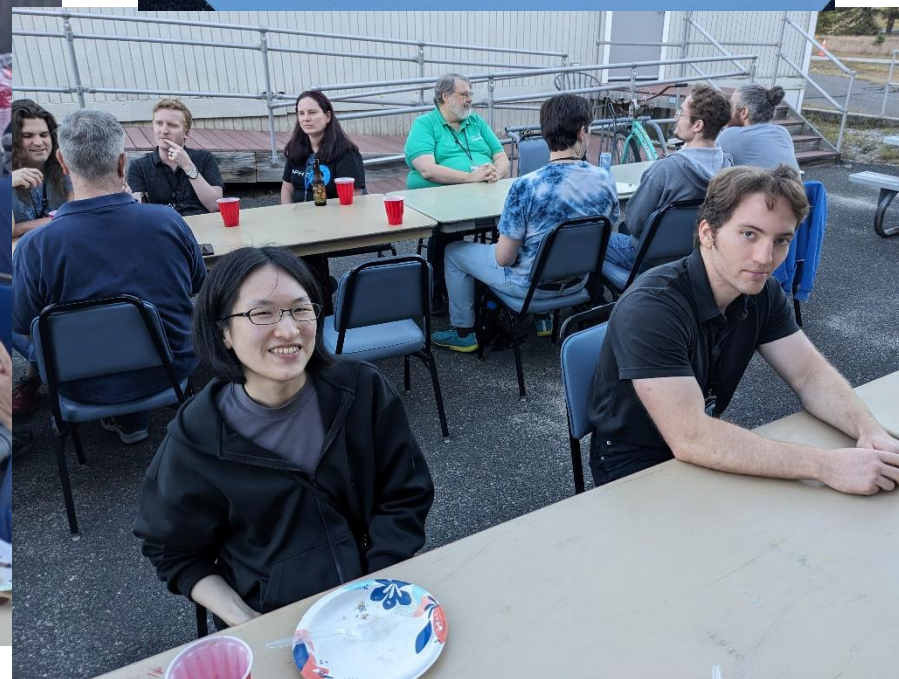


# sPHENIX Run24 status

Akitomo Enokizono

# We just had the end of run24 party!



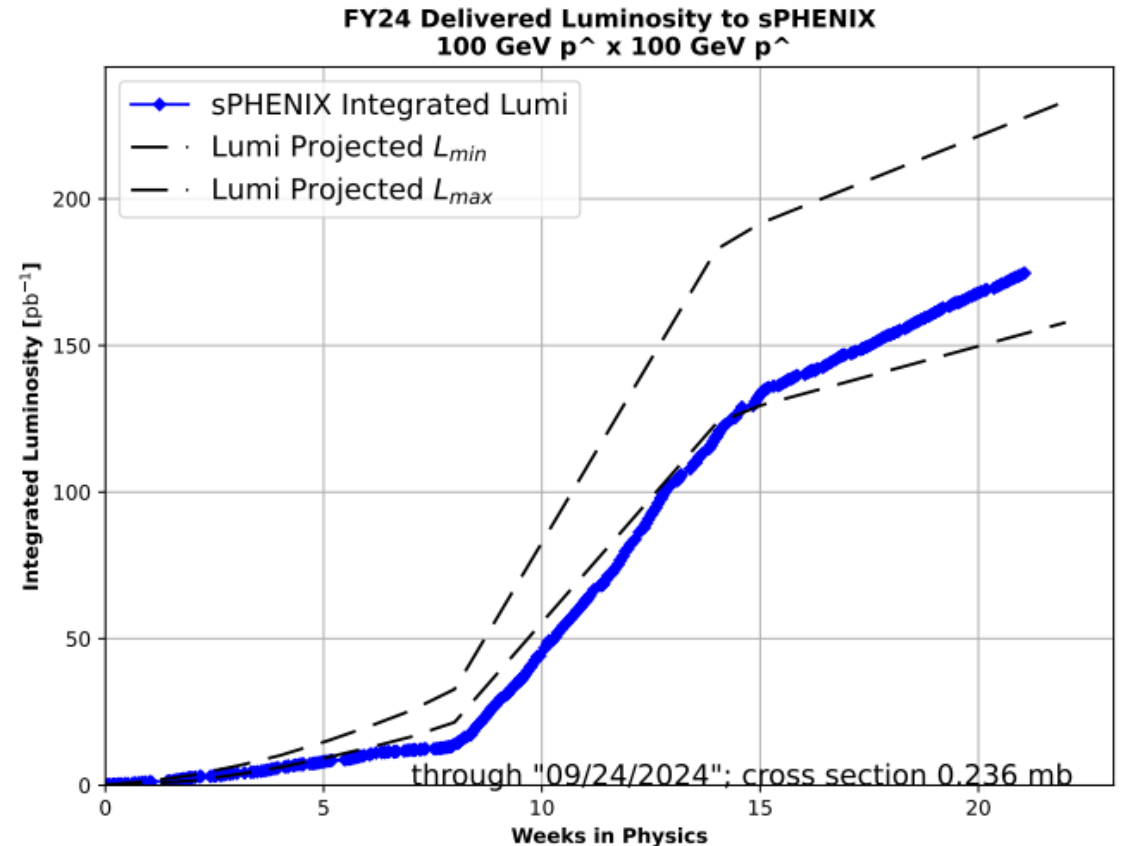
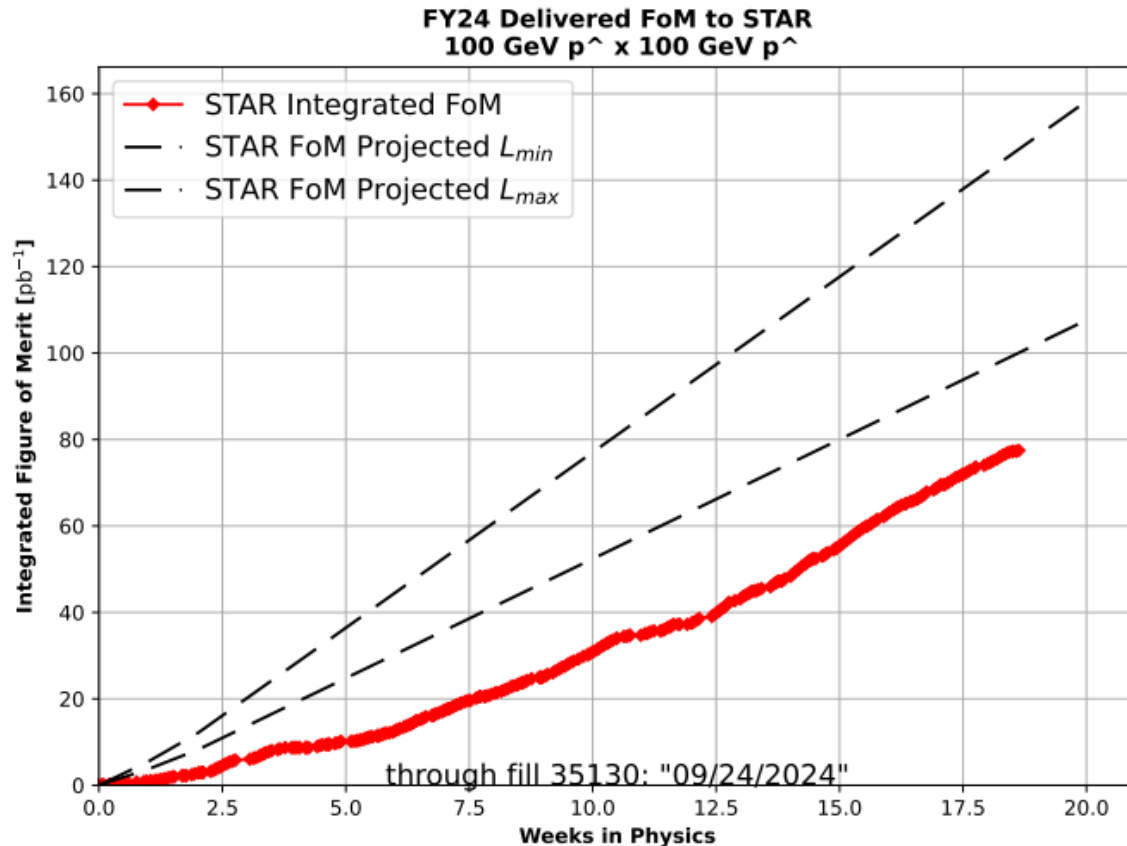
# Timeline of run24 p+p runs (since last RBRC Mtg.)

