



Contribution ID: 108

Type: Parallel talk

Non-thermal gravitino production after large-field inflation

Thursday, 22 June 2017 15:45 (15 minutes)

We revisit the non-thermal gravitino production at the (p)reheating stage after inflation. Particular attention is paid to large-field inflation models with a \mathbb{Z}_2 symmetry, for which the previous perturbative analysis is inapplicable; and inflation models with a stabilizer superfield, which have not been studied non-perturbatively. It is found that in single-superfield inflation models (without the stabilizer field), non-thermal production of the transverse gravitino can be cosmologically problematic while the abundance of the longitudinal gravitino is small enough. In multi-superfield inflation models (with the stabilizer field), production of the transverse and longitudinal gravitinos is significantly suppressed, and they are cosmologically harmless. If time remains, gravitino production in the case with (orthogonal) nilpotent fields is also discussed.

Presentation type

Parallel talk

Primary authors: Mr EMA, Yohei (The University of Tokyo); Dr MUKAIDA, Kyohei (Kavli IPMU); Prof. NAKAYAMA, Kazunori (The University of Tokyo); Dr TERADA, Takahiro (KEK)

Presenter: Dr TERADA, Takahiro (KEK)

Session Classification: Parallel IV