INTT weekly meeting

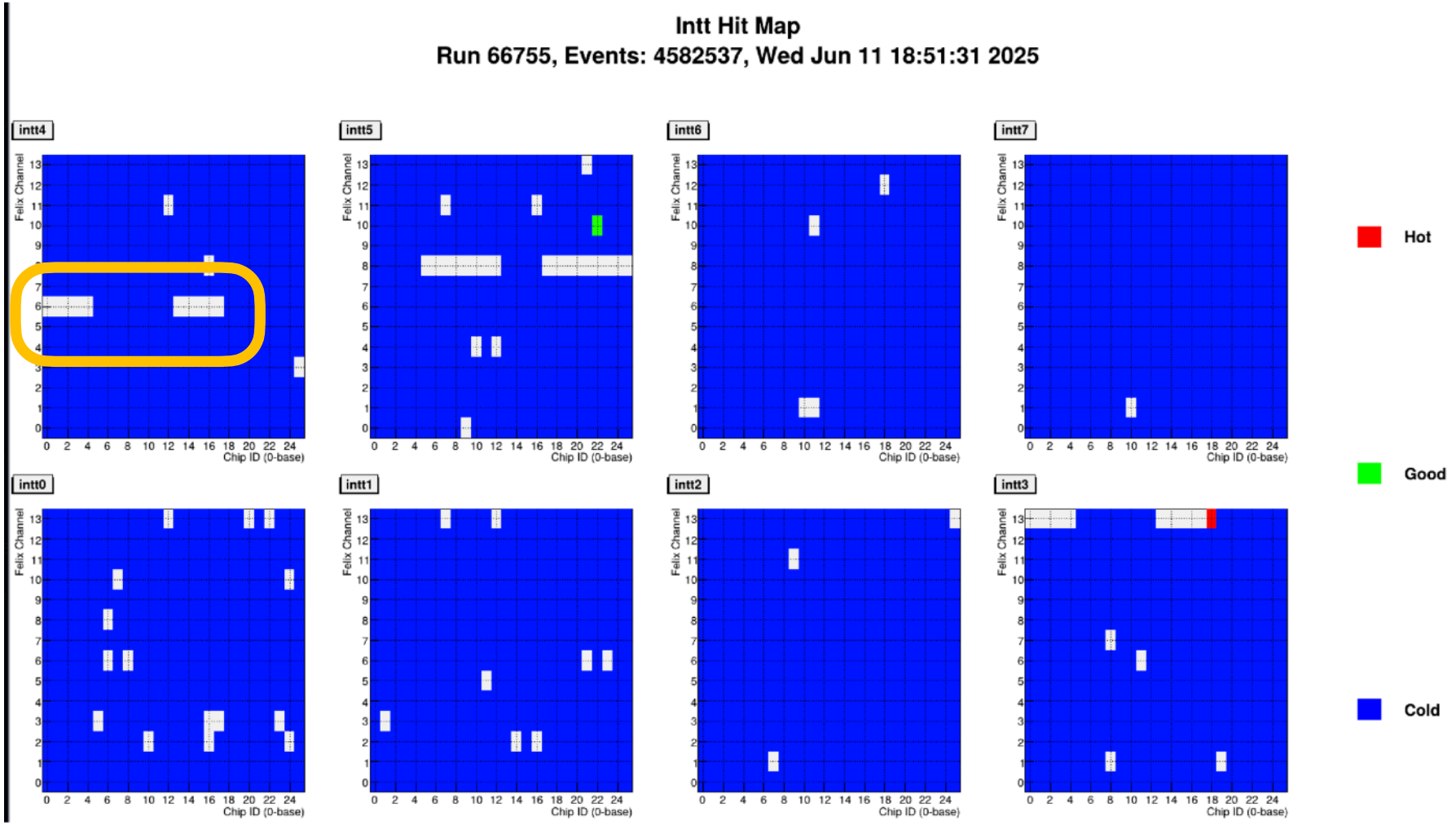
Some update on INTT
Event display and vertex

Jaein Hwang (Korea Univ.)