- Cryo#13: TPC is waiting for approval of isobutene. Running with 0 mrad beam crossing angle
- Cryo#15: INTT is switched to the full streaming mode
- Cryo#16: Isobutene approved and start flowing into TPC
- Cryo#17: Start taking TPC data with lower intensity
- Cryo#18: 111x111 bunches with +1.5 mrad beam crossing angle. (All sPHENIX detectors including TPC are working!)
- Cryo#19: TPC Felix firmware is updated to deal with a significant data dropping issue
- Cryo#21: p+p run is extended two weeks (take from Run25 Au+Au weeks)
- Cryo#25: p+p run ended on September 30 (Today!)

# Statistics of run24 p+p run

Kiel Hock, RHIC Coordination Mtg 9/24

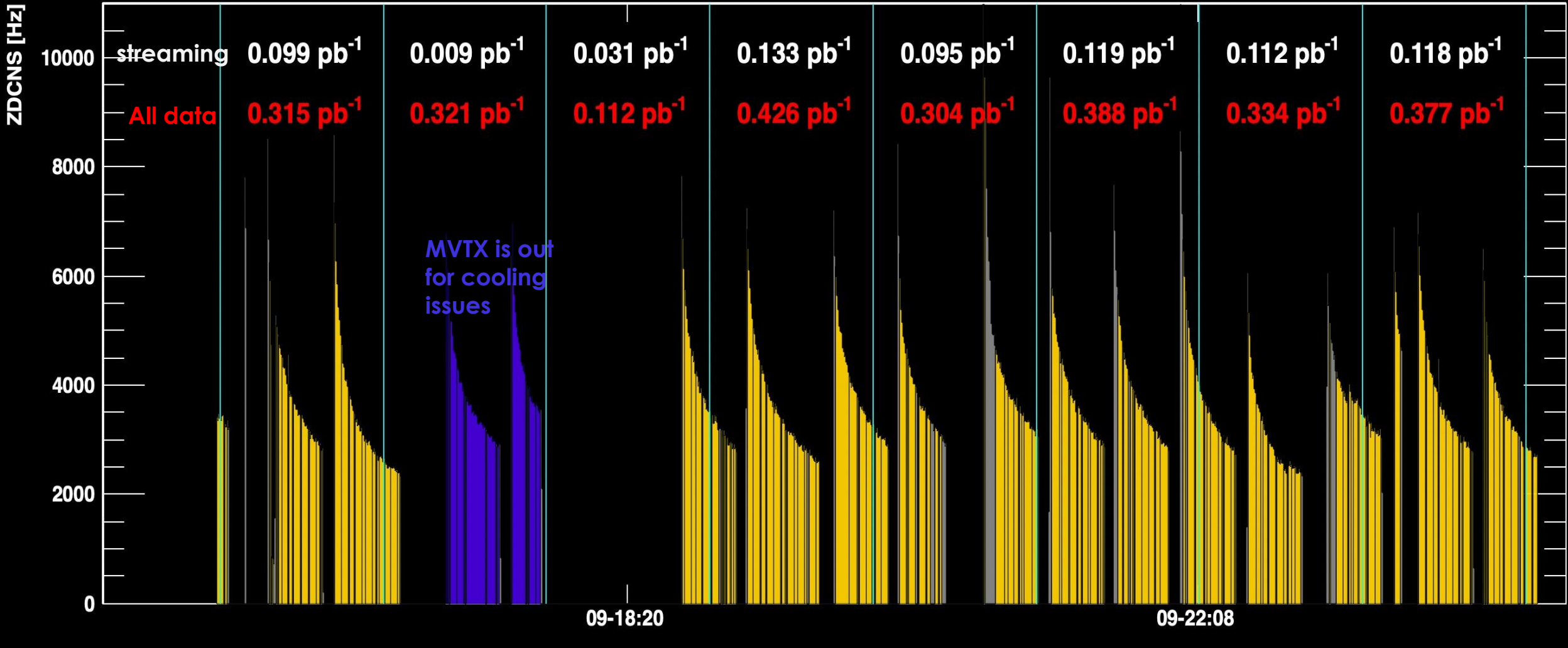
111x111 physics running since 4/30. Preliminary luminosity accounting



