Contribution ID: **1058** Type: **Parallel session talk**

DUNE cold electronics R&D at ICEBERG

Thursday 18 July 2024 09:38 (17 minutes)

The Deep Underground Neutrino Experiment (DUNE) is a next-generation long-baseline neutrino oscillation experiment with a primary physics goal of observing neutrino and antineutrino oscillation patterns to precisely measure the parameters governing long-baseline neutrino oscillation in a single experiment, and to test the three-flavor paradigm. DUNE is being built with the exquisite imaging capability of massive LArTPC far detector modules and an argon-based near detector. Fermilab and DUNE have built ICEBERG for the R&D of the DUNE Cold Electronics(CE) for both Horizontal and vertical drift TPC including the Photon Detector(PD), DAQ, Trigger, and online and offline software development. ICEBERG has a 1280 channel DUNE APA with 30 cm LAr dual drift volume along with X-ARAPUCA Photon Detector. We are working to implement OnEdge AI/ML in the DUNE-DAQ. The status of R&D will be discussed.

Alternate track

1. Computing, AI and Data Handling

I read the instructions above

Yes

Author: Dr MISHRA, Shekhar

Presenter: Dr MISHRA, Shekhar

Session Classification: Detectors for Future Facilities, R&D, Novel Techniques

Track Classification: 13. Detectors for Future Facilities, R&D, Novel Techniques