

RSIC Newsletter



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*Ideals are like the stars—we never reach them, but like the mariners
on the sea, we chart our course by them.—Carl Schurz*

DOE RECON System Terminated

The U.S. Department of Energy (DOE) RECON system for computer-based information retrieval is being terminated effective December 31, 1986. The system, in operation at Oak Ridge National Laboratory (ORNL) for many years, has provided access for users throughout the United States to a large number of literature data bases. The largest data base, DOE's Energy Data Base, will be available on commercial systems. RSIC's literature files, RSI (shielding literature) and RSC (codes literature) are searchable upon request by RSIC staff.

CHANGES TO THE COMPUTER CODE COLLECTION

During the month three changes were made to the computer code collection: two new code systems were added to the collection, and an existing code package was extensively revised. One of the additions was provided by a foreign contributor.

CCC-476/CAAC

The IBM version of this code system, which contains versions of PREPAR, AIRDOS, PREDA, and DARTAB, and their associated data files used for the 1984 Clean Air Act assessments, has been extensively revised. A VAX version of the system that corresponds to the upgraded IBM version was contributed by Westinghouse Materials Company of Ohio, Cincinnati, Ohio. Suggestions for revisions were received from the Inst. za Elektroprivredu, Zagreb, Yugoslavia; Argonne National Laboratory, Illinois; and the Inst. for Nuclear Energy Research, Lung-Tan, Taiwan. The error corrections were verified by the contributors at ORNL and the Environmental Protection Agency. Changes were made to the AIRDOS source, to the radionuclide data referenced by PREPAR, and to

the input data for PREDA for sample individual and population assessments. Revised output files are also included. The VAX version is available in industry compatible or BACKUP form. References: ORNL-5532 (1979), ORNL-5692 (1981), and ORNL-5952 (1984) and informal notes. FORTRAN IV; IBM-3033 (A) and FORTRAN 77; VAX (B).

CCC-505/MEDUSA-IB

This one-dimensional implosion and burnup code system for an ion beam driven inertial confinement fusion target was contributed by the University of Tokyo, Japan. Based on the one-dimensional, two-temperature plasma hydrodynamics code, MEDUSA, developed at Culham Laboratory, Abington, England, MEDUSA-IB in-

cludes multigroup x-ray, alpha particle, and neutron transport models. The collision probability method used for neutron transport is taken from CCC-349/MEDUSA-PIJ. For multilayered, spherical geometry targets, the progress of implosion and fuel burnup can be followed, and a variety of parameters can be computed. Output for the sample runs is provided in the document. The code system has not been tested by RSIC. Reference: UTNL-R 0168 and *J. Nucl. Sci. Tech.* **22**, 683-696 (1985). FORTRAN 77; HITACHI-M Series.

PSR-235/DWUCK

This set of computer codes for nuclear model calculations was contributed by the Univ. of Colorado, Boulder. It includes DWUCK4, a distorted wave Born approximation (DWBA) using a zero range form between incoming and outgoing waves; CHUCK2, a coupled channel code; and DWUCK5, a DWBA model with finite range. Sample input is provided for each code and the documentation contains the corresponding output. The code system has not been tested by RSIC. Reference: Informal notes. FORTRAN IV; VAX.

ANS News

On-Line Services Available

The American Nuclear Society (ANS) has announced the implementation of the ANS Information Resource Service (ANSIRS) which will enable members to communicate by electronic mail and will provide access to information of interest to the nuclear community. The ANSIRS is an electronic communications and information network managed by ANS and operated in conjunction with the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Computer Society system. Both services are supported by Dialcom, Inc., a leading vendor of electronic mail and publishing services.

RSIC already has access to the system, and we expect this means of communication to become increasingly important. For example, we expect it will be possible for RSIC to make data files available through file-transfer protocols available on the system. It will also be possible for RSIC users to make requests via electronic mail. One of the early services available will be the bulletin board of the ANS Radiation Protection and Shielding Division which RSIC will use to make announcements.

