



# AGENDA

---

SUNDAY, 26<sup>TH</sup> MAY

18:00-20:00

Registration desk open & Informal reception

Place: Cloister of Colegio Mayor Arzobispo Fonseca  
c) Fonseca 4



## MONDAY 27<sup>TH</sup> MAY

8:15- 8:55	Hospedería Fonseca	Registration desk
<b>9:00</b> <b>Opening Session</b> Chairperson: B. Quintana		
9:00	Welcome by the Rector of the University of Salamanca and ICRM President	
9:10	Deciphering the age of the ocean, Prof. Dr. J. A. Flores Villarejo (Univ. Salamanca)	
9:30	The New International System of Units, Dr. E. Prieto Esteban, CEM (Spanish Center for Metrology)	
<b>9:50</b> <b>Session: Radionuclide Metrology in Life Sciences</b> Chairpersons: J. Cessna, A. Yunoki		
9:50	P. Cassette - A new counter for the on-site standardization of short half-life radiopharmaceutical solutions	O-68
10:10	K. Lotter et al. - Assessing activity and dose values computed by image-based quantification of Y-90 SPECT/CT data	O-154
RMLS poster presentation (chair: A. Yunoki)		
10:30	M. Capogni et al. - <sup>90</sup> Y on site calibration of the OPBG ionisation chamber	P-132
	F. Juget et al. - Efficiency curve for ionization chambers and application for short-lived isotopes measurement on-site in hospitals	P-135
	P. Oropesa et al. - <sup>18</sup> F activity calibrations for nuclear medicine applications in Cuba	P-179
10:35 - 11:05		Coffee break and posters
11:05-11:55		Working Group: Life Sciences Chairperson: J. Cessna
<b>11:55</b> <b>Session: Alpha- and Beta-particle Spectrometry</b> Chairpersons: S. Pommé, X. Mougeot		
11:55	E. García-Toraño et al. - Alpha-particle emission probabilities of <sup>231</sup> Pa derived from first semiconductor spectrometric measurements	O-54
12:15	A. Singh et al. - Beta spectra measurement using a 4π detection system based on Si detectors	O-62
12:35	M. Loidl et al. - Beta Spectrometry with Metallic Magnetic Calorimeters in the Framework of the European EMPIR project MetroBeta	O-187
ABS poster presentation (chair: E. García Toraño)		
12:55	M. Marouli et al. - Automated optical distance measurements for counting at a defined solid angle	P-36
	S. Pommé et al. - Conversion electron spectrometry of <sup>241</sup> Am	P-52

	M. Vasile et al. - Development of 'on-site' methods for assay of alpha-emitting radionuclides	P-59
13:00	S. Röttger et al. - Streamlining geometrical efficiency calculations for defined solid-angle alpha spectrometry	P-77
13:05-14:30		Lunch
14:30-14:50		Working Group: Alpha-particle Spectrometry Chairperson: S. Pommé
14:50-15:30		Working Group: Beta-particle Spectrometry Chairperson: M. Kellet
<b>15:30</b> <b>Session: Gamma-ray Spectrometry</b> Chairpersons: M-C. Lépy, O. Sima		
15:30	O. Delaune et al. - Software development for automatic analysis of 2-dimension gamma spectrum	O-24
15:50	O. Sima et al. - Self-consistency test of coincidence-summing calculation methods for extended sources	O-100
16:10	M-C. Lépy et al. - A benchmark for Monte Carlo simulation in gamma-ray spectrometry	O-115
16:30-17:00		Coffee break and posters
17:00	N.M. Murphy et al. - An automated programme for the optimisation of HPGe detector parameters using an evolutionary algorithm with GESPECOR	O-116
17:20	J. Xu et al. - Spectral unmixing for activity estimation in gamma-ray spectrometry	O-159
GS poster presentation (chairs: O. Sima, P. de Felice)		
17:40	D. Stanga et al. - New advances in determining the detection efficiency of gamma spectrometry systems	P-40
	H. Paradis et al. - Spectral unmixing applied to fast identification of gamma-emitting radionuclides using NaI(Tl) detectors	P-66
	I. Mitsios et al. - The effect of time in the background of typical low-level gamma spectrometry measurements	P-73
	M. Konstantinova et al. - Efficiency calibration of HPGe detector using Monte Carlo simulations including coincidence summing corrections	P-91
	A. Wadjinny et al. - PUF1: a tool to prepare geometry files for PENELOPE Monte Carlo simulation in gamma-ray spectrometry	P-110
	B.J. Kim et al. - Design of optimal digital filter and digital signal processing for a CZT high-resolution gamma-ray system	P-134
	T. Vidmar et al. - Sensitivity of TCS correction factors to uncertainty in efficiency values	P-139
	J. Šuráň et al. - Unmanned airborne spectrometric (HPGe) monitoring system	P-143

