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Opportunities for Electroweak & Beyond The Standard Model Physics with the US Electron Ion Collider

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The Electron Ion Collider was recently accepted by the US Nuclear Science community as their high priority new facility to be built after the completion of FRIB (currently being built at the Michigan State University). The principle physics program of the EIC is aimed at understanding the role of gluons in QCD: structure and dynamics of partons in nucleons and nuclei. This program can be achieved in the center mass energy range of the machine between 40-140 GeV (10-20 times larger than the previous fixed target polarized beam experiments) and with luminosities reaching a few times 10^{33} cm^{-2} sec^{-1} (~100 times that of HERA) . However if all the accelerator physics advances planned in the technical design of this machine are realized, then the luminosity in the excess of 10^{34} cm^{-2}sec^{-1} will be possible. I will review the Electroweak and Beyond the Standard Model physics programs that might become possible at the future EIC. I will review preliminary experimental conditions and accelerator designs, and present opportunities for future collaboration on this topic.

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