Highlights of Spanish Astrophysics VII, Proceedings of the X Scientific Meeting of the Spanish Astronomical Society held on July 9 - 13, 2012, in Valencia, Spain. J. C. Guirado, L. M. Lara, V. Quilis, and J. Gorgas (eds.)

Evolution of Brightest Cluster Galaxies over the past 7 Billion Years

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Abstract

We present a study of the formation and evolution mechanisms of the brightest cluster galaxies (BCGs) over cosmic time. By comparing high-z (z∼0.9) massive galaxies in clusters and groups of the Cl1604 supercluster with those in local clusters (z∼0), we noticed striking differences in the morphologies and structural parameters of these galaxies. This sample, coupled with the results of numerical simulations and semi-analytic models, allows us to directly infer the mechanisms that shape and evolve BCGs over the past ∼7 Gyrs.