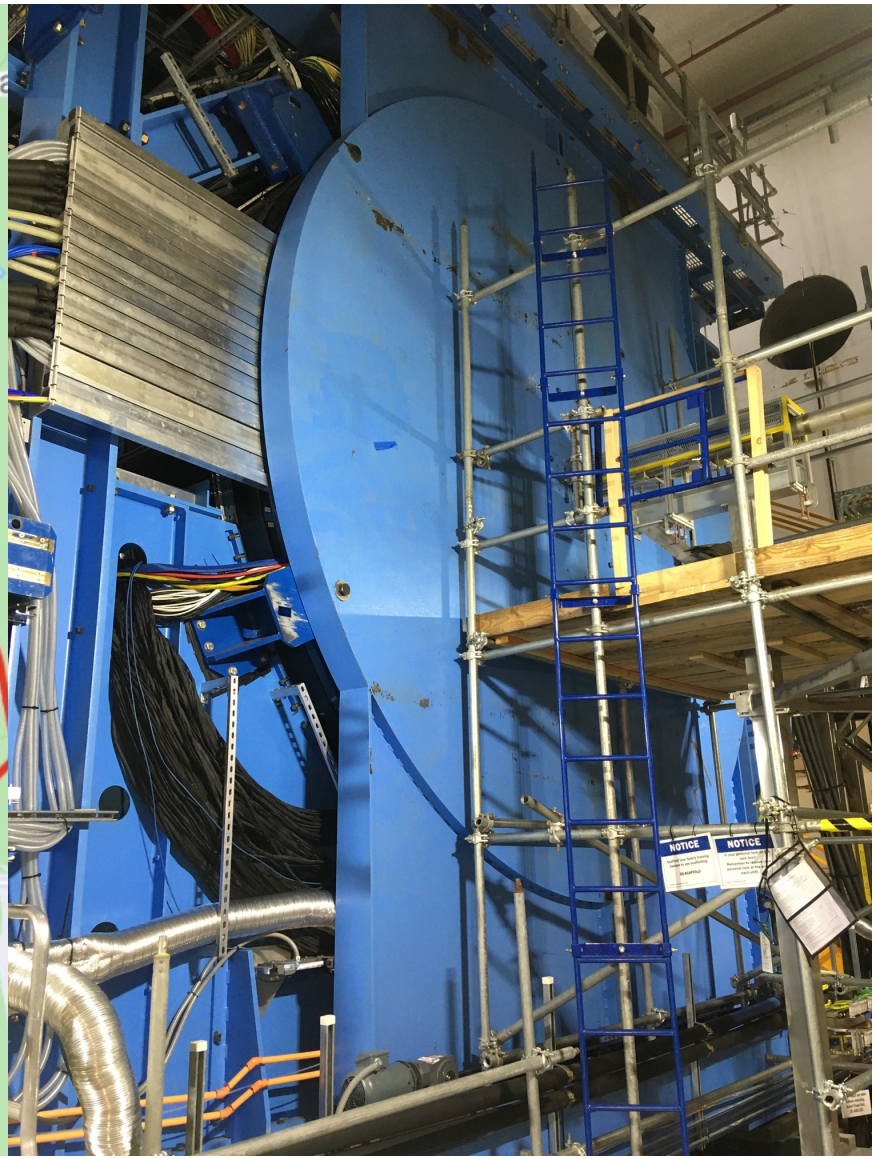
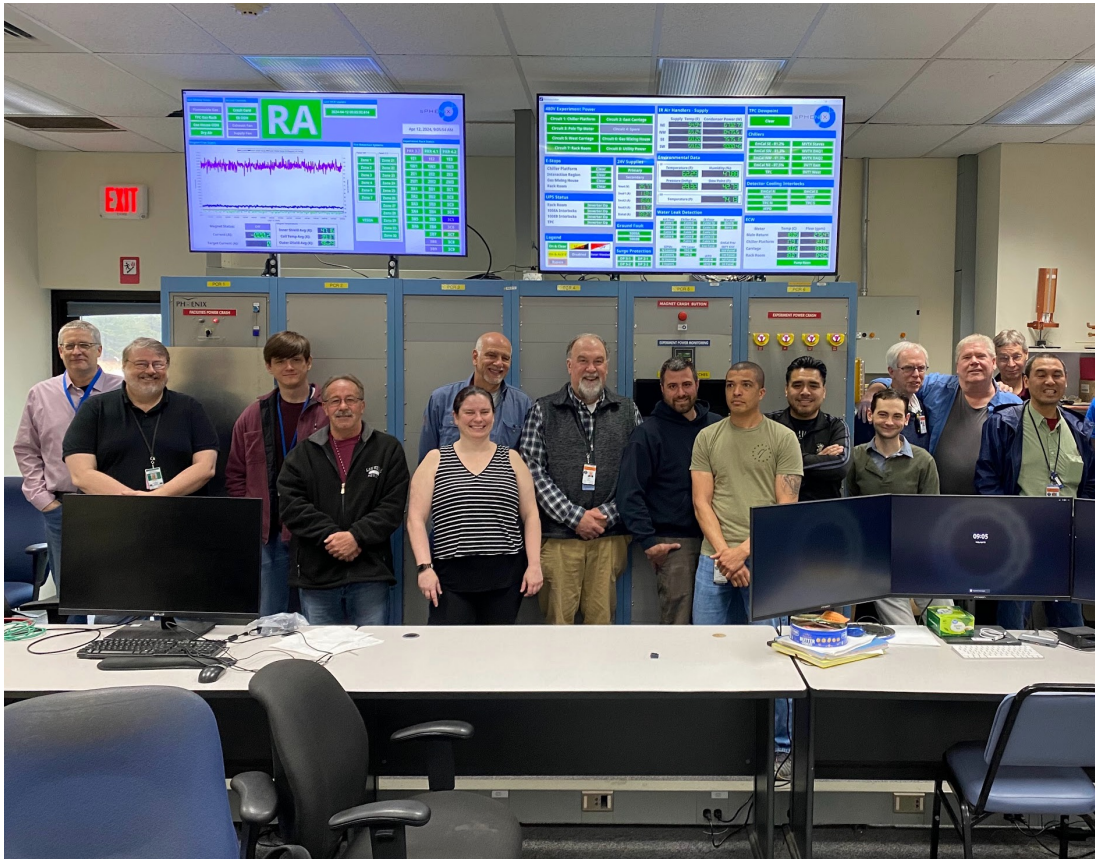
sPHENIX Status
RHIC Coordination Meetinng
April 16, 2024

