

# Towards Run24

Genki Nukazuka (RIKEN)

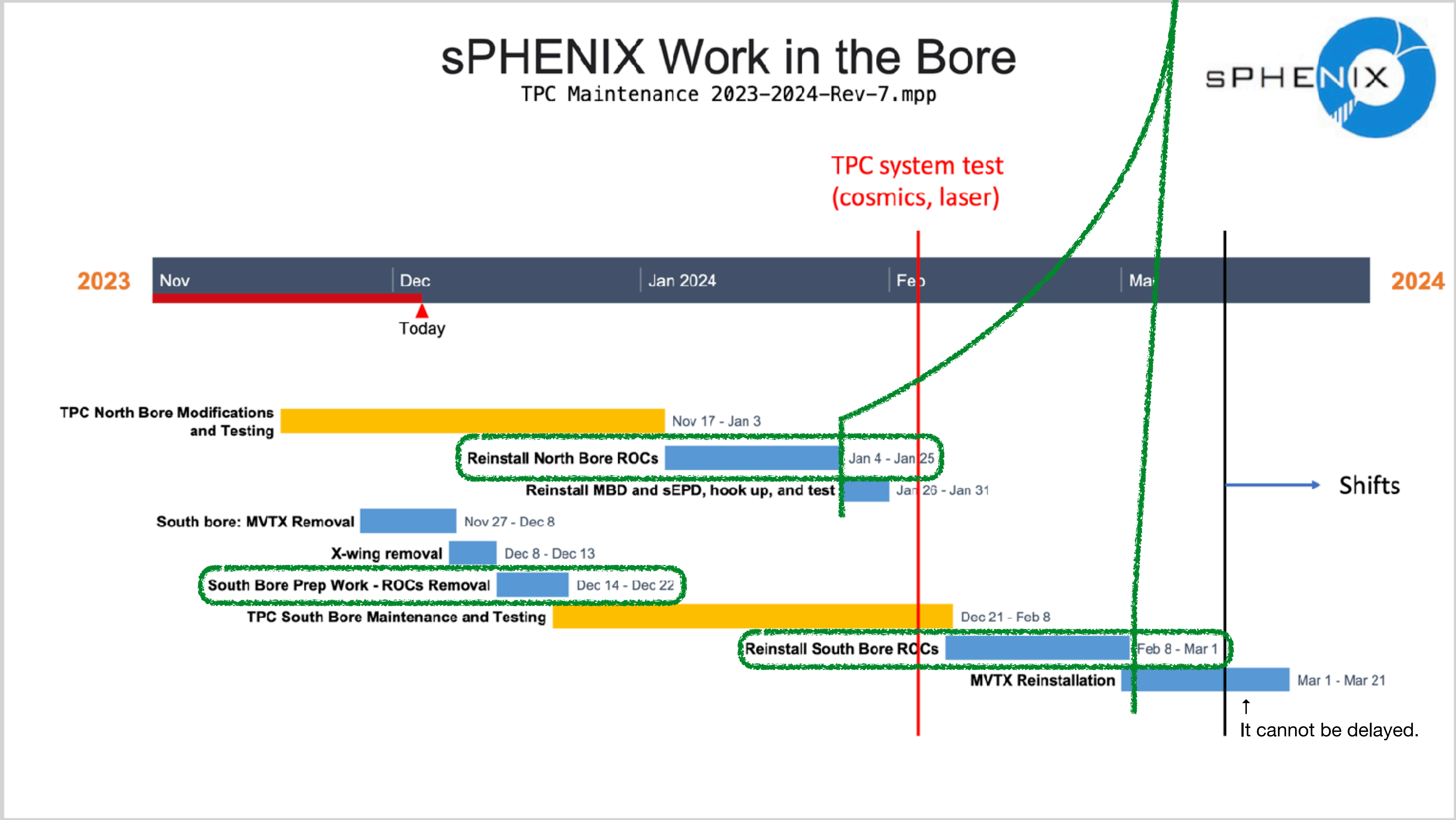
# Run24

- I work as a pp commissioning coordinator. Probably, I'll also work for AuAu commissioning and pp data taking. Let's make a plan for Run24.
- The sPHENIX plan towards Run24 was reported at the collaboration meeting. We can make more realistic plan.

