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Preheating confronts leptogenesis

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High scale leptogenesis is notoriously difficult to probe experimentally. In this talk, I will discuss constraints on a minimal model, in which the observed baryon asymmetry is realized after the inflaton decays into the lightest sterile neutrino. Because this scenario induces a Higgs-inflation coupling at the radiative level, strong constraints come from the stability of the Higgs vacuum during pre-heating. The constraints are strongest when the sterile neutrino is thermal at production. I will show how these constraints depend on the reheat temperature, the inflaton mass, and the masses in the neutrino sector.

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