$(b - y)_0 = -0.116 + 0.097c_1$ for an unreddened main-sequence B star,

$(b - y)_0 = 2.946 - 1.0\beta - 0.1\delta c_1$ ($-0.25\delta m_1$ if $m_1 < 0$) for A stars with
$\qquad$ $2.870 > \beta > 2.720$ and $\delta c_1 < 0.28$,

$(b - y)_0 = 0.222 + 1.11\Delta\beta + 2.7(\Delta\beta)^2 - 0.05\delta c_1 - (0.1 + 3.6\Delta\beta)\delta m_1$ for F stars
$\qquad$ with $2.630 < \beta < 2.720$ and $\delta c_1 < 0.28$, or $2.590 < \beta < 2.630$ and
$\qquad$ $\delta c_1 < 0.20$,

where $\Delta\beta = 2.720 - \beta$, $\delta c_1 = c_1 - c_{std}$, $\delta m_1 = m_{std} - m_1$; See Section 15.3.2 for c_{std} and m_{std}.

15.3.1   Calibration of MK Spectral Types [2, 21, 22]

Table 15.7 presents the absolute magnitude, color, effective surface temperature, and bolometric correction calibrations for the MK spectral classes. Table 15.8 gives the calibrated physical parameters for stars of the various spectral classes.

Table 15.7. *Calibration of MK spectral types.*

Sp	$M(V)$	$B - V$	$U - B$	$V - R$	$R - I$	T_{eff}	BC
MAIN SEQUENCE, V							
O5	−5.7	−0.33	−1.19	−0.15	−0.32	42 000	−4.40
O9	−4.5	−0.31	−1.12	−0.15	−0.32	34 000	−3.33
B0	−4.0	−0.30	−1.08	−0.13	−0.29	30 000	−3.16
B2	−2.45	−0.24	−0.84	−0.10	−0.22	20 900	−2.35
B5	−1.2	−0.17	−0.58	−0.06	−0.16	15 200	−1.46
B8	−0.25	−0.11	−0.34	−0.02	−0.10	11 400	−0.80
A0	+0.65	−0.02	−0.02	0.02	−0.02	9 790	−0.30
A2	+1.3	+0.05	+0.05	0.08	0.01	9 000	−0.20
A5	+1.95	+0.15	+0.10	0.16	0.06	8 180	−0.15
F0	+2.7	+0.30	+0.03	0.30	0.17	7 300	−0.09
F2	+3.6	+0.35	0.00	0.35	0.20	7 000	−0.11
F5	+3.5	+0.44	−0.02	0.40	0.24	6 650	−0.14
F8	+4.0	+0.52	+0.02	0.47	0.29	6 250	−0.16
G0	+4.4	+0.58	+0.06	0.50	0.31	5 940	−0.18
G2	+4.7	+0.63	+0.12	0.53	0.33	5 790	−0.20
G5	+5.1	+0.68	+0.20	0.54	0.35	5 560	−0.21
G8	+5.5	+0.74	+0.30	0.58	0.38	5 310	−0.40
K0	+5.9	+0.81	+0.45	0.64	0.42	5 150	−0.31
K2	+6.4	+0.91	+0.64	0.74	0.48	4 830	−0.42
K5	+7.35	+1.15	+1.08	0.99	0.63	4 410	−0.72
M0	+8.8	+1.40	+1.22	1.28	0.91	3 840	−1.38
M2	+9.9	+1.49	+1.18	1.50	1.19	3 520	−1.89
M5	+12.3	+1.64	+1.24	1.80	1.67	3 170	−2.73
GIANTS, III							
G5	+0.9	+0.86	+0.56	0.69	0.48	5 050	−0.34
G8	+0.8	+0.94	+0.70	0.70	0.48	4 800	−0.42
K0	+0.7	+1.00	+0.84	0.77	0.53	4 660	−0.50
K2	+0.5	+1.16	+1.16	0.84	0.58	4 390	−0.61
K5	−0.2	+1.50	+1.81	1.20	0.90	4 050	−1.02
M0	−0.4	+1.56	+1.87	1.23	0.94	3 690	−1.25
M2	−0.6	+1.60	+1.89	1.34	1.10	3 540	−1.62
M5	−0.3	+1.63	+1.58	2.18	1.96	3 380	−2.48