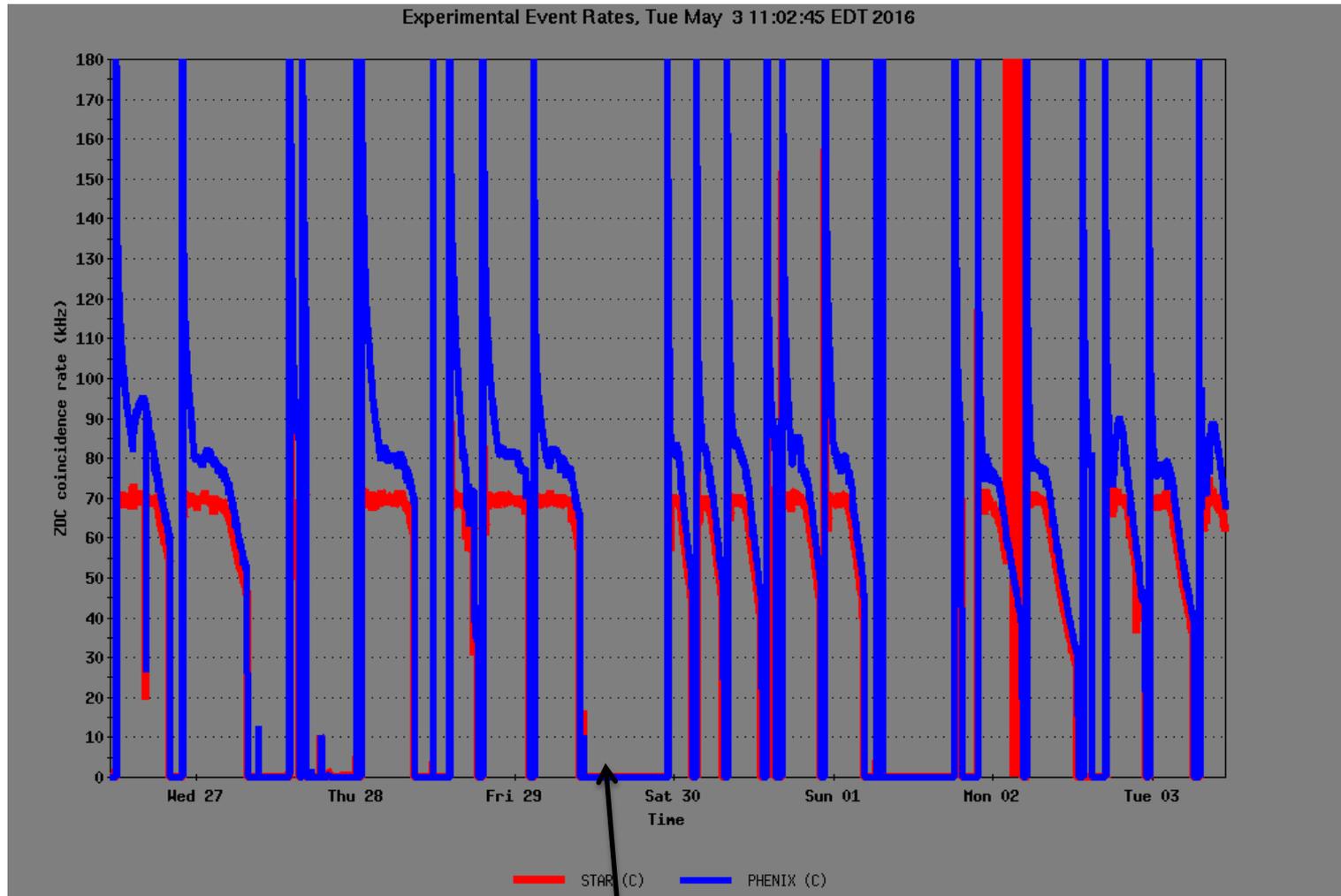


# Time Meeting

May 3, 2016.

