

Trigger Board Meeting

05-July-2021

Members:

Rosi Reed, Jiangyong Jia, Hongwei Ke, Gene Van Buren, Bill Christie, Eleanor Judd, Hank Crawford, Jeff Landgraf, Akio Ogawa, Geary Eppley, Zaochen Ye, Grazyna Odyniec, JH Lee, Daniel Brandenburg, Daniel Cebra, Prasanth Shanmuganathan, Christian Videbaek, and Hanna Zbroszczyk.

Agenda:

- RHIC and STAR run status
- 200 GeV d+Au status

Overall Run Status (2021)

Energy	Start	Finish	First Run	Last Run	HLTgood	Target
7.7 GeV	Jan 31 st	May 1 st	22031042	22121018	100.9 M	100 M
3.0 FXT	May 1 st	May 5 th	22121036	22125011	306.6 M	300 M
9.2 FXT	May 6 th	May 6 th	22126010	22126029	53.9 M	50 M
11.5FXT	May 7 th	May 7 th	22126045	22127018	51.7 M	50 M
13.7 FXT	May 8 th	May 8 th	22128001	22128011	50.7 M	50 M
O+O 200	May 11 th	Min Bias	22131011	22136010	403.9 M	400 M
O+O 200	May 16 th	Central	22136011	22141016	212.4 M	200 M
O+O 200	May 21 st	Flip Field	22141039	22144006	125.0 M	100 M
17.3 GeV	May 25 th	June 7 th	22145017	22158019	256.1 M	250 M
3.0 FXT	June 7 th	June 28 th	22159051	22179022	1796 M	1.7 B
d+Au 200	June 28 th		22180043		175.3 M	200 M
7.2 FXT	June 3 rd		22154936		88.6 M	none

