

## LHeC and eRHIC

*Friday, 17 July 2009 15:35 (25 minutes)*

This talk is focused on possible designs and predicted performance of two proposed high-energy, high-luminosity electron-hadron colliders: eRHIC at BL and LHeC at CERN. Both the eRHIC and the LHeC will add polarized electrons to the list of colliding species in these versatile hadron colliders: 10-20 GeV electrons to 250 GeV RHIC and 50-100 to 7 TeV LHC. Both colliders plan to operate in electron-proton (in RHIC case protons are polarized as well) and electron-ion collider modes. These two colliders are complementary both in the energy range and in the physics goals.

I will discuss possible choices of the accelerator technology for the electron part of the collider for both eRHIC and LHeC, and will present predicted performance for the colliders. In addition, possible staging scenarios for these colliders will be discussed.

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