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Institute for Reference Materials and Measurements (Geel)
Standards for Nuclear Safety, Security and Safeguards

Publications Radionuclide Metrology Sector June 2011 – May 2013

- R. Van Ammel, S. Eykens, R. Eykens and S. Pommé, Preparation of drop-deposited quantitative uranium sources with low self-absorption, Nucl. Instr. and Meth. A 652 (2011) 76-78.
- U. Wätjen, Europäische Ringvergleiche für Messungen der Umweltradioaktivität, In: Umweltpolitik - 14. Fachgespräch Überwachung der Umweltradioaktivität, Editor: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU), Berlin, Germany (2011)
- V. Jobbágy, M. T. Crespo, R. Van Ammel, M. Marouli, A. Moens, S. Pommé, E. García-Toraño, Preparation of high-resolution ^{238}U α -sources by electrodeposition from various electrolyte solutions, IMEKO-MI2011, Joint IMEKO TC11 TC19 TC20 International Symposia, Metrological Infrastructure Environmental And Energy Measurements, Dubrovnik Riviera, Cavtat, Croatia, June 15–17, 2011, p. 81-84
- L. Johansson, J-R. Filtz, P. DeFelice, S. Mohamed, A. Plompen, B. Hay, A. Dinsdale, S. Pommé, P. Cassette, J. Keightley, Advanced Metrology for New Generation Nuclear Power Plants, IMEKO-MI2011, Joint IMEKO TC11 TC19 TC20 International Symposia, Metrological Infrastructure Environmental And Energy Measurements, Dubrovnik Riviera, Cavtat, Croatia, June 15–17, 2011, p. 9-13
- G. Bonheure, M. Hult, R. González de Orduña, P. Vermaercke, A. Murari, S. Popovichev and J. Mlynar, Fusion Alpha Loss Diagnostic for ITER using Activation Technique, Fusion Engineering and Design 86 (2011) 1298-1301
- The GERDA collaboration (i.a. M. Hult), The GERDA experiment: status and perspectives, NIM B 217 (2011) 38-40
- E. Andreotti, M. Hult, R. González de Orduña, G. Marissens, E. Wieslander and M. Misiaszek, The Half-Life of the Beta Decay $^{115}\text{In}^{(9/2+)} \rightarrow ^{115}\text{Sn}^{(3/2+)}$, Phys. Rev. C 84, no. 4 (2011) 044605 (1-8), doi 10.1103/PhysRevC.84.044605
- M. Agostini, M. Hult et al., Procurement, production and testing of BEGe detectors depleted in Ge-76, Nuclear Physics B (Proceedings Supplement) 229-232 (2012) 489
- S. Pommé, STEFFY – Software for calculation of nuclide-specific total counting efficiency in well-type γ -ray detectors, ARI 70 (2012) 2070-2074.
- S. Pommé, G. Suliman, M. Marouli, R. Van Ammel, V. Jobbágy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern, Measurement of the ^{226}Th and ^{222}Ra half-lives, ARI 70 (2012) 1913-1918.

- S. Pommé, T. Altzitzoglou, R. Van Ammel, G. Suliman, M. Marouli, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern, Measurement of the ^{230}U half-life, ARI 70 (2012) 1900-1906.
- G. Suliman, S. Pommé, M. Marouli, R. Van Ammel, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern, Measurements of the half-life of ^{214}Po and ^{218}Rn using digital electronics, ARI 70 (2012) 1907-1912.
- M. Marouli, S. Pommé, J. Paepen, R. Van Ammel, V. Jobbagy, A. Dirican, G. Suliman, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern, High-resolution alpha-particle spectrometry of the ^{230}U decay series, ARI 70 (2012) 2270-2274. *Pubsty 66157*
- B. E. Zimmerman, T. Altzitzoglou, A. Arinc, E. Bakhshandeiari, D.E. Bergeron, L. Bignell, C. Bobin, M. Capogni, J. T. Cessna, M.L. Cozzella, C. J. da Silva, P. De Felice, M. S. Dias, T. Dziel, A. Fazio, R. Fitzgerald, A. Iwahara, F. Jaubert, L. Johansson, J. Keightley, M.F. Koskinas, K. Kossert, J. Lubbe, L. Mo, O. Nähle, O. Ott, J. Paepen, S. Pommé, M. Sahagia, B.R.S. Simpson, F. F. V. Silva, R. van Ammel, M.J. van Staden, W. M. van Wyngaardt, and I. M. Yamazaki, Results of an international comparison for the activity measurement of ^{177}Lu , ARI 70 (2012) 1825-1830.
- A. Dirican, P. E. Erden, M. Seferinoğlu, S. Pommé, Use of solid angle for alpha detector efficiency in ^{226}Ra analyses of soil samples, ARI 70 (2012) 2260-2262.
- J. Merešová, U. Wätjen and T. Altzitzoglou, Determination of natural and anthropogenic radionuclides in soil - results of an European Union comparison, ARI 70 (2012) 1836-1842.
- U. Wätjen, T. Altzitzoglou, A. Ceccatelli, H. Dikmen, Y. Spasova, Z. Szanto, ..., Results of an international comparison for the determination of radionuclide activity in bilberry material, ARI 70 (2012) 1843-1849.
- M.C. Lépy, T. Altzitzoglou et al., Intercomparison of methods for coincidence summing corrections in gamma-ray spectrometry – part II (volume sources), ARI 70 (2012) 2112-2118.
- M. Hult, G. Marissens, N. Sahin, et al., Distribution of ^{60}Co in steel samples from Hiroshima, ARI 70 (2012) 1974-1976.
- E. Andreotti, M. Hult, G. Marissens, R. Gonzalez de Orduna, P. Vermaercke, Study of the double beta decays of ^{96}Ru and ^{104}Ru , ARI 70 (2012) 1985-1989.
- F. Simonelli, K. Abbas, A. Bulgheroni, S. Pommé, T. Altzitzoglou, G. Suliman, Measurement of the $^{\text{nat}}\text{Hf}(d,x)^{177}\text{Ta}$ cross section and impact of erroneous gamma-ray intensities, NIM B 285 (2012) 162-164.
- S. Pommé, M. Marouli, G. Suliman, H. Dikmen, R. Van Ammel, V. Jobbagy, A. Dirican, H. Stroh, J. Paepen, F. Bruchertseifer, C. Apostolidis, A. Morgenstern, Measurement of the ^{225}Ac half-life, ARI 70 (2012) 2608-2614.
- F.A. Danevich, E. Andreotti M. Hult, G. Marissens, V.I. Tretyak, and A. Yüksel, Search for alpha decay of ^{151}Eu to the first excited level of ^{147}Pm using underground gamma-ray spectrometry, Eur. Phys. J. A (2012) **48**: 157.
- G. Bonheure, M. Hult, et al., Experimental investigation of the confinement of $d(3\text{He},p)\alpha$ and $d(d,p)t$ fusion reaction products in JET, Nucl. Fusion **52** (2012) 083004 (10pp).

