ACCELERATOR SEMINAR

RHIC Performance with Stochastic Cooling for Ions and Electron Lenses for Protons

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The Relativistic Heavy Ion Collider (RHIC) has two main operating modes with heavy ions and polarized protons respectively. In addition to a continuous increase in the bunch intensity in all modes, two major new systems were completed recently mitigating the main luminosity limit and leading to significant performance improvements. For heavy ion operation stochastic cooling mitigates the effects of intrabeam scattering, and for polarized proton operation electron lenses mitigate the beam-beam effect. We present the performance increases with these upgrades for heavy ions and polarized protons, as well as an overview of all operating modes past and planned. The largest performance upgrade under way is a bunched beam electron cooler to increase the luminosity of Au+Au operation at the lowest energies, with Au beam stored below the nominal injection energy.

Friday, February 19, 2016
11:00 a.m.
ARC, Room 231/233

Coffee before seminar beginning at 10:45 p.m.

Jefferson Lab

For further info, please contact
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