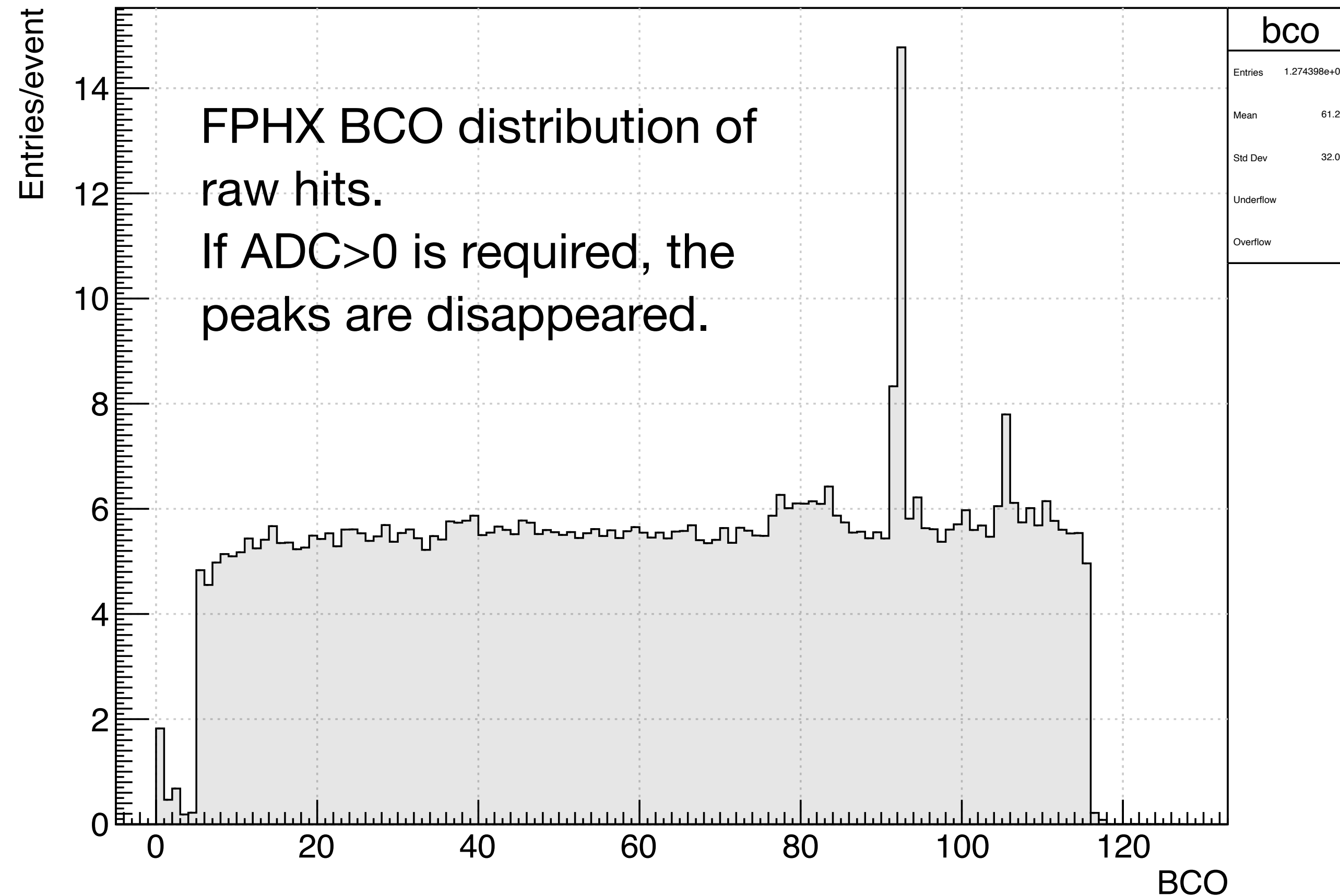


**#cluster correlation for each FPHX  
BCO of the streaming readout data**

Genki Nukazuka (RIKEN)

