TABLE 2

HII REGIONS PARAMETERS

HII regions	Radius[1] (pc)	Log(Lum)[2] (erg s^{-1})
Orion	5	37
30 Dor	200	40.2
Mrk 1318	60–230	∼39
Tol 1358-328	30–392	35–40

[1]The radius was computed assuming a distance of 20.9 Mpc to Mrk 1318 and of 16.7 Mpc to Tol 1358-328.

[2]The luminosity was corrected for internal extinction using the Balmer decrement from Te91.

uum. This frame was subtracted then from the line+continuum image providing the continuum-free line frame.

3. RESULTS AND FUTURE WORK

A catalogue of HII regions candidates was created using the Hα images and the automatic detection code SExtractor (Bertin & Arnouts 1996). To avoid confusing image noise with real structure, for a candidate structure to be accounted as an HII region the area covered by it has to be larger than a minimum area, $A_{HII} = \pi \times (FWHM_\star/2)^2$, defined by the image seeing or image mean stellar full width at half maximum ($FWHM_\star$).

We were able to identify, for the first time in these galaxies, 7 and 142 perfectly delimited HII regions in Mrk 1318 (Figure 1) and Tol 1358-328 (Figure 2). In Table 2 we compare the Hα radius and luminosity values of Orion and 30 Dor (Kennicutt 1991) with those of the HII regions found in Mrk 1318 and Tol 1358-328. It can be seen that the radii found have characteristic values of these type of objects, and that the Hα luminosity of some of the HII regions is similar to that of 30 Dor nebula.

The next step is to identify the HII regions in the [OIII] images and estimate their ages using Hα equivalent width in combination with broad band photometry. This will allow us to understand the impact that the young stellar population has on the ISM as well as the star formation history of the selected HII galaxies.

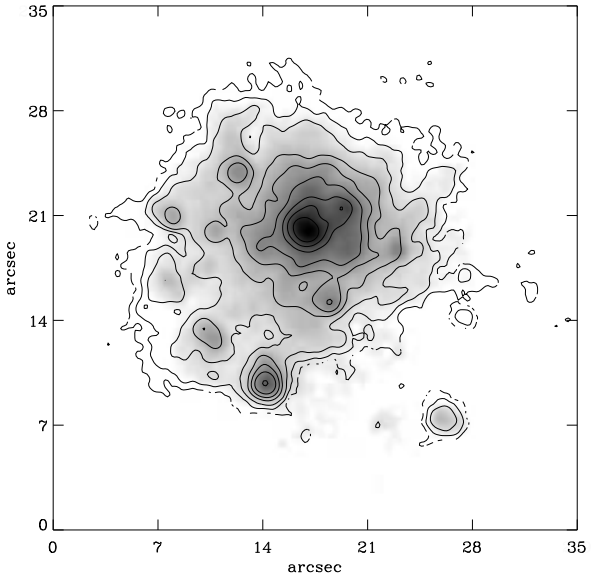

Fig. 1. Mrk 1318 [OIII]λ5007 map with Hα contours overploted.

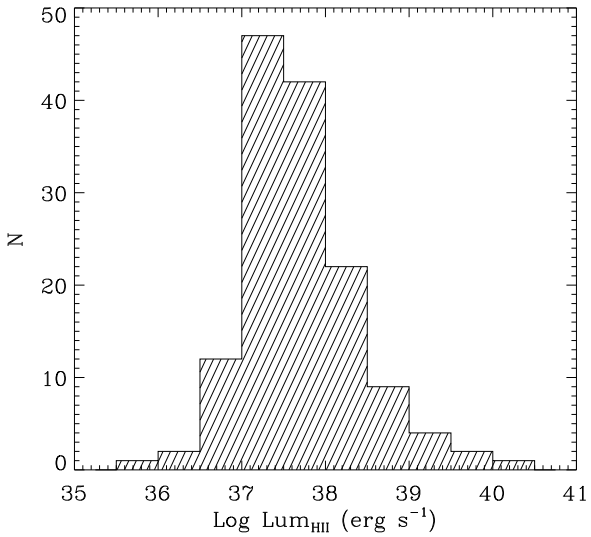

Fig. 2. Histogram of HII regions Hα luminosity in Tol 1358-328.

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