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Searches for strong production of supersymmetric particles with the ATLAS detector

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Supersymmetry (SUSY) provides elegant solutions to several problems in the Standard Model, and searches for SUSY particles are an important component of the LHC physics program. Naturalness arguments for weak-scale supersymmetry favour supersymmetric partners of the gluons and third generation quarks with masses light enough to be produced at the LHC. This talk will present the latest results of searches conducted by the ATLAS experiment which target gluino and squark production, including stop and sbottom, in a variety of decay modes. It covers both R-parity conserving models that predict dark matter candidates and R-parity violating models that typically lead to high-multiplicity final states without large missing transverse momentum.

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