

Growth of structure in regularised 4D Einstein-Gauss-Bonnet

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Interest in modified gravity has been rekindled by cosmologists' attempts to resolve cosmological tensions. For example, it has been suggested that parametrisations of modified structure growth can provide a better fit to large-scale structure data and can alleviate the S8 tension. In this era of precision cosmology we can successfully test these effects for modified gravity theories that so far elude detection. In the spirit of this revitalisation of modified gravity, we analyse regularised 4D Einstein-Gauss-Bonnet in the limit of a General Relativistic background, which is equivalent to a Λ CDM background with a dark relativistic degree of freedom and modified scalar perturbations. In this talk, we will look at a range of interesting behaviours displayed by this theory and probe the effect its imprint on large-scale structure may have on the standard cosmological tensions.

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