

Crouching Monsters: Deeply Embedded Star Formation in Massive Clouds in the Central Molecular Zone

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Star formation in the Central Molecular Zone (CMZ) of our Galaxy is poorly understood, and is suggested to be suppressed by an order of magnitude despite the large amount of dense molecular gas. Whether active star formation in very early evolutionary phases is deeply embedded in massive clouds in the CMZ is unclear. To explore the deeply embedded star formation, we carried out ALMA, SMA, and JVLA observations toward a sample of five massive CMZ clouds. Gravitationally bound dense cores are identified with the dust emission, and signatures of star formation are traced by UC HII regions and masers. We have found a sample of protostellar candidates in the five clouds, most of which have not been known before. We attempt to quantify the star formation rates of the clouds based on these results. I will also present latest results from our ALMA data, which reveal abundant fragmentation and may indicate emerging massive star cluster formation.

Galactic Scale