

Toshikazu Onishi (Osaka Prefecture University)

■ Title

Revealing the initial conditions of star formation in the Galaxy and Magellanic Clouds

■ Summary

The goal of this study is to reveal the initial conditions of the formation of low to high mass stars by pursuing observationally the evolution of molecular clouds to protostar formation in various environments. Toward this goal, we will make full use of our ALMA data and archival ALMA data, focusing mainly on the following two topics.

1. Formation mechanism of high-mass stars in the Magellanic Clouds, having different environments from the Galaxy. The study includes comparisons with YSOs/dust properties taken by Spitzer, Herschel, HST, and so on, and also includes comparisons with the Galactic molecular clouds.
2. Evolution of high-density cores to protostar formation in nearby (local) star forming regions; focussing, for example, on the fragmentation process of dense gas leading to the formation of multiple-stars.