TABLE 1

COMPARISON OF PARAMETERS, NGC 1647

Parameter	Paunzen[a]	Hoag[b]	Turner[c]	Hebb[d]	Zdanavičius[e]	Guerrero[f]
$E(B-V)$	0.370	0.30	0.29	0.37	0.35	0.35
$V_0 - M_V$	9.81	8.7	8.67	8.7	8.42	8.75
d (pc)	540	549	542	550	555	564
log age	8.158	–	8.27	8.3	8.1	7.98

[a]Paunzen & Mermilliod (2007). [b]Hoag & Applequist (1965). [c]Turner (1992). [d]Hebb et al. (2004). [e]Zdanavičius et al. (2005). [f]This paper.

TABLE 2

COMPARISON OF PARAMETERS, NGC 1778

Parameter	Paunzen[a]	Hoag[b]	Barbon[c]	Joshi[d]	Pandey[e]	Xin[f]
$E(B-V)$	0.33 6	0.34	0.33	0.34	0.23	0.23
$V_0 - M_V$	11.88	10.7	11.11	10.3	10.2	11.53
d (pc)	1469	1380	1670	1062	1100	2023
log age	8.155	–	–	8.2	11.3	11.8

[a]Paunzen & Mermilliod (2007). [b]Hoag & Applequist (1965). [c]Barbon & Hassan (1973). [d]Joshi et al. (1975). [e]Pandey (1998). [f]Xin et al. (2007).

a distance modulus $V_0 - M_V = 8.7$. Using Johnson photometry Turner (1992) observed 45 stars, reported a distance $d = 542 \pm 4$ pc, and measured a reddening $E(B-V) = 0.29 \pm 0.01$, a distance modulus $V_0 - M_V = 8.67 \pm 0.02$ and an age log age = 8.27 years. Hebb, Wyse, & Gilmore (2004) with 53 stars determined a distance $d = 550$ pc, a reddening $E(B-V) = 0.37$, a distance modulus $V_0 - M_V = 8.7$ and an age log age = 8.3 years. Using the Vilnius seven-color photometric system, Zdanavičius et al. (2005) published a study of 252 stars and reported a distance $d = 555 \pm 74$ pc, a reddening $E(B-V) = 0.35 \pm 0.01$, a distance modulus $V_0 - M_V = 8.42 \pm 0.02$ and an age log age = 8.1 years.

NGC 1778 lies in the direction of the Perseus arm; the coordinates for its center are: $\alpha(2000) = 5^h08^m04^s.56$ and $\delta(2000) = +37°01'24''$. The diameter of the cluster is about $10'$ and it is a very poorly populated, faint cluster, which has no previously observed $uvby-\beta$ photometry. Other authors have reported physical parameters (Table 2): Hoag & Applequist (1965) observed 10 stars and reported a distance $d = 1380$ pc, a reddening $E(B-V) = 0.34$ and a distance modulus of $V_0 - M_V = 10.7$, using Johnson photometry. In 1973, Barbon & Hassan observed 14 stars and reported a distance $d = 1670$ pc, a reddening $E(B-V) = 0.33$ and a distance modulus $V_0 - M_V = 11.11$. Joshi, Sagar, & Pandey (1975) observed 85 stars and reported a reddening $E(B-V) = 0.34$, a distance $d = 1062$ pc, a distance modulus $V_0 - M_V = 10.13$ and an age log age = 8.2 years. Pandey (1998) observed 16 stars and reported a distance $d = 1100$ pc, a distance modulus $V_0 - M_V = 10.2$ and an age log age = 11.3 years. Xin, Deng, & Han (2007) using 15 stars determined a distance $d = 2023$ pc, a reddening $E(B-V) = 0.23$, a distance modulus $V_0 - M_V = 11.53$ and an age log age = 11.18 years.

2. OBSERVATIONS

Observations were made at the Observatorio Astronómico Nacional, San Pedro Mártir, Mexico, with the 1.5 m telescope and a Strömgren spectrophotometer. The observing run consisted of five nights from 22 to 26 in October 2007. We chose to observe all the brightest stars up to magnitude 13 (close to the limit of the telescope-photometer system), according to the chart of Paunzen & Mermilliod (2007, WEBDA, magnitude limit 13).

In order to be able to transform the data into the $uvby-\beta$ absolute system, a set of photometric standards was observed along with the program stars.