

Status of Technical Proposal

Tim Bolton and Sam Zeller

February 13, 2018

Purpose of this meeting

- Thanks to all for getting outlines in on time!
- Outlines generally point towards a high quality document emerging in the future.
- Consortium editors own their section; Sam and I will not micro-manage.
- We do wish to emphasize several themes.

Milestones

- **January 12:** Finalize table of contents
 - Section heading level
- **February 23:** First rough draft of TP due
 - **TDR editor-led informal review**
- **March 16:** Second rough draft of TP due
 - Formally assigned “external” reviewers.
- **April 13:** Final version of TP due
 - Ready for submission to LBNC.
- **May 11:** TP submitted to LBNC

The TP is not an updated CDR

- Heading towards the baseline design, the TDR
- Options should be narrowing.
- Designs should be flowing from requirements.
- Design performance should be demonstrable from simulation.

Introductions are important

- We cannot be complacent!
- Take the attitude that LBNC will be a tough and skeptical review committee.
- What is the very purpose of sub-system and its parts? Be clear. Example:
 - Photon detection system.
 - Slow monitoring.
 - Calibration.
- Why have certain design decisions been made and retained, even if circumstances have changed. Example:
 - Wrapped APA.
 - Cold electronics.

Emphasize technical over project

- Consolidate and summarize project-oriented sections.
Example:
 - Interfaces.
- Cost and schedule will be developed in other documents.
- Include timelines and key milestones.

Show a path to conclusion

- How will design options be resolved? Examples
 - Photon detector system.
 - Calibration system.
- Connect to ProtoDUNEs.
- No wish lists!

Don't duck vulnerabilities

- Call them out. Examples:
 - Cannot achieve nominal HV?
 - Single point failures in HV?
 - Noise impacts on DAQ.
 - Dead electronics channel impacts.
 - Inaccessibility: “unmanned spaceship” analogy.
 - 20-40 years of operation.
- Discuss trade-offs, mitigation. Examples:
 - Electric field vs. purity.
 - Dead channel model, and tolerance of performance.