

Ending Run-12 510 GeV p+p Run

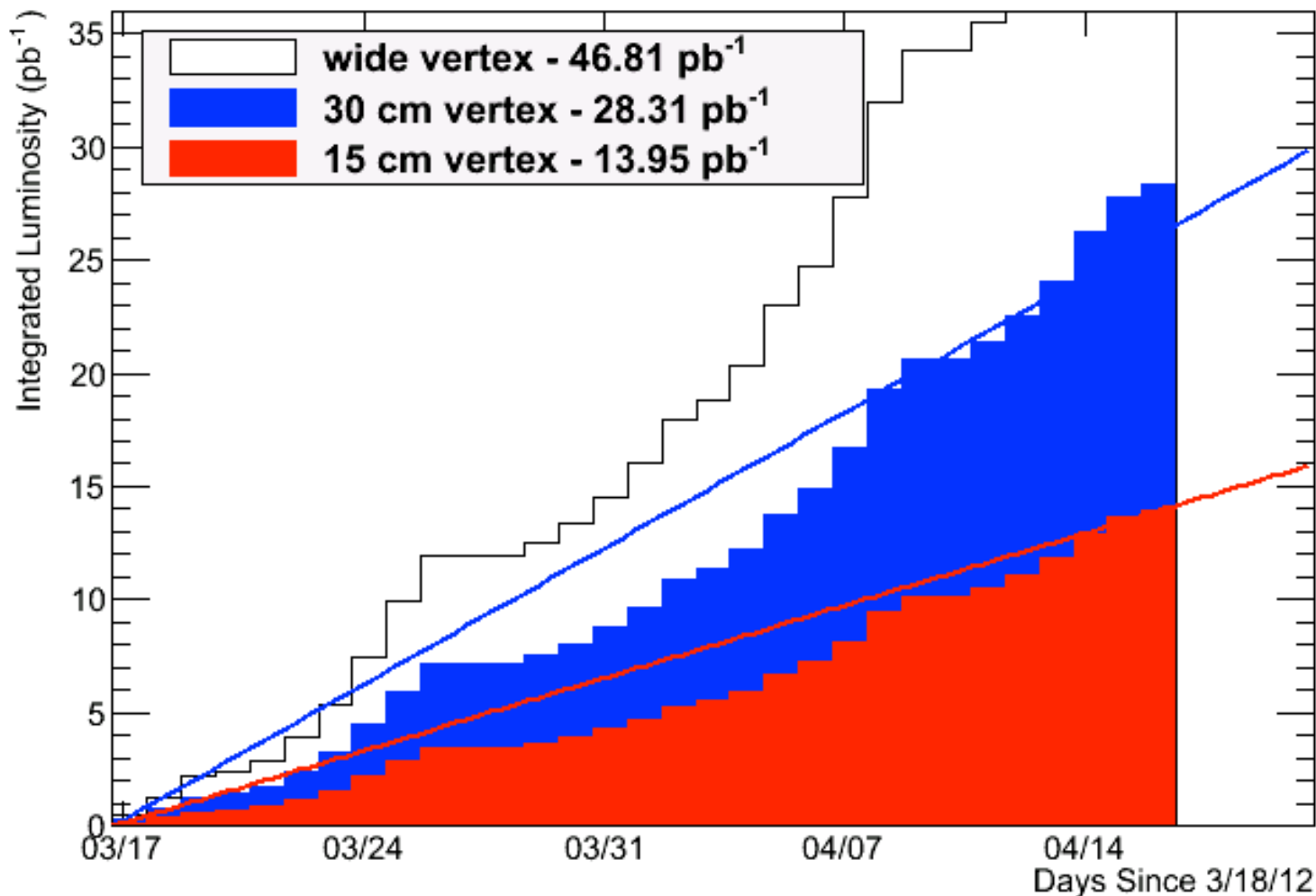
Xiaochun He

- We will be able to reach (exceed) the sampled luminosity goal by this time tomorrow. **The Run-12 510 GeV p+p physics run ends on April 18.**
- Improvement of W trigger rejection power with RPC detectors fully operational.
- FVTX has been taking data. New readout electronics for muon piston calorimeter (MPC) works.
- Fast data production is going seamlessly well, which provides near-real-time feedback to our data taking and triggering improvement.
- We would like to thank Vincent Schoefer and his team (and C-AD in general) for their support of physics program throughout the Run-12 pp run.

