

# 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

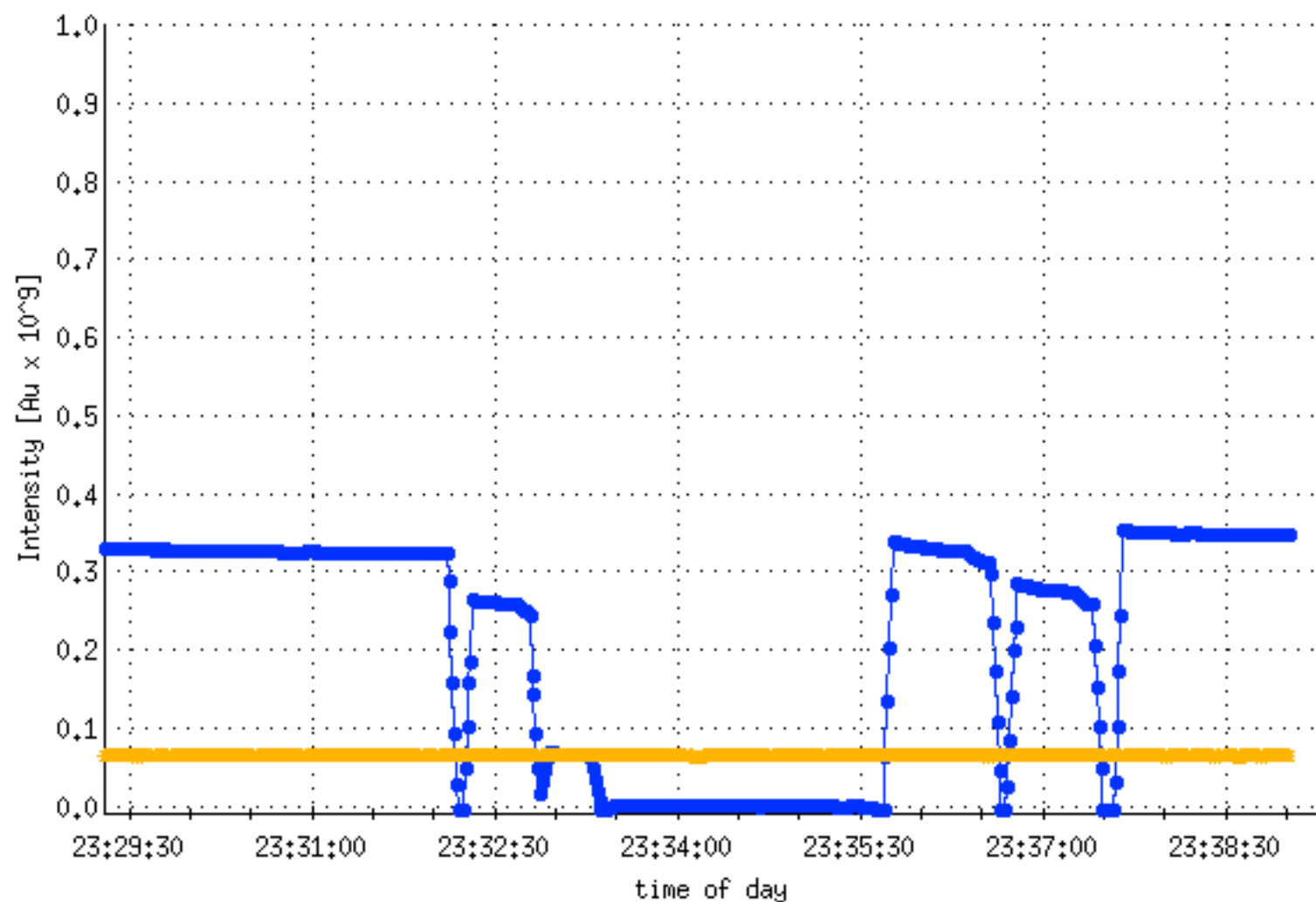
# Cryo performance!

