

## Recent physics results from NEWS-G

*Thursday 22 September 2022 11:10 (20 minutes)*

The NEWS-G collaboration is searching for light dark matter using spherical proportional counters. Access to the mass range from 50 MeV to 10 GeV is enabled by the combination of low energy threshold, light gaseous targets (H, He, Ne), and highly radio-pure detector construction. The NEWS-G collaboration has constructed a new, 140 cm in diameter, spherical proportional counter at LSM using 4N copper with 500 um electroplated inner layer. Prior to shipping the detector to SNOLAB, a short data-taking campaign was undertaken at LSM using methane. New physics results from this run, leading to world-leading spin-dependent sensitivity will be presented.

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**Session Classification:** Session 1 (morning)