BOAO 1.8m CCD PHOTOMETRY OF OLD OPEN CLUSTERS: PROGRESS REPORT

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We present a progress report of CCD observations of old open clusters obtained at the Bohyunsan Optical Astronomical Observatory 1.8m telescope. Using Washington and Johnson-Cousins CCD photometry, we have been trying to measure the metallicities of old open clusters for which the metallicities are not yet known. We have obtained CCD images of some of the target clusters using the BOAO 1.8m telescope in two observing runs of November, 1996 and January, 1997.

The BOAO 1.8m telescope has suffered from some servo-control problems, preventing us from obtaining long exposures, especially under the strong wind. In this presentation, we will show preliminary color-magnitude diagrams of the old open clusters we observed and discuss the limits of the CCD stellar photometry using the BOAO 1.8m telescope before 1997 February.

ANALYSIS OF TWO-DIMENSIONAL H-ALPHA SPECTRA: VELOCITY FIELDS OF A SOLAR FLARE

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High resolution H-alpha spectra of a solar flare have been taken with a multi-channel imaging spectrograph at the Solar Tower Telescope of Nanjing University. The flare appeared on 26,Jan.,1994 near a sunspot on the solar limb (N08,W51). The observed H-alpha line profiles were sampled over an area of 2'x1' on the solar surface, and each set of data comprises 56 x 30 spectra.

Two-dimensional velocity fields of the flare region have been derived as a function of time with a time inverval of a few minutes by analyzing asymmetries of the H-alpha line profiles. In this study, we have examined spatial- and temporal-velocity variations taken place during the flare activity and their physical implications are discussed.