

TABLE III ცხრილი

Phase	Ph. Mg.	n	Phase	Ph. Mg.	n	Phase	Ph. Mg.	n
0.055	^m 10.73	10	0.323	^m 10.53	10	0.663	^m 10.46	20
087	10.72	10	381	10.65	10	704	10.52	20
126	10.67	10	475	10.68	10	765	10.51	20
194	10.53	10	510	10.65	10	835	10.57	10
2-6	10.47	10	561	10.54	10	905	10.65	10
290	10.47	10	617	10.49	10	995	10.72	10

From the final light-curve we derive

$$\text{Max} = 10^m.47; \quad A_I = 0^m.25; \quad A_{II} = 0^m.21.$$

The extreme assymetry of the curve makes it difficult to believe that it is due to defects of observations and to mistakes made in drawing the curve.

Therefore the possibility must be considered that the orbit of the star is elliptic.

The photographic material was secured with the help of K. G. Zakharin. The plates were measured by E. Dolidse and G. Oragvelidse.

March, 1937.

Literature: ლიტერატურა:

1. A. N. 233, 1928.

2. K. V. BB. 6, 1929.

AH AURIGAE

ფოტოგრაფიული სიკაზმის მრუდი და ელემენტები

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(რეზუმე)

220 ფოტოგრაფიული გამონახვის დამუშავების შედეგად AH Aurigae-სათვის მიღებულია სიკაზმის საშუალო მრუდი. უკანასკნელს ახასიათებს მნიშვნელოვანი ასიმეტრია, რაც შეიძლება მივაწეროთ ვარსკვლავის ორბიტის ელიპტიურობას.

მარტი, 1937.

SS COMAE BERENICES
 PHOTOGRAPHIC LIGHT-CURVE AND ELEMENTS

V. M. BODOKIA

The variability of the star SS Comae Berenices ($\alpha_{1855} = 12^h 42^m 27^s$; $\delta_{1855} = +19^\circ 29'.7$) was discovered in 1929 on Babelsberg plates by P. Gutbnik and R. Prager¹, who established afterwards that the star belongs to the group of the short-period eclipsing W Ursae Majoris type stars.

The following elements are given by Prager:

$$\text{Min} = 2425002.515 + 0^d.412789 \cdot E,$$

where 2425002.515 is the initial epoch corresponding to the secondary minimum².

The photographic light-curve and elements given below are derived by the author from 300 photographic images, of which 41 were obtained in June, 1936 and the rest in the interval from February, 3 to March, 31 of the year 1937.

The photographs were taken with 13-inch reflektor on Ilford Monarch plates (emulsion 8474 A). The length of exposures was 6 or 7 minutes.

Comparing the area of the variable with KSA 26 the stellar magnitudes of comparison stars were obtained.

The comparison stars are given in Table I.

TABLE I ცხრილი

Star	Mg	Star	Mg
a) BD + 19° 2609 (9 ^m .5)	10 ^m .22	d) Anonyma $\left\{ \begin{array}{l} \alpha = 12^h 42^m 56^s \\ \delta = +19^\circ 47'.6 \end{array} \right.$	11 ^m .37
b) Anonyma $\left\{ \begin{array}{l} \alpha = 12^h 40^m 16^s \\ \delta = +19^\circ 39'.2 \end{array} \right.$	11.14	e) Anonyma $\left\{ \begin{array}{l} \alpha = 12^h 39^m 59^s \\ \delta = +19^\circ 24'.3 \end{array} \right.$	12.09
c) Anonyma $\left\{ \begin{array}{l} \alpha = 12^h 40^m 16^s \\ \delta = +19^\circ 47'.6 \end{array} \right.$	11.50		

The individual observations are listed in Table II.