Integrated Sampled Luminosity

PHENIX Integr. Sampled Lumi vs Day

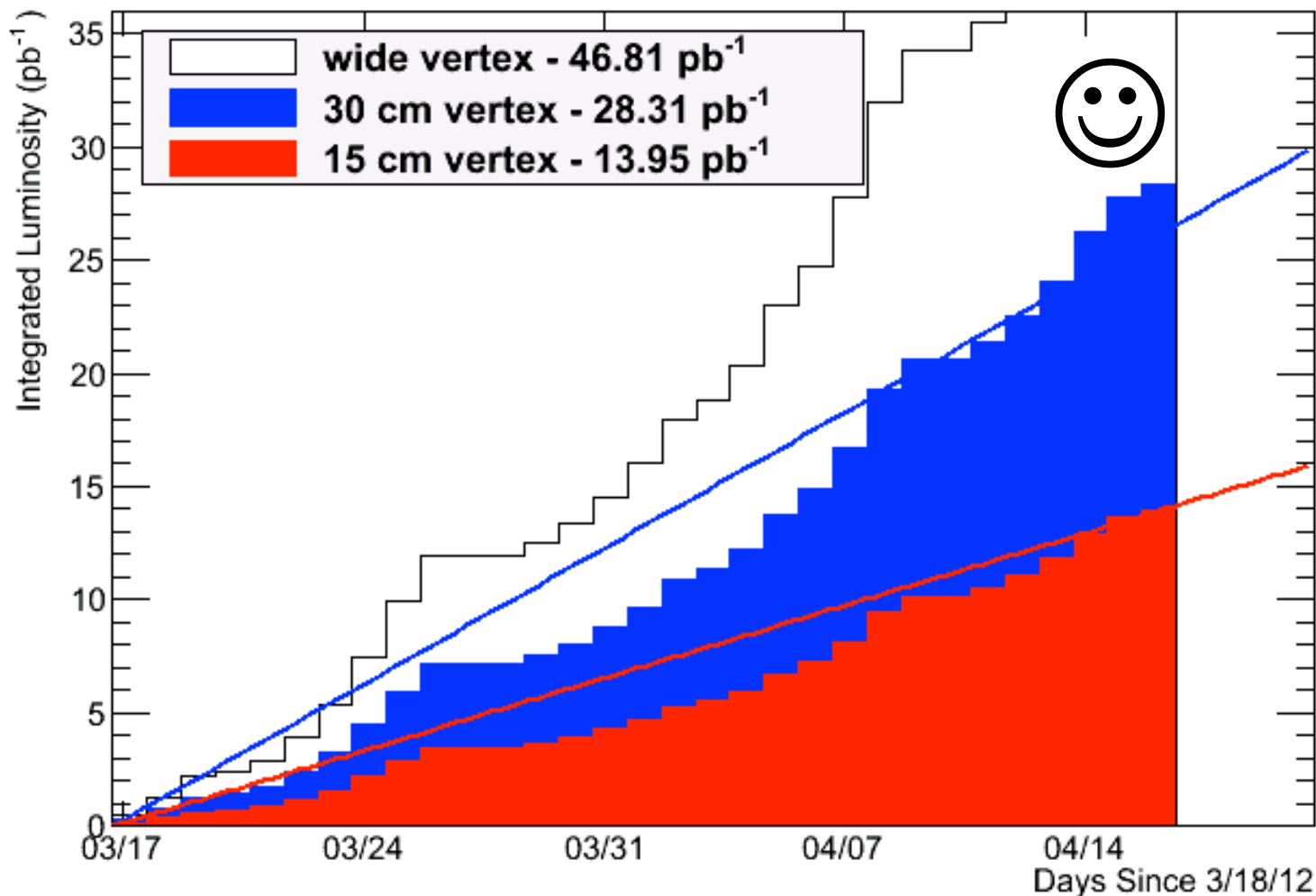
Tue Apr 17 09:09:39 2012



Integrated Sampled Luminosity

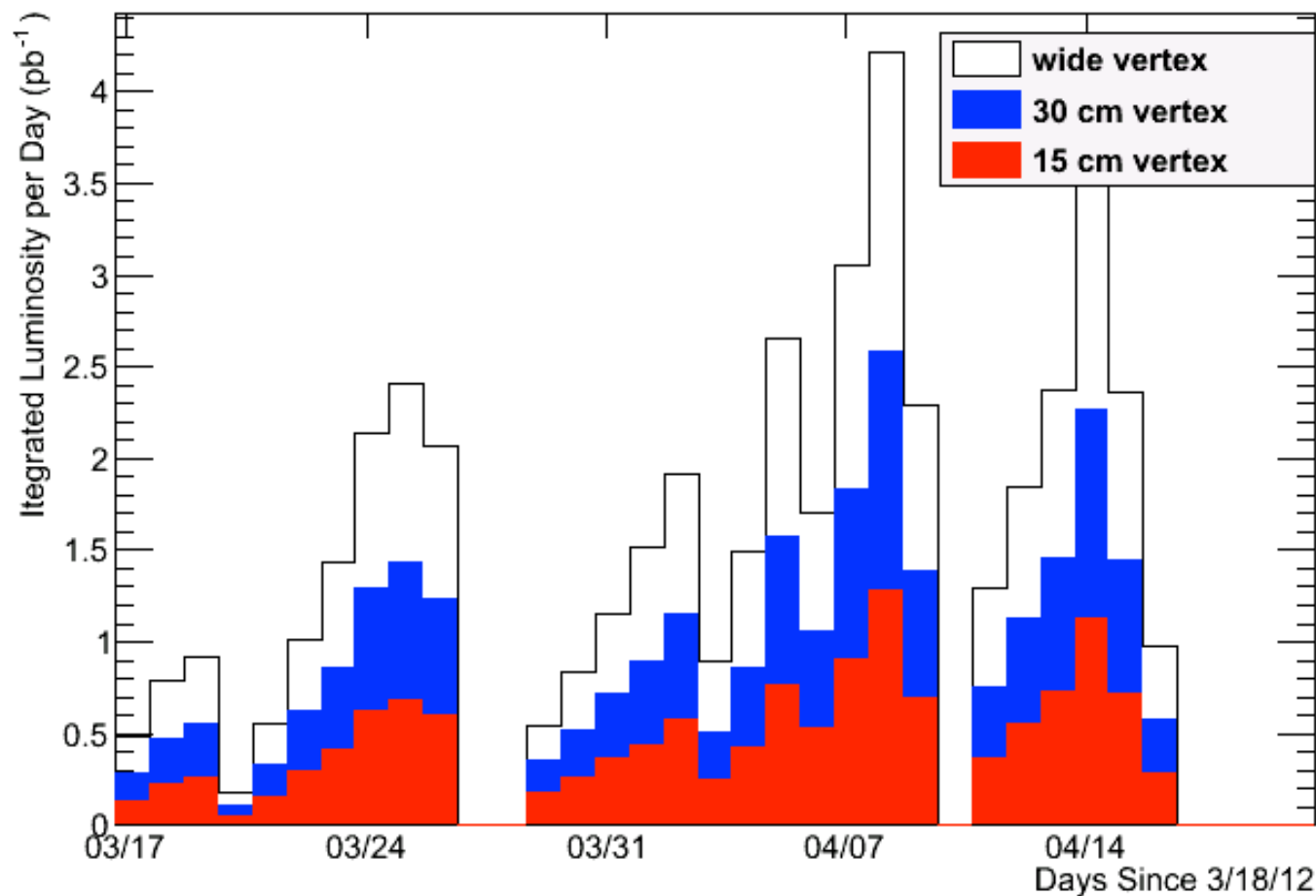
PHENIX Integr. Sampled Lumi vs Day

Tue Apr 17 09:09:39 2012



