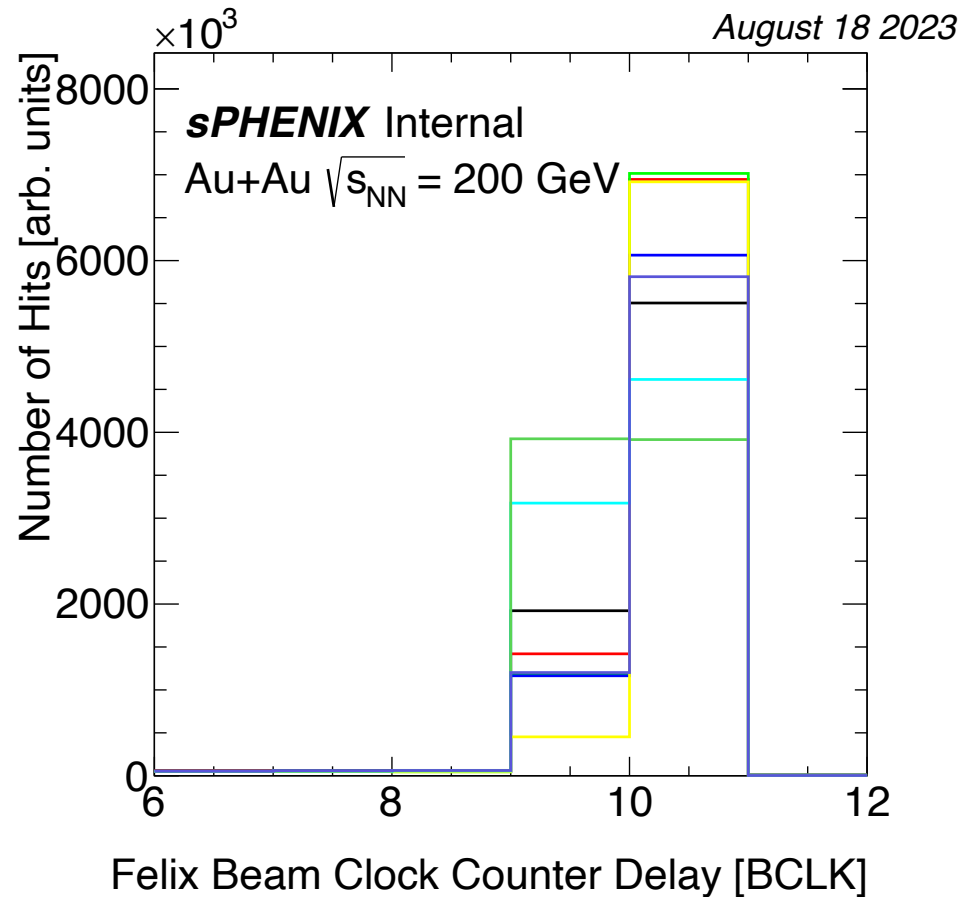


# Preliminary request for PAC document ++

Maya Shimomura(NWU) on behalf of INTT group

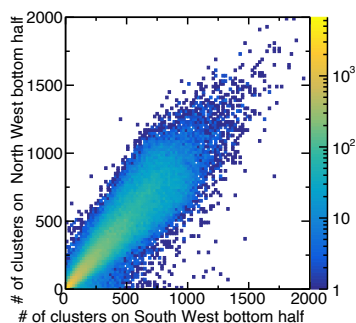
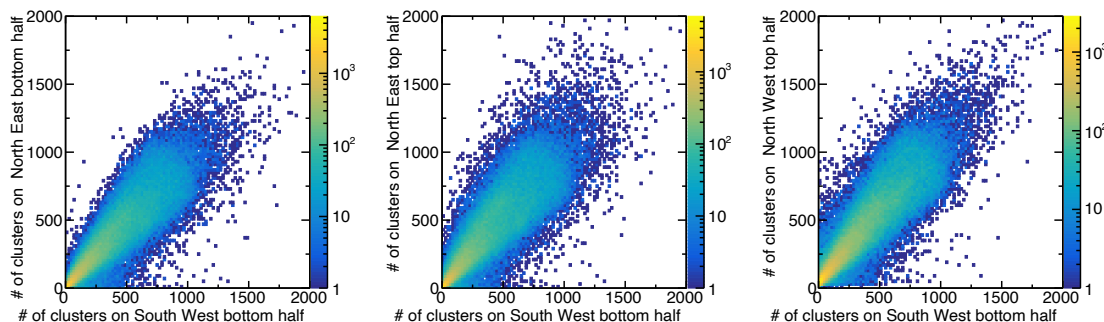
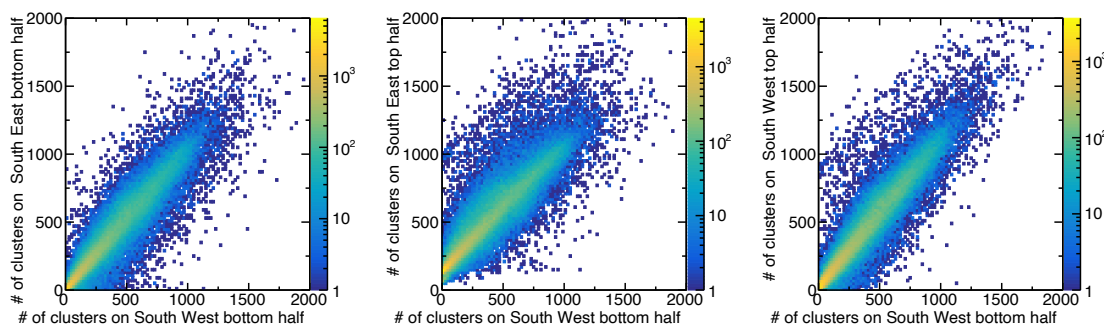
Many thanks to MBD expert Mickey Chiu(BNL)

