

## LAST MINUTE RESULTS FROM CTIO OBSERVATIONS

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From June 26 through July 1, 1991 observations were performed at the Cerro Tololo Interamerican Observatory of two peculiar binaries that might be in different phases of the rapid mass loss stage of evolution, namely, R ARAE and W SERPENTIS.

The material was obtained with the fiber-fed bench-mounted CCD échelle spectrograph at the 1.52m telescope and cover the spectral region 5500-7000 Å. A TEK 1024 CCD was used and the spectral resolution was 27,000.

The assigned observing permitted us to run the observations throughout more than one complete orbital cycle of R Arae and through a principal minimum of W Serpentis. Figures 1 and 2 display sets of spectra of R Arae and W Serpentis that illustrate the rapid changes undergone by the He I 5876 and H $\alpha$  features. The phases were computed with the expressions,

$$MinI = JD \ 2,447,779.989 + 4.425E$$

(Giménez *et al.* 1990), for R Arae, and

$$MinI = JD \ 2,426,625.493 + 14.15486E + 3.140 \times 10^{-6}E^2 + 1.432 \times 10^{-9}E^3$$

(Koch and Guinan 1978), for W Ser.

### References

- Giménez, A., González-Riestra, R., Guinan, E.F., Kondo, Y., McCluskey, G., Bradstreet, D.H., McCook, G.P., Dorren, J.D., Johansson, S. and Sahade J. 1990, in *IUE Astronomy in the Era of New Space Missions*, ESA SP-310, ed. E. Rolfe, p.383.  
Koch, R.H. and Guinan E.F. 1978, *IBVS* N°1483.

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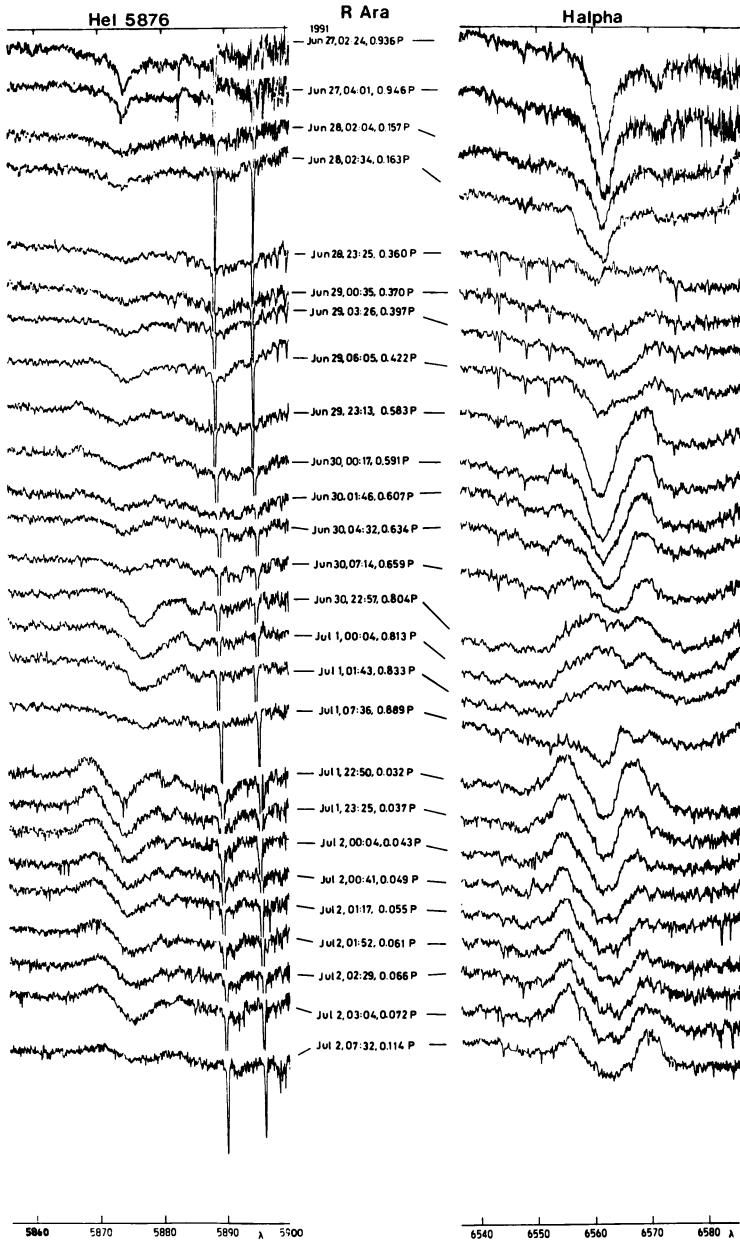


