eγ Runs of the TB 2016 data

2016 test beam analysis

meeting
15/06/17
Borysova Maryna

Outline

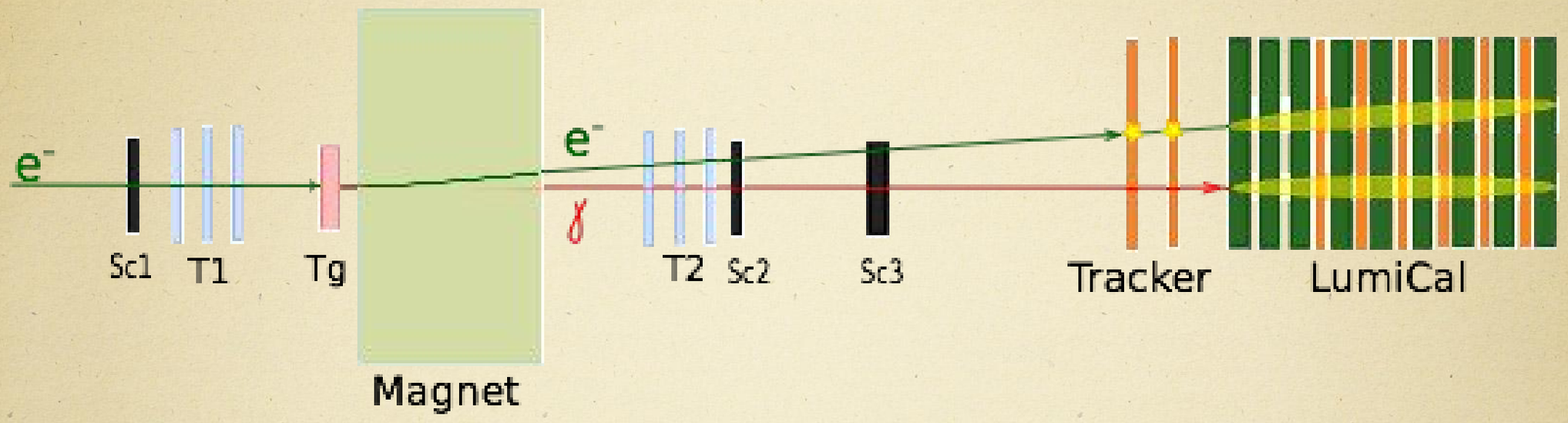
- **Linking neighbors clustering algorithm**

for physics run:

