Radiation Safety Information Computational Center

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under contract DE-AC05-00OR22725

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No. 462 August 2003

"We would accomplish many more things if we did not think of them as impossible."
-- C. Malesherbes

RSICC is Moving August 8th!

RSICC will be moving into a new building about one block west of our current location **August 8th**! We will be packing the full week before and unpacking the full week after. Our computers are being moved, so the website will be down for a day or so. We hope to be established with full communications the week of **August 18th**. We ask your patience during the move. We will update the website when everything is back up and running.

OBITUARY

Roger Carter, 74, died on June 29, 2003 in Richland, Washington. Roger was a long time, active, and very valued member of the Nuclear Criticality Safety community. A list of his accomplishments and activities is too long to include here. Somewhat newer members might recognize his name as a member of the Criticality Safety Benchmark Evaluation Working Group and one of the authors of an older handbook, ARH-600. He attended the University of Oklahoma and Oklahoma State (A&M) receiving a Masters degree in Nuclear Physics in 1952 and from there was recruited by Hanford to work at the various reactors in Criticality Safety. He retired in March of 1989. Affiliations include membership in the American Nuclear Society, obtaining emeritus status. He was recognized as an authority and coauthored a criticality safety handbook. After retirement he became a consultant for Mohr & Associates in Richland and was sent to work for Lockheed Martin in Oak Ridge, Tennessee from 1989 to 1997. He returned to consult for Mohr & Associates until he was unable to work due to illness. He was preceded in death by one daughter. He is survived by his wife, Bobbi, and three sons.

Changes to the Computer Code and Data Collection

One newly frozen package and one modified version were added to the computer code collection this month. One new data package was also added.

PSR-158/SAMMY-M6

OP SYS: Unix, Linux, Windows
Language: Fortran 77
Computers: Workstation & PC
Format: Unix tar

Oak Ridge National Laboratory, Oak Ridge, Tennessee, contributed a newly frozen version of this multilevel multichannel R-matrix code. SAMMY was first released in 1980 for use in analysis of neutron-induced cross section data at the Oak Ridge Electron Linear Accelerator. SAMMY has evolved to the point where it is now in use around the world for analysis of many different types of data. With the incorporation of charged-particle capabilities, SAMMY is no longer limited to incident neutrons, but can also be used for incident protons or alpha particles (etc.); likewise, Coulomb exit channels can be included. Corrections for a wide variety of experimental conditions are available in the code: Doppler- and resolution broadening, multiple-scattering corrections for capture or reaction yields, normalizations and backgrounds, to name but a few. The fitting procedure is Bayes' method, and data and parameter covariance matrices are properly treated within the code. Pre- and post-processing capabilities are also available, including (but not limited to) connections with the Evaluated Nuclear Data Files. Though originally designed for use in the resolved resonance region, SAMMY also includes a treatment for data analysis in the unresolved resonance region. See the SAMMY home page **http://www-rsicc.ornl.gov/nuclear_data/nucdata/SAMMY.html** and links from there to the SAMMY users' group.

SAMMY runs on IBM RS/6000, DEC Alpha computers under both Open/VMS and OSF1 operating systems, Sun UltraSparc, PC under RedHat Linux, and on PC running Windows using Compaq Visual Fortran. The package includes PC executables created on a Dell Dimension 4100 under Windows 2000 with Compaq Visual Fortran Professional Edition 6.6.B, so Windows users do not require a compiler. All Unix, Linux and VMS systems require a Fortran compiler to create executables. SAMMY runs on DEC Alpha under both OSF1 and OpenVMS. At RSICC, SAMMY-M6 was tested on the following machines:

IBM RS/6000 Model 270 running AIX 4.3.3 with XLF 7.1 and XLC 4.4
SUN UltraSparc 60 Solaris 2.6 using f77 V 5.0
SUN under Solaris 5.7 with Sun Fortran 77 V 5.1
AMD Athlon running RedHat Linux 7 with G77
Micron P3 under Windows 2000 using included executables.

The package is distributed on CD which contains the referenced document in PDF format and a compressed Unix tar file with the source code, Windows executable files, tutorials, Unix and VMS scripts, and test cases. WinZIP 8.0 or newer is required to expand this file under Windows. Reference: ORNL/TM-9179/R6 (May 2003). Fortran; DEC Alpha (Unix and VMS), IBM RS/6000, SUN, PC (P00158MNYCP09).

