



ID contributo: 7

Tipo: **non specificato**

## APEX: A Prime EXperiment

*martedì 16 ottobre 2012 10:20 (35 minuti)*

APEX is a fixed target experiment at Thomas Jefferson National Accelerator Facility (JLab) in Virginia, USA, that searches for a new gauge boson ( $A'$ ) with sub-GeV mass and coupling to ordinary matter of  $g' \sim (10^{-2} - 10^{-6}) e$ . Electrons impinge upon a fixed target of high-Z material to produce an  $A'$  via a process analogous to photon bremsstrahlung, which then decays to an  $e^+ e^-$  pair that is detected by the JLab Hall A High Resolution Spectrometers. A test run was held in July of 2010, covering an  $A'$  mass range from 175 to 250 MeV and couplings  $g'/e > 10^{-3}$ . A full run is approved and will cover  $m_{A'} \sim 65$  to 525 MeV and  $g'/e > 2.3 \times 10^{-4}$ . I will present the results of the test run and report on the current status of preparations for the full run.

**Autore principale:** BEACHAM, James (New York University)

**Relatore:** BEACHAM, James (New York University)

**Classifica Sessioni:** Fixed target experiments I