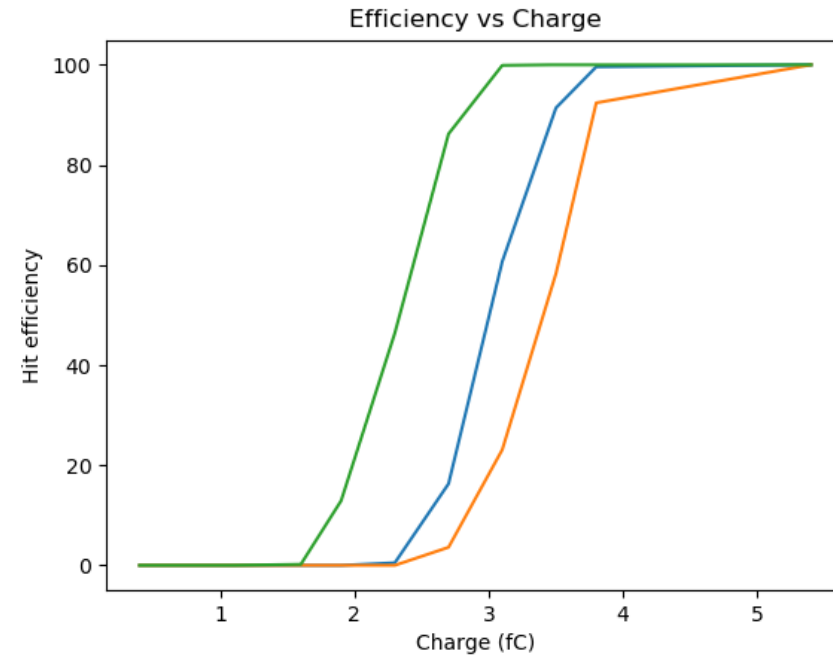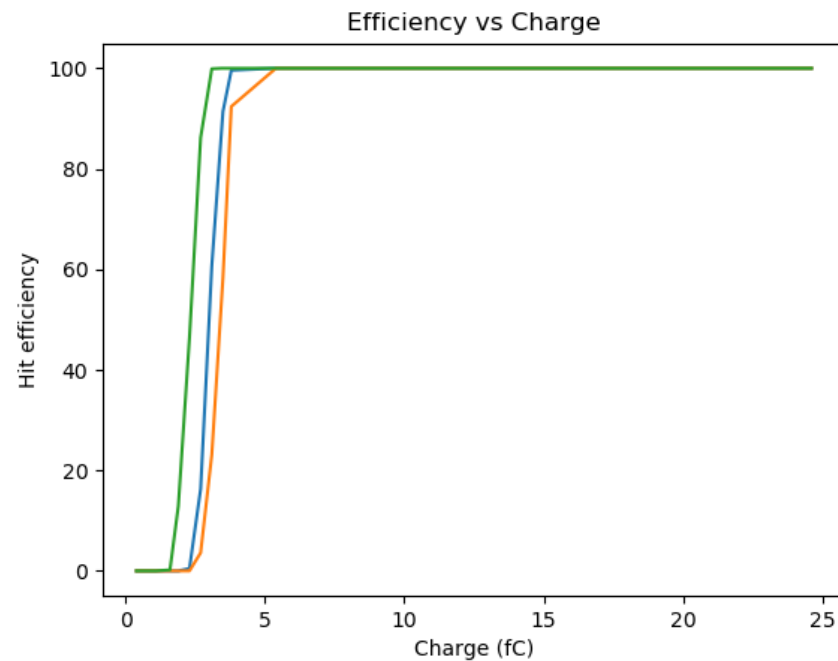# Update on charge threshold

