

Searches for natural supersymmetry with the ATLAS detector

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Naturalness arguments for weak-scale supersymmetry favour supersymmetric partners of the third generation quarks, Higgs and electroweak gauge bosons with masses not too far from those of their Standard Model counterparts. Real and virtual production of third generation squarks via decay of a gluino can be significant if the mass of the gluino does not exceed the TeV scale. Top or bottom squarks as well as gauginos and sleptons with masses less than a few hundred GeV can also give rise to direct pair production rates at the LHC that can be observed in the data sample recorded by the ATLAS detector in 2011 and 2012. The talk presents recent ATLAS results from searches for gluino mediated and direct stop and sbottom pair production in various final states, and for electroweak production of gauginos and sleptons in final states with leptons.

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