

Inner outer barrel correlation

2025/6/12

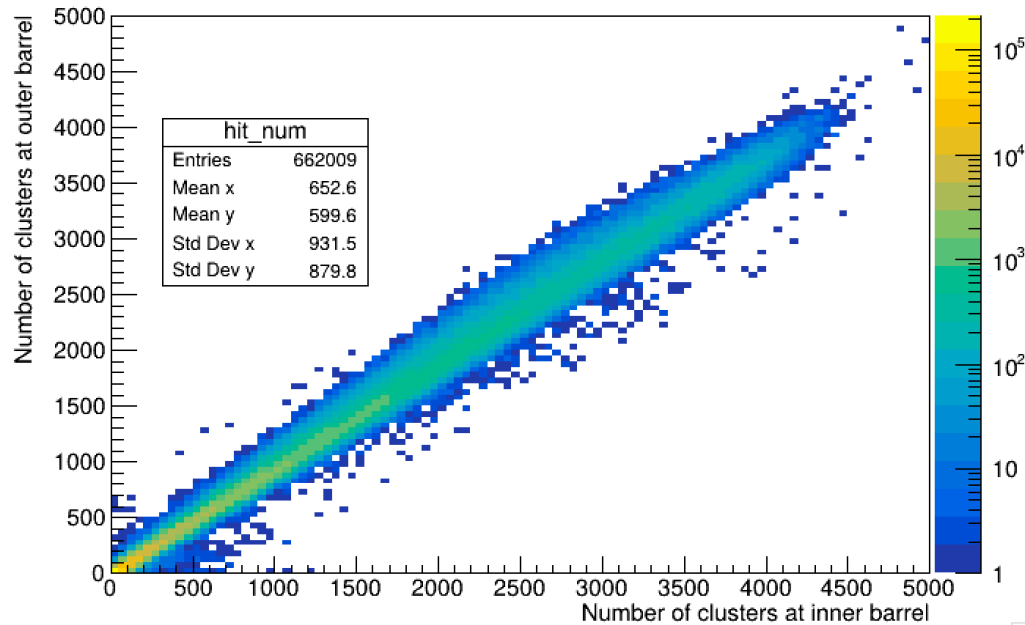
Nara Women's Univarcity

Itsuka Omae



Inner outer barrel correlation

Run 66522

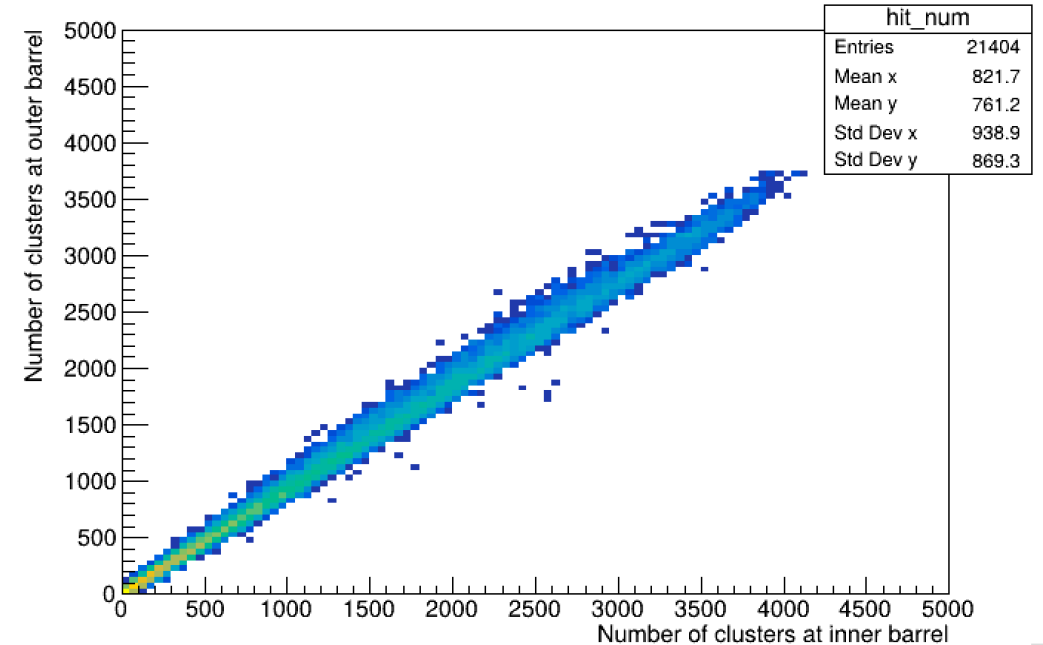


Bunch: 12 x 12

750k events

Trigger: see next page

Run 66682



Bunch: 56 x 56

? events

Trigger: see next page

They show a similar positive correlation.
This is a good indication of healthy operation of INTT.

