

## Constraining the stellar mass-loss-rate evolution on the AGB (and slightly beyond)

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It is believed that stellar mass loss increases as a star evolves along the AGB, and that it is higher the more massive the star is. However, there is little evidence that supports these beliefs. In addition, it has been proposed, but not firmly established, that the MLR characteristics on the AGB are frequently (strongly) affected by the presence of a nearby companion. These are troublesome lacks of understanding since the mass-loss evolution of AGB stars is an important input parameter in population synthesis and galactic chemical evolution models, in which the mass-loss rates of AGB stars follow prescriptions based on the above expectations. It is therefore of great importance to empirically determine the mass-loss rate evolution for a large sample of AGB stars to improve the prescriptions. Of particular interest is the upper AGB and the early post-AGB where most of the stellar mass is expected to be lost.

We have assembled a sample of 77 OH/IR stars at the distance of the inner Galactic Bulge for a combined ALMA/APEX study to constrain their phase of strongest mass loss, and the sharp decline in mass loss expected to take place at the end of the AGB. It is a CO multi-transition study aimed at accurately estimating mass-loss-rate characteristics and stellar  $^{12}\text{C}/^{13}\text{C}$  isotope ratios. This study will provide a much-needed and unprecedented empirical picture of the evolution of AGB gaseous mass loss at its most extreme phases.

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