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Triplet extended MSSM: naturality vs LHC data & perturbativity constraints

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In this talk, I will briefly review the triplet extended MSSM, and then show that for a sizable portion of viable parameter space, associated with a large but still perturbative triplet coupling, the model features conspicuously smaller fine-tuning than in the case of MSSM-like couplings. I will then present the results of a fit to Higgs physics data as well as to low energy observables like the B to $X_{s\gamma}$ decay, which demonstrate that the couplings allowed by direct search constraints generally lie well within the experimentally viable regions. Finally, I will show that the goodness of fit of the given experimental data by the triplet extended MSSM is comparable with that of the SM.

Summary

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