

# The Mu2e Calorimeter

*Thursday 18 July 2024 17:53 (17 minutes)*

The Mu2e experiment will search for the charged-lepton flavor violating conversion of muons into electrons in the field of a nucleus, planning to reach a single event sensitivity of  $3 \times 10^{-17}$ . The conversion electron has a monoenergetic signature at  $\sim 105$  MeV and is identified by a high-resolution tracker and an electromagnetic calorimeter (EMC). The EMC is composed of 1348 CsI crystals, each read by two custom SiPMs, arranged in two annular disks. It will achieve  $<10\%$  energy resolution and 500 ps timing resolution for 100 MeV electrons while maintaining high levels of reliability in a harsh operating environment with high vacuum. The production phase of all EMC components is almost complete. The two disks are assembled, with a full integration and test of all the analogic sensors and electronics. This talk summarises the construction and assembly phases, the QC and calibration tests performed, and the installation and commissioning plans as Mu2e nears data-taking.

## Alternate track

1. Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors

## I read the instructions above

Yes

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**Session Classification:** Detectors for Future Facilities, R&D, Novel Techniques

**Track Classification:** 13. Detectors for Future Facilities, R&D, Novel Techniques