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## Evidence for four-top-quark production in the multilepton final state in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector

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A search is presented for four-top-quark production using proton-proton collision data at a centre-of-mass energy of 13 TeV collected by the ATLAS detector at the Large Hadron Collider with an integrated luminosity of 139/fb. Events are selected if they contain a same-sign lepton pair or at least three leptons (electrons or muons). Jet multiplicity, jet flavour and event kinematics are used to separate signal from the background through a multivariate discriminant, and dedicated control regions are used to constrain the dominant backgrounds. The four-top-quark production cross section is measured to be  $24^{+7}_{-6}$  fb. This corresponds to an observed (expected) significance with respect to the background-only hypothesis of 4.3 (2.4) standard deviations and provides evidence for this process.

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