

XVI.

S u p e r

Longitudine geographica

Speculae astronomicae Regiae, quae Monachii est, ex
 occultationibus siderum inerrantium a se observatis et ad calculos
 revocatis nunc primum definita

a

CAROLO FELICI SEYFFER.

Commentatio prior lecta in consessu academico III. Nonarum Septembris
 eius DCCC VIII.

Inest occulatio α^2 cancri.

Cum Augustissimus Rex MAXIMILIANUS JOSEPHUS speculam
 astronomicam in agro prope Ramersdorf a me electo construi apud
 se consituisset, eodem in loco speculam parvam, a principi specula
 30 passus versus occidentem distantem, quac interim, usque dum
 specula princeps constructa fuerit, observationibus inservire possit,
 erigi decrevit.

Quo quidem aedificio 23. Decembris 1804 incepto, die 25.
 Julii 1805 ad finem perducto, fundamentisque marmoreis circuli
 astro-

astronomici repetitoris, tubi culminatorii meridiani (inscriptio subter basin circuli in camera lateritia recondita) circuli azimuthalis et quinque horologiorum pendulorum (quorum quatuor frigoris calorisque effectus compensant) ita jactis, ut instrumenta, eorumque fundamenta marmorea 5 pedum subter terram eximie firmata, neque trabium concamerationem, neque totius aedificii fabricam ullo puncto contingent, ideoque, quaecumque fuerit aedificii tempestatisque mutatio, ne minimam inde variationem experiri possent, instrumentis ad amissim correctis exacteque positis, observationes orsus sum, quarum omnium praecipuas, quae ad positionem speculac geographicam faciunt, et quidem occultationes siderum inerrantium a me observatas et ad calculos revocatas primum edere e re erit.

Quodcumque vero et aedificii excellens positio, circulo aspe-
ctum nostrum finiente quaquaversus amplissimo, et instrumentorum
eximia supellex ad sublimis astrorum scientiae augmenta efficerint,
ad Augustissimum Regem, ad Uraniae protectorem de Mont-
gélas, Regi a Secretis principem, optimum, tamquam liberalissimo-
rum animorum documentum pie et grata referet Urania.

I.

Occultatio α^{a} cancri tubo achromatico Dollondii 275^{ies} augente a me
observata 1806 Decembri 27^{mo}.

Immersio 17.^h 46.^m 47,^s64 }
Emersio 18.^h 37.^m 36,^s2 } tempore solari medio.
Coelum apprime serenum, observatio exacta.

Immersio computata.

Monachii.		Locus solis.								
1806. 27 ^{mo} Dec. 17. ^h 46. ^m 47, ^s 64 temp. med. = 28 ^{vo} Dec. 5. ^h 9. ^m 41, ^s 64. temp. med. civ. Parisino.										
	Longitudo \odot	Perigeum.	M.	A.	B.	C.	D.	E.	F.	N.
Aeq. secul.	- - - 0,5	- - - 0,03	-	-	-	-	-	-	-	-
1806.	95.09 ^o .56'.43,"2	95.09 ^o .35.'15,"00	830	344	278	154	836	733	546	230
28 ^{vo} Dec.	11.25. 49. 07, 1	- - 01. 01, 30	101	225	989	606	526	83	34	53
Lg. med. \odot	9.05.45. 50,8	9. 09. 36. 16.33	940	569	267	760	362	816	580	283
5. ^h -	- 12. 19,2	9. 05. 58. 33.90		20	—	Corr. A.				
9. ^m -	- - 22,2			7	7	1	1			
41, ^s 64.	- - 01,7	11. 26. 22. 17.57								
		11. 26. 22. 20,3	947	596	268	761	362	816	580	283
		11. 26. 37,1	Anom. med.							
\odot	95.05 ^o .58.33,"90									
Aeq. Cent.	11.29. 51. 47,31									
Var. sec.	- - - 0,03									
A	- - - 03,26									
la 3 ^{ta} part.	- - - 0,20									
B. C.	- - - 16,87									
B. D.	- - - 07,47									
B. E.	- - - 12,43									
B. F.	- - - 0,95									
Nut. \oplus	- - - 17,64									
Nut. \odot	- - - 0,20									
Aberr. \odot	- - - 0,33									
Lg. vera \odot	95.05 ^o .51'10,"87									
\odot	9. 05. 58. 33.90									
Nut. \oplus	- - 17,64									
Lg. med. \odot	95.05 ^o .58'.51,"54									

Emer-

Emersio computata.

Monachii.		Locus solis.									
1806.	Longit. med. ☽	Perigeum.		M.	A.	B.	C.	D.	E.	F.	N.
27mo Dec. 18.h 37'36,"2	temp. med. = 28vo Dec. 6h 0'.30,"2	98.05°.45'.50,"8	98.09°.36'.16,"33	940	569	267	760	362	816	580	283
6.h - -	- - 14.47, 1	9. 06. 00. 39, 10		20	=Corr.A.						
30,"2 - -	- - - 01, 2	11.26. 24. 23, 77		8	8	1	1				
☽	9. 06. 00. 39, 10	11.26. 24. 379	948 597	268	761	362	816	580	283		
Aeq. centr.	11.29, 51.51, 58	11.26, 406	Anom. med. ☽								
Var. sec. -	- - - 0,03										
A. - -	- - - 03,24										
2da 3tia pars	- - - 0,20										
B. C. -	- - - 16,87										
B. D. -	- - - 07,47										
B. E. -	- - - 12,43										
B. F. -	- - - 0,95										
Nut. ☉ -	- - - 17,64										
Nut. ☽ -	- - - 0,20										
Aberr. ☽ -	- - - 0,33										
Lg. vera ☽	98.05°.53'29,"32										
☽	9. 06. 0. 39, 10										
Nut. ☉ -	- - - 17, 64										
Lg. med. ☽	98.06°.0'.56,"74										

Immersio computata.

I mmersio Monachii.

Locus Lunac.

1806. 27^{mo} Dec. 17^h .46'.47'',64 temp. med. astr. = 28^{vo} Dec. 5^h .9'.411'',64 temp. Paris. civ.

Argg.	Long. med. ☽	Anom. med.	Argg.	Suppl. Nodi.
Aeq. secul.	- - - 10, 30	- - - 44, 8	- - -	- - - - 8,5
1806.	18.21 ⁰ .42'.30'',00	109.02 ⁰ .10'.23'',6	- - -	2s. 22 ⁰ .47'.24'',0
28 ^{vo} Dec.	2. 16. 40. 44, 70	1. 06. 27. 43, 2	- - -	0. 19. 07. 0,8
5. ^h	0. 02. 44. 42, 30	0. 02. 44. 18, 7	- - -	- - - - 39,7
9. ^m	- - 04.56, 50	- - 04.54, 0	- - -	- - - - 01,2
41'',6.	- - - 22, 84	- - - 22, 6	- - -	- - - - 0,1
☽	4. 11. 13. 26,64	11. 11. 27. 26, 9	N XVII.	3. 11. 54. 57,3
○	9. 05. 51. 19,87	- - - -	A.	11. 11. 27. 26,9
D.	7. 05. 22. 06,77	Aequat. long. -	aeq. A.	11. 28. 01. 26,0
I.	11. 26. 22. 17,57	- - 0°.12'.43'',3	24. aeq.	0. 03. 23. 41,2
II.	7. 01. 44	- - - - 14, 0		
III.	7. 09. 0	- - - - 19, 5	XXV.	11. 12. 52. 34,1
IV.	6. 16. 49	- - - - 08, 2	XXVI.	7. 04. 46. 38,5
V.	7. 23. 55	- - - - 01. 21, 5	XXVII.	4. 03. 21. 23,4
VI.	2. 29. 17	- - - - 2. 53. 29, 9	XXVIII.	7. 23. 05. 48,3
VII.	1. 22. 12	- - - - 14, 3		
VIII.	4. 06. 22	- - - - 01, 3	24. aeq.	0. 03. 23. 41,2
IX.	11. 15. 05	- - - - 49, 8	25ta	11. 26. 0. 50,6
X.	2. 07. 07	- - - - 01. 49, 6	☽	4. 11. 13. 26,6
XI.	2. 14. 22	- - - - 03. 13, 6		
XII.	7. 20. 17	- - - - 00, 3	☽'	4. 10. 37. 58,4
XIII.	2. 25. 39	- - - - 05. 04, 2	26ta	0. 01. 12. 37,8
XIV.	3. 02. 55	- - - - 01. 47, 5		
XV.	1. 18. 34	- - - - 03, 0	☽''	4. 11. 50. 36,2
XVI.	1. 25. 50	- - - - 02, 3	27ma	- - - - 49,5
XVII.	3. 11. 55	- - - - 03, 4	28va	11. 29. 13. 28,5
XVIII.	0. 17. 46	- - - - 01. 23, 7	Nut. ☽	- - - - 17,6
* XIX.	8. 11. 41	- - - - 06, 3		
XX.	5. 10. 01	- - - - 16, 4	☽'	4. 11. 05. 11,8
XXI.	6. 17. 06	- - - - 0, 8		
XXII.	8. 15. 48	- - - - 02, 4		
XXIII.	31. 12. 59	- - - - 08, 0		
XXIV.	10. 05. 54	- - - - 17, 1		
24. Aequat. = - - 03. ⁰ 23.' ⁴¹ '',2				

* Cum Tabula Illustris De lam
bre ad sinus simplum sit con-
structa, aequationem XIXnam
ad formulam ipsam celeberr.
Bürg. XVtam computaveris.
Ex illustris Triesnecker
formula — 8'',8 sin. 2 Dist.
☽ a Ω — 2 anom. med. ☽
prodit aequatio — 05'',2.

Immersio computata.