  - 741 @ 5 GeV w/ charge Divider, ~55K events, no target no megnetic field

  - **Correlations between Tracker 1 & 2 for efficiencies calculations**

Efficiencies



Number of γ in LumiCal: N_γ

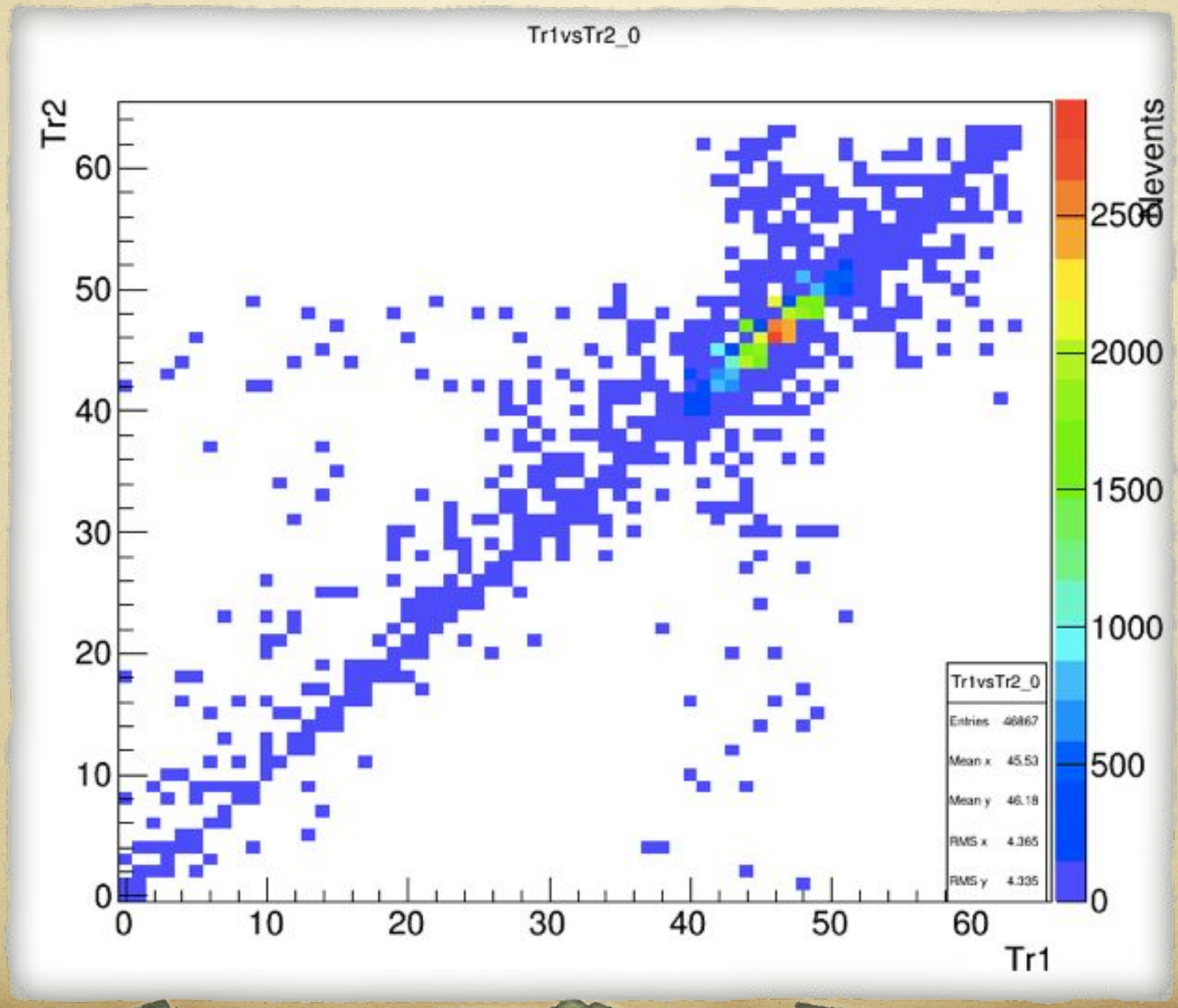
Number events with γ and hits in tracking detector 1: n_{t2} ($n_{t2}, n_{t1,t2}$)

Efficiencies: $\varepsilon_{t1}=n_{t1}/N_\gamma$ & $\varepsilon_{t2}=n_{t2}/N_\gamma$ & $\varepsilon_{t1,t2}=n_{t1,t2}/N_\gamma$

Probabilities of γ identification: $1-\varepsilon_{t1}$ & $1-\varepsilon_{t2}$ & $1-\varepsilon_{t1,t2}$

