RSIC Newsletter

Oak Ridge National Laboratory
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No. 362 *January 1995*

I have never wanted to be famous . . . But many scientists of 100 years back have already been forgotten.—taken from Recollections *by Eugene P. Wigner (1902–1995)*

Wigner: In Tribute

Eugene Wigner died on January 1, 1995, at the age of 92. Though he "never wanted to be famous" his impact on science and history in the 20th history will be forever linked to personalities and events that would have been significantly altered if he had not been where he was. Alvin Weinberg writes in his own memoirs that, "Most people don't really understand the absolutely central role Eugene Wigner played in the Manhattan Project." Wigner was compelled by his understanding of the military implications of earlier discoveries in Germany, France, and the U.S. to make an urgent plea with Albert Einstein and Leo Szilard to Franklin D. Roosevelt to "get an atomic program" rolling. The program became the Manhattan Project. While he later felt that the atomic program was languishing, he nevertheless prepared the basic plans for what became the historic Graphite Reactor in Oak Ridge and the prototype for the crucial plutonium producing reactors at Hanford, Washington.

Wigner spent a brief time as research director of Clinton Laboratories (now Oak Ridge National Laboratory) beginning in 1946. Though he remained full-time only a short while, he returned as a consultant many times in the ensuing years. In the 1960s he returned to Oak Ridge to direct a study of Civil Defense. Wigner was attending ceremonies in November 1963 to shut down ORNL's Graphite Reactor 20 years to the day after its historic criticality on November 4, 1943, when he learned that he had been awarded the Nobel prize. Ready to give credit to others, he thought there were scientists more deserving than he.

One hundred years from now, the particular details of Wigner's life may be forgotten. But unless such expressions as Wigner crystals, Wigner theorems, Wigner energy, and Wigner rules are struck from the scientific canon, he will not be forgotten by students of science.

—*Alice Rice*

CHANGES TO THE COMPUTER CODE COLLECTION

Four changes were made to the computer code collection during the month. One new code system was packaged and added, and three newly frozen versions replaced existing code packages. One change resulted from a foreign contribution.

CCC-543/TORT-DORT 2.12.14

OP SYS: Unix

Language: Fortran 77, C

Computers: Work-stations, mainframes

Format: DOS, tar

Oak Ridge National Laboratory contributed a newly frozen version of this two- and three-dimensional discrete ordinates transport code system. The new release, designated TORT 2.12.14, includes many small improvements and corrections and runs on Sun, DEC Alpha (under OSF/1) and HP workstations in addition to Cray and IBM RS/6000 computers. Significant changes are: the TORSET code now allows mapping between dissimilar direction sets, as well as rotation about the Z axis; TORT scratch files have been reduced in size in cases using discontinuous mesh; TORT has an improved restart option that allows groups left uncompleted in a previous run to continue convergence smoothly; repair and some testing has been done on the TORT adjoint calculations.

Only the mainframe and workstation version has been updated. The new release will be converted to run on a PC in the future. An announcement will appear in the *RSIC Newsletter* as soon as it is available. The code system is transmitted on either DC 6150 (150 MB), 4 mm DAT (8 GB), or 8 mm (2.3 GB) cartridge tapes in tar format or on five 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), and ORNL/TM-12359 (Aug. 1993). Fortran 77 and C, Cray, IBM RS/6000, Sun, and DEC. (C00543/MFMWS/04).

PSR-199/HEATING 7.2i

OP SYS: DOS, Unix

Language: Fortran 77, C

Computers: Work-stations, PCs

Format: DOS, tar

Oak Ridge National Laboratory contributed a newly frozen version of this code system for multidimensional, finite-difference heat conduction analysis. The package, designated HEATING 7.2i, solves steady-state and/or transient heat conduction problems in one-, two-, or three-dimensional Cartesian, cylindrical, or spherical coordinates. Changes to the code since the previous version supplied to RSIC (HEATING 7.2f) include the following.

