Radiation Safety Information Computational Center

No. 454   December 2002

"I believe that unarmed truth and unconditional love will have the final word in reality."
--Martin Luther King

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

NEW REQUEST PROCEDURE FOR RSICC

New procedures are in place to allow registered RSICC users to request codes and data. The RSICC pass number and password must now be entered before an order can be initiated. If the pass number and/or password are forgotten, they can be easily retrieved by contacting RSICC at 865-574-6176 or sending an email to **finchsy@ornl.gov**. *PLEASE DO NOT REGISTER AS A NEW USER IF YOU HAVE REGISTERED WITH US BEFORE.* A new user can register at **http://www-rsicc.ornl.gov/ CFDOCS/blk/db/REG_FORMjw.newuser.cfm** to receive a new pass number and password. A copy of the registration will be sent to your mailbox; it contains the information needed to request a code or data package.

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.

PSR-282/SUPERDAN-PC

Changes to the Computer Code and Data Collection

Two changes were made to the computer code collection this month, both being new packages. One is a foreign contribution.

PSR-519/ENTREE 1.4.0

OP SYS: Unix, Linux
Language: Fortran 77 & C
Computers: Pentium, Sun &
         Alpha
Format: Windows

TEPCO Systems Corporation, Shinbashi, Minato-ku, Japan, and Tokyo Institute of Technology, Tokyo, Japan, contributed this plant simulation code system that can be applicable to operational transients, coupled neturonic-thermal hydraulic instability and reactivity insertion accidents. The main objectives of ENTREE are development, verification and application of the three-dimensional plant simulation system TRAC/BF1-ENTREE-ACCORD-N for boiling water reactors (BWRs).

ENTREE is a three-dimensional neutron kinetic code based on modern nodal methods. The assembly discontinuity factor (ADF) and pin power reconstruction capabilities are also implemented for transient calculations, and they permit evaluation of detailed local pin power transition. The fully implicit scheme is implemented to deal with slow and fast power transients based on the same formulations. The modal analysis code ACCORD-N solves the two- or three-dimensional higher neutron flux modes based on the two energy group diffusion equation. This ENTREE package includes the ENTREE and ACCORD-N codes; it does **not** include the proprietary TRAC/BF1 code for state-of-the-art plant simulation based on the two-fluid model.

ENTREE and ACCORD-N run under Linux on Intel personal computers, on Compaq Alpha-TRUE64 V4.0F UNIX workstations, and on Sun under Sun OS5.5.1. Fortran 77 and C compilers are required. The package contains post-processing codes for Windows environment. GNUPLOT 3.8 and PVM version 3.4 software is included. The package is transmitted on a CD which contains source code, installation files, test cases, and documentation. References: Thesis for Tokyo Institute of Technology (March 2001) and TEPCO Systems Corporation report (May 2002). Fortran 77 and C; Intel PC-Linux, Sun, and Compaq Alpha workstations (P00519MNYWS00).

PSR-520/COMPASS 1.0.0

OP SYS: Windows
Computers: Pentium
Format: Self-extracting
         compressed windows

The U. S. Nuclear Regulatory Commission, Washington, D.C., and Oak Ridge Institute of Science and Energy, Oak Ridge, Tennessee, contributed the COMPASS 1.0.0 software to facilitate the use of MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual) and guide the user into making informed decisions in designing final status radiological surveys. COMPASS also simplifies the application of the statistical tests by performing the statistical calculations and providing prospective power curves that help in determining what level of confidence the user is willing to accept for a particular number of measurements or samples for a survey unit. After performing the final status survey, COMPASS assesses the data for comparison to the release criteria.

COMPASS is an interactive program that runs on Pentium computers under Windows 95, 98, NT 4.0 or 2000. Internet Explorer 4.0 or higher is required. The executable program is distributed, but no Visual Basic source files are included. Reference: MARSSIM Rev. 1, NUREG-1575, Rev. 1, EPA 402-R-97-016, Rev. 1, DOE/EH-0624, Rev. 1 (August 2000). Visual Basic; Pentium (P00520PC58600).

Monthly Code Focus
Nuclear Systems Analysis

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**. Many packages in the RSICC code collection are in this subject category. A few are highlighted here for your review.

