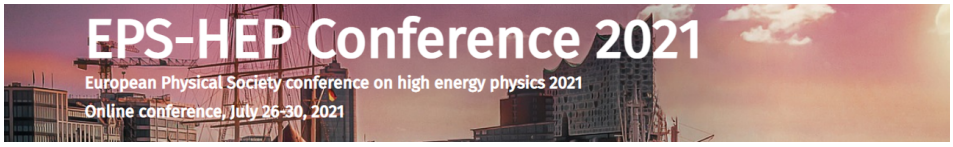

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Improved inclusive cross-section measurement of top quark in association with Z boson at the CMS experiment

Single top quark production in association with a Z boson (tZq) was recently observed for the first time by both the CMS and ATLAS experiments. This rare process provides experimental access to the coupling of the top quark to the Z boson and is interesting as a probe for several new physics scenarios. We report on an inclusive tZq cross-section measurement that has been improved with respect to the first observations. It employs an optimized lepton identification strategy using boosted decision trees, and a data-driven background rejection method. The analysis improvements together with a larger data set result in a substantially better precision with respect to earlier work, showing the potential for future precision measurements of this rare process.

Collaboration / Activity

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