

Recent publications from the neutron group of NMIJ/AIST

From 2009 to 2011

1. H. Harano, T. Matsumoto, J. Nishiyama, A. Uritani, K. Kudo, Accelerator-based neutron fluence standard at the National Metrology Institute of Japan, AIP Conf. Proc. 1099 915 (2009).
2. T. Matsumoto, H. Harano, J. Nishiyama, K. Kudo, A. Uritani, Novel generation method of 24-keV monoenergetic neutrons using accelerators, AIP Conf. Proc. 1099 924 (2009).
3. T. Fujibuchi, Y. Tanabe, T. Isobe, H. Kawamura, T. Terunuma, K. Yasuoka, T. Matsumoto, J. Nishiyama, H. Harano, T. Sakae, Convenient Method of Thermal Neutron Fluence Estimation Using Imaging Plates, IFMBE proceedings Vol 25/3, pp.602-605 (2009).
4. H. Harano and T. Matsumoto, Development and future view on neutron national standards, Japanese Journal of Applied Physics 79 (3), 230-234 (2010). (in Japanese).
5. H. Harano, T. Matsumoto, Y. Tanimura, Y. Shikaze, M. Baba, T. Nakamura, Monoenergetic and Quasi-Monoenergetic Neutron Reference Fields in Japan, Radiat. Meas. 45, 1076-1082 (2010).
6. T. Matsumoto, H. Harano, J. Nishiyama, H. Matsue, A. Masuda, A. Uritani, K. Kudo: Thermal neutron calibration method using an intense neutron beam from the JRR-3M, Radiat. Meas. 45, 1124-1126 (2010).
7. Y. Sato, H. Harano, T. Matsumoto, K. Moriyama, Y. Unno, T. Yamada, A. Yunoki, Y. Hino, K. Kudo: Measurement of activated Au foils by 2pb+2pb-g coincidence counting and EGS5 Monte Carlo calculation: AIP Conf. Proc. 1099 907 (2009).
8. K. Tsuchiya, K. Kuroki, N. Akiba, T. Matsumoto, H. Harano, J. Nishiyama, Radiation-induced failures and degradation of wireless real-time dosimeter under high-dose-rate irradiation, SPIE proceedings--the international society for optical engineering vol.7665, 76651G (2010).
9. H. Iwase, M. Hagiwara, Y. Iwamoto, D. Satoh, H. Tashima, T. Matsumoto, J. Nishiyama, A. Masuda, H. Harano, T. Sato, Y. Nakane², T. Itoga⁵, C. Theis, E. Feldbaumer, L. Jaegerhofer, C. Pioch, V. Mares, Y. Sakamoto, H. Nakashima, A. Tamii, and T. Nakamura, Benchmark experiment of neutron penetration through iron and concrete shields using 243 and 387 MeV quasi-monoenergetic neutrons

- part-I: Measurement and calculation of neutron depth-dose distribution, Proc. SATIF-10, Flnance (2010)
10. Y. Iwamoto, M. Hagiwara, D. Satoh, H. Iwase, H. Yashima, T. Itoga, T. Sato, Y. Nakane, H. Nakashima, Y. Sakamoto, T. Matsumoto, A. Masuda, J. Nishiyama, A. Tamii, K. Hatanaka, C. Theis, E. Feldbaumer, L. Jaegerhofer, C. Pioch, V. Mares, T. Nakamura, Characterization of quasi-monoenergetic neutron energy spectra using the ${}^7\text{Li}(p,n)$ reactions in the 246 and 389 MeV, Proc. SATIF-10, Flnance (2010).
 11. L. Jagerhofer, E. Feldbaumer, D. Forkel-Wirth, C. Theis, H. Vincke, Y. Iwamoto, M. Hagiwara, D. Satoh, H. Iwase, H. Yashima, T. Matsumoto, A. Masuda, J. Nishiyama, T. Nakamura, T. Sato, Y. Nakane, H. Nakashima, Y. Sakamoto, A. Tamii and K. Hatanaka, Characterization of the WENDI II REM counter for its application at MedAustron, Proc. Joint International conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA+MC2010), Tokyo (2010).
 12. Y. Iwamoto, M. Hagiwara, D. Satoh, H. Iwase, H. Yashima, T. Itoga, T. Sato, Y. Nakane, H. Nakashima, Y. Sakamoto, T. Matsumoto, A. Masuda, J. Nishiyama, A. Tamii, K. Hatanaka, C. Theis, E. Feldbaumer, L. Jaegerhofer, C. Pioch, V. Mares, T. Nakamura, Quasi-monoenergetic neutron energy spectra from the 246 and 389 MeV ${}^7\text{Li}(p,n)$ reactions at angles from 0° to 30° , Nucl. Instr. Method A629, 43-49 (2011).
 13. T. Yagi, H. Unesaki, T. Misawa, C. H. Pyeon, S. Shiroya, T. Matsumoto, H. Harano, Development of a small scintillation detector with an optical fiber for fast neutrons, Appl. Radiat. Isot. 69, 539-544 (2011).
 14. T. Matsumoto, H. Harano, A. Masuda, J. Nishiyama, A. Uritani and Y. Sakurai: New idea of a small-sized neutron detector with a plastic fiber, Radiat. Prot. Dosim. (in printing).
 15. H. Harano, T. matsumoto, J. Nishiyama, A. Masuda, A. Uritani, K. Kudo, Recent activities on neutron standardization in Japan, J. Nucl. Sci. Technol. (in printing).
 16. T. Fujibuchi, Y. Tanabe, T. Sakae, T. Terunuma, T. Isobe, H. Kawamura, K. Yasuoka, T. Matsumoto, H. Harano, J. Nishiyama, A. Masuda, A. Nohtomi, Feasibility study on using imaging plates to estimate thermal neutron fluence in neutron-gamma mixed fields, Radiat. Prot. Dosim. (in printing)
 17. H. Tsuji, S. Maeda, H. Tomita, J. Kawarabayashi, T. Iguchi, T. Matsumoto, J. Hori, Epithermal neutron response on moderated neutron spectrometer with multi-resonance filters, J. Nucl. Sci. Technol. (in printing).
 18. J. Nishiyama, H. Harano, T. Matsumoto, Y. Sato, A. Uritani and K. Kudo, Absolute measurement of activity of ${}^{198}\text{Au}$ foil using the 4pb-g coincidence counting method and corrections by Monte carlo simulations, Radiat. Prot. Dosim. (in printing)