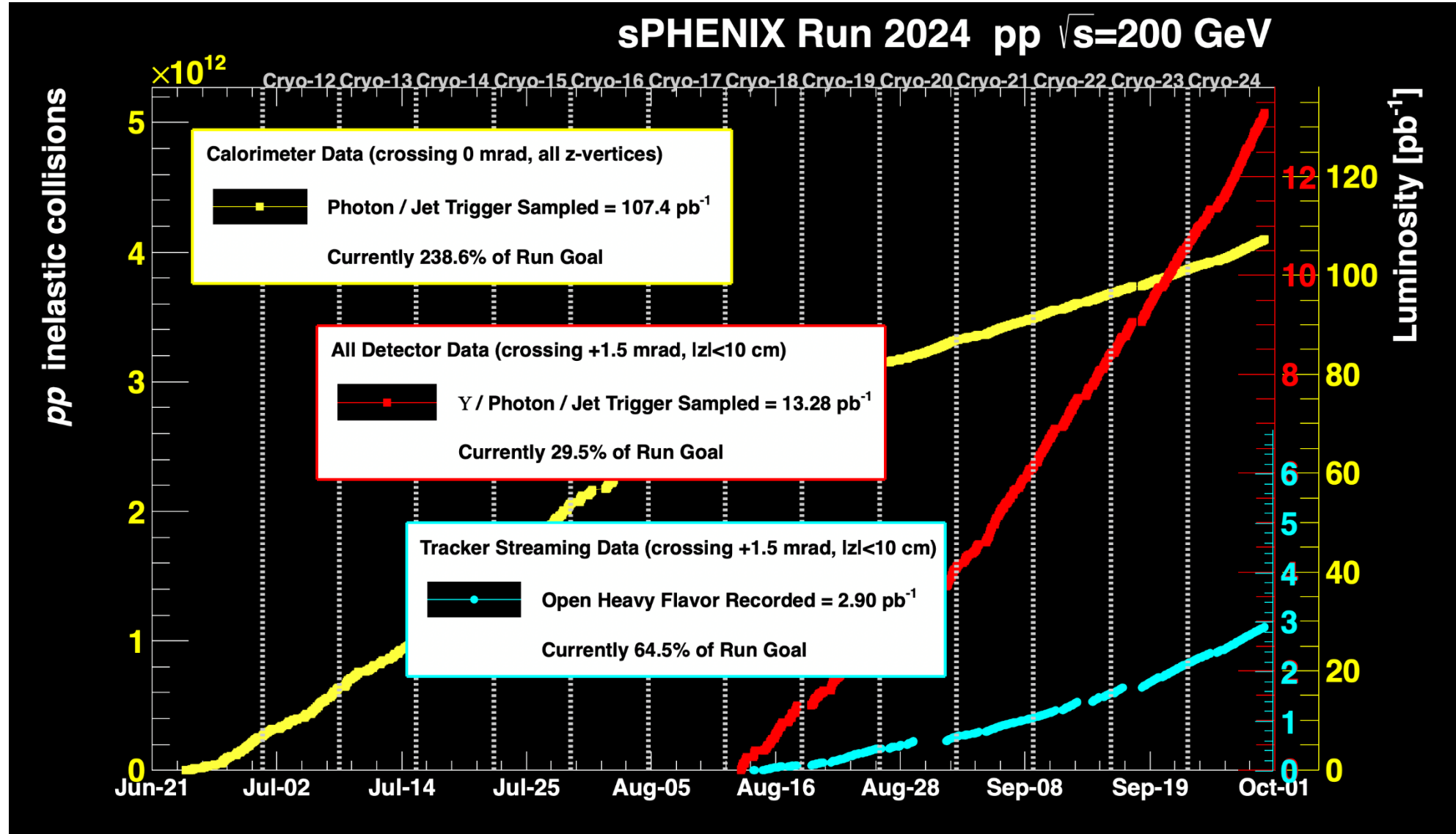
Inflection for sPHENIX projections coincides with change in crossing angle.

# Uptimes of recent p+p runs

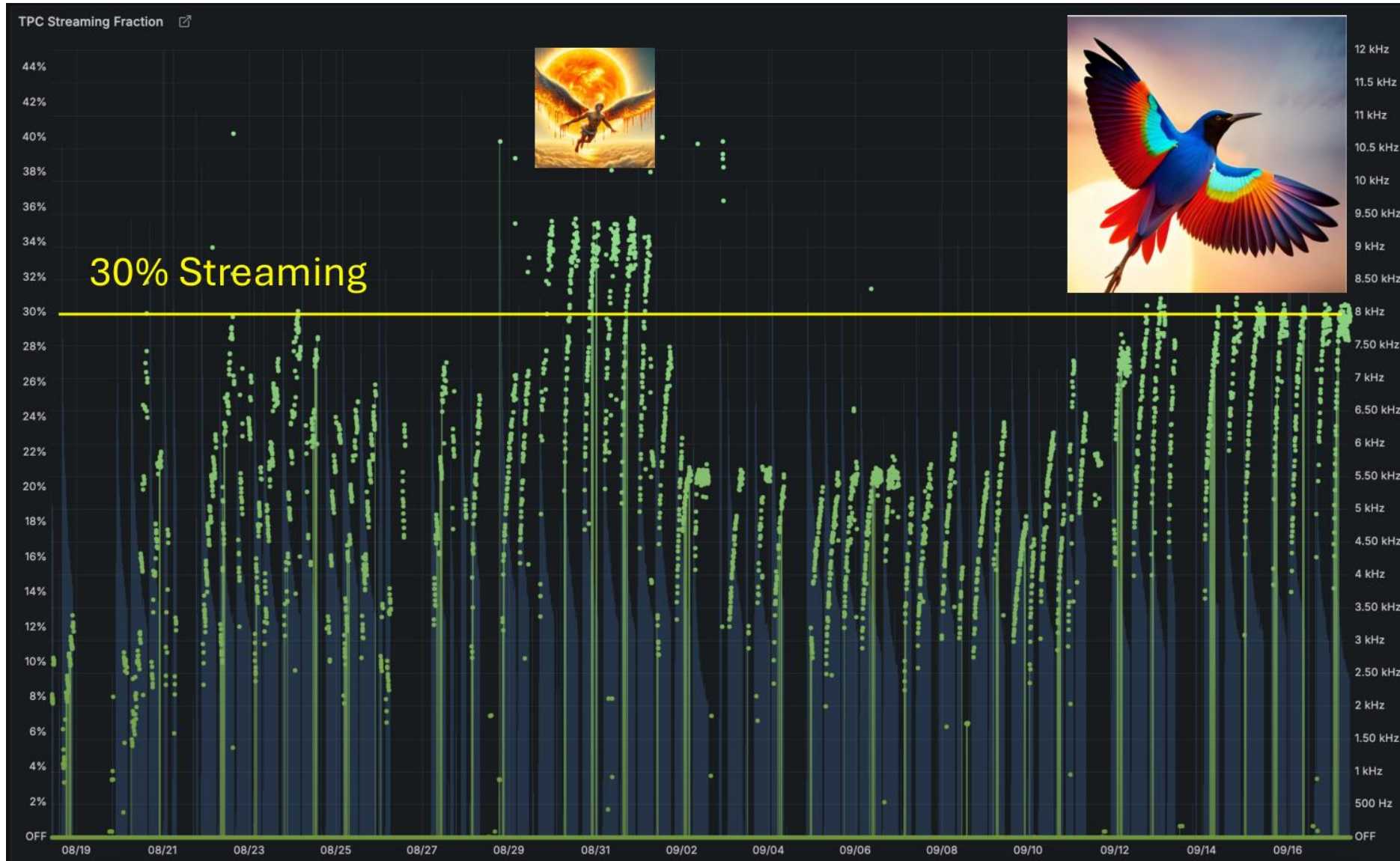
RHIC uptime	73%	64%	18%	87%	73%	83%	80%	80%
sPHENIX uptime	75%	88%	84%	85%	69%	74%	80%	82%

