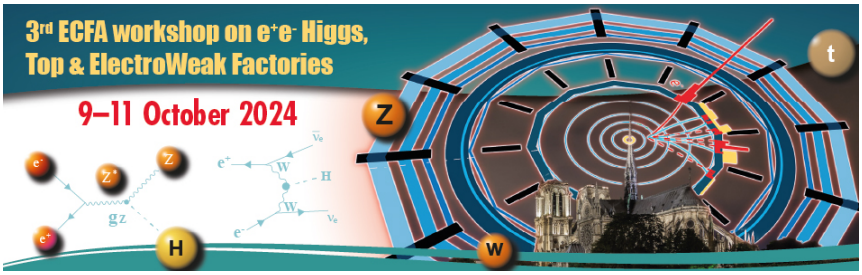

Contribution ID: **123** Type: **POSTER**

Measurements of $H \to \tau\tau$ properties at FCC-ee

Wednesday 9 October 2024 18:30 (2 minutes)

The Future Circular Collider (FCC) stands at the forefront of the European Strategy for Particle Physics as the future Higgs factory. The $H \to \tau\tau$ decay, featuring a large branching ratio, clean identification at FCC-ee environment, and the possibility to reconstruct polarization information, is an excellent channel to measure Higgs properties. The CP nature of the Htautau coupling is of particular interest because the CP-odd component only appears in Higgs gauge couplings through loop effects, while it is allowed to be sizable in the Higgs couplings to fermions. This contribution shows recent progress in the experimental setup for the $H \to \tau\tau$ analysis and reports prospective results in both the ZH, $H \to \tau\tau$ cross section measurement and CP measurement, as well as the interpretation framework based on SM effective field theory.

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Session Classification: Poster Session / Welcome Reception (at 19:00)

Track Classification: WG1: WG1-HTE - Physics Potential: Higgs, top and electroweak