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Linear and non-linear limb-darkening coefficients for LTE model atmospheres*

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Abstract. — Linear, quadratic, and square root limb-darkening coefficients have been computed by means of least squares fits to model atmospheres by Kurucz (1991) with the main purpose of facilitating the analysis of light curves of eclipsing binaries. Results are compared with previously published values using the same or different models and various fitting procedures. The linear limb-darkening coefficients were found to be quite sensitive to the method adopted for the fit of the model atmosphere. We also found that the best analytical approximation to the actual effect of limb-darkening is highly dependent on the effective temperature. The depth of the convective region defines in fact important changes in the behaviour of the intensity surface distribution and, e.g., for the hotter stars the square root approximation introduced in a previous paper (Díaz-Cordovés & Giménez 1992) provided the best fit. Integrated limb-darkening coefficients were calculated for the Strömgren *uvby* and Johnson's *UBV* photometric bands for all the models available, and a simple expression for the interpolation of linear limb-darkening values is given together with the corresponding coefficients for the different photometric bands.

Key words: stars: atmospheres — binaries: eclipsing

1. Introduction

Limb darkening in stellar atmospheres is a well known effect which should be considered in detail for several types of astrophysical problems, e.g., the analysis of stellar occultations by the Moon, measurements of stellar diameters, the interpretation of rotationally broadened line profiles, the photometric effects of stellar spots in rotating stars and, in particular, the analysis of eclipsing binary stars. Milne (1921) introduced the first explicit expression for the computation of limb darkening effects as a linear approximation. This is the well-known linear limb-darkening law,

$$I(\mu) = I(1)(1 - u(1-\mu)) \qquad (1)$$

where $\mu = \cos\gamma$, and γ denotes the angle formed by the line of sight and the direction of the emerging flux. $I(1)$ represents the specific intensity at the center of the stellar disc, and u is known as the linear limb-darkening coefficient.

This linear law has been widely used since then, although it is well known that it is just a first approximation to the real values of the emergent specific intensity computed from non-grey model atmospheres. The linear limb-darkening law is specially inadequate for hot stars (Grygar 1965; Shul'berg 1973; Wade & Rucinski 1985; Díaz-Cordovés & Giménez 1992). It should be noted that the only possible direct measurement of the limb darkening in stellar atmospheres is available for the Sun, with a temperature for which the linear approximation gives quite good results.

In previous studies (Díaz-Cordovés & Giménez 1992; Díaz-Cordovés et al. 1993), we have compared the linear law with two non-linear approximations, namely, a quadratic law in the form,

$$I(\mu) = I(1)(1 - a(1-\mu) - b(1-\mu)^2) \qquad (2)$$

as adopted by Manduca et al. 1977; Wade & Rucinski 1985; or Claret & Giménez 1990, and a new empirical non-linear approximation in the form,

$$I(\mu) = I(1)(1 - c(1-\mu) - d(1-\sqrt{\mu})) \qquad (3)$$

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*Tables 1 to 4 are also available electronically at the CDS via anonymous ftp 130.79.128.5

as described by (Díaz-Cordovés & Giménez 1992, who have also discussed the temperature ranges where each of the approximations gives the best results.

On the other hand, Klinglesmith & Sobieski (1970) introduced a logarithmic law in the form,

$$I(\mu) = I(1)(1 - x(1 - \mu) - y\mu \ln \mu) \quad (4)$$

which was also used by Van Hamme (1993).

In order to make a practical use of any of these limb-darkening laws, we need, of course, reliable values for the coefficients adequately tabulated: either the linear coefficient, u, or the non-linear ones, a, b, c, d, x, and y. This is the main purpose of the present paper. From the observational point of view, it has been mentioned that the Sun is the only star for which it is possible to obtain direct measurements of the limb darkening. Eclipsing binary systems have also been used to obtain observational values of the linear coefficients, but these results are only a very crude estimation in most cases because the analysis of the light curves of eclipsing binaries is a complex mathematical problem and limb darkening is just a second order effect (Grygar et al. 1972; Shul'berg 1973; Popper 1984). Moreover, "a fortiori", it seems to us completely unrealistic to try to derive observational values of the non-linear coefficients from eclipsing binaries.

As a consequence, it is clearly a much better policy for the analysis of light curves, as well as in other astrophysical research areas, to compute theoretical limb-darkening coefficients from available and reliable stellar model atmospheres. In order to do so, the actual values of the emergent specific intensity have to be computed from the models and these values of $I(\mu)/I(1)$, for a number of adopted values of μ, have to be fitted by means of an analytical limb-darkening approximation to obtain the needed coefficients.

At this point, it is a relevant matter of discussion the method used to fit the computed $I(\mu)/I(1)$ values, since there are significant discrepancies between several authors. Some have used the direct least-squares fitting method (Grygar 1965; Grygar et al. 1972; Manduca et al. 1977; Claret & Giménez 1990). Some others have chosen the fitting method proposed by Hosokawa 1967, in which it is imposed that the emergent integrated flux obtained using the linear limb-darkening law equals the actual flux obtained from the model. This fitting method has been used by Klinglesmith & Sobieski (1970), Wade & Rucinski (1985) and Van Hamme (1993). Moreover, this method has been generalized to obtain limb-darkening coefficients for the quadratic approximation (2) with some modifications. For example, using simultaneously the conservation of the total flux and the value of $I(\mu)$ at a fixed intermediate point (Wade & Rucinski 1985). On the other hand, Al-Naimiy 1978 adopted a method proposed by Al-Naimiy & Budding 1977 in which the linear coefficient u is computed as the weighted mean value of the slope of the $I(\mu)/I(1)$ curve, and Rubashevskii 1990 adopted a method in which the linear coefficient u is computed by weighted least-squares using μ as a weighting factor, following Van't Veer (1960).

It is clear that there is some controversy about the fitting method that should be adopted to compute limb-darkening coefficients, and about which is the non-linear limb-darkening approximation that better reproduces the emergent specific intensity. In previous papers, we have studied these problems using limb-darkening coefficients computed from the model atmospheres by Kurucz 1979 (Díaz-Cordovés 1991; Díaz-Cordovés & Giménez 1992; Díaz-Cordovés et al. 1993). But new model atmospheres have been computed by the same author (Kurucz 1991, 1993) and, in the present paper, we use these new models to discuss the mentioned problems and to present integrated limb-darkening coefficients in 7 selected photometric bands (Strömgren $uvby$ and Johnson UBV) for the three limb-darkening approximations (1), (2), and (3) given above.

2. Computational procedure

We have adopted the 410 model atmospheres computed by Kurucz (1991). These models cover a wide range of effective temperatures from 3 500 to 50 000 K as well as surface gravities, $\log g$, from 0.0 to 5.0 in cgs units. All the adopted models were computed for standard solar composition, and a specific model for the Sun is included. Convection for models with temperatures below 9 000 K was computed with a mixing-length parameter $l/H_P = 1.25$.

The model atmosphere data, sent to us by Kurucz, included monochromatic specific intensities for 1221 different values of wavelength at 17 values of μ, from 1.0 to 0.01. From this data, we have computed integrated values of the specific intensity for 7 photometric bands which are those more extensively used by observers of eclipsing binaries, namely, the Strömgren $uvby$ and Johnson's UBV.

For a given photometric band, the model atmosphere values of the integrated $I(\mu)$ are given by,

$$I(\mu) = \int_{\lambda_1}^{\lambda_2} I(\lambda, \mu) S(\lambda) \mathrm{d}\,\lambda \quad (5)$$

where $I(\lambda, \mu)$ is the monochromatic specific intensity, given by Kurucz model atmospheres, λ_1 and λ_2 are the photometric band lower and upper boundaries, and $S(\lambda)$ is the response function that includes the atmospheric transmissions, the reflection from aluminum coated mirrors, the photomultiplier sensitivity and the filter transmission curves according to Allen (1976), Kurucz (1979), Crawford & Barnes (1970), Buser (1978) and Azusienis & Straizys (1969). All calculations were made for airmass 1.0, though different checks were carried out with other values. For each model and photometric band, we have obtained the integrated values of $I(\mu)$, for each of the 17 tabulated values of μ, by numeric quadratures using (5). The adopted computational routines were checked for an accuracy of the results leading to two significant digits.

The corresponding integrated values of the limb-darkening coefficients, for the 7 mentioned photometric bands, are obtained then from the fitting of the integrated values of $I(\mu)/I(1)$. But, as mentioned before, there is some controversy about the best fitting method and we have decided therefore to compute linear, quadratic and square root limb-darkening coefficients using three different fitting methods in each case.

For the linear law, we have used the least-squares procedure (denoted as LS in the present paper), the total flux conservation (FC, as described by Hosokawa 1967), and the weighted least-squares fitting with μ as a weighting factor (WLS, denoted as br by Rubashevskii 1990).

In the case of the quadratic and square root approximations, we have used the least-squares procedure (LS), the conservation of flux with the adopted fixed point by Wade & Rucinski 1985 (FC), and a third method which is a modification of that used by Wade & Rucinski. This is obtained by imposing the conservation of the actual total emergent flux and then deriving the other coefficient from the best fit by least-squares (FCL).

Since all the limb-darkening coefficients are actually derived from the same $I(\mu)/I(1)$ values, any possible differences among them, for a given limb-darkening law, will be due to the adopted fitting method. For both FC and FCL fits, we need the values of the total flux for each photometric band and we have used values derived from,

$$F = 2\,I(1) \int_0^1 I(\mu)/I(1)\mu \mathrm{d}\,\mu \tag{6}$$

where $I(\mu)$ is the integrated specific intensity.

Since the 17 values of μ adopted by Kurucz are not equally spaced within the range between 0 and 1 (11 values are actually taken below 0.5), it is not straightforward to apply the least-squares method to the original data. In order to avoid too large weights for the limb regions leading to unrealistic coefficients, we have computed values of $I(\mu)$ for different values of μ which reproduce better the surface intensity distribution needed for the analysis of eclipsing binary systems. After several tests, including synthetic light curves, we adopted for the least-squares fits needed in LS, WLS, and FCL, 10 points between 1.0 and 0.1 equally spaced (with a step of 0.1) plus an additional value at $\mu = 0.05$. This set of points, provided a well-balanced distribution and answered adequately to the needs of synthetic light curves computed during eclipses.

3. Comparison of the different fitting methods

Figures 1 and 2 show the behaviour, as a function of effective temperature, of the linear limb-darkening coefficient, for the Strömgren u and y bands, respectively. For comparison, the linear coefficients computed from the models by Kurucz 1991 with the three previously mentioned fitting methods (LS, FC and WLS) are plotted as well as the original values published by Al-Naimiy 1978 (AN), Wade & Rucinski 1985 (WR), and Claret & Giménez 1990 (CG). It is clear that the adopted fitting method introduces some systematic differences as observed by comparing the three sets of values computed for the same model atmospheres (the new models by Kurucz 1991). The coefficients $u_{\rm LS}$ are smaller than $u_{\rm FC}$ for cool models and larger for the hotter atmospheres. Typical differences between values computed using LS or FC are within a range between 0.05 and 0.1. On the other hand, $u_{\rm WLS}$ is always between the two other coefficients, as expected, and generally closer to FC than to LS. The change of sign in the differences between $u_{\rm LS}$ and $u_{\rm FC}$ is observed in the temperature region for which Kurucz's models present a maximum of linearity in the $I(\mu)/I(1)$ curves. This temperature is, on the other hand, different for each photometric band. Concerning the effect of the different model atmospheres, we will comment in Sect. 4, but it is also evident that the differences due to the adopted fitting method are generally larger than those due to the models themselves.

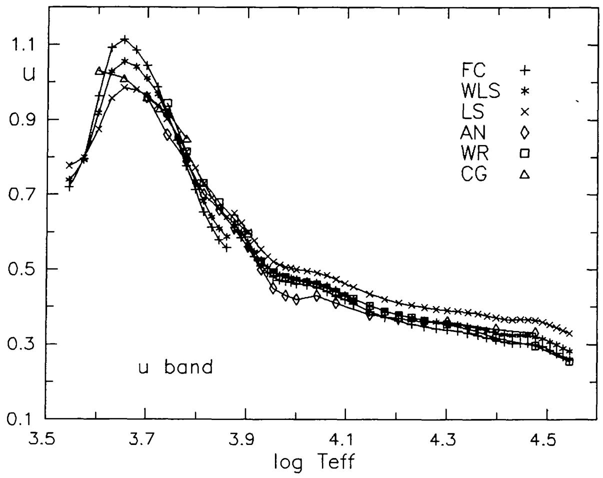

Fig. 1. Behaviour, as a function of effective temperature, of the linear limb-darkening coefficients calculated for the Strömgren u band and $\log g = 4.0$. Results by Al-Naimiy et al. and Claret & Giménez are also shown for comparison

Figures 3 to 5, show the actual $I(\mu)/I(1)$ curves represented by + signs, at the 17 original values of μ, joined by a continuous line together with the linear fits corresponding to the three methods adopted to compute linear coefficients (FC, LS, and WLS). Figures 3 and 4 correspond to cool models (4 500 and 4 250 K), with convective envelopes, while Figure 5 shows the behaviour of a hot (15 000 K) atmosphere, with radiative envelope. Figure 3 is representative of the temperature range where convective models give $u_{\rm LS} < u_{\rm WLS} < u_{\rm FC}$, while Fig. 5 shows a value of temperature for which $u_{\rm LS} > u_{\rm WLS} > u_{\rm FC}$.

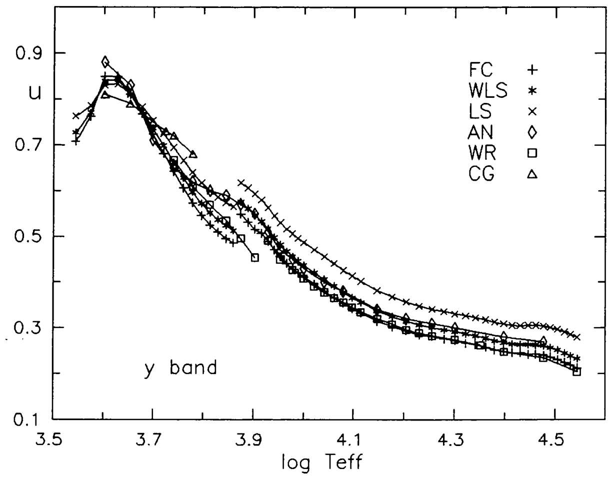

Fig. 2. The same as Fig. 1 for the Strömgren y band

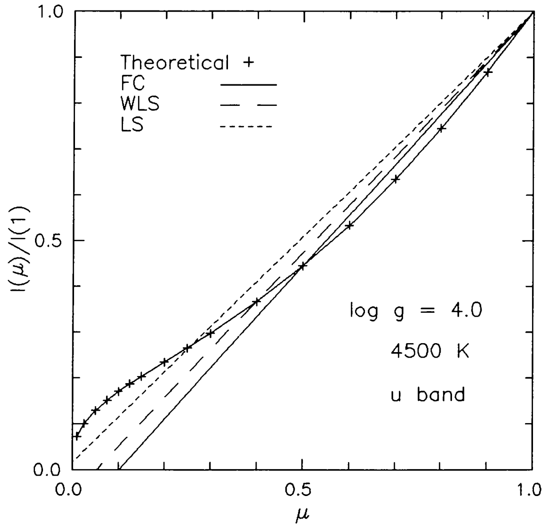

Fig. 3. $I(\mu)/I(1)$ curves derived from the theoretical intensity values computed for the model atmospheres (continuous line and +) and comparison with the linear approximation for three different fitting methods (FC: continuous, LS: points, WLS: dashed). The model corresponds to an atmosphere with effective temperature 4 500 K and $\log g = 4.0$ in the Strömgren u band

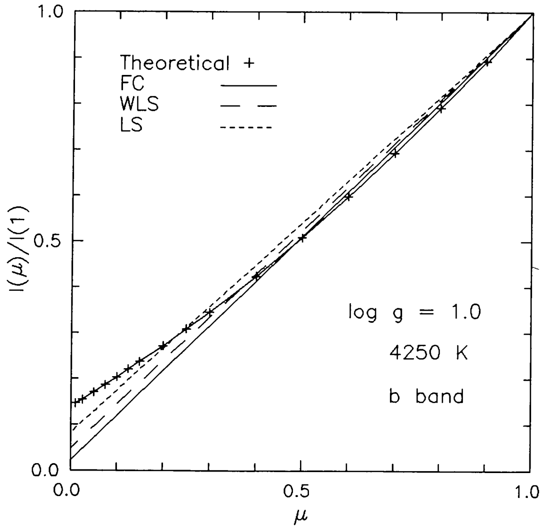

Fig. 4. The same as Fig. 3 for the Strömgren b band and a model atmosphere of effective temperature 4 250 K and $\log g = 1.0$

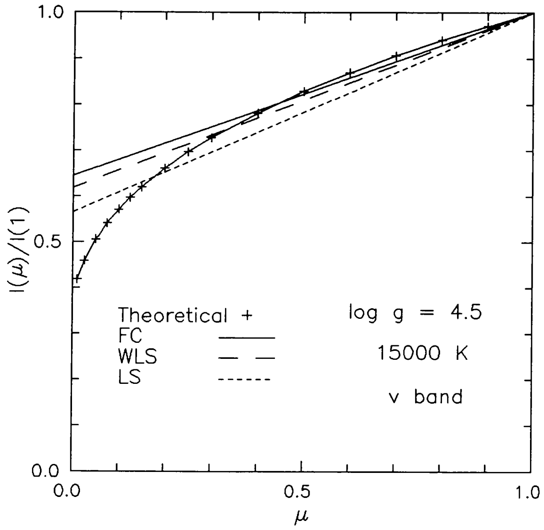

Fig. 5. The same as Fig. 3 for the Strömgren v band and a model atmosphere of effective temperature 15 000 K and $\log g = 4.5$

Figures 6 to 9 display the quadratic (a, b) and square root (c, d) limb-darkening coefficients, computed with the three different fitting methods (FC, LS and FCL) for models with $\log g = 3.5$ (a, b) and 5.0 (c, d), together with the quadratic coefficients published by Wade & Rucinski (1985) and Claret & Giménez (1990) for comparison.

Quadratic and square root coefficients are in fact much less affected by the adopted fitting method than the linear coefficients. Only some small differences are found among the quadratic coefficients of the hotter models, for which the square root approximation actually provides the best fit. On the contrary, cool models show relatively larger differences in the square root coefficients calculated by means of the three different assumptions but the quadratic approximation is known to be the best selection here (Díaz-Cordovés & Giménez 1992).

Tables 1, 2 and 3, show the integrated limb-darkening coefficients computed by least-squares from Kurucz's 1991 model atmospheres in the 7 adopted photometric bands. In Cols. 1 and 2, the values of $\log g$ in cgs units and the effective temperature (K) are given. The remaining seven columns give the limb-darkening coefficients for each of the photometric bands. Table 1 gives the linear limb-darkening coefficients, while Tables 2 and 3 give the quadratic and square root coefficients, respectively. In this later tables, coefficients a (or c for the square root law)

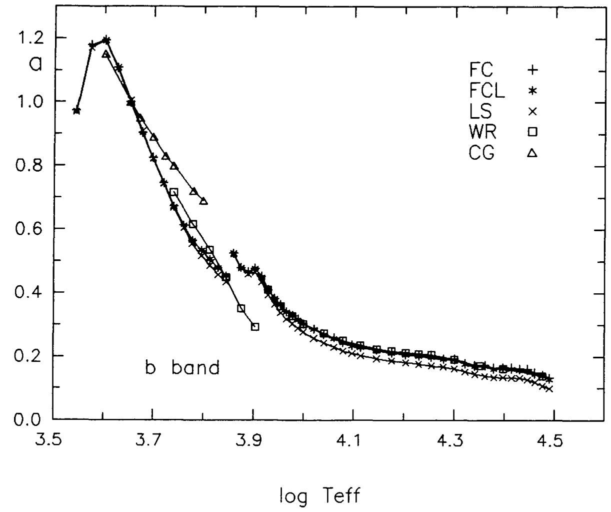

Fig. 6. Behaviour, as a function of temperature, of the quadratic coefficient a derived by means of the three fitting methods: FC, LS and FCL. All models correspond to $\log g = 3.5$ and the Strömgren b band. For comparison, models by Wade & Rucinski (1985) and Claret & Giménez (1990) are also shown

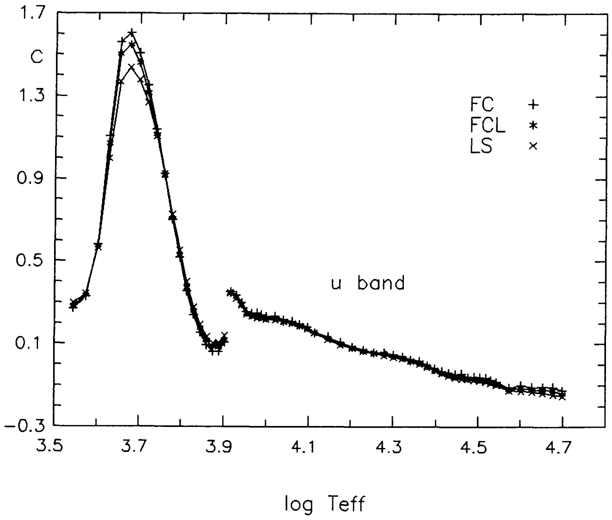

Fig. 8. Behaviour, as a function of temperature, of the square root coefficient c derived by means of the three fitting methods: FC, LS and FCL. All models correspond to $\log g = 5.0$ and the Strömgren u band

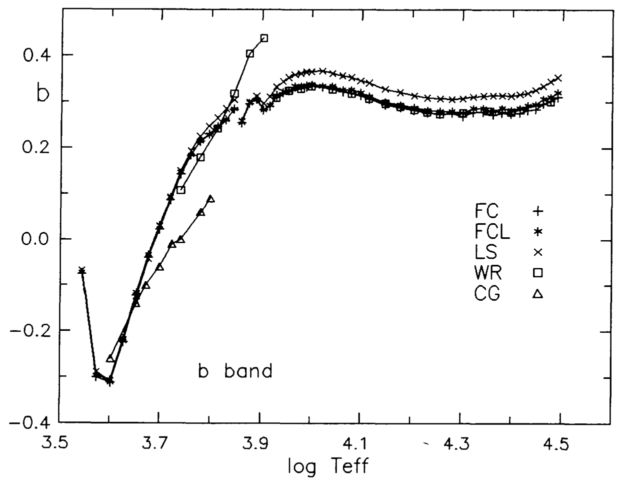

Fig. 7. The same as Fig. 6 for coefficient b

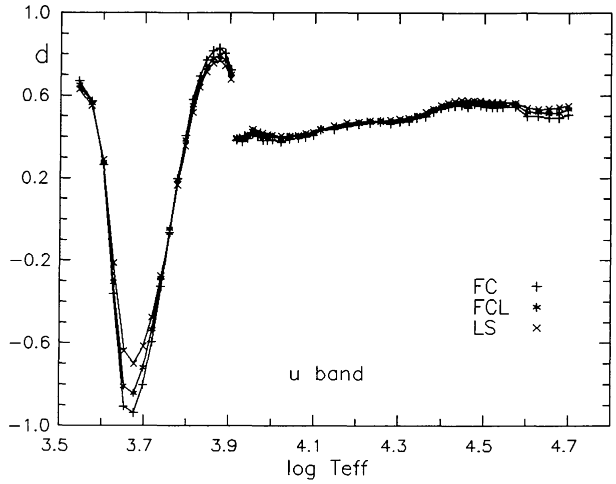

Fig. 9. The same as Fig. 8 for coefficient d

are given on top of coefficients b (or d), for each model and wavelength. Only the first two digits of the coefficients are expected to be significant according to the uncertainty of the input data (see Sect. 2). Nevertheless, we have included up to three decimals in the Tables in order to facilitate interpolations and the comparison with coefficients published by other authors. All these Tables (1, 2 and 3) as well as Table 4, mentioned below, are available in electronic form via an anonymous ftp copy at the CDS (Strasbourg).

The given tables only include coefficients computed by means of the least-squares procedure. We have adopted this method because FC and WLS fits produce unrealistic values of $I(\mu)/I(1)$ in some models with convective envelopes when the linear law is used as well as several other tests. For example, the comparison of results derived from the use of different limb-darkening coefficients in synthetic light curves of eclipsing binaries show that the orbital inclination is less affected when we use LS coefficients than those obtained by means of the other method (Díaz-Cordovés 1991; Díaz-Cordovés et al. 1993). Moreover, the use of the new models by Kurucz 1991 shows that the LS coefficients produce only very little deviations for the computed value of the total flux in the linear approximation and a negligible deviation in the non-linear laws, in perfect agreement with previous results using different model atmospheres (Claret & Giménez 1990; Díaz-Cordovés & Giménez 1992).

Figure 10 shows the dependence of the linear limb-darkening coefficients computed with the three fitting methods as a function of the surface gravity. It is clear that the change with $\log g$ of the coefficients is much smaller than that with effective temperature as already noted by several authors (Klinglesmith & Sobieski 1970; Manduca et al. 1977; Al-Naimiy 1978; Claret & Giménez 1990).

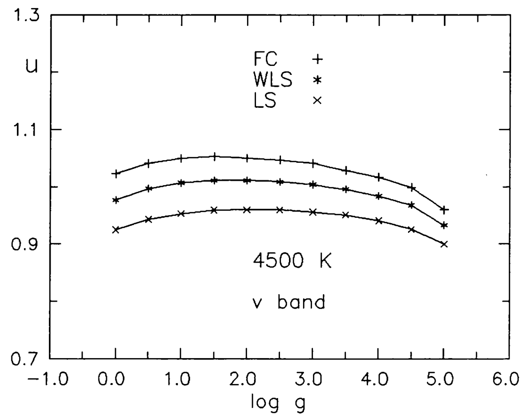

Fig. 10. Behaviour of the linear limb darkening as a function of the surface gravity, $\log g$, for the three different fitting methods: FC, WLS and LS. All models were calculated for an effective temperature of 4 500 K and the Strömgren v band

Finally, in order to facilitate the prediction of linear limb-darkening coefficients by interpolation between values given in Table 1, we have used polynomials in the form,

$$u = a_0 + a_1 \log T_{\rm eff} + a_2 \log g + a_3 (\log T_{\rm eff})^2 \qquad (7)$$

for each photometric band to fit the tabulated coefficients. This has been done by means of a least squares fitting using orthogonal polynomials for the 410 available points in the $\log T_{\rm eff} - \log g$ plane. Since the linear limb-darkening coefficients are clearly non-linear with respect to the effective temperature, we have used a quadratic term a_3 but, due to the small change of the coefficients with $\log g$, only a linear dependence with surface gravity has been considered. The obtained coefficients a_0 to a_3, for each of the seven photometric bands, derived from the least squares fits, are given in Table 4. These fits allow us to easily obtain reasonable values for the linear coefficients, to be used in the analysis of the light curves of eclipsing binaries, with an average deviation of 0.03 – 0.06, which is certainly acceptable given the accuracy mentioned for the results given in Table 1. Of course, the values of a_2 are much smaller than the other coefficients due to the weaker dependence of the limb-darkening on the value of the surface gravity.

