

## ORAL CONTRIBUTION

### CHARACTERIZING THE FORMATION OF THE MOST MASSIVE STAR CLUSTERS IN THE MILKY WAY

Roberto Galván-Madrid<sup>1</sup> and Haiyu B. Liu<sup>2</sup> and  
Adam Ginsburg<sup>2</sup> and Jaime E. Pineda<sup>3</sup>

We give an update on our comprehensive gas surveys of some of the most luminous ( $L_{\text{bol}} > 10^5$  to  $10^7 L_{\odot}$ ) deeply embedded (optically obscured) star formation regions in the Milky Way, which are the local cases of massive star clusters and/or associations in the making. Our approach emphasizes multi-scale, multi-resolution imaging in dust and gas in its different phases through a combination of data taken with facilities such as ALMA, JVLA, SMA, Herschel, and several single-dish telescopes including the LMT in Mexico. We highlight our results on W49A, the most luminous star formation region ( $L_{\text{bol}} \sim 3 \times 10^7 L_{\odot}$ ) in the Galactic disk, which appears to be forming a massive star cluster with  $M_{\star} \sim 10^5 M_{\odot}$  that may remain bound after gas dispersal. Recent results in a handful of other regions are also highlighted.

---

<sup>1</sup> Instituto de Radioastronomía y Astrofísica, Universidad Nacional Autónoma de México, Campus Morelia, Apartado Postal 3–72, 58090 Morelia, Michoacán, Mexico (r.galvan@crya.unam.mx).

<sup>2</sup> European Southern Observatory (ESO), Karl-Schwarzschild-Strasse 2, D–85748 Garching, Germany.

<sup>3</sup> Max-Planck-Institut für extraterrestrische Physik (MPE), Giessenbachstrasse 1, D–85741 Garching, Germany.

---