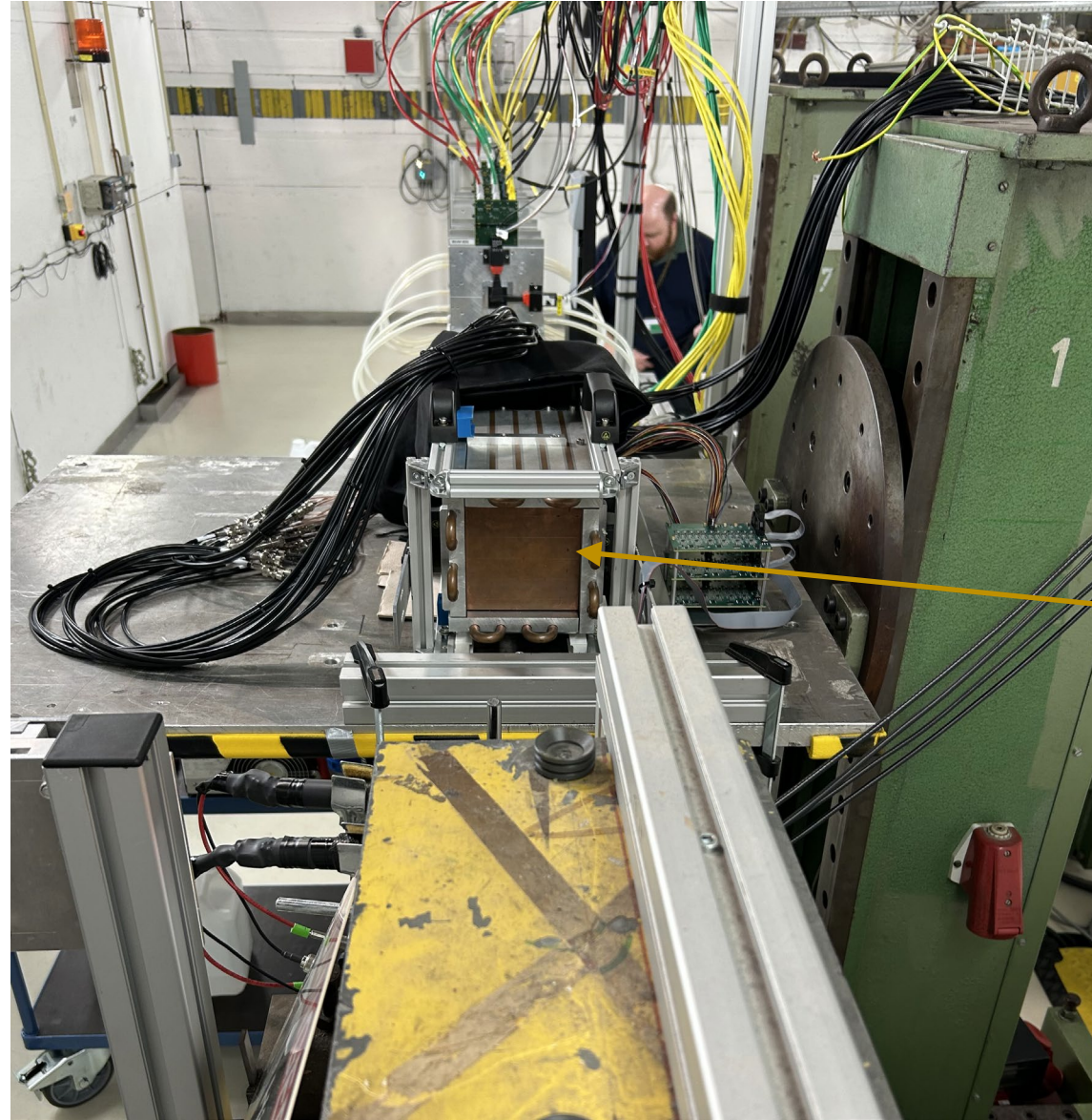


eRD109 COTS Waveform Readout FEB – update Jan 8, 2026

G. Visser, Indiana University

Activities November/December
concentrated on EEECAL beam test

