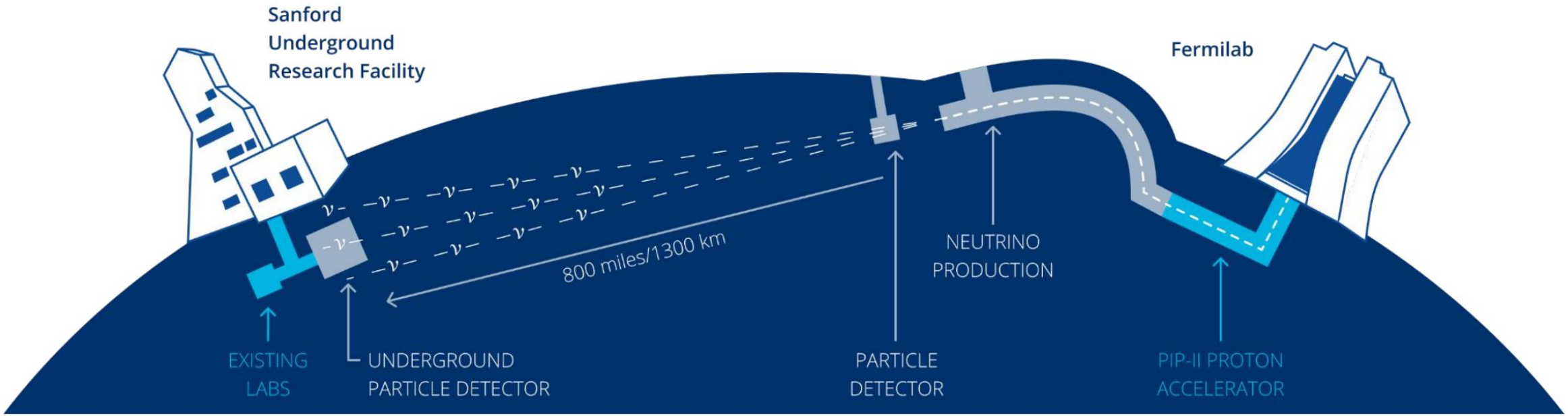
DUNE Overview

Juseong Park

Chung-Ang University, Korea

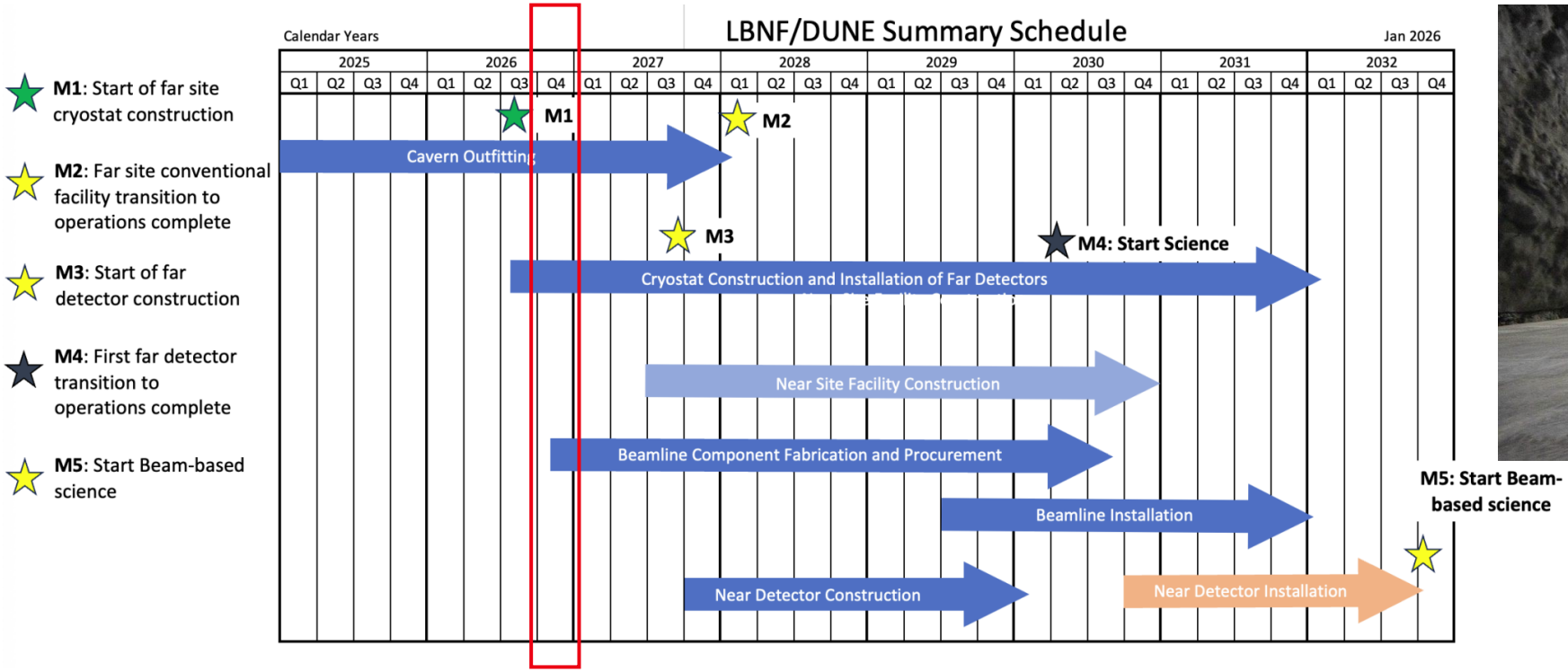
Deep Underground Neutrino Experiment - DUNE

