

# Machine and Run Status

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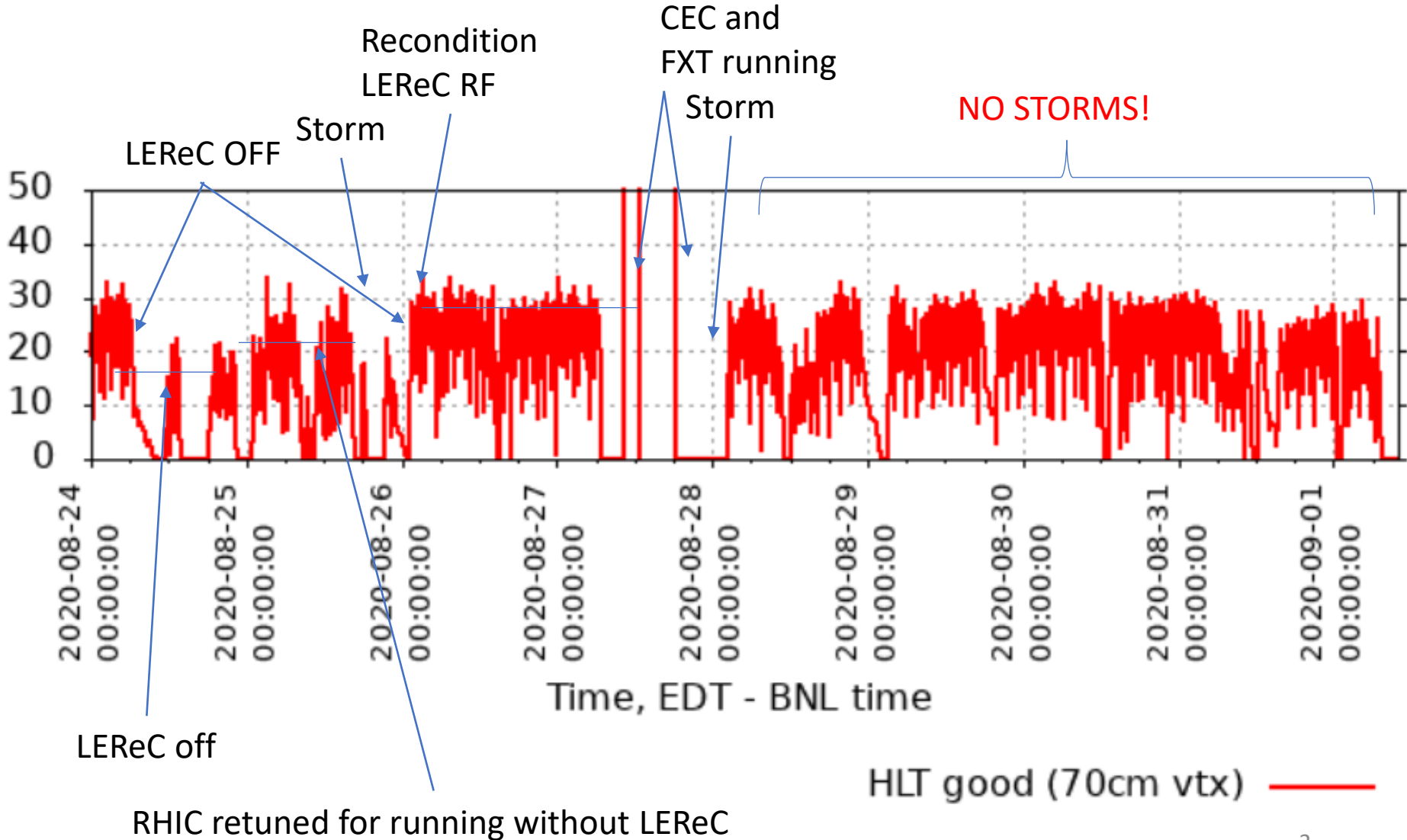
04-September-2020

Run 2020(b)

