

Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Search For CP Violation in Positronium CHELSEA BARTRAM,
UNC Chapel Hill — We propose to search for CP violation in the charged lepton sector by studying positronium decays. Positronium, a bound state of an electron and positron, occurs in both a singlet and triplet state. The triplet state, orthopositronium, decays primarily into three gamma rays. CP violation could potentially manifest itself in angular correlations between the directions of the three gamma rays. We will use the APEX annular array of NaI detectors, combined with a tagged source and a novel, conventional electromagnet. This array will increase the angular acceptance by a factor of 25 over previous experiments. We will present the current status of the experiment. This work is supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics.

Chelsea Bartram
UNC Chapel Hill

Date submitted: 09 Jan 2015

Electronic form version 1.4