

Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Measuring Scatter in the Cluster Richness-Mass Relation for the Dark Energy Survey DEVON HOLLOWOOD, TESLA JELTEMA, Univ of California-Santa Cruz, ELI RYKOFF, Kavli Institute for Partical Astrophysics and Cosmology, EDUARDO ROZO, Kavli Institute for Cosmological Physics, DARK ENERGY SURVEY COLLABORATION — Measuring the number density of galaxy clusters as a function of density and redshift places strong constraints on the dark energy equation of state. This measurement can be cheaply and cleanly accomplished using galaxy cluster richness as a mass proxy. In order to understand the intrinsic scatter in the richness-mass relationship, I have developed a pipeline to determine comparatively low-scatter x-ray mass proxies for galaxy clusters which appear in both archival Chandra data and in the Dark Energy Survey catalogue. These data can then be used to constrain the cluster richness-mass relation, which in turn is expected to improve the Dark Energy Survey figure-of-merit by a factor of two.

Devon Hollowood
Univ of California-Santa Cruz

Date submitted: 09 Jan 2015

Electronic form version 1.4