



# Particle Theory Seminar

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“CP violating asymmetries induced by supersymmetry”

**Friday, September 05, 2008, 11:30**

**WBGB/021**

**Abstract:**

The baryon asymmetry of the universe, i.e. the abundance of matter over anti-matter, cannot be explained by the Standard Model. However, supersymmetric extensions of the Standard Model might give an explanation of this baryon asymmetry because of possible new sources of CP violation.

I present a detailed numerical analysis of the CP violating decay rate asymmetry of the decay of a stop into a bottom-quark and a chargino in the Minimal Supersymmetric Standard Model with complex parameters at full one-loop level. Tight constraints on these complex parameters coming from experimental limits are considered and checked automatically along the way.

We obtain as results that the CP violating decay rate asymmetry can rise up to 24%, and it will be possible to measure this effect at LHC.