



MQXFA19 Structure & Shims Review

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US HL-LHC Accelerator Upgrade Project

MQXFA19 Structure & Shims Review



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1. Goal & scope

The HL-LHC AUP project is starting the assembly of MQXFA19 quadrupole magnet. If MQXFA19 meets MQXFA requirements [1] it will be used in a Q1/Q3 cryo-assembly to be installed in the HL-LHC.

MQXFA19 coils were presented and approved at the MQXFA19 Coil Acceptance Review [2].

Discrepancy or Non-Conformity Reports are generated whenever a component does not meet specifications [3-4].

The goal of this review is to evaluate MQXFA19 structure and the proposed shim plan including tapered load shims.

2. Charge questions

The committee is requested to answer the following questions:

1. Have all recommendations from previous reviews [5] been adequately addressed?
2. Have discrepancies and non-conformities been adequately documented and processed?
3. If there are major/critical non-conformities, have they been adequately documented and processed?
4. Are the proposed shims adequate for allowing MQXFA19 to meet MQXFA requirements [1]?
5. Do you have any other comment or recommendation to assure MQXFA19 is going to meet requirements?



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3. Technical information

Committee

Peter Wanderer, chairperson (BNL)

Rodger Bossert (FNAL)

Helene Felice (CEA-Saclay)

Susana Izquierdo Bermudez (CERN)

Date and Time

November 20, 2024.

Start time is 7:00/9:00/10:00/16:00 (LBNL/FNAL/BNL/CERN)

Location/Connection

Video-link by Zoom, info by email.

Link to agenda with talks and other documents

[MQXFA19 Structure & Shims Review \(November 20, 2024\) · INDICO-FNAL \(Indico\)](#)

4. References

- 1) *MQXFA Functional Requirements Specification*, US-HiLumi-doc-36.
- 2) *MQXFA19 Coils Acceptance Review*, US-HiLumi-doc-5354.
- 3) *MQXFA Series Magnet Production Specification*, US-HiLumi-doc-4009.
- 4) *Handling of Discrepancies and Nonconformances*, US-HiLumi-doc-2484.
- 5) *MQXFA17b Structure and Shims Review*, US-HiLumi-doc-5349.