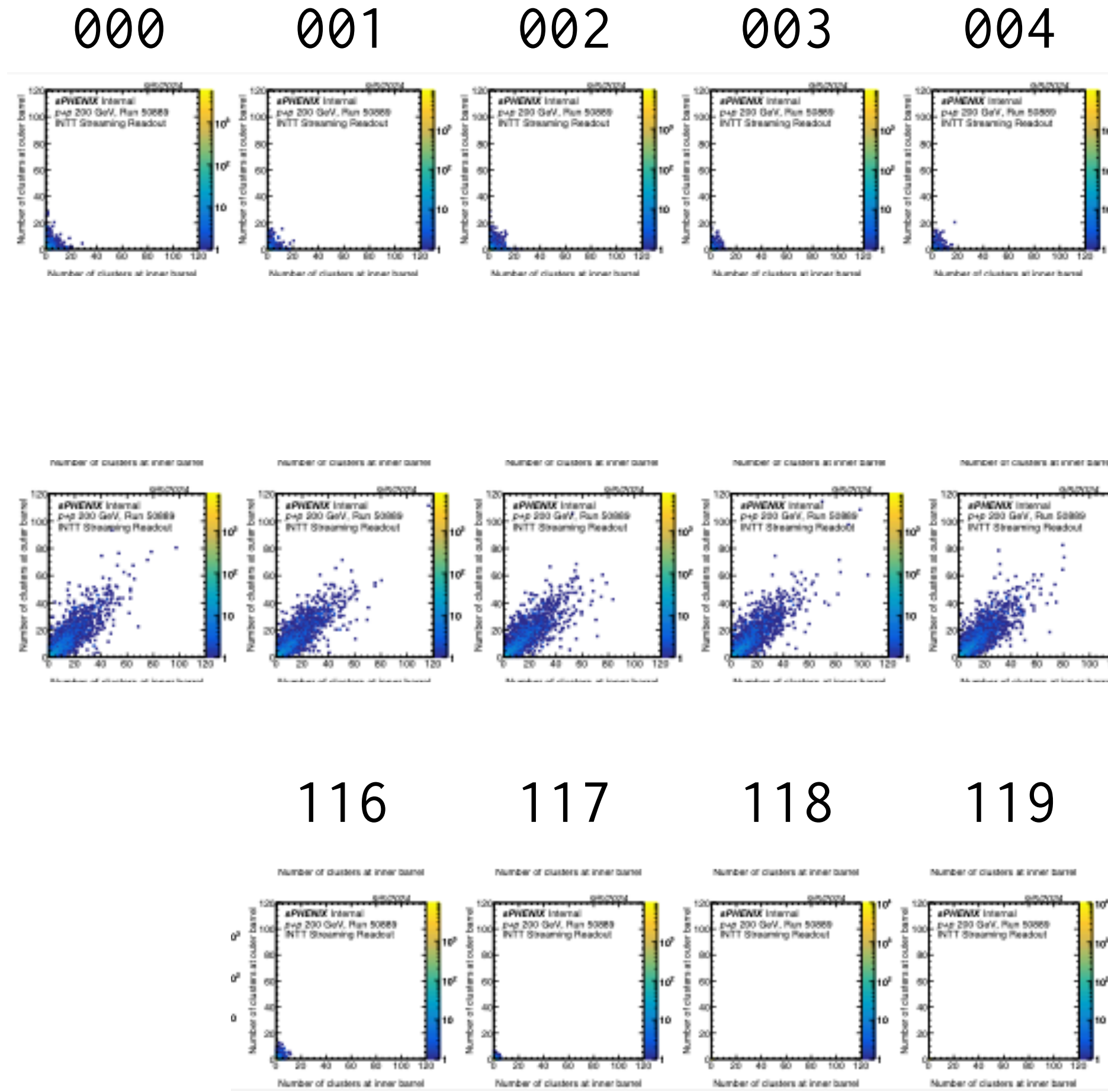
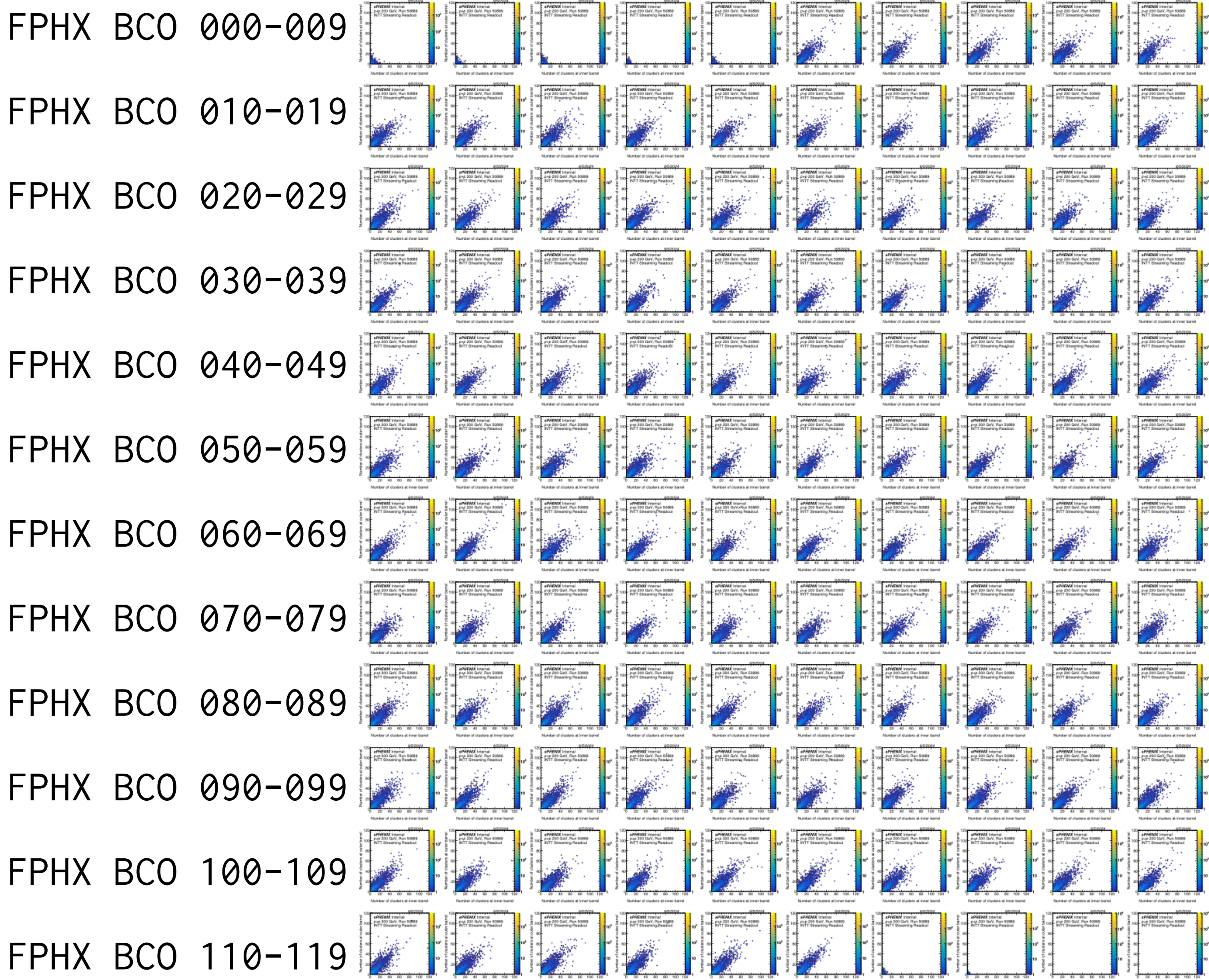
# FPHX BCO of the streaming readout data

BCO distribution



Each FPHX BCO corresponds to a particular bunch-crossing. I normally pick 63 to see the status. #cluster correlation with different FPHX BCO values are shown. But we have to see all!

