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Top properties measurements with the ATLAS detector

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The top quark is unique among the known quarks in that it decays before it has an opportunity to form hadronic bound states. This makes measurements of its properties particularly interesting as one can access directly the properties of a bare quark. Measurements of the charge asymmetry in topquark pair events are presented. The measurements use both the 7 and 8 TeV ATLAS datasets and probe models of physics beyond the Standard Model. A measurement of the correlation between the direction of the spins of topquark pairs is also presented. The measurement agrees with the Standard Model and is used to set limits on the production of the supersymmetric partner of the top quark. In addition, a novel measurement of colour flow in topquark pair events is presented. The measurement uses the jets originating from the Wboson and demonstrates the ability of the colour flow observable to distinguish between colour octet and colour singlet final states.

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