# XII.

## Super
# Longitudine geographica
## Speculae astronomicae Regiae, quae Monachii est, ex triginta septem defectionibus solis observatis, et ad calculos revocatis nunc primum definita

a

CAROLO FELICI SEYFFER.

Commentatio altera, lecta in Conscssu academico VI. Iduum Maii cIↃDCCCX.

Sit

$l$ = longit. verae ☉.
$A$ = ascensio: rect. ☉.
$B$ = latitud. ☉.
$\frac{1}{2}D$ = semidiam. ☉.
$\pi''$ = Parall. horizon. ☉.
$m$ = motui. hor. ☉ in longit.
$\varepsilon$ = obliquit. ecclipt.
$L$ = longit. verae ☾.
$\lambda$ = latit. verae ☾.
$\pi'$ = Parallax. ☾.
$M$ = motui horar. ☾ in longit.

Sit.

$\pi$ = Differ. parallax. (☾ — ☉).
$\alpha$ = AR medii coeli.
$\varphi'$ = elevatio. poli.
$\beta$ = lat. geocentr.
$\frac{n}{m} = \frac{333}{334}$
p = different. parallax. longit. ☾.
$\lambda'$ = latit. ☾ apparent.
$\frac{1}{2}D'$ = semidiametr. ☾ geocentricae.
$\mu$ = M — m = motui horar. (☾ — ☉).
log. h = log. pro reductione spatii ad tempus.
l' = longit. verae (☾ — ☉) = (L — l).
T = temp. observat- medio.
t = temp. ad ☌ propius accedenti.
$\tau$ = temp. civil. Parisiis.
$\tau'$ = tempori arithmetice medio phases observatas inter et conjunctionem propius supputatam.
ae = aequat. temporis.
T' = tempori vero.
$\delta$ = different. meridian. tempore.

1.

Eclipsis solis tubo achromatico Dollondii 275ies augente a me observata Junii 16. 1806.

Monachii, $\left.\begin{array}{l}\text{Initium} = 5^h.35'.58'',69 \\ \text{Finis} = 6^h.44'.29'',76\end{array}\right\}$ tempore solari medio.

2.

Positis different. meridian. Parisios inter et speculam regiam = — 37'.05'',56; et elevatione poli = 48° 07'. 33''. Illa quidem ex siderum inerrantium occultationibus, hac vero ex observationibus stellae polaris, aliisque, variis et multiplicibus a me definita.

3.

3.

Elementa desumpta ex: *Tables astron. publiées par le Bureau des Longitudes de France par M. Delambre. Paris* 1806.

Initium computatum. Locus Solis.

$5^h.35'58'',69$ = temp. med. astrom. Monachii = $16^h.58'53''13$ temp. civ. Parisino.

| | Longitudo. | Perigeum. | M. | A. | B. | C. | D. | E. | F. | N. |
|---|---|---|---|---|---|---|---|---|---|---|
| Aequat. sec. | - - - - 0, 4 | - - - 0, 0 | | | | | | | | |
| 1806 | 9°.09°.56'.43'',2 | 9°.09°.35'.15'',0 | 839 | 344 | 278 | 154 | 836 | 733 | 546 | 230 |
| 16. Jun. | 5. 13. 37. 02, 8 | - - - 28, 2 | 24 | 620 | 455 | 739 | 642 | 38 | 25 | 24 |
| | 2. 23. 33. 46, 4 | 9. 09. 35. 43, 2 | 863 | 964 | 733 | 893 | 78 | 771 | 561 | 254 |
| $16^h$. - - | - - 39. 25, 6 | 2. 24. 15. 37, 1 | 23 | 23 | 2 | 3 | | | | |
| 58'. - - | - - 02. 22, 9 | | | | | | | | | |
| 53''13 - | - - - 02, 2 | 5. 14. 39. 53, 9 | 886 | 987 | 735 | 896 | | | | |
| | | 5. 14. 39. 898 | | 9 | 2B . . | 470 | | | | |
| ☉ | 2. 24. 15. 37, 1 | 5. 14, 664 anom | med | 996 | 2B—C | 574 | | | | |
| | | | | | dupl. . . | 148 | | | | |
| Aeq. centr. | 0. 0. 29. 10, 4 | | | | C—2(2B—C) . . | 748 | | | | |
| Var. sec. | . . . . . 0, 1 | | | | | | | | | |
| A. | . . . . . 07, 3 | | | | | | | | | |
| B. C. | . . . . . 13, 5 | | | | | | | | | |
| B. D. | . . . . . 04, 2 | | | | | | | | | |
| B. E. | . . . . . 16, 3 | | | | | | | | | |
| B. F. | . . . . . 0, 2 | | | | | | | | | |
| Nut. ☾ | . . . . . 18, 0 | | | | | | | | | |
| Nut. ☉ | . . . . . — 0, 2 | | | | | | | | | |
| Aberrat. ☉ | . . . 0, 3 | | | | | | | | | |
| Lg. ☉ ver. | 2. 24. 45. 47, 2 | | | | | | | | | |
| ☉ | 2. 24. 15. 37, 1 | | | | | | | | | |
| Nut. ☾ | . . . . . 18, 0 | | | | | | | | | |
| Lg. ☉ med. | 2. 24. 15. 55, 1 | | | | | | | | | |

**Obliquitas Eclipticae.**

Obliquitas 1800. 230.27'.57'',0
5,5 anni . . . . . — 03, 4
Nut. ☾ . . . . . — 0, 2
Nut. ☉ . . . . . — 0. 4

Obliquit. . . . 230. 27'. 53'',0

**E Tabula XXIX.**

Semidiam. ☉. . . 15'. 46'',03
Motus horar. ☉ . 02. 23, 15
Parall. ☉ . . . . . 08, 66

**Latitudo solis.**

A+B+N=985+0,06
2B—C=554—0,08
3C—4B=748—0,06
B—2E=193+0,04

Latit. ☉ = l = — 0,04

Finis computatus. Locus Solis.

$6^h.44'.29'',76$ = temp. med. astronom. Monachii = $18^h.07'24'',2$ temp. civ. Parisino.

| | Longitudo. | Perigeum. | M. | A. | B. | C. | D. | E. | F. | N. |
|---|---|---|---|---|---|---|---|---|---|---|
| Aequat. sec. | - - - 0, 4 | - - - 0, 0 | | | | | | | | |
| 1306. | $9^s.09^o.56'.43'',2$ | $9^s.09^o.35'.15'',0$ | 839 | 344 | 278 | 154 | 836 | 733 | 546 | 230 |
| 16. Jun. | 5. 13. 37. 02, 8 | - - - 28, 2 | 24 | 620 | 455 | 739 | 242 | 38 | 15 | 24 |
| | 2. 23. 33. 46, 4 | 9. 09. 35. 43,2 | 863 | 964 | 733 | 893 | 78 | 771 | 561 | 254 |
| $18^h$. - - | - - 44. 21, 1 | 2. 24. 18. 25,7 | 25 | 25 | 2 | 3 | | | | |
| 07'. - - | - - - 17, 2 | | | | | | | | | |
| 24'', 2 - | - - - 01, 0 | 5. 14. 42. 42,5 | 888 | 989 | 735 | 896 | | | | |
| | | 5. 14. 42,704 | | 9 | 2B . . 470 | | | | | |
| ☉ | 2. 24. 18. 25, 1 | 5. 14,712 anom. | med | 998 | 2B—C 574 | | | | | |
| | | | | | dupl. . 148 | | | | | |
| Aeq. centr. . . | 29. 05,0 | | C—2 (2B—C) = 3C | | | | | | | |
| Var. sec. . . . . | 0,1 | | —4B = 748 | | | | | | | |
| A. . . . . | 07,4 | | | | | | | | | |
| B. C. . . . . | 13,5 | | | | | | | | | |
| B. D. . . . . | 04,2 | | | | | | | | | |
| B. E. . . . . | 16,3 | | | | | | | | | |
| B. F. . . . . | 0,2 | | | | | | | | | |
| Nut. ☾ . . . . . | 18,0 | | | | | | | | | |
| Nut. ☉ . . . . . | — 0,2 | | | | | | | | | |
| Aberr. ☉ . . . . . | 0,3 | | | | | | | | | |

| | |
|---|---|
| Lg. ☉ ver. | 2. 24. 48. 30,5 |
| ☉ | 2. 24. 18. 25,7 |
| Nut. ☾ . . . . . | 18,0 |
| Lg. ☉ med. | 2. 24 18. 43,7 |

Obliquitas Eclipticae.

| | |
|---|---|
| Obliquit. 1800 | $23^o.37'.57'',0$ |
| 5,5 anni . . . | — 03, 4 |
| Nut. ☾ . . . . | — 0, 2 |
| Nut. ☉ . . . . | — 0, 4 |
| Obliquit. . . | $23^o.27'.53'',9$ |

E Tabula XXIX.

| | |
|---|---|
| Semidiam. ☉ . . | 15'.46'',03 |
| Motus horar. ☉. | 02. 23, 15 |
| Parall. ☉ . . . . . | 08, 66 |

Latitudo solis.

| | |
|---|---|
| A+B+N = 985 . . | +0,06 |
| 2B—C = 574 . . | —0,08 |
| 3C—4B = 748 . . | —0,06 |
| B—2E = 193 . . | +0,04 |
| Latitudo ☉ = l = . . | —0,04 |

Initium computatum. Locus Lunae.

| Constructio argument. | | Long. med. ☾ | | Anom. med. | | | Suppl. nod. |
|---|---|---|---|---|---|---|---|
| | Aeq. sec. | - - - 10, 3 | | - - - 44, 8 | | | - - — 08, 5 |
| | 1806 | 1s.210.42′.30″,0 | | 10s.020.10′.23″,6 | | | 2s.220.47′.24″,0 |
| | 16. Jun. | - 27. 16. 54, 5 | Argg. | - 08. 47. 19, 0 | Deductio argumentorum. | Argg. | - 08. 47. 26, 1 |
| | 16h. | - 08. 47. 03, 4 | | - 08. 42. 36, 0 | | | - - 02. 07, 1 |
| | 58′. | - - 31. 50, 6 | | - - 31. 24, 4 | | | - - - 07, 0 |
| | 53″,13 | - - - - 29, 1 | | - - - 28, 9 | | | - - - 0, 1 |
| | ☾ | 2.28.18.57, 9 | A. . . | 10.20.13.06.7 | N. | XVII. | 3.01.36.56, 5 |
| | ☉ | 2.24.45.47, 2 | Acquat. A. | 11.27.54.11,9 | | ☉ | 2.24.45.47, 2 |
| ☾—☉ | D. | 0.03.33.10, 7 | 24 aequat. | 0.02.53.55,2 | ☉+N. | XVIII. | 5.26.23 |
| Anom.☉ | I. | 5.14.39.53, 9 | XV. | - 10.21.01.13,8 | | V. | 1.13.20 |
| D+I. | II. | 5.18.13 | Argg. | Aequat. longit. | XVIII+V. | XIX. | 7.09.43 |
| D—I. | III. | 6.18.53 | I. | 0s. 00.09′.05″,4 | | VI. | 1.16.53 |
| | D. | 0.03.33 | II. | - - - - 22,4 | | 2D | 0.07.06 |
| m. m. ☾ | A. | 10.20.13 | III. | - - - - 20,0 | VI+2D | XX. | 1.23.59 |
| D+A. | IV. | 10.23.46 | IV. | - - - - 15,9 | | 2A— | 9.10.26 |
| D—A. | V. | 1.13.20 | V. | - - - - 46,8 | XX—2A. | XXI. | 4.13.33 |
| V+D. | VI. | 1.16.53 | VI. | - - 02.32.20.4 | | 2A. | 9.10.26 |
| | 2A. | 9.10.26 | VII. | - - - 01.31,3 | | X— | 5.21.46 |
| VI+2A | VII. | 10.27.19 | VIII. | - - - - 01,3 | 2A—X. | XXII. | 3.18.40 |
| VI—2A | VIII. | 4.06.27 | IX. | - - - 01.16,3 | | ☾ | 2.28.18.57,9 |
| | A. | 10.20.13 | X. | - - - 01.07,7 | | N. | 3.01.36.56,5 |
| a. | I. | 5.14.40 | XI. | - - - 01.30,9 | ☾+N. | ♂. | 5.29.55.54 |
| A—I. | IX. | 5.05.33 | XII. | - - - - 0,6 | | 2♂— | 11.29.51.48 |
| | VII. | 10.27.19 | XIII. | - - - 01.54.8 | | VI. | 1.16.53 |
| VII—IX. | X. | 5.21.46 | XIV. | - - - - 17,9 | VI—2♂ | XXIII. | 1.17.01 |
| | VI. | 1.16.53 | XV. | - - - - 03,9 | | 2A. | 9.10.26 |
| | IX. | 5.05.33 | XVI. | - - - - 01,6 | XXIII+2A | XXIV. | 10.27.27 |
| VI+IX. | XI. | 6.22.26 | XVII. | - - - - 03,2 | N. | XVII. | 3.01.36.56,5 |
| | V. | 1.13.20 | XVIII. | - - - 02.07,9 | | Aequat. N. | 11.29.24.20,8 |
| | I. | 5.14.40 | XIX. | - - - - 03,7 | | ☾″ | 2.25.40.04,9 |
| V+I. | XII. | 6.28. 0 | XX. | - - - - 11,4 | ♂′ | ☾″+N′. | 5.26.41.22,2 |
| | VI. | 1.16.53 | XXI. | - - - - 01,9 | 2♂′. | 2(☾″+N′) | 11.23.22.44,4 |
| | I. | 5.14.40 | XXII. | - - - - 0,1 | | XXV— | 10.21.01.13,8 |
| VI+I. | XIII. | 7.01.33 | XXIII. | - - - - 15,0 | 2♂′—XXV | XXVII. | 1.02.21.30,6 |
| VI—I. | XIV. | 8.02.13 | XXIV. | - - - - 14,8 | ♂′ | ☾″+N′ | 5.26.41.22,2 |
| | VII. | 10.27.19 | 24 aequat. | 0s.020.53′.55″,2 | | constans | 11.29.58 |
| | I. | 5.14.40 | 25ta | 11. 23. 48, 52, 3 | | 27ma | - - 01.14,8 |
| VII+I. | XV. | 4.11.59 | ☾ | 2. 24. 18. 57, 9 | | XXVIII. | 5.26.40.37,0 |
| VII—I. | XVI. | 5.12.39 | ☾′ | 2. 25. 01. 45, 4 | | | |
| | | | ☉— | 2. 24. 45. 47, 2 | | | |
| | | | XXVI. | 0. 0. 15. 58. 2 | | | |
| | | | 26ta | - - 38. 19, 5 | | | |
| | | | ☾″ | 2. 25. 40. 04, 9 | | | |

