Accurate Radial Velocities of 2086 Nearby FGKM Stars and 132 Standards¹

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ABSTRACT

We present radial velocities with an accuracy of $0.1~\rm km~s^{-1}$ for 2086 stars of spectral type F,G,K, and M, based on ~29000 spectra taken with the Keck I telescope. We also present 132 FGKM standard stars, all of which exhibit constant radial velocity within $0.01~\rm km~s^{-1}$ (RMS) for at least 10 years. All velocities are measured relative to the solar system barycenter and are placed on the velocity scale of Nidever et al. (2002). Comparison of our absolute radial velocities with IAU standards shows agreement within $\sim 0.1~\rm km~s^{-1}$. Small zero-point differences from the different spectrometers are well characterized. The quoted radial velocities contain no corrections for convective blueshift or gravitational redshift. The radial velocities presented here serve as standards for all-sky surveys such as Gaia and RAVE.

¹ Based on observations obtained at the W.M. Keck Observatory, which is operated jointly by the University of California and the California Institute of Technology, and on observations obtained at the Lick Observatory which is operated by the University of California.

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1. Introduction

Here we establish 132 absolute radial velocity standard stars, and provide the velocities for 2086 additional stars. By "absolute" radial velocities, we mean "barycentric" radial velocities, referring to the star's velocity relative to the center of mass of the solar system, or the barycenter. We provide these velocities with uncertainties less than 0.1 km s⁻¹.

Radial velocity standard stars serve two notable purposes: allowing for comparison between different instruments or observatories, and establishing absolute velocity zero points for use in calibrations. Different surveys of stars have their own scientific objectives, but all need accurate wavelength scales to ensure the quality of spectroscopic data.

Radial velocities are used for more than just calibrations, however. Our radial velocities also serve as a tool for studying the kinematics of the galaxy. When combined with the proper motion and positions detected using the upcoming Gaia space telescope, one can create a vision of the three dimensional movement of the stars around us. Determining the velocity vectors of various stars allows for the study of galactic structure and of fundamental stellar properties.

Another area of interest is the search for possible long period binary stars. By making available the velocities of so many stars at this time, we enable future observers to compare their velocities and perhaps discover hidden companion stars.

2. Spectroscopic Observations

We obtained the spectra using the HIRES echelle spectrometer on the 10-m Keck 1 telescope. The standard stars observed have precise relative radial velocities computed using the iodine cell/planet hunting technique, which confirmed the stability of their velocities over 10 years. However, to calculate our own absolute barycentric velocities, we use two template spectra. For the FGK stars, we use a spectrum of Vesta as a solar proxy. For M dwarfs we use a spectrum of HIP 80824 (spectral type M3.5). For both of these templates, we used only certain sections of the spectrum: those unpolluted by telluric lines. We used an A star to accurately determine the placement of these telluric lines, and chose four segments that were free of them, as detailed in Section 4.

For our standard stars, we required that at least 3 spectra were obtained over a period of 10 years. This guaranteed that the velocities obtained were indeed constant over a long timescale.

3. Barycentric Radial Velocities

Establishing and maintaining a single, well-defined velocity scale, including zero-point accuracy and precision, is incredibly important in making radial velocities useful. They must be comparable to and preferably quite close to other well–known scales. In particular, our velocities are tied closely to those from Geneva, Harvard-Smithsonian, and the California Planet Survey¹.

We based our barycentric velocity measurements on the scale of Nidever et al. (2002) Thus, we list the velocities as if measured from the Solar System barycenter, but with the effects of the solar gravitational potential well removed. However, we do not take into account the gravitational redshift nor convective blueshift of the star. The effects of redshift vary with stellar masses and radii. Uncertainties in these quantities hinder the accurate removal of the effects of gravitational redshift. Convective blueshift depends on spectral type Dravins (1999), and we do not do the involved calculations necessary to account for it here.

4. Doppler Method

We use the well-known Doppler method to determine our absolute radial velocities. We follow the example of Griffin et al. (2002) in using telluric lines to determine a zero point, which is gone into more detail in Section 5.

We used a spline to transform the spectra to a logarithmic wavelength scale. Binning the spectra linearly with $\ln \lambda$ enabled us to detect any Doppler shift as a uniform linear shift, with a shift of 1 pixel representing a Doppler shift of 1.30 km s⁻¹. To account for fractional pixel shifts, we oversampled a subarray around the minimum of each chi squared function and fit a spline to the data.

We used the solar spectrum as a template with which to compare our stellar spectra. Because the A and B bands, at 7594-7621 Å and 6867-6884 Å respectively, were present in all of our spectra, we first used the A5 star HR 3662 to determine which sections of the spectra were unpolluted by these telluric lines. We selected portions of the spectra rich in stellar absorption lines but unaffected by telluric lines, and ran these segments against the solar spectrum using a chi squared minimization. This provides us with the Doppler shift of the stellar absorption lines. We applied a barycentric correction and ended up with a velocity for each spectrum.

¹http://exoplanets.org

We did not account for gravitational redshift or convective blueshift. Both of these errors are about a few tenths of a kilometer per second, and probably opposite in sign. Our uncertainty is then for internal precision, not actual velocity.

5. Velocity Zero-Point

The velocities calculated were systematically off until we applied a correction the correct zero-point. We first needed to determine the barycentric corrections for our original template spectra. We calculated this by taking a sample of standard stars and comparing them to the Nidever et al. (2002) velocities. By plotting the differences in velocities (present minus Nidever) against the Nidever velocities, we were able to remove any systematic error and force our absolute velocities onto the scale of Nidever et al. (2002).

To further improve our zero-point, we needed to account for small shifts of the CCD over time. This time, we used the segments of our spectra that did contain telluric lines, and again utilized χ^2 minimization method to find the displacement of the telluric lines.

We subtracted this displacement from the apparent shift of the stellar lines in order to find the true Doppler shift. Thus, we found the radial velocity as determined by the Doppler shift of stellar absorption lines. We averaged the velocities given by each of the segments of the spectra and give this as the present day value of the stars absolute radial velocity.

6. Comparison of Present Velocities with Standard Stars

The velocities of Nidever et al. (2002)'s varied from those of Udry et al. (1999a) and Stefanik et al. (1999) by less than $0.1 \mathrm{km~s^{-1}}$, and our own velocities' differences from these previous standard measurements are within a similar margin.

Our velocities differ from the standard stars of Udry et al. (1999a) by 0.072 km s⁻¹ (RMS) for the 30 standard stars in common, with the zero–point differing by: $\langle V_{\rm present} - V_{\rm Udry} \rangle = +0.063 \text{ km s}^{-1}$. They differ from the standard stars of Stefanik et al. (1999) by 0.13 km s⁻¹ (RMS) for the 25 standard stars in common, and the zero–point changes by: $\langle V_{\rm present} - V_{\rm Stefanik} \rangle = +0.15 \text{ km s}^{-1}$. We also compare our measurements of M dwarves to those of Marcy et al. (1987). We find that our velocities differ by 0.26 km s⁻¹ (RMS) and our zero–points by: $\langle V_{\rm present} - V_{\rm Marcy} \rangle = 0.005 \text{ km s}^{-1}$ for the 17 stars in common.

These new velocities are thus congruent with the best known standard stars to within $0.1~\rm km~s^{-1}$, in both precision and zero-point.

7. Uncertainty Estimates

We used two methods to estimate uncertainties for our 132 standard stars: the standard deviation of the mean (the internal RMS scatter of points) and comparison with the published values in Nidever et al. (2002). We considered the smallest viable uncertainty to be 0.03 km s⁻¹, as this was the uncertainty of the velocities given in Nidever et al. (2002). The biggest of these three uncertainty values is listed in Tables 1 and 2 as a conservative estimate of the uncertainty for each radial velocity.

We display the consistency of our radial velocities with those of Nidever et al. (2002) in figures 5 and 6. The outliers with seemingly inconsistent radial velocities (a difference greater than 0.5 km s^{-1}) are in fact easily explained—they are confirmed binary systems. This exemplifies the usefulness of our results in the search for long term binary stars.

8. Final Radial Velocities and Description of Tables

The barycentric radial velocities for our 132 standard stars are reported in Tables 1 and 2. In Table 1, primary and alternate star names are given in the first three columns, and the spectral type in column 4. Columns 5, 6, and 7 give information regarding the period of observation, and columns 8 and 9 give the Nidever et al. (2002) velocities along with our own present day ones. In the next two columns we list the standard deviation of our calculated velocities, and the number of spectra used. We report the final velocity as an average of the Nidever et al. (2002) and present velocities. We consider this appropriate as each set of velocities is valid, and was determined using different spectral techniques. The uncertainty recorded is the largest of three numbers: the difference between our velocity and Nidever's, the uncertainty in the mean, or 0.03 km s⁻¹, which we called our cut-off point to prevent artificially low uncertainties. Table 2 lists the same standard stars, but in a format more suitable for observing. We give the primary name, position in RA and DEC, magnitude, spectral type, final absolute radial velocity, and uncertainty.

Table 3 reports all 2086 stars (including the standards). The primary star name is given in column 1, and the template type in column 2. V represents the Vesta spectrum (solar), and M the M-dwarf spectrum. Next we give the average Julian date of our observations, along with the number of days between the first and last observation. We then give the barycentric radial velocity, number of observations, and standard deviation of our measurements.

9. Conclusion

We have provided barycentric radial velocities with an internal precision of $0.1 \,\mathrm{km\ s^{-1}}$ for 2086 stars, of which 132 are standards. The error estimates come from both the internal errors found from our measurements and from the comparison with the standard velocities of Stefanik et al. (1999) and (Udry et al. 1999a). Our absolute radial velocities were forced to share the velocity zero–point defined by Nidever et al. (2002). Our velocity scale differs by only 0.063 km s⁻¹ from that of Udry et al. (1999a), 0.15 km s⁻¹ from that of Stefanik et al. (1999), and 0.007 km s⁻¹ from that of Marcy et al. (1987), which adds confidence to the zero points of all three sets of velocities.

These velocities will be important in helping the upcoming Gaia space telescope in their calibrations, along with supporting any work examining the kinematics of the galaxy. They will act as a stepping stone to allow even more distant stars to be measured, as well as assisting in the search for long-term binary stars.

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Table 1. Radial Velocities of Standard Stars

Star Name			Spectral Type	JD First (-2440000)	JD Last (-2440000)	Duration (years)	Nidever RV ^a (km s^{-1})	Present RV ^b (km s^{-1})	$\frac{\sigma_{\rm RV}^{\rm c}}{({\rm km~s^{-1}})}$	$^{\mathrm{p}}$ Ops _q	Final RV ^e (km s^{-1})	$ m Unc^f$ $ m (km~s^{-1})$
HD 166	HIP 544	GJ 5	K0	0969	15252	23	-6.537	-6.350	0.118	12	-6.444	0.110
HD 283	_	GJ 9003	K0	10367	14457	11	-43.102	-43.247	0.077	7	-43.174	0.147
HD 3651		GJ 27	K0	7048	15251	22	-32.961	-32.919	0.108	63	-32.940	0.059
	HIP 3206	GJ 28	K2	10462	15252	13	-63.202	-63.179	0.119	62	-63.191	0.030
		GJ 31.4	K2	10367	15172	13	9.460	9.393	0.104	49	9.426	0.070
HD 4628		GJ 33	K2	7047	15252	22	-10.230	-10.228	0.121	79	-10.229	0.041
HD 8389	HIP 6456	GJ 57.1	$_{\mathrm{K0}}$	10367	15016	13	34.647	34.606	0.110	58	34.626	0.031
$^{ m HD}$ 9562		GJ 59.2	G_2	10367	15230	13	-14.989	-14.990	0.132	2	-14.990	0.030
10002		GJ 62	K0	10463	14431	11	11.562	11.494	0.045	5	11.528	0.059
HD 10145		GJ 9059	G5	10462	15110	13	17.838	17.938	0.158	4	17.888	0.163
HD 10476		GJ 68	K1	7048	15172	22	-33.647	-33.650	0.103	137	-33.648	0.030
10 HD 10		GJ 71	G8	7047	15232	22	-16.619	-16.640	0.121	466	-16.629	0.030
HD 12051		GJ 82.1	G5	10419	15257	13	-35.102	-35.163	0.146	117	-35.133	0.066
HD 13043		GJ 9073	G_2	10367	15232	13	-39.333	-39.326	0.102	122	-39.329	0.030
HD 14412		GJ 95	G5	10366	15232	13	7.383	7.297	0.129	73	7.340	0.057
HD 16141		GJ 9085	G5	10366	15230	13	-50.971	-50.909	0.109	18	-50.940	0.038
HD 18803		GJ 120.2	G8	10367	15135	13	9.878	9.847	0.092	69	9.862	0.030
$\overline{\mathrm{HD}}$ 20165		GJ 9112	K1	10366	15173	13	-16.676	-16.667	0.164	28	-16.672	0.030
HD 20619		GJ 135	G1.5	10366	15135	13	22.689	22.637	0.130	40	22.663	0.030
HD 22484		GJ 147	F9	7049	15261	22	28.080	28.253	0.073	3	28.167	0.173
HD 22879		GJ 147.1	F9	10366	15173	13	120.356	120.325	0.107	31	120.340	0.049
HD 23439		GJ 1064	K1	10463	15134	13	50.704	50.572	0.119	25	50.638	0.085
		GJ 3254	G8	10463	15172	13	19.278	19.274	0.083	9	19.276	0.030
		GJ 15	$_{ m K0}$	10463	15257	13	38.809	38.736	0.136	31	38.772	0.053
		GJ 165.2	K3	10420	14456	11	56.573	56.402	0.112	7	56.487	0.109
		GJ 166A	K1	7049	15261	22	-42.331	-42.344	0.118	83	-42.337	0.030
HD 28187	HIP 20638	GJ-	G3	10366	14024	10	18.321	18.324	0.137	3	18.322	0.046
HD 31253		GJ-	ъ 8	10839	14807	11	12.184	12.285	0.167	14	12.235	0.030
$^{ m HD}\ 31560$		GJ 2037	K3	10366	14780	12	6.203	6.208	0.112	∞	6.205	0.058
HD 32147		GJ 183	K3	7047	15286	23	21.552	21.536	0.115	126	21.544	0.030
HD 34721	• •	GJ 198	G0	10366	15081	13	40.448	40.503	0.130	32	40.475	0.047
HD 34411		GJ 197	G0	7049	15322	23	66.511	66.482	0.135	88	66.497	0.030
1 HD 2 36003	HIP 25623	GJ 204	K5	10367	15109	13	-55.527	-55.588	0.111	69	-55.558	0.030
$\overline{\text{HD}}$ 36395	HIP 25878	GJ 205	M1.5	10420	15257	13	8.665	8.687	0.169	13	8.676	0.039

Table 1—Continued

1	Spectral	JD First (-2440000)	JD Last (-2440000)	Duration (years)	Nidever RV ^a (km s ⁻¹)	Present RV ^b (km s ⁻¹)	$\frac{\sigma_{\rm RV}^{\rm c}}{({\rm km~s}^{-1})}$	psqO #	Fir (kr	$\mathrm{Unc}^{\mathrm{f}}$ (km s ⁻¹)
208 K7 209 G4		10420 10420	15257 15230	13 13	22.046 -23.076	22.333 -23.032	0.273 0.094	9 8 2	22.190 -23.054	$0.208 \\ 0.097$
		10419	15262	13	31.543	31.471	0.093	92	31.507	0.043
		10366	14865	12	0.333	0.307	0.085	14	0.320	0.064
		10420	15199	13	4.724	4.753	0.115	14	4.738	0.030
		10366	15322	14	-53.501	-53.499	0.127	164	-53.500	0.033
		10366	15199	13	-3.856	-3.863	0.119	117	-3.859	0.030
		7049	15343	23	-23.933	-23.881	0.101	33	-23.907	0.092
		10784	15173	12	22.914	22.969	0.165	24	22.942	0.120
		10462	15134	13	-21.624	-21.688	0.128	33	-21.656	0.032
		7049	15230	22	24.604	24.566	0.115	92	24.585	0.030
		7049	15290	23	18.216	18.203	0.095	20	18.210	0.030
		10419	15345	13	14.832	14.760	0.114	61	14.796	0.061
		10419	15345	13	-44.318	-44.225	0.091	32	-44.272	0.195
		10462	14130	10	17.286	17.493	0.148	33	17.389	0.127 - 6
		10462	15290	13	-12.088	-12.159	0.102	29	-12.123	0.060
		10462	15199	13	-12.225	-12.317	0.104	23	-12.271	0.061
		0969	15351	23	4.900	4.862	0.128	32	4.881	0.030
		7195	15017	21	-25.729	-25.692	0.118	18	-25.710	0.063
		10463	14811	12	82.497	82.430	0.070	4	82.463	0.099
		10463	14131	10	-22.045	-21.987	0.187	3	-22.016	0.062
		10419	15351	14	-7.551	-7.563	0.125	94	-7.557	0.040
		8020	15198	20	12.420	12.486	0.104	30	12.453	0.064
		10419	15352	14	26.934	26.902	0.147	70	26.918	0.122
		10462	14642	11	29.940	29.867	0.090	21	29.903	0.030
		6929	15343	23	-84.689	-84.678	0.136	149	-84.683	0.030
		10419	14928	12	12.769	12.805	0.170	ιO	12.787	0.066
		8649	15351	18	-16.376	-15.942	0.107	24	-16.159	0.034
		10419	15352	14	39.794	39.783	0.132	99	39.789	0.035
		10463	15352	13	-1.654	-1.758	0.122	151	-1.706	0.086
		10462	15352	13	13.330	13.294	0.128	70	13.312	0.030
GJ 429A K0		10419	15320	13	4.190	4.151	0.134	109	4.171	0.030
		10419	15351	14	-4.854	-4.867	0.118	39	-4.860	0.030
		10419	15352	14	-21.959	-21.970	0.111	54	-21.964	0.030

Table 1—Continued

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$ m Unc^f$ $ m (km~s^{-1})$	0.161	0.056	0.077	0.118	0.030	0.030	0.046	0.043	0.030	0.060	0.030	0.149	0.094	0.036	0.076	0.030	0.077	0.030	0.070	0.112	0.046	0.030	0.030	0.030	0.140	0.041	0.291	0.069	0.104	0.047	0.041	0.158	0.031	0.067
Final RV $^{\rm e}$ (km s $^{-1}$)	96.812	14.992	-2.472	-7.336	2.563	28.411	27.383	14.531	15.778	-37.628	-57.442	1.484	-12.331	-9.856	-14.789	-6.052	-26.417	-67.105	-66.390	-14.014	11.756	9.473	-31.349	-46.945	34.095	-78.559	-23.118	-51.556	-28.720	-9.499	-94.955	-110.416	20.236	32.621
psqO #	3	40	120	4	7	37	82	25	20	21	45	v	12	26	32	93	3	123	179	17	114	39	35	88	34	40	3	06	73	37	3	75	100	28
$\frac{\sigma_{\rm RV}^{\rm c}}{({\rm km~s^{-1}})}$	0.156	0.110	0.121	0.069	0.069	0.151	0.117	0.107	0.110	0.089	0.105	0.107	0.117	0.117	0.104	0.127	0.018	0.131	0.126	0.116	0.124	0.131	0.121	0.122	0.118	0.119	0.065	0.121	0.109	0.112	0.124	0.132	0.098	0.160
Present RV ^b (km s^{-1})	96.718	14.963	-2.516	-7.256	2.578	28.401	27.351	14.506	15.748	-37.450	-57.440	1.558	-12.285	-9.906	-14.806	-6.067	-26.460	-67.108	-66.363	-13.961	11.763	9.470	-31.341	-46.959	34.044	-78.572	-23.037	-51.506	-28.660	-9.483	-94.982	-110.326	20.224	32.571
Nidever RV ^a (km s^{-1})	96.902	15.021	-2.428	-7.415	2.548	28.421	27.416	14.556	15.809	-37.806	-57.444	1.409	-12.377	-9.806	-14.771	-6.037	-26.374	-67.101	-66.416	-14.067	11.748	9.475	-31.357	-46.930	34.146	-78.546	-23.199	-51.605	-28.779	-9.515	-94.929	-110.506	20.248	32.671
Duration (years)	12	13	13	13	11	13	13	12	13	13	13	12	10	14	13	14	10	13	23	10	14	13	13	13	14	23	13	13	12	12	10	22	14	23
JD Last (-2440000)	14808	15315	15231	15174	14549	15315	15320	14964	15257	15315	15285	15232	13985	15315	15345	15256	13935	15261	15315	14295	15352	15285	15343	15351	15322	15351	15081	15322	15016	15043	13935	14930	15321	15352
JD First (-2440000)	10462	10462	10463	10463	10463	10463	10463	10546	10546	10546	10546	10832	10277	10276	10546	10277	10276	10546	0969	10547	10284	10546	10602	10547	10276	6958	10276	10547	10604	10605	10276	6958	10276	6929
Spectral Type	99	K2	K0	85	G8	G5	G5	M0.5	M1.5	K4	K2	F8	G5	K1	K1	K2	K3	K3	G0	G5	G2	K1	K_5	G8	K_5	G0	K_5	G5	M3.5	M1	K1	M4	K0	M1
	GJ 3679	GJ 1153	GJ 3706	GJ 3715	GJ 3752	GJ~3781A	GJ~3782B	GJ 514	GJ 526	GJ 529	GJ 535	GJ -	GJ 541.1	GJ 544	GJ 31.4	GJ 1191	GJ 1192	GJ 591	GJ 598	GJ-	GJ 616	GJ 637.1	GJ 638	GJ 54.2	GJ 653	GJ 672	GJ 673	GJ 56.3	GJ 687	GJ 686	GJ 9605	GJ 699	GJ 700.2	GJ 701
	HIP 56830	HIP 58451	HIP 59280	HIP 59572	HIP 62607	HIP 65352	HIP 65355	HIP 65859	HIP 67155	HIP 67487	HIP 68337	HIP 68593	HIP 69881	HIP 70016	HIP 73005	HIP 75253	HIP 75266	HIP 76375	HIP 77257	HIP 78955	HIP 79672	HIP 81813	HIP 82003	HIP 83389	HIP 83591	HIP 84862	HIP 85295	HIP 85810	HIP 86162	HIP 86287	HIP 87089	HIP 87937	HIP 88348	HIP 88574
Star Name	$HD\ 101259$	HD 104067	HD 105631	$HD\ 106156$	HD 111515	HD 116442	HD 116443	HD -	HD 119850	HD 120467	HD 122120	HD 122652	HD 125184	HD 125455	HD 132142	HD 136713	HD 136834	HD 139323	HD 141004	HD 144585	HD 146233	HD 151541	HD 151288	HD 154345	HD 154363	HD 157214	HD 157881	HD 159222	HD -	HD -	HD 161848	HD -	HD 164922	$HD\ 165222$

Table 1—Continued

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$\mathrm{Unc^f}$ $\mathrm{(km\ s^{-1})}$	0.054	0.031	0.065	0.030	0.038	0.031	0.070	0.046	0.030	0.030	0.082	0.038	0.054	0.065	0.030	0.070	0.086	0.030	0.116	0.210	0.096	0.124	0.060	0.124	0.030	0.038	0.047	0.176	0.138	0.041
Final RV $^{\rm e}$ (km s $^{-1}$)	-19.465	-54.776	-43.137	37.095	-45.630	19.674	-6.825	-21.485	-100.289	-20.619	-40.074	-2.535	-49.289	-41.930	-35.402	-24.697	-17.144	-27.448	-84.103	-16.154	1.241	-27.255	16.461	-12.738	-37.825	9.967	33.984	-12.625	-71.084	-24.005
# Opsq	42	44	13	43	31	41	က	55	61	66	20	30	28	46	160	41	19	39	20	36	63	24	49	က	31	46	41	4	52	3
$\frac{\sigma_{\rm RV}^{\rm c}}{({\rm km~s^{-1}})}$	0.107	0.109	0.161	0.121	0.093	0.112	0.062	0.134	0.126	0.138	0.122	0.155	0.119	0.115	0.110	0.116	0.133	0.104	0.103	0.194	0.125	0.156	0.105	0.100	0.119	0.108	0.112	0.327	0.169	0.037
Present RV ^b (km s^{-1})	-19.512	-54.801	-43.142	37.087	-45.658	19.650	-6.856	-21.462	-100.285	-20.626	-40.039	-2.543	-49.291	-41.873	-35.395	-24.692	-17.127	-27.468	-84.021	-16.049	1.192	-27.194	16.502	-12.800	-37.846	9.943	33.966	-12.537	-71.022	-24.025
Nidever RV ^a (km s^{-1})	-19.418	-54.752	-43.131	37.103	-45.602	19.698	-6.793	-21.508	-100.292	-20.611	-40.109	-2.527	-49.286	-41.987	-35.409	-24.702	-17.161	-27.427	-84.186	-16.259	1.291	-27.317	16.420	-12.676	-37.804	9.990	34.001	-12.713	-71.147	-23.985
Duration (years)	23	13	17	13	12	14	10	12	14	14	23	13	13	14	14	21	12	13	13	10	12	11	13	11	13	13	13	13	22	12
JD Last (-2440000)	15261	15043	15322	15136	14987	15352	14024	15319	15319	15319	15319	15016	15111	15318	15318	15015	14984	15111	15084	15136	14809	14809	15135	15019	15198	15111	15173	15017	15199	14839
JD First (-2440000)	6929	10276	9201	10284	10548	10284	10284	11005	10367	10277	0969	10276	10277	10277	10366	7374	10602	10366	10366	11342	10276	10666	10366	11006	10367	10462	10367	10277	7047	10367
Spectral Type	K2	K3	K1	35	K0	85 C	G5	85 G	85 C	G G	85 C	K1	K1	85 85	G5	M1.5	M0.5	K2	K5	F6	К0	M1.5	K5	ъ 8	K3	K2	K2	F8	M2	G7
	GJ 706	GJ 715	GJ716	GJ 722	GJ 725.1	GJ 736	GJ 740.1	GJ758	GJ 759	GJ 4126	GJ 771A	GJ 778	GJ 783.2	GJ 796	GJ 797A	GJ 806	GJ 809	GJ 825.3	GJ 830	GJ 849.1	GJ -	GJ 880	GJ 884	GJ -	GJ 4313	GJ 4320	GJ 894.5	GJ 9829	GJ 908	GJ 4366
	HIP 88972	HIP 90656	HIP 90790	HIP 91438	HIP 91949		HIP 93518	HIP 95319	HIP 95447	HIP 97767	HIP 98036	HIP 98792	HIP 99452	HIP 101997	HIP 102040	HIP 102401	HIP 103096	HIP 105152	HIP 106147	HIP 109422	HIP 112870	HIP 113296	HIP 113576	HIP 113896	HIP 114322	HIP 114886	HIP 115445	HIP 116106	HIP 117473	HIP 117526
Star Name	HD 166620	HD 170493	HD 170657	HD 172051	HD 173701	HD 175541	176982	HD 182488	HD 182572	HD 187923	HD 188512	HD 190404	HD 191785	$^{ m HD}$ 196761	HD 197076	HD -	HD 199305	HD 202751	HD 204587	HD 210302	HD 216259	$^{+}$ HD 216899	HD 217357	HD 217877	HD 218566	HD 219538	HD 220339	HD 221356	HD -	HD 223498

^aRadial velocities from Nidever et al. (2002)

^bRadial velocities from the measurements made here.

