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High-Precision Higgs Masses in the Complex MSSM

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Since the discovery of a Higgs-like particle at the LHC considerable effort has been undertaken to reveal its nature and properties. To make significant comparisons of the experimental measurements and theory predictions, high-precision calculations are necessary.

One of the particle's basic properties is its mass; due to the very precise measurement, the current MSSM prediction is challenged.

I will present the most recent status of the Higgs-particle spectrum in the CP-violating MSSM in the Feynmandiagrammatic approach with non-trivial renormalization. The known two-loop contributions (leading terms of $\mathcal{O}(\alpha_t \alpha_s + \alpha_t^2)$) are briefly reviewed and new results and implications of the full subleading QCD terms of $\mathcal{O}(\alpha_{any}\alpha_s)$ are shown.

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