INTT Task	Name	Position		Local /Visiting	Task description
Spin coordinator	- Itaru Nagakawa	RIKEN	Staff Scientist	- Visiting	
Silicon expert	- Genki Nukazuka - Akitomo Enokizono	RIKEN RIKEN	- Postdoc - Postdoc	- Local - Visiting/remote	- Assisting shift crew in the detector daily operation, and shift change meeting
pp commissioning coordinator	- Genki Nukazuka	RIKEN	- Postdoc	- Local	- Commissioning for p+p spin physics
Assistant silicon expert	- Jaein Hwang - Cheng-Wei Shih - NCU Student (1) - Joseph Bertaux - Milan Stojanovic	KU NCU NCU PU PU	- PhD Student - PhD Student - MAS student - PhD Student - Postdoc	- Visiting/remote - Visiting/remote - Visiting/remote - Visiting/remote - Visiting/remote	- Assisting silicon expert - Daily checking of: data quality and signal processing
Readout expert	- Raul Cecato	BNL	- Staff Scientist	- Local	Full readout electronic operation
LV Gui	- Maya Shimomura	NWU	- Professor	- Visiting/remote	Low Voltage Gui and trip/safety limits
HV GUI	- Joseph Bertaux	PU	- PhD Student	- Visiting/remote	Bias voltage Gui and trip/safety limits
Data Quality Assessment	- Maya Shimomura - Takashi Hachiya - NWU Students (10) - Rikkyo Students (4)	NWU NWU NWU RU	- Professor - Professor - MAS Students - MAS Students	- Visiting/remote - Visiting/remote - Visiting/remote - Visiting/remote	Offline evaluation of data quality
Detector operation manager	- Rachid Nouicer	BNL	Staff Scientist	- Local	Detector, auxiliaries systems, and beam condition of INTT operations

# sPHENIX plan towards Run24

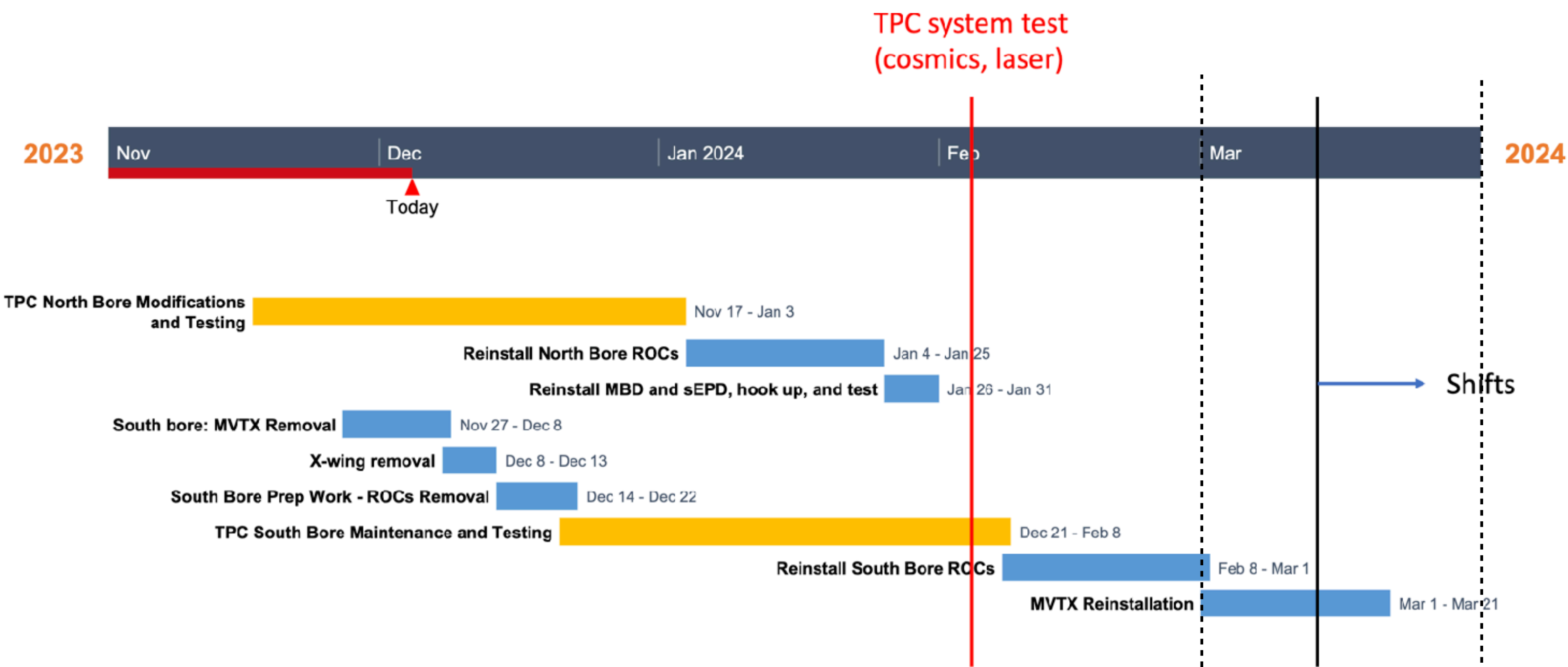
There is no gap b/w the plans. (If we follow the timeline) everything related to ROC installation, eg. cable connections, calibration tests, and debugging, needs to be completed in the term.



