

# Run 10 Start-up Status

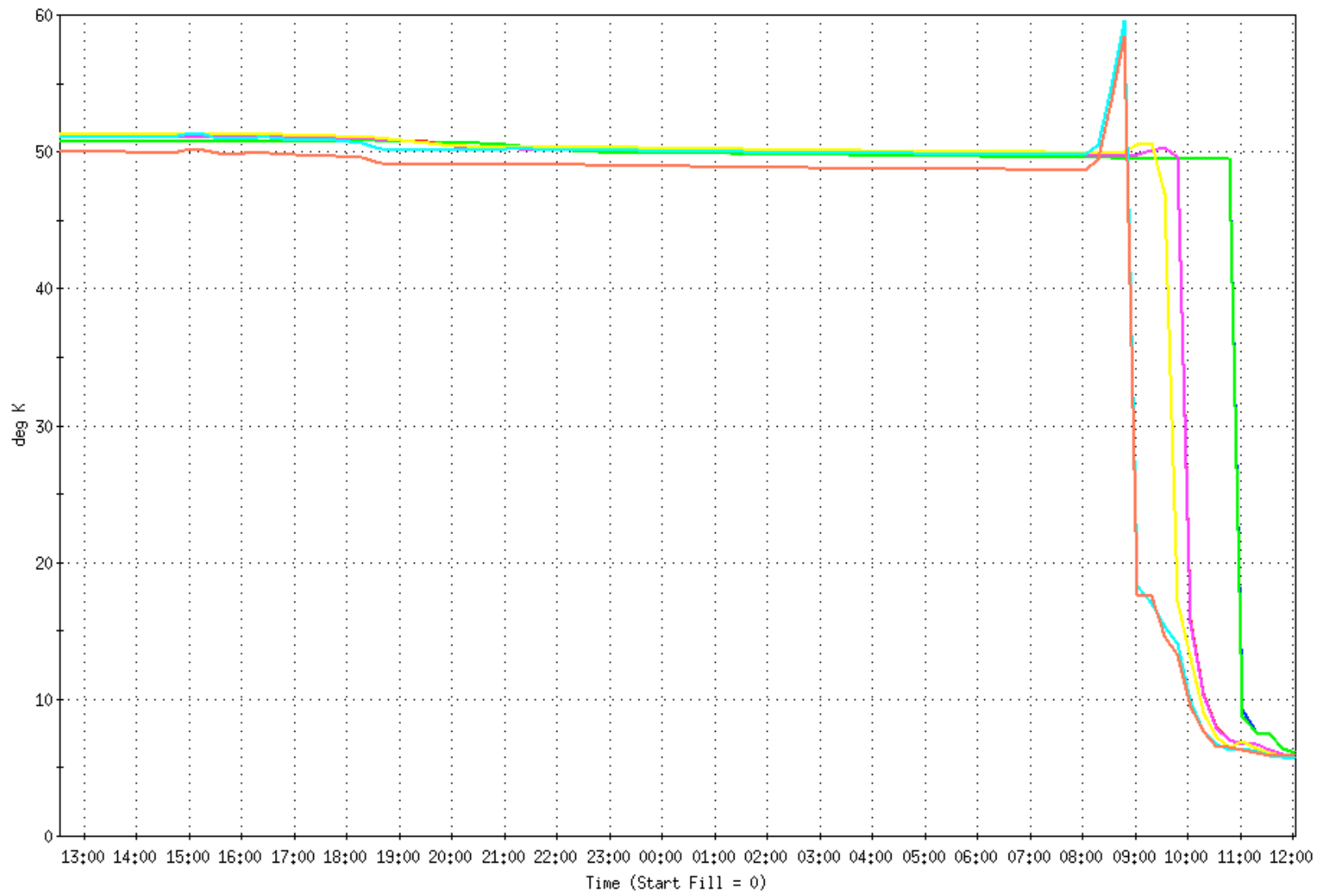
<http://www.cadops.bnl.gov/AP/RHIC2010/>

