
Radiation Safety Information Computational Center



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"A man isn't poor if he can still laugh" --Raymond Hitchcock

Printable PDF file of this newsletter available at: <http://www-rsicc.ornl.gov/NEWSLETTER.html>.

Dr. Wang is RSICC Data Coordinator

Dr. Jy-An Wang will assume the role of RSICC Data Coordinator. We welcome the new effort and capabilities that Jy-An possesses. His vast nuclear materials and science background will be advantageous to his approach and methods.

Our data collection expanded under the direction of John White, and we must continue growing to meet the needs of our user community. RSICC now has over 200 data libraries with applications across dosimetry, fission, fusion, and accelerator applications. With additional possibilities for fission power on the horizon, new high- and low- energy data and dosimetry libraries will be needed.

We also want to congratulate Jy-An on receiving an R&D 100 award for the Spiral Notch Torsion Test. This project was developed and jointly submitted by Jy-An Wang, ORNL's Nuclear Science and Technology Division; Ken Liu, ORNL's Metals and Ceramics Division; and Inventure Laboratories of Knoxville. It is a portable system that tests fracture toughness and the strength of materials, including ceramics, composites, polymers, carbon foam and concrete, to be used in designs. This system is expected to help engineers set limits in structural designs so that certain materials are not used in conditions unsuitable to the strengths of that material.

SAMMY WORKSHOP ANNOUNCED

RSICC is pleased to announce that a five-day workshop on Oak Ridge National Laboratory's (ORNL) SAMMY code will be held **May 12-16, 2003**, in Knoxville, Tennessee. This training course is intended for those who are interested in the theory of neutron cross sections in the resonance region, and in the use of SAMMY for the analysis of experimental neutron-induced cross-section data for extracting values and covariances for resonance parameters. Both novice and experienced SAMMY users would benefit from the intensive and extensive examination of all aspects of resonance parameter analyses.

During the workshop, lectures and computer applications will alternate. Lectures will include both theoretical discussion and practical examples for each topic. The lecturer is Dr. Nancy Larson of the Nuclear Data and Information Analysis Group, Nuclear Science and Technology Division of ORNL, author of the SAMMY code.

Topics include (but are not limited to) the following:

- I. R-matrix formalisms (both resolved and unresolved resonance region)

- II. Simulation of experimental conditions
 - A. Multiple nuclides in the sample
 - B. Doppler- and resolution-broadening
 - C. Self-shielding and multiple-scattering corrections
 - D. Other data-reduction effects
 - III. Mathematical methods used for experimental data-fitting
 - A. Use of covariance information
 - IV. Reporting results for Evaluated Nuclear Data Files
 - V. Features in the latest version of the analysis code SAMMY
- The workshop will include hands-on computer applications using the latest version of SAMMY (M6). Computer exercises will lead participants through the various features of the code beginning with simple examples and leading to realistic situations. Participants who are experienced SAMMY users are encouraged to bring their own examples as well.

The number of PC workplaces available at the training center restricts the number of workshop participants accepted. Therefore, we encourage you to register as early as possible. The SAMMY workshop web site with further detailed information and on-line registration can be accessed at <http://www-rsicc.ornl.gov/SAMMY/intro.html>). Please bookmark the site and visit it occasionally for news and updates as they become available.

September 2002 Edition of the International Handbook of Evaluated Criticality Safety Benchmark Experiments

The September 2002 Edition, of the *International Handbook of Evaluated Criticality Safety Benchmark Experiments* will be available for distribution on CD-ROM near the end of September. Twenty-three newly approved evaluations are included in this version in addition to all previously approved evaluations. Editorial and technical corrections have been made to some of the previously approved evaluations, and major revisions were made to three evaluations: HEU-COMP-THERM-010, HEU-MET-INTER-006, and MIX-COMP-THERM-011. Revision status of each individual evaluation is noted at the bottom of each page. In addition, a revision status table noting specific technical revisions made to each evaluation is included on the CD-ROM in a directory designated Revision. If you are interested in obtaining a copy of this edition of the handbook on CD-ROM, you may request a copy by completing the registration form provided at the ICSBEP internet site (<http://www.icsbep.inel.gov/icsbep/>).

ACES POLL

Nuclear Community Needs for Free Computational Expert Consulting

RSICC wishes to poll the user community on the need for centralized Atomic Computational Expert Services (ACES). If you would benefit by being linked to a consulting expert via email or phone, please send email to aces@ornl.gov by **September 30th** with a list of codes on which you might want to receive expert help. Note the work areas to which you would apply the codes (GenIV, Homeland Defense, Reactor Safety, Consequence Analysis, Nuclear Criticality Safety, etc.). DOE complex experts would be made available to users needing immediate help on those software and data tools for their application and use. ACES would be free of charge to the users.

Available NRC Codes

One U.S. Nuclear Regulatory Commission (NRC) software package transferred from the Energy Science and Technology Software Center, Oak Ridge, Tennessee, to RSICC was processed this month.

Please browse the computer code abstract available at RSICC's web site for more information on this package.

