

ZDCSMD Run 23 fastoffline data

2023/06/16

Purdue University

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Data

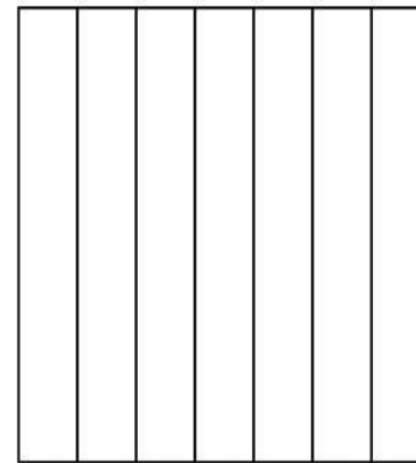
■ Data set: production_AuAu_2023

- Au + Au @ $\sqrt{s_{NN}} = 200$ GeV
- Run ID: 24146040 – 24162016

■ Cuts:

- $|V_z| < 30$ cm
- $n_{\text{HitsFit}} \geq 20$
- $\text{FitMaxRatio} \geq 0.52$
- $|\eta| \leq 1$
- $gdca \leq 1$ cm
- $p_t \geq 0.2 \ \&\& \ p_t \leq 2.0$

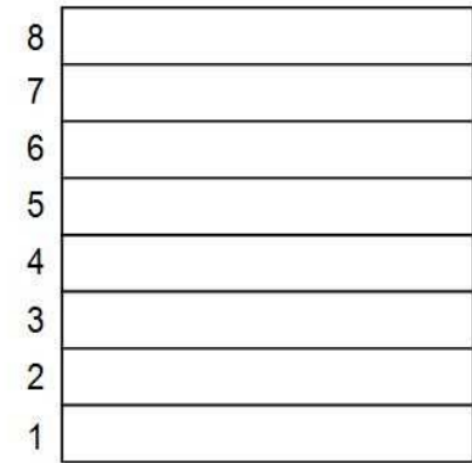
ZDC Shower Max Detector (SMD)



1 2 3 4 5 6 7

Vertical slats (X)

(21 strips)



1

2

3

4

5

6

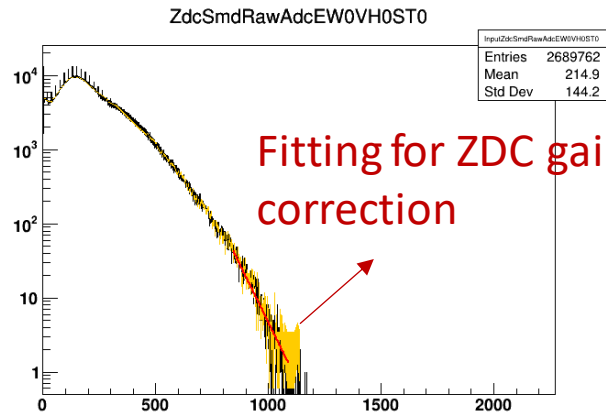
7

8

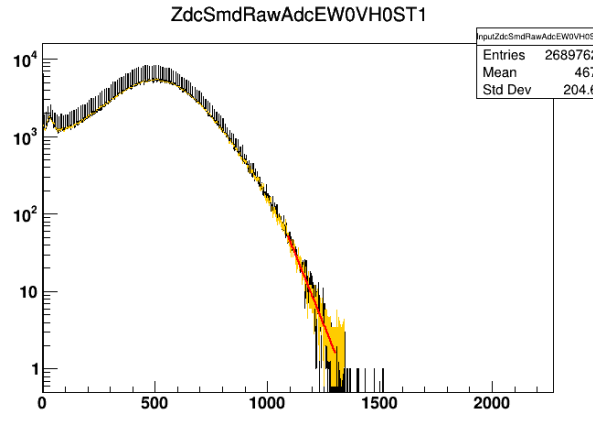
Horizontal slats (Y)

(32 strips)

