

HWW and HZZ in the fully hadronic final states

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Abstract

The precise determination of the Higgs boson couplings to electroweak gauge bosons is a key objective of the FCC-ee physics programme. This note presents an analysis of Higgs decays to WW^* and ZZ^* in the ZH production mode, focusing on the fully hadronic final state, which offers the highest branching fractions and, thus, competitive precision compared to channels involving leptons or neutrinos. The analysis strategy enables the simultaneous extraction of the HWW and HZZ branching ratios by employing dedicated jet clustering and pairing algorithms to maximize the signal significance. The resulting expected uncertainties are 1.48% for $\sigma_{ZH} \times \mathcal{B}(H \rightarrow WW^*)$ and 8.20% for $\sigma_{ZH} \times \mathcal{B}(H \rightarrow ZZ^*)$.