Initium computatum.

| Constructio argumentorum. | | Argg. latid. |
|---|---|---|
| | ☊''' | 2.250.40'.04'',9 |
| | aeq. 27ma | - - 01. 14, 8 |
| | constans | 11. 29. 20. |
| XII. | ☊'' | 2. 25. 01. 19, 7 |
| | ☉ | 2. 24. 45. 47, 2 |
| | D''. | 0. 0. 15. 32, 5 |
| | 2D''. | 0. 0. 31. 05, 0 |
| XXVIII. long. | I— | 5. 26. 40. 37, 0 |
| 2D''—I. | II. | 6.03.50 |
| Anom. med. ☉ | a. | 5.14.40 |
| I—A | III. | 0.12. 0 |
| | A. | 10.20.13 |
| I—A. | IV. | 7.06.27 |
| IV—A. | V. | 8.16.14 |
| V—A. | VI. | 9.26.01 |
| II+a | VII. | 11.18.30 |
| II—a. | VIII. | 0.19.10 |
| II+A. | IX. | 4.24,03 |
| II—A. | X. | 7.13.37 |
| X—A. | XI. | 8.23.24 |
| ☊''' | XII. | 2.25.01 |
| | Argg. | Aequat. latit. |
| | I. | - 89°.31.'47'',0 |
| | II. | - - - 09.23,7 |
| | III. | - - - - 03,8 |
| | IV. | - - - - 28,0 |
| | V. | - - - - 0,7 |
| | VI. | - - - - 0,2 |
| | VII. | - - - - 10,8 |
| | VIII. | - - - - 02,5 |
| | IX. | - - - - 0,9 |
| | X. | - - - - 05,0 |
| | XI. | - - - - 0,0 |
| | XII. | - - - - 16,0 |
| | Dist. pol. | - 89°.42'.18'',6 |
| | | - 90 |
| | Latitud. | + 00.17'.41'',4 |

Locus Lunae.

| | Long. et Parall. |
|---|---|
| ☊'' | 2s.25°.40'.04'',9 |
| 27ma | - - 01. 14, 8 |
| 28va | 11. 29. 20. 47, 2 |
| ☊IV | 2. 25. 02. 06, 9 |
| Nutat | - - - 18, 0 |
| ☊V | 2. 25. 02. 24, 9 |
| | Parall. aequat. |
| XXV. | - 58'.16'',7 |
| VI. | - 01.03,1 |
| XXVI. | - - 52,4 |
| I. | - - 0,6 |
| V. | - - 02,2 |
| VII. | - - 0,0 |
| IX. | - - 0,0 |
| X. | - - 0,2 |
| XI. | - - 0,0 |
| XIII. | - - 0,1 |
| XIV. | - - 0,3 |
| XVIII. | - - 0,8 |
| XXVII | - - 0,1 |
| Parall. | - 60.16,5 |
| Semid. | - 16.27,05 |
| | Mot. hor. in lat. |
| I. | — 2'.57'',73 |
| const. | — 5,00 |
| II. | 0,03 |
| III. | 0,00 |
| V. | 0,24 |
| VI. | 9,05 |
| VII. | 0,17 |
| VIII. | 0,02 |
| X. | 0,01 |
| XI. | 0,00 |
| XII. | 0,09 |
| Mot. in lat. | — 3'.02'',06 |

Motus horar.

| Imi ordiuis. | | IIdi ordinis. | |
|---|---|---|---|
| I. | - 0,97 | IV. | - 0,000 |
| II. | - 0,00 | VII. | - - 9 |
| III. | - - 7 | IX. | - - 1 |
| IV. | - - 13 | X. | - - 7 |
| V. | - - 11 | XI. | - - 15 |
| VII. | - - 28 | XIII. | - - 8 |
| VIII. | - - 1 | XIV. | - - 2 |
| IX. | - - 4 | XV. | - - 0 |
| X. | - - 2 | XX. | - - 6 |
| XI. | - - 10 | VI. | - - 40 |
| XIII. | - - 15 | XXV. | - 0,843 |
| XIV. | - - 14 | XXVI. | - 0,392 |
| XV. | - - 6 | XXVII. | - - 6 |
| XVI. | - - 0 | XXVIII. | - - 66 |
| XVIII. | - - 1 | XXV. bis. | - - 68 |
| XX. | - - 14 | XXVI. bis. | - 0,328 |
| XXIII. | - - 3 | XXVII. bis. | - - 2 |
| XXIV. | - - 1 | XXVIII bis. | —2,284 |
| XXV+I | - - 83 | Summa | — 0,491 |
| VI. | - 73,13 | | |
| 24 aeq. | - 76,23 | | |
| XXV. | 33.46,57 | | |
| XXVbis | - 07,87 | | |
| 25 aeq. | 35·10,67 | | |
| XXVI. | - 8.25 | | |
| bis. | - 11,03 | | |
| XXVII. | - 0,31 | | |
| bis. | - 09,88 | | |
| XXVIII | - 0,23 | | |
| 28 aeq. | 36·53,37 | | |
| bis. | — 10,90 | | |
| mot. inlg 2di ord. | 36·42,47 — 0,49 | | |
| hor. seq. hor. praec. | 36·41,98 36.42,96 | | |

Latitudo sec. ord.

| | |
|---|---|
| I. | —0'',050 |
| II. | +0,001 |
| | —0,049 |

27 aeq. = 36'.51''
N = 1.1187
$N^2$ = 1.2514
—182'',06.N = = —203'',67
—0,049$N^2$ — = —0,061

Finis computatus.

| Constructio argument. | | Long. med. ☾ |
|---|---|---|
| | Aeq. sec. | - - - 10, 3 |
| | 1806 | 1ˢ.210.42′.30″,0 |
| | 16. Jun. | -27. 16. 54, 5 |
| | 18ʰ. | -09. 52. 56, 3 |
| | 07′. | - - 03. 50, 6 |
| | 43″,95 | - - - 24, 1 |
| | ☾ | 2.28.56.45, 8 |
| | ☉ | 2.24.48.31, 3 |
| ☾ ☉ | D. | 0.04.08.14, 5 |
| Anom. ☉ | I. | 5.14.42.43. 3 |
| D+I. | II. | 5.18.51 |
| D—I. | III. | 6.19.25 |
| | D. | 0.04.08 |
| an. m. ☾ | A. | 10.20.51 |
| D+A. | IV. | 10.24.59 |
| D—A. | V. | 1.13.17 |
| V+D. | VI. | 1.17.25 |
| | 2A | 9.11.41 |
| VI+2A | VII. | 10.29.06 |
| VI—2A | VIII. | 4.05.44 |
| | A. | 10.20.51 |
| a. | I. | 5.14.43 |
| A—I. | IX. | 5.06.08 |
| | VII. | 10.29.06 |
| VII—IX | X. | 5.22.58 |
| | VI. | 1.17.25 |
| | IX. | 5.06.08 |
| VI+IX. | XI. | 6.23.33 |
| | V. | 1.13.17 |
| | I. | 5.14.43 |
| V+I. | XII. | 6.28. 0 |
| | VI. | 1.17.25 |
| | I. | 5.14.43 |
| VI+I. | XIII. | 7.02.08 |
| VI—I. | XIV. | 8.02.42 |
| | VII. | 10.29.06 |
| | I. | 5.14.43 |
| VII+I. | XV. | 4.13.49 |
| VII—I. | XVI. | 5.14.23 |

Locus Lunae.

| | Anom. med. |
|---|---|
| Argg. | - - - 44, 8 |
| | 10ˢ.020.10′.23″,6 |
| | - 08. 47. 19, 0 |
| | - 09. 47. 55, 5 |
| | - - 03. 48, 6 |
| | - - - 23, 9 |
| A. | 10. 20. 50. 35, 4 |
| Aequat. A. | 11. 27. 54. 13, 1 |
| 24 aequat. | - 02. 54. 20, 7 |
| XXV. | 10. 21. 39. 09, 2 |
| Argg. | Aequat. longit. |
| I. | 0ˢ. 00.09′.05″,9 |
| II. | - - - - 22,0 |
| III. | - - - - 20,8 |
| IV. | - - - - 15,8 |
| V. | - - - - 46.8 |
| VI. | - - 02.32.51,0 |
| VII. | - - - 01.29.3 |
| VIII. | - - - - 01,3 |
| IX. | - - - 01.15,9 |
| X. | - - - 01.06,6 |
| XI. | - - - 01.29.5 |
| XII. | - - - - 0,6 |
| XIII. | - - - 01.53,9 |
| XIV. | - - - - 17,8 |
| XV. | - - - - 03,9 |
| XVI. | - - - - 01,6 |
| XVII. | - - - - 03,2 |
| XVIII. | - - - 02.07,8 |
| XIX. | - - - - 03,7 |
| XX. | - - - - 11,2 |
| XXI. | - - - - 01,9 |
| XXII. | - - - - 0,1 |
| XXIII. | - - - - 15,0 |
| XXIV. | - - - - 14,7 |
| 24 aequat. | 0ˢ.020.54′.20″.7 |
| 25ta | 11. 23. 52. 10, 9 |
| ☾″ | 2. 28. 56. 45, 8 |
| ☾′ | 2. 25. 43. 17, 4 |
| ☉— | 2. 24. 48. 31, 3 |
| XXVI. | 0. 0. 54. 46, 1 |
| 26ta | - - 39. 06, 9 |
| ☾″ | 2. 26. 22. 24, 3 |

| | | Suppl. nod. |
|---|---|---|
| Deductio argumentorum. | Argg. | - - — 08, 5 |
| | | 2ˢ.220.47.24″,0 |
| | | -08. 47. 26, 1 |
| | | - - 02. 23, 0 |
| | | - - - 0, 9 |
| | | - - - 0, 1 |
| N. | XVII. | 3.01.37.05, 6 |
| | ☉ | 2.24.48.31, 3 |
| ☉+N | XVIII. | 5.26.26 |
| | V. | 1.13.17 |
| XVIII+V. | XIX. | 7.09.43 |
| | VI. | 1.17.25 |
| | 2D. | 0.08.16 |
| VI+2D. | XX. | 1.25.41 |
| | 2A— | 9.11.41 |
| XX—2A. | XXI. | 4.14. 0 |
| | 2A. | 9.11.41 |
| | X— | 5.22.58 |
| 2A—X. | XXII. | 3.18.43 |
| | ☾ | 2.28.56.45, 8 |
| | N. | 3.01.37.05, 6 |
| ☾+N | δ. | 6. 0.33.51, 0 |
| | 2δ— | 0.01.07.42. 0 |
| | VI. | 1.17.25 |
| VI—2δ. | XXIII. | 1.16.17 |
| | 2A. | 9.11.41 |
| XXIII+2A | XXIV. | 10.27.58 |
| N. | XVII. | 3.01.37.05, 6 |
| | Aequat. N. | 11.29.24.20, 4 |
| | ☾″ | 2.26.22.24, 3 |
| δ′. | ☾″+N′. | 5.27.23.50, 3 |
| 2δ′. | 2(☾″+N′) | 11.24.47.40, 6 |
| | XXV. | 10.21.39.09, 2 |
| 2δ′—XXV | XXVII. | 1.03.08.31, 4 |
| δ′ | ☾″+N′. | 5.27.23.50, 3 |
| | constans | 11.29.58 |
| | 27ma | - - 01,13, 7 |
| | XXVIII. | 5.27.23.04, 0 |

## Finis computatus.

| Constructio Argumentorum. | | Argg. latitud. |
|---|---|---|
| | ☾″ | 2.260.22′.24″,3 |
| | aeq.27ma | - - 01. 13. 7 |
| | Constans | 11. 29. 20 |
| XII. | ☾″ | 2. 25. 43. 38, 0 |
| | ☽ | 2. 24. 48. 31, 0 |
| | D″ | 0. 0. 55. 07, 0 |
| | 2D″ | 0. 01. 50. 14, 0 |
| XXVIII. long. | I.— | 5. 27. 23. 04, 0 |
| 2D″—I. | II. | 6.04.27.10,0 |
| Anom. med. ☉ | a. | 5.14.43 |
| I—a. | III. | 0.12.40 |
| | A. | 10.20.51 |
| I—A. | IV. | 7.06.32 |
| IV—A. | V. | 8.15.41 |
| V—A. | VI. | 9.24.50 |
| II+a. | VII. | 11.19.10 |
| II—a. | VIII. | 0.19.44 |
| II+A. | IX. | 4.25.18 |
| II—A. | X. | 7.13.36 |
| X—A. | XI. | 8.22.45 |
| ☾″ | XII. | 2.25.44 |

| | Argg. | Aequat. latit. |
|---|---|---|
| | I. | - - 89o.35.35,3 |
| | II. | - - - 09.29,4 |
| | III. | - - - - 03,9 |
| | IV. | - - - - 28,0 |
| | V. | - - - - 0,8 |
| | VI. | - - - - 0,2 |
| | VII. | - - - - 10,7 |
| | VIII. | - - - - 02,4 |
| | IX. | - - - - 0,9 |
| | X. | - - - - 05,0 |
| | XI. | - - - - 0,0 |
| | XII. | - - - - 16,0 |
| | Dist. pol. | - 89o.46′.12″,6<br>- 90 |
| | Latitud. | + 00.13′.47″,4 |

