NUCLEAR SCIENCE AND ENGINEERING

VOLUME 53, NUMBER 4, APRIL 1974

CONTENTS

TECHNICAL PAPERS

355	Solution of Standard Diamond Difference Equations for Discrete-Ordinate Neutron Transport Equations Equivalent to the P_L Approximation in x - y Geometry	Jungchung Jung, Nubuo Ohtani, Keisuke Kobayashi, Hiroshi Nishihara
370	Relative and Absolute Measurements of the Fast- Neutron Fission Cross Section of Uranium-235	W. P. Poenitz
393	The Use of Californium-252 as a Randomly Pulsed Neutron Source for Prompt-Neutron Decay Measure- ments	J. T. Mihalczo
415	A Study of the 2.8-keV Neutron Resonance of Sodium and an Analysis of the Total Neutron Cross Section up to 50 keV	Janet Seltzer, F. W. K. Firk
420	Fine Neutron-Spectrum Effects on Spatial Calculations for Fast-Reactor Design	R. Corcuera, A. Khairallah
436	A Method of Computing Fission-Product Decay Heat in a Reactor with Time-Dependent Flux	F. W. Barclay, K. W. Dormuth
440	SINOD—A Nonlinear Lumped-Parameter Model for Steady-State, Transient, and Stability Analysis of Two- Phase Flow in Natural Circulation Boiling-Water Loops	M. R. Mataušek
458	Radiation-Induced Boiling in Superheated Water and Organic Liquids	C. R. Bell, N. P. Oberle, W. Rohsenow, N. Todreas, C. Tso
466	Equations of Motion of a Liquid-Submerged Sonic Gas Jet Relative to Fission-Gas-Jet Impingement in Sub- assemblies of the Liquid Metal Fast Breeder Reactor	T. C. Chawla
	TECHNICAL NOTES	
475	Reciprocity Relations in Response Matrix Theory	Sten-Örjan Lindahl
479	The Effect of Local Flux Distortions on the Doppler Effect of Small Fissile Samples	P. H. Kier, M. Salvatores
482	Relationships Between Experimental and Theoretical Parameters in Unresolved Resonance Theory	M. Gyulassy, S. T. Perkins
487	An Assessment of Proposed $(n,\gamma n')$ Data Based on Measured and Calculated Neutron Spectra in Uranium Depleted in Uranium-235	Martin Becker, Narinder N. Kaushal
489	BOOK REVIEWS	
492	CORRIGENDUM	
493	VOLUME 53 AUTHOR AND SUBJECT INDEXES	