

Interferometric Observations of Complex Organic Molecules

Sheng-Yuan Liu¹

¹Academia Sinica Institute of Astronomy and Astrophysics,
P.O. Box 23-141, Taipei 106, Taiwan, R.O.C.
email: syliu@asiaa.sinica.edu.tw

Abstract. Rich molecular complexity has been demonstrated to exist in star forming regions primarily through millimeter to submillimeter single-element telescope spectral line surveys or searches over the years. While the ubiquity of such chemical complexity, particularly the existence of complex organics in both high- and low-mass star forming regions, offered profound implications, the detailed distribution and evolution of these chemicals need to be further established. Interferometers are a powerful tool for this purpose: with the spatial filtering capability, interferometric observations are especially sensitive to compact structures, such as those so called "hot molecular core" sources where complex organics were almost exclusively found. The higher angular resolutions achieved by interferometers further allow us to better discriminate chemical differentiation and possibly evolutionary effects spatially. In this contribution, I will discuss the results from observations of complex organic molecules carried out with various interferometric arrays toward star forming regions including, for example, the Sgr B2(N-LMH), Orion KL, and IRAS 16293-2422.

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