V08b   **DMC performance and observations of star clusters M13 and Ruprecht 8**

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Featuring several dichroic mirrors to split incoming light into blue and red components, the University of Tokyo's Dichroic-Mirror Camera (DMC) has the capability of observing in fifteen intermediate-width photometric bands simultaneously. DMC is a unique instrument which could be used to construct a spectral energy distribution (SED) of the observed object efficiently. The full span of the SED is from 390 to 950 nm. During the 2007 and 2008 observing runs at Higashi-Hiroshima Observatory, we were able to observe several kinds of astronomical objects. Our instrument produced a field of view of 4.5 arcmin with 0.27 arcsec/pixel, and image quality was seeing-limited to 1.2 arcsec at best.

In this presentation we show scientific results for the globular cluster M13 and a sparse open star cluster Ruprecht 8 with instrument performance of DMC. The cluster stars were measured using PSF photometry technique to derive magnitudes in DMC bands. Subsequently we constructed color-magnitude diagrams (CMD) of the two clusters, then performed isochrone fitting to derive their age, metallicity, reddening, and distance. We also constructed SED for each star from the DMC magnitudes. We further checked the isochrone fitting result by performing an SED fitting to the observed SED. For M13 the SED fitting confirmed the result of the isochrone fitting, while for Ruprecht 8 the result was inconsistent. This could mean that Ruprecht 8 is not a genuine star cluster but further investigation is desirable before drawing that conclusion.