

# p+p 200 GeV, 2024 Hard Probes PWG Data QA

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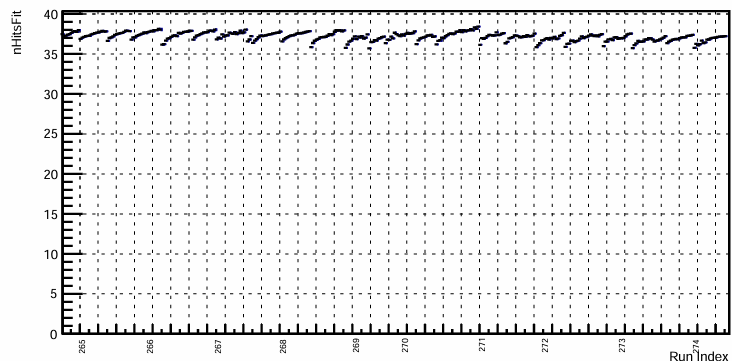
# Dataset + selection criteria

- Days 264-274
- Runs: 25264033-25274018
- Total: 367
- Event-level:
  - $|z_{\text{vertex}}| < 100$  cm
  - [Positive ranking](#)
  - $v_T < 2$  cm
  - $|\text{VPD } v_z - \text{TPC } v_z| < 6$  cm
- Track-level primaries
- Charged Jet: Primary tracks  $p_T > 0.2$  GeV/c, leading track  $p_T > 2$  GeV/c,  $n_{\text{hit}} > 15$  &  $n_{\text{hit-ratio}} > 51\%$ ,  $|\eta| < 1.4$ ;  $|\eta| < 1 - R$ ,  $p_T > 1$  GeV/c, anti-kt,  $R=0.4$
- Full Jet:  $|\eta| < 1.0$ , BEMC Hadronic Correction = 100 %,  $E_T > 0.2$  GeV after correction, Same jet criteria
  - New: Selection on having a charged track  $> 1$  GeV

