

Event Mixup

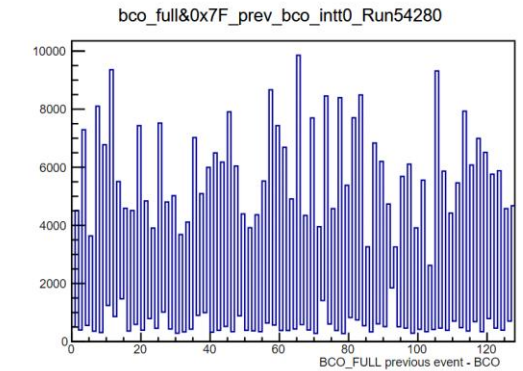
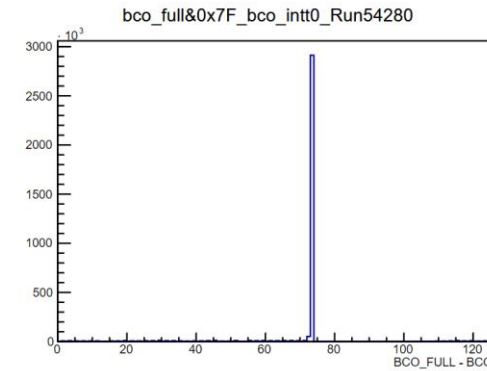
