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Título: The gas-to-dust ratio and molecular gas properties of (U)LIRGs

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Resumen:

In this talk I will present our IRAM 30m extensive survey of CO observations on a sample of 56 nearby, bright (ultra) luminous infrared galaxies, (U)LIRGs, selected from the Great Observatories All-Sky LIRG Survey (GOALS). Using Herschel photometric data, we have fitted the SED of our sources to a modified blackbody model, deriving the dust parameters (i.e., dust masses and temperatures), as well as the IR luminosity. We have compared the dust and gas content and, using local reference samples, we have constrained the CO-to-H₂ conversion factor for (U)LIRGs. We have also studied the relation between the infrared and CO luminosities, as well as characterized the star formation efficiency and depletion time of these systems. Finally we have also reexamined the relationship between the 12CO/13CO ratio with dust temperature.