

# RSIC Newsletter



**Oak Ridge National Laboratory**  
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*The men who build the future are those who know that greater things are yet to come, and that they themselves will help bring them about. Their minds are illumined by the blazing sun of hope. They never stop to doubt. They haven't time.—Melvin J. Evans*

## RSIC to Collect Information Profile of All Users

Appended to this issue of the newsletter is an RSIC User Registration Form for those who wish to use the services offered by RSIC. Although it is similar to the Periodic Distribution Query we have used in the past to update the distribution list for our monthly newsletter, the form will also be used to update our distribution data base with current information about all RSIC users. All users should complete and return this form by *December 1, 1989*. Beginning January 1, 1990, we will require the completed form to be on hand before a request will be honored.

Because we use the newsletter to publish changes to the computer code and data library collections, all users should have access to it. In the interest of controlling costs, we encourage users, if possible, to

share access to the *RSIC Newsletter* so the mailing list can be kept to a manageable size. All users in such a group that share the newsletter should complete and return the form, but only one should check the box indicating they want to receive the newsletter (see first paragraph of Part I).

The information asked for in Part I gives us the kind of profile of our user community that we need. It is important for our operational efficiency to have accurate information about addresses, sources of funding, organization types, and project areas. The information requested in Part II will tell us what technology is of interest to the user community and will be used as a guide to our future acquisition activity.

R. W. Roussin

## CHANGES TO DIVISION ADMINISTRATION

The Engineering Physics and Mathematics Division is the administrative unit under which RSIC operates. **Fred C. Maienschein** has been the Di-

vision Director for 23 years. **Robert C. Ward** was appointed as Associate Director of the division effective September 21, 1989. In addition to his ac-

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tivities as Associate Director, he will continue to lead the work of the Mathematical Sciences Section. Special emphasis will be placed on close technical interaction between research efforts in the Mathematical Sciences Section and the Intelligent Systems Section led by **Reinhold C. Mann**. Mann recently replaced **Charles R. Weisbin** who has gone to Jet Propulsion Laboratory, Pasadena, California, as Assistant Section Manager for Research and Technology.

#### **NRC Oversight**

**Claud E. Pugh** succeeds **Anthony P. Malinauskas** as Director of Nuclear Regulatory

Commission programs at ORNL. Malinauskas has been named the director of the Waste R&D Program at ORNL, which includes the development of processes to minimize hazardous and radioactive wastes, and of robotic technologies to reduce radiation exposure to personnel. Pugh was most recently head of the pressure vessel technology section of ORNL's Engineering Technology Division. He is now responsible for NRC-sponsored activities at ORNL such as reactor safety research; technical support for nuclear reactor regulation, safeguards, fuel cycle, and environmental research; risk assessment; and standards development.

## **CHANGES TO THE COMPUTER CODE COLLECTION**

During the month three changes were made to the computer code collection. A new code system was packaged and added to the collection, an existing code package was extended with an additional hardware version, and a correction was made to an existing code package. One change resulted from a foreign contribution.

#### **CCC-371/ORIGEN2**

This isotope generation and depletion code system was extended to include a new hardware version contributed by Century Research Center Corporation, Tokyo, Japan. ORIGEN2 is a computer code system that calculates the buildup, decay, and processing of radioactive materials by using a matrix exponential method to solve a large system of coupled, linear, first-order ordinary differential equations with constant coefficients. The source was converted to run on a CRAY X-MP using the CFT compiler under COS. Additional modifications made to the source include: (1) addition of the total photon spectrum table, (2) modification of output format for individual element fractional recoveries and group fractional recoveries, and (3) addition of becquerel units to the output table. The CRAY source, input, and output files were added to the master for CCC-371A without testing by RSIC. References: ORNL/TM-7175 (July 1980), *Nucl. Technol.* 62, p 335 (September 1983), and Informal Notes (December 1985, January 1985, October 1981). FORTRAN; IBM 360/

370, CDC, VAX and CRAY (A), UNIVAC 1100 (B), PRIME 400 (C), and IBM PC (D).

#### **CCC-419/CRAC2**

The IBM version of this code system for calculating reactor accident consequences was corrected by modifying sample case input and executing the sample cases again. RSIC was notified of problems with the currently distributed results by both the Royal Observatory of Hong Kong and by the Nuclear Energy Agency Data Bank. The IBM version of CRAC2 may generate incorrect results when temporary modifications are stacked in a single run. Users are advised to avoid running stacked cases with temporary modifications using the IBM FORTRAN 77 version of CRAC2, originally released in December 1985. This package incorporates change 46 (2/20/86) from the originators at Sandia National Laboratories, Albuquerque, New Mexico. References: NUREG/CR-2326 (SAND81-1994); NUREG/CR-2552 (SAND82-0342). FORTRAN 77; IBM (A). FORTRAN IV; CDC (B).

#### **PSR-251/DSNQUAD**

Battelle Columbus Laboratories, Columbus, Ohio, contributed this code system for calculating angular quadrature weights and cosines for use by the CCC-254/ANISN-ORNL code. The DSNQUAD routines were taken from the XSDRN-PM code supplied with the CCC-475/SCALIAS-77

package. DSNQUAD runs on the IBM PC and compatibles using either Microsoft or IBM Professional FORTRAN compilers. The package is

transmitted on one 5.25-in. DS/DD (360K) diskette. Reference: Informal Notes (1987). FORTRAN 77; IBM PC.

### PERSONAL ITEMS

In serving a specialized area of scientific endeavor, it seems important that we note significant changes in the activities of people concerned with radiation protection, transport, and shielding in the nuclear industry. We, therefore, continue to carry personal items as they are brought to our attention.

**Walter Zobel** has retired from the Tennessee Valley Authority in Knoxville after 18 years of service. He was Section Supervisor of Radiation Protection in the Engineering Organization. Prior to his service at TVA, Zobel was a physicist at ORNL for 16 years. He worked principally in the fields of neutron and gamma-ray spectrometry and was also a staff member of RSIC before moving to TVA.

**G. Prillinger**, formerly with IKE in Stuttgart, Fed. Republic of Germany, is currently employed by the Fachhochschule für Technik Esslingen.

### Visitors to RSIC

During the month the following persons came for an orientation visit and/or to use RSIC facilities: *Gary B. Word*, Vanderbilt University, Nashville, Tennessee; *Tony Leveling* and *W. C. Salsbury*, Fermilab, Batavia, Illinois; *Geoffrey N. Pendleton*, University of Alabama at Huntsville; *P. K. Job*, Argonne National Laboratory, Argonne, Illinois; *Ruby C. Jennings*, U.S. Air Force, Cocoa Beach, Florida; *Jack Courtney*, Louisiana State University, Baton Rouge, Louisiana; *Surender Saini*, *Thomas Hundler*, and *H. Joe Hargis*, University of Tennessee, Knoxville; and *Charles M. Ward*, Department of the Army, Charlottesville, Virginia.

### CONFERENCES, COURSES, SYMPOSIA

RSIC 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 to RSIC.

### ANS Winter Meeting

The American Nuclear Society Winter Meeting will be held November 26-30, in San Francisco. Sessions of

special interest to the RSIC user community are listed below. Those marked with an asterisk are special sessions organized for this conference.