# Number of hits vs. Felix Beam Clock Counter Delay



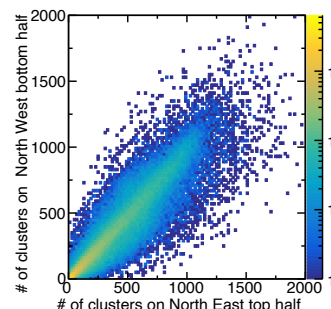
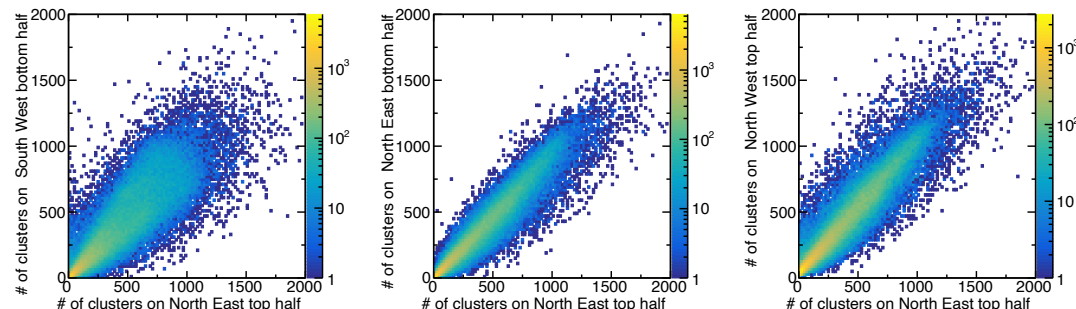
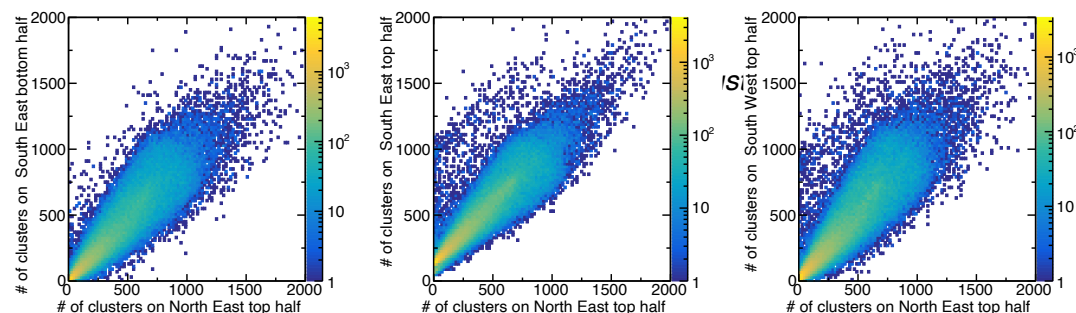
- Run #23096
- Filed ON
- Plotted by Jaein
- X-axis: The relative timing between the FPHX chips and the GTM counter.
- Different colors show different FELIX,
- $n_{\text{coll}} = 127$
- 8 Felix synchronize within 1 BCLK

# Clusters correlation for each Felix



**sPHENIX** Internal  
Au+Au  $\sqrt{s_{NN}} = 200$  GeV  
August 18, 2023

Correlation  
between INTT3  
and others.



