

Abstract Submitted
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Observation of a spinning top at the LHC AKIRA SHIBATA, STEVE LLOYD, GRAHAM THOMPSON, LUCIO CERRITO, University of London (QMWC) — The LHC and the ATLAS detector will enable us to carry out precision measurements of the top quark properties very shortly after the startup, and we will be searching for deviations from the standard model prediction at the energy scale close to electro-weak symmetry breaking. The single top production provides us with a unique opportunity to study the spin properties of the top production bWt vertex, where maximal polarization is predicted by the SM through the V-A coupling. Due to its massiveness, the top decays before hadronization and its spin information is directly propagated to the decay products. Therefore, in this analysis, the top quark is reconstructed using a kinematic fit and the polarization is measured using a template method. Results using the Atlas full-simulation samples will be shown. The focus is on understanding the effect of background from W+jets events using the latest MC generators.

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