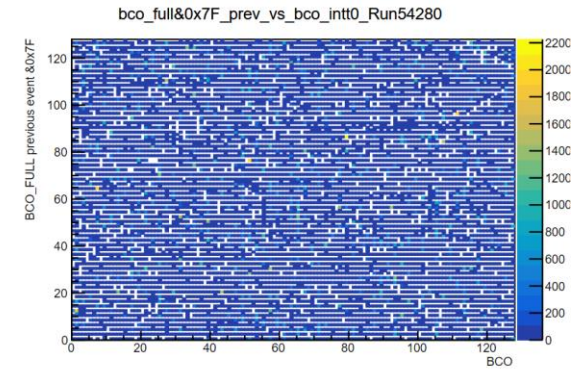
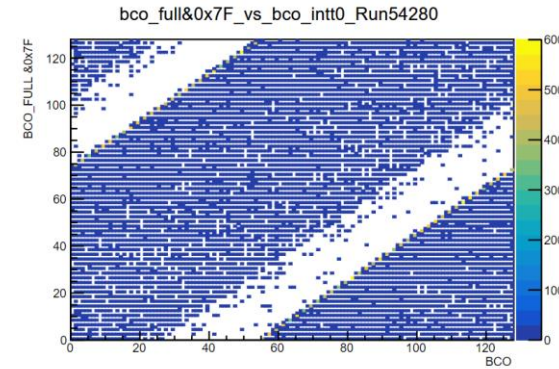
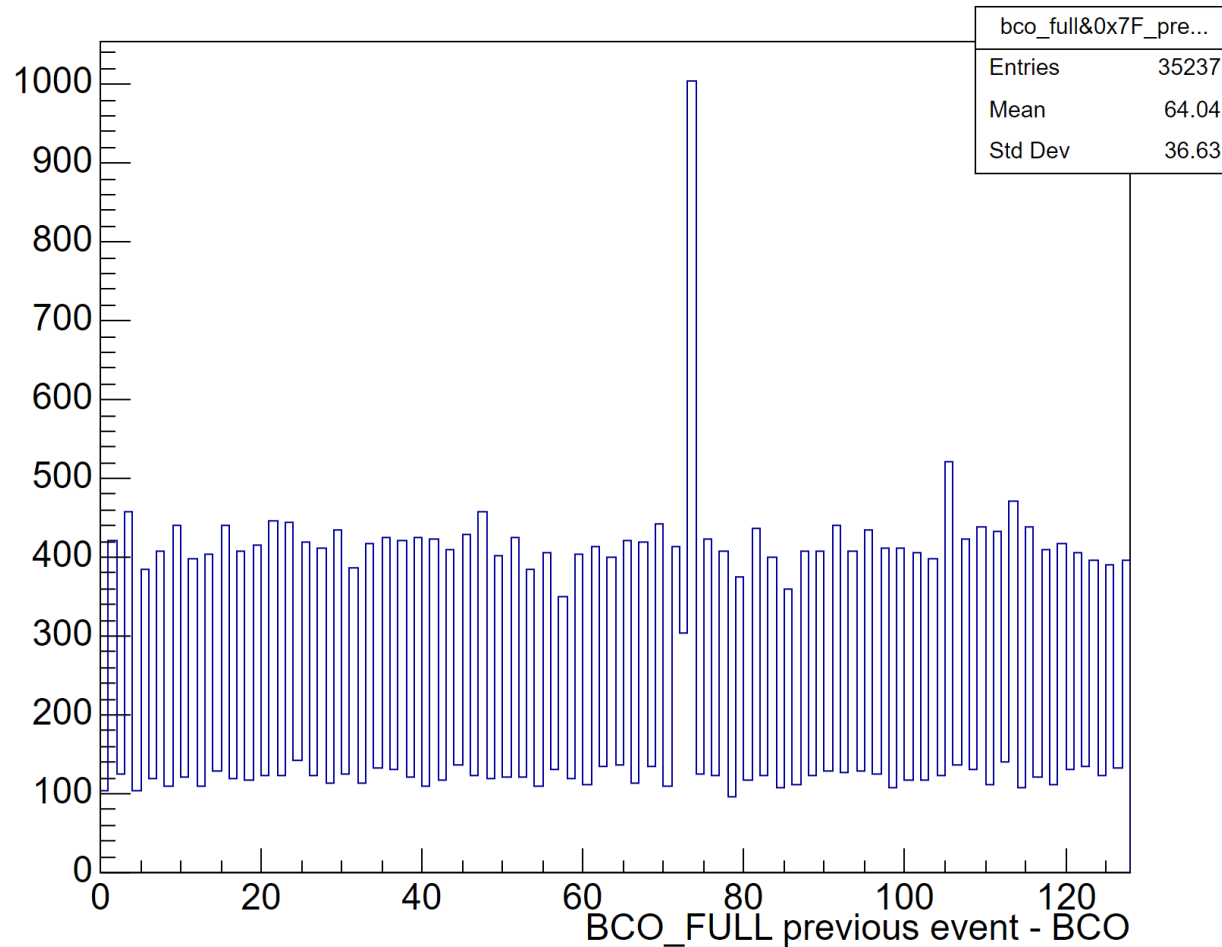
20241227

