

Reconstruction of di-tau mass using deep neural networks

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Reconstruction of di- τ mass in a faster and more accurate way than the existing methods is crucial to test any theory involving Higgs boson and Z boson which are decaying to $\tau^+\tau^-$. However, it is an arduous task due to existence of neutrinos as decay product of each τ lepton which are invisible to detectors at LHC.

The present ongoing work aims at obtaining a di- τ mass estimator using ML techniques. Its use in the CMS MSSM $H \rightarrow \tau\tau$ analysis on the full Run II will be discussed.

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