

Preliminary Considerations and Perspectives for ProtoDUNE VD in 2025

NP02 Run coordination meeting

FLC

ProtoDUNE VD in 2025

Preliminary perspectives for NP02 Operation at Neutrino Platform

- ProtoDUNE VD Operation nominally can start at completion of LAr filling - expected by ~End of January.
- A (minimum) SIX months continued Operation is envisaged.
- Request to SPSC for Beam Time (LE-charged ptcl. H₂/NP02 Tertiary beam) is submitted:
 - 4-6 Weeks Beam Time Slot (tba)- starting not before May (presumably across June/July)
- NP02 Operation (6 Months: Feb-July) should be organized in “SubRuns” - including (culminating with) the H₂/NP02 Beam (sub)Run
- **The list and the agenda of the SubRuns is under construction** - starting now by calling for Inputs from all relevant parties - DUNE Consortia (HV, TPC/CRP/TDE-BDE, PDS, DAQ, CALCI) and Physics Coordinators and also Grp.s involved with specific instrumentation in NP02 (e.g PMT array, PurMon, Calibration Sources, Purification Methods, ...)

ProtoDUNE VD in 2025

Basic Assumptions for subRuns list candidates

- *February (2 to 4 weeks):* **Detector(s) Activation/Commissioning/Tuning** [HV, TPC/CRP, PDS/C&M&PMT, DAQ - in Series and in Parallel at some point] - take all time needed.
- SubRuns main Goals/Topics:
 - **Detector Performance Characterization/Demonstration:**
 - Periodic (e.g once a month) TestPulse/LED Flash Calibration Run: stability of Response over time.
 - Periodic Detector Development Run [e.g. DAQ, Trigger, r/o Electronics]
 - **Detector (Absolute) Calibration** with “calibrated” Signal Sources & Trigger:
 - LASER Periscope Run
 - PNS (Pulsed Neutron Source) Run
 - “Physics”
 - Cosmic Runs w/ External CRT Trigger
 - Beam Runs w/ LE-charged ptcl. H₂/NPO₂ Tertiary beam Trigger
 - Dedicated Physics Runs (tbd)

ProtoDUNE VD in 2025

Basic Assumptions for subRuns list candidates

- Special Tasks/Operations:
 - **Xenon Doping:**
 - Dedicated Run time for Xe-doping in steps (from 1 ppm to 10 ppm)
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