

CALCI Scope Workshop/Review Kick-off

Eric James, Gina Rameika

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Outline

- Charge Questions
- Prioritization Categories
- Review Committee “assignments”
- Report writing
- Review Material
- Questions

Review Committee Charge – Part I

- The review committees are asked to look at each of the proposed systems and evaluate the following:
 - Does the system have a well-justified role in safeguarding the far detectors and facilitating their operation, and if so, what is the minimum amount of system scope needed to carry out this role? (Cryogenic Instrumentation only)
 - Does the system have a well-justified role in facilitating the analysis of far detector data, and if so, what is the minimum amount of system scope required to fulfill this role?
 - Have all technical issues related to the feasibility of the system (including those raised in the previous workshops) been resolved?
 - Are there any risks to overall detector performance associated with the implementation of the system, and if so, is there a plan in place for mitigating these risks?
 - Is there a credible plan in place for demonstrating system performance in ProtoDUNE-II?
 - Does the functionality of the system justify its overall cost?

- Note that the workshop is not intended to serve as a design review for the systems under discussion. As stated above, the review committees should attempt to assess the technical viability of each proposed system but not worry directly about more detailed technical questions such as how cryostat penetrations will be allocated among the different systems. The intention is to first define the overall required scope for calibration and cryogenic instrumentation systems and then work to figure out how to best globally integrate them. If the committees believe that certain calibration and cryogenics instrumentation systems are likely to have interference issues with other existing detector systems, these concerns would be appropriately be addressed as part of their evaluation of potential risks to overall detector performance.

Review Committee Charge – Part II:

- Based on their evaluations of the individual systems, the review committees are asked to classify each of the proposed systems in terms of the following categorizations:
 - Essential – Experiment should not be run without this system in place.
 - Highly-desirable – Strong justification for including this system but not viewed as absolutely necessary.
 - Advantageous – Good arguments exist for why this system might be useful but not fully justified in terms of its contribution to overall detector performance.
 - Debatable – System could potentially be useful but not fully supportable based on current arguments.

Committee “assignments”

- **Cryogenic Instrumentation Systems Sub-committee**

- Flavio Cavanna, Alberto Marchioni, Stephen Pordes, Filippo Resnati, Michelle Stancari, Marco Verzocchi
 - Temperature Sensors (Alberto, Marco)
 - Purity Monitors (Flavio, Michelle)
 - Pressure Sensors and Level Meters (Filipo, Alberto)
 - Cameras (Michelle, Stephen)
 - Gas Analyzers (Stephen, Filipo)
 - Instrumentation coordination (Marco, Flavio)

- **Calibration System Sub-committee**

- Mike Moody, Ryan Patterson, Francesco Pietropaolo, Kate Scholberg, Michele Weber, Tingjun Yang
 - Ionization Laser System (Michele, Mike)
 - Laser Beam Location Systems (Tingjun, Michele)
 - Photo-electron Laser System (Ryan, Kate)
 - Pulsed Neutron Source (Francesco, Ryan)
 - Radioactive Source System (Kate, Tingjun)
 - Calibration program coordination : (Mike, Francesco)

Report Writing

- We will collect questions and material for the report in the Google Doc which you can find here :
 - https://docs.google.com/document/d/1kllpmr6A6yQaogCtsOdao4FzP5-Uf_IzahBp8CWD0KI/edit?usp=sharing

Review Material

- On the review INDICO page (top section) :
 - <https://indico.fnal.gov/event/24155/>
- You can find the following material :
 - Charge and Charge Questions
 - Committee Assignments
 - Link to Google Doc
 - Relevant TDR Chapters + a ReadMe Guide
 - Contributions from LBNF
 - Reports from 2019 Scope Reviews
 - CALCI Deliverables (Preliminary Cost Book)