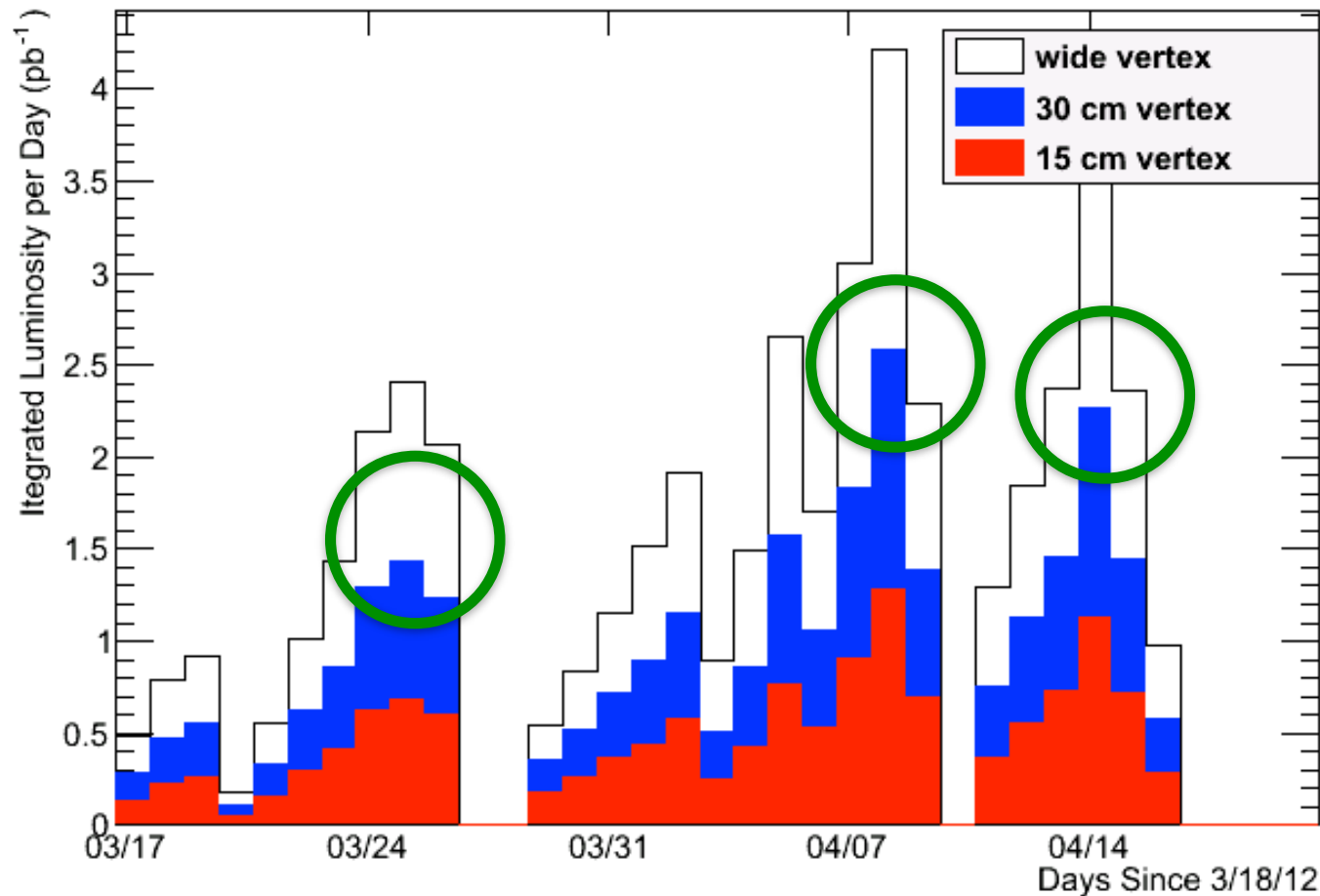
Daily Sampled Luminosity

PHENIX Integr. Sampled Lumi/Day vs Day ue Apr 17 09:09:39 2012



Daily Sampled Luminosity

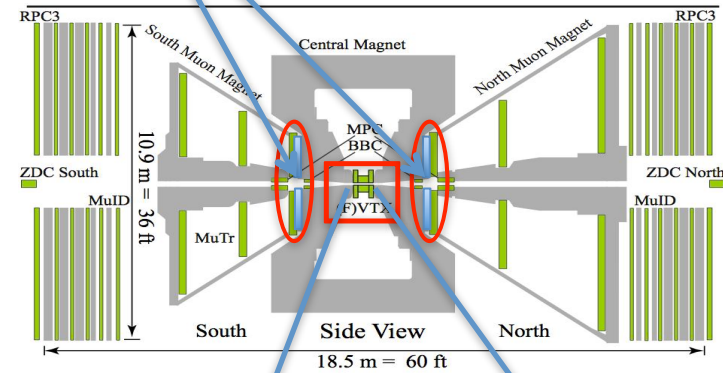
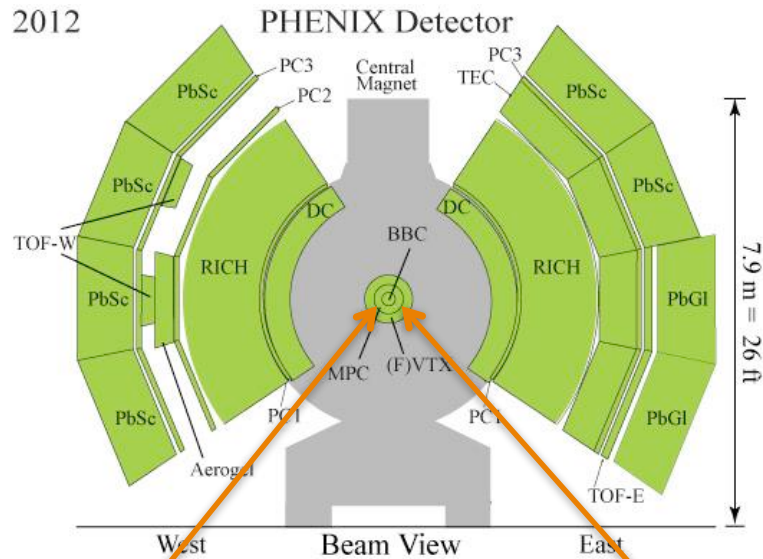
PHENIX Integr. Sampled Lumi/Day vs Day ue Apr 17 09:09:39 2012



