

Probing entanglement in top quark production with the CMS detector

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Reference: CMS-PAS-TOP-23-001 (<https://cds.cern.ch/record/2893854>)

Entanglement is an intrinsic property of quantum mechanics and its measurement probes the current understanding of the underlying quantum nature of elementary particles at a fundamental level. A measurement of the extent of entanglement in top quark-antiquark events produced in proton-proton collisions at a center-of-mass energy of 13 TeV is performed on the data recorded by the CMS experiment at the CERN LHC in 2016, corresponding to an integrated luminosity of 35.9 fb⁻¹.

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