

Employing the usual LTE analysis, we determined the CO column densities over the area extending  $20' \times 20'$ . The column density at the globule center is found to be  $10^{17} \text{cm}^{-2}$ . At a distance of 600pc, the globule contains mass amounting  $200M_{\odot}$ . For the isotopic species, we made the position-velocity map in several directions across the cloud, and also made the velocity centroid map. The map shows that the cloud consists of rigidly rotating core and constantly rotating envelope. The velocity centroid map of  $^{12}\text{CO}$  as well as  $^{13}\text{CO}$  traces the velocity field fairly well.

## **CO Observations of a Region in the Perseus arm Containing Hb 12 and its Immediate Vicinity**

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High resolution  $^{12}\text{CO}$  observations of the region containing the planetary nebula Hb12 were made with the Nobeyama Radio Telescope. These observations reveal that there is no significant CO emission from Hb12 itself. Near Hb12, however, the observed regions show a structure of clustered dark clouds whose physical parameters suggest that these clumps would be further fragmented or collapsed. Also found with the high resolution observations is that a few isolated clumps are located away from the main CO feature extended possibly from the galactic plane. For more detail morphologies and velocity structures of the clumps, especially in relation to the large CO complex to which these are likely to be associated, more observations are substantiated.

## **IRAS Observations of Dark Globules**

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Infrared emission maps are constructed at 12.5, 25, 60 and  $100\mu\text{m}$  for dark globules B5, B34, B133, B134, B361, L134 and L1523 using Infrared Astronomical Satellite data base. These clouds are selected on the basis of their appearance in Palomar print as dark obscuring objects with angular sizes in the range of 3 to 30 arcminutes. The short wavelengths (12.5 and  $25\mu\text{m}$ ) maps show the embedded infrared sources. These are identified as late type stars, circumstellar envelopes or reddened stars. We found many such sources only in B5, B361 and B34 regions. Diffuse component at  $25\mu\text{m}$ , arising from the stochastically heated small dust grains ( $a \lesssim 0.01\mu\text{m}$ ) by interstellar radiation field, is found in B361 and L1523 regions. Such emission is characterized by the limb brightening, which is confirmed L1523 and marginally detected in B361.