



## Stony Brook University

10 Experimental Faculty, ~10 post docs, ~20 graduate students and ~20 undergraduate students with strong history of contributions & collaborations: PHENIX, sPHENIX, SoLID, MOLLER, RHIC & JLab polarimetry & EIC Detector R&D program eRD2, eRD6, eRD14, eRD23 ...



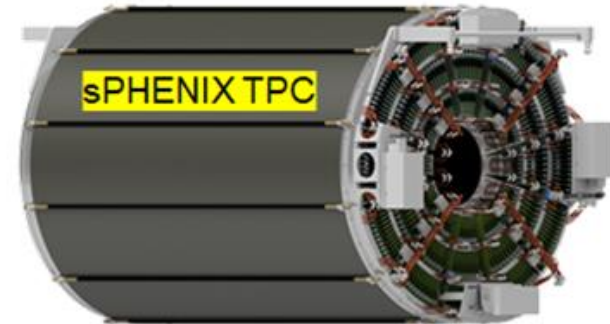
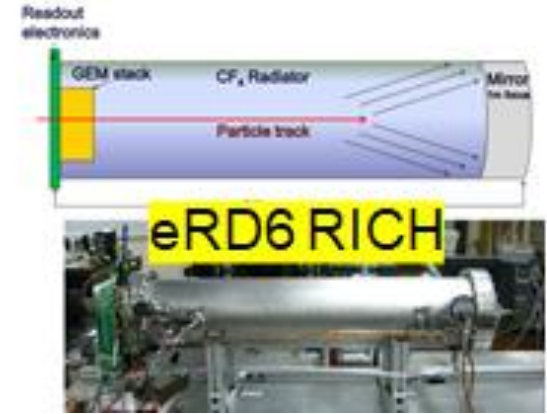
# SBU EOI & Potential Collaboration Partners

## Particle identification with **eRD6, eRD14 partners & collaborators**

- Hadron Blind Detector for eID → SBU/WIS built HBD for PHENIX
- High-momentum reach RICH prototype, technology implemented in EIC simulation
- R&D Novel Cherenkov radiator material **with India**
- dE/dx extension for sPHENIX TPC → EIC TPC
- LAPPD collaboration **with BNL**
- DIRC work in collaboration **with CUA and GSI**
- Co-convenor PID-WG YR

## Tracking **eRD6 partners & collaborators**

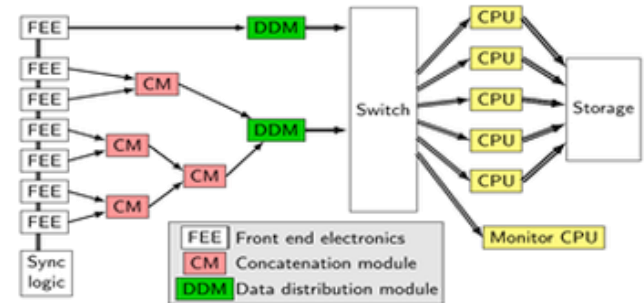
- **Designing and building sPHENIX TPC** →  
EIC detector central tracker? **with India**



# SBU EOI & Potential Collaborators

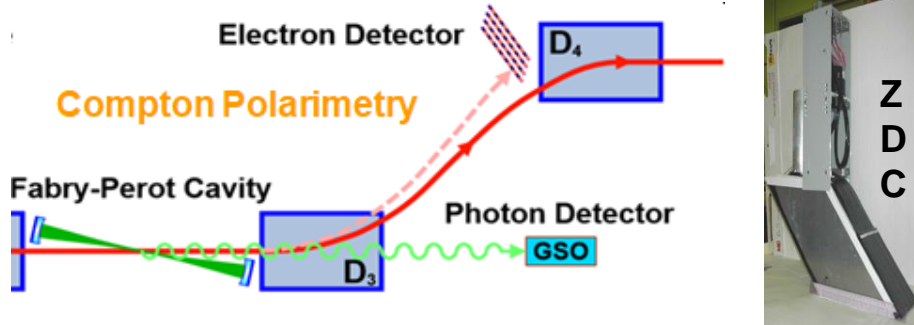
## Data acquisition eRD23 (sPHENIX, SWG, RIKEN, MIT, BNL, JLab, ...)

