

Z307r **ALMA View of Molecular Cloud Cores in the Galactic Center 50 km/s Cloud:
Molecular Cloud Cores made by Cloud-cloud Collision**

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The Galactic center 50 km/s molecular cloud (50MC) is most remarkable in the Sgr A region. There are several compact HII regions associated with the cloud. While the cloud has a cloud-cloud collision site because an enhancement in the SiO $J = 2 - 1$ emission line had been found by the NRO 45-m telescope. Then the 50MC would be a candidate for the massive star formation induced by CCC. In addition, the previous observation with NMA in the CS $J = 1 - 0$ emission line had found a top-heavy core mass function (CMF) in the 50MC. The observations of the 50MC would be important for all studies of star formation in galactic nuclei as a template.

We observed the whole of the 50MC with a high angular resolution ($\sim 2''$) in ALMA cycle 1 in several molecular emission lines including the H^{13}CO^+ $J = 1 - 0$ and C^{34}S $J = 2 - 1$ emission lines. We identified 241 and 129 bound cores with a virial parameter of less than 2 in the emission lines using the clumpfind algorithm, which are thought to be gravitationally bound. The bound cores are distributed in the CCC site selectively. The biased distributions suggest that the CCC compresses the molecular gas and increases the number of the dense bound cores. Additionally, the massive bound cores exist only in the CCC site, although the slope of the CMFs are not different in or out the site.

We will present the details of our ALMA observation and analysis with the data.