The only equipment required by users is a terminal or PC equipped with a modem. Connection to the system is accomplished by calling the local telephone number of Tymnet or Telenet. Foreign users will also be on the system. Access to non-users can be accomplished through Telex.

Additional information, including costs, is available from ANSIRS System Manager, American Nuclear Society, 555 N. Kensington Ave., LaGrange Park, IL 60525 USA.

RP Division Officers The Reactor Physics (RP) Division has announced election results and committee appointments to serve in the 1986-1987 term. The following members will serve: *Chair*—Odelli Ozer; *Vice*

Chair/Chair Elect—Paul J. Turinsky; *Secretary*—Henry H. Windsor; and *Treasurer*—Richard W. Benjamin.

Members serving on the Executive Committee are as follows: 1987—Paul W. Dickson, Jr., Richard A. Harris, and Harold F. McFarlane; 1988—Roger Owen Anderson, S. K. Bhattacharyya, Dimitrios M. Cokinos, and Charles L. Cowan; 1989—Judson Hardy and James A. Lake; Leo G. LeSage is Ex Officio. The members serving as Committee Chairs are: Program—Charles L. Cowan, Nominating—Leo G. LeSage, Standards—Abe Weitzberg, and Goals—Norm Francis.

ANS Names Fellows and Honors Rockwell

The ANS named several members of the nuclear engineering community as Fellows at its winter meeting in November. The new Fellows include:

Dan G. Cacuci for his outstanding contributions and leadership in the development of the theoretical foundations of sensitivity and uncertainty theory for nonlinear systems and for the applications of this theory to nuclear reactors, climatic modeling and nuclear weapons effect studies.

William H. Hannum for his contributions to the nuclear program as a technical administrator—first in nuclear reactor safety and also as Director of the West Valley Demonstration Project. In his technical work, he has also made important contributions to reactor technology.

Albert B. Reynolds for his outstanding contributions and leadership in the physics design of the Southwest Experimental Fast Oxide Reactor and subsequent prototype reactors, for his university research on fast reactor safety, specifically his analyses of expansion phase and aerosol behavior in hypothetical core disruptive accidents, and for his extensive contributions to nuclear engineering education.

Bernard W. Wehring in recognition of his definitive experimental research on measuring the mass distribution of fission fragments, and for his many contributions to nuclear engineering education, including outstanding classroom and laboratory instruction and supportive advising of graduate students.

Cacuci is serving the ANS as editor of *Nuclear Science and Engineering*. Bill Hannum supported RSIC for many years while serving in the branch of DOE that originally sponsored RSIC. Wehring's research and development is well represented in RSIC, and he participated in several of the RSIC seminar-workshops.

Theodore Rockwell III was the recipient of the first *Rockwell Award* as the creator of the well-known *Reactor Shielding Design Manual* on the 30th anniversary of its publication. The citation read as follows:

On behalf of the American Nuclear Society, the Radiation Protection and Shielding Division is very pleased to present to **Theodore Rockwell III** its first Rockwell Lifetime Achievement Award for his unique and lasting contribution to the field of radiation shielding, *The Radiation Shielding Design Manual*.

Beginning as a MS chemical engineer directly out of Princeton University in 1945, he was first introduced to radiation shielding at the Oak Ridge National Laboratory, the time and place at which modern radiation shielding technology began. By the time he left the Lab four years later, he had risen to the position of Head of the Radiation Shielding Engineering Group. In 1949 he joined Admiral Rickover's Naval Reactor Headquarters organization. In 1955 he became the Technical Director of the Naval Reactors Program, reporting directly to the Admiral. At this time, noting that radiation shielding had not been previously covered in the open literature, he responded to the perceived technical need by starting preparation of *The Reactor Shielding Design Manual*. He needed to call upon many of his varied talents in order to produce the *Manual*. He first persuaded 21 individual authors and contributors from five different organizations to provide written input. He organized the order, content and innovative style of the *Manual*. As Editor he gathered all the authors and contributors together in a single room for 15 straight days and nights. The result was a draft of the shielding *Manual*, but it still needed his attention to fill the gaps and make it complete. As Editor he stood firm on the principle of including only those theoretical shielding approaches that were actually being used in design practice.

