Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Measurement of CMB Polarization with the Atacama Cosmology Telescope EMILY GRACE, Princeton Univ, ACTPOL COLLABORATION — The Atacama Cosmology Telescope Polarimeter (ACTPol) is a polarization-sensitive receiver for the Atacama Cosmology Telescope designed to make sensitive, high-resolution measurements of the polarization anisotropies of the Cosmic Microwave Background (CMB) with the goal of investigating the properties of inflation, dark energy, dark matter, and neutrinos in the early Universe. The ACTPol receiver employs three kilo-pixel arrays of transition edge sensor (TES) bolometer detectors. The first and second of these arrays, which were deployed in 2013 and 2014, respectively, and observed at 146 GHz, are among the most sensitive millimeter-wave polarimeters currently fielded and demonstrate the significant polarization measurement capabilities of the ACTPol instrument. I will present an overview of the first two seasons of observations, discussing the optimization of the detector arrays, the on-sky instrument performance, the observation and data-reduction strategies, and the science results.

Emily Grace
Princeton Univ

Date submitted: 09 Jan 2015 Electronic form version 1.4