4. Comparison with previous results

It is well known that the linear limb-darkening coefficients should decrease for increasing effective temperatures in a more or less continuous way, and the values computed by Al-Naimiy 1978 and Claret & Giménez (1990) show in fact this behaviour. But the linear coefficients computed from the new models by Kurucz (1991), using any of the three fitting methods, show some interesting features, like an increase of u for increasing temperatures in the range of the coolest models, and a discontinuity in the behaviour between two relatively close effective temperatures which changes with gravity (see Figs. 1 and 2 as well as Table 5). These "anomalies" are present, with different intensity, in the 7 photometric bands. Since previous models by Kurucz (1979) did not include model atmospheres cooler than the Sun, the increase in u for this range was not detected before, but the gap can be clearly seen in the non-linear coefficients computed in this paper as well as in the coefficients computed using the models by Kurucz (1979), and the linear and quadratic coefficients published by Wade & Rucinski (1985).

Figure 11 shows values of the actual integrated normalized flux computed from models by Kurucz 1991 in two bands, for models with $\log g = 4.0$. Two interesting features are shown here, a decrease of the normalized flux for increasing temperatures in the range of the coolest models, and a gap in the same position as in Figs. 1 and 2. Obviously, this behaviour should be due to the convection model adopted. Old models by Kurucz 1979 for late A, F, and G stars presented a small systematic error in the colour indices caused by problems in the treatment of convection and the omission of line opacities (Kurucz 1979, 1993). For the new models, Kurucz 1993 included some improvements in the treatment of convection as well as new opacities. Nevertheless, some problems may remain, either in the treatment of convection or in the adopted opacities, which could explain at least partly the observed features in the behaviour of the limb-darkening coefficients computed from the new models. In fact, the mixing-length theory may not be adequate to treat some convective envelopes. It can be seen in Fig. 20.1 by Cox & Giuli (1968), that the thickness of convective envelopes decreases with effective temperature for a given ratio of mixing length to pressure scale height. But the thickness increases with the mixing length parameter for a fixed effective temperature. Relyea & Kurucz (1978) have discussed the problem of the transition between convective and radiative transfer, pointing out that, for high effective temperatures, the selected mixing-length parameter may lead to a pressure scale height larger than the thickness of the convective envelope. With respect to opacities, for example, models with 3 500 and 3 750 K, for $\log g$ = 4.0, 4.5, and 5.0 may require the consideration of water opacity (Kurucz 1993).

For convective models, some differences between FC linear and quadratic coefficients in this paper, and those

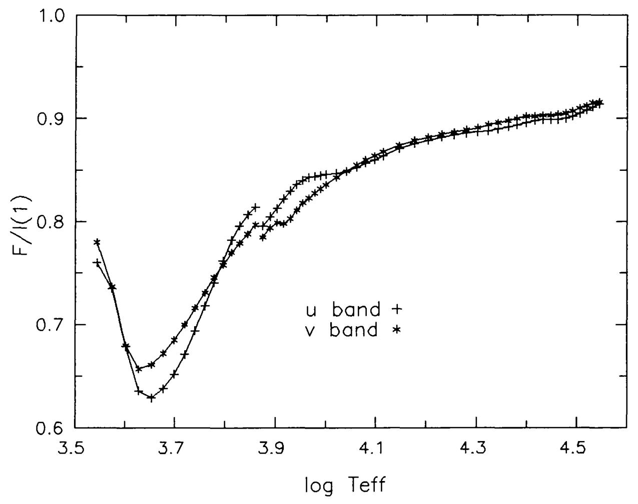

Fig. 11. Behaviour of normalized flux as a function of the effective temperature for the Strömgren u and v bands. All models were calculated for $\log g = 4.0$

published by Wade & Rucinski (1985) from old Kurucz's models, are explained in terms of the mentioned improvements in convection and opacities. For radiative models, linear and quadratic coefficientes by Wade & Rucinski (1985) agree very well with the corresponding FC coefficients in this paper.

There is also a good agreement between linear coefficients by Al-Naimiy (1978) and the WLS linear coefficients of this paper for radiative models because both were computed using similar fitting methods, intermediate between least-squares and the conservation of the total flux. For convective models, the differences found reflect the peculiarities of the models used to obtain them. A similar situation is found when comparing linear and quadratic coefficients published by Claret & Giménez (1990) with the corresponding LS coefficients in this paper.

We have finally made a comparison between the predicted limb-darkening derived from the solar model by Kurucz (1991) and actual observations of the Sun, as it was also done by Van Hamme (1993). In the optical region considered in this paper, there is a very good agreement between theory and observations, at least for $\mu > 0.1$

5. Comparison of the three limb-darkening approximations

In a previous paper (Díaz-Cordovés & Giménez 1992), we have shown that the square root limb-darkening approximation is the most adequate for radiative stars, with $T_{\rm eff}$ hotter than around 9 000 K, for wavelengths in the range from 3437 to 9000 Å, on the basis of the old models by Kurucz (1979). We also found that limb darkening shows its maximum linearity for effective temperatures around 5500 – 6000 K, but we should be aware that 5500 K was the smallest of the effective temperatures available in the grid of models by Kurucz (1979).

We have therefore studied again these results using now the new models by Kurucz (1991). In Figs. 12 and 13, we have plotted values of σ, an indicator of the quality of the actual fit as it was introduced by Díaz-Cordovés & Giménez (1992), for models with $\log g = 4.0$. Values of σ for linear, quadratic, and square root laws, with coefficients from Tables 1 to 3, are shown in two photometric bands. There is a maximum of linearity for an effective temperature, which is different for each band, and separates models with $u_{\rm LS} < u_{\rm WLS} < u_{\rm FC}$ and models with the opposite behaviour. These effective temperatures of maximum linearity are 5500 – 5750 K for u and U bands, 5250 – 5500 K for v and B bands, 5000 K for the b band, and 4500 – 4750 K for y and V bands. This temperatures agree with previous results by Manduca et al. (1977), and Claret & Giménez (1990). Solar observations also confirm this linearity in wavelengths corresponding to u and U bands.

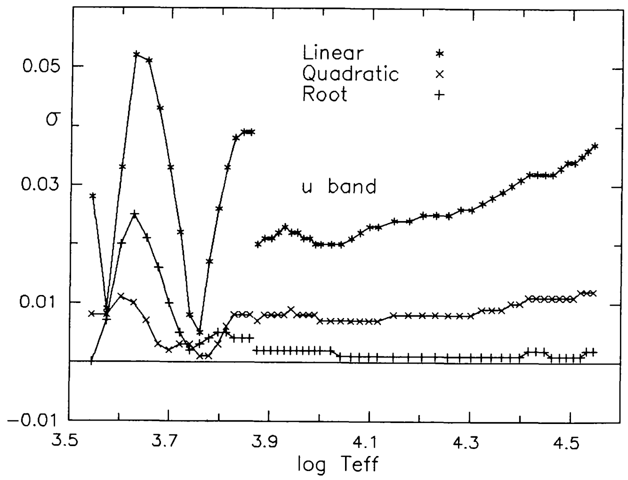

Fig. 12. σ values versus $\log T_{\rm eff}$ for the three limb-darkening approximations using coefficients obtained by least squares. All models were calculated for $\log g = 4.0$ and the Strömgren u band

There are other minima of σ for the linear law in the u and the y band, but they are probably not real maximum values of linearity and may be produced by the already mentioned problems found in convective models. In fact, these minima are found in the range of the mentioned gap or discontinuity, in the u and y bands, or at 3750 K equivalent to the coolest models which may present opacity problems.

Figures 14-16 display the differences between theoretical $I(\mu)/I(1)$ values and those given for the three considered approximations, with LS coefficients as given in Tables 1-3. The behaviour of the theoretical $I(\mu)/I(1)$ curves determines which is the most adequate non-linear

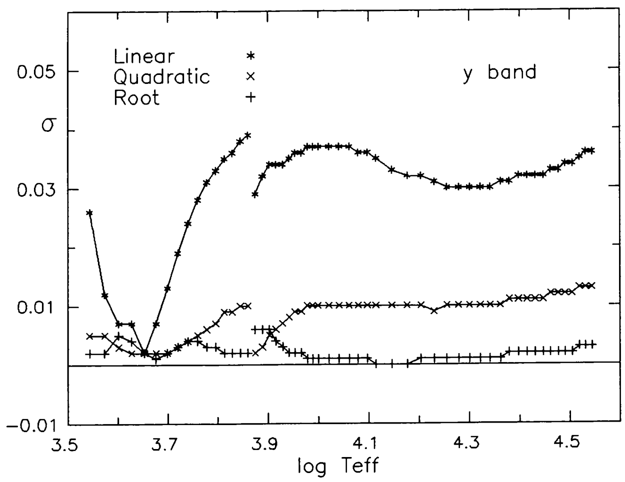

Fig. 13. The same as Fig. 12 for the Strömgren y band

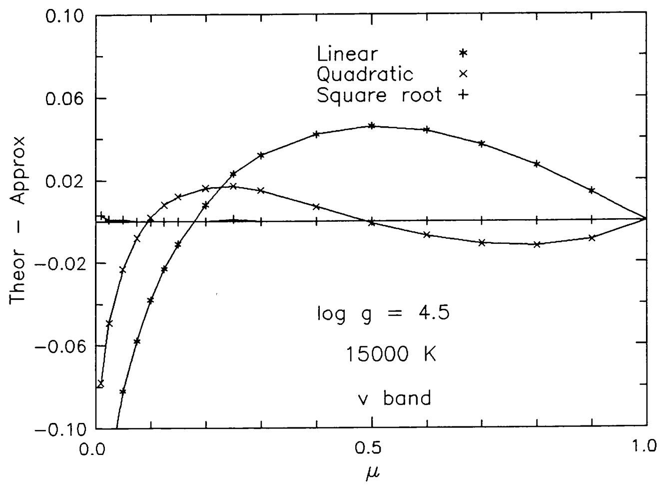

Fig. 15. The same as Fig. 14 for a radiative model atmosphere and the Strömgren v band

law. It is clear that the best fit is obtained by means of the square root law for radiative models ($T_{\rm eff} > 9\,000$ K) as it was found in our previous study with models by Kurucz (1979). Van Hamme (1993), on the basis of the new models by Kurucz 1991, confirmed this results in the optical region and also showed that the square root limb-darkening law is the most adequate for all effective temperatures in the IR region.

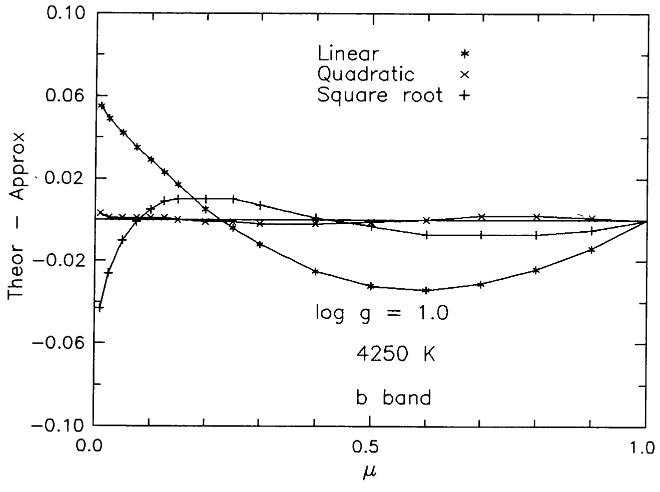

Fig. 14. Differences between theoretical $I(\mu)/I(1)$ and predicted values for the three limb-darkening approximations using the coefficients derived by means of least squares for a convective model atmosphere and the Strömgren b band

For convective models there is no clear answer. Figure 16 shows that the square root law is also a very good approximation for a model with $T_{\rm eff}$ = 6000 K contrary to Van Hamme (1993), who considered that the quadratic law is not a good approximation and the logarithmic limb-

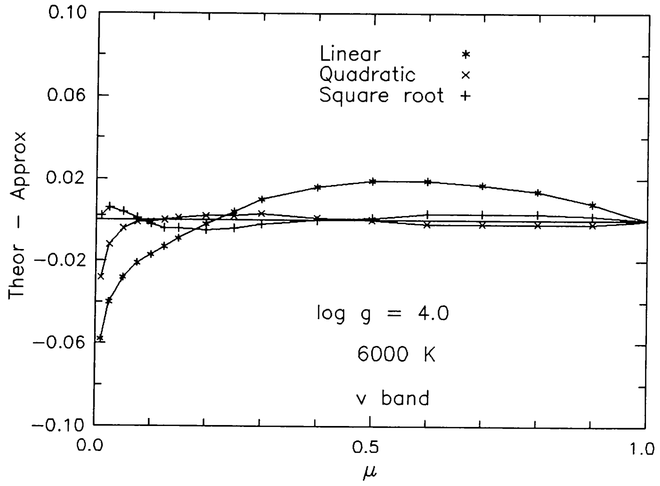

Fig. 16. The same as Fig. 14 for another convective model atmosphere, closer to the Sun, and the Strömgren v band

darkening law (4) is more adequate for convective models in the optical region. The already mentioned problems in convective models may affect the selection of the most adequate approximation (see e.g. Fig. 13).

6. Conclusions

We have shown that the fitting method used to compute theoretical linear limb-darkening coefficients affects strongly their values. As expected, the non-linear coefficients are less affected by the fitting method. We have chosen the least-squares fitting method to compute linear, and non-linear, coefficients but it is necessary to keep in mind that the controversy about the most appropriate method to fit the intensity distribution in stellar discs (in order to compute theoretical linear limb-darkening coefficients for the analysis of eclipsing binaries), is a problem almost impossible to be solved: to find the optimal linear approximation to a non-linear effect. Any chosen fitting method to compute the linear coefficient will not provide satisfactory results. The correct solution is to adopt an adequate non-linear limb darkening approximation.

For radiative stars, the square root law is the most adequate limb-darkening approximation in all spectral regions. On the other hand, it is necessary to improve the convective models to be able to decide which is the most adequate non-linear law for convective stars.

We have chosen the least-squares method for the fits providing the values tabulated in 1, 2, and 3, because we found it to be the most adequate to obtain realistic limb-darkening coefficients for the analysis of the light curves of eclipsing binary systems. No doubt, for such analyses, it is very important to get the best description of the distribution of the $I(\mu)/I(1)$ function over the stellar disc and, for a given limb-darkening law, the coefficients obtained by least squares are the best to reproduce, as a whole, the actual distribution of the emergent specific intensity.

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Table 1. Linear (u) limb-darkening coefficients

log g	T_{eff}	u	v	b	y	U	B	V
0.0	3500	0.737	0.821	0.959	0.916	0.749	0.869	0.901
0.0	3750	0.835	0.890	0.934	0.886	0.828	0.902	0.894
0.0	4000	0.972	0.934	0.912	0.859	0.932	0.921	0.874
0.0	4250	0.991	0.939	0.889	0.828	0.966	0.914	0.841
0.0	4500	0.946	0.925	0.866	0.793	0.946	0.893	0.806
0.0	4750	0.884	0.901	0.840	0.759	0.902	0.864	0.773
0.0	5000	0.827	0.877	0.812	0.727	0.860	0.839	0.742
0.0	5250	0.779	0.854	0.786	0.697	0.825	0.817	0.714
0.0	5500	0.747	0.882	0.820	0.727	0.817	0.848	0.744
0.0	5750	0.709	0.879	0.811	0.714	0.795	0.845	0.732
0.0	6000	0.671	0.884	0.805	0.702	0.775	0.848	0.721
0.5	3500	0.750	0.850	0.980	0.920	0.769	0.889	0.901
0.5	3750	0.837	0.909	0.955	0.892	0.836	0.916	0.896
0.5	4000	0.982	0.950	0.931	0.865	0.938	0.934	0.881
0.5	4250	1.008	0.956	0.906	0.835	0.974	0.928	0.851
0.5	4500	0.974	0.943	0.880	0.800	0.963	0.907	0.815
0.5	4750	0.920	0.922	0.855	0.768	0.929	0.882	0.784
0.5	5000	0.862	0.896	0.826	0.734	0.887	0.854	0.751
0.5	5250	0.810	0.871	0.797	0.704	0.848	0.831	0.721
0.5	5500	0.756	0.848	0.768	0.671	0.810	0.810	0.689
0.5	5750	0.733	0.889	0.818	0.718	0.810	0.855	0.736
0.5	6000	0.693	0.882	0.808	0.707	0.784	0.850	0.725
0.5	6250	0.654	0.886	0.804	0.696	0.762	0.851	0.715
0.5	6500	0.619	0.882	0.797	0.686	0.739	0.848	0.707
0.5	6750	0.593	0.857	0.776	0.673	0.715	0.827	0.692
0.5	7000	0.575	0.822	0.748	0.657	0.691	0.797	0.675
0.5	7250	0.567	0.774	0.715	0.639	0.669	0.756	0.654
0.5	7500	0.568	0.710	0.667	0.615	0.640	0.697	0.625
1.0	3500	0.770	0.872	0.994	0.920	0.793	0.904	0.897
1.0	3750	0.843	0.922	0.968	0.894	0.845	0.925	0.893
1.0	4000	0.989	0.961	0.945	0.863	0.943	0.943	0.883
1.0	4250	1.021	0.966	0.918	0.838	0.979	0.936	0.856
1.0	4500	0.995	0.953	0.889	0.805	0.973	0.916	0.821
1.0	4750	0.948	0.933	0.862	0.772	0.945	0.891	0.788
1.0	5000	0.894	0.909	0.834	0.739	0.908	0.866	0.757
1.0	5250	0.839	0.882	0.804	0.708	0.868	0.840	0.725
1.0	5500	0.782	0.856	0.774	0.675	0.827	0.818	0.693
1.0	5750	0.735	0.838	0.753	0.652	0.791	0.801	0.670
1.0	6000	0.718	0.884	0.810	0.707	0.795	0.852	0.726
1.0	6250	0.677	0.876	0.800	0.697	0.765	0.844	0.716
1.0	6500	0.640	0.877	0.796	0.687	0.741	0.843	0.707
1.0	6750	0.608	0.872	0.789	0.678	0.719	0.838	0.698
1.0	7000	0.585	0.847	0.768	0.663	0.696	0.816	0.683
1.0	7250	0.569	0.812	0.742	0.647	0.676	0.787	0.665
1.0	7500	0.560	0.773	0.711	0.627	0.655	0.752	0.643
1.0	7750	0.555	0.730	0.679	0.608	0.638	0.713	0.622
1.0	8000	0.554	0.689	0.647	0.589	0.618	0.675	0.600
1.0	8250	0.565	0.657	0.622	0.572	0.609	0.644	0.581
1.5	3500	0.794	0.886	1.002	0.917	0.813	0.913	0.890
1.5	3750	0.853	0.930	0.976	0.893	0.853	0.928	0.886
1.5	4000	0.989	0.967	0.954	0.870	0.943	0.948	0.881
1.5	4250	1.029	0.972	0.925	0.840	0.981	0.941	0.858
1.5	4500	1.008	0.959	0.895	0.808	0.977	0.921	0.825
1.5	4750	0.969	0.940	0.868	0.775	0.956	0.897	0.792
1.5	5000	0.919	0.915	0.838	0.742	0.923	0.871	0.759
1.5	5250	0.866	0.888	0.808	0.712	0.884	0.846	0.729
1.5	5500	0.807	0.860	0.777	0.678	0.841	0.821	0.696
1.5	5750	0.754	0.837	0.752	0.651	0.799	0.801	0.669
1.5	6000	0.712	0.820	0.733	0.633	0.763	0.784	0.651
1.5	6250	0.701	0.870	0.797	0.695	0.772	0.839	0.714
1.5	6500	0.663	0.859	0.787	0.685	0.742	0.828	0.704
1.5	6750	0.629	0.859	0.782	0.675	0.718	0.826	0.695
1.5	7000	0.600	0.852	0.775	0.666	0.696	0.819	0.686
1.5	7250	0.578	0.825	0.755	0.652	0.676	0.798	0.670
1.5	7500	0.564	0.793	0.728	0.631	0.655	0.769	0.649
1.5	7750	0.553	0.759	0.699	0.611	0.638	0.737	0.628
1.5	8000	0.544	0.725	0.671	0.593	0.621	0.706	0.608
1.5	8250	0.538	0.694	0.647	0.577	0.606	0.677	0.590
1.5	8500	0.540	0.669	0.627	0.564	0.596	0.654	0.576
1.5	8750	0.548	0.650	0.612	0.554	0.592	0.636	0.564
1.5	9000	0.558	0.635	0.600	0.545	0.590	0.622	0.555
2.0	3500	0.817	0.894	1.007	0.913	0.828	0.918	0.882
2.0	3750	0.861	0.931	0.979	0.890	0.856	0.927	0.876
2.0	4000	0.983	0.967	0.960	0.869	0.935	0.947	0.876
2.0	4250	1.031	0.974	0.931	0.841	0.977	0.943	0.858
2.0	4500	1.015	0.960	0.900	0.810	0.975	0.923	0.828
2.0	4750	0.982	0.942	0.870	0.777	0.959	0.899	0.795
2.0	5000	0.938	0.917	0.840	0.744	0.931	0.873	0.761
2.0	5250	0.888	0.890	0.809	0.712	0.895	0.847	0.730
2.0	5500	0.831	0.861	0.778	0.680	0.853	0.821	0.698
2.0	5750	0.777	0.834	0.751	0.653	0.809	0.798	0.670
2.0	6000	0.730	0.815	0.732	0.633	0.770	0.780	0.651
2.0	6250	0.694	0.799	0.718	0.618	0.737	0.765	0.636
2.0	6500	0.687	0.849	0.781	0.682	0.747	0.819	0.700
2.0	6750	0.651	0.836	0.770	0.671	0.716	0.806	0.690
2.0	7000	0.619	0.835	0.766	0.663	0.692	0.804	0.681
2.0	7250	0.593	0.825	0.760	0.653	0.674	0.797	0.672
2.0	7500	0.574	0.799	0.737	0.635	0.651	0.773	0.653
2.0	7750	0.559	0.769	0.709	0.614	0.633	0.744	0.632
2.0	8000	0.546	0.739	0.682	0.593	0.616	0.716	0.610
2.0	8250	0.535	0.709	0.657	0.576	0.600	0.689	0.591
2.0	8500	0.527	0.684	0.637	0.562	0.587	0.666	0.575
2.0	8750	0.526	0.664	0.619	0.549	0.581	0.647	0.562
2.0	9000	0.529	0.647	0.605	0.539	0.575	0.631	0.551
2.0	9250	0.533	0.633	0.593	0.530	0.571	0.618	0.542
2.0	9500	0.537	0.620	0.583	0.522	0.567	0.606	0.533
2.0	9750	0.538	0.609	0.573	0.514	0.563	0.595	0.525
2.0	10000	0.537	0.600	0.565	0.507	0.557	0.586	0.517
2.0	10500	0.528	0.584	0.550	0.494	0.545	0.570	0.504
2.0	14000	0.503	0.543	0.515	0.470	0.515	0.532	0.479
2.5	3500	0.834	0.894	1.008	0.908	0.833	0.916	0.873
2.5	3750	0.864	0.926	0.978	0.886	0.850	0.920	0.864
2.5	4000	0.969	0.962	0.962	0.867	0.919	0.941	0.867
2.5	4250	1.027	0.972	0.935	0.840	0.966	0.941	0.855
2.5	4500	1.017	0.960	0.904	0.811	0.968	0.923	0.830
2.5	4750	0.990	0.941	0.872	0.780	0.956	0.899	0.797
2.5	5000	0.952	0.918	0.842	0.747	0.935	0.874	0.764
2.5	5250	0.907	0.890	0.811	0.716	0.903	0.848	0.733
2.5	5500	0.853	0.859	0.779	0.683	0.862	0.820	0.700
2.5	5750	0.802	0.833	0.752	0.657	0.821	0.797	0.673
2.5	6000	0.751	0.809	0.729	0.633	0.777	0.775	0.650
2.5	6250	0.708	0.789	0.712	0.616	0.738	0.757	0.633
2.5	6500	0.679	0.775	0.701	0.604	0.709	0.743	0.622
2.5	6750	0.674	0.824	0.762	0.667	0.720	0.795	0.684
2.5	7000	0.641	0.809	0.751	0.656	0.691	0.780	0.673
2.5	7250	0.612	0.802	0.746	0.647	0.669	0.775	0.664
2.5	7500	0.588	0.795	0.739	0.636	0.647	0.769	0.654
2.5	7750	0.569	0.769	0.715	0.616	0.628	0.744	0.635
2.5	8000	0.553	0.742	0.689	0.595	0.609	0.718	0.612
2.5	8250	0.538	0.714	0.663	0.576	0.591	0.692	0.591
2.5	8500	0.525	0.689	0.641	0.559	0.577	0.669	0.574
2.5	8750	0.518	0.669	0.623	0.545	0.569	0.650	0.559
2.5	9000	0.516	0.651	0.607	0.534	0.562	0.633	0.548
2.5	9250	0.517	0.636	0.594	0.525	0.557	0.619	0.537
2.5	9500	0.519	0.623	0.583	0.516	0.553	0.606	0.527
2.5	9750	0.520	0.610	0.571	0.507	0.548	0.594	0.518
2.5	10000	0.520	0.599	0.562	0.499	0.543	0.584	0.510
2.5	10500	0.515	0.579	0.543	0.483	0.532	0.565	0.493
2.5	11000	0.505	0.562	0.528	0.468	0.519	0.548	0.479
2.5	11500	0.493	0.549	0.515	0.456	0.506	0.535	0.467
2.5	12000	0.483	0.538	0.504	0.447	0.496	0.524	0.457
2.5	12500	0.475	0.529	0.496	0.439	0.488	0.515	0.450
2.5	13000	0.470	0.522	0.490	0.434	0.482	0.509	0.444
2.5	14000	0.464	0.512	0.481	0.427	0.475	0.500	0.437
2.5	15000	0.463	0.506	0.476	0.424	0.473	0.494	0.434
2.5	16000	0.466	0.502	0.473	0.425	0.473	0.491	0.434
2.5	17000	0.470	0.499	0.473	0.427	0.476	0.489	0.436
2.5	18000	0.476	0.498	0.473	0.432	0.480	0.489	0.440
2.5	19000	0.480	0.497	0.474	0.436	0.483	0.489	0.443
3.0	3500	0.840	0.877	0.992	0.891	0.827	0.899	0.853
3.0	3750	0.860	0.914	0.974	0.879	0.838	0.908	0.849
3.0	4000	0.947	0.951	0.962	0.864	0.895	0.931	0.856
3.0	4250	1.014	0.967	0.938	0.839	0.947	0.936	0.850
3.0	4500	1.013	0.956	0.907	0.811	0.956	0.919	0.829
3.0	4750	0.992	0.938	0.875	0.781	0.949	0.897	0.799
3.0	5000	0.961	0.915	0.843	0.749	0.933	0.872	0.766
3.0	5250	0.921	0.888	0.812	0.718	0.906	0.846	0.734
3.0	5500	0.873	0.858	0.780	0.687	0.870	0.819	0.703
3.0	5750	0.823	0.830	0.752	0.659	0.830	0.794	0.675
3.0	6000	0.773	0.805	0.728	0.635	0.787	0.771	0.651
3.0	6250	0.728	0.783	0.709	0.616	0.746	0.751	0.632
3.0	6500	0.690	0.764	0.694	0.601	0.709	0.732	0.617
3.0	6750	0.665	0.749	0.684	0.591	0.682	0.718	0.607
3.0	7000	0.663	0.795	0.742	0.651	0.694	0.768	0.667
3.0	7250	0.633	0.775	0.729	0.640	0.667	0.752	0.655
3.0	7500	0.607	0.768	0.723	0.629	0.643	0.745	0.646
3.0	7750	0.583	0.761	0.715	0.617	0.621	0.737	0.634
3.0	8000	0.564	0.738	0.693	0.597	0.602	0.715	0.615
3.0	8250	0.546	0.712	0.668	0.577	0.582	0.690	0.594
3.0	8500	0.530	0.688	0.644	0.559	0.566	0.667	0.573
3.0	8750	0.518	0.667	0.624	0.543	0.555	0.647	0.557
3.0	9000	0.511	0.650	0.608	0.531	0.547	0.630	0.544
3.0	9250	0.509	0.635	0.594	0.520	0.542	0.616	0.533
3.0	9500	0.509	0.621	0.582	0.511	0.538	0.604	0.523
3.0	9750	0.509	0.607	0.570	0.502	0.534	0.592	0.514
3.0	10000	0.509	0.596	0.560	0.493	0.529	0.580	0.505
3.0	10500	0.506	0.575	0.541	0.477	0.519	0.560	0.488
3.0	11000	0.498	0.556	0.523	0.461	0.507	0.542	0.472