In March 1956, the *Manual* was first published by the Government Printing Office, followed four

months later by separate editions from McGraw-Hill and Van Nostrand presses. He stated confidently that "there will probably be a second edition within a year or so," but he never had the time to undertake the revision. Instead the *Manual* has stood the test of time. It has been translated into several foreign languages, including Russian, German and Dutch. It has been used as a text for many courses in addition to its use in the Naval Reactor schools.

Thirty years after its publication, the *Manual* has become the radiation shielding "bible." For his role in producing it, we, the members of the Radiation Protection and Shielding Division, say "Thank you—we couldn't have done our work without you and your *Manual*!"

He was also honored by the Radiation Protection and Shielding Division at a reception following one of the Division sessions.

Documentation Standard Published

The American National Standards Institute (ANSI) standard, "Guidelines for the Documentation of Digital Computer Programs," ANSIANS-10.3-1986, has been revised and reissued. The original standard was issued in 1974. We recommend that all developers of computer code systems use this standard when preparing the documentation to enable the successful transfer to new users. The standard is available from the Standards Dept., ANS, 555 N. Kensington Ave., LaGrange Park, IL 60525.

PERSONAL ITEMS

In serving a specialized area of scientific endeavor, it seems important that we note significant changes in the activities of people concerned with radiation protection, transport, and shielding in the nuclear industry. We, therefore, continue to carry personal items as they are brought to our attention.

Samuel Glasstone died Nov. 16, 1986, at the age 89 in Oak Ridge, Tennessee. He was co-author with Milton Edlund of *The Elements of Nuclear Reactor Theory*, first published in 1950. Glasstone was the sole or joint author of 38 books, 16 of which were in the nuclear science and engineering field. He received many honors, the most recent in 1984 when he was made a Fellow of Queen Mary College of the University of London. The third edition of *Nuclear Reactor Engineering*, with Alexander Sesonske, published in 1981 by Van Nostrand Reinhold Co., contained updated chapters on radiation protection and on nuclear reactor shielding.

Schütt Replaced at NUKEM Udo Schütt has informed RSIC that he will leave his position as head of NUKEM's central data processing division in January

1987. He is to be replaced by **Bertold Fuchs**. RSIC has interacted with Germany's (FRG) NUKEM Company personnel for several years.

William H. Hannum has left DOE employment for the Tennessee Valley Authority (TVA) in Chattanooga, Tennessee, where he serves as Chairman of TVA's Nuclear Safety Review Board.

Thomas J. Dolan has been named chairman of nuclear engineering at the Univ. of Missouri-Rolla. He is replacing **Nicholas Tsoulfanidis**, who will return to full-time teaching and research after a sabbatical leave in France, where he is conducting research at the Nuclear Research Center of Cadarache of the French Atomic Energy Commission. Dolan joined the UMR faculty in 1971 after a period of study in plasma physics at the Institute of Nuclear Physics, Novosibirsk, USSR. During his career at UMR, he developed courses, experiments, and technology, and participated in fusion research programs at Lawrence Livermore National Laboratory, Los Alamos National Laboratory, ORNL, INRS-Energie (Univ. de Quebec) and Phillips Petroleum Co. He has taught at the National Tsing Hua Univ. in Taiwan. He is the author of the textbook, *Fusion Research*, published by Pergamon Press in 1982.

Clyde Jupiter has resigned from the Nuclear Regulatory Commission to form his own company, Jupiter Associates, Inc., 511 Wheaton Plaza North, Wheaton, MD 20902 (phone 301-946-8088). Jupiter Associates offers services in four areas: technical services (high- and low-level radioactive waste areas), facility operations, computer technology, and human resource development and management.