Immersio Monachii.			Locus Lunae.		
	Argumenta Latitudinis.	Aequation. Latitudinis.		Motus horar. Longitud.	
				Imi ordinis.	Idi ordinis.
G''	48. 11°. 50'. 36'', 2		I. - -	o. '0, ''03 IV.	- 0,005
Aeq. 27.	- - - 49, 5		II. - -	- o, 20 VII.	- 0,037
const.	11. 29. 20.		III. - -	- o, 05 IX.	- 0,002
G'''	4. 11. 11. 25, 7		IV. - -	- o, 13 X.	- 0,000
I. -	7. 23. 05. 48, 4	93°. 56'. 28'', 4	V. - -	- o, 11 XI.	- 0,000
II. -	6. 17. 34 - -	- 11. 27, 9	VII. - -	- o, 64 XIII.	- 0,000
III. -	7. 26. 44 - -	- - o, 5	VIII. - -	- o, 01 XIV.	- 0,000
IV. -	8. 11. 39 - -	- - 34, 3	IX. - -	- o, 58 XV.	- 0,000
V. -	9. 0. 12 - -	- - o, 0	X. - -	- 1, 39 XX.	- 0,004
VI. -	9. 18. 45 - -	- - o, 1	XI. - -	- 1, 67 VI.	- 0,001
VII. -	6. 13. 56 - -	- - 11, 2	XIII. - -	- 1, 13 XXV.	1,442
VIII. -	6. 21. 12 - -	- - 05, 0	XIV. - -	- o, 24 XXVI.	0,025
IX. -	5. 29. 01 - -	- - 02, 2	XV. - -	- o, 14 XXVII.	0,007
X. -	7. 06. 07 - -	- - 06, 5	XVI. - -	- o, 05 XXVIII.	0,147
XI. -	7. 24. 40 - -	- - o, 9	XVII. - -	- o, 02 25bis -	0,054
XII. -	4. 11. 12 - -	- - 14, 0	XX. - -	- o, 55 26bis -	0,468
Lat. = - 4°. 09'. 11''. 0 Parall. aequatorial.			XXIII. - -	- o, 01 27bis -	0,000
			XXIV. - -	- o, 03 28bis -	- 2,284
			XXV+I. - -	- o, 75	
			V. - -	- 45, 93 Idi ord.	- 0,092
XXV.	-	58'. 56'', 2	Aequat.	o'. 53'', 66	
VI.	-	- 37, 8	XXV.	34.35, 38	
XXVI.	-	- 37, 0	25bis	- 05, 95	
I. -	-	- o, 0	XXVI.	- 56, 11	
V.	-	- o1, 8	26bis	- 10, 49	
VII. -	-	- o, 1	XXVII.	- o1, 45	
IX. -	-	- o, 4	27bis	- 10, 08	
X. -	-	- o1, 0	XXVIII.	- 10, 18	
XI. -	-	- o1, 0	28bis	- 09, 74	
XIII. -	-	- o1, 1			
XIV. -	-	- o, 6	Imi ord.	36.53, 56	
XVIII. -	-	- o, 7	2di ord.	- o, 09	
XXVII.	-	- o1, 3	Motus hor	36.53, 47 hora sequenti.	
Parallaxis	=	60'. 19'', 0		36.53, 65 hora praecedenti.	
Semi Diam.	=	16. 27, 74			

Emersio computata.

Emersio Monachii.			Locus Lunae.	
1806.	Longit. med. ☽	Anom. med.		Suppl. Nodi.
1806. 27mo Dec. 18h 37'. 36'', 2 temp. med. astr. = 28vo Dec. 6h .0'. 30'', 2. temp. med. civ. Parisino.				
28vo Dec.	48.08°.23'.25'',0	118.08°.38'.51'',6	- - -	38.11°.54'.16'',3
6.h - -	- 03. 17. 38, 8	- 03. 15. 58, 5	- - -	- - - 47, 7
30'',2 - -	- - - 16, 4	- - - 16, 3	- - -	- - - 0, 0
☽	4. 11. 41. 20,2	11. 11. 55. 06,4	N. - -	3. 11. 55. 04,0
⊕	9. 05. 53. 29,8		A. - -	11. 11. 55. 06,4
D.	7. 05. 47. 50,4	Aequat. long. -	Aeq. A.	11. 28. 01. 25,2
L. - -	11. 26. 24. 22,0	- 0°.12'.43'',1	24 aequat.	0. 03. 23. 41,0
II.	7. 02. 12 - -	- - - 13,9		
III.	7. 09. 23 - -	- - - 10,5	XXV. -	11. 13. 20. 12,6
IV.	6. 17. 43 - -	- - - 08,1	XXVI. -	7. 05. 15. 27,6
V.	7. 23. 53 - -	- - 01. 21,5	XXVII. -	4. 03. 56. 22,7
VI.	2. 29. 41 - -	- 02. 53. 29,6	XXVIII. -	7. 23. 37. 07,6
VII.	1. 23. 31 - -	- - - 13,5		
VIII.	4. 05. 51 - -	- - - 01,3	24 aequat.	0. 03. 23. 41,0
IX.	11. 15. 31 - -	- - - 50,0	25ta -	11. 26. 03. 56,2
X.	2. 08. 0 - -	- - 01. 55,0	☽	4. 11. 41. 20,2
XI.	2. 15. 12 - -	- - 03. 13,9		
XII.	7. 20. 17 - -	- - - 0,3	☽'	4. 11. 08. 57,4
XIII.	2. 26. 05 - -	- - 05. 04,3	26ta -	- 01. 12. 50,7
XIV.	3. 03. 17 - -	- - 01. 47,5		
XV.	1. 19. 55 - -	- - - 04,0	☽''	4. 12. 21. 48,1
XVI.	1. 27. 07 - -	- - - 02,4	2-ma -	- - - 49,9
XVII.	3. 11. 55 - -	- - - 03,4	28va -	11. 29. 13. 31,5
XVIII.	0. 17. 48 - -	- - 01. 23,6	Nut. ☽	- - - 17,6
XIX.	8. 11. 41 - -	- - - 06,3		
XX.	5. 11. 17 - -	- - - 16,6	☽"	4. 11. 36. 27,1
XXI.	6. 17. 27 - -	- - - 0,8		
XXII.	8. 15. 50 - -	- - - 02,4		
XXIII.	11. 12. 29 - -	- - - 07,9		
XXIV.	10. 06. 19 - -	- - - 17,1		
	24 Aequationes	= 03°.23'.41'',0		

Emersio computata.

Emersio Monachii.			Locus Lunae.		
			Motus horarius longitud.		
	Argumenta latitudinis.	Aequationes latitudinis.		Imi ordinis.	Idi ordinis.
G''	4°. 12'. 21'. 48'', ₁		I.	- 0'. 00'', ₀₃	IV. - 0,005
27ma	- - - 49, 9		II.	- 0,20	VII. - 0,038
const.	11. 29. 20 -		III.	- 0,05	IX. - 0,002
G'''	4. 11. 42. 38,0	93°. 58'. 00'', ₂	IV.	- 0,13	X. - 0,000
I. -	7. 23. 37. 07,6		V.	- 0,12	XI. - 0,000
II. -	6. 18. 02 -	- 11. 31,8	VII.	- 0,66	XIII. - 0,000
III. -	7. 27. 13 -	- - - 0,5	VIII.	- 0,01	XIV. - 0,000
IV. -	8. 11. 42 -	- - - 34,3	IX.	- 0,58	XV. - 0,000
V. -	8. 29. 47 -	- - - 0,0	X.	- 0,137	XX. - 0,004
VI. -	9. 17. 52 -	- - - 0,1	XI.	- 0,164	VI. - 0,001
VII. -	6. 14. 26 -	- - - 11,2	XIII.	- 0,11	XXV. 1,432
VIII. -	6. 21. 38 -	- - - 05,1	XIV.	- 0,24	XXVI. 0,020
IX. -	5. 29. 57 -	- - - 02,2	XV.	- 0,14	XXVII. 0,007
X. -	7. 06. 07 -	- - - 06,5	XVI.	- 0,05	XXVIII. 0,146
XI. -	7. 24. 12 -	- - - 01,0	XVIII.	- 0,03	25bis - 0,054
XII. -	4. 11. 43 -	- - - 13,9	XX.	- 0,55	26bis - 0,468
Lat. == - 4°. 10'. 55'', ₈ Parall. aequator.			XXIII.	- 0,01	27bis - 0,000
			XXIV.	- 0,03	28bis - 2,284
			XXV+I.	- 0,75	Idi ord. - 0,107
			VI.	- 45,64	
			XXV.	34. 36,03	
			VI.	- 05,95	
			XXVI.	- 55,44	
			bis	- 10,47	
			XXVII.	- 01,46	
			bis	- 10,08	
			XXVIII.	- 10,18	
			bis	- 09,73	
			Imi ord.	36', 53'', ₂₂	
			Idi ord.	- 0,11	
			Mot.hor.	36. 53, ₁₁	hora sequenti.
				36. 53, ₃₃	hora praecedenti.

Quorum quidem solis et lunae elementorum calculi subducti sunt ad perfectissimas nostrae aetatis tabulas astronomicas: Tables astronomiques publiées par le Bureau des Longitudes de France. Première Partie. Tables du Soleil par M. Delambre. Tables de la Lune, par M. Bürg à Paris 1806.

II.

