

Discussion

All participants

Electron Beam Polarimetry Workshop at U. Michigan

8/24/2007

General considerations:

- Longitudinal vs. Transverse beam polarimetry
 - Use differently for RR and LR design of the EIC?
 - Transverse in the Ring, Longitudinal in the IR?
 - Location and impact of the polarimeter design on the space available for e beam lattice
- Local polarimetry?
 - Only direction of e spin vector or longitudinal polarimetry magnitude as well in the IR?
- Energy variability of e beam from 3 GeV to 20 GeV
 - Is a single design sufficient? Dynamic range of any polarimeter wide enough? If not what options do we have?
- High luminosity: various issues:
 - E-beam currents very different than HERA?
 - Crossing frequency 2-30 ns. Very different than HERA, RHIC & HERA
 - Beam-beam effects: depolarization of colliding bunches w.r.t. non-colliding. Measure and diagnostics associated with this with e-pol
 - Crab crossing of bunches... effect on polarization, how to measure it?

Future:

- Attendees agreed to be part of the e-pol working group or task force
- Wolfgang Lorenzon agreed to coordinate the initial activities and directions for the group
 - This group will pick these numbers up and start working towards an experimental design of the polarimeter with some preliminary simulations based on HERA and other experience.
 - Both eRHIC and ELIC lattice information including various magnetic field strengths around the IR will be available on EIC webpage(s)
- E-mail list will be used by the group (AD) will help this setup
- Regular meetings requested: every three/four months. Two of which could be part of the annual collaboration meetings

Next Meetings

- EIC Collaboration meeting II at Stony Brook University, December 7,8, 2007
- EIC Collaboration meeting III at Jlab/Hamptons in May 2008
- EIC Collaboration meeting IV at Munich, Germany Summer/Fall 2008
- E-Polarimetry group will meet at above venues but also some time between these meetings in smaller groups.

Thank you all for coming,
and
Wolfgang Lorenzon and his group at U.
Michigan for hosting us!