

Run 18 RHIC Machine/Experiments Meeting

June 5, 2018

Agenda:

General discussion of Run 18

- W. Christie

- Status of 27 GeV AuAu (Physics declared May 10th)
- Summary for fixed target AuAu with 3.85 GeV beam
- RHIC beam requests for final ~ two weeks of Run 18
 - 27 GeV Au Au running
 - CeC running
 - APEX
 - Beam development
 - Abort kicker testing
 - High luminosity development

All Other Business (AOB)

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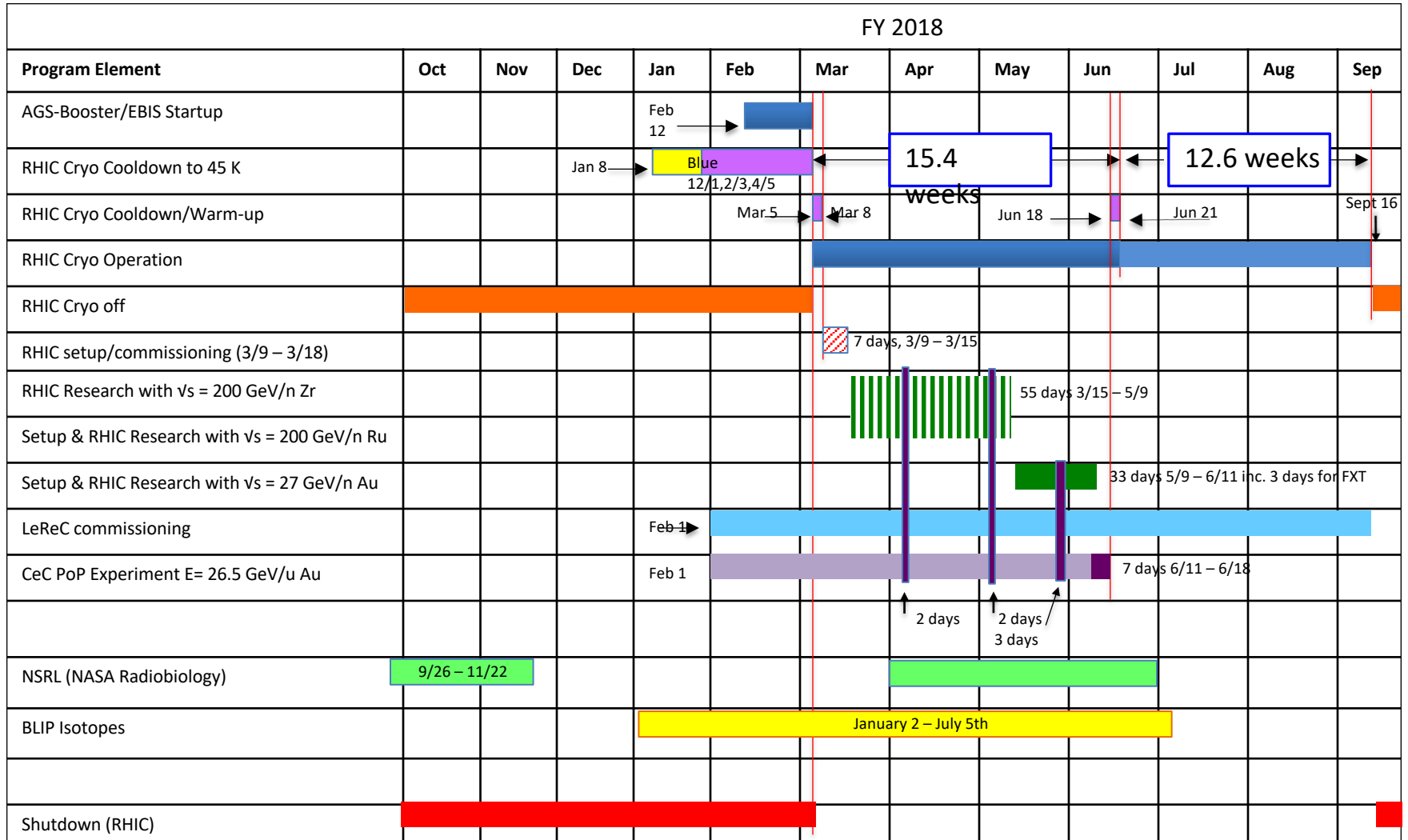
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Summary of the 3.85 GeV STAR Fixed Target run

- Large timing shift observed by STAR to time in for 3.85 GeV beam (~ 41 ns)
- After short trigger study, a very efficient and clean trigger was tuned and running
- Took a few iterations, with quick turn around, to tune online tracking routines to determine in real time the fraction of analysis quality (aka “good”) events
- These real time “good” event rates were passed to the RHIC Control room via CDEV.
- Very good interaction/coordination between STAR and the RHIC MCR on optimizing the physics running to optimize between the number and quality of the accumulated data set.
- This is the lowest energy Fixed target running planned for BES-II, and the result was a bit over 300% of the STAR data set goal (i.e. ~ 300 Mevts with goal of 100 Mevts)
- We are now very well positioned for the various future Fixed target running planned for BES-II in the next few years!

