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## THEORY TO PROOF THE EXISTENCE OF DARK ENERGY

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### THEORY TO PROOF THE EXISTENCE OF DARK ENERGY

We Earthlings are living in a world of 15 percentage of observable universe. The universe which we live in is because of the remaining percentages of dark matter and dark energy which is not anti particle or made of dark material. Most of our universe is hidden in plain sight. Though we can't see or touch it, most astronomers say the majority of the cosmos consists of dark matter and dark energy. But what is this mysterious, invisible stuff that surrounds us? And what's the difference between Dark energy and Dark matter? In short, dark matter slows down the expansion of the universe, while dark energy speeds it up. Dark matter works like an attractive force — a kind of cosmic cement that holds our universe together. This is because dark matter does interact with gravity, but it doesn't reflect, absorb or emit light. Meanwhile, dark energy is a repulsive force — a sort of anti-gravity — that drives the universe's ever-accelerating expansion. Astronomers have known that our universe is expanding for about a century now. Telescopic observations have shown that most galaxies are moving away from each other, which implies the galaxies were closer together in the distant past. As a result, the evidence for the Big Bang. However, astronomers assumed that the combined gravitational pull of all the cosmos' stars and galaxies should be slowing down the universe's expansion. Perhaps it would even someday collapse back in on itself in a Big Crunch. There are some existence proof for the dark matter theories like Distance measurements and their relation to redshift, which suggest the universe has expanded more in the last half of its life, The theoretical need for a type of additional energy that is not matter or dark matter to form the observationally flat universe (absence of any detectable global curvature), Measures of large-scale wave-patterns of mass density in the universe. Since then, these observations have been corroborated by several independent sources. Measurements of the cosmic microwave background, gravitational lensing, and the large-scale structure of the cosmos, as well as improved measurements of supernovae, have been consistent with the Lambda-CDM model. Some people argue that the only indications for the existence of dark energy are observations of distance measurements and their associated redshifts. Cosmic microwave background anisotropies and baryon acoustic oscillations serve only to demonstrate that distances to a given redshift are larger than would be expected from a "dusty" Friedmann-Lemaître universe and the local measured Hubble constant. Supernovae are useful for cosmology because they are excellent standard candles across cosmological distances. They allow researchers to measure the expansion history of the universe by looking at the relationship between the distance to an object and its redshift, which gives how fast it is receding from us. The relationship is roughly linear, according to Hubble's law. It is relatively easy to measure redshift, but finding the distance to an object is more difficult. Usually, astronomers use standard candles: objects for which the intrinsic brightness, or absolute magnitude, is known. This allows the object's distance to be measured from its actual observed brightness, or apparent magnitude. Type I supernovae are the best-known standard candles across cosmological distances because of their extreme and consistent luminosity.

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