Event Mixup

20240906

INTTJPMT

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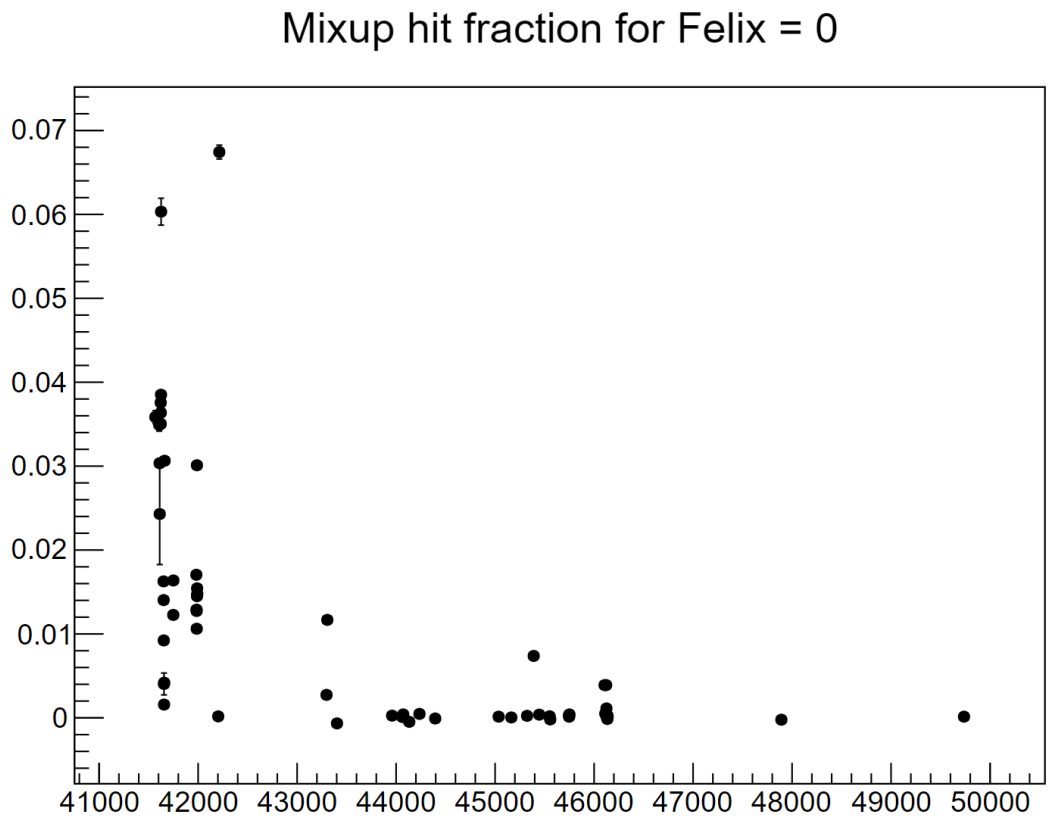
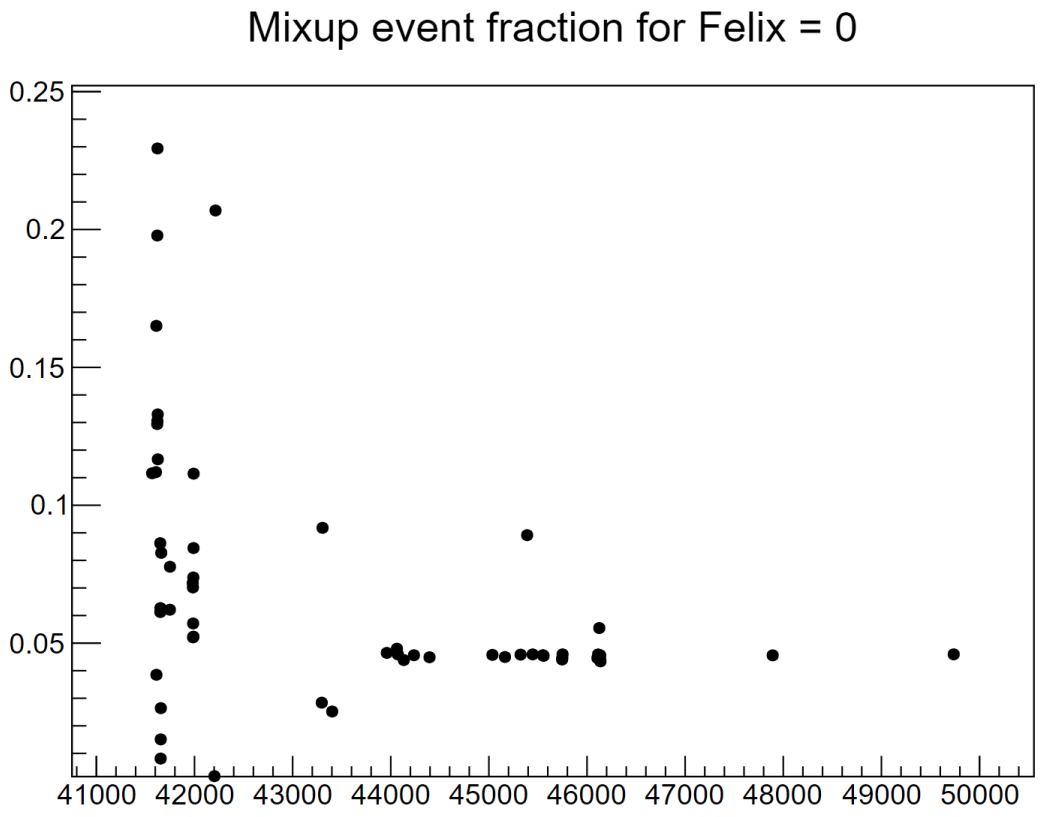
contents

- DSTファイル作成でバグが起きていて内容とRun番号が一致していなかった
- 調べていたRunを全て結果を作り直した
- 各RunごとにMixup のプロットを確認することはまだ出来ていないがMixup fractionの分布も作り、今までのと比べ変化があった

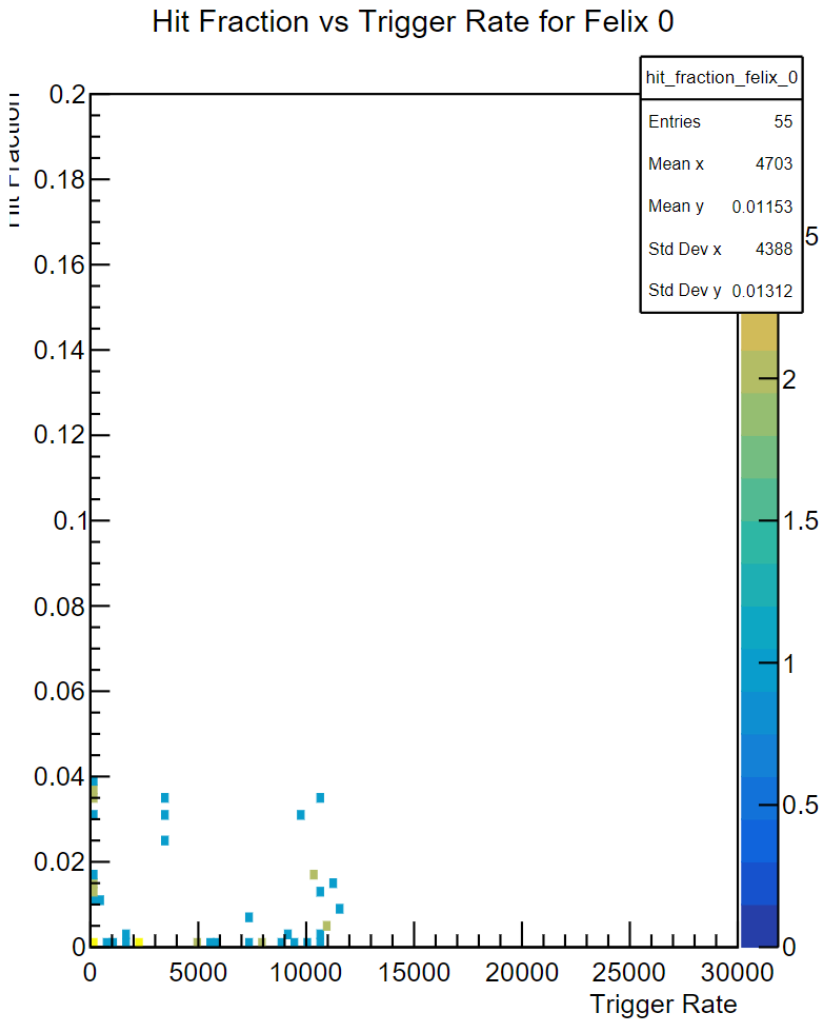
Run24 Mixup fraction intt0 >10min　old

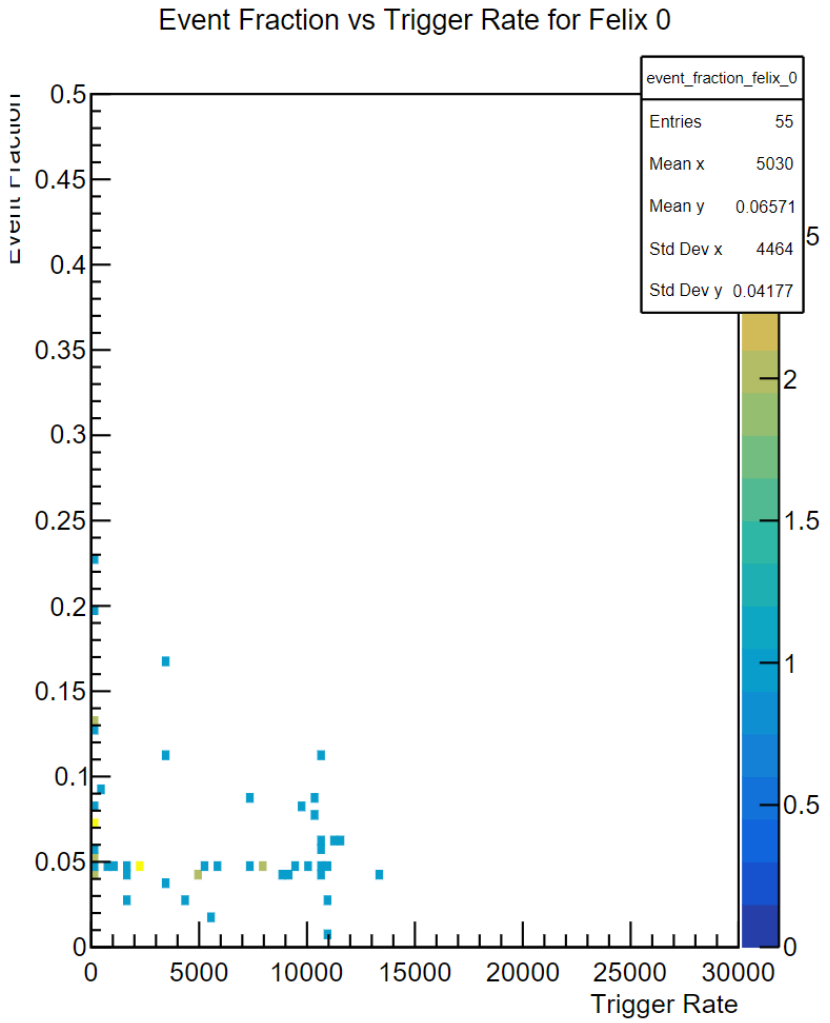




I will submit a plot of Run vs Mixup fraction only Runs with a measurement time of 10 minutes or more. Also, this trigger rate is the trigger rate obtained by dividing the total number of events scaled down by the duration

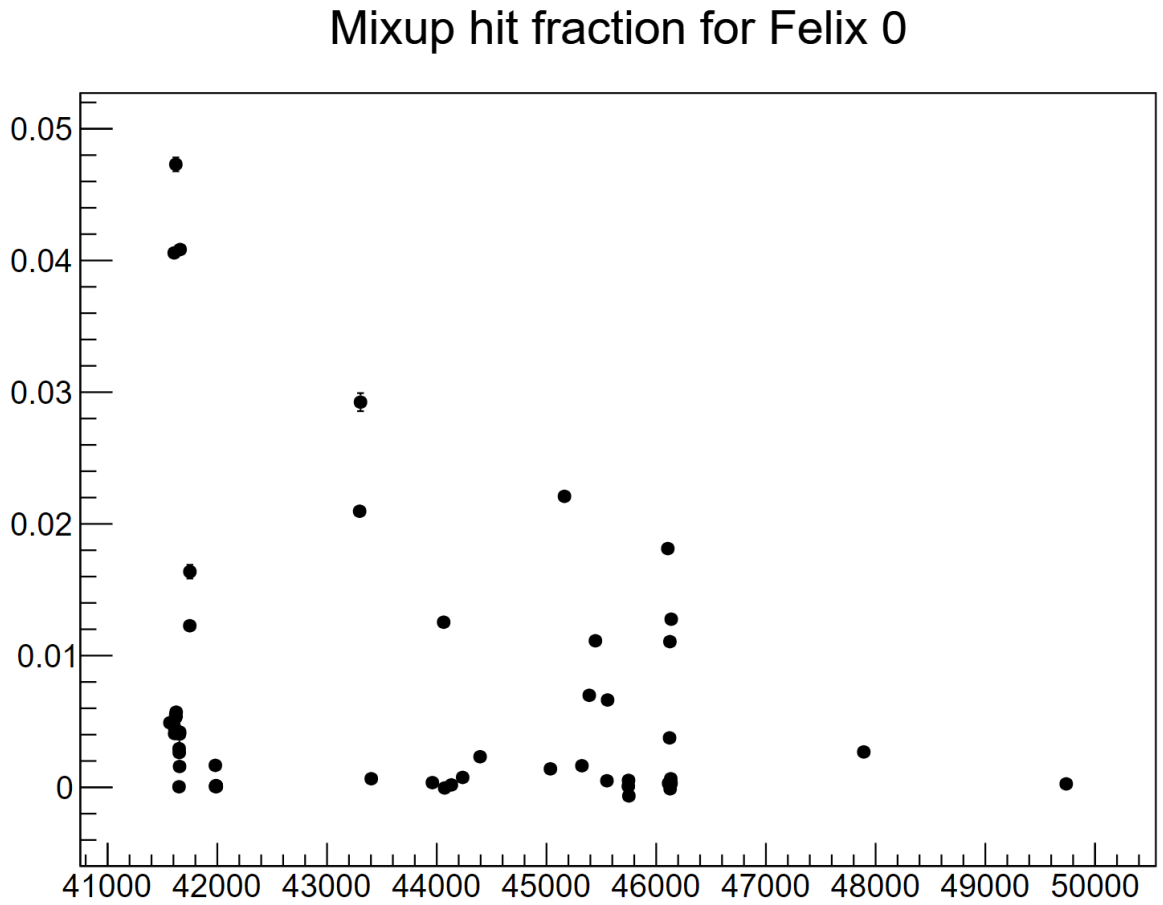
Mixup fraction vs trigger rate intt0 >10min old

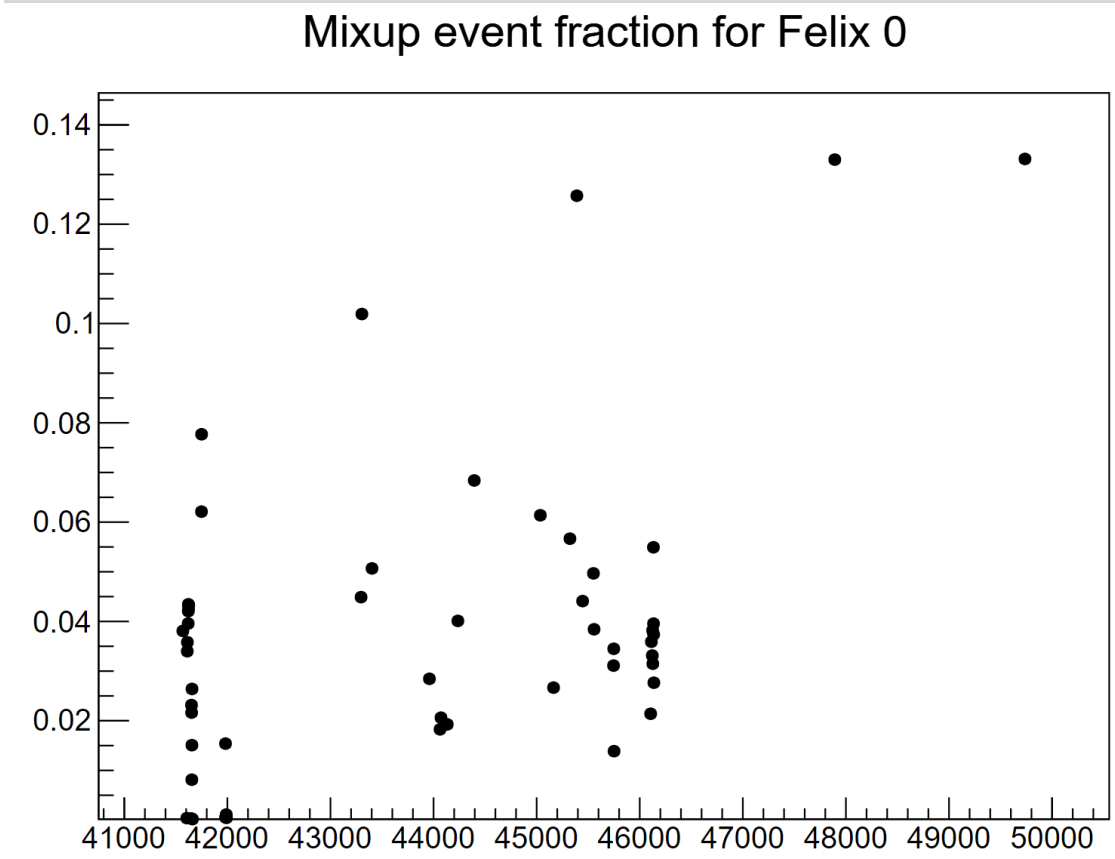




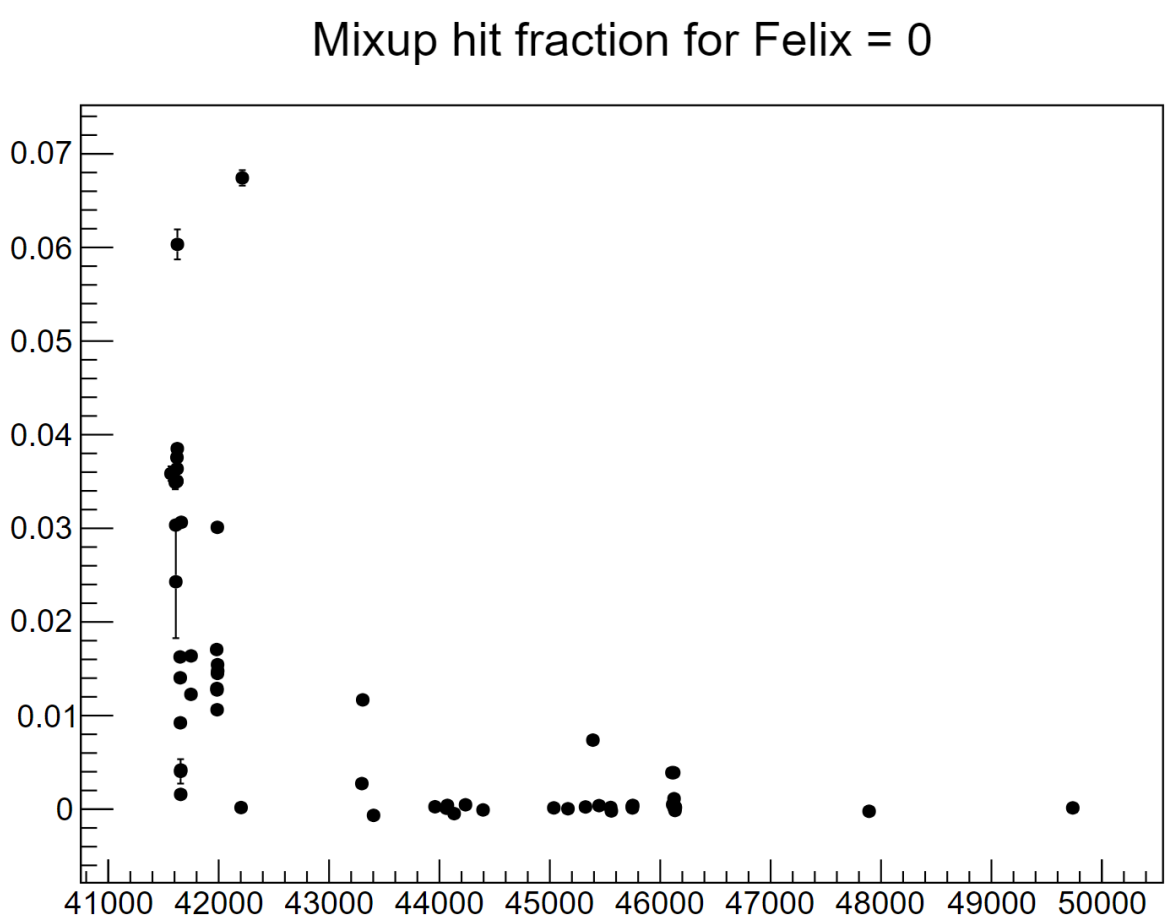
I will be submitting this plot as well, but the mixup fraction for each Run data will change after the reanalysis, so this plot will change as well.
After that I will check Mixup have trigger rate dependence or no.

