

Dark Energy And Life's Ultimate Future

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Abstract

The discovery of the present accelerated expansion of space changed everything regarding cosmology and life's ultimate prospects. Both the optimistic scenarios of an ever (but decelerated) expanding universe and of a collapsing universe seem to be no longer available. The final future looks deadly dark. However, the fate of the universe and intelligence depends crucially on the nature of the still mysterious dark energy which drives the accelerated expansion. Depending on its – perhaps time-dependent – equation of state, there is a confusing number of different models now, popularly called Big Rip, Big Whimper, Big Decay, Big Crunch, Big Brunch, Big Splat, etc. This paper briefly reviews possibilities and problems. It also argues that even if our universe is finally doomed, perhaps that doesn't matter ultimately because there might be some kind of eternal recurrence.

Keywords: Cosmology, Universe, Dark Energy, Cosmological Constant, Quintessence, Phantom Energy, Inflation, Quantum Gravity, Far Future, Life, Intelligence

[General Issues: Thought Experiments](#)

[Specific Sciences: Computer Science: Artificial Intelligence](#)

[General Issues: Laws of Nature](#)

Subjects: [Specific Sciences: Physics: Cosmology](#)

[Specific Sciences: Physics: Relativity Theory](#)

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