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The Halo Population Statistics of DES redMaPPer Selected Clusters ARYA FARAH, AUGUST EVRARD, University of Michigan - Ann Arbor, THE DARK ENERGY SURVEY COLLABORATION — We present results of ongoing efforts to determine the population statistics of halos at fixed optical richness for the Dark Energy Survey (DES) clusters identified with the redMaPPer algorithm. First, we discuss the scaling properties of X-ray observables of DES Year-1 redMaPPer with $z < 0.2$, obtained from archival Chandra and XMM observations. Then, we constrain the scatter in the log of halo mass at fixed optical-richness via the halo population model of Evrard et al. (2014). Finally, the cosmological constraints from the DES-Year 1 Data will be presented, in which these above results are the key input of the cosmological pipeline. We finally discuss the state of systematic uncertainties and provide the roadmap of the cluster cosmology.

Arya Farahi
University of Michigan - Ann Arbor

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