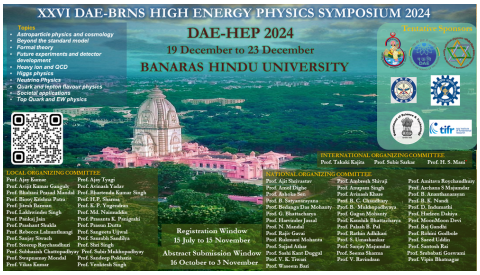

Contribution ID: **199** Type: **Oral**

Measurement of collider independent asymmetries in the top quark pair production at CMS experiment

In top quark pair production, interference between the tree-level and box diagrams, along with interference between initial-state and final-state radiation in quark-initiated processes, induces an asymmetry in the angular distribution of the resulting top and anti-top quarks. Several observables have been proposed in the literature to quantify this asymmetry, including the Forward-Backward asymmetry measured at Tevatron and Charge asymmetry at the LHC, each capturing distinct aspects of parton-level interactions. In this work, we aim to measure the fundamental, collider-independent, parton-level components of this asymmetry using data collected by the CMS experiment.

Field of contribution

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Track Classification: Top Quark and EW physics