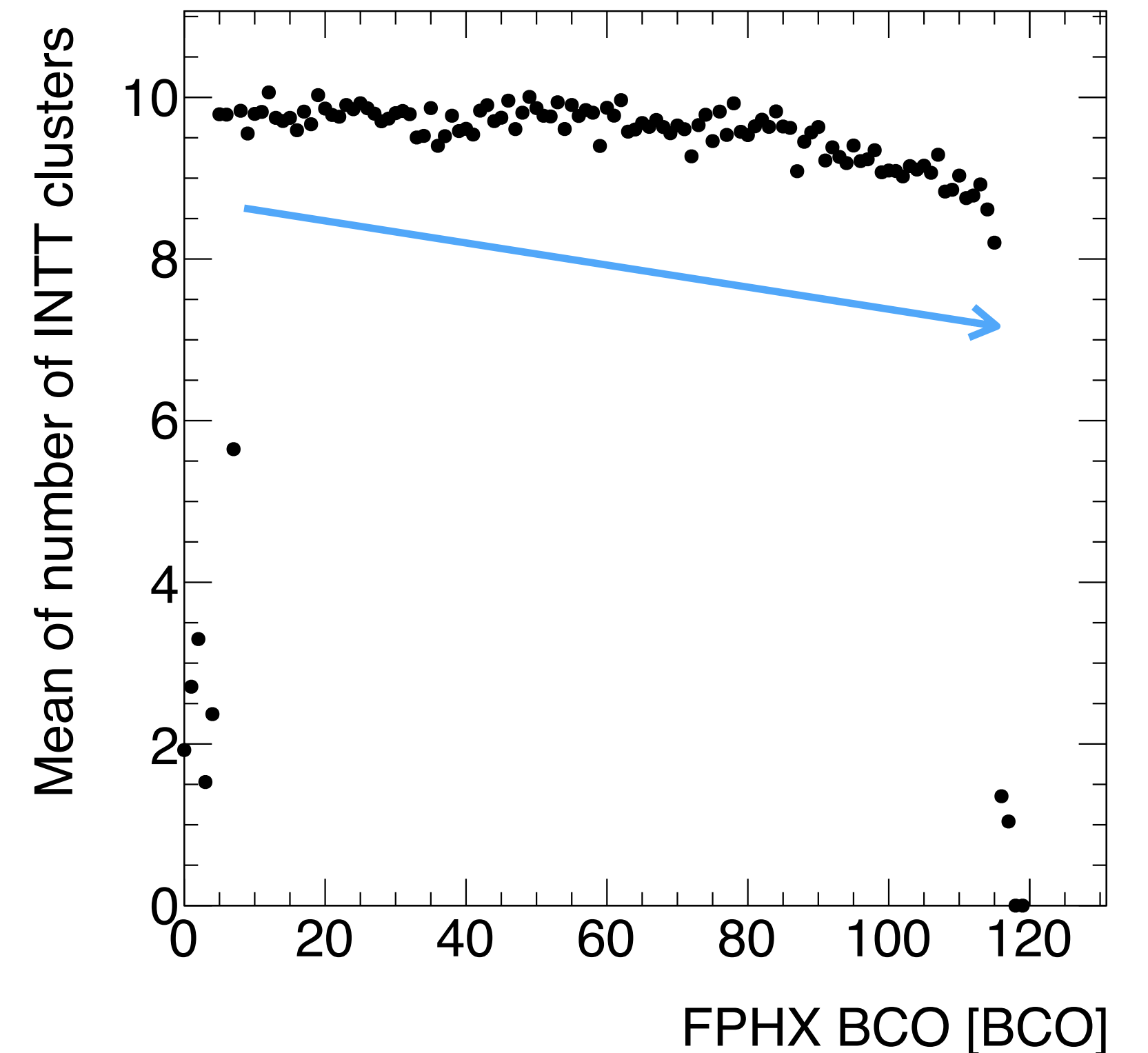
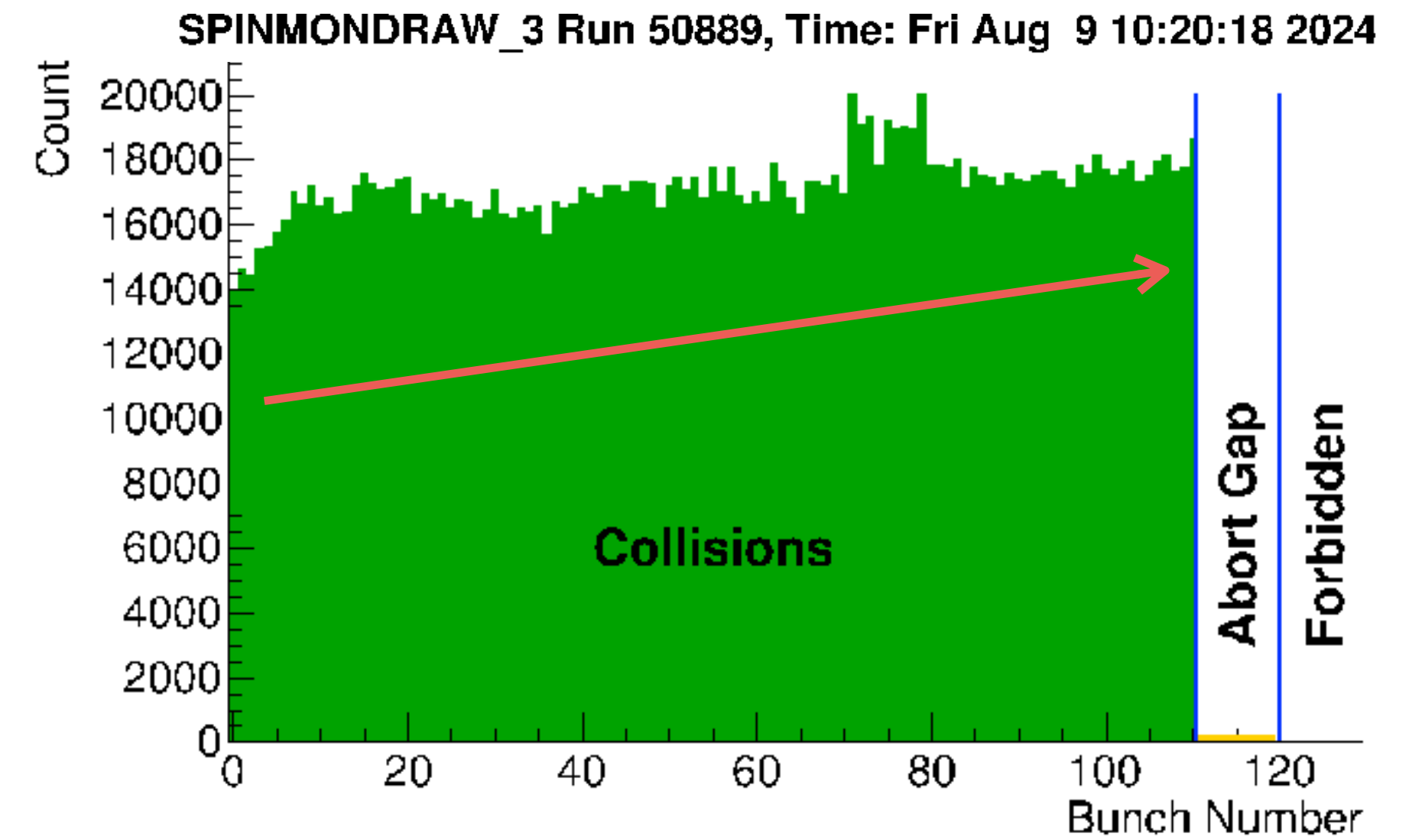
# #cluster correlation for each FPHX BCO



Yes, we can see different correlation at FPHX BCOs 0-4 and 116-119. They must corresponds to the abort gap!

