olution of the EBASIM data. For 170 unblended lines of the star α Sex in the region 3840–4930 Å, they obtained nearly the same scale for the equivalent widths. Then, they did not apply any additional correction to the equivalent widths of the EBASIM spectra. However, we caution that the comparison done in Pintado & Adelman (2003) needs to be extended and made more robust. The authors plan to extend it with high S/N (> 500) spectra of sharp-lined stars.

The stellar lines of the HgMn stars were identified using the same procedure of previous papers (Saffe, Levato, & López-García 2004, 2005; Saffe & Levato 2009). We used the general references of *A Multiplet Table of Astrophysical Interest* (Moore 1945) and *Wavelengths and Transition Probabilities for Atoms and Atomic Ions*, Part 1 (Reader et al. 1980) as well as the more specialized references for P II (Svendenius, Magnusson, & Zetterberg 1983), Mn II (Iglesias & Velasco 1964), Fe II (Dworetsky 1971; Johansson 1978; Guthrie 1985) and Y II (Nilsson, Johansson, & Kurucz 1991). The final line list is similar to those used in recent papers of HgMn stars (Zavala et al. 2007; Adelman & Yüce 2010).

3. ATMOSPHERIC PARAMETERS

An estimate of the effective temperature and gravity was done by Woolf & Lambert (1999), who used the Strömgren $uvby-\beta$ photometry and the calibration of Moon & Dworetsky (1985). For HR 3273, the authors derived 12350 K and 3.28 dex for $T_{\rm eff}$ and $\log g$, respectively. Glagolevskij (1994) used the Shallis-Blackwell method and derived two temperatures from the parameters Q and X (reddening free index and multicolor photometry parameter). For HR 8118 they obtained 11900 K and 11500 K, while for HR 8937 they obtained 12400 and 12300 K, using the Q and X parameters, respectively. Dolk et al. (2003) derived a temperature and gravity using *uvby* photometric data but with the calibration of Napiwotzki, Shonberner, & Wenske (1993). For HR 8567, they obtained 11977 K and 4.06 dex, while for HR 8937 they derived 12476 K and 4.13 dex for $T_{\rm eff}$ and $\log g$, respectively.

We compared the observed Hγ profiles with synthetic spectra of the Hγ region calculated with SYNTHE (Kurucz & Avrett 1981) using Kurucz ATLAS9 (Kurucz 1995, private communication) model atmospheres with [M/H]=0.0, i.e. solar abundance, which seems to be adequate for these stars. However it is difficult to obtain accurate Balmer line profiles in this region from echelle spectra covering several orders. Thus, we estimated $T_{\rm eff}$ and $\log g$ using the $uvby-\beta$ mean colors of Hauck & Mermilliod (1998) with the calibration of Napiwotzki et al. (1993), and then we corrected the $T_{\rm eff}$ values according to Adelman & Rayle (2000). These values are presented in the first two columns of Table 3. Next we adjusted the surface gravity to get ionization equilibrium from FeI and FeII. A similar strategy was applied by Adelman & Yüce (2010) in the derivation of the fundamental parameters. The final adopted values of the fundamental parameters are shown in Table 3.

TABLE 3

TEMPERATURE AND GRAVITY DERIVED FOR THE HGMN STARS

Star	$uvby-\beta$ $T_{\rm eff}$	$uvby-\beta$ $\log g$	Adopted $T_{\rm eff}$	Adopted $\log g$
HR 3273	12253	3.32	12253	3.42
HR 8118	11381	4.01	11381	4.11
HR 8567	12315	3.78	12315	3.68
HR 8937	12088	4.28	12088	4.28

We fitted a synthetic spectrum to ∼20 Fe lines in order to derive an estimation of the rotational velocities of the HgMn stars. We used the program SYNTHE (Kurucz & Avrett 1981) and the command *broaden* to reproduce the instrumental broadening of the EBASIM spectrograph, adopting a resolving power of $R \sim 40000$. The value of R is approximate, and thus the derived rotational velocities should be taken with caution. The final $v \sin i$ values are obtained using the average and standard deviation of the lines. We derived rotational velocities of 20 ± 2 km s^{-1}, 30 ± 1 km s^{-1}, 22 ± 1 km s^{-1} and 24 ± 2 km s^{-1} for the stars HR 3273, HR 8118, HR 8567 and HR 8937, respectively. The HgMn stars of our sample are not extremely slow rotators.

4. ABUNDANCE ANALYSES

To derive the abundances of the chemical species we used the WIDTH9 code (Kurucz 1995, private communication) and equivalent widths measured in the spectra of the stars. The program also requires the selection of a model atmosphere and the atomic data for the lines (oscillator strength, excitation potentials, damping constants, etc.). The code calculates a theoretical equivalent width for an initial input abundance (taken from the model atmosphere) and compares this value with the measured EW. WIDTH9 computes basically the line profile and the curve of growth. Then it modifies the abundance iteratively to achieve a difference between theoretical and measured equivalent width < 0.01 mÅ. The process is repeated for each measured spectral line.