

*Workshop*

## **Stellar End Products: The Low Mass - High Mass Connection**

*ESO Garching, 6-10 July, 2015*

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**Title:**

Large dust grains in RSG winds: high-contrast polarimetric observations of VY Canis Majoris

**Abstract:**

I will present a detailed near-infrared and optical polarimetric study of VY Canis Majoris, the nearest and best studied dust-enshrouded red supergiant. Using high-contrast polarimetric imaging from SPHERE, we infer the presence of large (~500nm) dust grains and find evidence for grain size variations. I will also present the first fully-3D self-consistent radiative transfer model for VY CMa. To fit the SED and the optical morphology of the ejecta we require grains from 100nm to >1 micron. The presence of large grains implies that scattering driven winds may also play a role in RSGs mass loss.