INTTMT

Mai Kano

Run54280 10k

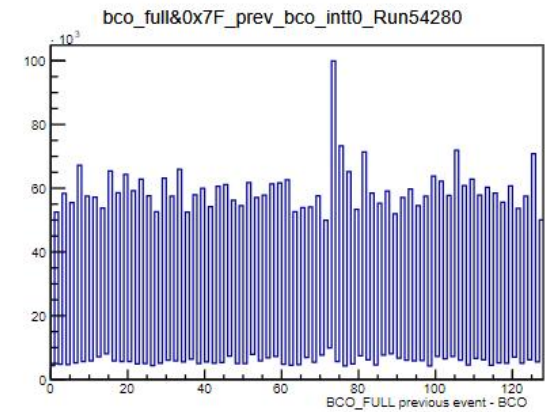
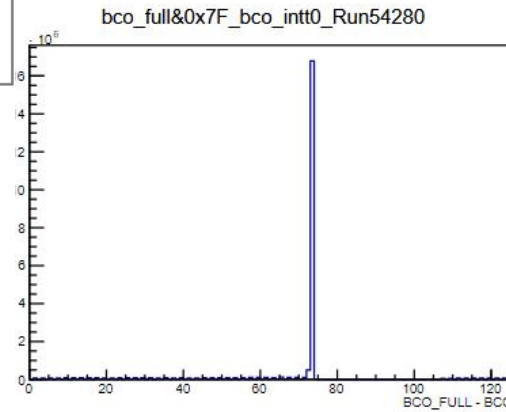
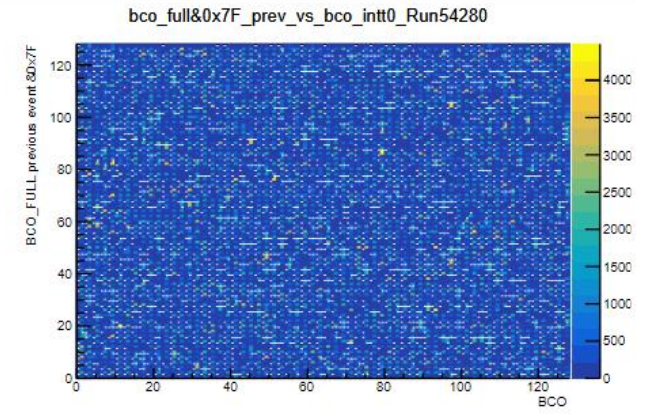
