

The Evolution of the Blue Compact Dwarf Galaxies: Palomar/Las Campanas Imaging Atlas

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We are carrying out the imaging atlas of a sample of 83 nearby Blue Compact Dwarf galaxies with recession velocities lower than $v=3800 \text{ km s}^{-1}$ selected mainly from the Byurakan, University of Michigan, Tololo, and Hamburg/SAO surveys. Deep broad-band B and R and narrow-band $H\alpha$ images for all these galaxies are being obtained using the Palomar 60-inch and Las Campanas 100-inch telescopes. At the time of writing this abstract we have completed around 25% of the sample.

The analysis of these images has allowed us: (1) to derive the properties of the underlying stellar population, including its optical ($B - R$) colors and the Star Formation Rate associated with the galaxy outer regions, (2) to estimate the contamination of the nebular emission on the galaxy outer colors, (3) to detect the presence of collective supernovae-driven winds, as evidenced by their $H\alpha$ emission, and (4) to study the relation between the evolution of these winds and (a) the propagation of the star formation and (b) the mass and chemical evolution of these galaxies. In this sense, the observations carried out so far have provided evidence for these winds in 30% of the galaxies.

Shortly after the conclusion of the atlas the images will be made publicly available through the NASA/IPAC Extragalactic Database.

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