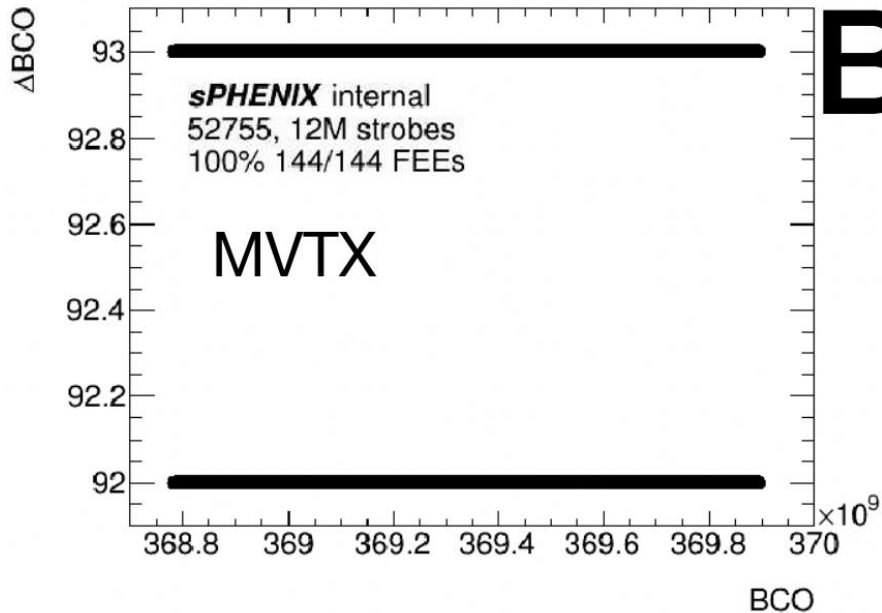


# sPHENIX statistics of run24 p+p run



# TPC streaming fraction

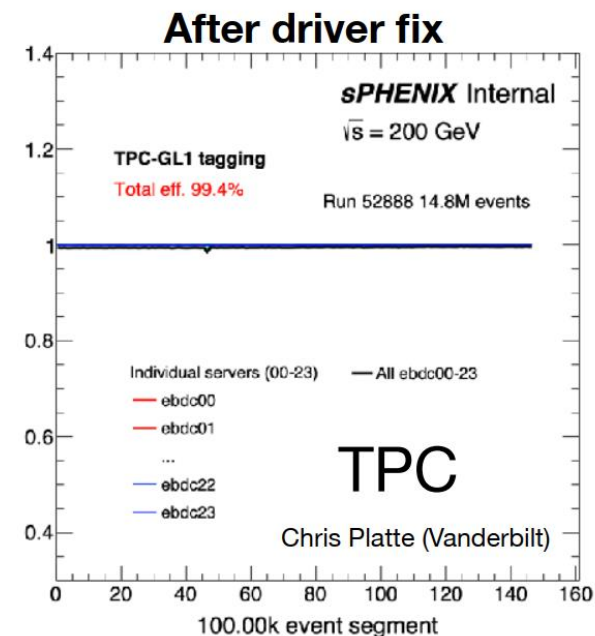
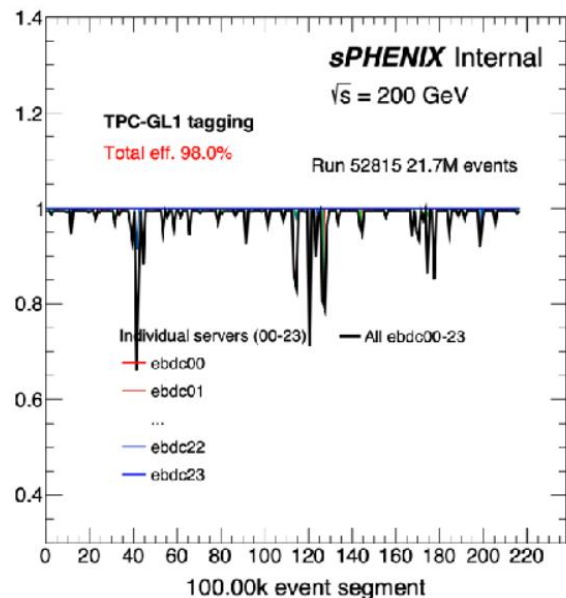
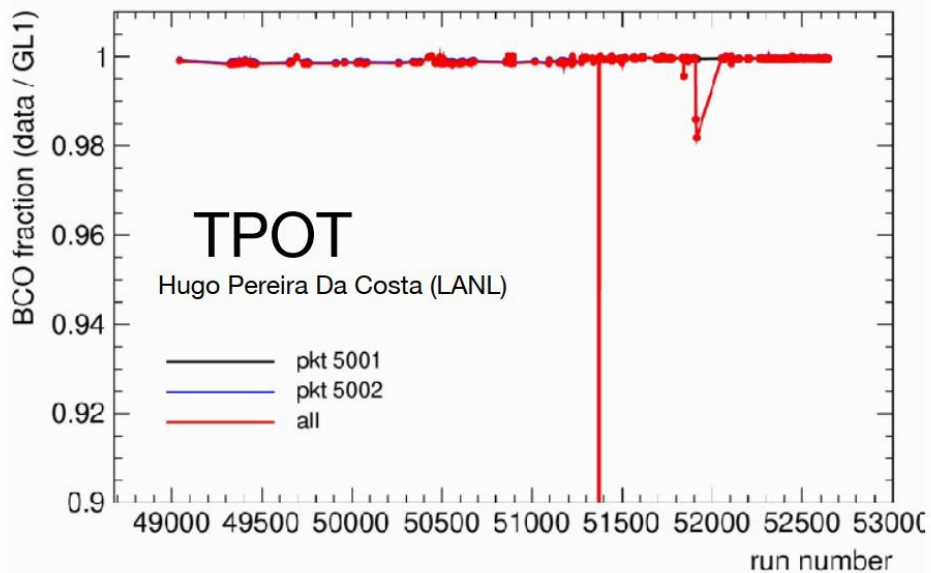
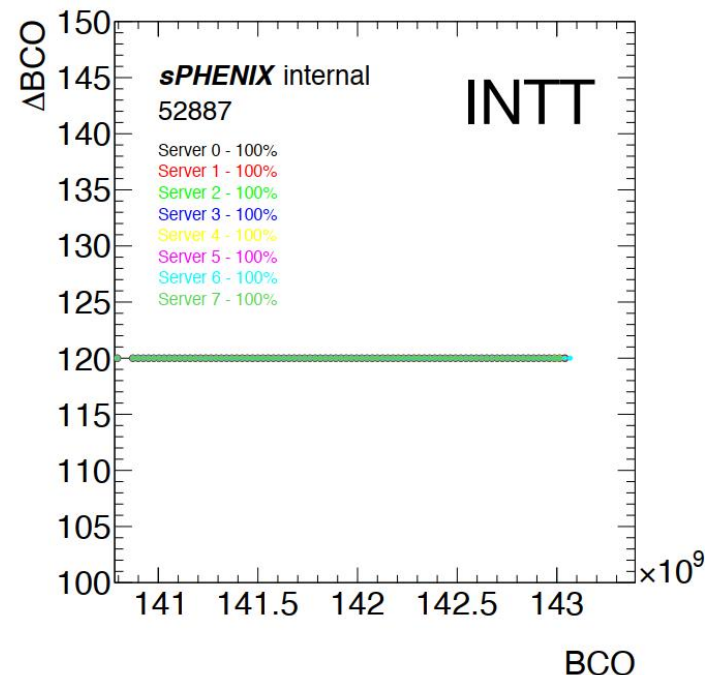




