Abstract Submitted
for the APR15 Meeting of
The American Physical Society

A measurement of gravitational lensing of the Cosmic Microwave Background by galaxy clusters using data from the South Pole Telescope ERIC BAXTER, Univ of Pennsylvania, SOUTH POLE TELESCOPE COLLABORATION — Clusters of galaxies gravitationally lens the cosmic microwave background (CMB) and thereby generate a distinct signal in the CMB on arcminute scales. Measurements of this effect can be used to constrain the masses of galaxy clusters using CMB data alone. We present a measurement of lensing of the CMB by galaxy clusters using data from the South Pole Telescope's Sunyaev-Zel'dovich (SPT-SZ) survey. Several sources of potential systematic error are identified, but their combined effect on our measurement is found to be less than our statistical precision. We find that the cluster masses derived from our measurement of CMB lensing are consistent with those derived from the clusters' SZ signatures.

Eric Baxter
Univ of Pennsylvania

Date submitted: 09 Jan 2015 Electronic form version 1.4