

Calorimetry for the Electron Ion Collider

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The Electron Ion Collider (EIC) is a new facility that has been proposed in the US to study the structure of nuclear matter in the gluon dominated regime of QCD using Deep Inelastic Scattering (DIS) with precision electromagnetic probes. Two versions of this facility have been proposed, one at Brookhaven (eRHIC) and another at JLAB (JLEIC). It would have the capability of colliding polarized beams of electrons in the energy range from 5-18 GeV with heavy ions in the range from 10-100 GeV/A and protons up to 275 GeV/c. The eRD1 Consortium has been investigating a number of calorimeter options for an EIC detector which include high resolution crystals and glasses for measuring the scattered electron and new types of high density sampling calorimeters for full azimuthal and rapidity coverage for full event reconstruction. The latest results of the R&D on these various types of calorimeters will be presented along with an overview of the EIC physics program and its detector systems.

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