TABLE II 366020

J. D.⊙	Ph. Mg.	J. D.⊙	Ph. Mg.	J. D.⊙	Ph. Mg.
	m		m		m
2428326.275	11.37	2428571.360	10.83	2428599.283	11.22
282	11.60	365	11.02	288	11.08
301	11.38	370	11.00	293	11.01
307	11.56	375	11.02	298	11.15
2428330.383	11.33	386	10.92	302	11.09
390	11.16	391	10.96	307	11.40
397	11.58	396	11.00	312	11.44
406	11.57	401	10.94	317	11.35
2428335.332	11.30	406	10.91	337	11.26
338	11.17	411	10.92	341	11.16
343	11.18	416	11.08	345	11.58
349	11.30	421	11.05	354	11.62
355	11.39	426	10.97	358	11.60
861	11.43	431	11.04	362	11.34
380	11.61	2428578.330	11.34	376	11.58
387	11.48	335	11.13	388	10.98
394	11.47	341	10.98	400	11.23
401	11.43	346	11.18	404	10.97
409	11.35	352	11.18	408	10.96
416	11.19	357	11.00	413	11.17
2428340.279	11.17	363	11.19	417	10.93
286	11.17	368	10.94	421	10.95
293	11.29	374	10.92	426	10.95
300	11.45	380	11.10	430	10.94
307	11.26	393	10.94	434	11.16
314	11.36	400	10.72	443	11.22
321	11.20	406	11.03	447	11.20
328	11.20	412	10.98	451	10.96
353	11.36	417	10.92	456	11.16
360	11.63	423	11.10	460	11.08
367	11.38	428	11.06	464	10.98
374	11.24	434	11.10	468	10.96
381	11.26	439	10.86	473	11.16
388	11.11	445	11.00	477	11.06
395	11.23	2428584.476	11.43	510	10.94
402	11.18	481	11.44	519	10.90
2428341.378	11.60	486	11.40	523	11.20
385	11.19	491	11.54	527	11.10
392	11.34	496	11.50	532	11.30
399	11.34	500	11.55	536	11.22
406	11.27	510	11.40	541	11.20
2428568.376	11.46	516	11.37	543	11.54
382	11.37	520	11.33	548	11.20
387	11.52	525	11.15	568	11.43
393	11.44	530	11.10	572	11.32
398	11.47	534	10.85	576	11.48
404	11.54	539	11.29	581	11.46
409	11.40	544	10.86	585	11.45
415	11.45	549	11.07	2428600.263	10.75
420	11.45	583	10.95	268	10.95
426	11.23	588	10.98	274	11.00
2428571.331	10.94	593	11.04	279	10.98
336	10.96	598	11.05	285	11.00
341	11.02	602	10.75	290	10.86
346	11.01	607	10.94	296	10.78
350	10.84	612	10.90	301	11.04
355	10.78	2428599.278	11.04	2428603.306	11.34

TABLE II 366020

J. D.⊙	Ph. Mg.	J. D.⊙	Ph. Mg.	J. D.⊙	Ph. Mg.
	m		m		m
2428603.311	11.48	2428607.305	10.80	5428624.269	11.26
316	11.28	309	10.93	303	11.44
321	11.28	314	10.64	324	11.57
326	10.90	318	11.07	329	11.34
332	11.01	322	10.86	333	11.63
343	11.20	326	11.15	337	11.54
348	11.16	340	10.93	341	11.48
352	11.08	347	10.99	345	11.36
358	11.06	350	11.22	350	11.39
363	11.03	359	11.27	354	11.57
368	10.92	363	11.04	358	11.38
373	10.80	367	11.22	364	11.40
390	10.82	2428609.253	11.62	374	11.17
394	10.86	257	11.60	378	11.18
403	11.99	262	11.56	382	10.98
407	10.74	266	11.55	386	11.02
2428606.267	11.04	270	11.54	390	11.06
272	10.85	278	11.52	401	10.74
281	10.90	282	11.65	406	10.78
285	11.08	289	11.39	410	10.84
290	11.12	293	11.40	414	10.85
294	11.05	298	11.15	422	10.92
298	11.04	302	11.25	427	10.80
307	11.11	307	11.35	431	10.83
312	11.10	311	11.34	435	10.93
316	11.18	315	11.40	453	10.98
320	11.13	321	11.07	457	10.91
324	11.30	325	11.05	461	10.87
329	11.25	330	11.08	465	10.98
333	11.40	334	10.95	474	10.85
343	11.50	338	11.12	478	10.93
354	11.63	342	11.13	482	10.97
359	11.42	346	10.98	486	11.02
363	11.58	352	10.68	493	11.34
372	11.56	356	10.96	497	11.26
376	11.37	360	10.92	501	11.15
380	11.58	364	10.88	506	11.34
2428607.266	11.00	368	10.90	512	11.25
270	10.95	373	10.85	516	11.47
275	11.14	377	10.99	520	11.50
279	11.17	2428623.270	11.28	524	11.47
283	10.99	306	11.48		
287	10.94	315	11.27		
291	10.88	351	11.16		

In calculating the phases we used Prager's elements given above. The smallness of the correction of the period derived from the curve drawn on the basis of points given in Table II confirmed the accuracy of Prager's period.

Thus, for the star SS Comae Berenices we have the following elements:

$$\text{Min} = 2428584.492 + 0^d.412789 \cdot E,$$

where the epoch 2428584.492 is given for the main minimum.

აბასთუმნის ასტროფიზ. ობსერვ. ბიულ. № 2.



As the observations were not distributed uniformly enough over the whole period, the normal points of the final light-curve were formed basing on observations made in equal intervals of the period.

