

Abstract Submitted  
for the DNP16 Meeting of  
The American Physical Society

**Performance Study of a Prototype Modular RICH Detector for EIC Experiments** CHEUK-PING WONG, Georgia State Univ, ERD14 - EIC PID CONSORTIUM COLLABORATION — A PID consortium (called eRD14) has been formed to explore the frontier of particle identification technologies for the future Electron Ion Collider (EIC) experiments. A modular RICH detector prototype has been designed and constructed for identifying pions and kaons in the momentum range of 3 to 10 GeV/c. The main components of this detector that include a block of aerogel, a Fresnel lens, a four-sided mirror set, and a photosensor plane, are fitted in a  $10\text{cm} \times 10\text{cm} \times 10\text{cm}$  volume. The prototype was tested at Fermilab in April of 2016. The preliminary results from this beam test and the comparison with Geant4 simulation results will be presented in this talk.

Cheuk-Ping Wong  
Georgia State Univ

Date submitted: 29 Jun 2016

Electronic form version 1.4