A TIMELY REMINDER!

Your feedback of ideas, suggestions, comments, corrections, new information, and/or philosophic musings is much appreciated by the RSIC staff. Your response to the periodic survey is essential to our continuing viability. Within this season of New Years Resolutions, we hope that one resolve will be to immediately respond to our request for current information concerning your work and its sponsors.

We again append a copy of the RSIC Periodic Distribution Query Form which was initially published in the RSIC Newsletter No. 217, December 1982. Please tear off the two page, two-part sheet, answer all parts of the query and return it immediately. Failure to respond will be interpreted as a lack of interest in receiving the RSIC Newsletter and the distribution list will be modified accordingly.

New Publication Noted


CHANGES TO THE COMPUTER CODE COLLECTION

Changes to the code collection for the month of December included a newly frozen version, an update, and an extension of existing code systems.

 CCC-79/ISOSHLD II

This kernel integration code package with general purpose isotope shielding analysis was updated to correct a data library incompatibility. File 5 of the tape list formerly issued for the IBM version (B) of this code package was omitted from the ISOSHLD II portion of the package because that data file is compatible with ISOSHEL D III only. The UNIVAC version (A) of the package was not affected by this update. FORTRAN IV and assembler language; IBM 360/370, 3033 and UNIVAC.

CCC-203/MORSE-CG

The IBM 360 package of the general purpose Monte Carlo multigroup neutron and gamma ray transport code system has been extended by the addition of 2 groups of special source routines for determination of POINT and EVENT value. Some changes were also made in miscellaneous user routines in Subroutine SOURCE that has the comment "sample source for K-Eff calculations." File 3 of the original master of the RANF file was divided into 2 files in order to use as packaged. DOMINO II sample problem, input and output, and MORSE (DOMINO) output was added to reflect changes made to the code from previous updates. Suggestions for these changes were contributed by the original ORNL code developers. Neither of the additions affect the CDC (B) or UNIVAC (A) versions. FORTRAN IV and Assembler Language; IBM 360.

CCC-371/ORIGEN-II-1982

The original ORIGEN II code system was re-
placed by a newly frozen version provided by the Oak Ridge National Laboratory. The new version represents a number of corrections and minor modifications made as a result of user feedback and internal examination of the uses of ORIGEN II. Select changes were made to enhance usefulness of the package. Cross section libraries of thorium cycle LMFBRs were added. A description of the new version may be requested from RSIC. Both the CDC and the IBM versions of the code are replaced by this newly frozen version. FORTRAN IV; IBM 3033 and CDC.

PERSONAL ITEMS

R. B. Perez, G. De Saussure, J. L. Munoz-Cobos, J. Barhen, and R. Q. Wright, of the University of Tennessee and Oak Ridge National Laboratory, received the Best Paper Award for their paper, "On the ENDF/B Unresolved Resonance Region Formalism Representation." The winning paper was chosen by the ANS Reactor Physics Division from among those presented at the December 1981 ANS Winter Meeting in San Francisco. In addition, a special certificate of appreciation was presented to Paul Greebler, who has served as chairman of the division and was instrumental in establishing the division's standards program.

David R. Lide, Chief of the Office of Standard Reference Data, National Bureau of Standards, was elected Secretary-General for ICSU/CODATA for the 1982-86 period at the thirteenth General Assembly held October 8-9, 1982. The Secretary-General has oversight responsibility for CODATA scientific activities, the operation of the CODATA Secretariat in Paris, and the various publication programs. Lide was the U.S. National Delegate to CODATA from 1973-81 and has been a member of the Executive Committee since 1978.

William N. McElroy, manager of irradiation environment at the Hanford Engineering Development Laboratory, Richland, Washington, was a recipient of the 1982 Award of Merit by the American Society for Testing and Materials. The award, presented at the Eleventh International Symposium on the Effects of Radiation on Materials held June 28 in Scottsdale, Arizona, honored McElroy "for his distinguished service in the advancement of voluntary consensus standardization in the field of nuclear radiation metrology, and for his leadership in ASTM and related international standardization efforts."

