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## Interferometry setup for the LEMING experiment

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The LEMING experiment aims to test the equivalence principle for second-generation matter, using a cold muonium beam (bound  $\mu^+e^-$ ), where the inertial mass is dominated by the muon.

The feasibility of such a measurement relies on measuring the gravitational deflection of a lifetime-limited atomic beam. In this poster, the feasibility of an atomic interferometer is discussed, which could potentially provide a percent-level measurement of  $g$  of muonium.

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