

ACCELERATOR SEMINAR

“The Search for the Nuclear Phase Space Critical Point at RHIC”

***Todd Satogata,
Brookhaven National Laboratory***

Significant evidence points to the existence of a phase transition critical point on the QCD phase diagram. Experimental identification of this critical point would be a major step in understanding nuclear phase transitions. If this critical point exists, it should appear in a range of RHIC collision cm energies from $\sqrt{s_{NN}}=5-50$ GeV/u. The lowest part of this range is over a factor of four below RHIC design injection energy. This talk will review RHIC experience and challenges for low energy operations, including harmonic number changes, reduced field quality, nonlinear orbit control, luminosity monitoring, and potential cooling upgrades. I will also comment on preparations for first RHIC operations at $\sqrt{s_{NN}}=7.7$ GeV/u scheduled for early 2010.

Friday, February 5, 2010

9:30 a.m. – 10:30 a.m.

CEBAF Center, Room A110

**Coffee before Seminar
Beginning at 9:00 a.m.**