

NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 54, NUMBER 4, AUGUST 1974

CONTENTS

TECHNICAL PAPERS

- 369** Generalized Collision Probabilities and Neutron Transport Eigenvalue Problems *Tomas Lefvert*
- 376** Weighted Central Difference Equations for the Neutron Transport Equation *Niel K. Madsen*
- 387** Calculation of the Flux Variation and the Reactivity Change Induced by a Central Perturbation in a Fast Critical Assembly. The Reduced Reactor Model *D. Akl, B. Laponche*
- 395** Neutron and Gamma-Ray Effects on Self-Powered In-Core Radiation Detectors *H. D. Warren, N. H. Shah*
- 416** Small-Angle Scattering of 7.4- to 9.5-MeV Neutrons from Nitrogen and Oxygen *W. P. Bucher, C. E. Hollandsworth, D. McNatt, R. Lamoreaux, A. Niiler, J. E. Youngblood*
- 423** Measurement and Normalization of the Relative Uranium-233 Fission Cross Section in the Low Resonance Region *A. J. Deruytter, C. Wagemans*
- 432** Accurate Kinetics Equations of a Square Cascade for Gas Separation *S. Yamashita*
- 445** Turbulence Measurements in a Magneto-Fluid-Mechanic Channel *Hsichun Hua, Paul S. Lykoudis*

TECHNICAL NOTES

- 450** Partial-Range Analysis of the One-Speed Neutron Transport Equation with Anisotropic Scattering *E. A. Attia, A. A. Harms*
- 455** An Asymptotic Solution in the Theory of Neutron Moderation *C. E. Siewert, A. R. Burkart*
- 456** Application of the Finite Element Method to Two-Dimensional Diffusion Problems *L. O. Deppe, K. F. Hansen*
- 465** A Rapid Computational Method for Multigroup Elastic Transfer *Martin Becker*
- 467** On the Estimation of Errors in Reactor Theory *Yigal Ronen*
- 470** Neutron Yields from Uranium Isotopes in Uranium Hexafluoride *Thomas E. Sampson*
- 474** Optimization of Control-Rod Programming in Multiregion Nuclear Reactors *Koichi Sekimizu, Kazuo Monta*
- 481** On the Mechanisms for Vapor Explosions *S. G. Bankoff, H. K. Fauske*

483 BOOK REVIEWS

486 VOLUME 54 AUTHOR AND SUBJECT INDEXES