



Canadian Association
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Contribution ID: 2533 Type: **Oral Competition (Graduate Student) / Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

Analog Electronics and SiPM Characterization for LOLX

Wednesday, 5 June 2019 12:00 (15 minutes)

The Light Only Liquid Xenon (LOLX) experiment aims to investigate both scintillation and Cherenkov light emission in liquid xenon using 24 Hamamatsu VUV4 Silicon Photomultipliers (SiPMs). Analog electronics are used to perform summing of 4 SiPM channels prior to signal amplification, with the goal of retaining single photon counting and sub nanosecond timing resolution. Additionally, LOLX aims to characterize cross-talk between opposing SiPMs as this process can falsely contribute to the measured light signal. LOLX will provide SiPM R&D and testing of photon transport codes related to the nEXO neutrinoless double beta decay experiment.

This talk will discuss the optimization of SiPM performance with the analog electronics and characterization of external cross-talk in air.

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Session Classification: W1-7 Detectors for Particle Physics (DAPI/PPD) | Détecteurs pour la physique des particules (DPAI/PPD)

Track Classification: Applied Physics and Instrumentation / Physique appliquée et de l'instrumentation (DAPI / DPAI)