Table 1. continued

log g	T_{eff}	u	v	b	y	U	B	V
3.0	11500	0.487	0.540	0.507	0.446	0.493	0.525	0.457
3.0	12000	0.475	0.525	0.493	0.434	0.481	0.512	0.444
3.0	12500	0.465	0.514	0.482	0.423	0.469	0.500	0.434
3.0	13000	0.457	0.504	0.473	0.415	0.461	0.491	0.426
3.0	14000	0.445	0.489	0.459	0.402	0.449	0.476	0.413
3.0	15000	0.438	0.479	0.449	0.394	0.441	0.466	0.404
3.0	16000	0.435	0.471	0.442	0.389	0.437	0.459	0.399
3.0	17000	0.433	0.465	0.437	0.386	0.435	0.454	0.395
3.0	18000	0.434	0.460	0.433	0.385	0.434	0.449	0.394
3.0	19000	0.435	0.455	0.430	0.384	0.434	0.445	0.392
3.0	20000	0.435	0.451	0.426	0.383	0.434	0.441	0.392
3.0	21000	0.434	0.447	0.423	0.382	0.432	0.437	0.390
3.0	22000	0.431	0.444	0.421	0.382	0.430	0.435	0.389
3.0	23000	0.431	0.446	0.422	0.384	0.431	0.436	0.392
3.0	24000	0.435	0.450	0.426	0.391	0.436	0.441	0.398
3.0	25000	0.443	0.454	0.432	0.400	0.444	0.446	0.407
3.0	26000	0.448	0.457	0.436	0.407	0.449	0.450	0.414
3.5	3500	0.813	0.806	0.916	0.833	0.787	0.831	0.797
3.5	3750	0.840	0.880	0.949	0.856	0.811	0.877	0.819
3.5	4000	0.917	0.933	0.956	0.857	0.864	0.914	0.839
3.5	4250	0.991	0.956	0.939	0.837	0.919	0.926	0.841
3.5	4500	1.004	0.951	0.909	0.811	0.937	0.914	0.826
3.5	4750	0.989	0.933	0.877	0.783	0.936	0.893	0.800
3.5	5000	0.966	0.912	0.845	0.752	0.927	0.870	0.769
3.5	5250	0.933	0.886	0.814	0.720	0.907	0.845	0.737
3.5	5500	0.890	0.857	0.783	0.691	0.876	0.818	0.707
3.5	5750	0.844	0.828	0.753	0.663	0.838	0.793	0.679
3.5	6000	0.796	0.801	0.728	0.637	0.797	0.768	0.653
3.5	6250	0.750	0.777	0.706	0.617	0.755	0.745	0.633
3.5	6500	0.709	0.755	0.689	0.601	0.716	0.726	0.616
3.5	6750	0.675	0.735	0.675	0.586	0.682	0.706	0.602
3.5	7000	0.653	0.722	0.668	0.578	0.657	0.694	0.594
3.5	7250	0.655	0.760	0.720	0.634	0.670	0.739	0.649
3.5	7500	0.628	0.743	0.707	0.623	0.644	0.723	0.637
3.5	7750	0.603	0.733	0.699	0.612	0.619	0.713	0.627
3.5	8000	0.580	0.726	0.692	0.598	0.597	0.704	0.614
3.5	8250	0.559	0.706	0.672	0.580	0.576	0.685	0.596
3.5	8500	0.540	0.682	0.648	0.560	0.557	0.662	0.575
3.5	8750	0.524	0.661	0.627	0.543	0.543	0.642	0.557
3.5	9000	0.513	0.643	0.608	0.529	0.532	0.624	0.542
3.5	9250	0.508	0.629	0.593	0.517	0.526	0.610	0.530
3.5	9500	0.505	0.615	0.581	0.507	0.523	0.598	0.520
3.5	9750	0.503	0.603	0.569	0.498	0.519	0.587	0.510
3.5	10000	0.502	0.591	0.558	0.489	0.515	0.575	0.501
3.5	10500	0.499	0.570	0.539	0.473	0.507	0.555	0.484
3.5	11000	0.494	0.551	0.521	0.457	0.496	0.537	0.468
3.5	11500	0.485	0.533	0.504	0.442	0.483	0.519	0.453
3.5	12000	0.473	0.517	0.489	0.428	0.470	0.503	0.439
3.5	12500	0.462	0.504	0.475	0.416	0.459	0.490	0.426
3.5	13000	0.452	0.492	0.464	0.405	0.448	0.479	0.416
3.5	14000	0.437	0.473	0.445	0.389	0.431	0.460	0.399
3.5	15000	0.425	0.459	0.432	0.377	0.420	0.446	0.387
3.5	16000	0.419	0.448	0.422	0.368	0.413	0.436	0.378
3.5	17000	0.414	0.440	0.414	0.362	0.407	0.428	0.371
3.5	18000	0.410	0.433	0.407	0.357	0.404	0.422	0.366
3.5	19000	0.409	0.426	0.402	0.354	0.401	0.415	0.363
3.5	20000	0.407	0.420	0.397	0.350	0.400	0.410	0.359
3.5	21000	0.406	0.414	0.391	0.347	0.397	0.404	0.356
3.5	22000	0.403	0.408	0.385	0.344	0.394	0.398	0.352
3.5	23000	0.398	0.402	0.380	0.340	0.390	0.393	0.348
3.5	24000	0.393	0.399	0.376	0.337	0.386	0.389	0.345
3.5	25000	0.392	0.398	0.375	0.337	0.386	0.388	0.345
3.5	26000	0.394	0.399	0.376	0.340	0.388	0.390	0.347
3.5	27000	0.397	0.401	0.378	0.343	0.392	0.392	0.351
3.5	28000	0.399	0.401	0.377	0.346	0.392	0.392	0.353
3.5	29000	0.398	0.399	0.375	0.346	0.392	0.391	0.354
3.5	30000	0.394	0.396	0.372	0.345	0.390	0.388	0.352
3.5	31000	0.390	0.393	0.370	0.344	0.387	0.386	0.351
4.0	3500	0.777	0.735	0.828	0.763	0.739	0.757	0.733
4.0	3750	0.798	0.800	0.864	0.785	0.761	0.802	0.751
4.0	4000	0.875	0.893	0.929	0.830	0.821	0.877	0.805
4.0	4250	0.957	0.939	0.937	0.833	0.883	0.910	0.828
4.0	4500	0.985	0.941	0.910	0.810	0.911	0.905	0.819
4.0	4750	0.980	0.926	0.878	0.783	0.917	0.887	0.798
4.0	5000	0.964	0.907	0.847	0.754	0.914	0.865	0.771
4.0	5250	0.938	0.883	0.816	0.724	0.902	0.842	0.740
4.0	5500	0.902	0.856	0.785	0.694	0.877	0.817	0.710
4.0	5750	0.860	0.827	0.755	0.666	0.844	0.791	0.682
4.0	6000	0.815	0.798	0.728	0.640	0.805	0.765	0.655
4.0	6250	0.771	0.772	0.704	0.617	0.764	0.742	0.632
4.0	6500	0.729	0.748	0.685	0.599	0.724	0.719	0.614
4.0	6750	0.692	0.728	0.671	0.586	0.688	0.700	0.600
4.0	7000	0.664	0.710	0.659	0.574	0.658	0.683	0.589
4.0	7250	0.641	0.690	0.650	0.565	0.633	0.668	0.579
4.0	7500	0.651	0.728	0.698	0.617	0.649	0.710	0.630
4.0	7750	0.625	0.709	0.685	0.606	0.622	0.692	0.619
4.0	8000	0.600	0.696	0.674	0.593	0.597	0.679	0.607
4.0	8250	0.577	0.688	0.667	0.580	0.575	0.671	0.594
4.0	8500	0.554	0.673	0.651	0.563	0.553	0.655	0.577
4.0	8750	0.535	0.652	0.630	0.545	0.535	0.635	0.559
4.0	9000	0.521	0.634	0.610	0.530	0.521	0.616	0.543
4.0	9250	0.512	0.619	0.594	0.516	0.512	0.601	0.529
4.0	9500	0.506	0.606	0.580	0.506	0.508	0.589	0.518
4.0	9750	0.503	0.595	0.568	0.496	0.504	0.578	0.508
4.0	10000	0.500	0.584	0.557	0.487	0.500	0.568	0.499
4.0	10500	0.496	0.563	0.537	0.471	0.494	0.549	0.482
4.0	11000	0.491	0.545	0.520	0.456	0.485	0.531	0.466
4.0	11500	0.484	0.527	0.503	0.441	0.474	0.514	0.451
4.0	12000	0.474	0.510	0.487	0.426	0.463	0.497	0.437
4.0	12500	0.463	0.496	0.472	0.414	0.450	0.483	0.424
4.0	13000	0.453	0.483	0.460	0.402	0.439	0.471	0.412
4.0	14000	0.435	0.461	0.438	0.382	0.420	0.449	0.393
4.0	15000	0.421	0.445	0.423	0.368	0.406	0.433	0.378
4.0	16000	0.411	0.432	0.410	0.357	0.397	0.421	0.366
4.0	17000	0.404	0.422	0.400	0.348	0.389	0.411	0.358
4.0	18000	0.399	0.413	0.392	0.341	0.384	0.402	0.351
4.0	19000	0.394	0.406	0.385	0.336	0.379	0.395	0.344
4.0	20000	0.391	0.399	0.378	0.331	0.376	0.388	0.340
4.0	21000	0.388	0.392	0.372	0.327	0.373	0.382	0.335
4.0	22000	0.386	0.385	0.366	0.323	0.370	0.375	0.331
4.0	23000	0.382	0.378	0.359	0.318	0.366	0.368	0.326
4.0	24000	0.376	0.372	0.352	0.313	0.361	0.363	0.321
4.0	25000	0.371	0.366	0.346	0.309	0.357	0.357	0.316
4.0	26000	0.367	0.363	0.342	0.306	0.354	0.354	0.314
4.0	27000	0.366	0.362	0.341	0.305	0.353	0.352	0.313
4.0	28000	0.367	0.361	0.340	0.306	0.353	0.352	0.313
4.0	29000	0.366	0.359	0.338	0.306	0.353	0.351	0.313
4.0	30000	0.364	0.357	0.335	0.304	0.352	0.349	0.311
4.0	31000	0.359	0.352	0.330	0.301	0.348	0.344	0.308
4.0	32000	0.352	0.345	0.324	0.297	0.342	0.337	0.303
4.0	33000	0.345	0.339	0.317	0.291	0.336	0.331	0.298
4.0	34000	0.337	0.333	0.310	0.286	0.329	0.325	0.292
4.0	35000	0.330	0.328	0.305	0.280	0.323	0.320	0.287
4.44	5777	0.867	0.821	0.753	0.665	0.842	0.785	0.681
4.5	3500	0.752	0.696	0.773	0.716	0.708	0.713	0.690
4.5	3750	0.756	0.724	0.770	0.705	0.712	0.725	0.680
4.5	4000	0.818	0.813	0.847	0.757	0.764	0.801	0.734
4.5	4250	0.909	0.902	0.913	0.810	0.836	0.877	0.798
4.5	4500	0.958	0.926	0.909	0.807	0.878	0.893	0.810
4.5	4750	0.964	0.916	0.880	0.782	0.893	0.879	0.795
4.5	5000	0.957	0.900	0.849	0.755	0.897	0.860	0.771
4.5	5250	0.939	0.879	0.818	0.726	0.892	0.839	0.742
4.5	5500	0.910	0.852	0.786	0.696	0.874	0.814	0.712
4.5	5750	0.873	0.824	0.757	0.669	0.847	0.789	0.684
4.5	6000	0.832	0.795	0.728	0.642	0.811	0.762	0.657
4.5	6250	0.790	0.768	0.703	0.619	0.773	0.738	0.633
4.5	6500	0.748	0.743	0.683	0.599	0.733	0.714	0.613
4.5	6750	0.710	0.720	0.666	0.584	0.696	0.694	0.598
4.5	7000	0.679	0.701	0.653	0.571	0.664	0.675	0.585
4.5	7250	0.652	0.679	0.642	0.561	0.636	0.658	0.574
4.5	7500	0.634	0.662	0.632	0.553	0.614	0.643	0.566
4.5	7750	0.648	0.695	0.675	0.598	0.629	0.679	0.611
4.5	8000	0.624	0.677	0.662	0.587	0.604	0.662	0.600
4.5	8250	0.600	0.661	0.650	0.575	0.580	0.648	0.588
4.5	8500	0.575	0.651	0.642	0.562	0.555	0.637	0.575
4.5	8750	0.551	0.638	0.631	0.547	0.532	0.624	0.560
4.5	9000	0.532	0.622	0.613	0.532	0.515	0.607	0.544
4.5	9250	0.520	0.606	0.595	0.518	0.503	0.591	0.530
4.5	9500	0.511	0.593	0.580	0.506	0.495	0.578	0.517
4.5	9750	0.505	0.582	0.567	0.495	0.491	0.567	0.507
4.5	10000	0.502	0.572	0.556	0.486	0.487	0.557	0.497
4.5	10500	0.496	0.553	0.536	0.469	0.481	0.540	0.480
4.5	11000	0.490	0.536	0.518	0.455	0.475	0.523	0.465
4.5	11500	0.484	0.520	0.502	0.440	0.466	0.507	0.450
4.5	12000	0.475	0.504	0.487	0.427	0.455	0.492	0.436
4.5	12500	0.466	0.489	0.472	0.414	0.444	0.477	0.423
4.5	13000	0.456	0.475	0.459	0.402	0.433	0.464	0.411
4.5	14000	0.437	0.452	0.436	0.381	0.413	0.441	0.390
4.5	15000	0.421	0.434	0.418	0.364	0.398	0.423	0.374
4.5	16000	0.409	0.419	0.403	0.351	0.386	0.409	0.360
4.5	17000	0.400	0.408	0.392	0.341	0.377	0.398	0.350
4.5	18000	0.393	0.399	0.382	0.333	0.371	0.388	0.342
4.5	19000	0.387	0.390	0.374	0.326	0.365	0.380	0.334
4.5	20000	0.382	0.382	0.366	0.320	0.361	0.373	0.328
4.5	21000	0.379	0.375	0.360	0.315	0.357	0.366	0.323
4.5	22000	0.376	0.369	0.353	0.311	0.354	0.360	0.318
4.5	23000	0.372	0.362	0.347	0.306	0.351	0.353	0.313
4.5	24000	0.368	0.355	0.340	0.301	0.347	0.347	0.308
4.5	25000	0.363	0.348	0.333	0.296	0.342	0.340	0.303
4.5	26000	0.358	0.342	0.327	0.291	0.337	0.334	0.298
4.5	27000	0.353	0.337	0.322	0.287	0.334	0.329	0.294
4.5	28000	0.350	0.335	0.319	0.285	0.331	0.326	0.292

Table 1. continued

log g	T_{eff}	u	v	b	y	U	B	V
4.5	29000	0.348	0.332	0.316	0.283	0.329	0.324	0.289
4.5	30000	0.345	0.331	0.312	0.281	0.328	0.322	0.288
4.5	31000	0.341	0.326	0.308	0.278	0.325	0.318	0.284
4.5	32000	0.335	0.320	0.301	0.273	0.319	0.312	0.280
4.5	33000	0.328	0.312	0.294	0.268	0.312	0.305	0.274
4.5	34000	0.319	0.304	0.286	0.261	0.305	0.297	0.267
4.5	35000	0.310	0.296	0.278	0.254	0.297	0.289	0.260
4.5	37500	0.287	0.278	0.258	0.235	0.277	0.270	0.242
4.5	40000	0.278	0.271	0.250	0.226	0.269	0.263	0.233
5.0	3500	0.742	0.685	0.743	0.688	0.692	0.692	0.663
5.0	3750	0.732	0.686	0.715	0.657	0.683	0.682	0.638
5.0	4000	0.769	0.739	0.752	0.676	0.715	0.726	0.661
5.0	4250	0.849	0.834	0.843	0.746	0.782	0.812	0.735
5.0	4500	0.920	0.900	0.894	0.791	0.840	0.869	0.789
5.0	4750	0.942	0.904	0.880	0.780	0.864	0.869	0.789
5.0	5000	0.943	0.891	0.850	0.755	0.875	0.852	0.770
5.0	5250	0.932	0.871	0.819	0.727	0.876	0.832	0.743
5.0	5500	0.911	0.848	0.787	0.698	0.866	0.809	0.714
5.0	5750	0.881	0.821	0.758	0.670	0.845	0.785	0.685
5.0	6000	0.844	0.792	0.728	0.642	0.814	0.759	0.657
5.0	6250	0.805	0.764	0.702	0.619	0.779	0.734	0.633
5.0	6500	0.766	0.738	0.679	0.598	0.742	0.710	0.612
5.0	6750	0.728	0.714	0.661	0.582	0.705	0.688	0.595
5.0	7000	0.696	0.694	0.648	0.569	0.673	0.669	0.583
5.0	7250	0.668	0.671	0.636	0.559	0.645	0.652	0.572
5.0	7500	0.645	0.652	0.625	0.549	0.619	0.635	0.562
5.0	7750	0.629	0.636	0.616	0.541	0.599	0.620	0.553
5.0	8000	0.619	0.623	0.609	0.536	0.583	0.609	0.547
5.0	8250	0.623	0.644	0.639	0.570	0.589	0.633	0.580
5.0	8500	0.601	0.626	0.626	0.558	0.565	0.616	0.568
5.0	8750	0.576	0.613	0.617	0.546	0.541	0.604	0.556
5.0	9000	0.548	0.609	0.617	0.536	0.516	0.598	0.548
5.0	9250	0.532	0.592	0.598	0.521	0.500	0.581	0.532
5.0	9500	0.520	0.576	0.582	0.507	0.488	0.566	0.518
5.0	9750	0.513	0.565	0.568	0.496	0.481	0.554	0.507
5.0	10000	0.507	0.556	0.556	0.486	0.476	0.545	0.497
5.0	10500	0.499	0.540	0.534	0.468	0.470	0.528	0.478
5.0	11000	0.492	0.525	0.517	0.454	0.464	0.513	0.463
5.0	11500	0.486	0.509	0.501	0.440	0.457	0.498	0.450
5.0	12000	0.478	0.494	0.486	0.427	0.449	0.484	0.436
5.0	12500	0.469	0.481	0.472	0.415	0.440	0.471	0.424
5.0	13000	0.460	0.467	0.459	0.403	0.429	0.458	0.412
5.0	14000	0.442	0.444	0.436	0.382	0.410	0.435	0.391
5.0	15000	0.425	0.424	0.416	0.364	0.393	0.415	0.373
5.0	16000	0.411	0.409	0.401	0.350	0.380	0.400	0.358
5.0	17000	0.400	0.396	0.388	0.339	0.370	0.387	0.346
5.0	18000	0.392	0.386	0.377	0.329	0.362	0.377	0.337
5.0	19000	0.385	0.377	0.368	0.321	0.356	0.368	0.329
5.0	20000	0.379	0.369	0.360	0.314	0.351	0.361	0.322
5.0	21000	0.374	0.362	0.353	0.308	0.347	0.354	0.316
5.0	22000	0.370	0.356	0.346	0.303	0.344	0.348	0.311
5.0	23000	0.367	0.349	0.340	0.299	0.341	0.342	0.305
5.0	24000	0.364	0.342	0.333	0.294	0.337	0.335	0.301
5.0	25000	0.360	0.336	0.326	0.290	0.334	0.329	0.296
5.0	26000	0.355	0.329	0.320	0.285	0.329	0.322	0.291
5.0	27000	0.349	0.323	0.313	0.279	0.325	0.316	0.286
5.0	28000	0.344	0.318	0.308	0.275	0.320	0.311	0.281
5.0	29000	0.339	0.314	0.303	0.272	0.317	0.307	0.277
5.0	30000	0.335	0.312	0.299	0.268	0.314	0.305	0.274
5.0	31000	0.331	0.308	0.294	0.265	0.310	0.301	0.271
5.0	32000	0.325	0.303	0.288	0.260	0.305	0.295	0.266
5.0	33000	0.318	0.295	0.281	0.255	0.299	0.288	0.261
5.0	34000	0.309	0.287	0.273	0.248	0.292	0.281	0.254
5.0	35000	0.300	0.279	0.264	0.241	0.284	0.273	0.247
5.0	37500	0.274	0.256	0.241	0.221	0.260	0.250	0.226
5.0	40000	0.254	0.239	0.223	0.202	0.242	0.233	0.209
5.0	42500	0.245	0.232	0.216	0.195	0.234	0.226	0.201
5.0	45000	0.241	0.229	0.212	0.191	0.231	0.223	0.197
5.0	47500	0.238	0.226	0.209	0.188	0.228	0.220	0.194
5.0	50000	0.235	0.224	0.207	0.186	0.226	0.217	0.192

