

Workshop

Stellar End Products: The Low Mass - High Mass Connection

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Title:

An investigation of the morphology and kinematics of the circumstellar envelope of AGB star π 1 GruisL

Abstract:

The S-type AGB star π 1 Gruis has a known companion at a separation of 400 AU. Previous observations of the circumstellar envelope (CSE) show strong deviations from spherical symmetry. We will present our results from the analysis of ALMA-ACA observations of π 1 Gruis. The images of the rotational line emission from CO J=2-1 and 3-2 provide good constraints for a model of the morphology and kinematics of the CSE. We model the source using SHAPE to derive the temperature, density and velocity distribution. The results are also compared with hydrodynamic simulations of binary interaction.