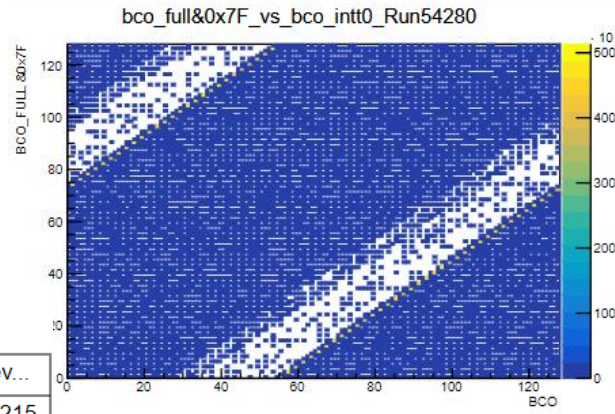
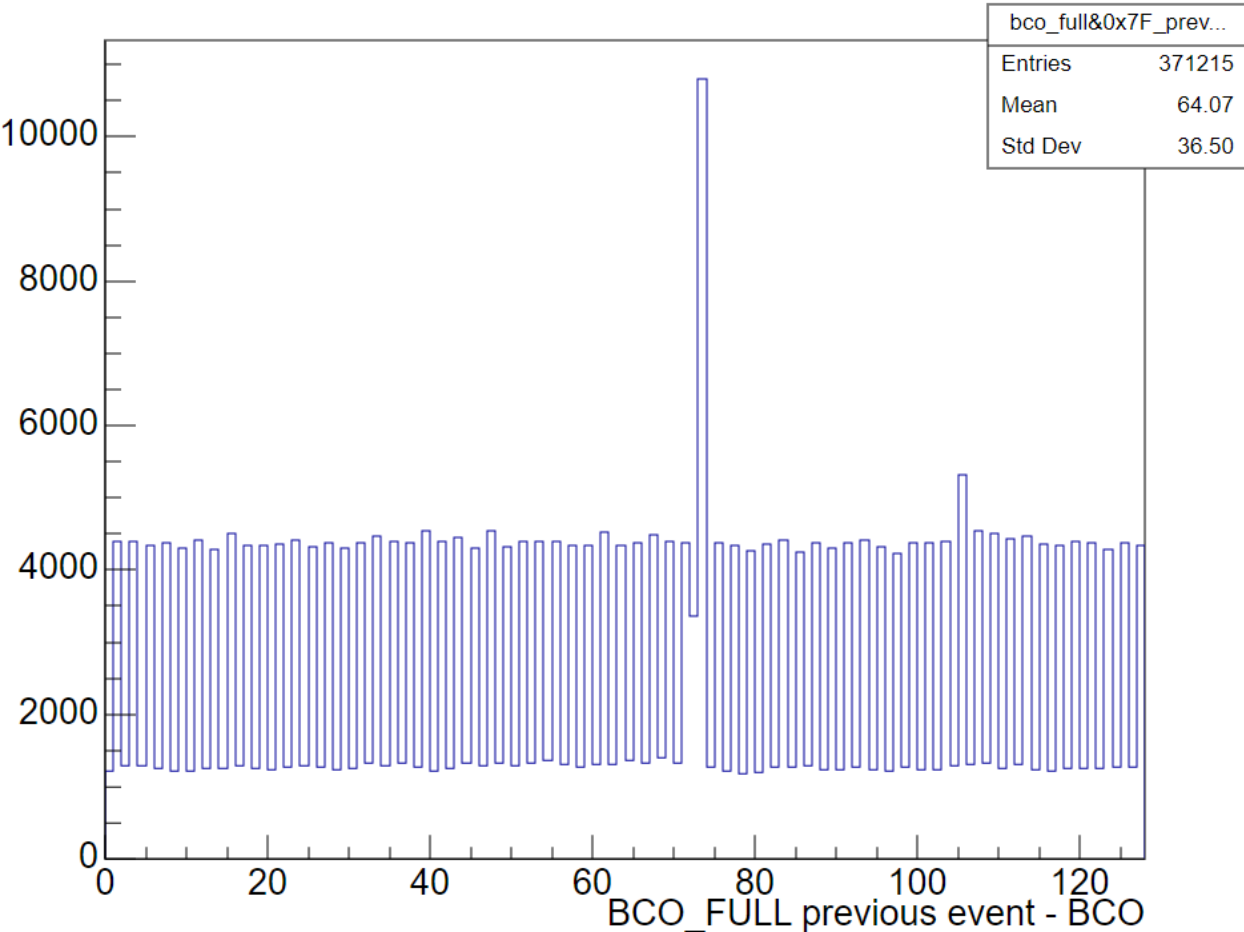
bco_full&0x7F_prev_bco_forEvfraction0_Run54280



