

Coudé-feed stellar spectral library - atmospheric parameters

Yue Wu,^{1,2} Harinder P. Singh,^{3,1} Philippe Prugniel,¹ Ranjan Gupta^{4,1} and Mina Koleva^{5,1}

¹ Université de Lyon, Université Lyon 1, Villeurbanne, F-69622, France; CRAL, Observatoire de Lyon, CNRS UMR 5574, 69561 Saint-Genis Laval, France

e-mail: prugniel@obs.univ-lyon1.fr

² National Astronomical Observatories, Chinese Academy of Sciences, 20A Datun Road, Chaoyang District, Beijing 100012, China; Key Laboratory of Optical Astronomy, NAOC, Chinese Academy of Sciences; Graduate University of the Chinese Academy of Sciences, 19A Yuquan Road, Shijingshan District, Beijing, 100049, China

e-mail: wuyue@lamost.org

³ Department of Physics and Astrophysics, University of Delhi, India

e-mail: hpsingh@physics.du.ac.in

⁴ IUCAA, Post Bag 4, Ganeshkhind, Pune 411007, India

e-mail: rag@iucaa.ernet.in

⁵ Instituto de Astrofísica de Canarias, La Laguna, E-38200 Tenerife, Spain; Departamento de Astrofísica, Universidad de La Laguna, E-38205 La Laguna, Tenerife, Spain

e-mail: koleva@iac.es

Received ; accepted

ABSTRACT

Context. Empirical libraries of stellar spectra play an important role in different fields. For example, they are used as reference for the automatic determination of atmospheric parameters, or for building synthetic stellar populations to study galaxies. The CFLIB (Coudé-feed library, Indo-US) database is at present one of the most complete libraries, in terms of its coverage of the atmospheric parameters space (T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$) and wavelength coverage 3460 - 9464 Å at a resolution of ~ 1 Å FWHM. Although the atmospheric parameters of most of the stars were determined from detailed analyses of high-resolution spectra, for nearly 300 of the 1273 stars of the library at least one of the three parameters is missing. For the others, the measurements, compiled from the literature, are inhomogeneous.

Aims. In this paper, we re-determine the atmospheric parameters, directly using the CFLIB spectra, and compare them to the previous studies.

Methods. We use the ULYSS program to derive the atmospheric parameters, using the ELODIE library as a reference.

Results. Based on comparisons with several previous studies we conclude that our determinations are unbiased. For the 958 F,G, and K type stars the precision on T_{eff} , $\log g$, and $[\text{Fe}/\text{H}]$ is respectively 43 K, 0.13 dex and 0.05 dex. For the 53 M stars they are 82 K, 0.22 dex and 0.28 dex. And for the 260 OBA type stars the relative precision on T_{eff} is 5.1%, and on $\log g$, and $[\text{Fe}/\text{H}]$ the precision is respectively 0.19 dex and 0.16 dex. These parameters will be used to re-calibrate the CFLIB fluxes and to produce synthetic spectra of stellar populations.

Key words. atlases – stars: abundances – atmospheres – fundamental parameters

1. Introduction

Spectral libraries with a good coverage in T_{eff} , $\log g$, and $[\text{Fe}/\text{H}]$ at moderate spectral resolution (1-2 Å FWHM) are essential in several areas of astronomy. Two important applications are the spectral synthesis of the stellar population of galaxies (e. g. Bruzual & Charlot 2003; Le Borgne et al. 2004; Vazdekis et al. 2010) and the automated classification and determination of the stellar atmospheric parameters (e. g. Katz et al. 1998). The latter application is a key step in the analysis of large spectroscopic surveys, such as RAVE (Steinmetz et al. 2006), SDSS/SEGUE, APOGEE and SEGUE-2 (Rockosi et al. 2009), the Guoshoujing Telescope¹ survey (Zhao et al. 2006) or GAIA (Perryman et al. 2001). Both the increased output of the modern instruments and the better quality of

the spectra require improvements of the spectral libraries and models.

The first large library (684 stars) at the intermediate spectral resolution of ~ 2 Å (FWHM) was published by Jones (1999). It covered only two small windows of the optical range with an incomplete sampling of the atmospheric parameters. It was followed by more complete libraries improving the wavelength and parameter coverage. The most significant ones at present are the ELODIE (Prugniel & Soubiran 2001), CFLIB (Valdes et al. 2004) and MILES (Sánchez-Blázquez et al. 2006).

The ELODIE library (Prugniel & Soubiran 2001; Prugniel et al. 2007b) has a compilation of 1962 spectra of 1070 stars observed at a resolution $R \sim 42000$ in the range 3900-6800 Å. The library is also available at a resolution of 0.55 Å ($R \sim 10000$) for the population synthesis in PegaseHR (Le Borgne et al. 2004). The main limitation of this library is its restricted wavelength coverage. The CFLIB (also called Indo-US library) has a wide wavelength

Send offprint requests to: Ph. Prugniel

¹ formerly named LAMOST, <http://www.lamost.org>

coverage (3460-9464 Å) at a lower resolution ($R \sim 5000$), its most important limitation is its approximate flux calibration. The youngest library in the optical range is MILES (Sánchez-Blázquez et al. 2006). With a wavelength coverage from 3525 - 7500 Å, it is limited in its coverage in the red compared to CFLIB. Its resolution is only 2.3 Å (FWHM, $R \sim 2200$), but its flux calibration is undoubtedly more precise and is used for population synthesis (Vazdekis et al. 2010).

The reliability and accuracy of the atmospheric parameters of the stars of these libraries has direct consequences on their usage, for example in stellar populations models (Prugniel et al. 2007a; Koleva et al. 2007; Percival & Salaris 2009; Chen et al. 2010). While most of the stars of CFLIB have atmospheric parameters compiled from the literature and in general determined from high-dispersion spectra, there is a substantial fraction ($\sim 25\%$) of stars with either one or more parameters unavailable. Because the flux calibration was done by fitting each observation to a spectral energy distribution with a close match in spectral type from the Pickles (1998) library, the stars with poorly known atmospheric parameters were also inaccurately calibrated. The present paper intends to re-measure these parameters homogeneously and is therefore a step toward an improvement of the flux calibration.

Various methods have been developed in the past to estimate stellar atmospheric parameters from stellar spectra in an automatic and reliable manner. One of the often used technique involves finding the minimum distance between observed spectra and grids of synthetic or observed spectra. The program TGMET, developed by Katz et al. (1998) and improved by Soubiran et al. (2000, 2003), illustrates this approach. It achieves an internal accuracy of 86 K, 0.28 dex and 0.16 dex for T_{eff} , $\log g$, and $[\text{Fe}/\text{H}]$ respectively for a target F, G, or K star with signal-to-noise ratio $S/N = 100$ and 102 K, 0.29 dex and 0.17 dex at $S/N = 10$.

Re Fiorentin et al. (2007) derived atmospheric parameters from observed medium-resolution stellar spectra using non-linear regression models trained either on pre-classified observed data or synthetic stellar spectra. For the SDSS/SEGUE spectra, they reached an accuracy on the order of 150 K in the estimation of T_{eff} , 0.36 dex in $\log g$, and 0.19 dex in $[\text{Fe}/\text{H}]$. Other similar efforts include Bailer-Jones et al. (1997), Prugniel & Soubiran (2001), Snider et al. (2001), Willemsen et al. (2005), Recio-Blanco et al. (2006), Shkedy et al. (2007), Luo et al. (2008), Lefever et al. (2009), Zhang et al. (2009) and Jofré et al. (2010).

The method employed in this work uses the ULYSS² package and consists of minimizing a χ^2 between an observed spectrum and a model spectrum. This model is adjusted at the same resolution and sampling as the observation, and the fit is performed in the pixel space. The method determines all free parameters in a single fit in order to handle properly the degeneracy between the temperature and the metallicity.

The details of the method and the process of extraction are presented in the next section. In Sect. 3 we test the quality of parameter extraction by comparing with other determinations in the literature. In Sect. 4, we give the results and conclusions of our study.

2. Analysis method

The ULYSS package fits a spectrum against a non-linear model. The package has flexibility allowing one to use it for various types of tasks. For example, in Koleva et al. (2009a) it was used to retrieve the star-formation history of galaxies and in Wu et al. (2010) to analyze stellar spectra. In the present work, we will use the so-called TGM component of the package to fit the CFLIB spectra against stellar spectral models based on a new version of the ELODIE library (version 3.2). In this section, we describe this new library and the fitting method.

2.1. ELODIE 3.2

The ELODIE library is based on echelle spectra taken with the eponym spectrograph attached to the 1.93 m telescope of Observatoire de Haute-Provence. The data used to prepare the library were already processed by the data-reduction pipeline run at the telescope. They can be retrieved from the observatory archive (Moultaka et al. 2004).

The first version of the library (Prugniel & Soubiran 2001) contained 908 spectra for 709 stars, and the spectra were provided in the wavelength range 4100-6800 Å. Two upgrades were released in Prugniel & Soubiran (2004, version 3.0) and Prugniel et al. (2007b, version 3.1). The version 3 series rests on a new and larger selection of spectra from the whole archive of the instrument. There are 1962 spectra for 1070 stars within wavelength range 3900-6800 Å with a larger coverage of atmospheric parameter space.

The three lines of improvement that motivated the successive releases were (i) the data-reduction (in particular the correction of the diffuse light and the extension of the wavelength range to 3900-6800 Å), (ii) the determination of the atmospheric parameters and Galactic extinctions and (iii) the interpolator. This last point is particularly important for the present study because it is the function that returns a spectrum for a given set of atmospheric parameters by making an interpolation over the whole library (Prugniel et al. 2008).

Since the release of version 3.1, the ELODIE library has thus been continuously improved, and for the present work we use the version 3.2 that will also be described separately (Prugniel et al. in preparation). The main motivation to use this new version here is a modification of the interpolator, which now takes the natural broadening of the spectra (due to rotation) as an additional parameter.

The interpolator consists of polynomial expansions of each wavelength element in powers of $\log(T_{\text{eff}})$, $\log g$, $[\text{Fe}/\text{H}]$ and $f(\sigma)$. The last term is a function of the rotational broadening parameterized by σ , the standard deviation of a Gaussian. We used $f(\sigma) = 1 - 1/\sqrt{1 + \sigma^2}$, with σ in pixels, because it is approximately proportional to the change of depth of the lines caused by the broadening. The Gaussian broadening of each spectrum was determined with ULYSS using a previous version of the model, and is, therefore, relative to the 'mean' rotational width for a given spectral type.

Three sets of polynomials are defined for three temperature ranges (roughly matching the OBA, FGK, and M types) with considerable overlap between them where they are linearly interpolated. For the FGK and M polynomials,

² <http://ulyss.univ-lyon1.fr>

26 terms are used and for the OBA polynomials, 19 terms are used. The terms of the polynomials were chosen to be almost orthogonal, for ease of understanding their contribution and to avoid contributions of large amplitudes that cancel each other and result in a loss of precision. The inclusion of new terms was made gradually, testing those whose contribution appears to be the most important, as measured by the decrease of the total squared residuals between the original spectra and the interpolated ones. Another argument that guided the choice of the developments was the minimization of the biases between the atmospheric parameters compiled from the literature (absolute calibration), and the internal values obtained by inverting the interpolator. These biases were probed in different regions of the space of parameters. The final choice of the developments and the limit tuning of the three temperature ranges were based on intuitions and tests.

The coefficients of the polynomials were fitted on a subset of the whole library after excluding peculiar stars (these stars are listed in the table of the ELODIE 3.1 release; the corresponding list for the present version is almost unchanged and will be given in Prugniel et al. in preparation). A first interpolator is based on parameters compiled from the literature (that we call *absolute* parameters). For the stars without spectroscopic determinations of the parameters, we used photometric calibrations, or a calibration from the spectral classifications, which are obviously less accurate than the spectroscopic ones. The quality of this *absolute* interpolator is limited by the inhomogeneity and inaccuracy of the atmospheric parameters. Therefore, we fitted the observed spectra against the interpolated ones to derive revised parameters for those stars that were photometrically calibrated, and we adopted the average between the original and new parameters. We computed a second interpolator, based on these improved parameters, and used it in an iteration to measure homogeneously the atmospheric parameters for the complete library. These self-calibrated *internal* parameters are finally used to compute an *internal* interpolator, which is used for the stellar population synthesis with PegaseHR. The *internal* interpolator is more precise in the sense that the residuals between the original observations and the interpolated spectra are reduced, but it may be affected by biases owing to the imperfect modeling by polynomials.

In previous versions, the inversion of the interpolator restored biased atmospheric parameters for the intermediate temperature stars. For example, for the 13 observations of the Sun, the mean temperature obtained in version 3.1 is 5726 ± 11 K, compared to the reference temperature of 5777 K (i.e. the one adopted by Prugniel et al. 2007b from Cayrel de Strobel 1996). A careful examination revealed that this negative bias was balanced with a positive bias for the fast rotating stars. The effect of the rotation reduces the depth of the lines, which then can be fitted to a hotter temperature. Surprisingly this degeneracy links the rotation more to the temperature than to the metallicity³. This analysis lead us to introduce rotation terms in to the polynomial developments. With the new version, the temperature of the Sun is 5760 ± 14 K. Even if we exclude three observations from the same date (1999/12/22) which

depart significantly from the 10 others, the mean temperature is 5766 ± 9 K. For the same set of observations, $\log g$ and $[\text{Fe}/\text{H}]$ are respectively 4.33 ± 0.03 and -0.03 ± 0.02 dex compared to the reference values of $4.44 \log(g/\text{cm.s}^2)$ and 0.0 dex respectively. For some reason there is apparently a small but significant bias on the surface gravity of the Sun, but the consistency for the temperature is extremely good. The comparison between the absolute and internal determination of the atmospheric parameters in various small regions of the parameter space did not reveal noticeable biases.

Another improvement in the new version concerns the ability of the interpolator to model the spectra in sparsely populated regions of the parameter space, and even to extrapolate out of the range of parameters of the library.

This has been achieved by supplementing the observed spectra with 'semi-empirical' ones. We computed these semi-empirical spectra by adding the differential effect predicted in the theoretical libraries (Coelho et al. 2005; Martins et al. 2005) between two points of the parameter space to the interpolated spectrum in a reference point. We can write it as

$$S_s(T_1, \log g_1, [\text{Fe}/\text{H}]_1) = S_i(T_0, \log g_0, [\text{Fe}/\text{H}]_0) + [S_t(T_1, \log g_1, [\text{Fe}/\text{H}]_1) - S_t(T_0, \log g_0, [\text{Fe}/\text{H}]_0)].$$

While $(T_0, \log g_0, [\text{Fe}/\text{H}]_0)$ is a reference point in the parameter space where the interpolator predicts a reliable spectrum, and $(T_1, \log g_1, [\text{Fe}/\text{H}]_1)$ is a point located outside of the region populated by the library stars, S_i is a spectrum predicted by the interpolator (previous version) and S_t are spectra from the theoretical library. S_s is the semi-empirical spectrum used to complete the library. This method guarantees the continuity between the observed and theoretical libraries and provides better approximations of the spectra than the pure theoretical spectra, which are devoid of some lines. We used these semi-empirical spectra to constrain the extrapolations toward very hot and cool stars and toward the low metallicities for hot stars. The spectra from Coelho et al. (2005) were used to extend the interpolator for the warm stars to low metallicity (down to $[\text{Fe}/\text{H}] = -2.5$ dex), and those from Martins et al. (2005), to extend to high and low temperatures. Note that despite a more sophisticated model (Phoenix, Hauschildt et al. 1996), these latter models do not match the observations for the cool stars, $T_{\text{eff}} < 3500$ K, in the spectral region 6300 to 6500 Å. This is certainly because of a wrong line list for the molecular absorption (Martins, private communication).

The modeling of the spectra with polynomials is similar to the fitting functions for the Lick spectroscopic indices (Gorgas et al. 1993; Worthey et al. 1994). As an alternative to this global interpolation, Vazdekis et al. (2003) developed a Gaussian kernel smoothing, which may be less sensitive to biases, but is more sensitive to the errors on the atmospheric parameters and to the particularities of the stars in the scarcely populated regions of the space of parameters. In these regions, only a few stars are used for the local interpolation and the resulting spectra are therefore more subject to the cosmic variance, while this effect is smoothed for a global interpolation.

³ By contrast, in stellar populations the broadening owing to the velocity dispersion is clearly degenerated with the metallicity (Koleva et al. 2008).

We computed interpolators both for the continuum-normalized and for the flux-calibrated versions of the library. The residuals between the observed and interpolated spectra for continuum-normalized version are lower than for the flux-calibrated version because of the additional uncertainties of the flux-calibration and correction of the Galactic extinction. In this work, we adopted the flux-calibrated version to analyze the flux-calibrated CFLIB observations.

2.2. Fitting method

The function described above is interfaced with ULySS to fit the observed spectrum with an interpolated spectrum convolved with a Gaussian and multiplied by a polynomial. The order of this polynomial is chosen to absorb any flux calibration systematics or effects of extinction. The minimization problem is written as

$$\text{Obs}(\lambda) = P_n(\lambda) \times [\text{TGM}(T_{\text{eff}}, \log g, [\text{Fe}/\text{H}], \lambda) \otimes G(v_{\text{sys}}, \sigma)],$$

where $\text{Obs}(\lambda)$ is the observed spectrum, $P_n(\lambda)$ a Legendre polynomial of degree n , and $G(v_{\text{sys}}, \sigma)$ is a Gaussian broadening function characterized by the systemic velocity v_{sys} , and the dispersion σ . The free parameters of the minimization procedure are the three parameters of the TGM function: T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$, the two parameters of the Gaussian: v_{sys} , σ and the coefficients of P_n . v_{sys} absorbs the imprecision of the cataloged radial velocity of the stars that were used to reduce them in the rest frame; σ encompasses both the instrumental broadening and the effect of the rotation.

2.3. Consistency tests

As a consistency test, we determined the atmospheric parameters of the ELODIE library stars using ULySS. We compared the continuum-normalized spectra to the continuum-normalized interpolator based on the absolute parameters (i.e. compiled from the literature). We fitted the three atmospheric parameters and a broadening function, which accounts for rotation, with a rejection of the outliers.

Because the *internal* atmospheric parameters determined in the ELODIE library were also obtained from an inversion of this interpolator, we expect ULySS to return very similar results. Though the two minimization approaches are different (an ad-hoc downhill method designed to avoid known local minima in the case of ELODIE), both methods minimize the squared departures between the model and the observation computed on each wavelength bin. Still, the two analyses differ by significant details. In particular, while ULySS matches the rotation using a Gaussian convolution, in ELODIE it is included as specific terms in the polynomial developments of the interpolator (see Sect. 2.1).

For this test, we used only ELODIE observations with reliable absolute parameters. The number of comparison spectra are 293 for O, B, and A, 1415 for F, G, and K and 26 for M types. The biases and dispersions with respect to the *internal* determinations of the ELODIE library are shown in the left part of Table 1. The first line gives the mean formal fitting errors. The second gives the statistics

using all the measurements, and the third, the statistics after excluding the values departing by more than 3σ from the mean.

The biases between the two series of measurements are not significant and the dispersions are small compared to the usual precision on this type of determinations. After checking the most deviating stars, we conclude that the main source of discrepancy comes from different modeling of the rotational broadening. The convolution method of ULySS is better, and the ELODIE interpolator should be improved. However, as this is well within the final expected errors, we will proceed with the current version.

A second test consisted in analyzing the flux-calibrated ELODIE spectra with ULySS using the flux-calibrated interpolator and the corresponding biases, and the dispersions are shown in Table 1 (right side).

The residuals of the comparisons between the two sets of atmospheric parameters are only a little higher in this second test. This was expected because this time the measurements differ not only by the fitting method, but also by the models. We can a priori estimate that the flux-calibrated interpolator is not as accurate as the continuum-normalized one, since it also *averages* the flux calibration errors (which are significant in ELODIE). We can also assume that the flux-calibrated interpolator is less precise for the same number of terms in the developments, since the spectra are more complex (they include the thermal component).

A precision better than 40 K for a F, G and K star is fully satisfactory for the present purpose, and we will not investigate solutions to improve the flux-calibrated interpolator.

2.4. Relative line-spread function

In principle, an initial step prior to the analysis is to adapt the resolution of the model to the one of the observation, this is called line-spread function (LSF) injection. This is in general more complex than a convolution, because the relative resolution between the observation and the model may vary with wavelength (see the detailed description in Koleva et al. 2009b). However, as CFLIB was made over a period of eight years, with slightly different setups, the resolution also changes throughout the library. This would require a separate analysis of the resolution for each spectrum. This can be done with ULySS, but after testing several cases for various type of stars, we found that this was not producing significantly different results than if we simply included a simple Gaussian broadening in the fitted model. This broadening also matches the rotational broadening of the fitted star.

Figure 1 shows the relative LSF between the ELODIE library and a star from CFLIB (chosen randomly). It was evaluated with wavelength intervals of 600 Å spaced by 300 Å. The variation of the instrumental velocity dispersion (σ_{ins}) with the wavelength is significant: from 21 to 34 km s⁻¹. For this star, the atmospheric parameters without LSF injection are $T_{\text{eff}}=5803$ K, $\log g=4.01$ dex, $[\text{Fe}/\text{H}]=-0.26$ dex. With LSF injection they are $T_{\text{eff}} = 5787$ K, $\log g = 3.98$ dex, $[\text{Fe}/\text{H}]=-0.25$ dex. Figure 2 shows the corresponding fit and illustrates the general quality. We checked the same for 13 other randomly selected CFLIB observations, which represent seven different stellar spec-

Table 1. Consistency tests with the continuum-normalized interpolator and with the flux-calibrated interpolator.

Sp.Type ^a	ΔT_{eff}		$\Delta \log g (\text{cm s}^{-2})$		$\Delta [\text{Fe}/\text{H}] (\text{dex})$		Sp.Type ^a	ΔT_{eff}		$\Delta \log g (\text{cm s}^{-2})$		$\Delta [\text{Fe}/\text{H}] (\text{dex})$	
	mean	rms	mean	rms	mean	rms		mean	rms	mean	rms	mean	rms
OBA		0.17 %		0.008		0.006	OBA		0.17 %		0.007		0.006
9/293	0.21 %	3.1 %	-0.022	0.129	0.029	0.128	13/293	0.39 %	4.3 %	-0.027	0.159	0.043	0.119
	0.18 %	2.2 %	-0.016	0.096	0.029	0.125		0.34 %	3.3 %	-0.027	0.129	0.042	0.116
FGK		3.7 K		0.006		0.003	FGK		3.7 K		0.006		0.003
69/1415	2.3 K	38.3 K	-0.022	0.071	0.023	0.065	37/1415	-1.9 K	44.4 K	-0.028	0.086	0.023	0.069
	0.2 K	23.0 K	-0.021	0.067	0.019	0.055		-1.1 K	29.5 K	-0.025	0.079	0.023	0.063
M		1.1 K		0.006		0.003	M		1.1 K		0.006		0.003
3/26	-2.3 K	17.6 K	0.005	0.181	0.003	0.051	2/26	-2.9 K	17.8 K	-0.005	0.227	0.005	0.054
	-0.5 K	11.8 K	0.021	0.165	0.009	0.043		-2.4 K	14.0 K	-0.004	0.236	0.011	0.049

Notes. The left panel presents the parameter statistics for the continuum-normalized interpolator, and the right one for the flux-calibrated interpolator. For each stellar type group, the first line gives the formal fitting errors. The second gives the raw statistics, and the third, the statistics after rejecting the $3 \sigma T_{\text{eff}}$ outliers. The comparisons are the ULySS values minus the ELODIE values. ^(a) The second line gives the total number of spectra used for the comparison and the number of clipped T_{eff} outliers.

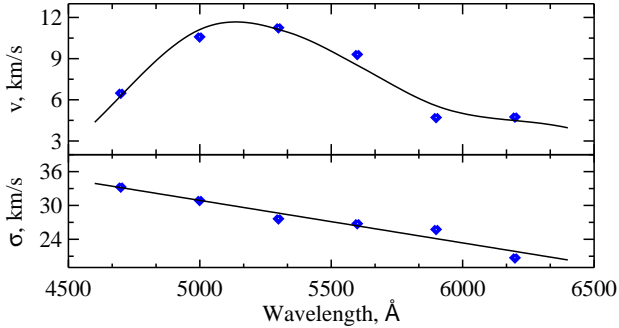


Fig. 1. Relative line-spread function of CFLIB with respect to ELODIE for HD 4307. The blue diamonds are the values derived using ULY_LSF, and the black lines are smoothed functions.

tral types, and concluded that the differences are within the uncertainties.

2.5. Error estimation

In principle, to compute the formal fitting errors we need to know the random errors on each wavelength element. Unfortunately, this information is not provided with the reduced CFLIB spectra. Therefore, we determined an upper limit to these internal errors by assuming that the residuals are entirely due to the noise (i. e. the fit is perfect and there are no residuals of physical origin). In this case, the reduced χ^2 is by definition equal to unity. To make this determination, we assumed that the noise is the same on all the wavelength elements. We performed the fit with an arbitrary value of S/N and rescaled the errors returned by ULySS by multiplying them by $\sqrt{\chi^2}$. We verified that the implementation is correct by checking that the errors do not depend on the over-sampling degree of the data.

The mean errors for the fits of the ELODIE spectra (see Table 1) are one order of magnitude smaller than the dispersion between the inversion with ULySS and the measurements in the ELODIE library. This difference is certainly caused by the correlation between the atmospheric

parameters, in particular between the temperature and the metallicity, as illustrated in Koleva et al. (2009b, their fig. 7) and to the correlation between other characteristics of the atmosphere (some other tests indicate that the data are not over-fitted; see Sect. 2.6). In any case, the internal errors are likely proportional to the formal fitting errors, and we estimate them by a simple rescaling to the dispersions reported in the right panel of Table 1, according to the spectral type.

2.6. Order of the multiplicative polynomial

To determine the optimal order of the multiplicative polynomial, n , we proceeded as suggested in (Koleva et al. 2009b). We selected some stars that are representative of all main spectral types and analyzed them with a series of values of n to find the point where the solutions become independent of n . Figure 3, compared with the similar graph presented in Koleva et al. (2009b) shows the improvement brought about by the new version of the interpolator: the plateau is reached for a lower n and the solutions are more stable. In this work, we adopt a polynomial degree $n = 70$.

2.7. Analysis strategy

We classified the stars into three groups, 260 O, B & A (hereafter OBA), 958 F, G & K (hereafter FGK) and 53 M type stars. The distributions of the atmospheric parameters compiled in the CFLIB paper are shown in Figs. 4, 5 and 6 for the OBA, FGK and M types respectively.

Because ULySS performs a *local* minimization, we studied the structure of the parameter space to understand where local minima may actually occur and trap the solution. We did this with convergence maps for several stars that spanned the range of the parameters. These tests (see an example in Fig. 7) consisted in fitting the spectra from a wide grid of guesses to identify the convergence regions. According to the results we chose the following grids of guesses for the three temperature groups:

- O, B, A case, $T_{\text{eff}} = [7000, 10000, 18000, 30000]$ K, $\log g = [1.8, 3.8]$ cm/s^2 , $[\text{Fe}/\text{H}] = [-0.5, 0.5]$ dex
- F, G K case, $T_{\text{eff}} = [4000, 5600, 7200]$ K, $\log g = [1.8, 3.8]$ cm/s^2 , $[\text{Fe}/\text{H}] = [-1.7, -0.3]$ dex

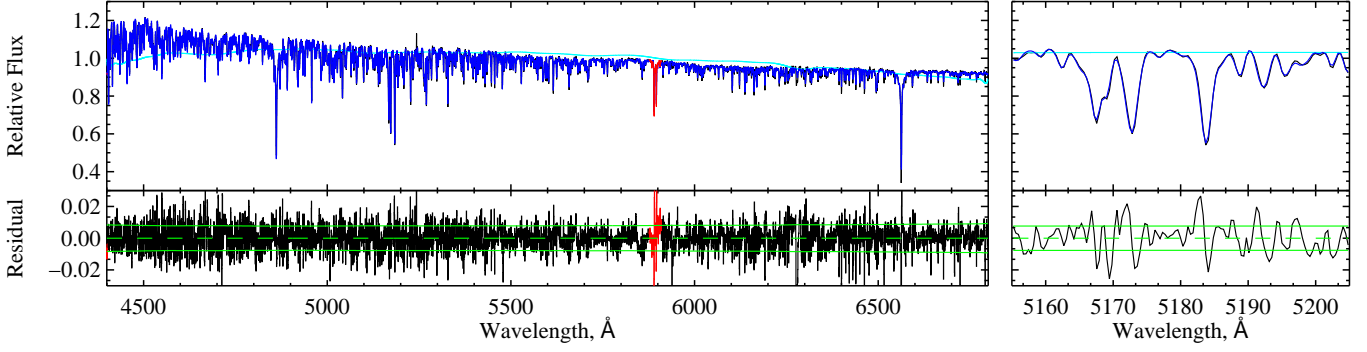


Fig. 2. Fit of the CFLIB observation HD 4307 (G2V) with a TGM component. The top panel shows the spectrum (in black) and the best fit in blue (both are almost superimposed and the black line can be seen only when zooming on the figure), the light blue is the multiplicative polynomial. In red we plot the flagged and masked NaD telluric lines that were not well calibrated in ELODIE library. The residuals are plotted in the bottom panels. The continuous green lines mark the $1\text{-}\sigma$ deviation, and the dashed line is the zero-axis. The right side shows a small wavelength region around Mg_b . The order of the multiplicative polynomial is $n=70$.

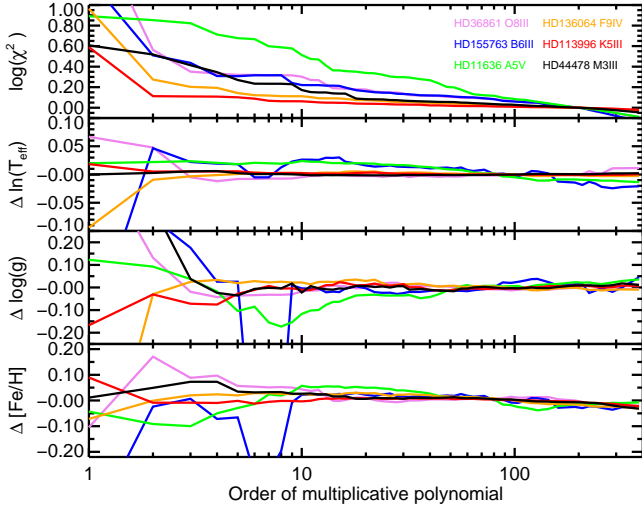


Fig. 3. Evolution of the stellar atmospheric parameter fit results ($\log(\chi^2)$, $\log(T_{\text{eff}})$, $\log g$, and $[\text{Fe}/\text{H}]$) with increasing Legendre polynomial degree.

– M case, $T_{\text{eff}} = [3100, 3600, 4100]$ K, $\log g = [1.0, 4.0]$ cm/s^2 , $[\text{Fe}/\text{H}] = [-0.5, 0.0]$ dex

The adopted solution, i.e. absolute minimum, is the best of those obtained with different guesses.

Because the S/N in the ELODIE spectra drops notably in the blue, especially for cool stars, we restricted the fit to the wavelength range 4400–6800 Å (though using the whole 3900–6800 Å gives consistent results). Among the 1273 CFLIB stars, 885 have a complete coverage of the wavelength range (neglecting small gaps of less than 50 Å). The other stars contain gaps in the coverage. The bad pixels (e.g. emission lines, cosmic ray, bad sky subtraction, telluric lines or bad ones due to the instrument errors etc.) are automatically rejected during the fitting process by ULYSS, using the clipping algorithm applied iteratively on the residuals to the fit (/CLEAN option).

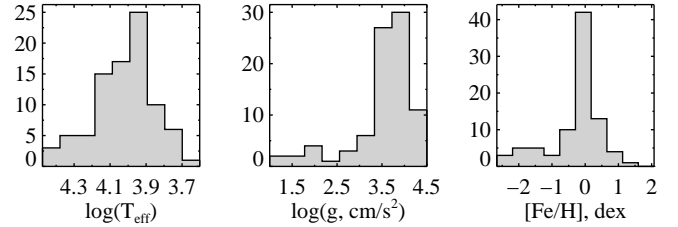


Fig. 4. Distribution of the 260 O, B, and A CFLIB stars with already partially published atmospheric parameters, actually including 87 T_{eff} , 86 $\log g$ and 86 $[\text{Fe}/\text{H}]$. Note that the ordinates of the three panels are not on the same scale.

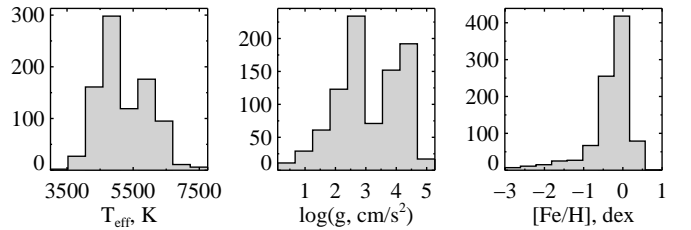


Fig. 5. Distribution of the 958 F, G, and K CFLIB stars with already partially published atmospheric parameters, actually including 895 T_{eff} , 890 $\log g$ and 905 $[\text{Fe}/\text{H}]$. Note that the ordinates of the three panels are not on the same scale.

3. Determination of the atmospheric parameters

In this section, we present the determination of the atmospheric parameters and the comparison with previous publications, separately for the three groups of stars with spectral types FGK, OBA, and M.

Table 2 lists the atmospheric parameters of the 1271 CFLIB stars determined with ULYSS.

We could not determine the atmospheric parameters of HD 156164 (A3IV) because its observed wavelength range (6775–8648 Å) does not overlap the range of ELODIE. We

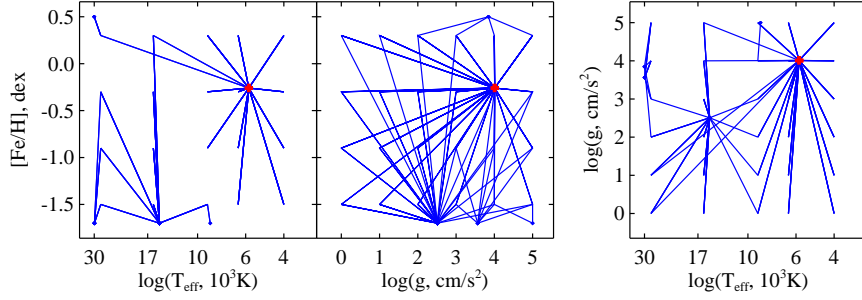


Fig. 7. Convergence maps on different projections of the parameters space for the CFLIB star HD 4307. Each vector connects a guess with the corresponding solution. The red dots show the location of absolute minimum in the three projections.

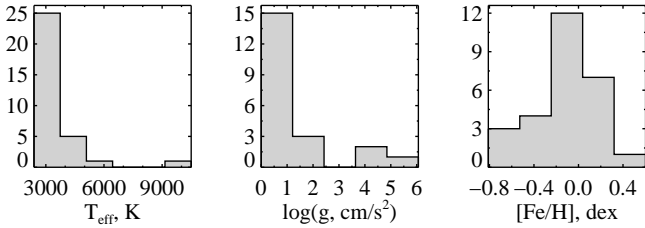


Fig. 6. Distribution of the 53 M CFLIB stars with already partially published atmospheric parameters, actually including 32 T_{eff} , 21 $\log g$ and 27 $[\text{Fe}/\text{H}]$. Note that the ordinates of the three panels are not on the same scale.

rejected also HD 25329 (K1V...), whose CFLIB spectrum is apparently corrupted. We suspect that the range around H_{β} corresponds to another star. It may be a pointing error, possibly because of the high proper motion of this star; the A0 star HD 279382, located 3 arcmin away, may have been observed for the H_{β} setup.