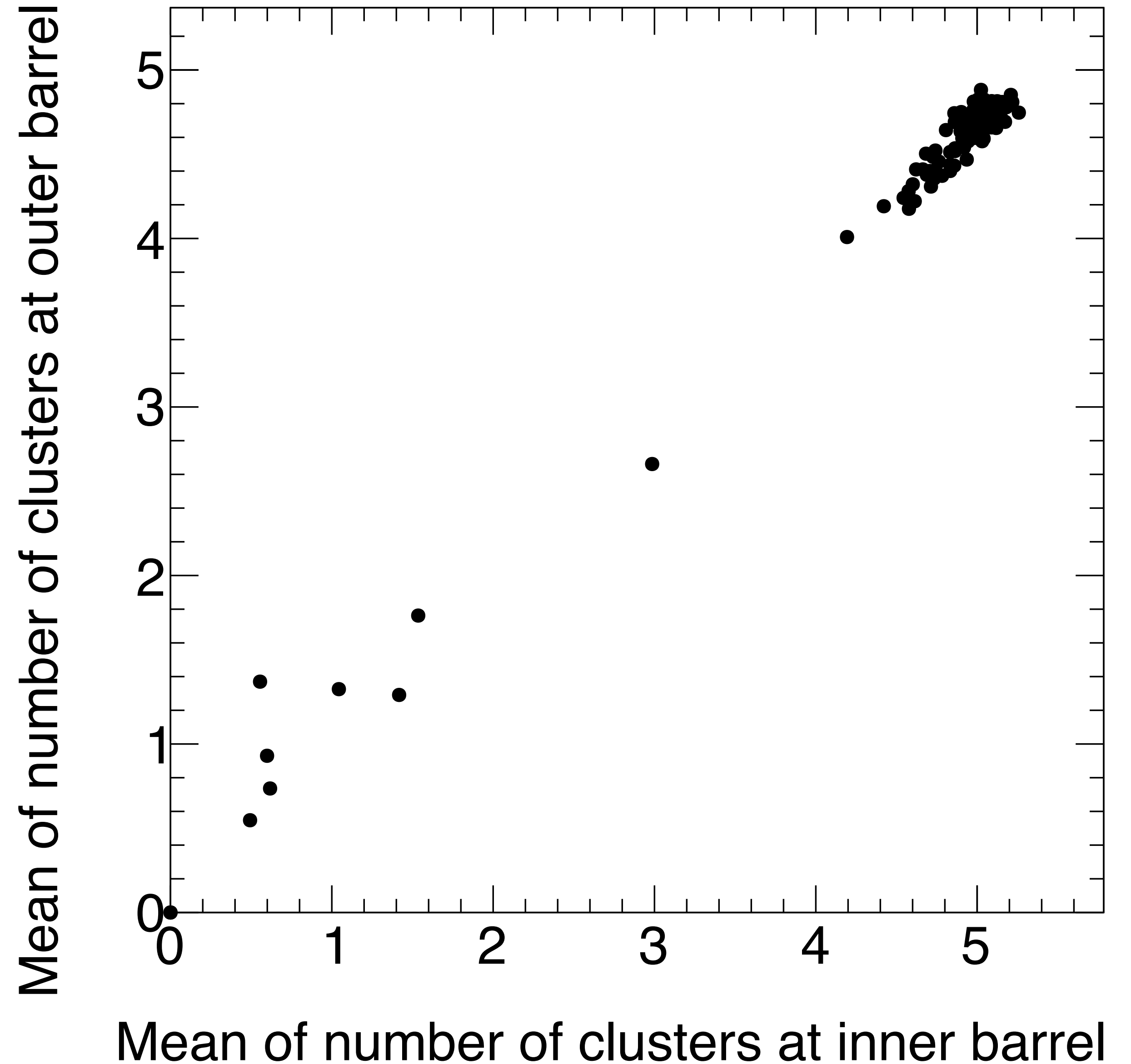
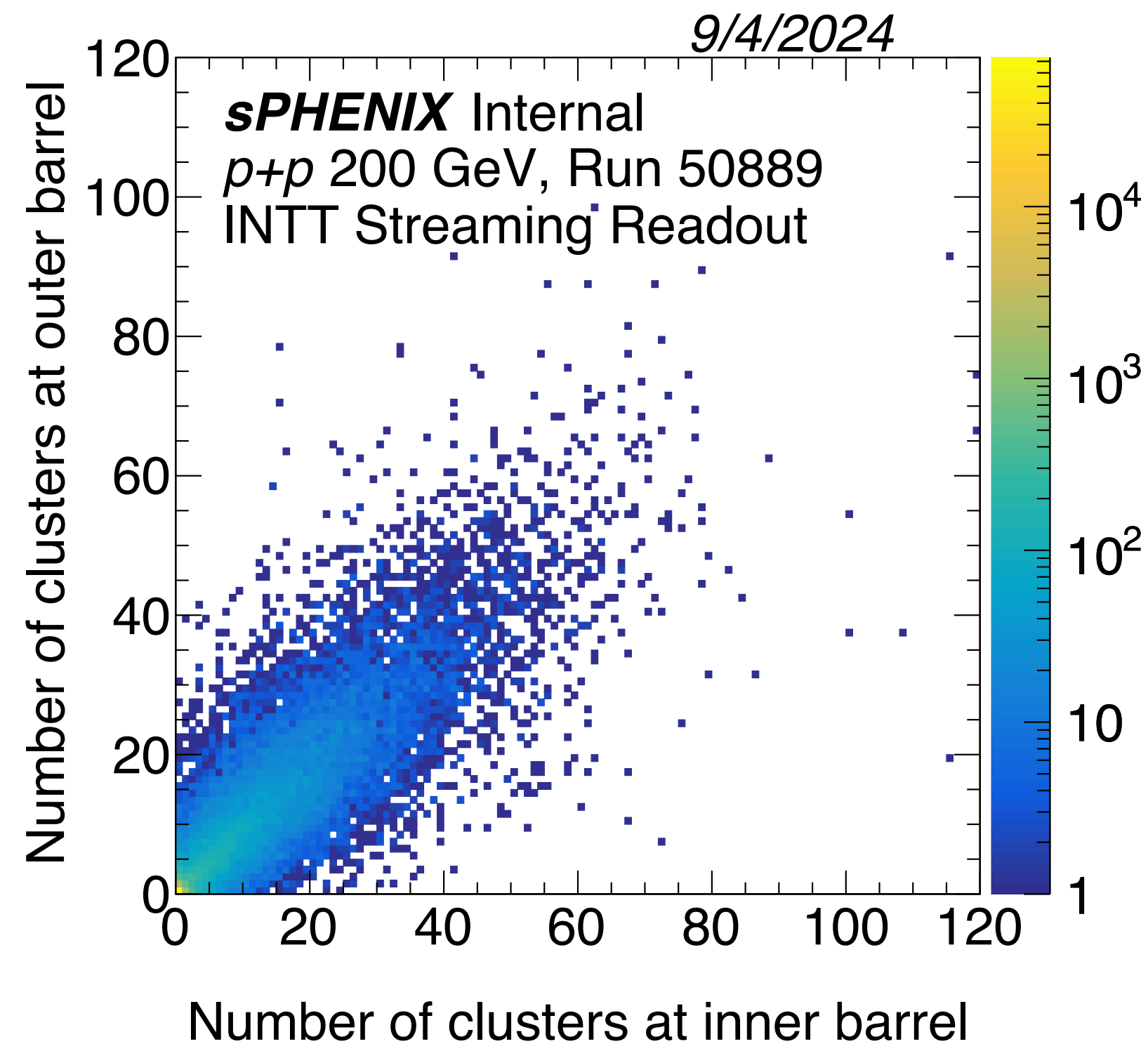
# #cluster

- Hot channel rejection applied
- Single hit clusters with DAC = 35 are removed.
- The trend of #cluster as a function of FPHX BCO is falling. That of the spin monitor Spin is rising.
- We have to understand the difference as it's crucial for spin physics.



