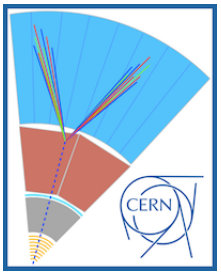

Contribution ID: **21** Type: **not specified**

Forward Liquid Argon Experiment at the High Luminosity LHC

Tuesday 2 July 2024 11:20 (20 minutes)

The Forward Liquid Argon Experiment (FLArE) is a Liquid Argon Time Projection Chamber (LArTPC) based experiment, designed to detect collider neutrinos and search for dark matter at the Large Hadron Collider (LHC) at CERN. It will be located in the proposed Forward Physics Facility (FPF), 620 m from the ATLAS interaction point in the far-forward direction. The LArTPC technology offers excellent spatial resolution and particle identification. With a fiducial mass of 10 tonnes, FLArE is able to detect millions of neutrinos from the LHC, and search for dark matter particles with world-leading sensitivity in the MeV to GeV mass range. In this talk, I will overview the physics reach, preliminary design, and status of the FLArE project.

Author: WU, Wenjie (University of California, Irvine)

Presenter: WU, Wenjie (University of California, Irvine)

Session Classification: Dedicated or uniquely-sensitive long-lived particle detectors