Sixteenth Marcel Grossmann Meeting



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Parameter discordance in current cosmology: projection in the primordial power spectrum

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The discordance can be due to a wide range of non-standard cosmological or astrophysical processes as well as from some particular systematics. Here, without considering any particular astrophysical process or extension to the standard model at the background level, we look to project the effect of these differences in the values of the key cosmological parameters on to the shape of the primordial power spectrum. We show that there is a class of primordial power spectra that can fit the observed anisotropies in the cosmic microwave background well and that predicts a value for the Hubble parameter and S8 consistent with the local measurements. I also briefly discuss a theoretical inflationary model that can generate such features in the form of the primordial spectrum.

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Session Classification: Status of the H_0 and Sigma_8 Tensions: Theoretical Models and Model-Independent Constraints

Track Classification: Cosmic Microwave Background: Status of the H_0 and sigma_8 tensions: theoretical models and model-independent constraints