

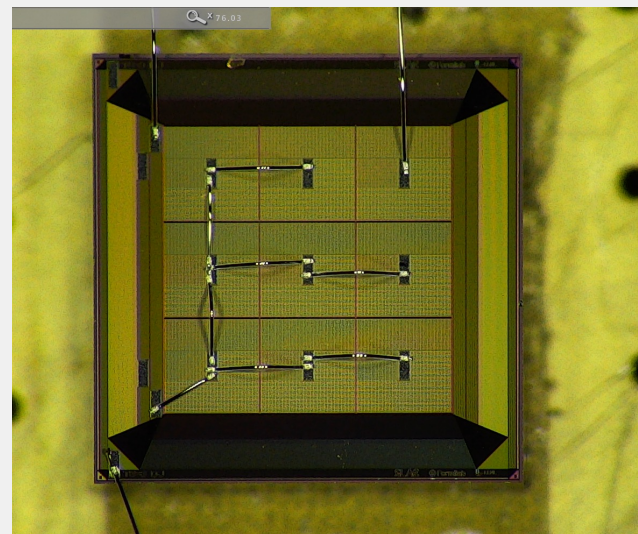
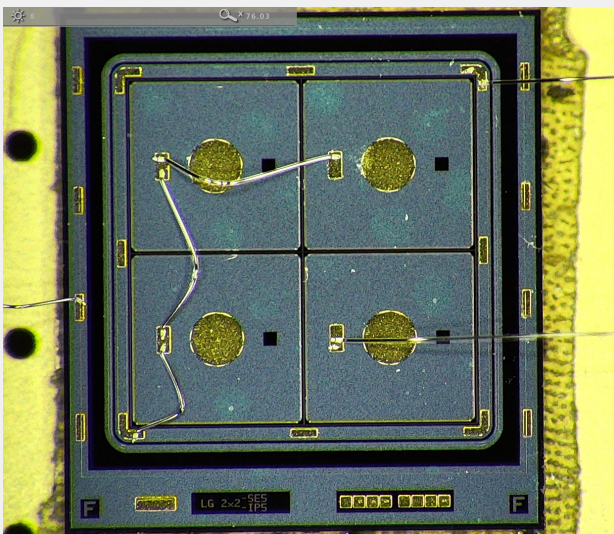


