

Columbia University Department of Physics



THEORY SEMINAR

“Detecting Modified Gravity in the Stars”

Screened Scalar-Tensor gravity such as chameleon and symmetron theories allow order one deviations from General Relativity on large scales whilst satisfying all local solar-system constraints. A lot of recent work has therefore focused on searching for observational signatures of these models and constraining them. If these models are to be viable then our own solar system is necessarily screened, however, this may not be the case for stars in Dwarf Galaxies, which can exhibit novel and unique phenomena. These new effects can be exploited to produce constraints that are far more competitive than laboratory and cosmological tests and in this talk, I will describe some recent and ongoing work using these phenomena to place new constraints.

Jeremy Sakstein,
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