

PHENIX Run-12 200 GeV pp Run

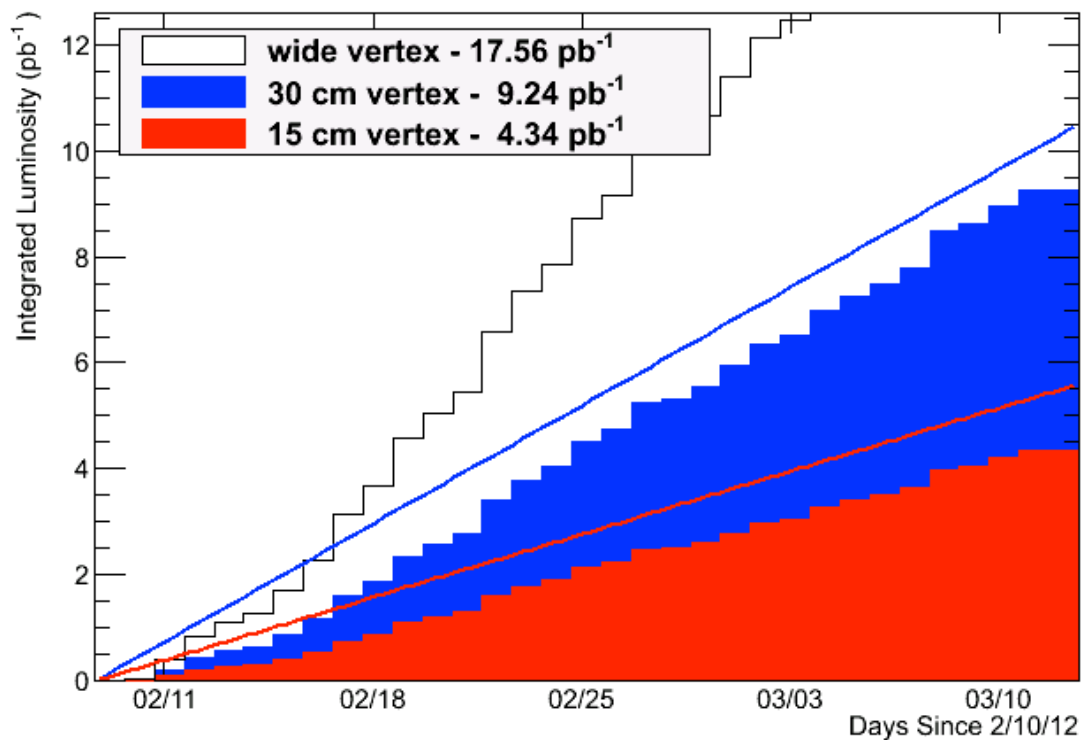
Xiaochun He

- Run-12 200 GeV pp is officially over. Beam was dumped at 8am on Monday (3/12/12). See next slide for the integrated luminosity sampled in PHENIX.
- During this run period, PHENIX continued on commissioning a newly installed forward vertex detector (FVTX). We are currently trying to resolve a high bias current issue seen from FVTX and will use the long access hours tomorrow (maintenance day) to improve the existing cooling system for FVTX.
- Need to improve PHENIX data taking efficiency with stable running air conditioning unit in the PHENIX rack room.

