

# Measuring gravity using the CMB

We will discuss the effects that a modified sector tensor can produce on the polarisation CMB power spectra. Alternative theories of gravity can give the graviton a mass but also modify the dispersion relation of the gravitational waves. A mass for the graviton can affect the large angular scales and in general a modified dispersion relation could change the position of the acoustic peaks. These effects modify either the CMB power spectrum and bispectrum, with respect to the canonical case. Thus given the precision of the CMB experiments, if detected, primordial gravitational waves can help to constrain gravity at a much higher accuracy.

**Author:** M. CESPEDES, Sebastian (DAMTP, University of Cambridge)

**Co-auteur:** Prof. DAVIS, Anne (DAMTP, University of Cambridge)

**Orateur:** M. CESPEDES, Sebastian (DAMTP, University of Cambridge)