

Phenomenology 2025 Symposium



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ATLAS results on top quark cross section measurements

Monday 19 May 2025 17:00 (15 minutes)

The exceptionally large dataset collected by the ATLAS detector at the highest proton-proton collision energies provided by the LHC enables precision testing of theoretical predictions using an extensive sample of top quark events. Measurements of the inclusive top quark production rates at the LHC have reached a precision of several percent and test advanced Next-to-Next-to-Leading Order predictions in QCD. Differential measurements in several observables are important to test SM predictions and improve Monte Carlo generator predictions. Recent measurements include total and differential top quark cross sections, as well as detailed studies of top quark production at various center-of-mass energies. This contribution presents the latest highlights from the ATLAS top quark physics program, including key measurements from Run II, and new results using Run III data.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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