- Streaming (trigger-less) readout development leadership



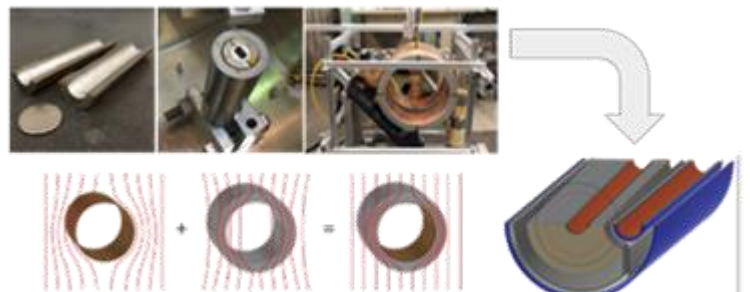
## Polarimetry and forward calorimetry (BNL, JLab, UVa, UMass & RIKEN)

- **Proposing** laser (and detector system) for Compton polarimetry
- Development of **new techniques** for hadron polarimetry
- With RIKEN: design, develop and build Zero Degree Calorimetry

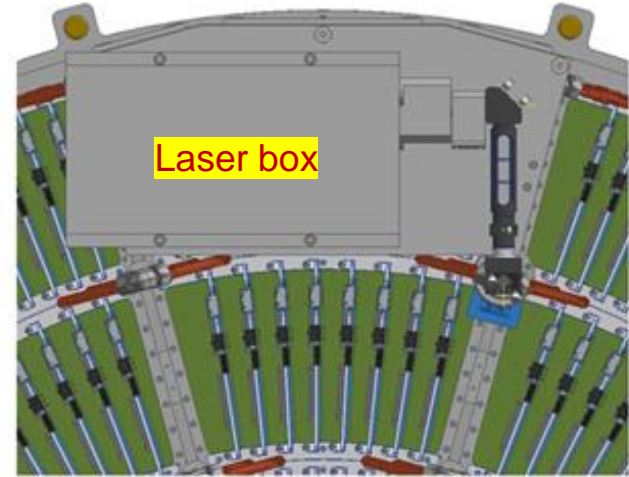
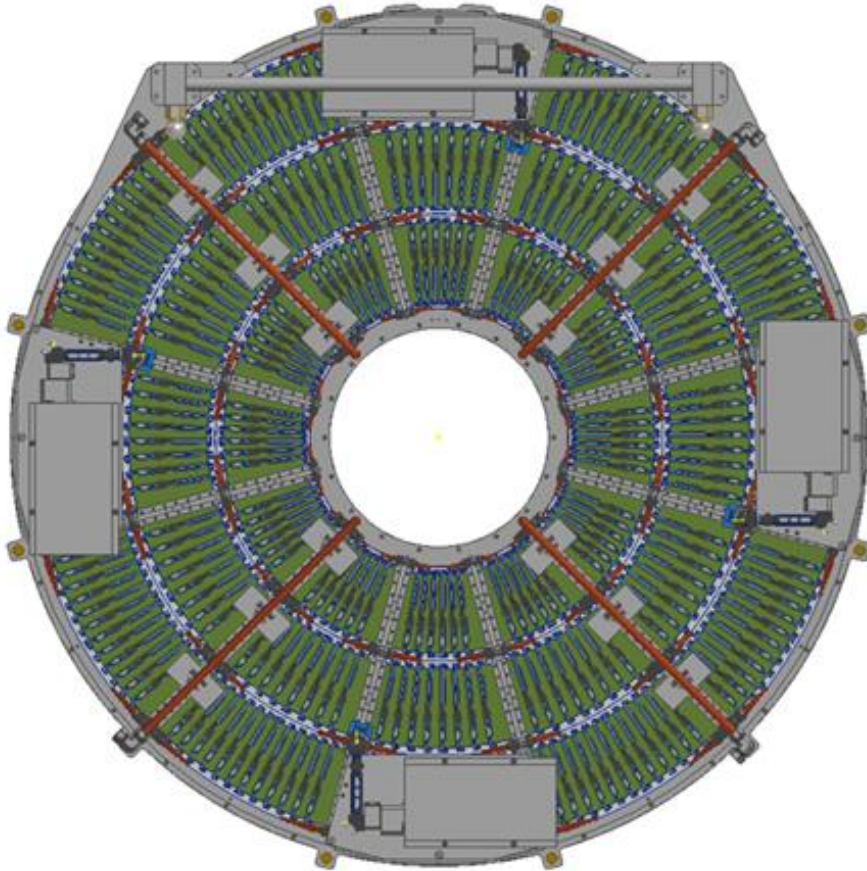


## Magnetic cloak eRD2 (with BNL/Magnet/CAD, JLab)

- Use as shielding with forward dipole



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sPHENIX TPC with an eye toward  
EIC

- Everywhere you see green  
you are looking at low mass
- Laser boxes only for sPHENIX

