

sPHENIX Status RHIC Coordination

September 16th, 2025

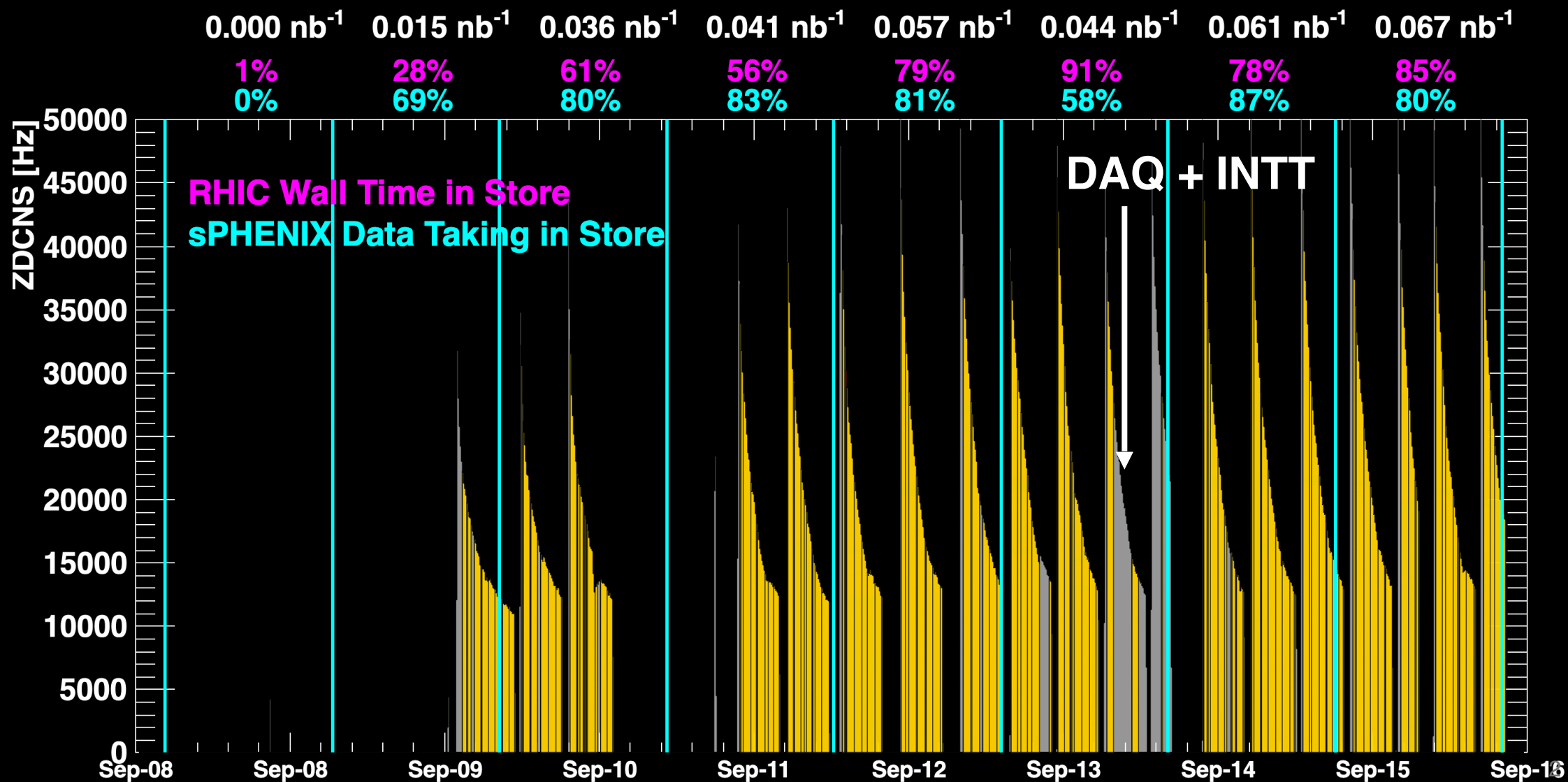
Rosi Reed
Lehigh University
sPHENIX Run Coordinator



