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A Cyclic Universe alternatively dominated by matter and antimatter

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It was recently suggested that what we call dark matter and dark energy, can be explained as the local and global effects of the gravitational polarization of the quantum vacuum by the immersed Standard Model matter. This result appears as the consequence of the working hypothesis that by their nature quantum vacuum fluctuations are virtual gravitational dipoles. Here, we argue that, as a consequence of the same hypothesis, we may live in a cyclic universe with cycles alternatively dominated by matter and antimatter. At least mathematically there is no the initial singularity, there is no need for the cosmic inflation and there is an amusing explanation of the matter-antimatter asymmetry in the universe: our universe is dominated by matter because the previous cycle was dominated by antimatter (and the next cycle would be dominated by antimatter again).

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