- I think this cool-down sets a new record !
- Excellent job getting down to 4.5 K

**File PPM Setup Logging Diagnostics**

Mon Dec 7 2009

RHIC - DCCT total beam &amp; WCM bunched beam



Stop



STOP

Blue 3

NewData



Heart Beat

49

Freeze



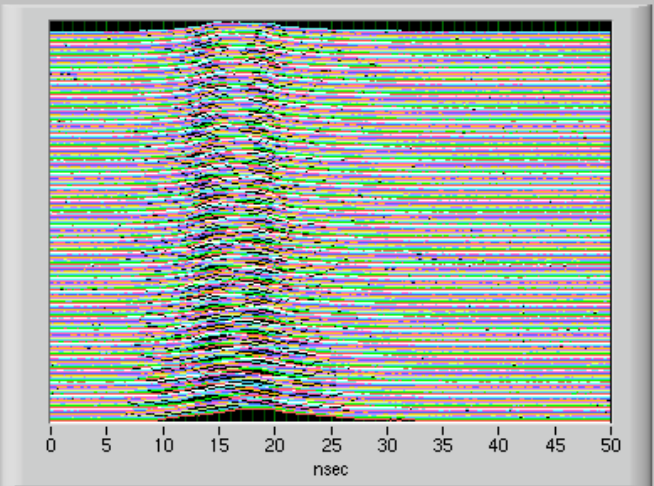
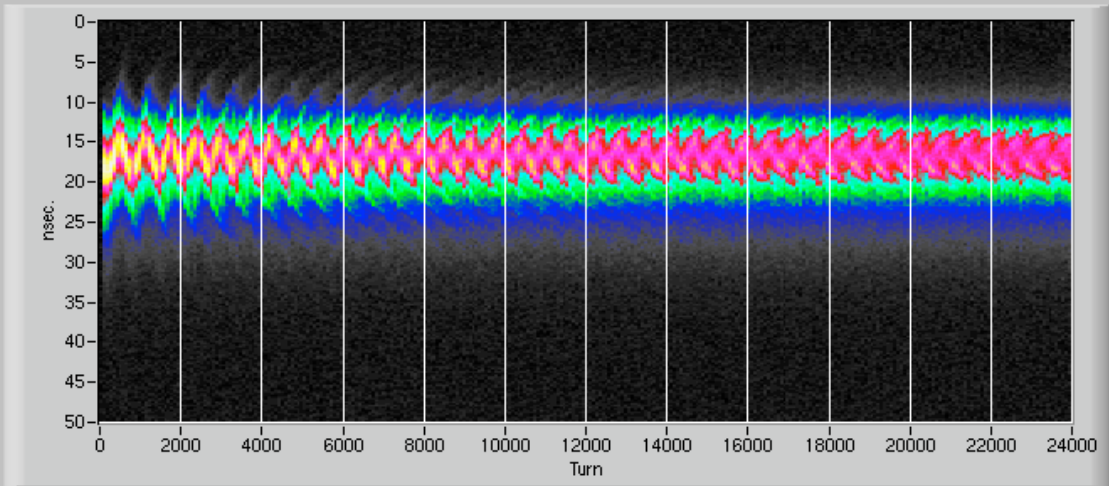
White

OFF

Z zoom

20

Intensity



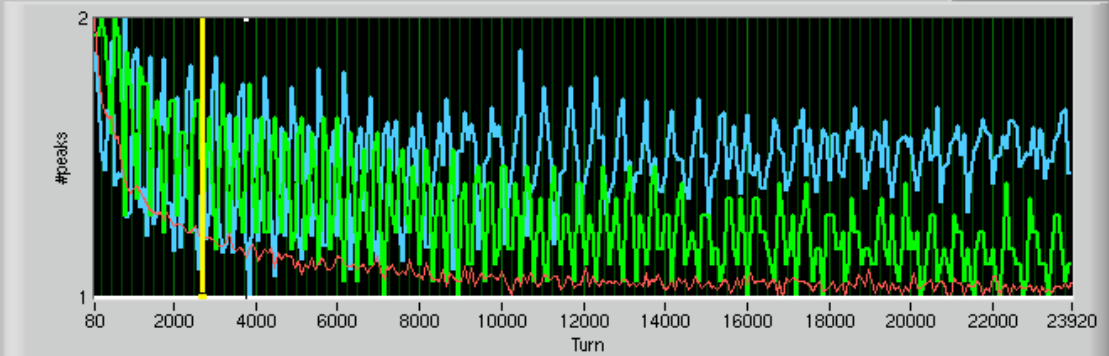
Last trigger

03:21:24	tot. acq. ms	us/profile	#profiles	Bucket #	revPer
12/08/2009	307.2	1023.9	300	1	12.7984