- G. Lutter, M. Hult, R. Billnert, A. Oberstedt, S. Oberstedt, E. Andreotti, G. Marissens, U. Rosengard, F. Tzika, Radiopurity of a CeBr3 crystal used as scintillation detector, NIM A 703 (2013) 158-162.
- M. Marouli, G. Suliman, S. Pommé, R. Van Ammel, V. Jobbágy, A. Dirican, H. Stroh, H. Dikmen, J. Paepen, F. Bruchertseifer, C. Apostolidis, A. Morgenstern, Decay data measurements on ^{213}Bi using recoil atoms, Appl. Radiat. Isot. 74 (2013) 123-127.
- G. Suliman, S. Pommé, M. Marouli, R. Van Ammel, H. Stroh, V. Jobbágy, J. Paepen, A. Dirican, F. Bruchertseifer, C. Apostolidis, A. Morgenstern, Half-lives of ^{221}Fr , ^{217}At , ^{213}Bi , ^{213}Po and ^{209}Pb from the ^{225}Ac decay series, Appl. Radiat. Isot. 77 (2013) 32-37.
- B. Lehnert, K. Zuber, E. Andreotti, M. Hult, New half-life limits on double- β decays of ^{110}Pd and ^{102}Pd into excited states, Physical Review C87, 034312 (2013).
- V. Jobbágy, M. T. Crespo, R. Van Ammel, M. Marouli, A. Moens, S. Pommé, E. García-Toraño, Preparation of high-resolution ^{238}U α -sources by electrodeposition: a comprehensive study, J. Radioanal. Nucl. Chem. 10.1007/s10967-013-2444-8 (2013)

EUR Reports in Radioactivity

- Y. Spasova, U. Wätjen, L. Benedik, M. Vasile, T. Altzitzoglou and M. Beyermann, Evaluation of EC comparison on the determination of ^{226}Ra , ^{228}Ra , ^{234}U and ^{238}U in mineral waters. JRC Scientific and Policy Reports, EUR 24694 EN (2011), ISBN978-92-79-19069-8.
- Y. Spasova and M. Vasile, Homogeneity of Comparison Samples for ^{226}Ra , ^{228}Ra , ^{234}U and ^{238}U in Mineral Waters. JRC Scientific and Policy Reports, EUR 25174 EN (2011), ISBN978-92-79-22791-2.
- S. Pommé, Determination of a reference value, associated standard uncertainty and degrees of equivalence for CCRI(II) key comparison data. JRC Scientific and Policy Reports, EUR 25355 EN, EUR – Scientific and Technical Research series - ISSN 1831-9424 (online), ISSN 1018-5593 (print), ISBN 978-92-79-25104-7, doi:10.2787/61338 2012, 2012 (16 pages)
- V. Jobbágy, R. Van Ammel and M. Marouli, Preparation of high resolution ^{238}U alpha-sources by electrodeposition from aqueous solution. JRC Scientific and Policy Reports, EUR 25356 EN (2012), ISBN978-92-79-25105-4.
- V. Jobbágy, R. Van Ammel and M. Marouli, Preparation of high resolution ^{230}U alpha-sources by electrodeposition from aqueous solution. JRC Scientific and Policy Reports, EUR 25358 EN (2012), ISBN978-92-79-25108-5.
- J. Merešová, U. Wätjen and T. Altzitzoglou, Evaluation of EC interlaboratory comparison on radionuclides in soil. JRC Scientific and Policy Reports, EUR 25360 EN (2012), ISBN978-92-79-25111-5.