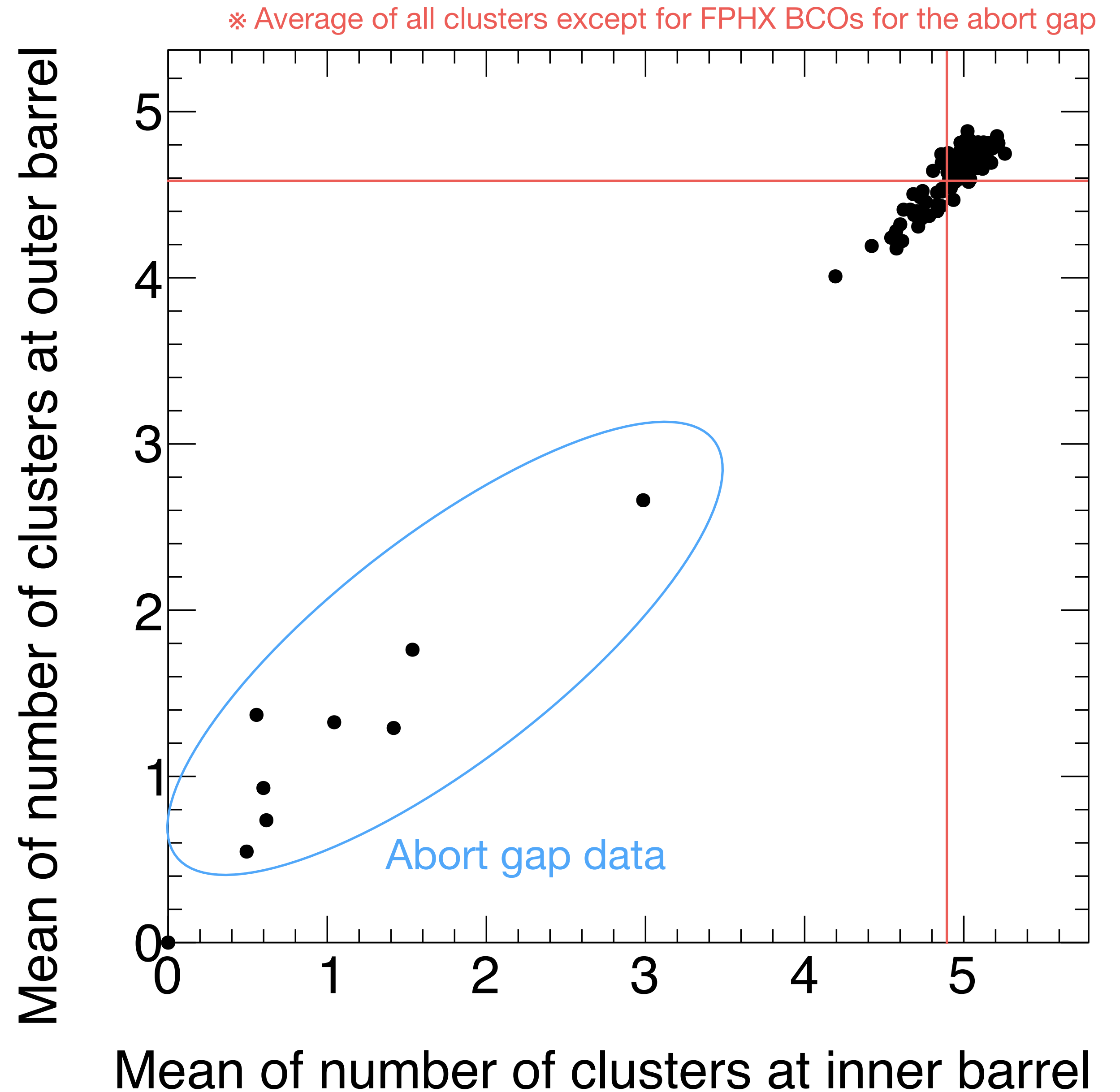
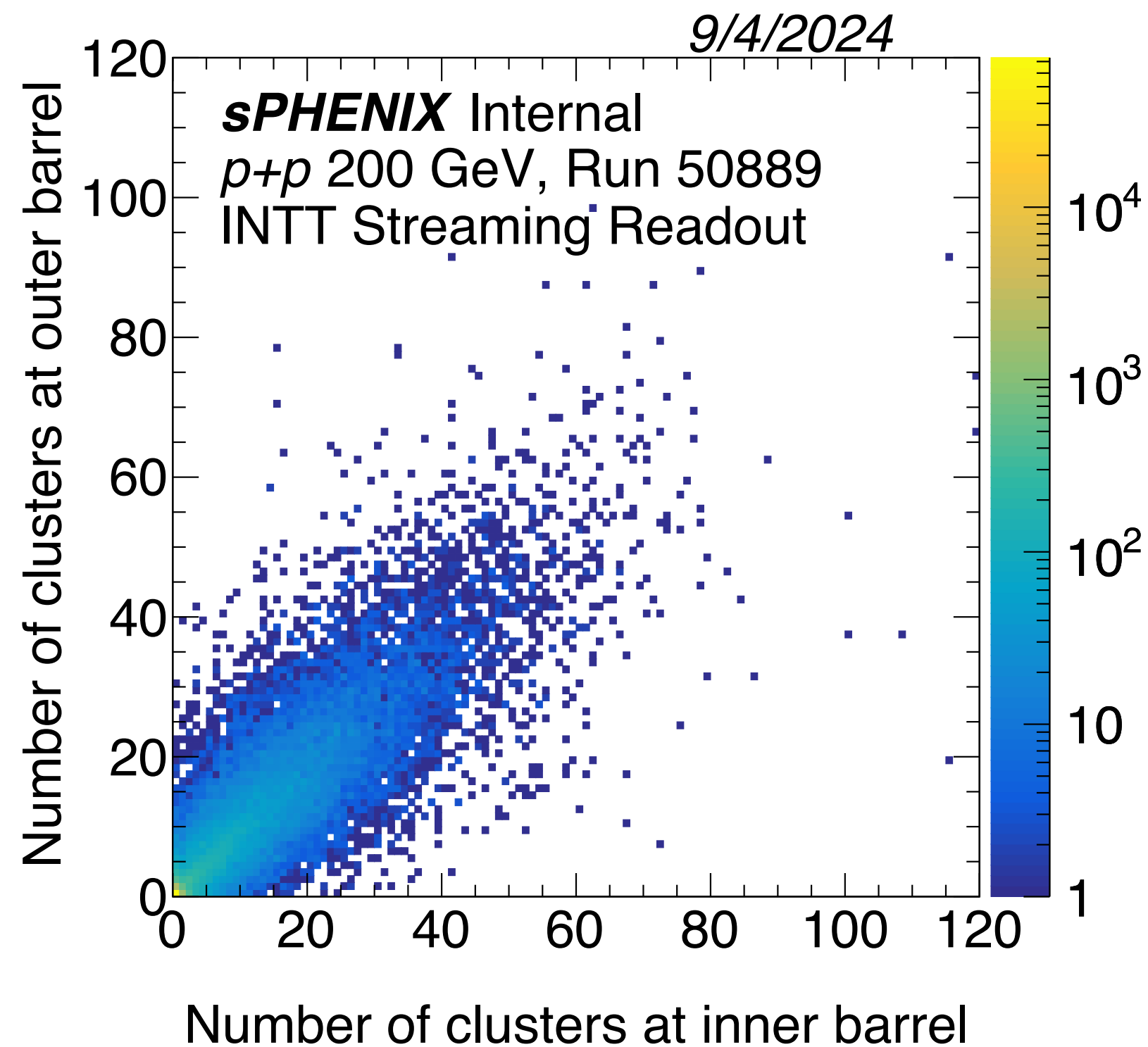
# Comparison of #cluster correlations

- Means of the #cluster correlation  $(x = \langle N_{in} \rangle, y = \langle N_{out} \rangle)$  are plotted.



