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JAPANESE REQUEST LIST OF NUCLEAR DATA

February 1992

Compiled by
(Eds.) Yutaka NAKAJIMA and Tokio FUKAHORI
and
WRENDA Group of Japanese Nuclear Data Committee

日 本 原 子 力 研 究 所
Japan Atomic Energy Research Institute

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Japanese Request List of Nuclear Data

Compiled by

(Eds.) Yutaka NAKAJIMA and Tokio FUKAHORI

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WRENDA Group of Japanese Nuclear Data Committee*

(Received January 28, 1992)

Requests for nuclear data from Japan are summarized. These will be registered in the World Request List for Nuclear Data WRENDA 91/92. The list contains 58 requests(fission: 37, fusion: 21) maintained from the previous list and 182 new requests(fission: 78, fusion: 8, other: 96). Most of the new requests are related to the OMEGA project (incineration of long lived actinides by actinide burner reactors or high intensity-high energy proton accelerators). Lists of 20 withdrawn requests(fission: 12, fusion: 4, safeguard: 4) are also contained in this report.

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Keywords: Nuclear Data, Data Request, Fission Reactor, Fusion Reactor, OMEGA Project, Actinide, Proton Linac, WRENDA

核データに対する日本からの要求リスト

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中島　豊・深堀　智生（編）

（1992年1月28日受理）

1991年末時点での核データに対する日本国内からの要求リストをまとめたものである。これらはIAEAから発行されるWorld Request List for Nuclear Data（WRENDA）91／92に登録される予定になっている。要求の内容は，前回（WRENDA 87／88）から引続き要求したもの58件（核分裂炉関係37件，核融合炉関係21件），新たな要求182件（核分裂炉関係78件，核融合炉関係8件，その他96件）である。新たな要求の大部分はオメガプロジェクト（アクチナイド専焼炉または大強度高エネルギー陽子加速器による放射能消滅計画）からの要求で165件を占めている。また前回リストから取り下げた要求は20件（核分裂炉関係12件，核融合炉関係4件，保証措置関係4件）であり，その内容もこの報告書に含めてある。

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1. Introduction

This request list summarizes the data needs which were submitted to be registered in the World Request List for Nuclear Data WRENDA 91/92. The WRENDA Group of Japanese Nuclear Data Committee has been asked to update requests in WRENDA 87/88[1)] for the 91/92 edition. We convened twice in September and December 1991 to screen new requests and to examine the requests in WRENDA 87/88 from Japan.

Beforehand we sent the listing of the Japanese requests in WREMDA 87/88 to requesters and asked that they considered whether or not their requests should be still maintained in the WRENDA lists. The group reviewed answers from the requesters, judged each request should be withdrawn from the request lists, or maintained in the lists. The group decided 58 requests were still worthwhile to be maintained in the request list. In some cases, the requests were revised by the Group according to the data status and needs. The Group decided that 12 requests for fission nuclear data, 4 for fusion nuclear data and 4 for safeguard nuclear data should be withdrawn.

There are several hundred new requests for registration to WRENDA 91/92. However more than half of them are out of the scope of the WRENDA or related to data whose accuracy is uncertain because their evaluation is in progress at Nuclear Data Center, JAERI. The Group judged that they should not be submitted to WRENDA 91/92. Eight requests for fusion nuclear data and nine requests for light water reactor and Th cycle reactor data were adopted after modification of some requests. Sixty nine and ninety six requests were adopted for actinide burner reactor data, and development of high intensity proton linac and radioactive waste management, respectively. In the following sections, the WRENDA lists are presented in the same format as previous publications[2)].

