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Benchmarking the fundamental parameters of Ap stars with optical long-baseline interferometric measurements[★] (Corrigendum)

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This corrigendum corrects Table 1 in which the columns gathering the *B* and *V* magnitudes were inverted, and the erroneous value of the effective temperature of HD 201601 that was derived from interferometric observations in Table 4. The corrected Table 1 is given below.

An effective temperature of 7364 ± 235 K was derived for HD 201601, as reported previously in Perraut et al. (2011). Figure 5 and Table 4 have been updated accordingly. These corrections affect neither the results nor the conclusions of the original paper.

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Table 1. Stellar properties for the complete Ap sample, with T_{eff} and L derived from Kochukhov & Bagnulo (2006).

#	HD	<i>B</i>	<i>V</i>	Sp. type	T_{eff} [K]	$L [L_{\odot}]$
1	4778	6.16	6.15	A3Vp	9980	32.4
2	24 712 ^(a)	6.32	6.00	A9p	7190	7.4
3	108 662	5.21	5.24	A0p	10 500	64.6
4	108 945	5.50	5.44	A2pv	8950	51.3
5	118 022 ^(b)	4.96	4.94	Ap	9060	28.8
6	120 198	5.63	5.68	B9pe	10 540	44.7
7	128 898 ^(c)	3.43	3.19	A7p	7670	11.0
8	137 909 ^(d)	3.97	3.68	F2p	7430	27.5
9	153 882	6.35	6.31	B9p	9730	100
10	176 232 ^(e)	6.14	5.89	A7p	7930	20.9
11	188 041 ^(f)	5.84	5.62	A5p	8430	35.5
12	201 601 ^(g)	4.94	4.68	A9p	7620	12.6
13	204 411 ^(f)	5.38	5.31	A4pv	8750	89.1
14	220 825	4.98	4.94	A2pv	9080	22.4

Notes. The objects previously observed are in italics and the corresponding references are given in the notes.

References. ^(a)Perraut et al. (2016); ^(b)Perraut et al. (2015); ^(c)Bruntt et al. (2008); ^(d)Bruntt et al. (2010); ^(e)Perraut et al. (2013); ^(f)Romanovskaya et al. (2019b); and ^(g)Perraut et al. (2011).

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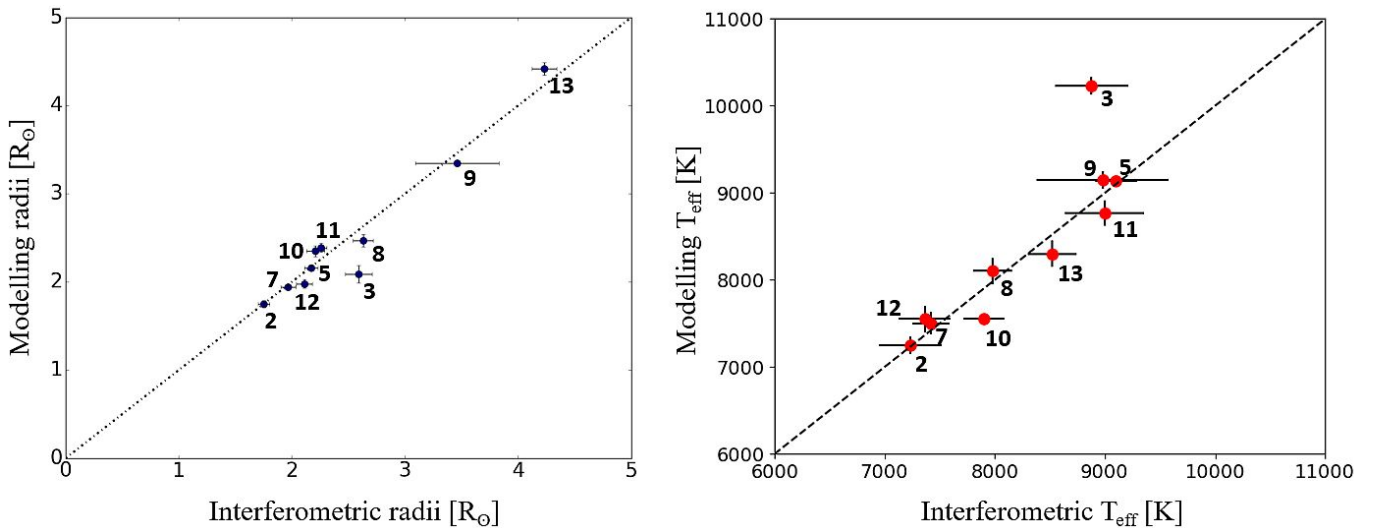
[★] CHARA/VEGA observations.

