

Final report

20241129

INTT Analysis Workshop at KU

NWU M2 Mai Kano

Analysis Plan during INTT workshop

Name : Mai Kano

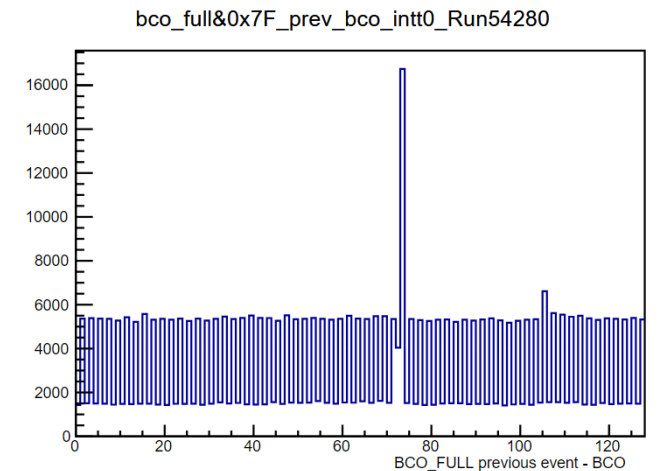
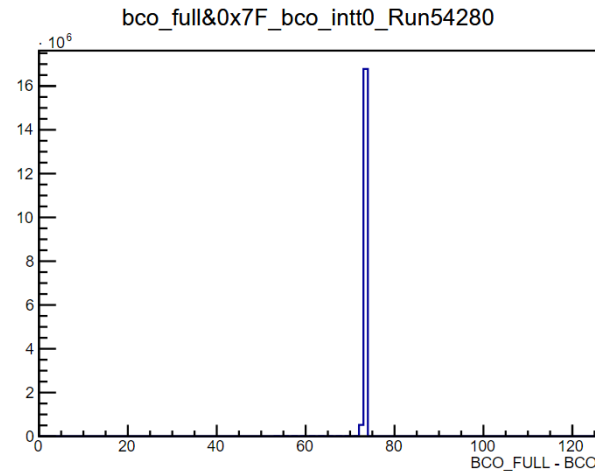
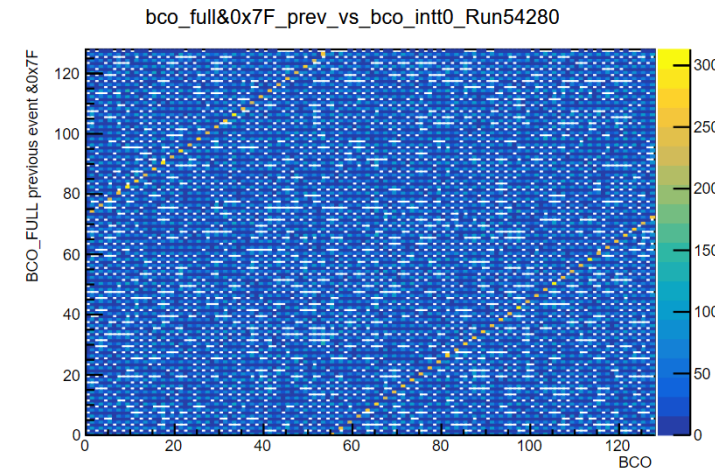
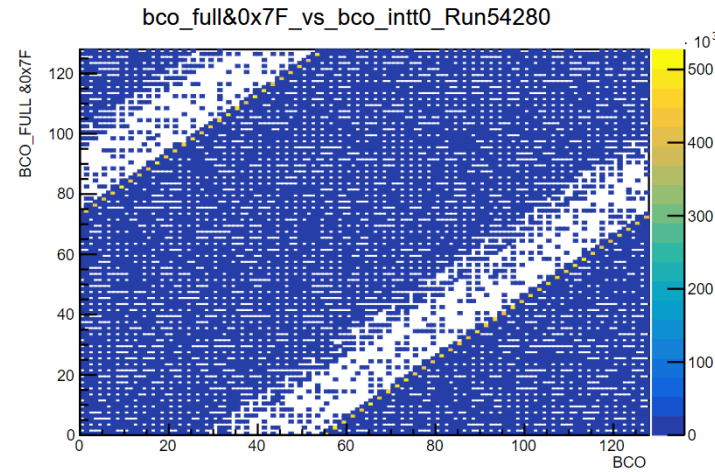
Institution : Nara Women's Univ



