CERN Joint EP/PP Seminars

SPEAKER: Jeannine Wagner (Karlsruhe University)

TITLE: **Single Top-Quark Production at CDF**

DATE: Tue 22/04/2008 16:30

PLACE: Council Chamber **

ABSTRACT

The Tevatron proton anti-proton collider at Fermilab with a center of mass energy of 1.96 TeV is at the moment the only place to produce the heaviest known elementary particle, the top-quark. In the last years data corresponding to an integrated luminosity of more than 3/fb have been collected with the CDF experiment whereof about 2/fb have been reconstructed and analysed.
Although the top-quark is now known more than one decade only the top-pair production via the strong interaction is well established while there is evidence for, but no observation of single top-quark production via the electroweak interaction.
The main challenge of the single top-quark search at the Tevatron is the huge background from W+jets events and QCD events, which makes the use of advanced multivariate techniques essential. The recent single top analyses using either the matrix element method, neural networks, likelihood discriminants or boosted decision trees as well as the combination of the former three analyses will be presented and the results from CDF will be compared with the results from DO.

Organised by: Maria Spiropulu / PH ---------- **Tea and coffee will be served at 16:00