June 12 2025

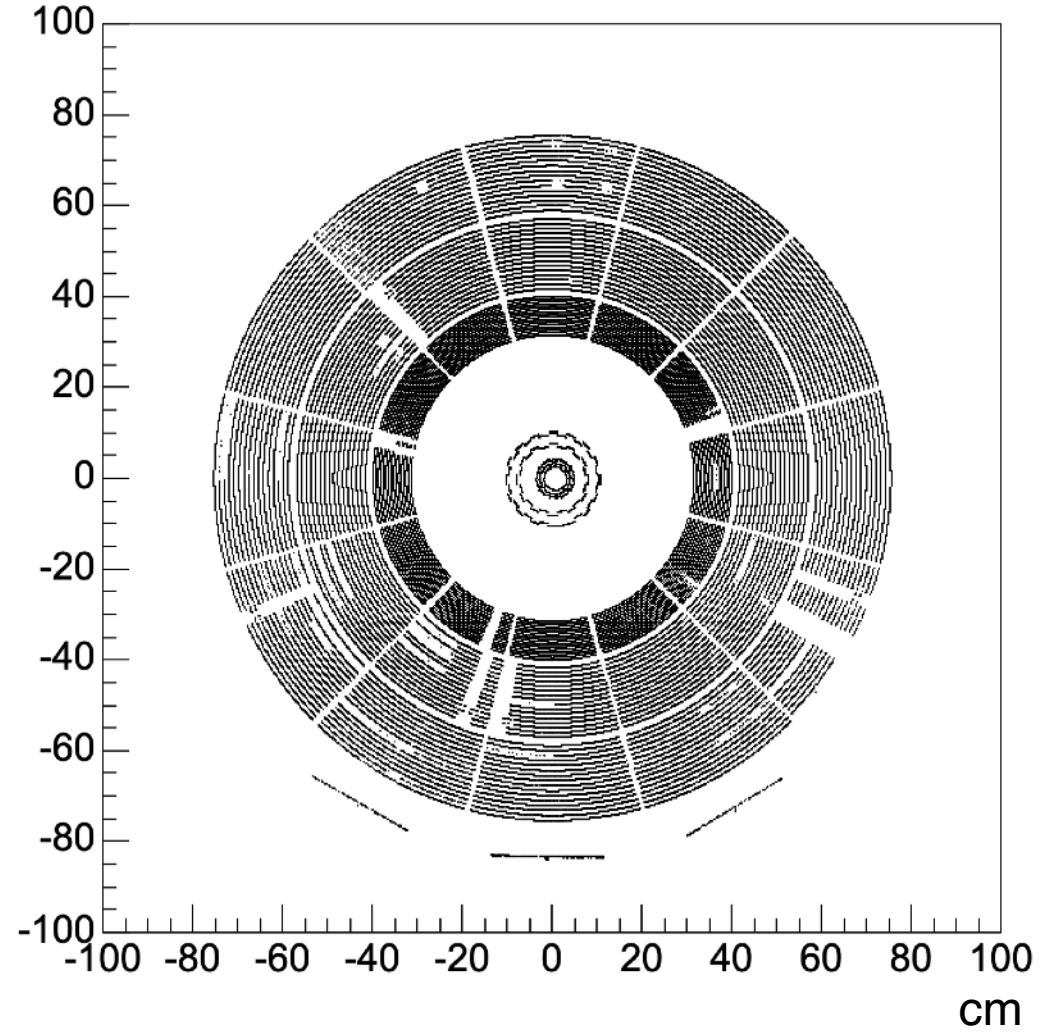
Online masking update

After masking update

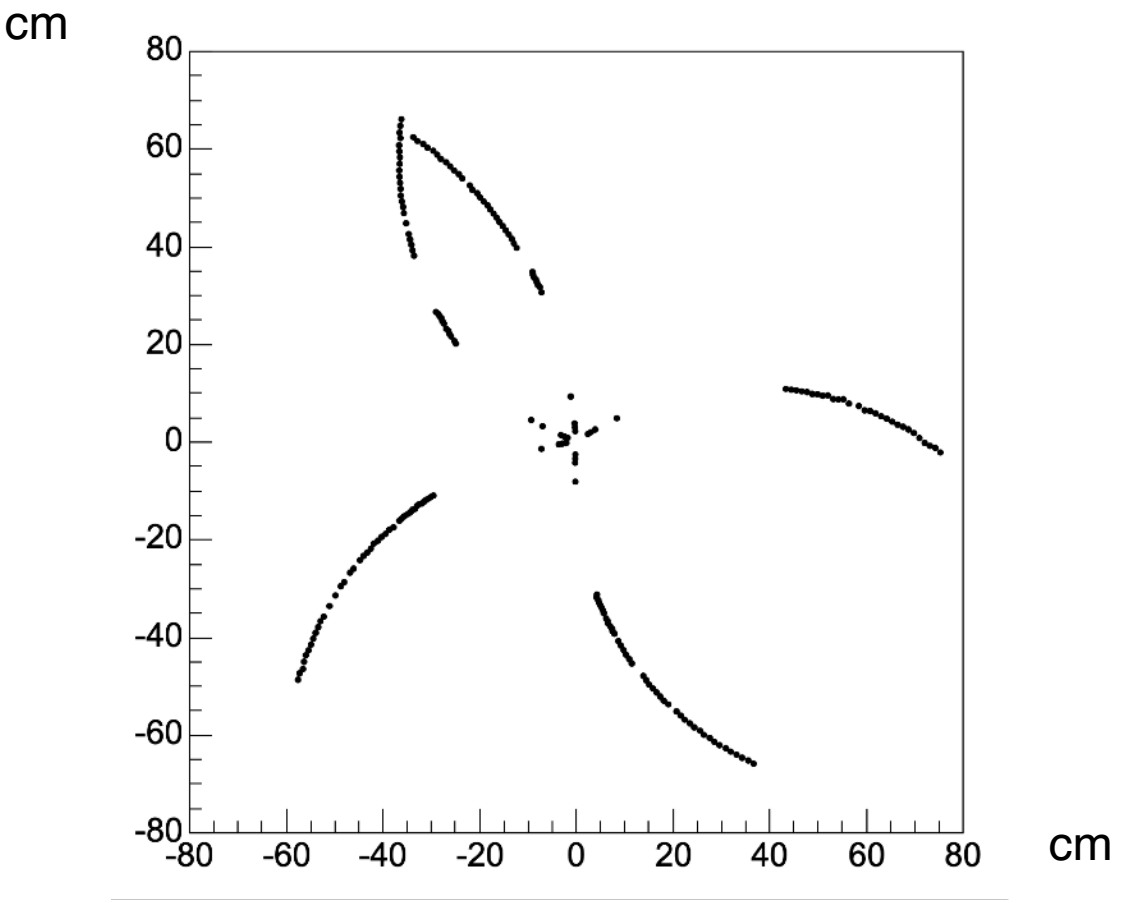


Event display with Full Tracker

From Run 66552 ~ 1000events
Clusters distribution from all trackers



From Run 66552
clusters associated with Track,