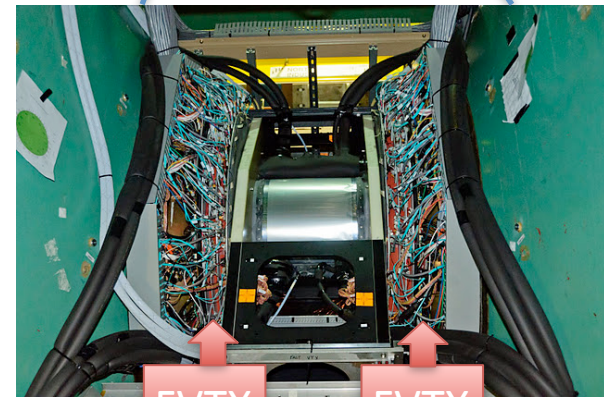
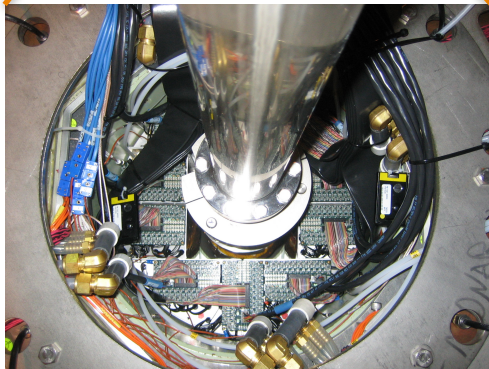
We should have a better plan to avoid extended downtime after maintenance+APEX+MD

Commissioning new detectors (+readout) in PHENIX

Commissioned RPC-1 (+trigger timing)



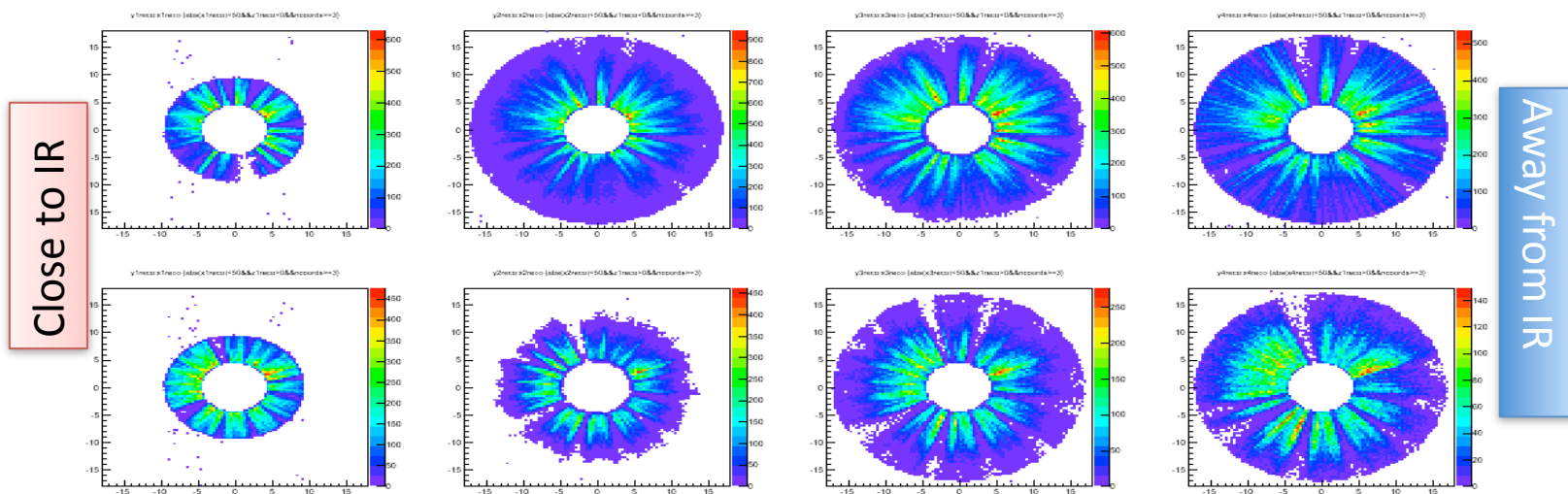
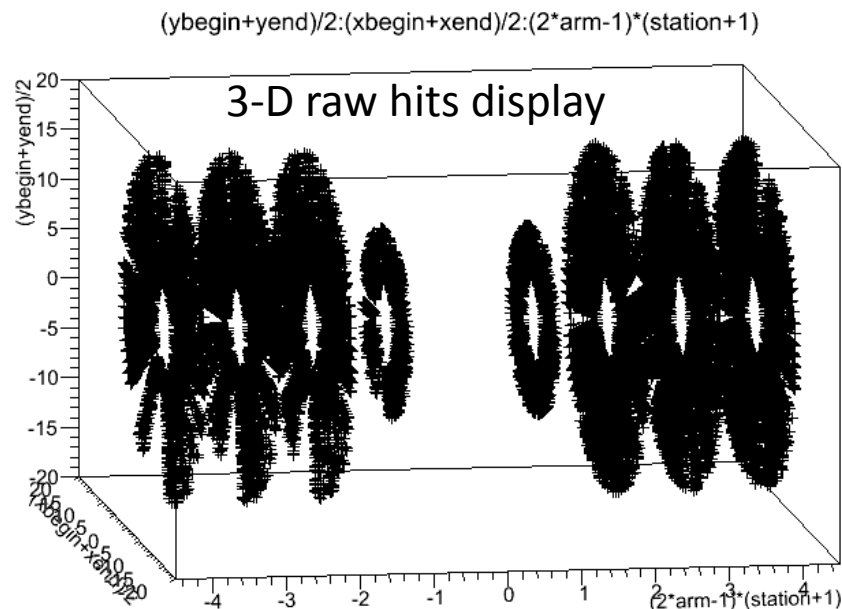
MPC