μ CATALYST Work Summary

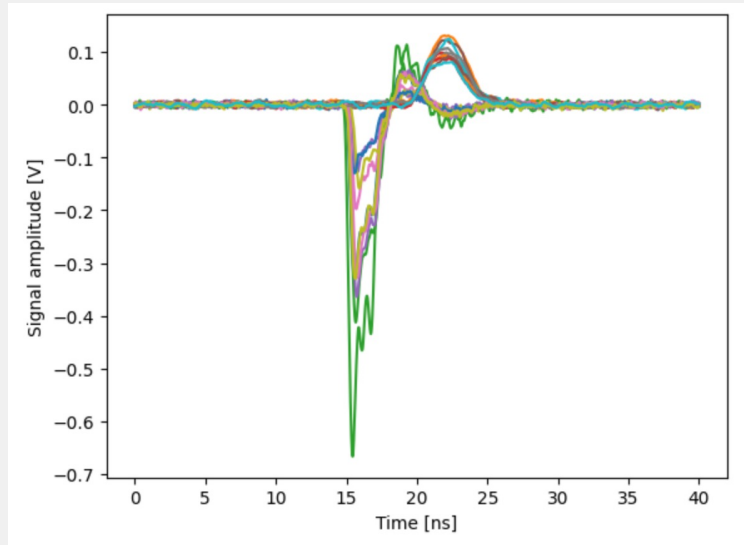
Cici Hanna, 9.14.2026

Fermilab work

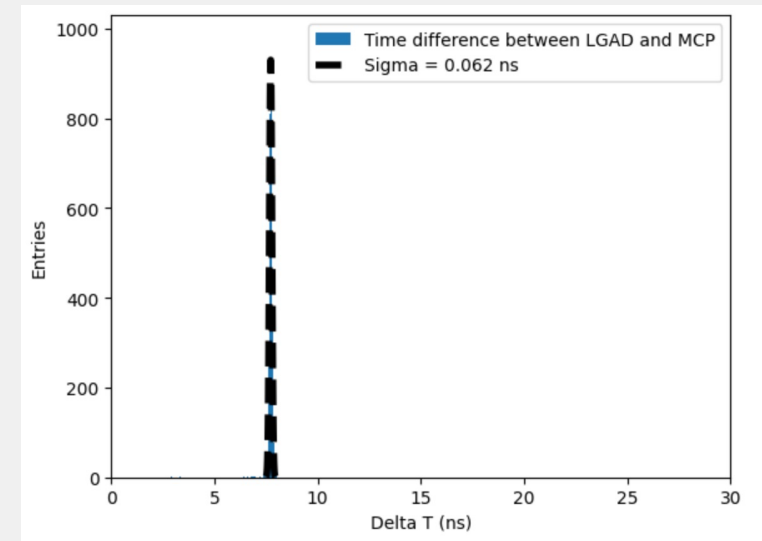
- Measured LGADs with the Fermilab Timing group, comparing standard (Hamamatsu) AC-LGADs to AC-LGADs manufactured with a new technique (Tower)