Table 2. Quadratic (a, b) limb-darkening coefficients

log g	T_{eff}	u	v	b	y	U	B	V
0.0	3500	0.547	0.969	1.307	1.117	0.607	1.062	1.103
		0.247	-0.192	-0.453	-0.262	0.184	-0.252	-0.263
0.0	3750	0.835	1.164	1.266	1.046	0.832	1.167	1.091
		0.000	-0.357	-0.432	-0.208	-0.005	-0.345	-0.257
0.0	4000	1.241	1.240	1.184	0.962	1.105	1.177	1.011
		-0.350	-0.398	-0.355	-0.135	-0.225	-0.334	-0.179
0.0	4250	1.280	1.225	1.106	0.876	1.186	1.133	0.915
		-0.376	-0.372	-0.282	-0.063	-0.286	-0.285	-0.097
0.0	4500	1.164	1.186	1.039	0.795	1.143	1.077	0.837
		-0.284	-0.340	-0.225	-0.003	-0.257	-0.239	-0.040
0.0	4750	1.041	1.145	0.973	0.726	1.079	1.022	0.768
		-0.204	-0.317	-0.173	0.042	-0.230	-0.205	0.007
0.0	5000	0.934	1.104	0.907	0.658	1.022	0.980	0.702
		-0.139	-0.295	-0.123	0.090	-0.211	-0.184	0.052
0.0	5250	0.830	1.058	0.842	0.596	0.964	0.937	0.640
		-0.067	-0.266	-0.073	0.132	-0.180	-0.156	0.096
0.0	5500	0.771	1.167	0.963	0.712	0.980	1.053	0.756
		-0.031	-0.371	-0.186	0.019	-0.212	-0.267	-0.015
0.0	5750	0.665	1.128	0.917	0.679	0.907	1.023	0.722
		0.056	-0.325	-0.138	0.047	-0.147	-0.233	0.013
0.0	6000	0.565	1.119	0.882	0.647	0.846	1.014	0.689
		0.138	-0.307	-0.101	0.071	-0.092	-0.216	0.042
0.5	3500	0.601	1.039	1.332	1.119	0.684	1.100	1.090
		0.193	-0.246	-0.458	-0.259	0.111	-0.274	-0.247
0.5	3750	0.881	1.214	1.284	1.046	0.891	1.192	1.084
		-0.057	-0.398	-0.428	-0.200	-0.071	-0.359	-0.244
0.5	4000	1.305	1.280	1.191	0.960	1.156	1.196	1.010
		-0.421	-0.430	-0.339	-0.123	-0.284	-0.342	-0.168
0.5	4250	1.357	1.261	1.104	0.873	1.234	1.149	0.916
		-0.453	-0.397	-0.258	-0.049	-0.338	-0.287	-0.086
0.5	4500	1.252	1.213	1.025	0.787	1.202	1.085	0.826
		-0.362	-0.352	-0.189	0.017	-0.312	-0.232	-0.014
0.5	4750	1.125	1.166	0.963	0.721	1.139	1.032	0.761
		-0.266	-0.318	-0.141	0.061	-0.274	-0.196	0.030
0.5	5000	0.991	1.105	0.887	0.649	1.061	0.976	0.689
		-0.168	-0.273	-0.080	0.111	-0.226	-0.158	0.080
0.5	5250	0.869	1.049	0.821	0.589	0.983	0.931	0.629
		-0.077	-0.232	-0.032	0.150	-0.176	-0.130	0.120
0.5	5500	0.722	0.989	0.756	0.528	0.877	0.878	0.566
		0.045	-0.183	0.016	0.187	-0.087	-0.088	0.160
0.5	5750	0.703	1.107	0.895	0.671	0.909	1.009	0.711
		0.039	-0.284	-0.101	0.060	-0.128	-0.200	0.032
0.5	6000	0.601	1.050	0.846	0.641	0.824	0.965	0.677
		0.120	-0.218	-0.049	0.085	-0.052	-0.150	0.063
0.5	6250	0.518	1.044	0.824	0.614	0.767	0.956	0.651
		0.177	-0.205	-0.026	0.107	-0.006	-0.136	0.084
0.5	6500	0.456	1.011	0.801	0.592	0.714	0.931	0.629
		0.213	-0.168	-0.006	0.123	0.032	-0.108	0.101
0.5	6750	0.418	0.915	0.737	0.558	0.653	0.852	0.591
		0.227	-0.075	0.050	0.149	0.080	-0.032	0.131
0.5	7000	0.402	0.808	0.667	0.521	0.600	0.762	0.549
		0.225	0.019	0.106	0.177	0.118	0.045	0.164
0.5	7250	0.404	0.694	0.596	0.486	0.554	0.666	0.508
		0.213	0.103	0.154	0.200	0.149	0.117	0.191
0.5	7500	0.421	0.575	0.512	0.443	0.510	0.557	0.457
		0.191	0.175	0.202	0.224	0.169	0.183	0.220
1.0	3500	0.673	1.076	1.346	1.115	0.762	1.119	1.072
		0.126	-0.265	-0.458	-0.255	0.041	-0.280	-0.228
1.0	3750	0.941	1.242	1.289	1.042	0.949	1.203	1.070
		-0.128	-0.417	-0.418	-0.193	-0.136	-0.362	-0.231
1.0	4000	1.359	1.301	1.192	0.956	1.198	1.207	1.010
		-0.482	-0.442	-0.322	-0.113	-0.332	-0.344	-0.165
1.0	4250	1.410	1.273	1.097	0.868	1.267	1.154	0.916
		-0.506	-0.399	-0.234	-0.039	-0.374	-0.283	-0.078
1.0	4500	1.314	1.221	1.012	0.784	1.239	1.087	0.824
		-0.416	-0.348	-0.160	0.027	-0.347	-0.223	-0.004
1.0	4750	1.180	1.164	0.940	0.710	1.171	1.028	0.750
		-0.303	-0.300	-0.102	0.081	-0.294	-0.178	0.049
1.0	5000	1.044	1.101	0.869	0.644	1.088	0.972	0.684
		-0.195	-0.250	-0.045	0.125	-0.234	-0.139	0.094
1.0	5250	0.899	1.032	0.798	0.580	0.992	0.917	0.619
		-0.079	-0.195	0.007	0.166	-0.161	-0.100	0.138
1.0	5500	0.746	0.964	0.734	0.522	0.878	0.863	0.558
		0.047	-0.141	0.052	0.200	-0.067	-0.059	0.176
1.0	5750	0.622	0.904	0.680	0.475	0.772	0.813	0.511
		0.148	-0.086	0.094	0.231	0.024	-0.015	0.208
1.0	6000	0.637	1.016	0.825	0.635	0.816	0.937	0.668
		0.104	-0.172	-0.019	0.094	-0.028	-0.112	0.076
1.0	6250	0.553	0.956	0.778	0.603	0.735	0.888	0.636
		0.162	-0.105	0.028	0.121	0.039	-0.058	0.104
1.0	6500	0.487	0.949	0.761	0.579	0.682	0.876	0.610
		0.199	-0.093	0.045	0.141	0.077	-0.042	0.126

Table 2. continued

log g	T_{eff}	u	v	b	y	U	B	V
1.0	6750	0.441	0.920	0.741	0.558	0.640	0.852	0.590
		0.218	-0.063	0.062	0.156	0.103	-0.018	0.140
1.0	7000	0.414	0.830	0.679	0.518	0.591	0.774	0.548
		0.222	0.022	0.117	0.188	0.138	0.055	0.176
1.0	7250	0.400	0.734	0.614	0.480	0.551	0.695	0.506
		0.219	0.102	0.168	0.217	0.163	0.120	0.207
1.0	7500	0.399	0.648	0.552	0.442	0.518	0.618	0.464
		0.209	0.162	0.207	0.241	0.179	0.174	0.234
1.0	7750	0.403	0.578	0.503	0.414	0.494	0.554	0.432
		0.198	0.199	0.229	0.253	0.187	0.208	0.248
1.0	8000	0.419	0.532	0.467	0.391	0.480	0.510	0.406
		0.176	0.204	0.234	0.258	0.180	0.214	0.253
1.0	8250	0.457	0.516	0.452	0.378	0.490	0.493	0.391
		0.141	0.184	0.220	0.253	0.155	0.197	0.247
1.5	3500	0.743	1.086	1.350	1.108	0.817	1.122	1.051
		0.067	-0.261	-0.453	-0.248	-0.004	-0.272	-0.210
1.5	3750	1.003	1.247	1.290	1.041	0.996	1.200	1.053
		-0.195	-0.413	-0.410	-0.193	-0.186	-0.354	-0.217
1.5	4000	1.391	1.307	1.197	0.957	1.219	1.211	1.007
		-0.523	-0.442	-0.316	-0.113	-0.360	-0.342	-0.164
1.5	4250	1.447	1.277	1.092	0.869	1.283	1.153	0.920
		-0.544	-0.397	-0.216	-0.038	-0.393	-0.276	-0.081
1.5	4500	1.352	1.220	1.000	0.785	1.252	1.084	0.824
		-0.448	-0.340	-0.136	0.030	-0.358	-0.213	0.001
1.5	4750	1.225	1.160	0.927	0.711	1.191	1.025	0.748
		-0.334	-0.286	-0.078	0.084	-0.306	-0.166	0.057
1.5	5000	1.078	1.083	0.848	0.638	1.100	0.960	0.675
		-0.206	-0.219	-0.014	0.135	-0.231	-0.115	0.109
1.5	5250	0.930	1.008	0.777	0.576	0.996	0.900	0.611
		-0.084	-0.156	0.040	0.177	-0.146	-0.070	0.153
1.5	5500	0.771	0.936	0.711	0.514	0.875	0.840	0.547
		0.047	-0.098	0.085	0.214	-0.045	-0.025	0.194
1.5	5750	0.632	0.871	0.660	0.469	0.757	0.788	0.503
		0.159	-0.044	0.120	0.238	0.054	0.017	0.216
1.5	6000	0.523	0.808	0.611	0.429	0.655	0.730	0.462
		0.246	0.015	0.159	0.265	0.141	0.070	0.246
1.5	6250	0.589	0.916	0.758	0.597	0.725	0.854	0.627
		0.147	-0.059	0.050	0.128	0.061	-0.020	0.113
1.5	6500	0.521	0.855	0.712	0.566	0.652	0.800	0.591
		0.184	0.005	0.098	0.155	0.117	0.037	0.146
1.5	6750	0.471	0.850	0.697	0.540	0.609	0.787	0.569
		0.205	0.011	0.111	0.177	0.142	0.051	0.164
1.5	7000	0.436	0.821	0.677	0.517	0.572	0.761	0.545
		0.214	0.040	0.128	0.194	0.161	0.074	0.183
1.5	7250	0.412	0.736	0.620	0.482	0.534	0.695	0.507
		0.216	0.116	0.176	0.221	0.185	0.133	0.212
1.5	7500	0.403	0.656	0.556	0.436	0.500	0.621	0.460
		0.209	0.179	0.224	0.254	0.202	0.192	0.246
1.5	7750	0.397	0.588	0.501	0.403	0.476	0.558	0.422
		0.204	0.223	0.257	0.271	0.212	0.233	0.268
1.5	8000	0.395	0.535	0.462	0.377	0.458	0.511	0.395
		0.195	0.247	0.272	0.281	0.212	0.253	0.277
1.5	8250	0.400	0.499	0.436	0.361	0.446	0.478	0.373
		0.180	0.254	0.274	0.282	0.208	0.259	0.283
1.5	8500	0.413	0.479	0.419	0.345	0.445	0.457	0.357
		0.165	0.247	0.272	0.284	0.197	0.255	0.284
1.5	8750	0.433	0.469	0.410	0.337	0.449	0.447	0.349
		0.151	0.235	0.263	0.282	0.187	0.246	0.280
1.5	9000	0.447	0.464	0.406	0.329	0.452	0.443	0.342
		0.144	0.223	0.253	0.281	0.180	0.233	0.277
2.0	3500	0.802	1.077	1.354	1.100	0.848	1.114	1.028
		0.019	-0.239	-0.451	-0.243	-0.026	-0.256	-0.190
2.0	3750	1.046	1.234	1.288	1.040	1.013	1.186	1.034
		-0.241	-0.395	-0.403	-0.196	-0.205	-0.337	-0.205
2.0	4000	1.392	1.300	1.199	0.956	1.215	1.204	1.000
		-0.532	-0.433	-0.312	-0.113	-0.365	-0.335	-0.162
2.0	4250	1.464	1.272	1.091	0.872	1.281	1.152	0.924
		-0.563	-0.388	-0.208	-0.040	-0.397	-0.272	-0.086
2.0	4500	1.374	1.212	0.994	0.788	1.253	1.080	0.833
		-0.467	-0.328	-0.123	0.028	-0.362	-0.205	-0.006
2.0	4750	1.254	1.146	0.913	0.711	1.195	1.015	0.748
		-0.353	-0.266	-0.056	0.086	-0.307	-0.151	0.061
2.0	5000	1.106	1.067	0.833	0.636	1.104	0.947	0.671
		-0.219	-0.195	0.009	0.140	-0.225	-0.096	0.118
2.0	5250	0.958	0.984	0.760	0.571	0.999	0.881	0.606
		-0.092	-0.123	0.064	0.184	-0.135	-0.043	0.162
2.0	5500	0.800	0.906	0.692	0.509	0.877	0.817	0.541
		0.041	-0.060	0.112	0.222	-0.031	0.006	0.204
2.0	5750	0.655	0.835	0.638	0.462	0.754	0.759	0.492
		0.158	-0.001	0.147	0.248	0.072	0.052	0.231
2.0	6000	0.543	0.775	0.596	0.429	0.646	0.706	0.459
		0.243	0.052	0.176	0.266	0.160	0.097	0.250
2.0	6250	0.466	0.722	0.559	0.398	0.562	0.656	0.426
		0.297	0.100	0.206	0.286	0.227	0.142	0.273
2.0	6500	0.556	0.817	0.693	0.559	0.644	0.768	0.583
		0.170	0.042	0.113	0.160	0.134	0.067	0.152
2.0	6750	0.502	0.754	0.647	0.527	0.582	0.712	0.549
		0.193	0.107	0.161	0.188	0.176	0.123	0.182
2.0	7000	0.464	0.755	0.637	0.504	0.543	0.703	0.528
		0.202	0.105	0.168	0.206	0.193	0.131	0.199
2.0	7250	0.434	0.728	0.623	0.485	0.520	0.685	0.510
		0.207	0.127	0.178	0.219	0.201	0.145	0.210
2.0	7500	0.417	0.654	0.562	0.442	0.483	0.620	0.465
		0.204	0.190	0.228	0.250	0.218	0.200	0.245
2.0	7750	0.404	0.583	0.502	0.399	0.455	0.552	0.420
		0.202	0.242	0.269	0.279	0.232	0.249	0.276
2.0	8000	0.394	0.527	0.458	0.369	0.435	0.503	0.385
		0.198	0.276	0.292	0.291	0.236	0.278	0.293
2.0	8250	0.387	0.485	0.423	0.348	0.420	0.462	0.362
		0.193	0.292	0.304	0.296	0.234	0.295	0.298
2.0	8500	0.388	0.454	0.400	0.330	0.411	0.436	0.343
		0.180	0.300	0.309	0.302	0.230	0.300	0.303
2.0	8750	0.396	0.434	0.381	0.316	0.409	0.414	0.326
		0.170	0.300	0.311	0.304	0.223	0.304	0.307
2.0	9000	0.407	0.418	0.367	0.303	0.405	0.399	0.313
		0.158	0.298	0.310	0.308	0.222	0.302	0.310
2.0	9250	0.415	0.407	0.358	0.294	0.402	0.389	0.305
		0.155	0.294	0.306	0.308	0.220	0.297	0.308
2.0	9500	0.416	0.399	0.350	0.285	0.400	0.380	0.296
		0.158	0.288	0.303	0.308	0.218	0.293	0.309
2.0	9750	0.412	0.391	0.343	0.279	0.393	0.372	0.290
		0.164	0.283	0.300	0.307	0.221	0.290	0.306
2.0	10000	0.405	0.385	0.335	0.271	0.385	0.366	0.282
		0.172	0.280	0.298	0.307	0.224	0.286	0.307
2.0	10500	0.382	0.372	0.324	0.259	0.367	0.354	0.270
		0.191	0.276	0.294	0.305	0.232	0.281	0.304
2.0	14000	0.337	0.348	0.304	0.245	0.335	0.332	0.255
		0.216	0.253	0.275	0.293	0.234	0.260	0.291
2.5	3500	0.836	1.046	1.345	1.085	0.848	1.089	0.999
		-0.002	-0.198	-0.439	-0.231	-0.019	-0.225	-0.164
2.5	3750	1.056	1.201	1.281	1.036	0.999	1.159	1.010
		-0.251	-0.358	-0.394	-0.195	-0.194	-0.311	-0.190
2.5	4000	1.368	1.281	1.203	0.959	1.185	1.190	0.987
		-0.519	-0.415	-0.313	-0.120	-0.347	-0.324	-0.156
2.5	4250	1.462	1.263	1.095	0.876	1.262	1.147	0.927
		-0.566	-0.379	-0.208	-0.047	-0.386	-0.268	-0.094
2.5	4500	1.386	1.205	0.995	0.795	1.242	1.078	0.842
		-0.481	-0.319	-0.119	0.022	-0.357	-0.202	-0.016
2.5	4750	1.276	1.137	0.907	0.717	1.190	1.007	0.755
		-0.372	-0.255	-0.045	0.081	-0.304	-0.141	0.055
2.5	5000	1.138	1.053	0.827	0.642	1.108	0.937	0.677
		-0.242	-0.177	0.019	0.137	-0.225	-0.082	0.114
2.5	5250	0.990	0.967	0.749	0.574	1.003	0.867	0.605
		-0.108	-0.100	0.081	0.185	-0.131	-0.025	0.166
2.5	5500	0.832	0.880	0.675	0.508	0.878	0.796	0.538
		0.028	-0.027	0.135	0.229	-0.021	0.032	0.211
2.5	5750	0.696	0.810	0.622	0.462	0.760	0.737	0.489
		0.138	0.030	0.169	0.253	0.079	0.078	0.239
2.5	6000	0.570	0.745	0.579	0.425	0.644	0.682	0.450
		0.236	0.083	0.195	0.271	0.174	0.122	0.261
2.5	6250	0.475	0.690	0.545	0.394	0.549	0.631	0.419
		0.302	0.129	0.218	0.288	0.247	0.164	0.278
2.5	6500	0.430	0.641	0.516	0.369	0.489	0.586	0.395
		0.324	0.174	0.241	0.306	0.287	0.204	0.295
2.5	6750	0.536	0.724	0.635	0.522	0.578	0.684	0.543
		0.179	0.129	0.166	0.188	0.186	0.144	0.184
2.5	7000	0.495	0.663	0.587	0.489	0.524	0.629	0.508
		0.190	0.190	0.213	0.218	0.217	0.197	0.216
2.5	7250	0.460	0.654	0.576	0.466	0.493	0.618	0.484
		0.198	0.192	0.221	0.235	0.229	0.205	0.234
2.5	7500	0.435	0.643	0.567	0.445	0.469	0.610	0.468
		0.199	0.198	0.224	0.248	0.232	0.206	0.242
2.5	7750	0.418	0.579	0.511	0.405	0.441	0.549	0.425
		0.197	0.247	0.266	0.275	0.243	0.253	0.273
2.5	8000	0.402	0.521	0.458	0.370	0.418	0.495	0.386
		0.197	0.287	0.301	0.293	0.249	0.290	0.295
2.5	8250	0.390	0.474	0.418	0.342	0.398	0.453	0.355
		0.192	0.313	0.319	0.304	0.250	0.311	0.308
2.5	8500	0.381	0.439	0.390	0.322	0.389	0.421	0.334
		0.187	0.326	0.327	0.309	0.245	0.323	0.313
2.5	8750	0.383	0.412	0.366	0.305	0.383	0.396	0.315
		0.176	0.335	0.334	0.312	0.241	0.330	0.318
2.5	9000	0.387	0.391	0.349	0.293	0.377	0.376	0.300
		0.169	0.339	0.336	0.314	0.240	0.335	0.322
2.5	9250	0.392	0.374	0.334	0.282	0.372	0.361	0.289
		0.162	0.340	0.338	0.316	0.241	0.337	0.323
2.5	9500	0.396	0.361	0.323	0.270	0.367	0.346	0.279
		0.160	0.340	0.339	0.319	0.241	0.339	0.324
2.5	9750	0.395	0.350	0.312	0.260	0.362	0.336	0.268
		0.162	0.339	0.338	0.321	0.242	0.337	0.326

Table 2. continued

log g	T_{eff}	u	v	b	y	U	B	V
2.5	10000	0.394	0.341	0.302	0.252	0.356	0.326	0.260
		0.165	0.336	0.339	0.321	0.244	0.335	0.325
2.5	10500	0.377	0.322	0.287	0.237	0.337	0.309	0.244
		0.180	0.334	0.333	0.319	0.253	0.334	0.325
2.5	11000	0.357	0.312	0.278	0.226	0.320	0.297	0.234
		0.193	0.327	0.325	0.316	0.259	0.327	0.319
2.5	11500	0.337	0.301	0.266	0.216	0.305	0.288	0.225
		0.204	0.322	0.323	0.313	0.261	0.321	0.315
2.5	12000	0.323	0.293	0.259	0.209	0.295	0.279	0.218
		0.208	0.318	0.320	0.310	0.261	0.319	0.311
2.5	12500	0.312	0.287	0.253	0.205	0.288	0.273	0.212
		0.213	0.314	0.316	0.305	0.260	0.315	0.309
2.5	13000	0.305	0.283	0.248	0.200	0.280	0.268	0.209
		0.215	0.311	0.314	0.305	0.262	0.314	0.306
2.5	14000	0.294	0.277	0.244	0.195	0.274	0.262	0.203
		0.221	0.306	0.309	0.303	0.262	0.309	0.305
2.5	15000	0.289	0.275	0.241	0.193	0.272	0.261	0.202
		0.227	0.301	0.306	0.301	0.261	0.303	0.302
2.5	16000	0.289	0.273	0.240	0.192	0.273	0.259	0.202
		0.229	0.298	0.304	0.303	0.262	0.302	0.302
2.5	17000	0.290	0.272	0.240	0.193	0.274	0.259	0.202
		0.235	0.296	0.303	0.305	0.263	0.300	0.304
2.5	18000	0.286	0.268	0.236	0.192	0.272	0.258	0.201
		0.247	0.299	0.308	0.311	0.271	0.301	0.311
2.5	19000	0.277	0.267	0.234	0.190	0.269	0.255	0.201
		0.264	0.299	0.311	0.319	0.279	0.303	0.316
3.0	3500	0.828	0.960	1.272	1.029	0.806	1.013	0.934
		0.015	-0.108	-0.364	-0.179	0.027	-0.149	-0.106
3.0	3750	1.037	1.153	1.261	1.023	0.957	1.119	0.978
		-0.231	-0.311	-0.374	-0.188	-0.156	-0.274	-0.167
3.0	4000	1.316	1.250	1.203	0.959	1.131	1.167	0.973
		-0.480	-0.389	-0.314	-0.125	-0.308	-0.307	-0.153
3.0	4250	1.441	1.248	1.103	0.879	1.224	1.137	0.926
		-0.555	-0.366	-0.214	-0.051	-0.361	-0.262	-0.099
3.0	4500	1.386	1.193	0.999	0.802	1.220	1.070	0.851
		-0.485	-0.308	-0.120	0.012	-0.344	-0.196	-0.029
3.0	4750	1.289	1.123	0.907	0.724	1.180	1.000	0.763
		-0.386	-0.241	-0.042	0.075	-0.300	-0.134	0.047
3.0	5000	1.164	1.041	0.822	0.646	1.107	0.927	0.682
		-0.264	-0.163	0.028	0.134	-0.227	-0.072	0.110
3.0	5250	1.021	0.952	0.743	0.577	1.008	0.854	0.608
		-0.131	-0.083	0.090	0.183	-0.132	-0.010	0.165
3.0	5500	0.873	0.863	0.669	0.512	0.891	0.783	0.542
		0.000	-0.006	0.145	0.227	-0.027	0.047	0.209
3.0	5750	0.733	0.785	0.609	0.460	0.769	0.717	0.487
		0.118	0.058	0.186	0.259	0.079	0.100	0.245
3.0	6000	0.608	0.721	0.564	0.421	0.654	0.661	0.447
		0.215	0.109	0.213	0.278	0.173	0.143	0.266
3.0	6250	0.508	0.663	0.530	0.392	0.553	0.610	0.415
		0.287	0.156	0.233	0.292	0.251	0.183	0.283
3.0	6500	0.434	0.613	0.499	0.366	0.475	0.563	0.388
		0.333	0.196	0.253	0.306	0.304	0.220	0.298
3.0	6750	0.407	0.567	0.473	0.346	0.430	0.520	0.368
		0.336	0.237	0.275	0.318	0.329	0.258	0.312
3.0	7000	0.525	0.639	0.576	0.486	0.527	0.610	0.502
		0.180	0.203	0.216	0.215	0.218	0.206	0.215
3.0	7250	0.490	0.576	0.529	0.451	0.480	0.557	0.466
		0.185	0.259	0.261	0.245	0.244	0.255	0.247
3.0	7500	0.461	0.567	0.518	0.428	0.448	0.544	0.444
		0.190	0.261	0.267	0.263	0.254	0.262	0.263
3.0	7750	0.436	0.565	0.513	0.410	0.427	0.538	0.427
		0.192	0.254	0.264	0.269	0.253	0.258	0.270
3.0	8000	0.417	0.516	0.468	0.375	0.405	0.492	0.392
		0.192	0.289	0.294	0.290	0.257	0.290	0.290
3.0	8250	0.398	0.466	0.422	0.344	0.383	0.446	0.357
		0.193	0.320	0.320	0.303	0.259	0.318	0.308
3.0	8500	0.386	0.431	0.388	0.321	0.369	0.411	0.331
		0.188	0.335	0.333	0.309	0.256	0.332	0.315
3.0	8750	0.380	0.400	0.359	0.303	0.363	0.383	0.310
		0.180	0.347	0.344	0.313	0.249	0.344	0.321
3.0	9000	0.379	0.375	0.339	0.286	0.358	0.361	0.294
		0.173	0.357	0.350	0.318	0.246	0.350	0.325
3.0	9250	0.380	0.356	0.322	0.273	0.353	0.343	0.282
		0.168	0.362	0.354	0.322	0.246	0.355	0.327
3.0	9500	0.383	0.339	0.310	0.262	0.347	0.326	0.270
		0.164	0.367	0.354	0.323	0.248	0.362	0.330
3.0	9750	0.385	0.324	0.298	0.252	0.343	0.314	0.259
		0.161	0.369	0.355	0.325	0.249	0.362	0.331
3.0	10000	0.384	0.312	0.285	0.243	0.336	0.302	0.249
		0.163	0.370	0.357	0.326	0.251	0.363	0.332
3.0	10500	0.376	0.292	0.267	0.227	0.321	0.281	0.232
		0.169	0.369	0.356	0.325	0.258	0.362	0.333
3.0	11000	0.358	0.275	0.254	0.214	0.303	0.267	0.221
		0.182	0.365	0.350	0.322	0.265	0.357	0.327
3.0	11500	0.338	0.264	0.242	0.203	0.287	0.254	0.209
		0.194	0.359	0.344	0.316	0.269	0.354	0.322
3.0	12000	0.321	0.253	0.233	0.196	0.274	0.244	0.201
		0.201	0.354	0.339	0.310	0.269	0.348	0.317
3.0	12500	0.306	0.247	0.226	0.188	0.264	0.236	0.193
		0.207	0.347	0.334	0.306	0.267	0.343	0.313
3.0	13000	0.296	0.241	0.220	0.183	0.254	0.232	0.189
		0.209	0.343	0.329	0.302	0.269	0.338	0.309
3.0	14000	0.280	0.233	0.209	0.175	0.244	0.223	0.180
		0.215	0.333	0.325	0.296	0.266	0.329	0.303
3.0	15000	0.270	0.225	0.206	0.169	0.237	0.217	0.175
		0.220	0.330	0.316	0.293	0.266	0.325	0.298
3.0	16000	0.264	0.222	0.200	0.165	0.231	0.214	0.172
		0.223	0.324	0.314	0.291	0.268	0.319	0.295
3.0	17000	0.259	0.218	0.198	0.162	0.229	0.209	0.169
		0.227	0.322	0.311	0.292	0.269	0.319	0.295
3.0	18000	0.253	0.213	0.193	0.158	0.224	0.204	0.166
		0.235	0.322	0.312	0.295	0.274	0.319	0.297
3.0	19000	0.247	0.205	0.188	0.154	0.220	0.198	0.161
		0.244	0.325	0.315	0.300	0.279	0.322	0.302
3.0	20000	0.238	0.199	0.179	0.148	0.212	0.191	0.156
		0.257	0.328	0.321	0.306	0.288	0.325	0.307
3.0	21000	0.223	0.195	0.172	0.142	0.202	0.188	0.148
		0.274	0.328	0.326	0.313	0.299	0.325	0.315
3.0	22000	0.213	0.196	0.170	0.136	0.196	0.186	0.143
		0.284	0.323	0.327	0.320	0.305	0.325	0.321
3.0	23000	0.208	0.200	0.172	0.137	0.197	0.188	0.144
		0.289	0.320	0.325	0.322	0.304	0.323	0.323
3.0	24000	0.213	0.208	0.175	0.141	0.203	0.195	0.149
		0.289	0.314	0.327	0.325	0.304	0.320	0.324
3.0	25000	0.219	0.211	0.179	0.146	0.209	0.200	0.154
		0.292	0.316	0.328	0.331	0.306	0.321	0.329
3.0	26000	0.217	0.211	0.180	0.148	0.210	0.201	0.157
		0.301	0.320	0.333	0.337	0.310	0.325	0.334
3.5	3500	0.711	0.702	0.969	0.816	0.659	0.766	0.740
		0.132	0.135	-0.068	0.023	0.167	0.085	0.074
3.5	3750	0.951	1.028	1.170	0.951	0.866	1.013	0.890
		-0.144	-0.193	-0.288	-0.124	-0.072	-0.176	-0.091
3.5	4000	1.233	1.201	1.193	0.951	1.057	1.129	0.946
		-0.411	-0.349	-0.309	-0.123	-0.252	-0.280	-0.139
3.5	4250	1.391	1.225	1.108	0.882	1.166	1.120	0.918
		-0.520	-0.351	-0.220	-0.058	-0.322	-0.252	-0.100
3.5	4500	1.370	1.179	1.005	0.807	1.184	1.060	0.857
		-0.477	-0.297	-0.124	0.006	-0.321	-0.191	-0.040
3.5	4750	1.292	1.110	0.909	0.730	1.158	0.992	0.775
		-0.395	-0.231	-0.042	0.068	-0.289	-0.128	0.033
3.5	5000	1.187	1.034	0.823	0.657	1.102	0.921	0.692
		-0.287	-0.158	0.029	0.124	-0.228	-0.067	0.100
3.5	5250	1.058	0.943	0.743	0.586	1.017	0.847	0.616
		-0.163	-0.074	0.092	0.175	-0.144	-0.003	0.158
3.5	5500	0.915	0.853	0.669	0.521	0.907	0.775	0.549
		-0.032	0.005	0.149	0.221	-0.041	0.056	0.206
3.5	5750	0.777	0.772	0.605	0.467	0.788	0.708	0.492
		0.086	0.073	0.193	0.255	0.065	0.110	0.243
3.5	6000	0.653	0.703	0.554	0.423	0.670	0.647	0.447
		0.186	0.128	0.225	0.279	0.164	0.158	0.269
3.5	6250	0.546	0.642	0.516	0.388	0.566	0.592	0.412
		0.265	0.175	0.247	0.297	0.246	0.199	0.287
3.5	6500	0.465	0.590	0.486	0.366	0.482	0.543	0.385
		0.318	0.216	0.265	0.306	0.304	0.238	0.300
3.5	6750	0.409	0.540	0.457	0.340	0.418	0.498	0.361
		0.347	0.254	0.285	0.320	0.343	0.271	0.314
3.5	7000	0.391	0.502	0.434	0.325	0.385	0.464	0.343
		0.342	0.286	0.304	0.329	0.355	0.298	0.327
3.5	7250	0.520	0.556	0.523	0.448	0.485	0.539	0.459
		0.177	0.266	0.257	0.242	0.242	0.260	0.247
3.5	7500	0.491	0.502	0.477	0.415	0.444	0.489	0.426
		0.178	0.313	0.299	0.271	0.259	0.304	0.275
3.5	7750	0.462	0.488	0.459	0.393	0.416	0.472	0.405
		0.183	0.319	0.312	0.285	0.264	0.313	0.288
3.5	8000	0.433	0.497	0.465	0.377	0.392	0.475	0.390
		0.191	0.298	0.296	0.288	0.267	0.299	0.291
3.5	8250	0.413	0.461	0.433	0.352	0.373	0.443	0.365
		0.190	0.318	0.311	0.296	0.265	0.315	0.301
3.5	8500	0.395	0.422	0.393	0.325	0.357	0.406	0.336
		0.189	0.338	0.332	0.307	0.261	0.333	0.312
3.5	8750	0.382	0.393	0.363	0.304	0.346	0.378	0.313
		0.185	0.349	0.344	0.311	0.256	0.344	0.318
3.5	9000	0.378	0.367	0.337	0.286	0.340	0.353	0.294
		0.176	0.360	0.353	0.317	0.251	0.353	0.323
3.5	9250	0.377	0.347	0.317	0.269	0.337	0.334	0.277
		0.171	0.367	0.359	0.322	0.247	0.359	0.329
3.5	9500	0.376	0.327	0.303	0.259	0.334	0.317	0.265
		0.167	0.375	0.362	0.323	0.246	0.366	0.332
3.5	9750	0.376	0.313	0.288	0.249	0.331	0.304	0.254
		0.165	0.378	0.365	0.325	0.245	0.368	0.334
3.5	10000	0.375	0.296	0.277	0.240	0.323	0.290	0.244
		0.165	0.384	0.366	0.325	0.250	0.372	0.335