### Fuel Cycle and Waste Management

\*Dynamics and Techniques in Public Interaction  
\*Performance Assessment of Low-Level-Waste Disposal Facilities

\*Fuel Cycle and Waste Management—General  
Advances in Spent-Fuel Handling and Interim Storage

\*Spent-Fuel Transport and Interim Storage Cask Development

\*Safeguards Aspects of Spent-Fuel Management

\*Social and Ethical Issues in Waste Management

\*Waste Management at DOE Defense Nuclear Facilities—I and II

\*Technical and Design Update of the Low-Level-Waste Compact Program

\*Interaction Between Reload Design and Fuel Cycle Economics

\*Low-Level-Waste Disposal Costs for New Facilities

\*Waste Management Systems Evaluation and Project Decision Analysis Simulations—I and II

\*Materials Aspects of Fabrication and Reprocessing of Liquid-Metal Reactor Fuels

International Progress in Fuel Reprocessing and Separation Technology

### Fusion Energy

\*Bifurcation, Nonlinear Dynamics, Chaos, and Fractals in Nuclear Energy Production—A Tutorial

Fusion Energy—General

### Mathematics and Computation

\*Visualization of Large-Scale Calculations

\*A Review of Nuclear Computational Methods and Their Applications

Applications of Artificial Intelligence in Nuclear Engineering

Methods in Thermal Hydraulics

Reactor Analysis Methods—I and II

Methods in Particle Transport

Radiation Transport Methods and Applications

### Radiation Protection and Shielding

\**De Minimis* and Below Regulatory Concern

\*Physical, Radiobiological, and Legal Aspects of Hot Particles

Chernobyl Accident Environmental Studies

\*Shielding Design for Spent-Fuel Storage and Transportation Casks

\*Radiation Protection Standards

\*Charged Particle Data: Measurement, Theory, and Evaluation—I and II

Radiation Evaluation and Measurement Techniques

### Reactor Physics

Nuclear Reactor Design, Validation, and Operating Experience

\*Advances in the Application of Sensitivity Theory and Data Adjustment Techniques for Reactor Analysis

\*Review of the Contents and Performance of ENDF/B-VI—I and II

Reactor Analysis Methods—I and II

## Calendar

Your attention is directed to the following events of interest.

### November 1989

*International Symposium on Recovery Operations in the Event of a Nuclear Accident or Radiological Emergency*, Nov. 6–10, 1989, sponsored by IAEA. Contact: Barbara Thomas, IE-13, U. S. Department of Energy, Forrestal Building, Washington, DC 20585 USA (phone 202-586-6188 or FTS 896-6188).

*Selected Topics of Monte Carlo Applications in Science and Technology*, Nov. 6–10, 1989, a course sponsored by the Joint Research Centre, Ispra Establishment. Contact: Secretariat "ISPRA-Courses", Centro Comune di Ricerca, I-21020 ISPRA (Varese) Italy (phone 0332-789819/789839/781128).

*9th International Conference on Solid State Dosimetry*, Nov. 6–10, 1989, Vienna. Contact: Dr. A Hefner, Austrian Research Center at Seibersdorf, A-2444 Seibersdorf, Austria (02254-80, ext. 2500).

*19th International Symposium on Nuclear Physics: Nuclear Processes in Fusion Reactors*, Nov. 6–10, 1989, Gaussig, German D. R. Contact: D. Seeliger, Technische Universitaet Dresden, Sektion Physik, Mommsenstr. 13, DDR-8027 Dresden, GDR.

*International Symposium on Radiological Protection (ISRP)*, Nov. 20–22, 1989, Beijing, sponsored by the Chinese Medical Association. Contact: Dr. Wei Kedao, Ministry of Public Health, Laboratory of Industrial Hygiene, 2 Xinkang Street,

Deshengmenwai, Beijing 100088, People's Republic of China.

*Winter Meeting of the American Nuclear Society*, Nov. 26–30, 1989, San Francisco. Contact: Mary J. Keenan, Meetings Manager, ANS, 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 312-352-6611).

*Scientific Basis for Nuclear Waste Management*, Nov. 27–30, 1989, Boston, Massachusetts, sponsored by the Materials Research Society. Contact: Conferences, MRS, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237 (phone 412-367-3003).

### December 1989

*4th International Conference on Fusion Reactor Materials*, Dec. 4–8, 1989, Kyoto, Japan. Contact: Prof. S. Ishino, Dept. of Nuclear Engineering, University of Tokyo, Bunkyo-ku, Tokyo 113, Japan.

### January 1990

*Recent Advances in Physics*, Jan. 15–19, 1990, Dhaka, Bangladesh. Contact: Dr. M. A. Mannan, P.O. Box 158, Dhaka-1000, Bangladesh (Cable: BANGLATOM; Telex 632203 BATOM BJ; phone 502600).

### February 1990

*HEART Conference*, Feb. 12–16, 1990, Monterey, California. Contact: Thomas A. Tumolillo, Kaman Sciences Corp., P.O. Box 7463, Colorado Springs, CO 80933 (phone 719-599-1718).

*WATTec '90 Technical Conference and Exhibition*, Feb. 20-23, 1990, Knoxville, Tennessee. Contact: WATTec. P.O. Box 629, Oak Ridge, TN 37831-0629.

*Waste Management '90*, Feb. 25-Mar. 1, 1990, Tucson, Arizona, sponsored by the University of Arizona and the American Nuclear Society. Contact: Dr. Morton E. Wacks, Dept. NEE, University of Arizona, Tucson, AZ 85721 (phone 602-621-6160).

### March 1990

*7th Pacific Basin Conference*, Mar. 4-8, 1990, San Diego, California, sponsored by the ANS. Contact: ANS Meetings Department, 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 312-352-6611).

*International Conference on Supercomputing in Nuclear Applications*, Mar. 12-16, 1990, Mito City, Japan, sponsored by JAERI. Contact: Kiyoshi Asai, Computing Center, JAERI, Tokai-mura, Naka-gun, Ibaraki 319-11, Japan (phone 0292(82)5611; Fax 0292(82)6070).

### April 1990

*26th Annual Meeting of the National Council on Radiation Protection and Measurement, Health and Ecological Implications of Radioactively Contaminated Sites*, Apr. 4-5, 1990, Washington, D. C. Contact: NCRP, 7910 Woodmont Ave., Suite 800, Bethesda, MD 20814.

*International Conference for High-Level Radioactive Waste Management*, April 8-12, 1990, Las Vegas, Nevada. Contact: Dean William Wells, Howard Hughes College of Engineering, UNLV, Las Vegas, NV 89154 (phone 702-739-3699).

*Physor '90*, Apr. 23-26, 1990, Marseille, France. Contact: Yuri Orechwa, Engineering Physics Division, Bldg. 208, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439 USA.

### May 1990

*International Symposium on Radiation Protection Infrastructure*, May 7-11, 1990, Munich, Fed. Rep. of Germany, sponsored by the IAEA. Contact: Conference Service Section, IAEA, P.O. Box 100, A-1400, Vienna, Austria.

*7th Symposium on Radiation Measurements and Applications*, May 21-24, 1990, the University of Michigan, Ann Arbor. Contact: Helen Lum, Symposium Secretary, 3034 Phoenix Memorial Laboratory, The University of Michigan, Ann

Arbor, MI 48109-2100 (phone 313-764-6214; Fax 313-763-4540).

### June 1990

*American Nuclear Society Annual Meeting*, June 10-15, 1990, Nashville, Tennessee. Contact: Mary Keenan, Meetings Manager, ANS, 555 N. Kensington Ave., La Grange Park, IL 60525 (phone 312-352-6611).

