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# Optical interferometry to probe the photosphere of red supergiant stars

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## Abstract

The mechanism that trigger the mass loss of red supergiant stars remains unknown. One of the possible scenario involves convection to lower the effective gravity to allow launching the material thanks to radiative absorption on molecular lines. Bright features on the photosphere of these stars have been observed with optical interferometry and were interpreted as the top of large convective cells. Contrary to solar-type stars, red supergiants should host only a handful of large convective features. Continuous monitoring of these convective cells is required to understand their dynamics and to link them to possible episodic intense mass loss episode. I will present the result of our recent observations of nearby red supergiant stars using the VLTI facility. Those data were obtained in coordination with a TBL/Narval visible spectropolarimetric campaign (see Tessore's talk).

**Keywords:** interferometry, high angular resolution, near infrared, red supergiants

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