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Type: Talk

## CMS Top

Wednesday, July 12, 2023 11:00 AM (25 minutes)

Recent results on top quark properties and interactions are presented, obtained using data collected with the CMS experiment at 13 TeV and 13.6 TeV pp center-of-mass energies. The first measurement of the top quark pair cross section at 13.6 TeV is done with data collected by the CMS experiment, in good agreement with the standard model prediction. The first observation of the production of four top quarks in proton-proton 13 TeV collisions is reported. Also, it is presented the first evidence for the standard model production of a top quark in association with a W and a Z boson in multilepton final states. Inclusive and differential cross section measurements of  $t\bar{t}b\bar{b}$  production are also performed in the lepton jets channel. Further results are the search of the violation of Lorentz invariance using top quark pair ( $t\bar{t}$ ) production and the top pair charge asymmetry. The results are compared with predictions from the standard model.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

CMS

### Is the speaker for that presentation defined?

Yes

### Details

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### Internet talk

No

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