- Histogram with each BCOFULL-BCO value Filled only once within one event
- Mixup peak entries are the number of events with Mixup hit

Run54280 100k

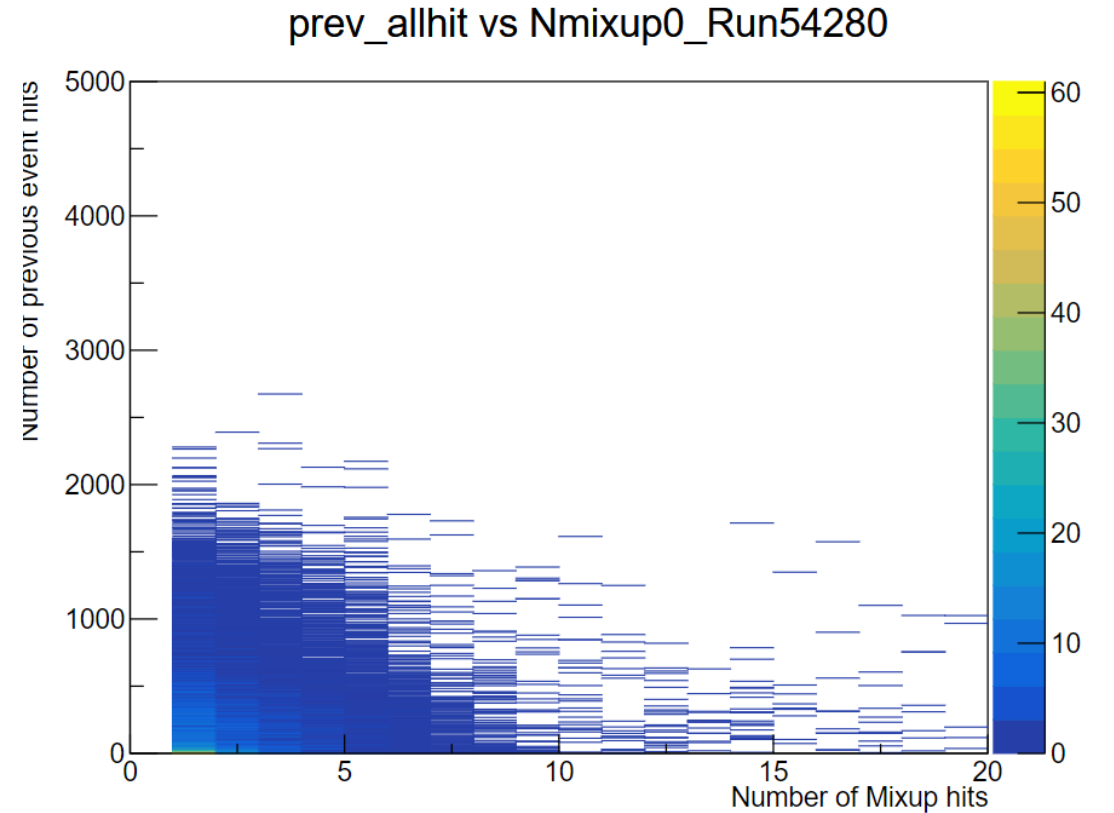
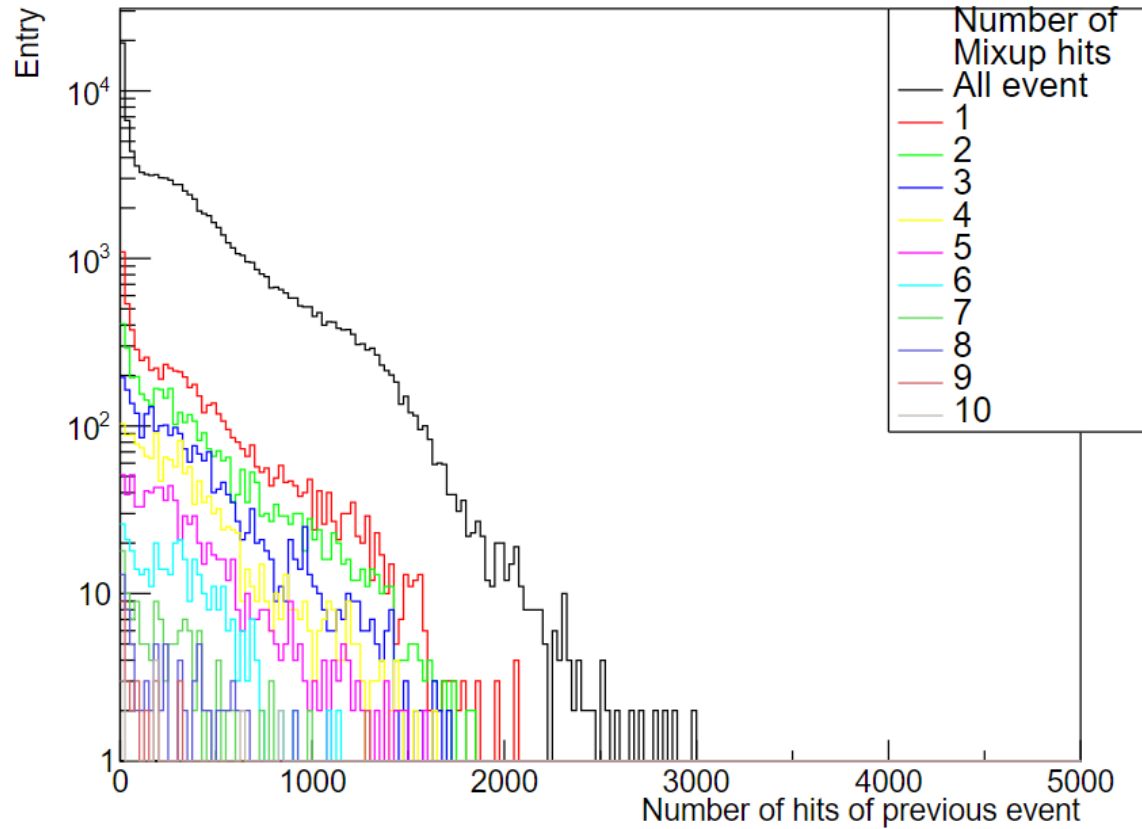
bco_full&0x7F_prev_bco_forEvfraction0_Run54280