<http://www.agsrhichome.bnl.gov/AP/RHIC2010/>

# Schedule

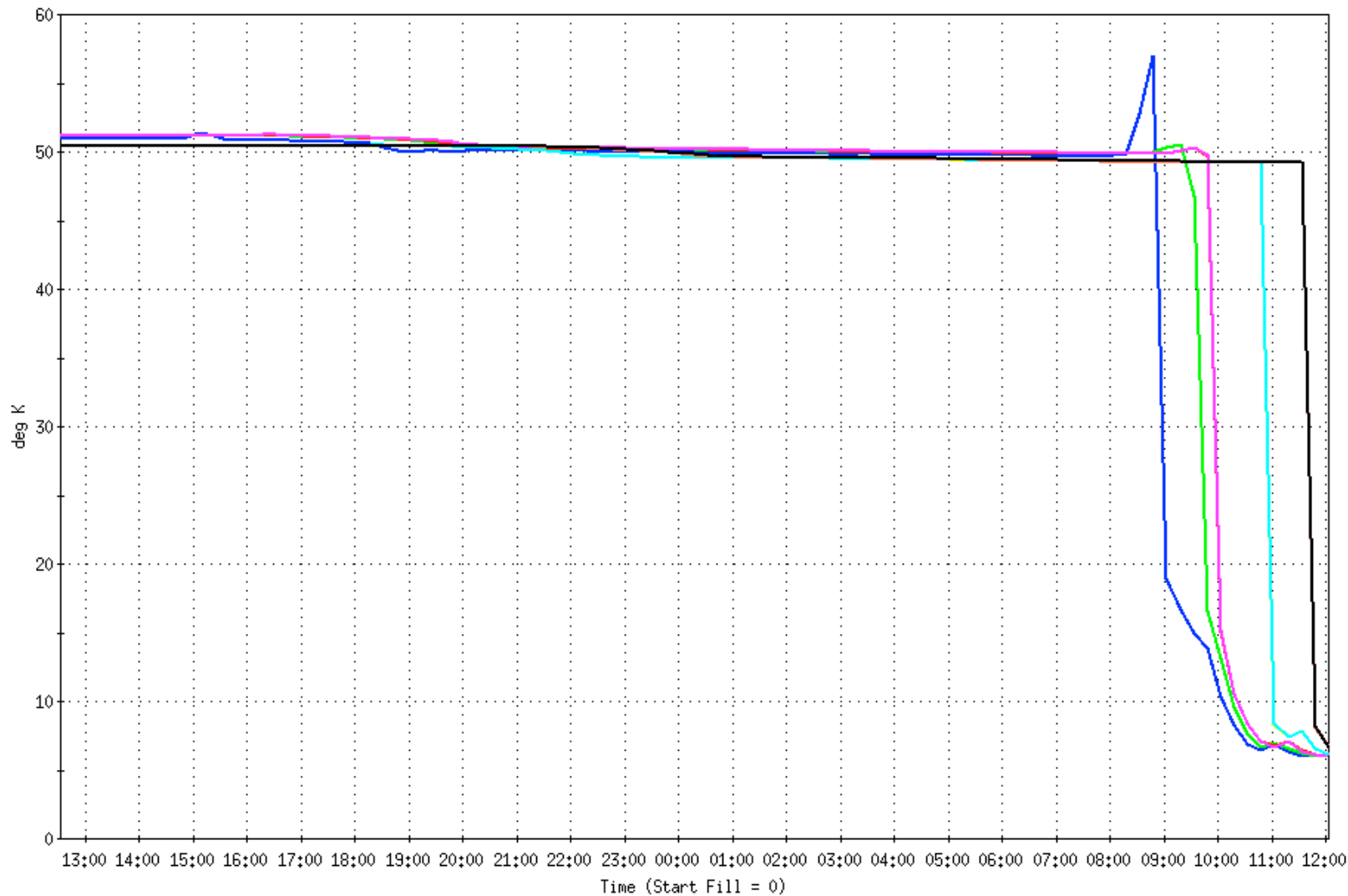
- ~~• Oct. 1 begin FEC/Controls Turn-on~~
  - ~~• Oct. 6 Begin Cryo Scrubbing~~
  - ~~• Nov. 2 Begin 45 K waves~~
  - ~~• Nov. 16 Booster/AGS Setup~~
  - ~~• Nov. 16 – 20 RHIC Dry Run~~
  - Dec. 1 4.5 K waves – Started
  - Dec. 4 Beam in RHIC (blue)
  - Dec. 14 Store devel., physics setup
- (conditions:  $\beta^*=60$  cm , intensity = 1e9, # of bunches > 50)
- Dec. 22 Projected Physics Start