*15th Symposium on Effects of Radiation on Materials*, June 17-21, 1990, Nashville, Tennessee, sponsored by the American Society for Testing and Materials. Contact: Conferences, ASTM, 1916 Race St., Philadelphia, PA 19103 (phone 215-299-5400).

*17th European Conference on Controlled Fusion and Plasma Heating*, June 25-29, 1990, Amsterdam, The Netherlands. Contact: F. C. Schuller, FOM-Instituut voor Plasmafysica "Rijnhuizen," Postbus 1207, NL-3430 BE Nieuwegein.

### July 1990

*5th Conference on Radiation Chemistry*, July 1-6, 1990, Québec. Contact: Jean-Paul Jay-Gerin, JECR-90 Committee, Département de médecine nucléaire et de radiobiologie, Faculté de médecine, Université de Sherbrooke, Sherbrooke, Québec, J1H 5N4, Canada (phone 819-563-5555).

*27th Annual International Nuclear and Space Radiation Effects Conference and Short Course*, July 16-20, 1990, Reno, Nevada, sponsored by the Institute of Electrical and Electronics Engineers, Inc. Contact: Joseph R. Srouf, Northrop Corp., M.S. X400/N5, 2301 West 120th St., P.O. Box 5032, Hawthorne, CA 90251-5032 (phone 213-600-4151).

### August 1990

*International Topical Meeting on Fast Reactor Safety*, Aug. 12-16, 1990, Snowbird, Utah, sponsored by the ANS. Contact: Wayne K. Letho, Argonne National Laboratory, P.O. Box 2528, Idaho Falls, ID 83403-2528 (phone 208-526-7369).

*Operational Radiation Protection*, Aug. 20-22, 1990, Idaho Falls, Idaho, sponsored by the ANS. Contact: Jack Liebenthal, EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, ID 83415-3515 (phone 208-526-1253).

*7th ASTM-EURATOM Symposium on Reactor Dosimetry*, Aug. 27-31, 1990, Strasbourg, France. Contact: G. Tsotridis, Joint Research Centre, Petten Establishment, HFR Div., Postbus 2, NL-1755 ZG, Petten, The Netherlands (phone 02246 5122, Telex REACP NL 57211, Fax 02246 1449) or G. P. Lamaze, National Inst. of Standards and

Technology, Bldg. 235, Gaithersburg, MD 20899  
USA (phone 301-975-6202, Telex 197 674 NBS UT,  
Fax 301-921-9847).

#### September 1990

*16th Symposium on Fusion Technology*, Sept. 3-7,  
1990, London. Contact: JET Joint Undertaking,  
Conference Office, Abingdon, Oxon, OX14 3EA,  
United Kingdom.

*International Conference on Monte Carlo Methods for  
Neutron and Photon Transport Calculations*,  
Sept. 25-28, 1990, Budapest, Hungary. Contact: Dr.  
Lázló Koblinger, Central Research Inst. for Physics,  
P.O. Box 49, H-1525 Budapest, Hungary.

#### October 1990

*Spectrum '90: Radioactive Waste Technologies,  
Decontamination, Decommissioning and*

*Hazardous Wastes*, Oct. 3-5, 1990, Knoxville,  
Tennessee, sponsored by ANS. Contact: Thomas H.  
Row, ORNL, P.O. Box 2008, 4500N MS6198, Oak  
Ridge, TN 37831-6198 (phone 615-574-5974 or FTS  
624-5974).

*9th Topical Meeting on Technology of Fusion Energy*,  
Oct. 8-12, 1990, Chicago, sponsored by the  
American Nuclear Society. Contact: Dr. Charles  
Baker, Argonne National Laboratory, 9700 S. Cass  
Ave., Argonne, IL 60439 (phone 312-972-4836, FTS  
972-4836).

#### November 1990

*American Nuclear Society Winter Meeting*, Nov.  
11-16, 1990, Washington, D.C. Contact: Mary  
Keenan, Meetings Manager, ANS, 555 N.  
Kensington Ave., La Grange Park, IL 60525.

## SEPTEMBER ACCESSION OF LITERATURE

The following literature cited has been ordered for review, and that selected as suitable will be placed in the RSIC Information Storage and Retrieval Information System (SARIS). This early announcement is made as a service to the shielding community. Copies of the literature are not distributed by RSIC. 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.

RSIC maintains a microfiche file of the literature entered into SARIS, and duplicate copies of out-of-print reports may be available on request. Naturally, we cannot fill requests for literature which is copyrighted (such as books or journal articles) or whose distribution is restricted.

**This Literature is on order. It is not in our system. Please order from NTIS or other available source as indicated.**

#### RADIATION SHIELDING LITERATURE

**CONF-880404**, . . *Dose Estimation in Case of LOCA Followed by Core Melt-Down in the Argos PHWR-380 MWe*, . . Conte, M.C., . . 1988, . . Pergamon Press, Sydney, Australia, . . IRPA, . . In: Radiation Protection Practice, Proceedings of 7. International Congress of the IRPA, Sydney, Australia, 10-17 April 1988

**CONF-880404**, . . *Collective Dose Commitment in Sweden after the Chernobyl Accident: Calculation for Inhalation and External Irradiation*, . . Finck, R.; Ed-

varson, K.; De Geer, L.E.; Bjurman, B.; Vintersved, I.; Arntsing, R.; Jacobsson, S., . . 1988, . . Pergamon Press, Sydney, Australia, . . IRPA, . . In: Radiation Protection Practice, Proceedings of the 7. International Congress of the IRPA, Sydney, Australia, 10-17 April 1988

**CONF-880404**, . . *Computer Model on Consequences of Sudden Release of Radioactivity into the Environment*, . . Chandrasekhar, M.; Kumar, H.; Ramaseshu, P.; Gupta, M.M.; Reddy, A.R., . . 1988, . . Pergamon Press, Sydney, Australia, . . IRPA, . . In: Radiation Protection Practice, Proceedings of the 7. International Congress of the IRPA, Sydney, Australia, 10-17 April 1988

**The following papers are from the Proceedings of the 7th International Conference on Radiation Shielding, Bournemouth, UK, 12-16 Sept. 1988.**

**CONF-880906-Vol.1, pp.103-113 (In French)**, . . *Collection of Measurements and Study of the Contamination of Circuits (EMECC)*, . . Eimecke, R.; Anthoni, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency

**CONF-880906-Vol.1, pp.117-124**, . . *The Role of Cost-Effectiveness in Radiation Shielding Design Analysis*, . . Hobson, J.M.; Towey, G.A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency

**CONF-880906-Vol.1, pp.125-132**, . . *A New Formulation of the Order of Scattering Method*, . . Simovic, R., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency

