

Es sind nach der Berechnung des Herrn Studiosus Berberich die nachstehenden:

Datum	Stern B. D.	Grösse	M. Berl. Zeit der Conj.	$\Delta d$ ( $\varphi - * $ )	Anmerkungen
Juli 23	19 <sup>o</sup> 851	6 <sup>m</sup> 5	21 <sup>h</sup> 12 <sup>m</sup> 4 <sup>s</sup>	+ 20'7	Bedeckung.
Aug. 7	21 <sup>o</sup> 1172	9.0	19 0 5	- 1.6	»
» 10	21 <sup>o</sup> 1247	8.1	10 0 3	- 54.9	»
» 16	21 <sup>o</sup> 1435	9.3	15 53 8	+ 7.7	»
» 20	20 <sup>o</sup> 1941	9.0	17 50 8	+ 12.7	»

Es wird von Interesse sein, diese Bedeckungen zu beachten; vielleicht lassen auch sie sich, unter Anwendung sehr starker Vergrösserungen, um den blitzenden Fixsternpunkt deutlich sich abheben zu lassen von der matt gewordenen Planetenscheibe, mit hinlänglicher Sicherheit beobachten.

Die nahen Conjunctionen von Venus mit Fixsternen, sei es am Abend- oder am Morgenhimmel, verdienen aber für die Bestimmung der Venusparallaxe auch dann die besondere Aufmerksamkeit der Astronomen, wenn keine Bedeckungen Statt finden. Die Beobachtung der Distanzen mittelst mikrometrischer Apparate wird kaum

weiterführen. Die so wenig bekannten Inflexions- und Beugungserscheinungen, soweit sie in verschiedenen optischen Apparaten verschieden den Durchmesser eines Planeten verunstalten, werden wohl kaum je erlauben, den Halbmesser bei Venusbeobachtungen als bekannt anzunehmen; ebensowenig ist mir, ausser bei Venusdurchgängen eine Methode bekannt, denselben aus dem Resultate der Abstands-Messungen zu eliminieren.

Ganz anders verhält es sich jedoch mit den Messungen von Positionswinkeln. Benutzt man ein Fädenpaar, dessen Abstand grösser ist, als der Durchmesser der Venus, so lässt sich der Positionswinkel eines Fixsterns stets unmittelbar in Bezug auf den Mittelpunkt der Venus beobachten. Zu der Zeit der Stillstände wird aber bei einem Abstände des Fixsterns von 1' vom Venuscentrum durch die Parallaxe (bei 15<sup>o</sup> Höhe des Planeten) im günstigsten Falle der Positionswinkel gegen den für den Mittelpunkt der Erde gültigen um volle 22<sup>o</sup> verschoben.

Genauere Vorschläge zur Ausnutzung der vorstehend hingeworfenen Gedanken behalte ich mir vor, sobald die thatsächliche Anwendung der Methode mir die anzuwendenden Vorsichtsmaassregeln mit hinlänglicher Sicherheit angezeigt hat.

Strassburg, im Mai 1881.

A. Winnecke.

## Aus einem Schreiben von Dr. B. A. Gould, Director der Sternwarte in Cordoba.

### Corrigenda in the Uranometria Argentina.

Inclosed is a list of errors found in the Uranometria Argentina since its publication. Several astronomers have kindly sent me memoranda of discordances, but all the corresponding errors, excepting three, had already been detected here. For two of these I am indebted to Mr. Marth, & for the third to Prof. Pickering.

The corrigenda now sent you comprise all which have come to my knowledge besides those published in the volume itself, with exception of some harmless errors of orthography and one important matter relative to the variable R. Hydrae.

For this star I assumed, page 301, an error of one year in the date of Maraldi's second observation, since this may be brought into perfect harmony with observations of earlier and later astronomers by supposing the year to have been 1707 instead of 1708; but mentioned at the same time that, not having access to the original publication, it was out of my power to test the correctness of the conjecture. During a recent visit home, my friend Mr. S. C. Chandler called my attention to the matter, and reference to the Mémoires de Paris made it evident that the supposition was untenable. I have therefore now resumed the investigation of the period of variability, and hope soon to be able to send you the results.