# Run24

## sPHENIX Work in the Bore

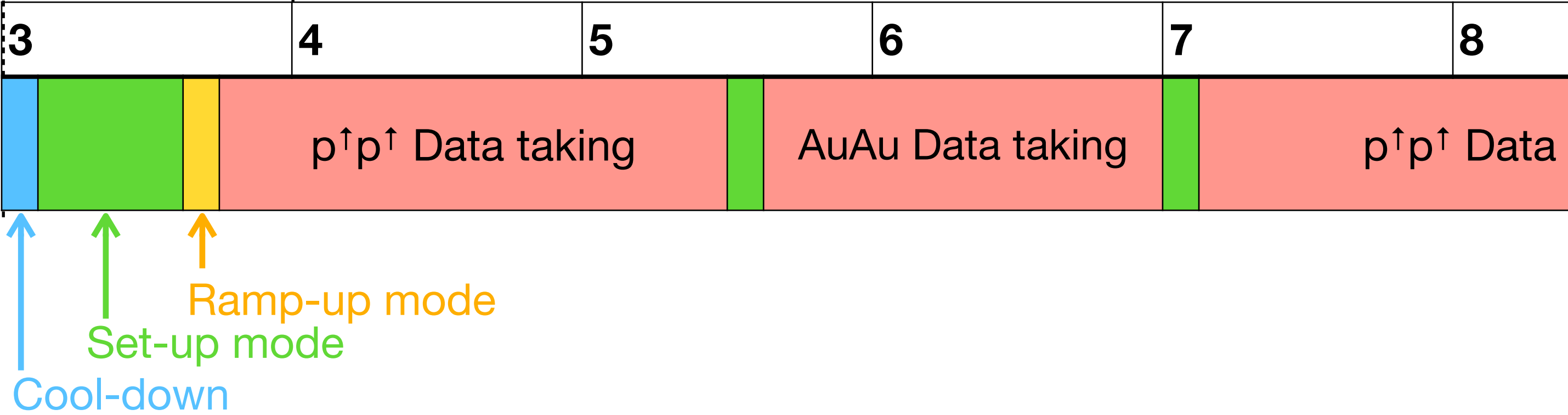
TPC Maintenance 2023-2024-Rev-7.mpp



The new RHIC projection was released on November 9 ([Link](#)).