FVTX

FVTX

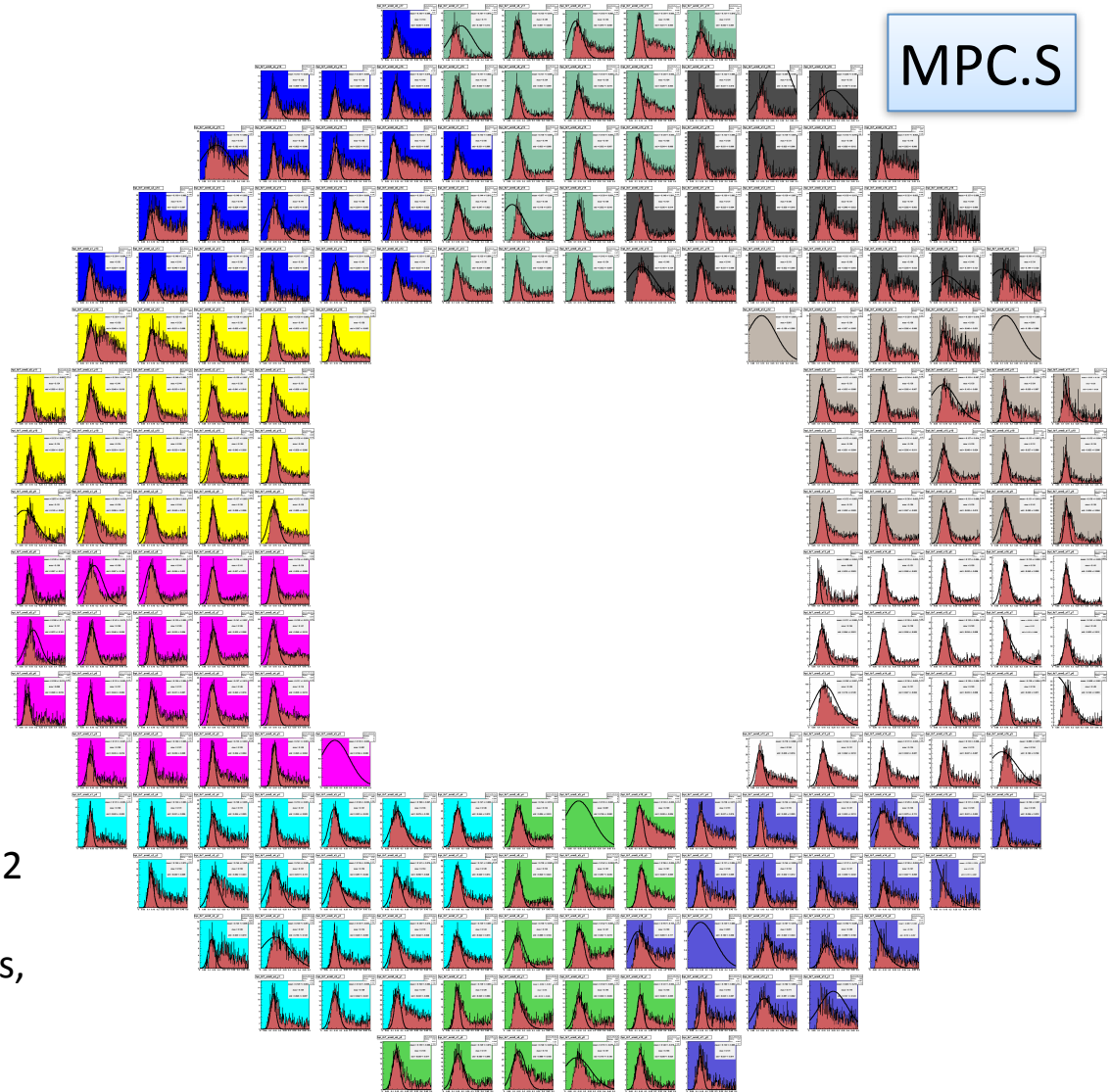
FVTX Detector Commissioning + Software Development



Hits distribution from matched tracks from existing muon spectrometer

Tower by Tower Pi0 Calibrations

- New, fully digital trigger for MPC
- South already working since $\sim 2^{\text{nd}}$ week of Run12pp200
- North since start of 510
- Trigger calculates tower sum within each module 6 times per beam clock