- **9.2 GeV collisions**
  - **26.5 GeV FXT**
- **7.7 GeV Collisions**

# 9.2 GeV collisions Run Status

*Main breaks for the past week came from failures and CEC timesharing*



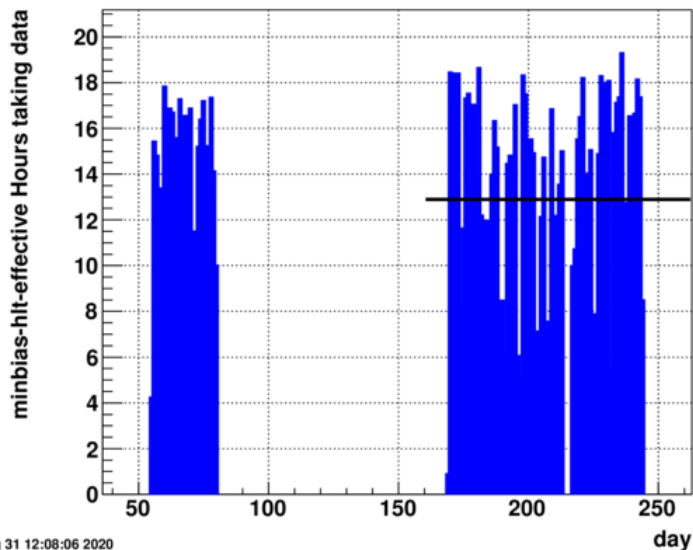
# Review of the Past Week

Day	Hours of data taking	Number HLTgood Events	Issues	Hours down
Tuesday, Aug 25	12.7	1.48 M	Storms and Injectors	4
Wednesday, Aug 26	16.6	2.51 M		
Thursday, Aug 27	5.7	0.85 M	CEC (with FXT), storm	16
Friday, Aug 28	16.7	2.10 M		
Saturday, Aug 29	18.2	2.32 M		
Sunday, Aug 30	17.4	2.61 M		
Monday, Aug 31	18.7	2.27 M		
Tuesday, Sep 01	4.5	0.57 M		

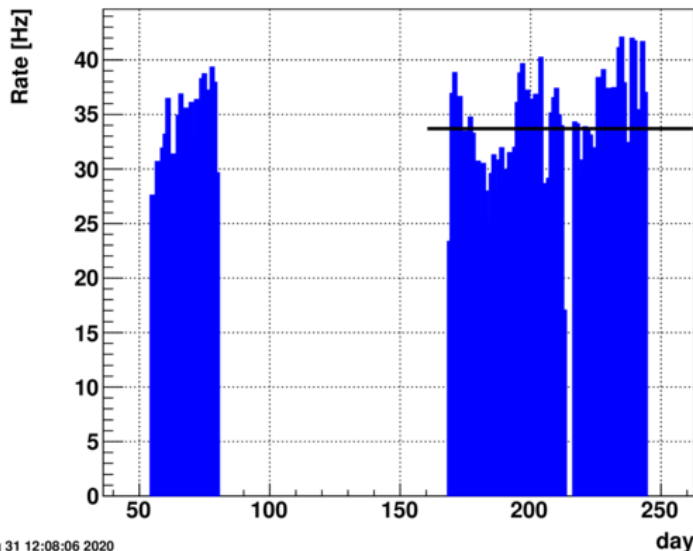
Excellent week of running.