3.1. F, G, and K stars

The majority of the stars in both CFLIB and ELODIE libraries have spectral types F, G and K; 958 of the 1273 CFLIB stars belong to these types. On the basis of our analysis, we also assigned to this group five stars without a classification. These are BD+09 3063, BD+09 3223, BD+18 2890, G 102-20 (= BD+12 853) & G 46-31 (= HIP 45554).

There are five stars with poor quality spectra or with missing regions: HD 186408 (G1.5Vb) has very low S/N in the range 4750-6070 Å and we fit only the range 6070-6800 Å. For HD 140283 (F3) we fit the range 4780-6800 Å. For HD 18474 (G5:III...) we fit the range 6010-6800 Å. HD 224458 (G8III) has a large gap 4780.6-6812.2 Å and the fit is limited to the range 3900-4780.6 Å. Finally, BD+09 3063's coverage is similarly limited to 3900-4782.6 Å.

Figure 8 compares our determinations of the atmospheric parameters with those compiled by Valdes et al. (2004, hereafter, Valdes) in the original CFLIB release, for the 877 FGK stars for which Valdes gives the three parameters. The statistics shown in Table 4 emphasize the

heterogeneity of the Valdes compilation. We excluded 46 T_{eff} , 8 $\log g$ and 5 $[\text{Fe}/\text{H}]$ outliers.

In Appendix A we compare our determinations to the ELODIE 3.2 internal estimations and to 15 other previous studies with a significant number of F, G, and K stars in common with CFLIB. We determined the mean biases and the rms dispersion between these datasets and our series of measurement for the three parameters, after rejecting the objects whose T_{eff} deviate by more than $3\text{-}\sigma$. For the comparison with ELODIE 3.2 and Nordström et al. (2004) we also excluded some $\log g$ and $[\text{Fe}/\text{H}]$ outliers.

The summary of these comparisons is reported in Table 4. The most significant outliers are listed in Table 3 and are discussed in the appendix.

3.2. O, B, and A Stars

There are 260 O, B, and A stars in CFLIB. The determination of the atmospheric parameters for hot stars is more delicate than for the FGK stars for a couple of reasons. First, there are fewer spectral features. Second, the spectra are often more complex because of emission lines, of chemical peculiarities or of rotation. Third, there are few reference measurements in the literature and the number of stars in the ELODIE library is even smaller. For these reasons, the interpolator is less secure, and may be biased, in the sense that the interpolated spectra may differ from the templates by some systematics.

To study these systematics, we compare in Appendix B the absolute and internal parameters of the ELODIE library. We also compare our determinations with three other studies. The results are given in Table 5.

For two stars we excluded a significant region of the spectrum: For HD 206267 (O6e), the region 4785 - 5933 Å was not observed, and for HD 33111 (A3III), the region 4679 - 6012 Å has a low S/N.

3.3. M Stars

There are 53 M, S, or C stars in CFLIB. For nine of them, the fit with ULySS was not successful, in the sense that the metallicity reached the lower bound, $[\text{Fe}/\text{H}] = -1.0$ dex, set as a validity limit of the models (for the M stars). After a critical review of the literature and of the quality of our fit, we adopted the parameters listed in Table 7.

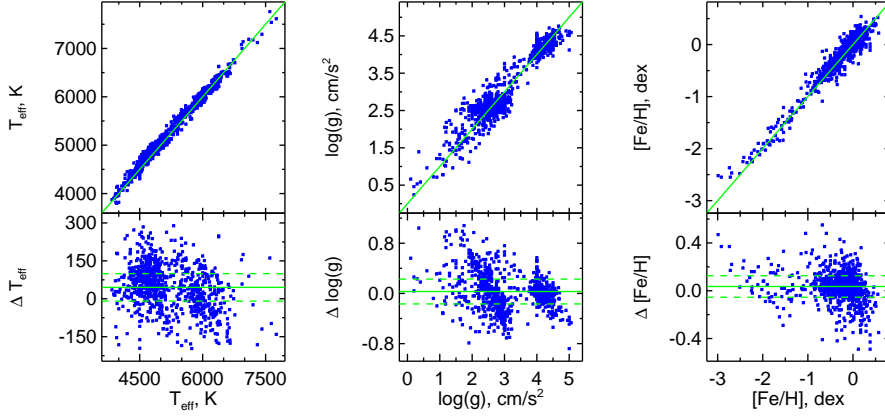


Fig. 8. Comparison of the atmospheric parameters determined by us (ordinates of the upper panels) with those from Valdes (abscissas). 818 FGK stars are plotted and 46 temperature, eight $\log g$ and five $[\text{Fe}/\text{H}]$ outliers are not displayed. In the lower panels, we plot the differences between the values from ULySS and the literature (here Valdes). The green lines in the upper panels are the 1 to 1 ratios. In the lower panels, the continuous green lines mark the mean bias, and the dashed lines are the $1\text{-}\sigma$ deviation (computed after the rejection of the T_{eff} outliers). The same convention is used from Fig. A.1 to C.4 for other literature sources.

Table 4. External comparison of the atmospheric parameters of F, G, and K stars.

Reference	ΔT_{eff} (K)		$\Delta \log g$ (cm s^{-2})		$\Delta [\text{Fe}/\text{H}]$ (dex)		No. of Stars ^a /clipped	Sp.Type
	mean	rms	mean	rms	mean	rms		
Valdes et al. (2004)	45.1	98.7	0.03	0.30	0.04	0.13	877/46/8/5	F,G,K
ELODIE 3.2 I (2009)	17.4	41.4	0.04	0.10	0.03	0.07	387/7/1/1	F,G,K
Valenti & Fischer (2005)	-27.4	78.5	-0.11	0.16	-0.04	0.06	106/0	F,G,K
Soubiran et al. (2008)	39.9	75.1	0.09	0.27	0.03	0.10	175/8	F,G,K
Edvardsson et al. (1993)	-14.8	52.2	-0.02	0.12	0.04	0.07	129/10	F,G
Santos et al. (2004)	-46.3	74.4	-0.06	0.15	-0.02	0.07	23/2	F,G,K
Fuhrmann et al. (1998)	-27.9	41.5	-0.04	0.10	-0.01	0.03	7/0	F,G
da Silva et al. (2006)	5.0	32.4	0.11	0.17	0.01	0.06	17/1	G,K
Gray et al. (2001)	-52.9	91.8	0.06	0.28	0.03	0.11	46/4	F,G
Robinson et al. (2007)	-4.6	57.2	-0.05	0.27	0.00	0.11	26/2	F,G,K
Nordström et al. (2004)	36.8	62.0	-	-	0.03	0.08	269/15/0/2	F,G,K
Mishenina et al. (2006)	41.3	55.8	0.19	0.28	0.01	0.09	48/3	G,K
Kovtyukh et al. (2006)	42.5	64.4	-	-	-	-	69/5	G,K
Takeda (2007)	-24.3	71.3	0.00	0.13	-0.02	0.06	117/9	F,G,K
Hekker (2007)	-10.8	62.2	-0.23	0.29	0.01	0.07	132/5	G,K
Luck (2007)	-65.5	70.5	-0.18	0.24	-0.06	0.07	113/5	G,K
Sousa (2008)	-43.7	75.1	-0.07	0.16	0.00	0.05	17/2	F,G,K

Notes. The mean Δ values are computed as our determination minus those of the literature.

^(a) The first number is the total of spectra in common, the second is the number of the rejected T_{eff} outliers. For the comparisons with ELODIE 3.2, Valdes, and Nordström, the third and fourth are the numbers of rejected $\log g$ and $[\text{Fe}/\text{H}]$ outliers.

Table 5. Comparison of common O, B, and A type stars with other references.

Reference	ΔT_{eff} (%)		$\Delta \log g$ (cm s^{-2})		$\Delta [\text{Fe}/\text{H}]$ (dex)		No. of Stars /clipped	Sp.Type
	mean	rms	mean	rms	mean	rms		
ELODIE 3.2 A vs. I (2009)	1.33	6.32	0.07	0.25	-0.01	0.21	293/19	O,B,A
ELODIE 3.2 I (2009)	-0.84	3.36	-0.05	0.16	0.01	0.14	47/6	O,B,A
Valdes et al. (2004)	1.53	10.02	0.08	0.47	0.15	0.55	86/2	O,B,A
	1.53	10.02	0.01	0.35	0.02	0.29	86/2/5/18	O,B,A
Cenarro et al. (2007)	4.33	12.14	0.17	0.58	0.23	0.60	38/1	B,A
	4.33	12.14	0.03	0.38	-0.01	0.33	38/1/3/9	B,A

Notes. For the comparison with Valdes et al. (2004) and Cenarro et al. (2007), the statistics listed in the first line are given after excluding the temperature outliers, and the second line lists the statistics after clipping those red crosses in $\log g$ and $[\text{Fe}/\text{H}]$ panels respectively. Numbers displayed in the column of ‘No. of Stars /clipped’ show the clipped number in the order of T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$.

Table 6. Comparison of common M type stars with other references.

Reference	ΔT_{eff} (K)		$\Delta \log g$ ($cm s^{-2}$)		$\Delta [\text{Fe}/\text{H}]$ (dex)		Star num/clip
	mean	rms	mean	rms	mean	rms	
ELODIE 3.2 I (2009)	-32.9	43.7	0.16	0.34	0.03	0.08	7
Valdes et al. (2004)	-60.9	122.9	-0.08	0.32	-0.12	0.44	18/2
Cenarro et al. (2007)	-61.7	127.3	-	-	-	-	10
Cayrel et al. (2001)	-97.4	133.4	-0.11	0.30	-0.14	0.49	18

Table 7. Nine late type stars, which ULySS could not successfully fit.

Name	Sp.Type	T_{eff} (K)	$\log(g)$ $cm s^{-2}$	$[\text{Fe}/\text{H}]$ (dex)	Ref.
HD078712	M6IIIase	3210	0.00	-0.01	A
		3101	0.23	-1.00	0
		3210	0.00	-0.11	1
		3210	0.00	0.09	1
HD084748	M8IIIe	3070	0.78	-1.00	0&A
HD114961	M7III	3014	0.00	-0.81	2&A
		3080	0.36	-1.00	0
HD126327	M7.5	3000	0.00	-0.58	2&A
		3088	0.30	-1.00	0
HD148783	M6III	3250	0.20	-0.04	A
		3146	0.45	-1.00	0
		3250	0.20	-0.01	3
		3250	0.20	-0.06	4
HD177940	M7IIIevar	3092	0.59	-1.00	0&A
HD187796	S...	3148	0.49	-1.00	0&A
HD196610	M6III	3100	0.39	-1.00	0&A
HD197812	M5Iab:	3389	0.32	-1.00	A
		3119	0.32	-1.00	0
		3389			5

References. (A) Adopted solution; (0) ULySS fit to the CFLIB spectrum; (1) Smith & Lambert (1986); (2) Jones (1999); (3) Ramírez et al. (2000); (4) Carr et al. (2000); (5) Dyck et al. (1998).

Notes. First column is the star name. Second column is the stellar spectral type. Third to fifth column are the three atmospheric parameters. Sixth lists the source of the measurements. For HD 78712 we adopt the averaged parameters from Smith & Lambert (1986)'s two solutions, for HD 114961 and 126327 we adopt values from Jones (1999), for HD 148783 we adopt the averaged values of Ramírez et al. (2000) and Carr et al. (2000), for HD 197812 we use the T_{eff} value from Dyck et al. (1998), and adopt $\log g$ and $[\text{Fe}/\text{H}]$ value of ULySS determination. For the remaining four stars, as no other reference could be found, we adopt our determinations in the final table.

In Appendix C we compare our measurements with other determinations from four other compilations. The corresponding statistics is summarized in Table 6.

4. Discussion and conclusion

Nearly 300 of the 1273 stars in the Indo-US stellar spectral library (CFLIB) had one or more of the atmospheric parameters, T_{eff} , $\log g$, or $[\text{Fe}/\text{H}]$, unknown.

We have determined the atmospheric parameters for 1271 (out of 1273) CFLIB stars using the ULySS package and the interpolator of the ELODIE library. ULySS optimizes the usage of all the signal information inside the spectrum, allows taking into account of the errors on

each bin of the spectrum and is insensitive to the shape of the continuum. This method determines all free parameters within a single minimization, in order to properly handle the degeneracy between some parameters, e.g., temperature and metallicity. The instrumental and physical broadening of the spectra is matched with a Gaussian convolution. The distribution of the adopted parameters is presented on Figs. 9 & 10.

Based on comparisons with several previous studies we conclude that our method is robust. We derived the intrinsic external accuracy. For the 958 F, G, and K stars, the precisions on T_{eff} , $\log g$, and $[\text{Fe}/\text{H}]$ are respectively 43 K, 0.13, and 0.05 dex. For the 53 M stars they are 82 K, 0.22, and 0.28 dex and for the 260 O, B, and A stars the relative precision on T_{eff} is 5.1%, and on $\log g$, and $[\text{Fe}/\text{H}]$ the precisions are 0.19 and 0.16 dex respectively.

The external comparisons also allow us to probe the existence of biases. For the FGK stars the various comparisons summarized in Table 4 indicate biases in the ranges -65 to 44 K, -0.2 to 0.1 dex and -0.06 to 0.04 dex, for temperature, gravity and metallicity respectively. For OBA stars (Table 5), they are in the ranges -1 to 4 %, -0.05 to 0.03 dex and -0.01 to 0.02 dex, and for M stars (Table 5) -100 to -30 K, -0.1 to 0.1 dex and -0.13 to 0.03 dex. These individual biases are symmetrical around zero, and we have no indication for a systematics in our measurements.

These determinations are particularly reliable and accurate for the FGK stars. But they appeared also valuable for both the OBA and M stars. The main limitations are for the low-metallicity blue horizontal branch stars and the stars cooler than 3300 K. In the first case, the program tends to over-estimate the metallicity. An A0 star with $[\text{Fe}/\text{H}] \sim -1.5$ would be retrieved at $[\text{Fe}/\text{H}] \sim -0.8$. In the second case, the program often converges toward a low-metallicity solution: A solar metallicity M star may be found at the low-metallicity boundary of the model. Both of these effects are certainly owing to the poor coverage of the ELODIE library in these regions of the parameter space. Also, the physical description of the hot and cool stars cannot be generally expressed by the three atmospheric parameters plus a Gaussian broadening. More elaborated models may improve the behavior of the program for these special stars, or a non-parametric approach, like TGMET, may perform better.

We will use this set of atmospheric parameters to recalibrate the fluxes in the CFLIB library. Then, after homogenizing and correcting the line-spread functions, we will prepare high-quality stellar population models.

Acknowledgements. We thank R. Peletier (the referee), C. Soubiran and Th. Morel for comments which helped to improve the manuscript. PP is grateful to Indo-French Astronomy Network (IFAN) for a visit to India where this work was initiated, and for the support from the French *Programme National Cosmologie et Galaxies* (PNCG). YW

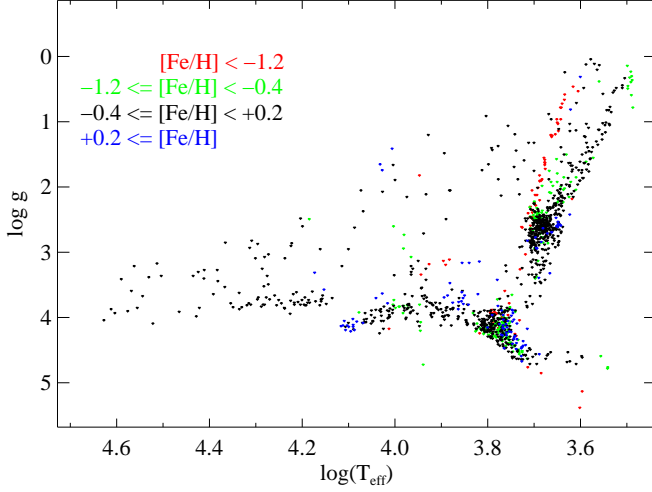


Fig. 9. Distribution in the $\log(T_{\text{eff}})$ - $\log g$ plane of the adopted atmospheric parameters for the 1271 CFLIB stars. The color of the symbols distinguishes the different metallicity classes.

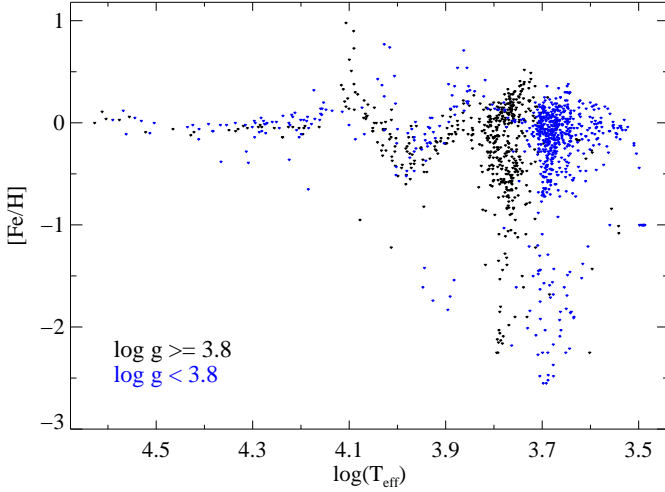


Fig. 10. Distribution in the $\log(T_{\text{eff}})$ - $[\text{Fe}/\text{H}]$ plane of the adopted atmospheric parameters for the 1271 CFLIB stars. The dwarfs are in black and the giants in blue.

acknowledges a grant from the China Scholarship Council (CSC) under No. 2007104275 and a funding from Natural Science Foundation of China (NSFC) under No.10973021. She also thanks Prof. Y.H. Zhao and Prof. A.L. Luo for providing support from the Chinese Academy of Sciences (LAMOST). RG, HPS and MK thank CRAL, Observatoire de Lyon, Université Claude Bernard for Invited Professorships.

References

Adelman, S. J. 1998, *MNRAS*, 296, 856
 Adelman, S. J. & Hill, G. 1987, *MNRAS*, 226, 581
 Adelman, S. J. & Philip, A. G. D. 1994, *MNRAS*, 269, 579
 Allende Prieto, C., Barklem, P. S., Lambert, D. L., & Cunha, K. 2004, *A&A*, 420, 183
 Alonso, A., Arribas, S., & Martínez-Roger, C. 1996, *A&A*, 313, 873
 Alonso, M. S., López-García, Z., Malaroda, S., & Leone, F. 2003, *A&A*, 402, 331
 Andrievsky, S. M., Egorova, I. A., Korotin, S. A., & Burnage, R. 2002, *A&A*, 389, 519
 Bailer-Jones, C. A. L., Irwin, M., Gilmore, G., & von Hippel, T. 1997, *MNRAS*, 292, 157

Balachandran, S. 1990, *ApJ*, 354, 310
 Balachandran, S., Lambert, D. L., Tomkin, J., & Parthasarathy, M. 1986, *MNRAS*, 219, 479
 Barklem, P. S., Stempels, H. C., Allende Prieto, C., et al. 2002, *A&A*, 385, 951
 Baschek, B. & Searle, L. 1969, *ApJ*, 155, 537
 Behr, B. B. 2003, *ApJS*, 149, 101
 Boesgaard, A. M. & Friel, E. D. 1990, *ApJ*, 351, 467
 Boesgaard, A. M. & Tripicco, M. J. 1986, *ApJ*, 303, 724
 Bruzual, G. & Charlot, S. 2003, *MNRAS*, 344, 1000
 Carney, B. W., Latham, D. W., Laird, J. B., & Aguilar, L. A. 1994, *AJ*, 107, 2240
 Carr, J. S., Sellgren, K., & Balachandran, S. C. 2000, *ApJ*, 530, 307
 Castelli, F. & Hubrig, S. 2004, *A&A*, 425, 263
 Cayrel de Strobel, G. 1996, *A&A Rev.*, 7, 243
 Cayrel de Strobel, G., Soubiran, C., & Ralite, N. 2001, *A&A*, 373, 159
 Cenarro, A. J., Peletier, R. F., Sánchez-Blázquez, P., et al. 2007, *MNRAS*, 374, 664
 Chen, X. Y., Liang, Y. C., Hammer, F., et al. 2010, *A&A*, 515, 101
 Chen, Y. Q., Nissen, P. E., Zhao, G., Zhang, H. W., & Benoni, T. 2000, *A&AS*, 141, 491
 Coelho, P., Barbuy, B., Meléndez, J., Schiavon, R. P., & Castilho, B. V. 2005, *A&A*, 443, 735
 Cottrell, P. L. & Sneden, C. 1986, *A&A*, 161, 314
 da Silva, L., Girardi, L., Pasquini, L., et al. 2006, *A&A*, 458, 609
 Dyck, H. M., van Belle, G. T., & Thompson, R. R. 1998, *AJ*, 116, 981
 Edvardsson, B., Andersen, J., Gustafsson, B., et al. 1993, *A&A*, 275, 101
 Feltzing, S. & Gustafsson, B. 1998, *A&AS*, 129, 237
 Fernandez-Villacanas, J. L., Rego, M., & Cornide, M. 1990, *AJ*, 99, 1961
 Foy, R. 1981, *A&A*, 103, 135
 Frémat, Y., Zorec, J., Hubert, A., & Floquet, M. 2005, *A&A*, 440, 305
 Fuhrmann, K. 1998, *A&A*, 338, 161
 Fuhrmann, K., Pfeiffer, M., Frank, C., Reetz, J., & Gehren, T. 1997, *A&A*, 323, 909
 Fuhrmann, K., Pfeiffer, M. J., & Bernkopf, J. 1998, *A&A*, 336, 942
 Fulbright, J. P. 2000, *AJ*, 120, 1841
 Gies, D. R. & Lambert, D. L. 1992, *ApJ*, 387, 673
 Giridhar, S. & Arellano Ferro, A. 2005, *A&A*, 443, 297
 Glagolevskij, Y. V., Iliev, I. K., Stateva, I. K., & Chountonov, G. A. 2006, *Astrophysics*, 49, 497
 Gorgas, J., Faber, S. M., Burstein, D., et al. 1993, *ApJS*, 86, 153
 Gratton, R. G., Carretta, E., & Castelli, F. 1996, *A&A*, 314, 191
 Gray, R. O., Corbally, C. J., Garrison, R. F., et al. 2006, *AJ*, 132, 161
 Gray, R. O., Graham, P. W., & Hoyt, S. R. 2001, *AJ*, 121, 2159
 Hartkopf, W. I. & Yoss, K. M. 1982, *AJ*, 87, 1679
 Hauschildt, P. H., Baron, E., Starrfield, S., & Allard, F. 1996, *ApJ*, 462, 386
 Heacox, W. D. 1979, *ApJS*, 41, 675
 Hekker, S. & Meléndez, J. 2007, *A&A*, 475, 1003
 Hensberge, H. & de Loore, C. 1974, *A&A*, 37, 367
 Høg, E., Fabricius, C., Makarov, V. V., et al. 2000, *A&A*, 355, L27
 Jofré, P., Panter, B., Hansen, C. J., & Weiss, A. 2010, *ArXiv e-prints*
 Jones, L. A. 1999, PhD thesis, Univ. North Carolina
 Katz, D., Soubiran, C., Cayrel, R., Adda, M., & Cautain, R. 1998, *A&A*, 338, 151
 Kinman, T., Castelli, F., Cacciari, C., et al. 2000, *A&A*, 364, 102
 Klochkova, V. G. & Panchuk, V. E. 1987, *Soviet Astronomy*, 31, 37
 Kodaira, K. & Scholz, M. 1970, *A&A*, 6, 93
 Koleva, M., de Rijcke, S., Prugniel, P., Zeilinger, W. W., & Michielsen, D. 2009a, *MNRAS*, 396, 2133
 Koleva, M., Prugniel, P., Bouchard, A., & Wu, Y. 2009b, *A&A*, 501, 1269
 Koleva, M., Prugniel, P., & De Rijcke, S. 2008, *Astronomische Nachrichten*, 329, 968
 Koleva, M., Prugniel, P., Ocvirk, P., et al. 2007, in *IAU Symposium*, Vol. 241, *IAU Symposium*, ed. A. Vazdekis & R. F. Peletier, 183–184
 Kovtyukh, V. V. 2007, *MNRAS*, 378, 617
 Kovtyukh, V. V., Soubiran, C., Bienaymé, O., Mishenina, T. V., & Belik, S. I. 2006, *MNRAS*, 371, 879
 Kurucz, R. 1993, *ATLAS9 Stellar Atmosphere Programs and 2 km/s grid*. Kurucz CD-ROM No. 13. Cambridge, Mass.: Smithsonian Astrophysical Observatory, 1993., 13
 Kurucz, R. L. 1979, *ApJS*, 40, 1
 Kurucz, R. L. 1992, in *IAU Symposium*, Vol. 149, *The Stellar Populations of Galaxies*, ed. B. Barbuy & A. Renzini, 225–+

- Kyrolainen, J., Tuominen, I., Vilhu, O., & Virtanen, H. 1986, *A&AS*, 65, 11
- Le Borgne, D., Rocca-Volmerange, B., Prugniel, P., et al. 2004, *A&A*, 425, 881
- Lefever, K., Puls, J., Morel, T., et al. 2009, arXiv:0910.2851
- Leone, F. & Catanzaro, G. 1998, *A&A*, 331, 627
- Luck, R. E. 1982, *ApJ*, 256, 177
- Luck, R. E. & Challener, S. L. 1995, *AJ*, 110, 2968
- Luck, R. E. & Heiter, U. 2007, *AJ*, 133, 2464
- Luck, R. E. & Lambert, D. L. 1985, *ApJ*, 298, 782
- Luck, R. E. & Wepfer, G. G. 1995, *AJ*, 110, 2425
- Luo, A.-L., Wu, Y., Zhao, J., & Zhao, G. 2008, in Presented at the Society of Photo-Optical Instrumentation Engineers (SPIE) Conference, Vol. 7019, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series
- Mallik, S. V. 1998, *A&A*, 338, 623
- Martins, L. P., González Delgado, R. M., Leitherer, C., Cerviño, M., & Hauschildt, P. 2005, *MNRAS*, 358, 49
- McWilliam, A. 1990, *ApJS*, 74, 1075
- Mishenina, T. V., Bienaymé, O., Gorbaneva, T. I., et al. 2006, *A&A*, 456, 1109
- Moultaka, J., Illovaisky, S. A., Prugniel, P., & Soubiran, C. 2004, *PASP*, 116, 693
- Nordström, B., Mayor, M., Andersen, J., et al. 2004, *A&A*, 418, 989
- Oinas, V. 1977, *A&A*, 61, 17
- Percival, S. M. & Salaris, M. 2009, *ApJ*, 703, 1123
- Perrin, M. 1983, *A&A*, 128, 347
- Perryman, M. A. C., de Boer, K. S., Gilmore, G., et al. 2001, *A&A*, 369, 339
- Pickles, A. J. 1998, *PASP*, 110, 863
- Prugniel, P., Koleva, M., Ocvirk, P., Le Borgne, D., & Soubiran, C. 2007a, in IAU Symposium, Vol. 241, IAU Symposium, ed. A. Vazdekis & R. F. Peletier, 68–72
- Prugniel, P., Koleva, M., Ocvirk, P., Le Borgne, D., & Soubiran, C. 2008, in Astronomical Spectroscopy and Virtual Observatory, Proceedings of the EURO-VO Workshop, held at the European Space Astronomy Centre of ESA, Villafranca del Castillo, Spain, 21–23 March, 2007, Eds.: M. Guainazzi and P. Osuna, Published by the European Space Agency., p.219, ed. M. Guainazzi & P. Osuna, 219
- Prugniel, P. & Soubiran, C. 2001, *A&A*, 369, 1048
- Prugniel, P. & Soubiran, C. 2004, arXiv:astro-ph/0409214
- Prugniel, P., Soubiran, C., Koleva, M., & Le Borgne, D. 2007b, arXiv:astro-ph/0703658
- Ramírez, I. & Meléndez, J. 2005, *ApJ*, 626, 446
- Ramírez, S. V., Sellgren, K., Carr, J. S., et al. 2000, *ApJ*, 537, 205
- Re Fiorentin, P., Bailer-Jones, C. A. L., Lee, Y. S., et al. 2007, *A&A*, 467, 1373
- Recio-Blanco, A., Bijaoui, A., & de Laverny, P. 2006, *MNRAS*, 370, 141
- Robinson, S. E., Ammons, S. M., Kretke, K. A., et al. 2007, *ApJS*, 169, 430
- Robinson, S. E., Strader, J., Ammons, S. M., Laughlin, G., & Fischer, D. 2006, *ApJ*, 637, 1102
- Roby, S. W. & Lambert, D. L. 1990, *ApJS*, 73, 67
- Rockosi, C., Beers, T. C., Majewski, S., Schiavon, R., & Eisenstein, D. 2009, in Astronomy, Vol. 2010, astro2010: The Astronomy and Astrophysics Decadal Survey, 14–+
- Saffe, C., Gómez, M., Pintado, O., & González, E. 2008, *A&A*, 490, 297
- Sánchez-Blázquez, P., Peletier, R. F., Jiménez-Vicente, J., et al. 2006, *MNRAS*, 371, 703
- Santos, N. C., Israelian, G., & Mayor, M. 2004, *A&A*, 415, 1153
- Sargent, W. L. W. 1966, *ApJ*, 144, 1128
- Searle, L., Lungershausen, W. T., & Sargent, W. L. W. 1966, *ApJ*, 145, 141
- Shkedy, Z., Decin, L., Molenberghs, G., & Aerts, C. 2007, *MNRAS*, 377, 120
- Smith, K. C. & Dworetzky, M. M. 1993, *A&A*, 274, 335
- Smith, M. A. 1974, *ApJ*, 189, 101
- Smith, V. V. 1984, *A&A*, 132, 326
- Smith, V. V. & Lambert, D. L. 1985, *ApJ*, 294, 326
- Smith, V. V. & Lambert, D. L. 1986, *ApJ*, 311, 843
- Smith, V. V. & Lambert, D. L. 1987, *MNRAS*, 226, 563
- Snedden, C., Pilachowski, C. A., & Lambert, D. L. 1981, *ApJ*, 247, 1052
- Snider, S., Allende Prieto, C., von Hippel, T., et al. 2001, *ApJ*, 562, 528
- Soubiran, C., Bienaymé, O., Mishenina, T. V., & Kovtyukh, V. V. 2008, *A&A*, 480, 91
- Soubiran, C., Bienaymé, O., & Siebert, A. 2003, *A&A*, 398, 141
- Soubiran, C., Odenkirchen, M., & Le Campion, J. 2000, *A&A*, 357, 484
- Sousa, S. G., Santos, N. C., Mayor, M., et al. 2008, *A&A*, 487, 373
- Steinmetz, M., Zwitter, T., Siebert, A., et al. 2006, *AJ*, 132, 1645
- Strohbach, P. 1970, *A&A*, 6, 385
- Sturenburg, S. 1993, *A&A*, 277, 139
- Takeda, Y., Kang, D., Han, I., Lee, B., & Kim, K. 2009, *PASJ*, 61, 1165
- Takeda, Y., Kawanomoto, S., Honda, S., Ando, H., & Sakurai, T. 2007, *A&A*, 468, 663
- Thevenin, F. & Foy, R. 1986, *A&A*, 155, 145
- Thorén, P. & Feltzing, S. 2000, *A&A*, 363, 692
- Tomkin, J. & Lambert, D. L. 1983, *ApJ*, 273, 722
- Valdes, F., Gupta, R., Rose, J. A., Singh, H. P., & Bell, D. J. 2004, *ApJS*, 152, 251
- Valenti, J. A. & Fischer, D. A. 2005, *ApJS*, 159, 141
- Vazdekis, A., Cenarro, A. J., Gorgas, J., Cardiel, N., & Peletier, R. F. 2003, *MNRAS*, 340, 1317
- Vazdekis, A., Sánchez-Blázquez, P., Falcón-Barroso, J., et al. 2010, *MNRAS*, 477
- Venn, K. A. 1995, *ApJS*, 99, 659
- Willemsen, P. G., Hilker, M., Kayser, A., & Bailer-Jones, C. A. L. 2005, *A&A*, 436, 379
- Worthey, G., Faber, S. M., Gonzalez, J. J., & Burstein, D. 1994, *ApJS*, 94, 687
- Wu, Y., Luo, A., Li, H., et al. 2010, Research in Astronomy and Astrophysics, submitted
- Zboril, M. & Byrne, P. B. 1998, *MNRAS*, 299, 753
- Zhang, J.-N., Luo, A.-L., & Zhao, Y.-H. 2009, Research in Astronomy and Astrophysics, 9, 712
- Zhao, G., Chen, Y., Shi, J., et al. 2006, Chinese Journal of Astronomy and Astrophysics, 6, 265

Appendix A: External comparisons for FGK stars

In this appendix we present the detailed comparisons between our measurements and 16 previous studies. The main outliers are individually discussed.

A.1. Comparison with ELODIE 3.2

There are 206 stars in common between CFLIB and the ELODIE library, corresponding to a total of 387 ELODIE spectra. The comparison with the internal parameters of ELODIE is shown in Fig. A.1. The ELODIE parameters were determined with the interpolator computed on the continuum normalized spectra, while for the present study we used the flux-calibrated interpolator.

The dispersion between the two series of measurements of T_{eff} is 42 K (see Table 4). Assuming that the uncertainty is evenly shared between the two series, this implies an intrinsic precision of ~ 30 K, in agreement with the results of Sect. 2.3. This precision is well within the errors quoted in the literature (50 to 70 K) and we conclude that we can rely on our method. The precisions on $\log g$ and $[\text{Fe}/\text{H}]$ are respectively 0.08 and 0.06 dex.

We detected seven T_{eff} , one $\log g$ and two $[\text{Fe}/\text{H}]$ outliers that we excluded from the statistics. For HD 22468 (K2:Vnk), we obtained a temperature ~ 390 K cooler than the one in ELODIE, $T_{\text{eff}} \sim 5136$ K, (average of two spectra). Our fit of the two ELODIE spectra returns a mean $T_{\text{eff}} = 4771$ K, consistent with our estimation. This star is an active RS CVn variable with strong emission lines (CAII K & H, Balmer lines) and a broad asymmetric cross-correlation peak reflecting the duplicity. The main component is a K1/2 star (Gray et al. 2006), for which a temper-

ature around 4800 K is reasonable. We keep our determination in the final table.

For the second outlier, HD 72946, with three ELODIE observations, we find a temperature ~ 360 K hotter than the ELODIE internal determinations, $T_{\text{eff}} = 5655$ K, or the ULYSS fit of the ELODIE spectra, $T_{\text{eff}} = 5664$ K. As the CFLIB observation misses the red part of the fitting wavelength range, we remade the fit starting from 3900 Å, and obtained $T_{\text{eff}} = 5624$ K. We adopt this latter solution. For the third and fourth outliers HD 183085 and 45674 we determined temperatures ~ 260 K warmer than the ELODIE internal estimation. However, as our solution is consistent with the ULYSS fit of the ELODIE spectra, we adopt it.