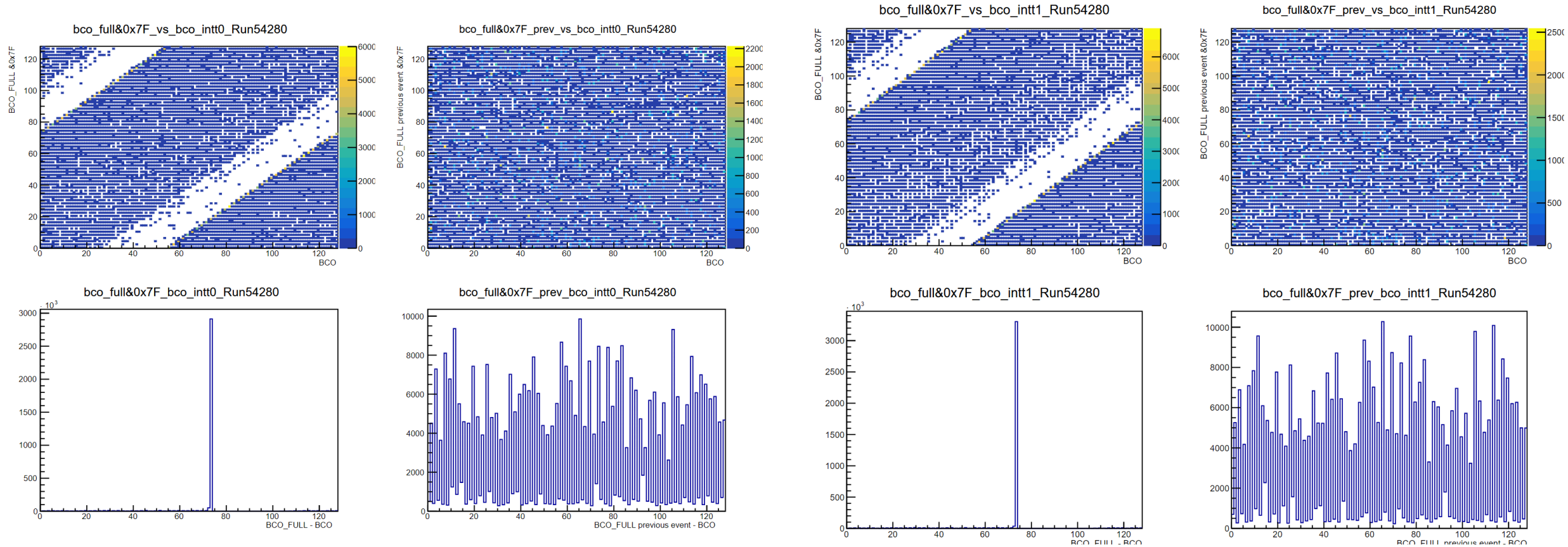
- Analysis topic
Event Mixup
- Current knowledge/status of this topic
Event Mixup is the leakage of hits from one previous event to the next.
Correlate to Mixup Hits and Hit Multiplicity in Au-Au.
Correlate to Mixup Event fraction and collision rate in p-p.
- Goal for the workshop
 1. Reexamine the calculation of the Mixup Event fraction.
 2. Find unified understanding of Event Mixup between p+p and Au+Au.
 3. Check the Event Mixup in streaming readout data.
- Milestones to reach to your goal
 1. Check difference between inner and outer layer about Event Mixup.
 2. Make histogram for subtract Event of random hits from Mixup Event fraction.
 3. Make histogram of correlation between Mixup Hit fraction and INTT hit rate.
 4. Make plot that confirms that Event mixup is occurring with streaming readout data.

From Cheng-Wei Analysis

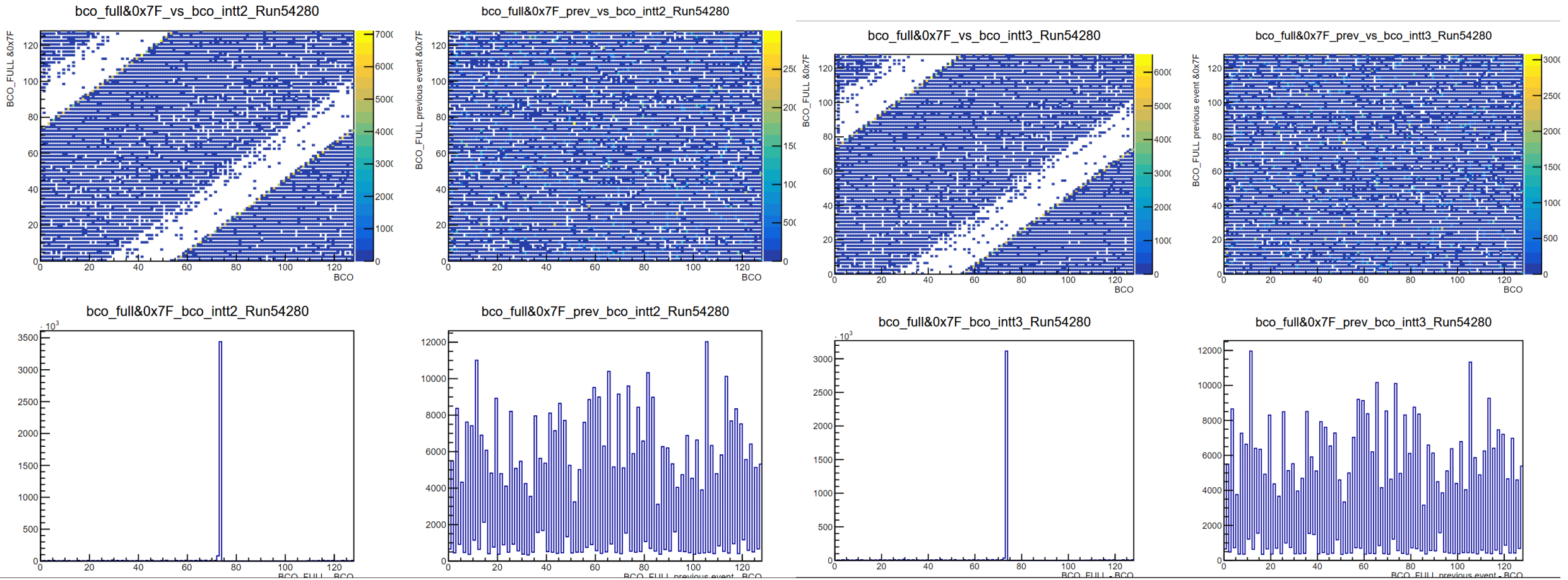
- I checked Event Mixup status of Run that Cheng-Wei found missing cluster at inner layer. (Run54280)
- That Run have Event Mixup.
- Next I will check inner and outer separately.



