

EURADOS Working Group 11

High Energy Radiation Fields

Motivation

The motivation is to increase the knowledge and expertise regarding field characterisation and dose assessment in various activities where high energy radiation fields are found, like in medicine, research, civil aviation, and space. In addition, the WG contributes to the development of international standards and recommendations (e.g. ISO, ICRU, ICRP).

From a practical aspect, the objective of this WG is the continuation and extension of the work done by both the former WG8/CONRAD WP6: *Complex Mixed Radiation Fields at Workplaces* and WG5: *Aircraft Crew Dosimetry*. The main reason to merge these two Working Groups was that the competences, knowledge, measurement and computation techniques are similar.

Aims

- To measure and characterise high energy fields for assessment of human exposure and for instrument calibration
- To determine the instrument response in high energy fields, especially in pulsed fields
- To assess the dose due to solar particle events
- To measure cosmic radiation at ground level and at aviation altitudes
- To compare the different systems (instruments, calculation codes) used for high energy field dosimetry.

Actions

- Comparison of codes used to assess air-crew dose due to galactic cosmic radiation
- Instrument response in pulsed fields: organisation of a comparison (measurements, simulations)
- Improvement of the models for dose assessment due to solar particle events and validation with experimental data
- Establish and run a network for continuous measurements of cosmic radiation
- Review of high energy codes and models and their benchmarking
- Review of existing high-energy neutron reference fields

Corresponding members

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Additional information

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