

FY 2013 Call for Proposals
Generic Detector R&D for an Electron Ion Collider
Fall 2012 Advisory Committee Meeting

In January 2011 Brookhaven National Laboratory announced a generic detector R&D program to address the scientific requirements for measurements at a future Electron Ion Collider (EIC). The primary goals of this program are to develop detector concepts and technologies that have particular importance for experiments in an EIC environment, and to help ensure that the techniques and resources for implementing these technologies are well established within the EIC user community.

This program is supported through R&D funds provided to BNL by the DOE Office of Nuclear Physics. It is not intended to be specific to any proposed EIC site, and is open to all segments of the EIC community. Proposals should be aimed at optimizing detection capability to enhance the scientific reach of polarized electron-proton and electron-ion collisions up to center-of-mass energies of 100-200 GeV and e-p equivalent luminosities up to a few times $10^{34} \text{ cm}^{-2}\text{s}^{-1}$. ***Details of proposed accelerator facilities for an EIC, and the requirements for a suite of “golden” experimental measurements can be found in Ref. 1.*** Funded proposals will be selected on the basis of peer review by a standing EIC Detector Advisory Committee consisting of internationally recognized experts in detector technology and collider physics. This committee meets approximately twice per year, to hear and evaluate new proposals, and to monitor progress of ongoing projects. The program is administered by the BNL Physics Department.

The website for this R&D program, including past proposals and Committee reports, is at:
https://wiki.bnl.gov/conferences/index.php/EIC_R%25D

This program is funded at an annual level of \$1.0M - \$1.5M, subject to availability of funds from DOE NP. The next meeting of the Advisory Committee is planned for November 2012 (exact dates to be announced). ***Proposals to be considered at this meeting should be received at BNL by Oct. 26, 2012.***

Proposals should include:

- A description of the project, including its relevance for the EIC experimental environment and science program and the expected results of the R&D project. Proposals must include a quantitative discussion of the performance requirements and corresponding detector specifications that motivate the R&D (based, e.g., on measurements described in Ref. 1.)
- A description of the necessary resources and the scientific and technical personnel who will carry out the project. To the extent possible, proposals should indicate specific personnel commitments for the R&D effort.
- A funding request and budget. Funds may be requested for a period of 1, 2, or 3 years.

Proposals should be submitted to Thomas Ludlam, BNL Physics Chair: ludlam@bnl.gov

Ref. 1: The EIC Science Case: a report on the BNL/INT/JLab program “Gluons and the Quark Sea at High Energies”, arXiv:1108.1713v2 [nucl-th]