

RSIC Newsletter



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*Dost thou love life? Then do not squander time; for that's the stuff
life is made of.—Benjamin Franklin*

RSIC VETERAN RETIRES

Henrietta (Henri) Hendrickson will turn off her terminal as an RSIC staff member for the last time on September 30, 1985. After 32 years in the Oak Ridge research and development complex established in the early 40s, Henri is retiring. She has been an RSIC staff member unofficially since 1963 and officially since 1967. Henri began her association with RSIC in 1963 on loan to the RSIC Codes Section from the Union Carbide Nuclear Division Computing Technology Center at the Oak Ridge Gaseous Diffusion Plant, where she had worked for 10 years. In 1967 she was formally transferred to the Oak Ridge National Laboratory, Neutron Physics Division, later renamed the Engineering Physics and Mathematics Division, and assigned to RSIC. In her 22 years of service in RSIC, Henri has made unique contributions to the organizational growth and effectiveness of the information analysis center, and she will be sorely missed. However, it is pleasing to note that the philosophy and patterns of service to the international shielding community which she promulgated as a member of the RSIC team will remain beyond her employment.

In addition to her regular duties in testing, packaging, and maintaining code systems and data libraries in the RSIC collections, Henri has also performed as divisional Affirmative Action Representative and coordinated EPIC's Summer Student program.

Henri also served unofficially as a goodwill ambassador for RSIC during a 2 ½-year (1979-1981) assignment as data service coordinator in the Nuclear Data Section (NDS) at the International Atomic Energy Agency (IAEA) in Vienna, Austria. Upon completion of her assignment, she was credited with having made a "significant contribution to improving the efficiency of the data, code, and documentation services of the centre" by the IAEA/NDS head, J. J. Schmidt.

Following ORNL retirement, Henri is planning to put her energy into a new career in the travel industry, an area in which she has gained much experience over the last several years.

Any reader who has known Henri who may wish to send good wishes to her may do so by writing to her at the RSIC address. The communications will be forwarded and will be most appreciated by Henri. We who remain on the job salute Henri for a job well done and wish her contentment and happiness in her retirement.

CHANGES TO THE COMPUTER CODES COLLECTION

During the month of August four changes were made to the computer codes collection. Two new code systems were packaged and added to the collection, an existing code package was enhanced with additional software, and another code package was extended with an additional hardware version.

CCC-179/ATR 4.1

This package of models of radiation transport in air was updated to add sample problem input and output and IBM JCL. The code system runs on CDC, IBM, and VAX computers. The option alerting the machine for a particular hardware version is registered through a change of program card. Users at Kirtland Air Force Base in New Mexico called RSIC's attention to the need for this update. The ATR developers at Science Applications International Corp., La Jolla, California, advised an RSIC staff member on input instructions for the update. FORTRAN 77; CDC, IBM, and VAX (A).

CCC-254/ANISN-ORNL

This multigroup one-dimensional discrete ordinates transport code system with anisotropic scattering was extended to add a new hardware version contributed by Goodyear Atomic Corporation, Piketon, Ohio. The new version, designated (G), runs on the DEC 10 and DEC 20 computers. FORTRAN IV, FORTRAN 77, and Assembler language; IBM 360/370 (A), UNIVAC 1108 (B), CDC 6600/7600 (C), TR-440 (D), SIEMENS 7541 (E), PRIME (F), and DEC 10 and DEC 20 (G).

CCC-476/CAAC

This package of clean air act codes implements the radiological assessment methodology used for

the preparation of the Environmental Protection Agency 1984 background information documents on radionuclides. Atmospheric dispersion and deposition are calculated by CCC-357/AIRDOS-EPA. Dose and risk assessment tables are calculated by CCC-420/DARTAB from the binary output file produced by CCC-357/AIRDOS-EPA and a file of dose and risk factors calculated by CCC-422/RADRISK. Preprocessors (PREPAR and PREDAS) for AIRDOS-EPA and DARTAB access databases of element and nuclide dependent data to simplify the execution of the principal program. References: ORNL-5952 and informal notes. FORTRAN IV and Assembler Language; IBM 3033 (A).

