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Type: Talk

## Recent highlights of top-quark cross section and properties measurements with the ATLAS detector at the LHC

Thursday, July 13, 2023 11:00 AM (25 minutes)

The remarkably large dataset collected with the ATLAS detector at the highest proton-proton collision energy provided by LHC allows to use the large sample of top quark events to test theoretical predictions with unprecedented precision. Recent measurements of total and differential top-quark cross sections as well properties of top-quark production are presented, including new measurements of top-quark pair production and single-top production at 5 and 13 TeV as well as first measurement of the 13.6 TeV cross-section of  $t\bar{t}$  events. Further highlights are the new measurements of angular properties such as the W-boson polarisation in  $t\bar{t}$  events, new top-quark mass measurements as well as distributions sensitive to colour reconnection and jet substructure. Several measurements are interpreted within the Standard Model Effective Field Theory, yielding stringent bounds on Wilson coefficients.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

ATLAS

### Is the speaker for that presentation defined?

No

### Details

N/A

### Internet talk

Maybe

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