## Locus Lunae,

| | Long. et Parall. |
|---|---|
| ☾″ | 2.26.22.24,3 |
| 27ma | - - 01.13,7 |
| 28va | 11.29.20.37,2 |
| ☾IV | 2. 25. 44. 15, 2 |
| Nutat. | - - - 18, 0 |
| ☾V | 2.25.44.33,2 |
| | Parall. aequat. |
| XXV. | - 58′.18″,4 |
| VI. | - 01.02,8 |
| XXVI. | - - 52,4 |
| I. | - - 0,6 |
| V. | - - 02,2 |
| VII. | - - 0,0 |
| IX. | - - 0,0 |
| X. | - - 0,1 |
| XI. | - - 0,1 |
| XIII. | - - 0,1 |
| XIV. | - - 0,3 |
| XVIII. | - - 0,8 |
| XXVII | - - 0,1 |
| Parall. | - 60.17.9 |
| Semid. | - 16.27,44 |
| | Mot. hor. in lat. |
| I. | - 2′.57″86 |
| const. | - — 5,00 |
| II. | - - 0,03 |
| III. | - - 0,00 |
| V. | - - 0,24 |
| VI. | - - 0,05 |
| VII. | - - 0,17 |
| VIII. | - - 0,02 |
| IX. | - - 0,01 |
| X. | - - 0,00 |
| XI. | - - 0,06 |
| XII. | - - 0,09 |
| Mot. in lat. | —3′.02″,19 |

## Motus horar.

| Imi ordinis. | | IIdi ordinis. | |
|---|---|---|---|
| I. | - 0,97 | IV. | 0,000 |
| II. | - 0,00 | VII. | - - 9 |
| III. | - 0,07 | IX. | - - 1 |
| IV. | - 0,12 | X. | - - 8 |
| V. | - 0,11 | XI. | - - 16 |
| VII. | - 0,25 | XIII. | - - 8 |
| VIII. | - 0,01 | XIV. | - , 2 |
| IX. | - 0,04 | XV. | - - 0 |
| X. | - 0,01 | XX. | - - 6 |
| XI. | - 0,11 | VI. | - - 39 |
| XIII. | - 0,16 | XXV. | 0,883 |
| XIV. | - 0,14 | XXVI. | 0,383 |
| XV. | - 0,06 | XXVII. | - - 6 |
| XVI. | - 0,00 | XXVIII. | - - 68 |
| XVIII. | - 0,01 | XXV. bis. | - - 67 |
| XX. | - 0,14 | XXVI bis. | 0,332 |
| XXIII | - 0,03 | XXVII. bis. | - - 1 |
| XXIV. | - 0,01 | XXVIII. bis. | —2,284 |
| XXV+I | - 0,83 | Summa | —0,503 |
| VI. | 10.12,82 | | |
| 24 aeq. | 01.15,89 | | |
| XXV. | 33.48,59 | | |
| XXV bis | - 07,87 | | |
| 25 aeq. | 35.12,35 | | |
| XXVI. | 01.21,23 | | |
| bis. | - 11,15 | | |
| XXVII. | - 0,31 | | |
| bis. | - 09,88 | | |
| XXVIII. | - 0,20 | | |
| 28 aeq. | 36.55,12 | | |
| bis. | — 10,91 | | |
| Mot. inlg | 36.44,21 | | |
| 2di ord. | — 0,50 | | |
| hor. seq. hor. | 36.43,71 | | |
| pracc. | 36.44,71 | | |

Latitudo secund. ord.

| | |
|---|---|
| I. | —0 ',030 |
| II. | +0, 002 |
| | —0, 037 |

27 aeq.=36′,53
N = 1. 1197
N² = 1. 2537
—1,82, 19 N =
= — 204.00
— 0,037 N² =
= — 0,046

## 4.

Elementa igitur ex tabulis desumpta ita se habent:

| | tempore initii, | finis. |
|---|---|---|
| l | = 840.45′.47″,20 | 840.48′.30″5 |
| A | = 84. 15. 55, 1 | 84. 18. 43, 7 |
| B | = . . — 0, 04 | |
| $\frac{1}{2}$D | = . . 15. 46,03 | |
| $\pi''$ | = . . . 8,66 | |
| m | = . . 2. 23,15 | |
| ε | = 23. 27. 53.0 | |
| L | = 85. 02. 24,9 | 85. 44. 33. 2 |
| λ | = . + 17. 41,4 | +13. 47, 4 |
| $\pi'$ | = . . 60. 16,5 | ..60. 17, 9 |
| M | = . . 60. 41,98 | ..36. 43, 71 |
| $\pi$ | = . . 60. 07,84 | ..60. 09, 24 |
| ϰ | = 168. 15. 35,45 | 185.26.10, 1 |

## 5.

Correctio latitudinis,

posita depressione sphaerae telluris $= \frac{1}{334}$ vel $\frac{n}{m} = \frac{333}{334}$

$$\log. \text{tg. lat. geoc.} = \beta = \frac{n^2}{m^2} \text{tg.} \varphi$$

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

$$\text{tg.} \beta' = 0.0474811$$

$$\varepsilon = 47^{\circ}.57'.18'',0 \quad . \quad . \quad . \quad \text{tg.} \beta = 0.0448767$$

## 6.

Calculi anguli $\varphi$

$$\text{Tg.} \varphi = \sin. \alpha \cot. \beta.$$

| | | | |
|---|---|---|---|
| | Sin $\alpha$ = 9.3085983 | 8.9765161 n | |
| | cot. $\beta$ = 9.0551233 | 9.9551233 | |
| ang. $\varphi$ = 100.23′.52″,8 | tg. $\varphi$ = 9.2636316 | 8.9316394 n | ang. $\varphi$ = — 40.52′.59″,2 |
| ε = 23. 27. 53. 0 | | | ε = 23. 27. 53. 0 |
| $\varphi$ + ε = 330.51′.45″,8 | | | $\varphi$ + ε = 180.34′.53″,8 |

## 7.

## Differentia parallaxium longitudinis.

$$\text{Tg. long. ☾ app.} = \frac{\sin. L \cos. \lambda - \frac{\sin. \pi \cos. \beta}{\cos. \varphi} \sin.(\varphi + \varepsilon)}{\cos. L \cos. \lambda - \sin. \pi \cos. \alpha \cos. \beta.}$$

| Initium. | | | | Finis. |
|---|---|---|---|---|
| | sin. L | =9.9983708 | 9.9987964 | |
| | cos. L | =8.9367946 | 8.8766267 | |
| | cos. λ | =9.9999943 | 9.9999965 | |
| Num.=0.9962424 | sin. L cos. λ | =9.9983651 | 9.9987964 | Num.=0.9972324 |
| Num.=0.0864547 | cos L cos. λ | =8.9367889 | 8.8706232 | Num.=0.0742347 |
| | sin. π | =8.2427997 | 8.2429683 | |
| | sin. β | =9.8707661 | 9.8707661 | |
| | C cos. φ | =0.0071912 | 0.0015791 | |
| | | 8.1207570 | 8.1153135 | |
| 0.9962424 | sin.(φ+ε) | =9.7460150 | 9.5033209 | 0.9972324 |
| Num.=0.0073582 | | =7.8667720 | 7.6186344 | Num.=0.0041556 |
| Diff. =0.9888842 | | log.=9.9951455 | 9.9969828 | Diff. =0.9930768 |
| | sin. π | =8.2427997 | 8.2429683 | |
| | cos. α | =9.9908183n | 9.9980423n | |
| 0.0864547 | cos. β | =9.8258894 | 9.8258894 | 0.0742374 |
| Num.=—0.0114685 | | 8.0595074n | 8.0669000n | Num.=—0.0116651 |
| Diff. = 0.0979232 | | log.=8.9908856 | 8.9340059 | Diff. = 0.0589025 |
| | C. log. | =1.0091144 | 1.0659941 | |
| L =850.02′.24″,9 | | 9.9951455 | 9.9969828 | L=850.44′.33″,2 |
| L′=84.20.41, 2 | tang. L′ | =1.0042599 | 1.0629769 | L′= 5.8 03. 22, 1 |
| p= — 2508″,7 | | | | p = — 2471″,1 |

## 8.

## Latitudo lunae apparens.

$$\text{Tg. lat. ☾ app.} = \frac{(\sin. \lambda - \frac{\sin. \pi \sin. \beta}{\cos. \varphi} \cos. (\varphi + \varepsilon) \cos. L'}{\cos. L \cos. \lambda - \sin \pi \cos. \alpha \cos. \beta.}$$

| | | | | |
|---|---|---|---|---|
| | $\frac{\sin. \pi \sin \beta}{\cos. \varphi}$ | =8.1207570 | 8.1153135 | |
| sin λ= 0.0051458 | cos(φ+ε) | =9.9192743 | 9.9767491 | sin.λ= 0.0040113 |
| Num.= 0.0109656 | | =8.04003183 | 8.0920626 | Num.= 0.0123612 |
| Diff. =—0.0058198 | | log.=7.7649081n | 7.9216813n | Diff. =—0.0083499 |
| | cos. L′ | =8.9936217 | 8.9354046 | |
| | C | =1.0091144 | 1.0659941 | |
| λ′ =—1208″,0 | tg. λ′ | —7.7676442n | 7.9230800n | λ′=—1727″7 |

9.

Semidiameter lunae geocentrica.

$$\text{Sin. semid. } ☾ \text{ geoc.} = \frac{\cos. L' \cos. \lambda' \sin. \frac{1}{2} D}{\cos. L \cos. \lambda - \sin \pi \cos. \alpha \cos. \beta}$$

| Initium. | | | Finis. |
|---|---|---|---|
| C.Den.cos.L' | =0.0027361 | 0.0013987 . . . . . | |
| cos.λ' | =9.9999925 | 9.9999846 . . . . . | |
| sin.½D | =7.6799121 | 7.6800797 . . . . . | |
| ½D'=993''28 . . . . sin.½D' | =7.6826407 | 7.6814630 . . . . . | ½D'=990'',58 |

10.

Tempus ad ☌ propius accedens.

Motus hor. ☾ — ☉ : 3600'' = long. vera (☾ — ☉) : x''

Initium.

$\mu = 34'.19'',27 = 34',32$
$c' = 16.\ 37,\ 7 = 16,63$

$34',32 : 3600'' = 16',63 : x'' = 1744'' = 29'.04''$

$T = 5^h.35'.58'',7$
Correct. $= -29.\ 04,\ 0$
$t = 5^h.06'.54'',7$

11.

Motus horarius lunae — solis.

| Initium. | | Finis. |
|---|---|---|
| T | $=16^h.45'$ | $17^h.20''$ |
| μ | $=34'.\ 18'',99$ | $34'.19'',73$ |

12.

Logarith. pro reduction. spatii ad tempus.

| | |
|---|---|
| $34',3165 : 3600'' = 1 : h'$ | $34',32883 : 3600'' = 1 : h'$ |
| log. h' = 0.2426495 | 0.2424924 |

## 13.

## Solutio trianguli SMN.

Sit ♈m = Long. ☾ appar.
♈s = Long. ☉.
♈M = Long. ☾ verae.
Mm = Parall. ☾ — ☉ in long.
MN = Latitud. ☾ verae.
mn = Latitud. ☾ appar. — lat. ☉
Sn = Semid. ☾ — ☉ correct.

erit $Sm^2 = (Sn + mn)(Sn - mn)$

et inde

| temp. initii, | finis. |
|---|---|
| SM = p − Sm | SM = p + SM |

hinc

Correctio = − SM′ = h′. SM

| | | | |
|---|---|---|---|
| Sn = 1939,31 | | | Sn = 1936,61 |
| mn = 1207,96 | | | mn = 1727,66 |
| Sum. = 3147,27 . . . . . | log. = 3.4979340 | 3.5639875 . . . | Sum. = 3664,27 |
| Diff. = 731,35 . . . . . | log. = 2.8641253 | 2.3200424 . . . | Diff. = 208,95 |
| | log. $Sm^2$ = 7-3620593 | 5.8840299 | |
| Sm = 1517,1 . . . | log. Sm = 3.1810296 | 2.9420149 . . . | Sm = 875,01 |
| p = 2503,7 | | | p = 2471,1 |
| SM = 986,6 . . . . . | log. = 2.9941411 | 3.5245400 . . . | SM = 3346,11 |
| | log. h′ = 0.2426495 | 0.2424924 . . . | SM′ = $1^h$,37.28″,3 |
| SM′ = 28′.45″,0 . . | log. SM′ = 3.2367906 | 3.7670324 . . . . . | SM′ = $1^h$.37′.28″,3 |

## 14.

## Tempus ♂ incorrectum.

| | |
|---|---|
| T = $5^h$.35′.58″,69 | $6^h$.44′.29″,76 |
| SM′ = − 28. 45, 00 | − 1. 37. 28, 30 |
| ♂ = $5^h$.07′13″,69 | $5^h$.07′.01″,46 |

## 15.

### Correctio ♂ supputatae.

Temp. ♂ correctae.

| | I. | II. | III. | IV. | V. |
|---|---|---|---|---|---|
| ex init.) ex fine) | $\pm\frac{h'fn}{fm}\,dfn$ | $\pm\frac{h'mn}{fm}\,d\lambda$ | $\mp\frac{h'mn}{fm}\sin.b\,d\pi$ | $-h'\sin.(l-L')\cos.b\,d\pi$ | $+\frac{3}{11}\frac{h'fn}{fm}\,d\pi$ |

ubi b = Altit. Nonag.
l = Lòng. Nonag.

