

# Response to DOE 2015 November SBS Review

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## Three Recommendations:

1. The team should provide to DOE a report on the ECal annealing tests by February 16, 2016. This report should use the beam test data to validate the heat annealing model, and use the model to predict performance under expected operating conditions.

**Response:** *Report was sent to DOE in March 2016.*

2. A document describing trigger and DAQ electronics including a timing diagram for the trigger should be provided one month before the next review.

**Response:** *Need to update the old DAQ document by Alexandre Camsonne*

3. The Laboratory is urged to evaluate the ECal project including the technical feasibility of the annealing solution, and ECal project cost and schedule, by summer 2016.

**Response:** *Report on three options for ECal was sent to 3 committee member for review in July. After the review, a final report will be sent to DOE in August.*

## Comments

- Executive Summary

1. The group should formulate a plan for measuring trigger efficiency.

**Response:** *Quote from report : "It appears possible to investigate trigger efficiencies by loading the memories of the FADC and Fastbus systems with simulated data. " . Who will lead this effort?*

2. The ECAL and the polarized 3He target external dependencies are notably behind schedule. This introduces risk, including risk to costs, to the completion of the SBS detector system, but also adds risk to the achievement of the core scientific program. While the selection of the choice of design and the additional cost of the revised ECAL detector is now anticipated by mid-2016, a viable financial path forward for its construction needs be addressed.

**Response:** *Polarized target :*

1) *Review of polarized target conceptual design in March 2016*

2) *Hall A hired two new designers for more manpower for polarized target.*

3) *Robin Wines evaluated the timeline and concluded completion of engineering by July 2018.*

**Response:** *ECAL:*

1) *See response 3 in "Three recommendations section"*

2) *Work by Stony Brook on the C200 prototype will test mechanical design that can be scaled to the full size version. Complete the C200 test by August 2016.*

- Significance and Merit

The Collaboration is encouraged to extend the effort on the simulation and analysis framework to include:

1. Higher level analysis including tracking, clusters, etc.
2. Tracking the spin rotation angle of particles through the spectrometer in order to be able to extract the transverse polarization of the nucleon.
3. Analysis of accidentals, by mixing events.
4. Trigger efficiency simulations.
5. Radiative corrections and form factor extraction methodology.

**Response:** *Monte Carlo group is working on these items. Prepare a report for the review?*