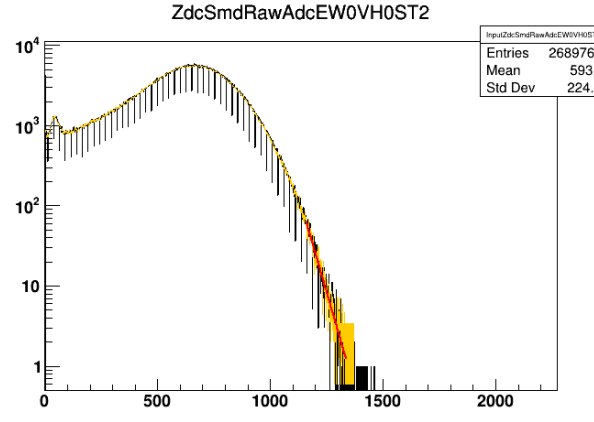
ADC bins in various east vertical slats



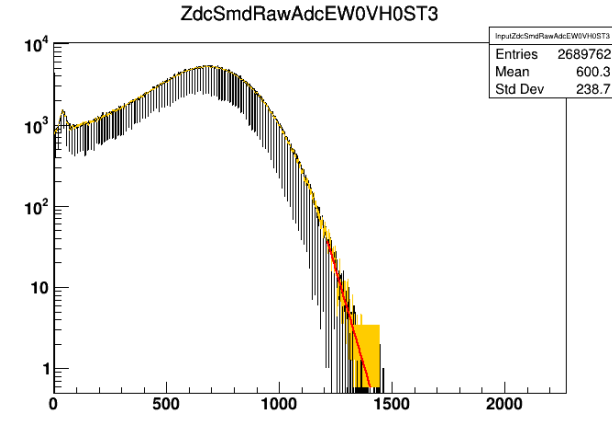
East vertical slat 0



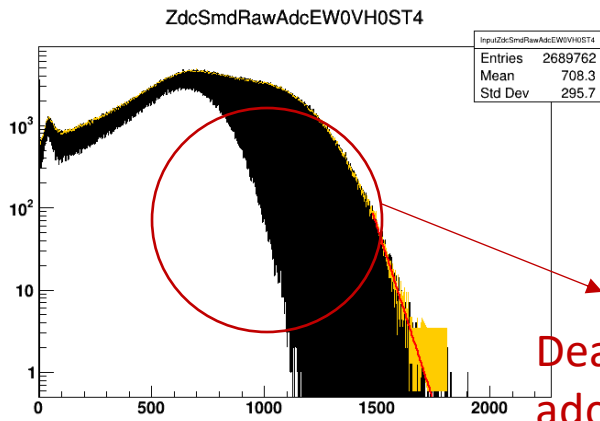
East vertical slat 1



East vertical slat 2

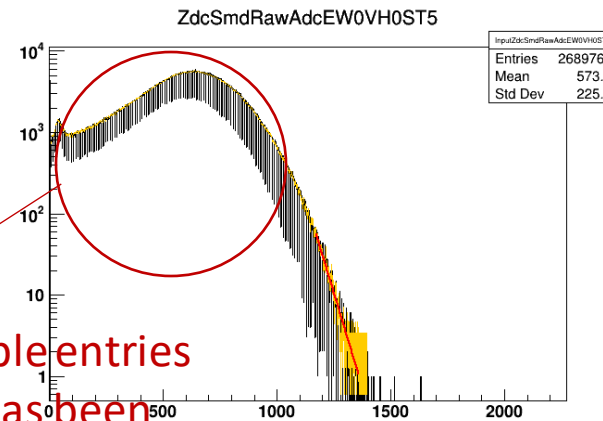


East vertical slat 3

