

# Towards realistic constraints on alternative theories of gravity

*Friday 9 September 2022 15:50 (10 minutes)*

I will start by overviewing the main motivations to test gravity at cosmological scales. In particular, I shall focus on current cosmological constraints and the use of dark energy and alternative theories of gravity to alleviate cosmological tensions. Then, I will describe what are the main methods and tools – including the Einstein-Boltzmann solver `hi_class` – used to reach the precision needed by the next generation of surveys. I shall concentrate on their caveats, missing features and improvements required to get believable results. Finally, I will outline the road ahead and future perspectives for cosmological tests of gravity.

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