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Low Background Measurement Program at SNOLAB

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Experiments studying rare event searches, such as dark matter interactions and neutrinoless double beta decay, require ultra-low levels of radioactive backgrounds in their own construction materials, shielding and in the surrounding environment. As the next generation of experiments are becoming even more sensitive, material selection has become one of the most crucial components of the design process for these experiments to reduce these backgrounds to be as low as reasonably achievable. The SNOLAB low background counting program has developed several different methods to directly measure these experimental backgrounds. This presentation will review the low background measurement facilities at SNOLAB currently used to measure these backgrounds, describe the data analysis techniques used and present the capabilities of these detectors. Furthermore, plans and options to expand these facilities will be discussed, and a program to measure environmental backgrounds at the SNOLAB underground laboratory will be outlined.

Submitted on behalf of a Collaboration?

No

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