Table 4. Limb-darkened angular diameters in the R band derived from interferometric measurements, *Gaia* DR2 parallaxes, radii, effective temperatures, and luminosities derived from interferometric measurements for the complete Ap sample.

#	HD	θ_{LD} [mas]	π_P [mas]	Interferometric observations			Modelling		
				R [R_\odot]	L [L_\odot]	T_{eff} [K]	R [R_\odot]	T_{eff} [K]	$\langle B_s \rangle$ [kG]
1	4778	0.204 ± 0.008	9.32 ± 0.10	2.36 ± 0.12	34.9 ± 4.3	9135 ± 400			2.6 ^(a)
2	24712	0.335 ± 0.009	20.62 ± 0.09	1.75 ± 0.05	7.6 ± 1.2	7235 ± 280	1.75 ± 0.04	7250 ± 100 ^(b)	3.1 ^(c)
3	108662	0.328 ± 0.009	13.54 ± 0.24	2.59 ± 0.12	38.1 ± 4.9	8880 ± 330	2.09 ± 0.10	10225 ± 100 ^(d)	3.3 ^(e)
4	108945	0.315 ± 0.006	12.00 ± 0.15	2.82 ± 0.09	36.5 ± 4.2	8430 ± 270			0.1 ^(a)
5	118022	0.346 ± 0.006	17.16 ± 0.25	2.17 ± 0.06	28.9 ± 3.0	9100 ± 190	2.16 ± 0.02	9140 ± 30 ^(f)	3.0 ^(f)
6	120198	0.226 ± 0.008	10.62 ± 0.078	2.28 ± 0.10	44.9 ± 4.3	9865 ± 370			1.6 ^(e)
7	128898	1.105 ± 0.037	60.35 ± 0.14 ^(*)	1.967 ± 0.066	10.51 ± 0.60	7420 ± 170	1.94 ± 0.01	7500 ± 130 ^(g)	2.0 ^(h)
8	137909	0.699 ± 0.017	28.60 ± 0.69 ^(*)	2.63 ± 0.09	25.3 ± 2.9	7980 ± 180	2.47 ± 0.07	8100 ± 150 ⁽ⁱ⁾	5.4 ^(j)
9	153882	0.193 ± 0.019	5.98 ± 0.053	3.46 ± 0.37	70.8 ± 6.5	8980 ± 600	3.35 ± 0.03	9150 ± 100 ^(k)	3.8 ^(k)
10	176232	0.275 ± 0.009	13.37 ± 0.08	2.21 ± 0.08	16.9 ± 1.4 ⁽⁺⁾	7900 ± 190 ⁽⁺⁾	2.35 ± 0.06	7550 ± 50 ^(l)	1.5 ^(l)
11	188041	0.247 ± 0.005	11.72 ± 0.11	2.26 ± 0.05	30.5 ± 4.2	9000 ± 360	2.39 ± 0.05	8770 ± 150 ^(m)	3.6 ^(m)
12	201601	0.564 ± 0.017	28.77 ± 0.25	2.11 ± 0.07	11.0 ± 0.93	7364 ± 235	1.98 ± 0.05	7550 ± 150 ^(j)	4.0 ^(j)
13	204411	0.328 ± 0.004	8.33 ± 0.12	4.23 ± 0.11	85.6 ± 9.2	8520 ± 220	4.42 ± 0.07	8300 ± 150 ^(m)	<0.8 ⁽ⁿ⁾
14	220825	0.339 ± 0.005	20.44 ± 0.23	1.78 ± 0.03	17.2 ± 1.7	8790 ± 230			2.0 ^(e)

Notes. The last three columns give the radii and the effective temperatures as derived from self-consistent modelling and when considering the *Gaia* DR2 parallaxes, and the magnetic field strengths. Four targets have not been modelled yet. ^(*)For these two targets, we have kept the parallaxes from HIPPARCOS because of the binarity and/or the brightness is too high. ⁽⁺⁾We report the average values of the effective temperatures and luminosities provided in Perraut et al. (2013).

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**Fig. 5.** Comparison between the radii (left) and the effective temperatures (right) derived from interferometric measurements and those derived from the self-consistent spectroscopic modelling. The dash lines give the 1:1 relations. The numbers close to the symbols refer to Table 4.