

ASTRONOMY SEMINAR

May 2, 2011

Speaker : Manash Ranjan Samal
ARIES, Nainital

Title : Star formation activity in the vicinity of
Galactic H II regions

Day, Date & Time : May 10, 2011 (Tuesday) at 1600 hrs

Venue : Lecture Theatre (AG-66)

(A. Gopakumar)

Abstract

Massive stars ($M > 8 M_{\text{solar}}$) have profound effect on the parental molecular cloud. Understanding these feedback processes and their mode of interaction with the surrounding medium are vital to have an improved understanding of star formation processes within a complex. The details of the star formation process in the vicinity of H II regions are complex and not completely understood. We have carried out observational studies of massive star formation using optical, infrared and radio wavelengths. In this talk, I shall focus on recent results obtained with these observations around Galactic H II regions. We particularly attempt to combine various observed components into a coherent model to explore the process that may influence the formation of new generation stars in these regions. Our analysis shows the evidence of induced star formation at the borders of H II regions, where the star formation has occurred due to compression of pre-existing matter or due to collision of the swept up matter. I will also discuss properties of the associated clusters and nature of young stellar objects.