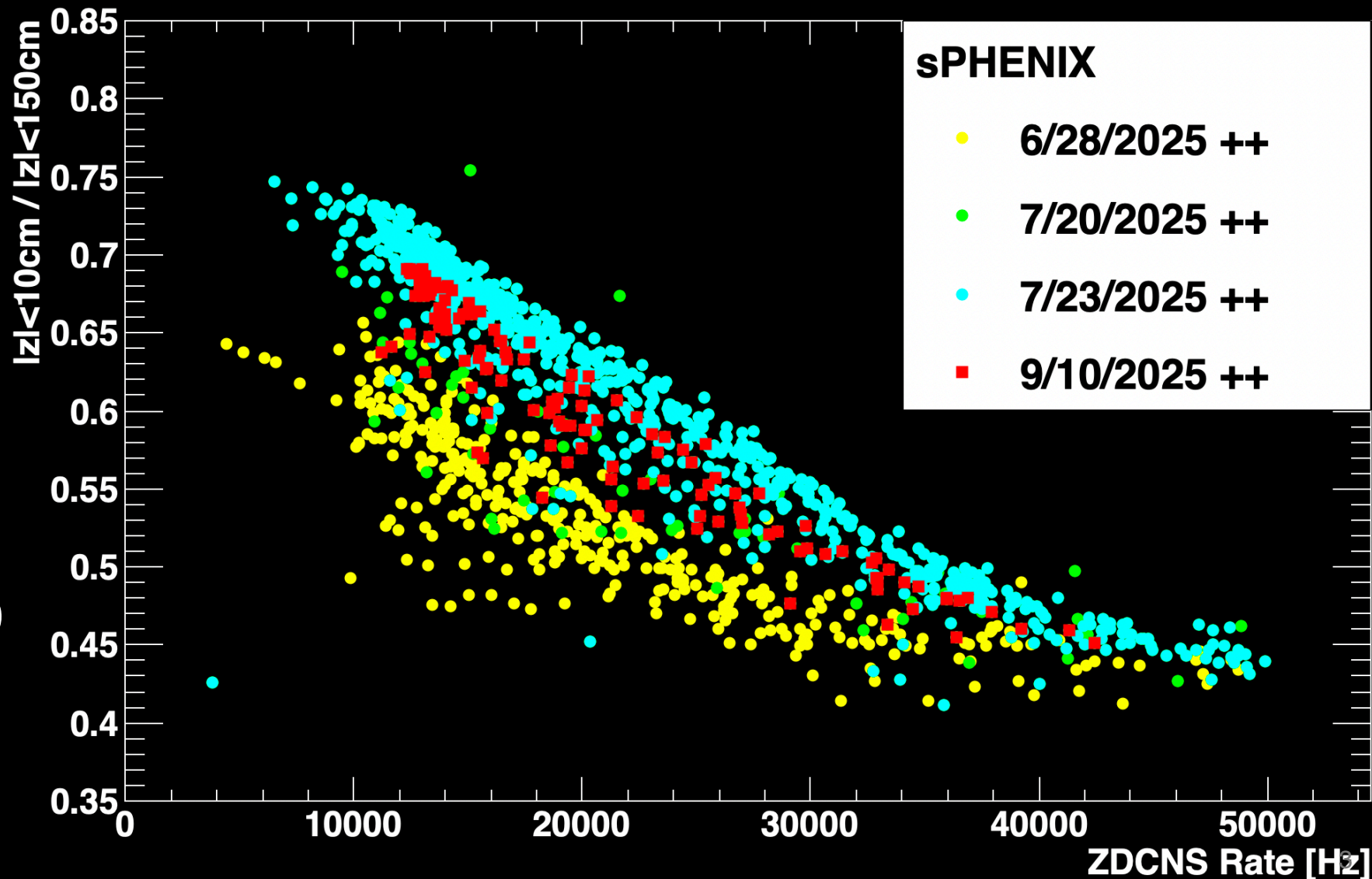
Ron Belmont
UNC Greensboro
sPHENIX Deputy Run Coordinator