PSR-212/MRSPAK

This combinatorial geometry data generator was contributed by Sandia National Laboratory, Albuquerque, New Mexico. MRSPAK allows users of radiation transport analysis code packages based on combinatorial geometry, such as CCC-203/MORSE-CG, to create geometry using the PADL2 system and then automatically generate the combinatorial geometry data from the PADL2 representation. This is desirable because creating geometry data in the combinatorial geometry format is tedious and error-prone. Reference: Informal Notes. FORTRAN IV; VAX 11 (A).

PERSONAL ITEMS

We again take note of the movement of people concerned with radiation protection, transport, and shielding in the nuclear industry. The following personal items have been brought to our attention.

Rick E. Marshall, a mathematics and computer science student, spent the summer with RSIC as part of a program which places college students in a "real" working environment. During his stay with RSIC, Rick upgraded the programs which drive the RSIC ADES information management system used for request processing.

Rick has returned to Ohio Northern University in Ada to complete his course work.

During the past month we have been informed of the following changes of address:

Gregory J. Wolfe, from General Dynamics Land Systems, to the U.S. Army Tank-Automotive Command, Warren, Michigan; **Ezra B. Mann, III**, from Electro Magnetic Applications, Inc., to Applied Physics, Inc., in Albuquerque, New Mexico; **Steve Manglos**, from Rockwell International, Rocky Flats, Colorado, to Duke University Medical Center in Durham, North Carolina; and **Robert Tayloe**, from Goodyear Atomic

Corp. in Piketon, Ohio, to Battelle Columbus Laboratories in Columbus.

Visitors to RSIC

During the month the following persons came for an orientation visit and/or to use RSIC facilities: *Junro Oda*, Ishikawajima-Harima Heavy Industries, Co., Ltd., Yokohama, Japan; *Kazuo Yamanaka*, Nippon Kokan K.K., Yokohama; *Hiroaki Wakabayashi*, University of Tokyo; *Kenji Yamaji*, Central Research Institute of Electric Power Industry, Tokyo; *Ichiro Sugawara*, JGC Corp., Tokyo; *Takashi Yokoyama*, Nuclear Fuel Industries, Ltd., Osaka, Japan; *Steven A. Thomas*, E. I. Dupont de Nemours and Co., Savannah River Lab., Aiken, South Carolina; *Jim T. West*, Los Alamos National Laboratory, New Mexico; and *Rex K. Kiziah*, Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico.

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.

IAEA to Sponsor Source Term Meet

The International Atomic Energy Agency (IAEA) has announced that an *International Symposium on Source Term Evaluation for Accident Conditions* will be held at the Battelle Columbus Laboratories in Columbus, Ohio, October 28–November 1, 1985. The symposium will serve as an international forum to review the results obtained and the conclusions drawn from on-going re-evaluation and research work in order to assist in updating the determination of radionuclide releases during postulated accidents in nuclear power plants. Focus will be on source term related experimental and theoretical nuclear safety research and application of selected computer code systems for safety study and evaluation. Papers are invited on the following technical areas: In-vessel release of radionuclides and generation of aerosols; Transport and retention in the reactor coolant system; Ex-vessel release of radionuclides and generation of aerosols; Retention and behaviour of fission products and aerosols in containment; and Release of fission products from the plant, including engineered safety feature systems performance and evaluation. The symposium will also include panel discussions summarizing the current state of knowledge on (a) containment response and loads following accident conditions well

beyond design basis accident (DBA), including hydrogen generation and control; (b) Re-entrainment or re-vaporization of fission products and aerosols from surfaces and/or water pools (especially iodine in the containment); and (c) Identification of unresolved technical issues and related research needs for regulatory application—conclusions and recommendations.

Additional information may be obtained from the Scientific Secretary, M. Jankowski, Division of Nuclear Safety, or the Conference Service Section, International Atomic Energy Agency, Vienna International Centre, P.O. Box 100, A-1400 Vienna, Austria (phone 0222 2360, telex 1-12645, or cable INATOM VIENNA).

