

TOF HV Increase

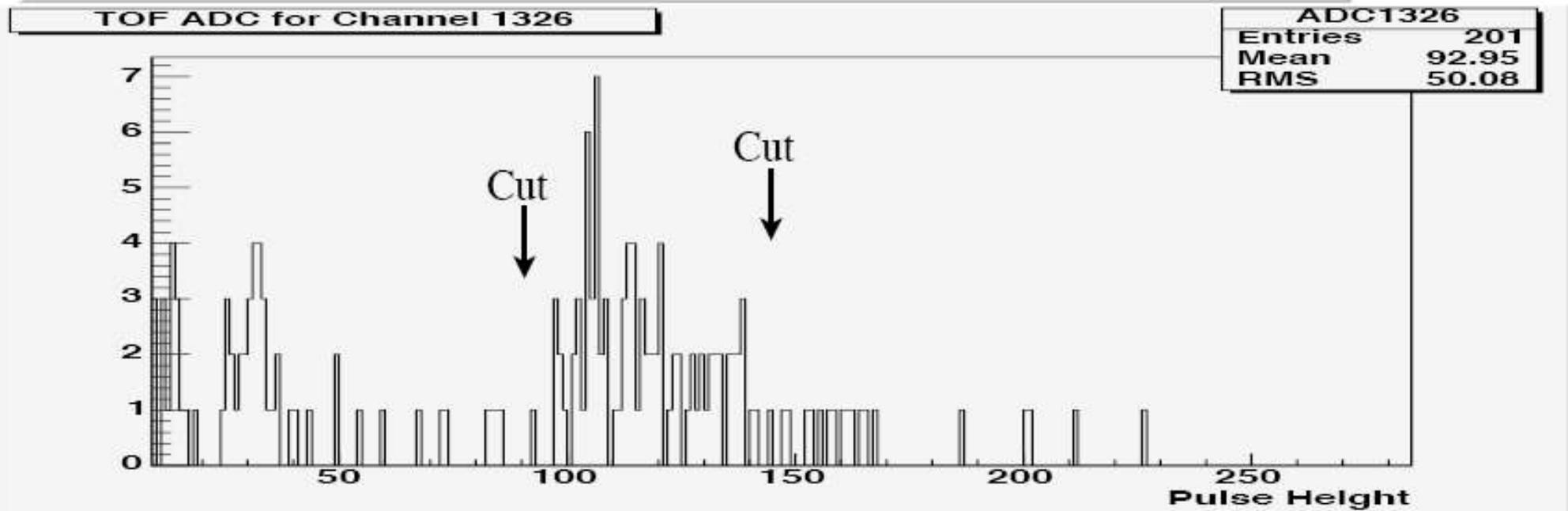
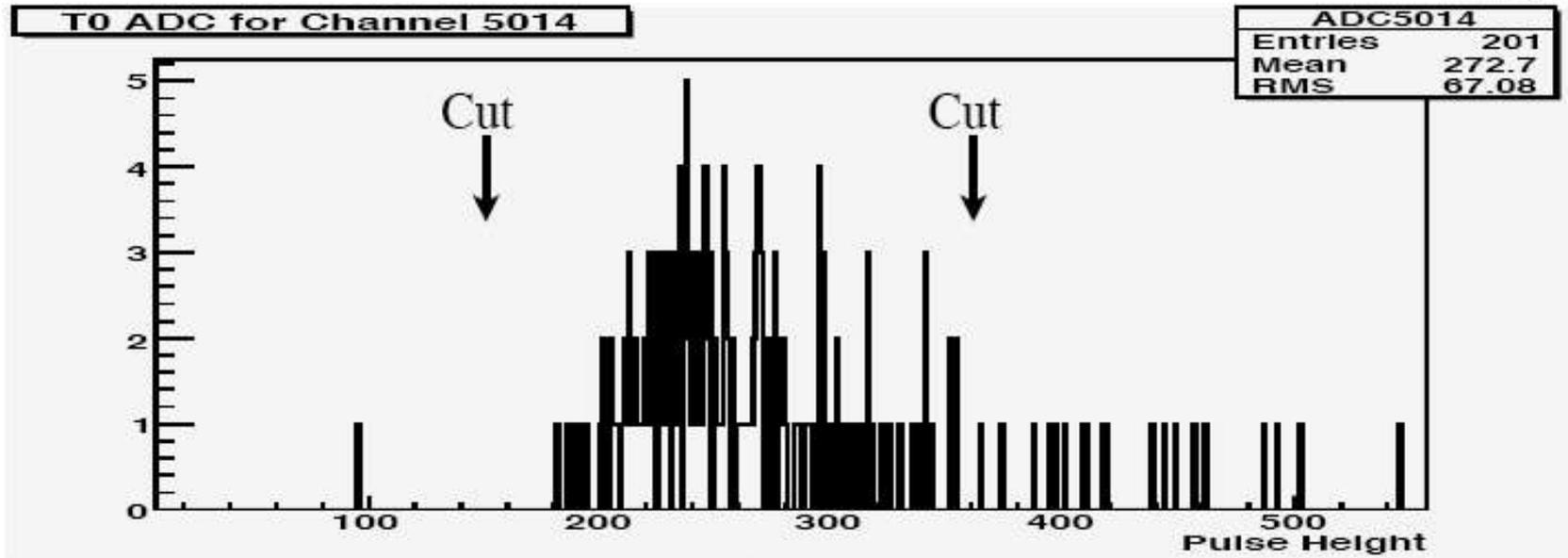
10/18/05

