



Status report for BCAL gain calibration Fall18

Date : 21 March 2019

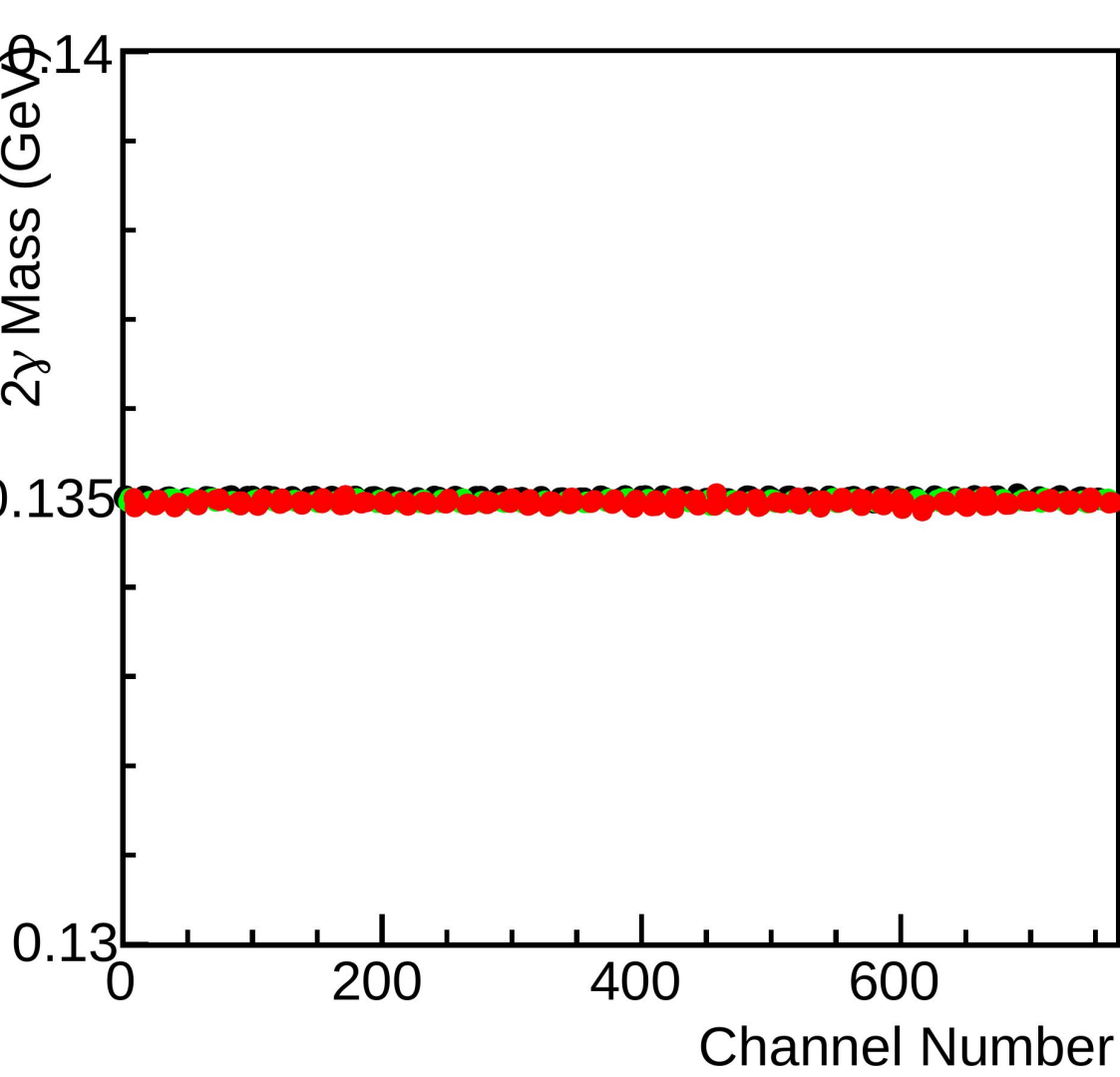


Fall 2018 gain calib

- Used the runs 50638 to 51000 for calibration of the gains
- For the spring 2018, For the nonlinearity correction, Used the SiPM's pixel/count value = 0.1
- The used value was not nominal and did not serve the purpose.
- Experimenting now with various pixel per count for the fall runs

