

Hall A Update

May 2023 SoLID Collaboration Meeting

Hall A Crane repair completed last summer!

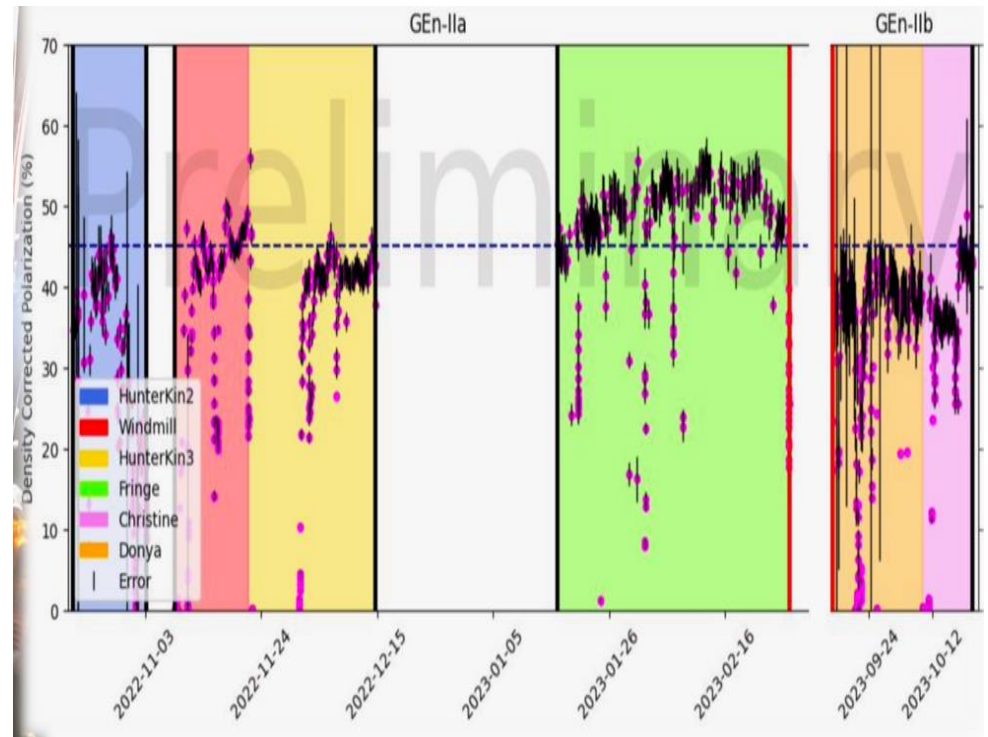
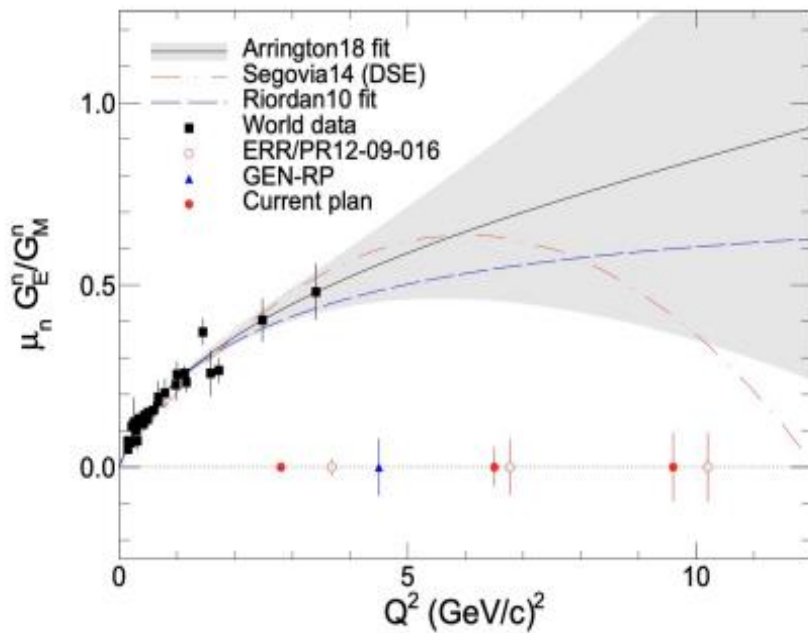
- Work completed in Aug 2023
- Crane in operation



