

BVRI PHOTOMETRY OF 46 SOUTHERN BRIGHT STARS

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ABSTRACT

We have made four color photometric observations (BVRI System) of 46 Southern Bright Stars, in order to enlarge, in right ascension, our previous Catalogue (Mendoza, 1967a).

SUMARIO

Se han obtenido mediciones fotoeléctricas de cuarenta y seis estrellas del Hemisferio Sur, en el sistema BVRI. Estas observaciones amplían el catálogo estelar anterior (Mendoza, 1967a).

We have made BVRI observations of 46 southern objects, which are included in the Catalogue of Bright Stars (Hoffleit, 1964) using our technique (Mendoza, 1963, 1967a and 1967b) with the photometer attached to the 40" telescope of La Silla, European Southern Observatory.

Standard and program stars are listed in Tables 1 and 2. The columns of these tables give, first the BS number (Hoffleit, 1964); second, the name of the star; third, the MK-type; fourth to seventh, the resulting V, B-V, V-R, and R-I values, respectively. And lastly, the number of independent observations. The quality of the measurements is the same as the one obtained in our previous catalogues (Mendoza, 1967a and 1967b).

TABLE 1

Standard stars

BS	Name	Sp	V	B-V	V-R	R-I	n
718	ξ^2 Cet	B9 III	4.29	-0.05	0.01	-0.04	9
753	—	K3 V	5.83	0.98	0.82	0.52	8
875	—	A1 V	5.18	0.08	0.12	0.05	14
1084	ϵ Eri	K2 V	3.70	0.88	0.73	0.46	14
1855	v Ori	B0 V	4.60	-0.27	-0.12	-0.26	12
3249	β CnC	K4 III	3.55	1.47	1.12	0.79	9
3454	η Hya	B3 V	4.31	-0.19	-0.07	-0.19	9

TABLE 2

BVRI photometry of southern bright stars

BS	Name	Sp	V	B-V	V-R	R-I	n
25	ϵ Phe	K0 III	3.83	0.99	0.77	0.52	2
77	ζ Tuc	G2 V	4.21	0.56	0.51	0.32	2
98	β Hyi	G2 IV	2.79	0.61	0.53	0.34	2
99	α Phe	K0 III	2.36	1.08	0.84	0.60	2
100	χ Phe	A7 Vn	3.91	0.16	0.19	0.08	2
126	β^1 Tuc	B8 V	4.37	-0.05	0.00	-0.07	2
127	β^2 Tuc	A2 V	4.55	0.14	0.18	0.08	2
180	μ Phe	G8 III	4.59	0.96	0.74	0.52	2
191	η Phe	A0 IV	4.36	-0.01	0.06	0.00	2
322	β Phe	G8 III	3.29	0.88	0.70	0.49	2
338	ζ Phe	B6 V	3.97	-0.11	-0.01	-0.11	2
429	γ Phe	K5+ IIb-IIIa	3.40	1.57	1.26	0.98	2
440	δ Phe	K0 III-IV	3.94	0.98	0.75	0.51	2
472	α Eri	B5 IV	0.39	-0.16	-0.03	-0.12	3
555	ψ Phe	M4 III	4.40	1.58	1.70	1.52	3

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TABLE 2 (cont.)

BS	Name	Sp	V	B-V	V-R	R-I	n
566	χ Eri	G5 IV	3.67	0.84	0.68	0.45	3
570	η^2 Hyi	G8 III	4.71	0.94	0.75	0.48	3
574	—	gG5	4.80	0.87	0.70	0.45	2
591	α Hyi	F0 V	2.84	0.29	0.29	0.16	4
868	R Hor	gM7e	10.40	1.8:	5.01	3.53	2
1008	—	G5 V	4.24	0.71	0.62	0.40	1
1264	γ Ret	gM5	4.49	1.62	1.65	1.47	4
1492	R Dor	gM7	5.50	1.75	3.68	3.19	3
1607	R Lep	C7, 4e	7.71	5.74	2.84	1.47	1
2156	S Lep	M6	6.78	1.60	2.68	2.37	3
2553	τ Pup	K0 III	2.92	1.19	0.85	0.60	5
2583	—	WN5	6.75	-0.30	0.28	0.06	1
2591	—	C8,2	6.32	2.22	1.63	1.30	4
2748	L ² Pup	gM5e	5.78	1.63	2.64	2.43	2
2902	—	M2 Iabep + B	4.99	1.46	1.62	1.39	2
3207	γ^2 Vel	WC7 + 07:	1.75	-0.24	-0.04	-0.11	1
3307	ϵ Car	K0 II + B	1.85	1.27	1.15	0.89	5
8387	ϵ Ind	K5 V	4.69	1.05	0.89	0.55	2
8425	α Gru	B5 V	1.70	-0.14	0.01	-0.12	2
8502	α Tuc	K3 III	2.83	1.36	1.05	0.73	2
8556	δ^1 Gru	gG5	3.96	1.01	0.75	0.51	2
8560	δ^2 Gru	gM6	4.18	1.55	1.72	1.56	2
8630	β Oct	dA9	4.16	0.21	0.22	0.10	2
8636	β Gru	M5 III	2.09	1.57	1.86	1.69	2
8675	ϵ Gru	A2 V	3.47	0.08	0.11	0.07	3
8747	ζ Gru	G5 III	4.11	0.95	0.77	0.53	2
8787	θ Gru	F6 IV	4.29	0.43	0.38	0.18	2
8820	ι Gru	K0 III	3.88	1.00	0.75	0.50	2
8848	γ Tuc	F0 III	3.98	0.39	0.41	0.23	3
9076	ϵ Tuc	B7 V	4.46	-0.09	0.02	-0.05	2
9084	θ Oct	K2 III	4.79	1.24	0.98	0.67	2

These new observations enlarge, in right ascension, the UBVRI photometry of Southern Bright Stars (paper 1), which we obtained at Cerro Tololo, Inter-American Observatory (Mendoza, 1967a). A few misprints noticed in Table 2, of paper I, are listed in Table 3.

TABLE 3

Errata in table 2 of paper I

BS 338	data correspond to BS 377	BS 3656	= a Car
BS 377	data correspond to BS 435 with V=6.31	BS 3884	Sp = (c G2)
BS 435	data correspond to BS 338	BS 4798	V = 2.71
BS 3307	V-R = 1.16		

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