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## Indirect search for sub-GeV dark matter with neutrino telescopes

*Friday, 8 July 2022 18:40 (20 minutes)*

We discuss indirect searches for sub-GeV dark matter (DM) that annihilates directly to a neutrino pair or a pair of new bosons subsequently decaying to neutrinos. The neutrino spectrum from the DM annihilation is monochromatic in the former process and a polynomial shape in the latter case. As a benchmark scenario, we consider a gauged  $U(1)_{L_\mu - L_\tau}$  model under which a DM field is charged, and evaluate the sensitivity at the Super-Kamiokande and future Hyper-Kamiokande experiments. We also discuss the interplay between the muon  $g-2$  anomaly and DM physics.

### In-person participation

Yes

**Primary authors:** OKAWA, Shohei (ICCUB); TSUMURA, Koji; ASAI, Kento**Presenter:** OKAWA, Shohei (ICCUB)**Session Classification:** Dark Matter**Track Classification:** Dark Matter