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Bimetric gravity is cosmologically viable

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Bimetric theory describes gravitational interactions in the presence of an extra spin-2 field. It allows for many different types of cosmological solutions but not all of them are theoretically allowed, most of them are generically plagued by instabilities. We discuss the conditions of the absence of these ghost- and gradient instabilities and present a ghost-free model in which the gradient instabilities can be pushed back to unobservably early times. In this limit, the theory approaches general relativity with a technically-natural effective cosmological constant which is, remarkably, determined by the spin-2 interaction scale.

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