



# W.I.P plots update

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2025/01/17 INTT meeting

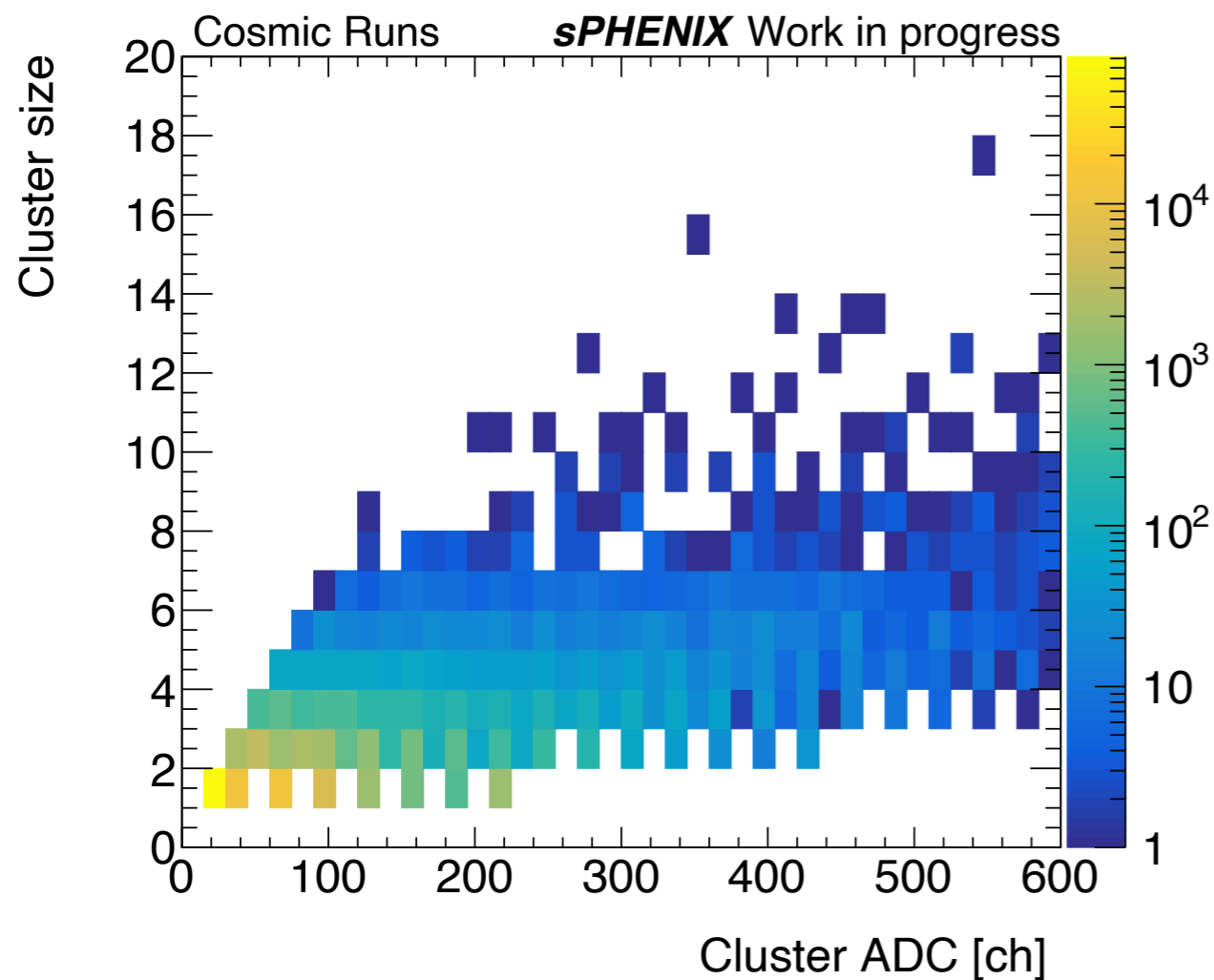
# Aim for this presentation

- Show the final version of the “work in progress”.
- Highlight the plots plan to get the preliminary approval.
- Timeline for the preliminary approval and APR report.

