

Charge Letter: LBNC October 2022 Review, October 5-7, 2022

The LBNC is charged by the Fermilab Director to review the scientific, technical, and managerial progress, plans and decisions associated with the Fermilab Long Baseline Neutrino Facility (LBNF) and the Deep Underground Neutrino Experiment (DUNE).

For the October 2022 meeting, the LBNC will meet in hybrid mode to review status and progress of LBNF and DUNE. As with other meetings, 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. In addition to updates on major detector systems: Far Detector 1, Far Detector 2, and Near Detector, the LBNC should also receive updates on activities towards ProtoDUNE-II and LBNF Beamline. Along with technical progress, staffing and plans, presentations should report on issues and concerns related to supply chains and availability of components.

As design and construction decisions are made by partners contributing to this effort, the LBNC should comment on scope, timeline, and physics performance impacts of these decisions. Where appropriate, the LBNC should also comment on overall coherence of the international effort.

In considering the presentations and material provided for the meeting, attention should be given to prior LBNC recommendations and actions that have been undertaken to address these recommendations. For the DUNE detectors and computing, we would like to continue our work toward uniform and regular reporting and tracking of major DUNE technical milestones.

Other specific areas of review for this meeting should include:

- 1) Re-affirm scope and potential phasing of DUNE near detector complex. Follow up on the response to recommendations from the previous LBNC meeting.
- 2) Review and endorse as appropriate DUNE Computing CDR.

The LBNC should develop a Closeout Report which it should deliver at 12:15 CDT on October 7, 2022. Subsequently this should be refined into a LBNC Meeting report.