## The 59th Winter Nuclear & Particle Physics Conference (WNPPC2022)



Contribution ID: 32 Type: not specified

## SiPM Stability Tests for nEXO

Friday, 18 February 2022 08:36 (12 minutes)

nEXO is a next-generation experiment that aims to search for neutrinoless double beta decay in 5 tonnes of liquid xenon (LXe), enriched to 90% in the double beta decaying isotope Xe-136. The detector is designed as a single-phase time projection chamber where anti-correlated ionization and scintillation signals will be recorded and used to reconstruct the energy, position, and spatial time topology of each event. A large array of silicon photomultipliers (SiPMs) will detect the vacuum ultraviolet (VUV) scintillation light in nEXO. Stable and uniform performance of these SiPMs is required for the planned 10-year livetime of the experiment. In addition to electrical and optical characterization, nEXO SiPMs will be tested after controlled exposure to various amounts of VUV light. I will report on the in-vacuum response of Hamamtsu VUV4 SiPMs to Xe scintillation light following exposure to high density VUV light.

## email address

lucasd@physics.mcgill.ca

## Please select: Experiment or Theory

Experiment

Primary author: DARROCH, LUCAS (McGill)

Presenter: DARROCH, LUCAS (McGill)
Session Classification: Instrumentation