Run54280 From Official DST

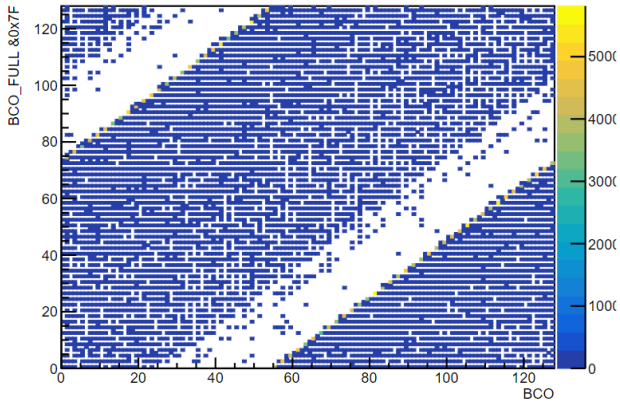


Run54280 From Official DST

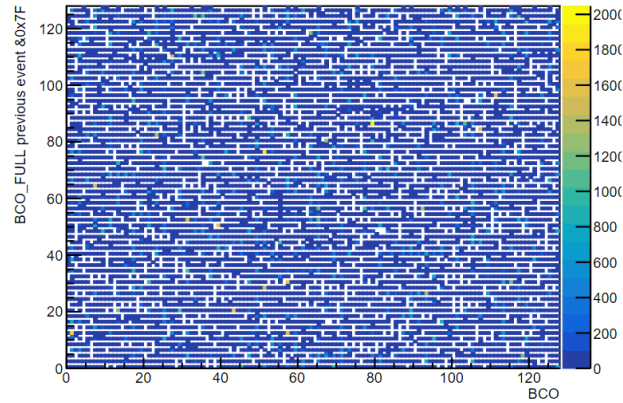


Run54280 From Official DST

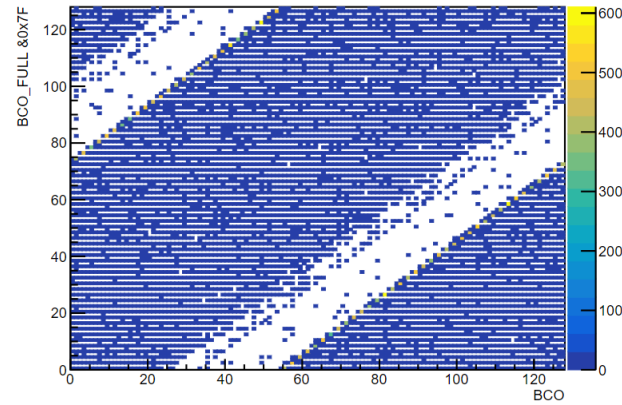
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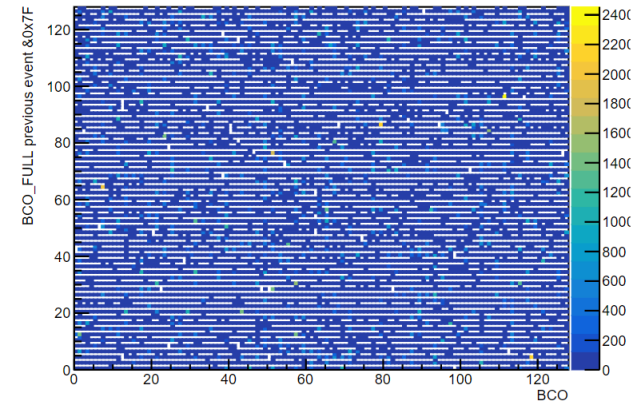
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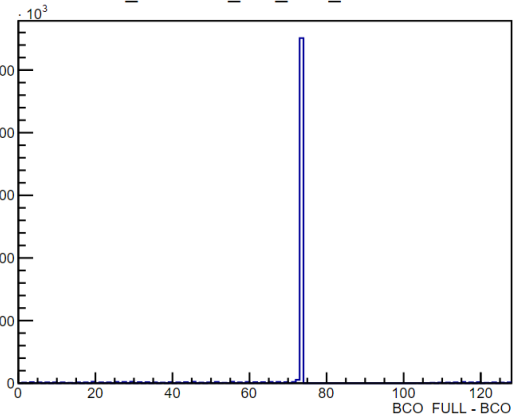
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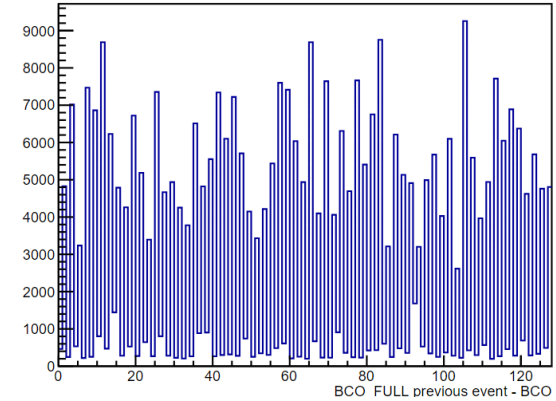
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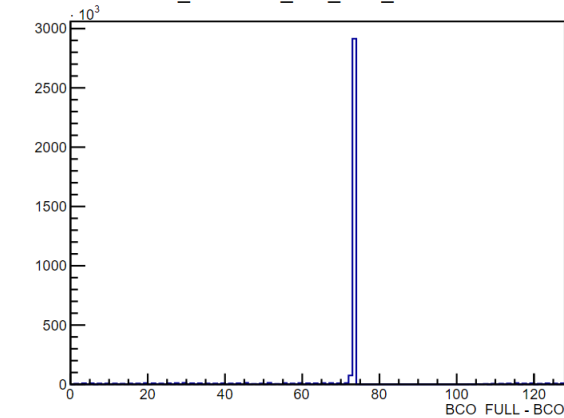
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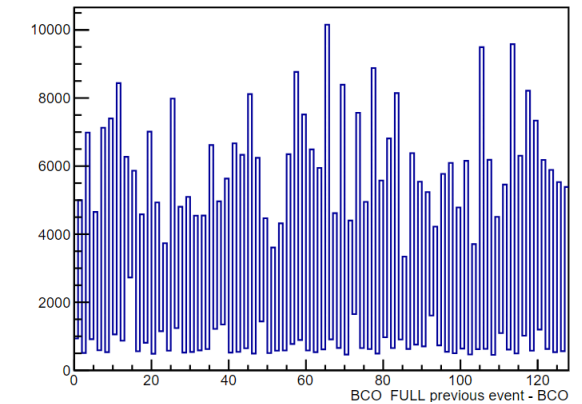
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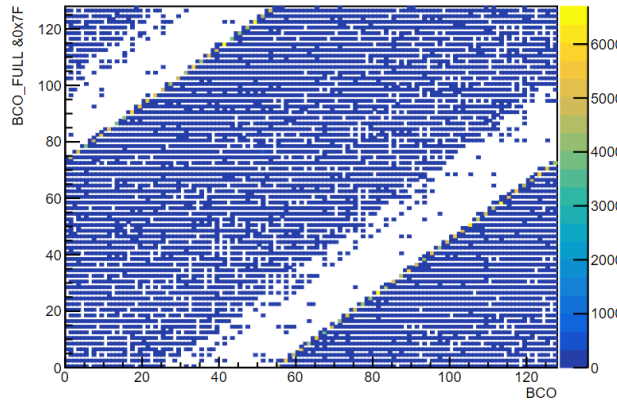


