

13th Beam Telescopes and Test Beams Workshop



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Constellation - a Flexible Control and Data Acquisition Framework for Test Beam Environments

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The qualification of new detectors in test beam environments presents a challenging setting that requires stable operation of diverse devices, often employing multiple data acquisition (DAQ) systems running on several machines. Changes to these setups are frequent, such as using different reference detectors depending on the facility. Managing this complexity necessitates a system capable of controlling the data taking, monitoring the experimental setup, facilitating seamless configuration, and easy integration of new devices.

Constellation is a flexible control and data acquisition framework developed with the requirements of laboratory and test beam environments in mind. Constellation streamlines setup integration through network discovery, enhances system stability by operating autonomously, and simplifies onboarding with comprehensive documentation.

This contribution will provide an overview of the Constellation project, showcase recent developments and report on user experience from recent test beams.

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