



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE

Directorate C - Energy, Mobility and Climate
Energy Efficiency and Renewables

Ispra, 30 January 2024
JRC.C.2/DP

Invitation to the International Spectroradiometer Intercomparison 17 - 21 June 2024

We are happy to announce that the registrations for the International Spectroradiometer Intercomparison 2024 are now open.

The event will be hosted by the **European Solar Test Installation (ESTI)** laboratories of the **European Commission Joint Research Centre**, Ispra site (VA), Italy, in the **week 17 - 21 June 2024**.

The main goal of the ISRC is the harmonization of measurement techniques, verification of instruments and improvement in metrology of solar irradiance between laboratories, research institutions and industry.

There is no registration fee for participating. The costs for each participant shall be met from their own resources, no monetary compensation shall be provided by the JRC.

To register, please follow the instructions in the next pages.

If you are interested to participate, please follow the instructions in the annexed pages. The deadline for registering is **24th May 2024**.

Yours faithfully,

Diego Pavanello

Registration to the ISRC 2024

In order to register for the ISRC, please follow the instructions below:

- 1) Fill in the sections below regarding your affiliation and instrumentation
- 2) Register all the attending people of your institution via [this link \(mandatory\)](#)
- 3) Follow the instructions in the dedicated sections below to organize eventual shipment of instrumentation to/from the JRC site and to ask for logistics information
- 4) Contact the Renewable Energies Unit's secretariat for any administrative issue via the mailbox JRC-C2-SECRETARIAT@ec.europa.eu.

Part 1: Affiliation and participating people

Institution / Company name:	
Address:	
People involved ^(*) :	

^(*) Each involved person shall register using the link provided in the letter page.

For safety reasons, on the measurement field every person shall wear safety shoes (not provided by the JRC).

Part 2: Instrumentation questionnaire

The participation to the Intercomparison is limited to stakeholders with one or more spectroradiometers and/or absolute cavity radiometers (ACR). Each participant may register up to 3 other broadband instruments (pyranometers or pyrhemometers) or other custom instruments.

Only participants bringing at least either a spectroradiometer or an absolute cavity radiometer will be accepted for registration.

Spectroradiometers

Spectroradiometer #1	
Brand / model	
Wavelength range	
Optical fiber? Y/N If yes, approx.. length:	
Dimensions	
Weight	
Own tracker? Y/N No = I ask space on the JRC provided tracker	
Spectroradiometer #2	
Brand / model	
Wavelength range	
Optical fiber? Y/N If yes, approx.. length:	
Dimensions	
Weight	
Own tracker? Y/N No = I ask space on the JRC provided tracker	

Spectroradiometer #3	
Brand / model	
Wavelength range	
Optical fiber? Y/N If yes, approx.. length:	
Dimensions	
Weight	
Own tracker? Y/N No = I ask space on the JRC provided tracker	

Absolute Cavity Radiometers

If a sufficient number of absolute cavity radiometers is reached, a restricted intercomparison between them will be performed.

Participants with absolute cavity radiometers shall bring their own tracker and data acquisition system, in order to provide their irradiance readings.

Cavity radiometers having a valid WRR factor will be included in the group of references, thus participating to the calculation of the reference value. Cavities without a valid WRR factor will be assessed against the reference group.

ACR #1	
Brand / model	
Valid WRR obtained at IPC-XIII (2021)?	
ACR #2	
Brand / model	
Valid WRR obtained at IPC-XIII (2021)?	
ACR #3	
Brand / model	
Valid WRR obtained at IPC-XIII (2021)?	

Additional pyranometers and pyrhemometers

Participants having at least either a spectroradiometer or an ACR are entitled to bring up to 3 broadband instruments (pyranometers or pyrhemometers).

They will be acquired by the JRC systems, and for each instrument, the filtered and unfiltered data sets will be given to the participant. The data set includes the reference irradiances given by the JRC absolute cavity radiometers, pyrhemometers and pyranometers, and the electrical output of the specific participant's instruments. No calculation of the sensitivity values of the participant's instruments will be performed by the organizer, but the given data sets will allow each participant to perform the calculation on their own.

Additional broadband instrument #1	
Type	<input type="checkbox"/> Pyranometer <input type="checkbox"/> Pyrhemometer
Brand and model	
Serial number	
Additional broadband instrument #2	
Type	<input type="checkbox"/> Pyranometer <input type="checkbox"/> Pyrhemometer
Brand and model	
Serial number	
Additional broadband instrument #3	
Type	<input type="checkbox"/> Pyranometer <input type="checkbox"/> Pyrhemometer
Brand and model	
Serial number	

Cable and label: each instrument shall be equipped with its own connection cable at least 5 meters long and a label near the terminals in order to identify it at the connection box.

Prototype instruments

Participants are entitled to bring prototype instruments. For this class of devices, the data acquisition shall be done by the participant, and no space on the JRC trackers is guaranteed. They will not be considered in the Intercomparison exercise, but they will be given the reference irradiance data sets for their own post processing.

Part 3: Planning of measurements

The access to the JRC Ispra site is forbidden to external people on Saturdays and Sundays, therefore no setup can be done on Sunday 16 June by the participants.

- **Monday 17 June:**
 - From 08:30: first access to the site and start of the setup. Please note that the first entrance to the site might take some moments for the identity checks and entrance permits at the JRC reception
 - Afternoon: start of data acquisitions
- **Tuesday 18 - Thursday 20 June:**
 - From 08:30: measurements running every day
- **Friday 21 June:**
 - From 08:30: start of last day of measurements.
 - During the day: start dismantling and end of the campaign

Late arrivals of instruments: participants not present on Monday morning will anyway be allowed to mount and connect their instruments at a later stage. Operations will be organized in such a way not to interfere with the ongoing measurements.

Indoor measurements: in case of adverse weather conditions, the large area steady state solar simulator Apollo will be available to host the measurements of the spectroradiometers in order to guarantee a successful data collection for the purposes of the intercomparison.

Part 4: Logistics

Logistic aspects such as transport, shipments, accommodation are of full responsibility of each participant.

Use the mailbox **JRC-C2-SECRETARIAT@ec.europa.eu** for information about hotels, the JRC navette service, available local transport, entrance permits procedures.

Use the mailbox **JRC-ISPRA-RICEVIMENTO-MERCI@ec.europa.eu** for detailed instructions on how to ship your instrument to/from the JRC Ispra site.

Address:

European Commission Joint Research Centre
Attn. Diego Pavanello TP450
Via E. Fermi 2749
I - 21027 Ispra (VA), Italy

Exemption from responsibility: the JRC is not responsible for any phase of the shipment process. Once arrived at the Shipment/Reception Department of the Ispra site, the goods will be internally delivered to the ESTI building.

Storage: the boxes will not be opened by the ESTI personnel; they will be stored in an internal room with controlled temperature conditions and restricted access until the beginning of the ISRC.