



AUTHORS — MARCH 1983

SHIELDING

BULK SHIELD DESIGN FOR NEUTRON ENERGIES BELOW 50 MeV

L. L. Carter

L. L. Carter (PhD, University of Washington, 1969) is a fellow engineer in the Radiation and Shield Analysis Group at Hanford Engineering Development Laboratory (HEDL). Prior to joining HEDL in 1977, he was the alternate group leader of the Monte Carlo Group at Los Alamos National Laboratory. He co-authored the Energy Research and Development Administration Critical Review Series book, *Particle-Transport Simulation with the Monte Carlo Method*. Current interests include neutronics and shielding for fusion facilities and fast breeder reactors, and the development and application of the Monte Carlo method.



PLASMA ENGINEERING

TRANSPORT EFFECTS OF SYNCHROTRON RADIATION IN DEUTERIUM-FUELED TOKAMAKS

*David C. Baxter
Stephen Tamor*

David C. Baxter (photograph not available) (BA, Cornell University, 1966; MS, 1968, and PhD, 1974, University of California, San Diego) joined Science Applications, Inc., in 1974 and has participated in several studies involving ionospheric physics and the physics of magnetic fusion energy. Current research includes cost-scaling studies of deuterium-deuterium-fueled tokamak reactors and assessment of advanced fuel mirror reactors. **Stephen Tamor** (right) (BS, City College of New York, 1944; PhD, University of Rochester, 1950) joined Science Applications, Inc., in 1971 where he has worked on the dynamics of laser-heated plasmas and developed a very detailed treatment of the non-LTE ionization kinetics and resulting x-ray emission. Since 1973 he has been a member of the Laboratory for Applied Plasma Studies and is engaged primarily in studies of the SNECTR code. His current interests include the investigation of cyclotron radiation, the development and application of controlled thermonuclear reactor codes, and the study of energetic electron ring formation by electron cyclotron resonance heating.



BRANCHING PROCESS ANALYSIS OF DEUTERIUM-BASED FUSION SYSTEMS

*A. A. Harms
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Photographs and biographies were not available at the time of publication.

TRITIUM SYSTEMS

DECOMPOSITION OF TRITIATED WATER WITH SOLID OXIDE ELECTROLYSIS CELL

Satoshi Konishi (top left) (MS, nuclear engineering, University of Tokyo, Japan, 1981) is a research engineer at the Tritium Engineering Laboratory of the Japan Atomic Energy Research Institute (JAERI). He has been working on the development of tritium processing technology relating to palladium diffusers and electrolyzers for the fusion fuel cycle. He is also interested in the property of solid blanket materials. **Hideo Ohno** (top right) (PhD, chemistry, Kyoto University, Japan, 1971) has worked in physical chemistry on molten salts at JAERI since 1970. He studied the high-temperature lithium battery between 1979 and 1980 at Argonne National Laboratory. His research interests include structural analysis by x-ray and neutron diffraction and transport phenomena of molten salts and solid electrolytes. **Hiroshi Yoshida** (bottom left) (PhD, nuclear engineering, Tokyo Institute of Technology, Japan, 1971) has been engaged in nuclear technology research relative to uranium enrichment, spent fuel off-gas treatment, and the fusion fuel cycle since 1971 at JAERI. His present interests include developing tritium processing technologies. **Yuji Naruse** (bottom right) (BS, chemical engineering, Kyoto University, Japan, 1959) is chief of the Tritium Engineering Laboratory at JAERI. He has been engaged in the engineering works related to fuel reprocessing and uranium enrichment. He is now involved in the design and construction of tritium facilities.

*Satoshi Konishi
Hideo Ohno
Hiroshi Yoshida
Yuji Naruse*



PLASMA ENGINEERING

A SIMPLE COMPUTATIONAL FORM FOR MAXWELLIAN REACTIVITIES

Lee M. Hively

Lee M. Hively (BS, engineering science, and BS, mathematics, 1970, Pennsylvania State University; MS, physics, 1971, and PhD, nuclear engineering, 1980, University of Illinois) is a fusion plasma physicist employed by General Electric Company at the Fusion Engineering Design Center at Oak Ridge National Laboratory. From 1971 to 1974 he was a member of the research staff at Western Electric Company, Princeton, New Jersey, and later obtained a U.S. patent (#3,944,963) as a result of his work in millimetre waveguide processing. His current research interests include high energy fusion-product transport in tokamaks, bundle divertor optimization, and plasma performance in the Fusion Engineering Device.

