Infrared emissions at the long wavelenths(60 and 100μm) are due to cold dusts with temperature less than 20K. The positions at which 60 and 100μm emissions peak generally do not coincide with the optical center or position of point sources. The morphology of these emissions are often clumpy, indicating clumpy nature of dust distribution. The distribution of color index determined between 60 and 100μm emissions implies decrease of dust temperature toward the center. Assuming that the dust grains are assumed to be heated by interstellar radiation field, the thermalization efficiency is found to be close to unity.

IR Continuum and CO Line Observations of Barnard 134

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In order to study detailed structures of dark globules, we have observed Barnard 134 in the ^{12}CO ($J=1-0$) line and analyzed the IRAS images of the globules at 12, 25, 60, and 100μm. From the ratio of 60 to 100μm flux, we determined the dust temperature averaged over line of sight as a function of projected distance from the globule center. Using the temperature, we also determine the dust optical depth at the longer IR wavelengths. Good agreement is found between the IR optical contours and the CO map of integrated antenna temperature. Total mass of the globule was estimated from the IR and extinction contours. Some discussions will be given to internal dynamics of the globule.

Computer Simulation of Three Dimensional Stellar System in Cylindrical Coordinates

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N-body problems in general are classified as no exact solutions avail, and in many present-day applications, these have been greatly aided, both theory and desigen are pushed to the limit, in producing trustworthy resuls through computer simulations. Acknowleding the crucial role of computing time, many computer algorithms have been advanced for reduction of the costly CPU time. In this paper we propose a method, best applicable to stellar systems with good symmetrical properties, employing cylindrical coordinates and the FACR method.