

Measuring the tWZ process with full Run-II ATLAS data

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The production of a single top quark in association with a W^\pm and Z boson ($tW^\pm Z$) is sensitive to both the neutral and charged electroweak couplings of the top quark as the process involves the simultaneous production of a W boson and a Z boson in association with the top quark. However the process is so rare that it has never been observed by any particle physics experiment. The latest datasets recorded by ATLAS are sufficiently large to allow a potential observation of the process. This talk will detail an ongoing analysis of the full run II ATLAS dataset in order to measure the tWZ process. The talk will focus on the development of a technique to kinematically reconstruct hadronically-decaying W bosons with a machine-learning based approach and the optimisation of lepton p_T criteria in the basic event selection.

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