- CONF-880906-Vol.1, pp.133-141**, . . *A Trial of Vectorized Neutron Transport Monte Carlo*, . . Taylor, N.P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.142-155**, . . *The Finite Element Code FELTRAN: Benchmark Applications and Further Development*, . . Issa, J.G.; Goddard, A. J.H., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.15-26**, . . *Shielding Experimental Benchmark Data Base at the Nuclear Energy Agency Data Bank*, . . Miller, P.; Nagel, P.; Salvatores, M.; Sartori, E., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.159-163**, . . *Photofission in Pressure Vessel Dosimetry*, . . Williamson, T.G., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.164-172**, . . *ARCAS-A Facility for the Validation of Improved Gamma-Ray Shielding Methods*, . . Cowan, P.; Curl, I.J.; Miller, P.C.; Phillips, A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.173-177**, . . *Calculations of EURACOS Iron Benchmark Experiment Using the HYBRID Method*, . . Liu, Y.W.H.; Wun, C.C.; Rief, H., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.178-182**, . . *Need for High Energy Nuclear Data Libraries in Particle Accelerator Shielding Calculations*, . . Cerullo, N.; Bergamini, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.183-187**, . . *Photo Excitation of  $^{93}\text{mNb}$* , . . Williamson, T.G.; Lamaze, G.P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.188-192**, . . *Re-Evaluation of Dose Buildup Factors for Heavy Lead Glass Based on Its Gamma Energy Absorption Measurements*, . . Ishitsuka, T.; Kadotani, H.; Kishida, N.; Ishikawa, S.; Nakano, K.; Miyasaka, S.; Hibana, H.; Suzuka, T., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.193-200**, . . *The NES-SUS Reference Field in the NESTOR Reactor at Winfrith*, . . Carter, M.D.; Curl, I.J.; Murphy, M.F.; Packwood, A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.201-205**, . . *Current Status of the  $(\alpha, n)$  Reaction Cross Sections for Light Nuclides and Neutron Yields in Spent Fuel*, . . Okuda, Y.; Matsunobu, H., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.206-211**, . . *Interpretation of the EURACOS Iron and Sodium Benchmarks*, . . Perlini, G.; Rief, H.; Vittone, E.; Burn, K., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.212-218**, . . *Compilation of MCNP Data Library Based on JENDL-3T and Test Through Analysis of Benchmark Experiment*, . . Sakurai, K.; Sasamoto, N.; Kosako, K.; Ishikawa, T.; Sato, O.; Oyama, Y.; Narita, H.; Maekawa, H.; Ueki, K., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.219-225**, . . *Transport Calculations for the PCA-Replica Shielding Benchmark: A Validation of JEF-1 Data and SN Codes for the Prediction of LWR's Pressure Vessel Neutron Damage*, . . Pescarini, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.226-230**, . . *Experimental Simulation and Characterization of Neutron Spectra for Calibrating Radiation Protection Devices*, . . Chartier, J.L.; Posny, F.; Medioni, R.; Sueur, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.231-239**, . . *The Use of a Dimple Mock-Up Experiment to Assess the Uncertainties in the Radial Shield Fluxes of a PWR*, . . Knipe, A.D.; Miller, P.C.; Greenhouse, K.G.; Murphy, M.F., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.240-244**, . . *Adjustment of Neutron Cross-Sections for Sodium Starting from Different Angular Moments*, . . Pfister, G.; Hehn, G.; Mattes, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.245-250**, . . *French Studies for Improvement of the Data for Radioactive Sources*, . . Duchemin, B.; Blachot, J.; Chouha, M.; Nimal, B.; Nimal, J.C., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.251-255**, . . *Measurements of Differential Neutron Dose-Albedo for Finite Slabs*, . . Sakamoto, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.256-261**, . . *Measurement of Neutron Energy Spectra Emerging from a Laminated Shield Due D-T Source and Comparison with Calculations*, . . Coelho, P.R.P.; Maiorino, J.R.; Mendonça, A.G.; Silva, A.A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.262-267**, . . *Dose Equivalent of Fission Neutrons Transmitted Through Iron Slabs*, . . Pavlović, R.S.; Ninković, M.M.; Glodić, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.268-272**, . . *Semiempirical Functions for Electromagnetic Radiation Cross Sections*, . . Legarda, F.; de Lafuente, O.M.; Herranz,

- M., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.27-36, . . . A Computer Based Doserate Estimation Method for Complex Distributed Source Geometries, . . .** Beecroft, D; Tee, M.P.; Welsh, C.R.; Shaw, I.P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.277-286, . . . Analysis of Flux Distributions in the Shields Measured at the Super-Phenix Start-Up, . . .** Cabrillat, J.C.; Calamand, D.; Palmiotti, G.; Robinson, P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.287-296, . . . Dosimetry and Fluence Calculations on French PWR Vessels: Comparisons Between Experiments and Calculations, . . .** Nimal, J.C.; Bourdet, L.; Lloret, R.; Bevilaqua, A.; Guilleret, J.C.; Hedin, F., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.297-306 (In French), . . . Protections Neutroniques du Stockage Interne dans un Reacteur a Neutrons Rapides de 1 500 MWe, . . .** Cerdan, C.; Maire, D.; Harrer, A.; Calamand, D., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.307-316, . . . Monju Reactor Shielding Characteristics and Measurement Plan, . . .** Suzuki, T.; Isumi, A.; Namiki, S.; Shiina, A.; Sasaki, K.; Nishi, H.; Aoki, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.321-330, . . . Experiment and Analysis on the Behavior of 14 MeV Neutrons Incident to a Large Cavity, . . .** Tanaka, S.I.; Nakashima, H.; Hasegawa, A.; Kotegawa, H.; Suzuki, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.331-340, . . . Measurement and Analysis of Neutron Spectra in a Large Cylindrical Iron Assembly Irradiated by 13 MeV Neutrons, . . .** Oishi, K.; Ikeda, Y.; Konno, C.; Nakamura, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.341-350, . . . Benchmark Experiment of Fusion Neutron Streaming Through Iron Shields and the Analysis by the Three-Dimensional Transport Calculation Code, TRISTAN, . . .** Oka, Y.; Shin, K.; Ida, T.; Aoki, M.; Kasamo, T.; Yamamoto, J.; Takahashi, A.; Sekimoto, H.; Sakamoto, S., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.355-364, . . . Development of a Vectorized Version of the DOT Code for an IBM 3090/200 Computer, . . .** Barbucci, P.; Mariotti, G., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.365-375, . . . Development and Application of Vectorized Three-Dimensional Discrete Ordinates Transport Code, . . .** Tada, K.; Yokobori, H.; Nishimura, T.; Totsuka, S., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.37-47, . . . A Review of LWR Pressure Vessel Dosimetry and Associated Shielding Studies, . . .** Miller, P.C., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.48-57, . . . Neutron Activation Screening Tests of Raw Materials for Developing Low-Activation Concrete Shield, . . .** Kinno, M.; Ishikawa, T.; Kimura, K.; Nakamura, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.63-73, . . . Source Term and Shielding Calculations to Support Decommissioning of Shippingport Reactor, . . .** Morford, R.J.; Bunch, W.L.; Carter, L.L.; Daughtry, J.W.; Schwarz, R.A.; Stinson, W.P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.74-83, . . . A Computer System for the Assessment of Post Accident Doserates, . . .** Dolan, A.; Tee, M.P.; Shaw, I.P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.84-92, . . . Calculation with the Monte Carlo Code Tripoli-2 of the G2 and Chinon A-2 Structure Activation in View of Their Dismantling, . . .** Eid, M.; Diop, C.M.; Nimal, J.C., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.1, pp.93-102, . . . Radioactive Assaying and Shielding Requirements of WAGR Decommissioning, . . .** Burstall, R.B.; Lloyd, J.M.; Salmon, M.J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.379-388, . . . An Approximate Formula for Neutron and Gamma-Ray Streaming Through Ducts and Slits, . . .** Shin, K., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.389-398, . . . Design Method of Compensational Shield for Shield Irregularities of Reprocessing Plant, . . .** Yamaji, A., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.399-408, . . . MCNP Simulation of Two GCFR Deep Penetration and Streaming Configurations, . . .** Arkuszewski, J.J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.409-418, . . . Three-Dimensional Calculations of Neutron Streaming in the Beam Tubes of the ORNL HFIR Reactor, . . .** Childs, R.L.; Rhoades, W.A.; Williams, L.R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.419-428, . . . Calculation of Gamma Ray Streaming Through Bent Ducts, . . .**



