

The role of the atomic nucleus in testing fundamental symmetries: Can we moderate wavefunction related uncertainties?

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In this talk I shall focus on some experiments that use the atomic nucleus as a probe to search for and place bounds on interactions that arise from physics beyond the Standard Model. One key aspect in such tests that has been under scrutiny in recent times is the contribution of nuclear structure. While nuclear structure can provide an enhancement of the effects arising from exotic interactions (such as CP violating EDMs), they can also wash out other rare effects, making our understanding of structure-related corrections crucial for such experimental probes. I shall present some experimental results that have recently provided demanding tests of theoretical calculations in a particular mass region and show the repercussions of these investigations in other light nuclei.

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