

NON-LTE SPECTRA OF IRON GROUP ELEMENTS FOR CSPN

S.R. BECKER and K. BUTLER

Universitätssternwarte München, Scheinerstraße 1, 8000 München 80, Germany

The calculations

UV spectra of CSPN are dominated by lines from ions of iron group elements. Recently we have developed a non-LTE model of the Fe V spectrum putting particular emphasis on this spectral region (Becker and Butler, 1992a). Lines of Ni IV and Ni V are major contributors to blends with the dominating Fe V lines. Meanwhile, non-LTE models for Ni IV, Ni V and Ni VI have been developed (Becker and Butler, 1992b) and the non-LTE model spectra composed of lines from all four ions can be compared to the observations.

In this paper we modelled the spectra of two CSPN (IC3568, NGC6826). IUE high resolution spectra were available and stellar parameters were taken from Mendez *et al.*, 1990. The presence of a stellar wind has been accounted for according to the analytical stellar wind model by Kudritzki (1992a).

A resulting theoretical spectrum is shown in fig. 1 together with the observations. It is obvious from this that the major limitation for determination of abundances is currently given by the quality of the observations. HST spectra, when available, allow a reliable determination of the iron abundance (see Becker and Butler, 1992a, Kudritzki, 1992b).

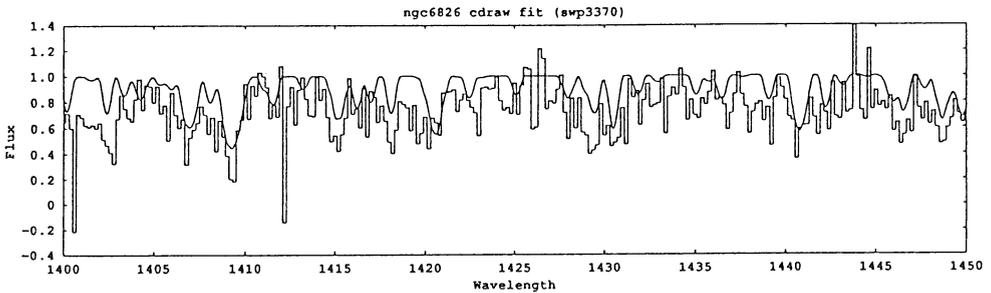


Figure 1: Comparison of a theoretical non-LTE spectrum with an IUE observation of NGC 6826.

REFERENCES

- Becker, S.R. and Butler, K., 1992a, *A&A*, in press.
 Becker, S.R. and Butler, K., 1992b, *A&A*, in preparation.
 Kudritzki, R.P., 1992a, *A&A* in press.
 Kudritzki, R.P., 1992b, this book.
 Mendez, R.H., Herrero, A. and Manchado, A., 1990, *A&A*, **229**, 152.