^cStandard deviation of all RVs measured here for this star.

 $^{^{\}rm d}{\rm Number}$ of observations (spectra) used for this star.

^eUnweighted average of the Nidever RV and the RV measured here. This is the recommended RV for use as a standard star.

^fUncertainty in the Final RV (see text).

Table 2. Standard Star Radial Velocities with RA and DEC

)	v mag	Spectral Type	$(\mathrm{km}\ \mathrm{s}^{-1})$	0 nc (km s^{-1})
HD 166	0 6 36.8	29 1 17.4	6.13	К0	-6.444	0.110
HD 283	0732.5	-23 49 7.4	8.70	К0	-43.174	0.147
HD~3651	0.3921.8	$21\ 15\ 1.7$	5.80	К0	-32.940	0.059
$HD\ 3765$	$0\ 40\ 49.3$	$40\ 11\ 13.8$	7.36	K2	-63.191	0.030
HD 4256	0.454.9	1477.9	8.03	K2	9.426	0.070
HD 4628	0.4823.0	$5\ 16\ 50.2$	5.75	K2	-10.229	0.041
HD~8389	1232.6	-12 57 57.8	7.84	К0	34.626	0.031
HD 9562	13342.8	-7 1 31.2	5.76	G2	-14.990	0.030
HD 10002	$1\ 37\ 8.6$	-29 23 35.7	8.13	$_{ m K0}$	11.528	0.059
HD 10145	14137.7	665435.8	7.70	G5	17.888	0.163
HD 10476	$1\ 42\ 29.8$	$20\ 16\ 6.6$	5.20	K1	-33.648	0.030
HD 10700	1 44 4.1	-15 56 14.9	3.50	G8	-16.629	0.030
HD 12051	1596.6	33 12 34.8	7.14	Q 52	-35.133	0.066
HD 13043	2 7 34.3	0 -37 2.7	6.87	G2	-39.329	0.030
HD 14412	$2\ 18\ 58.5$	-25 56 44.5	6.34	G5	7.340	0.057
HD 16141	$2\ 35\ 19.9$	-3 33 38.2	6.78	G5	-50.940	0.038
HD 18803	3226.0	26 36 33.3	6.62	85	9.862	0.030
$^{\rm HD}\ 20165$	31447.2	8 58 50.9	7.83	K1	-16.672	0.030
HD 20619	$3\ 19\ 1.9$	-25035.5	7.10	G1.5	22.663	0.030
HD 22484	$3\ 36\ 52.4$	0.246.0	4.28	F9	28.167	0.173
HD 22879	$3\ 40\ 22.1$	-3 13 1.1	6.74	F9	120.340	0.049
$^{\rm HD}$ 23439	$3\ 47\ 2.1$	$41\ 25\ 38.2$	8.18	K1	50.638	0.085
HD 24365	35337.7	$28 \ 8 \ 53.2$	7.87	G8	19.276	0.030
HD 24238	3 55 3.8	$61\ 10\ 0.5$	7.85	К0	38.772	0.053
HD 26794	$4\ 14\ 30.3$	3119.4	8.81	K3	56.487	0.109
HD 26965	$4\ 15\ 16.3$	-7 39 10.3	4.41	K1	-42.337	0.030
$^{+}$ HD 28187	42523.8	$-35\ 40\ 32.0$	7.80	G3	18.322	0.046
$HD\ 31253$	45443.7	$12\ 21\ 7.9$	7.14	F.8	12.235	0.030
$HD\ 31560$	45541.9	$-28\ 33\ 50.1$	8.12	К3	6.205	0.058
HD 32147	5049.0	$-5\ 45\ 13.2$	6.22	K3	21.544	0.030
HD 34721	$5\ 18\ 50.5$	-18 7 48.2	5.96	G0	40.475	0.047
HD 34411	$5\ 19\ 8.5$	40556.6	4.70	G0	66.497	0.030
$^{HD}36003$	52826.1	-3 29 58.4	7.64	K_5	-55.558	0.030
$^{ m HD}$ 36395	$5\ 31\ 27.4$	-3 40 38.0	7.92	M1.5	8.676	0.039

Table 2—Continued

	IVA	DEC	$V_{ m mag}$	Spectral Type	Final RV (km s^{-1})	$\frac{\mathrm{Unc}}{\mathrm{(km \ s^{-1})}}$
HD 245409	5 36 31.0	11 19 40.3	8.89	K7	22.190	0.208
HD 37124	$5\ 37\ 2.5$	204350.8	7.68	G4	-23.054	0.097
HD 38858	54834.9	-4 5 40.7	5.97	G4	31.507	0.043
HD 39881	5563.4	135529.7	09.9	G5	0.320	0.064
HD 42581	$6\ 10\ 34.6$	-215152	8.14	M1	4.738	0.030
HD 42618	$6\ 12\ 0.6$	$6\ 46\ 59.1$	6.87	G4	-53.500	0.033
HD 45184	6 24 43.9	-28 46 48.4	6.37	G2	-3.859	0.030
HD 48682	6 46 44.3	$43\ 34\ 38.7$	5.25	G0	-23.907	0.092
$^{+}$ HD 265866	65449.0	$33\ 16\ 5.4$	68.6	M3	22.942	0.120
HD 51866	7 1 38.6	$48\ 22\ 43.2$	8.00	K3	-21.656	0.032
HD 52711	7 3 30.5	$29\ 20\ 13.5$	5.93	G4	24.585	0.030
GJ 273	72724.5	$5\ 13\ 32.8$	68.6	M3.5	18.210	0.030
HD 65583	8032.1	$29\ 12\ 44.5$	6.94	85	14.796	0.061
HD 67767	8 10 27.2	$25\ 30\ 26.4$	5.73	G7	-44.272	0.195
HD 71334	8 25 49.5	-295550.1	7.82	G4	17.389	0.127
HD 73667	8 39 50.8	$11\ 31\ 21.6$	7.64	K1	-12.123	090.0
HD 84035	94325.7	$42\ 41\ 29.6$	8.12	K5	-12.271	0.061
HD 84737	94835.4	$46\ 1\ 15.6$	5.10	G0.5	4.881	0.030
HD 88230	$10\ 11\ 22.1$	$49\ 27\ 15.3$	6.61	K5	-25.710	0.063
HD 88371	10 11 48.1	$23\ 45\ 18.7$	8.43	G2	82.463	0.099
HD 88725	10 14 8.3	3 9 4.7	7.74	G1	-22.016	0.062
$^{ m HD}$ 89269	$10\ 18\ 51.9$	$44\ 2\ 54.0$	6.65	G5	-7.557	0.040
GJ 388	$10\ 19\ 36.3$	195211.9	9.43	M4.5	12.453	0.064
HD 90156	$10\ 23\ 55.3$	-293843.9	6.95	G2	26.918	0.122
HD 90711	$10\ 28\ 12.1$	-6 36 2.1	7.90	K0	29.903	0.030
HD 95735	11320.2	$35\ 58\ 11.5$	7.49	M2	-84.683	0.030
HD 96700	11754.4	$-30\ 10\ 28.4$	6.54	G2	12.787	0.066
HD 97101	$11\ 11\ 5.2$	$30\ 26\ 45.7$	8.31	K8	-16.159	0.034
HD 97343	$11\ 12\ 1.2$	-26812.0	7.04	89	39.789	0.035
HD 97658	$11\ 14\ 33.2$	$25\ 42\ 37.4$	7.78	K1	-1.706	0.086
HD 98281	$11\ 18\ 22.0$	-5 4 2.3	7.31	85	13.312	0.030
HD 99491	$11\ 26\ 45.3$	3047.2	6.49	K0	4.171	0.030
HD 100180	11 31 44.9	$14\ 21\ 52.2$	6.20	G0	-4.860	0.030
HD 100623	$11\ 34\ 29.5$	-324952.8	5.98	K0	-21.964	0.030

Table 2—Continued

HD 101259 11 39 0.4 -24 43 15.9 6.42 G6 96.812 HD 104667 11 59 10.0 -20 21 136 7.93 K2 14.992 HD 106531 12 9 37.3 40 15 7.4 7.47 K0 -2.472 HD 106156 12 12 57.5 10 2 15.8 7.92 G8 -7.336 HD 116442 13 29 44.8 111 16.9 7.06 G5 2.441 HD 116443 13 29 59.8 10 2 13.8 7.36 G5 2.5431 HD 119850 13 49 44.8 10 2 2 37.8 9.04 M0.5 14.531 HD 110850 13 49 44.8 10 2 2 37.8 8.46 M1.5 15.778 HD 120467 13 49 44.8 -22 6 39.9 8.16 K4 -37.62 HD 120467 13 49 44.8 -22 6 39.9 8.16 K4 -37.62 HD 120467 13 49 44.8 -22 6 39.9 8.16 K4 -37.62 HD 120467 13 49 44.8 -22 6 39.9 8.16 K4 -37.62 HD 12046	Star Name	m RA	DEC	$V_{ m mag}$	Spectral Type	Final RV (km s^{-1})	$_{\rm (km~s^{-1})}^{\rm Unc}$
104067 11 59 10.0 -20 2113.6 7.93 K2 106531 12 9 37.3 40 15 7.4 7.47 K0 106156 12 12 57.5 10 2 15.8 7.92 G8 111515 12 49 44.8 11116.9 8.10 G8 1116442 13 23 30.2 243 24.0 7.06 G5 1116443 13 23 50.8 10 22 37.8 9.04 M0.5 1119850 13 45 43.8 14 53 29.5 8.46 M1.5 1120467 13 49 44.8 -22 6 39.9 8.16 K4 1122120 13 59 19.4 22 5 2 11.1 9.04 M0.5 11220467 13 49 44.8 -22 6 39.9 8.16 K4 1122184 14 18 0.7 -73 2 30.6 6.50 G5 1122184 14 18 0.7 -73 2 30.6 6.50 G5 1122184 15 22 42.5 125 7.1 8.30 K3 1133923 15 22 42.5 125 7.1 8.30 K3 144588 16 42 8.6			-24 43 15.9	6.42	95	96.812	0.161
105631 12 9 37.3 40 15 7.4 7.47 K0 1006156 12 12 57.5 10 2 15.8 7.92 G8 111615 12 49 44.8 1111 16.9 8.10 G8 1116442 13 23 39.2 2 43 24.0 7.06 G5 1116443 13 23 40.8 2 43 31.0 7.36 G5 1116443 13 29 59.8 10 22 37.8 9.04 M0.5 1119850 13 45 43.8 14 53 29.5 8.46 M1.5 119850 13 49 44.8 -22 6 39.9 8.16 M0.5 1200467 13 49 44.8 -22 6 39.9 8.16 M1.5 122052 14 2 31.6 2.2 52 11.1 9.04 M1.5 122040 13 50 19.4 -22 6 39.9 8.16 K4 122120 13 50 19.4 -7 32 32.6 6.50 G5 122545 14 19 34.9 -7 32 32.6 6.50 K3 132645 14 52 11.0 53 40 49.2 7.73 K1 138323 15 22 42.5		$11\ 59\ 10.0$	-20 21 13.6	7.93	K2	14.992	0.056
100156 12 12 57.5 10 2 15.8 7.92 G8 111515 12 49 44.8 1111 16.9 8.10 G8 1116442 13 23 39.2 2 43 24.0 7.06 G5 1116443 13 23 40.8 2 43 31.0 7.36 G5 1116443 13 29 59.8 10 22 37.8 9.04 M0.5 1119850 13 45 43.8 14 53 29.5 8.46 M1.5 120467 13 49 44.8 -22 6 39.9 8.16 M0.5 1202050 13 49 44.8 -22 6 39.9 8.16 M1.5 120467 13 49 44.8 -22 6 39.9 8.16 M1.5 122050 14 2 31.6 22 5 2 11.1 9.04 M0.5 122052 14 2 31.6 31 39 39.1 7.17 F8 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 2 31.6 -7 32 32.6 6.50 G5 138323 15 2 2 42.5 1 25 41.3 K2 144585 16 4 5.6 33 30 32.5 </td <td></td> <td>12937.3</td> <td>40 15 7.4</td> <td>7.47</td> <td>К0</td> <td>-2.472</td> <td>0.077</td>		12937.3	40 15 7.4	7.47	К0	-2.472	0.077
111515 12 49 44.8 111116.9 8.10 G8 1116442 13 23 39.2 2 43 24.0 7.06 G5 1116443 13 23 40.8 2 43 24.0 7.06 G5 514 13 29 59.8 10 22 37.8 9.04 M0.5 514 13 29 59.8 10 22 37.8 9.04 M0.5 119850 13 45 43.8 14 53 29.5 8.46 M1.5 120467 13 49 44.8 -22 6 39.9 8.16 M1.5 122050 13 59 19.4 22 52 11.1 9.04 M0.5 122052 14 2 31.6 31 39 39.1 7.17 F8 122545 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.73 K1 132142 14 18 0.7 -7 32 32.6 6.50 G5 136713 15 22 42.5 12 54.0 7.73 K1 138323 15 22 42.5 12 57.1 4.43 G0 144585 16 42 6.6 72 111.		$12\ 12\ 57.5$	$10\ 2\ 15.8$	7.92	85	-7.336	0.118
116442 13 23 39.2 2 43 24.0 7.06 G5 116443 13 23 40.8 2 43 31.0 7.36 G5 514 13 29 59.8 10 22 37.8 9.04 M0.5 514 13 29 59.8 10 22 37.8 9.04 M0.5 119850 13 45 43.8 14 53 29.5 8.46 M1.5 120467 13 49 44.8 -22 6 39.9 8.16 K4 122050 14 2 31.6 31 39 39.1 7.17 F8 122545 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 18 0.7 -7 32 32.6 6.50 G5 132545 14 19 34.9 -5 9 4.3 7.73 K1 132645 14 25 11.0 53 40 49.2 7.73 K1 138733 15 22 42.5 12 27.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 144585 16 42 5.6 39 49 52.0 </td <td></td> <td></td> <td>$1\ 11\ 16.9$</td> <td>8.10</td> <td>85</td> <td>2.563</td> <td>0.030</td>			$1\ 11\ 16.9$	8.10	85	2.563	0.030
116443 13 23 40.8 2 43 31.0 7.36 G5 514 13 29 59.8 10 22 37.8 9.04 M0.5 514 13 29 59.8 10 22 37.8 9.04 M0.5 119850 13 45 43.8 14 53 29.5 8.46 M1.5 120467 13 49 44.8 -22 639.9 8.16 K4 122120 13 59 19.4 22 52 11.1 9.04 K5 122652 14 2 31.6 31 39 39.1 7.17 F8 122545 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 18 0.7 -7 32 32.6 6.50 G5 138634 15 22 42.5 1.25 40.3 K1 K1 138634 15 22 42.5 1.25 7.1 8.30 K3 144585 16 5 6.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 14623 16 42 38.6 8.2 2 10.0		23	24324.0	7.06	G5	28.411	0.030
514 13 29 59.8 10 22 37.8 9.04 M0.5 119850 13 45 43.8 10 22 37.8 9.04 M0.5 120467 13 49 44.8 -22 6 39.9 8.16 K4 122040 13 59 19.4 22 52 11.1 9.04 K5 122052 14 2 31.6 31 39 39.1 7.17 F8 122545 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.73 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136713 15 22 36.7 -10 39 40.0 7.99 K2 138834 15 22 42.5 1 25 7.1 8.30 K3 138043 15 22 42.5 1 25 7.1 8.30 K3 144585 16 7 3.4 -14 4 16.6 6.32 G5 144585 16 42 6.6 7 21 11.1 4.43 G0 151248 16 45 6.4 33 30 33.2 8.11 K5 152425 17 2 36.4 47 4 54.8			24331.0	7.36	G5	27.383	0.046
119850 13 45 43.8 14 53 29.5 8.46 M1.5 120467 13 49 44.8 -22 6 39.9 8.16 K4 122120 13 59 19.4 22 5 2 11.1 9.04 K5 122552 14 2 31.6 31 39 39.1 7.17 F8 125184 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136834 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 136834 15 22 42.5 1 25 7.1 8.30 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 144585 16 42 6.4 33 30 33.2 8.11 K5 151248 1 6 45 6.4 33 30 33.2 8.11 K5 152436 1 7 2 36.4 47 4			$10\ 22\ 37.8$	9.04	M0.5	14.531	0.043
120467 13 49 44.8 -22 6 39.9 8.16 K4 122120 13 59 19.4 22 52 11.1 9.04 K5 122652 14 2 31.6 31 39 39.1 7.17 F8 125184 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136834 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 1389323 15 22 42.5 1 25 7.1 8.30 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 7 3.4 -14 4 16.6 6.32 G5 146234 16 42 38.6 68 6 7.8 7.75 K1 151248 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 <td></td> <td>13 45 43.8</td> <td>145329.5</td> <td>8.46</td> <td>M1.5</td> <td>15.778</td> <td>0.030</td>		13 45 43.8	145329.5	8.46	M1.5	15.778	0.030
122120 13 59 19.4 22 52 11.1 9.04 K5 122652 14 2 31.6 31 39 39.1 7.17 F8 125184 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136834 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 1389323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 7 3.4 -14 4 16.6 6.32 G5 146238 16 45 6.4 33 30 33.2 8.11 K5 151244 17 2 36.4 47 4 54.8 6.74 G8 15245 17 2 36.4 47 4 54.8 <td></td> <td>13 49 44.8</td> <td>-22 6 39.9</td> <td>8.16</td> <td>K4</td> <td>-37.628</td> <td>090.0</td>		13 49 44.8	-22 6 39.9	8.16	K4	-37.628	090.0
122652 14 2 31.6 31 39 39.1 7.17 F8 125184 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136713 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 7 3.4 -14 4 16.6 6.32 G5 146234 16 42 38.6 68 6 7.8 7.56 K1 15124 16 42 38.6 68 6 7.8 7.73 K5 151243 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8		$13\ 59\ 19.4$	$22\ 52\ 11.1$	9.04	K2	-57.442	0.030
125184 14 18 0.7 -7 32 32.6 6.50 G5 125455 14 19 34.9 -5 9 4.3 7.58 K1 132142 14 55 11.0 53 40 49.2 7.73 K1 136713 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G5 146233 16 42 38.6 68 6 7.8 7.56 K1 151541 16 42 38.6 68 6 7.8 7.75 K5 151543 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 155345 17 2 36.4 47 4 54.8 6.74 G8 155486 17 2 36.4 47 4 54.8		$14\ 2\ 31.6$	$31\ 39\ 39.1$	7.17	F8	1.484	0.149
125455 14 19 34.9 -5 9 4.3 7.58 KI 132142 14 55 11.0 53 40 49.2 7.73 KI 136713 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G5 1462345 16 42 38.6 68 6 7.8 7.56 K1 151541 16 42 38.6 68 6 7.8 7.75 K5 1515428 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 155343 17 2 36.4 47 4 54.8 6.74 G8 155345 17 2 36.4 47 4 54.8 6.74 G8 155486 17 2 36.4 47 4 54.8		14 18 0.7	-7 32 32.6	6.50	G 5	-12.331	0.094
132142 1455 11.0 53 40 49.2 7.73 K1 136713 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G5 151541 16 42 38.6 68 6 7.8 7.56 K1 151542 16 42 38.6 68 6 7.8 7.56 K1 151543 16 42 6.4 33 30 33.2 8.11 K5 1514458 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 155436 17 2 36.4 47 4 54.8 6.74 G8 155437 17 2 36.4 47 4 54.8 6.74 K5 155481 17 2 36.4 47 4 54.8		$14\ 19\ 34.9$	-5 9 4.3	7.58	K1	-9.856	0.036
136713 15 22 36.7 -10 39 40.0 7.99 K2 136834 15 22 42.5 1 25 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G5 151541 16 45 6.4 33 30 33.2 8.11 K5 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 155345 17 2 36.4 47 4 54.8 6.74 G8 157346 17 2 36.4 47 4 54.8 6.74 G8 157214 17 2 36.4 47 4 54.8 6.74 G8 157214 17 2 5 45.2 2 6 41.1 7.54 K5 15728 17 3 2 1.0 34 16 16.1 6.56 G5 686 17 3 2 6.2 68 20 20.9		$14\ 55\ 11.0$	$53\ 40\ 49.2$	7.73	K1	-14.789	0.076
136834 15 22 42.5 125 7.1 8.30 K3 139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G5 151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 155345 17 2 36.4 47 4 54.8 6.74 G8 157346 17 2 3.4 -5 3 59.4 7.73 K5 157214 17 2 0 30.6 32 28 3.9 5.40 G0 157281 17 3 2 1.0 34 16 16.1 6.56 G5 687 17 3 2 6.2 68 20 20.9 9.15 M1 161848 17 4 7 42.1 4 56 22.7			-103940.0	7.99	K2	-6.052	0.030
139323 15 35 56.6 39 49 52.0 7.56 K3 141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G2 151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154345 17 2 36.4 47 4 54.8 6.74 G8 155214 17 2 36.4 47 4 54.8 6.74 G8 157214 17 2 0 30.6 32 28 3.9 5.40 G0 157214 17 20 30.6 32 28 3.9 5.40 G0 157214 17 20 30.6 32 28 3.9 5.40 G0 15728 17 32 1.0 34 16 16.1 6.56 G5 687 17 32 5.0 68 20 20.9 9.15 M1 161848 17 47 42.1 4 56 22.7		$15\ 22\ 42.5$	$1\ 25\ 7.1$	8.30	K3	-26.417	0.077
141004 15 46 26.6 7 21 11.1 4.43 G0 144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 22 10.0 5.50 G2 151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 2 36.4 47 4 54.8 6.74 G8 157214 17 2 0 30.6 32 28 3.9 5.40 G0 157214 17 20 30.6 32 28 3.9 5.40 G0 157214 17 20 30.6 32 28 3.9 5.40 G0 157214 17 20 30.6 32 28 3.9 5.40 G0 157214 17 20 40.2 26 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7			$39\ 49\ 52.0$	7.56	K3	-67.105	0.030
144585 16 7 3.4 -14 4 16.6 6.32 G5 146233 16 15 37.3 -8 2 2 10.0 5.50 G2 151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 2 36.4 47 4 54.8 6.74 G8 1554363 17 2 3.4 -5 3 59.4 7.73 K5 157214 17 20 39.6 32 28 3.9 5.40 G0 157281 17 25 45.2 2 6 41.1 7.54 K5 155222 17 32 1.0 34 16 16.1 6.56 G5 687 17 32 5.0 68 20 20.9 9.15 M3 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 441 36.2 9.54 M4 -1 164922 18 2 30.9 26 18		$15\ 46\ 26.6$	72111.1	4.43	G0	-66.390	0.070
146233 16 15 37.3 -8 2 2 10.0 5.50 G2 151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 30 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 2 36.4 47 4 54.8 6.74 G8 1554363 17 2 3.4 -5 3 59.4 7.73 K5 157214 17 20 39.6 32 28 3.9 5.40 G0 157224 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 687 17 32 5.0 68 20 20.9 9.15 M3.5 688 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 441 36.2 9.54 M4 -1 165222 18 5 7.6 -31 52.8 9.37 M1		1673.4	-14 4 16.6	6.32	G5	-14.014	0.112
151541 16 42 38.6 68 6 7.8 7.56 K1 151288 16 45 6.4 33 0 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 2 3.4 -5 3 59.4 7.73 K5 157214 17 20 39.6 32 28 3.9 5.40 G0 157811 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 687 17 36 25.9 68 20 20.9 9.15 M3.5 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 4 41 36.2 9.54 M4 -1 16522 18 2 30.9 26 18 46.8 6.99 K0		$16\ 15\ 37.3$	-8 22 10.0	5.50	G2	11.756	0.046
151288 16 45 6.4 33 0 33.2 8.11 K5 154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 2 36.4 47 4 54.8 6.74 G8 155214 17 20 39.6 32 28 3.9 5.40 G0 157881 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 687 17 36 25.9 68 20 20.9 9.15 M3.5 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 5 7.6 -31 52.8 9.37 M1		$16\ 42\ 38.6$	88 6 7.8	7.56	K1	9.473	0.030
154345 17 2 36.4 47 4 54.8 6.74 G8 154363 17 5 3.4 -5 3 59.4 7.73 K5 157214 17 20 39.6 32 28 3.9 5.40 G0 157881 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 687 17 36 25.9 68 20 20.9 9.15 M3.5 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 4 41 36.2 9.54 M4 -1 165222 18 5 7.6 -3 152.8 9.37 M1		$16\ 45\ 6.4$	$33\ 30\ 33.2$	8.11	K_5	-31.349	0.030
154363 17 5 3.4 -5 3 59.4 7.73 K5 157214 17 20 39.6 32 28 3.9 5.40 G0 157881 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 687 17 36 25.9 68 20 20.9 9.15 M3.5 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -31 52.8 9.37 M1		$17\ 2\ 36.4$	47 4 54.8	6.74	G8	-46.945	0.030
157214 17 20 39.6 32 28 3.9 5.40 G0 157881 17 25 45.2 2 6 41.1 7.54 K5 159222 17 32 1.0 34 16 16.1 6.56 G5 -6 687 17 36 25.9 68 20 20.9 9.15 M3.5 -686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 -1699 17 57 48.5 4 41 36.2 9.54 M4 -1 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -31 52.8 9.37 M1		1753.4	-5 3 59.4	7.73	K5	34.095	0.140
157881 17 25 45.2 2 6 41.1 7.54 K5 - 159222 17 32 1.0 34 16 16.1 6.56 G5 - 687 17 36 25.9 68 20 20.9 9.15 M3.5 - 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 - 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1		$17\ 20\ 39.6$	32 28 3.9	5.40	G0	-78.559	0.041
159222 17 32 1.0 34 16 16.1 6.56 G5 G5 - G5 687 17 36 25.9 68 20 20.9 9.15 M3.5 - G8 686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 - G9 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1		$17\ 25\ 45.2$	2641.1	7.54	K_5	-23.118	0.291
687 17 36 25.9 68 20 20.9 9.15 M3.5 686 17 37 53.3 18 35 30.2 9.62 M1 61848 17 47 42.1 4 56 22.7 8.91 K1 699 17 57 48.5 4 41 36.2 9.54 M4 61 61 622 18 2 30.9 26 18 46.8 6.99 K0 61 6522 18 5 7.6 -3 1 52.8 9.37 M1	_	$17\ 32\ 1.0$	$34\ 16\ 16.1$	6.56	G5	-51.556	0.069
686 17 37 53.3 18 35 30.2 9.62 M1 161848 17 47 42.1 4 56 22.7 8.91 K1 - 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1		$17\ 36\ 25.9$	$68\ 20\ 20.9$	9.15	M3.5	-28.720	0.104
161848 17 47 42.1 4 56 22.7 8.91 K1 - 699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1		37	$18\ 35\ 30.2$	9.62	M1	-9.499	0.047
699 17 57 48.5 4 41 36.2 9.54 M4 -1 164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1		$17\ 47\ 42.1$	56	8.91	K1	-94.955	0.041
164922 18 2 30.9 26 18 46.8 6.99 K0 165222 18 5 7.6 -3 1 52.8 9.37 M1			44136.2	9.54	M4	-110.416	0.158
165222 18 5 7.6 -3 1 52.8 9.37 M1		$18\ 2\ 30.9$	$26\ 18\ 46.8$	6.99	$_{ m K0}$	20.236	0.031
		18 5 7.6	52	9.37	M1	32.621	0.067