Visitors to RSIC

During the month the following persons came for an orientation visit and/or to use RSIC facilities: **Masahiro Ohta**, Toyo Engineering Corp., Funabashi, Japan; **Genevieve Roessler**, Univ. of Florida, Gainesville; **Peter C. Ernst**, McMaster Univ., Hamilton, Ontario, Canada; **Guangyu SUN**, **Guangyi LU**, and **Shengjie JIANG**, Chinese Nuclear Society; and **Renkai ZHAO** and **Dexi WANG**, Ministry of Nuclear Industry. A brief visit was made to ORNL through EPIC arrangement by staff members of the French nuclear establishment: **Alain Kavenoky** and **Jean Rastoin**, CEA/CEN/Saclay Laboratory, Gif-sur-Yvette, and **Bernard Tinturier**, CEA, Paris.

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.

Waste Management '87

The preliminary program for the *Waste Management '87* conference to be held March 1-5, 1987, in Tucson, Arizona, has been announced.

The sessions include: Status and Plans for Radioactive Waste Management; Current Perspectives for Implementation of the NWPA of 1982; A Systems Perspective of the National Waste Management Storage and Disposal Programs; DOE Process for Assuring HLW Acceptance at a Federal Repository; Closing the Defense Fuel Cycle at Savannah River; LLWPA of 1985: Milestone Compliance; Utility LLW Management Plans and Practices; State and Tribal Issues in Nuclear Waste Management; Poster—LLW Disposal Activities and Waste Management at the IMPC; Regulations and Standards; Productive Cooperation of International Nuclear Waste Disposal Programs; Utility LLW Management—Waste Characterization; Siting Developments for LLW Disposal Facilities; Communication and Participation in Waste Management Decisions; Poster—HLW Transportation, Storage, and Disposal; Interface Between Technical Experts and Public Institutional Interests; Economic and Social Effects on HLW Repository Development; Utility-LLW Management Processing; Nuclear Waste Disposal Technology; Economics of the Fuel Cycle and Waste Management; Geotechnical Characterization of HLW Repositories; Poster—LLW Processing/Form/Transportation and Associated Equipment/Facilities/Plans; A WIPP Overview and TRU Waste Processing; Site Characterization Strategy; LLW Form Technology; LLW Regulatory Compliance; Toward Resolution of State and Tribal Issues in Radioactive Waste Transportation; Poster—Decommissioning/Processing and Monitoring/Modeling of Nuclear Waste Activities; Transportation of Nuclear Waste; WIPP Site Characterization and In Situ Testing; Mixed, Hazardous and Short-Lived Wastes; LLW Containers, Packages, and Casks Technologies; Waste Management Aspects of Environmental Surveillance; Spent Fuel Storage; Legal Liability and Institutional Issues; LLW Filtration and Ion Exchange; Media Processes; LLW Processing; and Nuclear Waste Management QA Programs.

The conference will be preceded by a workshop on "Systems Engineering Nuclear Applications," Sunday, March 1. Further details may be obtained from Special Professional Education, Harvill Bldg., Box 9, Univ. of Arizona, Tucson, AZ 85721.

Advances in Reactor Physics, Mathematics and Computation

The preliminary program for the twelfth biennial ANS Mathematics and Computation (M&C) Division topical meeting to be held in Paris, April 27-30, 1987 (see page 3 of April 1986 *RSIC Newsletter*), includes the following sessions: New Fast and Thermal Reactor De-

signs (Conceptual Reactor Physics and Thermal Hydraulics Problems); Advances in Computational Methods Including Utilization of Parallel Processing and Vectorization; Review of Status of Assembly Spectrum Codes; Fast, Epithermal/Thermal, Reactor Physics, Calculations Versus Measurements; Thermal Radiation and Charged Particle Transport; Application of Expert Systems to Physical Aspects of Reactor Design and Operation; Super Computers; Thermal Reactor Design, Validation and Operating Experience; Fast Reactor Design, Validation and Operating Experience; Interpretation and Analysis of Reactor Instrumentation; Deterministic Transport Methods; Diffusion Theory and Kinetics; Numerical Methods for Structural Mechanics and Fluid Structure Interaction; Stochastic Transport Theory and Methods; High Speed Computing Applied to Reactor Operations; and Poster Sessions: Benchmark and Codes.

