

Significado de la Función de luminosidad H α en Galaxias Australes

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ABSTRACT. By means of CCD frames and image processing techniques we measured the luminosity function of H α of III regions of nearby galaxies with a high S/N. Several studies were done recently assuming that the shape of the observed luminosity function can be use to determine physical parameters (e.g. mass distribution, stellar evolution, stellar mass distribution, etc) of the hidden stellar population. Some of the models only consider the distribution of the integrated stellar mass of the III regions and others only the evolution of the stellar ionizing population of III region. In this work we consider the two effects simultaneously plus the effect of taking in account different stellar formation rate for the host galaxy. This a summary of the results:

- The turnover point discover by Kennicutt et al. (1989) appears to have an explanation as the convolution of the stellar formation rate and the stellar mass distribution.
- From comparison with observational data (from Feinstein et al. - 1992, this issue and Thesis) some galaxies NGC 2997, NGC 6070, NGC 6384, NGC 7552 seem to have luminosity functions compatible with a constant SFR. NGC 1672 exhibits to have a more complex situation, not compatible with a constant SFR.
- In the case of constant SFR, the slope of -2 (Kennicutt et al., 1989, Apj 337,761) can only fit the luminosity function in the bright side of the distribution.

Función de la luminosidad H α en Galaxias Australes

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ABSTRACT. H α images of 20 nearby Southern galaxies were obtained using narrow interferometric filters. Positions, fluxes and diameters of the objects were obtained from these frames. A study of the completeness of the sample is made and after a proper calibration, the absolute fluxes and the H α luminosity function were obtained for each galaxy. Two galaxies in the sample (NGC 1672, NGC 5861) show profiles of type II luminosity function while NGC 6221 shows extended H α emission.

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