# BCO Checks

Joe Osborn, Tpc mini-Review, 9/13

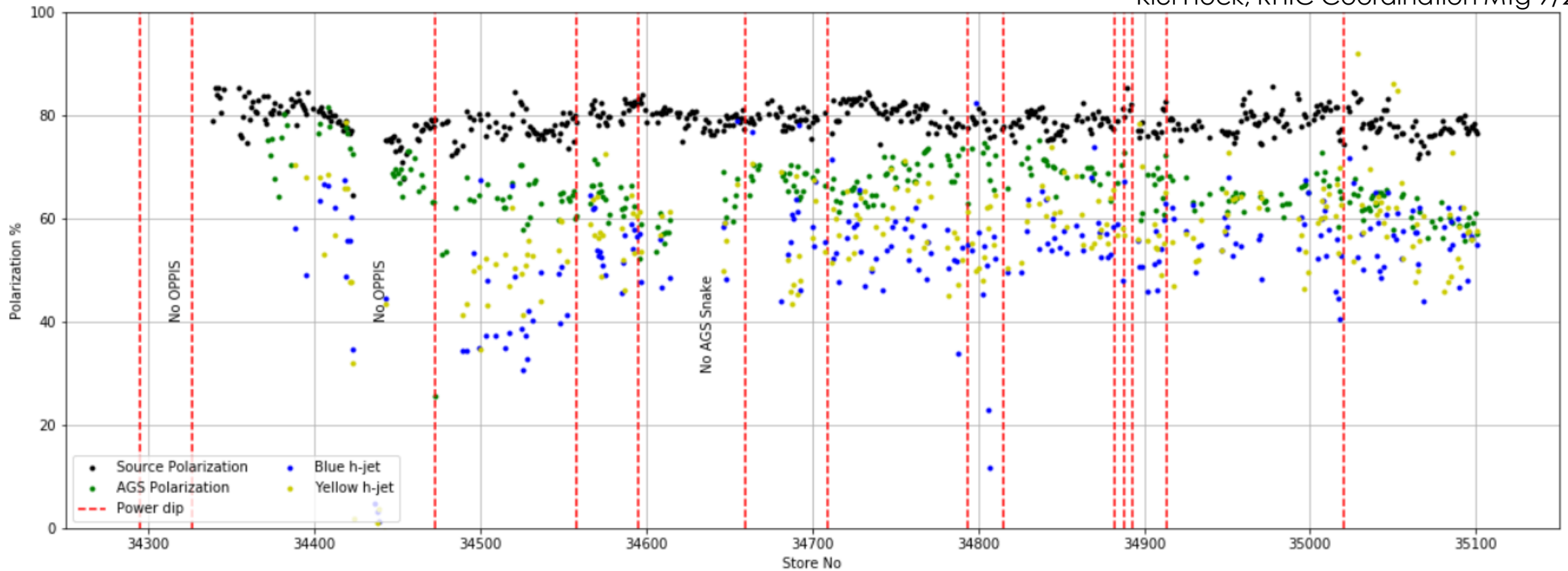
- BCO checks all look reasonable in sample of runs chosen. A few follow ups required





# Polarization of run24 p+p run

Kiel Hock, RHIC Coordination Mtg 9/24



Recent drop in source polarization due to excess Rb, recovered slightly. Injector polarization did not rebound.

h-jet values from: <https://www.cnipol.bnl.gov/hjet/run24.html>

cni values from: <https://www.cnipol.bnl.gov/fills/?rp=24&fn=&ft=&be=100&mode=11&sb>Select>

# Au+Au commissioning

Kiel Hock, RHIC Coordination Mtg 9/24

Day(s)	Objective
9/30	Maintenance, injection setup during the evening, RF conditioning overnight
10/1	DX Training+High current shutoff, ramp development during evening, RF conditioning overnight
10/2	rebucket setup and store development, possibly more RF conditioning more development needed
10/3	finish setup and hand store over for experimenter setup
10/4-10/8	ramp up and start setting up stochastic cooling 1 plane/store
10/7+	week of, look to setup 56 MHz (1-4 shifts required)

Jamie Nagle, RHIC Coordination Mtg 9/24

Start date 9/30.