For further meeting and program information contact: Alain Kavenoky, DGMT, CEN Saclay, 91191 Gif-sur-Yvette CEDEX, France.

Pacific Basin Nuclear Conference

The theme for the 6th Pacific Basin Nuclear Conference, to be held September 7-11, 1987, in Beijing, is "The Outlook of Nuclear Technology Development in the 1990s." A variety of sessions will provide delegates with the opportunity to review the past two decades in nuclear power in an effort to support the cause of peaceful use of nuclear power in the future. The sessions planned are: Present Status & Prospects of Nuclear Power Development, Energy Demand and Nuclear Power Perspectives in the Pacific Basin, Advancements in Commercial Power Reactors, Advanced Reactors & Research and Test Reactors, Perspectives on Nuclear Power Safety in the 1990s, Applied Radioisotope Technology and Radiation, Advancement in Nuclear Fuel, Improvement of Nuclear Power Plant Management — Lessons Learned in the 70s and 80s, and Regional Cooperation and Manpower Training.

Further information may be obtained from Lu Rongguang, Chairman 6th PBNC Technical Program Committee, P.O. Box 2125, Beijing, China (PRC) (phone 867188), or James I. Sweeney, Co-Chairman, Technical Program Committee, 175 Curtner Ave., M/C 780, San Jose, CA 95125 (phone 408-925-1037).

Calendar

Your attention is directed to the following events of interest to the radiation shielding and protection community.

January 1987

4th Symposium on Space Nuclear Power Systems, Jan. 12-16, 1987, Albuquerque, New Mexico, sponsored

by the Univ. of New Mexico, ANS, Sandia National Laboratories, and the U. S. Dept. of Energy. Contact: Mohamed S. El-Genk, Institute for Space Nuclear Power Studies, Chemical and Nuclear Engineering Dept., Univ. of New Mexico, Albuquerque, NM 87131 (phone 505-277-5442).

Reactor Accidents: What Chernobyl Has Taught Us, Jan. 28, 1987, London, sponsored by the Society for Radiological Protection. Contact: J. H. Martin, Bldg. 15, Park Wynd, University of Dundee, Dundee DD1 4HN, Scotland, UK (phone Dundee 23181 ext. 4438).

February 1987

Health Physics of Radiation-Producing Machines, Feb. 8-12, 1987, Reno, Nevada, sponsored by the Health Physics Society. Contact: John W. Poston, Sr., Dept. of Nuclear Engr., Texas A&M Univ., College Station, TX 77843-3133 (phone 409-845-4161).

Radiation Transport Calculations Using EGS4, Feb. 16-19, 1987, Montreal, Canada, a course sponsored by the National Research Council of Canada. Contact: David W. O. Rogers, Ionizing Radiation Standards, National Research Council of Canada, Ottawa, Ontario K1A 0R6 Canada (phone 613-993-2715).

March 1987

Radioactive Waste Management (WM 87), Mar. 1-5, 1987, Tucson, Arizona, sponsored by the Univ. of Arizona. Contact: Technical Program Chairman, WM 87, Dept. of Nuclear and Energy Engineering, College of Engineering and Mines, Univ. of Arizona, Tucson, AZ 85721 (602-621-2475).

International Conference on Radiation Dosimetry and Safety, Mar. 2-4, 1987, Taipei, Taiwan, Rep. of China, sponsored by Nuclear Energy Society of the Rep. of China and ANS. Contact: C. J. Tung, Inst. of Nuclear Science, National Tsing Hua University, Hsinchu 30043, Rep. of China, or C. S. Sims, Health & Safety Research Div., ORNL, P.O. Box X, Oak Ridge, TN 37831.

Annual Meeting of the Atomic Energy Society of Japan, Mar. 26-28, 1987, Nagoya, Japan. Contact: Minoru Masamoto, Secretary General, Atomic Energy Society of Japan, No. 1-13, 1-chome, Shimbashi, Minato-ku, Tokyo 105, Japan (phone 03 508-1261).

