Search for four-top-quark production in the single-lepton and opposite-sign dilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector.

Faraj M.

Università degli Studi di Udine

A search for the production of $t\bar{t}t\bar{t}$ using proton-proton collisions data at center of mass energy $\sqrt{s} = 13$ TeV with an integrated luminosity of 36 fb$^{-1}$ recorded by the ATLAS experiment at LHC is presented. The considered final states are events with multiple jets, $b$-jets and either one lepton or two opposite sign leptons with high-transverse momentum. The result is combined with the previous same-sign dilepton and multilepton searches carried out by ATLAS. No significant excess above the Standard Model expectation is observed.