(earliest YSOs; protostars), the 40% of the class II objects (disk-like YSOs), and the 30% of the class III objects (latest YSOs) are in the correspondent regions of the diagram. There are a likely effect of contamination on the [4.5], [5.8] and [8.0] IRAC bands that introduce a dispersion in the distribution due to interstellar emission by PAHs, which contribute important in these bands at star-forming regions.

In order to obtain a physical characterization for the YSOs, we have obtained physical parameters for the objects using a fitting tool SED models (Robitaille et al. 2006) and selected the best ten models for the fit the SED model to data of each object. We have found that the class I and II (likely youngest YSOs) have the highest accretion rates while the evolved class III have null presence of accretion.

4. DISCUSSION AND CONCLUSIONS

4.1. *Spatial distribution of YSOs*

From the spatial distribution of the YSOs we noted that (a) the class I objects and class II are associated with the highest column densities traced by the molecular gas, and (b) the class III objects are uniformly distributed over the molecular cloud. The distribution of the YSOs suggest a two different young population, evolved objects (CIII) associated to the low dense regions, where they have consumed the molecular gas in their formation process, and removed the molecular remanent material close to them, and a youngest population (CI/II) associated to dense regions which are coexisting with the IRDCs, where they have a reservory of material for their final formation.

4.2. *The YSOs associated to the central molecular region*

We found four sources associated to the central molecular region towards the IRAS source (within 1 arcmin), two of them have typical characteristic class I SED (protostar), one object has a class I/II SED, and other has a class II SED. From the physical parameters obtained using fitted SED models, we noted that the class I objects have highest accretion rates which is a feature of their earlier phase evolutive. These objects are associated with the brightest sources at 24 μm image, and could be the source of an outflow, which is suggested by the extended brighter emission at [4.5] IRAC band (EGO) and their association to methanol maser emission reported by Walsh et al. (2003) and Cyganowski et al. (2009). Therefore they are likely in earliest evolution stage of star formation process, and are excellent candidates to high mass star precursors. These objects shows a likely scenario for "Hot Molecular Core" phase, an early evolutive phase in the high mass star-forming process (Garay & Lizano 1999; Kurtz 2000; Churchwell 2002).

4.3. *The YSOs associated to NW molecular region*

We have found three YSOs associated to NW dense molecular subregion which is also associated to an IRDC; one of them, has typical class I SED, last two objects are class II. From the physical parameters obtained from the SED fit models, we noted that one class II and the class I objects have a moderate-high accretion rates. These objects are associated with brighter sources at 24 μm image and with a dense core at 1.2 mm continumm emission (Faúndez et al. 2004; Rathborne et al. 2006), and both are associated to "green fuzzy" objects in the 3-color IRAC/Spitzer image. Also these objects have an outflow associated by detection via HCO^+(1-0), HCN(1-0) and $C^{18}O$(2-1) by López-Sepulcre et al. (2010) and detection at SiO (2-1) and (3-2) emission line by López-Sepulcre et al. (2011), confirming their early evolutionary stage.

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