RSIC Newsletter

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> *Love work.*
> *Turn a deaf ear to slander.*
> *Be considerate in correcting others.*
> *Do not be taken up by trifles.*
> *Do not resent plain speaking.*
> *Meet offenders half-way.*
> *Be thorough in thought.*
> *Have an open mind.*
> *Do your duty without grumbling.*
>
> *)Marcus Aurelius*

An Era Passes) NESC Ceases Operation

Margaret Butler, a legend in the computational mathematics and scientific computing world, has announced the close of the National Energy Software Center (NESC) at Argonne National Laboratory (ANL). The DOE Office of Scientific & Technical Information (OSTI) which exercises oversight of the program, transferred its inventory and functions to its Oak Ridge offices during this fiscal year. The work will continue under the DOE/OSTI Energy Science and Technology Software Center (ESTSC), organized for this activity. The Nuclear Regulatory Commission (NRC), an NESC sponsor for several years, has also transferred its software distribution functions to the new DOE/OSTI center.

Margaret Butler founded NESC's predecessor, the Argonne Code Center (ACC), within her ANL Applied Mathematics Division more than thirty years ago. ACC served as a clearinghouse for the voluntary exchange of computing technology among the early pioneers in scientific computing, located largely within the Atomic Energy Commission (AEC) laboratories. The center filled an important role in assisting in advancing the state of the art in scientific computing in the critical early days of reactor research and development.

The Argonne Code Center grew, and following a review by the AEC-sponsored Mitchell Committee, was selected as the central repository for AEC software and its distribution center. As the AEC National Energy Software Center, NESC was fully funded through AEC programs to facilitate technology transfer and exchange.

The Atomic Energy Commission was replaced by the Energy Research & Development Administration (ERDA) and NESC sponsorship was transferred to the ERDA Controller's office and upgraded in both staff and activities. When ERDA was replaced by the Department of Energy (DOE), the DOE/OSTI assumed responsibility for NESC activities. As budgets became leaner, NESC funding was gradually reduced, leading to full cost recovery operation.

Margaret Butler personally exercised a strong influence in efforts to advance computing technology within the nuclear industry. She was one of the founders, and later chairperson, of the American Nuclear Society's

(ANS) Mathematics and Computation (M&C) Division. She led in many standardization efforts in scientific computing. She was a founder and a continuing member of ANS-10, a subcommittee of the ANS Standards Committee, and worked with other national standards efforts including the American National Standards Institute (ANSI).

And so, RSIC staff members are proud to salute Margaret Butler and the team which served under the ACC/NESC label. Their efforts, in many ways, have influenced for good the field of scientific computing in which RSIC also serves.

Betty F. Maskewitz

RSIC/ESTSC Agreement on DOE Software

As indicated in the October 1991 *RSIC Newsletter*, the centralized activity for scientific and technical software distribution is now handled by a new organization in Oak Ridge called the Energy Science and Technology Software Center (ESTSC), and the U.S. Department of Energy (DOE) Order governing this activity is under revision to reflect this and other changes.

The DOE Order 1360.4B, SCIENTIFIC AND TECHNICAL COMPUTER SOFTWARE (available in draft form), specifically recognizes the Radiation Shielding Information Center (RSIC) as a Specialized Information Analysis Center (SIAC) funded by various sponsors to provide information analysis center activities (including those associated with software and data) in the technical areas of radiation transport and safety. RSIC is also a party to the DOE/NEA Cooperative Arrangement on Nuclear Data and Computer Programs. The role of RSIC in providing services on behalf of the interests of our programmatic sponsors remains unchanged.

ESTSC and RSIC are completing an agreement whereby RSIC will be the exclusive source of all requests for software within our technical scope. Interaction between RSIC and users covered by our programmatic sponsors will be handled in the normal fashion. For those users not currently in the above category, a charge will be assessed that is the same as that which will

Customer	Type of hardware, cost is in U.S. currency		
	Personal computer	Mainframe	Supercomputer
DOE and contractors	$170	$ 600	$1440
Other Federal Agencies and contractors	190	685	1630
Universities	200	740	1770
Public	610	2200	5470
Foreign	$935	$3260	$8040

be required to obtain software from ESTSC. In effect, RSIC will continue to provide a full range of information analysis center services directly to the entire technical community concerned with the solution of problems associated with the broad topic of radiation transport and safety. At the same time, it will provide an equitable degree of consistency in the overall software management goals of DOE. Please contact RSIC if you have any questions. Your cooperation will be appreciated.

