

# NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 68, NUMBER 2, NOVEMBER 1978

## CONTENTS TECHNICAL PAPERS

- |     |   |  |
|-----|---|--|
| 155 | Two-Phase Flow Patterns with High-Pressure Water in a Heated Four-Rod Bundle  | <i>C. L. Williams,<br/>A. C. Peterson, Jr.</i>                                   |
| 170 | Neutron Flux Monitoring and Data Analysis for Neutron Standard Reaction Cross Sections  | <i>O. A. Wasson, R. A. Schrack,<br/>G. P. Lamaze</i>                             |
| 183 | A New Measurement of the ${}^6\text{Li}(n,\alpha){}^7\text{Li}$ Cross Section   | <i>G. P. Lamaze, R. A. Schrack,<br/>O. A. Wasson</i>                             |
| 189 | A Measurement of the ${}^{10}\text{B}(n,\alpha\gamma){}^7\text{Li}$ Cross Section in the keV Energy Region                        | <i>R. A. Schrack, G. P. Lamaze,<br/>O. A. Wasson</i>                             |
| 197 | Absolute Neutron Fission Cross Sections of ${}^{235}\text{U}$ , ${}^{238}\text{U}$ , and ${}^{239}\text{Pu}$ at 13.9 and 14.6 MeV | <i>M. Cancé, G. Grenier</i>  |
| 204 | Sputtering Calculations with the Discrete-Ordinates Method  | <i>T. J. Hoffman,<br/>H. L. Dodds, Jr.,<br/>M. T. Robinson,<br/>D. K. Holmes</i> |

## TECHNICAL NOTES

- |     |  |  |
|-----|--|--|
| 212 | Cylindrical Source Shielding Equations Utilizing Compact Functions and Including Buildup   | <i>J. L. Kamphouse</i>   |
| 217 | On Several Good Methods for Computing the Distortion Factor Relevant to a Foil Placed in an Exponentially Varying Flux               | <i>P. Benoist, V. C. Boffi,<br/>P. Grandjean, A. Kavenoky,<br/>V. G. Molinari, C. E. Siewert,<br/>G. Spiga</i> |
| 220 | Reactivity Prediction of Uniform $\text{PuO}_2\text{-UO}_2$ -Fueled Lattices and $\text{Pu}(\text{NO}_3)_4$ Solutions in Light Water | <i>P. Mohanakrishnan,<br/>H. C. Huria</i>  |
| 226 | Neutron Wave Propagation Across an Absorption Discontinuity  | <i>Ashok Sadhwani,<br/>Ashok Kumar</i>   |

## COMPUTER CODE ABSTRACT

- |     |         |  |
|-----|---------|--|
| 231 | MACK-IV | <i>M. A. Abdou, Y. Gohar,<br/>R. Q. Wright</i> |
|-----|---------|--|

(Continued)

## CONTENTS

(Continued)

### BOOK REVIEWS

- |     |   |   |
|-----|---|---|
| 233 | Plasma Physics, E. W. Laing   | <i>Albert Simon</i>                               |
| 233 | Two-Phase Flow and Heat Transfer, D. Butterworth and G. F. Hewitt, Eds. | <i>Walter L. Kirchner</i>                         |
| 234 | Foundations of Nuclear Engineering, Thomas J. Connolly                  | <i>R. K. Osborn</i>                               |
| 235 | Computational Methods in Engineering and Science, S. Nakamura           | <i>James J. Duderstadt,<br/>William R. Martin</i> |

### CORRIGENDUM

- |     |  |                             |
|-----|--|-----------------------------|
| 237 | Fusion-Fission Analogy and $Tn\tau$ Criterion for Fusion Plasmas | <i>J. Rand McNally, Jr.</i> |
| 238 | ANNOUNCEMENT OF CURRENT PUBLICATIONS                             |                             |