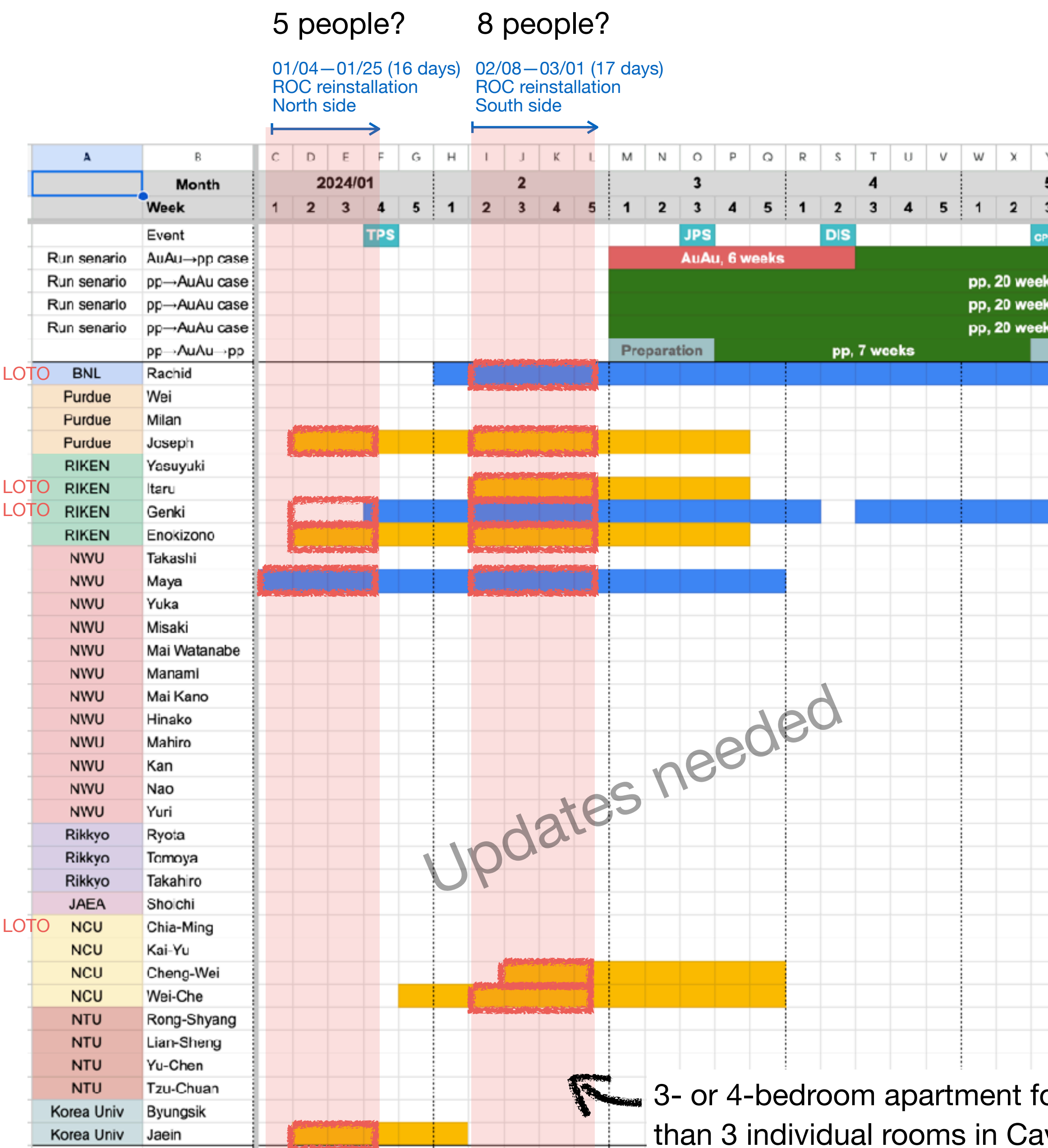
Possible modes for Run-24 are  $p\uparrow p\uparrow$  at 100 GeV beam energy and Au+Au at 100 GeV/nucleon. 26 weeks of RHIC refrigerator operation in FY 2024 could be scheduled in the following way:

Cool-down from 50 K to 4 K	0.5 weeks	
Set-up mode 1 ( $p\uparrow p\uparrow$ at 100 GeV)	2.0 weeks	(no dedicated time for experiments)
Ramp-up mode 1	0.5 weeks	(8 h/night for experiments)
Data taking mode 1	7.0 weeks	
Set-up mode 2 (Au+Au at 100 GeV/nucleon)	0.5 weeks	(no dedicated time for experiments)
Data taking mode 2 with further ramp-up	5.5 weeks	
Set-up mode 1 ( $p\uparrow p\uparrow$ at 100 GeV)	0.5 weeks	(no dedicated time for experiments)
Data taking mode 1	9.0 weeks	
Controlled turn-off	0.5 week	





# Run24: ROC reinstallation



## • Overview

- ROCs on the north/south sides will be installed again.
- Dan Cacace et al will physically install ROCs.
- INTT member will make the cable connections.
- Rob will connect the cooling lines and test them. It will be done after cable connections.