DLC-79/DOSDAT-II 81

Changes to the Computer Code and Data Collection

Four changes were made to the computer code collection this month: one new package, two additions, and one modification.

CCC-654/VENTURE-PC 1.1

OP SYS: Windows; Linux

Language: Fortran 90

Computers: Pentium

Format: Windows & tar

Argonne National Laboratory, Argonne, Illinois, updated this reactor analysis code package with the addition of several sample problems, a new Windows executable, and a new Linux version. The VENTURE-PC program solves the usual neutronics eigenvalue, adjoint, fixed source, and criticality search problems. It treats up to three dimensions, maps power density, and does first-order perturbation analysis at the macroscopic cross section level. The BURNER code solves the nuclide chain equations to estimate the nuclide concentrations and burnup at the end of an exposure time or after a shutdown period. This package is a subset of CCC-459/BOLD VENTURE IV.

The Windows distribution contains 2 executables. The new executable is optimized for Pentium IV. It was compiled with Lahey/Fujitsu Fortran 95 V5.70b and tested in a DOS window of Windows2000 and WindowsXP. The other executable, copied from the previous release, was created using Lahey Fortran 90 V4.50h and runs in a DOS window on Windows95/98/NT systems. This executable should be run on Pentium III computers and older.

The new Linux distribution includes an executable compiled with the Lahey/Fujitsu Fortran 95 Version 6.10a compiler for Linux. This executable was tested on RedHat Linux 7; it will not run under RedHat Linux 6.1. The package is distributed on a CD as a self-extracting compressed Windows file and in a GNU compressed tar file. Included are documentation, source, executables, sample input and output files. Reference: EGG-2582, University of Cincinnati (January 1990). Fortran 90 or Fortran 95 with Fortran 77 extensions; PC386, PC486, PC586, & PC686 (C00654/PC586/02).

PSR-199/HEATING 7

OP SYS: Unix, Windows

Language: Fortran 77

Computers: IBM Workstation & PC

Format: Windows & tar

This multidimensional, finite-difference heat conduction analysis code system from Oak Ridge National Laboratory, Oak Ridge, Tennessee, was updated with minor changes to facilitate installation. The readme file was modified, and the document was added to the distribution CD. There were no changes to source, executables, or data. HEATING can solve steady-state and/or transient heat conduction problems in one-, two-, or three-dimensional Cartesian, cylindrical, or spherical coordinates.

HEATING 7.3 includes some Fortran 90 features. HEATING 7.3 PC executables were created using Microsoft Powerstation v4.0. HEATING7.3 for Unix and requires the XLF 3.2 compiler. The package is transmitted on one CD-ROM with a self-extracting, compressed Windows file and in a GNU compressed tar file. The distribution files contain HEATING 7.2i and 7.3 source files for both Unix and DOS, PC executables, script files, and sample cases. Reference: ORNL/TM-12262 (February 1993; update to Chapter 4, September 1998). HEATING 7.2i: Fortran 77 and C; Unix Workstation or Mainframe or 486PC. HEATING 7.3: Fortran 90 486PC and IBM RS/6000 (P00199/MNYCP/04).

DLC-217/IEAF-2001

OP SYS: Unix, Windows

Language: N/A

Computers: Workstation & PC

Format: Windows & tar

The Association of FZK-Euratom, Institut f. Reaktorsicherheit (IRS), Forschungszentrum Karlsruhe, Karlsruhe, Germany, and Obninsk Institute of Nuclear Power Engineering (INPE) Studgorodok Obninsk, Russia, through the OECD NEA Data Bank, Issy-les-Moulineaux, France, contributed the Intermediate Energy Activation File 2001. A complete activation data library IEAF-2001 was developed in standard ENDF-6 format with neutron-induced activation cross sections for 679 target nuclides from Z=1 (hydrogen) to Z=84 (polonium) and incident neutron energies up to 150 MeV. Using the NJOY processing code, an IEAF-2001 working library was prepared in a 256 energy group structure for enabling activation analyses of the IFMIF D-Li neutron source. This library was applied to the activation analysis of the IFMIF high flux test module (HFTM) using the recent ALARA activation code which is capable of handling the variety of reaction channels open in the energy domain above 20 MeV. The IEAF-2001 activation library was thus shown to be suitable for activation analyses in fusion technology and intermediate energy applications such as the IFMIF D-Li neutron source.

The total number of reaction channels with activation cross-section data is 134,431. The European Activation File EAF-99 served as basis for the activation data below 20 MeV neutron energy. Threshold reaction cross-sections were evaluated on the basis of geometry dependent hybrid exciton and evaporation models using a modified version of the ALICE code. A groupwise IEAF-2001 data library has been prepared for 256 energy groups in GENDF data format. The IEAF-2001 CD contains both the pointwise ENDF and the groupwise GENDF data files. These data can be processed with standard ENDF processing tools such as NJOY. No Fortran source codes are included. The package is transmitted on a CD-ROM containing the data files in a PkWare® self-extracting WINDOWS® executable and a tar file for Unix applications. References: EFF-DOC-803 (November 2001), EFF-DOC-804 (November 2001), and IRS-Nr. 10/01 - FUSION-Nr. 179 (September 2001). Unix workstations or Windows PC (D00217/MNYCP/00).