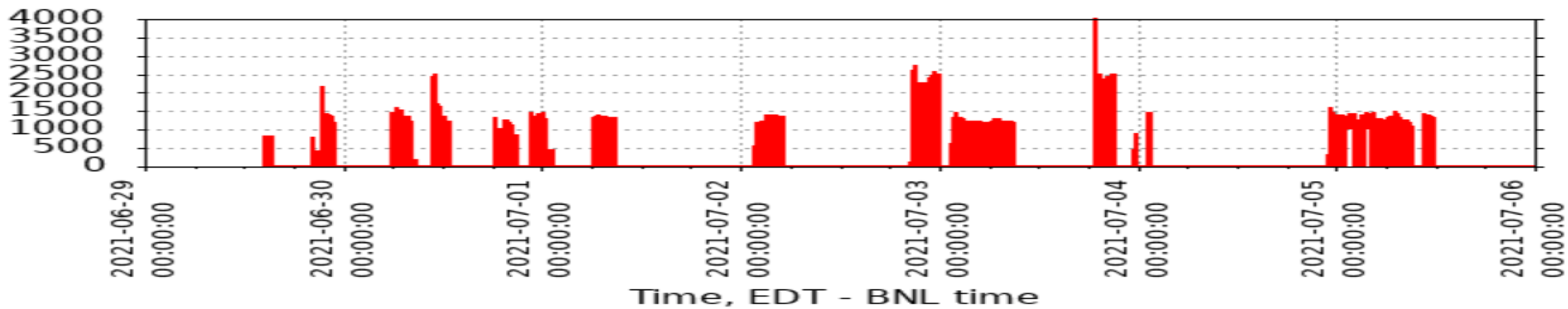
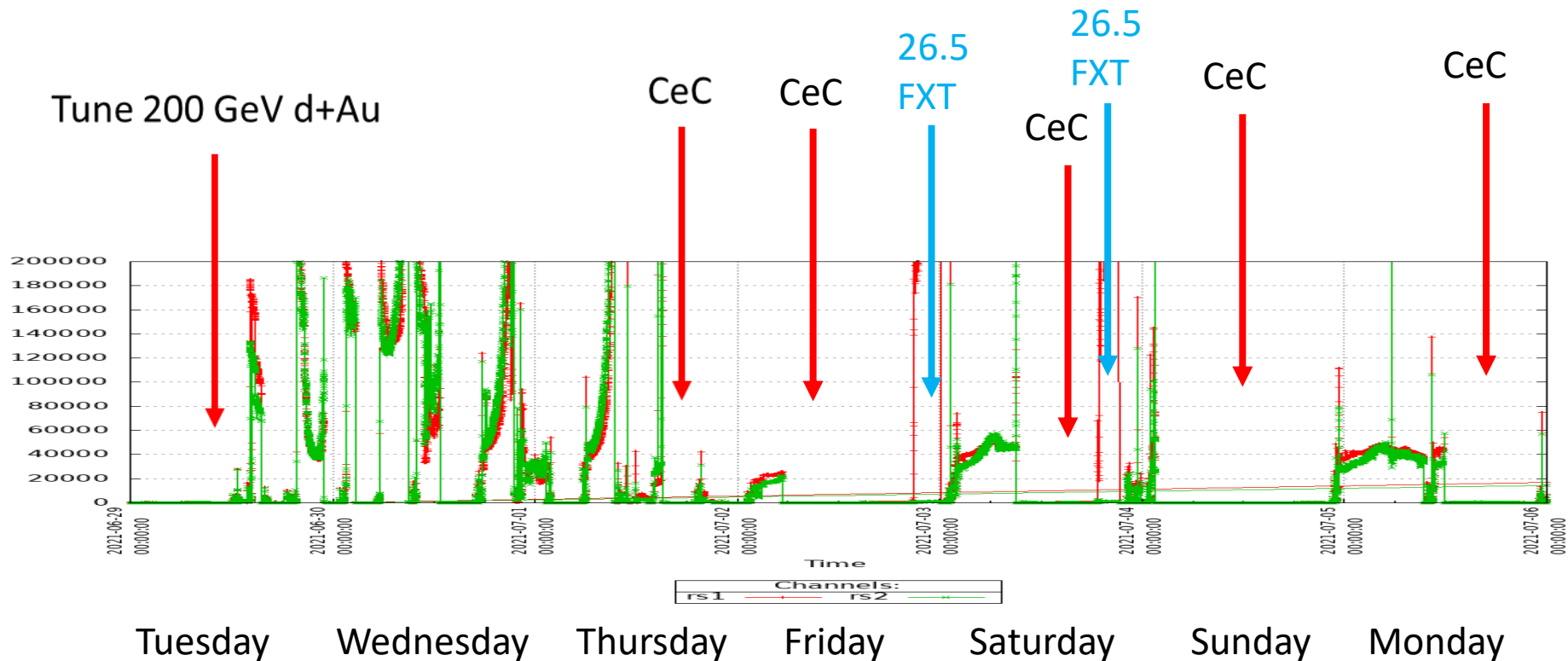
Review of the Past Week

200 GeV d+Au Collider

Day	Hours of data taking	Number HLTgood Events	Issues	Hours down
			3.85 FXT	
Monday June 28	1.0	7.9	AGS RF PA (7 H), Switch to d+Au	7 H
Tuesday June 29	5.4	2.7	Machine Development	
Wednesday Jun 30	7.6	25.6	CeC (15H)	15 H
Thursday July 01	3.2	12.8	CeC (15H), Quench (3H)	18 H
Friday July 02	3.4	9.8	CeC (15H), Magnet quench	20 H
Saturday July 03	7.3	37.2	CeC (12 H) (26.5 FXT 16 M)	12 H
Sunday July 04	1.5	5.9	CeC (12 H), RHIC PS issue (7H)	19 H
Monday July 05	9.2	51.0	CeC (12 H)	
Tuesday July 06	~11	~53	APEX (9 H)	
Wednesday July 07	~8	~40	CeC (12 H) – End of d+Au noon	
Thursday July 09		Cosmics	End of Beam operations 9AM	
Friday July 10		Cosmics	Finish FFF Cosmics at noon	

