

Radiogenics Working Group Report

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Topics Covered

- Questions kept in mind - What can AARM do?
What information may we need to decide the direction of the next proposal?
- Simulations of fission and alpha-n processes
- Screening Efforts
- Material Acquisition
- Databases

Simulations

- We had noted that most of the work developing a common simulations would be done by the Framework Working Group.
- Benchmarking different calculations should be done for some materials. (SOURCES, EMPIRE and TAYLS) (Scorza?)
- We need to learn more about LUXSIM and the calculation of radiogenic processes within.

Screening Efforts

- Do we have enough of the right kind of screeners for demand? (ICPMS)
- Facilitate in developing or acquiring more sensitive screeners
 - GeMPI (HPGe detector, Max Plank Institute type) (Keeter)
 - Immersion Counter (more sensitive than Borexino, QUPIDs, LAB scintillator) (Keeter)
 - Compton suppressed HPGe
- Can we coordinate a network of screeners? (i.e. a website where people would go to find out which screeners have short queues and which have long queues)

Material Acquisition

- A difficult challenge to all experiments concerned with backgrounds is acquiring material which meets their needs.
 - Turn around time from screening facilities is slow. So, the batch you are screening may be gone before you are ready to buy.
- SUM - Stockpile Ultra-pure Materials
 - White paper (Tripathi)

Databases

- Low Background Material Database (Cooley, Villano)
 - Care should be taken with the naming (not to alarm the public)
 - flexible fields (liquid nobles have different criteria than copper)
 - pull down list of material choices
 - vendor, date, lot #
- NAA (Neutron Activation Analysis) Database
 - don't bother list