Table 2—Continued

$\frac{\mathrm{Unc}}{(\mathrm{km \ s}^{-1})}$	$0.054 \\ 0.031$	0.065	0.038	0.031	0.070	0.030	0.030	0.082	0.038	0.054	0.065	0.030	0.070	0.086	0.030	0.116	0.210	0.096	0.124	0.060	0.124	0.030	0.038	0.047	0.176	0.138	0.041
Final RV (km s^{-1})	-19.465 -54.776	-43.137 37.095	-45.630	19.674	-6.825	-21.485	-20.619	-40.074	-2.535	-49.289	-41.930	-35.402	-24.697	-17.144	-27.448	-84.103	-16.154	1.241	-27.255	16.461	-12.738	-37.825	9.967	33.984	-12.625	-71.084	-24.005
Spectral Type	K2 K3	K1 G2	К0	85	: :	85 85	CO	G8	K1	K1	G8	G5	M1.5	M0.5	K2	K_5	F6	К0	M1.5	K_5	F8	К3	K2	K2	F8	M2	G7
Vmag	6.37 8.05	6.82	7.52	8.03	8.35	5.16	6.10	3.71	7.28	7.33	6.37	6.45	10.79	8.54	8.23	9.10	4.92	8.30	8.66	7.89	89.9	8.60	8.09	7.80	6.49	8.98	8.41
DEC	38 27 28.0 -1 49 5.2	-18 54 31.7 -21 3 6.7	$43\ 49\ 59.8$	4 15 55.2	0 -42 40.4	115639.9	$11\ 37\ 42.0$	62424.3	$23\ 20\ 26.5$	$16\ 11\ 16.8$	$-23\ 46\ 25.9$	19567.9	$44\ 29\ 56.7$	62915.8	0941.7	$-12\ 30\ 36.3$	-32 32 54.3	135811.9	$16\ 33\ 12.4$	$-22\ 31\ 27.6$	-4 47 41.5	-21538.7	$30\ 40\ 12.7$	-104551.3	-4 5 14.7	2244.4	25237.8
RA	18 9 37.4 18 29 52.4	18 31 19.0 18 38 53.4	$18\ 44\ 35.1$	18 55 40.9	19 2 44.4	$19\ 23\ 34.0$ $19\ 24\ 58.2$	19523.4	$19\ 55\ 18.8$	$20\ 3\ 52.1$	$20\ 11\ 6.1$	$20\ 40\ 11.8$	$20\ 40\ 45.1$	$20\ 45\ 4.1$	205319.8	$21\ 18\ 3.0$	$21\ 30\ 2.8$	$22\ 10\ 8.8$	$22\ 51\ 26.4$	225634.8	$23\ 0\ 16.1$	$23\ 3\ 57.3$	$23\ 9\ 10.7$	$23\ 16\ 18.2$	$23\ 23\ 4.9$	$23\ 31\ 31.5$	$23\ 49\ 12.5$	$23\ 50\ 5.7$
Star Name	HD 166620 HD 170493	HD 170657 HD 172051	HD 173701		HD 176982 HD 183488		HD 187923	HD 188512	HD 190404	HD 191785	$^{ m HD}\ 196761$	197076	GJ 806	$^{ m HD}\ 199305$	HD 202751	HD 204587	HD 210302	HD 216259	HD 216899	HD 217357	HD 217877	HD 218566	HD 219538	HD 220339	HD 221356	GJ 908	$^{+}$ HD 223498

Table 3. Absolute Radial Velocities for 2086 Nearby FGKM Stars

Star Name	${ m Template}^{ m a}$	<jd> -2450000</jd>	ΔT (days)	$\langle \mathrm{RV} \rangle$ $(\mathrm{km~s^{-1}})$	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 10002	>	3945	1193	11.528	ಬ	0.045
HD 100069	>	3778	0	-7.674	П	NaN
HD 10008	>	3971	620	11.689	ಬ	0.026
HD 10013	>	4072	447	-61.891	ಬ	0.057
HD 10015	>	3983	2	2.281	4	0.105
$HD\ 100180$	>	4539	2009	-4.860	40	0.117
$HD\ 100337$	>	4868	1096	-30.480	∞	0.134
HD 100623	>	4376	1950	-21.964	56	0.110
$HD\ 100920$	>	3838	0	14.662	Η	NaN
HD 101165	>	3778	0	18.010	П	NaN
$HD\ 101259$	>	3887	1438	96.812	3	0.156
HD 101348	>	4086	0	11.697	П	NaN
HD 101444	>	3778	0	-1.443	Η	NaN
HD 10145	>	4257	1871	17.888	4	0.158
HD 101501	>	5052	243	-5.464	2	0.105
$HD\ 101675$	>	3897	473	-13.786	4	0.143
HD 101847	>	3758	83	4.100	6	0.133
HD 101904	>	3846	156	-10.364	6	0.139
10195	>	3689	0	10.076	П	NaN
HD 101959	>	4234	1828	-0.912	9	0.058
$HD\ 102070$	>	3838	0	4.121	1	NaN
HD 102071	>	4228	1828	-10.600	9	0.781
HD 102158	>	3576	354	28.124	2	0.174
HD 102195	>	4075	1605	1.930	18	0.153
HD 102283	>	3778	0	-13.092	1	NaN
$HD\ 102329$	>	5042	1157	14.580	14	0.093
HD 102365	>	4497	742	16.911	18	0.070
HD 102444	>	4951	1104	23.056	∞	0.143
HD 102956	>	5181	1164	-26.025	23	0.113
HD 103047	>	5317	22	-4.593	2	0.013
HD 10336	>	3689	0	-13.548	1	NaN
HD 103417	>	3937	473	-9.408	3	0.016
$HD\ 103432$	>	3619	437	6.164	2	0.163
HD 103459	>	4372	1830	19.708	15	0.125

Table 3—Continued

$\operatorname{Template}^{\mathrm{a}}$	<jd></jd>	ΔT	<rv></rv>	Obs	σ_{RV}
	-2450000	(days)	$({\rm km \ s}^{-1})$		(km s^{-1})
>	3692	2	-6.463	က	0.078
>	5333	98	42.203	2	0.170
>	3898	473	-50.050	4	0.156
>	4173	1753	-2.162	3	0.481
>	4947	1041	20.676	11	0.153
>	4103	704	5.048	ಬ	0.079
>	3612	851	31.076	4	0.170
>	4195	1980	48.388	65	0.152
>	4935	1097	-4.577	∞	0.134
>	4597	1914	14.992	40	0.110
>	3929	9	42.969	ಬ	0.127
>	4805	1239	0.105	36	0.109
>	4032	1541	-50.946	6	0.063
>	4005	474	-11.336	12	0.132
>	4827	1355	7.804	17	0.108
>	3898	473	-18.695	4	0.190
>	3635	354	-10.791	3	0.179
>	4493	0	-10.458	1	NaN
>	3898	473	-10.058	4	0.159
>	3966	2139	-33.648	136	0.103
>	5106	704	2.045	15	0.191
>	3565	472	10.027	3	0.142
>	3907	1798	-11.660	∞	0.149
>	4128	1833	-20.102	3	0.277
>	3955	1778	2.162	4	0.200
>	3834	692	31.913	9	0.054
>	3923	1469	-13.199	ಬ	0.080
>	4329	301	35.585	9	0.079
>	4258	0	18.195	1	NaN
>	3546	468	7.460	3	0.097
>	4558	1832	-2.472	120	0.121
>	5336	84	-37.612	3	0.138
>	3778	0	0.474	1	NaN
>	3778	0	-5.379	1	NaN
	Template ^a V V V V V V V V V V V V V V V V V V V	C -245	 <jd><!--2450000</li--> 3695 5333 3898 4173 4947 4103 3612 4195 4697 4935 4805 4827 3823 4329 428 3955 3834 3923 4329 4258 3546 4558 5336 5346 5365 5336 5336 5336 5336 5336 5347 5347 5346 5356 5366 5366</jd>	 <jd></jd> 3695 5333 86 3898 473 4173 4173 4173 4173 4173 4173 4173 4173 4174 4041 4103 4047 41041 4103 4104 4105 4805 1239 4032 1541 4005 474 4827 1355 3898 473 3898 473 3898 473 3898 473 3896 2139 5106 704 3898 472 3896 2139 5106 704 3898 472 3907 1798 4128 1833 3955 1778 3834 769 3824 468 458 458	$\langle JD \rangle$ ΔT $\langle RW \rangle$ -2450000 (days) (km s^{-1}) 3695 2 -6.463 5333 86 42.203 3898 473 -50.050 4173 1753 -2.162 4947 1041 20.676 4103 704 5.048 3612 851 31.076 4195 1980 48.388 4935 1097 -4.577 4597 1914 14.992 3929 6 42.969 4805 1239 0.105 4005 474 -11.336 4827 1355 7.804 3898 473 -10.058 3898 473 -10.058 3898 473 -10.058 3896 2139 -33.648 5106 704 -10.458 3898 473 -10.058 3898 473 -10.458 3896 1778 -10.45

Table 3—Continued

N	E	717	E	\D\$7.	2	
Star Iname	1emplate~	<ju>></ju>	آ ا ا	< RV >	SgO	$\sigma_{\rm RV}$
		-2450000	(days)	(km s ·)		(km s ⁺)
HD 106088	>	4176	208	-14.107	6	0.112
HD 106116	>	3619	437	14.634	2	0.089
$HD\ 106156$	>	4336	1773	-7.336	4	0.069
$HD\ 106270$	>	5016	1156	24.331	14	0.152
$HD\ 106279$	>	4905	1127	-45.801	∞	0.403
$HD\ 106314$	>	5332	84	-4.116	2	0.015
HD 106421	>	3666	989	6.222	∞	0.078
HD 106949	>	3481	0	6.936	1	NaN
10697	>	4723	2139	-45.919	7	0.132
HD 10700	>	4309	1994	-16.629	460	0.121
HD 107087	>	3616	382	8.635	2	0.448
HD 107146	>	4245	1796	1.904	9	0.196
HD 107148	>	4289	1982	25.287	23	0.128
HD 107211	>	3937	473	4.802	က	0.056
10 HD 107 80	>	4045	1871	2.814	13	0.086
HD 10790	>	4564	1993	-25.689	7	0.122
107990	>	4839	1097	-6.554	11	0.071
HD 108189	>	4821	1104	-3.686	7	0.153
$HD\ 10823$	>	4940	916	25.650	19	0.138
$HD\ 108300$	>	3778	0	1.004	1	NaN
$HD\ 108351$	>	3849	732	0.529	4	0.154
HD 108863	>	5003	1160	-27.984	16	0.109
HD 108874	>	4512	1978	-30.069	23	0.101
$HD\ 108916$	>	3778	0	-0.020	1	NaN
HD 108942	>	3937	473	-11.008	က	0.025
$^{ m HD}$ 109159	>	4908	1159	9.348	∞	0.114
109202	>	3780	က	-9.391	7	0.024
HD 109218	>	4894	1159	18.423	∞	0.091
HD 109286	>	3778	0	-7.587	1	NaN
HD 109331	>	3954	354	6.143	2	0.105
109358	>	4278	1952	6.228	20	0.151
$^{\rm HD}\ 109409$	>	3548	441	18.191	က	0.129
109718	>	3898	473	-16.054	4	0.135
HD 109749	>	3820	1952	-13.135	20	0.122

Table 3—Continued

Star Name	Template ^a	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$(\mathrm{km}\ \mathrm{s}^{-1})$
HD 109929	>	3874	1438	-10.706	13	0.170
HD 1100	>	4663	795	22.749	~	0.132
HD 110044	>	4048	473	-6.730	7	0.148
HD 11020	>	3622	784	22.739	33	0.079
HD 110315	>	4476	1828	24.357	39	0.129
HD 110537	>	3477	414	35.585	œ	0.108
HD 110743	>	3927	1	-2.980	3	0.045
HD 110745	>	3779	2	-3.326	2	0.300
HD 110897	>	4667	1801	80.358	36	0.139
HD 111031	>	4751	1922	-20.346	55	0.118
HD 111096	>	3425	0	14.520	П	NaN
HD 111153	>	3432	114	-24.307	12	0.147
HD 11131	>	3753	53	-4.394	12	0.111
HD 111395	>	4283	1639	-8.911	23	0.107
HD 111484a	>	3634	376	-20.797	33	0.157
HD 111484b	>	3413	27	-19.037	4	0.377
HD 111515	>	4249	1148	2.563	7	0.069
HD 111528	>	3778	0	45.463	Н	NaN
HD 111606	>	3778	0	-27.659	2	0.00
HD 111631	M	4456	1920	5.017	17	0.085
HD 11170	>	3798	596	-10.803	9	0.139
HD 111814	>	4157	1410	-2.185	11	0.121
HD 112019	>	3954	353	25.066	7	0.271
HD 112115	>	5175	832	3.973	10	0.101
HD 112257	>	4297	1772	-39.428	9	0.118
HD 112337	>	4250	က	-20.215	က	0.096
HD 112415	>	4060	474	7.530	4	0.045
HD 11271	>	4223	827	9.276	4	0.098
HD 112742	>	5333	98	7.046	2	0.008
HD 112973	>	4818	1097	-34.986	∞	0.146
HD 112988	>	4989	1163	-32.842	13	0.184
HD 113039	>	3778	0	-4.714	1	NaN
HD 113194	>	3748	0	10.632	П	NaN
HD 113595	>	5350	09	-40.717	2	0.029

Table 3—Continued

Star Name	Template ^a	<:ID>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
	•	-2450000	(days)	$(\rm km~s^{-1})$		$(\mathrm{km}\ \mathrm{s}^{-1})$
HD 11373	Λ	3621	723	-27.449	5	0.191
HD 113938	>	3778	0	7.395	1	NaN
HD 113983	>	3452	151	0.495	4	0.194
HD 114161	>	4893	1100	-7.180	6	0.157
HD 114174	>	3480	0	24.587	2	0.028
HD 11437	>	5259	9	25.574	3	0.133
HD 114375	>	4250	3	-39.976	4	0.144
HD 114506	>	3778	0	-26.778	1	NaN
HD 114613	>	4476	1039	-13.095	28	0.061
HD 114659	>	4889	1081	-1.322	[∞]	0.096
HD 114729	>	4957	1536	64.905	4	0.084
HD 114783	>	4503	2138	-12.012	63	0.096
HD 114826	>	3778	0	-12.843	1	NaN
HD 114946	>	4552	1655	-48.283	2	0.159
HD 11506	>	4633	2012	-7.421	55	0.117
HD 115404a	>	3828	2015	7.853	9	0.208
HD 115589	>	3633	417	-21.193	2	0.544
HD 115617	>	4251	2011	-7.844	184	0.128
HD 116029	>	4958	1163	-6.923	15	0.181
HD 11616	>	3689	0	-11.790	1	NaN
HD 116321	>	3475	201	-25.119	20	0.106
HD 116442	>	4141	1917	28.411	37	0.151
HD 116443	>	4309	2141	27.383	83	0.117
HD 116956	M	4148	794	-12.183	22	0.096
HD 117122	>	4093	473	0.280	9	0.123
HD 117176	>	4780	1442	4.882	37	0.124
HD 117207	>	4957	1536	-17.457	4	0.073
HD 11731	>	3804	436	-22.767	4	0.108
HD 117378	>	3778	0	-9.485	1	NaN
HD 117434	>	5334	68	2.879	2	0.03
HD 117497	>	3446	28	-6.618	6	0.064
HD 117576	>	3779	2	-25.532	2	0.275
HD 117623	>	3530	515	-6.631	15	0.127
HD 117762	>	4825	1103	-26.104	œ	0.131

Table 3—Continued

Star Name	Templatea	ZID>	LV	/BV>	od o	dbr.
		-2450000	(days)	$(\mathrm{km}\ \mathrm{s}^{-1})$		$(\mathrm{km}\ \mathrm{s}^{-1})$
HD 11791	Λ	3695	2	18.130	33	0.084
HD 117936	>	3839	1991	-5.864	4	0.212
HD 117987	>	3725	0	-74.955	Н	NaN
HD 118006	>	3778	0	-36.779	П	NaN
HD 118034	>	3778	0	-7.958	1	NaN
HD 118082	>	4799	1103	-26.805	œ	0.129
HD 11850	>	4369	1933	1.941	23	0.153
HD 118722	>	3780	0	0.927	Н	NaN
HD 118744	>	5017	1159	-0.025	15	0.107
HD 118914	>	3441	85	16.680	2	0.140
HD 11964a	>	4049	2023	-9.306	92	0.150
HD 11970	>	4747	832	-14.377	9	0.734
HD 119824	>	3778	0	-2.630	Н	NaN
HD 119850	M	4405	1291	15.778	20	0.110
HD 11997	>	3695	П	29.297	2	0.067
HD 120066	>	4604	1772	-30.559	33	0.045
HD 12039	>	5092	424	6.341	4	0.273
HD 120467	>	4530	1979	-37.628	23	0.121
HD 120476a	>	4037	1833	-20.238	33	0.106
HD 1205	>	4944	1355	6.561	14	0.183
HD 12051	>	4492	2017	-35.133	117	0.146
HD 120528	>	4048	473	-22.803	~	0.181
HD 120531	>	4840	1069	24.663	6	0.278
HD 120636	>	5334	88	-13.517	7	0.096
HD 120666	>	3780	3	-1.675	7	0.016
HD 121135	>	4258	0	125.174	П	NaN
HD 121151	>	3778	0	-37.437	П	NaN
HD 121320	>	4275	1959	-11.944	ಬ	0.079
HD 12137	>	4701	830	-12.799	7	0.192
HD 121550	>	4439	1085	-11.057	35	0.094
HD 121579	>	3670	1151	13.162	ಬ	0.097
HD 12164	>	4718	735	-18.252	9	0.148
HD 12165	>	3695	2	-15.730	33	0.065
HD 122064	>	3950	2076	-26.524	82	0.120

Table 3—Continued

Star Name	Templatea	<jd></jd>	Δ T	<rv></rv>	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km~s^{-1}})$
HD 122120	>	4305	1884	-57.442	45	0.105
HD 122253	>	4679	1098	-9.990	! ~	0.106
HD 122255	>	3389	56	25.546	3	0.103
HD 122303	M	4335	1895	-25.825	24	0.096
HD 12235	>	5257	0	-18.243	Н	NaN
HD 122517	>	5366	23	-12.121	3	0.013
HD 122563	>	4258	0	-26.508	1	NaN
HD 122652	>	4235	1806	1.484	ಬ	0.107
HD 122683	>	3495	206	6.077	33	0.065
HD 122973	>	4014	617	-11.875	6	0.138
HD 123239	>	4764	1025	41.990	∞	0.090
HD 123265	>	4088	647	-41.642	4	0.052
HD 123613	>	3601	350	-1.890	2	0.119
HD 123812	>	4377	389	23.502	33	0.115
HD 124106	>	4765	1915	3.352	∞	0.046
HD 124257a	>	3566	416	3.135	3	0.071
HD 124257b	>	3671	559	3.091	4	0.098
HD 124292	>	4711	1832	37.725	39	0.133
HD 124641	>	5049	743	11.842	ಬ	0.424
HD 124642	M	3560	350	-16.049	က	0.105
HD 12484	>	4344	1537	4.960	6	0.101
HD 125184	>	3701	746	-12.331	12	0.117
HD 125217	>	4778	1122	-6.304	∞	0.430
HD 125390	>	4830	1162	-76.758	7	0.222
HD 125455	>	4402	1979	-9.856	28	0.114
HD 125612	>	4671	1776	-18.255	42	0.107
$^{ m HD}126053$	>	4385	1898	-19.287	43	0.121
HD 126203	>	3763	849	-29.360	10	0.090
HD 126532	>	3589	375	22.344	2	0.002
HD 126583	>	3512	416	0.702	ಬ	0.090
$^{\rm HD}$ 12661	>	4566	1992	-47.309	20	0.141
	>	4713	1537	-32.896	49	0.174
	>	4258	0	-19.112	Н	NaN
HD 126831	>	3456	55	19.391	7	0.104

