



Contribution ID: 103

Type: **Talk**

Tau polarization measurement in $Z \rightarrow \tau\tau$ at LHC

Tuesday 25 September 2018 14:45 (20 minutes)

Parity violation in decays of Z bosons leads to tau lepton polarisation. The measurement of the polarisation offers a unique possibility to measure tau lepton couplings and to translate them into a measurement of the effective electroweak mixing angle. Data taken by the CMS experiment are used to perform a measurement of the tau lepton polarisation in the most promising hadronic decay modes. The analysis is based on decay-mode-specific optimal observables discriminating between the two possible longitudinal spin states of tau leptons. The resulting average tau polarisation offers the possibility to estimate the effective electroweak mixing angle taking into account the variation of the polarisation as a function of \sqrt{s} and the impact of different quark flavours.

....

Presenter: WINTER, Benedict Tobias (Albert Ludwigs Universitaet Freiburg (DE))

Session Classification: Session