Radiation Safety Information Computational Center

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"The minute a man ceases to grow, no matter what his years, that minute he begins to be old. "
--William James

Changes to the Computer Code and Data Collection

CCC-721/GRTUNCL3D

OP SYS: AIX, LINUX, Windows
Language: Fortran 77, C
Computers: IBM RS/6000; Pentium
Format: tar

Oak Ridge National Laboratory, Oak Ridge, Tennessee, contributed GRTUNCL3D, which can generate uncollided flux and first collision source distributions for the three-dimensional discrete ordinates transport code TORT. Note that TORT is not included in this package but is distributed within the CCC-650/DOORS package. Although TORT can perform three-dimensional calculations in both rectilinear X, Y, Z and curvilinear R, Q, Z geometries, the current initial version of GRTUNCL3D is only operational in X, Y, Z cartesian geometries. However, since TORT has the ability to perform calculations on a multilevel discontinuous mesh, i.e., geometries containing a different number of cells in each row and a different number of rows in each plane, GRTUNCL3D was written to generate uncollided flux and first collision source distributions for X, Y, Z discontinuous space meshes. In addition, it employs a simple scheme of cell subdivision which can provide improved estimates of the average uncollided flux and first collision source within each cell; it performs a system balance calculation to aid the user in determining whether or not the fine mesh is sufficient to yield credible results; it dynamically allocates all memory as needed; and finally, it obtains many of its control parameters and all of the geometry data from the TORT input file thereby eliminating any duplication of input data.

GRTUNCL3D was developed on IBM RS/6000 workstations and has been ported to personal computers running Linux and Windows. GRTUNCL3D was tested on the following systems:

- IBM RS/6000 on AIX with IBM XL Fortran for AIX Version 08.01.0000.0000
- IBM RS/6000 on AIX 5.1 with IBM XL Fortran for AIX Version 08.01.0000.0003
- AMD Athlon on RedHat Linux 7.3 with Portland Group, Inc.Fortran 4.0 2 & GNU gcc 2.96
- PC on Windows 2000 with Portland Group, Inc. Fortran.4.0 2 and PGI C 4.0 2

•PC on Windows XP with the included PGI executable created under Windows 2000

The package is distributed on a CD in a GNU compressed Unix tar file which contains the GRTUNCL3D source file, executables for Windows and Linux, an information file, test case input and output and documentation. WinZIP 8.0 or newer is required to expand the distribution file under Windows. Reference: Excerpt from ORNL/TM-11778 (March 1992). Fortran 77 and C; IBM RS/6000 and on PC under Linux and Windows (C00721MNYCP00).

PSR-526/ERROR-J, Version 2

OP SYS: Unix
Language: Fortran 77
Computers: DEC, Sun
Format: tar

Sumitomo Atomic Energy Ind., LTD, Tokyo, Japan, and Japan Nuclear Cycle Development Institute, Ibaraki, Japan, contributed ERRORJ. This code system produces multigroup covariance matrices from ENDF/B-6 format and is based mainly on the methods of the ERRORR module in NJOY94.105. Thus all the function of ERRORR is available in ERRORJ, which produces a COVFIL format file to store multi-group covariance data which is converted to a COVERX format file by the included conversion program NJOYCOVX. A COVERX format is proposed as a standard file of multi-group covariance data in the FORSS system.

ERRORJ was developed on HP-9000/735 and was tested under DEC and Sun Unix workstations. A Fortran 77 compiler is required to compile the codes. RSICC tested ERRORJ on the following systems: DEC alpha under Digital Unix V40.F with Fortran 77 and Sun SparcStation under Sun OS 5.6 with Fortran 77 5.0. The package is distributed on a CD which includes a GNU compressed Unix tar file which includes source code, data files for sample cases, test input and output and documentation. References: JNC TJ 9440 99-003 and JNC TJ 9440 99-003 (1999) [English translation]. Fortran 77; HP, DEC Alpha, and Sun SparcStation (P00526MNYCP00).

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 (if available) are listed alphabetically following the table.

