Radiation Safety Information Computational Center

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"It is the growling man who lives a dog's life" - Coleman Cox

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

40 Years Ago - This is How it Was!

RSIC published its **first newsletter** June 1, 1963. The newsletter announced the establishment of the center, described its program and services, and requested shielding information. A Board of Volunteer Coordinators was listed in the newsletter: 47 scientists and engineers who represented a cross section of the international shielding community. RSIC staff met with the Coordinators for the first time at the 1963 summer meeting of the American Nuclear Society in Salt Lake City, Utah. Groundwork was laid for cooperation throughout the nuclear industry. It was not until January 1965 that the **second newsletter** was published, and that was due to pressure from the Coordinators! It was published on a monthly basis thereafter.*

RSICC's 40th anniversary will be formally acknowledged at a dinner on Tuesday, April 8th at the M&C Topical Meeting in Gatlinburg, Tennessee. Among the speakers will be Betty Maskewitz and Dr. Alvin Weinberg.

*Betty F. Maskewitz, *History of the Engineering Physics and Mathematics Division 1955–1993*, p. 25, Oak Ridge National Laboratory Report ORNL/M-2998 (June 2001).

Oak Ridge National Laboratory is 60!

Oak Ridge National Laboratory celebrated its 60th anniversary with a series of events and activities to help preserve the lab's history, thank the community and honor ORNL's past and present staff.

In February 1943, construction began at ORNL (called Clinton Laboratories until 1948) on what became the world's first continuously operated nuclear reactor. The Graphite Reactor began operation in November 1943 and demonstrated that a reactor could provide a sustained nuclear reaction and produce significant amounts of plutonium. Some 20 months later, plutonium produced in Hanford, Wash., was used in one of the atomic bombs that accelerated the end of World War II.

Since its early years, ORNL's mission has changed from weapons research to one that includes world-class research in energy, neutron science, biological systems, advanced materials, national security and high-performance computing.

ORNL Director Bill Madia said the laboratory's celebration was designed with three goals. "We are making sure future generations know about the tremendous contributions of those who worked here before us. We are thanking the community for their help and support over the years. And we are recognizing the wonderful staff, past and present, who have made ORNL a world leader in scientific research."

Dozens of ORNL retirees, including some of the original staff from 1943, heard presentations that recounted the research in the early years of the laboratory and life in the Secret City during the war years.

The ORNL staff has organized several initiatives to chronicle and preserve the laboratory's history. Approximately 25 ORNL retirees are being interviewed on camera to develop an oral history of the laboratory's first two decades. An ORNL history room has been established for the identification, preservation and display of artifacts related to the science and life of early ORNL staff. ORNL also has renovated and upgraded the exhibit wing of the Graphite Reactor to display both the history and future of the laboratory's scientific agenda.

A commemorative 60th anniversary stamp and postal cover will be unveiled at the American Museum of Science and History in Oak Ridge (**http://www.amse.org/**). Collectors may purchase the stamp at the museum.

Madia said the anniversary will continue throughout 2003 with other events and projects that will celebrate both the past and future of ORNL.

ORNL News and Communications
February 3, 2003

Change to the Computer Code and Data Collection

One new version of a package was added to the computer code collection this month.

CCC-711/EASY 99

OP SYS: Windows & Unix
Language: Fortran 77
Computers: PC & workstations
Format: Windows & tar

UKAEA/EURATOM Fusion Association, Oxfordshire, United Kingdom, through the OECD NEA Data Bank, Issy-les-Moulineaux, France, contributed a Windows version of this multipurpose activation and transmutation code system. EASY-99 is an updated version of CCC-678/EASY-97. Information on EASY-99 is posted at the UKAEA web site: **http://www.fusion.org.uk/.** The European Activation System (EASY) is a complete tool for the calculation of activation in materials exposed to neutrons. It can be used for any application (fusion, transmutation, fission and accelerator) where the neutron energy does not exceed 20 MeV. EASY-99 consists of the inventory code FISPACT-99 and the EAF-99 file, which contains various libraries of nuclear data. EASY-99 calculates the response of materials irradiated in a neutron flux. It is designed to investigate fusion devices which will act as intense sources of high energy (14 MeV) neutrons and cause significant activation of the surrounding materials. The EAF-99 library contains 12468 excitations functions involving 766 targets from 1H to 257Fm, in the incident energy range up to 20 MeV.