DIF3D8-VARIANT8	**PWR-AXBUPRO-GKN**	**VIM 4.0**
EXPRESS	**SCALE 4.4A**	**WIMS-ANL 4.0**
GUI2QAD-3D	**SQUIRT 2.3**	**WIMSD-5B**
PCDOSE	**TIBSO**	

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	Time and Place	Web Site	Date of Abstract/Paper Submission
14th Annual U.S. Hydrogen Meeting	Mar. 4-6, 2003 Washington, DC	**http://www.hydrogenconference.org/**	Feb. 3, 2003
ENS TopFuel 2003/ANS LWR Fuel Performance Meeting	Mar. 16-19, 2003 Wurzburg, Germany	**http://www.topfuel2003.de**	Nov. 4, 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**	Nov. 15, 2002
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**	Oct. 15, 2002
21st International System Safety Conference	Aug. 4-8, 2003 Ottawa, Canada	**http://www.system-safety.org/**	Jan. 17, 2003

Supercomputing in Nuclear Applications (SNA-2003)	Sept. 22-24, 2003 Paris, France	**http://sna-2003.cea.fr/**	Dec. 16, 2003
Advances in Nuclear Fuel Management III	Oct. 5-8, 2003 Hilton Head Island, South Carolina	**http://rpd.ans.org/nfm.htm**	Mar. 15, 2003
9th International Symposium on Radiation Physics (ISRP-9)	Oct. 27-31, 2003 Cape Town, South Africa	**www.medrad.tlabs.ac.za/isrp9.htm**	
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

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.

ENS TopFuel 2003/ANS LWR Fuel Performance Meeting

The American Nuclear Society (ANS) and the European Nuclear Society (ENS) have agreed to bundle their conference activities concerning nuclear fuel. The well established ANS "LWR Fuel Performance Meeting" and the ENS "TopFuel Conference" will from now on be jointly held, alternating the location between the USA and Europe.

The first joined conference will be organized by the local nuclear society in Germany, the KTG (Kerntechnische Gesellschaft e.V.) from **March 16-19, 2003**, at Würzburg. The program will comprise invited and contributed papers. Please visit our website for more information: **http://www.topfuel2003.de**. Abstracts should be sent to **conferences@inforum-gmbh.de** before November 4, 2002.

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, **December 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.

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.

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 knowledge and skills necessary to create the 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 professionals, 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 one 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 the 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**.

2nd International Workshop on Advanced Radiation Transport Simulation with PENELOPE

Dr. Francesc Salvat of the Universitat de Barcelona, Spain, announces the "2nd International Workshop on Advanced Radiation Transport Simulation with PENELOPE," to be held in Salou (Tarragona, Spain) on **January 8-10, 2003**. You can reach Dr. Salvat at: (tel 34-9340-21186, fax 34-9340-21174, email **cesc@ecm.ub.es**). Please see attached **information** in pdf format.

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 lectures 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 sessions 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

January 27-30	Introductory class	Mass. Inst. of Technology
February date TBA	To be determined	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 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 **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 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

January 13-17	Advanced	Las Vegas, Nevada
February 17-21	Introductory	Orlando, Florida
March 31-April 4	Advanced	Knoxville, Tennessee
May	Introductory	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**.

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 programme, 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 programme. All contributions to the subject of the workshop are more than welcome.

The workshop time-schedule will be organized in the following way: Monday, September 1, 2003, 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, September 5, 2003.

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.

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 signficant new computational capabilities in SCALE 5 plus current developments that will appear in later SCALE releases. The workshop 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 at the conference hotel in Gatlinburg on Thursday afternoon **April 10, 2003**, 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. The early registration deadline is February 28, 2003.

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 was due November 15, 2002, notification of acceptance is December 31, 2002, final abstract is January 15, 2003, and electronic and paper versions of presentation are 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 Coblentz, Program Committee Chair, at **brenda.coblentz@hq.doe.gov**.

Supercomputing in Nuclear Applications

The deadline for submitting abstracts for the international conference on "Supercomputing in Nuclear Applications" SNA-2003, Paris, **September 22-24, 2003**, was extended to December 16, 2002.

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. Abstracts can be submitted **http://www.nea.fr/html/science/ meetings/sna2003/registration.html**.