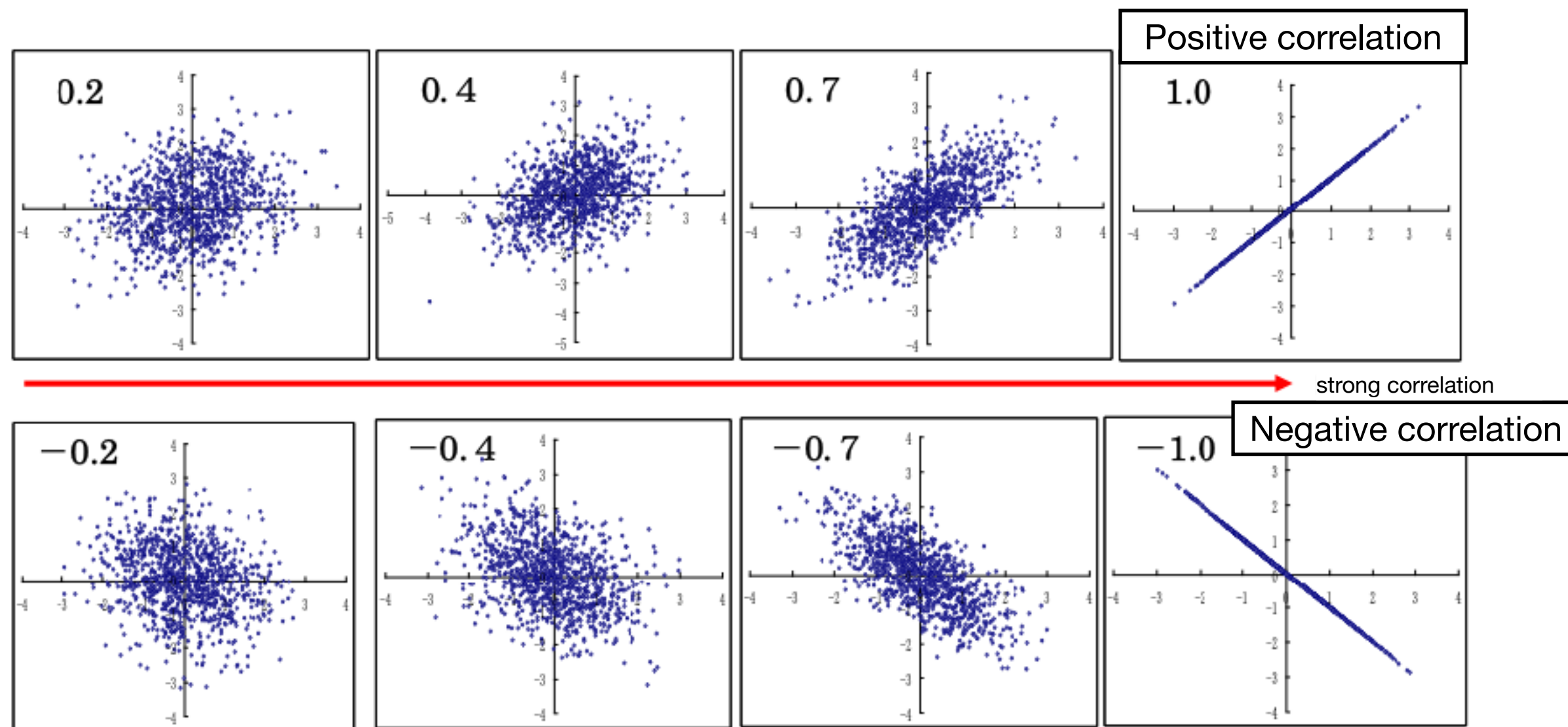
# Comparison of #cluster correlations

- Means of the #cluster correlation ( $x = \langle N_{in} \rangle$ ,  $y = \langle N_{out} \rangle$ ) are plotted.



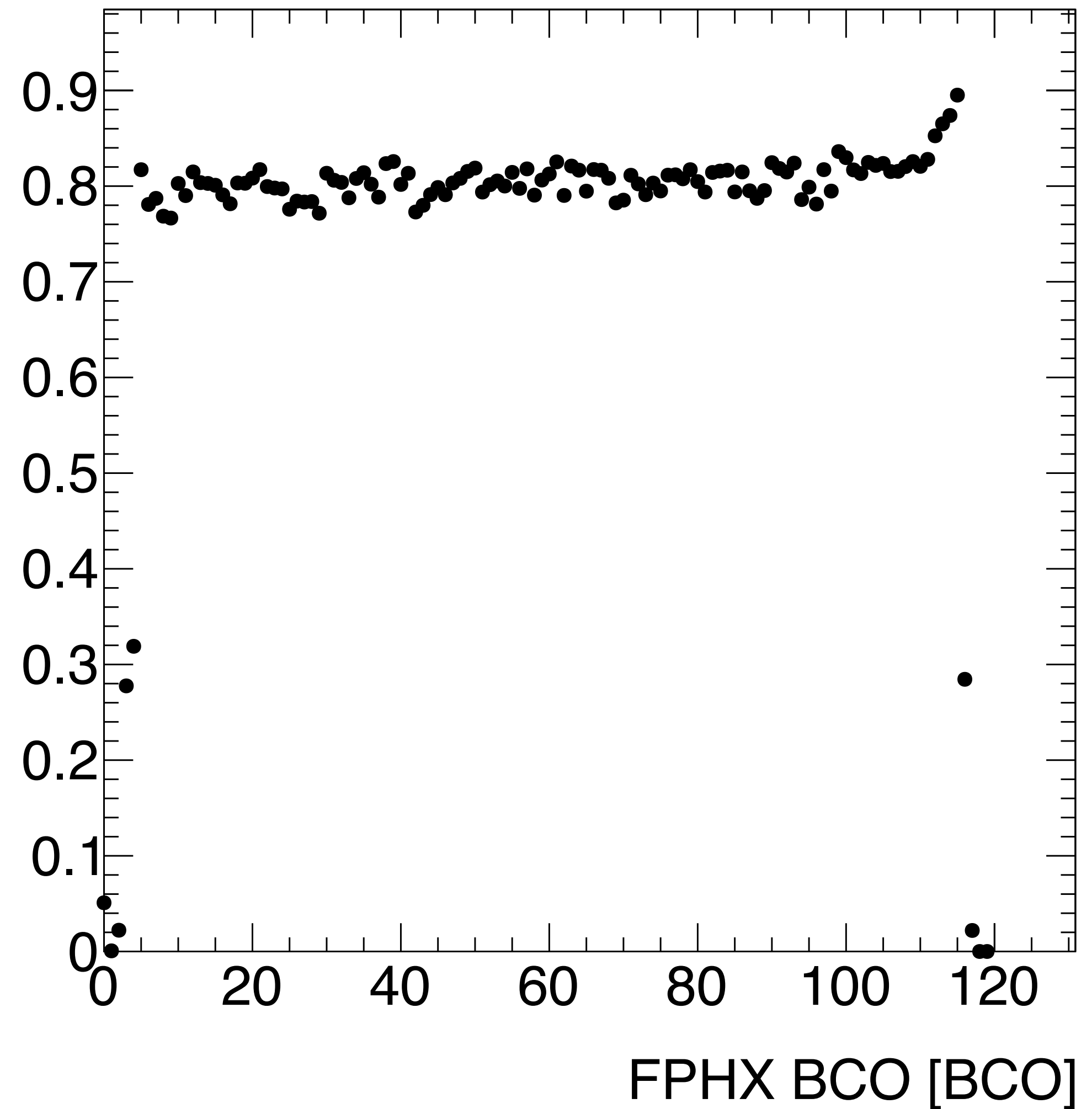
# Correlation factor

- A correlation factor can be a good indicator for the comparison of lots of correlations