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	$\Delta \mathrm{T}$	$\langle \mathrm{RV} \rangle$	obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km \ s^{-1}})$
HD 126990	>	5288	54	7.697	2	0.242
HD 126991	>	4792	1097	-94.578	6	0.112
HD 127334	>	4678	1445	-0.401	51	0.118
HD 127374	>	4765	1027	-35.966	20	0.122
HD 127741	>	5320	0	9.336	П	NaN
HD 128095	>	4861	1162	28.952	6	0.309
HD 128165	M	3560	350	11.441	3	0.218
HD 128311	>	4368	2137	-9.521	38	0.191
HD 12846	>	4297	1957	-4.694	98	0.105
HD 128642	>	3429	3	-35.902	9	0.723
HD 128720	>	4896	1122	16.832	_∞	0.100
HD 128987	>	3961	1768	-22.948	7	0.073
HD 129010	>	3634	417	-7.671	2	0.602
HD 129191	>	3634	416	12.673	2	0.076
HD 1293	>	4652	202	45.140	10	0.082
HD 129333	>	4246	1771	-20.044	10	0.677
HD 129471	>	3925	643	26.166	2	0.073
HD 129601	>	4892	1162	-14.491	∞	0.150
HD 129814	>	3541	602	6.501	2	0.076
HD 130004	M	3537	347	-9.531	9	0.124
HD 130048	>	5320	0	-20.891	П	NaN
HD 130087	>	3634	416	-15.624	2	0.143
HD 130307	M	3455	28	12.844	7	0.160
HD 130322	>	4675	1952	-12.503	ಬ	0.113
HD 13043	>	4593	1994	-39.329	122	0.102
HD 130666	>	4250	က	-49.056	3	0.142
HD 130672	>	3604	0	-30.798	П	NaN
HD 130871	>	3426	0	-32.318	П	NaN
HD 130992	>	4264	1537	-57.193	51	0.127
HD 131117	>	3634	416	-28.754	2	0.139
HD 131156	>	4998	322	1.762	3	0.088
HD 131156b	>	4839	0	2.610	П	NaN
HD 131183	>	4437	1627	-26.414	∞	0.076
HD 131496	>	4983	1122	1.146	14	0.131

Table 3—Continued

Ž	- -	Į į	E	a rd.	7	
otar iname	rempiace-	<51D>	(days)	$\langle \text{rav} \rangle$ (km s^{-1})	S	$\sigma_{\rm RV}$ (km s ⁻¹)
HD 131509	Λ	3503	603	-44.749	က	0.167
HD 131580	>	3778	0	-31.124	1	NaN
HD 13167	>	4886	892	15.780	11	0.075
HD 131977	>	4461	1388	27.063	3	0.140
HD 132130	>	3778	0	11.222	1	NaN
HD 132133	>	3604	0	-30.056	1	NaN
HD 132142	>	4628	2106	-14.789	32	0.104
HD 132425	>	3763	29	-10.219	2	0.222
HD 132505	>	3426	0	-15.563	1	NaN
HD 1326	M	4037	1796	11.817	44	0.110
HD 1326b	M	3928	0	10.960	1	NaN
HD 133125	>	3992	320	-14.263	ಬ	0.050
HD 133233	>	3876	431	1.537	18	0.133
HD 133295	>	4354	1989	-2.174	9	0.208
HD 13345	>	4024	0	22.362	1	NaN
HD 13357	>	3622	784	25.145	3	0.093
HD 13361	>	4024	0	6.802	1	NaN
HD 13382	>	4386	1779	20.026	7	0.112
HD 134047	>	3842	0	3.039	1	NaN
HD 134048	>	3574	9	13.608	က	0.107
HD 134319	>	4396	1805	-6.357	ಬ	0.110
HD 134353	>	3651	350	-24.131	က	0.064
HD 134439	>	3427	0	-119.632	1	NaN
HD 134440	>	3427	0	-72.423	1	NaN
HD 13483	>	3641	693	-12.077	က	0.152
HD 134987	>	4523	1948	5.068	29	0.111
HD 135101a	>	4891	1719	-38.885	13	0.122
HD 135143	>	3778	0	-4.299	1	NaN
HD 135148	>	4258	0	-96.007	1	NaN
HD 135446	>	3562	30	-9.102	12	0.110
HD 13555	>	4085	0	5.771	1	NaN
HD 135724	>	3778	0	12.252	1	NaN
HD 13579	>	3899	1059	-12.859	က	0.121
HD 13584	>	3604	0	6.212	1	NaN
		1	1	111111	1	

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT (days)	$\langle \text{RV} \rangle$ (km s ⁻¹)	Ops	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 135872	>	5335	31	-20.488	2	0.108
HD 136028	>	3842	0	-13.813	Н	NaN
HD 13612b	>	3605	729	-5.422	2	0.156
HD 136159	>	5330	115	-11.975	33	0.070
HD 136274	>	3732	536	-30.515	3	0.125
HD 136352	>	4340	1039	-68.923	37	0.083
HD 136418	>	5004	1158	-34.407	28	0.197
HD 136442	>	4259	1960	-46.986	37	0.102
HD 136513	>	4972	1094	-59.606	15	0.152
HD 136618	>	3604	0	-18.962	П	NaN
HD 136713	>	4446	2017	-6.052	93	0.127
HD 136834	>	3534	695	-26.417	3	0.018
HD 136925	>	3680	509	-49.011	2	0.028
HD 137368	>	5288	54	-8.820	2	0.146
HD 13747	>	5261	0	18.603	Н	NaN
HD 137631	>	3604	0	-50.093	Н	NaN
HD 13773	>	4172	295	9.193	2	0.068
HD 137778	>	4093	2082	7.911	9	0.295
HD 137985	>	3624	154	-0.660	3	0.100
HD 138278	>	3399	1	-12.712	2	0.087
HD 13836	>	3642	693	1.076	33	0.121
HD 1384	>	4987	973	-35.185	30	0.135
HD 138549	>	3774	534	11.927	3	0.038
HD 138600	>	3552	24	-37.465	7	0.085
HD 138776	>	3633	411	10.632	2	0.144
HD 1388	>	3856	1487	28.574	33	0.157
HD 13931	>	4815	2022	30.586	27	0.139
HD 139323	>	4593	2135	-67.105	124	0.131
HD 139457	>	3534	695	37.592	33	0.049
HD 139477	>	4370	1782	-8.630	2	0.077
HD 139813	>	4193	1805	-15.787	ಬ	0.216
HD 139879	>	3604	0	-8.865	Н	NaN
HD 139907	>	3905	826	-29.394	ប	0.171
HD 13997	>	3793	1193	-20.788	9	0.112

Table 3—Continued

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Table 3—Continued

SqO
$\langle RV \rangle$ $\langle km \ s^{-1} \rangle$
ΔT (days)
<jd></jd>
1
Template ^a

Table 3—Continued

Star Name	me	Template ^a	<jd></jd>	ΔT	<rv></rv>	Obs	σ_{RV}
			-2450000	(days)	$({\rm km}\;{\rm s}^{-1})$		$(\mathrm{km}\;\mathrm{s}^{-1})$
HD 1497	_	>	3867	525	-7.488	2	0.210
HD 149724	724	>	3682	504	-33.541	2	0.10
HD 149750	150	>	3962	826	15.330	9	0.213
HD 149760	092	>	3604	0	9.309	1	NaN
$^{\rm HD}$ 149806	908	>	4530	1425	10.471	38	0.114
HD 149907	206	>	5333	98	-9.995	2	0.041
HD 150122	122	>	3399	3	-58.657	3	0.096
HD 1502	~1	>	4988	1037	-10.024	43	0.114
HD 150237	237	>	3573	ಬ	-46.708	2	0.198
HD 150331	331	>	3818	744	-6.637	15	0.129
HD 150420	120	>	3509	268	-11.217	3	0.181
HD 150433	133	>	3360	240	-40.119	2	0.204
HD 150437	137	>	3360	240	14.142	2	0.128
HD 150554	554	>	4297	1804	-18.379	10	0.188
HD 150698	869	>	3360	240	48.248	2	0.073
HD 150706	902	>	4402	1805	-17.191	7	0.114
150936	936	>	3604	0	-37.219	1	NaN
HD 151288	888	M	4926	1913	-31.349	33	0.132
HD 151329	329	>	3577	444	-26.417	ಬ	0.482
HD 151504	504	>	4224	1128	-75.510	22	0.098
HD 151522	522	>	4469	029	-45.210	7	0.472
HD 151541	541	>	4290	2141	9.473	41	0.136
HD 151627	327	>	3842	0	-14.058	1	NaN
HD 151852	352	>	4823	1001	-38.440	7	0.157
HD 151877	377	>	3938	1116	2.117	3	0.345
HD 151995	395	>	3430	0	-5.554	1	NaN
HD 152125	125	>	3960	089	-25.716	7	0.171
HD 152391	391	>	5257	0	25.162	1	NaN
HD 152555	555	>	4337	1992	-15.891	ಬ	0.241
HD 152581	581	>	4902	1116	3.739	12	0.111
HD 152733	733	>	4693	1054	-27.517	6	0.113
HD 152792	792	>	3767	505	4.624	3	0.131
HD 15335	35	>	3722	724	41.202	3	0.095
HD 15336	98	>	4756	734	-30.453	9	0.186

Table 3—Continued

Star Name	$\operatorname{Template}^{\mathrm{a}}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$(\mathrm{km}\;\mathrm{s}^{-1})$		$({\rm km \ s^{-1}})$
HD 15337	>	3814	420	-3.995	2	0.089
HD 153378	>	3803	1143	-24.765	6	0.083
HD 153458	>	3535	695	0.591	3	0.073
HD 153525	>	4404	1886	-7.339	ស	0.108
HD 153557	>	4187	1861	-6.564	33	0.020
HD 15367	>	3604	0	-64.275	П	NaN
HD 15391	>	4899	582	28.682	9	0.192
HD 154088	>	4463	2136	14.163	167	0.102
HD 154144	>	3883	1002	-19.163	23	0.148
HD 154325	>	3845	089	-28.603	ಬ	0.206
HD 154345	>	4456	1945	-46.945	88	0.121
HD 154363	>	4478	1811	34.095	34	0.118
HD 154656	>	4121	648	-22.618	ಬ	0.070
HD 154697	>	3604	0	-33.717	П	NaN
HD 154994	>	4142	648	-58.311	9	0.051
HD 155413	>	3955	142	-23.274	10	0.105
HD 155415	>	3604	0	-5.489	Н	NaN
HD 155456	>	3745	535	-59.531	33	0.125
HD 155524	>	5320	0	-6.037	1	NaN
HD 155712	>	4373	1923	19.778	54	0.108
HD 155817	>	3002	0	-54.182	П	NaN
155968	>	3927	646	-29.848	2	0.025
HD 156026	>	4288	1896	0.061	ro	0.179
$^{ m HD}$ 156079	>	3926	645	-103.318	2	0.085
HD 156279	>	4908	2134	-20.670	36	0.289
HD 156342	>	4545	1174	-63.164	17	0.084
$^{ m HD}$ 156365	>	3360	240	-13.057	2	0.122
HD 156549	>	3552	24	16.765	7	0.123
$^{ m HD}$ 156668	>	5042	1832	-44.547	254	0.110
HD 156826	>	3422	366	-32.685	2	0.017
HD 156846	>	5071	419	-68.386	55	0.242
HD 156985	>	4736	1950	-4.805	84	0.105
HD 157172	>	3360	240	-78.978	2	0.057
HD 157214	>	4511	1923	-78.559	40	0.119

Table 3—Continued

) yab	$({\rm km \ s^{-1}})$	0.004	NaN	0.110	0.126	NaN	0.983	0.217	0.159	NaN	0.135	0.078	0.098	0.113	0.115	NaN	0.121	0.129	NaN	0.092	0.250	0.087	NaN	NaN	0.104	0.176	NaN	0.145	0.112	NaN	0.142	NaN	NaN	0.107	0.092
Ohs		2	1	18	66	Н	ಬ	4	14	П	2	2	∞	31	40	Н	06	7	П	33	2	11	П	П	18	7	П	13	17	1	62	П	1	7	25
-BV	$(\mathrm{km}\ \mathrm{s}^{-1})$	-1.087	-47.361	-24.248	-35.854	-52.955	-76.728	-23.118	19.632	-62.633	-20.555	13.605	-26.926	-38.564	-83.967	-6.176	-51.556	11.064	-47.048	-23.525	1.327	-59.230	-8.367	-8.715	9.775	33.975	5.747	-7.570	-50.940	-49.070	25.756	-6.795	21.949	-24.585	-17.576
L<	(days)	32	0	1569	2081	0	1042	1840	1121	0	ಬ	1712	1065	1915	1527	0	1706	916	0	88	415	1087	0	0	1632	202	0	474	1992	0	1299	0	0	962	287
	-2450000	5336	3604	3718	4257	5320	4664	4119	4945	3604	3573	4405	4807	4366	4188	3431	4148	4778	5320	4297	3635	4718	5312	5379	4371	3683	5312	4071	4387	3604	4695	5379	5256	4664	4843
Templatea		>	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name		HD 157261	HD 157299	HD 157338	HD 157347	HD 157481	HD 157719	HD 157881	HD 158038	HD 158173	HD 158210	HD 158259	HD 158449	HD 158633	HD 159062	HD 159063	HD 159222	HD 15928	HD 159798	HD 159868	HD 160013	HD 160215	$HD\ 160247$	HD 160371	$\overline{\text{HD}}$ 1605	160693	HD 161131	HD 161284	HD 16141	HD 161424	HD 16160	HD 161622	HD 16175	HD 16178	HD 161797

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.124	0.171	0.083	0.018	NaN	0.057	NaN	0.032	0.086	0.144	0.197	0.091	0.142	0.115	0.102	NaN	0.694	0.108	0.119	0.340	0.005	0.098	0.158	0.061	0.141	0.270	0.244	NaN	NaN	0.118	0.097	NaN	0.147	0.101
Obs	က	3	20	3	1	4	П	4	14	18	16	4	38	2	18	1	4	2	36	2	2	100	3	3	62	2	∞	1	1	12	က	1	10	41
<rv> (km s⁻¹)</rv>	-94.955	-16.653	-72.674	6.924	-16.157	-7.552	-30.173	-1.032	-72.845	-49.414	-65.155	-36.033	-10.118	-99.654	11.096	-4.060	-12.803	5.310	13.640	2.120	-80.539	20.236	-4.620	0.164	32.621	-0.814	-118.491	-12.757	-5.497	-6.444	17.541	-14.487	-30.304	-19.465
ΔT (days)	969	1587	1771	2	0	1436	0	1204	364	1556	1122	824	1803	693	∞	0	089	793	1810	490	308	2137	116	725	2142	118	1710	0	0	1326	744	0	1028	1992
<jd></jd>	3551	4389	4550	3692	5379	3831	3576	4311	3532	4320	4708	3966	4791	3587	4673	5320	3912	3943	4810	3724	3393	4151	5330	3583	4561	3490	4264	5261	3604	4128	3551	3550	4594	4342
Template ^a	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>
Star Name	HD 161848	HD 161897	HD 162232	16249	HD 162587	HD 16275	HD 162808	16297	HD 163153	HD 163489	HD 163528	HD 163589	163607	16397	HD 16417	HD 164213	HD 164330	HD 164507	164509	HD 164595	HD 164651	164922	HD 165109	HD 165173	HD 165222	165269	HD 165401	16559	165672	166	16623	HD 166435	HD 166494	166620

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	<rv></rv>	Ops	$\sigma_{\rm RV}$
		-2450000	(days)	(km s ⁺)		(km s ¹)
167042	>	5317	121	-18.181	2	0.093
167215	>	3696	292	-41.855	2	0.129
167216	>	3561	721	-42.731	3	0.266
167389	>	3720	483	-5.395	2	0.259
16760	>	4126	1092	-3.566	18	0.372
167665	>	3852	1486	8.523	4	0.039
168009	>	4631	1380	-64.634	29	0.118
168443	>	4649	2140	-48.446	24	0.328
168603	>	3949	29	-32.771	2	0.007
168723	>	5218	377	9.219	4	0.086
168746	>	4265	1437	-25.604	2	0.075
168874	>	3550	0	-20.092	П	NaN
168960	>	3678	258	-9.966	2	0.078
169830	>	4583	1834	-17.197	18	0.133
16984	>	4664	962	69.677	7	0.258
169889	>	3832	437	-17.691	3	0.031
170003	>	5320	0	-3.058	П	NaN
170174	>	3394	306	-28.564	2	0.519
170469	>	4128	1827	-59.340	18	0.117
170493	>	4382	1466	-54.776	44	0.109
170512	>	3830	1127	-36.281	11	0.107
170657	>	4212	2082	-43.137	13	0.161
17075	>	3695	2	-34.298	3	0.044
171010	>	5320	0	-33.552	Н	NaN
171067	>	3754	414	-46.246	2	0.025
171238	>	3604	0	21.446	П	NaN
17152	>	3241	0	27.857	Н	NaN
17156	>	4197	1425	-3.207	38	0.110
171665	>	3393	307	-23.279	2	0.005
17190	^	4341	523	14.045	ιO	0.052
171918	>	3393	307	-67.213	2	0.058
171999	>	3604	0	-51.888	П	NaN
172043	>	5320	0	3.164	П	NaN
172051	>	4237	1898	37.095	41	0.110

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	$\Delta T \\ (days)$	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 17230	>	4619	2042	11.006	32	0.110
HD 172310	>	3661	363	31.210	2	0.146
HD 172365	>	5379	0	-20.204	Н	NaN
HD 172513	>	3547	0	-11.558	Н	NaN
HD 17311	>	4778	916	18.516	7	0.114
HD 17354	>	3320	158	16.794	2	0.851
HD 173701	>	4285	1439	-45.630	31	0.093
HD 173739	M	4325	1436	-0.794	31	0.122
HD 173740	M	4341	1436	1.118	30	0.135
HD 173818	>	3717	2084	15.468	ಬ	0.059
HD 17382	>	3833	407	5.841	4	0.441
HD 174080	>	3942	789	-7.083	2	0.016
HD 17449	>	3694	0	-48.965	1	NaN
HD 174622	>	3828	292	-49.990	3	0.130
HD 174719	>	3944	982	-17.270	2	0.036
HD 175425	>	3845	089	-67.588	v	0.190
HD 175441	>	3574	9	-21.276	33	0.094
HD 175541	>	4592	2141	19.674	42	0.114
HD 17620	>	4826	798	1.340	7	0.099
HD 176377	>	4845	1831	-40.681	71	0.096
HD 176414	>	3539	86	33.544	6	0.108
17660	>	4248	1540	-28.997	7	0.118
$^{ m HD}$ 176650	>	5322	0	29.613	П	NaN
HD 176982	>	3604	784	-6.825	33	0.062
HD 177033	>	3604	0	-46.802	1	NaN
HD 177274	>	4230	1067	-5.141	7	0.215
HD 177572	>	3720	483	-10.245	2	0.191
HD 177830	>	4573	1841	-72.083	53	0.153
HD 178251	>	4805	982	91.769	14	0.118
HD 178911b	>	4733	1770	-40.551	16	0.345
HD 179079	>	4457	1715	19.440	70	0.107
HD 179152	>	5322	0	-20.725	Н	NaN
HD 179306	>	5347	69	5.136	15	0.107
HD 179596	>	3480	1	-4.219	2	0.105

Table 3—Continued

Obs $\sigma_{\rm RV}$	$(\mathrm{km}\;\mathrm{s}^{-1})$	4 0.178	79 0.119	75 0.125	84 0.135	7 0.140	4 0.130		100 0.154																									
$\langle \mathrm{RV} \rangle$	$(km s^{-1})$	-24.350	-41.824	-41.162	-5.874	19.008	-27.036	35.730	-2.002	-4.651	-46.730	-28.168	14.493	-0.837	31.970	-30.323	-21.485	-100.289	8.280	-30.492	-43.069	-50.240	-19.122	-46.421	-2.280	-9.752	58.219	-5.083	-48.823	30.598	50.465	26.620	0.620	(
ΔT	(days)	1468	1871	1560	1164	916	1738	1829	783	1041	784	1195	0	1041	1475	1196	1448	2081	412	692	326	1831	69	1123	0	723	784	0	2049	323	1004	2138	575	400
<jd></jd>	-2450000	4640	4242	4271	4999	4778	4185	4668	3632	4944	3604	3768	5261	4952	4543	3654	4838	3886	3826	3585	4852	4530	5345	4753	5232	3584	3570	5322	4025	3642	3839	4297	5101	2
Template ^a	1	Λ	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	11
Star Name		HD 179949	HD 179957	HD 179958	HD 180053	HD 18015	HD 180161	HD 180617	HD 180684	HD 180902	HD 181234	HD 181253	HD 18131	HD 181342	HD 18143	HD 182407	HD 182488	HD 182572	HD 182619	HD 1832	HD 183216	HD 183263	HD 183298	HD 183473	HD 1835	HD 183650	HD 183658	HD 183756	HD 183870	HD 18436a	HD 18445	HD 185144	HD 185269	UD 10500E

Table 3—Continued

σ_{RV}	$(\mathrm{km~s}^{-1})$	NaN	0.144	0.122	0.147	0.122	0.364	NaN	0.162	0.050	0.099	0.215	0.106	0.105	0.391	0.135	0.044	0.138	0.130	0.075	0.093	0.105	NaN	0.114	0.073	0.122	0.145	0.175	0.119	0.203	0.139	NaN	0.064	NaN	0.143
Obs		П	3	49	62	7	œ	1	ಬ	9	30	4	18	9	2	2	2	66	2	10	89	ಬ	1	ಬ	က	ಬ	22	2	21	2	က	1	2	1	98
<rv></rv>	$(km s^{-1})$	-61.389	28.924	-27.391	-27.859	-2.656	3.660	-57.813	71.313	-14.941	-16.896	-32.797	-13.831	49.424	20.248	-5.456	-37.507	-20.619	-12.006	0.060	9.862	9.295	33.769	9.773	-85.627	-16.090	-73.744	-192.628	-40.074	-30.109	-51.057	56.577	-28.176	-14.995	-2.570
ΔT	(days)	0	743	1391	1423	794	528	0	1189	6	2105	1098	916	1628	569	789	120	2079	П	2141	1796	648	0	648	824	1768	1041	729	1452	787	729	0	544	0	1618
<1D>	-2450000	3604	3541	4692	4841	4714	4702	3604	3820	5314	4404	3773	4868	4489	3562	3944	4749	4231	3480	4201	3909	4121	3604	4121	4124	3936	2068	3604	4401	3945	3654	5322	3752	3604	3983
Template ^a	•	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name		HD 186104	18632	HD 186408	HD 186427	$^{ m HD}18645$	$^{\rm HD}$ 18667	HD 186932	HD 18702	HD 187091	HD 187123	HD 187237	HD 18742	HD 18747	HD 18752	HD 187748	187897	HD 187923	HD 187944	HD 188015	HD 18803	HD 188268	HD 188298	HD 188311	HD 188345	HD 188376	HD 188386	HD 188510	HD 188512	189087	18916	HD 189186	HD 189625	189627	HD 189733