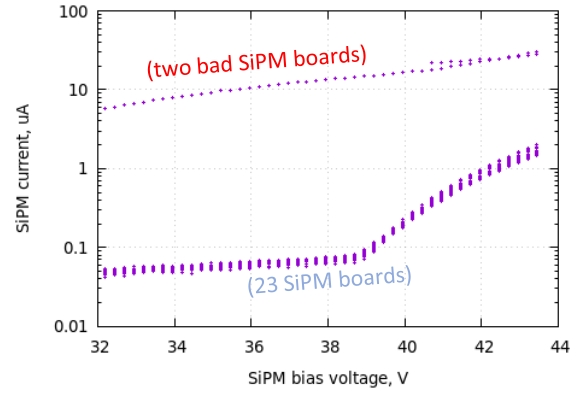
DESY 12/8 – 12/13



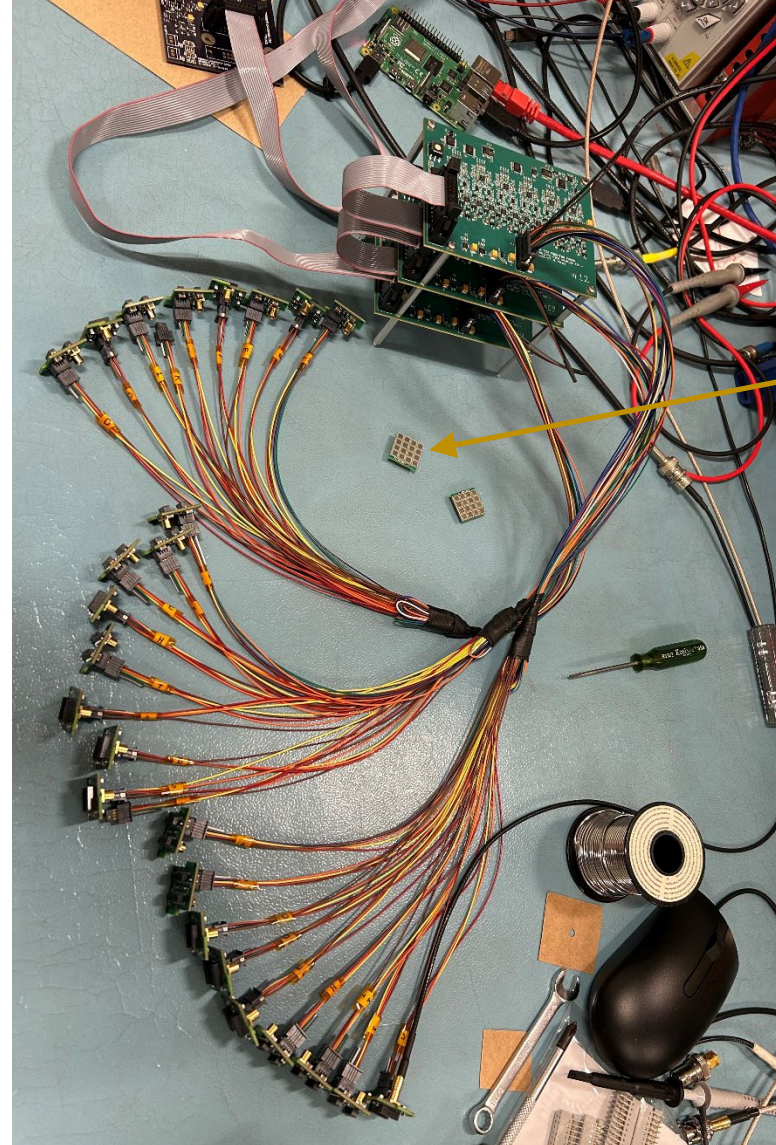
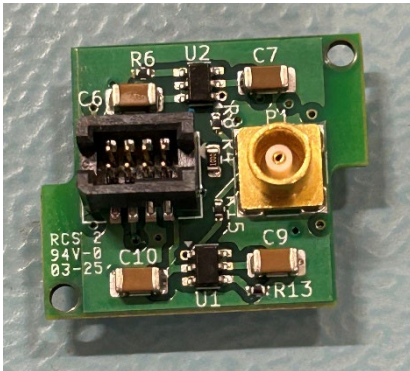
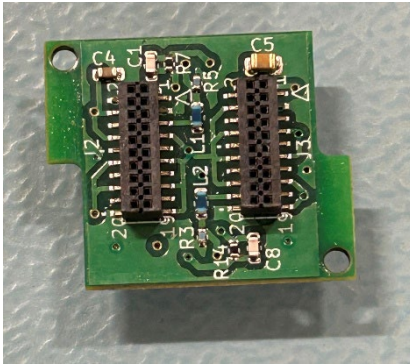
25 tower EEECAL
prototype
(IJCLab team)