CALENDAR

January 2003

2nd International Workshop on Advanced Radiation Transport Simulation with PENELOPE, Jan. 8-10, 2003, Tarragona, Spain. Contact: Dr Francesc Salvat (tel 34 9340 21186, fax 34 9340 21174, email **cesc@ecm.ub.es**).

MCNPX Workshop, Jan.13-17, 2003, Orlando, FL. 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, Cambridge, MA. Contact: Elizabeth Selcow (email **selcow@lanl.gov**, url **http://www-xdiv.lanl.gov/x5/MCNP/ index.html**).

February 2003

MCNPX Workshop, Feb. 17-21, 2003, Las Vegas, NV. 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://www-xdiv.lanl.gov/x5/MCNP/index.html**).

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/**).

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

MCNPX Workshop, Mar. 31-Apr. 4, 2003, Knoxville, TN. 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, TN. 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 814-865-0039, email **yya3@psu.edu** or Bernadette Kirk (tel 865-574-6176, email **kirkbl@ornl.gov**, url **http://meetingsandconferences.com/MC 2003/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**).

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/pap ers/_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 Workshop, May 2003, Los Alamos/Santa Fe, NM. 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@mcnpxworkshops.com,** url **http://mcnpxworkshops.com** for details).

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**).

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/**).

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**).

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**).

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**).

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.

Ann. Nucl. Energy, 30, 391-403. . . *Influence of Magnetite and Boron Carbide on Radiation Attenuation of Cement-Fiber/Composite.. . .*El-Sayed Abdo, A.; Alli, M.A.M.; Ismail, M.R. . . . March 2003. . . Atomic Energy Authority, Cairo, Egypt.

Ann. Nucl. Energy, 30, 405-412. . . *The Coupled Kinetic and Thermal-Hydraulic Three Dimensional Code System NLSANMT/COBRA-IV for PWR Core Transient Analysis.* . . .Chengkui Liao; Zhongsheng Xie. . . March 2003. . . Xi'an Jiaotong University, Shaanxi, P.R. China.

Ann. Nucl. Energy, 30, 413-436. . . *Study on Transmutation of Minor Actinides Discharged from High Burn-Up PWR-MOX Spent Fuel in the Force-Free Helical Reactor.. . .*Yapici, H.. . . March 2003. . . Erciyes Universitesi, Kayseri, Turkey.

Ann. Nucl. Energy, 30, 437-471. . . *Predictions of Ultimate Load Capacity for Pre-Stressed Concrete Containment Vessel Model with BARC Finite Element Code ULCA.* . . .Basha, S.M. et al. . . . March 2003. . . Bhabha Atomic Research Centre, Mumbai, India.

Ann. Nucl. Energy, 30, 473-496. . . *Modeling the Effects of the Engineered Barriers of a Radioactive Waste Repository by Monte Carlo Simulation.. . .*Marseguerra, M. et al.. . . March 2003. . . Polytechnic of Milan, Milan, Italy; ENEA, Rome, Italy.

Ann. Nucl. Energy, 30, 497-502. . . *Preliminary Study of the Removal of Polonium Contamination by Neutron-Irradiated Lead-Bismuth Eutectic.. . .*Obara, T. et al. . . . March 2003. . . Tokyo Institute of Technology, Tokyo, Japan.

Ann. Nucl. Energy, 30, 503-510. . . *Criticality Safety of Fuel Pins in a Post Irradiation Examination Cell.. . .*Joseph, G.; Chandrasekaran, S. . . . March 2003. . . Indira Gandhi Centre for Atomic Research, Tamilnadu, India.

J. Nucl. Mater., 305, 83-89. . . *Sub-Solidus Phase Equilibria in the CeO2-ThO2-ZrO2 System.* . . .Grover, V.; Tyagi, A.K. . . . October 2002. . . Bhabha Atomic Research Centre, Mumbai, India. .

J. Nucl. Mater., 305, 90-96. . . *Phase Studies in the Rb-Sr-U-O System: Characterisation of New Phases.* . . .Keskar, M.; Agarwal, R.; Singh Mudher, K.D. . . . October 2002. . . Bhabha Atomic Research Center, Mumbai, India.

