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## Quartz fluorescence backgrounds in liquid xenon TPCs

*Thursday 9 October 2025 11:20 (20 minutes)*

Searches for 1-10 GeV dark matter particles with liquid xenon TPCs such as LZ, XENONnT and PandaX-4T are presently limited by instrumental backgrounds consisting of accidental photon coincidence. We have investigated this pathology and conclude that the dominant source of the photons, which follow each particle interaction, is fluorescence of the quartz windows of the photomultiplier tubes. Recent results and next steps will be discussed.

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**Session Classification:** SHARED SESSION

**Track Classification:** RDC 7 Low-Background Detectors