Condensed Table of Conferences

Name of Conference	Date and Location	Web Site	Abstract/Paper Due Date
AAPM 46th Annual Meeting	July 25-29, 2004 Pittsburgh, Pennsylvania	**http://www.aapm.org/meetings/04AM/MtgPrgmTOC.asp**	n/a
ANS Annual Summer Meeting	June 13-17, 2004 Pittsburgh, Pennsylvania	**http://www.ans.org/meetings/students call for papers**	passed
Summer School on "Concepts and Trends in Medical Dosimetry	June 22-26, 2004 New Haven, Connecticut	**http://www.ssd14.org/**	passed
14th International Conference on Solid State Dosimetry	June 27-July 2, 2004 New Haven, Connecticut	**http://www.ssd14.org/**	passed
1st International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry	Sept. 4-8, 2004 Helsinki, Finland	**http://www.eanm.org/eanm.php?kopf=head/hd_calendar.html&worte=calendar/calendar.php**	
12th International Conference on the Physics of Highly Charged Ions	Sept. 6-10, 2004 Vilnius, Lithuania	**http://www.itpa.lt/hci2004/**	passed
16th American Nuclear Society Topical Meeting on the Technology of Fusion Energy	Sept. 14-16, 2004 Madison, Wisconsin	**http://fti.neep.wisc.edu/tofe**	passed
International Conference on Nuclear Data for Science and Technology "ND2004"	Sept. 26-Oct. 1, 2004 Santa Fe, New Mexico	**http://t16web.lanl.gov/nd2004/**	passed
5th International Conference of Yugoslav Nuclear Society (YUNS)	Sept. 27-30, 2004 Belgrade, Serbia & Montenegro	**http://www.vin.bg.ac.yu/YUNS/Yunsc2004.html**	June 1, 2004
Americas Nuclear Energy Symposium 2004	Oct. 3-6, 2004 Miami Beach, FL	**http://anes.fiu.edu/2004/**	NA

Name of Conference	Date and Location	Web Site	Abstract/Paper Due Date
11th International Congress on Neutron Capture Therapy (ISNCT-11)	Oct. 11-15, 2004 Boston, Massachusetts	future site	
ANS Annual Winter Meeting and Nuclear Technology Expo	Nov. 14-18, 2004 Washington, D.C.	**http://www.ans.org/meetings/**	
Monte Carlo 2005 Topical Meeting	Apr. 17-21, 2005 Chattanooga, Tennessee	**http://MonteCarlo2005.org**	**call for papers**
Twelfth International Symposium on Reactor Dosimetry	May 8-13, 2005 Gatlinburg, Tennessee	**announcement / call for papers in pdf** **http://reactordosimetry.com**	Aug. 1
ANS Annual Summer Meeting	June 5-9, 2005 San Diego, California	**http://www.ans.org/meetings/**	
2005 HEART Conference	Mar. 21-25, 2005 Tampa, Florida		Sept. 17, 2004
Seventh Topical Conference on Nuclear Applications of Accelerator Technology "AccApp05"	Aug. 28-Sept. 1, 2005 Venice, Italy	future	Mar. 31, 2005

2004 Conferences

Americas Nuclear Energy Symposium 2004

The United States Department of Energy and the American Nuclear Society are pleased to announce the next Americas Nuclear Energy Symposium (ANES 2004), which will take place Sunday through Wednesday, **October 3-6, 2004,** at the Deauville Beach Resort in Miami Beach, Florida.

ANES 2004 will feature the theme "Building Bridges to Greater Cooperation." The symposium will provide you with the latest information about the use and development of nuclear energy technology throughout the Americas. The format will include open panel discussions, case studies, technical breakout sessions, and an exhibit of international organizations, not to mention great opportunities to network.

ANES 2004 will include sessions on nuclear reactors; technology development and deployment; production, disposal and usage of isotopes; fuel cycle and waste management; new applications; finance; and environmental, infrastructure and communications issues.

Another successful event is anticipated with the largest number of participants yet attending from across Canada, the Caribbean, Latin America and the United States. Please visit the website at

http://anes.fiu.edu for frequent updates.

16th American Nuclear Society Topical Meeting on the Technology of Fusion Energy

The ANS Topical Meeting on the Technology of Fusion Energy will be held **September 14-16, 2004**, in Madison, Wisconsin. You are cordially invited to submit one-page abstract(s) describing work that is new, significant, and relevant to both magnetic and inertial fusion technologies. A Microsoft Word template that can be used to create the abstract is available on the TOFE website: **http://fti.neep.wisc.edu/tofe**.