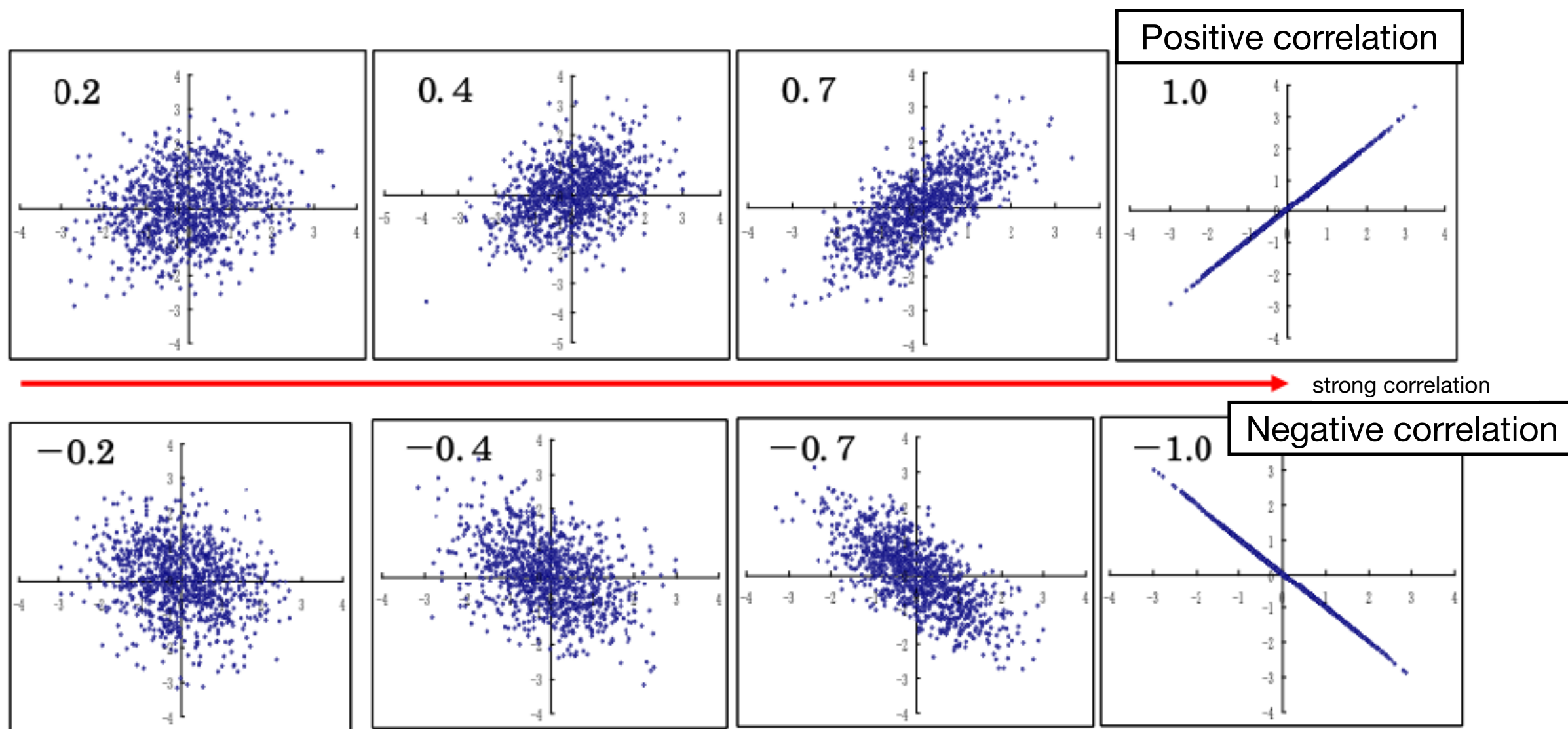
[Good example by Kumamoto Pref.?](#)

Number of INTT clusters at inner and outer barrels



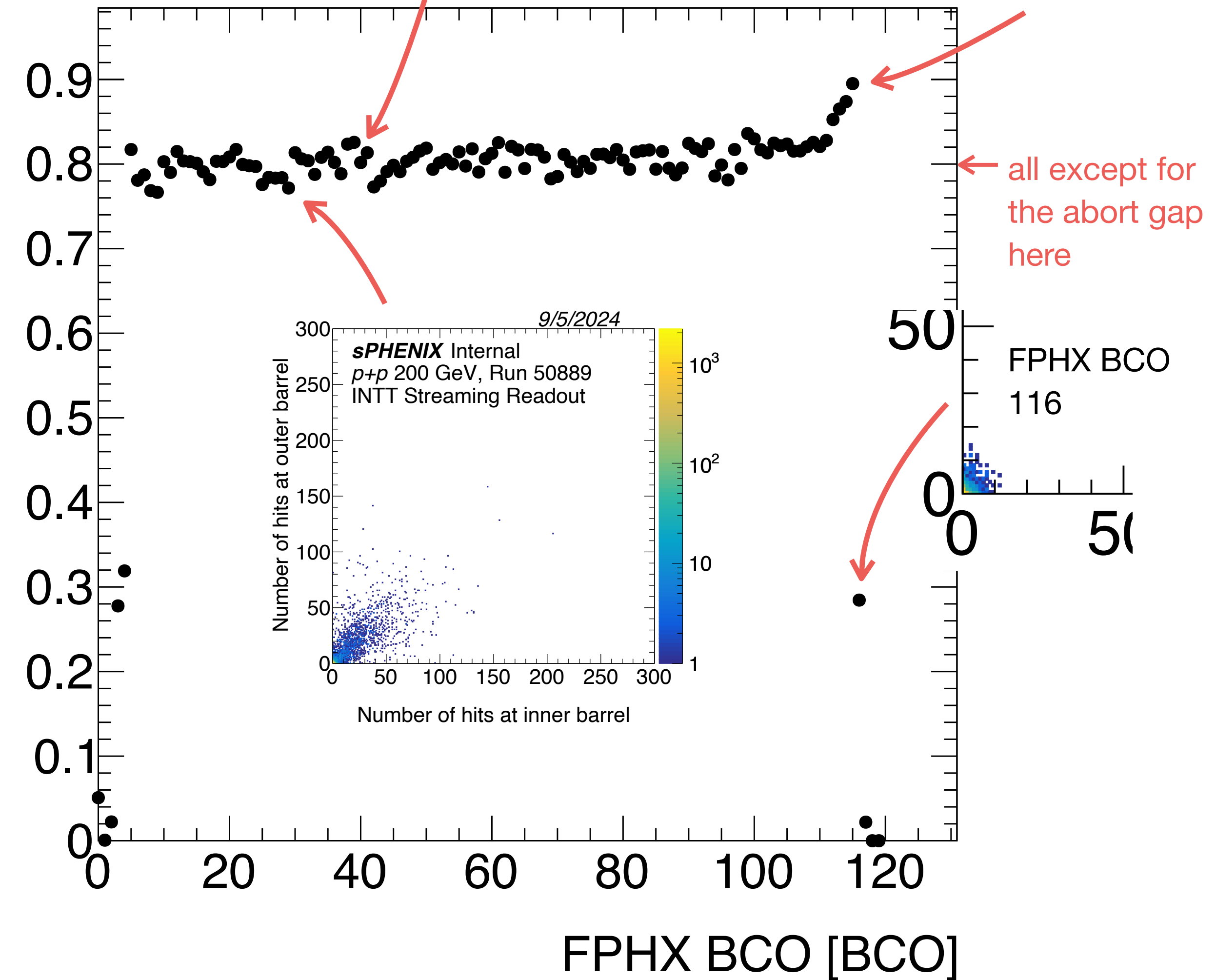
# Correlation factor

- A correlation factor can be a good indicator for the comparison of lots of correlations



