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EXTRAGALACTIC NOVA OR UNUSUAL U Gem-TYPE VARIABLE?

A new variable star: R.A.= $10^{\text{h}}31^{\text{m}}19^{\text{s}}$ , Dec.= $+31^{\circ}24'$  (1950),  $l=197^{\circ}0$ ,  $b=+59^{\circ}8$ , has been found by one of us (L.Z.) during inspection on the Carl Zeiss, Jena blinkcomparator a pair of B-plates of a field near SA 54. The star occurs to be visible on several other photographs taken on April 1980 the same week as on the discovery plate with the Schmidt telescope of the Radioastrophysical Observatory at Baldone. B- and V- magnitudes of the variable object are given in Table I. They are measured in the system of magnitudes of the comparison stars, partly presented in Table II. On other 138 B- and 134 V-photographs (limiting magnitude  $B \approx 18.5$ ,  $V \approx 17.5$ ) obtained between March 1970 and May 1979, and after 1980 May 5 the star is not visible. According to A.S.Sharov there are no traces of the star either on the Palomar Observatory Sky Survey charts or on seven plates of the region from Sternberg Astronomical Institute plate collection taken in 1952-53 and 1974.

Thus the amplitude of the observed outburst was at least 5 mag and it lasted not less than 7 days. If the object is nova, it belongs, probably, to the fast novae (light decline 0.2 mag/day) and was observed not very long after its maximum light. Then it is placed beyond the boundaries of our Galaxy.

If the object is a cataclysmic variable of U Gem-type, then either its outburst was exceptionally large or its mean period between outbursts was extraordinarily long.

To decide between the two alternatives the search for the star on plates of the respective region of the sky taken at other observatories would, probably, help.

The variable is indicated on the finding chart (12x12 arcmin) together with the comparison stars according to Table II.

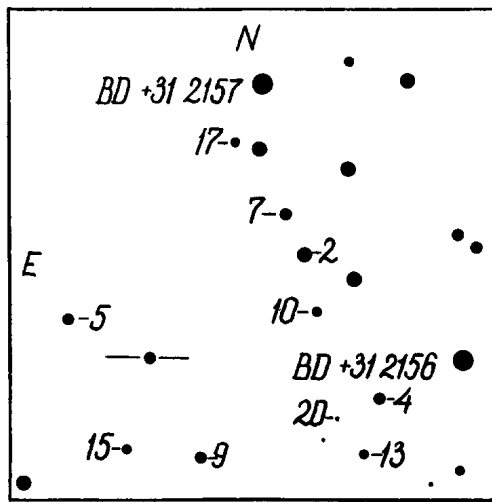


Figure 1

Table I

Date (UT)	B (mag)	Date (UT)	V (mag)
1980 Apr. 11.85	15.87	1980 Apr. 12.85	15.97
Apr. 11.88	15.73	Apr. 16.82	17.43
Apr. 12.97	16.09	Apr. 19.90	17.13
Apr. 14.89	16.36		
Apr. 15.93	16.96		
Apr. 16.85	17.05		
Apr. 17.91	17.20		
Apr. 18.96	17.40		

Table II

Star	B	V	Star	B	V
2	14.91	14.22	10	17.05	15.95
4	15.35	14.66	13	17.35	16.01
5	15.75	15.25	15	17.48	15.98
7	15.89	14.79	17	17.63	16.72
9	16.18	15.33	20	18.67	17.28

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