

## Abstract

Successful leptogenesis within the simplest type I supersymmetric seesaw mechanism requires the lightest of the three right-handed neutrino supermultiplets to be heavier than  $\sim 10^9$  GeV. Thermal production of such (s)neutrinos requires very high reheating temperatures which result in an overproduction of gravitinos with catastrophic consequences for the evolution of the universe. In this letter, we let R-parity be violated through a  $\lambda_i \hat{N}_i \hat{H}_u \hat{H}_d$  term in the superpotential, where  $\hat{N}_i$  are right-handed neutrino supermultiplets. We show that in the presence of this term, the produced lepton-antilepton asymmetry can be enhanced. As a result, even for  $\hat{N}_1$  masses as low as  $10^6$  GeV or less, we can obtain the observed baryon asymmetry of the universe without gravitino overproduction.