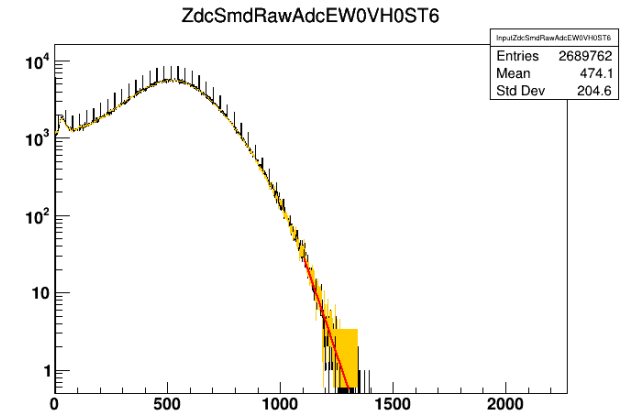


East vertical slat 4

Dead and double entries
adc channels has been
fixed by Aihong



East vertical slat 5

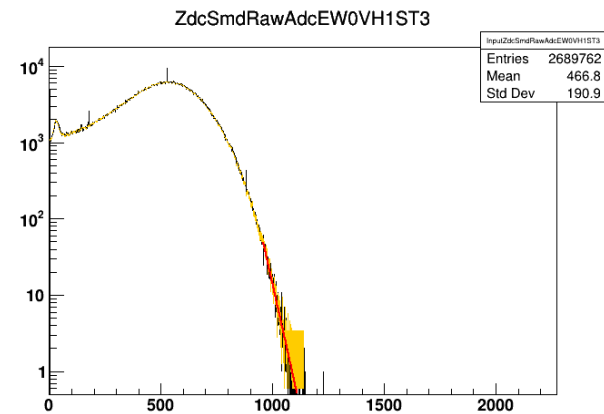
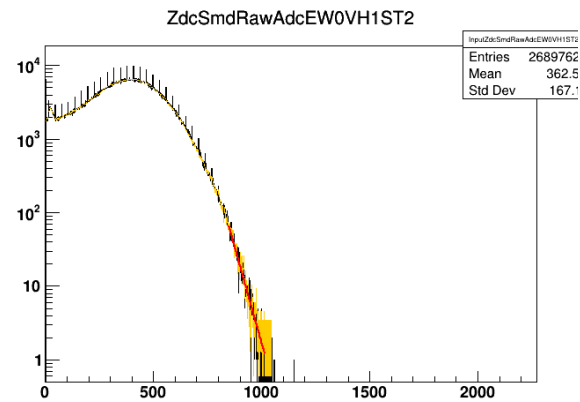
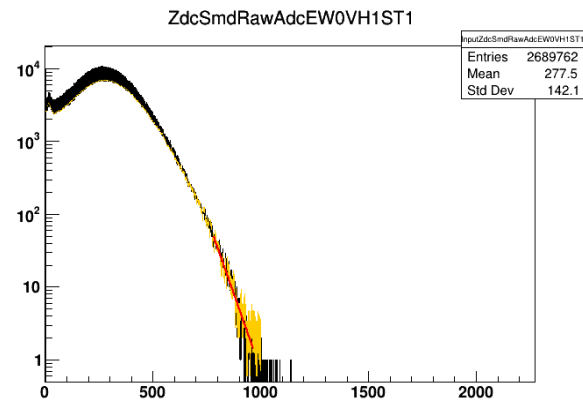
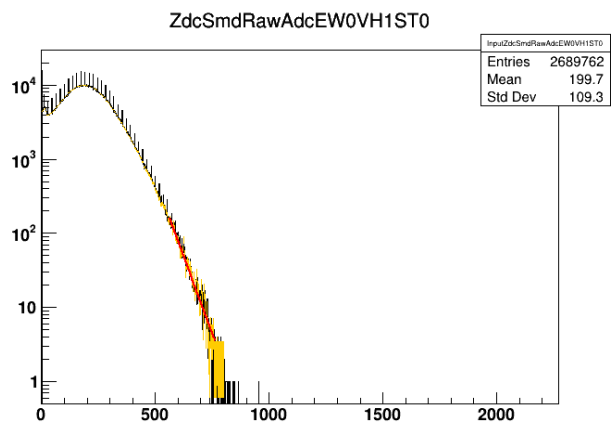