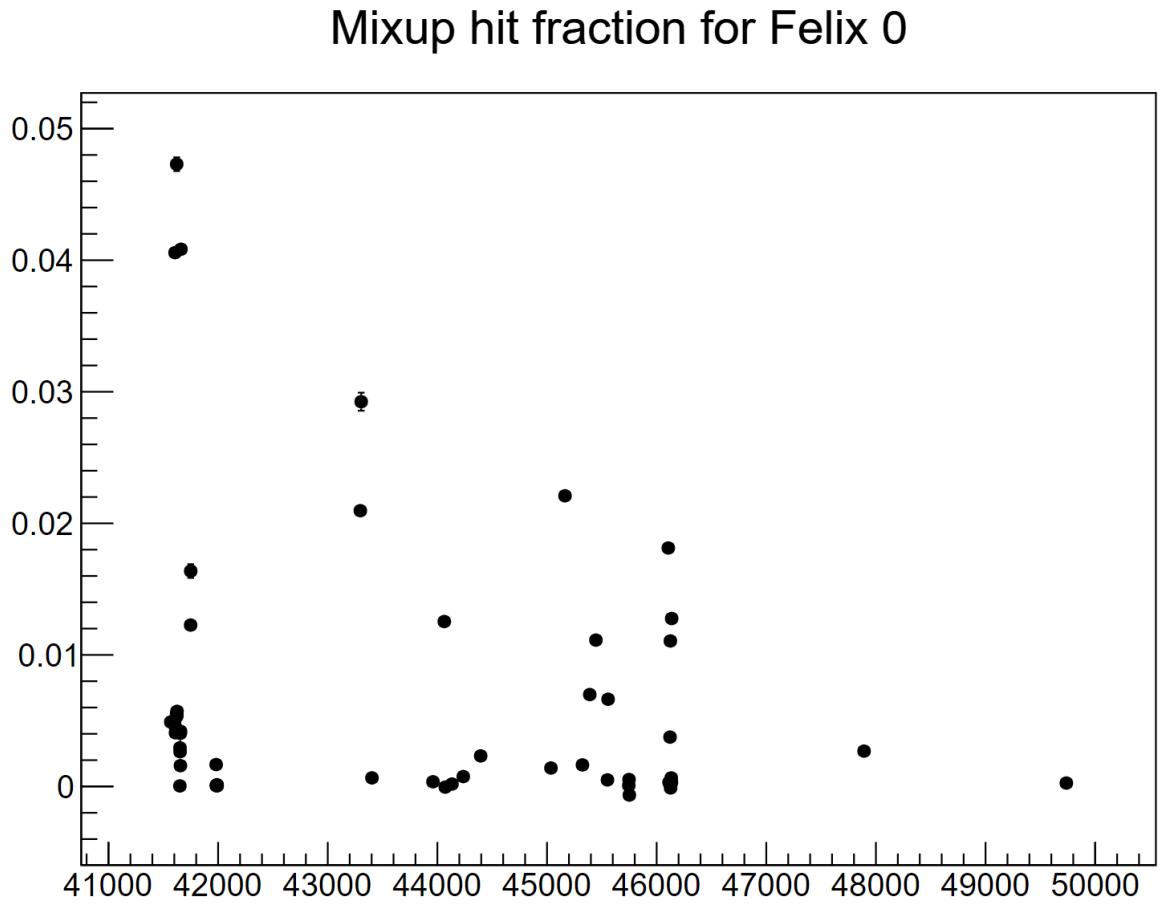
Run24 Mixup fraction intt0 >10min



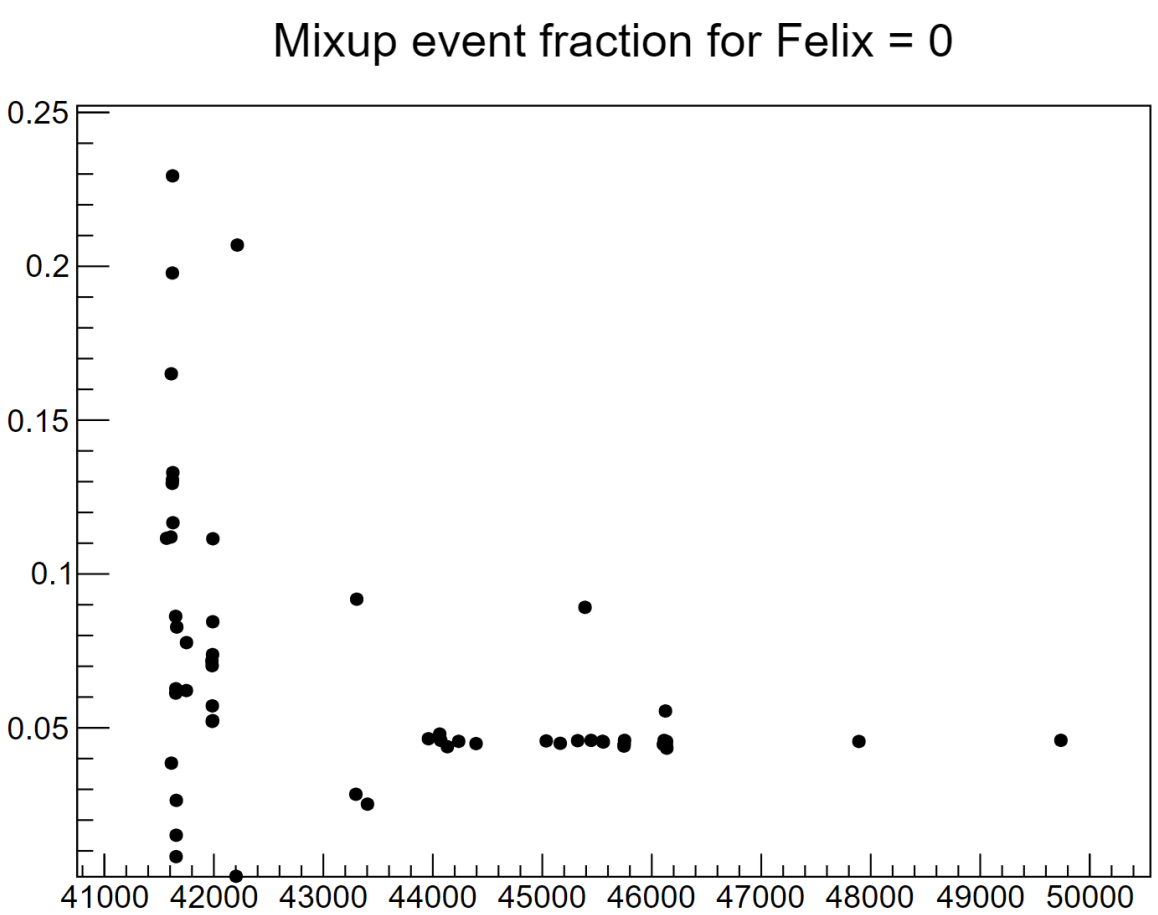


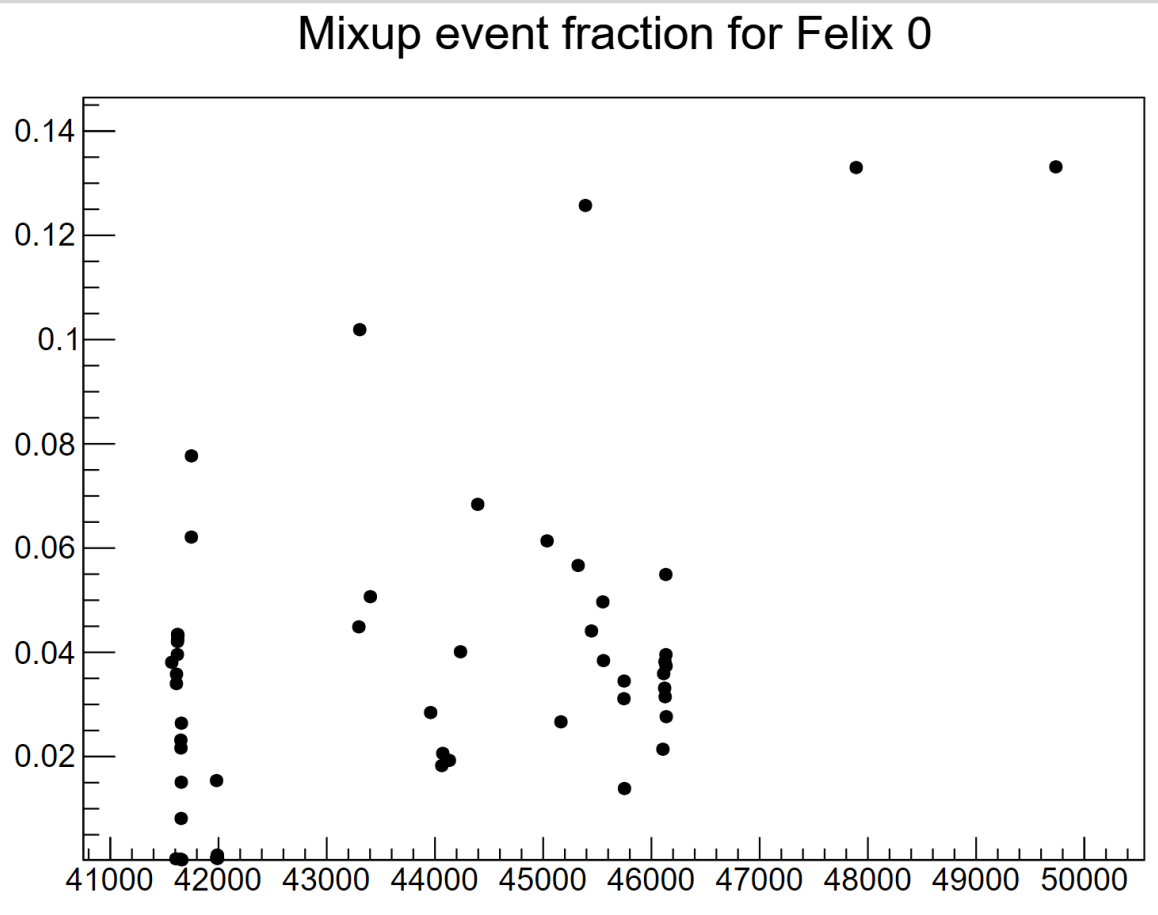
Run24 Mixup fraction intt0 >10min



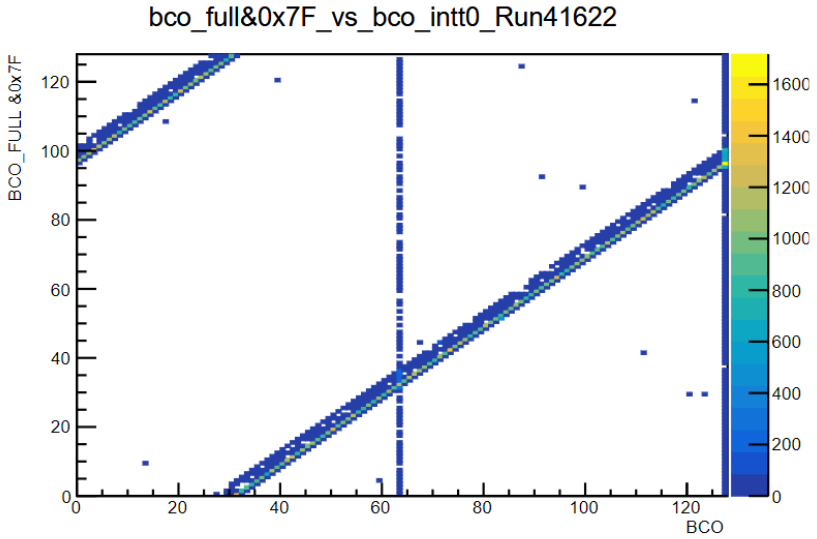


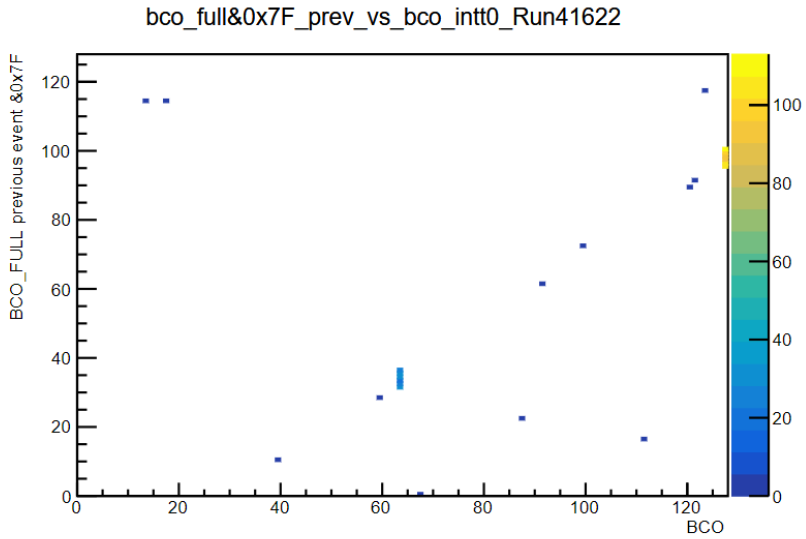
Run24 Mixup fraction intt0 >10min

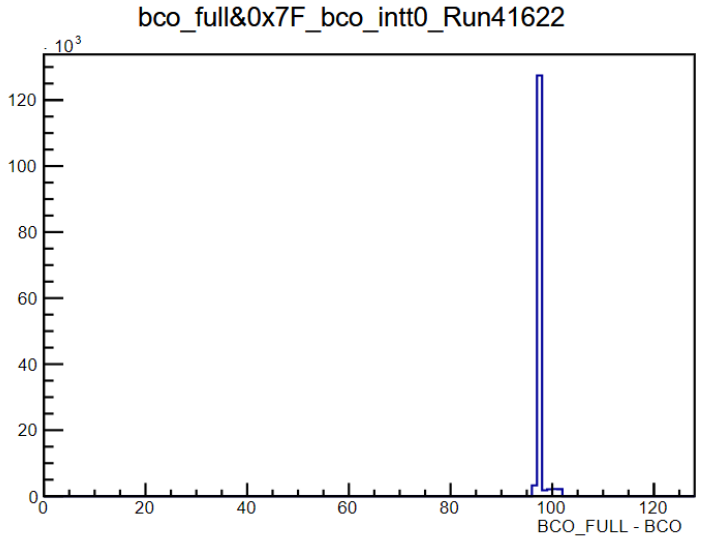


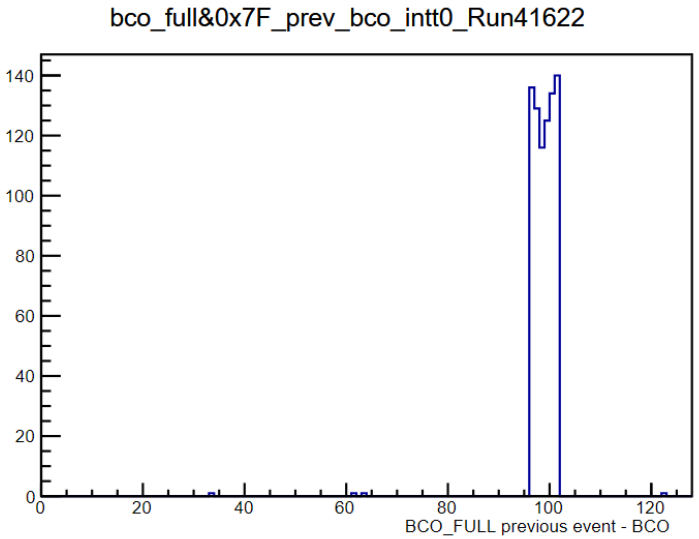


Run41622 intt0 high hit fraction

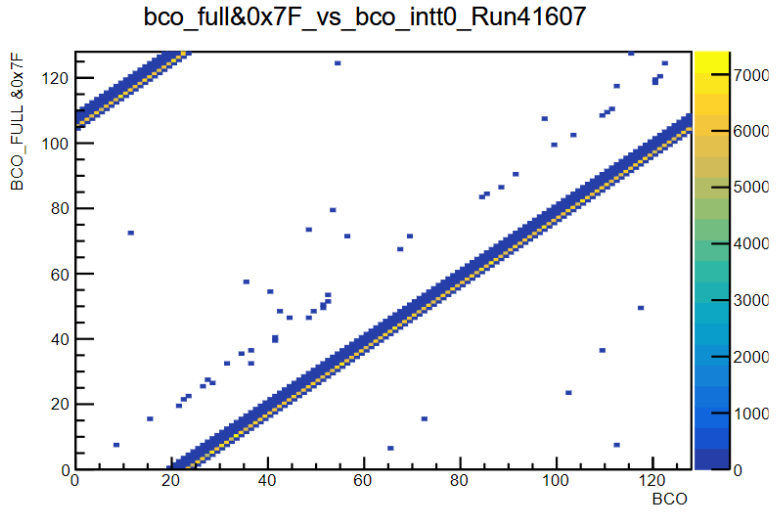


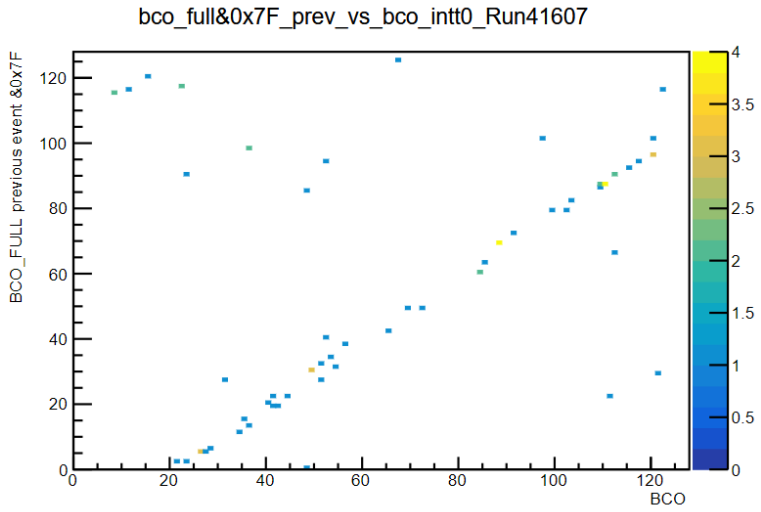


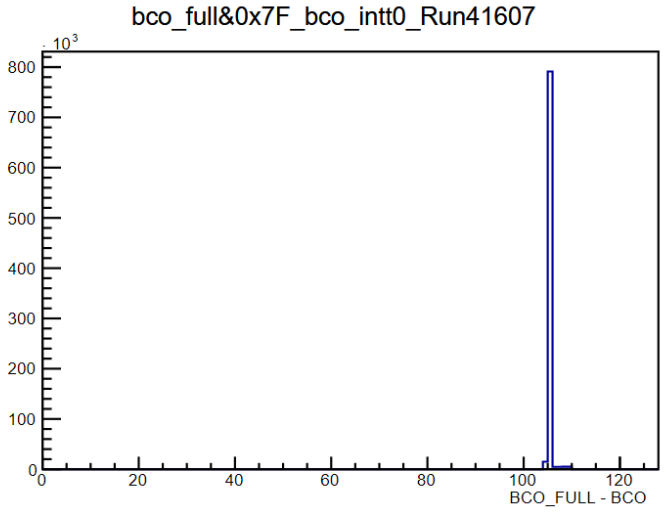


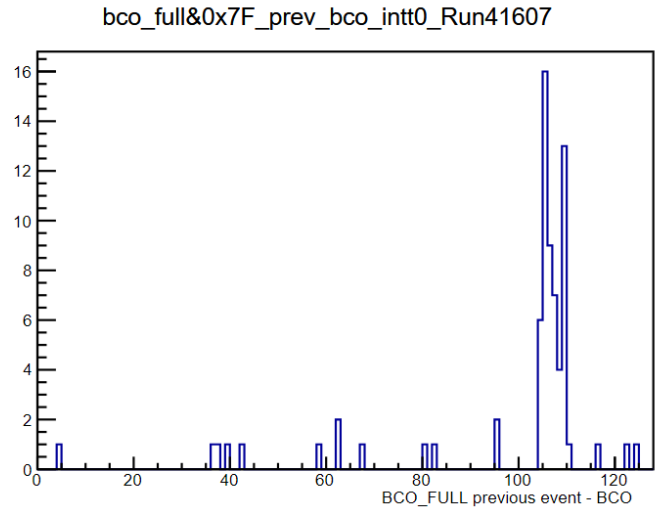


Run41607 intt0 high hit fraction

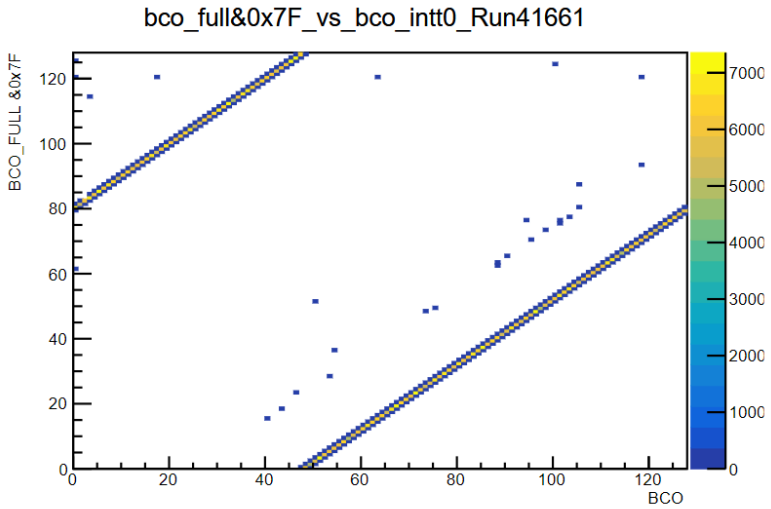


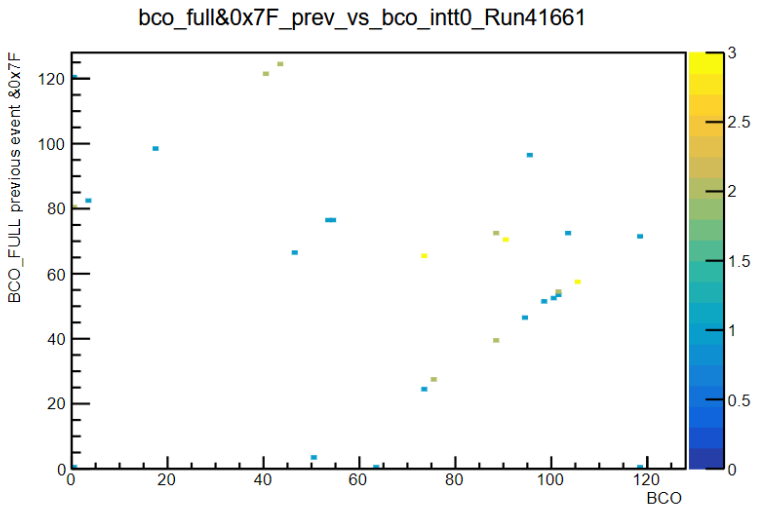


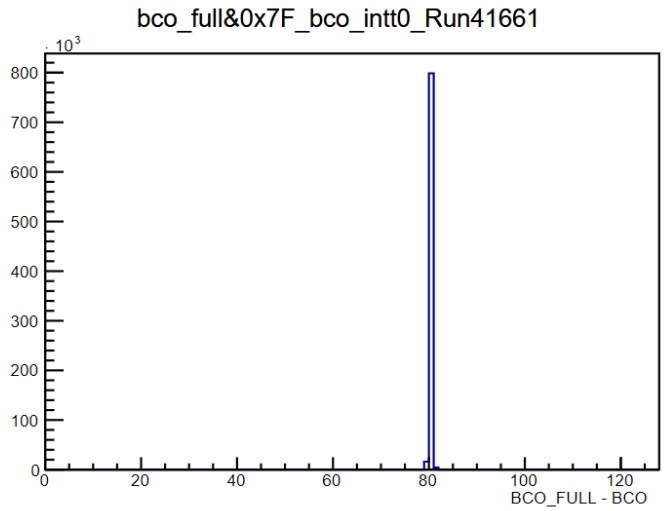


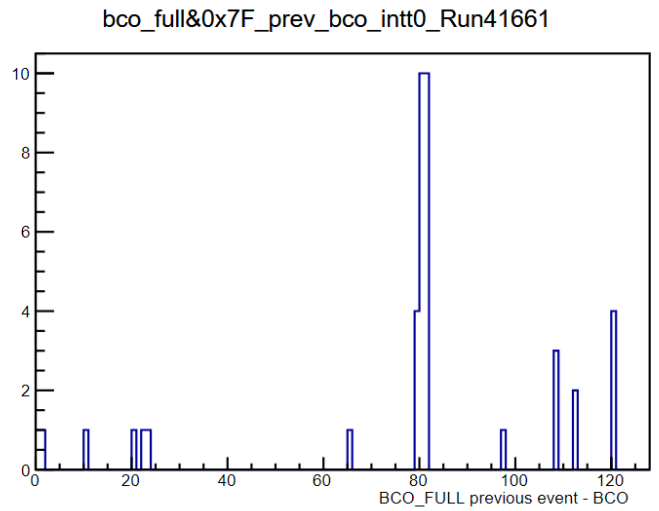


Run41661 intt0 high hit fraction

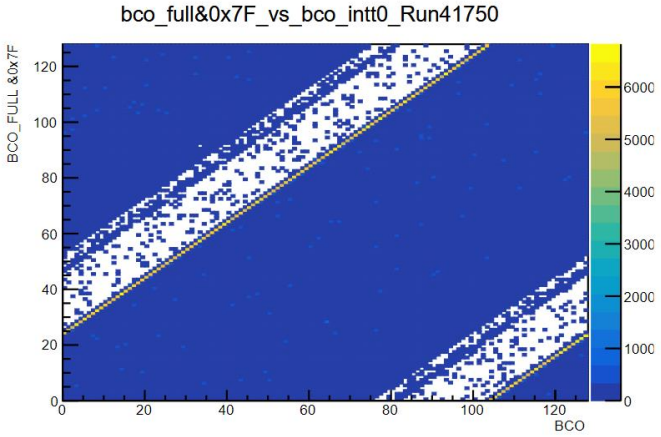


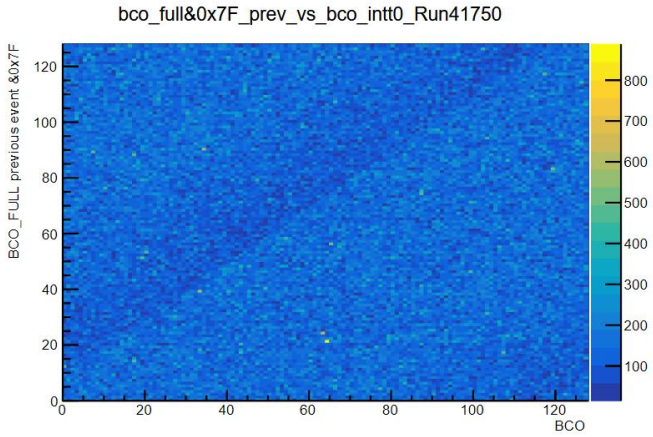


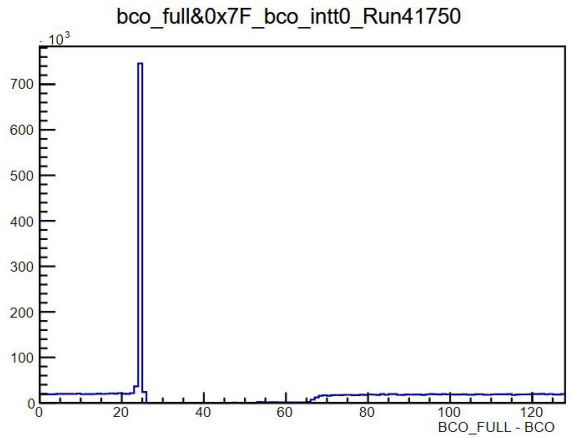


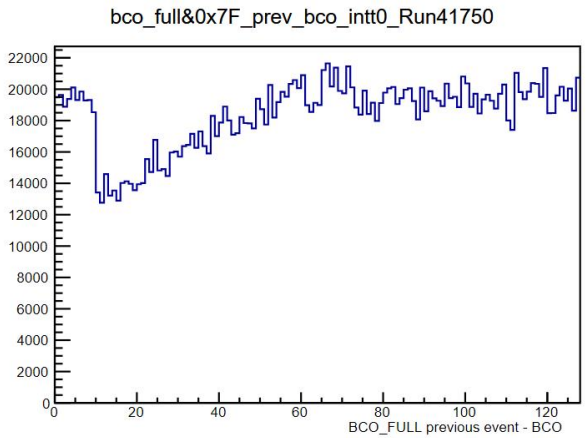