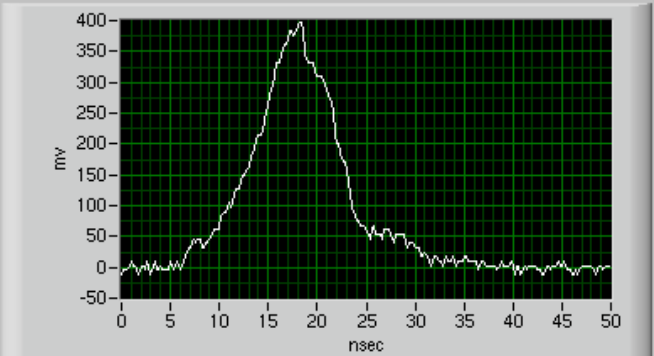
#peaks

- Sum
- Heighth
- FWHM

Graph



Turn	#peaks	Sum	Heighth	FWHM
2720	1	19560	398	8.4



AutoScale Y

# What's been done?

- Blue injection is setup
  - Kickers timed in
  - Injection orbit corrected (vertical)
  - Tunes are set to correct values
  - Frequency is set
- LLRF commissioning has started
  - RF Capture is done
- Instrumentation check-out has started
  - BBQ is ready for tune feedback on ramps
  - BPM's are timed in and orbits are working
  - ARTUS, BTF, WCM, Schottky, Loss monitors, dcct all functioning and ready
- P.S. check-out is progressing very well
  - DX training is almost done
  - Yellow check-out is in progress
  - Ready to prepare blue ramp

# This Week (12/7-12/14)

- Bake-out in RHIC continues on schedule
  - Should be finished after tomorrow
- Finish P.S. check-out
- Setup Ramp in Blue
- Setup Yellow Injection and Ramp
- Commission new LLRF
- This weekend – expect to work on ramps
  - Will need to bring on exp. Magnets during ramp development
- Expect to go to 24 hour shifts Thursday Eve.

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

## ~~1. Get to 4.5 K~~

- Cryo may need access to adjust lead flows

## 2. Complete P.S. checks and preparation (Yellow)

- hi-pot tests, yellow sextupoles, yellow MMPS
- Checkout during days, end late afternoon.
- DX training almost complete (up to  $Brho > 800 \text{ Tm}$ )

## 3. Complete Vacuum Bake-out and work in the RHIC tunnels during days – almost complete

## 4. Commission LLRF (Blue)

## 5. Ramp beam to Store in Blue

## 6. This weekend: setup both Rings - ramps



End

# Beam Set-up plan: Dec. 8 – Dec. 10

- Tue. evening: Prepare blue MMPS for ramps
  - Finish DX training
  - Check-out p.s. with ramp for physics
- Wed. owl: Cont. Beam development at injection
- Wed. day: Finish bake-out work, PS checkout
- Wed. evening: commission LLRF – acceleration
  - Tune feedback for every ramp
  - Setup transition (phase and gamma jumps)
- Thurs. owl: Cont. Blue ramp development
- Thurs. day: Last day to work in tunnels
  - Reconnect up instrumentation (from bake-out)
  - Finish Stochastic cooling work

# Beam Set-up plan: Dec. 10 – Dec. 14

- Thurs. evening: Blue ramp, yellow injection
  - Continue LLRF commissioning
  - 1<sup>st</sup> look at yellow injection
  - Begin 24 hour shifts
- Fri. owl: yellow acceleration
  - LLRF commissioning
  - BBQ – Tune feedback on 1<sup>st</sup> yellow ramp
  - Slow orbit feedback commissioning
  - Yellow Gamma jump
- Sat./Sun: ramp development
  - Exp. Magnets turned on.
  - Maybe some time to look at Stochastic cooling