

the mean number of neighbors on circular velocity. Galaxies with $V_c > 250 \text{ km s}^{-1}$ have an excess of neighbors on scales $\approx r_0$ with respect to those with $V_c < 250 \text{ km s}^{-1}$. This excess corresponds to an amplification by a factor 1.2 in the correlation length. We find, however, no statistical evidence of a V_c -environment dependence for galaxies with circular velocities smaller than 250 km s^{-1} .

POPULATION SYNTHESIS ANALYSIS OF THE UV SPECTRUM OF ELLIPTICAL GALAXIES

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The Isochrone Synthesis algorithm of Charlot & Bruzual (1991, ApJ, 367, 126) and Bruzual & Charlot (1993, ApJ, 405, 538) is used to perform a detailed analysis of the possible stellar populations which may be responsible for the UV flux observed in elliptical galaxies. The UV spectrum of N4472, N3379, M32, and N4649 (normal ellipticals, according to the nomenclature of Burstein et al. 1988, ApJ, 328, 440) are examined. We conclude that whereas N4472 and N3379 have a UV spectrum which is consistent with that produced by a passively evolving old stellar population of solar metallicity, M32 shows definite spectral evidence that a recent major event of star formation took place in this galaxy close to 4 Gyr ago. The spectrum of N4649 cannot be understood unless we assume that star formation has been taking place (in minor amounts) in this galaxy until recent epochs, or that a UV bright stellar component is missing in our synthesis models.

EVOLUTION OF GALAXY LUMINOSITY IN THE CDM MODEL

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We analyse the evolution of the luminosity function of galaxies using the CDM model in numerical simulations. There is an observational excess in the number counts of galaxies per square degree in the blue band N_b (i.e., APM, Maddox et al. 1990). Several models have tried to reproduce it but they cannot fit the observations. Our model assumes an instantaneous star formation rate (SFR) proportional to the local density. A 'single star burst' is produced each time step and we follow

the evolution of the luminosity and colour of each 'stellar group'. The galaxies are identified with a density criterium. We compute U , V , B , K colours and N_b which satisfactorily reproduce the observations. We present a discussion of our results.

WIDE BAND PHOTOMETRY OF H II GALAXIES

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Wide band photometry in the B , V , R and I bands is presented for 44 H II galaxies from the samples by Maza et al. (1991, A&A, 89, 389) and Vigroux, Stasinska, & Comte (1987, A&A, 172, 15). These objects have well determined redshifts, physical conditions and chemical abundances (Peña, Ruiz, & Maza 1991, A&A, 251, 417). The data were obtained with the 2.1-m telescope at the Observatorio Astronómico Nacional, B.C., México, equipped with a direct camera and a CCD detector. The apparent magnitudes in all the bands were measured defining apertures which included all the objects. Absolute magnitudes and colors were derived. From these data we obtained the following preliminary results:

- The absolute magnitudes of the sample range from -14 to -22 mag in the B band and similarly in the others.

- These galaxies present very blue colors ($B-V$, $V-R$ and $R-I$) compared to other stellar systems such as globular clusters or elliptical and spiral galaxies. However some objects show an excess in the I band; these objects also have larger heavy element abundances than the average of the sample, therefore we conclude that this excess could be due to the presence of an old stellar population embedded in the galaxy.

- We analyzed the possibility that these objects follow a luminosity - metallicity relation similar to that reported for elliptical, spiral and irregular galaxies (see for instance Skillman, Kennicutt, & Hodge 1989, ApJ, 347, 875). We found that there is no evidence for such relation although some of the objects with very low metallicity have very low luminosity. We found that there are no objects with very low metallicity and high luminosity in this sample.