

APR09-2009-020034

Abstract for an Invited Paper  
for the APR09 Meeting of  
the American Physical Society

**Kavli Foundation Lectureship: Nature's Highest Energy Messenger: Pierre Auger Observatory**

JAMES W. CRONIN, University of Chicago

The Pierre Auger observatory has been operating in Argentina since 2004. It began with 300 surface detectors and was recently completed with 1600 detectors covering a surface of 3000 square kilometers. The array of surface detectors is overlooked by four fluorescence telescopes which provide energy calibration and longitudinal observation of the air showers produced by the cosmic ray primaries. Data on the spectrum and the elongation rate up to 100 EeV will be presented. Limits on the neutrino and photon components of the cosmic rays will be presented. Plans for the northern observatory will be presented.