Blue Cryo Temperatures



bi12-q14-rci    bi12-q14-tio    bi12-q6-rci    bi12-q6-tio    bi12-q3-i    bi12-dx-o    bi12-tio

Blue Cryo Temperatures



- bo11-dx-i
- bo11-q3-o
- bo11-q6-rci
- bo11-q6-tio
- bo11-q14-rci
- bo11-q14-tio
- bo11-q21-rci
- bo11-q21-tio

# This Week (11/30-12/4)

- Bake-out in RHIC continues on schedule
- Begin P.S. check-out, along with cool-down
- Checking out and configuring RHIC main magnet p.s.
- Beam has been to the W-Dump (AtR)
- Preparing for Blue Injection, starting Friday Evening.

# 1<sup>st</sup> 2-Weeks Priorities

1. Get to 4.5 K
  - Cryo will need access to adjust lead flows
2. Complete P.S. checks and preparation
  - 1<sup>st</sup> few days doing hi-pot tests – working late to 10 or 11 pm
  - Starting Saturday, will try to finish work between 4 – 6 pm, to hand over for beam development work
  - DX training on Sunday – may go late
3. Complete Vacuum Bake-out and work in the RHIC tunnels
4. Commission LLRF (Blue)
5. Ramp beam to Store in Blue

End

# Beam Set-up plan: Dec. 1 – Dec. 8

*Assume Blue is ready for beam on Fri., Dec. 4 evening.*

- Fri. evening: establish injection and coasting beam
  - Setup injection kickers
  - Instrumentation checkout; losses, tunes, dcct, wcm
  - Injection orbit correction (1<sup>st</sup> iteration)
- Sat. day: P.S. testing and preparation
- Sat. evening: finish injection setup, capture
  - Setup injection damper
  - Continue instrumentation checkout: BPM's, BBQ setup
  - Check sextupole polarities, coupling angles (need BBQ)
  - Begin LLRF commissioning; synchro, capture
- Sun. day: DX training (> 1 day cold)
- Sun. evening: LLRF commissioning, no ramp
  - Cont. with BBQ at injection, tune feedback test
  - Look at Slow orbit feedback for first time



# Beam Set-up plan: Dec. 1 – Dec. 8

*Assume Blue is ready for beam on Fri., Dec. 4 evening.*

- Mon. day: P.S. testing, prepare Blue for ramp
- Mon. evening: possible 1<sup>st</sup> Blue ramp (6 bunch?)
  - LLRF commissioning
  - BBQ – Tune feedback on 1<sup>st</sup> ramp
  - Slow orbit feedback commissioning
  - Gamma jump – first time with new lattice
- Tue. Evening: LLRF commissioning & tune feedback  
both need to be involved, it is a race who loses beam 1<sup>st</sup>
- Wed. Evening: more – beam to store (12 bunches?)
- Thu. Evening: stochastic cooling time (whether at store or inject) + yellow injection & checkout (owl)
- Fri. Evening: Yellow injection & acceleration

Mon Nov 30	Tue Dec 1	Wed Dec 2	Thu Dec 3	Fri Dec 4	Sat Dec 5	Sun Dec 6	Mon Dec 7	Tue Dec 8
2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM	2 A 6 AM   2 P 6 PM