## 9.2 GeV collisions Run Status

hours\_perday\_mb\_hlt-effective.txt

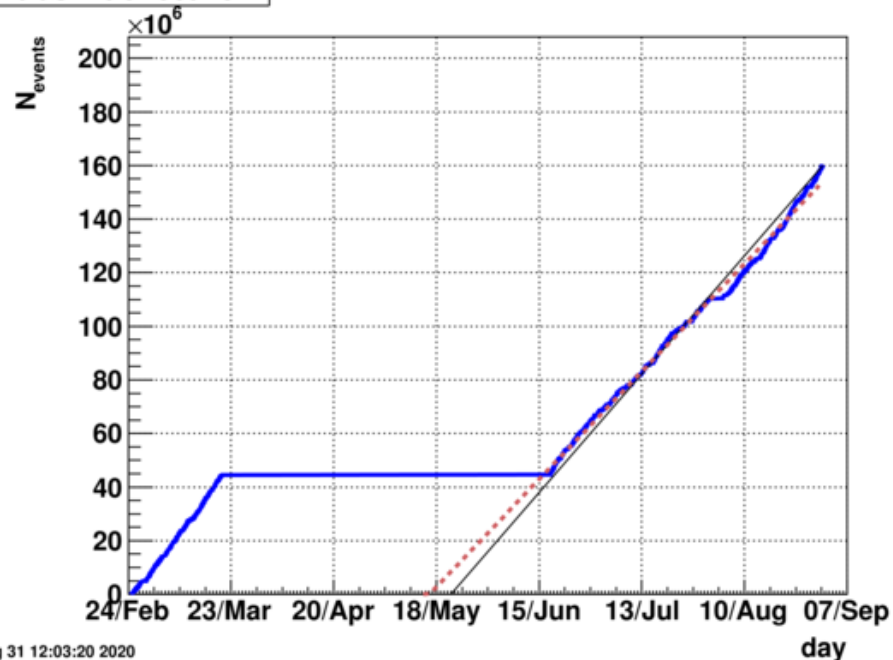


minbias-hlt-effective Average Rate [Hz]



- Last week, average hours per day was 14.3.
- HLTgood average event rate has been up. Finished with several days in the lower 40's
- Currently 161.8 M, **Dataset completed!**

minbias-hlt-effective



# FXT running during CEC

Parasitic running during CeC time

The opportunity is FXT at 26.5 (7.2) GeV

- ➔ No CEC this week
- ➔ Last week (Thursday, Aug 27) took FXT data for 6.7 hours of data taking
  - ➔ Eight physics runs: Run numbers 21240017, 018, 019, 022, 023, 024, 027, 028
  - ➔ Recorded 36.52 M HLTgood event at 26.5 (7.2) GeV
  - ➔ Recorded 48.4 M minbias triggers ➔ about 75% HLTgood rate (as expected)
- ➔ Total to date is 69.6 M (24 total runs to date)

# September 2<sup>nd</sup> – 14<sup>th</sup>

Schedule for final phase of RHIC operations (Could be somewhat fluid)

Tuesday June 01<sup>st</sup> – 9.2 GeV complete (160 M) – Ended 9.2 GeV operations at 8AM

Wednesday to Friday – Turn up LEReC for 7.7 GeV Collisions (**started Wednesday**)

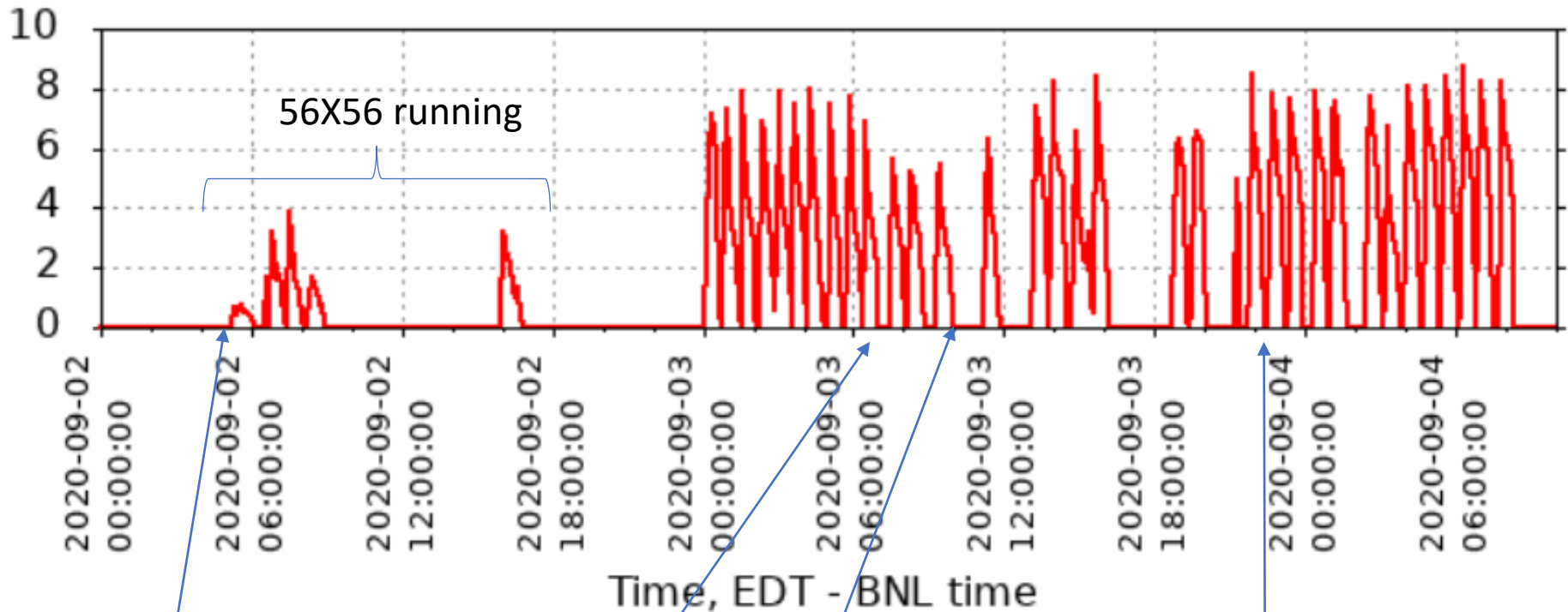
Saturday, Sunday, and Monday – **Take collisions at STAR over Labor day weekend**

