



# “Kamioka CryoLab: A Future Low-background Underground Facility for Cryogenic Light Dark Matter Searches

by Suerfu Burkhant (KEK QUP)

Time and Date: 10:00-12:00, July 14<sup>th</sup>, 2023

Place: Room 745, Science Complex B H03 (hybrid)

Registration: "[https://us02web.zoom.us/meeting/register/tZMrfu-srTwoE9Alq8CRvX899\\_PBis6iDTNO](https://us02web.zoom.us/meeting/register/tZMrfu-srTwoE9Alq8CRvX899_PBis6iDTNO)"

Dark matter—established via various cosmological and astronomical observations—is a significant constituent of our Universe and remains one of the most outstanding mysteries of modern physics. The mass range of potential dark matter candidates covers more than 30 orders of magnitude. In the past, researchers have primarily focused on searching for GeV-TeV dark matter (WIMP) via nuclear recoils. However, null results from numerous large-scale, highly sensitive experiments have redirected our interests towards keV-MeV light dark matter candidates. Currently under construction, the Kamioka CryoLab is an underground facility designed to provide a low-background experimental environment for cryogenic low-mass dark matter searches. In this talk, I will present the idea, concept, status, and future perspective of the project.

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