- . Diop, C.M.; El Hamzaoui, B.; Lee, Y.K.; Nimal, J.C.; Vergnaud, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.433-442, . . . Benchmark Experiment and Analysis of Neutron Penetration Through FBR Radial Shield Mockups, . . .** Ohtani, N.; Suzuki, S.; Shirakata, K.; Takemura, M.; Uematsu, M.; Ohta, S.; Handa, H.; Suzuoki, Z.; Tsunoda, H.; Oka, Y., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.443-454, . . . The JASON Experimental Program to Validate B<sub>4</sub>C/Steel Shield Design, . . .** Calamand, D.; Maire, M., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.455-463, . . . Interpretation of Neutron Spectra Unfolded from Bonner Ball Detector Responses in TSF Shielding Benchmark Experiments, . . .** Uematsu, M.; Kawai, M.; Nishi, H.; Ohtani, N., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.464-473, . . . Measurements of Continuous Gamma-Ray Spectra Inside the Containment of a 950 mW PWR by Using NE-213 Spectrometry System, . . .** Shiue, B.W.; Wu, H.Y.; Jiang, S.H., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.477-481, . . . A Comparative Study of Shielding Design Between Three Advanced Marine Reactors in Concept, . . .** Ise, T.; Itoh, Y.; Narita, H.; Ishitsuka, T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.482-486, . . . Shielding Performance of the Net Vacuum Vessel, . . .** Arkuszewski, J.J.; Jaeger, J.F., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.487-493, . . . Optimum Arrangement for Neutron and Secondary Gamma-Ray Dose Rates of an Iron-Polyethylene Shielding System, . . .** Ueki, K.; Namito, Y., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.494-500, . . . Moderator Heat Loads in CANDU Reactors, . . .** Boss, C.R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.501-508, . . . A Transportable Neutron Spectrometer (TNS) for Radiological Applications, . . .** Armishaw, M.J.; Butler, J.; Carter, M.D.; Curl, I.J.; McCracken, A.K., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.509-513, . . . Experimental and Computational Study of Ordinary Concrete Shielding Properties, . . .** Simović, R.; Marinković, N.; Pešić, M.; Stančić, V., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.514-518, . . . Shielding Aspects of a Small District Heating Reactor, . . .** Jaeger, J.F.; Herrnberger, V.; Francioni, W., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.519-523, . . . Study on the Radiation Source in the Cover Gas System of LMFBR, . . .** Hayashida, Y.; Yamauchi, K.M.; Miyagi, K.; Kawai, M.; Endo, H.; Nishi, H., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.524-529, . . . Occupational Exposure to Radioactivity at PWRs: An International Perspective, . . .** Kallenbach, U.; Benedittini, M.; Lochard, J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.530-535, . . . Radiation Shielding Design of a 1.3 GeV Electron Synchrotron SRRS, . . .** Jiang, S.H.; Wang, J.P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.536-542, . . . Improved Microcalorimetry for Shielding Benchmark Experiments, . . .** Mason, J.A.; Bainbridge, N.; Heffer, P.J.H.; Curl, I.J.; Miller, P.C., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.543-552, . . . Neutron Fluxes Around the Pressure Vessels of the Hunterston A Reactors, . . .** Avery, A.F.; Eaton, J.R.P.; Tilbury, J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.553-559, . . . Use of Semiconductor Detectors in Personal Dosimetry, . . .** Jung, M.; Fasasi, M.; Teissier, C.; Siffert, P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency Bournemouth, UK, 12-16 September 1988
- CONF-880906-Vol.2, pp.560-564, . . . Neutron Transport and Shielding Properties Studies of Poly-Boron and Ilmenite-Magnetite Concrete Developed Locally with Indigeneous Resources, . . .** Bhuiyan, S.I.; Ahmed, F.U.; Mollah, A.S.; Rahman, M.; Rahman, M.A., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.565-571, . . . A Review of Some Shielding Calculations for the European Demonstration Reprocessing Plant (EDRP), . . .** Lloyd, J.M.; Robinson, P.J.; Dean, M.H., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.572-577, . . . Limacrete - An All Purpose Radiation Shielding System, . . .** Coleman, F.J.; Tombleson, R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.578-582, . . . Experimental and Theoretical Investigations of the Neutron Flux Distribution Outside the Core of the WWER-1000 Reactor Type, . . .** Ošmera, B.; Rataj, J.; Moryakov, A.V.; Khrustalev, A.V.; Janský, B.; Marek, M.; Holman, M.; Mařík, P.; Hógel, J.; Vychytil, F.; Brodtkin, E.G.; Zaritskii, S.M., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency

- CONF-880906-Vol.2, pp.583-588**, . . *Comparison of Calculated and Measured Dose Rates on Operating Plant*, . . Watmough, M.H.; Hobson, M.J., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.589-594**, . . *Estimation of Radiation-Dose Distribution Within and Around Linear Accelerator Medical Room*, . . Takeuchi, K.; Takaku, Y., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.595-599**, . . *Shielding Design Analyses of a Research Reactor with High Quality Neutron Beam Hole*, . . Ise, T.; Maruo, T.; Kawasaki, H.; Ishikawa, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.600-604(In French)**, . . *Un Materiel Bon Marche Contre les Neutrons: Le Colemanite*, . . Bayülken, A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.605-611**, . . *Radiation Field and Material Mismatch in Metrology Measurements in Shielding Benchmark Experiments*, . . Mason, J.A.; Bainbridge, N.; Heffer, P.J.H., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.612-616**, . . *Shield Calculation Analysis for an Argonaut Type Reactor in Brazil*, . . Pontedeiro, E.; dos Santos, R., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.621-638**, . . *Progress in Nodal Transport Methods*, . . Badruzzaman, A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.639-655**, . . *The Finite Element Method Comes of Age for Shielding Calculations*, . . Ackroyd, R.T., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.656-666**, . . *State-of-the-Art Monte Carlo 1988*, . . Soran, P.D., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.671-680**, . . *Radiation Shielding Analysis of the Fugen Nuclear Power Station*, . . Andoh, Y.; Nakamura, T.; Shibuya, S.; Handa, H.; Ishikawa, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.681-691**, . . *Calculations of the Neutron and Gamma Ray Fluxes at Ex-Core Instrumentation Locations in the Sizewell 'B' PWR*, . . Cripps, S.J.; Kinniburgh, C.G.; Whyman, E.K.; Miller, P.C., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.692-701**, . . *Shielding Design in the Cost Reduction Design Study of Demonstration LMFBR in Japan*, . . Hayashi, H.; Nishi, H.; Sasaki, K.; Handa, H., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.702-710**, . . *Neutron Scattering Through the Main Loop Penetrations of the Sizewell 'B' PWR*, . . Kinniburgh, C.G.; Smith, P.N., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.711-720(In French)**, . . *Reacteur a Neutrons Rapides de 1 500 MWe Fermetures Superieures du Bloc Reacteur Evolution de la Conception des Protections Biologiques*, . . Maire, D.; Peyrard, G.; Harrer, A., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.725-733**, . . *Monte Carlo Sensitivity Analysis of Winfrith Benchmark Experiments Using JEF-1 Cross Sections*, . . Wright, G.A.; Curl, I.J.; Hoare, C.J.; McCracken, A.K.; Miller, P.C.; Ziver, A.K., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.734-743**, . . *High Order Sensitivity Methods for Shielding Analysis*, . . D'Angelo, A.; Gandini, A.; Palmiotti, G.; Salvatore, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.744-751**, . . *A One- and Two-Dimensional Cross-Section Sensitivity and Uncertainty Path of the AARE Modular Code System*, . . Davidson, J.W.; Dudziak, D.J.; Higgs, C.E.; Stepanek, J., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.752-765**, . . *Multidimensional Transport Sensitivity for Shielding Analysis*, . . Palmiotti, G.; Salvatore, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.769-781(In French)**, . . *Analysis Methods for Optimization of Radiation Protection of Space Vehicles*, . . Estienne, J.P.; Ferrante, J.G., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.782-792**, . . *Applications of Radiation Transport to Spacecraft Shielding*, . . Hammond, N.D.; Comber, C.; Dyer, C.S.; Sims, A.J.; Truscott, P.R., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.2, pp.793-802**, . . *A Development of the Standardized Intelligent Shielding Analysis Code Package: INTEL-BERMUDA*, . . Hasegawa, A.; Nakashima, H.; Tanaka, S.I.; Suzuki, T., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1005-1010**, . . *Neutron and Gamma Transport in Air by Tripoli-2 Time Dependent Energy Deposition and Electron Current Calculation*, . . Vergnaud, T.; Nimal, J.C.; Ulpas, J.P.; Faucheux, G., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency

