

**Senol, A.; Denizli, H.; Yilmaz, A.; Turk Cakir, I.; Oyulmaz, K. Y.; Karadeniz, O.; Cakir, O.**  
**Probing the effects of dimension-eight operators describing anomalous neutral triple gauge boson interactions at FCC-hh.** (English) [Zbl 1398.81304](#)  
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Summary: The effects of dimension-eight operators giving rise to anomalous neutral triple gauge boson interactions of  $Z\gamma\gamma$  and  $Z\gamma Z$  vertices in  $pp \rightarrow l^-l^+\gamma$  and  $pp \rightarrow \nu\bar{\nu}\gamma$  are investigated at 100 TeV center of mass energy of future circular hadron collider (FCC-hh). The transverse momentum of photon, invariant mass of  $l^-l^+\gamma$  and angular distribution of charged lepton in the rest frame of  $l^-l^+$  and Missing Energy Transverse (MET) are considered in the analysis. The realistic detector effects are also included with Delphes simulation. Sensitivity limits obtained at 95% C.L. for  $C_{\tilde{B}W}/\Lambda^4$  and  $C_{BB}/\Lambda^4$  couplings are  $[-0.52; 0.52][[-0.40; 0.40]]\text{TeV}^{-4}$ ,  $[-0.43; 0.43][[-0.33; 0.33]]\text{TeV}^{-4}$  in the dilepton+photon channel and  $[-0.11; 0.11][[-0.084; 0.084]]\text{TeV}^{-4}$ ,  $[-0.092; 0.092][[-0.072; 0.072]]\text{TeV}^{-4}$  in the MET+photon channel with  $L_{int} = 1 (3)\text{ab}^{-1}$ , respectively.

**MSC:**

[81V22](#) Unified quantum theories  
[81T50](#) Anomalies in quantum field theory

Cited in **2** Documents

**Software:**

[FeynRules](#)

**Full Text:** [DOI](#) [arXiv](#)

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