

## Main-Sequence Luminosity Function of M13

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Conducting deep BV CCD observations, the color-magnitude diagram (CMD) and the main-sequence luminosity function of a globular cluster M13 have been investigated. While those clusters observed by HST show shallow luminosity function for low mass stars, M13 has been known to have a very steep gradient toward the faint end (Richer & Fahlman 1986, Drukier et al. 1988, Richer et al. 1990). To understand this seemingly unique characteristics of M13, we carried out deep BV CCD observations. The observed field of nearly 56 square arcminutes is located approximately 12' off from the cluster center. Our (B-V)-V CMD has the main-sequence extended to the detection limit at  $V \sim 24.5$  mag. It is apparent that there is a significant population of unexpected field stars below  $V \sim 22.5$  mag level, which cannot be accounted by photometric errors. When these field stars are eliminated, the derived luminosity function of M13 shows much shallower slope in the faint end just like other Galactic globular clusters studied by HST observations.