There is also an obvious $\log g$ and $[\text{Fe}/\text{H}]$ outlier, HD 178266 (K5). We find $\log g = 2.68$ dex and $[\text{Fe}/\text{H}] = 0.10$ dex, while ELODIE 3.2 quotes $\log g = 1.76$ dex and -0.50 dex (absolute) and 1.81 dex and -0.49 dex (internal). In ELODIE version 1 (Prugniel & Soubiran 2001), the star was on the dwarf sequence: $\log g = 5.27$ dex. Fitting the ELODIE spectrum with ULYSS, we obtain $\log g = 2.69$ dex and $[\text{Fe}/\text{H}] = 0.10$ dex, in agreement with our measurement of the CFLIB spectrum, which we finally adopt.

Finally, there is another metallicity outlier, HD 22211 (G0). We obtained $[\text{Fe}/\text{H}] = 0.20$ dex while CFLIB quotes -0.31 dex (from ELODIE version 1) and ELODIE 3.2 gives -0.29 dex. Fitting the ELODIE spectrum, we get $[\text{Fe}/\text{H}] = 0.14$ dex, close to our determination, which we therefore adopt.

A.2. Comparison with Valenti & Fisher (2005)

Valenti & Fischer (2005) published a catalog of stellar properties for 1040 nearby F, G, and K dwarfs (1944 spectra) observed at a resolution $R \sim 70\,000$ by various planet search programs. Directly fitting the observations rather than equivalent widths with synthetic spectra yielded the effective temperature, surface gravity, metallicity, and projected rotational velocity. They adopted a Kurucz (1992) grid of model atmospheres generated by the ATLAS9 program (Kurucz 1993). Their precisions are 44 K for T_{eff} , 0.06 dex for $\log g$ and 0.03 dex for $[\text{Fe}/\text{H}]$. Beside, they compared their measurements with Edvardsson et al. (1993), Fuhrmann et al. (1997), Fuhrmann et al. (1998), Santos et al. (2004) and Allende Prieto et al. (2004), and found mean external errors of 72 K in T_{eff} , 0.13 dex in $\log g$, and 0.06 dex in $[\text{Fe}/\text{H}]$.

We have identified 106 CFLIB stars in common with this work and show the comparison in Fig. A.2. The two series are consistent (see Table 4), without outliers exceeding 3σ in T_{eff} . Our determinations are within the error estimates given by Valenti & Fischer (2005).

A.3. Comparison with Soubiran et al. (2008)

Soubiran et al. (2008) assembled two lists of mostly clump giants: 368 nearby stars ($d < 100$ pc) and 523 distant stars ($d < 1$ kpc) in the direction of the North Galactic pole. The atmospheric parameters of the former group were either estimated from their spectroscopic observations at high resolution and high signal-to-noise ratio or compiled from the literature, including in particular Mishenina et al. (2006). For the latter group, they were determined with the

TGMET program (Katz et al. 1998) using ELODIE spectra.

We identified 175 stars in common with this reference, and we present the corresponding comparisons in Fig. A.3 after excluding eight T_{eff} outliers.

For the first outlier HD 48329 (G8Ib), we find a ~ 360 K warmer temperature. This star is one of the absolute calibrators in Soubiran et al. (2008), who adopted an average between the measurements by Luck (1982), Smith & Lambert (1987) and Mallik (1998). Our temperature, 4662 K, is consistent with Luck (1982)'s, 4624 K, and we keep our original measurements.

We found the second outlier, HD 72946, 324 K warmer. As the CFLIB spectrum misses the red range, we remade the fit including the blue from 3900 Å. This reduced the discrepancy to 80 K, in agreement also with the ELODIE internal determination. We adopted the results from our revised fit.

For the third outlier, HD 197964, our $T_{\text{eff}} = 4762$ K is ~ 230 K cooler. This star is in the TGMET reference library, and the parameters given in Soubiran et al. (2008) are an average between Kyrolainen et al. (1986) and McWilliam (1990). The latter is from a photometric calibration, while the former, from a spectroscopic analysis, agrees with our determination and is also consistent with the ELODIE internal value. We adopt our original determination.

For the fourth (HD 219134) and fifth (HD 32147) outliers, our fitted temperatures are ~ 200 K cooler. For HD 219134, the Soubiran et al. (2008) temperature is an average between measurements by Strohbach (1970), 4710 K, Oinas (1977), 4710 K and Robinson et al. (2007), 4963 K. Our $T_{\text{eff}} = 4700$ K agrees with the former two and is consistent with the ELODIE internal measurements (for two spectra). For HD 32147, the Soubiran et al. (2008) temperature is an average between Feltzing & Gustafsson (1998) and Thorén & Feltzing (2000), both from photometric calibrations. Our determined temperature, $T_{\text{eff}} = 4617$ K, is consistent with the ELODIE internal value. We adopt our original determinations for these two stars.

The sixth outlier is HD 40460 (K1III). Our T_{eff} is 263 K warmer. The Soubiran et al. (2008) temperature is a spectroscopic determination from Cottrell & Sneden (1986).

The two ELODIE internal determinations for this star are consistent with our result and with the ULYSS fit of these spectra. Therefore we adopt our original estimations.

For the seventh outlier HD 16458 (G8p...), our $T_{\text{eff}} = 4410$ K is ~ 160 K cooler. The parameters in Soubiran et al. (2008) are averages between Sneden et al. (1981), $T_{\text{eff}} = 4500$ K, Tomkin & Lambert (1983), 4600 K, Smith (1984), 4800 K, and Fernandez-Villacanas et al. (1990), 4500 K. As the blue range of the spectrum has a good S/N, we re-fitted the spectrum starting from 3900 Å and obtained $T_{\text{eff}} = 4484$ K, in agreement with both Fernandez-Villacanas et al. (1990) and the ELODIE internal measurement. In Table 2 we adopt our modified solution.

For the last outlier HD 204867, our $T_{\text{eff}} = 5705$ K is 243 K warmer than Soubiran et al. (2008), which is an average between Luck (1982), 5362 K, and Foy (1981), 5478 K. The ELODIE internal parameters are consistent with our results which we therefore adopt in Table 2.

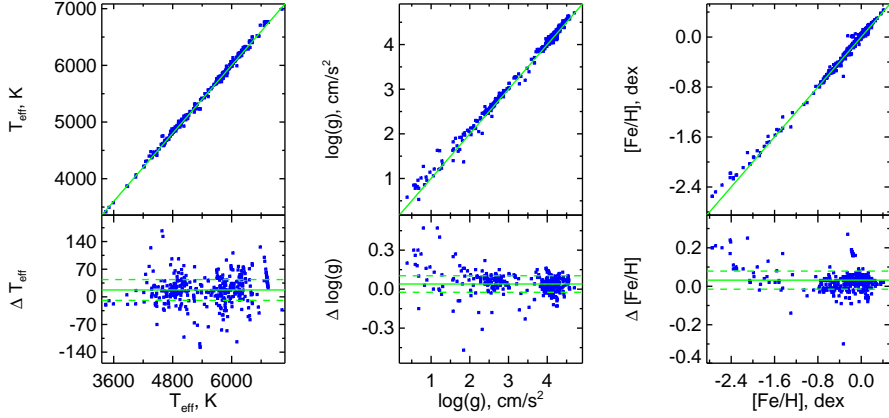


Fig. A.1. Comparison of the atmospheric parameters determined by us (ordinates, upper panels) with those from ELODIE 3.2 (abscissas). We plot 378 F, G, and K observations in common between the two data sets, seven outliers are not displayed. The axes are as in Fig. 8.

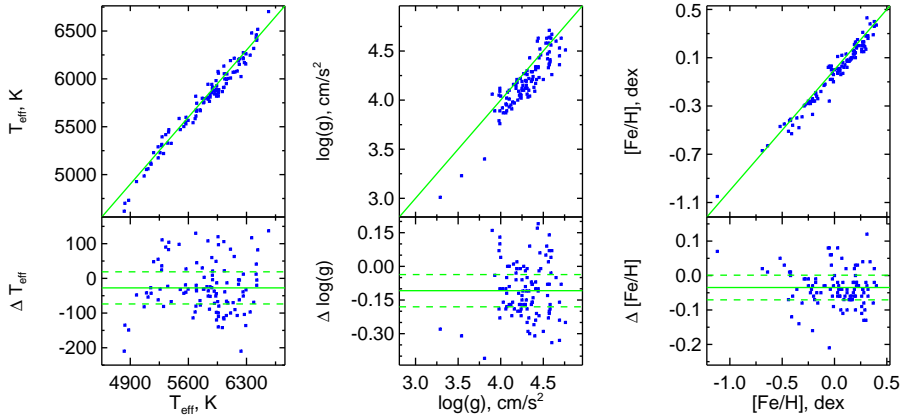


Fig. A.2. Comparison of the atmospheric parameters determined by us with those from Valenti & Fischer (2005). We plot 106 F, G, and K dwarfs in common between the two data sets. The axes are as in Fig. 8.

A.4. Comparison with Edvardsson et al. (1993)

Edvardsson et al. (1993) studied the atmosphere of 189 nearby field F and G stars to provide observational constraints on the evolution of the Galactic disk. The temperature and gravity were determined with Strömgren photometry, and the $[\text{Fe}/\text{H}]$ metallicity and detailed abundances were estimated to a precision of 0.05 dex with LTE atmosphere models.

The CFLIB has 129 stars in common with this database and the results of the comparison are shown in Fig. A.4. Ten T_{eff} outliers were excluded. As seen from Table 4, the deviations in the parameters are small between the two studies.

For seven of the ten outliers we find a temperature around 170 K cooler and, for the rest of them, about 100 K warmer. Six of these outliers belong also to the ELODIE library, where their internal measurements are consistent with the present determinations. The other four T_{eff} outliers are discussed below.

For HD 175317, our estimated temperature is ~ 170 K cooler than the one given by Edvardsson et al. (1993), and there is also a discrepancy of 0.20 dex in $[\text{Fe}/\text{H}]$. Balachandran (1990) gives photometric determinations

of the parameters which are consistent with ours. Gratton et al. (1996) give $T_{\text{eff}} = 6517$ K, only 38 K warmer than us. For HD 102634, our estimated temperature is 177 K cooler than Edvardsson et al. (1993)'s, but our parameters agree with the measurements of Gratton et al. (1996). For HD 220117 and 168151, our temperature is consistent with Boesgaard & Friel (1990) and Gratton et al. (1996). We adopt our original measurements for these four stars.

A.5. Comparison with Santos et al. (2004)

Santos et al. (2004) derived stellar metallicities and other parameters from a detailed $R \sim 50\,000$ spectroscopic analysis of a sample of 139 stars known or suspected to be orbited by planetary mass companions.

The errors were estimated to be on the order of 50 K in T_{eff} , 0.12 dex in $\log g$ and 0.05 dex in metallicity. The obtained stellar parameters were found to be compatible, within the errors, with the values derived by others. In particular, the derived surface gravities were only on average 0.03 dex different from trigonometric estimates based on Hipparcos parallaxes.

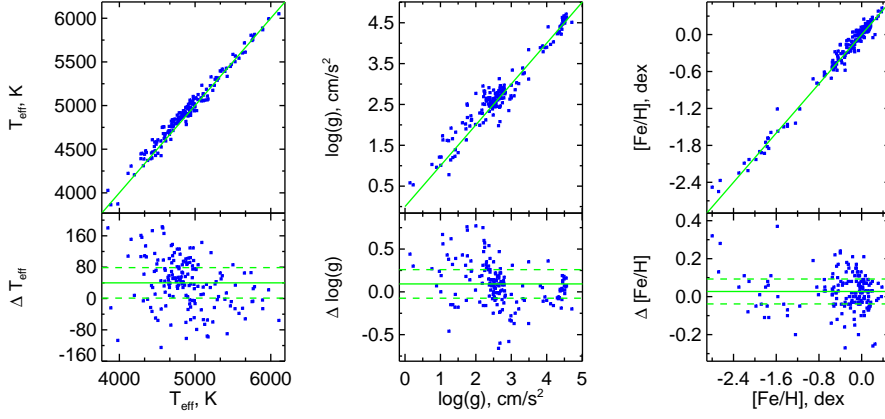


Fig. A.3. Comparison of the atmospheric parameters determined by us with those from Soubiran et al. (2008). We plot 167 F, G, and K stars in common between the two data sets, eight outliers are not displayed. The axes are as in Fig. 8.

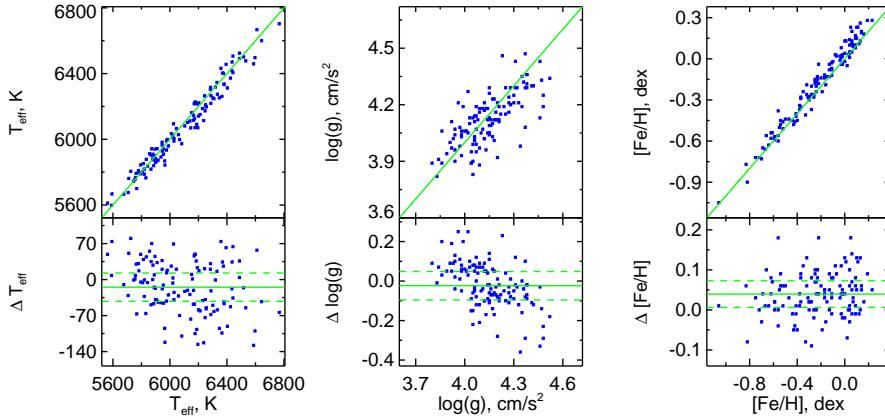


Fig. A.4. Comparison of the atmospheric parameters determined by us with those from Edvardsson et al. (1993). We plot 119 F and G stars in common between the two data sets, 10 outliers are not displayed. The axes are as in Fig. 8.

We have a total of 23 F, G, and K stars common with this database. Figure A.5 shows the comparison after excluding the two outliers HD 137759 and HD 19994.

For HD 137759, our T_{eff} is 250 K cooler, but our atmospheric parameters are consistent with the ELODIE internal determinations and are close to Soubiran et al. (2008)'s estimates, especially the T_{eff} and $[\text{Fe}/\text{H}]$. For HD 19994, our T_{eff} is 209 K cooler, but closer to the photometric estimate from Edvardsson et al. (1993). The internal measurements of the two spectra from the ELODIE library are consistent with our results. For both stars we adopt our measurements.

A.6. Comparison with Fuhrmann et al. (1998)

Fuhrmann et al. (1998) used a H_α and H_β line-fitting procedure to derive the effective temperatures of F and G stars. Figure A.6 presents the comparison for the seven stars in common with this sample. The agreement is good.

A.7. Comparison with da Silva et al. (2006)

da Silva et al. (2006) give a detailed spectroscopic analysis of 72 evolved stars observed at the resolution

$R = 50\,000$. The atmospheric parameters were obtained by adjusting the measured equivalent widths to LTE atmosphere models, imposing excitation and ionization equilibrium. A direct comparison of their results with those of other authors (Cayrel de Strobel et al. 2001) showed that their metallicity is on average systematically higher by 0.07 dex, their temperature by about 40 K, and gravity by about 0.13 dex. Their estimate of the uncertainties are 70 K on T_{eff} , 0.2 dex on $\log g$, 0.1 dex on $[\text{Fe}/\text{H}]$.

We found 17 G and K stars in common and show the comparison in Fig. A.7. We do not see the biases found by da Silva et al. (2006). For HD 99167, our estimated T_{eff} is 191 K cooler, while the other two parameters also deviate significantly. Our estimated T_{eff} and $\log g$ are consistent with McWilliam (1990) (discussed above in Sect. A.1), but our $[\text{Fe}/\text{H}]$ deviates by 0.30 dex compared to both da Silva et al. (2006) and McWilliam (1990). The quality of our fit is satisfactory and we adopt our determinations.

A.8. Comparison with Gray et al. (2001)

Gray et al. (2001) studied 372 late A, F, and early G type stars with the aim of understanding the nature of the MK luminosity classification for this range of spectral types. They simultaneously fitted the optical spectra (1.8 Å res-

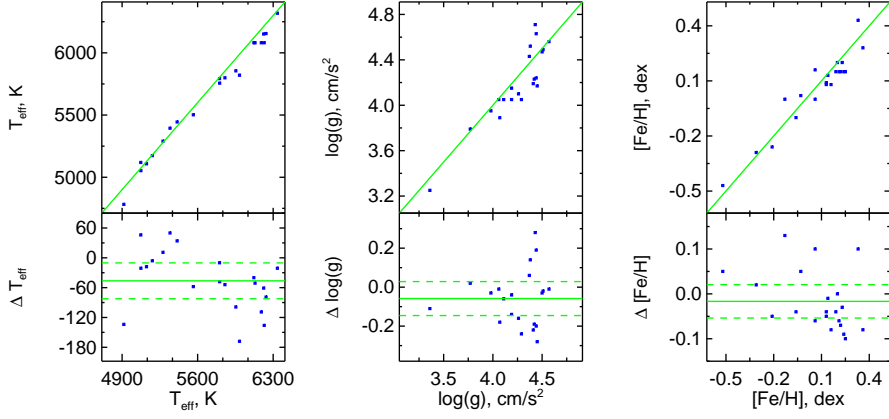


Fig. A.5. Comparison of the atmospheric parameters determined by us with those from Santos et al. (2004). We plot 21 F, G, and K stars in common between the two data sets, two outliers are not displayed. The axes are as in Fig. 8.

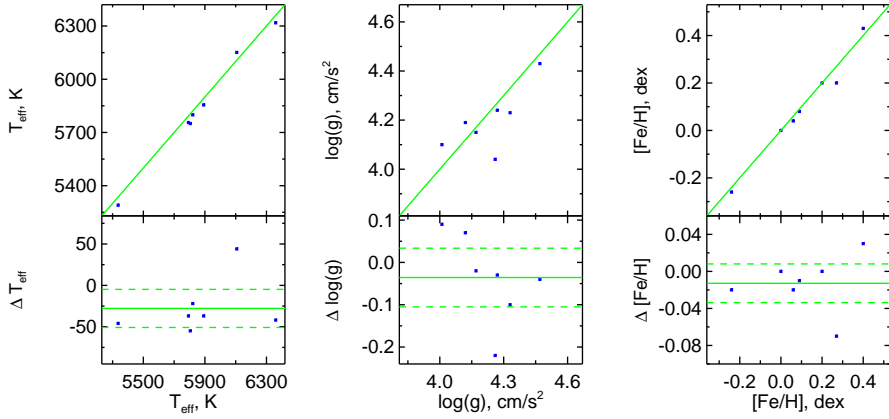


Fig. A.6. Comparison of the atmospheric parameters determined by us with those from Fuhrmann et al. (1998). We plot seven F and G stars in common between the two data sets. The axes are as in Fig. 8.

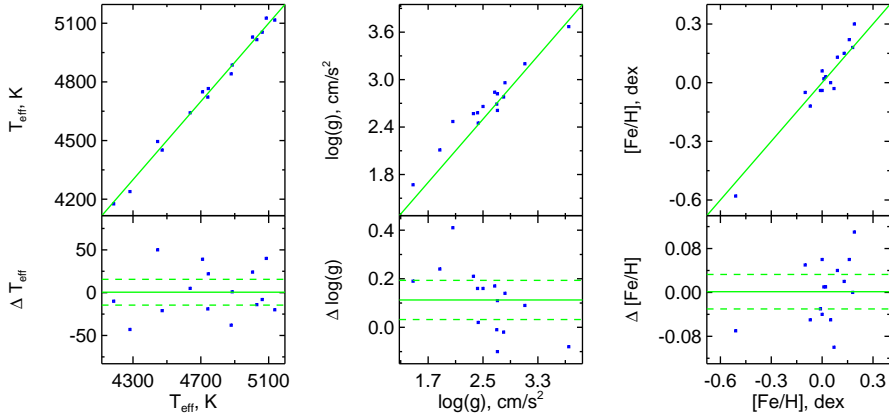


Fig. A.7. Comparison of the atmospheric parameters determined by us with those from da Silva et al. (2006). We plot 15 G and K stars in common between the two data sets, two outliers are not displayed. The axes are as in Fig. 8.

olution) and Strömgren *uvby* photometry against Kurucz ATLAS9 models. They estimated the random external errors to 80 K on T_{eff} , 0.1 dex on $\log g$ and 0.10 to 0.15 dex on $[\text{Fe}/\text{H}]$.

We present the comparison of the 46 stars in common with our sample in Fig. A.8, after excluding four T_{eff} outliers.

The star HD 25291 (F0II) is a prominent outlier. The T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$ from Gray et al. (2001) are 7050 K,

1.85 dex and -0.21 dex respectively. Our corresponding values are 7761 K, 2.49 dex and 0.14 dex, yielding large deviations of 711 K in temperature, 0.64 dex in gravity and 0.35 dex in metallicity. This star has been a subject of a number of investigations. Andrievsky et al. (2002) give $T_{\text{eff}} = 6750$ K, using photometric data, and the $\log g = 1.00$ dex was determined assuming the FeI/II ionization equilibrium. Giridhar & Arellano Ferro (2005) gave spectroscopic $T_{\text{eff}} = 7250$ K and $\log g = 1.50$ dex. Kovtyukh (2007) gave 7497 K using line-depth ratios (the uncertainty is 5-30 K). Venn (1995) gave 7600 K and $\log g = 1.5$ dex, from MgI/II ionisation equilibrium and $H\gamma$ profile fit. All the above references point to a mean $\log g \sim 1.50$ dex, which seems reliable. Fixing $\log g$ at this value and re-fitting the spectrum, we find $T_{\text{eff}} = 7390$ K, close to Kovtyukh (2007)'s value and more reasonable for a F0 star. In the final table we adopted this latter solution.

The estimates for the other three T_{eff} outliers, HD 194093, 36673 and 20902, can be improved by fitting from 3900 Å instead of 4400 Å, because the blue part of these spectra have a better quality. The internal ELODIE measurements for HD 194093 are consistent with the latter estimations, and fitting the ELODIE spectrum with ULYSS also gives a similar result. For HD 20902, Luck & Lambert (1985) gave 6300 K, cooler than Gray et al. (2001) by 260 K. In Table 2 we adopt our improved determinations.

A.9. Comparison with Robinson et al. (2007)

Robinson et al. (2007) reported atmospheric parameters for 1907 stars from a low-resolution spectroscopic survey, designed to identify metal-rich F, G, K dwarfs likely to harbor detectable planets. $[\text{Fe}/\text{H}]$, T_{eff} and $\log g$ were measured with the calibrations of Lick indices presented in Robinson et al. (2006). T_{eff} is given by a linear combination of Lick indices, $[\text{Fe}/\text{H}]$ by a linear combination of Lick indices and T_{eff} and $\log g$ by a linear combination of indices and T_{eff} plus one nonlinear term, $T_{\text{eff}}(H_{\gamma F} + H_{\beta})$. The precision of these calibrations are cited to be 82 K, 0.13 dex and 0.07 dex on respectively T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$. We identified 26 common F, G, and K stars and show the comparison in Fig. A.9 after clipping two T_{eff} outliers.

The first outlier, HD 219134 (K3V), was discussed in Sect. A.3. Our estimated temperature is 263 K cooler, but is consistent with the ELODIE internal determination. For the second, HD 61295 (F6II), our T_{eff} is 196 K warmer, but is consistent with the Luck & Wepfer (1995)'s photometric estimate. We adopt our original determinations.

A.10. Comparison with the Geneva-Copenhagen survey

The Geneva-Copenhagen radial velocity survey of the solar neighborhood (Nordström et al. 2004) has provided T_{eff} and $[\text{Fe}/\text{H}]$ for 16,682 nearby F and G dwarf stars from Strömgren photometry. The effective temperatures were determined from the reddening-corrected $b - y$, c_1 , and m_1 indices and the calibration of Alonso et al. (1996). Their resulting temperatures have a mean difference of only 3 K and a dispersion of 94 K compared to Barklem et al. (2002). They compared their metallicities with the homogeneous spectroscopic values from Edvardsson et al. (1993) and Chen et al. (2000). They found mean differences of 0.02

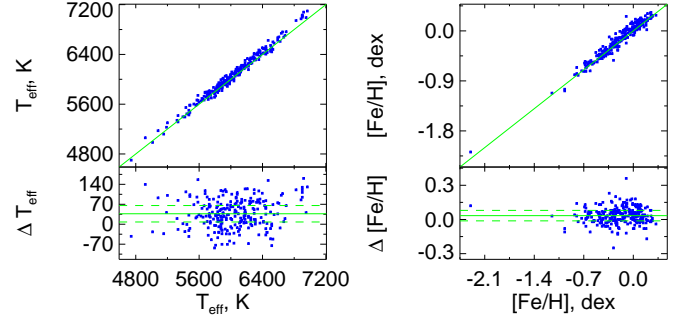


Fig. A.10. Comparison of the atmospheric parameters determined by us with those from Nordström et al. (2004). We plot 252 F, G, and K observations in common between the two data sets, 14 T_{eff} plus two metallicity outliers are not displayed. The axes are as in Fig. 8.

and 0.00 dex and dispersions of 0.08 and 0.11 dex, respectively.

We found 269 measurements for 266 stars in common and the corresponding comparisons are shown in Fig. A.10, after rejecting 15 T_{eff} outliers plus one metallicity outlier (two measurements). One of them, HD 72946, has been discussed in Sec. A.1.

For six of the outliers, HD 54322, 124244, 137510, 37088, 94280 and 165341, our estimated parameters are consistent with the Valdes' compilation. For HD 82210 our value, 5343 K, is close to McWilliam (1990) (see Sect. A.3). For HD 37394, our $T_{\text{eff}} = 5328$ K is 190 K hotter, and Perrin (1983) gives 5196 K from photometry. For HD 129132, a member of a triple system, though our determination is 200 K warmer, the quality of our fit is satisfactory. For HD 195633, we fitted $T_{\text{eff}} = 6102$ K, Nordström et al. (2004) give 5916 K, and Fulbright (2000) 6000 K from spectroscopy. For all these stars we adopt our measurements.

There is one $[\text{Fe}/\text{H}]$ outlier HD 22468 (K2:Vnk) with two measurements in Nordström et al. (2004): $[\text{Fe}/\text{H}] = -1.25$ dex and -1.52 dex. Our $[\text{Fe}/\text{H}] = -0.16$ dex is closer to the ELODIE internal determination, $[\text{Fe}/\text{H}] = -0.48$ dex, and in agreement with the ULYSS fit to the ELODIE spectrum: $[\text{Fe}/\text{H}] = -0.23$ dex ± 0.07 dex. We keep our determinations.

A.11. Comparison with Kovtyukh et al. (2006)

Kovtyukh et al. (2006) made precise temperature determinations of 215 F, G, and K giants by measuring the line depths and equivalent widths of a large number of spectral lines of low and high excitation potentials and establishing ~ 100 relations between T_{eff} and their ratios. This calibration of the line depth ratio method yielded a precision of 5 to 20 K.

We found 69 stars in common and the comparison of T_{eff} is shown in Fig. A.11. There is no significant outlier.

A.12. Comparison with Mishenina et al. (2006)

The atmospheric parameters of 177 clump giants of the Galactic disk were determined by Mishenina et al. (2006). The effective temperatures were estimated by the line depth ratio method calibrated by Kovtyukh et al. (2006,

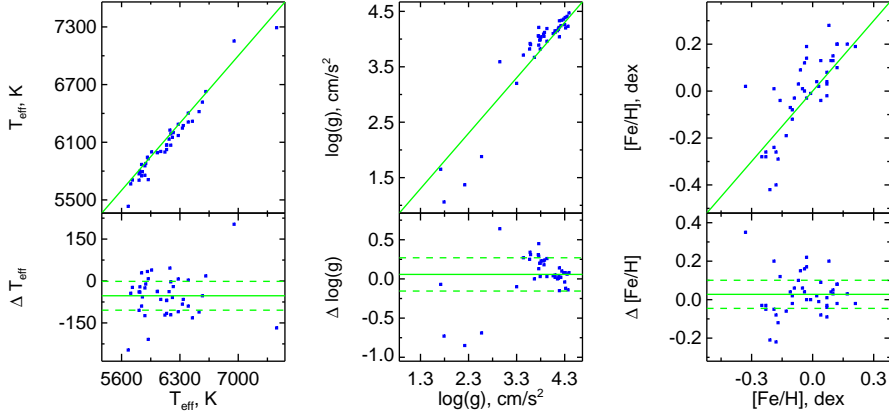


Fig. A.8. Comparison of the atmospheric parameters determined by us with those from Gray et al. (2001). We plot 42 F and G stars in common between the two data sets, four outliers are not displayed. The axes are as in Fig. 8.

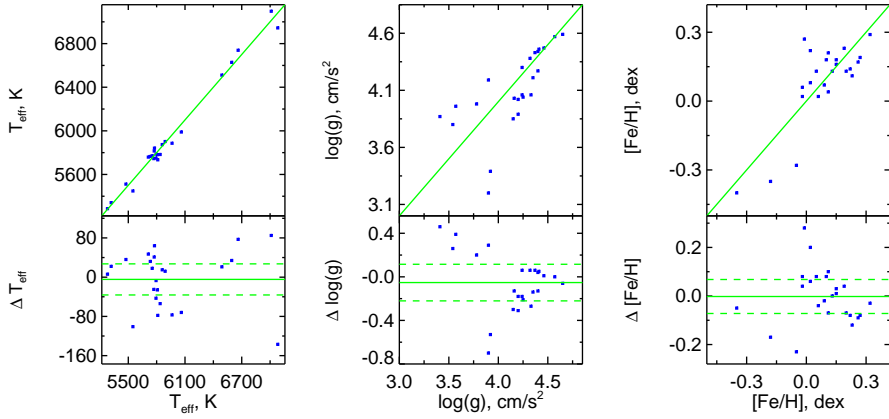


Fig. A.9. Comparison of the atmospheric parameters determined by us with those from Robinson et al. (2007). We plot 24 F, G, and K stars in common between the two data sets, two outliers are not displayed. The axes are as in Fig. 8.

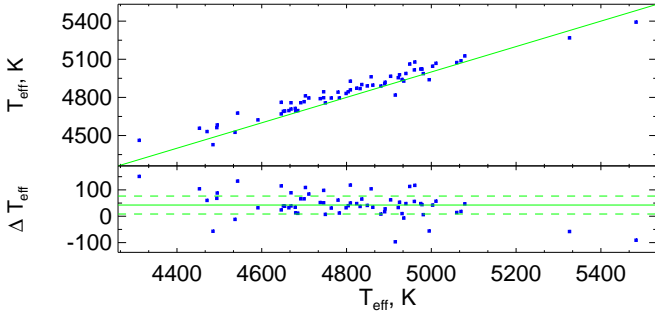


Fig. A.11. Comparison of the atmospheric parameters determined by us with those from Kovtyukh et al. (2006). We plot 64 G and K stars in common between the two data set, five outliers are not displayed. The axes are as in Fig. 8.

see above). The surface gravity was estimated using the iron ionization equilibrium and the wings of the Ca I triplet near 6100-6160 Å. The [Fe/H] was derived from Fe I lines. The internal precisions are 20 K, 0.2-0.3 dex and 0.1 dex on respectively T_{eff} , $\log g$ and [Fe/H].

We identified 48 stars in common and the comparison, excluding three T_{eff} outliers, is shown in Fig. A.12. These outliers were also detected in the comparison with Kovtyukh et al. (2006) and are discussed in Sect. A.11.

A.13. Comparison with Takeda et al. (2007)

We found 117 stars in common with Takeda et al. (2007), who estimated the atmospheric parameters of solar analogs from the analysis of R=70 000 spectra. The internal precisions of this series of measurements are 17 K, 0.04 and 0.02 dex on respectively T_{eff} , $\log g$ and [Fe/H]. The comparison is shown in Fig. A.13. Nine T_{eff} outliers were clipped from the statistics given in Table 4. For eight of them HD 121370, 99747, 98991, 151769, 137510, 128167, 15798, 4307, our parameter estimations are quite close to the Valdes adopted values. For HD 224930 our temperature (5427 K) agrees with that of Soubiran et al. (2008) (5413 K) and ELODIE (5446 K), while Takeda et al. (2007) give 5681 K and Fulbright (2000) 5275 K. We maintain our original measurements.

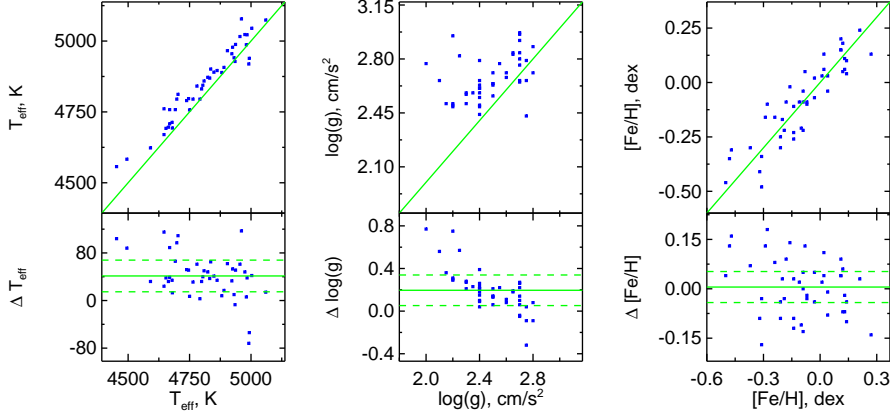


Fig. A.12. Comparison of the atmospheric parameters determined by us with those from Mishenina et al. (2006). We plot 45 G and K stars in common between the two data sets, three outliers are not displayed. The axes are as in Fig. 8.

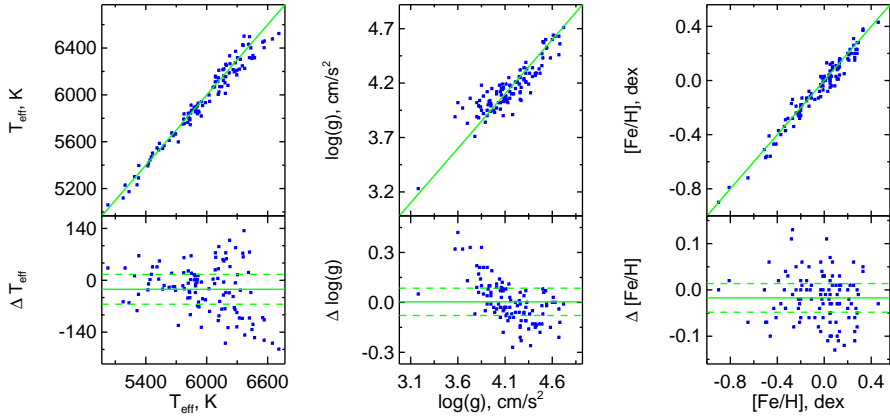


Fig. A.13. Comparison of the atmospheric parameters determined by us with those from Takeda et al. (2007). We plot 108 F, G, and K stars in common between the two data sets, nine outliers are not displayed. The axes are as in Fig. 8.