MIS-002/NCSP-DAT

OP SYS: Unix; Windows

Language: N/A

Computers Workstation; PC

Format: Windows & tar

Oak Ridge National Laboratory, Oak Ridge, Tennessee, updated this nuclear data package with data for additional nuclides. The package was developed in support of the Nuclear Criticality Safety Program (NCSP) to develop a comprehensive criticality safety program to maintain and ensure subcriticality of nuclear systems located throughout the DOE complex. These data are provided in ACER format for use with MCNP and in AMPX master library format for use with KENO in the 238-group structure. Users should be advised that the data are preliminary. Extensive benchmark testing has not yet been performed. Data are included for Al-27, O-16, Si-28, Si-29, Si-30, U-233 and U-235. The package contains no retrieval codes. (M00002/MNYCP/01).

Monthly Code Focus

Materials and Radiation Effects

As years have gone by many different codes and applications have been sent to RSICC for stewardship. We currently have over 1700 analytical code and data packages and distribute as many each year to 73 countries in the world. To help 'categorize' each package, we have developed a database of 'Main Categories' to attach applications to the packages at RSICC. Doing so requires investigation into each code package, user feedback from end use statements, and extensive RSICC staff experience and analysis

so that we can deliver useful information each month on the 30 different categories we have identified thus far. Links to the package abstracts are embedded into the WWW version of the RSICC Newsletter. Feedback from our Newsletter community is very valuable so please direct your comments and/or suggestions to PDC@ORNL.GOV.

CEMENT 1.02

EDSFI *US distribution only*

FRAPCON2

GAMIDENT

GRASS-SST

GT2R2

HERAD

LEPRICON

MARLOWE 15A

NONSAP-C

OCTAVIA

PR-EDB *US distribution only*

REBUS-PC 1.4

RODBURN-FEMAXI-V

SHEILD

SPECTER-ANL

TR-EDB

TRIPOS

USINT

CONFERENCES, COURSES, SYMPOSIA

RSICC 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 alphabetically. Should you be involved in the planning/organization of such events, feel free to send your announcements and calls for papers via email to FINCHSY@ornl.gov with "conferences" in the subject line by the **20th of each month**. Please include the announcement in its native format as an attachment to the message. If the meeting is on a website, please include the url.

Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct and live. However, the very nature of the web creates the possibility that the

links may become unavailable. In that case, please call or mail the contact provided. Below is a condensed list of the conferences only. More details are listed after the table.

Condensed Table of Conferences

Name of Conference	Time and Place	Web Site	Date of Abstract/Paper Submission
Americas Nuclear Energy Symposium	Oct. 16-18, 2002 Miami, Florida	www.anes2002.org	Oct. 16, 2002
Computed Tomography: Patient Dose Symposium	Nov. 6-7, 2002 Arlington, Virginia	http://www.ncrp.com	n/a

48th Annual Radiobioassay and Radiochemical Measurements	Nov. 11-15, 2002 Knoxville, Tennessee	www.bioassay.org/2002/	July 15, 2002
SC2002	Nov. 16-22, 2002 Baltimore, Maryland	http://www.sc2002.org/	see website
ANS 15th Topical Meeting on Technology of Fusion Energy	Nov. 17-21, 2002 Washington, DC	www.ans.org/meetings	June 21, 2002
Software Quality Forum 2003 (SQF 2003)	Mar. 25-26, 2003 Arlington, Virginia	http://cio.doe.gov/sqas	Nov. 15, 2002
M&C 2003	Apr. 6-10, 2003 Gatlinburg, Tennessee	meetingsandconferences.com/MC2003	Oct. 21, 2002
International Congress on Advanced Nuclear Power Plants" (ICAPP '03)	May 4-7, 2003 Cordoba, Spain	www.ans.org/goto/icapp03	Oct. 15, 2002
Advances in Nuclear Fuel Management III	Oct. 5-8, 2003 Hilton Head Island, South Carolina	http://rpd.ans.org/nfm.htm	Mar. 15, 2003
The 11th International Conference on Fusion Reactor Materials (ICFRM-11)	Dec. 7-12, 2003 Kyoto, Japan	icfrm.iae.kyoto-u.ac.jp	Apr. 30, 2003

The 11th International Conference on Fusion Reactor Materials (ICFRM-11)

The first announcement of "The 11th International Conference on Fusion Reactor Materials (ICFRM-11)," which will be held in Kyoto, Japan, **Dec. 7-12, 2003**, is now available on the ICFRM-11 website at <http://icfrm.iae.kyoto-u.ac.jp>. For further information, contact ICFRM-11 secretariat at icfrm@iae.kyoto-u.ac.jp or phone +81-774-38-3597, fax +81-774-38-3467.