**sPHENIX** Internal  
Au+Au  $\sqrt{s_{NN}} = 200$  GeV  
August 18, 2023

- Run #20444
- Filed ON
- 20K events
- Correlation between INTT5 and others.
- Plotted by Hinako and Takashi

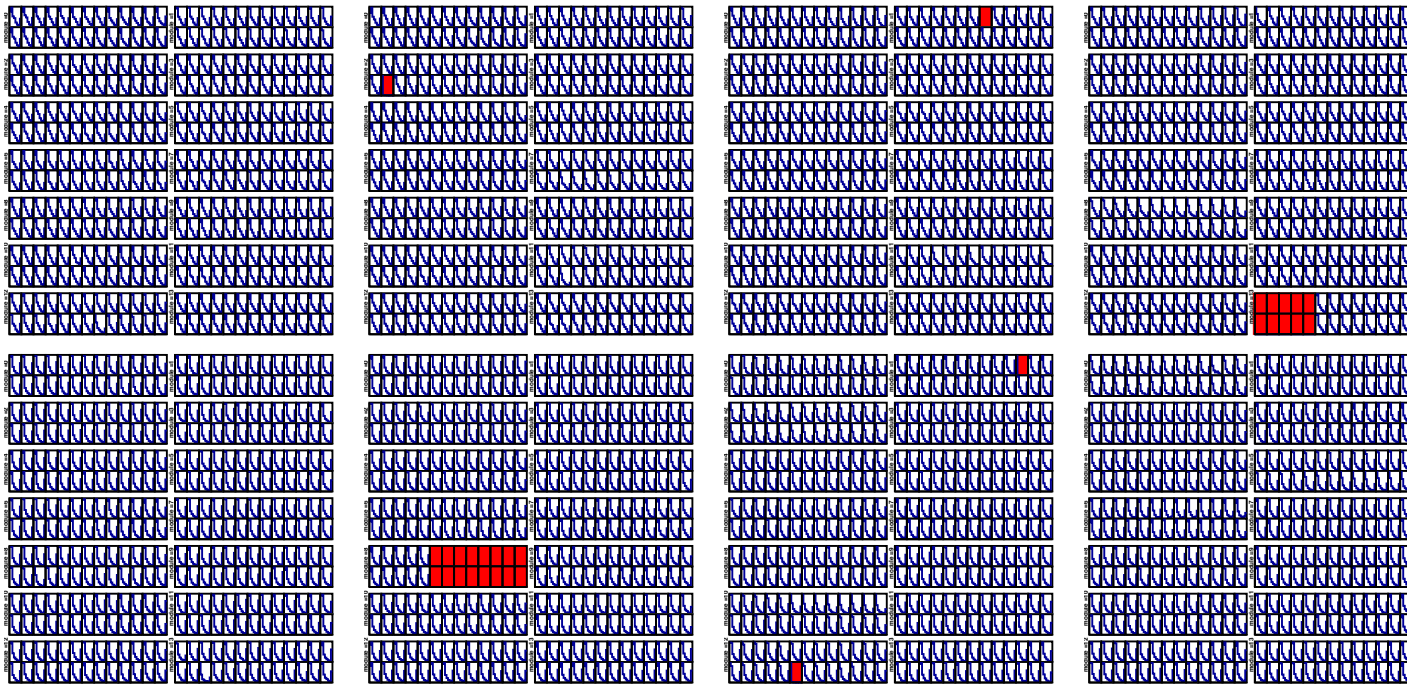
You can see same rapidity (North or South) has narrower correlations.

