

News (reviews, ProtoDUNE-II, TDR ,.....)

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DOE IPR (Oct 29 – Nov 1)

- This review was done to judge how we are progressing toward establishing a baseline for the LBNF / DUNE project
- On the DUNE Far Detector the committee was impressed with our technical progress but criticized somehow our presentations
 - There is a standard set of transparencies for DOE reviews and we were missing some information that the committee wanted to see (cost drivers, milestones, requirements)
 - Very limited cost drill-downs (mostly TPC electronics, one question on HV), committee was not happy with documentation (not our fault, spreadsheets prepared by project control personnel lacked some information)

DOE IPR (Oct 29 – Nov 1)

- While acknowledging that progress is being made in all areas the committee does not think that we are going to be ready to estimate the total cost of the LBNF / DUNE project in time for a review in Spring 2020
 - Near detector, near site facility and beamline, cryogenics
 - Understanding of international contributions
- The committee made a long list of very useful recommendations to the project
- Committee and DOE were very supportive of the entire project in the review

Next reviews

- Redo CD-3a for excavation of the far site (March 17-19)
 - Allow for the excavation of the far site to start in July as planned
 - This is the most important step to ensure that the entire LBNF / DUNE project is not delayed
- Another DOE IPR to judge preparedness for baselining (July 14-16)
- There could be a director's review somewhere in here
- DOE CD-2 IPR in the last week of October
 - Establish baseline for entire project (LBNF/DUNE, far site and near site)

Are we going to get CD-3 in October 2020 ?

- Unclear whether we are going for a full CD-3 for the DUNE far detector in the review of October 2020
- If excavation starts in July 2020, there is no need to push ahead with CD-3 for the Far Detector in October 2020
- There could be another review in 2021 to give the go-ahead for construction
 - Note that the APA construction will start in the UK in 2020 and that in the US we are trying to get NSF funding for the APA construction
 - For the 1st detector the APAs are the longest lead item
- Is there an issue with the ASICs ? Are we allowed to make the ASIC engineering run(s) prior to CD-3 ?
 - To be understood

Preparing for next reviews

- Our documentation (BoE files) for the review is in fairly good shape, but in most places we rely on quotes that are 2-3 years old (ProtoDUNE)
- Starting in December we will have to get new quotes for a lot of items
 - I will be asking for help to work on this, we need to update almost all BoE files
- BoE files have also been reviewed very carefully by the Neutrino Cost Group (Markus Norberg, Jeff Spalding) and they gave useful suggestions / questions
 - Found very few mistakes / unclear things
 - We have a good foundation for future reviews

ProtoDUNE-II

- Plans are being put in place for a 2nd run of ProtoDUNE
- Empty cryostat, reopen TCO, extract APAs, replace
- Current goal is to have 4 DUNE APAs in the detector (2 hanging upside down) with final electronics / photon detector
- This calls for aggressive schedule on
 - 2nd round of ASIC prototypes / FEMBs / system testing
 - ASIC selection in January 2021
 - Fabrication of masks for ASICs (if LArASIC/ColdADC/COLDATA solution is chosen, may be able to do it with MPW run if CRYO is selected)
 - Install final prototype FEMBs on APAs for ProtoDUNE-II in Fall of 2021

Other reviews (i)

- In addition to DOE reviews we are going through
 - LBNC review (TDR)
 - Neutrino Cost Group
- The LBNC has a meeting at CERN at the beginning of December
 - We may be asked to present update on status of ASICs
 - LBNC already informed of success of cable insertion tests at Ash River and of bubble test stand at BNL
 - Will know more in next few days
- The NCG is reviewing our BoEs and we have received a first set of questions

Other reviews (ii)

- And then we have internal DUNE reviews
- Preliminary Design Reviews
 - February 19: mechanical aspects of TPC electronics (cryostat penetrations, cable trays, connection of cables to FEMB and of FEMBs / CE boxes to APA)
 - 5-7 February 20: review of ASICs and FEMBs at CERN
 - Hopefully we will have the charge this week, will send detailed instructions for documentation by the 1st week of December
 - 10-12 March 20: review of WIEC/WIB/PTC/system aspects at Fermilab (tentative date)
 - Will agree on charge with Steve Kettell before mid-December

SOWs

- I've started to work on SOWs for CY20
- One down, a lot more to go
- I hope to get 2-3 done this week, please bear with me....

TPC Electronics Workshop

- We failed miserably to have a workshop in the Summer
- How many people would be available for a workshop in (early) January (at Fermilab ?)
 - Very close to collaboration meeting
 - No classes ?
 - Risk of getting stuck in snow..... (affects also the module of opportunity workshop.....)