HAVE YOU RETURNED THE NEWSLETTER QUERY?

As we go to press, we have received approximately 500 responses out of a possible 1600 readers of the RSIC Newsletter. We remind you that an affirmative response is required in order for you to continue receiving the RSIC Newsletter. A failure to respond will be interpreted as a negative response, i.e., you no longer wish to receive the newsletter. We also remind you that the deadline for beginning our review of the newsletter distribution remains September 1.

We also call your attention to the fact that some respondents overlooked the query concerning financial sponsorship. This information, as well as that requested concerning your contribution to the RSIC information collections, will probably give us justification to continue to serve your needs without unit charges. Please help us to keep information in the RSIC subject coverage freely exchanged.

We again append the query form as the last page of this copy of the newsletter. If you have not already done so, we urge you to detach it, respond to the request for information, and mail it immediately. If you have responded and remember that you failed to answer all the queries, please give us the additional information on this form. We especially need to know the agency when you have government funding.

It is with the cooperation and the collaboration of the international technical community that RSIC is able to provide a useful information exchange. We deeply appreciate each of your efforts to further this exchange process.

RSIC DIRECTOR TRAVELS

Betty F. Maskewitz is in Europe this August on an information review and collection trip on behalf of the ORNL Engineering Physics Information Centers (EPIC) for which she is responsible. The primary purpose of the travel is to represent the U.S. Nuclear Regulatory Commission (NRC) Data Bank program at the 5th International Conference on Structural Mechanics in Reactor Technology (SMIRT-5) on August 13-17, 1979 in Berlin (West) and to participate in a post-conference seminar on the Computational Aspects of the Finite Element Method (CAFEM-5). Ms. Maskewitz will give two invited papers, entitled, “The U.S.A NRC/RSR Data Bank System and the Reactor Safety Research Data Repository (RSRDR)” and “A Survey of Major Data Management Systems.” She will also participate in a panel discussion on Data Management.

While in Berlin, Ms. Maskewitz has been invited to visit the Technical Information Center of the German Democratic Republic (GDR) Office for Atomic Safety and Protection in East Berlin.

Following the above conferences, RSIC orientation and information collection visits will be made to the Federal Republic of Germany (FRG). She will visit and lecture in The National Physical-Technical Institution (PTB) at Braunschweig and will meet with West German shielding specialists in Hanau in a seminar hosted by NUKEM, GmbH.

An orientation visit with French shielding specialists at CEA/CEN/Saclay and a discussion of mutual problems of information exchange with the OECD Nuclear Energy Agency (NEA) Data Bank personnel in Paris and at Gif-sur-Yvette, France will conclude the travel. Ms. Maskewitz will return to Oak Ridge at the end of August.
In addition to RSIC and RSRDR, EPIC includes the Nuclear Regulatory Commission (NRC) sponsored Technical Data Management Center (TDMC), which is currently involved in work associated with the enhancement, validation and documentation of computing technology used in support of NRC regulatory and licensing programs.

STANDARD ON DIRECT AND SCATTERED GAMMA RADIATION AVAILABLE

The newly-published standard, ANSI/ANS-6.6.1-1979, Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants, is now available from the American Nuclear Society, 555 North Kensington Ave., La Grange Park, Ill., 60525, for $32. It was developed by Working Group ANS-6.6 of the ANS Standards Committee under the leadership of E. A. (Ed) Warman of Stone and Webster Engineering Corporation.

The scope reads as follows: This standard defines calculational requirements and discusses measurement techniques for estimates of dose rates near nuclear power plants due to direct and scattered gamma rays from contained sources on site. On-site locations outside plant buildings and locations in the off-site unrestricted area are considered. All sources that contribute significantly to dose rates are identified, and methods for calculating the source strength of each are discussed. Particular emphasis is placed on $^{18}$N sources as they are significant sources of direct and scattered radiation for Boiling Water Reactors. The standard specifically excludes radiation from gaseous and liquid effluents. The standard describes the considerations necessary to compute dose rates, including component self-shielding, shielding afforded by walls and structures, and scattered radiation. The requirements for measurements and data interpretation of measurements are given. The standard includes normal operation and shutdown conditions but does not address accident or normal operational transient conditions.

The Nuclear Regulatory Commission has informed ANSI that NRC plans to refer to it in the Standard Review Plan for the Review of Safety Analysis Reports for nuclear power plants.