Aberratio et Nutatio α et Cancri.

$$\begin{aligned} \text{AR med. } 1800 &= 131^\circ.53'.02'' \text{.an.var.} = +49'',26 \cdot \delta = 12^\circ.37'.24'' \text{.var.} = -13'',37 \\ 6\text{an.},99 \times 49'',26 &= - +05'.44'',3. - 13'',37 \times 6\text{an.},99 = -01'.33'',4 \\ \text{AR. med. } 1806,28\text{vo Dee.} &= 131^\circ.58'.49'',3 = \alpha \dots \dots \delta = 12^\circ.35'.50'',6 \end{aligned}$$

Aberratio.

$$\begin{aligned} \text{Long. } \odot &= 9s. 05^\circ. 59' \\ A &= - 29,9 \\ \odot + A - \alpha &= 143^\circ. 13' \end{aligned}$$

In AR.

$$\begin{aligned} \log. a &= - - 1.3061.n. - - 1.3061.n \\ \log. \cos. \odot + A - \alpha &= 9.9051 \quad \log. \sin = 9.7743 \\ C. \log. \cos \delta &= 0.0106.n \quad \log. \sin = 9.3386 \\ &1.2218 - - 0.4190.n \end{aligned}$$

$$\begin{aligned} \text{Aberratio in AR.} &= +16'',66 \quad \text{In } \delta \text{ pars} = -2,62 \\ \odot + \delta &= -1,29 \\ \odot - \delta &= +0,47 \\ \text{Aberr. in } \delta &= -3,44 \end{aligned}$$

$$\begin{aligned} \text{AR. med.} &= 131^\circ. 58'.46'',3 \\ \text{Aberr. in AR.} &= - - + 16, 66 \\ \text{Nut. in AR.} &= - - + 17, 05 \\ \text{AR. app.} &= 131^\circ. 59'.20'',01 \end{aligned}$$

Nutatio.

$$\begin{aligned} \Omega &= 8s. 18^\circ.05' \\ B &= - 03. 55 \\ \Omega + B - \alpha &= 122^\circ.12 \\ c &= + 16'',18 \end{aligned}$$

In AR.

$$\begin{aligned} \log. b &= 0.8636.n \dots 0.8636.n \\ \log. \cos. \Omega + B - \alpha &= 9.7266.n \quad \log. \sin = 9.9274 \\ \log. \operatorname{tg.} \delta &= 9.3501 \dots 0.7910.n \\ &9.9403 \text{ - numerus} = 0.87 \\ c &= 16,18 \\ \text{Nut. in AR.} &= +17,05 \\ \text{Nut. in } \delta &= - 6,18 \end{aligned}$$

$$\begin{aligned} \delta \text{ med.} &= 12^\circ.35'.50'',6 \\ \text{Aberr. in } \delta &= - - - 03, 44 \\ \text{Nut. in } \delta &= - - - 06, 18 \\ \delta \text{ app.} &= 12^\circ.35'.40'',98 \end{aligned}$$

Ascensionem rectam ex Bradley, Declinationem ex Bradley et celeberr. Piazzistellarum inerrantium Positiones mediae Panorm. 1803 cum variationibus desumsi, aberratione et nutatione ad formulas generales celeberr. Gauss 1808 computatis. Cacterum de formulis, earumque notatione et concisione vid. Lexell, Lagrange, Delambre, Cagnoli, Klügel, Olbers, Bohnenberger, Wurm, Scriptores in calculis parallacticis longe principes.

III.

Apparens Longitudo et Latitudo. *

$$\sin AR. = 9.8711493$$

$$\cot. \delta = 0.6508293$$

$$\frac{\operatorname{tg}. x = 0.5219786}{\operatorname{tg}. x} = 73^{\circ} 16'. 04'', 9 - - - \cos. x = 0.4592341$$

$$\frac{\operatorname{obliqu}. = 23. 27. 50, 9}{y} = 96. 43. 55, 8 - - -$$

$$\frac{\operatorname{cos}. y = 0.0690326}{\operatorname{cos}. y} = 9.6097985$$

$$\frac{\operatorname{sin} \delta = 0.3305637}{\operatorname{sin} lat. = 0.9483692}$$

$$* \text{Latitudo} = -5^{\circ} 05'. 38'', 3 - - - \operatorname{sin} lat. = 0.9483692$$

$$\operatorname{tg}. lat. = 8.9498827$$

$$\operatorname{tg}. y = 0.9279630$$

$$\frac{\sin long. = 9.8778457}{180^{\circ}} = 49^{\circ} 0'. 35'', 9$$

$$\frac{\text{Long.} = -49. 0'. 35'', 9}{\text{Long.} * = 130^{\circ} 59'. 24'', 1}$$

De formulis vid. illustris Cagnoli Trigonometrie. Seconde Edition. 1808.
§. 1449. 1450.

IV.

Correctio Latitudinis.

$$\phi = 48^{\circ} 07'. 33'' = \text{Latitudini speculae astronomicae regiac.}$$

$$\text{Posita depressione sphaerae telluris} = \frac{1}{334}$$

$$\log \frac{n^2}{m^2} = 9.9973956$$

$$\operatorname{tg} \phi = 0.0474811$$

$$\phi' = 47^{\circ} 57'. 18'', 0 - - \operatorname{tg} \phi' = 0.0448767 = \text{Tg Latitudinis geocentricae.}$$

$$\text{Sive; } x = \frac{a^2 - b^2}{a^2 + b^2}; a = 334; b = 333$$

$$\phi - \phi' = x \sin 2\phi - \frac{1}{2}x^2 \sin 4\phi + \frac{1}{3}x^3 \sin 6\phi - - -$$

$$\phi - \phi' = 618'', 4836 \sin 2\phi - 0'', 9273 \sin 4\phi + 0'', 0018 \sin 6\phi - - -$$

$$= + 10'. 14'', 805 + 0'', 2007 - 0'', 0017$$

$$= 10'. 15'', 005$$

$$\phi' = 47^{\circ} 57'. 18''. = \text{Latitudini geocentricae.}$$

V.

Elementa igitur ita se habent:

Obliquitas Eclipticae	$\equiv \omega \equiv$	23°. 27'. 50'', 98
Latitudo stellae	$\equiv \beta \equiv -$	5. 05. 38, 3
Longitude stellae	\equiv	130. 59. 24, 1
Latitudo geographica	$\equiv \phi \equiv$	48. 07. 33
Latitudo correcta	$\equiv \phi' \equiv$	47. 57. 18
Differ. merid. suppos.	$\equiv - - -$	37. 06 tempore.
Mot. hor. solis in longit.	$\equiv - - -$	02. 32, 9

	Tempore Immersionis.	Emersionis.
Longitude vera \odot	- - - - -	275°. 51'. 19'', 87
Media	- - - - -	275. 58. 51, 5
Longitude vera \mathbb{E}	$\equiv L \equiv$	131. 05. 11, 8
Latitudo	$\equiv B \equiv$	4. 09. 11, 0
Parallaxis \mathbb{E}	$\equiv \pi \equiv$	60. 19, 0
Semidiameter \mathbb{E}	$\equiv \frac{1}{2}d \equiv$	16. 27, 82
Motus horar. in longitud.		
1) hora sequenti	- - - - -	+ 36. 53, 47
2) hora praecedenti	- - - - -	+ 36. 53, 65
Variatio motus semihoraria	- - - - -	- 0. 092
Parallaxis \mathbb{E} longitud.	$\equiv p \equiv$	- 20. 06, 5
Latitudo \mathbb{E} correcta	$\equiv B' \equiv$	4. 54. 10. 0
Semidiameter \mathbb{E} auct.	$\equiv \frac{1}{2}d' \equiv$	997, 9

VI.

Longitudo et Latitudo Nonagesimi.

$$\text{Tg } x = \sin \mu \cdot \cot \phi'$$

$$\text{Sin latitud. Nonag.} = \sin b = \frac{\sin \phi' \cos (\omega + x)}{\cos x}$$

$$\text{Sin longit. Nonag.} = \sin l = \underline{\sin b \cdot \text{tg}(\omega + x)}$$

Immersio.

Emersio.

$$\text{Longit. med. } \odot = 275^{\circ}.58'.51'',5 \quad | \quad 276^{\circ}.0'.56'',74$$

$$\text{Temp. med.} = 266.41.54,6 \quad | \quad 279.24.03,00$$

$$\text{Nut. } \mathbb{Q} = - - 17,6 \quad | \quad - - - 17,64$$

$$\mu = 182^{\circ}.41'.03'',7 \quad | \quad 195^{\circ}.25'.17'',38$$

$$\cot \phi' = 9.9551233 \quad | \quad 9.9551233$$

$$\sin \mu = 8.6705593n \quad | \quad 9.4247468n$$

$$x = -02^{\circ}.25'.06'',6 \quad | \quad \text{tg } x = 8.6256826n \quad | \quad 9.3798701n \quad | \quad x = -13^{\circ}29'.07'',9$$

$$\omega = 23.27.50,9 \quad | \quad \omega = 23.27.50,9$$

$$\omega + x = 21.02.44,3 \quad | \quad \cos = 9.9700188 \quad | \quad 9.9933800 \quad | \quad \omega + x = 9.58.34,0$$

$$\sin \phi' = 9.8707661 \quad | \quad 9.8707661$$

$$C. \cos x = 0.0003870 \quad | \quad 0.0121422$$

$$b = 43^{\circ}.55'.25'',4 \quad | \quad \sin b = 9.8411719 \quad | \quad 9.8762883 \quad | \quad b = 43^{\circ}.46'.28'',2$$

$$\text{tg}(\omega + x) = 9.5852104 \quad | \quad 9.2453697$$

$$180^{\circ} \quad | \quad \text{tg } b = 9.9836800 \quad | \quad 0.0573867 \quad | \quad 180^{\circ}$$

$$21^{\circ}.45'.06'',7 \quad | \quad -\sin l = 9.5688904 \quad | \quad 9.3027564 \quad | \quad 11^{\circ}.35'.0'',7$$

$$l = 158^{\circ}.14'.53'',8 \quad | \quad 1 = 168^{\circ}.24'.59'',3$$

VII.