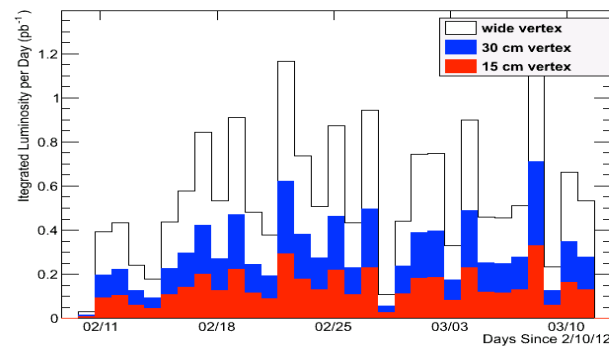
Sampled Luminosity in PHENIX

PHENIX Integr. Sampled Lumi vs Day

Mon Mar 12 12:07:16 2012



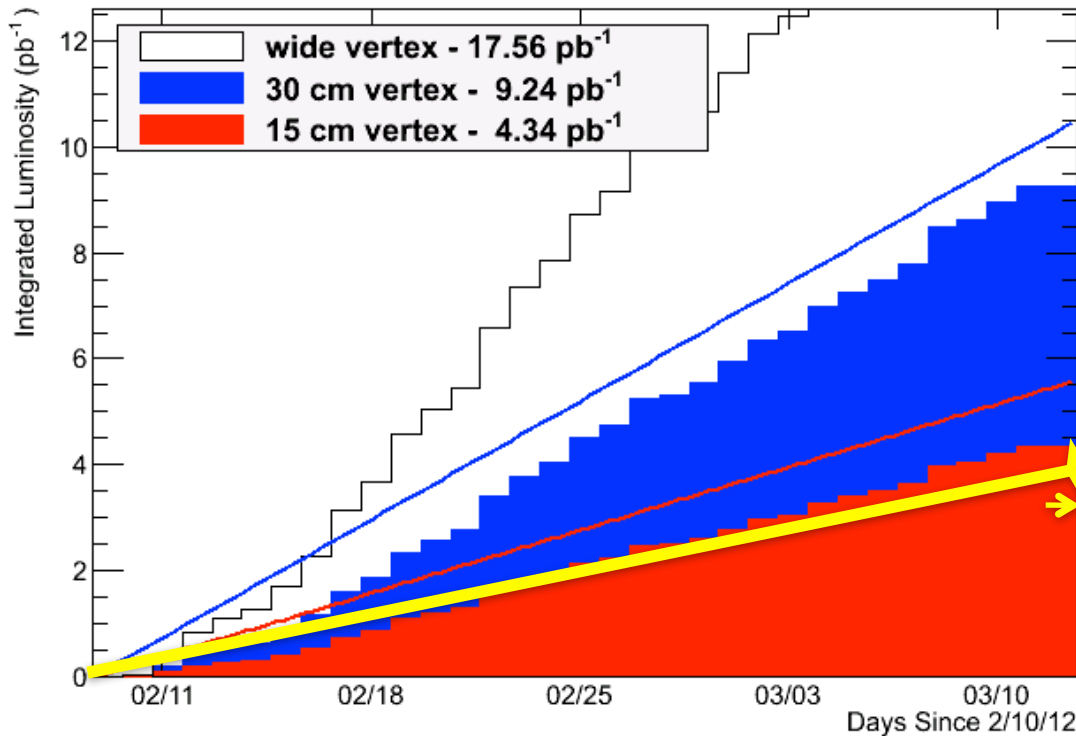
PHENIX Integr. Sampled Lumi/Day vs Day Mon Mar 12 12:07:17 2012



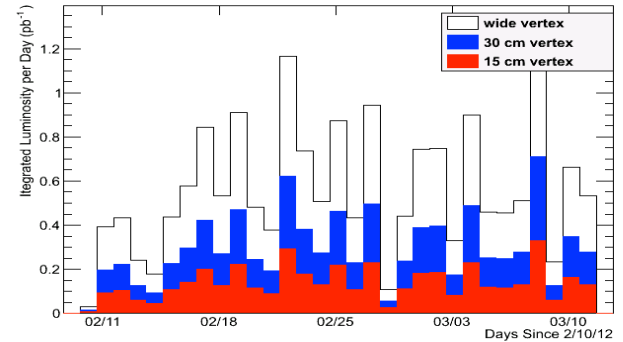
Sampled Luminosity in PHENIX

PHENIX Integr. Sampled Lumi vs Day

Mon Mar 12 12:07:16 2012



PHENIX Integr. Sampled Lumi/Day vs Day Mon Mar 12 12:07:17 2012



Goal for narrow vtx

This is what we got

Based on the PHENIX BUP for Run-12, our goal for 4-week 200 GeV pp run are:
 $|z| < 30\text{cm}$: 10.5 pb^{-1} $|z| < 10\text{cm}$: 3.8 pb^{-1}