Advances in Nuclear Fuel Management III - Call For Papers

Preparations for the American Nuclear Society's Advances in Nuclear Fuel Management III Topical Meeting to be held in Hilton Head Island, South Carolina, during the period of **October 5-8, 2003**, have now begun in earnest. You are invited to serve on the Meeting's Technical Program Committee (TPC). In this capacity your commitment will include:

1. Electronically submit one or more papers, and encourage colleagues to do the same,
2. Help identify and organize special session(s) on timely topics you are interested in, and solicit participation, and
3. Electronically review papers assigned to you in a timely and professional manner

Please return the following information (name, affiliation, phone, alternative email if preferable, topics of interest) to Youssef A. Shatilla at shatilya@westinghouse.com.

Please remember that the success of this meeting depends on your active support and involvement. Finally, please bookmark the conference web site: <http://rpd.ans.org/nfm.htm> and visit it occasionally for news and updates. Comments and suggestions are most welcome.

American Nuclear Society 15th Topical Meeting on Technology of Fusion Energy

The American Nuclear Society, in cooperation with the U.S. Department of Energy and the Fusion Engineering Division of the Atomic Energy Society of Japan, will hold the 15th Topical Meeting on Technology of Fusion Energy. This meeting will be held as an embedded topical of the American Nuclear Society 2002 winter meeting, held **November 17-21, 2002**, in Washington, DC.

The purpose of this meeting is to bring together specialists in the area of fusion energy to discuss current work and future challenges in the area of fusion technology. In addition to bringing together the varied expertise of this aggressive research area, special sessions are planned to focus on similarities and differences between the inertial and magnetic fusion energy concepts and the interface between materials and design communities. The technical program will include paper and poster presentations as well as invited speakers. Co-sponsors of this meeting are INEEL, LLNL, NRL, ORNL, and Kyoto University. For more information, visit www.ans.org/meetings.

Americas Nuclear Energy Symposium

The Americas Nuclear Energy Symposium (ANES 2002) will be in Miami, Florida, **October 16-18, 2002**, and will provide a forum for a hemispheric discussion and exchange focused on issues related to the future of nuclear energy in the Americas. ANES 2002 will build on the success of both ANES 2000 and the ANS Meeting of the Americas in 1998. The program promises to deliver interactive discussions, workshops, case studies, industry updates, and an exposition by leaders in the nuclear industry. One-page summaries of proposed papers may be sent to anes2002@hcet.fiu.edu. The American Nuclear Society is responsible for the technical program.

Notification of abstract acceptance will be sent by August 16, 2002. Full written papers are due by October 16, 2002. Papers will be published on CD after the event. Visit our website at <http://www.anes2002.org> for more information on the symposium.

2003 International Congress on Advanced Nuclear Power Plants (ICAPP '03)

We are pleased to announce the CALL FOR PAPERS for the "2003 International Congress on Advanced Nuclear Power Plants" (ICAPP '03) which will be held in Cordoba, Spain, **May 4-7, 2003**, at the Congress Palais. Please make note of the October 15, 2002 deadline for abstracts.

Following the highly successful ICAPP '02 meeting held in Hollywood, Florida, this international congress will bring together international experts of the nuclear industry involved in the operation, development, building, regulation and research related to nuclear power plants. The conference is sponsored by the leading nuclear societies of Europe, Asia and USA.

The program will cover the full spectrum of nuclear power plant issues from design, deployment and construction of plants to research and development of future designs and advanced systems. The program is expected to cover lessons learned from power, research and demonstration reactors from over 50 years of experience with operation and maintenance, structures, materials, technical specifications, human factors, system design and reliability. You may visit the ICAPP '03 website at www.ans.org/goto/icapp03 for updated information on the congress and to download a copy of the Call For Papers.

M&C 2003

To mark the beginning of the second century of nuclear science, the American Nuclear Society's Mathematics and Computation Division 2003 Topical Meeting is organized around the theme Nuclear

Mathematical and Computational Sciences: A Century in Review, A Century Anew. The conference will be held at the Park Vista Hotel, Gatlinburg, Tennessee, **April 6-10, 2003**. It is co-sponsored by the American Nuclear Society's Reactor Physics, and Radiation Protection and Shielding Divisions, as well as the ANS Oak Ridge/Knoxville Local Section, Oak Ridge National Laboratory's Radiation Safety Information Computational Center, the Nuclear Energy Agency of the OECD, Korean Nuclear Society, and the Canadian Nuclear Society.

The conference's web site is: <http://meetingsandconferences.com/MC2003/>. It will be updated with new information as it becomes available. Please bookmark and visit it occasionally for news and updates. Comments and suggestions are most welcome. Contact: Yousry Azmy 814-865-0039, yva3@psu.edu or Bernadette Kirk 865-574-6176, kirkbl@ornl.gov. (See announcement on SCALE 5 workshop, that will be held immediately before the M&C Conference.)