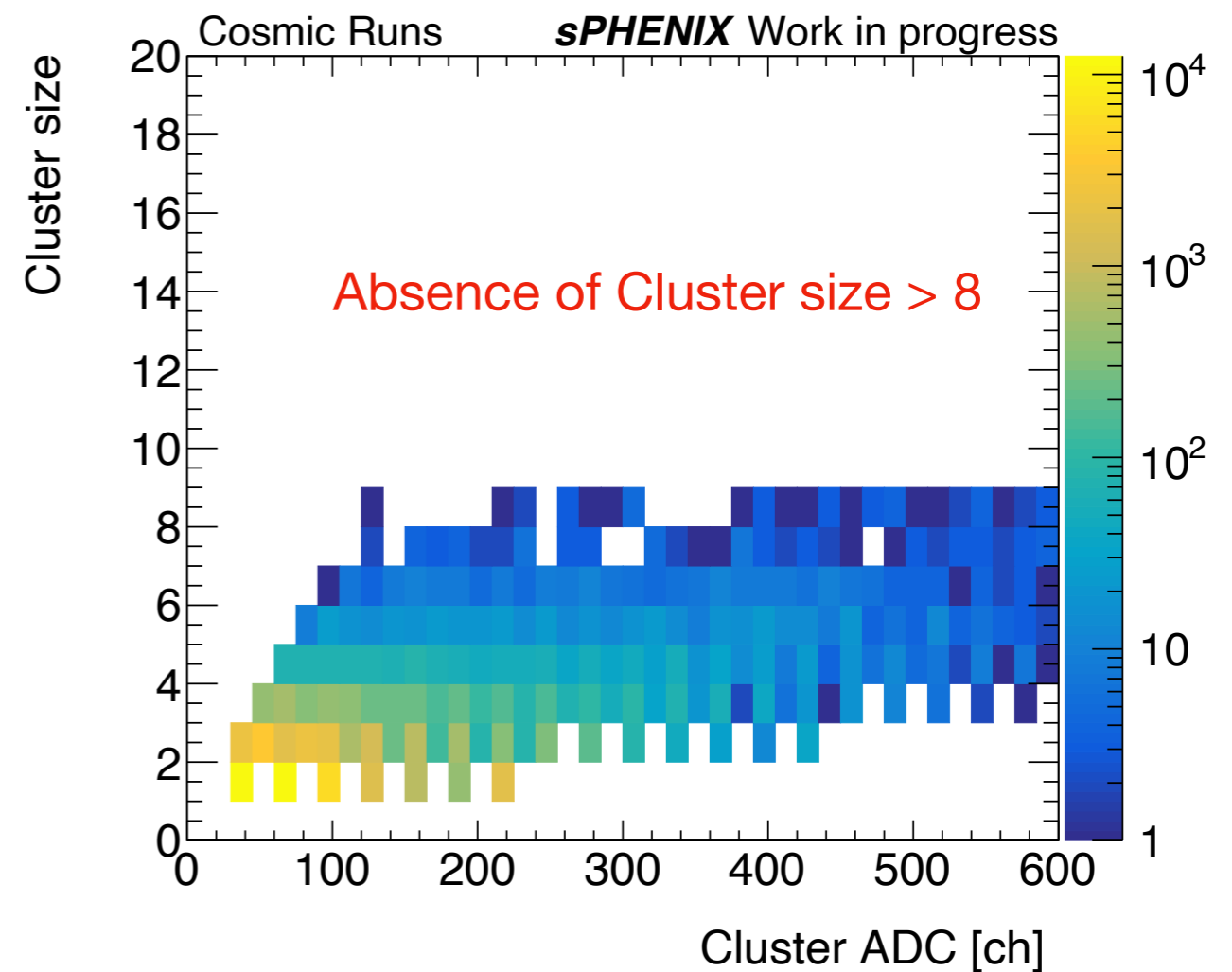
# Good cluster cut plots

- '*cluster Adc > 15*' & '*cluster phisize < 9*'
- Single run is used for the plots.