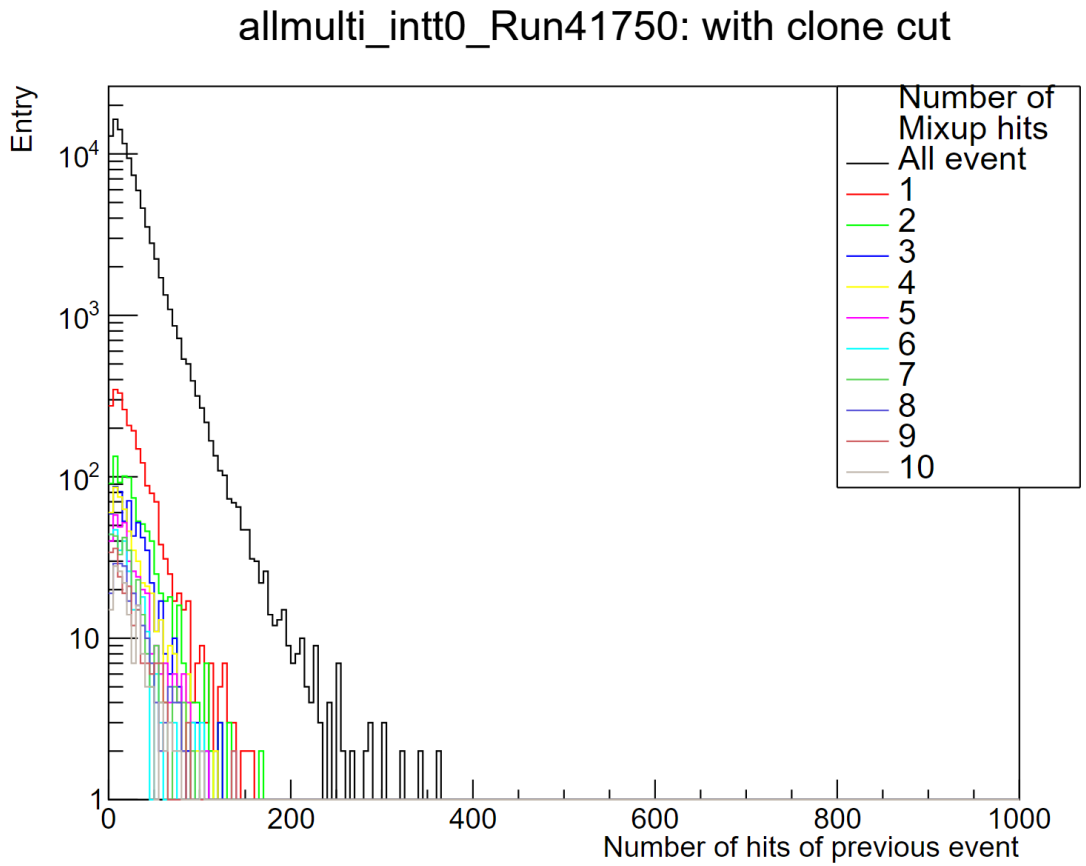
Run41750 intt0 high Event fraction



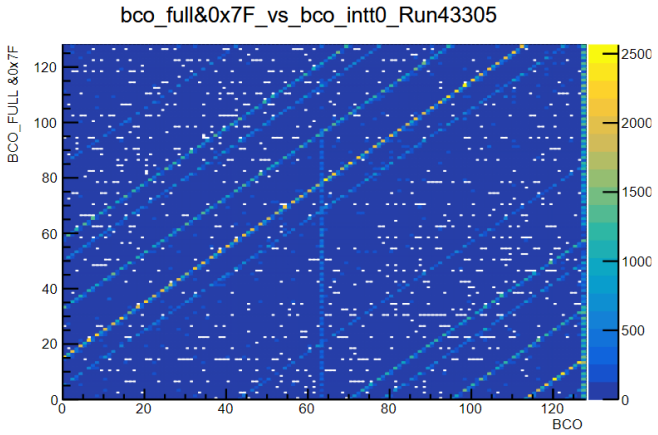


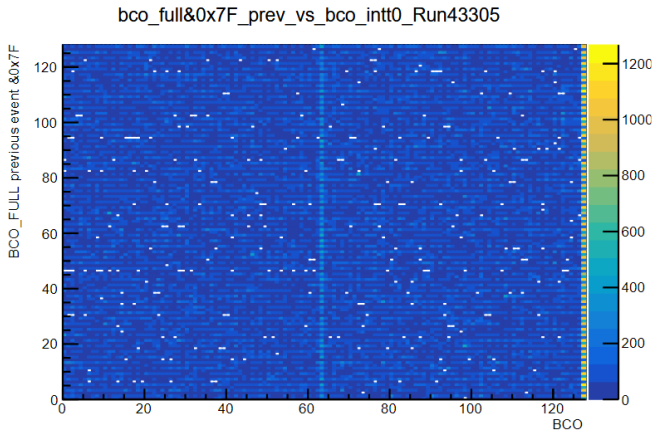


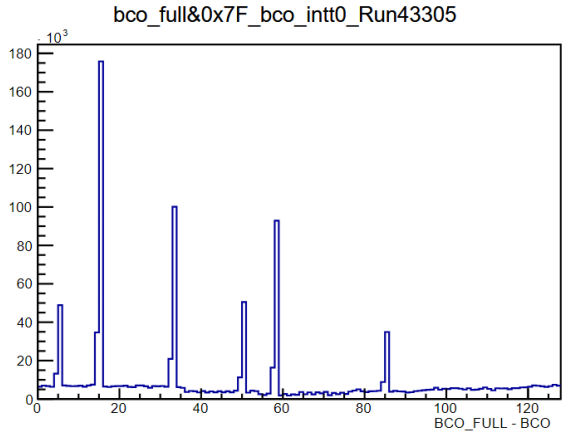


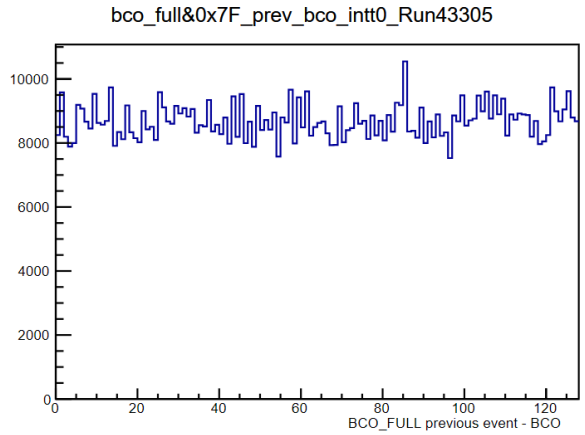


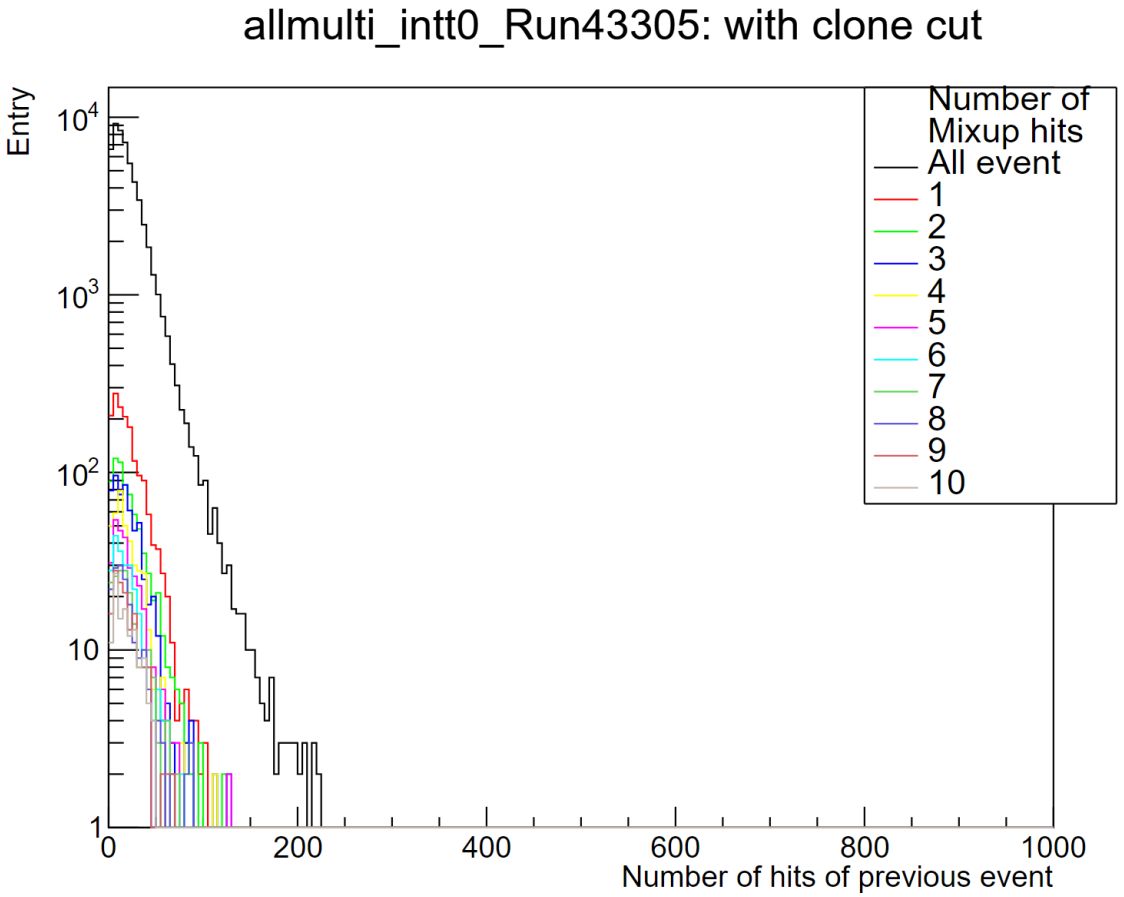
Run43305 intt0 high Event fraction



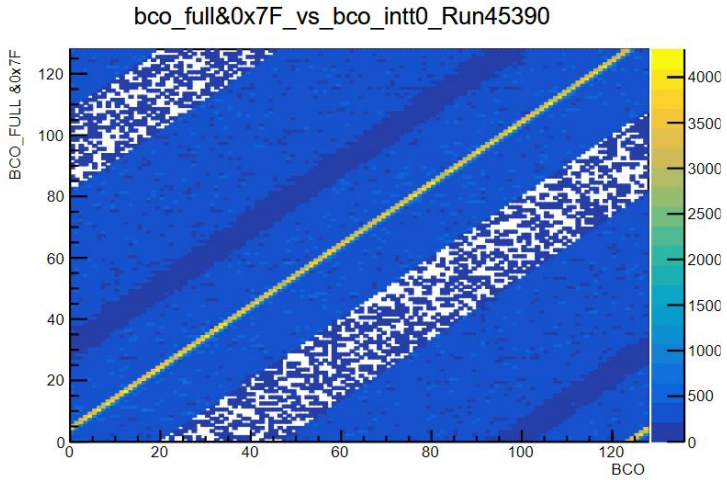


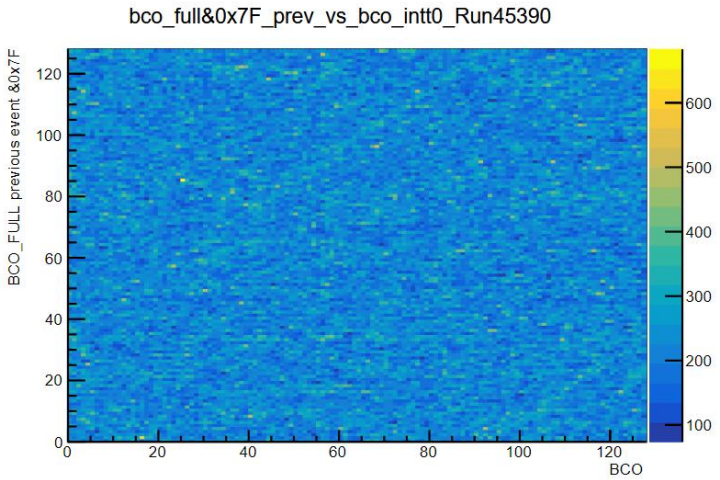


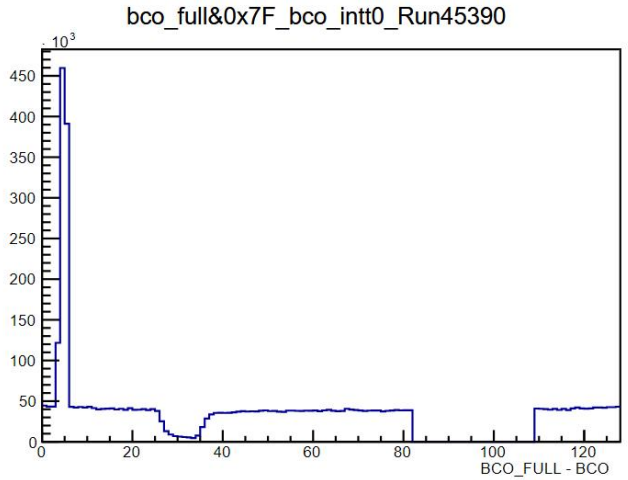


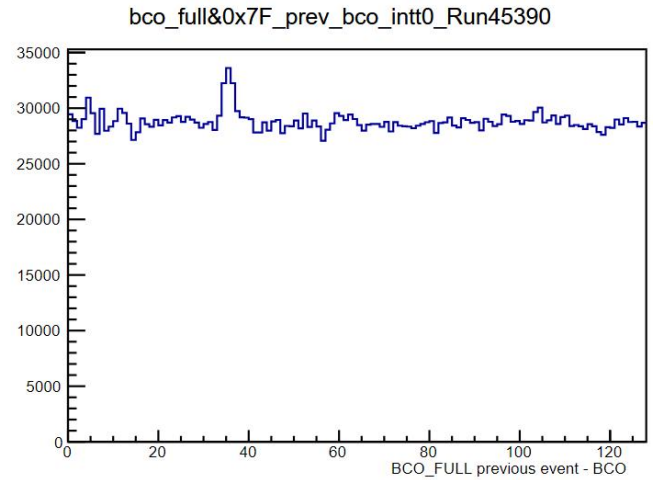


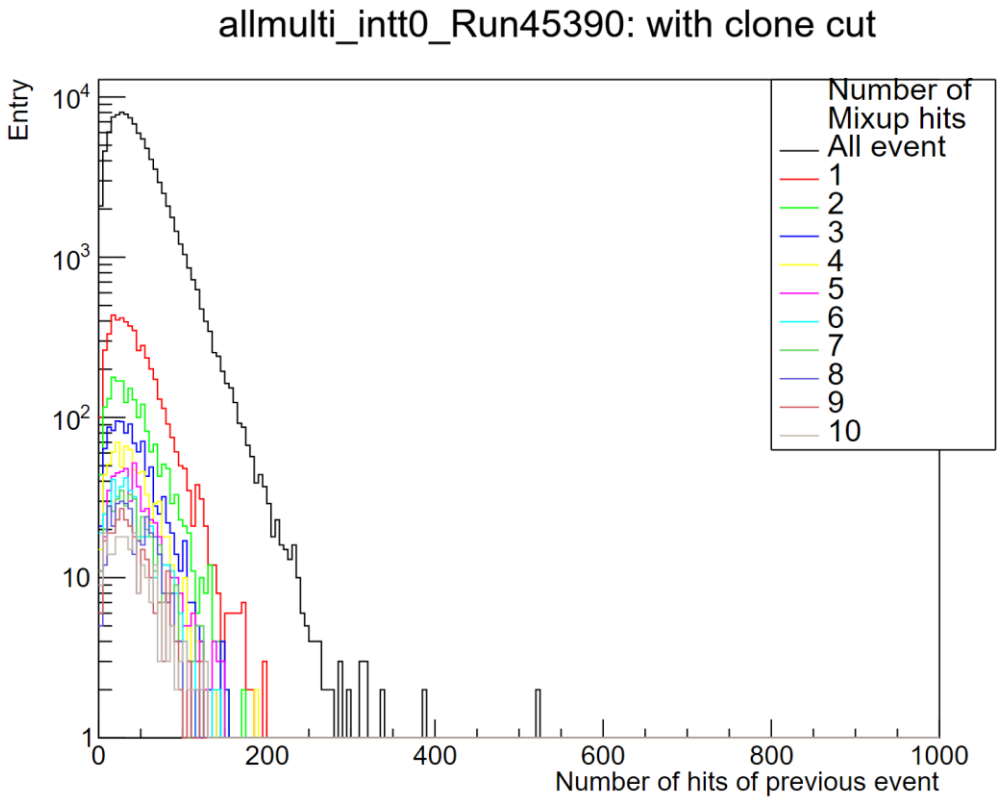
Run45390 intt0 high Event fraction



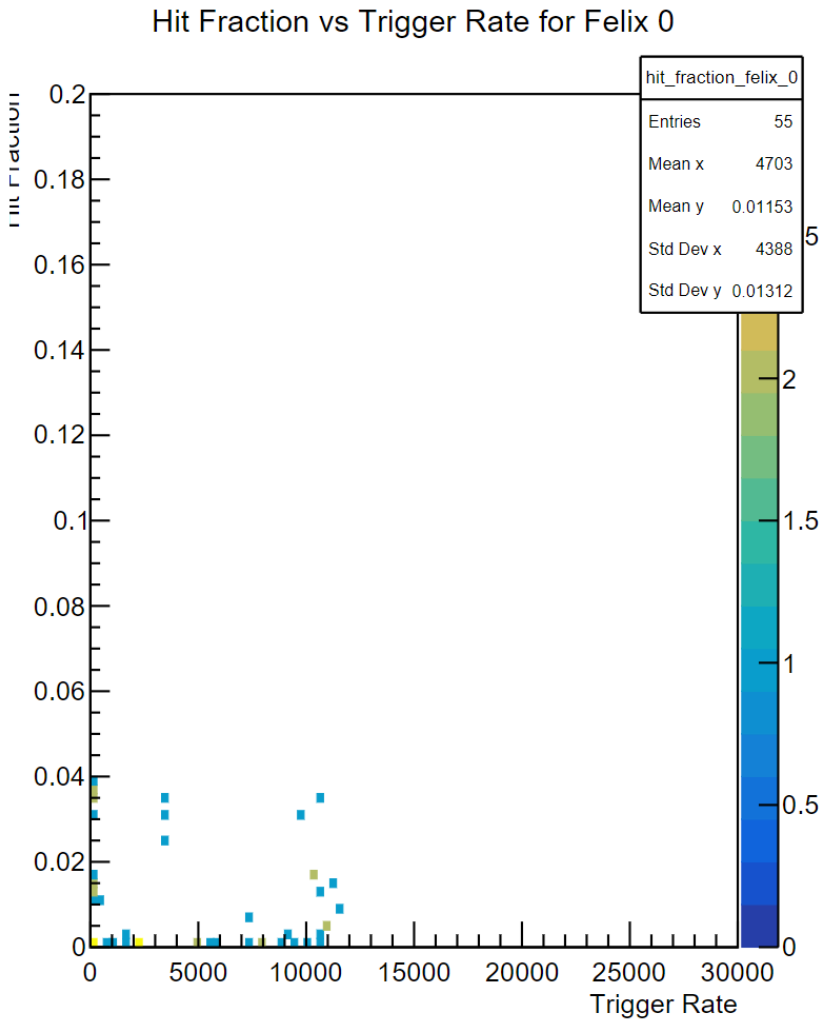


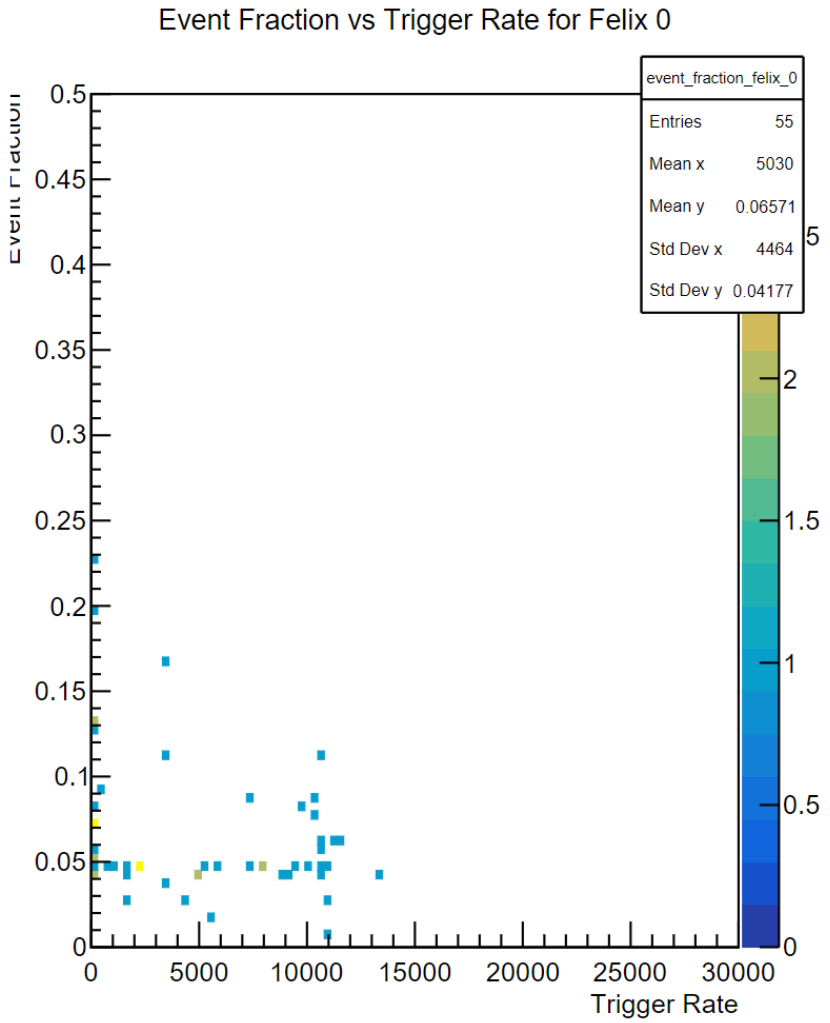






Mixup fraction vs trigger rate intt0 >10min old





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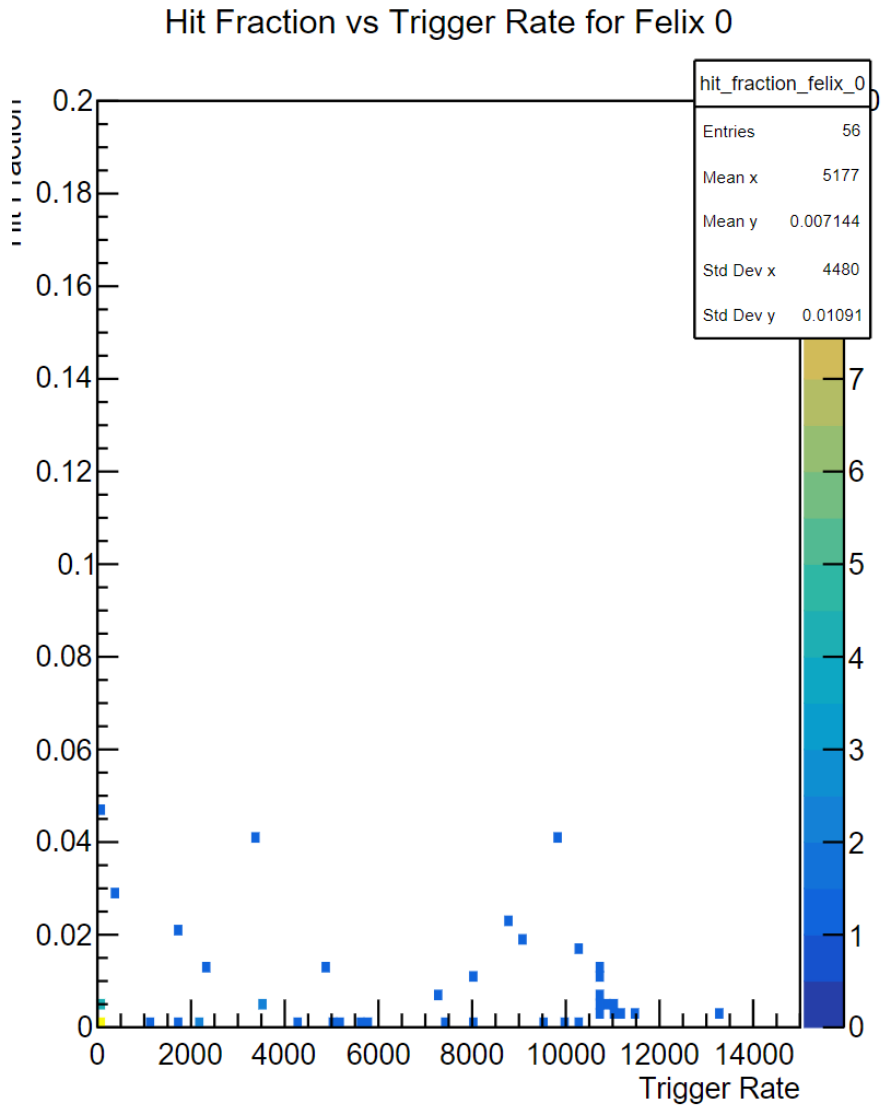
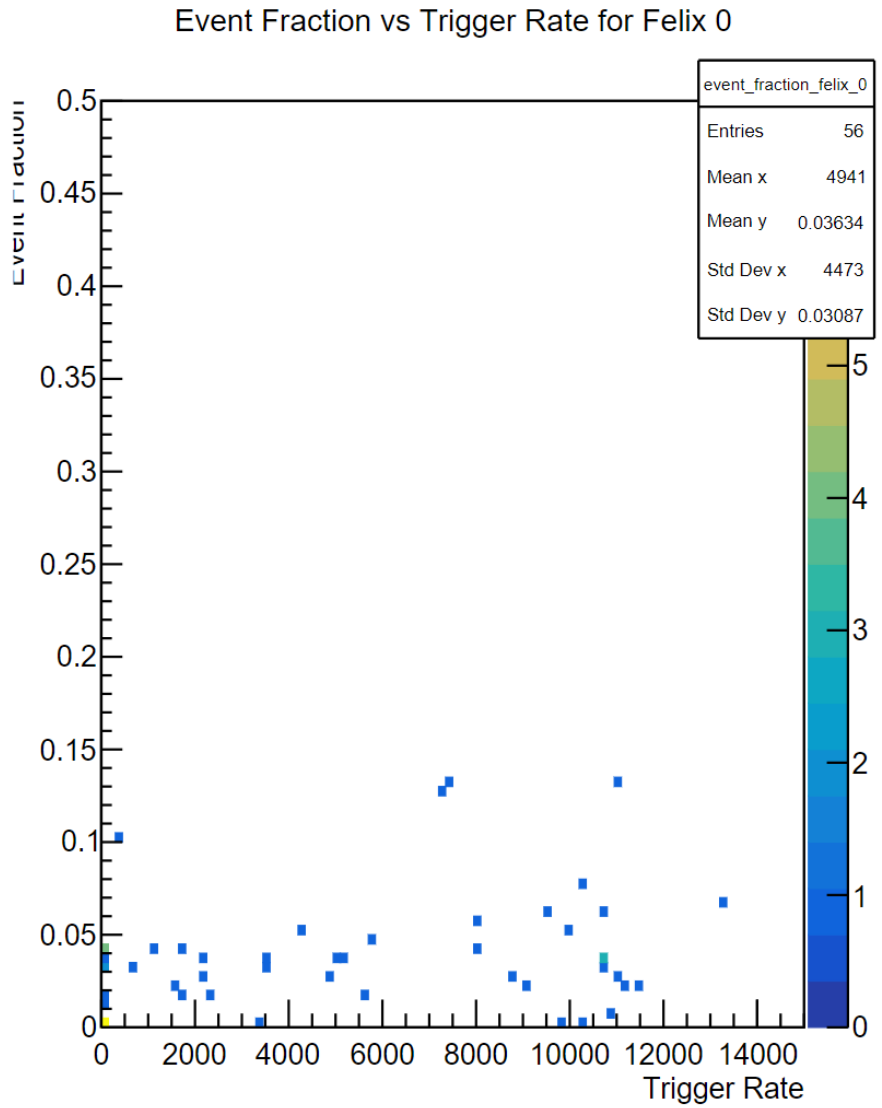
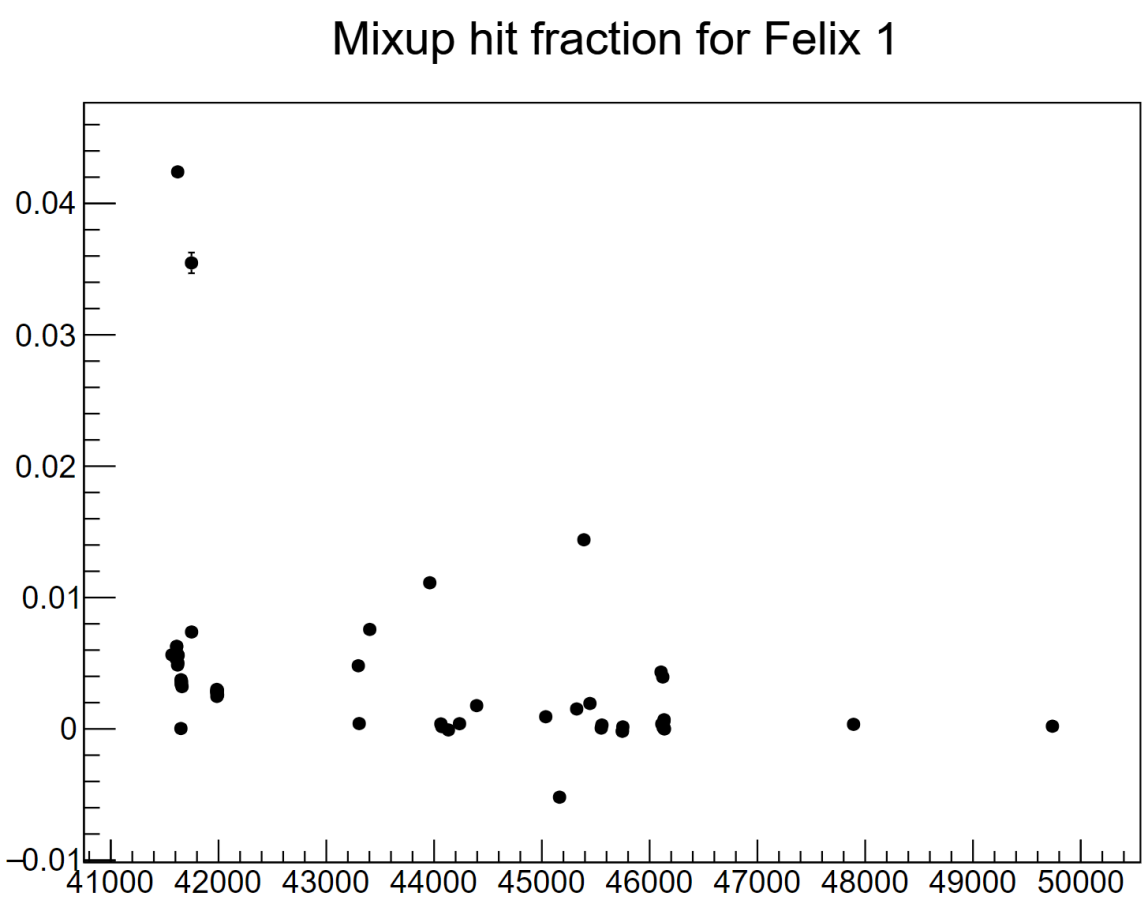
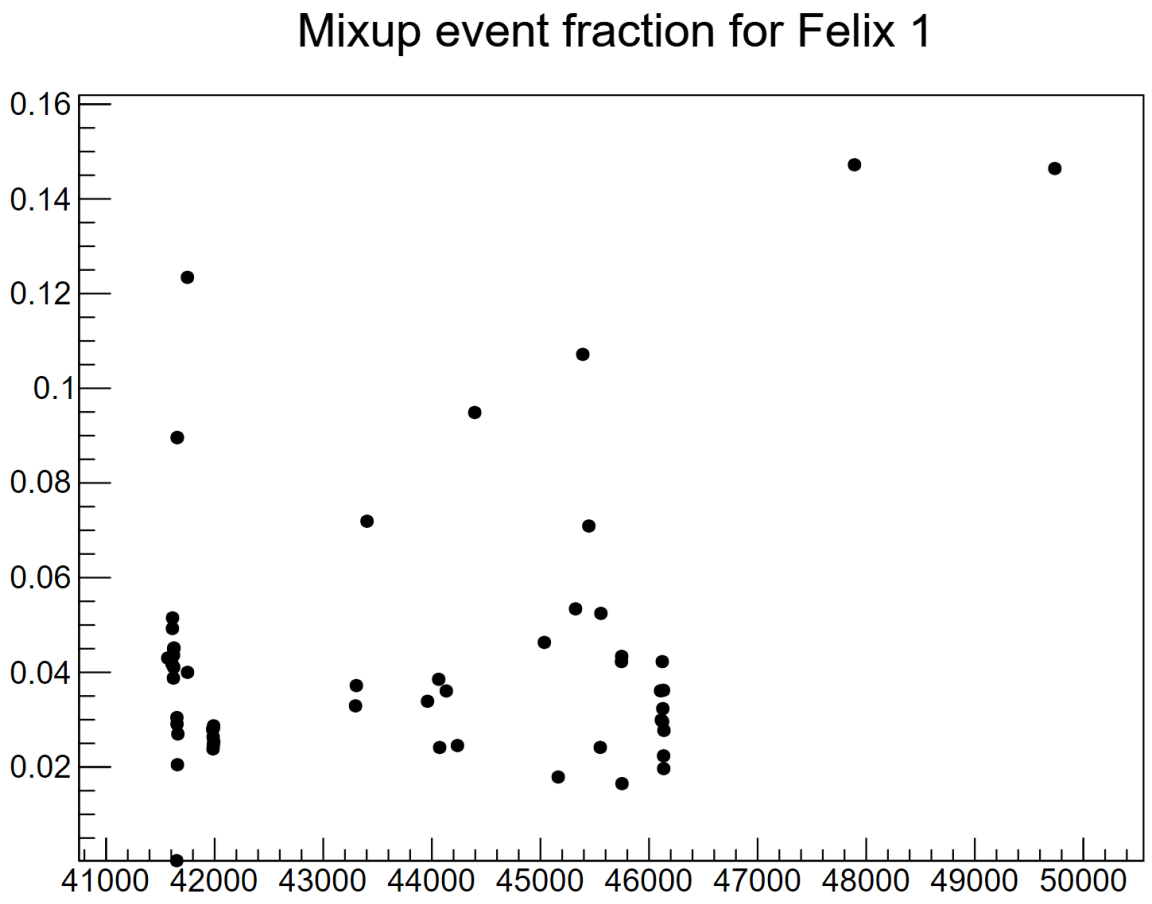
Mixup fraction vs Trigger rate intt0 >10min



