

RSIC Newsletter



Oak Ridge National Laboratory

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No. 355

June 1994

*I don't think much of a man who is not wiser today than he was
yesterday.—Abraham Lincoln*

CHANGES TO THE COMPUTER CODE COLLECTION

Three changes were made to the computer code collection during the month. An existing code package was replaced with a newly frozen version, an existing code package was extended with an additional hardware version, and an existing code package was updated to make a correction.

CCC-543/TORT-DORT 2.8.14

OP SYS: UNIX, DOS

Language: Fortran 77
and C

Computers: Cray, IBM
RISC, Sun, HP, Dec,
PC

Format: tar, DOS

Oak Ridge National Laboratory advised us of a correction required to this two- and three-dimensional discrete ordinates transport code system regarding an error in both TORT and DORT that applies to a few unusual problems. When the error does occur, the result has invariably been job failure. Both codes have subroutines named INPUT. In both, a few lines below statement label 1037, a call to DLOCAL is made with the arguments LENDR and I1. The first argument should be LENDB. LENDB and LENDR are almost always equal. The UNIX version is transmitted either on tape cartridge in tar format or on four DS/HD 3.5-in. (1.44 MB) diskettes in self-extracting compressed DOS files. The PC version is transmitted on four DS/HD 3.5-in. (1.44 MB) diskettes in self-extracting compressed DOS files. References: ORNL-6268 (Nov. 1987), ORNL-5851 (April 1982), ORNL/TM-8362 (Sept. 1982), ORNL/TM-12246 (Jan. 1993), ORNL/TM-12359 (Aug. 1993), and Informal reports. Fortran 77 and C; Cray, IBM RISC, Sun, HP, Dec (C00543/MFMWS/03) or PC 386 (C00543/PC386/00).

PSR-146/ALICE91

OP SYS: SunOS4,
UNICOS, DOS,
Solaris

Language: Fortran 77

Computers: Cray, Sun,
PC

Format: DOS, tar

Lawrence Livermore National Laboratory, Livermore, California, contributed a new hardware version of this statistical model code system with fission competition. The new release runs on Sun workstations under either SunOS 4.1.1 or Solaris 2.3.

Several types of calculations and combinations can be performed by ALICE including a standard Weisskopf-Ewing evaporation with multiple particle emission, s-wave approximation to give an upper limit to the enhancement of gamma-ray deexcitation due to angular momentum effects, and an evaporation calculation that can include fission competition via the Bohr-Wheeler approach. ALICE91 calculates precompound decay via

Hybrid and GDH models with multiple precompound decay algorithms, single and double differential spectra, and reaction product cross sections.

Versions are also available for the Cray XMP and IBM PC/AT computers with math co-processors. The Cray/CTSS version used the CIVIC compiler, and the Cray/UNICOS version used the CFT77 compiler. For ALICE-87 IBM Professional Fortran Version 1.0 was used and for ALISO, Microsoft's Fortran 4.01 was used. Each package can be transmitted on one DS/HD 5.25-in. (1.2 MB) diskette in DOS format. The SUN version can alternately be transmitted on one diskette written in tar format. References: UCID-20169 (September 1984), UCID-19614 (November 1982), *Physical Review C*, 28(4), 1475-1492 (October 1983), and UCRL-JC-109052 (Nov. 1991). Fortran 77; Cray (P00146/CY0MP/00), IBM PC (P00146/PCAT/00), and SUN (P00146/SUN05/00).

PSR-158/SAMMY-H1

OP SYS: AIX

Language: Fortran

Computers: IBM RISC
6000

Format: tar

ORNL has contributed a newly frozen version of this code system for analyses of neutron-induced cross section data in the resolved resonance region. Many new features are included in SAMMY-H1 in which theoretical cross sections are generated using the Reich-Moore approximation to R-matrix theory. Sophisticated models are used to describe the experimental situation: data-reduction parameters (e.g. normalization, background, or sample thickness) are included. Several options are included for both Doppler and resolution broadening. Self-shielding and single-scattering corrections are included for analysis of capture cross sections.

