

Preparation for Run25

Akitomo Enokizono

FY2025 Shutdown

2025 Jan Feb Mar 2025

Today

TPC testing with Ar/CF4

Jan 6 - Feb 18

TPC testing with Ar/CF4/Isobutane

Feb 18 - Mar 25

Global power outage

Feb 5 - Feb 7

Install donuts and collar

Feb 24 - Mar 7

Install MBD

Mar 10 - Mar 16

Install sEPD

Mar 17 - Mar 18

Walkthrough

Mar 19

Close poletip doors

Mar 19 - Mar 21

Watch shift

Feb 18 - Mar 24

Full shifts begin

Mar 25

The carbon fiber rails allow the collar sections to be pushed off to the side without needing to be fully removed. This should make changes during the run easier.

Collar
~15-20lb

Doughnut

Carbon Fiber Rails

80/20

Plastic
Bracket
s

Plastic Bracket
Attached to INTT I-Beams

Tube on McMaster
1.75" ID, 3.25" OD
304 Stainless Steel

2025/02/07

INTT Meeting

From John's slides for sPHENIX
Fortnight meeting on Jan 24

BNL travel schedule

	Month	Feb							Mar							Apr							May							Jun							Jul							Aug							Sep							Oct							Nov							Dec						
	Period	1/28 2/3	2/4 2/10	2/11 2/17	2/18 2/24	2/25 3/3	3/4 3/10	3/11 3/17	3/18 3/24	3/25 3/31	4/1 4/7	4/8 4/14	4/15 4/21	4/22 4/28	4/29 5/5	5/6 5/12	5/13 5/19	5/20 5/26	5/27 6/2	6/3 6/9	6/10 6/16	6/17 6/23	6/24 6/30	7/1 7/7	7/8 7/14	7/15 7/21	7/22 7/28	7/29 8/4	8/5 8/11	8/12 8/18	8/19 8/25	8/26 9/1	9/2 9/8	9/9 9/15	9/16 9/22	9/23 9/29	9/30 10/6	10/7 10/13	10/14 10/20	10/21 10/27	10/28 11/3	11/4 11/10	11/11 11/17	11/18 11/24	11/25 12/1	12/2 12/8	12/9 12/15	12/16 12/22																														
	Cryo Week									1	2	3	4	5	6	7	8	9	10	11	12	13	14	Summer Break							15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32																														
	Events							JPS		QM							HQ																IS	JPS	SPIN																																											
	Beam			Pink					Beam? (3/24--)															7/1	No Beam				8/20	Beam (8/19--)		Beam(?)																12/22																														
BNL	Rachid										QM																																																																			
BNL	Raul			2/17 BR				3/17																																																																						
Purdue	Wei																																																																													
Purdue	Joseph																																																																													
RIKEN	Yasuyuki																																																																													
RIKEN	Itaru					3/3		3/13	JPS																									IS	JPS																																											
RIKEN	Genki									4/2																																																																				
RIKEN	Akitomo					3/2				3/29																																																																				
RIKEN	Yuko					3/2				3/29	QM																								IS	JPS																																										
RIKEN/NCU	Cheng-Wei		2/10							3/29	QM														7/8							8/25			IS?	JPS?																																										
NWU	Takashi										QM																																																																			
NWU	Maya										Mostly not available																																																																			
NWU	Manami										not available																																																																			
NWU	Mai Kano										not available																																																																			
NWU	Hinako										not available																																																																			
NWU	Nao																																																																													
NWU	Yui																																																																													
NWU	Mahiro																																																																													
NWU	Itsuki																																																																													
Rikkyo	Ryota							JPS			not available																																																																			
Rikkyo	Tomoya							JPS			not available																																																																			
Rikkyo	Takahiro							JPS		4/2																																																																				
Rikkyo	Hayato										not available																																																																			
Rikkyo	Tomoki																																																																													
Rikkyo	Yusuke										not available																																																																			
JAEA	Shoichi																																																																													
NCU	Chia-Ming																																																																													
NCU	Kai-Yu																																																																													
NCU	Wei-Che																																																																													
NCU	Shan-Yu																																																																													
NTU	Rong-Shyang																																																																													
NTU	Lian-Sheng																																																																													
NTU	Yu-Chen																																																																													
NTU	Tzu-Chuan																																																																													
Korea Univ	Byungsik																																																																													
Korea Univ	Jaen									QM																																																																				

