



Invitation

Casimir cosmology: Casimir cosmology: how to get rid of 120 orders of magnitude

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The cosmological constant, also known as dark energy, was believed to be caused by vacuum fluctuations, but naive calculations give results in stark disagreement with fact. In the Casimir effect, vacuum fluctuations cause forces in dielectric media, which is very well described by Lifshitz theory. Recently, using the analogy between geometries and media, a cosmological constant of the correct order of magnitude was calculated with Lifshitz theory [U. Leonhardt, Ann. Phys. (New York) 411, 167973 (2019)]. This lecture discusses the empirical evidence and the ideas behind the Lifshitz theory of the cosmological constant without requiring prior knowledge of cosmology and quantum field theory.

Webinar

Tuesday, Aug 11, 2020 11:00 AM Vienna

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