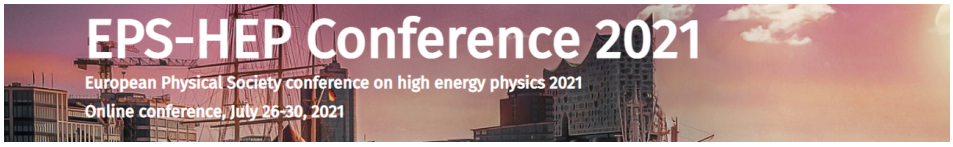

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Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at $\sqrt{s} = 13$ TeV with the ATLAS detector

The production of a top-quark-antiquark pair in association with a Z boson (ttZ) is a rare process that directly probes the neutral coupling of the top quark to the electroweak gauge bosons. A better understanding of this process also benefits precision measurements of other Standard Model processes and beyond the Standard Model searches where ttZ is an important background. The ttZ process became accessible only recently owing to the large centre-of-mass energy and luminosity of the Large Hadron Collider. This poster will present measurements of the inclusive and differential ttZ production cross sections at a centre-of-mass energy of 13 TeV with the ATLAS detector. These measurements use the full set of data collected during Run 2 of the LHC from 2015 to 2018, corresponding to a total integrated luminosity of 139 fb^{-1}. Overall, the unfolded data and the inclusive cross section, measured to be $\sigma_{t\bar{t}Z} = 0.99 \pm 0.05$~(stat.)~$\pm 0.08$~(syst.)~pb, are in good agreement with the theoretical predictions.

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Collaboration / Activity

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