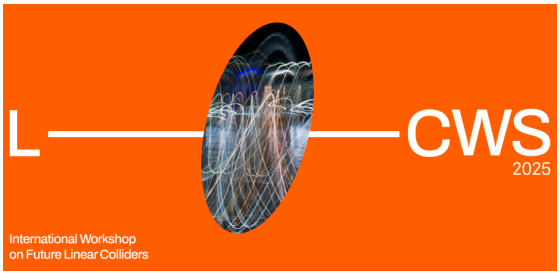

Contribution ID: **4** Type: **Talk**

Searches for light exotic scalar decays at the e+e- Higgs factory.

Tuesday 21 October 2025 10:00 (20 minutes)

The physics program of the Higgs factory will focus on measurements of the 125 GeV Higgs boson, with the Higgs-strahlung process being the dominant production channel at 250 GeV. However, similar production of exotic light scalars, in a scalar-strahlug process, is still not excluded by the existing experimental data, provided their coupling to the SM gauge bosons is sufficiently suppressed. This was selected as one of the focus topics of the ECFA Higgs/Top/EW factory study. Presented in this contribution are the expected cross section limits from the search in the $b\bar{b}$ decay channel, based on a full simulation of the International Large Detector (ILD), as well as the expected sensitivity in di-tau and invisible decay channels, based on the fast simulation in the DELPHES framework, assuming 250 GeV ILC running scenario.

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Session Classification: Beyond-the-Standard-Model physics

Track Classification: Physics: Beyond-the-Standard-Model physics