New trucks installed and the hanging supports were shimmed

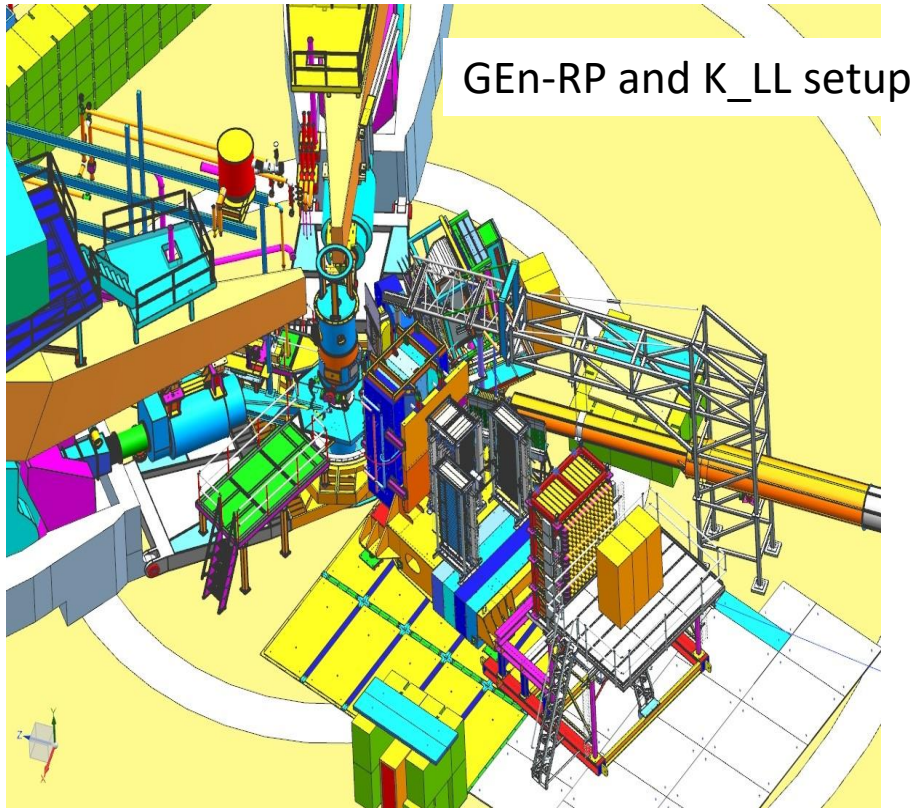
GEn using polarized helium target

- Started running the experiment at beginning of Oct 2022
- First time running with 60cm long ^3He cell
 - 45-50% polarization in beam!
- Completed the $Q^2 = 3.0$ and 6.8 kinematics by Dec 2022.
- Completed the $Q^2 = 9.9$ kinematics by running from Sept 12 to Oct 30 2023.



