



Figure 2: Absolute flux distribution of CPD -71°172AB from Lyman alpha to the Johnson K band ($2.2 \mu\text{m}$) expressed in $\text{erg} (\text{cm}^2 \text{s} \text{\AA})^{-1}$ versus the wavelength in \AA units. Strömgren $uvby$, Cousins R_c , I_c and Johnson JHK fluxes are displayed by large filled dots. Small dots in the UV range represent the observations with IUE.

range, following the method of Heber et al. (1984) and Heber (1986) though presently only LTE models were available. It provided a low estimate of the effective temperature $T_{\text{eff}} \sim 50,000^\circ \text{K}$ for the hot star, from which were derived its intrinsic optical colours; some iterations were necessary to adjust the V magnitudes and the reddening so that all colours of the primary would be those of an early F star. The adopted solution was the following:

Star	CPD -71° 172A	CPD -71° 172B
Spectral type	F 3–4 IV	SdOB
y or V	10.99	12.05
$b-y$	0.265	- 0.155
m_1	0.161	0.060
C_1	0.643	- 0.210
$U-B$	0.019	- 1.210
$B-V$	0.403	- 0.327
$V-R_c$	0.240	- 0.16
$V-I_c$	0.481	- 0.32
$V-J$	0.77	- 0.74
$V-H$	0.96	- 0.91
$V-K$	1.01	- 0.97

The visual absolute magnitudes of both stars were derived from the adopted spectral type and colours of the F component, using the Tables of Crawford (1975) and of Fitzgerald (1970) to estimate its degree of evolution; the inferred intrinsic parameters were checked by means of the Barnes-Evans (1978) relation. We determined in that way:

Figure 2 shows the fit of the sum of the Kurucz models adopted for each component to the IUE and visible observed composite colours. As it can be seen, the overall agreement between models and observations is quite satisfactory. A subsequent check using the R index of Schonberner and Drilling (1984) yielded $T_{\text{eff}} \sim 50,000$ to $60,000^\circ \text{K}$.

We have compared CPD -71° 172 B to two well-known subdwarfs:

(1) BD 75° 325 is a field sdO with $T_{\text{eff}} \sim 50,000^\circ \text{K}$, $\log g \sim 5.3$, helium rich after Kudritzki et al. (1980). The short wavelength IUE spectra of both stars have revealed comparable ionization and excitation temperatures; the Hell line at 164 nm is much stronger in the spectrum of BD 75° 325, suggesting that helium is moderately to fairly depleted in CPD -71° 172 B. The abundance of nitrogen is roughly normal while silicon and carbon are depleted like helium.

(2) The ultraviolet spectrum of LS II + 18° 9, which is a helium normal star with $T_{\text{eff}} \sim 60,000^\circ \text{K}$, confirms both the normal abundance of nitrogen and the slight depletion of helium in the photosphere of CPD -71° 172 B. In case where these results would be confirmed by the analysis of IUE high resolution observations, this newly discovered subdwarf would be one of the first helium poor sdO's with $T_{\text{eff}} > 40,000^\circ \text{K}$.

So far, 14 other potential candidates

Tentative Time-table of Council Sessions and Committee Meetings in 1987

October 6	Council in Paris
November 17	Scientific Technical Committee
November 19–20	Finance Committee
Nov. 30–Dec. 1	Observing Programmes Committee
December 7	Committee of Council
December 8	Council

All meetings will take place in Garching unless stated otherwise.

have been identified and spectrographic observations recently performed at ESO have revealed seven objects of various natures, for which a long-term general survey including multicolour photometry, radial velocity measurements and IUE observations is in progress.

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List of ESO Preprints

506. V. Castellani and M.L. Quarta: The Oosterhoff Dichotomy Revisited. I. The Ranking of RR Lyrae Periods Versus Metallicity. *Astronomy and Astrophysics*. June 1987.
 507. L.B. Lucy and M. Perinotto: Models for the Wind of the Central Star of NGC 6543. *Astronomy and Astrophysics*. June 1987.
 508. A.F.M. Moorwood: IRSPEC: Design, Performance and First Scientific Results. Invited paper presented at the Workshop on "Ground-Based Astronomical Observations with Infrared Array Detectors", University of Hawaii at Hilo, March 1987. June 1987.
 509. A. Renzini: Some Embarrassments in Current Treatments of Convective Overshooting. *Astronomy and Astrophysics*. June 1987.
 510. P. Crane, A. Stockton and W.C. Saslaw: The Optical Spectral Index in the South Radio Lobe of 3C 33. *Astronomy and Astrophysics*. June 1987.