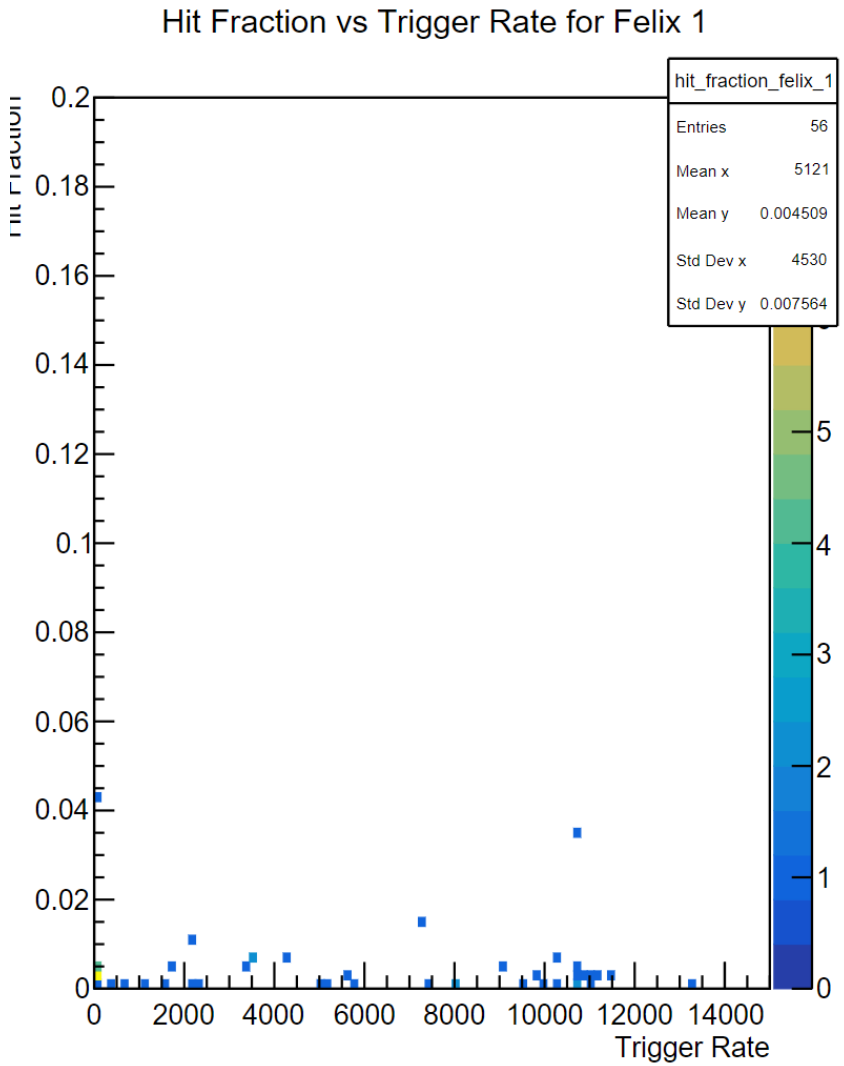


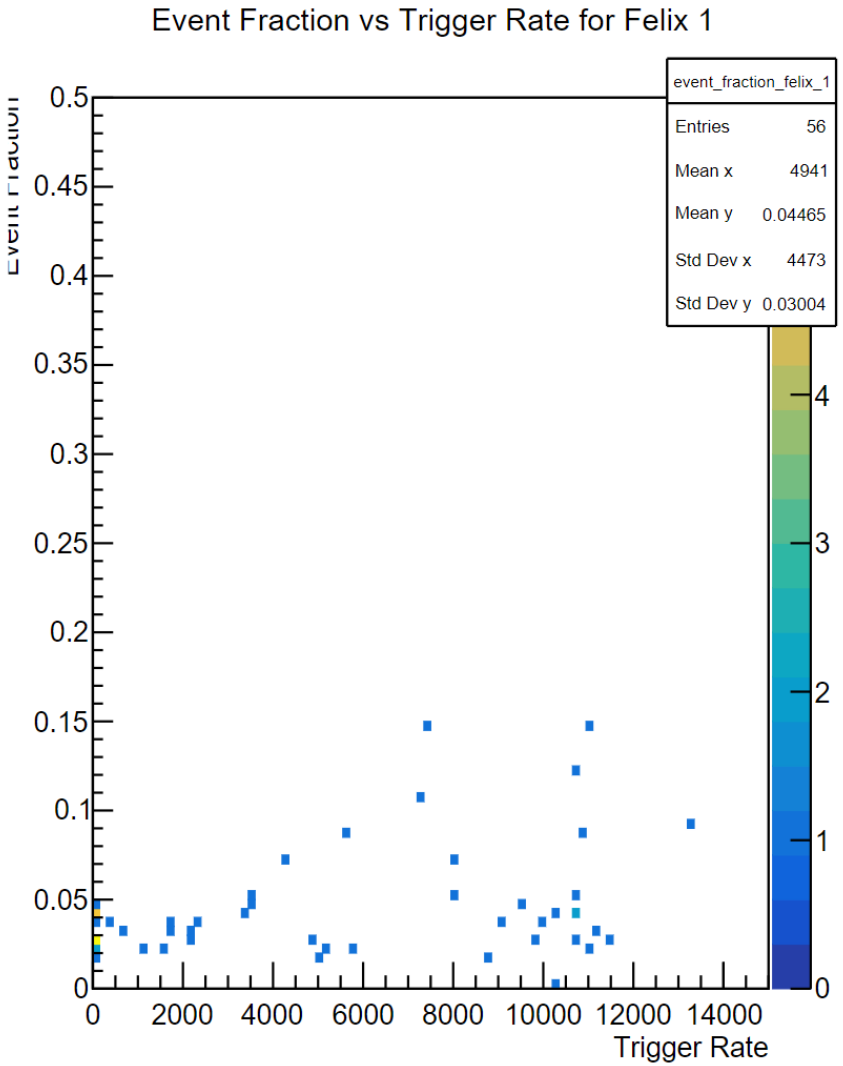
Run24 Mixup fraction intt1 >10min



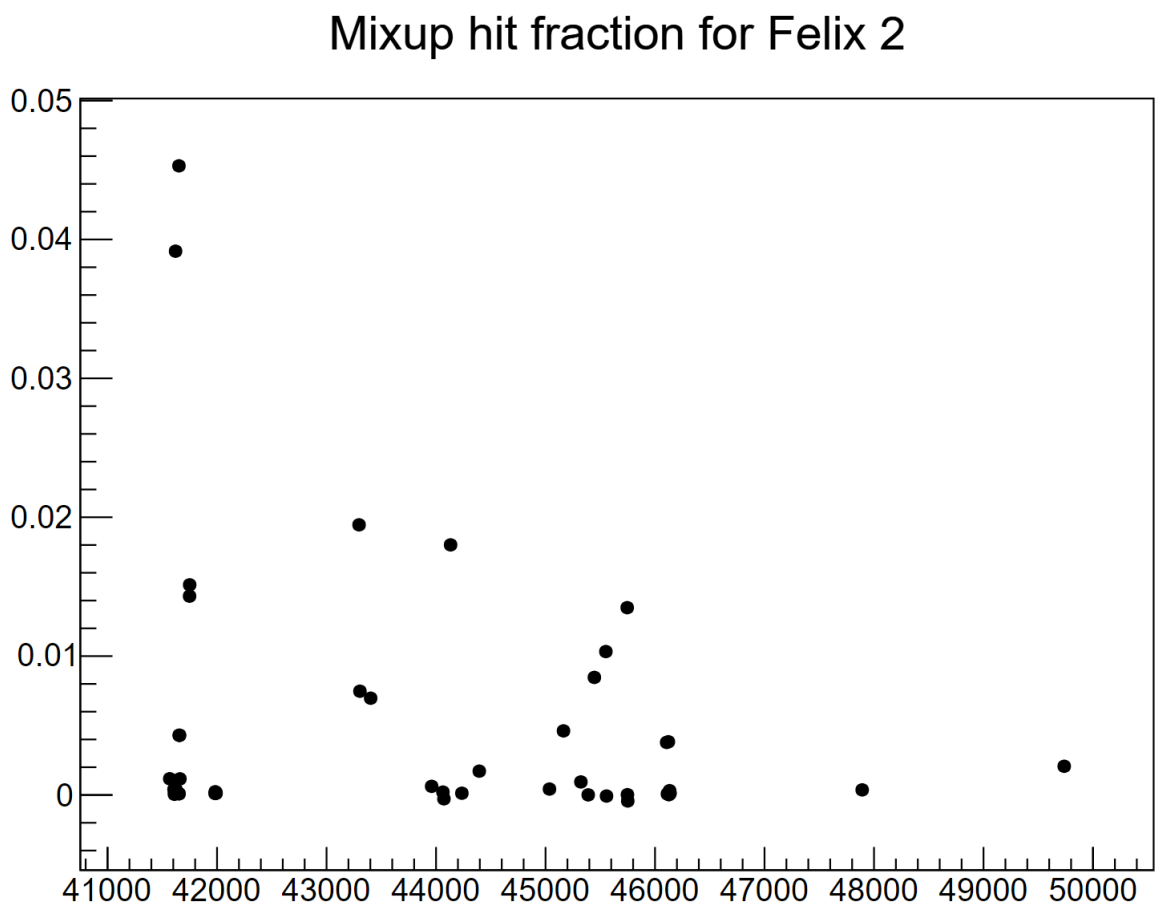


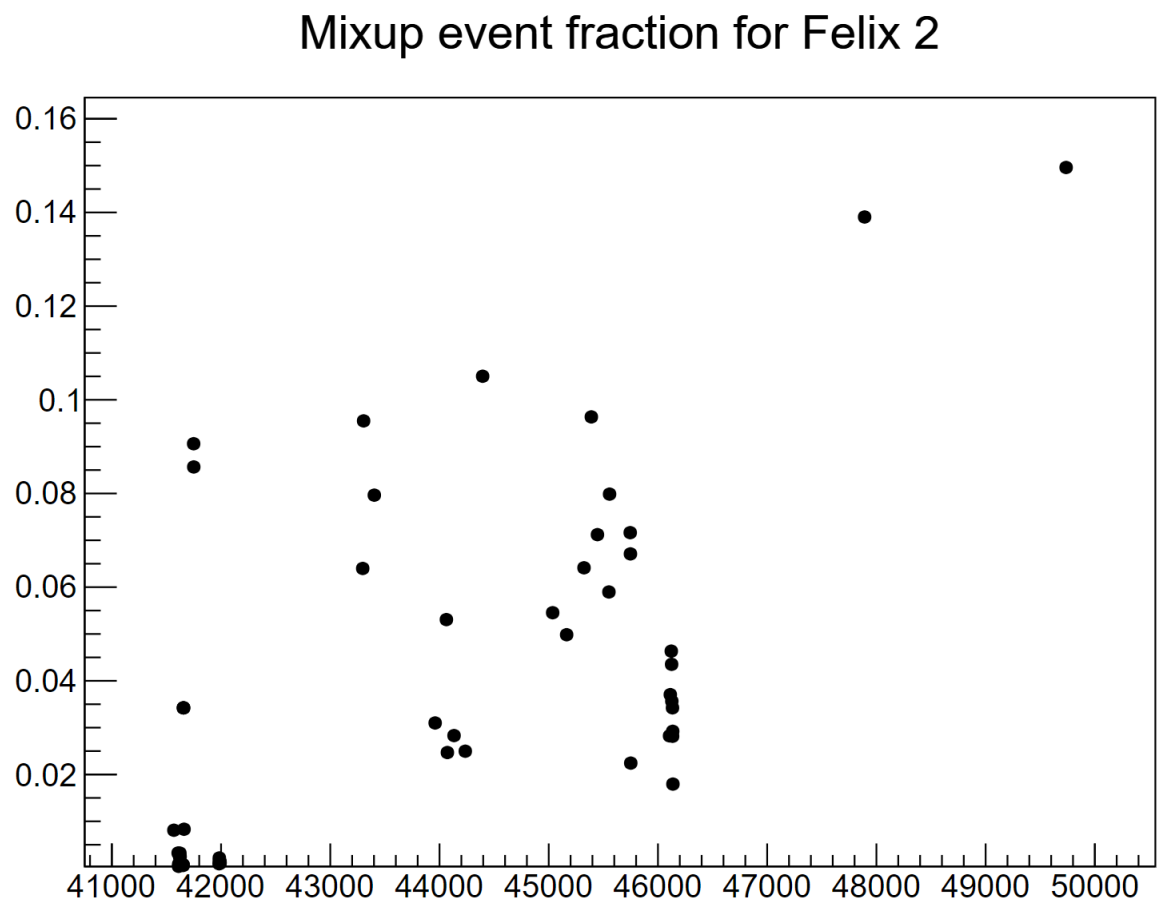
Mixup fraction vs Trigger rate intt1 >10min