Table 3—Continued

Star Name	Templatea	<:ID>	ΔT	<bv></bv>	Obs	σρ
	•	-2450000	(days)	$(\mathrm{km}\ \mathrm{s}^{-1})$		$(\mathrm{km}\ \mathrm{s}^{-1})$
HD 18975	Λ	3676	613	35.268	2	0.073
HD 18993	>	4159	375	-19.391	4	0.119
HD 190007	>	3761	1828	-30.270	11	0.105
HD 190067	>	4207	1472	20.375	96	0.126
HD 19019	>	4148	1896	24.867	7	0.122
HD 190228	>	4631	1827	-50.196	∞	0.114
HD 19034	>	3551	744	-20.281	3	0.051
HD 190360	>	3979	2135	-45.253	88	0.141
HD 190404	>	4255	1777	-2.535	29	0.157
HD 190406	>	4549	1768	4.617	46	0.125
HD 19056	>	3692	2	41.549	3	0.029
HD 190571	>	5321	2	37.432	2	0.101
HD 190594	>	4281	1086	-33.632	20	0.129
HD 190821	>	4024	1089	-8.951	12	0.128
HD 190931	>	4397	1072	-25.905	10	0.098
HD 191067	>	5332	84	-3.437	2	0.120
HD 191359	>	5322	0	27.090	1	NaN
HD 191408	>	4096	2113	-129.355	78	0.121
HD 191785	>	4335	1872	-49.289	27	0.121
$^{ m HD}$ 191957	>	3271	62	-24.506	2	0.041
HD 192020	^	3755	415	-11.537	2	0.142
HD 192148	>	3576	0	-26.591	1	NaN
HD 192153	>	4830	1034	-37.994	10	0.106
HD 192263	>	4122	1804	-10.853	ಬ	0.153
HD 192310	>	4872	2143	-54.374	103	0.118
HD 192343	>	3758	422	-0.611	2	0.035
HD 192344	>	3688	422	-0.546	က	0.032
19308	>	3551	744	32.828	က	0.168
HD 193202	>	4494	1791	-1.675	51	0.111
HD 193342	>	4699	1085	-24.246	6	0.128
HD 193391	>	4998	1041	-41.912	14	0.095
	>	4469	1038	-1.419	13	0.098
HD 193728	^	3603	0	-21.142	1	NaN
HD 19373	>	4001	1957	49.400	128	0.114

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.080	0.113	0.025	NaN	0.124	0.090	0.135	0.253	0.254	NaN	0.249	0.118	0.138	0.481	0.129	0.108	0.133	0.094	$N_{a}N$	$N_{a}N$	NaN	0.077	0.114	0.150	0.062	NaN	0.115	0.090	0.110	0.135	0.059	0.116	NaN	0.044
Obs	2	3	4	1	12	4	2	19	ស	1	ರ	7	24	4	6	59	ಸು	4	П	П	П	7	12	2	7	П	46	06	160	18	3	11	1	4
$\langle \mathrm{RV} \rangle$ $\langle \mathrm{km \ s^{-1}} \rangle$	6.833	-171.504	2.383	-20.027	-20.453	7.002	8.423	-91.443	-89.211	-8.604	-0.857	57.359	9.460	-10.278	7.740	-42.450	-27.372	-26.551	-27.296	-19.175	-1.124	1.974	-33.297	-0.545	14.664	-41.965	-41.930	-21.107	-35.402	-139.688	-69.405	21.789	-6.208	10.659
ΔT (days)	415	784	420	0	1064	744	ಬ	1832	1177	0	1565	834	1827	83	1038	1686	447	က	0	0	0	556	1012	23	1896	0	2136	487	1738	1094	825	1001	0	1828
<jd></jd>	3754	3604	3888	5322	4650	3607	3573	4555	4256	4024	4049	4727	4070	4314	4851	4554	4073	3984	3479	3550	4428	3828	4912	5363	4148	4636	4013	3337	4518	4676	4153	4029	5290	4212
Template ^a	>	>	>	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	HD 193795	193901	HD 194080	HD 194110	HD 194541	HD 19467	HD 194913	HD 195019	HD 195019b	19502	HD 195034	HD 19522	HD 195564	HD 195787	HD 195824	HD 196124	HD 19617	HD 19618	HD 196199	HD 196201	HD 19638	HD 19659	$^{ m HD}\ 196645$	HD 196676	HD 19668	HD 19676	196761	$^{ m HD}\ 196850$	197076	HD 197162	HD 197623	$^{+}$ HD 19773	HD 197964	HD 198425

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd> -2450000</jd>	$\Delta T \\ (days)$	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Ops	σ_{RV} $(\mathrm{km~s^{-1}})$
HD 198483	>	3605	0	-19.338	П	$N_{a}N$
198599	>	3922	299	20.713	14	0.128
HD 198683	>	3604	0	-30.569	1	NaN
HD 198802	>	4261	2134	-3.102	ಬ	0.089
HD 199019	>	4357	1651	-11.467	4	0.134
HD 199086	>	3970	734	15.766	2	0.034
HD 199100	>	3605	0	-25.874	1	NaN
HD 199178	>	5322	0	-10.198	П	NaN
HD 199255	>	5322	0	21.641	П	NaN
HD 199260	>	4838	326	-15.836	33	0.155
HD 199305	M	4498	1434	-17.144	19	0.133
HD 199381	>	5363	22	49.179	2	0.084
HD 199476	>	4503	1469	-30.335	24	0.140
HD 199580	>	5322	0	-20.795	П	NaN
HD 19961	>	3695	1	-11.626	2	0.092
HD 199683	>	3604	0	-11.223	1	NaN
HD 199960	>	4658	1825	-17.526	ಸು	0.237
HD 200078	>	3604	0	-60.325	1	NaN
$^{\rm HD}$ 200156	>	3604	0	-5.215	1	NaN
HD 200491	>	4743	1121	-7.484	∞	0.157
HD 200538	>	3786	475	15.455	2	0.185
$^{ m HD}$ 200565	>	4136	1173	-3.857	5	0.214
$^{\rm HD}$ 200625	>	3787	473	5.300	5	0.187
HD 200964	>	4978	974	-71.884	40	0.148
HD 200968	>	3737	1805	-32.680	12	0.117
HD 201091	>	4529	1960	-65.841	104	0.137
$^{+}$ HD 201092	>	4312	1960	-64.420	93	0.134
HD 201203	>	3549	0	-16.550	1	NaN
HD 201219	>	4341	1468	4.919	9	0.109
HD 201378	>	3604	0	-30.698	1	NaN
$^{\rm HD}$ 20155	>	3320	158	-7.949	2	0.070
$^{\rm HD}$ 20165	>	4510	1803	-16.672	28	0.164
HD 201651	>	3929	1191	-12.775	9	0.072
TD 901094	11	1001	100	0000	1	0

Table 3—Continued

Star Name	Template ^a	<jd></jd>	ΔT (days)	$\langle \mathrm{RV} \rangle$ $(\mathrm{km~s^{-1}})$	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 201989	>	4517	1439	-23.863	4	0.097
HD 2025	>	4052	2140	3.094	4	0.153
$^{ m HD}\ 202560$	>	4673	∞	20.932	ಬ	0.117
$^{ m HD}\ 202575$	>	4298	1826	-18.263	33	0.109
$^{+}$ HD 202696	>	4929	1085	-34.433	32	0.125
$HD\ 202751$	>	4505	1257	-27.448	39	0.104
HD 202867	>	4753	1067	14.212	_∞	0.109
HD 202917	>	3845	473	-1.499	33	0.533
HD 203030	>	4251	1259	-16.696	4	0.043
HD 203471	>	4751	1034	23.620	14	0.126
$HD\ 203473$	>	4226	404	-61.949	2	0.081
HD 204277	>	4616	1238	9.390	9	0.100
HD 20439	>	3813	209	32.234	10	0.133
$^{ m HD}\ 204587$	>	4492	1533	-84.103	20	0.111
HD 204814	>	3977	878	-87.086	4	0.093
HD 205163	>	4858	1068	50.098	10	0.097
$^{ m HD}\ 205351$	>	3724	453	-17.932	3	0.142
$^{ m HD}\ 205353$	>	4180	313	6.028	7	0.191
$^{ m HD}\ 205855$	>	4513	999	7.125	20	0.086
$^{ m HD}\ 205905$	>	4270	1748	-17.076	9	0.227
HD 206116	>	4293	405	-6.512	33	0.080
HD 20618	>	5261	0	-4.708	П	NaN
$^{\rm HD}\ 20619$	>	4588	1895	22.663	40	0.130
HD 206332	>	4346	0	-44.428	П	NaN
	>	4220	1776	-42.981	9	0.197
$^{+}$ HD 206387	>	3600	718	-7.438	2	0.508
$^{ m HD}\ 206610$	>	4961	1065	-18.658	26	0.104
$^{ m HD}\ 206635$	>	4749	1037	-40.357	∞	0.108
$^{+}$ HD 206658	>	4286	1322	6.091	36	0.112
$^{ m HD}\ 20670$	>	4416	785	15.573	7	0.050
	>	4584	1230	23.029	2	0.487
	>	3705	62	35.051	v	0.154
	>	5348	52	-3.681	2	0.097
HD 207077	>	4709	1060	-20.370	7	0.090

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	$\Delta T \\ (days)$	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Ops	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 207485	>	3864	421	-19.099	3	0.043
HD 207583	>	3962	715	21.955	2	0.073
HD 20781	>	3604	0	40.135	П	NaN
HD 207832	>	4486	1445	-16.682	51	0.102
HD 207839	>	4072	827	-29.891	v	0.091
HD 207874	>	4017	826	-26.747	2	0.143
HD 207897	>	3843	361	-6.551	3	090.0
HD 207966	>	3241	0	-24.701	Н	NaN
HD 207978	>	4086	0	19.053	2	0.055
HD 207994	>	3620	454	-29.755	6	0.156
HD 208038	>	4226	1773	13.536	4	0.042
HD 208313	>	4673	1185	-13.228	28	0.107
HD 2085	>	4024	0	-47.402	2	0.950
HD 208585	>	4845	1062	-26.979	6	0.143
HD 208801	>	4072	2135	-50.081	3	0.067
HD 208880	>	3784	360	-15.791	2	0.019
HD 208897	>	5322	0	-14.780	П	NaN
HD 209203	>	3759	335	9.381	ಬ	0.116
HD 209253	>	4389	1057	16.519	9	0.145
HD 209290	M	4326	1123	18.275	36	0.120
HD 209340	>	3724	453	-33.511	4	0.186
HD 209393	>	4427	1412	5.032	ಬ	0.125
$^{+}$ HD 209458	>	4070	1951	-14.691	28	0.114
$^{+}$ HD 209599	>	4062	881	-0.117	ಬ	0.101
$^{+}$ HD 209706	>	3759	335	-19.446	ಬ	0.140
$^{+}$ HD 209875	>	3604	0	-40.972	П	NaN
HD 210011	>	3669	510	-10.319	10	0.070
HD 210144	>	4090	828	-33.433	D.	0.054
HD 21019a	>	3970	2016	41.737	4	0.207
HD 210277	>	4358	2142	-20.844	88	0.126
HD 210302	>	4331	1584	-16.154	36	0.194
HD 210312	>	3604	0	16.476	Н	NaN
HD 210320	>	4024	0	30.523	П	NaN
HD 210323	>	3759	335	-17.431	v	0.147

Table 3—Continued

Star Name	$\mathrm{Template}^{\mathrm{a}}$	<1D>>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km \ s}^{-1})$
HD 210373	>	5381	0	-40.170	1	NaN
HD 210392	>	3604	0	-1.541	1	NaN
HD 210460	>	4041	1858	20.381	4	0.047
HD 210521	>	4568	451	-13.818	ಬ	0.135
HD 210702	>	5270	164	16.340	2	0.166
HD 211038	>	3421	365	10.331	2	0.065
$HD\ 211080$	>	3604	0	8.305	2	0.021
HD 211567	>	3624	154	-46.834	3	0.146
HD 211681	>	4319	1413	-40.288	3	0.282
HD 211810	>	4285	1484	-36.581	16	0.088
HD 21197	>	3472	744	-13.023	ស	0.130
HD 212291	>	4059	2013	-5.589	39	0.100
HD 212315	>	3466	177	-10.645	3	0.614
HD 212585	>	3693	7	-16.314	4	0.129
HD 212733	>	3843	361	6.913	3	0.305
HD 212771	>	4954	1041	14.863	22	0.122
HD 212801	>	3767	434	-8.588	2	0.015
HD 213042	>	4398	1533	5.632	47	0.157
HD 213066	>	4226	405	-39.161	2	0.034
HD 21313	>	3969	0	-20.188	1	NaN
HD 21316	>	3695	2	40.584	3	0.065
HD 213278	>	4633	817	-53.476	7	0.077
HD 213329	>	4226	405	-12.736	2	0.106
HD 21340	>	4861	357	21.900	4	0.096
HD 213472	>	3603	0	16.907	1	NaN
HD 213519	>	3603	0	-31.688	1	NaN
HD 213628	>	3604	0	-50.513	1	NaN
HD 21449	>	3870	902	-5.328	14	0.123
HD 214683	>	3846	365	23.821	3	0.039
HD 214749	>	4304	744	-0.011	4	0.101
HD 214759	>	4322	30	-20.153	7	0.053
HD 214823	>	4281	1564	-44.542	14	0.230
HD 215032	>	3898	1602	21.062	13	0.083
HD 215049	>	4668	795	-29.844	ಬ	0.130

Table 3—Continued

Star Name	Template ^a	<jd></jd>	Δ T	<rv></rv>	Obs	σ_{RV}
		-2450000	(days)	$(\mathrm{km}\;\mathrm{s}^{-1})$		$({\rm km}\;{\rm s}^{-1})$
$^{ m HD}$ 215152	>	4359	1524	-13.842	39	0.121
HD 215274	>	3931	9	-9.418	4	0.138
HD 215500	>	4082	828	-45.555	ಬ	0.064
HD 215578	>	4294	1951	-20.817	4	0.429
HD 215625	>	3604	0	8.439	Н	NaN
HD 215704	>	4154	828	-51.527	∞	0.092
HD 21581	>	4726	734	152.943	9	0.119
HD 215908	>	4636	202	6.348	7	0.092
HD 216083	>	3575	9	-6.312	က	0.214
HD 216175	>	3759	335	-41.508	ಬ	0.128
HD 216191	>	4125	828	18.901	9	0.110
HD 216259	>	4389	1257	1.241	63	0.125
HD 216275	>	4426	1412	13.676	ಬ	0.152
HD 216320	>	3793	381	-18.997	2	0.984
HD 216520	>	4935	2040	-18.720	94	0.113
HD 216722	>	5378	0	-45.529	Η	NaN
HD 216803	>	4274	1619	7.152	4	0.086
$HD\ 216834$	>	4537	472	-32.615	7	0.276
HD 216899	M	4495	1257	-27.255	23	0.141
HD 217004	>	3604	0	0.298	П	NaN
HD 217014	>	4637	1452	-33.118	36	0.128
HD 217107	>	4353	2135	-13.269	20	0.132
$^{ m HD}\ 217165$	>	4707	141	13.225	∞	0.147
HD 217357	M	4384	1765	16.461	49	0.203
HD 21742	>	4055	829	-36.126	က	0.093
HD 217496	>	4678	854	-2.206	9	0.128
HD 217523	>	3759	335	-15.383	ಬ	0.075
HD 217591	>	4877	1062	-9.106	18	0.149
HD 217681	>	4685	962	-0.257	9	0.079
HD 21774	>	3983	0	-3.116	1	NaN
$HD\ 217850$	>	4516	1810	7.224	17	0.177
HD 217877	>	4197	1416	-12.738	က	0.100
	M	4485	1846	8.759	32	0.165
HD 218133	>	3563	630	-48.818	4	0.165

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT (days)	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Ops	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HD 218168	>	3794	381	2.673	2	0.148
HD 218209	>	3793	381	-16.058	2	0.006
HD 218354	>	3867	592	-10.368	ಬ	0.097
HD 218445	>	3795	828	27.606	7	0.199
HD 21847	>	3540	746	30.289	3	0.094
HD 218566	>	4548	1595	-37.825	31	0.119
HD 218868	>	4420	1245	-30.613	70	0.101
HD 218935	>	5376	0	-9.811	П	NaN
HD 219134	>	4023	2135	-18.560	151	0.127
HD 219396	>	3822	650	-46.903	ಬ	0.119
HD 219428	>	3978	692	-6.478	10	0.154
HD 219498	>	4461	1238	-9.499	9	0.087
HD 219538	>	4367	1506	6.967	45	0.109
HD 219542	>	3421	364	-10.995	2	0.002
HD 219553	>	4533	451	3.458	ಬ	0.101
HD 219623	>	4975	510	-27.153	ಬ	0.114
HD 219770	>	4226	405	8.483	2	0.013
HD 219781	>	3832	629	-20.145	∞	0.234
HD 219828	>	3867	592	-24.104	7	0.075
$HD\ 219834b$	>	4395	1432	10.752	29	0.097
HD 219953	>	3793	381	-48.231	2	0.047
HD 220122	>	4865	829	-46.327	13	0.124
$^{\rm HD}$ 220182	>	3972	734	3.437	2	0.292
HD 220221	>	4120	1771	-13.568	4	0.123
$^{+}$ HD 220339	>	4633	1621	33.984	41	0.112
$^{+}$ HD 22049	>	5217	151	16.428	∞	0.087
$^{+}$ HD 22072	>	3542	744	11.039	3	0.107
HD 220845	>	3749	4	-7.269	4	0.076
$^{+}$ HD 2 20908	>	4014	650	-13.666	2	0.067
$^{+}$ HD 220952	>	4686	932	-15.604	6	0.115
HD 221149	>	4226	405	-7.161	2	0.055
HD 221354	>	4380	2039	-25.113	186	0.122
$^{\rm HD}$ 221356	>	4705	1649	-12.625	က	0.081
HD 221504	>	4668	962	-1.391	ಬ	0.133

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	NaN	0.142	0.058	0.074	0.019	NaN	0.076	0.127	0.072	0.019	0.118	0.024	0.117	0.106	0.145	0.082	0.013	0.079	NaN	0.236	0.037	0.134	0.146	NaN	0.011	0.110	0.067	0.108	0.114	0.113	0.073	0.136	0.176	0.069
Obs	П	ಬ	4	က	33	Н	~	7	7	2	4	2	7	2	4	11	2	33	П	2	33	ಬ	2	П	2	33	4	31	6	29	33	∞	7	6
$\langle RV \rangle$ $\langle km s^{-1} \rangle$	18.685	-12.709	-21.201	-26.035	-22.881	-3.161	-12.685	19.434	-7.296	5.846	-2.850	-44.036	12.032	14.534	-4.945	-3.355	14.836	-43.921	-15.254	0.017	-24.005	-52.620	1.494	15.833	9.641	-31.245	-49.248	21.009	-17.394	1.396	28.167	-17.486	-6.225	10.869
ΔT (days)	0	148	1771	405	393	0	854	916	30	0	892	0	1035	992	745	748	0	2	0	739	1289	736	367	0	405	746	405	424	817	1830	150	1619	832	594
<jd></jd>	4024	3722	4177	4293	3753	5377	4632	4747	4322	4085	3803	4371	4809	3954	3512	3829	4256	3695	3571	3974	4119	4755	3422	5381	4226	3598	4219	4367	4684	3885	5209	4176	4646	3810
Template ^a	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	HD 221561	HD 221822	HD 221851	HD 221974	HD 222038	HD 222089	HD 222112	HD 22233	HD 222335	HD 222368	HD 222391	HD 222404	HD 222582	$^{+}$ HD 222697	HD 22282	HD 222986	HD 223171	HD 223205	HD 223238	HD 223315	HD 223498	$^{ m HD}$ 223627	$^{ m HD}$ 223691	HD 223869	HD 224040	HD 224383	HD 224601	HD 224619	$^{ m HD}\ 224679$	HD 224693	HD 22484	HD 224983	$^{ m HD}$ 225021	HD 225118

Table 3—Continued

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Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	<rv></rv>	obs	σ_{RV}
		-2450000	(days)	$(\mathrm{km}\;\mathrm{s}^{-1})$		$({\rm km}\;{\rm s}^{-1})$
HD 24238	>	4559	1856	38.772	30	0.138
HD 24316	>	4934	892	52.272	12	0.103
HD 24341	>	3611	746	142.692	2	0.100
HD 24365	>	4089	1934	19.276	9	0.083
HD 24451	>	4264	1441	17.585	7	0.081
HD 24496	>	4586	2046	18.869	118	0.138
HD 244992	>	3749	148	11.340	∞	0.110
HD 24505	>	4081	1747	-12.696	9	0.179
HD 24521	>	3969	0	-0.159	1	NaN
HD 245409	M	3733	1206	22.190	ಬ	0.200
HD 24612	>	3985	0	33.976	1	NaN
HD 24727	>	3540	744	-18.076	က	0.136
HD 24892	>	3600	743	45.545	4	0.250
$^{+}$ HD 24916	>	3412	783	3.585	7	0.234
HD 25311	>	4012	1833	-40.043	111	0.075
$^{+}$ HD 25329	>	4327	1772	-25.845	33	0.107
HD 25445	>	3695	2	7.638	3	0.034
$^{\rm HD}$ 25457	>	3997	2017	17.846	10	0.196
$^{ m HD}$ 25565	>	4044	1470	-27.168	3	0.098
HD 25622	>	4827	917	-1.817	7	0.096
$^{ m HD}$ 25665	>	4406	1795	-13.556	18	0.121
HD 256714	>	3779	2	19.505	က	0.090
HD 25682	>	3554	785	-30.338	က	0.161
HD 25825	>	3555	784	37.625	က	0.139
HD 2589	>	3754	0	13.743	2	0.026
$^{+}$ HD 25894	>	3779	2	-15.393	က	0.080
HD 25998	>	5057	424	26.066	က	0.234
HD 26007	>	4870	946	9.167	7	0.089
HD 26140	>	4748	972	-6.970	7	0.142
$^{+}$ HD 2 6151	>	4438	2017	-6.752	7	0.151
$^{+}$ HD 2 6161	>	3984	0	12.870	1	NaN
1 HD 2 6257	>	3387	61	33.841	ಬ	0.083
$^{+}$ HD 265866	M	4530	1775	22.942	24	0.165
HD 26633	>	5262	0	91.484	1	NaN

Table 3—Continued

Template ^a <jd> -2450000 V 4790 V 3778 V 3399 V 4174 V 4034 V 3765 V 3765 V 3765 V 3765 V 4336 V 4336 V 4336 V 4336 V 3785 V 4846 V 3785 V 4846 V 3785 V 3785 V 3785 V 3785</jd>	AT (days) 917 1061 1 1216 0 2021 101 1 1 55 922	<rv> <rv> (km s⁻¹) 8.476 37.430 38.162 56.487 61.401 -42.337 -9.580 38.520 37.949 42.493 38.521</rv></rv>	Obs 13 13 2 2 2 2 2 2 2 2 8 8 8 8 8	ORV (km s ⁻¹) 0.118 0.001
4790 4776 3778 4019 3399 4174 4034 3778 3765 4846 4336 4084 4084 4084 4016 3695	(days) 917 1061 1 1216 0 2021 101 1 55 922	(km s ⁻¹) 8.476 37.430 38.162 56.487 61.401 -42.337 -9.580 38.520 37.949 42.493 38.510	83 1 4 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	(km s ⁻¹) 0.118 0.001
4790 4276 3778 4019 3399 4174 4034 3778 3765 4846 4336 4016 3695	917 1061 1216 0 2021 101 1 55 922 0	8.476 37.430 38.162 56.487 61.401 -42.337 -9.580 38.520 37.949 42.493	13 83 83 83 83 83	0.118 0.001
4276 3778 4019 3399 4174 4034 3778 3765 4846 4336 4084 4336 3785 3785 4084 4084	1061 1 1216 0 2021 101 1 55 922 0	37.430 38.162 56.487 61.401 -42.337 -9.580 38.520 37.949 42.493 38.51	83 1 - 1 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	0.118
3778 4019 3399 4174 4034 3778 3765 4846 4336 4084 4336 3785 3785 3785 3785 3785 3785 3785 3785	$ \begin{array}{c} 1\\ 1216\\ 0\\ 2021\\ 101\\ 1\\ 55\\ 922\\ 0 \end{array} $	38.162 56.487 61.401 -42.337 -9.580 38.520 37.949 42.493 38.581	8 5 5 8 1 4 5	0.001
4019 3399 4174 4034 3778 3765 4846 4336 3785 4084 4016 3695	1216 0 2021 101 1 55 922 0	56.487 61.401 -42.337 -9.580 38.520 37.949 42.493 38.581	8 5 5 3 1 -4	
3399 4174 4034 3778 3765 4846 4336 3785 4084 4016 3695	0 2021 101 1 55 922 0	61.401 -42.337 -9.580 38.520 37.949 42.493 38.581	8 2 2 3 1	0.112
4174 4034 3778 3765 4846 4336 3785 4084 4084 4016 3695	2021 101 1 55 922 0	-42.337 -9.580 38.520 37.949 42.493 38.581	8 2 2 8	NaN
4034 3778 3765 4846 4336 3785 4084 4084 4016 3695	$ \begin{array}{c} 101 \\ 1 \\ 55 \\ 922 \\ 0 \end{array} $	-9.580 38.520 37.949 42.493 38.581	01 01 00	0.118
3778 3765 4846 4336 3785 4084 4084 4016 3695	$1 \\ 55 \\ 922 \\ 0$	38.520 37.949 42.493 38.581	C1 00	0.093
3765 4846 4336 3785 4084 4336 4016 3695	55 922 0	37.949 42.493 38.581	∞	0.003
4846 4336 3785 4084 4336 4016 3695	922 0	42.493		0.107
4336 3785 4084 4336 4016 3695	0	38.581	9	0.136
3785 4084 4336 4016 3695		1100	1	NaN
4084 4336 4016 3695	238	27.783	∞	0.083
4336 4016 3695	1469	42.209	_	0.098
4016 3695	0	37.470	1	NaN
3692	715	38.507	3	0.035
	2	-23.892	3	0.019
4336	0	39.601	1	NaN
3779	2	12.896	က	0.062
4493	0	37.692	1	NaN
4793	917	45.984	7	0.131
4336	0	42.593	1	NaN
4448	1627	34.729	21	0.108
3884	710	8.375	9	0.120
4016	715	38.431	က	0.018
3695	2	20.526	က	0.088
3779	2	18.922	က	0.092
4264	561	110.315	2	0.106
3884	1089	50.253	2	0.298
3554	784	18.322	က	0.137
3778	1	-4.138	2	0.002
4413	1862	16.294	7	0.644
4162	1957	39.690	7	0.147
4336	0	40.436	1	NaN
4153	1219	-43.174	_	0.077
	3554 3778 4413 4162 4336 4153		784 1 1862 1957 0 1219	784 1 1862 1957 0 1219