Parallaxis Longitudinis.

$$\text{tg } p = \frac{\sin \pi \cdot \cos b \sin (L \omega l)}{\cos B - \sin \pi \cdot \cos b \cos (L \omega l)}$$

<i>Immersio.</i>	<i>Emersio.</i>
$\sin \pi = 8.2441410$	8.2441770
$\cos b = 9.8574917$	9.8189014
$\sin \pi \cdot \cos b = 8.1016327$	8.0630784
$\cos B = 0.9973819 \cdot \cos(l-L) = 9.9492549$	9.9034361
0.0112431	$- 8.0508876$
0.9861388	$- N = 9.9939380$
	9.9948091
$CN = 0.0060620$	0.0051909
$\sin \pi \cdot \cos b = 8.1016327$	8.0630784
$\sin(l-L) = 9.6594413n$	$9.7775345n$
$p = - 20'.06'',5$	$\text{tg } p = 7.7671360n$
$p = - 1206'',5$	$7.8458038n$
	$- - - - -$
	$p = - 24'.06'',1$
	$p = - 1446'',3$

VIII.

Latitudo Lunae correcta.

$$\text{tg } B' = \frac{(\sin B - \sin \pi \cdot \sin b) \cos p}{\cos B - \sin \pi \cdot \cos b \cdot \cos (L \omega l)}$$

$\sin \pi = 8.2441410$	8.2441770	$\sin B = - 0.0729278$
$- 0.0724211 = \sin B$	$\sin b = 9.8411719$	9.8762883
$- 0.0121706$	$- - - - -$	8.0853129
$- 0.0845917$	$- - - - -$	8.1204653
	$- - - - -$	$8.9273278n$
	$- - - - -$	$8.9351207n$
	$- - - - -$	9.9999926
	$- - - - -$	9.9999893
	$- - - - -$	$C.N = 0.0060620$
	$- - - - -$	0.0051909
$B' = - 4^{\circ} 54' 10''$	$\text{tg } B' = 8.9333824n$	$8.9403069n$
	$- - - - -$	$- - - - -$
	$- - - - -$	$B' = - 4^{\circ} 58' 52'',3$

IX.

Augmentum Semidiametri Lunae.

$$\sin \frac{1}{2}d' = \frac{\sin \frac{1}{2}d \cdot \cos p \cdot \cos B'}{\cos B - \sin \pi \cdot \cos b \cdot \cos(L \pm l)}$$

Immersio.

C. N = 0.0060620	0.0051909	Emersio.
$\sin \frac{1}{2}d = 7.6802119$	7.6802119	
$\cos p = 9.9999926$	9.9999893	
$\cos B' = 9.9984081$	9.9983567	
$\frac{1}{2}d' = 16'.37'',9$	$\sin \frac{1}{2}d' = 7.6846746$	$\frac{1}{2}d' = 16'.35'',8$
$\frac{1}{2}d' = 997'',9$	7.6837488	$\frac{1}{2}d' = 995'',8$

X.

Tempus ad conjunctionem proprius accedens.

Motus hor. $\odot:3600''$ = Longit. vera \odot — Longit. stellae: x''

$L = 131^{\circ}.05'.11'',8$		$L = 131^{\circ}.36.27'',1$
* = 130. 59. 24, 1		* = 130. 59. 24, 1
$05'.47'',7$ - log = 0.7630534	1.5687882	$37'.03'',0$
Motus horar. log 3600'' = 3.5563025	3.5563025	
hora praeced. C. log 36',89 = 8.4330913	8.4331502	= C. log 36',885
$565'',52 = x$ - - - - 2.7524472	3.5582409	$x = 3616'',1$
$x = 9'.25'',52$		$x = 60'.16'',1$
Tempus observationis = 17h.46'.47'',6	18h.37'.36'',2	
$x = - 09. 25, 5$	-1.00. 16, 1	
Conjunctio prop. acced. = 17h.37'.22'',1	17h.37'.20'',1	

XI.

Correctio motus horarii Lunae computati.

<i>Immersio.</i>	<i>Emersio.</i>
$\delta = 17^{\text{h}} 37' 22''$	$\delta = 17^{\text{h}} 37' 20''$
$e = 17. 46. 48.$	$a = 18. 37. 36.$
$\frac{1}{2}(\delta + e) = M = 17^{\text{h}} 42' 05''$	$\frac{1}{2}(a + \delta) = M' = 18^{\text{h}} 07' 28''$
$N = 17. 16. 48.$	$N' = 18. 07. 36.$
Var. mot. semihor. = $- 0'',092$	$- 0'',107$
$M - N = 25'.17''$	$M' - N' = - 0',08''$
$30' : - 0'',092 = 25'17'' : x$	$30' : - 0'',107 = - 0'.08'' : x$
$x = - 0'',08$	$x = + 0'',0004$

Hinc

Motus horar. momenti $N = 36'.53'',65$	$36',53'',33$
$x = - 0,08$	$+ 0,00$
$M = 36'.53'',57$	$36',53'',33 = M' = \text{Motui medio tempore conjunctionem inter et emersionem.}$

XII.

Coëfficiens constans h' computatus

$\log. 3600'' = 3.5563025$	3.5563025
$\log. H = 3.3450991$	$3.3450403 = \text{Log. motus horar.: } \mathbb{C}$
$\log h' = 0.2112034$	0.2112622

Tempus ♂.

Immersio.

Emersio.

Sit $n m =$ Latit. ♀ appar. — latit. app. *
 $N M =$ Latit. verae Lunae.
 $V n =$ Longit. app. }
 $V N =$ Longit. ver. } ♀
 $n N =$ parall. longitud.
 $S m =$ Semidiámetro ♀ correctae.
 $V S =$ Longitud. *
erit $S n^2 = \frac{(f m + m n) (f m - m n)}{\cos B' \cdot \cos \beta}$

$B' = 4^{\circ} 54'.10''$, 0	- - - - -	- - - - -	$B' = 4^{\circ} 58'.52''$, 3
$\beta = 5.05.38, 3$	- - - - -	- - - - -	$\beta = 5.05.38, 3$
$m n = 11'.28''$, 3	- - - - -	- - - - -	$m n = 06'.46''$, 0
$m n = 688''$, 3	- - - - -	- - - - -	$m n = 406''$, 0
$\frac{1}{2}d' = 997,9$	- - - - -	- - - - -	$\frac{1}{2}d' = 995, 8$
$f m - m n = 309,6$	- log = 2.4908010	2.7707048	$f m - m n = 589,8$
$f m + m n = 1686,2$	- log = 3.2269091	3.1466861	$f m + m n = 1401,8$
$C. \cos B' = 0.0015919$	0.0016433		
$C. \cos \beta = 0.0017186$	0.0017186		
$p = 1206''$, 5	- log $f n^2 = 5.7210206$	5.9207528	$p = 1446''$, 1
$f n = 725,29$	- log $f n = 2.8605103$	2.9603764	$f n = 912, 8$
$S N = 481''$, 21	- log = 2.6823346	3.3727095	$S N = 2358''$, 9
	- log $h' = 0.2112034$	0.2112622	
$S N' = 782''$, 59	- log $S N' = 2.8935380$	3.5839717	$S N' = 3836''$, 8
$S N' = 13'.02''$, 59			$S N' = 1h.03'.56''$, 8
Tempora observation. = 17h.46'.47'', 6		18h.37'36'', 2	
$S N' = - 13.02.6$		- 1.03.56.8	
Ex immers. igit. prod. ♂ = 17h.33'.45''0		17h.33'.39'', 4	= ♂ ex emersione.



XIII.

Eadem α & ω Cancri occultatio in specula astronomica Fani Gabromagi
a celeberr. Derflinger observata.

$$\begin{aligned} \text{Immersio} &= 17^{\text{h}}. 53'. 06'', 4 \\ \text{Emersio} &= 18^{\text{h}}. 49'. 32'', 0 \end{aligned} \quad \left. \begin{array}{l} \\ \end{array} \right\} \text{tempore solari medio.}$$

XIV.

E l e m e n t a.

Obliquitas Ecliptiae	$\equiv \sigma \equiv$	$23^{\circ}. 27'. 50'', 98$
Latitudo stellae	$\equiv \beta \equiv -$	$5. 05. 38, 3$
Longitude stellae	$\equiv -$	$130. 59. 24, 1$
Latitudo geographica	$\equiv \phi \equiv$	$48. 03. 36$
Latitude correcta	$\equiv \phi' \equiv$	$47. 53. 20, 9$
Differ. merid. suppos.	$\equiv - - -$	$47. 12$
Mot. hor. solis in longit.	$\equiv - - -$	$02. 32, 9$
Depressio sphaerae telluris	$\equiv \frac{1}{334}$	

Tempore Immersionis.			Emersionis.
Longitude vera \odot	$\equiv - - - -$	$275^{\circ}. 51'. 22'', 86$	$275^{\circ}. 53'. 33'', 94$
- media	$\equiv - - - -$	$275. 58. 54, 44$	$276. 01. 01, 24$
Longitude vera \oplus	$\equiv L \equiv - - -$	$131. 05. 57, 7$	$131. 37. 34, 4$
Latitude	$\equiv B \equiv - - -$	$4. 09. 13, 6$	$-4. 10. 59, 5$
Parallaxis \oplus	$\equiv \pi \equiv - - -$	$60. 19, 0$	$- 60. 19, 3$
Semidiameter \oplus	$\equiv \frac{1}{2}d \equiv - - -$	$16. 27, 82$	$- 16. 27, 82$
Motus horar. \oplus in longitud.			
1) hora sequenti	$- - - -$	$= + 36. 53, 47$	$+ 36. 53, 11$
2) hora praecedenti	$- - - -$	$= + 36. 53, 65$	$+ 36. 53, 33$
Variatio motus semihoraria	$- - - =$	$- 0. 092$	$- - - 0. 107$
Parallaxis \oplus longitud.	$\equiv p \equiv - - -$	$- 21. 15, 1$	$- - 24. 54, 9$
Latitude \oplus correcta	$\equiv B' \equiv - - -$	$4. 54. 50, 5$	$- 4. 59. 33, 4$
Semidiameter \oplus auct.	$\equiv \frac{1}{2}d' \equiv - - -$	$997,4$	$- - - 995,3$



XV.

