



Contribution ID: 418

Type: **Talk**

## Evolution of DUNE's Production System

*Thursday 24 October 2024 14:24 (18 minutes)*

The DUNE experiment will start running in 2029 and record 30 PB/year of raw waveforms from Liquid Argon TPCs and photon detectors. The size of individual readouts can range from 100 MB to a typical 8 GB full readout of the detector to extended readouts of up to several 100 TB from supernova candidates. These data then need to be cataloged, stored and then distributed for processing worldwide. This large massive amount of data and heterogeneous computing environment necessitates powerful and robust distributed computing infrastructure. In the process of building up that infrastructure, DUNE's production system has recently undergone an overhaul, in which it has integrated 1) a new workflow management system (justIN) 2) a new data catalog (MetaCat) and 3) a state-of-the-art data management system (Rucio). Simulations of DUNE's Far Detector and its prototypes ProtoDUNE-HD (PDHD) and ProtoDUNE-VD, as well as data from PDHD serve as the first tests of this infrastructure.

**Primary author:** CALCUTT, Jacob Michael (Brookhaven National Lab)

**Presenter:** CALCUTT, Jacob Michael (Brookhaven National Lab)

**Session Classification:** Parallel (Track 4)

**Track Classification:** Track 4 - Distributed Computing