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## Measuring gravitational effects on antimatter in space

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A direct measurement of the gravitational acceleration of antimatter has never been performed to date. Recently, such an experiment has been proposed, using antihydrogen with an atom interferometer and an Antihydrogen confinement has been realized at CERN. In alternative we propose an experimental test of the gravitational interaction with antimatter by measuring the branching fraction of the CP violating decay of KL in space. We show that at the altitude of the International Space Station, gravitational effects may change the level of CP violation such that a 5 sigma discrimination may be obtained by collecting the KL produced by the cosmic proton flux within a few years.

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