Cosmological Constant as an Intrinsic Mass of Spacetime

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Abstract

Supported by the dynamical role of spacetime in General Relativity, I suggest an argument of the materialization of spacetime at high scales$\sim M_P$. Such a materialization is given in terms of massive spacetime structures m_Λ, whose energy density corresponds to the observed small cosmological constant $\Lambda_{Obs}^{1/4} \sim 10^{-3} eV$, a candidate for Dark Energy in the universe. Under the known data, such an intrinsic spacetime mass is probed as $m_\Lambda \gtrsim 10^{-52} eV$.

Key words: Cosmological Constant; Spacetime; Gravity.

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