Revision	Problem corrected
g	In the convergence information file the header was repeated with every nonlinear iteration when using the conjugate gradient steady-state solution technique.
h	User-supplied unit conversion factors for material properties extracted from the material properties library were not being applied.
i	Applying a boundary condition to a surface with zero area (i.e., a surface at a radius of zero) produced an error with the direct solution steady-state technique.

The package is available for either Unix workstations or personal computers. The system has run on several Unix platforms including Cray, IBM RS/6000, Sun, DEC, and HP. The PC version is compiled with Version 4.2.1 of the Microway NDP Fortran-386 compiler to create the .EXE files, including the DOS extender. A 386- or 486-based personal computer equipped with at least 4 MB of memory and a math coprocessor is the minimum configuration for the PC version. The Unix version is available on a 3.5-in. diskette in tar format; the PC version is transmitted on a 3.5-in. (1.44 MB) DS/HD diskette in self-extracting compressed DOS files. Reference: ORNL/TM-12262 (Nov.

1992). Fortran 77 and C; Unix workstations (P00199/ALLWS/03), PC (P00199/PC386/03).

PSR-317/TRANSX 2.15

OP SYS: Unix, Unicos, VMS

Language: Fortran 77

Computers: Mainframes, workstations

Format: tar

Los Alamos National Laboratory in New Mexico contributed a newly frozen version of this code system which reads NJOY91-produced MATXS libraries and produces transport tables for use with discrete-ordinates (Sn) and diffusion codes. Tables can be produced for neutron, photon, charged-particle, or coupled transport. Options include adjoint tables, mixtures, homogeneous or heterogeneous self-shielding, group collapse, homogenization, thermal upscatter, prompt or steady-state fission, transport corrections, elastic removal corrections and flexible response function edits. TRANSX can be used to construct data for fusion reactors, fast fission reactors, thermal fission reactors and shielding problems. A utility code for maintaining MATXS libraries, BBC version 2.5 is included in the package. UPD, a portable version-control program, is included to make machine-dependent changes and updates to the code.

TRANSX2.15 has been run on Cray under Unicos, Vax running VMS, Sun, and IBM RS/6000 computers. The code is transmitted on cartridge tape in tar format. References: LA-12312/MS (1992) and LA-12057-MS (April 1991). Fortran 77; Cray, Sun, IBM, and Vax (P00317/MFMWS/01).

PSR-351/PREPRO-94

OP SYS: Unix, VMS, DOS

Language: Fortran 77

Computers: Many

Format: DOS

The Lawrence Livermore National Laboratory in California and the International Atomic Energy Agency in Austria contributed a new version of the pre-processing code system for data in the ENDF/B format. This is a modular set of computer codes which reads evaluated nuclear data in the ENDF/B format, processes the data, then outputs it in the ENDF/B format. PREPRO-94 is designed to operate on virtually any type of computer from mainframes to personal computers, using the CONVERT program to configure the other codes to run on any one of a variety of platforms. Codes included in the package are CONVERT, MERGER, LINEAR, RECENT, SIGMA1, LEGEND, SIXPAK, DICTION, FIXUP, GROUPIE, MIXER, VIRGIN, COMPLOT, EVALPLOT, and RELABEL. The Lahey Fortran F77L3-EM/32 v5.1 comiler was used to create the executables included in the package for use on personal computers. The package is transmitted on four DS/HD 3.5-in. (1.44 MB) diskettes in self-extracting compressed DOS files. References: IAEA-NDS-39 (Jan. 1994). Fortran 77; Many computers (P00351/MNYCP/00).

CHANGE TO THE DATA LIBRARY COLLECTION

A new data libraray was added to the data library collection during the month.