2. List of Requests Submitted to WRENDA 91/92

In this section, Japanese requests submitted to WRENDA 91/92 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, symbol of elements, mass number, incident particle, and physical quantity. 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 91/92, and date of withdrawal from WRENDA(for only withdrawn requests). Third line is for the energy region, required accuracy, priority, and requestor's name. 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). These structures are made so as to reproduce the WRENDA lists.

```
1 003 LITHIUM 006       NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  01  80/11/10    91/12/02    80/12/25
        2.00 MEV    15.00 MEV     5.0%   1    OSA   A.TAKAHASHI         HIT   K.MAKI
      800003  832035   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.

2 003 LITHIUM 006       NEUTRON                DIFFERENTIAL ELASTIC CROSS SECTION
  00  87/07/25    91/12/12    87/08/01
       10.00 MEV    50.00 MEV    10.0%   2    JAE   S.CHIBA
      870011  872011   FUSION REACTOR
                     O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS, AND FOR
                        INTERCOMPARISON OF EXPERIMENTS.
                     Q: ANGULAR DISTRIBUTION IS ALSO WANTED.
                     O: NO DATA ABOVE 15 MEV.

3 003 LITHIUM 006       NEUTRON                ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
  00  87/07/25    91/12/12    87/08/01
       10.00 MEV    50.00 MEV    10.0%   2    JAE   S.CHIBA
      870012  872012   FUSION REACTOR
                     O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS,AND FOR INTERCOMPARISON
                        OF EXPERIMENTS.
                     Q: ANGULAR DISTRIBUTION IS ALSO WANTED.
                     O: NO DATA ABOVE 15 MEV.

4 003 LITHIUM 006       NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  87/07/25    91/12/12    87/08/01
       10.00 MEV    50.00 MEV    10.0%   1    JAE   S.CHIBA
      870016  872016   FUSION REACTOR
                     O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS,AND FOR INTERCOMPARISON
                        OF EXPERIMENTS.
                     O: NO DATA ABOVE 15 MEV.

5 003 LITHIUM 007       NEUTRON                N,NT
  01  76/04/01    87/07/25    76/10/10
        4.00 MEV    12.00 MEV     5.0%   1    OSA   A.TAKAHASHI
      780013  832036   FUSION REACTOR
                     Q: NEUTRON SPECTRA WITH ACCURACY 15 PER CENT ALSO REQUIRED
                     O: TRITIUM BREEDING AND ENERGY DEPOSITION CALCULATION. MET FOR 13 TO 15 MEV.

6 003 LITHIUM 007       NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  01  80/11/10    91/12/03    80/12/25
        2.00 MEV    15.00 MEV     5.0%   1    OSA   A.TAKAHASHI
      800004  832037   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. EMISSION SPECTRUM IN LOW SECONDARY ENERGY
                        REGION. NOT MET FOR 7 TO 12 MEV.
                     A: HIGHER ACCURACY IS REQUIRED FROM DESIGN STUDY.
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 7 003 LITHIUM 007        NEUTRON                ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01
          6.00 MEV    15.00 MEV    10.0%   1    JAE   K.SHIBATA           JAE   S.CHIBA
       870010  872010   FUSION REACTOR
                      O: TO ESTIMATE NEUTRON SPECTRA IN BLANKET PRECISELY.
                      Q: CROSS SECTION FOR THE SECOND LEVEL IS WANTED.
                      O: LARGE DISCREPANCY BETWEEN TNL AND OTHER DATA.

 8 003 LITHIUM 007        NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  87/07/25    91/12/12    87/08/01
         10.00 MEV    50.00 MEV    10.0%   2    JAE   S.CHIBA
       870013  872013   FUSION REACTOR
                      O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS,AND FOR INTERCOMPARISON
                         OF EXPERIMENTS.
                      O: NO DATA ABOVE 15 MEV.

 9 003 LITHIUM 007        NEUTRON                ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01
         10.00 MEV    50.00 MEV    10.0%   2    JAE   S.CHIBA
       870014  872014   FUSION REACTOR
                      O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS,AND FOR INTERCOMPARISON
                         OF EXPERIMENTS.
                      Q: ANGULAR DISTRIBUTION IS ALSO WANTED.
                      O: NO DATA ABOVE 15 MEV.

10 003 LITHIUM 007        NEUTRON                DIFFERENTIAL ELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01
         10.00 MEV    50.00 MEV    10.0%   2    JAE   S.CHIBA
       870015  872015   FUSION REACTOR
                      O: FOR COMPARISON BETWEEN EXPERIMENTS AND CALCULATIONS,AND FOR INTERCOMPARISON
                         OF EXPERIMENTS.
                      Q: ANGULAR DISTRIBUTION IS ALSO WANTED.
                      O: NO DATA ABOVE 15 MEV.

11 004 BERYLLIUM 009      NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   01  80/11/10    91/12/03    80/12/25
          1.70 MEV    15.00 MEV     5.0%   1    HIT   K.MAKI              OSA   A.TAKAHASHI
       800005  832038   FUSION REACTOR
                      Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS
                         REQUIRED. (N,2N) REACTION CROSS SECTION IS ALSO REQUIRED BY A.TAKAHASHI.
                      O: BLANKET NEUTRONICS CALCULATIONS. FOR ALSO NEUTRON MULTIPLICATION
                         CALCULATIONS.
                      A: 3 % REQUIRED FOR (N,2N) CROSS SECTION. HIGHER ACCURACY IS REQUIRED FROM
                         DESIGN STUDY.

12 006 CARBON             NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14
         UP TO        20.00 MEV    10.0%   2    JAE   I.MURATA
       910019          FUSION REACTOR
                      Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                      A: ACCURACY REQUIRED 5 TO 10 %.
                      O: SHIELDING CALCULATIONS OF FUSION REACTOR.
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13 006 CARBON 013        ALPHA                  NEUTRON EMISSION CROSS SECTION
   00  78/08/08    91/12/13    78/12/12
         UP TO        10.00 MEV    20.0%   2    SAE   N.YAMANO            SAE   H.MATSUNOBU
       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.

14 007 NITROGEN          PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910099          OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

15 007 NITROGEN          PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910128          OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

16 007 NITROGEN          PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910129          OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

17 007 NITROGEN 014      PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO        15.00 MEV    20.0%   2    JAE   M.MIZUMOTO
       910091          OTHERS
                      O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

18 008 OXYGEN            NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14
         UP TO        20.00 MEV    10.0%   2    JAE   I.MURATA
       910020          FUSION REACTOR
                      Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                      A: ACCURACY REQUIRED 5 TO 10 %.
                      O: SHIELDING CALCULATIONS OF FUSION REACTOR.

19 008 OXYGEN            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910100          OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

20 008 OXYGEN            PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910127          OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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21 008 OXYGEN            PROTON                  ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910130            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

22 008 OXYGEN 016        PROTON                  NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         15.00 MEV    20.0%   2    JAE   M.MIZUMOTO
      910092            OTHERS
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

23 008 OXYGEN 017        NEUTRON                 N,ALPHA
   01  78/08/08    91/12/1B    7B/12/12
        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.

24 008 OXYGEN 017        ALPHA                   NEUTRON EMISSION CROSS SECTION
   00  78/08/08    91/12/13    78/12/12
         UP TO         10.00 MEV    20.0%   2    SAE   N.YAMANO            SAE   H.MATSUNOBU
      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 PROCESS.

25 008 OXYGEN 018        ALPHA                   NEUTRON EMISSION CROSS SECTION
   00  78/08/08    91/12/13    78/12/12
         UP TO         10.00 MEV    20.0%   2    SAE   N.YAMANO            SAE   H.MATSUNOBU
      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.

26 011 SODIUM            PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910102            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

27 011 SODIUM            PROTON                  DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910125            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

28 011 SODIUM            PROTON                  ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910132            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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29 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910162           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

30 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910164           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

31 012 MAGNESIUM         PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910103           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

32 012 MAGNESIUM         PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910124           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

33 012 MAGNESIUM         PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910133           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

34 012 MAGNESIUM         PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910151           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

35 012 MAGNESIUM         PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910154           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

36 013 ALUMINIUM         PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910104           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

37 013 ALUMINIUM         PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
            UP TO       1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910123           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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38 013 ALUMINIUM        PROTON                ACTIVATION CROSS SECTION
   DO  91/12/16    92/01/14
          UP TO        1.5D GEV    30.0%   2    JAE   M.MIZUMOTO
       910134          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

39 013 ALUMINIUM        PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910152          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

40 013 ALUMINIUM        PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910153          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

41 014 SILICON          NEUTRON               TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14
          UP TO       20.00 MEV    10.0%   2    JAE   I.MURATA
       910018          FUSION REACTOR
                    Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                    A: ACCURACY REQUIRED 5 TO 10 %.
                    O: SHIELDING CALCULATIONS OF FUSION REACTOR.

42 014 SILICON          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   DO  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910105          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

43 014 SILICON          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910122          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

44 014 SILICON          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910135          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

45 01B ARGON            PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910101          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

46 01B ARGON            PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910126          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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47 018 ARGON            PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910131           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

48 018 ARGON 040        NEUTRON               ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
   00  71/04/01    91/12/18    71/10/10
          UP TO        10.00 MEV            2    TOS   M.KAWAI
       780039  712006   FISSION REACTOR
                     A: ACCURACY REQUIRED TO BETTER THAN 20.0 PERCENT.
                     O: FOR REACTOR HAZARD CALCULATION.

49 020 CALCIUM          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910106           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

50 020 CALCIUM          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910121           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

51 020 CALCIUM          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910136           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

52 024 CHROMIUM         NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   01  82/11/20    91/12/03    82/12/25
           2.00 MEV    10.00 MEV    10.0%   2    HIT   K.MAKI
       820004  832024   FUSION REACTOR
                     O: NEUTRON TRANSPORT CALCULATIONS.

53 024 CHROMIUM         NEUTRON               TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO        15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
       910002           FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                        DISTRIBUTION.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTOR.

54 024 CHROMIUM         PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910111           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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55 024 CHROMIUM          PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910116           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