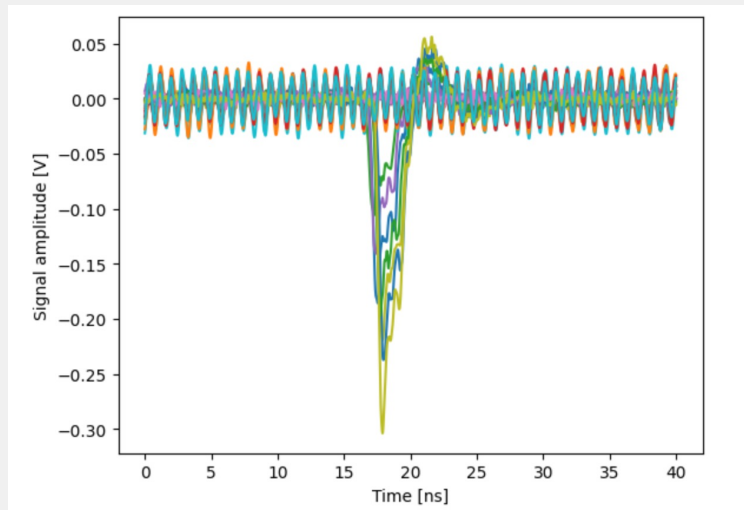
Hamamatsu LGAD waveforms, 105V



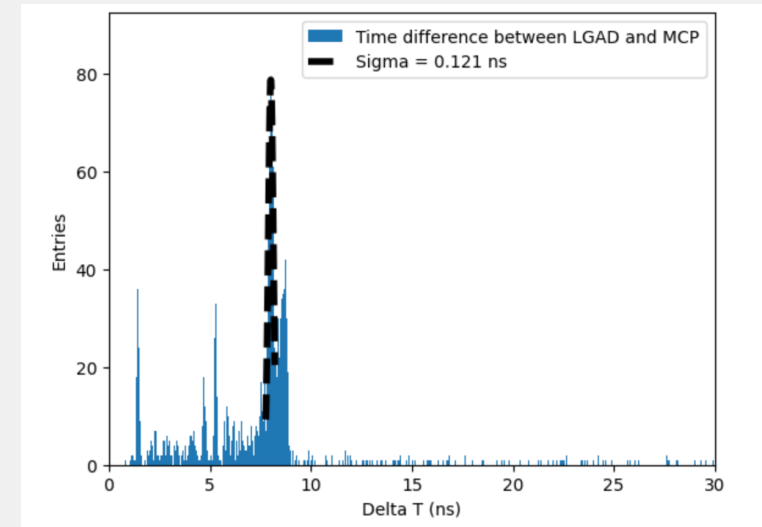
Hamamatsu LGAD timing, 105V



Tower LGAD waveforms, 88V



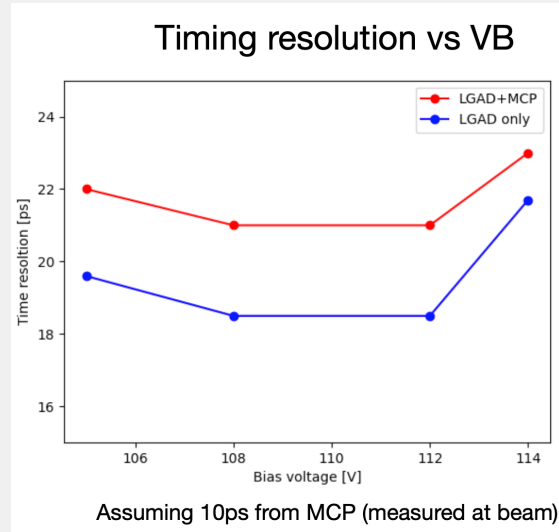