DLC-179/ENDLIB-94

OP SYS: Unix, VMS

Language: Fortran 77

Computers: Many

Format: DOS

The Lawrence Livermore National Laboratory contributed new libraries of atomic data, electron data, and photon data in Evaluated Nuclear Data Library (ENDL) type format. These ENDLIB-94 data are in a machine-independent character file format and contain data for the evaluated atomic relaxation data library (EADL), the evaluated photon interaction data library (EPDL), and the evaluated electron interaction data library (EEDL). The purpose of these libraries is to furnish data for coupled electron-photon transport calculations. All three libraries are required to perform coupled photon-electron transport calculations. The UCRL-ID-117796 report included in the documentation for this package provides information on the contents and

formats for all three libraries. All of these libraries span atomic numbers, Z, from 1 to 100. Additionally the electron and photon interaction libraries cover the incident particle energy range from 10 eV to 100 GeV.

Two codes which are written in Fortran 77 and run on either Vax or Unix workstations are included in the package. SCATMAN reads photon interaction cross sections in the ENDL character format and calculates anomalous scattering factors and/or coherent cross sections. RELAX calculates atom relaxation spectra of X-rays and electrons due to bound-bound transitions. This calculation is based on the atomic transition data contained in EADL.

The data are transmitted in a binary compressed tar file on either a DC 6150 (150 MB), 4 mm DAT (8 GB), or 8 mm (2.3 GB) cartridge tape. References: UCRL-ID-117796 (July 1994), UCRL-ID-110438 (March 1992), UCRL-ID-103422 (November 1989). Fortran 77; Many computers (D00179/MNYCP/00).

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.

Ural Atomic-3

The Call for Papers has been announced by the organizers of the *3rd International Symposium: Ural Atomic*, to be held May 29–June 2, 1995, in Zarechny in the Urals region. The symposium organizers are the Institute of Industrial Ecology, Ural Branch of the Russian Academy of Sciences; the Beloyarskaya nuclear power station; the Nuclear Society of Russia; the "Radioecology" Fund; and Club Association UNESCO UN. The program committee is soliciting papers on the following topics:

I. Problems of contamination with radionuclide territories:

- Monitoring and rehabilitation of the territories,
- Radioecology of ground and water ecosystems,
- Calculation of doses,
- Medical consequences of radiation impact,
- Socio-economic consequences of radioactive contamination of territories,
- Experience in solving problems of contamination with radionuclide territories rehabilitation as it arises from realization of state program of Russian Federation for Urals region, and
- Natural sources of radiation.

II. Problems and perspectives of nuclear industrial complex development:

- Conversion problems,
- Perspectives of nuclear power engineering development,
- Handling of radioactive wastes, and
- Nuclear energy enterprise activities and regional safety.

III. Problems of complex assessment of state of territories with heavy industrial impact:

- Clearing up the ecological status of urbanized territories,
- Risk assessment of natural and technogenic catastrophes in industrial regions, and
- Assessment of enterprise impact on environment.

Further information about the conference may be obtained from the Institute of Industrial Ecology UB RAS, 91, Pervomayskaya st., 620219, Ekaterinburg (phone for Veronica Gromova, 3432-44-07-71; phone for Dr. Anatoly Kuligin, 3432-44-59-62; fax 3432-44-07-71; email Alpha@ccko.rcupi.c-burg.su).

The Third International Conference on Computational Physics

November 13-17, 1995, Chung-Yuan Christian University, Chung-Li, Taiwan, is the time and place set for the *Third International Conference on Computational Physics* (ICCP-3), sponsored by the International Union of Pure and Applied Physics, Chung Yuan Christian University, National Central University, National Center for High-Performance Computing, Ministry of Education, National Science Council, and the Physical Society. The conference is now one of the recognized international conferences of this robust field. While historically it was named computational physics, its content has gone well beyond the standard bounds.This conference will last 5 days, and will include the following topics:

- Astrophysics and Cosmology
- Computations in Atomic and Subatomic Physics
- Computations in Condensed Matter Physics
- Chaos and Nonlinear Dynamics
- Plasma Physics and Fluid Dynamics
- Computer Architecture, Networking, and Algorithms
- Molecular Dynamics and Computational Biology
- Computer-Aided Physics Education