showing just some tracks which have clear connecti
with Silicons



Event display with Full Tracker

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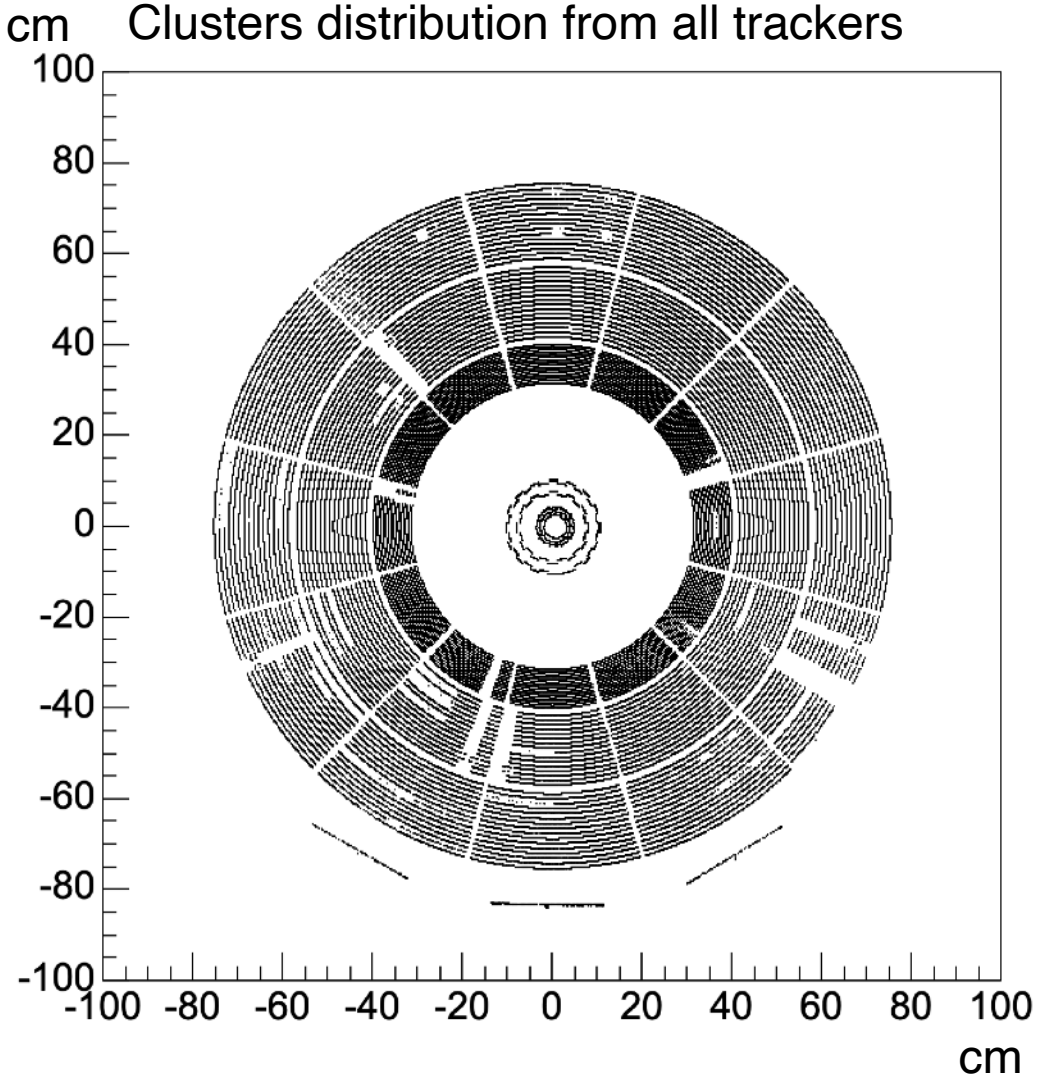
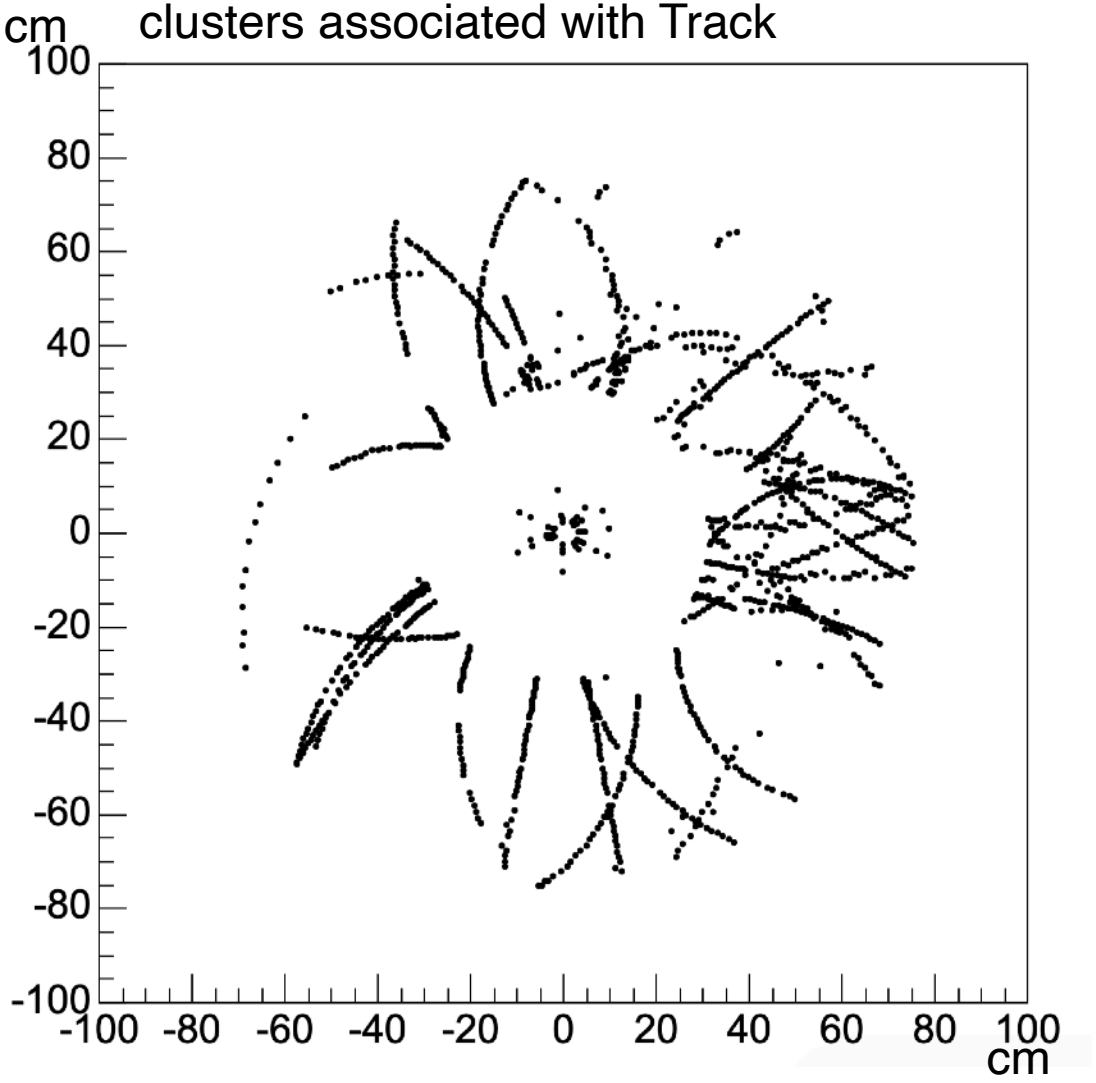
Clusters distribution from all trackers