The 16th Topical Meeting on the Technology of Fusion Energy (TOFE) will continue the tradition of stand-alone topical meetings originated in the early 1970's, continued through the 80's, and re-established in the year 2000 in Park City, Utah. The scope of the TOFE meeting is to provide a forum for sharing exciting new progress that has been made in fusion research as well as presenting the future of the national and worldwide fusion program.

The 2½ day program of the 16th TOFE meeting will have plenary, oral, and poster sessions, including a mix of invited oral papers and a significant number of contributed oral and poster papers. Key deadlines follow: one-page abstracts (May 1, 2004); nominations for ANS-FED awards (May 31, 2004); notification to authors (June 1, 2004); early registration deadline (August 10, 2004); hotel reservation cutoff date (August 10, 2004); full papers due at the meeting (September 14, 2004).

MCNP Courses

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**

June 1-4	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 order the new package from RSICC.

The other capabilities of 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.

MCNPX Workshops

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

June 7-11	Introductory	Santa Fe, NM
July 12-16	Intermediate	Houston, TX

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**.

Monte Carlo Analysis and Nuclear Criticality Safety - Short Course

The Department of Nuclear Engineering at the University of Tennessee-Knoxville is offering two short courses for radiation transport and criticality safety specialists during Tennessee Industries Week (TIW-39), **August 9-13, 2004.**

Engineers, scientists, and technical managers who wish to increase their knowledge and understanding of nuclear criticality safety will be interested in the criticality safety course, which also runs for five days. The topics covered in the course are based primarily on the experience of the five instructors which totals over 120 years of nuclear criticality safety related experience. Such a wealth of experience needs to be shared with the criticality safety community including both new professionals in the field as well as experienced professionals.

Monte Carlo is often the method of choice to solve complex problems in nuclear criticality safety and radiation shielding. To use Monte Carlo effectively the analyst must understand the theoretical and computational fundamentals of the method, as well as the computational options available in particular computer tools. Also, it is sometimes advantageous to create new special-purpose Monte Carlo programs to solve particular problems rather than use an existing program. The Monte Carlo course runs for five days.

The deadline for registration is July 23, 2004. Classes are limited in size and will be filled on a first-come first-serve basis. For additional information on these and other courses offered during TIW-39, contact Kristin England at the University of Tennessee, phone (865) 974-5048, email **kengland@utk.edu**, url **http://www.engr.utk.edu/nuclear/TIW.html**.

Nuclear Data for Science and Technology "ND2004" - International Conference

The International Conference on Nuclear Data for Science and Technology will be held **September 26-October 1, 2004**, in Santa Fe, New Mexico. This is an OECD-Nuclear Energy Agency Conference, which is held approximately every 3 years. Recent conferences in this series were held in Antwerp (1982), Santa Fe (1985), Mito (1988), Jüelich (1991), Gatlinburg (1994), Trieste (1997) and Tsukuba (2001). This International Conference focuses on nuclear data, their production, dissemination, testing and application. The data are produced through both experimental and theoretical models; they are compiled and evaluated to form data libraries for use in applications; and they are tested through benchmark experiments and a very wide range of applications. This Conference includes all of these activities with the goal of improving nuclear data for applications including fission and fusion energy, accelerator driven systems, accelerator technology, spallation neutron sources, nuclear medicine, environment, space, non-proliferation, nuclear safety, astrophysics and cosmology, and basic research. Please see the web site for more information: **http://t16web.lanl.gov/nd2004/**.

Physics of Highly Charged Ions - 12th International Conference

HCI-2004 will be the 12th conference in an international series taking place every two years around the world. This year's conference will be in Vilnius, Lithuania, **September 6-10, 2004.** Born in Stockholm in 1982, HCI became a major forum for the presentation and discussion of important new research results in the physics of highly charged ions. The conference will continue to emphasize basic, fundamental science at the atomic and molecular level, and its application to important technology challenges. Opportunity will be given to provide insights in other disciplines where HCI physics have a strong impact like nuclear physics, material science, radiation chemistry, radiobiology, etc.

For more information, please email **hci2004@itpa.lt** or see the website: **http://www.itpa.lt/hci2004/**.