Inclusive



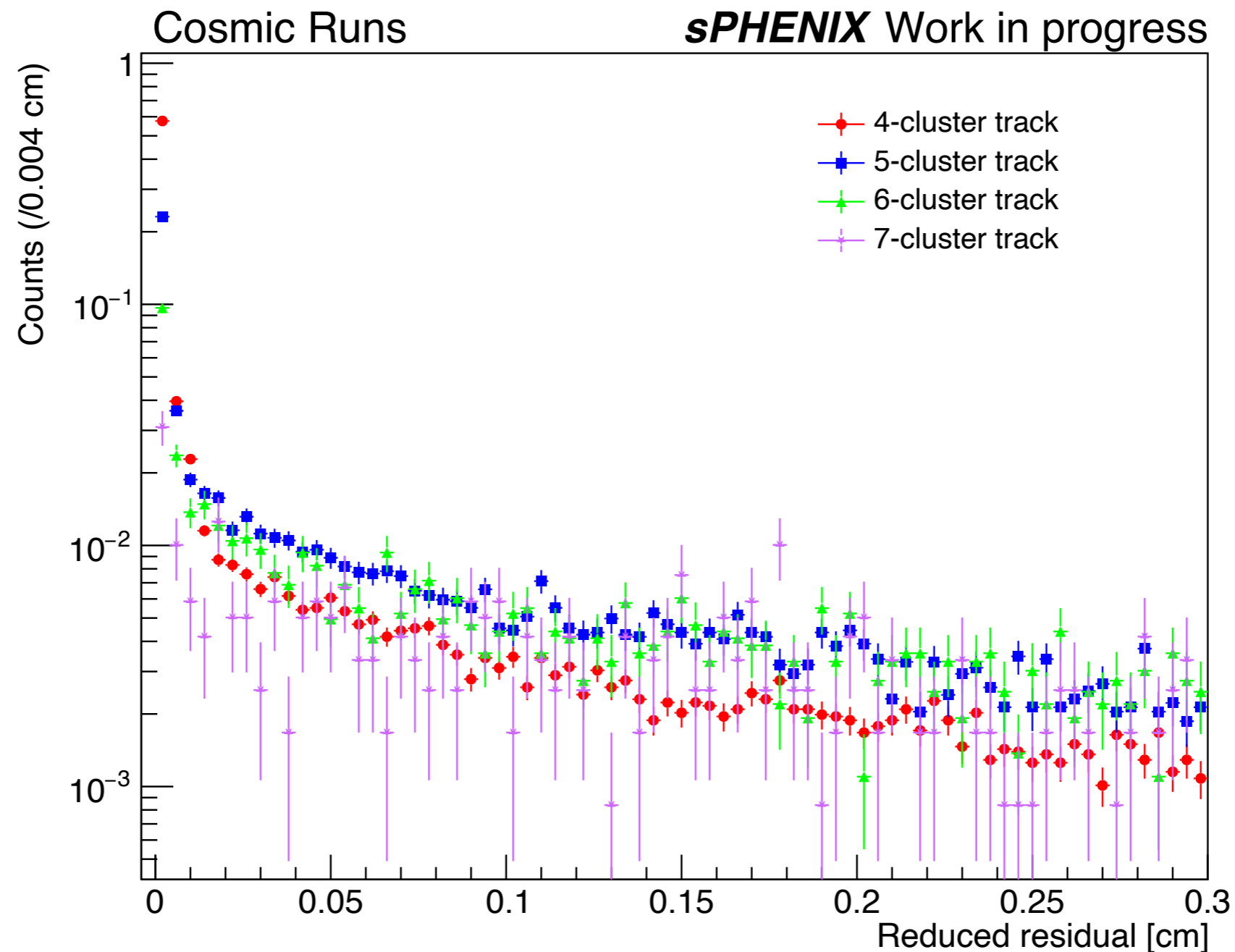
Good cluster only



# Reduced residual overlap

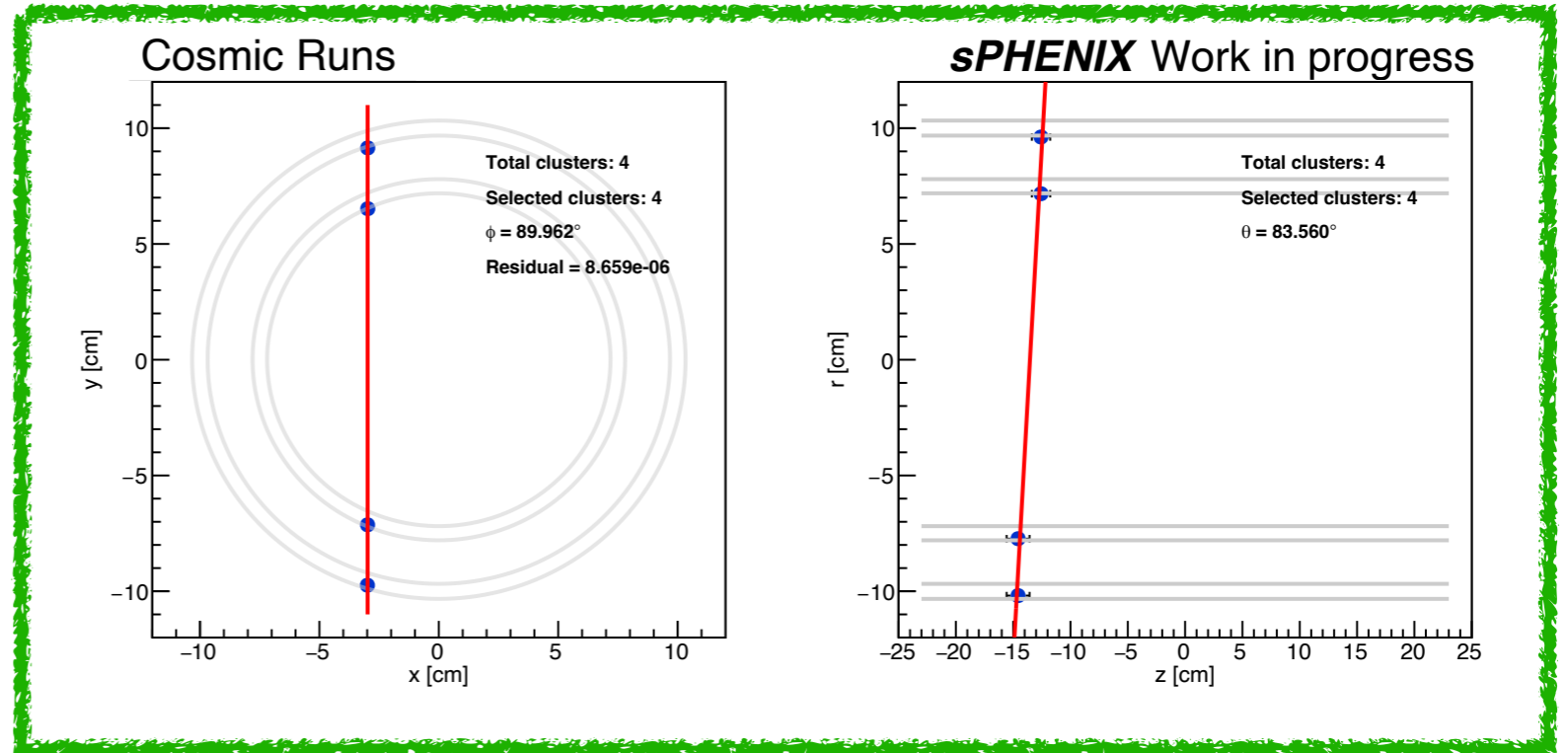
- No significant differences between the distributions of the clusters.

