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Mid-IR spectroscopic observations of the dustiest AGB stars in the Galaxy

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We have used the VISIR spectrograph at the Very Large Telescope to target 21 of the most luminous and heavily-obscured oxygen-rich evolved AGB stars in the galaxy. Low resolution N-band (8 - 13 um) spectroscopy was used to target the 10 μm silicate feature. The sample, with a median luminosity of ~10,000 solar luminosities and a median mass loss rate of ~10E-4 solar masses per year, has shown higher mass loss rates than previous Galactic and Large Magellanic Cloud samples, given their luminosities. These results, along with expansion velocities from previous OH maser detections, have been used to test and refine the wind-driving and mass loss mechanisms. Our new spectra have also allowed us to study the dust composition and geometries of these sources.

Consider for a poster?

Yes

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Session Classification: Poster Presentations

Track Classification: The creation and evolution of dust