East vertical slat 6

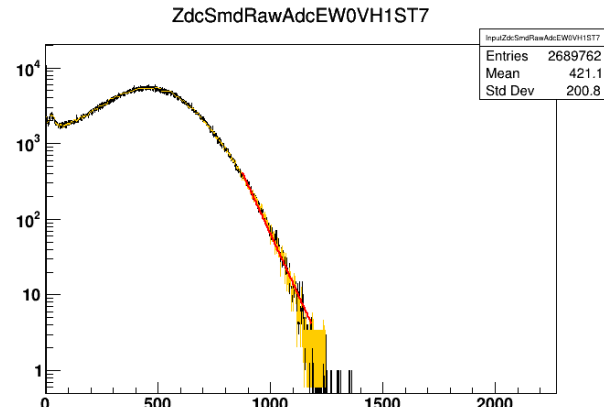
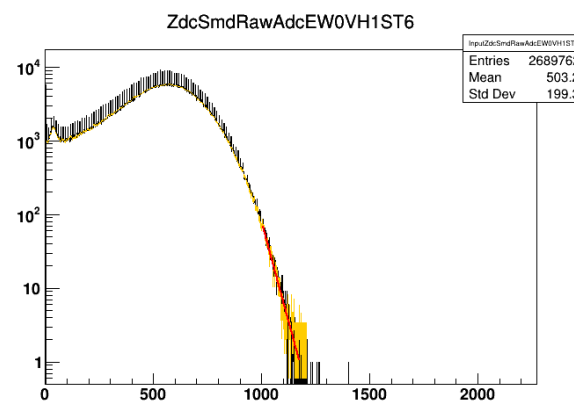
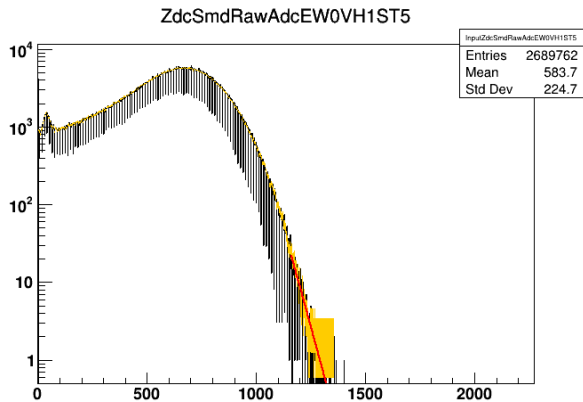
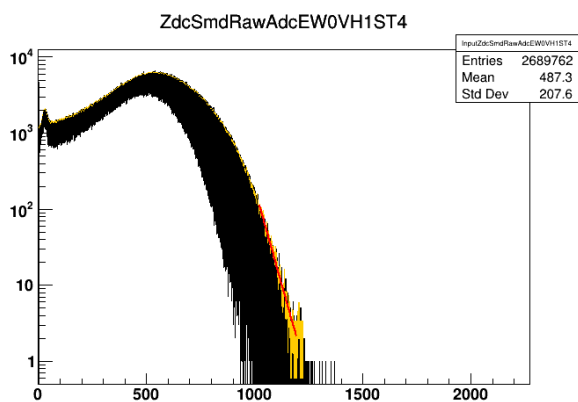
<https://lists.bnl.gov/mailman/private/star-ops-l/2023-June/008626.html>

