

Poster: The Onset of Ionization Feedback in High-Mass Protostars

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Using the VLA to reach sensitivities of 3-10 Jy/beam, we found that radio continuum sources are more commonly detected towards high-mass protostars than previously expected. Many of these radio continuum sources are weak (on the order of <1 mJy) and have morphologies and other observational parameters that resemble collimated ionized jets, which is in general agreement with recent theoretical models developed exclusively for high-mass protostars based on core accretion. We are building a sample of ~ 20 high-mass protostars with comprehensive observations from radio to mid-IR using VLA, SOFIA and ancillary data to test and refine these new protostar formation models that predict both the morphology and spectral energy distribution. I will present results showing that extending the infrared SEDs to radio wavelengths is highly effective in breaking degeneracies in the fitted model parameters. Additionally, I will present ALMA band 3 observations towards a subsample of these sources and discuss how the infall/outflow processes depend on the evolutionary stage of the source.

Outflows and Disks