Searching magnetic fields in Wolf-Rayet stars using FORS2 spectropolarimetry

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Abstract

The main physical ingredients governing the evolution of massive stars are mass loss, convection, and mixing in radiative zones. Depending on the choice of a shear or a magnetic model, the link between a (non-)homogeneous evolution and the initial rotation is quite different (Meynet et al. 2016). Since magnetic fields are now believed to play an important role in the evolution of massive stars, we have investigated if magnetic fields are present in Wolf-Rayet stars using FORS2 low-resolution spectropolarimetry. In our talk, we report on our results for a few stars selected in the Galaxy and one in the Large Magellanic Cloud. We will further detail our first experiences with a new methodology to detect magnetic fields in stellar winds.

Keywords: WR stars, magnetic fields

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