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Studying the red fraction on LSST DESC DC2 and DP0 with the Wavelet Z-Photometric Cluster Finder

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In color-magnitude diagrams of galaxy clusters it is possible to distinguish two regions: the red sequence and the blue cloud. The red sequence includes reddish and generally elliptical galaxies. With data from surveys and algorithms we can investigate this feature and their relation with cluster evolution. In this study we aim to study the evolution of red fraction of cluster members of Data Preview 0 and Data Challenge 2 from Legacy Survey of Space and Time identified by the Wavelet Z-Photometric Cluster Finder (WaZP), in order to evaluate its performance. We investigated color histograms and fitted Gaussians to characterize the red and blue galaxy populations to calculate the red fraction. The preliminary results indicate a good agreement between the evolution of the red sequence of the samples, despite the catalogs having different types of magnitude and redshift, which may be a sign of the good performance of WaZP.

Primary author: WILLE, ANDRESSA (UTFPR)

Presenter: WILLE, ANDRESSA (UTFPR)

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