56 024 CHROMIUM          PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910141           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

57 024 CHROMIUM          PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910148           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

58 024 CHROMIUM          PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910157           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

59 024 CHROMIUM 053      PROTON                 CAPTURE CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910097           OTHERS
                     Q: MN-54 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

60 024 CHROMIUM 054      PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910093           OTHERS
                     Q: MN-54 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

61 025 MANGANESE         NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO        15.00 MEV    10.0%   1    HIT   K.MAKI
       910005           FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY SPECTRA.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS.

62 025 MANGANESE         PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910107           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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63 025 MANGANESE        PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910120          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

64 025 MANGANESE        PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910137          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

65 025 MANGANESE        PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910147          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

66 025 MANGANESE        PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910158          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

67 026 IRON             NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   01  80/11/10    91/12/03    80/12/25
           2.00 MEV    10.00 MEV     5.0%   1    OSA   A.TAKAHASHI         HIT   K.MAKI
       800007  832042   FUSION REACTOR
                    Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR INELASTIC SCATTERING AND
                       (N,2N) REACTION ARE ESPECIALLY WANTED.
                    O: NEUTRON TRANSPORT CALCULATION. NOT MET FOR LOW ENERGY PART OF EMISSION
                       SPECTRUM.

68 026 IRON             NEUTRON               TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO       15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
       910001          FUSION REACTOR
                    Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                       DISTRIBUTION.
                    O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                       MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTOR.

69 026 IRON             PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910108          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

70 026 IRON             PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910119          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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71 026 IRON              PROTON                  ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910138           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

72 026 IRON              PROTON                  FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910146           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

73 026 IRON              PROTON                  SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910159           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

74 026 IRON              PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV      1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910163           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

75 026 IRON              PROTON                  DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV      1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910165           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

76 026 IRON 056          PROTON                  CAPTURE CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910098           OTHERS
                     Q: CO-57 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

77 026 IRON 058          PROTON                  NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910094           OTHERS
                     Q: CO-58 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

78 027 COBALT            PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910112           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

79 027 COBALT            PROTON                  DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910115           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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80 027 COBALT            PROTON                  ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910142            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

81 027 COBALT            PROTON                  FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910145            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

82 027 COBALT            PROTON                  SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910160            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

83 028 NICKEL            NEUTRON                 N,2N REACTION CROSS SECTION
   00  87/07/25    91/12/18    87/08/01
          8.00 MEV    20.00 MEV    15.0%   2    TOS   M.KAWAI
      870017  872017   FUSION REACTOR
                     O: RADIATION DAMAGE STUDY AND FUSION NEUTRONICS CALCULATION.
                     O: DISCREPANCY BETWEEN AND CALCULATED DATA.

84 028 NICKEL            NEUTRON                 NEUTRON EMISSION CROSS SECTION
   00  87/07/25    91/12/18    87/08/01
          8.00 MEV    20.00 MEV    15.0%   2    TOS   M.KAWAI
      870018  872018   FUSION REACTOR
                     O: RADIATION DAMAGE STUDY AND FUSION NEUTRONICS CALCULATION.
                     O: NO DATA AVAILABLE,EXCEPT AT 15 MEV.

85 028 NICKEL            NEUTRON                 CAPTURE CROSS SECTION
   00  87/07/25    91/12/18    87/08/01
        600.00 KEV    10.00 MEV    10.0%   1    TOS   M.KAWAI
      870019  872019   FUSION REACTOR
                     O: FOR FISSION AND FUSION REACTOR CALCULATIONS.
                     A: EXISTING DATA FOR 600 KEV - 1 MEV DISCREPANT ABOUT 20 %.
                     O: NO DATA ARE AVAILABLE ABOVE 1 MEV. EVALUATED DATA ARE ALSO DISCREPANT BY A
                        FACTOR OF 2 ABOVE 1 MEV.

86 028 NICKEL            NEUTRON                 TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
         UP TO         15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
      910004            FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                        DISTRIBUTION.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTORS.

87 028 NICKEL            PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
      910113            OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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88 028 NICKEL            PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910114           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

89 028 NICKEL            PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910143           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

90 028 NICKEL            PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910144           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

91 028 NICKEL            PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910161           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

92 028 NICKEL 060        NEUTRON                N,2N REACTION CROSS SECTION
   00  87/07/25    91/12/18    87/08/01
          12.00 MEV    20.00 MEV    10.0%   2    TOS   M.KAWAI
       870020  872020   FUSION REACTOR
                     O: RADIATION DAMAGE STUDY AND FUSION NEUTRONICS CALCULATION.
                     O: NO EXPERIMENTAL DATA.

93 028 NICKEL 060        NEUTRON                NEUTRON EMISSION CROSS SECTION
   00  87/07/25    91/12/18    87/08/01
          12.00 MEV    20.00 MEV    10.0%   2    TOS   M.KAWAI
       870021  872021   FUSION REACTOR
                     O: RADIATION DAMAGE STUDY AND FUSION NEUTRONICS CALCULATION.

94 029 COPPER            NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO         15.00 MEV    10.0%   1    HIT   K.MAKI
       910006           FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY SPECTRA.
                     O: NUCLEAR HEATING CALCULATION IN SUPERCONDUCTING MAGNETS.

95 029 COPPER            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910110           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

96 029 COPPER            PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910117           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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 97 029 COPPER            PROTON                 ACTIVATION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910140            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

 98 029 COPPER            PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910149            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

 99 029 COPPER            PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910156            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

100 029 COPPER 063       PROTON                 NEUTRON EMISSION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO         15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
        910095            OTHERS
                       Q: ZN-63 PRODUCTION CROSS SECTION
                       O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

101 029 COPPER 065       PROTON                 NEUTRON EMISSION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO         15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
        910096            OTHERS
                       Q: ZN-65 PRODUCTION CROSS SECTION
                       O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

102 030 ZINC             PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910109            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

103 030 ZINC             PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910118            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

104 030 ZINC             PROTON                 ACTIVATION CROSS SECTION
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910139            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

105 030 ZINC             PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
           UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910150            OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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106 030 ZINC              PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
        910155           OTHERS
                       O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

107 039 YTTRIUM           NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910174           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

108 039 YTTRIUM           NEUTRON               DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910177           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

109 040 ZIRCONIUM         NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910175           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

110 040 ZIRCONIUM         NEUTRON               DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910176           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

111 041 NIOBIUM 093       NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  80/11/10    91/12/03    80/12/25
          UP TO         15.00 MEV    10.0%   2    HIT   K.MAKI
        800009  832043   FUSION REACTOR
                       Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS
                          REQUIRED.
                       O: FOR NEUTRON MULTIPLICATION CALCULATION OF FUSION BLANKET. MET FOR 14MEV
                          REGION.

112 041 NIOBIUM 093       NEUTRON               ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
    01  80/11/10    82/12/10    80/12/25
          UP TO         20.00 MEV    10.0%   2    MAP   M.SASAKI            JAE   K.SAKURAI
        800012  812029   FISSION REACTOR
                       Q: PRODUCTION FOR 13.6 YEAR ISOMER.
                       O: FOR NEUTRON DOSIMETRY.

113 042 MOLYBDENUM        NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    01  76/04/01    91/12/03    76/10/10
            1.00 MEV    15.00 MEV    10.0%   2    HIT   K.MAKI
        780099  762126   FUSION REACTOR
                       O: NEUTRON TRANSPORT CALCULATIONS.
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114 042 MOLYBDENUM 095    NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
            2.00 KEV     3.00 KEV    10.0%   2    TOS   M.KAWAI
        820006  832027   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR BURN-UP CALCULATION.

115 042 MOLYBDENUM 097    NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
            2.00 KEV     3.00 KEV    10.0%   2    TOS   M.KAWAI
        820007  832028   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR BURN-UP CALCULATION.

116 044 RUTHENIUM 101     NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
            1.00 KEV     3.00 KEV    10.0%   2    TOS   M.KAWAI
        820009  832030   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR BURN-UP CALCULATION.

117 044 RUTHENIUM 102     NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/03    80/12/25
          UP TO          3.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800028  812033   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR FAST REACTOR BURNUP CALCULATIONS.

118 044 RUTHENIUM 103     NEUTRON                ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
    01  78/08/08    91/12/03    78/12/12
          100.00  EV   500.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        780127  792079   FISSION REACTOR