The Conference is open to anyone who wishes to register. There will be an exhibition of power computers (e. g. workstations), and arrangements will be made for participants to show slides, movies, and video presentations. There will be plenary and parallel sessions, and the conference proceedings will be published. Those who wish to contribute a paper may submit a 1000-word abstract in English before **March 30, 1995** to Dr. Ming-Chang Huang, Physics Department, Chung-Yuan Christian University, Chung-Li, Taiwan (Fax: ++886-3-4563160, E-mail: ICCP95@phys730.cycu.edu.tw). An oral presentation in English of 20 minutes with discussion is planned for each accepted paper. The authors will be notified on May 30, 1995, on acceptance or rejection of their paper. If there are sufficient requests, the organizers will also organize several poster sessions.

Calendar

Your attention is directed to the following events of interest.

February 1995

Radiation Detection & Measurement, Feb. 20–24, 1995, Orlando, Florida. Contact: Technical Management Services, Inc., P.O. Box 226, New Hartford, CT 06057 (phone 203-738-2440, fax 203-738-9322).

International Conference on Nuclear Power Plants: Experiences and Perspectives, Feb. 21–23, 1995, Madrid, Spain. Contact: European Nuclear Society, Belpstrasse 23, CH-3007, Bern, Switzerland.

International Conference on Internal Radiation Protection Dosimetry: Occupational Workers and the Public, Feb. 21–24, 1995, Bombay, India, sponsored by the Indian Association of Radiation Protection. Contact: Dr. R. C. Sharma, IARP, Low-Level Counting Laboratory, BARC Hospital, Anushaktinagar, Bombay 400 094, India (phone 91-022-5512936; fax 91-022-556-0750).

Waste Management '95, Feb. 26–Mar. 2, 1995, Tucson, Arizona. Contact: WM Symposia, Inc., Suite 19, 245 S. Plumer, Tucson, AZ 85719 (phone 602-624-8573; fax 602-792-3993).

Higher European Research Course for Users of Large Experimental Systems: Neutron and Synchrotron Radiation for Condensed Matter Studies, Feb. 26–Apr. 7, 1995, Grenoble, France. Contact: CNRS, Sec. Hercules, P.O. Box 166X, Maison des Magisteres, F-38042, Grenoble Cedex 6, France.

March 1995

34th International Nuclear and Particle Physics University Meeting: Low-Dimensional Models in Statistical Physics and Quantum Field Theory, Mar. 4–11, 1995, Schladming, Austria. Contact: Univ. Graz, Inst. f. Theoretische Physik, Universitätplatz 5, A-8010, Graz, Austria (fax 43-316-384091, email utp@edvz.kfunigraz.ac.at).

Radiation Transport Calculations Using the EGS4 Monte Carlo System, Mar. 6–9, 1995, Seattle, Washington. Contact: Ms. Suzan Walker, Computer Services Director, The Lawrence H. Lanzl Inst. of Medical Physics, 3876 Bridge Way N., Suite 300, Seattle, WA 98103-7951 (phone 206-545-1141; fax 206-545-1347; email suzan_walker@lanzl.com).

Transportation & Packaging of Radioactive Materials, Mar. 6–10, 1995, Washington, DC. Contact: Technical Management Services, Inc., P.O. Box 226, New Hartford, CT 06057 (phone 203-738-2440, fax 203-738-9322).

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 (phone 619-535-9-763).

Internal Dose Assessment, Mar. 13–17, 1995, Knoxville, Tennessee, a course offered by Consultec Scientific, Inc. Contact: Consultec Scientific, Inc., Suite 110, 725 Pellissippi Pkwy., Knoxville, TN 37932-3300 (phone 615-675-4333 or 800-269-4333; fax 615-675-4334; email info@consultec.com).