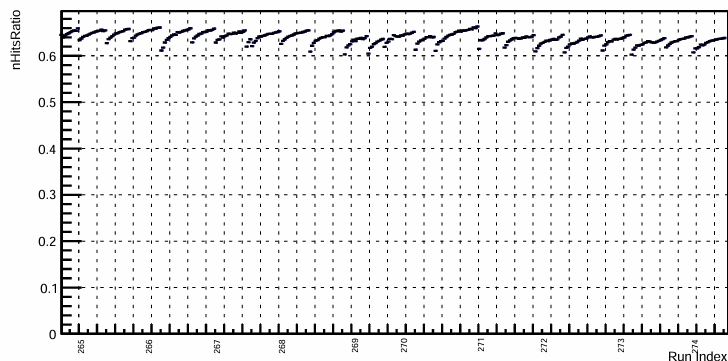
Radial runs

# Track Quality

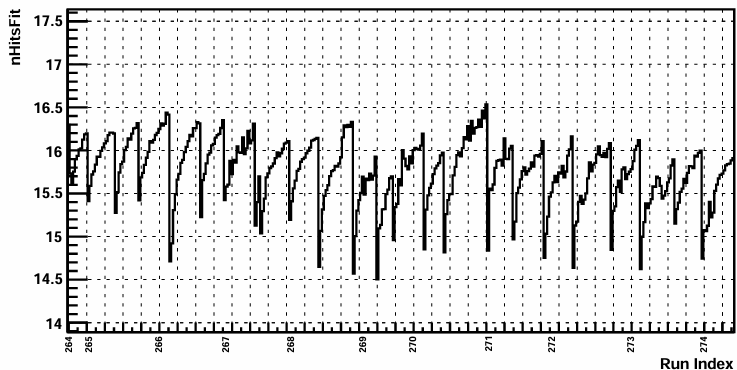
Avg track nhit



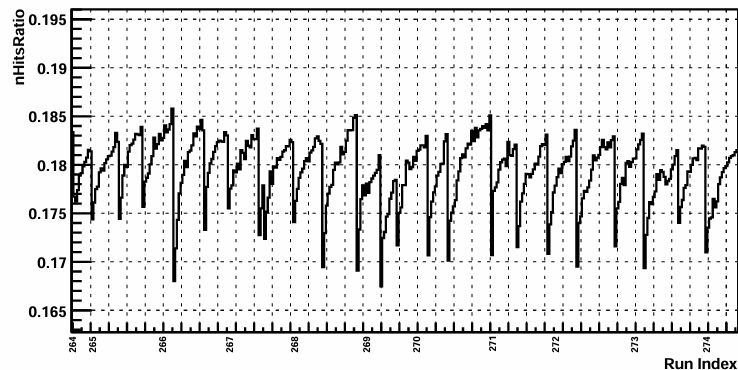
Avg track nhitratio



Dev track nhit

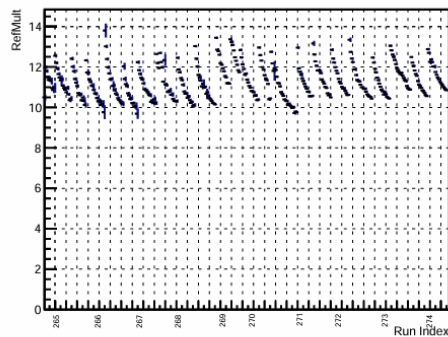


Dev track nhitratio

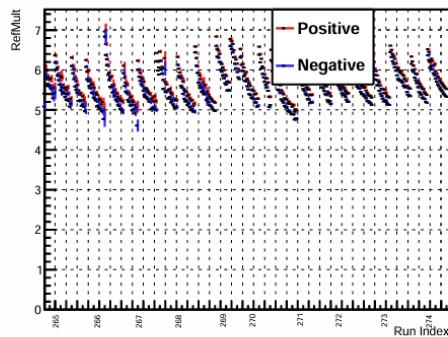


# Track Multiplicity

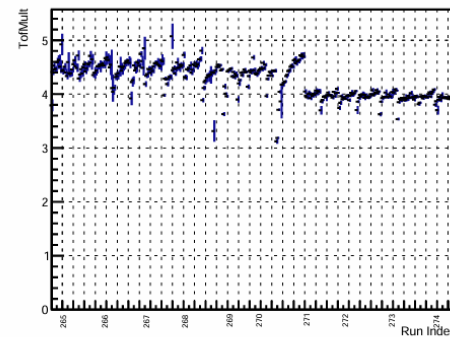
Avg overall



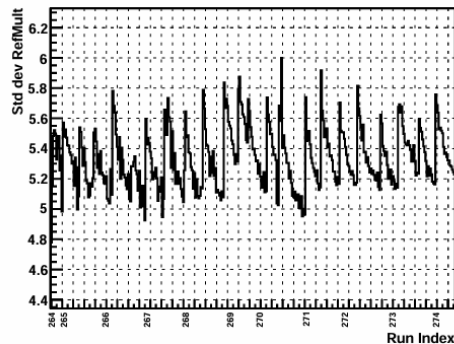