#### In the Volume

p. 133	Hydrus No. 21 for AR. 1 <sup>h</sup> 54 <sup>m</sup> 46 <sup>s</sup> read 1 <sup>h</sup> 51 <sup>m</sup> 46 <sup>s</sup>
134	Chamaeleon No. 25 for AR. 15 <sup>h</sup> 44 <sup>m</sup> 3 <sup>s</sup> » 10 <sup>h</sup> 44 <sup>m</sup> 3 <sup>s</sup>
136	Pavo No. 75 and 76 The magnitudes are interchanged
138	Tucana No. 15 for Decl. 66 <sup>o</sup> 20' 6 read 62 <sup>o</sup> 20' 6
155	Centaurus No. 363.4 for <i>a</i> » <i>a</i>
159	Eridanus. The constellation-number should be 23.
176	Scorpius No. 115 for Decl. 40 <sup>o</sup> 47' 6 read 44 <sup>o</sup> 47' 6.
198	Ophiuchus No. 4 belongs to the constellation Serpens
205	Lepus No. 91 for Decl. 21 <sup>o</sup> 48' 9 read 21 <sup>o</sup> 47' 9
211	Cetus No. 175 » AR. 1 <sup>h</sup> 37 <sup>m</sup> 24 <sup>s</sup> » 1 <sup>h</sup> 36 <sup>m</sup> 24 <sup>s</sup>
220	Aquila No. 17 » Decl. -9 <sup>o</sup> 27' 3 » + 9 <sup>o</sup> 27' 3
313	Cetus N. 2331.4 » ántes de que » aunque
313	» » » » before » although
336	Both columns l.1 for Serpentis » Sextantis
343	» » 1.8 » 32 <sup>1</sup> / <sub>2</sub> <sup>o</sup> » 22 <sup>1</sup> / <sub>2</sub> <sup>o</sup>
343	» » l. 5 from bottom for 8.3 <sup>mm</sup> » 8.73 <sup>mm</sup>
384	Constellation No. 2 for Musca » Mensa

#### In the Atlas

(The list of errors previously discovered is given on page 346).

#### Stars wanting upon the Maps

Map 3	Reticulum No 1—L. 1057
4	Puppis No. 226—L. 3086
5	Antlia No. 46—L. 4142

Map 5	Centaurus	No. 291 1/2 — Joint effect of L. 5746 and another
6	Scorpius	No. 131, 161, 162—See note p. 286
9	Orion	No. 57—DM. 9 <sup>o</sup> 806
9, 10	Canis minor	No. 33, 34, 36, 47. — Ll. 15177, 15207, 15271, 15564.
11	Virgo	No. 197.—Anon. 6 <sup>m</sup> 8
12	Sagittarius	No. 117.—Bonn. Beob. VI 138
12	Capricornus	No. 30.—WB. XX 644
13	Pisces	No. 88. — Ll. 617
13	Aquarius	No. 5.—Ll. 39925
13	Capricornus	No. 126.—WB. 1016

Those variables which are usually fainter than 7<sup>m</sup>0 have mostly been omitted, as is stated on p. 345.

Stars erroneously plotted.

Maps 1, 6, 7	ζ Pavonis	No. 35 is placed 10 minutes too early in AR.
4, 5	S Carinae	No. 177 is placed 2 <sup>o</sup> too far south
8	Cetus	No. 97 » » 1 <sup>o</sup> too far south
9	Eridanus	No. 179 » » 20' too far north

Dots to be erased from the Maps.

