Nach der Übertragung der Oppolzerschen Schwere auf den Punkt der Münchener Beobachtungen vom Jahre 1899 ist aber

$$g = 9807.48 \text{ mm}$$

und in jener Zeit war

$$T_{89} = 0.5078344^{\text{sec}} \quad T_{90} = 0.5077579^{\text{sec}} \quad T_{91} = 0.5077119^{\text{sec}}$$

Nach

$$l = [9.003324 - 10] \cdot g \cdot T^2$$

wo T in Sternzeit verstanden ist, wird daher

$$l_{89} = 254.87 \text{ mm} \quad l_{90} = 254.80 \text{ mm} \quad l_{91} = 254.75 \text{ mm} . \quad (6)$$

Endlich beträgt das Gewicht der Münchener Pendel in Gramm

$$\Sigma m_{89} = 1108.5 \quad \Sigma m_{90} = 1099.2 \quad \Sigma m_{91} = 1129.2 . \quad (7)$$

4. Aus den Gleichungen

$$\frac{s l \Sigma m}{s \Sigma m} = l \quad \frac{s l \Sigma m + \sigma \lambda \Sigma \mu}{s \Sigma m + \sigma \Sigma \mu} = l + \Delta l$$

folgt

$$s = \frac{\Sigma \mu}{\Sigma m} \sigma \frac{\lambda - l - \Delta l}{\Delta l}$$

und mithin, wenn man die Zahlen (2) bis (7) substituiert:

$$s_{89} = 231.13 \text{ mm} \quad s_{90} = 231.17 \text{ mm} \quad s_{91} = 231.40 \text{ mm}$$

was gesucht war.

Nach den Erscheinungen, welche sich bei Pendel 89 gezeigt haben, und bei der theoretisch erwiesenen großen Bedeutung der Schneidenform möchte ich nicht empfehlen, die Deckplatte fest mit dem Wandstativ zu verbinden.

Es gibt ein viel einfacheres Mittel, die Deckplatte unschädlich zu machen: man hebt sie nach jeder Pendelmessung ab. Dann verbindet sich die Art des Aufliegens mit den zufälligen Fehlern.

Am 30. November 1900 wurde das Pendel 89 beobachtet, ohne daß an der Deckplatte etwas geändert wurde:

München, 1902 Dez. 25.

und am 1. Dezember 1900 wurde nach jeder Messung nicht nur die Platte abgehoben, sondern auch die Schrauben wurden gelöst und die Spitzenschrauben verstellt, dann die Platte neu aufgelegt und nivelliert. Dasselbe Pendel ergab:

Beginn	8 ^h 40 ^m	5078393 ^e
10	25	8386
12	10	8394
1	55	8394
3	40	8392

Der mittlere Fehler einer Messung beträgt

$$\text{dort: } \pm 3.7^\circ \quad \text{hier: } \pm 3.3^\circ .$$

Aus diesem Grunde habe ich während der ganzen Expedition 1902 dieses Verfahren eingehalten, ohne daß irgend eine ungünstige Wirkung bemerkt wurde.

E. Anding.

New Variable Star 19.1903 Lyrae.

$$\text{RA.} = 18^{\text{h}} 38^{\text{m}} 13.9, \quad \text{Decl.} = +32^\circ 39' 1 (1855).$$

The approximate position of this variable according to measures of two photographs taken with a 4.4-inch portrait lens is given above. It lies in a region devoid of bright stars, and where there are many faint ones, but the adjoining little diagram will help in identifying it. The star marked a is BD. +32°3193 (9.2 mag.). The following results are based primarily upon 104 observations made with a 6½-inch reflector in the month of May of the present year, but the star is also shown upon 19 photographs obtained here. Upon most of these photographs the star is faint and only on one plate does it appear very bright. This circumstance made it seem probable that the star belonged to that extreme type of short period variation which has been termed »Cluster-type« by Bailey and »Antalgol-type« by Hartwig; and the observations soon showed in fact that it was an unusually exaggerated specimen of this type, the rise from minimum to maximum occurring in the short period of 61 minutes, whilst the decrease takes 11^h 15^m, the ratio of increase to decrease being thus 0.09.