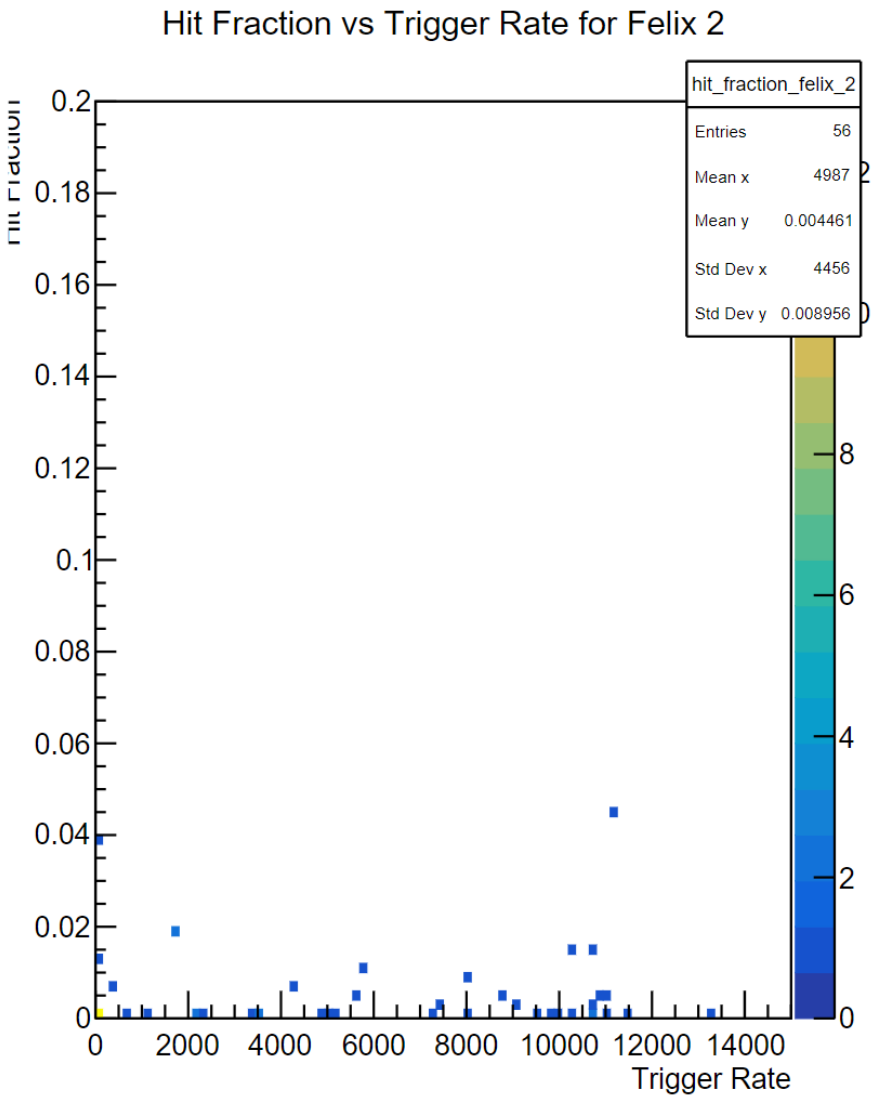


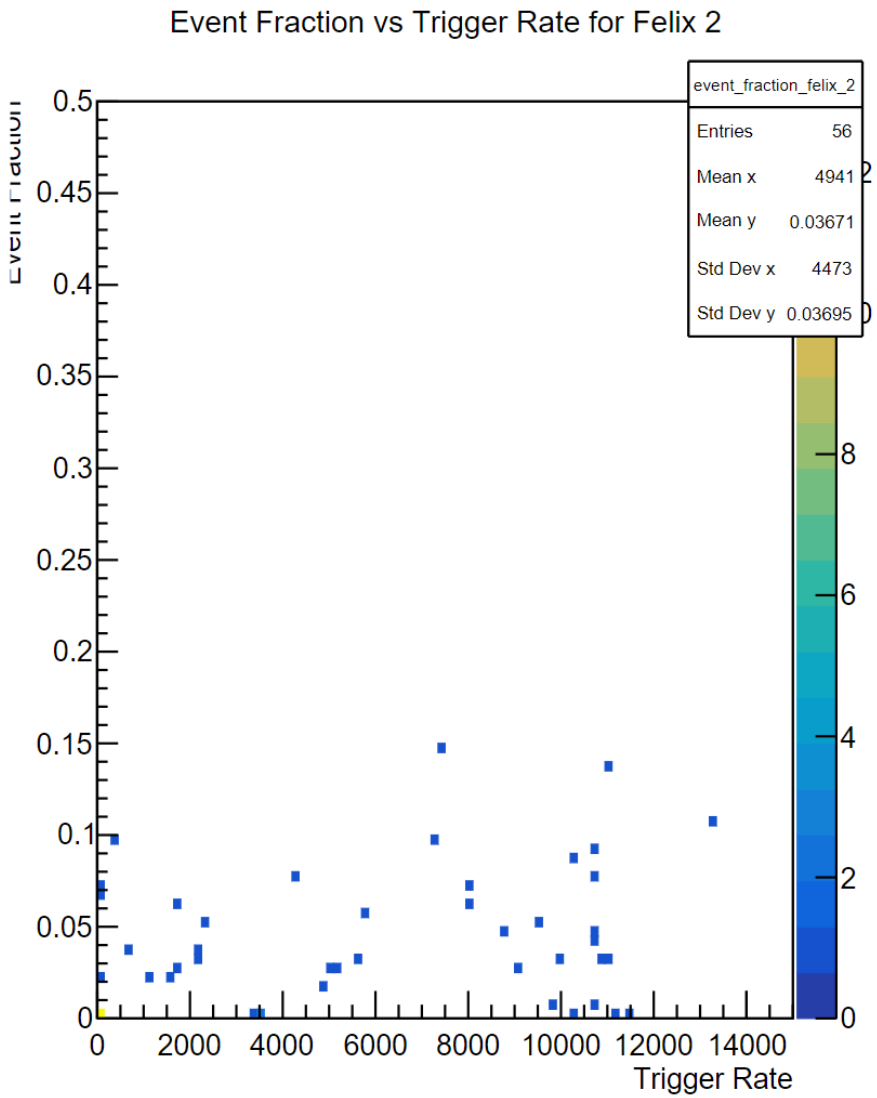
Run24 Mixup fraction intt2



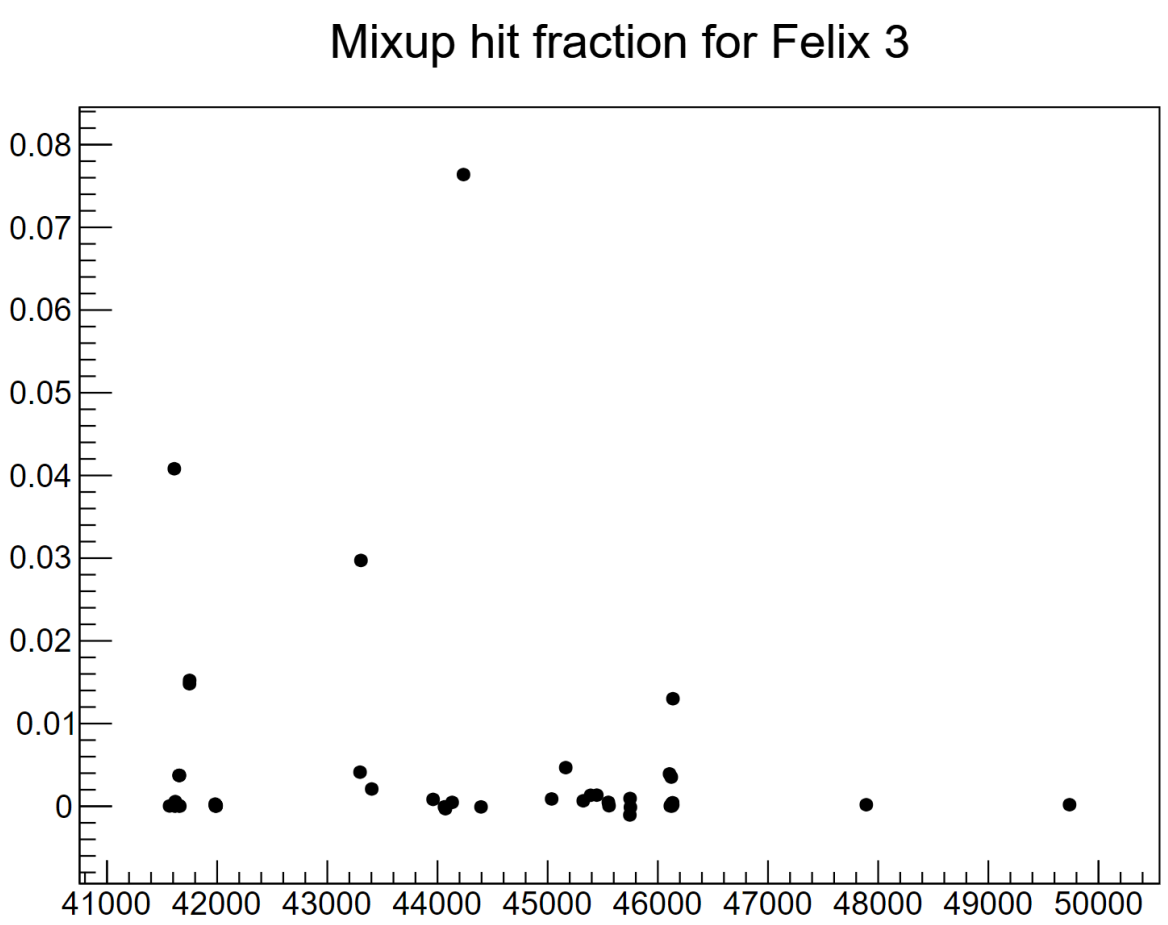


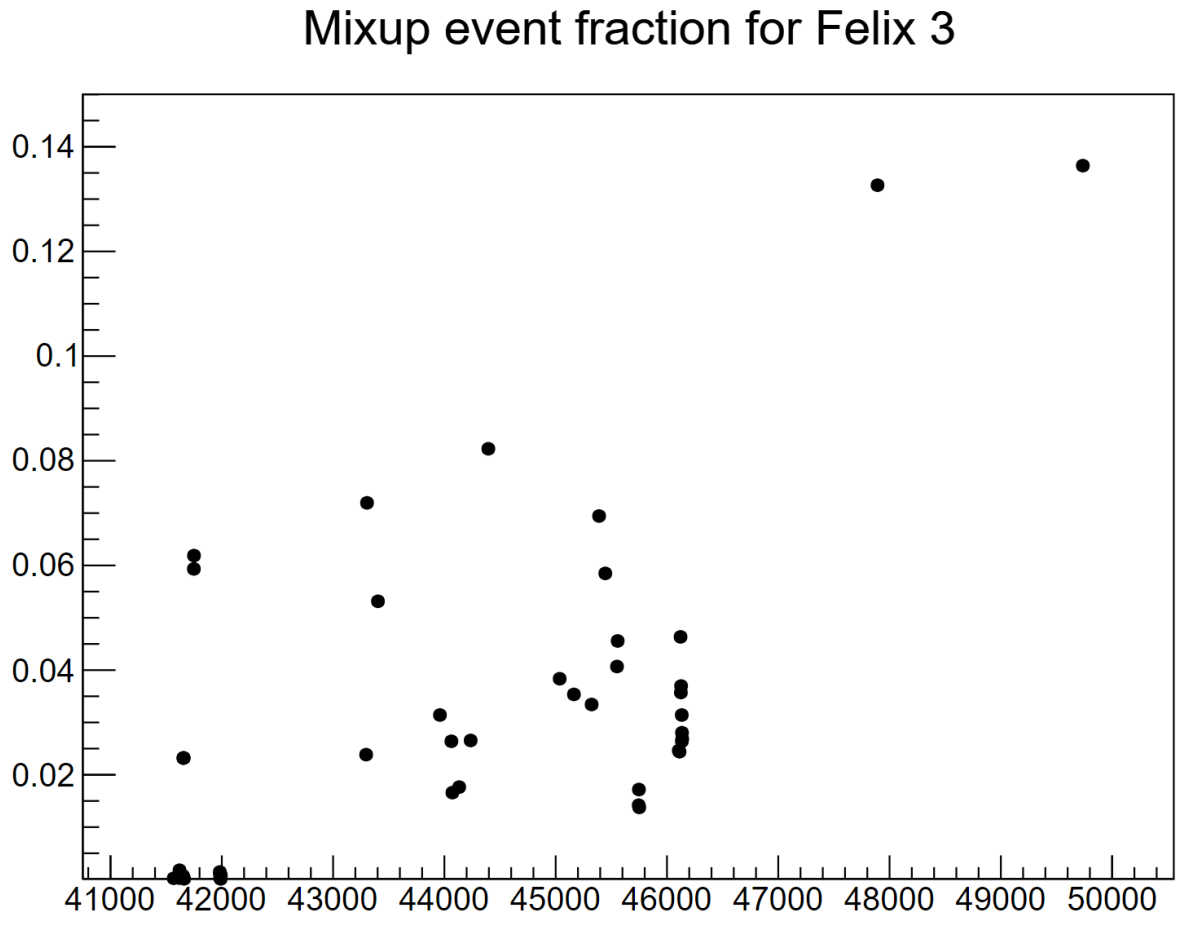
Mixup fraction vs Trigger rate intt2 >10min



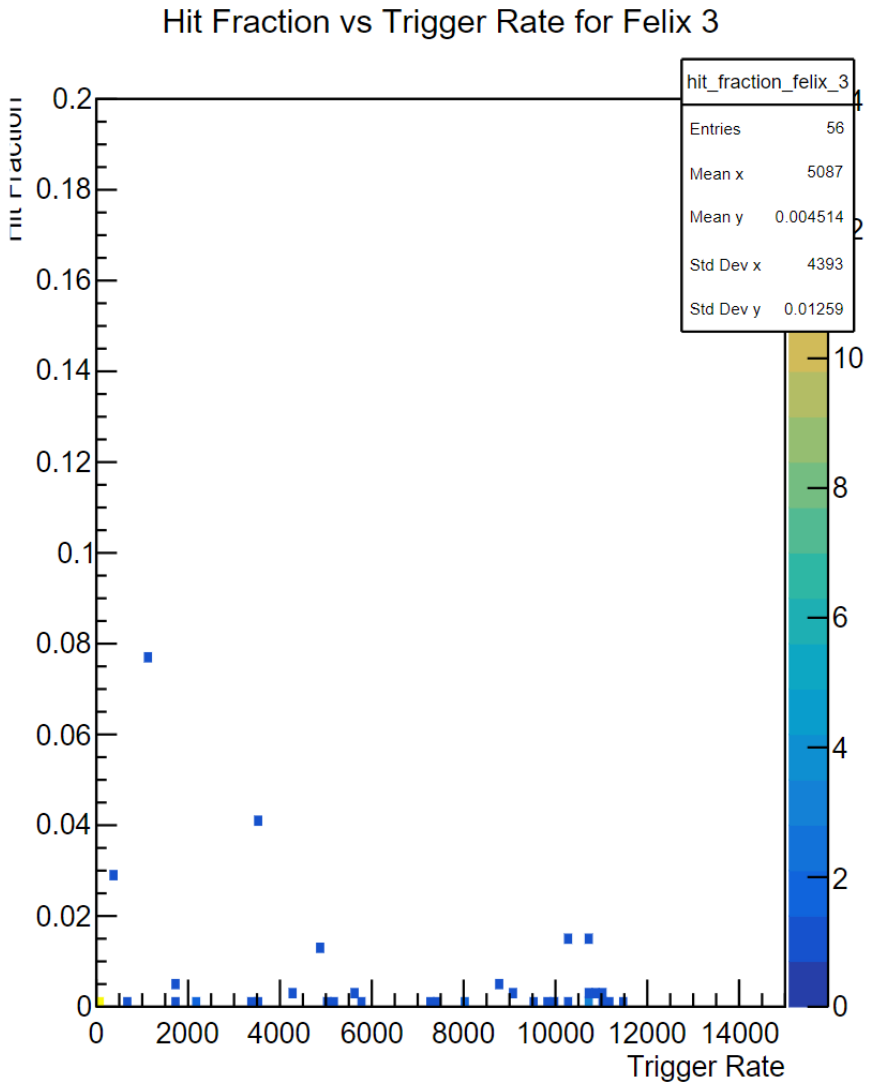


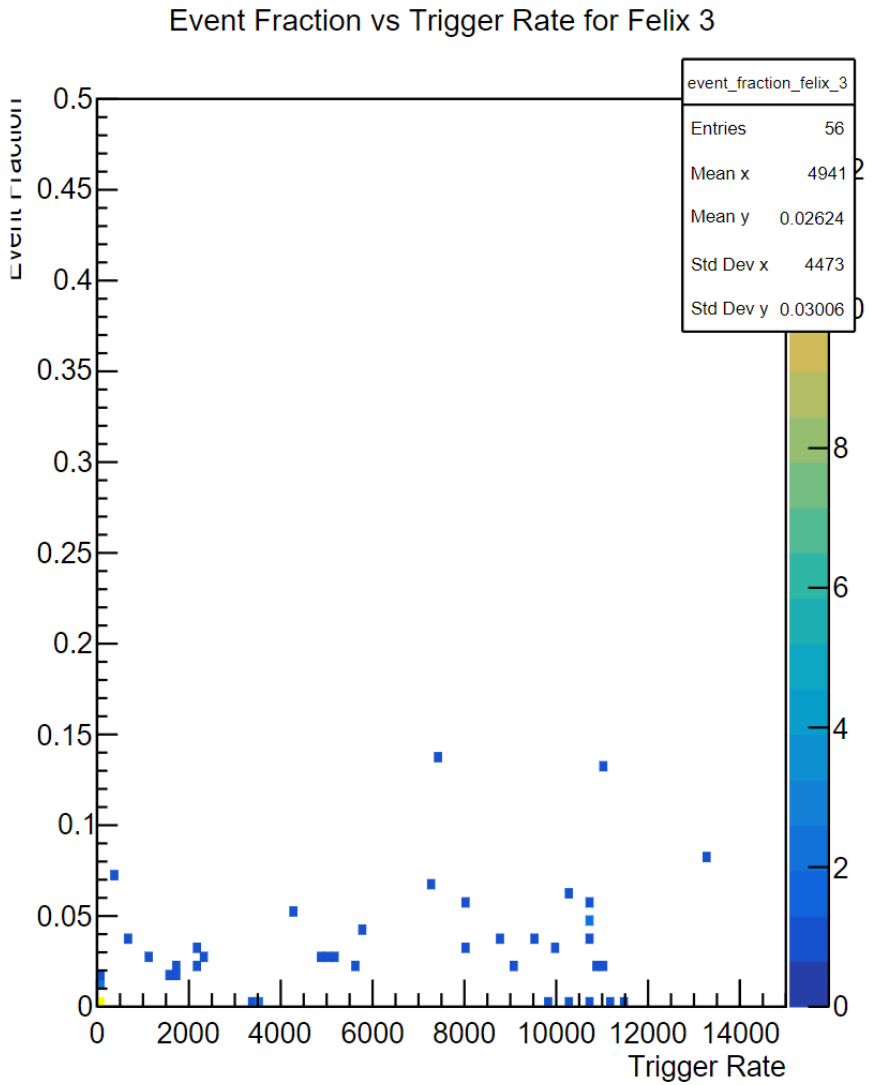
Run24 Mixup fraction intt3



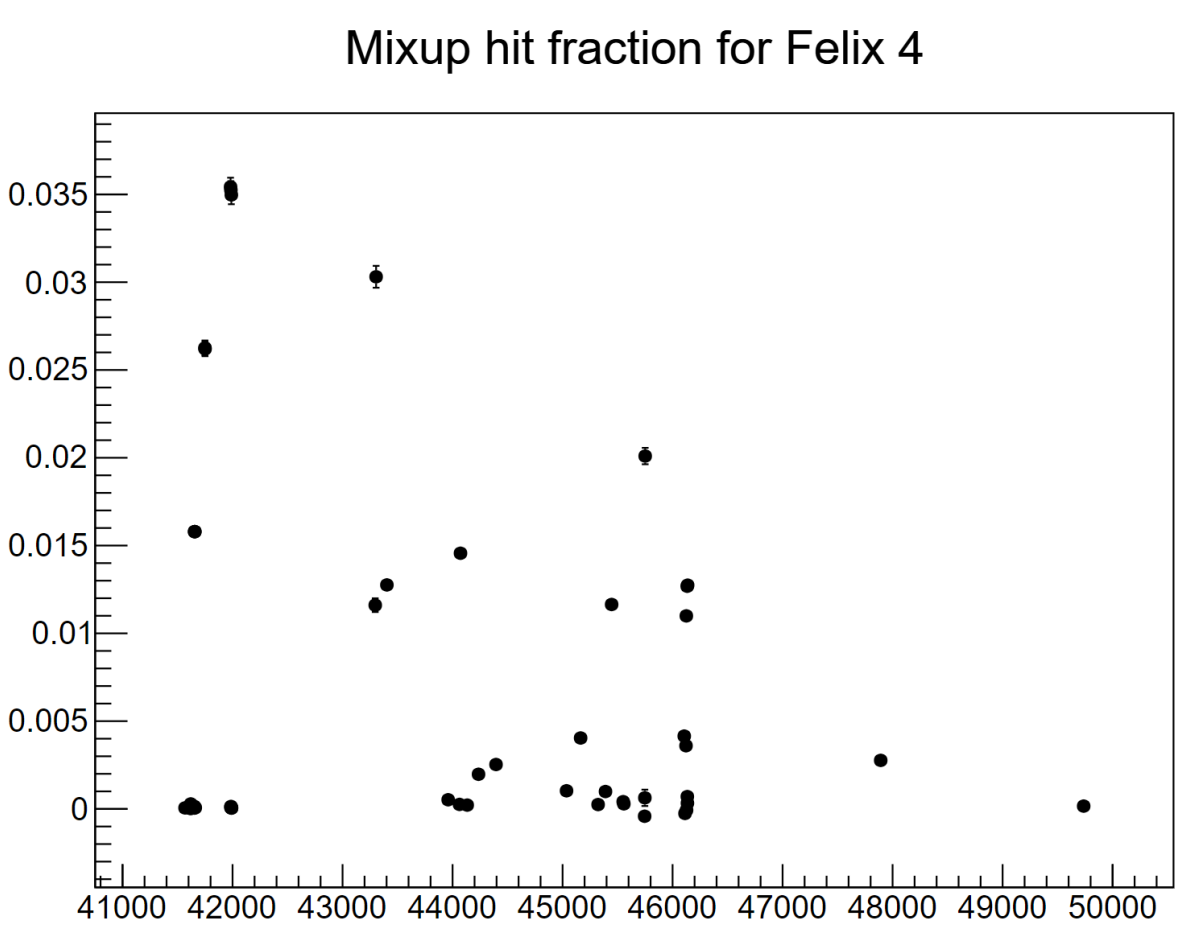


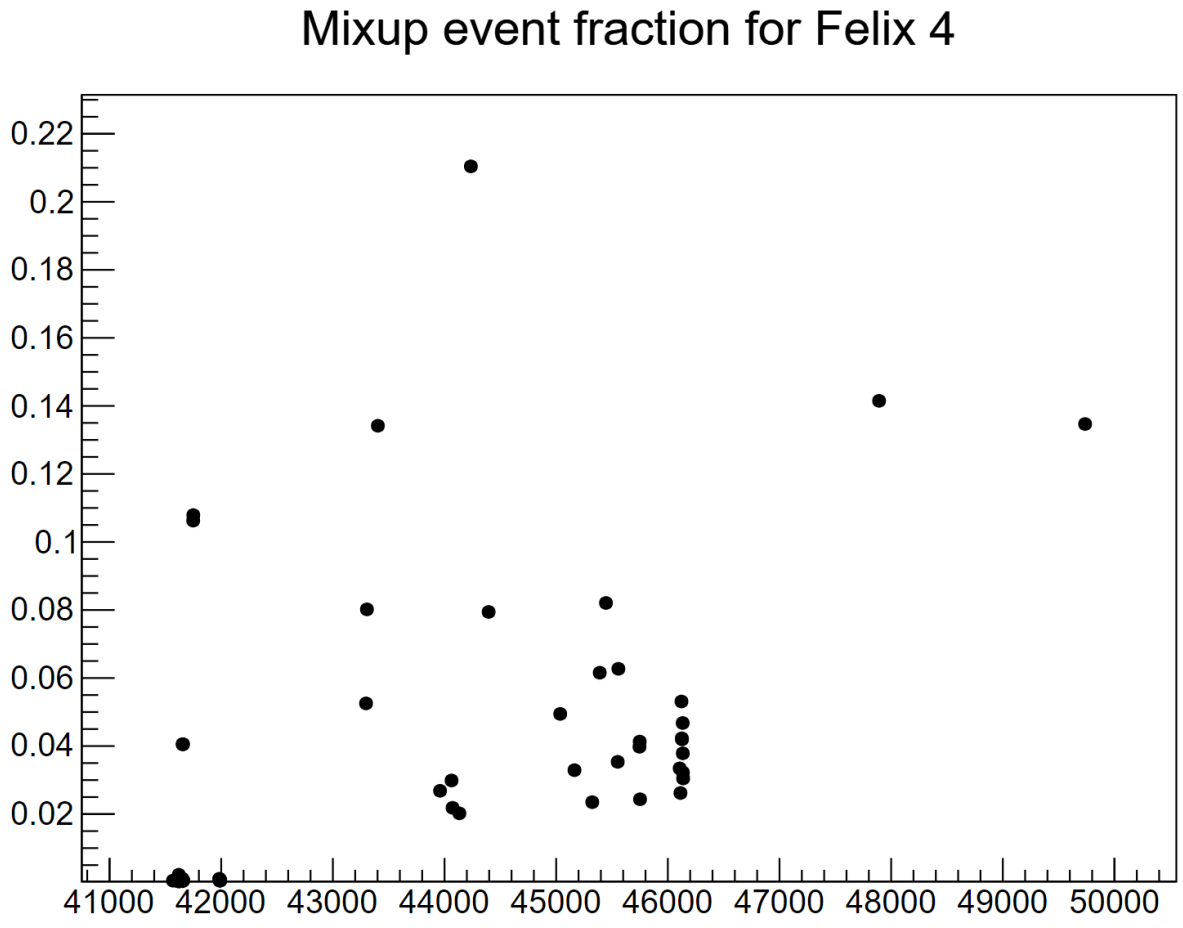
Mixup fraction vs Trigger rate intt3 >10min



