



CERN Joint EP/PP Seminars

SPEAKER: Prof. Daniel KAPLAN (Director, IIT Center for Accelerator and Particle Physics)
TITLE: **New Experiments with Antiprotons**
DATE: Tue 14/10/2008 16:30
PLACE: Council Chamber **

ABSTRACT

Fermilab operates the world's most intense antiproton source. Newly proposed experiments can use those antiprotons either parasitically during Tevatron Collider running or after the Tevatron Collider finishes in about 2010. For example, the annihilation of 8 GeV antiprotons might make the world's most intense source of tagged D0 mesons, and thus the best near-term opportunity to study charm mixing and, via CP violation, to search for new physics. An experiment using a Penning trap and an atom interferometer could make the world's first measurement of the gravitational force on antimatter. Other potential measurements will also be discussed, to give a flavor of the veritable "physics cornucopia" that could be manifest.