Longitudo et Latitudo Nonagesimi.

Immersio.

Emersio.

$$\mu = 185^{\circ}30'48''08 \{ 198^{\circ}24'18'',84$$

Latitudo.

$$\begin{array}{l} x = -4^{\circ}57'48'',3 \\ \omega = 23.27.50,9 \\ \omega+x = 18.30.02,6 \\ b = 44^{\circ}55'22'' \cdot \sin b = 9.8489020 \end{array} \quad \left| \quad \right. \quad \begin{array}{l} x = -15^{\circ}55'43'',0 \\ \omega = 23.27.50,9 \\ \omega+x = 7.33.07,9 \\ b = 49^{\circ}53'23'' \cdot 5 \end{array}$$

Longitudo.

$$l = 160^{\circ}30'21'', \text{ i. } -\sin l = 9.5233700 | 9.1959968 \quad \dots \quad l = 170^{\circ}57'54'', 6$$

XVI.

Parallaxis Longitudinis.

$$p = -21'.15''_1 - \lg p = 7.7911734n \quad | \quad 7.8602089n \quad - \quad p = -24'.54''_9$$

XVII.

Latitudo Lunae correcta.

$$B' = -4^\circ 54' .50'', \quad 5, \quad t_B B' = 8.9343837n, \quad 8.9413079n, \quad - \quad B' = -4^\circ 59' .33'' 4$$

XVIII.

Augmentum Semidiametri Lunae.

$$\begin{aligned} \frac{3}{2}d' &= 16'.37''.4 - \sin \frac{1}{2}d' = 7.6844848 \\ \frac{1}{2}d' &= 997''.4 \quad \text{--- --- --- --- --- ---} \quad \frac{1}{2}d' = 995''.3 \end{aligned}$$

XIX.

Tempus ♂.

<i>Immersio.</i>		<i>Emersio.</i>
$B' = 4^{\circ} 54' 50'', 5$	- - - - -	$B' = 4^{\circ} 59' 33'', 4$
$\beta = 5. 05. 38, 3$	- - - - -	$\beta = 5. 05. 38, 3$
$mn = 10' 47'', 8$	- - - - -	$mn = 06' 04'', 9$
$mn = 647'', 8$	- - - - -	$mn = 364'', 9$
$\frac{1}{2}d' = 997'', 4$	- - - - -	$\frac{1}{2}d' = 995'', 3$
$fm-mn = 349'', 6$	- - - - -	$fm-mn = 630'', 4$
$fm+mn = 1645'', 2$	- - - - -	$fm+mn = 1360'', 5$
$fn = 761'', 29$	log. = 2.8815539	$fn = 929'', 59$
$p = 1275'', 1$	- - - - -	$p = 1494'', 9$
$SN = 513'', 81$	log. = 2.7108026	$SN = 2424'', 5$
$SN' = 835, 61$	log. = 2.9220060	$SN' = 3943'', 5$
$SN' = 13'. 55'', 61$	- - - - -	$SN' = 1h. 05'. 43'', 5$
Tempora observat.	= 17h. 58'. 06'', 4	18h. 49'. 32'', 0
- SN' = - 13. 55, 6	- 1. 05. 43, 5	
Ex immersione prodit ♂ = 17h. 44'. 10'' 8	17h. 43'. 48'', 5	= ♂ ex emersione.



XX.

Occultatio a z Cancri in specula astronomica Ochsenhusii Algoviae
a celeberr. Philippo Kylene observata.

Immersio = 17h. 40'. 16'' 5
Emersio = 18. 29. 51, 0 } tempore solari medio.

XXI.

E l e m e n t a.

Obliquitas Eclipticae	$\equiv \alpha =$	23°.27'.50'',9
Latitudo stellae	$\equiv \beta = -$	5. 05. 38, 3
Longitude - -	\equiv	130. 59. 24, 1
Latitudo geographicā	$\equiv \phi =$	48. 03. 52, 5
Latitudo correcta	$\equiv \phi' =$	47. 53. 37, 5
Mot. hor. solis in longit.	$= - - -$	02. 32, 9
Depressio sphacrae telluris	$\equiv \frac{1}{37}$	
Differ. merid. suppos.	$\equiv - -$	30. 31, 6

Celeberrimus Basilius Perger, olim subtilis et acutus Astronomus, observationes ad speculae suae positionem geographicam facientes a se exactius definitam mihi amicissime communicavit, ex quibus subductis calculis, velut:

$$\begin{aligned} \text{ex } 200 \text{ occultationibus satellitum Jovis} &= 30'.34'',50 \\ \text{ex } 4 \text{ Eclipsibus } \odot &= 30.31, 45 \\ \text{ex } 9 \text{ occultationibus fixarum} &= 30.28, 99 \end{aligned}$$

Constitui differentiam meridianorum omnium medium = 30'.31'',6 Lutetiam Parisiorum inter et Ochsenhusium.

Tempore Immersionis.			Emersionis.
Longitude vera \odot	\equiv	275°.51'.20'',6	275°.53'.26'',24
- - media	\equiv	275. 58. 51, 7	276. 0. 53, 8
Longitude vera \oplus	$\equiv L \equiv$	131. 05. 15, 5	131. - 35. 44, 1
Latitudo - -	$\equiv B \equiv$	-4. 09. 11, 1	-4. 10. 53, 6
Parallaxis \oplus	$\equiv \pi \equiv$	60. 19, 0	60. 19, 3
Semidiameter \oplus	$\equiv \frac{1}{2}d \equiv$	16. 27, 82	16. 27, 82
Motus horar. \oplus in longitudine			
1) hora sequenti	- - -	+ 36. 53, 47	+ 36. 53, 11
2) hora praecedenti	- - -	+ 36. 53, 65	+ 36. 53, 33
Variatio motus scmhioraria	- - -	- 0,092	- 0, 107
Parallaxis \oplus longitud.	$\equiv p \equiv$	- 19. 29, 3	- 23. 36, 8
Latitudo \oplus correcta	$\equiv B' \equiv$	- 4. 53. 44, 8	- 4. 58. 22, 8
Semidiameter \oplus aucta	$\equiv \frac{1}{2}d' \equiv$	998, 2	996, 2

XXII.

Longitudo et Latitudo Nonagesimi.

*Immersio.**Emersio.*

$$\mu = 181^\circ.03'.16''8 \quad | 193^\circ.28'.56'',4$$

Latitudo.

$x = -0^\circ.57'.10'',9$	$\omega = 23.27.50, 9$	$x = -11^\circ.53'.55'',3$
$x+\omega = 22.30.40, 0$		$\omega = 23.27.50, 9$
$b = 43^\circ.16'.20'',7$	$\sin b = 0.8359872$	$x+\omega = 11.33.55, 6$
	$ 9.8708713$	$b = 47^\circ.58'.13'',4$

Longitudo.

$$l = 157^\circ.02'.05'',1 \quad - \sin l = 0.5912569 \quad | 0.3561061 \quad - \quad l = 166^\circ.52'.37'',3$$

XXIII.

Parallaxis Longitudinis.

$p = -19'.29'',3$	$\operatorname{tg} p = 7.7535270n$	$7.8369134n$	$p = -23'.36'',8$
$p = -1169'',3$			$p = -1416'',8$

XXIV.

Latitudo Lunae correcta.

$$B' = -4^\circ.53'.44'',8 \quad | \operatorname{tg} B' = 8.9327580n \quad | 8.9395883n \quad - \quad B' = -4^\circ.53'.22'',8$$

XXV.

Augmentum Semidiametri Lunae.

$\frac{1}{2}d' = 16'.38'',2$	$\sin \frac{1}{2}d' = 0.6847901$	7.6839174	$\frac{1}{2}d' = 16'.36'',2$
$\frac{1}{2}d' = 998'',2$			$\frac{1}{2}d' = 996'',2$

XXVI.

Tempus ♂.

<i>Immersio.</i>		<i>Emersio.</i>
$B' = 4^{\circ}53'.44'',8$	- - - - -	$B' = 4^{\circ}58'.22'',8$
$\beta = 5.05.38, 3$	- - - - -	$\beta = 5.05.38, 3$
$mn = 0^{\circ}.11'.53'',5$	- - - - -	$mn = 0^{\circ}.07'.15'',5$
$mn = 713'',5$	- - - - -	$mn = 435'',5$
$\frac{1}{2}d' = 998'',2$	- - - - -	$\frac{1}{2}d' = 996'',2$
$fm-mn = 284'',7$	- - - - -	$fm-mn = 560'',7$
$fm+mn = 1711'',7$	- - - - -	$fm+mn = 1431'',7$
$fn = 700'',7$	- log.	$fn = 2.8455605 \quad 2.9530695$
$p = 1169'',3$	- - - - -	$p = 1416'',8$
$SN = 468'',6$	- log	$SN = 2316'',2$
$SN' = 762, 0$	- log	$SN' = 3767'',3$
$SN' = 12'.42'',0$	- - - - -	$SN' = 1h.02'.47'',3$
Tempora observat.	$= 17h.40'.16'',5$	$18h.29'.51'',0$
	$SN' = -12.42, 0$	$-1.02.47, 3$
Ex immersione prodit ♂	$= 17h.27'.34'',5$	$17h.27'.03'',7$
		$= ♂ ex emersione.$

XXVII.

