

Abstract Submitted
for the APR09 Meeting of
The American Physical Society

Measuring Sunyaev-Zel'dovich Scaling Relations with APEX-SZ

AMY BENDER, University of Colorado at Boulder, APEX-SZ COLLABORATION¹ — Accurately measuring the masses of galaxy clusters is critical to the precise constraint of cosmological parameters using cluster surveys. Detecting clusters with the Sunyaev-Zel'dovich effect (SZE) is extremely promising and the observed flux is theoretically shown to be an excellent proxy for total cluster mass. We present 150 GHz observations of the SZE taken using the APEX-SZ camera; a 330 element TES bolometer array mounted on the APEX telescope in northern Chile. We combine SZE and X-ray analysis for several clusters and compare relationships between the observable SZE flux and total cluster mass with expected values from theory and simulations. Our sample contains both relaxed and merging clusters over a wide redshift range allowing us to probe the dependence of our correlations on the dynamical and evolutionary state of the clusters.

¹<http://bolo.berkeley.edu/apexsz/group.html>

Amy Bender
University of Colorado at Boulder

Date submitted: 09 Jan 2009

Electronic form version 1.4