J. Nucl. Mater., 305, 97-105. . . *A Contribution to the Ru-Sn System.. . .*Ananthasivan, K. et al. . . . October 2002. . . Indira Gandhi Centre for Atomic Research, Kalpakkam, India.

J. Nucl. Mater., 305, 106-111. . . *Processing of Uranium Oxide Powders in a Fluidized-Bed Reactor. I. Experimental.. . .*Cho, W.D. et al. . . . October 2002. . . University of Utah, Salt Lake City, UT; Lawrence Livermore National Laboratory, Livermore, CA.

J. Nucl. Mater., 305, 112-123. . . *Size Effect Studies of the Creep Behaviour of a Pressure Vessel Steel at Temperatures from 700-900 Degrees C.* . . .Krompholz, K.; Kalkhof, D. . . . October 2002. . . Paul Scherrer Institut, Villigen, Switzerland.

J. Nucl. Mater., 305, 124-133. . . *Single-Phase Diffusion Study in B-Zr(Al).. . .*Laik, A.; Bhanumurthy, K.; Kale, G.B. . . . October 2002. . . Bhabha Atomic Research Centre, Mumbai, India..

J. Nucl. Mater., 305, 134-152. . . *Construction of Radiation-Modified Phase Diagrams Under Cascade-Producing Irradiation: Application to Zr-Nb Alloy.* . . .Turkin, A.A.; Buts, A.V.; Bakai, A.S. . . . October 2002. . . Institute of Physics and Technology, Kharkov, Ukraine.

J. Nucl. Mater., 305, 153-158. . . *Microstructural Evolution of Nickel-Doped 9Cr Steels Irradiated in HFIR.* . . .Hashimoto, N.; Klueh, R.L.. . . October 2002. . . Oak Ridge National Laboratory, Oak Ridge, TN.

J. Nucl. Mater., 305, 159-168. . . *Densification Behaviour of UO2 in Six Different Atmospheres.* . . .Kutty, T.R.G. et al. . . . October

2002. . . Bhabha Atomic Research Centre, Mumbai, India.

J. Nucl. Mater., 305, 169-174. . .
Characterisation of Microstructural Parameters in Oxygen-Irradiated Zr-1.0%Nb-1.0%Sn-0.1%Fe. . .
.Mukherjee, P. et al. . . . October 2002. . . Variable Energy Cyclotron Centre, Kolkata, India; Regional Engineering College, Durgapur, India; Jadavpur University, Kolkata, India.

J. Nucl. Mater., 305, 175-186. . . *Thermal Creep of Zr-Nb1%-O Alloys: Experimental Analysis and Micromechanical Modelling.* . .
.Brenner, R.; Bechade, J.L.; Castelnau, O. Bacroix, B. . . . October 2002. . . Universite Paris-Nord, Villetaneuse, France; CEA Saclay, Gif-sur-Yvette, France.

J. Nucl. Mater., 305, 187-201. . .
Plutonium Chemistry: A Synthesis of Experimental Data and A Quantitative Model for Plutonium Oxide Solubility. . .Haschke, J.M.; Oversby, V.M. . .
. October 2002. . . Actinide Sciences Consulting, Waco, TX; VMO Konsult, Stockholm, Sweden.

J. Nucl. Mater., 305, 202-208. . .
Microstructure and Leach Rates of Apatite Glass-Ceramics as a Host for Sr High-Level Liquid Waste. . .Yong He; Weimin Bao; Hongli Song . .
.October 2002. . . China University of Geosciences, Wuhan, PR China; Tsinghua University, Beijing, PR China.

J. Nucl. Mater., 305, 209-219. . .
Influence of Chemical Composition, Prior Deformation and Prolonged Thermal Aging on the Sensitization Characteristics of Austenitic Stainless Steel. . .Parvathavarthini, N.; Dayal, R.K. . . . October 2002. . . Indira Gandhi Centre for Atomic Research, Tamilnadu, India.

J. Nucl. Mater., 305, 220-223. . .
Optimum EDTA Solvent Chemistry for Iron Oxide Removal at 150 Degrees C. . .Hur, D.H. et al. . . . October 2002. . . Korea Atomic Energy Research Institute, Daejeon, Republic of Korea.