Radiation Health and Risks, Mar. 13–17, 1995, Knoxville, Tennessee, a course offered by Consultec Scientific, Inc. Contact: Consultec Scientific, Inc., Suite 110, 725 Pellissippi Pkwy., Knoxville, TN 37932-3300 (phone 615-675-4333 or 800-269-4333; fax 615-675-4334; email info@consultec.com).

Gamma Spectroscopy, Mar. 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).

Health Physics for the Industrial Hygienist, Mar. 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 61 5-576-3576 or 615-241-4888; fax 615-576-9383).

April 1995

High Performance Computing '95, Apr. 9–13, 1995, Tucson, Arizona, sponsored by the Society for Computer Simulation. Contact: High Performance Computing '95, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439 (email tentner@pepper.ra.angl.gov).

Applied Health Physics, Apr. 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).

31st Annual Meeting of the National Council on Radiation Protection and Measurements, Apr. 12–13, 1995, Arlington, Virginia. Contact: NCRP, Suite 800, 7910 Woodmont Ave., Bethesda, MD 20814-3095 (phone 800-229-2652; fax 301-907-8768).

5th Topical Meeting on Emergency Preparedness and Response, Apr. 18–21, 1995, Savannah, Georgia, sponsored by the American Nuclear Society Savannah River Section. Contact: Charles H. Hunter, Jr., Technical Program Chairman, Westinghouse Savannah River Co., Bldg. 773-A, Aiken, SC 29808 (phone 803-725-2953; fax 803-725-4233).

ICONE-3, The Third International Conference on Nuclear Engineering—Nuclear Power and the Energy Future, Apr. 23–27, 1995, Kyoto, Japan. Contact: Mr. M. Takahashi, Japan Society of Mechanical Engineers, Shinjuku-Sanshin Bldg. 5F, 2-4-9 Yoyogi, Shibuya-ku, Tokyo 151 Japan (phone 81-3-3379-6781; fax 81-3-3379-0934); or W. C. Cleff, Sargent & Lundy, 55 E. Monroe St., Chicago, IL 60603.

SCALE Training Course, Apr. 24–28, 1995, in Oak Ridge, Tennessee, sponsored by the DOE Transportation and Packaging Safety Division and hosted by the Radiation Shielding Information Center (RSIC) at ORNL. Contact: Lindy Norris, Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, TN 37831-6370 (phone 615-574-6471).

Radiation Safety, Apr. 24–28, 1995, a training course offered by Northwestern University. Contact: Allison Ando, McCormick School of Engineering, Northwestern University, 2145 Sheridan Road, Evanston, IL 60208-3124 (phone 708-491-3365, fax 708-491-8539).

International Conference on Mathematics and Computations, Reactor Physics, and Environmental Analyses, Apr. 30–May 4, 1995, Portland, Oregon. Contact: Ms. L. Briggs, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439 (phone +91708-252-4677, fax 708-252-4620, email llbriggs@anl.gov).

May 1995

1995 International High-Level Radioactive Waste Management Conference: Progress Toward Understanding, May 1–5, 1995, Las Vegas, Nevada. Contact: Allen G. Croff, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, IL 60525 (fax 708-352-6464).

Conference and International Symposium on Radionuclide Metrology and Its Applications, May 15–19, 1995, Paris, France. Contact: Laboratoire Primaire des Rayonnements Ionisants, P.O. Box 52, F-91193, Gif-sur-Yvette Cedex, France (fax 33-1-69-08-29-19, email ICRM@BABAORUM. CEA.FR).

1st International Conference on Neural, Parallel, and Scientific Computations, May 28–31, 1995, Atlanta, Georgia. Contact: Morehouse College, Dept. of Mathematics, M. Sambandham, 830 Westview Drive, SW, Atlanta, GA 30314 (fax 404-458-7932, email icnpsc@voyager. cau.auc.edu).

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).

