

Red supergiant stars (RSG) are experiencing significant mass loss. It ultimately determines their late evolution into a type II supernova leading to a remnant that can be a neutron star or a black hole. Therefore, understanding the mass loss properties is key to predicting their final fate. Optical interferometry has previously shown that the surface of RSGs present prominent convective features. Further away from the photosphere, several direct images of RSGs have revealed large clumps of dust in their surroundings, providing clear evidence of inhomogeneous mass loss. However, current radiative-hydrodynamics simulations of RSGs fail to explain how such amount of material leaves the star, although they do predict the strong convective activity. Antares, the closest RSG, is the ideal laboratory to better investigate the mass-loss phenomenon, its triggering mechanisms, and the processes by which material escapes from the star. Using a multi-epoch VLT/GRAVITY dataset, we aim to link the convection on the star's photosphere to the material in the upper molecular layers, and ultimately unveil the physical mechanism that triggers the mass loss. In this presentation, I will show reconstructed images of the photosphere, and I will present the process to retrieve the physical parameters of the molecular layers using a library of spatially resolved spectra build with radiative transfer models.