

How Many Galaxies? Checking the Accuracy of a Method for Extrapolating Galaxy Cluster Richness

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In order to study a sample of galaxy clusters exhibiting strong gravitational lensing, we took images of ten galaxy clusters at Kitt Peak National Observatory. In our analysis, we extrapolated the total number of galaxies in the outer regions of the clusters because some sections of the clusters were outside of our original images. In early 2012, we took new observations of some of these clusters at Apache Point Observatory with the goal of imaging the previously missing area. We then determined how many cluster galaxies were present in this area and compared this to the extrapolated number to check the accuracy of our extrapolation method. We describe our results. We also describe new imaging of a foreground galaxy cluster obtained during these observations.

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