

PROTOSTELLAR CANDIDATES IN W75N

C.M. Mountain, I. Gatley, T.W. Hartquist, S.K. Leggett,
M.J. Selby
UKIRT, 900 Leilani St., Hilo, HI 96720, USA

W75N is a highly obscured region containing far-infrared sources, masers and molecular clouds. New results are presented showing highly reddened point sources near the maser source W75N(OH). One of these sources appears to be illuminating a newly discovered reflection nebula exhibiting large scale fluorescent molecular hydrogen.

NEAR-INFRARED SOURCES IN THE COMPLEX H II REGION NGC 6357

P. Persi, M. Ferrari-Toniolo
Istituto Astrofisica Spaziale, CNR, CP 67,00044, Frascati,
Italy
M. Roth, M. Tapia
Instituto de Astronomía, Universidad Nacional Autónoma de
México, Apdo. Postal 877, Ensenada, B.C. México

We have searched for the near-infrared emission from selected areas of the star forming region NGC 6357. Six fields of 90×90 arcsec² centered on the far-IR peaks G353.19+0.91, G353.22+0.67, G353.13+0.64, G353.05+0.56, on the 6-cm radio continuum peak G353.035+0.78, and on the water maser source H₂O353.27+0.64, were scanned through the K(2.2 μ m) filter at the 2.1-m telescope of the Observatorio Astronómico Nacional at S. Pedro Mártir, Baja California, México.

Twenty-one sources were found to a flux limit in K of ~ 67 mJy (3σ). J, H, K, and L photometry were collected for most of the detected sources. To separate the effects of interstellar reddening from IR excess due to emission from dust or a gas envelope, the colours of the sources were plotted in a (J-H, H-K) diagram. From this diagram it follows that seven sources are reddened background stars, while eight sources have significant IR excess, and most likely are related to the star forming region NGC 6357. Three of these sources are located within the bright visible nebula G353.19+0.91, and are coincident with the peaks of the 10 and 20 microns maps. Their energy distributions between 1 to 20 μ m, imply luminosities of the order of 10^4 - $10^5 L_{\odot}$, and the 8-13 μ m CVF spectrum of Irs1 shows "silicates" in absorption with $\tau_{9.7} \approx 2$ ($A_V \approx 30$). The other IR sources associated with the complex region, result to be less luminous, and their colours are very similar to those of T-Tau stars.