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Toward Precision Top Quark Measurements in e+e- collisions

Saturday, 8 July 2017 12:00 (15 minutes)

This talk presents a review of precision top quark measurements at linear e+e- colliders, with results from the ILC detector concepts and the CLIC detector and physics group. After a brief overview of established elements of the top physics programme, the contribution focuses on new developments in the full-simulation studies of key measurements. These include improvements in the experimental strategies for top quark pair production in the continuum, both at 380-500 GeV and at high energy where top quarks are highly boosted. New results are presented on the potential of a linear collider to measure the top electro-weak couplings, where the precision on the CP-violating dipole moment has been evaluated in full simulation for the first time. The study into the potential of the top quark mass measurement at threshold is updated, including a thorough evaluation of theoretical uncertainties. New results on the reach of searches for rare flavour-changing neutral current decays are presented as well.

Experimental Collaboration

LCC, CLIC

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