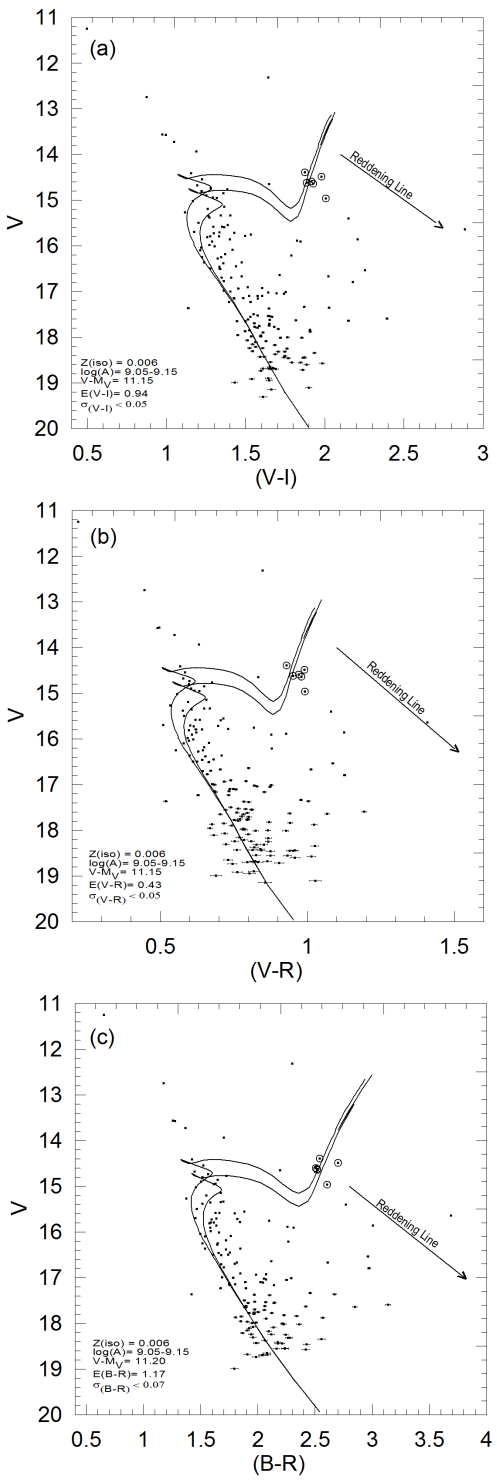


Fig. 10. The $(V,\ V-I)$, $(V,\ V-R)$ and $(V,\ B-R)$ diagrams for Be 10. The symbols are the same as in Figure 9. See the text, and Tables 7 and 8, for the inferred values for reddening, metallicity, distance modulus, and age.

been measured. Our results are listed in Tables 7 and 8. The resulting (best) isochrone fitting to the corresponding Be 10 data in the $(V,\ B-V)$, $(V,\ R-I)$, $(V,\ V-I)$, $(V,\ V-R)$ and $(V,\ B-R)$ diagrams are displayed in Figures 9 and 10, where one can see that the isochrones reproduce well the observed lower and upper MS, the TO, and RC sequences of this cluster.

### 3.4. *Estimated errors and weighted averages*

In Table 7, the ultraviolet excesses and the metallicities are given for Be 89, Ru 135, and Be 10, and in Table 8, the mean values for the distance moduli, heliocentric distances, logarithmic ages, and ages, together with the corresponding estimates of precision. The errors were calculated in a straightforward manner (cf. Bevington & Robinson 2003, and references therein). In the following the details of this error analysis are presented.

#### 3.4.1. *Errors in $E(B-V)$ and $Z$*

The random errors in the color excess $E(B-V)$ and photometric metallicity [Fe/H] were estimated as follows:

(i) By moving the two-color curve of SK82 backward and forward along the standard reddening vector in the $(U-B,\ B-V)$ diagram until a good fit with the observed GK-type, RC, and F-hump sequences was achieved. (No BA-type sequences were present for these clusters.) The precision of the determinations also depends on the scatter of the data points (cf. Figure 5 of Ru 135 and Figure 8 of Be 10 for good and fair cases, respectively). The uncertainties given in Tables 7 and 8 reflect this. Following this procedure, a typical error in $E(B-V)$ for the quality of the reduced data of our clusters is (conservatively) $\approx 0\overset{\mathrm{m}}{.}04$. The systematic error in $E(B-V)$ depends on the color calibration used. In the case of SK82, the uncertainty can be safely assumed to be, at the most, of the order of the difference between two adjacent spectral subclasses.

(ii) The random photometric-metallicity uncertainty has then been estimated from the parabolic (eyeball) fit to the data of the maximum characterizing the ultraviolet flux excess of the stars at the dereddened color $(B-V)_0 \simeq 0\overset{\mathrm{m}}{.}44$ (Sp $\simeq$ F5) and then following Sandage's (1969) normalization procedure.

The uncertainty of the metal content $Z$ was determined from the relation (e.g., Bevington &