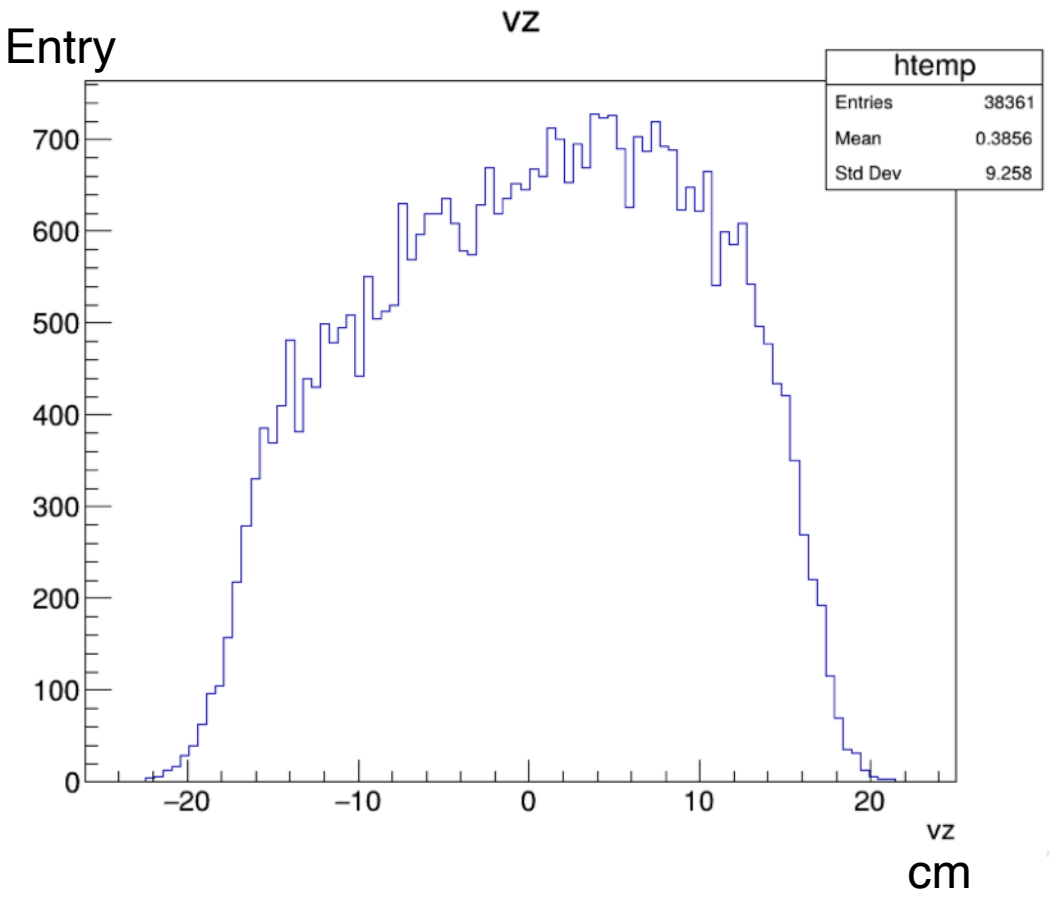


From one event(1st event) Run 66552
clusters associated with Track

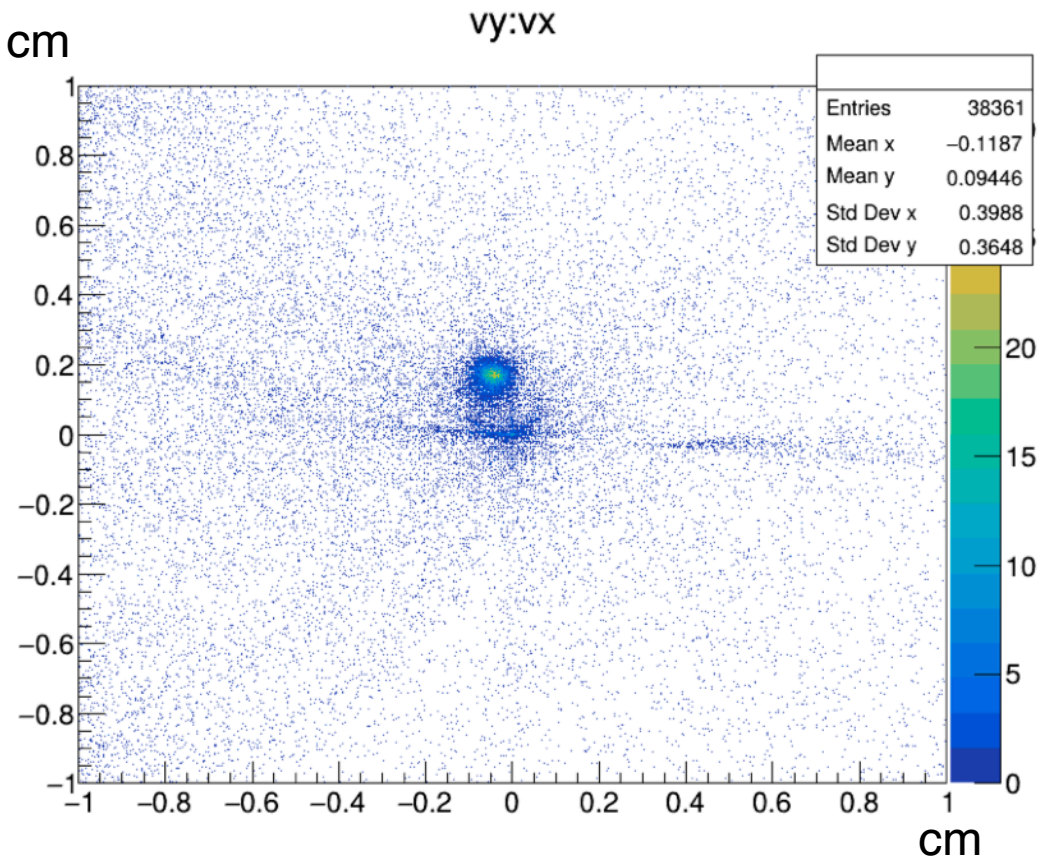


Vertex reconstruction

Z-vertex reconstructed by SvtxTracks



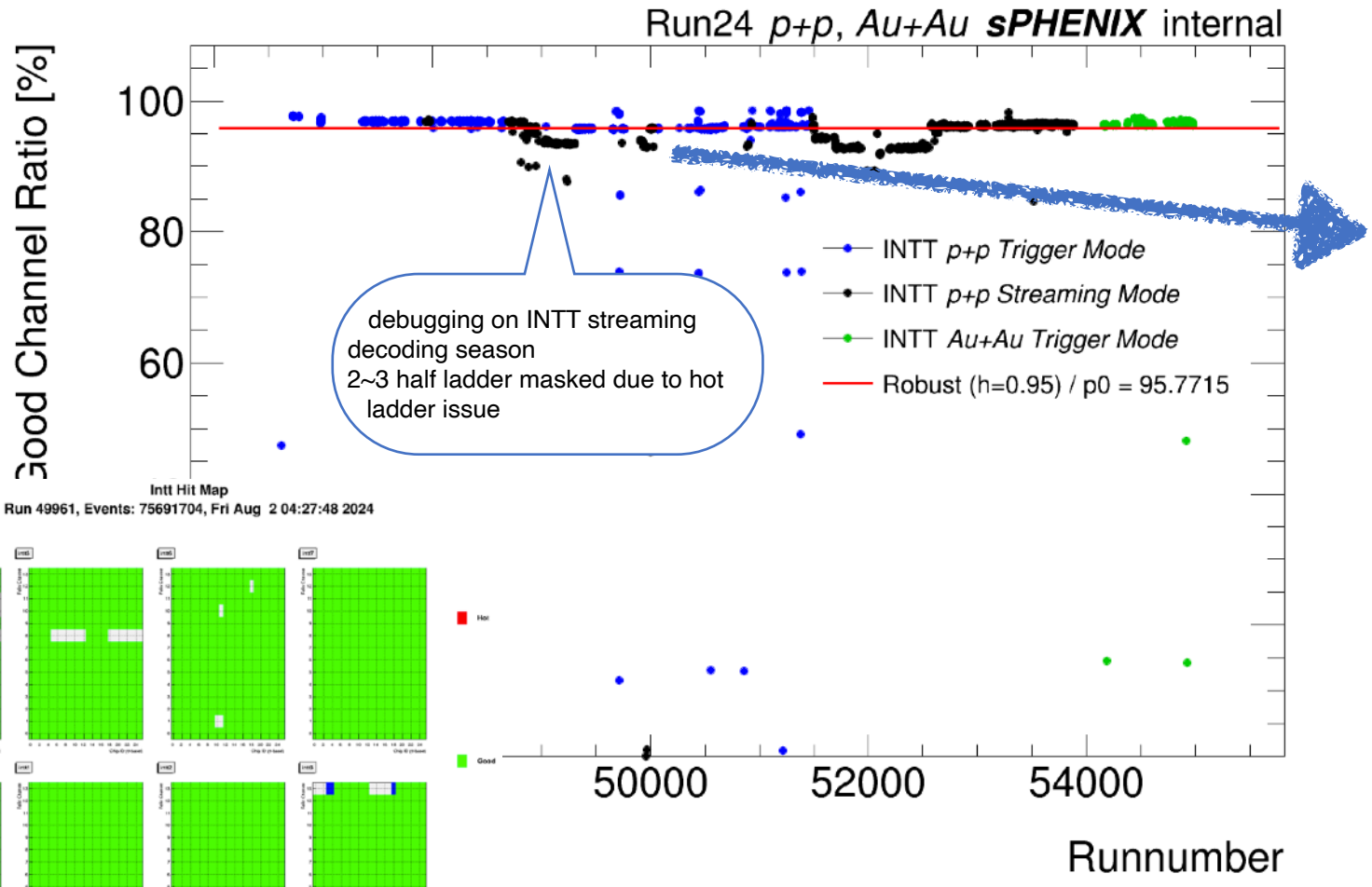
From one event Run 66552
XY-vertex reconstructed by Svtxtracks



BACKUP

Remarkable past record(1)

Good Channel Ratio (BCO_QA == GOOD && Runtime > 300s)



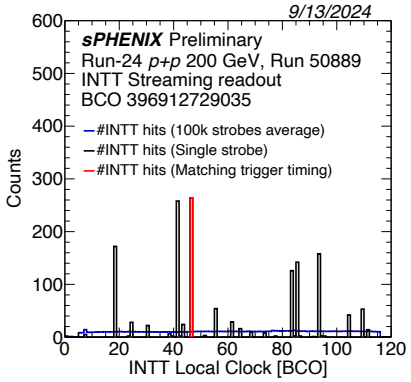
BLUE : Triggered mode

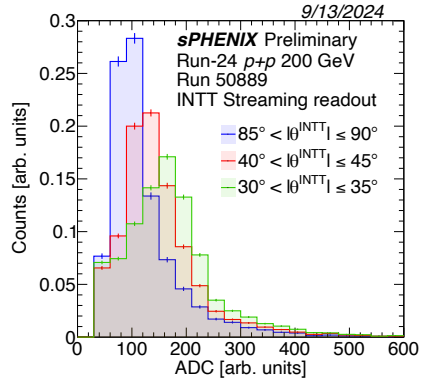
BLACK : Streaming mode

GREEN : AuAu Trigger mode

Linear / Robust (h=0.95) Fit

Run 50,889 / Golden run to clarify INTT is ready for streaming readout





INTT Run QA Result

RC-DAQ events in daq database
is used for # of events estimation

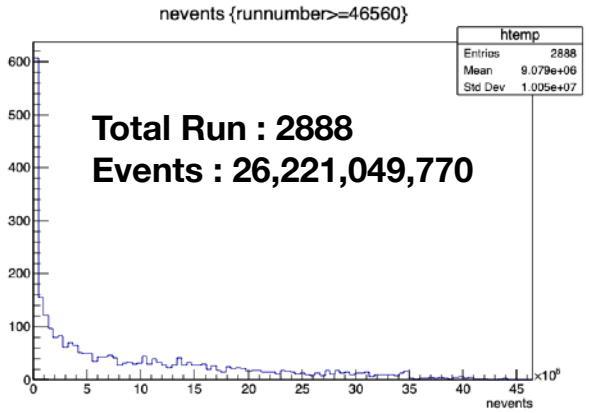
From Jun 21(Run 46560) to End of Run

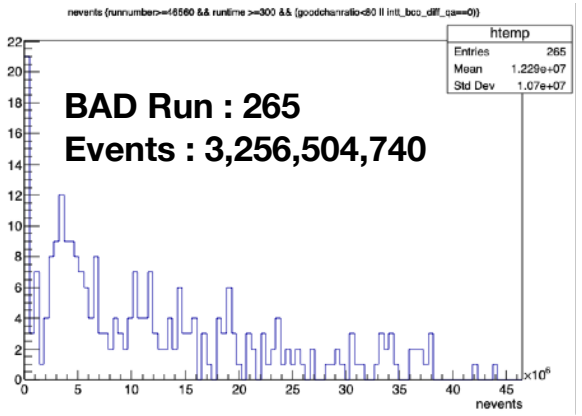
- Golden Run
  BCO alignment = GOOD
  Runtime >= 5 mins
  GOOD Channel ratio > 90%

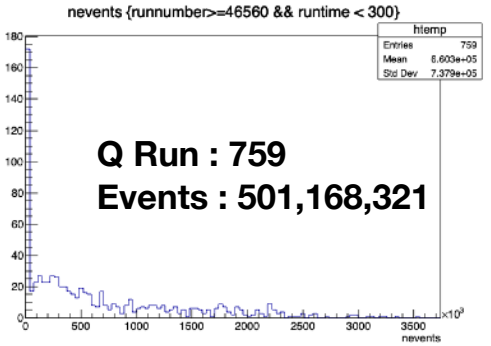
- Bad Run case 1
  Runtime >= 5mins
  BCO alignment = BAD