The initial cost structure for DOE-developed software is the table.

R. W. Roussin

ORNL AGREES TO PROVIDE UNIVERSITY OF TENNESSEE STUDENTS HANDS-ON REACTOR EXPERIENCE

ORNL Press Release) Nuclear engineering students at the University of Tennessee (UT) will have the opportunity this fall to gain hands-on experience at what is considered by some researchers the most capable shielding research reactor in the western world.

The U.S. Department of Energy's Oak Ridge National Laboratory (ORNL) has entered into an agreement that will open the Tower Shielding Reactor II to senior nuclear engineering students at UT. The reactor is located at the laboratory's Tower Shielding Facility. The Memorandum of Understanding outlines a program that will allow the students to perform start-ups and shutdowns and to become familiar with aspects of reactor operations such as equipment line-ups, conduct of operations and compliance issues. The students will perform all operations under direct supervision of ORNL's certified senior reactor operators.

"This type of tangible experience is crucial for students in the nuclear engineering program," said Tom Kerlin, UT's nuclear engineering department head. "Working with an actual reactor, not just computer simulations, instills in the students a heightened level of respect for a nuclear facility."

UT graduate William E. Hill, now an assistant section head for class-B reactors at ORNL, said the laboratory is looking forward to providing students this educational experience. ``There are so few research reactors available for students now that we feel it's very important to provide these type opportunities whenever possible,'' he said. In 1987, following procedural reviews, a DOE shutdown order for several ORNL reactors eliminated the availability of facilities for student-participation programs at laboratory reactors. ``We're really pleased to get the program started again,'' Hill said.

Work at the Tower Shielding Reactor II includes experiments to gauge various material's ability to act as a shield against radiation. Currently, a joint Japanese-American shielding program is under way. ORNL is one of five energy-related facilities managed by Martin Marietta Energy Systems, Inc., for the Department of Energy.

NASA Forms Technology Transfer Network

K. Lee Peddicord, a long-time RSIC supporter, is currently director of the Texas Experimental Engineering Station (TEES) and interim Dean of Engineering at Texas A&M University. TEES was recently selected by NASA as one of six organizations which will create the agency's technology transfer network. TEES will oversee the network's Mid-Continent Regional Technology Transfer Center. This center, assisted by the Southwest Research Institute, the University of Houston/Clear Lake, and the University of Texas, San Antonio, will set up the network in fourteen states.

The $30-million program, funded entirely by NASA, is aimed at providing U.S. business and industry with better access to technology developed by the space agency as well as by other government agencies. For a fee, the network will offer services such as document retrieval, market research, business planning, and data services.

CHANGES TO THE COMPUTER CODE COLLECTION

Four new code systems were packaged and added to the computer code collection. Two code systems were contributed by foreign countries.

CCC-597/RMET21

The National Commission of Atomic Energy, Rio Negro, Argentina, contributed RMET21. RMET21 is a lattice cell code system which calculates different parameters associated with spatial and energy neutron resonance self-shielding, such as effective values of broad energy group absorption and fission cross sections, resonance integrals as functions of energy and space, and effective energy group lambda factors. The integral form of the Boltzmann equation with first-flight collision probabilities is solved. RMET21 runs on the VAX family of computers under the VAX/VMS operating system and is written in Fortran IV and Fortran 77. One DS/DD 5.25-in. diskette is required for transmittal. References: Informal Notes (1991), *Ann. Nucl. Energy*, 14(11), 589-601 (1987). Fortran IV and 77; VAX.

CCC-598/FISPACT

Harwell Laboratory, Oxfordshire, England, through the NEA Data Bank, Gif-sur-Yvette, Cedex, France, contributed this inventory code system for neutron activation analysis in fusion reactors. FISPACT uses external libraries of reaction cross sections and decay data for all relevant nuclides to produce an inventory of nuclides and associated quantities produced as a result of irradiation with neutrons. The actual output quantities include the amounts (atoms and grams), the activities (Bq), alpha-, beta- and gamma-energies (curie-MeV), dose rates, ingestion and inhalation doses and half-life for each nuclide. The code is written in Fortran 77 and runs on the IBM 3090. Two DS/HD 5.25-in. (1.2 MB) diskettes are required for transmittal. References: AERE-M-3655 (April 1988) and AERE-M-3654 (March 1988). Fortran 77; IBM 3090.