                        Q: EXPERIMENTAL DATA REQUIRED.
                        O: FOR FAST REACTOR BURNUP CALCULATIONS. NO DIFFERENTIAL OR INTEGRAL DATA
                           EXIST. VERY LARGE DISCREPANCIES BETWEEN EVALUATIONS.

119 044 RUTHENIUM 104     NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/03    80/12/25
          UP TO          3.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800029  812034   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR FAST REACTOR BURNUP CALCULATIONS.

120 046 PALLADIUM 104     NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
          UP TO          3.00 KEV    20.0%   2    TOS   M.KAWAI
        820010  832031   FISSION REACTOR
                        Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                           MOMENTUM WANTED.
                        O: FOR BURN-UP CALCULATION.
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121 046 PALLADIUM 106     NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
          UP TO          3.00 KEV    20.0%   2    TOS   M.KAWAI
        820011  832032   FISSION REACTOR
                       Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                          MOMENTUM WANTED.
                       O: FOR BURN-UP CALCULATION.

122 054 XENON 131         NEUTRON                ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
    02  75/04/01    91/12/03    75/10/10
           4.00 KEV   500.00 KEV    20.0%   1    SAE   H.MATSUNOBU
        780142  752014   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS. RESONANCE PARAMETERS ARE KNOWN UP TO
                          4 KEV.

123 054 XENON 132         NEUTRON                ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
    01  80/11/10    91/12/03    80/12/25
          100.00  EV   500.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800018  812038   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.

124 054 XENON 132         NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/03    80/12/25
          UP TO         40.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800019  812039   FISSION REACTOR
                       Q: ONLY 5 LEVELS BELOW 3.85 KEV.
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.

125 054 XENON 134         NEUTRON                RESONANCE PARAMETERS
    00  82/11/20    91/12/18    82/12/25
          UP TO         40.00 KEV    20.0%   2    TOS   M.KAWAI
        820012  832033   FISSION REACTOR
                       Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                          MOMENTUM WANTED.
                       O: FOR BURN-UP CALCULATION.

126 055 CESIUM 135        NEUTRON                CAPTURE CROSS SECTION
    01  75/04/01    91/12/13    75/10/10
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        780150  752016   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS. EVALUATIONS ARE VERY DISCREPANT.

127 055 CESIUM 135        NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/03    80/12/25
                                     10.0%   1    SAE   H.MATSUNOBU
        800020  812040   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.
                       Q: RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR
                          MOMENTUM WANTED.

128 061 PROMETHIUM 147    NEUTRON                ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
    01  75/04/01    91/12/03    75/10/10
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        780158  752019   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.
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129 062 SAMARIUM 144      NEUTRON                RESONANCE PARAMETERS
    00  87/07/25                87/08/01
         1.00-3   EV   500.00 KEV     2.0%   3    JAE   T.NAKAGAWA
        870001           FISSION REACTOR
                       Q: WANTED FOR SYSTEMATIC STUDY OF AVERAGE RESONANCE PARAMETERS, SO,DO FOR SM
                          ISOTOPES.
                       O: NO DATA EXIST.

130 062 SAMARIUM 149      NEUTRON                CAPTURE CROSS SECTION
    01  75/04/01    91/12/13    75/10/10
           25.00 KEV    25.00 KEV     5.0%   1    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.

131 062 SAMARIUM 151      NEUTRON                CAPTURE CROSS SECTION
    00  75/04/01    91/12/13    75/10/10
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        780160  752021   FISSION REACTOR
                       O: FOR FAST REACTOR BURNUP CALCULATIONS. NO KEV DATA.

132 063 EUROPIUM 152      NEUTRON                CAPTURE CROSS SECTION
    00  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        800021  812041   FISSION REACTOR
                       Q: NO KEV DATA.
                       O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

133 063 EUROPIUM 152      NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        800022  812042   FISSION REACTOR
                       Q: THERE EXIST NO DATA, EXCEPT THOSE BY VERTEBNYJ ET AL.(1977) IN 0.88 TO 17
                          EV. RESONANCE ENERGY, NEUTRON WIDTH, RADIATIVE WIDTH, SPIN AND ORBITAL
                          ANGULAR MOMENTUM WANTED.
                       O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

134 063 EUROPIUM 154      NEUTRON                CAPTURE CROSS SECTION
    00  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        800023  812043   FISSION REACTOR
                       Q: NO EXPERIMENTAL DATA.
                       O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.

135 063 EUROPIUM 154      NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    10.0%   1    SAE   H.MATSUNOBU
        800024  812044   FISSION REACTOR
                       Q: INSUFFICIENT RESONANCE PARAMETERS. RESONANCE ENERGY, NEUTRON WIDTH,
                          RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR MOMENTUM WANTED.
                       O: FOR CONTROL ROD AND THERMAL REACTOR BURNUP CALCULATIONS.
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136 063 EUROPIUM 155      NEUTRON                CAPTURE CROSS SECTION
    00  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800025  812045   FISSION REACTOR
                       Q: NO EXPERIMENTAL DATA
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.

137 063 EUROPIUM 155      NEUTRON                RESONANCE PARAMETERS
    01  80/11/10    91/12/13    80/12/25
          100.00  EV   500.00 KEV    20.0%   2    SAE   H.MATSUNOBU
        800026  812046   FISSION REACTOR
                       Q: INSUFFICIENT RESONANCE PARAMETERS. RESONANCE ENERGY, NEUTRON WIDTH,
                          RADIATIVE WIDTH, SPIN AND ORBITAL ANGULAR MOMENTUM WANTED.
                       O: FOR FAST REACTOR BURNUP CALCULATIONS.

138 074 TUNGSTEN          PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910170           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

139 074 TUNGSTEN          PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910171           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

140 074 TUNGSTEN          PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910172           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

141 074 TUNGSTEN          NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910173           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

142 074 TUNGSTEN          NEUTRON                DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910178           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

143 080 MERCURY 199       NEUTRON                ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
    01  80/11/10    [illegible]2/10    80/12/25
          500.00 KEV    20.00 MEV    10.0%   3    JAE   K.SAKURAI
        800013  812030   FISSION REACTOR
                       Q: PRODUCTION CROSS SECTION FOR 42.6 MIN ISOMER THROUGH INELASTIC SCATTERING.
                       O: FOR NEUTRON DOSIMETRY.
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144 082 LEAD              NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    01  80/11/10    91/12/03    80/12/25
          UP TO        15.00 MEV     5.0%   1    HIT   K.MAKI
        800008  832044   FUSION REACTOR
                       Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS
                          REQUIRED.
                       O: FOR NEUTRON MULTIPLICATION CALCULATION OF FUSION BLANKET.

145 082 LEAD              PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910166           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

146 082 LEAD              PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910169           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

147 082 LEAD              PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910185           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

148 083 BISMUTH           PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910167           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

149 083 BISMUTH           PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910168           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

150 083 BISMUTH           PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910186           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

151 092 URANIUM 233       NEUTRON                INELASTIC CROSS SECTION
    00  91/12/03    92/01/14
          100.00 KEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910008           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

152 092 URANIUM 233       NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/03    92/01/14
            6.00 MEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910009           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.
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153 092 URANIUM 233       NEUTRON                N,3N REACTION CROSS SECTION
    00  91/12/03    92/01/14
          13.00 MEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910010           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

154 092 URANIUM 233       NEUTRON                CAPTURE TO FISSION RATIO(ALPHA)
    00  91/12/03    92/01/14
         0.25-1   EV     1.00 MEV    20.0%   2    SAE   H.MATSUNOBU
        910011           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

155 092 URANIUM 233       NEUTRON                FISSION CROSS SECTION
    00  91/12/03    92/01/14
         0.25-1   EV   200.00 KEV    10.0%   2    SAE   H.MATSUNOBU
        910012           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

156 092 URANIUM 235       NEUTRON                FISSION CROSS SECTION
    00  91/12/03    92/01/14
           1.00 KEV   100.00 KEV     3.0%   2    SAE   H.MATSUNOBU
        910013           FISSION REACTOR
                       O: NO COMMENT.

157 092 URANIUM 235       NEUTRON                CAPTURE TO FISSION RATIO(ALPHA)
    00  91/12/03    92/01/14
           1.00 KEV     1.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910015           FISSION REACTOR
                       O: NO COMMENT.

158 092 URANIUM 235       NEUTRON                NEUTRONS EMITTED PER FISSION(NU BAR)
    00  91/12/03    92/01/14
         1.00-2   EV     1.00 MEV     1.0%   2    SAE   H.MATSUNOBU         JAE   I.MURATA
        910016           FISSION REACTOR
                       O: ANALYSIS FOR TEMPERATURE COEFFICIENT OF REACTIVITY.

159 092 URANIUM 235       NEUTRON                INELASTIC CROSS SECTION
    00  91/12/03    92/01/14
         100.00 KEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910017           FISSION REACTOR
                       O: NO COMMENT.

160 092 URANIUM 238       PROTON                 FISSION CROSS SECTION
    00  91/12/16    92/01/14
          10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910179           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

161 093 NEPTUNIUM 237     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910022           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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                ** REQUESTS TO BE REGISTERED TO WRENDA.   **                                    PAGE   21

162 093 NEPTUNIUM 237     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910046           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

163 093 NEPTUNIUM 237     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910054           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

164 093 NEPTUNIUM 237     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910074           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

165 093 NEPTUNIUM 237     NEUTRON                FISSION HALF LIFE
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910077           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

166 093 NEPTUNIUM 237     PROTON                 FISSION CROSS SECTION
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910180           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

167 094 PLUTONIUM 238     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910023           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

168 094 PLUTONIUM 238     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910047           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

169 094 PLUTONIUM 238     NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910050           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

170 094 PLUTONIUM 238     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910055           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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171 094 PLUTONIUM 238     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910075           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

172 094 PLUTONIUM 238     NEUTRON                FISSION HALF LIFE
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910076           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

173 094 PLUTONIUM 238     NEUTRON                SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910183           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

174 094 PLUTONIUM 239     NEUTRON                SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910184           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

175 095 AMERICIUM 241     NEUTRON                CAPTURE CROSS SECTION
    02  75/04/01    91/12/13    75/10/10