- BAD Run case 2
  Runtime >= 5mins
  Good Channel ratio < 80%

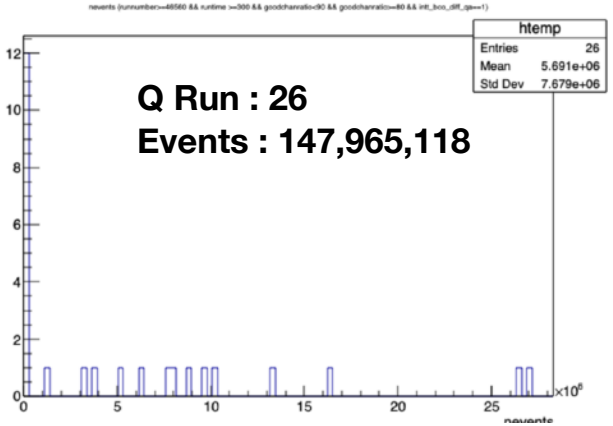
- Questionable case 1
  Runtime < 5mins







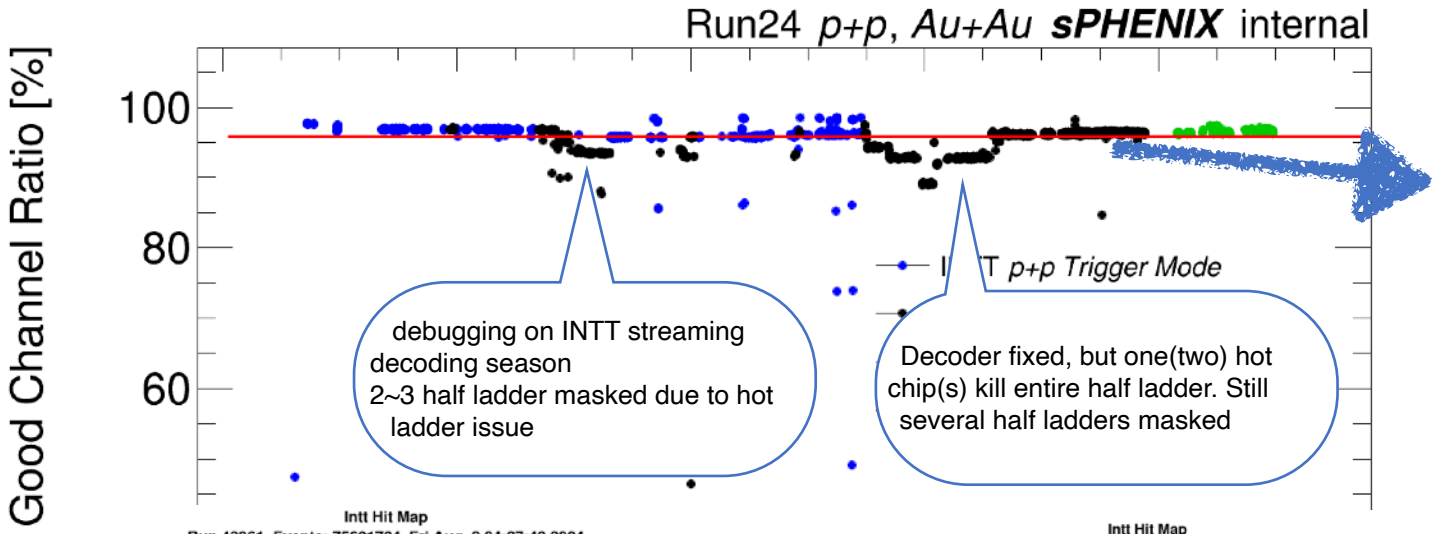
- Questionable case 2
  Runtime >= 5mins
  80% < Good Channel ratio < 90%

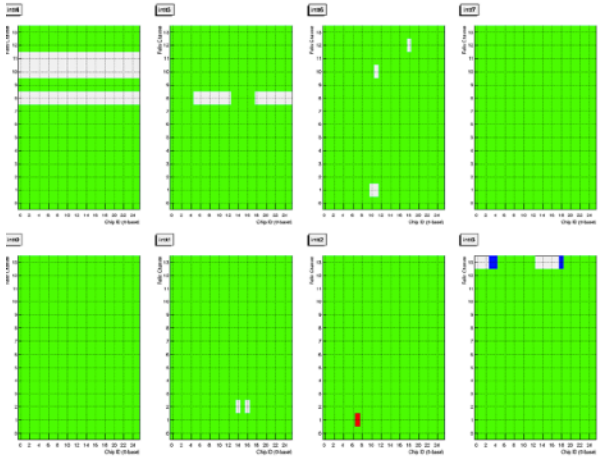


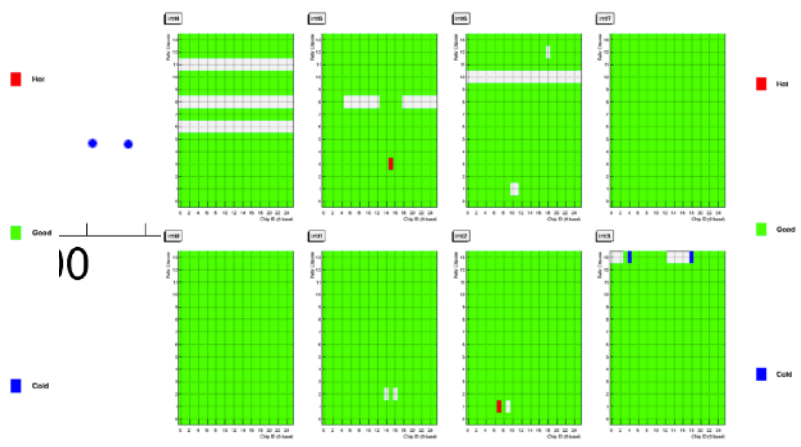
Category	Fraction of Runs (%)	Fraction of Event (%)
GOOD	63.67%	85.09%
BAD	9.18%	12.42%
Questionable	27.15%	2.49%

Remarkable past record(2)

Good Channel Ratio (BCO_QA == GOOD && Runtime > 300s)

