

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Way to CPT test with cold antihydrogen RYO FUNAKOSHI,
ATHENA Collaboration — The CPT theorem and the Weak Equivalence Principle (WEP) are foundational principles on which the standard description of the fundamental interactions is based. The validity of such basic principles should be tested using the largest possible sample of physical systems. Cold neutral antimatter (low-energy antihydrogen atoms) could be a tool for testing the CPT symmetry with high precision. After several years of experimental efforts, the production of low energy antihydrogen through the combination of antiprotons and positrons is a well established experimental reality. An overview of the ATHENA experiment at CERN will be given and the main experimental results on antihydrogen formation will be reviewed.

Ryo Funakoshi
ATHENA Collaboration

Date submitted: 24 May 2005

Electronic form version 1.4