION
 00 760401 NEUTRON 761010 801110
 0.25-1 EV 15.00 MEV 20.0% 2 MAP T.HOJUYAMA
 780107 762181 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

49 042 MOLYBDENUM 094 TOTAL CROSS SECTION
 00 760401 NEUTRON 761010 801110
 0.25-1 EV 15.00 MEV 10.0% 2 MAP T.HOJUYAMA
 780109 762183 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

50 042 MOLYBDENUM 094 CAPTURE CROSS SECTION
 00 760401 NEUTRON 761010 801110
 0.25-1 EV 100.00 KEV 20.0% 2 MAP T.HOJUYAMA
 780110 762184 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

51 042 MOLYBDENUM 094 NEUTRON N,P
 00 760401 761010 801110
 UP TO 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780112 762186 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

52 042 MOLYBDENUM 094 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780113 762187 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

53 042 MOLYBDENUM 095 NEUTRON TOTAL CROSS SECTION
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 10.0% 2 MAP T.HOJUYAMA
 780114 762188 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

54 042 MOLYBDENUM 095 NEUTRON INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 20.0% 2 MAP T.HOJUYAMA
 780115 762189 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

55 042 MOLYBDENUM 095 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 20.0% 2 MAP T.HOJUYAMA
 780116 762191 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

56 042 MOLYBDENUM 096 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 20.0% 2 MAP T.HOJUYAMA
 780117 762193 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

57 042 MOLYBDENUM 096 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780118 762195 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

58 042 MOLYBDENUM 097 NEUTRON INELASTIC CROSS SECTION
 00 760401 761010 801110
 UP TO 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780119 762197 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

59 042 MOLYBDENUM 097 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780120 762198 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

60 042 MOLYBDENUM 097 NEUTRON TOTAL CROSS SECTION
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 10.0% 2 MAP T.HOJUYAMA
 781118 762196 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

61 042 MOLYBDENUM 098 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780121 762200 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

62 042 MOLYBDENUM 100 NEUTRON N,P
 00 760401 761010 801110
 UP TO 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780122 762203 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

63 042 MOLYBDENUM 100 NEUTRON N,ALPHA
 00 760401 761010 801110
 0.25-1 EV 15.00 MEV 30.0% 2 MAP T.HOJUYAMA
 780123 762204 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

64 044 RUTHENIUM 101 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010 801110 SAE H.MATSUNOBU
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA
 780125 752008 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT.

65 045 RHODIUM 106 GAMMA RAY YIELD
 00 720401 721010 801110
 1.0% 2 JAE K.TASAKA
 780128 722004 SAFEGUARDS
 O: YIELD PER DISINTEGRATION OF 512, 616, 622 AND 1050 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

** REQUESTS WITHDRAWN FROM WRENDA. **

66 046 PALLADIUM 105 CAPTURE CROSS SECTION
 00 750401 751010 801110 SAE H. MATSUNOBU
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA
 780129 752011 FISSION REACTOR
 Q: EVALUATION ALSO REQUIRED.
 O: FOR FAST REACTOR BURNUP CALCULATIONS. DATA BETWEEN 160 EV TO A FEW KEV ARE LACKING. NO EXPERIMENTAL DATA ABOVE 100 EV.

67 047 SILVER 109 CAPTURE CROSS SECTION
 00 750401 751010 801110 SAE H. MATSUNOBU
 100.00 EV 500.00 KEV 10.0% 2 NIG S.IIJIMA
 780131 752013 FISSION REACTOR
 A: 10.0 TO 20.0 %.
 O: FOR FAST REACTOR CALCULATIONS. DISCREPANT SERIES OF DATA IN KEV REGION. DATA ARE ALSO AVAILABLE FOR AG-107 AND NATURAL AG.

68 051 ANTIMONY 121 CAPTURE CROSS SECTION
 00 760401 761010 801110 SAE H. MATSUNOBU
 0.25-1 EV 15.00 MEV 15.0% 2 MAP T.HOJUYAMA
 780133 762205 FISSION REACTOR
 O: FOR NEUTRON SOURCE CALCULATION.

69 051 ANTIMONY 123 CAPTURE CROSS SECTION
 00 760401 761010 801110 SAE H. MATSUNOBU
 0.25-1 EV 15.00 MEV 15.0% 2 MAP T.HOJUYAMA
 780134 762206 FISSION REACTOR
 O: FOR NEUTRON SOURCE CALCULATION.