Avg pos/neg charge



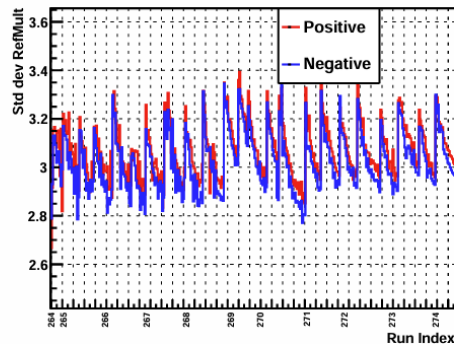
Avg tofmult



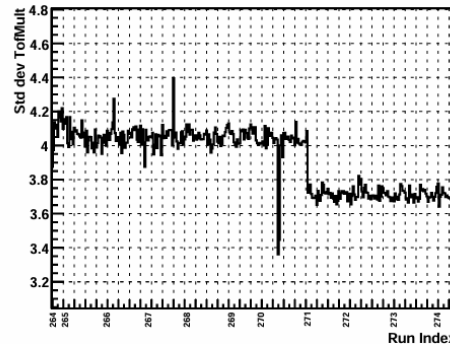
Dev overall



Dev pos/neg charge

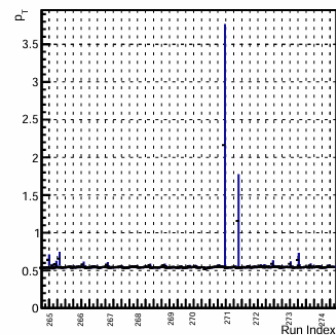


Dev tofmult

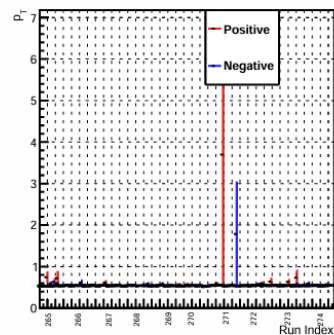


# Track Kinematics

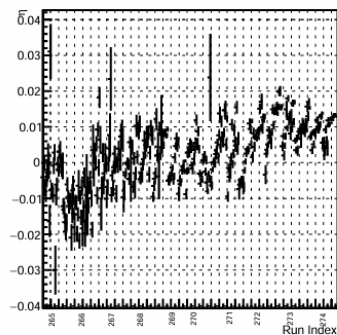
Avg pt



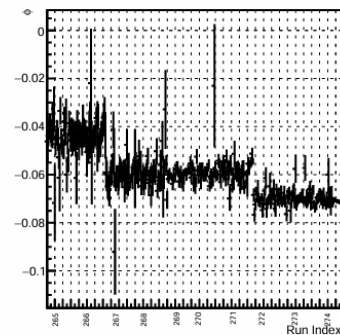
Avg pos/neg charge pt



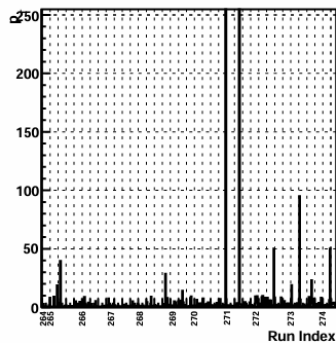
