

# Hall A and C status report

June 2026 Hall A/C Summer Meeting

Mark Jones  
Hall A/C Group Leader

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Hall A/C Deputy Group Leader



# Safety Minute

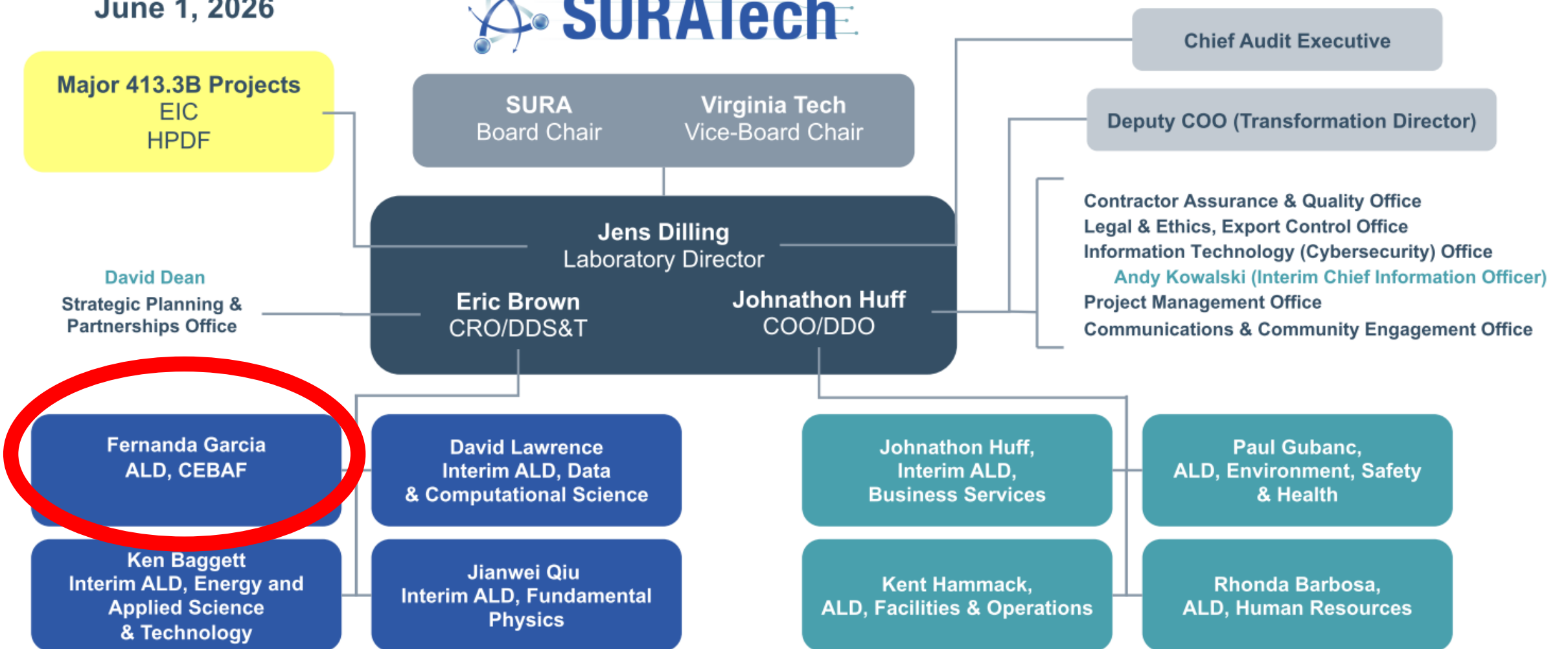
- Remember to report all injuries to Occupational Medicine and your supervising staff. No matter how minor.
- Basically, all work at the lab needs to have an ePAS and a pre-job brief performed before preceding with work.
- For working with detectors and electrical equipment you will at least need ESC001 which is a class.
- Undergrads
  - Need to take SAF099. It cannot be taken online. Usually zoom. Please contact saf099@jlab.org to schedule this training.
  - Undergraduates working outside regular working hours ( 6am-6pm M-F) must be pre-approved by the DSO.
  - During their first three months working in conjunction with JLab or user staff, undergraduate students 18 and over may be allowed to work in the halls (following all standard rules as outlined in the Hall Conduct of Operations (COO), the Hall Radiation Work Permit (RWP) and more generally, the JLab ES&H manual) with the provisions that:
    - a) They have completed the FULL complement of standard training courses (ES&H awareness (SAF100), ODH (SAF103), Rad Worker I (SAF801), Hall specific hazard awareness training and have signed the “COO”) and any additional training that may be deemed necessary for the assigned task;
    - b) Their work in the hall is always under the supervision of a hall-authorized “buddy”, with the only non-standard condition that the buddy is NOT another undergraduate;
    - c) One of the following is true:
      - i) A permanent JLab staff member has supervisory responsibility for their work, is cognizant of the work to be done, and approves the “buddy,” or
      - ii) A fully trained user is their supervisor for the purposes of their work at JLab, is cognizant of the work to be done and approves the “buddy.”

