

EIC AC Institutional Board Meeting

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EIC AC Working Groups: project priorities

- **Beam-beam effects** – confirm hadron diffusion rates and our luminosity models with “all” effects included
- **Polarized Beams and Polarimetry** – orbit correction algorithms for the RCS (to preserve polarization during acceleration 0.75 GeV to 18 GeV)
- **EIC commissioning tools** – create a virtual EIC machine (digital twin)
- **Collimation, MPS** – MPS development (connect to the digital twin); collimator technology and materials
- **Electron source/pre-injector** – looking for in-kind partners (linac, diagnostics) and cost-effective solutions
- **Impedance and Collective effects** – we are projecting that hadron beams will be unstable after cooling at injection energy. Looking for confirmation and for solutions (Landau damping, etc)
- **Second IR** – this is an upgrade to the project. We are likely moving the second IR from EIC IP8 to EIC IP12 location. Need to update the design.
- **High Energy Beam Cooling** – this is an upgrade to the project. Presently, fully in the R&D stage. Many opportunities.