

ProtoDUNE

Status and Updates

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Visit to CERN

to discuss our answer document with SPSC

Oct. 19th:

Pre-meeting with referees

Stefan Schoenert (TU Munich)

Antonio Bueno Villar (Univ. of Granada)

and with head of SPS Cttee

Claude Vallee (CPP Marseille)

June 21st:

SPSC committee closed meeting

- Ilias Efthyomiopoulos gave presentation on beamline design status
- we answered two more questions in front of entire SPS Cttee

Pre-meeting Summary

Discussion with referees were constructive, useful and positive. Questions/topics discussed:

Organizational:

- Overlap with other efforts, specifically SBND and the organizational connection with WA105
- Synergies with WA105 and WA104
 - Incorporation of ICARUS experience
- Manpower (at CERN)
- Schedule
- Organization

Technical:

- Photon Detection System selection
- Cold electronics development
- Study of contamination from ullage

- Discussed joint tests on cathode materials, field cage design, LAr purification, ...

SPSC Recommendations

The Committee acknowledges the motivation to build a full-scale engineering detector for validation of full size components and charge beam calibration of detector response.

Because of the above and scheduling constraints, the SPSC recommends the P-351 proposal for approval and to proceed as a new project in the CERN neutrino platform.

An engineering detector should be based on state-of-the-art components tested in previous prototypes and similar detectors. To this respect, the Committee is concerned with the fact that many components are neither fully defined, nor validated.

The SPSC requests a Technical Design Report containing detailed descriptions of all components as well as proofs of validation of previous detectors with special emphasis on the DUNE specific components tested on the 35-tons prototype.

The Committee therefore recommends to improve collaboration between all teams involved in FNAL LAr-based neutrino experiments including the European expert groups to ensure that the best available solutions are chosen.

For an efficient conduction of project, the Committee recommends that the collaboration sets up a permanent team resident at CERN and requests a description of local management and organisation at CERN.

protoDUNE next steps:

- SPSC makes a recommendation
- Decision (with assignment of experiment no.) expected on Dec. 3rd

Most critical tasks ahead:

- 1) grow team and fully engage more collaborators and newcomers in all required activities
- 2) exploit synergies with WA105 and other CERN and FNAL nu-platform activities

Ongoing Activities

- Cryostat penetrations need to be finalized now
- CERN EHN1 facility interface requirements need to be better defined NOW
- ...

ProtoDUNE Webpages

as part of the CERN nu-platform:

- official portal: <http://cern.ch/duneproto>
- Twiki (more technical online documentation):
<https://twiki.cern.ch/twiki/bin/view/CENF/DUNEProtSPH>

at Fermilab:

<https://web.fnal.gov/collaboration/DUNE/SitePages/ProtoDUNE%20Working%20Group.aspx>

- Need to start populating pages
- Will cross link pages (make CERN page primary page)

Organizational issues

New protoDUNE management structure expected to be in place soon:

→ ProtoDUNE is on aggressive schedule and lots of work needs to be done, so keep moving with present organization until it is being updated

High level meetings on **Fridays at 10:00am CDT** during detector weeks:

- Monthly: focus on protoDUNE issues
- Monthly: focus on synergies between protoDUNE and WA105

Reminder of working groups:

- “Measurement and analysis” (**Tuesdays at 2:00 pm CDT during physics weeks**)
 - now sub-group under far detector “computing and simulation”
 - Same conveners (to be formalized)
- “calibration” (**Thursdays at 9:00am CDT during detector weeks**)
 - now sub-group under far detector “calibration”
 - same convener (but may change)
- “beam” (**as needed**)
 - As before

Reminder

CERN nu-platform meetings on **Thursdays at 8:30am CDT** :

- Neutrino platform general meeting alternates with
- Neutrino platform integration meeting

Reminder:

ProtoDUNE email list:

- We are using CENF-LBNF-Test@cern.ch including all sub-groups
- Also: CENF-General@cern.ch
→ CERN nu-platform meetings announced here
- Self-subscription at: <https://account.cern.ch/account/>
→ Follow link “e-groups membership” or if you don’t have a CERN login yet follow “create a new account” first.
- Please let us know (1. Youlia Ilieva Krasteva youlia.krasteva@cern.ch or 2. kutter@phys.lsu.edu) if you experience problems with the CERN based email list/e-group

ProtoDUNE and WA105 email list: (now in use)

- self-subscribe to dune-cern-proto
<https://web.fnal.gov/project/LBNF/SitePages/LBNF%20and%20DUNE%20Mailing%20Lists.aspx>
- <http://listserv.fnal.gov/scripts/wa.exe?A0=DUNE-CERN-PROTO>