Values for both resonance parameters and experimental quantities (e.g. sample thickness, effective temperature) are determined via fits to the experimental data. Data types that may be analyzed include transmission, elastic (both angle-integrated and differential), fission, inelastic, capture, and absorption cross sections, and eta. Multiple isotopes and impurities within a sample are handled accurately. Bayes' Theorem (generalized least squares) is used to find the "best fit" values of parameters and the associated covariance matrix.

This release has been tested on IBM RISC 6000 computers under AIX 3.2.5 using the XLF 2.3 compiler. The code system is available in compressed tar format on either DC 6150 (150 MB), 4-mm DAT (8 or 2.3 GB), or 8-mm (2.3 GB) cartridge tapes. References: ORNL/TM-9179 (August 1984), ORNL/TM-9179/R1 (July 1985), ORNL/TM-9179/R2 (June 1989), and Rev. 3 (Draft 1994). Fortran; IBM RISC 6000 (P00158/IRISC/01).

Visitors to RSIC

During the month the following persons came for an orientation visit and/or to use RSIC facilities: *Sun Zuxun*, China Institute of Atomic Energy, Beijing; *Lu Sian Ting*, M&R Forwarding, Ltd., Shanghai, China; *E. Shjo*, Louisiana State University; *W. I. Furman*, Joint Institute of Nuclear Research, Moscow, Russia; *Raquel Paviotti Corcuera*, Centro Tecnico Aeroespacial, São Jose dos Campos, Brazil; *E. Szondi*, Budapest Technical University, Hungary; and *L. M. Smith*, University of Tennessee, Space Institute, Tullahoma, Tennessee.

CONFERENCES, COURSES, SYMPOSIA

RSIC attempts to keep its users/contributors advised of conferences, courses, and symposia in the field of radiation protection, transport, and shielding through this section of the newsletter. Should you be involved in the planning/organization of such events, feel free to send your announcements and calls for papers to RSIC.

Calendar

Your attention is directed to the following events of interest.

July 1994

6th International Radiation Physics Society

(*ISRP 6*), July 18–22, 1994, Rabat, Morocco.

Contact: D. B. Isabelle, CERI-CNRS, 3A Rue de la Ferrollerie, 45071 Orleans Cedex 2, France (fax 33-38-63-02-71) or Pr. M. Berrada, Lab. de Physique Nucléaire, Faculté des Sciences, B. P. 1014 Rabat, Morocco (Fax 212-7-77-99-78).

27th International Conference on High Energy

Physics, July 21–27, 1994, Glasgow, United Kingdom. Contact: Institute of Physics, 47 Belgrave Square, London SW1X 8OX, UK.

International Conference on Low-Level Waste,

July 24–26, 1994, Norfolk, Virginia USA, sponsored by the Electric Power Research Institute. Contact: Ms. L. Nelson, EPRI, P.O. Box 10412, Palo Alto, CA 94304 (fax 415-855-2954).

Workshop on Radwaste, July 26–29, 1994,

Norfolk, Virginia, sponsored by the American Society of Mechanical Engineers and EPRI. Contact: Ms. L. Nelson, EPRI, P.O. Box 10412, Palo Alto, CA 94304 (fax 415-855-2954).

August 1994

Technology Transfer, What? Why? How?, Aug. 10–11, 1994, Richland, Washington, sponsored by WM Symposia and held in conjunction with the TriCiPE II environmental trade show. Contact: WM Symposia (phone 602-624-8573).

SPECTRUM '94, Aug. 14–18, 1994, Atlanta, Georgia, jointly sponsored by the ANS, the Canadian Nuclear Society, the Atomic Energy Society of Japan, IAEA, the European Nuclear Society, and the U. S. Department of Energy. Contact: Laura Jordan, *SPECTRUM '94*, Bldg. 773-41A, Westinghouse Savannah River Co., Aiken, SC 29808 USA (phone 803-725-3426; fax 803-725-2978).

