

## The light detection system in ProtoDUNE-DP

The ProtoDUNE-DP experiment aims to build and operate a 6x6x6 m<sup>3</sup> LAr TPC prototype to fully demonstrate the dual-phase technology at large scale for the next generation long-baseline neutrino detector, DUNE. DUNE plans to install four 10-kton LAr TPC detectors to measure neutrino oscillations at 1300-km distance from the neutrino beam, to perform neutrino astrophysics studies, and nucleon decay searches. The photon detection system in these detectors is crucial as it will provide the trigger signal and an absolute time reference for the charge. The ProtoDUNE-DP light system will be formed by 36 8-inch cryogenic photomultipliers from Hamamatsu positioned at the bottom of the detector. The characterization of this photomultipliers that will be installed in ProtoDUNE-DP will be described. This light system has been already successfully tested in a 3x1x1 m<sup>3</sup> LAr double phase detector operated at CERN, and preliminary results of the light signals will be presented.

### Authorship annotation

on behalf of DUNE Collaboration

### Session and Location

Wednesday Session, Poster Wall #44 (Auditorium Gallery Right)

### Poster included in proceedings:

yes

**Primary author:** Ms LASTORIA, Chiara F (CIEMAT (Madrid))

**Presenter:** Ms LASTORIA, Chiara F (CIEMAT (Madrid))

**Track Classification:** Poster (participating in poster prize competition)