

Detector Technologies for the EIC Exclusive Physics Program

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The future Electron-Ion Collider (EIC) will enable a broad scientific program spanning topics in nuclear physics not yet fully understood at past or present facilities. Among them is understanding the origin of mass and spin of the proton and being able to study the 3D structure of the proton (partonic imaging). Additionally, there are goals in electron + heavy-ion collisions aimed at understanding nuclear parton distribution functions and studying saturation, among other topics. In order to meet these and other physics goals, specialized detectors integrated with the outgoing hadron beamline are required. While these far-forward detectors are not new in and of themselves, the technology to be used at the EIC will be employed for the first time and has many synergies with other high-energy experiments. This presentation will primarily focus on these technologies and their application to the EIC physics program, and beyond.

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