Table 2. continued

log g	T_{eff}	u	v	b	y	U	B	V
3.5	10500	0.372	0.273	0.257	0.222	0.312	0.266	0.227
		0.165	0.387	0.367	0.327	0.254	0.376	0.335
3.5	11000	0.360	0.256	0.243	0.208	0.295	0.249	0.213
		0.174	0.384	0.362	0.324	0.262	0.374	0.332
3.5	11500	0.343	0.243	0.229	0.196	0.280	0.235	0.201
		0.185	0.378	0.357	0.320	0.264	0.370	0.328
3.5	12000	0.325	0.231	0.217	0.188	0.264	0.224	0.193
		0.193	0.373	0.353	0.314	0.268	0.364	0.319
3.5	12500	0.310	0.222	0.210	0.180	0.254	0.215	0.186
		0.198	0.366	0.346	0.308	0.267	0.358	0.313
3.5	13000	0.296	0.216	0.202	0.174	0.242	0.209	0.179
		0.203	0.359	0.341	0.301	0.267	0.351	0.308
3.5	14000	0.276	0.206	0.193	0.166	0.228	0.200	0.171
		0.209	0.347	0.328	0.290	0.265	0.339	0.297
3.5	15000	0.263	0.198	0.186	0.158	0.218	0.192	0.164
		0.212	0.339	0.321	0.285	0.263	0.332	0.290
3.5	16000	0.254	0.193	0.181	0.153	0.211	0.187	0.158
		0.214	0.333	0.314	0.280	0.263	0.324	0.286
3.5	17000	0.245	0.188	0.176	0.149	0.205	0.182	0.156
		0.220	0.328	0.309	0.277	0.263	0.320	0.281
3.5	18000	0.239	0.184	0.171	0.147	0.201	0.176	0.151
		0.224	0.325	0.307	0.273	0.264	0.319	0.280
3.5	19000	0.233	0.179	0.167	0.143	0.196	0.173	0.147
		0.229	0.322	0.306	0.274	0.267	0.316	0.281
3.5	20000	0.224	0.170	0.161	0.139	0.191	0.167	0.141
		0.238	0.325	0.307	0.276	0.272	0.316	0.284
3.5	21000	0.215	0.163	0.152	0.130	0.184	0.158	0.136
		0.249	0.327	0.311	0.283	0.278	0.320	0.286
3.5	22000	0.201	0.158	0.145	0.122	0.174	0.151	0.127
		0.262	0.325	0.313	0.289	0.286	0.322	0.292
3.5	23000	0.189	0.153	0.139	0.115	0.164	0.147	0.120
		0.271	0.324	0.314	0.293	0.294	0.320	0.297
3.5	24000	0.180	0.152	0.135	0.111	0.159	0.144	0.116
		0.278	0.321	0.314	0.294	0.296	0.319	0.298
3.5	25000	0.176	0.154	0.134	0.110	0.158	0.145	0.114
		0.282	0.318	0.313	0.295	0.297	0.317	0.300
3.5	26000	0.178	0.154	0.133	0.109	0.157	0.146	0.114
		0.282	0.319	0.316	0.301	0.300	0.318	0.304
3.5	27000	0.177	0.153	0.132	0.109	0.159	0.145	0.116
		0.287	0.323	0.319	0.305	0.303	0.322	0.306
3.5	28000	0.173	0.148	0.127	0.106	0.155	0.140	0.110
		0.295	0.329	0.326	0.312	0.310	0.329	0.316
3.5	29000	0.165	0.140	0.119	0.100	0.147	0.133	0.105
		0.304	0.336	0.334	0.321	0.318	0.336	0.323
3.5	30000	0.152	0.131	0.108	0.091	0.138	0.123	0.096
		0.315	0.345	0.344	0.331	0.328	0.345	0.334
3.5	31000	0.139	0.124	0.099	0.083	0.127	0.115	0.087
		0.326	0.351	0.353	0.340	0.338	0.352	0.343
4.0	3500	0.591	0.492	0.663	0.585	0.523	0.540	0.544
		0.242	0.316	0.214	0.232	0.282	0.282	0.246
4.0	3750	0.767	0.751	0.863	0.711	0.683	0.751	0.666
		0.040	0.065	0.001	0.096	0.101	0.066	0.110
4.0	4000	1.089	1.075	1.104	0.877	0.932	1.019	0.855
		-0.279	-0.237	-0.228	-0.060	-0.145	-0.185	-0.066
4.0	4250	1.311	1.188	1.107	0.878	1.091	1.091	0.901
		-0.460	-0.325	-0.222	-0.058	-0.270	-0.235	-0.095
4.0	4500	1.335	1.158	1.011	0.809	1.130	1.046	0.854
		-0.455	-0.284	-0.131	0.001	-0.285	-0.184	-0.046
4.0	4750	1.282	1.097	0.912	0.736	1.126	0.981	0.781
		-0.393	-0.222	-0.044	0.061	-0.272	-0.122	0.022
4.0	5000	1.197	1.022	0.824	0.663	1.088	0.913	0.701
		-0.303	-0.150	0.030	0.118	-0.226	-0.062	0.091
4.0	5250	1.087	0.937	0.746	0.595	1.019	0.844	0.625
		-0.194	-0.070	0.091	0.168	-0.153	-0.003	0.150
4.0	5500	0.955	0.848	0.671	0.532	0.921	0.771	0.557
		-0.069	0.010	0.149	0.212	-0.058	0.059	0.199
4.0	5750	0.824	0.765	0.605	0.475	0.809	0.703	0.498
		0.048	0.080	0.196	0.249	0.045	0.115	0.239
4.0	6000	0.698	0.690	0.548	0.427	0.693	0.637	0.448
		0.153	0.140	0.234	0.277	0.146	0.167	0.269
4.0	6250	0.591	0.626	0.507	0.391	0.589	0.580	0.411
		0.234	0.190	0.257	0.294	0.229	0.210	0.289
4.0	6500	0.499	0.568	0.473	0.363	0.498	0.529	0.381
		0.299	0.234	0.277	0.308	0.294	0.248	0.303
4.0	6750	0.435	0.522	0.447	0.341	0.427	0.483	0.359
		0.334	0.268	0.291	0.319	0.339	0.282	0.314
4.0	7000	0.396	0.481	0.423	0.321	0.380	0.447	0.339
		0.349	0.299	0.308	0.330	0.363	0.307	0.326
4.0	7250	0.375	0.436	0.401	0.306	0.348	0.414	0.322
		0.347	0.330	0.324	0.337	0.372	0.331	0.335
4.0	7500	0.519	0.487	0.470	0.414	0.456	0.476	0.424
		0.171	0.314	0.297	0.264	0.252	0.304	0.269
4.0	7750	0.491	0.436	0.429	0.382	0.418	0.431	0.391
		0.175	0.356	0.332	0.291	0.266	0.341	0.297
4.0	8000	0.463	0.416	0.411	0.360	0.388	0.409	0.368
		0.179	0.365	0.343	0.304	0.272	0.353	0.311
4.0	8250	0.433	0.428	0.419	0.348	0.369	0.416	0.357
		0.187	0.339	0.323	0.303	0.269	0.332	0.308
4.0	8500	0.408	0.415	0.403	0.331	0.349	0.402	0.342
		0.191	0.336	0.324	0.302	0.265	0.329	0.307
4.0	8750	0.392	0.383	0.368	0.309	0.334	0.371	0.318
		0.187	0.350	0.340	0.308	0.261	0.343	0.313
4.0	9000	0.382	0.356	0.341	0.289	0.326	0.345	0.297
		0.180	0.362	0.350	0.313	0.254	0.353	0.320
4.0	9250	0.377	0.338	0.319	0.271	0.323	0.326	0.279
		0.175	0.366	0.358	0.320	0.247	0.359	0.326
4.0	9500	0.374	0.320	0.301	0.259	0.321	0.309	0.264
		0.172	0.372	0.362	0.321	0.244	0.364	0.330
4.0	9750	0.372	0.303	0.287	0.248	0.317	0.295	0.253
		0.170	0.379	0.366	0.323	0.244	0.369	0.332
4.0	10000	0.371	0.290	0.273	0.238	0.313	0.283	0.244
		0.168	0.382	0.370	0.324	0.244	0.372	0.332
4.0	10500	0.368	0.264	0.253	0.221	0.304	0.259	0.226
		0.167	0.389	0.370	0.326	0.247	0.378	0.333
4.0	11000	0.360	0.244	0.236	0.208	0.291	0.241	0.212
		0.171	0.391	0.369	0.324	0.253	0.378	0.332
4.0	11500	0.345	0.229	0.223	0.196	0.277	0.224	0.199
		0.181	0.387	0.364	0.319	0.257	0.377	0.328
4.0	12000	0.329	0.216	0.211	0.186	0.261	0.213	0.189
		0.189	0.384	0.358	0.313	0.262	0.370	0.323
4.0	12500	0.314	0.207	0.203	0.177	0.250	0.203	0.181
		0.194	0.376	0.351	0.308	0.261	0.364	0.316
4.0	13000	0.300	0.199	0.195	0.172	0.239	0.195	0.174
		0.199	0.369	0.344	0.300	0.260	0.359	0.309
4.0	14000	0.277	0.188	0.184	0.162	0.222	0.185	0.165
		0.206	0.356	0.332	0.287	0.258	0.344	0.296
4.0	15000	0.260	0.180	0.175	0.155	0.209	0.177	0.158
		0.210	0.345	0.322	0.277	0.257	0.333	0.286
4.0	16000	0.250	0.175	0.170	0.148	0.202	0.170	0.152
		0.211	0.334	0.312	0.272	0.253	0.326	0.279
4.0	17000	0.240	0.169	0.164	0.144	0.194	0.166	0.146
		0.213	0.329	0.307	0.265	0.254	0.319	0.275
4.0	18000	0.231	0.167	0.161	0.140	0.191	0.163	0.146
		0.218	0.321	0.301	0.262	0.251	0.312	0.267
4.0	19000	0.225	0.162	0.158	0.139	0.185	0.159	0.141
		0.220	0.317	0.295	0.256	0.254	0.307	0.265
4.0	20000	0.218	0.157	0.151	0.134	0.180	0.155	0.138
		0.225	0.314	0.295	0.257	0.255	0.304	0.263
4.0	21000	0.210	0.150	0.148	0.129	0.175	0.146	0.133
		0.232	0.315	0.292	0.257	0.258	0.307	0.263
4.0	22000	0.201	0.143	0.140	0.123	0.166	0.140	0.126
		0.241	0.314	0.293	0.260	0.265	0.307	0.267
4.0	23000	0.190	0.137	0.133	0.116	0.158	0.133	0.119
		0.250	0.314	0.295	0.263	0.271	0.307	0.270
4.0	24000	0.178	0.134	0.125	0.108	0.148	0.128	0.112
		0.259	0.309	0.296	0.267	0.277	0.306	0.272
4.0	25000	0.168	0.130	0.120	0.103	0.142	0.125	0.106
		0.264	0.308	0.295	0.268	0.280	0.302	0.274
4.0	26000	0.161	0.129	0.119	0.101	0.138	0.124	0.103
		0.269	0.304	0.291	0.268	0.281	0.300	0.274
4.0	27000	0.159	0.128	0.116	0.097	0.137	0.122	0.103
		0.270	0.304	0.293	0.271	0.282	0.300	0.273
4.0	28000	0.157	0.127	0.114	0.095	0.134	0.120	0.100
		0.273	0.305	0.294	0.275	0.285	0.303	0.278
4.0	29000	0.154	0.122	0.107	0.092	0.132	0.116	0.096
		0.276	0.309	0.300	0.278	0.288	0.305	0.282
4.0	30000	0.148	0.116	0.101	0.088	0.127	0.108	0.092
		0.281	0.314	0.305	0.282	0.294	0.313	0.286
4.0	31000	0.139	0.106	0.092	0.080	0.118	0.102	0.085
		0.287	0.319	0.310	0.288	0.299	0.315	0.291
4.0	32000	0.125	0.095	0.082	0.073	0.108	0.089	0.076
		0.296	0.326	0.315	0.292	0.305	0.323	0.296
4.0	33000	0.113	0.086	0.071	0.062	0.097	0.079	0.066
		0.302	0.329	0.320	0.299	0.311	0.328	0.302
4.0	34000	0.101	0.076	0.063	0.054	0.086	0.072	0.057
		0.308	0.334	0.322	0.302	0.317	0.330	0.307
4.0	35000	0.091	0.070	0.057	0.046	0.079	0.065	0.048
		0.312	0.336	0.323	0.305	0.319	0.331	0.310
4.44	5777	0.844	0.750	0.594	0.475	0.814	0.689	0.498
		0.030	0.092	0.207	0.248	0.037	0.126	0.238
4.5	3500	0.525	0.397	0.507	0.454	0.455	0.431	0.436
		0.296	0.389	0.347	0.342	0.330	0.367	0.331
4.5	3750	0.614	0.523	0.569	0.476	0.531	0.521	0.459
		0.184	0.262	0.261	0.298	0.235	0.266	0.288
4.5	4000	0.860	0.803	0.833	0.650	0.728	0.769	0.640
		-0.055	0.014	0.018	0.139	0.046	0.041	0.123
4.5	4250	1.168	1.082	1.040	0.816	0.966	1.003	0.830
		-0.338	-0.235	-0.164	-0.007	-0.169	-0.163	-0.041
4.5	4500	1.278	1.132	1.011	0.808	1.064	1.026	0.848
		-0.416	-0.268	-0.132	-0.001	-0.242	-0.173	-0.049
4.5	4750	1.257	1.080	0.915	0.739	1.081	0.969	0.786
		-0.380	-0.213	-0.046	0.056	-0.245	-0.117	0.012

Table 2. continued

log g	T_{eff}	u	v	b	y	U	B	V
4.5	5000	1.197	1.010	0.828	0.670	1.065	0.905	0.711
		-0.313	-0.143	0.027	0.112	-0.219	-0.059	0.079
4.5	5250	1.106	0.932	0.746	0.600	1.014	0.838	0.633
		-0.218	-0.069	0.093	0.164	-0.160	0.001	0.142
4.5	5500	0.990	0.844	0.670	0.535	0.930	0.766	0.563
		-0.104	0.011	0.151	0.211	-0.073	0.062	0.194
4.5	5750	0.867	0.760	0.604	0.481	0.831	0.699	0.504
		0.009	0.083	0.200	0.245	0.020	0.117	0.235
4.5	6000	0.744	0.682	0.543	0.429	0.718	0.630	0.450
		0.114	0.147	0.241	0.278	0.122	0.172	0.269
4.5	6250	0.636	0.615	0.499	0.392	0.615	0.572	0.411
		0.200	0.199	0.267	0.295	0.207	0.216	0.289
4.5	6500	0.540	0.557	0.462	0.360	0.520	0.518	0.379
		0.270	0.242	0.287	0.311	0.278	0.255	0.306
4.5	6750	0.464	0.506	0.435	0.339	0.443	0.474	0.355
		0.320	0.278	0.300	0.318	0.329	0.286	0.316
4.5	7000	0.415	0.465	0.413	0.319	0.387	0.434	0.335
		0.344	0.308	0.313	0.328	0.360	0.314	0.325
4.5	7250	0.379	0.418	0.389	0.302	0.346	0.398	0.317
		0.356	0.339	0.329	0.337	0.377	0.339	0.334
4.5	7500	0.367	0.382	0.365	0.288	0.321	0.365	0.299
		0.347	0.365	0.347	0.345	0.382	0.362	0.347
4.5	7750	0.518	0.425	0.423	0.377	0.431	0.418	0.385
		0.169	0.352	0.327	0.288	0.258	0.340	0.295
4.5	8000	0.492	0.382	0.386	0.350	0.402	0.378	0.356
		0.172	0.384	0.359	0.309	0.264	0.370	0.317
4.5	8250	0.464	0.356	0.363	0.329	0.373	0.356	0.334
		0.177	0.398	0.374	0.320	0.269	0.380	0.330
4.5	8500	0.433	0.365	0.371	0.319	0.350	0.359	0.327
		0.184	0.372	0.352	0.316	0.266	0.362	0.323
4.5	8750	0.406	0.367	0.374	0.311	0.330	0.359	0.321
		0.189	0.353	0.334	0.307	0.264	0.345	0.312
4.5	9000	0.389	0.349	0.350	0.297	0.318	0.340	0.304
		0.186	0.356	0.342	0.306	0.256	0.347	0.313
4.5	9250	0.381	0.327	0.322	0.278	0.313	0.318	0.283
		0.180	0.364	0.355	0.312	0.248	0.356	0.321
4.5	9500	0.376	0.309	0.302	0.262	0.309	0.301	0.268
		0.176	0.369	0.362	0.317	0.243	0.360	0.325
4.5	9750	0.373	0.295	0.285	0.250	0.306	0.287	0.254
		0.172	0.373	0.367	0.320	0.240	0.364	0.329
4.5	10000	0.370	0.282	0.274	0.238	0.303	0.274	0.243
		0.172	0.378	0.368	0.322	0.239	0.369	0.330
4.5	10500	0.365	0.258	0.251	0.220	0.298	0.253	0.223
		0.170	0.385	0.370	0.324	0.239	0.373	0.334
4.5	11000	0.358	0.238	0.234	0.206	0.287	0.234	0.210
		0.172	0.389	0.370	0.323	0.244	0.377	0.332
4.5	11500	0.348	0.221	0.220	0.197	0.275	0.218	0.198
		0.178	0.388	0.368	0.318	0.249	0.377	0.328
4.5	12000	0.335	0.207	0.209	0.185	0.261	0.205	0.187
		0.183	0.386	0.362	0.316	0.252	0.373	0.324
4.5	12500	0.321	0.198	0.197	0.177	0.250	0.194	0.179
		0.189	0.379	0.358	0.309	0.254	0.369	0.317
4.5	13000	0.306	0.189	0.189	0.170	0.238	0.187	0.172
		0.195	0.372	0.351	0.302	0.254	0.361	0.312
4.5	14000	0.281	0.176	0.178	0.159	0.220	0.174	0.161
		0.203	0.359	0.336	0.289	0.252	0.348	0.299
4.5	15000	0.261	0.169	0.170	0.152	0.206	0.166	0.155
		0.208	0.344	0.323	0.276	0.249	0.335	0.284
4.5	16000	0.248	0.163	0.163	0.146	0.198	0.161	0.148
		0.210	0.334	0.313	0.267	0.245	0.323	0.277
4.5	17000	0.236	0.159	0.159	0.142	0.191	0.157	0.143
		0.214	0.324	0.303	0.260	0.243	0.313	0.269
4.5	18000	0.227	0.155	0.155	0.138	0.185	0.153	0.141
		0.215	0.318	0.296	0.254	0.242	0.307	0.261
4.5	19000	0.223	0.152	0.150	0.135	0.180	0.149	0.137
		0.214	0.310	0.292	0.249	0.242	0.301	0.256
4.5	20000	0.212	0.146	0.147	0.130	0.174	0.144	0.134
		0.222	0.308	0.285	0.247	0.243	0.298	0.253
4.5	21000	0.208	0.142	0.143	0.129	0.169	0.140	0.130
		0.222	0.304	0.282	0.243	0.244	0.294	0.250
4.5	22000	0.200	0.137	0.137	0.124	0.164	0.134	0.126
		0.228	0.301	0.281	0.243	0.247	0.294	0.250
4.5	23000	0.191	0.131	0.132	0.119	0.157	0.129	0.119
		0.236	0.300	0.280	0.243	0.253	0.292	0.252
4.5	24000	0.180	0.126	0.125	0.112	0.149	0.123	0.114
		0.246	0.298	0.280	0.246	0.258	0.292	0.253
4.5	25000	0.168	0.120	0.118	0.104	0.142	0.118	0.109
		0.254	0.296	0.280	0.249	0.261	0.288	0.253
4.5	26000	0.160	0.117	0.115	0.100	0.134	0.112	0.102
		0.257	0.293	0.276	0.249	0.265	0.288	0.254
4.5	27000	0.152	0.115	0.110	0.096	0.130	0.111	0.099
		0.261	0.290	0.275	0.249	0.265	0.283	0.253
4.5	28000	0.149	0.114	0.109	0.092	0.127	0.109	0.097
		0.261	0.288	0.273	0.251	0.266	0.283	0.253
4.5	29000	0.146	0.111	0.106	0.092	0.124	0.107	0.094
		0.262	0.287	0.273	0.249	0.266	0.282	0.254
4.5	30000	0.142	0.107	0.100	0.089	0.121	0.104	0.090
		0.264	0.291	0.277	0.251	0.269	0.285	0.257
4.5	31000	0.137	0.103	0.094	0.084	0.118	0.099	0.085
		0.265	0.291	0.278	0.253	0.270	0.285	0.259
4.5	32000	0.130	0.095	0.087	0.078	0.111	0.091	0.082
		0.267	0.293	0.278	0.255	0.271	0.287	0.258
4.5	33000	0.119	0.085	0.078	0.073	0.102	0.083	0.075
		0.271	0.296	0.281	0.254	0.275	0.290	0.259
4.5	34000	0.109	0.076	0.069	0.065	0.092	0.073	0.068
		0.273	0.297	0.282	0.255	0.278	0.292	0.260
4.5	35000	0.096	0.067	0.062	0.056	0.083	0.064	0.059
		0.278	0.299	0.281	0.257	0.279	0.293	0.262
4.5	37500	0.079	0.055	0.047	0.042	0.063	0.052	0.043
		0.272	0.290	0.274	0.252	0.279	0.285	0.259
4.5	40000	0.071	0.051	0.044	0.036	0.059	0.048	0.037
		0.270	0.286	0.269	0.248	0.273	0.280	0.255
5.0	3500	0.521	0.389	0.436	0.388	0.456	0.401	0.382
		0.288	0.386	0.400	0.390	0.308	0.379	0.365
5.0	3750	0.541	0.425	0.422	0.352	0.465	0.412	0.354
		0.249	0.339	0.382	0.397	0.284	0.352	0.370
5.0	4000	0.674	0.580	0.558	0.434	0.572	0.547	0.439
		0.124	0.207	0.252	0.316	0.186	0.233	0.290
5.0	4250	0.943	0.860	0.824	0.631	0.784	0.799	0.645
		-0.122	-0.034	0.026	0.149	-0.003	0.017	0.117
5.0	4500	1.175	1.063	0.967	0.765	0.973	0.966	0.798
		-0.333	-0.213	-0.095	0.034	-0.173	-0.127	-0.012
5.0	4750	1.216	1.057	0.917	0.739	1.027	0.953	0.785
		-0.357	-0.199	-0.049	0.054	-0.213	-0.110	0.005
5.0	5000	1.180	0.996	0.827	0.671	1.031	0.894	0.719
		-0.308	-0.138	0.029	0.109	-0.203	-0.055	0.067
5.0	5250	1.111	0.921	0.744	0.602	0.998	0.828	0.639
		-0.232	-0.064	0.098	0.162	-0.159	0.005	0.135
5.0	5500	1.012	0.837	0.666	0.537	0.932	0.758	0.568
		-0.131	0.014	0.158	0.209	-0.087	0.067	0.190
5.0	5750	0.900	0.755	0.599	0.482	0.844	0.691	0.506
		-0.025	0.086	0.206	0.245	0.002	0.122	0.234
5.0	6000	0.781	0.675	0.537	0.427	0.739	0.624	0.450
		0.082	0.152	0.248	0.280	0.098	0.177	0.270
5.0	6250	0.674	0.606	0.488	0.389	0.639	0.564	0.407
		0.170	0.206	0.278	0.299	0.183	0.222	0.294
5.0	6500	0.579	0.545	0.450	0.357	0.546	0.509	0.374
		0.243	0.251	0.298	0.313	0.255	0.261	0.309
5.0	6750	0.501	0.492	0.423	0.335	0.465	0.461	0.350
		0.296	0.289	0.310	0.322	0.312	0.295	0.320
5.0	7000	0.443	0.451	0.400	0.316	0.408	0.425	0.331
		0.329	0.316	0.322	0.329	0.346	0.318	0.328
5.0	7250	0.401	0.404	0.379	0.300	0.360	0.388	0.314
		0.348	0.348	0.336	0.337	0.370	0.343	0.336
5.0	7500	0.373	0.366	0.357	0.284	0.326	0.355	0.295
		0.355	0.373	0.349	0.345	0.381	0.365	0.347
5.0	7750	0.365	0.333	0.335	0.268	0.308	0.325	0.278
		0.343	0.394	0.366	0.355	0.379	0.385	0.358
5.0	8000	0.377	0.306	0.314	0.258	0.303	0.299	0.265
		0.315	0.413	0.384	0.362	0.365	0.404	0.367
5.0	8250	0.490	0.331	0.345	0.320	0.389	0.332	0.324
		0.173	0.407	0.382	0.325	0.260	0.391	0.334
5.0	8500	0.466	0.305	0.321	0.301	0.363	0.307	0.302
		0.176	0.419	0.397	0.335	0.264	0.402	0.347
5.0	8750	0.437	0.301	0.321	0.291	0.341	0.302	0.294
		0.181	0.406	0.385	0.332	0.261	0.392	0.341
5.0	9000	0.401	0.338	0.364	0.307	0.319	0.335	0.314
		0.192	0.353	0.330	0.299	0.256	0.342	0.305
5.0	9250	0.389	0.317	0.332	0.286	0.308	0.313	0.291
		0.186	0.358	0.346	0.306	0.249	0.348	0.313
5.0	9500	0.380	0.297	0.308	0.269	0.300	0.293	0.274
		0.183	0.364	0.356	0.311	0.245	0.355	0.318
5.0	9750	0.374	0.282	0.290	0.253	0.298	0.277	0.257
		0.180	0.369	0.362	0.316	0.239	0.361	0.325
5.0	10000	0.370	0.271	0.276	0.241	0.294	0.266	0.245
		0.178	0.371	0.364	0.319	0.237	0.363	0.328
5.0	10500	0.363	0.252	0.249	0.220	0.292	0.246	0.224
		0.177	0.374	0.372	0.323	0.232	0.367	0.331
5.0	11000	0.355	0.232	0.231	0.207	0.284	0.228	0.209
		0.178	0.381	0.372	0.322	0.234	0.370	0.331
5.0	11500	0.347	0.216	0.217	0.194	0.274	0.213	0.197
		0.181	0.382	0.370	0.320	0.239	0.371	0.329
5.0	12000	0.336	0.202	0.205	0.186	0.263	0.201	0.187
		0.184	0.380	0.367	0.314	0.242	0.369	0.324
5.0	12500	0.325	0.191	0.196	0.178	0.253	0.190	0.179
		0.188	0.377	0.360	0.308	0.243	0.365	0.319
5.0	13000	0.311	0.182	0.187	0.170	0.241	0.181	0.171
		0.194	0.372	0.354	0.304	0.244	0.361	0.314
5.0	14000	0.286	0.168	0.175	0.158	0.222	0.168	0.159
		0.203	0.359	0.340	0.291	0.244	0.348	0.301
5.0	15000	0.264	0.159	0.165	0.150	0.207	0.158	0.152
		0.209	0.345	0.326	0.278	0.242	0.335	0.287
5.0	16000	0.250	0.154	0.159	0.143	0.197	0.153	0.145
		0.210	0.332	0.315	0.269	0.238	0.321	0.277