          500.00 KEV     1.00 MEV    10.0%   1    PNC   R.YUMOTO            SAE   H.MATSUNOBU
                                                  FBE   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.
                       A: 20% IN MEV REGION.

176 095 AMERICIUM 241     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910024           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

177 095 AMERICIUM 241     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910048           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

178 095 AMERICIUM 241     NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910051           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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179 095 AMERICIUM 241     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    15.0%   1    JAE   T.MUKAIYAMA
        910056           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

180 095 AMERICIUM 241     NEUTRON                FISSION CROSS SECTION
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910181           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

181 095 AMERICIUM 242     NEUTRON                CAPTURE CROSS SECTION
    00  75/04/01    91/12/13    75/10/10
         0.25-1   EV   100.00 KEV           1    PNC   R.YUMOTO            SAE   H.MATSUNOBU
        780234  752036   FISSION REACTOR
                       Q: WANTED FOR GROUND AND ISOMERIC STATES.
                       A: ACCURACY REQUIRED 5 TO 20 %.
                       O: REACTOR BURNUP CALCULATIONS AND ESTIMATION OF TRANS-URANIUM NUCLIDE
                          BUILD-UP IN SPENT FUEL. NEUTRON SHIELDING OF SPENT-FUEL TRANSPORT CASK.

182 095 AMERICIUM 242     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910025           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

183 095 AMERICIUM 242     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910026           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                          META-STABLE STATE OF AM-242

184 095 AMERICIUM 242     NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910045           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

185 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910057           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                          META-STABLE STATE OF AM-242

186 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910061           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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                ** REQUESTS TO BE REGISTERED TO WRENDA.   **                                    PAGE   24

187 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910073           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                          META-STABLE STATE OF AM-242

188 095 AMERICIUM 242     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910078           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

189 095 AMERICIUM 242     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910079           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                          META-STABLE STATE OF AM-242

190 095 AMERICIUM 243     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910027           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

191 095 AMERICIUM 243     NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910044           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

192 095 AMERICIUM 243     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910049           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

193 095 AMERICIUM 243     NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910052           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

194 095 AMERICIUM 243     NEUTRON                TOTAL CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   1    JAE   T.MUKAIYAMA
        910053           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

195 095 AMERICIUM 243     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    15.0%   1    JAE   T.MUKAIYAMA
        910058           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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196 095 AMERICIUM 243     NEUTRON                FISSION CROSS SECTION
    00  91/12/16    92/01/14
          10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910182           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

197 096 CURIUM 242        NEUTRON                CAPTURE CROSS SECTION
    01  75/04/01    91/12/13    75/10/10
         0.25-1   EV   100.00 KEV            2    PNC   R.YUMOTO            SAE   H.MATSUNOBU
                                                 FBE   T.HOJUYAMA
        78023B  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.

198 096 CURIUM 242        NEUTRON                FISSION CROSS SECTION
    01  75/04/01    87/07/25    75/10/10
           1.50 MEV    20.00 MEV             2    PNC   R.YUMOTO            SAE   H.MATSUNOBU
                                                 FBE   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.

199 096 CURIUM 242        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910028           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

200 096 CURIUM 242        NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910043           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

201 096 CURIUM 242        NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910059           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

202 096 CURIUM 243        NEUTRON                CAPTURE CROSS SECTION
    01  75/04/01    91/12/13    75/10/10
           20.00  EV   100.00 KEV            2    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.
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203 096 CURIUM 243        NEUTRON                FISSION CROSS SECTION
    01  75/04/01    87/07/25    75/10/10
            3.00 MEV    20.00 MEV            2    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.

204 096 CURIUM 243        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910029           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

205 096 CURIUM 243        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910062           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

206 096 CURIUM 243        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910080           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

207 096 CURIUM 244        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   1    JAE   T.MUKAIYAMA
        910030           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

208 096 CURIUM 244        NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910060           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

209 096 CURIUM 244        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910063           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

210 096 CURIUM 244        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910081           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

211 096 CURIUM 245        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910031           FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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212 096 CURIUM 245        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910064           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

213 096 CURIUM 245        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910082           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

214 096 CURIUM 246        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910032           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

215 096 CURIUM 246        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910065           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

216 096 CURIUM 246        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    40.0%   3    JAE   T.MUKAIYAMA
        910083           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

217 096 CURIUM 247        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910033           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

218 096 CURIUM 247        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910066           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

219 096 CURIUM 247        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910084           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

220 096 CURIUM 248        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910034           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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221 096 CURIUM 248        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910067           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

222 096 CURIUM 248        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910085           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

223 097 BERKELIUM 249     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910035           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

224 097 BERKELIUM 249     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910068           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

225 097 BERKELIUM 249     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910086           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

226 098 CALIFORNIUM 249   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910036           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

227 098 CALIFORNIUM 249   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910069           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

228 098 CALIFORNIUM 249   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910087           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

229 098 CALIFORNIUM 250   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910037           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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230 098 CALIFORNIUM 250   NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910042            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

231 098 CALIFORNIUM 250   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910070            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

232 098 CALIFORNIUM 250   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910088            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

233 098 CALIFORNIUM 251   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910038            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

234 098 CALIFORNIUM 251   NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910041            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

235 098 CALIFORNIUM 251   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910071            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

236 098 CALIFORNIUM 251   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910089            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

237 098 CALIFORNIUM 252   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910039            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

238 098 CALIFORNIUM 252   NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910040            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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239 098 CALIFORNIUM 252   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910072            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

240 098 CALIFORNIUM 252   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910090            FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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3. List of Withdrawn Requests from WRENDA 87/88

Withdrawn requests of 20 are shown in this section. They were carefully reviewed by the requestors before they were decided to be withdrawn. They were withdrawn, because they are no longer needed or, because they are now considered as satisfied.

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                    ** REQUESTS WITHDRAWN FROM WRENDA.        **                                    PAGE    1

1 001 HYDROGEN 003      NEUTRON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  80/11/10    91/12/12    80/12/25    91/12/12
        UP TO        15.00 MEV    15.0%   2    OSA   A.TAKAHASHI
      800002  812019   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.

2 006 CARBON 012        NEUTRON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  80/11/10    91/12/02    80/12/25    91/12/02
        7.00 MEV    15.00 MEV    10.0%   2    OSA   A.TAKAHASHI
      800006  832039   FUSION REACTOR
                     Q: ENERGY-ANGLE DIFFERENTIAL CROSS SECTIONS FOR TOTAL NEUTRON EMISSIONS
                        REQUIRED. ANGULAR DISTRIBUTIONS OF INELASTIC SCATTERING CROSS SECTIONS FOR
                        ALL AVAILABLE DISCRETE LEVELS ESPECIALLY WANTED.
                     O: NEUTRON TRANSPORT CALCULATIONS. NOT MET FOR 7.62 MEV LEVEL CROSS SECTION
                        AND (N,N'3A).

3 020 CALCIUM           NEUTRON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  82/11/20    91/12/03    82/12/25    91/12/03
        1.00 MEV    15.00 MEV    15.0%   3    JAE   Y.SEKI
      820003  832018   FUSION REACTOR
                     O: INCLUDED IN CONCRETE. SHIELDING DESIGN.

4 026 IRON              NEUTRON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  82/11/20    91/12/03    82/12/25    91/12/03
        UP TO        15.00 MEV    10.0%   2    JAE   Y.SEKI
      820005  832025   FUSION REACTOR
                     O: NEUTRON TRANSPORT CALCULATIONS.

5 049 INDIUM 115        GAMMA                   SPECIAL QUANTITY
  00  78/08/08    91/12/03    78/12/12    91/12/03
        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

6 050 TIN 116           NEUTRON                 DIFFERENTIAL ELASTIC CROSS SECTION
  00  87/07/25    91/12/12    87/08/01    91/12/12
        5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
      870002  872002   FISSION REACTOR
                     O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                        DEFORMATION PARAMETERS.
