

LBNC Meeting December 5-7, 2019 - CERN

11/04/2019

Charge:

The LBNC would like to hear about the general status of LBNF and the principle outcomes of the recent IPR meeting. Time is devoted on the second afternoon to a report on the progress with the beamline in a parallel session. (The time is chosen such that it could be remote.)

The LBNC would like to hear from DUNE its overall status and progress from a high level, providing a within which to consider the details which follow.

The LBNC would like to hear about the progress with ProtoDUNE SP, addressing both the analyses, including results from the photo-detection and progress towards defining the operating parameters, which was seen as a primary goal for 2019. Time has been reserved on the second afternoon for breakout discussions which we suggest could be used for discussion of progress with installation and tests thereof (eg at Ash River)

The primary goal of this meeting is to understand the progress made with the Dual Phase technology. We have therefore devoted the whole of the first afternoon. Our hope would be to hear in detail of the installation and the operations thus far of ProtoDUNE DP. This should describe both the successes and the difficulties, for example the ion build-up, the bubbling, and the purity. This can be divided among several speakers. The LBNC imagines that each of the issues is likely to require significant future R&D and would like to hear about those plans including their schedules. Of particular interest may be the 600kV Power Supply design issues. Finally, we expect that this discussion leads to an understanding of a path forward towards a Dual Phase detector. The LBNC would like to hear how this path would lead to a future verification program likely including a second phase of ProtoDUNE DP operation, and to a TDR at an appropriate time.

Considerable progress was made in the first half of 2019 with understanding the needs and concepts for the Near Detector. We would like now to hear about progress towards a Conceptual Design and a CDR. In addition to a report on the recent DESY workshop, we could imagine several talks addressing key components. These should address: (ND time allocation 2 hrs)

- the current concept overall,
- the Argon Cube,
- the MPD including magnet designs for the Helmholtz or double dipole coils, and the reuse of ALICE TPC components,
- the Beam Monitor, including use of KLOE magnet, simulations, infrastructure and logistics,
- any plans for fall back systems and staging including the rationales and the way they support the goals for systematic uncertainties.

The LBNC is aware of substantial ongoing progress made by the Computing Consortium and would like to hear an update. It would be interested in any progress to co-involve those seeking and organizing the resources and those concentrating thus far, primarily on algorithm development and analysis.

The LBNC will develop a Closeout Report which it will deliver on Saturday morning at 11:00 am. Subsequently this will be refined into a LBNC Meeting report.