- Histogram with each BCOFULL-BCO value Filled only once within one event
- Mixup peak entries are the number of events with Mixup hit. Random peak also.
- I will use this histogram to calculate statistically Mixup Event fraction

Run54280 100k

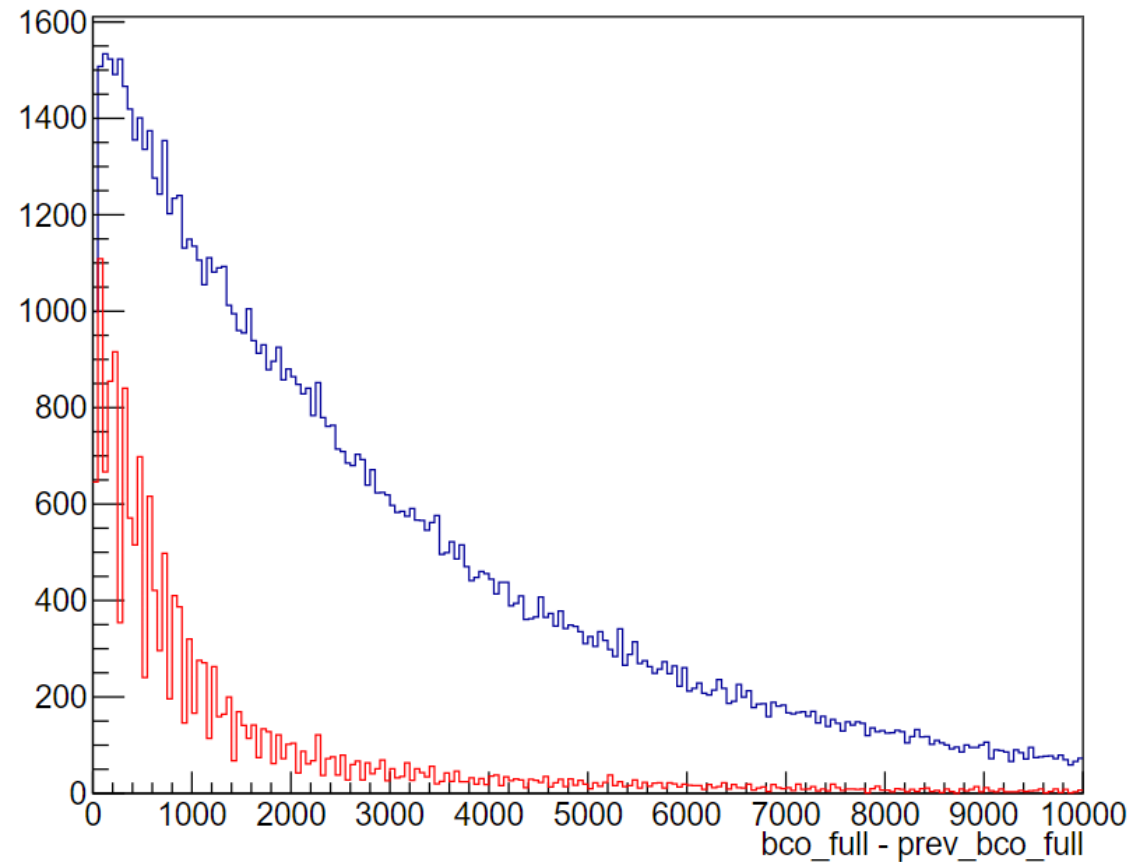
allmulti_intt0_Run54280: with clone cut