Fortran and C compilers are required to build executables on Unix or Linux. Makefiles are provided for Sun, IBM, HP and Intel PC Linux systems. The Windows release was developed for Windows 95, 98 and NT4.0 in 1999. The included PC executable created by the author with the Salford FTN77 compiler was tested at RSICC on Pentium computers running WindowsNT, Windows2000 and WindowsXP. Fortran source files are not included in the Windows distribution. The package is transmitted on a CD-ROM and

contains scripts, source files, test cases, data libraries, a Windows executable and documentation files. References: UKAEA FUS 407 (December 1998), UKAEA FUS 408 (December 1998), UKAEA FUS 409 (December 1998), UKAEA FUS 410 (December 1998), EDS-0 (December 1998), EDS-3a., EDS-2a (December 1998). Fortran 77 & C; IBM RS/6000, SUN, HP, Linux PC (C00711MNYCP01).

Monthly Code Focus

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 'Subject 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**. Many packages in the RSICC code collection are in this subject category. A few are highlighted here for your review of **Radiation Protection and Shielding**.

ANISN-ORNL	**ISO-PC 2.1**	**RSAC-6**
DANTSYS	**MCNP4C2**	**SCALE 4.4A**
DOORS 3.2	**PARTISN 2.99**	**SUGGEL**
HIMAC	**QAD-CGGP-A**	**TART2000**

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. 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 following the table.

Condensed Table of Conferences

Name of Conference	Date and Location	Web Site	Abstract/Paper Submission Date
14th Annual U.S. Hydrogen Meeting	Mar. 4-6, 2003 Washington, DC	**http://www.hydrogenconference.org/**	passed

Name of Conference	Date and Location	Web Site	Abstract/Paper Submission Date
ENS TopFuel 2003/ANS LWR Fuel Performance Meeting	Mar. 16-19, 2003 Wurzburg, Germany	**http://www.topfuel2003.de**	passed
Software Quality Forum 2003 (SQF 2003)	Mar. 25-26, 2003 Arlington, Virginia	**http://cio.doe.gov/sqas**	passed
M&C 2003	Apr. 6-10, 2003 Gatlinburg, Tennessee	**meetingsandconferences.com/MC2003**	passed
39th Annual National Council on Radiation Protection (NCRP)	Apr. 9-10, 2003 Arlington, Virginia	**http://www.ncrp.com**	
International Congress on Advanced Nuclear Power Plants (ICAPP '03)	May 4-7, 2003 Cordoba, Spain	**www.ans.org/goto/icapp03**	passed
2003 IEEE Nuclear and Space Radiation Effects Conference (NSREC)	July 21-23, 2003 Monterey, California	**http://www.nsrec.com/**	passed
21st International System Safety Conference	Aug. 4-8, 2003 Ottawa, Canada	**http://www.system-safety.org/**	passed
9th International Conf. on Environmental Remediation and Radioactive Waste Mgmt.	Sept. 21-25, 2003 Oxford, England	**http://www.icemconf.com**	passed
Supercomputing in Nuclear Applications (SNA-2003)	Sept. 22-24, 2003 Paris, France	**http://sna-2003.cea.fr/**	passed
Advances in Nuclear Fuel Management III	Oct. 5-8, 2003 Hilton Head Island, South Carolina	**http://rpd.ans.org/nfm.htm**	Mar. 15, 2003
6th International Symposium on ESR Dosimetry and Applications	Oct. 12-16, 2003 Campos do Jordão, Brazil	**http://www.if.usp.br/VI_ESR_2003/**	June 30, 2003
7th International Conference on Nuclear Criticality Safety (ICNC2003)	Oct. 20-24, 2003 Tokai-mura, Japan	**http://www.icnc.jp/**	passed

Name of Conference	Date and Location	Web Site	Abstract/Paper Submission Date
9th International Symposium on Radiation Physics (ISRP-9)	Oct. 27-31, 2003 Cape Town, South Africa	**www.medrad.tlabs.ac.za/isrp9.htm**	
11th International Conference on Fusion Reactor Materials (ICFRM-11)	Dec. 7-12, 2003 Kyoto, Japan	**icfrm.iae.kyoto-u.ac.jp**	Apr. 30, 2003
International Conference on Radiation Shielding (ICRS-10) and Topical Mtg. on Radiation Protection & Shielding (RPS 2004)	May 9-14, 2004 Funchal, Madeira Island (Portugal)	**http://www.itn.mces.pt/ICRS-RPS/**	

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**.

