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Measurement of the inclusive $t\bar{t}$ cross-section in pp Collisions at $\sqrt{s} = 8$ TeV with the ATLAS experiment

This poster presents the measurement of the inclusive top-quark pair-production cross-section in the lepton+jets channel with 20.2 fb^{-1} of 8 TeV data collected with the ATLAS detector at the LHC, using a neural-network discriminant and the reconstructed mass of the hadronically decaying W boson. Events are selected by requiring at least four jets, where at least one of the jets is required to be b-tagged. Signal events from the $t\bar{t}$ processes are separated using a neural-network discriminant based on final-state observables. The $t\bar{t}$ production cross-section is obtained from a binned maximum-likelihood fit to the neural-network discriminant and the reconstructed mass of the hadronically decaying W boson. The inclusive $t\bar{t}$ cross-section is measured to be consistent with the Standard Model prediction.

Experimental Collaboration

ATLAS

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