HIGH SCHOOL PHYSICS TEACHERS' DAY

at the 2011 Particle Accelerator Conference

sponsored by the

Division of Physics of Beams of the American Physical Society

Wednesday, March 30, 2011

Marriott Marquis Hotel at Times Square

Majestic Room (Sixth Floor)

AGENDA

8:30 – 8:55 **Breakfast and Announcements –** An opportunity to meet the workshop presenters, DPB members and to make connections with other physics teachers in the area.

8:55 – 9:00 **Welcome** – *Derek Lowenstein - BNL*

9:00 – 9:45 **Physics Research Talk – Nuclear and Particle Physics at RHIC** --*Thomas Hemmick Professor of Physics, Stony Brook University.*

9:45 – 10:00 **Break**

10:00 – 11:30 **Hands-On Workshops – The Physics of Tennis,** *Karl Hedrick, Professor of Mechanical Engineering, University of California, Berkeley*

A recently developed laboratory that has been designed at UC Berkeley to measure tennis racquet performance measures such as power, shock & vibration, spin generation and control. The metrics for these measures will be presented and some preliminary experimental results will be presented. Secondly some simple dynamic modeling that can be used to predict these measures will be discussed and every participant will be provided the modeling notes.

11:30 – 12:15 **Physics Research Talk – Physics of Accelerators** --*Todd Satogata, Senior Staff Physicist, Thomas Jefferson Accelerator Laboratory.*

12:15 – 1:15 **Lunch –** An opportunity to network with PAC'11 attendees

1:15 - 1:30 **Announcements**

1:30 – 2:15 **Physics Research Talk –A Fantastic New Microscope: The Synchrotron** – *Ernest Fontes, Professor Of Physics, CHESS Associate Director, Cornell*

2:15 – 2:30 **Break**

2:30 – 4:00 **Hands-On Workshops – Cosmic Ray Detection,** *Helio Takai, Senior Scientist, BNL*

Participants will be introduced to particle physics and cosmic ray science through live experiments. Participants will observe Brownian motion experiment, participate in the photoelectric effect demonstration, measure charge to mass ratio for electrons, observe tracks in a cloud chamber with magnetic field and detect cosmic rays. Each participant will receive a Petri dish cloud chamber.