Trigger information

Expert Control									
		Enter Scaledown	Enter Fraction	Enter Rate (Hz)		Raw	Live	Scaled	Live
0: Clock	187662 : 24/24				Modify	9383.00 kHz	9361.84 kHz	0.05 kHz	99.7
1: ZDC Coincidence	7 : 7/24				Modify	1.86 kHz	1.75 kHz	0.06 kHz	93.8
2: Donut Counter	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	100.0
5: TPC Laser	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
6: ZDC North	511 : 24/24				Modify	17.34 kHz	17.30 kHz	0.03 kHz	99.8
7: ZDC South	266 : 24/24				Modify	18.09 kHz	18.05 kHz	0.07 kHz	99.7
8: MBD S >= 2	off				Modify	6.32 kHz	6.29 kHz	0.00 kHz	99.5
9: MBD N >= 2	off				Modify	8.07 kHz	8.03 kHz	0.00 kHz	99.5
10: MBD N&S >= 2	off				Modify	1.27 kHz	1.27 kHz	0.00 kHz	99.6
11: MBD N&S >= 1	off				Modify	1.83 kHz	1.82 kHz	0.00 kHz	99.5
12: MBD N&S >= 2, vtx < 10 cm	off				Modify	0.48 kHz	0.48 kHz	0.00 kHz	99.7
13: MBD N&S >= 2, vtx < 30 cm	off				Modify	1.11 kHz	1.10 kHz	0.00 kHz	99.6
14: MBD N&S >= 2, vtx < 150 cm	0 : 24/24				Modify	1.14 kHz	1.14 kHz	1.14 kHz	99.6
15: MBD N&S >= 1, vtx < 10 cm	off				Modify	0.64 kHz	0.63 kHz	0.00 kHz	99.6
16: Photon 6 GeV + MBD NS >= 2	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
17: Photon 8 GeV + MBD NS >= 2	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
18: Photon 10 GeV + MBD NS >= 2	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
19: Photon 12 GeV + MBD NS >= 2	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
24: HCAL Singles	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	100.0
25: HCAL Narrow Vertical Coincidence	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
26: HCAL Wide Vertical Coincidence	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
27: HCAL Narrow Horizontal Coincidence	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
28: HCAL Wide Horizontal Coincidence	off				Modify	0.00 kHz	0.00 kHz	0.00 kHz	N/A
40: MBD Laser	off				Modify	9383.02 kHz	9361.86 kHz	0.00 kHz	99.7
41: Random	off				Modify	48.67 kHz	48.55 kHz	0.00 kHz	99.7

