MQXFA1 Assembly & Loading Readiness Review

Goal & Charge

MQXFA1 is the first prototype of the MQXFA magnets to be used in Q1 and Q3 for the High Luminosity LHC. The main goal of MQXFA1, regarding its structure, is to validate design, assembly procedures and loading targets by meeting quench performance requirements. Field quality and alignment requirements will be target of subsequent prototypes and/or re-assemblies.

Before this review the MQXFA1 structure should have been fully assembled using dummy coils (MQXFA1M) and loaded up to targets.

The goal of this review is to assess readiness to start MQXFA1 coils-pads subassembly, and following operations up to MQXFA1 azimuthal and axial loading.

The committee is requested to answer the following questions:

- Are MQXFA requirements clear and complete for the scope of this review?
- Are the measurements performed on the MQXFA1 yoke-shells subassembly satisfactory to assure that MQXFA1 will meet requirements?
- Are the measurements performed on the MQXFA1M assembly with dummy coils satisfactory?
- Are the following procedures and targets adequate to meet requirements and reasonably based on experience and performance of short models?
    - MQXFA1 coils-pads sub-assembly procedure
    - MQXFA1 assembly procedure
    - MQXFA1 loading procedure and targets
- Are all procedures sufficiently documented?
- Are QA and QC adequate?
- Is there any other comment or recommendation to assure MQXFA1 will meet requirements?

Committee

H. Felice (chairperson), S. Caspi, P. Ferracin

Date and Time

April 27-28, 2017

Location/Connection

LBNL, room TBD
Video-link by Zoom, info on Indico page

Link to talks

https://indico.fnal.gov/conferenceDisplay.py?confId=14044