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Constraints on bimetric gravity

Bimetric gravity is a ghost-free extension of general relativity, exhibiting both a massless and a massive graviton. We show how the theory can be parameterized with five observables with specific physical interpretations and then constrain the parameter space by requiring: (i) observationally viable cosmology, (ii) a working screening mechanism that restores general relativity locally, and (iii) viable propagation of gravitational waves. Interestingly, the theory provides a good fit to data even away from any general relativity limit.

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