| | | | | |
|---|---|---|---|---|
| | | $h'=0.2426495$ | $0.2424924$ | |
| | | $fm=3.1810296$ | $2.9420149$ | |
| | | log.Quot.$=7.0616199$ | $7.3004775$ | |
| | | $fn=3.2876472$ | $3.2870421$ | |
| | | $mn=3.0820527$ | $3.2374583$ | |
| $I=+2,2349\,dfn$ . . . | Prod.$=0.3492671$ | $0.5875196$ | . . . . . | $I=-3,8682\,dfn$ |
| $II=+1,3921\,d\lambda$ . . . | Prod.$=0.1436726$ | $0.5379358$ | . . . . . | $II=-3,4509\,d\lambda$ |
| | sin.b$=9.7972310$ | $9.8490947$ | | |
| $III=-0,8728\,d\pi$ . . | Prod.$=9.9409042$ | $0.3870305$ | . . . . . | $III=+2,4379\,d\pi$ |
| | $h'=0.2426495$ | $0.2424924$ | | |
| | cos.b$=9.8915721$ | $9.8498780$ | | |
| | sin.$(l-L')=9.9497692$ | $9.9856261$ | | |
| $IV=-1,2133\,d\pi$ . . | Prod.$=0.0839908$ | $0.0779965$ | . . . . . | $IV=-1,1967\,d\pi$ |
| | log.$\frac{3}{11}=9.4357284$ | $9.4357284$ | | |
| | log.$\frac{h'fn}{fm}=0.3492671$ | $0.5875196$ | | |
| $V=+0,6095\,d\pi$ . . | Prod.$=9.7849955$ | $0.0232480$ | . . . . . | $V=+1,0549\,d\pi$ |

Temp. ♂ correct. { ex initio. $=5^h.07'.13'',69+2,2349\,dfn+1,3921\,d\lambda-1,4766\,d\pi$
ex fine $=5.\ 07.\ 01,\ 46-3,8682\,dfn-3,4509\,d\lambda+2.2961\,d\pi$

Aeq. I . . . . . $12'',23+6,1031\,dfn+4,8430\,d\lambda-3,7727\,d\pi$

## 16.

Eclipsis solis Romae ab Astronomis celeberrimis Conti et Calandrelli in collegio romano observata. Ex litteris a celeberrimo Astronomo Calandrelli ad me datis.

Initium $=5^h.42'.41'',9$
Finis $=7.\ 0.\ 52,\ 9$ } temp. solari vero.

17.

Diff. merid. Parisios inter et collegium romanum $= -40'.38''$. tempore, ex epistola Calandrelli. Elevatio poli $= 41^{o}.53'.54'',2$ Ex eadem epistola desumpta.

18.

Tempus solare medium.

| Initinm. | | Finis. |
|---|---|---|
| ae = | $+7'',36$ | $8'',05$ |
| T′ = | $5^{h}.42'.41'',9$ | $7^{h}.0'.52'',9$ |
| T Romae = | $5.42,49,26$ | $7.01.0,95$ |
| δ = | $-40.38,00$ | $-40.38,00$ |
| T = | $17^{h}.02'.11'',26$ | $18^{h}.20'.22'',95$ |

19.

Elementa e tabulis desumpta.

| | | |
|---|---|---|
| l = | $84^{o}.45'.55'',0$ | $84^{o}.49'.01'',6$ |
| A = | $84.16.03,2$ | $84.19.15,8$ |
| L = | $85.04.26,1$ | $85.52.18,1$ |
| λ = | $+17.30,0$ | $+13.04,3$ |
| α = | $169.58.22,4$ | $189.34.29,05$ |

Caetera elementa ut supra.

20.

Correctio latitudinis,

$\beta = 41^{o}.43'.39'',5$ . . . | . . . tg. $\beta = 9.9502837$

21.

Differentia parallaxium longit.

| | | | |
|---|---|---|---|
| L = | $85^{o}.04'.26'',1$ | | L = $85^{o}.52'.18'',1$ |
| L′ = | $84.18.10,1$ | tg. L′ = $1.0010278$ | $1.0699807$ . . . . . L′ = $85.07.25,2$ |
| p = | $-2776'',0$ | | p = $-2692'',9$ |

22.

Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -971'',3$ . . . | tg. $\lambda' = 7.6729544n$ | 7.8897359n . . . . . | $\lambda' = -1600'',1$ |

23.

Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 992'',52$ . . | sin. $\frac{1}{2}D' = 7.6823097$ | 7.6807782 . . . . . | $\frac{1}{2}D' = 989'',00$ |

24.

Logarith. pro reduct. spatii ad tempus.

| | | |
|---|---|---|
| $\tau' = 16^h.46'.$ | | $17^h.25'.$ |
| $\mu =$ . . | 34.19'',0 | . . 34. 19'',83 |
| log. $h' =$ . | 0,2426465 | 0.2424711 |

25.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| Sn = 1938,55 | | | Sn = 1935,03 |
| mn = 971,26 | | | mn = 1600,06 |
| Sm = 1677.6 . . . | log. Sm = 3.2247106 | 3,0367032 . . . . . | Sm = 1088,2 |
| p = 2776,0 | | | p = 2692.9 |
| SM = 1098,4 | | | SM = 3781,1 |
| SM' = 32'. 0'',4 . . | log. SM' = 3.2834070 | 3.8200893 . . . . . | SM' = $1^h.50'.08''$,3 |

26.

Tempus $\delta$ incorrectum.

| | | |
|---|---|---|
| T = $5^h.42'.49''$,26 | | $7^h.01'.00''$,95 |
| SM' = — 32. 0, 40 | | — 1. 50, 08, 30 |
| $\delta = 5^h.10'.48''$,86 | | $5^h.10'.52''$,65 |

27.

Tempus ♂ correctum.

Ex init. $= 5^h.10'.48'',86 + 2,0203\, d\, \int n + 1.0122\, d\, \lambda - 1.3599\, d\, \pi$
ex fine $= 5.\ 10.\ 52,\ 65 - 3,1078\, d\, \int n - 2,5692\, d\, \lambda + 1,2392\, d\, \pi$
Aeq. II. . . . . $3'',79 - 5,1281\, d\, \int n - 3,5814\, d\, \lambda + 2,5991\, d\, \pi$

28.

Eclipsis solis ab Astronomo celeb. Scarpellini Romae in specula astronomica Caetani observata. Ex litteris ad Illustrem de Humboldt, Regi Borussorum a Secretis principem, id temporis Romae Oratorem, mihi amicissimum, datis, ut mecum communicaret.

Initum $= 5^h.42'.55'',0$
Finis $= 7.\ 0.\ 52.\ 5$ } temp. sol. vero.

29.

Diff. merid. Parisios inter et speculam Caetani $= -40'.37''5$ tempore
Elevatio poli $= +410,53'.54''.2$ Illam ex litteris (cf. Connaissance des tems pour l'an XIII. p. 489) aeque ac hanc desumpsi ita habentibus: „L'osservatorio Caetani e di poche tese più australe di quello del Collegio Romano."

30.

Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| ae = | . . . 7'',36 | . . 8'',05 |
| T' = | $5^h.42'.55,\ 00$ | $7^h.\ 0'.52'',5$ |
| T Romae = | 5. 43. 02, 36 | 7. 01. 0, 55 |
| ♂ = | — 40. 37, 50 | — 40. 37, 50 |
| τ = | $17^h.02'.24'',86$ | $18^h.20'.23''05$ |

## 31.

### Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 840.45'.55'',5$ | | $840.49'.01'',7$ |
| $A = 84.\ 16.\ 03,\ 7$ | | $84.\ 19.\ 15,\ 9$ |
| $L = 85.\ 04.\ 34,\ 3$ | | $85.\ 52.\ 18,\ 2$ |
| $\lambda = +\ 17.\ 29,\ 2$ | | $+\ 13.\ 04,\ 3$ |
| $\alpha = 170.01.\ 39,\ 1$ | | $189.34.\ 24,\ 1$ |

## 32.

### Correctio latitudinis.

$\beta = 41.43'.39'',5$ . . $tg.\beta = 9.9502837$

## 33.

### Calculi anguli $\varphi$

| | | |
|---|---|---|
| $\varphi = 100.59'.20'',0$ . . $tg.\varphi = 9.2882015$ | $9.2706355n$ . . . | $\varphi = -100.33'.47'',7$ |
| $\varphi + \epsilon = 24.\ 27.\ 13,\ 0$ | | $\varphi + \epsilon = 12.\ 54.\ 05,\ 3$ |

## 34.

### Differentia parallaxium longit.

| | | |
|---|---|---|
| $L = 850,04'.34''3$ | | $L = 850.52'.18'',2$ |
| $L' = 84.\ 18.\ 18,\ 1$ . . $tg.L' = 1,0011993$ | $1.0689825$ . . . . . | $L' = 85.\ 07.\ 25,\ 3$ |
| $p = -\ 2776'',2$ | | $p = -\ 2692'',9$ |

## 35.

### Latitudo lunae apparens.

$\lambda'' = -973''1$ . , . $tg.\lambda' - 7.6737472.n$ | $7.8897498.n$ . . . . . , $\lambda' = -1600'',1$

## 36.

### Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 992'',51$ . . . . $tg.\frac{1}{2}D' = 7.6823057$ | $7.6807777$ . . . . . $\frac{1}{2}D' = 989'',0$

37.

Logarith. pro reductione spatii ad tempus.

| Initium. | | Finis. |
|---|---|---|
| $\tau' = 16^h.46''$ | | $17^h.25'$. |
| $\mu = \ldots 34.\ 19'',0$ | | $34.\ 19'',83$ |
| $\log. h' = 0.2426465$ | | $0.2424711$ |

38.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1938'',54$ | | | $fn = 1935'',03$ |
| $mn = 973,\ 06$ | | | $mn = 1600,\ 06$ |
| $fm = 1676,\ 6$ | $\ldots \log. fm = 3.2244375$ | $3.0367032$ | $\ldots\ldots\ldots fm = 1088,\ 2$ |
| $p = 2776,\ 2$ | | | $p = 2692,\ 8$ |
| $SM = 1099,\ 6$ | | | $SM = 3781,\ 1$ |
| $SM' = 32'.02'',6$ | $\ldots \log. SM' = 3.2838812$ | $3.8200893$ | $\ldots\ldots SM' = 1^h.50'.08''3$ |

39.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 5^h.43'.02'',36$ | $7^h.01'\ 0'',55$ |
| $SM' = -\ 32.\ 02,\ 60$ | $-\ 1.\ 50.08,\ 30$ |
| $\delta = 5^h.10'.59''76$ | $5^h.10'.52'',25$ |

40.

Tempus $\delta$ correctum.

$$\text{Ex init.} = 5^h.10'.59'',76 + 2,0215\, d\,fn + 1,0147\, d\,\lambda - 1,3625\, d\,\pi$$
$$\text{ex fine} = 5.\ 10.\ 52,\ 25 - 3,1078\, d\,fn - 2,5692\, d\,\lambda + 1,2392\, d\,\pi$$
$$\text{Aeq. III.} \ldots\ldots 7'',51 + 5,1293\, d\,fn + 3,5839\, d\,\lambda - 2,6017\, d\,\pi$$

41.

Eclipsis ab Astronomo celeb. Chiminello in specula astronomica Patavii observata. Ex Litteris Illustrissimi Cagnoli, Societatis scientiarum Italicae Praesidis ad me datis:

$$\left.\begin{array}{l}\text{Initium} = 5^h.38'.26'',8 \\ \text{Finis} \ = 6.\ 51.\ 30,\ 9\end{array}\right\} \text{temp. solar. vero.}$$

## 42.

Diff. merid. Parisios inter et Patavium $= -38'.10''$ tempore
Elevatio poli $= +45^{o}.23'.40''$.

## 43.

### Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| T' | $= 5^{h}.38',26'',80$ | $6^{h}.51'.30'',90$ |
| ae | $= \ldots + 7,\ 35$ | $\ldots + 7,\ 99$ |
| T Patav. | $= 5.\ 38.\ 34,\ 15$ | $6.\ 51.\ 38,\ 89$ |
| $\delta$ | $= -38.\ 10.$ | $-38,10$ |
| $\delta$ | $= 17^{h}.0'.24'',15$ | $18^{h}.13'.28'',89$ |

## 44.

### Elementa e tabulis desumpta.

| | | |
|---|---|---|
| l | $= 84^{o}.45'.51'',0$ | $84^{o}.48'.45'',2$ |
| A | $= 84.\ 15.\ 58,\ 8$ | $84.\ 18.\ 58,\ 8$ |
| L | $= 85.\ 03.\ 20,\ 6$ | $85.\ 48.\ 04,\ 0$ |
| $\lambda$ | $= +17.\ 36,\ 0$ | $+13.\ 27,\ 8$ |
| $\alpha$ | $= 168.54.31,\ 05$ | $187.\ 13.\ 42,\ 15$ |

## 45.

### Correctio latitudinis.

$\beta = 45^{o}.13'.21'',5 \ldots \text{tg.}\beta = 0,0033753$

## 46.

### Calculi anguli $\varphi$.

$\varphi = 100^{o}.48'.24''.3 \ldots \text{tg.}\varphi = 9.2807663 \quad 9.0963894.n \ldots \varphi = -7^{o}.06'.59'',6$
$\varphi + \varepsilon = 34.\ 36.\ 17,\ 3 \qquad \varphi + \varepsilon = 16.\ 20.\ 53,\ 4$

## 47.

### Differentia parallaxium longit.

$L = 85^{o}.03'.20'',6 \qquad L = 85^{o}.48'.04'',0$
$L' = 84.\ 19.\ 33,\ 9 \ldots \text{tg.}L' = 1.0028184 \quad 1.0655993 \ldots\ldots L' = 85.\ 05.\ 08,\ 7$
$p = -\ 2626'',7 \qquad p = -\ 2575'',3$

## 48.

### Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -1105'',1$ . . | tg. $\lambda' = 7.7289757$ n | 7.9092988.n . . . . . | $\lambda' = -1674,0$ |

## 49.

### Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 992,9$ . . | sin. $\frac{1}{2}D' = 7.6825130$ | 7.6811741 . . . . . | $\frac{1}{2}D' = 990'',0$ |

## 50.

### Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.45'$ | $17^h.22'$. |
| $\mu = 34.18'',99$ | . . 34.19''77 |
| log. $h' = 0.2426495$ | 0.2424825 |

## 51.

### Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn $= 1938'',93$ | | | fn $= 1936,03$ |
| mn $= 1105,06$ | | | mn $= 1673,96$ |
| fm $= 1593,2$ . . . | log. fm $= 3.2022708$ | 2.9879616 . . . . . | fm $= 972,66$ |
| p $= 2626,7$ | | | p $= 2575,30$ |
| SM $= 1033,5$ | | | SM $= 3547,96$ |
| SM' $= 30'.07'',0$ . . | log. SM' $= 3.2569600$ | 3.7924612 . . . . . | SM' $= 1^h.43'.21'',0$ |

## 52.

### Tempus $\delta$ incorrectum.

| | |
|---|---|
| T $= 5^h\ 08'.34'',15$ | $6^h.51'.38'',89$ |
| SM $= -30.07,0$ | $-1.43.21,0$ |
| $\delta = 5^h.08.27'',15$ | $5^h.08'.17'',89$ |

53.

