

Figure 2: A section of an ECHÉLEC spectrum of HD 96446. Most spectral features visible here seem to be real.

eclipsing phenomenon. Rather it might indicate an intrinsic variability, not characteristic for early-type stars. It has to be noted, however, that, when observed on different occasions with considerable time-separation, the mean value of the photometric

parameters has turned out to be constant. Thus the UBV mean values obtained from 7 nights in 1985 are: 6.696, -0.151, -0.823 and the corresponding ones from 5 nights in 1988: 6.705, -0.155, -0.826. The possible He-line variations, mentioned above,

are actually not relevant and, besides, the routines of the CCD-ECHÉLEC reduction do not permit any high-accuracy measurements of line intensities.

2. Typical examples are some Fe lines crowding between 3935 and 3936 and some mysterious lines (Ti I?) around 4099. In an extensive contribution by Wolf (1973) a large number of "high-temperature" lines are identified. Unfortunately it is not self-evident that all lines found in a certain position really and entirely represent the expected ones. The lines themselves do not tell you explicitly who they are. As mentioned above, there are quite a few coincidences between high and medium lines in the spectrum without any possibility of convincing unbiased identification.

In Table 2 I have added some identified high-temperature lines to the list, presented by Wolf. Besides, however, there are a few lines which I personally consider as not characteristic for a B2 star although another series of observations with still higher resolution is required for definite confirmation.

3. The H and K lines seem to be of interstellar origin. With respect to the star's location in the Milky Way one has to expect a considerable con-

A Panorama of La Silla

H. ZODET, ESO

The centrefold in this *Messenger* issue was obtained in late December 1991 and depicts the central part of the 180° panorama reproduced below.

It shows the La Silla observatory and most of the telescopes there, just before sunset. It was taken from the road that leads to the 3.6-m telescope. Quite a few cars with busy astronomers and engineers passed me and probably wondered what a photographer was doing there, with plenty of equipment in the middle of the road. Thanks for their kind consideration, a minor traffic jam was elegantly avoided.

This panorama covers half of the hori-

zon and is a composite of eight individual exposures, made in rapid succession so that the illumination would not change too much.

I used a Hasselblad 2000FC camera, equipped with a Zeiss Planar 110-mm lens, stopped to 1:2. The film was Kodak Ektachrome 100 Plus.

In order to combine the slides so that there would be a smooth transition between all of them, they were scanned and re-assembled electronically by Reger Studios, Munich.

This photo is one of a series of panoramic views of the ESO observatory, which I obtained from various loca-

tions in and around La Silla. It turns out that due to the pattern of the telescope domes, there does not exist any spot (on the ground at least) from where all buildings are simultaneously visible.

The La Silla Panorama which is well suited for the production of horizon panoramas in Planetaria, etc., is now available from the ESO Information Service (address on last page). It may be obtained as a 1-metre-long photographic print or a 24-cm-wide slide, both at a cost of 115 DM. Please be sure to indicate on the order which of the two is desired.



tribution from the interstellar matter. There should be noted, however, that the UBV colour excess looks surprisingly low and a certain caution would be appropriate. Furthermore, the H and K lines are slightly doubled, and the Doppler displacement for one of the components apparently coincides with that for the majority of the assumed stellar lines. In other cases of double-line appearances it is probably near at hand to interpret the phenomenon as a disturbance from a ghost rather than from a real Doppler shift.

4. Also in cases where a single line tends to show significant individual Doppler shift, one should in the first instance suspect some kind of blend effect.

When time-variation of the Doppler shift is concerned, there are certain differences between the mean values for the various nights of observation but, unfortunately, the overall accuracy is not high enough to convince us with certainty that these differences are really significant. The average radial velocities obtained were (when corrected for terrestrial motion)

May 28, 1988	+ 4.98	± 2.75
30	+ 2.03	± 2.45
31	+ 7.00	± 3.00
Feb. 1, 1991	+ 8.48	± 1.00
2	+ 8.64	± 1.52
3	+ 8.97	± 0.90
4	+ 7.85	± 0.80
5	+10.43	± 0.80

As can be seen from the scattering figures, it is hardly advisable to draw any conclusions about long-term variations in the radial velocity, but a very careful study of a few selected lines has given an indication that the relative difference between February 1 and February 5 might be significant.

