

Charter for the Super Bigbite Spectrometer Collaboration

(Dated: September 21, 2023)

Goals

The Super Bigbite Spectrometer (SBS) collaboration is a working group within the Hall A collaboration whose purpose is to ensure the successful running, analysis, and publication of approved experiments which will use all or parts of the equipment of SBS. This collaboration formulated the original scope and drove the realization of the DOE-supported SBS program, and this charter formalizes its structure. This collaboration includes the group of individuals who initially developed the SBS program, as well as the experiments accepted by the CC vote.

The SBS group of experiments presently consist of E12-07-109(GEp), E12-09-016(GEn), E12-09-019(GMn), E12-09-018(SIDIS), C12-15-006 (TDis), E12-17-004 (GEn-recoil) with run group additions C12-15-006A (TDis-Kaon) and C12-15-006B (Tagged DIS Measurement of the Neutron Structure Function), E12-20-008(pionKLL), E12-20-010(nTPE), and E12-22-005(pionALL). This collaboration and its coordinating committee have been formed for a broad, common scientific endeavor, and should not be confused with any entity named in the management plan specific to the DOE-supported SBS program, formally completed in 2017.

This charter recognizes the responsibilities of the individual groups as outlined in the SBS Research Management Plan. This charter's purpose is to establish an effective collaboration structure so that activities within the DOE-related SBS program as well as other activities related to the SBS experiments can be coordinated efficiently. The responsibilities of the SBS collaboration include the development, construction, installation and calibration of the components of the SBS and ancillary detectors needed for SBS-experiments, within the available funds.

These responsibilities also include implementation of readout electronics and data-acquisition hardware as well as software for data-acquisition, calibration, and analysis. The collaboration will share techniques, software, calibrations, and knowledge to support the rapid and accurate analysis of data and to move experiments forward towards timely publication. The collaboration also coordinates the development and construction of the several key systems on which the SBS program depends, especially the front GEM tracker (used in the SBS for the GEp experiment and in BigBite for other experiments), the polarized He-3 target with convection-driven flow of gas, the Hadron calorimeter (HCAL-J), the radiation-hard electromagnetic calorimeter (ECAL), upgraded BBCAL, highly segmented Timing Hodoscope, and the highly segmented Gas Cherenkov counter for BigBite.

Membership

All members listed as collaborators on SBS-collaboration experiment proposals, as submitted to the PAC, are included in the SBS collaboration unless they submit a request to the coordinating committee not to be included. This includes authors on both full experiments, run group proposals, and run group additions. In addition to this, individual membership is open to all who would like to contribute to a particular experiment or particular piece of equipment. These applicants must submit their names for consideration by the coordinating committee. The names and background information for any person who has requested membership or who is to be considered for removal from membership will be presented at a weekly SBS meeting and collaborators will be invited to contact their representatives on the coordinating committee. The coordinating committee will vote on membership no sooner than one week after that presentation. A majority vote by the coordinating committee is required to grant membership. A two thirds majority vote by the coordinating committee is required to remove a member from the collaboration unless that removal is voluntarily requested by the member. Any member will be removed from the collaboration if they so request.

Individual experiments that wish to be endorsed by the SBS collaboration must submit their proposal to the coordinating committee and make a presentation at a weekly SBS meeting or, if possible, at a collaboration meeting. The proposal must be submitted a minimum of six weeks prior to the date of requested endorsement. If this required date of submission precedes the PAC submission deadline then a reasonable draft of the proposal may be submitted, with the understanding that consideration of the proposal will not continue if the draft is found not to permit adequate evaluation. The coordinating committee will designate no fewer than two people (with majority coordinating committee consent) to review the submitted proposal, and jointly produce a report on the goals, technical feasibility, resources brought by the proposers, and any potential issues of the experiment. If a reviewer determines that the draft of the proposal submitted is not sufficiently complete to permit evaluation, consideration of the proposal will not proceed. Reviewers may remain anonymous outside of the coordinating committee with the coordinating committee chair acting as proxy between the reviewers and candidate experiment members. After the presentation to the collaboration meeting and/or SBS weekly meeting and the completion of the reviewer report, at least three

quarters vote by the coordinating committee is required to grant collaboration endorsement to the experiment. The coordinating committee must be allowed two weeks following the presentation and the circulating of the report prior to the vote. Once an experiment has been endorsed by the collaboration, the SBS collaboration may be included in the list of proposers and it becomes an SBS-experiment.

To remove the SBS-collaboration status of an experiment, the experiment spokespeople must be notified by the coordinating committee that a vote will be held regarding the consideration of removal, the action must be announced at a SBS weekly meeting and at least ten business days must be allowed for collaboration members to express their views to their representatives on the coordinating committee. After that time, a vote by the coordinating committee will be held. A minimum two-thirds vote by the coordinating committee is required for the removal to succeed.

Graduate students on SBS-experiments are automatically given membership once the student and his/her advisor have made an agreement, approved by a majority of the Coordinating Committee, on the student's contribution to the SBS program. If the student wishes to remain a member upon graduating, he/she must qualify under the usual membership rules described above.

Governance

The collaboration will be led by a Coordinating Committee composed of one representative of each of the SBS-experiments (selected by the spokespersons of that experiment) as well as two SBS Program Scientists: Bogdan Wojtsekhowski (principal contact) and Gordon Cates, who originated the SBS program, and Hall A/C leader: Mark Jones. The Coordinating Committee's task is to coordinate efforts of the collaboration, but not the individual experiments whose are led by the corresponding spokespeople team. More than one experiment cannot be represented by the same committee member. Run group additions will not be considered an independent experiment and any run group will be represented on the coordinating committee by a single member.

The Coordinating Committee will choose one member as a chairperson to organize and run meetings of the Coordinating Committee and to represent the committee. In the event the committee cannot choose a chairperson, a member of the committee will be appointed as chairperson by the SBS Program Scientists and the Hall A/C leader. The chairperson will serve for a one-year term and may serve consecutive terms. If the chairperson becomes unwilling or unable to serve or is removed as chair by the committee members, a new chairperson will be chosen, as above. A chairperson may be removed as chair by a vote of one more than a simple majority of other committee members. Experiment representatives on the committee may be changed as desired by the spokespersons of the experiment they represent.

The Coordinating Committee will identify tasks which need to be carried out and will seek volunteers to carry out those which the committee chooses to delegate. In particular, the committee will organize collaboration telephone meetings as well as meetings of the full collaboration at least once per calendar year to monitor progress and to help ensure adequate communication between people working on different aspects of the project. The committee will also distribute opportunities for invited talks representing the SBS collaboration with a goal of distributing them fairly.

Publications

Publications within the collaboration (papers, proceedings, technical notes) must be submitted to the coordinating committee and the SBS mailing list at least three business days prior to publication or posting on preprint servers. Master's and Ph.D. theses and conference contributions without referee are exempt from this rule. Authorship on papers with experimental results will be decided upon by the spokespeople of the experiment.

Authorship Requirements and List

Requirements for authorship on an experimental result must be stated at least three months in advance of running and will be set by the experiment's spokespersons. These must include at least shift taking requirements, run coordinator requirements, hardware and software contributions, and analysis contributions. At least three months prior to running, the contact spokesperson of each experiment or a designated person shall be responsible for maintaining a list of authors until final publication.

Modification of the charter

Suggested changes in the collaboration's charter will be circulated to the entire SBS collaboration membership for review and comment. At least three weeks will be allowed for collaboration members to express their opinions to their representatives. Final approval of the change then requires a vote of the Coordinating Committee with at least one more than a simple majority voting to accept the change.