Occupational & Environmental Radiation

Protection, Aug. 15–19, 1994, a course offered by the Harvard School of Public Health. Contact: Harvard School of Public Health, Office of Continuing Education, 677 Huntington Ave., Boston, MA 02115-0023 (phone 617-432-1171, fax 617-432-1969).

Computational Methods in Reactor Analysis,

Aug. 15–19, 1994, Knoxville, Tennessee, a short-course sponsored by the University of Tennessee during Tennessee Industries Week, TIW-29. Contact: T. W. Kerlin, Head of the Dept. of Nuclear Engineering, 315 Pasqua Engineering Bldg., University of Tennessee, Knoxville, TN 37996-2300 (phone 615-974-2525; fax 615-974-0668; email salmon@utkvt.UTK.edu).

Monte Carlo Analysis, Aug. 15–19, 1994,

Knoxville, Tennessee, a short-course sponsored by the University of Tennessee during Tennessee Industries Week, TIW-29. Contact: T. W. Kerlin, Head of the Dept. of Nuclear Engineering, 315 Pasqua Engineering Bldg., University of Tennessee, Knoxville, TN 37996-2300 (phone 615-974-2525; fax 615-974-0668; email salmon@utkvt.UTK.edu).

Health Physics for the Industrial Hygienist, August 15-19, 1994, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117(phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

Annual Conference of the European Association of Nuclear Medicine, Aug. 20-24, 1994, Düsseldorf, Germany. Contact: Die Kongress-Partner, Germany (phone 49-69-78-5050, fax 49-69-78-5049).

18th Symposium on Fusion Technology (18th SOFT), Aug. 22-26, 1994, Karlsruhe, Germany. Contact: SOFT Conference Secretariate, Germany (phone 7246-82-5461, fax 7247-82-5467).

Advanced Workshop on Occupational & Environmental Radiation Protection, Aug. 22-26, 1994, a course offered by the Harvard School of Public Health. Contact: Harvard School of Public Health, Office of Continuing Education, 677 Huntington Ave., Boston, MA 02115-0023 (phone 617-432-1171, fax 617-432-1969).

Safe Use of Radionuclides, August 22-26, 1994, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117(phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

10th Annual Oak Ridge Model Conference on Waste Management and Environmental Restoration, Aug. 23-25, 1994, Oak Ridge, Tennessee, sponsored by the U. S. Department of Energy, Martin Marietta Energy Systems, Inc., and the Oak Ridge Waste Management Association. Contact: Kimberly Collins, Analysas Corp., 300 S.

Tulane Ave., Oak Ridge, TN 37830 (phone 615-576-0650).

Interregional Seminar on Radiotherapy Dosimetry: Radiation Dose in Radiotherapy from Prescription to Delivery, Aug. 27-30, 1994, Rio de Janeiro, Brazil, sponsored by the International Atomic Energy Agency. Contact: IAEA Conference Service Section, P.O. Box 100, Wagramerstrasse 5, A-1400 Vienna, Austria.

International Workshop on Scientific Bases for Decision Making After a Radioactive Contamination of an Urban Environment, Aug 29-Sept. 2, 1994, Rio de Janeiro/Goiania, Brazil. Contact: E.C.S. Amaral, CNEN, Inst. of Radioprotection and Dosimetry, Av. Salvador Allende s/n, Recreio CEP 22780, P.O. Box 37750, Rio de Janeiro, Brazil (phone 55-21-348-5172, fax 55-21-442-1950).

September 1994

International Conference on the Nuclear Power Option, Sept. 5-8, 1994, Vienna, Austria, sponsored by the International Atomic Energy Agency. Contact: IAEA (phone 43-1-2360-1310; fax 43-1-234-564).

First International Workshop on Accelerator-Based Neutron Sources for Boron Neutron Capture Therapy, Sept. 11-14, 1994, Jackson, Wyoming, sponsored by the U.S. Department of Energy. Contact: D. W. Nigg, Idaho National Engineering Laboratory, P.O. Box 1625, Idaho Falls, ID 83415-3890 (fax 208-526-0528).