Avg track eta



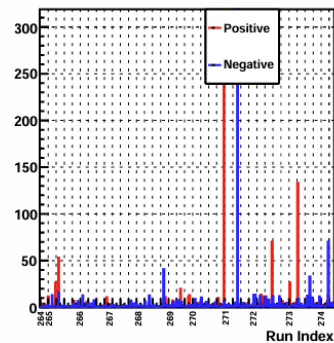
Avg track phi



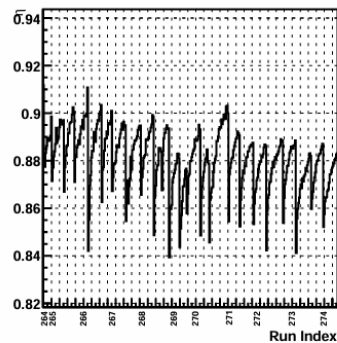
Dev pt



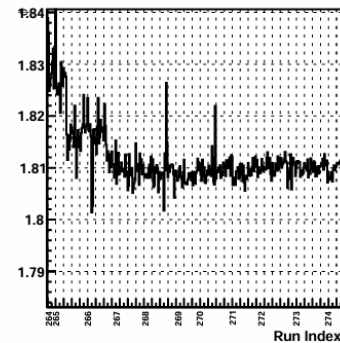
Dev pos/neg charge pt



Dev track eta

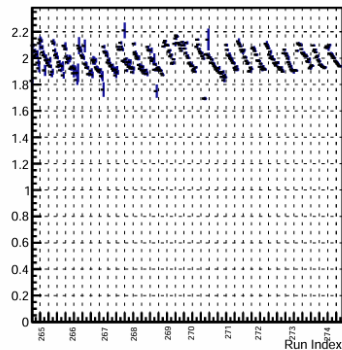


Dev track phi

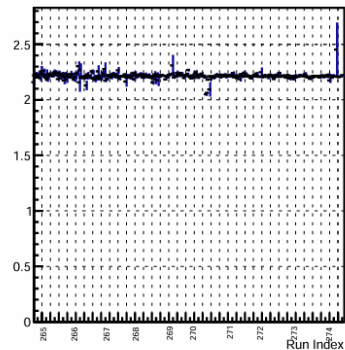


# Charged Jets

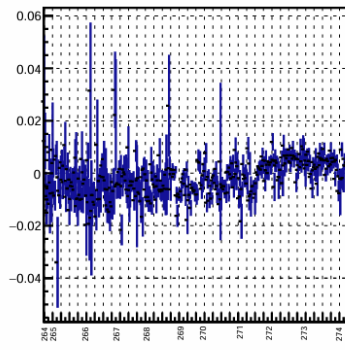
Average number of charged jet



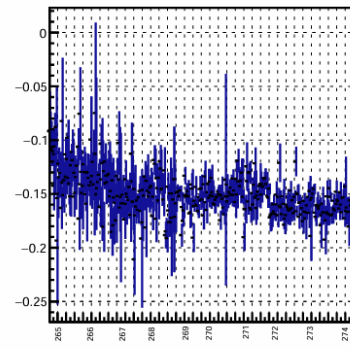