2023/8/18

preliminary request INTT

# ADC distribution for all chips

August 18, 2023

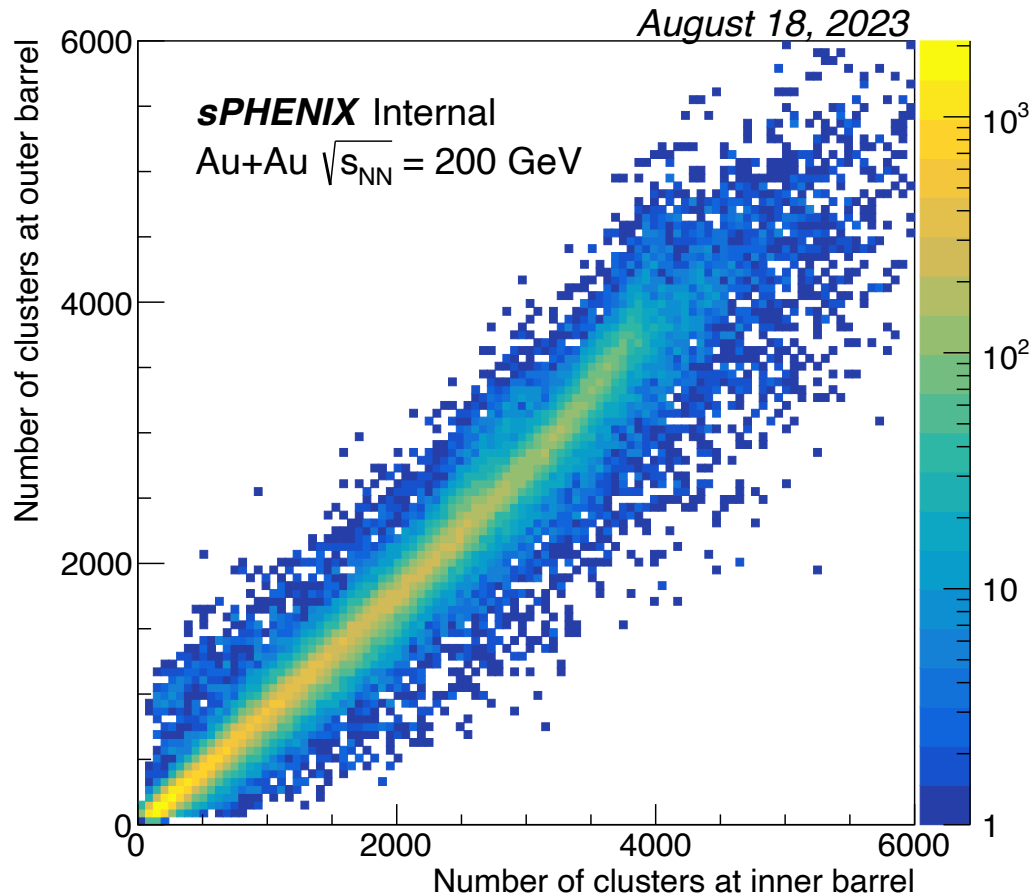


**sPHENIX** Internal

Au+Au  $\sqrt{s_{NN}} = 200$  GeV

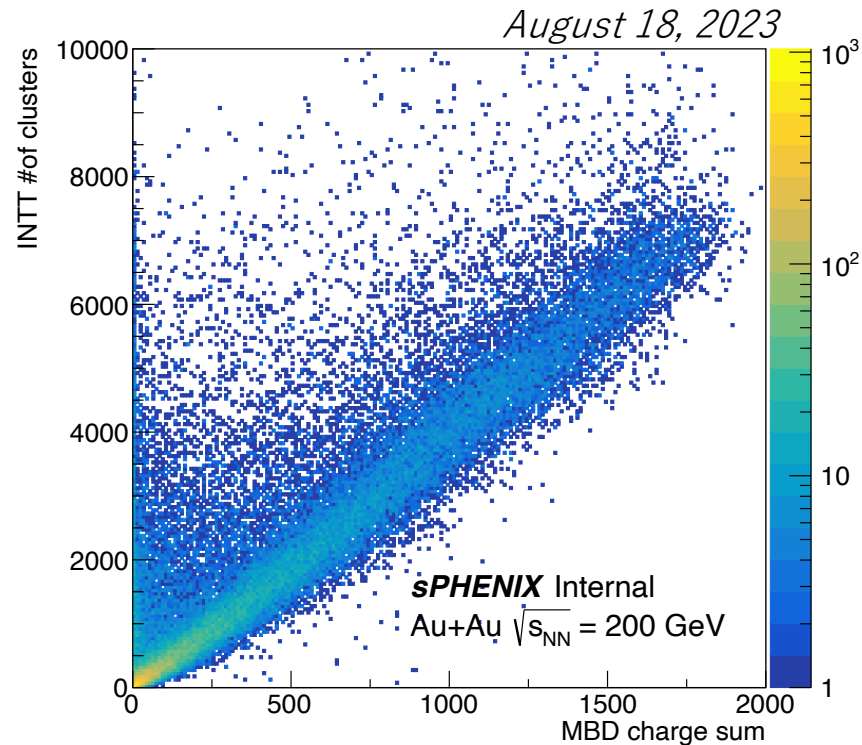
- Run # 20856
- Field ON
- Plotted by Misaki and Takashi
- 99% is working.