	I. Vukanac et al. - Preparation of laboratory radioactive standards for experimental calibration in gamma ray spectrometry	P-147
	R. Idoeta et al. - Analytical method to determine activity concentrations of short-lived radionuclides	P-166
18:00	P. Jodłowski et al. - Monte Carlo validation of self-attenuation correction calculation in $^{210}\text{Pb}$ measurements with well detector	P-173
End of conference day 1		
<p>19:00</p> <p>Visit to the Historical University Building and welcome cocktail</p> <p>Patio de Escuelas s/n</p>		

## TUESDAY 28<sup>TH</sup> MAY

9:00-10:00		Working Group: Gamma-ray Spectrometry Chairperson: M-C. Lépy
<p>10:00</p> <p><b>Session: Source Preparation Techniques</b></p> <p>Chairpersons: S. Jerome, E. García-Toraño</p>		
10:00	V. Peyres et al. - Study of the equivalence between homogeneous sources and those prepared by seeding layers for different geometries, energies and matrix parameters	O-82
SPT poster presentation (chair: S. Jerome)		
10:20	I. Mitsios et al. - A fast method for the determination of $^7\text{Be}$ in rainwater and atmospheric humidity samples	P-64
10:25	R. Galea et al. - Standardizing $^{56}\text{Mn}$ for the NRC manganese salt bath	P-89
10:25-10:55		Coffee break and posters
<p>10:55</p> <p><b>Session: Measurement Standards and Reference Materials</b></p> <p>Chairpersons: L. Karam, P. de Felice</p>		
10:55	F. Mertes et al. - A new primary emanation standard for $^{222}\text{Rn}$	O-75
11:15	B. Sabot et al. - Reference radioactive gas atmospheres for detector calibration and material qualification	O-114
11:35	D. Heo et al. - Development of certified reference material for the measurement of $^{137}\text{Cs}$ and $^{40}\text{K}$ using mushroom ( <i>Lentinula Edodes</i> )	O-125
MSRM poster presentation (chair: L. Karam)		
11:55	Y. Chen et al. - Preparation of area $^{90}\text{Sr}$ reference sources using nafion ion exchange membrane	P-98

