COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 916

Konkoly Observatory
Budapest
1974 August 9

PHOTOELECTRIC OBSERVATIONS OF THE ECLIPSING BINARY IM AURIGAE

The star IM Aur was observed photoelectrically at the Fort Skała Observatory in Cracow during the autumn, 1969. The observations have been made at the 20 cm Grubb refractor using an FEU-17 phototube. The following comparison stars were used:

MD 33601 = BD +46°0979; V = $7^m.47$, B-V = $-0^m.16$, B8,
MD 34299 = BD +47°1126; V = 8.07, B-V = -0.18, AO,
MD 34380 = BD +44°1165; V = 8.27, B-V = 0.00, AO,
HD 34399 = BD +44°1167; V = 8.76, B-V = -0.23, AO,

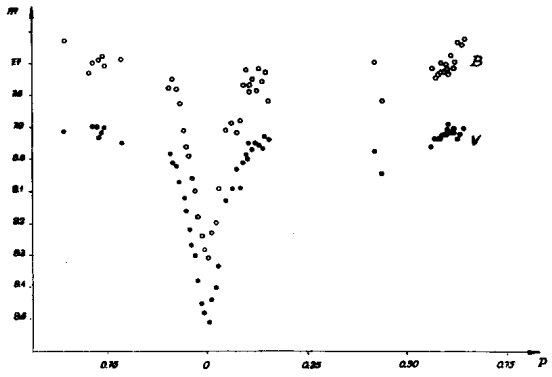
(systematic errors of the above values of V and B-V are probable).

The observations are listed in the Table and presented in the Figure. The heliocentric moments of minima were determined by the tracing-paper method of Kordylewski:

JD hel.	filter	lim.error	$(O-C)^I$	$(O-C)^{II}$
2440515.5463	B	$\pm 0^d.0008$	$-0^d.0431$	$-0^d.0002$
2440515.5468	V	±0.0006	-0.0426	+0.0003

The values $(O-C)^I$ were obtained by using the elements given by Margoni et al. (IBVS No. 131, 1966). Recent determination of the elements leads to new values of O-C, called as $(O-C)^{II}$. These elements follow from times of minima obtained photoelectrically by Kondo (A.J. 71, 51), Margoni et al. (IBVS No.131) and by the author:

Min I JD hel. = 2440515.5465 + $1^d.247296 \cdot E$.



Photoelectric Observations of IM Aurigae

JD hel. 2440000+	Phase	B	V	JD hel. 2440000+	Phase	B	V
481.6029	0.7863	$7^m.69$	7.95	515.6399	0.0749	$7^m.92$	$8^m.03$
514.4330	0.1073	7.79	7.95	.6489	0.0821	7.88	8.09
.4434	0.1156	7.75	7.97	.6575	0.0890	7.77	8.01
.4515	0.1221	7.79	7.95	.6659	0.0957	7.72	7.99
.4598	0.1288	7.72	7.96	.6725	0.1010	7.77	8.00
.4706	0.1374	7.76	7.97	516.4366	0.7136	7.73	7.90
.4818	0.1464	7.73	7.93	.4457	0.7209	7.70	7.90
.4926	0.1551	7.82	7.93	.4536	0.7273	7.69	7.93
515.4299	0.9065	7.78	7.98	.4616	0.7345	7.68	7.92
.4390	0.9138	7.75	8.01	.4722	0.7422	7.71	7.90
.4494	0.9222	7.78	8.02	542.4414	0.5626	7.72	7.96
.4588	0.9297	7.83	8.07	.4515	0.5707	7.75	7.94
.4755	0.9431	7.91	8.12	.4570	0.5751	7.74	7.94
.4823	0.9485	7.96	8.16	.4638	0.5805	7.73	7.94
.4920	0.9563	7.99	8.22	.4694	0.5850	7.70	7.93
.4987	0.9617	8.06	8.27	.4761	0.5904	7.73	7.93
.5080	0.9691	8.1	8.3	.4817	0.5949	7.71	7.93
.5282	0.9773	8.18	8.38	.4879	0.5999	7.72	7.91
.5303	0.9870	8.24	8.45	.4945	0.6051	7.74	7.90
.5390	0.9940	8.28	8.48	.5016	0.6108	7.68	7.92
.5521	0.0045	8.31	8.51	.5082	0.6161	7.72	7.92
.5637	0.0138	8.23	8.44	.5142	0.6209	7.70	7.91
.5736	0.0217	8.20	8.40	.5234	0.6268	7.64	7.94
.5824	0.0288	8.09	8.33	.5308	0.6343	7.65	7.93
.6223	0.0463	7.91	8.13	.5379	0.6399	7.63	7.91
.6311	0.0678	7.89	8.09	543.5095	0.4189	7.70	7.98
				.5345	0.4389	7.82	8.05

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