Updates from PACs

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Physics Analysis Coordination Meeting – May 19th, 2026

- **Early Science -> the new Matrix**
  - **Assumptions:**
    - Running 30 weeks/year
    - 2.5 hour turn around time
    - 80% facility availability
  - **Config.s also possible:**
    - ep 5x100: 0.5 fb-1/year
    - eAu 5x110: 2 fb-1/year
    - eAg 5x110: 2 fb-1/year
- **Simulations:**
  - ESR: Use April campaign, just rescale the lumi
  - NIM-A: new energies!

Species	Beam energy (GeV)	Integrated luminosity	Electron-beam polarization	Hadron-beam polarization
e+Ag	9×115	1.0 fb^{-1}	NO	N/A
e+D	9×130	1.5 fb^{-1}	LONG	NO
$e+p$	9×130	1.0 fb^{-1}	LONG	TRANS and/or LONG
$e+p$	9×275	2.5 fb^{-1}	LONG	TRANS and/or LONG
e+Au	9×100	1.0 fb^{-1}	LONG	N/A
$e+{}^3$He	9×166	1.5 fb^{-1}	LONG	TRANS and/or LONG

Table 1: EIC Early Science Matrix. The eA luminosity is per nucleon.

Remember: we are not making a running plan

- **Updated Roadmap to ESR**
  - May 29 - hand over a second draft to the referees
  - June 10 - feedback from the referees
  - June 16 – circulation to the Collaboration. Request feedback by June 23
  - **July 1** – prior to the Collab meeting in Glasgow

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- **Reminder on NIM-A Special Issue:** ~October - submit **seven papers**
  - TDR Ch.4 and ESR spin offs (**2 papers**)
  - ESR analysis papers (Inclusive, SIDIS, EDT, Jets+HF) **4 independent papers**!
  - BSM+EW opportunities with the full scale EIC

- **Tracking (MPGD) timing studies**
  - MPGD spatial resolution studied (https://indico.bnl.gov/event/28413/). Now **timing resolution** needs studies. SIDIS cannot commit before July. Anyone from Jets+HF? (Or anyone else?)

Details on the request are below:
"The issue is that the MPGD's (and TOF) need to provide the discrimination needed to assign tracks correctly to the proper beam crossing, and like all things we need to understand the efficiency and background associated with doing this with simulated data. For the MPGD's this would be a function of the timing resolution and would allow us to set a specification.
What would be good is if someone would think a bit about ***how*** we determine a time for a track in an event. If we do this on a track-by-track basis you would be limited by the individual MPGD time resolution. However, you could do better by taking all tracks associated with an event vertex and averaging the MPGD times associated with the tracks to get better than the individual MPGD hit resolution as the event time, which is what we want. I believe the simulations are at an appropriate point to do this. Right now the times associated with hits are the MC times, which is fine – they can be treated as t0 subtracted without any smearing from the t0, which is very small (10-20ps) at the level of the MPGD resolution (~10ns)."

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- **Next physics forum:**
  - Originally planned for May 5th, then May 12…
  - We are moving it to …(when best **??**)
    - (Potential releases SIDIS, J/psi, D tagging…)
    - Analysis Notes need to be circulated to the Collaboration days before!

- **Next Joint Physics and Software meeting**
  - **May 27th 11am ET**
  - PWG convenors please prepare a slide reporting on **status of background studies** in your group for TDR and any issues you'd like to report or problems faced when trying to do the analysis
  - (next joint meeting after that will be July 8th)

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- **Nominate new conveners:**
  - **Form:** https://docs.google.com/forms/d/e/1FAIpQLSc9cerYYCIKW0mtXhzd6adVpxxcKnXqOgSf-TQWJctnIj2iJw/viewform
  - **Personal exchange also started with conveners of each PWG**
  - **Big thank you to outgoing convenors**