CCC-599/QBSHIELD MICRO

The University of Pittsburgh, Pennsylvania, contributed this code system for the spherical shield design for gamma-ray energies between 0.5 and 10 MeV using the buildup factor method for water, ordinary concrete, iron, lead, and uranium. Quick spherical shielding design for storage of radionuclide sources in research settings is done based on photon energies, abundances, activity, desired exposure rate at a specified point, choice of shielding material, source radius, and assumed density of shielding material. Shield thickness and weight are computed along with exposure rates. QBSHIELD has run on IBM PCs and compatibles and the IBM PS/2 Models 50, 60, and 70. The source code is written in Microsoft QuickBASIC 4.5, which will also run under MS-DOS 5.0 QBasic. The executable version requires no additional software. Included on one DS/HD (1.2 MB) 5.25-in. diskette are source code, executable code, data files, sample input and output files. References: Informal Notes from University of Pittsburgh (Sept. 24, 1991), The Pennsylvania State University Informal Report

PUTZ Errata/Note

You may have noticed in the December issue of the *RSIC Newsletter* that two of the codes announced used the same reference number. The code PUTZ MICRO should be CCC-595 not CCC-594.

We apologize for the delay in the availability of PUTZ. Those of you who have already inquired about it may now send in one DD diskette with your request.

(April 1978). QuickBASIC; IBM PC.

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.

Appended to the end of the newsletter is an announcement sent via Email and included for your information. Further details regarding content and logistics may be obtained from Van Riper as indicated in the announcement.

Deterministic Methods Seminar/TORT Workshop Update

If you have been reading the newsletter for the last several months, you are aware that RSIC is sponsoring the *Deterministic Methods Seminar/TORT Workshop* in February. For your information the titles of selected presentations for the seminar are given here. (This is a tentative list, not in order of presentation.)

S. M. Zaritsky, I. V. Kurchatov Institute of Atomic Energy, Moscow, ``Some Problems of WWER Pressure Vessels Radiation Damage Evaluation by Deterministic Radiation Transport Methods,''

Bradley Clark, Los Alamos National Laboratory, ``THREEDANT: A Three-Dimensional Diffusion-Accelerated Neutral Particle Transport Code for x-y-z and r-T-z Geometries,''

Igor J. Feoktistov, and Vladimir A. Zhukov, Atomic Energy Software Assoc., Novgorod, Russia, ``FEMINA: Two-Dimensional Finite Element System for Radiation Transport Problems by Simplified Method of Spherical Harmonics Approximation,''

Frej Wasastjerna, Technical Research Centre of Finland, ``Calculations Methods in Finland,''

David W. Nigg, EG & G Idaho, ``Biomedical Applications of Two- and Three-Dimensional Deterministic Radiation Transport Methods,''

Yen-Wan Hsueh Liu, National Tsing Hua University, Taiwan, ``Development of a Collapsing Scheme for the Mixed Group and Point Cross Sections and Its Application on Multi-Dimensional Deep Penetration Calculations,''

Katsumi Hayashi, Hitachi Engineering Co., Japan, ``DOG-II Input Generator Program DOT3.5 Code,''

H. Brockmann, KFA - Jülich, Fed. Rep. of Germany, ``Improved Treatment of Two-Dimensional Neutral Particle Transport Through Voids Within the Discrete Ordinates Methods by Use of Angle-Dependent View Factors,''

Roy A. Castelli, and D. Allen Barnett, Knolls Atomic Power Laboratory, Schenectady, New York, ``COGEDIF) Automatic TORT and DORT Input Generation from MORSE Combinatorial Geometry Models,''

Ediz Tanker, Turkish Atomic Energy Authority, Ankara, ``PC 386-Based Version of DORT,''

V. S. Arakali, West Valley Nuclear Service Co. Inc., New York, ``Radiation Transport in High-Level

Waste Form,"

R. T. Perry, Los Alamos National Laboratory, New Mexico, ``Reactivity Effects of Light Water Insertion in a Heavy Water System: A Comparison of Four Transport Codes,"

Ahmed Badruzzaman, Chevron Oil Field Research Co., La Habra, California, ``Nodal Discrete

L. J. Lorence, Jr, Sandia National Laboratories, Albuquerque, New Mexico, ``CEPXS/ONELD: A One-Dimensional Coupled Electron-Photon Discrete Ordinates Code Package,"

Ordinates Methods) An Update."