Average charged jet pt



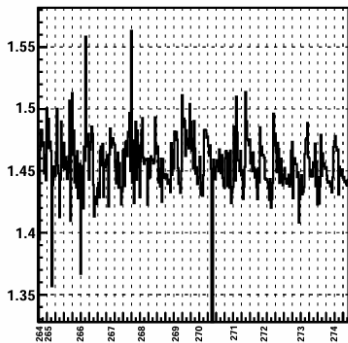
Average charged jet eta



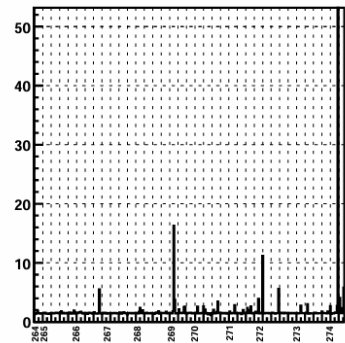
Average charged jet phi



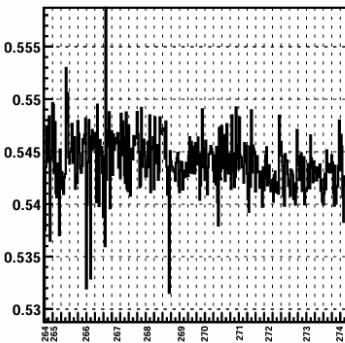
Dev #charged jets



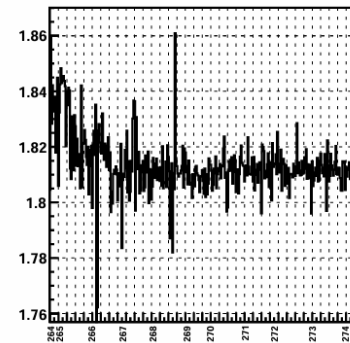
Dev charged jets pt



Dev charged jets eta

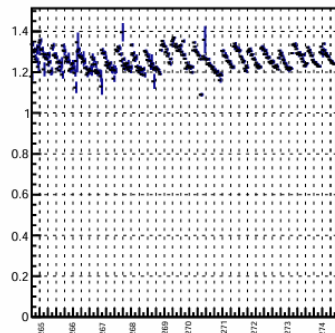


Dev charged jets phi

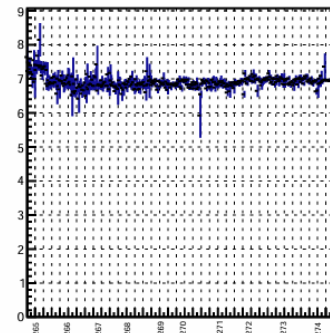


