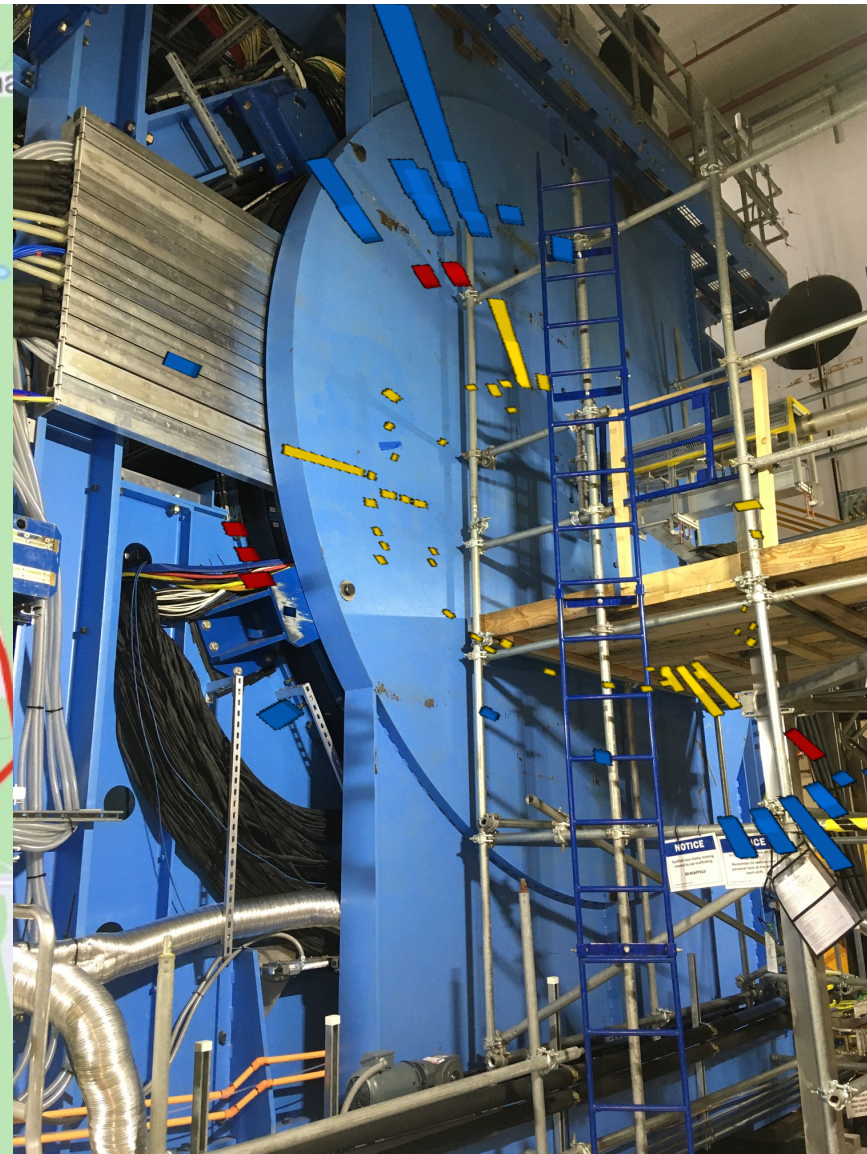


sPHENIX Status RHIC Coordination Meeting August 27, 2024

Jamie Nagle
University of Colorado Boulder
sPHENIX Run Coordinator

8/26/24

sPHENIX 2024





SPHENIX Collaboration

<https://www.sphenix.bnl.gov/node/1751378401>

Highlighting early career collaborators

sPHENIX Hero: Devon Loomis

How long have you been working in sPHENIX and at what institution?

I have been working in sPHENIX since the summer of 2022 as a graduate student at the University of Michigan.

What is the focus of your work on the sPHENIX experiment?

I have been mostly focused on preparation for spin physics and cold QCD. This has included development of the spin database and online monitoring, and commissioning of the ZDC/SMD/local polarimeter. More recently, I have also been helping the tracking team characterize TPC performance.

Where were you born and what is your educational background before your current position?

I was born in Watsonville, California but grew up in a small town northeast of Sacramento. I attended Western Kentucky University as an undergraduate before going to graduate school at the University of Michigan.

What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

A tentative title for my Ph.D. is "Eta meson cross sections and spin asymmetries at PHENIX". I was very fortunate to give a talk this year at DIS2024 in



sPHENIX Hero: Xudong Yu

How long have you been working in sPHENIX and at what institution?