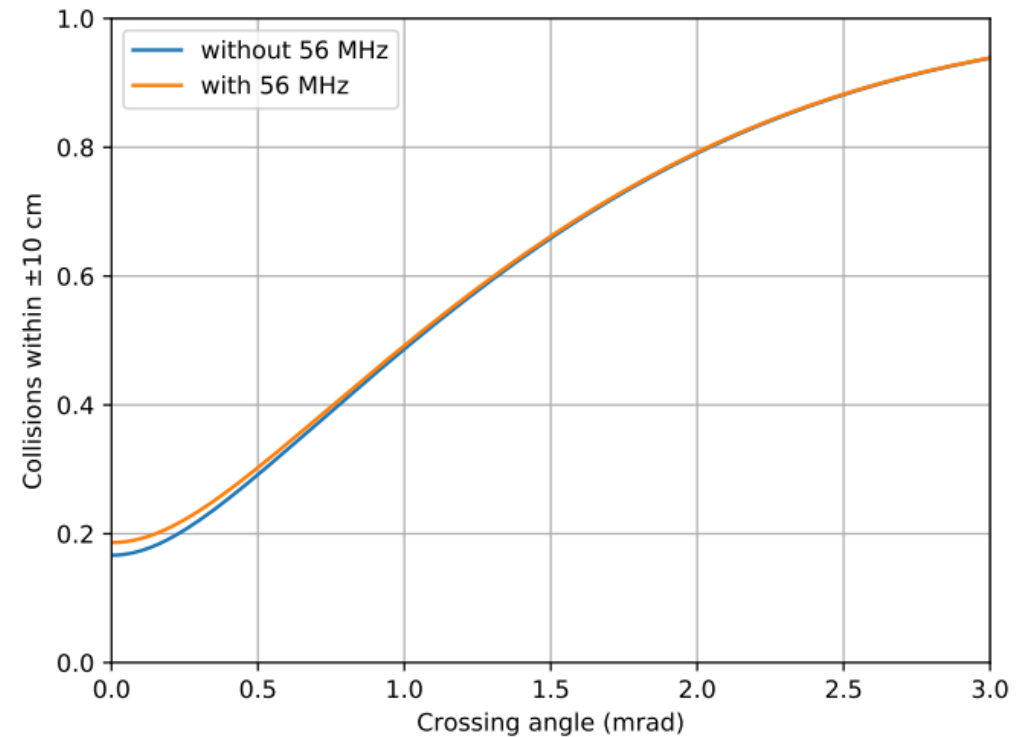
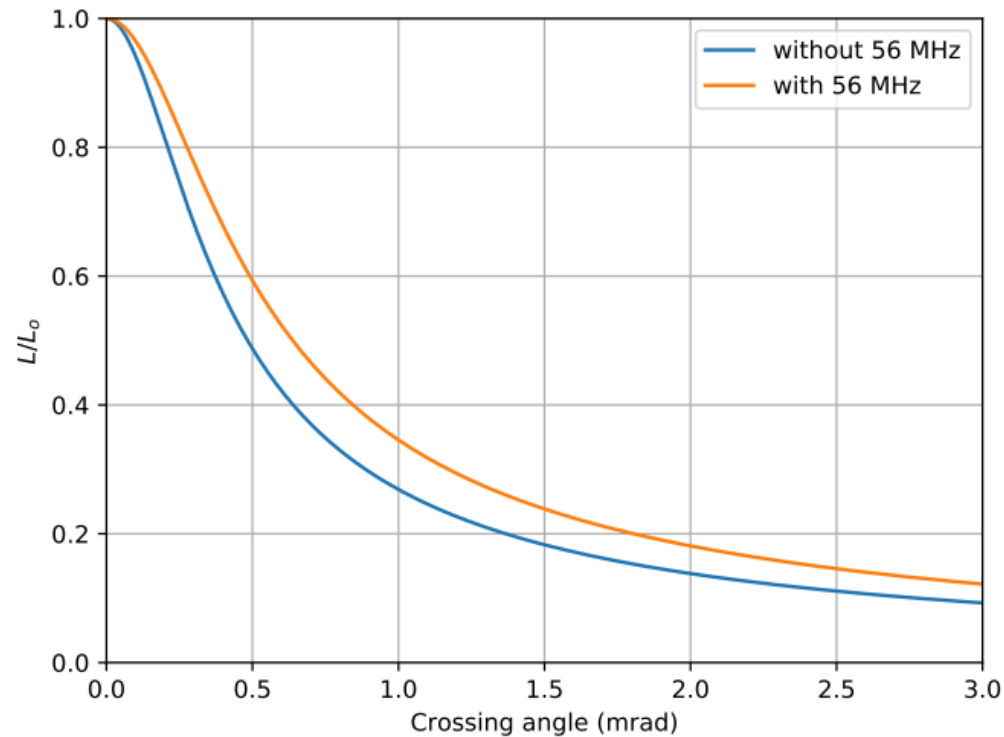
IR6 and IR8 access available during DX training+High current shutoff

Day	RHIC day	Major activity	Beam conditions	Detector status
Monday Sep 30	1	Maintenance		Off
Tuesday Oct 1	2			Off Tune ZDC voltages
Wednesday Oct 2	3	Possible overnight store	CAD	Off Turn on MBD
Thursday Oct 3	4	Possible overnight store	CAD	Tune MBD and trigger
Friday Oct 4	5	Overnight store	28/56/111 bunches	Calorimeter timing
Saturday Oct 5	6	"Physics" stores		Calorimeter data taking
Sunday Oct 6	7	"Physics stores"	56 MHz setup begins	
Monday Oct 7	8	Silicon trackers		Si detector setup
Tuesday Oct 8	9	Silicon trackers		Si detector operation
Wednesday Oct 9	10	TPC	6x6	Turn on TPC
Thursday Oct 10	11	TPC	28x28	
Friday Oct 11	12	TPC	111x111	
Saturday Oct 12	13			
Sunday Oct 13	14			
Monday Oct 14	15			
Tuesday Oct 15	16	Possible absorber installation		
Wednesday Oct 16	17	Possible absorber installation		
Thursday Oct 17	18	Possible absorber installation		
Friday Oct 18	19			
Saturday Oct 19	20			
Sunday Oct 20	21			
Monday Oct 21	22	End of run; leave magnet on for TPC laser tests		
Tuesday Oct 22	23	Turn off magnet, go to watch shifts		

# Optimizing crossing angle and luminosity

Luminosity scaling (left) and collisions within 10 cm (right)

Kiel Hock, RHIC Coordination Mtg 9/17



- 56 MHz improves luminosity scaling throughout the store.
- This is due to the highly cooled horizontal emittances.
- Can reduce crossing angle during store to increase data volume.
- With the 56 MHz, start of store collisions within  $\pm 10$  cm is  $\sim 18\%$  vs  $15\%$ , end of store  $\sim 14\%$  vs  $\sim 10\%$ .

