

Erratum

Do Si stars undergo any rotational braking?

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There was a bug in the code computing the surface gravity, for stars with $T_{\text{eff}} > 10700$ K. This implied a slight overestimate of $\log g$, by up to 0.15 dex, and affected part of Table 1, Fig. 1, 2 and 4. All other quantities (R, L, M, M_v) were unaffected, but the estimated errors on $M, \log T_{\text{eff}}, \log g, R$ were slightly biased. The corrected Table and Figures are reproduced below (the whole Table is reproduced although 26 lines were free of error).

In the text (Subsection 2.3), the scatter of the residuals around the regression line of Fig. 1 (left panel) is $\sigma_{\text{res}} = 0.283$ dex (instead of 0.273). In Subsection 2.4, the $\log g$ values quoted for HD 24155, HD 142884 and HD 221006 should read $\log g = 4.34, 4.54$ and 4.38 respectively (instead of 4.48, 4.67 and 4.51). Furthermore, the discussion about HD 221006 overlooked the recent determination of its projected rotational velocity $v \sin i = 40 \text{ km s}^{-1}$ by Leone et al. (1995), as Dr. Leone kindly pointed out to me; taking this result into account brings HD 221006 just below the equality line in Fig. 3 and nicely reconciles its $v \sin i$ with radius and period.

In Sect. 3, the surface gravities of CU Vir should read $\log g = 4.24 \pm 0.09$ for $T_{\text{eff}} = 12130$ K (instead of 4.37 ± 0.09) and $\log g = 4.36 \pm 0.09$ for $T_{\text{eff}} = 13000$ K (instead of 4.50 ± 0.08).

The discussion and conclusion remain essentially unaffected.

References

Leone F., Catalano F.A., Manfrè M., 1995, A&A 294, 223

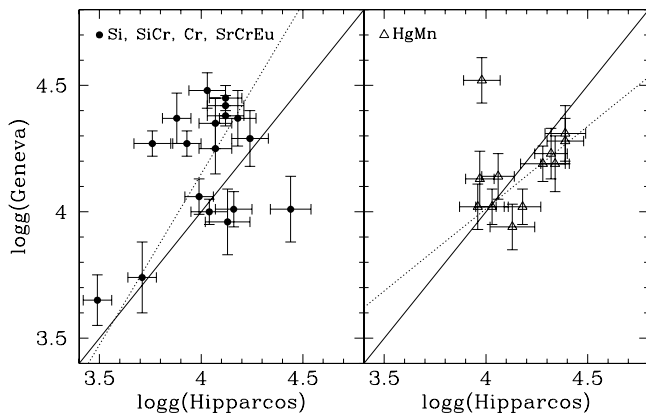


Fig. 1. left panel corrected.

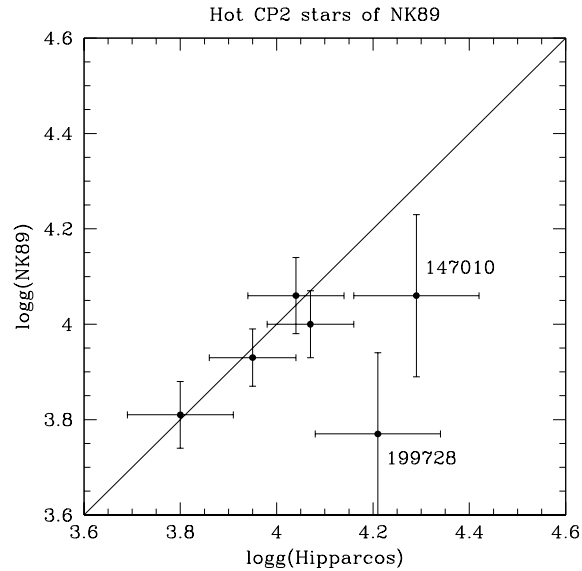


Fig. 2. corrected version

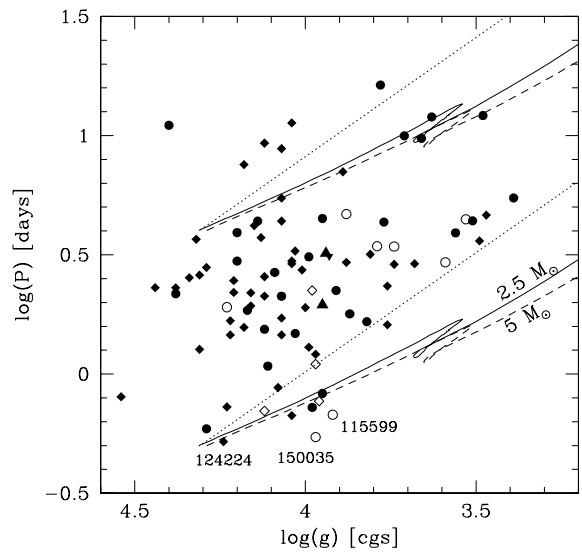


Fig. 4. corrected version

Table 1. Corrected version.

