

THE NATURE OF THE DIFFUSE ELLIPTICAL GALAXIES

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A collaboration between Bulgaria and France is continuing since 8 years. The teams from Sofia and Lyon Observatories participate together to the development and operation of the HyperLeda database which is used to study the physics of galaxies and the structure of the Local Universe.

The other axis of this association is the study of the stellar populations and in particular the genesis of the diffuse elliptical galaxies (dE). It is shown here that the evolutionary link between gas rich disk galaxies and the present spheroidal and gas depleted dE is a robust assumption. Using spectroscopy and a new method for recovering the history of the enrichment and star formation, we propose that the metallicity evolution is controlled by the balance between the energy feed-back from the star formation and the gravitational energy of the galaxy, but the gas removal must essentially be due to the ram pressure stripping against the hot intra cluster medium.

We present the basis of our analysis method, discuss some recent results and outline our future projects.