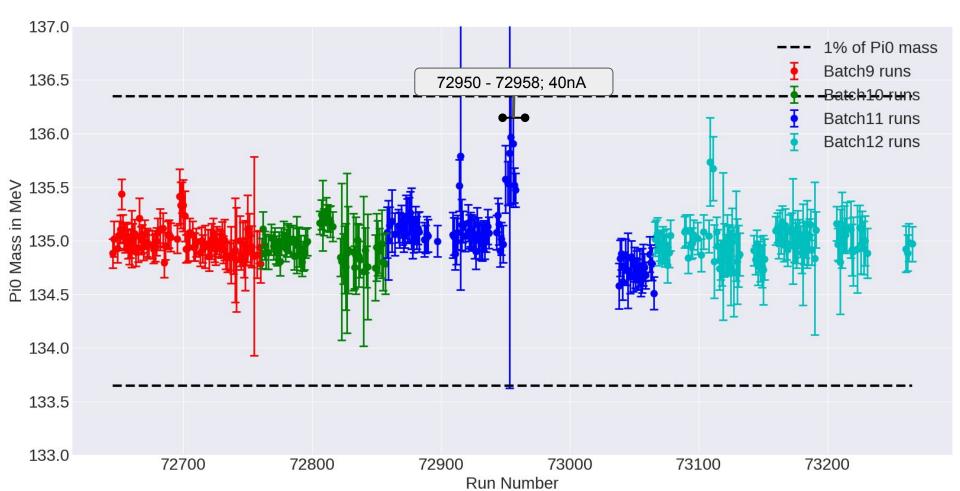
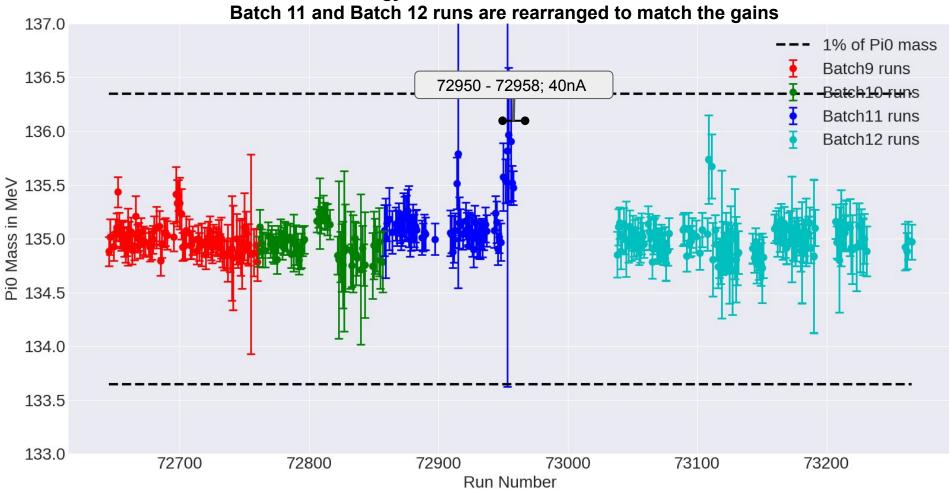
### Pi0 Mass without nonlinear energy correction as a function of Run number for summer 2020





Pi0 Mass without nonlinear energy correction as a function of Run number for summer 2020

#### Runs

<u>72914</u> - beam\_current 14.9426; beam\_on\_current 35.5866

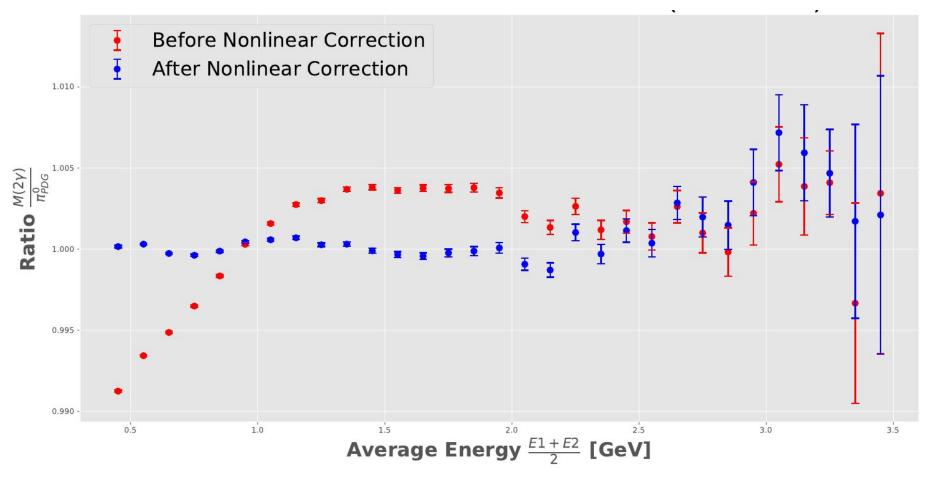
- <u>72915</u> beam\_current 17.4804; beam\_on\_current 34.7952
- <u>72950</u> <u>72958</u>; current 40nA
- <u>73109</u> beam\_current 156.483; beam\_on\_current 348.663
- <u>73111</u> beam\_current 311.34; beam\_on\_current 348.009

