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Weak Lensing Analysis of Ten High-z Galaxy Clusters KELLEN MURPHY, DOUG CLOWE, Ohio University, DARK ENERGY AMERICA FRANCE TEAM (DAFT/FADA) COLLABORATION — We present the results of our weak lensing analysis of ten massive, high redshift galaxy clusters imaged by the Hubble Space Telescope Advanced Camera for Surveys (ACS). We demonstrate the application of photometric redshift for background galaxy discrimination, explore the fitting of the mass profiles of the clusters using weak lensing shear, and present our creation of an initial test data set for the study of tomographic weak lensing with clusters. The use of tomographic techniques to constrain the dark energy equation of state parameter is a pivotal component of future large survey missions, however, the application of tomography to cosmic shear necessitates the exclusion of regions around galaxy clusters from analysis. We therefore test the applicability tomography to cluster-induced shear as a secondary, complementary sample through which estimates of the dark energy e.o.s. parameter can be made.

Kellen Murphy
Ohio University

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