Occultatio a 2 Cancri Vindebonae in specula academica observata
a celeberr. Francisco de Paula Triesnecker.

$$\left. \begin{array}{l} \text{Immersio} = 18h.05'.73'',4 \\ \text{Emersio} = 18.57.59, 75 \end{array} \right\} \text{tempore solari vero.}$$

Cum celeberr. Triesnecker per observatarum calculisque subduetarum occultationum segetem eductus animadverteret, discrepantiam longitudinis geographiae haud contemnendam faepius ex eo oriri, quod diversi Astronomi dissimilem temporis aequationem in calculos invexerint, haud temere fuit auctor, ut observatarum occultationum tempora vera notarentur a speculatoribus; acute quidem et argute; datur enim euique optio, aequationes temporis ex eadem formula computandi, aequabilemque exinde efficiendi conclusionem. Primum igitur tempora vera Vindebonae ad media eadem methodo, qua aliis in locis habitas observationes computasti, reduxeris.

Aequa-

Aequatio Temporis.

Vindebonae
ad illustris Delambre Tables du \odot

Immersio.

Temp. med. Vind. = 18h.07'.15'',05	- - - - -	18h..59'.38'',50
Temp. ver. observ. = 18. 05. 37, 40	- - - - -	18. 57. 59, 75
Hinc ex tabulis colligatur	- - - - -	= + 01'.38'',75
igitur aequaliter temp. = + 01'.37'',65	- - - - -	= + 01'.38'',75
quam quidem aequationem, cum justo major videbatur, ad formulam viri in universa Mathesi limati et subtilis, illusir. Lagrange: (Mem. de l'Acad. royale des sciences, année 1772. I. part. Paris 1775. pag. 609.)	- - - - -	- - - - -

$$\begin{aligned} dT = & - 2ie \sin(\varphi - \alpha) - i \operatorname{tg}^2 \frac{1}{2} \omega \sin 2\varphi \\ & - 2i(e - \frac{1}{2}k)k \sin 2(\varphi - \alpha) + \frac{1}{2}i \operatorname{tg}^4 \frac{1}{2} \omega \sin 4\varphi \\ & - 2i(e - \frac{1}{2}k)k^2 \sin 3(\varphi - \alpha) + \frac{1}{3}i \operatorname{tg}^6 \frac{1}{2} \omega \sin 6\varphi \\ & - \text{etc.} - - - - - + \text{etc.} - - - \end{aligned}$$

penitus de integro computavi, denotantibus

- e. Excentricitatem solis,
- φ . Longitudinem veram solis,
- α . Longitudinem apogei,
- ω . Obliquitatem apparentem eclipticae;

positis

$$ik = \frac{e}{1 + \sqrt{1 - e^2}}$$

$$i = \frac{m}{150}; m = \text{radio trigonometr. scrupulis secundi expresso.}$$

Ufas sum per illusir. La Place (Expos. du syst. du monde pag. 117. troisièmes edit. 1808.) ratione excentricitatis ad semiaxem majorem telluris:

$$\begin{aligned} \text{Ineunte 1801} &= 0,01685318 \quad \text{Var. sec.} = - 0,000041632 \\ \text{Var. ee. 6 annorum} &= - 0,00024979 \\ 1806 Dec. - e &= 0,01660339 \end{aligned}$$

Illustris Delambre Tables du \odot

Obliquitas eclipticae = ω = $23^\circ 27'.50''$,9 - - - 1806. 23rd Decemb.

XXVIII.

Coëfficientes formulac ad anni 1806 Decembris 28^{um} computati.

$$\begin{aligned}
 i &= 13750'',9 \\
 -2ie &= -456'',62 = \text{coëfficienti primo.} \\
 -itg^2 \frac{1}{2}\alpha &= -593'',05 = \dots \dots \dots \text{2do} \\
 -2i(e-\frac{1}{2}k)k &= -2'',84 = \dots \dots \dots \text{3to} \\
 +\frac{1}{2}itg^4 \frac{1}{2}\alpha &= +12'',78 = \dots \dots \dots \text{4to} \\
 -2i(e-\frac{2}{3}k)k^2 &= -0'',02 = \dots \dots \dots \text{5to} \\
 +\frac{1}{2}itg^6 \frac{1}{2}\alpha &= +0'',36 = \dots \dots \dots \text{6to}
 \end{aligned}$$

Ad epocham anni 1806 Decembr. formula igitur abit in

$$\begin{aligned}
 dT = I. - 456'',62 \sin(\varphi - \alpha) - 593'',05 \sin 2\varphi &\dots \dots \dots \text{II.} \\
 \text{III. } - 2'',84 \sin 2(\varphi - \alpha) + 12'',78 \sin 4\varphi &\dots \dots \dots \text{IV.} \\
 \text{V. } - 0'',02 \sin 3(\varphi - \alpha) + 0'',36 \sin 6\varphi &\dots \dots \dots \text{VI.}
 \end{aligned}$$

atqui habebis:

$$\begin{aligned}
 \varphi &= 275^\circ 38' 36'',8 & - & - & - & - & - & \varphi = 275^\circ 38' 36'',8 \\
 \alpha &= 99^\circ 36' 16,3 & - & - & - & - & - & 2\varphi = 191^\circ 17' 13,6 \\
 \varphi - \alpha &= 176^\circ 02' 20,5 & - & - & - & - & - & 4\varphi = 22^\circ 34' 27,2 \\
 2(\varphi - \alpha) &= 352^\circ 04' 41,0 & - & - & - & - & - & 6\varphi = 213^\circ 51' 40'',8 \\
 3(\varphi - \alpha) &= 168^\circ 07' 01'',5 & - & - & - & - & - &
 \end{aligned}$$

Hinc neglectis interim terminis V et VI:

$$\begin{aligned}
 I &= -31'',54 \dots \log. I = 1.4988938n + 2.0647449n = \log. \text{II. II.} = +116'',07 \\
 \text{III} &= +0'',39 \dots \log. \text{III} = 9.5929204 + 0.6910265 = \log. \text{IV. IV.} = +04'',91
 \end{aligned}$$

$$\begin{aligned}
 \text{II} &= +116'',07 \\
 \text{III} &= +0,39 \\
 \text{IV} &= +4,91 \\
 \text{I} &= -31,54 \\
 \text{Summa} &= +89'',83 = +1',29'',83 = \text{aequationi temporis} \\
 &\quad \text{propius veram.}
 \end{aligned}$$

Immersio.

$$\text{Tempus verum} = 18h.05'37'',4 \quad -\quad 18h.57'59'',75$$

$$\text{Aequat. temporis} = + 01.29.8 \quad -\quad + 01.29.83$$

$\frac{18h.07'07'',2}{18h.59'29'',58}$ = tempori medio prius accedenti.

Emersio.

His vero temporum momentis convenient:

$$\varphi = 275^{\circ}.51'.23'',0 \quad -\quad -\quad -\quad -\quad -\quad -\quad \varphi = 275^{\circ}.53'.36'',c$$

$$\alpha = 99.36.16.0 \quad -\quad -\quad -\quad -\quad -\quad -\quad \alpha = 99.36.16.0$$

$$\varphi - \alpha = 176^{\circ}.15'.07'',0 \quad -\quad -\quad -\quad -\quad -\quad -\quad \varphi - \alpha = 176^{\circ}.17'.20'',0$$

$$\text{I} = -29'',85 \quad -\log \text{I} = 1.4749342n - 1.4706382n \quad -\text{I} = -29'',55$$

$$\text{II} = +120,39 \quad -\log \text{II} = 2.0806056 - 2.0832983 \quad -\text{II} = +121,14$$

$$\text{III} = +0,37 \quad -\log \text{III} = 9.5691956 - 9.5649178 \quad -\text{III} = +0,36$$

$$\text{IV} = +05,08 \quad -\log \text{IV} = 0.7062307 - 0.7088069 \quad -\text{IV} = +05,11$$

$$\text{V} = -0,004 \quad -\log \text{V} = 7.6119022n - 7.6076550n \quad -\text{V} = -0,004$$

$$\text{VI} = -0,21 \quad -\log \text{VI} = 9.3261264n - 9.3279640n \quad -\text{VI} = -0,21$$

$$\text{I} = -29'',85 \quad -\text{III} = +0'',37 \quad -+0'',36 \quad -\text{I} = -29'',55$$

$$\text{V} = 0,00 \quad -\text{II} = 120,39 \quad -\text{II} = 121,14 \quad -\text{V} = 0,00$$

$$\text{VI} = 0,21 \quad -\text{IV} = 05,08 \quad -\text{IV} = 05,11 \quad -\text{VI} = 0,21$$

$$-30'',06 \quad -+125'',74 \quad -+126'',61$$

$$\text{Prodit denique aequatio} + 30,06 \quad -29,76$$

$$\text{temporis exacta} = +95'',68 \quad -+96'',85$$

$$= +01'.35'',68 + 01'.36'',85$$

XXIX.