Tempus $\delta$ correctum.

Ex init. $= 5^h.08'.27'',15 + 2,1278\, d\, \int n + 1,2127\, d\, \lambda - 1,4168\, d\, \pi$
ex fine $= 5.\ 08.\ 17,\ 89 - 3,4788\, d\, \int n - 3,0079\, d\, \lambda + 1.7666\, d\, \pi$
Aeq. IV. . . . . $9'',26 + 5,6066\, d\, \int n + 4,2206\, d\, \lambda - 3.1834\, d\, \pi$

54.

Eclipsis solis ab Astronomo celeb. Oriani in specula astronomica Mediolani observata, ex litteris ab Ipso ad me datis:

Initium $= 5h.25'.58'',6$ }
Finis $= 6.\ 42.\ 41,\ 7$ } temp. sol. medio.

55.

Diff. merid. Parisios inter et Mediolanum $= -27'.25''$ temporis.
Elevatio Poli $= +45^o.28'.05''$

56.

Elementa e tabulis desumpta.

| Initium. | Finis. |
|---|---|
| $I = 48^o.45'.46'',4$ | $84^o.48'.49'',5$ |
| $A = 84.\ 15.\ 54,\ 3$ | $84.\ 19.\ 03,\ 3$ |
| $L = 85.\ 02.\ 12,\ 9$ | $85.\ 49.\ 10,\ 4$ |
| $\lambda = +17.\ 42,\ 2$ | $+13.\ 21,\ 7$ |
| $\alpha = 165.45.\ 33,\ 3$ | $184.\ 59.\ 28,\ 8$ |

57.

Correctio latitudinis.

$\beta = 45^o.17'.46'',5$ . . . . . | $tg.\beta = 0.0044914$

58.

Calculi anguli $\varphi$.

$\varphi = 13^o.41'.\ 0'',0$ .. $tg.\varphi = 9.3864384$ | $8.9350534.n$ . . . $\varphi = -\ 40.55'.17'',7$
$\varphi + 1 = 37.\ 08.\ 53,\ 0$ | $\varphi + 1 = \ 18.\ 32.\ 35,\ 3$

59.

Differentia parallaxium longit.

| Initium. | | | Finis. |
|---|---|---|---|
| L = 85°.02'.12'',9 | | | L = 85°.49'.10'',4 |
| L' = 84. 18. 47, 1 | . . tg.L' = 1.0018182 | 1.0668344 . . . . . | L' = 85. 05. 58, 7 |
| p = — 2605''8 | | | p = — 2591,7 |

60.

Latitudo lunae apparens.

λ' = — 1048'',2 . . tg.λ' = 7.7060401.n | 7.9015718.n . . . . . λ' = — 1644'',3

61.

Semidiameter lunae geocentrica.

½D' = 993'',61 . . sin.½D' = 7.6827841 | 7.6814126 . . . . . ½D' = 990'',46

62.

Log pro reductione spatii ad tempus.

| | | |
|---|---|---|
| τ' = 16h.43' | | 17h.23' |
| μ = | 34. 18'',92 | . . . 34.19'',79 |
| log.h' = 0.2426647 | | 0.2424795 |

63.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn = 1939'',64 | | | fn = 1936,49 |
| mn = 1048, 16 | | | mn = 1644,26 |
| fm = 1663, 0 | . . . log.fm = 3.2127315 | 3.0098494 . . . . . | fm = 1022, 9 |
| p = 2605, 8 | | | p = 2591, 7 |
| SM = 973, 8 | | | SM = 3614, 6 |
| SM' = 28'22''7 | . . log.SM = 3.2311345 | 3.8005397 . . . . . | SM' = 1h.45'.17'',4 |

## 64.

### Tempus $\delta$ incorrectum.

| Initium. | Finis. |
|---|---|
| $T = 5^h.25'.58'',6$ | $6^h.42'41'',7$ |
| $SM' = -28.22,7$ | $1.45\ 17,4$ |
| $\delta = 4^h.57'.35'',9$ | $4^h.57'.24'',3$ |

## 65.

### Tempus $\delta$ correctum.

Ex init. $= 4^h.57'.35'',9 + 2,0780\, d\, fn + 1,1228\, d\lambda - 1,3424\, d\pi$
Ex fine $= 4.\ 57.\ 24,\ 3 - 3,3086\, d\, fn - 2,8093\, d\lambda + 1,5519\, d\pi$
Acq. V. . . . . $11'',6 + 5,3866\, d\, fn + 3,9321\, d\lambda - 2,8943\, d\pi$

## 66.

Eclipsis solis ab Astronomo celeb. Don Felipe Bauza Mantuae Carpetanorum observata in loco 3″ a Plaza-Major orientem versus distante. Ex litteris ad me datis.

Initium $= 4^h.27'.49'',0$
Finis $= 6.\ 09.\ 08,\ 5$ } temp. sol. vero.

## 67.

Diff. merid. Parisios inter et Madritum $= +24'.07'',3$ temporis.
Elevatio poli $= +40^o.24'.57'',8$

## 68.

### Tempus solare medium.

| Initium. | Finis. |
|---|---|
| $T' = 4^h.27'.49'',00$ | $6^h.09'.08'',50$ |
| $ae = +\ 7.\ 29$ | $+\ 8,\ 17$ |
| T Madr. $= 4.\ 27.\ 56,\ 29$ | $6.\ 09.\ 16,\ 67$ |
| $\delta = +24.\ 07,\ 30$ | $+24.\ 07,\ 30$ |
| $\tau' = 16^h.52'.03'',59$ | $18^h.33',23'',97$ |

## 69.

### Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 840.45'.30'',8$ | $840.49'.32'',7$ | |
| $A = 84.\ 15.\ 38,\ 2$ | $84.\ 19.\ 47,\ 9$ | |
| $L = 84.\ 58.\ 14,\ 3$ | $86.\ 0.\ 15,\ 9$ | |
| $\lambda = +\ 18.\ 04,\ 3$ | $+\ 12.\ 20,\ 9$ | |
| $\alpha = 151.\ 14.\ 42,\ 55$ | $176.\ 38.\ 57,\ 95$ | |

## 70.

### Correctio latitudinis.

$\beta = 400.14'.47'',4$ . . $tg.\beta = |9.9276055$

## 71.

### Calculi anguli $\varphi$.

$\varphi = 290.36'.38'',3$ . . $tg.\varphi = 9.7545969$ | $8.8391432$ . . . . . $\varphi = 30.56'.59'',4$

$\varphi + \varepsilon = 53.\ 04.\ 31,\ 3$ | $\varphi + \varepsilon = 27.24.52,\ 4$

## 72.

### Diff. parallaxium longit.

$L = 840.58'.14'',3$ | $L = 860.\ 0'.15'',0$

$L' = 84.\ 14.\ 37,\ 4$ . . $tg.L' = 0.9965150$ | $1.0775021$ . . . . . $L' = 85.\ 13.\ 04,\ 7$

$p = -\ 2616'',9$ | $p = -\ 2830,3$

## 73.

### Latitudo lunae apparens.

$\lambda' = -531'',2$ . . $tg.\lambda' = 7.4108509.n$ | $7.8125204.n$ . . . . . $\lambda' = 1339'',5$

## 74.

### Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 996''27$ . . $\sin.\frac{1}{2}D' = 7.6839490$ | $7.6818948$ . . . . . $\frac{1}{2}D' = 991'',57$

75.

Logarith. pro reduct. spatii ad tempus.

| Initium. | | Finis. |
|---|---|---|
| $\tau' = 16h.41'.$ | | $1^{-}h.32'.$ |
| $\mu = \ldots 34'.18'',89$ | | $\ldots 34'.19''96$ |
| $\log. h' = 0.2426723$ | | $0.2424446$ |

76.

Solutio trianguli SMN.

| | | | |
|---|---|---|---|
| Sn = 1942,30 | | | Sn = 1937,60 |
| mn = 531,16 | | | mn = 1339,46 |
| fm = 1868, 2 . . . | log. fm = 3.2714375 | 3.1467436 . . . . | fm = 1400,0 |
| p = 2616.9 | | | p = 2830,3 |
| SM = 748,7 | | | SM = 4230,3 |
| SM' = 21'.49'',1 . . | log. SM' = 3.1169801 | 3.8688158 . . . . . | SM' = 2h.03',12'',9 |

77.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 4^h.27'.56'',29$ | $6^h.09'.16'',67$ |
| $SM' = -21.49, 10$ | $-1.03.12, 90$ |
| $\delta = 4^h.06'.07'',19$ | $4^h.06'.03'',77$ |

77.

Tempus $\delta$ correctum.

Ex init. $= 4^h.06'.07'',19 + 1,8178\, d\, fn + 0,4971\, d\lambda - 0,9913\, d\pi$

Ex fine $= 4.06.03, 77 - 2,4186\, d\, fn - 1,6719\, d\lambda + 0,2504\, d\pi$

Acq. VI. . . . . $3'',42 + 4,2364\, d\, fn - 2,1690\, d\lambda + 1,2447\, d\pi$

79.

Eclipsis solis a celeb. Machinatore Meguié, et Don Pedro Giraldo Aranjuetii observatâ. Ex litteris ad me datis:

Initium $= 4.28'.33',6$
Finis $= 6.10.06.6$ } temp. sol. vero.

## 80.

Diff. merid. Parisios inter et Aranjuctium $= +23'.43''8$ temporis.
Elevatio poli $= +40^{\circ}.01'.30''$

## 81.

### Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| $T' =$ | $4^h.28'.33'',60$ | $6^h.10'.06'',60$ |
| $ae =$ | . . . . 7, 28 | . . 8, 18 |
| T Aranj. $=$ | $4^h.28'.40'',88$ | $6^h.10'.14'',78$ |
| $\delta =$ | $+23.48, 80$ | $+23.48, 80$ |
| $\tau =$ | $16^h.52'.29'',68$ | $18^h.34'.03'',58$ |

## 82.

### Elementa e tabulis desumpta.

| | | |
|---|---|---|
| $l =$ | $84^{\circ}.45'.31'',9$ | $84^{\circ}.49'.34'',2$ |
| $A =$ | 84. 15. 39, 3 | 84. 19. 49, 5 |
| $L =$ | 84. 58. 30, 2 | 86. 0. 41, 0 |
| $\lambda =$ | $+$ 18. 02, 8 | $+$ 12. 17, 8 |
| $\alpha =$ | 151.25.52, 5 | 176. 53. 31, 2 |

## 83.

### Correctio latitudinis.

$\beta = 39^{\circ}.51'.21'',1$ . . tg. $\beta = 9.9215937$

## 84.

### Calculi anguli $\varphi$

| | | | |
|---|---|---|---|
| $\varphi =$ | $29^{\circ}.28'.19'',9$ . . tg. $\varphi = 9.7580276$ | 9.8125517 . . . | $\varphi = -30.42'.57'',2$ |
| $\varphi + \varepsilon =$ | 53. 16. 12, 9 | | $\varphi + \varepsilon =$ 27. 10. 50, 2 |

## 85.

### Differentia parallaxium longit.

| | | | |
|---|---|---|---|
| L $=$ | $84^{\circ},58'.30''2$ | | L $= 86^{\circ}.0'.41'',0$ |
| L' $=$ | 84. 14. 35, 8 . . tg. L' $= 9,9964849$ | 1.0777836 . . . . . | L' $=$ 85. 13. 15, 8 |
| p $=$ | $-2634'',4$ | | p $= -2845'',2$ |

86.

Latitudo lunae apparens.

| Initium. | | Finis. |
|---|---|---|
| $\lambda'' = -515''4$ . . . | tg. $\lambda' = 7.3977379.n$ \| $7.8092596.n$ . . . . . | $\lambda' = -1329'',4$ |

87.

Semidiameter lunae geocentrica.

| | | |
|---|---|---|
| $\frac{1}{2}D' = 996'',6$ . . . . | tg. $\frac{1}{2}D' = 7.6841270$ \| $7.6818552$ . . . . . | $\frac{1}{2}D' = 991'',4$ |

88.

