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Propagation of waves and eikonal approximation in the Horndeski's vector-tensor theory

Friday 31 May 2019 14:45 (15 minutes)

In this talk we use the eikonal approximation to impose constraints on the Horndeski's vector-tensor theory. We explore the modifications imposed by Horndeski's theory on some very basic aspects of geometric optics such as light propagation on null geodesics, the geodesic deviation equation, photon creation, among others. We illustrate our results in Friedmann-Lemaître and Schwarzschild spacetimes and speculate on possible interpretations and observational consequences of our findings.

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