Cum igitur maxime prope fidem sit, aequationem ex tabulis illustr. Delambre desumptam, justo majorem esse, ipsam ex formula (Tables astronomiques publiées par le Bureau de longitudes 1ere Partie feuille c. 3.) et apprime coefficientem 2di termini formulæ Delanubriancæ computavi.

$$\text{Idus Terminus} = + \frac{a}{15} (1+t) \cos \pi \sin L$$

$$\text{Anno } 1810 \text{ erit } a = 1^{\circ}.55'.27''.$$

$$t = \operatorname{tg}^2 \frac{1}{2} \omega; \omega = 23^{\circ}.27'.56''$$

$$\pi = 98.09^{\circ}.39'.$$

$$(1+t) = 1''.043127$$

$$\frac{a}{15} = 461'',846$$

$$\text{Coëff.} = 80'',757 \quad \dots \quad \log \text{coëff.} = 1.9071837$$

Anni 1806 27mo Dec. erat L = $275^{\circ}.46'$ circiter;

et formula illustr. Delambre ita se habebit:

I.

$$dT = 0'',047 + 80'',757 \sin L + 435'',840 \cos L \quad \dots \quad \text{VII.}$$

$$\text{II.} = -596, 878 \sin 2L + 1, 628 \cos 2L \quad \dots \quad \text{VIII.}$$

$$\text{III.} = -3, 424 \sin 3L - 18, 801 \cos 3L \quad \dots \quad \text{IX.}$$

$$\text{IV.} + 12, 949 \sin 4L - 0, 073 \cos 4L \quad \dots \quad \text{X.}$$

$$\text{V.} + 0, 142 \sin 5L + 0, 848 \cos 5L \quad \dots \quad \text{XI.}$$

$$\text{VI.} = 0, 373 \sin 6L + 0, 003 \cos 6L \quad \dots \quad \text{XII.}$$

$$+ \frac{1}{15} P + 0'',09925 \sin N - 0,117 \sin(2L + N + 500) - 0'',013 \sin(2L - N)$$

$$L = 275^{\circ}.46'$$

$$\text{I.} = -80'',34 \quad \dots \quad \text{VII.} = +43'',79$$

$$2L = 191^{\circ}.32'$$

$$\text{II.} = +119'',33 \quad \dots \quad \text{VIII.} = -01'',59$$

$$3L = 107^{\circ}.18'$$

$$\text{III.} = -03'',26 \quad \dots \quad \text{IX.} = +05'',59$$

$$4L = 23^{\circ}.04'$$

$$\text{IV.} = +05'',07$$

$$\text{II.} = +119'',33 \quad \dots \quad \text{I.} = -80'',34$$

$$\text{IV.} = 05, 07 \quad \dots \quad \text{III.} = 03, 26$$

$$\text{VII.} = 43, 79 \quad \dots \quad \text{VIII.} = 01, 59$$

$$\text{IX.} = 05, 59 \quad \dots \quad -85'',19$$

$$+ 173'',78$$

$$\text{Aequat. temp. ad verum} = 85, 19$$

$$\text{propius accedens} = +88'',59 = 1',28'',59$$

*Immersio.**Emersio.*

Tempus verum	$= 18h.05'37'',4$	-	-	-	-	-	$18h.57'59'',75$
Differ. Merid.	$= - 56.10$	-	-	-	-	-	$- 56.10$
Temp. civ. verum							
Lutetiae Parisior.	$= 5.09.27,4$	-	-	-	-	-	$6.01.49,75$
Aeq. temp. approp.	$= + 01.28,6$	-	-	-	-	-	$+ 01.28,59$
temp. approp. med.	$= \frac{1}{2}h.10'56'',0$	-	-	-	-	-	$\frac{1}{2}h.03'18'',34$

Quibus momentis convenient tempore

*Immersionis.**Emersionis.*

I	$= 27^{\circ}0.50'36''$	-	-	-	$L = 27^{\circ}0.0'45''$			
I	$= - 80'',31$	-	-	-	I	$= - 80'',31$		
II	$= + 45'',38$	-	-	-	II	$= + 45'',65$		
2L	$= 191^{\circ}0.57'12''$	-	-	-	2L	$= 192^{\circ}0.01'30''$		
III	$= + 123'',60$	-	-	-	III	$= + 124'',35$		
IV	$= - 01'',59$	-	-	-	IV	$= - 01'',59$		
3L	$= 107^{\circ}53'48''$	-	-	-	3L	$= 108^{\circ}02'15''$		
V	$= - 03'',26$	-	-	-	V	$= - 03'',24$		
VI	$= + 05'',79$	-	-	-	VI	$= + 05'',82$		
4L	$= 23^{\circ}54'24''$	-	-	-	VII	$= + 05'',27$		
VII	$= + 05'',24$	-	-	-	VIII	$= - 0'',07$		
VIII	$= - 0'',07$	-	-	-	4L	$= 24^{\circ}0.03'$		
5L	$= 299^{\circ}53'$	-	-	-	IX	$= - 0'',12$		
IX	$= - 0'',12$	-	-	-	X	$= + 0'',42$		
X	$= + 0'',42$	-	-	-	6L	$= 216^{\circ}04'36''$		
6L	$= 215^{\circ}51'36''$	-	-	-	XI	$= + 0'',22$		
XI	$= + 0'',22$	-	-	-	XII	$= 0,00$		
XII	$= - 0'',00$	-	-	-				
		$+ 0,05$			$+ 0,05$			
I	$= - 80'',31$	-	II	$= 45'',38$	II	$= 45'',65$	I	$= - 80'',31$
IV	$= 01.59$	-	III	$= 123,60$	III	$= 124,35$	IV	$= 01.59$
V	$= 03,26$	-	VI	$= 05,79$	VI	$= 05,82$	V	$= 03,24$
VIII	$= 0,07$	-	VII	$= 05,24$	VII	$= 05,27$	VIII	$= 0,07$
IX	$= 0,12$	-	X	$= 0,42$	X	$= 0,42$	IX	$= 0,12$
XII	$= 0,00$	-	XI	$= 0,22$	XI	$= 0,22$	XII	$= 0,00$
Summa	$= - 85'',35$	-	+ 180'',70	-	+ 181'',78	-	-	$= 85'',33$
				$- 85,35$		$- 85,33$		

Summa $= 95'',35$ $+ 96'',45$ = quantitati, quam

Tab. VIII. illustr. Delambre exhibere debuerit; at

VIII. Tab. $= + 01'35'',35$ $+ 01'36'',45$ Var. sec. $= - 0,46$ $- 0,46$ Perturb. Planet. $= - 0,2$ $- 0,2$ Ergo aequat. temp. ex
form. Delambr. efficitur $= + 01.36'',01$ $+ 01'37'',11$

quae

quae ab illustri Lagrange

$$= + 01^{\circ}35'68 \quad - \quad + 01^{\circ}36'85 \text{ supra computata haud abludit.}$$

Tandem ergo

Tempo verum	=	18h.05'.37'',4	-	-	18h.57'59'',75
Aequat. temp.	=	+ 01.36, 1	-	-	+ 01.37, 11
Temp. med. Viud.	=	18h.07'.13'',5	-	-	18h.59'.36'',86
Diff. Meridian.	=	- 56. 10	-	-	- 56. 10
Temp. civ. med. Paris.	=	05h.11'.03'',5	-	-	06h.03'.26'',86

XXX.

E l e m e n t a.

Obliquitas Eclipticae	= ω =	23°.27'.50'',9
Latitudo stellae	= β =	- 5. 05. 38, 3
Longitude --	= ' =	130. 59. 24, 1
Latitudo geographicā	= ϕ =	48. 12. 36
Latitudo correcta	= ϕ' =	48. 02. 21, 2
Differ. Merid. suppos.	= - -	+ 56. 10. tempore.
Mot. hor. \odot in longit.	= - - -	- 02. 32, 9
Depressio telluris	= $\frac{1}{\pi^2}$	

	Tempore Immersionis.	Emersionis.
Longitudo vera \odot	= - - -	275°.51'.23'',2
media	= - - -	275. 58. 54, 8
Longitudo vera \mathbb{G}	= L =	- 131. 06. 03, 3
Latitudo --	= B =	- 4. 09. 13. 8
Parallaxis \mathbb{G}	= π =	- 60. 19, 0
Semidiameter \mathbb{G}	= $\frac{1}{2}d$ =	- 16. 27, 82
Motus horar. \mathbb{G} in longitudine		
1) hora sequenti	= - - -	+ 36. 53, 47
2) hora praecedenti	= - - -	+ 36. 53, 65
Variatio motus semihoraria	= - - -	- 0,092
Parallaxis \mathbb{G} longitud.	= p =	- 21. 57, 1
Latitudo \mathbb{G} correcta	= B' =	- 4. 55. 28, 1
Semidiameter \mathbb{G} aucta	= $\frac{1}{2}d'$ =	- 997'',1

XXXI.

XXXI.

Longitudo et Latitudo Nonagesimi.

Immersio.

$$\mu = 187^{\circ} 47' 29'' .4 \quad | 200^{\circ} 55' 30'' .8$$

Emersio.

Latitudo.

$x = -06^{\circ} 56' 59'' .9$	- - - - -	$x = -17^{\circ} 48' 43'' .3$
$\omega = 23. 27. 50. 9$	- - - - -	$\omega = 23. 27. 50. 9$
$x + \omega = 16^{\circ} 30' 51'' .9$	- - - - -	$x + \omega = 5^{\circ} 39' 37'' .6$
$b = 45^{\circ} 54' 23'' .5$	- - -	$b = 51^{\circ} 0' 16'' .4$
$\sin b = 0.8562489$	$ 0.8965305$	

Longitudo.

$$= 162^{\circ} 10' 50'' .6 \quad - \sin l = 9.4857440 | 9.0878450 \quad - \quad l = 172^{\circ} 58' 06'' .1$$

XXXII.

Parallaxis Longitudinis.

$p = -21' 57'' .1$	-	$\operatorname{tg} p = 7.8052090$	$ 7.8676000$	- - -	$p = -25' 20'' .6$
$p = -131' 7'' .1$	- - - - -			- - -	$p = -1520'' .6$

XXXIII.

Latitudo Lunae correcta.

$$B' = -4^{\circ} 55' 28'' .1 \quad - \log = 8.93530890 | 8.94221350 \quad - \quad W' = -5^{\circ} 0' 10'' .8$$

XXXIV.

Augmentum Semidiametri Lunae.