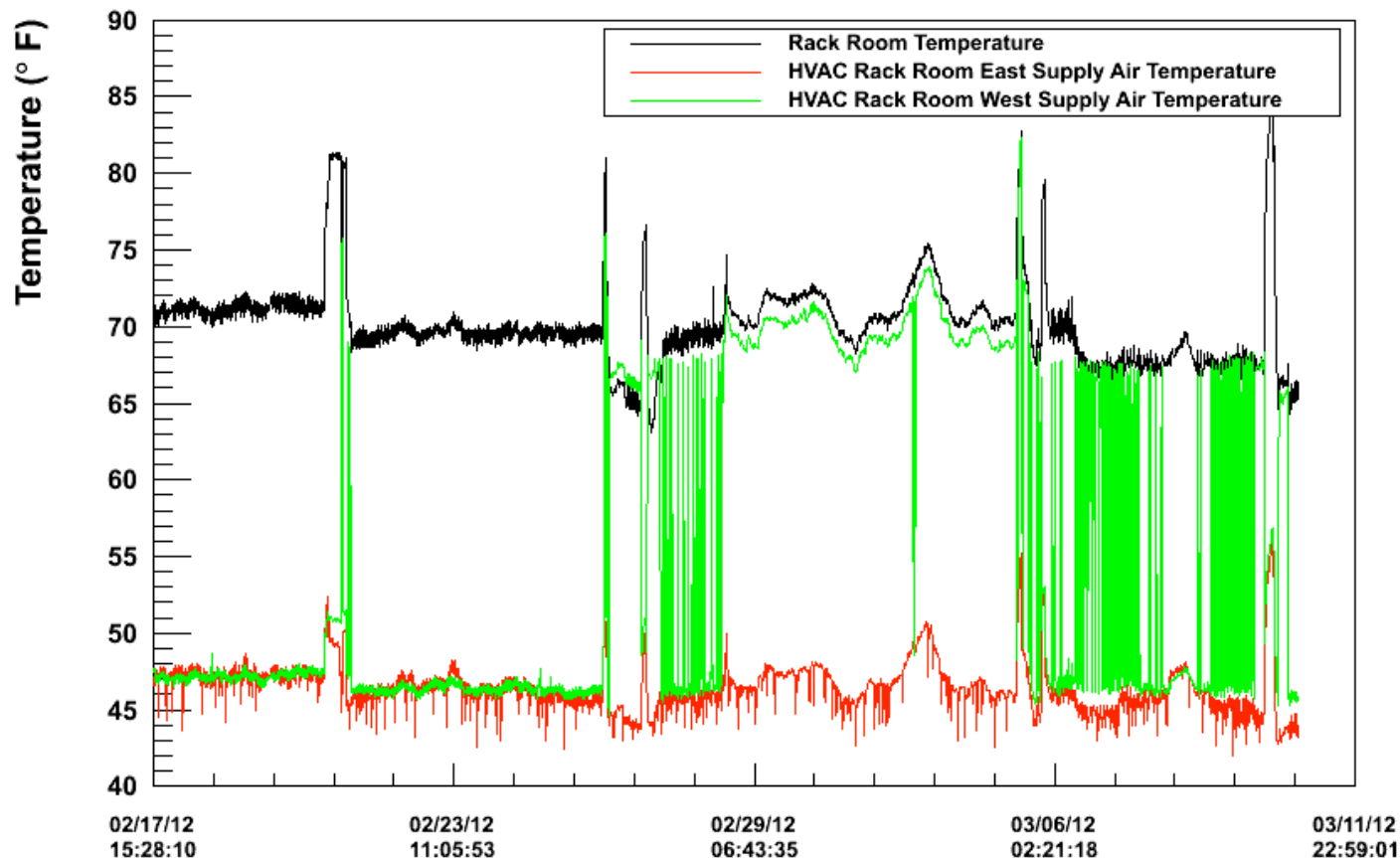
We have:

