Request for a Performance Plots Approval

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Overview

- I would like to request an approval of performance plots demonstrating the timing accuracy of INTT in Run-24
- Analysis note: https://sphenix-invenio.sdcc.bnl.gov/records/xe0ng-36d24

Data used for the analysis

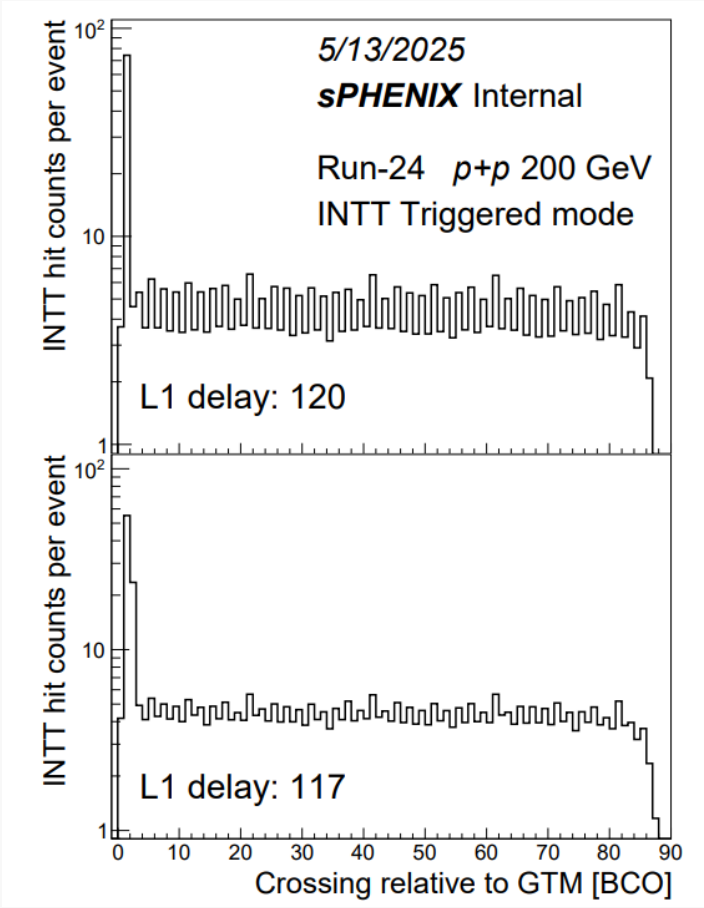
- **INTT Timing scan**
  We conducted a INTT delay parameter scan last year (May 2024)
  to tune INTT timing relative to GTM/GL1.

Run	L1 delay
43291	127
43288	126
43285	125
43283	124
43282	123
43280	122
43278	121
43276	120
43313	119
43408	120
43410	119
43412	118
43413	117
43414	116
43415	115
43417	114
43421	113
43426	112
43441	110
43436	108
43438	107
43440	106

- **Run conditions**
  - RHIC fill pattern: 74 x 74
  - Trigger condition: MBD NS>=1
  - Data taken during the commissioning phase in local mode.
- **DST production done with ana.464 by ourselves.**
- **Event selection: first 100k events in each run were used, and INTT hot channels removed.**

Plots waiting for the approval

- Comparison of different delay settings.
- L1 delay of 120 shows a sharp peak
  indicating sub-bunch-crossing time resolution of INTT.



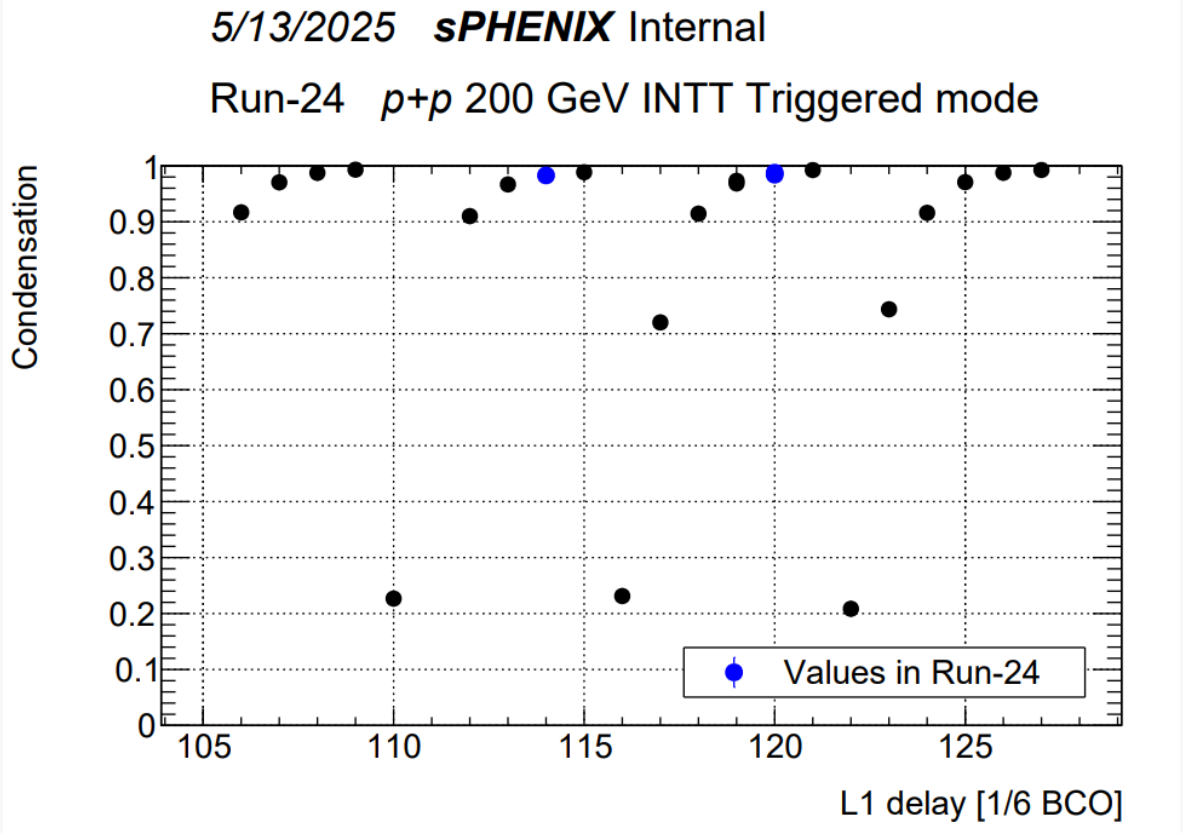
- Message of this plot: We must tune the delay setting for a good data taking.

Plots waiting for the approval

- **An index that evaluates how good each settings were, based on 2 bins that were considered sharing the peak.**

- **Definition:** $\text{Condensation} = \frac{N_{\text{Left}}}{N_{\text{Left}}+N_{\text{Right}}}$

  Value close to 1 → The setting is good.



- **Message of this plot: INTT was operated in a good setting during Run-24**