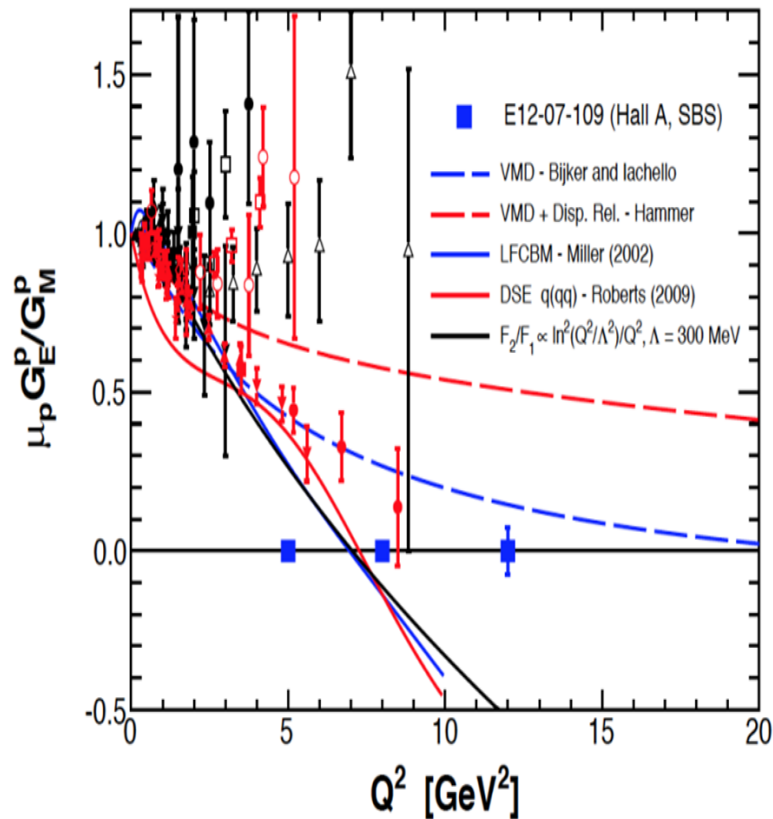
GEn-RP and K_LL in April 2024

- Measurement of the Ratio GEn/GMn by the Double-polarized ${}^2\text{H}(\vec{e}, e'\vec{n})$ Reaction
 - Outgoing neutron polarization measured by charge exchange
 - Additional polarization measurement using the side detectors
- Polarization Transfer in Wide-Angle Charged Pion Photoproduction (K_LL)



