

FY 2015 Call for Proposals
Generic Detector R&D for an Electron Ion Collider
Summer 2014 Detector Advisory Committee Meeting

In January 2011 Brookhaven National Laboratory, in association with Jefferson Lab and the DOE Office of Nuclear Physics, 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 100-150 GeV and e-p equivalent luminosities up to $10^{34} \text{ cm}^{-2}\text{s}^{-1}$. 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, with annual funds of about \$1.0M - \$1.5M, subject to availability of funding from DOE NP.

The website for this R&D program is at: https://wiki.bnl.gov/conferences/index.php/EIC_R%25D

The next meeting of the Detector Advisory Committee is planned for July 2014. ***Proposals to be considered at this meeting should be received at BNL by June 27, 2014.***

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 the 2012 White Paper, “Electron Ion Collider: The Next QCD Frontier”, arXiv:1212.1701.)
- 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. *Note that decisions at this meeting will be specifically for FY 2015 funding. Funding awards for out-years will be contingent on progress reports at future meetings.*

Proposals should be submitted to:

Thomas Ullrich, Brookhaven National Laboratory

Electronic submission is encouraged: thomas.ullrich@bnl.gov

Please join me in wishing Tom Ludlam a Happy Retirement.

Tom has spearheaded the EIC R&D efforts since their beginnings in Spring 2011. He did so with great enthusiasm and diligence. The many exciting R&D projects underway reflect the great value of this program and the progress we have made under his stewardship towards making the EIC a reality. Tom will be greatly missed!

It will be quite a challenge to step in his shoes. However, Tom has briefed me in detail and I hope that the transition will proceed without too many glitches. Please do not hesitate to touch base with me at any time.

Thomas Ullrich