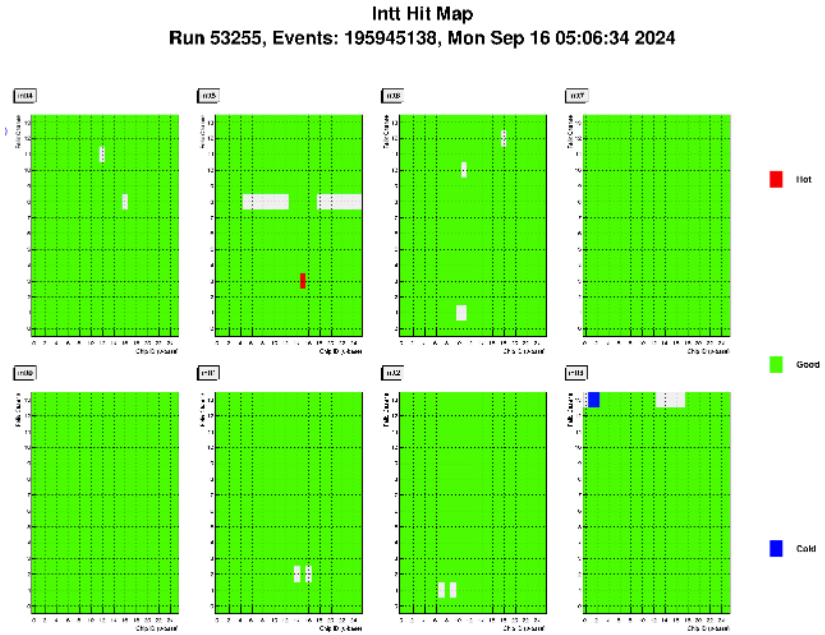






FELIX Update by Raul
-> Chip masking on FELIX side available

INTT back to operating with ~95% GOOD channel



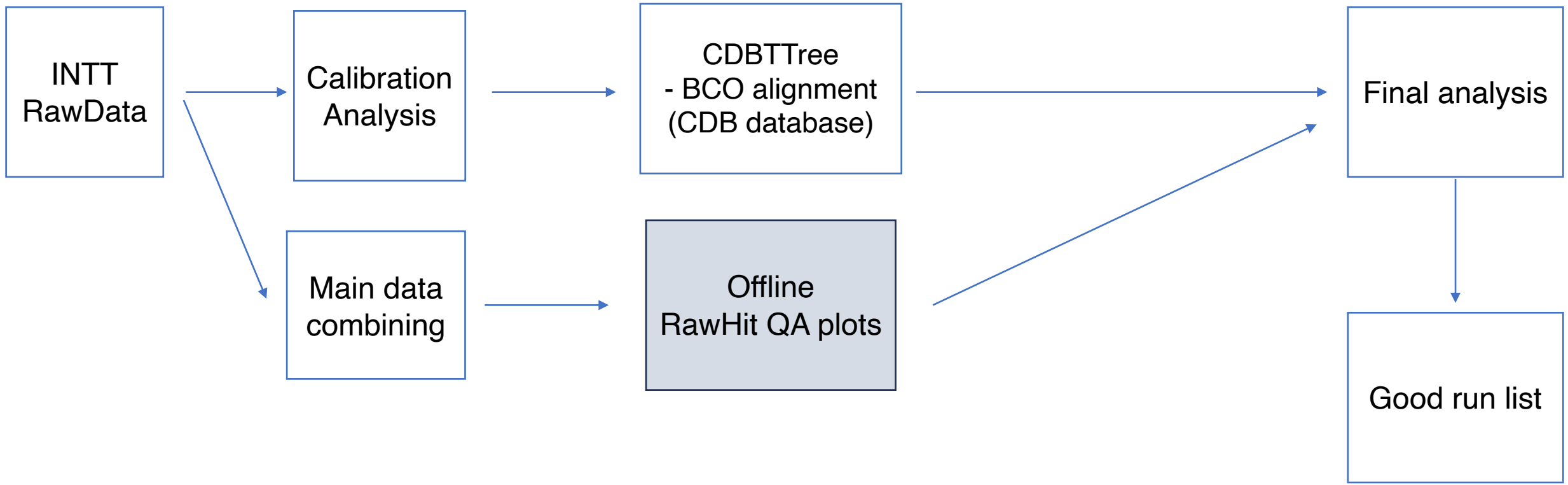
INTT Run QA structure(OLD)

RCDAQ

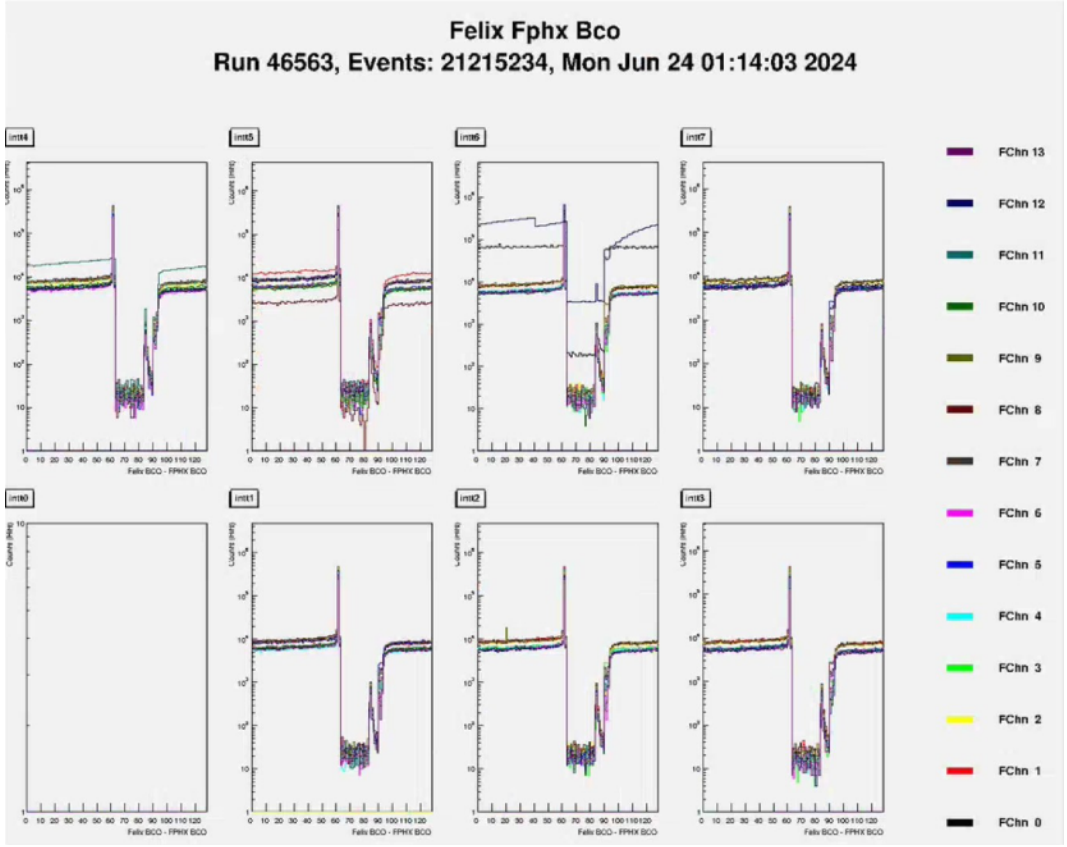
- Check BCO alignment based on Calibration result
- Check HitMap distribution from Offline RawHit QA, BUT..

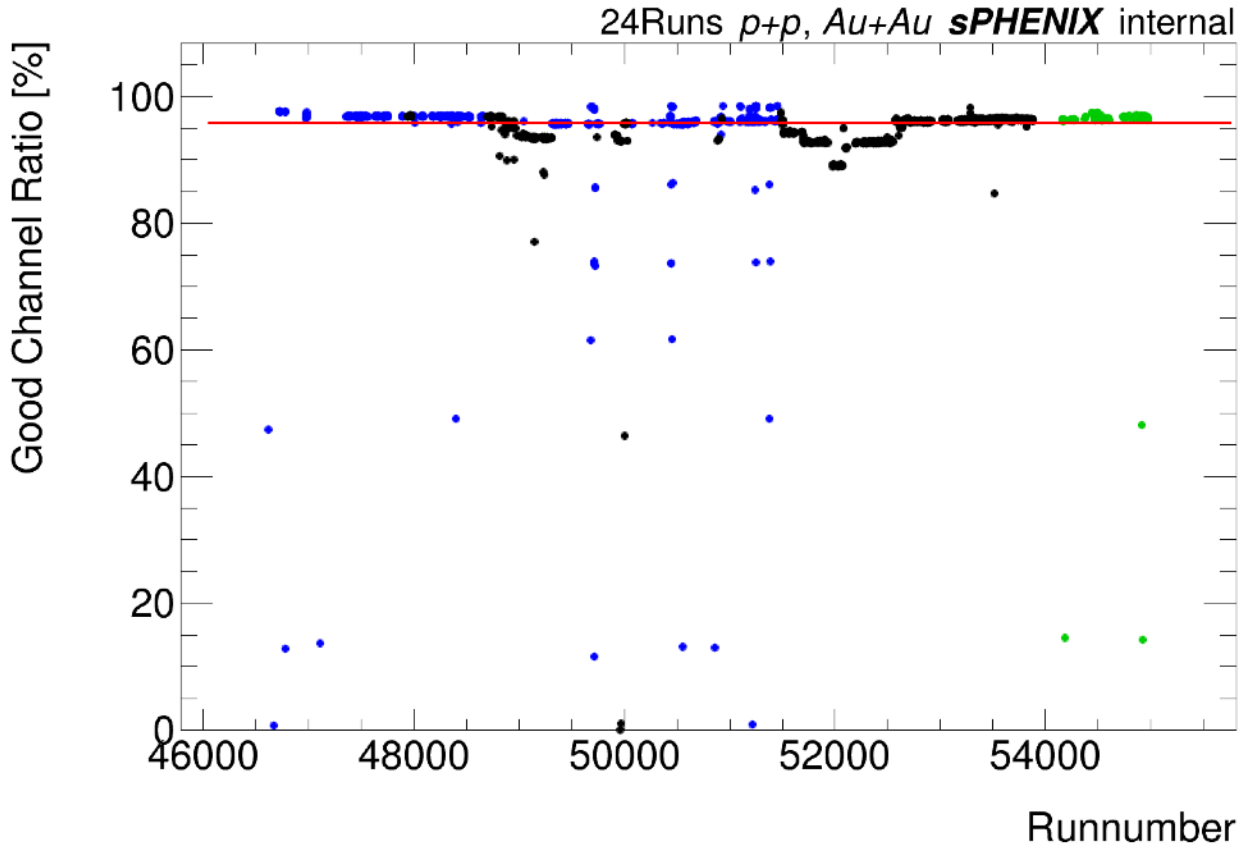
Only cover some streaming runs -> Only silicon runs have to be included for final list