	E. Kwon et al. - Development of bauxite CRM for naturally occurring radioactive material	P-123
12:00	M. Krivošík et al. - Development of the secondary standard $^{222}\text{Rn}$ in the air	P-144
<b>12:00</b>		
<b>Session: Low-level Radioactivity Measurement Techniques</b>		
Chairpersons: D. Arnold, S. Jerome		
12:00	M. Hult et al. - Underground gamma-ray measurements of radium isotopes from hydrothermal plumes in the deep Pacific Ocean	O-25
12:20	F.J. Maringer et al. - A new quick method for traceable measurements of radon-222 in drinking water	O-84
12:40	C. Buck et al. - Low Level/Low Energy-Ge-Spectrometry near the Brokdorf Reactor Core within the CONUS experiment	O-185
LL poster presentation (chair: M. Hult)		
13:00	V. Thomas - Development of a New Radioactive Gas Detection System	P-30
	L. Pujol et al. - A rapid method for indoor radon measurements	P-72
	J. Vaquero et al. - Implications of the sampling method on the determination of $^{222}\text{Rn}$ in groundwater	P-76
	A. Martín Sánchez et al. - Measuring $^{210}\text{Po}$ on glass surfaces with tracks detectors to estimate retrospective indoor radon concentrations	P-85
	D. Borrego et al. - Towards a suitable gross $\alpha$ - and $\beta$ -activity determination on drinking water	P-141
	D. Zapata-García et al. - Fast radiochemical analysis of airborne radionuclides in emergency situations	P-158
	A. Gheddou et al. - Automatic discrimination between $^{75\text{m}}\text{Ge}$ and $^{99\text{m}}\text{Tc}$ in aerosol analysis by gamma-ray spectrometry	P-161
	B. Liu et al. - Modified algorithm of characteristic limits of the net count calculation method for low counts of IMS beta-gamma coincidence noble gas samples	P-163
13:10	M. C. Pedrosa et al. - Precise $^{210}\text{Pb}$ determination by gamma spectrometry with MAZINGER for $^{210}\text{Pb}$ dating of marine sedimentary cores	P-177
13:10-14:30		Conference picture and lunch
14:30-15:10		Working Group: Low-level Radioactivity Measurement Techniques Chairperson: M. Hult
<b>15:10</b>		
<b>Session: Liquid Scintillation Counting Techniques</b>		
Chairpersons: K. Kossert, B. Zimmerman		
15:10	D. Bergeron et al. - Standardization of $^{124}\text{I}$ by three liquid scintillation-based methods	O-31
15:30	M.P. Tacáks et al. - Standardization of $^{85}\text{Sr}$ with digital anticoincidence counting and half-life determination of the 514 keV level of $^{85}\text{Rb}$	O-49

15:50	C. Dutsov et al. - A comparison of TDCR counting logics based on common and individual dead-time	O-63
16:10	F. van Wyngaardt et al. - Primary standardisation of technetium-99m by liquid scintillation counting	O-119
16:30-17:00		Coffee break and posters
LSC poster presentation (chairs: P. Cassette, B. Zimmerman)		
17:00	J. Liang et al. - Activity concentration determination of Radon products by LSC method	P-33
	I. Alekseev et al. - Digital coincidence counting parameters optimisation at VNIIM TDCR instrument	P-39
	H. Liu et al. - Determination of activity concentration of $^{231}\text{Pa}$ by means of LSC	P-45
	M. van Rooy et al. - First absolute standardization of $^{18}\text{F}$ at NMISA using liquid scintillation beta-efficiency extrapolation- and non-extrapolation methods for SIRT1 comparison	P-47
	N. Todorovic et al. - Analysis of $^{210}\text{Pb}$ by Cherenkov counting	P-60
	T. Shilnikova et al. - Influence of appliance of different atomic models on precision of $^{55}\text{Fe}$ measurement by TDCR-method	P-87
	C. Zhao et al. - Preliminary study on a reliable and practical liquid scintillation counting technique for the determination of $^{14}\text{C}$ sample	P-103
	Y. Sato - CIEMAT/NIST efficiency tracing with gamma ray interaction in lead shield	P-122
	L. Laureano-Pérez et al. - Standardization of $^{133}\text{Ba}$	P-160
17:20	A. Listkowska et al. - Study of the influence of the scintillator and the counter on the universal cross-efficiency LSC curves	P-172
17:20-18:20		Working Group: Liquid Scintillation Counting Chairperson: K. Kossert
18:30 End of conference day 2		

## WEDNESDAY 29<sup>TH</sup> MAY

<b>9:00</b>		
<b>Session: Radionuclide Metrology Techniques</b>		
Chairpersons: J. Keightley, C. Bobin		
9:00	V.H. Elvira et al. - Proportional counter for the absolute determination of low-energy X-ray emission rates	O-28
9:20	R. Fitzgerald et al. - Accurate integral counting using multi-channel analyzers	O-95
9:40	Y.J. Park et al. - Development of the primary standard using isothermal microcalorimetry and its validation	O-121

