

tating disk with a 35" diameter reported by Bieging (1984) can be recognized.

We have investigated the position-velocity diagrams and could not find the large, distinct velocity gradient which is expected for the rotating disk reported. There is a complex velocity structure near the IRS, but that is not as large as  $2 \text{ km s}^{-1} \text{ arcsec}^{-1}$  which is required for support against the gravitational attraction of the central  $20 M_{\odot}$  star, nor it shows a simple rigid-rotation like pattern. Instead of the large scale velocity gradient, a narrow blueshifted wing is seen toward the protostar that suggests the existence of a very compact outflow. There are no strong redshifted components and therefore the flow in S106 is probably not of a bipolar-type.

The results from our observations indicate that the protostellar disk around S106 is disrupting, and consequently that S106 is in a late stage of the massive star formation process.

#### REFERENCES

- Bally, J., and Scoville, N.Z.: 1982, *Astrophys. J.* 255, 497.  
Bally, J., Snell, R.L., and Predmore, R.: 1983, *Astrophys. J.* 272, 154.  
Bieging, J.: 1984, *Astrophys. J.* 286, 591.  
Felli M., Staude, H.J., Reddmann, Te., Massi, M., Eiroa, C., Hefele, H., Neckel, Te., and Panagia, N.: 1984, *Astron. Astrophys.* 135, 261.

#### DIFFRACTION-LIMITED FAR-INFRARED IMAGING OF "PROTOSTARS"

Paul M. Harvey, Daniel F. Lester, Marshall Joy  
Astronomy Department, University of Texas at Austin,  
Austin, TX 78712, USA

New mapping and analysis techniques for NASA's Kuiper Airborne Observatory are described which permit us to obtain information of size scales of order 10" in the far-infrared. Basically, the focal-plane image is highly oversampled while the telescope is scanned smoothly and repeatedly over the region of interest with a slit of size  $\lambda/D$ . Maximum-entropy deconvolution is then used to obtain spectral frequency information down to scales of  $\sim \lambda/2D$ .

We discuss the application of these techniques to the study of dust density and temperature distributions around "protostars", both spherically symmetric sources like S140 and disk-like sources such as S106.