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Star Formation in the Inner Parsecs of the Galactic Center

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Our Galactic Center (GC) is the closest and most accessible galactic nucleus, which provides us with the unique opportunity to conduct resolved star formation studies in extreme environments. Despite the need for very high gas densities to overcome the tidal field of the supermassive black hole Sgr A \backslash , *and induce gravitational collapse, there is evidence for star formation taking place at the heart of the Milky Way: Several bipolar CO outflows, masers and compact radio continuum sources, that display characteristics similar to those associated with newly formed low-mass stars, have been found in the central parsecs. Furthermore, the molecular content of the GC circumnuclear disk, located at a distance of ≥ 2 pc from Sgr A \backslash , represents one of the largest reservoirs of dense molecular gas in the inner few parsecs and even within its cavity dense clumps of molecular material can be found.*

In this talk I will review the observational hints of ongoing star formation in the inner few parsecs, and discuss them in light of our recently obtained mid-infrared observations from space with the JWST's MIRI integral field unit and from ground with the VLT's VISIR instrument. This study represents the first high-resolution imaging and spectral datasets taken in the mid-infrared which aims at tackling the question of whether or not star formation is indeed taking place in the tidally stressed environment of our Galactic Nucleus.

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