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Constraining Modified Gravity with Euclid

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Future proposed satellite missions as Euclid can offer the opportunity to test general relativity on cosmic scales through mapping of the galaxy weak lensing signal. In this paper we forecast the ability of these experiments to constrain modified gravity scenarios as those predicted by scalar-tensor and $f(R)$ theories. We found that Euclid will improve constraints expected from the PLANCK satellite on these modified gravity models by two orders of magnitude. We discuss parameter degeneracies and the possible biases introduced by modified gravity.

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