

Nuclear Engineering

Operation and Exploitation of the Reactor, Dosimetry (RPI) and Reactor Calculations

Journals

J.G. Marques, K. Lorenz, N. Franco, E. Alves, Defect production in neutron irradiated GaN, *Nucl. Instr. & Meth. B* 249 (2006) 358-361.

A.C. Fernandes, I.C. Gonçalves, J. Santos, J. Cardoso, L. Santos, A.F. Carvalho, J.G. Marques, A. Kling, A.J.G. Ramalho, M. Osvay, Dosimetry at the Portuguese Research Reactor using thermoluminescence measurements and Monte Carlo calculations, *Rad. Prot. Dosim.* 120 (2006) 349-353.

J.P. Santos, A.C. Fernandes, I.C. Gonçalves, J.G. Marques, A.F. Carvalho, L. Santos, J. Cardoso, M. Osvay, Photon and Fast Neutron Dosimetry Using Aluminium Oxide Thermoluminescence Dosimeters, *Rad. Prot. Dosim.* 120 (2006) 358-360.

A.C. Fernandes, T. Morlat, M. da Costa, J.I. Collar, J. Puibasset, G. Waysand, H.S. Miley, A.R. Ramos, T.A. Girard, F. Giuliani, D. Limagne, J.G. Marques, C. Oliveira, The SIMPLE SDD, *Rad. Prot. Dosim.* 120 (2006) 503-508.

Y. Zong, F.J. Franco, A.H. Cachero, J.A. Agapito, A.C. Fernandes, J.G. Marques, M.A. Rodriguez-Ruiz, J. Casas-Cubillos, Radiation tolerant isolation amplifiers for temperature measurement, *Nucl. Instr. & Meth. A* 568 (2006) 869-876.

T. Morlat, D. Limagne, G. Waysand, M. Djabourov, J.I. Collar, The role of additives towards increasing the SIMPLE SDD lifetime, *Nucl. Instr. & Meth. A* 560 (2006) 339.

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A.C. Fernandes, E. Novak, J. Cardoso, L. Santos, J.G. Marques, V. Rýpar, Neutron and Photon Dosimetry at LR-0 Using Paired Dosimeters, *Proc. 12th Int. Symp. Reactor Dosimetry, J. ASTM Int., vol.3, nr.3* (2006) JAI 13438.

T.A. Girard, F. Giuliani, T. Morlat, J.I. Collar, D. Limagne, G. Waysand, J. Puibasset, H.S. Miley, M. Auguste, D. Boyer, A. Cavaillou, J.G. Marques, C. Oliveira, A.C. Fernandes, A.R. Ramos, M. Felizardo, R.C. Martins, SIMPLE Limits on Spin-Dependent WIMP Interactions, *Proc. 9th Int. Conf. on Topics in Astroparticle and Underground Physics, J. Physics: Conf. Series 39* (2006), pp. 114-116.

F. Giuliani, T. Morlat, T.A. Girard, M.F. da Costa, J.G. Marques and A.R. Ramos, Impact of a "Heavy" SIMPLE on the Search for WIMP Matter Search, *Proc. 9th Int. Conf. on Topics in Astroparticle and*

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J.E. Matos, J.G. Stevens, E.E. Feldman, J.A. Stillman, F.E. Dunn, K. Kalimullah, J.G. Marques, N.P. Barradas, A.R. Ramos, A. Kling, Core Conversion Analyses for the Portuguese Research Reactor, *Proc. Int. Meeting on Reduced Enrichment for Research and Test Reactors* (2006), Cape Town, South Africa.

