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CYANOACETYLENE OBSERVATIONS OF B335

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B335 is now recognized as the smallest isolated star forming region. The detection of a Far-IR source and a bipolar flow were successful, on the other hand, the distribution of the quiet gas is poorly understood. We are trying to determine the density distribution in B335. As the first step, we have carried out HC_3N (J = 5-4 and 4-3) observations of B335. The observations of the J = 5-4 line have revealed a high density core with a 30"-60" size. The Far-IR source is located just at the center of the core, and the core lies at the center of the bipolar flow. A mean hydrogen molecular density in the core of about 5×10^4 cm^{-3} is derived from the line ratio J - 5-4/4-3.

CO OBSERVATIONS OF A COMETARY GLOBULE IN IC1396

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A cometary globule in IC1396 named "comet tail 6" by Osterbrock (1957), has been observed at CO and ^{13}CO (J = 1-0) lines with a high spatial resolution, 14", with the 45-m radio telescope at the Nobeyama Radio Observatory. The resolution corresponds to a linear size of 0.05 pc at the distance of 750 pc (Matthews 1979). Two possible pre-main sequence stars, LkHα 349 and LkHα 349/c (Cohen and Kuhi 1979), associated

https://doi.org/10.1017/S0074180900094997 Published online by Cambridge University Press

with small nebulosities nestle in the central part of the globule. We have obtained CO and ^{13}CO spectra along NS and EW strips which cross each other at the position of LkHα 349 and have mapped a 1.5'×1.5' area around the globule center at ^{13}CO. Results from the observations are summarized as follows:

1) It has been found that the central part of the globule is a cavity of a size of 0.4 pc (Figure 3) and no systematic motion is recognized there (Figure 1).

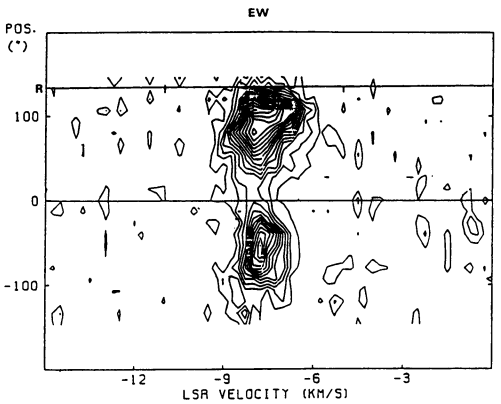

Fig. 1. A position-velocity map along EW strips for ^{13}CO emission. Contours are drawn in 1 K intervals. The position of the eastern rim is indicated by "R" at the coordinate.

2) Figure 2 shows the distribution of the column density plotted along the NS and EW strips. The densest region lies 0.1 pc interior from the eastern optical rim. IC1396A (Pottasch 1958), and the extent is as narrow as 0.1 pc. This peaking seems to be due to compression of the globule by the H II region. The observed visual extinction of 3.65 mag. (Cohen and Kuhi 1979) for LkHα 349 suggests that this star is behind the globule. The total mass of the globule is estimated to be 120 $M_\odot$ by assuming an appropriate geometrical model.

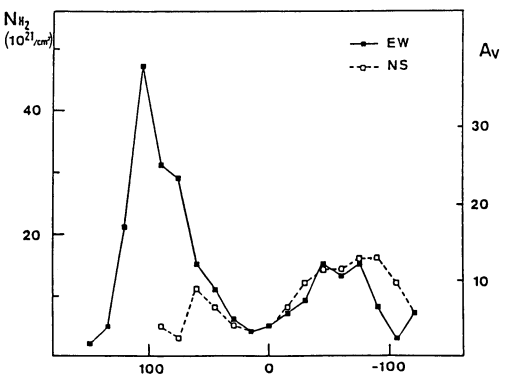

Fig. 2. The column density plotted as a function of position along NS and EW strips. The abscissa is the offset in seconds of arc with respect to the position of LkHα 349.

3) In Figure 3, a map of a the central part of the globule showing the spatial distribution of the integrated intensity of the ^{13}CO emission is superposed on the optical photograph. The structure of the cen-

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tral cavity coincides well with the nebulosities associated with LkHα 349 and LkHα 349/c. Therefore, the cavity may be formed by the interaction between the stellar wind from the pre-main sequence stars and the globule.

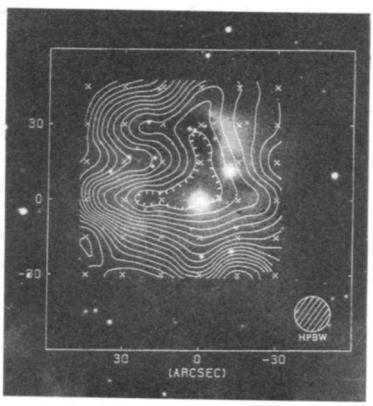

Fig. 3. A ^{13}CO integrated intensity map of the central part of the globule. The velocity intervals are from -10 to -6 km/s. The observed points are indicated by crosses. The two brightest stars are LkHα 349 (the brighter) and LkHα 349/c (the fainter). The photograph is a partial reproduction of Osterbrock's plate (courtesy Dr. D.E. Osterbrock).

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CO OBSERVATIONS OF DRACO CLOUDS, UNUSUAL HIGH LATITUDE CLOUDS

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Due to highly sensitive detectors and to the observers' efforts the observations of high galactic latitude clouds (HLC) have been improved in the last few years. The detection of infrared cirrus clouds, which were discovered by the IRAS (Low *et al.* 1984), strongly stimulated research on HLC. It is generally considered that HLC are small clouds which lie around 100 pc of the Sun (Blitz *et al.* 1984). This idea is consistent with their small velocity (V_{LSR}) in the CO (λ = 2.6 mm) line.

Though Draco clouds are HLC (b $\sim$ 38°) with faint optical emission, they are different from the other HLC. Their distance from the Sun is estimated to be about 800 pc by a UBV-photometric study (Mebold *et al.* 1984). The distance is consistent with the negatively large V_{LSR} ($\sim$ -19 or -27 km/sec) in the H I (λ = 21 cm) and CO lines. The observations in

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