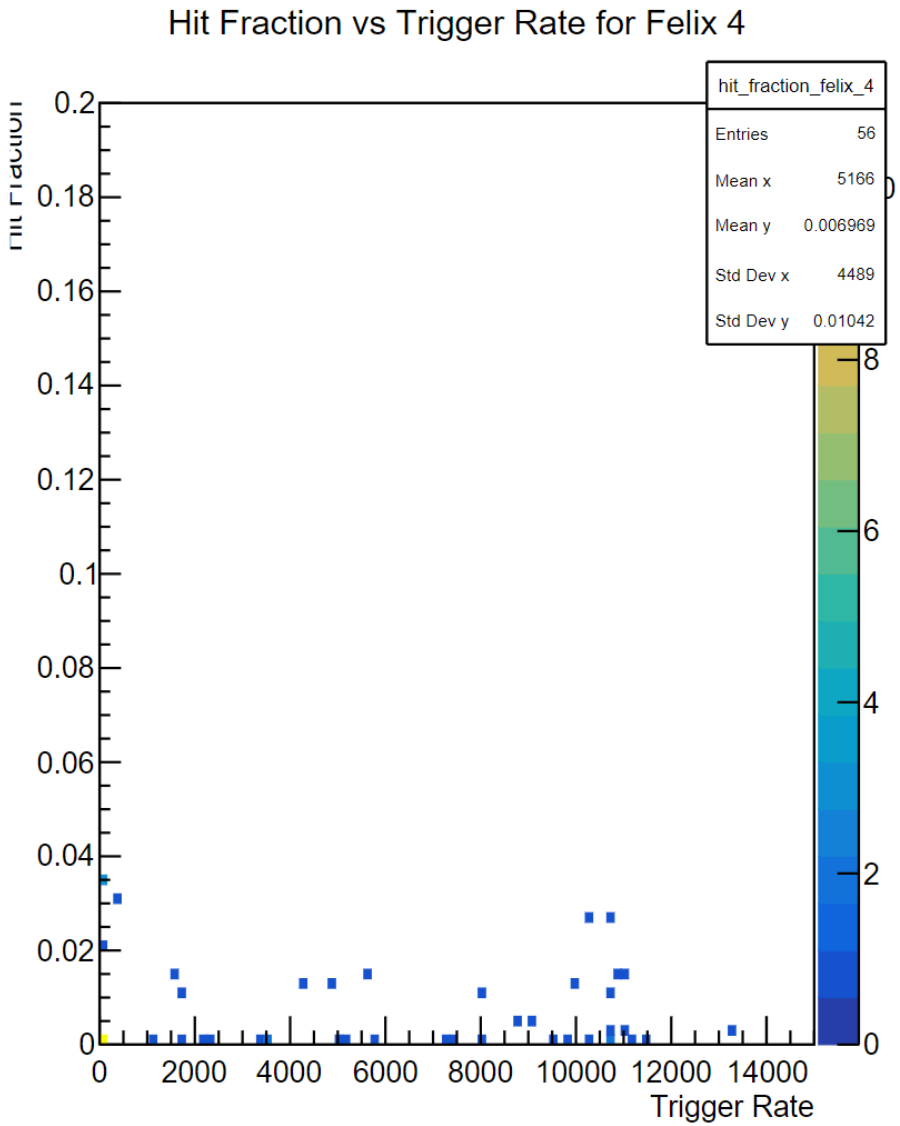


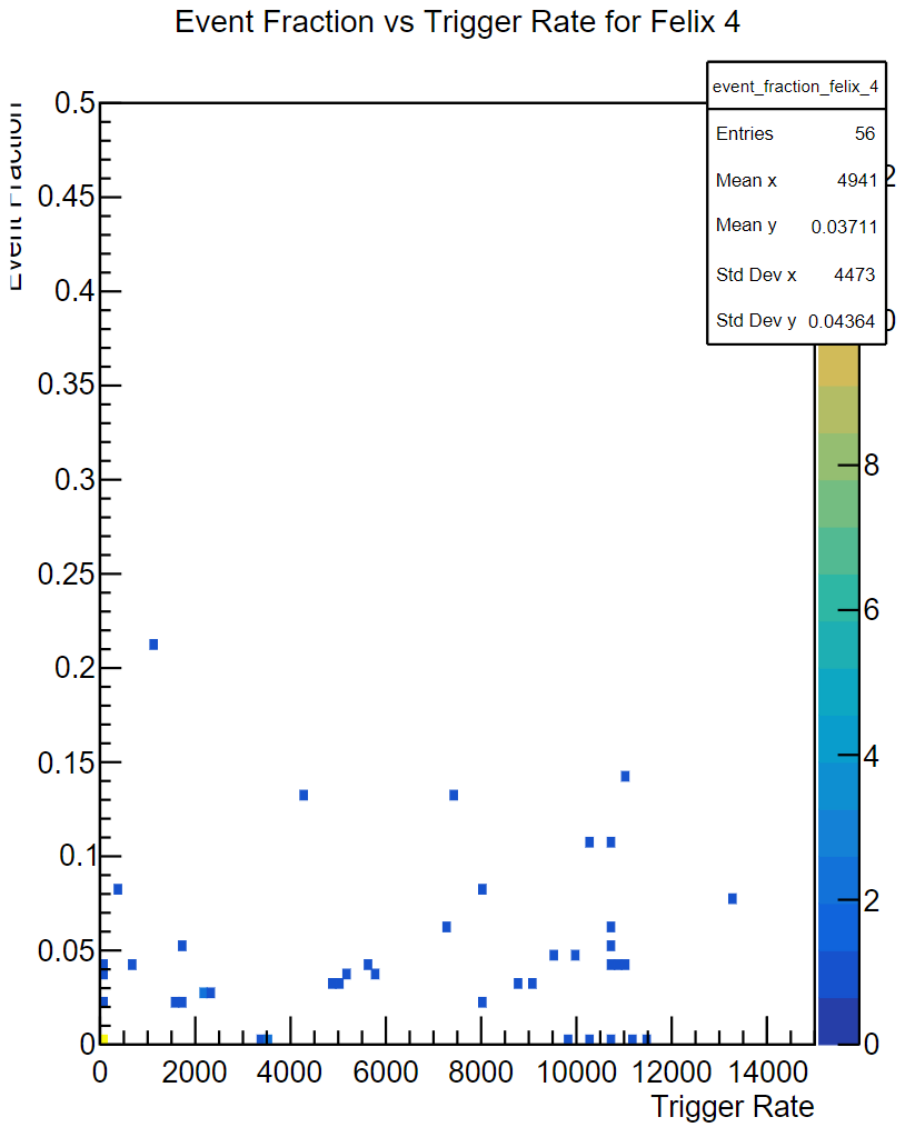
Run24 Mixup fraction intt4



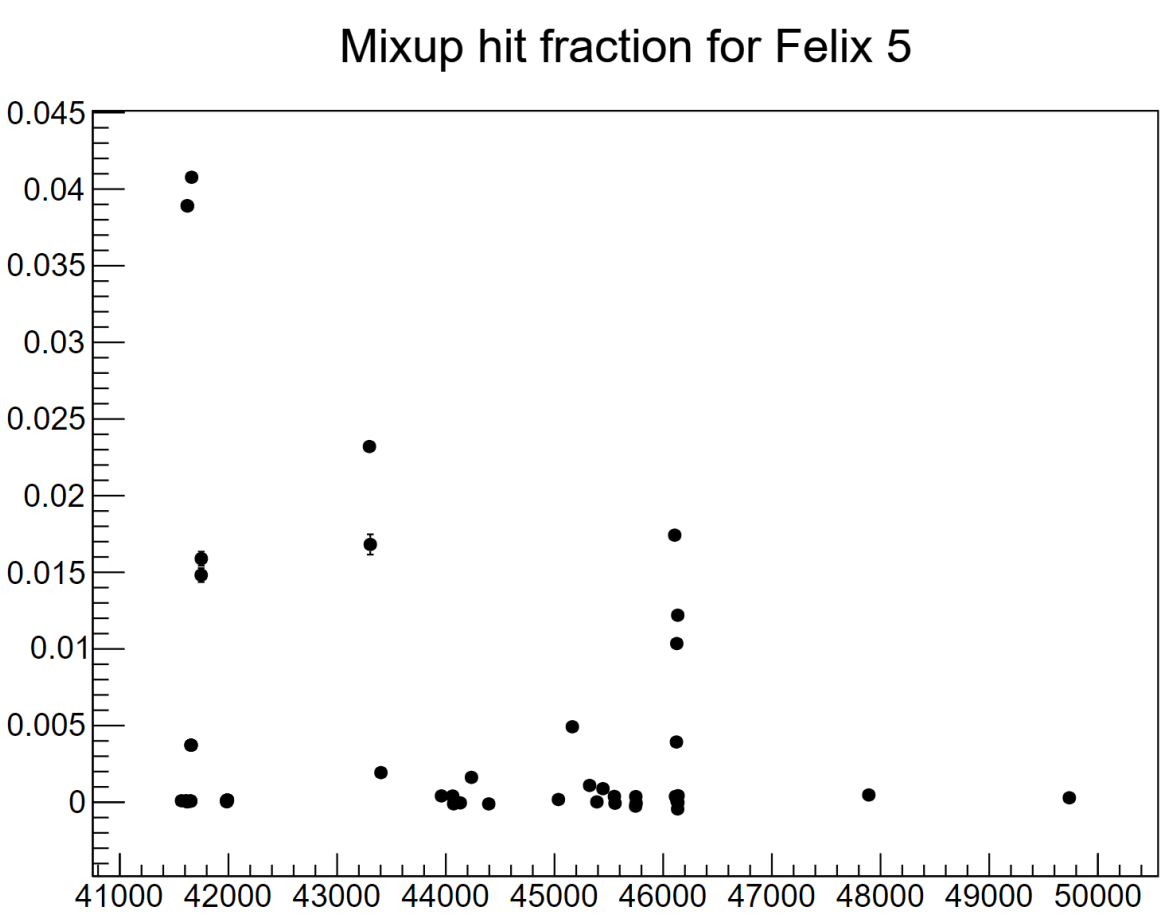


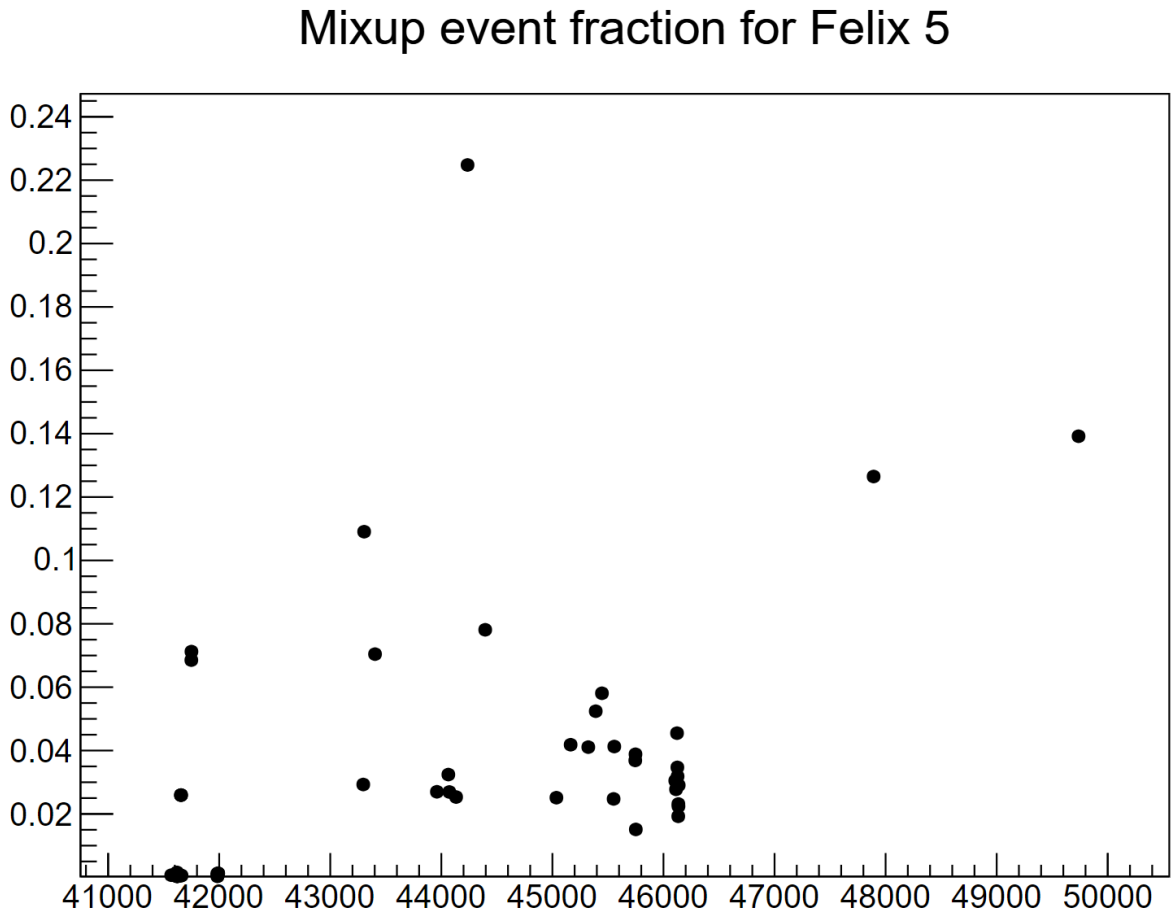
Mixup fraction vs Trigger rate intt4 >10min



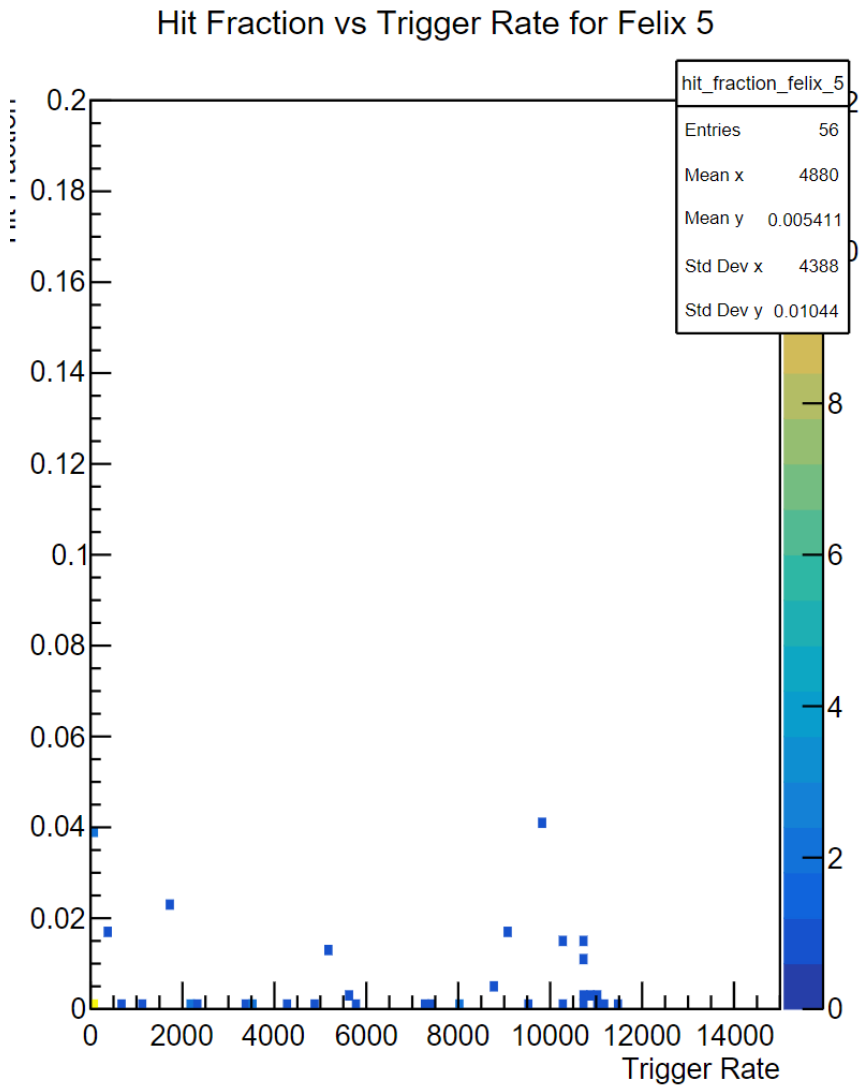


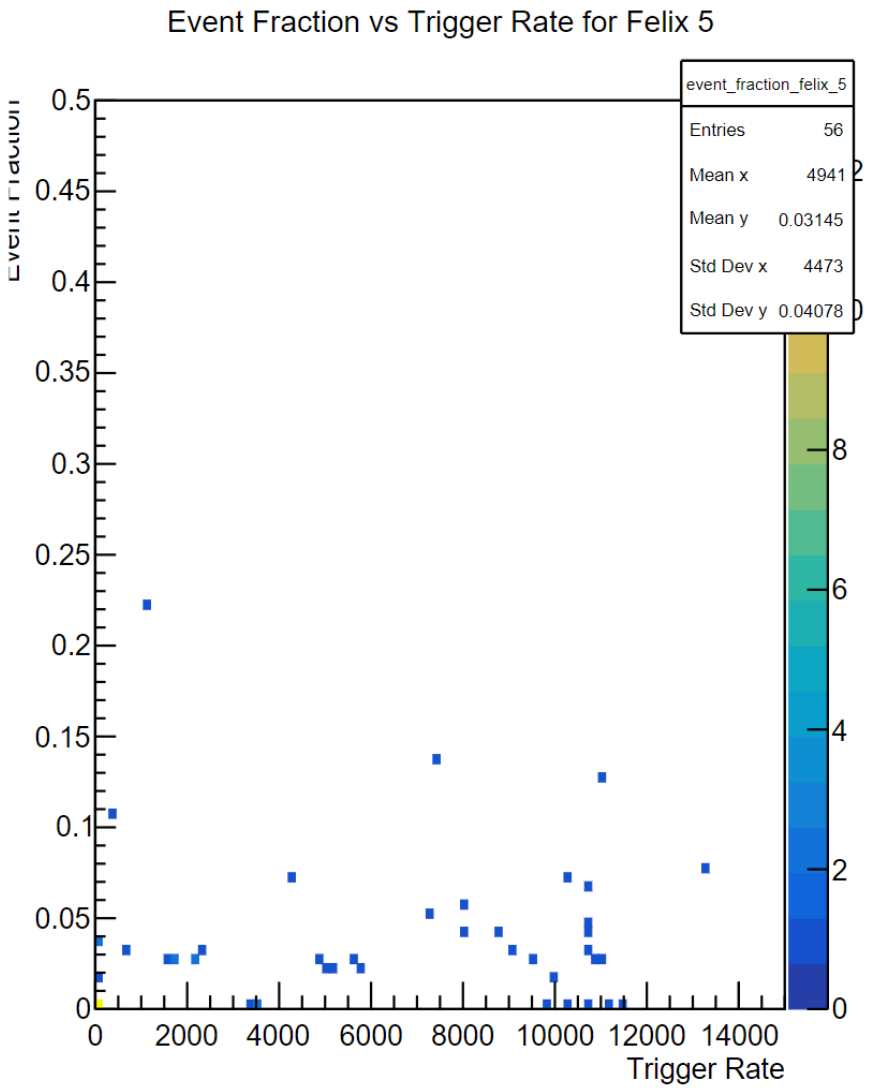
Run24 Mixup fraction intt5



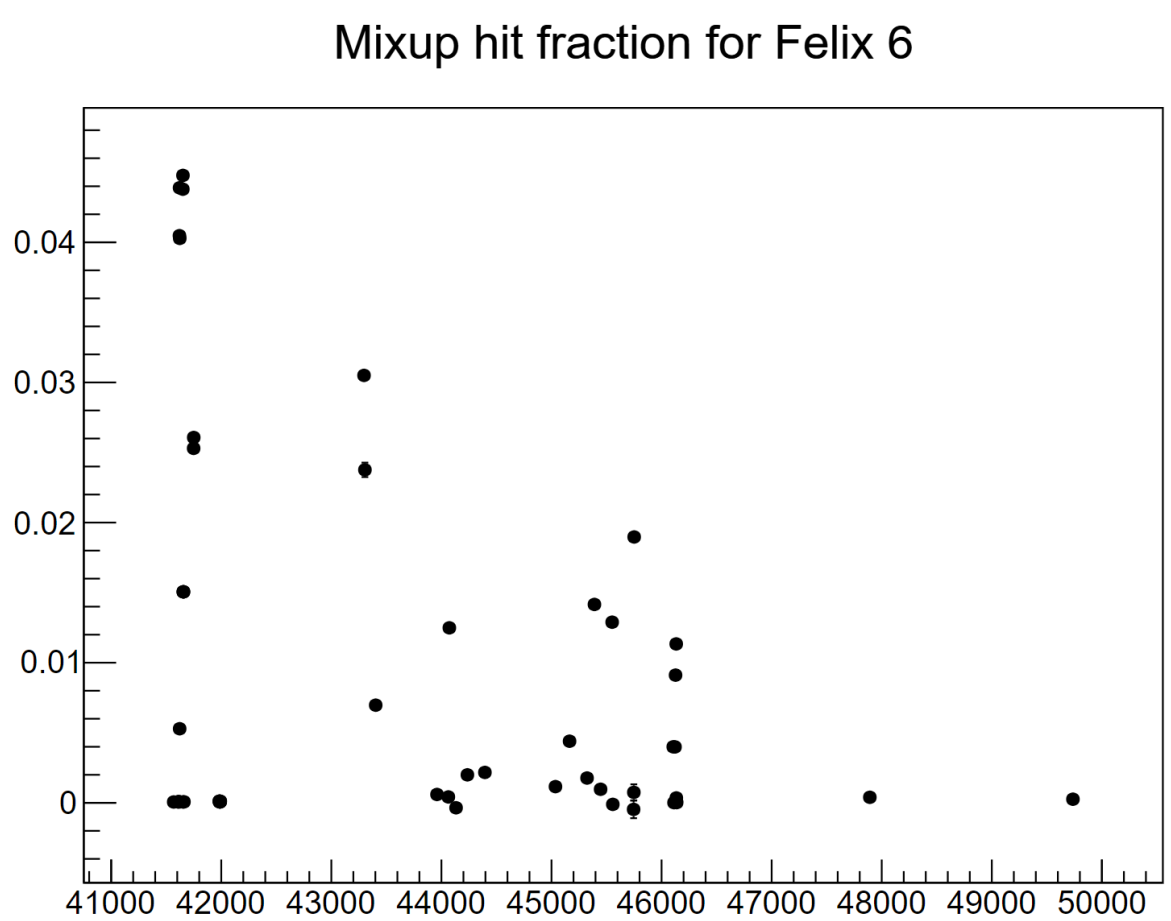


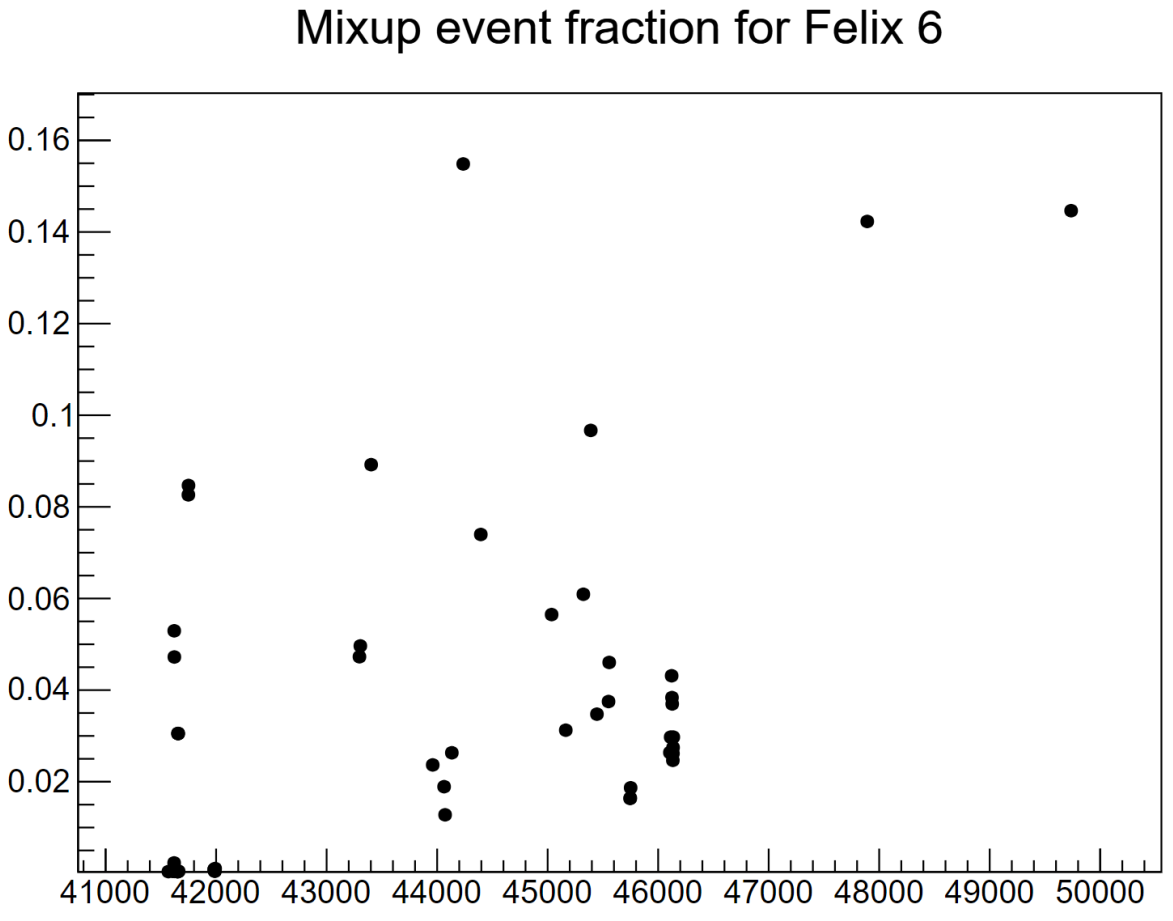
Mixup fraction vs Trigger rate intt5 >10min



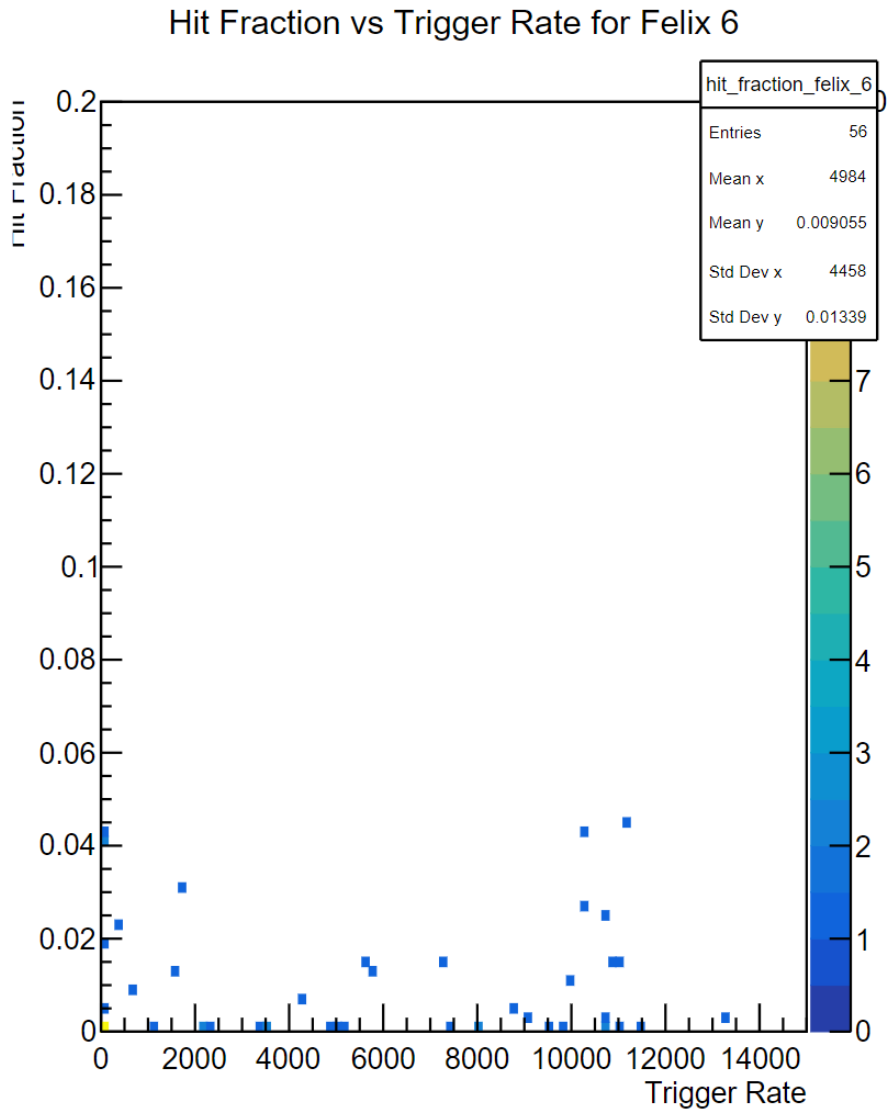


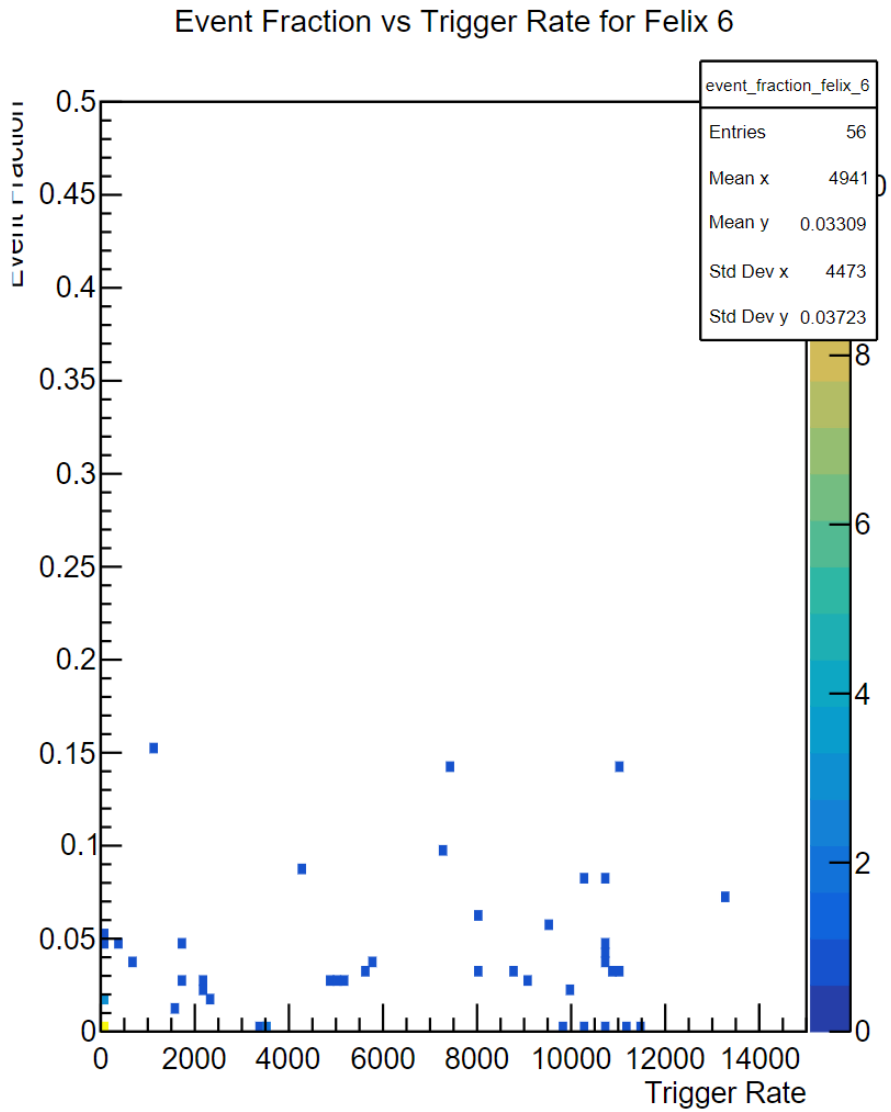
Run24 Mixup fraction intt6



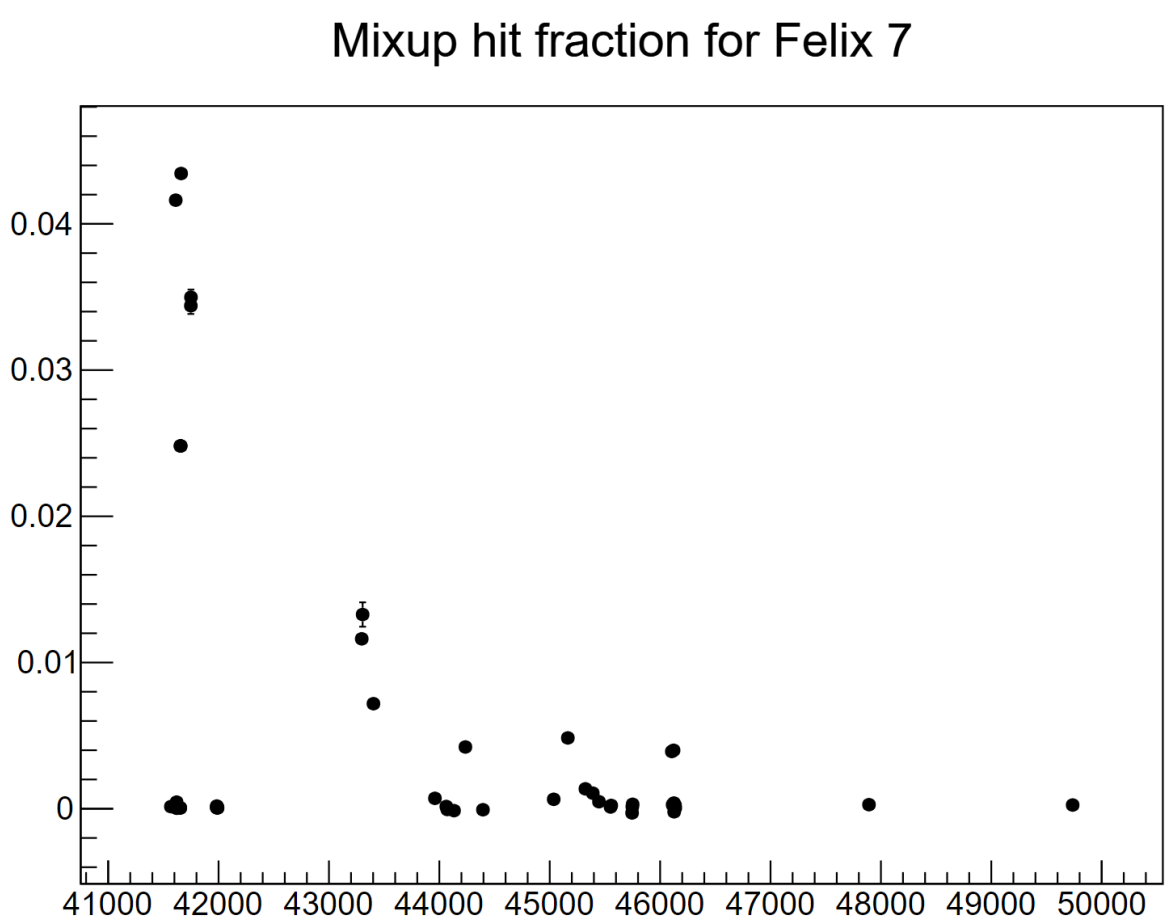


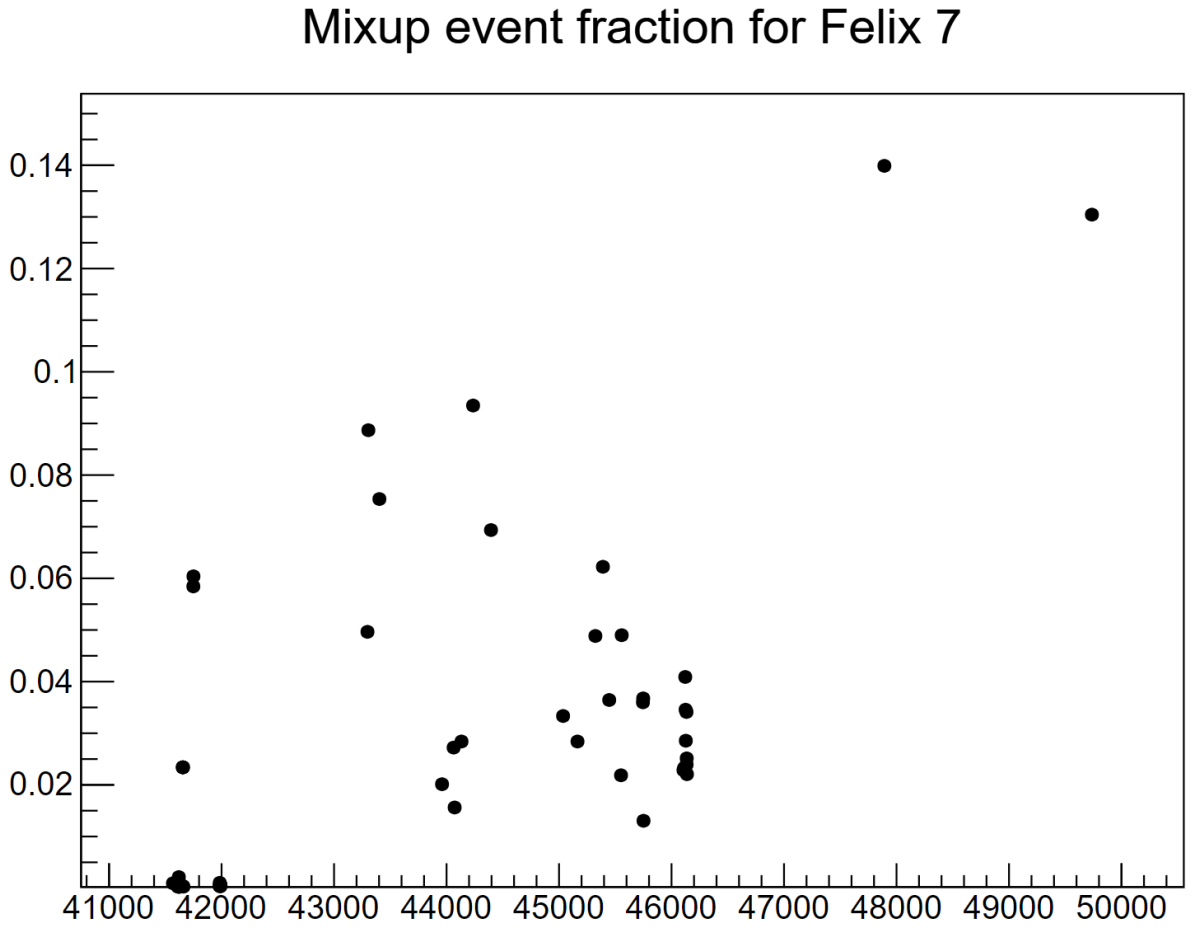
Mixup fraction vs Trigger rate intt6 >10min



