

# NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 85, NUMBER 2, OCTOBER 1983

## CONTENTS

### TECHNICAL PAPERS

- 87** Validated Deep-Penetration, Air-Over-Ground, Neutron/Gamma-Ray Transport *W. E. Loewe, W. A. Turin, C. W. Pollock, A. C. Springer, B. L. Richardson*
- 116** Flux-Limited Diffusion and Fokker-Planck Equations *G. C. Pomraning*
- 127** A Proposed Technique for Producing High-Purity Monoenergetic Neutron Beams Between 100 eV and 2.5 keV for Nuclear Research *A. J. Mill*
- 133** Basic Principles for Developing Equations for Heterogeneous Reactors—A Modification of the Homogenization Method *N. I. Laletin*
- 139** Aggregate Delayed Neutron Intensities and Spectra Using Augmented ENDF/B-V Precursor Data *T. R. England, W. B. Wilson, R. E. Schenter, F. M. Mann*
- 156** Malfunction Isolation in Linear Stochastic Systems: Application to Nuclear Power Plants *Yakov Ben-Haim*
- 167** On the Neutron Noise Diagnostics of Pressurized Water Reactor Control Rod Vibrations. I. Periodic Vibrations *I. Pázsit, O. Glöckler*
- 178** Asymmetric Effects on Vibrations of a Cylinder in Turbulent Parallel Flows *Y. T. Fung*

### TECHNICAL NOTES

- 188** Boundary Perturbation Theory for Nonanalytic Perturbations *G. C. Pomraning*
- 191** A Simplified Perturbation Model for Calculation of Few-Group Cross Sections and Reaction Rates *Anthony N. Sinclair, John C. Lee*

### BOOK REVIEWS

- 197** The Necessity for Nuclear Power, Geoffrey Greenhalgh *Myron S. McCay*

(Continued)

VOLUME 85, NUMBER 2, OCTOBER 1983

## **CONTENTS**

**(Continued)**

**198** Born Secret—The H-Bomb, The *Progressive* Case and National Security, A. De Volpi, G. E. Marsh, T. A. Postal, and G. S. Stanford *Conrad V. Chester*

**200** Status of USA Nuclear Reactor Pressure Vessel Surveillance for Radiation Effects (ASTM STP 784), L. E. Steele, Ed. *R. D. Cheverton*

### **LETTERS TO THE EDITOR**

**201** Comments on the *R*-Parameter Formalism for Neutron-Induced Gamma-Ray Production *S. T. Perkins*

**202** Response to "Comments on the *R*-Parameter Formalism for Neutron-Induced Gamma-Ray Production" *D. Hermsdorf, D. Seeliger*

**204** **ANNOUNCEMENT OF CURRENT PUBLICATIONS**