

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

Number 3573

Konkoly Observatory  
 Budapest  
 11 March 1991  
 HU ISSN 0374 - 0676

NEW VARIABLE STARS IN THE FIELD OF IC1805

The systematic photographic search of variable stars, in blue and infrared radiation, in 5 fields of some 25 square degrees each (Maffei 1975,1977) has been continued in a field centered on the coordinates (1950.0)  $\alpha = 2^h 40^m$ ;  $\delta = +60^\circ 30'$ , with the Schmidt telescope of 65/90 cm at the Asiago Astrophysical Observatory. From 29th Sept. to 2nd Oct.1975 and from 26th Dec. 1984 to 25th Jan. 1985, 74 I-N (Hypers.) + RG5 and 74 103a-O +GG13 or without filter were collected.

The examination of these plates leads to the discovery of 35 new variable stars.

The plates were compared by means of the blink microscope at the Asiago Observatory and with the positive - negative method.

The main characteristics of the 35 variables are listed in Table I. The numeration of the variables, characterized with the prefix M, continues the one started in the field of M 16-M 17 (Maffei 1975,1977). The positions and the photometric calibration were obtained by means of the photometer Sartorius of the Specola Vaticana at Castelgandolfo. The calibration was based on the photometric sequences published by Moffat and Vogt (1974).

Table I.

Provisional Name	AR (1950.0)	DEC	Type	$m_I$		$m_B$		Period (days)	Epoch J.D 24.....
				max	min	max	min		
M 278	2 <sup>h</sup> 41 <sup>m</sup> 51 <sup>s</sup>	62° 53'	M	12.3	15.4	(1)		311	41273
M 279	37 24	62 31	SR	13.2	16.0				
M 280	31 29	59 45	SR	13.2	15.4			465:	
M 281	47 50	59 14	M	12.2	15.5			189.5	41978
M 282	43 40	57 56	M	12.3	15.9			420	42086
M 283	25 25	60 17	M	11.4	14.5			273	41980
M 284	46 57	58 16	M	12.9	15.7			359	40127
M 285	17 54	60 20	M	12.8	15.4			228	41076
M 286	19 42	59 24	SR	14.1	<16.5				
M 287	27 11	62 32	M	7.4	10.4	14.0	<17.4	552	46076
M 288	32 42	59 10	E:	12.9	14.0	14.7	16.0		
M 289	36 33	63 14	L	12.1	12.9	(1)			
M 290	24 19	61 56	L	13.3	14.3	18.4	20.0		
M 291	56 41	61 25	E:	12.2	13.2	19.0	19.3		
M 292	22 15	59 24	L	12.8	13.6				
M 293	56 54	59 31	L	10.8	11.8	19.0	19.4		
M 294	32 46	63 24	E:	14.1	16.4				
M 295	33 38	61 48	L	11.1	12.1				

Table I. cont.

Provisional Name	AR		DEC		Type	$m_I$		$m_B$		Period (days)	Epoch J.D 24.....
	(1950.0)		max	min		max	min				
M 296	47	05	61	27	M	10.3	12.0	17.2	19.1	166.5	40626
M 297	35	28	61	51	I	12.8	13.8	14.0	14.5		
M 298	35	09	58	50	I	10.5	11.3	16.5	18.0		
M 299	20	50	59	11	SR	9.4	10.7	15.0	17.4		
M 300	50	59	60	16	I	8.8	9.1	14.1	15.1		
M 301	24	01	60	37	I	(2)		14.6	15.8		
M 302	37	21	62	22	I	14.3	14.9	17.2	18.4		
M 303	35	17	59	31	I	11.7	12.9	13.2	14.1		
M 304	43	51	62	30	E	12.9	13.9	14.9	16.2		
M 305	55	16	61	02	I	13.1	13.7	16.8	18.1		
M 306	31	27	62	59	I	10.1	10.8	15.6	16.6		
M 307	41	00	61	52	SR	9.8	10.5	17.7	18.8	373:	
M 308	42	07	58	10	I	15.8	16.3	17.6	18.5		
M 309	41	50	60	26	I	14.4	15.2	16.9	17.7		
M 310	29	22	58	12	I	15.7	15.9	16.1	18.0		
M 311	18	29	60	57	SR:	(2)		14.1	15.2		
M 312	34	51	58	37	I:	15.6	16.1	16.8	17.7		

(1) Visible on a few plates

(2) Overexposed on all plates

The identification charts, most of the light curves and a detailed account, will be published in a more extensive work.

During this research a burst of star near the galaxy Maffei 2 was observed. This observation also will be published and discussed in a following work.

Of the 35 new variables, 8 have been classified as Mira type stars and 6 as SR. Before this research 4 Mira and 4 SR were known in the field.

This result confirms the increase of the number of long-period variable stars when the observations are made by means of the infrared technique. However in this region (galactic anti-center) the increase is not so dramatic as in the field of M 16 - M 17 neither so remarkable as in that of  $\gamma$  Cygni.

Many thanks are due to Fth. G. V. Coyne, Director of the Specola Vaticana for the use of the photometer Sartorius and for the kind hospitality.

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