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$(\mathrm{km}\;\mathrm{s}^{-1})$		$({\rm km}\;{\rm s}^{-1})$
$\overline{\text{HD}}$ 28305	>	4336	0	38.442	1	NaN
$^{+}$ HD 28307	>	4336	0	39.281	П	NaN
HD 28343	M	4466	1797	-35.000	17	0.158
HD 283704	>	3779	1	38.509	2	0.142
HD 28388	>	4481	388	20.406	4	0.462
HD 284253	>	4336	0	38.183	Н	NaN
HD 28437	>	3806	298	26.731	3	0.453
HD 284414	>	4336	0	39.585	Н	NaN
HD 28462	>	3778	1	40.090	2	0.022
HD 285773	>	4336	0	39.992	Н	NaN
HD 28593	>	3778	1	39.666	2	0.046
$^{+}$ HD 285968	M	4725	1886	26.244	39	0.139
HD 28678	>	4968	973	61.465	13	0.152
HD 28737	>	4770	922	-5.702	9	0.203
1 HD 2 8946	>	3875	1059	-46.327	œ	0.101
HD 28992	>	3778	1	40.214	2	0.074
HD 2946	>	4682	795	10.460	11	0.174
$^{+}$ HD 29461	>	4680	1146	40.326	3	0.239
HD 29528	>	3554	783	-18.789	3	0.254
HD 29621	>	3779	2	35.022	3	0.102
HD 29818	>	3696	1	46.573	2	0.017
HD 29883	>	4198	1951	17.776	25	0.111
HD 2992	>	4024	0	-16.150	П	NaN
HD 29980	>	4084	11116	32.286	9	0.089
HD 30090	>	3697	0	23.377	П	NaN
HD 30128	>	4798	917	20.863	7	0.149
$^{\rm HD}\ 30166$	M	4701	794	-32.300	9	0.114
HD 30246	>	3778	1	41.721	2	0.029
HD 30286	>	3779	2	18.334	3	0.113
HD 30339	>	3696	2	8.686	33	0.561
$^{ m HD}\ 30572$	>	3778	1	32.450	2	0.051
$^{ m HD}\ 30649$	>	4977	209	32.241	2	0.067
HD 30663	>	3715	83	-15.485	4	0.063
30708	>	3985	0	-55.696	П	NaN

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.174	0.064	0.130	0.089	0.107	0.167	0.114	0.108	0.226	0.108	0.106	0.144	0.112	0.074	NaN	0.063	0.170	0.095	0.214	0.112	0.093	NaN	$_{ m NaN}$	0.115	0.127	0.132	0.050	0.126	0.133	0.139	0.139	0.122	0.112	0.138
Obs	2	က	11	7	12	14	∞	4	ಬ	7	က	∞	∞	က	1	2	9	9	က	125	က	1	1	48	19	2	က	27	18	30	9	11	2	12
$\langle RV \rangle$ (km s ⁻¹)	42.593	29.412	35.457	-39.511	-4.147	12.235	29.447	0.606	42.118	0.644	15.151	-6.940	6.205	42.825	-8.368	16.049	29.318	-26.445	-17.897	21.544	28.075	9.115	-6.714	20.594	-62.295	-22.388	55.861	33.525	10.465	4.721	-6.983	83.122	-49.255	5.710
ΔT (days)	1	1412	916	974	1002	1566	1917	629	391	859	30	290	1440	2	0	1	922	202	743	1946	2	0	0	1339	1911	1262	2	973	946	1917	945	1834	ಬ	1982
<jd></jd>	4130	4201	4901	4915	3892	4152	4419	4136	4876	4794	3360	4669	4159	3695	5314	4546	4686	3992	3532	4496	3779	5262	4024	4673	4913	4655	3695	4971	4938	3981	4931	3825	3573	4705
Template ^a	Λ	>	>	>	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	HD 30712	HD~3074a	1 HD 20856	4 HD 30882	HD 31018	HD 31253	HD 31392	HD 3141	HD 31412	HD 31451	HD 31452	HD 31543	HD 31560	$^{ m HD}\ 31609$	HD 31664	$HD\ 31675$	HD 31693	HD 31864	HD 31966	HD 32147	HD 32259	HD 32483	$^{ m HD}$ 32673	HD 32923	HD 32963	HD 33021	HD 33108	HD 33142	HD 33240	HD 33283	HD 33298	HD 33334	HD 335129	HD 33636

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	<rv></rv>	ops	σ_{RV}
		-2450000	(days)	(km s ⁻¹)		(km s ⁻¹)
33822	>	3723	1059	-6.639	3	0.173
33844	>	4931	973	36.307	20	0.135
3404	>	4411	317	5.770	9	0.080
34411	>	4147	1983	66.497	87	0.135
34445	>	4712	1973	-78.867	22	0.122
34575	>	4309	707	-23.592	ಬ	0.113
3458	>	4585	202	-4.607	9	0.365
34721	>	4311	1682	40.475	32	0.130
34745	>	3725	262	35.225	2	0.090
34887	>	4346	1975	-25.569	26	0.115
34909	>	4736	973	-0.426	9	0.090
34957	>	4560	1567	0.909	31	0.419
3545	>	4773	1174	-24.951	28	0.107
355183	>	4161	1120	-16.025	24	0.107
35627	>	3626	262	27.220	3	0.054
3578	>	3695	2	3.187	3	0.034
3592	>	3695	2	7.395	33	0.034
35974	>	3725	262	76.502	2	0.045
36003	>	4168	1769	-55.558	69	0.111
36130	>	3697	654	-62.445	2	0.145
36215	>	3849	738	-16.323	7	0.131
36308	>	3662	646	26.064	7	0.111
36387	>	3779	2	37.290	က	0.061
36395	M	4313	1917	8.676	12	0.170
3651	>	3949	2140	-32.940	63	0.109
3684	>	4158	295	-23.238	က	0.064
36974	>	4646	471	15.106	9	0.847
3700	>	3689	893	-1.356	က	0.141
37006	>	4356	1771	-11.556	4	0.154
37008	>	3931	1772	-45.861	35	0.116
37124	>	4118	1990	-23.054	27	0.096
37213	>	3427	0	12.264	1	NaN
37216	>	4441	1771	11.418	ಬ	0.097
37250	>	5299	29	43.275	2	0.005

Table 3—Continued

$\sigma_{\rm RV}$ (km s ⁻¹)	0 111	0.114	0.153	0.483	0.286	0.107	0.175	NaN	0.278	NaN	0.056	0.093	0.110	0.149	0.183	0.088	NaN	0.126	0.329	0.177	0.023	0.184	0.093	0.136	0.142	0.101	0.106	0.121	NaN	NaN	NaN	0.170	0.103	0.105	0.097
Obs	1	- (×	4	12	09	19	1	4	1	3	4	46	3	ಬ	3	1	ಬ	6	30	3	12	92	œ	10	18	10	12	1	1	1	က	7	က	6
<rv> (km s⁻¹)</rv>	1 202	1.323	38.804	24.019	-22.197	-63.191	1.321	-28.427	-45.481	2.949	20.667	59.202	-29.212	43.522	-9.570	-9.152	18.969	-17.783	75.613	30.247	-14.786	-25.370	31.507	3.485	1.654	-1.700	10.170	8.977	-9.594	48.226	48.733	-33.724	32.695	62.824	28.802
ΔT	1046	1940	973	1380	1191	2137	1961	0	1844	0	2	1060	1886	349	684	480	0	1091	981	1570	0	1093	1922	1746	1482	1480	447	981	0	0	0	385	981	745	974
<jd></jd>	4064	4004	4885	4305	4264	4160	3670	3339	4515	3427	3779	3813	4128	3642	3517	5116	3339	3999	4826	4564	4258	4315	3849	4471	4172	4219	4206	4938	3398	3339	3340	3468	4812	3724	4781
Template ^a	12	> ;	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	M	M	>	>	>	>	>	>	>	>	>
Star Name	MD 97904			HD 37484	HD 37605	HD 3765	HD 377	HD 37879	HD 3795	HD 37962	HD 37977	HD 37986	HD 38230	$^{+}$ HD 38308	1 HD 2 38392	$^{+}$ HD 38393	HD 38400	$^{ m HD} 38467$	$^{ m HD} 38505$	$^{ m HD}$ 38529	HD~3861	$^{ m HD} 38801$	HD 38858	$^{ m HD} 38949$	HD 38a	48 P	$^{ m HD}\ 39094$	HD 39142	HD 39251	HD 39352	HD 39480	$^{ m HD}$ 39715	HD 39731	HD 39796	HD 39828

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km \ s^{-1}})$
HD 39833	>	3817	791	24.891	က	0.064
HD 39881	>	4214	1438	0.320	13	0.087
HD 39997	>	4024	0	10.263	П	NaN
HD 40126	>	3339	0	35.865	П	NaN
40330	>	3779	2	56.603	3	0.059
40397	>	3993	1789	143.356	54	0.098
40537	>	4736	988	53.783	_∞	0.123
HD 40647	>	4489	1771	-14.112	9	0.287
HD 4075	>	3642	693	-9.485	3	0.110
HD 40979	>	4075	1772	32.597	7	0.127
HD 4113	>	4242	229	4.944	7	0.096
HD 41484	>	3339	0	0.385	П	NaN
HD 41593	M	3974	674	-9.644	7	0.133
HD 41700	>	4149	1804	27.944	ಬ	0.359
HD 4203	>	4452	1657	-14.092	14	0.131
HD 4208	>	4843	1566	56.785	ಬ	0.074
HD 42182	>	3333	0	60.735	Н	NaN
HD 42250	>	3577	353	19.806	2	0.263
HD 4256	>	4387	1980	9.426	52	0.109
HD 42581	M	4033	1830	4.738	13	0.119
HD 42618	>	4626	1923	-53.500	164	0.127
42698	>	3750	52	18.707	2	0.013
HD 4313	>	4927	1038	14.482	30	0.113
HD 43162	>	4114	1533	22.089	∞	0.092
43296	>	3779	2	-8.388	3	0.057
43691	>	4156	1689	-28.916	4	0.045
HD 43745	>	3401	0	-2.423	П	NaN
43947	>	4377	1798	40.880	9	0.221
HD 4395	>	4710	795	-0.439	7	0.158
HD 4406	>	4007	1223	2.431	13	0.353
HD 44420	>	3713	623	-0.439	2	0.285
HD 44614	>	3484	0	32.807	П	NaN
HD 44663	>	3369	0	5.919	П	NaN
HD 44985	>	3401	0	32.481	П	NaN

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km}\ {\rm s}^{-1})$
HD 45067	>	3414	26	47.311	2	0.261
HD 45161	>	3780	3	-16.441	3	0.167
HD 45184	>	4113	1800	-3.859	117	0.119
HD 45210	>	4866	943	53.781	10	0.565
HD 45350	>	4308	1982	-20.649	18	0.089
HD 45410	>	5273	34	39.477	2	0.139
HD 45588	>	3973	1145	36.220	2	0.086
HD 45652	>	3941	651	-5.021	4	0.188
HD 457	>	3604	0	-19.447	П	NaN
HD 46013	>	3779	2	-67.985	3	0.078
HD 4614	>	5017	789	8.397	37	0.117
HD 4614b	M	4862	1147	11.196	26	0.107
HD 4628	>	4859	1319	-10.229	79	0.121
HD 4635	>	4349	1443	-31.508	ಬ	0.107
HD 46375	>	4602	1918	906.0-	9	0.095
HD 47157	>	4725	1469	25.215	27	0.056
HD 47186	>	4618	1947	4.322	11	0.103
47309	>	3779	2	27.765	33	0.049
HD 4741	>	3495	513	11.513	2	0.017
HD 4747	>	4506	1960	10.078	23	0.117
47562	>	4744	988	17.309	∞	0.100
HD 47625	>	3441	98	31.181	2	0.237
HD 47752	>	3940	1411	-44.389	10	0.148
HD 48122	>	4803	913	2.698	∞	0.148
HD 4813	>	4516	1292	8.303	3	0.135
HD 48345	>	5290	0	24.701	П	NaN
48682	>	4730	1199	-23.907	33	0.101
48938	>	3401	0	-10.293	П	NaN
HD 4915	>	4687	1448	-3.729	49	0.129
HD 4917	>	5039	916	-11.482	31	0.114
HD 49197	>	4437	1738	10.398	3	0.126
HD 49674	>	4647	1944	12.034	22	0.148
	>	2006	945	84.308	6	0.132
HD 50281	>	3969	1742	-6.985	က	0.149

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	<rv></rv>	ops	$\sigma_{ m RV}$
		-2450000	(days)	$(\mathrm{km}\;\mathrm{s}^{-1})$		$(\mathrm{km}\;\mathrm{s}^{-1})$
HD 5035	Λ	3931	0	-7.177	1	NaN
HD 50499	>	4507	1946	36.883	16	0.206
HD 50554	>	4637	1916	-3.919	7	0.094
$^{+}$ HD $^{-}$ 50639	>	5099	447	-4.066	3	960.0
$^{+}$ HD $^{-}$ 50692	>	4466	1974	-14.968	64	0.178
$^{+}$ HD 20806	>	3713	623	72.443	2	0.167
HD 51046	>	3381	32	0.470	ಬ	0.088
HD 51067a	>	3778	0	13.184	Н	NaN
HD 51067b	>	3778	0	13.548	П	NaN
HD 51219	>	3401	0	-7.809	П	NaN
HD 5133	>	4408	1239	-13.071	4	0.072
HD 51419	>	5041	1257	-26.804	88	0.124
HD 51813	>	3778	1	36.427	2	0.076
HD 51845	>	3601	349	23.616	2	0.089
HD 51866	>	4442	1735	-21.656	32	0.118
HD 52265	>	3806	1857	53.763	29	0.126
HD 52456	>	3383	87	-12.138	2	0.036
HD 52711	>	4599	1861	24.585	95	0.115
HD 52919	>	4201	1411	-30.526	9	0.090
HD 5294	>	4065	615	-8.202	3	0.029
HD 5319	>	4289	2013	0.344	44	0.105
HD 531a	>	3422	367	13.338	2	0.149
HD 531b	>	3422	367	14.525	2	0.157
HD 533	>	3002	0	24.101	П	NaN
HD 53532	>	4077	417	42.868	9	0.102
$^{ m HD}$ 53665	>	3713	623	-14.543	2	0.200
HD 5372	>	3931	0	0.698	Н	NaN
HD 55575	>	4923	1214	84.769	47	0.135
HD 55647	>	3692	2	-16.717	33	0.084
HD 55696	>	4335	1799	19.631	6	0.135
$^{+}$ HD $^{-}$ 56083	>	4497	1573	-11.680	7	0.132
HD 56122	>	5290	0	24.363	П	NaN
HD 56274	>	3383	88	66.529	2	0.134
HD 56303	>	3401	0	8.431	П	NaN

Table 3—Continued

Star Name	$\mathrm{Template}^{\mathrm{a}}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km \ s^{-1}})$		$({\rm km}~{\rm s}^{-1})$
HD 56322	>	3778	0	6.295	1	NaN
HD 56957	>	3398	0	54.806	П	NaN
HD 57204	>	4165	447	-13.211	∞	0.072
HD 57813	>	3984	က	46.063	4	0.036
$^{+}$ HD 58727	>	3984	က	-13.584	4	0.047
HD 58781	>	3383	88	4.920	2	0.115
HD 5891	>	2006	916	-96.564	22	0.241
HD 59062	>	3481	0	46.114	П	NaN
HD 5946	>	3983	2	-2.850	4	0.057
HD 60041	>	3481	0	-77.051	Н	NaN
HD 6019	>	4827	459	-23.812	ស	0.247
HD 60234	>	3590	328	-0.242	2	0.408
HD 60491	>	4154	1888	-9.586	ល	0.142
$^{ m HD}$ 60521	>	3725	0	29.355	Н	NaN
HD 60737	>	5149	450	6.448	ಬ	0.045
$^{+}$ HD $^{+}$ 60803	>	3697	0	47.102	П	NaN
$\overline{\text{HD}}$ 61005	>	4910	1177	22.558	ಸು	0.081
HD 61236	>	3601	349	3.903	2	0.691
HD 61364	>	3705	31	-10.536	3	0.033
HD 61447	>	3587	378	89.308	2	0.133
$^{ m HD}$ 61606	>	4154	1888	-18.085	ಸು	0.144
$^{ m HD}$ 61994	>	4207	1828	-16.429	ಬ	0.920
HD 61995	>	5290	0	-36.443	1	NaN
$^{+}$ HD 6 2068	>	5290	0	-66.510	T	NaN
HD 62128	>	4087	1090	107.066	9	0.231
$^{\rm HD}$ 62613	>	4141	1943	-7.861	20	0.137
HD 6268	>	3983	0	38.966	П	NaN
$^{ m HD}$ 62694	>	3779	2	-30.779	33	0.172
$^{ m HD}$ 62857	>	3778	1	13.142	2	0.029
$^{ m HD}$ 63754	>	3383	88	44.963	2	0.117
HD 64324	>	4203	1767	17.182	9	0.105
HD 64413	>	5052	952	15.856	16	0.122
HD 64502	>	3558	436	55.165	2	0.048
HD 64730	>	4812	952	15.976	6	0.194

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.084	0.120	0.038	0.146	0.078	0.322	0.090	0.127	0.114	0.152	NaN	0.119	0.054	0.001	0.080	0.103	NaN	0.186	0.091	0.139	NaN	0.086	0.121	0.626	0.126	0.153	0.391	NaN	0.491	0.043	0.090	0.100	0.124	0.117
Obs	7	4	3	25	2	18	10	2	61	2	П	19	ಬ	2	ಬ	∞	П	2	ಬ	103	1	10	2	က	က	20	က	1	ಬ	4	9	က	143	9
$\langle RV \rangle$ $\langle km \ s^{-1} \rangle$	-8.022	-8.280	10.246	-4.457	-11.239	-28.568	-8.135	8.839	14.796	36.520	26.216	44.143	25.094	-24.752	-23.680	-94.606	26.906	-15.689	-44.272	29.496	-69.928	9.076	-34.681	-35.158	51.726	-69.383	2.670	20.395	-8.894	-2.864	-31.840	17.486	30.207	32.292
ΔT (days)	1538	82	405	1974	2	1566	1827	367	1975	28	0	1944	735	405	1192	1625	0	88	1919	1946	0	1125	694	1486	503	1943	2	0	383	1776	1950	415	1261	1060
<jd></jd>	3935	3715	4257	4371	3695	4614	4010	3422	4071	3384	3481	4057	3864	4226	3999	4661	3370	3383	4424	4314	5290	4244	3586	3996	3536	4441	3779	3340	3598	4241	4307	3507	4988	3727
Template ^a	Λ	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	HD 64942	$^{ m HD}$ 65080	HD 6512	$^{ m HD}$ 65277	HD 65368	HD 65430	HD 65486	HD 6558	HD 65583	HD 66171	$^{ m HD}$ 66221	HD 66428	HD 66485	$_{1}^{1}$ HD $_{2}$	HD 6715	HD 6734	HD 67346	HD 67458	HD 67767	$^{ m HD}$ 68017	$^{ m HD}$ 68165	$^{+}$ HD $^{-}$ 68168	HD 6872a	HD 6872b	HD 68978	HD 68988	HD 69027	$^{ m HD}$ 69026	$92069~\mathrm{OH}$	HD 691	HD 6963	HD 69809		HD 69960

Table 3—Continued

Star Name	Templatea	<jd></jd>	Δ	<rv></rv>	Obs	σRV
		-2450000	(days)	$(\mathrm{km}\ \mathrm{s}^{-1})$		$({\rm km \ s^{-1}})$
$\overline{\text{HD}}$ 70516	>	4335	1804	8.481	ಬ	0.153
HD 70573	>	4862	1146	20.133	J.	0.049
HD 71067	>	3778	0	-1.017	Н	NaN
HD 71334	>	3751	761	17.389	33	0.148
HD 71479	>	3507	415	60.142	33	0.100
HD 71835	>	3572	349	-1.204	2	0.250
HD 71881	>	3426	0	13.699	Н	NaN
HD 72003	>	4830	1134	-6.950	6	0.130
HD 72429	>	4658	798	79.290	7	0.282
HD 72440	>	4871	1096	-33.261	7	0.119
HD 72490	>	4992	943	31.512	18	0.121
HD 72616	>	3481	0	24.101	П	NaN
HD 72659	>	4299	1974	-18.294	27	0.135
HD 72673	>	3969	1915	14.666	45	0.128
HD 72687	>	5144	450	21.951	70	0.109
HD 72905	>	4285	1827	-12.715	_∞	0.122
HD 73226	>	3968	1693	25.670	10	0.120
HD 73256	>	4677	1834	29.736	9	0.253
HD 73534	>	4355	1765	9.720	32	0.137
12 HD 13	>	4515	1920	-12.123	29	0.102
HD 73933	>	4131	0	0.598	П	NaN
HD 73940	>	3634	323	13.057	3	0.163
HD 74104	>	3587	320	-4.258	7	0.007
HD 74156	>	4818	1947	3.833	27	0.090
HD 74390	>	4870	1134	-58.086	∞	0.148
HD 745	>	5379	0	-2.357	1	NaN
$^{+}$ HD 74669	>	5288	25	26.821	7	0.094
HD 74777	>	3698	1	-20.251	2	0.080
HD 7510	>	4072	447	-35.616	ಬ	0.097
HD 7530	>	4717	734	55.245	9	0.073
HD 75407	>	5321	1	-25.430	7	0.034
HD 75576	>	3484	0	-12.343	П	NaN
HD 75732	>	4565	2013	27.360	378	0.130
$\overline{\text{HD}}$ 75732b	M	4433	1495	27.356	15	0.104

Table 3—Continued

σ_{BV}	$(\mathrm{km\ s}^{-1})$	0.105	0.122	0.051	NaN	0.125	0.121	0.269	0.177	0.145	0.004	NaN	0.130	NaN	0.048	0.128	NaN	0.088	NaN	0.107	0.274	0.122	0.129	0.049	NaN	0.065	0.134	0.112	0.077	0.241	0.113	0.160	NeN	INGIN
Obs	,	13	30	2	1	4	∞	2	4	9	2	1	12	1	3	∞	1	2	1	∞	9	374	က	9	1	4	9	2	4	47	∞	က		1
<rv></rv>	$(km s^{-1})$	45.415	21.790	-34.605	32.276	-12.576	-16.402	15.328	5.565	31.129	3.286	-40.520	-15.808	28.397	2.006	-44.051	2.832	5.087	72.179	11.224	12.683	-22.711	4.031	11.248	20.023	-6.714	50.896	909.6	-47.871	3.948	30.014	34.993	41.726	1
Δ T	(days)	1892	1885	1	0	1766	913	2	646	1384	355	0	1162	0	2	1096	0	1	0	1829	1176	2046	2	794	0	407	1086	367	က	1976	913	2	О)
<jd></jd>	-2450000	4333	4340	3698	5232	4252	4750	3779	3861	4305	3547	3778	4997	3481	3695	4764	3481	3778	3481	4069	3722	4620	3779	4661	3481	3845	3985	3422	3695	4703	4755	3779	3725	
Templatea	•	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	M	M	>	>	>	>	>	>	>	>	>	>	>	>	
Star Name		HD 75784	HD 75898	HD 76078	HD 76151	HD 76218	HD 76445	HD 76539	HD 76617	HD 76780	HD 76909	HD 76974	HD 77172	HD 77519	$^{+}$ HD 77803	HD 77818	HD 78277	HD 78538	HD 78752	HD 79210	HD 79211	HD 7924	HD 79282	HD 7931	HD 79498	$^{ m HD}\ 80355$	$^{+}$ HD $^{+}$ 80367	HD 8038	HD 804	90908 CH	HD 80811	HD 80846	HD 80903	