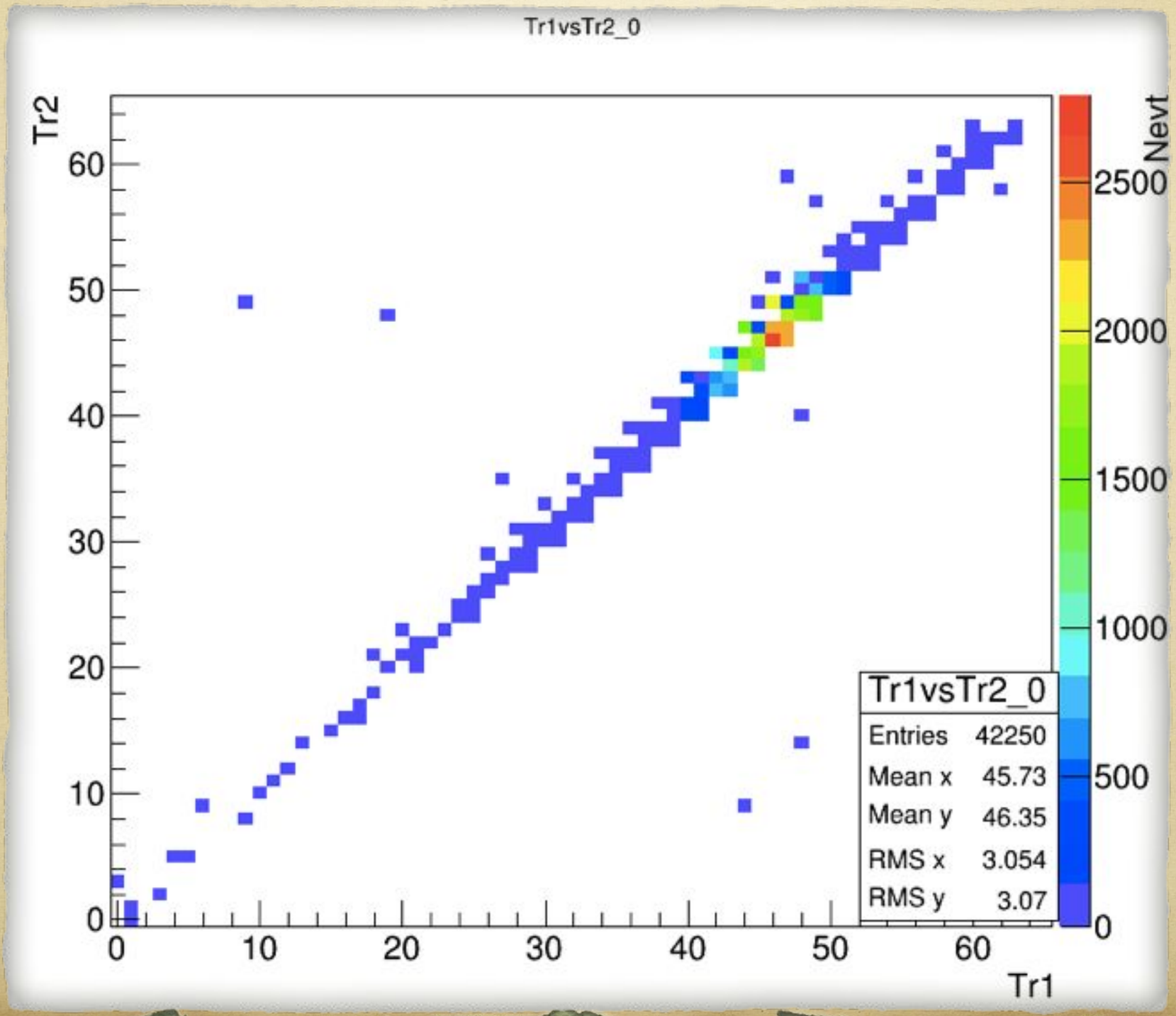
Correlations between Tracker 1 & 2

Run 741 @ 5 GeV w/ charge Divider



Correlations between Tracker 1 & 2

Run 741 @ 5 GeV w/ charge Divider & require only 1 cluster



Outlook

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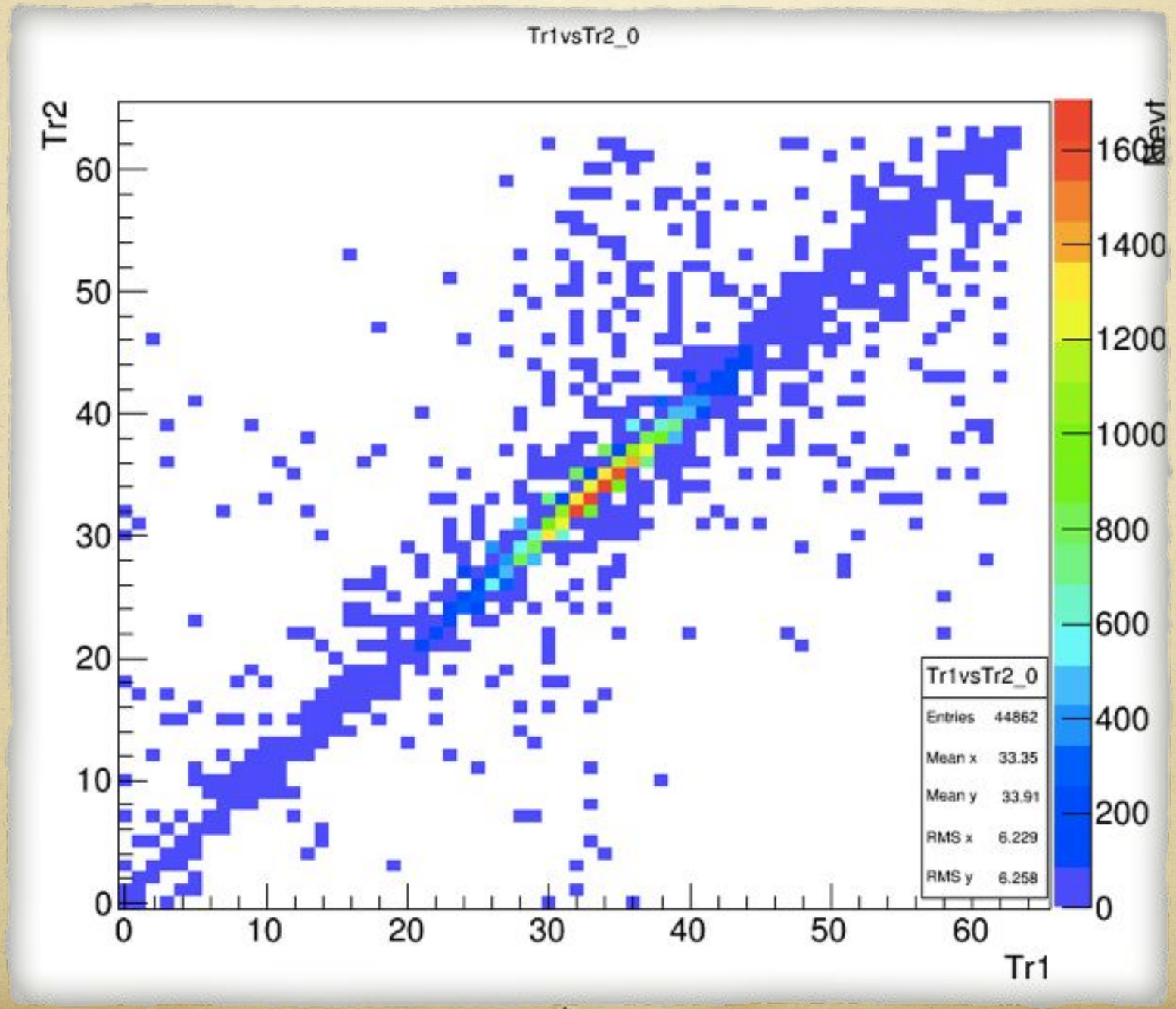
- Studied Correlations between Tracker 1 & 2 in order to test feasibility of using them for efficiencies calculations.