# General News at the Lab

- New M&O contract under SURATech starting June 1 2026.
- DOE Research funding reduced by 35% this year ( *These kind of cuts have affected our users too* )
- Physics division has received American Science Cloud funding offsetting some of the research reduction and JLab is competing for GENESIS funding in partnership with many Jefferson Lab user institutions.
- This fiscal year, JLab increasing its reserve to 6 weeks from approximately a couple of weeks
  - That puts a strain on this year's operations & research budgets
  - But upcoming fiscal years, Lab will only need to service the account
- New dashboard, requested by DOE nuclear physics research, to show publication & thesis record of experiments: <https://pages.jlab.org/physdiv/jrdb/exp-dashboard/>
  - Need to enter publications into JLab database: <https://misportal.jlab.org/sti/>
  - By end of June will support dataset submissions.
  - Should Hall A/C have “coordinator” to have data on hepdata.net or something similar?
- Planning for ~30 week runs starting in FY27
  - Energy and cryogen costs are making that challenging
- Striving to make CEBAF more reliable
  - Instead of pushing energy beyond 1060MeV/linac, now focused on reliability.
- Looking to go from an average of 50% to 60% efficiency for experiments as JLab used to have with pre-12GeV CEBAF.

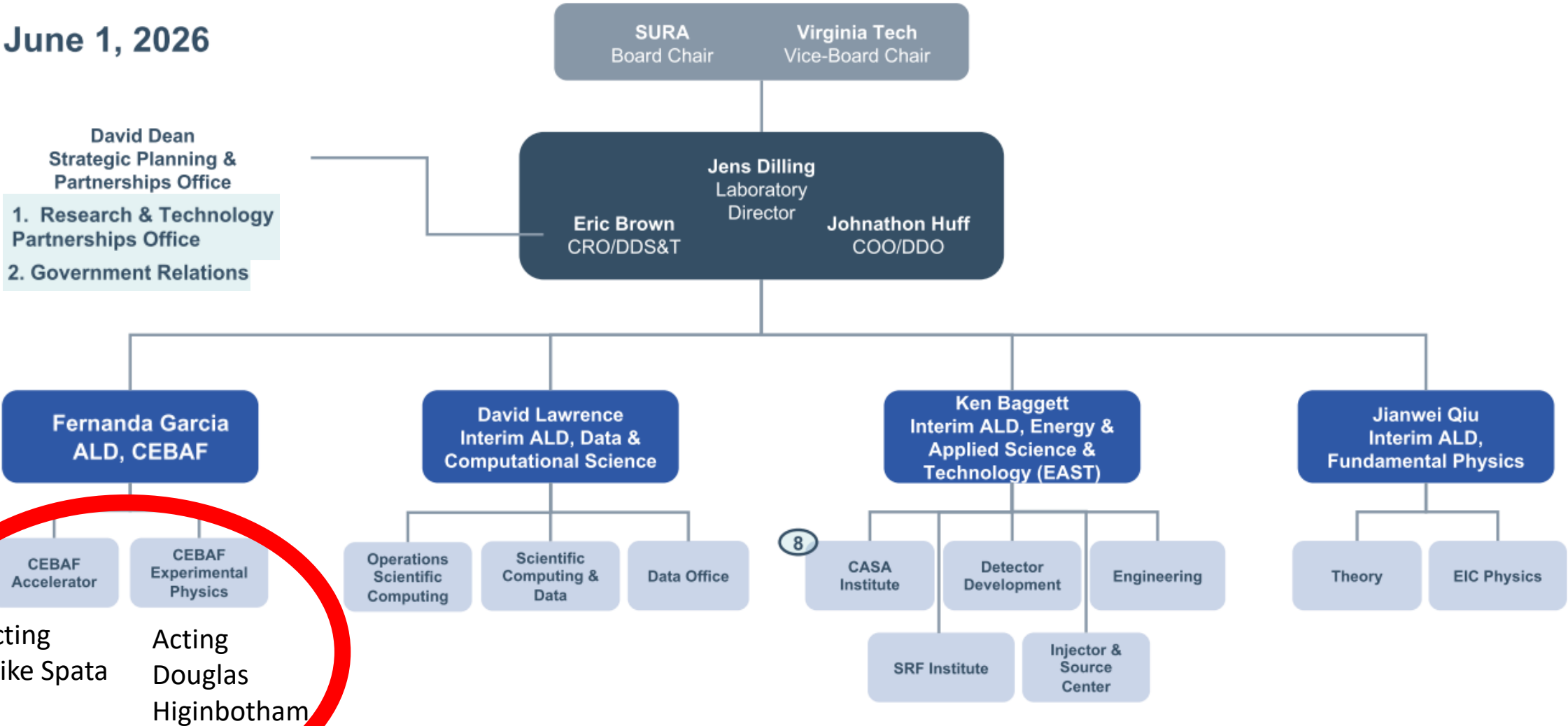
# New contractor, SURATech, and new Lab management structure

June 1, 2026



# Another level down in the Physics management structure

June 1, 2026



David Dean  
Strategic Planning & Partnerships Office

1. Research & Technology Partnerships Office

2. Government Relations

Acting Mike Spata

Acting Douglas Higinbotham

# Hall C Running in 2026

- Accelerator started at low pass energy of 345 per linac for compatibility w/PRAD
