

Search for strongly-produced superpartners in final states with two same-sign leptons or three leptons with the ATLAS detector using 20 fb-1 of LHC pp collisions at 8 TeV

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Search for supersymmetry in final states with a pair of leptons (electrons or muons) of the same electric charge, or three leptons, using 20.3 fb-1 of proton-proton collision data at $\sqrt{s} = 8$ TeV recorded by the ATLAS experiment at the LHC in 2012. Several signal regions are studied with different requirements on the jet and b-jet multiplicities, missing transverse momentum, effective mass and transverse mass. They are designed to maximize the sensitivity to several scenarios of strongly-produced superpartners. No excess above the standard model background expectation is observed. Limits are set on the visible cross section of new physics within the kinematic requirements of the search. The results are interpreted as limits on the parameters of several models such as gluino-mediated top squark, direct bottom squark and the production of squarks and gluinos decaying to gauginos and sleptons.

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