Title: LATEST CONSTRAINTS ON MODIFIED GRAVITIES FROM LARGE-SCALE STRUCTURES

Abstract: We use growth of latest large-scale structure data to constrain the both effective field theory of dark energy and scalar-tensor paradigmatic models. Considering as cases study Horndeski theories with the speed of gravitational waves equal to that of light and the popular Hu-Sawicki *f(R)* model, we show how constraints on the free parameters and the large-scale structure phenomenological functions can be improved by two ingredients: firstly by complementing the set of redshift-space distortions data with the three recent measurements of the growth rate f and the amplitude of matter fluctuations σ_8 from the VIPERS and SDSS collaborations; secondly by applying a local Solar-System bounds on the variation of the Newton's constant. Such an analysis allowed us to conclude that: *i*) despite firmly restricting the predictions of weaker gravity, the inclusion of the Solar-System bounds do not prevent suppressed growth relative to the ΛCDM Concordance model at low redshifts; *ii*) the same bounds in conjunction with the large-scale structure data strongly restrict the redshift evolution of the gravitational slip parameter to be close to unity and the present value is constrained to one at the 10^{-3} level; *iii*) in the effective field theory framework, the large-scale structure data favour a fifth force contribution to the effective gravitational coupling at low redshifts and at more than one sigma at present time; and *iv)* the validity of the quasi-static vs. the subHubble approximation for *f(R)* theories is revisited carefully in order to establish model-parameters constraints.