## Reduced residual distribution

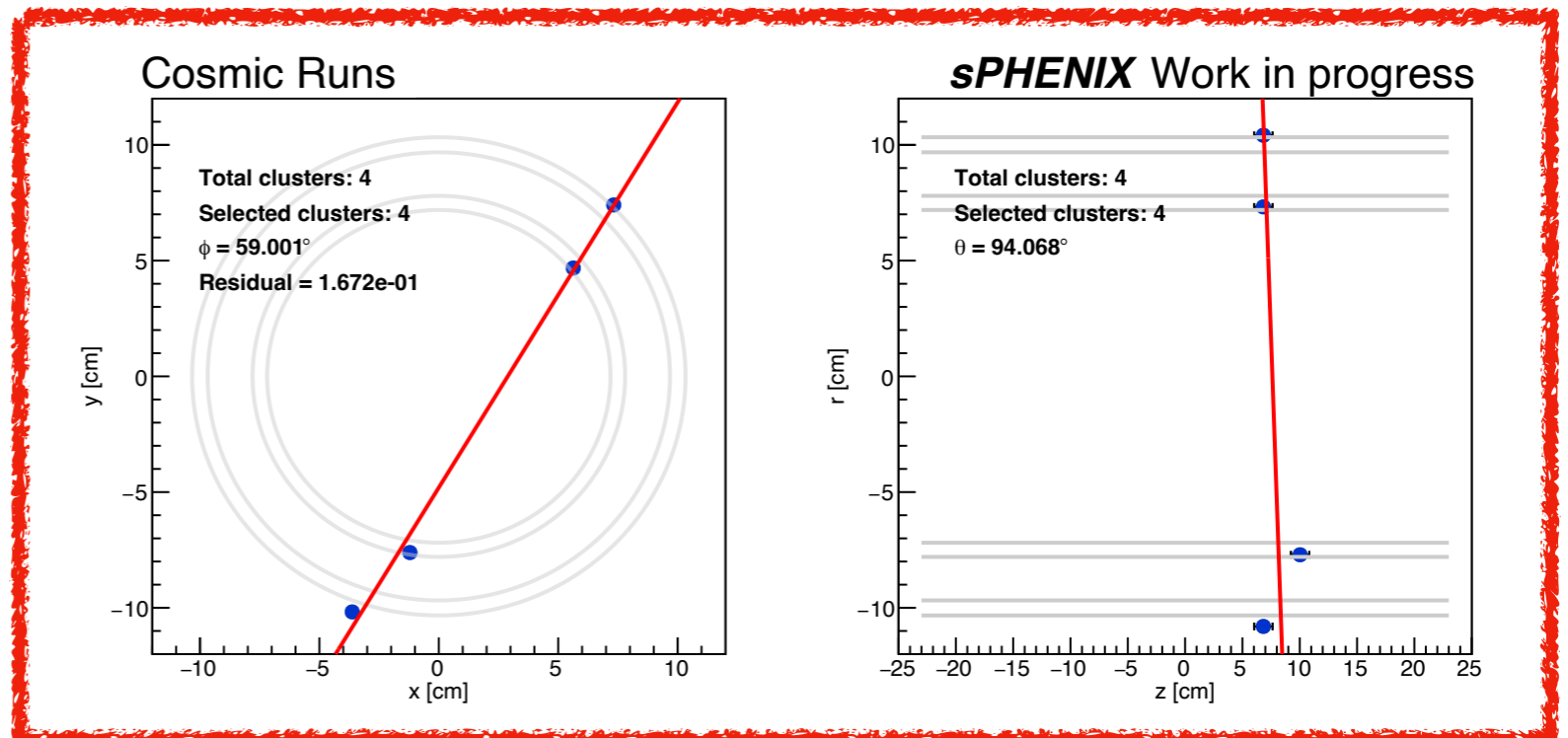


# Event displays for 4 clusters only

- Good track!
- Reduced residual < 0.02 cm

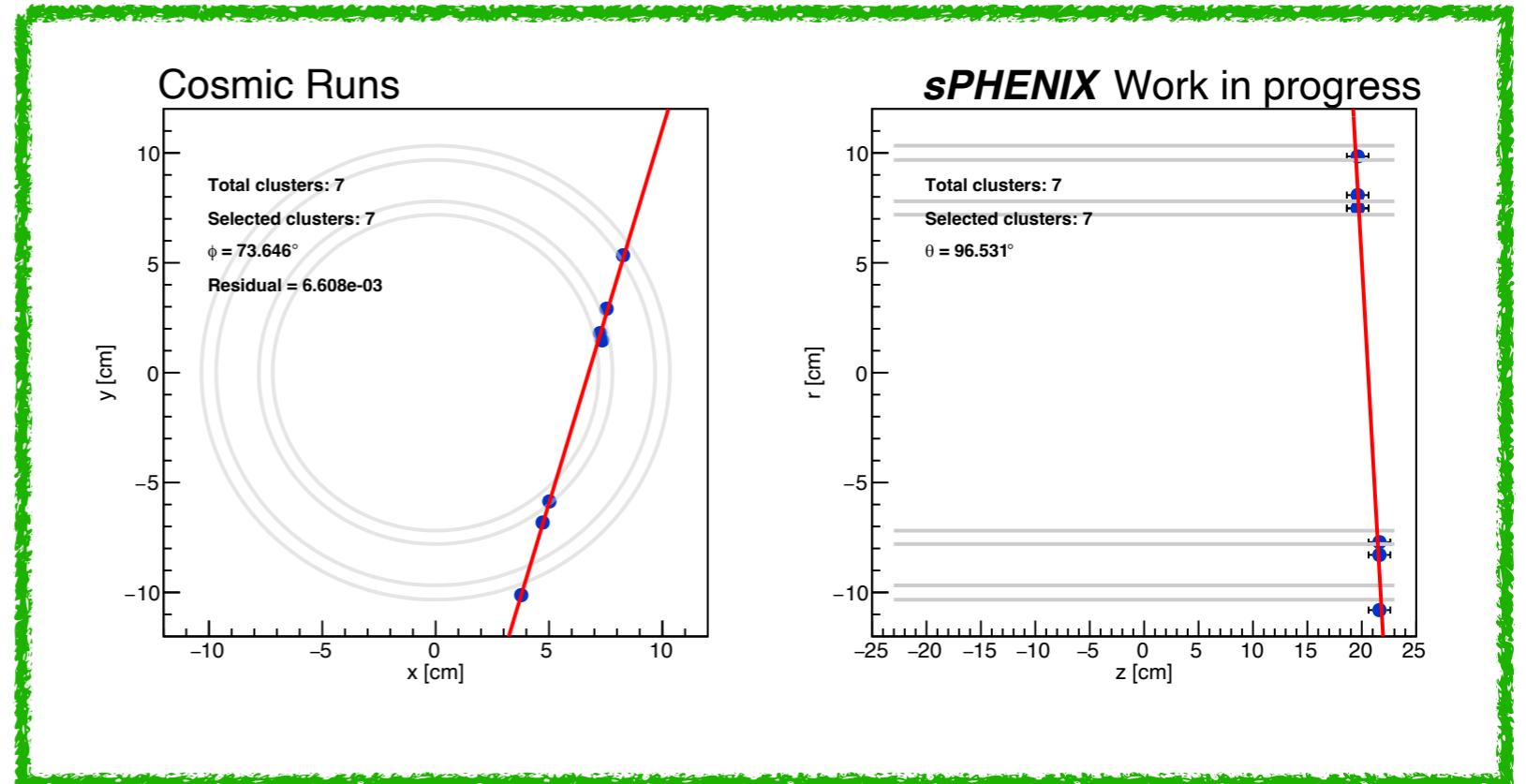


- Bad track!
- Reduced residual > 0.02 cm