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.

2003 IEEE Nuclear and Space Radiation Effects Conference (NSREC)

The 2003 IEEE Nuclear and Space Radiation Effects Conference (NSREC) will be held in Monterey, California, **July 21-25, 2003**. This annual meeting of engineers and scientists presents the latest techniques for enhancing the performance of microelectronic devices and circuits that are used in radiation environments. The final call for papers for the 2003 IEEE Nuclear and Space Radiation Effects Conference (NSREC) is available on the web site at **www.nsrec.com**. Deadline for submission is February 7, 2003.

Make plans for the 2003 short course in Monterey. Joe Benedetto and his team of professors have put together an interesting program about radiation effects on device scaling. The syllabus is at **www.nsrec.com/short.htm**.

Forms to nominate an outstanding colleague for the 2003 Radiation Effects Award are at **www.nsrec.com/nominate.htm**. This award comes with a handsome IEEE plaque and $2000 check.

University professors - Forms are available on the NSREC web site to nominate an outstanding student for the 2003 IEEE NPSS Phelps Continuing Education Grant. The cash award ($500 - $1000) comes with an IEEE certificate and complimentary short course registration. NSREC plans to award two grants this year. See **www.nsrec.com/steering.htm**.

Keep checking the web site at **www.nsrec.com** for the latest NSREC information. Contact Paul Dodd, Sandia National Laboratories, 505-844-1447 if you have questions.

International Conference on Radiation Shielding (ICRS-10) and Topical Meeting on Radiation Protection & Shielding (RPS 2004)

The Tenth International Conference on Radiation Shielding (ICRS-10) and the Thirteenth Topical Meeting of the Radiation Protection and Shielding Division of the American Nuclear Society (RPS 2004) will be held **May 9-14, 2004**.

The Local Organization has been assigned to ITN (the Nuclear and Technological Institute, in Lisbon), a laboratory of the Portuguese Ministry of Science and Higher Education. At the international level, the joint organization is co-sponsored by The Nuclear Energy Agency (NEA) of the Organization for Economic Co-operation and Development (OECD), The Radiation Protection and Shielding Division (RPSD) of the American Nuclear Society (ANS), and The Radiation Safety Information Computational Center (RSICC, Oak Ridge National Laboratory).

It is anticipated that this will be the most important event in the areas of Radiation Shielding and Radiation Protection during 2004. For further information please refer to the Conferences Web pages at the following URL **http://www.itn.mces.pt/ICRS-RPS**. Please don´t hesitate to contact the Conference Secretariat at **icrs-rps@itn.mces.pt**.

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 the 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.

6th International Symposium on ESR Dosimetry and Applications

The 6th International Symposium on ESR Dosimetry and Applications will be held **October 12-16, 2003**, in Campos do Jordão, Brazil. For complete information, please see **http://www.if.usp.br/VI_ESR_2003/** and click on "second announcement (PDF version)" on the left side of the screen.

7th International Conference on Nuclear Criticality Safety (ICNC2003)

The 7th International Conference on Nuclear Criticality Safety (ICNC2003) will be held **October 20-24, 2003,** in Tokai-mura, Japan. This conference has been held approximately every 4 years under the support of OECD/Nuclear Energy Agency/Nuclear Science Committee. The last conference, hosted by Japan, was the 3rd conference held in Tokyo in 1987. In the Versailles conference held in 1999, over 300 people from 25 countries participated, and more than 200 presentations were given on the recent activities in research work, industrial applications, regulatory studies, and other topics related to criticality safety. ICNC2003 will provide a good opportunity for communication among researchers, engineers, plant operators, and regulators. The Conference will consist of invited talks, contributed talks, and poster sessions. On the final day of the conference, technical tours to nuclear facilities are scheduled, and social programs are planned during conference. Please see the website for more information: **http://www.icnc.jp/**.

