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Type: Oral

Top-quark pair production in $p+\text{Pb}$ collisions in the ATLAS experiment

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Measurements of top-quark pairs in heavy-ion collisions are expected to provide novel probes of nuclear parton distribution functions at high Bjorken- x values, which are difficult to access experimentally using other available probes. We report the observation of top-quark pair production in proton-lead collisions at the centre-of-mass energy of 8.16 TeV in the ATLAS experiment at the LHC. Top-quark pair production is measured in the lepton+jets and the dilepton channels, with a significance well above 5 standard deviations in each channel separately. The nuclear modification factor R_{pA} is also measured for the first time for the top-quark pair process.

Category

Experiment

Collaboration (if applicable)

ATLAS Collaboration

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