No hot/cold channel rejection is included -> Only one hot channel can affect on entire half-ladder

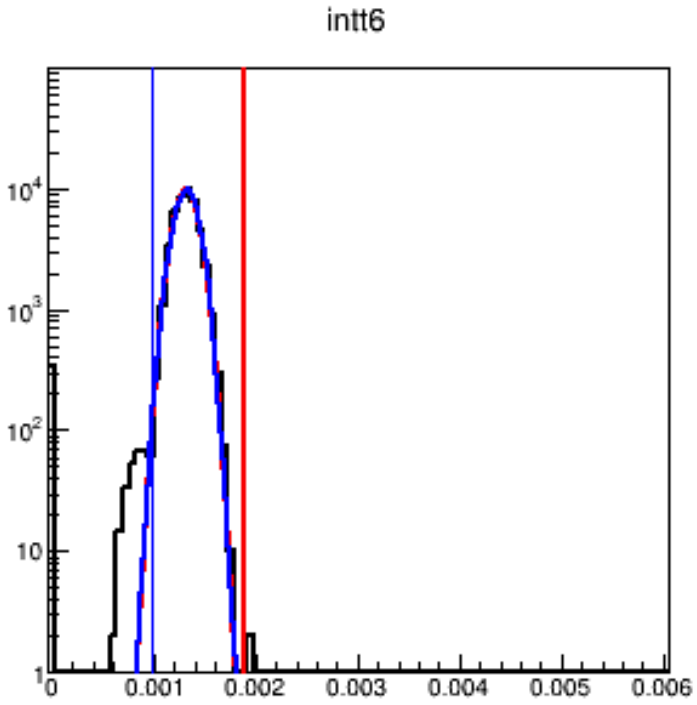


BACKUP


Felix Fphx Bco
Run 46563, Events: 21215234, Mon Jun 24 01:14:03 2024
FChn 13
FChn 12
FChn 11
FChn 10
FChn 9
FChn 8
FChn 7
FChn 6
FChn 5
FChn 4
FChn 3
FChn 2
FChn 1
FChn 0

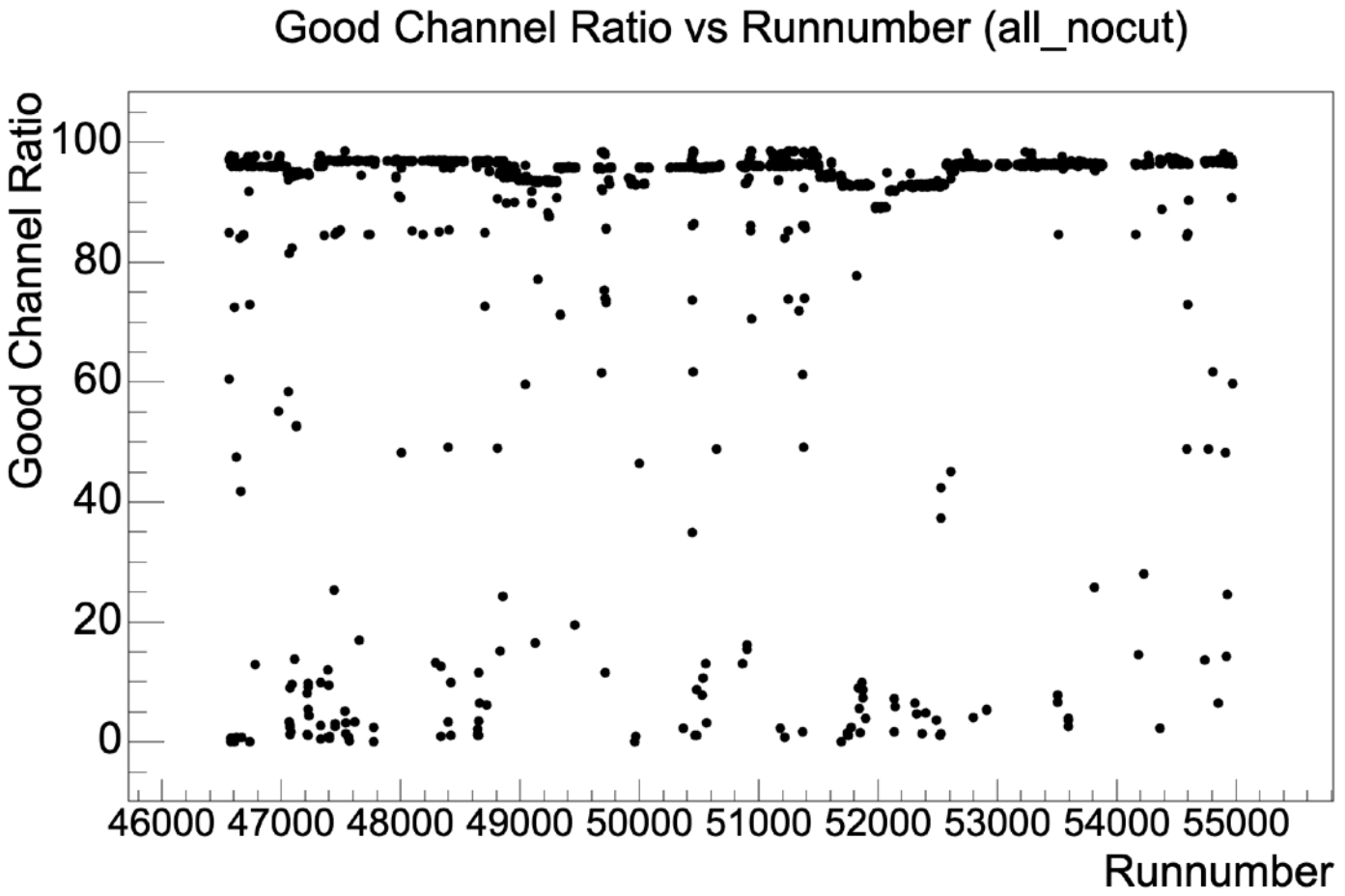

24Runs p+p, Au+Au sPHENIX internal
Good Channel Ratio [%]
100
80
60
40
20
0
46000
48000
50000
52000
54000
Runnumber