9th International Meeting on Radiation Processing, Sept. 11-16, 1994, Istanbul, Turkey. Contact: Prof. Dr. Olgun Guven, Chairman (IMRP-9), P.O. Box 177, Bahcelievler, Ankara, 06502 Turkey (phone 90-4-298-1894, fax 90-312-815-4307).

Environmental Monitoring, September 12-16, 1994, in Oak Ridge, Tennessee, a short course

sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

Utility-NRC Interface Workshop (Region I), Sept. 18–21, 1994, King of Prussia, Pennsylvania, sponsored by the American Nuclear Society. Contact: General Chairs William F. Kane, U. S. Nuclear Regulatory Commission, 475 Allendale Road, King of Prussia, PA 19406 (phone 215-337-5304; fax 215-337-5241) or Dickenson Smith, PECO Energy Co., 965 Chesterbrook Blvd, M/C 63C-3, Wayne, PA 19087-5681 (phone 215-640-6600; fax 215-640-6611).

Applied Health Physics, September 19–October 21, 1994, in Oak Ridge, Tennessee, a five-week course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

6th Russian Scientific Conference on Radiation Shielding of Nuclear Installations, Sept. 20–23, 1994, Obninsk, Russia. Contact: A. P. Suvorov, Inst. of Physics and Power Engineering, 249020, Bondarenko Sq. 1, Obninsk, Kaluga Region, Russia (fax 095-230-2326, telex 911509 URAN SU).

Fundamentals of Radiation Protection, Sept. 26–30, 1994, Cambridge, Massachusetts, a short course offered by Arthur D. Little, Radiation Technology and Policy Unit, ATTN: David J. Allard, 20 Acorn Park, Rm. 321, Cambridge, MA 02140-2390 (phone 617-498-6101; fax 617-498-7161).

3rd International Conference on Decommissioning of Nuclear Facilities, Sept. 26–30, 1994, Luxembourg, sponsored by

Commission of European Communities. Contact: FBCL Conference Services, Rue J.P. Brasseur 29, L-158 Luxembourg, Luxembourg (phone 352-455518; fax 352-455905).

October 1994

ENC-94—International Nuclear Congress and World Exhibition, Oct. 2–6, 1994, Lyon, France. Contact: P. Fuez, European Nuclear Society, P.O. Box 5032, Belpstrasse 23, CH-3007 Berne, Switzerland (phone 41-31-320-61-11; fax 41-31-244-66).

Meeting of the American Society for Therapeutic Radiology and Oncology, Oct. 3–7, 1994, Philadelphia, Pennsylvania. Contact: ASTRO, 1101 Market St., 14th Floor, Philadelphia, PA 19107-2990 (phone 215-574-3180).

Seminar on Radioactive Waste Management Practices and Issues in Developing Countries, Oct. 10–14, 1994, Beijing, China, sponsored by IAEA. Contact: IAEA, Conference Service Section, P.O. Box 100, A-1400 Vienna, Austria (phone 43-1-2360-1310; fax 43-1-234-564).

ANSWERS Shielding & Criticality Seminar, Oct. 11–14, 1994, a workshop presented by AEA Technology at Winfrith, U.K. Contact: Mrs. J. Wilkinson-James, AEA Technology, Winfrith, Dorchester, Dorset DT2 8DH, UK (phone 0305-202352; fax 0305-202746).

3rd International Conference on Containment Design and Operation, Oct. 19–21, 1994, Toronto, Canada. Contact: CNS, 144 Front St. West, Suite 725, Toronto, Ont., Canada M5J 2L7 (phone 416-977-7620).

Fourth Conference on Radiation Protection and Dosimetry, Oct. 24–26, 1994, Orlando, Florida, sponsored by the Oak Ridge National Laboratory. Contact: J. S. Bogard, ORNL, P.O. Box 2008, Oak Ridge, TN 37831-6379 (phone 625-574-5851, fax 615-574-9174).