70 051 ANTIMONY 125 GAMMA RAY YIELD
 00 720401 721010 801110 SAE H. MATSUNOBU
 780136 722006 SAFEGUARDS 1.0% 2 JAE K.TASAKA
 Q: YIELD PER DISINTEGRATION OF 176,381,428,464,601,607,636, AND 672 KEV GAMMA-RAYS REQUIRED. (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

71 054 XENON 131 RESONANCE PARAMETERS
 00 780808 781212 801110 SAE H. MATSUNOBU
 100.00 EV 500.00 KEV 20.0% 2 NIG S.IIJIMA
 780143 792069 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. NO KEV DATA AT ALL. EVALUATIONS ARE VERY DISCREPANT. EVALUATIONS ARE ALSO REQUIRED.

72 055 CESIUM 133 CAPTURE CROSS SECTION
 00 720401 721010 801110 SAE H. MATSUNOBU
 0.25-1 EV 14.00 MEV 3.0% 1 JAE H.OKASHITA
 780145 722021 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

** REQUESTS WITHDRAWN FROM WRENDA. **

73 055 CESIUM 133 NEUTRON CAPTURE CROSS SECTION
 00 750401 751010 801110
 100.00 EV 500.00 KEV 10.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780146 752015 FISSION REACTOR
 O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE ALSO REQUIRED.
 O: SYSTEMATIC DISCREPANCY BETWEEN THE KEV DATA SETS.

74 055 CESIUM 134 GAMMA RAY YIELD
 00 720401 721010 801110
 1.0% 2 JAE H.OKASHITA
 780147 722007 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 563,569,796,802 AND 1365 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

75 056 BARIUM 133 SPECIAL QUANTITY
 00 760401 761010 801110
 3.0% 3 TIT K.HISATAKE
 780151 762207 FISSION REACTOR
 Q: RELATIVE YIELDS OF 53.2,79.6,81.0,160.6,276.4,302.0 AND 356.0 KEV GAMMA-RAYS.
 O: INTENSITY STANDARDS FOR GAMMA-RAY MEASUREMENTS.

76 057 LANTHANUM 140 GAMMA RAY YIELD
 00 720401 721010 801110
 1.0% 2 JAE K.TASAKA
 780152 722009 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 328.8,487.0,815.8 AND 2522.0 KEV GAMMA-RAYS
 REQUIRED. (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

77 058 CERIUM 144 GAMMA RAY YIELD
 00 720401 721010 801110
 1.0% 2 JAE H.OKASHITA
 780153 722011 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 133.5 KEV GAMMA-RAY REQUIRED. (FOLLOWING BETA DECAY
 EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

78 059 PRASEODYMIUM 141 NEUTRON CAPTURE CROSS SECTION
 00 720401 721010 801110
 0.25-1 EV 14.00 MEV 3.0% 1 JAE H.OKASHITA
 780154 722023 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM DESTRUCTIVE MEASUREMENT.

** REQUESTS WITHDRAWN FROM WRENDA. **

79 059 PRASEODYMIUM 144
 00 720401 721010 801110 GAMMA RAY YIELD
 1.0% 1 JAE H.OKASHITA
 780155 722012 SAFEGUARDS
 Q: YIELD PER DISINTEGRATION OF 696.5-1498.1 AND 2185.7 KEV GAMMA-RAYS REQUIRED.
 (FOLLOWING BETA DECAY EVENT).
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

80 060 NEODYMIUM 143
 00 750401 751010 801110 CAPTURE CROSS SECTION
 100.00 EV 400.00 KEV 20.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780156 752017 FISSION REACTOR
 Q: DESIRED WITH LOWER PRIORITY FOR WIDER ENERGY RANGE.
 O: FOR FAST REACTOR CALCULATIONS.

81 060 NEODYMIUM 145
 00 750401 751010 801110 CAPTURE CROSS SECTION
 100.00 EV 400.00 KEV 20.0% 1 NIG S.IIJIMA SAE H.MATSUNOBU
 780157 752018 FISSION REACTOR
 Q: DESIRED WITH LOWER PRIORITY FOR WIDER ENERGY RANGE.
 O: FOR FAST REACTOR CALCULATIONS. NO EXPERIMENTAL DATA FROM 100 EV TO 400 KEV.

82 063 EUROPIUM 153
 00 720401 721010 801110 CAPTURE CROSS SECTION
 0.25-1 EV 14.00 MEV 5.0% 1 JAE H.OKASHITA
 780161 722038 SAFEGUARDS
 Q: RESONANCE INTEGRAL ALSO WANTED.
 O: FOR BURNUP CALCULATION FROM NON-DESTRUCTIVE MEASUREMENT.

