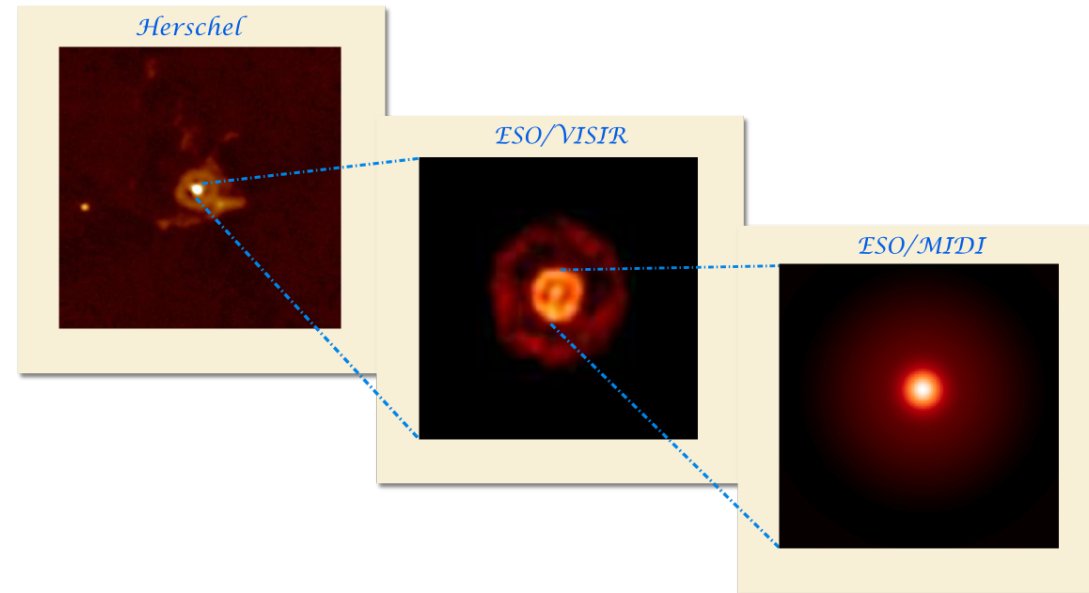


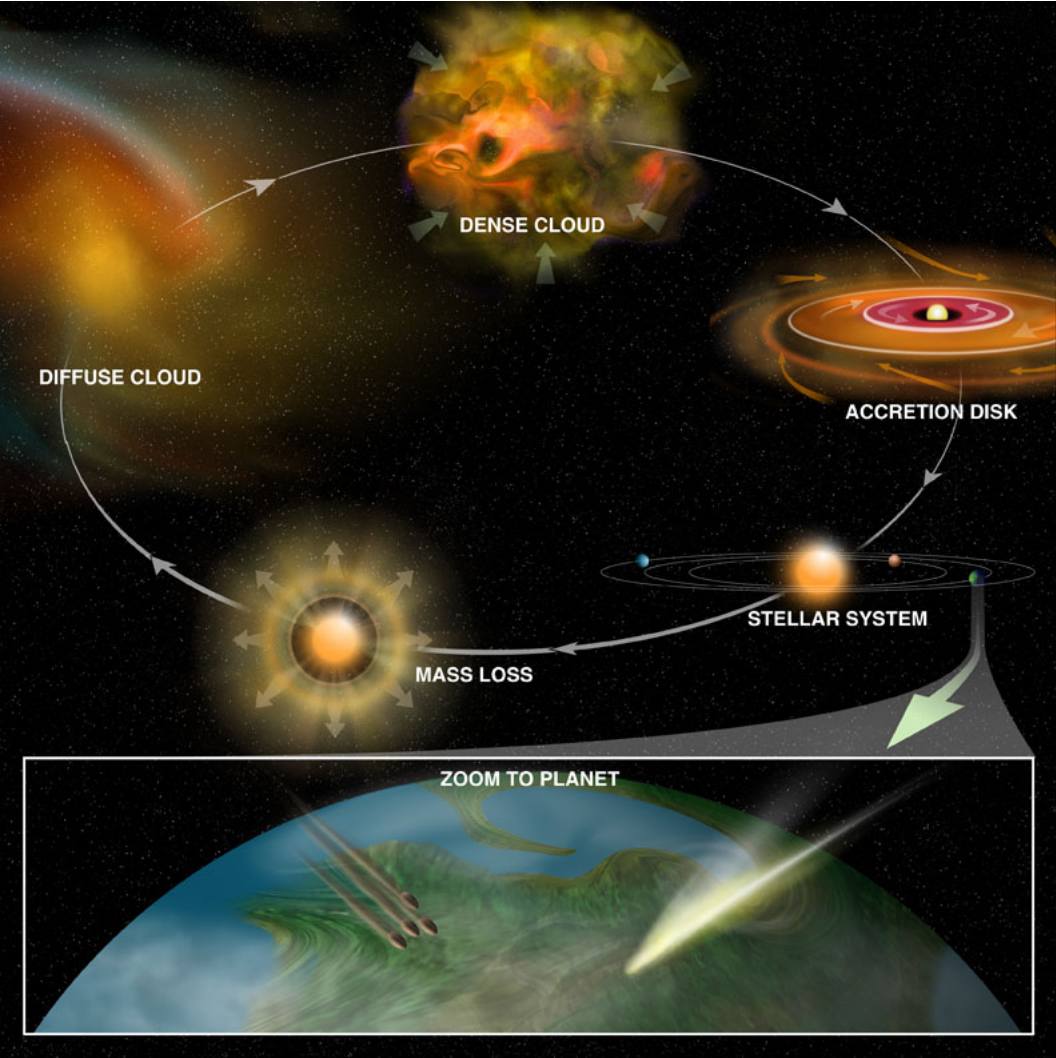


EXAMPLE



Studying the geometry of the mass-loss process in AGB stars with Herschel and VLT-MIDI (MATISSE!)

What? Mass loss



<http://www.nrao.edu/pr/2006/gbttmolecules/>

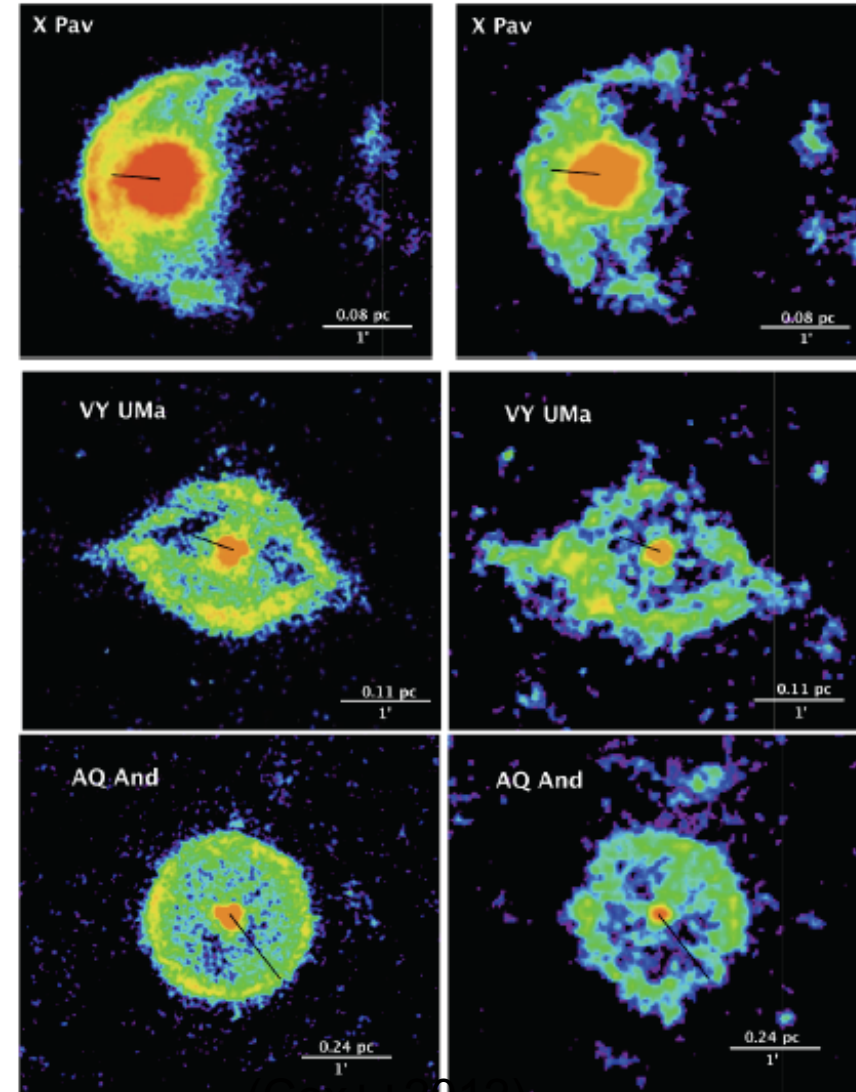
Scientific Rationale

Groenewegen++2011

Herschel/PACS mapped the outer envelope of ~80 evolved stars

@ 70 and 160 micron

- Fermata wind-ISM interaction
- Eye wind-wind or binary
- Ring wind-wind interaction
- Irregular



(Cox++2012)

Immediate objective

Herschel is unveiling the outer part of the envelope of the AGB stars, but what about the inner part?