International Symposium on Global Environment and Nuclear Energy Systems, Oct. 24–27, 1994, Shizuoka, Japan. Contact: Akinao Shimizu or Hiroshi Tomiyasu, Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, O-okayama, Meguro-ku, Tokyo 152, Japan (phone 81-3-3734-3062; fax 81-3-5734-2925).

International Conference on Radiation and Society: Comprehending Radiation Risks, Oct. 24–28, 1994, Paris, sponsored by the IAEA. Contact: IAEA, IAEA-CN-54, P.O. Box 100, A-1400 Vienna, Austria (fax 43-1234564).

Nuclear Science Symposium: Medical Imaging Conference, Oct. 30–Nov. 5, 1994, Norfolk, Virginia, sponsored by the U.S. Department of Energy, the Institute of Electrical and Electronics Engineers, and the Stanford Linear Accelerator Center. Contact: L. A. Kleisner, SLAC, P.O. Box 4349, MS 12, Stanford, CA 94309.

November 1994

2nd ANS Workshop on the Safety of Soviet-Designed Nuclear Power Plants, Nov. 12–13, 1994, Washington, D.C., held in conjunction with the 1994 ANS Winter Meeting. Contact: Robert Bari, Brookhaven National Laboratory, Bldg. 197C, Upton, NY 11973 (phone 516-282-2629; fax 516-282-5266).

1994 ANS Winter Meeting: The State of the Industry, Nov. 13–17, 1994, Washington, D.C. Contact: ANS Meetings Dept., 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 708-579-8258).

ANS Meeting on Environmental Aspects of Decommissioning, Decontamination, and/or Environmental Restoration at Nuclear and Mixed Waste Facilities, Nov. 13–17, 1994, Washington. Contact: Argonne National Laboratory, OQA/EWM-201, Ms. M. G.

White, 9700 S. Cass Ave., Argonne, IL 60439 (fax 708-252-5965).

2nd Radiation Physics Conference, Nov. 20–24, 1994, Sadaat City, Egypt, sponsored by the Atomic Energy Authority, Menoufia University. Contact: Prof. M. A. Gomaa, Atomic Energy Authority, 101. Kasr El-Aini Street, Cairo, Egypt (phone 02-355-8269/8264, fax 02-354-0982).

Workshop on Various Reduction Schemes Developed at ENEA for Use With the MCNP Transport Code, Nov. 28–Dec. 1, 1994, Bologna, Italy. Contact: K. W. Burn (kwb@lboenea.bitnet).

December 1994

Safe Use of Radionuclides, December 5–9, 1994, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

March 1995

1995 HEART Conference, Mar. 13–17, 1995, Sandia National Laboratories, Albuquerque, New Mexico. Contact: Delores Walters, JAYCOR, P.O. Box 85154, San Diego, CA 92138 (619-535-9763).

Gamma Spectroscopy, March 20–24, 1995, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

5th Topical Meeting on Tritium Technology in Fission, Fusion, and Isotopic Applications, Mar. 26–31, 1995, Augusta, Georgia, sponsored by the ANS. Contact: C. E.

Murphy, Westinghouse SRC, Savannah River Lab., Aiken, SC 29808.

Health Physics for the Industrial Hygienist, March 27–31, 1995 in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

April 1995

Applied Health Physics, April 10–May 12, 1995, in Oak Ridge, Tennessee, a five-week course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

June 1995

Air Sampling for Radioactive Materials, June 12–16, 1995, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

Environmental Monitoring, June 26–30, 1995 in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated

Universities. Contact: Registrar Professional Training Programs Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383)

August 1995

Safe Use of Radionuclides, August 21–25, 1995, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117(phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

September 1995

Environmental Monitoring, September 11–15, 1995, in Oak Ridge, Tennessee, a short course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383).

Applied Health Physics, September 18–October 20, 1995, in Oak Ridge, Tennessee, a five-week course sponsored by Oak Ridge Associated Universities. Contact: Registrar Professional Training Programs, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge TN 37831-0117 (phone 615-576-3576 or 615-241-4888; fax 615-576-9383) .