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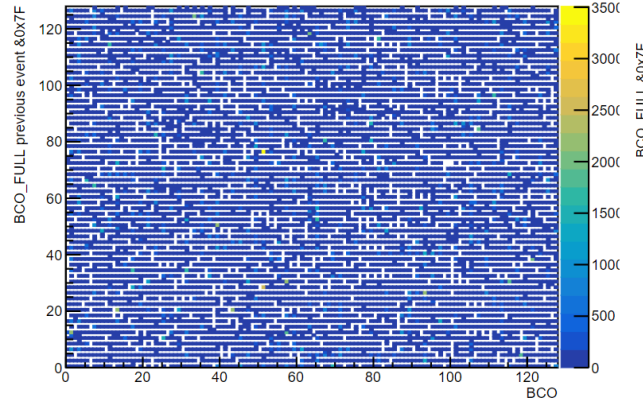


Run54280 From Official DST

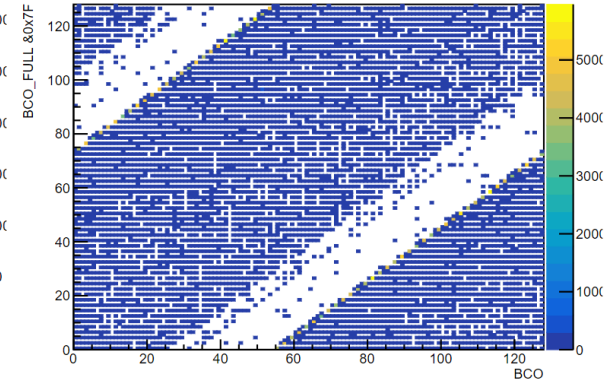
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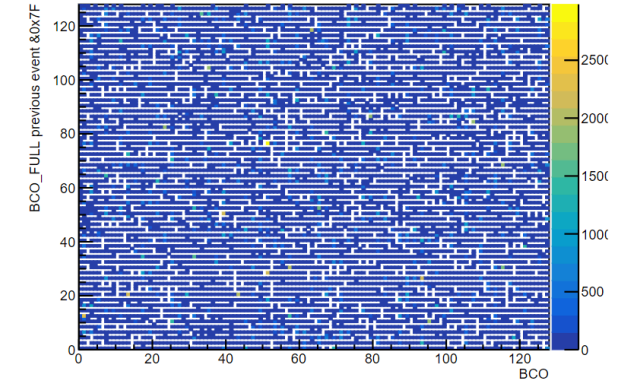
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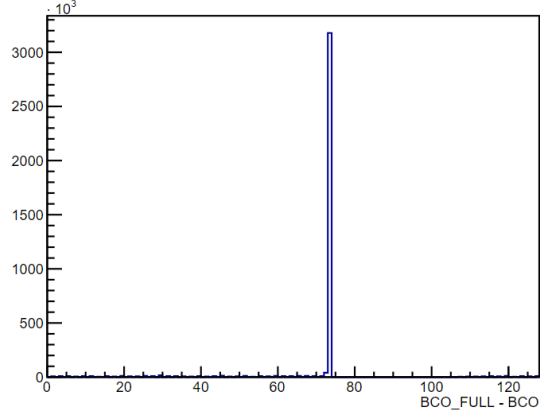
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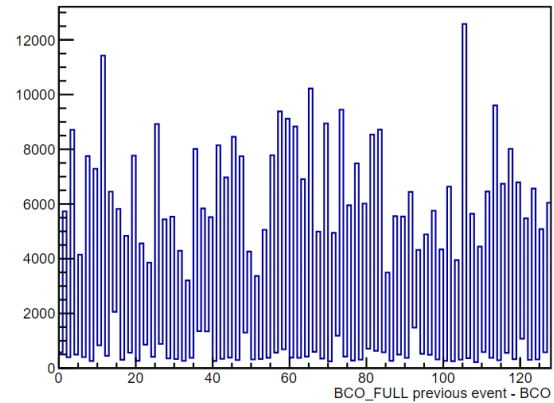
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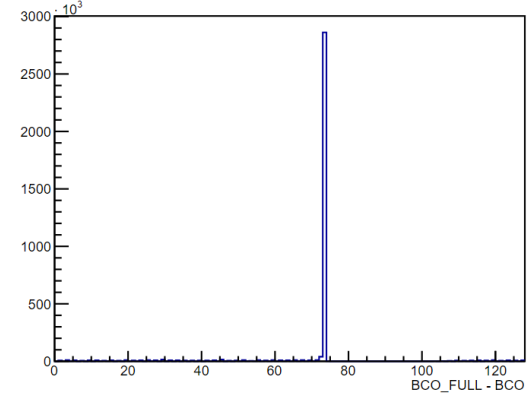
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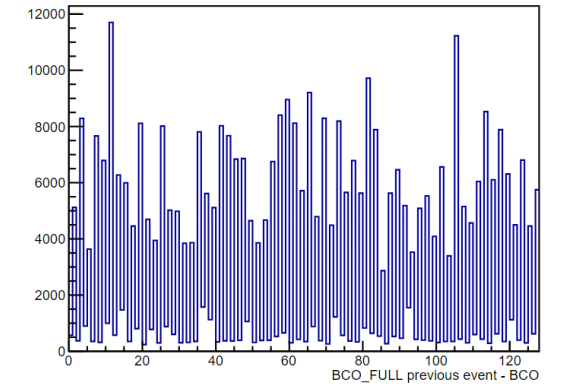
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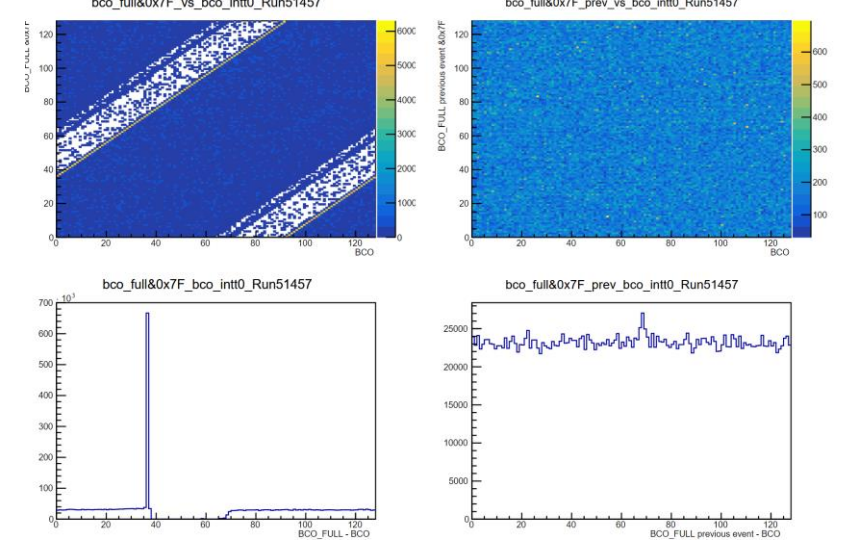