MCNP Course Announcement for 2003

Registration: <http://www-xdiv.lanl.gov/XCI/PROJECTS/MCNP/registration.html>

MCNP home page: <http://laws.lanl.gov/x5/MCNP/index.html>

LANL contact: selcow@lanl.gov

European contact: sartori@nea.fr

2003

January 27-30	Introductory class	Mass. Inst. of Technology
February date TBA	TBD	North Carolina State University
May 12-16	Introductory class	Japan
June date TBA	Introductory class	Los Alamos National Laboratory
August date TBA	Advanced MCNP Topics	Los Alamos National Laboratory

The introductory class is for people who have little or no experience with MCNP. The intermediate to advanced class will be held for people who have used MCNP and want to extend their knowledge and understanding of the code system.

The classes will be based on MCNP5. The code and data package will be available through RSICC at a reduced rate to class participants. The new capabilities of version 5 will be covered.

The other capabilities on MCNP will also be covered, including: basic geometry and advanced geometry, source definitions, tallies, data, variance reduction, statistical analysis, criticality, plotting of geometry, and particle tracks, neutron/photon/electron physics.

All classes provide interactive computer learning. Time will be available to discuss individual questions and problems with MCNP experts or to pursue in more detail topics mentioned in the talks. Please note that other classes are offered based on MCNP. The classes mentioned here are the only ones that are taught by the people who develop and write MCNP.

MCNP Visual Editor Classes

The Visual Editor is a powerful visualization tool that can be used to rapidly create complex Monte Carlo N Particle (MCNP 4C2) geometry models, including lattices, universes, fills, and other geometrical transformations. The Visual Editor can:

- Display MCNP 4C2 geometries in multiple plot windows,
- Create surfaces and cells to build a geometry,
- Create materials using the local xsdir file,
- Store commonly used materials in a material library,
- Sub-divide large cells into smaller cells,

Create cells containing universes and lattices,
 Interactively set cell importances from the plot window, and
 Display source points and collision points in the plot window.

Two classes are scheduled **March 17-21, 2003**, and **September 8-12, 2003**, both in Richland, Washington. The class will focus on the use of the visual editor, with an overview of MCNP. The fifth day is optional and will focus on using the Visual Editor and MCNP to do some example problems.

Class will include computer demonstrations and exercises that will focus on creating and interrogating input files with the Visual Editor. Advanced visualization work using MCNP will also be demonstrated. The class will be taught on Pentium computers running the Linux operating system and Windows NT. Class attendees can use either the Linux or Windows version of the visual editor. Attendees are encouraged to bring their own input files for viewing and modifying in the visual editor. Further information on this class can be located at: <http://www.mcnpvised.com/train.html>, or by contacting Randy Schwarz (email randyschwarz@mcnpvised.com).

MCNPX Workshops for 2002 & 2003

Lead Teachers: Drs. John Hendricks, Gregg McKinney, Laurie Waters

Organizer: HQC Professional Services

Contact: bill@solutionsbyhqc.com

More Information: <http://mcnpworkshops.com>

MCNPX homepage: <http://mcnp.lanl.gov>

2002

November 11-15	Intermediate	Tokyo, Japan
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2003

January 13-17	To be decided	Orlando, Florida
February 17-21	To be decided	Las Vegas, Nevada
March 31-April 4	To be decided	Knoxville, Tennessee
May	To be decided	Los Alamos/Santa Fe
June	To be decided	Europe

MCNPX is the LANL all-particle, all-energy (eV-TeV) Monte Carlo transport code based on MCNP4C, LAHET, CEM, etc. MCNPX has been in active development since 1995, sponsored by the particle accelerator community. It has now become an accepted tool for a broad range of applications by nuclear engineers, physicists, and scientists. The MCNPX development effort has expanded the use of the Los Alamos tools to applications such as APT, waste transmutation, accelerator shielding and health physics, particle beam cancer therapy, space shielding and cosmic ray analysis, single event effects in semiconductors, radiography, and more detailed analysis of the effects of light and heavy ions in matter. In addition, the entire functionality of MCNP4C is retained. New variance reduction and data analysis techniques, many adapted from high energy accelerator methodologies, have also been added, such as the extensive 'mesh tally' capability which allows up to 3-d plotting of particle tracks, fluence and fluence-derived quantities, energy deposition, next event estimator generation contributions and particle sources.

The workshops include hands-on instruction, generally on PC Windows machines. Subject to participant export approval for the MCNPX beta test team, participants will be able to access the Fortran-90 version of MCNPX 2.4, the LA150 (150 MeV) cross-section data for over 40 isotopes for incident neutrons and protons, and 12 for photonuclear interactions, and a notebook of viewgraphs. Follow-up consultation for class participants will be provided.

Classes are taught by experienced MCNPX code developers and instructors. For more information on code versions and their capabilities, go to the MCNPX Workshops web site <http://mcnpxworkshops.com>.

SC2002

SC2002 will be held **November 16-22, 2002**, in Baltimore, Maryland, will offer leading edge technology with stunning exhibits and faster-than-lightning computer systems. Academic and industry researchers draw on this conference as an arena to feature high-performance computing and networking discoveries designed to transform terabytes of data into insights about the origins of our universe, our own genetic makeup, the condition of our planet and its ecosystems, and how to keep ourselves safe in a dangerous world. For more information, see <http://www.sc2002.org/>.