Tower LGAD timing, 88V



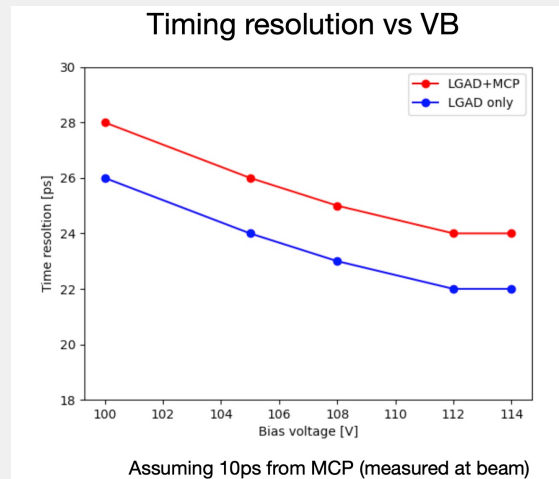
Recreating time resolution plots of Tower LGADs

Shuoxing's plots

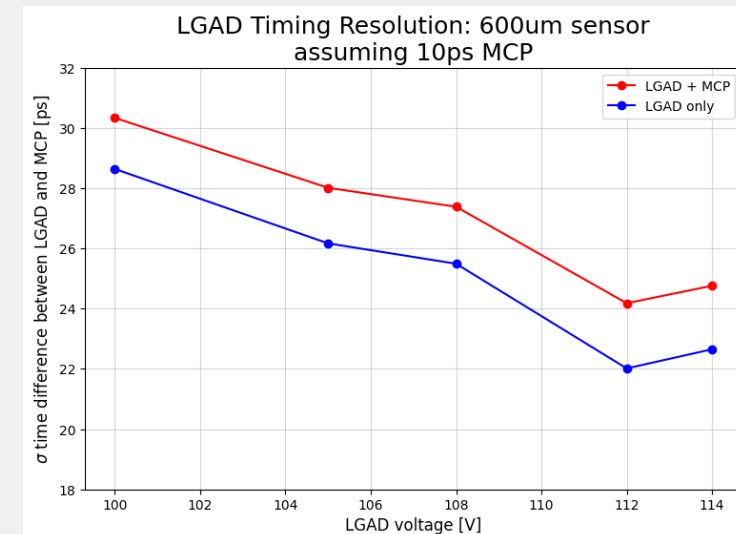
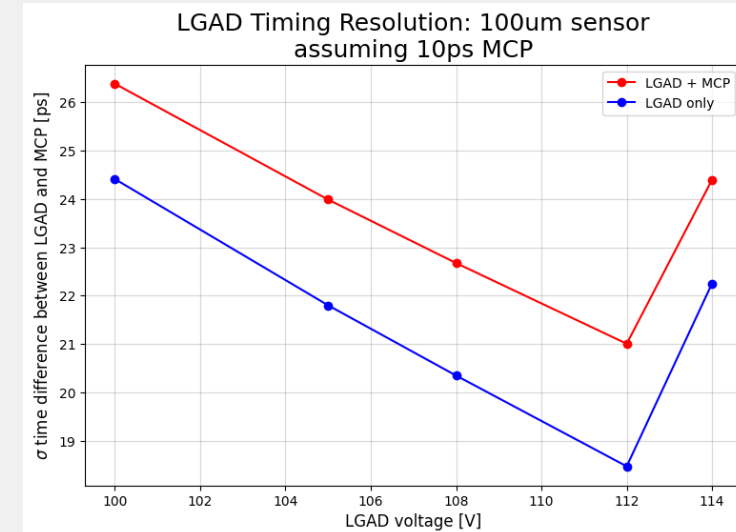
100 μ m
AC-LGAD



