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Measurement of the CP nature of the $H\tau\tau$ Yukawa coupling using gluon fusion production in association with two jets with a Higgs boson decay to a tau lepton pair

Monday 8 April 2019 14:00 (15 minutes)

Since the discovery of the Higgs boson with a mass near 125 GeV, much effort has been dedicated to studying its properties. This talk presents one such study, which investigates the CP structure of the Higgs boson by exploiting the gluon fusion production process in association with two jets. Analysis of the azimuthal angle correlations of the jets provides an insight into the CP nature of the $H\tau\tau$ Yukawa coupling. Higgs bosons decaying into a pair of tau leptons are considered, and the full 2016 and 2017 datasets collected at the CMS experiment are used.

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