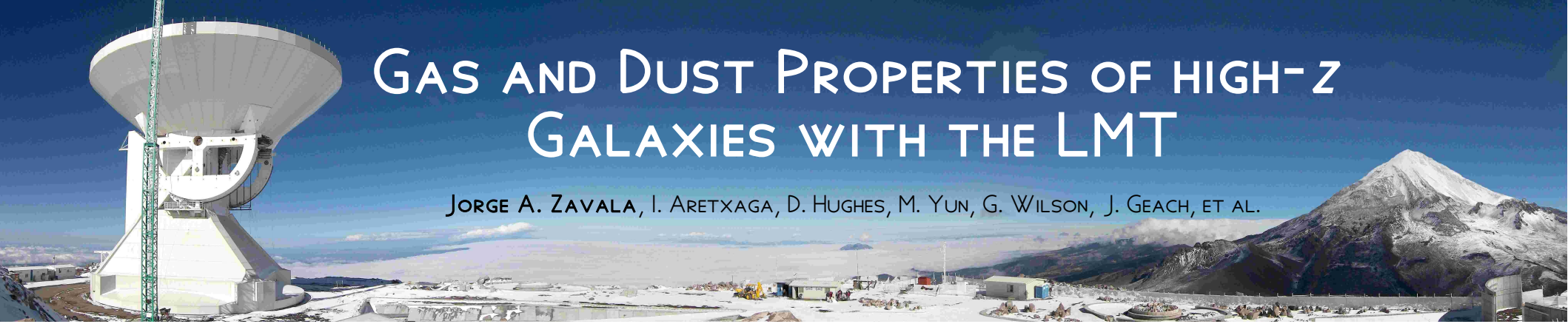

Gas and Dust Properties of high-z Galaxies with the LMT

Jorge A. Zavala, I. Aretxaga, D. Hughes, M. Yun, G. Wilson, J. Geach, et al.

We present observations taken with the **1.1 mm continuum camera AzTEC** and with the wide Bandwidth **(74-111 GHz) spectrometer Redshift Search Receiver** installed on the 50-m (currently 32-m operationally) Large Millimeter Telescope *Alfonso Serrano* (**LMT/GTM**) **towards lensed SMGs** selected from different surveys (*Herschel*, SCUBA-2, *Planck*). We detect CO molecular lines and dust continuum, which allow us to derive **spectroscopic redshifts up to z~5** and other dust and gas properties.

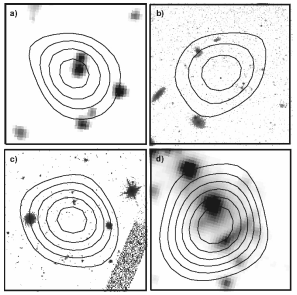

Fig 1. 30”x30” IRAC/*Spitzer* postage stamps in the 3.6μm band (a & d) and HST in the F606W band (b & c) at the position of some of the targets. Contours represent our 1.1mm AzTEC observations.

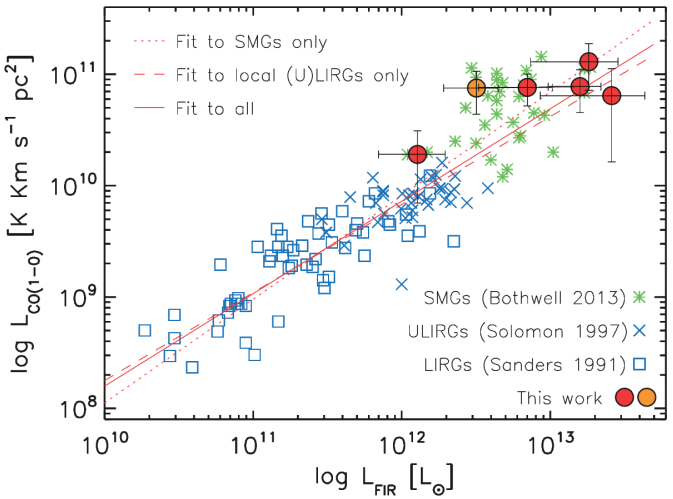

Fig 3. CO luminosity vs LFIR luminosity. For comparison, other SMGs are plotted along with local LIRGs and ULIRGs. Best-fitting slopes to SMGs, local (U)LIRGs and all three samples are overplotted

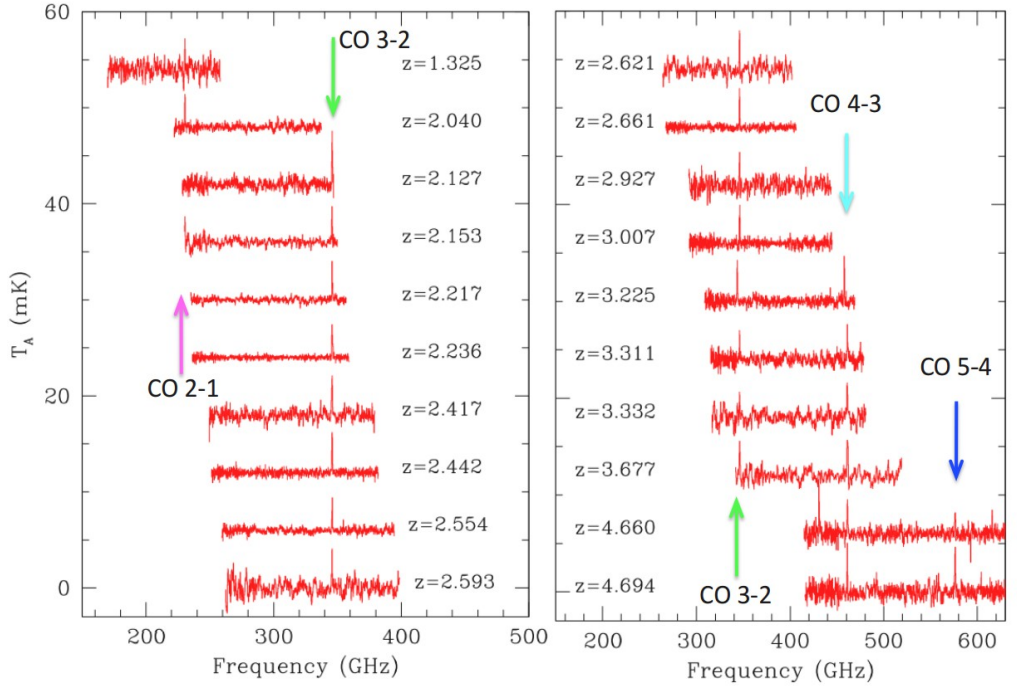

Fig 2. LMT/RSR measured CO redshifts for 20 Planck/Herschel sources. The highest redshift galaxy detected is at z=4.7.