Radionuclide Therapy and Radiopharmaceutical Dosimetry - 1st International Symposium

The 1st International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry will take place in conjunction with the annual European Association of Nuclear Medicine (EANM) Congress in Helsinki, Finland, **September 4-8, 2004.**

The format of the meeting has evolved from a series of seven interesting and important radiopharmaceutical and dosimetry symposia held approximately every 5 years since 1970, with distribution of published proceedings. The last meeting (7th International Radiopharmaceutical Dosimetry Symposium) was held in Nashville, Tennessee in 2002.

The decisions of the scientific committee and the set-up of the program for Helsinki will be coordinated by the EANM Task Group on Dosimetry and EANM Therapy Committee. All organisational matters will be handled by the EANM.

A call for abstracts (also electronic) will go out in a few months, with authors notified of the outcome in May 2004. Contributors will be asked either to bring an electronic version of their manuscript to the meeting in September 2004 or to submit it within two months after the meeting; early plans are to

have extended peer-reviewed abstracts published as a supplement to a journal.
For more information contact: Michael Lassmann, Chair T/G Dosimetry EANM, **Lassmann@nuklearmedizin.uni-wuerzburg.de** or Val Lewington, Chair Therapy Committee EANM, **vjlewington@hotmail.com** or visit **http://www.eanm.org/eanm.php?kopf=head/hd_calendar.html&worte=calendar/calendar.php**

RESRAD Family Workshops

Argonne National Laboratory will conduct two training workshops on the RESRAD family of risk assessment codes. The first workshop is for the RESRAD (6.22) and RESRAD-BUILD (3.22) codes on **August 10-13, 2004.** The second workshop is for the newly released RESRAD-BIOTA (1.0) code on **September 15-16, 2004.** The tentative agenda and registration information can be found on the RESRAD web site **http://web.ead.anl.gov/resrad/training/**. If you have questions contact: Dr. Charley Yu, CHP
RESRAD Program Manager, phone 630-252-5589, fax 630-252-4624, email **cyu@anl.gov**.

Yugoslav Nuclear Society (YUNS) - 2004 - 5th International Conference

The Conference will be held **September 27-30, 2004**, at the Chamber of Commerce of the Republic of Serbia, Belgrade, Serbia & Montenegro. For more information visit **http://www.vin.bg.ac.yu/YUNS/Yunsc2004.html**.

2005 Conferences

Monte Carlo 2005 Topical Meeting

Monte Carlo 2005 will be held **April 17-21, 2005,** (Sunday-Thursday). The theme of the conference will be "The Monte Carlo Method: Versatility Unbounded in A Dynamic Computing World".

The conference site is the Chattanooga Marriott and Convention Center in Chattanooga, Tennessee. The conference will be hosted by the American Nuclear Society (ANS) Oak Ridge/Knoxville Section, with ANS Radiation Protection and Shielding Division (RPSD) as the sponsoring division and Mathematics and Computations Division (MCD) as a co-sponsor. Co-sponsors will also include Oak Ridge National Laboratory (ORNL), Radiation Safety Information Computational Center (RSICC) and the Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency Data Bank (NEADB).

The Monte Carlo method and its applications have been frequently addressed at several major conferences and workshops organized in recent years in the area of nuclear applications. Monte Carlo topics have included radiation shielding, radiation physics, medical physics, and high energy physics. Significant developments have taken place in computational and data issues, resulting in state-of-the-art computer codes and tools. Monte Carlo 2005 is the next in a series devoted to the topic, following Monte Carlo 2000 which was held in Lisbon, Portugal, in October 2000.

Conference topics will include: Methods Advancements (Physics) (proton transport, neutron transport, gamma transport, electron transport, heavy ion transport); Nuclear Data Advancements (proton transport, neutron transport, gamma transport, electron transport, heavy ion transport); Mathematical and Computational Advances (experiments & benchmarks, mathematical advances, computational advances, visualization); Applications (reactor, medical, accelerator, neutron science, dosimetry, shielding, fuel cycle, waste management, space & aviation, fusion, criticality safety, non-nuclear applications).

The website is **http://MonteCarlo2005.org**. Full papers are due September 10, 2004. For information contact Bernadette Kirk (**kirkbl@ornl.gov**, 865-574-6176), General Chair, or Jeff Johnson (**johnsonjo@ornl.gov**, 865-574-5262), Technical Chair.

