FCC Week 2025



Contribution ID: 18

Type: (b) Poster abstract only (one author must be in person)

Probing HZZ Interactions through HZ Production in e+e- Collisions at FCC-ee

Thursday 22 May 2025 17:32 (2 minutes)

The associated production of a Higgs boson with a Z boson decaying into leptons and the Higgs boson mostly decays to b b[~] pair can be measured in the high transverse momentum regime of dileptons, ranging 50 - 70 GeV, with the IDEA detector. The recoil mass distributions from the signal (HZ, Z-> l+ l-) and the backgrounds (mainly ZZ, WW and other backgrounds) have been analyzed using the analysis code, the parameters have been optimized by appropriate fitting to obtain more precise results. This method plays an important role in probing the HZZ interactions. The analyzed MC simulation data, corresponding to an integrated luminosity of 1/ab, have been used as reference to compare the sensitivities at 240 GeV and 365 GeV center of mass energy of the collider.

Author: Dr CAKIR, Orhan (Ankara University (TR))
Co-author: Mrs KAHRAMAN, Isinsu (Ankara University)
Presenter: Dr CAKIR, Orhan (Ankara University (TR))
Session Classification: Poster session

Track Classification: Physics, Experiments and Detectors: Physics/Theoretical Calculations