

PAC54 Jeopardy Proposal(s?)

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SBS Collaboration 2026

From PAC54 Call For Proposals

All I have is this statement from the PAC54 Call for Proposals that went out over the cuga list (maybe Bogdan has more detailed and specific guidance as contact person)

Jeopardy

Experiments which have not been reviewed by the PAC for over three years and also are not on the upcoming published Jefferson Lab schedule can be schedule for Jeopardy review. To keep the work load of the PAC reasonable and focused, jeopardy reviews for a given year tend to be focused on a particular hall or physics topic **This year's jeopardy process will focus on SBS experiments in Hall A.** A jeopardy review may not be used to request beam time beyond the original PAC allocation. If additional time is needed, the collaboration should submit a new proposal.

Jeopardy Policy Information (From PAC53 Intro)

JEOPARDY

Policy

Finalized after discussion with UGBOD in September 2016

Rationale

To ensure the relevancy of experiments which haven't run within a five year window of time, the Jefferson Lab Program Advisory Committee is asked to review experiments in a jeopardy process to ensure the experiments are still world class and can reject, defer, approve or adjust the letter grade of the experiment as deemed appropriate.

Approach

- Use normal yearly PAC in ~4 year cycle of Halls to address all presently approved proposals that have not been scheduled. [This PAC 53 focuses on Hall D.](#)
- Started in 2019, now steady state - proposals that have been approved for 4 years or more but are not scheduled will be considered in Jeopardy.
 - *Changed to “not completed” instead of “not scheduled”*
 - *Does not speak to projected long term schedule – use near term NPES*
 - *New beam time or significant resource requests must be submitted as full proposals*
 - *Major changes to configurations should come back as new proposals*

JEOPARDY ISSUES

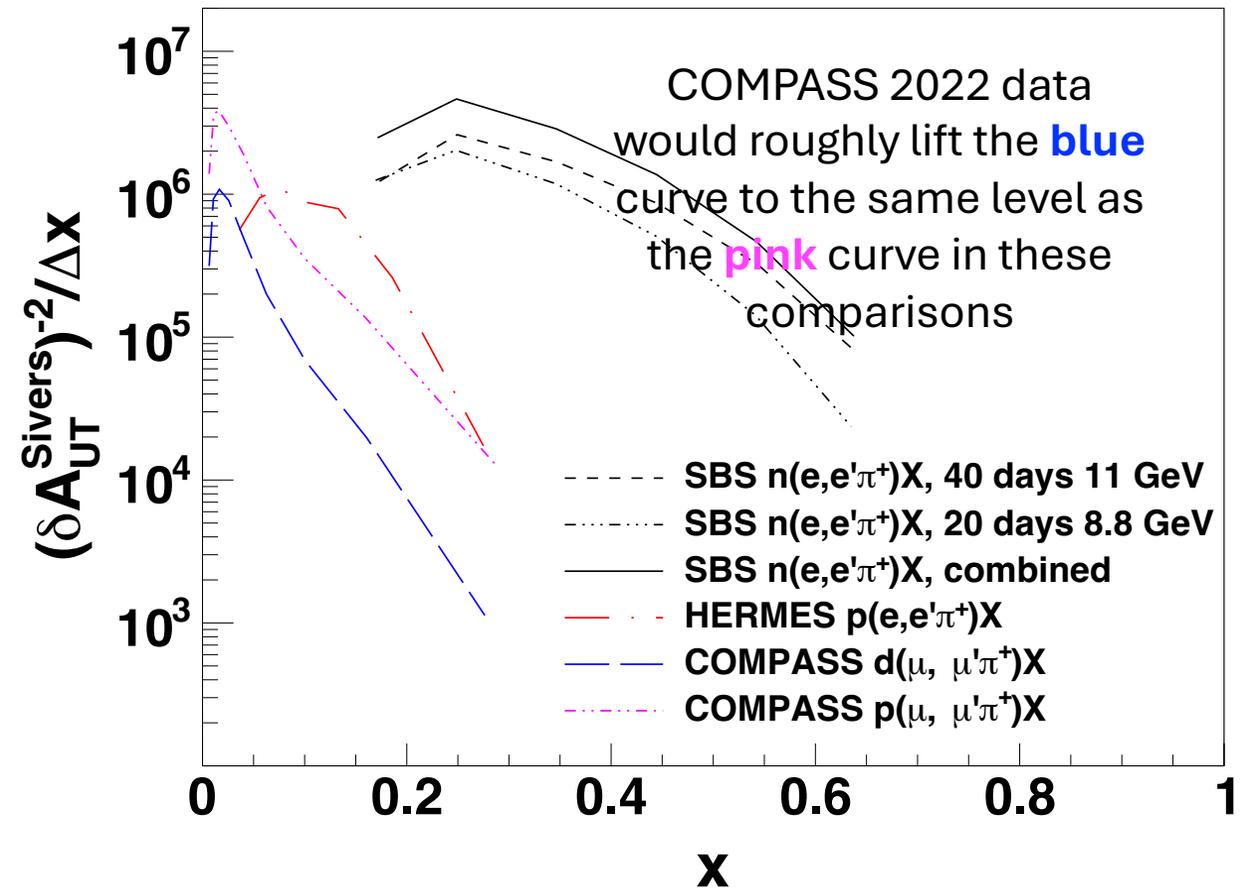
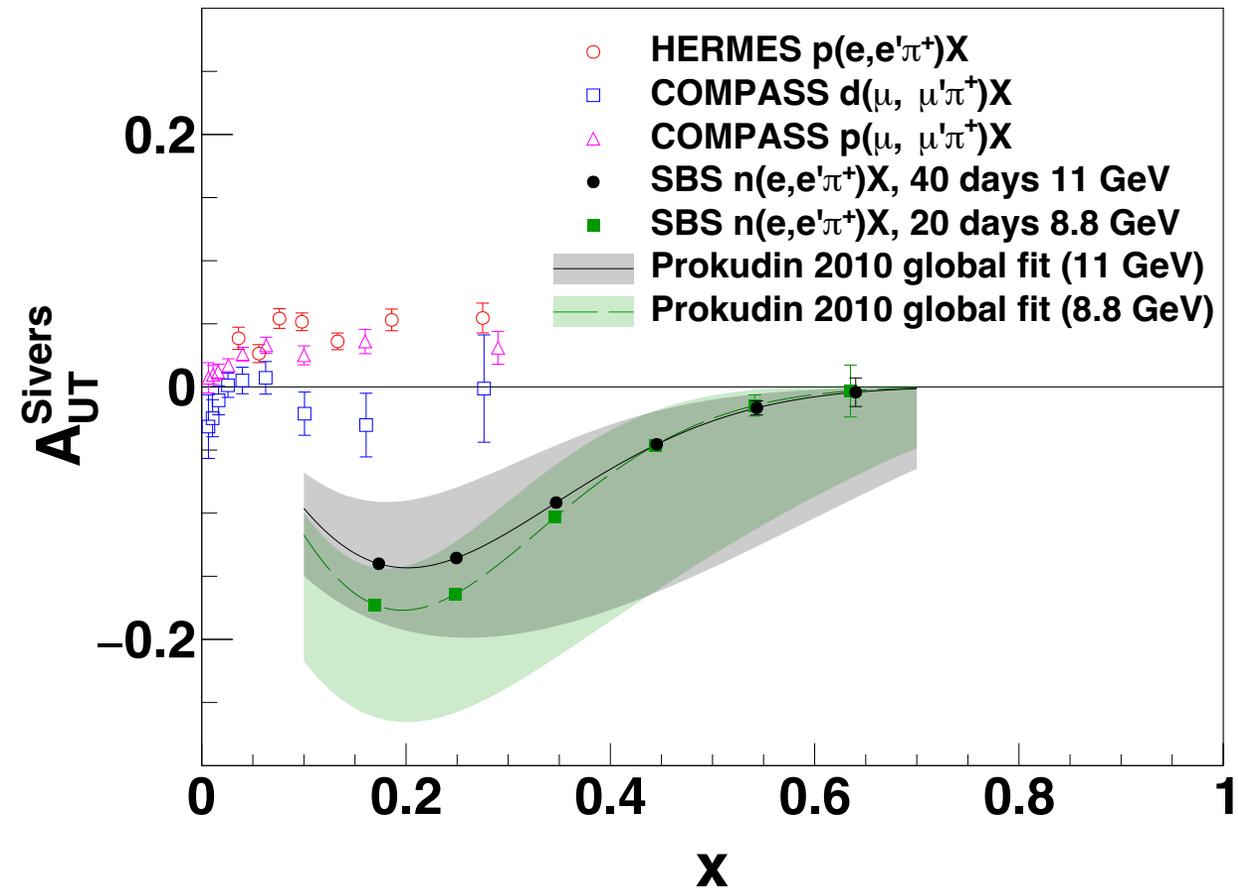
- 1) Is there any new information that would affect the scientific importance or impact of the Experiment since it was originally proposed?
- 2) If the Experiment has already received a portion of its allocated beam time and/or is on the presently published **near term** NPES schedule, the spokespersons should provide an analysis of the existing data set, the projected result for any additional time on the published schedule, and the projected result for the complete data set including all remaining unscheduled time. The goal is to show the physics impact of the respective data sets.
- 3) What is the status of the collaboration in terms of institutes, committed staff, and prospective students?
- 4) Should the remaining beam time allocation and experiment grade be reconsidered?

