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COMMUNICATION FROM THE OBSERVATORY AT LEIDEN.

Occultations of stars by the Moon in the year 1929, by *C. H. Hins* and *D. Gaykema*.

The occultations published in this paper were observed in compliance with a request by Prof. F. W. BROWN to participate in his campaign for collecting a large material of occultations all over the world.

As we feared that the number of observations would be very small when confined to the occultations predicted in the Nautical Almanac, we have endeavoured to observe others also.

As to the mean places 1929.0 adopted for the stars not contained in the N. A. or Am. Eph. we refer to the notes.

For three stars viz. B. D. 24° 1910, 24° 1915 and 24° 1917 not a single catalogue position was available.

It is our purpose to observe these stars this month with the Leiden meridian circle.

All the observations were made with the 10½-inch refractor of this observatory without using a chronograph and estimating tenths of a second between the beats of a dial in the observing room. The sidereal mother clock controlling this dial has been compared every day with the standard clock HOHWÜ 17 of the observatory.

The reductions were done according to the method of INNES (*A. J.* 35 p. 155) using a scheme kindly sent to us by Dr. D. BROUWER.

We are indebted to Mr. G. PELS for the considerable part he took in the computations.

Star	Mag.	Date 1929	Limb	Obs.	Adopted mean place 1929.0		Immersion		$\chi - \rho$	$\sigma' - \sigma$	Notes
					α	δ	Loc. Sid. Time	Grw. Civil Time			
8 Librae	5.4	Mar. 1	bright	H	^h ^m ^s Naut.	Almanac	^h ^m ^s 11 15 5.7	^h ^m ^s 0 23 51.1	— 8 30'	+ 7.9"	
α Librae	2.7	Mar. 1	»	H	»	»	11 23 15.7	0 31 59.8	— 5 3	+ 1.5"	
67 Tauri	5.4	Mar. 16	dark	H	»	»	10 25 29.3	22 31 28.3	45 56	+ 2.2"	
B. D. 24° 818	8.4	Mar. 17	»	H	5 15 49.20	24 56 38.8	7 31 14.0	19 33 45.6	4 56	+ 0.2"	1)
B. D. 25° 818	7.9	Mar. 17	»	H	5 15 56.05	25 5 59.2	7 41 51.5	19 44 21.4	— 28 24	— 0.5"	2)
B. D. 24° 826	8.2	Mar. 17	»	H	5 19 39.42	24 53 42.6	9 22 34.8	21 24 48.2	31 43	— 0.7"	3)
B. D. 26° 1481	7.0	Apr. 15	»	H	7 7 6.77	26 31 26.9	9 25 29.3	19 33 40.9	— 56 31	— 0.7"	4)
B. D. 24° 1903	7.0	Apr. 16	»	H	8 14 55.70	24 23 50.0	11 55 30.7	21 59 21.8	— 49 11	— 1.9"	5)
B. D. 24° 1907	8.2	Apr. 16	»	G	8 15 47.92	24 2 0.1	12 17 19.5	22 21 7.0	19 26	— 1.0"	6)
λ Cancri	5.9	Apr. 16	»	G	Naut.	Almanac	12 30 1.5	22 33 46.9	— 35 50	— 1.6"	
B. D. 24° 1911	9.4	Apr. 16	»	G	8 17 13.04	23 53 7.9	12 58 10.7	23 1 51.5	27 29	0.0"	7)
B. D. 23° 1941	8.9	Apr. 16	»	G	8 17 59.45	23 43 54.2	13 27 37.9	23 31 13.9	50 20	— 1.4"	8)
B. D. 24° 1918	8.2	Apr. 16/17	»	G	8 19 19.35	23 45 50.0	13 49 51.2	23 53 23.9	19 42	— 1.5"	9)
B. D. 24° 1922	8.2	Apr. 17	»	G	8 21 9.58	23 46 52.0	14 30 25.4	0 33 51.2	— 11 27	— 0.9"	10)
B. D. 24° 1923	9.1	Apr. 17	»	G	8 21 33.96	23 53 33.0	14 45 2.9	0 48 26.3	— 46 51	— 0.9"	11)
γ Virginis n. p.	3.7	Apr. 21	»	G	Naut.	Almanac	13 42 27.9	23 26 22.0	— 2 38	— 3.4"	12)
γ Virginis s. f.	3.7	Apr. 21	»	G	Naut.	Almanac	13 42 32.1	23 26 26.2	— 2 38	+ 0.2"	
B. A. C. 4277	6.1	Apr. 22	»	G	12 39 59.15	— 1 11 12.1	15 6 0.9	0 49 41.3	— 51 24	— 2.5"	13)
W. Z. C. 851	6.8	Apr. 22	»	G	13 18 49.50	— 5 49 44.4	9 48 1.9	19 28 38.5	— 20 59	— 2.1"	14)

1) B. D. 24° 818. The mean place 1929.0 has been computed from the catalogues A. G. Cbr. (E.), A. G. Be. B., Abb.₀₀ and Greenwich 1910. No appreciable p. m. was found from these data.

2) B. D. 25° 818. The mean place 1929.0 was computed from the catalogues A. G. Cbr. (E.), A. G. Be. B., Kü.₀₀, Ed.₀₀, Cp.₀₀, Ko.₀₀ and Gr.₁₀. No appreciable p. m. was found.

3) B. D. 24° 826. The mean place 1929.0 was computed from the catalogues A. G. Cbr. (E.), A. G. Be. B., Abb.₀₀, Ko.₀₀ and Gr.₁₀. A small negative p. m. in declination has been applied.

- 4) B.D. 26° 1481. The position of Gr_{10} reduced to 1929 with its p. m. has been adopted.
- 5) B.D. 24° 1903. idem.
- 6) B.D. 24° 1907. The mean value of the catalogues A. G. Be. B., Abb_{∞} , Gr_{10} has been adopted, applying for the declination the p. m. of Gr_{10} .
- 7) B.D. 24° 1911. The position of Bergedorf 1925°0 has been adopted, without proper motion.
- 8) B.D. 23° 1941. The mean value of the catalogues A. G. Be. B., Battermann 1900 and Abb_{∞} has been adopted. No appreciable p. m. is indicated by these catalogues.
- 9) B.D. 24° 1918. The mean place 1929°0 has been computed from the catalogues A. G. Be. B., Bm_{∞} and Abb_{∞} . A negative p. m. in R. A. as well as in declination indicated by these catalogues has been taken into account.
- 10) B.D. 24° 1922. The mean value of the catalogues Par_3 , A. G. Be. B., and Abb_{∞} has been adopted; a small p. m. in declination indicated by the difference A. G. Be. B. — Abb_{∞} has been applied.
- 11) B.D. 24° 1923. The position from Heidelberg (Königsstuhl) Bd. 8 No. 13 has been adopted.
- 12) γ Virginis. The correction from the centre of gravity to the components has been taken into account.
- 13) B. A. C. 4277. The position of Ci_{∞} No. 19 has been adopted with its proper motion.
- 14) W. Z. C. 851. idem.