W. Christie



Vacuum issue in Yellow

# Run 16 plan based on 20 weeks cryo operation

and Fischer et.al. RHIC Collider Projections (FY 2016 – FY 2022), 19 April 2015

## Today, May 3<sup>rd</sup>

- 19 Jan, Begin cool-down to 4.5K
- 25 Jan, Beam in Yellow
- ~~22~~ 26 Jan, Beam in Blue
- ~~29 Jan~~, Feb 3, First Collisions
- ~~5~~ 7 Feb, Begin 10 week **vs=200 GeV/n AuAu** physics run
- 7 am March 18<sup>th</sup>, RHIC Operations halted for Blue ring Diode issue
- 7 pm April 6<sup>th</sup>, RHIC Operations resumed (19.5 days offline)
- Decision made to add 19.5 days to the AuAu running to account for the Diode related down time
- 9 May, End 10 week (+ 2 days) **vs=200 GeV/n AuAu** physics run
- ~ 12 May, Begin 1 week **vs=200 GeV/n dAu** physics run
- 19 May, End 1 week **vs=200 GeV/n dAu** physics run
- 29 April, Begin 1.4 week **vs=39 GeV/n dAu** physics run
- 9 May, End 1.4 week **vs=39 GeV/n dAu** physics run
- 12 May, Begin 0.9 week **vs=62 GeV/n dAu** physics run
- 18 May, End 0.9 week **vs=62 GeV/n dAu** physics run
- 21 May, Begin 0.9 week **vs=200 GeV/n dAu** physics run
- 27 May, End 0.9 week **vs=200 GeV/n dAu** physics run
- 20 June, Begin 7 day **E=40 GeV/n Au** CEC physics run
- 27 June, End 7 day **E=40 GeV/n Au** CEC physics run
- 27 June, begin cryo warm-up
- 1 July, Cryo warm-up complete, 23.5 cryo weeks of operation

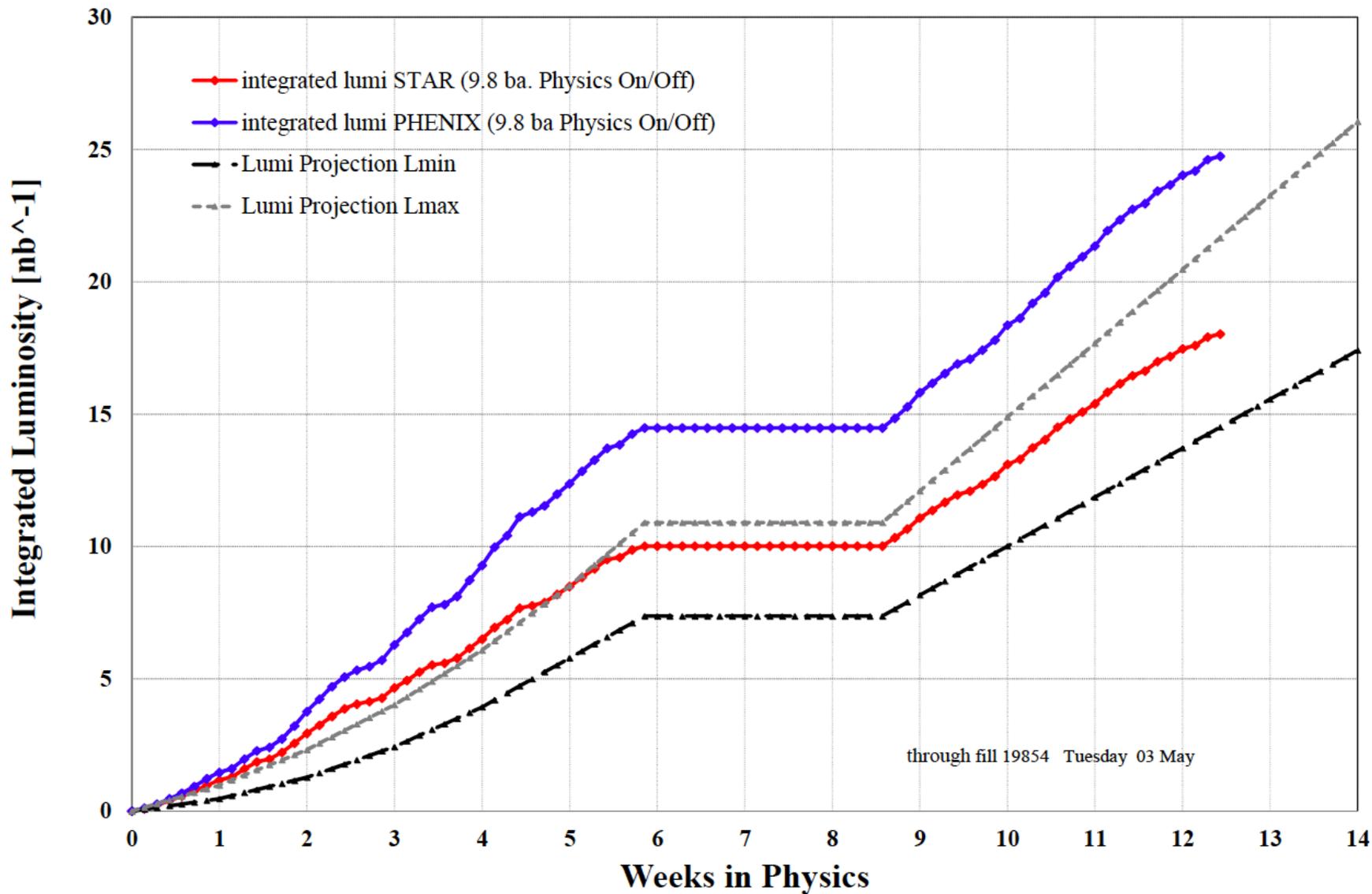
• Actual physics time for each dAu energy is TBD