9th International Conference on Environmental Remediation and Radioactive Waste Management

The conference will be held in Oxford, England, **September 21-25, 2003**. Session M-6 - Applying Strategic Planning, Decision-making, and Risk Reduction Methodologies in EM, includes the following:

-- Applications of strategic planning, decision-making, and/or risk reduction methodologies and tools (e.g., roadmapping) to resolve environmental management issues
-- Innovative approaches to decision-making to resolve problems/issues related to environmental management
-- Innovative approaches to assessing risk and cost-effective reduction of risk for issues related to environmental management
-- Innovative approaches to strategically plan for and implement science and technology (S&T) to resolve environmental barriers to project completion
-- Ways to effectively integrate strategic planning, decision-making, and risk reduction techniques and tools to resolve environmental management issues
-- Methodologies used in developing the sites' plans to meet DOE EM's goals of site closures, cost savings, schedule acceleration, and risk reduction

Additional details on the ICEM conference are on the website at **http://www.icemconf.com**.

21st International System Safety Conference

The System Safety Society is pleased to announce the 21st International System Safety Conference, **August 4-8, 2003**, in Ottawa, Ontario, Canada. The conference is an international forum for the technical presentation and discussion of all aspects and issues regarding system safety engineering and management. The conference theme is "Broader Perspectives, Focused Solutions." The emphasis is on the knowledge and skills necessary to create system safety solutions for increasingly complex technologies and missions. The range of topics will cover both the art and science of system safety and the organizational issues influencing the effective management of system safety in the product life cycle. This is the major conference for system safety and related professions, with a week of technical sessions, tutorials, workshops, special events, social affairs, luncheons, and the society's awards banquet. The conference proceedings are the premier collection of work in the system safety field. For more information, please visit: **http://www.russona.com/issc21/**.

9th International Symposium in Radiation Physics (ISRP-9)

The 9th International Symposium on Radiation Physics (ISRP-9) will be held in Cape Town, South Africa, **October 27-31, 2003**. This triennial event will be organized jointly by the International Radiation Physics Society (IRPS) and iThemba Laboratory for Accelerator Based Sciences (iThemba LABS) [formerly the National Accelerator Centre]. The Symposium is the latest in a series which began in Calcutta in 1974 and thereafter continued in Penang (1982), Ferrara (1985), São Paulo (1988), Dubrovnik (1991),

Rabat (1994), Jaipur (1997) and Prague (2000). A 2½ day "Workshop on Radiation-Based Analytical Techniques" (WoRBAT) will be held prior to ISRP-9 (October 24-26, 2003) with emphasis on x-ray fluorescence and diffraction (XRF, XRD) and particle-induced x-ray emission (PIXE). For more information, please visit **www.medrad.tlabs.ac.za/isrp9.htm**.

M&C 2003

The American Nuclear Society's Mathematics and Computation Topical Meeting, M&C 2003, will be held in Gatlinburg, Tennessee, **April 6-10, 2003**. The unique setup for this conference, entitled "Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew," promises to provide an exciting and unprecedented opportunity for students and professionals in the field to learn about its rich intellectual heritage from leading figures. The Review section of the conference is comprised of eight lectures on selected topics of common interest to the membership of the Mathematics and Computation Division, the primary sponsor of the meeting. The Anew section of the meeting will include contributed and invited papers on standard topics in this series of conferences. Please refer to the conference web site **http://meetingsandconferences.com/MC2003/** for details on the lecture series and lecturers, a list of topics for contributed papers and special sessions, author instructions, and general information about the conference.

The web site for M&C 2003 is now open for submitting papers. Please check the "Call for Papers" link to learn about the topics of interest in this conference, including special session topics. The "Authors" link has templates for preparing full papers in MS Word, WordPerfect, and LaTeX. Please note that abstract submission is not required due to the Math & Computational Sciences Division's policy of reviewing only full papers for inclusion in meetings where the division is the primary sponsor. We look forward to welcoming you to Gatlinburg.

