

Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Concept for an Electron Ion Collider detector built around the BaBar solenoid JIN HUANG, Brookhaven National Laboratory, PHENIX COLLABORATION — A conceptual design for an Electron Ion Collider (EIC) detector, which builds upon the BaBar solenoid and the planned PHENIX detector upgrades, has been developed. This concept is designed for the PHENIX interaction point on the proposed eRHIC collider, which adds an electron beam to the current RHIC collider to provide polarized e+p/e+A collisions. The PHENIX collaboration is planning a detector upgrade before the EIC era, which consists of large acceptance electromagnetic and hadronic calorimetry and tracking detectors built around the superconducting solenoid recently acquired from the decommissioned BaBar experiment at SLAC. In this EIC detector design, we utilize this upgrade and propose to add new detectors for measurements of a comprehensive EIC physics program. In this talk, we will give an overview for the detector design and its physics capabilities. Update on performance studies will also be discussed.

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Date submitted: 10 Jan 2014

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