## • Manpower estimation

- Installation: at least **2 LOTO workers**
  - A connects the cables (LOTO)
  - B supports A (remember 2-person rule) (LOTO)
- Calibration tests and debugging: at least **2 LOTO workers + 1 worker**
  - A operates DAQ and analyzes data
  - B works for cable connection (LOTO)
  - C helps B (LOTO)

## • Work schedule estimation

- Day 1 — 4: ROC installation (by Dan et al)
- Day 5 — 8: Cable connections (3 ROCs/day by INTT member)
- Day 9 — 13: Cooling line connection and tests (by Rob)
- Day 14 — 16: Calibration tests and debugging (by INTT member)

## • Housing estimation

- Cavendish/Curie: \$62 / day ~ \$1860 / month
- Apartment: \$2215—3193 / 2-4 persons / month

3- or 4-bedroom apartment for 1 month is better than 3 individual rooms in Cavendish for 3 weeks.

# Run24: Lockout/Tagout (LOTO) training for ROC reinstallation

- The ROC reinstallation is carried out inside sPHENIX magnet bore. Everybody is required to complete Lockout/Tagout training to work there.
- There some steps to complete the training. You need to take a class in person, which is held 1—2 times/month.
- Current LoTo workers in the INTT team: Rachid, Itaru, Maya, Genki, Cheng-Wei, (Joseph?), (Jaein?), Raul

December 2023						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11 Benchtop/Dispersibles Training	12 Davis Bacon Fall Protection (part 1) Qualified Electrical Worker 2	13 Contractor/Vendor Orientation Training	14 Cardiopulmonary Resuscitation (Adult CPR/AED)	15 Contractor/Vendor Orientation Training	16
17	18 Contractor/Vendor Orientation Training QEW NFPA 70E 2022 Update	19 Hazard Identification Lockout/Tagout Authorized Worker QEW NFPA 70E 2022 Update RadWorker I Final (Part 2 Classroom Portion)	20 Contamination Practical Contamination, High Cont. and Airborne Areas Contractor/Vendor Orientation Training	21 QEW NFPA 70E 2022 Update	22 Contractor/Vendor Orientation Training	23
24	25 Lab Holiday: Christmas Day	26	27 Contractor/Vendor Orientation Training Qualified Electrical Worker 1	28 Confined Space Entry QEW NFPA 70E 2022 Update	29 Contractor/Vendor Orientation Training	30
31						

December 2023

January 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Lab Holiday: New Year's Day	2 Basic Rigging Qualified Electrical Worker 2 RadWorker I Final (Part 2 Classroom Portion)	3 Contamination Practical Work Planning & Control: An Introduction	4 Fall Protection (part 1)	5	6
7	8 Management Training in Contractor Assurance System (CAS) Rad Buffer Area Access Training	9 Basic Rigging Lockout/Tagout Authorized Worker 9 a.m. to 12 p.m. Bldg. 900, Training Room 88 Register for This Class	10 Davis Bacon	11 Cardiopulmonary Resuscitation (Adult CPR/AED) RadWorker I Final (Part 2 Classroom Portion)	12 Basic Life Support for Healthcare Providers	13
14	15 Lab Holiday: Martin Luther King Jr.'s Birthday	16	17	18 Confined Space Entry	19	20
21	22 Benchtop/Dispersibles Training	23 Hazard Identification Qualified Electrical Worker 2	24 Contamination Practical Contamination, High Cont. and Airborne Areas	25 Fall Protection (part 1) Qualified Electrical Worker 2	26	27
28	29 Contamination, High Cont. and Airborne Areas Principles of Work Oversight RadWorker I Final (Part 2 Classroom Portion)	30 Lockout/Tagout Authorized Worker 9 a.m. to 12 p.m. Virtual Log in instructions will be sent the day before. Register for This Class	31 Cardiopulmonary Resuscitation (Adult CPR/AED)			

January 2024