



Contribution ID: 98

Type: **Talk**

Generalised dark matter and diminishing the low CMB multipole tension

Tuesday 24 July 2018 14:20 (20 minutes)

Generalized dark matter (GDM) is a powerful framework capable of emulating the effects of a wide variety of dark matter and dark energy models. In this talk, I will discuss the GDM framework and show how it can reduce the moderate tension in the low CMB TT multipoles. The standard Λ CDM model predicts more power in the low TT multipoles than observed by Planck. This tension can be alleviated by altering the late ISW effect through a modification of the recent expansion history of the Universe, achieved here by varying the dark matter equation of state.

I will show that GDM suppresses power in low CMB multipoles, with minimal impact on a number of other cosmological observables. If dark matter exhibits such exotic behavior, our understanding of cosmic expansion history and of the nature of dark matter are far from complete.

I am also submitting an abstract to the track Theory.

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Session Classification: 2.4 Theory

Track Classification: Theory