

Graviton detection and the quantization of gravity

Tuesday 5 December 2023 15:00 (12 minutes)

A key dividing line in the dark matter community is between the wave and particle regimes. This division can be applied to any bosonic state, and for gravitational energy density the boundary cuts right through the ultra-high frequency regime. I will discuss the implications of this for instruments looking to detect a signal in the regime where gravity is a dilute gas of gravitons, and explain why contrary to what analogies with the photoelectric effect might suggest, a detection in that parameter space would not prove gravity was quantized.

Primary author: RODD, Nicholas Llewellyn (CERN)

Presenter: RODD, Nicholas Llewellyn (CERN)

Session Classification: Theory