J. Nucl. Mater., 305, 224-231. . . *Studies of Second Phase Particles in Different Zirconium Alloys Using Extractive Carbon Replica and an Electrolytic Anodic Dissolution Procedure.* . .
.Toffolon-Masclet, C.; Brachet, J-C.; Jago, G. . . . October 2002. . . CEA Saclay, Gif-sur-Yvette, France; Hutchinson Corporate Research Center, Chalette sur Loing, France.

J. Nucl. Mater., 305, 232-235. . .
Discharge Cleaning and Wall Conditioning in a Novillo Tokamak. . .Valencia, R. et al. . . . October 2002. . . ESIME-ZACATENCO-IPN, Mexico; IIM-UNAM, Mexico.

Nucl. Eng. Design, 218, 3-12. . . *Roles and Prospect of Nuclear Power in China's Energy Supply Strategy.* . . .Wang Dazhong; Lu Yingyun . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 13-23. . .
Overview of the 10 MW High Temperature Gas Cooled Reactor - Test Module Project. . .Yuanhui Xu.; Kaifen Zuo . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 25-32. . . *The Design Features of the HTR-10.* . . .Zongxin Wu et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 33-41. . . *Fuel Management of the HTR-10 Including the Equilibrium State and the Running-In Phase.* . . .Yongwei Yang et al.. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 42-49. . .
Prediction Calculations and Experiments for the First Criticality of the 10 MW High Temperature Gas-Cooled Reactor-Test Module. . . .Xingqing Jing. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 51-64. . . *Thermal Hydraulic Calculation of the HTR-10 for the Initial and Equilibrium Core.* . . .Zuying Gao; Lei Shi. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 65-80. . . *Thermal Hydraulic Transient Analysis of the HTR-10.* . . .Gao Zuying; Shi Lei. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 81-90. . . *Fission Product Release and Its Environment Impact for Normal Reactor Operations and for Relevant Accidents.* . . .Liu Yuanzhong; Cao Jianzhu. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 91-102. . . *Design and Manufacture of the Fuel Element for the 10 MW High Temperature Gas-Cooled Reactor.* . . .Chunhe Tang et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 103-110. . .
Safety Functions and Component Classification for the HTR-10. . . .Zhongwang Wu; Shuren Xi . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 111-122. . . *The Primary Loop Confinement and Pressure Boundary System of the HTR-10.* . . .He Shuyan et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 123-136. . .
Structural Design of Ceramic Internals of HTR-10. . . .Zhensheng Zhang et al. . . . October 2002. . .

Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 137-145. . . *Design and Experiment of Hot Gas Duct for the HTR-10.. . .Huang, Z.Y. et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 147-154. . . *Design and Tests for the HTR-10 Control Rod System.* . . .Wu Yuanqiang et al.. . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 155-162. . . *Design and Verification Test of the Small Absorber Ball System of the HTR-10.. . .Zhou, H.Z. et al.* . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 163-167. . . *The Helium Purification System of the HTR-10.* . . .Yao, M.S. et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 169-178. . . *Design and Full Scale Test of the Fuel Handling System.* . . .Liu, J.G. et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 179-187. . . *Structural Design and Two-Phase Flow Stability Test for the Steam Generator.* . . .Li Rizhu; Ju Huaiming . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 189-198. . . *Helium Circulator Design and Testing.* . . .Zhou, H.Z.; Wang, J. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 199-208. . . *Thermal Hydraulic Instrumentation System of the HTR-10.* . . .Zhong Shuoping et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 209-214. . . *Design of the Exhaust System in the Confinement of the HTR-10.. . .Feng Jian; Sui-sheng Ye; Jun Yang . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 215-225. . . *The First Digital Reactor Protection System in China. . . .Fu Li et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 227-232. . . *A Design of In-Plant Electric Power System for the HTR-10.* . . .Sun, W.D; Zhou, S.X. . . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 233-240. . . *Simulating Test for Thermal Mixing in the Hot Gas Chamber of the HTR-10.* . . .Yao, M.S. et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 241-247. . . *Commissioning Procedures of the 10 MW High Temperature Gas-Cooled Reactor-Test Module.. .*

.Su, Q.S. et al. . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 218, 249-257. . . *Future HTGR Developments in China After the Criticality of the HTR-10.* . . .Zuoyi Zhang; Suyuan Yu . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Eng. Design, 219, 97-110. . . *Feasibility Study of the IE-SASW Method for Nondestructive Evaluation of Containment Building Structures in Nuclear Power Plants.* . . .Kim, D.S. et al.. . . February 2003. . . Korea Advanced Institute of Science and Technology, Taejon, South Korea; Korea Telecom, Taejon, Korea; KEPRI, Taejon, South Korea.

