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Induced gravity: dark energy and dark matter

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Abstract content

We study the recent cosmic evolution using the induced gravity theory in which a Higgs field non-minimally couples to gravity. After the symmetry breaking the field goes to its true vacuum value, a process that induces the creation of a new Higgs particle that can account as dark matter. On the other hand, the evolution of the Higgs field acts as a quintessence field. Taking into account the experimental constraints on the parameters of the theory, we study the quintessence and dark matter dynamics. We obtain the possible models and discuss the physical consequences in cosmology and particle physics.

Summary

Primary author(s) : Dr. CERVANTES, Jorge (ININ)

Presenter(s) : Dr. CERVANTES, Jorge (ININ)

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