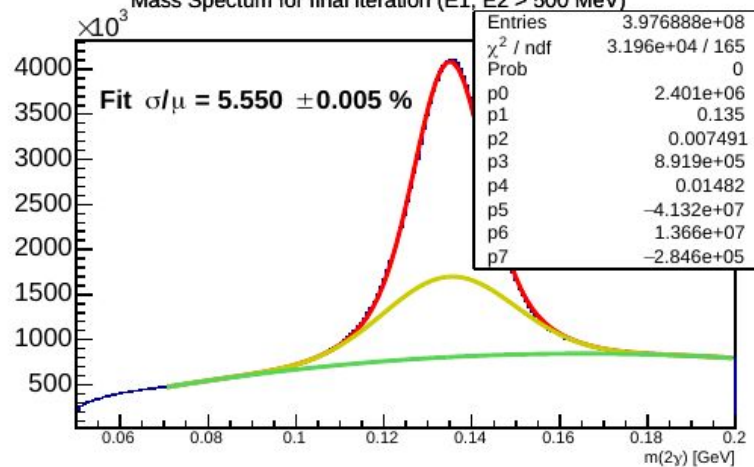
The gains of converged to right piOMass after **11** iterations

- Now, started experimenting with the nonlinearity. Changed the pixel/count from 0.1 to 0.3 in steps of 0.05 and did 1 for 0.478 (expected value)

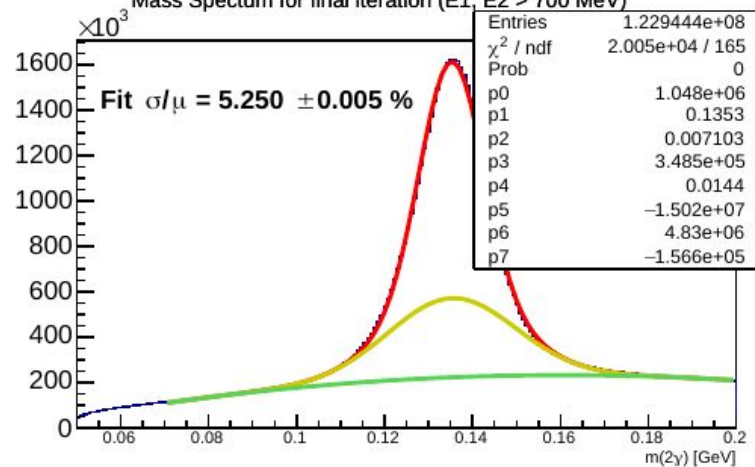


**Iteration 11 the
gains for channel
converges to
correct pi0 mass**

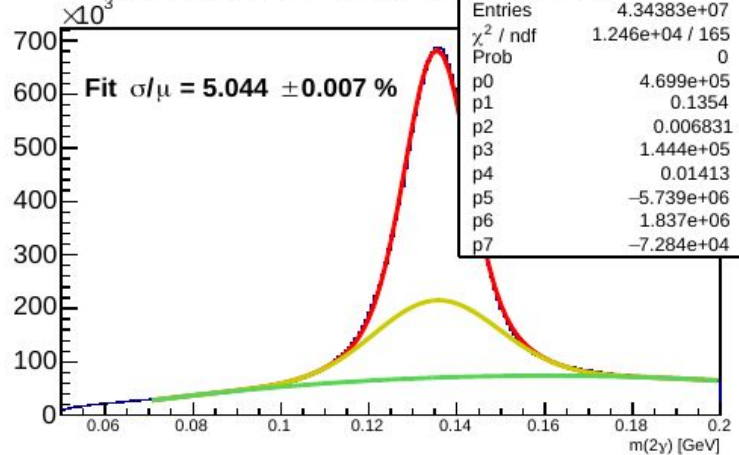
Mass Spectrum for final iteration (E1, E2 > 500 MeV)



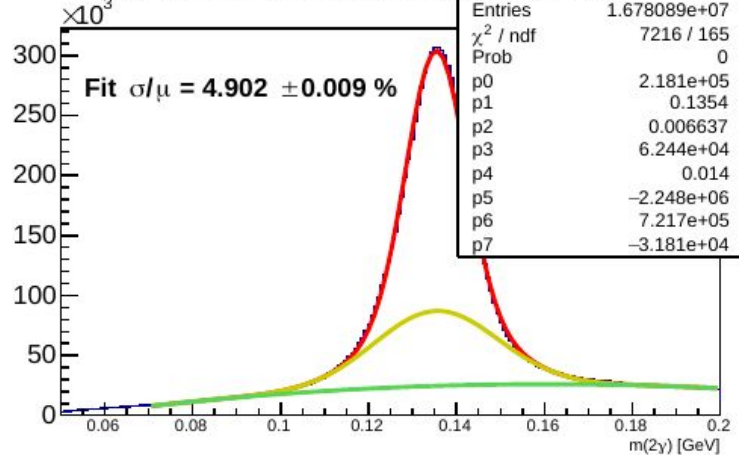
Mass Spectrum for final iteration (E1, E2 > 700 MeV)



