The presence of massive and low mass objects in NGC 6357, suggests that a unique triggering mechanism cannot explain the star formation process in this complex region.

THE STAR FORMATION REGION ASSOCIATED WITH THE COMETARY NEBULA GM24

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GM24 is a small visible nebulosity in the vicinity of a molecular cloud. In this contribution we present the results of continuum (6-cm) and CO line ($J = 1 \rightarrow 0$) radio observations, infrared maps, broad-band photometry and low-resolution spectroscopy as well as long-slit Echelle Hα spectroscopy. We found evidence that the GM24 = PP85 nebula is part of a larger region where star formation occurred in the past 10^4 years; the region is embedded in a typical molecular cloud with a dimension of ~ 10 pc and mass of $\sim 10^4$ $M_\odot$. A compact radio H II region seems to be associated with GM24 and with one of the mid-infrared peaks detected. The nebula is most probably the visible part of an embedded H II region that is starting to emerge from the cloud. The other infrared peaks found in its vicinity ($\sim$ 1 pc) are probably associated with less evolved stellar objects. The complex also shows an extended near-infrared flux which we believe to arise in a reflection nebula. From energy arguments, we found that the luminosity required to power the H II region and keep the cloud at the observed large temperature ($T_K \cong 33$ K), is $\sim 10^5$ $L_\odot$ which is consistent with the infrared total flux from the present measurements and those from IRAS of 4×10^4 $L_\odot$; this corresponds to the flux of $\sim$3 B0 ZAMS stars. The details of the present work have appeared in the Revista Mexicana de Astronomía y Astrofísica, Volume 11, 83, 1985.

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