

Data Acquisition using MicroTCA in the Mu2e Experiment

Thursday, 9 December 2021 15:50 (15 minutes)

The Mu2e experiment, currently under construction at Fermilab, will use a pulsed beam structure to significantly improve limits on the rates of charged lepton flavor violating muon decay processes. The time structure of the pulsed beam is measured by the extinction monitor, comprised of scintillation counters and a silicon pixel detector telescope, which are read out using a data acquisition system made from commercial MicroTCA components. We describe this data acquisition system, the decision to use MicroTCA in its implementation, the constraints imposed by the MTCA.4 standards, and the ways in which the hardware features available in commercial components have been integrated into the design.

Summary

Primary author: JONES, Matthew (Purdue University (US))

Presenter: JONES, Matthew (Purdue University (US))

Session Classification: Session 9