MCNP Courses for 2003

Registration: **http://www-xdiv.lanl.gov/x5/MCNP/registration.html**
MCNP home page: http://www-xdiv.lanl.gov/x5/MCNP/index.html
LANL contact: **selcow@lanl.gov**
European contact: **sartori@nea.fr**
Japanese contact: **tadakazu@hero.tokai.jaeri.go.jp**

2003

March 11-14	Advanced MCNP Topics	North Carolina State University
March 24-28	Intermediate/Advanced Topics	London
April 11	MCNP5 Parallel Processing Workshop	Gatlinburg, Tennessee
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 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 instruction. 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 **June 2-6, 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**).

On **April 6, 2003**, there is a four hour class that is being held in conjunction with MC 2003. The class will be held Sunday and will cover the most popular features of the Visual Editor, including viewing files, creating simple geometries and setting importances. For more info on the MC2003 conference, see **http://meetingsandconferences.com/MC2003**.

MCNPX Workshops for 2003

Lead Teachers: Drs. John Hendricks, Gregg McKinney, Laurie Waters
Organizer: HQC Professional Services Contact: **bill@solutionsbyhqc.com**
More Information: **http://mcnpxworkshops.com** MCNPX homepage: **http://mcnpx.lanl.gov**

2003

March 31-April 4	Advanced	Knoxville, Tennessee
April 6 (Sunday)	(4-hour class in conjunction with MC2003 conference)	Gatlinburg, Tennessee
May 19-23	Introductory	Los Alamos/Santa Fe
June/July	Advanced	Europe

August 25-29	Advanced	Los Alamos/Santa Fe
September/October	Introductory	Europe
November	Advanced	Japan

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. More information on code versions and capabilities is available at MCNPX Workshops web site **http://mcnpxworkshops .com**.

Workshop on Nuclear Data for the Transmutation of Nuclear Waste

The "Workshop on Nuclear Data for the Transmutation of Nuclear Waste" will be held **September 1-5, 2003,** at GSI-Darmstadt, Germany. The workshop is organized on the occasion of the end of the HINDAS research program, a collaboration of several European Institutes working on the subject of "High and Intermediate Nuclear Data for Accelerator Driven Systems." Please note that the topics included in the workshop are not restricted to the HINDAS research program. All contributions to the subject of the workshop are more than welcome.

The workshop time-schedule will be organized in the following way: Monday will be dedicated to a closed HINDAS meeting. On Tuesday, the open sessions will start and last till the end of the workshop on Friday.

Those who are interested in participating in the workshop are invited to register (no fee) before August 1, 2003, using the workshop website **http://www-wnt.gsi.de/tramu.** There is also information on workshop topics, accommodations, transportation, and key dates. Please contact Aleksandra Kelic, **A.Kelic@gsi.de** if you have questions.

Practical MCNP for the HP, Medical Physicist, and Rad Engineer

DATE: **June 16-20, 2003** (4.5 days)
FEE: $1,450 per person
PLACE: The MESA Complex, Room 130, University of New Mexico-Los Alamos Campus

Monte Carlo type calculations are ideally suited to solving a variety of problems in radiation protection and dosimetry. This course is aimed at the HP, medical physicist, and rad engineer with no prior experience with Monte Carlo techniques. The focus is almost entirely on the application of MCNP™ to solve a variety of practical problems in radiation shielding and dosimetry. The intent is to "jump start" the student toward using MCNP™ productively. Extensive interactive practice sessions are conducted on a

personal computer. Topics will include overview of the MCNP™ code and the Monte Carlo method, basic concepts, input file preparation, geometry, source definition, standard MCNP tallies, interpretation of the output file, exposure and dose rate calculations, radiation shielding, photon skyshine, detector simulation and dosimetry. Students will be provided with a comprehensive class manual and a diskette containing all of the practice problems. This course has been granted 32 Continuing Education Credits by the AAHP, and 4.5 CM points by the American Board of Industrial Hygiene.