Logarith. pro reductione spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.21$ | $17^h.32$ |
| $\mu = 34'.18'',89$ | $34'.19'',96$ |
| $\log.h' = 0,2426723$ | $0,2424446$ |

89.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1942'',63$ | | | $fn = 1937'',43$ |
| $mn = 515,\ 36$ | | | $mn = 1329,\ 36$ |
| $fm = 1873,\ 0$ . . | $\log. fm = 3.2725432$ | $3.1490374$ . . . . . | $fm = 1409,\ 4$ |
| $p = 2634,\ 4$ | | | $p = 2845,\ 2$ |
| $SM = 761,\ 4$ | | | $SM = 4254,\ 6$ |
| $SM' = 22'.11'',3$ . . | $\log. SM' = 3.1242852$ | $3.8713033$ . . . . . | $SM' = 2^h.03'.55''4$ |

90.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 4^h.28'.41'',17$ | $6^h.10'15'',09$ |
| $SM' = -22.\ 11,\ 30$ | $-2.\ 03.55,\ 40$ |
| $\delta = 4^h.06'.29''87$ | $4^h.06'.20'',29$ |

## 91.

### Tempus ☾ correctum.

ex init. $= 4^h.06'.29'',87, = 1,8135\, d\,\mathfrak{n} + 0,4811\, d\lambda - 0,9948\, d\pi$
ex fine $= 4.\ 06.\ 20,\ 29 - 2,4023\, d\,\mathfrak{n} - 1,6483\, d\lambda + 0.2193\, d\pi$
Acq. VII . . . $9'',58 + 4,2158\, d\,\mathfrak{n} + 2,1294\, d\lambda - 1,2141\, d\pi$

## 92.

Eclipsis solis Pampelonae Navarrae observata. Ex litteris celeberrimi Caesaris Astronomi Bouvard ad me datis:

Initium $= 4^h.36'.07''$
Finis $= 6.\ 11.\ 31$ } temp. solari vero.

## 93.

Diff. merid. Parisios inter et Pampelonam $= +16'.08''$ in temp.
Elevatio poli $= +42^o.48'.0''$

## 94.

### Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| $T' =$ | $4^h.36'.07'',00$ | $6^h.11'.31'',00$ |
| $ae =$ | . . $+\ 07,\ 20$ | . . $+\ 08,\ 12$ |
| $T$ Pamp. $=$ | $4^h.36'.14'',20$ | $6^h.11'.39'',12$ |
| $\delta =$ | $+\ 16.\ 08,\ 00$ | $+\ 16.\ 08.\ 00$ |
| $T =$ | $16^h.52'.22'',2$ | $18\ .27'.47'',12$ |

## 95.

### Elementa e tabulis desumpta.

| | | |
|---|---|---|
| $l =$ | $840.45'.31'',6$ | . . $840.49'.19'',2$ |
| $A =$ | $84.\ 15.\ 39,\ 0$ | . . $84.\ 19.\ 34,\ 0$ |
| $L =$ | $84.\ 58.\ 25,\ 7$ | . . $85.\ 56.\ 49,\ 1$ |
| $\lambda =$ | $+\ 18.\ 03,\ 2$ | . . $+\ 12.\ 39,\ 2$ |
| $\alpha =$ | $153.\ 19.\ 12,\ 0$ | . . $177.\ 14.\ 20,\ 8$ |

## 96.

### Correctio latitudinis.

$\beta = 42^o.37'.43'',4$ . . $tg.\beta = 9.9640111$

97.

Calculi anguli $\varphi$.

| Initium. | | | Finis. |
|---|---|---|---|
| $\varphi = 260.\ 0'.11'',3$ | . . tg.$\varphi$=9.6882423 | 8.7187473 . . . . | $\varphi = 020.59'.43'',9$ |
| $\varphi + \iota = 49.\ 28.\ 04,\ 3$ | | | $\varphi + \iota = 26.\ 27.\ 36,\ 9$ |

98.

Differentia parallaxium longit.

| | | | |
|---|---|---|---|
| $L = 840.58'.25'',7$ | | | $L = 850.56'.49'',2$ |
| $L' = 84.\ 15.\ 39,\ 2$ | . . tg.$L'$=0.9978211 | 1.0747178 . . . . . | $L' = 85.\ 11.\ 14,\ 6$ |
| $p = -\ 2566'',5$ | | | $p = -\ 2734'',5$ |

99.

Latitudo lunae apparens.

$\lambda' = -689'',6$ . . . tg.$\lambda'$=7.5241720n | 7.8433672n . . . . . $\lambda' = -1438'',1$

100.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 995'',92$ . . sin.$\frac{1}{2}D'$=7.6837947 | 7.6819329 . . . . . $\frac{1}{2}D' = 991'',66$

101.

Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.41'$ | $17^h.32'$ |
| $\mu = 34.18''.89$ | . . 34. 19'',96 |
| log. $h' = 0,2426723$ | 0.2424446 |

102.

Solutio trianguli S m n.

| | | | |
|---|---|---|---|
| Sn = 1941,95 | | | Sn = 1937,69 |
| mn = 689,56 | | | mn = 1438,06 |
| Sm = 1815,4 | . . . log. Sm = 3.2589724 | 3,1135093 . . . . . | Sm = 1298,7 |
| p = 2766,4 | | | p = 2734,5 |
| SM = 751,1 | | | SM = 4033,2 |
| SM' = 21'.53'',3 | . . log. SM' = 3.1183701 | 3.3180944 . . . . . | SM' = $1^h$.57'.28'',4 |

103.

Tempus ♂ incorrectum.

| | |
|---|---|
| T = 4h.36′.14″,2 | 6h.11′.39″,12 |
| SM′ = — 21. 53, 3 | — 1. 57. 28, 40 |
| ♂ = 4h.14′.20″,9 | 4h.14′.10″,72 |

104.

Tempus ♂ correctum.

| | | | |
|---|---|---|---|
| Ex init. = 4h.14′.20″,9 | + 1,8704 d ſn | + 0,6642 d λ | — 1,0590 d π |
| ex fine = 4. 14. 10, 7 | — 2,6074 d ſn | — 1,9351 d λ | + 0,5619 d π |
| Aeq. VIII. . . . 10″,2 | + 4,4778 d ſn | + 2,5993 d λ | — 1,6209 d π |

105.

Eclipsis solis Kinderhookii, in provincia Albany, Americae septentrionalis a celeberr. Astronomo Ferrer observata. Ex litteris ad me datis:

Initium = 9h.49′.30″,5 } 25 Junii
Finis = 0. 33. 38, 5 } temp. solar. vero.

106.

Diff. merid. Parisios inter et Kinderhookium = + 5h.04′.43″,0
Elevatio poli = + 42o.03. 53, 0

107.

Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| T′ = | 9h.49′.30″,50 | 0h.33′.38″,50 |
| ae = | . . + 06, 23 | . . + 07, 68 |
| T Kinderkok. = | 9h.49′.36″,73 | 0h.33′.46″,18 |
| δ = | + 5.04. 43, 00 | 5. 04. 43, 00 |
| τ = | 14h.54′.19″,73, | 17h.38′.29 ,18 |

108.

Elementa e tabulis desumpta.

| Initium. | Finis. |
|---|---|
| $l = 840.40'.50'',0$ | $840.47'.21'',5$ |
| $A = 84.\ 10.48,\ 2$ | $84.\ 17.32,\ 4$ |
| $L = 83.\ 46.15,\ 5$ | $85.\ 26.38,\ 6$ |
| $\lambda = ..+24.40,\ 5$ | $+15.26,\ 8$ |
| $\pi' = ...60.14,\ 8$ | $..60.17,\ 0$ |
| $\frac{1}{2}D' = ..16.26,\ 59$ | $..16.27,\ 19$ |
| $a = 51.\ 34.59,\ 15$ | $92.\ 44.05,\ 1$ |

109.

Correctio latitudinis.

$\beta = 410.53'.37'',9$ . . $tg.\beta = 9.9528193$

110.

Calculi anguli $\varphi$.

$\varphi = 410.08'.05'',1$ .. $tg.\varphi = 9.9412254 \mid 0.0466859$ . . . . . $\varphi = 480.04'.25'',2$

$\varphi + \varepsilon = 64.\ 35.58,\ 1$ $\qquad$ $\varphi + \varepsilon = 71.\ 32'.18,\ 2$

111.

Differentia parallaxium longit.

$L = 830.46'15'',5$ $\qquad$ $L = 850.26'.38'',6$

$L' = 84.\ 08.46,\ 2$ . . $tg.L' = 0.9891681 \mid 1.0879573$ . . . . . $L' = 85.\ 19.52,\ 4$

$p = 1350''7$ $\qquad$ $p = -406'',2$

112.

Latitudo lunae apparens.

$\lambda' = +110'',9$ . . . . $tg.\lambda' = 6.7303874 \mid 7.0257563.n$ . . . . . $\lambda' = 218'',9$

113.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 1002''1$ . . . $\sin.\frac{1}{2}D' = 7.6864734 \mid 7.6871914$ . . . . . $\frac{1}{2}D' = 1003'',7$

114.

Logarith. pro reductione spatii ad tempus.

| Initium. | | Finis. |
|---|---|---|
| $\tau' = 15^h.42''$ | | $17^h.04'.$ |
| $\mu = \ldots 34.\ 17'',4$ | | $34.\ 19'',39$ |
| $\log. h' = 0.2429838$ | | $0.2425660$ |

115.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1948'',13$ | | | $fn = 1949'',73$ |
| $mn = 110,\ 86$ | | | $mn = 218,\ 86$ |
| $fm = 1944,\ 9 \ldots$ | $\log. fm = 3,2889137$ | $3,2872210 \ldots\ldots$ | $fm = 1937,\ 4$ |
| $p = 1350,\ 7$ | | | $p = 406,\ 2$ |
| $SM = 3295,6$ | $SM = p + fm$ | | $SM = 2343,\ 6$ |
| $SM' = 1^h.36'.01'',0 \ldots$ | $\log. SM' = 3,7605005$ | $3,6128673 \ldots\ldots$ | $SM' = 1^h.08'20'',8$ |

116.

Tempus ♂ incorrectum.

| | | |
|---|---|---|
| $T =$ | $9^h.49'.36'',73$ | $0^h.33'.46'',18$ |
| $SM =$ | $+1.\ 36.\ 01,\ 00$ | $-1.\ 08.\ 20.\ 80$ |
| ♂ 15la Jun. $=$ | $23^h.25'.37'',73$ | $23^h.25'.25'',38$ |

117.

Tempus ♂ correctum.

$$\text{Ex init.} = 23^h.25'.37'',73 + 1,7509\, d\, fn - 0,0996\, d\lambda + 0,2220\, d\pi$$
$$\text{ex fine} = 23.\ 25.\ 25,\ 38 - 1,7609\, d\, fn - 0,1977\, d\lambda - 0,614\, d\pi$$
$$\text{Acq. IX.} \ldots 12'',35 + 3,5118\, d\, fn + 0,0981\, d\lambda + 0,0367\, d\pi$$

118.

Eclipsis solis a Simeon de Witt in Fort-Orange, Provinciae Nevyork Americae septentrionalis observata, ex litteris ad me datis:

$$\left.\begin{array}{l} \text{Initium} = 9^h.50'.12'' \\ \text{Finis} = 0.\ 33.\ 08 \end{array}\right\} \text{temp. sol. vero.}$$

119.

Diff. merid. Parisios inter et Fort-Orange = + 5h.04'.29'',00
Elevatio poli = + 42°.30'.39''

120.

Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| T' = | 9h.50'.12'',09 | 0h.33'.08'',00 |
| ae = | . . + 06, 24 | . . + 07, 67 |
| T Fort-Orange = | 9h.50'.18'',24 | 0h.33'.15'',67 |
| δ = | +5. 04. 29, 00 | +5.04. 29, 00 |
| τ = | 14h.54'.47'',24 | 17h.37'.44'',67 |

121.

Elementa e tabulis desumpta.

| | | |
|---|---|---|
| l = | 84°.40'.51'',1 | 84°.47'.20'',0 |
| A = | 84. 10. 49, 3 | 84. 17. 30, 8 |
| L = | 83. 46. 32, 3 | 85. 26. 11, 4 |
| λ = | + 24. 42, 0 | + 15. 29, 3 |
| π' = | 60. 14, 8 | 60. 17, 0 |
| ½D' = | 16. 26, 59 | 16. 27, 19 |
| α = | 51. 46. 22, 9 | 92. 36. 25, 85 |

122.

Correctio latitudinis.

β = 42°.28'.22'',7 . . . tg. β = 9.9616412

123.

Calculi anguli φ.

| | | |
|---|---|---|
| φ = 47°.37'.59'',2 . . tg. φ = 9.9335414 | 0.0379091 . . . . . | φ = 47°.29'.50'',9 |
| φ + ε = 64. 05. 52, 2 | | φ + ε = 70. 57. 43, 9 |

124.

Diff. parallaxium longit.

| Initium. | | | Finis. |
|---|---|---|---|
| L = 83o.46'.32",3 | | | L = 85o.26'.11",4 |
| L' = 84. 08. 55, 3 | tg.L' = 0.9893568 | 1.0874523 | L' = 85. 19. 33, 0 |
| p = — 1343,0 | | | p = — 398",4 |

125.

Latitudo lunae apparens.

λ' = + 81",5 . . . . tg. λ' = 6.5964173 | 7.0854717.n . . . . . λ' = — 251",1

126.

Semidiameter lunae geocentrica.

½D' = 1001",3 . . sin. ½D' = 7.6861726 | 7.6871653 . . . . , . . . ½D' = 1003",7

427.

Logarith. pro reduction. spatii ad tempus.

| | |
|---|---|
| τ' = 15h. 42' | 17h. 04" |
| μ = 34. 17, 40 | 34'. 19",39 |
| log. h' = 0.2429838 | 0.2425660 |

128.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn = 1947",33 | | | fn = 1949",73 |
| mn = 81, 46 | | | mn = 251, 06 |
| fm = 1945, 6 . . . | log fm = 3,2890593 | 3,2863438 . . . . . | fm = 1933, 5 |
| p = 1303, 5 | | | p = 398, 4 |
| SM = 3289, 2 | | | SM = 2331, 9 |
| | SM = fm + p | | |
| SM' = 1h.35'.54",4 | log.SM' = 3,3760036 1 | 3,6102759 . . . . . | SM' = 1h.07'.56"4 |

129.

