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Measurement of Single-top Quark Production with the ATLAS Detector

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We use 2011 data from the ATLAS detector to isolate the production of single-top quarks. This electroweak top-quark production is expected to be sensitive to new physics such as flavor changing neutral currents or W' production, and can also be an important background for processes like the Higgs boson production. The data for this analysis are collected from collisions occurring at 7 TeV center-of-mass energy and then several selections are applied to these events. The selections are determined from studies of simulated events and chosen to isolate the signal while removing background events, based on the kinematic signature of the single-top quark process. We report the likelihood that the resulting sample of data events are single-top quarks and discuss the kinematics of this process.

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