  - E12-22-001: N- $\Delta$  at low  $Q^2$  M. Paolone's talk on Thursday Morning
  - Had major target ladder motion failure.
    - Heroic effort by target group restored target in less than a week.
  - E12-23-001: VCS at low  $Q^2$ , 17 of 61 PAC days completed S. Lee's talk on Thursday Morning
- Two weeks for accelerator changeover to standard beam energies
  - Started beam to Hall C on June 15.
  - E12-06-104/E12-24-001: R-SIDIS (Part 2).
  - E12-06-107: Color Transparency via exclusive pion electroproduction. (2<sup>nd</sup> part)
  - Run period ends on Aug 31<sup>st</sup> 2026. Hard cut-off date.
- Testing focused on studying a variety of MPGDs ( GEMs , uRwell, uRgroove) at high luminosity will be done parasitically during the run period. H. Liu's talk on Thursday Afternoon

# Near future Hall C schedule (*Planning and Drafting stage*)

- Sept 1, 2026 to end of Jan 25 2027 Scheduled Accelerator Maintenance (SAM)
  - Target change out
  - Install detectors in SHMS for E12-24-007 (Elastic  $A_T$  on nuclei)
- Jan 25 2027 to Aug 22 2027 ( Tentative 30 week schedule)
  - Low energy running (at 1.0 and 1.1 GeV/pass) from Jan 25 - Mar 7, 2027
    - E12-24-007 (Elastic  $A_T$  on nuclei) C. Ghosh's talk on Wednesday Morning
    - R-DIS (E12-14-002), KAON LT ( E12-09-011)
  - High energy running ( $\sim 2.2$  GeV/pass) from Mar 7 to Aug 22 2027
    - VCS (E12-23-001). Complete the four remaining Q2 points
    - R-DIS (E12-14-002), KAON LT ( E12-09-011) T. Horn's talk on Wed Afternoon
    - E12-20-007, Run 1.5 PAC days of U-channel experiment A. Postuma's talk on Wed Afternoon
- Sept 1 2027 to Jan 20 2029 (  $\sim 16$  months)
  - Install Hypernuclear experiments
  - Run Hall A,B and D from Jan 20 to Sept 1 2028