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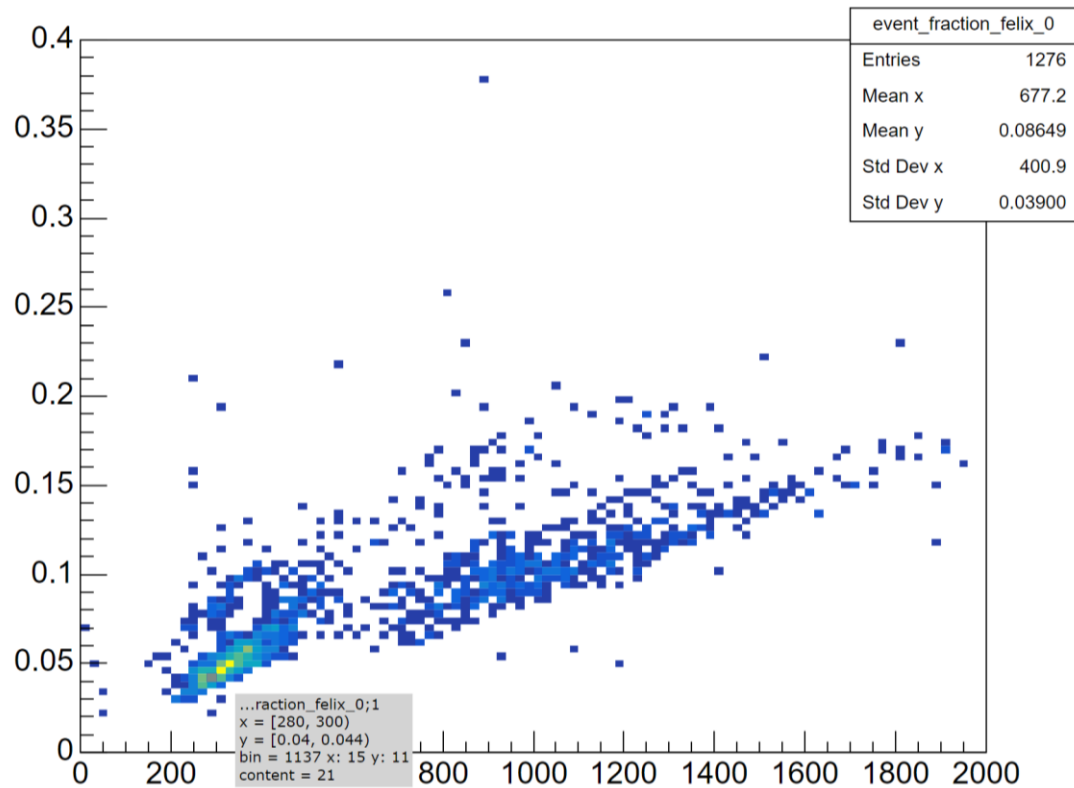


