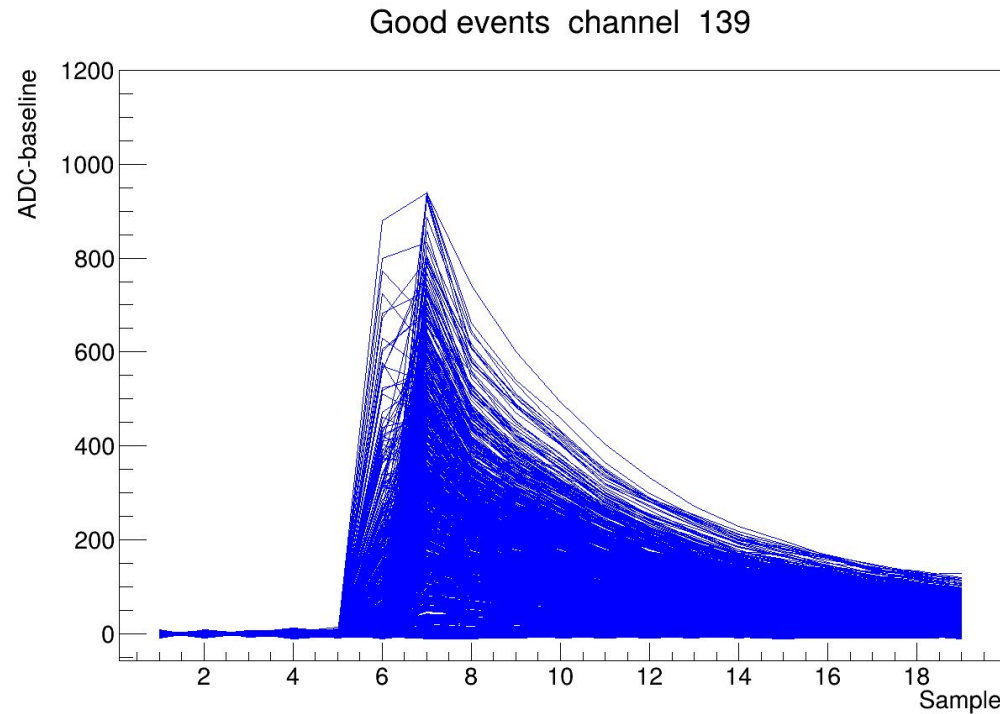
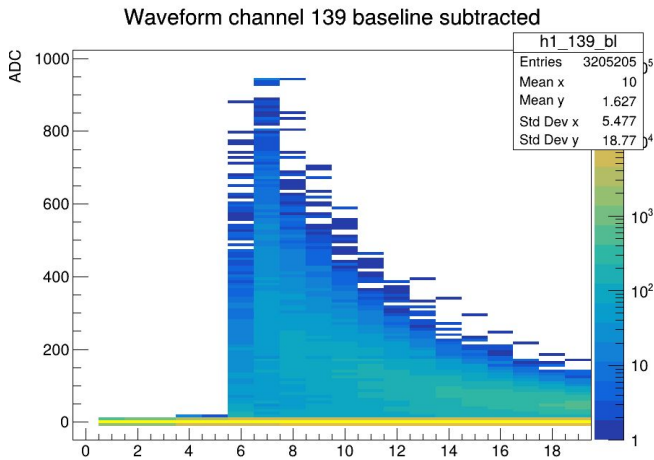
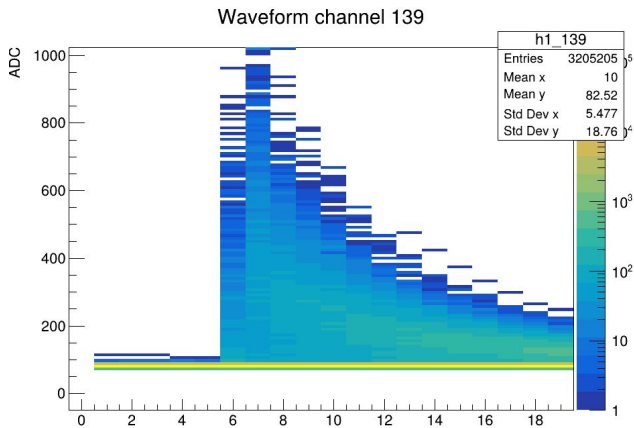
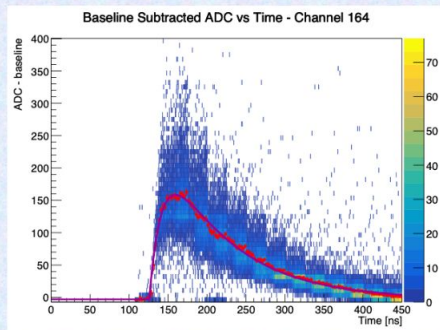
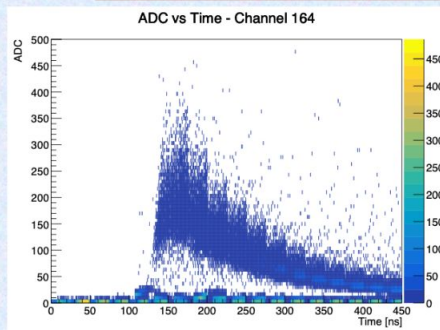