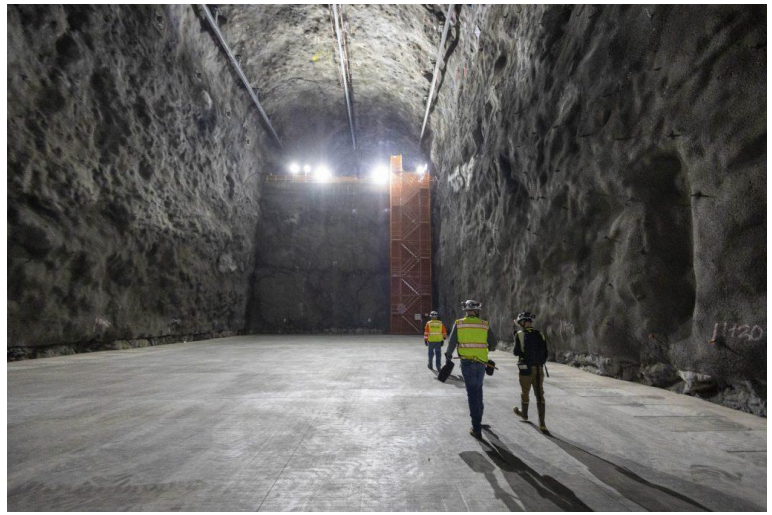


- Baseline: 1,300 km from Fermilab to the Sanford Underground Research Facility (SURF).
- Detectors: A Near Detector (ND) at Fermilab and a Far Detector (FD) using liquid argon time projection chamber (LArTPC) technology.
- Physics Goals: Measure neutrino oscillations, search for CP violation in the lepton sector, determine the neutrino mass ordering, and investigate rare phenomena such as proton decay and supernova neutrinos.

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Deep Underground Neutrino Experiment - DUNE





- Building and moving detector to FD Cavern now
- Detector construction started!

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NuLa CAU NEUTRINO LAB

Korea DUNE Members

Members of DUNE

Chung-Ang University

CAU Neutrino LAB (CAU NULA)

Prof. Kim Siyeon

PostDoc	**Sunwoo Gwon** (FD4 R&D, WbLS)
Ph.D student	**Juseong Park** (ND analysis)
Master's student	**Hokyeong Nam** (FD ProtoDUNE) **Sunhong Kim** (ND analysis) **Yujin Park** (FD ProtoDUNE)

Jeonbuk Univ.

Prof. Seodong Shin

New Members Since the last K-Neutrino Symposium

SEOULTECH

Prof. Myeonghun Park

Jeju Univ.

Prof. YoungJu Ko

Hanyang Univ.

