

ABSTRACT

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The effect of metallicity on the mass-loss from AGB stars

Studying the effect of metallicity on the mass-loss process is important to understanding the impact of AGB stars to the chemical enrichment in the early Universe and to get observational constraints on this poorly understood- but important- process. At low metallicity, less seeds are present for dust formation, so one might expect dust formation to be less efficient and thus the mass-loss rates to be lower.

CO observations (JCMT and Mopra), combined with near infrared ones using Spitzer and the VLT have allowed us to study both the dust and gas content of these stars and thus get better quantitative constraints on the effect of metallicity on the mass-loss process. Our JCMT observations have already shown that the expansion velocity was decreasing with metallicity (Lagadec et al. 2010). We will present how ALMA will allow us to extend this studies to lower metallicities by observing AGB stars in local group galaxies