July 1995

32nd Annual IEEE International Nuclear and Space Radiation Effects Conference, July 21–27, 1995, Madison, Wisconsin. Contact: United Technologies, Microelectronics Center, 1575 Garden of the Gods Road, Colorado Springs, CO 80907 (fax 719-594-8187).

Joint Annual Meeting of the Health Physics Society and the American Association of Physicists in Medicine to Celebrate the X-Ray Centennial, July 23–27, 1995, Boston, Massachusetts. Contact: Health Physics Society, ATTN: Richard J. Burke, Jr., Suite 130, 8000 Westpark Drive, McLean, VA 22102 (phone 703-790-1745; fax 703-790-9063) or American Association of Physicists in Medicine, ATTN: Salvatore Trofi, Jr., One Physics Ellipse, College Park, MD 20740-3846 (phone 301-209-3350; fax 301-209-0862).

August 1995

10th Brazilian Meeting on Reactor Physics and Thermal Hydraulics (X ENFIR) and the *3rd Brazilian Meeting on Nuclear Applications (III ENAN)*, Aug. 7–11, 1995, Rio de Janeiro, Brazil. Contact: Wilma S. Bastos, IEN, C.P. 68550, CEP-21945.970, RJ, Brazil (fax 55-21-5902692: email IENRCB@BRLNCC.BITNET).

September 1995

5th International Conference on Radioactive Waste Management and Environmental Remediation, Sept. 3–9, 1995 Berlin, Germany. Contact: ASME Headquarters, Ms. L. Friedman, 345 East 47th St., New York, NY 10017-2392 (fax 212-705-7856) or Battelle Pacific Northwest Laboratory, MSIN K1-19, SC Slate, P.O. Box 999, Richland, WA 99352 (fax 509-375-5963).

VOLGA-95, Sept. 4–8, 1995, in Volga, Russia. Contact: Prof. V. Khromov, Department Head, Chairman of Organizing Committee, Prof. V. Naumov, Program Chairman, or Dr. L. Goncharov, Scientific Secretary at the Moscow Engineering Physics Institute, Kashirskoe Shosse 31, Moscow, 115409, Russia (phone +7-095-323-9242; fax +7-095-324-7026; email volga@rephyd.mepi.msk.ru).

4th European Space Power Conference, Sept. 4–8, 1995, Poitiers, France. Contact: ESTEC, Power and Energy Conversion Div., Ms. J. Sanchez-Michielsen, P.O. Box 299, NL-2200, AG Noordwijk, Netherlands, or ESA Publications Division, T. D. Guyenne, NL-2200, AG Noordwijk, Netherlands (fax 31-1719-85433).

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, Sept. 18–Oct. 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).

16th Symposium on Fusion Engineering, Sept. 30–Oct. 4, 1995, Urbana, Illinois. Contact: Cella Elliott, Conference Secretary, Fusion Studies Lab., University of Illinois, Urbana, IL 61801 (phone 217-333-2772; fax 217-333-2906; email miley@uiucvmd.bitnet).

October 1995

International Conference on Radiation Dose Management, Oct. 3–5, 1995, Windermere, United Kingdom. Contact: European Nuclear Society, Belpstrasse 23, CH-3007, Bern, Switzerland.

International Symposium on Nuclear Energy, Oct. 20–21, 1995, Bucharest, Romania. Contact: C. Briatianu, Univ. Politechnicadin Bucuresti, Facultateade Inginerie Mecanica, Splaiul Independentei Nr. 313, Sector 6, 77206, Bucharest, Romania (phone 40-1-6314010/224).

Annual Meeting of the Society for Industrial and Applied Mathematics, Oct. 23–26, 1995, Charlotte, North Carolina. Contact: Soc. for Indus. and App. Math., 3600 University City Sciences Center, Philadelphia, PA 19104-2688 (fax 215-386-7999, email meetings@siam.org).