Prof. Sungbin Oh

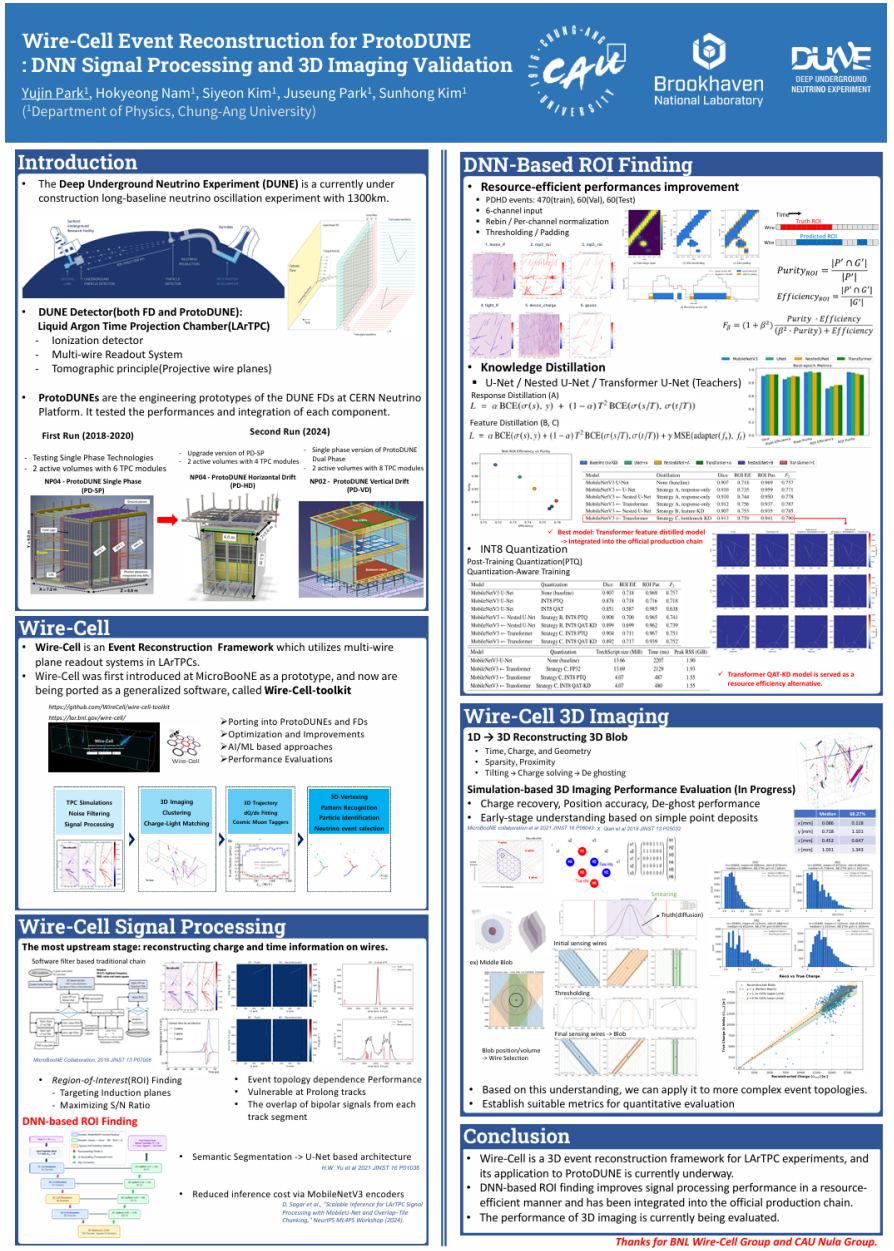
Korea DUNE Activity

Chung-Ang University
CAU Neutrino LAB (CAU NULA)

Research Activities

DUNE Far Detector — Wire-Cell Signal Processing
Yujin Park, Hokyeong Nam

- DNN-based ROI finding for signal processing
- Improving DNN-based Signal processing performance with resource efficiency
- ProtoDUNE 3D imaging validation (ongoing)