Nucl. Eng. Design, 219, 111-125. . . *Cohesive Modelling of the Fracture of a Neutron Irradiated Pressure Vessel Steel.* . . .Gomez, F.J.; Valiente, A; Elices, M. . . . February 2003. . . Universidad Politecnica de Madrid, Madrid, Spain.

Nucl. Eng. Design, 219, 143-168. . . *Two-Group Interfacial Area Transport in Vertical Air-Water Flow I. Mechanistic Model.* . . .Fu, X.Y.; Ishii, M. . . . February 2003. . . Purdue University, West Lafayette, IN.

Nucl. Eng. Design, 219, 169-190. . . *Two-Group Interfacial Area Transport in Vertical Air-Water Flow II. Model Evaluation.* . . .Fu, X.Y.; Ishii, M. . . . February 2003. . . Purdue University, West Lafayette, IN.

Nucl. Sci. Eng., 142, 119-139. . . *Optimization of Boiling Water Reactor Loading Pattern Using Two-Stage Genetic Algorithm.* . . .Kobayashi, Y.; Aiyoshi, E. . . . October 2002. . . Tepco Systems Corp., Tokyo, Japan; Keio University, Yokohama City, Japan.

Nucl. Sci. Eng., 142, 140-149. . . *Dead-Time Effects on Counting Statistics in Subcritical Nuclear Systems.. .*Difilippo, F.C. . . . October 2002. . . Oak Ridge National Laboratory, Oak Ridge, TN.

Nucl. Sci. Eng., 142, 150-157. . . *Effects of Backscattering on One-Dimensional Electron Beam Transport.* . . .Andersson, F. et al. . . . October 2002. . . Chalmers University of Technology, Goteborg, Sweden; EURATOM/UKAEA Fusion Association, Oxfordshire, United Kingdom.

Nucl. Sci. Eng., 142, 158-164. . . *Photon Leakage from Spherical and Hemispherical Samples with a Central 14-MeV Neutron Source.* . . .Saukov, A.I. et al. . . . October 2002. . . Institute of Technical Physics, Chelyabinsk Region, Russia; International Center for Environmental Safety of Minatom of Russia, Moscow, Russia.

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Nucl. Sci. Eng., 142, 177-194. . . *Neutron and Proton Cross-Section Evaluations for 232Th Up to 150 MeV.* . . .Ignatyuk, A.V. et al. . . . October 2002. . . Royal Institute of Technology, Stockholm, Sweden.

Nucl. Sci. Eng., 142, 195-202. . . *Analysis for Cross Sections of (p,xn) Reactions on 208 Pb at Intermediate Energies by Using Quantum Molecular Dynamics.* . . .Sheng Fan et al.. . . October 2002. . . China Institute of Atomic Energy, Beijing, China.

Nucl. Sci. Eng., 142, 203-206. . . *Differential Cross-Section Measurement for the 10B(n,a)7Li Reaction.* . . .Guohui Zhang et al. . . . October 2002. . . Peking University, Peking, China; Tsinghua University, Beijing, China.

Nucl. Sci. Eng., 142, 207-219. . . *UNF Code for Fast Neutron Reaction Data Calculations.* . . .Jingshang Zhang . . . October 2002. . . China Institute of Atomic Energy, Beijing, China.

Nucl. Sci. Eng., 142, 220-229. . . *A Numerical Model for Evaluating the Impact of Noble Metal Chemical Addition in Boiling Water Reactors.* . . .Yeh, T-K. . . . October 2002. . . National Tsing-Hua University, Taiwan.

Nucl. Sci. Eng., 142, 230-236. . . *PCCSAC: A Three-Dimensional Code for AC600 Passive Containment Cooling System Analysis.* . . .Jiyang Yu; Baoshan Jia . . . October 2002. . . Tsinghua University, Beijing, China.