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km~s^{-1}})$
HD 81324	>	3779	2	33.418	3	0.134
$^{ m HD}$ 81505	>	3481	0	17.279	П	NaN
HD 81856	>	3587	321	17.028	2	0.020
$^{ m HD}$ 82460	>	3779	2	9.579	33	0.115
HD 8250	>	5257	0	5.364	П	NaN
$^{ m HD}\ 82886$	>	4993	1156	12.554	24	0.119
HD 82905	>	3779	2	5.058	33	0.141
HD 82943	>	4791	1975	8.111	38	0.137
HD 83024	>	4750	913	4.556	œ	0.159
HD 8328	>	3599	720	-3.874	2	0.076
HD 83394	>	4933	1162	40.345	6	0.138
HD 834	>	4294	405	5.199	33	0.112
HD 83443	>	4292	1829	28.990	4	0.112
HD 8389	>	4387	1778	34.626	57	0.109
HD 83983	>	3778	1	30.812	2	0.117
$^{ m HD}$ 84035	>	4600	1829	-12.271	23	0.104
HD 8407	>	4664	794	-6.833	7	0.064
HD 84117	>	4739	2006	34.687	20	0.146
HD 84453	>	5334	88	-44.436	2	0.125
HD 8446	>	4210	405	19.785	ಸು	0.123
HD 84501	>	3481	0	2.795	Н	NaN
HD 8467	>	4394	1958	14.712	7	0.111
HD 84703	>	3481	0	22.288	П	NaN
HD 84737	>	4825	1296	4.881	33	0.134
$^{ m HD}$ 8208	>	4930	916	9.086	18	0.149
$^{ m HD}~85301$	>	4588	1861	15.345	17	0.101
HD 85440	>	4940	1069	-4.184	10	0.127
HD 85472	>	4869	1068	-9.954	∞	0.100
HD 8553	>	4036	1193	868.9	7	0.112
$^{ m HD}$ 85689	>	4378	1483	8.562	21	0.133
$\overline{\text{HD}}$ 85725	>	3921	1854	61.744	4	0.201
HD 8574	>	4609	1958	19.041	9	0.094
	>	3824	1479	30.882	29	0.184
$^{ m HD}$ 86329	>	5333	87	17.864	2	0.016

Table 3—Continued

HD 8648 HD 86728 HD 87230 HD 87359 HD 87424 HD 87424 HD 87669 HD 87669 HD 87836 HD 87833 HD 88133 HD 88133 HD 88218 HD 88218 HD 88218 HD 8829 HD 88269 HD 8859 HD 8859 HD 88609 HD 88654 HD 88656 HD 88656 HD 88656 HD 88656	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	4067 4067 4074 3779 4975 4545 3705 3708 4889 4017 4947	(days) 1787 2005 2 1157	(km s^{-1}) 0.859	m	(km s^{-1})
8648 86728 87720 87730 87730 877424 877424 877424 877424 877424 877424 877424 8775 8783 87712 88134	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	4067 4074 3779 4975 4545 3705 3728 4889 4017	1787 2005 2 1157	0.859	m	0
86728 87001 87230 87359 87424 8765 8765 87669 877836 877836 8773 88133 88134 88133 88134 88230 88230 88230 88230 88230 88238 88371 88402 8859 88654 88654 88656	>>>> >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	4074 3779 4975 4545 3705 3728 4889 4017	$\frac{2005}{2}$,	0.099
87001 87230 87230 87424 8765 8765 87669 87836 88133 88134 88133 88134 88230 88230 88230 88230 8823 88371 88402 8859 88654 88654 88655	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	3779 4975 4545 3705 3728 4889 4017	$\frac{2}{1157}$	55.955	64	0.145
87230 87359 87424 8765 87669 877836 877836 87783 88133 88134 88230 88230 88230 88230 88230 8823 88371 88402 8859 88654 88654 88655	>> \\ > > \> > > > > > > > > \>	4975 4545 3705 3728 4889 4017	1157	-26.036	3	0.134
87359 87424 8765 87669 87836 87833 88133 88134 88230 88230 8823 8823 8823 8823 8823 88	> \(> > > > > > > > > > > > > > > > > >	4545 3705 3728 4889 4017		42.625	11	0.123
87424 8765 87669 87836 87833 88072 88133 88134 88230 88230 8828 88371 88402 8859 88659 88654 88654 88656	Z>>>>>>>>>>>>>	3705 3728 4889 4017 4947	П	0.553	2	0.044
8765 87669 87836 87833 88072 88133 88134 88230 88230 8823 8823 8823 88371 88402 8859 88659 88654 88654 88656	>>>>>>>>>>>	3728 4889 4017 4947	1178	-11.723	4	0.316
87669 87836 87833 88072 88133 88134 88230 88230 8823 8823 8823 88371 88402 8859 88659 88654 88654 88656	>>>>>>>>>>	4889 4017 4947	09	-23.399	11	0.076
87836 87883 88072 88133 88134 88230 8823 8823 8828 88371 88402 8859 88659 88654 88654 88656 88775	>>>>>>>>	4017	1161	8.257	10	0.107
87883 88072 88133 88134 88230 88230 8828 88371 88402 8859 88609 88654 88654 88656 88775	>>>>>>	4947	1558	-42.128	33	0.116
88072 88133 88134 88238 88230 8828 88371 88402 8859 88609 88654 88654 88656 88775	>>>>>)	739	9.188	35	0.126
88133 88134 88238 88230 8828 88371 88402 8859 88609 88654 88654 88656 88775	>>>>	3573	350	-17.778	2	0.276
88134 88218 88230 8828 88371 88402 8859 88609 88638 88654 88656 88775	>>>	4122	1825	-3.454	12	0.119
88218 88230 8828 88371 88402 8859 88609 88638 88654 88656 88775	> >	4799	1096	21.617	∞	0.094
88230 8828 88371 88402 8859 88609 88638 88654 88656 88725	Σ	3427	0	36.322	1	NaN
	1.1	4390	932	-25.710	18	0.170
	>	4256	1437	13.603	27	0.104
	>	4186	1441	82.463	4	0.070
	>	3779	2	34.453	က	0.140
	>	3610	743	24.586	2	0.102
	>	4258	0	-38.237	1	NaN
	>	3778	1	49.355	2	0.130
	>	5055	1159	-6.933	13	0.102
	>	4049	1441	8.252	9	0.186
	>	3761	733	-22.016	က	0.187
	>	3779	2	-26.633	3	0.131
98688 QH	>	4167	1920	29.106	က	0.033
HD 89022	>	3779	2	-33.598	က	0.057
HD 8907	>	4379	1957	8.966	ಬ	0.169
HD 8912	>	3610	743	24.512	2	0.138
HD 89269	>	4745	1981	-7.557	94	0.125
HD 8939	>	4024	0	-5.838	1	NaN
HD 89391	>	4608	1096	29.603	12	0.108
HD 89454	>	3576	356	18.872	2	0.205
HD 89793	>	4051	1090	32.705	4	0.121

Table 3—Continued

Star Name	${ m Template}^a$	<jd></jd>	ΔT (days)	$\langle RV \rangle$ (km s ⁻¹)	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
98868 QH	Λ	3425	0	12.990	1	NaN
HD 90028	>	3479	0	12.098	2	0.005
HD 90043	>	5062	571	7.088	29	0.123
HD 90054	>	4112	950	48.645	က	0.205
HD 90125	>	4325	1980	-13.933	ಬ	0.100
HD 90156	>	4567	1954	26.918	70	0.147
HD 90211	>	3479	0	17.551	1	NaN
HD 90323	>	3479	0	10.565	1	NaN
HD 90383	>	3779	2	-34.012	က	0.087
HD 90432	>	3838	0	56.761	1	NaN
HD 90681	>	3779	2	4.241	3	0.112
HD 9070	>	3601	721	11.805	2	0.049
HD 90711	>	4552	187	29.903	21	0.090
HD 90722	>	3618	440	40.113	2	0.111
HD 90792	>	4784	1069	32.556	∞	0.105
HD 9081	>	4226	405	28.668	2	0.049
$^{+}$ HD $^{+}$ 90875	>	4900	1920	4.968	22	0.109
$^{+}$ HD 90905	>	4495	1801	16.726	9	0.118
HD 9113	>	4073	825	-32.621	4	0.120
HD 91148	>	3779	2	-23.126	3	0.124
HD 91204	>	4315	1834	-9.619	2	0.553
HD 91275	>	3779	2	-18.634	က	0.138
HD 91331	>	3779	2	-13.428	3	0.119
HD 91332	>	3779	2	-43.504	3	0.111
HD 91348	>	3779	2	8.193	3	0.145
HD 9156	>	4749	736	28.918	∞	0.095
HD 91702	>	3941	651	-46.684	4	0.145
HD 91856	>	3779	2	46.234	3	0.138
HD 91876	>	3820	456	-2.873	4	0.199
HD 91909	>	3779	2	20.943	3	0.138
HD 9218	>	4662	794	11.171	9	0.056
HD 92194	>	3778	1	-0.588	2	0.075
HD 92222a	>	3687	384	8.339	9	0.077
HD 92222b	>	3501	377	7.904	9	0.178

Table 3—Continued

Star Name	$\mathrm{Template}^{\mathrm{a}}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km}\ {\rm s}^{-1})$
HD 92266	>	5320	61	5.744	2	0.013
HD 92320	>	3779	2	2.805	3	0.246
HD 92719	>	4370	1954	-17.924	38	0.120
HD 92788	>	4311	1823	-4.399	7	0.180
$^{+}$ HD $^{-}$ 92885	>	3779	2	14.992	3	0.046
HD 92945	>	5073	615	22.900	4	0.057
HD 93215	>	3941	651	-15.301	4	0.139
HD 9331	>	3600	722	-19.961	2	0.043
HD 93396	>	4788	1103	34.959	∞	0.127
HD 93461	>	4788	1103	13.093	∞	0.114
HD 93664	>	3839	1003	-1.315	4	0.087
HD 93745	>	3494	326	38.200	4	0.390
HD 93811	>	3778	1	-0.814	2	0.045
HD 93849	>	3479	0	8.919	П	NaN
$^{ m HD}\ 93864$	>	4809	1097	15.935	∞	0.101
HD 93932	>	3479	0	43.653	П	NaN
HD 9407	>	4668	2046	-33.313	309	0.124
HD 94151	>	4038	1775	4.553	9	0.180
HD 94178	>	5320	61	9.958	2	0.019
$^{\rm HD}$ 94292	>	3779	2	27.630	33	0.125
HD 94375	>	3479	0	28.754	П	NaN
HD 94383	>	3779	2	44.596	3	0.137
HD 94482	>	3479	0	29.395	1	NaN
$^{\rm HD}$ 94587	>	3779	2	8.757	33	0.108
HD 9472	>	4657	1265	11.443	4	0.091
$^{\rm HD}$ 94834	>	4940	1164	2.813	11	0.107
$^{ m HD}~95022$	>	4052	1090	19.377	4	0.127
$^{+}$ HD $^{-}$ 95088	>	4345	1483	0.263	17	0.119
$^{+}$ HD $^{-}$ 95089	>	4932	1157	8.081	25	0.128
HD 95128	>	2096	449	11.293	24	0.108
$^{ m HD}$ 95188	>	4362	1827	6.023	7	0.083
HD 9518a	>	3600	722	-17.100	2	0.066
HD 9540	>	4672	0	2.598	1	NaN
HD 9540a	>	3490	745	2.456	4	0.154

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$(\mathrm{km}\ \mathrm{s}^{-1})$		$({\rm km}\ {\rm s}^{-1})$
HD 95456	>	3620	444	-1.227	2	0.148
HD 95526	>	4906	1098	22.059	œ	0.183
HD 9554	>	4630	202	-18.085	9	0.136
HD 9562	>	4410	1992	-14.990	_	0.132
HD 95622	>	4042	1395	-8.861	11	0.147
HD 95650	M	3806	1915	-13.832	12	0.104
HD 95735	M	4245	2004	-84.683	148	0.136
$^{ m HD}$ 95900	>	5337	88	4.483	33	0.086
HD 96063	>	5042	1156	-1.373	12	0.104
HD 96108	>	3369	0	-11.083	Н	NaN
HD 96167	>	4057	1805	12.031	41	0.132
HD 9625	>	4890	892	-26.883	12	0.640
HD 96361	>	4004	650	12.921	v	0.135
HD 96529	>	4148	1090	-14.752	9	0.129
$^{+}$ HD 96626	>	3778	0	23.107	П	NaN
HD 96683	>	4991	836	17.922	∞	0.143
00296 CH	>	4368	1530	12.787	ಬ	0.170
HD 9672	>	4724	0	-2.838	Н	NaN
$^{+}$ HD 96937	>	3479	0	10.474	П	NaN
HD 97038	>	3479	0	-3.176	П	NaN
68026	>	3398	0	-26.400	П	NaN
HD 97101	>	4803	1981	-16.159	24	0.102
HD 97101b	M	4567	1916	-15.421	17	0.098
HD 97343	>	4803	1628	39.789	99	0.132
HD 97584a	M	3697	732	9.114	4	0.095
HD 97645	>	3780	က	-7.324	33	0.127
$^{ m HD}\ 97658$	>	4999	1633	-1.706	178	0.119
HD 9782	>	3749	891	11.408	4	0.078
HD 97854	>	3849	156	-7.751	7	0.156
HD 98219	>	5044	1160	-10.458	15	0.119
HD 9826	>	4085	0	-28.351	П	NaN
	>	4258	1983	13.312	20	0.128
	>	3600	351	20.258	2	0.466
HD 98553	>	4354	1829	-36.612	ಬ	0.059

Table 3—Continued

Star Name	${ m Template}^{ m a}$	< JD > -2450000	ΔT (days)	$\langle \text{RV} \rangle$ (km s ⁻¹)	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
	>	3574	349	7.078	2	0.247
	>	3992	1470	13.530	9	0.954
	>	3370	1	-3.411	2	0.189
	>	3574	349	-40.311	2	0.281
	>	3980	1975	33.069	16	0.143
	>	4329	1896	4.171	110	0.134
	>	4236	2038	3.676	73	0.138
	>	4981	916	-30.256	12	0.110
	>	4749	1776	-20.984	38	0.145
	>	3492	436	-9.321	4	0.366
	>	3552	0	-115.163	1	NaN
	>	4838	1983	26.787	4	0.153
	>	5232	0	23.802	1	NaN
	>	5286	0	23.603	1	NaN
	>	5321	0	31.020	1	NaN
	>	5200	96	18.462	3	0.061
	>	3339	0	44.489	1	NaN
	>	5229	28	4.617	3	0.289
	\mathbb{Z}	3870	558	37.572	ಬ	0.114
	>	3517	383	22.226	3	0.138
	\mathbb{Z}	4036	1001	1.939	9	0.047
	\mathbb{Z}	3623	380	-3.548	က	0.105
	M	3721	483	-18.890	2	0.337
	\mathbb{Z}	3757	410	-1.750	2	0.117
	\mathbb{Z}	3837	1073	-84.256	3	0.116
	>	3333	184	-17.519	2	0.179
	M	4104	1896	26.159	6	0.194
	M	3601	722	25.784	2	0.012
	M	4479	1896	30.458	11	0.149
	M	4242	1434	5.081	10	0.178
	M	4524	1921	61.992	19	0.114
	M	4421	1858	-1.682	6	0.070
	M	4633	1921	-58.224	31	0.113
	M	4791	1796	-7.280	25	0.120

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km}\ {\rm s}^{-1})$
GJ 26	M	3966	1776	-0.383	14	0.115
GJ 272	M	4778	0	-31.158	П	NaN
GJ 273	M	4278	1921	18.210	20	0.095
GJ 317	M	4543	1862	87.728	56	0.117
GJ 357	M	4424	1920	-34.484	15	0.092
GJ 382	M	4147	1945	8.021	10	0.162
GJ 388	M	3803	1859	12.453	30	0.104
GJ 393	M	4436	1410	8.294	23	0.085
GJ 397	>	4252	1818	20.613	6	0.152
GJ 406	M	3918	1092	19.321	6	0.145
GJ 4063	M	3707	456	12.618	2	0.255
GJ 408	M	4383	1920	3.181	10	0.131
GJ 412a	M	4453	1828	68.675	103	0.139
GJ 433	M	4420	1921	17.934	14	0.110
GJ 445	M	4315	1915	-111.750	18	0.110
GJ 450	M	4434	1887	0.295	10	0.128
GJ 47	M	4654	1445	7.599	2	0.094
GJ 48	M	4475	1771	1.377	15	0.122
GJ 486	M	4083	1145	19.471	4	0.268
GJ 49	M	4136	409	-5.895	2	0.114
GJ 514	M	4519	1565	14.531	25	0.107
GJ 528b	>	4412	1922	-22.549	ಬ	0.180
GJ 546	>	4046	1806	-36.783	3	0.180
GJ 569a	M	4307	1894	-7.217	4	0.246
GJ 625	M	4310	1915	-13.063	34	0.139
$_{ m GJ}$ 667 $_{ m c}$	M	4346	1688	6.448	7	0.202
GJ 686	M	4324	1434	-9.499	37	0.112
GJ 687	M	4339	1537	-28.720	73	0.109
GJ 694	M	4487	1292	-14.328	14	0.084
GJ 699	M	4192	1692	-110.416	74	0.130
GJ 708	>	4279	0	2.332	1	$_{ m NaN}$
GJ 745a	M	4555	845	32.263	∞	0.106
GJ745b	M	4629	440	31.940	D	0.093
GJ 793	M	4224	1088	10.429	ಬ	0.083

Table 3—Continued

Star Name	Templatea	<jd></jd>	ΔT	<rv></rv>	Obs	σ_{RV}
	1	-2450000	(days)	$({\rm km~s^{-1}})$		$({\rm km \ s^{-1}})$
GJ 803	M	4180	1089	-4.499	14	0.155
GJ 806	M	4715	1468	-24.697	41	0.116
GJ 83.1	M	4003	1158	-28.308	9	0.192
GJ 87	M	4627	1238	-2.655	37	0.152
GJ 876	M	4312	1860	-1.519	20	0.157
GJ 905	M	4581	745	-77.715	∞	0.124
GJ 908	M	4469	1801	-71.084	52	0.169
gmaur	>	4385	1891	16.180	9	0.994
hat5	>	5286	0	7.759	П	NaN
hat9	>	5258	53	22.823	2	0.026
hii 1101	>	5087	450	5.563	3	0.357
hii 152	>	5087	450	5.807	33	0.044
hii 514	>	5087	450	4.976	33	0.070
HIP 100040	>	3573	ಬ	-98.254	2	0.099
HIP 10072	M	5151	118	17.642	33	0.066
HIP 101262	>	5203	352	-26.987	2	0.046
HIP 102332	^	5028	2	-73.673	2	0.312
HIP 102870	>	4720	1	-52.510	3	0.049
HIP 103256	>	4719	2	-39.414	4	0.129
HIP 103269	>	3585	721	-130.498	3	0.276
HIP 10337	>	4997	452	3.058	19	0.186
HIP 103650	>	4918	365	-29.652	10	0.166
HIP 104092	>	4719	2	-66.502	4	0.102
HIP 10416	>	4976	484	-8.576	7	0.081
HIP 104432	M	4579	1178	-58.200	20	0.147
HIP 10449	>	3605	729	27.893	2	0.223
HIP 105341	>	4719	2	18.079	4	0.120
HIP 1055	>	4736	87	-36.137	7	0.317
HIP 105904	>	3878	892	-64.110	4	0.177
HIP 107062	>	5029	0	-51.449	П	NaN
HIP 108056	>	3724	453	-97.943	3	0.167
HIP 108388	>	3574	ಬ	-16.960	7	0.132
HIP 108940	^	4722	10	-24.619	9	0.062
HIP 109388	M	4550	2137	-15.334	46	0.155

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT (days)	$\langle RV \rangle$ (km s ⁻¹)	Ops	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HIP 109555	M	4194	1064	-51.312	ಬ	0.087
HIP 109980	>	4921	472	-4.563	14	0.150
HIP 11000	>	4933	539	26.409	6	0.102
HIP 11048	M	4457	1896	-37.964	18	0.151
HIP 110750	>	4927	470	-20.659	10	0.101
HIP 110774	>	4837	471	0.802	4	0.078
HIP 112460	M	4210	1086	0.192	33	0.041
HIP 112496	>	5083	163	-23.929	ಬ	0.151
HIP 112918	>	4813	472	-7.787	ಬ	0.119
HIP 113026	>	4719	2	-17.765	4	0.137
HIP 113207	>	3817	089	-22.104	23	0.177
HIP 113409	>	4944	470	10.016	10	0.148
HIP 114156	>	4839	467	15.298	4	0.031
HIP 114411	M	4067	793	-6.676	7	0.131
HIP 114587	>	3937	089	2.493	9	0.180
HIP 114914	>	3603	0	-12.124	П	NaN
HIP 115004	>	5193	10	27.132	33	0.080
HIP 115332	M	4092	733	-6.504	က	0.034
HIP 115562	M	3967	2137	-33.184	7	0.071
HIP 116215	>	4722	2	-0.640	4	0.127
HIP 116838	>	4783	364	-18.154	9	0.121
HIP 117197	>	4888	469	-20.792	19	0.116
HIP 117386	>	3695	2	-10.935	က	0.128
HIP 117492	>	4816	469	-12.262	ಬ	0.173
HIP 117559	>	5164	324	-3.701	7	0.182
HIP 117886	M	4565	1422	-1.903	19	0.141
HIP 117946	>	4972	657	-11.442	6	0.114
HIP 118261	>	5054	657	1.702	28	0.131
HIP 118310	>	5189	က	6.494	33	0.037
HIP 12493	>	4817	470	72.885	ಬ	0.119
HIP 12635	>	5049	0	-3.455	П	NaN
HIP 12709	>	4740	69	34.053	4	0.171
HIP 1294	>	4779	2	-0.325	4	0.079
HIP 13342	>	4961	541	0.313	17	0.129

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.095	0.038 0.223	0.065	0.080	NaN	0.300	0.153	0.146	0.114	0.072	0.047	0.020	0.134	0.076	0.078	0.115	0.045	0.111	NaN	0.015	0.064	0.093	0.130	0.041	0.101	0.080	0.092	0.188	0.080	0.132	0.095	0.130	0.032
Obs	∞ ເ	ა 4	4	9	Н	64	_∞	22	4	ಬ	4	33	2	က	9	ಬ	33	22	П	33	ಬ	7	4	4	4	6	6	ro	21	25	2	4	ಬ
$\langle \mathrm{RV} \rangle$ $\langle \mathrm{km \ s^{-1}} \rangle$	-49.470	-1.291 2.822	40.386	39.134	5.203	-4.971	15.315	-10.994	31.102	-40.148	86.643	34.050	-161.665	16.928	16.023	83.869	-47.094	25.068	45.412	145.427	27.994	18.253	-78.582	23.394	14.402	-6.831	27.274	2.913	-8.865	-14.554	15.432	122.509	115.339
ΔT (days)	540	2 2137	269	483	0	1591	484	476	70	386	1104	П	731	150	483	412	2	2022	0	2	72	1958	72	288	09	1273	456	468	1278	1450	645	2	413
<jd></jd>	4945	3095 3972	3762	4928	3694	4202	5002	5042	5212	4856	3779	4724	3604	3702	4928	4861	3695	4019	5188	3692	5204	4162	5208	3767	3710	4641	4987	4816	4844	4727	3661	4779	4862
Template ^a	M	> ⊠	>	>	>	>	>	>	>	>	>	>	>	M	>	>	>	>	>	>	>	>	>	^	>	M	>	>	M	M	M	^	>
Star Name	HIP 13375	HIP 1368	HIP 14113	HIP 14729	HIP 14809	HIP 14810	HIP 15095	HIP 1532	HIP 15563	HIP 15673	HIP 15904	HIP 16134	HIP 16404	HIP 1734	HIP 17346	HIP 17496	HIP 1780	HIP 19165	HIP 19472	HIP 19946	HIP 19981	HIP 20218	HIP 20359	HIP 20705	HIP 21091	HIP 21556	HIP 22288	HIP 2247	HIP 22627	HIP 22762	HIP 23512	HIP 23516	HIP 24121