Table 2. continued

log g	T_{eff}	u	v	b	y	U	B	V
5.0	17000	0.236	0.149	0.154	0.141	0.189	0.148	0.143
		0.214	0.322	0.304	0.258	0.236	0.312	0.265
5.0	18000	0.228	0.145	0.151	0.136	0.182	0.144	0.137
		0.214	0.314	0.295	0.251	0.235	0.304	0.260
5.0	19000	0.219	0.142	0.147	0.133	0.176	0.140	0.134
		0.215	0.306	0.288	0.245	0.235	0.297	0.253
5.0	20000	0.212	0.139	0.143	0.130	0.173	0.137	0.131
		0.217	0.300	0.283	0.240	0.232	0.291	0.249
5.0	21000	0.206	0.135	0.138	0.128	0.168	0.135	0.128
		0.219	0.296	0.279	0.235	0.233	0.286	0.245
5.0	22000	0.199	0.132	0.137	0.123	0.163	0.130	0.125
		0.224	0.292	0.272	0.234	0.236	0.283	0.241
5.0	23000	0.190	0.127	0.131	0.118	0.158	0.127	0.120
		0.231	0.289	0.272	0.235	0.238	0.279	0.242
5.0	24000	0.181	0.120	0.127	0.115	0.151	0.120	0.115
		0.237	0.289	0.269	0.234	0.242	0.280	0.242
5.0	25000	0.171	0.117	0.119	0.110	0.142	0.115	0.110
		0.245	0.285	0.270	0.234	0.249	0.277	0.242
5.0	26000	0.162	0.111	0.113	0.104	0.137	0.111	0.105
		0.250	0.283	0.268	0.236	0.251	0.275	0.242
5.0	27000	0.154	0.108	0.108	0.099	0.129	0.107	0.099
		0.254	0.279	0.267	0.235	0.255	0.273	0.243
5.0	28000	0.147	0.105	0.105	0.094	0.124	0.103	0.096
		0.255	0.277	0.264	0.235	0.255	0.271	0.241
5.0	29000	0.143	0.103	0.101	0.092	0.122	0.101	0.093
		0.255	0.274	0.262	0.234	0.254	0.269	0.240
5.0	30000	0.140	0.102	0.100	0.089	0.119	0.098	0.091
		0.254	0.275	0.259	0.234	0.254	0.270	0.239
5.0	31000	0.135	0.098	0.095	0.085	0.115	0.096	0.087
		0.255	0.274	0.259	0.235	0.254	0.267	0.239
5.0	32000	0.130	0.094	0.090	0.081	0.111	0.091	0.086
		0.253	0.272	0.257	0.233	0.252	0.266	0.235
5.0	33000	0.124	0.088	0.083	0.078	0.107	0.085	0.080
		0.252	0.269	0.257	0.230	0.250	0.264	0.235
5.0	34000	0.117	0.080	0.078	0.074	0.100	0.080	0.075
		0.251	0.270	0.254	0.227	0.249	0.262	0.233
5.0	35000	0.107	0.074	0.070	0.067	0.092	0.072	0.069
		0.251	0.267	0.252	0.226	0.250	0.261	0.232
5.0	37500	0.082	0.056	0.054	0.051	0.071	0.054	0.053
		0.249	0.260	0.243	0.220	0.246	0.255	0.225
5.0	40000	0.072	0.048	0.047	0.042	0.061	0.047	0.044
		0.237	0.248	0.230	0.209	0.236	0.242	0.214
5.0	42500	0.066	0.048	0.045	0.040	0.056	0.044	0.040
		0.234	0.240	0.222	0.202	0.232	0.237	0.209
5.0	45000	0.061	0.044	0.041	0.034	0.052	0.042	0.037
		0.235	0.241	0.223	0.204	0.232	0.235	0.208
5.0	47500	0.056	0.038	0.037	0.031	0.046	0.038	0.034
		0.237	0.244	0.224	0.205	0.236	0.236	0.208
5.0	50000	0.051	0.035	0.033	0.027	0.042	0.035	0.029
		0.239	0.246	0.226	0.207	0.239	0.238	0.212

Table 3. Square root (c, d) limb-darkening coefficients

log g	T_{eff}	u	v	b	y	U	B	V
0.0	3500	0.332	1.055	1.581	1.267	0.433	1.191	1.249
		0.574	-0.331	-0.883	-0.498	0.448	-0.458	-0.494
0.0	3750	0.784	1.368	1.551	1.178	0.786	1.374	1.252
		0.072	-0.678	-0.875	-0.414	0.061	-0.671	-0.509
0.0	4000	1.438	1.481	1.426	1.050	1.218	1.389	1.129
		-0.661	-0.776	-0.730	-0.271	-0.405	-0.665	-0.363
0.0	4250	1.502	1.452	1.298	0.914	1.344	1.313	0.978
		-0.725	-0.728	-0.581	-0.123	-0.538	-0.566	-0.195
0.0	4500	1.327	1.391	1.192	0.793	1.280	1.224	0.860
		-0.540	-0.662	-0.463	0.000	-0.475	-0.469	-0.077
0.0	4750	1.154	1.339	1.093	0.693	1.200	1.147	0.760
		-0.383	-0.621	-0.359	0.093	-0.422	-0.400	0.019
0.0	5000	1.013	1.291	0.996	0.590	1.140	1.096	0.663
		-0.264	-0.587	-0.260	0.193	-0.398	-0.365	0.113
0.0	5250	0.871	1.234	0.898	0.497	1.073	1.039	0.569
		-0.131	-0.540	-0.160	0.284	-0.352	-0.315	0.205
0.0	5500	0.783	1.427	1.107	0.699	1.115	1.241	0.769
		-0.051	-0.774	-0.408	0.040	-0.423	-0.558	-0.035
0.0	5750	0.616	1.370	1.033	0.647	1.005	1.197	0.717
		0.131	-0.698	-0.315	0.096	-0.299	-0.500	0.021
0.0	6000	0.452	1.350	0.972	0.598	0.906	1.178	0.664
		0.310	-0.662	-0.238	0.148	-0.185	-0.468	0.081
0.5	3500	0.421	1.163	1.610	1.265	0.557	1.245	1.224
		0.466	-0.444	-0.893	-0.490	0.300	-0.505	-0.458
0.5	3750	0.858	1.448	1.567	1.171	0.881	1.409	1.235
		-0.030	-0.765	-0.869	-0.395	-0.064	-0.700	-0.480
0.5	4000	1.538	1.543	1.423	1.038	1.302	1.413	1.118
		-0.790	-0.841	-0.699	-0.245	-0.515	-0.679	-0.337
0.5	4250	1.625	1.506	1.281	0.900	1.423	1.330	0.970
		-0.875	-0.780	-0.532	-0.093	-0.636	-0.570	-0.169
0.5	4500	1.470	1.430	1.157	0.769	1.380	1.230	0.830
		-0.704	-0.692	-0.393	0.044	-0.592	-0.458	-0.022
0.5	4750	1.286	1.365	1.062	0.674	1.297	1.154	0.736
		-0.520	-0.629	-0.294	0.134	-0.522	-0.386	0.067
0.5	5000	1.097	1.281	0.944	0.565	1.196	1.074	0.629
		-0.333	-0.547	-0.168	0.240	-0.439	-0.313	0.173
0.5	5250	0.922	1.205	0.846	0.475	1.095	1.015	0.537
		-0.159	-0.474	-0.069	0.326	-0.350	-0.261	0.262
0.5	5500	0.694	1.116	0.743	0.379	0.935	0.934	0.440
		0.088	-0.380	0.036	0.414	-0.177	-0.176	0.354
0.5	5750	0.669	1.321	0.983	0.628	0.998	1.159	0.690
		0.091	-0.613	-0.235	0.127	-0.266	-0.432	0.065
0.5	6000	0.504	1.227	0.900	0.581	0.862	1.089	0.636
		0.268	-0.489	-0.131	0.178	-0.111	-0.339	0.127
0.5	6250	0.372	1.210	0.861	0.539	0.769	1.068	0.596
		0.401	-0.460	-0.081	0.222	-0.010	-0.308	0.170
0.5	6500	0.277	1.152	0.821	0.505	0.687	1.025	0.561
		0.486	-0.383	-0.035	0.257	0.074	-0.252	0.207
0.5	6750	0.225	0.994	0.718	0.453	0.590	0.895	0.501
		0.522	-0.194	0.081	0.312	0.177	-0.096	0.272
0.5	7000	0.208	0.820	0.607	0.396	0.510	0.750	0.435
		0.521	0.004	0.201	0.371	0.257	0.066	0.340
0.5	7250	0.219	0.642	0.498	0.342	0.440	0.599	0.373
		0.494	0.187	0.307	0.422	0.324	0.223	0.399
0.5	7500	0.253	0.461	0.375	0.281	0.378	0.435	0.299
		0.448	0.352	0.415	0.474	0.372	0.373	0.463
1.0	3500	0.537	1.215	1.625	1.258	0.682	1.270	1.192
		0.331	-0.486	-0.895	-0.480	0.158	-0.520	-0.418
1.0	3750	0.960	1.489	1.564	1.160	0.981	1.421	1.210
		-0.165	-0.805	-0.846	-0.377	-0.194	-0.705	-0.450
1.0	4000	1.626	1.574	1.412	1.025	1.371	1.424	1.113
		-0.905	-0.870	-0.663	-0.222	-0.608	-0.683	-0.327
1.0	4250	1.712	1.522	1.258	0.887	1.479	1.333	0.964
		-0.981	-0.789	-0.483	-0.069	-0.708	-0.563	-0.153
1.0	4500	1.570	1.440	1.120	0.758	1.443	1.227	0.821
		-0.817	-0.691	-0.328	0.066	-0.667	-0.441	0.000
1.0	4750	1.372	1.354	1.011	0.647	1.347	1.138	0.710
		-0.601	-0.597	-0.212	0.177	-0.570	-0.350	0.110
1.0	5000	1.172	1.264	0.901	0.548	1.232	1.059	0.612
		-0.394	-0.505	-0.095	0.271	-0.459	-0.275	0.206
1.0	5250	0.956	1.162	0.792	0.453	1.097	0.979	0.512
		-0.167	-0.398	0.017	0.361	-0.324	-0.197	0.302
1.0	5500	0.717	1.060	0.691	0.363	0.922	0.897	0.418
		0.092	-0.289	0.117	0.444	-0.135	-0.113	0.391
1.0	5750	0.521	0.964	0.606	0.291	0.757	0.817	0.345
		0.303	-0.179	0.208	0.512	0.047	-0.023	0.461
1.0	6000	0.553	1.161	0.856	0.567	0.839	1.033	0.616
		0.233	-0.392	-0.065	0.199	-0.063	-0.257	0.156
1.0	6250	0.421	1.060	0.778	0.519	0.709	0.950	0.566
		0.364	-0.262	0.031	0.252	0.079	-0.151	0.213
1.0	6500	0.321	1.039	0.746	0.480	0.625	0.924	0.524
		0.453	-0.229	0.071	0.295	0.164	-0.114	0.259

Table 3. continued

log g	T_{eff}	u	v	b	y	U	B	V
1.0	6750	0.256	0.988	0.711	0.446	0.561	0.882	0.492
		0.500	-0.164	0.111	0.328	0.225	-0.062	0.293
1.0	7000	0.224	0.838	0.609	0.383	0.484	0.753	0.424
		0.512	0.012	0.227	0.398	0.301	0.090	0.368
1.0	7250	0.211	0.682	0.504	0.321	0.425	0.626	0.357
		0.508	0.185	0.338	0.462	0.356	0.230	0.437
1.0	7500	0.217	0.547	0.410	0.264	0.379	0.505	0.292
		0.486	0.320	0.428	0.515	0.392	0.351	0.498
1.0	7750	0.231	0.445	0.341	0.225	0.349	0.412	0.248
		0.460	0.404	0.480	0.544	0.410	0.427	0.531
1.0	8000	0.263	0.389	0.298	0.197	0.338	0.359	0.218
		0.413	0.424	0.495	0.556	0.399	0.448	0.543
1.0	8250	0.327	0.385	0.291	0.186	0.366	0.350	0.204
		0.337	0.386	0.469	0.548	0.345	0.418	0.535
1.5	3500	0.647	1.224	1.626	1.245	0.770	1.269	1.158
		0.209	-0.480	-0.885	-0.465	0.061	-0.505	-0.380
1.5	3750	1.065	1.494	1.557	1.158	1.063	1.414	1.181
		-0.301	-0.801	-0.825	-0.375	-0.298	-0.689	-0.418
1.5	4000	1.682	1.582	1.411	1.024	1.411	1.427	1.108
		-0.983	-0.873	-0.649	-0.219	-0.664	-0.680	-0.321
1.5	4250	1.775	1.526	1.240	0.888	1.508	1.328	0.968
		-1.058	-0.787	-0.447	-0.068	-0.749	-0.549	-0.156
1.5	4500	1.632	1.435	1.094	0.756	1.465	1.217	0.817
		-0.886	-0.676	-0.281	0.073	-0.693	-0.420	0.010
1.5	4750	1.442	1.344	0.981	0.646	1.378	1.128	0.702
		-0.671	-0.572	-0.161	0.183	-0.599	-0.327	0.127
1.5	5000	1.218	1.228	0.858	0.537	1.245	1.030	0.593
		-0.423	-0.444	-0.029	0.291	-0.458	-0.226	0.236
1.5	5250	0.992	1.113	0.747	0.442	1.092	0.942	0.495
		-0.179	-0.319	0.087	0.383	-0.295	-0.136	0.332
1.5	5500	0.742	1.000	0.643	0.345	0.904	0.848	0.394
		0.092	-0.199	0.190	0.473	-0.091	-0.038	0.429
1.5	5750	0.520	0.898	0.563	0.277	0.717	0.767	0.329
		0.332	-0.086	0.268	0.531	0.116	0.049	0.482
1.5	6000	0.349	0.793	0.485	0.217	0.555	0.672	0.265
		0.515	0.037	0.353	0.589	0.296	0.158	0.548
1.5	6250	0.469	0.985	0.740	0.506	0.685	0.888	0.550
		0.329	-0.163	0.081	0.268	0.125	-0.069	0.233
1.5	6500	0.368	0.881	0.662	0.459	0.569	0.798	0.492
		0.419	-0.031	0.177	0.321	0.246	0.043	0.300
1.5	6750	0.298	0.866	0.634	0.415	0.503	0.770	0.455
		0.470	-0.009	0.210	0.369	0.306	0.080	0.341
1.5	7000	0.254	0.814	0.597	0.377	0.448	0.724	0.415
		0.491	0.055	0.253	0.410	0.353	0.134	0.384
1.5	7250	0.227	0.672	0.503	0.319	0.390	0.614	0.354
		0.499	0.217	0.358	0.471	0.406	0.261	0.449
1.5	7500	0.221	0.542	0.400	0.247	0.342	0.494	0.278
		0.486	0.357	0.466	0.545	0.444	0.390	0.527
1.5	7750	0.220	0.436	0.316	0.198	0.309	0.396	0.220
		0.474	0.458	0.543	0.586	0.467	0.484	0.578
1.5	8000	0.225	0.361	0.264	0.163	0.290	0.330	0.186
		0.453	0.517	0.578	0.609	0.470	0.532	0.599
1.5	8250	0.242	0.317	0.235	0.146	0.283	0.290	0.159
		0.421	0.535	0.584	0.612	0.458	0.549	0.613
1.5	8500	0.267	0.300	0.216	0.128	0.289	0.271	0.140
		0.388	0.523	0.583	0.618	0.437	0.543	0.618
1.5	8750	0.298	0.299	0.215	0.121	0.301	0.267	0.134
		0.355	0.498	0.564	0.614	0.414	0.524	0.610
1.5	9000	0.321	0.302	0.217	0.114	0.309	0.273	0.130
		0.336	0.472	0.544	0.612	0.398	0.496	0.603
2.0	3500	0.739	1.201	1.628	1.234	0.819	1.250	1.120
		0.111	-0.436	-0.881	-0.455	0.013	-0.472	-0.337
2.0	3750	1.141	1.471	1.548	1.158	1.096	1.387	1.150
		-0.398	-0.766	-0.808	-0.380	-0.341	-0.653	-0.389
2.0	4000	1.688	1.569	1.409	1.023	1.411	1.413	1.096
		-1.001	-0.855	-0.637	-0.219	-0.675	-0.662	-0.313
2.0	4250	1.805	1.516	1.233	0.891	1.510	1.324	0.974
		-1.097	-0.770	-0.428	-0.072	-0.757	-0.541	-0.165
2.0	4500	1.668	1.421	1.078	0.762	1.468	1.209	0.831
		-0.927	-0.654	-0.254	0.067	-0.701	-0.405	-0.004
2.0	4750	1.485	1.319	0.951	0.644	1.385	1.109	0.700
		-0.713	-0.535	-0.115	0.189	-0.604	-0.297	0.134
2.0	5000	1.257	1.196	0.827	0.532	1.248	1.006	0.583
		-0.452	-0.395	0.018	0.301	-0.450	-0.188	0.253
2.0	5250	1.027	1.067	0.713	0.432	1.089	0.904	0.484
		-0.197	-0.251	0.137	0.397	-0.275	-0.080	0.350
2.0	5500	0.775	0.943	0.603	0.337	0.897	0.804	0.382
		0.079	-0.117	0.248	0.487	-0.062	0.024	0.448
2.0	5750	0.544	0.831	0.519	0.266	0.703	0.712	0.309
		0.330	0.005	0.329	0.549	0.152	0.123	0.512
2.0	6000	0.367	0.733	0.455	0.215	0.529	0.626	0.258
		0.514	0.117	0.393	0.593	0.341	0.219	0.557
2.0	6250	0.250	0.644	0.395	0.169	0.396	0.544	0.207
		0.631	0.219	0.458	0.638	0.483	0.313	0.609
2.0	6500	0.416	0.814	0.631	0.447	0.548	0.742	0.479
		0.384	0.050	0.212	0.333	0.282	0.109	0.314
2.0	6750	0.340	0.707	0.551	0.395	0.452	0.647	0.425
		0.441	0.183	0.310	0.391	0.375	0.227	0.375
2.0	7000	0.292	0.702	0.532	0.358	0.396	0.627	0.389
		0.465	0.190	0.332	0.432	0.420	0.251	0.414
2.0	7250	0.256	0.653	0.505	0.324	0.364	0.593	0.358
		0.478	0.245	0.362	0.466	0.441	0.289	0.445
2.0	7500	0.240	0.529	0.403	0.256	0.311	0.484	0.283
		0.474	0.383	0.473	0.537	0.482	0.410	0.525
2.0	7750	0.229	0.414	0.308	0.188	0.271	0.376	0.212
		0.469	0.503	0.569	0.604	0.514	0.522	0.595
2.0	8000	0.223	0.330	0.242	0.146	0.247	0.301	0.162
		0.458	0.580	0.625	0.635	0.524	0.590	0.635
2.0	8250	0.219	0.273	0.196	0.120	0.233	0.244	0.133
		0.448	0.620	0.654	0.647	0.520	0.631	0.649
2.0	8500	0.231	0.233	0.168	0.097	0.228	0.212	0.110
		0.421	0.640	0.665	0.660	0.510	0.644	0.660
2.0	8750	0.247	0.212	0.145	0.080	0.232	0.187	0.090
		0.395	0.641	0.673	0.666	0.495	0.652	0.670
2.0	9000	0.268	0.197	0.132	0.065	0.229	0.174	0.074
		0.370	0.639	0.671	0.673	0.492	0.650	0.678
2.0	9250	0.279	0.188	0.125	0.055	0.229	0.167	0.066
		0.361	0.630	0.665	0.674	0.485	0.640	0.675
2.0	9500	0.279	0.185	0.120	0.045	0.228	0.160	0.056
		0.367	0.618	0.657	0.678	0.481	0.633	0.677
2.0	9750	0.273	0.181	0.115	0.040	0.220	0.156	0.051
		0.377	0.607	0.650	0.674	0.487	0.624	0.672
2.0	10000	0.261	0.177	0.108	0.031	0.208	0.151	0.043
		0.392	0.601	0.648	0.676	0.495	0.617	0.674
2.0	10500	0.222	0.166	0.100	0.020	0.185	0.143	0.033
		0.434	0.593	0.639	0.673	0.512	0.606	0.669
2.0	14000	0.160	0.157	0.093	0.013	0.152	0.135	0.026
		0.486	0.547	0.600	0.648	0.516	0.563	0.642
2.5	3500	0.789	1.142	1.613	1.212	0.816	1.206	1.076
		0.063	-0.352	-0.858	-0.431	0.025	-0.411	-0.288
2.5	3750	1.163	1.412	1.532	1.150	1.078	1.342	1.115
		-0.424	-0.690	-0.786	-0.375	-0.323	-0.599	-0.357
2.5	4000	1.656	1.539	1.411	1.029	1.369	1.393	1.078
		-0.976	-0.818	-0.637	-0.231	-0.639	-0.641	-0.299
2.5	4250	1.803	1.502	1.238	0.899	1.484	1.316	0.982
		-1.101	-0.751	-0.429	-0.083	-0.735	-0.533	-0.179
2.5	4500	1.689	1.409	1.077	0.772	1.456	1.205	0.846
		-0.954	-0.637	-0.246	0.056	-0.692	-0.401	-0.024
2.5	4750	1.519	1.303	0.938	0.655	1.379	1.096	0.711
		-0.751	-0.514	-0.094	0.178	-0.600	-0.279	0.123
2.5	5000	1.303	1.172	0.814	0.540	1.252	0.987	0.592
		-0.498	-0.361	0.039	0.294	-0.451	-0.160	0.244
2.5	5250	1.070	1.034	0.690	0.436	1.091	0.879	0.482
		-0.232	-0.206	0.171	0.397	-0.267	-0.045	0.356
2.5	5500	0.818	0.895	0.573	0.333	0.892	0.766	0.377
		0.050	-0.051	0.292	0.497	-0.043	0.077	0.459
2.5	5750	0.601	0.784	0.490	0.265	0.705	0.672	0.303
		0.286	0.069	0.371	0.556	0.165	0.177	0.526
2.5	6000	0.398	0.678	0.424	0.210	0.516	0.584	0.242
		0.501	0.186	0.432	0.601	0.371	0.272	0.579
2.5	6250	0.252	0.589	0.370	0.164	0.364	0.502	0.196
		0.647	0.284	0.486	0.641	0.531	0.362	0.619
2.5	6500	0.191	0.507	0.325	0.125	0.275	0.427	0.160
		0.693	0.379	0.534	0.679	0.616	0.448	0.655
2.5	6750	0.386	0.659	0.534	0.391	0.441	0.602	0.416
		0.409	0.234	0.324	0.392	0.396	0.274	0.380
2.5	7000	0.334	0.553	0.453	0.336	0.361	0.509	0.359
		0.436	0.363	0.422	0.455	0.467	0.385	0.446
2.5	7250	0.291	0.533	0.429	0.299	0.318	0.486	0.319
		0.455	0.381	0.450	0.494	0.498	0.411	0.489
2.5	7500	0.264	0.511	0.412	0.262	0.287	0.469	0.290
		0.459	0.402	0.464	0.530	0.511	0.425	0.516
2.5	7750	0.249	0.405	0.319	0.198	0.248	0.368	0.221
		0.454	0.516	0.561	0.593	0.539	0.533	0.588
2.5	8000	0.232	0.313	0.236	0.146	0.218	0.282	0.161
		0.455	0.608	0.643	0.638	0.555	0.619	0.640
2.5	8250	0.224	0.243	0.179	0.107	0.197	0.222	0.119
		0.446	0.668	0.687	0.664	0.558	0.667	0.671
2.5	8500	0.219	0.196	0.142	0.082	0.191	0.178	0.093
		0.434	0.701	0.708	0.677	0.548	0.697	0.683
2.5	8750	0.229	0.160	0.111	0.062	0.189	0.145	0.069
		0.410	0.722	0.725	0.686	0.539	0.715	0.696
2.5	9000	0.240	0.134	0.091	0.048	0.184	0.122	0.050
		0.392	0.734	0.733	0.691	0.536	0.726	0.706
2.5	9250	0.250	0.116	0.074	0.034	0.180	0.104	0.037
		0.378	0.737	0.738	0.697	0.535	0.731	0.710
2.5	9500	0.258	0.103	0.062	0.020	0.174	0.087	0.026
		0.370	0.738	0.740	0.704	0.537	0.737	0.712
2.5	9750	0.255	0.091	0.051	0.008	0.169	0.078	0.012
		0.375	0.737	0.738	0.708	0.537	0.733	0.718

