

A photograph of a large, multi-story stone building with a prominent tower, likely a Lehigh University building. The building is set on a grassy hill with bare trees in the foreground and background. The sky is blue with some clouds.

Lehigh University EEEMCal Meeting

Rosi Reed

Jan 25th, 2021

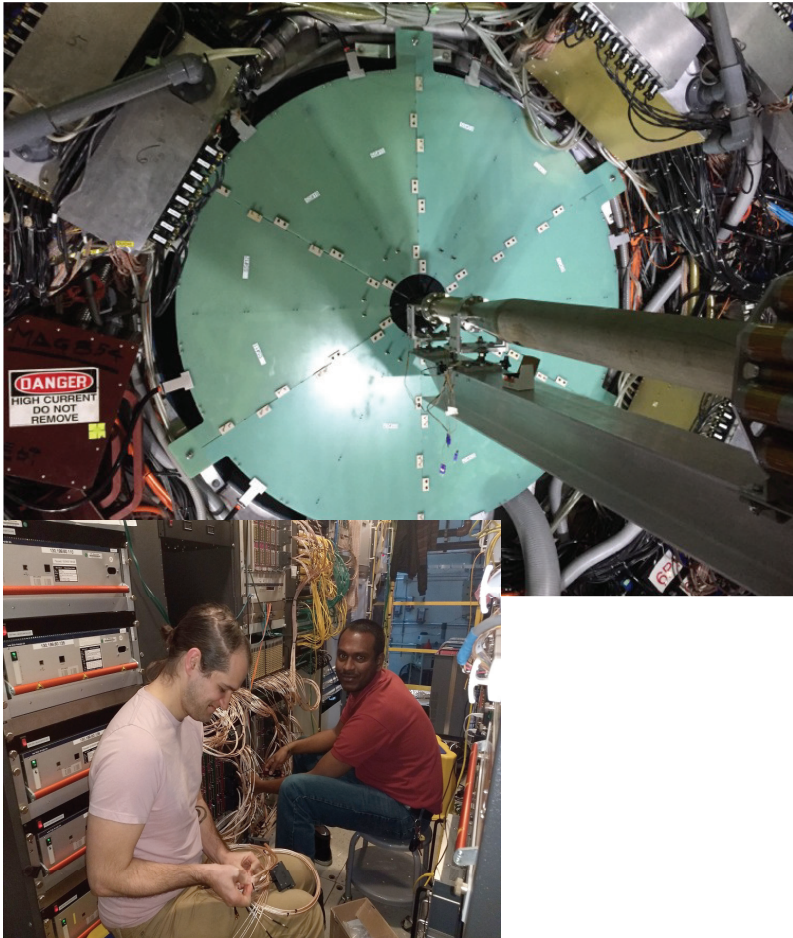
Lehigh Group

- Professors: Rosi Reed, Anders Knospe



- Graduate Students: Annika Ewigleben, Catherine Tomkiel, Skipper Kagamaster, Micah Meskowitz, Hannah Cooper, Tristan Protzman
- Usually group has 1 – 3 undergraduate working with the group

Activities – STAR EPD

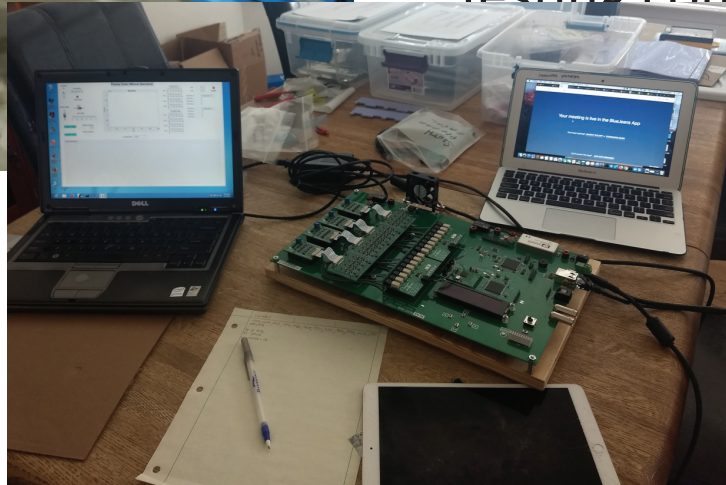


- Lehigh group designed, built, commissioned the STAR EPD with OSU group (project headed by M. Lisa OSU)
- Project started in 2015, detector commissioned in 2018
- Plastic scintillator disk read out by SiPMS used in STAR trigger system
- Current responsibilities
 - Installation, calibration and maintenance each RHIC Run