- CONF-880906-Vol.3, pp.1011-1015**, . . *Gamma Ray Streaming and the Pebbles Effect in Shielding Heterogeneities*, . . Bufalino, D.; Fratangelo, P.; Cerullo, N.; Riscossa, P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1016-1020**, . . *Analysis of the Experiments on the Source Intensity of Spent Fuel and Shielding of Transport Cask*, . . Sakamoto, Y.; Kotegawa, H.; Naito, Y.; Tanaka, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1021-1025**, . . *A Computerized Approach to the Shielding Design and Dose Verification for Nuclear-Fuel-Cycle-Plants*, . . Landeyro, P.A.; Carotenuto, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1026-1031**, . . *Package Type A and Shielding for <sup>226</sup>Ra Needles Transportation*, . . Sahyun, A.; Sordi, G.M.A.A.; Rela, P.R., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1032-1036**, . . *Comparison Between Measured and Analyzed Dose Rates of MSF-1 Cask and Validation of Its Shielding Design*, . . Nakata, M.; Ohashi, M., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1037-1042**, . . *MAR-MER, A Flexible Point-Kernel Shielding Code*, . . Kloosterman, J.L.; Hoogenboom, J.E., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1043-1049**, . . *A Computer Code to Assess Component Activation Inventories - CAIRN*, . . Collett, E.M.; Tee, M.P.; Shaw, I.P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1050-1057**, . . *A System for Dose Limitation and ALARP Assessment Applied to a Nuclear Facility Design*, . . Hobson, J.M.; Cooper, A.J.; Deakin, J., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1058-1062**, . . *Exposure Buildup Factors for Slant Penetration Through Slab Shield from Point Isotropic Gamma-Ray Source*, . . Kanai, Y.; Nariyama, N.; Takeuchi, K., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1063-1067**, . . *A Dose Calculation Code MANYCASK Based on a New Principle of Improving Calculation Efficiency*, . . Yamakoshi, H.; Yamaji, A.; Ueki, K.; Namito, Y., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1068-1076**, . . *A Study into Photoneutron Production in Lead*, . . Armishaw, M.J.; Carter, M.D.; Curl, I.J.; Hoare, C.J.; Packwood, A.; Power, S., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1077-1081**, . . *The Application of the MARC Code to Shielding Work*, . . King, D.C.; Lloyd, J.M.; Wall, S.J., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1082-1088**, . . *Calculation of the Response Matrix of Ex-Core Neutron Detector in the Italian Unified Core PWR Design*, . . Burn, K.W.; Monti, S.; Meda, N.; Riscossa, P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1089-1095**, . . *Shielding Calculations for Fast Reactor Spent Fuel Flasks*, . . Dean, M.H.; Darby, W.P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1096-1103**, . . *A Potential Treatment of Voids in Finite Element Neutron Transport Theory*, . . Schofield, S.L., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1107-1118**, . . *The Quality Assurance of the Shield Design Methods Used in the UK*, . . Miller, P.C.; Walker, S.D., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1119-1124**, . . *European Collaboration on Fast Reactor Shielding*, . . Burs-tall, R.F.; Calamand, D.; Salvatores, M.; Cleri, F.; Erd-mann, M.; Miller, P.C., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1125-1134**, . . *The Status of ENDF/B-VI*, . . Roussin, R.; Dunford, C.; McKnight, R.; Young, P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1135-1142**, . . *RSIC After 25 Years--Challenges and Opportunities*, . . Roussin, R.W.; Maskewitz, B.F.; Trubey, D.K., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1145-1154**, . . *New Dose-Mortality Data Based on 3-D Radiation Shielding Calculation for Concrete Buildings at Nagasaki*, . . Rhoades, W.A.; Childs, R.L.; Ingersoll, D.T., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1155-1164**, . . *Verification of Dose Prediction Methods for Increased Environmental Radiation and Study of Effective Protection Measures*, . . Hehn, G.; Jehle, K.; Böhm, A.; Pfister, G., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.1165-1174**, . . *Radiation Protection and Shielding Design of Nuclear Power Plants*, . . Lahti, G.P., . . 1989, . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.807-816**, . . *Comparison of Computational Methods for Analysis of Spent Fuel Cask Shielding*, . . Parks, C.V.; Broadhead, B.L., . .

