

Surface Photometry of the Blue Compact Dwarf Galaxy Mrk 49 in Virgo Cluster

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We present optical and near-IR multicolor photometry, for the blue compact dwarf galaxy Mrk 49 in Virgo Cluster. Our UBVRI and JK surface photometry confirms that the radial luminosity distribution is well described by an exponential disk in all wavelength domain, except the central 10" (0.9 kpc) region. A scale length, 0.6 kpc, and a central brightness in B, $B(0)=20.44$ mag/sq. arcsec is derived. From the J and K images, a bright IR source is found at the distance of 20" south-west from the center. We also obtained a H-alpha narrow band image to investigate ionized regions and found a strong emission region of 10" in size at 10" north-west from the center. Mrk 49 appears to have a low-surface-brightness elliptical envelope, which is extended to the radius of 50". With the mean intrinsic ellipticity of dwarf galaxies, $\langle q \rangle = 0.3$, the measured ellipticity indicates an inclination of 46 degrees for this galaxy.

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