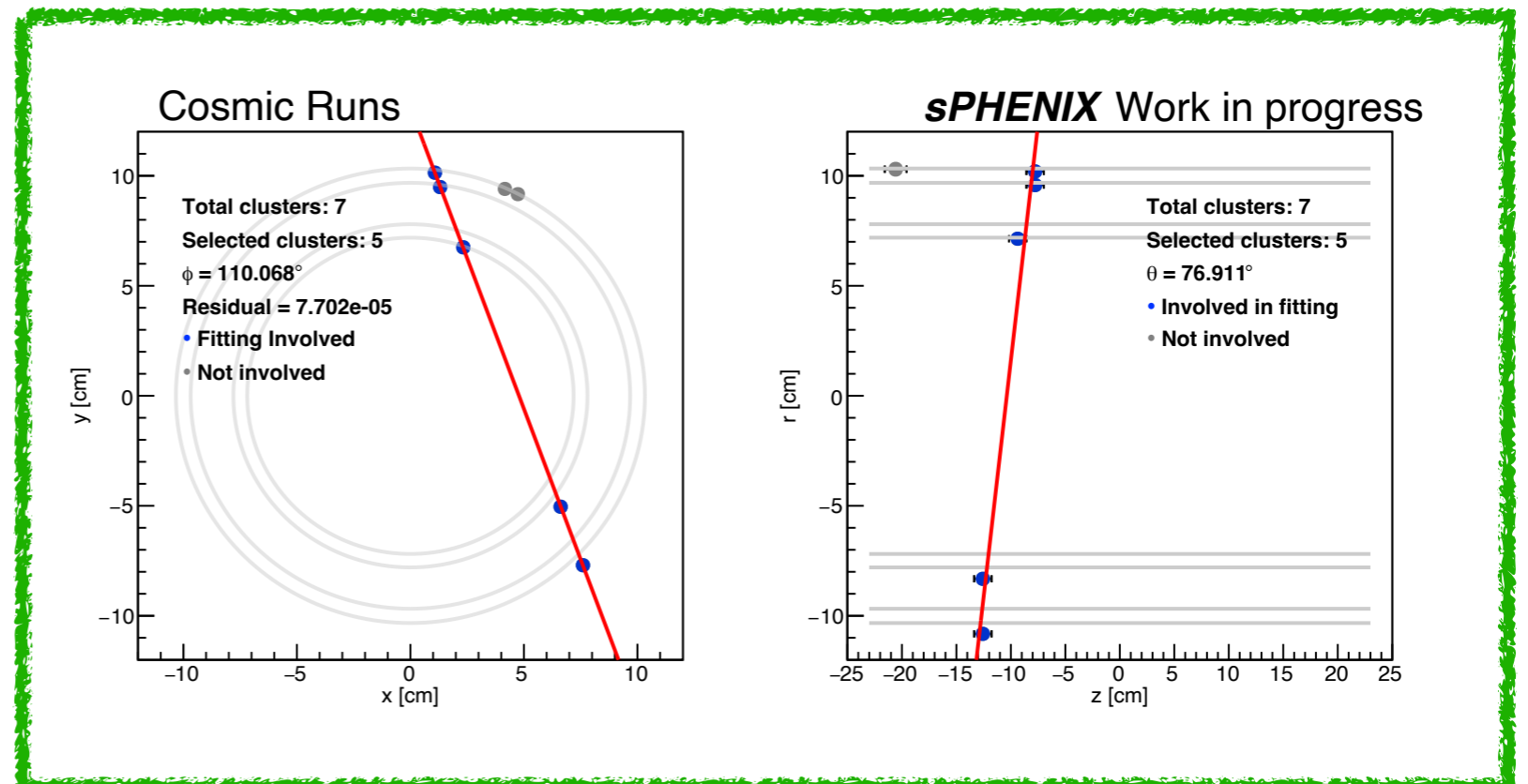


# Event displays for good tracks

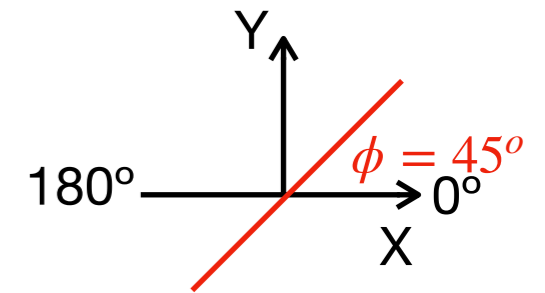
- Good track!
- Reduced residual < 0.02 cm with 5 clusters



- Good track!
- Reduced residual < 0.02 cm with 5 clusters (2 noise hits excluded)



