

# NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 63, NUMBER 3, JULY 1977

## CONTENTS TECHNICAL PAPERS

- |     |  |  |
|-----|--|--|
| 225 | A Comparison of Constrained Finite Elements and Response Matrices as One-Dimensional Transport Approximations  | <i>L. L. Briggs, E. E. Lewis</i>               |
| 236 | Elastic Neutron Scattering from Distributed Fusion Neutrons, Deuterium, Tritium, and Lithium, and Multigroup Rate Coefficients   | <i>B. R. Wienke, R. E. Seamon</i>              |
| 242 | Calculated Neutron Capture Cross Sections to the Americium Ground and Isomeric States  | <i>F. M. Mann, R. E. Schenter</i>              |
| 250 | Measurements of the Neutron-Induced Fission Cross Sections of $^{234}\text{U}$ , $^{236}\text{U}$ , and $^{238}\text{U}$ Relative to $^{235}\text{U}$ from 0.1 to 30 MeV | <i>J. W. Behrens, G. W. Carlson</i>            |
| 268 | Measurement of the $^{58}\text{Ni}(n,p)^{58}\text{Co}$ Cross Section with $\text{H}(n,n)p$ as a Standard   | <i>Mien-Win Wu,<br/>Jen-Chang Chou</i>         |
| 276 | Uncertainties in Fission Product Decay-Heat Calculations   | <i>F. Schmittroth, R. E. Schenter</i>          |
| 292 | Thermal-Neutron Behavior in Cluster-Type Plutonium Fuel Lattices   | <i>T. Wakabayashi, Y. Hachiya</i>              |
| 306 | Theoretical Investigation of the Local and Global Components of the Neutron-Noise Field in a Boiling Water Reactor   | <i>K. Behringer, G. Kosály,<br/>Lj. Kostić</i> |
| 319 | Effects of Fast-Neutron Irradiation and High-Intensity Magnetic Fields upon Cavitation Thresholds and Nuclei Spectra in Water  | <i>E. Yilmaz, F. G. Hammitt</i>                |
| 330 | Determination of the Probing Distance in Pulsed-Neutron Uranium Logging Experiments  | <i>James H. Renken</i>                         |

## TECHNICAL NOTES

- |     |  |   |
|-----|--|---|
| 336 | A Parametric Analysis of the Spallation Breeder  | <i>A. A. Harms, C. W. Gordon</i>  |
| 341 | The Tritium Production in a Controlled Thermonuclear Reactor Blanket Model with a Graphite Reflector | <i>R. Herzing, L. Kuipers,<br/>P. Cloth, D. Filges,<br/>R. Hecker, N. Kirch</i> |

(Continued)

VOLUME 63, NUMBER 3, JULY 1977

## CONTENTS

(Continued)

- |     |  |   |
|-----|--|---|
| 343 | Thermonuclear Reaction Rate Parameters for $d + {}^6\text{Li}$ Reactions   | <i>A. J. Elwyn, J. E. Monahan,<br/>F. J. D. Serduke</i> |
| 347 | A Perturbation Analysis of Changes in Prompt Fission Neutron Uranium-Logging Signals Produced by Trace Neutron-Absorbing Rock Constituents | <i>James H. Renken</i>                                  |
| 350 | Solidification of a Sphere with Internal Heat Generation and Convective Cooling at the Surface   | <i>Vijay K. Dhir, Kin Wong,<br/>W. E. Kastenberg</i>    |

### LETTERS TO THE EDITOR

- |     |   |   |
|-----|---|---|
| 357 | Comments on Particle Transport in Finite Slabs            | <i>M. M. R. Williams</i>                                      |
| 358 | Reply to "Comments on Particle Transport in Finite Slabs" | <i>Stanley Woolf, John C. Garth,<br/>William L. Filippone</i> |

### COMPUTER CODE ABSTRACT

- |     |       |   |
|-----|-------|---|
| 359 | WASP2 | <i>D. A. Spragg, C. S. Caldwell,<br/>F. T. Dunckhorst,<br/>G. W. Swartele</i> |
|-----|-------|---|

### 360 ANNOUNCEMENT OF CURRENT PUBLICATIONS