

Dark Energy from Inflation

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Abstract content

We show that a very light scalar field experiencing quantum fluctuations during primordial inflation can explain the current cosmic acceleration. Provided its mass does not exceed the Hubble parameter today, this field has been frozen during the cosmological ages to start dominating the universe only recently. Assuming this scenario to be correct, and using supernovae data, the model predicts the energy scale of primordial inflation to be around a few TeV and suggests that it has lasted for an extremely long period. Dark energy could therefore be a natural consequence of cosmic inflation close to the electroweak energy scale.

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