

BV SURFACE PHOTOMETRY OF THE SOUTHERN GALAXIES
NGC 6769, 6770 AND 6771

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ABSTRACT: From B and V photographic surface photometry we have obtained isophote maps, photometric parameters, luminosity profiles and B-V color indices for the group of the spiral galaxies NGC 6769, 6770 and 6771. The observations were made with the 1.6 m telescope of Observatório Astrofísico Brasileiro using the combination of 103a-0 or IIA-0 plate plus GG385 filter for the B system and IIA-D plate plus GG495 for the V system. The reductions were made using the Zeiss-Jena microdensitometer of Instituto de Física - UFRGS, Porto Alegre and the method of Sérsic (1968) or the PDS microdensitometer of Observatório Nacional, Rio de Janeiro, and the software developed in that observatory by da Costa et al. (1982). The values obtained for the total apparent magnitudes (m_B), total color indices ($m_B - m_V$), absolute magnitudes (M_B), major (D) and minor (d) diameters are listed in the table below, together with the isophotal level μ_B where these values were obtained.

TABLE 1. Photometric Parameters

NGC	m_B	$m_B - m_V$	M_B	D (") kpc	d (") kpc	μ_B
6769	12.70	0.65	-21.27	130.0 28.1	93.0 20.1	24.86
6770	12.91	0.71	-20.97	174.0 36.7	128.0 27.0	24.86
6771	13.76	0.90	-20.25	143.0 33.4	34.5 8.1	25.17

In general, the color indices vary from about 1.1 mag in the nuclear regions to about 0.3 mag in the blue regions. Exponential and $r^{1/4}$ laws have been adjusted to the luminosity profiles.

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VELOCITY ELLIPSES IN THE GALACTIC PLANE: REGIONAL VARIATIONS AND SPECTRAL DISTRIBUTIONS

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Velocity ellipses of nearby stars are calculated for stratifications in strips. Such stratifications are made both in strips parallel to the longitude line $60^\circ - 240^\circ$ and to the longitude line $150^\circ - 330^\circ$, with different widenings of the strips.

Considering the spectral distribution and the ℓ vertex direction for each strip, we find large variations for homogeneous distributions, as well as small variations for non-homogeneous distributions. Indicators of old and young age are considered in fractional form, and they do not seem to have any influence on the above mentioned variations in ℓ vertex. We may be facing another influence, which acts differently on different star locations. This may be a local effect which is more discernible using two regions separated by the $60 - 240^\circ$ longitude line, than when we use $150^\circ - 330^\circ$ as a division line.

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