SEARCHEs FOR β-ALANINE AND PYRIMIDINE TOWARD ORION-KL

R. FUJIMORI, K. KAWAGUCHI, Faculty of Science, Okayama University, Okayama 700-8530, Japan; T. NAKAJIMA, H. OGAWA, Department of Physical Science, Graduate School of Science, Osaka Prefecture University, Osaka 599-8531, Japan.

Watanabe et al.\textsuperscript{a} have searched for α-alanine in Ori-KL with the Nobeyama 45-m radio telescope. Blagojevic et al.\textsuperscript{b} expected that β-alanine may have a larger abundance than α-alanine in interstellar space. In meteorites the abundance ratio of glycine, β-alanine, α-alanine is reported to be 1 : 2.35 : 0.26. Pyrimidine may be related to the nucleic acid base such as uracil and searched by Kuan et al.\textsuperscript{c} In the present study, we carried out deep searches for β-alanine and pyrimidine toward Ori-KL by using a new waveguide-type sideband-separating receiver in the 3 mm band installed at Nobeyama 45-m telescope. Low noise characteristic of the receiver made it possible to high sensitive observation in wide frequency range. The rotational transitions of β-alanine and pyrimidine were not detected with upper limit abundances of $2.9 \times 10^{14}$cm\textsuperscript{-2}, $8.8 \times 10^{12}$cm\textsuperscript{-2}, respectively. The upper limit for pyrimidine is an order of magnitude lower than the previous\textsuperscript{c}. Many un-identified lines have been detected and the carriers will be discussed.