

[GC-53] An Ultraviolet to Infrared Photometric Study of Star Clusters in the Circumnuclear Star-forming Region of Barred Spiral Galaxy NGC 1672

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We report on a photometric study of star clusters in the circumnuclear star-forming region of nearby barred spiral galaxy NGC 1672. We use FUV to NIR imaging data (FUV, U, B, V, R, H α , I, and H) in the Hubble Space Telescope (HST) archive. We have selected 89 star clusters with $V < 21.8$ ($M_V < -9$) mag in the central 600 pc region, and have derived their age & mass by comparing their colors with theoretical population synthesis models. Most of the star clusters are mildly reddened ($E(B-V) \sim 0.2$ on average), but some star clusters suffer from severe reddening ($E(B-V) > 0.6$). The mass of the star clusters are in the range from $10^4 M_{\odot}$ to $10^7 M_{\odot}$. About half of them are more massive than $10^5 M_{\odot}$. Their ages range from 1 Myr to several 100 Myr, and concentrate at ~ 6 Myr and ~ 40 Myr. It indicates that the episodic starburst in the circumnuclear star-forming region lasted at least several 100 Myr. We find no obvious azimuthal age gradient, but we find a radial age gradient in some regions. We discuss these properties with theoretical expectations

[GC-54] Chemical Properties of Emission Line Galaxies in the Virgo and Ursa Major Cluster

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We utilize Sloan Digital Sky Survey DR7 spectroscopy of ~ 600 emission line galaxies (ELGs) in the Virgo and Ursa Major clusters to investigate their chemical properties depending on the environments. We derived chemical abundances of galaxies using either a direct estimation of the electron temperature or empirical calibrations. We also estimated star formation rates (SFRs) using H alpha and GALEX ultraviolet (UV) luminosities. We see no significant difference of UV colors and SFRs of ELGs between the Virgo and Ursa Major, indicating weak dependence of their star formation activity on global cluster environment. We also discuss the segregation of gas-phase element abundances in cluster environment.