

# NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 71, NUMBER 3, SEPTEMBER 1979

## CONTENTS

### TECHNICAL PAPERS

- 237** The Dispersion and Spheroidization Treatment of  $\delta$  Zirconium Hydride and Its Effect on Corrosion Resistance  
*Shi-Chien Lin,  
Michiko Hamasaki,  
Yii-Der Chuang*
- 251** The Effect of Dispersion and Spheroidization Treatment of  $\delta$  Zirconium Hydrides on the Mechanical Properties of Zircaloy  
*Shi-Chien Lin,  
Michiko Hamasaki,  
Yii-Der Chuang*
- 267** Statistical Evaluation of Major Human Errors During the Development of New Technological Systems  
*G. Campbell, K. O. Ott*
- 280** Cross Sections for  ${}^6\text{Li}({}^6\text{Li}, {}^5\text{He}){}^7\text{Be}$ ,  ${}^6\text{Li}(d, n){}^7\text{Be}$ , and  ${}^{19}\text{F}({}^6\text{Li}, p){}^{24}\text{Na}$   
*Lawrence Ruby,  
Robert V. Pyle,  
Yue-Chau Wong*
- 287** Thor, A Thorium-Reflected Plutonium-Metal Critical Assembly  
*G. E. Hansen, H. C. Paxton*
- 294** Penetration of Secondary Neutrons and Photons from a Graphite Assembly Exposed to 52-MeV Protons  
*Kazuo Shin,  
Yoshitomo Uwamino,  
Mitsuo Yoshida,  
Tomonori Hyodo,  
Takashi Nakamura*
- 301** The Energy Distribution of Antineutrinos Originating from the Decay of Fission Products in a Nuclear Reactor  
*G. Rudstam, K. Aleklett*
- 309** Reactor Dynamic Perturbation Measurement  
*R. Fuge, D. Ziegenbein*
- 319** An Interpretation of the Quadratic Approximation in Zero Power Reactor Noise Analysis  
*F. Carloni, M. Marseguerra*

### TECHNICAL NOTES

- 327** Comparison of Calculations and Measurements of Fission Product Decay Heat for Uranium-235 and Plutonium-239 for Cooling Times  $>5 \times 10^4$  s  
*K. Shure, O. J. Wallace,  
J. C. Connor*
- 330** An Improvement of the PALLAS Discrete-Ordinates Transport Code  
*Nobuo Sasamoto,  
Kiyoshi Takeuchi*

(Continued)

**CONTENTS**  
(Continued)

**LETTERS TO THE EDITOR**

- 343 On the Quasi-Static Synthesis Method for Space-Time Dynamics Problems *J. B. Doshi*
- 344 Reply to "On the Quasi-Static Synthesis Method for Space-Time Dynamics Problems" *Bruce I. Hauss,  
William E. Kastenberg*

**BOOK REVIEW**

- 347 MHD Instabilities, Glenn Bateman *George H. Miley*

348 **ANNOUNCEMENT OF CURRENT PUBLICATIONS**

353 **VOLUME 71 AUTHOR AND SUBJECT INDEXES**