Preparations

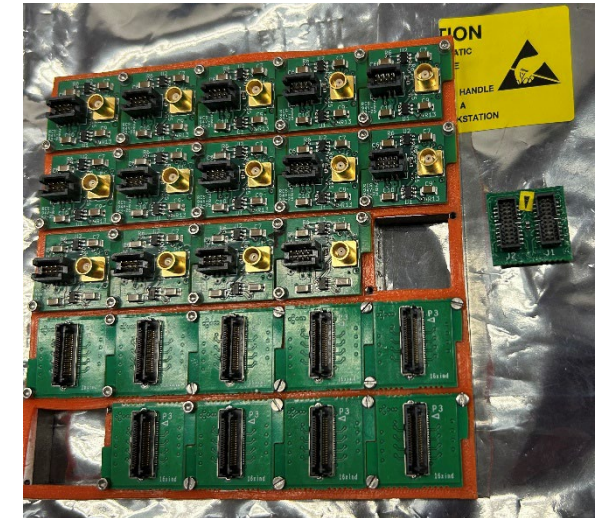
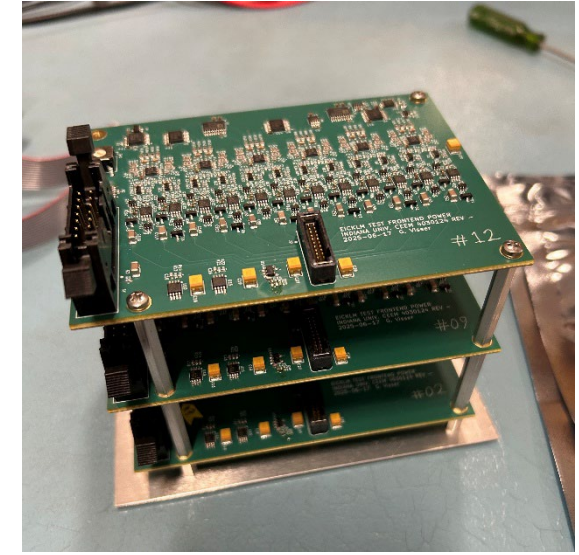
- 25 preamp boards (L. Isenhower layout / JLab production), from Feb 2025 beam test
- 3× 12 channel SiPM bias regulator boards – based on STAR FCS, prototype for ePIC ECAL's
- New cables prepared, control software adapted



automated I-V scan in setup at DESY



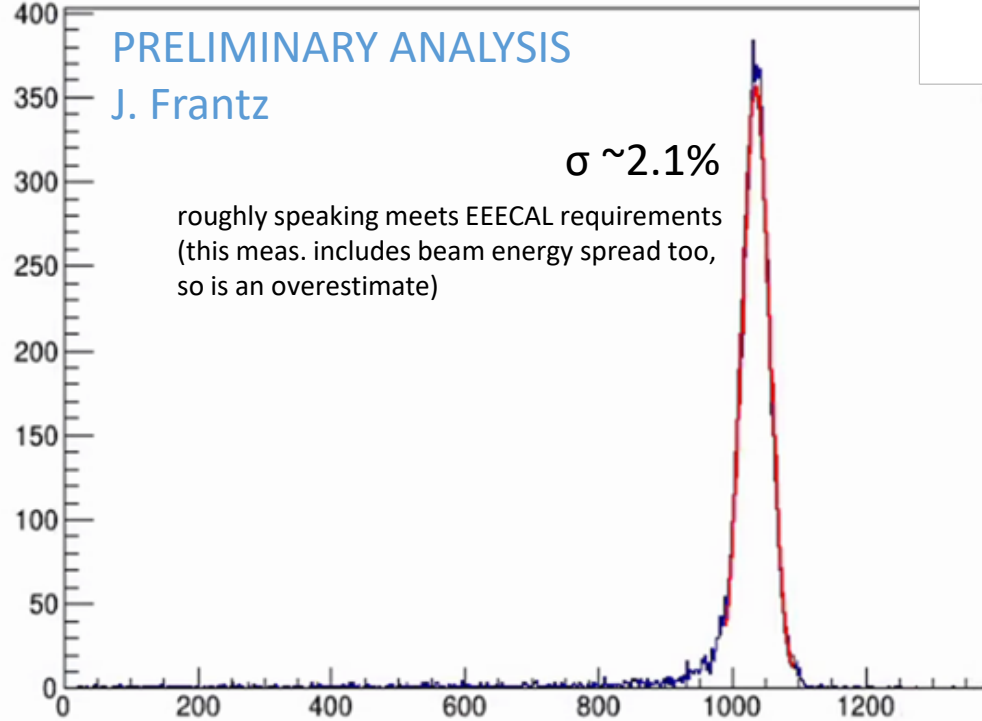
SiPM bd. (IJCLab)



converting SiPM frame assembly from HGCROC to discrete setup

Results

4 GeV electrons, fixed 9-channel “cluster” sum



Sum of channel's ADC sums over gated range, arbitrary units

A cut on reconstructed position was applied, this reduces low energy background. The background is real – relates to incorrect collimator setup – and understood (but too late!).

Performance seems improved compared to Feb 2025 beamtest. Potentially due to new SiPM bias board. Perhaps other snafus in Feb 2025.

Above is only intended as a preview plot – for details and full discussion see Justin's presentation tomorrow in EEECAL meeting.

Slow controls / monitoring

