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Search for top squark pair production in final states with one isolated lepton, jets and missing transverse momentum in $\sqrt{s}=8$ TeV pp collisions using 21 fb-1 of ATLAS data.

This poster presents the latest results of a search for top squark pair production in final states with one isolated lepton, jets, and missing transverse momentum in $\sqrt{s}=8$ TeV pp collisions using 20.7 fb-1 of ATLAS data. Two top squark decay scenarios are considered: (a) to a top quark and a stable undetected neutral particle (LSP), (b) to a bottom quark and a chargino, where the chargino decays via an on- or off-shell W boson to the LSP. The update contains a new dedicated shapes-fit targeting the challenging region where $m(\text{stop})$ approaches $m(\text{top}) + m(\text{LSP})$.

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