PSR-455/MONTEBURNS 2.0

OP SYS: Solaris, HP-UX, Windows
Language: Fortran 77
Computers: Sun, HP & PC
Format: Unix tar

Los Alamos National Laboratory contributed a modified version of this automated, multi-step Monte Carlo burnup code system to calculate coupled neutronic/isotopic results for nuclear systems. Monteburns is a fully automated tool that links the Monte Carlo transport code MCNP with the radioactive decay and burnup code ORIGEN2 or CINDER90. Some minor changes were made, but no new features were added in this release. Monteburns produces a large number of criticality and burnup results based on various material feed/removal specifications, power(s), and time intervals. The principle function is to transfer one-group cross-section and flux values from MCNP to ORIGEN2, and then transfer the resulting material compositions (after irradiation and/or decay) from

ORIGEN2 back to MCNP in a repeated, cyclic fashion (a simple predictor-corrector method is used during this process).

Along with other minor improvements in MONTEBURNS Version 2, the option was added to use CINDER90 instead of ORIGEN2 as the depletion/decay part of the system. CINDER90 is a multi-group depletion code developed at LANL and is not currently available from RSICC. This MONTEBURNS release was tested with various combinations of CCC-715/MCNPX 2.4.0, CCC-710/MCNP5, CCC-700/MCNP4C, CCC-371/ORIGEN2.2, ORIGEN2.1 and CINDER90. Perl is required software and is **not** included in this distribution. MCNP, ORIGEN2, and CINDER90 are **not** included.

The code runs on Sun Solaris, HP Unix, and Windows NT or Linux systems. Note that it does not run under Windows95 or 98. Although it has not yet been fully tested and debugged on other systems, it was designed to work on any PC or Unix machine and on a VMS system. The main part of the code was written in Fortran 77; but the interface between MCNP, ORIGEN2, and MONTEBURNS is a Perl script that runs the codes and processes intermediate data. Reports: LA-UR-99-4999 (September 1999). Fortran 77 and Perl; Sun, HP and PC Windows NT systems (P00455MNYCP02).

DLC-218/POINT 2003

OP SYS: Unix, Windows
Language: N/A
Computers: Any
Format: Ascii data files

Lawrence Livermore National Laboratory, Livermore, California, contributed POINT 2003, a temperature-dependent, linearly interpolable, tabulated cross section library based on ENDF/B-VI, Release 8.

As distributed, the original evaluated data include cross sections represented in the form of a combination of resonance parameters and/or tabulated energy dependent cross sections, nominally at 0 Kelvin temperature. For use in applications, these ENDF/B-VI, Release 8 data were processed into the form of temperature-dependent cross sections at eight temperatures between 0 and 2100 Kelvin, in steps of 300 Kelvin. At each temperature the cross sections are tabulated and linearly interpolable in energy.

POINT2003 contains all of the evaluations in the ENDF/B-VI general purpose library, which contains evaluations for 328 materials (isotopes or naturally occurring elemental mixtures of isotopes). No special purpose ENDF/B-VI libraries, such as fission products, thermal scattering, or photon interaction data are included.

The majority of these evaluations are complete, in the sense that they include all cross sections over the energy range 10-5 eV to at least 20 MeV. However, the following are only partial evaluations that either only contain single reactions and no total cross section (Mg24, K41, Ti46, Ti47, Ti48, Ti50 and Ni59), or do not include energy-dependent cross sections above the resonance region (Ar40, Mo92, Mo98, Mo100, In115, Sn120, Sn122 and Sn124). The PSR-351/PREPRO2002 code system was used to process the ENDF/B data. Any codes which treat the ENDF/B-VI format can be used as data retrieval programs.

In this library each evaluation is stored as a separate file. The entire library is in the computer independent ENDF/B-VI character format, which allows the data to be easily transported between computers. The data are approximately 1.6 gigabyte in size and are distributed on three CD's. Reference: UCRL-ID-12776-Rev-2 (May 22, 2003). ASCII data; PC or workstation (D00218MNYCP00).

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. This month's code focus is **Nuclear Data Post-processor, Graphic Display, Curve Fitting**.

BOT3P1.0	**MCNPVISED - in MCNP5**	**PREPRO2002**
CHENDF6.12	**MOCUP**	**TRANSX2.15**
KENO3D	**MONTEBURNS2**	**VIEWCXS**

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 listed chronologically. More details are listed alphabetically following the table.