The course is offered by the Health Physics Measurements Group at the Los Alamos National Laboratory and is co-sponsored by RSICC. Registration is available online at **http://drambuie.lanl.gov/~esh4 mcnp.htm**. Make checks payable to the University of California (checks must be in U.S. dollars on a U.S. bank) and mail together with name, address, and phone number to: Los Alamos National Laboratory, Group HSR-4, MCNP Class/David Seagraves, Mail Stop J573, Los Alamos, NM 87545.

This course is offered by the Health Physics Measurements Group at LANL and is a completely separate offering from the other courses offered by other groups at Los Alamos.

Inquiries regarding registration and class space availability should be made to David Seagraves, 505-667-4959, fax: 505-665-7686, e-mail: **dseagraves@lanl.gov**. Technical questions may also be directed to Dick Olsher, 505-667-3364, e-mail: **dick@lanl.gov**.

Radiation Process Simulation and Modeling User Group

The Radiation Process Simulation and Modeling User Group (RPSMUG) announces its annual meeting to be held **April 22-23, 2003**, at the National Institute of Standards and Technology in Gaithersburg, Maryland. The meeting will consist of technical presentations, round-table discussions and informational sessions related to the use of mathematical models and simulation in radiation processing (gamma, electron beam, and x-ray). New RPSMUG officers will be installed at this time. Please click on **announcement** for more information.

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.

SCALE 5 Plus Workshop Announced

Version 5 of the SCALE software system is scheduled for release in 2003. This half-day tutorial workshop will highlight significant new computational capabilities in SCALE 5 plus current developments that will appear in later SCALE releases. The workshop at the conference hotel in Gatlinburg on Thursday afternoon **April 10, 2003**, will be part of the American Nuclear Society **M&C 2003 Topical Meeting** in Gatlinburg, Tennessee. The workshop will be hosted by Oak Ridge National Laboratory, immediately following the final technical sessions of the topical meeting.

The workshop will feature presentations on the following new computational capabilities to be released in SCALE 5:

- SEN3 3-D sensitivity/uncertainty sequence (using KENO V.a)
- TRITON/NEWT 2-D flexible mesh discrete ordinates automated sequences for criticality safety and depletion/source term analyses.
- New resonance cross-section processing capabilities using continuous energy and ENDF/B-VI cross sections.
- New 2-D interactive plotting of KENO and XSDRNPM results with Javapeno.

Plus, the workshop will also feature presentations on the following developments planned for release:

- Continuous energy version of the KENO V.a criticality safety code
- 3-D automated variance reduction for Monte Carlo radiation shielding analysis

The registration fee is $200. You can register online at **www.ornl.gov/scale/register_scale5.html** or as part of your M&C 2003 registration.

Supercomputing in Nuclear Applications

The conference on "Supercomputing in Nuclear Applications" SNA-2003, will be held in Paris, **September 22-24, 2003**.

The web pages (**http://sna-2003.cea.fr/**) were expanded to include information on tours, sightseeing and events scheduled at the time of the conference.

One of the events at SNA-2003 is linked to the museum of "arts et metier", literally of arts & crafts; art is here used in its primary meaning: skills acquired through studies and by practice, technical knowledge. In this museum are displayed among many other items the "supercomputer" of 1642: arithmetical machine by Blaise Pascal, the original pendulum of Foucault (1851) or the instrument he developed to measure the speed of light (1852), or a decimal clock with a day of 10 hours each of 100 minutes and a minute of 100 seconds etc.

CALENDAR

March 2003

14th Annual U.S. Hydrogen Meeting, Mar. 4-6, 2003, Washington, DC. Contact: Catherine E. Grégoire Padró (tel 303-275-2919, fax 303-275-2905, email **owner-hydrogen@mail.nrel.gov**, url **http://www.hydrogenconference.org/**).

MCNP Course, Mar. 11-14, 2003, North Carolina State University. Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/ MCNP/index.html**).

MCNP Course, Mar. 24-28, 2003, London, Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/ MCNP/index.html**).

Software Quality Forum 2003, Mar. 24-27, 2003, in Arlington, VA. Contact: Kathleen Canal (email **kathleen.canal@hq.doe.gov**, url **http://cio.doe.gov/sqas**).