83 092 URANIUM 235
 00 760401 761010 801110 FISSION PRODUCT MASS YIELD SPECTRUM
 4.00 MEV 14.00 MEV 10.0% 3 KJU R.MIKI
 780171 762034 SAFEGUARDS
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD ROENTGEN*NUCLEUS OR RELATIVE TO U-238 OR OTHER PHOTO ACTIVATION
 YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF U.

84 092 URANIUM 235
 00 760401 761010 801110 FISSION PRODUCT MASS YIELD SPECTRUM
 4.00 MEV 14.00 MEV 5.0% 3 KJU R.MIKI
 780172 762042 SAFEGUARDS
 Q: CUMULATIVE YIELDS OF HIGH FISSION YIELD ISOTOPES.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF NUCLEAR MATERIALS.

** REQUESTS WITHDRAWN FROM WRENDA. **

85 092 URANIUM 238 GAMMA 801110 FISSIION PRODUCT MASS YIELD SPECTRUM
 00 760401 761010 10.0% 3 KKU R.MIKI
 4.00 MEV 14.00 MEV
 780177 762035 SAFEGUARDS
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD/ROENTGEN*NUCLEUS OR RELATIVE TO OTHER PHOTOACTIVATION YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) SUFFICIENT THICKNESS TO STOP ELECTRONS.
 O: NON-DESTRUCTIVE ASSAY OF U.

86 092 URANIUM 238 GAMMA 801110 FISSIION PRODUCT MASS YIELD SPECTRUM
 00 760401 761010 5.0% 3 KKU R.MIKI
 4.00 MEV 14.00 MEV
 780178 762043 SAFEGUARDS
 Q: CUMULATIVE YIELDS OF HIGH FISSION YIELD ISOTOPES.
 O: NON-DESTRUCTIVE ASSAY OF NUCLEAR MATERIALS.

87 093 NEPTUNIUM 239 NEUTRON 801110 CAPTURE CROSS SECTION
 00 760401 761010 10.0% 3 NFI M.YADA
 0.25-1 EV 10.00 MEV
 780185 762025 SAFEGUARDS
 O: FOR HIGHER BURNUP CALCULATIONS.

88 093 NEPTUNIUM 239 NEUTRON 801110 FISSIION CROSS SECTION
 00 760401 761010 25.0% 3 NFI M.YADA
 0.25-1 EV 10.00 MEV
 780187 762032 SAFEGUARDS
 Q: THE VALUE OF NU ALSO WANTED.
 A: 10 PER CENT ACCURACY IS DESIRABLE FOR APPLICATION.
 O: NO EXPERIMENTAL DATA. BURNUP ANALYSIS OF FAST BREEDER REACTORS.

89 094 PLUTONIUM 238 GAMMA 801110 FISSIION PRODUCT MASS YIELD SPECTRUM
 00 760401 761010 10.0% 3 KKU R.MIKI
 4.00 MEV 14.00 MEV
 780190 762036 SAFEGUARDS
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF
 SUFFICIENT THICKNESS TO STOP ELECTRONS . NO EXPERIMENTAL DATA.
 O: NON-DESTRUCTIVE ASSAY OF U.

90 094 PLUTONIUM 239 SPONTANEOUS 801110 FISSIION HALF LIFE
 01 760401 761010 1.0% 2 PNC S.SUZUKI
 780194 762015 SAFEGUARDS
 O: DETECTION OF PU BY NEUTRON COINCIDENCE METHOD.

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** REQUESTS WITHDRAWN FROM WRENDA.

91 094 PLUTONIUM 239 GAMMA 761010 801110
 00 760401 14.00 MEV 10.0% 3 KKU R.MIKI
 780196 762037
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD/ROENTGEN*NUCLEUS OR RELATIVE TO U-238 OR OTHER PHOTOACTIVATION
 YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF PU.

FISSION PRODUCT MASS YIELD SPECTRUM

92 094 PLUTONIUM 239 GAMMA 761010 801110
 00 760401 14.00 MEV 5.0% 3 KKU R.MIKI
 780197 762045
 Q: CUMULATIVE YIELDS OF HIGH FISSION YIELD ISOTOPES.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF NUCLEAR MATERIALS.

