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A STUDY OF FOUR RED STARS

We have studied four variable stars on photographs taken with the 40 cm astrograph of the Sternberg Institute Crimean Laboratory. The discoverer of each star, the number of estimated plates and the time interval covered are indicated in Table I.

Table I

Name	Reference	Type GCVS	Observational interval J.D.2400000+	Number of plates
AM Lac	Hoffmeister (1928)	M	45642-47826	109
BX Lac	Hoffmeister (1929)	M	45642-47851	102
KW Lac	Miller and Wachmann (1971)	SRb:	45642-48532	98
NSV 14200	Morgenroth (1934)	-	45642-48532	121

The finding charts are shown in Figure 1. The magnitudes of comparison stars for KW Lac were taken from Miller and Wachmann (1971), and for the rest of the stars we have measured them with the iris photometer of the Variable Star Department, Sternberg Institute (see Table III).

We have reduced the observations on a PC. The main results are given in Table II.

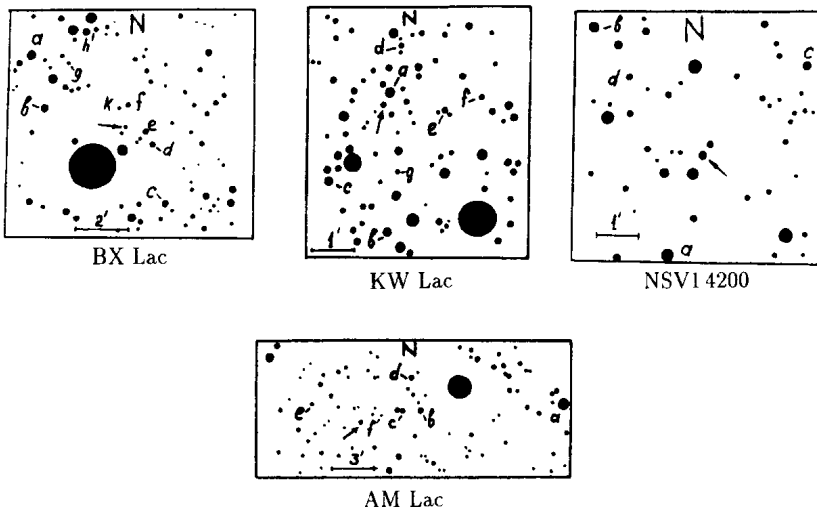


Figure 1. The finding charts of the programme stars.

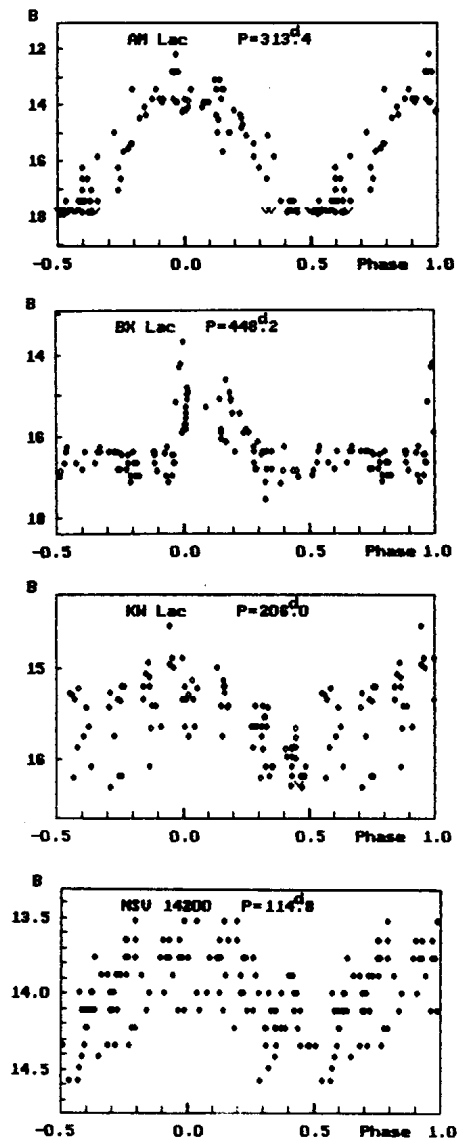


Figure 2. The mean light curve of the stars studied. Uncertain observations are shown as open circles.

Table II

Name	Type	Max	Min	J.D. max	Period	Sp
AM Lac	M	12 ^m 2	(18 ^m)	46722	313 ^d 4	M5
BX Lac	M	13.7	17.6	46413	448.2	M10
KW Lac	SRa	14.6	16.3	45675	206.0	?
NSV 14200	SRb	13.5	14.6	45649	114.8	M6

Remark: The spectral types are given from the literature.

Table III

Name	AM Lac	BX Lac	KW Lac	NSV14200
a	12 ^m 20	12 ^m 83	14 ^m 56	13 ^m 18
b	13.80	13.90	14.84	13.77
c	14.51	14.45	15.07	14.34
d	15.11	14.95	15.15	14.72
e	15.86	15.18	15.43	—
f	17.9	15.85	15.87	—
g	—	15.96	16.28	—
h	—	16.48	—	—
k	—	17.14	—	—

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