Figure 1. Illustrative set of the spectra of R Arae taken with the fiber-fed bench-mounted CCD échelle spectrograph at the 1.52m telescope at Cerro Tololo on June 26-July 1, 1991. The label for each set of profiles gives date, UT of mid-exposure and phase, respectively.

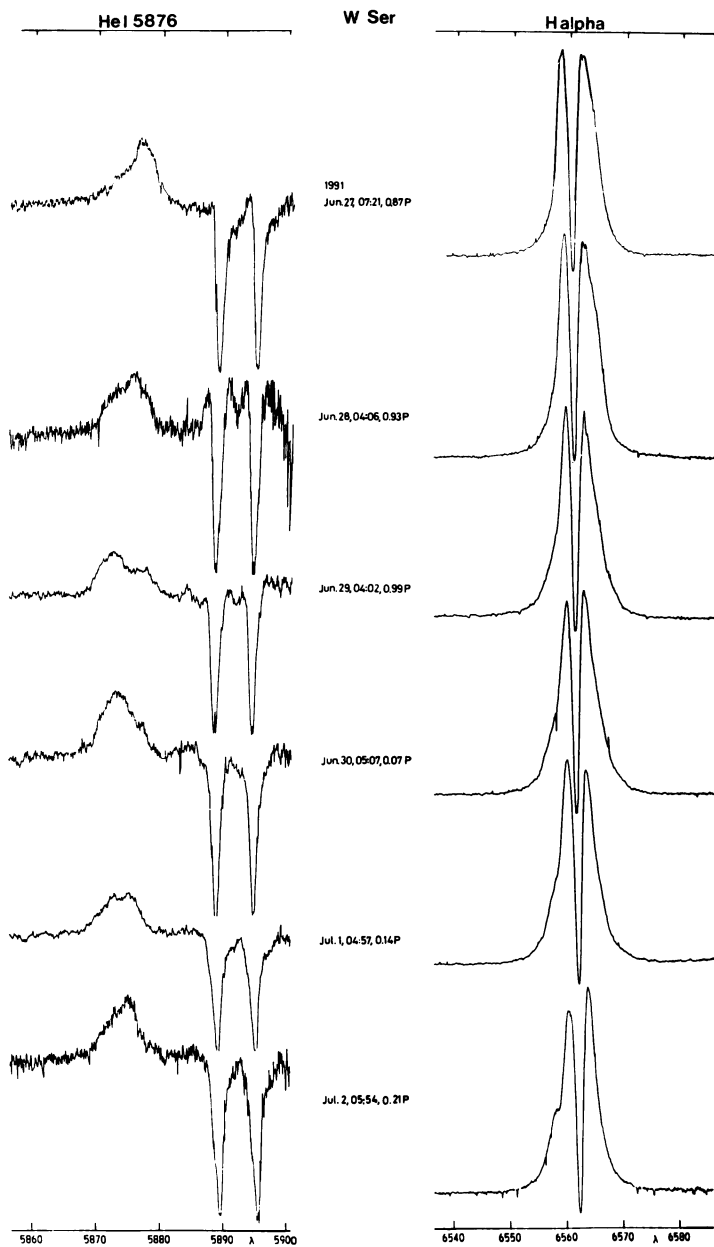


Figure 2. Illustrative set of the spectra of W Serpentis taken with the fiber-fed bench-mounted CCD échelle spectrograph at the 1.52m telescope at Cerro Tololo on June 26-July1, 1991. The label for each set of profiles gives date, UT of mid-exposure and phase, respectively.