# BUP-2024 for Run25 (and /26?)

Dennis V. Perepelitsa, PCM 9/20

- The ALD requests a BUP for 20 cryoweeks in Run-24 (= 22 minus 2 weeks carried forward from Run-24)
  - ➔ and 28 cryoweeks “assuming we can extend the run”
- The ALD mentions “BUR 2025/26” but no quantitative cryoweek scenarios for a Run-26
- Some timing considerations:
  - ➔ Run-24 ends 21 October 2024
  - ➔ C-AD nominal plan is a 22 week shutdown, starting Run-25 on 24 March 2025
  - ➔ A 20 week run would go until 11 August 2025, but a 28 week run would go until 6 October - automatically extending into FY26

# BUP-2024 for Run25 (and /26?)

Dennis V. Perepelitsa, PCM 9/20

- Monday 21 October - end of Au+Au running, end of Run-24
- Monday 28 October - updated projections promised by C-AD
- Sunday 3 November - BUP due to ALD
- Thursday 7 November - start of PAC Meeting
  
- Given the extremely compressed timescale, we will need to define some overall strategies beforehand and then “plug in the numbers”
  - ➔ BUP2024 task force including run/trigger/offline experts, working in advance
  - ➔ suggest special meeting Tuesday 29 October and then use the PCM Friday 1 November for Collaboration-wide discussion

# Run24 sPHENIX shifts

Institution Name	# People	Current # of active Authors	Effective # of Authors	# total shift obligation	# Shifts Taken	Status	Member Names
RIKEN	10	5	5	13	15	+15% (OK)	Yasuyuki Akiba, Hideto Enyo, Yuji Goto, Itaru Nakagawa, Ralf Seidl, Akitomo Enokizono, Minho Kim, Yuko Shoji Sekiguchi, Yasushi Watanabe, Satoshi Yokkaichi
RIKEN BNL Research Center	1	1	1	3	1	-67% (2 more needed)	Genki Nukazuka

Shifts signed up for by Yasuyuki Akiba are :

Week	Hours	Position
Apr 9th - Apr 16th	0:00 - 8:00	Shift Leader
Jul 2nd - Jul 9th	0:00 - 8:00	Shift Leader

Shifts signed up for by Hideto Enyo are :

Week	Hours	Position
May 28th - Jun 4th	0:00 - 8:00	Shift Leader
Aug 27th - Sep 3rd	8:00 - 16:00	Detector Operator

Shifts signed up for by Akitomo Enokizono are :

Week	Hours	Position
Mar 12th - Mar 19th	8:00 - 16:00	Detector Operator
Jun 18th - Jun 25th	0:00 - 8:00	DAQ Operator
Jun 25th - Jul 2nd	0:00 - 8:00	Shift Leader
Oct 8th - Oct 15th	N/A	Period Coordinator
Oct 15th - Oct 22nd	N/A	Period Coordinator

Shifts signed up for by Genki Nukazuka are :

Week	Hours	Position
Mar 19th - Mar 26th	16:00 - 0:00	Detector Operator

Shifts signed up for by Yuji Goto are :

Week	Hours	Position
Apr 2nd - Apr 9th	0:00 - 8:00	Shift Leader
Aug 20th - Aug 27th	16:00 - 0:00	Detector Operator

Shifts signed up for by Ralf Seidl are :

Week	Hours	Position
Jul 16th - Jul 23rd	8:00 - 16:00	Shift Leader
Aug 27th - Sep 3rd	16:00 - 0:00	Detector Operator

Shifts signed up for by Yuko Shoji Sekiguchi are :

Week	Hours	Position
Sep 10th - Sep 17th	0:00 - 8:00	Data Monitor Operator
Oct 8th - Oct 15th	0:00 - 8:00	Detector Operator

- RIKEN group already took 16 shifts in total which fulfill the shift duty for RIKEN
  - 7 effective number of authors, and Itaru is exempt from shift duty by taking spin coordinator duty,  $6 \times 2.5 = 15$  shifts needed for RIKEN
- Yuko takes 2 shifts
  - Run24 author?

# INTT experts

- Genki coordinated the INTT operation for run24, and many collaborators were working so hard on INTT to make the operation very successful and stable!
  - The most stable subsystem among the sPHENIX trackers



- Akitomo will be the INTT coordinator for run25
  - Need help/advice from you!

	A	G
1		INTT
3	02/27-03/04	Rachid Nouicer (631-652-5042)
4	03/05-03/11	Rachid Nouicer (631-652-5042)
5	03/12-03/18	Rachid Nouicer (631-652-5042)
6	03/19-03/25	Rachid Nouicer (631-652-5042)
7	03/26-04/01	Rachid Nouicer (631-652-5042)
8	04/02-04/08	Joseph Bertaux (317-385-3985)
9	04/09-04/15	Rachid Nouicer (631-652-5042)
10	04/16-04/22	Rachid Nouicer (631-652-5042)
11	04/23-04/29	Rachid Nouicer (631-652-5042)
12	04/30-05/06	Rachid Nouicer (631-652-5042)
13	05/07-05/13	Genki Nukazuka (631-816-3268)
14	05/14-05/20	Genki Nukazuka (631-816-3268)
15	05/21-05/27	Genki Nukazuka (631-816-3268)
16	05/28-06/03	Rachid Nouicer (631-652-5042)
17	06/04-06/10	Genki Nukazuka (631-816-3268)
18	06/11-06/17	Genki Nukazuka (631-816-3268)
19	06/18-06/24	Genki Nukazuka (631-816-3268)
20	06/25-07/01	Joseph Bertaux (317-385-3985) (until 28th)
21	07/02-07/08	Akitomo Enokizono (934-226-7791)
22	07/09-07/15	Takashi Hachiya
23	07/16-07/22	Takashi Hachiya
24	07/23-07/29	Rachid Nouicer (631-652-5042)
25	07/30-08/05	Jaein Hwang
26	08/06-08/12	Cheng-Wei Shih (281-302-8740)
27	08/13-08/19	Genki Nukazuka (631-816-3268)
28	08/20-08/26	Genki Nukazuka (631-816-3268)
29	08/27-09/02	Jaein Hwang
30	09/03-09/09	Joseph Bertaux (317-385-3985)
31	09/10-09/16	Rachid Nouicer (631-652-5042)
32	09/17-09/23	Jaein Hwang
33	09/24-09/30	Akitomo Enokizono (934-226-7791)
34	10/01-10/07	Akitomo Enokizono (934-226-7791)
35	10/08-10/14	Joseph Bertaux (317-385-3985)
36	10/15-10/21	Joseph Bertaux (317-385-3985)

