



PPD Seminar

Radon Control and Measurement at SNOLAB for Rare-Event Experiments

Nasim Fatemighomi (SNOLAB)

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Current and future underground physics experiments at SNOLAB are trying to answer two fundamental questions: why there is more matter than antimatter in the universe, and what is the nature of dark matter. Achieving these goals requires an extraordinary level of control over radioactive backgrounds, which can obscure or mimic the extremely rare signals being sought. Among these, the decay products of radon-222 present one of the most persistent and challenging sources of background. In this talk, I will present a range of techniques and methods we have developed and applied to characterize and suppress radon backgrounds in SNOLAB experiments. I will also highlight ongoing research efforts at SNOLAB aimed at establishing ultra-low-radon systems—efforts that are crucial for enabling the next generation of rare-event searches.