Calendar

Your attention is directed to the following events of interest.

February 1992

Deterministic Methods Seminar/TORT Workshop, Feb. 4! 6, 1992, Oak Ridge, Tennessee. Contact: R. W. Roussin, Oak Ridge National Laboratory, Radiation Shielding Information Center, P.O. Box 2008, Oak Ridge, TN 37831-6362 (phone 615-574-6176; Fax 615-574-9619).

Basic Radiation Safety & Management, Feb. 20! 21, 1992, Las Vegas, Nevada, a seminar presented by Stan A. Huber Consultants, Inc. Contact: Stan A. Huber Consultants, Inc., 200 N. Cedar Road, New Lenox, IL 60451 (phone 815-485-6161; Fax 815-485-4433).

MCNP Input/Output Workshop) How We Currently Communicate with MCNP and Ideas to Make It Better, Feb. 20! 21, 1992, Los Alamos National Laboratory, New Mexico. Contact: Ken Van Riper, Los Alamos National Laboratory, P.O. Box 1663, Los alamos, NM 87545 (phone 505-667-8104; Fax 505-665-5538).

1992 HEART Conference, Feb. 24! 28, 1992, Albuquerque, New Mexico. Contact: DASIAC, Attention: 1992 HEART Conference, 2560 Huntington Ave., Suite 500, Alexandria, VA 22303.

March 1992

Waste Management '92, Mar. 1! 5, 1992, Tucson, Arizona. Contact: University of Arizona, College of Engineering, Building 20, Tucson, AZ 85721.

1992 Topical Meeting on Advances in Reactor Physics, Mar. 8! 11, 1992, Charleston, South Carolina, sponsored by the ANS Reactor Physics and Mathematics and Computations Divisions. Contact: Russ Ferrara, Westinghouse Savannah River Co., Savannah River Laboratory, Bldg. 786-1A, Room 5, Aiken, South Carolina 29808 (phone 803-725-8233).

Radiation Transport Calculations Using EGS4, Mar. 9! 12, 1992, a four-day, 80386 microcomputer-based course to be held in Seattle, Washington, sponsored by Inst. of Applied Physics and Medicine. Contact: Susan Walker, IAPM, 701 16th Ave., Seattle, WA 98122 (phone 206-553-7330).

Practical Radiation Shielding, Mar. 9! 13, 1992, Atlanta, Georgia, a course sponsored by Shonka Research Associates, Inc., and the Georgia Institute of Technology. Contact: Georgia Tech Continuing Education, Georgia Institute of Technology, Atlanta, GA 30332-0385 (phone 404-894-2400, 800-325-5007).

Introduction to Radiation Protection, Mar. 16! 20, 1992, Cambridge, Massachusetts. Contact: David J. Allard, Arthur D. Little, Inc., 20 Acorn Park, Cambridge, MA 02154 (phone 617-864-5770 ext. 3584).

Occupational and Environmental Radiation Protection, Mar. 23! 27, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

Radon 2000, Mar. 26! 27, 1992, London, sponsored by the National Radiological Protection Board. Contact: NRPB Press Office, Chilton, Didcot, Oxon OX11 0RQ (phone 0235-831600; Fax 0235-833891).

April 1992

28th Annual Meeting of the National Council on Radiation Protection and Measurements, Apr. 1! 2, 1992, Washington, D.C. Contact: NCRP, 7910 Woodmont Ave., Suite 800, Bethesda, MD 20814 (phone 301-657-2652).

Basic Radiation Safety & Management, Apr. 23! 24, 1992, Chicago, Illinois, a seminar presented by Stan A. Huber Consultants, Inc. Contact: Stan A. Huber Consultants, Inc., 200 N. Cedar Road, New Lenox, IL 60451 (phone 815-485-6161; Fax 815-485-4433).

New Horizons in Radiation Protection and Shielding, Apr. 26! May 1, 1992, Pasco, Washington, a topical meeting of the ANS Radiation Protection and

Shielding Division. Contact: Wilbur Bunch, HO-36, Westinghouse Hanford Co., P.O. Box 1970, Richland, WA 99352 (phone 509-376-6313).

