



CERN Joint EP/PP Seminars

SPEAKER: Graziano Venanzoni (INFN)

TITLE: **KLOE MEASUREMENT OF THE $\sigma(e^+e^- \rightarrow \pi^+\pi^-(\gamma))$ WITH INITIAL STATE RADIATION AND THE $\pi\pi$ CONTRIBUTION TO THE MUON ANOMALY**

DATE: Tue 23/03/2010 11:00

PLACE: Council Chamber

ABSTRACT

The KLOE experiment at the ϕ factory DAΦNE in Frascati (near Rome) is the first to have employed Initial State Radiation (ISR) to precisely determine the $e^+e^- \rightarrow \pi^+\pi^-(\gamma)$ cross section below 1 GeV. Two different configurations have been investigated: (a) a non-observed photon, emitted at small angle (SA), whose energy is obtained by kinematics; (b) a photon emitted at large angle and detected in the calorimeter (LA) where its energy is measured. With the two samples the $M_{\pi\pi}^2$ range $0.1 < M_{\pi\pi}^2 < 0.95 \text{ GeV}^2$ is covered. KLOE has recently published a measurement of the p^+p^- cross section at SA, and presented a new independent measurement at LA using data taken in 2006 at a collision energy of 1 GeV, 20 MeV below the ϕ -peak. We present past results and discuss future prospects of these measurements as well as their impact on the evaluation of the hadronic contribution to the muon anomaly.