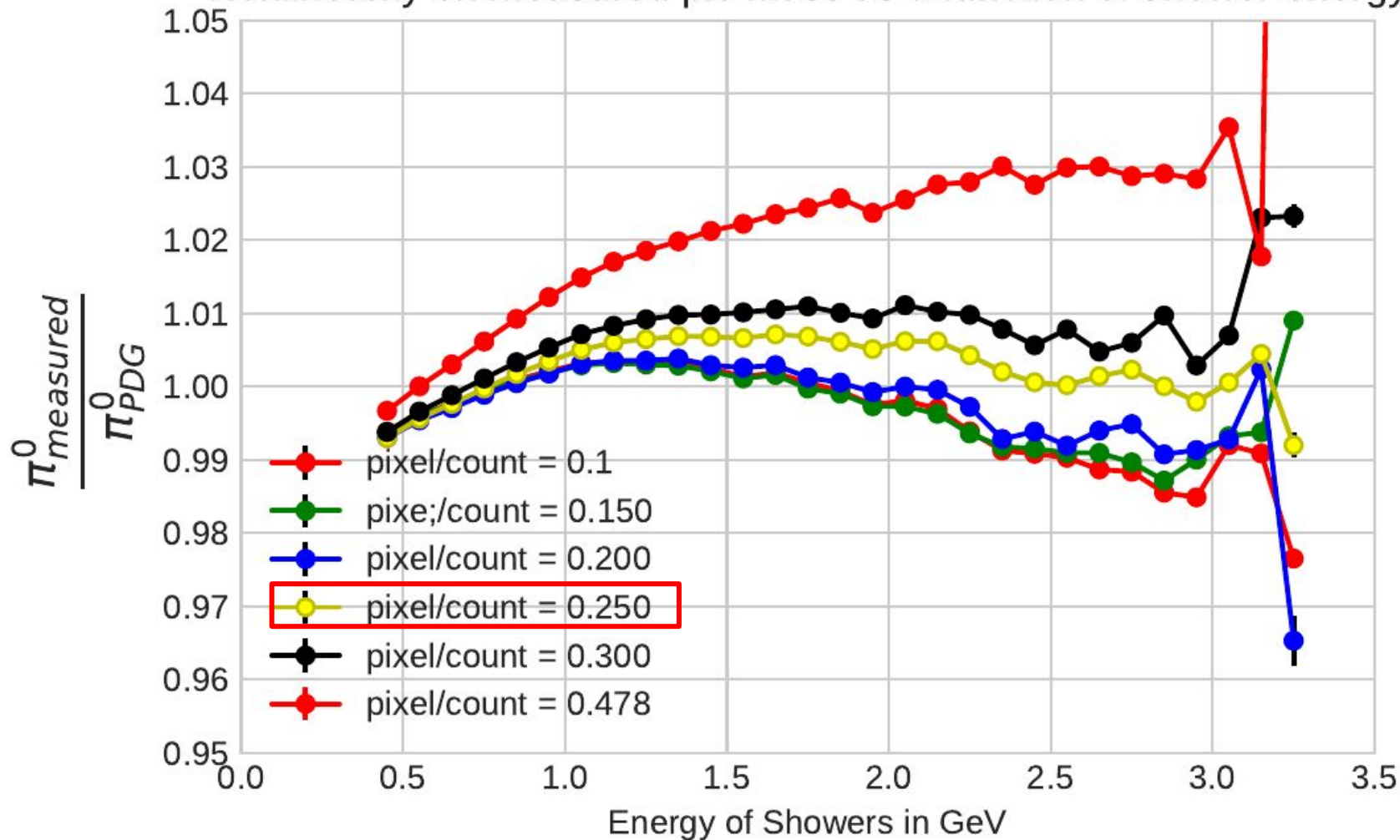
Mass Spectrum for final iteration (E1, E2 > 900 MeV)



Mass Spectrum for final iteration (E1, E2 > 1100 MeV)



Nonlinearity on measured pi0 mass as a function of shower energy



Nonlinearity in pi0 mass as a function of shower energy with pixel/count =