- Tang, J.S., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.817-823**, . . . *Overview of Experiment-Calculation Interpretations Made in France on Fuel Spent Shipping Cask*, . . . Nimal, J.C.; Diop, C.M.; Dupont, C.; Lejeune, E.; Cagnon, R.; Blum, P.; Morin, P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.824-833**, . . . *Shielding Calculations for Fuel Transport Flasks*, . . . Avery, A.F.; Locke, H.F., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.834-843**, . . . *The ENEA Contribution to the NEA-CRP International Intercomparison of Codes for Radiation Protection Assessment of Spent Fuel Transport Flasks*, . . . Gualdrini, G.F.; Burn, K.W.; Casalini, L.; Peerani, P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.847-854**, . . . *Refinement of BWR Pressure Vessel Surveillance Dosimetry Evaluation*, . . . Mitsuhashi, I.; Hashimoto, K., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.855-865**, . . . *Neutron Dosimetry and Pressure Vessel Neutron Damage Analysis for the Decommissioned LWR Gundremmingen A*, . . . Prillinger, G.; Föhl, J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.866-878**, . . . *Activities of the SCK/CEN in the Frame of LWR Pressure Vessel Dosimetry*, . . . Minsart, G.; D'Hondt, P.; Fabry, A.; Ait Abderrahim, H.; de Raedt, C.; Leenders, L.; Menil, R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.879-888**, . . . *Dosimetry and Fluence Calculations on French PWR Vessels: Comparisons Between Experiments and Calculations*, . . . Nimal, J.C.; Bourdet, L.; Lloret, R.; Bevilaqua, A.; Guilleret, J.C.; Hedin, F., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.893-902**, . . . *Shielding Design of High Energy Heavy Ion Medical Accelerator*, . . . Kato, T.; Nakamura, T.; Sato, Y., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.903-911**, . . . *Shielding of High Energy Heavy Ion Accelerators*, . . . Weise, H.P., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.912-921**, . . . *Shielding Calculations for the Milan Superconducting Cyclotron*, . . . Ferrari, A.; Fassò, A.; Birattari, C., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.922-932**, . . . *The Radiation Field Near an Iron Shielded Dump for 600 MeV Protons*, . . . Herrnberger, V.; Janett, A.; Duvoisin, J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.933-943**, . . . *Shielding the LANSCE 800-MeV Spallation Neutron Source*, . . . Russell, G.J.; Legate, G.L.; Robinson, H.; Woods, R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.947-956**, . . . *Monte Carlo Applications for the Design and Operation of Nuclear Facilities*, . . . Carter, L.L.; Bunch, W.L.; Morford, R.J.; Wootan, D.W.; Schwarz, R.A., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.957-971**, . . . *Developments in the Direct Statistical Approach to Monte Carlo Optimization*, . . . Burn, K.W.; Dubi, A.; Goldfeld, A.; Tinti, R., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.972-981**, . . . *The Implementation and Validation of a New n-g Coupled Capability in the Monte Carlo Code MCBEND*, . . . Chucas, S.J.; Avery, A.F.; Curl, I.J.; Hoare, C.J., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.982-991**, . . . *The All Particle Method: Coupled Neutron, Photon, Electron, Charged Particle Monte Carlo Calculations*, . . . Cullen, D.E.; Perkins, S.T.; Plechaty, E.F.; Rathkopf, J.A., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- CONF-880906-Vol.3, pp.992-1001**, . . . *Multi-Detector Monte Carlo Calculation Using MDM Biasing Parameters*, . . . Su, M.F.; Jiang, S.H.; Chen, H.T., . . . 1989, . . . UKAEA Winfrith and the OECD Nuclear Energy Agency
- Ann. Nucl. Energy**, 15(9), 457-469, . . . *Fission Neutron Penetration in Iron and Sodium -1. Activation Measurements*, . . . Nicks, R.; Perlini, G.; Rief, H., . . . 1988
- Ann. Phys.**, 45(4), 271-277, . . . *Fast Neutron Albedo Calculations for Concrete Shield With Different Curvatures*, . . . Sayed Ahmed, F.M.; Salama, M., . . . August 1988
- Health Phys.**, 57(23), 439-448, . . . *Nuclear Accident Dosimetry Intercomparison Studies*, . . . Sims, C.S., . . . September 1989
- Isotopenpraxis**, 25(1), 20-21, . . . *Area Monitoring Using Neutron Albedo Thermoluminescence Dosimeters*, . . . Kotb, M.A.; Moustafa, H.R.; Gomaa, M.A.; El-Fiki, M.A., . . . January 1989
- Isotopenpraxis**, 25(1), 34-37, . . . *A New Statistical Calculation of Scattered Neutrons in an Infinite Slab*, . . . Selim, Y.S.; Azzam, A.A., . . . January 1989
- Nucl. Sci. Eng.**, 103(1), 1-11, . . . *Angular Fokker-Planck Decomposition and Representation Techniques*, . . . Landesman, M.; Morel, J.E., . . . September 1989

**Nucl. Sci. Eng.**, **103(1)**, **12-24**, . . . *Advanced Methods Comparisons of Reaction Rates in the Purdue Fast Breeder Blanket Facility*, . . Hill, R.N.; Ott, K.O., . . Sept. 1989

**Nucl. Sci. Eng.**, **103(1)**, **25-36**, . . . *Directional Effects in Transitional Resonance Spectra and Group Constants*, . . Hill, R.N.; Ott, K.O.; Rhodes, J.D., . . September 1989

**Nucl. Sci. Eng.**, **103(2)**, **46-58**, . . . *Experimental and Analysis of Neutron Spectra in a Concrete Assembly Bombarded by 14-MeV Neutrons*, . . Oishi, K.; Ikeda, Y.; Maekawa, H.; Nakamura, T., . . Sept. 1989, . . JAERI

**Nucl. Technol.**, **87(1)**, **305-312**, . . . *Three Mile Island Unit 2 Fission Product Inventory Estimates*, . . Akers, D.W.; Tolman, E.L.; Kuan, P.; Golden, D.; Nishio, M., . . August 1989

**Nucl. Technol.**, **86(3)**, **305-312**, . . . *Long-Term Isolation of High-Level Radioactive Waste in Salt Repositories Containing Brine*, . . Schweitzer, D.G.; Sastre, C.A., . . September 1989

**Sov. At. Energy (Engl. Transl.)**, **63(3)**, **705-709**, . . . *Self-Absorption Coefficients for Monoenergetic Unidirectional Gamma Radiation from Cylindrical Sources*, . . Dvoretzki, V.G.; Smirnov, V.P.; Rabinovich, A.D., . . March 1988

**Sov. J. Nondestr. Test.**, **22(11)**, **756-759 (Engl. Transl.)**, . . . *Calculations of x- and Gamma-Radiation Fields in Absorbers of Complex Geometry*, . . Gusev, E.A.; Potapov, V.M., . . July 1987

**Trans. Theory Stat. Phys.**, **18(2)**, **205-219**, . . . *Spatial Domain Decomposition for Neutron Transport Problems*, . . Yavuz, M.; Larsen, E.W., . . 1989

**ANL/FPP/TM-241**, . . . *KOAS/LIB-V: A Library of Nuclear Response Functions Generated by KAOS-V Code from ENDF/B-V and Other Data Files*, . . Farawila, Y.; Gohar, Y.; Maynard, C., . . April 1989, . . NTIS

**BNL-42601**, . . . *Higher Order Hybrid Monte Carlo Algorithms*, . . Creutz, M., . . March 1989, . . NTIS

**DOE-NE-44139-40**, . . . *Preliminary Design of the High-Level Waste Canister Storage System*, . . Peters, F.E.; Leap, D.R., . . November 1987, . . West Valley Nuclear Services Co., Inc., West Valley, NY

**INDC(CSR)-016/LJ**, . . . *PEQAC: A PC Version of Fully Pre-Equilibrium Computer Code with Gamma Emission*, . . Betak, E., . . June 1989, . . IAEA

**JAERI-M-89-046**, . . . *Evaluation of Neutron Nuclear Data of B-11*, . . Fukahori, T., . . April 1989, . . JAERI

**JINR-D-4-89-241**, . . . *New Method for Solving Multidimensional Scattering Problem*, . . Melezchik, V.S., . . 1989, . . Joint Inst. of Nuclear Research, Dubna, USSR

**JUEL-2202**, . . . *A Monte-Carlo Test Program With Vectorized Geometry Routines*, . . Cloth, P.; Filges, D.,

. . May 1988, . . INIS, . . Kernforschungsanlage Juelich, F.R. Germany

**KEK Preprint 89-33**, . . . *High Energy Physics Computing in Japan*, . . Watase, Y., . . July 1989, . . National Laboratory for High Energy Physics, Japan, . . To appear in the proceedings of Computing in High Energy Physics '89 held at University of Oxford, 10-14 April, 1989

**KEK Preprint 89-5**, . . . *Radiation Detectors and Their Uses*, . . Miyajima, M.; Sasaki, S.; Doke, T., . . July 1989, . . National Laboratory for High Energy Physics, Japan, . . In: Proceedings of the Fourth Workshop on Radiation Detectors and Their Uses, KEK, Japan, January 24-25, 1989

**KEK Preprint 89-8**, . . . *Estimation of Absorbed Dose Due to Gas Bremsstrahlung from Electron Storage Rings*, . . Ban, S.; Hirayama, H.; Miura, S., . . April 1989, . . National Laboratory for High Energy Physics, Japan, . . To be published in Health Phys.

