

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

Number 3030

Konkoly Observatory
 Budapest
 5 June, 1987
 HU ISSN 0374-0676

SIX NEW VARIABLE STARS IN THE CONSTELLATION OF SAGITTARIUS

The central regions of the Milky Way, in the direction of Sagittarius and Scorpii (Right Ascension between 16 h to 19 h and declination from -20 to -40 degrees) constitute a region with large probabilities of finding new variables or nova-like very faint type stars.

Therefore, a systematic search program of such objects was started two years ago. For its development two hundred photographic plates of this region were available. Such plates were obtained starting in 1942 and were obtained in 103a0 emulsions with exposures times of 60 min and utilizing a BM camera provided with a Ross Lunding lens of 7.62 cm diameter and a focal distance of 53.34 cm.

The basic procedure was the comparison of several plates taken in different epochs, utilizing a Zeiss stereocomparator. All the plates were referred to the following plate: BM 111 that was taken on April 10, 1942. The whole sample of the 200 plates of the archive were compared against this plate in the search of new variables.

The results obtained are listed in Table I. They constitute a sample of six new objects, all of which are stellar like and the ID chart of each one is presented in Figure 1.

In order to see if such objects have not been previously reported, the coordinates were estimated from the CD and the SAO star catalogues. Such coordinates were evaluated to the epoch of 1900 and were searched for in the General Catalogue of Variable Stars (Kukarkin et al., 1970). None of them has been previously listed in such catalogues; therefore, it is safe to conclude that the sample of six stars are being reported for the first time.

More information is needed in order to decide on the nature of these stars.

Table I. Coordinates and magnitudes of the reported stars.

I.D.	DM	R.A. (2000)	Dec.	Estimated magnitude
B		18h 40m 26s	-29d 06m 06s	11
D		18 18 37	-36 23 09	11
E	-33 13239	18 28 04	-33 21 23	8
F		18 20 09	-32 12 49	10
K		18 10 18	-21 04 29	12
L		18 18 43	-28 04 02	11

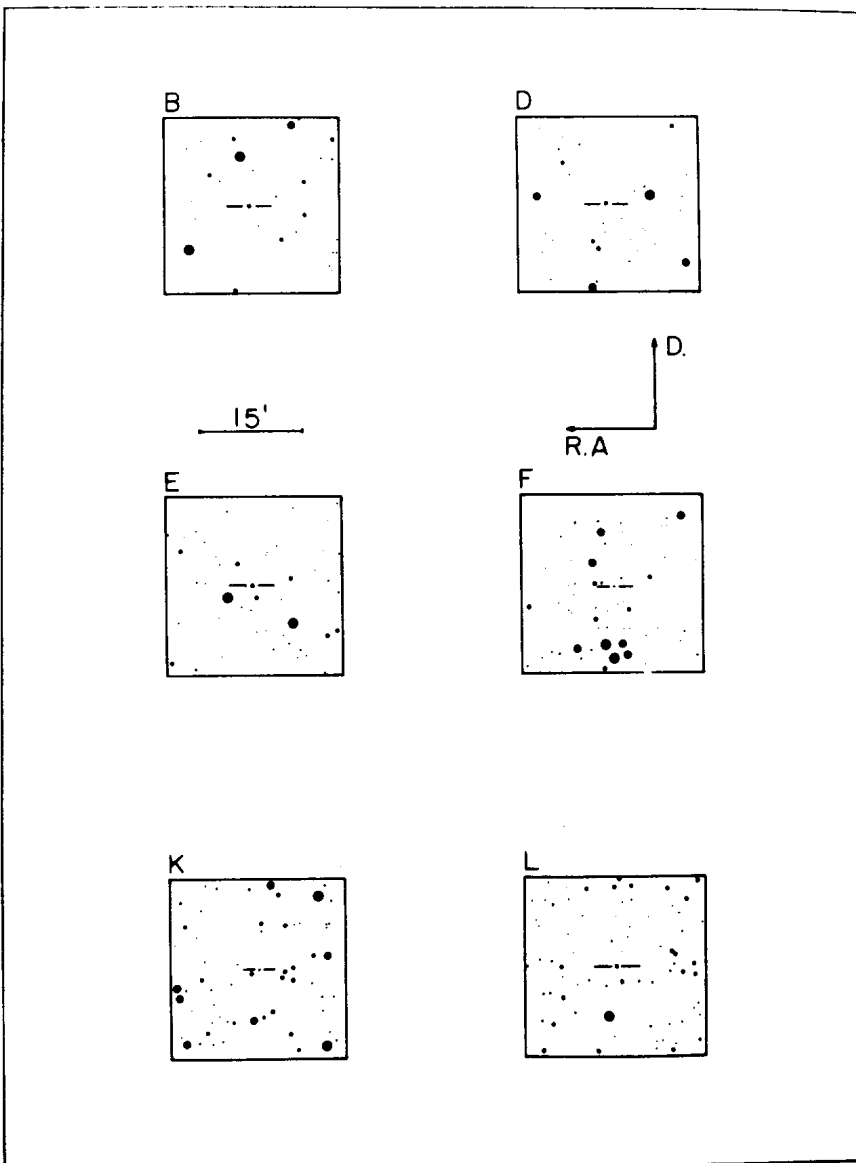


Figure 1

ID charts of the new variables found, scale of the plates is indicated.

Acknowledgements: We would like to thank Dr. O. Cardona for suggesting this project, to J. H. Peña for his advice and to Dr. R. Peniche, to M. A. Hobart, and to T. Gomez for their assistance. All the drawings were made by G. Ceron, and the photographs by I. Cabañas.

JOAQUIN CAMPOS and ANTONIO SANCHEZ

Instituto Nacional de Astrofisica, Óptica y Electronica
Apartado Postal 51
Puebla, Pue.
Mexico, 72000

Reference:

Kukarkin, B.P., Kholopov, P.N., Efremov, Yu.N., Kukarkina, N.P., Kurochkin, N.E., Medvedeva, G.I., Perova, N.B., Fedorovich, V.P. and Frolov, M.S., 1970, General Catalogue of Variable Stars, Third Edition