Tempus ♂ incorrectum.

| Initium. | | Finis. |
|---|---|---|
| T = | 9h.50′.18″,24 | 0h.33′.15″,67 |
| SM′ = | + 1. 35.54, 30 | − 1. 07. 56, 40 |
| ♂ 15.Jun. = | 23h.26′.12″,54 | 23h.25′.19″,27 |

130.

Tempus ♂ correctum.

Ex init. = 23h.26′.12″,54 + 1,7513 d fn + 0,0734 d λ − 0,2026 d π
Ex fine = 23. 25. 19, 27 − 1,7627 d fn − 0,2270 d λ + 0,3617 d π
Acq. X. . . . . 53″,27 + 3,5140 d fn + 0,1536 d λ − 0,1591 d π

131.

Eclipsis solis Amstelodami observata in specula astronomica Societatis Felix Meritis. Ex litteris ad me datis:

Initium = 5h.02′.07″
Finis = 6. 12. 31 } temp. sol. vero.

132.

Diff. merid. Parisios inter et Amstelodamum = + 10′.09″,5 in temp.
Elevatio poli = + 52°.22′.05″

133.

Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| T′ = | 5h.02′.07″,00 | 6h.12′.31″,00 |
| ae = | + 07. 27 | . . + 07, 89 |
| T Amstelod. = | 5. 02. 14, 27 | 6. 12. 38, 89 |
| δ = | − 10. 09 5 | − 10. 09, 50 |
| τ = | 16h.52′.04″,77 | 16h.02′,29″,39 |

134.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 84^{o}.45'.30'',9$ | $84^{o}.48'.18'',6$ | |
| $A = 84.\ 15.\ 38,\ 3$ | $84.\ 18.\ 31,\ 7$ | |
| $L = 84.\ 58.\ 15,\ 0$ | $85.\ 41.\ 20,\ 7$ | |
| $\lambda = +\ 18.\ 04,\ 3$ | $+\ 14.\ 05,\ 2$ | |
| $\alpha = 159.\ 49.\ 12,\ 35$ | $177.\ 28.\ 15,\ 05$ | |

135.

Correctio latitudinis.

$\beta = 52^{o}.12'.06'',3$ . . $tg.\beta = |0.1103454$

136.

Calculi anguli $\varphi$.

$\varphi = 140^{o}.58'.36'',8$ . . $tg.\varphi = 9.4274352$ | $8.5338920$ . . . . . $\varphi = 10.57'.29'',2$

$\varphi + \varepsilon = 38.\ 26.\ 29,\ 8$ | $\varphi + \varepsilon = 25.25.\ 22,\ 3$

137.

Diff. parallaxium longit.

$L = 84^{o}.58'.15'',0$ | $L = 85^{o}.41'.20'',7$

$L' = 84.\ 2\cancel{0}.\ 48,\ 7$ . . $tg.L' = 1.0044262$ | $1.0622758$ . . . . . $L' = 85.\ 02.\ 53,\ 5$

$p = -\ 2246'',3$ | $p = -\ 2307,2$

138.

Latitudo lunae apparens.

$\lambda' = -\ 1236'',8$ . . $tg.\lambda' = 7.7778796.n$ | $7.9263091.n$ . . . . $\lambda' = 1740'',7$

139.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 994''94$ . . $\sin.\frac{1}{2}D' = 7.6833691$ | $7.6822697$ . . . . $\frac{1}{2}D' = 992'',43$

140.

Logarith. pro reduct. spatii ad tempus.

| Initium. | Finis. |
|---|---|
| $\tau' = 16h.41'.$ | $17h.17'.$ |
| $\mu = \ldots 34'.18'',9$ | $\ldots 34'.19''66$ |
| $\log. h' = 0.2426647$ | $0.2425076$ |

141.

Solutio trianguli SMN.

| | | | |
|---|---|---|---|
| Sn = 1940,97 | | | Sn = 1938,46 |
| mn = 1236,76 | | | mn = 1740,66 |
| fm = 1495, 9 . . . | log. fm = 3.1749096 | 2.9309436 . . . . | fm = 853,0 |
| p = 2246,3 | | | p = 2307,2 |
| SM = 750,4 | | | SM = 3160,2 |
| SM' = 21'.52'',0 . . | log. SM' = 3.1179575 | 3.7422222 . . . . . | SM' = 1h.32'.03'',6 |

142.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 5^h.02'.14'',27$ | $6^h.12'.38'',89$ |
| $SM' = -21.52,00$ | $-1.32.03,60$ |
| $\delta = 4^h.40'.22'',27$ | $4^h.40'.35'',29$ |

143.

Tempus $\delta$ correctum.

Ex init. $= 4^h.40'.22'',27 + 2,2686\, d\, fn + 1,4455\, d\lambda - 1,3959\, d\pi$
Ex fine $= 4.40.35,29 - 3,9721\, d\, fn - 3,5668\, d\lambda + 2,5128\, d\pi$
Acq. XI. . . . . $13'',02 + 6,2407\, d\, fn - 5,0123\, d\lambda + 3,9087\, d\pi$

144.

Eclipsis solis Trajecti ad Rhenum a celeberr. van Beek Calkoen in specula academica observata. Ex litteris ab ipso ad me datis:

Initium = 5 .03'.26''
Finis = 6. 14. 06 } temp. sol. vero.

145.

Diff. merid. Parisios inter et Trajectum ad Rhenum $= -11'.06''6$ in temp.
Elevatio poli $= +52^{\circ}.05'.30''$

146.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 84^{\circ}.45'.31'',5$ | $84^{\circ}.48'.20'',1$ | |
| $A = 84.\ 15.\ 38,\ 9$ | $84.\ 18.\ 32,\ 9$ | |
| $L = 84.\ 58.\ 23,\ 9$ | $85.\ 41.\ 39,\ 0$ | |
| $\lambda = +\ 18.\ 03,\ 4$ | $+\ 14.\ 03,\ 4$ | |
| $\alpha = 160.07.08,\ 9$ | $177.\ 50.\ 02,\ 9$ | |

147.

Correctio latitudinis.

$\beta = 51^{\circ}.55'.29'',8$ . . $\text{tg.}\beta = 0.1060183$

148.

Calculi anguli $\varphi$

$\varphi = 14^{\circ}.55'.02'',9$ . . $\text{tg.}\varphi = 9.4255446$ | $8.4713866$ . . . $\varphi = -\ 10.41'.44'',9$
$\varphi + \varepsilon = 38.\ 22.\ 55,\ 9$ | $\varphi + \varepsilon = \ 25.\ 09.\ 37,\ 9$

149.

Differentia parallaxium longit.

$L = 84^{\circ}.58'.23''9$ | $L = 85^{\circ}.41'.39'',0$
$L' = 84.\ 20.\ 41,\ 9$ . . $\text{tg.}L' = 1,0042763$ | $1.0624074$ . . . . . $L' = 85.\ 02.\ 58.\ 9$
$p = -\ 2622'',0$ | $p = -\ 2320'',1$

150.

Latitudo lunae apparens.

$\lambda' = -1230'',1$ . . $\text{tg.}\lambda' = 7.7755313.n$ | $7.9255918.n$ . . . . . $\lambda' = -173'',9$

151.

Semidiameter lunae geocentrica.

| Initium. | | Finis. |
|---|---|---|
| $\frac{1}{2}D' =$ 994,88 . . sin. $\frac{1}{2}D' = 7.6833415$ | 7.6822306 . . . . . | $\frac{1}{2}D' =$ 992″,34 |

252.

Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.41'$ | $17^h.17'$ |
| $\mu =$ 31.18″,9 | . . 34.19″66 |
| log. $h' =$ 0.2426647 | 0.2425076 |

153.

Solutio trianguli S m n.

| | | | |
|---|---|---|---|
| f n = 1940″,91 | | | f n = 1938,37 |
| m n = 1230, 06 | | | m n = 1737,86 |
| f m = 1501, 3 . . . | log. f m = 3.1764850 | 2.9337693 . . . . . | f m = 858,55 |
| p = 2262, 0 | | | p = 2320,10 |
| SM = 760, 7 | | | SM = 3178,65 |
| SM′ = 22′.10″,0 . . | log. SM′ = 3.1238781 | 3.7447504 . . . . . | SM′ = $1^h$.32′.35″,8 |

154.

Tempus ♂ incorrectum.

| | |
|---|---|
| T = 5h.03′.26″,0 | 6h.14′.06″,0 |
| SM = — 22. 10 | —1. 32. 35, 8 |
| ♂ = 4h.41′.14″,0 | 4h.41′.30″,2 |

156.

Tempus ♂ correctum.

Ex init. $= 4^h.41'.14'',0 + 2,2604\, d\, f n + 1,4325\, d\, \lambda - 1,3945\, d\, \pi$

ex fine $= 4.\ 41.\ 30,\ 2 - 3,9461\, d\, f n - 3,5379\, d\, \lambda + 2,4743\, d\, \pi$

Aeq. XII. . . . . $16'',\ 2 - 6,2065\, d\, f n - 4,9722\, d\, \lambda + 3.8688\, d\, \pi$

156.

Eclipsis solis Turigii observata a celeberr. Feer, ex litteris ad me datis:

Initium = 5h.22′.06″,5 } temp. sol. medio.
Finis = 6. 36. 24, 2 }

55.

Diff. merid. Parisios inter et Turigium = — 24o.5o′ temp.
Elevatio Poli = + 47o.22′.o″

158.

Elementa e tabulis desumpta.

| Initium. | Finis. |
|---|---|
| l = 84o.45′.43″,4 | 84o.48′.4o″6 |
| A = 84. 15. 51, 2 | 84. 18. 54, 1 |
| L = 85. 01. 25, 7 | 85. 46. 53, 9 |
| λ = + 17. 46, 6 | + 13. 34, 3 |
| α = 164.47. 28, 7 | 183. 24. 57, 1 |

159.

Correctio latitudinis.

β = 47o.11′.43″,4 . . tg. β = | c.o333143

160.

Calculi anguli φ.

φ = 13o.39′.22″,4 .. tg.φ = 9.3855430 | 8.7418060.n . . . φ = — 3o.09′.3o″,8
φ + ε = 37. 07. 15, 4 | φ + ε = 20. 18. 22, 2

161.

Differentia parallaxium longit.

L = 85o.01′.25″,7 | L = 85o.46′.53″,9
L′ = 84. 19. 29. 5 . . tg.L′ = 1.0027226 | 1.0652842 . . . . . L′ = 85. 04. 55, 9
p = — 2516″2 | p = — 2518,0

162.

Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -1112'',9$ . . | $tg.\lambda' = 7.7320371.n$ | $7.9105438.n$ . . . . . | $\lambda' = -1678'',8$ |

163.

Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 993'',85$ . . | $\sin.\frac{1}{2}D' = 7.6828916$ | $7.6815936$ . . . . . | $\frac{1}{2}D' = 990'',89$ |

164.

Log. pro reductione spatii ad tempus.

| | | |
|---|---|---|
| $\tau' = 16^h.45'$ | $17^h.24'$ |
| $\mu = 34.18'',98$ | . . . $34.19'',82$ |
| $\log.h' = 0.2426495$ | $0.2424749$ |

165.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1939'',88$ | | | $fn = 1936,92$ |
| $mn = 1112,86$ | | | $mn = 1678,67$ |
| $fm = 1588,9$ | . . . $\log.fm = 3.2011029$ | $2.9850395$ . . . . . | $fm = 966,1$ |
| $p = 2516,2$ | | | $p = 2518,0$ |
| $SM = 927,3$ | | | $SM = 3484,1$ |
| $SM' = 27'.01''3$ . . | $\log.SM' = 3.2098698$ | $3.7845655$ . . . . . | $SM' = 1^h.41'.29'',2$ |

166.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T' = 5^h.22'.06'',5$ | $6^h.36'.24'',2$ |
| $SM' = -27.01,3$ | $-1.41.29,2$ |
| $\delta = 5^h.55'.05'',2$ | $4^h.54'.55'',0$ |

167.

Tempus ☾ correctum.

Ex init. $= 4^h.55'.05'',2 + 2,1346\, d\, fn + 1.2245\, d\, \lambda - 1,3746\, d\, \pi$
ex fine $= 4.\ 54.\ 55,\ 0 - 3,5038\, d\, fn - 3,0368\, d\, \lambda + 1.8290\, d\, \pi$
Aeq. XIII. . . . $10,\ 2 + 5,6384\, d\, fn + 4,2613\, d\, \lambda - 1,2924\, d\, \pi$

168.

Eclipsis solis ab Astronomo celeb. Kyene in specula astronomica Ochsenhusii Algoviae observata.

Initium $= 5^h.28'.24''$
Finis $= 6.\ 39.\ 24$ } temp. sol. med.

169.

Diff. merid. Parisios inter et Ochsenhusium $= -30'.31'',7$ temp.
Elevatio poli $= +48^o.03'.52'',5$

170.

Elementa e tabulis desumpta.

| | |
|---|---|
| $l = 84^o.45'44.''.8$ | $84^o.48'.34'',1$ |
| $A = 84.\ 15.\ 52,\ 6$ | $84.\ 18.\ 47,\ 4$ |
| $L = 85.\ 01.\ 47,\ 6$ | $85.\ 45.\ 15,\ 0$ |
| $\lambda = +17.\ 44,\ 5$ | $+13.\ 43,\ 4$ |
| $\alpha = 166.21.\ 52,\ 6$ | $184.\ 09.\ 47,\ 4$ |

171.

Correctio latitudinis.