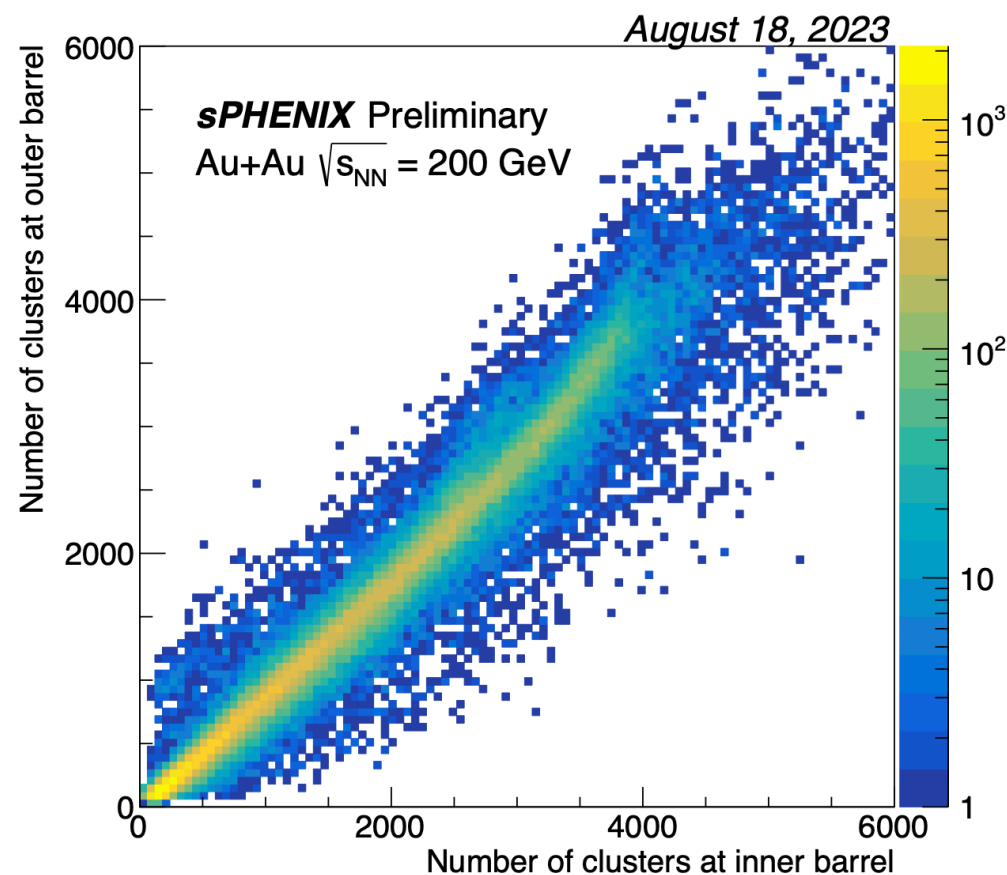
0: Clock	187662 : 24/24
1: ZDC Coincidence	7 : 7/24
2: Donut Counter	off
5: TPC Laser	off
6: ZDC North	511 : 24/24
7: ZDC South	266 : 24/24
8: MBD S >= 2	off
9: MBD N >= 2	off
10: MBD N&S >= 2	off
11: MBD N&S >= 1	off
12: MBD N&S >= 2, vtx < 10 cm	off
13: MBD N&S >= 2, vtx < 30 cm	off
14: MBD N&S >= 2, vtx < 150 cm	0 : 24/24

