laporta & Munari (2006) estimate the reddening as $0^m.31$.

We computed the intrinsic colors of the primary component using the JHK magnitudes as $J-H = -0^m.021 \pm 0^m.044$ and $H-K = -0^m.039 \pm 0^m.033$. V1898 Cyg is located between supergiants and dwarfs in the infrared $(J-H)-(H-K)$ diagram (Tokunaga 2000). Using the the equations given by Straižys, Corbally, & Laugalys (2008) we estimated the interstellar reddening as $E(J-H) = 0^m.106 \pm 0^m.060$ and $E(H-K) = 0^m.052 \pm 0^m.060$. Using the transformation equation given by Bessell et al. (1998) we find $E(B-V) = 0^m.286$, in very good agreement with that found from the UBV colors. Since the observed common color index is $0^m.036$ one obtains an intrinsic $B-V$ color of $-0^m.25$ which corresponds to a B1V star in the calibrations of Papaj, Krelowski, & Wegner (1993).

We used our spectra to determine the spectral type of the primary component of V1898 Cyg. We followed the procedures of Hernández et al. (2004), choosing helium lines in the blue-wavelength region, where the contribution of the secondary component to the observed spectrum is almost negligible. From several spectra we measured EWs of HeI λ 4026, 4144, 4387, 4922 as 0.867 ± 0.044, 0554 ± 0.062, 0.497 ± 0.090, 0.768 ± 0.028 Å, respectively. Then we used the EW-spectral type diagrams given by Hernández et al. (2004). The EWs of the helium lines indicate that the spectral type of the primary component is $B1.8 \pm 0.6$ which is in a agreement with that obtained from infrared photometry. The calibration of Papaj et al. (1993) gives an effective temperature of 18700 K and $B-V$ of $-0^m.21$ for a B2V star, 16800 K and $-0^m.19$ for the same spectral type but for a giant star. Therefore, we estimated an effective temperature of 18000 ± 600 K for the primary component of V1898 Cyg.

3.2. *Reddening*

The measurement of reddening is a key step in determining the distance of stars. V1898 Cyg is located in the direction of the NAP, where reddening varies from one place to other. We estimated the reddening in the $B-V$ color as $0^m.29$ using the infrared colors. On the other hand we find $E(B-V) = 0^m.25$ for a star of type B2V and $E(B-V) = 0^m.23$ for a B2III star. The photometric and spectroscopic determinations of the interstellar reddening seem to be in a good agreement within a 3σ error. Our spectra cover the interstellar Na I (5890 and 5896 Å) doublet, which is an excellent estimator of the reddening as demonstrated by Munari & Zwitter (1997). They calibrated a tight relation linking the Na I D1 (5890 Å) equivalent widths with the $E(B-V)$ reddening. On spectra obtained at quadratures, lines from both components are un-blended with the interstellar ones, and they can therefore be accurately measured. We derive an equivalent width of 0.52 ± 0.06 Å for the Na I D1 line, which corresponds to $E(B-V) = 0^m.33 \pm 0.09$. Since the star is located nearly on the galactic plane ($l = 87^\circ.60$, $b = -0^\circ.34$) and near the edge of North America nebula (NAN) such a reddening at optical wavelengths is expected.

3.3. *Rotational velocity*

The width of the cross-correlation profile is a good tool for the measurement of $v \sin i$ (see, e.g., Queloz et al. 1998). The rotational velocities ($v \sin i$) of the two components were obtained by measuring the FWHM of the CCF peaks in nine high-S/N spectra of V1898 Cyg acquired close to the quadratures, where the spectral lines have the largest Doppler-shifts. In order to construct a calibration curve FWHM-$v \sin i$, we have used an average spectrum of HD 27962, acquired with the same instrumentation. Since the rotational velocity of HD 27962 is very low but not zero ($v \sin i \simeq 11$ km s^{-1}, e.g., Royer et al. (2002) and references therein), it could be considered as a useful template for A-type stars rotating faster than $v \sin i \simeq 10$ km s^{-1}. The spectrum of HD 27962 was synthetically broadened by convolution with rotational profiles of increasing $v \sin i$ in steps of 5 km s^{-1} and the cross-correlation with the original one was performed at each step. The FWHM of the CCF peak was measured and the FWHM-$v \sin i$ calibration was established. The $v \sin i$ values of the two components of V1898 Cyg were derived from the FWHM of their CCF peak and the aforementioned calibration relations, for a few wavelength regions and for the best spectra. This gave values of 110 ± 5 km s^{-1} for the primary star and 90 ± 9 km s^{-1} for the secondary star.

4. TIMES OF MINIMA AND THE ORBITAL PERIOD

Times of mid-eclipses were published by Halbedal (1985), CS, DM and Brát et al. (2008). These times of eclipses are presented in Table 2. The O-C(I) residuals are computed using the light curve elements given below,

$$\mathrm{MinI(HJD)} = 2\,450\,690.6948 + 1^d.51311 \times E\,, \quad (1)$$

where the orbital period is adopted from DM. The behavior of the deviations from the linear light curve