Martin Becker, was one of two professors of nuclear engineering at Rensselaer Polytechnic Institute (RPI), Troy, New York to receive high awards. Becker, a Fellow of the American Nuclear Society, was selected by the American Society for Engineering Education to receive its 1982 Glenn Murphy Award, an annual award recognizing a distinguished nuclear engineering educator for notable professional contributions to the teaching of undergraduate and/or graduate nuclear engineering students. The award was presented at the association's annual conference, held June 20-24, at Texas A&M University.

Don Steiner, RPI professor of nuclear engineering and also a Fellow of ANS, received a certificate of appreciation from the U.S. Department of Energy, citing him for "personal commitment through service as Manager of the Fusion Engineering Design Center for the Technical Management Board, as well as for significant contributions to the definition of the Fusion Engineering Device."

VISITORS TO RSIC

The following persons came to RSIC during the month of December to visit and/or to use RSIC facilities: Charles M. Ward, U.S. Army Foreign Science and Technology Center, Charlottesville, Virginia and Roger Rydin, University of Virginia, Charlottesville.

UPCOMING MEETINGS, COURSES, AND SYMPOSIA

Please note the following information about upcoming events of interest.

Call for Papers on Numerical Methods

The International Conference on Numerical Methods in Nuclear Engineering, will be held September 6-9, 1983, in Montreal, Quebec, Canada. The conference is sponsored by the Nuclear Science and Engineering Division of the Canadian Nuclear Society, and papers are solicited for the following general topics:

- reactor dynamics and safety;
- fuel and fuel channel modeling;
- thermal hydraulics;
- probabilistic risk assessment;
- multidimensional reactor analysis;
- transport theory (fission and fusion reactors, shielding);
- power control and optimization;
- in-core data processing algorithms;
- software engineering;
- mathematical models for advanced fuel cycles; and
- resource and energy management.

The deadline for 750—1200-word summaries is March 25, 1983; the final paper deadline is July 15, 1983. For further details contact Riccardo A. Bombalumi, Nuclear Studies and Safety Department, H18 H17, Ontario Hydro, 700 University Ave., Toronto, Ont. M5G 1X6, Canada; phone 416-592-7026.

Courses

A short course on Criticality Accident Dosimetry will be held April 11–15, 1983, at the Dosimetry Applications Research Facility of the Oak Ridge National Laboratory in Oak Ridge, Tennessee. The fee for the course is $750; registration deadline is March 25, 1983. The course will provide a detailed survey of neutron and gamma radiation dosimetry associated with nuclear criticality accidents. Lectures will be presented concerning area and personnel monitoring, chromosome aberrations, dose estimation, criticality alarm monitoring, and biological effects of radiation. Experimental work will allow participants to obtain dose estimates and accident information using neutron activation (foils, blood sodium, hair), and thermoluminescent methods. Criticality accidents will be simulated by operating the Health Physics Research Reactor in the pulse mode. Additional information may be obtained from R. E. Swaja or C. S. Sims, ORNL, P.O. Box X, Bldg. 7710, Oak Ridge, Tennessee 37830; phone 615-574-5851.

The University of New Mexico Department of Chemical and Nuclear Engineering is sponsoring a course entitled, Nuclear Criticality Safety, May 16–20, and a Nuclear Criticality Specialist’s Workshop to follow on May 23–25. Both the course and the workshop will be held in Taos, New Mexico. The Nuclear Criticality Safety course will provide an overview of the theory and practice of nuclear criticality for those with less than two years of experience. The registration deadline is April 1, 1983. The course fee is $625 for ANS Nuclear Criticality Safety Division members and $650 for nonmembers. The workshop is intended for those who have attended an earlier basic course, such as the course which precedes this workshop, or who have equivalent experience. The registration deadline for the workshop is March 1, 1983. Additional information about both the course and the workshop may be obtained from Glenn A. Whan, Department of Chemical and Nuclear Engineering, University of New Mexico, Albuquerque, NM 87131; phone 505-277-5442 or -5431.

