

DETECTION OF  $c - C_3H_2$ , NO, and  $CH_3CN$  TOWARDS MOLECULAR CLOUDS AT THE EDGE OF THE GALAXY

LILIA KOELEMAY, *Department of Chemistry and Biochemistry, University of Arizona, Tucson, AZ, USA;*  
LUCY M. ZIURYS, *Dept. of Astronomy, Dept. of Chemistry, Arizona Radio Observatory, The University of Arizona, Tucson, AZ, USA.*

In previous studies, we detected methanol in molecular clouds towards the edge of the Milky Way galaxy using the Arizona Radio Observatory (ARO) 12m. These observations implied that the Galactic Habitable Zone (GHZ) may extend beyond 20 kpc from the Galactic Center. As a continuation of this study, we have searched for other organic molecules towards these same edge clouds. We have current detections of  $c - C_3H_2$ , NO, and  $CH_3CN$  towards WB89-640, WB89-380, and 19423+2541, among other sources. These molecules appear to show no decrease in abundance with respect to galactic radius despite the decrease in metallicity. Clearly organic chemistry is active towards the edge of our galaxy. The detection of these organic molecules show that the universe is far more molecular in nature than previously thought.