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Theory of Dark Energy

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Abstract

The presented article provides a theory of dark energy that appears to have been developed in two complementary ways. On the one hand, this theory is based on physics and mathematics and, on the other hand, it is developed on the basis of available data. This corresponds to the discovery of the laws of planetary motion in elliptical planetary orbits by JOHANNES KEPLER in the past. He developed his laws from a large amount of data. Later it was theoretically substantiated more thoroughly by ISAAK NEWTON. The focus is on deriving a formula for the equivalence of energy and time. Precursors to the presented "Theory of Dark Energy" were published in the articles.

The derivation of the formula for the equivalence of energy and time provides new theoretical insights and applications in theoretical terms.

This derivation leads to the discovery of a new law of nature.

A formula for calculating dark energy was developed in a previous article published in the International Journal of Physics and Astronomy.

$$\text{It is: } Ed = (h/tp^2) \cdot tu \qquad (1.2)$$

The „The Foundations of a Dark Energy Theory "was first mentioned in my previous work" Commentary about Calculation of Dark Energy and Dark Matter", published in the Journal of Physics and Astronomy [2]. The presented article "Theory of Dark Energy" is now completed and a physical-mathematical and theoretical derivation of the formula (1.2) is provided.

Keywords: Dark Energy, Planck Time, Law of Nature, Age of the Universe, Fundamental Oscillations of a Cosmic Space, Cosmology, Theoretical Physics