For Event fraction

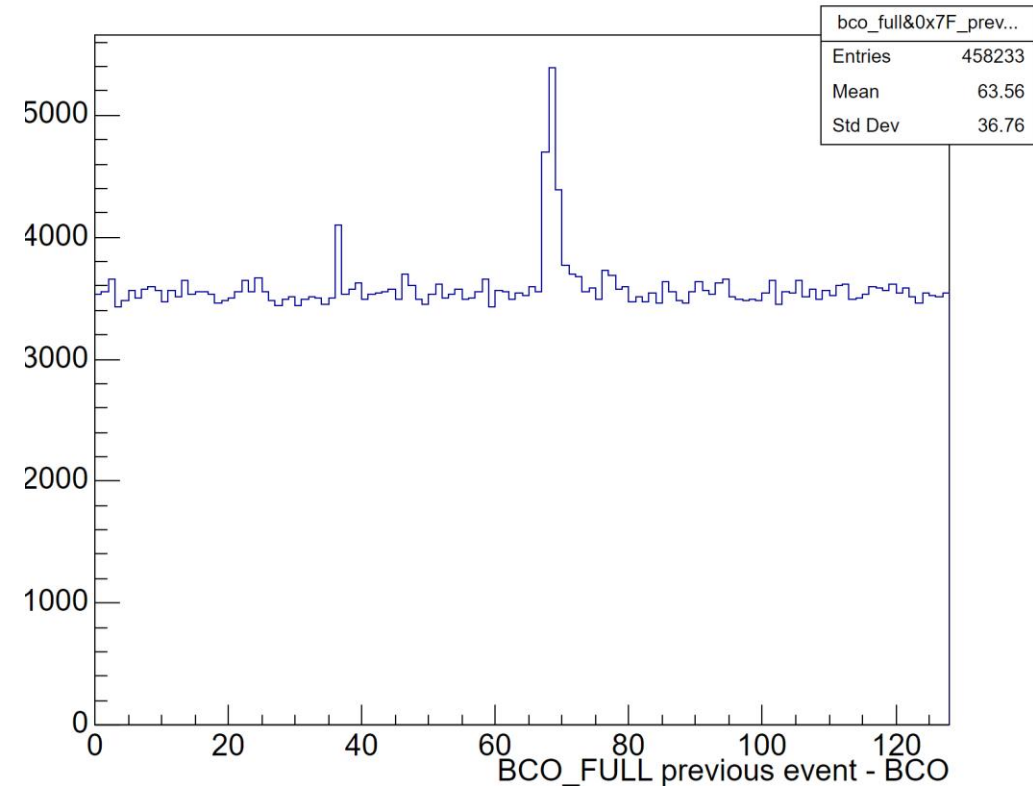
- Histogram with each BCOFULL-BCO value Filled only once within one event



Event Fraction vs Trigger Rate for Felix 0

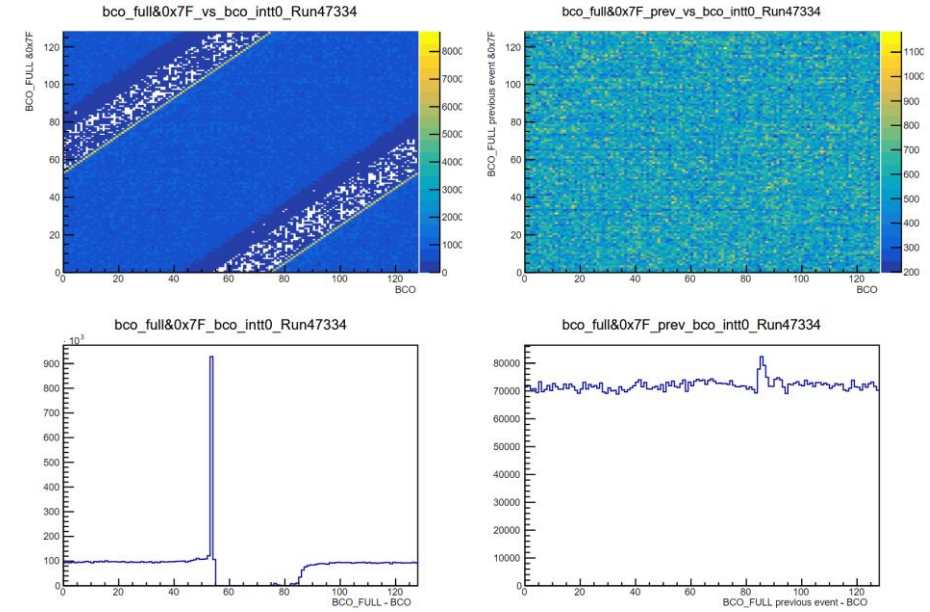


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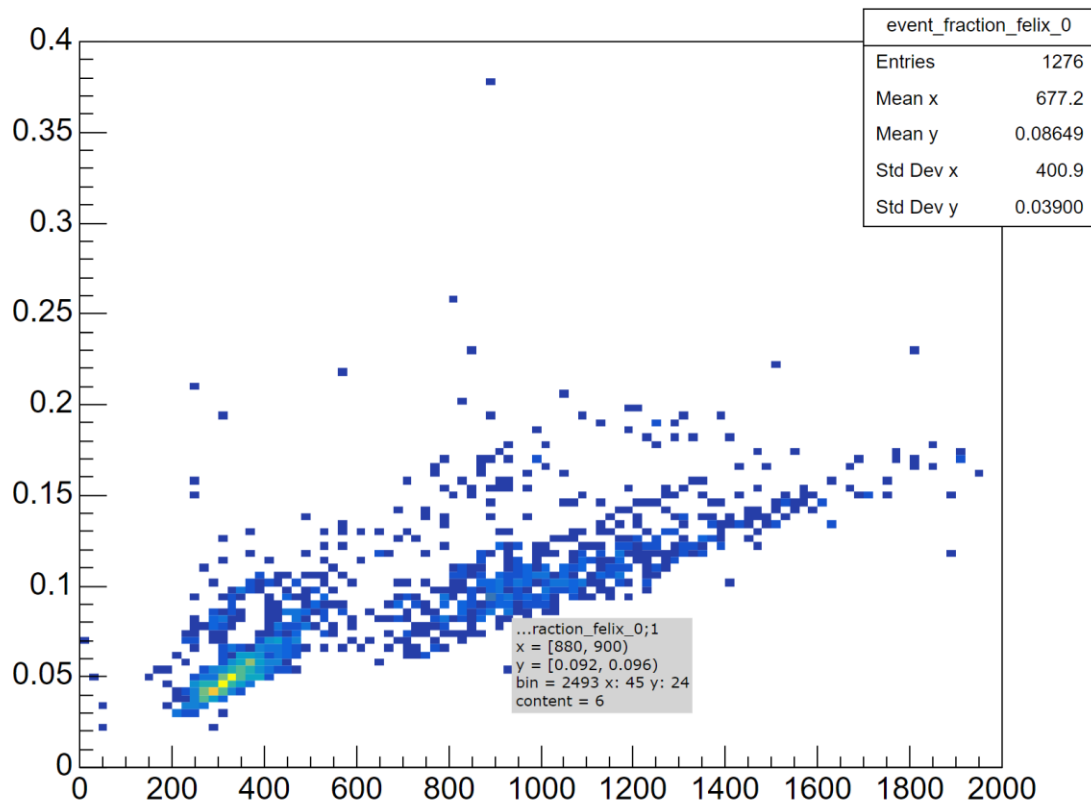


