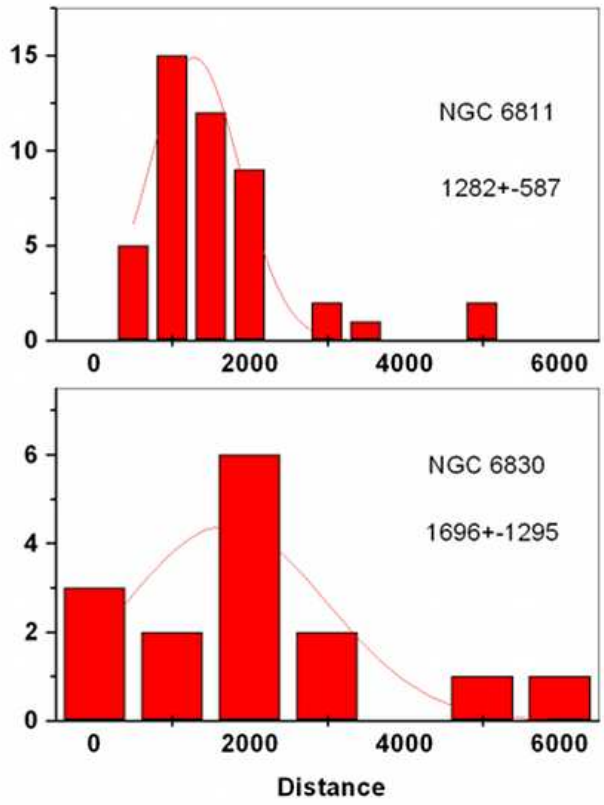

Fig. 1. Histogram of the distance modulus (X axis, in magnitudes) found for the B, A and F stars in the direction of NGC 6811 (top) and NGC 6830 (bottom).

lation $\log(\text{age}) = -3.499 \log\log T_{\text{eff}} + 22.476$ valid in the range [4.25, 4.56] yields log(age) of 7.69 (4.89×10^7 yr).

These determinations are confirmed by constructing the color-magnitude diagram of NGC 6811 and NGC 6830 which are shown in Figures 4 and 5, respectively. The unreddened magnitudes $[(b-y)_0,\ M_V]$ of cluster members taken from Tables 5 (NGC 6811) and 6 (NGC 6830) are shown with filled circles. In each plot two theoretical isochrones in the Strömgren photometric system are shown with solid and dashed lines. The metallicity and ages are indicated in the figures. The theoretical isochrones were obtained from the Padova database (Girardi et al. 2003). As can be seen, the isochrones match the observed color-magnitude diagram with the ages and distance derived in the present paper.

5. VARIABLE STARS IN NGC 6811

As was stated in the introduction, Luo et al. (2009) performed time-series photometric observations of the open cluster NGC 6811 to search for variable stars. These observations were carried out

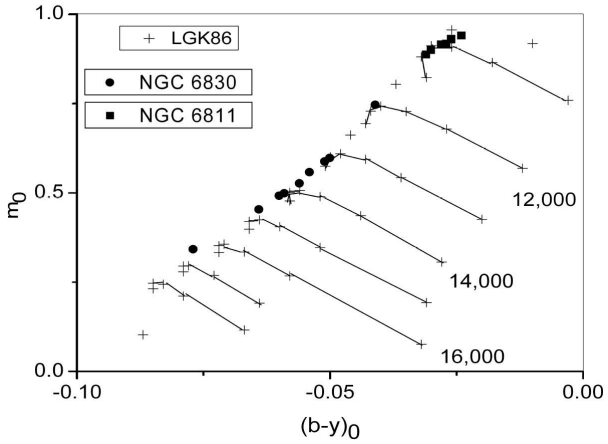

Fig. 2. Location of the unreddened points of the two clusters on the LGK86 grids. Squares: NGC 6811; dots: NGC 6830.

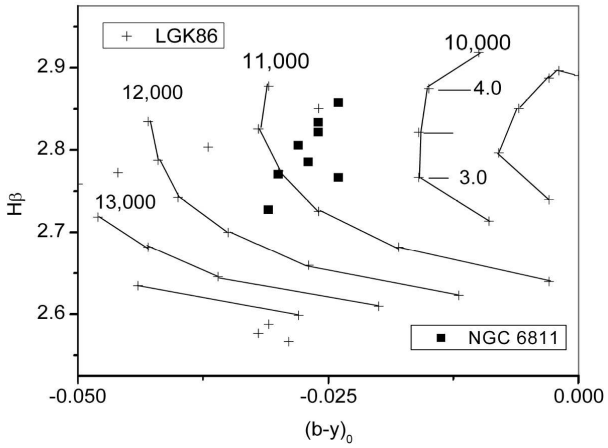

Fig. 3. Location of the unreddened points of the hot stars in the NGC 6811 cluster on the LGK86 grids.

during five nights from June 6 to July 24, 2008 utilizing the 85 cm telescope of the Xonglong Station of the National Astronomical Observatories of the Chinese Academy of Sciences. The instrumentation they used was a 1024×1024 CCD camera with a field of view of $16.5' \times 16.5'$ with standard Johnson-Cousin-Bessell filters in B and V bands, with which they obtained 750 CCD frames in each band. Sixteen certain variable stars were detected or confirmed from that survey, namely V1–V7 and V10–V18 following the variable name list of van Cauteren et al. (2005) (see Table 1 by Luo et al. 2009). Among these, twelve stars were catalogued as Delta Scuti variables based upon the light curves (V1–V7 and V10–V14). The omitted variables, V8 and V9, were outside of their