November 1995

ANS International Topical Meeting on Managing Plant Life, Nov. 28–30, 1995, Nice, France. Contact: Dr. S. Charbonneau, Tour Fiat, Cedex 16, F-92024, Paris, France.

December 1995

11th International Conference on Packaging and Transportation of Radioactive Materials, Dec. 3–8, 1995, Las Vegas, Nevada. Contact: Laura Dechter, Social & Scientific Systems, Inc., 7101 Wisconsin Ave., Bethesda, MD 20814-4805 (phone 301-986-4870; fax 301-913-0351).

April 1996

Annual Meeting of the National Council on Radiation Protection and Measurements, Apr. 3–4, 1996, Arlington, Virginia. Contact: Natl. Council on Radiation, Protection and Measurements, Suite 800, 7910 Woodmont Ave., Bethesda, MD 20814 (fax 301-907-8768).

U.S. Nuclear Regulatory Commission Regulatory Information Conference, Apr. 9–11, 1996, Washington, D.C. Contact: Anna May Haycraft, U. S. NRC, Office of NRR, 12H5, Washington, DC 20555 (phone 301-504-3075).

Annual Meeting of the Radiation Research Society, Apr. 13–18, 1996, Chicago, Illinois. Contact: Radiation Research Society, M. G. Watson, Suite 600, 2021 Spring Rd., Oak Brook, IL 60521.

DECEMBER 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

Fusion Technol., 26, 929-932 . . . *A Portable Cylindrical Electrostatic Fusion Device for Neutronic Tomography.* . . . Gu, Y.B.; Javedani, J.B.; Miley, G.H. . . . November 1994 . . . University of Illinois at Urbana-Champaign, Urbana, IL.

Fusion Technol., 26, 933-937 . . . *Radiation Shielding for TFTR DT Diagnostics.* . . . Ku, L.P.; Johnson, D.W.; Liew, S.L. . . . November 1994 . . . Princeton Plasma Physics Laboratory, Princeton, NJ.

Fusion Technol. 26, 945-948 . . . *Conceptual Design for a Fast Neutron Ionization Chamber for Fusion Reactor Plasma Diagnostics.* . . . Sailor, W.C.; Barnes, C.W.; Wurden, G.A.; Chrien, R.E. . . . November 1994 . . . Los Alamos National Laboratory, Los Alamos, NM.

Fusion Technol., 26, 958-962 . . . *Coupled Diffusion-Transport Calculations of Fusion Reactor Activations.* . . . Annese, C.E., Greenspan, E. . . . November 1994 . . . Department of Nuclear Engineering, University of California, Berkeley, CA.

Fusion Technol., 26, 963-970 . . . *TFTR Radiation Contour and Shielding Efficiency Measurements During D-D Operations.* . . . Kugel, H.W.; Ascione, G.; Elwood, S.; Gilbert, J.; Hwang, D.; Lewis, M.; Levine, J.; Ku, L.-P.; Rule, K.; Hajnal, F.; Azziz, N.; Goldhagen, P.,; Klemi . . . November 1994 . . . Princeton Plasma Physics Laboratory, Princeton, NJ; Environmental Measurements Laboratory, New York, NY.

Fusion Technol., 26, 1086-1091 . . . *Tritium Production-Rate Measurement Techniques Developed at FNS/JAERI.* . . . Hiroshi Maekawa, Fujio Maekawa, Yukio Oyama, Chikara Konno, Yujio Ikeda, Kouichi Tsuda, Seiya Yamaguchi . . . November 1994 . . . Japan Atomic Energy Research Institute, Japan.

Fusion Technol., 26, 1092-1097 . . . *GERAPH: A Novel Approach to the General Solution of Pulsed History Activation Problems.* . . . Wilson, P.P.H.; Sisolak, J.E.; Henderson, D.L. . . . November 1994 . . . Nuclear Engineering and Engineering Physics, University of Wisconsin-Madison, Madison, WI.

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