

The spectral evolution of the LMC S Dor variable R127 during outburst

O. Stahl, B. Wolf
Landessternwarte Königstuhl
6900 Heidelberg
FRG

The LMC star R127 was classified as O Iafpe extr. by Walborn (1977). Later, Walborn (1982) noted the spectral similarity to late WN stars and classified R127 as Ofpe/WN9 star. Stahl et al. (1983) discovered an S Dor outburst of R127. It has now been monitored photometrically almost continuously for more than four years. In addition, several high-dispersion and high signal-to-noise spectra were taken with the ESO CASPEC and CES spectrographs. In 1986 R127 became the visually brightest star of the LMC until it was surpassed by SN1987A in Feb. 1987.

During the first phases of the outburst, the equivalent spectral type of the star was early B type. In the course of the visual brightening the spectral type became gradually later and reached middle A type. In this phase the spectrum was indistinguishable from the maximum spectrum of the prototype star S Dor, when this star was in a phase of similar brightness. Several shell absorption lines appeared in the early phase of the outburst and slowly disappeared later.

A more detailed discussion of the spectral evolution of R127 is in preparation for publication in *Astronomy and Astrophysics*.

References:

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