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Dust attenuation laws at kpc scales in nearby galaxies

Dust attenuation modifies the spectra of galaxies over a wide range of wavelength. Integral field spectroscopy surveys of nearby galaxies such as MaNGA, NUV imaging from Swift/UVOT and NIR imaging from 2MASS combine to provide measurements of dust attenuation curves at ~3 arcsec resolution, corresponding to ~kpc scales in nearby galaxies. I will present these measurements for a sample of ~500 galaxies and discuss the correlations between stellar and gas attenuation, the correlations of stellar/gas dust attenuation with a variety of regional/global properties, the physical origin of the UV bump at 2175 angstrom in the attenuation curve. These measurements reveal significant variation of dust attenuation from galaxy to galaxy and from region to region within a galaxy, in terms of both dust opacity and attenuation curve slopes, which is driven by the physical properties of local regions such as stellar age and ionization parameter, at scales of kpc or smaller.

Author: LI, Cheng (Tsinghua University)

Presenter: LI, Cheng (Tsinghua University)

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