# Run24 Travels

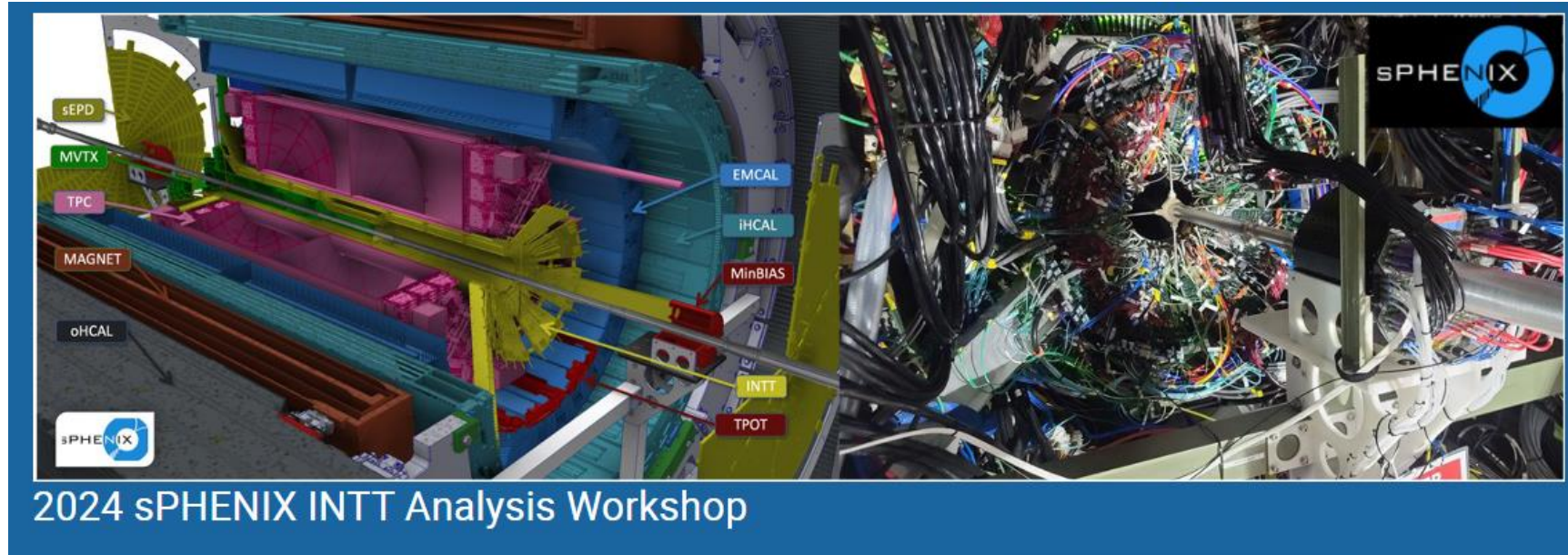
Now



		2					3					4					5					6					7					8					9					10					11																			
Month		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5															
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BNL	Raul																																																																	
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Purdue	Milan																																																																	
Purdue	Joseph						3/7					4/12					5/14					6/29					8/24										10/22																													
RIKEN	Yasuyuki	2/25					3/1										5/13?					6/9 6/14					6/30					7/12					7/28					8/2					8/25					9/1					10/6					10/18				
RIKEN	Itaru	2/13					3/7					4/15										6/20					7/12					7/19					8/30-9/7					9/12					10/11					10/24														
RIKEN	Genki						3/29					to Italy					4/9										7/4					7/19										9/9					no VISA-																			
RIKEN	Akitomo						3/25					4/23					5/22					6/16					7/12										9/4					10/30																								
RIKEN/NCU	Cheng-Wei	2/17					3/14										6/2										8/16																																							
NWU	Takashi						4/16					~5/31?					6/17										8/9																																							
NWU	Maya						3/25																																																											
NWU	Manami Fujiwara																															8/25										10/18																								
NWU	Mai Kano																					6/30										8/23										10/11					11/10																			
NWU	Hinako Tsujibata											4/16															7/4																																							
NWU	Mahiro Ikemoto																5/13																																																	
NWU	Nao Morimoto																										6/30										8/9																													
NWU	Yui Ishigaki																										7/12										8/23																													
NWU	Yuka						not available																																																											
NWU	Misaki						not available																																																											
NWU	Mai Watanabe						not available																																																											
NWU	Kan						not available																																																											
NWU	Yuri						not available																																																											
Rikkyo	Ryota Shishikura																										7/12															9/27																								
Rikkyo	Tomoya Kato																5/13															7/30															10/11					11/10														
Rikkyo	Kazuma Fujiki	2/13					3/7					not available																																																						
Rikkyo	Takahiro Kikuchi	2/13					3/7																				7/12															9/27					10/11					11/10														
JAEA	Shoichi																																																																	
NCU	Chia-Ming																																																																	
NCU	Kai-Yu																																																																	
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# INTT Workshop at Korea University (Nov.18-29)



Nov 18 – 29, 2024  
Asia/Seoul timezone

Overview
Timetable
Contribution List
Registration
Participant List
Scientific Programme
Venue

## 2024 sPHENIX INTT Analysis Workshop

Korea University, Seoul, South Korea  
18-29 Nov, 2024

The **2nd INTT International Analysis Workshop** will take place at Korea University. The main goal of this workshop is to review and document the results from the 2023/2024 period, while fostering collaborative learning among participants. This will provide an opportunity to share knowledge and insights gained over the past year.

- Location/Date/Programs are discussed and decided by students
- Jaein is the main person to organize the workshop