

Lepto-Axiogenesis

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1910.02080 RC, K. Harigaya

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1910.14152 RC, L. Hall, K. Harigaya

Phys. Rev. Lett. accepted

2006.05687 RC, N. Fernandez, A. Ghalsasi, L. Hall, K. Harigaya

Abstract:

We propose a baryogenesis mechanism where axion's rotation in the potential is initiated by explicit Peccei-Quinn symmetry breaking in the early Universe and gives rise to the observed baryon asymmetry. With the aid of the neutrino Majorana mass term, the Peccei-Quinn charge associated with the rotation is sequentially transferred to the baryon asymmetry. Dark matter is simultaneously produced from the kinetic misalignment mechanism and/or parametric resonance.

Office hour: afternoon coffee break on Wednesday 3-4 pm CEST.

