INTT plan for the end of Au+Au and the commissioning of p+p

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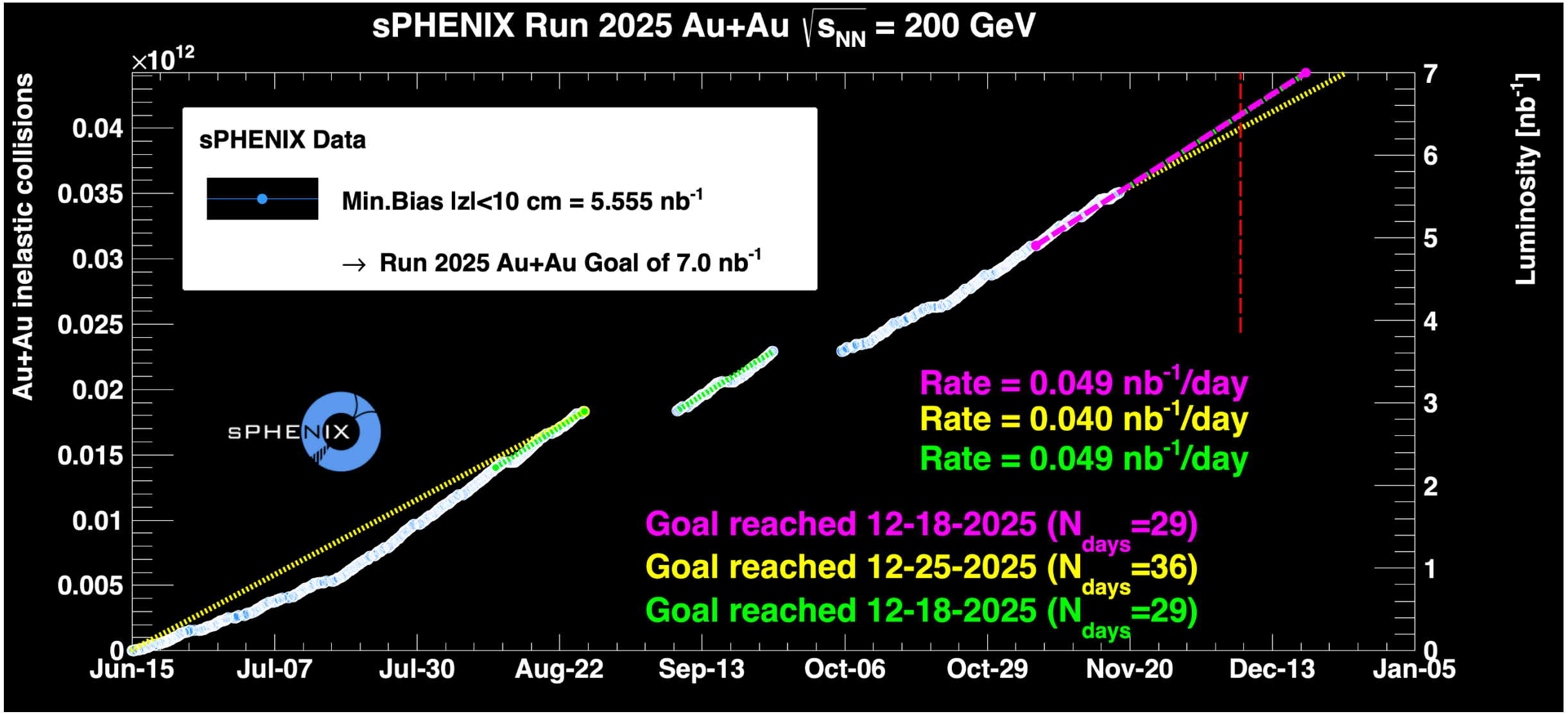
Integrated luminosity



Message from Rosi at SCM on 11/18

- (RJR) Waiting on final decision from Abhay and the DOE, but we plan to end Au+Au **December 8th**. Machine set-up is ~1 week. sPHENIX commissioning is ~1 week.
  - Extend shift sign up
  - Meeting first week of December (TBD, will check on expert availability) for pp commissioning plan
  - Is there anything we need to do for calibrations while we are still configured for Au+Au running?

If Au+Au run ends on Dec.8

Shift schedule

Week	Period Coord.	Shift	Shift Leader	Detector Opr.	DAQ Opr.	Data Monitor Opr
Dec 9th - Dec 16th C-AD commissioning	Tanner Mengel University of Colorado, Boulder	0:00-8:00	Skaydi Grossberndt Baruch College, CUNY	Yuji Goto RIKEN	Yasuyuki Akiba RIKEN	
		8:00-16:00	Yuko Shoji Sekiguchi RIKEN	Audrey Francisco CEA Saclay	Nicole D'Hose CEA Saclay	Anjaly Sasikumar Menon Baruch College, CUNY
		16:00-00:00	Anne Sickles University of Illinois, Urbana-Champaign	Chris McGinn Massachusetts Institute of Technology	Hannah Bossi Massachusetts Institute of Technology	Iftekhar (Ifty) Ahmed University of Tennessee, Knoxville