Summary of results of HV increase
Andrew Godley

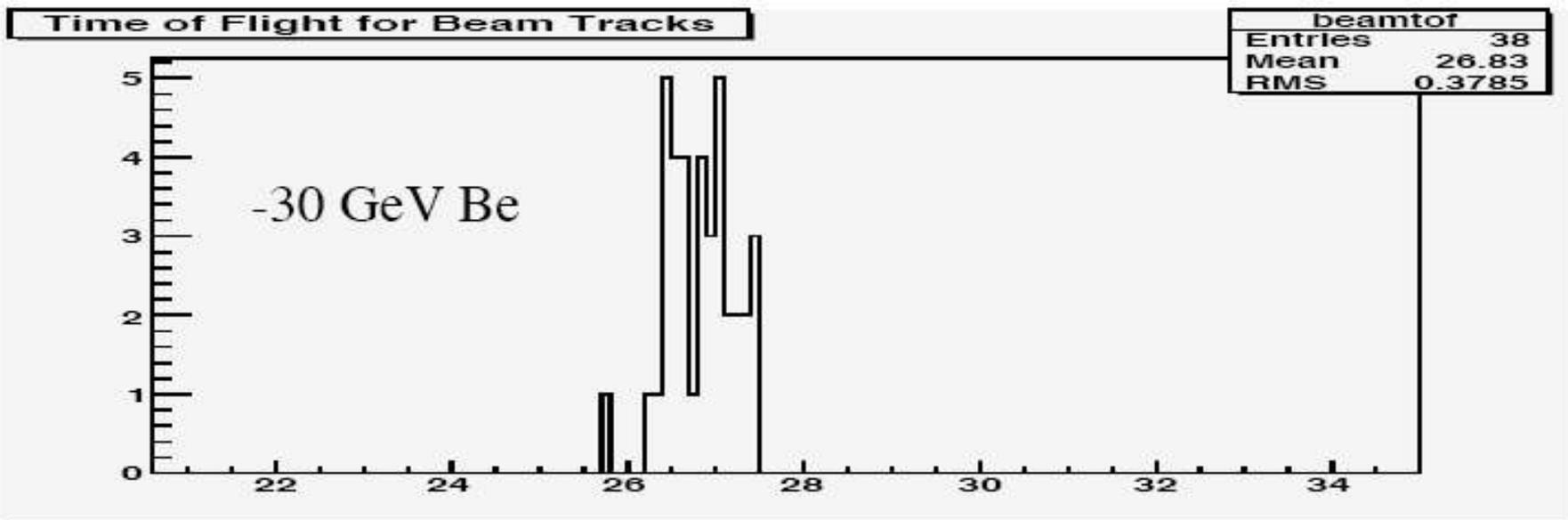
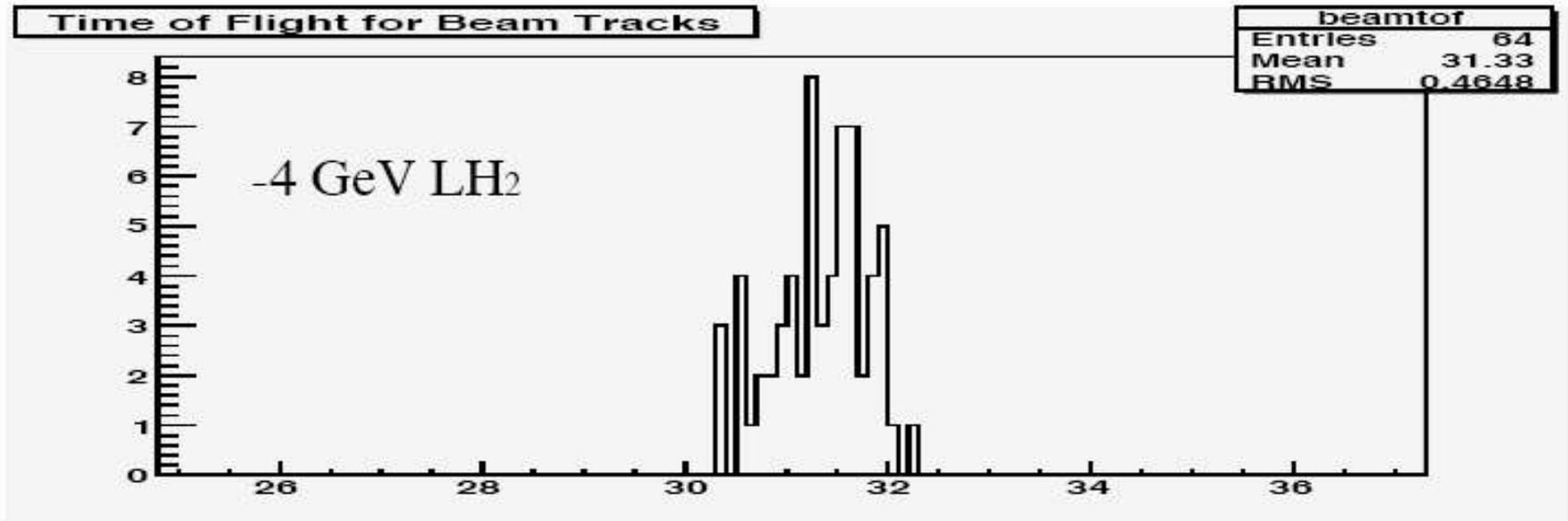
State at July Software Meeting

- Kevin Wilson made first attempt at extracting time of flight resolution
- Used beam tracks as defined by TPC (beamonly.xml) => poor statistics
- (Plot) ADC of T01 and TOF channel 1326 (bar beam hit)
- (Plot) TOF wall time – T01 time
- ~400ps resolution
- Increase High Voltage from 800 to 880V
- 800V was the manufacturer specification