Occupational and Environmental Radiation Protection, Mar. 30-Apr. 3, 1987, Boston, Massachusetts, a course sponsored by the Harvard School of Public Health. Contact: Dade W. Moeller, Office of Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-732-1171).

Meeting on Practical Radiation Protection, Mar. 31-Apr. 1, 1987, London. Contact: J. H. Martin, Bldg. 15, Park Wynd, University of Dundee, Dundee DD1 4HN, Scotland, UK (phone 23181 ext. 4438).

Conference on Health Effects of Low Dose Ionizing Radiation: Recent Advances and Their Implications,

Mar. 31–Apr. 3, 1987, sponsored by the British Nuclear Energy Society. Contact: P. J. Ross, BNES, Institution of Civil Engineers, 1-7 Great George St., Westminster, London SW1P 3AA, United Kingdom (phone 01-222-7722 ext. 283).

April 1987

23d Annual Meeting of the National Council on Radiation Protection and Measurements, Apr. 8–9, 1987, Washington, D. C. Contact: NCRP, 7910 Woodmont Ave., Suite 1016, Bethesda, MD 20814.

Theory and Practices in Radiation Protection and Shielding, Apr. 22–24, 1987, Knoxville, Tennessee, sponsored by the ANS Radiation Protection and Shielding Division. Contact: Robert T. Santoro, Chairman, Technical Program Committee, ANS Topical Conference, RP&S, P.O. Box X, Oak Ridge, TN 37831 (phone 615-574-6084).

Advances in Reactor Physics, Mathematics and Computation, Apr. 27–30, 1987, sponsored by the European Nuclear Society, French Nuclear Energy Society, Commission of the European Communities, French Atomic Energy Commission, Electricité de France, ANS, Nuclear Energy Agency, Organisation for Economic Co-operation and Development. Contact: R. Alcouffe, Los Alamos National Laboratory, P.O. Box 1663, MS-B226, Los Alamos, NM 87545.

May 1987

Control of Occupational Exposures in Nuclear Power Plants, May 11–15, 1987, Boston, Massachusetts, a course sponsored by the Harvard School of Public Health. Contact: Dade W. Moeller, Office of Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-732-1171).

6th Symposium on Reactor Dosimetry, May 31–June 5, 1987, Jackson Hole, Wyoming, sponsored by the American Society for Testing and Materials, and the Commission of the European Communities in co-operation with the International Atomic Energy Agency. Contact: G. R. Lamaze, National Bureau of Standards, Bldg. 235, Gaithersburg, MD 20899 (phone 301-921-2767) or H. Röttger, Joint Research Centre, Petten Establishment, HFR Div., Postbus 2, 1755 ZG Petten, The Netherlands.

June 1987

ANS Annual Meeting, June 6–12, 1987, Dallas, Texas. Contact: ANS, Meeting Dept., 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 312-352-6611).

Application of Computer Technology to Radiation Protection, June 22–26, 1987, Bled, Yugoslavia, sponsored by the IAEA. Contact: Conference Service Section, IAEA, P.O. Box 100, A-1400 Vienna.

July 1987

32nd Annual Meeting of the Health Physics Society, July 5–9, 1987, Salt Lake City, Utah. Contact: John W. Poston, Sr., Dept. of Nuclear Engr., Texas A&M Univ., College Station, TX 77843-3133 (phone 409-845-4161).

August 1987

9th International Conference on Structural Mechanics in Reactor Technology (SMiRT-9), Aug. 17–21, 1987, Lausanne, Switzerland, sponsored by the International Association for Structural Mechanics in Reactor Technology, the Commission of the European Communities, and the École Polytechnique Fédérale de Lausanne. Contact: Folker H. Wittmann, École Polytechnique Fédérale de Lausanne, SMiRT-9, Chemin de Bellerive 32, CH-1007 Lausanne, Switzerland.

International Conference on Nuclear Fuel Reprocessing and Waste Management, Aug. 24–28, 1987, Paris, sponsored by the ANS and the European Nuclear Society. Contact: Lloyd McClure, Westinghouse Idaho Nuclear Co., Idaho Chemical Processing Plant, P.O. Box 4000, Idaho Falls, ID 83401.

