



**HEP 2013
Stockholm
18-24 July 2013**



Contribution ID: 362

Type: **Poster Presentation**

Search for direct sbottom and stop pair production in final states with missing transverse momentum and two b-jets with the ATLAS detector.

We report on a search for pair production of the scalar partners of bottom and top quarks in 20.3 fb⁻¹ of pp collisions at a centre-of-mass energy of 8 TeV using the ATLAS experiment. The study focuses on final states with large missing transverse momentum, no leptons (electrons or muons) and two jets identified as originating from a b-quark. This final state can be produced in a R-parity conserving minimal supersymmetric scenario, assuming that the scalar bottom decays exclusively into a bottom quark and a neutralino and the scalar top decays into a bottom quark and a chargino, with a small mass difference with the neutralino.

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Track Classification: Higgs and New Physics