<https://docs.google.com/spreadsheets/d/19mHncED6ORXqv2N4TVZ12kvGjgqf92Ysrr8i0v4nPBM/edit?gid=177969834#gid=177969834>

Shift arrangement within INTT group

		Month		Feb				Mar				Apr				May				Jun				Jul				Aug				Sep				Oct				Nov				Dec							
		Period		1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	
		Cryo Week		2/3	2/10	2/17	2/24	3/3	3/10	3/17	3/24	3/31	4/7	4/14	4/21	4/28	5/5	5/12	5/19	5/26	6/2	6/9	6/16	6/23	6/30	7/7	7/14	7/21	7/28	8/4	8/11	8/18	8/25	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27	11/3	11/10	11/17	11/24	12/1	12/8	12/15	12/22	
													1	2	3	4	5	6	7	8	9	10	11	12	13	14	Summer Break					15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
Shift available	Owl / SL																																																		
	Owl / DAQ																																																		
	Owl / DM																																																		
	Owl / DO																																																		
	Day / SL																																																		
	Day / DAQ																																																		
	Day / DM																																																		
	Day / DO																																																		
	Eve / SL																																																		
	Eve / DAQ																																																		
Eve / DM																																																			
Eve / DO																																																			

Shift available

If you can give shift you reserved, change the cell color to cyan with your initial

If you want to take any of the shifts, put your name after the initial

CW: would like to have these five shifts for NCU if it's possible

Will be cancelled with credit for summer break

- A message from Rosi on Mattermost on Feb 5
 - “We'll be discussing this on Friday, but the short answer is that there won't be beam from July 1 to August 20. We will do gas shifts until ~July 15 then we will shut down until ~August 5, when we will start up with gas shifts again. People will get credit for what they signed up for. We will only need the PC, SL and DAQ shifter during the gas shifts.”

sPHENIX shift duty

Institution Name	# People	Current # of active Authors	Effective # of Authors	# total shift obligation	# Shifts Taken	Status	Member Names
Korea University	2	2	2	5	7	+40% (OK)	Byungsik Hong, Jaein Hwang
Nara Women's University	10	7	7	19	16	-16% (3 more needed)	Manami Fujiwara, Takashi Hachiya, Mahiro Ikemoto, Mai Kano, Nao Morimoto, Maya Shimomura, Hinako Tsujibata, Yui Ishigaki, Yumika Namimoto, Runa Takahama
National Central University	4	3	3	8	3	-63% (5 more needed)	Chia-Ming Kuo, Cheng-Wei Shih, Wei-Che Tang, Kai-Yu Cheng
Purdue University	2	2	2	5	6	+20% (OK)	Joseph Bertaux, Wei Xie
RIKEN	10	6	6	16	23	+44% (OK)	Akitomo Enokizono, Yasuyuki Akiba, Hideto Enyo, Yuji Goto, Itaru Nakagawa, Ralf Seidl, Minho Kim, Yuko Shoji Sekiguchi, Yasushi Watanabe, Satoshi Yokkaichi
RIKEN BNL Research Center	1	1	1	3	3	Exact coverage (OK)	Genki Nukazuka
Rikkyo University	6	1	1	3	5	+67% (OK)	Takahiro Kikuchi, Tomoya Kato, Ryota Shishikura, Kazuma Fujiki, Kazuyoshi Kurita, Jiro Murata

