TABLE 6

ADOPTED INTERSTELLAR EXTINCTION LAW

$\frac{E(V-I)}{E(B-V)}$	$\frac{E(R-I)}{E(B-V)}$	$\frac{E(V-R)}{E(B-V)}$	$\frac{E(B-R)}{E(B-V)}$
1.25	0.69	0.56	1.56

the hump of the F-star region in Figures 2, 5, and 8) and, simultaneously, to the red-clump stars (if present), since they also will lie blue-ward of the red-giant colors of SK82 with a corresponding ultraviolet excess. This ultraviolet excess is correlated with the photometric metallicity of the cluster. Then, a metallicity value, [Fe/H], for a cluster can be derived from the empirical calibration, [Fe/H]-$\delta(U-B)_{0.6}$, of Karataş & Schuster (2006), allowing the determination of [Fe/H] independently of the isochrones to be fitted to the data, thus reducing from three to two the free parameters to be derived from the CM diagrams. Heavy-element abundances (Z) of the three clusters have been obtained from the photometric metal abundances [Fe/H] with the expression

$$Z = Z_{\odot} \cdot 10^{[\mathrm{Fe/H}]}, \quad Z_{\odot} = +0.019\,. \tag{6}$$

Finally, the appropriate isochrones of MGBG were computed online in terms of the resulting heavy-element abundance for further analyses of the clusters (distances and ages).

To estimate the the age of a cluster (A) and the true distance modulus ($DM = V_0 - M_V$) in a CM diagram, for example the ($V,\ B-V$) diagram, the absolute magnitudes, M_V, of the MGBG isochrones have been shifted by $DM + 3.1\ E(B-V)$ along the magnitude axis and their corresponding colors, $(B-V)_0$, reddened by adding the color excess $E(B-V)$ until some DM value provides a good fit of the appropriate isochrone to the faint/blue concentration of the observed lower main sequence of the cluster and, if present, of the red-clump stars. One has to take into account when determining the DM that metal-poor stars are sub-luminous as compared with their solar-like counterparts by determining a reliable value for Z from the CC diagram. To infer the age of the cluster, the (logarithm of the) age of the isochrones, log A, has been varied until a good match with the observed sequences, i.e., the upper main-sequence (MS), the turn-off (TO) stars, and, if present, the red-clump (RC) stars, has been achieved. A fine tuning of the DM has been made if necessary. The uncertainties of $E(B-V)$, Z, DM, and log A are discussed in § 3.4.

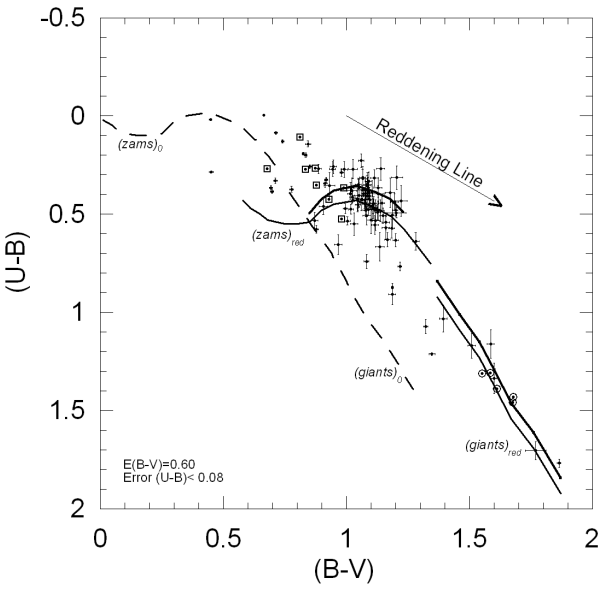

Fig. 2. The ($U-B,\ B-V$) diagram of Be 89. The "S" curves (upper parts, ZAMS, and lower parts, red giants) have been taken from the two-color relations of SK82 and are displayed for the interstellar reddening values $E(B-V) = 0\overset{\mathrm{m}}{.}00$ and $0\overset{\mathrm{m}}{.}60$ (the bluer and redder versions, respectively). A reddening vector is also shown as an arrow, and big open circles mark the six RC candidates, and open squares, the blue-straggler ones. A heavy solid curve represents our best fit to the data; this has been adjusted to the main-sequence F-type stars above (i.e., blue-ward of) the ZAMS colors of SK82 and, simultaneously, to the RC stars above the red-giant colors of SK82. This fit has been used to estimate the heavy-element abundance of the cluster, which is shown in Table 7.

Following a similar procedure to that outlined above, the distance moduli and cluster ages have also been derived from analyses of four other CM diagrams for each of the clusters. The corresponding color excesses applied in the diagrams were iterated starting with the previously derived color excess estimates, $E(B-V)$, and the results were intercompared by means of the standard interstellar extinction law adopted (see Table 6; also cf. Dean, Warren, & Cousins 1978; Mathis 1990; Straižys 1995) until satisfactory solutions were obtained for all the CM diagrams. The derived extinction laws do not differ significantly from that of Table 6.

3.1. *Be 89*

The ($U-B,\ B-V$) diagram of Be 89 is shown in Figure 2. An interstellar reddening of $(B-V) = 0\overset{\mathrm{m}}{.}60 \pm 0\overset{\mathrm{m}}{.}09$ has been derived by shift-