THE ATACAMA LARGE MILLIMETER/SUBMILLIMETER ARRAY (ALMA): EARLY RESULTS

ALWYN WOOTTEN, *National Radio Astronomy Obsy, 520 Edgemont Rd, Charlottesville, Va 22903*.

New radioastronomical instruments, such as ALMA or the Jansky VLA, have increased spectral throughput by orders of magnitude over previously available capabilities. ALMA brings orders of magnitude increases in spectral sensitivity and spatial resolution over what has previously been available. These increased capabilities open new possibilities for studies of complex molecules in the interstellar medium.

Complex interstellar molecules may form on the surfaces of interstellar grains, after which they may be liberated into the gas phase by shocks, radiation, or other external influences. Emission from complex molecules may be diluted owing to the large number of transitions large molecules may undergo, particularly in warm regions of interstellar clouds. High sensitivity and spatial resolution are necessary to explore the distributions and relationships of these molecules. Of particular interest are the distributions of large organic molecules. Observations which establish the relationships between various large molecules are now emerging from these new instruments and will be discussed.