May 1992

Radiation Protection Instrumentation, May 11! 15, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

8th International Radiation Protection Association Conference, May 17! 22, 1992, Montreal, Canada. Contact: G. Webb, NRPB, IRPA 8 Secretariat, Chilton, Didcot, Oxon OX11 ORQ, United Kingdom.

International Symposium on Numerical Transport Theory, May 26! 28, 1992, in Moscow. Contact: Prof. T. A. Germogenova, The Keldysh Institute of Applied Mathematics, USSR Ac. of Sci., Miusskaya Sq. 4, Moscow A-47, 125047, USSR (fax 095-972-0737). Participants from the U.S. may contact Prof. Paul Nelson, Dept. of Nuclear Engg., Texas A&M University, College Station, TX 77843-3133 (fax 409-845-6443).

June 1992

American Nuclear Society Annual Meeting, June 7! 12, 1992, Boston, Massachusetts. Contact: Mary Keenan, ANS, 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 708-352-6611).

10th Topical Meeting on Technology of Fusion Energy, June 7! 12, 1992, Boston, Massachusetts, sponsored by the American Nuclear Society and the U.S. Department of Energy. Contact: Stephen O. Dean, Fusion Power Associates, 2 Professional Drive, Suite 248, Gaithersburg, MD 20879 (phone 301-258-0545).

Environmental Radiation Surveillance, June 8! 12, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

In-Place Filter Testing Workshop, June 8! 12, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

Techniques in Nuclear Radiation Shield Analysis, June 15! 19, 1992, a course sponsored by the University of Texas at Austin. Contact: Continuing Engineering Studies, The University of Texas at Austin, College of Engineering, ECJ 10.324, Austin, TX 78712 (phone 512-471-3506, Fax 512-471-0831).

Planning for Nuclear Emergencies, June 15! 19, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

July 1992

1992 Nuclear and Space Radiation Effects Conference, July 13! 17, in New Orleans. Contact: Nelson S. Saks, NSREC Technical Program Chairman, Naval Research Laboratory, Code 6813, 4555 Overlook Ave., Washington, DC 20375-5000 (phone 202-767-2534, Fax 202-767-0546).

15th International Conference on High Energy Accelerators, July 20! 24, 1992, Hamburg, Fed. Rep. of Germany. Contact: F. Willeke, Deutsches Elektronen-Synchrotron, Notkestrasse 85, 2000 Hamburg 52, FRG.

August 1992

SLOPOS5, 5th International Workshop on Slow-Positron Beam Techniques for Solids & Surfaces, Aug. 6! 10, 1992, Jackson Hole, Wyoming, USA. Contact: Eric H. Ottewitte, Idaho National Engineering Laboratory, P.O. Box 1625, Idaho Falls, ID 83415-2114 USA (phone 208-526-1751; Fax 208-526-9267).

Basic Radiation Safety & Management, Aug. 13! 14, 1992, Newport Beach, California, a seminar presented by Stan A. Huber Consultants, Inc. Contact: Stan A. Huber Consultants, Inc., 200 N. Cedar Road, New Lenox, IL 60451 (phone 815-485-6161; Fax 815-485-4433).

Nuclear Technologies for Space Exploration, Aug. 16! 19, 1992, Jackson Hole, Wyoming. Contact: Dr. David Woodall, INEL EG&G Idaho, P.O. Box 1625, Idaho Falls, ID 83415-2516.

Occupational and Environmental Radiation Protection, Aug. 17! 21, 1992, Boston, Massachusetts, a short course offered by Harvard School of Public Health. Contact: Mary F. McPeak, Assoc. Dean for Continuing Education, 677 Huntington Ave., Boston, MA 02115 (phone 617-432-1171; Fax 617-432-1969).

September 1992

Hazardous and Radioactive Waste Management (Spectrum 92), Sept. 13! 17, 1992, sponsored by the ANS and the U.S. Dept. of Energy. Contact: Dr. Clyde W. Frank, EM-50/6B-158, U.S. Dept. of Energy, 1000 Independence Ave., SW., Washington, DC 20585 (phone 202-586-6382)

8th International Meeting on Radiation Processing, Sept. 14! 19, 1992, Beijing, China, sponsored by the International Atomic Energy Agency. Contact: International Meeting on Radiation Processing, P.O. Box 1012 (30), Beijing 100 822, China.