Nuclear Applications of Accelerator Technology "AccApp05" - 7th Topical Conference

The forthcoming International Topical Meeting on Nuclear Applications of Accelerator Technology (AccApp'05) is the seventh in a series of international meetings of the Accelerator Applications Division of the American Nuclear Society. It is scheduled for **August 28-September 1, 2005,** at the Island of San Servolo, Venice, Italy. The purpose of AccApp'05 is to provide an international forum for presenting and discussing the use of particle accelerator technology for a variety of applications. It is intended to focus on a wide area of applications including, among others, spallation neutron sources, isotope production, medical therapy, nuclear waste transmutation, energy production, high power accelerators under construction and future projects, material issues in a particle environment, nuclear data and experiments, codes and models for particle transport, system engineering, thermo hydraulics, contraband detection and radiation protection. For more information see: **http://www.nea.fr/listsmh/satif/pdf00004.pdf**.

Reactor Dosimetry - 12th International Symposium

The 12th International Symposium on Reactor Dosimetry will be held **May 8-13, 2005,** in Gatlinburg, Tennessee.

This Symposium is held approximately every three years to provide a forum for the interchange of state-of-the-art techniques, data bases and standardization of radiation metrology. The Symposium will be of value to those involved in reactor dosimetry, including researchers, manufacturers and representatives from industry, utilities and regulatory agencies.

This Symposium is jointly sponsored by ASTM International, the European Working Group on Reactor Dosimetry (EWGRD), and the Atomic Energy Society of Japan (AESJ). It is organized by ASTM Committee E10 on Nuclear Technology and Applications and EWGRD.

The Symposium will be organized into oral and poster presentations, informal round-table workshops and tutorials. The meeting language will be English. No translations will be provided.

All papers presented at the Symposium will be subject to peer-review before acceptance for publication in the on-line Journal of ASTM International. Registrants will receive a complimentary CD of the papers presented at the Symposium. For more information visit the website at: **http://reactordosimetry.com/**.

CALENDAR

July 2004

MCNPX Intermediate Workshop, July 12-16, 2004, Houston, TX. Contact: Bill Hamilton (tel 505-455-0312, email **bill@mcnpxworkshops.com**, url **http://mcnpxworkshops.com** for details).

AAPM 46th Annual Meeting, July 25-29, 2004, Pittsburgh, PA. (URL **http://www.aapm.org/meetings/04AM/MtgPrgmTOC.asp**).

August 2004

RESRAD (6.22) and RESRAD-BUILD (3.22) Workshop, Aug. 10-13, 2004. Argonne, IL. Contact: Charley Yu (tel 630-252-5589, fax 630-252-4624, email **cyu@anl.gov**, url **http://web.ead.anl.gov/resrad/training/**).

September 2004

1st International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry, Sept. 4-8, 2004, Helsinki, Finland. Contact: Michael Lassmann or Val Lewington, (emails **lassmann@ nuklearmedizin.uni-wuerzburg.de**; **vjlewington@ hotmail.com**).

16th American Nuclear Society Topical Meeting on the Technology of Fusion Energy, Sept. 14-16, 2004, Madison, WI. (url **http://fti.neep.wisc.edu/tofe**).

RESRAD-BIOTA (1.0) Workshop, Sept. 15-16, 2004, Argonne, IL. Contact: Charley Yu (tel 630-252-5589, fax 630-252-4624, email **cyu@anl.gov**, url **http://web.ead.anl.gov/resrad/training/**).

International Conference on Nuclear Data for Science and Technology "ND2004", Sept. 26-Oct. 1, 2004, Santa Fe, NM. (Contact: **http://t16web.lanl.gov/nd2004/**).

5th International Conference of Yugoslav Nuclear Society (YUNS) - 2004, Sept. 27-30, 2004, Belgrade, Serbia & Montenegro. Contact: Dr. Milan Pesic, (tel 381-11-245-82-22/ext. 681, email **mpesic@vin.bg.ac.yu**, url **http://www.vin.bg.ac.yu/YUNS/index.htm**).

October 2004

11th World Congress on Neutron Capture Therapy (ISNCT-11), Oct. 11-15, 2004, Boston, MA. Contact: Robert G. Zamenhof (tel 617-636-1681, fax 617-636-5867, email **rzamenhof@tufts-nemc.org**, url **http:// meetingsandconferences.com/ISNCT-11/**).