A.14. Comparison with Hekker & Meléndez (2007)

Hekker & Meléndez (2007) used high S/N spectra at $R=60\,000$ of 380 G and K giant stars to measure the atmospheric parameters. The effective temperatures, surface gravities, and metallicities are determined from the equivalent width of iron lines, by imposing excitation and ionization equilibria. They compared their stellar parameters with Ramírez & Meléndez (2005), an updated version of the Cayrel de Strobel et al. (2001) compilation, for 254 stars in common. They found their effective temperature and surface gravity are higher by 56 K and 0.15 dex, and with 84 K and 0.22 dex dispersion respectively. The dispersion of $[\text{Fe}/\text{H}]$ is 0.10 dex. They found their results to be consistent with Luck & Heiter (2007).

We compare the 132 stars in common after clipping five outliers (Fig. A.13). For HD 39118 (G8III+...), our $T_{\text{eff}} = 4927$ K is 377 K hotter while the ELODIE internal temperature is 5029 K, and the ULySS fit to the ELODIE spectrum gives 5000 K. For HD 184406 and 29139 our estimates are consistent with both the Valdes compilation and with the ELODIE internal determinations. The temperatures given by Hekker & Meléndez (2007) are ~ 240 K hotter. For HD 115004 and 57669, our temperatures are

~ 170 K hotter, but we have no reason to question our fit. In all cases we adopt our solutions.

A.15. Comparison with Luck & Heiter (2007)

Luck & Heiter (2007) present the parameters for 298 nearby G and K giants using spectroscopy and photometry. The external uncertainty of their temperatures is on the order of ~ 100 K. We compared the 113 stars found in common (Fig. A.15) and found a mean difference in temperature of -66 K (ULySS minus Luck & Heiter (2007); see Table 4).

There are a total of five T_{eff} outliers, HD 102328, 85503, 104979, 167768 and 126271, our temperatures are between 150-230 K lower. HD 85503 is already discussed in Sect. A.11. For HD 104979, our result (4818 K) agrees well with the ELODIE internal determination (4814 K) and with the Valdes compilation (4850 K), while Luck & Heiter (2007) give 4996 K.

A.16. Comparison with Sousa et al. (2008)

Sousa et al. (2008) give accurate stellar parameters for 451 stars using high-resolution spectra. We compared the 17

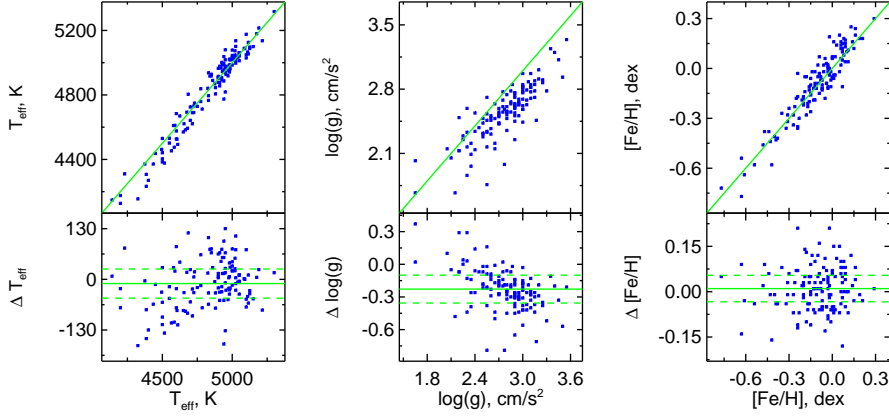


Fig. A.14. Comparison of the atmospheric parameters determined by us with those from Hekker & Meléndez (2007). We plot 127 G and K stars in common between the two data sets, five outliers are not displayed. The axes are as in Fig. 8.

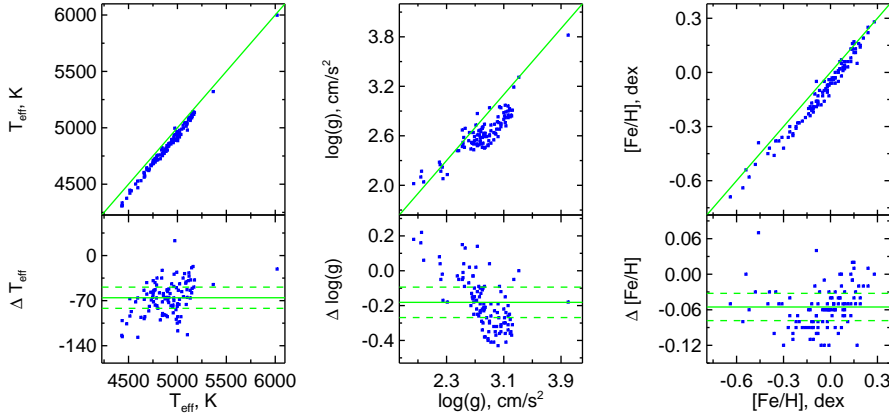


Fig. A.15. Comparison of the atmospheric parameters determined by us with those from Luck & Heiter (2007). We plot 108 G and K stars in common between the two data sets, five outliers are not displayed. The axes are as in Fig. 8.

common FGK observations on Fig. A.16 where 2 T_{eff} outliers have been clipped.

HD 19994 (F8V) was already discussed in Sec. A.16, and the other outlier is not significant.

Appendix B: External comparisons for OBA stars

In this appendix we present detailed comparisons between our measurements and four previous studies.

B.1. Comparison between ELODIE 3.2 absolute and internal parameters

The absolute and internal atmospheric parameters of ELODIE are described in Sect. 2.1. We stress that the present comparison is different from the one in Sect. 2.3, where we used ULySS to determine the atmospheric parameters of the ELODIE observations.

There are 293 O, B, and A type stars with valid internal determinations in ELODIE stellar library. The comparison between the absolute and internal values of the parameters are shown in Fig. B.1 after excluding 18 T_{eff} outliers and one metallicity outlier. The comparison statistics are listed in Table 5 without these 19 outliers.

The absolute parameters of almost all of these outliers were not available from spectroscopic analyses in the literature. The temperature were estimated from the B-V color (Tycho-2 catalog of Høg et al. 2000), assuming an empirical color-temperature relation for a main-sequence star; $\log g$ were converted from the V absolute magnitude from Hipparcos and T_{eff} , using a bolometric correction valid for a main-sequence star and an empirical mass-to-light relation. See Prugniel & Soubiran (2001) for more details.

We did not find any significant bias on the determination of the three atmospheric parameters, but the dispersions are higher than for the FGK stars. This is primarily because of the lack of accurate measurements for the reference stars.

In addition, the modeling of the atmosphere with the three fundamental parameters is an over-simplification, because the spread of other physical characteristics, which we neglected, induces a dispersion of our measurements. The modeling can probably be improved in the future, but the important point is that the present method apparently does not introduce major biases.

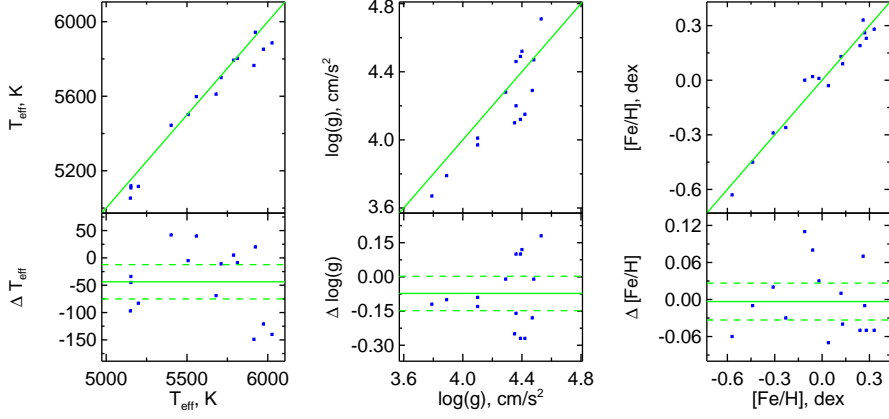


Fig. A.16. Comparison of the atmospheric parameters determined by us with those from Sousa et al. (2008). We plot 17 F, G, and K stars in common between the two data sets, two outliers are not displayed. The axes are as in Fig. 8.

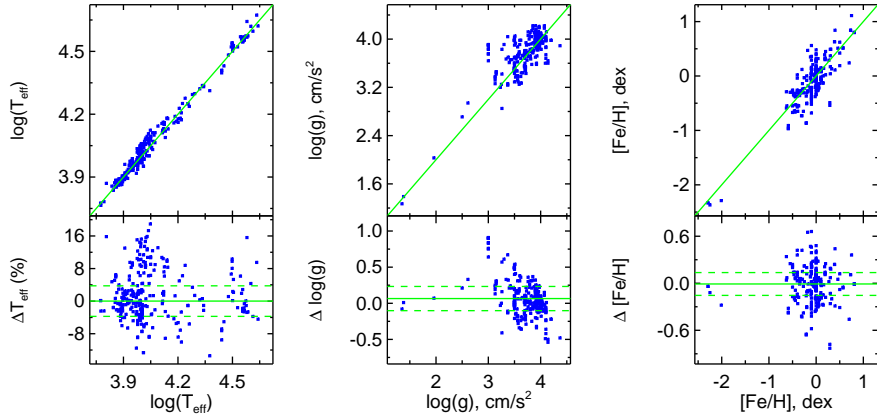


Fig. B.1. Comparison of the ELODIE 3.2 Absolute (A) and Internal (I) atmospheric parameters. We plot 274 O, B, and A type stars, 18 T_{eff} outliers plus one metallicity outlier are not displayed. The axes are similar as in Fig. 8, all the abscissas are the measurements of A. T_{eff} is in \log_{10} . *Upper* panels: the ordinates are from I; *Lower* panels: the ordinates are the difference I – A.

B.2. Comparison with ELODIE 3.2

There are 47 O, B, and A observations in common with ELODIE. The comparison with the ELODIE internal determinations is shown in Fig. B.2 after excluding six T_{eff} outliers.

For the first outlier, HD 212571 (B1Ve), though it is a Be type star, we could not see any emission lines in both its CFLIB and ELODIE observations, but the spectrum is quite rotationally broadened. Its ELODIE internal parameters are 20530 K, 3.29 dex, 0.01 dex, and we obtain 23278 K, 3.53 dex, -0.02 dex, which are close to the ELODIE absolute parameters, 23714 K, 3.50 dex and 0.00 dex. Fitting the ELODIE spectrum, we get 23031 K, 3.41 dex and -0.06 dex, in agreement with our measurements for CFLIB. We suppose that the discrepancy results from the different approach for modeling the effect of stellar rotation in our ULySS measurements and in the internal ELODIE measurement (see Sect. 2.3).

The second outlier, HD 5394 (B0IVpe), displays prominent H_{α} and H_{β} emission lines (rejected when performing the ULySS fit). There are two observations of this star in the ELODIE library, with determinations: [34097 K,

3.34 dex, 0.11 dex] and [39156 K, 3.22 dex, -1.56 dex]. Because of the emission lines, these spectra were not used to build the ELODIE interpolator. Our results [33939 K, 3.38 dex, 0.02 dex] are close to the former ELODIE internal values. The ULySS fit of these ELODIE spectra provides 33090 K, 3.41 dex and 0.05 dex, consistent with our measurements.

For the third outlier HD 206165 (B2Ib), the ELODIE internal determinations are 19685 K, 2.94 dex and -0.27 dex, while we get 22112 K, 3.09 dex and -0.12 dex. Gies & Lambert (1992) derived 19040 K, 2.61 dex and -0.33 dex comparing Strömgren de-reddened color indices and H_{γ} line profiles to line-blanketed atmosphere models (Kurucz 1979). The abundances were derived using LTE Kurucz models. They quote errors of 2-4% on T_{eff} and 0.1 dex on $\log g$. So the ELODIE internal solution is compatible with their measurements. The ULySS fit of the ELODIE spectrum gives 20569 K, 2.93 dex and -0.28 dex, also consistent with the ELODIE internal determinations. We adopt this latter solution rather than our fit of the CFLIB spectrum.

The fourth outlier is HD 86986 (A1V), a blue horizontal branch star (BHB). Our determinations, 8843 K, 4.28 dex

and -0.76 dex, are 676 K warmer than the ELODIE internal value. Kinman et al. (2000) and Behr (2003) give 7950 K and 7775 K respectively. The ELODIE interpolator is only weakly constrained in this region of the parameters' space, and we adopt the average of the two recent literature measurements.

For the fifth outlier, HD 176437 (B9III), the ELODIE internal parameters are 12230 K, 4.08 dex and 0.25 dex, and we find 11163 K, 4.06 dex and 0.15 dex. Balachandran et al. (1986) give $T_{\text{eff}}=10080$ K. The last outlier, HD 220825 (A0p...), is a CVn star that is discussed below in Sect. B.3. The ELODIE internal yield is 9683 K, 3.80 dex and 0.47 dex, while we find 10375 K, 3.78 dex and 0.74 dex. This is 692 K warmer and is consistent with Searle et al. (1966): 10286 K. For these two stars, we adopt our measurements.

B.3. Comparison with Valdes et al. (2004)

Of the 260 O, B, and A stars in CFLIB, the atmospheric parameters were compiled for only 86 stars by Valdes et al. (2004). The comparison between these values and our determinations is displayed in Fig. B.3 after excluding two temperature outliers. The 18 cases where the $[\text{Fe}/\text{H}]$ deviations between CFLIB and our measurements is greater than 0.7 dex are displayed in red (right panel), as well as the five $\log g$ outliers deviating by more than 0.8 dex (central panel). These five stars, HD 105262, 161817, 18296, 2857 and 86986, have also discrepant metallicities. All these cases are discussed below.

The statistics, with and without the outliers, are reported in Table 5.

For HD 4727 (B5) and HD 39283 (A2V), the large discrepancy on T_{eff} is due to confusions on the designations in the Valdes compilation. Our measurements are consistent with the spectral classification.

Four stars are classified CVn, chemically peculiar stars, HD 18296, 34797, 72968 and 220825, for which Valdes adopted low metallicities taken from old curve-of-growth references. More recently, Alonso et al. (2003) studied HD 34797 and found a significant over-abundance. This supports our solution ($[\text{Fe}/\text{H}] = 0.62$ dex). For HD 220825, Glagolevskij et al. (2006) give $[\text{Fe}/\text{H}] = 0.69$ dex, consistent with our result and with the measurements on the ELODIE spectrum. We did not find any detailed analysis on the metallicity of the two last CVn, HD 18296 and 72968. Leone & Catanzaro (1998) and Takeda et al. (2009) studied another supposedly CVn star, HD 79469, and re-qualified it as a 'normal' star, although we find a significant over-abundance. These comparisons tend to grant confidence in the ability of our method to retrieve the metallicity of the chemically peculiar stars, and we therefore adopt our solutions.

Among the $[\text{Fe}/\text{H}]$ outliers are five BHB stars HD 2857, 74721, 86986, 109995 and 161817, and one post-AGB HD 105262. Their atmospheric parameters determined by Kinman et al. (2000) and Behr (2003) are consistent with the previous measurements adopted in Valdes, but more precise and reliable. As pointed out in Sect. B.2, the ELODIE interpolator is not performing well in this region. For these six stars, we obtained a mean $[\text{Fe}/\text{H}]$ of -0.46 dex, while the average of the aforementioned references is -1.64 dex. We adopt averages of these references rather than our own measurements.

For HD 27295, we give $[\text{Fe}/\text{H}] = -0.02$ dex and Valdes take -0.75 dex, from Smith & Dworetzky (1993, analysis of IUE spectra). Behr (2003) obtained recently $[\text{Fe}/\text{H}] = -0.95 \pm 0.06$ and $[\text{Mg}/\text{H}] = -0.46 \pm 0.05$ for this main sequence chemically peculiar star. We adopt the Behr (2003) solution.

For HD 183324, Valdes quotes -1.50 dex from Sturenburg (1993). ULYSS returned a value of $[\text{Fe}/\text{H}] = -0.39$ dex. Recently, Saffe et al. (2008) determined $[\text{Fe}/\text{H}] = -1.22 \pm 0.30$ dex, and we adopt their solution.

The metallicity reported in Valdes for HD 60179 (Smith 1974) appears to be erroneous (transcription or conversion error). The star has a solar metallicity, and there is no disagreement with our estimate. For HD 174959, Heacox (1979) gives $[\text{Fe}/\text{H}] = -0.8$ (adopted by Valdes), but also $[\text{Mg}/\text{H}] = -0.3$ and a solar abundance of Ni. So, the low $[\text{Fe}/\text{H}]$ may not be real. There is no other detailed analysis of this star. For HD 155763, we find $[\text{Fe}/\text{H}] = 0.13$ dex, while Valdes report -0.95 dex. More recently, Adelman (1998) provides $T_{\text{eff}} = 12500$, $\log g = 3.50$ and $[\text{Fe}/\text{H}] = -0.11$, from $R \sim 50\,000$ optical spectra. For HD 175640, a typical HgMn star, we give $[\text{Fe}/\text{H}] = 0.18$ dex and Valdes adopt -0.55 dex from Smith & Dworetzky (1993). Castelli & Hubrig (2004) give $[\text{Fe}/\text{H}] = -0.02 \pm 0.10$, from high quality, $R \sim 100\,000$, spectra. For HD 58343 (B2Vne), we estimate $[\text{Fe}/\text{H}] = 0.01$ dex, while Valdes quotes 0.89 dex from Kodaira & Scholz (1970). Frémat et al. (2005) determined the temperature and the surface gravity, confirming that the temperature used by Kodaira & Scholz (1970) is too hot. This may be an explanation for their high metallicity. For these five stars, we adopt our original measurements.

We conclude that the trends seen in Fig. B.3 are partly caused by an over-estimate of the metallicity of the metal-poor evolved stars by our analysis, and partly by inaccurate measurements in the literature.

B.4. Comparison with Cenarro et al. (2007)

Cenarro et al. (2007) compiled and homogenized the atmospheric parameters for MILES (Sánchez-Blázquez et al. 2006). This library contains 985 stars, spanning a large range in atmospheric parameters. There are 38 common B and A type stars between CFLIB and MILES, and we show the comparison in Fig. B.4 after excluding one T_{eff} outlier. Several $\log g$ and $[\text{Fe}/\text{H}]$ outliers are shown by red crosses. The comparison statistics listed in Table 5 excludes the one T_{eff} outlier and all the $\log g$ and $[\text{Fe}/\text{H}]$ outliers.

The T_{eff} outlier is HD 89822, for which Valdes adopts 10500 K from Smith & Dworetzky (1993), consistent with our estimates of 10286 K. For this star, Cenarro et al. (2007) give an erroneous 5538 K.

Besides this detected T_{eff} outlier, a couple of other cases catch the attention in Fig. B.4 (left panel). The most prominent is HD 105262 (B9). Cenarro et al. (2007) and Valdes adopted the same set of parameters, and the star is already discussed in Sect. B.3. The second one is HD 206165, already discussed in Sect. B.2.

We find also nine $[\text{Fe}/\text{H}]$ outliers displayed in red in Fig. B.4 (right panel). These are HD 2857, 27295, 74721, 105262, 109995, 155763, 174959, 183324, and 220825. Finally, there are three $\log g$ cases displayed in red in

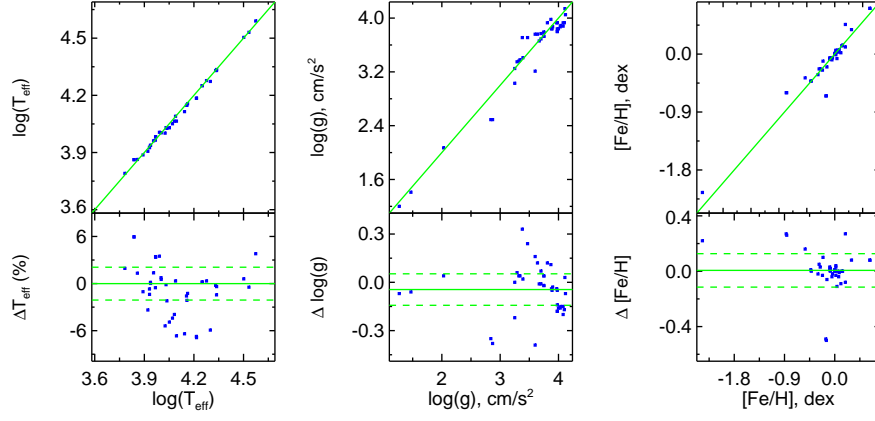


Fig. B.2. Comparison of the atmospheric parameters determined by us with those from ELODIE 3.2. We plot 41 O, B, and A type stars in common between the two data sets, six outliers are not displayed. The axes are as in Fig. 8, besides T_{eff} is in log10.

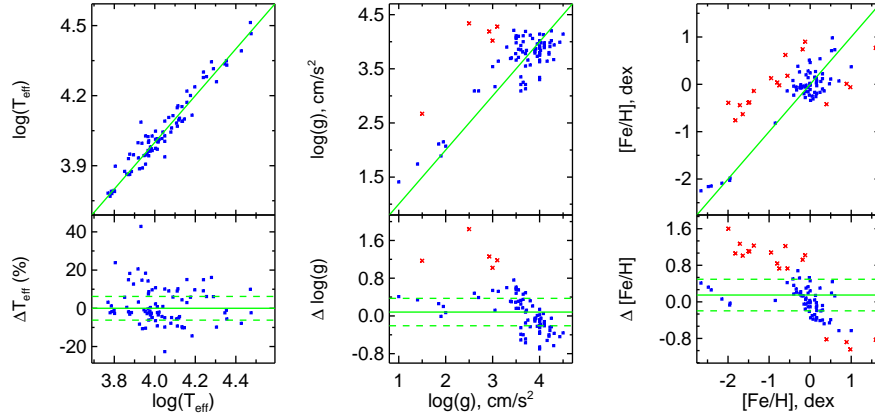


Fig. B.3. Comparison of the atmospheric parameters determined by us with those from Valdes et al. (2004). We plot 84 O, B, and A type stars in common between the two data sets. Two T_{eff} outliers are not displayed. Five $\log g$ and 18 $[\text{Fe}/\text{H}]$ discrepant measurements are shown as red crosses and are discussed in the text. The axes are as in Fig. 8, besides T_{eff} is in log10.

Fig. B.4 (middle panel): HD 2857, 86986, and 105262. All these stars are already discussed in Sect. B.3.

As for Fig. B.3, the trends seen in Fig. B.4 result from a combination between wrong measurements reported in the literature and over-estimated metallicities for the metal-poor evolved stars.

Appendix C: External comparisons for M stars

In this appendix we present detailed comparisons between our measurements and four previous studies.

C.1. Comparison with ELODIE 3.2

The first comparison is with the ELODIE (version 3.2) internal parameters. There are six M and one S type common observations for five stars between the ELODIE and CFLIB library. The comparison is shown in Fig. C.1.

The most T_{eff} departing star is HD 175588. ELODIE internal temperature is 3426 K, while we give 3333 K.

C.2. Comparison with Valdes et al. (2004)

The comparison with the parameters compiled in Valdes et al. (2004) for 17 M and 1 S type stars is shown in Fig. C.2 after excluding two T_{eff} outliers. For the first, G_103-68 (M3), Valdes quote a temperature of 5511 K from Carney et al. (1994) based on photometry, while we give 3477 K, which corresponds better to the spectral type. For the other star G_176-11 (M2V), Valdes report 3544 K from Worthey et al. (1994), while we determine 3948 K, 5.13 dex and -1.43 dex for T_{eff} , $\log g$ and $[\text{Fe}/\text{H}]$ respectively. Soubiran et al. (2008) give 3687 K, 4.90 dex and -0.43 dex. We adopt our solution.

C.3. Comparison with Cenarro et al. (2007)

We found ten M type stars in common with Cenarro et al. (2007), but three of them lack $\log g$ and half of them miss $[\text{Fe}/\text{H}]$ values in Cenarro et al. (2007). Therefore, we only compare the effective temperatures between our determinations and this reference, the result is shown in Fig. C.3. The most deviation with 249 K cooler is star HD 123657,

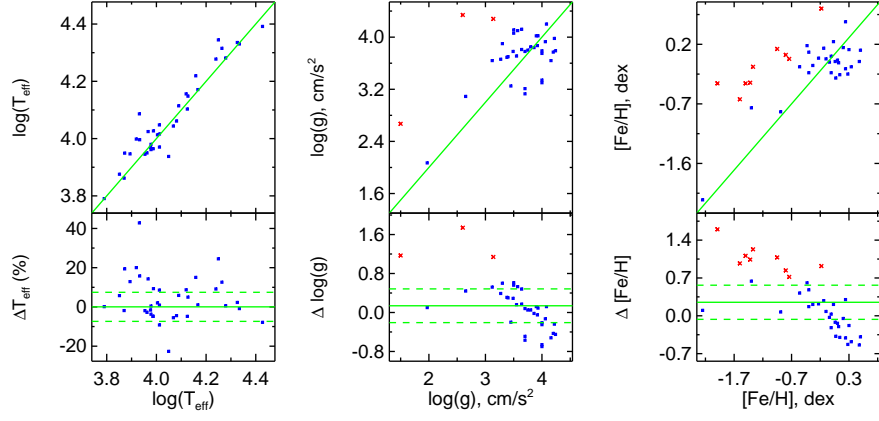


Fig. B.4. Comparison of the atmospheric parameters determined by us with those from Cenarro et al. (2007). We plot 37 B and A type stars in common between the two data sets. One T_{eff} outlier is not displayed. Three $\log g$ and nine $[\text{Fe}/\text{H}]$ deviating measurements are displayed as red crosses and discussed in the text. The axes are as in Fig. 8, besides T_{eff} is in $\log 10$.

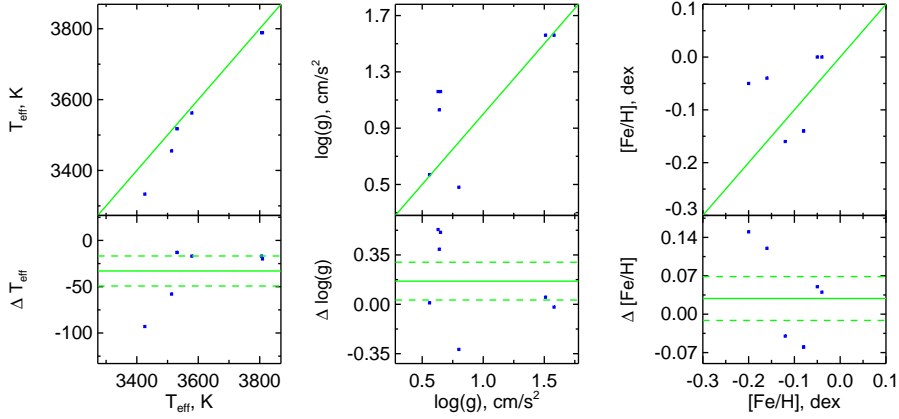


Fig. C.1. Comparison of the atmospheric parameters determined by us with those from ELODIE 3.2 for the seven M type stars in common. The axes are as in Fig. 8.

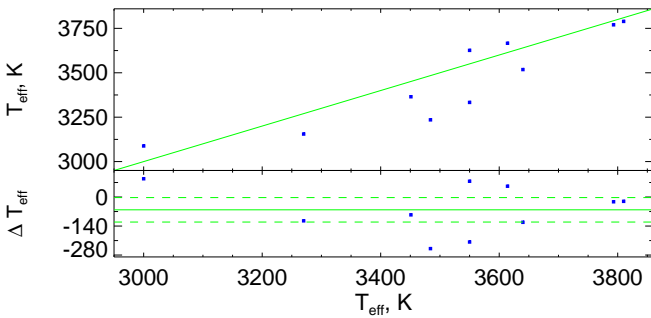


Fig. C.3. Comparison of the atmospheric parameters determined by ULySS with those from Cenarro et al. (2007) for 10 M type stars in common. The axes are as in Fig. 8.

Cenarro et al. (2007) give 3484 K, $\log g = 0.85$ dex, ULySS fitted with 3235 K, 0.48 dex and -0.20 dex. CFLIB adopt 3452 K, 0.90 dex and -0.03 dex Smith & Lambert (1985).

C.4. Comparison with Cayrel de Strobel et al. (2001)

Cayrel de Strobel et al. (2001) present a compilation of published atmospheric parameters obtained from various sources and hence their data are inhomogeneous. The comparison between their parameters and ours is shown in Fig. C.4. We identified 11 M and 1 S type stars in common, for a total of 18 measurements in this compilation.

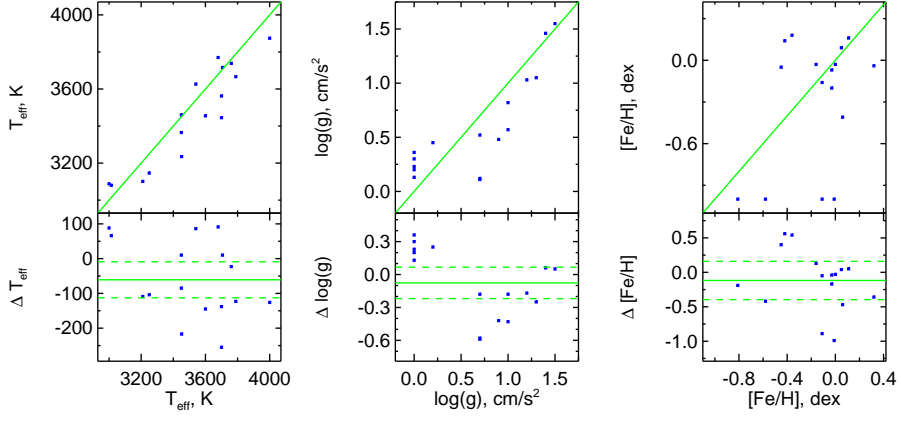


Fig. C.2. Comparison of the atmospheric parameters determined by us with those from Valdes et al. (2004). We plot 16 M type stars in common between the two data sets, two outliers are not displayed. The axes are as in Fig. 8.

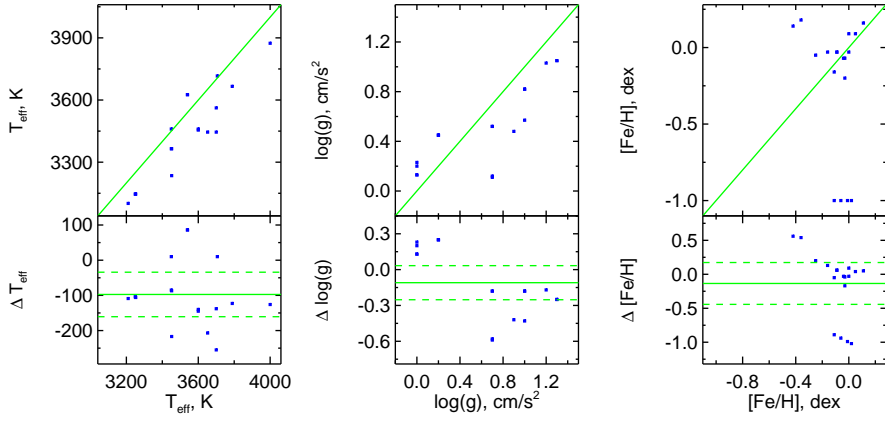


Fig. C.4. Comparison of the atmospheric parameters determined by ULySS with those from Cayrel de Strobel et al. (2001). We plot 18 M type observations in common between the two data sets, actually 12 stars. The axes are as in Fig. 8.

