

[GC-22] Properties of Type Ia Supernova Host Galaxies in the SDSS

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We investigate the properties and environments of Type Ia Supernovae host galaxies from the Sloan Digital Sky Survey-II Supernova Survey for the Stripe 82 centered on the celestial equator. 87 SNe Ia host galaxy samples are selected from the SDSS Main galaxy catalog at the apparent r -band magnitude range $m_r < 17.77$. We found that the color properties of SNe Ia host galaxies are slightly bluer than the main galaxies and the absolute magnitude of SNe Ia host galaxies has a higher fraction than the main galaxies when the characteristic absolute magnitude $M_{\star} < -20.5$. The distribution of the distance to nearest neighbor galaxy and the local density of SNe Ia host galaxies show that SNe Ia host galaxies prefer intermediate region compared to the main galaxies. In early type SNe Ia host galaxies, the distribution shows SNe Ia host galaxies have a more distant neighbor galaxy compared to the main galaxies.

[GC-23] Improved line measurements for SDSS DR6

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We have established a database of galaxy spectral line strengths for SDSS DR6 using an improved line measuring method. Our work includes the entire SDSS DR6 galaxies within redshift of 0.2 excluding saturated objects. The absorption line strengths measured by the SDSS pipeline are seriously contaminated by emission filling. Our code, GANDALF (gas and absorption line fitting code) performs more accurate measurements by effectively separating emission lines from absorption lines. A significant improvement has also been made on the velocity dispersion measurement, more notably in late-type galaxies. The database will be provided with new parameters that are indicative of line strength measurement quality. The database will be useful for various fields of galaxy studies including star formation and AGN activities.