Statistics for Radiological Sciences and Protection will be presented May 29–June 3, 1983, in Merrimack, New Hampshire. The course presents the development and use of fundamental statistical concepts applicable to data reduction and error analyses. Concepts and relationships are reinforced by the presentation of applications in the field of radiological sciences and protection and through the solutions of sample problems. The manual and text are included for a fee of $650. Further information and registration forms may be obtained from the course sponsor, Kenneth W. Skrable, 6 Ruthellen Rd., Chelmsford, Massachusetts 01824; phone 617-453-1045 or 452-5000, ext. 2239.

Calendar

Please note the following.

February 1983


Waste Management ’83, Tucson, Arizona, February 27–March 3, sponsored by the University of Arizona, the American Nuclear Society, and the American Society of Mechanical Engineers’ Radiwaste Systems Committee. Contact: General Chairman Roy Post, Editor, Nuclear Technology, University of Arizona, Tucson, Arizona 85721; or
Technical Program chairman M. E. Wacks, Department of Nuclear and Energy Engineering, University of Arizona, Tucson, AR 85721.

March 1983


*Topical Meeting on Advances in Reactor Computations*, Salt Lake City, Utah, March 28-31, sponsored by the ANS Mathematics and Computation Division and the ANS Idaho Section. Contact: General Chairman Vincent Acquino, Argonne National Laboratory, P.O. Box 2598, Idaho Falls, Idaho 83404, phone 208-526-7616; or Technical Program Chairman Elmer Lewis, Department of Mechanical and Nuclear Engineering, Northwestern University, Evanston, Illinois 60201, phone 312-492-7025.

April 1983

*Topical Meeting on Technology of Fusion Energy*, Knoxville, Tennessee, April 26-28, sponsored by the ANS Oak Ridge/Knoxville Section, the ANS Fusion Energy Division, Oak Ridge National Laboratory, the U.S. Department of Energy, and the Electric Power Research Institute. Contact: General Chairman James L. Scott, ORNL, P.O. Box X, Oak Ridge, Tennessee 37830, phone 615-574-4834; or Technical Program Chairman Charles Planagan, Fusion Energy Div, Oak Ridge, TN 37830, phone 615-576-5503.

May 1983

Louisiana State University is offering a five-day short course on basic health physics to begin on May 9, 1983 at a cost of $425. Contact: J. C. Courtney, Nuclear Science Center, Louisiana State University, Baton Rouge, LA 70803; phone (504) 388-2163.


June 1983

*Third International Conference on Emerging Nuclear Energy Systems*, Helsinki, Finland, June 6-9, sponsored by the Finnish Nuclear Society, the European Nuclear Society, the American Nuclear Society, and the USSR Academy of Sciences. Contact: Jorma Routti, Helsinki University of Technology, Department of Technical Physics, SF-02150 Espoo 15, Finland (Telex: 12-1591); or S. J. Karttunen, Technical Research Centre of Finland, Nuclear Engineering Laboratory, P.O. Box 169, SF-0181 Helsinki 18, Finland.

*ANS Annual Meeting*, Detroit, Michigan, June 12-16. Contact: General Chairman Walter J. McCarthy, Jr., Chairman and Chief Executive Officer, Detroit Edison, 2002 Second Ave., Detroit, Michigan 48226, phone 313-237-8800; or Technical Program Chairman Denis O'Brien, Commonwealth Edison, Route 1-Box 84, Braidwood Station, Braceville, Illinois 60407, phone 815-458-2801.

*Fifth Summer School on Computing Techniques in Physics*, Tabor, Czechoslovakia, June 21-30. Contact: Dr. J. Nadrchal, Summer Schools on Computational Physics, Institute of Physics, Czechoslovak Academy of Sciences, Na Slovance 2, CS-180 40 Prague 8, Czechoslovakia.

