

APPENDIX B-1

TABLE A4-3 Stellar Characteristics by Spectral Type and Luminosity Class

Spectral Type	M_v			$B - V$			$T_{\text{eff}}(\text{K})$			BC	R/R_{\odot}			M/M_{\odot}		
	V	III	Ib*	V	III	I	V	III	I	V	V	III	I	V	III	I
O5	-6.0			-0.32	-0.32	-0.32	50,000			-4.30	18			40		100
B0	-4.1	-5.0	-6.2	-0.30	-0.30	-0.24	27,000			-3.17	7.6	16	20	17		50
B5	-1.1	-2.2	-5.7	-0.16	-0.16	-0.09	16,000			-1.39	4.0	10	32	7		25
A0	+0.6	-0.6	-4.9	0.00	0.00	+0.01	10,400			-0.40	2.6	6.3	40	3.6		16
A5	+2.1	+0.3	-4.5	+0.15	+0.15	+0.07	8200			-0.15	1.8		50	2.2		13
F0	+2.6	+0.6	-4.5	+0.30	+0.30	+0.24	7200			-0.08	1.3		63	1.8		13
F5	+3.4	+0.7	-4.5	+0.45	+0.45	+0.45	6700	6500	6200	-0.04	1.2	4.0	80	1.4		10
G0	+4.4	+0.6	-4.5	+0.60	+0.65	+0.76	6000	5500	5050	-0.06	1.04	6.3	100	1.1	2.5	10
G5	+5.2	+0.3	-4.5	+0.65	+0.86	+1.06	5500	4800	4500	-0.10	0.93	10	126	0.9	3	13
K0	+5.9	+0.2	-4.5	+0.81	+1.01	+1.42	5100	4400	4100	-0.19	0.85	16	200	0.8	4	13
K5	+8.0	-0.3	-4.5	+1.18	+1.52	+1.71	4300	3700	3500	-0.71	0.74	25	400	0.7	5	16
M0	+9.2	-0.4	-4.5	+1.39	+1.65	+1.94	3700	3500	3300	-1.20	0.63		500	0.5	6	16
M5	+12.3	-0.5	-4.5	+1.69	+1.85	+2.15	3000	2700		-2.10	0.32			0.2		

*All class Ia stars have an absolute visual magnitude of -7.0 .
BC is bolometric correction.

The main sequence^(a)

Appendix B-2

Sp (V)	$U - V$	$B - V$	$V - R$	$V - I$	$V - J$	$V - K$	$V - L$	$V - M$	$V - N$	BC	T_e (K)
O5-7	-1.46	-0.32	-0.15	-0.47	-0.73	-0.94	-1.01	—	—	—	38 000
O8-9	-1.44	-0.31	-0.15	-0.47	-0.73	-0.94	-1.01	—	—	—	35 000 ^(b)
O9.5	-1.40	-0.30	-0.14	-0.46	-0.73	-0.94	-1.00	—	—	-3.34	31 900
B0	-1.38	-0.30	-0.13	-0.42	-0.70	-0.93	-0.99	—	—	-3.17	30 000
B0.5	-1.29	-0.28	-0.12	-0.39	-0.66	-0.88	-0.93	—	—	-2.80	27 000 ^(b)
B1	-1.19	-0.26	-0.11	-0.36	-0.61	-0.81	-0.86	—	—	-2.50	24 200
B2	-1.10	-0.24	-0.10	-0.32	-0.55	-0.74	-0.77	—	—	-2.23	22 100
B3	-0.91	-0.20	-0.08	-0.27	-0.45	-0.61	-0.63	—	—	-1.77	18 800
B5	-0.72	-0.16	-0.06	-0.22	-0.35	-0.47	-0.48	—	—	-1.39	16 400
B6	-0.63	-0.14	-0.06	-0.19	-0.30	-0.41	-0.41	—	—	-1.21	15 400
B7	-0.54	-0.12	-0.04	-0.17	-0.25	-0.35	-0.34	—	—	-1.04	14 500
B8	-0.39	-0.09	-0.02	-0.12	-0.17	-0.24	-0.22	—	—	-0.85	13 400
B9	-0.25	-0.06	0.00	-0.06	-0.09	-0.14	-0.11	—	—	-0.66	12 400
A0	0.00	0.00	+0.02	0.00	-0.01	-0.03	0.00	-0.03	-0.03	-0.40	10 800
A2	+0.12	+0.06	+0.08	+0.09	+0.11	+0.13	+0.16	+0.13	+0.13	-0.25	9730
A5	+0.25	+0.14	+0.16	+0.22	+0.27	+0.36	+0.40	+0.36	+0.36	-0.15	8620
A7	+0.30	+0.19	+0.19	+0.28	+0.35	+0.46	+0.52	+0.46	+0.46	-0.12	8190
F0	+0.37	+0.31	+0.30	+0.47	+0.58	+0.79	+0.86	+0.79	+0.79	-0.08	7240
F2	+0.39	+0.36	+0.35	+0.55	+0.68	+0.93	+1.07	+0.93	+0.93	-0.06	6930
F5	+0.43	+0.43	+0.40	+0.64	+0.79	+1.07	+1.25	+1.07	+1.07	-0.04	6540

