

Status of the NEWS-G dark matter experiment

Wednesday 19 May 2021 17:15 (15 minutes)

The NEWS-G collaboration aims to detect sub-GeV WIMPs using Spherical Proportional Counters (SPC). During the past 6 years, the collaboration developed a new 140 cm diameter detector. This detector - larger than the previous generation - is made from stringently selected materials for their radio-purity. The detector construction is discussed. This presentation will be followed by a review of the different methods for characterizations such as W-value, ionization yield measurement and calibration using UV laser, Ar-37, neutron, and gamma sources. The new detector performed a first measurement campaign at the Laboratoire Souterrain de Modane (LSM) in France in 2019 before being moved and installed at SNOLAB. A summary of the commissioning run at the LSM and current installation at SNOLAB will be presented.

Primary author: BROSSARD, Alexis (Queen's University)

Presenter: BROSSARD, Alexis (Queen's University)

Session Classification: Light DM Detection 2