Table 2. Adopted atmospheric parameters for the 1273 CFLIB stars

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD000249	K1IV	4757	± 28	2.88	± 0.09	-0.29	± 0.06	0
HD000358	B8IVmnp...	12307	± 180	4.14	± 0.07	0.38	± 0.09	0
HD000400	F8IV	6215	± 45	4.18	± 0.07	-0.24	± 0.07	0
HD000417	K0III	4858	± 33	2.45	± 0.10	-0.30	± 0.08	0
HD000693	F5V	6221	± 41	4.14	± 0.06	-0.34	± 0.06	0
HD000886	B2IV	21397	± 382	3.84	± 0.04	-0.06	± 0.03	0
HD001227	G8II-III	5068	± 41	2.81	± 0.10	0.00	± 0.09	0
HD001406	K3III	4349	± 20	2.61	± 0.09	-0.13	± 0.06	0
HD001522	K1.5III	4530	± 25	2.25	± 0.09	0.14	± 0.05	0
HD001918	G9III	4896	± 33	2.47	± 0.10	-0.42	± 0.08	0
HD001967	Se...	3630	± 41	0.38	± 0.52	-1.00	± 0.00	0
HD002126	K0III-IV	4775	± 28	2.79	± 0.09	-0.34	± 0.06	0
HD002454	F6Vawvar	6492	± 42	4.12	± 0.05	-0.29	± 0.06	0
HD002628	A7III	7305	± 56	3.98	± 0.06	-0.07	± 0.06	0
HD002665	G5IIIw	4942	± 62	2.12	± 0.20	-2.03	± 0.14	0
HD002796	Fw	4879	± 85	1.82	± 0.26	-2.25	± 0.19	0
HD002857	A2	7776		3.19		-1.70		2
HD002952	K0III	4800	± 35	2.61	± 0.11	-0.09	± 0.08	0
HD003268	F7V	6225	± 44	4.11	± 0.07	-0.16	± 0.06	0
HD003360	B2IV	21652	± 505	3.87	± 0.05	-0.08	± 0.03	0
HD003454	F5	6186	± 64	4.30	± 0.09	-0.56	± 0.11	0
HD003546	G8III	4979	± 43	2.46	± 0.12	-0.64	± 0.11	0
HD003817	G8III	5101	± 32	2.64	± 0.08	-0.15	± 0.07	0
HD004128	K0III	4906	± 27	2.63	± 0.07	0.07	± 0.06	0
HD004188	K0III	4859	± 24	2.66	± 0.07	-0.04	± 0.05	0
HD004306	G0	4915	± 73	2.01	± 0.22	-2.55	± 0.15	0
HD004307	G2V	5803	± 32	4.01	± 0.06	-0.26	± 0.05	0
HD004395	G5	5448	± 51	3.39	± 0.12	-0.28	± 0.10	0
HD004502	K1IIe	4632	± 43	2.31	± 0.15	-0.15	± 0.10	0
HD004614	G0V	5928	± 29	4.33	± 0.05	-0.28	± 0.05	0
HD004727	B5V+...	15989	± 302	3.80	± 0.07	-0.05	± 0.07	0
HD004744	G8IV	4643	± 22	2.46	± 0.08	-0.66	± 0.05	0
HD004813	F7IV-V	6197	± 33	4.29	± 0.05	-0.13	± 0.05	0
HD004817	K3Iab:	4062	± 20	0.71	± 0.12	0.14	± 0.06	0
HD004963	K1III	4661	± 22	2.32	± 0.08	-0.51	± 0.05	0
HD005007	K1III	4546	± 23	2.64	± 0.09	0.04	± 0.05	0
HD005015	F8V	6070	± 32	4.06	± 0.06	0.04	± 0.04	0
HD005234	K2III	4457	± 24	2.18	± 0.10	-0.08	± 0.06	0
HD005286	K1IV	4844	± 29	3.47	± 0.07	0.15	± 0.06	0
HD005394	B0IVe	33939	± 1090	3.38	± 0.06	0.02	± 0.04	0
HD005395	G8IIIb	4890	± 26	2.51	± 0.08	-0.41	± 0.06	0
HD005516	G8III	5039	± 30	2.88	± 0.08	0.05	± 0.06	0
HD005750	F5	6330	± 47	4.21	± 0.06	-0.42	± 0.07	0
HD005848	K2II-III	4500	± 27	2.28	± 0.10	0.12	± 0.06	0
HD005916	G8III-IV	5015	± 40	2.48	± 0.11	-0.71	± 0.10	0
HD006186	G9III	4878	± 33	2.43	± 0.10	-0.35	± 0.08	0
HD006203	K0III	4570	± 24	2.31	± 0.09	-0.34	± 0.06	0
HD006397	F4II-III	6580	± 63	4.03	± 0.09	-0.10	± 0.08	0
HD006461	G3V	5106	± 48	2.45	± 0.13	-0.88	± 0.12	0
HD006482	K0III	4790	± 30	2.79	± 0.09	-0.09	± 0.07	0
HD006497	K2III	4450	± 21	2.75	± 0.09	0.02	± 0.05	0
HD006582	G5Vb	5397	± 35	4.53	± 0.07	-0.79	± 0.08	0
HD006734	K0IV	4985	± 36	3.40	± 0.10	-0.53	± 0.08	0
HD006763	F0III-IV	6972	± 45	4.10	± 0.05	-0.11	± 0.06	0
HD006805	K1.5III	4576	± 20	2.62	± 0.07	0.10	± 0.04	0
HD006833	G9III	4608	± 32	1.92	± 0.12	-0.72	± 0.08	0
HD006834	F2	6416	± 48	4.23	± 0.06	-0.61	± 0.08	0
HD006840	G0	6004	± 52	4.01	± 0.10	-0.33	± 0.08	0
HD006920	F8V	5944	± 43	3.71	± 0.09	-0.04	± 0.07	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD007087	G8.5IIIa	4918	± 31	2.34	± 0.08	-0.10	± 0.07	0
HD007439	F5V	6422	± 46	4.15	± 0.06	-0.29	± 0.06	0
HD007476	F5V	6501	± 40	4.06	± 0.05	-0.17	± 0.05	0
HD008207	K0III	4757	± 26	2.66	± 0.08	0.13	± 0.06	0
HD008491	K0III	4802	± 27	2.70	± 0.08	0.05	± 0.06	0
HD008512	K0III	4729	± 28	2.58	± 0.09	-0.12	± 0.06	0
HD008705	K2III	4333	± 22	2.36	± 0.11	-0.23	± 0.06	0
HD008724	G5	4754	± 62	1.66	± 0.21	-1.68	± 0.16	0
HD008890	F7:Ib-IIvar	6192	± 50	1.40	± 0.09	0.13	± 0.08	0
HD008949	K1III	4700	± 29	2.67	± 0.09	0.13	± 0.06	0
HD009057	G9III	4967	± 30	2.74	± 0.08	0.06	± 0.06	0
HD009269	K0IIIvar	4779	± 31	2.55	± 0.10	-0.22	± 0.07	0
HD009270	G7IIa	5006	± 34	2.26	± 0.08	-0.06	± 0.08	0
HD009408	G9IIIb	4844	± 31	2.51	± 0.09	-0.30	± 0.07	0
HD009562	G2IV	5819	± 45	3.91	± 0.09	0.17	± 0.07	0
HD009826	F8V	6151	± 40	4.10	± 0.07	0.08	± 0.05	0
HD009856	K1III	4426	± 24	2.08	± 0.10	-0.11	± 0.06	0
HD009927	K3III	4371	± 21	2.29	± 0.10	0.12	± 0.05	0
HD010307	G1.5V	5881	± 49	4.29	± 0.09	0.03	± 0.08	0
HD010362	B7II	14902	± 368	3.31	± 0.12	0.32	± 0.12	0
HD010476	K1V	5229	± 33	4.58	± 0.06	0.02	± 0.06	0
HD010486	K2IV	4896	± 33	3.39	± 0.08	0.36	± 0.06	0
HD010700	G8V	5394	± 34	4.56	± 0.07	-0.47	± 0.07	0
HD010761	G8III	4997	± 35	2.54	± 0.09	-0.06	± 0.08	0
HD010780	K0V	5417	± 37	4.63	± 0.07	0.11	± 0.07	0
HD010975	K0III	4889	± 31	2.51	± 0.09	-0.22	± 0.07	0
HD011007	F8V	5971	± 44	4.08	± 0.08	-0.22	± 0.07	0
HD011503	A1p...	10990	± 241	3.70	± 0.21	0.43	± 0.14	0
HD011592	F5V	6328	± 47	4.21	± 0.06	-0.34	± 0.07	0
HD011636	A5V	8061	± 43	3.88	± 0.04	0.07	± 0.04	0
HD011749	K0III	4713	± 30	2.44	± 0.10	-0.21	± 0.07	0
HD012303	B8III	12230	± 157	4.19	± 0.05	0.30	± 0.08	0
HD012339	G8III	5022	± 27	2.51	± 0.07	-0.06	± 0.06	0
HD012533	K3IIb...	4319	± 18	1.50	± 0.08	0.04	± 0.05	0
HD012929	K2III	4527	± 19	2.42	± 0.07	-0.19	± 0.04	0
HD012953	A1Iae	10766	± 185	1.65	± 0.05	0.37	± 0.11	0
HD013475	B9V+...	5122	± 74	2.65	± 0.20	-0.31	± 0.17	0
HD013530	G8III:var	4863	± 28	2.72	± 0.09	-0.57	± 0.06	0
HD013555	F5V	6432	± 26	4.07	± 0.04	-0.19	± 0.04	0
HD013611	G8Iab:	5101	± 30	2.34	± 0.08	-0.21	± 0.07	0
HD013974	G0.5V	5711	± 37	4.39	± 0.07	-0.42	± 0.07	0
HD014214	G0.5IV	5975	± 105	4.11	± 0.23	0.03	± 0.21	0
HD014489	A2Ia	10650	± 136	1.74	± 0.04	0.26	± 0.08	0
HD014625	G8III	4836	± 30	2.84	± 0.08	0.23	± 0.06	0
HD014626	K0	4630	± 26	2.73	± 0.09	-0.19	± 0.06	0
HD014770	G8III	5016	± 28	2.55	± 0.07	-0.02	± 0.06	0
HD014938	F5	6116	± 94	4.18	± 0.16	-0.35	± 0.15	0
HD015318	B9III	10055	± 158	3.73	± 0.11	-0.43	± 0.11	0
HD015335	G0V	5912	± 33	4.02	± 0.06	-0.18	± 0.05	0
HD015596	G5III-IV	4853	± 23	2.85	± 0.07	-0.65	± 0.05	0
HD015798	F5V	6470	± 47	4.07	± 0.06	-0.15	± 0.06	0
HD015920	G8III	5119	± 29	2.84	± 0.07	-0.08	± 0.06	0
HD016458	G8p...	4484	± 17	1.57	± 0.06	-0.53	± 0.04	1
HD016673	F6V	6219	± 46	4.29	± 0.07	-0.05	± 0.06	0
HD016895	F7V	6247	± 35	4.21	± 0.06	-0.04	± 0.05	0
HD017081	B7IV	12678	± 164	4.12	± 0.05	0.24	± 0.07	0
HD017361	K1.5III	4670	± 20	2.64	± 0.07	0.05	± 0.04	0
HD017378	A5Ia	8473	± 43	1.20	± 0.03	0.05	± 0.06	0
HD017463	F5Ib...	6919	± 50	3.16	± 0.08	0.31	± 0.05	0
HD017506	K3Ib...	4200	± 73	1.03	± 0.31	0.08	± 0.17	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD017548	F8	5990	± 27	4.24	± 0.05	-0.59	± 0.05	0
HD017925	K1V	5174	± 25	4.63	± 0.05	0.16	± 0.05	0
HD018296	B9p...	12326	± 197	4.02	± 0.11	0.90	± 0.08	0
HD018322	K1III	4642	± 20	2.58	± 0.07	-0.12	± 0.04	0
HD018449	K2III	4403	± 22	2.21	± 0.10	-0.12	± 0.06	0
HD018474	G5:III...	5038	± 49	2.59	± 0.14	-0.28	± 0.13	0
HD018768	F8	5805	± 46	3.89	± 0.09	-0.54	± 0.08	0
HD018778	A7III-IV	7763	± 68	3.89	± 0.06	0.06	± 0.06	0
HD019476	K0III	4978	± 25	2.97	± 0.06	0.14	± 0.05	0
HD019510	F0.5	6108	± 55	3.91	± 0.09	-2.13	± 0.13	0
HD019656	K0III	4684	± 21	2.33	± 0.07	-0.05	± 0.05	0
HD019787	K2III	4869	± 24	2.79	± 0.07	0.10	± 0.05	0
HD019994	F8V	6081	± 29	4.05	± 0.05	0.15	± 0.04	0
HD020084	G3IIp+...	5006	± 39	2.22	± 0.11	-0.68	± 0.10	0
HD020123	G5Iab:	5268	± 29	1.59	± 0.06	-0.11	± 0.07	0
HD020468	K2II	4387	± 25	1.39	± 0.08	0.04	± 0.06	0
HD020618	G6IV	5093	± 26	3.14	± 0.07	-0.25	± 0.06	0
HD020797	M0Iab:	3918	± 14	0.48	± 0.08	0.17	± 0.04	0
HD020893	K3III	4379	± 22	2.29	± 0.10	0.09	± 0.05	0
HD020902	F5Iab:	6490	± 13	1.74	± 0.03	0.14	± 0.02	1
HD022049	K2V	5119	± 26	4.71	± 0.05	0.00	± 0.05	0
HD022211	G0	6018	± 49	3.42	± 0.11	0.20	± 0.07	0
HD022468	K2:Vnk	4748	± 50	3.42	± 0.14	-0.16	± 0.10	0
HD022484	F9IV-V	5999	± 27	4.09	± 0.05	-0.08	± 0.04	0
HD023183	G8III	4866	± 25	2.51	± 0.07	-0.28	± 0.06	0
HD023249	K0IV	5053	± 25	3.79	± 0.06	0.09	± 0.05	0
HD023841	K1III	4338	± 19	2.23	± 0.09	-0.56	± 0.06	0
HD024398	B1Iab:	24163	±2079	3.27	± 0.12	-0.08	± 0.07	0
HD024421	F5	6117	± 48	4.17	± 0.08	-0.35	± 0.08	0
HD024760	B0.5V+...	26405	±1549	3.85	± 0.13	-0.09	± 0.10	0
HD025173	F8V	6018	± 36	4.07	± 0.06	-0.55	± 0.06	0
HD025291	F0II	7761		2.49		0.14		4
HD025329	K1V...	4840		4.85		-1.68		2
HD025457	F5V	6228	± 44	4.29	± 0.07	0.04	± 0.06	0
HD025604	K0III	4795	± 21	2.65	± 0.06	0.06	± 0.05	0
HD025621	F6IV	6251	± 29	3.98	± 0.05	0.05	± 0.04	0
HD025642	A0IV _n	10585	± 166	4.05	± 0.07	0.01	± 0.10	0
HD025940	B3Ve	16827	± 427	3.94	± 0.08	-0.04	± 0.08	0
HD025975	K1III	4986	± 23	3.47	± 0.06	0.05	± 0.05	0
HD026297	G5/G6IV _w	4468	± 25	1.01	± 0.09	-1.82	± 0.07	0
HD026574	F2II-III	7132	± 42	3.70	± 0.06	0.21	± 0.05	0
HD026965	K1V	5108	± 26	4.49	± 0.05	-0.29	± 0.05	0
HD027022	G5IIb	5321	± 29	2.91	± 0.07	-0.05	± 0.06	0
HD027295	B9IV	11956		3.92		-0.95		2
HD027348	G8III	5045	± 24	2.88	± 0.06	0.04	± 0.05	0
HD027371	K0III	5016	± 25	2.84	± 0.06	0.15	± 0.05	0
HD027382	K1III	4501	± 19	2.28	± 0.07	-0.36	± 0.05	0
HD027697	K0III	5023	± 26	2.83	± 0.07	0.15	± 0.06	0
HD027971	K1III	4979	± 25	2.90	± 0.06	0.10	± 0.05	0
HD028099	G2V	5815	± 31	4.47	± 0.06	0.21	± 0.05	0
HD028100	G7III _a	4986	± 25	2.38	± 0.07	-0.17	± 0.06	0
HD028292	K2III	4557	± 19	2.66	± 0.07	-0.09	± 0.04	0
HD028305	G9.5III	4978	± 27	2.77	± 0.07	0.20	± 0.06	0
HD028307	K0III _b	5078	± 28	2.97	± 0.07	0.18	± 0.06	0
HD028527	A6IV	7757	± 58	3.85	± 0.06	0.13	± 0.05	0
HD028978	A2Vs	8910	± 83	3.13	± 0.09	-0.26	± 0.08	0
HD029139	K5III	3863	± 8	1.73	± 0.10	-0.04	± 0.04	0
HD029574	G8/K0III _w ...	4306	± 34	0.58	± 0.12	-1.90	± 0.07	0
HD029613	K0III	4682	± 21	2.78	± 0.07	-0.24	± 0.05	0
HD029645	G0V	5989	± 32	4.03	± 0.06	0.11	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD029763	B3V	10073	± 198	2.60	± 0.07	-0.51	± 0.16	0
HD030562	F8V	5839	± 28	4.03	± 0.06	0.20	± 0.04	0
HD030614	O9.5Iae	32591	± 806	3.17	± 0.04	-0.10	± 0.05	0
HD030652	F6V	6419	± 29	4.20	± 0.04	-0.02	± 0.04	0
HD030739	A1Vn	9457	± 128	4.00	± 0.05	-0.20	± 0.10	0
HD030743	F3/F5V	6372	± 30	4.18	± 0.04	-0.41	± 0.04	0
HD030812	K1III	4746	± 26	2.58	± 0.08	-0.08	± 0.06	0
HD030814	K0III	4926	± 24	2.75	± 0.07	0.03	± 0.05	0
HD030834	K3III	4223	± 18	1.63	± 0.10	-0.27	± 0.05	0
HD031295	A0V	8817	± 54	4.20	± 0.05	-0.82	± 0.10	0
HD031421	K2IIIb	4498	± 20	2.36	± 0.08	-0.25	± 0.05	0
HD031996	CIIe...	3995	± 175	5.38	± 0.55	-2.25	± 0.72	0
HD032147	K3V	4617	± 21	4.53	± 0.05	0.17	± 0.04	0
HD032356	K5II	4111	± 13	2.06	± 0.10	-0.30	± 0.05	0
HD032736	CII...	4152	± 197	2.18	± 1.61	-1.52	± 0.90	0
HD032923	G4V	5674	± 27	4.00	± 0.06	-0.22	± 0.05	0
HD033111	A3III	8002	± 99	3.78	± 0.12	-0.20	± 0.12	0
HD033256	F2V	6406	± 35	4.13	± 0.05	-0.28	± 0.05	0
HD033276	F2IV	7188	± 36	3.75	± 0.05	0.21	± 0.04	0
HD033608	F5V	6428	± 34	4.08	± 0.05	0.18	± 0.04	0
HD033751	K0	4936	± 33	2.85	± 0.09	0.12	± 0.07	0
HD033904	B9IV:...	12088	± 160	4.06	± 0.06	0.28	± 0.07	0
HD033959	A9IV...	7500	± 52	3.86	± 0.05	-0.02	± 0.05	0
HD034255	K4Iab:	4196	± 18	1.14	± 0.09	-0.01	± 0.05	0
HD034334	K2.5IIIb	4214	± 19	2.15	± 0.11	-0.43	± 0.07	0
HD034411	G1.5IV-V	5874	± 27	4.21	± 0.05	0.08	± 0.04	0
HD034578	A5II	8570	± 59	2.11	± 0.04	-0.19	± 0.05	0
HD034797	B8/B9IV:	12580	± 172	4.14	± 0.07	0.62	± 0.08	0
HD034816	B0.5IV	29190	± 960	3.91	± 0.07	-0.06	± 0.05	0
HD035296	F8V	6162	± 27	4.32	± 0.04	-0.02	± 0.04	0
HD035369	G8III	4941	± 24	2.55	± 0.07	-0.23	± 0.06	0
HD035410	G9III-IV	4886	± 29	2.84	± 0.08	-0.32	± 0.06	0
HD035468	B2III	22339	± 602	3.84	± 0.05	-0.07	± 0.04	0
HD035497	B7III	14226	± 196	3.57	± 0.07	0.20	± 0.07	0
HD035620	K3IIICN+...	4206	± 17	1.97	± 0.10	0.15	± 0.05	0
HD036130	G0	5925	± 37	4.21	± 0.07	0.10	± 0.05	0
HD036389	M2Iab:	3716	± 11	0.11	± 0.09	0.16	± 0.05	0
HD036673	F0Ib	7603	± 24	2.05	± 0.03	0.08	± 0.03	1
HD036861	O8III	37689	± 963	3.90	± 0.06	0.03	± 0.04	0
HD037043	O9III	35006	± 969	3.67	± 0.07	0.05	± 0.06	0
HD037088	G0	5790	± 35	4.26	± 0.07	0.13	± 0.05	0
HD037160	K0IIIb	4815	± 23	2.77	± 0.08	-0.57	± 0.05	0
HD037216	G5	5468	± 29	4.63	± 0.05	0.03	± 0.05	0
HD037269	B9.5V+...	6239	± 71	3.97	± 0.12	0.02	± 0.09	0
HD037394	K1V	5328	± 27	4.67	± 0.05	0.21	± 0.05	0
HD037828	K0	4442	± 29	1.14	± 0.11	-1.49	± 0.08	0
HD037984	K1III	4480	± 22	2.24	± 0.09	-0.45	± 0.05	0
HD037986	G8/K0IV	5502	± 38	4.28	± 0.08	0.33	± 0.06	0
HD038656	G8III	4953	± 25	2.60	± 0.07	-0.19	± 0.06	0
HD038674	K2	4069	± 18	1.85	± 0.15	-0.47	± 0.08	0
HD038899	B9IV	10385	± 138	3.89	± 0.05	-0.16	± 0.07	0
HD039003	G9.5III	4678	± 20	2.36	± 0.06	-0.02	± 0.04	0
HD039118	G8III+...	4927	± 49	2.01	± 0.13	-0.12	± 0.12	0
HD039225	M1.5II-III	3653	± 9	1.35	± 0.17	-0.29	± 0.07	0
HD039283	A2V	8856	± 68	4.13	± 0.04	-0.36	± 0.06	0
HD039587	G0V	5942	± 26	4.43	± 0.05	-0.04	± 0.04	0
HD039801	M1	3626	± 10	0.13	± 0.10	0.09	± 0.05	0
HD039833	G0III	5855	± 35	4.41	± 0.07	0.15	± 0.05	0
HD039853	K5III	3872	± 10	1.61	± 0.12	-0.46	± 0.06	0
HD039866	A2II	9427	± 129	2.15	± 0.04	-0.34	± 0.10	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD040035	K0III	4859	± 22	2.59	± 0.06	-0.07	± 0.05	0
HD040111	B0.5II	25771	±1684	3.27	± 0.08	-0.06	± 0.07	0
HD040136	F1V	6997	± 27	4.08	± 0.03	-0.05	± 0.03	0
HD040183	A2IV+...	8774	± 131	3.55	± 0.18	-0.11	± 0.13	0
HD040239	M3II	3388	± 6	0.55	± 0.10	0.03	± 0.04	0
HD040460	K1III	4804	± 28	2.53	± 0.09	-0.25	± 0.07	0
HD040536	A6m	7836	± 120	3.69	± 0.15	0.38	± 0.12	0
HD040801	K0II	4812	± 21	2.95	± 0.07	-0.25	± 0.05	0
HD041117	B2Iaevar	23210	±2321	2.85	± 0.12	-0.38	± 0.15	0
HD041330	G0V	5873	± 27	4.18	± 0.05	-0.20	± 0.04	0
HD041597	G8III	4644	± 22	2.08	± 0.08	-0.51	± 0.06	0
HD041636	G9III	4714	± 23	2.55	± 0.08	-0.28	± 0.05	0
HD041640	F5	6093	± 30	4.28	± 0.05	-0.58	± 0.05	0
HD041692	B5IV	16566	± 286	3.64	± 0.06	0.08	± 0.05	0
HD042475	M1Iab:	3874	± 18	0.12	± 0.10	0.18	± 0.06	0
HD042543	M1Ia-ab	3666	± 12	0.20	± 0.12	0.14	± 0.06	0
HD043039	G8.5IIIb	4783	± 26	2.44	± 0.08	-0.31	± 0.06	0
HD043042	F6V	6459	± 29	4.16	± 0.04	0.01	± 0.04	0
HD043232	K1.5III	4375	± 20	1.61	± 0.08	-0.15	± 0.05	0
HD043247	B9II-III	12600	± 324	2.95	± 0.11	-0.02	± 0.16	0
HD043318	F6V	6252	± 30	3.99	± 0.05	-0.13	± 0.04	0
HD043380	K2III	4557	± 22	2.57	± 0.08	-0.01	± 0.05	0
HD043384	B3Ib	19771	± 779	2.87	± 0.07	-0.14	± 0.07	0
HD043827	K1III	4400	± 20	2.03	± 0.08	-0.09	± 0.05	0
HD043947	F8V	5982	± 27	4.29	± 0.05	-0.30	± 0.04	0
HD044007	G5IV:w...	4971	± 33	2.28	± 0.11	-1.57	± 0.08	0
HD044033	K3Iab:	3796	± 7	1.57	± 0.10	0.01	± 0.04	0
HD044478	M3III	3460	± 5	0.82	± 0.09	-0.03	± 0.03	0
HD044537	M0Iab:	3984	± 21	0.31	± 0.10	0.20	± 0.06	0
HD044769	A5IV	7717	± 47	3.84	± 0.05	-0.11	± 0.06	0
HD044951	K3III	4384	± 19	2.14	± 0.09	-0.30	± 0.05	0
HD045282	G0	5232	± 30	3.03	± 0.09	-1.50	± 0.06	0
HD045410	K0III-IV	4964	± 25	3.17	± 0.07	-0.18	± 0.05	0
HD045412	F8Ibvar	5987	± 30	1.88	± 0.07	0.13	± 0.06	0
HD045674	F0	7630	± 75	2.05	± 0.08	0.16	± 0.07	0
HD046184	K1III	4375	± 21	2.25	± 0.09	0.06	± 0.05	0
HD046317	F5	6307	± 33	4.21	± 0.05	-0.24	± 0.05	0
HD046480	G8IV-V	4917	± 27	3.13	± 0.08	-0.53	± 0.06	0
HD046588	F8V	6162	± 38	4.25	± 0.06	-0.13	± 0.05	0
HD046687	CII...	3843	± 105	1.39	± 1.18	-0.15	± 0.46	0
HD046703	F7IVw	6654	± 60	4.09	± 0.06	-0.85	± 0.11	0
HD047105	A0IV	9231	± 124	3.21	± 0.08	-0.28	± 0.09	0
HD047205	K1III+...	4766	± 22	3.20	± 0.06	0.18	± 0.04	0
HD047731	G5Ib	5151	± 26	1.32	± 0.04	-0.06	± 0.06	0
HD047839	O7Ve	40175	± 914	3.93	± 0.05	0.04	± 0.04	0
HD048329	G8Ib	4662	± 36	0.88	± 0.05	0.15	± 0.07	0
HD048432	K0III	4901	± 23	2.84	± 0.07	-0.16	± 0.05	0
HD048433	K1III	4531	± 20	2.13	± 0.07	-0.17	± 0.05	0
HD048682	G0V	6051	± 30	4.22	± 0.05	0.07	± 0.04	0
HD048737	F5IV	6544	± 29	3.91	± 0.04	0.15	± 0.03	0
HD048781	K1III	4691	± 21	2.31	± 0.07	-0.07	± 0.05	0
HD049178	G0	5727	± 32	4.40	± 0.06	0.07	± 0.05	0
HD049368	S...	3562	± 14	0.57	± 0.19	-0.05	± 0.08	0
HD049520	K3III	4406	± 23	2.21	± 0.10	0.01	± 0.06	0
HD049732	F8	6361	± 38	4.21	± 0.05	-0.62	± 0.06	0
HD050420	A9III	7275	± 36	3.70	± 0.04	0.12	± 0.04	0
HD050692	G0V	5887	± 29	4.29	± 0.05	-0.20	± 0.05	0
HD051309	B3Ib/II	19990	± 714	3.09	± 0.08	-0.04	± 0.05	0
HD051440	K2III	4325	± 21	1.85	± 0.11	-0.56	± 0.07	0
HD051530	F7V	6094	± 35	3.96	± 0.06	-0.38	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD052711	G4V	5898	± 31	4.34	± 0.06	-0.13	± 0.05	0
HD054322	G5	5841	± 33	4.44	± 0.06	0.13	± 0.05	0
HD054662	O7III	42421	±1052	4.04	± 0.05	0.00	± 0.05	0
HD054717	F5	6442	± 34	4.25	± 0.04	-0.42	± 0.05	0
HD054719	K2III	4441	± 19	2.17	± 0.08	0.16	± 0.04	0
HD054810	K0III	4758	± 30	2.63	± 0.10	-0.31	± 0.07	0
HD055280	K2III	4692	± 23	2.82	± 0.07	0.05	± 0.05	0
HD055575	G0V	5868	± 26	4.25	± 0.05	-0.37	± 0.04	0
HD056986	F0IV	7024	± 33	4.04	± 0.04	-0.17	± 0.05	0
HD057264	G8III	4627	± 20	2.46	± 0.07	-0.38	± 0.05	0
HD057651	K5	3418	± 6	0.85	± 0.12	-0.07	± 0.05	0
HD057669	K0IIIa	4658	± 25	1.88	± 0.07	0.13	± 0.05	0
HD057727	G8III	5067	± 24	3.00	± 0.06	-0.09	± 0.05	0
HD058207	G9IIIb	4831	± 22	2.58	± 0.06	-0.11	± 0.05	0
HD058343	B2Vne	18173	± 590	3.66	± 0.09	0.01	± 0.06	0
HD058526	G3Ib	5515	± 29	1.19	± 0.05	0.00	± 0.06	0
HD058551	F6V	6220	± 28	4.23	± 0.04	-0.50	± 0.04	0
HD058855	F6V	6310	± 36	4.18	± 0.05	-0.29	± 0.05	0
HD058946	F0V	6991	± 29	4.11	± 0.03	-0.25	± 0.04	0
HD059380	F8V	6326	± 36	4.22	± 0.05	-0.15	± 0.05	0
HD059881	F0III	7538	± 42	3.57	± 0.05	0.16	± 0.04	0
HD059984	F5V	5934	± 44	4.01	± 0.08	-0.72	± 0.08	0
HD060179	A1V	9340	± 146	3.79	± 0.08	-0.06	± 0.07	0
HD061064	F6III	6625	± 40	3.64	± 0.06	0.26	± 0.04	0
HD061295	F6II	7079	± 45	3.66	± 0.06	0.32	± 0.05	0
HD061935	G9III	4841	± 29	2.61	± 0.08	-0.04	± 0.06	0
HD062301	F8V	5940	± 29	4.16	± 0.05	-0.65	± 0.05	0
HD062509	K0IIIb	4893	± 23	2.89	± 0.06	0.05	± 0.05	0
HD063302	K3Iab/Ib	4304	± 34	0.24	± 0.08	0.12	± 0.07	0
HD063333	F5	6157	± 30	4.22	± 0.05	-0.36	± 0.05	0
HD063352	K0	4179	± 17	1.92	± 0.10	-0.47	± 0.06	0
HD063410	G8III	4896	± 25	2.53	± 0.07	-0.37	± 0.06	0
HD063791	G0	4838	± 32	1.90	± 0.11	-1.59	± 0.08	0
HD064238	F2IV/V	7166	± 44	3.16	± 0.07	0.31	± 0.05	0
HD064937	K5	3495	± 8	0.82	± 0.14	-0.05	± 0.06	0
HD065583	G8V	5315	± 31	4.51	± 0.06	-0.67	± 0.07	0
HD065714	G8III:	4966	± 27	2.51	± 0.07	0.12	± 0.06	0
HD065900	A1V	9228	± 142	3.34	± 0.11	-0.17	± 0.11	0
HD067228	G1IV	5810	± 26	3.92	± 0.05	0.14	± 0.04	0
HD068988	G0	5820	± 41	4.17	± 0.08	0.28	± 0.06	0
HD069582	G5	5692	± 35	4.52	± 0.06	0.13	± 0.06	0
HD069830	K0V	5444	± 33	4.52	± 0.06	0.02	± 0.06	0
HD069897	F6V	6261	± 28	4.19	± 0.04	-0.28	± 0.04	0
HD070110	F9V	5909	± 27	3.95	± 0.05	0.09	± 0.04	0
HD071369	G5III	5215	± 31	2.52	± 0.08	-0.13	± 0.07	0
HD071479	G0	5886	± 38	4.15	± 0.07	0.19	± 0.06	0
HD071597	K2III	4449	± 19	2.54	± 0.08	-0.23	± 0.05	0
HD071952	K0IV	4734	± 23	3.13	± 0.07	-0.15	± 0.05	0
HD072184	K2III	4678	± 43	3.02	± 0.13	0.19	± 0.09	0
HD072324	G9III	4885	± 23	2.48	± 0.06	-0.02	± 0.05	0
HD072660	A1V	9226	± 137	3.30	± 0.10	-0.14	± 0.10	0
HD072946	G5V	5624	± 22	4.19	± 0.05	-0.03	± 0.05	1
HD072968	A1spe...	10651	± 281	3.63	± 0.24	0.77	± 0.14	0
HD073394	G5IIIw	4511	± 29	1.19	± 0.11	-1.61	± 0.08	0
HD074280	B3V	17816	± 202	3.73	± 0.06	0.01	± 0.04	0
HD074395	G2Iab:	5481	± 27	1.44	± 0.05	0.04	± 0.06	0
HD074462	G5IV	4742	± 43	1.72	± 0.15	-1.43	± 0.11	0
HD074721	A0V	8789		3.34		-1.42		2
HD075332	F7Vn	6219	± 34	4.31	± 0.05	0.07	± 0.04	0
HD075333	B9mnp...	11722	± 149	4.08	± 0.05	0.22	± 0.07	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD075732	G8V	5290	± 27	4.43	± 0.05	0.43	± 0.04	0
HD075782	G0	5912	± 37	3.87	± 0.07	0.19	± 0.05	0
HD076151	G2V	5793	± 26	4.47	± 0.05	0.13	± 0.04	0
HD076219	G8Iab:	5018	± 29	2.25	± 0.07	-0.09	± 0.07	0
HD076291	K1IV	4583	± 19	2.77	± 0.07	-0.10	± 0.04	0
HD076294	G9II-III	4917	± 24	2.46	± 0.07	-0.11	± 0.06	0
HD076351	K5III	4186	± 19	1.63	± 0.10	0.09	± 0.05	0
HD076376	K2/K3III	4239	± 17	2.11	± 0.09	-0.05	± 0.05	0
HD076508	K1III	4912	± 27	2.73	± 0.07	0.10	± 0.06	0
HD076579	K3III	4017	± 13	1.74	± 0.11	-0.17	± 0.05	0
HD076644	A7V	7703	± 48	3.96	± 0.05	-0.03	± 0.06	0
HD076780	G5	5765	± 38	4.38	± 0.07	0.18	± 0.06	0
HD076813	G9III	5074	± 25	2.71	± 0.06	-0.09	± 0.05	0
HD076932	F7/F8IV/V	5843	± 28	4.08	± 0.05	-0.90	± 0.06	0
HD076943	F5V	6511	± 30	4.19	± 0.04	0.14	± 0.03	0
HD076944	K5	3864	± 21	1.32	± 0.23	-0.16	± 0.09	0
HD077350	A0III	10037	± 167	3.35	± 0.11	-0.20	± 0.13	0
HD077601	F6II-III	6578	± 52	3.14	± 0.10	0.42	± 0.06	0
HD077818	K1IV	4726	± 23	3.13	± 0.07	-0.23	± 0.05	0
HD077912	G8Iab:	5015	± 27	1.75	± 0.06	-0.05	± 0.06	0
HD078209	A1m	7508	± 47	3.77	± 0.06	0.54	± 0.04	0
HD078249	K1IV	4868	± 25	3.45	± 0.06	0.05	± 0.05	0
HD078316	B8IIImnp	12460	± 259	4.21	± 0.09	0.51	± 0.12	0
HD078362	Am	7289	± 50	3.76	± 0.07	0.71	± 0.04	0
HD078418	G5IV-V	5741	± 40	4.22	± 0.08	0.08	± 0.06	0
HD078479	K3III	4486	± 20	2.60	± 0.08	0.22	± 0.04	0
HD078558	G3V	5700	± 31	4.20	± 0.06	-0.45	± 0.06	0
HD078712	M6IIIase	3101	± 17	0.23	± 0.36	-1.00	± 0.00	0
HD079028	F9V	5972	± 76	3.93	± 0.15	0.05	± 0.11	0
HD079158	B8IIImnp	12305	± 151	4.11	± 0.07	0.73	± 0.07	0
HD079452	G6III	5029	± 28	2.43	± 0.08	-0.77	± 0.07	0
HD079469	B9.5V	10099	± 145	3.80	± 0.08	-0.42	± 0.09	0
HD080218	F5	6180	± 33	4.16	± 0.05	-0.26	± 0.05	0
HD080493	K7III	3899	± 9	1.63	± 0.11	-0.11	± 0.04	0
HD080499	G8III	5065	± 26	2.48	± 0.07	-0.13	± 0.06	0
HD080586	G8III-IV+...	5084	± 26	2.87	± 0.07	0.01	± 0.06	0
HD081146	K2III	4394	± 18	2.44	± 0.08	-0.05	± 0.04	0
HD081192	G7III	4822	± 24	2.69	± 0.08	-0.70	± 0.06	0
HD081797	K3II-III	4176	± 15	1.67	± 0.09	0.06	± 0.04	0
HD081937	F0IV	7097	± 37	3.87	± 0.05	0.17	± 0.05	0
HD082210	G4III-IV	5343	± 33	3.49	± 0.08	-0.21	± 0.07	0
HD082328	F6IV	6333	± 28	3.97	± 0.04	-0.14	± 0.04	0
HD082395	K0III	4807	± 22	2.61	± 0.07	-0.08	± 0.05	0
HD082590	F6w...	6564	± 68	4.16	± 0.07	-0.86	± 0.11	0
HD082621	A2V	8851	± 113	3.80	± 0.11	-0.41	± 0.11	0
HD082635	G8III	5100	± 31	2.93	± 0.08	-0.04	± 0.07	0
HD082741	G9.5III	4856	± 22	2.51	± 0.07	-0.21	± 0.05	0
HD083506	K0III	4951	± 30	2.45	± 0.08	0.15	± 0.07	0
HD083618	K2.5III	4270	± 18	1.96	± 0.10	-0.12	± 0.05	0
HD083787	K6III	3818	± 7	1.45	± 0.10	-0.21	± 0.04	0
HD083805	G8III	5047	± 27	2.76	± 0.07	0.02	± 0.06	0
HD084441	G1II	5392	± 25	2.11	± 0.06	-0.08	± 0.06	0
HD084453	K0IV	4929	± 23	3.19	± 0.06	-0.10	± 0.05	0
HD084737	G0.5Va	5860	± 28	4.02	± 0.06	0.10	± 0.04	0
HD084748	M8IIIe	3070	± 35	0.78	± 0.93	-1.00	± 0.00	0
HD085235	A3IV	8662	± 72	3.71	± 0.08	-0.23	± 0.06	0
HD085444	G6/G8III	5090	± 26	2.68	± 0.07	0.00	± 0.06	0
HD085503	K2III	4453	± 19	2.61	± 0.08	0.30	± 0.04	0