Well, the present study of the two stars has not led up to any exciting result or definite answer to the question about their possible multiplicity. Epitomizing, however, one could at least vindicate that HD 62623 is probably alone and that HD 96446 is still under serious suspicion of having a baffling component. In no case, of course, we

Table 2: List of high-temperature lines, identified in the actual investigation but missing in Wolf's list (1973)

3919.279	O II	4092.94	O II	4345.56	O II
3955.851	N II	4095.63	O II	4351.275	O II
3973.266	O II	4110.79	O II	4369.28	O II
4016.104	Si IV	4112.02	O II	4673.71	O I, II
4062.94	O II	4137.63	N I	4677.94	N II
4071.24	O II	4169.23	O II	4703.14	O II
4073.04	N II	4294.74	O II	4788.126	N II
4084.66	O II	4303.78	O II	4803.272	N II
4088.863	Si IV	4336.85	O II		

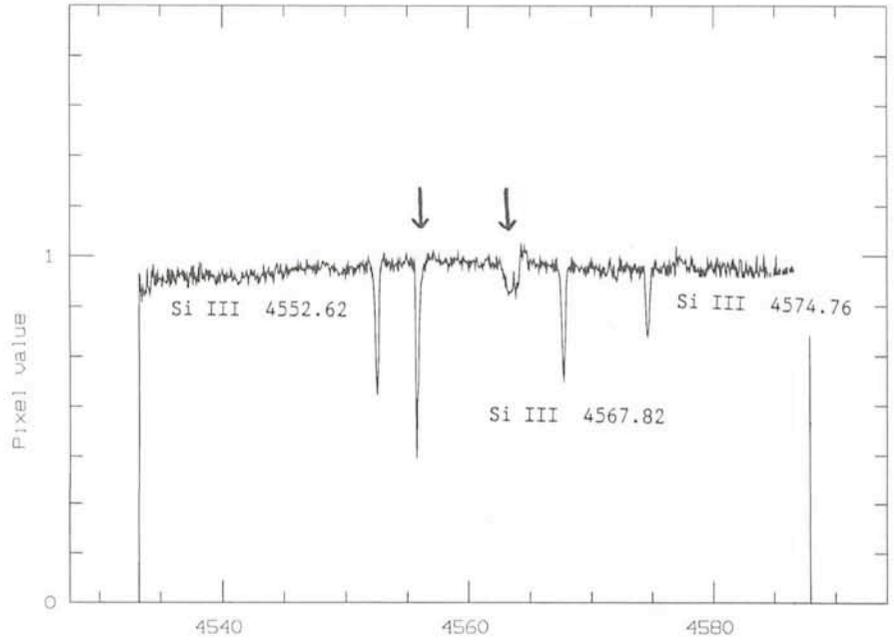


Figure 3: Another section of an ECHLEC spectrum of HD 96446. Here one can see two characteristic delusive spectral features, produced somewhere in the system (arrows).

can exclude the possibility of a malicious component moving nearly perpendicular to the line of sight.

The project itself has been very interesting to carry out and particularly the experience from the use of the ECHLEC spectrograph has been stimulating. Possibly one could object that the reduction procedure with the observational material is a little bit too complicated and time consuming, as well as computer space consuming, in consideration to the outcome, and that the occurrence of false spectral features is still unreasonably frequent.

I am most grateful to Pascal Ballester for his devoted and competent assistance at the reduction of my tapes during a couple of hectic weeks at the ESO Headquarters in August 1991.

References

Kaufmann, J.P., Theil, U.: 1980, *Astron. Astrophys. Suppl. Ser.* **41**, 271.
Lodén, L.O.: 1990, *Nordic Baltic Meeting*, Uppsala, 193.

Lodén, L.O., Sundman, A.: 1987, *J. Astron. Astrophys.* **8**, 351.
Lodén, L.O., Sundman, A.: 1989, *J. Astron. Astrophys.* **10**, 183.
Pedersen, H., Thomsen, B.: *Astron. Astrophys. Suppl. Ser.* **30**, 11.
Wolf, R.E.A.: 1973, *Astron. Astrophys.* **26**, 127.

STAFF MOVEMENTS

Arrivals

Europe

CLÉVA, Frédéric (F), Coopérant
LOUSTALOT, Florence (F), Secretary to the Head of Administration
MARCONI, Gianni (I), Fellow
MEYLAN, Georges (CH), Astronomer
QUENTIN, Jutta (D), Draughtswoman (Mechanics)

Departures

Europe

BEELEN, Guido (B), Electronics Engineer
DOBBELS, Geert (B), Remote Control Operator
HES, Ronald (NL), Student
WANG, Li-fan (RC), Associate

Chile

HAINAUT, Olivier (B), Coopérant
HAINAUT-ROUELLE, Marie-Claire (B), Associate
HEYDARI-MALAYERI, Mohammad (F), Astronomer