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Fast oscillating fundamental "constants"

Tuesday 17 October 2023 14:00 (30 minutes)

Background ultralight scalar fields that are considered as a viable candidate for galactic dark matter may manifest themselves in apparent variation of fundamental constants, see, for example, [1,2].

In this talk, we will discuss some of the recent work of our group and collaborators, for example [3- 6], where we search for oscillating dark matter with Compton frequencies from near DC up to 100 MHz.

References
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[3] A Banerjee, D Budker, M Filzinger, N Huntemann, G Paz, G Perez, S Porsev, and M Safronova, "Oscillating nuclear charge radii as sensors for ultralight dark matter,"arXiv:2301.10784 (2023)
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