HD086322	K1III	4792	± 25	2.58	± 0.08	-0.12	± 0.06	0
HD086728	G3Va	5745	± 28	4.27	± 0.06	0.23	± 0.04	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD086986	A1V	7863		3.13		-1.83		2
HD087140	K0	5061	± 41	2.46	± 0.13	-1.75	± 0.09	0
HD087141	F5V	6312	± 31	3.90	± 0.05	0.04	± 0.04	0
HD087344	B8V	11061	± 232	4.00	± 0.07	0.00	± 0.11	0
HD087646	G1IV	5866	± 48	4.27	± 0.09	0.26	± 0.07	0
HD087737	A0Ib	10637	± 159	2.07	± 0.05	-0.07	± 0.10	0
HD087822	F4V	6486	± 43	4.06	± 0.06	0.06	± 0.05	0
HD087901	B7V	12862	± 220	4.05	± 0.09	0.21	± 0.09	0
HD088195	A1V	9232	± 302	3.07	± 0.17	-0.47	± 0.25	0
HD088284	K0III	4940	± 34	2.94	± 0.09	0.22	± 0.07	0
HD088355	F7V	6392	± 44	4.09	± 0.07	0.01	± 0.05	0
HD088609	G5IIIw	4749	± 42	1.63	± 0.14	-2.48	± 0.08	0
HD088737	F9V	6103	± 35	3.88	± 0.07	0.19	± 0.05	0
HD088983	A8III	7957	± 53	3.87	± 0.06	-0.20	± 0.06	0
HD088986	G0V	5787	± 32	4.06	± 0.06	0.02	± 0.05	0
HD089010	G1.5IV-V	5717	± 36	3.90	± 0.08	0.02	± 0.06	0
HD089025	F0III	7153	± 37	3.59	± 0.05	0.19	± 0.04	0
HD089125	F8Vbw	6159	± 33	4.25	± 0.05	-0.37	± 0.05	0
HD089254	F2III	7122	± 78	3.79	± 0.10	0.36	± 0.08	0
HD089449	F6IV	6426	± 34	4.10	± 0.05	0.06	± 0.04	0
HD089484	K1IIIb	4566	± 22	1.98	± 0.08	-0.48	± 0.05	0
HD089490	K0	5148	± 31	3.34	± 0.07	0.06	± 0.06	0
HD089707	G1V	5959	± 37	4.30	± 0.06	-0.46	± 0.07	0
HD089744	F7V	6155	± 32	3.95	± 0.06	0.15	± 0.04	0
HD089822	A0sp...	10286	± 134	3.96	± 0.06	0.13	± 0.08	0
HD090250	K1III	4726	± 24	2.61	± 0.08	-0.01	± 0.05	0
HD090277	F0V	7292	± 36	3.82	± 0.04	0.19	± 0.04	0
HD090508	F9V	5790	± 32	4.33	± 0.06	-0.33	± 0.06	0
HD091190	K0III	5039	± 29	2.78	± 0.07	0.00	± 0.06	0
HD091204	G0	5842	± 43	4.12	± 0.08	0.19	± 0.06	0
HD091752	F3V	6524	± 28	4.11	± 0.04	-0.15	± 0.04	0
HD091889	F7V	6111	± 31	4.15	± 0.05	-0.24	± 0.05	0
HD092055	CII...	3888	± 100	1.23	± 0.94	0.02	± 0.35	0
HD092125	G2.5IIa	5433	± 25	1.88	± 0.06	0.01	± 0.06	0
HD092588	K1IV	5116	± 28	3.67	± 0.06	-0.03	± 0.06	0
HD092769	A4Vn	7902	± 47	3.98	± 0.05	-0.20	± 0.07	0
HD092839	CII...	3826	± 89	1.09	± 0.92	0.14	± 0.31	0
HD093487	F8	5120	± 35	2.31	± 0.10	-1.20	± 0.09	0
HD093813	K0/K1III	4371	± 19	2.13	± 0.09	-0.18	± 0.05	0
HD094247	K3III	4233	± 16	1.86	± 0.09	-0.19	± 0.05	0
HD094264	K0III	4731	± 19	2.82	± 0.06	-0.12	± 0.04	0
HD094280	F8	6054	± 33	4.22	± 0.06	0.06	± 0.05	0
HD094363	K0III+...	5036	± 26	3.11	± 0.07	-0.21	± 0.06	0
HD094600	K1III	4634	± 20	2.52	± 0.07	-0.16	± 0.05	0
HD094601	A1V	9429	± 153	3.87	± 0.08	-0.30	± 0.11	0
HD094669	K2III	4562	± 22	2.64	± 0.08	-0.13	± 0.05	0
HD095128	G1V	5855	± 29	4.24	± 0.06	0.00	± 0.04	0
HD095241	F9V	5899	± 30	3.83	± 0.06	-0.28	± 0.05	0
HD095272	K1III	4712	± 24	2.51	± 0.08	-0.06	± 0.05	0
HD095345	K1III	4559	± 24	2.17	± 0.09	-0.15	± 0.06	0
HD095418	A1V	9370	± 133	3.85	± 0.07	-0.03	± 0.07	0
HD095849	K3III	4501	± 29	2.40	± 0.11	0.17	± 0.06	0
HD096436	G9IIICN...	4792	± 27	2.85	± 0.09	-0.46	± 0.06	0
HD096833	K1III	4621	± 22	2.33	± 0.07	-0.02	± 0.05	0
HD097603	A4V	8141	± 57	3.84	± 0.07	-0.18	± 0.07	0
HD097633	A2V	9154	± 130	3.25	± 0.09	-0.25	± 0.10	0
HD097907	K3III	4368	± 18	2.21	± 0.09	-0.05	± 0.05	0
HD098231	G0V	5927	± 25	4.34	± 0.05	-0.29	± 0.04	0
HD098430	K0III	4610	± 30	2.09	± 0.11	-0.44	± 0.07	0
HD098553	G2/G3V	5867	± 54	4.36	± 0.09	-0.48	± 0.10	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD098744	G0	6191	± 49	4.06	± 0.08	-0.26	± 0.07	0
HD098824	K1III	4776	± 21	2.61	± 0.06	0.01	± 0.05	0
HD098991	F3IV	6600	± 37	3.93	± 0.05	-0.02	± 0.04	0
HD099028	F4IV	6739	± 36	3.96	± 0.05	0.19	± 0.04	0
HD099167	K5III	3819	± 7	1.76	± 0.10	-0.08	± 0.04	0
HD099491	K0IV	5470	± 29	4.39	± 0.06	0.38	± 0.05	0
HD099747	F5Vawvar	6667	± 31	4.19	± 0.03	-0.48	± 0.04	0
HD099998	K3.5III	3991	± 12	1.61	± 0.11	-0.26	± 0.05	0
HD100006	K0III	4719	± 22	2.51	± 0.07	-0.20	± 0.05	0
HD100030	G9IV	4977	± 23	2.95	± 0.06	-0.40	± 0.05	0
HD100446	F8	6087	± 37	4.22	± 0.06	-0.45	± 0.06	0
HD100470	K0III	4714	± 23	2.58	± 0.08	-0.17	± 0.05	0
HD100563	F5V	6404	± 57	4.22	± 0.08	0.04	± 0.07	0
HD100696	K0III	4896	± 26	2.50	± 0.08	-0.34	± 0.06	0
HD100889	B9.5Vn	10563	± 116	3.83	± 0.07	-0.27	± 0.07	0
HD100920	G9III	4877	± 23	2.55	± 0.07	-0.20	± 0.05	0
HD101484	K0III	4919	± 29	2.80	± 0.08	0.02	± 0.06	0
HD101501	G8V	5586	± 27	4.60	± 0.05	0.03	± 0.05	0
HD101673	K3III	4376	± 24	1.97	± 0.10	-0.13	± 0.06	0
HD101676	F6V	6197	± 38	4.14	± 0.06	-0.43	± 0.06	0
HD102070	G8III	5028	± 30	2.57	± 0.08	0.03	± 0.07	0
HD102212	M1III	3738	± 6	1.55	± 0.10	-0.41	± 0.05	0
HD102224	K0.5IIIb	4462	± 20	2.05	± 0.08	-0.38	± 0.05	0
HD102328	K3III	4389	± 21	2.59	± 0.10	0.30	± 0.05	0
HD102574	F7V	5973	± 34	3.89	± 0.06	0.18	± 0.05	0
HD102634	F7V	6210	± 34	4.10	± 0.06	0.16	± 0.04	0
HD102870	F9V	6071	± 30	4.05	± 0.06	0.13	± 0.04	0
HD103047	K0	5000	± 26	3.38	± 0.06	0.06	± 0.05	0
HD103287	A0V	9361	± 139	3.85	± 0.07	-0.44	± 0.09	0
HD104304	G9IV	5546	± 32	4.33	± 0.06	0.31	± 0.05	0
HD104783	G5III	5103	± 91	2.63	± 0.25	-0.68	± 0.22	0
HD104979	G8IIIa	4818	± 32	1.98	± 0.10	-0.58	± 0.08	0
HD104985	G9III	4713	± 25	2.47	± 0.09	-0.33	± 0.06	0
HD105043	K2III	4399	± 21	2.43	± 0.09	-0.22	± 0.05	0
HD105262	B9	8855		1.82		-1.61		2
HD105546	G2IIIw	5106	± 45	2.30	± 0.13	-1.48	± 0.11	0
HD105755	G0Vw	5788	± 76	4.08	± 0.15	-0.66	± 0.14	0
HD105944	G7III	4995	± 45	2.39	± 0.13	-0.70	± 0.11	0
HD106365	K2III	4630	± 74	2.71	± 0.25	-0.01	± 0.16	0
HD106516	F5V	6173	± 28	4.31	± 0.04	-0.73	± 0.05	0
HD106591	A3V	8564	± 119	3.83	± 0.14	-0.35	± 0.15	0
HD106714	G8III	4928	± 36	2.56	± 0.10	-0.22	± 0.08	0
HD107113	F4V	6456	± 43	4.19	± 0.05	-0.45	± 0.06	0
HD107213	F8Vs	6170	± 48	3.96	± 0.09	0.20	± 0.06	0
HD107259	A2IV	8756	± 77	3.54	± 0.09	-0.17	± 0.06	0
HD107328	K0IIIb	4420	± 24	2.10	± 0.10	-0.39	± 0.06	0
HD107383	G8III	4806	± 34	2.44	± 0.11	-0.36	± 0.08	0
HD107418	K0III	4753	± 23	2.77	± 0.07	-0.03	± 0.05	0
HD107752	G5	4868	± 50	1.90	± 0.15	-2.47	± 0.10	0
HD107950	G6III	5176	± 30	2.48	± 0.07	-0.02	± 0.07	0
HD108225	G9III	5060	± 26	2.85	± 0.07	0.08	± 0.06	0
HD108317	G0	5114	± 40	2.46	± 0.12	-2.27	± 0.09	0
HD108381	K1III	4693	± 24	2.71	± 0.08	0.24	± 0.05	0
HD108510	G0	6008	± 33	4.37	± 0.06	0.01	± 0.05	0
HD108954	F9V	6028	± 31	4.35	± 0.05	-0.12	± 0.05	0
HD108985	K5	3960	± 11	1.78	± 0.11	0.01	± 0.04	0
HD109303	F8	6057	± 41	4.08	± 0.07	-0.57	± 0.07	0
HD109317	K0III	4862	± 24	2.61	± 0.07	-0.08	± 0.05	0
HD109345	K0III	4772	± 22	2.55	± 0.07	-0.09	± 0.05	0
HD109358	G0V	5879	± 27	4.34	± 0.05	-0.24	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD109387	B6IIIpe	15302	± 1016	2.49	± 0.16	-0.65	± 0.36	0
HD109995	A0p	8441		3.18		-1.74		2
HD110010	G0	5904	± 45	4.26	± 0.08	0.33	± 0.06	0
HD110014	K2III	4495	± 24	2.47	± 0.09	0.30	± 0.05	0
HD110184	G5	4478	± 39	0.96	± 0.13	-2.25	± 0.08	0
HD110281	K5	4130	± 20	0.46	± 0.08	-1.38	± 0.05	0
HD110679	G5III	4994	± 39	2.51	± 0.11	-0.67	± 0.09	0
HD110897	G0V	5844	± 28	4.29	± 0.05	-0.57	± 0.05	0
HD110930	G7IIIw	5000	± 40	2.50	± 0.11	-0.58	± 0.10	0
HD111028	K1III-IV	4803	± 23	3.19	± 0.07	-0.15	± 0.05	0
HD111335	K5III	3875	± 9	1.47	± 0.10	-0.05	± 0.04	0
HD111591	K0III	4843	± 23	2.77	± 0.07	-0.19	± 0.05	0
HD111721	G6V	5072	± 32	2.66	± 0.10	-1.30	± 0.07	0
HD111765	K4III:	4346	± 16	2.16	± 0.08	-0.02	± 0.04	0
HD111812	G0IIIp	5771	± 29	3.20	± 0.07	0.02	± 0.05	0
HD112030	G7III	4972	± 27	2.51	± 0.08	-0.48	± 0.06	0
HD112127	K2.5III	4447	± 27	2.58	± 0.11	0.30	± 0.06	0
HD112142	M3III	3525	± 8	1.05	± 0.16	-0.10	± 0.06	0
HD112300	M3III	3445	± 6	1.05	± 0.13	-0.03	± 0.05	0
HD113022	F6Vs	6441	± 27	4.11	± 0.04	0.07	± 0.03	0
HD113092	K2III	4272	± 20	1.50	± 0.10	-0.72	± 0.06	0
HD113095	K0III	4952	± 28	2.66	± 0.08	-0.09	± 0.06	0
HD113226	G8III	5126	± 29	2.82	± 0.07	0.13	± 0.06	0
HD113436	A3Vn	8735	± 115	3.67	± 0.16	-0.37	± 0.15	0
HD113515	G8III	4714	± 29	2.39	± 0.10	-0.60	± 0.07	0
HD113847	K1III	4560	± 22	2.31	± 0.08	-0.12	± 0.05	0
HD113848	F4V	6680	± 31	4.17	± 0.04	-0.22	± 0.04	0
HD113994	G7III	4785	± 27	2.59	± 0.09	-0.38	± 0.06	0
HD113996	K5III	3998	± 11	1.90	± 0.11	-0.05	± 0.04	0
HD114038	K1III	4621	± 21	2.48	± 0.07	0.02	± 0.05	0
HD114092	K4III	4199	± 16	2.42	± 0.10	0.21	± 0.05	0
HD114113	K3III	4507	± 23	2.41	± 0.09	-0.10	± 0.05	0
HD114203	K0	4869	± 28	2.63	± 0.08	-0.13	± 0.06	0
HD114256	K0III	4834	± 26	2.66	± 0.08	0.01	± 0.06	0
HD114287	K5III	3992	± 12	1.90	± 0.12	0.06	± 0.04	0
HD114330	A1IVs+...	9550	± 130	3.85	± 0.07	-0.23	± 0.07	0
HD114357	K3III	4426	± 21	2.65	± 0.09	0.14	± 0.05	0
HD114642	F6V	6401	± 30	4.04	± 0.04	-0.12	± 0.04	0
HD114710	F9.5V	6004	± 29	4.36	± 0.05	0.03	± 0.04	0
HD114946	G8III/IV	5060	± 26	3.23	± 0.07	-0.37	± 0.06	0
HD114961	M7III	3080	± 19	0.36	± 0.44	-1.00	± 0.00	0
HD115004	K0III	4905	± 24	2.37	± 0.06	0.09	± 0.05	0
HD115061	K0	4559	± 21	2.74	± 0.08	-0.02	± 0.05	0
HD115136	K2III	4611	± 22	2.59	± 0.07	0.03	± 0.05	0
HD115202	K1III	4791	± 23	3.19	± 0.07	-0.06	± 0.05	0
HD115383	G0Vs	6024	± 32	4.26	± 0.06	0.15	± 0.04	0
HD115444	K0	4874	± 46	1.91	± 0.14	-2.52	± 0.10	0
HD115539	G8III-IV	4902	± 24	2.48	± 0.07	-0.43	± 0.06	0
HD115589	G8IV	5228	± 74	4.42	± 0.14	0.25	± 0.13	0
HD115604	F3III	7176	± 47	3.61	± 0.07	0.54	± 0.04	0
HD115617	G5V	5598	± 32	4.46	± 0.06	0.01	± 0.05	0
HD116292	K0III	4955	± 25	2.68	± 0.07	-0.07	± 0.06	0
HD116656	A2V	9135	± 139	3.89	± 0.07	-0.03	± 0.08	0
HD116658	B1III-IV+...	15073	± 1892	3.60	± 0.22	-0.01	± 0.07	0
HD116976	K1IIICN	4796	± 28	2.63	± 0.08	0.20	± 0.06	0
HD117176	G5V	5502	± 30	3.89	± 0.07	-0.10	± 0.05	0
HD117243	G5III	5855	± 34	4.16	± 0.07	0.24	± 0.05	0
HD117818	K0III	4904	± 24	2.53	± 0.07	-0.32	± 0.06	0
HD117876	G8III	4766	± 29	2.50	± 0.10	-0.46	± 0.07	0
HD118055	K0w...	4380	± 27	0.78	± 0.10	-1.86	± 0.07	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD118098	A3V	8347	± 77	3.93	± 0.09	-0.26	± 0.10	0
HD118100	K5Ve	4239	± 25	4.53	± 0.07	-0.17	± 0.08	0
HD118244	F5V	6343	± 43	4.21	± 0.05	-0.50	± 0.06	0
HD118266	K1III+...	4746	± 22	2.76	± 0.07	-0.13	± 0.05	0
HD119516	G5	5315	± 52	2.62	± 0.15	-1.84	± 0.13	0
HD120136	F6IV	6318	± 33	4.15	± 0.05	0.20	± 0.04	0
HD120164	K0III+...	4797	± 22	2.58	± 0.07	-0.10	± 0.05	0
HD120315	B3V	17291	± 336	3.86	± 0.08	-0.14	± 0.07	0
HD120348	K1III	4659	± 20	2.44	± 0.07	-0.17	± 0.05	0
HD120452	K0III	4821	± 26	2.65	± 0.08	0.01	± 0.06	0
HD120933	K5III	3509	± 6	1.01	± 0.11	-0.11	± 0.04	0
HD121146	K2IV	4385	± 20	2.70	± 0.08	-0.08	± 0.05	0
HD121299	K2III	4756	± 24	2.66	± 0.07	0.13	± 0.05	0
HD121370	G0IV	5998	± 34	3.82	± 0.07	0.28	± 0.05	0
HD121560	F6V	6133	± 30	4.27	± 0.05	-0.41	± 0.05	0
HD122408	A3V	8308	± 59	3.80	± 0.07	-0.27	± 0.08	0
HD122563	F8IV	4755	± 34	1.62	± 0.11	-2.37	± 0.07	0
HD122956	G6IV/Vw...	4594	± 36	1.23	± 0.12	-1.85	± 0.09	0
HD123299	A0III	10307	± 175	3.90	± 0.07	-0.14	± 0.09	0
HD123657	M4.5:III	3235	± 8	0.48	± 0.15	-0.20	± 0.08	0
HD123934	M1III	3680	± 8	1.30	± 0.15	-0.23	± 0.06	0
HD123977	K0III	4799	± 25	2.51	± 0.08	-0.24	± 0.06	0
HD124186	K4III	4404	± 19	2.58	± 0.08	0.29	± 0.04	0
HD124244	G5	5782	± 39	4.02	± 0.08	0.07	± 0.06	0
HD124547	K3III	4141	± 16	1.73	± 0.10	-0.16	± 0.05	0
HD124570	F6IV	6114	± 31	3.95	± 0.06	0.10	± 0.04	0
HD124850	F7IV	6226	± 29	3.90	± 0.05	-0.07	± 0.04	0
HD124897	K1.5III	4310	± 26	2.02	± 0.13	-0.54	± 0.08	0
HD125184	G5IV	5611	± 28	3.97	± 0.06	0.26	± 0.05	0
HD125451	F5IV	6609	± 42	4.14	± 0.05	-0.07	± 0.05	0
HD125454	G8III	4842	± 23	2.58	± 0.07	-0.11	± 0.05	0
HD125560	K3III	4451	± 21	2.57	± 0.08	0.22	± 0.05	0
HD126141	F5V	6677	± 29	4.17	± 0.03	-0.08	± 0.04	0
HD126271	K4III	4442	± 22	2.54	± 0.09	-0.01	± 0.05	0
HD126327	M7.5	3088	± 17	0.30	± 0.36	-1.00	± 0.00	0
HD126661	F0m	7613	± 45	3.47	± 0.05	0.36	± 0.04	0
HD126681	G3V	5631	± 70	4.38	± 0.13	-1.12	± 0.16	0
HD126778	K0III	4847	± 29	2.47	± 0.09	-0.50	± 0.07	0
HD126868	G2IV	5707	± 49	3.67	± 0.11	0.01	± 0.08	0
HD127334	G5V	5667	± 31	4.21	± 0.06	0.23	± 0.05	0
HD127665	K3III	4307	± 18	2.17	± 0.09	-0.05	± 0.05	0
HD128000	K5III	3941	± 12	1.86	± 0.12	0.05	± 0.05	0
HD128167	F2V	6703	± 26	4.21	± 0.03	-0.42	± 0.04	0
HD128385	F5	6192	± 40	4.19	± 0.06	-0.24	± 0.06	0
HD128750	K2III:	4617	± 21	2.50	± 0.08	-0.21	± 0.05	0
HD128987	G6V	5581	± 29	4.62	± 0.05	0.08	± 0.05	0
HD129132	G0V	6761	± 45	3.90	± 0.06	0.04	± 0.05	0
HD129312	G7III	5002	± 28	2.37	± 0.07	0.02	± 0.06	0
HD129336	G8III	4942	± 32	2.64	± 0.09	-0.28	± 0.07	0
HD129956	B9.5V	10252	± 160	3.86	± 0.09	-0.37	± 0.10	0
HD129972	G8.5III	4987	± 28	2.64	± 0.07	-0.02	± 0.06	0
HD129978	K2III	4500	± 20	2.25	± 0.08	-0.20	± 0.05	0
HD130025	K0	5226	± 32	2.82	± 0.08	-0.13	± 0.07	0
HD130087	G2IV	5950	± 33	4.10	± 0.06	0.23	± 0.05	0
HD130109	A0V	9772	± 205	3.83	± 0.12	-0.41	± 0.14	0
HD130325	K0III	4706	± 26	2.53	± 0.08	-0.16	± 0.06	0
HD130705	K4II-III	4425	± 22	2.57	± 0.09	0.38	± 0.05	0
HD130948	G1V	5993	± 31	4.41	± 0.05	-0.01	± 0.05	0
HD130952	G8III	4789	± 27	2.50	± 0.09	-0.40	± 0.06	0
HD131111	K0III	4724	± 26	2.82	± 0.08	-0.27	± 0.06	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD131156	G8V	5530	± 29	4.60	± 0.06	-0.08	± 0.05	0
HD131507	K4III	4162	± 16	2.10	± 0.11	-0.11	± 0.05	0
HD131873	K4III	4067	± 13	1.70	± 0.11	-0.13	± 0.05	0
HD131918	K4III	4148	± 17	1.67	± 0.11	-0.03	± 0.05	0
HD132132	K1III	4681	± 26	2.55	± 0.08	0.08	± 0.06	0
HD132254	F7V	6195	± 30	4.15	± 0.05	0.05	± 0.04	0
HD132345	K3IIICN...	4450	± 24	2.53	± 0.10	0.36	± 0.05	0
HD132883	K1:IV-V:	4534	± 20	2.82	± 0.07	0.05	± 0.04	0
HD133165	K0.5IIIb	4725	± 24	2.50	± 0.08	-0.24	± 0.06	0
HD133208	G8IIIa	5049	± 45	2.35	± 0.11	-0.05	± 0.10	0
HD134063	G5III	4901	± 28	2.40	± 0.09	-0.68	± 0.07	0
HD134083	F5V	6517	± 30	4.18	± 0.04	-0.03	± 0.04	0
HD134169	G1Vw	5878	± 33	4.07	± 0.06	-0.77	± 0.06	0
HD134190	G7.5III	4937	± 30	2.54	± 0.09	-0.38	± 0.07	0
HD134474	G5	5341	± 26	4.59	± 0.05	0.22	± 0.05	0
HD135148	K0	4361	± 30	0.72	± 0.10	-1.85	± 0.07	0
HD135722	G8III	4915	± 30	2.61	± 0.09	-0.42	± 0.07	0
HD135742	B8V	12946	± 449	4.12	± 0.16	0.33	± 0.17	0
HD136064	F9IV	6124	± 34	4.02	± 0.06	0.02	± 0.05	0
HD136202	F8III-IV	6132	± 33	3.99	± 0.06	0.02	± 0.05	0
HD136479	K1III	4957	± 34	2.93	± 0.09	0.25	± 0.07	0
HD136512	K0III	4821	± 25	2.54	± 0.08	-0.27	± 0.06	0
HD136726	K4III	4204	± 20	1.99	± 0.13	-0.01	± 0.06	0
HD136729	A4V	8247	± 63	3.93	± 0.07	-0.30	± 0.08	0
HD137052	F5IV	6477	± 31	4.02	± 0.04	-0.04	± 0.04	0
HD137510	G0IV-V	5886	± 30	3.89	± 0.06	0.29	± 0.04	0
HD137759	K2III	4525	± 22	2.63	± 0.08	0.11	± 0.05	0
HD138279	F5	6172	± 64	4.06	± 0.09	-1.35	± 0.15	0
HD138481	K5III	3905	± 12	1.22	± 0.12	-0.01	± 0.04	0
HD138716	K1IV	4779	± 47	3.14	± 0.14	-0.09	± 0.10	0
HD138776	K0	5584	± 38	4.06	± 0.08	0.36	± 0.06	0
HD138905	K0III	4783	± 45	2.42	± 0.14	-0.40	± 0.11	0
HD139195	K0III:CNs...	4985	± 27	2.71	± 0.07	-0.11	± 0.06	0
HD139446	G8III/IV	5108	± 31	2.75	± 0.08	-0.28	± 0.07	0
HD139457	F8V	6077	± 51	4.12	± 0.09	-0.45	± 0.08	0
HD139641	G7.5IIIb	5000	± 50	2.94	± 0.14	-0.52	± 0.11	0
HD139669	K5III	3949	± 13	1.50	± 0.12	0.16	± 0.04	0
HD140027	G8III	5136	± 34	2.70	± 0.09	-0.11	± 0.08	0
HD140283	sdF3	5798	± 52	3.59	± 0.10	-2.18	± 0.11	0
HD140573	K2IIIb	4592	± 24	2.69	± 0.08	0.25	± 0.05	0
HD141003	A2IV	8538	± 78	3.75	± 0.10	-0.20	± 0.10	0
HD141004	G0V	5892	± 30	4.19	± 0.06	-0.01	± 0.05	0
HD141680	G8III	4848	± 41	2.59	± 0.12	-0.20	± 0.10	0
HD141714	G3.5III	5317	± 31	3.24	± 0.08	-0.23	± 0.06	0
HD142091	K1IVa	4844	± 25	3.27	± 0.07	0.07	± 0.05	0
HD142198	K0III	4804	± 28	2.49	± 0.09	-0.27	± 0.06	0
HD142373	F8Ve...	5837	± 38	3.98	± 0.08	-0.51	± 0.07	0
HD142860	F6IV	6274	± 30	4.15	± 0.05	-0.19	± 0.04	0
HD142980	K1IV	4493	± 22	2.65	± 0.09	0.01	± 0.05	0
HD143107	K2III	4397	± 20	2.09	± 0.09	-0.18	± 0.05	0
HD143393	K2III	4599	± 24	2.68	± 0.09	-0.07	± 0.05	0
HD143666	G8IIIb	4897	± 29	2.61	± 0.08	-0.19	± 0.07	0
HD143761	G0Va	5799	± 29	4.19	± 0.06	-0.26	± 0.05	0
HD144172	F8	6346	± 28	4.13	± 0.04	-0.45	± 0.04	0
HD144585	G5V	5765	± 30	4.10	± 0.06	0.28	± 0.04	0
HD145328	K1III-IV	4808	± 23	3.08	± 0.07	-0.07	± 0.05	0
HD145502	B2IV	19251	± 350	3.80	± 0.08	-0.02	± 0.05	0
HD146051	M0.5III	3770	± 7	1.46	± 0.11	-0.04	± 0.04	0
HD146791	G9.5IIIb	4918	± 28	2.59	± 0.08	-0.13	± 0.06	0
HD147394	B5IV	15868	± 270	3.73	± 0.05	0.03	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD147677	K0III	4982	± 26	2.93	± 0.07	0.11	± 0.05	0
HD147700	K0III	4838	± 34	2.53	± 0.12	-0.18	± 0.08	0
HD148293	K2III	4693	± 24	2.59	± 0.07	0.16	± 0.05	0
HD148387	G8IIIb	5066	± 37	2.78	± 0.10	-0.07	± 0.08	0
HD148513	K4III	4127	± 15	2.15	± 0.11	0.19	± 0.05	0
HD148783	M6III	3146	± 10	0.45	± 0.18	-1.00	± 0.00	0
HD148786	G8/K0III	5180	± 30	2.82	± 0.07	0.20	± 0.06	0
HD149161	K4III	3924	± 10	1.86	± 0.11	-0.22	± 0.05	0
HD149630	B9V	10294	± 189	3.99	± 0.09	0.03	± 0.12	0
HD149661	K2V	5301	± 29	4.64	± 0.06	0.12	± 0.05	0
HD149750	G5	5783	± 37	4.06	± 0.07	0.16	± 0.06	0
HD149757	O9V	33262	± 836	4.09	± 0.08	-0.09	± 0.08	0
HD150012	F5IV	6628	± 33	3.98	± 0.05	0.13	± 0.04	0
HD150100	B9.5Vn	10271	± 127	3.99	± 0.04	-0.33	± 0.07	0
HD150117	B9V	10727	± 157	3.91	± 0.08	-0.22	± 0.09	0
HD150177	F3V	6141	± 30	4.04	± 0.05	-0.60	± 0.05	0
HD150449	K1III	4773	± 28	2.67	± 0.09	-0.03	± 0.06	0
HD150453	F3V	6506	± 35	4.06	± 0.05	-0.28	± 0.05	0
HD150680	G0IV	5780	± 35	3.89	± 0.07	0.09	± 0.06	0
HD150997	G7.5IIIb	5042	± 37	2.79	± 0.10	-0.21	± 0.08	0
HD151431	A3V	8346	± 55	3.78	± 0.07	-0.15	± 0.07	0
HD151613	F2V	6760	± 33	4.11	± 0.04	-0.21	± 0.04	0
HD151769	F7IV	6417	± 37	3.89	± 0.06	0.13	± 0.04	0
HD151862	A1V	9272	± 126	3.93	± 0.06	-0.14	± 0.07	0
HD152569	F0V	7303	± 34	3.87	± 0.05	0.22	± 0.04	0
HD152601	K2III	4719	± 25	2.74	± 0.08	0.11	± 0.05	0
HD152614	B8V	11651	± 164	4.03	± 0.07	0.09	± 0.08	0
HD152792	G0V	5662	± 28	3.87	± 0.06	-0.39	± 0.05	0
HD152815	G8III	4941	± 32	2.62	± 0.09	-0.18	± 0.07	0
HD153597	F6Vvar	6304	± 35	4.29	± 0.05	-0.14	± 0.05	0
HD153653	A7V	7561	± 35	4.12	± 0.04	-0.11	± 0.05	0
HD153808	A0V	9609	± 205	3.82	± 0.12	-0.25	± 0.14	0
HD154278	K1III	4718	± 31	2.61	± 0.10	-0.28	± 0.07	0
HD154431	A5V	7821	± 49	4.03	± 0.05	-0.11	± 0.06	0
HD154445	B1V	22604	± 728	3.78	± 0.09	-0.02	± 0.05	0
HD154543	K2	3576	± 7	1.27	± 0.14	-0.03	± 0.05	0
HD154660	A9V	7663	± 33	3.97	± 0.05	-0.18	± 0.06	0
HD155358	G0	5903	± 25	4.12	± 0.05	-0.66	± 0.04	0
HD155514	A8V	7591	± 43	3.87	± 0.05	-0.09	± 0.06	0
HD155763	B6III	14064	± 207	3.79	± 0.07	0.13	± 0.07	0
HD156164	A3IV							
HD157089	F9V	5790	± 29	4.05	± 0.06	-0.57	± 0.05	0
HD157198	A2V	9547	± 141	3.89	± 0.07	-0.28	± 0.08	0
HD157214	G0V	5666	± 33	4.21	± 0.07	-0.40	± 0.06	0
HD157373	F4V	6492	± 33	4.19	± 0.04	-0.46	± 0.05	0
HD157466	F8V	6059	± 26	4.30	± 0.04	-0.42	± 0.04	0
HD157740	A3V	8573	± 69	3.42	± 0.09	-0.05	± 0.06	0
HD157741	B9V	10999	± 174	3.88	± 0.11	-0.19	± 0.11	0
HD157910	G5III+...	5232	± 32	2.65	± 0.08	-0.09	± 0.07	0
HD158148	B5V	15545	± 238	3.81	± 0.10	-0.03	± 0.09	0
HD158261	A0V	9517	± 161	3.64	± 0.11	-0.10	± 0.10	0
HD158352	A8V	7494	± 40	3.85	± 0.05	-0.06	± 0.05	0
HD158414	A4V	8276	± 61	3.81	± 0.08	-0.19	± 0.08	0
HD158485	A4V	8371	± 73	3.96	± 0.08	-0.23	± 0.09	0
HD158614	G9IV-V...	5602	± 30	4.40	± 0.06	0.06	± 0.05	0
HD158716	A1V	8629	± 78	3.66	± 0.08	-0.04	± 0.06	0
HD158899	K4III	4155	± 14	1.76	± 0.09	-0.03	± 0.04	0
HD159139	A1V	9405	± 188	3.81	± 0.10	-0.55	± 0.14	0
HD159307	F8	6333	± 30	4.13	± 0.04	-0.57	± 0.05	0
HD159332	F6V	6264	± 37	4.00	± 0.06	-0.13	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD160054	A5V	7890	± 53	3.92	± 0.05	-0.05	± 0.06	0
HD160315	K0III+...	4980	± 29	2.88	± 0.08	0.10	± 0.06	0
HD160762	B3IV	19109	± 383	3.80	± 0.05	-0.04	± 0.04	0
HD160765	A1V	9235	± 162	3.91	± 0.08	-0.40	± 0.10	0
HD160933	F9V	5869	± 36	3.92	± 0.07	-0.28	± 0.06	0
HD161056	B1.5V	21672	±1001	3.62	± 0.14	0.00	± 0.09	0
HD161096	K2III	4593	± 24	2.69	± 0.08	0.25	± 0.05	0
HD161693	A2V	9391	± 163	3.80	± 0.10	-0.40	± 0.11	0
HD161797	G5IV	5566	± 32	3.93	± 0.07	0.28	± 0.05	0
HD161817	sdA2	7631		3.11		-1.54		2
HD161868	A0V	9608	± 212	3.93	± 0.09	-0.60	± 0.15	0
HD162555	K1III	4702	± 25	2.70	± 0.08	-0.10	± 0.05	0
HD162570	A9V	7511	± 38	3.87	± 0.05	0.02	± 0.05	0
HD163506	F2Ibe	7826	± 98	1.48	± 0.08	0.01	± 0.11	0
HD163588	K2III	4483	± 25	2.65	± 0.10	0.04	± 0.06	0
HD163624	A3V	8422	± 63	3.77	± 0.07	-0.09	± 0.06	0
HD163917	G9III	4965	± 40	2.78	± 0.10	0.16	± 0.08	0
HD163989	F6IV-Vs	6216	± 36	3.94	± 0.06	-0.04	± 0.05	0
HD163993	G8III	5087	± 28	2.91	± 0.07	0.07	± 0.06	0
HD164136	F2II	6979	± 45	3.80	± 0.05	-0.07	± 0.05	0
HD164259	F2IV	6764	± 28	4.09	± 0.03	0.01	± 0.03	0
HD164284	B2Ve	19706	± 635	3.69	± 0.14	0.00	± 0.08	0
HD164353	B5Ib	18738	± 590	3.03	± 0.08	-0.01	± 0.06	0
HD164577	A2Vn	9479	± 169	4.02	± 0.07	-0.14	± 0.13	0
HD165029	A0V	9581	± 178	3.82	± 0.10	-0.51	± 0.13	0
HD165195	K3p	4398	± 30	0.78	± 0.10	-2.21	± 0.06	0
HD165341	K0V	5232	± 24	4.57	± 0.05	0.07	± 0.05	0
HD165358	A2V	8948	± 114	3.94	± 0.07	-0.25	± 0.07	0
HD165401	G0V	5766	± 28	4.43	± 0.05	-0.44	± 0.05	0
HD165645	F0V	7294	± 38	3.99	± 0.05	0.02	± 0.05	0
HD165687	K0III	4667	± 23	2.56	± 0.08	-0.02	± 0.05	0
HD165760	G8III	5029	± 26	2.69	± 0.07	0.03	± 0.06	0
HD165908	F7V	6013	± 31	4.19	± 0.05	-0.56	± 0.05	0
HD166014	B9.5V	10590	± 250	4.17	± 0.08	-0.06	± 0.15	0
HD166046	A3V	8326	± 102	3.99	± 0.10	-0.18	± 0.12	0
HD166161	G5	5064	± 56	2.05	± 0.16	-1.44	± 0.15	0
HD166207	K0III	4806	± 30	2.67	± 0.09	0.02	± 0.06	0
HD166208	G8IIICN...	5084	± 29	2.71	± 0.07	0.10	± 0.06	0
HD166229	K2.5III	4572	± 20	2.87	± 0.07	0.16	± 0.04	0
HD167006	M3III	3518	± 5	1.16	± 0.11	-0.14	± 0.04	0
HD167042	K1III	4959	± 23	3.34	± 0.06	-0.01	± 0.05	0
HD167588	F8V	5945	± 32	4.02	± 0.06	-0.32	± 0.05	0
HD167768	G3III	4945	± 28	2.32	± 0.08	-0.72	± 0.07	0
HD167771	O8/O9	37002	± 884	3.59	± 0.05	0.12	± 0.05	0
HD168009	G2V	5797	± 30	4.26	± 0.06	0.00	± 0.05	0
HD168092	F1V	7014	± 49	4.07	± 0.05	-0.12	± 0.06	0
HD168151	F5V	6450	± 37	4.18	± 0.05	-0.34	± 0.05	0
HD168199	B5V	16479	± 318	3.80	± 0.10	-0.04	± 0.09	0
HD168270	B9V	10699	± 151	3.97	± 0.06	-0.07	± 0.08	0
HD168322	G8.5IIb	4802	± 29	2.49	± 0.09	-0.45	± 0.07	0
HD168656	G8III	5062	± 48	2.71	± 0.12	-0.11	± 0.11	0
HD168720	M0III	3789	± 6	1.56	± 0.09	0.00	± 0.03	0
HD168723	K0III-IV	4927	± 24	3.01	± 0.07	-0.26	± 0.05	0
HD168775	K2III	4611	± 21	2.43	± 0.07	0.12	± 0.05	0
HD169191	K3III	4377	± 22	2.15	± 0.10	-0.18	± 0.06	0
HD169305	M2III	3641	± 6	1.12	± 0.10	-0.08	± 0.04	0
HD169414	K2III	4475	± 19	2.62	± 0.08	-0.11	± 0.04	0
HD169578	B9V	11551	± 199	4.07	± 0.08	0.07	± 0.10	0
HD170693	K1.5III	4446	± 25	2.22	± 0.10	-0.42	± 0.06	0
HD171301	B8IV	11752	± 142	4.08	± 0.04	0.05	± 0.07	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD171391	G8III	5096	± 29	2.85	± 0.07	-0.03	± 0.06	0
