

# HGTD - Test Beam Analysis

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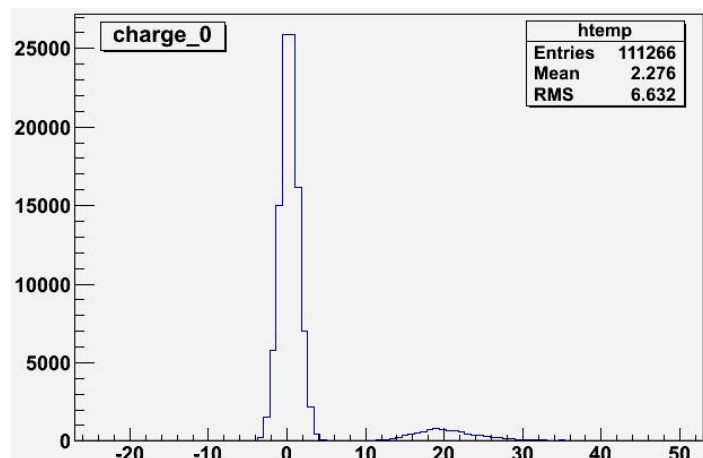
2019\_01\_03

# Outline

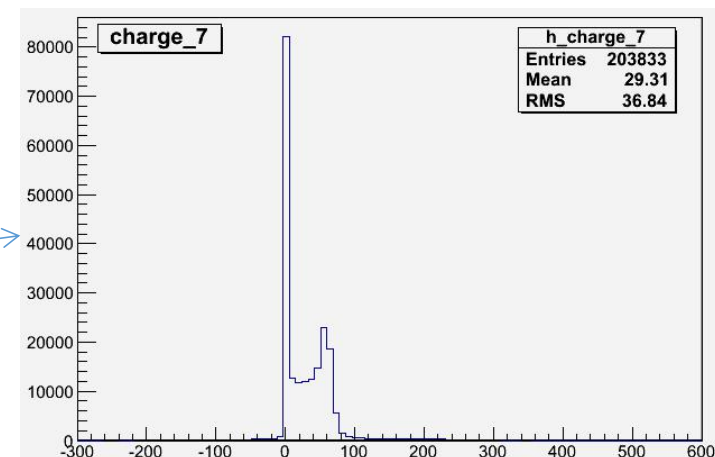
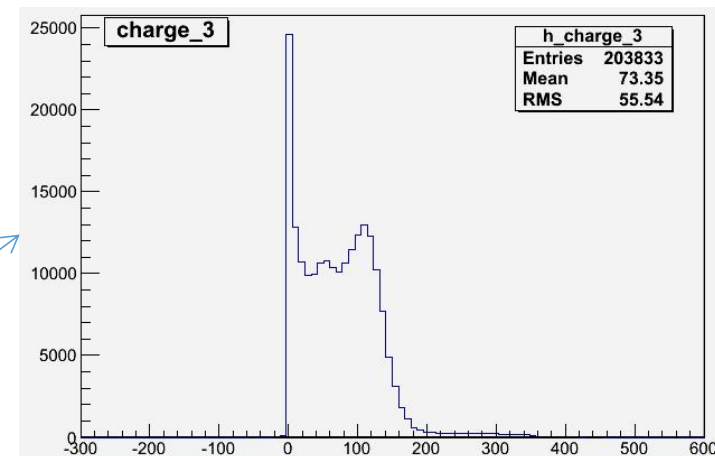
- Some task we need to do
  - LGA35 performance time stability(Nikola discussed with Mhammad)
  - Charge and amplitude uniformity performance for CNM sensors tested in April -30 using the high stat batches
- We can also do
  - time resolution by getting sigma of  $t(\text{UFSD})-t(\text{SiPM})$

# Charge distribution for 2018 Apr

/eos/atlas/atlascerngroupdisk/det-hgtd/testbeam/HGTDPyAna/  
v00-13-00/Tracking-00-00-02/tree\_April2018\_201\_charge.root



- 0 ch1 W9-LGA35
- 1 ch2 W4-1068
- 2 ch3 W4-S1058
- 3 ch4 SiPM1
- 4 ch5 W4-1067
- 5 ch6 W4-RB10-1
- 6 ch7 W4-RB10-2
- 7 ch8 SiPM2