First run after fixing this issue: 24156035

ADC bins in various east horizontal slats



East horizontal slat 0

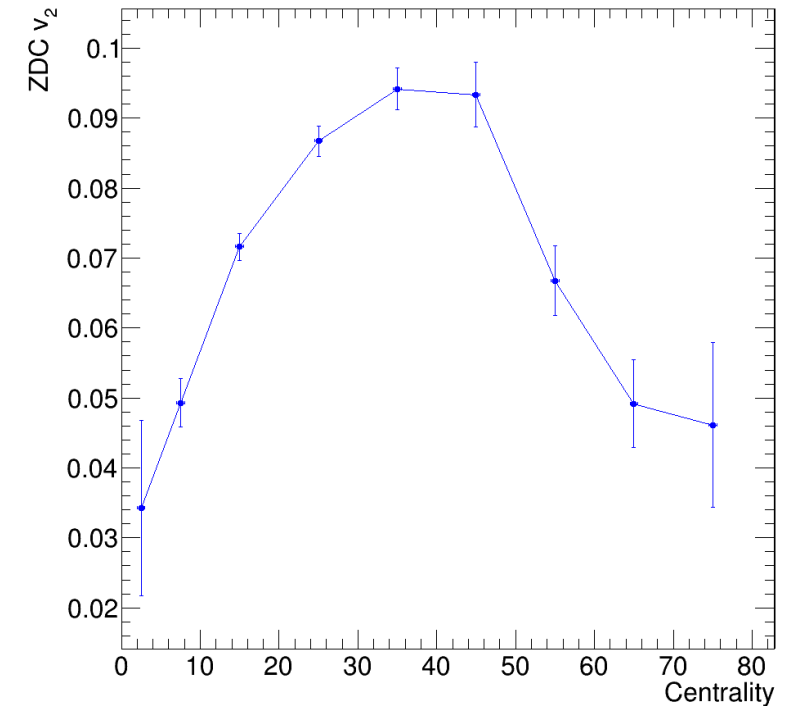
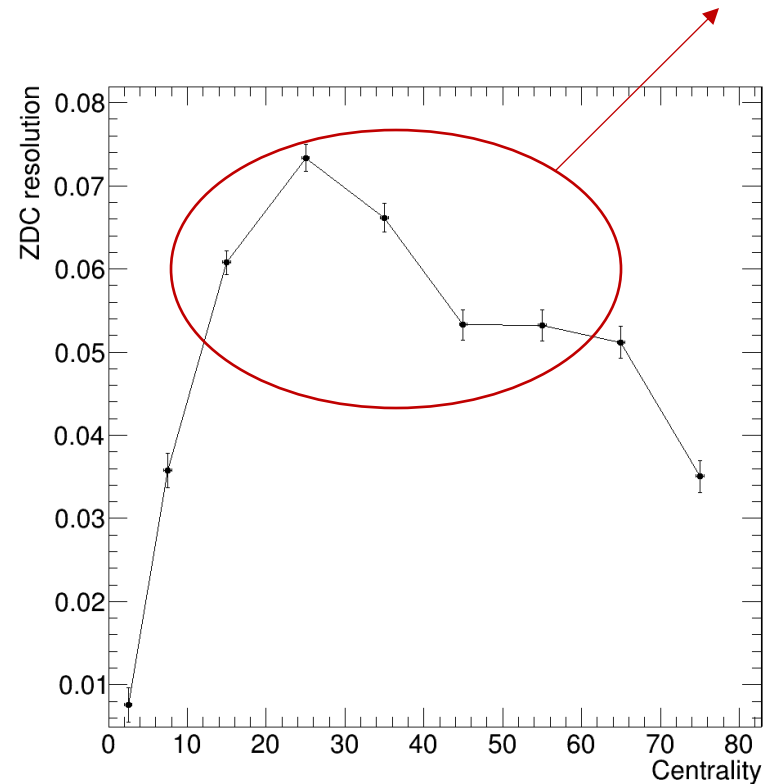


ZDC resolution

Defined Centrality by refmult ranges

- refmult > 531.5 for 0-5%
- refmult > 402.5 for 5-10%
- refmult > 228.5 for 10-20%
- refmult > 135.5 for 20-30%
- refmult > 79.5 for 30-40%
- refmult > 50.5 for 40-50%
- refmult > 31.5 for 50-60%
- refmult > 18.5 for 60-70%
- refmult > 9.5 for 70-80%

Higher ZDC resolution than Run11



Pileup in RefMult vs TofMatch