October 1983

*3rd Topical Meeting on Fusion Reactor Materials*, Albuquerque, New Mexico, October 10-13, sponsored by Sandia National Laboratories. Contact: M. J. Davis, General Chairman, 3rd Topical Meeting on Fusion Reactor Materials, Dept. 5830, Sandia National Laboratories, P.O. Box 5800, Albuquerque, NM 87185, USA

May 1984

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.

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 fulfill 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

AERE-R-8925 The Effects of Radiation on Electrical Insulators in Fusion Reactors., Phillips, D.C., 1978, NTIS, HSMO

BARC-1064 Skyshine Spectra of Gamma Rays., Swarup, J., 1980, Health Physics Division, Bhabha Atomic Research Centre, Bombay (India)


BNL-31600, CONF-821103-11 Fusion-Reaction Cross Section In (High-Temperature) Mu-Catalyzed Fusion., Takahashi, H., Moats, A., June 1980, NTIS, PC A02/MF A01


Portions of document are illegible.


CONF-820931-7 Comparison of Electron-Transport Calculations for Water in the Liquid and Vapor Phases., Turner, J.E.; Paretzke, H.G.; Hamm, R.N.; Wright, H.A.; Ritchie, R.H., 1982, NTIS, PC A02/MF A01


DOE/SR-82-1103-1 Fusion-Reaction Cross Section In (High-Temperature) Mu-Catalyzed Fusion., Takahashi, H., 1982, NTIS, PC A02/MF A01


HEDL-SA-2228FP  Point Monte Carlo Data Needs and Constraints., Carter, L.L., August 1980, NTIS, PC A02/MF A01
HEDL-TME-82-12  MIDX, A One-Dimensional Diffusion Code for Generating Effective Nuclear Cross Sections. Mann, F.M., September 1982, NTIS, PC A04/MF A01
LA-UR-82-2528; CONF-820942-1 Application of Nuclear Models to Neutron Nuclear Cross Section Calculations., Young, P.G., 1982, NTIS, PC A02/MF A01
LA-UR-80-2605; CONF-801207-1 New Developments in Differencing the Spherical Geometry Neutron Transport Equation., Miller, W.F., Jr., 1980, NTIS, PC A02/MF A01
NBSIR 82-2579 Tables of Energy Deposition Distributions in Aluminum and Copper Irradiated by Point-Monodirectional Electron Beams with Energies from 1 to 60 MeV., Berger, M.J.; Seltzer, S.M., October 1982, NTIS, PC $7.50
Atomkernenergie, 36(2), 143 Neutron Fluence-to-Dose Conversion Factors for (alpha,n) Sources., Kumar, A.; Nagarajan, P.S., 1980, Short communication only.
Energ. Atomtech, 32(5-6), 249-252, 256, 260 (In Hungarian) Calculation of the Activity Transport in Power Reactor Components by the Graph Theory., Horvath, L.G., May-June 1979


Nucl. Technology, 60(1), 114-123 Assessment of Radiation Dose and Effects from Radon and Its Progeny in Energy-Efficient Homes. Burkart, W., January 1983


BOOK HANDLING RADIOACTIVITY: A PRACTICAL APPROACH FOR SCIENTISTS AND ENGINEERS., Stewart, D.C., New York, NY. John Wiley and Sons

COMPUTER CODES LITERATURE

EPRI NP-926,OZMA - A Code to Calculate Resonance Reaction Rates in Reactor Lattices Using Resonance Profile Tabulations., Barhen, J.; Rothenstein, W., Technion, Israel Institute of Technology, Haifa, Israel, February 1981


JAERI-1274 DOYC; JCOMPACT; JFRIC; SRAC Modular Programming Method at JAERI., Asai, K.; Katsuragi, S., Japan Atomic Energy Research Institute, Tokai, Japan, February 1982

JAERI-1280 AMOEDA Graphical Representation of Transmutation and Decay Chain Data, Transmutation Cross Section and Delayed Gamma Ray Emission Data., Seki, Y.; Iida, H.; Kawasaki, H., Japan Atomic Energy Research Institute, Ibaraki, Japan, September 1982