C-A Operations FY18

Last revision: April 10, 2018



Au run = 33 days (1 setup + 26 "physics" + 3 FXT + 3 CeC)
 3.85 GeV FXT (+ Beam dev.) 5/31 – 6-4
 "physics" = physics + APEX + maintenance

Dates for first three CeC periods are approximate (early April, early and late May)
 CeC parasitic commissioning =
 CeC Dedicated running = (Total of 14 days)

N.B. "Physics" running was declared on 3/14, STAR started Physics data on 3/15.

RHIC Schedule for the week starting Monday 6/4/18

Monday (June 4th):

- Midnight to 7:45 am: 3.85 GeV Au Fixed Target running
- 8 am to 11:45: Low Energy Beam development
- Noon to 4 pm: Access to restore RHIC for above injection energy running
- 4 pm to midnight: Restore and run 27 GeV Au Au Physics program

Tuesday:

- midnight to 11:45 am: 27 GeV Au Au Physics running
- Noon to 3:45 pm: CeC running
- 4 pm to 7:45 pm: 27 GeV Au Au Physics running
- 8 am to midnight: CeC running

Wednesday:

- Midnight to 7:45 am: 27 GeV Au Au Physics running
- 8:00 am to 2 pm: APEX
- 2:00 pm to ~3:10 pm: Tour at STAR (Restricted Access, Magnet off, no beam in RHIC)
- 2 pm to midnight: Dedicated CeC running (no RHIC beam until STAR tour completes)

Thursday:

- Midnight to 8:45 am, 27 GeV Au Au Physics running
- 9 am to midnight: CeC running, likely access of up to 6 hours sometime during this period.

Friday, Saturday, & Sunday:

- Midnight to 8:45 am: 27 GeV Au Au Physics running
- 9 am to 8:45 pm: CeC running
- 9 pm to midnight: 27 GeV Au Au Physics running

Monday (June 11th):

- Midnight to 8:45 am: 27 GeV Au Au Physics running
- 9 am to 8:45 pm: CeC running
- 9 pm to midnight: 27 GeV Au Au Physics running

APEX and Beam development requests from today to end of Run 18

APEX:

- 6 hours on Wednesday June 6th
- 9 hours on Wednesday June 13th

Beam Development:

- ~ 1 hour for Beam abort test of single bunch ramping
- ~ 8 hours(?) for testing of beam abort system at end of Run
- ~ 3 hours(?) for high luminosity tests related to RF system

Other:

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RHIC Run 18, Schedule as Run

- Cool down to 4K for Collider starts on March 4th
- Magnet checkout gets started March 5th
- First injected beam to RHIC March 8th
- “Physics” running Declared March 14th
- STAR starts accumulating Isobar Physics data on March 15th.
- The planned 55 days for the RuRu & ZrZr running extended until May 9th
- First APEX session on March 28th
- Scheduled Access on April 4th
- Second APEX session on April 11th
- Scheduled Access on April 18th
- First session of dedicated CeC running April 19th
- Third APEX session on April 25th
- Second session of dedicated CeC running on April 26th
- Third session of dedicated CeC running on April 27th
- Fourth session of dedicated CeC running on May 2nd
- Scheduled Access on May 3rd
- Fifth session of dedicated CeC running on May 7th
- End of the Isobar Physics program, 7:45 am May 9th
- Fourth APEX session on May 9th
- “Physics” running for 27 GeV AuAu declared May 10th
- Scheduled Access on May 16th
- Sixth session of dedicated CeC running on May 18th
- Remainder of 4th APEX on May 21st, and fifth APEX session on May 23rd
- Seventh session of dedicated CeC running on May 24th
- Eighth session of dedicated CeC running on May 25th
- Ninth session of dedicated CeC running on May 28th
- Scheduled Access on May 30th
- Setup for 3.85 GeV Fixed Target running the evening of May 30th
- Start of 3.85 GeV Fixed Target physics running morning of May 31st
- End of combined 3.85 GeV Au Fixed target run and low energy beam development, noon June 4th.
- Commence final two weeks of ~50-50 27 GeV Au Au Physics and CeC running
- RHIC beam operation ends, 8 am Monday June 18th.