88%

76%

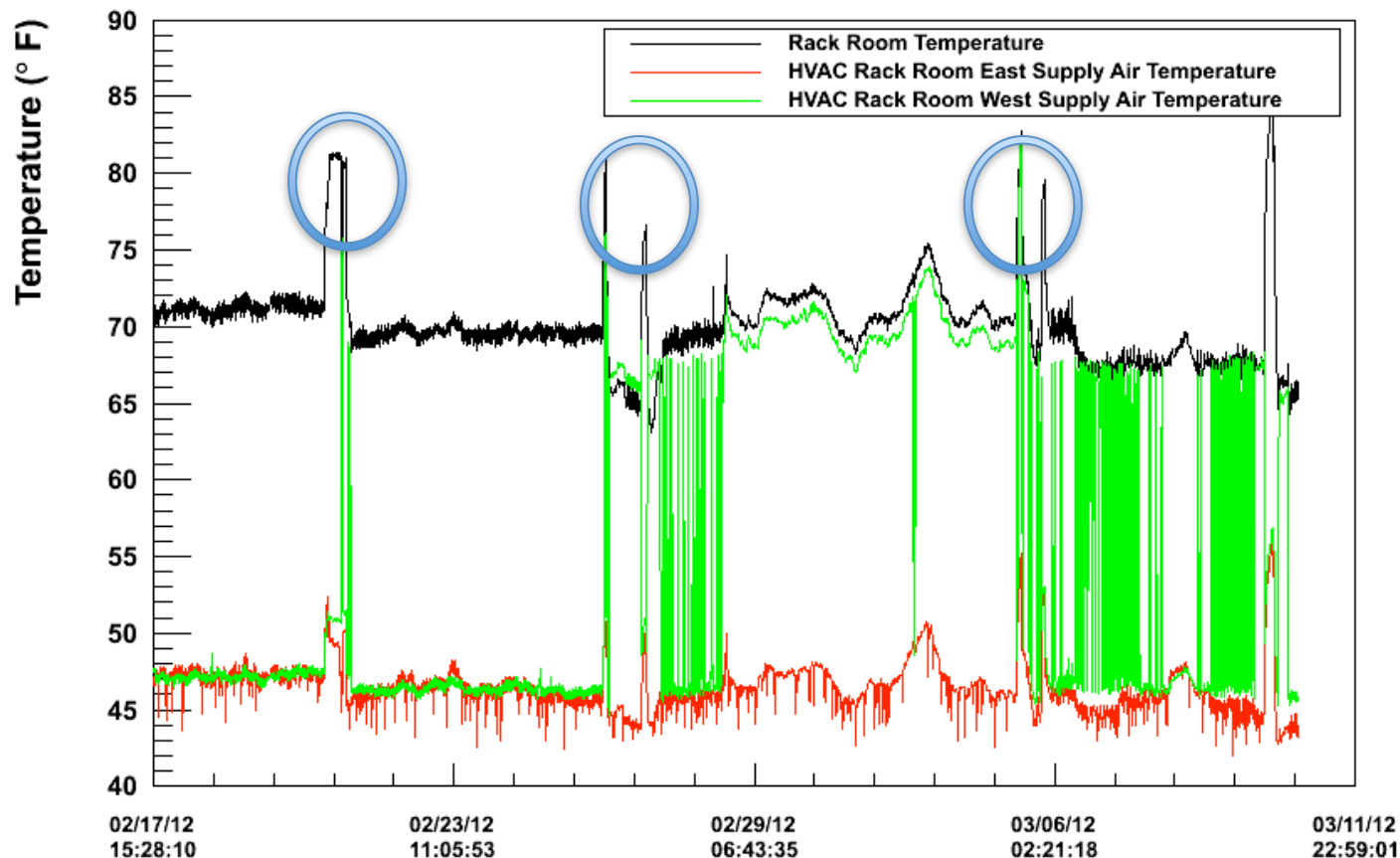
Major Concerns about the PHENIX

PHENIX Rack Room Temperatures



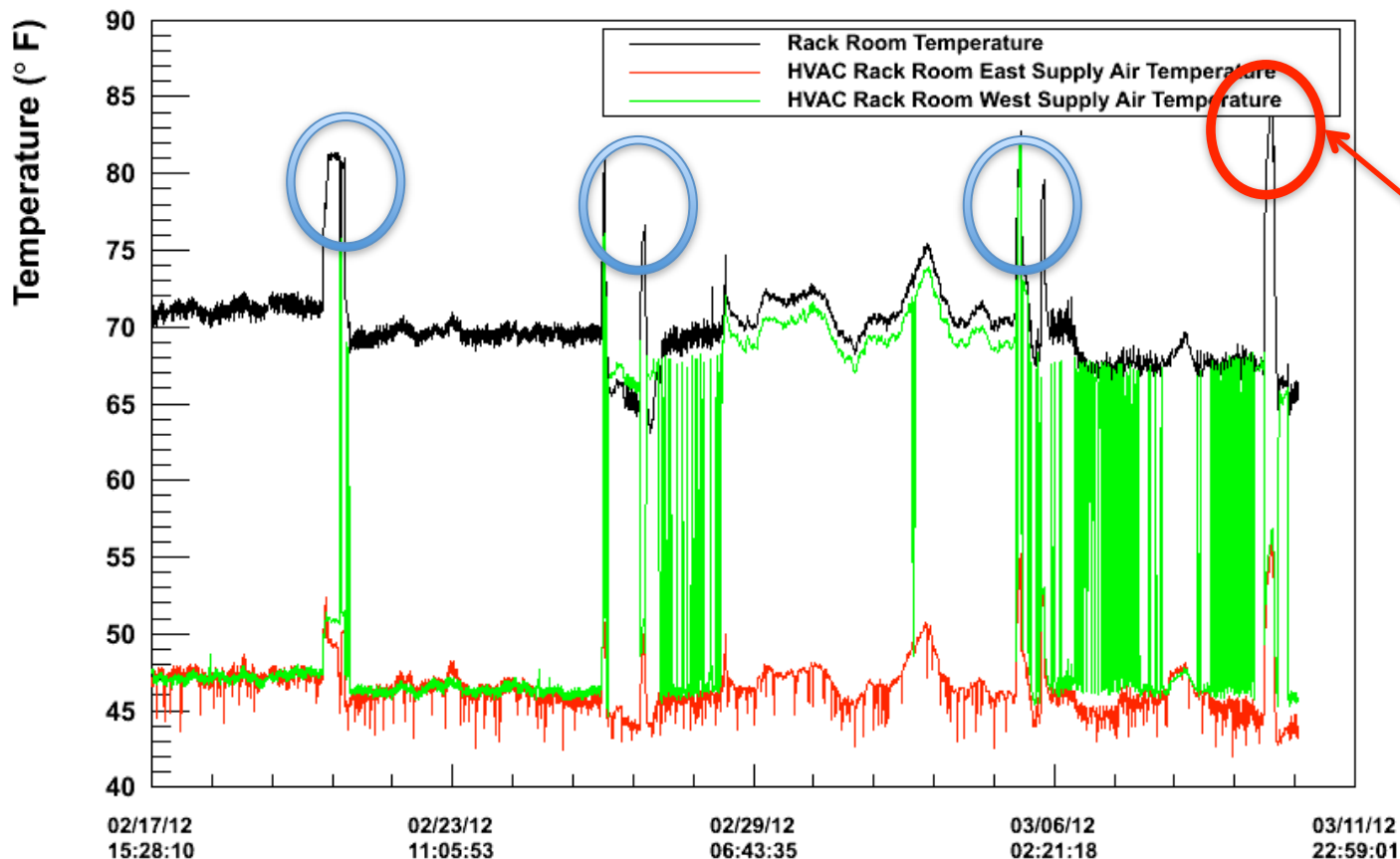
Major Concerns about the PHENIX

PHENIX Rack Room Temperatures



Major Concerns about the PHENIX

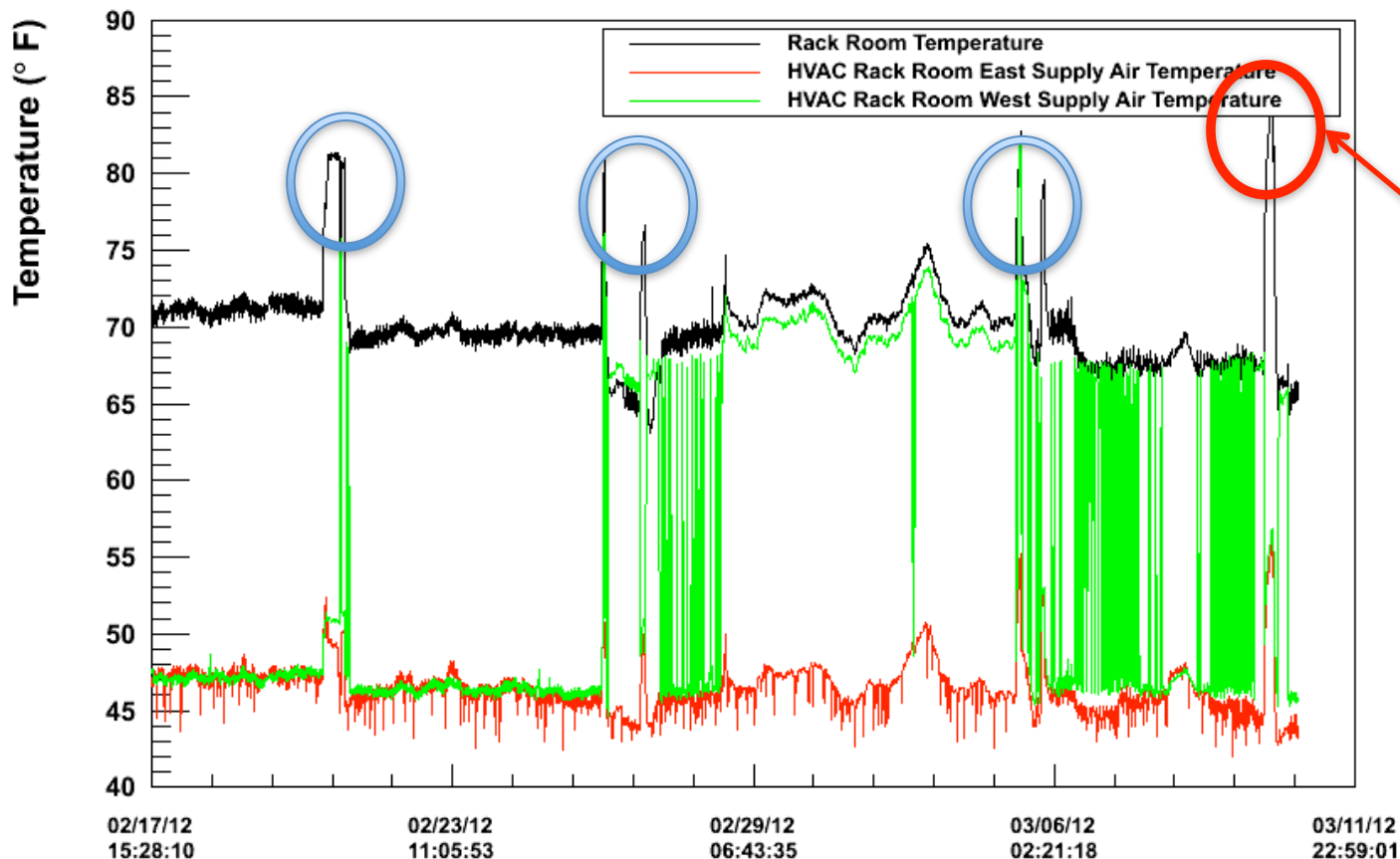
PHENIX Rack Room Temperatures



Caused a significant DAQ melt-down during the past weekend

Major Concerns about the PHENIX

PHENIX Rack Room Temperatures



Caused a significant DAQ melt-down during the past weekend

This is certainly not new to Run-12. It has been an issue for many years!

Control the PHENIX Rack Room Temp



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Backend of the rack room has a door (to “nowhere”) through which we fanned in cool air from outside periodically.