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F8	+0.60	+0.54	+0.47	+0.76	+0.96	+1.27	+1.45	+1.27	+1.27	-0.05	6200
G0	+0.70	+0.59	+0.50	+0.81	+1.03	+1.35	+1.53	+1.35	+1.35	-0.06	5920
G2	+0.79	+0.63	+0.53	+0.86	+1.10	+1.44	+1.61	+1.44	+1.44	-0.07	5780
G5	+0.86	+0.66	+0.54	+0.89	+1.14	+1.49	+1.67	—	—	-0.10	5610
G8	+1.06	+0.74	+0.58	+0.96	+1.24	+1.63	+1.85	—	—	-0.15	5490
K0	+1.29	+0.82	+0.64	+1.06	+1.38	+1.83	+2.00	—	—	-0.19	5240
K2	+1.60	+0.92	+0.74	+1.22	+1.57	+2.15	+2.24	—	—	-0.25	4780
K5	+2.18	+1.15	+0.99	+1.62	+2.04	+2.75	+2.84	—	—	-0.65	4410
K7	+2.52	+1.30	+1.15	+1.93	+2.36	+3.21	+3.40	—	—	-0.90	4160
M0	+2.67	+1.41	+1.28	+2.19	+2.71	+3.60	+3.78	—	—	-1.20	3920
M1	+2.70	+1.48	+1.40	+2.45	+3.06	+3.95	+4.15	—	—	-1.48	3680
M2	+2.69	+1.52	+1.50	+2.69	+3.37	+4.27	+4.47	—	—	-1.76	3500
M3	+2.70	+1.55	+1.60	+2.94	+3.66	+4.57	+4.79	—	—	-2.03	3360
M4	+2.70	+1.56	+1.70	+3.19	+3.97	+4.87	+5.20	—	—	-2.31	3230
M5	+2.80	+1.61	+1.80	+3.47	+4.28	+5.17	(+5.54)	—	—	-2.62	3120
M6	+2.99	+1.72	+1.93	+3.76	+4.63	+5.58	(+6.03)	—	—	—	—
M7	+3.24	+1.84	+2.20	+4.20	+5.20	+6.18	—	—	—	—	—
M8	(+3.50)	(+2.00)	(+2.50)	(+4.70)	(+5.80)	(+6.75)	—	—	—	-4.20	2660

Bolometric corrections, BC , effective temperatures, T_e , and colors for stars of various spectral types. $m_b = BC + V$, where m_b and V are the bolometric and visual magnitudes, respectively.

^(a) Morgan & Keenan classification of spectral types.

Giant stars

APPENDIX B-4

Sp (III)	$U - V$	$B - V$	$V - R$	$V - I$	$V - J$	$V - K$	$V - L$	$V - M$	$V - N$	BC	T_e (K)
G5	+1.55	+0.92	+0.69	+1.17	+1.52	+2.08	+2.18	+2.02	+2.05	-0.20	5010
G8	+1.64	+0.95	+0.70	+1.18	+1.56	+2.16	+2.27	+2.09	+2.12	-0.21	4870
K0	+1.93	+1.04	+0.77	+1.30	+1.71	+2.35	+2.47	+2.25	+2.28	-0.30	4720
K1	+2.13	+1.10	+0.81	+1.37	+1.80	+2.48	+2.61	+2.36	+2.39	-0.36	4580
K2	+2.32	+1.16	+0.84	+1.42	+1.87	+2.59	+2.73	+2.45	+2.48	-0.42	4460
K3	+2.74	+1.30	+0.96	+1.61	+2.12	+2.92	+3.07	+2.75	+2.80	-0.59	4210
K4	+3.07	+1.41	+1.06	+1.81	+2.36	+3.24	+3.39	+3.05	+3.11	-0.79	4010
K5	+3.34	+1.54	+1.20	+2.10	+2.71	+3.67	+3.83	+3.47	+3.54	-1.08	3780
M0	+3.43	+1.55	+1.23	+2.17	+2.82	+3.79	+3.96	+3.59	+3.65	-1.17	3660
M1	+3.48	+1.56	+1.28	+2.27	+2.90	+3.92	+4.09	+3.72	+3.78	-1.25	3600
M2	+3.51	+1.59	+1.34	+2.44	+3.08	+4.11	+4.29	+3.91	+3.97	-1.41	3500
M3	+3.51	+1.60	+1.48	+2.79	+3.51	+4.58	+4.77	+4.39	+4.45	-1.80	3300
M4	+3.32	+1.59	+1.74	+3.39	+4.26	+5.24	+5.44	+5.10	+5.14	-2.44	3100
M5	+3.00	+1.55	+2.18	+4.14	+5.04	+6.06	+6.31	+6.00	+6.00	-3.23	2950
M6	+2.43	+1.54	+2.80	+5.06	+5.86	+7.01	+7.39	—	—	-4.15	2800

Bolometric corrections, BC , effective temperatures, T_e , and colors for stars of various spectral types. $m_b = BC + V$, where m_b and V are the bolometric and visual magnitudes respectively.