

Search for top squarks with ATLAS at $\sqrt{s} = 13\text{TeV}$ in fully hadronic and semi-leptonic final states

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Looking for supersymmetry, the search for a scalar partner of the top quark plays a major part due to its role in stabilising the Higgs boson mass. In the parameter space where a decay of a top squark into a top quark and the neutralino, a Dark Matter candidate, is possible, searches asking for either zero or one charged lepton are most sensitive. Events with an isolated electron or muon simplify event classification, whereas the branching fraction into fully hadronic final states is higher. In both cases b-jets are produced and missing transverse momentum is observed due to undetectable neutralinos. This contribution presents methods used by these searches and the results obtained with data taken in 2015 and 2016 with the ATLAS detector at $\sqrt{s} = 13\text{ TeV}$.

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