

Impact of photo-z on Dark Matter Halo membership and the estimation of cosmological parameters

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The abundance of galaxy clusters is a powerful probe for cosmology, especially on large optical surveys where hundreds of thousands can be detected. One of the main techniques that allows us to evaluate the large number of composing galaxies at a low cost is the photometric estimation of redshifts, i. e. photo-zs. Here we intend to evaluate the propagation of the uncertainties of photo-zs on the determination of the cluster redshift and mass proxy, and consequently, on cosmological constraints from cluster abundance. This preliminary work is evaluating the impact on the dark matter halos on the DC2 simulation using FlexZBoost photometric redshifts. Ultimately, the goal will be to evaluate this effect on optically detected galaxy clusters and optimize the application of different photo-zs for cluster cosmology.

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