

we fitted the main-sequence to the standard sequence of Pleiades, the age of the cluster was estimated to be about 2×10^9 yrs, assuming the metal abundance of 0.01. This contradicts to earlier estimate by Zelwanowa & Schoneich (1971) of 10^9 yrs, but is consistent with Hassan's (1972) result.

PROGRESSIVE REPORT ON A CCD PHOTOMETRY OF OPEN CLUSTERS

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We have conducted CCD photometry of open clusters on BVRI system using cooled CCD attached to the 61cm reflector of Sobacksan Observatory. We intended our photometry as deep as possible in order to test the feasibility of the observations of cluster luminosity functions. The faintest stars from single exposure of 300 s is fainter than $V = 19$ for the seeing conditions with FWHM of $3.5''$. The C-M diagram of the central region of an old open cluster NGC2420 whose distance modulus $(m-M) = 11.95$, shows well defined giant branch and main sequence which can be identified down to almost 5 mag below the turnoff. The red hook in the turnoff region which is best explained by the models with overshoot mixing (Twarog et al. 1990) is well observed in the C-M diagram. The present photometry of NGC2420 shows the possibility of cluster observations in the Sobacksan observatory.

Globular Clusters in Dwarf Galaxies and the Formation of Non-nucleated Dwarf Galaxies

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We try to examine dynamical processes which could lead formation of non-nucleated dwarfs. We focus on the fact that some dwarf spheroidals have globular clusters. The dynamical friction will be important and effective for globular clusters' orbital decay in dwarf spheroidal galaxy. As the clusters sink to the center of a host galaxy, they eventually interact with each other. Repeated encounters provide opportunities for the clusters to eventually coagulate. So the dynamical friction causes the formation of nucleated dwarf galaxies. But this mechanism can not explain the formation of non-nucleated dwarf galaxies. Here we propose the tidal effect due to parent galaxy to resolve this problem. In order to study this dynamical process, we adopt a restricted N-body numerical scheme based on Aarseth's NBODY1 scheme. We adopt a logarithmic potential for the parent galaxy and the eccentric orbit for the dwarf galaxy. Our results suggest that the tidal effect can prevent the globular clusters from concentrating near central region