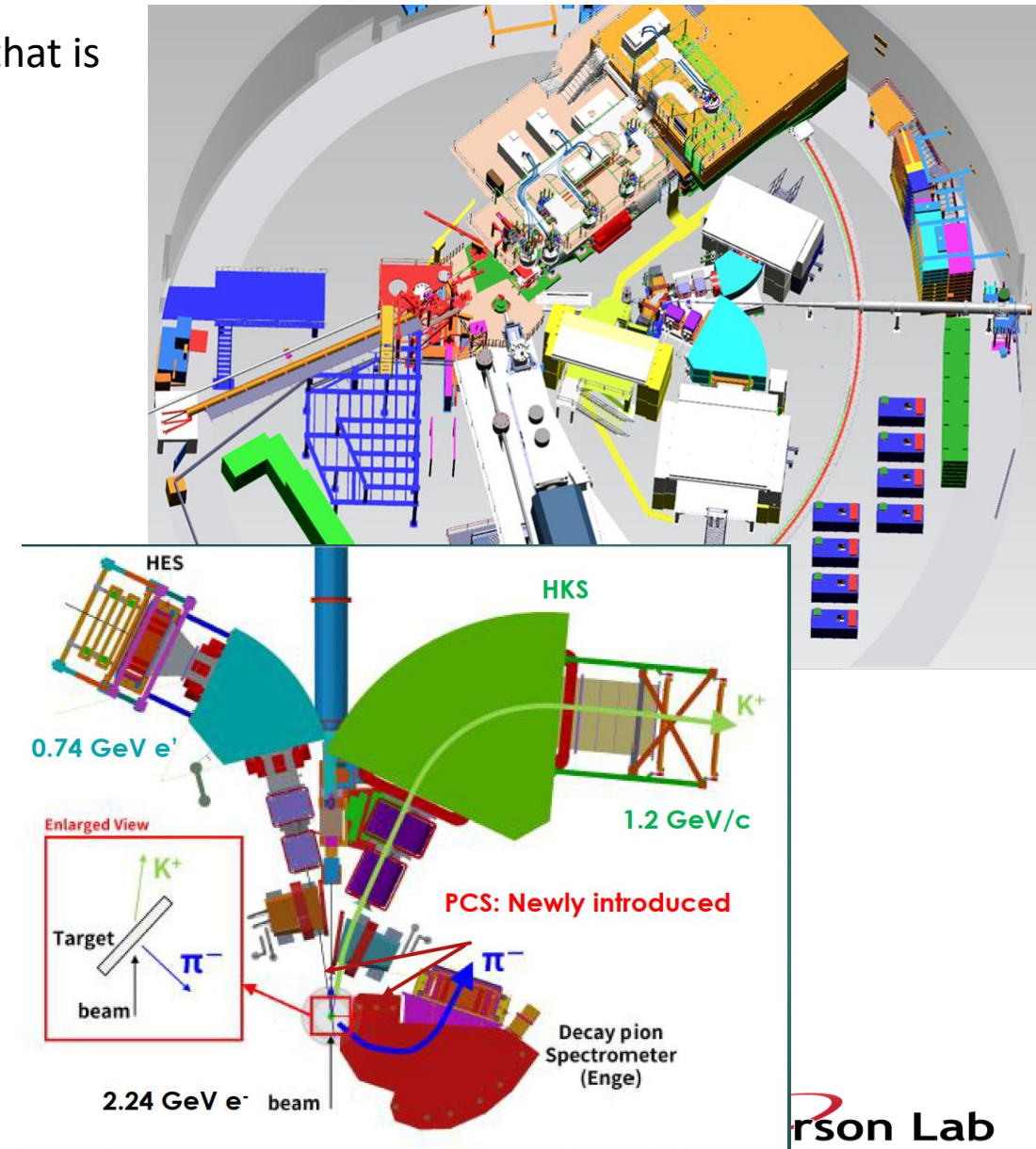
# Hypernuclear experiments

See Talks on Thursday Afternoon

- Experiments had ERR in Nov 2024. **Successful ERR in June 2026.**
- Experiment PAC days. Total 149 PAC days. Assuming 50% efficiency that is 42 weeks. Two run periods.
- Funding for the new equipment is from COPS and Capitol project.

Experiment	Title	PAC Days
E12-23-013	An isospin dependence study of the Lambda-N interaction through the high precision spectroscopy of Lambda hypernuclei	55
E12-24-011	Study of a triaxially deformed nucleus using a Lambda particle as a probe	28
E12-24-003	Studying Lambda interactions in nuclear matter with the $^{208}\text{Pb}(e,e' K^+)^{208}_{\Lambda}\text{Tl}$ reaction	42
E12-24-004	Study of charge symmetry breaking in p-shell hypernuclei	24
Run Group	High-resolution spectroscopy of light hypernuclei with the decay-pion spectroscopy (ENGE magnet)	N/A

- MOLLER will be running in Hall A during the time that Hypernuclear experiments would run



# Future Hall C schedule (speculative)

S. Nagao and K. Nishida's talks on Thursday Afternoon

- Jan 20th – Sept 1<sup>st</sup> 2029
  - Run 32 weeks of Hypernuclear experiments.
- Jan 20<sup>th</sup> - Mar 31<sup>st</sup> 2030
