

# Run 19 RHIC Machine/Experiments Meeting

*December 31, 2019*

## Agenda:

- General discussion of Run 20 - W. Christie
- Collider Status/update - C. Liu
- STAR Status/update - J.H. Lee
- All Other Business (AOB)

## BLUEJEANS CONNECTION INFO:

To join the meeting on a computer or mobile phone: <https://bluejeans.com/273705843/1875?src=calendarLink>

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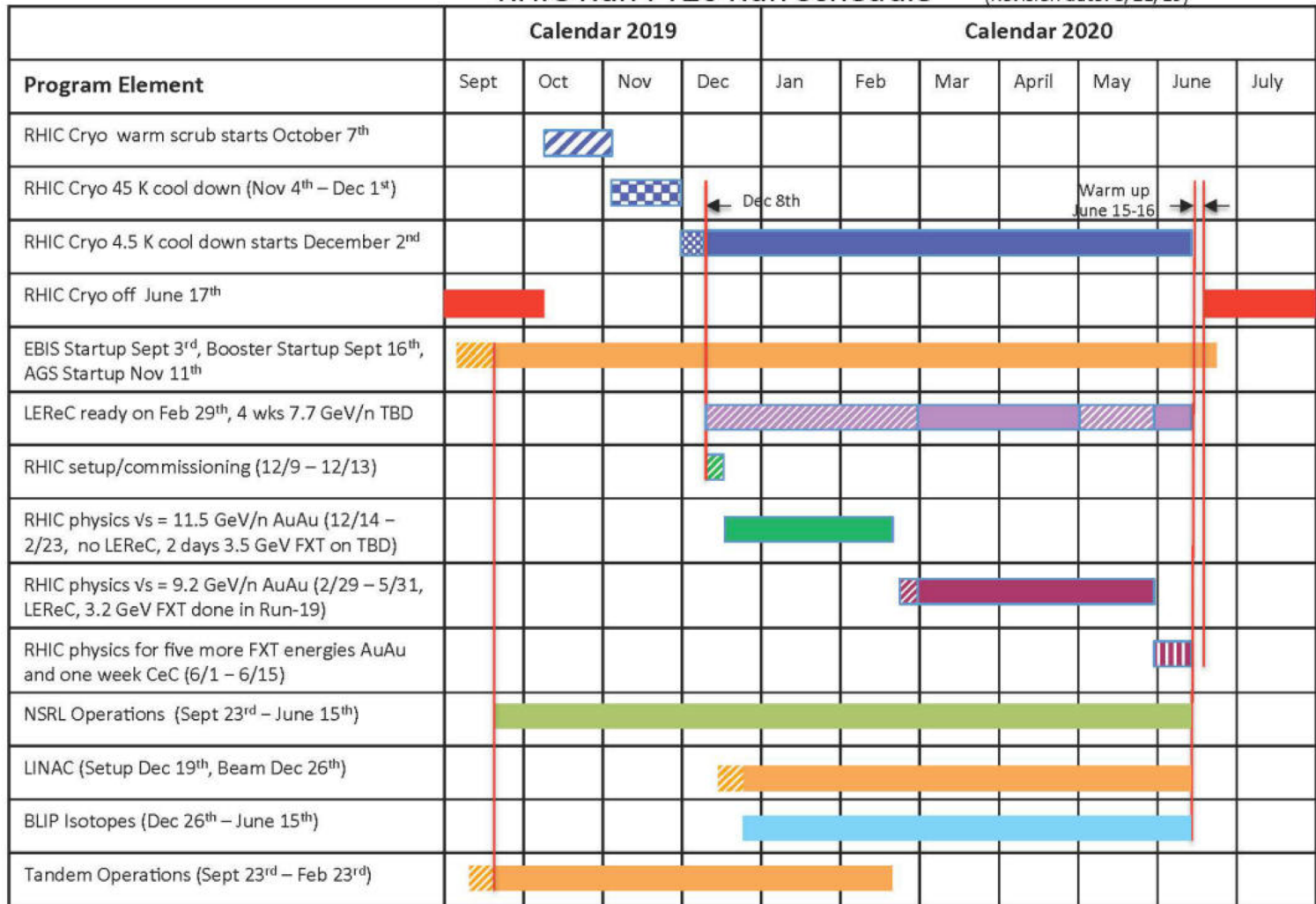
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Global Numbers: <http://bluejeans.com/numbers>

Meeting ID: 273 705 843

# RHIC Run FY20 Run Schedule

(Revision date: 8/21/19)



**N.B. This schedule assumes that we end up with a budget that allows for a 28 Cryo week run.**

The actual transition date between 11.5 and 9.2 GeV Physics running will be a matter of discussion as the run progresses.