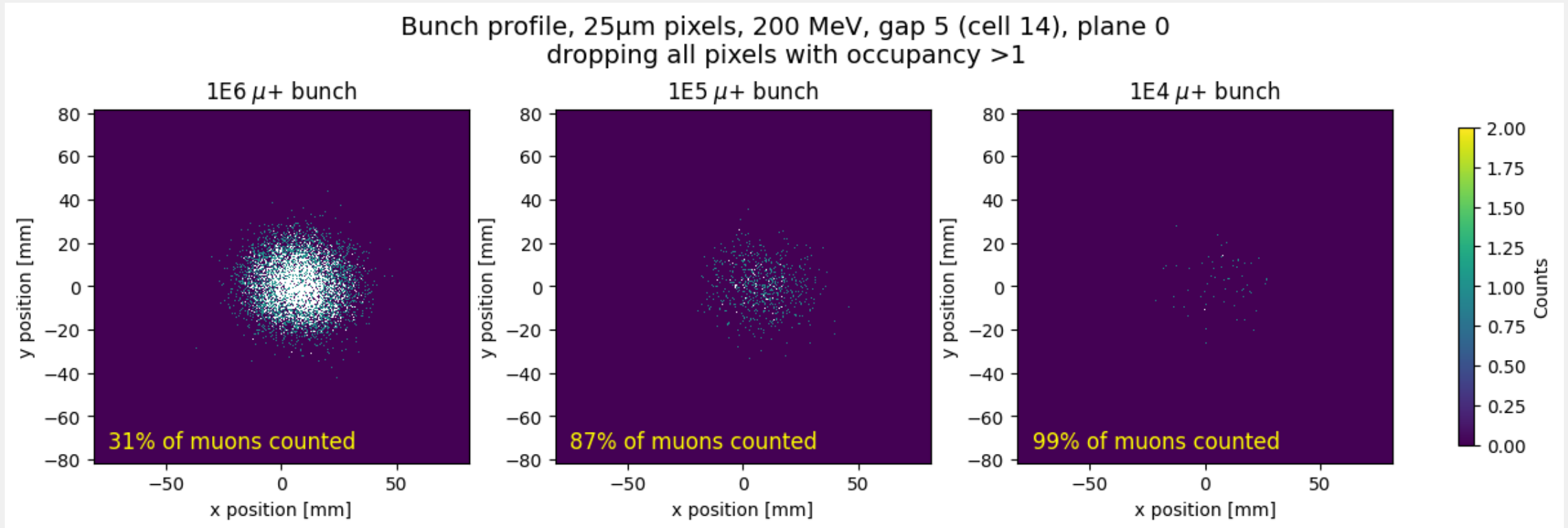
600 μ m
AC-LGAD



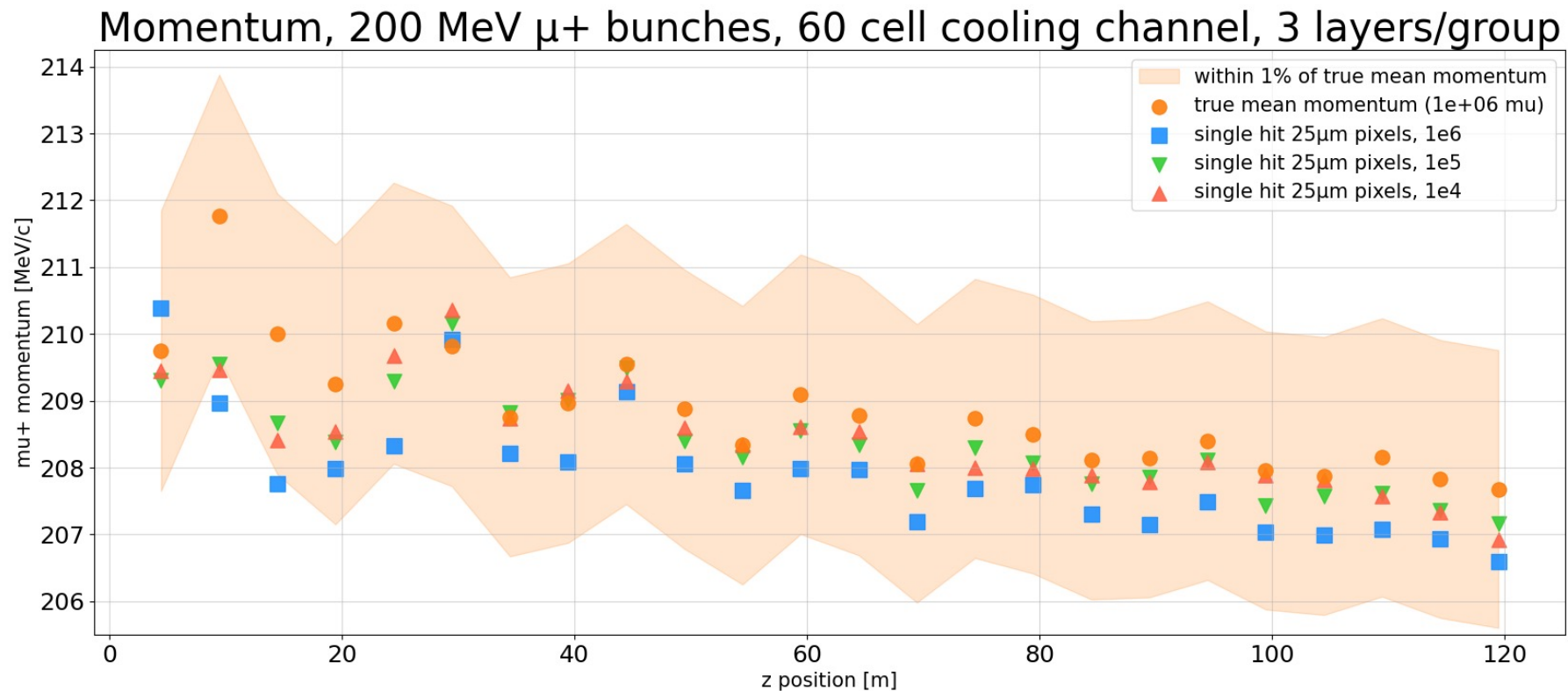
My plots



Beam intensity in demonstrator



Beam intensity in demonstrator



Other work

- Submitted application for URA Visiting Scholarship program at Fermilab
- Writing chapter on instrumentation with Leonardo Palombini for upcoming paper on demonstrator
- Beam instrumentation scheme uses precision clock phases to digitally record discriminator signals from the pixel array—using HLS tools for ECAL of Hi-Lumi upgrade to get FPGA firmware of timing/digital readout system for electronics