

Axion inflation with gauged lepton flavor symmetry, large lepton asymmetry, and helium abundance

Axion inflation can have a Chern-Simons coupling to gauge fields. Depending on the gauge fields, it gives rise to the magnetic field production together with fermion asymmetry. For example, in the case of U(1) hypergauge field in the Standard Model, we generate B+L asymmetry. In this talk, I will examine the case of U(1) gauged lepton flavor symmetry, which can produce lepton asymmetry. Their implications on the Big Bang Nucleosynthesis will be discussed.

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