48th Annual Radiobioassay and Radiochemical Measurements Conference

The 48th Annual Radiobioassay and Radiochemical Measurements Conference will be held **November 11-15, 2002**, at the Marriott (formerly the Hyatt Regency) in Knoxville, Tennessee. This conference is a continuation of an informal conference with a long history.

The objectives of the Conference (as adapted from the proceedings of the First Annual Bioassay and Analytical Chemistry Conference) are as follows:

1. To bring everyone up to date on some of the latest developments in the field of bioassay, analytical, and environmental radiochemistry;
2. To enable all persons actively engaged in the field of bioassay, analytical, and environmental radiochemistry to discuss mutual problems;
3. To standardize some of the procedures commonly used by the various laboratories;
4. To enable each laboratory to become familiar with procedures used elsewhere; and
5. To plan for future meetings.

For more information, please visit the web site at: <http://www.bioassay.org/2002/>.

SCALE Training Course Schedule for 2002

The SCALE staff at Oak Ridge National Laboratory (ORNL) will be offering two training courses this fall (**October 14-18 and October 21-25**) at ORNL. The courses will emphasize hands-on experience solving practical problems on PCs. There will be workgroups of two persons each. No prior experience in the use of SCALE is required to attend. The registration fee is \$1800 for one course or \$3000 for both courses (\$300 discount if you register at least one month before the course). A copy of the SCALE software and manual on CD may be obtained for an additional fee of \$700, and the KENO3D 3-D visualization tool on CD is available for \$800 (single license). Registrations will be accepted on a first-come basis. Registration forms submitted directly from the Web are preferred. Registration via fax or email is also acceptable. The registration fee must be paid by check, travelers checks, bank transfer, or credit card (VISA or MasterCard only). The agenda and registration form are on the web page at <http://www.ornl.gov/scale/trcourse.html>. Contact: Kay Lichtenwalter (tel 865-574-9213, email x4s@ornl.gov).

SCALE 5 Workshop Announced

The first workshop on SCALE 5 is being planned in conjunction with the American Nuclear Society M&C 2003 Topical Meeting in Gatlinburg, Tennessee. The workshop will be hosted by Oak Ridge National Laboratory in nearby Oak Ridge, Tennessee. The course is scheduled for the week of **March 31 - April 4, 2003**, immediately before the M&C 2003 meeting.

The workshop will feature some of the new modules to be released in SCALE 5, such as the SEN3 3-D sensitivity/uncertainty sequence and the STARBUCS burnup credit sequence for criticality safety. The workshop will emphasize hands-on experience solving practical problems on PCs. There will be workgroups

of two persons each. No prior experience in the use of SCALE is required to attend. The registration fee is \$1800 (there is a \$300 early registration discount). You can register online at www.ornl.gov/scale/register_scale5.html or as part of your M&C 2003 registration. The early registration deadline is February 28, 2003. (See announcement on M&C 2003 Conference).

Software Quality Forum 2003 (SQF 2003)

The Forum will be held **March 25-26, 2003**, at the Crystal Gateway Marriott Hotel, which is conveniently located in Arlington, Virginia.

The Program Committee is now accepting presentation proposals for the Software Quality Forum 2003 (SQF 2003). The Forum offers an exciting opportunity for software professionals in the Department of Energy (DOE), other government agencies, private industry, and academia to share their knowledge about trends and technologies in the acquisition, development, support, and management of software intensive systems. Well-known keynote speakers, tutorials on key Forum topics, a showcase for high-visibility IT projects using cutting-edge technologies, and a vendor exhibit area are included in the program.

This is a tri-annual event sponsored by the Software Quality Assurance Subcommittee (SQAS) of the Quality Managers within the DOE Nuclear Weapons Complex. The 2003 Forum is co-hosted by the DOE Office of the Chief Information Officer and the National Nuclear Security Administration, Office of Advanced Simulation and Computing within the Office of Defense Programs.

Please note the following due dates: submission of proposal, abstract, and biography is November 15, 2002, notification of acceptance is December 31, 2002, final abstract is January 15, 2003, and electronic and paper versions of presentation is due February 1, 2003.

For more information, visit the web site <http://cio.doe.gov/sqas>. Look for the "Forum 2003" heading on the left side of the home page. There will be a website devoted to the SQF 2003 in a week or so, which will be linked from the above website. If you have questions, send email to Kathleen Canal at kathleen.canal@hq.doe.gov. If interested in submitting a presentation proposal, please contact Brenda Coblenz, Program Committee Chair, at brenda.coblenz@hq.doe.gov.

CALENDAR

September 2002

Fourth Meeting of the International MACCS Users Group (IMUG), Sept. 6, 2002, in the Principality of Monaco (url <http://www.bnl.gov/est/IMUG2002>).