I joined sPHENIX in May 2023 as a second year Ph.D. student at Peking University at the same time sPHENIX began taking data. Therefore, I am still a newbie in sPHENIX.

What is the focus of your work on the sPHENIX experiment?

My focus on sPHENIX experiment separates into two parts. One is heavy flavor physics including quarkonium and open heavy flavor. Another one is doing service work in MVTX group and tracking software group.

Where were you born and what is your educational background before your current position?

I was born in Japan, but I am a Chinese from Fujian province. I got my bachelor's degree in Sun Yat-sen University before I went to Peking University. I Join in BESIII experiment since I was a sophomore and do some physics analysis about Λ_{c1} decay. Therefore, I have some experience on physics analysis, but lack of experience on hardware. I hope I can learn some hardware knowledge in sPHENIX to be a true experimental physicist.

What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

Since I am on the half way of Ph.D. career, the title of Ph.D. thesis has not been fixed. I have finished four physics papers about Λ_{c1} decay at BESIII and new physics search, so a possible title of Ph.D. thesis may be something like heavy flavor physics in BESIII and sPHENIX. I try to make sPHENIX part richer in context. My ideal goal is 50% BESIII and 50% sPHENIX in thesis, and it really depends on my current progress in



sPHENIX Hero: Derek Anderson

How long have you been working in sPHENIX and at what institution?

I've been working in sPHENIX for 2 years as a postdoc at Iowa State University

What is the focus of your work on the sPHENIX experiment?

Where were you born and what is your educational background before your current position?

I'm from Kansas City! I was born on the Kansas side, and grew up on the Missouri side. I went to the Missouri University of Science & Technology for my undergraduate education, and Texas A&M for graduate school.

What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

My PhD was "Reconstruction of neutral-triggered recoil jets in $\sqrt{s} = 200$ GeV $p+p$ collisions at the STAR experiment." I was able to give a talk at Quark Matter 2022 on it and the L_{AA} measurements it served as a baseline for!

How did you decide to go into heavy ion or spin research?

I actually first got interested in QCD from a book by Frank Wilczek, the Lightness of Being. Something that struck me then and has since continued to is how remarkably complex phenomena – like the QGP, or even just the spectrum of hadrons – emerge from the relative simplicity of the underlying partons!



Where can you find this duck?

sPHENIX Hero: Mai Kano

How long have you been working in sPHENIX and at what institution?

I joined sPHENIX in October 2022, when I was fourth year bachelor student at Nara Women's university. So I have been working for almost two years now.

What is the focus of your work on the sPHENIX experiment?

I am working for the INTT group since I joined sPHENIX. Currently I am doing data QA, mainly on data readout of INTT. I am now in second year of the master program, and I still have a lot to learn, so my days are tough, but I am enjoying student life.

Where were you born and what is your educational background before your current position?

I was born in Osaka prefecture Japan. I got my bachelor degree at Nara Women's university.

What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

Since I am still in the master's program, I will be writing my master's thesis from now on. The title will be on the INTT data QA that I am currently working. I have not given a talk at a major conference yet because of my inexperience, but I talked at JPS in March 2024 on "Data readout of the intermediate track detector INTT in the RHIC-sPHENIX" I gave a talk titled "Data readout of the intermediate track detector INTT in the RHIC - sPHENIX experiment" at JPS in March 2024. I will also be giving a talk on data readout of INTT in Run24 at JPS in September this year. This will probably be the biggest talk so far.

How did you decide to go into heavy ion or spin research?

