

EURADOS Priorities for the 2nd call

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Ranking of the top four EURADOS priorities

1. To quantify correlations between track structure and radiation damage (in 1st call – topic 1)
2. To improve neutron dosimetry techniques in occupational exposures
3. To quantify doses after accidental internal contamination (in 1st call - topic 2)
4. To develop accurate and on-line personal dosimetry for workers

To quantify correlations between track structure and radiation damage

Addressed in the 1st call - topic 1

... Fundamental considerations of radiation action on molecular and cellular levels including **track structure modelling** and measurement may also be included for a better understanding of local dose deposition. ...

To quantify doses after accidental internal contamination

Addressed in the 1st call - topic 2

“... Proposals will identify and address key uncertainties in modelling and decision making regarding **exposure, dose** and risk characterization and management for humans and wildlife. This is needed for a wide range of sources, release scenarios, and assessment contexts for emergencies and existing exposure situations (especially in cases of **mixed external and internal exposures**)”

Priorities for the 2nd call

Priorities 2 and 4 could be addressed in the same call : *To improve neutron dosimetry techniques and To develop accurate and on-line personal dosimetry for workers*

Should be more focused than the 1st call and based on maximum funding of 1 M€

Proposal for the 2nd call

Topic:

Improvement of occupational dosimetry

Scope:

The EURADOS objective for the 2nd CONCERT call is to improve occupational dosimetry with particular emphasis on neutron applications; however, applications featuring other radiation qualities are also welcome.

Challenge

The challenge is to provide **reliable, accurate and on-line personal dosimetry for workers**, when exposed to ionizing radiation and in particular to neutrons. This requires monitoring the workers in **real time** for relevant limiting quantities (e.g., **whole body, eye lens, extremities, brain, heart**), and to provide input for the optimal application of the ALARA principle. Dosimetric research for personal dosimetry should deliver well characterized dosimeters, and good computational tools **using advanced communication technology**. For neutrons, the simultaneous measurement of energy and direction distribution, in order to characterize calibration and workplace fields, is an important part of the challenge.

1) Focus on Priority 1 because it has not been funded.

Can be addressed in MELODI subtopic?

Reformulate EURADOS subtopic?

OR

2) Proceed with Priorities 2 and 4 (on line/neutron dosimetry)?

Follows Art. 31 Group recommendations (D2.3) on dosimetry (Needs in occupational exposure: Practical eye lens dosimetry, Reliable active neutron dosimeters)