22nd Symposium on Fusion Technology - SOFT, Sept. 8-13, 2002, Helsinki, Finland. Contact: Symposium Secretary Mrs. Merja Asikainen (tel +358 9 456 6854; fax +358 9 456 7002; email: soft2002@vtt.fi; url <http://www.vtt.fi/val/soft2002/>).

Visual Editor Class, Sept. 9-13, 2002, Richland, WA. Contact: Randy Schwarz (tel 509-372-4042, email randy.schwarz@mcnpvised.com, url mcnpvised.com/train.html).

MCNP Course, Sept. 9-13, 2002, Stuttgart, Germany, Contact: Enrico Sartori (emailsartori@nea.fr, url <http://laws.lanl.gov/x5/MCNP/index.html>).

MCNPX Workshop, Sept. 23-27, 2002, San Diego, California. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpworkshops.com, url <http://mcnpworkshops.com> for details).

Neutron Spectra Unfolding Training Course, Sept. 24-26, 2002, in Los Alamos, NM. Contact: Burkhard Wiegel, PTB (email: Burkhard.Wiegel@ptb.de, url <http://www.ptb.de/utc2002/>).

YUNSC 2002 - The 4th International Conference of Yugoslav Nuclear Society, Sept.30-Oct.3, 2002, Belgrade, Yugoslavia. Contact (tel ++381 11 454-796; fax ++381 11 444-74-57; email yuns@rt270.vin.bg.ac.yu, url www.vin.bg.ac.yu/YUNSC).

8th Annual Workshop on Monte Carlo Simulation of Radiotherapy Treatment Sources using the BEAM Code System, Sept. 30-Oct. 3, 2002, Ottawa, Canada. Contact: Blake Walters, Ionizing Radiation Standards, National Research Council of Canada, Ottawa, Canada, K1A 0R6 (tel 613-993-2715, fax 613-952-9865, e-mail bwalters@irs.phy.nrc.ca, url www.irs.inms.nrc.ca/inms/irs/BEAM/beamhome.html).

October 2002

2002 International Topical Meeting on Probabilistic Safety Assessment (PSA '02), Oct. 6-10, 2002, Detroit, MI. Contact: Rebecca Steinman (phone 734-930-7500, email rls@adventengineering.com, url <http://www-ners.engin.umich.edu/PSAConf/>).

PHYSOR 2002, Oct. 7-10, 2002, Seoul, Korea, sponsored by the American Nuclear Society and hosted by the Korean Nuclear Society. Contact: Prof. Nam Zin Cho (tel +82-42-869-3819, fax +82-42-869-5859, email tpc@physor2002.kaist.ac.kr, url <http://physor2002.kaist.ac.kr>).

SCALE Source Terms & Shielding Course, Oct. 14-18, 2002, Oak Ridge, TN. Contact: Kay Lichtenwalter (tel 865-574-9213, email x4s@ornl.gov, url <http://www.ornl.gov/scale/trcourse.html>).

The Americas Nuclear Energy Symposium (ANES 2002), Oct. 16-18, 2002, Miami, FL. Contact: Martha Santos (tel 305-348-3942, email msantos@hcet.fiu.edu, url <http://www.anes2002.org>).

First Asian and Oceanic Congress for Radiation Protection (AOCRP-1), Oct. 20-24, 2002, Seoul, Korea, sponsored by the Korean Association for Radiation Protection (KARP). Contact: Dr. Myung-Jae Song (tel +82-42-870-0202, fax +82-42-870-0269, email mjsong@khnp.co.kr, url www.aocrp-1.com).

SCALE KENO V.a Criticality Course, Oct. 21-25, 2002, Oak Ridge, TN. Contact: Kay Lichtenwalter (tel 865-574-9213, email x4s@ornl.gov, url <http://www.ornl.gov/scale/trcourse.html>).

November 2002

Computed Tomography: Patient Dose Symposium, Nov. 6-7, 2002, Arlington, VA. Contact: William Beckner (tel 301-657-2652, fax 301-907-8768, url <http://www.ncrp.com>).

MCNPX Intermediate Workshop, Nov. 11-15, 2002, Tokyo, Japan. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpxworkshops.com, url <http://mcnpxworkshops.com> for details).

The 48th Annual Radiobioassay and Radiochemical Measurements Conference, Nov. 11-15, 2002, Knoxville, Tennessee. Contact: Tom Rucker (tel 865-481-2993, email ruckert@saic.com, url <http://www.bioassay.org/2002/>).

SC2002, Nov. 16-22, 2002, Baltimore, Maryland. Contact: (sc2002-info@sc-conference.org, url <http://www.sc2002.org/>).

15th ANS Topical Meeting on the Technology of Fusion Energy, Nov. 17-21, 2002, Washington, DC. (url www.ans.org/).

International Symposium on Standards and Codes of Practice in Medical Radiation Dosimetry, Nov. 25-28, 2002, IAEA, Vienna. Contact: Dr. Ken R. Shortt (tel +43 1 2600 21664, fax +43 1 26007 21662, email Dosimetry@iaea.org, url www.iaea.org/worldatom/Meetings/2002/infcn96.shtml).

