

Top Cross Section and properties measurements at LHC

Thursday, 16 July 2009 15:31 (18 minutes)

The top quark will be a fundamental element of the early physics program at the Large Hadron Collider (LHC). The LHC unparalleled energy of the proton-proton collisions and large top quark production may provide an improved reach in several top quark measurements.

We will show the expected performance of the ATLAS and CMS experiments with a focus on the early measurements of the top pair and single top production. The LHC prospects of the measurement of the V_{tb} element of the Cabibbo-Kobayashi-Maskawa (CKM) from top pairs and single top will be discussed. We will also describe the LHC potential for the study of the top quark properties and physics beyond the Standard Model coupled to the top quark sector, discussing the measurements of the top quark charge, spin, spin correlation, new heavy gauge bosons and decays related to flavor changing neutral currents.

The sensitivity of the ATLAS and CMS experiments will be analyzed under different scenarios of LHC center of mass energy and integrated luminosity.

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Session Classification: VII. Standard Model Electroweak Physics

Track Classification: Standard Model Electroweak Physics