Which SBS Experiments Are Being Evaluated This Year?

- As far as I know, this mainly refers to SIDIS (E12-09-018)
- TDIS did a jeopardy review in PAC51 (as I learned from DD's talk earlier today)
- What else (if anything) am I forgetting?

E12-09-018 developments since previous jeopardy evaluation (PAC49, 2021)

- For reference:
 - [PAC49 jeopardy proposal](#)
 - [PAC38 proposal](#)
- GEN-II completion—different target design, but same or similar performance goals/parameters ✓
- Successful operation of BB+SBS w/GEMs, HCAL ✓
- Successful operation of GRINCH under more-demanding-than-SIDIS conditions, demonstrating RICH technical feasibility ✓
- 2022 COMPASS run on transversely polarized deuteron → Increased deuteron precision to level comparable with proton data
- Progress in fragmentation functions?
- Other Collins/Sivers-adjacent experimental progress; e.g. polarized Drell-Yan measurements, di-hadron SIDIS measurements providing alternate path to transversity, etc.?



- Need to update this kind of plot (along with impact study/error band) to include newer COMPASS data, latest global analysis.
- Improved deuteron data would presumably shrink somewhat the “error band” of projected neutron asymmetries in the same kind of global phenomenological fits.
- This one was last updated in 2010 during PAC37/38 proposal development
- SBS would still give 2-3 orders of magnitude FOM improvement over HERMES/COMPASS in the region of interest
- Direct FOM comparison to COMPASS *deuteron* data understates the advantage of SBS ^3He for direct sensitivity to the *neutron*
- Important for flavor-decomposition of Sivers and Transversity distributions

Plans

- For E12-09-018: I will start an overleaf project and organize biweekly (for now, will be more frequent near PAC deadline and PAC54 meeting) on jeopardy proposal development w/spokespeople and other interested collaborators
- Need to reach out to theorists/phenomenologists to update impact studies
- Need to formulate a path to scheduling → plans for target development and RICH preparation toward ERR
- What other SBS experiments (if any) face jeopardy?