It is likely that STAR will request to start/run the Fixed target sometime in mid to late January.

# Summary of interleaving LEReC Commissioning with the STAR Physics running

Meeting held on December 17, 2018 to discuss Strategy/plan:

- Once collisions available, spend the first about week getting STAR tuned up and the Physics running going.
- After this first week of running, start interleaving LEReC commissioning
  - Idea discussed to schedule for 12 hours every other day (e.g. M, W, F)
  - Keep schedule “flexible” so that if for any reason LEReC can’t effectively use the time it switched back to Physics running.
  - Also so that if LEReC is making good progress, and more time is desirable, the allotted time can be extended.

This is a Strategy/plan to get started on this sharing of the Collider time. Expectation is that once we see how this works we’ll discuss if we need any modifications.

## Rough accounting of LEReC hours per week and planned for this week:

12/10 - 12/16:	~20 hrs LEReC
12/17 - 12/23:	28 hrs LEReC
12/24 - 12/30:	0 hrs LEReC
12/31 – 1/6:	~23.5 hrs LEReC

*Total LEReC ~ 71.5 hrs (~ 3 days)*

Key:

Blue = as run

Red = planned

# STAR Beam Use Request for Run20

	Beam Energy (GeV/nucleon)	$\sqrt{s_{NN}}$ (GeV)	$\mu_B$ (MeV)	Run Time	Number Events requested / collected
	<del>9.8</del>	<del>19.6</del>	<del>205</del>	<del>4.5 weeks</del>	<del>400M</del> <b>582M</b>
	<del>7.3</del>	<del>14.5</del>	<del>260</del>	<del>5.5 weeks</del>	<del>300M</del> <b>324M</b>
Run20	5.75	11.5	315	9.5 weeks	230M
	4.55	9.1	370	9.5 weeks	160M
	3.85	7.7	420	12 weeks	100M
Run20	<del>31.2</del>	<del>7.7 (FXT)</del>	<del>420</del>	<del>2 days</del>	<del>100M</del> <b>51M</b>
	19.5	6.2 (FXT)	487	2 days	100M
	13.5	5.2 (FXT)	541	2 days	100M
	9.8	4.5 ( FXT)	589	2 days	100M
	<del>7.3</del>	<del>3.9 (FXT)</del>	<del>633</del>	<del>2 days</del>	<del>100M</del> <b>53M</b>
	5.75	3.5 (FXT)	666	2 days	100M
	<del>4.55</del>	<del>3.2 (FXT)</del>	<del>699</del>	<del>2 days</del>	<del>100M</del> <b>201M</b>
	<del>3.85</del>	<del>3.0 (FXT)</del>	<del>721</del>	<del>2 days</del>	<del>100M</del> <b>3.7M+300M (run18)</b>

- Top priority for Run20 is measuring next two energies in BES-II at  $\sqrt{s_{NN}} = 11.5$  GeV and 9.2 GeV
- Finishing **fixed target** measurements at  $\sqrt{s_{NN}} = 3.5, 3.9, 4.5, 5.2, 6.2, 7.7$  GeV

## Some anticipated Issues that we'll be discussing through out RHIC Run 20

- The length of the run (24 vs 26 or 28 Cryo weeks, awaits final FY20 budget)
- Going into the run, it looks like a significant challenge, that we may not be able to overcome, to fully meet the stated STAR data set (statistics) goals.
- A key decision will be deciding when to switch from the 11.5 to the 9.2 GeV Physics running. The timescale for this decision is likely sometime in February.
- When to run the STAR Fixed target program, as well as whether to run it all in the same time period. Likely timescale for this decision is mid January or so.
- We need to accommodate collider time for the 9.2 and 7.7 LEReC commissioning, as well as the CeC program.
- What is clear now is that we have to be very careful and deliberate in scheduling and efficiently utilizing every day of RHIC Run 2020.

These are what I anticipate as being the key issues we'll be dealing with during the run. Any additional issues that people would like to add to the list?

## All Other Business (AOB)