ENDF/B-V RELEASED FOR USE IN THE UNITED STATES

The United States Department of Energy has determined that ENDF/B-V will, for the present, be limited to users within the United States and AECL (Chalk River), except for the Standards, Special Purpose Dosimetry, and Actinide Files, and the Fission Product Files, which are available to everyone. However, this limitation is not intended to inhibit the release of documentation concerning how the evaluations were determined, the general characteristics of portions of the data (e.g., curves), the formats and procedures, and calculational results, nor the release by individuals or sponsoring organizations of their own information contributed to ENDF/B-V.

Limitations on ENDF/B-IV data are removed after the complete ENDF/B-V General Purpose Files are available in the U.S. and AECL (Chalk River).

The ENDF/B-V General Purpose and the Special Actinide Files have now been released by the Cross-Section Evaluation Working Group (CSEWG), and are now available for distribution from the National Nuclear Data Center (NNDC) at Brookhaven National Laboratory.

The contents of the ENDF/B-V General Purpose File are listed in Table 1, and those of the Special Purpose Actinide File are listed in Table 2.
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**NRC HIGHLIGHTS NEED FOR INCREASED EVALUATION OF DATA**

The Committee on Chemical Sciences of the National Research Council's Assembly of Mathematical and Physical Sciences recently issued, "The Department of Energy: Some Aspects of Basic Research in the Chemical Sciences." The report marks the conclusion of a study carried out by the committee to provide advice to DOE on plans for research in the chemistry-related sciences. One of the recommendations stated:

"The funding mechanism used to support the critical evaluation of nuclear data should be extended to a commitment of an additional 0.2 percent of the total R & D budget of DOE (about $8 million) for the evaluation and compilation of data. The sum will support a data-evaluation program urgently needed for advancement of the DOE mission and of fundamental science."
In the section of the report discussing critically evaluated data, the committee cited the Buchsbaum and CODAN reports, which discuss the need for critically evaluated scientific data, and the editorial in SCIENCE by W. H. Stockmayer, Chairman of the NRC Committee on Data Needs (CODAN). The report also states:

"The Committee concurs with the recommendations of the CODAN report which persuasively documents the need for critical evaluation and compilation of data in the U.S., an activity which has been seriously neglected. The need for evaluated data pervades basic and applied research as well as engineering and technology in government, industry, and universities.

"The utility and value of evaluated data depend upon the availability and reliability of the data and on the quality of their evaluation. The CODAN report emphasizes that data evaluation saves money in research, development, and technological applications such as those for which DOE has responsibility. The sooner evaluated data become available, the more money will be saved by channeling efforts into potentially fruitful directions. Timely, high-quality evaluations make it less likely that potential research and technological opportunities will be missed. It should be emphasized that the utility of evaluated data is not restricted to the specific properties, compounds, and conditions (temperature, pressure, etc.) tabulated. Ready availability of a sufficient number of reliable data points permits extrapolation to new compounds, new conditions, and, sometimes, unusual properties. Such extrapolations are of major importance in the assessment, development, and understanding of potential new processes."

After further discussion, the section concluded:

"Data needs related to DOE programs range over chemical sciences in the broadest sense, from spectroscopy to combustion engineering, from solid-state properties to corrosion. Chemical data pertinent to DOE programs include spectroscopic constants (from X-ray to nmr) for atoms, ions, and gaseous molecules, fundamental kinetic transport data, such as rate constants, diffusivities and conductivities; thermodynamic data (including data for surfaces and data at extreme conditions); crystal structures and phase diagrams; electrochemical data; state properties of solids, liquids, gases and plasmas.

"Data evaluation requires a considerable investment of time and money in the initial installation of literature-retrieval and data-processing techniques; data evaluation also requires highly trained people. For these reasons, it is important to ensure the continuity of groups with experience in critical evaluation and tabulation. The recommended program of continuing evaluation will have long-term applications for a wide range of fields, and it is essential to maintain a level of activity that will keep pace with the flow of new data in the literature. Funding and administrative mechanisms for the proposed data evaluation program should be developed by DOE to foster such a long-term commitment."