The following light scale is based upon sequences of steps made on six nights with the reflector. The magnitudes in the last column have been derived by assuming the star a to be 9.0 mag., and the value of a step to be 0.06 mag.

Star	Light-scale	Mag.
a	47.2	9.00
b	30.8	9.98
c	25.1	10.33
d	15.4	10.91
e	10.0	11.23

The table below contains particulars of six observed maxima. Also, as already stated, the star is very bright on one photograph, taken on Nov. 2, 1901, with an exposure of 29^m, from 8^h 57^m to 9^h 26^m, and taking everything into account, it seems probable that the star must have been at or very near its maximum brightness then. The middle of the exposure has consequently been assumed as the time of maximum. The table contains, besides the observed Greenwich mean times of maximum, the computed times according to the elements given further on, and the residuals C — O.

E	Date	Comp. Max.	Obs. Max.	C—O	Weight.
1	1899 Sept. 28	12 ^h 2 ^m	(12 ^h 37 ^m)	(—35 ^m)	ph.
709	1900 » 25	11 46	(12 52)	(—66)	ph.
1497	1901 Nov. 2	9 11	9 11	0	ph.
2575	1903 May 7	13 7	13 15	— 8	2
2579	» 9	14 12	14 13	— 1	2
2612	» 26	11 8	10 28*	+40*	1
2614	» 27	11 41	11 41	0	5
2616	» 28	12 13	12 7	+ 6	1
2622	» 31	13 51	14 0	— 9	3

The adopted period of variation is based upon the last 7 results of the above table, but as the star is shown bright on another plate dated 1899 Sept. 28, this will afford a valuable check upon its accuracy. The variable is about a quarter of a magnitude fainter on this plate than it is on that of 1901 Nov. 2, so that we are probably safe in assuming that the star was within an hour of maximum. As will be seen from the preceding table, the computed time of maximum precedes the middle time of the photograph by 35^m, which is quite satisfactory. Also on another plate, dated 1900 Sept. 25, the star is moderately bright, and must certainly have been within two hours of maximum. Here also the residual of —66^m is quite satisfactory, so that it is clear that the adopted period must be very near the truth. The concluded elements are as stated below.

Period of variation	0 ^d 12 ^h 16 ^m 15 ^s 0 = 0 ^d 5 11 28 4
Epoch of maximum	1903 May 31, 13 ^h 51 ^m Gr. m. t. = J. D. 2416266 ^d 5768
Maximum brightness	9.87 mag.
Minimum brightness	11.23 »
Minimum to maximum	1 ^h 1 ^m
Maximum to minimum	11 15
Ratio of increase to decrease	0.09

The light curve of the present variable almost exactly resembles those of γ Lyrae and UY Cygni†, but is of a more exaggerated type. The following is an ephemeris for every 45th maximum. Maxima will occur 32.5 minutes later on each succeeding night.

E	1903	G. M. T.
2647	June 13	8 ^h 37 ^m
2692	July 6	8 48
2737	29	8 59
2782	Aug. 21	9 10
2827	Sept. 13	9 22
2872	Oct. 6	9 33

E	1903	G. M. T.
2917	Oct. 29	9 ^h 44 ^m
2962	Nov. 21	9 55
3007	Dec. 14	10 6
	1904	
3052	Jan. 6	10 18
3097	29	10 29

20 Hove Park Villas, Hove, 1903 June 8.

A. Stanley Williams.

* A subsequent determination makes the time of maximum 11^h 3^m. This would reduce this large residual to +5^m. The rise to maximum was not observed, so that the time is necessarily somewhat approximate. It should be mentioned that the correction for the equation of light has not been taken into account, and that the observed times are geocentric times.

† See Monthly Notices, Vol. 62, p. 206 and Vol. 63, p. 308.

Anzeige. An der Heidelberger Sternwarte (Astron. Abt.) ist baldmöglichst die Stelle eines Assistenten durch einen jüngeren, aber im Beobachten nicht unerfahrenen Astronomen zu besetzen. Anmeldungen nimmt Prof. *Valentiner* entgegen.

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