

## Status and Prospects of Kamioka Cryolab

*Thursday 28 August 2025 16:40 (20 minutes)*

Recently, there has been an increasing interest in searching for low-mass dark matter. To address this new direction, a new experimental setup for low-mass dark matter searches is currently being commissioned at the Kamioka Underground Laboratory. A dilution refrigerator has been installed underground, and gamma and neutron shielding is under construction. Ambient gamma and neutron levels have been measured and a Geant4 simulation model has been constructed to predict experimental background rates with this setup. Multiple experiments are under preparation for g-yr level dark matter searches starting in late 2025, including superconducting targets with optical TES sensor readout and a test underground run of a superfluid helium payload. In this talk, a status update will be given and future prospects will be briefly discussed.

### Collaboration you are representing

Kamioka Cryolab

**Author:** BURKHANT, Suerfu (High Energy Accelerator Research Organization (KEK))

**Presenter:** BURKHANT, Suerfu (High Energy Accelerator Research Organization (KEK))

**Session Classification:** Dark Matter and Its Detection

**Track Classification:** Dark Matter and Its Detection