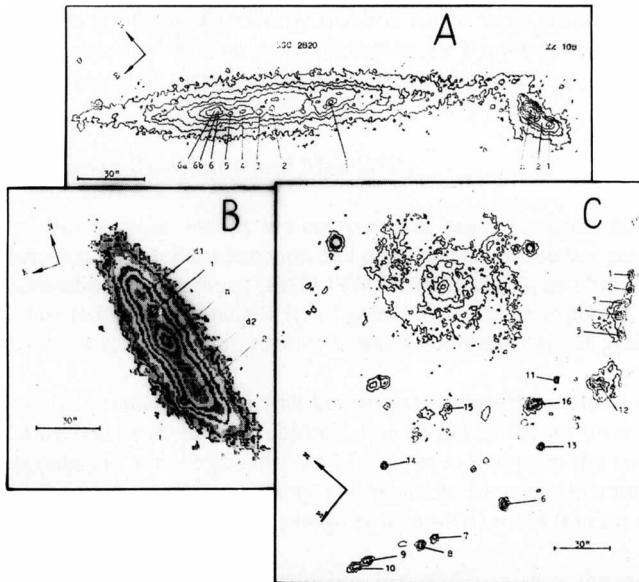


# UBV PHOTOMETRY IN THE GROUP OF GALAXIES NGC 2805, NGC 2814, NGC 2820 AND MKN 108

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Some photographic plates (resolution  $\sim 0''.8$ ) of the galaxies NGC 2805, NGC 2814, NGC 2820 and Mkn 108 from the Group Holmberg 124 were obtained with the 1-meter Ritchey-Chrétien (RC) Zeiss telescope of Maidanak Observatory. These plates were scanned with the PDS microdensitometer of Tartu Observatory, Estonia. Artamonov et al. (1993) have discussed in detail the calibration and image processing of the observed galaxies.

Figure 1 shows B-isophote maps of these galaxies. The numered labels in Fig. 1 show blue starlike objects and condensations. The observed galaxies have disturbance in their symmetry, which is related to tidal interaction. NGC 2805 has a remarkable chain of blue condensations



**Figure 1.** B-isophote maps of NGC 2820 and Mkn 108 (A), NGC 2814 (B), NGC 2805 (C). Numered labels show blue objects. The numerical levels of the isophotes are given in Artamonov et al. (1993).

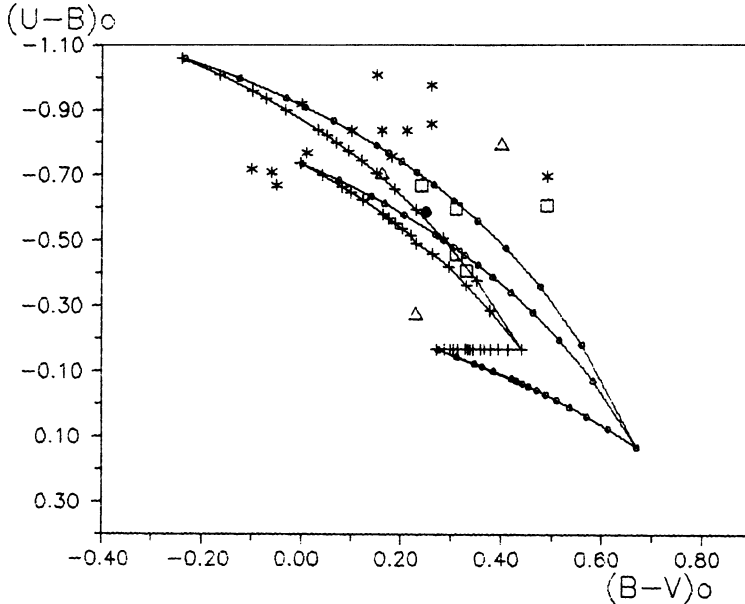
(stellar aggregates) along its spiral arm. The distances between groups of condensations and condensations themselves are 2 - 4 kpc and 0.7 - 0.9 kpc respectively. The median size and magnitude of condensations are 250 pc and  $M_b \approx -12.3$ .

Figure 2 shows a two-color plot of blue objects in comparison with a simple model of photometric evolution of a galaxy. We form the model as a mixture of single burst star formation (Traat, 1988) and background galaxy (Vaucouleurs et al., 1991) in different proportions.

The short conclusions are:

- 1) The median age of blue objects with correction for dust is  $10^6 - 10^7$  y.
- 2) The burst of star formation is connected with the spiral arms or bar.

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**Figure 2.** Two-colour plot of blue objects from Fig. 1. \* - NGC 2805, □ - NGC 2820, • - NGC 2814, Δ - Mkn 108. Background galaxy:  $Sc(+)$  and  $Sa(o)$  (Vaucouleurs et al., 1991). The age of the burst of star formation:  $1 - 10^6$  y.,  $2 - 10^7$  y.,  $3 - 5 \cdot 10^7$  y. The part of the burst (solid line): 100, 10, 5, 4, 3, 2, 1.8... (step 0.2)... 0.2, 0.

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