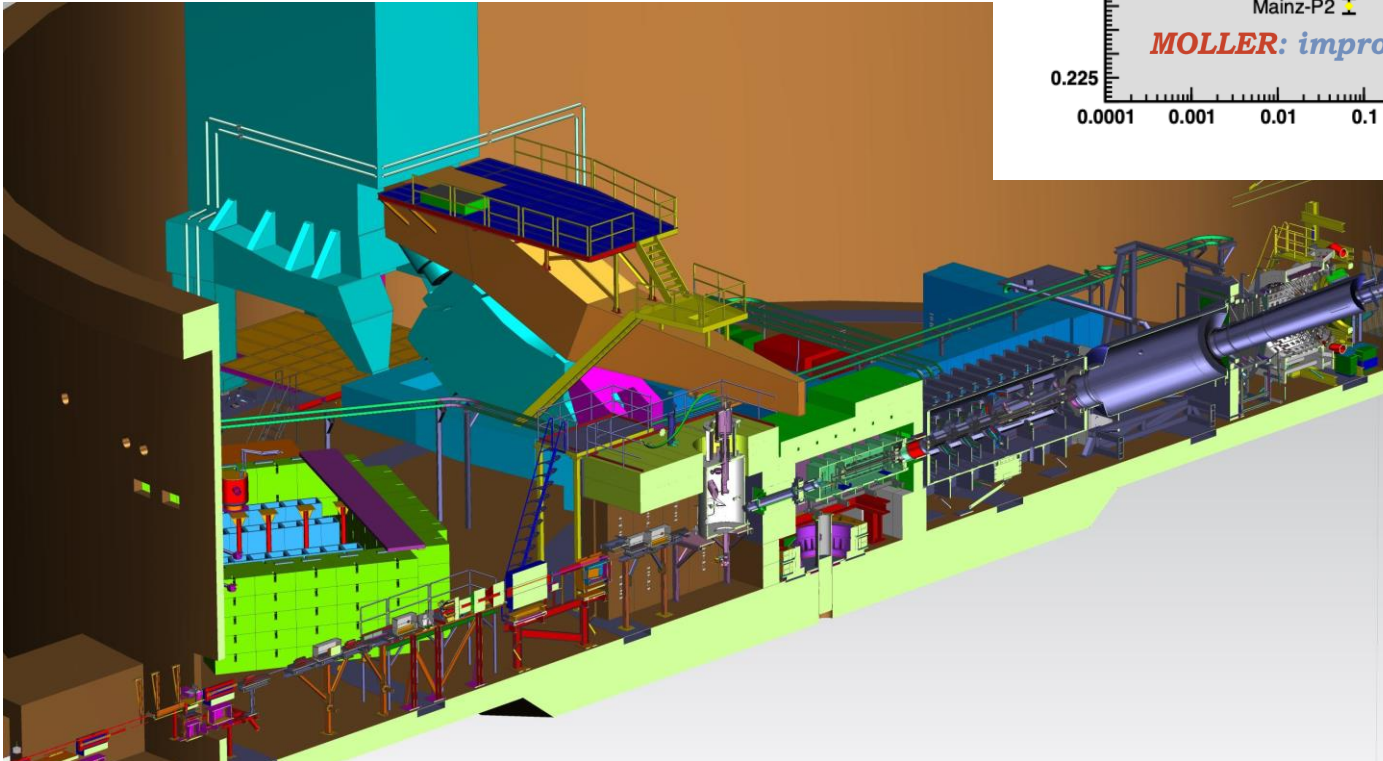
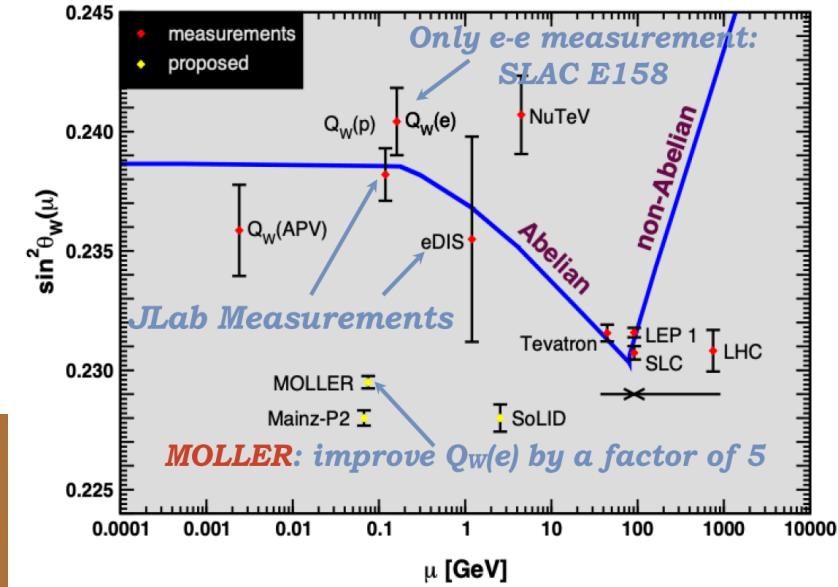
GEP experiment

- Installation begins in May 2024 and ends Oct 2024
- Experiment runs from Nov 2024 to April 2025
- Measure to $Q^2 = 12$



MOLLER Project

- Inflation Reduction Act provided full funding.
- Passed Cd-3A review and spending CD-3A funds.
- CD2 /CD3 review in October 2023.
- 3 years of running.
- [JLUO talk by Caryn Palatchi](#)



Strategy for obtaining CD0 for SoLID

- Part of recommendation #4 in the NSAC LRP
- Working towards a plan for cost sharing of 30/70 between JLab and the SoLID project. Working with SoLID leadership, David Dean , Thia Keppel, Allison Lung.
- Hall A OPS would commit about \$7.8M for Magnet and Infrastructure.
- JLab Capitol would commit about \$13M on DAQ (started in FY23), GEMs and LGC

Conclusion

- Hall A crane repair completed.
- GEn polarized ^3He target experiment completed.
- Dec 2023 – Mar 2024 Switchover from ^3He to cryotarget and GEn-RP experiment which runs in April 2024.
- GEp installation from May 2024 to Nov 2024 then runs until April 2025 .
- MOLLER has 3 years of running from 2026-2030.