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TOP Production at the LHeC and FCC-he

Thursday 19 April 2018 09:48 (24 minutes)

In this talk we present an overview of top physics at two possible future electron-proton (ep) colliders at the high energy frontier, the LHeC and the FCC-eh. Selected topics include but are not limited to top structure function, top parton distribution functions, top spin polarization, top electric charge, measurement of Vtb, anomalous ttg, ttZ, tbW, tqg, tqH couplings and CP phase
of ttH coupling.

Direct Measurement of Vtd and Vts through electron proton collisions by Hao Sun:

We perform a study on the direct measurement of Vtd and Vts CKM matrix elements, at the electron proton colliders, through W boson and bottom quark associated production channel as well as W boson and jet associated production channel. The W and bottom(jet) final states can be produced by s-channel single top decay or t-channel top exchange. We find even at the current LHC based ep collider, the channels we are using, already result in very good limits, thus good direct measurement potentials to the Vtd and Vts CKM matrix elements.

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