



› Allgemeines Physikalisches Kolloquium

› Donnerstag, 11.02.2016 um 16 Uhr c.t.

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A Force out of Nothing

Quantum vacuum fluctuations can lead to a force between objects in the micrometer and sub-micrometer range. Theoretically predicted in 1948 by Hendrik Casimir, evidence for the Casimir force was found ten years later. What might seem like a quantum mechanical curiosity has become an extremely active field of research in the last twenty years with the development of precise measurement techniques. Casimir physics relates to basic questions like the search for a fifth fundamental interaction as well as to applications like in microelectromechanical systems. After giving an introduction to the Casimir effect, we will discuss some of its applications. The analysis of modern Casimir experiments requires to adequately take into account the material properties of the objects involved. In the last part of the talk, we will highlight some interesting issues arising in this context.

