

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Cosmological Constraints on Moduli from Cosmic Strings ERAY SABANCILAR, Tufts Institute of Cosmology, Tufts University — Cosmological constraints on moduli, whose coupling to matter is stronger than Planck mass suppressed coupling, are derived. In particular, moduli are considered to be produced by oscillating loops of cosmic strings and constraints are obtained from their effects on big bang nucleosynthesis and their contribution to diffuse gamma ray background and dark matter. Large volume and warped Type-IIB flux compactifications are taken as examples where strongly coupled moduli are present. Finally, the constraints on cosmic string tension, modulus mass and modulus coupling constant are obtained and it is shown that the constraints are relaxed significantly when the coupling constant is large enough. In addition, the effect of thermal production of moduli are considered and the corresponding constraints are derived.

Eray Sabancilar
Tufts Institute of Cosmology, Tufts University

Date submitted: 22 Oct 2009

Electronic form version 1.4