

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS

Number 1674

Konkoly Observatory
 Budapest
 1979 September 19

SEVEN NEW VARIABLE STARS IN THE FIELD OF M 101

This communication contains the results of a survey in the field of M 101 for the discovery of new variable stars at high galactic latitudes.

The area of the sky covered by the plates taken with the 67/90/210 cm Schmidt telescope is of $6^\circ \times 6^\circ$ centered on M 101.

With a blinkmicroscope five pair of plates have been examined and seven new variable stars have been discovered (GR 293-294-295-296-297-298-299).

The position (1950.0) of these stars and their characteristics are listed in Table I.

TABLE I

var.	R.A.	D.	max	min
GR	1950		B	
293	13 ^h 55 ^m 07 ^s	+ 56° 40'	14.9	15.4
294	13 57 24	+ 56 41	15.6	17.3
295	13 54 35	+ 53 08	15.1	15.9
296	13 57 00	+ 55 58	17.5	<18.2
297	13 58 03	+ 55 12	15.4	15.9
298	14 01 45	+ 56 36	16.1	16.9
299	14 10 00	+ 53 43	16.6	17.7

Comments to Table I

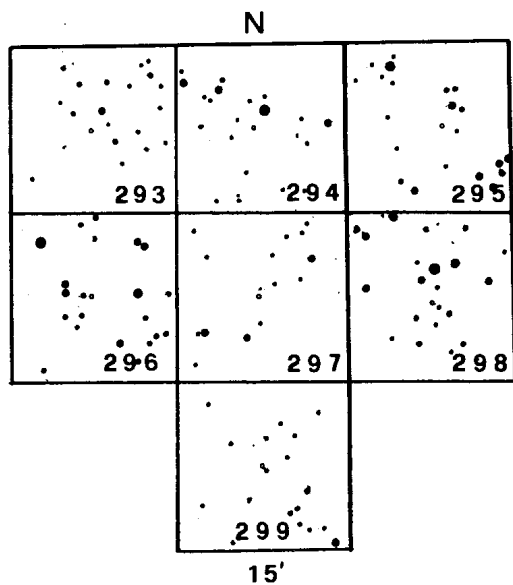
GR 293: Variations of small amplitude (0.5 in B and 0.6 in V).
 The B - V color varies between + 0.2 to + 0.6. It is not possible to determine the type of variability.

GR 294: This star is blue ($0 < B - V < - 0.3$). Probably this object belong to BL Lac type. The amplitudes are 1.7 in B and 0.7 in V.

GR 295: The light variations in B are between 15.1 and 15.9; in V between 15.2 and 15.9. The B - V color varies from + 0.1 to + 0.3. RR Lyrae type.

GR 296: From the characteristics of light variations and color ($+ 0.1 < B - V < + 0.5$) the star is likely to be an U Gem star.

- GR 297: Variable with small amplitude (0.5 in B and 0.8 in V).
The B - V color is high (+ 0.6 ; + 0.8). Type uncertain.
- GR 298: Amplitude 0.8 in B and 0.4 in V. This star is red
(+ 0.7 < B - V < + 0.9). Type uncertain.
- GR 299: The amplitude is 1.1 in B and 0.7 in V ; the color is
+ 0.1 < B - V < +0.5. Possibly an RR Lyrae variable.



The B and V magnitudes of comparison stars have been determined with the SA 57. Since the material examined (27 B and 17 V plates) is spread from 1970 to 1977 it is difficult to determine exactly the type and elements of variability.

Figure 1 shows the finding chart.

G. ROMANO
Istituto di Astronomia
dell'Università di
Padova