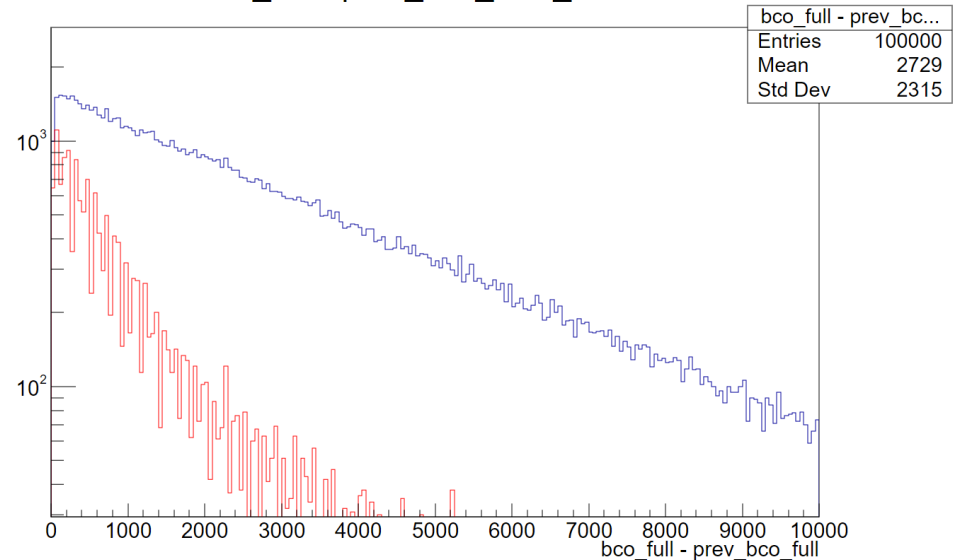
As for Multiplicity, I could not confirm the correlation as in Run23Au-Au

Collision interval Run54280

bco_full - prev_bco_full0_Run54280



bco_full - prev_bco_full0_Run54280



BCO_full – previous BCO_full(40bit)

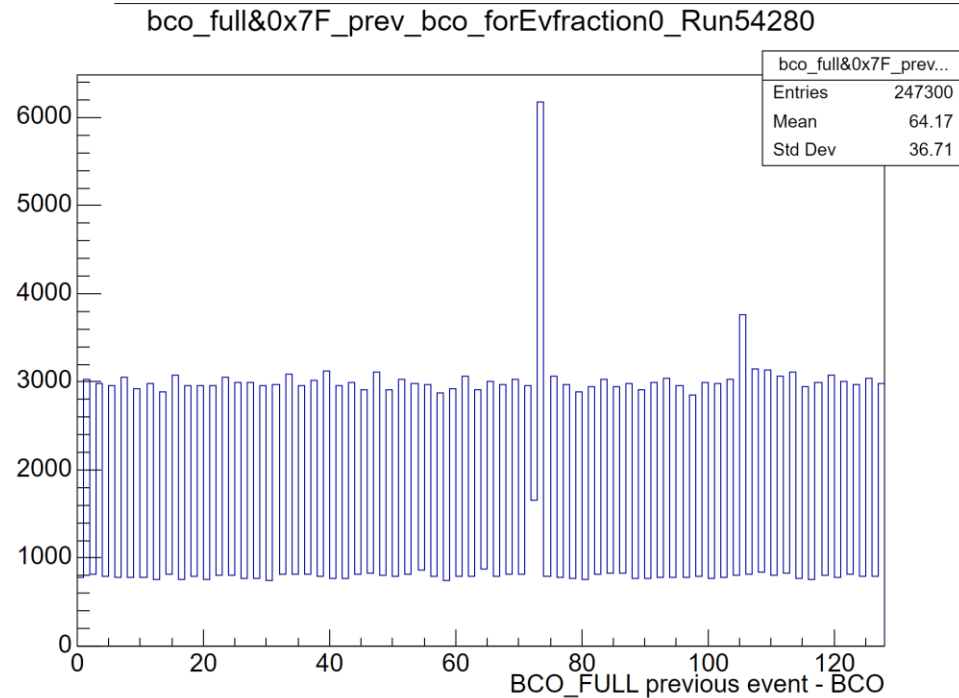
Blue: All Event

Red: Mixup Event(with at least 1 mixup hit)

