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Power-law Inflation with a Nondynamical Scalar Field

Many scalar-tensor theories have more than 2 degrees of freedom because of additional scalar fields. However, there is a theory named "cuscuton"whose number of degrees of freedom is only 2 on a cosmological background. This theory has a nondynamical scalar field, which is called "cuscuton field."In this talk, we consider inflation in the context of cuscuton gravity. We find a new exact power-law solution and show that this can be reconciled with the CMB data in the presence of the cuscuton field. We believe the result would be general in any dressed inflationary scenario.

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