

**[AST-17] Near-Infrared Photometric Study of Young Star Clusters in the Dwarf Starburst Galaxy NGC 1569**

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We present *JHK* photometry of star clusters in the dwarf irregular/dwarf starburst galaxy NGC 1569. Adopting several criteria to exclude other sources like foreground stars, background galaxies, etc., ~150 star cluster candidates are identified in the near-infrared images of NGC 1569, which include very young star clusters. From analysis based on theoretical background, we find ten very young star clusters near the center of this galaxy. The total reddening values toward these clusters are estimated from comparison with the theoretical estimates given by star cluster mode

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**[AST-18] Dynamical Evolution of Mass Function and Radial Profile of the Globular Cluster System of M87**

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M87, a cD galaxy in the Virgo cluster, has 3–10 times larger enclosed mass than the Milky Way at any given galactocentric radius. Thus the globular cluster (GC) system in M87 is expected to have undergone a more significant dynamical evolution than that of the Milky Way if it had started from the same initial mass function (MF) and radial distribution (RD) as the Milky Way. The evolution of MF and RD of the M87 GC system has been calculated using an advanced, realistic Fokker–Planck (FP) model that considers dynamical friction, disk/bulge shocks, and eccentric cluster orbits. We perform hundreds of FP calculations with different initial cluster conditions, and then search a wide parameter space for the best-fit initial GC MF and RD that evolves into the observed present-day GC MF and RD. We also find best-fit initial MFs and RDs for blue and red GC groups, separately.