

# Construction, installation and operation of ProtoDUNE-SP

*Tuesday 28 July 2020 17:35 (15 minutes)*

The single-phase liquid argon TPC at CERN (ProtoDUNE-SP) is an engineering prototype for the first module of the DUNE far detector. This prototype which has dimensions of a cube of about 10m edge, provide full validation of the use of the membrane tank technology for large dimension cryostats. Furthermore, the very high performance of the protoDUNE-SP TPC with more than 500 days of continuous and stable operation, demonstrated the reliability of the LAr detection technology at a scale never tested before. In this talk we will review the main characteristics and milestones of the construction and installation of protoDUNE-SP which provide a series of benchmarks for DUNE. The performance for several different detector working points will also be discussed.

## I read the instructions

### Secondary track (number)

13

**Author:** BORDONI, Stefania (Michigan State University (US))

**Presenter:** BORDONI, Stefania (Michigan State University (US))

**Session Classification:** Operation, Performance and Upgrade of Present Detectors

**Track Classification:** 12. Operation, Performance and Upgrade of Present Detectors