JAERI-M 9717 (In Japanese) PROPP; TOPIC Application of Monte Carlo Transport Code to Neutronics Design of Tokomak Fusion Reactor., Iida, H., Japan Atomic Energy Research Institute, Ibaraki, Japan, October 1981, AVAIL: INIS (microfiche only)
CORRECTION TO ASTM STANDARDS

It has come to our attention via a telephone call from Mark Rowland of the University of New Mexico that a telephone number for ordering ASTM Standards given in the December issue of the newsletter was incorrect. The correct number is 215-299-5585.
The RSIC Newsletter carries information about RSIC products and services. Do you wish to continue to receive it? If so, please fill out the form below as completely as possible and mail it immediately. We will remove from the distribution list the names of those not responding on or before March 1, 1983. Please print or type the name and mailing address. Use additional paper as necessary.

A. Name: ________________________________
   Organization: ____________________________
   Mailing: __________________________________
   Address: __________________________________
   Nation: __________________________________
   Telephone No: ____________________________
   (Commercial) (FTS)

B. Organization/institution type:
   Utility ____________________________
   Consultant ____________________________
   Architect-Engineer ____________________________
   Government Contractor ____________________________
   Power Reactor ____________________________
   Industrial Laboratory ____________________________
   Industrial Vendor ____________________________
   University ____________________________
   International Agency ____________________________
   Health Care Agency ____________________________
   Government Lab. ____________________________
   Hospital ____________________________
   Software Service ____________________________

C. What are the areas in which you are engaged?
   Breeder Reactor ________
   Gas Cooled Reactor ________
   Light Water Reactor ________
   Heavy Water Reactor ________
   Fusion - Magnetic ________
   Fusion - Inertial ________
   Fusion - Hybrid ________
   Weapons ________
   Accelerators ________
   Space Shielding ________
   Well Logging ________
   Other ________
   Waste Management ________
   Reactor Safety ________
   Criticality Safety ________
   Shipping Casks ________
   Fuel Cycle ________
   Health Physics ________
   Occupational Exposure ________
   Radiation Damage ________
   Environmental Exposure ________
   Activation and Heating ________
   Radiation Measurement ________

D. Organization/institution type: For United States installation, please indicate your source of financial support; if more than one sponsor, indicate proportionate fraction of time spent on each. This information is essential.
   DOE - Breeder ________
   DOE - Fusion ________
   DOE - Military ________
   DOE - LWR ________
   DOE - Navy ________
   DOE - Other ________
   Defense Nuclear Agency ________
   Army ________
   Navy ________
   Air Force ________
   Defense - Other ________
   Civil Defense ________
   NRC ________
   Utility ________
   EPRI ________
   State ________
   Private ________
   University ________
   Other ________


PART II

SURVEY OF RADIATION PROTECTION, SHIELDING AND TRANSPORT COMPUTING TECHNOLOGY
(Please answer each question, using additional paper as needed)

1. Do you compute radiation exposures or perform radiation transport calculations, (e.g., in-plant exposures, environmental studies, shield design)? Please describe.

2. Do you use computerized numerical data bases or cross section libraries?

3. What computing technology do you need (e.g., accurate, fast code to perform neutron streaming studies)?

4. What data libraries do you need? (e.g., radioactive decay nuclide data base, albedo data for MORSE for concrete elements)?

5. Describe your computer environment. What computers do you use?

6. What trends do you see — more computation on mini- and microcomputers, in-house or centralized computing facilities via remote terminal?

7. Do you have any outstanding shielding problem areas that should be addressed through additional R & D?

8. Have you obtained, and do you use, computer codes and data from RSIC? List; comment.

9. Have you developed computer codes and data libraries that you are willing to share through RSIC? Please list and cite documentation, if any exists.

10. Have you already placed your work in RSIC? If yes, indicate below if it is time for an update. Do you have publications which you wish to contribute? Please comment:

Please make any additional comments or suggestions.

PLEASE RETURN TO: Radiation Shielding Information Center
Oak Ridge National Laboratory
P.O. Box X
Oak Ridge, Tennessee 37830