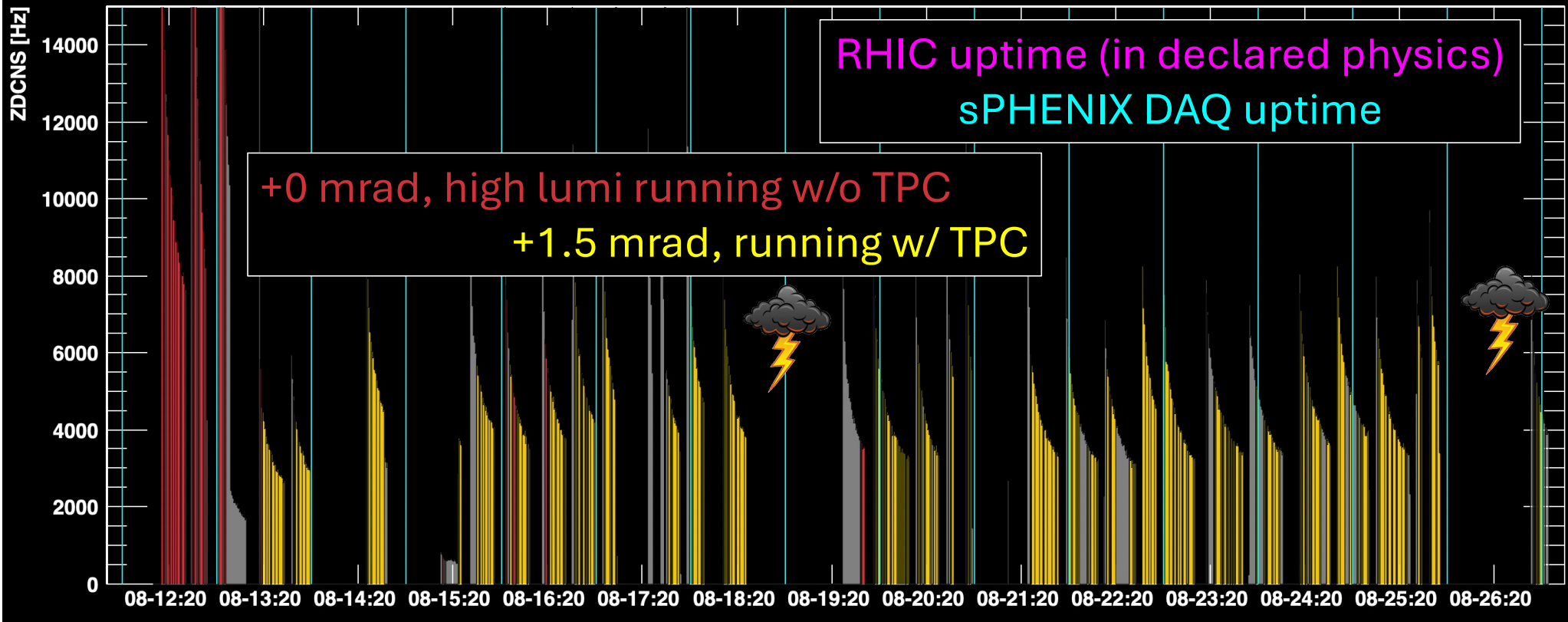


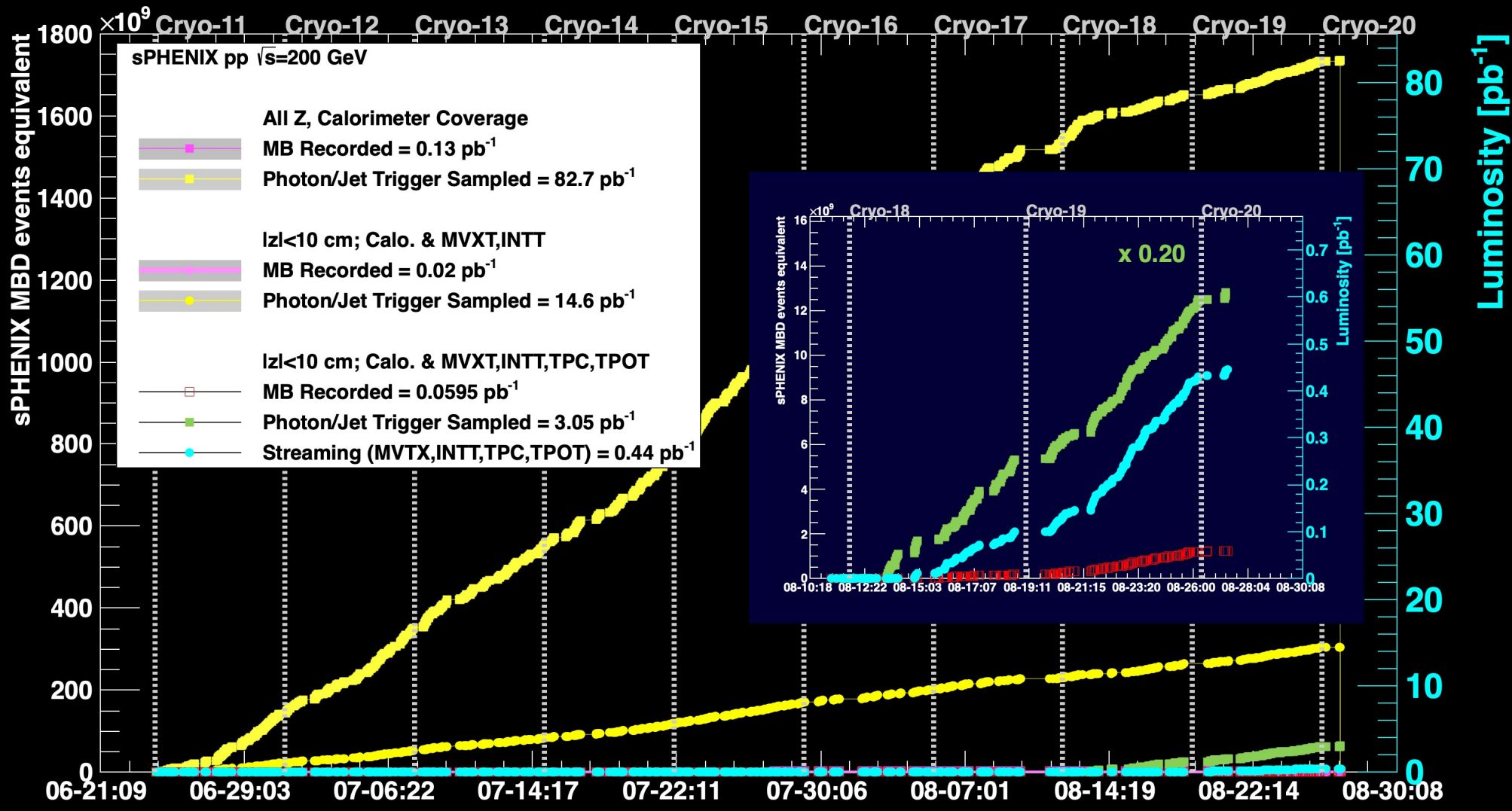
14 days of sPHENIX w/ TPC physics data taking at +1.5 mrad