# Number of clusters correlation of the full inner vs. full outer barrel



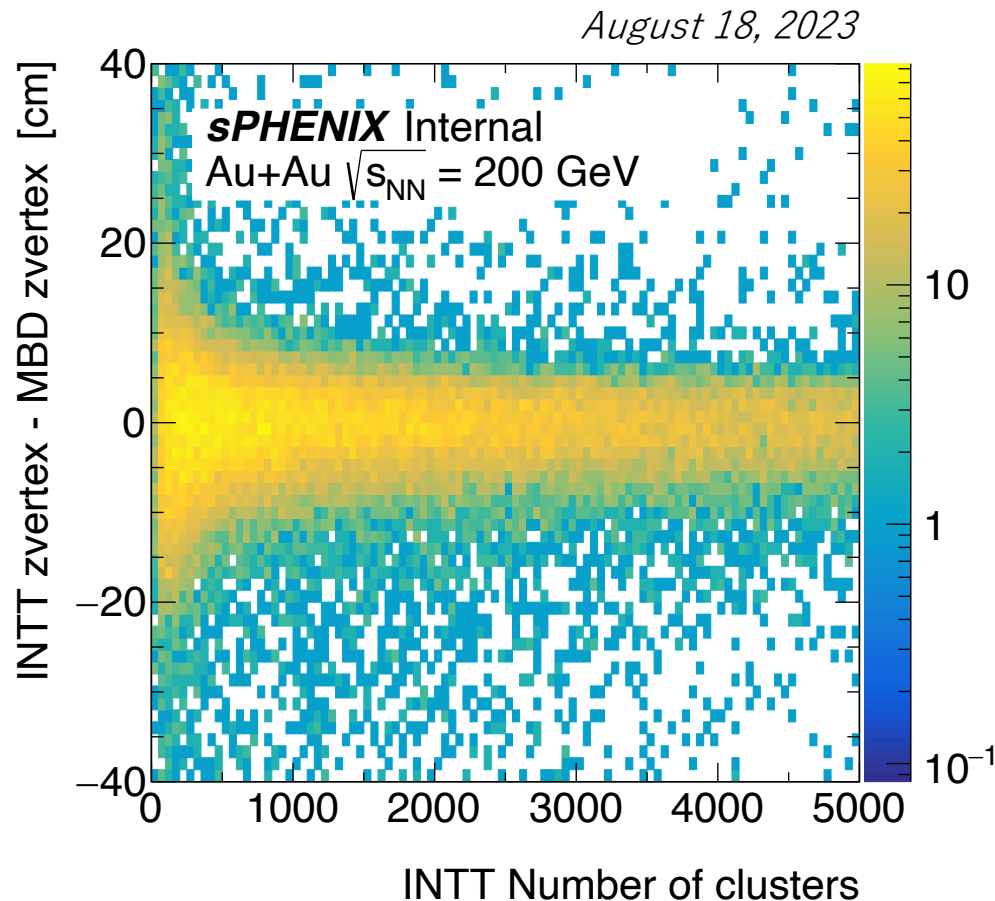
- Run #20444
- Filed ON
- 20K events
- First full barrel correlation.
- Plotted by Hinako and Genki
- Updated from previous preliminary
  - Usage : 1/8 -> whole INTT

# Correlation between number of clusters of full INTT vs. the MBD charge sum



- Run #20708
- Filed ON
- First full barrel correlation.
- Plotted by Takashi
- Use BCO\_full and Femclk to synchronize MBD and INTT
- Updated from previous preliminary
  - Usage : 1/8 -> whole INTT

