

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1518

Konkoly Observatory
Budapest
1978 December 20

BVRI OBSERVATIONS OF RED IRREGULAR VARIABLES

Observations on the Johnson BVRI system are reported for four variables classified as Lb in the General Catalogue of Variable Stars. The Purdue High Speed Photometer, described by Barnes et al. (1978), was used in obtaining the data. The instrumental system and reduction procedures are discussed by Moffett and Barnes (1979).

Most of the observations were obtained on the 91-cm and 76-cm reflectors at McDonald Observatory and a few were also made on the 61-cm reflector at the Table Mountain Observatory and the No. 2, 91-cm telescope at Kitt Peak National Observatory.

The results for the four Lb variables; BL Ori, ψ Vir, BY Boo and σ Lib are given in Table I. The estimated uncertainties for a single observation are: $V = \pm 0.014$, $(B-V) = \pm 0.009$, $(V-R) = \pm 0.009$ and $(R-I) = \pm 0.012$.

THOMAS G. BARNES III	THOMAS J. MOFFETT
McDonald Observatory	Department of Physics
Department of Astronomy	Purdue University
The University of Texas	West Lafayette, Indiana 47907
Austin, Texas 78712	

References:

- Barnes, T.G., Evans, D.S., and Moffett, T.J., 1978, *M.N.R.A.S.*,
183, 285
Moffett, T.J., and Barnes, T.G., 1979, *P.A.S.P.*, (submitted)

TABLE I.

Irregular Variables

BL Ori = BS2308

HJD	V	(B-V)	(V-R)	(R-I)
(2440000+)				
3128.79	6.110	2.391	1.744	1.260
3129.70	6.131	2.435	1.765	1.259
3130.83	6.169	2.382	1.764	1.144
3132.73	6.191	2.396	1.772	1.161
3135.87	6.192	2.404	1.782	1.149
3138.86	6.212	2.396	1.792	1.137
3144.78	6.226	2.438	1.794	1.139
3429.96	6.071	2.439	1.711	1.081
3508.83	6.352	2.493	1.878	1.090
3516.80	6.429	2.502	1.909	1.110
3517.77	6.442	2.502	1.917	1.096

ψ Vir = BS4902

3248.80	4.785	1.631	1.479	1.317
3248.82	4.796	1.628	1.482	1.314
3251.78	4.964	1.614	1.499	1.316
3517.04	4.821	1.577	1.489	1.275
3620.80	4.748	1.598	1.492	1.237
3621.79	4.734	1.589	1.475	1.257
3664.73	4.794	1.614	1.508	1.286
3669.68	4.784	1.615	1.498	1.272
3671.70	4.732	1.625	1.496	1.270
3672.68	4.762	1.623	1.493	1.292

BY Boo = BS5299

2921.66	5.279	1.533	1.957	1.698
2921.75	5.258	1.540	1.954	1.723
2922.74	5.258	1.523	1.979	1.737
2922.84	5.251	1.546	1.968	1.729
2922.91	5.276	1.540	2.003	1.706
3287.80	4.975	1.548	1.752	1.615
3291.67	5.100	1.540	1.751	1.687
3292.69	5.117	1.545	1.770	1.680
3297.69	5.238	1.540	1.805	1.740
3300.75	5.329	1.513	1.829	1.749
3621.81	5.216	1.541	1.833	1.648
3622.81	5.238	1.535	1.839	1.662
3663.73	5.141	1.551	1.813	1.651
3667.68	5.106	1.574	1.787	1.626
3668.68	5.107	1.558	1.800	1.632
3669.76	5.104	1.562	1.807	1.629
3672.70	5.129	1.567	1.800	1.667

σ Vir = BS5603

2921.76	3.364	1.638	1.583	1.265
2922.85	3.344	1.664	1.594	1.256