Expect roughly 245 M d+Au (Target is 200)

200 GeV d+Au Collider Running



32.7 M 26.5 GeV FXT data

100 calendar hours
 84 hours to Cec
 10 hours to APEX

Calendar to Complete Run 21

- CeC is a priority for the RHIC facility → need another 3 – 7 days
- 200 GeV d+Au for STAR is a new priority → STAR request is 200M, PAC says 400M

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 13 3.85 GeV FXT	June 14	June 15	June 16 CeC	June 17 CeC	June 18 APEX	June 19
June 20	June 21 Prep d+A	June 22 APEX	June 23 Prep d+A	June 24	June 25 CeC	June 26 CeC
June 27 CeC	June 28 Prep d+A	June 29 prep d+Au	June 30 d+Au data	July 1 CeC	July 2 CeC	July 3 CeC
July 4 CeC	July 5 CeC	July 6 HE APEX	July 7th	July 8 CeC	July 9	July 10
July 11	July 12 RHIC Warm Up			RHIC Magnet + Power Supply Tests		
3.85 FXT	APEX	machine devel.	d+Au	CeC	Magent Tests	

Projections for completing the Run 21 physics agenda:

PAC

Run-21:

Single-Beam Energy (GeV/nucleon)	$\sqrt{s_{NN}}$ (GeV)	Run Time	Species	Events (MinBias)	Priority	Recommendation
3.85	7.7	11-20 weeks	Au+Au	100 M	1	Highest Priority
3.85	3 (FXT)	3 days	Au+Au	300 M	2	Next Highest (2)
44.5	9.2 (FXT)	0.5 days	Au+Au	50 M	2	
70	11.5 (FXT)	0.5 days	Au+Au	50 M	2	
100	13.7 (FXT)	0.5 days	Au+Au	50 M	2	
100	200	1 week	O+O	400 M	3	Third Priority (3a)
8.65	17.3	2.5 weeks	Au+Au	250 M	3	Lower Third (3b)
3.85	3 (FXT)	3 weeks	Au+Au	1.7 B	3	If time available

Table 2: Proposed Run-21 assuming 24-28 cryo-weeks, including an initial one week of cool-down, one week for CeC, a one week set-up time for each collider energy and 0.5 days for each FXT energy.

24 Weeks (How much of the program are we likely to complete:

Priority 1 (7.7): (11-20 wks) → Started January 31st; Finished May 1st (12.85 wks)

Priority 2 (FXT): (6-8 days) → Start May 1st; Finished May 8th (7 days)

Priority 3a (O+O): (15-16 days) → Start May 8th; Finished May 24th (16 days)

Priority 3b (17.3): (21-27 days) → Start May 24th; Finished June 7th (14 days)

Priority 3c (FXT): (21-25 days) → Start June 7th; Finished by June 28th (21 days)

Opportunity d+Au (6-8 days) → Start June 28th; Will stop July 7th

Priority X (26.5 FXT): parasitic CeC → Start June 3rd; Stop on July 8th 8AM

Magnet and Power Supply tests → July 8th – July 12th

RHIC warm-up → July 11-12th

Summary

- Completed the 7.7 GeV Collider program on May 1st
- Completed 3.85, 44.5, 70, and 100 GeV FXT completed May 8th
- 200 GeV O+O completed May 24th
- 17.3 GeV Au+Au completed June 7th
- 3.85 GeV FXT completed June 28th
- Parasitic 26.5 GeV FXT during CeC, 88 M so far
- 200 GeV d+Au will complete July 7th

July 6th STAR midnight to 3PM, APEX 3PM to midnight
July 7th STAR midnight to noon, CeC noon to midnight
July 8th CeC to 8AM, Magnet tests 8AM onward

Will discuss STAR ended at 9AM tomorrow at
coordination meeting