NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 73, NUMBER 1, JANUARY 1980

CONTENTS

TECHNICAL PAPERS

1	Markovian Reliability Analysis Under Uncertainty with an Application on the Shutdown System of the Clinch River Breeder Reactor	Ioannis A. Papazoglou, Elias P. Gyftopoulos
19	Heat Transfer and Pressure Drop in Sodium Boiling in Tubes	Yu. A. Zeigarnick, V. D. Litvinov
29	Radiation Damage by High-Energy Neutrons	William Primak
35	Neutron Spectra from Monoenergetic Source Neutrons After Multiple Reflection Between Plane-Parallel Con- crete Interfaces	William K. Hagan, G. L. Simmons
42	Fission Product Yields for Thermal-Neutron Fission of Plutonium-239	J. K. Dickens, J. W. McConnell
56	Some Results of Transfer Matrix Calculations for Thermal Neutrons	Seong-Youn Kim, Raphael Aronson
66	Variance Versus Efficiency in Transport Monte Carlo	Iván Lux
76	Convergence Rates of Spatial Difference Equations for the Discrete-Ordinates Neutron Transport Equations in Slab Geometry	Edward W. Larsen, Warren F. Miller, Jr.
	TECHNICAL NOTES	
84	Probability Level of Readiness in Supervised Protective Systems for Nuclear Reactors	J. M. Kontoleon
87	Comparison of One- and Two-Dimensional Cross-Section Sensitivity Calculations for a Fusion Reactor Shielding Experiment	Y. Seki, R. T. Santoro, E. M. Oblow, J. L. Lucius
93	Optimized Smoothing in Neutron Spectrum Unfolding by the FERDOR Method	R. H. Johnson, B. W. Wehring, J. J. Dorning
97	Photon Point Source Buildup Factors for Air, Water, and Iron	A. B. Chilton, C. M. Eisenhauer, G. L. Simmons

(Continued)

VOLUME 73, NUMBER 1, JANUARY 1980

CONTENTS

(Continued)

LETTERS TO THE EDITOR

108	The Influence of Boundary Conditions on the Precision of the Eigenvalues of the Boltzmann Equation	C. Syros, P. Theocharopoulos
109	Reply to "The Influence of Boundary Conditions on the Precision of the Eigenvalues of the Boltzmann Equation"	E. B. Dahl, N. G. Sjöstrand
110	Comments on "Neutron-Induced Fission in a DT- Plutonium Plasma"	F. Winterberg
110	Reply to "Comments on 'Neutron-Induced Fission in a DT-Plutonium Plasma"	S. T. Perkins
	BOOK REVIEW	
112	Radiation Shielding and Dosimetry, A. Edward Profio	Karl Z. Morgan
	CORRIGENDUM	
113	Statistical Evaluation of Major Human Errors During the Development of New Technological Systems	G. Campbell, K. O. Ott

114 ANNOUNCEMENT OF CURRENT PUBLICATIONS