FISSION PRODUCT MASS YIELD SPECTRUM

93 094 PLUTONIUM 240 GAMMA 761010 801110
 00 760401 14.00 MEV 10.0% 3 KKU R.MIKI
 780207 762038
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD/ROENTGEN*NUCLEUS OR RELATIVE TO U-238 OR OTHER PHOTOACTIVATION
 YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NO EXPERIMENTAL DATA. NON-DESTRUCTIVE ASSAY OF PU.

FISSION PRODUCT MASS YIELD SPECTRUM

94 094 PLUTONIUM 240 NEUTRON 801110
 00 760401 500.00 KEV 10.0% 1 MAP Y.SEKI
 780208 762214
 Q: FOR EVALUATION OF BREEDING RATIO AND BURNUP REACTIVITY CHANGE IN FAST REACTOR
 CALCULATIONS.

CAPTURE CROSS SECTION

95 094 PLUTONIUM 241 GAMMA 761010 801110
 00 760401 14.00 MEV 10.0% 3 KKU R.MIKI
 780214 762039
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD/ROENTGEN*NUCLEUS OR RELATIVE TO U-238 OR OTHER PHOTOACTIVATION
 YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF PU.

FISSION PRODUCT MASS YIELD SPECTRUM

96 094 PLUTONIUM 241 NEUTRON 801110
 00 760401 100.00 KEV 10.0% 1 MAP T.HOJUYAMA
 780215 762216
 Q: FOR FAST REACTOR CALCULATIONS.

TOTAL CROSS SECTION

** REQUESTS WITHDRAWN FROM WRENDA. **

97 094 PLUTONIUM 241 NEUTRON 801110 CAPTURE CROSS SECTION
 00 760401 761010 801110 CAPTURE CROSS SECTION
 0.10 EV 15.00 MEV 8.0% 1 MAP T.HOJUYAMA
 780216 762217 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

98 094 PLUTONIUM 241 NEUTRON N,2N 801110
 00 760401 761010 801110
 UP TO 15.00 MEV 20.0% 2 MAP T.HOJUYAMA
 780217 762221 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

99 094 PLUTONIUM 241 NEUTRON CAPTURE TO FISSION RATIO(ALPHA)
 00 760401 761010 801110
 0.10 EV 15.00 MEV 8.0% 1 MAP T.HOJUYAMA
 780219 762219 FISSION REACTOR
 O: FOR FAST REACTOR CALCULATIONS.

100 094 PLUTONIUM 241 NEUTRON RESONANCE PARAMETERS
 00 760401 761010 801110
 0.20 EV 200.00 EV 10.0% 1 MAP T.HOJUYAMA
 780221 762222 FISSION REACTOR
 A: 10 PER CENT IN FISSION WIDTH.
 O: FOR FAST REACTOR CALCULATIONS.

101 094 PLUTONIUM 242 NEUTRON CAPTURE CROSS SECTION
 00 760401 761010 801110
 1.00 KEV 15.00 MEV 10.0% 2 MAP T.HOJUYAMA
 780225 762223 FISSION REACTOR
 O: FOR SHIELDING OF SPENT FUEL.

102 094 PLUTONIUM 242 NEUTRON FISSION CROSS SECTION
 00 760401 761010 801110
 1.00 KEV 15.00 MEV 10.0% 2 MAP T.HOJUYAMA
 780226 762224 FISSION REACTOR
 O: FOR SHIELDING OF SPENT FUEL.

103 095 AMERICIUM 241 GAMMA FISSION PRODUCT MASS YIELD SPECTRUM
 00 760401 761010 801110
 4.00 MEV 14.00 MEV 10.0% 3 KGU R.MIKI
 780228 762040 SAFEGUARDS
 Q: TOTAL FISSION YIELD PRODUCED BY BREMSSTRAHLUNG REQUIRED. YIELD MAY BE IN THE
 UNIT OF YIELD/ROENTGEN*NUCLEUS OR RELATIVE TO U-238 OR OTHER PHOTOACTIVATION
 YIELDS.
 O: BREMSSTRAHLUNG CONVERTER (PREFERABLY TA) OF SUFFICIENT THICKNESS TO STOP
 ELECTRONS. NON-DESTRUCTIVE ASSAY OF PU.

