**LCLS-II Review Committee Charge for:**

***3.9 GHz Pre-Production Cryomodule***

**Preliminary Design Review**

(~30-50% Design Maturity)

The review committee is charged to evaluate the preliminary design readiness of the LCLS-II (*System/Device to be reviewed*) to assess implementation, procurement, fabrication and installation activities maturity. To carry out this charge the review committee should evaluate the design readiness by responding to the following questions:

# Technical Scope

1. Are all specifications, requirements, performance and interface documents identified, reviewed, and at the level of maturity commensurate with a PDR.
2. Is the design sufficiently mature and technically sound so as to meet the performance specifications? In particular:
   1. Is the HOM, coupler heating, and the CM heat load understood?
   2. Have the chimney sizes, etc have been increased appropriately to accommodate the larger average heat load?
   3. Do the changes made to the cavity geometry increase either the HOM power generated or the multipacting activity?
   4. Are the materials used in the design sufficiently rad hard?
   5. Is the 1.3 GHz CM beam line absorber effective?
3. Have installation issues been identified and addressed?
4. Have all the major interfaces been identified and incorporated into the design?
5. Are the design differences with earlier-generation cryomodules identified clearly? Are strategies for further analysis or testing identified ?

# Design Management

1. Is the design team organized and staffed to successfully complete the project?
2. Have all of the major risks been identified?
3. Are procurements appropriately identified and being planned/prepared?
4. Is the development of associated drawing packages sufficiently mature?

# Cost and Schedule

1. Is the current preliminary cost and schedule reasonable to achieve the planned scope?

# ES&H

1. Have all related ES&H aspects been identified, and planned to be properly addressed?

# Miscellaneous

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

# Overall Readiness

1. Is the design maturity at the level sufficient for preliminary design review approval?