  - Run 10 weeks of Hypernuclear experiments.
- April 2030 – mid March 2031
  - Deinstallation of Hypernuclear
  - Installation of tensor polarized target.
- Mid March 2031 – Sept 2031
  - Run [E12-13-011](#) , “The Deuteron Tensor Structure Function b1”, 41 PAC days
  - Run E12-15-005, “Measurements of the Quasi-Elastic and Elastic Deuteron Tensor Asymmetries”, 45 PAC days.
- Sept 2031- Jan 2032
  - Install beamline for transversely polarized proton target
- Jan 2032- March 2032
  - Run E12-24-002, “Revealing the Transition Region of QCD with the Proton’s g2 structure function” , 26 PAC days.

# Installation of MOLLER in Hall A in 2026

V. Berdnikov's talk on Wed Morning

## Big thanks:

Dave Kashy as the Technical Lead and Robin Wines as Lead engineer  
Hall A techs: Zak, Cason, Cody, Casey, Dalton , David, Lawrence  
EIC Techs: Andrew, Travis, Xavier, Caleb, Evan  
Magnet Group: Probir, Dave, Ian, Sandesh, Eric, Joe, Randy  
Hall A E&D: Robin, Whit, Ryan, Anthony, Dan, Chris, Derek  
Hall A/C Spec Support Group: Ellen, Heidi, Lars  
Target Group: Dave M, Casey, Paul, Stan, Mark, Dave G  
Radcon, SSG, S&A, Fire Safety, ES&H, I&C, AES, DC-Power,  
Hall D techs, Hall B techs



