



SBS Project Management

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Management Overview

- SBS Program management oversees three projects:
 - **SBS Basic (WBS 1)** involves the acquisition of an existing magnet and the associated work of preparing it for use during the SBS research program. The effort includes modifications to the magnet, including machining a slot in the yoke for beam passage, field clamps, and a solenoid to reduce the transverse magnetic field on the beam line, the design and development of the infrastructure needed to run the magnet, and the construction of the platform on which it will stand.

WBS1 COMPLETED ON JAN 31st 2016
 - **Neutron Form Factor (WBS 2)** involves the construction of the PMT-based Coordinate Detector (CDet) , trigger electronics , pole shims, rear clamp, detector frames, electronics huts and lead shielding .

WBS2 COMPLETED ON JAN 22nd 2017
 - **Proton Form Factor (WBS 3)** involves the construction of forty GEM detector modules with associated front-end and DAQ modules.

WBS3 COMPLETED ON FEB 1st 2017
 - **SBS Dependencies:** ECal, polarized helium target, GRINCH, Front GEM tracker and HCal.
- [Monthly DOE reports](#) on wiki.

DOE November 2016 SBS Review

- Final DOE [committee report](#) was positive with three recommendations and numerous comments.
- Executive Summary Recommendations:
 1. Provide an updated organization chart to DOE before the next review.
 2. The team should consider what progress on performance is needed to reach full performance and identify them as Ultimate Performance Parameters (UPPs).
 3. The team should provide to DOE a plan for transition to operations before the project closeout review. The plan should describe the activities, goals, and schedule associated with demonstrating the KPP's. The plan should also include a list of milestones that capture the main activities, including off-project dependencies and demonstration of UPP's as appropriate, which need to be completed in order to accomplish the planned science program of the SBS, after project completion. These milestones will be discussed on a quarterly basis with ONP.

Steps to meet 2016 SBS Review Recommendations

1. Provided updated organization [chart](#)
 - Main change was to explicitly have Alexandre Camsonne in charge of DAQ.
2. Prepared “Transition to Operations” document
 - Described the management structure with quarterly reports.
 - Listed milestones for dependencies. These are just the milestones that already had been tracked.
 - Demonstrated how the KPPs for each project had been met.
 - Stated the UPPs.

DOE SBS Closeout Review

- [Review](#) was held remotely on June 6th in the morning.
- Prepared two supplemental documents:
 - [Status](#) of ECal
 - [Status](#) of polarized target
- Presented two talks:
 - SBS Close out [talk](#) and summary [document](#).
 - All projects had met KPPs.
 - WBS2 and WBS3 were under budget and completed on time.
 - SBS Transition to Operations [talk](#) and [document](#).
 - Milestones for dependencies.
 - UPPs for projects are the same as KPPs.
 - UPPs for dependencies
 - The GMn experiment will pass an Experimental Readiness Review (ERR).
 - The HCal will have a time resolution $< 1\text{ns}$
 - The INFN GEM modules will have tracking efficiency $> 95\%$ using cosmic tests.
 - The polarized target will have a bench-level demonstration of 60% polarization at an effective beam current of 60 μA .
 - The ECal will have an energy resolution of 5% for 4 GeV electrons.
 - The GEn and GEp experiments will pass an ERR.

Conclusion

- DOE SBS Close Out:
 - **NO recommendations**
 - Accepted UPPs in the Transition to Operations document
- Moving from construction to commissioning
- Monitor the dependencies with milestones and quarterly reports.

Thanks to everyone for making
the SBS Program a success