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## **MSSM with explicit CP-Violation in the Higgs sector**

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### **Abstract content**

#### **Summary**

The Minimal Supersymmetric Standard Model (MSSM), despite being a theoretically successful and highly predictive model, suffers from some technical setbacks and leaves ample room for further modification. We have recently analyzed an extended version of the minimal model; an MSSM with explicit CP-violation in the Higgs sector. We are looking for Higgs signatures in this model, focussing mainly on the di-photon decay mode of the Higgs boson, and have found significant deviations from the MSSM scenario. Particulary, the cross-section for the lightest Higgs can vary by as much as an order of magnitude in certain regions of the parameter space from the corresponding scenario in a CP-preserving MSSM.

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