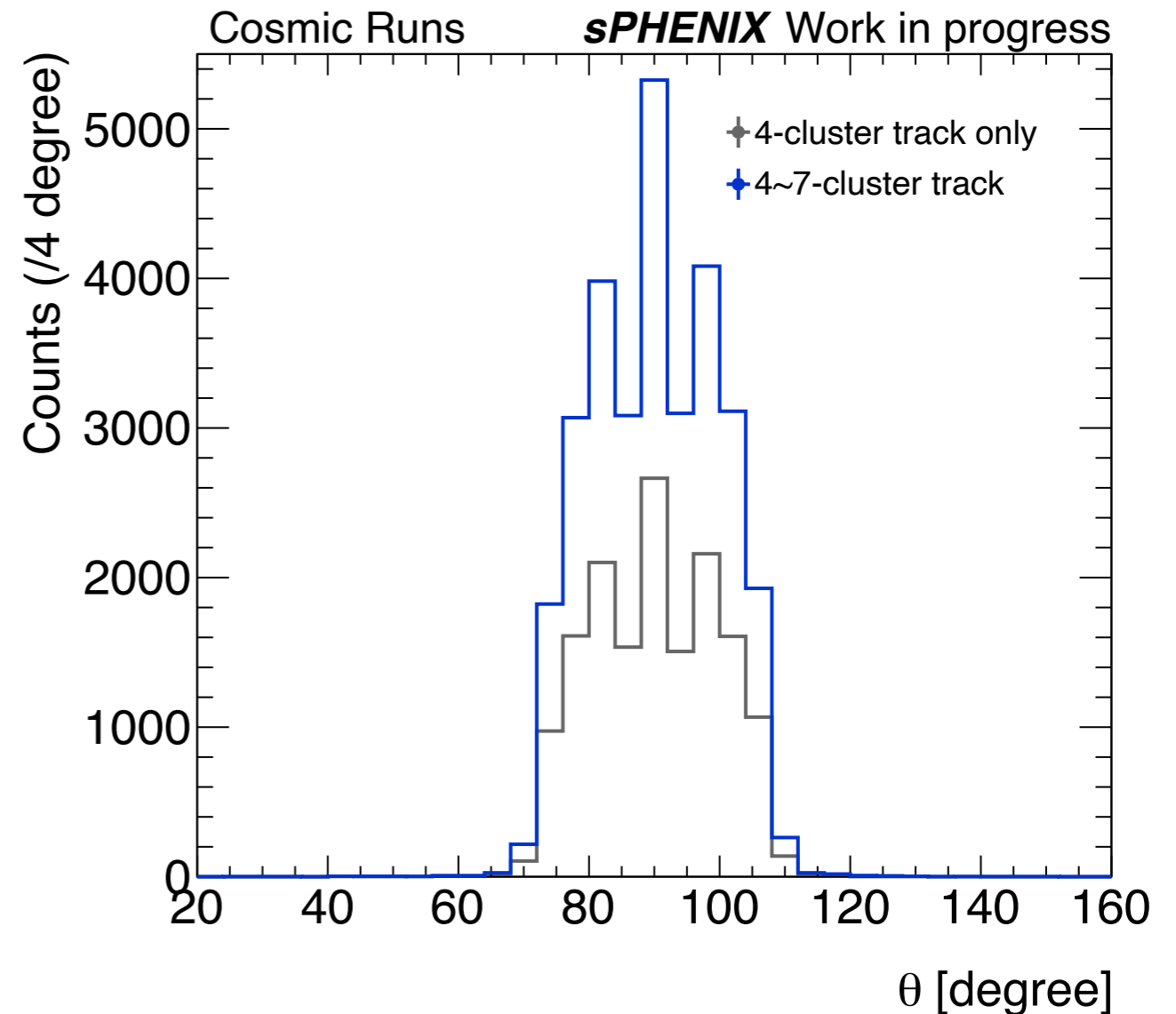
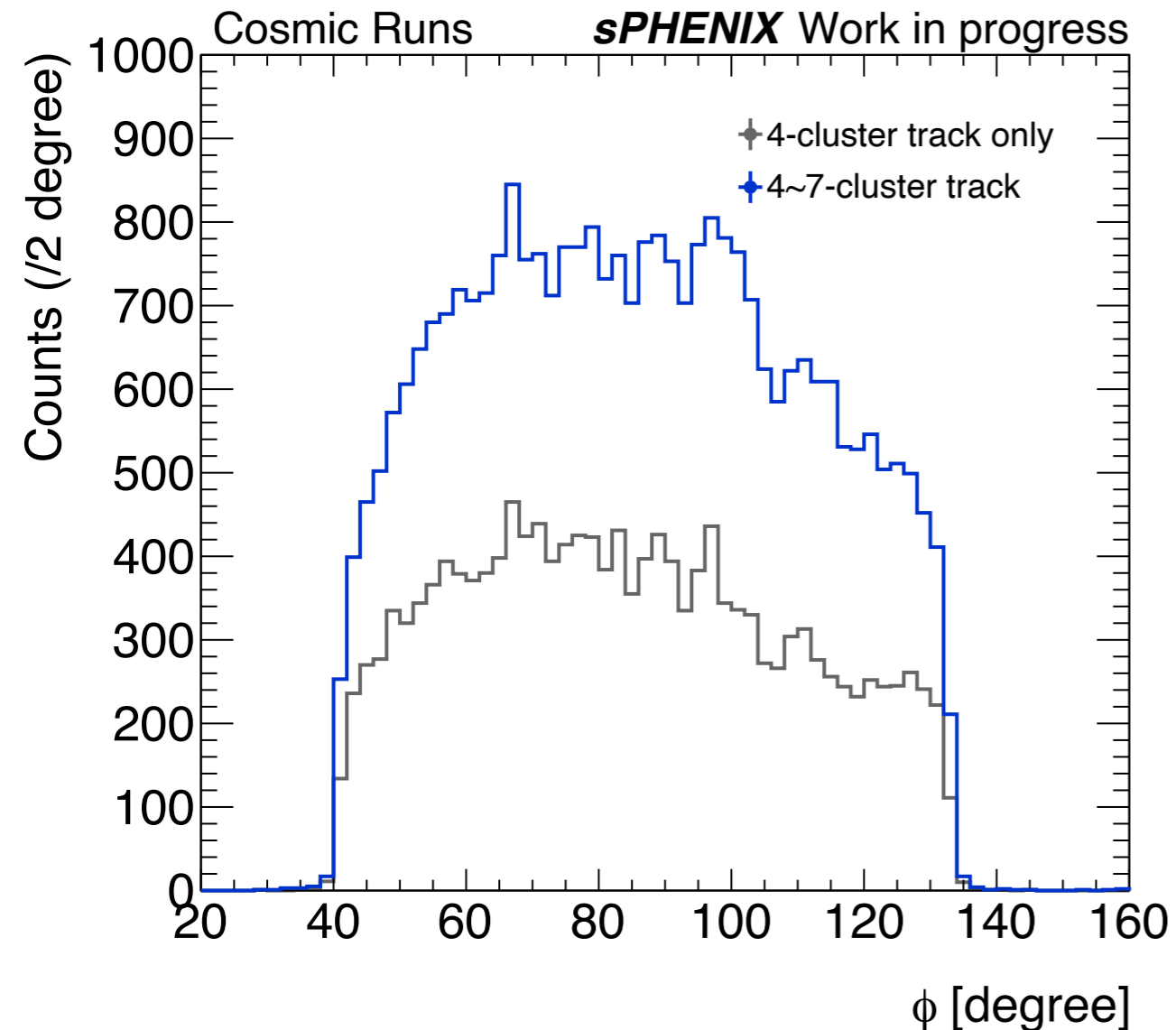
# Angle distribution



- The distribution of the  $\phi$  angle (in X-Y plane) and  $\theta$  angle (in Z-Radius plane).
- X-Y residual  $< 0.02\text{cm}$ , full cluster coverage of the fitting line in Z-Radius plane.

