

Montgomery
September 02, 2020

LBNC September 14-16 Draft Charge

The LBNC would like to hear about the general status of LBNF. The LBNC understands that there may be progress with the excavation contracts. Of continuing interest are the planning for DOE-IPRs, the current schedule, and any options for early delivery of beam.

The LBNC would like to hear from DUNE its overall status and progress from a high level, providing a basis for the details which follow. The situation with respect to the IPR process and the approach to a Baseline review appears to be fluid. The LBNC would like to hear how DUNE is approaching this. This should include mention of the ND Day-1 detector.

Time has been allotted for discussions of the advances in the Technical Coordination of DUNE. At the previous meeting there was concern about how TC was handling its multiple responsibilities for construction and R&D. At this stage the incorporation of the Near Detector in the TC should be addressed.

The LBNC would like to hear about the progress with the Far Detector SP technology. The presentation(s) should cover:

- a) A summary of the PrtoDUNE SP photon detection situation including results of the Xenon tests should be described.
- b) Physics analysis of the PD-SP data (briefly)
- c) SP technical progress including the TPC electronics development and the progress towards a choice.
- d) Progress in understanding of, and tests, of installation plans and procedures for DUNE.

Substantial time has been reserved for breakout discussions which we suggest could be used for some of these discussions.

PrtoDUNE DP (NP02) has undergone HV surgery and further operations since the previous meeting. These operations are set to end early September, so a discussion of what has been learned is of particular interest. Understanding the ongoing R&D on, for example the LEM construction, continues to be important. This leads towards a plan for a second phase of NP02 operation. In this context the LBNC would like to understand the planning for configuration of NP02 for future tests. We note that in the plenary session in-depth discussion is not possible but that there is substantial breakout time.

Since the previous meeting DUNE submitted their Conceptual Design Report for the Near Detector complex for review. The LBNC provided, in writing, an extensive critique. After digestion the LBNC ND team met with the DUNE ND team to discuss development of responses and to discuss clarifications. At this stage, the full LBNC would like to hear brief comments on this, on the technical progress, and on the Day-1 Detector. There will then be extensive breakout time which should be shared between these three aspects of the Near Detector planning.

The LBNC continues to be interested in the development of the Computing Consortium. We continue to be interested in a (more) coherent view of the computing and software project. We would like to see a path toward a TDR, starting maybe with a CDR highlighting where all the pieces fit together.

For example, it would be important to understand what are the steps that the DUNE computing consortium is taking toward the definition of the computing system to be used for production, which will eventually be described in the TDR.

We are also interested in understanding how this coherent vision covers the needs of the various communities FD SP, DP, ProtoDUNE, Near Detector.

Finally a short update of progress during the past 6 months is desirable.

This is a considerable ask, so we have tentatively suggested a substantial breakout. Failing that the presentation at this meeting should be a precursor to follow-up at subsequent LBNC meetings.

The LBNC will develop a Closeout Report which it will deliver at 12:15 CDT September 16. Subsequently this will be refined into a LBNC Meeting report.