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Probing CPV mixing in the Higgs sector in VBF at 1 TeV ILC

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Although the studies of tensor structure of the Higgs boson interactions with vector bosons and fermions at CMS and ATLAS experiments have established that the JPC quantum numbers of the Higgs boson should be 0++, small CP violation in the Higgs sector (i.e. less than 10% contribution of the CP-odd state) cannot be excluded with the current experimental precision. We review possibility to measure CP violating mixing angle between scalar and pseudoscalar states of the extended Higgs sector, at 1 TeV ILC with ILD detector.

Collaboration / Activity

ILC/ILD

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