                     Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

7 050 TIN 116           NEUTRON                 ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
  00  87/07/25    91/12/12    87/08/01    91/12/12
        5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
      870003  872003   FISSION REACTOR
                     O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                        DEFORMATION PARAMETERS.
                     Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.
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 8 050 TIN 118          NEUTRON              DIFFERENTIAL ELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870004  872004   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

 9 050 TIN 118          NEUTRON              ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870005  872005   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

10 050 TIN 120          NEUTRON              DIFFERENTIAL ELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870006  872006   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

11 050 TIN 120          NEUTRON              ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870007  872007   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

12 050 TIN 124          NEUTRON              DIFFERENTIAL ELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870008  872008   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

13 050 TIN 124          NEUTRON              ANGULAR DIFFERENTIAL INELASTIC CROSS SECTION
   00  87/07/25    91/12/12    87/08/01    91/12/12
          5.00 MEV    30.00 MEV    10.0%   3    JAE   S.CHIBA
       870009  872009   FISSION REACTOR
                      O: TO DETERMINE SYSTEMATICS OF (N-Z)/A TERM IN OPTICAL POTENTIAL AND
                         DEFORMATION PARAMETERS.
                      Q: ANGULAR DISTRIBUTION ALSO IS REQUIRED.

14 055 CESIUM 134       NEUTRON              ENERGY DIFFERENTIAL CAPTURE CROSS SECTION
   00  72/04/01    91/12/03    72/10/10    91/12/03
         0.25-1   EV  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.
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15 094 PLUTONIUM 239     NEUTRON                ELASTIC CROSS SECTION
   01  76/04/01    91/12/03    76/10/10    91/12/03
          1.00 KEV    50.00 KEV     2.0%   1    NIG   M.KAWAI
       780198  762210   FISSION REACTOR
                      O: FISSION REACTOR CALCULATIONS.

16 094 PLUTONIUM 239     NEUTRON                FISSION CROSS SECTION
   02  76/04/01    91/12/03    76/10/10    91/12/03
        500.00  EV   200.00 KEV     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.

17 094 PLUTONIUM 239     NEUTRON                NEUTRONS EMITTED PER FISSION(NU BAR)
   01  70/04/01    91/12/03    70/10/10    91/12/03
          UP TO         1.00 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 FUSION REACTOR CALCULATIONS. DISCREPANCY EXISTS BETWEEN
                         EXPERIMENTAL DATA.

18 094 PLUTONIUM 239     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
   00  76/04/01    91/12/13    76/10/10    91/12/13
         0.25-1   EV    10.00 MEV     5.0%   2    NIG   T.MURATA
       780203  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.

19 094 PLUTONIUM 240     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
   00  76/04/01    91/12/13    76/10/10    91/12/13
         0.25-1   EV    10.00 MEV     5.0%   2    NIG   T.MURATA
       780210  762049   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.

20 094 PLUTONIUM 241     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
   00  76/04/01    91/12/13    76/10/10    91/12/13
         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.
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4. New Requests Submitted to WRENDA 91/92

In this section, 182 new requests are listed. They were adopted after the WRENDA Group of JNDC examined their appropriateness for the requests. They are 78 requests for fission reactor data, 8 for fusion research, and 96 for other applications.

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                ** NEW REQUESTS SUBMITTED TO WRENDA.      **                                    PAGE    1

1 006 CARBON            NEUTRON                 TOTAL PHOTON PRODUCTION CROSS SECTION
  00  91/12/03    92/01/14
        UP TO         20.00 MEV    10.0%   2    JAE   I.MURATA
      910019          FUSION REACTOR
                    Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                    A: ACCURACY REQUIRED 5 TO 10 %.
                    O: SHIELDING CALCULATIONS OF FUSION REACTOR.

2 007 NITROGEN          PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         1.50 GEV     30.0%   2    JAE   M.MIZUMOTO
      910099          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

3 007 NITROGEN          PROTON                  DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         1.50 GEV     30.0%   2    JAE   M.MIZUMOTO
      910128          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

4 007 NITROGEN          PROTON                  ACTIVATION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         1.50 GEV     30.0%   2    JAE   M.MIZUMOTO
      910129          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

5 007 NITROGEN 014      PROTON                  NEUTRON EMISSION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         15.00 MEV    20.0%   2    JAE   M.MIZUMOTO
      910091          OTHERS
                    O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

6 008 OXYGEN            NEUTRON                 TOTAL PHOTON PRODUCTION CROSS SECTION
  00  91/12/03    92/01/14
        UP TO         20.00 MEV    10.0%   2    JAE   I.MURATA
      910020          FUSION REACTOR
                    Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                    A: ACCURACY REQUIRED 5 TO 10 %.
                    O: SHIELDING CALCULATIONS OF FUSION REACTOR.

7 008 OXYGEN            PROTON                  DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         1.50 GEV     30.0%   2    JAE   M.MIZUMOTO
      910100          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

8 008 OXYGEN            PROTON                  DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
  00  91/12/16    92/01/14
        UP TO         1.50 GEV     30.0%   2    JAE   M.MIZUMOTO
      910127          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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 9 008 OXYGEN            PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910130           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

10 008 OXYGEN 016        PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         15.00 MEV    20.0%   2    JAE   M.MIZUMOTO
       910092           OTHERS
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

11 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910102           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

12 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910125           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

13 011 SODIUM            PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910132           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

14 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV      1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910162           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

15 011 SODIUM            PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV      1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910164           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

16 012 MAGNESIUM         PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910103           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

17 012 MAGNESIUM         PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910124           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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18 012 MAGNESIUM        PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910133          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

19 012 MAGNESIUM        PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910151          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

20 012 MAGNESIUM        PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910154          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

21 013 ALUMINIUM        PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910104          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

22 013 ALUMINIUM        PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910123          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

23 013 ALUMINIUM        PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910134          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

24 013 ALUMINIUM        PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910152          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

25 013 ALUMINIUM        PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910153          OTHERS
                    O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

26 014 SILICON          NEUTRON               TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14
          UP TO       20.00 MEV    10.0%   2    JAE   I.MURATA
       910018          FUSION REACTOR
                    Q: ENERGY AND ANGULAR DIFFERENTIAL GAMMA-RAY PRODUCTION CROSS SECTION.
                    A: ACCURACY REQUIRED 5 TO 10 %.
                    O: SHIELDING CALCULATIONS OF FUSION REACTOR.
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27 014 SILICON          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910105           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

28 014 SILICON          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910122           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

29 014 SILICON          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910135           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

30 018 ARGON            PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910101           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

31 018 ARGON            PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910126           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

32 018 ARGON            PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910131           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

33 020 CALCIUM          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910106           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

34 020 CALCIUM          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910121           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

35 020 CALCIUM          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910136           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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36 024 CHROMIUM          NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03     92/01/14    91/12/03
          UP TO        15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
       910002           FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                        DISTRIBUTION.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTOR.

37 024 CHROMIUM          PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16     92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910111           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

38 024 CHROMIUM          PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16     92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910116           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

39 024 CHROMIUM          PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16     92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910141           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

40 024 CHROMIUM          PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16     92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910148           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

41 024 CHROMIUM          PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16     92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910157           OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

42 024 CHROMIUM 053      PROTON                 CAPTURE CROSS SECTION
   00  91/12/16     92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910097           OTHERS
                     Q: MN-54 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

43 024 CHROMIUM 054      PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16     92/01/14
          UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910093           OTHERS
                     Q: MN-54 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE
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44 025 MANGANESE        NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO        15.00 MEV    10.0%   1    HIT   K.MAKI
       910005          FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY SPECTRA.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS.

45 025 MANGANESE        PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910107          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

46 025 MANGANESE        PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910120          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

47 025 MANGANESE        PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910137          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

48 025 MANGANESE        PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910147          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

49 025 MANGANESE        PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910158          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

50 026 IRON             NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO        15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
       910001          FUSION REACTOR
                     Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                        DISTRIBUTION.
                     O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                        MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTOR.