10:00	M.T. Durán et al. - Evaluation of digital signal processing techniques for a $\beta$ - $\gamma$ coincidence counting system	O-124
10:20-10:50	Coffee break and posters	
10:50	T. Ziemek et al. - A new coincidence module using pulse-mixing method applied in the $4\pi$ (LS)- $\gamma$ coincidence system with TDCR detector	O-136
11:10	R. Fitzgerald et al. - The next generation of current measurement for ionization chambers	O-157
RMT poster presentation (chairs: A. Yunoki, C. Bobin, S. Pommé)		
11:30	Y. Seon et al. - The primary system for measurement of beta emitting radioactive gases at KRISS	P-55
	A. L. Quadros et al. - Uncertainty estimative reduction in the ionization chamber system using automation platform	P-69
	M. Dias et al. - Primary standardization applying digital data acquisition systems	P-70
	K. Mitev et al. - Methods for experimental study of homogeneity in $^{220}\text{Rn}$ calibrations	P-78
	E. Tereshchenko et al. - $^{198}\text{Au}$ activity measurements at VNIIM	P-80
	M. Koskinas et al. - Primary standardization and determination of gamma ray emission probability per decay of $^{166}\text{Ho}$	P-93
	R. Gomes et al. - Gamma-ray emission probability determination for $^{229}\text{Th}$	P-101
	A. Yunoki et al. - Estimation of influence of xenon-131m on a coincidence measurement of iodine-131	P-126
	T. Yamada et al. - Alpha particles discrimination in the measurement of alpha/beta decaying chains by use of ultra-thin plastic scintillation sheets	P-127
	T. Ziemek et al. - Comparison of coincidence modules for TDCR and $4\pi$ (LS)- $\gamma$ coincidence counting used in POLATOM and PTB	P-137
	A. Arinc et al. - Standardisation of $^{231}\text{Pa}$ by defined solid angle and liquid scintillation methods at NPL	P-138
	M. Krivosik et al. - Construction and implementation of a new TDCR-G measurement system at SMU	P-169
11:50	S. Hwang et al. -Development of the high-sensitive radon monitor for the radon calibration system at KRISS	P-171
11:50-13:00	Working Group: Radionuclide Metrology Techniques Chairperson: J. Keightley	
13:05-14:30	Lunch	
<b>14:30</b>		
<b>Session: Quality Assurance and Uncertainty Evaluation in Radioactivity Measurements</b> Chairperson: M. Bruggeman		

14:30	D. Glavič-Cindro et al. - Measurement uncertainty arising from sampling of environmental samples	O-183
<b>QA poster presentation (chairs: M. Bruggeman, D. Glavič-Cindro)</b>		
14:50	M. Korun et al. - Determination of the probability for locating peaks by computerized peak location methods in gamma-ray spectrometry as a function of the relative peak area uncertainty	P-22
	D. Pressyanov et al. - Testing and calibration of CDs as radon detectors at highly variable radon concentrations and temperature	P-94
	N. Hermanspahn et al. - Assessing uncertainties reported in the CTBTO proficiency test exercises	P-109
	M.A. Saizu - Uncertainty analysis on the response of a thyroid gamma spectrometer using different calibration phantoms	P-128
	J.A. Trinidad et al. - Retrospective study of Spanish intercomparison exercises in environmental radioactivity levels	P-149
	R. Idoeta et al. - Validation and implementation of a method for <sup>226</sup> Ra determination by using LSC	P-165
15:00	L. Vázquez-Canelas et al. - Uncertainty estimation for MC-based efficiencies and true-coincidence-summing corrections in gamma spectrometry with HPGe detectors when measuring complex matrices	P-178
<b>Session: Research in Industry</b>		
15:00	H. Persson (Mirion) - Nuclide identification, activity and uncertainty calculations with correlated efficiency calibrations	R-1
15:15	A. de Raedemaeker (Perkin-Elmer) - PerkinElmer: New developments in the field of environmental radioactivity and radio-analytical detection techniques	R-2
15:30-16:00	Coffee break and posters	
16:00 End of conference day 3		

