

## LoLX Experiment

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The Light only Liquid Xenon (LoLX) experiment aims to investigate the emission of scintillation and Cherenkov light in liquid xenon for its applications in rare event searches in particle physics. LoLX consists of 24 quadruple Hamamatsu VUV4 Silicon Photomultipliers (SiPM) arranged in an octagonal prism. SiPMs are covered with two different kinds of optical filters used to separate scintillation and Cherenkov light. Out of 24 SiPMs, 22 are covered with 225nm long-pass filters to see Cherenkov light from liquid xenon, one is covered with a band-pass filter centred at 175nm to detect the scintillation light of liquid xenon and one is left bare. A strontium-90 beta source placed at centre of the structure is used for light production in LoLX. The beta electrons will deposit energy in liquid xenon and produce scintillation and Cherenkov light to be detected by SiPMs. First LoLX data have been taken in cold nitrogen gas to measure the external crosstalk events where photons emitted from surface of one SiPM are detected in another. The first data set of LoLX with liquid xenon is planned to be taken at McGill University by the time of this conference. This talk will give an overview of the LoLX experiment, its current status and upcoming plans.

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### **Please select: Experiment or Theory**

Experiment

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