Tuesday to Friday – CEC time 8 AM – 12 PM (**will get some 26.5 GeV FXT**), **7.7 overnight?**

No longer under discussion – 2.5 GeV FXT.

Monday September 14<sup>th</sup> – End of beam operations.

# 7.7 GeV Collider Running



First run: 21246010

Switch from EBIS to Tandem: 21247009

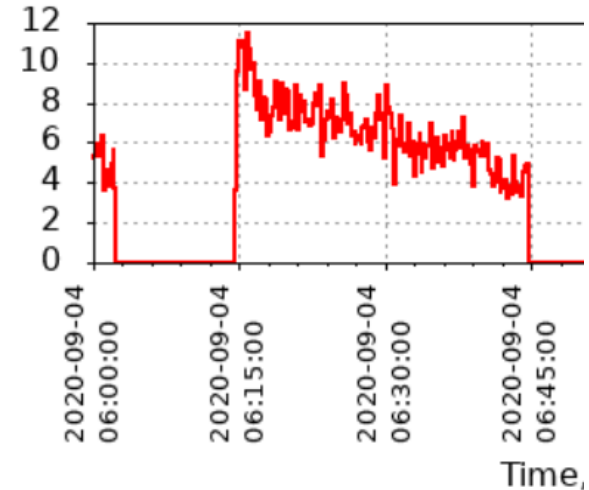
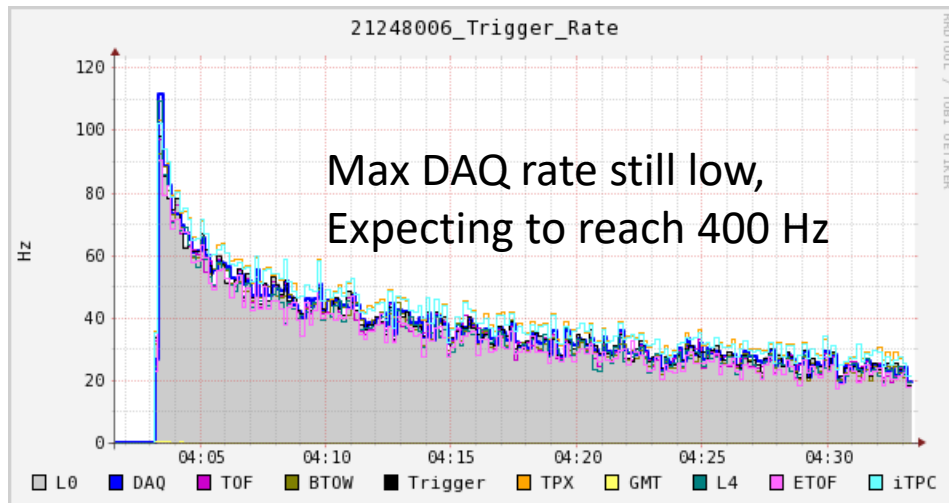
Global timing change: 21247014