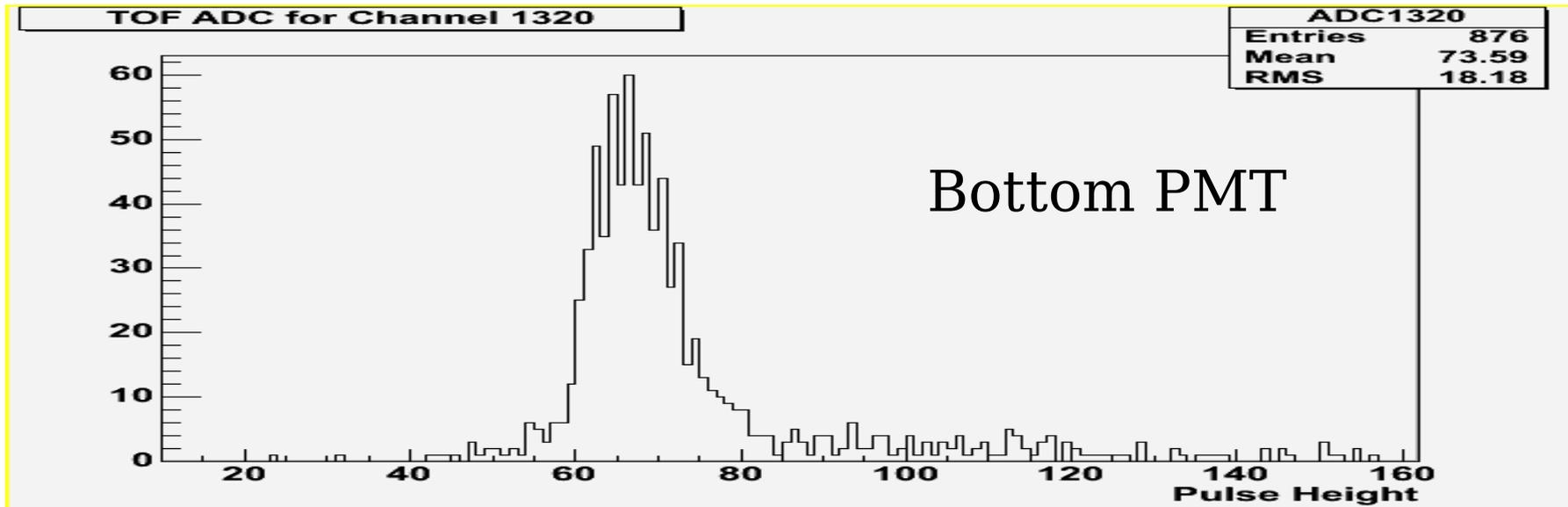
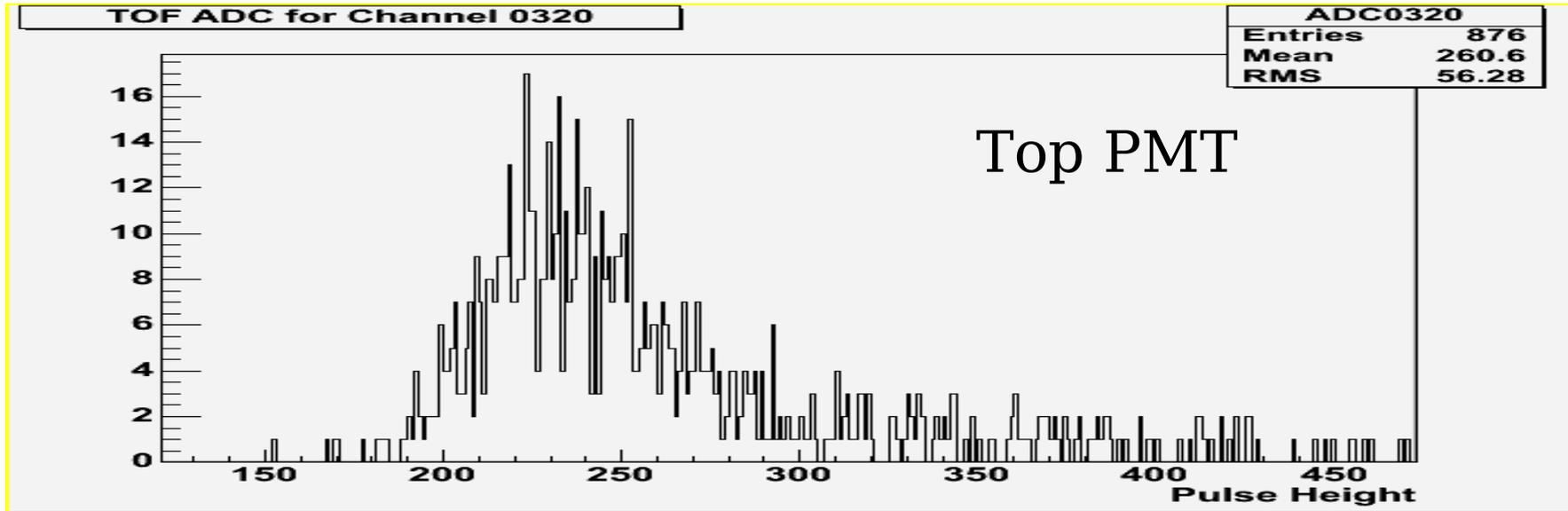
Beam track TOF, T01->Wall



