

18-Aug-2021

**Charge Letter: LBNC September 2021 Review, September 15-17, 2021**

As usual, the LBNC should construct a report in which it acknowledges, comments on, and where appropriate, makes recommendations following the presentations and discussions during the meeting.

The LBNC should hear about the general status of LBNF and DUNE. Of continuing interest is the planning for a tailored approach to baselining following the recent DOE-IPR and the schedule for future DOE-IPRs. In addition, significant changes to the baseline funding profile has considerably modified the timeline for some aspects of the project. These modifications affect the US project, international partners, overall scope and the timeline to physics. The LBNC should hear about these issues and provide input and feedback.

The LBNC has regularly heard about the safety performance associated with the work at the Sanford lab. It would be interesting to understand how DUNE has more broadly addressed ES&H issues and integrated Lessons Learned from experience with the NP02 and NP04 experiments and other neutrino detector fabrication such as the SBND detectors,

As the definition of the technical plans for the major pieces of the DUNE detector progress, it is important for DUNE to ensure that all aspects of the endeavor enjoy an appropriate organizational structure and management coverage. DUNE is expected to discuss its management structures in the DUNE overview talk, in the Technical Coordination and to a greater or lesser extent in the main Sub-detector sections. These structures should allow convenient mapping to the US-DUNE DOE project. In its reports from this meeting, the LBNC should include commentary on the current management implementation within DUNE including how well the major sub-systems Far Detector Modules, and Near Detectors are integrated.

Prior to, and as part of, this meeting, the LBNC will undertake a “mini-review” of Far Detector 1 (FD-1, horizontal drift). The first part of the review will happen on September 8, in advance of the LBNC meeting, while the final portion of the review will occur during the LBNC meeting. The charge for the FD-1 mini-review is provided separately, closeout will be combined with the LBNC closeout.

The LBNC should hear about the progress with the FD-2 that utilizes Vertical Drift SP technology. Focus should be upon progress achieved since the dedicated vertical drift review in April/May 2021. The presentation(s) should cover:

- a) Progress towards ProtoDUNE II VD (NP02).
- b) Technical progress on the Vertical Drift Detector, HV, CRPs, photon detection, etc.
- c) Progress on integration, documentation, including the ongoing review of the Vertical Drift CDR.

The LBNC should hear about status and plans for the Near Detector. This should include the “Phase 1” (“Day 1”) Near Detector as well as planned evolution toward the ultimate DUNE ND. In light of the funding profile issues outlined above, the LBNC should hear about priorities, options and actions planned with the Near Detector.

The LBNC should also hear an update on safety issues related to LBNF and DUNE.

The LBNC should hear an update from the Computing consortium, including an update on the DUNE Computing CDR. This segment should also address progress with physics analyses and publications deriving from the ProtoDUNE operations and other R&D activities.

The LBNC should develop a Closeout Report which it should deliver at 12:15 EST September 17, 2021. Subsequently this should be refined into a LBNC Meeting report.