## Nonlinear corrections

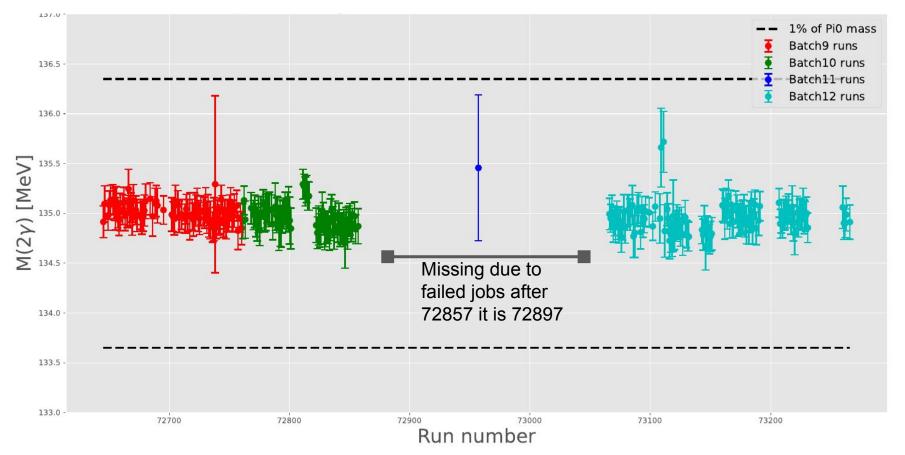
- Has a single correction throughout the run period
- Used ver02 (/cache/halld/RunPeriod-2019-11/calib/ver02/BCAL\_pi0/) files for nonlinear corrections. Ver01 files has the tape issues
- Both the versions are similar. However, with a total of 6861 files about 1534 of them had issues (SWIF\_USER\_NONZERO) and files were not copied to cache
- Did the nonlinear calibration

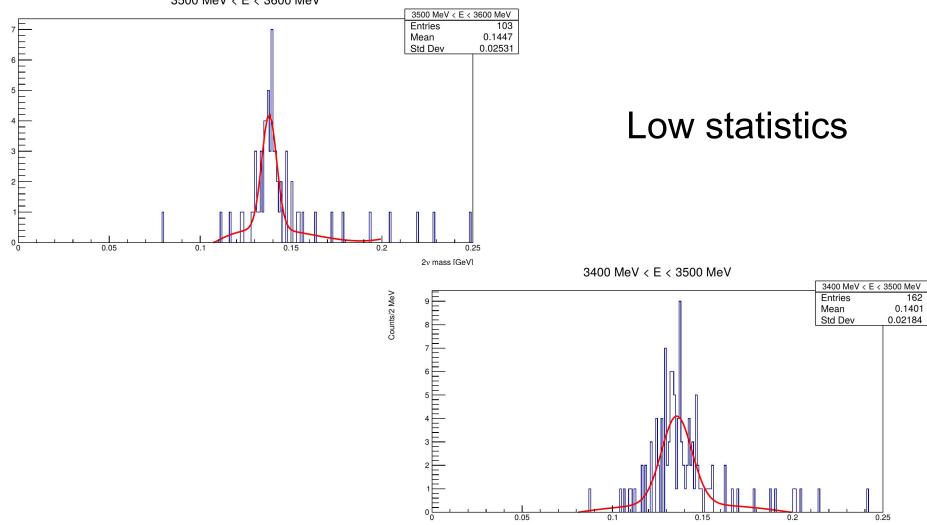
## Nonlinear correction function anchored at 1 at 11 GeV 1.1 1.08 1.06 1.04 Latio 0.98 0.96 0.94 0.92 0.9 2 6 8 10 12 Energy [GeV]

# Nonlinear correction Summary



# Looking into the pi0 values after nonlinear corrections





0.05

0.15

0.2

0.25

2v mass [GeV]

3500 MeV < E < 3600 MeV

Counts/2 MeV