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Gravimeters based on atom interferometry not only offer the ability to measure the value of local acceleration g with high accuracy but also help validate highly relevant principles such as the Weak Equivalence Principle. Broadly speaking, the implementation of such a device comprises the following steps: Preparation of the atoms in a defined state, splitting and recombining the wave atomic function, and measurements of the different phases acquired by the atom's wave function due to gravity. Every element requires components to be implemented such as a vacuum system, including the interferometric region, a laser system for the cooling, control, and detection of atoms, and a control system to control the experiment. This work shows the progress in the implementation of the first dual quantum gravimeter based on 133Cs and 87Rb atoms.

Poster Abstract

Session Classification: Poster Session

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