# Full Jets

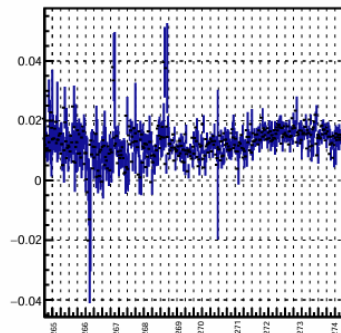
Average number of full jet



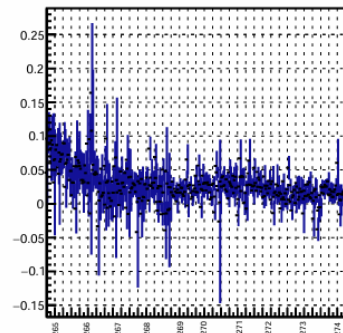
Average full jet pt



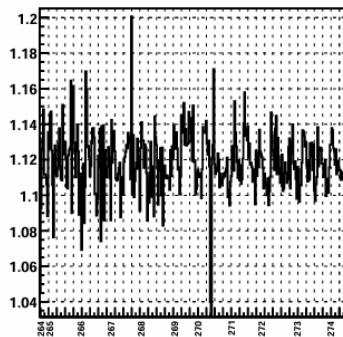
Average full jet eta



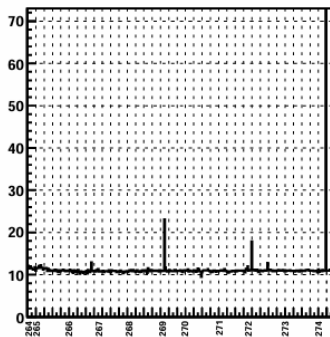
Average full jet phi



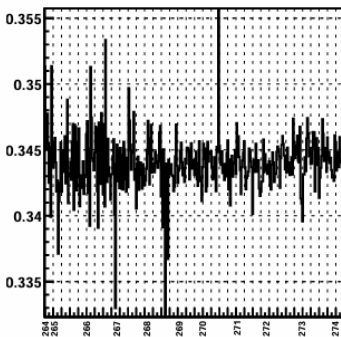
Dev #full jets



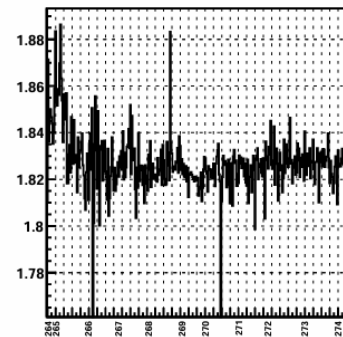
Dev full jets pt



Dev full jets eta

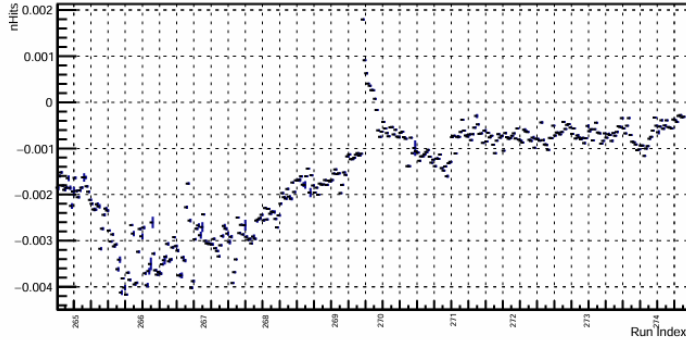