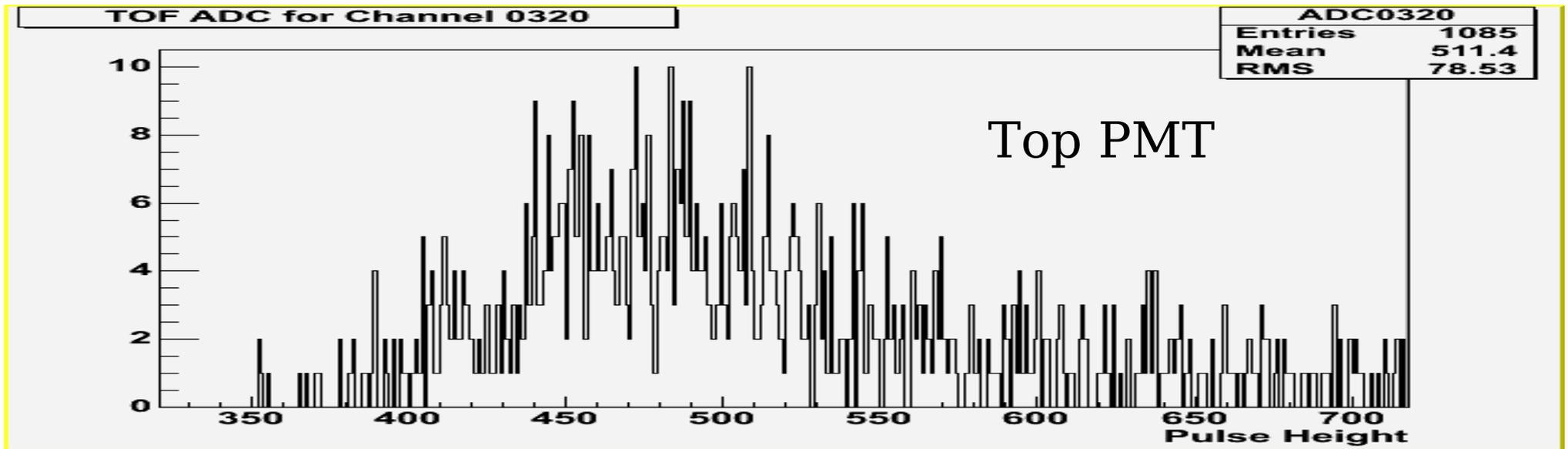
Beam track TOF, T01->Wall



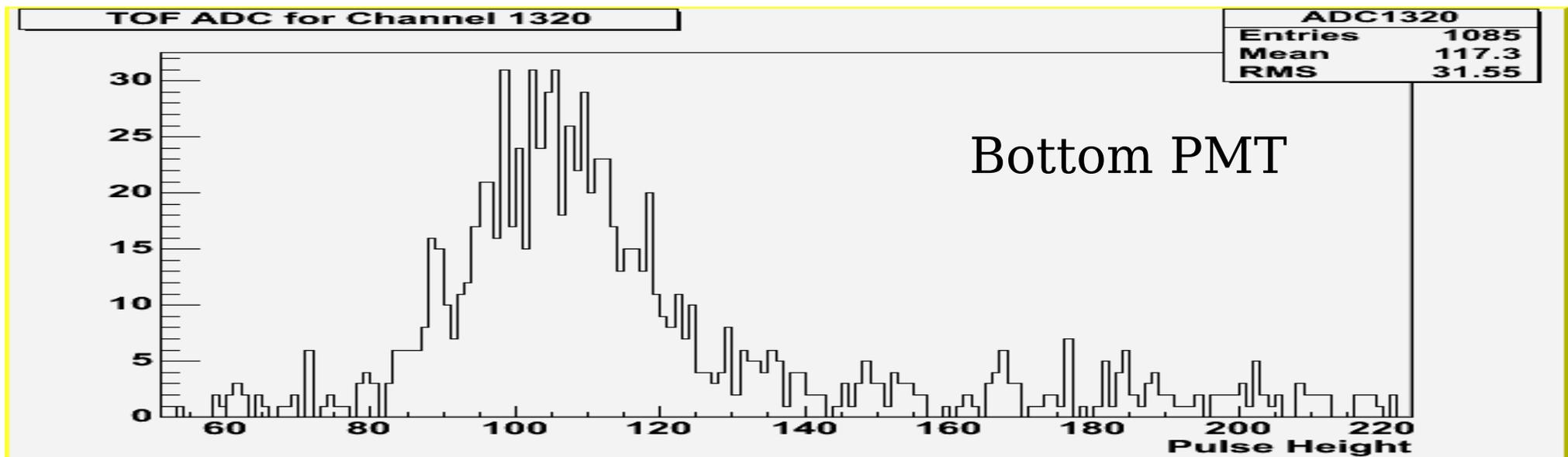
Run 15681: 800V 120GeV Be



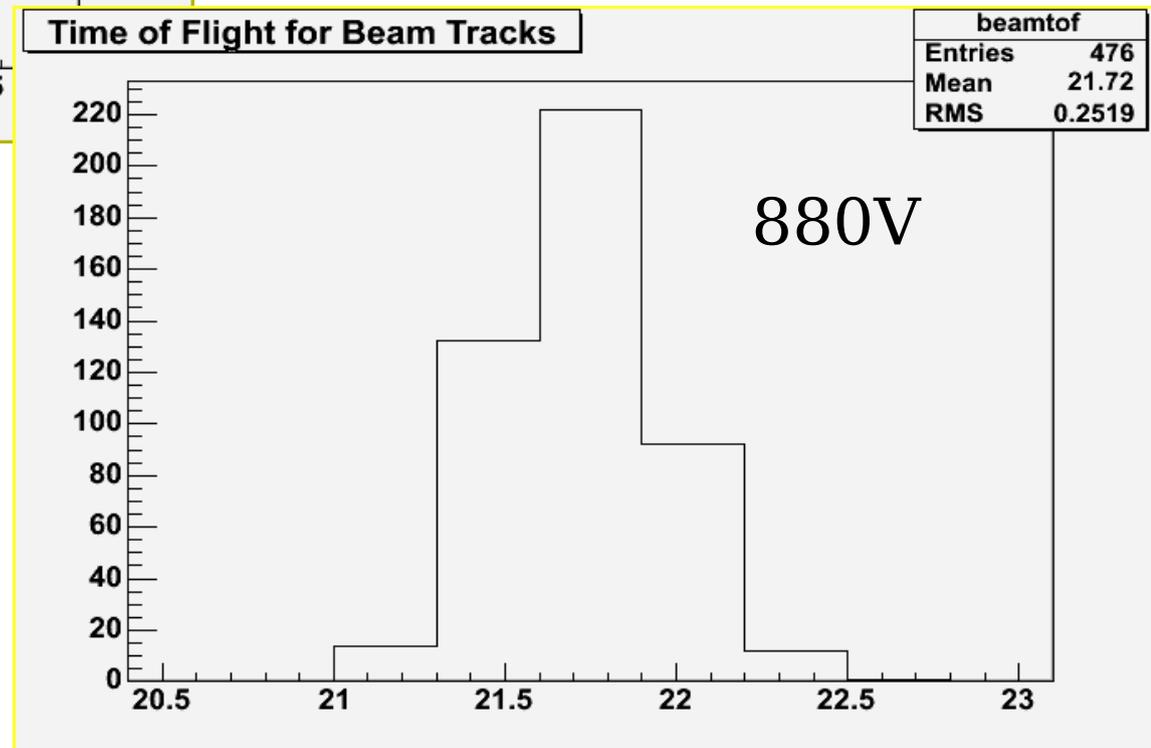