** REQUESTS WITHDRAWN FROM WRENDA. **

104 095 AMERICIUM 241 NEUTRON 751010 801110 CAPTURE CROSS SECTION
 00 750401 20.00 EV 1 PNC R.YUMOTO SAE H.MATSUNOBU
 1.00-2 EV MAP T.HOJUYAMA
 780229 752032 FISSION REACTOR
 Q: ENERGY DEPENDENCE WANTED.
 A: ACCURACY REQUIRED 5 TO 10 PERCENT.
 O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS- URANIUM NUCLIDE BUILD-UP IN
 SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

105 095 AMERICIUM 242 NEUTRON 761010 801110 CAPTURE CROSS SECTION
 00 720401 14.00 MEV 2 JAE Y.NAITO
 0.25-1 EV SAFEGUARDS
 780232 722045 A: ACCURACY REQUIRED AT THERMAL IS 10 PER CENT, 20 PER CENT ABOVE.
 O: FOR BURNUP CALCULATION OF A PU LOADED THERMAL REACTOR.

106 095 AMERICIUM 242 NEUTRON 761010 801110 CAPTURE CROSS SECTION
 00 760401 10.00 MEV 3 NFI M.YADA
 0.25-1 EV SAFEGUARDS
 780233 762026 O: NO MEASUREMENTS OF CAPTURE CROSS SECTION BUT A FEW DATA OF FISSION CROSS SECTION
 O: ARE AVAILABLE. FOR HIGHER BURN- UP CALCULATIONS.

107 095 AMERICIUM 242 NEUTRON 761010 801110 FISSION CROSS SECTION
 00 760401 10.00 MEV 5.0% 3 NFI M.YADA
 0.25-1 EV SAFEGUARDS
 780235 762033 Q: THE VALUE OF NU ALSO WANTED.
 A: 10 PER CENT ACCURACY IS DESIRABLE FOR APPLICATION.
 O: NO EXPERIMENTAL DATA. THE VALUES OF FISSION CROSS SECTION AND NU ARE KNOWN
 WITHIN AN ERROR OF 5 PER CENT AT 25.3 MV. BURNUP ANALYSIS OF FAST BREEDER
 REACTORS.

108 095 AMERICIUM 243 NEUTRON 761010 801110 FISSION CROSS SECTION
 00 760401 4.00 MEV 20.0% 1 MAP T.HOJUYAMA
 0.25-1 EV FISSION REACTOR
 780237 762227 O: FOR FAST REACTOR CALCULATIONS.

109 096 CURIUM 242 NEUTRON 761010 801110 CAPTURE CROSS SECTION
 00 760401 10.00 MEV 20.0% 3 NFI M.YADA
 0.25-1 EV SAFEGUARDS
 780239 762029 A: 10 PER CENT ACCURACY FOR 25.3 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY.
 O: FOR HIGHER BURNUP CALCULATIONS.

** REQUESTS WITHDRAWN FROM WRENDA. **

110 096 CURIUM 243
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 0.25-1 EV 10.00 MEV 20.0% 3 NFI M.YADA
 780242 762030 SAFEGUARDS
 A: 10 PER CENT ACCURACY FOR 25.3 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY REGION.
 O: FOR HIGHER BURNUP CALCULATIONS.

111 096 CURIUM 244
 00 760401 NEUTRON 801110 CAPTURE CROSS SECTION
 0.25-1 EV 10.00 MEV 20.0% 3 NFI M.YADA
 780244 762031 SAFEGUARDS
 A: 10 PER CENT ACCURACY FOR 25 MV, 20 PER CENT ACCURACY FOR HIGHER ENERGY REGION.
 O: FOR HIGHER BURNUP CALCULATIONS.

5. References

- 1) Muir D.W.: INDC(SEC)-73/URSF, "World Request List for Nuclear Data, WREND A79/80", (1979).
- 2) Igarasi S. et al.: JAERI-M 8062, "Japanese List of Requests for Nuclear Data", (1979).
- 3) Igarasi S. and Narita T.: to be published.

Appendix. Codes of Laboratories.

JAE	Japan Atomic Energy Research Institute
KKU	Kinki University Atomic Energy Research Institute
KTO	Kyoto University
KYU	Kyushu University
MAP	Mitsubishi Atomic Power Industries, Inc.
NAG	Nagoya University
NFI	Nuclear Fuel Industries
NIG	Nippon Atomic Industry Group Co., Ltd.
NIR	National Institute of Radiological Sciences
OSA	Osaka University
PNC	Power Reactor and Nuclear Fuel Development Corporation
SAE	Sumitomo Atomic Energy Industries, Ltd.
TIT	Tokyo Institute of Technology
TKO	Tokyo University
TOH	Tohoku University
TOS	Toshiba Research and Development Center