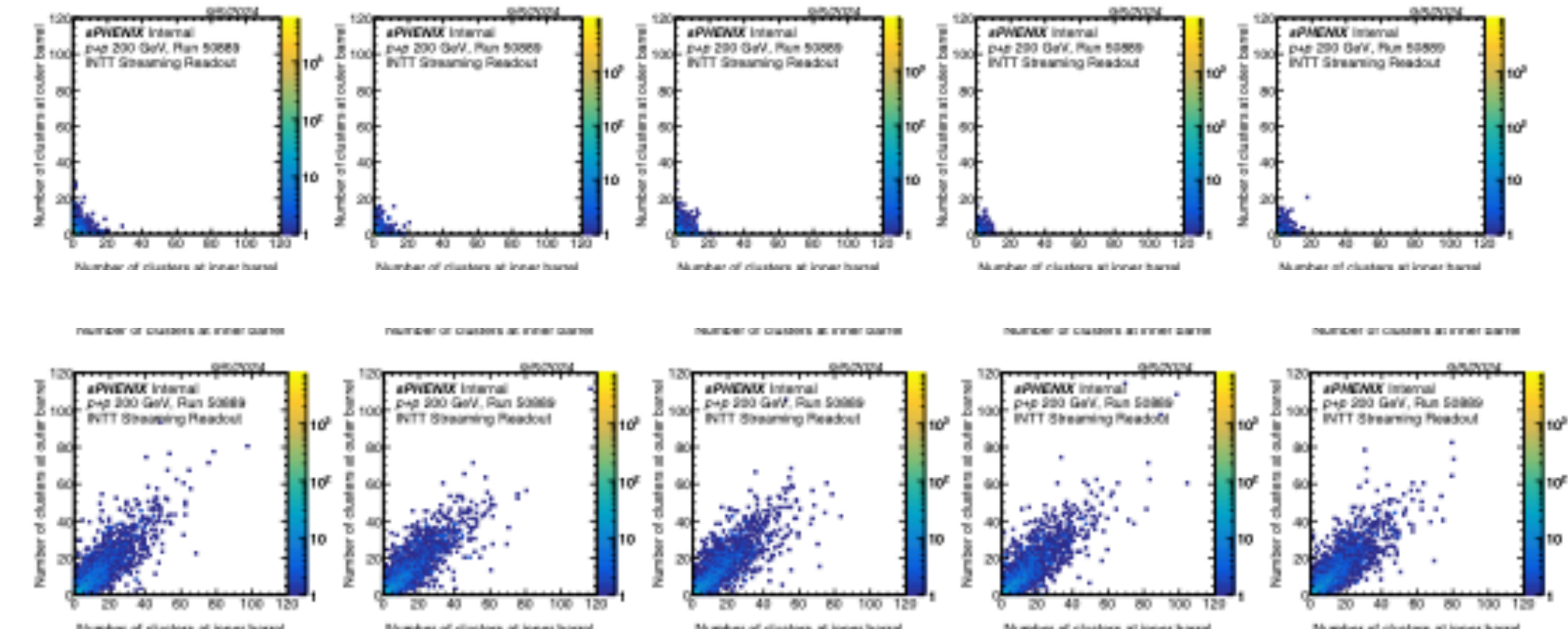
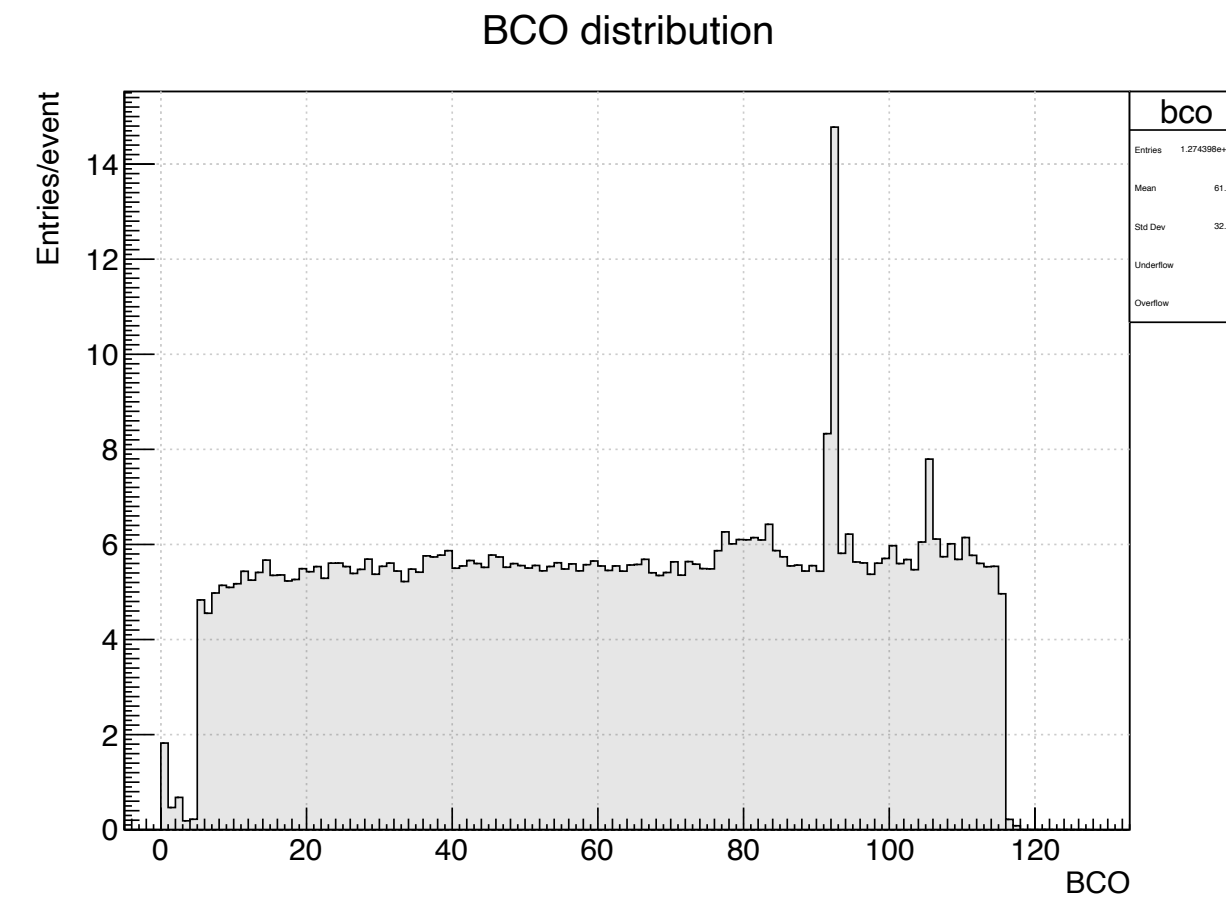
[Good example by Kumamoto Pref.?](#)

Number of INTT clusters at inner and outer barrels





# Conclusion



We could see the abort gap in the correlation plots! It means INTT can provide hit information for each bunch-crossing.

An inconsistency was found between #cluster/strobe and the spin monitor. We have to understand the reason.