Condensed Table of Conferences

Name of Conference	Date and Location	Web Site	Abstract/Paper Submission Date
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**	passed
6th International Symposium on ESR Dosimetry and Applications	Oct. 12-16, 2003 Campos do Jordão, Brazil	**http://www.if.usp.br/VI_ESR_2003/**	passed

Name of Conference	Date and Location	Web Site	Abstract/Paper Submission Date
7th International Conference on Nuclear Criticality Safety (ICNC2003)	Oct. 20-24, 2003 Tokai-mura, Japan	**http://www.icnc.jp/**	passed
9th International Symposium on Radiation Physics (ISRP-9)	Oct. 27-31, 2003 Cape Town, South Africa	**www.medrad.tlabs.ac.za/isrp9.htm**	
Council on Ionizing Radiation Measurements and Standards (CIRMS)	Oct. 27-29, 2003 Gaithersburg, Maryland	**http://www.cirms.org**	passed
11th International Conference on Fusion Reactor Materials (ICFRM-11)	Dec. 7-12, 2003 Kyoto, Japan	**icfrm.iae.kyoto-u.ac.jp**	passed
PHYSOR 2004	Apr. 25-29, 2004 Chicago, Illinois	**www.td.anl.gov/PHYSOR2004**	Sept. 5, 2003
Current Topics in Monte Carlo Treatment Planning	May 3-5, 2004 Montreal, Canada	**http://mctp.medphys.mcgill.ca**	Nov. 1, 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/**	

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. 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 mgt.
-- 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**.

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.**

Advances in Nuclear Fuel Management III

American Nuclear Society's Advances in Nuclear Fuel Management III Topical Meeting will be held in Hilton Head Island, South Carolina, **October 5-8, 2003**. 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.

Current Topics in Monte Carlo Treatment Planning

This workshop will be held at McGill University, Montreal, Canada, from **May 3-5, 2004**, and aims to bring together medical physicists and researchers to discuss development, clinical implementation and clinical evaluation of Monte Carlo treatment planning techniques in radiotherapy. The meeting will have both invited speakers and proffered contributions and is designed to have plenty of opportunity for informal and in-depth discussions.

For details regarding registration, program, invited speakers, abstract submission, etc, please consult our workshop website: **http://mctp.medphys.mcgill.ca**. Early registration is encouraged as the number of participants will be limited to around 100.

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**.

In addition, if you would be interested in serving on the Scientific Program Committee, and contribute to the success of the meeting by either submitting or encouraging colleagues to submit papers, and participating in the technical review process, please contact the Conference Secretariat at the above email and provide your name, organization, email and topics of interest or expertise. The Organizing Committee welcomes your comments and suggestions to make your meeting a success.

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**

2003

Sept. 15-19	Introductory	Issy-les-Moulineaux, France
Oct. 14-17	Intermediate/Advanced	Los Alamos, NM

2004

Feb. TBA	Introductory	Los Alamos, NM
Apr. 19-23	Intermediate/Advanced	Tokyo, Japan
June TBA	Introductory	Los Alamos, NM

Introductory classes are for people who have little or no experience with MCNP. This class surveys the features of MCNP so the beginning user will be introduced to the capabilities of the program, and will have hands-on experience at running the code to solve simple problems. Course topics include Basic Geometry, Source Definitions, Output (Tallies) Specification and Interpretation, Advanced Geometry (repeated structures specification), Variance Reduction Techniques, Statistical Analysis, Criticality, Plotting of Geometry, Tallies, and Particle Tracks, and Neutron / Photon / Electron Physics.

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 class will be based on MCNP5 and will cover the new capabilities of version 5. Attendees may elect to receive the new package. If you have previously received an older registered version of MCNP from RSICC, you may request that the MCNP5 package be sent to you at no charge. If you have not received an older version of MCNP from RSICC, you will be charged the applicable transmittal fee.

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 class 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 Class

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.

The class is scheduled **September 8-12, 2003,** 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 2003 & 2004

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

August 25-29	Advanced	Los Alamos/Santa Fe
October 6-10	Introductory	Stuttgart, Germany
November	Advanced	Japan

2004

January 12-16	Introductory	Las Vegas, NV

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**.

PHYSOR 2004

The Chicago Section of the American Nuclear Society is pleased to announce that it will host the PHYSOR-2004 Topical Meeting, **April 25-29, 2004,** in Chicago, Illinois. The meeting is co-sponsored by the Reactor Physics Division of the ANS and the OECD Nuclear Energy Agency. The conference will be held at the Hyatt Regency in downtown Chicago.

The title for the meeting is "The Physics of Fuel Cycles and Advanced Nuclear Systems: Global Developments." The technical program will cover more than 15 topical focus areas; the deadline for submission of 1000-word summaries is September 5, 2003. You are invited to visit the meeting website at **www.td.anl.gov/PHYSOR2004** to obtain updated information and to download a copy of the meeting announcement. Contact: Ray Klann, Technical Program Co-Chair, at 630-252-4305 or **klann@anl.gov**.