Korea DUNE Activity

Chung-Ang University

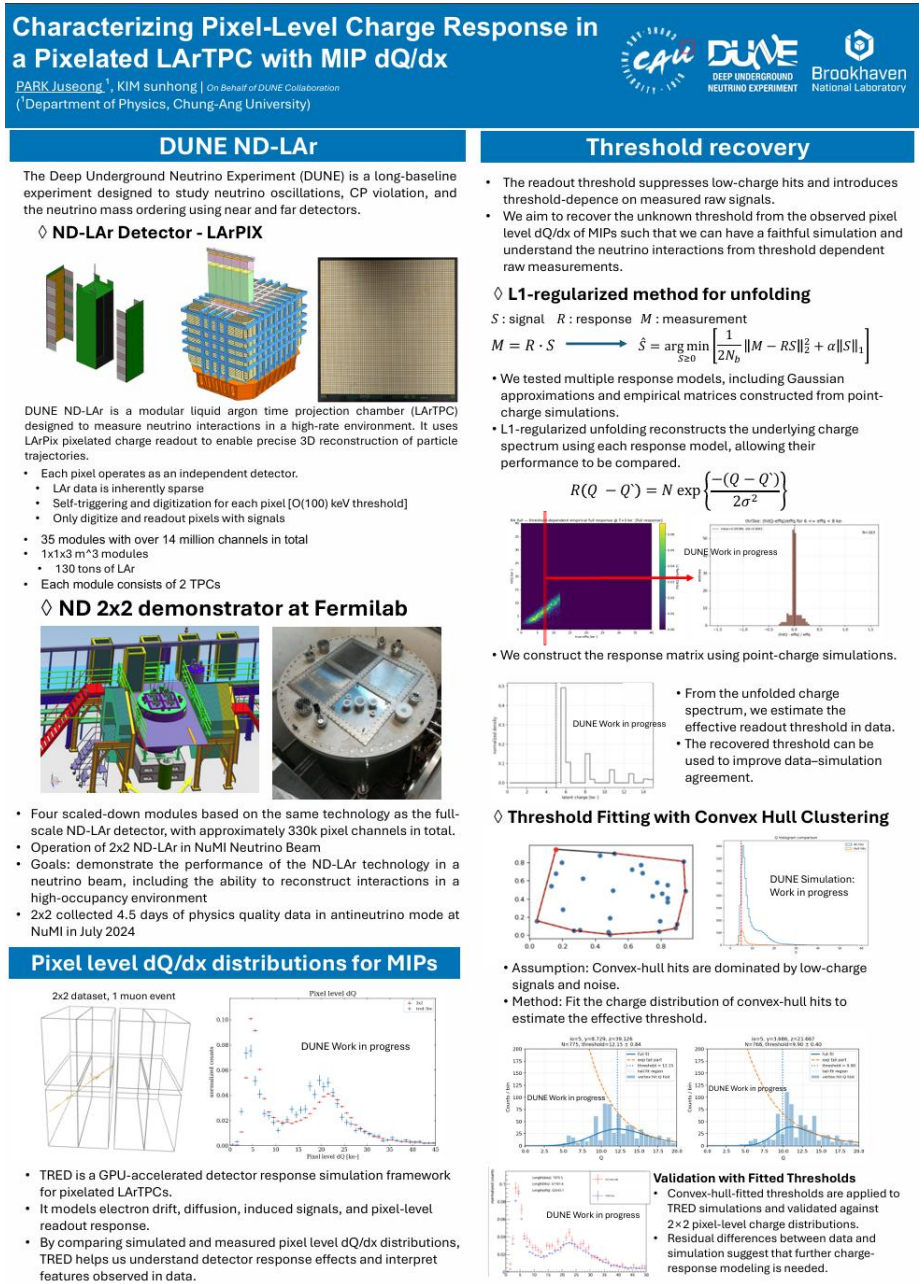
CAU Neutrino LAB (CAU NULA)

Research Activities

DUNE Near Detector — TRED Simulation

Juseong Park, Sunhong Kim

- Pixel-level charge response modeling in ND-LAr
- Threshold estimation using unfolding methods
- Data–simulation comparison of charge distributions



