A BVRI PHOTOMETRIC STUDY OF STAR CLUSTERS IN THE BOK REGION OF THE LMC.

Gonzalo Alcaino and William Liller Instituto Isaac Newton, Ministerio de Educación de Chile, Santiago, Chile.

The large number of star clusters in the Large Magellanic Cloud provides us with an excellent opportunity to understand well this neighboring galaxy. The large variety of integrated cluster colors present suggests a wide range in evolutionary stages, and several studies have established vague relationships between their location in the LMC and properties including color, total luminosity and metallicity.

We are at present deriving color-magnitude diagrams for a selection of clusters located in the so-called Bok region situated in the northwestern section of the Bar of the LMC. This region relative to the LMC is identified in Figure 1, and a magnification of the region itself is shown in Figure 2. As can be seen in Figure 2, this zone is densely populated with clusters, among the most conspicuous being NGC 1847, NGC 1850, NGC 1854 and NGC 1856.

The photographic material consists of 4 B plates, 4 V plates and 2 R plates each covering 1° x 1° obtained with a Pickering-Racine wedge at the 2.5 m du Pont telescope of Las Campanas, ($\Delta m \sim 5.1$ mag, scale 10.8 arc sec mm⁻¹), and three I plates obtained using the triplet configuration at the 3.6 m telescope at ESO/La Silla (scale 18 arc sec mm⁻¹). The plates are being calibrated with a BVRI photoelectric sequence to V \sim 15.3, obtained by us using the 1 m telescope at ESO/La Silla (Alcaino and Liller 1982).

Reference

Alcaino, G., and Liller, W.: 1982, Astron. Astrophys. 114, p. 213.

Figure 1. The Bok region in the NW section of the LMC Bar (next page) Figure 2. Enlargement of a section of Figure 1. (next page)

49

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