

NUCLEAR SCIENCE AND ENGINEERING®

VOLUME 124, NUMBER 2, OCTOBER 1996

CONTENTS

TECHNICAL PAPERS

- 211 Solubility of Nickel Ferrite in High-Temperature Pure or Oxygenated Water
Yukiko Hanzawa, Daisuke Hiroishi, Chihiro Matsuura, Kenkichi Ishigure
- 219 Helium Production by 9.85-MeV Neutrons in Elemental Iron, Nickel, and Copper and in ^{56}Fe and $^{58,60,61}\text{Ni}$
R. C. Haight, D. W. Kneff, B. M. Oliver, L. R. Greenwood, H. Vonach
- 228 Transmission Through Shields of Quasi-Monoenergetic Neutrons Generated by 43- and 68-MeV Protons – I: Concrete Shielding Experiment and Calculation for Practical Application
Noriaki Nakao, Hiroshi Nakashima, Takashi Nakamura, Shun-ichi Tanaka, Susumu Tanaka, Kazuo Shin, Mamoru Baba, Yukio Sakamoto, Yoshihiro Nakane
- 243 Transmission Through Shields of Quasi-Monoenergetic Neutrons Generated by 43- and 68-MeV Protons – II: Iron Shielding Experiment and Analysis for Investigating Calculational Method and Cross-Section Data
Hiroshi Nakashima, Noriaki Nakao, Shun-ichi Tanaka, Takashi Nakamura, Kazuo Shin, Susumu Tanaka, Hiroshi Takada, Shinichiro Meigo, Yoshihiro Nakane, Yukio Sakamoto, Mamoru Baba
- 258 Effects of the Photon Cross Sections and Energy-Absorption Coefficients of Air to the Gamma-Ray Point Isotropic Exposure Buildup Factors
Hideo Hirayama
- 271 The $^{59}\text{Co}(n, \alpha)$ Reaction from 5 to 50 MeV
S. M. Grimes, C. E. Brient, F. C. Goeckner, F. B. Bateman, M. B. Chadwick, R. C. Haight, T. M. Lee, S. M. Sterbenz, P. G. Young, O. A. Wasson, H. Vonach
- 280 Analysis of Nuclear Power Transmutation Potential at Equilibrium
M. Salvatores, I. Slessarev, A. Tchistiakov
- 291 Optimization of Nonanalog Monte Carlo Games Using Differential Operator Sampling
P. K. Sarkar, Herbert Rief
- 309 A Modified P_3 -Like Approximation to the Transport Equation
Bingjing Su, G. C. Pomraning
- 320 Boundary Condition Perturbations in Transport Theory
Farzad Rahnema

(Continued)

CONTENTS

(Continued)

- 327 Quantitative Method to Measure Void Fraction of Two-Phase Flow Using Electronic Imaging with Neutrons *K. Mishima, T. Hibiki*
- 339 Neural Network-Based Fault Detections in a Pressurized Water Reactor Pressurizer *M. Marseguerra, M. E. Ricotti, E. Zio*

TECHNICAL NOTES

- 349 A Semiempirical Method to Calculate Continuum Gamma-Ray Spectra and Multiplicities from Neutron-Induced Reactions *Sheng Fan, Zhixiang Zhao*
- 358 A Note on the P_N Method with Mark Boundary Conditions *R. D. M. Garcia, C. E. Siewert*
- 361 Autoregressive Moving Average Inverse Dynamics for Rhodium Self-Powered Neutron Detector *Charles W. Mayo, Lian Yan*

LETTERS TO THE EDITOR

- 364 Comment on "Response Matrix Properties and Convergence Implications for an Interface-Current Nodal Formulation" *Mihaly Makai*
- 364 On "Neutron Fluence at the Pressure Vessel of a Pressurized Water Reactor Determined by the MCNP Code" *Alireza (Ali) Haghghat*
- 367 Reply to "On 'Neutron Fluence at the Pressure Vessel of a Pressurized Water Reactor Determined by the MCNP Code' " *Peter Laky, Nicholas Tsoulfanidis*