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Rn-222 Concentrations within the Water Phase of the SNO+ Experiment (G)*

Wednesday 13 June 2018 08:30 (15 minutes)

Radon-222 and its daughters are a primary background within SNO+, a large liquid scintillator detector located deep underground at SNOLAB, designed to detect rare neutrino interactions. Therefore it is crucial to determine the remaining trace amounts contributing to the experiment's background signal carefully.
A cryogenic radon trapping system is used to monitor the backgrounds observed in both water and scintillator phases of the experiment. This system has been improved and must be tested and then operated frequently. Concentrations up to 3.5×10ˆ-14 g 238U/g H2O can be measured in water. Radon-222 measurement techniques and results within SNO+ will be discussed in this presentation.

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