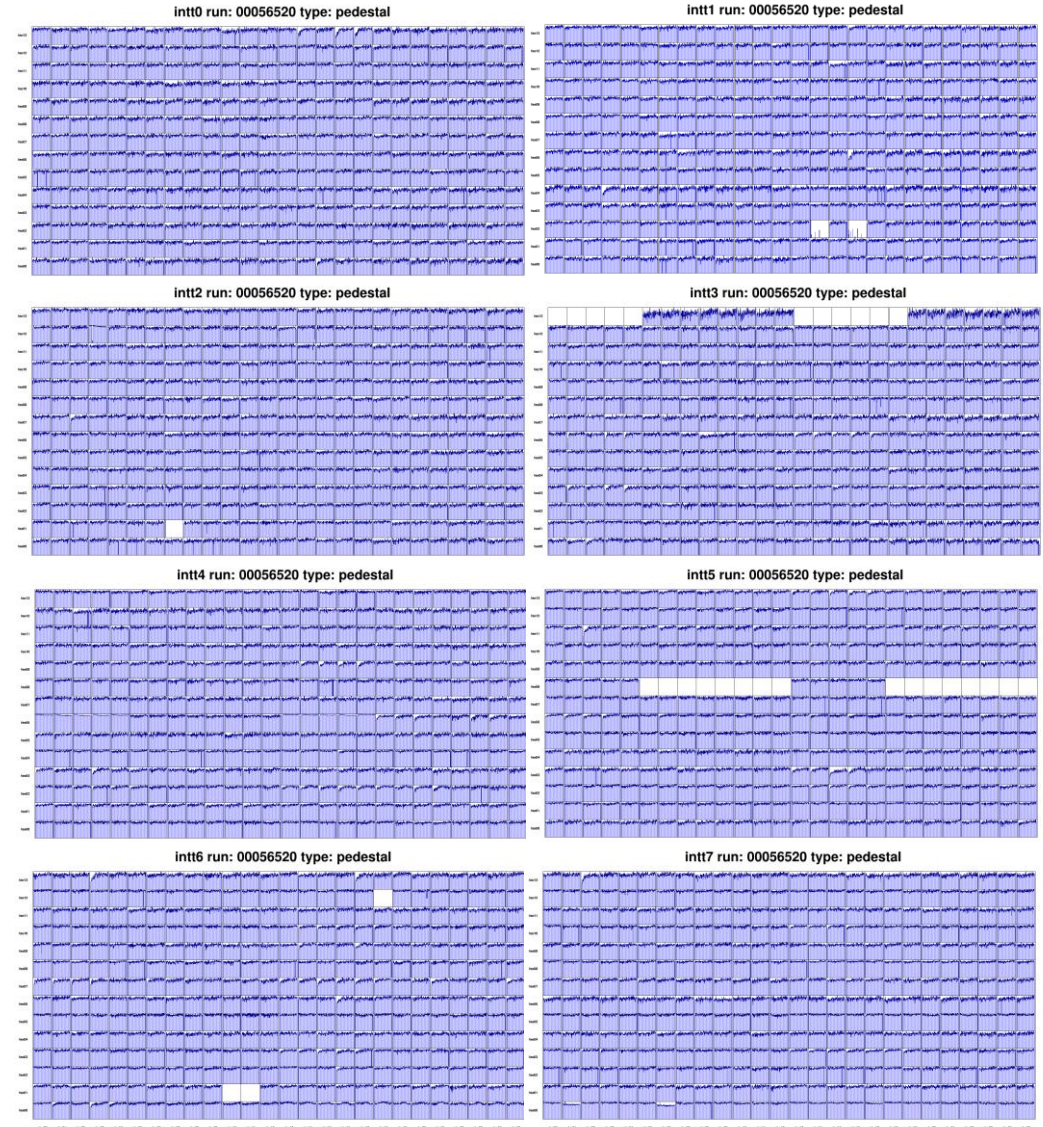
- 2.7 shifts per person at this moment but will increase the number because of the increased number of Cryo weeks and free shift credits for summer break

Apartments

- BNL housing office finally approved the following reservations
 - One-bedroom Apt for staff / Mar 2 – Oct 31 (Approved)
 - One-bedroom Apt for staff / Mar 3 – Oct 31 (Approved)
 - One-bedroom Apt for staff / Jun 1 – Aug 31 (Approved)
 - Two-bedroom Apt for staff / Aug 1 – Sep 31 (Approved)
 - **Team Apt (4 bedroom) / March 3 – Oct 31 (Approved)**
 - Team Apt (3 bedroom) / May 5 – Oct 31 (Approved)
- Staff apartments will be also used by any INTT stuff members.
- Will modify the start data of the 4-bedroom team apartment depending on when more than 2 students visit BNL
 - Need to be modified before Feb 17 to avoid surcharge