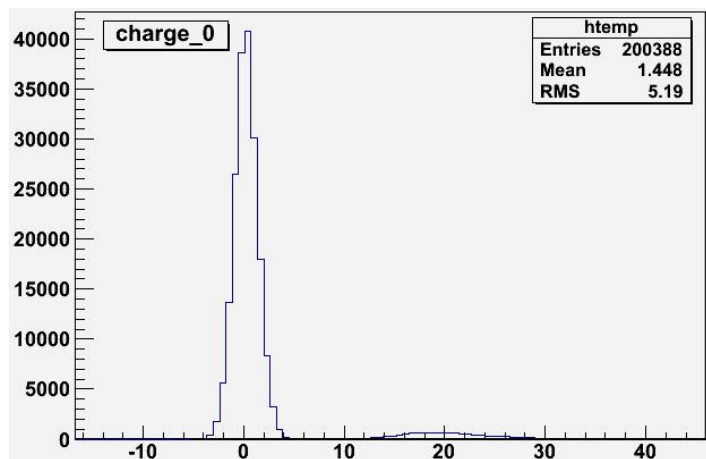


201, 202, 203, 207, 301, 302, 303, 304, 305, 306, 308

- charge: integral of the pulse divided by the transimpedance

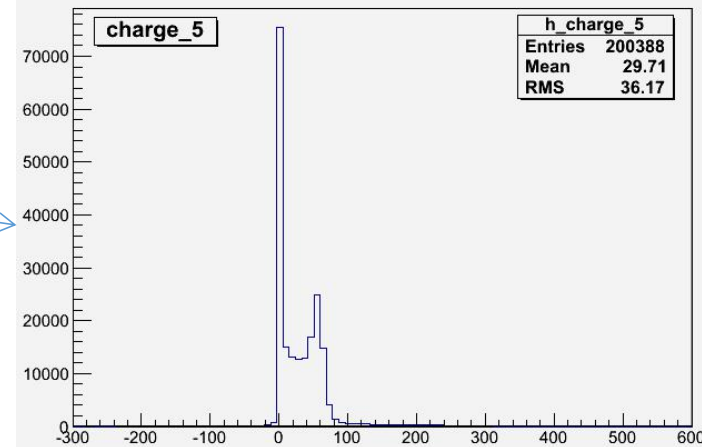
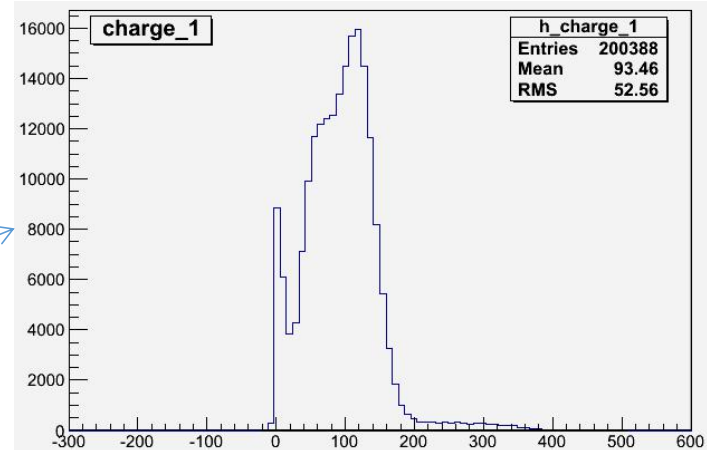
# Charge distribution for 2018 Apr

/eos/atlas/atlascerngroupdisk/det-hgtd/testbeam/HGTDPyAna/  
v00-13-00/Tracking-00-00-02/tree\_April2018\_406\_charge.root



208, 212, 406

- 0 ch1 W9-LGA35
- 1 ch2 SiPM1
- 2 ch3 W4-S1021
- 3 ch4 W4-RA02-1
- 4 ch5 W4-RA02-2
- 5 ch6 SiPM2



- charge: integral of the pulse divided by the transimpedance

# Next

- Get fit result for charge distribution
- Get 2 dimensional scatter plot of charge v.s. voltage