MCNPX Advanced Workshop, Mar. 31-Apr. 4, 2003, Knoxville, TN. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com** url **http://mcnpxworkshops.com** for details).

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 814-865-0039, email **yya3@psu.edu** or Bernadette Kirk (tel 865-74-6176, email **kirkbl@ornl.gov**, url **http://meetingsandconferences.com /MC2003/index.html**).

Visual Editor for MCNP, Apr. 6, 2003, Gatlinburg, TN. Contact: Randy Schwartz (url **http://www.mcnpvised.com/ved/class7. html**).

MCNP Course, Apr. 11, 2003, Gatlinburg, Tennessee. Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/ MCNP/index.html**).

39th NCRP Meeting, Apr. 9-10, 2003, Arlington, VA. Contact: William Beckner (tel 301-657-2652, fax 301-907-8768, url **http://www.ncrp.com**).

Radiation Process Simulation and Modeling User Group, Apr. 22-23, 2003, Gaithersburg, MD. Contact: Mark Smith (tel 704-587-8914, email **msmith@iba-group.com**).

SCALE5 Workshop, Apr. 28-May 2, 2003, Oak Ridge, TN. Contact: Kay Lichtenwalter (email **x4s@ornl.gov**, **scalehelp@ornl.gov**, url **http://www.ornl.gov/scale/ workshop_mc2003.html**).

May 2003

Radiation Transport Calculations using the EGS Monte Carlo System, May 5-8, 2003, 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, email **bwalters@irs.phy.nrc.ca**, url **http://www.irs.inms.nrc.ca/inms/irs/papers/egsnrc/brochure.html**).

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

MCNPX Introductory Workshop, May 19-23, 2003, Los Alamos/Santa Fe, NM. Contact: Bill Hamilton (tel 505-445-0312, email **registrar@mcnpxworkshops.com,** url **http://mcnpxworkshops.com** for details).

June 2003

Visual Editor for MCNP, June 2-6, 2003, Richland, Washington. Contact: Randy Schwarz (email **randyschwarz@mcnpvised.com**, url **http://www.mcnpvised.com/ train.html**).

Practical MCNP For The HP, Medical Physicist, And Rad Engineer, June 16-20, 2003, Los Alamos, NM. Contact: David Seagraves (tel 505-667-4959, fax 505-665-7686, email **dseagraves@lanl.gov**, url **drambuie.lanl.gov/~esh4/mcnp.htm**).

MCNP Course, June 2003, (TBA), Los Alamos National Laboratory, Los Alamos, NM. Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/MCNP/index.html**).

MCNPX Advanced Workshop, June/July (tbd), 2003, Europe. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

July 2003

Intercomparison on the Usage of Computational Codes in Radiation Dosimetry, July 14-16, 2003, Bologna, Italy. Contact: Gianfranco Gualdrini (tel 39-051-6098350, fax 39-051-6098003, email **guald@bologna.enea.it**, url **http://www.nea.fr/download/quados/quados.html**).

2003 IEEE Nuclear and Space Radiation Effects Conference (NSREC), July 21-25, 2003, Monterey, CA. Contact: Paul Dodd (tel 505-844-1447, url **http://www.nsrec.com**).

MCNPX Advanced Workshop, June/July (tbd), 2003, Europe. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

August 2003

21st International System Safety Conference, Aug. 4-8, 2003, Ottawa, Canada. Contact: Gerry Einarsson, Chair, (tel 613-824-2468, email **einargk@rogers.com**, url **http://www.russona.com/issc21/**).

MCNPX Advanced Workshop, Aug. 25-29, 2003, Los Alamos / Sante Fe. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com,** url **http://mcnpxworkshops.com** for details).

MCNP Course, Aug. 2003, (TBA), Los Alamos National Laboratory, Los Alamos, NM. Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/MCNP/ index.html**).

September 2003

Workshop on Nuclear Data for the Transmutation of Nuclear Waste, Sept. 1-5, 2003, GSI-Darmstadt, Germany, Contact: Aleksandra Kelic (tel 49-0-6159-71-2727, fax 49-0-6159-71-2785, email **A.Kelic@gsi.de**, url **http://www-wnt.gsi.de/tramu**).