BACKUP

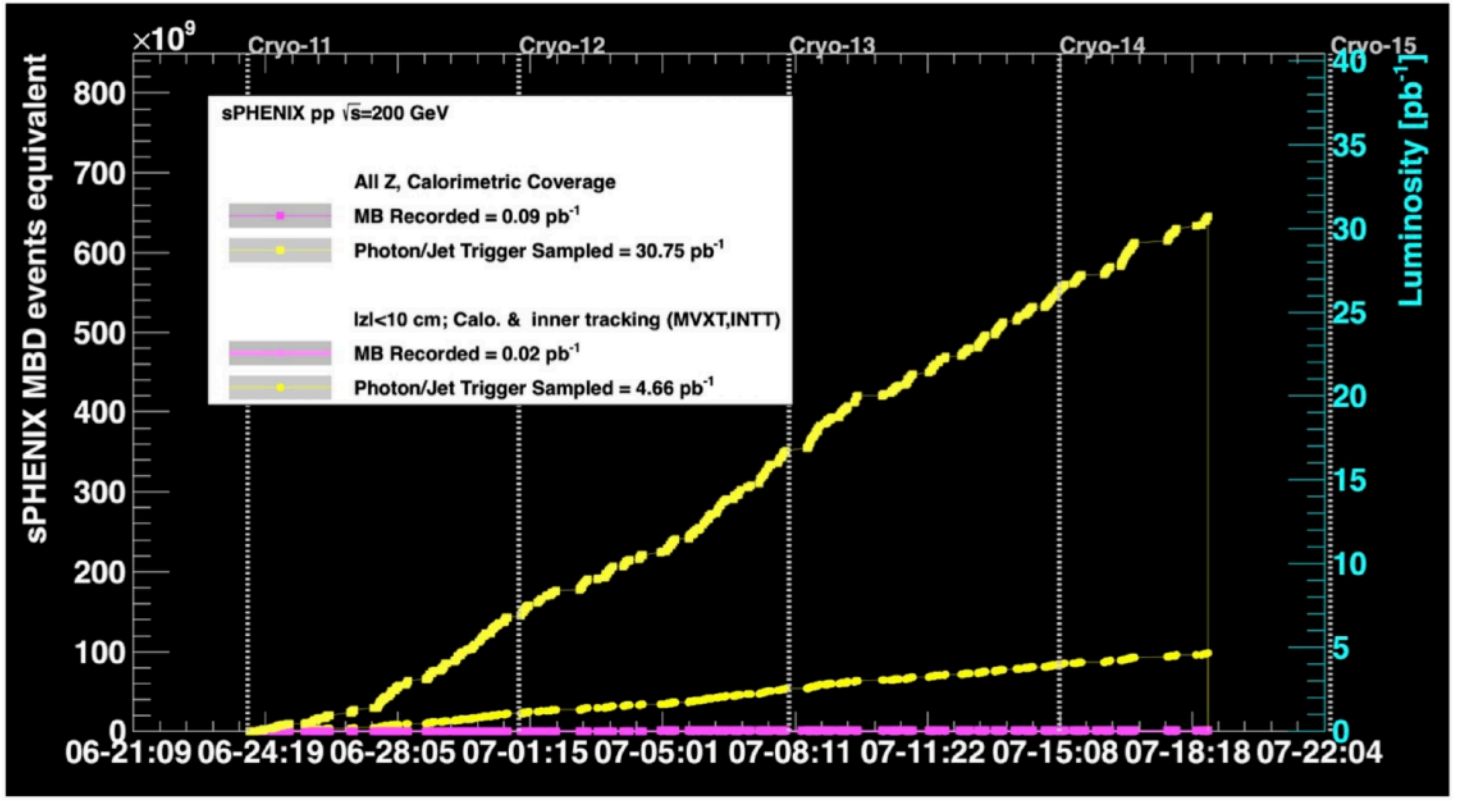


Dead/No hit Cold Hot

mean-3sig<good<mean+5sig



BACKUP

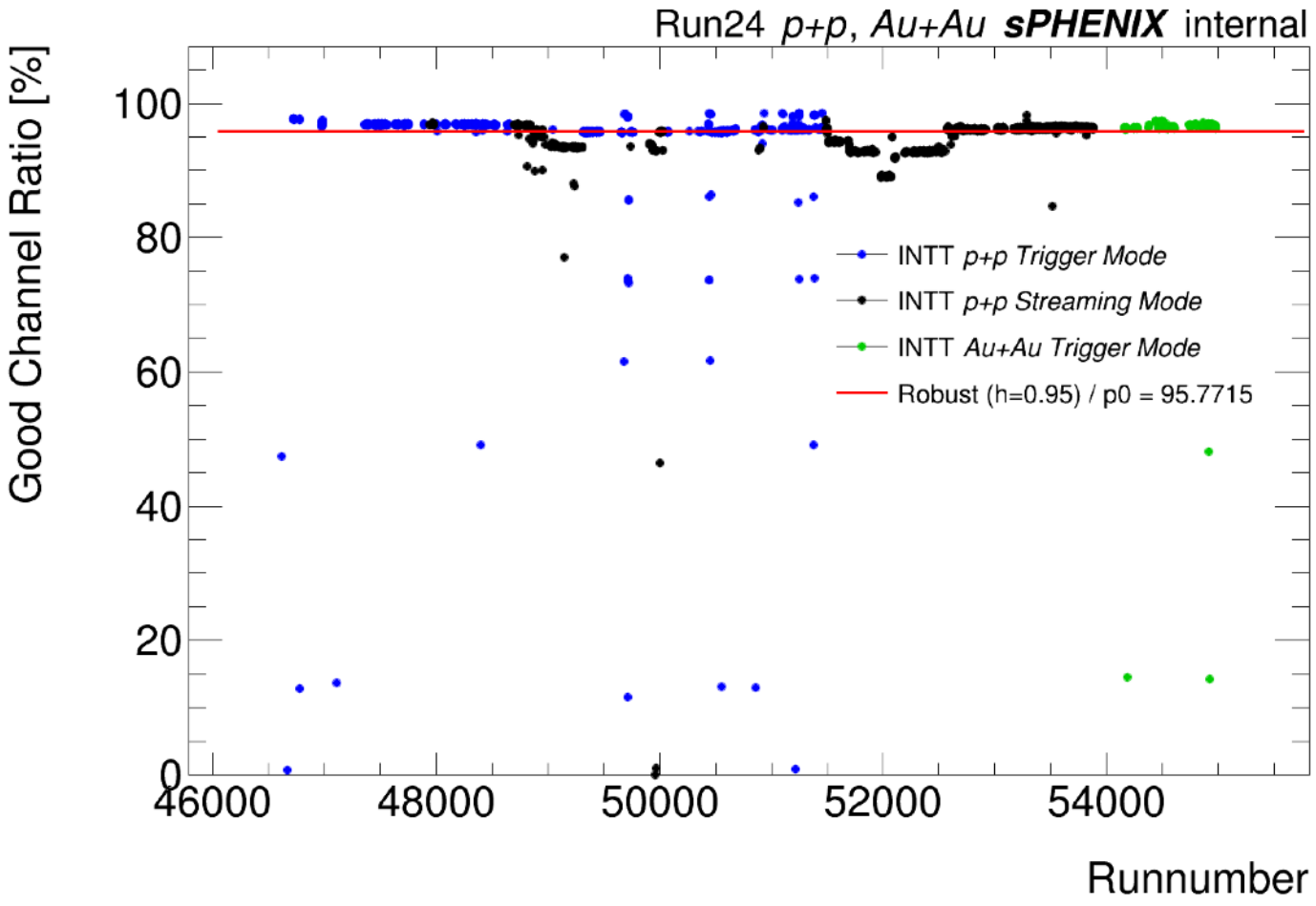


All our quality data is in the last three weeks.
30.7 pb^{-1} over all z-vertices, 4.6 pb^{-1} within |z| <10 cm

My personal suggestion, only worth analyzing data after June 24, 2024.

Good Channel Ratio for Run24

Good Channel Ratio (BCO_QA == GOOD && Runtime > 300s)



BLUE : Trigger mode

BLACK : Streaming mode

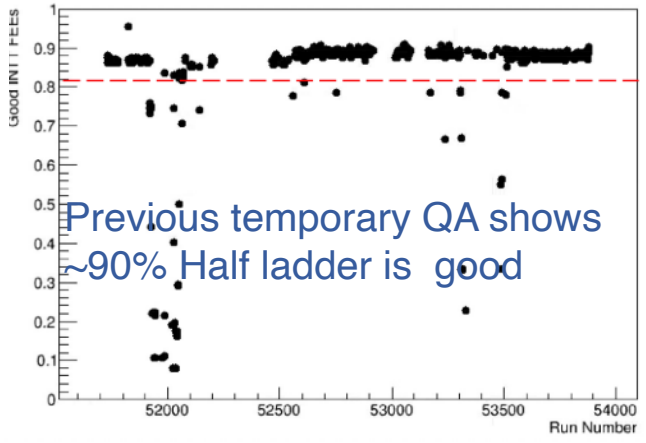
GREEN : AuAu Trigger mode

Linear / Robust (h=0.95) Fit

```
Minimizer is Linear / Robust (h=0.95)
Chi2                      =       107060
NDf                       =         1890
p0                        =      95.7715
```

95% of the INTT channels are GOOD for overall Run24 data

WHEN

1)FELIX is properly configured.

2)At least more than 5mins run to ensure stability and to accumulate the statistics