JLab Test Beam Analysis

July 28, 2026



Hall D TB Sample – Update



Plot average of the signals (data - fit) vs time.
Fit the average:

$$\text{ADC} = \begin{cases} B_0, & t < t_0 \\ B_0 + A_0(1 - e^{-\Delta/\tau_{\text{rise}}})e^{-\Delta/\tau_{\text{fall}}}, & t > t_0 \end{cases}$$

Where $\Delta = t - t_0$

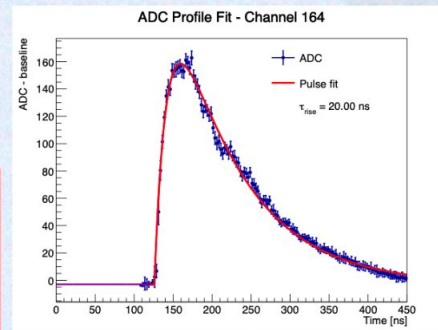
B_0 = Baseline

A_0 = Amplitude

t_0 = pulse start/time offset

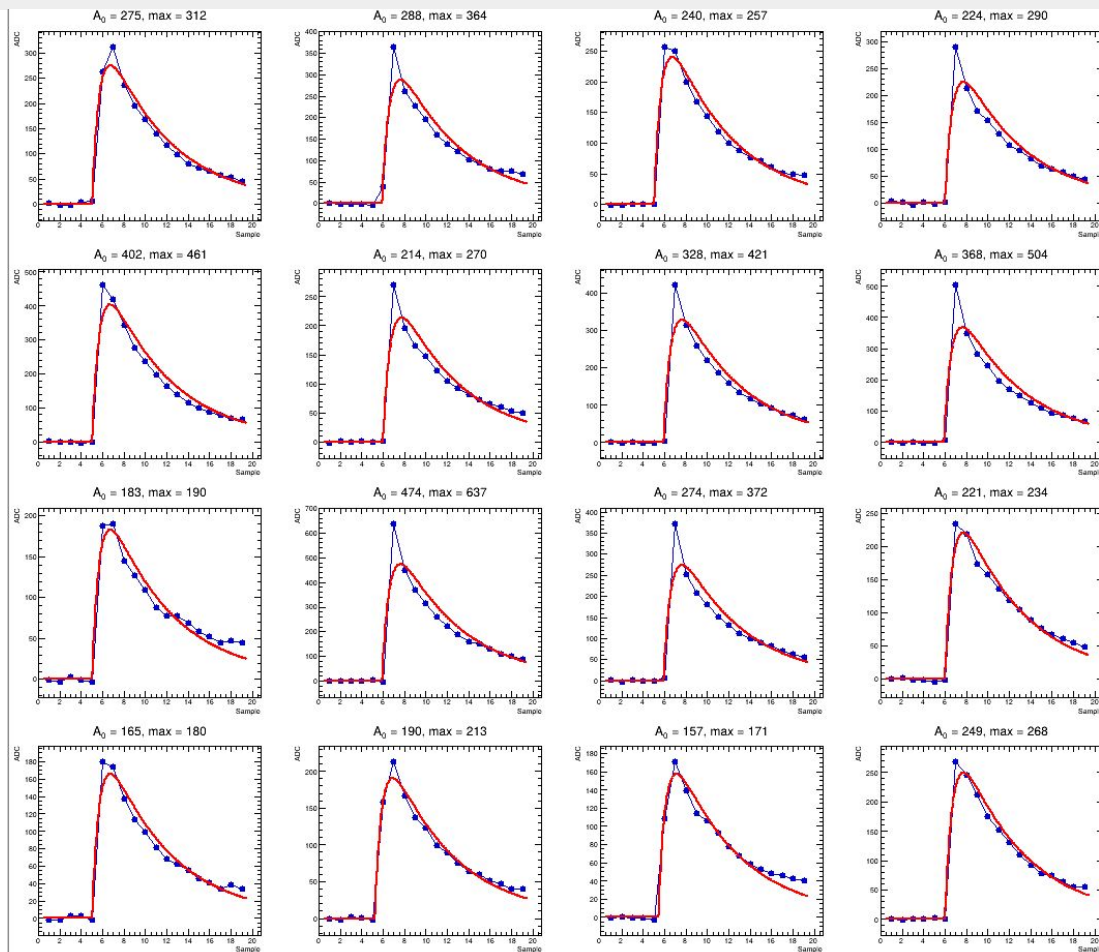
τ_{fall} = fall time constant

τ_{rise} = rise-time, expressing how sharp/soft the leading edge is



/work/eic/EPIC/TestBeam/BIC/data/KCU0/beam/beam_ROC_0-00002679-0000.evt '

Run # : 530,597,636,685,686,687,688,689,690,691,692,693 (Cosmics run in beam mode)



Template:

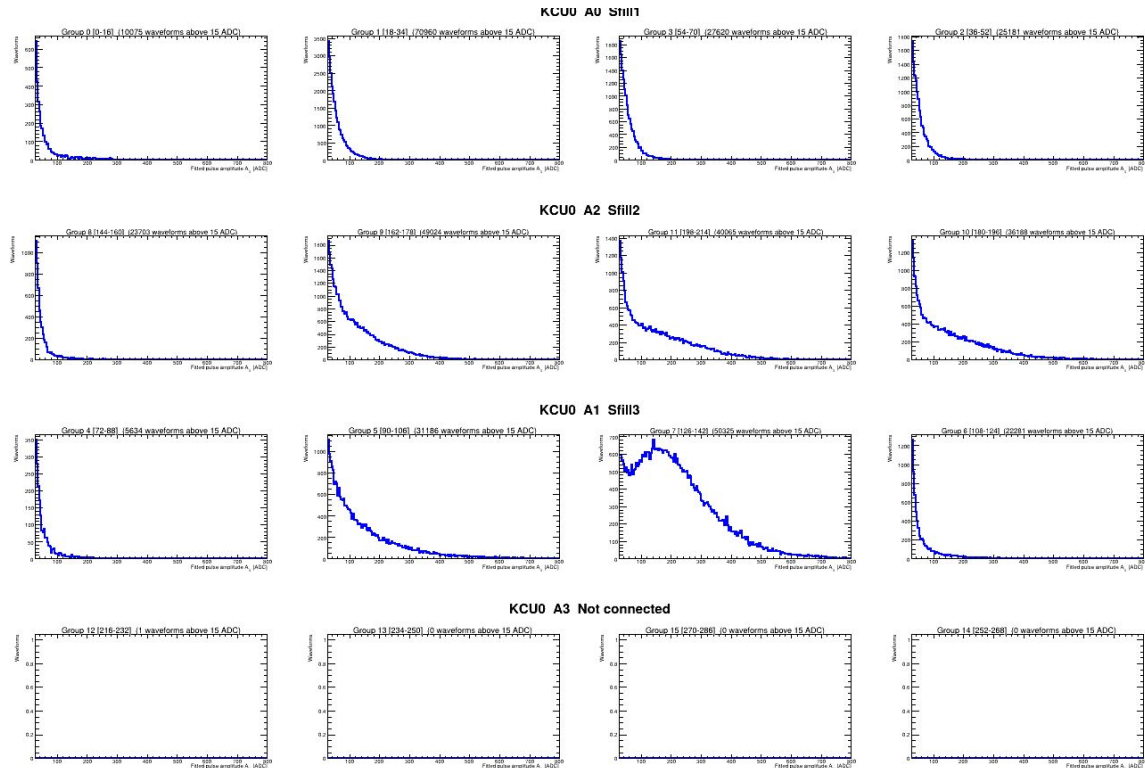
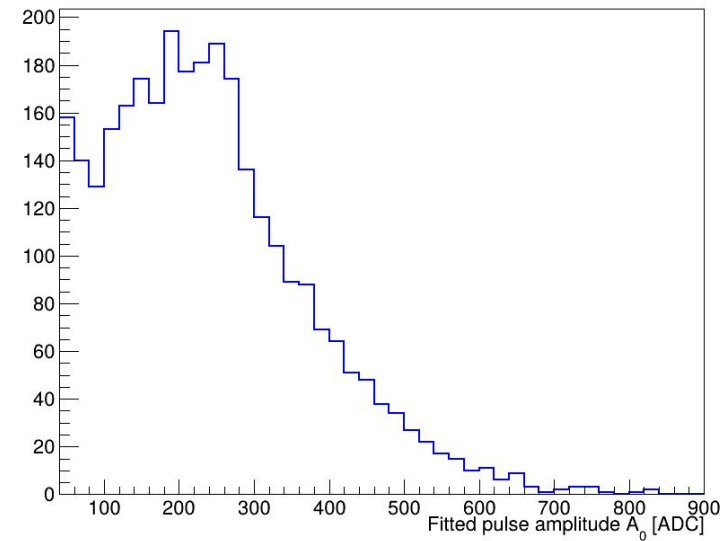
tau_rise = 20 ns

