

EP12 A survey of the weakest-field magnetic Ap stars: discovery of a threshold magnetic field strength

M. Aurière¹ and G. A. Wade²

¹ *Observatoire Midi Pyrénées, France*

² *Physics Department, Royal Military College of Canada, Canada*

We are conducting a magnetic survey of a sample of about 30 spectroscopically-identified Ap stars (selected from the HD catalogue), but with faint or previously undetected magnetic fields. We use the MuSiCoS spectropolarimeter at Telescope Bernard Lyot (Pic du Midi Observatory, France) and the cross-correlation technique Least Squares Deconvolution (LSD; Donati et al, 1997). For 29 studied stars, we have obtained 26 detections of Stokes V Zeeman signatures (data quality and phase coverage may explain our lack of detection of any field in some objects). Our results suggest that all Ap stars are magnetic and, furthermore that there may exist a minimum field strength for which Ap-type characteristics are produced.