$\frac{1}{2} d' = 16' 37'' .1$	-	$\sin \frac{1}{2} d' = 7.6843158$	$ 7.6833264$	- - -	$\frac{1}{2} d' = 16' 34'' .8$
$\frac{1}{2} d' = 997'' .1$	- - - - -			- - -	$\frac{1}{2} d' = 994'' .8$

XXXV.

Tempus ♂.

<i>Immersio.</i>		<i>Emersio.</i>
$B' = 4^{\circ} 55'.28'',1$	- - - - -	$B' = 5^{\circ} 0'.10'',3$
$\beta = 5.05.38,3$	- - - - -	$\beta = 5.05.38,3$
$mn = 10'.10'',2$	- - - - -	$mn = 05'.27'',5$
$mn = 610'',2$	- - - - -	$mn = 327'',5$
$\frac{1}{2}d' = 997'',1$	- - - - -	$\frac{1}{2}d' = 994'',8$
$fm-mn = 386'',9$	- - - - -	$fm-mn = 667'',3$
$fm+mn = 1607'',3$	- - - - -	$fm+mn = 1322'',3$
$fn = 791'',6$	log. $fn = 2.8985102$	$fn = 943'',0$
$p = 1317'',1$	- - - - -	$p = 1520,6$
$SN = 525'',5$	log = 2.7180863	$SN = 2463'',6$
$SN' = 849,7$	log = 2.9292897	$SN' = 4007'',1$
$SN' = 14'.09'',7$	- - - - -	$SN' = 1^h.06'.47'',1$
Tempora observat.	$= 18h.07'.13'',5$	$= 18h.59'36'',86$
	$SN' = 14.09,7$	$- 1.06.47,1$
Ex immersione prodit ♂	$= 17h.53'.03'',8$	$= 17h.52'49'',76$
		$= \delta ex emersione.$

XXXVI.

Occultationis α et γ Cancri Albae Helviorum a celeberr. Flaugergues
observata emersio fuit = $18^h.06'.27'',4$ tempore solari medio.

XXXVII.

XXXVII.

E l e m e n t a.

Obliquitas Eclipticae	$\equiv \omega \equiv$	23°. 27'. 50'', 98
Latitudo stellae	$\equiv \beta \equiv -$	5. 05. 38, 3
Longitudo stellae	\equiv	130. 59. 24, 1
Latitudo geographicā	$\equiv \varphi \equiv$	44. 29. 13
Latitudo correcta	$\equiv \varphi' \equiv$	44. 18. 54, 6
Mot. hor. solis in longit.	$\equiv - - -$	02. 32, 9
Depressio telluris	$\equiv \frac{1}{334}$	
Differ. Merid. suppos.	$\equiv - - -$	09. 19, 3

Cum differentiam Lutetiam Parisiorum inter et Vivarium = = 9°.24''. in recentiori perfectiorique catalogo longitudinum apud illust. Delambre justo majorem censuris, medium observationum, velut:

Occultationum stellarum inerrantium, et errantium,	○ Eclipseos	1802 27mo Aug.	=	9'.16'',5
	φ ♀	1798 21mo Aug.	=	9. 22, 3
	4	1792 7mo Apr.	=	9. 16, 3
	3'8	1796 14to Mart.	=	9. 20, 0
	Spica	1801 30mo Mart.	=	9. 20, 3
	δ m	1799 25to Febr.	=	9. 19, 7
	1. 2. ♈	1790 4to Sept.	=	9. 20, 3
in calculis supposui				+ 9'.10'',3

Conf. illustr. Bode III. Suppl., p. 71.

Tempore *Emersonis.*

Longitudo vera ☽	=	-	-	-	-	175° 53'.20",7
media	=	-	-	-	-	276. 0.48, 4
Longitudo vera ☉	=	L	=	-	-	131. 34.18, 2
Latitudo	-	-	E	=	-	-4. 10.48, 3
Parallaxis ☉	=	π	=	-	-	- 60. 19, 3
Semidiameter ☉	=	$\frac{1}{2}d$	=	-	-	- 16. 27, 82
Motus horar. ☉ in longitudine.						
1) hora sequenti	-	-	-	-	-	+ 36. 53, 11
2) hora praecedenti	-	-	-	-	-	+ 36. 53, 33
Variatio motus semilioraria	-	-	-	-	-	- - 0, 107
Parallaxis ☉ longitud.	=	p	=	-	-	- 24. 41, 3
Latitudo ☉ correcta	=	B'	=	-	-	- 4. 54.45, 9
Semidiameter ☉ auct.	=	$\frac{1}{2}d'$	=	-	-	- 997.4

XXXVIII.

Longitudo et Latitudo Nonagesimi.

$$\mu = 187^{\circ} 73'.57'',0$$

Latitudo.

$$\begin{aligned} x &= -6^{\circ} 44'.47'',4 \\ \alpha &= 23. 27. 50, 9 \\ \alpha + x &= 15^{\circ} 43'.03'',5 \\ b &= 42^{\circ} 44'.25'',0 \quad \sin b = 9,8316626 \end{aligned}$$

Longitudo.

$$l = 164^{\circ} 55'.36'',5 \quad \sin l = 9,4150618$$

XXXIX.

Parallaxis Longitudinis.

$$\begin{aligned} p &= -24'.41'',3 \quad \text{tg } p = 7,8562262n \\ p &= -1481'',3 \end{aligned}$$

XL.

Latitudo Lunae correcta.

$$B' = -4^{\circ} 54'.45'',9 \quad \text{tg } B' = 8,931269on$$

XLI.

Augmentum Semidiametri Lunae.**Emersio.**

$$\begin{aligned} \frac{1}{2} d' &= 16'.37'',4 \quad \sin \frac{1}{2} d' = 7,6844717 \\ \frac{1}{4} d' &= 997,4 \end{aligned}$$

Cele-

Celeberr. Olbers, vir et in eruditione et in acumine ingeuii divinus, concisas formulas, elegantemque demonstrationem proposuit, calculisque olim a me Gottingae editis adhibuit. Vid. illustr. Bode astronom. Jahrbuch 1803 p. 196. Ib. 1811, p. 95. Calculos subductos secundis curis perpolenti ex Olbersii formulis mili prodiit

$$p = 24'.41'',_0; B' = 4^{\circ}.54'.46'',_0; \frac{1}{2}d' = 16'.37'',_4$$

XLII.

Tempus ♂.

$$B' = 4^{\circ}.54'.45'',_0$$

$$\beta = 5.05.38, 3$$

$$\underline{mn = - 10'.52'',_4}$$

$$\underline{mn = - 652'',_4}$$

$$\underline{\frac{1}{2}d' = - 997, 4}$$

$$\underline{fm-mn = - 345'',_0}$$

$$\underline{fm+mn = - 1649'',_8}$$

$$fn = - 757'',_3 \quad \log fn = 2.8792837$$

$$\underline{p = - 1481, 3}$$

$$\underline{SN = - 2238'',_6} \quad \log = 3.3499765$$

$$SN' = - 3641'',_1 \quad \log = 3.5612387$$

$$SN' = 1b. 0'.41'',_1$$

$$Tempus observationis = 18h.06'.27'',_4$$

$$\underline{SN' = - 1. 0.41, 1}$$

$$\begin{aligned} \text{Ex emersione observata} \\ \text{igitur efficitur } \delta &= 17h.05'.46'',_3 \end{aligned}$$

XLIII.

Conclusio.

Cum fere omnes observations immersionis a Collegis amicissimis mecum communicatae notam incertitudinis ab ipsis Astronomis, in epistolis ad me datis, inustam prae se ferrent, incurso stellae insuper in partem lunae lucidam accidisset, neque correctiones clementorum dSm , dB , et $d\pi$ in tempora conjunctionis invchere, neque ullam immersionem obsrvatam in complexionem inferre cautius existimavi.

stimavi. Longitudinem igitur nostram geographicam tantum ex emersionibus, quae ex parte obscura lunae prosilientes certitudinis momentum exactaque observationis testimonium ab Astronomis supra laudatis rétulerunt, tuto determinaveris. Atqui evenerunt

		Ergo
1.	σ Monachii - - - - $17^{\text{h}}.33'.39'',4$ } = $\square 10'.09'',1$	
	Fani Gabromagi - - $17. 43. 48, 5$ } $- 47. 12, 0$	
		<u><u>- 37'.02'',9</u></u>
2.	σ Monachii - - - - $17^{\text{h}}.33'.39''4$ } = $+ 06'.35'',7$	
	Ochsenhusii - - $17. 27. 03, 7$ } $30. 31, 6$	
		<u><u>- 37'.07'',3</u></u>
3.	σ Monachii - - - - $17^{\text{h}}.33'.39'',4$ } = $- 19'.10''36$	
	Viennæ - - - $17. 52. 49, 76$ } $56. 10, 0$	
		<u><u>- 36'.59'',64</u></u>
4.	σ Monachii - - - - $17^{\text{h}}.33'.39''4$ } = $+ 27'.53'',1$	
	Albae Helyiorum - - $17. 05. 46, 3$ } $09. 19, 3$	
		<u><u>- 37'.12'',4</u></u>

Observationem Vivariensem, cum expresse atque adeo ab Astronomo perpolitissimo notata sit: „Observation très exacte” quamvis paulo plus a cacteris dissidentem, a complexione hanc excludere religioni habui, omniumque igitur medium constitui arithmeticum =

$$= - 37'.05'',56 \text{ tempore,}$$

specula quidem Regis, quae Monachii est, a Parisiorum specula Caesaris versus Orientem distante.

Ex quibus jam tandem Longitudo Monachii geographica a coelo devoeata, quae inde a Scheineri tempestate, de cursis duobus fere seculis, omnis jacuit, conficitur

$$29^{\circ}.16'.25'',4.$$



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