**RSC RHIC Checklist**

**RHIC Cryo**

45 K cryo plant cooldown

45 K wave, both rings

Blue Cool Down 45K

Yellow Cool Down 45 K

Blue Cool Down 5K

Yellow Cool Down 5K

Vacuum Bake-out, Yellow

**RHIC Magnets & P.S.'s**

Ramp Defined and Approved

Hi Pot Tests

Injection current testing

Testing Ramps - Blue

Testing Ramps - Yellow

DX Training

**RHIC Injection**

Blue First Turn

Blue Injection Kicker Setup

Blue Injection Orbit Correction

Yellow First Turn

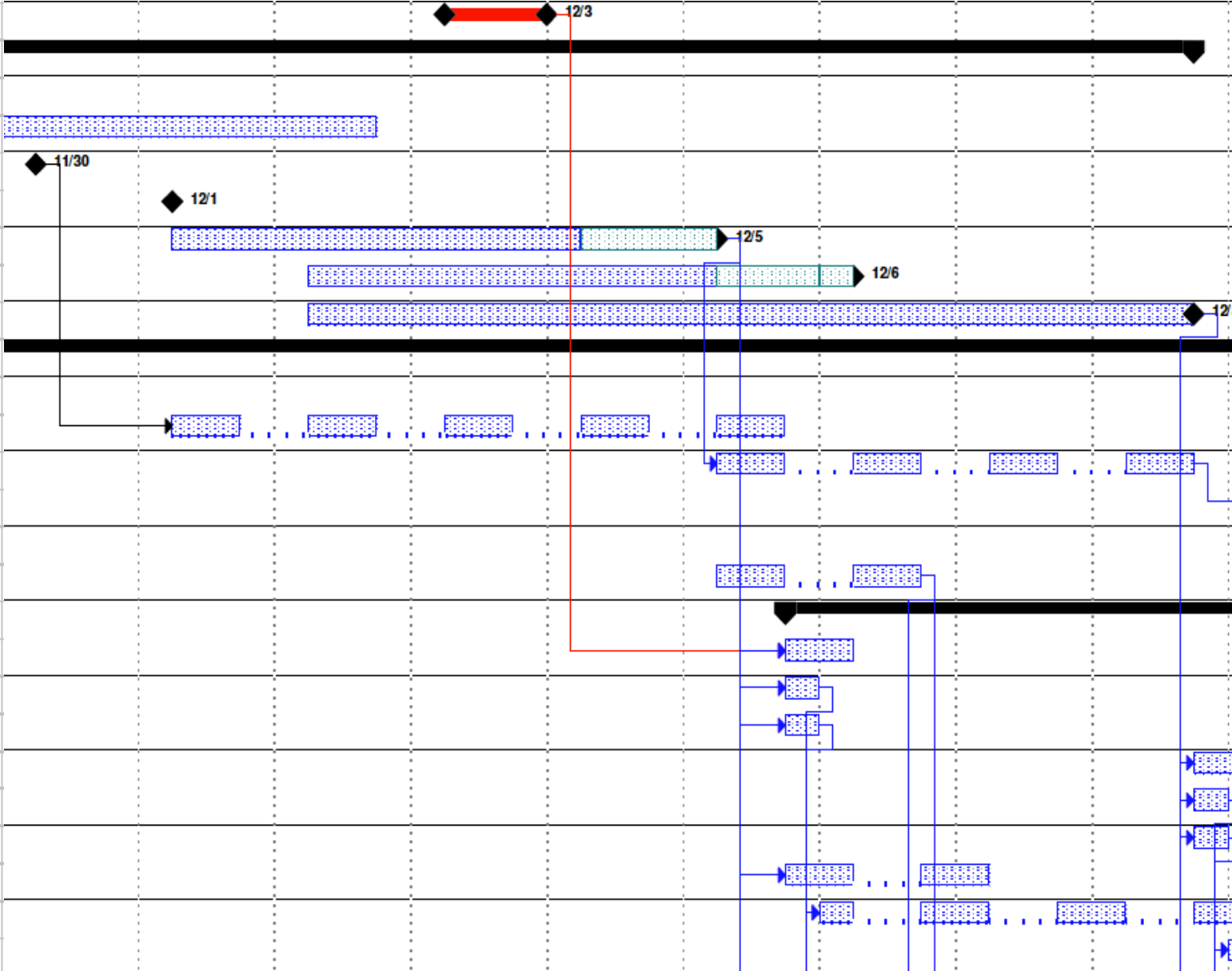
Yellow Injection Kicker Setup

Yellow Injection Orbit Correction

Injection Damper setup

Blue Injection, Coasting Beam

Yellow Injection, Coasting Beam



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**RHIC Instrumentation**

- Blue BPM Self Trigger mode
- Blue BPM clocked
- Blue IPM Ready
- Yellow BPM Self Trigger mode
- Yellow BPM clocked
- Yellow IPM Ready
- BBQ Checkout

**RHIC RF**

- AIR Synchro
- Blue RF Capture
- Yellow Synchro
- Yellow RF Capture
- Commission New LLRF
- Blue Acceleration
- Yellow Acceleration
- 200 MHz Rebucketing
- Cogging
- Landau Cavities