Dev full jets phi

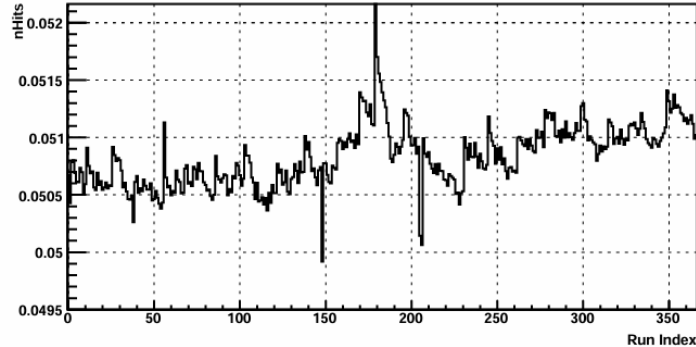


# EMCal Stats

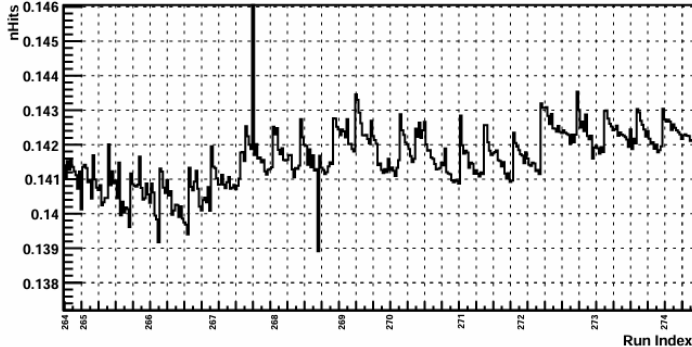
Avg EMC hit



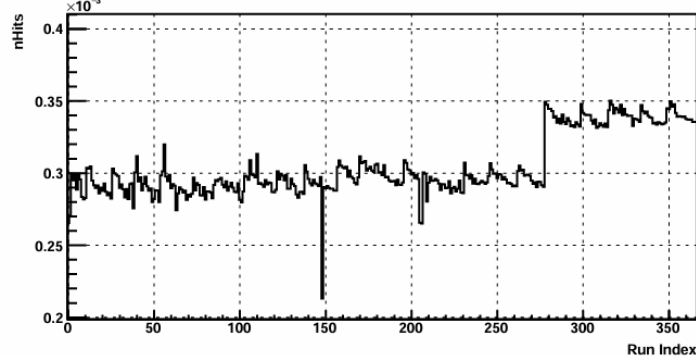
EMC hit > 200 MeV



Dev EMC hit

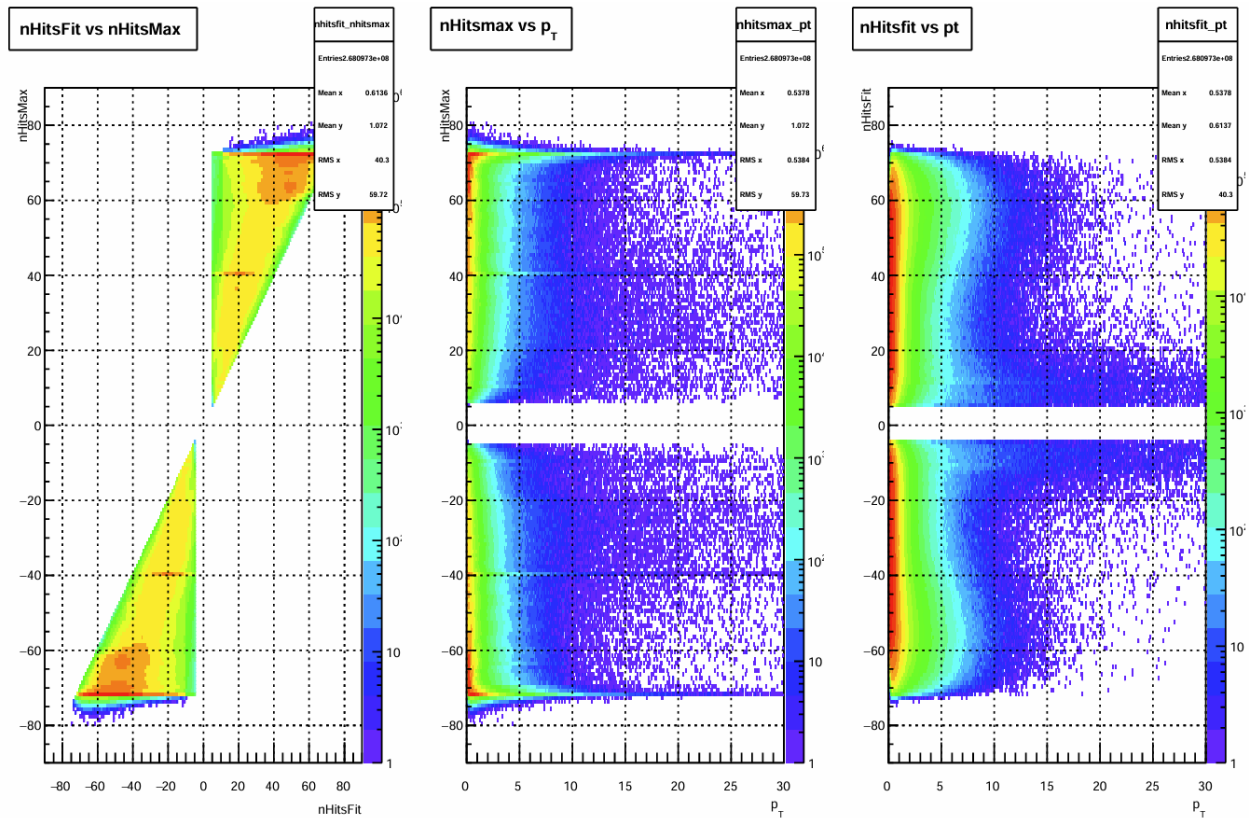


EMC hit > 1 GeV

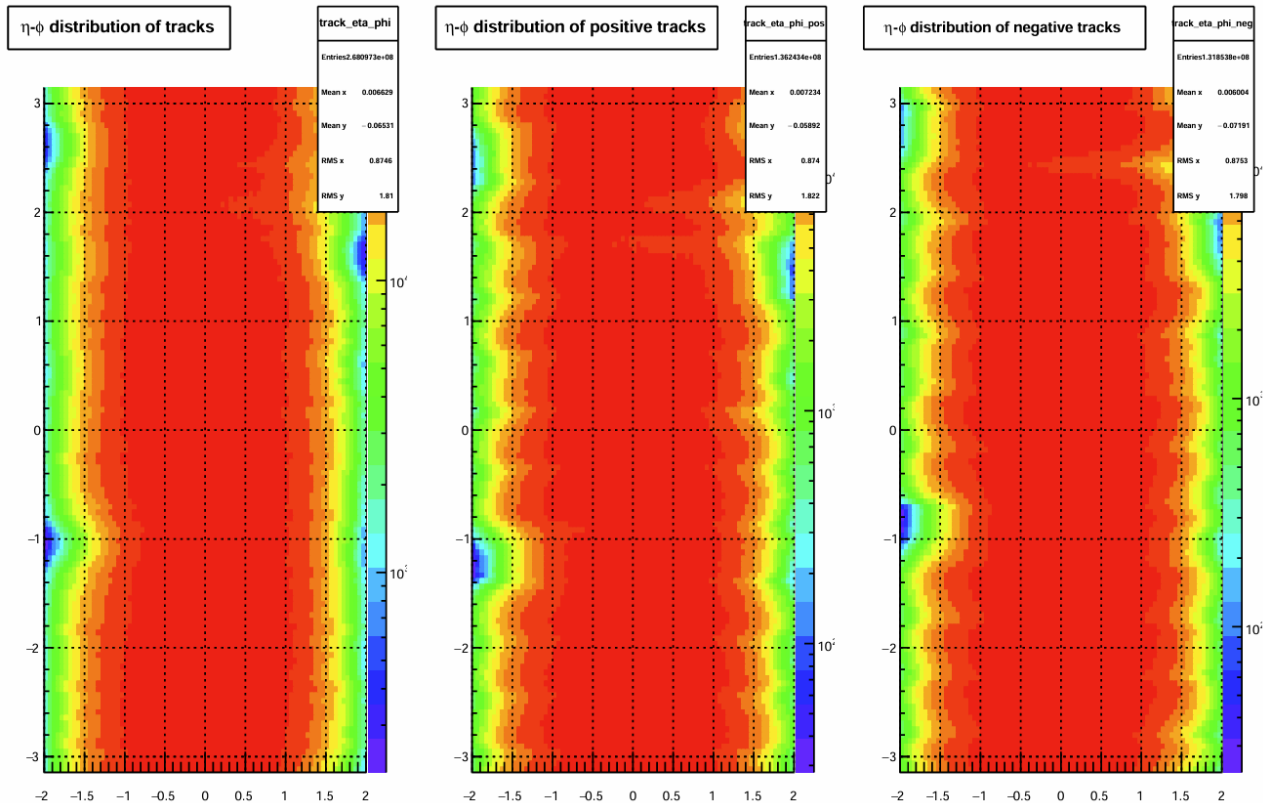




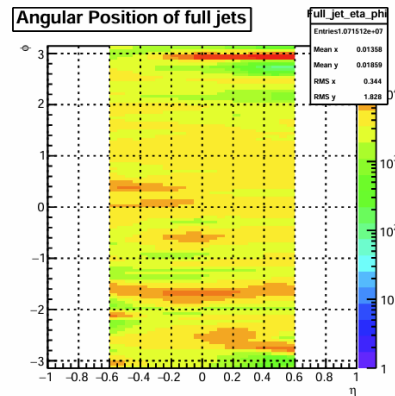
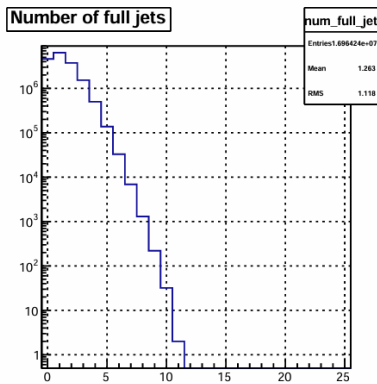
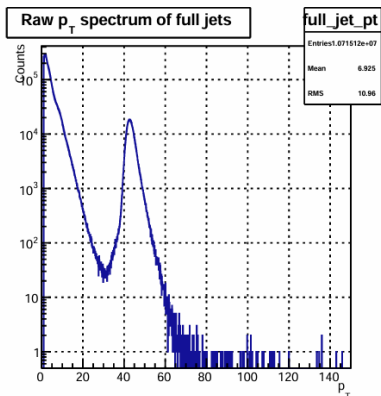