"Effective implementation of the program will require involvement of scientists (100 or 200) who have the background and experience necessary for critical evaluations. The program would benefit from participation of groups and individuals at the National Bureau of Standards, universities, national laboratories, existing data centers, and in industry. A benefit of dispersed data-evaluation efforts is the education of young scientists in the procedures suitable for objective, critical assessment of experimental results.

"It should be emphasized that data evaluation and the development of models to extrapolate data are intertwined activities. The availability of critically assessed data and the process of critical assessment are inherent parts of the development of reliable models to extend physical and chemical properties to new conditions of potential technological importance."

References:

DRAFT OF ANS PUBLIC POLICY PAPER ON OCCUPATIONAL DOSE AVAILABLE

The American Nuclear Society is preparing a series of public policy papers to define the ANS position on several nuclear-related issues. The Radiation Protection and Shielding Division appointed a committee, headed by Ed Warman of Stone and Webster Engineering Corporation, to prepare a draft on proposed reductions in occupational radiation dose limits. The draft was approved by the Division Executive Committee in June and forwarded to the ANS Public Policy Committee which is responsible for all the ANS position papers. The approved paper should be available in September and will be published in Nuclear News.

CURRENT WORK AND PROBLEMS

We continue to report current work and problems as a means of promoting intercommunication between members of the RSIC user community. We encourage our readers to keep us informed and to feel free to communicate, directly or through RSIC, with their peers in areas of interest.

M. Hatchya, Chiba Laboratory, Mitsui Engineering and Shipbuilding Co., Ltd. (MES), Japan, reports the following new activities of members of MES (sponsors in parentheses):

- Nuclear Data Evaluation (JAERI) — M. Hatchya.
- Design Study on Medical Research Reactor for Boron Neutron Capture Therapy (National Science Foundation) — M. Hatchya.
- Check Calculation for Shielding Modification of Nuclear Ship Mutsu (Japan Nuclear Ship Development Authority) — Y. Kanemori, et al.

Jon Broadway, Computer Services Section, United States Environmental Protection Agency, asks for help in the following area: "Please send any information on the existence or plans for an advanced interactive language with special capability for execution of syntactical matrix operations (preferably written in FORTRAN) and other capabilities similar to the program MLAB written in SAIL at National Institutes of Health, Bethesda, MD."

PERSONAL ITEMS

H. R. Hendrickson of the RSIC staff has taken a 2-year leave of absence from Oak Ridge National Laboratory to join the Nuclear Data Section of the International Atomic Energy Agency in Vienna, Austria. We wish Henri the best of success in this assignment.

J. Benjamin (Ben) Zipperer has recently joined the EPIC staff to provide technical support to all phases of the operation. His background is mathematics, having received a degree in Pure and Applied Mathematics from Armstrong State College, Savannah, Georgia, and having spent an additional year of study at the University of Kentucky, Lexington, Kentucky. We welcome Ben to EPIC.

Jean R. Gonnord of the Shielding Laboratory (LEP) of the Reactor and Applied Mathematical Studies Service (SERMA) of CEA/CEN/Saclay, France, has completed his one-year stay at RSIC. His assignment involved the interfacing of the TRIPOLI Monte Carlo code with the ENDF/B-IV data base.
Two summer student employees have joined EPIC as participants in an Oak Ridge Associated Universities program. Ken Clement, a Computer Science major at University of Southwestern Louisiana, Lafayette, Louisiana, and Tom Williams, a Mathematics major at Nicholls State University, Thibodaux, Louisiana, are spending the summer assisting the EPIC staff.

VISITORS TO EPIC

The following persons came for an orientation visit and/or to use EPIC facilities during the months of June and July: Ernst H. Brehm, BBC Mannheim, Germany; Edward T. Cheng and B. A. Engholm, General Atomic, San Diego, CA; A. Dubi, Ben Gurion University of the Negev, Beer Sheva, Israel; Dennis Mennerdahl, Swedish Nuclear Power Inspectorate, Stockholm, Sweden; Richard Kramer, Institute of Radiation Protection, Munich, Federal Republic of Germany; Koaru Taniguchi and Shunsuke Uchida, Hitachi Ltd. Energy Research Laboratory, Hitachi, Japan; and G. G. Warner, UCC-ND Computer Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.