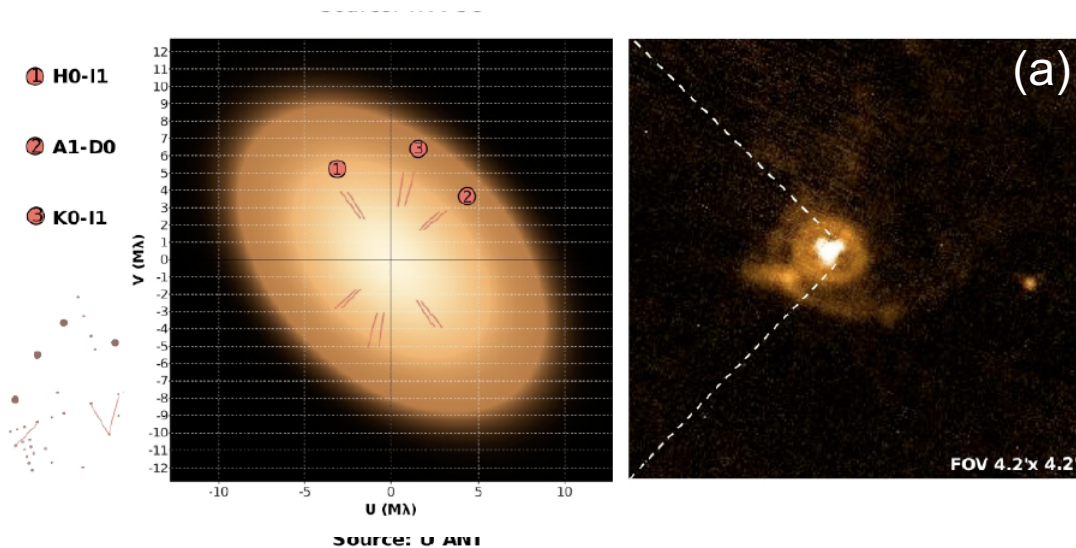
Aim

Use VLT/MIDI to complement Herschel data & study the inner atmosphere.

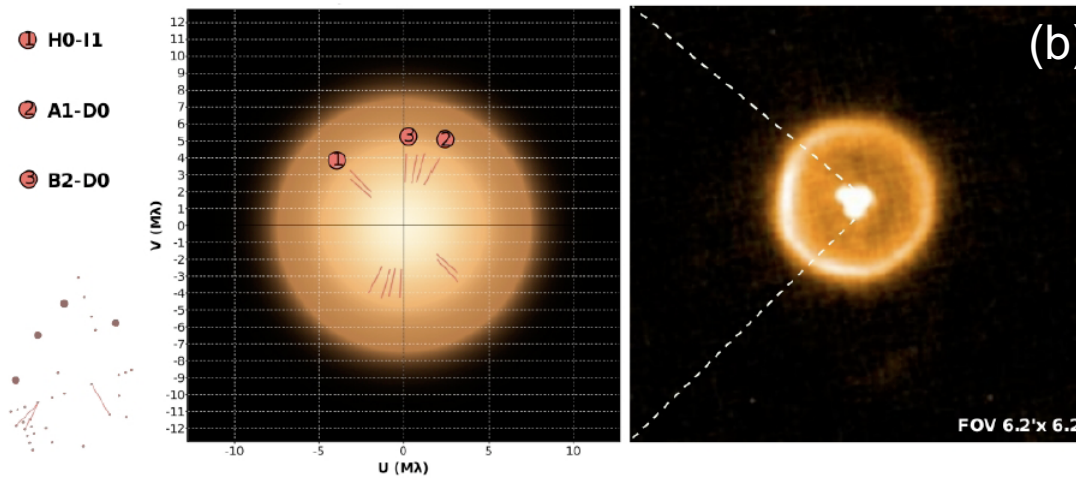
- 6 observations per star
- Different position angle, similar spatial frequency to study geometry
- Low spectral resolution

Modeling

- Right panel: Herschel observations of TX Psc.
- Left panel: modeling of interferometric observations made with ASPRO2.



- Right panel: Herschel observations of U Ant.
- Left panel: ASPRO2 modeling with gaussian profile.



- Sirius
- Bright enough for mid-infrared observations and not resolved on the large baselines (diameter = 6 mas)
- G-band magnitude for the AT telescopes: -1.46 mag
- L-band flux = 393 Jy
- N-band flux = 143 Jy