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Study of HγZ coupling at the ILC

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In the Standard Model, HγZ coupling is a loop induced coupling, therefore it might receive relatively large correction from BSM physics. In the SM Effective Field Theory, the measurement of HγZ coupling can provide a very useful constraint that helps the global fit, in particular the precise determination of HZZ and HWW couplings. At the ILC, there are two direct ways to study HγZ coupling: measuring the decay branching ratio of H->γZ, or measuring the production cross section of e+e- -> γH. In this talk, we will introduce the full simulation studies using these two ways, based on the detector model ILD at the ILC. Results will be given for an integrated luminosity of 2 ab-1 at ECM=250 GeV.

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