International Symposium on Nuclear Data Evaluation Methodology, Sept. 28! Oct. 2, 1992, Upton, New York, sponsored by Brookhaven National Laboratory. Contact: C. L. Dunford, Brookhaven National Laboratory, NNDC/197D, Upton, New York.

14th International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Sept. 30! Oct. 7, 1992, Wuerzburg, Germany, sponsored by the International Atomic Energy Agency. Contact: IAEA, Conference Service Section, P.O. Box 100, A-1400 Vienna, Austria.

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 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

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Nucl. Sci. Eng., 109, pp. 373-379. . *Mitigation of Singularity Problems in Gamma-Ray Transport in Spherical Systems*. . Subbaiah, A.; Natarajan, A.; Gopinath, D.V.; Takeuchi, K. . December 1991

Nucl. Sci. Eng., 109, pp. 380-390. . *Transmission of Intermediate-Energy Neutrons and Associated Gamma Rays Through Iron, Lead, Graphite, and Concrete Shields*. . Shin, K.; Ishii, Y.; Miyahara, K.; Uwamino, Y.; Sakai, H.; Numata, S. . December 1991

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KAPL-4721. . *Benchmark Measurements and Calculations of a Three-Dimensional Neutron Streaming Experiment*. . Barnett, D.A. . February 1991

Med. Phys. 18, pp. 153-159. . *Geometrical Aspects of Scatter-to-Primary Ratio and Primary Dose*. . Nizin, P.S. . April 1991

Med. Phys. 18, pp. 744-748. . *Primary Dose in Photon Beams with Lateral Electron Disequilibrium*. . Nizin, P.S.; Chang, X.S. . August 1991

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Radiat. Prot. Dosim., 37, pp. 165-173. . *Calculations of Dose Equivalents Due to Stray Radiation from a High Energy Electron Beam in a Forward Direction*. . Sakano, M.; Hirayama, H.; Ban, S. . June 1991

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How Accurately Are the Rock Neutron Parameters Known? SLOWN32.BAS Program . Czubek, J.A. Institute of Nuclear Physics; Krakow, Poland 1989 INIS (MF only)

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Confidence Belt for the Rock Thermal Neutron Parameters. NEROTH32.Bas Program . Czubek, J.A. Institute of Nuclear Physics; Krakow, Poland 1989 . . . INIS (MF only)

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MCNP INPUT/0UTPUT WORKSHOP

How We Currently Communicate with MCNP
and Ideas to Make it Better

February 20 & 21 (Thursday & Friday), 1992

J. Robert Oppenheimer Study Center
Los Alamos National Laboratory

Organizing Committee:	Ken Van Riper, LANL
	Lee Carter, Hanford
	Randy Schwarz, Hanford
	Bob Little, LANL

**** First Announcement **** Call for Presentations ****

The Monte Carlo N--Particle transport code MCNP is the tool of choice for many users worldwide. But telling it what to transport where and how to do so efficiently is still done through an INP file of card images. An ever-increasing number of physics capabilities, options, and tricks available in MCNP, coupled with the ability to run larger and more complex problems on ever-more powerful computers, compounds the possibility for user frustration and bewilderment during the tedious and challenging process of preparing an INP file. Users are coming to expect more sophisticated input options in the form of graphical user interfaces, on-line help packages, input checkers, and geometry visualizers. The software technology to build such aids exists, and the computational power to do it on the User's desk is in place. The same combination of more complex problems, accessible computer power, and user sophistication also requires and facilitates improved and new ways of visualizing the results.

We invite experienced MCNP users to come and share their solutions, ideas, and hopes for the future. We would like to hear how complex INP files are being prepared now and especially about innovative programs which aid in the automation of their generation. We also solicit examples of novel ways of dealing with output, such as Gee-Whiz visualizations, use of third-party graphics software, and applications of the MCNP-SABRINA particle track display capability. Please bring some hardcopy for display and wishes for future development of MCNP and SABRINA.

A preliminary list of topics is attached. The specific applications listed are suggestions only; contributions need not fall into one of these exact areas.

Please Respond by January 6, 1992 to:

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