

Diffuse Light in Clusters of Galaxies

M. Arnaboldi

I.N.A.F., Observatory of Turin

I will review the latest results for the presence of diffuse light in clusters, the nearby universe and at intermediate redshift, evidence of ongoing star formation in an intracluster Virgo field, and how measurements with HST can give important information on the metallicity of these diffuse stars. I will present the latest results from hydrodynamical cosmological simulations of cluster formation regarding the diffuse light in clusters, and discuss the correlations between the amount of diffuse light and its distributions with the clusters' physical parameters. I shall then present how intracluster planetary nebulae (ICPNe) can be used as excellent tracers of the diffuse stellar population in nearby clusters. Their number density profile and radial velocity distribution can be used to test models for cluster formations. The preliminary comparison of available ICPN samples with predictions from cosmological simulations support late infall as the most likely mechanism for the origin of diffuse stellar light in clusters.

*BDMH 2004 – Baryons in Dark Matter Halos
5–9 October 2004
Novigrad (Croatia)*