CHANGES OF ADDRESS

The following address changes have been noted: Robert R. Finck from Institute of Radiophysics at Lund to the Radiation Physics Section of the National Defense Research Institute at Stockholm, Sweden; Dr. David C. Oakley from DNA Headquarters in Washington, D.C. to the NRC Waste Management Program at Lawrence Livermore Laboratory; and Dr. R. T. Perry from Battelle Laboratories in Richland, WA to the University of Wisconsin in Madison.

INTERNATIONAL JOURNAL OF THERMOPHYSICS ESTABLISHED

About two years ago, CINDAS (Center for Information and Numerical Data Analysis and Synthesis), at Purdue University, conducted an extensive international survey regarding the need for a new journal on thermophysics. Responses from nearly one thousand individuals reaffirmed the general consensus of the need for a high quality journal having a policy of broad coverage in all major scientific and technological areas of thermophysics. Based on the overwhelmingly positive attitude and the encouragement of the thermophysics community, it has been decided to establish the International Journal of Thermophysics.

The journal will publish original research articles, authoritative review papers, articles on relevant applications, brief communications on research and applications, and a section of general interest comprised of announcements of meetings, conferences, publications, and other pertinent information of interest to the thermophysics community. All publications will be refereed.

Some of the appropriate topics that will be considered for publication are: Thermodynamic properties—including heat capacity, enthalpy, vapor pressure, thermal expansion, surface tension, and other properties related to phase changes, PVT, and calorimetric studies; Transport properties—including thermal and electrical conductivity, thermal diffusivity, viscosity, and related properties; Thermal radiative properties—including emittance, absorptance, reflectance, and optical constants; New developments in experimental techniques and instrumentation relevant to thermophysical measurements; Reviews of current topics in thermophysics; Reports on reference materials and critical evaluation and standardization of techniques and procedures for thermophysical measurements; Methods of collection, critical evaluation, correlation, and dissemination of thermophysical properties data and information, and major international sources for such collections; and Selected technological applications of thermophysics.

The Editor-in-Chief invites members of the international community of researchers to submit brief informative abstracts of manuscripts intended for publication in the first and subsequent issues of the journal. Send your abstracts to: Dr. Ared Cezairliyan, Editor-In-Chief, Thermophysics Division (Bldg. 236), National Bureau of Standards, Washington, D.C. 20234, USA (301-921-3687).

The journal will be published by Plenum Press. Subscriptions should be addressed directly to Plenum Publishing Company, 227 West 17th Street, New York, NY 10011, USA.
NEW ICRU REPORTS AVAILABLE


ICRU Report 30 deals with dosimetry pertinent to radiobiological experiments, and considers methods of improving the accuracy and intercomparability of dosimetry in radiobiology. It is, in essence a handbook, primarily for the experimental radiobiologist and the radiological physicist, although it is also expected to be of value to the hospital physicist and radiotherapist. The report introduces and describes concepts and definitions of importance in quantitative radiobiology. The material is intended to provide both the physicist and the biologist a fuller appreciation of the range of concepts involved in performing work in a quantitative manner, the degree of accuracy desired and appropriate, and the difficulties and pitfalls associated with achieving that degree of accuracy. The dosimetry portion of the new report constitutes a revision of ICRU Report 10e, *Radiobiological Dosimetry*.

ICRU Report 31 reviews the available information on the mean energy required to produce an ion pair (W) in gases, liquids and solids, for a variety of radiations. The report provides, where possible, suggested values for current usage. For gases, it provides an examination of experimental methods, current theories, and gas mixtures, and then includes a compilation of experimental values with emphasis on energy dependence and suggested values. For liquids and solids, references to more extensive discussions elsewhere are given. The report also provides introductory material on the history and use of W and a concluding section on expected trends in future research and new applications.

Individuals and organizations already on the ICRU Publications Standing Order List will receive copies of the new reports automatically and be invoiced for their order. Others may purchase copies of the new reports or place their name on the Standing Order List by directing their order to ICRU Publications, P. O. Box 30165, Washington, D.C. 20014, U.S.A.

CANADIAN NUCLEAR ASSOCIATION OFFERS COURSES

The Canadian Nuclear Association (CNA) is offering a course on Quality Assurance. The first offering will be at the Pillar and Post, Niagara-on-the-Lake, Ontario, October 28 - November 1, 1979. Repeat courses will be given November 25-29 (one in English, one in French) at Hotel L’Estrel, Ville D’Estrel, Quebec. Further information is available from the Canadian Nuclear Association, 65 Queen St. W., Suite 1120, Toronto, Ontario M5H 2M5.