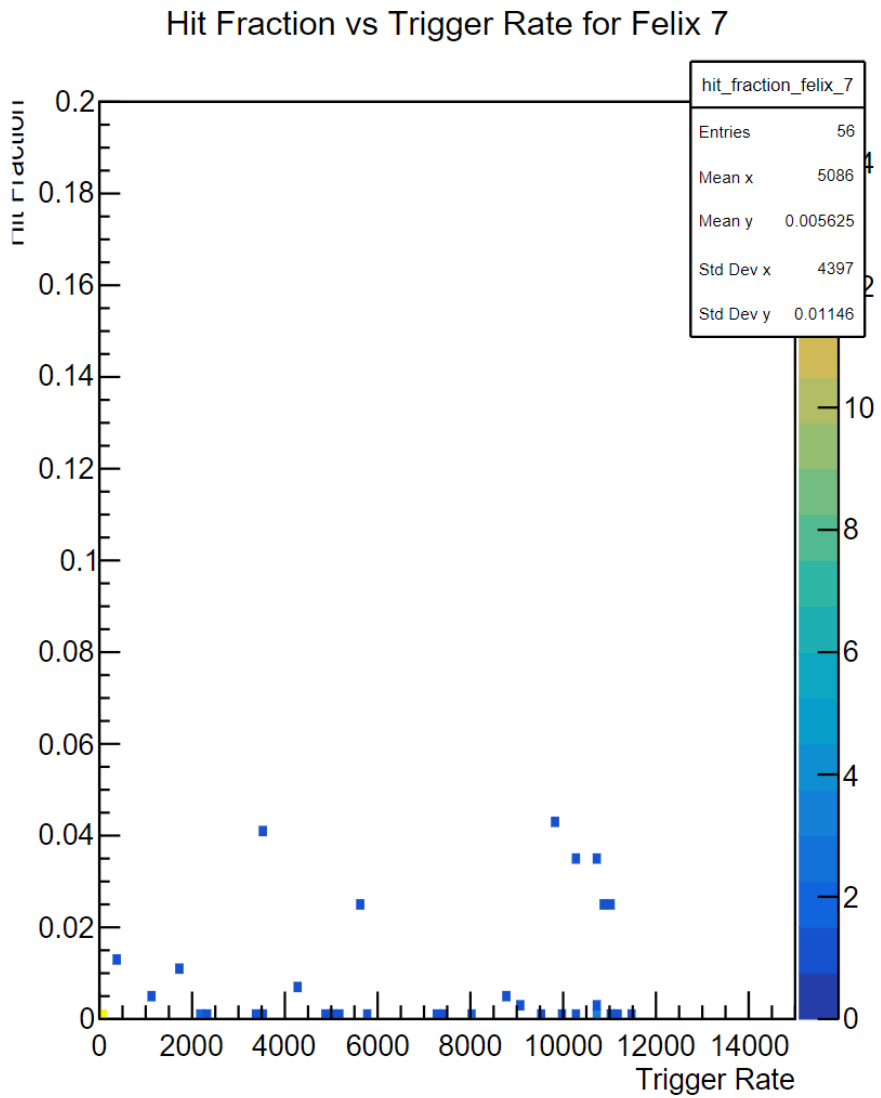


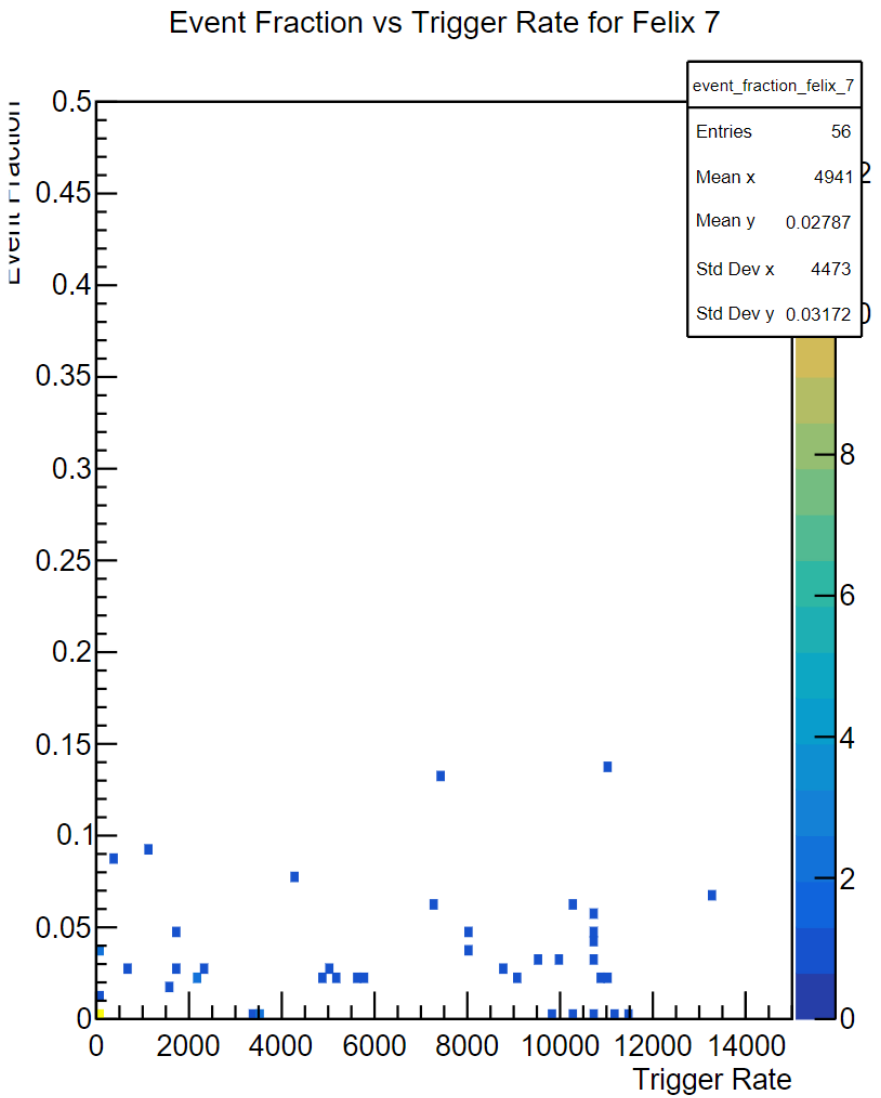
Run24 Mixup fraction intt7





Mixup fraction vs Trigger rate intt7 >10min



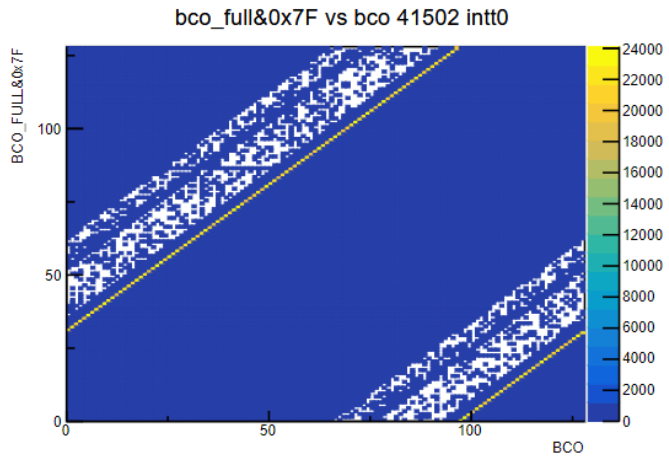


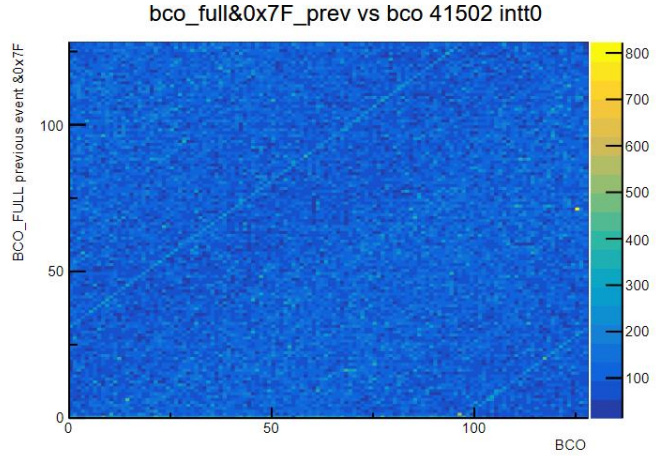
To do list

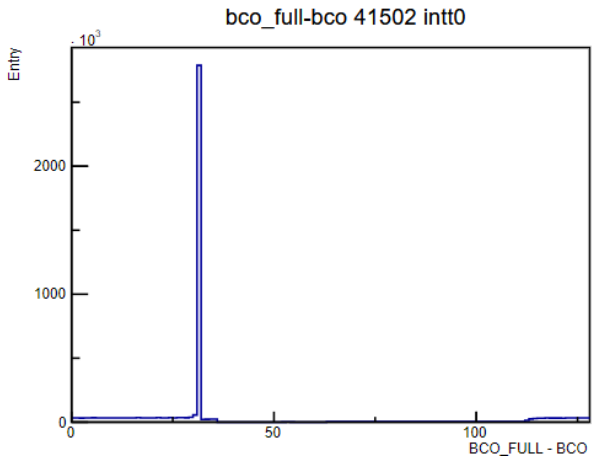
- Analysis note write (as soon as possible)
- Submit plots for preliminary (next week GM)
- I have not yet included the bunch number 111 x 111 or the opening time or any other cuts. If it is done in time, it will be included.

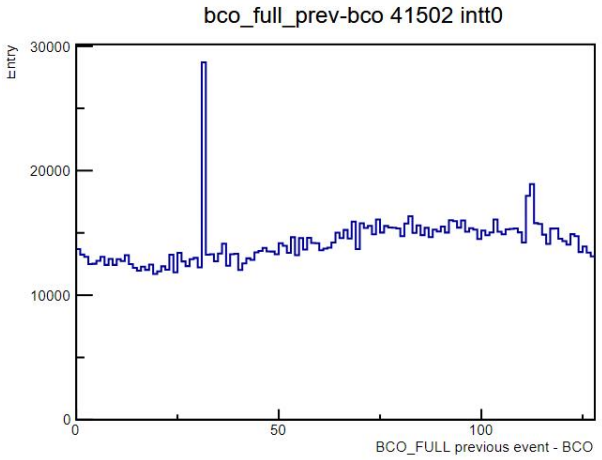
Back up

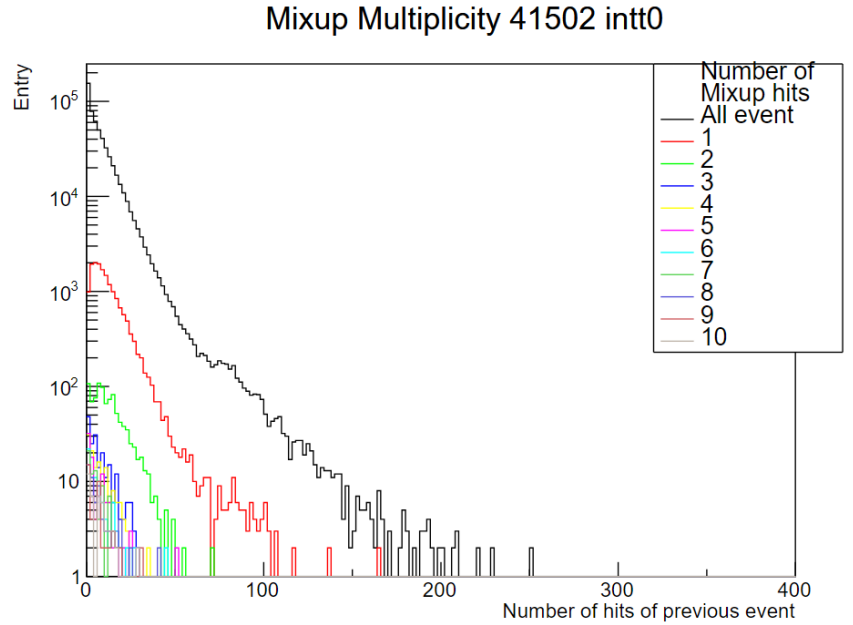
Run24 p-p BCO_full BCO & Multiplicity plots





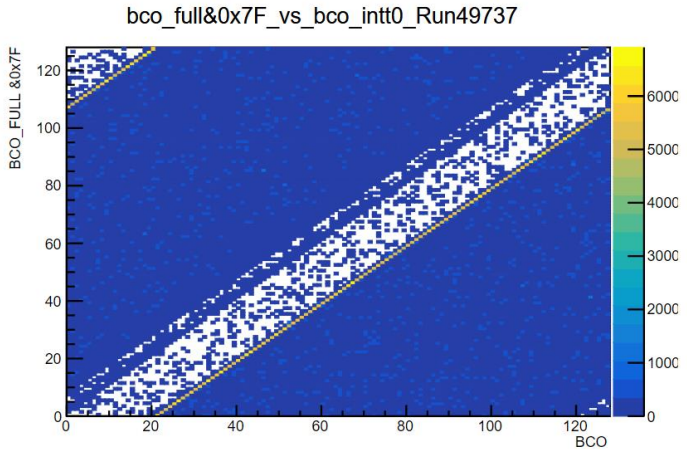


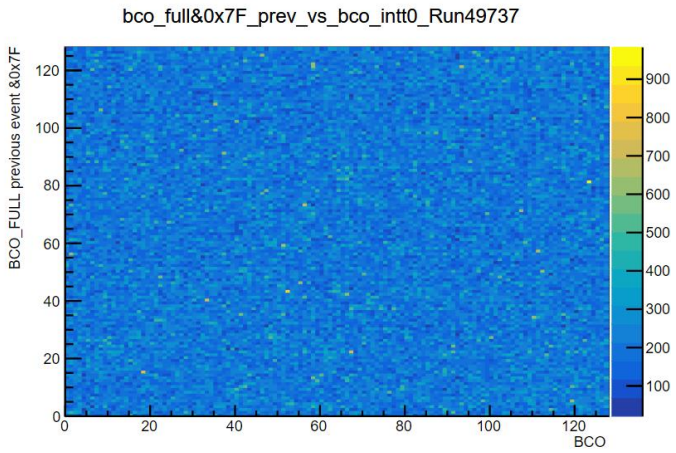


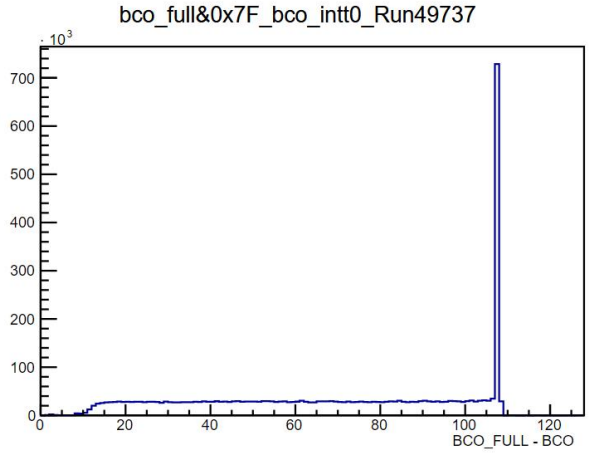


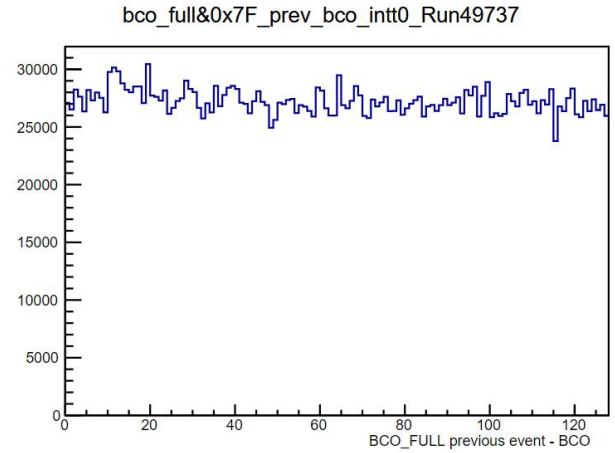
- These plots that show the mixup is occurring.
- I will remake them and choose Run data that is easier to understand Mixup is ocurre or not and has no riddle peaks, and I will submit these plots

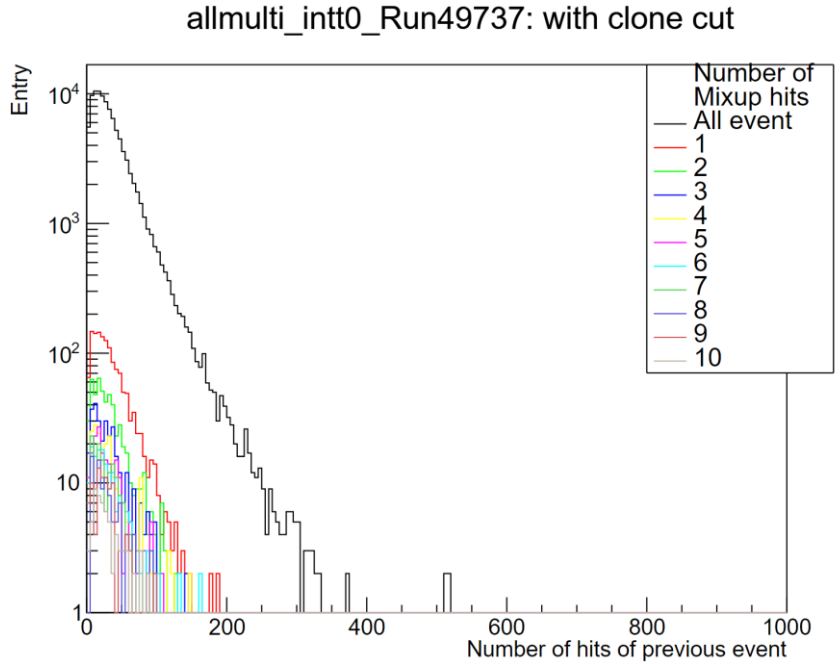
Run24 p-p BCO_full BCO & Multiplicity plots





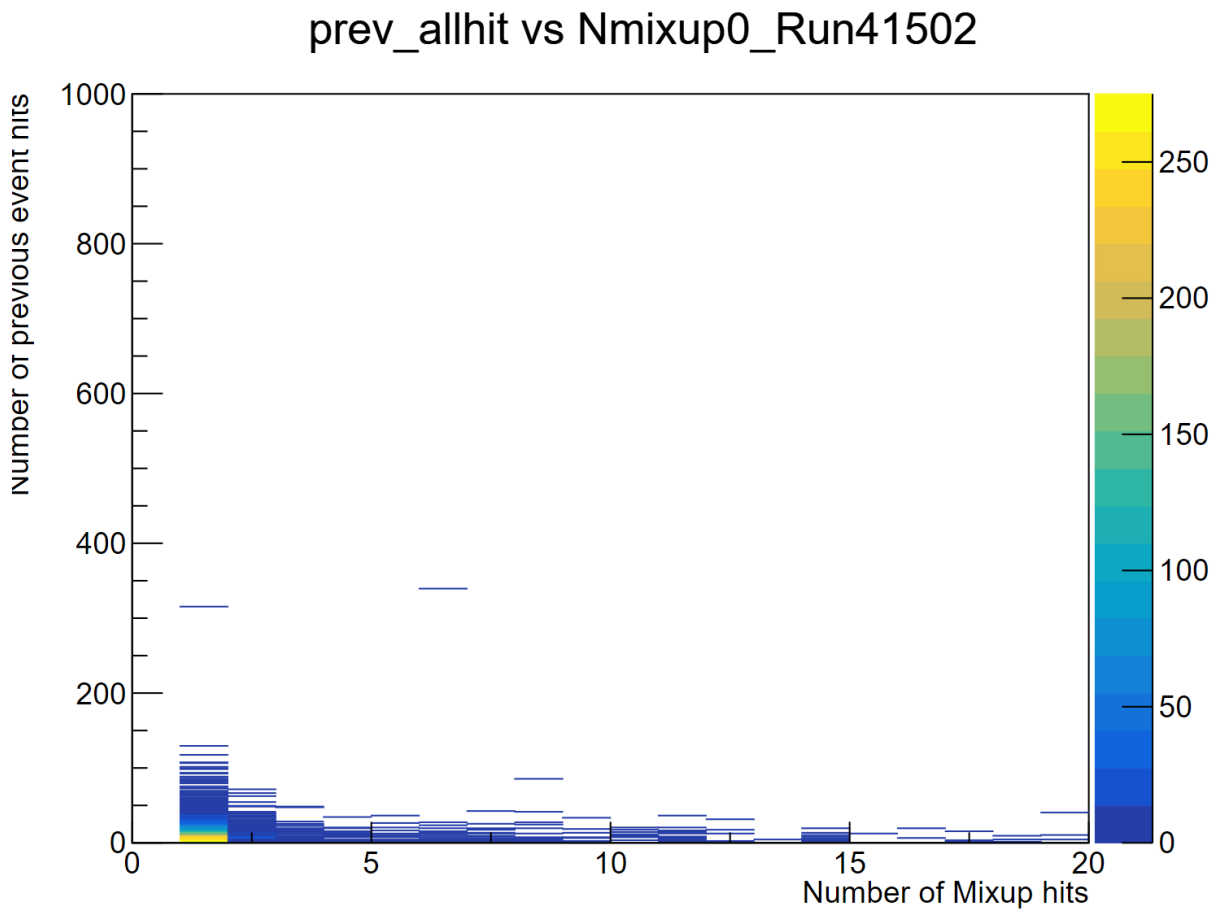






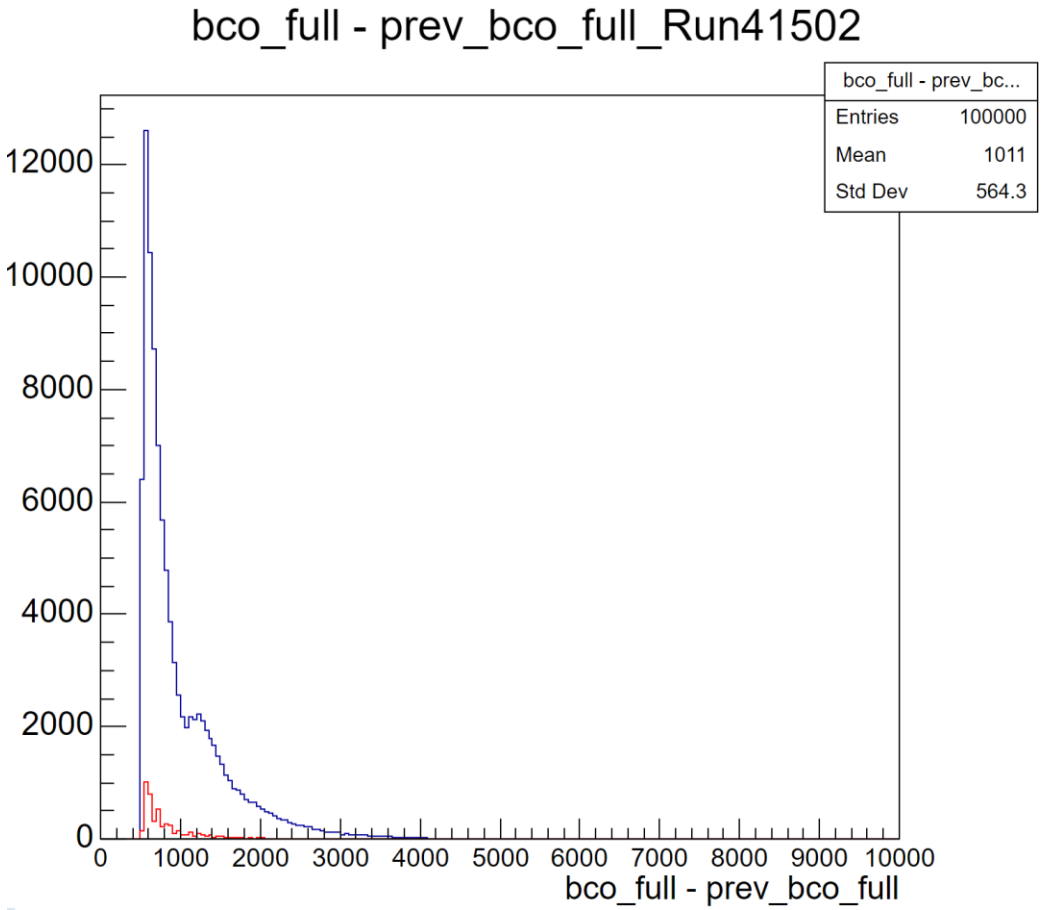
I will submit results for similar previous plots where the mixup does not appear to have occurred.