Week	Period Coord.	Shift	Shift Leader	Detector Opr.	DAQ Opr.	Data Monitor Opr
Dec 16th - Dec 23rd sPHENIX commissioning		0:00-8:00	Skaydi Grossberndt Baruch College, CUNY		SHIFT OVERLAPS Anjaly Sasikumar Menon Baruch College, CUNY	Bade Sayki Los Alamos National Laboratory
		8:00-16:00	Mickey Chiu Brookhaven National Laboratory	Chenxi Ma Stony Brook University	Parker Lewis Ohio University	Luke Legnosky Stony Brook University
		16:00-00:00	Shuhang Li Columbia University	Yui Ishigaki Nara Women?s University	Kyle Gable University of Texas, Austin	Rowan Kelleher University of Michigan

Week	Period Coord.	Shift	Shift Leader	Detector Opr.	DAQ Opr.	Data Monitor Opr
Dec 23rd - Dec 30th Start of p+p run		0:00-8:00	Skaydi Grossberndt Baruch College, CUNY			
		8:00-16:00				
		16:00-00:00				

Week	Period Coord.	Shift	Shift Leader	Detector Opr.	DAQ Opr.	Data Monitor Opr
Dec 30th - Jan 6th		0:00-8:00	Sean Stoll Brookhaven National Laboratory			
		8:00-16:00		Luke Legnosky Stony Brook University		
		16:00-00:00	Brett Fadem Muhlenberg College			

- The shift table will open till Feb 3 (assuming the RHIC will be running until Jan 20)

What we need for p+p commissioning?

	Task	Person in Charge	Duration	Points	Beam condition	Other subsystem	Priority	Field	Trigger	Comment
	Chip saturation study	DAQ: 1008 guys Analysis: Ryotaro Support: Cheng-Wei	10 mins for each	INTT in trigger mode Set1-1: ncollision100, and open_time 127 Set1-2: ncollision100, and open_time 110 Set1-3: ncollision100, and open_time 90 Set1-4: ncollision100, and open_time 80 Set1-5: ncollision100, and open_time 60 Set1-6: ncollision100, and open_time 40 Set1-7: ncollision100, and open_time 25 Set2: same open_time settings, while changing ncollision to be 2 Set3: same open_time settings, while changing ncollision to be 50	with collisions (with low rate)	With MBD, in global mode	High	Any	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	DAQ: 1008 guys Analysis: Ryotaro Support: Cheng-Wei	10-15 mins (~1M to 1.5M events for each)	INTT in trigger mode Set1: ncollision 3, and open_time 60 Set2: ncollision 3, and open_time 127 Set3: ncollision 127, and open_time 127 Set4: ncollision 100, and open_time 60 (nominal setting, as ref.) (Short GTM busy window for this test if possible, but maybe not possible)	with collisions (prefer high trigger rate)	Local mode should be fine	High	Any	MBDNS	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 abnomal 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
①	**Timing coarse delay scan**	DAQ: 1008 guys Analysis: Ryotaro Support: Genki	5 min x 6 points x 2 sets	lvl1 = 112, 113, 114, 115, 116, 117	With collisions	With MBD, standalone	High	Any	MBD	After GTM is finalized
②	**DAC0 scan**	DAQ: 1008 guys Analysis: Nao Support: Akitomo	5 min x 6 points x 2 sets	DAC0 = 15, 20, 25, 30, 35, 40	better to be with beam	Standalone	Middle	Any	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	DAQ: Takahiro Analysis: Tomoki Support: Itaru	5 min x 2 points x 2 sets	Digital Ctrl = 2, 10	With collisions	Standalone	High	Any	Any	First try the digital control test with pedestal data with no collisions. If it's not successful, retry to take data with collisions.
③	**Renew chip/channel mask**	DAQ: 1008 guys Analysis: Jaein Support: Rachid/Raul	1 min w/ FA	Need some iterations	With collisions	Standalone	Must	Any	Any	~~Can be finished before Au beam comes.~~ This work will should be performed AFTER 1 week of stable data taking using the current mask condition. Also need Raul to unmask FELIX chip masking
	~~**Single bunch crossing**~~	~~DAQ: 1008 guys~~ Analysis: ?? Support: ??	~~10 mins?~~	~~one run~~ ncollision 100 one run small ncollision	~~single or two~~ bunch crossing(s) with collisions	~~Join the MVTX~~ commissioning	~~Low~~	~~Any~~	~~Any~~	~~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
	Hit rate study with/without collar	DAQ: 1008 guys Analysis: ?? Support: ??	10 mins?	one run ncollision 100 one run for each configuration small ncollision	single or two bunch crossing(s) with collisions	Join the MVTX commissioning	Low	Any	Any	

Anything else?

Do we need special Au+Au runs?

- Any special runs for hit carry-over study?
- Any special runs for chip saturation study?
- Any special runs for digital control study?
- DAC scan for MIP study?
- More zero-field data?

This is the last chance to take special data that would be useful as calibration or systematic for your Au+Au analysis