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## One spectrum to rule them all?

*Thursday, 8 July 2021 19:00 (25 minutes)*

We show that in absence of entropy or effective anisotropic stress the freedom in the choice of the initial energy scale of inflation implies the existence of an infinite family of dual slow-roll parameters histories which can produce the same spectrum of comoving curvature perturbations. This implies that in general there is no one-to-one correspondence between the spectrum and higher order correlation functions. We give some numerical examples of expansion histories corresponding to different initial energy scales, with the same spectrum of curvature perturbations, the same squeezed limit bispectrum, in agreement with the squeezed limit consistency condition, but with different bispectra in other configurations and different spectra of primordial gravitational waves. The combined analysis of data from future CMB and gravitational wave experiments could allow to distinguish between dual models.

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