

Lorentz violation on the primordial Baryogenesis

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Abstract content

Summary

Recently many studies have considered the possibility of a Lorentz Invariance Violation (LIV), and explored its consequences in a wide range of experiments. If this is true, a LIV could explain some mysteries in Cosmology. In this talk specifically, we will analyze the effects on The Primordial Baryogenesis because it is one of the more important and mysterious phenomena of the Big-Bang, that happened at very high energies, so we have a real chance to obtain an important effect. We will see that this effect could exist, depending directly on the temperature, that is very high at this time in the history of the Universe. So, it is possible to use this result as a test for a LIV and explore the possibility that the boson that started the baryogenesis explains, in part, the dark matter. We will obtain estimates about the beginning time of the baryogenesis and the boson mass too, that come directly from the LIV.

Presenter(s) : Prof. ALFARO, Jorge (PUC)

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