

MAGNETIC FIELDS OF SUPERGIANTS

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ABSTRACT. Magnetic fields of supergiants have been observed scarcely and sporadically. The results are not convincing because of the weakness of the measured field strengths and the complexity of the physical phenomena in evolved stars at all. Hitherto only the supergiant ν Cep exhibits periodically (every 4.8 year) a strong magnetic field of about +2000 G, which has been proved by superposing the measuring values of individual lines of several spectrograms. Continued and cooperative observations of this star have secured 118 measurements covering a time interval of 12 years. To answer the question whether magnetism might be typical for the state of evolution as we observe in ν Cep, other supergiants of similar spectral and luminosity class as ν Cep are due to be observed systematically. A search program for magnetic fields of supergiants has already started in 1986 rendering first preliminary results given in the present paper.

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