51 026 IRON             PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910108          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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52 026 IRON              PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910119            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

53 026 IRON              PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910138            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

54 026 IRON              PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910146            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

55 026 IRON              PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910159            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

56 026 IRON              PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV       1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910163            OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

57 026 IRON              PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV       1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910165            OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

58 026 IRON 056          PROTON                 CAPTURE CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910098            OTHERS
                      Q: CO-57 PRODUCTION CROSS SECTION
                      O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

59 026 IRON 058          PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910094            OTHERS
                      Q: CO-58 PRODUCTION CROSS SECTION
                      O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

60 027 COBALT            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910112            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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61 027 COBALT          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910115         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

62 027 COBALT          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910142         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

63 027 COBALT          PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910145         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

64 027 COBALT          PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910160         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

65 028 NICKEL          NEUTRON               TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO       15.00 MEV    10.0%   1    HIT   K.MAKI              JAE   I.MURATA
       910004         FUSION REACTOR
                   Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY AND ANGULAR
                      DISTRIBUTION.
                   O: NUCLEAR HEATING CALCULATION IN BLANKETS, SHIELDS AND SUPERCONDUCTING
                      MAGNETS. SHIELDING CALCULATIONS OF FUSION REACTORS.

66 028 NICKEL          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910113         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

67 028 NICKEL          PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910114         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

68 028 NICKEL          PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO        1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910143         OTHERS
                   O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE
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69 028 NICKEL            PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910144            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

70 028 NICKEL            PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910161            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

71 029 COPPER            NEUTRON                TOTAL PHOTON PRODUCTION CROSS SECTION
   00  91/12/03    92/01/14    91/12/03
          UP TO         15.00 MEV    10.0%   1    HIT   K.MAKI
       910006            FUSION REACTOR
                      Q: GAMMA-PRODUCTION CROSS SECTIONS. SECONDARY GAMMA ENERGY SPECTRA.
                      O: NUCLEAR HEATING CALCULATION IN SUPERCONDUCTING MAGNETS.

72 029 COPPER            PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910110            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

73 029 COPPER            PROTON                 DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910117            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

74 029 COPPER            PROTON                 ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910140            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

75 029 COPPER            PROTON                 FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910149            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

76 029 COPPER            PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
          UP TO          1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910156            OTHERS
                      O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

77 029 COPPER 063        PROTON                 NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
          UP TO         15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910095            OTHERS
                      Q: ZN-63 PRODUCTION CROSS SECTION
                      O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE
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78 029 COPPER 065        PROTON                NEUTRON EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO        15.00 MEV    15.0%   2    JAE   M.MIZUMOTO
       910096          OTHERS
                     Q: ZN-65 PRODUCTION CROSS SECTION
                     O: CALCULATIONS FOR ACCELERATOR TESTING SPALLATION NEUTRON SOURCE

79 030 ZINC              PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910109          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

80 030 ZINC              PROTON                DOUBLE DIFFERENTIAL GAMMA-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910118          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

81 030 ZINC              PROTON                ACTIVATION CROSS SECTION
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910139          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

82 030 ZINC              PROTON                FISSION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910150          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

83 030 ZINC              PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         UP TO         1.50 GEV    30.0%   2    JAE   M.MIZUMOTO
       910155          OTHERS
                     O: SHIELDING CALCULATIONS FOR SPALLATION NEUTRON SOURCE

84 039 YTTRIUM           NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910174          OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

85 039 YTTRIUM           NEUTRON               DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910177          OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

86 040 ZIRCONIUM         NEUTRON               DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
        100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910175          OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE
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87 040 ZIRCONIUM          NEUTRON                DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910176           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

88 074 TUNGSTEN           PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910170           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

89 074 TUNGSTEN           PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910171           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

90 074 TUNGSTEN           PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910172           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

91 074 TUNGSTEN           NEUTRON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910173           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

92 074 TUNGSTEN           NEUTRON                DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910178           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

93 082 LEAD               PROTON                 DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910166           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

94 082 LEAD               PROTON                 SPALLATION PRODUCT MASS YIELD SPECTRUM
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910169           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

95 082 LEAD               PROTON                 DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
   00  91/12/16    92/01/14
         100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
       910185           OTHERS
                     O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE
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 96 083 BISMUTH          PROTON                DOUBLE DIFFERENTIAL PROTON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910167           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

 97 083 BISMUTH          PROTON                SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910168           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

 98 083 BISMUTH          PROTON                DOUBLE DIFFERENTIAL NEUTRON-EMISSION CROSS SECTION
    00  91/12/16    92/01/14
          100.00 MEV     1.50 GEV    30.0%   2    JAE   T.NISHIDA
        910186           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

 99 092 URANIUM 233      NEUTRON               INELASTIC CROSS SECTION
    00  91/12/03    92/01/14
          100.00 KEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910008           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

100 092 URANIUM 233      NEUTRON               N,2N REACTION CROSS SECTION
    00  91/12/03    92/01/14
            6.00 MEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910009           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

101 092 URANIUM 233      NEUTRON               N,3N REACTION CROSS SECTION
    00  91/12/03    92/01/14
           13.00 MEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910010           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

102 092 URANIUM 233      NEUTRON               CAPTURE TO FISSION RATIO(ALPHA)
    00  91/12/03    92/01/14
         0.25-1   EV     1.00 MEV    20.0%   2    SAE   H.MATSUNOBU
        910011           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

103 092 URANIUM 233      NEUTRON               FISSION CROSS SECTION
    00  91/12/03    92/01/14
         0.25-1   EV   200.00 KEV    10.0%   2    SAE   H.MATSUNOBU
        910012           FISSION REACTOR
                       O: CALCULATION FOR THORIUM CYCLE.

104 092 URANIUM 235      NEUTRON               FISSION CROSS SECTION
    00  91/12/03    92/01/14
            1.00 KEV   100.00 KEV     3.0%   2    SAE   H.MATSUNOBU
        910013           FISSION REACTOR
                       O: NO COMMENT.
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105 092 URANIUM 235       NEUTRON                CAPTURE TO FISSION RATIO(ALPHA)
    00  91/12/03    92/01/14
          1.00 KEV      1.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910015          FISSION REACTOR
                      O: NO COMMENT.

106 092 URANIUM 235       NEUTRON                NEUTRONS EMITTED PER FISSION(NU BAR)
    00  91/12/03    92/01/14
         1.00-2   EV     1.00 MEV     1.0%   2    SAE   H.MATSUNOBU         JAE   I.MURATA
        910016          FISSION REACTOR
                      O: ANALYSIS FOR TEMPERATURE COEFFICIENT OF REACTIVITY.

107 092 URANIUM 235       NEUTRON                INELASTIC CROSS SECTION
    00  91/12/03    92/01/14
          100.00 KEV    20.00 MEV    10.0%   2    SAE   H.MATSUNOBU
        910017          FISSION REACTOR
                      O: NO COMMENT.

108 092 URANIUM 238       PROTON                 FISSION CROSS SECTION
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910179          OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

109 093 NEPTUNIUM 237     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910022          FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

110 093 NEPTUNIUM 237     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910046          FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

111 093 NEPTUNIUM 237     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910054          FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

112 093 NEPTUNIUM 237     NEUTRON                DELAYED NEUTRONS EMITTED PER FISSION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910074          FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

113 093 NEPTUNIUM 237     NEUTRON                FISSION HALF LIFE
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910077          FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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114 093 NEPTUNIUM 237     PROTON                FISSION CROSS SECTION
    00  91/12/16    92/01/14
          10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910180           OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

115 094 PLUTONIUM 238     NEUTRON               CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910023           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

116 094 PLUTONIUM 238     NEUTRON               INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910047           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

117 094 PLUTONIUM 238     NEUTRON               N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910050           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

118 094 PLUTONIUM 238     NEUTRON               ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910055           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

119 094 PLUTONIUM 238     NEUTRON               DELAYED NEUTRONS EMITTED PER FISSION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910075           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