J.G. Marques, N.P. Barradas, A.R. Ramos, Physics and nuclear safety, *Radioprotecção Vol II* (2006) 51-59

Communications

F. Giuliania, T. Morlat, A.R. Ramos, T.A. Girard, M. Felizardo da Costa, J.G. Marques, R.C. Martins, H.S. Miley, D. Limagne, G. Waysand, SIMPLE-icity in direct dark matter searches, *7th UCLA Symp. Sources and Detection of Dark Matter and Dark Energy in the Universe*, Feb.22-24, 2006, Marina del Rey, USA, talk

F. Nascimento, A.R. Ramos, A.C. Fernandes, M. Felizardo, T. Morlat, J. G. Marques, F. Giuliani, T. A. Girard, J. A. Paixão, Optimization of Filtered Neutron Beams for the Calibration of Superheated Droplet Detectors at the RPI, *10th Int. Symp. on Radiation Physics*, Sept. 15-17, 2006, Coimbra, Portugal, poster.

T. Morlat, A.R. Ramos, F. Giuliani, T.A. Girard, M. Felizardo, Response study of a CF3I superheated droplets detector for dark matter application, *ISRP10, 10th Int. Symp. on Radiation Physics*, Sept. 15-17, 2006, Coimbra, Portugal, poster.

N.P. Barradas, Characterisation of ordered antiferromagnets by rapid thermal anneal without magnetic field, *12th Workshop on Magnetism and Intermetallics*, 9-10 Feb. 2006, Sacavém, Portugal, Invited talk.

N.P. Barradas, Can quantum dots be analysed with macrobeam RBS?, *CAARI 2006: 19th Int. Conf. on the Application of Accelerators in Research and Industry*, 20-25 Aug. 2006, Fort Worth, USA, Invited talk.

Participação em programa da série "4x Ciência" da RTP-N, dedicado à energia nuclear, March 2006.

Apresentação convidada "Energia Nuclear" no XVI Congresso da Ordem dos Engenheiros, São Miguel, Açores, Sept. 2006.

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J. G. Marques, N.P. Barradas, A. R. Ramos, J. Sousa, Alteração da configuração do núcleo do RPI:

Configuração N2-P1/8A - Relatório de execução, Jan. 2006.

J.G. Marques, N.P. Barradas, A. R. Ramos Wahl, J. Sousa, Alteração da configuração do núcleo do RPI: Configuração N2-P1/9 - Relatório de execução, Dec. 2006.

A. Kling, Radiological Control at the Portuguese Research Reactor (RPI) - Report Jan. 1 – Dec. 31, 2005 ITN/RPI-R-06/90.

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A. R. Ramos Wahl, J.G. Marques, Measurements of thermal hydraulic parameters, ITN/RPI-R-06/93.

A. Kling, Estimate for the ^{14}C activity concentration in the RPI pool water by comparison with the tritium activity concentration, ITN/RPI-R-06/94.

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Books

F. Axisa, J. Antunes, Modelling of Mechanical systems: Fluid-structure interaction (800 p.), *Elsevier Science & Technology*, ISBN 9780750668477.

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O. Inácio, L. Henrique, J. Antunes, The dynamics of Tibetan singing bowls, *Acta Acústica* **92** (2006), n.º 4, pp. 637-653.

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O. Inácio, J. Antunes, A Linearized analysis of friction-excited musical bars, *Proc. Congrès Français d'Acoustique*, 24-27 Apr. 2006, Tours, France

M. Moreira, J. Antunes, M. Paulino, V. Debut, H. Pina, Optimization of baffle configurations to prevent aeroacoustic instabilities in heat exchangers: A preliminary study, *Internoise 2006*, 3-6 Dec. 2006, Honolulu, EUA.

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J. Antunes, Vibrations et usure des éléments combustibles excités par les écoulements, 22 June 2006, CEA-Saclay, France

V. Debut, La clarinette: Instrument de musique et de recherche, Faculdade de Engenharia da Univ. Porto (FEUP), 16 Nov. 2006, Porto.

Internal Reports

J. Antunes, Vitamine 1: Formulation et implémentation de l'excitation par la turbulence des écoulements, Report ITN/ADL-2006-Dec-01.