Schedule in Magenta is estimate  
Schedule in Orange text not updated yet  
Schedule in Blue text assumes CeC runs as planned

See <http://www.rhichome.bnl.gov/AP/RHIC2016/> for the Run Coordinator's detailed plan

# Run16 Delivered Luminosity

## Au x Au $\sqrt{s} = 200$ GeV



## SCHEDULE FOR WEEK FROM MONDAY May 2<sup>nd</sup> – MONDAY May 9<sup>th</sup>

- **Monday:**
  - Physics running all day
- **Tuesday:**
  - Physics Running all day
  - 56 MHz will be tried on first fill of the day shift, if no issues will continue to be used
- **Wednesday:**
  - Physics Running all day
  - About noon, once NSRL Biology running finished for the day, EBIS will be taken offline for repair, and Tandem will be used to inject Au into RHIC.
  - Estimated that EBIS will be operational again for RHIC and NSRL sometime on Thursday, and it will go back online.
  - Tune up of deuteron beams in Tandem expected to occur on Friday and Monday in preparation for d-Au running next week.
- **Thursday:**
  - Physics running all day
  - Low luminosity store for STAR (~2.5 to 3 hours)
  - At some point Thursday or Friday EBIS comes back online
- **Friday until Monday:**
  - Physics running
- **Monday:**
  - AuAu operation ends at 8 am
  - 8 hour maintenance period (may be extended)

Archive

# The Calendar

January						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

March						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- Cool down to 4.5K starts on January 19<sup>th</sup>.
- Physics Running Declared on Sunday February 7<sup>th</sup>.
- Physics Running halted by Diode at 7 am on Friday March 18<sup>th</sup>
- ~ 5 5/7's weeks
- Physics running restarted on Wednesday evening, April 6<sup>th</sup>.
- Gap of ~ 19.5 days
- Original "10 wks" of AuAu physics running would have been concluded on Sunday April 17<sup>th</sup>.
- If one adds 19.5 days to this original end date, one land on Saturday May 7<sup>th</sup>.
- Without any extension, the Cryo warm up completes on June 7<sup>th</sup>.
- *Shown in Magenta is where the CeC running would fall with A TWO WEEK EXTENSION.*
- Original date for the start of the Cryo warm up was Friday, June 3<sup>rd</sup>.
- 20 Cryo weeks total.

## Outcome from the April 12<sup>th</sup> RHIC Coordination meeting

- A decision that was taken at the meeting was that the earliest end date for the AuAu running would be pushed from April 17<sup>th</sup> (original end date for 10 weeks of physics running) to the vicinity of May 7<sup>th</sup>. This accounts for the 19.5 days that RHIC was offline for the diode repair.
- Extending Run 16. Given the funds saved from the reduced power load during the three weeks that RHIC was offline, and the lower cost for power through February of this year (March Power costs not yet known), the funds were deemed to be available to extend the run by at least two weeks.
- Depending on the power cost for March, it may be possible to add an additional week to the run, making for a total of a three week extension. It is expected that the power cost for March will be known soon (this week) and thus a final decision of the length of a possible run extension will be made by/at the RHIC Coordination meeting on April 26<sup>th</sup>.
- To better understand the implications of the possible options for allocating the RHIC beam time between May 7<sup>th</sup> (earliest end of AuAu running) and the end date for the run, Berndt asked both collaborations to provide him with input to specific questions.
- The date for detailing all aspects of the plan for the remainder of Run 16 is by or on April 26<sup>th</sup>.

PHENIX goals: 10 weeks,  $1.8 \text{ nb}^{-1}$  with 12 billion MB events recorded within  $|z| < 10 \text{ cm}$  vertex, request dynamic  $\beta^*$  squeeze.

