## Review of Gamma-ray spectrometry for Material Radioassay in Current and Future Generation Rare Event Search Experiments

Gamma-ray spectrometry has helped form the backbone of material radio-assay for rare event searches for many years. There are a number of facilities worldwide that are leading the charge for the current generation of low-background experiments using both custom built and off the shelf high-purity germanium detectors.

R&D must begin in earnest now for the next generation of dark matter and neutrinoless double beta-decay experiments. Material radio-assay will form a vital part of this R&D. In order to provide a full picture of material characteristics, a wide variety of complementary techniques based both in surface and underground laboratories will need to be used. One of the key techniques for this will continue to be gamma-ray spectrometry. As a community, we are beginning to implement the improvements needed to provide germanium screening facilities with the required sensitivity reach for this exciting new era of low background physics.

This talk will review the current global state of the art in HPGe material radio-assay and will discuss future plans for even more sensitive measurements.

Author: SCOVELL, Paul (STFC) Presenter: SCOVELL, Paul (STFC)