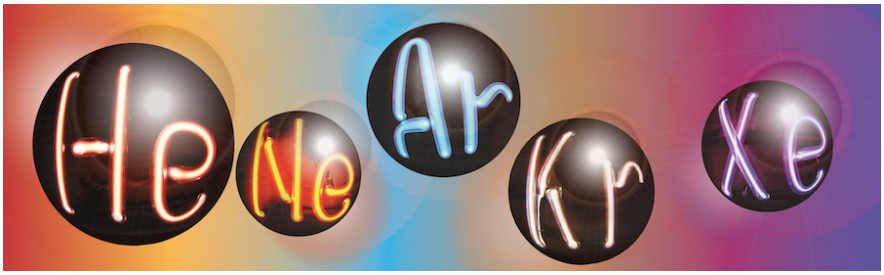

Contribution ID: **10** Type: **Poster**

DAPHNE digitizing system for DUNE SP-PD

Thursday, 22 September 2022 15:30 (1 hour)

The Deep Underground Neutrino Experiment (DUNE) will be an experiment in neutrino physics and proton decay studies. DUNE will consist of two parts, The Long-Baseline Neutrino Facility, located at the Fermi National Accelerator Laboratory, and the Far Detector at Sanford Underground Research Facility, the latter consists of liquid argon tanks used as scintillators for neutrino detection. The PD consortia are using SiPMs sensors for photon detection and those analog signals are amplified and digitized by a system named DAPHNE. The DAQ system we have designed is capable of digitizing 40 channels of signals coming from the silicon sensors, sending data at high speed via Gigabit Ethernet or fiber optics using the FullMode protocol to the receiving DAQ systems. This card works as an interface between the analog signals, part of the cold electronics, and the digital signals, part of the warm electronics.
DAPHNE system is under development and testing by a group of Latin American institutions and Fermilab. Other works running in the collaboration are the SiPM signal amplification system, timing interface, and DAQ for system validation.

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Session Classification: Poster session

Track Classification: Light/charge readout (PMT, SiPM, WLS, electronics etc.)