1st week, full lumi. sampled w/ triggers, ~ 10% extended readout/streaming

2nd week, full lumi. Sampled w/ triggers, ~ 20% extended readout/streaming

73%	80%	23%	50%	78%	49%	41%	32%	74%	39%	83%	85%	79%	73%	12%
76%	61%	77%	53%	63%	38%	85%	28%	55%	72%	59%	62%	55%	66%	66%

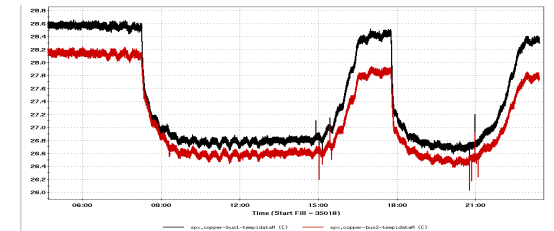




Great C-AD luminosity delivered over the past week

Yesterday, tough day 🌩️, but lemons 🍋 into lemonade

sPHENIX magnet tripped twice -- due to broken water flow switch and then power dip



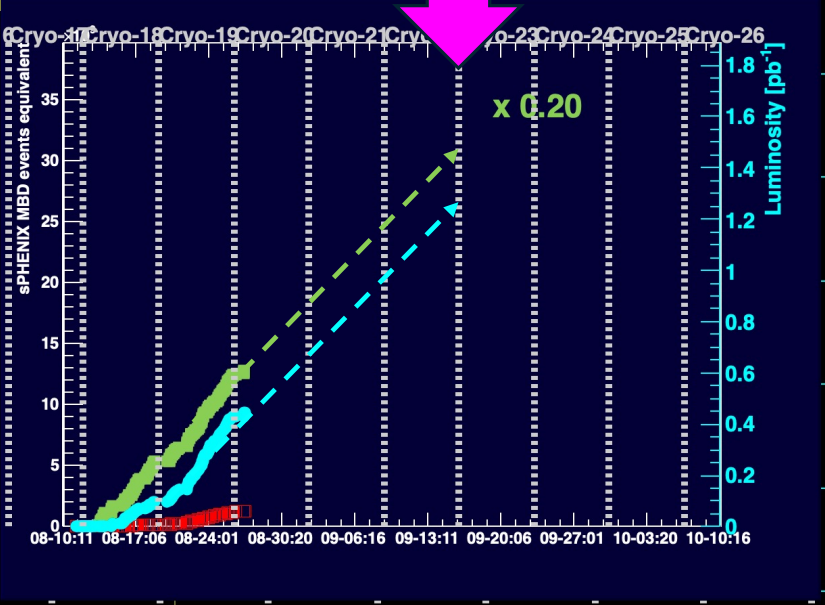
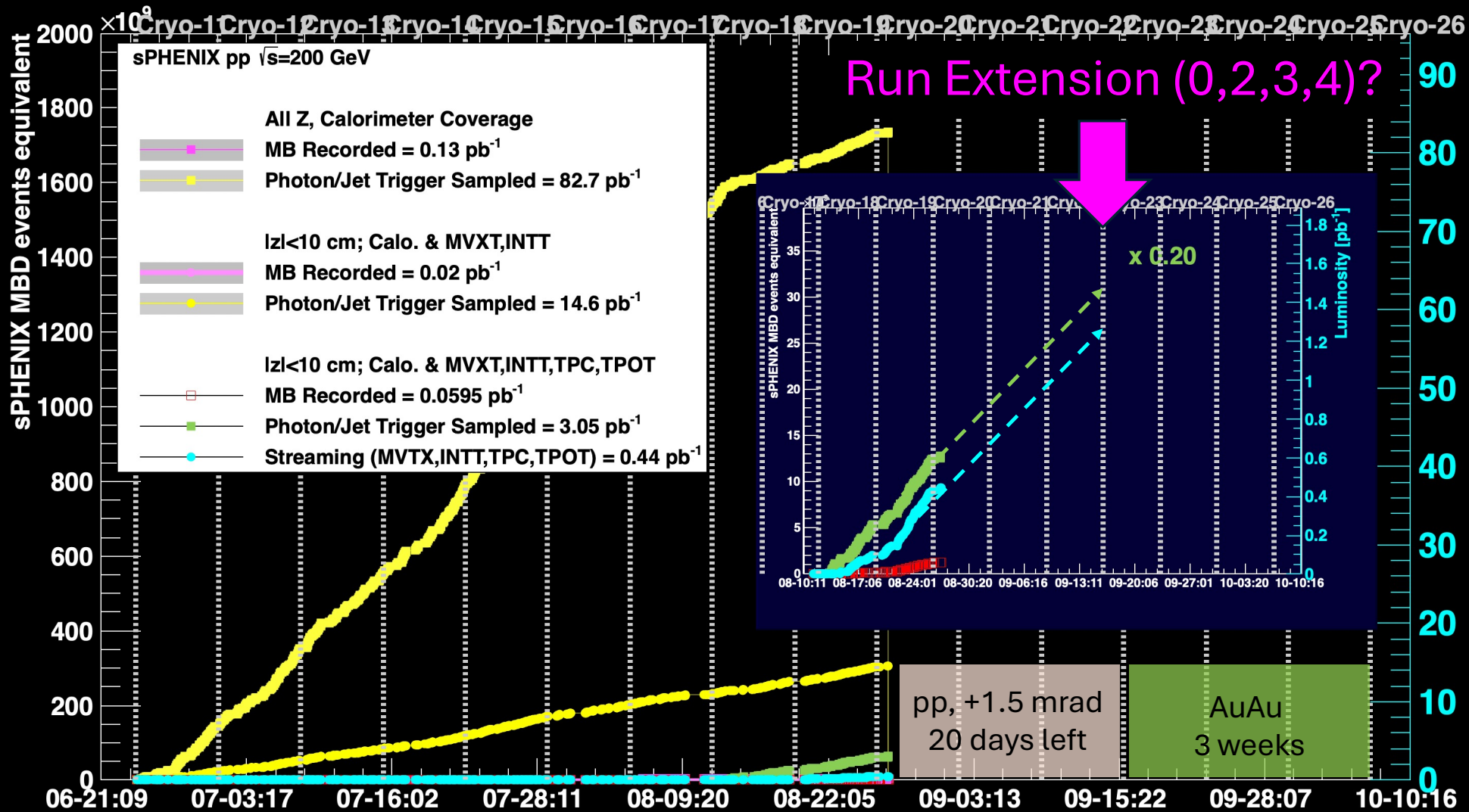
sPHENIX low luminosity, B=0 data taking for alignment checked off the list

sPHENIX is running with uptime ~ 65% and 20% streaming
Note that BUP specs were 60% uptime, 10% streaming



Working on options for increasing extended readout/streaming towards 30%

- sPHENIX has 8-hours of work for Maintenance Day tomorrow
- Looking forward to Machine Development on Beta Squeeze on Thursday
- sPHENIX working with Angelika to reconcile differences in #s from Vernier Scan
- sPHENIX requested 4-week extension to pp 200 GeV running. Under consideration by ALD/DOE.
- sPHENIX requested delay in PAC meeting, so AuAu running information can be incorporated





sPHENIX Run Coordinator 2024

sPHENIX Spin Coordinator 2024

sPHENIX Run Coordinator 2023