

# Minimal Supersymmetric SU(5) and Gauge Coupling Unification at Three Loops

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We consider the relations between the gauge couplings at the electroweak scale and the high scale where unification of the three gauge couplings is expected. Threshold corrections are incorporated both at the supersymmetric and at the grand unified scale and, where available three-loop running and two-loop decoupling are employed. We study the impact of the current experimental uncertainties of the coupling constants and the supersymmetric mass spectrum on the prediction of the super-heavy masses within the so-called minimal supersymmetric SU(5) and also of the missing doublet model.

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