GEORGE WASHINGTON UNIVERSITY ANNOUNCES COURSE

The Continuing Engineering Education Program at George Washington University, Washington, D.C., offers a course on *Applications of Intense Charged-Particle Beams*, October 1-4, 1979. This course is designed for managers of industrial and technical projects, advanced technology analysts, researchers and others who need a better understanding of the increasing applications of intense charged-particle beams. The presentation will include examples of these applications such as pulsed high power microwave generator, gas laser excitation and controlled thermonuclear fusion research.

Emphasis will be on technological advances in particle beam generation and applications, and will include present capabilities, specifications, and limitations; in addition to the short- and long-term probable applications. The lecturers are specialists in intense charged particle beam generation and applications.

Topics to be covered include: Intense Charged-Particle Beam Generation — Electron Diodes, Ion Sources, and Collective Effect Accelerators; Radiation Sources — Laser Excitation, Intense X-Ray Generation, and High Power Microwave Generation; Fusion Applications — Particle Beam Pellet Fusion.

For additional information, contact Office of Continuing Engineering Education, George Washington University, Washington, D.C. 20052.

UNIVERSITY OF TENNESSEE TO OFFER APPLIED REACTOR PHYSICS COURSE

A short course on Computational Methods in Nuclear Reactor Analysis—Statics, Kinetics, Depletion will be offered September 10–14, 1979 at the University of Tennessee, Knoxville, as a part of Tennessee Industries Week (TIW). The registration fee is $400, and the deadline for registration is August 24, 1979.

Areas to be covered include multidimensional diffusion theory methods for applications in reactor statics, space-time kinetics, and fuel depletion; transport theory methods including the discrete ordinates method, integral transport theory, and the Monte Carlo method; cross-section generation and processing utilizing the AMPX system developed at the Oak Ridge National Laboratory.

The first day of the course will cover the fundamentals of nuclear reactor physics beginning with the fission process and proceeding through development of the Boltzmann transport equation and the diffusion approximation of the transport equation. This material will provide a good foundation to the non-nuclear engineer for study of the more advanced material to be presented Tuesday through Friday. For the participant with some nuclear background, the first day would be a review of basic nuclear engineering.

For additional information contact: Dean F. N. Peebles, Dean of Engineering, Tennessee Industries Week, College of Engineering, University of Tennessee, Knoxville, TN 37916 (615-974-5321); or H. L. Dodds, Associate Professor of Nuclear Engineering, Oak Ridge National Laboratory, P. O. Box X, Oak Ridge, TN 37830 (615-574-6085).

UPCOMING MEETINGS

We call attention to the following upcoming meetings.

September 1979


ASIDIC Fall Meeting on Non-Bibliographic Data Bases, September 16–18, 1979, Parker House Hotel, Boston, Massachusetts. Contact: Ms. J. Webb, ASIDIC, P. O. Box 8105, Athens, Georgia 30603.


October 1979

International Conference on Nuclear Cross Sections for Technology, October 22–26, 1979, University of Tennessee, Knoxville. Contact: Department of Conferences, U. of Tennessee, 1629 Melrose Ave., Knoxville, TN 37916. (See January 1979 RSIC Newsletter for details).

November 1979


March 1980

International Radiation Protection Agency 5th International Congress, March 9–14, 1980, Jerusalem, Israel. Contact: A. Eisenberg, General Secretary of 5th International Congress of IRPA, P. O. Box 16271, Tel Aviv, Israel (See April 1979 RSIC Newsletter for details).
ADVICE FOR USERS OF OLDER VERSIONS OF ANISN

K. Verschuur, Netherlands Energy Research Foundation (ECN), Petten, The Netherlands, has pointed out an improvement that can be made to versions of ANISN obtained from RSIC prior to 1973. For large problems (large values for IGM and ISCT), the calculation of the Legendre components of the down-scatter source in subroutine S824, consumes considerable computational time. In most cross-section libraries, the higher Legendre components of the scattering matrix arc for the most part filled with zeroes, and correspondingly much time is lost in multiplying these zeroes in S824. It is a simple matter to skip these useless calculations by adding a conditional GOTO statement. (CURRENT VERSIONS OF ANISN CONTAIN THIS MODIFICATION).

