

The Higgs boson masses and Higgs decays in the B-LSSM with explicit CP violation

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We calculate one-loop radiation corrections to the mass matrix of the neutral Higgs boson in the B-L Supersymmetric Standard Model (B-LSSM) with explicit CP violation. Within the effective potential methods, the masses of the neutral Higgs-boson are calculated at the one-loop level by taking into account the contributions of the following loops of ordinary particles and superparticles: the top quarks, the bottom quarks, the scalar top quarks and the scalar bottom quarks. At the same time, we also calculate the lightest Higgs decays $h^0 \rightarrow \gamma\gamma, h^0 \rightarrow f\bar{f}, h^0 \rightarrow VV^* (V=W,Z), h^0 \rightarrow gg$ in the B-L supersymmetric standard model (B-LSSM) with explicit CP violation.

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