

## **Properties of Dark Matter Halos in Disk Galaxies**

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**Abstract** We present a simple technique to estimate mass-to-light (M/L) ratios of stellar populations in local universe galaxies based on two broadband photometry measurements, i.e. a color-M/L relation. We apply the color-M/L relation to galaxy rotation curves, using a large set of galaxies that span a large range in Hubble type, luminosity and scale size and that have accurately measured HI rotation curves. We have obtained new accurate optical and near-IR surface photometry of these galaxies as well as optical rotation curves. Using the color-M/L relation we construct stellar mass models of the galaxies. We subtract all known mass components from the observed rotation curves to reveal the dark matter contribution to the rotation curves. We use these dark matter rotation curves to investigate dark matter scaling relations for our set of galaxies. We compare our dark matter rotation curves with adiabatically contracted Navarro, Frenk & White dark matter halos and with isothermal spheres.