



LCLS-II Review Committee Charge for:

3.9 GHz Cryomodule

Final Design Review

(~90-100% Design Maturity)

The LCLS-II 3.9 GHz cryomodule design is nearly completed, and thus ready for review. The review committee is charged to evaluate the system design readiness to approve implementation, procurement, and fabrication activities. This review focuses on the cryomechanical aspects of the design, since the RF component design verification tests (for dressed cavity, magnetic shielding, tuner and coupler) are ongoing. The committee is requested to consider only the functional design and integration of these RF components into the cryomodule, and a follow-on review for these three elements will be held after design verification phase is completed.

The review committee is requested to evaluate the cryomodule design readiness by responding to the following questions:

1 Technical Scope

- a. Are the designs mature and technically sound to satisfy design specifications?
- b. Is the design likely to meet performance expectations?
 - i. Does the cryomodule cryogenic design meet the heat load requirements?
 - ii. Would potential modifications to RF component designs after design verification tests significantly impact the cryomodule cryomechanical design?
- c. Have cryomodule assembly procedures and tooling been adequately developed?
- d. Have shipping, rigging, and handling procedures been adequately developed?
- e. Have all the major interfaces been identified and incorporated into the design?
- f. Are all design specifications, requirements, performance, and interface documents reviewed, approved and released?

2 Design Management

- a. Is the design team organized and staffed to successfully complete the project?
- b. Have all of the major risks been identified and managed?
- c. Are procurements appropriately planned?
- d. Is the development of associated drawing packages sufficiently mature?

3 Cost and Schedule

- a. Is the cost and schedule reasonable to achieve the planned scope?

4 ES&H

- a. Are all related ES&H aspects being properly addressed?
- b. Has the appropriate failure modes and effects analysis (FMEA) been performed on the components and system?



5 Miscellaneous

- a. Have all the previous design review action items/comments been addressed?
- b. Are there any other issues that have been identified that need to be addressed?

6 Overall Readiness

- a. Is the design sufficiently mature so as to allow Final Design Review approval?