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	ΔT (days)	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Ops	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HIP 24141	>	3694	0	-7.256	П	NaN
HIP 24284	M	4548	1827	-24.999	15	0.113
HIP 25220	>	4987	484	38.254	10	0.138
HIP 26080	>	3779	2	-14.572	33	0.044
HIP 26196	>	5154	332	29.980	<u>_</u>	0.176
HIP 26857	M	4359	561	106.040	33	0.037
HIP 27793	>	3930	1116	7.549	ಬ	0.047
HIP 29052	M	4016	1029	13.640	6	0.091
HIP 29067	>	5190	1	-1.799	33	090.0
HIP 29548	>	5207	72	21.739	4	0.088
HIP 30112	>	5179	332	31.760	10	0.129
HIP 30979	>	4856	386	43.193	ಬ	0.055
HIP 3143	M	3766	354	12.249	4	0.169
HIP 31546	>	3695	2	6.343	33	0.046
HIP 32132	>	3719	83	16.220	9	0.123
HIP 32769	>	4946	483	-52.417	<u></u>	0.103
HIP 32892	>	3692	2	23.587	33	0.073
HIP 32919	>	4868	386	19.244	ಬ	0.134
HIP 33241	>	3864	1177	15.007	ಬ	0.162
HIP 33287	>	5188	0	31.134	П	NaN
HIP 3418	>	4816	469	-36.313	ಬ	0.192
HIP 35093	>	3695	2	-50.685	က	0.053
HIP 36338	M	3659	1176	1.685	9	0.208
HIP 36551	>	4862	385	65.876	ಬ	0.070
HIP 36635	M	5322	0	-17.917	1	NaN
HIP 36834	M	4027	1090	-41.708	13	0.141
HIP 37217	M	3853	1178	-28.833	4	0.147
HIP 37766	M	4018	1177	26.643	11	0.149
HIP 37798	>	5161	331	-34.465	7	0.229
HIP 38117	>	5043	420	-7.653	11	0.236
HIP 38340	>	4493	0	18.816	2	0.020
HIP 38969	>	5245	126	53.208	7	0.076
HIP 39939	>	3695	2	-8.074	က	0.050
HIP 3998	>	5189	2	6.693	4	0.036

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd></jd>	$\Delta T \\ (days)$	$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	Obs	σ_{RV} (km s ⁻¹)
HIP 40375	>	5036	511	21.316	16	0.106
HIP 40671	>	4923	483	13.385	9	0.123
HIP 40910	>	4879	358	6.992	ಬ	0.129
HIP 41130	>	4879	358	-27.105	ಬ	0.078
HIP 41443	>	5027	455	55.036	6	0.117
HIP 41689	M	4913	1975	-51.570	21	0.128
HIP 42220	M	4532	1917	11.309	20	0.290
HIP 42491	>	4105	1802	-20.050	ಬ	0.160
HIP 42567	>	4923	453	54.509	9	0.049
HIP 42731	>	3779	2	24.067	3	0.123
HIP 428	M	4292	1933	-0.287	13	0.175
HIP 43151	>	3695	2	15.962	3	0.076
HIP 43212	>	4866	920	2.819	7	0.127
HIP 4353	>	4722	2	7.727	4	0.154
HIP 43534	>	4950	483	-22.259	15	0.149
HIP 43667	>	4949	410	45.614	7	0.082
HIP 44072	>	4856	386	-50.545	ಬ	0.051
HIP 4454	>	5101	112	-51.402	ಬ	0.072
HIP 45042	>	4995	235	-27.301	4	0.069
HIP 45839	>	4808	ಬ	36.642	4	0.165
HIP 46018	>	5190	0	0.645	П	NaN
HIP 46199	>	5237	73	1.016	33	0.082
HIP 46343	>	4922	412	-6.589	11	0.087
HIP 46417	>	4949	454	-18.190	7	0.175
HIP 46627	>	3697	0	18.432	П	NaN
HIP 46655	M	3772	1177	46.107	4	0.228
HIP 46769	M	4330	1916	19.894	15	0.199
HIP 47201	>	4866	358	-36.400	9	0.077
HIP 47261	>	5190	0	-4.277	П	NaN
HIP 47455	>	3779	2	27.370	33	0.153
HIP 47513	M	4341	1892	11.493	∞	0.109
HIP 47650	M	3546	472	6.495	3	0.063
HIP 48139	>	4893	357	-20.978	9	0.108
HIP 48205	>	3697	0	15.718	П	NaN

Table 3—Continued

Star Name	$\mathrm{Template}^{\mathrm{a}}$	<jd></jd>	ΔT	$\langle \mathrm{RV} \rangle$	Obs	σ_{RV}
		-2450000	(days)	$({\rm km}\ {\rm s}^{-1})$		$({\rm km~s}^{-1})$
HIP 48411	>	4808	Ю	21.452	4	0.155
HIP 4845	M	4879	478	9.538	9	0.149
HIP 48714	M	4118	1440	15.430	9	0.080
HIP 48740	>	5155	332	-4.735	9	0.114
HIP 48855	>	4851	1104	50.236	∞	0.154
HIP 49091	M	5154	332	51.409	4	0.125
HIP 49197	>	5059	546	30.204	6	0.138
HIP 5004	>	3422	367	45.432	2	0.169
HIP 50341	M	5337	30	-10.688	2	0.155
HIP 50960	>	5094	332	19.415	ಬ	0.091
HIP 51007	M	4174	1945	21.800	9	0.371
HIP 51443	>	5114	539	31.476	12	0.120
HIP 5247	>	4861	413	2.661	ស	0.034
HIP 52942a	>	4357	1945	24.538	13	0.114
HIP 53020	M	3796	1178	-0.794	4	0.295
HIP 53327	>	5116	416	-26.223	4	0.118
HIP 53541	>	4808	4	-34.087	4	0.092
HIP 54459	>	5256	452	103.869	6	0.125
HIP 54498	>	3897	473	-11.462	4	0.150
HIP 54532	M	4527	1892	-3.821	12	0.098
HIP 54651	>	5143	332	37.054	ಸು	0.119
HIP 54810	>	4808	ಬ	16.435	4	0.145
HIP 55360	M	4740	1887	60.466	15	0.132
HIP 55368	>	3779	2	-13.224	3	0.153
HIP 55507	>	5230	448	-5.554	14	0.159
HIP 55915	M	5337	30	-3.148	2	0.419
HIP 5643	M	3605	0	27.840	1	$_{ m NaN}$
HIP 5663	>	5041	478	-4.765	22	0.145
HIP 56630	>	5114	357	-38.943	ಬ	0.239
HIP 57050	M	4962	1886	-9.006	26	0.113
HIP 57058	>	4808	ಬ	18.225	4	0.118
HIP 57087	M	4680	1982	9.544	169	0.107
HIP 57274	>	5244	575	29.701	30	0.140
HIP 57450	>	3399	0	64.732	1	NaN

Table 3—Continued

Star Name	${ m Template}^{ m a}$	<jd> -2450000</jd>	ΔT (days)	$\langle RV \rangle$ (km s ⁻¹)	Obs	$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$
HIP 57493	>	5032	484	0.360	6	0.095
HIP 57548	M	3428	114	-31.173	ಬ	0.087
HIP 57683	>	4808	4	11.568	က	0.114
HIP 5938	>	4461	1994	8.327	9	0.133
HIP 59406	M	3971	1177	-8.924	4	0.247
HIP 59406b	M	3604	468	-9.281	2	0.100
HIP 59431	>	3778	0	-4.003	П	NaN
HIP 59496	>	5040	332	-9.977	4	0.119
HIP 59748	M	4957	114	-13.240	ಬ	0.126
HIP 60093	M	5002	260	-0.665	7	0.118
HIP 60357	M	5358	28	-22.105	4	0.103
HIP 60559	M	3929	1146	51.096	33	0.306
HIP 60633	>	5358	28	12.841	4	0.078
HIP 61205	>	3935	35	-1.029	!~	0.110
HIP 61706	M	5082	423	-4.334	14	0.179
HIP 62406	>	5224	452	2.402	19	0.166
HIP 6276	>	4302	1935	10.549	ಸು	0.099
HIP 62794	>	4929	0	9.818	2	0.106
HIP 62847	>	5023	444	11.596	12	0.106
HIP 63257	>	5321	2	-7.336	4	0.099
HIP 6344	>	4816	470	-20.485	ಬ	0.163
HIP 63510	M	4609	266	-13.740	15	0.309
HIP 63759	>	5321	2	-17.423	4	0.045
HIP 63762	>	4887	236	-48.729	9	0.361
HIP 63894	>	5317	∞	-6.834	4	0.095
HIP 64048	>	5317	∞	-8.371	4	0.086
HIP 64262	>	5331	25	18.703	7	0.078
HIP 65016	M	2000	333	-11.540	ಬ	0.109
HIP 66074	>	5022	333	-30.851	9	0.122
HIP 66193	>	5317	∞	1.512	4	0.081
HIP 66222	M	5216	449	14.986	7	0.130
HIP 66283	>	5327	31	7.892	ಬ	0.100
HIP 66459	M	4066	1618	-14.518	11	0.124
HIP 67164	M	4090	1121	5.389	4	0.325

Table 3—Continued

σ_{RV}	(km s^{-1})	0.246	0.138	0.126	0.097	0.275	0.351	0.111	0.082	NaN	0.046	0.133	0.132	0.132	0.092	0.026	0.076	0.136	0.124	0.103	0.196	0.139	0.080	0.100	0.212	0.115	NaN	0.101	NaN	0.172	0.323	NaN	0
ops		∞	က	4	2	12	4	7	12	П	2	9	4	150	3	2	4	ಬ	က	က	21	7	4	2	18	36	П	25	Η	9	က	1	
$\langle \text{RV} \rangle$	$({\rm km \ s^{-1}})$	-45.112	-0.659	1.053	15.141	7.867	-1.351	-1.638	18.687	-7.481	-33.357	-26.337	-69.158	-9.523	-15.350	5.462	10.162	-35.942	1.397	-50.240	-4.656	-45.404	-73.034	-17.445	-25.945	-21.249	-0.461	4.145	8.351	-50.725	-44.404	-19.189	000
$\Delta \mathrm{T}$	(days)	455	9	22	185	1865	1243	459	1864	0	0	452	29	2136	2	Η	2	445	9	534	451	451	32	178	1961	1300	0	1914	0	484	969	0	000
<jd></jd>	-2450000	4991	3575	5351	3870	4600	4120	4223	4549	3778	5080	5119	5331	4555	3695	4929	5189	5034	3575	3744	5109	2002	5329	3516	4528	4507	5380	4726	5191	3872	3551	3479	1
${ m Template}^{ m a}$		>	>	M	>	M	M	M	M	>	>	>	>	M	>	>	>	>	>	>	M	>	>	>	M	M	>	M	>	M	M	M	
Star Name		HIP 67691	HIP 6778	HIP 67842	HIP 68461	HIP 70865	HIP 70975	HIP 71253	HIP 71898	HIP 73302	HIP 7339	HIP 73427	HIP 74346	HIP 74995	HIP 7728	HIP 77908	HIP 7830	HIP 78423	HIP 7924	HIP 79308	HIP 79431	HIP 79698	HIP 80096	HIP 80295	HIP 8051	HIP 80824	HIP 82408	HIP 83043	HIP 8361	HIP 83762	HIP 84099	HIP 84790	CO LIFE

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s}^{-1})}$	0.298	0.104	0.061	0.135	NaN	0.366	0.051	NaN	0.141	0.302	0.060	0.060	0.203	0.138	0.086	0.065	0.127	0.151	0.101	0.124	0.043	0.741	NaN	0.096	0.201	0.165	0.155	0.125	0.239	0.596	0.212	0.101	0.104	0.071
Obs	2	∞	4	4	1	2	2	1	4	4	2	3	∞	ಬ	15	4	15	16	9	6	3	25	1	6	4	101	11	24	6	7	35	114	18	3
$\langle RV \rangle$ (km s ⁻¹)	84,660	-66.098	-24.462	-39.517	-41.325	-0.842	-4.714	-36.087	-23.264	-11.418	-31.873	-10.535	-39.302	-14.846	-41.083	9.032	-12.314	-10.703	-33.930	-7.735	21.998	-22.489	-64.467	9.659	-28.778	14.766	-23.372	-40.639	7.703	-26.058	-10.525	-63.511	-22.390	28.676
ΔT (days)	239	1064	2	2	0	306	2	0	2	4	421	695	089	4	69	2	099	541	311	326	П	1039	0	263	1	742	1134	1135	65	267	1039	1040	1353	П
<jd></jd>	3360	4658	4719	4719	3933	3394	3399	3576	4719	4723	3758	3575	4010	4720	5347	4719	5057	4920	4822	4896	4719	4616	4456	4677	4549	2068	4305	4442	4222	4402	4947	4885	4319	4548
Template ^a	>	>	>	>	>	>	>	>	>	>	M	M	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	HIP 87062	HIP 87123	HIP 87464	HIP 89087	HIP 8920	HIP 89215	HIP 8943	HIP 90075	HIP 90376	HIP 916	HIP 91699	HIP 92403	HIP 92922	HIP 93119	HIP 93703	HIP 93871	HIP 97051	HIP 9788	HIP 99205	HIP 99332	HIP 99385	htr125-001	htr126-015	htr127-008	htr133-004	htr136-001	htr145-001	htr145-002	htr152-001	htr153-004	htr154-011	htr155-001	htr161-003	htr169-024

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.155	0.163	0.169	0.264	0.160	0.090	0.123	0.168	0.033	0.109	0.147	0.019	0.093	0.207	0.095	0.104	0.117	0.637	0.103	0.147	0.048	0.168	0.121	0.156	0.149	0.153	0.104	0.129	0.152	0.137	0.113	0.213	0.141
Olbs	25	18	17	20	9	ಬ	11	ಬ	2	2	4	33	47	12	29	6	7	6	က	က	9	14	12	72	∞	10	12	29	ಬ	∞	37	20	14
$\langle \mathrm{RV} \rangle$ (km s ⁻¹)	31.668	23.460	-9.999	-24.126	9.773	-14.183	22.210	-33.428	2.213	-23.242	0.399	-14.960	-1.317	-17.656	-20.393	-51.160	-9.588	-43.809	-51.049	-27.183	5.775	-22.143	-3.034	-2.698	18.729	4.779	-22.137	-11.250	42.205	-162.356	20.094	11.991	3.641
ΔT (days)	857	524	417	151	2	2	441	207	0	0	2	П	1103	649	715	176	121	2	П	П	2	1039	1449	1449	261	643	381	863	228	229	955	649	649
<jd></jd>	4558	4925	4361	4845	4956	4188	2022	4665	4188	5049	4188	4727	5055	4724	5180	4681	4470	4338	4603	4603	4338	4506	4059	4278	4688	4748	4612	4790	4783	4804	4797	4898	4942
Template ^a	>>	. >	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	htr170-004 htr173-008	htr176-001	htr176-002	htr176-007	htr180-001	htr182-001	htr183-005	htr185-002	$\rm htr 187\text{-}001$	htr188-001	htr188-002	htr189-001	htr191-001	htr194-006	$\rm htr195\text{-}003$	htr196-004	htr198-002	htr204-007	htr204-010	htr204-011	htr204-014	htr205-024	htr205-22	htr205-23	htr213-001	htr213-002	htr239-001	htr239-004	htr239-008	htr241-002	htr248-002	htr294-002	htr294-003

Table 3—Continued

			!	i		
Star Name	Template ^a	<1D>	ΔŢ	<-KV>	Ops	σ_{RV}
		-2450000	(days)	(km s^{-1})		$({\rm km \ s^{-1}})$
htr341-004	>	4840	556	-14.356	15	0.263
Kepler-4	>	5075	93	-60.975	23	0.168
Kepler-8	>	5050	152	-52.890	36	0.355
Kepler-6	>	5003	29	-49.222	11	0.107
Kepler-5	>	5020	125	-18.527	6	0.113
Kepler-7	>	5134	1	0.222	2	0.575
KIC 8394721	>	5351	0	-23.258	Π	NaN
KIC 5972334	>	5352	0	-62.979	П	NaN
KIC 10723750	>	5352	0	-12.784	П	NaN
KIC 3323887	>	5359	35	2.187	10	0.100
KIC 7287995	>	5351	0	0.533	1	NaN
KIC 7825899	>	5351	0	-21.275	П	NaN
lhs462	M	3706	454	0.491	2	0.252
lkca15	>	5259	54	18.187	2	0.011
pz99 j155847	>	4690	0	-7.436	П	NaN
pz99 j161459	>	4689	0	-0.987	П	NaN
pz99 j161618	^	4690	0	-8.416	1	NaN
rx j1600	>	4689	0	-0.901	1	NaN
s101438b	>	3501	599	-38.877	3	0.110
s11844	>	4080	1100	-17.089	9	0.133
s122446	M	4483	1536	-12.468	23	0.110
s130811	>	4645	2047	62.441	25	0.190
s92823	>	3622	784	26.000	3	0.075
sr21	>	4690	0	-26.537	1	NaN
tres1	>	4053	2052	-20.569	14	0.195
tres2	>	4260	662	-0.640	63	0.059
tres3	>	4343	1073	9.647	19	0.136
tres4	>	4829	913	-15.865	2	0.158
twhya	^	4962	655	12.600	2	0.334
usco j 160357	^	5257	0	93.108	1	NaN
usco j 160823	>	5257	0	283.156	1	NaN
v383lac	>	4355	1412	-18.624	4	0.950
wasp-1	>	4345	9	-13.430	37	0.089
wasp-2	>	4675	0	-27.958	1	NaN

Table 3—Continued

$\frac{\sigma_{\rm RV}}{({\rm km~s^{-1}})}$	0.126	0.232	0.058	0.318	NaN	0.042	NaN	NaN	NaN	0.071	0.532	0.046
Obs	28	14	2	4	П	2	Н	Н	П	3	43	2
$\langle RV \rangle$ (km s ⁻¹)	-5.409	18.921	9.940	-5.627	-49.251	2.780	21.001	57.414	1.972	46.856	-10.702	1.620
ΔT (days)	350	125	25	348	0	0	0	0	0	884	420	29
<jd></jd>	4655	5239	5243	4843	5232	5232	5232	5378	5232	4667	4876	5270
Template ^a	>	>	>	>	>	>	>	>	>	>	>	>
Star Name	wasp-3	wasp12	wasp13	wasp14	wasp17	wasp18	wasp19	wasp4	xo-1	xo-2	xo-3	xo-4

 $^{\rm a} \rm We$ used the Vesta spectrum as a template when V is listed, and a spectrum for HIP 80824 as a template when M is listed.

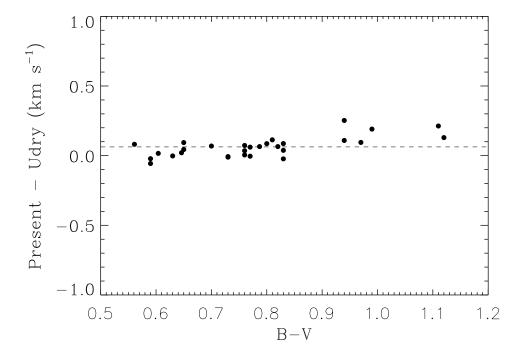


Fig. 1.— Difference between velocities of standard stars and velocities measured here, for stars in common with Udry et al. (1999a). The present velocities agree well with the standards, with an RMS scatter of 0.072 km s^{-1} and a zero-point difference of 0.063 km s^{-1} .

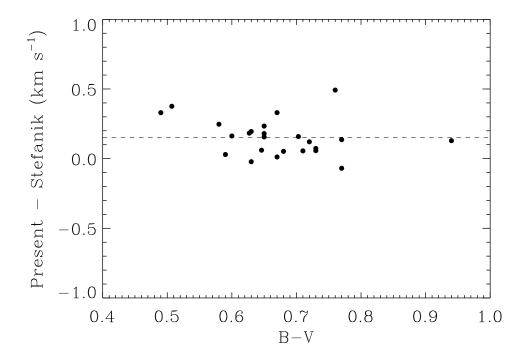


Fig. 2.— Difference between velocities of standard stars and velocities measured here, for stars in common with Stefanik et al. (1999). The present velocities agree well with the standards, with an RMS scatter of 0.13 km s^{-1} and a zero-point difference of 0.15 km s^{-1} .

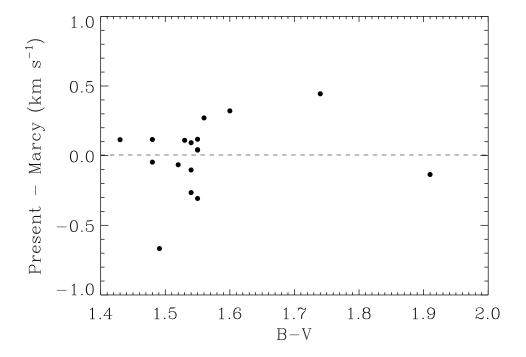


Fig. 3.— Difference between velocities of standard stars and velocities measured here, for M dwarfs in common with Marcy et al. (1987). The present velocities agree well with the standards, with an RMS scatter of 0.26 km s^{-1} and a zero-point difference of 0.005 km s^{-1} .

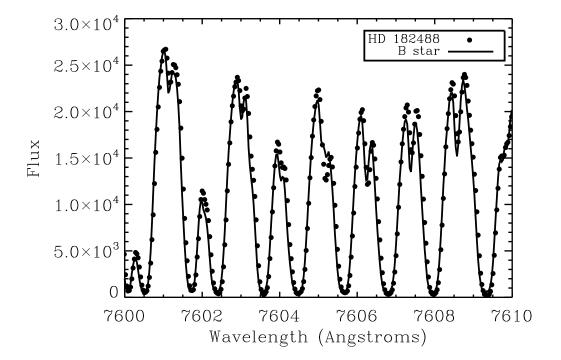


Fig. 4.— Telluric A band seen in both the reference B star, HD 79439 (solid line) and the program star, HD 182488 (dots). The spectrum of the program star is apparently displaced redward by 0.437 pixels, due entirely to a change in the zero-point of the wavelength scale caused by instrumental effects. This new zero-point is determined to within a hundredth of a pixel (13 m s⁻¹) by χ^2 fitting.

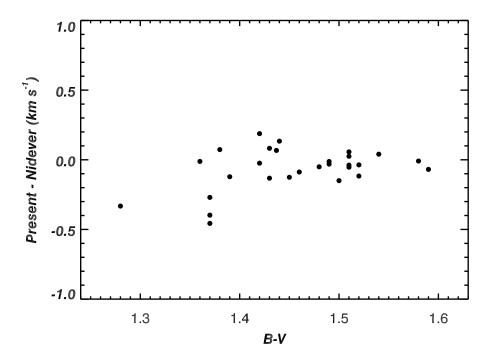


Fig. 5.— Difference between present velocities and those of Nidever et al. (2002) for all M dwarfs in common.

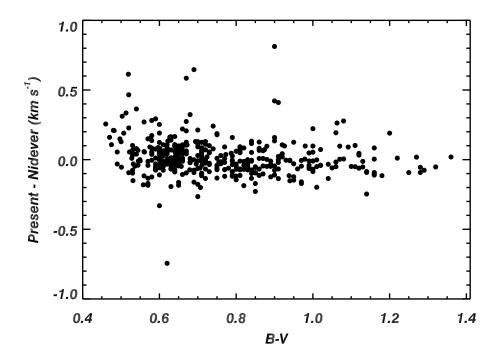


Fig. 6.— Difference between present velocities and those of Nidever et al. (2002) for all F,G, and K stars in common. Note that the stars with a velocity difference greater than 0.5 km s⁻¹ are actually confirmed binary systems.

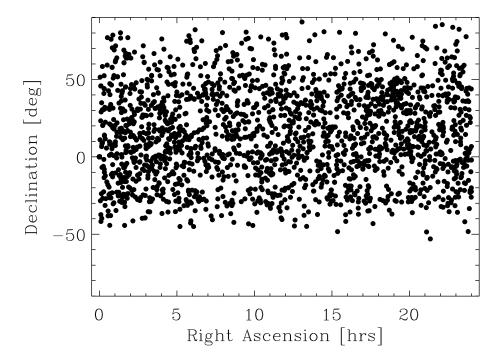


Fig. 7.— Location of the stars in this program in equatorial coordinates.