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VARIABLE STARS IN THE GLOBULAR CLUSTER NGC 5286

NGC 5286 ($C1343 - 511, l = 311^{\circ}6, b = +10^{\circ}6$) is a cluster of intermediate metallicity, as it follows from its spectral class - F5 (Hesser & Shawl, 1985), although a wide range of its values was quoted in the literature: from -1.26 (Samus' et al., 1995) to -1.79 (Brocato et al., 1996). It has the apparent radius $r = 4'6$ (Kukarkin, 1974), the tidal radius $r = 12'0$ (Webbink, 1985) and the concentration class CC V.

According to the data published in "A Third Catalogue of Variable Stars in Globular Clusters" (SHC) (Sawyer-Hogg, 1973) and later investigation by Fourcade et al. (1978) and Liller & Richten (1978) altogether 16 variables have been discovered within the apparent radius of this cluster. Ten of these stars are classified as RRAB and six as RRC. With Pab and Nc/Nab the cluster is classified as OoII variable-poor (IIVP).

The observational material and the method of search for variable stars are the same as in our previous papers (Kadla et al., 1996a,b). CMD was obtained as in Kadla et al. (1996b) using the mean V and B magnitudes from several consecutive V and B exposures. CMD for stars with $R > 0'36$ within the investigated area $5'4 \times 3'7$ is shown in Figure 1. In the instability strip, besides 10 of the above variables, there are 8 stars which may be RR Lyr variables. The data for the latter stars are given in Table 1. Their positions were determined using as the reference frame the coordinates system given in the catalogue of Sawyer-Hogg (1973). Our photometric data (23 exposures - 12 V and 11 B) permitted to confirm the variability of 5 short-period variable stars and detect variability for 2 suspected variables (N2 and N7 from Table 1). All variables (known and suspected) are shown in the cluster chart (Figure 2).

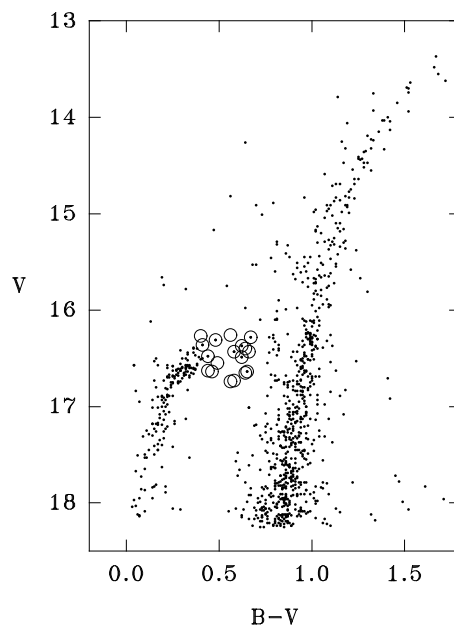


Figure 1. The color - magnitude diagram for the globular cluster NGC 5286. The known RR Lyrae stars are denoted by \circ , suspected ones by \odot

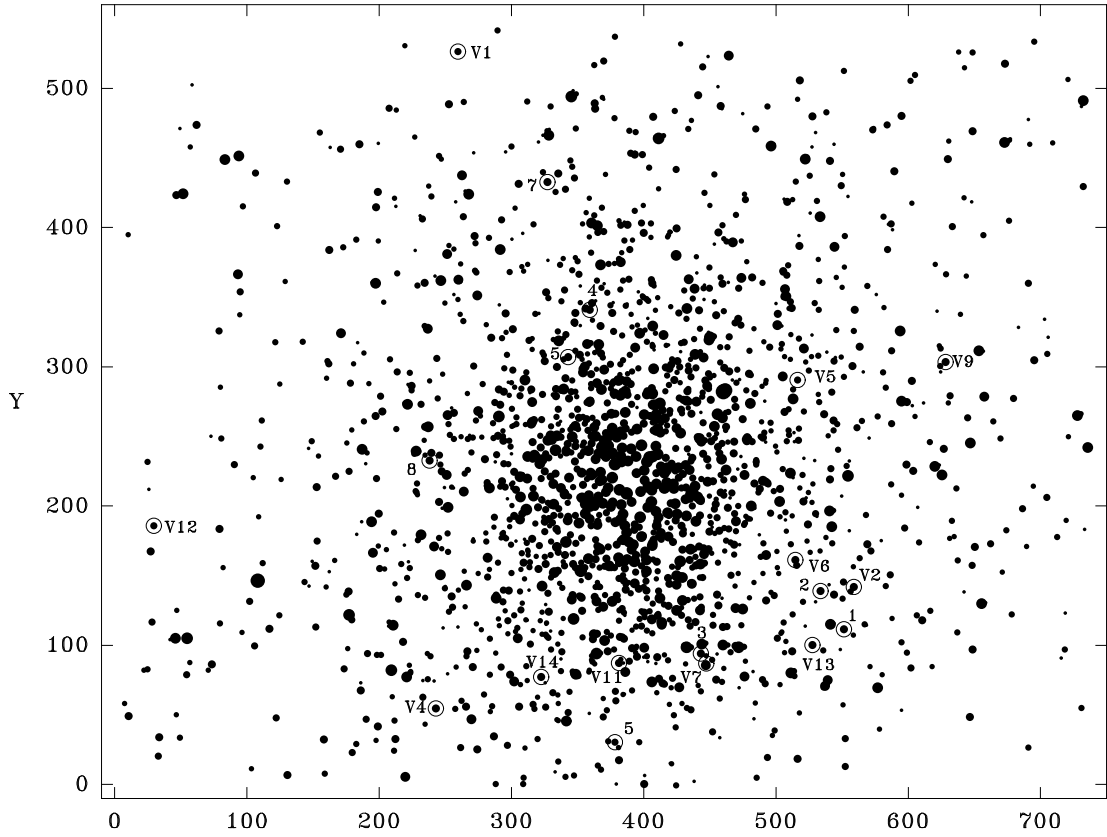


Figure 2. Chart of the cluster. Variable stars are denoted by \odot . The notations V preceding the star number refer to known variables

Table 1. Positions and photometric data for suspected variable stars

| N | X (arcsec) | Y (arcsec) | V | $B - V$ | N | X (arcsec) | Y (arcsec) | V | $B - V$ |
|-----|-----------------|-----------------|-------|---------|-----|-----------------|-----------------|-------|---------|
| 1 | 74.7 | -55.3 | 16.43 | 0.58 | 5 | -6.3 | 56.8 | 16.36 | 0.41 |
| 2 | 67.4 | -42.1 | 16.49 | 0.62 | 6 | -14.9 | 41.4 | 16.31 | 0.48 |
| 3 | 24.3 | -59.7 | 16.28 | 0.67 | 7 | -18.1 | 99.8 | 16.37 | 0.62 |
| 4 | -7.6 | -86.8 | 16.64 | 0.65 | 8 | -65.5 | 10.9 | 16.48 | 0.44 |

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CORRIGENDA

Correction to IBVS No.4418: In order to bring to accordance Table 1 and Figure 2, it is necessary to interchange star's Nos. 4 and 5 in Table 1 and to attribute No.6 to that one of two stars with number 5 in Figure 2 that has coordinates Xpixel=359 and Ypixel=341.

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