## Embedded Star Cluster Formation Near Galactic Centers Sherry Yeh (Subaru Telescope) & Chao-Wei Tsai (JPL/Caltech)

How do super star clusters form near the centers of galaxies?



Probe the youngest SSCs ( $A_K \sim 3$ ) and their HII regions using [NeII] at 12.8 µm: (1) very bright, (2) extinction free, (3) insensitive to densities, (4) high spatial resolution, (5) recovers point sources and extended features. <u>COMICS offers unique capabilities</u>.

(a) Successfully resolved compact sources, with star cluster masses 3 to 11  $\times 10^4$  M $\odot$ ; (b) detected extended features (associated with massive stars and missing in radio and NIR) detected for the first time; (c) MIR followup spectroscopy, constrain ages of clusters and densities of HII regions.









53.0 52.8 52.6 52.4 52.2 20:34:52.0 51.8 51.6