Nucl. Technol., 140, 1-17. . . *An Innovative Concept of a Sodium-Cooled Reactor to Pursue High Economic Competitiveness.* . . .Shimakawa, Y. et al. . . . October 2002. . . Japan Nuclear Cycle Development Institute, Ibaraki, Japan; Mitsubishi Heavy Industries, Ltd., Yokohama, Japan.

Nucl. Technol., 140, 18-27. . . *Critical Heat Flux During Reflood Transients in Small-Hydraulic-Diameter Geometries.* . . .Holowach, M.J. et al. . . . October 2002. . . Pennsylvania State University, University Park, PA; Bechtel Bettis Inc., West Mifflin, PA.

Nucl. Technol., 140, 28-40. . . *Emergency Decay Heat Removal by Reactor Vessel Auxiliary Cooling System from an Accelerator-Driven System.* . . .Carlsson, J.; Wider, H. . . . October 2002. . . Royal Institute of Technology, Stockholm, Sweden; Joint Research Centre, Petten, The Netherlands.

Nucl. Technol., 140, 41-50. . . *Electrotransport of Uranium from a Liquid Cadmium Anode to a Solid Cathode.* . . .Ahluwalia, R.J.; Hua, T.Q. . . . October 2002. . . Argonne National Laboratory, Argonne, IL.

Nucl. Technol., 140, 51-62. . . *Experimental Determination of the Spent Graphite*

Radioactive Contamination at Plutonium-Production Reactors of the Siberian Group of Chemical Enterprises (TOMSK-7). . . .Bushuev, A.V. et al. . . . October 2002. . . Moscow State Engineering Physics Institute, Moscow, Russia; Institute of Physical Chemistry of Russian Academy of Sciences, Moscow, Russia; Siberian Group of Chemical Enterprises, Tomsk Region, Russia.

Nucl. Technol., 140, 63-82. . . *Experimental and Modeling Indications for Self-Sealing of a Cementitious Low-and Intermediate-Level Waste Repository by Calcite Precipitation.* . . Pfingsten, W. . . . October 2002. . . Paul Scherrer Institute, Villigen, Switzerland.

Nucl. Technol., 140, 83-93. . . *Transport of a Two-Member Decay Chain of Radionuclides Through a Discrete Fracture in a Porous Rock Matrix in the Presence of Colloids.* . . .Tien, N-C.; Li, S-H. . . October 2002. . . National Tsing Hua University, Hsinchu, Taiwan.

Nucl. Technol., 140, 94-112. . . *Relationship Among Performance of Geologic Repositories, Canister-Array Configuration, and Radionuclide Mass in Waste.* . . .Ahn, J. et al. . . . October 2002. . . University of California, Berkeley, CA.

Nucl. Technol., 140, 113-126. . . *Determination of Long-Lived Neutron Activation Products in Reactor Shielding Concrete Samples.* . . .Zagar, A.; Ravnik, M . . . October 2002. . . Jozef Stefan Institute, Ljubljana, Slovenia.

Nucl. Technol., 140, 129-146. . . *A Robust Multivariable Feedforward/Feedback Controller Design for Integrated Power Control of Boiling Water Reactor Power Plants.* . . .Shyu, S-S.; Edwards, R.M. . . . November 2002. . . Institute of Nuclear Energy Research, Taoyuan, Taiwan; Pennsylvania State University, University Park, PA.

Nucl. Technol., 140, 147-163. . . *Evaluation of the Boron Dilution Method for Moderator Temperature Coefficient Measurements.* . . .Demaziere, C. et al. . . . November 2002. . . Chalmers University of Technology, Gothenburg, Sweden; Budapest University, Budapest, Hungary.

Nucl. Technol., 140, 164-168. . . *Study on Mass Estimation of Loose Parts in Pressurized Water Reactors Using K-L Transform and Neutral Network in the Frequency Domain.* . . .Jinhui Liu; Fangyu Gu . . November 2002. . . Tsinghua University, Beijing, China; Nuclear Power Institute of China, Chengdu, China.

Nucl. Technol., 140, 169-177. . . *On-Site Electromagnetic Compatibility of a Digital Wide-Range Neutron Monitor to Electric Fast*