April 2005

Monte Carlo 2005 Topical Meeting, Apr. 17-21, 2005, Chattanooga, TN. Contact: Bernadette Kirk (tel 865-574-6176, fax 865-241-4046, email **kirkbl@ornl.gov**, url **http://meetingsandconference.com /MonteCarlo2005**).

August 2005

Seventh Topical Conference on Nuclear Applications of Accelerator Technology "AccApp05", Aug. 28-Sept. 1, 2005, Venice, Italy. For more information: **http://www.nea.fr/ listsmh/satif/pdf00004.pdf**.

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/rsiccnew/AT-SARISquery.htm)**. 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.

J. Nucl. Mater., 327, 77-87. . .*Fission Gas Release and Swelling in Uranium-Plutonium Mixed Nitride Fuels*. . . . Tanaka, K. et al. . . . May 2004. . . Japan Nuclear Cycle Development Institute, Ibaraki-ken, Japan; JAERI, Ibaraki-ken, Japan.

J. Nucl. Mater., 327, 88-96. . .*He Migration in Implanted UO2 Sintered Disks*. . . . Guibert, S. et al. . . . May 2004. . . Centre d'Etudes et de Recherches par Irradiation, Orleans, France; CEA Cadarache, France; CEA Saclay, France; Les Renardieres, Moret-sur-Loing, France.

J. Nucl. Mater., 327, 97-113. . .*A Metallographic and Fractographic Study of Outside-In Cracking Caused by Power Ramp Tests*. . . . Shimada, S. et al. . . . May 2004. . . Global Nuclear Fuel Japan Co., Ibaraki-ken, Japan; Japan Nuclear Energy Safety Organization, Tokyo, Japan.

J. Nucl. Mater., 327, 114-120. . .*W Erosion Due to Low Energy O+ and D+ Impact*. . . . Macaulay-Newcombe, R.G. et al. . . . May 2004. . . University of Toronto Institute for Aerospace Studies, Ontario, Canada; EDFA Close Support Unit, Garching, Germany.

J. Nucl. Mater., 327, 121-129. .

.Microstructure of U2Si2 Fuel Plates Submitted to a High Heat Flux. . . . Leenaers, A. et al.. . . May 2004. . . SCK-CEN, Mol, Belgium; CERCA, Romans, France; CEA, St. Paul-lez-Durance, France.

J. Nucl. Mater., 327, 130-139. . .*A Critical Test of the Classical Rate Theory for Void Swelling.* . . . Okita, T. et al.. . . May 2004. . . Lawrence Livermore National Laboratory, Livermore, CA.

J. Nucl. Mater., 327, 140-147. . .*Materials for High Performance Light Water Reactors.* . . . Ehrlich, K. et al. . . . May 2004. . . Forschungszentrum Karlsruhe, Germany; VTT Industrial Systems, VTT, Finland.

J. Nucl. Mater., 327, 148-158. . . *Borosilicate and Lead Silicate Glass Matrix Composites Containing Pyrochlore Phases for Nuclear Waste Encapsulation.*. . . Boccaccini, A.R. et al. . . . May 2004. . . Imperial College London, UK; University of Padova, Italy; University of Modena and Reggio Emilia, Modena, Italy.

J. Nucl. Mater., 327, 159-164. . .*Profile Measurements of Helium Implanted in UO2 Sintered Pellets by Using the 3He(d,alpha)1H Nuclear Reaction Analysis Technique.* . . . Sauvage, T. et al. . . . May 2004. . . Centre d'Etudes et de Recherches par Irradiation, Orleans, France; University Cadi Ayyad, Marrakech, Morocco; CEA, Saclay, France; CEA, Cadarache, France; Delft University of Technology, Delft, The Neterlands.

J. Nucl. Mater., 327, 165-170. . . *Investigation of Mechanical Properties of E-Zirconium Hydride Using Micro- and Nano-Indentation Techniques.*. . . Xu, J. et al.. . . May 2004. . . Dalian Maritime University, Dalian, China; Hong Kong Polytechnic University, Hong Kong, China.

J. Nucl. Mater., 327, 171-174. . .*Leaching Behavior of 60Co and 137Cs from Spent Ion Exchange Resins in Cement-Bentonite Clay Matrix.* . . . Plecas, I. et al. . . . May 2004. . . VINCA Institute of Nuclear Sciences, Belgrade, Serbia & Montenegro.

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