HD171406	B4Ve	15278	± 270	3.77	± 0.13	-0.05	± 0.11	0
HD172365	F8Ib-II	5992	± 35	1.37	± 0.06	0.12	± 0.06	0
HD172569	F0V	7317	± 55	4.02	± 0.06	0.10	± 0.06	0
HD172816	M4III	3155	± 12	0.14	± 0.24	-0.44	± 1.35	0
HD172958	B8V	11251	± 199	3.96	± 0.10	-0.05	± 0.11	0
HD173087	B5V	16182	± 330	3.76	± 0.08	-0.07	± 0.07	0
HD173399	G5IV	5082	± 27	3.15	± 0.07	-0.26	± 0.06	0
HD173495	A1V+...	9218	± 185	3.84	± 0.10	-0.37	± 0.12	0
HD173667	F6V	6403	± 29	4.05	± 0.04	-0.03	± 0.04	0
HD173780	K3III	4468	± 19	2.42	± 0.08	-0.04	± 0.05	0
HD173936	B6V	14524	± 250	3.81	± 0.08	-0.04	± 0.08	0
HD174959	B6IV	14832	± 231	3.75	± 0.06	0.04	± 0.06	0
HD175156	B3II	17271	± 454	3.09	± 0.09	0.07	± 0.06	0
HD175306	G9IIIb	4470	± 26	1.92	± 0.10	-0.48	± 0.07	0
HD175317	F5/F6IV/V	6479	± 48	4.09	± 0.07	0.01	± 0.06	0
HD175426	B2.5V	17997	± 337	3.81	± 0.07	-0.05	± 0.06	0
HD175535	G7IIIa	5143	± 43	2.74	± 0.11	-0.03	± 0.10	0
HD175545	K2III	4511	± 20	2.92	± 0.07	0.11	± 0.04	0
HD175588	M4II	3333	± 7	0.48	± 0.11	-0.04	± 0.05	0
HD175640	B9III	11515	± 179	4.02	± 0.06	0.18	± 0.08	0
HD175743	K1III	4708	± 28	2.64	± 0.09	0.03	± 0.06	0
HD175751	K2III	4749	± 26	2.66	± 0.08	0.02	± 0.06	0
HD176301	B7III-IV	14428	± 265	3.75	± 0.10	0.14	± 0.09	0
HD176318	B7IV	13657	± 273	3.70	± 0.16	0.12	± 0.14	0
HD176411	K1III	4741	± 30	2.69	± 0.09	0.13	± 0.06	0
HD176437	B9III	11163	± 170	4.06	± 0.06	0.15	± 0.09	0
HD176582	B5IV	16308	± 303	3.61	± 0.09	0.10	± 0.08	0
HD176819	B2IV-V	20461	± 632	3.80	± 0.09	-0.05	± 0.07	0
HD177178	A4V	7854	± 55	3.99	± 0.06	-0.15	± 0.07	0
HD177196	A7V	7801	± 49	3.97	± 0.05	-0.11	± 0.06	0
HD177249	G5.5IIIb	5238	± 30	2.48	± 0.07	-0.03	± 0.07	0
HD177724	A0Vn	9975	± 242	3.85	± 0.13	-0.52	± 0.16	0
HD177756	B9Vn	11239	± 182	3.89	± 0.10	-0.08	± 0.11	0
HD177817	B7V	12786	± 201	4.14	± 0.07	0.16	± 0.08	0
HD177940	M7IIIevar	3092	± 23	0.59	± 0.54	-1.00	± 0.00	0
HD178125	B8III	12287	± 163	4.18	± 0.05	0.13	± 0.08	0
HD178187	A4III	8176	± 63	3.77	± 0.07	-0.03	± 0.06	0
HD178266	K5	4381	± 34	2.68	± 0.15	0.10	± 0.08	0
HD178329	B3V	17571	± 399	3.78	± 0.07	-0.05	± 0.05	0
HD178717	K3.5III:	4071	± 37	1.13	± 0.25	-0.13	± 0.12	0
HD179588	B9IV	11165	± 225	4.05	± 0.06	0.00	± 0.10	0
HD179761	B8II-III	14325	± 254	3.66	± 0.07	0.14	± 0.07	0
HD180006	G8III	4996	± 27	2.73	± 0.07	0.17	± 0.06	0
HD180028	F6Ib	6287	± 38	1.65	± 0.07	0.14	± 0.07	0
HD180163	B2.5IV	18946	± 401	3.69	± 0.06	0.02	± 0.04	0
HD180554	B4IV	16787	± 287	3.74	± 0.07	0.00	± 0.06	0
HD180610	K2III	4539	± 20	2.79	± 0.07	0.06	± 0.04	0
HD180711	G9III	4872	± 25	2.61	± 0.07	-0.17	± 0.06	0
HD180890	G5	5580	± 28	4.40	± 0.06	0.20	± 0.05	0
HD180928	K4III	4074	± 16	2.04	± 0.12	-0.57	± 0.07	0
HD180968	B0.5IV	24093	±1595	3.44	± 0.11	-0.08	± 0.10	0
HD181096	F6IV:	6318	± 34	4.03	± 0.05	-0.20	± 0.05	0
HD181276	G9III	5012	± 25	2.87	± 0.06	0.04	± 0.05	0
HD182293	K3IVp	4445	± 20	2.89	± 0.08	0.01	± 0.05	0
HD182490	A2III-IV	8548	± 92	3.69	± 0.10	0.05	± 0.07	0
HD182568	B3IV	18634	± 345	3.72	± 0.08	0.00	± 0.05	0
HD182572	G8IV...	5542	± 30	4.03	± 0.06	0.37	± 0.05	0
HD182761	A0V	9806	± 213	3.83	± 0.12	-0.44	± 0.14	0
HD182762	K0III	4894	± 37	2.63	± 0.10	-0.10	± 0.08	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD183085	F0	7138	± 45	3.93	± 0.06	-0.11	± 0.06	0
HD183144	B4III	16482	± 300	3.77	± 0.12	0.06	± 0.09	0
HD183324	A0V	10300		4.17		-1.22		2
HD184266	F2V	6014	± 53	3.72	± 0.10	-1.03	± 0.10	0
HD184406	K3IIIb	4428	± 19	2.83	± 0.08	0.04	± 0.05	0
HD184499	G0V	5762	± 34	4.13	± 0.07	-0.54	± 0.06	0
HD184875	A2V	8933	± 83	4.06	± 0.05	-0.24	± 0.06	0
HD184915	B0.5III	25817	±1967	3.40	± 0.11	-0.16	± 0.12	0
HD184930	B5III	14431	± 229	3.72	± 0.07	0.09	± 0.07	0
HD185351	G9IIIbCN...	5062	± 25	3.34	± 0.06	0.06	± 0.05	0
HD185423	B3III	19169	± 513	3.52	± 0.10	0.05	± 0.06	0
HD185644	K1III	4623	± 22	2.66	± 0.07	0.03	± 0.05	0
HD185657	G6V	4887	± 23	2.66	± 0.07	-0.16	± 0.05	0
HD185859	B0.5Iae	27238	±1708	3.36	± 0.09	-0.04	± 0.06	0
HD186307	A6V	7962	± 63	4.12	± 0.05	-0.20	± 0.07	0
HD186377	A5III	8677	± 70	2.71	± 0.06	-0.20	± 0.06	0
HD186408	G1.5Vb	5750	± 81	4.04	± 0.20	0.04	± 0.13	0
HD186486	G8III	5077	± 26	2.72	± 0.07	0.02	± 0.06	0
HD186619	M0III	3829	± 8	1.65	± 0.10	0.00	± 0.04	0
HD186648	K0III	4775	± 25	2.58	± 0.08	-0.07	± 0.06	0
HD186675	G7III	5042	± 26	2.64	± 0.07	-0.03	± 0.06	0
HD187013	F7V	6336	± 28	4.11	± 0.04	-0.08	± 0.04	0
HD187111	G8wvar...	4453	± 24	1.03	± 0.09	-1.69	± 0.07	0
HD187340	A2III	8579	± 76	3.25	± 0.09	-0.05	± 0.06	0
HD187428	F8Ib-II	5904	± 57	2.13	± 0.14	0.05	± 0.12	0
HD187459	B0.5Ibe...	26556	±1934	3.30	± 0.10	-0.02	± 0.09	0
HD187691	F8V	6069	± 30	4.12	± 0.05	0.10	± 0.04	0
HD187796	S...	3148	± 36	0.49	± 0.64	-1.00	± 0.00	0
HD187811	B2.5Ve	18859	± 772	3.36	± 0.14	-0.01	± 0.10	0
HD187929	F6Iab:	6169	± 43	1.43	± 0.08	0.13	± 0.08	0
HD187961	B7V	11710	± 315	2.37	± 0.08	-0.11	± 0.17	0
HD187983	A1Ia	10092	± 123	1.66	± 0.04	0.19	± 0.09	0
HD188001	O8e	36490	±1025	3.21	± 0.05	-0.11	± 0.08	0
HD188119	G8III	4939	± 28	2.43	± 0.08	-0.48	± 0.07	0
HD188209	O9.5Ib	31910	±1374	3.36	± 0.08	0.00	± 0.06	0
HD188260	B9.5III	10363	± 166	4.01	± 0.06	-0.11	± 0.08	0
HD188310	G9IIIb	4703	± 23	2.54	± 0.08	-0.24	± 0.05	0
HD188350	A0III	10115	± 158	3.88	± 0.08	-0.23	± 0.10	0
HD188485	A0III	10124	± 186	3.93	± 0.08	-0.28	± 0.11	0
HD188728	A1IV	9177	± 176	3.67	± 0.16	0.01	± 0.11	0
HD188947	K0III	4863	± 24	2.71	± 0.07	0.04	± 0.05	0
HD189319	M0III	3913	± 9	1.63	± 0.10	0.13	± 0.03	0
HD189558	G0/G1V	5702	± 37	3.87	± 0.08	-1.08	± 0.08	0
HD189944	B4V	15639	± 305	3.69	± 0.07	0.03	± 0.06	0
HD190004	F2III	6944	± 46	3.80	± 0.06	0.27	± 0.05	0
HD190172	F4III	7032	± 42	4.04	± 0.05	0.05	± 0.05	0
HD190390	F1III	6786	± 71	3.93	± 0.08	-0.63	± 0.11	0
HD190608	K2III	4722	± 22	2.96	± 0.07	0.00	± 0.05	0
HD190993	B3V	17316	± 407	3.85	± 0.10	-0.14	± 0.09	0
HD191026	K0IV	5186	± 26	3.84	± 0.06	0.05	± 0.05	0
HD191046	K0III	4468	± 24	1.79	± 0.10	-0.67	± 0.07	0
HD191243	B5Ib	16697	± 547	2.86	± 0.09	-0.02	± 0.08	0
HD191277	K3III	4444	± 21	2.85	± 0.08	0.15	± 0.05	0
HD191372	M3IIIa	3566	± 6	1.02	± 0.12	-0.02	± 0.04	0
HD191610	B2.5Ve	19332	±1371	3.25	± 0.20	-0.09	± 0.17	0
HD191615	G8IV	4764	± 24	2.54	± 0.08	-0.35	± 0.06	0
HD191639	B1V	20368	±1297	2.82	± 0.10	-0.39	± 0.19	0
HD192276	B7V	12601	± 249	4.08	± 0.08	0.14	± 0.10	0
HD192425	A2V	8804	± 95	4.07	± 0.07	-0.48	± 0.10	0
HD192685	B3V	18754	± 735	3.49	± 0.15	-0.10	± 0.12	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD192944	G8III	5045	± 27	2.55	± 0.07	-0.05	± 0.06	0
HD193322	O9V	35940	±1068	3.85	± 0.08	0.06	± 0.07	0
HD193432	B9IV	10069	± 165	3.82	± 0.08	-0.15	± 0.08	0
HD193536	B2V	19796	± 787	3.72	± 0.15	0.02	± 0.10	0
HD193621	A0III	9587	± 336	2.94	± 0.14	-0.52	± 0.29	0
HD194013	G8III-IV	4958	± 27	2.72	± 0.07	-0.06	± 0.06	0
HD194093	F8Iab:	6360	± 16	0.91	± 0.02	0.18	± 0.02	1
HD194960	K0III	4797	± 77	2.58	± 0.24	-0.15	± 0.18	0
HD195135	K2III	4604	± 24	2.67	± 0.08	0.16	± 0.05	0
HD195324	A1Ib	9997	± 121	1.89	± 0.04	-0.06	± 0.09	0
HD195506	K2III	4418	± 20	2.57	± 0.09	-0.32	± 0.05	0
HD195633	G0Vw	6102	± 40	4.10	± 0.07	-0.55	± 0.07	0
HD195725	A7III	7702	± 62	3.66	± 0.07	0.27	± 0.06	0
HD195810	B6III	14355	± 321	3.71	± 0.09	0.08	± 0.10	0
HD196504	B9V	10791	± 244	3.89	± 0.14	-0.27	± 0.15	0
HD196610	M6III	3100	± 14	0.39	± 0.29	-1.00	± 0.00	0
HD196740	B5IV	15427	± 282	3.77	± 0.14	0.02	± 0.11	0
HD196758	K1III	4804	± 27	2.63	± 0.08	0.06	± 0.06	0
HD196777	M1III	3629	± 7	1.12	± 0.14	-0.08	± 0.05	0
HD196787	G9III	4949	± 29	2.51	± 0.08	0.05	± 0.07	0
HD196867	B9IV	10705	± 173	4.05	± 0.06	-0.06	± 0.10	0
HD197812	M5Iab:	3119	± 13	0.32	± 0.24	-1.00	± 0.00	0
HD197912	G9.5III	4774	± 25	2.46	± 0.08	-0.11	± 0.06	0
HD197939	M3III	3438	± 7	0.77	± 0.14	-0.05	± 0.05	0
HD197964	K1IV	4762	± 22	2.96	± 0.07	0.09	± 0.05	0
HD198001	A1V	9320	± 131	3.81	± 0.08	-0.31	± 0.09	0
HD198084	F8IV-V	6091	± 32	3.96	± 0.06	0.11	± 0.04	0
HD198149	K0IV	4962	± 34	3.12	± 0.10	-0.28	± 0.08	0
HD198183	B5Ve	15629	± 315	3.81	± 0.10	-0.05	± 0.09	0
HD198345	K5III	4037	± 16	1.96	± 0.13	-0.07	± 0.06	0
HD198390	F5V	6424	± 32	4.18	± 0.04	-0.32	± 0.05	0
HD199081	B5V	15703	± 352	3.80	± 0.10	-0.11	± 0.10	0
HD199191	GIII+...	4813	± 32	2.77	± 0.10	-0.61	± 0.07	0
HD199253	K0III	4669	± 25	2.21	± 0.08	-0.14	± 0.06	0
HD199478	B8Iae	15983	± 788	2.48	± 0.11	-0.14	± 0.17	0
HD199870	K0IIIbCN...	4988	± 33	2.96	± 0.08	0.13	± 0.07	0
HD199960	G1V	5852	± 32	4.12	± 0.06	0.23	± 0.05	0
HD200527	M4s...	3365	± 9	0.52	± 0.15	-0.07	± 0.06	0
HD200790	F8V	6145	± 46	3.99	± 0.08	0.02	± 0.06	0
HD201099	G0	5942	± 41	4.14	± 0.08	-0.44	± 0.07	0
HD201381	G8III	5014	± 31	2.85	± 0.08	-0.02	± 0.07	0
HD201626	G9p	4818	± 111	1.88	± 0.39	-1.71	± 0.27	0
HD201889	G1V	5711	± 49	4.23	± 0.10	-0.73	± 0.10	0
HD201891	F8V-VI	5818	± 52	4.13	± 0.11	-1.05	± 0.11	0
HD202259	M1III	3748	± 9	1.39	± 0.14	-0.10	± 0.05	0
HD202573	G5V:	4929	± 37	2.40	± 0.11	-0.64	± 0.09	0
HD202850	B9Iab	11839	± 256	2.05	± 0.06	0.15	± 0.13	0
HD202904	B2Vne	16758	± 637	2.90	± 0.10	-0.36	± 0.16	0
HD203344	K1III	4683	± 27	2.54	± 0.09	-0.20	± 0.06	0
HD203387	G8III	5136	± 34	2.82	± 0.09	-0.06	± 0.07	0
HD203504	K1III	4671	± 24	2.59	± 0.08	0.01	± 0.05	0
HD203525	M0III	3951	± 14	1.74	± 0.14	-0.10	± 0.06	0
HD204306	F5	6050	± 53	4.12	± 0.09	-0.58	± 0.09	0
HD204363	F7V	6220	± 76	4.29	± 0.11	-0.34	± 0.12	0
HD204445	M1	3574	± 6	1.19	± 0.12	0.01	± 0.04	0
HD204543	G0	4612	± 48	1.20	± 0.16	-1.93	± 0.12	0
HD204613	G1IIIa:	5734	± 61	3.85	± 0.13	-0.35	± 0.11	0
HD204642	K2III	4664	± 24	2.94	± 0.08	0.03	± 0.05	0
HD204771	K0III	4966	± 31	2.92	± 0.08	0.06	± 0.07	0
HD204867	G0Ib	5705	± 31	1.06	± 0.05	0.03	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD205021	B2IIIvar	24636	± 1275	3.64	± 0.10	-0.01	± 0.05	0
HD205139	B1II	26810	± 2110	3.98	± 0.13	-0.12	± 0.10	0
HD205435	G8III	5088	± 33	2.90	± 0.09	-0.16	± 0.07	0
HD205512	K1III	4696	± 33	2.52	± 0.12	-0.03	± 0.08	0
HD205637	B3V:p	19106	± 1130	3.07	± 0.13	-0.08	± 0.14	0
HD206067	K0III	4801	± 28	2.60	± 0.08	-0.09	± 0.06	0
HD206078	G8III	4811	± 30	2.62	± 0.10	-0.56	± 0.07	0
HD206165	B2Ib	20569		2.93		-0.28		3
HD206267	O6e	40926	± 943	3.87	± 0.04	0.11	± 0.03	0
HD206453	G8III	5033	± 37	2.48	± 0.10	-0.43	± 0.09	0
HD206632	M4III:	3197	± 10	0.33	± 0.18	-0.30	± 0.11	0
HD206936	M2Iae	3784	± 16	0.04	± 0.11	0.05	± 0.07	0
HD206952	K1III	4713	± 29	2.73	± 0.09	0.19	± 0.06	0
HD207089	K0Iab:	4437	± 38	1.11	± 0.11	0.03	± 0.08	0
HD207130	K1III	4795	± 31	2.71	± 0.09	0.11	± 0.07	0
HD207134	K3III:	4429	± 24	2.41	± 0.12	-0.06	± 0.07	0
HD207330	B3III	20662	± 626	3.78	± 0.08	-0.02	± 0.05	0
HD207516	B8V	11629	± 228	4.07	± 0.08	0.04	± 0.12	0
HD207978	F6IV-Vwvar	6316	± 64	4.16	± 0.07	-0.56	± 0.09	0
HD208110	G0III _s	5011	± 47	2.25	± 0.14	-1.09	± 0.12	0
HD208202	K0III+...	5007	± 31	2.88	± 0.08	-0.04	± 0.07	0
HD208501	B8Ib	15827	± 632	2.60	± 0.09	-0.11	± 0.12	0
HD208906	F8V-VI	6035	± 52	4.30	± 0.08	-0.72	± 0.10	0
HD208947	B2V	19417	± 851	3.83	± 0.21	-0.04	± 0.14	0
HD209409	B7IVe	12221	± 289	2.62	± 0.08	-0.16	± 0.15	0
HD209419	B5III	15357	± 369	3.73	± 0.08	0.06	± 0.07	0
HD209819	B8V	11258	± 226	4.09	± 0.08	-0.08	± 0.12	0
HD210295	G8/K0w...	4877	± 55	2.20	± 0.19	-1.29	± 0.14	0
HD210752	G0	5943	± 41	4.29	± 0.07	-0.63	± 0.08	0
HD210807	G7II-III	5104	± 36	2.46	± 0.09	-0.11	± 0.08	0
HD210839	O6Iab:...	38903	± 866	3.41	± 0.05	0.03	± 0.06	0
HD210855	F8V	6210	± 43	3.89	± 0.08	0.13	± 0.06	0
HD210889	K2III	4615	± 25	2.60	± 0.09	0.02	± 0.05	0
HD210939	K1III	4546	± 25	2.28	± 0.09	-0.02	± 0.06	0
HD211391	G8III	5021	± 32	2.77	± 0.08	0.15	± 0.07	0
HD212496	G8.5IIIb	4761	± 27	2.57	± 0.09	-0.35	± 0.06	0
HD212571	B1Ve	23278	± 1230	3.53	± 0.10	-0.02	± 0.08	0
HD212943	K0III	4676	± 25	2.76	± 0.08	-0.28	± 0.05	0
HD212978	B2V	20855	± 700	3.81	± 0.11	-0.03	± 0.07	0
HD213660	A6V	8118	± 126	3.86	± 0.13	-0.15	± 0.16	0
HD214376	K2III	4646	± 26	2.63	± 0.09	0.12	± 0.06	0
HD214567	G8II	4987	± 37	2.63	± 0.10	-0.26	± 0.09	0
HD214923	B8V	11597	± 185	3.93	± 0.10	0.06	± 0.10	0
HD215373	K0III	5080	± 32	2.85	± 0.08	0.16	± 0.07	0
HD215648	F7V	6187	± 42	4.04	± 0.07	-0.26	± 0.06	0
HD215721	G8III	4907	± 42	2.49	± 0.13	-0.46	± 0.10	0
HD216131	G8III	5022	± 24	2.76	± 0.06	-0.09	± 0.05	0
HD216143	G5	4606	± 48	1.21	± 0.16	-2.09	± 0.11	0
HD216174	K1III	4390	± 24	1.99	± 0.11	-0.51	± 0.07	0
HD216219	G0IIp	5755	± 50	3.29	± 0.11	-0.28	± 0.09	0
HD216228	K0III	4795	± 28	2.58	± 0.08	-0.02	± 0.06	0
HD216385	F7IV	6266	± 95	4.08	± 0.15	-0.18	± 0.13	0
HD216640	K1III	4628	± 25	3.17	± 0.08	0.16	± 0.05	0
HD217014	G2.5IVa	5756	± 36	4.23	± 0.07	0.20	± 0.05	0
HD217675	B6IIIpe+...	14491	± 435	2.95	± 0.10	0.03	± 0.14	0
HD217906	M2.5II-III	3455	± 6	1.03	± 0.12	-0.16	± 0.05	0
HD218029	K3III	4437	± 22	2.34	± 0.09	0.18	± 0.05	0
HD218031	K0IIIb	4758	± 31	2.50	± 0.10	-0.16	± 0.07	0
HD218101	G8IV	5220	± 37	3.76	± 0.08	0.10	± 0.07	0
HD218470	F5V	6497	± 49	4.12	± 0.06	-0.13	± 0.06	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
HD218502	F3:w	6137	± 48	4.05	± 0.07	-1.85	± 0.13	0
HD218504	G1/G2w...	5965	± 53	4.21	± 0.09	-0.58	± 0.10	0
HD218857	G6w	5055	± 75	2.39	± 0.23	-1.92	± 0.17	0
HD218935	G8III-IV	4924	± 29	2.99	± 0.08	-0.16	± 0.06	0
HD219134	K3V	4700	± 30	4.58	± 0.07	0.02	± 0.06	0
HD219449	K0III	4690	± 25	2.59	± 0.08	0.00	± 0.05	0
HD219615	G9III:	4886	± 32	2.45	± 0.10	-0.58	± 0.08	0
HD219945	K0III	4845	± 31	2.55	± 0.09	-0.15	± 0.07	0
HD219962	K1III	4656	± 25	2.56	± 0.08	-0.04	± 0.06	0
HD220009	K2III	4334	± 23	2.04	± 0.12	-0.69	± 0.07	0
HD220117	F5V	6428	± 44	4.02	± 0.07	0.03	± 0.05	0
HD220575	B8III	13014	± 289	3.21	± 0.12	0.11	± 0.14	0
HD220825	A0p...	10375	± 161	3.78	± 0.14	0.74	± 0.09	0
HD220954	K1III	4759	± 28	2.63	± 0.09	0.07	± 0.06	0
HD221115	G7III	5045	± 29	2.83	± 0.07	0.06	± 0.06	0
HD221148	K3IIIvar	4635	± 31	3.32	± 0.09	0.34	± 0.06	0
HD221170	G2IV	4582	± 46	1.21	± 0.16	-2.03	± 0.11	0
HD221345	G8III	4696	± 27	2.49	± 0.09	-0.30	± 0.06	0
HD221615	M5III	3234	± 8	0.44	± 0.15	-0.22	± 0.08	0
HD221830	F9V	5676	± 51	4.09	± 0.10	-0.46	± 0.09	0
HD221861	G9Ib	4605	± 41	0.96	± 0.07	0.08	± 0.08	0
HD222107	G8III	4679	± 24	2.86	± 0.08	-0.48	± 0.05	0
HD222368	F7V	6200	± 42	4.12	± 0.07	-0.12	± 0.06	0
HD222404	K1IV	4782	± 31	3.25	± 0.09	0.08	± 0.06	0
HD222439	B9IVn	10733	± 247	3.87	± 0.13	-0.32	± 0.15	0
HD222574	G2Ib/II	5536	± 34	1.69	± 0.07	0.03	± 0.07	0
HD223047	G5Ib+...	5015	± 35	1.32	± 0.06	0.04	± 0.07	0
HD223075	CII...	3867	± 90	1.03	± 0.80	-0.01	± 0.33	0
HD223165	K1III	4728	± 29	2.50	± 0.09	0.06	± 0.06	0
HD223252	G8III	5034	± 35	2.76	± 0.09	-0.05	± 0.08	0
HD223385	A3Iae	10142	± 200	1.41	± 0.07	0.46	± 0.14	0
HD223460	G1IIIe	5383	± 42	2.92	± 0.10	-0.17	± 0.09	0
HD223869	K1III	4868	± 30	3.31	± 0.08	-0.07	± 0.06	0
HD224458	G8III	4829	± 49	2.39	± 0.12	-0.45	± 0.11	0
HD224533	G9III	5054	± 32	2.78	± 0.08	-0.04	± 0.07	0
HD224801	B9p...	12783	± 169	4.19	± 0.08	0.98	± 0.07	0
HD224926	B7III-IV	13068	± 224	4.13	± 0.08	0.37	± 0.09	0
HD224930	G5Vb	5427	± 39	4.34	± 0.08	-0.80	± 0.09	0
HD225132	B9IVn	10797	± 449	4.24	± 0.14	0.00	± 0.24	0
HD225180	A1III	9561	± 235	2.73	± 0.09	-0.47	± 0.17	0
HD225212	K3Iab:	4183	± 23	0.81	± 0.09	0.22	± 0.05	0
HD225239	G2V	5652	± 50	3.84	± 0.11	-0.47	± 0.09	0
HD232078	K3IIp	4028	± 15	0.53	± 0.08	-1.21	± 0.06	0
HD233891	G5IIIw	4772	± 45	1.55	± 0.15	-1.56	± 0.12	0
HD237846	F8	4987	± 64	2.12	± 0.19	-2.55	± 0.13	0
HD237903	K7V	4068	± 14	4.71	± 0.05	-0.35	± 0.06	0
HD338529	B5	6174	± 32	3.93	± 0.05	-2.15	± 0.08	0
BD+01_2916	K0	4312	± 26	0.66	± 0.09	-1.91	± 0.06	0
BD+04_4551	F7Vw	5986	± 58	4.16	± 0.09	-1.28	± 0.13	0
BD+09_3063	Flat	5048	± 160	2.67	± 0.41	-0.50	± 0.41	0
BD+09_3223	Flat	5164	± 51	2.40	± 0.15	-2.08	± 0.13	0
BD+11_2998	F8	5334	± 45	2.61	± 0.12	-1.21	± 0.11	0
BD+18_2890	Flat	5102	± 49	2.59	± 0.15	-1.45	± 0.11	0
BD+18_2976	G0	4753	± 49	1.58	± 0.16	-2.17	± 0.11	0
BD+25_2436	G7III	4964	± 41	2.46	± 0.12	-0.53	± 0.10	0
BD+25_2479	G8III	5458	± 46	4.33	± 0.09	0.40	± 0.07	0
BD+25_2497	G6III	4941	± 46	2.49	± 0.14	-0.65	± 0.11	0
BD+26_2276	G6III	5810	± 69	4.05	± 0.13	0.11	± 0.10	0
BD+27_2057	G7III	4882	± 51	2.50	± 0.15	-0.56	± 0.12	0
BD+27_2096	G6III	5572	± 47	3.89	± 0.10	0.41	± 0.07	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
BD+27_2126	G5	4721	± 25	2.57	± 0.08	-0.06	± 0.06	0
BD+28_2079	G7III	4812	± 31	2.36	± 0.10	-0.50	± 0.07	0
BD+29_2231	G7III	4942	± 48	2.52	± 0.14	-0.44	± 0.11	0
BD+29_2294	G5III-IVp	4983	± 44	2.47	± 0.13	-0.70	± 0.11	0
BD+30_2611	G8III	4391	± 28	0.96	± 0.10	-1.46	± 0.08	0
BD+30_2931	K2	4427	± 20	2.27	± 0.08	-0.21	± 0.05	0
BD+31_2356	G6III	5843	± 55	3.96	± 0.11	0.24	± 0.08	0
BD+34_2371	G7III	4906	± 69	2.47	± 0.16	-0.43	± 0.16	0
BD+36_2303	G7III	4649	± 31	1.75	± 0.11	-0.92	± 0.08	0
BD+36_368	K1III	4797	± 48	2.69	± 0.15	-0.09	± 0.11	0
BD+37_2312	G7III	5617	± 45	4.22	± 0.09	0.20	± 0.07	0
BD+37_2319	G6III	5707	± 46	4.05	± 0.09	0.31	± 0.07	0
BD+37_448	G9III	4900	± 37	2.70	± 0.10	-0.06	± 0.08	0
BD+39_2554	G6III	5595	± 43	3.88	± 0.09	0.25	± 0.07	0
BD+45_1668	A9.2	8693	± 79	4.72	± 0.06	-0.48	± 0.16	0
BD-01_2582	F0	5004	± 72	2.24	± 0.22	-2.25	± 0.16	0
BD-10_3166	K0V	5326	± 43	4.45	± 0.08	0.40	± 0.07	0
BD-11_4126	K3V	4731	± 26	4.63	± 0.06	-0.03	± 0.06	0
BD-15_872	F2	5511	± 66	4.27	± 0.16	-0.39	± 0.13	0
G_101-29	G0	5374	± 65	3.26	± 0.18	-2.01	± 0.15	0
G_102-20	Flat	5418	± 38	4.49	± 0.08	-1.09	± 0.10	0
G_102-27	G0	5595	± 36	3.65	± 0.08	-0.57	± 0.07	0
G_103-55	G0	5567	± 37	4.34	± 0.07	-0.36	± 0.07	0
G_103-68	M3	3477	± 11	4.76	± 0.07	-1.08	± 0.15	0
G_107-27	K2	4197	± 21	4.67	± 0.07	-0.17	± 0.06	0
G_108-29	G0V	5752	± 30	4.31	± 0.06	-0.39	± 0.05	0
G_108-43	G0	5805	± 38	4.23	± 0.07	-0.59	± 0.07	0
G_11-45	G4V	5668	± 36	4.34	± 0.07	0.15	± 0.06	0
G_112-54	G8V	5317	± 25	4.53	± 0.05	-0.78	± 0.06	0
G_114-18	G5	5444	± 58	4.50	± 0.11	-0.13	± 0.11	0
G_119-32	F5	5706	± 58	3.96	± 0.11	-1.90	± 0.14	0
G_119-64	G0	6134	± 55	4.16	± 0.07	-1.53	± 0.13	0
G_12-21	F2	5938	± 51	4.18	± 0.08	-1.32	± 0.12	0
G_12-22	G8V	5479	± 84	4.48	± 0.16	0.24	± 0.14	0
G_12-24	G3V	5648	± 31	4.29	± 0.06	-0.15	± 0.05	0
G_122-39	G0	5578	± 34	4.60	± 0.06	-0.33	± 0.06	0
G_122-51	G8Vp	5173	± 28	4.76	± 0.06	-1.22	± 0.08	0
G_122-66	G8Vw...	4955	± 26	3.37	± 0.07	-0.53	± 0.06	0
G_123-29	G0V	5745	± 24	4.28	± 0.05	-0.83	± 0.05	0
G_124-40	K0	5458	± 40	4.09	± 0.08	0.52	± 0.06	0
G_125-4	K0V	5196	± 131	3.82	± 0.31	-0.26	± 0.26	0
G_126-62	sdF8	6055	± 55	4.09	± 0.08	-1.44	± 0.13	0
G_136-45	G0	5598	± 26	4.41	± 0.05	-0.13	± 0.05	0
G_139-48	G0V	5774	± 38	4.24	± 0.07	-0.76	± 0.07	0
G_140-5	A5	6035	± 38	3.94	± 0.06	-2.09	± 0.09	0
G_143-17	G5Vw	5513	± 30	4.25	± 0.06	-1.50	± 0.08	0
G_144-6	F7V-VI	5974	± 34	4.19	± 0.05	-1.11	± 0.07	0
G_149-25	K0	5601	± 29	4.53	± 0.06	-0.33	± 0.06	0
G_15-20	K3V	4884	± 34	4.56	± 0.07	0.25	± 0.07	0
G_16-13	G0	5748	± 41	4.01	± 0.08	-0.84	± 0.08	0
G_16-32	K1.5IV	4862	± 25	3.67	± 0.06	0.08	± 0.05	0
G_160-27	G0	5504	± 30	3.91	± 0.07	-0.48	± 0.06	0
G_161-29	K:	4676	± 36	4.56	± 0.08	-0.06	± 0.08	0
G_162-13	K2	5343	± 37	4.47	± 0.07	0.34	± 0.06	0
G_163-78	K0	5185	± 112	4.17	± 0.26	0.36	± 0.23	0
G_165-11	G0	5800	± 31	4.12	± 0.06	-0.57	± 0.06	0
G_165-39	A4	6160	± 40	3.98	± 0.06	-2.03	± 0.10	0
G_166-25	F9V	5786	± 29	4.09	± 0.06	-0.60	± 0.05	0
G_166-45	A5	6060	± 51	3.93	± 0.08	-2.16	± 0.12	0
G_17-21	F8V	5877	± 28	4.14	± 0.05	-0.73	± 0.05	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
G_17-30	G0	5706	± 31	4.19	± 0.06	-0.48	± 0.06	0
G_170-47	G0	5070	± 34	2.35	± 0.10	-2.48	± 0.07	0
G_175-33	G0	5731	± 39	4.15	± 0.08	0.30	± 0.06	0
G_176-11	M2V	3948	± 9	5.13	± 0.29	-1.43	± 0.04	0
G_180-35	K0V	5292	± 28	4.36	± 0.05	0.49	± 0.05	0
G_181-47	G1V	5632	± 41	4.06	± 0.09	-0.48	± 0.08	0
G_182-19	G0V	5795	± 24	4.25	± 0.05	-0.54	± 0.04	0
G_183-11	F0	6133	± 35	3.97	± 0.05	-2.06	± 0.09	0
G_19-24	K5	3959	± 15	4.59	± 0.06	-0.27	± 0.06	0
G_193-33	G0	5814	± 34	4.12	± 0.07	-0.52	± 0.06	0
G_196-33	F8	5901	± 24	4.30	± 0.04	-0.47	± 0.04	0
G_196-48	G	5672	± 80	3.78	± 0.16	-1.61	± 0.18	0
G_196-9	K5	3947	± 12	4.61	± 0.05	-0.29	± 0.05	0
G_197-45	G5	5402	± 51	4.51	± 0.10	-0.61	± 0.11	0
G_197-56	G2V	5620	± 62	4.42	± 0.12	-0.71	± 0.13	0
G_200-36	G5	5511	± 29	4.43	± 0.06	0.18	± 0.05	0
G_200-62	K1V	5180	± 25	4.51	± 0.05	-0.38	± 0.05	0
G_205-5	K2V	4973	± 21	4.56	± 0.04	-0.20	± 0.05	0
G_207-5	F8	5904	± 51	4.32	± 0.09	-0.50	± 0.09	0
G_212-10	K0III-IV	4877	± 32	3.19	± 0.09	-0.17	± 0.07	0
G_22-7	K0IV-V	5534	± 31	4.30	± 0.06	0.31	± 0.05	0
G_223-65	G3IV	4968	± 31	2.38	± 0.09	-0.72	± 0.08	0
G_227-46	M3V	3481	± 10	4.78	± 0.07	-1.01	± 0.13	0
G_229-34	F8	5675	± 31	4.18	± 0.06	-0.28	± 0.05	0
G_230-49	G0	5763	± 53	4.24	± 0.12	-0.54	± 0.10	0
G_237-84	G0	5572	± 29	4.52	± 0.06	-0.45	± 0.06	0
G_241-18	G5	5631	± 43	4.39	± 0.08	-0.51	± 0.08	0
G_243-63	F8V	5063	± 51	2.46	± 0.16	-1.63	± 0.12	0
G_244-59	G8V	5538	± 34	4.44	± 0.07	-0.50	± 0.07	0
G_245-32	sd:F2	6114	± 62	4.06	± 0.09	-1.80	± 0.16	0
G_246-38	G0	5389	± 60	4.04	± 0.13	-1.90	± 0.16	0
G_249-49	G0	5875	± 33	4.11	± 0.06	-0.83	± 0.06	0
G_25-15	F9V	5887	± 47	4.32	± 0.08	-0.58	± 0.09	0
G_25-29	G5	5802	± 52	4.12	± 0.10	-0.65	± 0.10	0
G_250-22	K5	4257	± 20	4.68	± 0.06	-0.16	± 0.06	0
G_256-34	K1III	4693	± 26	2.57	± 0.10	-0.60	± 0.06	0
G_257-32	K7	3600	± 15	4.59	± 0.11	-0.84	± 0.19	0
G_259-35	G5III	5056	± 31	2.48	± 0.09	-1.44	± 0.07	0
G_27-44	F8	5987	± 45	4.18	± 0.08	-0.68	± 0.08	0
G_270-23	F5V	6161	± 59	4.12	± 0.08	-1.09	± 0.12	0
G_36-33	K1V	5344	± 27	4.64	± 0.05	0.14	± 0.05	0
G_37-26	A4p	5876	± 35	3.99	± 0.06	-1.98	± 0.09	0
G_4-44	G5	5846	± 49	4.23	± 0.09	-0.66	± 0.09	0
G_40-34	F0	6570	± 51	4.24	± 0.05	-1.39	± 0.12	0
G_43-3	sdF5	6210	± 38	3.94	± 0.06	-2.12	± 0.09	0
G_43-33	F8	5954	± 35	4.01	± 0.06	-0.50	± 0.06	0
G_44-6	G1V	5675	± 33	4.34	± 0.06	-0.64	± 0.07	0
G_46-31	Flat	5925	± 111	4.12	± 0.19	-0.83	± 0.20	0
G_48-29	sd:A2	6227	± 50	3.92	± 0.08	-2.25	± 0.12	0
G_5-40	G0	5893	± 76	4.19	± 0.13	-0.81	± 0.15	0
G_57-11	G5	5759	± 36	4.46	± 0.07	0.06	± 0.06	0
G_58-25	F4V	5930	± 31	4.13	± 0.05	-1.39	± 0.07	0
G_58-30	G0	5902	± 29	4.30	± 0.05	0.13	± 0.04	0
G_60-6	K2	5046	± 40	4.60	± 0.08	0.10	± 0.08	0
G_63-9	F9V	5897	± 32	4.19	± 0.06	-0.71	± 0.06	0
G_65-16	G5	5694	± 38	4.30	± 0.07	-0.42	± 0.07	0
G_65-47	G1V	5689	± 29	4.41	± 0.05	-0.37	± 0.05	0
G_7-6	G0	5746	± 32	4.12	± 0.06	0.17	± 0.05	0
G_74-5	F8V	5699	± 24	4.33	± 0.04	-0.95	± 0.05	0
G_75-62	G5	5520	± 29	4.42	± 0.06	-0.47	± 0.06	0

