

Reconstruction of Standard Model top and anti top quarks from simulated pp collisions with $\sqrt{s} = 13$ TeV

Wednesday 8 June 2016 14:00 (15 minutes)

A reconstruction for the Standard Model top and antitop quarks is conducted via analysing simulated proton-proton collisions at centre-of-mass energy of 13 TeV. MadGraph Monte-Carlo event generator is used, along with DELPHES detector simulator, and recorded using ROOT data format. The generated events contain one million collision events, which contains $t\bar{t} \rightarrow WbWb$ decay channel, where each event is comprised of reconstructed and identified physics objects such as jets, muons, and electrons. For this project, hadronic and leptonic decay channels of W bosons are considered. The reconstructed objects are analysed in order to reconstruct masses of top and antitop quark.

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Session Classification: Session IX

Track Classification: High Energy and Particle Physics