Downstream Enclosure on beam line



Pion Donut and Detector pipe on beam line

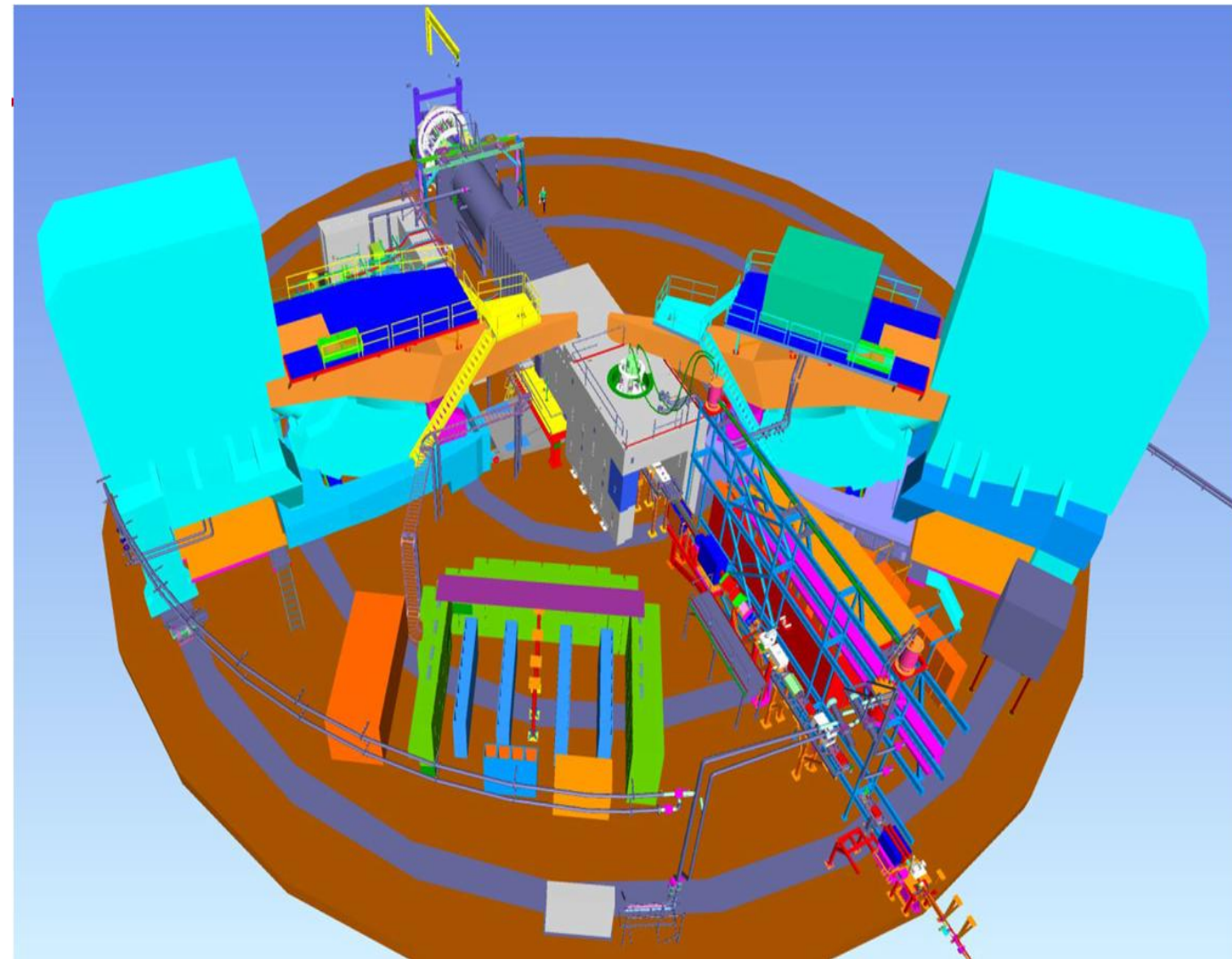
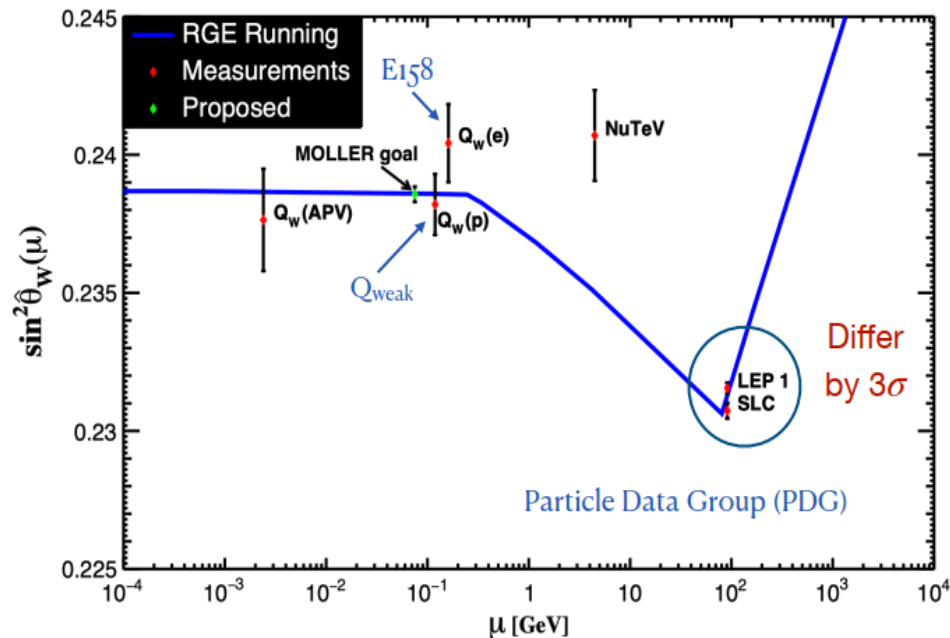


