

NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 150, NUMBER 3, JULY 2005

CONTENTS

TECHNICAL PAPERS

- 245** Geometric Buckling of Elliptical Cylinder *Raymond L. Murray*
- 257** Interface Conditions for Spherical Harmonics Methods *W. S. Yang, M. A. Smith, G. Palmiotti, E. E. Lewis*
- 267** Parallel S_n Sweeps on Unstructured Grids: Algorithms for Prioritization, Grid Partitioning, and Cycle Detection *Steven J. Plimpton, Bruce Hendrickson, Shawn P. Burns, William McLendon III, Lawrence Rauchwerger*
- 284** Generalized Particle Concept for Adjoint Monte Carlo Calculations of Coupled Gamma-Ray–Electron–Positron Transport *N. M. Borisov, M. P. Panin*
- 299** Advanced Online Flux Mapping of CANDU PHWR by Least-Squares Method *In Seob Hong, Chang Hyo Kim, Ho Chun Suk*
- 310** Annular Core Experiments in HTTR’s Start-Up Core Physics Tests *Nozomu Fujimoto, Kiyonobu Yamashita, Naoki Nojiri, Mituo Takeuchi, Shingo Fujisaki, Masaaki Nakano*
- 322** Analysis of the Effects of Radiolytic-Gas Bubbles on the Operation of Solution Reactors for the Production of Medical Isotopes *Francisco J. Souto, Robert H. Kimball, A. Sharif Heger*
- 336** Revisiting the ^{238}U Thermal Capture Cross Section and Gamma-Ray Emission Probabilities from ^{239}Np Decay *A. Trkov, G. L. Molnár, Zs. Révay, S. F. Mughabghab, R. B. Firestone, V. G. Pronyaev, A. L. Nichols, M. C. Moxon*
- 349** Enhanced Gamma-Ray Energy Conversion in Water Vessels—Part I: Physical Mechanisms *A. Y. K. Chen, T. Yoshida, T. Tanabe*
- 357** Enhanced Gamma-Ray Energy Conversion in Water Vessels—Part II: Hydrogen Production by Water Radiolysis *T. Yoshida, T. Sawasaki, A. Y. K. Chen, T. Tanabe*

TECHNICAL NOTE

- 362** An Attempt to Directly Convert Gamma-Ray Energy into Electricity *T. Yoshida, A. Y. K. Chen, J. Nozawa, Naohiro Sugie, T. Tanabe*

(Continued)

VOLUME 150, NUMBER 3, JULY 2005

CONTENTS

(Continued)

COMPUTER CODE ABSTRACT

- 368** BOT3P: Bologna Radiation Transport Analysis
Pre-Post-Processors Version 4.0 *Roberto Orsi*

LETTERS TO THE EDITOR

- 374** Comments on "Singular Solutions, Integral Transport Theory, and the S_n Method" *Richard Sanchez*
- 376** Reply to "Comments on 'Singular Solutions, Integral Transport Theory, and the S_n Method'" *J. E. Morel, K. D. Lathrop*
- 377** VOLUME 150 AUTHOR AND SUBJECT INDEXES