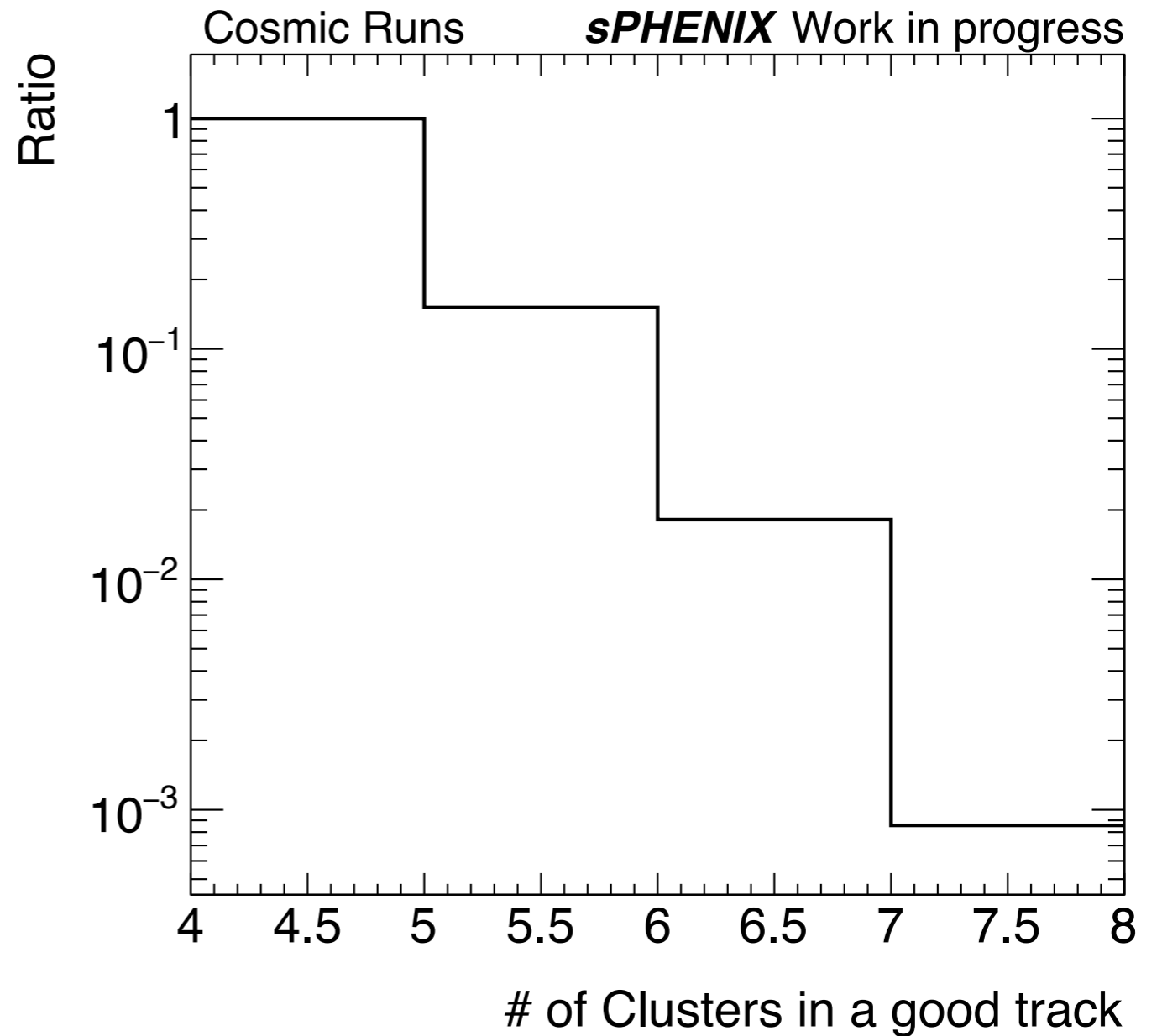
$\phi$  angle distribution in xy plane

$\theta$  angle distribution in zr plane



# # of clusters in a good track

- Number of good tracks in total ~ 30K
  - 4 clusters/total good clusters ~ 85.69 %
  - 5 clusters/total good clusters ~ 13.01 %
  - 6 clusters/total good clusters ~ 1.55 %
  - 7 clusters/total good clusters ~ 0.07 %





# Timeline for preliminary

- Jan. 31 : Deadline for the APR draft.
  - Need some time to circulate in the group.
- Jan. 24 : Get the preliminary approval.
- Jan. 20 : The final deadline to finished the analysis note.
  - Need to circulate through the collaboration at least three BNL working days.

**Back up**

# The DCA points for tracks

- The plot also implies the acceptance angle of cosmic tracks.