Nuclear Energy for New Europe 2003, Sept. 8-11, 2003, Portorož, Slovenia, Contact: Tomaz Zagar (phone +386-1-588-5450, fax +386-1-561-2335, email **PORT2003@ijs.si,** url **http://www.drustvo -js.si/port2003/**).

Visual Editor for MCNP, Sept. 8-12, 2003, Richland, Washington. Contact: Randy Schwarz (email **randyschwarz@mcnpvised.com**, url **http://www.mcnpvised.com/train.html**)

9th International Conference on Environmental Remediation and Radioactive Waste Management, Sept. 21-25, 2003, Oxford, England. Contact: (url **www.icemconf.com**).

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**).

MCNPX Introductory Workshop, Sept/Oct (tbd), 2003, Europe. Contact: Bill Hamilton (tel 505-455-0312, Email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

October 2003

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

7th International Conference on Nuclear Criticality Safety (ICNC2003), Oct. 20-24, 2003, Contact: Dr. Yoshinori Miyoshi (tel +81-29-282-6671; fax +81-29-282-6798, email **icnc03miyoshi@nucef.tokai.jaeri.go.jp**, url **http://www.icnc.jp/**).

9th Triennial International Symposium in Radiation Physics, Oct. 27-31, 2003, Cape Town, South Africa. Contact: Dr. D. T. L. Jones (tel +27-21-843-1336, fax +27-21-843-3382, email **Jones@tlabs.ac.za** url **www.medrad.tlabs.ac.za/isrp9.htm**).

MCNPX Introductory Workshop, Sept/Oct (tbd), 2003, Europe. Contact: Bill Hamilton (tel 505-455-0312, Email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

November 2003

MCNPX Advanced Workshop, November, 2003, Japan. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com,** url **http://mcnpxworkshops.com** for details).

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).**

May 2004

International Conference on Radiation Shielding (ICRS-10) and Topical Mtg. on Radiation Protection & Shielding (RPS 2004), May 9-14, 2004, Funchal, Madeira Island (Portugal). Contact: Conference Secretariat (email **icrs-rps@itn.mces.pt,** url **http://www.itn.mces.pt/ICRS-RPS**).

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.

J. Nucl. Mater., 307, 1-9. . . *ITER Status, Design and Material Objectives*.. . . Aymar, R. et al.. . . December 2002. . . ITER, Garching, Germany.

J. Nucl. Mater., 307, 21-30. . . *Breeding Blanket Concepts for Fusion and Materials Requirements*.. . . Raffray, A.R. et al.. . . December 2002. . . JAERI, Ibaraki-ken, Japan; Max Planck Inst. Plasma Physics, Garching, Germany; CEA Saclay, Gif-sur-Yvette, France; Forschungszentrum Karlsruhe, Germany.

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J. Nucl. Mater., 307, 43-52. . . *Plasma Facing and High Heat Flux Materials - Needs for ITER and Beyond*.. . . Bolt, H. et al.. . . December 2002. . . Max Planck Inst. Plasma Physics, Garching, Germany; ITER, Garching, Germany; Forschungszentrum Julich, Germany; CSU Garching, Germany; JAERI, Ibaraki-ken, Japan.

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J. Nucl. Mater., 307, 60-68. . . *Macroscopic Erosion of Divertor and First Wall Armour in Future Tokamaks*.. . . Wuerz, H. et al.. . . December 2002. . . Forschungszentrum Karlsruhe, Germany; Luikov Inst. Heat & Mass Transfer, Minsk, Byelarus; Troitsk Inst. Innov. & Fusion Research, Troitsk, Russia.

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Nagoya Univ., Aichi, Japan; Doshisha Univ.,Kyoto, Japan; Forschungszentrum Julich, Germany; Fukuoka Univ., Japan; Univ. Tokushima, Japan; Russian, Acad. Sci., Moscow, Russia.

J. Nucl. Mater., 307, 84-88. . . *Erosion and Re-Deposition Behavior of Plasma Facing Materials Due to Tokamak Plasma Disruption*.. . . Liu, X. et al.. . . December 2002. . . Sw. Inst. Physics., Chengdu, China.

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