HLT good (70cm vtx) —

MCR shifted the vertex Z: 21247034-35

Intensities are similar to 2010 7.7 GeV run,  
As expected

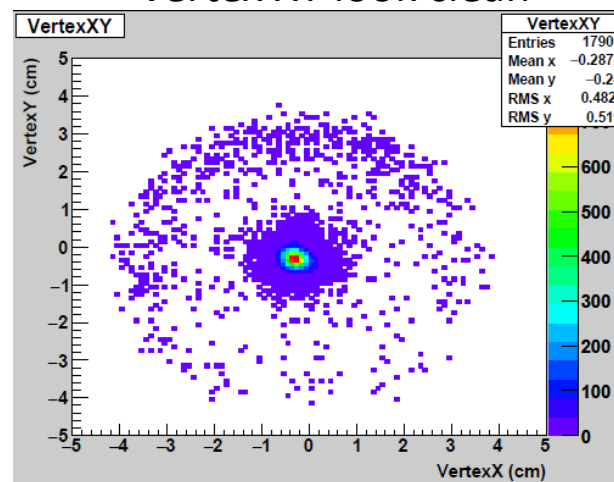
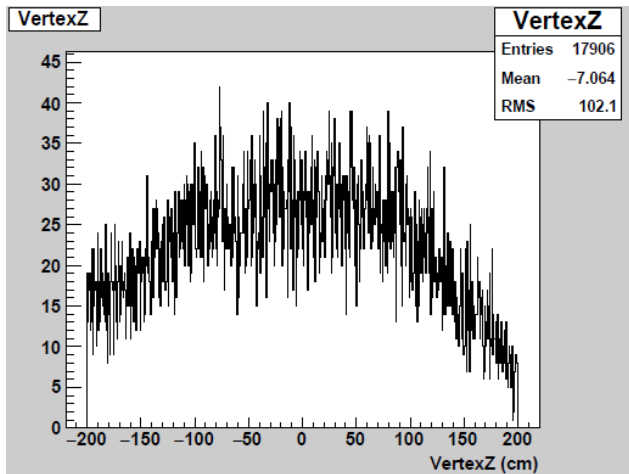
Fill Length: 30 minutes (expected)



Average HLTgood rate: 7 Hz  
(want this to be 15-20 Hz)

Vertex Z look OK

Vertex XY look clean



HLTgood70  
fraction is 25%,  
as expected

Things to check: Beta-squeeze, which injectors to use



# Summary

- 9.2 GeV running was excellent for the final week
- 9.2 GeV event goals have been met, running ended 8AM Tuesday September 1<sup>st</sup>.
- Accumulated 37 M FXT event at 26.5 (7.2) GeV last Thursday
- 7.7 GeV Running has started. Should get a nice set over the weekend. Need QA to check quality.
- Schedule for the final two weeks of RHIC operations this year.

# Overall Run Status

Energy	Start	Finish	First Run	Last Run	HLTgood	Target
11.5 GeV	Dec 10 <sup>th</sup>	Feb 24 <sup>th</sup>	20056032	21055017	235 M	230 M
31.2 FXT	Jan 28 <sup>th</sup>	Jan 29 <sup>th</sup>	21028011	21029037	112.5 M	100 M
9.8 FXT	Jan29 <sup>th</sup>	Feb 1 <sup>st</sup>	21029051	21032016	108 M	100 M
19.5 FXT	Feb 1 <sup>st</sup>	Feb 2 <sup>nd</sup>	21032049	21033017	118 M	100 M
13.5 FXT	Feb 2 <sup>nd</sup>	Feb 3 <sup>rd</sup>	21033026	21034013	103 M	100 M
7.3 FXT	Feb 4 <sup>th</sup>	Feb 5 <sup>th</sup>	21035003	21036013	117 M	100 M
5.75 FXT	Feb 13 <sup>th</sup>	Feb 14 <sup>th</sup>	21044023	21045011	115.6 M	100 M
9.2 GeV	Feb 24 <sup>th</sup>	Sep 1 <sup>st</sup>	21055032	21245010	161.8 M	160 M
7.2 FXT	July 29 <sup>th</sup>	TBD	21211028	TBD	69.6 M	none
7.7 GeV	Sep 2 <sup>nd</sup>	TBD	21246012	21000000	0.21 M	none

Energy	HLTgood w/ eTOF	Minimum w/ eTOF
31.2 FXT	101.7 M	100 M
19.5 FXT	80.4 M	80 M
13.5 FXT	88.9 M	70 M
9.8 FXT	72.7 M	65 M

Beam activities since 9 PM last night

56X56 beams for STAR with EBIS

LEReC is bringing up DC gun

Look at multiplicity as a function of vertex loca  
Timing change was after run 13 today