Main trigger



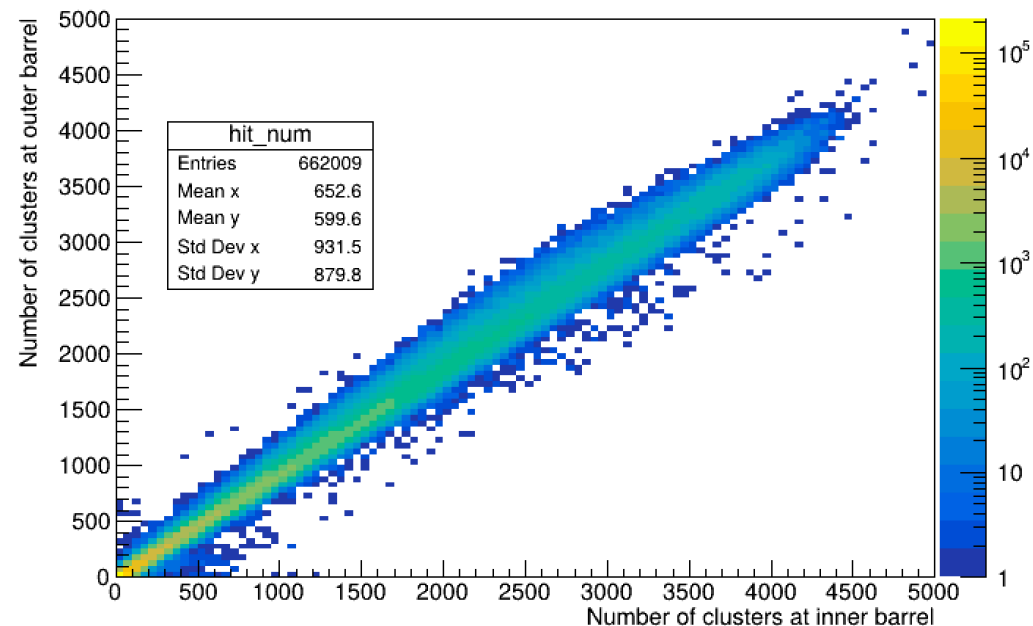
Comparison to past results

2023



2025

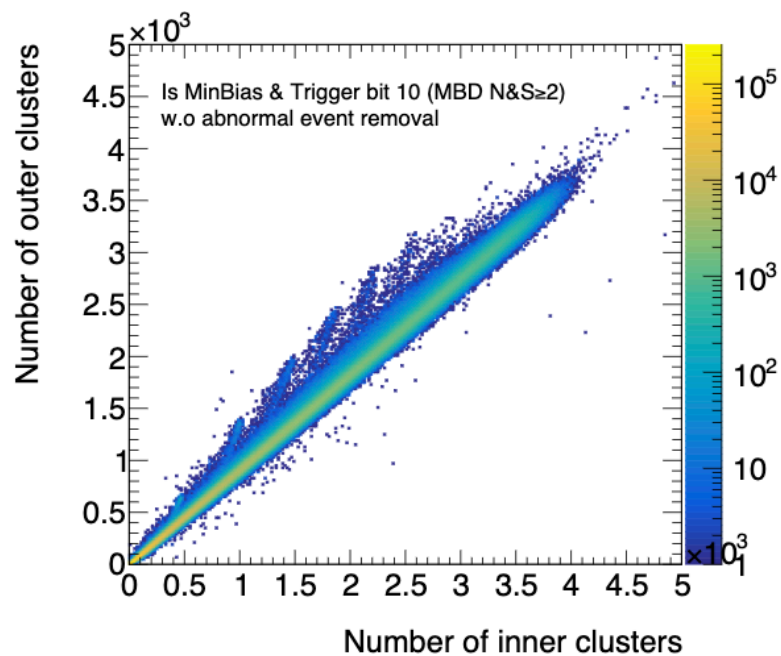
Run 66522



The 2025 plot has less noise than the 2023 plot.

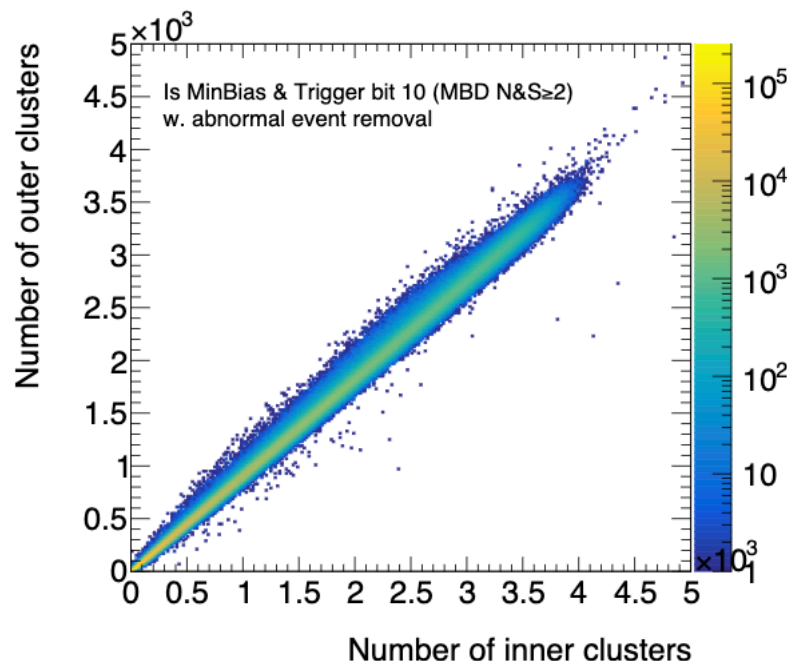
Comparison to past results

2024



Before cut

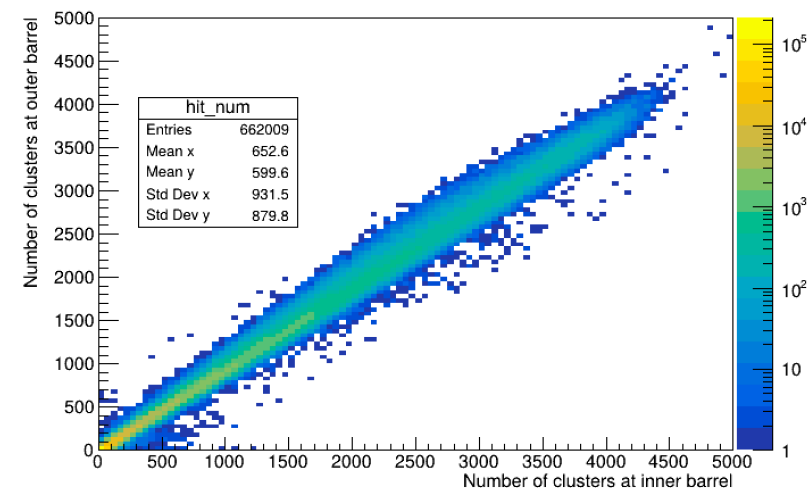
Inner outer correlation in 2024 Au+Au
From PPG02



After cut

2025

Run 66522



The 2025 plot is similar to the 2024 plot after the cuts.

Summary

- I can see the inner outer barrel correlation.
- The plot of correlation has less noise than the past plot.