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Equivalent Friedmann Equations in Delta Gravity and a possible explanation to Dark Energy

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From a modified General Relativity model named Delta Gravity (DG), that is based on a new Einstein-Hilbert action based on a new symmetry symbolized as $\tilde{\delta}$, we found two equations with the same structure as the Friedmann Equations. These equations let us establish a relation between the two free parameters of the DG theory, and the "Dark Energy" density, and we can conclude that one of these parameters, L_2, is strictly causing the Accelerating Expansion of the Universe.

These equivalent Friedmann Equations are obtained with a rearrangement of the (DG) motion equations. In this way, a new energy density appears naturally and it can be associated to Dark Energy in the ΛCDM model.

arXiv

https://arxiv.org/pdf/1704.02888.pdf

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