

First Announcement of the IC2024spec EURADOS spectro-dosimetry inter-comparison

EURADOS Working Group 3 SG 1 offers the possibility of participating in the IC2024 spectro-dosimetry inter-comparison.

Registration:

If you like to participate in the IC2024spec, go to the web page of the IC (<https://eurados.sckcen.be/news-overview/eurados-spectrodosimetry-intercomparison-ic2024spec-wg3-sg1>), and fill out the “Registration” webform.

If you have questions, please contact:

ic2024spec.inte@upc.edu

The registration will be open until 31st May 2024.

A confirmation of your submitted registration will be sent immediately. The Inter-comparison Committee will make the list of accepted centers/companies to participate according to the criteria and send an email with the acceptance and the invoice. Payment deadline is the 30th June 2024.

Once EURADOS Office receives the payment, the registration is completed. Accepted participants will receive detailed information of logistics and technical issues by PTB.

Participants should be responsible to operate their own instruments, bring their own instrument holder and arrange their own transportation to and from PTB and to and from the measurement sites.

Accepted number of participants:

The total number of detection systems allowed to participate in IC2024spec is limited to **20 dosimetry systems**, with a **maximum of 10 spectrometry systems**. Due to this limitation, selection criteria will be:

1. Devices used in early warning networks in Europe
2. Counting dosimetry systems (commercially available)
3. Radiation monitors developed in research centers

The priority lies on having different types and models.

Fee:

The participation fee* depends on the equipment and the status of being a EURADOS sponsor as given in the following table:

	Spectro-dosemeters	Dosemeters and crowd-source detectors
Sponsor	1650 €	1100 €
Non-sponsor	1800 €	1200 €

* free for a potential Ukrainian participant

IC Goals:

The main goals of this inter-comparison are:

- a) The harmonization •for the first time• of spectrodosimetry systems used for environmental radiation monitoring (prioritizing those used in national early warning networks in Europe)
- b) Comparison of the performance of spectrodosimetry systems in detecting small variations of $H^*(10)$ relative to counting dosimetry systems, including crowd-sourced detectors.

The results of the intercomparison will be published in two scientific publications. One publication coordinated by PTB will focus on $H^*(10)$ and the second publication, coordinated by EURADOS, will be dedicated to spectrum analysis and activity calculation of the spectrodosimetry systems. BfS will provide a HPGe-based mobile spectrometer which is intended to be used as reference system.

Inter-comparison procedure:

Irradiations will be carried out at PTB facilities from **Monday, 2 September 2024 (08:00 h) to Friday, 6 September 2024 (18:00 h)**. The campaign includes three scenarios:

- Irradiation with plume simulator (Sources: ^{137}Cs , ^{60}Co , ^{226}Ra sources) and an overnight background measurement.
- Measurements at Cosmic Radiation Dosimetry Site – CORADOS.
- Measurements at underground calibration facility - UDO II (overnight inherent background determination for all participants and irradiations with ^{137}Cs , ^{57}Co , ^{60}Co , ^{241}Am , ^{226}Ra sources only for spectrometry systems).

Basic measurement requirements:

- 10 min (and 1 min also recommendable) count rate
- 10 min (and 1 min also recommendable) $H^*(10)$ rate data
- optional: temperature and state-of-health data
- Data should be provided not later than 2 weeks after the campaign.
- Spectra analysis will be carried out within the framework of WG3-S1 EURADOS, and the necessary spectrum information and the format will be requested later on.

Inter-comparison Committee: Arturo Vargas (UPC), Faton Krasniqi (PTB), Ulrich Stöhlker, Martin Bleher (BfS), Tero Karhunen (STUK), Erwan Manach (IRSN) and Ulf Stolzenberg (PTB)

If you have any further question, please contact Dr. Anna Camp:

Contact: ic2024spec.inte@upc.edu