For Event fraction

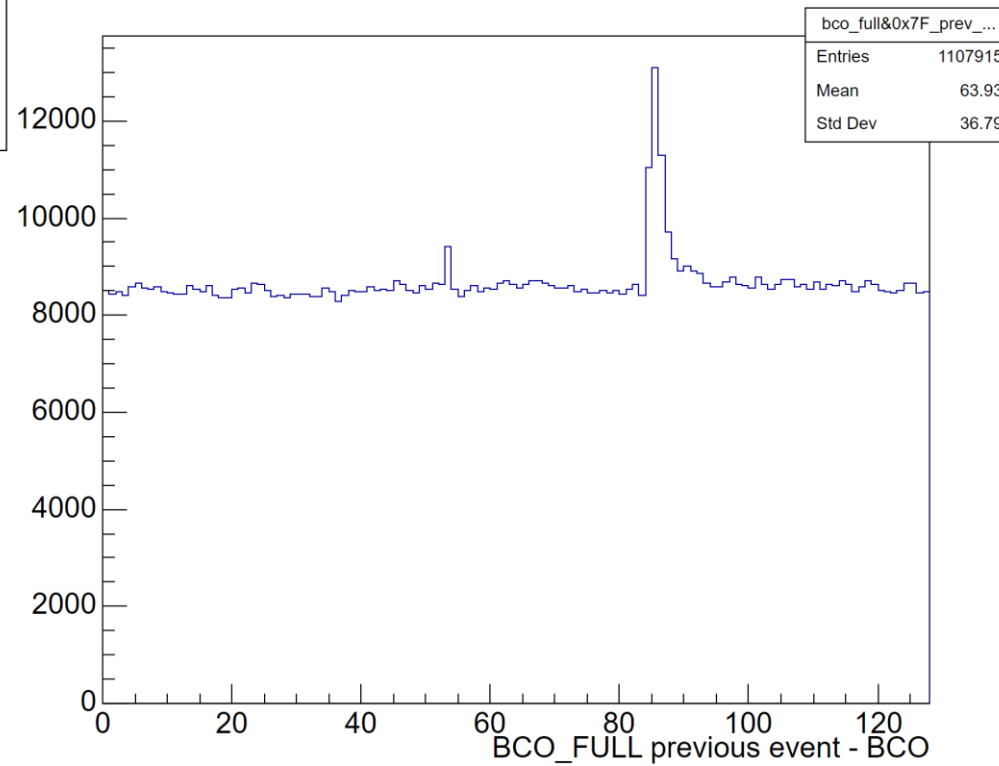
- Histogram with each BCOFULL-BCO value Filled only once within one event



