RSIC Newsletter

RADIATION SHIELDING INFORMATION CENTER

OAK RIDGE NATIONAL LABORATORY

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Beware prejudices. They are like rats, and men's minds are like traps; prejudices get in easily, but it is doubtful if they ever get out. . . . Lord Jeffrey

ANS NOMINATES SHIELDING AND DOSIMETRY MEMBERS AS CANDIDATES FOR BOARD

The American Nuclear Society's (ANS) Nominating Committee has nominated Norman C. Francis, Knolls Atomic Power Laboratory (KAPL) and Fred C. Maienschein, Oak Ridge National Laboratory (ORNL) as candidates for a 3-year term as members of the ANS Board of Directors. The candidates are well-known in the radiation transport field and are long-time members of the Shielding and Dosimetry Division. The full announcement is on page 116 of **Nuclear News** (November 1974).

ANS SHIELDING AND DOSIMETRY DIVISION ANNOUNCES CANDIDATES FOR OFFICE

Candidates nominated for office in 1975–76 have been announced by the ANS **Shielding and Dosimetry Division.** The candidates are: Chairman: E. A. Straker; Vice Chairman: M. A. Schmoke and F. R. Mynatt; Secretary: L. Harris, Jr.; Treasurer: E. A. Warman and C. M. Huddleston; Executive Committee members (two candidates for each of three vacancies): 1) T. E. Todd and B. L. Peele, Jr., 2) H. L. Beck and C. M. Eisenhauer, and 3) D. W. Muir and R. E. Faw.

Norman Schaeffer is the current chairman of the Nominating Committee.

REPORT ON ANS S & D DIVISION NAME-CHANGE BALLOTING

The ANS Shielding and Dosimetry Division distributed a straw ballot in October to determine the sentiment on the proposal to change the Division name. The proposal reflects recent trends in the work of many of its members. G. P. Lahti, Chairman of the *ad hoc* committee to explore the question, made the following report in a letter to the Division Chairman, David Trubey.

I received a total of 128 responses, including responses from England, Germany, and Japan. The tallies, as of December 13, 1974, are listed in the attached table. I tried to sort out the responses according to work areas, e.g., power, government, and other, to try to detect any trends. (Virtually all of the respondents signed their names to the ballot making the above possible.)

As expected, the power industry voted strongly for ***Shielding and Radiation Protection (S&RP).*** *But surprisingly enough, the vote for* ***S&RP*** *continued favorable in the government and other sectors.*

Write-ins included ***Shielding, Radiation Protection and Shielding,*** *and simply* ***Radiation Protection.***

Some important comments from the ballots include: "The ANS really ought to have a clearly visible radiation protection entity, and not leave the field to other societies." . . . J. E. McLaughlin (AEC-HASL) and, *"I am hopeful that this will create new and enhanced recognition for health physics in the nuclear power industry." . . . R. L. Kathren (Portland General Electric).*

Bill Kreger's suggestion, ***Radiation Protection and Measurements Division,*** *was supported by his comment: "I think* ***Radiation Protection*** *includes shielding but it is broader and more up-to-date.* ***Radiation Measurements*** *includes dosimetry but it is also broader." His feelings were supported by Jake Kastner (NRC) and Jim Lonergan (SAI).*

Eric Clarke's (Tech. Ops., Inc.) suggestion was ***Radiation Protection,*** *noting that Isotopes and Radiation Division is considering a change to* ***Radiation Applications Division.***

So where are we now? It seems the present sentiment is toward ***Radiation Protection and Shielding, Shielding and Radiation Protection,*** *or* ***Radiation Protection,*** *since the above drew 72 of the 128 responses. The "measurements" minority and "in-core radiation transport" minority were heard from, and should be considered explicitly, at least in the scope of the division. Also there seems to be a preference for a short, concise name (even* ***Shielding*** *again).*

I don't know if it's in order to request another straw vote as was presently done. I'm not sure that we would get as good a response. But on the other hand, perhaps the interest is growing.

Should another straw ballot be taken, perhaps along with the division officer ballots this spring, the following choices might be offered: (1) No change, or, Change to _____; (2) ***Radiation Protection;*** *(3)* ***Shielding & Radiation Protection;*** *(4)* ***Radiation Protection & Shielding;*** *or (5) Other.*

Again, provision for the respondent's name, affiliation and comments should be provided. Then, if a majority prefer a name change, a final ballot could be prepared for the 1975 ballot.