Spectrum '86

An American Nuclear Society (ANS) International Topical Meeting, *Waste Management and Decontamination and Decommissioning*, will be held September 14–18, 1986, in Niagara Falls, New York. The meeting is sponsored by the ANS Fuel Cycle and Waste Management Division and the ANS Niagara-Finger Lakes Section. Cosponsors include the U.S. Dept. of Energy, New York State Energy Research and Development Authority, ANS Remote Systems Technology Division, the Canadian Nuclear Society, and the Atomic Energy Society of Japan in cooperation with the IAEA. A spectrum of waste technologies will be covered during three and one half days of invited lectures, contributed papers, and panel discussions. A special media training course, international video session, and an educator's session are also planned. Those interested in contributing to the meeting are invited to submit a 500-word summary of their paper by **February 1, 1986** to Spectrum '86 Technical Program, Box 191, West Valley, NY 14171 USA. The major topics are Nuclear Success Stories—International Overviews; Waste Management and Government Regulations; High-Level Waste Management Techniques; Low-Level Waste Management Techniques; Equipment and Facility Design; Decontamination and Decommissioning; Remote Technologies; and Economics of Waste Management. A special tour of the West Valley Demonstration Project is planned for the fourth day. The technical program is headed by James M. Pope of WVNS assisted by P. Risoluti of Italy, K. D. Kuhn, Federal Republic of Germany, E. J. Detilleux of Belgium, W. Wilkinson, United Kingdom, K. Uematsu of Japan, C. G. Sombret of France, J. Vrijen of The Netherlands, and L. Devell of Sweden.

For additional information contact Anne E. Englert, P.O. Box 191, West Valley, NY 14171-0191 (telex 812390).

Calendar

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

October 1985

Meeting on Nuclear Data, Cross Section Libraries and Application in Nuclear Energy, October 1–2, 1985, Bonn, Fed. Rep. of Germany, sponsored by the German Nuclear Technology Society and the European Nuclear Society. Contact: Dieter Emendörfer, Stuttgart University (IKE), Pfaffenwaldring 31, D-7000 Stuttgart 80, Fed. Rep. of Germany.

Advanced Management of Radiation Accidents, a course sponsored by the University of New Mexico, October 3–5, 1985, in Albuquerque. Contact: Univ. of New Mexico, School of Medicine, School of Continuing Medical Education, North Campus, 815 Vassar NE, Albuquerque, NM 87131.

18th Annual Meeting of the Radiation Protection Association: Population Radiation Exposure, October 6–10, 1985, Luebeck-Travemuende, Fed. Rep. of Germany. Contact: Dipl.-Phys. K. Henning, GKSS-Forschungszentrum, Geesthacht GmbH, Postfach 1160, D-2054 Geesthacht, Fed. Rep. of Germany.

Scientific Seminar on the Application of Distribution Coefficients to Radiological Assessment Models, October 7–11, 1985, Louvain-la-Neuve, Belgium, sponsored by the Commission of the European Communities. Contact: T. H. Sibley, Seminar Secretariat, Unité de Physiologie Végétale, Université Catholique de Louvain, Place Croix du Sud 4, B-1348 Louvain-la-Neuve, Belgium (phone 010/43.34.68).

TMI-2: A Learning Experience, ANS Executive Conference, October 13–16, 1985, Hershey, Pennsylvania. Contact: Franklin Coffman, General Chairman, IT Corp., Federal State Remedial Div., 600 Maryland Ave., SW, Suite 302, Washington, DC 20024 (phone 202-484-7100).

3rd International Conference on Nuclear Technology Transfer, October 14–19, 1985, Madrid, Spain, sponsored by the Spanish Nuclear Society, the American Nuclear Society, and the European Nuclear Society. Contact: Myron Kratzer, International Energy Associates, Suite 600-600, New Hampshire Ave., Washington, DC 20036 (phone 202-342-6752) or Pierre Grau, Framatome, Tour Fiat, CEDEX 16, 92084 Paris, France (phone 796 04 06).

Technical Committee on the Assessment of the Radiological Impact from the Transport of Radioactive Materials, October 21–25, 1985, Vienna, Austria, sponsored by the International Atomic Energy Agency. Contact: R. B. Pope, Division of Nuclear Safety, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

3rd International Topical Meeting on Reactor Thermal Hydraulics, October 15–18, 1985, Newport, Rhode Island, sponsored by the ANS, American Society of Mechanical Engineers, and the American Institute of Chemical Engineers. Contact: 3rd Internatl. Top. Meeting on Reactor Thermal Hydraulics, c/o H. Shaffer, 1671 Worcester Road, Framingham, MA 01701 USA.

