INCREASING SENSITIVITY TO LARGE MOLECULES: THE IMPORTANCE OF PHASE CORRECTION TO MILLIMETER ARRAYS

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Radio interferometers play an important role in the detection of large molecules due to their natural ability to spatially filter large emission and resolve compact emission. The CARMA array is currently coming on-line with increased sensitivity to spectral lines, allowing a significant improvement in molecular detection. We will demonstrate the importance of an active phase correction scheme to the detection of large molecules in arrays. In particular, we will discuss the effects of phase coherence at various atmospheric conditions at the CARMA site and the improvement that our water vapor radiometer will bring to the array.