

Viable cosmological solutions in massive bimetric gravity

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We present general conditions of viable cosmological solutions of massive bimetric gravity models and constrain the free parameters by comparing to the Union 2.1 supernovae catalog and linear perturbation observations. We point out that a bimetric model with a single free parameter predicts a simple relation between the equation of state and the density parameter, fits well the supernovae data and is a valid and testable alternative to Λ CDM. Additionally, we identify the conditions for a phantom behavior. However, confirming previous results, we find that this minimal model is unstable at early times at small scales and present possible ways to cure the instability.