HD	M_V	Mass [M_\odot]	$\log T_{\text{eff}}$	$\log(L/L_\odot)$	$\log g$	R [R_\odot]	d [pc]	$\sigma(\pi)/\pi$	LK [mag]	P_{rot} [days]
4778	1.18	2.24± 9	3.972± 14	1.51± 7	4.12± 9	2.2± 2	93	0.07	-0.046	2.5616
9484	1.00	2.34± 12	3.987± 22	1.59± 9	4.12± 13	2.2± 3	128	0.09	-0.070	0.7?
9531	0.35	2.85± 16	4.039± 22	1.96± 10	4.04± 13	2.7± 4	126	0.10	-0.103	0.67
9996	0.68	2.47± 15	3.987± 23	1.72± 12	4.01± 14	2.6± 4	149	0.12	-0.143	8395 (23 y)?
10221	-0.28	3.12± 12	4.030± 22	2.19± 9	3.81± 11	3.6± 5	141	0.08	-0.069	3.18
11502	-0.15	2.87± 8	3.989± 18	2.05± 6	3.76± 9	3.7± 4	63	0.05	-0.026	1.60920
12767	-0.60	3.65± 18	4.111± 22	2.39± 9	4.00± 12	3.2± 4	114	0.09	-0.059	1.9
14392	0.26	3.07± 15	4.078± 22	2.04± 8	4.15± 12	2.4± 3	112	0.08	-0.056	4.189
18296	-0.54	3.32± 15	4.036± 22	2.31± 11	3.74± 13	4.1± 6	125	0.11	-0.109	2.8842
19832	0.25	3.16± 17	4.095± 22	2.04± 10	4.23± 13	2.3± 3	119	0.10	-0.096	0.7278972
24155	0.18	3.39± 21	4.132± 22	2.11± 12	4.34± 14	2.1± 4	145	0.12	-0.138	2.535
25267	-0.30	3.35± 11	4.080± 22	2.26± 7	3.97± 11	3.1± 4	103	0.07	-0.041	5.95
27309	0.34	3.06± 12	4.079± 14	2.02± 8	4.18± 9	2.4± 3	99	0.07	-0.052	1.569
29305	-0.39	3.33± 7	4.064± 15	2.29± 5	3.88± 7	3.5± 3	54	0.03	-0.006	2.94
32549	-0.98	3.29± 17	3.985± 23	2.37± 12	3.47± 14	5.5± 10	131	0.12	-0.144	4.64
32650	0.05	3.08± 14	4.059± 22	2.10± 7	4.01± 12	2.9± 4	117	0.06	-0.037	2.73332
34452	-0.42	3.95± 21	4.160± 22	2.42± 10	4.21± 13	2.6± 4	144	0.10	-0.097	2.4660
40312	-1.05	3.38± 8	3.997± 13	2.42± 6	3.49± 7	5.5± 5	54	0.04	-0.018	3.6190
49976	1.13	2.21± 11	3.955± 23	1.51± 8	4.04± 13	2.3± 3	104	0.08	-0.067	2.976
54118	0.35	2.73± 9	4.022± 17	1.89± 5	4.03± 9	2.7± 3	87	0.04	-0.015	3.28
56455	0.02	3.25± 15	4.096± 22	2.13± 7	4.16± 12	2.5± 3	133	0.07	-0.045	1.93
72968	1.06	2.25± 9	3.960± 14	1.55± 7	4.04± 9	2.4± 3	84	0.07	-0.047	11.305
74067	0.45	2.57± 7	3.988± 13	1.82± 6	3.93± 7	2.9± 3	87	0.05	-0.024	3.11299
74521	-0.02	3.01± 14	4.033± 22	2.11± 10	3.89± 12	3.3± 5	131	0.11	-0.103	7.0501
89822	0.76	2.57± 9	4.025± 16	1.72± 6	4.18± 9	2.2± 2	93	0.05	-0.020	7.5586
90044	0.71	2.51± 12	4.002± 22	1.73± 8	4.07± 12	2.4± 3	110	0.08	-0.054	4.379
92664	-0.37	3.86± 18	4.154± 22	2.38± 8	4.22± 12	2.5± 3	146	0.07	-0.053	1.673
