“Searching for ultralight dark matter with atomic spectroscopy and nuclear resonance”

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Abstract

Axions, axion-like particles (ALPs), dilatons, and other ultralight (masses from $10^{-4}$ down to $10^{-22}$ eV) particles have been discussed as possible candidates for dark matter. An interesting feature of these ideas is that they lead to predictions of potentially observable transient and oscillating effects. I will describe how we are looking for these as well as the relation of such experiments to tests of fundamental symmetries (P, CP, T, CPT ...).