Korea DUNE Activity

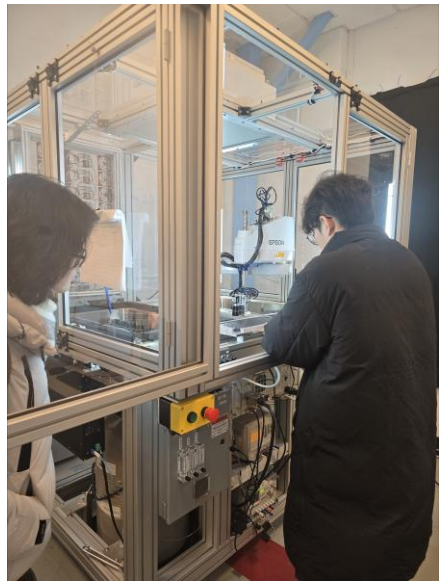




Research Activities

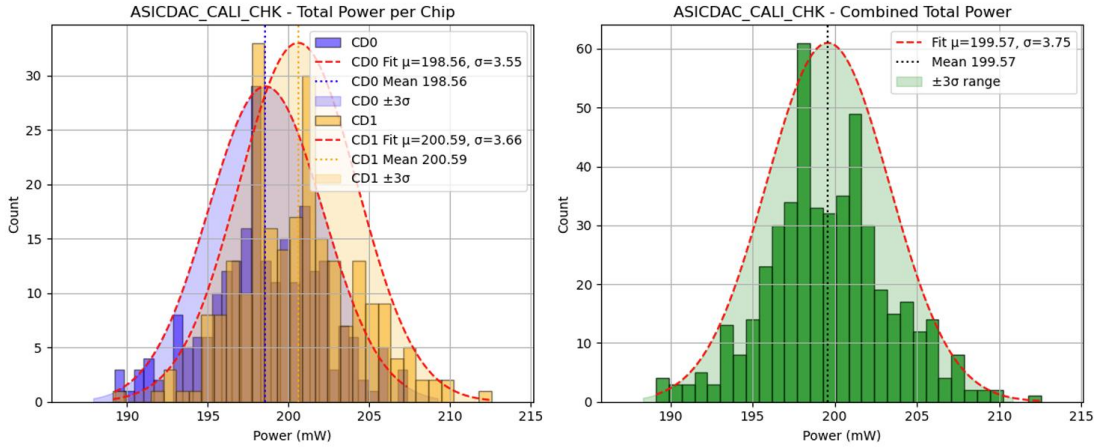
DUNE Cold Electronics Hardware : COLDATA, LArASIC, FEMB

Collaboration with BNL Electronic Detector Group



- Cold electronics chip testing for the DUNE Far Detector
- Robotics testing

Technical note in DUNE database :
Comprehensive QC Testing and Data Analysis of Cold Electronics






DUNE Talk in NNN

4 Oral Talk

Thursday, October 29

- 08:00–08:20 | The DUNE Near Detector: Design and Current Status
- 08:20–08:40 | The DUNE Far Detector Module 3: Technology & Physics Prospects
- 08:40–09:00 | Development and Characterization of the Photon Detection System for DUNE Experiment

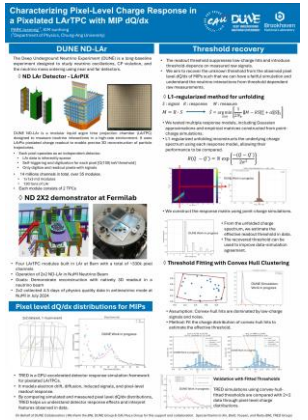
Friday, October 30

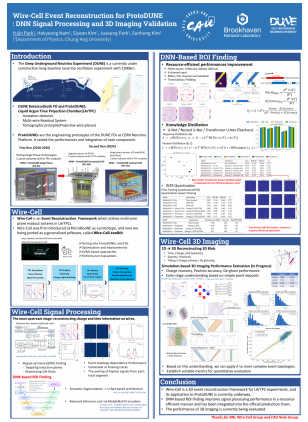
08:30–09:00 | Rhiannon Smith-Jones
The Deep Underground Neutrino Experiment (DUNE)