Results—ANS—Shielding & Dosimetry Division Straw Vote
For Name Change, Fall, 1974.

	POWER*	GOV'T.**	OTHER***	TOTAL
Retain present name	4	6	6	16
Shielding & Radiation Protection	23	14	22	59
Shielding, Radiation Analysis and Protection	6	4	8	18
WRITE-INS				
Shielding	3	1	0	4
Radiation Protection & Shielding	0	0	2	2
Radiation Protection	5	1	5	11
Other	6	6	6	18
Total	47	32	49	128

*POWER INDUSTRY – Nuclear steam supply system vendors, A-Es, utilities, and associated consultants.

**GOV'T. – U. S. Government agencies, including AEC and national laboratories.

***OTHER – Other consultants, universities, or otherwise unidentified.

. . . G. P. Lahti Dec. 13, 1974

In commenting on the report, Trubey expressed strong support for Kreger's suggestion **Radiation Protection and Measurements** as the most logical and comprehensive of those offered. It is virtually the only one which includes all aspects of radiation shielding, analysis, and dosimetry. Trubey suggests a final choice between **Shielding and Radiation Protection** and **Radiation Protection and Measurements**. He requests reader's comments be sent to RSIC.

ANS M & C DIVISION TOPICAL MEETING

The ANS Mathematics and Computation Division has announced that a topical meeting on *Computational Methods in Nuclear Engineering* will be held April 15–17, 1975/Mills Hyatt

House/Charleston, South Carolina. The Savannah River ANS Section and the ERDA Savannah River Operations Office join as sponsors of the meeting. The meeting will bring together experts in the areas of physics, mathematics, and computer science to discuss and exchange information about new and innovative computational techniques for solving nuclear engineering problems. Fifty-nine papers will be presented, twenty-two of which are invited. Panel discussions of the state of the art are planned for several sessions.

The General Chairman, H. C. Honeck, SRL and Technical Program Cochairmen, W. M. Stacey, Jr. (ANL) and J. W. Stewart, II (SRL) have arranged a program in the following major areas: Multidimensional Static Diffusion Theory, Reactor Transient Analysis, Application of Optimal Control to Reactor Problems, Radiation Transport, Mechanics, Environmental and Economic Modeling of Nuclear Plants, Code Systems and Software, Multidimensional Static Reactor Theory, Computer Code Exchange, and Multidimensional Dynamics.

Housing reservations should be made to The Mills Hyatt House, P.O. Box 1013, Charleston, S.C. 29402. Advance registration for the meeting should be mailed to H. C. Honeck, Charleston ANS Topical; Savannah River Laboratory, Aiken, S.C. 29801. Fees: $35., ANS member; $45., nonmember; $10., student.

CHANGE IN THE DNA WORKING CROSS SECTION LIBRARY

A new evaluation for deuterium has been added to the library by L. Stewart and A. Horsley of Los Alamos Scientific Laboratory. The designation is DNA MAT 4502 MOD 0.

CHANGES TO THE CODE COLLECTION

The following changes have been made to the code collection during the month:

CCC-75/G^3-6ED

The general purpose gamma-ray scattering code package has been expanded to include an IBM 360 version contributed by Southern Services, Inc., Atlanta, Georgia. The earlier packaged version contributed by LASL, operable on the CDC 6600/7600 computers, may be requested as CCC-75A. The IBM version is assigned to CCC-75B.

CCC-152/ALGAM-97

This Monte Carlo estimation of internal dose from gamma-ray sources in a phantom man has been updated to correct errors in Subroutine TRUNK. The complete package or the corrected subroutine may be requested. The code originators (ORNL) called RSIC attention to the need for correction.

PSR-63/AMPX-I

A partially-converted version of this modular code system for generating coupled multigroup neutron-gamma-ray libraries from ENDF/B is now available as PSR-63B, a contribution by Oak Ridge National Laboratory. The following changes will facilitate conversion to CDC and UNIVAC systems: character set and Hollerith string conversion and numerous flags to indicate incompatibilities. Three reels of tape (7T,556) are required for transmittal. The IBM version may be requested as PSR-63A.

