

The formation of cD Halos: the case of NGC 3311 in the Hydra I Cluster

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We have studied the core of the Hydra I cluster, around its central cD galaxy, NGC 3311. We have analyzed the kinematics a sample of 60 intracluster planetary nebulae (PNs), detected using the multi-slit imaging spectroscopy technique (MSIS, Gerhard *et al.*, 2005, Ventimiglia *et al.*, 2008). PNs are good tracers of light (Coccatto *et al.*, 2009) and the MSIS allows to measure their velocities and positions at the same time. The histogram of the PN radial velocities presents several discrete components. We are comparing this result with Λ CDM hydro-dynamical simulations and other data in order to interpret it in the framework of the formation of extended halos around cD galaxies. V band photometric data around NGC 3311 have revealed the presence of an excess of light in the North-East part of the galaxy, which is spatially coincident with most of the PNs contributing to the reddest peak in the PNs LOSVD. We have measured, using Long-Slit data, the velocity of HCC26, a dwarf (DW) galaxy in the middle of the excess of light. The reddest peak in the PNs LOSVD is consistent both with the velocity of HCC 26 and of several other DWs in the same region. We are investigating the possibility that the light in excess has been stripped from these galaxies and now incorporated into the halo of NGC 3311.

References

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Gerhard, O., *et al.* 2005, *ApJ* 621, L93
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