

Workshop

Stellar End Products: The Low Mass - High Mass Connection

ESO Garching, 6-10 July, 2015

Xavier Haubois
ESO, Chile

Title:

Probing the inner dust shell of Betelgeuse with Polarimetric Interferometry

Abstract:

We report on polarimetric aperture masking observations with VLT/SAMPol of the red supergiant Betelgeuse. A clear polarized signal is resolved at about 1.5 stellar radius in several near-infrared filters. The dependence of this signal with wavelength carries information on the dust grain size that we estimate following similar works on AGBs presented in Norris et al. 2012. To conclude, we put these dust characteristics in perspective with previous MIDI and VISIR observations as well as recently obtained SPHERE polarimetric images to get a global picture of dust distributions in Betelgeuse.