

Measuring the Fall of Antimatter in Earth's Gravitational Field

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The matter/antimatter unbalance in the universe is one of the most outstanding problem in physics. A different interaction of antimatter with respect to gravity might explain this difference. The AEGIS (Antimatter Experiment: Gravity, Interferometry, Spectroscopy) experiment, located at the Antimatter Factory at CERN, aims to study the asymmetry between matter and antimatter and, in particular, its first goal is to measure the effect of gravity on antimatter. The method chosen is to determine the fall of a pulsed beam of antihydrogen, caused by the Earth's gravitational field, by mean of an interferometer. This talk will start with an introduction to the physics, moving on describing the AEGIS experiment scheme of operations. The experimental apparatus will be presented, with the characteristics needed to obtain a precise gravity measurement. Last, the first technical results will be described and the future steps outlined.

Disclaimer: The whole Trento academic community is invited to participate. However, since this space is dedicated to PhD students, we would like to maintain an informal and welcoming environment

General information:

The seminar will be held at ECT*, Villa Tambosi, Strada delle Tabarelle 286, Villazzano. We are going to have a coffee break!
To reach Villa Tambosi: take bus number 13 from Povo (one leaves around 11) or bus number 6 from the city center. The bus stops is in front of the Villa. In order to organize the coffee break we kindly ask you to confirm your presence through the google form that you can find scanning the following QR code:



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