STAR goals: 13 weeks  $10 \text{ nb}^{-1}$  sampled for MTD and 2 billion MB events recorded within  $|z| < 6 \text{ cm}$  for HFT

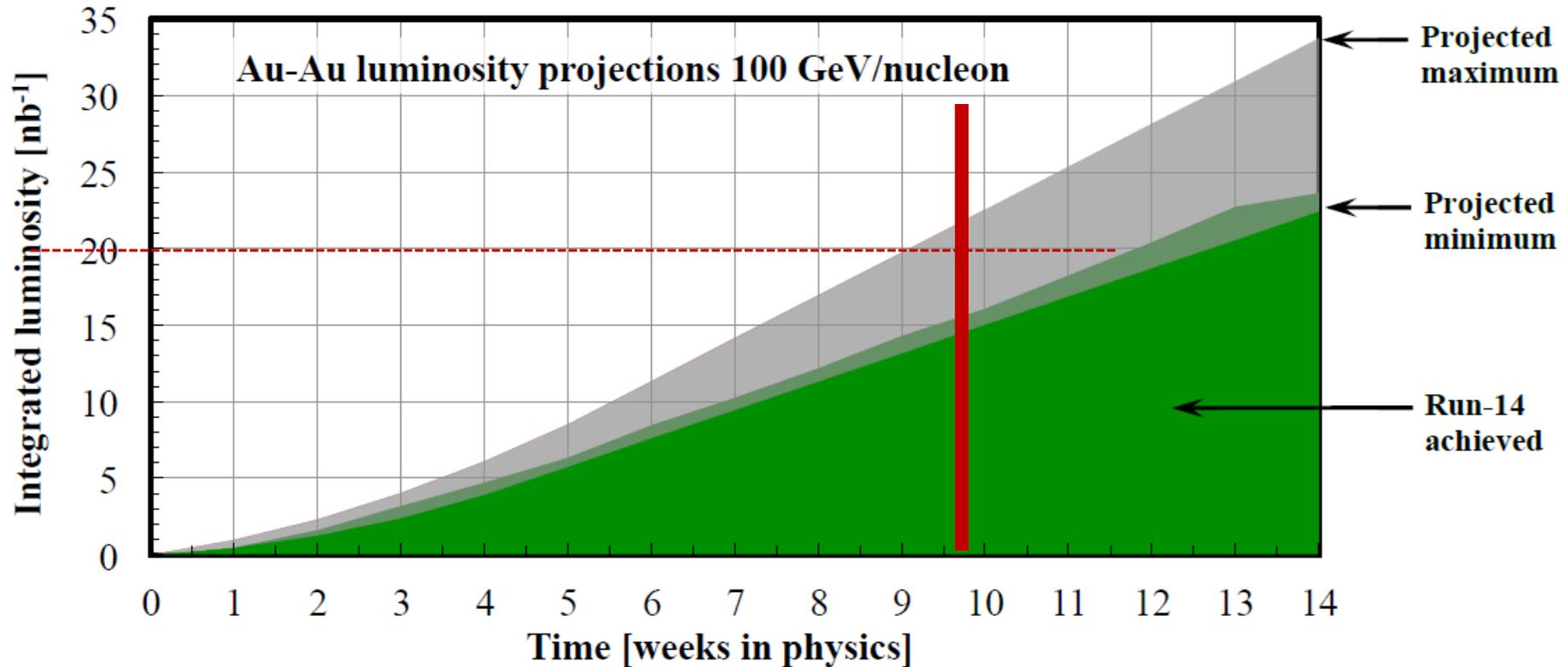


Figure 3: Projected minimum and maximum integrated luminosities for Au+Au collisions at 100 GeV/nucleon beam energy, assuming linear weekly luminosity ramp-up in 6 weeks.

From Fischer et. al., RHIC Collider Projections (FY 2016 – FY 2022), 19 April 2015



## Who's Who for 2016

RHIC 100 x 100 GeV AuAu:

**Run Coordinator:** Xiaofeng Gu, [xgu@bnl.gov](mailto:xgu@bnl.gov) , 631-344-4724

RHIC dAu Energy Scan:

**Run Coordinator:** Chuyu Liu, [cliu1@bnl.gov](mailto:cliu1@bnl.gov) , 631-344-4431

RHIC CeC POP Experiment:

**Run Coordinator:** TBD

**Scheduling Physicist:** Bill Christie, [christie@bnl.gov](mailto:christie@bnl.gov), 631-344-7137 (x4643 after 29 Jan)

**AGS Liaison:**

Haixin Huang, [huanghai@bnl.gov](mailto:huanghai@bnl.gov) , 631-344-5446