MAY ACCESSION OF LITERATURE

The following literature cited has been ordered for review, and that selected as suitable will be placed in the RSIC Information Storage and Retrieval Information System (SARIS). This early announcement is made as a service to the shielding community. Copies of the literature are not distributed by RSIC. They may generally be obtained from the author or from a documentation center such as the National Technical Information Service (NTIS), Department of Commerce, Springfield, Virginia 22161. For

literature listed as available from INIS contact INIS Clearinghouse, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna.

RSIC maintains a microfiche file of the literature entered into SARIS, and duplicate copies of out-of-print reports may be available on request. Naturally, we cannot fill requests for literature which is copyrighted (such as books or journal articles) or whose distribution is restricted.

This literature is on order. It is not in our system. Please order from NTIS or other available source as indicated.

Radiation Shielding Literature

Book . *CINDA93* . . 1993. . IAEA

Book . *International Code Comparison for Intermediate Energy Nuclear Data*. . . Blann, M.; Gruppelaar, H.; Nagel, P.; Rodens, J. . 1994. . NEA OECD

Book . *Probability, Statistics, and Data Uncertainties in Nuclear Science and Technology, Volume 4*. . . Smith, D.L. . OECD

Health Physics, 66, 380-391 .

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Health Physics, 66, 400-406 . *Calibration of a 241Am Wound-Monitoring System Using Monte Carlo Techniques*. . . Hickman, D.P.; Kruchten, D.A.; Fisher, S.K.; Anderson, A.L. . 04/94

Nucl. Instrum. and Methods in Phys. Resh., 336, 442-459 . *A Monte Carlo Investigation of Lead-Scintillator Calorimeters for Hadrons*. . . Tymieniecka, T. . 12/93

Nucl. Sci. and Eng., 117, 1-9 . *Biases in Monte Carlo Eigenvalue Calculations*. . . Gelbard, E.M.; Gu, A.G. . 05/94

Nucl. Sci. and Eng., 117, 10-21 . *Importance Iteration in MORSE Monte Carlo Calculations*. . . Kloosterman, J.L.; Hoogenboom, J.E. . 05/94

Nucl. Sci. and Eng., 117, 47-66 . *Determination of Point Isotropic Buildup Factors of Gamma Rays Including Incoherent and Coherent Scattering for Aluminum, Iron, Lead, and Water by the Discrete Ordinates Methods*. . . Kitsos, S.; Assad, A.; Diop, C.M.; Nimal, J.C.; Ridoux, P. . 05/94

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ANL/FPP/TM-265 . *Analysis of the Neutron Generation from A D-Li Neutron Source*. . . Gomes, I. . 02/94. . Argonne National Laboratory

BME-TR-ES-21/93 . *Evaluation of Resonance Region Covariance Information for IRDF-90*. . . Czifrus, Sz. . 10/93. . Technical University of Budapest

ECN-I-93-019 . *On the Quality of the Uncertainty Information in the International Reactor Dosimetry File IRDF-90*. . . Zsolnay, E.M.; Nolthenius, H. . 06/92. . Netherlands Energy Research Foundation

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JAERI-M 94-015 . *Phase III Experiments of the JAERI/USDOE Collaborative Program on Fusion Blanket Neutronics -Line Source and Annular Blanket Experiments- Vol. 1: Experiment*. . . Yukio OYAMA; Chikara KONNO; Yujiro IKEDA; Jujio MAEKAWA; Kazuaki KOSAKO; Tomoo NAKAMURA; Hiroshi MAEKAWA; Youssef, M.Z.; Kumar, A.; Abdou, M.A.; Watanabe, Y.; Bennett, E.F. . 02/94. . JAERI

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Expression of Gamma-ray Buildup Factors for Stratified Shields. . . Shin, K.; Hirayama, H. . 02/94. . National Laboratory for High Energy Physics. . Submitted to the 8th International Conference of Radiation Shielding, Arlington, TX, U.S.A., 04/24-28/94.

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