

Conference: Meeting of the National Research Group on Gravitational Waves

ID de Contribution: 42
ALTERNATIVES

Type: TESTS DE LA RELATIVITÉ GÉNÉRALE ET THÉORIES

Dynamics of Screening in Modified Gravity

jeudi 1 avril 2021 14:30 (15 minutes)

Gravitational theories differing from General Relativity may explain the accelerated expansion of the Universe without a cosmological constant. However, their viability crucially depends on a “screening mechanism” needed to suppress, on small scales, the fifth force driving the cosmological acceleration. I will discuss a scalar-tensor theory with first-order derivative self-interactions exhibiting such a mechanism, and present screened solutions in this theory for both non-relativistic and relativistic stars. Then, I will discuss the stability of these solutions and present our results from numerically evolving them in the strong-field, highly dynamical regime.

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Classification de Session: Contributed talks: Tests of GR and alternative theories