12th Annual Meeting and International Conference on Nuclear Energy, October 20–23, 1985, Boston, Massachusetts, sponsored by the World Nuclear Fuel Market. Contact: Donna P. Cason, Administrative Director, WNFEM, 5720 Peachtree Parkway, Norcross, GA 30092 (phone 404-447-1144).

Symposium on Organ Dosimetry for External Gamma and Neutron Radiations, October 22–24, 1985, Knoxville, Tennessee, sponsored by Oak Ridge National Laboratory. Contact: R. O. Chester, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, TN 37831 USA.

Computer Aided Methods in Radiation Protection, October 22–25, 1985, Budapest, Hungary. Contact: L. Koblinger, Central Research Institute for Physics, P.O. Box 49, H-1525 Budapest, Hungary (phone 699-499 ext. 15-95).

Computer Codes in Fusion Research, October 29–November 1, 1985, Lausanne, Switzerland, sponsored by the International Atomic Energy Agency. Contact: M. Leiser, Head, Physics Section, Division of Research and Laboratories, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

November 1985

Joint Meeting of the American Nuclear Society and the Atomic Industrial Forum, November 11–15, 1985, San Francisco. Contact: Meetings Dept., ANS, 555 North Kensington Ave., La Grange Park, IL 60525, or James R. Sasso, General Electric–MC-871, San Jose, CA 95125 (phone 408-925-1195).

Assessment of Occupational Intake of Radioactive Materials, November 11–15, 1985, Vienna, sponsored by IAEA. Contact: F. N. Flakus, Division of Nuclear Safety, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

Specialist's Meeting on the Use of the Optical Model for Calculation of Neutron Cross Sections Below 20 MeV, November 13–15, 1985, Paris, France. Contact: J. Salvy, Service Physique Nucleaire Centre d'Études de Bruyeres-le-Chatel, B.P. 561, 92541 Montrouge CEDEX, France, or C. Nordbert, NEA Data Bank, 91191 Gif-sur-Yvette CEDEX, France.

11th Symposium on Engineering Problems in Fusion Research, November 18–22, 1985, Austin, Texas. Contact: Ward Harris, Fusion Research Center, Univ. of Texas at Austin, RLM 11.1222, Austin, TX 78712 (phone 512-471-4576 or 4698).

Technical Committee on Procedures for Assessing the Reliability of Transfer Models, November 18–22, 1985, Vienna, Austria, sponsored by the International Atomic Energy Agency. Contact: I. Savolainen, Division of Nuclear Fuel Cycle, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

1st International Conference on Fusion Reactor Materials, November 19–22, 1985, Tokyo, Japan. Contact: R. R. Hasiguti, Science University of Tokyo, Kagurazaka, Shinjuku-ku, Tokyo, Japan 162.

December 1985

Technical Committee on Computer Codes in Fusion Research, December 3–5, 1985, Lausanne, Switzerland, sponsored by the International Atomic Energy Agency. Contact: M. Leiser, Head, Physics Section, Division of Research and Laboratories, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

January 1986

3rd Symposium on Space Nuclear Power Systems, January 13–16, 1986, in Albuquerque, New Mexico, sponsored by the Institute for Space Nuclear Power

Studies, Chemical/Nuclear Engineering Department, University of New Mexico. Contact: Institute for Space Nuclear Studies, Chemical/Nuclear Engr. Dept., Univ. of New Mexico, Albuquerque, NM 87131.

March 1986

Waste Management '86, March 2–6, 1986, Tucson, Arizona. Contact: Mort E. Wacks, Dept. of Nucl. and Energy Engr., Univ. of Arizona, Tucson, AZ 85721 (phone 602-621-6160).

August 1986

8th International Conference on Solid State Dosimetry organized by the National Radiological Protection Board, U.K., 26–29 August, 1986, St. Catherine's College, Oxford. Further details from: Miss L. Ashby, National Radiological Protection Board, Chilton, Didcot, Oxfordshire, U.K.

AUGUST 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.

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