

A generalization to the theory of massive gravity is presented which includes three dynamical metrics. It is shown that at the linear level, the theory predicts a massless spin-2 field which is decoupled from the other two gravitons which are massive and interacting. In this regime the matter naturally should be coupled to massless graviton which introduces a preferred metric that is the average of the primary metrics. The cosmological solution of the theory shows the de-Sitter behavior with a function of mass as its cosmological constant. Surprisingly, it lacks any non-trivial solution when one of the metrics is taken to be Minkowskian and seems to enhance the predictions which suggests that there is no homogeneous, isotropic and flat solution for the standard massive cosmology.