**NUREG/CR-3469-Vol 4**, . . . *Occupational Dose Reduction at Nuclear Power Plants: Annotated Bibliography of Selected Readings in Radiation Protection and ALARA*, . . Khan, T.A.; Baum, J.W., . . June 1989, . . NTIS

**NUREG/CR-4214, REV.1, PT.2**, . . . *Health Effects Models for Nuclear Power Plant Accident Consequence Analysis - Low Let Radiation, Part II: Scientific Bases for Health Effects Models*, . . Abrahamson, S., . . May 1989, . . NTIS

**NUREG/CR-5387**, . . . *Low-Level Waste Shallow Land Disposal Source Term Model: Data Input Guides*, . . Sullivan, T.M.; Suen, C.J., . . July 1989, . . NTIS

**NUREG/CR-5391**, . . . *Flow of Groundwater and Transport of Contaminants Through Saturated Fractured Geologic Media*, . . Steele, T.D., . . June 1989, . . NTIS, . . In-Situ, Inc., Laramie, WY

**UCID-21514, REV.1**, . . . *A Compendium of Computer Codes for the Research in Magnetic Fusion Energy*, . . Porter, G.D., . . June 1989, . . NTIS

## COMPUTER CODES LITERATURE

CEA-CONF-9711 . . . . . FPDL; RUDSTAN  
CEA Fission Product Radioactivity Data File and Its Assessment, . . Duchemin, B.; Nimal, B.; Nimal, J.C.; Blachot, J., . . CEA Centre d'Etudes Nucleaires de Saclay, Gif-sur-Yvette, France, . . 1988, . . AVAIL: INIS (microfiche only)  
CNEN-DR-GAPS-RA-01/88 (In Portuguese) . . . . .  
. . . . . ELEBRA MX-850  
Use of Source Term Code Package in the ELEBRA MX-850 System, . . Guimaraes, A.C.F.; Goes, A. G.A., . . Comissao Nacional de Energia Nuclear, Rio de Janeiro, Brazil, . . December 1988, . . AVAIL: INIS (microfiche only)  
ENEA-RT-PAS-88-17 (In Italian) . . . . . SMANT  
SMANT: A Complete Code to Determine the

- Optimal Sequence of Dismantling of Nuclear Power Plant Components in Order to Reduce Occupational Doses., . . Mincarini, M., . . ENEA, Casaccia, Italy, . . 1988, . . AVAIL: INIS (microfiche only)
- EPRI-NP-4574-CCM-Pt.2-Ch.11-Vol.1 . . NODE-P2 ARMP-02 Documentation: Part 2, Chapter 11, NODE-P2 Computer Code Manuals: Volume 1, Theory and Numerics., . . Mosteller, R.D., . . Electric Power Research Inst., Palo Alto, CA; S. Levy, Inc., Campbell, CA, . . October 1988, . . Research Reports Center, Box 50490, Palo Alto, CA 94303
- EPRI-NP-4574-CCM-Pt.2-Ch.11-Vol.2 . . NODE-P2 ARMP-02 Documentation: Part 2, Chapter 11, NODE-P2 Computer Code Manuals: Volume 2: User's Manual., . . Mosteller, R.D., . . Electric Power Research Inst., Palo Alto, CA; S. Levy, Inc., Campbell, CA, . . October 1988, . . Research Reports Center, Box 50490, Palo Alto, CA 94303
- IEEE Trans. Nucl. Sci., 36(1), 615-19 . . . . VAXGAP VAXGAP., . . William, E.W.; Hartwell, J.K., . . EG and G Idaho, Inc., Idaho Falls, ID, . . February 1989
- INIS-SU-85, 56-60 (In Russian) . . . . DEMETRA-ES DEMETRA-ES Program., . . Trukhanov, G.Ya., Maglevannyj, I.I.; Abdullaev, Kh.Sh., . . 1988, . . AVAIL: INIS (microfiche only)
- INIS-SU-85, 66-67 (In Russian) . . . . . GABI GABI Program Abstract., . . Biryuk, G.I.; Glushkov, E.S., . . 1988, . . AVAIL: INIS (microfiche only)
- INIS-SU-85, 67-69 (In Russian) . . . . . PRECON PRECON Program Abstract., . . Baranov, O.V., . . 1988, . . AVAIL: INIS (microfiche only)
- INIS-SU-85, 69-70 (In Russian) . . . . . ARADAR ARADAR Program Abstract., . . Glushkov, E.S.; Petushkova, N.A., . . 1988, . . AVAIL: INIS (microfiche only)
- INIS-SU-85, 71-72 (In Russian) . . . . . RADIKF; RADIKF-ES Abstract of the RADIKF and RADIKF-ES Programs., . . Boyarinov, V.F., . . 1988, . . AVAIL: INIS (microfiche only)
- J. Radioanal. Nucl. Chem., 124(2), 481-99 .RAYGUN Adaptation and Implementation of the RAYGUN Gamma-Ray Analysis Code on the IBM PC., . . Hensley, W.K.; Lepel, E.A.; Yuly, M.E.; Abel, K.H., . . Pacific Northwest Lab., Richland, WA, . . October 1988
- Nucl. Sci. Eng., 99(2), 145-56 . . . . . EGS4 Effects of Incoherent and Coherent Scattering on the Exposure Buildup Factors of Low-Energy Gamma Rays., . . Hirayama, H.; Trubey, D.K., . . National Lab. for High Energy Physics, Ibaraki, Japan; Oak Ridge National Laboratory, TN, . . June 1988
- NUREG/CR-5183 . . . . . MIGRAT A User's Manual for the Contaminant Transport Module of the MIGRAT Code., . . Nestor, C.W., Jr.; Pin, F.G.; Reister, D.B.; Witten, A.J., . . Nuclear Regulatory Commission, Washington, D.C.; Oak Ridge National Laboratory, TN, . . October 1988, . . AVAIL: NTIS; INIS (microfiche only)
- RAE-TM-Space-365 . . . . . PARTICLE TRANSPORT Particle Transport Simulation for Spaceborne, NaI Gamma-Ray Spectrometers., . . Dyer, C.S.; Truscott, P.R.; Sims, A.J.; Comber, C.; Hammond, N.D.A., . . Royal Aircraft Establishment, Farnborough, United Kingdom, . . November 1988, . . AVAIL: INIS (microfiche only)
- RTS-R-002 . . . . . MARC/PN MARC/PN. A Computer Program to Solve the Multigroup Neutron Transport Equation., . . Fletcher, J.K., . . UKAEA Risley Technical Services, Risley, U.K., . . July 1988, . . AVAIL: INIS (microfiche only)
- SLAC-TN-87-4-Rev. . . . . EGS4 Writing Subroutine HOWFAR for EGS4., . . Nelson, W.R.; Jenkins, T.M., . . Stanford Linear Accelerator Center, Menlo Park, CA, . . August 1988, . . AVAIL: NTIS; INIS (microfiche only)