Table 2. continued.

Name ^a	Sp.Type ^b	T_{eff} (K)	error	$\log(g)$ (cm s^{-2})	error	[Fe/H] (dex)	error	Flag
G_78-14	G8	5286	± 39	4.57	± 0.08	-0.40	± 0.08	0
G_80-15	F9V	5798	± 26	4.18	± 0.05	-0.89	± 0.05	0
G_81-38	G1V-VI	5786	± 28	4.25	± 0.05	-0.51	± 0.05	0
G_82-12	G0	5660	± 30	4.13	± 0.06	-0.26	± 0.05	0
G_84-29	sd:F0	6189	± 40	3.88	± 0.06	-2.25	± 0.10	0
G_84-37	G0	5895	± 41	4.19	± 0.07	-1.06	± 0.09	0
G_88-40	F8	5932	± 36	4.14	± 0.06	-0.84	± 0.07	0
G_89-11	K0	5131	± 33	4.47	± 0.06	0.16	± 0.06	0
G_90-1	K2V	4948	± 41	4.71	± 0.08	-0.06	± 0.08	0
G_90-25	sdG2	5479	± 30	4.28	± 0.06	-1.61	± 0.08	0
G_95-4	G0	5648	± 30	4.13	± 0.06	-0.42	± 0.05	0
G_95-57	K1V	5187	± 33	4.63	± 0.07	-0.94	± 0.08	0
G_96-20	F8	6284	± 37	4.26	± 0.04	-0.90	± 0.07	0
NGP_29_129	K1V	5315	± 44	4.45	± 0.09	0.22	± 0.08	0

Notes. The last column is a flag indicating the origin of the adopted parameters, ‘0’, standard fit of the CFLIB spectrum; ‘1’, fit of the CFLIB spectrum starting from 3900 Å; ‘2’, from literature; ‘3’, ULYSS fit of ELODIE spectra; ‘4’, improved fit, see the text. The internal errors are given only when Flag = 0 or 1.

^(a) Designation of the stars in the original CFLIB list (Valdes et al. 2004). ^(b) Stellar spectral classification inherited from Valdes et al. (2004), and updated with recent classifications for the literature.

Table 3. 79 Outliers found in the comparisons with the literature.

Name	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Reference	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Flag
HD002857	8895 (101)	4.34 (0.07)	-0.63 (0.16)	7522	2.50	-1.64	Klochkova & Panchuk (1987)	7776	3.19	-1.70	2
				7550	3.00	-1.73	Kinman et al. (2000)				
				8002	3.38	-1.67	Behr (2003)				
HD004307	5803 (32)	4.01 (0.06)	-0.26 (0.05)	5648	3.75	-0.29	Takeda et al. (2007)	5803	4.01	-0.26	0
				5809	4.06	-0.28	Edvardsson et al. (1993)				
HD005394	33939 (1090)	3.38 (0.06)	0.02 (0.04)	33090	3.41	0.05	fit_ELO	33939	3.38	0.02	0
				34097	3.34	0.11	ELODIE_I				
				39156	3.22	-1.56	ELODIE_I				
HD015798	6470 (47)	4.07 (0.06)	-0.15 (0.06)	6307	3.70	-0.26	Takeda et al. (2007)	6470	4.07	-0.15	0
				6436	3.94	-0.25	Edvardsson et al. (1993)				
HD016458	4410 (67)	1.40 (0.22)	-0.63 (0.17)	4577	1.77	-0.35	Soubiran et al. (2008)	4484	1.57	-0.53	1
				4500	1.40	-0.36	Fernandez-Villacanas et al. (1990)				
				4500	2.00	-0.32	Snedden et al. (1981)				
				4600	2.00	-0.38	Tomkin & Lambert (1983)				
				4800	1.80	-0.30	Smith (1984)				
				4480	1.57	-0.33	ELODIE_I				
				4484	1.57	-0.53	fit_3900				
HD018296	12326 (197)	4.02 (0.11)	0.90 (0.08)	11200	3.00	-0.12	Searle et al. (1966)	12326	4.02	0.90	0
				11480	3.90		Roby & Lambert (1990)				
HD019994	6081 (29)	4.05 (0.05)	0.15 (0.04)	6290	4.31	0.32	Santos et al. (2004)	6081	4.05	0.15	0
				6104	4.10	0.09	Edvardsson et al. (1993)				
				6074	4.02	0.11	ELODIE_I				
				6047	4.00	0.10	ELODIE_I				
				6289	4.48	0.24	Sousa et al. (2008)				
HD020902	6805 (42)	1.59 (0.09)	0.16 (0.08)	6560	1.92	-0.02	Gray et al. (2001)	6490	1.74	0.14	1
				6490	1.74	0.14	fit_3900				
HD022211	6018 (49)	3.42 (0.11)	0.20 (0.07)	6000	3.55	-0.29	ELODIE_I	6018	3.42	0.20	0
				5616	3.15	-0.31	Prugniel & Soubiran (2001)				
HD022468	4748 (50)	3.42 (0.14)	-0.16 (0.10)	5146	3.75	-0.46	ELODIE_I	4748	3.42	-0.16	0
				5126	3.70	-0.49	ELODIE_I				
				4771	3.46	-0.23	fit_ELO				
				4688		-1.25	Nordström et al. (2004)				
				4508		-1.52	Nordström et al. (2004)				
HD025291	7761 (67)	2.49 (0.00)	0.14 (0.08)	7050	1.85	-0.21	Gray et al. (2001)	7761	2.49	0.14	4
				7600	1.50	0.11	Venn (1995)				
				6750	1.00		Andrievsky et al. (2002)				
				7250	1.50	-0.33	Giridhar & Arellano Ferro (2005)				
				7497			Kovtyukh (2007)				
				7390	1.50	-0.2	fix log g				
HD026965	5108 (26)	4.49 (0.05)	-0.29 (0.05)	5284		-0.04	Nordström et al. (2004)	5108	4.49	-0.29	0
				5200	4.31	-0.25	Mallik (1998)				
				5163	4.51	-0.25	Soubiran et al. (2008)				
				5153	4.39	-0.31	Sousa et al. (2008)				
HD027295	11060 (183)	4.02 (0.06)	-0.02 (0.09)	12000	4.25	-0.75	Smith & Dworetzky (1993)	11956	3.92	-0.95	2
				11956	3.92	-0.95	Behr (2003)				
HD029139	3863 (8)	1.73 (0.10)	-0.04 (0.04)	4100	1.70	-0.36	Hekker & Meléndez (2007)	3863	1.73	-0.04	0
				3850	0.55	-0.10	Mallik (1998)				
				3882	1.67	-0.01	ELODIE_I				
HD032147	4617 (21)	4.53 (0.05)	0.17 (0.04)	4822	4.38	0.30	Soubiran et al. (2008)	4617	4.53	0.17	0
				4625	4.55	0.28	Feltzing & Gustafsson (1998)				
				4825	4.57	0.34	Thorén & Feltzing (2000)				
				4618	4.46	0.14	ELODIE_I				
HD034797	12580	4.14	0.62	14000	4.50	-0.60	Sargent (1966)	12580	4.14	0.62	0
				13000	4.25	0.90	Alonso et al. (2003)				
HD036673	7841 (63)	2.10 (0.08)	0.15 (0.08)	7460	1.41	0.13	Gray et al. (2001)	7603	2.05	0.08	1
				7400	1.10	0.04	Venn (1995)				
				7603	2.05	0.08	fit_3900				
HD037088	5790 (35)	4.26 (0.07)	0.13 (0.05)	5929		0.21	Nordström et al. (2004)	5790	4.26	0.13	0
				5856	4.35	0.10	Feltzing & Gustafsson (1998)				

Table 3. continued.

Name	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Reference	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Flag
HD037394	5328 (27)	4.67 (0.05)	0.21 (0.05)	5140		-0.02	Nordström et al. (2004)	5328	4.67	0.21	0
				5196	4.50	-0.20	Perrin (1983)				
HD039118	4927 (49)	2.01 (0.13)	-0.12 (0.12)	4550	1.52	-0.34	Hekker & Meléndez (2007)	4927	2.01	-0.12	0
				4546	1.93	-0.31	Prugniel & Soubiran (2001)				
				5029	2.32	-0.04	ELODIE_I				
				4927	2.16	-0.16	fit_ELO				
HD040460	4804 (28)	2.53 (0.09)	-0.25 (0.07)	4541	2.00	-0.50	Soubiran et al. (2008)	4804	2.53	-0.25	0
				4541	2.00	-0.50	Cottrell & Sneden (1986)				
				4787	2.46	-0.23	ELODIE_I				
				4790	2.45	-0.22	ELODIE_I				
HD045674	7630 (75)	2.05 (0.08)	0.16 (0.07)	7371	1.90	0.08	ELODIE_I	7630	2.05	0.16	0
				5175	1.20	-0.42	Prugniel & Soubiran (2001)				
				7618	1.99	0.13	fit_ELO				
HD048329	4662 (36)	0.88 (0.05)	0.15 (0.07)	4301	0.77	0.11	Soubiran et al. (2008)	4662	0.88	0.15	0
				4150	0.80	0.20	Mallik (1998)				
				4582	0.80	-0.05	Smith & Lambert (1987)				
				4624	0.60	-0.09	Luck (1982)				
				4302	0.87	-0.02	Cenarro et al. (2007)				
HD054322	5841 (33)	4.44 (0.06)	0.13 (0.05)	6026		0.15	Nordström et al. (2004)	5841	4.44	0.13	0
				5894	4.55	0.15	Feltzing & Gustafsson (1998)				
HD057669	4658 (25)	1.88 (0.07)	0.13 (0.05)	4500	2.00	-0.07	Hekker & Meléndez (2007)	4658	1.88	0.13	0
				4440	2.50	0.06	McWilliam (1990)				
HD058343	18173 (590)	3.66 (0.09)	0.01 (0.06)	20160	3.75	0.89	Kodaira & Scholz (1970)	18173	3.66	0.01	0
				16389	3.61		Frémat et al. (2005)				
HD060179	9340 (146)	3.79 (0.08)	-0.06 (0.07)	10286	4.00	0.98	Smith (1974)	9340	3.79	-0.06	0
HD061295	7079 (45)	3.66 (0.06)	0.32 (0.05)	6883	3.10	0.51	Robinson et al. (2007)	7079	3.66	0.32	0
				6925	3.00	0.25	Luck & Wepfer (1995)				
				7050	3.10	0.25	Luck & Wepfer (1995)				
HD072946	6028 (51)	4.12 (0.11)	0.09 (0.10)	5620	4.44	0.10	ELODIE_I	5624	4.19	-0.03	1
				5669	4.54	0.11	ELODIE_I				
				5676	4.53	0.12	ELODIE_I				
				5624	4.19	-0.03	fit_3900				
				5664	4.51	0.13	fit_ELO				
				5911	5.00	0.24	Feltzing & Gustafsson (1998)				
				5704	4.60	0.18	Soubiran et al. (2008)				
				5649		0.08	Nordström et al. (2004)				
HD072968	10651 (281)	3.63 (0.24)	0.77 (0.14)	11200	4.00	1.60	Hensberge & de Loore (1974)	10651	3.63	0.77	0
HD074721	9909 (203)	4.10 (0.05)	-0.38 (0.11)	8640	3.55	-1.48	Adelman & Philip (1994)	8789	3.34	-1.42	2
				8900	3.30	-1.42	Kinman et al. (2000)				
				8677	3.38	-1.41	Behr (2003)				
HD079469	10099 (145)	3.80 (0.08)	-0.42 (0.09)	11200	4.20	0.40	Baschek & Searle (1969)	10099	3.80	-0.42	0
				10700	4.20	0.00	Leone & Catanzaro (1998)				
				10510	4.20	0.01	Takeda et al. (2009)				
HD082210	5343 (33)	3.49 (0.08)	-0.21 (0.07)	5152		-0.31	Nordström et al. (2004)	5343	3.49	-0.21	0
				5250	3.42	-0.34	McWilliam (1990)				
HD086986	8843 (52)	4.28 (0.03)	-0.76 (0.09)	7850	3.10	-1.82	Adelman & Philip (1994)	7863	3.13	-1.83	2
				8167	4.05	-0.73	ELODIE_I				
				7950	3.20	-1.81	Kinman et al. (2000)				
				7775	3.05	-1.85	Behr (2003)				
HD089822	10286 (134)	3.96 (0.06)	0.13 (0.08)	10500	3.95	0.15	Smith & Dworetzky (1993)	10286	3.96	0.13	0
				5538	2.44	0.51	Cenarro et al. (2007)				
HD094280	6054 (33)	4.22 (0.06)	0.06 (0.05)	6166		0.18	Nordström et al. (2004)	6054	4.22	0.06	0
				6063	4.10	0.06	Chen et al. (2000)				
HD098991	6600 (37)	3.93 (0.05)	-0.02 (0.04)	6398	3.38	-0.19	Takeda et al. (2007)	6600	3.93	-0.02	0
				6643	3.98	-0.10	Edvardsson et al. (1993)				
HD099167	3819 (7)	1.76 (0.10)	-0.08 (0.04)	4010	1.33	-0.36	da Silva et al. (2006)	3819	1.76	-0.08	0
				3930	1.61	-0.38	McWilliam (1990)				
HD099747	6667	4.19	-0.48	6968	4.36	-0.34	Takeda et al. (2007)	6667	4.19	-0.48	0

Table 3. continued.

Name	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Reference	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Flag
HD102328	(31)	(0.03)	(0.04)	6610	3.99	-0.54	Edvardsson et al. (1993)	4389	2.59	0.30	0
	4389	2.59	0.30	4620	2.40	0.23	Luck & Heiter (2007)				
HD102634	(21)	(0.10)	(0.05)	4250	1.90	0.09	Luck & Challener (1995)	6210	4.10	0.16	0
	6210	4.10	0.16	6387	4.18	0.24	Edvardsson et al. (1993)				
HD104979	(34)	(0.06)	(0.04)	6261	4.24	0.20	Gratton et al. (1996)	4818	1.98	-0.58	0
	4818	1.98	-0.58	4996	2.86	-0.33	Luck & Heiter (2007)				
HD105262	(32)	(0.10)	(0.08)	4850	2.34	-0.25	Mallik (1998)	8855	1.82	-1.61	2
	12200	2.67	-0.14	4814	2.03	-0.56	ELODIE_I				
HD109995	(392)	(0.11)	(0.20)	8542	1.50	-1.37	Klochkova & Panchuk (1987)	8441	3.18	-1.74	2
	9962	4.11	-0.39	8855	1.82	-1.61	Behr (2003)				
HD115004	(182)	(0.04)	(0.10)	8262	3.50	-1.99	Adelman & Hill (1987)	4905	2.37	0.09	0
	4905	2.37	0.09	8500	3.10	-1.72	Kinman et al. (2000)				
HD121370	(8)	(0.15)	(0.08)	8382	3.25	-1.76	Behr (2003)	5998	3.82	0.28	0
	5998	3.82	0.28	4730	2.40	-0.10	Hekker & Meléndez (2007)				
HD123657	(24)	(0.06)	(0.05)	4810	2.45	-0.08	McWilliam (1990)	3235	0.48	-0.20	0
	3235	0.48	-0.20	6300	4.18	0.29	Takeda et al. (2007)				
HD124244	(34)	(0.07)	(0.05)	6068	3.83	0.19	Edvardsson et al. (1993)	5782	4.02	0.07	0
	5782	4.02	0.07	3452	0.90	-0.03	Smith & Lambert (1985)				
HD126271	(8)	(0.15)	(0.08)	3484	0.85		Cenarro et al. (2007)	4442	2.54	-0.01	0
	5782	4.02	0.07	5957		0.15	Nordström et al. (2004)				
HD128167	(39)	(0.08)	(0.06)	5853	4.11	0.05	Chen et al. (2000)	6703	4.21	-0.42	0
	4442	2.54	-0.01	4593	2.51	-0.01	Luck & Heiter (2007)				
HD129132	(22)	(0.09)	(0.05)			-0.12	Hartkopf & Yoss (1982)	6761	3.90	0.04	0
	6703	4.21	-0.42	6952	4.43	-0.29	Takeda et al. (2007)				
HD137510	(26)	(0.03)	(0.04)	6767	4.27	-0.41	Edvardsson et al. (1993)	5886	3.89	0.29	0
	6761	3.90	0.04	6662	4.20	-0.41	ELODIE_I				
HD137759	(45)	(0.06)	(0.05)	6561		-0.16	Nordström et al. (2004)	4525	2.63	0.11	0
	5886	3.89	0.29	6053		0.38	Nordström et al. (2004)				
HD151769	(30)	(0.06)	(0.04)	5929	3.91	0.25	Feltzing & Gustafsson (1998)	6417	3.89	0.13	0
	4525	2.63	0.11	6139	4.33	0.43	Takeda et al. (2007)				
HD155763	(22)	(0.08)	(0.05)	4775	3.09	0.13	Santos et al. (2004)	14064	3.79	0.13	0
	4528	2.62	0.09	4528	2.62	0.09	ELODIE_I				
HD161817	(22)	(0.08)	(0.05)	4552	2.96	0.16	Soubiran et al. (2008)	4525	2.63	0.11	0
	4525	2.63	0.11	4400	2.74	0.33	Mallik (1998)				
HD165341	(37)	(0.06)	(0.04)	6220	3.30	-0.08	Takeda et al. (2007)	6417	3.89	0.13	0
	6417	3.89	0.13	6435	3.80	0.00	Edvardsson et al. (1993)				
HD167768	(207)	(0.07)	(0.07)	12900	3.90	-0.95	Smith & Dworetzky (1993)	14064	3.79	0.13	0
	14064	3.79	0.13	12500	3.50	-0.11	Adelman (1998)				
HD168151	(165)	(0.10)	(0.14)	7412	2.93	-1.71	Adelman & Hill (1987)	7631	3.11	-1.54	2
	8518	4.19	-0.44	7550	3.00	-1.55	Kinman et al. (2000)				
HD174959	(165)	(0.10)	(0.14)	7711	3.22	-1.52	Behr (2003)	14832	3.75	0.04	0
	5232	4.57	0.07	5023		-0.29	Nordström et al. (2004)				
HD175317	(24)	(0.05)	(0.05)	5260	5.00	-0.25	Zboril & Byrne (1998)	6479	4.09	0.01	0
	4945	2.32	-0.72	5102	2.76	-0.61	Luck & Heiter (2007)				
HD175640	(28)	(0.08)	(0.07)	5235	1.61	-0.59	Jones (1999)	6450	4.18	-0.34	0
	6450	4.18	-0.34	6587	4.09	-0.31	Edvardsson et al. (1993)				
HD176437	(37)	(0.05)	(0.05)	6462	4.50	-0.05	Boesgaard & Friel (1990)	11515	4.02	0.18	0
	6450	4.18	-0.34	6525	4.05	-0.32	Gratton et al. (1996)				
HD176437	(37)	(0.05)	(0.05)	6357	4.02	-0.33	Fuhrmann (1998)	11515	4.02	0.18	0
	14832	3.75	0.04	14400	4.00	-0.80	Heacox (1979)				
HD177266	(231)	(0.06)	(0.06)					6479	4.09	0.01	0
	6479	4.09	0.01	6655	4.16	0.21	Edvardsson et al. (1993)				
HD178266	(48)	(0.07)	(0.06)	6537	4.20	0.06	Balachandran (1990)	11163	4.06	0.15	0
	11515	4.02	0.18	6517	4.22	0.15	Gratton et al. (1996)				
HD178266	(179)	(0.06)	(0.08)	12100	4.00	-0.55	Smith & Dworetzky (1993)	11163	4.06	0.15	0
	11163	4.06	0.15	12000	3.95	-0.02	Castelli & Hubrig (2004)				
HD178266	(170)	(0.06)	(0.09)	10080	3.50	0.11	Balachandran et al. (1986)	4381	2.68	0.10	0
	11163	4.06	0.15	12230	4.08	0.25	ELODIE_I				
HD178266	(170)	(0.06)	(0.09)	12230	4.08	0.25	ELODIE_I	4381	2.68	0.10	0
	4381	2.68	0.10	4375	1.81	-0.47	ELODIE_I				

Table 3. continued.

Name	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Reference	T_{eff} (K)	$\log(g)$ (cm s^{-2})	[Fe/H] (dex)	Flag			
HD183085	(34)	(0.15)	(0.08)	4879	5.27	-0.90	Prugniel & Soubiran (2001)	7138	3.93	-0.11	0			
	7138	3.93	-0.11	4377	2.69	0.10	fit_ELO							
	(45)	(0.06)	(0.06)	6872	3.96	-0.32	ELODIE_I							
				6963	3.30	-0.59	Prugniel & Soubiran (2001)							
HD183324	10582	3.98	-0.39	7070	3.93	-0.18	fit_ELO	10300	4.17	-1.22	2			
	(241)	(0.10)	(0.14)	9260	4.22	-1.50	Sturenburg (1993)							
HD184406	4428	2.83	0.04	10300	4.17	-1.22	Saffe et al. (2008)	4428	2.83	0.04	0			
	(19)	(0.08)	(0.05)	4670	3.20	0.04	Hekker & Meléndez (2007)							
HD194093	6708	0.86	0.19	4375	1.75	-0.05	Luck & Challener (1995)	6360	0.91	0.18	1			
				4449	2.87	0.02	ELODIE_I							
				4445	2.79	-0.01	ELODIE_I							
				6200	1.54	0.13	Gray et al. (2001)							
HD195633	6102	4.10	-0.55	5793	1.00	-0.30	Thevenin & Foy (1986)	6102	4.10	-0.55	0			
				(57)	(0.07)	(0.07)	6360					0.91	0.18	fit_3900
							6582					0.83	0.14	ELODIE_I
							5916						-0.63	Nordström et al. (2004)
HD197964	4762	2.96	0.09	6000	3.90	-0.65	Fulbright (2000)	4762	2.96	0.09	0			
				(22)	(0.07)	(0.05)	4998					3.32	0.27	Soubiran et al. (2008)
HD204867	5705	1.06	0.03	4990	3.49	0.13	McWilliam (1990)	5705	1.06	0.03	0			
				(31)	(0.05)	(0.05)	4800					2.80	0.17	Kyrolainen et al. (1986)
							4745					2.90	0.06	ELODIE_I
							5462					1.45	-0.03	Soubiran et al. (2008)
HD206165	22112	3.09	-0.12	5362	1.15	-0.05	Luck (1982)	20569	2.93	-0.28	3			
				(1409)	(0.09)	(0.07)	5478					1.60	-0.02	Foy (1981)
							5701					1.06	0.01	ELODIE_I
							19040					2.61	-0.33	Gies & Lambert (1992)
HD212571	23278	3.53	-0.02	19685	2.94	-0.27	ELODIE_I	23278	3.53	-0.02	0			
				(1230)	(0.10)	(0.08)	17760					2.65	-0.33	Cenarro et al. (2007)
							20569					2.93	-0.28	fit_ELO
							23031					3.41	0.06	fit_ELO
HD219134	4700	4.58	0.02	20530	3.29	0.01	ELODIE_I	4700	4.58	0.02	0			
				(30)	(0.07)	(0.06)	4913					4.51	0.08	Soubiran et al. (2008)
							4710					4.50	0.20	Oinas (1977)
							4711					4.57	0.08	ELODIE_I
HD220117	6428	4.02	0.03	4717	4.58	0.08	ELODIE_I	6428	4.02	0.03	0			
				(44)	(0.07)	(0.05)	4710					4.50	0.00	Strohbach (1970)
							4963					4.96	0.39	Robinson et al. (2007)
							6579					4.12	0.02	Edvardsson et al. (1993)
HD220825	10375	3.78	0.74	6462	4.50	-0.05	Boesgaard & Friel (1990)	10375	3.78	0.74	0			
				(161)	(0.14)	(0.09)	6443					3.78	-0.01	Gratton et al. (1996)
							6380					4.00	0.05	Boesgaard & Tripicco (1986)
							10286					3.70	-0.18	Searle et al. (1966)
HD224930	5427	4.34	-0.80	9683	3.80	0.47	ELODIE_I	5427	4.34	-0.80	0			
				(39)	(0.08)	(0.09)	9700					4.18	0.69	Glagolevskij et al. (2006)
							10210					3.80	0.69	fit_ELO
							5681					4.86	-0.52	Takeda et al. (2007)
G_103-68	3477	4.76	-1.08	5275	4.10	-1.00	Fulbright (2000)	3477	4.76	-1.08	0			
				(11)	(0.07)	(0.15)	5446					4.33	-0.77	ELODIE_I
G_176-11	3948	5.13	-1.43	5413	4.43	-0.81	Soubiran et al. (2008)	3948	5.13	-1.43	0			
				(9)	(0.29)	(0.04)	5511					4.00	-0.63	Carney et al. (1994)
							3544					4.85	0.00	Worthey et al. (1994)
			3544	4.85	-1.45	Cenarro et al. (2007)								
			3687	4.90	-0.43	Soubiran et al. (2008)								

Notes. The first column is the name of the outlier star (see Sect. 3.1). In the second to fourth columns, the first line is our fitted T_{eff} , $\log(g)$ and $[\text{Fe}/\text{H}]$, the second line is the internal errors. Columns five to seven are the parameters published by other references. Column eight lists the reference, where ‘E $\overline{\text{LODIE}}_I$ ’ means ELODIE internal determinations, ‘fit_ $\overline{\text{ELO}}$ ’ means ULYSS fit of an ELODIE spectrum, ‘fit_3900’ means fit of the CFLIB spectrum starting from 3900 Å instead of 4400 Å. Columns nine to eleven are the adopted values in our final table. The last column is a flag describing the adopted solution: ‘0’, standard fit of the CFLIB spectrum; ‘1’, fit of the CFLIB spectrum starting from 3900 Å; ‘2’, from literature; ‘3’, ULYSS fit of ELODIE spectra; ‘4’, improved fit, see the text.