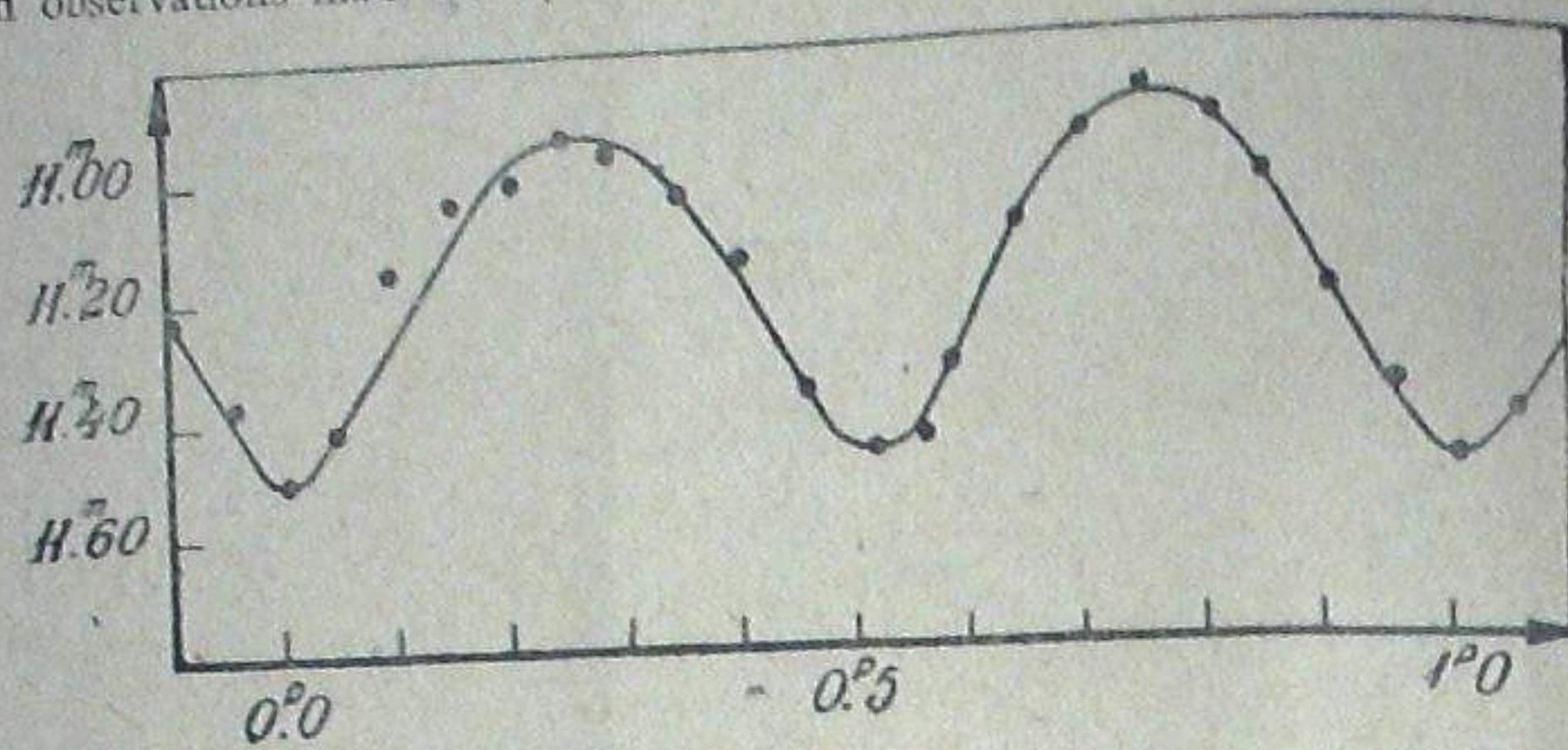


Fig. 1 ნახ.

We listed in Table III the normal values of photographic magnitudes or corresponding phases and the number of observations used for their determination.

TABLE III ცხრილი

Phase	Ph. Mg.	n	Phase	Ph. Mg.	n	Phase	Ph. Mg.	n
0.003	11.52	20	0.354	11.04	9	0.694	10.97	9
051	11.44	17	406	11.16	14	747	10.90	8
099	11.16	19	452	11.36	16	805	10.95	11
149	11.04	22	506	11.49	9	850	11.04	12
202	11.01	23	548	11.45	14	898	11.24	13
252	10.94	26	596	11.34	12	959	11.39	14
296	10.97	22	644	11.10	10			

From the examination of Fig. 1 we can conclude that the curve is symmetrical and

$$\text{Max} = 10^m.92; \quad A = 0^m.60; \quad A = 0^m.57;$$

Part of the photographic material was obtained by M. A. Vashakidse and K. G. Zakharin. The plates were measured by E. Dolidse and G. Oragvelidse.

May, 1937.

Literature: ლიტერატურა:

1. B. Z. 13, 1929.

2. K. V. BB. 6, 1929.

SS COMAE BERENICES

ფოტოგრაფიული სიკაშკაშის მრუდი და ელემენტები

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ფოტოგრაფიული სიკაშკაშის მრუდი და ელემენტები მიღებულია 300 ფოტოგრაფიული გამონახვის საფუძველზე.

ცხრ. II ცალკეულ დაკვირვებებს შეიცავს.

ცხრ. III და ნახ. I ცვალებადის ფოტოგრაფიული სიდიდის ნორმალურ მნიშვნელობებსა და საშუალო მრუდს გამოხატავენ შესაბამისად.

მაისი, 1937.