



Contribution ID: 449

Type: **Presentation**

Study of Galaxy Evolution in DES Clusters

Monday, 31 July 2017 12:00 (15 minutes)

Clusters of galaxies represent a powerful probe for cosmology in the era of large photometric surveys such as the Dark Energy Survey. At the same time, understanding the astrophysical processes that drive their evolution is needed for a correct cosmology: cluster galaxies show particular properties with respect to field galaxies, processes like cluster membership selection often require knowledge of clusters and galaxy evolution. In particular, the efficiency with which halos convert the matter they contain into stars is still matter of debate and it is crucial for understanding galaxy formation and evolution. We present a measurement of the stellar-to-halo mass relation for the DES Year 1 redmapper clusters, showing the results for centrals, satellites and total content. We also explore the evolution of the fraction of blue galaxies and the star formation rate. We show that stellar mass is also a powerful mass proxy for clusters by comparing our results to X-ray temperature measurements that overlap with the DES Y1 footprint.

Primary author: PALMESE, Antonella (Fermilab/UCL)

Co-authors: WELCH, Brian (University of Chicago); LIN, Huan (Fermilab); Dr ANNIS, James (Fermilab); Dr SOARES-SANTOS, Marcelle (Fermilab)

Presenter: PALMESE, Antonella (Fermilab/UCL)

Session Classification: Cosmology and Astrophysics

Track Classification: Cosmology and Astrophysics