Run 19 RHIC Machine/Experiments Meeting

December 10, 2019

Agenda:

- General discussion of Run 20
- Collider Status/update
- LEReC Status/update
- STAR Status/update
- All Other Business (AOB)

- W. Christie
- C. Liu
- A. Fedotov
- J.H. Lee

BLUEJEANS CONNECTION INFO:

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

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

Meeting ID: 273 705 843

	Calendar 2019				Calendar 2020							
Program Element	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	ne	July
RHIC Cryo warm scrub starts October 7 th		7//										
RHIC Cryo 45 K cool down (Nov 4 th – Dec 1 st)			58888	L D	ec 8th				Warm up June 15-16	-	4	
RHIC Cryo 4.5 K cool down starts December 2 nd				88	1 1	i i		i Î	ĺ			
RHIC Cryo off June 17 th												
EBIS Startup Sept 3 rd , Booster Startup Sept 16 th , AGS Startup Nov 11 th					i I							
LEReC ready on Feb 29 th , 4 wks 7.7 GeV/n TBD									W///////			
RHIC setup/commissioning (12/9 – 12/13)												
RHIC physics vs = 11.5 GeV/n AuAu (12/14 – 2/23, no LEReC, 2 days 3.5 GeV FXT on TBD)												
RHIC physics vs = 9.2 GeV/n AuAu (2/29 – 5/31, LEReC, 3.2 GeV FXT done in Run-19)						2		i Î	**************************************			
RHIC physics for five more FXT energies AuAu and one week CeC $(6/1 - 6/15)$										Ш		
NSRL Operations (Sept 23 rd – June 15 th)												
LINAC (Setup Dec 19 th , Beam Dec 26 th)				7//								
BLIP Isotopes (Dec 26 th – June 15 th)					1	1						
Tandem Operations (Sept 23 rd – Feb 23 rd)	7/		1									

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.

STAR Beam Use Request for Run20

					"G000"	
	Beam Energy	$\sqrt{s_{NN}}$ (GeV)	$\mu_{\rm B} \; ({\rm MeV})$	Run Time	Number Ev	vents
	(GeV/nucleon)				requested a	collected
	9.8	10.00 19.6 20 10 marin	205	4.5 weeks	400M	582M
_	7.3 min dia tra	a in the second of a grant of the second	260	5.5 weeks	300M	324M
Run20	5.75	11.5	315	9.5 weeks	230M	
Kulizu	4.55	9.1	370	9.5 weeks	160M	
	3.85	7.7	420	12 weeks	100M	
Г	31.2	7.7 (FXT)	420	2 days	100M	51M
	19.5	6.2 (FXT)	487	2 days	100M	
Run20	13.5	5.2 (FXT)	541	2 days	100M	
	9.8	4.5 (FXT)	589	2 days	100M	
	7.3	3.9 (FXT)	633	2 days	100M	53M
	5.75	3.5 (FXT)	666	2 days	100M	
	4.55	3.2 (FXT)	699	2 days	100M	201M
		3.0 (FXT)	721	2 days		3.7M+3

- 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)