

Reconstruction of Single-Top Events in the Semi-Leptonic t-Channel at $\sqrt{s}=7\text{TeV}$

The electro-weak production of single top quarks is of great interest for many aspects in and beyond the standard model. The reconstruction of such events is a demanding task and requires skilful analysis methods in order to achieve a good background suppression. At ATLAS, a simple cut-based analysis is used for the reconstruction of single-top t-channel events, as well as more complex methods. All of them are based on the selection of events containing an isolated high-pT electron or muon, jets and missing transverse energy. The different methods are described in detail and the results of their application to pp collision data recorded with the ATLAS detector in 2011 at a centre-of-mass energy of $\sqrt{s}=7\text{TeV}$ is presented.

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