

Observational studies of massive star formation

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Massive stars play a key role in the evolution of galaxies by driving much of the feedback in the interstellar medium. During their short lives they produce prodigious amounts of UV radiation, stellar winds and end in supernovae explosions. Understanding their formation is a vital part of this evolutionary puzzle and a phase when their feedback can both enhance and quench further star formation.

In this project you will use infrared and other multi-wavelength information to determine the properties of the direct environment of Massive Young Stellar Objects that are hidden from view at optical wavelengths. In particular, the data will involve observations at near-infrared to mid-infrared imaging and spectroscopy.

The project may also involve you in follow-up high resolution observations of the kinematics of both the ionized and molecular gas in these regions.

These properties of the sample will be used to test different massive star formation evolution models and their effect on the molecular environment.