A Proximity-Focusing RICH Detector for the ePIC Experiment at the EIC

The Electron-Proton/Ion Collider Experiment (ePIC) will be a large, multi-purpose detector to be installed at the Electron-Ion Collider (EIC) being built at Brookhaven National Laboratory. As robust particle identification (PID) capabilities are essential for fully realizing the EIC science program, ePIC contains several PID subsystems spanning different angular ranges. PID capability in the electron-going (negative) endcap is provided by a proximity-focusing Ring Imaging Cherenkov detector (pfRICH) designed to deliver 3-sigma separation between pions and kaons for momenta up to 7 GeV/c. This contribution will summarize the design of the pfRICH as well as ongoing fabrication and component testing efforts. GEANT-based performance simulations and integration into the ePIC geometry and reconstruction framework will also be discussed.