

DPF-PHENO 2024

Contribution ID: 595

Type: **not specified**

Constraints on the γH production cross-section and on anomalous Higgs boson couplings with the CMS detector.

Tuesday 14 May 2024 14:15 (15 minutes)

We present a search for the γH production mode with data from the CMS experiment at the LHC using 138fb^{-1} of data with $\sqrt{s} = 13\text{TeV}$. In this analysis we target a signature of a boosted Higgs boson recoiling against a high energy photon for $H \rightarrow 4l$ and $H \rightarrow b\bar{b}$ final states. Effective $HZ\gamma$ and $H\gamma\gamma$ anomalous couplings are considered in this work within the framework of Effective Field Theory. Within this model, constraints on the γH production cross-section are presented, and simultaneous constraints on four anomalous $HZ\gamma$ and $H\gamma\gamma$ couplings are reported.

Mini Symposia (Invited Talks Only)

Author: DAVIS, Jeffrey (Johns Hopkins University (US))

Presenter: DAVIS, Jeffrey (Johns Hopkins University (US))

Session Classification: Electroweak & Higgs Physics

Track Classification: Electroweak & Higgs Physics