

Ultra-light dark matter and gravitational wave interferometers

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Ultra-light dark matter, a compelling candidate for the cosmological dark matter, is modelled as an oscillating classical field, existing as a superposition of nearly coherent waves of macroscopic wavelength. If ultra-light dark matter has spin 2 it would look like a (massive) continuous gravitational wave, and as such it would be detectable in gravitational wave interferometers. In this talk I review the theory behind spin 2 dark matter models and describe the analysis pipeline to detect it with LIGO/Virgo data. If time allows I will also discuss how levitated sensor detectors can test this type of dark matter.

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