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We added big fans everywhere we could to improve cool air circulation whenever it was necessary.



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We even open the main entrance door to the rack to get better air flow.

Three AC Units in the Rack Room



The image shows a control panel for the Rack Room HVAC System. It features two large digital displays at the top, each showing a temperature of 42.8 and 42.5 respectively. Below these are two smaller digital displays showing 23.2 and 25.1. At the bottom, there is a row of seven indicator lights (green, blue, blue, red, red, yellow, yellow) and a yellow bar labeled 'RACK ROOM AIR CONDITIONER AC-3 STATUS'. Annotations include a blue box pointing to the top two displays labeled 'Two 10-ton units', a red box pointing to the bottom row of lights labeled 'One 30-ton unit.', and a large red box on the right containing the text 'If the 30-ton unit is down, the other two 10-ton units are not sufficient to cool down the air temperature!!'.

Two 10-ton units

One 30-ton unit.

If the 30-ton unit is down, the other two 10-ton units are not sufficient to cool down the air temperature!!

Improve Our AC Unit for the Rack Room

Poor Air Handling Unit?



We have reported the problem at the planning meeting yesterday.

It looks like that help is on the way.
We'd like to enlisted C-AD help to get F&O to finally fix the chronic HVAC

PHENIX is ready to take 510 GeV pp data. W measurement will be the main physics focus at this energy.

Will continue on commissioning FVTX during this run period.