Long Baseline Neutrino Committee

December 2018

CERN, Geneva Switzerland

CLOSEOUT Report

December 9, 2018

Ackowledgements

The LBNC recognizes the effort put into the preparation of the presentations and material by the DUNE Collaboration, and the frank responses to questions and queries.

The committee also appreciated the hospitality by the CERN Neutrino Platform organization and leadership, CERN itself, and Fermilab for their hospitality

Charge

- The LBNC will hear about the progress in a number of areas including the general progress of each of DUNE, LBNF, and ProtoDUNE. There will be in depth presentations covering the development of the Dual Phase option, including a look forward to 2019 with ProtoDUNE DP, and preparations for a TDR. We will also hear about TDR and CDR preparations in a few key areas.

- The LBNC will prepare a written report, which will include descriptions of the status of each of these items. Inter alia, this report will inform a presentation of the overall preparations of DUNE, which may be requested for the DOE LBNF-DUNE IPR in early January, 2019.

- An abbreviated verbal closeout will be presented on Sunday afternoon.

- Our goal will be to leave CERN with an advanced draft of the full report in hand.

Approach

- In order to facilitate achieving this, we have made tentative assignments for the attending LBNC members.
- Note that both Angela Fava, our Scientific Secretary and David MacFarlane, our outgoing chair are expected to be active participants.
- The assignments are shown below;
  - the name in Bold Face is requested to take the lead in writing.
  - We are looking for approximately 0.5 – 0.75 pages per item except for the Dual Phase which has several sub sections, so should be longer.
  - We will discuss the expectations in the Executive session at the beginning of the meeting, but if anyone feels that the task is not acceptable, please contact mont@jlab.org.

Assignments

- DUNE Overall Status 50 mins (35+15) Stefan Soldner Rembold --
  Exec Summary: **Montgomery**
- LBNF Status 45 mins (30+10) Chris Mossey
  LBNF Status: **Laxdal**, MacFarlane
- ProtoDUNE-SP Report (and lessons-learned) 45 min (35+10) Gina Rameika
  PD SP Status: **Charlton**, Fava, Montgomery
- Dual-Phase
  - Results from the 1x1x3 m^3 Demonstrator 30 mins (20+10) Sebastien Murphy
  - LEM Production & Testing 30 mins (20+10) Edoardo Mazzucato
  - CRP Assembly & Cold-Box Testing 30 mins (20+10) Dominique Duchesneau
  - ProtoDUNE-DP Installation 30 mins (20+10) Filippo Resnati
  - DUNE-DP IDR & TDR Status 30 mins (20+10) Dario Autiero

  DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

Assignments

- TDR/CDR Preparation Status
  - Overall View/Plan/Status 35 mins (25+10) Tim Bolton (Remote)
    TDR Overall Status: **Charlton**, Montgomery
  - Physics TDR Status/Preview 35 mins (25+10) Jon Urheim
    Physics TDR Status: **Heinemann**, Huber
  - Computing Organization Status 35 mins (25+10) Heidi Schellman
    Computing Plans: **Boehnlein**, Heinemann
  - APA TDR Status/Preview 35 mins (25+10) Christos Touramanis
    APA TDR Status: **Monroe,** MacFarlane,
- Near Detector CDR Status/Preview 35 mins (25+10) Alan Bross
  Near Detector Status **Mondal,** Huber, Fava

LBNF Status: **Laxdal**, MacFarlane

Recommendations

PD SP Status

Recommendations

DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

Results from the 1x1x3 m^3 Demonstrator

Recommendations

DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

LEM Production & Testing

Recommendations

DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

CRP Assembly & Cold-Box Testing

Recommendations

DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

ProtoDUNE-DP Installation

Recommendations

DUAL Phase Status: **Proudfoot**, Fuerst, Galbiati, Mondal

DUNE-DP IDR & TDR Status

Recommendations

TDR Overall Status: **Charlton**, Montgomery

Recommendations

Physics TDR Status: **Heinemann,** Huber

Recommendations

Computing Plans: **Boehnlein**, Heinemann

Recommendations

APA TDR Status: **Monroe,** MacFarlane,

Recommendations

Near Detector Status **Mondal**, Huber, Fava

Recommendations

Exec Summary: **Montgomery**