

FACET AND TEST FACILITIES

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RE: CHARGE TO 2026 FACET-II PROGRAM ADVISORY COMMITTEE

The charge of the Program Advisory Committee (PAC) is to evaluate the merit and the feasibility of proposed experiments and review the progress of the existing R&D program at SLAC's FACET-II National user facility. In addition, experiments that have already received beam time are evaluated concerning progress, effectiveness and plans for the next allocations of beam time. The committee reports to the Head of the SLAC FACET and Test Facilities Division. The committee is supported with ad hoc consultants as necessary.

The specific charge for the PAC is to:

- Evaluate the scientific merit and rate the technical risk of new proposals for FACET-II
- Determine whether the new proposals are appropriate
- Review existing experimental programs and evaluate which elements may need further in-depth analysis (for example):
 - Is the science unique and is the progress compelling?
 - Is the program making effective use of the facility and lab resources?
 - Could the program be enhanced by expanding the collaboration?
- Evaluate the FACET-II operational priorities and comment on any perceived weaknesses

The proposals are rated using a scale: Excellent, Very Good, Good, Fair and Not Recommended

The rating is based on:

- The scientific merit of the proposal, assuming successful execution
- The technical risk associated with the detailed measurements and requested beam parameters
 - The suitability of the experiment for FACET-II in terms of beam energy, bunch length, beam emittances, etc. Experiments that uniquely require FACET-II capabilities should be prioritized.
 - Feasibility based on remaining beam time

In addition to the rating, the committee is requested to assess the alignment of each experiment with DOE community priorities. Indicate whether the experiment principally advances:

- a) [the AAC roadmap](#)
- b) [the ABP roadmap](#)
- c) [non-AAC accelerator R&D prioritized by the P5 report](#)
- d) [BES Basic Research Needs for Accelerator Based Instrumentation](#)
- e) none

Furthermore, categorize the strength of that connection as Direct or Supporting.

- 1) Direct indicates the experiment addresses a stated goal or milestone

- 2) Supporting indicates it contributes enabling capability or knowledge without addressing a stated goal
- 3) Experiments rated none in the alignment assessment above need not be assigned to a category

The rating and the alignment assessment are independent. The rating reflects the scientific merit and technical feasibility of the experiment on its own terms. The alignment assessment reflects whether the experiment responds to a documented DOE priority, be it HENP, BES or any other office. The committee should not adjust one to reflect the other. The Division will use the alignment assessment in allocating beam time, with attention given to complete previously approved experiments, especially those supporting Ph.D. thesis research.

The reviewers should note if they feel that the experiment could be more reasonably performed at an alternate facility. If additional information is still needed for a full evaluation, the review committee should note this and may make a qualified rating or may skip the review if appropriate.

The committee is requested to present a preliminary report of its findings and recommendations to the FACET-II user community during the PAC meeting, with a final written report to follow.

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