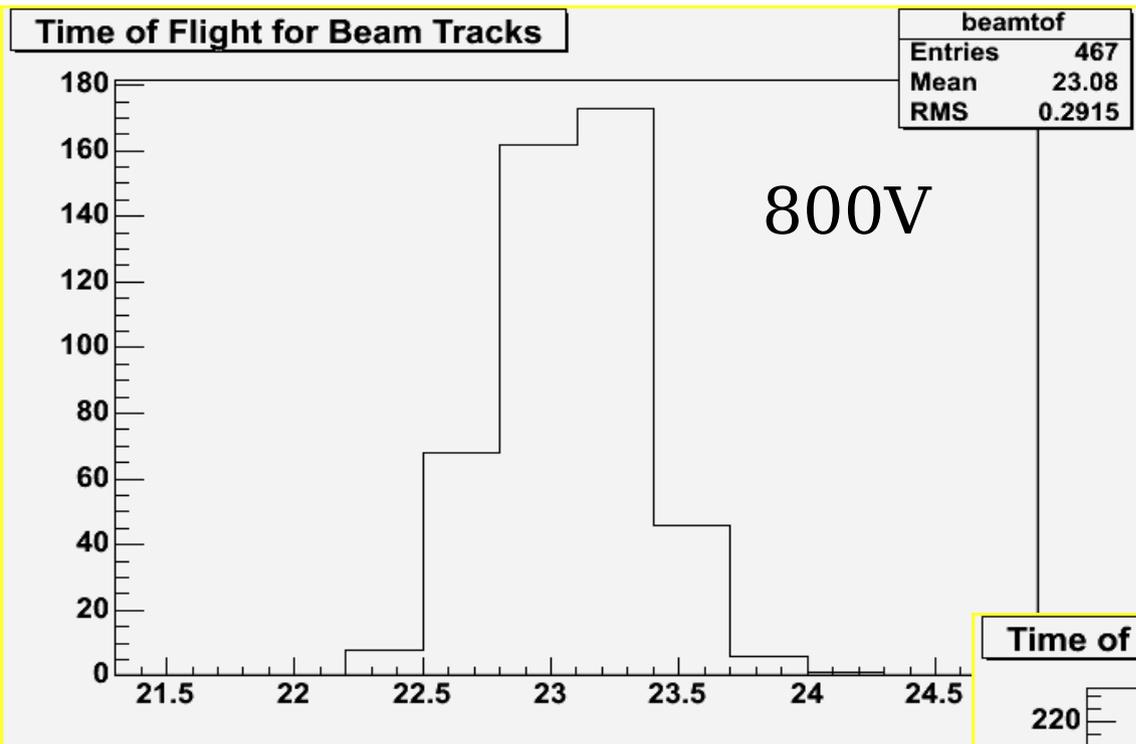
Run 15697: 880V 120GeV Be



Same channels as before, increased pulse heights



Beam track TOF, T01 -> Wall



Results

- Higher statistics (ran on multiple sub runs) and more beam tracks in 120 GeV runs(?)
- Clearer time resolution, 290ps at 800V and 250ps at 880V – an improvement
- Now see what improvements can be made with the software (calibration)