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Di-Higgs production ($\gamma\gamma \to hh$) in Composite Models

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In Standard Model (SM) Higgs Boson pair production initiated by photons ($\gamma\gamma \to hh$) is loop-generated process and thereby is very sensitive to any new couplings and particles that may come in loops. Composite Higgs Models (CHMs) provide an alternate mechanism to address the hierarchy problem of SM where Higgs could be a bound state of a strongly interacting sector instead of being an elementary field. These set of models apart from modifying the SM Higgs couplings could also introduce new effective couplings that can have substantial impact on the loop processes. In this work we have studied the impact of Composite Higgs models in $\gamma\gamma \to hh$ (Di-Higgs) production process.

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