# INTT z – MBD z vs. INTT multiplicity



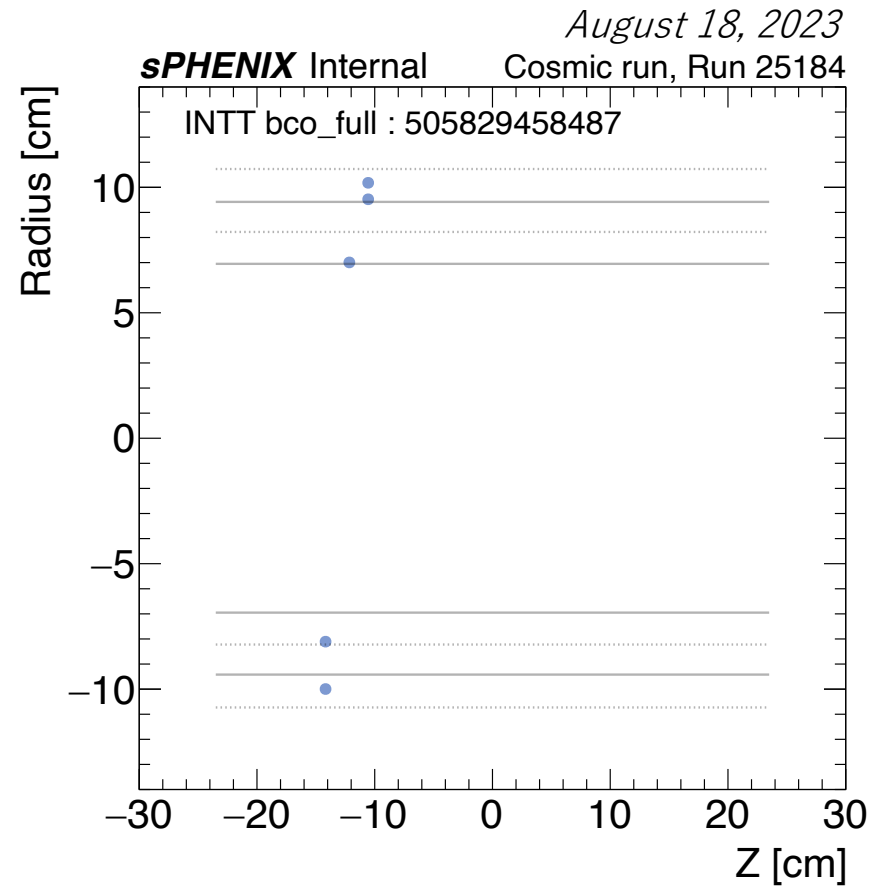
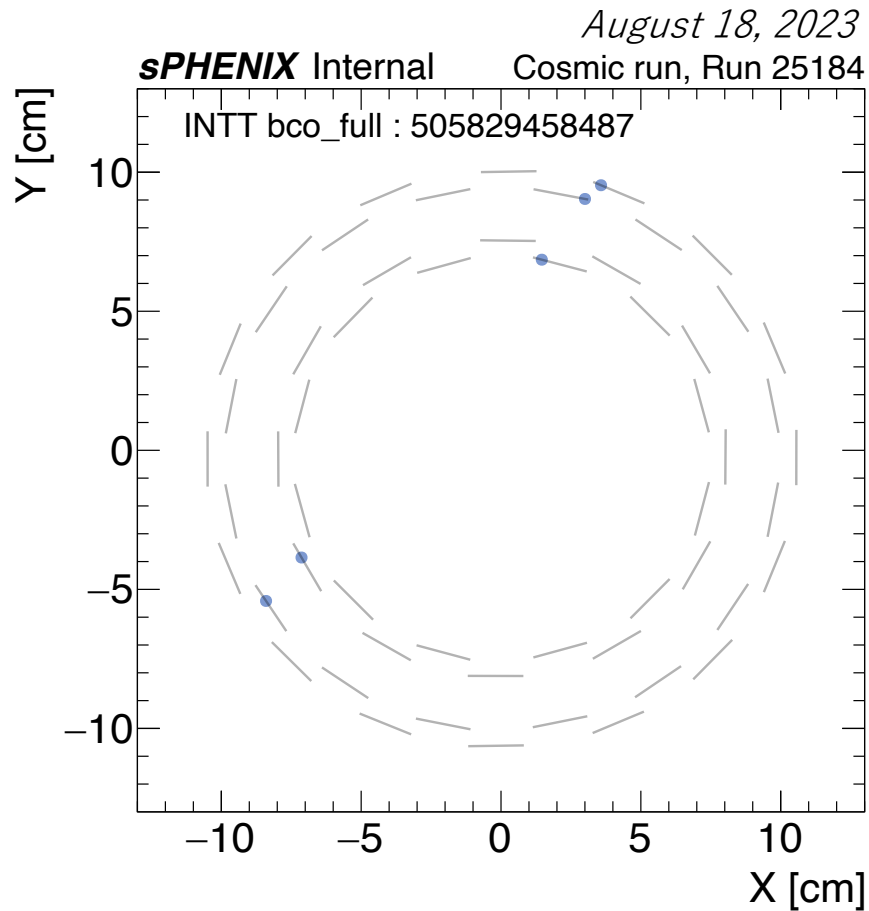
- Run # 20708 taken in July 5th
  - Field on
  - Before z vertex was moved to z=0
  - Clear dependence of the INTT # of clusters
  - Plotted by Takashi
- 
- \*This was shown previous preliminary session with much less statistics and we didn't request the preliminary at that time.

# Event display

We will show both Cheng-Wei's display and Manami (and Takashi)'s display and ask preliminary for both.

