

Multimessenger Astronomy Beyond the Standard Model and Quantum Sensing (Q-EYES 2025)



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Hunting Dark Matter at Kamioka Underground

Thursday, 11 December 2025 11:00 (30 minutes)

We are conducting a low-mass dark matter search at the Kamioka Underground Observatory, targeting dark matter in the sub-GeV mass regime. The experiment employs Transition Edge Sensor (TES)-based cryogenic detectors to measure tiny signals from particle interactions in a liquid helium target operated at ultra-low temperatures. Underground operation at 2700 m.w.e., together with dedicated gamma and neutron shielding, provides the low-background environment required for this search. This presentation will give an overview of the experimental concept and current status, with a focus on recent progress in background estimation, detector installation, and on-site preparation.

Presenter: BUI, Khai (QUP, KEK)

Session Classification: Plenary Session