September 1987

Pacific Basin Nuclear Conference, Sept. 6–11, 1987, Beijing, People's Republic of China, sponsored by the Chinese Nuclear Society and the ANS. Contact: Xu Honggui, Chinese Nuclear Society, P.O. Box 2125, Beijing, People's Republic of China, or ANS, 555 North Kensington Ave., La Grange Park, IL 60525 (phone 312-352-6611).

ANS/ENS International Conference on Fast Breeder Reactor Systems: Experience Gained and Path to Economical Power Generation, Sept. 13–17, 1987, Richland, Washington. Contact: M. C. Carelli, Westinghouse-AESD, P.O. Box 158, Madison, PA 15663 (phone 412-722-5284), or W. Marth, Kernforschungszentrum Karlsruhe, Postfach 3640, D-7500 Karlsruhe 1, F. R. Germany.

Monte Carlo Transport of Electrons and Photons Below 50 MeV, Sept. 24–Oct. 3, 1987, Trapani, Italy. The closing date for application has been extended to May 15, 1987 (see July 1986 *RSIC Newsletter* for details). Contact: David W. O. Rogers, Ionizing Radiation Standards, National Research Council of Canada, Ottawa, Ontario K1A 0R6 Canada (phone 613-993-2715).

October 1987

Annual Congress of the Association for Radiation Protection, Oct. 6–9, 1987, Basle, Switzerland. Contact: Fachverband f. Strahlenschutz e.V., c/o H. Brunner, Abt. SU/81, Eidg. Institut f. Reaktorforschung (EIR), CH-5303 Würenlingen, Switzerland (phone 0041 56-99 2350).

November 1987

International Waste Management Conference, Nov. 30-Dec. 5, 1987, Kowloon, Hong Kong, sponsored by the American Society of Mechanical Engineers in cooperation with the International Atomic Energy Agency and co-sponsored by the ANS, Atomic Energy Society of Japan, Canadian Nuclear Society, Chinese Nuclear Society, European Nuclear Society, Japanese Society of Mechanical Engineers, Korean Nuclear Society, and the Nuclear Energy Society, Taiwan. Contact: Larry Oyen (Conference Chairman), Sargent & Lundy, 55 East

Monroe St., Chicago, IL 60603.

September 1988

Industrial Radiation and Radioisotope Measurement Applications, Sept. 25-28, 1988, Pinehurst, North Carolina, a topical meeting sponsored by the Isotopes and Radiation Division of the ANS. Contact: Robin P. Gardner, General Chairman, or Kuruvilla Verghese, Tech. Program Chairman, North Carolina State Univ., School of Engineering, Box 7909 Raleigh, NC 27695-7909.

NOVEMBER 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.

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

AD-A-162706/6/XAB; SAI-84-1706, . . *Phantom Dosimetry Calculations for Use in Radiation-Effects Correlations. Technical Report, 1 April 1983 - 30 July 1984*, . . Kaul, D.C.; Roberts, J.A.; Egbert, S.D., . . July 30, 1984, . . NTIS, PC A08/MF A01

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ENEA-RT/ING-82-20, . . *Comparison Between Different Codes for Shielding Calculations for Plutonium Transport Cask*, . . Carotenuto, M.I.; Landeyro, P.A.; Pereyra Marcondes, S., . . July 1982, . . NTIS (U.S. Sales Only), PC A02/MF A01

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FEI-1283 (In Russian), . . *Temperature Limitations in Problems of Optimization of Radiation Shields*, . . Dubinin, A.A.; Kurachenko, Yu.A., . . 1982, . . MF available from INIS.

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try., . . Morozov, V.N., . . 1982, . . MF available from INIS.

IAEA-NDS-57-Rev.0; INDL/F-83, . . *Evaluated Neutron Reaction Data Library for INTOR Fusion Neutronics Calculations (1983 Version)*, . . Pronyaev, V.G.; Cullen, D.E.; McLaughlin, P.K., . . March 1983, . . NTIS (U.S. Sales Only), PC A08/MF A01

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