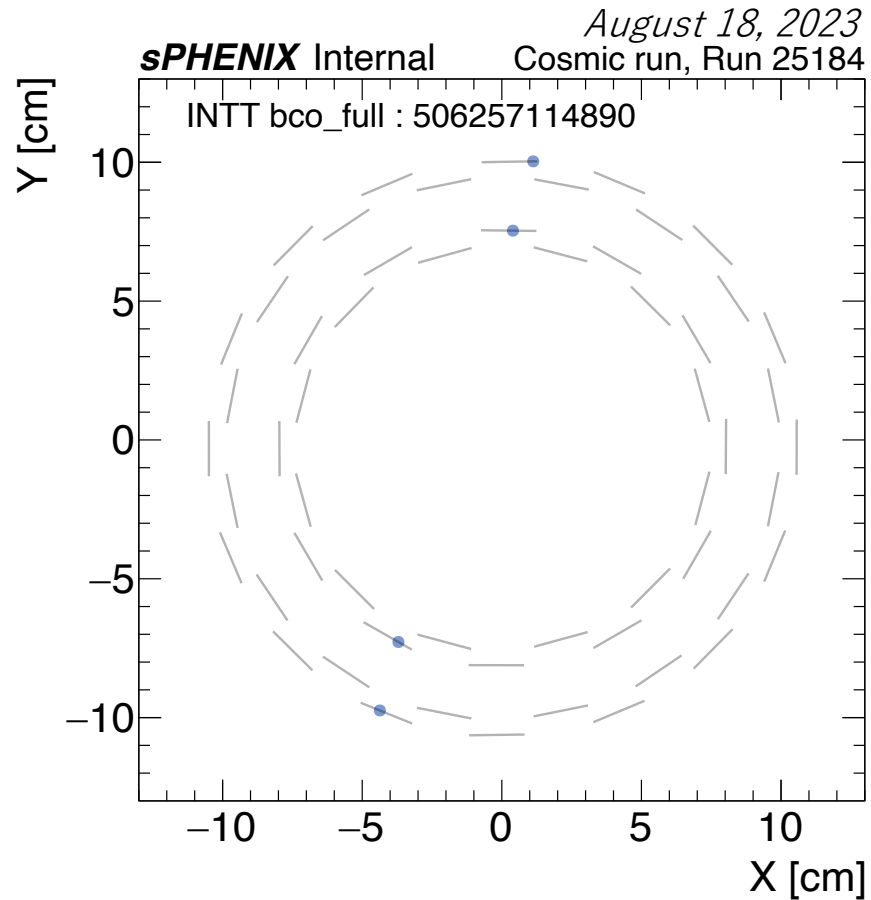


# Event display with trigger mode (1)

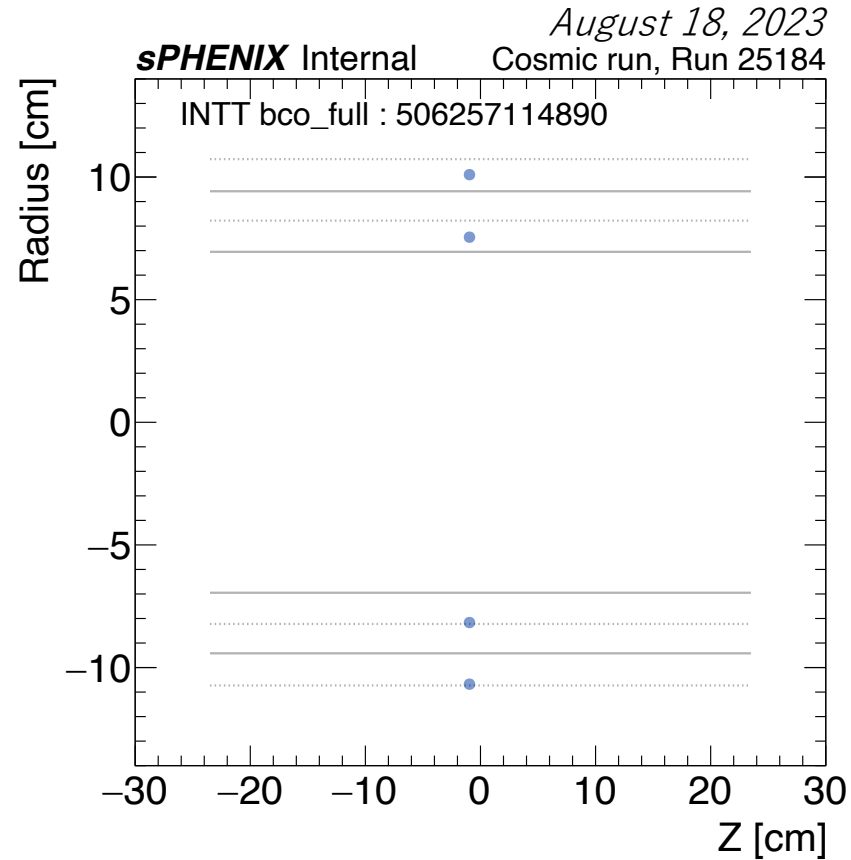


- Run # 25184
- Cosmic run
- Field on
- 1 event
- Plotted by Cheng-Wei

# Event display with trigger mode (2)



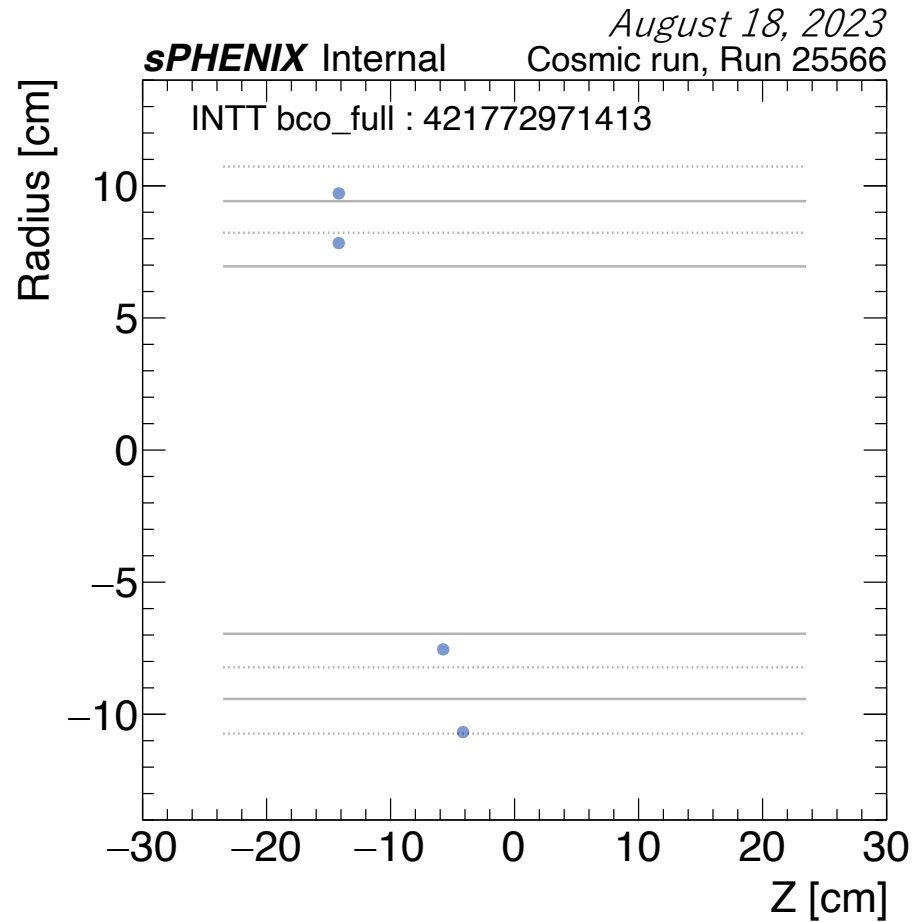
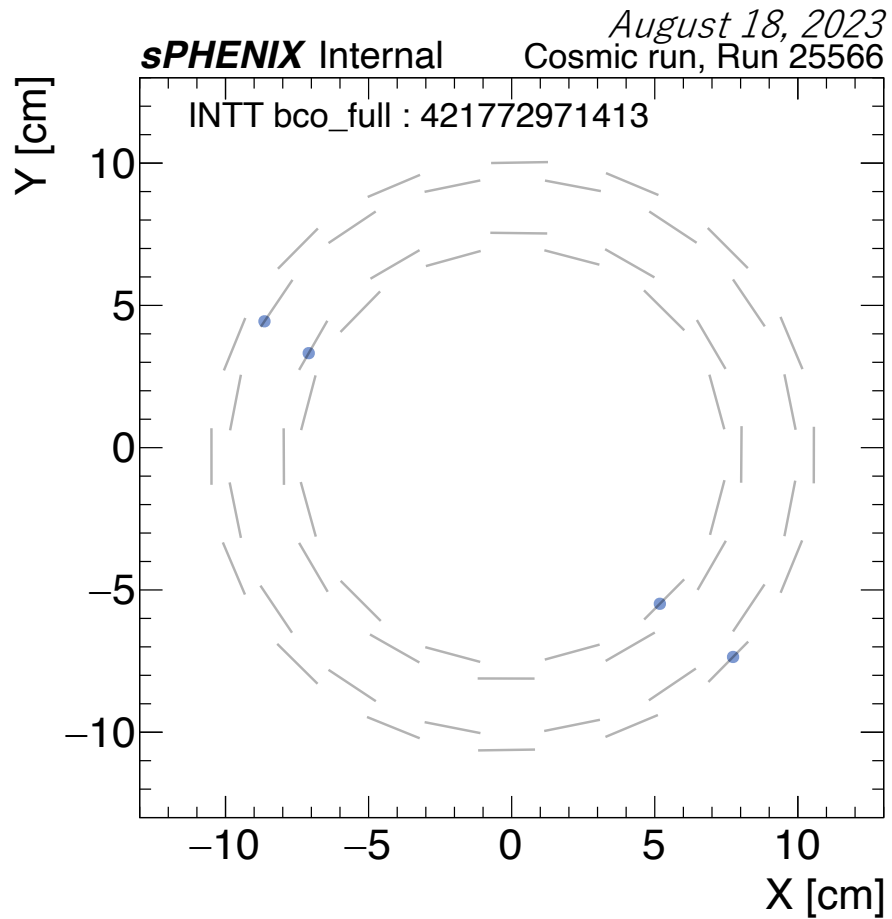
2023/8/18



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- Run # 25184
- Cosmic run
- Field on
- 1 event
- Plotted by Cheng-Wei

# Event display with streaming mode



- Run #
- Cosmic run
- Field off
- 1 event
- Plotted by Cheng-Wei

# Event display from Manami and Takashi

# What we need is the notes!

- I will prepare a new note for event display.
- I will add/modify the previous note for the correlation plots.

Back up

# Official preliminary plots

You can find here.

- <https://indico.bnl.gov/event/19862/>
  - Correlation between Inner and outer (part of INTT is used)
  - Correlation between 2 different felix (part of INTT is used)
  - Time-in
- <https://indico.bnl.gov/event/20139/>
  - Correlation between MBD and INTT (part of INTT is used)
  - Correlation between TPOT and INTT (at Hugo's presentation)
- <https://sphenix-invenio.sdcc.bnl.gov/records/h56xd-aer60>
  - The note for the correlation between TPOT and INTT (with preliminary logo)
- <https://sphenix-invenio.sdcc.bnl.gov/uploads/7xd7k-7x532>
  - The note for the Correlation between MBD and INTT