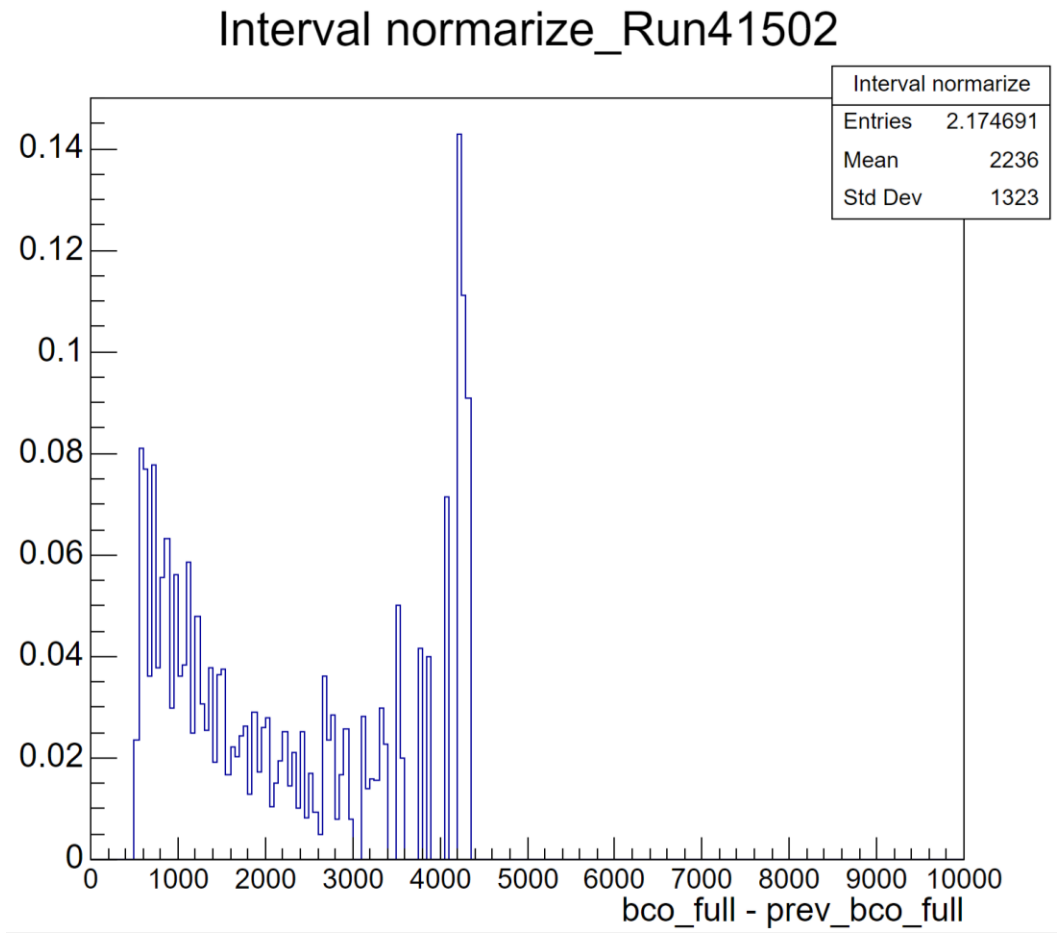
Multiplicity dependence



In Run23 Au-Au, the correlation between Multiplicity of previous event and the number of hits of Mixup was confirmed, but in Run24 p-p, it is difficult to confirm it because Multiplicity is low. If any of the results can be confirmed in the reworked results, I would like to submit them.

Collision interval dependence

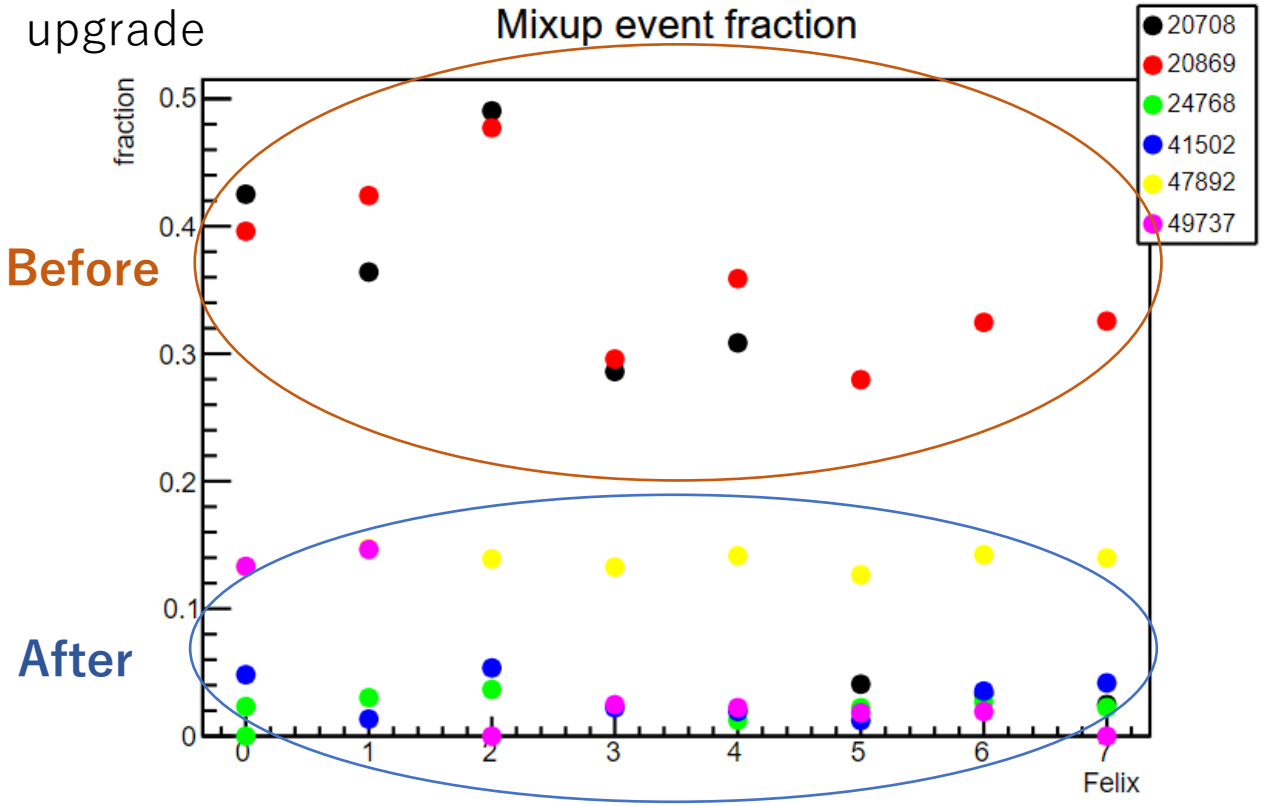


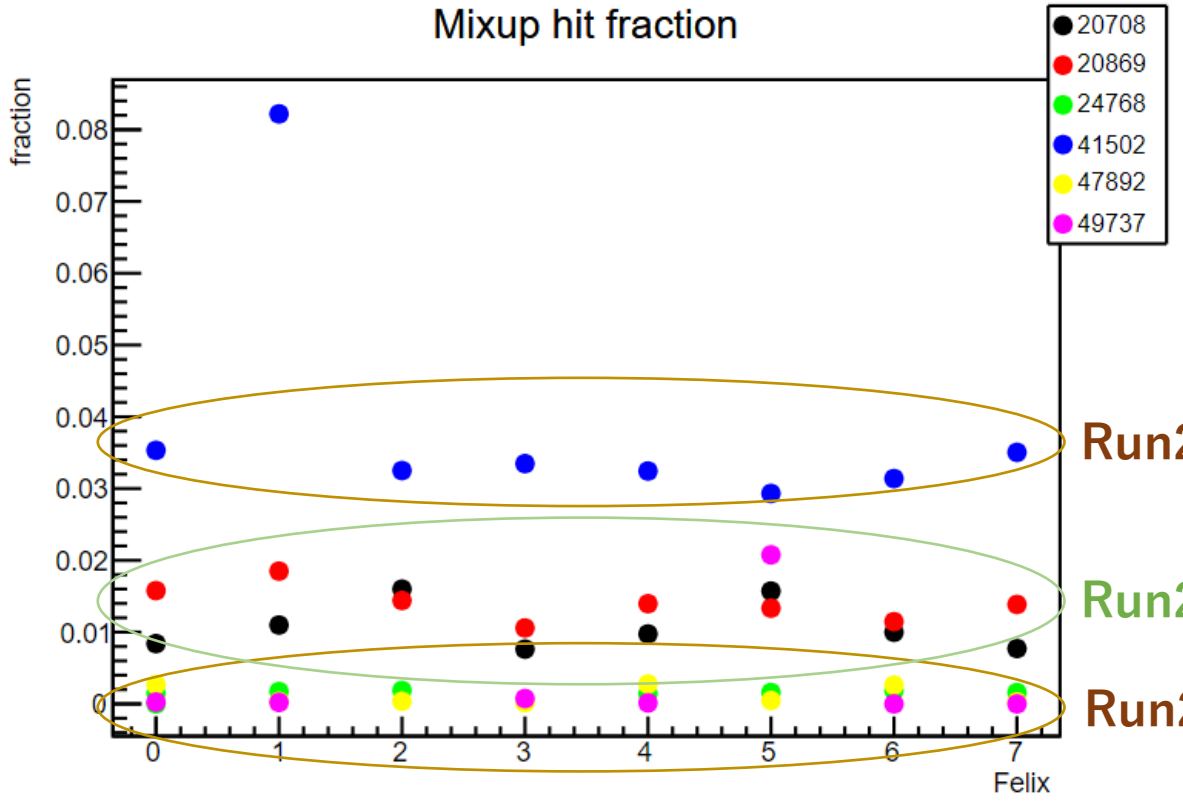


These plots show collision interval dependence, and in this result, the shorter the interval,
the more likely mixups are to occur, but I do not know how this will change when the results are remade.
However, I will submit the results with or without this dependence.

Run23&24 Mixup fraction

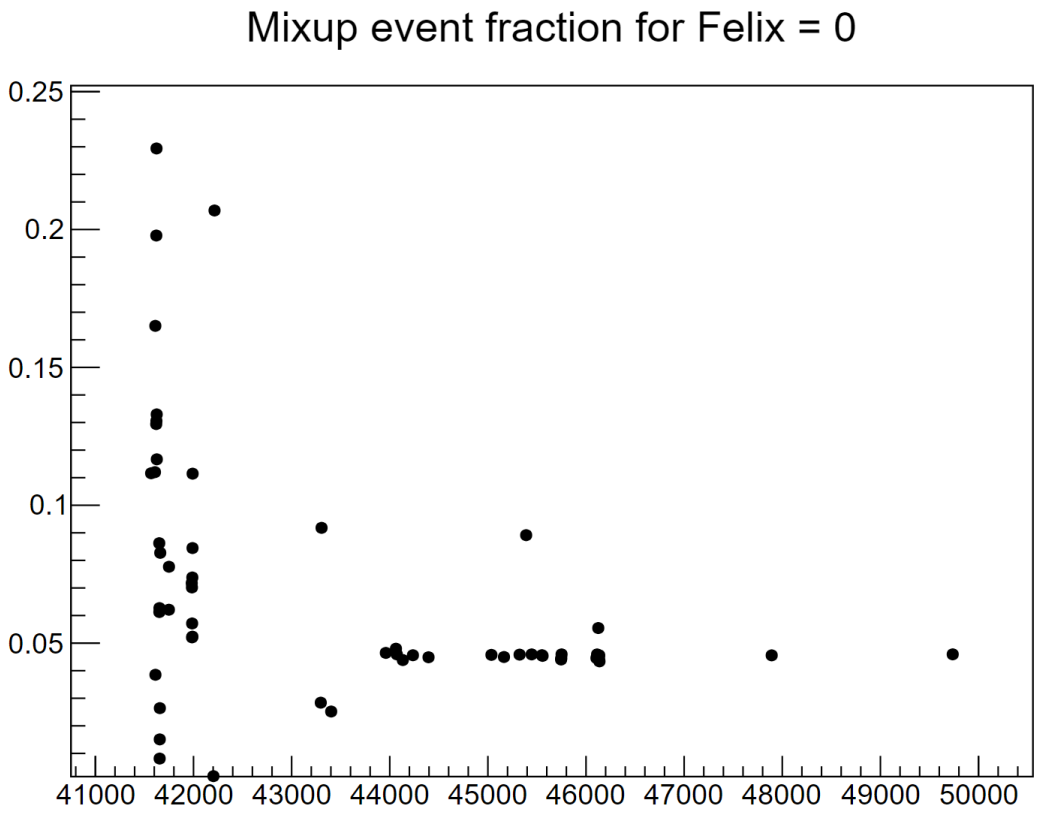
Felix Firmware upgrade

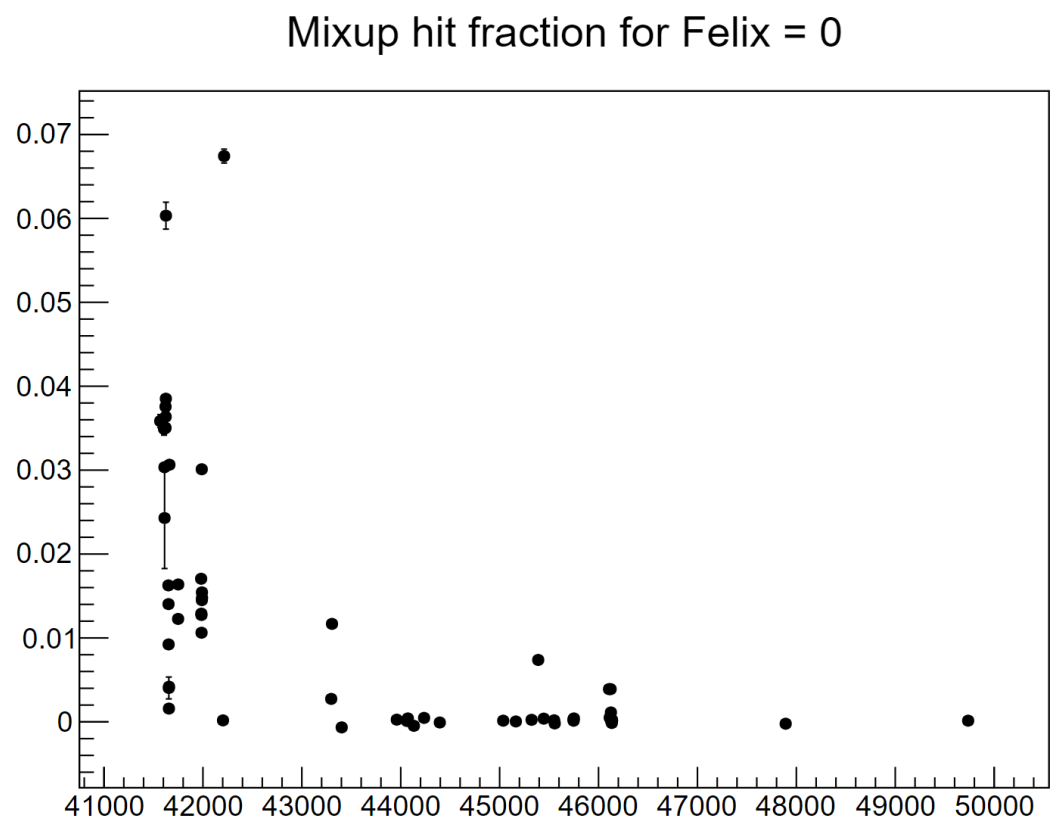




- These plots will also be submitted to show the change in Mixup fraction, but the results could change.
- Also, depending on the results, I plan to change the plots to averages of runs with and without mixups, rather than run-by-run.

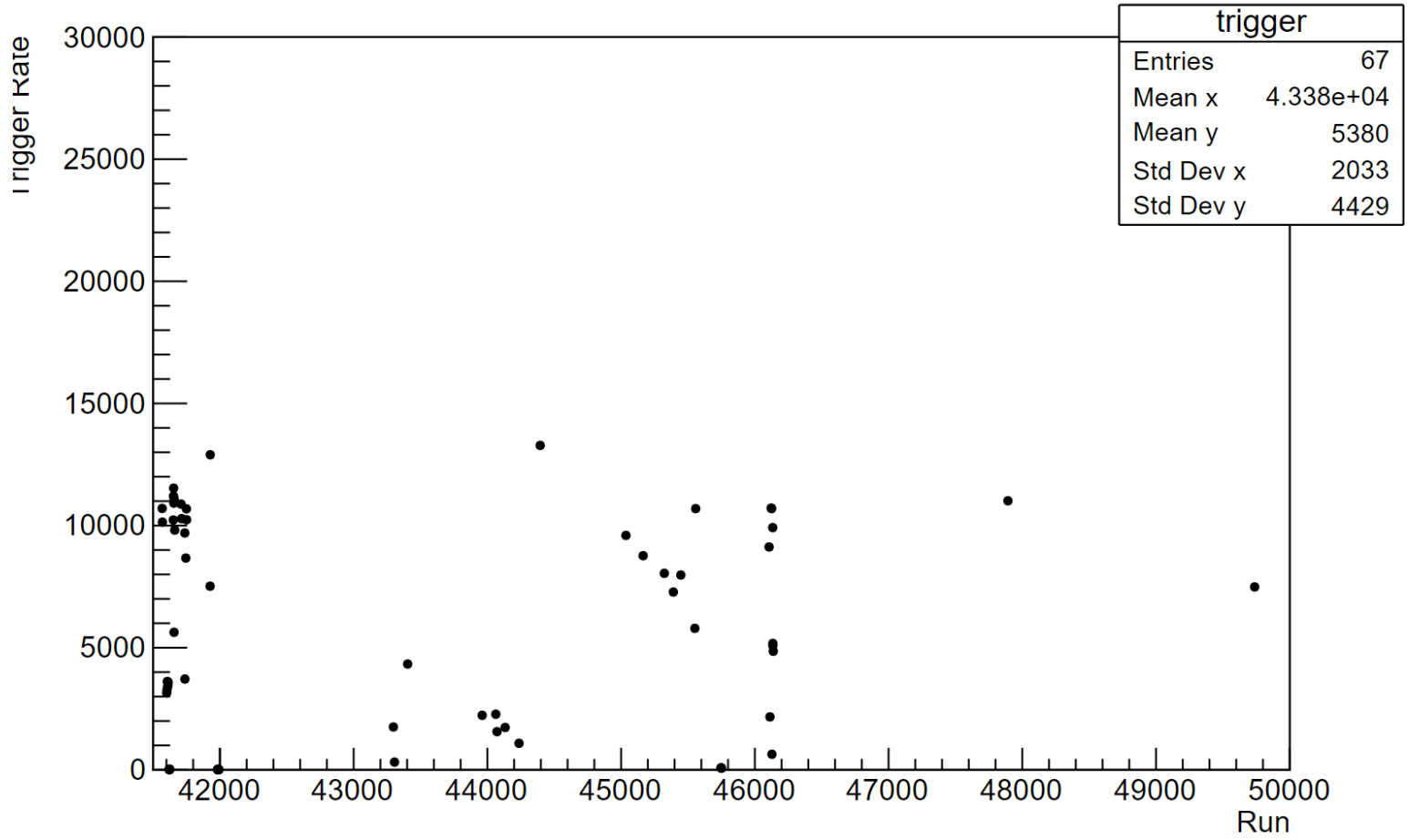
Run24 Mixup fraction intt0 >10min





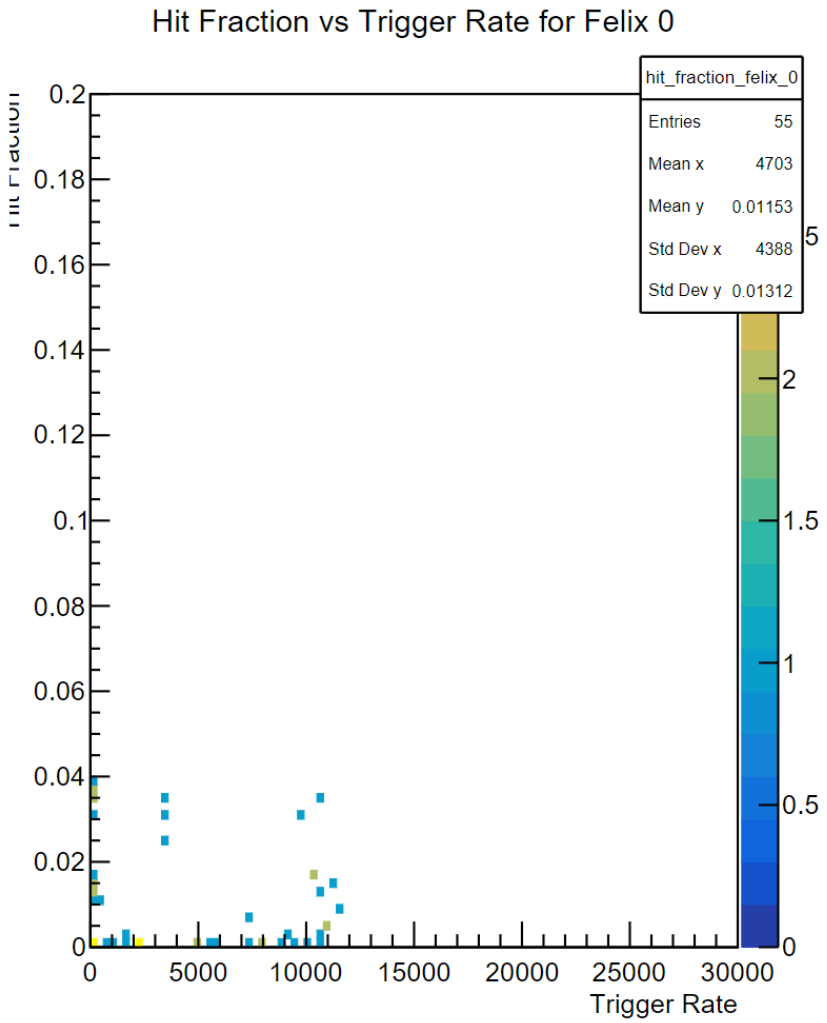
I will submit a plot of Run vs Mixup fraction only Runs with a measurement time of 10 minutes or more. Also, this trigger rate is the trigger rate obtained by dividing the total number of events scaled down by the duration

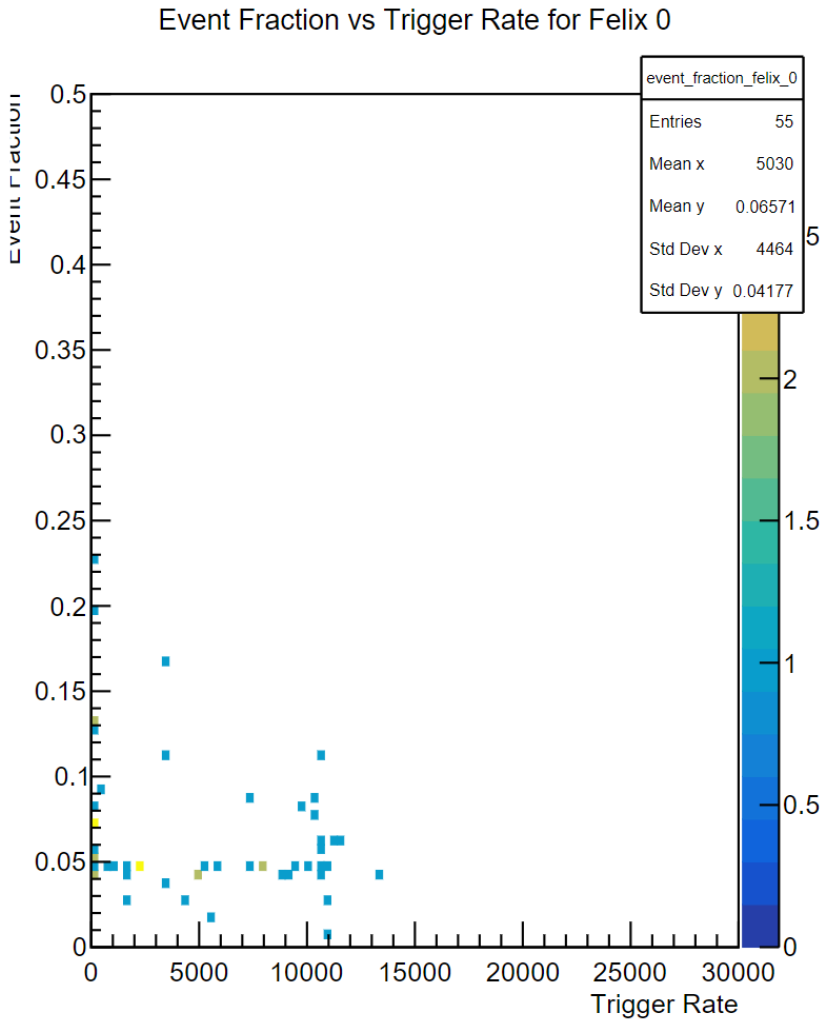
Run vs Trigger rate >10min



I will not submit this plot, but it is a plot of Trigger Rate vs Run over 10 minutes.
From this, I have identified some trigger rate dependence in some Run data, so after reanalyzing it, I will check for dependence between Mixup.

Mixup fraction vs trigger rate intt0 >10min





I will be submitting this plot as well, but the mixup fraction for each Run data will change after the reanalysis, so this plot will change as well.
After that I will check Mixup have trigger rate dependence or no.