

ICRM GSWG

ICRM Gamma Spectrometry Working Group

Report of the virtual meeting held on October 29-30, 2020

This first “virtual meeting” of the ICRM "Gamma Spectrometry" working group brought together more than 70 on-line participants.

The meeting was divided into two 3-hour sessions (from 13:00 to 16:00 CET) to allow colleagues from outside Europe to actively participate.

The schedule of meeting included seven contributed talks, status on the on-going action (Benchmark for Monte Carlo simulation applied to coincidence summing corrective factors) and time dedicated to topics of interest (calculation of detection limits according to ISO11929 and self-attenuation in the low-energy range).

The last part of the meeting took the form of a general discussion in order to identify several topics of interest for future studies/exercises, and identify potential contributors. These topics are:

1. Angular correlations in coincidence summing (leader: Octavian Sima)
2. Reference spectra
3. Self-attenuation
4. Detection limits

For these on-going or future actions, dedicated online meetings will be organized within the next weeks.

Thanks to the kind authorization of speakers, most of the presentations are made available on the ICRM/GSWG website: http://www.lnhb.fr/icrm_gs_wg/

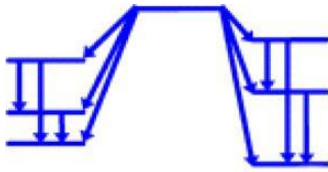
The presentation of the radionuclide decay database NUCLÉIDE-LARA will be available on-line, on the page of the application: (<http://www.nucleide.org/Laraweb/index.php>)

List of presentations

1. Welcome and workshop objectives
(*Marie-Christine Lépy, LNHB*)
2. General presentation of angular correlations in gamma-ray spectrometry
(*Octavian Sima, University of Bucharest & IFIN-HH Bucharest*)
3. New features of the peak fitting software COLEGRAM
(*Yves Ménesguen, LNHB*)
4. Discussion on detection limits – Application of ISO 11929
(*Mikael Hult, EC-JRC*)
5. Introduction presentation – examples
(*Michael Bruggeman, SCK-CEN*)

7. Introduction/ presentation of the on-going exercise (*M.-C. Lépy*)
 - 7.1 EFFTRAN (*Tim Vidmar, SCK-CEN*)
 - 7.2 GESPECOR (*Octavian Sima*)
 - 7.3 GEANT (*Cheick Thiam, LNHB*)
 - 7.4 PENELOPE (*Iason Mitsios, NTUA*)
 - 7.5 MCNP (*Thien-Thanh Tran, VNUHCM-University of Science*)

8. Modeling of inactive layers for p-type detectors
(*Henrik Persson, Mirion technologies*)
9. Self-evaluation of coincidence summing factor of radionuclides using MCNP-CP and PENNUC codes
(*Thien-Thanh Tran*)
10. Effect of the uncertainty of decay data parameters
(*Octavian Sima*)

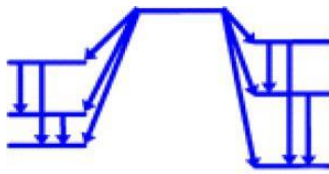


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FINAL AGENDA October 29th
(Time in CET – UTC +1)

October 29th:

- 12:30 - 13:00 *Tests for access to the webconference*
- 13:00 - 13:10 Welcome and workshop objectives (*Marie-Christine Lépy, LNHB*)
- 13:10 - 14:00 Contributed talks**
- 13:10 - 13:30 General presentation of angular correlations in gamma-ray spectrometry
(*Octavian Sima, University of Bucharest & IFIN-HH Bucharest*)
- 13:30 - 13:45 New features of the peak fitting software COLEGRAM
(*Yves Ménesguen, LNHB*)
- 13:45 - 14:00 New features of the radionuclide decay database NUCLÉIDE-LARA
(*Christophe Dulieu, LNHB*)
- 14:00 - 15:00 Discussion on detection limits – Application of ISO 11929**
(*Moderator: Mikael Hult, EC-JRC*)
- 14:00 - 14:15 Introduction presentation – examples
(*Michael Bruggeman, SCK-CEN*)
- 14:15 - 15:00 General discussion (all participants)
- 15:00 - 16:00 Implementation of density corrections**
- 15:00 - 15:15 Cutshall transmission method of the self-attenuation correction determination -
a method outline and its Monte Carlo validation
(*Pawel Jodlowsky, University Krakow*)
- 15:15 - 16:00 Share experience of participants



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FINAL AGENDA October 30th

(Time in CET – UTC +1)

October 30th:

12:45 - 13:00 *Tests for access to the webconference*

13:00 - 14:10 Benchmark on coincidence summing

13:00 – 13:10 Introduction/ presentation of the on-going exercise (*M.-C. Lépy*)

13:10 - 14:00 Presentation of results by code (5 minutes)

13:10 - 13:15 EFFTRAN (*Tim Vidmar, SCK-CEN*)

13:15 – 13:20 EGS (*Rapahel Galea, NRC*)

13:20 – 13:25 GESPECOR (*Octavian Sima*)

13:25 - 13:30 GEANT (*Cheick Thiam, LNHB*)

13:30 - 13:35 PENELOPE (*Iason Mitsios, NTUA*)

13:35 - 13:40 MCNP (*Thien-Thanh Tran, VNUHCM-University of Science*)

13:40 - 14:10 Summary and discussion – further step(s) (all participants)

14:10 – 14:20 *Short break*

14:20 - 15:05 Contributed talks

14:20 - 14:35 Modeling of inactive layers for p-type detectors
(*Henrik Persson, Mirion technologies*)

14:35 - 14:50 Self-evaluation of coincidence summing factor of radionuclides using MCNP-CP and PENNUC codes
(*Thien-Thanh Tran*)

14:50 - 15:05 Effect of the uncertainty of decay data parameters
(*Octavian Sima*)

15:05 - 15:20 New ¹⁶⁶Ho gamma emission intensities by high-energy-resolution and well-calibrated HPGe detector
(*Marco Capogni, ENEA*)

15:20 - 16:00 Proposal of new actions - Discussion (all participants)