Jefferson Lab

# Running MOLLER in Hall A in 2027 and beyond

B. Blaikie's talk on Wed Morning

- Finish installation and complete CD4 by March or April 2027.
- Running of MOLLER starting in July 2027.
  - Could start earlier with lower current running.
  - Will have to see the efficiency of the MOLLER target to understand what currents the Hall C target can run.
- Running MOLLER for 3 years (2028-2030). Assuming 32 week run periods.



# Far Future Hall A Schedule

- Two SBS experiments under Jeopardy review at this PAC 54.
  - Measurement of Tagged Deep Inelastic Scattering, C12-15-006, A- rating.
    - Tagged DIS to study pion and kaon structure functions
    - Needs to pass its C1 technical review
    - Two run group experiments
  - “Semi-Inclusive Deep Inelastic Scattering on a Transversely Polarized He-3 Target Using the BigBite and Super BigBite”, E12-09-018, A- rating.
    - TMDs with polarized neutrons at large  $Q^2$  and  $x$ .
- The SOLID physics program
  - Difficult budget times for a new project.
  - Collaboration is working to develop a plan for a high luminosity spectrometer using CLEO magnet and subset of detectors.
    - Planning to have workshop in Sept 2026 at JLab.
  - Five A rated experiments, one A- rated experiment, conditional approved experiment and 7 run group experiments
  - Wide physics program:
    - J/psi threshold production, PVDIS, TMDs on polarized proton and neutrons, two-photon exchange, DDVCS

A. Nadeeshani's talk on Thursday Morning

Z. Li's talk on Wed Afternoon

V. Khachatryan's talk on Thursday Afternoon

# Summary

## PAC54 is week of July 6<sup>th</sup>

- Eight new proposals for Hall C. Talks on the proposals on Wednesday and Thursday afternoon.
- Four Letters of Intent

## Hall A

- Anticipation of the amazing discovery potential of the MOLLER experiment
- Longer term possibilities:
  - Remaining SBS experiments: TMDs with polarized neutron at high  $Q^2$  and  $x$ , Tagged DIS
  - SoLID Physics program

## Hall C

- Exciting experimental program in Hall C using standard SHMS/HMS for next 2 years.
- Upcoming program of hypernuclear followed by polarized target physics program
- Longer term, have range of approved Hall C experiments ( some could run in Hall A)
  - Experiments using the NPS: Complete Hall A DVCS, Wide Angle Compton and Exclusive photoproduction
  - Polarization observables in WACS using the Compton Photon Source, polarized NH<sub>3</sub> target, NPS and BigBite
  - “A Search for a Nonzero Strange Form Factor of the Proton at 2.5 (GeV/c)<sup>2</sup>”
  - “Color Transparency in Maximal Rescattering Kinematics”
  - “Studying the Strangeness D-Term in Hall C via Exclusive Phi Electroproduction”

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**Social event at the  
ResFac at 5:30-7 today**

**Beer, Wine and snacks**