Table 3. continued

log g	T_{eff}	u	v	b	y	U	B	V
2.5	10000	0.253	0.085	0.040	-0.001	0.162	0.069	0.005
		0.378	0.730	0.740	0.709	0.541	0.731	0.716
2.5	10500	0.227	0.067	0.028	-0.016	0.136	0.052	-0.012
		0.409	0.726	0.731	0.707	0.561	0.727	0.718
2.5	11000	0.197	0.061	0.024	-0.024	0.115	0.045	-0.019
		0.438	0.712	0.714	0.699	0.574	0.714	0.706
2.5	11500	0.169	0.054	0.014	-0.033	0.099	0.040	-0.025
		0.460	0.701	0.710	0.694	0.578	0.703	0.698
2.5	12000	0.151	0.048	0.008	-0.038	0.087	0.033	-0.029
		0.471	0.695	0.704	0.689	0.580	0.697	0.689
2.5	12500	0.137	0.045	0.006	-0.038	0.081	0.029	-0.033
		0.481	0.687	0.695	0.678	0.577	0.690	0.686
2.5	13000	0.129	0.044	0.003	-0.044	0.072	0.024	-0.035
		0.484	0.679	0.691	0.678	0.582	0.688	0.680
2.5	14000	0.113	0.041	0.002	-0.048	0.065	0.023	-0.040
		0.498	0.669	0.680	0.675	0.582	0.677	0.678
2.5	15000	0.104	0.041	-0.001	-0.050	0.064	0.025	-0.041
		0.509	0.660	0.676	0.673	0.581	0.665	0.673
2.5	16000	0.102	0.042	0.001	-0.052	0.065	0.024	-0.041
		0.516	0.653	0.671	0.677	0.580	0.663	0.673
2.5	17000	0.098	0.043	0.001	-0.052	0.065	0.025	-0.041
		0.528	0.648	0.670	0.680	0.583	0.658	0.677
2.5	18000	0.088	0.038	-0.005	-0.057	0.058	0.023	-0.048
		0.550	0.653	0.678	0.694	0.599	0.661	0.692
2.5	19000	0.067	0.036	-0.010	-0.065	0.049	0.019	-0.052
		0.586	0.654	0.687	0.710	0.616	0.667	0.702
3.0	3500	0.776	0.998	1.494	1.122	0.747	1.082	0.973
		0.090	-0.172	-0.712	-0.327	0.113	-0.259	-0.171
3.0	3750	1.135	1.333	1.500	1.132	1.013	1.277	1.067
		-0.390	-0.594	-0.746	-0.359	-0.249	-0.524	-0.309
3.0	4000	1.581	1.490	1.411	1.033	1.292	1.356	1.061
		-0.899	-0.765	-0.638	-0.241	-0.563	-0.603	-0.292
3.0	4250	1.773	1.479	1.248	0.905	1.429	1.302	0.981
		-1.078	-0.727	-0.440	-0.093	-0.684	-0.520	-0.187
3.0	4500	1.689	1.390	1.082	0.787	1.422	1.193	0.864
		-0.959	-0.616	-0.249	0.035	-0.662	-0.388	-0.050
3.0	4750	1.541	1.281	0.936	0.665	1.365	1.085	0.725
		-0.779	-0.487	-0.087	0.165	-0.590	-0.267	0.105
3.0	5000	1.344	1.151	0.803	0.546	1.254	0.972	0.601
		-0.543	-0.335	0.057	0.288	-0.455	-0.141	0.235
3.0	5250	1.116	1.009	0.679	0.442	1.096	0.857	0.486
		-0.277	-0.172	0.188	0.391	-0.270	-0.016	0.352
3.0	5500	0.879	0.866	0.562	0.342	0.910	0.745	0.386
		-0.009	-0.012	0.310	0.489	-0.057	0.106	0.451
3.0	5750	0.653	0.740	0.468	0.263	0.715	0.640	0.300
		0.241	0.127	0.403	0.562	0.162	0.218	0.532
3.0	6000	0.454	0.637	0.398	0.206	0.529	0.550	0.240
		0.453	0.238	0.468	0.609	0.365	0.314	0.584
3.0	6250	0.297	0.542	0.345	0.161	0.367	0.468	0.192
		0.613	0.342	0.516	0.645	0.537	0.402	0.625
3.0	6500	0.185	0.463	0.298	0.121	0.247	0.391	0.151
		0.717	0.427	0.562	0.681	0.656	0.485	0.661
3.0	6750	0.155	0.386	0.256	0.094	0.182	0.321	0.121
		0.723	0.514	0.608	0.705	0.710	0.564	0.690
3.0	7000	0.373	0.518	0.440	0.335	0.362	0.481	0.354
		0.412	0.394	0.429	0.448	0.471	0.406	0.444
3.0	7250	0.333	0.410	0.358	0.279	0.294	0.391	0.295
		0.425	0.517	0.527	0.512	0.529	0.513	0.512
3.0	7500	0.299	0.392	0.335	0.239	0.251	0.365	0.257
		0.436	0.533	0.551	0.554	0.556	0.540	0.553
3.0	7750	0.272	0.386	0.325	0.209	0.226	0.354	0.227
		0.442	0.532	0.554	0.578	0.561	0.543	0.578
3.0	8000	0.252	0.307	0.252	0.155	0.199	0.279	0.172
		0.443	0.612	0.626	0.628	0.572	0.618	0.628
3.0	8250	0.232	0.230	0.183	0.111	0.174	0.209	0.121
		0.445	0.684	0.688	0.662	0.579	0.682	0.670
3.0	8500	0.224	0.179	0.136	0.080	0.161	0.160	0.088
		0.434	0.721	0.721	0.679	0.575	0.719	0.689
3.0	8750	0.224	0.137	0.096	0.059	0.160	0.121	0.061
		0.418	0.751	0.749	0.687	0.560	0.747	0.704
3.0	9000	0.229	0.103	0.069	0.037	0.159	0.092	0.040
		0.401	0.776	0.764	0.700	0.550	0.764	0.715
3.0	9250	0.235	0.079	0.047	0.020	0.154	0.070	0.026
		0.390	0.788	0.775	0.709	0.550	0.775	0.719
3.0	9500	0.241	0.056	0.034	0.007	0.147	0.047	0.011
		0.380	0.801	0.776	0.714	0.555	0.790	0.727
3.0	9750	0.247	0.040	0.021	-0.004	0.143	0.033	-0.002
		0.372	0.805	0.780	0.718	0.555	0.792	0.732
3.0	10000	0.244	0.025	0.006	-0.014	0.134	0.020	-0.013
		0.375	0.811	0.786	0.719	0.560	0.796	0.735
3.0	10500	0.234	0.006	-0.012	-0.031	0.114	-0.001	-0.031
		0.386	0.808	0.784	0.720	0.574	0.796	0.736
3.0	11000	0.206	-0.009	-0.022	-0.043	0.091	-0.012	-0.039
		0.414	0.802	0.773	0.715	0.589	0.786	0.725
3.0	11500	0.177	-0.016	-0.029	-0.049	0.072	-0.024	-0.047
		0.440	0.789	0.760	0.703	0.598	0.779	0.716
3.0	12000	0.156	-0.024	-0.035	-0.052	0.057	-0.029	-0.052
		0.454	0.780	0.749	0.689	0.601	0.768	0.704
3.0	12500	0.136	-0.025	-0.039	-0.057	0.049	-0.034	-0.057
		0.467	0.765	0.739	0.683	0.597	0.757	0.697
3.0	13000	0.125	-0.028	-0.041	-0.059	0.038	-0.034	-0.058
		0.471	0.755	0.729	0.673	0.600	0.745	0.687
3.0	14000	0.103	-0.029	-0.049	-0.063	0.030	-0.037	-0.063
		0.485	0.736	0.720	0.661	0.594	0.728	0.675
3.0	15000	0.090	-0.034	-0.047	-0.068	0.023	-0.040	-0.064
		0.494	0.728	0.703	0.655	0.594	0.719	0.665
3.0	16000	0.081	-0.034	-0.050	-0.071	0.015	-0.040	-0.066
		0.502	0.716	0.698	0.653	0.598	0.708	0.660
3.0	17000	0.073	-0.037	-0.050	-0.076	0.012	-0.044	-0.070
		0.511	0.712	0.690	0.656	0.601	0.707	0.660
3.0	18000	0.062	-0.041	-0.056	-0.081	0.004	-0.050	-0.075
		0.528	0.711	0.695	0.661	0.611	0.708	0.665
3.0	19000	0.049	-0.052	-0.065	-0.090	-0.004	-0.057	-0.084
		0.548	0.720	0.702	0.673	0.622	0.713	0.676
3.0	20000	0.029	-0.061	-0.078	-0.102	-0.019	-0.068	-0.095
		0.577	0.726	0.716	0.688	0.643	0.722	0.690
3.0	21000	0.002	-0.066	-0.090	-0.114	-0.039	-0.072	-0.109
		0.613	0.727	0.727	0.705	0.669	0.723	0.709
3.0	22000	-0.019	-0.062	-0.095	-0.127	-0.050	-0.076	-0.119
		0.638	0.718	0.731	0.722	0.682	0.725	0.722
3.0	23000	-0.028	-0.057	-0.091	-0.129	-0.049	-0.070	-0.121
		0.651	0.713	0.728	0.728	0.681	0.719	0.727
3.0	24000	-0.023	-0.043	-0.088	-0.126	-0.043	-0.061	-0.117
		0.650	0.699	0.730	0.734	0.681	0.713	0.731
3.0	25000	-0.018	-0.040	-0.085	-0.125	-0.036	-0.056	-0.114
		0.654	0.701	0.733	0.744	0.681	0.713	0.740
3.0	26000	-0.025	-0.041	-0.087	-0.126	-0.038	-0.057	-0.114
		0.671	0.708	0.742	0.757	0.690	0.720	0.749
3.5	3500	0.591	0.578	1.002	0.782	0.512	0.682	0.667
		0.315	0.324	-0.122	0.073	0.390	0.211	0.184
3.5	3750	1.001	1.130	1.349	1.017	0.871	1.104	0.927
		-0.228	-0.354	-0.568	-0.228	-0.086	-0.322	-0.153
3.5	4000	1.455	1.413	1.397	1.023	1.181	1.299	1.024
		-0.763	-0.682	-0.626	-0.236	-0.450	-0.547	-0.263
3.5	4250	1.699	1.444	1.258	0.912	1.344	1.277	0.974
		-1.004	-0.693	-0.453	-0.106	-0.602	-0.499	-0.188
3.5	4500	1.667	1.369	1.091	0.796	1.369	1.180	0.877
		-0.941	-0.593	-0.258	0.022	-0.612	-0.377	-0.072
3.5	4750	1.547	1.262	0.939	0.678	1.333	1.072	0.747
		-0.792	-0.467	-0.088	0.149	-0.563	-0.255	0.075
3.5	5000	1.381	1.141	0.805	0.564	1.247	0.963	0.618
		-0.589	-0.324	0.057	0.267	-0.454	-0.132	0.214
3.5	5250	1.174	0.995	0.679	0.458	1.113	0.847	0.500
		-0.343	-0.154	0.192	0.373	-0.293	-0.003	0.336
3.5	5500	0.944	0.850	0.562	0.358	0.936	0.732	0.398
		-0.077	0.010	0.313	0.472	-0.086	0.122	0.439
3.5	5750	0.722	0.720	0.462	0.276	0.744	0.626	0.309
		0.172	0.153	0.414	0.549	0.132	0.236	0.524
3.5	6000	0.522	0.608	0.383	0.210	0.554	0.528	0.241
		0.389	0.274	0.489	0.607	0.344	0.341	0.584
3.5	6250	0.352	0.509	0.325	0.157	0.385	0.440	0.189
		0.564	0.380	0.542	0.652	0.525	0.434	0.630
3.5	6500	0.227	0.424	0.278	0.125	0.256	0.360	0.149
		0.684	0.470	0.584	0.675	0.653	0.518	0.663
3.5	6750	0.147	0.345	0.232	0.086	0.158	0.287	0.113
		0.750	0.554	0.629	0.710	0.744	0.595	0.694
3.5	7000	0.134	0.283	0.197	0.065	0.115	0.235	0.085
		0.737	0.622	0.668	0.729	0.769	0.651	0.722
3.5	7250	0.371	0.384	0.354	0.278	0.301	0.368	0.288
		0.404	0.532	0.520	0.505	0.525	0.526	0.512
3.5	7500	0.340	0.294	0.276	0.223	0.245	0.284	0.233
		0.409	0.637	0.612	0.567	0.565	0.623	0.574
3.5	7750	0.306	0.265	0.242	0.186	0.209	0.252	0.198
		0.422	0.663	0.648	0.604	0.581	0.653	0.608
3.5	8000	0.272	0.281	0.249	0.160	0.180	0.257	0.173
		0.437	0.631	0.628	0.621	0.592	0.635	0.625
3.5	8250	0.251	0.226	0.202	0.125	0.160	0.208	0.136
		0.438	0.680	0.668	0.646	0.591	0.677	0.652
3.5	8500	0.233	0.167	0.142	0.088	0.145	0.153	0.096
		0.436	0.731	0.719	0.671	0.586	0.722	0.680
3.5	8750	0.223	0.127	0.100	0.062	0.137	0.115	0.067
		0.428	0.758	0.748	0.683	0.576	0.748	0.695
3.5	9000	0.226	0.090	0.065	0.038	0.135	0.081	0.042
		0.407	0.785	0.771	0.697	0.563	0.771	0.710
3.5	9250	0.230	0.064	0.039	0.017	0.135	0.057	0.019
		0.395	0.802	0.787	0.710	0.555	0.786	0.725
3.5	9500	0.233	0.037	0.020	0.004	0.133	0.034	0.003
		0.386	0.820	0.796	0.713	0.553	0.800	0.732
3.5	9750	0.234	0.019	0.002	-0.008	0.131	0.016	-0.010
		0.382	0.829	0.804	0.718	0.551	0.810	0.738
3.5	10000	0.234	-0.002	-0.009	-0.018	0.119	0.000	-0.020
		0.380	0.842	0.806	0.721	0.561	0.817	0.739

Table 3. continued

log g	T_{eff}	u	v	b	y	U	B	V
3.5	10500	0.233	-0.030	-0.032	-0.038	0.106	-0.029	-0.039
		0.378	0.852	0.809	0.725	0.569	0.829	0.743
3.5	11000	0.215	-0.045	-0.044	-0.051	0.083	-0.046	-0.051
		0.395	0.846	0.801	0.721	0.586	0.826	0.736
3.5	11500	0.191	-0.056	-0.054	-0.059	0.066	-0.057	-0.061
		0.417	0.835	0.791	0.711	0.592	0.818	0.729
3.5	12000	0.166	-0.064	-0.063	-0.064	0.048	-0.065	-0.062
		0.436	0.824	0.783	0.699	0.599	0.806	0.711
3.5	12500	0.147	-0.068	-0.066	-0.067	0.038	-0.069	-0.065
		0.447	0.811	0.768	0.685	0.597	0.793	0.698
3.5	13000	0.131	-0.069	-0.070	-0.068	0.026	-0.069	-0.068
		0.456	0.796	0.757	0.672	0.598	0.778	0.687
3.5	14000	0.105	-0.070	-0.069	-0.069	0.013	-0.070	-0.069
		0.471	0.770	0.730	0.649	0.594	0.752	0.664
3.5	15000	0.089	-0.072	-0.071	-0.072	0.005	-0.073	-0.070
		0.477	0.753	0.714	0.637	0.589	0.737	0.648
3.5	16000	0.079	-0.073	-0.071	-0.074	-0.002	-0.072	-0.074
		0.482	0.740	0.699	0.628	0.589	0.721	0.641
3.5	17000	0.066	-0.074	-0.073	-0.077	-0.008	-0.074	-0.073
		0.494	0.729	0.691	0.622	0.589	0.712	0.630
3.5	18000	0.056	-0.076	-0.076	-0.076	-0.013	-0.080	-0.077
		0.503	0.722	0.685	0.614	0.592	0.711	0.629
3.5	19000	0.045	-0.079	-0.081	-0.081	-0.020	-0.082	-0.082
		0.516	0.718	0.685	0.617	0.598	0.705	0.631
3.5	20000	0.031	-0.090	-0.087	-0.087	-0.030	-0.087	-0.091
		0.534	0.724	0.687	0.621	0.610	0.706	0.639
3.5	21000	0.012	-0.100	-0.100	-0.102	-0.042	-0.100	-0.099
		0.559	0.729	0.697	0.637	0.623	0.715	0.645
3.5	22000	-0.013	-0.104	-0.109	-0.116	-0.060	-0.110	-0.113
		0.589	0.727	0.702	0.653	0.644	0.721	0.659
3.5	23000	-0.033	-0.110	-0.118	-0.128	-0.077	-0.114	-0.125
		0.611	0.726	0.706	0.664	0.663	0.719	0.672
3.5	24000	-0.049	-0.110	-0.123	-0.133	-0.085	-0.117	-0.131
		0.628	0.721	0.708	0.668	0.668	0.718	0.676
3.5	25000	-0.057	-0.106	-0.123	-0.136	-0.088	-0.114	-0.136
		0.637	0.716	0.707	0.672	0.672	0.713	0.682
3.5	26000	-0.055	-0.107	-0.127	-0.142	-0.089	-0.114	-0.139
		0.637	0.717	0.714	0.684	0.677	0.716	0.690
3.5	27000	-0.059	-0.109	-0.130	-0.144	-0.090	-0.118	-0.139
		0.647	0.724	0.720	0.692	0.683	0.723	0.695
3.5	28000	-0.069	-0.117	-0.140	-0.154	-0.099	-0.128	-0.151
		0.664	0.736	0.734	0.710	0.697	0.738	0.716
3.5	29000	-0.083	-0.132	-0.155	-0.167	-0.113	-0.140	-0.162
		0.682	0.754	0.753	0.728	0.716	0.753	0.732
3.5	30000	-0.105	-0.148	-0.173	-0.183	-0.129	-0.157	-0.180
		0.708	0.772	0.774	0.750	0.735	0.773	0.755
3.5	31000	-0.127	-0.160	-0.190	-0.199	-0.148	-0.171	-0.196
		0.733	0.785	0.794	0.771	0.759	0.790	0.777
4.0	3500	0.397	0.237	0.503	0.408	0.297	0.318	0.353
		0.539	0.706	0.460	0.503	0.628	0.624	0.539
4.0	3750	0.707	0.678	0.847	0.627	0.582	0.680	0.569
		0.129	0.174	0.025	0.224	0.254	0.172	0.258
4.0	4000	1.231	1.213	1.249	0.905	0.989	1.125	0.881
		-0.505	-0.454	-0.455	-0.106	-0.239	-0.351	-0.108
4.0	4250	1.578	1.390	1.259	0.909	1.233	1.237	0.951
		-0.881	-0.641	-0.457	-0.107	-0.497	-0.464	-0.175
4.0	4500	1.613	1.339	1.103	0.802	1.290	1.161	0.877
		-0.891	-0.565	-0.273	0.010	-0.538	-0.363	-0.082
4.0	4750	1.533	1.243	0.944	0.688	1.287	1.057	0.761
		-0.785	-0.449	-0.094	0.134	-0.525	-0.241	0.053
4.0	5000	1.398	1.124	0.805	0.575	1.229	0.952	0.635
		-0.616	-0.309	0.059	0.253	-0.447	-0.122	0.193
4.0	5250	1.223	0.987	0.684	0.472	1.119	0.843	0.516
		-0.404	-0.148	0.187	0.358	-0.309	-0.001	0.318
4.0	5500	1.009	0.844	0.565	0.376	0.961	0.728	0.412
		-0.151	0.017	0.313	0.451	-0.119	0.126	0.423
4.0	5750	0.796	0.710	0.461	0.290	0.781	0.619	0.320
		0.092	0.166	0.418	0.534	0.090	0.244	0.513
4.0	6000	0.592	0.589	0.373	0.218	0.591	0.515	0.246
		0.317	0.297	0.503	0.599	0.303	0.356	0.581
4.0	6250	0.423	0.485	0.310	0.166	0.424	0.423	0.189
		0.494	0.408	0.560	0.641	0.484	0.453	0.629
4.0	6500	0.278	0.391	0.258	0.124	0.279	0.340	0.146
		0.640	0.507	0.606	0.675	0.631	0.538	0.665
4.0	6750	0.182	0.317	0.219	0.091	0.170	0.266	0.112
		0.723	0.583	0.641	0.701	0.734	0.615	0.693
4.0	7000	0.132	0.252	0.182	0.061	0.102	0.210	0.082
		0.755	0.650	0.677	0.729	0.789	0.671	0.719
4.0	7250	0.112	0.182	0.147	0.039	0.062	0.157	0.058
		0.750	0.721	0.713	0.746	0.810	0.725	0.740
4.0	7500	0.375	0.277	0.271	0.228	0.261	0.270	0.236
		0.391	0.640	0.606	0.553	0.550	0.624	0.559
4.0	7750	0.343	0.191	0.202	0.175	0.210	0.194	0.181
		0.400	0.736	0.685	0.611	0.584	0.708	0.622
4.0	8000	0.311	0.157	0.169	0.138	0.174	0.156	0.143
		0.410	0.766	0.717	0.646	0.601	0.742	0.658