Blue last meeting result
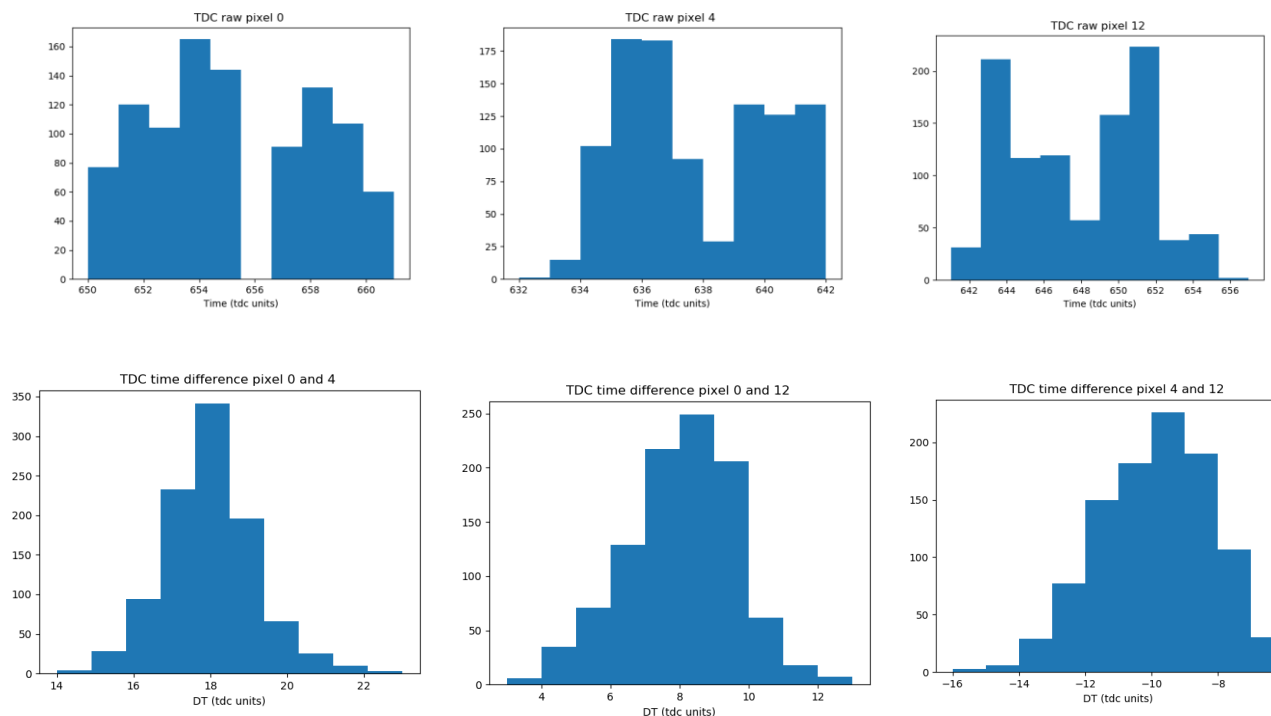Orange added on_cp
Green : added on_cp + probe PA and probe discri off + TDC off

→ Gain about 1 fC on threshold when RDC activity is off (measurement to be confirmed as done quickly

Intrinsic TDC time resolution   (25 fC charge input)

Threshold have been adjusted to lowest value for pixel 0 only (020A with 180) so thesholds for pixel 4 and 12 not at same charge
rms : 2.78 (pix 0), 2.48 (pix 4), 3.5 (pix12)

Time difference between channels (eliminate common noise contribution or common calib CMD contribution)
rms : 1.35 (0-4) , 1.62 (0-12) , 1.70 (4-12)
Not fully gaussian distribution

→ Deduce intrinsic TDC resolution :

Pixel 0 : 0.87   →   21.8 ps (assuming 25 ps lsb)
Pixel 4 : 1.03   →   25.7 ps
Pixel 12 :   1.37   →   34.2 ps
Difference can come from different threshold or different lsb values
Would like to repeat it using the EXT trigger signal (directly at TDC input) instead of charge injection