Master Thesis

Exploring the existence of prebiotic species: ALMA observations of amine-containing organic molecule in star-forming regions.

Harumi Minamoto

17M01629

Nomura Laboratory

Department of Earth and Planetary Sciences, Tokyo Institute of Technology

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Abstract

A variety of complex organic moleculues have been observed for decades in the interstellar medium. Some of them are considered to be delivered to the primordial Earth by comets, and contributed to the chemical evolution leading to terrestrial life.One example of such prebiotic species is amino acid. Glycine, the simplest amino acid, has been detected in comet 67P/C-G but its presence in molecular clouds is still uncertain.

In this work we analyze the ALMA archival data toward a few star-forming regions such as Orion KleinmannLow nebula and IRAS 16293-2422 to search molecules with amine functional group, which are suggested as precursors to glycine. We compare the results considering their different chemical condition.

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