log g	T_{eff}	u	v	b	y	U	B	V
4.0	8250	0.275	0.177	0.182	0.120	0.153	0.171	0.127
		0.428	0.725	0.689	0.653	0.598	0.710	0.663
4.0	8500	0.246	0.162	0.159	0.099	0.133	0.154	0.108
		0.437	0.725	0.699	0.658	0.596	0.711	0.666
4.0	8750	0.232	0.117	0.110	0.070	0.121	0.109	0.076
		0.429	0.758	0.738	0.675	0.586	0.745	0.685
4.0	9000	0.228	0.078	0.072	0.044	0.118	0.072	0.048
		0.416	0.788	0.763	0.689	0.573	0.772	0.701
4.0	9250	0.227	0.054	0.041	0.020	0.120	0.047	0.024
		0.403	0.802	0.784	0.704	0.557	0.787	0.717
4.0	9500	0.227	0.030	0.019	0.006	0.120	0.026	0.005
		0.395	0.817	0.796	0.710	0.550	0.799	0.728
4.0	9750	0.227	0.007	0.000	-0.007	0.118	0.006	-0.008
		0.391	0.833	0.805	0.713	0.549	0.811	0.732
4.0	10000	0.230	-0.009	-0.017	-0.019	0.114	-0.009	-0.019
		0.384	0.841	0.814	0.718	0.547	0.819	0.734
4.0	10500	0.227	-0.042	-0.039	-0.038	0.103	-0.039	-0.038
		0.381	0.859	0.817	0.722	0.555	0.834	0.738
4.0	11000	0.216	-0.064	-0.057	-0.050	0.086	-0.059	-0.053
		0.390	0.864	0.818	0.719	0.566	0.838	0.737
4.0	11500	0.196	-0.078	-0.066	-0.059	0.069	-0.075	-0.064
		0.408	0.858	0.807	0.709	0.575	0.835	0.731
4.0	12000	0.174	-0.089	-0.074	-0.065	0.049	-0.082	-0.069
		0.425	0.851	0.796	0.698	0.587	0.823	0.718
4.0	12500	0.156	-0.093	-0.077	-0.071	0.038	-0.087	-0.072
		0.436	0.835	0.780	0.687	0.585	0.809	0.704
4.0	13000	0.139	-0.096	-0.081	-0.069	0.028	-0.091	-0.074
		0.445	0.821	0.767	0.668	0.583	0.797	0.690
4.0	14000	0.109	-0.097	-0.082	-0.070	0.013	-0.090	-0.074
		0.463	0.792	0.739	0.642	0.578	0.766	0.662
4.0	15000	0.089	-0.096	-0.084	-0.070	0.000	-0.089	-0.072
		0.472	0.768	0.718	0.621	0.577	0.741	0.639
4.0	16000	0.077	-0.093	-0.081	-0.073	-0.004	-0.091	-0.073
		0.474	0.745	0.698	0.610	0.568	0.726	0.624
4.0	17000	0.067	-0.095	-0.083	-0.071	-0.013	-0.091	-0.076
		0.479	0.733	0.685	0.594	0.571	0.711	0.615
4.0	18000	0.054	-0.091	-0.082	-0.073	-0.013	-0.089	-0.072
		0.489	0.716	0.672	0.588	0.563	0.697	0.600
4.0	19000	0.046	-0.093	-0.080	-0.071	-0.021	-0.089	-0.075
		0.494	0.707	0.659	0.577	0.569	0.688	0.595
4.0	20000	0.034	-0.096	-0.087	-0.076	-0.028	-0.091	-0.077
		0.507	0.703	0.660	0.578	0.574	0.680	0.590
4.0	21000	0.021	-0.105	-0.089	-0.082	-0.035	-0.102	-0.082
		0.521	0.705	0.654	0.580	0.580	0.687	0.592
4.0	22000	0.005	-0.111	-0.099	-0.092	-0.050	-0.109	-0.093
		0.541	0.703	0.659	0.589	0.597	0.688	0.601
4.0	23000	-0.015	-0.118	-0.109	-0.101	-0.064	-0.117	-0.104
		0.564	0.703	0.664	0.594	0.611	0.689	0.610
4.0	24000	-0.035	-0.119	-0.119	-0.113	-0.079	-0.123	-0.113
		0.583	0.696	0.669	0.605	0.625	0.689	0.616
4.0	25000	-0.049	-0.123	-0.123	-0.120	-0.089	-0.124	-0.121
		0.597	0.694	0.667	0.609	0.632	0.683	0.621
4.0	26000	-0.062	-0.121	-0.123	-0.124	-0.095	-0.123	-0.125
		0.609	0.687	0.660	0.610	0.637	0.677	0.623
4.0	27000	-0.064	-0.121	-0.127	-0.130	-0.097	-0.126	-0.125
		0.611	0.685	0.664	0.617	0.639	0.678	0.622
4.0	28000	-0.069	-0.125	-0.129	-0.134	-0.102	-0.130	-0.132
		0.619	0.689	0.666	0.624	0.646	0.684	0.631
4.0	29000	-0.073	-0.132	-0.142	-0.141	-0.107	-0.136	-0.139
		0.624	0.697	0.681	0.633	0.653	0.691	0.641
4.0	30000	-0.084	-0.142	-0.151	-0.148	-0.115	-0.149	-0.147
		0.635	0.708	0.690	0.642	0.663	0.706	0.650
4.0	31000	-0.097	-0.156	-0.163	-0.161	-0.128	-0.158	-0.158
		0.648	0.720	0.700	0.656	0.675	0.712	0.661
4.0	32000	-0.117	-0.173	-0.179	-0.172	-0.143	-0.176	-0.171
		0.667	0.736	0.714	0.665	0.689	0.729	0.673
4.0	33000	-0.136	-0.185	-0.195	-0.188	-0.160	-0.191	-0.187
		0.682	0.743	0.726	0.681	0.703	0.742	0.689
4.0	34000	-0.154	-0.200	-0.206	-0.201	-0.177	-0.202	-0.201
		0.697	0.756	0.733	0.690	0.719	0.748	0.700
4.0	35000	-0.168	-0.209	-0.214	-0.213	-0.186	-0.211	-0.213
		0.707	0.761	0.736	0.699	0.723	0.753	0.709
4.44	5777	0.830	0.687	0.445	0.292	0.791	0.599	0.323
		0.052	0.190	0.438	0.530	0.072	0.264	0.508
4.5	3500	0.294	0.087	0.246	0.196	0.194	0.145	0.184
		0.650	0.864	0.748	0.739	0.730	0.807	0.719
4.5	3750	0.461	0.309	0.366	0.244	0.339	0.308	0.233
		0.418	0.590	0.573	0.654	0.529	0.591	0.634
4.5	4000	0.867	0.769	0.803	0.532	0.666	0.718	0.533
		-0.069	0.062	0.062	0.319	0.140	0.118	0.286
4.5	4250	1.357	1.223	1.147	0.810	1.043	1.099	0.842
		-0.636	-0.456	-0.332	0.001	-0.294	-0.314	-0.062
4.5	4500	1.528	1.302	1.105	0.803	1.194	1.134	0.872
		-0.808	-0.534	-0.277	0.005	-0.447	-0.342	-0.089
4.5	4750	1.495	1.218	0.950	0.697	1.221	1.042	0.772
		-0.752	-0.428	-0.100	0.122	-0.466	-0.232	0.033

Table 3. continued

log g	T_{eff}	u	v	b	y	U	B	V
4.5	5000	1.402	1.107	0.813	0.588	1.197	0.942	0.652
		-0.631	-0.294	0.052	0.238	-0.427	-0.116	0.170
4.5	5250	1.256	0.981	0.684	0.480	1.117	0.834	0.530
		-0.450	-0.145	0.189	0.349	-0.320	0.007	0.301
4.5	5500	1.067	0.840	0.564	0.380	0.979	0.721	0.422
		-0.223	0.018	0.315	0.449	-0.149	0.132	0.411
4.5	5750	0.867	0.703	0.459	0.299	0.820	0.615	0.331
		0.010	0.172	0.422	0.524	0.039	0.246	0.501
4.5	6000	0.667	0.578	0.366	0.220	0.634	0.504	0.249
		0.234	0.309	0.514	0.598	0.252	0.366	0.578
4.5	6250	0.493	0.469	0.298	0.168	0.466	0.412	0.192
		0.422	0.424	0.576	0.640	0.436	0.463	0.627
4.5	6500	0.341	0.377	0.242	0.121	0.314	0.326	0.143
		0.578	0.520	0.625	0.678	0.594	0.551	0.667
4.5	6750	0.223	0.295	0.203	0.091	0.194	0.256	0.108
		0.691	0.603	0.657	0.699	0.712	0.621	0.695
4.5	7000	0.153	0.230	0.169	0.062	0.113	0.192	0.080
		0.746	0.669	0.688	0.723	0.782	0.685	0.717
4.5	7250	0.109	0.157	0.132	0.036	0.056	0.135	0.054
		0.771	0.740	0.723	0.745	0.824	0.743	0.738
4.5	7500	0.104	0.100	0.095	0.016	0.027	0.085	0.025
		0.752	0.797	0.762	0.762	0.833	0.792	0.767
4.5	7750	0.378	0.181	0.199	0.172	0.230	0.183	0.177
		0.384	0.730	0.675	0.606	0.566	0.705	0.616
4.5	8000	0.346	0.111	0.136	0.128	0.194	0.116	0.130
		0.394	0.803	0.746	0.652	0.582	0.775	0.666
4.5	8250	0.316	0.068	0.096	0.095	0.159	0.080	0.094
		0.403	0.842	0.787	0.681	0.597	0.805	0.700
4.5	8500	0.278	0.087	0.112	0.081	0.135	0.089	0.086
		0.421	0.800	0.752	0.683	0.595	0.778	0.694
4.5	8750	0.247	0.097	0.122	0.076	0.115	0.095	0.082
		0.432	0.767	0.722	0.669	0.592	0.750	0.678
4.5	9000	0.232	0.074	0.089	0.059	0.108	0.073	0.061
		0.427	0.777	0.744	0.671	0.578	0.758	0.686
4.5	9250	0.229	0.045	0.049	0.034	0.109	0.042	0.033
		0.412	0.797	0.775	0.686	0.560	0.779	0.705
4.5	9500	0.227	0.021	0.020	0.014	0.109	0.020	0.013
		0.403	0.811	0.794	0.697	0.549	0.792	0.715
4.5	9750	0.227	0.003	-0.001	-0.002	0.108	0.003	-0.005
		0.395	0.821	0.806	0.706	0.542	0.801	0.726
4.5	10000	0.224	-0.015	-0.015	-0.017	0.106	-0.016	-0.017
		0.394	0.833	0.810	0.713	0.539	0.813	0.730
4.5	10500	0.221	-0.046	-0.041	-0.037	0.103	-0.042	-0.042
		0.390	0.850	0.819	0.719	0.537	0.826	0.740
4.5	11000	0.215	-0.070	-0.060	-0.051	0.088	-0.065	-0.055
		0.391	0.860	0.820	0.717	0.549	0.834	0.737
4.5	11500	0.200	-0.088	-0.073	-0.057	0.073	-0.082	-0.064
		0.402	0.862	0.816	0.706	0.557	0.835	0.730
4.5	12000	0.185	-0.099	-0.080	-0.068	0.056	-0.092	-0.072
		0.412	0.855	0.805	0.703	0.566	0.828	0.721
4.5	12500	0.166	-0.106	-0.089	-0.070	0.044	-0.100	-0.075
		0.424	0.844	0.797	0.687	0.568	0.819	0.708
4.5	13000	0.148	-0.109	-0.093	-0.072	0.032	-0.102	-0.079
		0.437	0.829	0.783	0.672	0.569	0.804	0.696
4.5	14000	0.115	-0.112	-0.092	-0.074	0.015	-0.106	-0.080
		0.457	0.801	0.750	0.646	0.565	0.776	0.667
4.5	15000	0.092	-0.107	-0.090	-0.072	0.003	-0.103	-0.075
		0.467	0.768	0.720	0.618	0.560	0.747	0.636
4.5	16000	0.077	-0.106	-0.089	-0.070	-0.002	-0.099	-0.076
		0.471	0.746	0.698	0.598	0.551	0.722	0.619
4.5	17000	0.063	-0.102	-0.086	-0.069	-0.007	-0.096	-0.074
		0.478	0.723	0.679	0.583	0.546	0.701	0.601
4.5	18000	0.053	-0.102	-0.084	-0.069	-0.011	-0.096	-0.072
		0.483	0.710	0.662	0.570	0.542	0.687	0.586
4.5	19000	0.049	-0.099	-0.085	-0.068	-0.017	-0.096	-0.071
		0.480	0.694	0.652	0.559	0.543	0.675	0.575
4.5	20000	0.032	-0.103	-0.084	-0.071	-0.024	-0.097	-0.072
		0.497	0.689	0.639	0.555	0.546	0.666	0.567
4.5	21000	0.027	-0.104	-0.085	-0.070	-0.030	-0.098	-0.074
		0.499	0.681	0.631	0.547	0.549	0.659	0.564
4.5	22000	0.014	-0.107	-0.091	-0.075	-0.038	-0.105	-0.078
		0.513	0.675	0.631	0.547	0.556	0.660	0.562
4.5	23000	-0.002	-0.113	-0.097	-0.081	-0.050	-0.109	-0.088
		0.531	0.674	0.630	0.549	0.569	0.656	0.569
4.5	24000	-0.022	-0.118	-0.104	-0.091	-0.063	-0.115	-0.095
		0.554	0.670	0.630	0.556	0.582	0.655	0.572
4.5	25000	-0.040	-0.123	-0.112	-0.102	-0.074	-0.118	-0.102
		0.572	0.668	0.632	0.565	0.590	0.650	0.574
4.5	26000	-0.051	-0.125	-0.114	-0.108	-0.085	-0.125	-0.109
		0.580	0.662	0.626	0.566	0.599	0.651	0.577
4.5	27000	-0.063	-0.124	-0.118	-0.112	-0.089	-0.123	-0.112
		0.591	0.654	0.624	0.566	0.599	0.641	0.576
4.5	28000	-0.066	-0.124	-0.119	-0.117	-0.094	-0.125	-0.115
		0.590	0.651	0.621	0.571	0.603	0.640	0.577
4.5	29000	-0.071	-0.127	-0.120	-0.117	-0.097	-0.127	-0.119
		0.594	0.651	0.619	0.568	0.604	0.639	0.579
4.5	30000	-0.076	-0.132	-0.130	-0.121	-0.103	-0.132	-0.124
		0.597	0.657	0.628	0.571	0.611	0.644	0.585
4.5	31000	-0.082	-0.138	-0.137	-0.128	-0.106	-0.136	-0.130
		0.601	0.658	0.631	0.577	0.612	0.645	0.588
4.5	32000	-0.090	-0.148	-0.145	-0.135	-0.114	-0.147	-0.134
		0.603	0.663	0.633	0.580	0.615	0.651	0.588
4.5	33000	-0.104	-0.160	-0.156	-0.140	-0.125	-0.157	-0.142
		0.612	0.670	0.639	0.579	0.621	0.656	0.590
4.5	34000	-0.115	-0.170	-0.165	-0.148	-0.138	-0.169	-0.150
		0.616	0.673	0.640	0.582	0.629	0.662	0.592
4.5	35000	-0.133	-0.182	-0.173	-0.160	-0.149	-0.180	-0.161
		0.628	0.678	0.640	0.587	0.633	0.666	0.597
4.5	37500	-0.149	-0.189	-0.185	-0.173	-0.171	-0.188	-0.178
		0.619	0.662	0.628	0.580	0.635	0.651	0.595
4.5	40000	-0.157	-0.191	-0.184	-0.176	-0.172	-0.189	-0.182
		0.618	0.655	0.617	0.571	0.625	0.642	0.588
5.0	3500	0.298	0.082	0.131	0.091	0.214	0.105	0.102
		0.630	0.857	0.868	0.848	0.679	0.834	0.795
5.0	3750	0.343	0.155	0.124	0.043	0.238	0.133	0.065
		0.552	0.753	0.840	0.872	0.631	0.779	0.813
5.0	4000	0.566	0.409	0.356	0.182	0.415	0.357	0.207
		0.289	0.469	0.563	0.701	0.426	0.524	0.644
5.0	4250	0.999	0.861	0.790	0.505	0.755	0.766	0.541
		-0.212	-0.038	0.076	0.341	0.037	0.065	0.276
5.0	4500	1.369	1.194	1.032	0.732	1.057	1.040	0.794
		-0.638	-0.418	-0.196	0.083	-0.308	-0.243	-0.007
5.0	4750	1.436	1.186	0.955	0.697	1.143	1.022	0.777
		-0.701	-0.399	-0.107	0.118	-0.397	-0.217	0.018
5.0	5000	1.377	1.088	0.812	0.591	1.150	0.927	0.669
		-0.617	-0.280	0.053	0.232	-0.391	-0.106	0.143
5.0	5250	1.267	0.966	0.678	0.485	1.097	0.822	0.542
		-0.475	-0.135	0.199	0.343	-0.313	0.015	0.285
5.0	5500	1.105	0.831	0.556	0.385	0.989	0.711	0.430
		-0.275	0.024	0.328	0.444	-0.174	0.139	0.402
5.0	5750	0.923	0.697	0.452	0.301	0.843	0.603	0.334
		-0.059	0.176	0.433	0.524	0.003	0.258	0.498
5.0	6000	0.727	0.567	0.356	0.219	0.672	0.495	0.248
		0.166	0.318	0.527	0.600	0.202	0.374	0.580
5.0	6250	0.554	0.456	0.280	0.162	0.508	0.401	0.186
		0.356	0.438	0.599	0.648	0.384	0.473	0.634
5.0	6500	0.401	0.360	0.223	0.117	0.358	0.314	0.138
		0.518	0.536	0.647	0.682	0.545	0.563	0.672
5.0	6750	0.278	0.276	0.185	0.086	0.231	0.238	0.103
		0.638	0.622	0.676	0.704	0.673	0.639	0.699
5.0	7000	0.193	0.212	0.152	0.061	0.145	0.182	0.075
		0.714	0.684	0.705	0.721	0.750	0.692	0.720
5.0	7250	0.136	0.138	0.119	0.037	0.077	0.124	0.051
		0.756	0.756	0.734	0.741	0.806	0.749	0.739
5.0	7500	0.103	0.080	0.086	0.013	0.032	0.073	0.023
		0.769	0.813	0.765	0.761	0.833	0.797	0.764
5.0	7750	0.105	0.030	0.052	-0.011	0.016	0.027	-0.001
		0.743	0.859	0.801	0.783	0.828	0.842	0.787
5.0	8000	0.140	-0.013	0.018	-0.025	0.022	-0.012	-0.021
		0.679	0.902	0.839	0.796	0.797	0.882	0.805
5.0	8250	0.347	0.038	0.074	0.085	0.183	0.050	0.083
		0.392	0.860	0.801	0.688	0.576	0.827	0.705
5.0	8500	0.320	-0.003	0.035	0.056	0.152	0.012	0.047
		0.399	0.893	0.839	0.713	0.587	0.857	0.739
5.0	8750	0.286	-0.005	0.037	0.043	0.130	0.009	0.039
		0.411	0.877	0.823	0.714	0.583	0.845	0.733
5.0	9000	0.241	0.067	0.114	0.076	0.109	0.073	0.078
		0.436	0.770	0.713	0.654	0.578	0.746	0.666
5.0	9250	0.233	0.039	0.068	0.049	0.104	0.044	0.048
		0.425	0.785	0.752	0.670	0.562	0.763	0.687
5.0	9500	0.226	0.013	0.034	0.026	0.098	0.016	0.025
		0.418	0.799	0.778	0.683	0.553	0.780	0.700
5.0	9750	0.223	-0.008	0.009	0.005	0.101	-0.005	0.002
		0.410	0.814	0.793	0.697	0.540	0.794	0.716
5.0	10000	0.220	-0.021	-0.009	-0.010	0.099	-0.018	-0.014
		0.407	0.819	0.801	0.704	0.534	0.799	0.725
5.0	10500	0.215	-0.043	-0.045	-0.037	0.101	-0.044	-0.038
		0.404	0.827	0.822	0.717	0.523	0.811	0.733
5.0	11000	0.207	-0.070	-0.064	-0.050	0.092	-0.065	-0.054
		0.404	0.844	0.824	0.714	0.528	0.820	0.734
5.0	11500	0.198	-0.088	-0.077	-0.061	0.080	-0.082	-0.066
		0.408	0.848	0.821	0.711	0.536	0.824	0.731
5.0	12000	0.185	-0.101	-0.087	-0.065	0.067	-0.095	-0.072
		0.416	0.845	0.814	0.699	0.543	0.821	0.721
5.0	12500	0.171	-0.111	-0.092	-0.069	0.055	-0.102	-0.076
		0.423	0.840	0.801	0.687	0.546	0.813	0.710
5.0	13000	0.153	-0.116	-0.096	-0.074	0.043	-0.109	-0.080
		0.436	0.828	0.788	0.677	0.548	0.805	0.699
5.0	14000	0.122	-0.120	-0.099	-0.077	0.024	-0.111	-0.083
		0.454	0.801	0.759	0.651	0.547	0.775	0.673
5.0	15000	0.094	-0.120	-0.097	-0.074	0.010	-0.112	-0.080
		0.469	0.772	0.729	0.622	0.544	0.748	0.643
5.0	16000	0.079	-0.114	-0.096	-0.075	0.003	-0.106	-0.079
		0.472	0.743	0.705	0.603	0.536	0.719	0.619

Table 3. continued

log g	T_{eff}	u	v	b	y	U	B	V
5.0	17000	0.064	-0.111	-0.091	-0.069	-0.004	-0.104	-0.071
		0.478	0.720	0.679	0.578	0.532	0.698	0.593
5.0	18000	0.055	-0.109	-0.089	-0.067	-0.009	-0.102	-0.073
		0.478	0.702	0.660	0.562	0.527	0.681	0.582
5.0	19000	0.045	-0.105	-0.086	-0.067	-0.015	-0.101	-0.072
		0.482	0.684	0.644	0.551	0.527	0.666	0.569
5.0	20000	0.036	-0.104	-0.087	-0.066	-0.017	-0.098	-0.071
		0.487	0.671	0.633	0.540	0.522	0.651	0.558
5.0	21000	0.028	-0.105	-0.087	-0.065	-0.022	-0.098	-0.072
		0.491	0.663	0.624	0.530	0.523	0.642	0.550
5.0	22000	0.016	-0.105	-0.084	-0.068	-0.030	-0.101	-0.071
		0.503	0.655	0.611	0.527	0.531	0.636	0.542
5.0	23000	0.002	-0.108	-0.090	-0.075	-0.038	-0.101	-0.079
		0.519	0.649	0.610	0.530	0.537	0.628	0.545
5.0	24000	-0.012	-0.115	-0.094	-0.078	-0.048	-0.108	-0.084
		0.534	0.649	0.606	0.529	0.547	0.629	0.546
5.0	25000	-0.029	-0.116	-0.103	-0.084	-0.062	-0.113	-0.089
		0.552	0.641	0.610	0.530	0.562	0.627	0.547
5.0	26000	-0.043	-0.122	-0.108	-0.092	-0.071	-0.116	-0.095
		0.564	0.640	0.607	0.534	0.568	0.621	0.547
5.0	27000	-0.055	-0.122	-0.112	-0.098	-0.081	-0.118	-0.102
		0.573	0.631	0.603	0.536	0.576	0.617	0.551
5.0	28000	-0.064	-0.124	-0.114	-0.103	-0.087	-0.120	-0.105
		0.579	0.627	0.599	0.536	0.578	0.613	0.548
5.0	29000	-0.068	-0.123	-0.116	-0.104	-0.089	-0.122	-0.108
		0.577	0.619	0.594	0.533	0.575	0.609	0.547
5.0	30000	-0.070	-0.125	-0.115	-0.107	-0.092	-0.126	-0.109
		0.575	0.621	0.588	0.533	0.576	0.612	0.545
5.0	31000	-0.076	-0.129	-0.120	-0.112	-0.096	-0.126	-0.112
		0.577	0.620	0.587	0.535	0.576	0.605	0.543
5.0	32000	-0.079	-0.131	-0.124	-0.114	-0.098	-0.129	-0.111
		0.572	0.616	0.585	0.531	0.572	0.603	0.535
5.0	33000	-0.084	-0.135	-0.130	-0.115	-0.100	-0.133	-0.117
		0.570	0.610	0.583	0.524	0.566	0.599	0.536
5.0	34000	-0.091	-0.143	-0.134	-0.118	-0.106	-0.137	-0.119
		0.568	0.611	0.577	0.520	0.564	0.593	0.530
5.0	35000	-0.100	-0.147	-0.139	-0.122	-0.114	-0.145	-0.125
		0.568	0.604	0.572	0.515	0.565	0.592	0.528
5.0	37500	-0.124	-0.161	-0.151	-0.135	-0.134	-0.159	-0.137
		0.565	0.592	0.556	0.504	0.559	0.580	0.515
5.0	40000	-0.128	-0.161	-0.147	-0.136	-0.137	-0.157	-0.138
		0.542	0.568	0.526	0.480	0.538	0.554	0.492
5.0	42500	-0.131	-0.155	-0.144	-0.134	-0.140	-0.156	-0.138
		0.535	0.550	0.510	0.467	0.532	0.542	0.481
5.0	45000	-0.137	-0.162	-0.149	-0.141	-0.145	-0.158	-0.142
		0.537	0.554	0.513	0.472	0.533	0.541	0.481
5.0	47500	-0.145	-0.170	-0.155	-0.146	-0.154	-0.164	-0.145
		0.544	0.562	0.517	0.474	0.542	0.544	0.481
5.0	50000	-0.152	-0.174	-0.162	-0.151	-0.161	-0.170	-0.154
		0.550	0.565	0.523	0.478	0.549	0.550	0.490

Table 4. Coefficients for the approximation to the linear limb-darkening given by Eq. (7)

Band	a_0	a_1	a_2	a_3
u	12.918	-5.462	0.005	0.591
v	5.863	-1.917	-0.024	0.157
b	8.687	-3.339	-0.015	0.331
y	9.257	-3.729	-0.015	0.388
U	10.068	-4.054	-0.017	0.422
B	6.365	-2.195	-0.023	0.193
V	8.229	-3.217	-0.018	0.326

Table 5. The position of the gap for the several gravities

log g	T_{eff}
0.0	5250
0.5	5500
1.0	5750
1.5	6000
2.0	6250
2.5	6500
3.0	6750
3.5	7000
4.0	7250
4.5	7500
5.0	8000