Map 3	Br. (605)	3 <sup>h</sup> 41 <sup>m</sup> 6 <sup>s</sup>	54 <sup>o</sup> 53'	7 <sup>m</sup> 2
3	L. 1762	5 8 56	32 14	7.6
4	L. 2727.8	7 13 10	38 45	7.1 together
9	WB. IV 655.6	4 32 12	13 18	7.1 dpl.
9	L. 1762	5 8 56	32 14	7.6
9	L. 1893	5 29 2	30 2	7.8
9, 10	Ll. 15984	8 4 9	+ 3 19	7.1
10	Ll. 17347	8 41 52	+ 1 1	7.5
12, 13	Ll. 38342	19 58 31	— 4 40	7.5
12, 13	Ll. 38405	20 0 0	— 4 46	7.1
13	Ll. 46741	23 45 27	19 21	8
5	Erroneous dot	12 3 40	63 6	
5	»	12 59 0	58 10	
5	»	13 1 40	33 6	
10	»	8 0 45	21 50	
11	»	13 5 25	+ 7 35	
11	»	13 11 0	— 8 6	
12	»	17 19 40	+ 9 0	

Cordoba 1881, Jan. 24.

B. A. Gould.

Star with large proper motion. (Lacaille 9352)

The progress of our zone-reductions has revealed a proper-motion, of nearly 7" a year, in a star of the 7.5 magnitude in the constellation *Piscis Austrinus*. Its amount is apparently inferior by less than 0.1 to that of Argelander's celebrated star Groombr. 1830, in *Ursa Major*; and full confirmation is given by observations made in 1880, although these are not yet reduced with sufficient nicety for publication.

The star is L. 9352, and was observed by Lacaille 1752 June 19. It occurs in the Washington Observations of 1865 and 1869, being No. 10149 of Yarnall's

catalogue. I observed it 1872, Sept. 26. in the Cordoba Zone 23; and its place was well determined with the meridian-circle in Nov. 1876. Furthermore there is an observation in the Washington Zone, with the Transit Instrument, No. 74.

Reducing the several positions to the m. equinox of 1875.0, and applying to Lacaille's right-ascension the correction — 0<sup>s</sup> 23, required, according to Argelander's data, for reducing it to the equinoctial point used in the other determinations, we find:

	Date	Equinox	Position observed		Mean Equinox 1875.0	
Lacaille	1752.5	1750.0	22 <sup>h</sup> 49 <sup>m</sup> 37 <sup>s</sup> 7	— 37 <sup>o</sup> 17' 1" 0	22 <sup>h</sup> 56 <sup>m</sup> 37 <sup>s</sup> 66	— 36 <sup>o</sup> 37' 0" 2
Wash. Zones	1846.7	1850.0	56 8.3	36 43 8.7	57 31.85	35 6.3
Wash. Obs.	1865.7	1870.0	57 25.3		57 42.00	
»	1869.7	1870.0	57 27.4	36 36 2.2	57 44.10	34 25.6
Cordoba Zones	1872.7	1875.0	57 45.8	36 34 22.0	57 45.80	34 22.0
Cordoba Obs.	1876.9	1876.0	57 51.54	36 33 58.4	57 48.20	34 17.7

From these data I infer an annual proper-motion of + 0<sup>s</sup> 5672 in right-ascension and + 1" 3058 in declination; the application of which gives:

	<i>t</i>	Total proper-motion		Epoch and m. Equin. 1875.0	
Lacaille	+ 122 <sup>y</sup> 5	+ 69 <sup>s</sup> 48	+ 159" 95	22 <sup>h</sup> 57 <sup>m</sup> 47 <sup>s</sup> 14	— 36 <sup>o</sup> 34' 20" 2
Wash. Zones	28.3	16.05	36.95	47.90	29.3
Wash. Obs.	9.3	5.87		47.27	
»	5.3	3.01	6.92	47.11	18.7
Cordoba Zones	+ 2.3	+ 1.30	+ 3.00	47.10	19.0
Cordoba Obs.	— 1.9	— 1.08	— 2.48	47.12	20.2

The corresponding motion in arc of a great circle is 6" 9565; the position-angle of the line of apparent motion, 79<sup>o</sup> 11'; and the annual variation, counted from the epoch 1875.0 is

in right-ascension, + 3<sup>s</sup> 9054 — 0<sup>s</sup> 000266 *t*  
in declination, + 20" 6256 + 0" 001226 *t*.

Cordoba, 1881 January 25.

B. A. Gould.