University of Lethbridge

Department of Physics and Astronomy Presents

Spectral Analysis and Modeling of Select Massive Young Stellar Objects

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Undergraduate Honours Thesis Presentation

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Abstract:
Stars play a key role in the evolution of galaxies, planetary systems, and further star formation, generating elements necessary for life through nuclear fusion. Massive stars (M > 8MSun) are the only stars capable of fusing carbon, and the enrichment of the interstellar medium through feedback of more massive elements is important to continued star formation. Owing largely to limited data on massive stellar objects in the early phase of active accretion, massive star formation remains a poorly understood phenomenon.

A set of sources identified by the Spitzer space telescope in the GLIMPSE survey have been identified as massive young stellar objects in this early stage of active accretion. A subset of four such sources were identified for follow-up observations with the Herschel space telescope. Spectral analysis of the Herschel observations and preliminary modeling of these four sources will be presented, and a discussion of modeling and related challenges shall follow.

EVERYONE IS WELCOME