For IGM=121, ISCT=8, and IEVT=0 a reduction of 30\% in the total computer time has been noted. If IEVT\neq0, the reduction may even become 50\%.

NOTICE TO CODE/DATA REQUESTERS

On each magnetic tape submitted to Engineering Physics Information Centers (EPIC), please be sure to write a tapemark (end-of-file mark) in the same density as the tape is to be written. Failure to do this results in days lost in turnaround time between EPIC and its computer facilities. Our local system, as a protection to users, will not allow writing on a tape without a proper tapemark.

CHANGES IN THE COMPUTER CODE COLLECTION

The following changes were made in July.

CCC-261/MORSE-L

MORSE-L, the ORNL Monte Carlo Radiation Transport Code System (CCC-203) which was modified at the Lawrence Livermore Laboratory (LLL) to solve neutron, gamma-ray, and coupled neutron-gamma-ray PENETRATION PROBLEMS ONLY using the CDC-6600, has been extended to include a CDC-7600 version (B). Both versions of this package, (A) and (B), were contributions of Lawrence Livermore Laboratory. FORTRAN IV; CDC-6600, -7600.

CCC-348/RICECCC

RICECCC, contributed by the Central Electricity Generating Board, Berkeley Nuclear Laboratory, United Kingdom, is a reactor nuclide inventory code for estimating actinide and fission products using a point source model, and can be used for reactor shielding and decay heating calculations for waste management and other long-term studies. It also provides a source term for studies of the effect of nuclear power generation on the environment. References: RD/B/N4138 and RD/B/N4079. FORTRAN IV; IBM 360.

CCC-349/MEDUSA-PIJ

MEDUSA-PIJ, a contribution of Japan Atomic Energy Research Institute (JAERI). Tokai-mura, Naka-gun, Ibaraki-ken, Japan, is a one-dimensional laser fusion analyzer which calculates the energy deposited by emitted neutrons by the collision probability method. Under laser irradiation, electrons near the critical surface of the pellet are heated by inverse bremsstrahlung, resonance absorption, and various anomalous mechanisms. The total energy deposition is considered in the energy balance equation of the system at each time step, and a hydrodynamic equation is solved. Neutron spectra escaping from a fuel sphere can be calculated by a neutron slowing down equation derived using a two-collision model. Reference: JAERI-M/8186. FORTRAN IV; FACOM 230-75.

CCC-350/BRHGAM

BRHGAM, a Monte Carlo estimation of absorbed dose from x-ray sources in phantom man, was contributed by UCC-ND Computer Sciences Division, Oak Ridge National Laboratory. Compiled from the elements of ALGAM (CCC-152), BRHGAM has been used with normally incident 4 \times 4 cm collimated
parallel monoenergetic photon beams of 30, 55, and 80 keV. Reference: ORNL/TM-4393. FORTRAN IV; IBM 360.

CHANGES IN THE DATA LIBRARY COLLECTION

The following changes were made in July.

DLC-45/SENPRO

The data package (compilation of multigroup sensitivity profiles in SENPRO format) has been updated to correct an error in the 26-group fast reactor benchmark sensitivity profiles. The ISTC (scattering order for total coefficients) parameter of the MAT-MT control record was improperly set in the standard interface file, SENPRO. ISTC was changed to 3 for the MAT-MT control records 913-1178. The National Nuclear Data Center, Brookhaven National Laboratory, called attention to the error, and Oak Ridge National Laboratory provided the material for correction. The updated version has been designated DLC-45C.

DLC-66/FPDL

The library of fission product yields, gamma-ray and beta spectra in ENDF-III format for $^{235}$U, $^{238}$U, $^{239}$Pu, $^{232}$Th, and $^{233}$U was contributed by CEA, Centre d'Etudes Nucleaires de Saclay, Gif-sur-Yvette, France. The library includes the following data for each isotope produced from fission for 635 nuclides: the radioactive half-life; decay energies; energies and intensities of the $\beta^-$; the energies and intensities of the $\gamma$ rays. Reference: OLS-78-255, Note CEA-N-1822 and SERMA/LEP/79.357; IBM 360.

JULY 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 22151.

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.

