

Looking for signatures of a modified speed of sound for the tensor modes.

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Higher derivative interactions might induce an effective speed of sound for the tensor modes. Such speed can be removed by a disformal transformation which is a change in the light cone slope. This transformation rescale the coordinates in such a way that the scalar modes get a effective speed. We study the effects of this transformation for CMB photons propagation. We find that by using this method it is possible to impose heavy constraints to an effective theory for gravitational waves.

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