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Ultra-low background assays at LBNL and SURF

Saturday, December 2, 2017 4:50 PM (20 minutes)

Next generation dark matter and neutrino experiments seek to reach unprecedented sensitivities to new physics processes, requiring high levels of radiopurity in detector components. To aid in material selection, the Berkeley Low Background Facility (BLBF) provides a variety of advanced gamma spectroscopy services. We will present a general overview of the facilities at Lawrence Berkeley National Laboratory (LBNL) and the Black Hills Underground Campus (BHUC) on the 4850 ft level of the Sanford Underground Research Facility (SURF), including assay activities and techniques. We will summarize currently installed and future counting stations, focusing in particular on Morvydd and Owain (the Twins), a pair of new high sensitivity counters using a large germanium mass to achieve field-leading performance.

Session

Works in Progress (15+5 min)

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