Back up

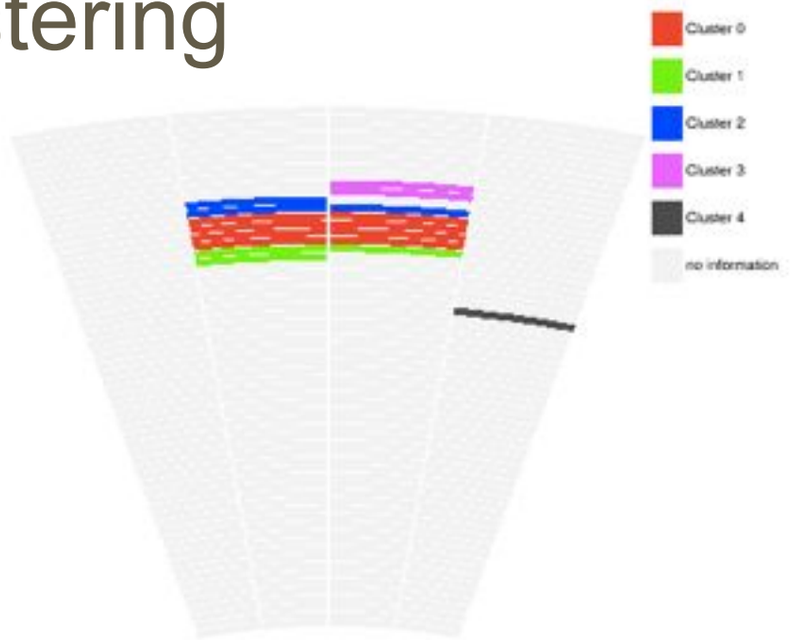
Correlations between Tracker 1 & 2

Run 771 @ 5 GeV w/ charge Divider, Low γ trigger

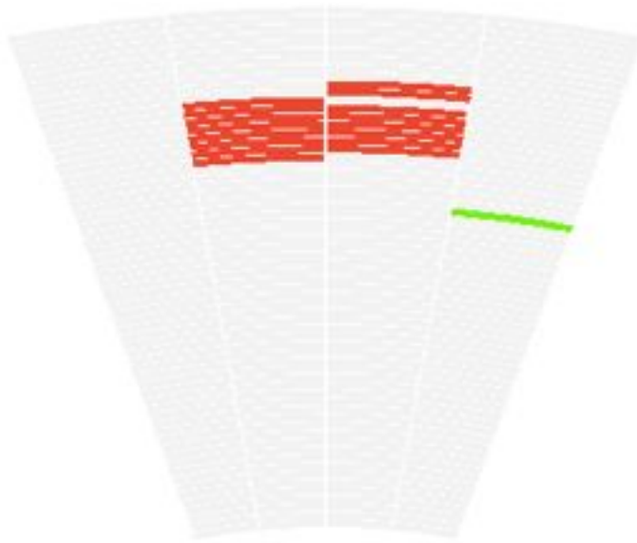


Event 10, Run 741 @ 5 GeV w/ charge Divider

E clustering



Linking neighbors



k-means clustering