103192	-0.55	3.36± 15	4.044± 22	2.33± 10	3.76± 12	4.0± 6	117	0.10	-0.091	2.34
112381	1.40	2.26± 12	3.999± 24	1.45± 9	4.29± 13	1.8± 3	105	0.09	-0.076	2.8
112413	0.24	3.00± 10	4.060± 15	2.04± 5	4.07± 8	2.6± 2	34	0.04	-0.011	5.46939
114365	0.83	2.80± 13	4.069± 22	1.81± 8	4.31± 12	1.9± 3	108	0.08	-0.055	1.27
115735	0.48	2.55± 7	3.990± 13	1.80± 6	3.96± 7	2.8± 3	85	0.05	-0.024	0.77?
116458	-0.17	2.95± 11	4.012± 22	2.09± 8	3.81± 11	3.5± 5	146	0.08	-0.063	147.9
119419	1.09	2.62± 13	4.048± 22	1.69± 9	4.31± 12	1.9± 3	116	0.08	-0.071	2.6006
124224	0.42	3.03± 12	4.084± 14	1.97± 8	4.24± 9	2.2± 2	82	0.07	-0.046	0.52068
125248	1.19	2.24± 9	3.972± 14	1.51± 8	4.12± 9	2.2± 3	93	0.08	-0.063	9.2954
125823	-1.27	5.69± 30	4.248± 22	3.07± 10	4.07± 13	3.7± 6	134	0.10	-0.089	8.817744
126515	1.03	2.29± 17	3.970± 24	1.57± 15	4.06± 16	2.3± 5	155	0.15	-0.200	129.95
129174	-0.39	3.49± 14	4.094± 14	2.33± 9	3.98± 9	3.2± 4	100	0.09	-0.067	2.24?
133652	0.68	3.05± 14	4.113± 13	1.89± 9	4.44± 10	1.8± 2	99	0.09	-0.082	2.304
133880	0.09	3.17± 18	4.079± 22	2.12± 11	4.08± 13	2.7± 4	134	0.11	-0.116	0.877485
140728	0.48	2.58± 7	3.998± 13	1.81± 6	3.99± 7	2.7± 2	98	0.05	-0.020	1.29557
142301	-0.57	4.41± 36	4.193± 22	2.59± 18	4.22± 17	2.7± 6	161	0.17	-0.311	1.459
142884	0.53	3.45± 23	4.160± 22	2.03± 13	4.54± 15	1.7± 3	133	0.13	-0.176	0.803
149822	0.61	2.58± 14	4.010± 22	1.78± 10	4.07± 13	2.5± 4	140	0.11	-0.101	1.459
152308	0.68	2.43± 12	3.976± 22	1.71± 11	3.97± 13	2.7± 4	146	0.11	-0.111	1.10 (or 0.92)?
166469	0.49	2.62± 15	4.012± 22	1.81± 10	4.04± 13	2.6± 4	140	0.10	-0.112	2.9
170000	0.21	2.99± 10	4.058± 15	2.03± 6	4.07± 8	2.7± 3	89	0.04	-0.017	1.71649
170397	1.07	2.35± 9	3.993± 13	1.57± 8	4.16± 9	2.1± 2	89	0.07	-0.055	2.1912
175362	-0.52	5.17± 32	4.249± 22	2.78± 12	4.32± 14	2.6± 5	140	0.12	-0.152	3.67375
183806	-0.22	2.89± 14	3.976± 22	2.07± 11	3.68± 13	4.1± 7	142	0.16	-0.126	2.9
187474	0.27	2.70± 11	4.004± 22	1.90± 9	3.94± 12	2.9± 4	108	0.09	-0.075	2345
199728	0.43	3.00± 20	4.078± 22	1.97± 13	4.21± 15	2.3± 4	143	0.14	-0.177	2.2
203006	0.99	2.36± 8	3.989± 13	1.60± 6	4.12± 8	2.2± 2	58	0.05	-0.024	2.122
221006	0.27	3.38± 15	4.135± 22	2.08± 7	4.38± 12	2.0± 3	118	0.06	-0.033	2.3
223640	0.08	3.21± 16	4.089± 14	2.12± 10	4.13± 11	2.5± 3	103	0.10	-0.090	3.735239