Seminar/Talk

Laser spectroscopy of antiprotonic helium

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The ASACUSA experiment at CERN carried out precision laser spectroscopy experiments on an composite matter-antimatter bound system called antiprotonic helium. These three-body metastable exotic atoms are formed spontaneously in helium targets, when a stopping antiproton is replacing one of the electrons of a ground state helium atom. The remaining 1s-electron protects the antiproton in near-circular Rydberg states during collisions, such that these states can sustain microsecond-scaled lifetimes. By comparing the 3-body relativistic QED predictions to the measured transition frequencies, the antiproton-to-electron mass ratio can be deduced to high precision.

Tuesday, March 21, 2017 11:00am - 01:00pm
Seminar room Big Ground floor / Office Bldg West (I21.EG.101)

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