Jamie Nagle
University of Colorado Boulder
sPHENIX Run Coordinator



sPHENIX Shutdown Complete



Jimmy Labounty
Frank Toldo
Jim Mills
Jeff Hoogsteden
Aaron Allen
Joel Vasquez
Dan Cacace
Mike Rau
Mike Lenz
Sean Stoll

(Not in the picture)

Sal Polizzo
Bill Lenz
Damon Miraglia
Kevin Mandracchia
Marianna Albanese
Rob Pisani
Bob Azmoun

Many thanks to C-AD!

Thank you!

- Detector 100% installed; magnet pole doors closed.

- Plug door currently open; Restricted Access

- Magnet status, around 4.9K.
  Hipot test successful today.
  Plan to ramp to full field on Wednesday/Thursday.
  We will discuss whether to leave magnet on or off this weekend (but it will be in one state)

- Ready for first collisions (MBD, ZDC, trigger, …)

- MVTX signal to C-AD for background feedback once initial beam stability achieved (also probably will want one beam tests)

sPHENIX Split Data Acquisition

(1) Fully pipelined, deadtimeless system

Calorimeters, Minimum Bias Detector, ZDC, sEPD, Triggers

Currently running at spec. of 15 kHz (ready for physics)

(2) Streaming tracking system

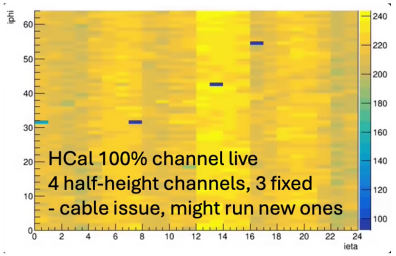
Time Projection Chamber (TPC), INTT, MVTX

Re-flashing TPC firmware (via sort-out-boxes/MightyJack board) on the critical path.

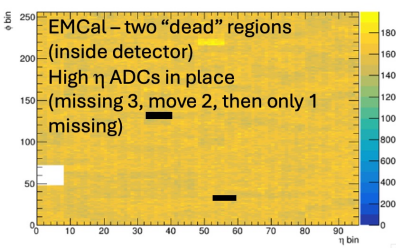
Many updates needed including
zero suppression.

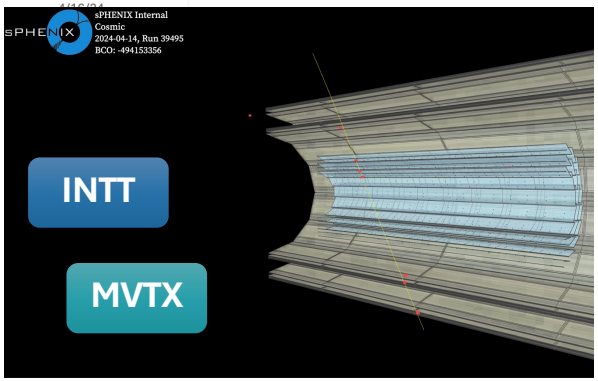
We can read out all sPHENIX systems together (!), but only at very low speed.

HCal



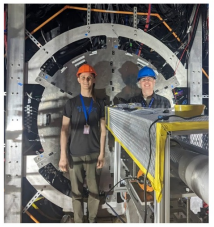
EMCal





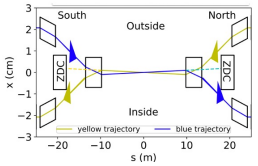
sEPD

Now fully installed.
Being read out with cosmics.
Initial zero suppression working.
Monitoring being updated.
Very close to "Physics Ready"



ZDC/ SMD

Detector moved by 1.8 cm to be centered for 2 mrad crossing angle.
Resolving readout issue via SEB20.



Initial local polarimeter via fast offline analysis.

Vernier scan plans in place – likely one month into stable running.

sPHENIX 2024