PSR-80/FATDUD

Foil Activation Data Unfolding Code was contributed by Breazeale Nuclear Reactor Center, Pennsylvania State University, University Park, Pennsylvania. FORTRAN IV; IBM 360. Reference: PSBR 315-497485. A reel of tape is required for transmittal.

PSR-81/FREEFORM

IBM 360 subroutine package to read free-form (unformatted) input, contributed by Oak Ridge National Laboratory. FORTRAN IV and assembler language. Reference: ORNL-CF 70-1-45. May be transmitted on cards or on tape.

PSR-82/DENIS

Monte Carlo simulation of the capture and detection of neutrons with large liquid scintillators was contributed by Nuclear Physics Dept., CEA/CEN/SACLAY, Gif-sur-Yvette, France. FORTRAN IV; IBM 360. Reference: *Nuclear Instruments and Methods 114* (1974), 113–119. May be transmitted on cards or on tape.

PSR-83/GAMAN

Qualitative and quantitative evaluation of Ge(Li) gamma-ray spectra was contributed by AECL Whiteshell Nuclear Research Establishment, Pinawa, Manitoba, Canada. FORTRAN IV; PDP 10. Reference: AECL-4217 and informal User's Guide. May be transmitted on either magnetic tape or DECtape.

ORIGINATOR MAKES SPECIAL NOTE ON CCC-82/ANISN

It has come to my attention that the UNIVAC 1108 version of ANISN distributed by RSIC is basically the original IBM/7090 version of the code. In fact, I believe that the CDC version from Westinghouse and the IBM version from ORNL are the only reasonably current versions of ANISN in the RSIC files and even the Westinghouse version does not have all the convergence acceleration techniques of the ORNL version.

It is my belief that the improvements in the Westinghouse and ORNL versions are in many cases very powerful and, therefore, very important to any user. Further, because of the generally basic, straight-forward FORTRAN programming in ANISN, I am convinced that any inconvenience caused by machine incompatabilities will be more than offset by the advantages of using one of the current versions.

. . . W. W. Engle, Jr. (ORNL)

PERSONAL ITEMS

Koichi Okamoto has returned to Japan after having worked for four years at the OECD Nuclear Energy Agency's Neutron Data Compilation Centre (CCDN), Gif-sur-Yvette, France.

Frank L. Bouquet, Jet Propulsion Laboratory (JPL) in California, is currently working in the JPL Radiation Control Group. Frank included the following "bouquet" in his letter: *RSIC information has been extremely valuable in connection with our Mariner Jupiter Saturn Spacecraft design, scheduled for launch in 1977, and in other applications. Keep up the good work!*

Several changes of address have been received in RSIC: **John E. Michales**, SCI-TEK, Inc. from Alexandria to 7500 Elgar Street, Springfield, Virginia; **Robin H. Curtis** from Queen Mary College, London, to the University of Birmingham, England; **S. K. Kaul** from the University of Delhi to the S.N.G.S. Hospital, Jammu (Tawi), India; **Norman E. Holden** from GE-KAPL to Brookhaven National Laboratory; and **R. T. Perry** from Interatom, Cologne to the Max-Planck Institute, Munich, Germany.

VISITORS TO RSIC

Visitors to RSIC during the month of January were: M. E. Koons and Austin M. Read, Union Carbide Corporation–Nuclear Division (UCC-ND), Oak Ridge; E. R. Schmidt, NUS Corp., Rockville, Maryland; Robert H. Whisker and William L. Graves, Brookhaven National Lab., Upton, New York; Frank Hammerling, Jack H. Owings, Jan H. Paylor and Charles E. Price, UCC-ND, Computer Sciences Division, Oak Ridge; Bruce C. Huguelet, Argonne National Laboratory, Argonne, Illinois; E. D. Copenhaver, Monte Lewis, Carol Oen, M. Roberto, M. T. Robinson and Gordon Smith, ORNL; and Robert Morford, NL Industries, Wilmington, Delaware.

JANUARY 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.

THIS LITERATURE IS ON ORDER. IT IS NOT IN OUR SYSTEM. PLEASE ORDER FROM NTIS OR OTHER AVAILABLE SOURCE AS INDICATED.

REACTOR AND WEAPONS SHIELDING LITERATURE

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