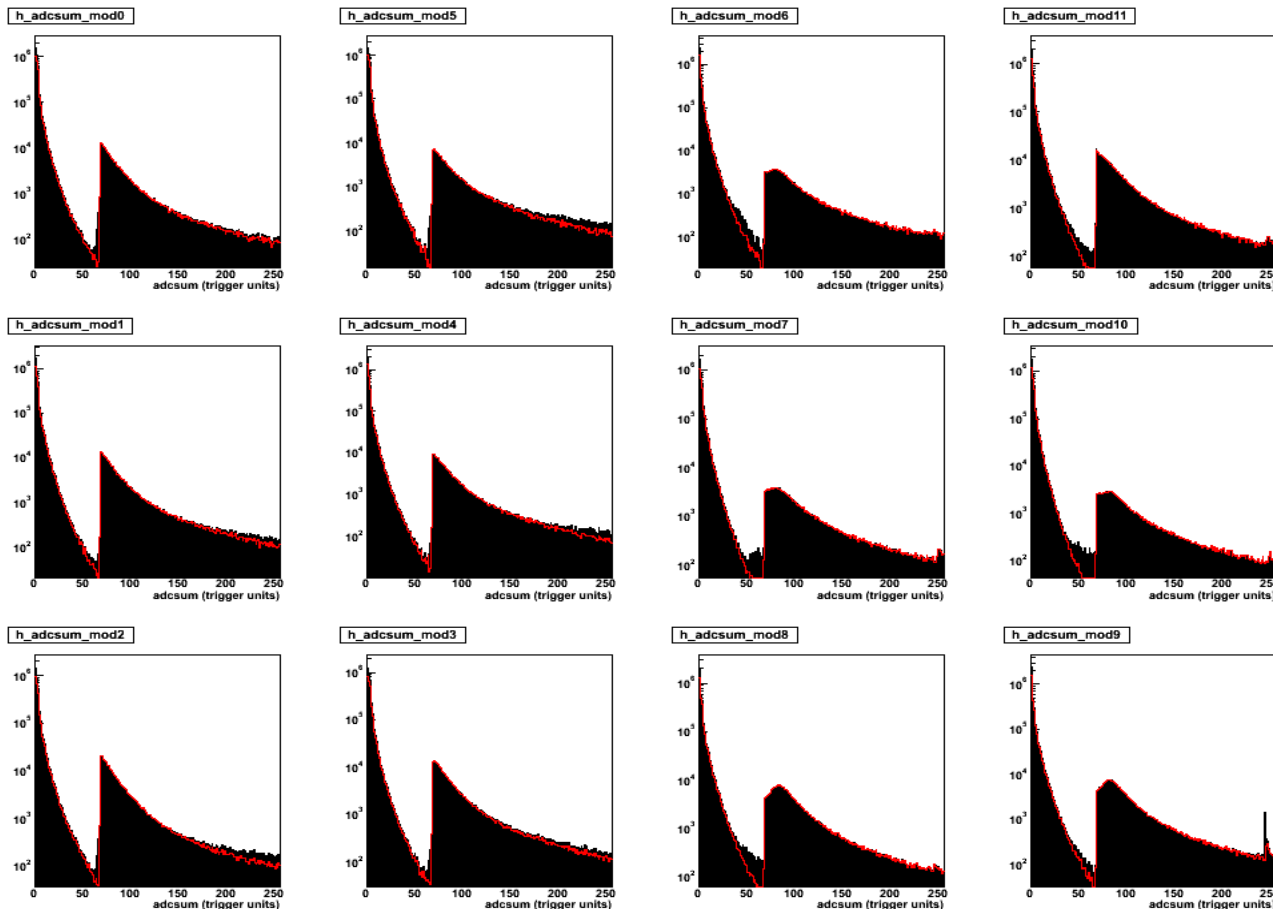
Using pi0cal_fast code, Fine-tuning extraction of signal amplitude from 12 samples
(EM shower, sgl neutron bkg, hadrons, etc)

MPC N and S New Trigger

Run 367925
-Apr-2012

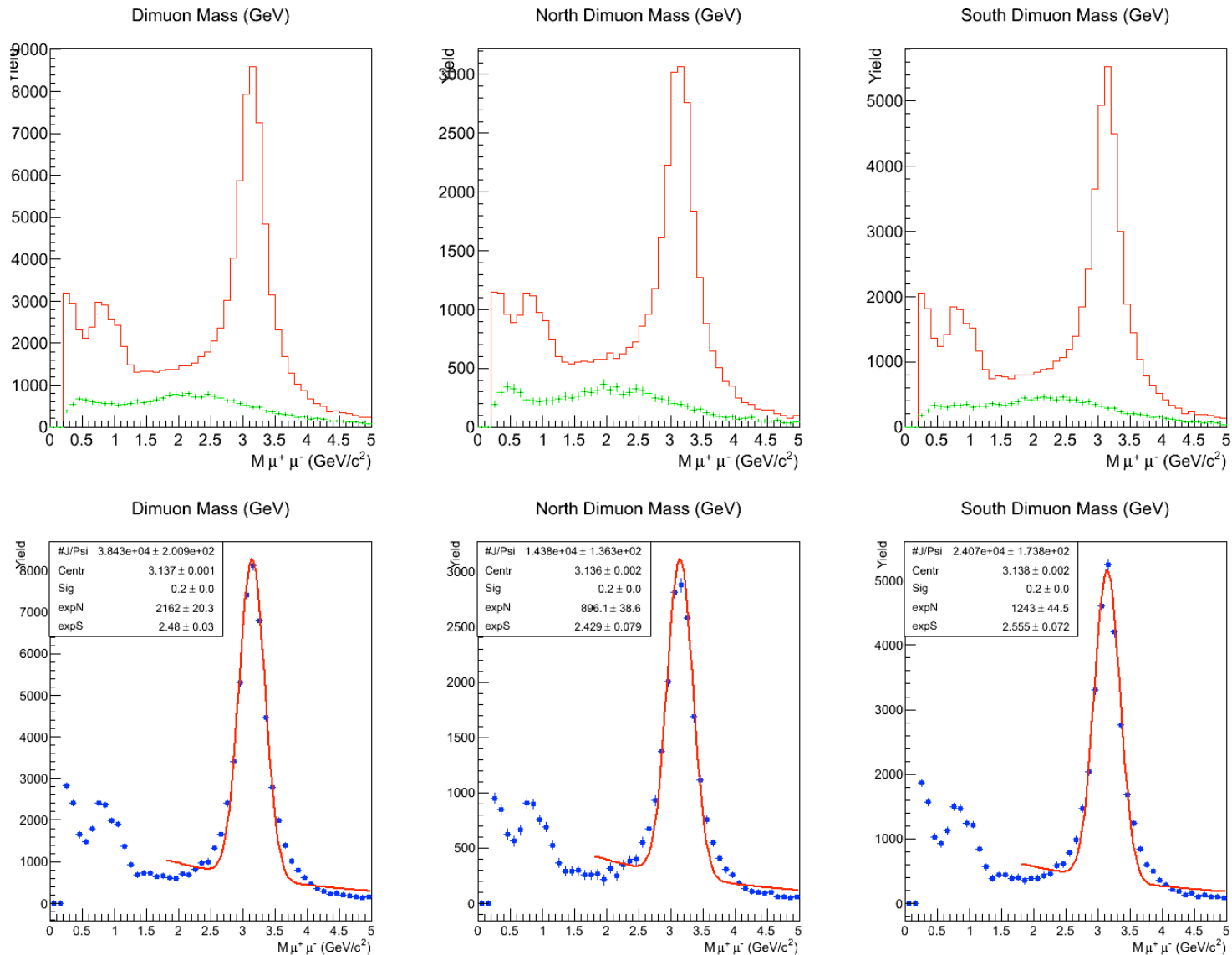
South MPC

North MPC



- Sharp threshold turn-on in South! North smearing under investigation
- Calculates p_T of towers, rejects single tower fake triggers (from neutrons)
 - Expect high purity of > 80%. Recorded >450e6 MPC triggers.

