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Status of NEWS-G3 Experiment and Muon Veto System

Friday, 17 February 2023 10:00 (15 minutes)

The NEWS-G experiment searches for low-mass dark matter candidates at SNOLAB in Sudbury, Ontario. The direct dark matter search is performed using a spherical proportional counter (SPC) filled with light atomic mass gases. NEWS-G3 is a proposed experiment that employs the same technology as the NEWS-G experiment to search for coherent elastic neutrino-nucleus scattering (CEνNS) at a nuclear reactor. NEWS-G3 will consist of a 60-cm high purity copper SPC implemented in a compact shield consisting of many different layers of material. One layer of shielding is an active muon veto system consisting of plastic scintillators coupled with a photomultiplier tube (PMT). In this presentation, I will present the current status of the NEWS-G3 experiment at Queen's University and the commissioning of the muon veto system.

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