19:00-23:00  
Official Dinner in Hacienda Zorita

Buses will depart from c) Fonseca at 18:30  
Welcoming wine  
Dinner  
Flamenco show and master class  
Buses will depart at 23:00



## THURSDAY 30<sup>TH</sup> MAY

<b>9:30</b>		
<b>Session: Nuclear Decay Data</b>		
Chairpersons: M. Kellet, E. García-Toraño		
9:30	L. Pibida et al. - Determination of the internal pair production branching ratio of $^{90}\text{Y}$	O-37
9:50	M. Kellet et al. - Measurement of the absolute gamma-ray emission intensities from the decay of $^{147}\text{Nd}$	O-53
10:10	C. Thiam et al. - NUCLIDE++: a C++ module to include DDEP recommended radioactive decay data in GEANT4	O-90
<b>10:30-11:15</b>		<b>Coffee break and posters</b>
11:15	A. Fenwick et al. - Absolute standardisation of $^{89}\text{Zr}$ and determination of nuclear data	O-140
<b>NDD poster presentation (chair: M. Kellet)</b>		
11:35	P. Dryak et al. - Measurement of the intensity of the branching ratio related to the internal pair production of $^{90}\text{Y}$ (PET-QI)	P-26
	A. Luca - $^{226}\text{Th}$ nuclear decay data evaluation	p-99
11:40	J. Riffaud et al. - Measurement of the absolute gamma-ray emission intensities from the decay of $^{103}\text{Pd}$	P-111
<b>11:40-12:35</b>		<b>Working Group: Nuclear Decay Data</b> (Chairperson: M. Kellet)
<b>12:35</b>		
<b>Session: Aspects of International Metrology</b>		
Chairpersons: S. Judge, L. Karam		
12:35	L. Karam et al. - The international measurement system for radionuclide metrology: a strategy for the future	O-97
<b>AIM poster presentation (chair: S. Judge)</b>		
12:55	S. Jerome et al. - Preliminary work to replace $^{226}\text{Ra}$ with $^{166\text{m}}\text{Ho}$ for ionisation chamber quality control	P-86
	S. Pierre et al. - Simulation of the response of an ionization chamber to $^{214}\text{Bi}$ emission. Application to the measurement of $^{222}\text{Rn}$	P-130
<b>13:00-14:30</b>		<b>Lunch</b>
<b>14:30</b>		
<b>Session: Intercomparisons</b>		
Chairpersons: S. Judge, L. Karam		
14:30	S. Jerome et al. - BIPM comparison of activity measurements for $^{231}\text{Pa}$	O-27
14:50	R. Galea et al. - The first official measurement of $^{11}\text{C}$ in the SIRT1	O-67

15:10	K. Sobiech-Matura et al. - Evaluation of a proficiency test of $^{131}\text{I}$ , $^{134}\text{Cs}$ and $^{137}\text{Cs}$ in maize powder	O-150
I poster presentation (chair: U. Wätjen)		
15:30	A. Gudelis et al. - The follow-up intercomparison of the radionuclide calibrators between FTMC, CMI and SMU	P-43
	V. Jobbágy et al. - Feasibility study evaluation of a European radon-in-water pilot proficiency test	P-88
15:35-16:00 Coffee break and posters		
16:00 Best Poster Award		
16:05 <b>Closing Ceremony</b>		

17:30 - 20:45	ICRM Executive Boarding Meeting I Place: Sala de presentaciones, Edificio I+D+i
---------------	--

## FRIDAY 31<sup>ST</sup> MAY

9:00 - 14:00 Visit to the ENUSA manufacturing nuclear fuel facility Bus will depart from Colegio Mayor Arzobispo Fonseca at 8:30 AM
---

9:00 - 13:00 ICRM General Meeting Place: Sala de Pinturas, Colegio Mayor Arzobispo Fonseca
--

14:00 - 16:00	ICRM Executive Boarding Meeting II Place: Sala de presentaciones, Edificio I+D+i
---------------	---