Current J/ψ Counts (in Muon Arms) from fast production

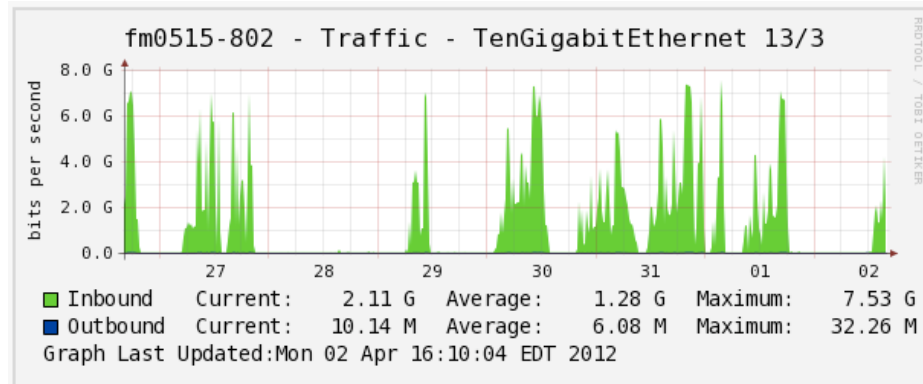
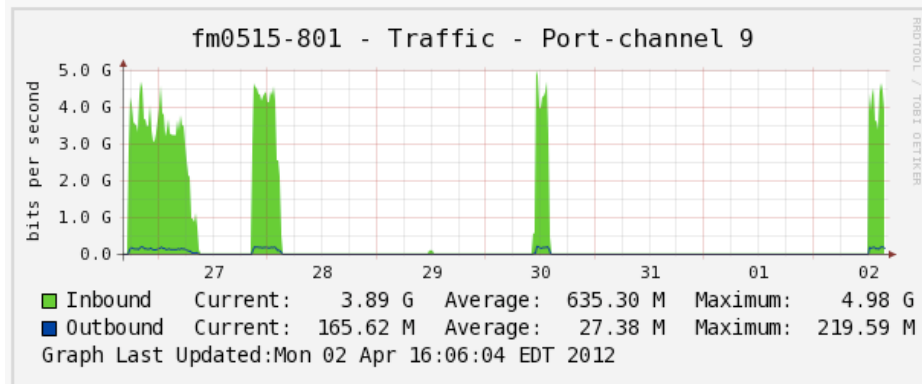


PHENIX and STAR Data Rate & Transfer Pattern

Last 7 Days (03/027-04/02)

PHENIX CH => RCF

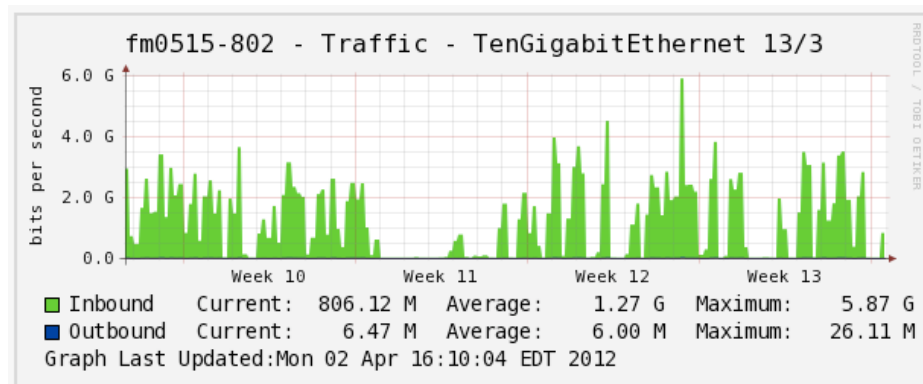
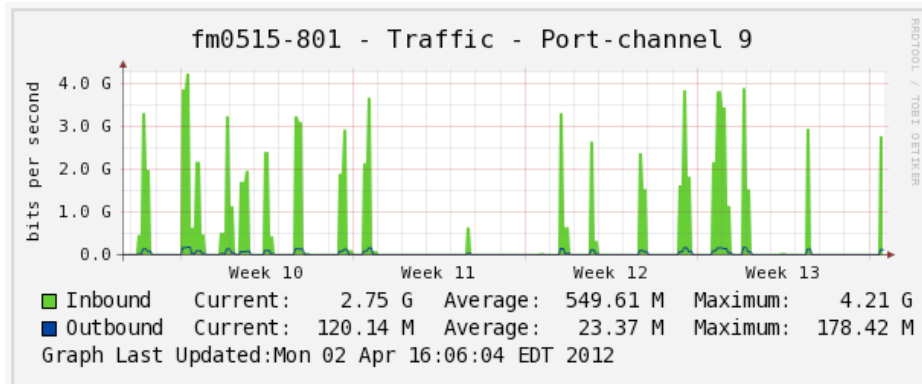
STAR CH => RCF



