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Probing CPV mixing in the Higgs sector at an e+e- collider at around 1 TeV center-of-mass energy

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Abstract: 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. app. 10% contribution of the CP-odd state) cannot be excluded with the current experimental precision. We review possibilities to measure CP violating mixing angle $\text{PSI}(\text{CP})$ between scalar and pseudoscalar states, at a linear electron-positron collider, at center-of-mass energies of 1 TeV and 1.4 TeV.

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