EIC software EoI potential contributions from the LANL team

- The LANL team is working on the heavy flavor and jet physics studies together with the detector simulation for a proposed forward silicon tracker for the EIC.

Requirement	Technique	Contribution
Physics simulation e-p/A generator with background embedded	PYTHIA, c++, python, ROOT	• Develop the event configuration with various backgrounds.
Detector simulation Including vertex and track reconstructions	Fun4All, Eicroot, c++, GEANT3/4, ROOT	• Implementing a forward silicon tracker in Fun4All simulation • Vertex and track reconstruction for heavy flavor measurements
Analysis Heavy flavor and full jet reconstructions	Machine learning technique, ACTS algorithm	• Applying machine learning technique in heavy flavor identification

Contact Person: Xuan Li [xuanli@lanl.gov]