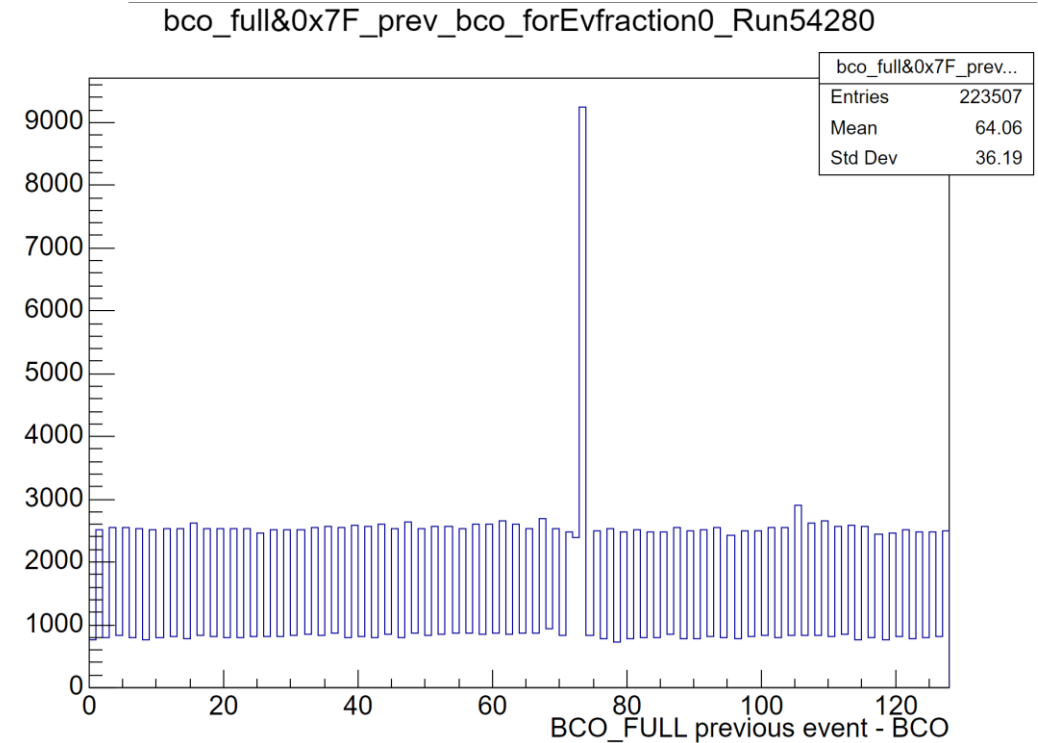
Distribution is different for all events and mixup events.

There have relation to mixup and collision interval

Inner layer

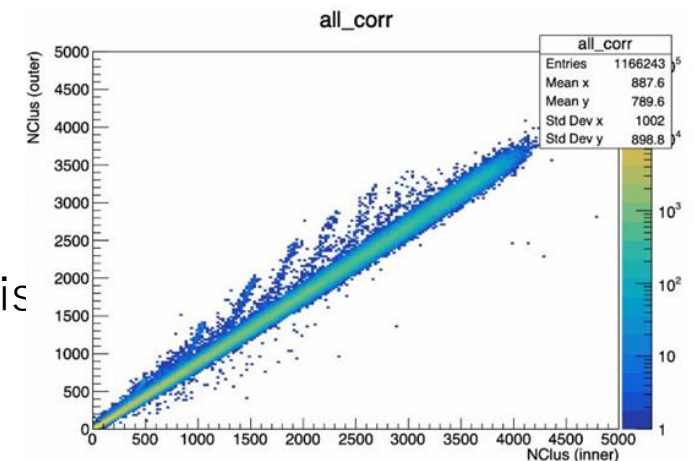


Outer layer



These results indicate that there are about 3000 mixup events in the inner layer and about 6000 mixup events in the outer layer, indicating that more mixups are occurring in the outer layer.

However, the CW analysis shows that hits are lost in the inner layer, which is not consistent with this.



Next to do

- If an event with $BCOFull_{-previous} < 61$ is cut in a Mixup analysis, whether the Event Mixup disappears (check for consistency with CW analysis).
- Calculate statistically Mixup Event fraction.