Activities – sPHENIX HCal

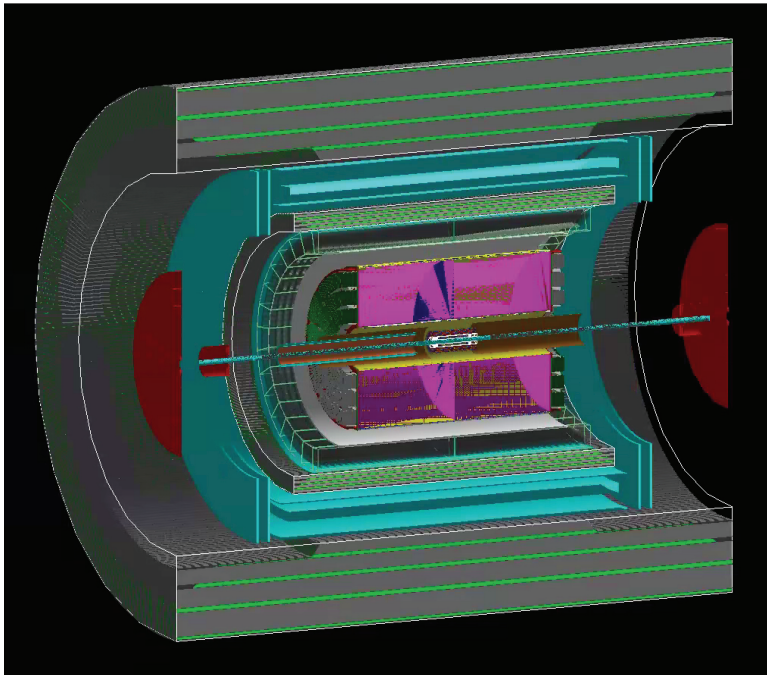


- Currently involved in sPHENIX HCal project
- Assembling + Testing SiPM amplifier/shaper boards
- Cabling, assembling HCal sectors
- Testing completed sectors

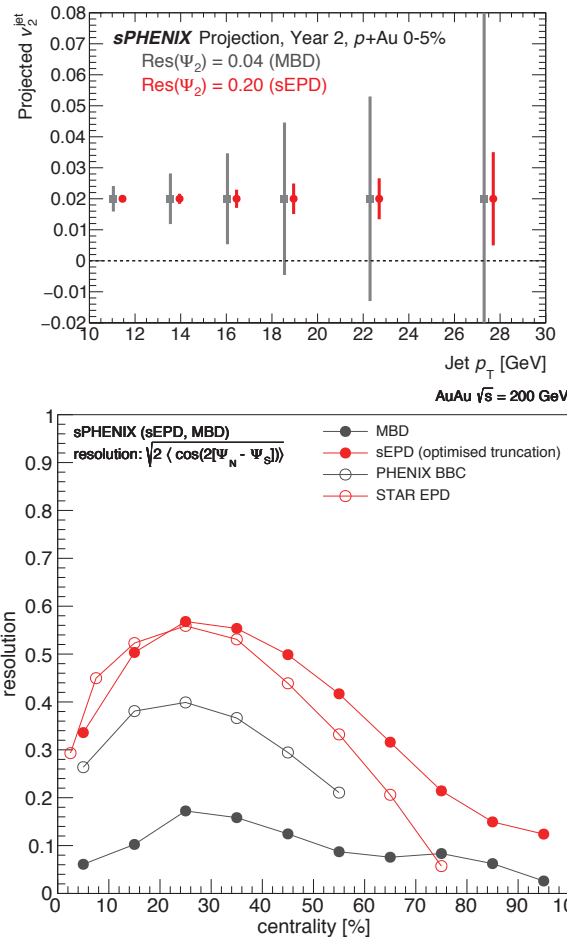


- sPHENIX will start data taking in early 2023
- Once detector is commission time commitments to sPHENIX will be decreased

Activities – sPHENIX EPD?



GEANT4 simulation of sEPD



- NSF MRI submitted Jan 19th, 2021
 - Collaboration with University of Colorado Boulder, Iowa State, Muhlenberg College, University of North Carolina Greensboro
- If funded construction would be Aug 2021 – Oct 2022
 - Same time scale as HCal

Lehigh Resources

- Two lab spaces (R. Reed)
 - Suitable for electronics testing, assembly, other small project
 - Potential to grow into larger space w/sEPD project
- One lab space under renovation (A. Knospe)
- Small machine job in physics
- University facilities at Packard lab available for faculty project (CNC machines, etc)
- Lehigh is about a 3 hour drive from BNL
 - Allows Lehigh personnel to spend time helping at BNL – especially useful for surprise timeline shifts

Lehigh Contribution

- Lehigh's large student group could provide person-power for activities at other places (test beams, etc)
- Assembly and test components at Lehigh
 - SiPMS?
 - Other electronic components
- Lehigh will hire 1 – 2 post-docs depending on MRI funding, should be able to contribute to software development
- Send people to any BNL based activities