120 094 PLUTONIUM 238     NEUTRON               FISSION HALF LIFE
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910076           FISSION REACTOR
                      O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

121 094 PLUTONIUM 238     NEUTRON               SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910183           OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

122 094 PLUTONIUM 239     NEUTRON               SPALLATION PRODUCT MASS YIELD SPECTRUM
    00  91/12/16    92/01/14
          10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910184           OTHERS
                      O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE
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123 095 AMERICIUM 241     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910024            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

124 095 AMERICIUM 241     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910048            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

125 095 AMERICIUM 241     NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910051            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

126 095 AMERICIUM 241     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    15.0%   1    JAE   T.MUKAIYAMA
        910056            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

127 095 AMERICIUM 241     NEUTRON                FISSION CROSS SECTION
    00  91/12/16    92/01/14
            10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910181            OTHERS
                        O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

128 095 AMERICIUM 242     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910025            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

129 095 AMERICIUM 242     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910026            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                           META-STABLE STATE OF AM-242

130 095 AMERICIUM 242     NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910045            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

131 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910057            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                           META-STABLE STATE OF AM-242
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132 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910061            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

133 095 AMERICIUM 242     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910073            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                           META-STABLE STATE OF AM-242

134 095 AMERICIUM 242     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910078            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

135 095 AMERICIUM 242     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910079            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR FOR
                           META-STABLE STATE OF AM-242

136 095 AMERICIUM 243     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910027            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

137 095 AMERICIUM 243     NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV     5.0%   1    JAE   T.MUKAIYAMA
        910044            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

138 095 AMERICIUM 243     NEUTRON                INELASTIC CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910049            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

139 095 AMERICIUM 243     NEUTRON                N,2N REACTION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910052            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

140 095 AMERICIUM 243     NEUTRON                TOTAL CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1    EV    20.00 MEV    10.0%   1    JAE   T.MUKAIYAMA
        910053            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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141 095 AMERICIUM 243     NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    15.0%   1    JAE   T.MUKAIYAMA
        910058           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

142 095 AMERICIUM 243     NEUTRON                FISSION CROSS SECTION
    00  91/12/16    92/01/14
           10.00 MEV   500.00 MEV    30.0%   2    JAE   T.NISHIDA
        910182           OTHERS
                       O: CALCULATIONS AROUND TARGET OF SPALLATION NEUTRON SOURCE

143 096 CURIUM 242        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910028           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

144 096 CURIUM 242        NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910043           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

145 096 CURIUM 242        NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910059           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

146 096 CURIUM 243        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   2    JAE   T.MUKAIYAMA
        910029           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

147 096 CURIUM 243        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910062           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

148 096 CURIUM 243        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910080           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

149 096 CURIUM 244        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   1    JAE   T.MUKAIYAMA
        910030           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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150 096 CURIUM 244        NEUTRON                ENERGY SPECTRUM OF FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910060           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

151 096 CURIUM 244        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910063           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

152 096 CURIUM 244        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   1    JAE   T.MUKAIYAMA
        910081           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

153 096 CURIUM 245        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    10.0%   2    JAE   T.MUKAIYAMA
        910031           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

154 096 CURIUM 245        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910064           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

155 096 CURIUM 245        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   2    JAE   T.MUKAIYAMA
        910082           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

156 096 CURIUM 246        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910032           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

157 096 CURIUM 246        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910065           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

158 096 CURIUM 246        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    40.0%   3    JAE   T.MUKAIYAMA
        910083           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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159 096 CURIUM 247        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910033            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

160 096 CURIUM 247        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910066            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

161 096 CURIUM 247        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910084            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

162 096 CURIUM 248        NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910034            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

163 096 CURIUM 248        NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910067            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

164 096 CURIUM 248        NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910085            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

165 097 BERKELIUM 249     NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910035            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

166 097 BERKELIUM 249     NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910068            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

167 097 BERKELIUM 249     NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910086            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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168 098 CALIFORNIUM 249   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910036           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

169 098 CALIFORNIUM 249   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910069           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

170 098 CALIFORNIUM 249   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910087           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

171 098 CALIFORNIUM 250   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910037           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

172 098 CALIFORNIUM 250   NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910042           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

173 098 CALIFORNIUM 250   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910070           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

174 098 CALIFORNIUM 250   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910088           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

175 098 CALIFORNIUM 251   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910038           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

176 098 CALIFORNIUM 251   NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910041           FISSION REACTOR
                       O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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177 098 CALIFORNIUM 251   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910071            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

178 098 CALIFORNIUM 251   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910089            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

179 098 CALIFORNIUM 252   NEUTRON                CAPTURE CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910039            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

180 098 CALIFORNIUM 252 . NEUTRON                FISSION CROSS SECTION
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    20.0%   3    JAE   T.MUKAIYAMA
        910040            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

181 098 CALIFORNIUM 252   NEUTRON                ENERGY SPECTRUM OF DELAYED FISSION NEUTRONS
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910072            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR

182 098 CALIFORNIUM 252   NEUTRON                FISSION PRODUCT MASS YIELD SPECTRUM
    00  91/12/13    92/01/14
         0.25-1   EV    20.00 MEV    30.0%   3    JAE   T.MUKAIYAMA
        910090            FISSION REACTOR
                        O: CALCULATIONS OF WASTE MANAGEMENT FOR MINOR ACTINIDE BURNING REACTOR
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2) Igarasi, S. et al.: JAERI-M 83-145, "Japanese List of Requests for Nuclear Data", (1983) ; Igarasi, S. et al.: JAERI-M 88-067, "Japanese List of Requests for Nuclear Data", (1988).

国際単位系 (SI) と換算表

表 1　SI 基本単位および補助単位

量	名称	記号
長さ	メートル	m
質量	キログラム	kg
時間	秒	s
電流	アンペア	A
熱力学温度	ケルビン	K
物質量	モル	mol
光度	カンデラ	cd
平面角	ラジアン	rad
立体角	ステラジアン	sr

表 2　SI と併用される単位

名称	記号
分，時，日	min，h，d
度，分，秒	°，′，″
リットル	l，L
トン	t
電子ボルト	eV
原子質量単位	u

1 eV　1.60218×10^{-19} J

1 u　1.66054×10^{-27} kg

表 5　SI 接頭語

倍数	接頭語	記号
10^{18}	エクサ	E
10^{15}	ペタ	P
10^{12}	テラ	T
10^{9}	ギガ	G
10^{6}	メガ	M
10^{3}	キロ	k
10^{2}	ヘクト	h
10^{1}	デカ	da
10^{-1}	デシ	d
10^{-2}	センチ	c
10^{-3}	ミリ	m
10^{-6}	マイクロ	μ
10^{-9}	ナノ	n
10^{-12}	ピコ	p
10^{-15}	フェムト	f
10^{-18}	アト	a

表 3　固有の名称をもつ SI 組立単位

量	名称	記号	他の SI 単位による表現
周波数	ヘルツ	Hz	s^{-1}
力	ニュートン	N	m·kg/s^2
圧力，応力	パスカル	Pa	N/m^2
エネルギー，仕事，熱量	ジュール	J	N·m
仕事率，放射束	ワット	W	J/s
電気量，電荷	クーロン	C	A·s
電位，電圧，起電力	ボルト	V	W/A
静電容量	ファラド	F	C/V
電気抵抗	オーム	Ω	V/A
コンダクタンス	シーメンス	S	A/V
磁束	ウェーバ	Wb	V·s
磁束密度	テスラ	T	Wb/m^2
インダクタンス	ヘンリ	H	Wb/A
セルシウス温度	セルシウス度	℃	
光束	ルーメン	lm	cd·sr
照度	ルクス	lx	lm/m^2
放射能	ベクレル	Bq	s^{-1}
吸収線量	グレイ	Gy	J/kg
線量当量	シーベルト	Sv	J/kg

表 4　SI と共に暫定的に維持される単位

名称	記号
オングストローム	Å
バーン	b
バール	bar
ガル	Gal
キュリー	Ci
レントゲン	R
ラド	rad
レム	rem

1 Å　0.1 nm　10^{-10} m

1 b　100 fm^2　10^{-28} m^2

1 bar　0.1 MPa　10^5 Pa

1 Gal　1 cm/s^2　10^{-2} m/s^2

1 Ci　3.7×10^{10} Bq

1 R　2.58×10^{-4} C/kg

1 rad　1 cGy　10^{-2} Gy

1 rem　1 cSv　10^{-2} Sv

（注）

1. 表 1～5 は「国際単位系」第 5 版，国際度量衡局 1985 年刊行による．ただし，1 eV および 1 u の値は CODATA の 1986 年推奨値によった．
2. 表 4 には海里，ノット，アール，ヘクタールも含まれているが日常の単位なのでここでは省略した．
3. bar は，JIS では流体の圧力を表わす場合に限り表 2 のカテゴリーに分類されている．
4. EC 閣僚理事会指令では bar，barn および水銀柱の単位 mmHg を表 2 のカテゴリに入れている．

換算表

	N（10^5 dyn）	kgf	lbf
力	1	0.101972	0.224809
	9.80665	1	2.20462
	4.44822	0.453592	1

粘度　1 Pa·s（N·s/m^2）　10 P（ポアズ）（g/(cm·s)）

動粘度　1 m^2/s　10^4 St（ストークス）（cm^2/s）

	MPa（10^6 bar）	kgf/cm^2	atm	mmHg（Torr）	lbf/in^2（psi）
圧力	1	10.1972	9.86923	7.50062×10^3	145.038
	0.0980665	1	0.967841	735.559	14.2233
	0.101325	1.03323	1	760	14.6959
	1.33322×10^{-4}	1.35951×10^{-3}	1.31579×10^{-3}	1	1.93368×10^{-2}
	6.89476×10^{-3}	7.03070×10^{-2}	6.80460×10^{-2}	51.7149	1

	J（10^7 erg）	kgf·m	kW·h	cal（計量法）	Btu	ft·lbf	eV
エネルギー・仕事・熱量	1	0.101972	2.77778×10^{-7}	0.238889	9.47813×10^{-4}	0.737562	6.24150×10^{18}
	9.80665	1	2.72407×10^{-6}	2.34270	9.29487×10^{-3}	7.23301	6.12082×10^{19}
	3.6×10^6	3.67098×10^5	1	8.59999×10^5	3412.13	2.65522×10^6	2.24694×10^{25}
	4.18605	0.426858	1.16279×10^{-6}	1	3.96759×10^{-3}	3.08747	2.61272×10^{19}
	1055.06	107.586	2.93072×10^{-4}	252.042	1	778.172	6.58515×10^{21}
	1.35582	0.138255	3.76616×10^{-7}	0.323890	1.28506×10^{-3}	1	8.46233×10^{18}
	1.60218×10^{-19}	1.63377×10^{-20}	4.45050×10^{-26}	3.82743×10^{-20}	1.51857×10^{-22}	1.18171×10^{-19}	1

1 cal　4.18605 J（計量法）

4.184 J（熱化学）

4.1855 J（15 ℃）

4.1868 J（国際蒸気表）

仕事率　1 PS（仏馬力）

75 kgf·m/s

735.499 W

放射能	Bq	Ci
	1	2.70270×10^{-11}
	3.7×10^{10}	1

吸収線量	Gy	rad
	1	100
	0.01	1

照射線量	C/kg	R
	1	3876
	2.58×10^{-4}	1

線量当量	Sv	rem
	1	100
	0.01	1

（86 年 12 月 26 日現在）