REACTOR AND WEAPONS RADIATION SHIELDING LITERATURE

AERE-R-9298, Transmutation and Activation of Fusion Reactor Wall and Structural Materials., Jarvis, O.N., January 1979, H.M.S.O.


BNL-NUREG-25635; CONF-790602-14, One- and Two-Dimensional Heating Analyses of Fusion Syntact Blankets., Isang, J.S.K.; Lazareth, O.W.; Powell, J.R., 1979, Dep., NTIS

CONF-780508-Vol.1, Technology of Controlled Nuclear Fusion., Powell, J.R.; Eterno, C.T. (Eds.), 1978, Dep., NTIS $19.00 Hard Copy - $3.00 MF


WT-1120, Radiation Energy Absorbed by Human Phantoms in a Fission Fallout Field., Imirie, G.W., Jr.; Sharp, R., 1955, Declassified September 19, 1959, NTIS


Health Phys., 30(3), 387-392, Attenuation of Primary and Leakage Radiation in Concrete for X-Rays from a 10 MV Linear Accelerator., Tochilin, E.; LaRiviere, P.D., March 1979


COMPUTER CODES LITERATURE

ANL/FPP-77-5 ................. MACK-IV

BNL-NCS-50681-CONF-77-523, 491-513
ALICE
Neutron, Proton, and Deuteron Induced Reaction Products in the 10 to 40 MeV Range., Divadeenam, M., Brookhaven National Laboratory, Upton, New York, July 1977

BNL-NURFG-50806
SORS

BNWL-1002; ENDF-127
ETOX

DPSPU-77-30-10 . . . . . . . RADIONUCLIDIC ANALYSIS

E11-1730 . . . . . . . POISSON; PANDIRA; SUPERFISH
Computer Calculations of Dipoles and Quadrupoles Based on Permanent Magnets., Ilyushchenko, V.I., Joint Institute for Nuclear Research, Dubna, USSR, 1978, CDC 6500

JINR-10-9094 (In Russian)
................. SUCHE; SPECTR
Combined Processing of Gamma-Spectra on Small and Large Computers., Fromm, V.D.; Joint Institute for Nuclear Research, Dubna, USSR, 1975, HP 2116C; CSC 6200, AVAIL: NTIS (U.S. Sales Only)

JNR 1691/IX/PR/A ............. SAMSY

KIYI-76-14 (In Russian) ........ GAMMA SPECTRA

ORNL-130-1978 ............... ALIS-1
ALIS-1 Program for Performing the Analysis of a General Linear Time-Invariant Multivariable System., Turcu, I.; Ilfove, L., Institutul de Reactori Nucleari Energetici, Ploesti, Romania, August 1978, FORTRAN 4 IBM 370/135

ORNL/CSL/1M-75 .............. FFCG
FFCG - A Free-Form Input Combinatorial Geometry Package., Fraley, S.K., Oak Ridge National Laboratory, Oak Ridge, Tennessee, March 1979

ORNL/TM-6055 ............... ORIGEN

ORNL/TM-6656 ............... WINDOWS

SAND-77-8755; CONF-780431-9
SPUTTERING
Monte Carlo Studies of Sputtering., Haggmark, L.G.; Wilson, W.D., Sandia Labs., Livermore, California, April 1978, AVAIL: NTIS

SGAE-2487; RT-93/75 (In German)
...................... THERMAL

...................... TRIANGULAR MESH
Linear, Continuous Triangular-Mesh Difference Scheme for Transport Codes., Walters, W.F.; O'Dell, R. D., Los Alamos Scientific Laboratory, Los Alamos, New Mexico, June 1978
Determination of Continuous Gamma-Ray Spectra Over the Energy Range 0.1 to 8 MeV., Fuess, D.A.; Slaughter, D.R.; Strout, R.E.; Rueppel, D.W., Los Alamos Scientific Laboratory, Los Alamos, New Mexico, August 1978, FORTRAN IV CDC 7600

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 purge from the distribution list the names of those not responding on or before September 1. Please print or type the name and mailing address. Use additional paper as necessary.

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G. Have you placed your work in RSIC? If yes, indicate below if it is time for an update. Do you have publications, computer codes, or data which you wish to contribute?

H. Please comment:

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PLEASE RETURN TO: Radiation Shielding Information Center
Oak Ridge National Laboratory
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Oak Ridge, Tennessee 37730