

On the Longitude of Argi Regio.

Date of observation	Long. centre of disk correct. for libration	Long. of cent. of Argi Regio from centre of disk	Resulting longitude of Argi Regio
Oct. 28 ^d 2 ^h 53 ^m	278°	13°	265°
22 25-57 ^m	281	13	268
23 46-59	281	12	269
29 2 5-12	281	12	269
22 20-38	283	15	268
23 0	283	15	268
30 4 2	284	15	269
20 40-50	286	17	269
31 23 18-32	288	19	269
Nov. 1 0 13	288	19	269
21 16	291	22	269
2 0 38-45	291	24	267
2 40	291	24	267
4 1 57-2 ^h 3 ^m	296	31	265
22 50	299	35	264
5 0 11-19 ^m	299	39	260
21 39-46	301	40	261
22 25-32	301	37	264
6 22 13	303	37	266
8 22 54-23 ^h 8 ^m	308	42	266

The mean of the resulting longitude for Argi Regio is thus $266^{\circ}6 \pm 0^{\circ}4$; the probable error of a single drawing being $1^{\circ}8$ and that of the mean $0^{\circ}4$.

This conclusively shows not only the fact of the libration, for the planet revolved through fifty-two degrees of heliocentric longitude in the course of its orbital circuit

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in the interim, but strikingly testifies to the permanency and visibility of the markings and to the accuracy of the drawings.

Physical Condition. This is revealed by the following observations and deductions from them.

1st. The markings are permanently visible. From this it is evident that there are no clouds or other obscurations over the surface of the planet.

2^d. There are no positive signs, either direct or indirect, of any atmospheric envelope. As for direct signs none were apparent when the planet transited the sun on November 10th 1894. Indirect signs are similarly wanting.

3^d. The negative evidence against any perceptible atmosphere is numerous. The first point is the low albedo of the planet, thus resembling that of the airless moon and markedly unlike that of the atmosphere-enveloped Venus. The second is the much greater contrast of the markings on Mercury than on Venus. Third is the absence of perceptible change in the appearance of the markings. All of these consequences would necessarily follow a lack of air.

4th. The surface is colorless; the surface being simply a chiaosuro, a geography in black and white. Consequently there can be neither water nor vegetation upon it.

5th. The absence of change in the markings shows that there are no seasonal effects.

All of these are necessary consequences of the isochronism of the orbital and axial rotations taken in connection with the perpendicularity of the axis to the plane of the orbit.

From all the above it is evident that the visible surface of the planet is one vast desert.

Percival Lowell.

Occultation des Pléiades par la lune du 17 Décembre 1896.

Les observations qui suivent ont été faites à l'Observatoire de Lyon par M. *Le Cadet* (GLC) à l'Équatorial coudé (0^m32) et par M. *Guillaume* (G) à l'Équatorial Brunner (0^m18). Les nuages ont empêché d'observer le commencement du phénomène; les immersions (I) ont lieu sur le bord obscur et les émerisions (E) sur le bord éclairé.

Étoile	Gr.	Phén.	T. m. Paris	Angle Pôle	Observ.
20 c Maia	4.5	E	4 ^h 20 ^m 5 ^s 6 ^s 1)	270° 0'	GLC
			4 20 5.4 2)	271 16	G
An. 29	7.5	I	4 35 10.6 3)	—	GLC
			4 35 9.8 4)	—	G
An. 12	7.5	E	4 53 43 5)	—	G
An. 31	8.5	E	4 59 7.4 6)	—	G

Étoile	Gr.	Phén.	T. m. Paris	Angle Pôle	Observ.
An. 32	7.5	I	5 ^h 2 ^m 55 ^s 9 ^s 7)	—	GLC
			5 2 55.8 8)	—	G
An. 29	7.5	E	5 27 50.9	215° 0'	G
An. 39	8.5	I	5 36 37.2	—	GLC
An. 32	7.5	E	5 49 56.3	204 0	GLC

1) Le phénomène n'a pas été instantané; à son apparition l'étoile forme un petit mamelon sur le bord éclairé de la lune. Elle ne s'en détache que 0^s5 plus tard. — 2) Émerision instantanée dans les franges d'ondulation. — 3) et 4) Instantané. — 5) Les temps d'émerision des étoiles 7^m5 et au dessous sont en retard probable de 0^s3 à 0^s5. — 6) Instantané à travers nuages. — 7) et 8) Instantané à travers légers nuages.

Observatoire de Lyon, 1897 Mars.

Ch. André.

Planet (162) Laurentia. Correction der Ephemeride (Berl. Jahrbuch 1899) 1897 April 12: $\Delta\alpha = -38^s.92$, $\Delta\delta = +4' 10''.8$.

W. Villiger.

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