Event Fraction vs Trigger Rate for Felix 0

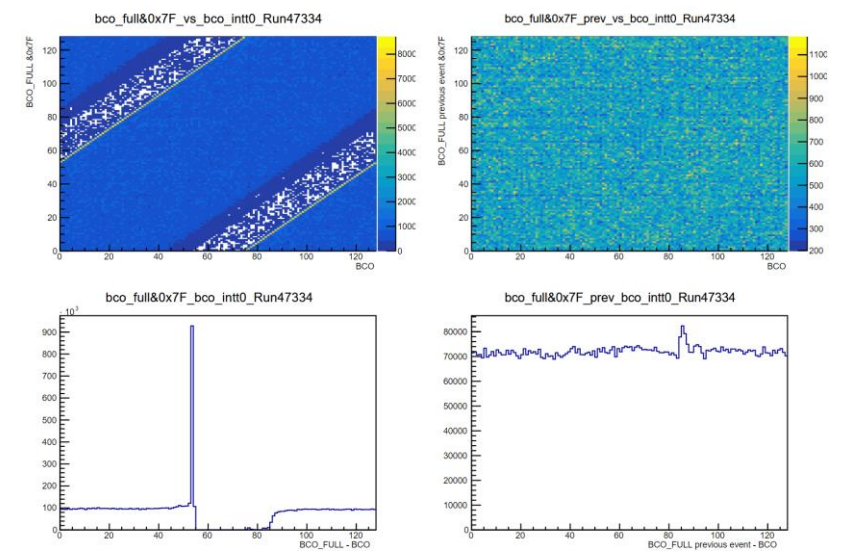


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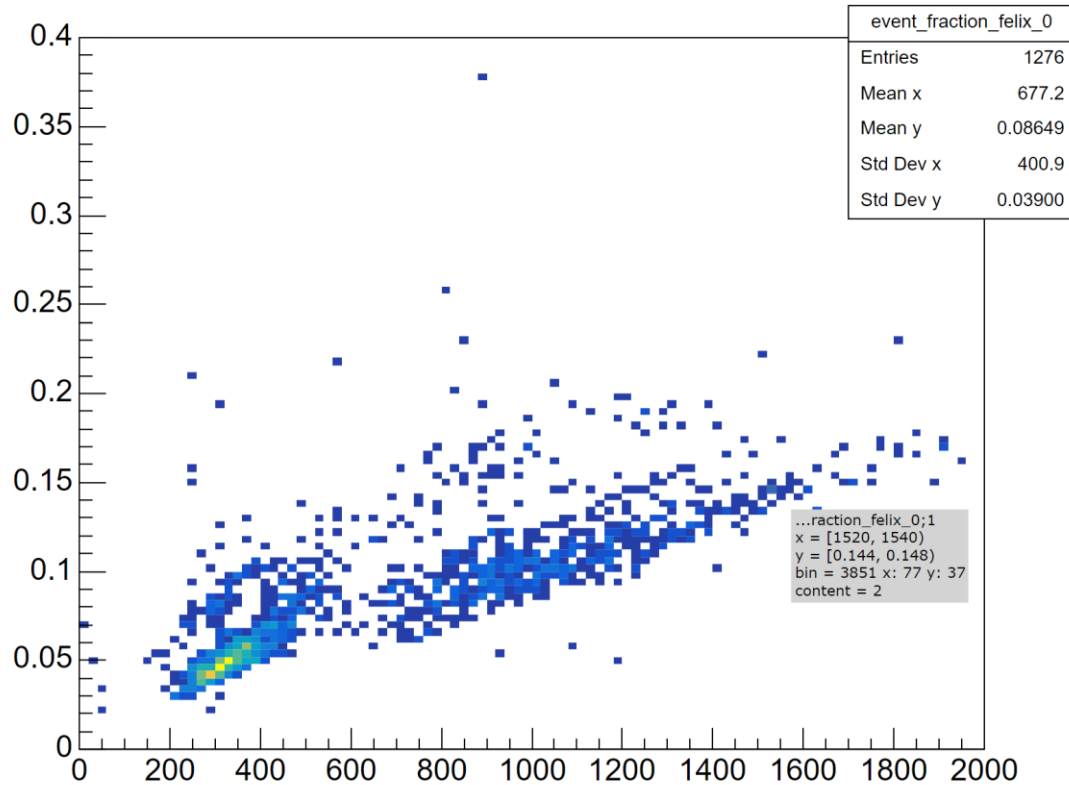


For Event fraction

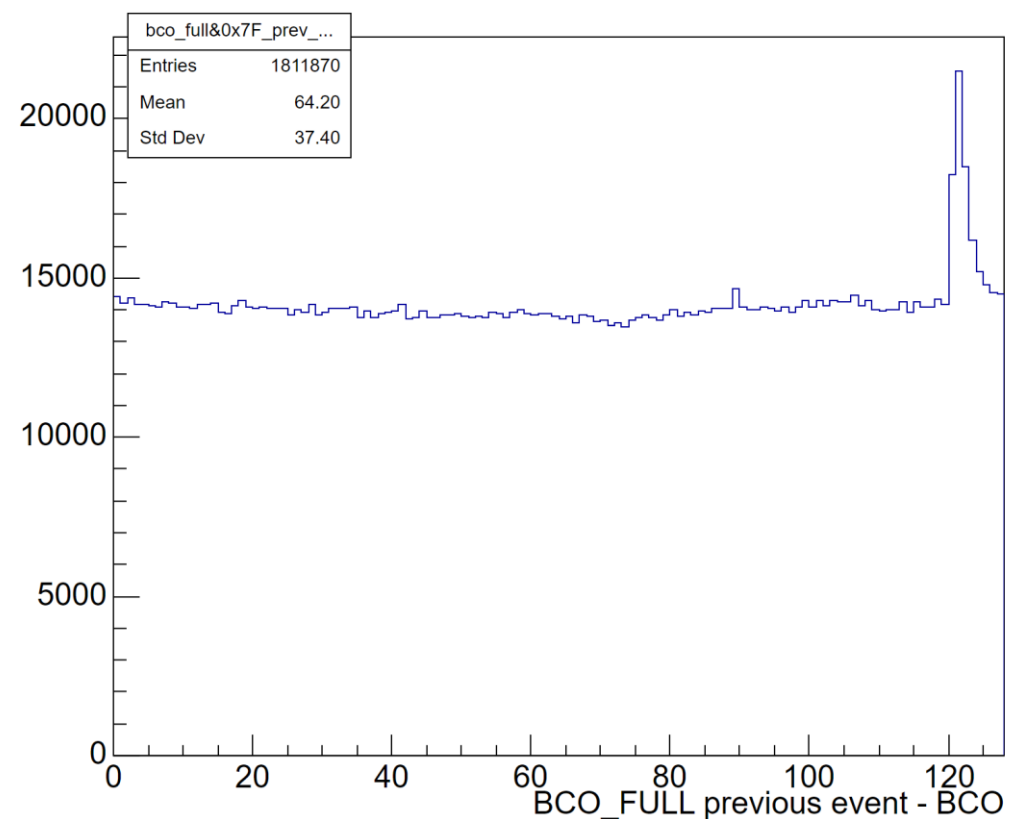
- Histogram with each BCOFULL-BCO value Filled only once within one event



Event Fraction vs Trigger Rate for Felix 0



bco_full&0x7F_prev_bco_forEvfraction0_Run47513



Next to do

- Check Event Mixup status inner and outer separately
- Make histogram for subtract Event of random hits from Mixup Event fraction(work in progress)
- Make histogram of correlation between Mixup Hit fraction and INTT hit rate(work in progress)
- Make plot that confirms that Event mixup is occurring with streaming readout data
- Make poster of streaming readout workshop at Dec.2