



SBN Joint Working Groups

SBN Oversight Board Meeting

FNAL

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Ornella Palamara

SBN – Joint Efforts across the SBN program

- ❑ **Joint Efforts** across the SBN program are **key to the success of the program**.
 - ❑ Exploiting synergies
 - ❑ Sharing of expertise from different groups
 - ❑ Reduce the effort of the single Collaborations
 - ❑ Minimize systematics that impact the final analysis

- ❑ There are several areas where the SBN collaborations are already working closely together on key aspects, in preparation for operation and physics.

From SBN Organization Document

❑ *SBN Joint Working Groups*

- ❑ Purpose: A set of SBN Joint Working Groups are needed to co-develop many key aspects of SBN operations and physics analysis. A list of existing Working Groups will be maintained by the SBN Oversight Board. New SBN Working Groups shall be set up as needed by the SBN-OB.
- ❑ Membership: The Working Groups are open to all participants in the SBN Program. For each Working Group the SBN-OB will identify a set of conveners to lead the activities of the group and report progress to the SBN-OB and the collaborations.

Existing Working Groups

- ❑ **SBN Analysis Group** (*conveners: D. Gibin, O. Palamara*)
 - ❑ Explore how combined SBN physics analysis for sterile neutrino oscillation searches can be most effectively performed.
 - ❑ Work focuses on implementing a three detector simulation, building reconstruction and analysis tools within a common framework, and developing an end-to-end common analysis scheme in preparation for real data exploitation.
 - ❑ Meet bi-weekly since September 2016, with typically 30+ participants.
 - ❑ Two SBN analysis workshops
 - ❑ Fermilab, Oct. 2017
 - ❑ Padua, March 2018

Existing Working Groups

- ❑ **SBN DAQ and Data Pre-Processing** (*convener: B. Badget, A. Fava, G. Karagiorgi, W. Ketchum, S. Ventura*)
 - ❑ Prepare the infrastructure for the efficient collection of high quality data with ICARUS and SBND using common strategies whenever possible.
 - ❑ Joint building of tools for the implementation of online/quasi-online monitor of detector performance (e.g. electron lifetime, signal-to-noise, space charge effect)
 - ❑ Meet bi-weekly since Feb. 2018.

Existing Working Groups

- ❑ **SBN Slow Controls** (*conveners: A. Fava, S. Gollapinni*)
 - ❑ Compare Slow Controls needs and designs and identify common hardware and software solutions for ICARUS and SBND.
 - ❑ Meet bi-weekly since Oct. 2017.

New Working Groups (Proposal)

- ❑ **Cosmic Ray Tagger** (*proposed conveners: I. Kreslo, U. Kose*)
 - ❑ Compare hardware components and performances, design common solutions for CRT triggering and CRT calibration
- ❑ **Cryogenics** (*proposed conveners: M. Geynisman, ?*)
 - ❑ Continue exchange of information between different teams in charge of build and support/operate the cryogenics systems
 - ❑ SBN cryogenics are a collaborative effort between Fermilab, CERN and INFN.
 - ❑ CERN cryogenic engineers will support the proximity cryogenics installation and work with FNAL engineering on commissioning.
 - ❑ FNAL cryogenic engineers will support the cryogenic systems and operations.
- ❑ Others?