

Minutes of the 8th Meeting of the SBN Oversight Board (Fermilab, March 13, 2020)

SBN-OB Attendees:

- A. Ereditato (Switzerland; remote)
- C. Rubbia (ICARUS Spokesperson; remote)
- M. Shaevitz (US NSF; remote)
- A. Guglielmi (ICARUS; remote)
- D. Schmitz (SBND Co-spokesperson; remote)
- R. Wilson (US DOE; remote)
- S. Bertolucci (INFN, Italy; remote)
- S. Brice (Chair)
- O. Palamara (SBND Co-spokesperson)
- J. Evans (UK)

Other Attendees:

- P. Wilson (SBN Program Head),
- J. Saviano (Secretariat)
- D. Salmieri (ICARUS Scientific Secretary; remote)
- K. McFarland (IB Chair; remote)

Not in Attendance:

- Nessi (CERN)

Action Items

1. No Action Items

Introduction and Review of Last Meeting

P. Wilson, SBN Program Head, welcomed the members and participants to the Eighth Meeting of the SBN Oversight Board, there were no action items from the 11 December 2019 meeting. The worldwide effect of COVID-19 ensured this meeting was held with mostly remote participation.

SBN Project Update. P. Wilson

P. Wilson, SBN Program Deputy Coordinator, provided an SBN project update.

Slides were presented that covered updates on ICARUS, Far Detector Cosmic Tagger, Near Detector, SBND Cryostat, TPC, PMT and DAQ.

Most items on the checklist have been completed. We're progressing through cryogenics commissioning. Staying on schedule by the week. Reviewed and completed cool-down process. Started LAr fill of ICARUS and are currently taking daily deliveries (45-48 trucks total)

expected). Should be complete by mid-April.

Continued collaboration with CERN engineers on a daily basis. The plan is to have a 2-week stabilization period and have the detector turn on before the beam ends in early June. Working on plan for remote shifts. Detector turn-on will probably be delayed if the experts are not able to be present at the lab due to coronavirus. Having discussions on what the consequences will be and how to deal with it. Fermilab engineers will continue to coordinate with CERN engineers.

Lab management is working on contingency plans for possible lab closure. Delivery of nitrogen is considered essential to several experiments. Once filled and core is operational, we will resume installation of remaining side CRTs.

CRT Modules – last modules being completed at Frascati. Will be transported from Frascati to CERN and then from CERN to Fermilab.

Near Detector – Load test completed in December. Currently installing flooring and clean tents to get the ATF ready for detector assembly at D0. Final machining taking place for CPA.

Cryostat – warm vessel installed at near detector bldg. Preparing 3-D survey of interior volume. All caps are in fabrication at CERN – to be completed in Spring and delivery is expected in May/June. A bid has been accepted for main membrane cryostat in December and CERN is currently working on the precise delivery schedule and putting the contract together. The cryostat installation is defining our critical path.

SBND - will be put into tools-down safe state in event of lab closure. Designers and engineers would continue to work from home. No changes in the milestones from last meeting. TPC itself should be constructed by the end of the summer. Re-planning of SBND schedule is being done in 2 stages because we were required to present an updated plan to DOE in January. After review, DOE has agreed to provide an additional \$500k for this fiscal year for work through the end of September. In this second phase we are accelerating cryogenics work and further evaluation of resource needs, adjust cryostat membrane procurement schedule.

Director's annual SBN review in February. Review of ICARUS operations plan this summer. There were 17 recommendations. Final report should be out next week. Need to complete the re-planning by the first of April. Should be another short (1-day) review in late July/August after re-planning is complete. Working on action plan for every one of the recommendations.

Discussion of how the planning will differ from the original schedule. No complete cryostat before beginning of 2021. Will be a very tight schedule to get everything installed.

SBND, O. Palamara

Ornella Palamara, co-Spokesperson, provided an update on the SBN Joint Working Groups.

Slides were presented that reviewed status of the SBN five Working Groups;

1. SBN DAQ & Data Pre-Processing
2. SBN Slow Controls
3. SBN Cosmic Ray Tagger (SBND CRT bottom layer installed)
4. SBN Analysis Working Group
5. SBN Analysis Infrastructure Group (Wes & Joseph Zennamo are conveners)

5th SBN Analysis Workshop will be held remotely/via zoom March 23 – 27. Agenda will be out soon.

Is analysis framework going to use LArsoft, Python or a mixture? Definitely a mixture. Framework will be integrated with ICARUS and SBND.

Update on SBN Institutional Board, K. McFarland

slides were presented on status of the SBN IB.

Elections were held in October. Kevin was elected.

Time was spent with SBN Collaboration leadership to understand what is needed. First meeting was held in February. Some interim meeting rules were put in place, we established there should be some ex-officio members in attendance. Most important action – need to implement rules writing committee. There should be a joint communication between ICARUS and SBND (via something like Slack)

4 function groups

1. Scientific results
2. Publication review process
3. Speakers committee
4. Dataset and Computing coordination

Next meeting scheduled for April. Are there suggestions from the oversight board?

Discussion on what the authorship standards should be (allow limited or full collaboration only?), where should boundaries be? High level guidance from this group could be good. What are the current processes for SBND and ICARUS? SBN allows only full authorship, ICARUS allows for some limited authorship. Should come to a decision before June so the focus group can begin writing rules.

At SBN level do we want to allow limited authorship papers?

ICARUS will take this offline to discuss. Results will be sent out via email.

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Discussion about contingency plans for the next few weeks? Nitrogen deliveries scheduled, continuing to operate the detectors, shift takers working out how to handle it remotely, only 3 shift takers allowed in the control room at a time.

PAB to be shut down/doors locked. Decommissioning to stop on MINERvA and Minos.

Email will be sent lab-wide to tell employees of current situation/determination.

The SBN-OB meeting was adjourned.

Next meeting 3 months from now 12 June 2020