SCALE KENO V.a Criticality Safety Course

The SCALE KENO V.a Criticality Course, **November 3-7, 2003**, will focus on KENO V.a and the associated criticality analysis sequences in CSAS. KENO V.a is a widely used 3-D multigroup Monte Carlo criticality safety code that has been in use for more that 15 years. KENO V.a is a fast, easy-to-use code that allows users to build complex geometry models using basic geometrical bodies of cuboids, spheres, cylinders, hemispheres, and hemicylinders. Two-dimensional color plots of the geometry model can be generated in KENO V.a or the model may be viewed using the KENO3D 3D visualization tool.
For further information,visit **http://www.ornl.gov/scale/trcourse.html#href1** or contact Kay Lichtenwalter, **scalecoding@ornl.gov**, 865-574-9213.

SCALE Source Terms & Shielding Course

The SCALE Shielding and Source Terms Course covers SAS2 and ORIGEN-ARP (depletion/source-term generation), SAS1/XSDRNPM (1-D neutron/gamma shielding), SAS4/MORSE-SGC (3-D Monte Carlo neutron/gamma shielding), and QADS/QAD-CGGP (3-D point kernel gamma shielding).

The course will be **November 10-14, 2003**, and will feature the use of the SCALE Windows GUIs: OrigenArp for Windows, ORIGEN-S plotting utility PlotOPUS, and the ESPN shielding input processor for SAS4. For further information, visit **http://www.ornl.gov/scale/ trcourse.html#href1** or contact Kay Lichtenwalter, **scalecoding@ornl.gov**, 865-574-9213.

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.

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.

CALENDAR

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/**).

Short Courses on Monte Carlo Analysis and Nuclear Criticality Safety, Aug. 11-15, 2003, Knoxville, TN. Contact: Kristin England (phone 865-974-5048, email: **kengland@utk.edu**, url **www.engr.utk.edu/nuclear/TIW.html**).

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).

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**)

MCNP5 Introductory Training Course, Sept. 15-19, 2003, Issy-les-Moulineaux, France. Organized by OECD/NEA and RSICC. Contact: Enrico Sartori (fax 33-1-45241110, email **sartori@nea.fr**, url **http://www.nea.fr/html/dbprog/ mcnpcourses2003-2.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**).

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**).

MCNPX Introductory Workshop, Oct. 6-10, 2003, Stuttgart, Germany. Contact: Bill Hamilton (tel 505-455-0312, email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

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/**).

Council on Ionizing Radiation Measurements and Standards, Oct. 27-29, 2003, Gaithersburg, MD. Contact: Teresa Vicente (tel 3010-975-3883, fax 301-948-2067, **teresa.vicente@ nist.gov**, url **www.cirms.org**).

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**).

November 2003

SCALE KENO V.a Criticality Safety Course, Nov. 3-7, 2003, Oak Ridge National Laboratory. Contact: Kay Lichtenwalter (tel 865-574-9213, email **scalecoding@ornl.gov**, url **http://www.ornl.gov/scale/trcourse.html #href1**.

SCALE Source Terms & Shielding Course, Nov. 10-14, 2003, Oak Ridge National Laboratory. Contact: Kay Lichtenwalter (tel 865-574-9213, email **scalecoding@ornl.gov**, url **http://www.ornl.gov/scale/trcourse.html #href1**.

ANS/ENS International Winter Meeting and Nuclear Technology Expo, Nov. 16-20, 2003, New Orleans, LA. Contact: (url **http://www.ans.org/meetings/**).

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

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).**

January 2004

MCNPX Introductory Workshop, Jan.12-16, 2004, Las Vegas, NV. Contact: Bill Hamilton (tel

505-455-0312, Email **registrar@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

April 2004

PHYSOR 2004 Reactor Physics Topical Meeting, Apr. 25-29, 2004, Chicago, IL. Jointly sponsored by the Reactor Physics Division of the ANS and the Nuclear Energy Agency of the OECD. **Contact:** Ray Klann (tel 630-252-4305, email **klann@anl.gov,** url **www.td.anl.gov/PHYSOR2004**).

May 2004

Current Topics in Monte Carlo Treatment Planning, May 3-5, 2004, McGill University, Montreal, Canada. Contacts: Jan Seutjens and Frank Verhaegen (tel 514-934-8052, url **http://mctp.medphys.mcgill.ca**).

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**).

The Accession of Nuclear Systems Literature will return next month.