An automated QC station for the calibration of the Mu2e Calorimeter Readout Units

Elisa Sanzani on behalf of the Mu2e Calorimeter group

Mu2e CsI Crystal Calorimeter Readout Unit (ROU):
Two 2x3 SiPM matrices, two Front End Electronics boards, copper holder and Faraday cage
⇒ Characterization of the ROUs with the QC Station
⇒ Study of SiPMs Gain, Photon Detection Efficiency and charge at different light intensities and bias voltages

- 420 nm Blu LED
- 9 position filter wheel to attenuate the light intensity
- Sandblasted glass layers to diffuse light, in a box to ensure light tightness
- 2 ROUs mounted to an Al plate stabilized at 25 °C

- Gain spread 2.5%
- Reproducibility 2%
- Mean gain 3.6\times10^6
- Full characterization of the ROUs
⇒ Complete knowledge of the ROU response during operations

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