

A Search for $t\bar{t}$ Resonances in Lepton Plus Jets Events with ATLAS using 14 fb^{-1} of Proton-Proton Collisions at $\sqrt{s} = 8 \text{ TeV}$

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Some Beyond the Standard Model theories predict new particles that decay predominantly into top-antitop quark pairs. A search for top-antitop quark resonances that decay into the lepton plus jets final state is carried out with the ATLAS experiment at the LHC using 14 fb^{-1} of $\sqrt{s} = 8 \text{ TeV}$ proton-proton collisions. The search considers both cases where all of the final state jets are isolated and where some or all of the top quark decay products are merged into a single jet. Mass exclusion limits at a 95% credibility level are set for two benchmark models, one predicting leptophobic topcolor Z' bosons and the other predicting Randall-Sundrum Kaluza-Klein gluons.

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