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Effects of CMB lensing beyond the Born approximation

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In this talk, I will briefly review the lensing corrections to the cosmic microwave background (CMB) temperature anisotropies considering effects beyond the Born approximation. The small deflection angle approximation is used to connect lensed and unlensed power spectrum, up to third order in the gravitational potential. This approach shows that the non-Gaussian nature of deflection angle at higher order is an important correction to the CMB lensing effect. This work has been done previously in literature and the idea here is to implement those modifications on a Boltzmann solver code in order to consider properly all the corrections of CMB lensing aiming the future CMB-IV experiments.

Topic Field

Cosmology

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