January 2003

MCNPX Workshop, Jan.13-17, 2003, Orlando, Florida. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpxworkshops.com, url mcnpxworkshops.com for details).

MCNP Course, Jan. 27-30, 2003, Mass. Inst. Of Technology, Contact: Elizabeth Selcow (email selcow@lanl.gov, url <http://laws.lanl.gov/x5/MCNP/index.html>).

February 2003

MCNPX Workshop, Feb. 17-21, 2003, Las Vegas, Nevada. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpxworkshops.com, url <http://mcnpxworkshops.com> for details).

MCNP Course, Feb. 2003, (TBA), North Carolina State University. Contact: Elizabeth Selcow (email selcow@lanl.gov, url <http://laws.lanl.gov/x5/MCNP/index.html>).

March 2003

Software Quality Forum 2003, March 24-26, 2003, in Arlington, Virginia. Contact: Kathleen Canal (email kathleen.canal@hq.doe.gov, url <http://cio.doe.gov/sqas>).

MCNPX Workshop, Mar. 31-Apr. 4, 2003, Knoxville, Tennessee. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpxworkshops.com url <http://mcnpxworkshops.com> for details).

SCALE5 Workshop, Mar. 31-Apr. 4, 2003, Oak Ridge, Tennessee. Contact: Kay Lichtenwalter (email x4s@ornl.gov, scalehelp@ornl.gov, url http://www.ornl.gov/scale/workshop_mc2003.html).

April 2003

ANS Topical Meeting, Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew, Apr. 6-10, 2003, Gatlinburg, TN. Co-sponsored by the American Nuclear Society's Reactor Physics, and Radiation Protection and Shielding Divisions, as well as the ANS Oak Ridge/Knoxville Local Section, Oak Ridge National Laboratory's Radiation Safety Information Computational Center, the Nuclear Energy Agency of the OECD, the Korean Nuclear Society, and the Canadian Nuclear Society. Contacts: Yousry Azmy (tel 865-574-8069, email azmyyy@ornl.gov) or Bernadette Kirk (tel 814-865-0039, email kirkbl@ornl.gov, url <http://meetingsandconferences.com/MC2003/index.html>).

May 2003

MCNP Course, May 12-16, 2003, Japan. Contact: Elizabeth Selcow (email selcow@lanl.gov, url <http://laws.lanl.gov/x5/MCNP/index.html>).

MCNPX Workshop, May 2003, Los Alamos/Santa Fe, New Mexico. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpxworkshops.com, url <http://mcnpxworkshops.com> for details).

June 2003

MCNPX Workshop, June 2003, Europe. Contact: Bill Hamilton (tel 505-662-9097, email registrar@mcnpworkshops.com, url <http://mcnpworkshops.com> for details).

MCNP Course, June 2003, (TBA), Los Alamos National Laboratory, New Mexico. Contact: Elizabeth Selcow (email selcow@lanl.gov, url <http://laws.lanl.gov/x5/MCNP/index.html>).

August 2003

MCNP Course, Aug. 2003, (TBA), Los Alamos National Laboratory, New Mexico. Contact: Elizabeth Selcow (email selcow@lanl.gov, url <http://laws.lanl.gov/x5/MCNP/index.html>).

September 2003

International Conference on Supercomputing in Nuclear Applications, SNA 2003, Sept. 22-24, 2003, Paris, France. Organizers: CEA, SFANS, co-organizer: OECD/NEA. (email SNA-2003@cea.fr, url <http://SNA-2003.cea.fr>).

October 2003

American Nuclear Society's Advances in Nuclear Fuel Management III Topical Meeting, Oct. 5-8, 2003, Hilton Head Island, South Carolina. Contact: Youssef A. Shatilla (email shatilya@westinghouse.com, url <http://rpd.ans.org/nfm.htm>).

December 2003

The 11th International Conference on Fusion Reactor Materials (ICFRM-11), Dec. 7-12, 2003, Kyoto, Japan. Contact ICFRM-11 secretariat (tel +81-774-38-3597, fax +81-774-38-3467, email icfrm@iae.kyoto-u.ac.jp, url <http://icfrm.iae.kyoto-u.ac.jp>).

ACCESSION OF NUCLEAR SYSTEMS LITERATURE

The nuclear systems literature (shielding, safety, materials) cited below has been reviewed and placed in the RSICC Information Storage and Retrieval Information System (SARIS), now searchable on the RSICC web server (<http://www-rsicc.ornl.gov/SARIS.html>). We now include medical physics in addition to material science, radiation dosimetry, radiation safety, reactor dynamics, reactor safeguards, risk assessment, waste management, fuel cycle, fusion and plasmas, high energy particle transport, and shielding. This early announcement is made as a service to the nuclear sciences community. Copies of the literature are not distributed by RSICC. 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. For literature listed as available from INIS contact INIS Clearinghouse, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna.

KEK-MSL Report 2000 . . . *KEK-MSL Report 2000 . . . 2000 . . .* High Energy Accelerator Research Organization, Ibaraki-ken, Japan.

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