

APR12-2012-000222

Abstract for an Invited Paper
for the APR12 Meeting of
the American Physical Society

Trapped Antihydrogen¹

FRANCIS ROBICHEAUX, Auburn University

Atoms made of a particle and an antiparticle are unstable, usually surviving less than a microsecond. Antihydrogen, the bound state of an antiproton and a positron, is made entirely of antiparticles and is believed to be stable. It is this longevity that holds the promise of precision studies of matter-antimatter symmetry. Low energy (Kelvin scale) antihydrogen has been produced at CERN since 2002. I will describe the experiment which has recently succeeded in trapping antihydrogen in a cryogenic Penning trap for times up to approximately 15 minutes.

¹results from the ALPHA collaboration