Pedestal check at 1008

- Rachid and Raul successfully get the pedestal data with helps from Genki and Joseph
 - The plots looks consistent with Run2024
 - Joseph's new decoder on bbox is fast to check on INTT data quickly
 - Genki is working on the web page for Run 2025
- The LV GUI for shift crews includes initialization scripts, which are available only at:
 - INTT mini PC
 - Control-1 (PC for DO shift)
 - If any of the PCs is renewed, please make sure to put the scripts and ensure ssh connection to opc0/control1/intt servers without password
 - Wiki document
https://wiki.sphenix.bnl.gov/index.php?title=INTT_LV_GUI



To do list for Run25 commissioning

Task	Duration	Points	Beam condition	Other subsystem condition	Priority	Field	Trigger	Comment
Chip saturation study	10 mins for each	INTT in trigger mode Different open time 25, 40, 60, 80, 90, 110, 127 moderate ncollision, 2, 50, 100 If possible we need the long GTM busy window for this test	with collisions (with low rate)	With MBD, in global mode			MBD	This is to study the chip hit saturation issue discovered on Dec 10 2024. Whether we still see the cutoff in the chip nhit distribution even with the open time of 128 BCO? We also need to check the cluster phi size distribution We can also try to learn the correlation between the open_time and nhits
Carried over hit study	30 mins	INTT in trigger mode moderate open_time (80 or 128) ncollision 1 or 2 or 3 Short GTM busy window for this test	with collisions (with high rate)	With MBD, in global mode			MBD	As of Nov 25 2024, I think we never have the dataset with very narrow ncollision for the event-mixed-up study With the statistic approach, in the reality, we just cannot distinguish b/w mix-up hits and the hits from real collisions. So it's good to have such a dataset that we have the potential to believe that any abnormal behavior found in the data can be really came from anything other than the really collisions. In addition, by comparing with the previous dataset with ncollision 100, we can possibly learn where the event mixup happened.
Timing coarse delay scan								
Single bunch crossing	10 mins?	one run ncollision 100 one run small ncollision	single or two bunch crossing(s) with collisions	Join the MVTX commissioning				We never join the MVTX commissioning data taking. I think it's a good idea to take at least one run with single bunch crossing or five. We can learn the noise level and also the beam background, and also fraction of the hit moved to the next bin
DAC0 scan	5 min x 6 points x 2 sets	DAC0 = 15, 20, 25, 30, 35, 40	better to be with beam	Standalone			MBD	Better to take data in the same condition as Run2024 Au+Au commissioning, i.e. with Au+Au beam, with other subsystems on.
Digital control test?								

- Please input your work using AuAu during commissioning to the list at https://docs.google.com/spreadsheets/d/175Z06nDFWACKIrvqN_R43ABLtRfE6r23u9CZtVuWDHg/edit?gid=1538604329#gid=1538604329:

INTT wiki for Run2025

- https://wiki.sphenix.bnl.gov/index.php?title=INTT_Run2025
- Calibration section
 - Timing Scan
 - Hot&Cold channel mask
 - DAC0 ScanAny other calibration?
- Other than the Run2025, the following pages will be updated before Run25 commissioning starts
 - DAQ operation
 - Online monitoring
 - Offline QA plotsAny other wiki page to be updated?

INTT Run2025

[Back to INTT top page](#)

Contents [\[hide\]](#)

- 1 Run25 Overview
- 2 Info for INTT Experts
- 3 Runs, Data Location
- 4 Commissioning
- 5 Calibration
- 6 Other Info

Run25 Overview [\[edit\]](#) [\[edit source\]](#)

- sPHENIX Run2025 page [🔗](#)
- Run2025 shift crew registration page [🔗](#)

Info for INTT Experts [\[edit\]](#) [\[edit source\]](#)

- 2025 BNL visit schedule [🔗](#)
- INTT E-log [🔗](#)
- Run2025 INTT standing order [🔗](#)
- INTT expert shift rule/role pdf [🔗](#)
- INTT operation manual [🔗](#)

Runs, Data Location [\[edit\]](#) [\[edit source\]](#)

- [Google Spreadsheet runlog](#) [🔗](#)

Commissioning [\[edit\]](#) [\[edit source\]](#)

- [commissioning task list](#) [🔗](#)

Calibration [\[edit\]](#) [\[edit source\]](#)

- Timing Scan
- Hot&Cold channel mask
- DAC0 Scan