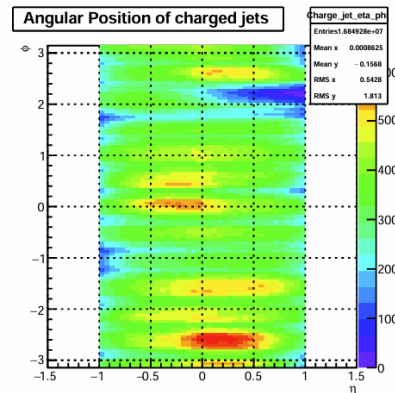
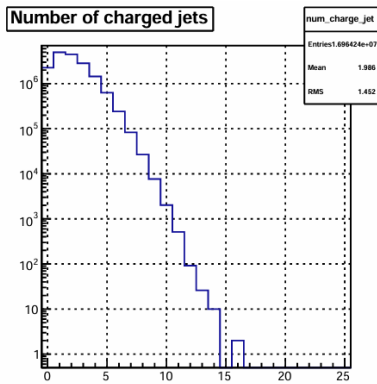
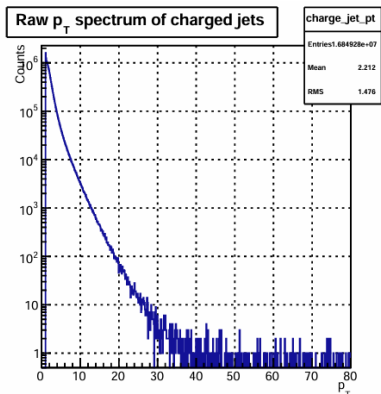
# Track Quality



# Track Kinematics



# Jet Kinematics



# Flagged runs

**Flagged Runs (Variables outside 5 sigma):**

**Purple** = Run ended early or problem noted in shift log

25264033, 25264053, 25265007, 25266009, 25266045, 25267052, 25269032,  
25270023, 25270024, 25270037, 25270057, 25271031, 25274011