sPHENIX Performance



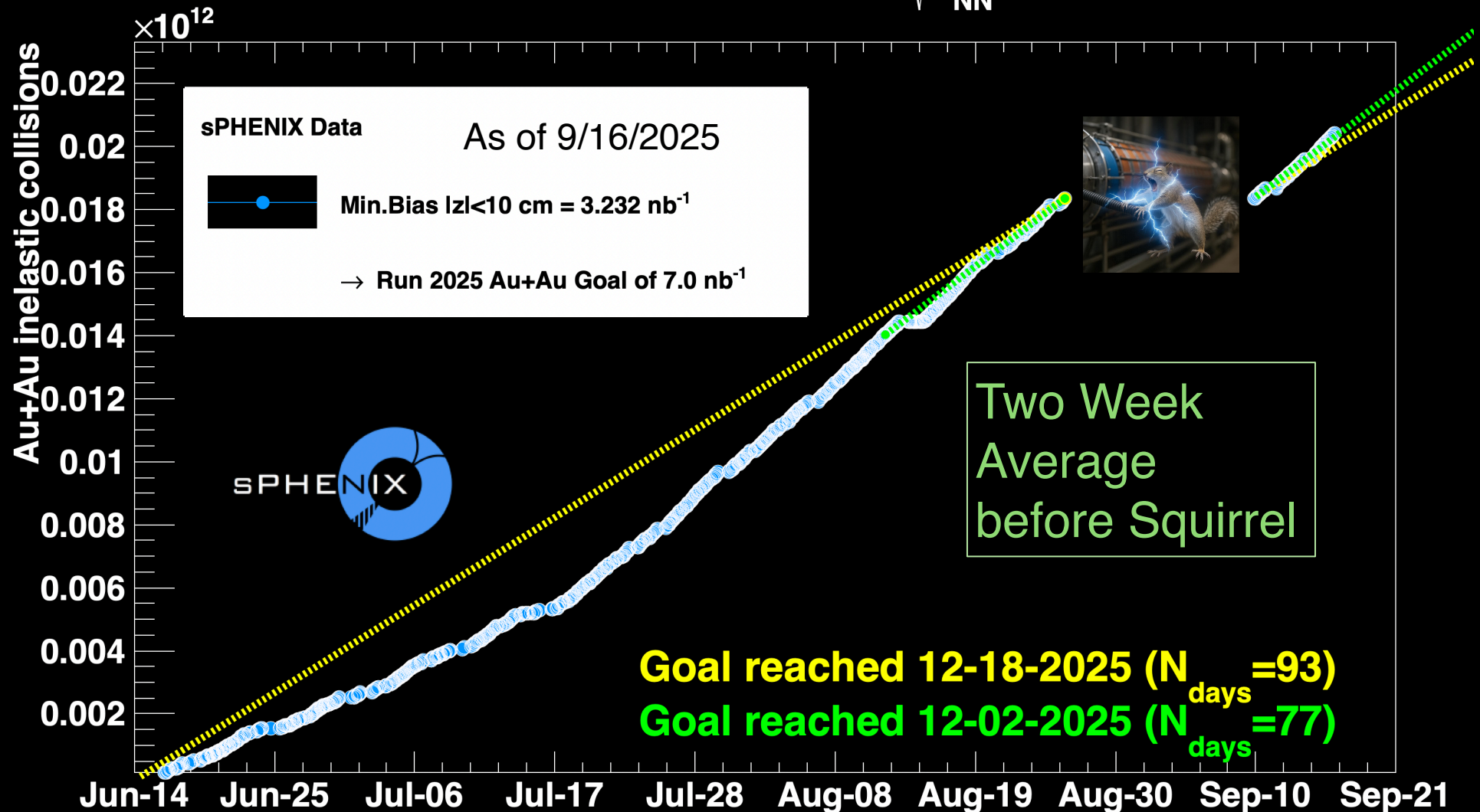
ZDC Rate vs % in Center



Close but not quite
back to where we
were in terms of
 $|z| < 10 / |z| < 150$
cm

sPHENIX Integrated Luminosity

sPHENIX Run 2025 Au+Au $\sqrt{s_{NN}} = 200$ GeV



sPHENIX Activities

- Diagnosing TPC CDU issue
 - Likely culprit is ODH sensor issue on Sept 8, caused a 2.5 °C drop in the IR Temp + any pressure issue
 - CDU leaks are sensitive to environmental conditions
 - Attempt to fix leaks decreased issue from 1 per day to 1 per 2–3 days
 - Causes LV trips (understood), HV trips (under investigation)
 - May need an access at some point
- 6x6 no field run—now that sPHENIX is in its final form, we can take this data for tracking alignment
 - Very helpful for making progress on our tracking
 - Start with ramping down magnet ~4am
 - We will want a 6x6 with field on at some point soon

Conclusions

- We are 46% of the way to our Au+Au goal, with 77–93 days left to go to reach 7 nb^{-1}
 - Preparing for PAC meeting to discuss post-Au+Au running goals in order to complete sPHENIX science mission
- We may have a few special runs that we want to take other than the 6x6, discussion this afternoon, over the next weeks
 - sPHENIX is in its final form
- With current set up, we can run at $0.05 \text{ nb}^{-1}/\text{day}$ in best case scenario and would prefer not to change collider (or sPHENIX) configurations if not required

Back Up

Full Range

sPHENIX Run 2025 Au+Au $\sqrt{s_{NN}} = 200$ GeV