tau_fall = 150 ns

sample = 25 ns

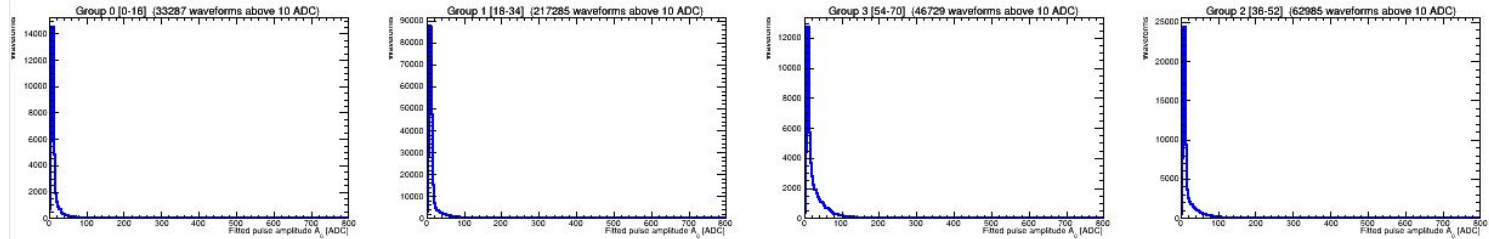
Run # : 530,597,636,685,686,687,688,689,690,691,692,693 (Cosmics run in beam mode)

Peak amplitude, channel 139 - waveforms with a pulse above 15 ADC

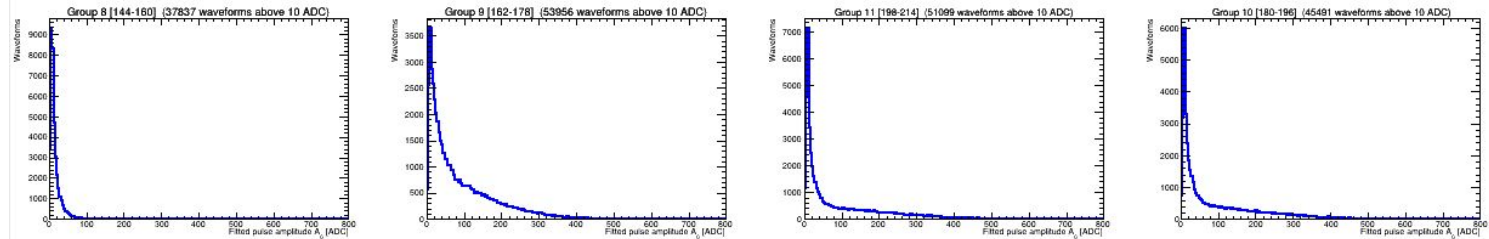


Run # : 530,597,636,685,686,687,688,689,690,691,692,693 (Cosmics run in beam mode)

KCU0 A0 Sfil1



KCU0 A2 Sfil2



KCU0 A1 Sfil3