2 Poster Talk

Wednesday and Thursday

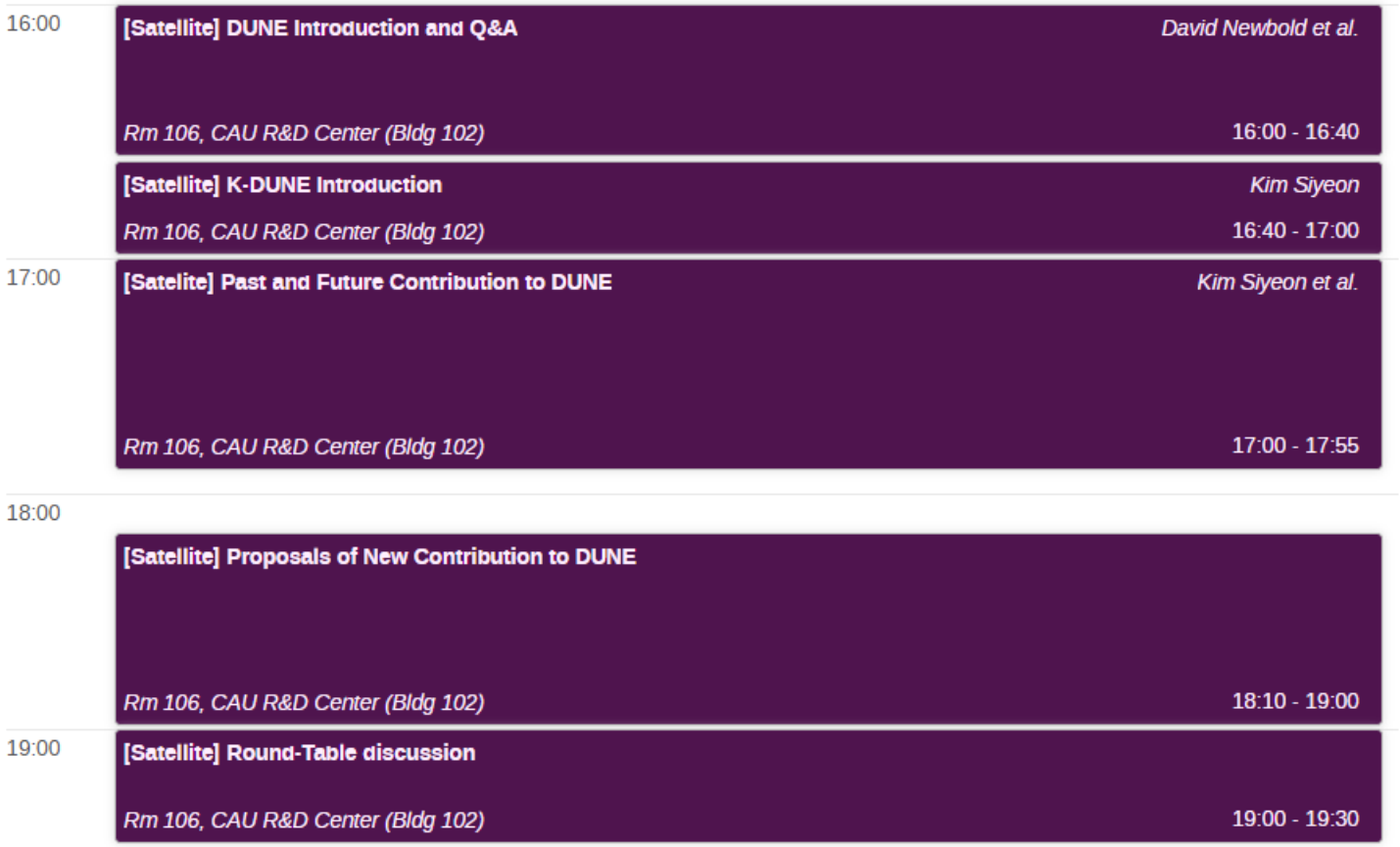
- Pixel-level charge response in ND-LAr
- Wire-Cell reconstruction for ProtoDUNE





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K-DUNE meeting 10/30



DUNE Spokespersons Sowjanya Gollapinni and David Newbold attends this meeting
Anyone who has interest with DUNE is welcome!

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K-DUNE Collaboration

K-DUNE Annual Meeting
Last meeting: December 2025
The annual K-DUNE meeting will be held again at the end of this year
More details will be announced soon.





Summer DUNE camp at JEJU
July 13 to July 24, 2026

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DEEP UNDERGROUND NEUTRINO EXPERIMENT