Since Run12 started

PHENIX CH => RCF

STAR CH => RCF



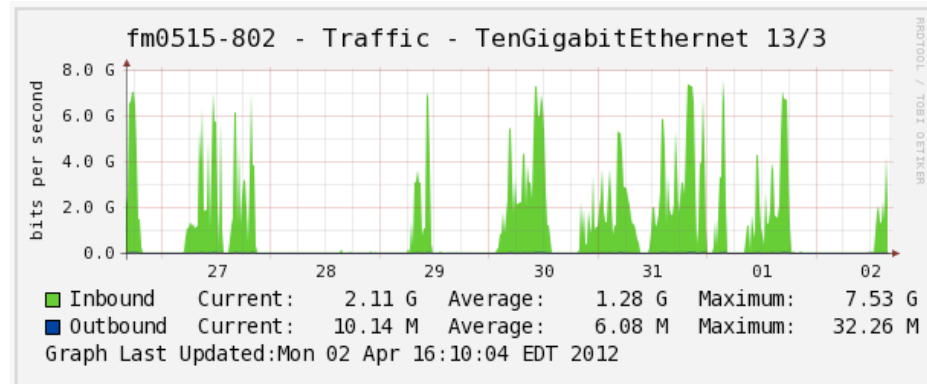
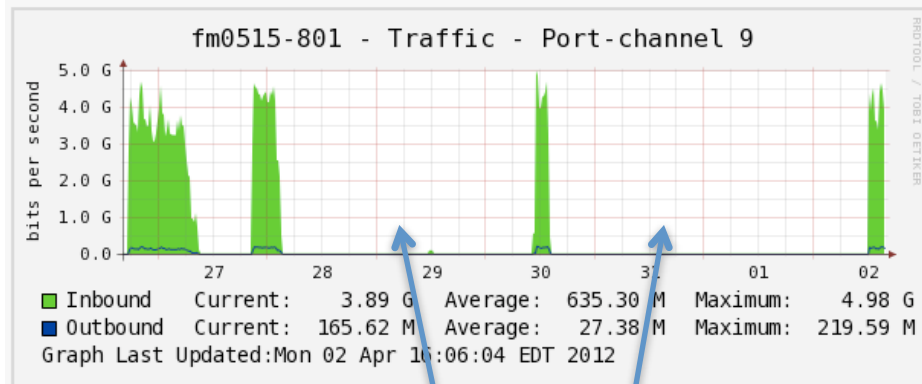
Data Volume collected by PHENIX and STAR in the last 7 days small

PHENIX and STAR Data Rate & Transfer Pattern

Last 7 Days (03/027-04/02)

PHENIX CH => RCF

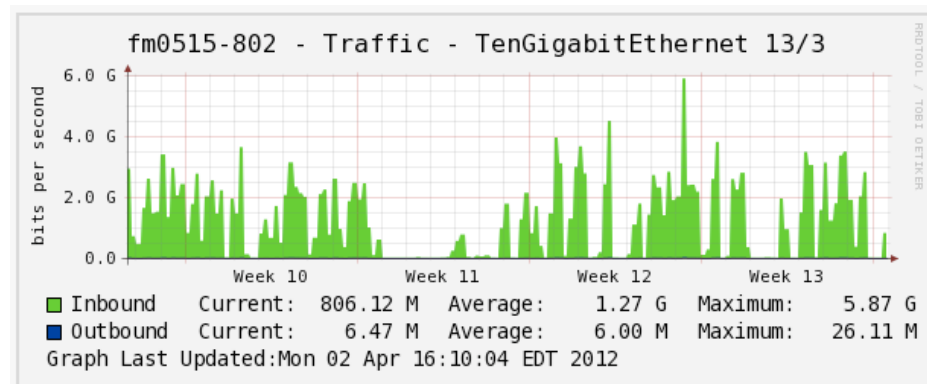
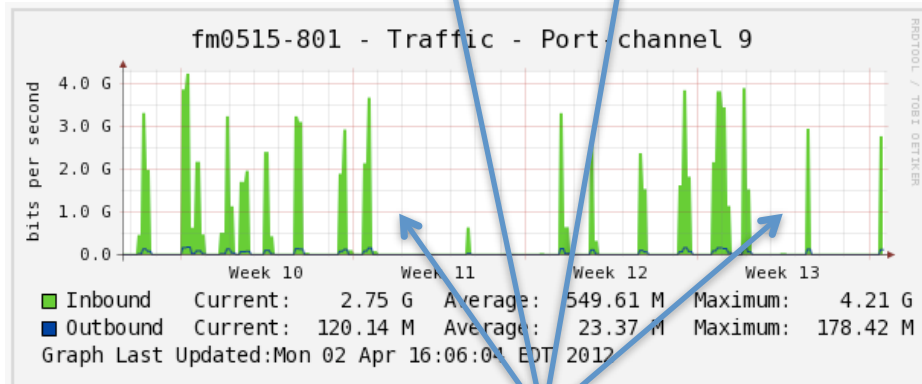
STAR CH => RCF



Since Run12 started

PHENIX CH => RCF

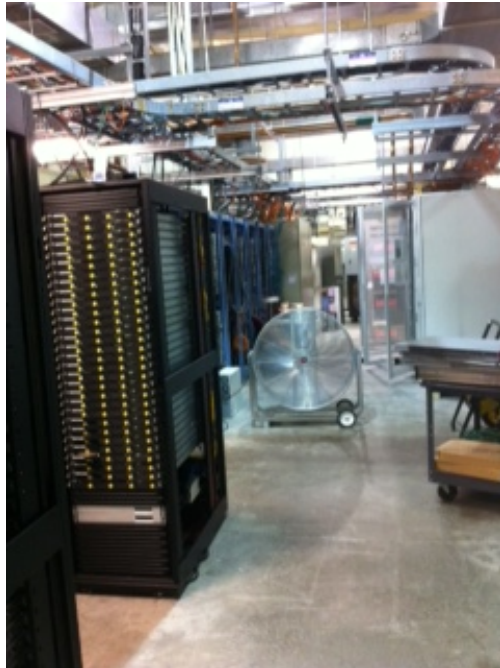
STAR CH => RCF



PHENIX stages data in the counting house for fast analysis before shipping to RCF, which allows us to make data QA and quick physics data analysis..

One Issue to be addressed.

Rack Room Temperature



Routing strategy was applied. The temp was brought under control. This could be a serious issue when the outside temperature will be high in a few weeks.

