HIGH RESOLUTION CARMA OBSERVATIONS OF ACETONE [$(CH_3)_2CO$] IN THE ORION-KL REGION

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The Orion-KL region is well known for its molecular diversity. However, the origin of these molecules is not well understood. Complex oxygen bearing molecules are known to be associated with the compact ridge, while complex nitrogen bearing species are associated with the hot core. Although acetone [$(CH_3)_2CO$] is a complex oxygen bearing species, its initial detection in Orion-KL placed it neither in the hot core nor the compact ridge but somewhere in between[a]. We present high resolution ($\sim 2'' \times 0.8''$) CARMA maps of acetone which show it is in at least 2 distinct clumps not associated with either the hot core or compact ridge. We have also mapped other complex molecules (e.g. ethyl cyanide [C_2H_5CN] and dimethyl ether [$(CH_3)_2O$]) at similar resolution to compare their distributions with that of acetone. We acknowledge support from the Laboratory for Astronomical Imaging at the University of Illinois and NSF grant AST-0540459.

[a]Friedel et al. 2005, ApJL, 632, L95