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**NEW POSSIBLE VARIABLES IN THE GLOBULAR CLUSTER NGC 6229**

We present a list of 12 new possible variable stars in the core of the halo globular cluster NGC 6229.

The Third Catalog of Globular Clusters (Sawyer Hogg, 1973) lists 22 variable stars in this cluster. One of them is Population II cepheid, others are RR Lyrae type variables.

In order to search for not yet detected variables the method proposed by Kadla and Gerashchenko (1982) was used. It is based on an analysis of a color-magnitude diagram obtained from measurements of two images taken “simultaneously”. Thus the variables are at identical phase and the RR Lyrae stars are located in the RR Lyrae gap.

We have at our disposal two pairs of CCD images in B and V colors covering the central  $1.5 \times 1.2$  arcmin of the cluster taken with SBIG ST-6 CCD camera attached at the 2 meter telescope in NAO “Rozhen”, kindly granted by ESO. The scale is 0.32 arcsec/pixel. In the central part of the cluster the crowding prevented accurate photometry. However, by using the positions of stars determined from frames after noise suppression, through wavelet transform (details will be reported elsewhere) we were able to obtain reasonable photometry at 1.5 mag below the HB.

Table 1. Possible variable stars in the core of NGC 6229

NGC 6229:  $\alpha = 16^{\text{h}}45^{\text{m}}6$   $\delta = +47^{\circ}37'$

Number	X (arcsec)	Y (arcsec)	V	B – V	R (arcmin)
1	–7.30	–4.09	18.47	0.46	0.13
2	–2.55	12.62	18.18	0.45	0.20
3	4.64	–3.86	17.90	0.36	0.20
4	11.54	6.94	17.29	0.34	0.21
5	7.76	–10.29	18.56	0.44	0.24
6	–0.91	–15.71	18.40	0.34	0.29
7	7.77	–16.83	17.57	0.15	0.34
8	–4.03	–21.29	18.12	0.45	0.40
9	–7.10	23.69	18.22	0.43	0.40
10	27.49	5.46	18.17	0.44	0.44
11	28.72	17.97	18.18	0.42	0.54
12	–22.02	24.35	18.18	0.42	0.52

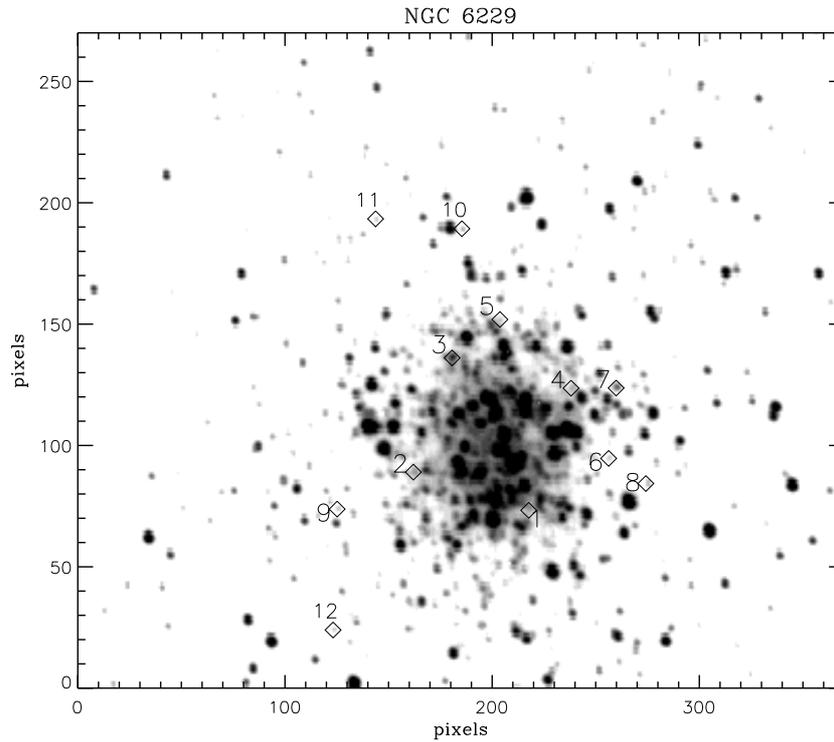


Figure 1

Among the 22 known variables in the cluster 8 were detected on our frames because of our small field of view: V5, V6, V8, V11, V12, V15, V16 and V20.

12 new suspected variables have been found and information of them is given in Table 1. In columns 2 and 3 of Table 1 the coordinates in arcsec of the new possible variables in the Sawyer Hogg (1973) system are listed. The next two columns contain V and B–V values, determined by only one image pair. R is the projected radial distance in arcmin from the cluster center.

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