$\beta = 47^o.53'.37'',5$ . . . $tg.\beta = 0,0439437$

172.

Calculi anguli $\varphi$.

$\varphi = 120.01'38'',6$ . . $tg.\varphi = 9,3284944$ | $8,8169756.n$ . . . . $\varphi = -3^o.45'.13'',8$
$\varphi + \varepsilon = 35.\ 29.\ 31,\ 6$ | $\varphi + \varepsilon = 19.\ 42.\ 39,\ 2$

173.

Differentia parallaxium longit.

| Initium. | | | Finis. |
|---|---|---|---|
| L = 85°.01'.47'',6 | | | L = 85°.45'.15'',0 |
| L' = 84. 20. 11, 5 | . . tg. L' = 1.0036233 | 1.0637248 . . . . . | L' = 85. 03. 52, 6 |
| p = — 2496'',1 | | | p = — 2482'',4 |

174.

Latitudo lunae apparens.

λ' = — 1171'',3 . . . tg. λ' = 7.7542726.n | 7.9182154.n . . . . . λ' = — 1708'',5

175.

Semidiameter lunae geocentrica.

½D' = 993'',62 . . sin. ½D' = 7.6827908 | 7.6815637 . . . . . ½D' = 990'',8

176.

Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| τ' = 16'.44' | 17'.20' |
| μ = 34.18''.89 | . . 34. 19'',73 |
| log. h' = 0,2426693 | 0.2424924 |

177.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn = 1939.65 | | | fn = 1936,83 |
| mn = 1171,26 | | | mn = 1708,46 |
| fm = 1546.1 | . . . log. fm = 3.1892346 | 3,9601856 . . . . . | fm = 912,4 |
| p = 2496.1 | | | p = 2482.4 |
| SM = 050,0 | | | SM = 3394.8 |
| SM' = ,72.41'' | | | SM' = 1h.38'.53'',4 |

178.

Tempus δ incorrectum.

| | |
|---|---|
| T = 5h.28'.24'',0 | 6h.39'.24''.0 |
| SM = — 27. 41, 0 | — 1. 38. 53, 4 |
| δ = 5h. 0'.43'',0 | 5h. 0'.30'',6 |

179.

Tempus ☌ correctum.

Ex init. $= 5h.0'.43'',0 + 2,1936\, d\, fn - 1,3246\, d\, \lambda + 1,4295\, d\, \pi$
Ex fine $= 5.\ 0.\ 30,\ 6 - 3,7102\, d\, fn - 3,2727\, d\, \lambda - 2,1005\, d\, \pi$
Aeq. XIV. . . $12'',4 + 5,9038\, d\, fn + 4,5973\, d\, \lambda + 3,5300\, d\, \pi$

180.

Eclipsis solis a celeberr. Rüdiger in specula astronomica academica observata, ex litteris ab ipso ad me datis:

Initium $= 5h.38'.30'',6$ } temp. sol. vero.
Finis $= 6.\ 39.\ 30,\ 9$ }

181.

Diff. merid. Parisios inter et Lipsiam $= -\ 40'.08'',0$ temp.
Elevatio poli $= +51^{0}.20'.12''4$

182.

Elementa e tabulis desumpta.

| Initium. | Finis. |
|---|---|
| $l = 84^{0}.45'.46'',0$ | $84^{0}.48'.11'',7$ |
| $A = 84.\ 15.\ 53,\ 8$ | $84.\ 18.\ 24.\ 1$ |
| $L = 85.\ 02.\ 06.\ 7$ | $85.\ 39.\ 26,\ 5$ |
| $\lambda = +17.\ 42,\ 8$ | $+14.\ 15,\ 6$ |
| $\alpha = 168.53.\ 32,\ 8$ | $148.11.\ 07,\ 6$ |

183.

Correctio latitudinis.

$\beta = 51^{0}.10'.08'',5$ . . . $tg.\beta = 0.0942524$

184.

Calculi anguli $\varphi$.

$\varphi = 8^{0}.48'.52'',1$ . . $tg.\varphi = 9.1905200$ | $8.7689305.n$ . . . . $\varphi = 03^{0}.21'.43'',3$
$\varphi + \varepsilon = 32.\ 16.\ 45,\ 1$ | $\varphi + \varepsilon = 20.\ 06.\ 09,\ 7$

185.

Differentia parallaxium longit.

| Initium. | | | Finis. |
|---|---|---|---|
| L = 850.02'.06'',7 | | | L = 850.39'.26'',5 |
| L' = 84. 22. 48, 9 | tg. L' = 1.0070086 | 1.0588701 | L' = 85. 0. 33, 8 |
| p = — 2357'',8 | | | p = — 2332'',7 |

186.

Latitudo lunae apparens.

λ' = — 1350'',1 . . . tg. λ = 7,8159738.n | 7,9398675.n . . . . . λ' = — 1795'',9

187.

Semidiameter lunae geocentrica.

½D' = 993'',7 . . . . sin. ½ = 7,6828634 | 7,6817164 . . . . . ½D' = 991'',1

188.

Logarith. pro reductione spatii ad tempus.

| | |
|---|---|
| τ' = 16h.44'' | 17h.14'. |
| μ = 34'. 18'',97 | 34. 19'',60 |
| log. h' = 0.2426571 | 0.2425205 |

189.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn = 1939'',73 | | | fn = 1937'',13 |
| mn = 1355, 06 | | | mn = 1795, 86 |
| fm = 1392, 8 . . . | log. fm = 3,1438886 | 3,8610533 . . . . . | fm = 726, 2 |
| p = 2357, 8 | | | p = 2332, 7 |
| SM = 965, 0 | | | SM = 3058, 9 |
| SM' = 28'.07'',2 . . . | log. SM' = 3,2271844 | 3,7280858 . . . . . | SM' = 1h.29'06'',7 |

190.

Tempus ☌ incorrectum.

| | |
|---|---|
| T = 5h.38′.30″,6 | 6h.39′.30″,9 |
| SM′ = — 28. 07, 2 | — 1. 29. 06, 7 |
| ☌ = 5h.10′.23″,4 | 5h.10′.24″,2 |

191.

Tempus ☌ correctum.

ex init. = 5h.10′.23″,4, = 2,4350 d∫n + 1,6948 d λ — 1,6043 d π
ex fine = 5. 10. 24, 2 — 4,6625 d∫n — 4,3225 d λ + 3,3095 d π
Aeq. XV . . . 0″,8 + 7,0975 d∫n + 6,0173 d λ — 4,9138 d π

192.

Eclipsis solis Vratislaviae a celeberr. Jungnitz in specula astronomica observata, ex litteris ab ipso ad me datis:

Initium = 6h. 0′. 4″,0
Finis = 6. 54. 15, 0 } temp. solari vero.

193.

Diff. merid. Parisios inter et Vratislaviam = — 58′.48″,3 temp.
Elevatio poli = + 51°.06′.50″

194.

Tempus solare medium.

| Initium. | Finis. |
|---|---|
| T′ = 6h. 0′.04″,00 | 6h.54′.15″,00 |
| ae = . . + 07, 35 | . . + 07, 83 |
| T Vratisl. = 6h. 0′.11″,35 | 6h.54′.22″,83 |
| ☌ = — 58. 48, 3 | — 58. 48, 3 |
| T = 17h.01′.23″,05 | 17h.55′.34″,53 |

195.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 84^{\circ}.45'.53'',1$ | . . | $84^{\circ}.48'.02'',5$ |
| $A = 84.\ 16.\ 01,\ 2$ | . . | $84.\ 18.\ 14,\ 7$ |
| $L = 85.\ 03.\ 56,\ 4$ | . . | $85.\ 37.\ 06,\ 7$ |
| $\lambda = +\ 17.\ 32,\ 6$ | . . | $+\ 14.\ 28,\ 5$ |
| $\alpha = 174.\ 18.\ 51,\ 45$ | . . | $187.\ 53.\ 57,\ 15$ |

196.

Correctio latitudinis.

$\beta = 500.56'.45'',1$ . . . . . $tg.\beta = 0.0907920$

197.

Calculi anguli $\varphi$.

| | | | |
|---|---|---|---|
| $\varphi = 040.35'.44'',3$ . . | $tg.\varphi = 8.9051581$ | $9.0472915.n$ . . . . | $\varphi = 060.21'.44'',7$ |
| $\varphi + i = 28.\ 03.\ 37,\ 3$ | | | $\varphi + i = 17.\ 06.\ 08,\ 3$ |

198.

Differentia parallaxium longit.

| | | | |
|---|---|---|---|
| $L = 850.03'.56'',4$ | | | $L = 850.37'.06'',7$ |
| $L' = 84.\ 24.\ 16,\ 3$ . . | $tg.L' = 1.0089032.n$ | $1.0558778$ . . . . . | $L' = 84.\ 58.\ 30,\ 2$ |
| $p = -2380''1$ | | | $p = -2316'',5$ |

199.

Latitudo lunae apparens.

$\lambda' = -1435'',3$ . . . $tg.\lambda' = 7.8425294.n$ | $7.9466215.n$ . . . . . $\lambda' = -1832'',4$

200.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 992''3$ . . . $sin.\frac{1}{2}D' = 7.6822496$ | $7.6814220$ . . . . . $\frac{1}{2}D' = 990'',5$

201.

Logarith. pro reductione spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.45$ | $17^h.13$ |
| $\mu = 34'.18'',98$ | $34'.19'',58$ |
| $\log.h' = 0,2426503$ | $0,2425356$ |

202.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1938'',33$ | | | $fn = 1936'',53$ |
| $mn = 1435,\ 26$ | | | $mn = 1832,\ 36$ |
| $fm = 1302,\ 7$ . . | $\log.fm = 3.1148647$ | $2.7969781$ . . . . . | $fm = 626,\ 6$ |
| $p = 2380,\ 1$ | | | $p = 2316,\ 5$ |
| $SM = 1077,\ 4$ | | | $SM = 2943,\ 1$ |
| $SM' = 31'.23'',7$ . . | $\log.SM' = 3.2750273$ | $3.7113406$ . . . . . | $SM' = 1^h.25'.44''5$ |

203.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 6^h.\ 0'.11'',34$ | $6^h.54'22'',83$ |
| $SM' = -\ 31.\ 23,\ 70$ | $-\ 1.\ 25.44,\ 50$ |
| $\delta = 5^h.28'.47''64$ | $5^h.28'.38'',33$ |

204.

Tempus $\delta$ correctum.

$$\begin{array}{l}
\text{Ex init.} = 5^h.28'.47'',64 + 2,6014\,d\,fn + 1,9262\,d\,\lambda - 1,6666\,d\,\pi \\
\text{ex fine} = 5.\ 28.\ 38,\ 33 - 5,4023\,d\,fn - 5,1117\,d\,\lambda + 4,1674\,d\,\pi \\
\hline
\text{Aeq. XVI.} \ldots\ 9'',31 + 8,0037\,d\,fn + 7,0379\,d\,\lambda - 5,8340\,d\,\pi
\end{array}$$

205.

Eclipsis solis ab Astronomo celeberr. Taucher in specula Budae Hungariae observata, ex litteris ab Illust. Triesnecker ad me datis:

$$\left.\begin{array}{r}\text{Initium} = 6^h.10'.12'' \\ \text{Finis} = 7.\ 09.\ 22\end{array}\right\}\ \text{temp. solar. vero.}$$

206.

Diff. merid. Parisios inter et Budam = — 1h.06′.47″ in temp.
Elevatio poli = +47°.29′.44″

207.

Tempus solare medium.

| Initium. | Finis. |
|---|---|
| T′ = 6h.10′.12″,0 | 7h.09′.22″,00 |
| ae = . . 07, 37 | . . 07, 89 |
| T Budae = 6h.10′.19″,37 | 7h.09′.29″,89 |
| δ = — 1.06. 47, 0 | — 1.06. 47, 0 |
| τ = 17h.03′.32″,37 | 18h.02′.42″,89 |

208.

Elementa e tabulis desumpta.

| | |
|---|---|
| l = 84°.45′.58″,3 | 84°.48′.19″,2 |
| A = 84. 16. 06, 6 | 84. 18. 32, 3 |
| L = 85. 05. 15, 7 | 85. 41. 28, 9 |
| λ = . . + 17. 25, 4 | + 14. 04, 4 |
| α = 176. 50. 57, 15 | . . 191. 41. 0,65 |

209.

Correctio latitudinis.

β = 47°.19′.27″,6 . . tg. β = 0.0352753

210.

Calculi anguli φ.

| | | |
|---|---|---|
| φ = 20.54′.03″,8 . . tg. φ = 8.7048050 | 9.2711614.n . . . . | φ = 100.34′.32″,8 |
| φ + 1 = 26. 21. 56, 8 | | φ + 1 = 12. 53′.20, 2 |

211.

Diff. parallaxium longit.

| Initium. | | | Finis. |
|---|---|---|---|
| L = 85°.05'.15",7 | | | L = 85°.41'.28",9 |
| L' = 84. 22. 50, 0 | tg.L' = 1,0070353 | 1,0592591 | L' = 85. 0. 49, 9 |
| p = −2545,7 | | | p = −2439",0 |

212.

Latitudo lunae apparens.

λ' = −1340",4 . . tg. λ' = 7,8128100.n | 7,9385169.n . . . . . λ' = −1790",3

213.

Semidiameter lunae geocentrica.

½D' = 991",59 . . sin. ½D' = 7,6819160 | 7,6809219 . . . . . ½D' = 989",38

215.

Logarith. pro reduction. spatii ad tempus.

| | |
|---|---|
| τ' = 16h. 47' | 17h. 17" |
| μ = 34. 19. 03 | 34'. 19",67 |
| log. h' = 0.2426404 | 0.2425053 |

216.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| fn = 1937",62 | | | fn = 1935",38 |
| mn = 1340, 36 | | | mn = 1790, 26 |
| fm = 1399, 2 . . . | log fm = 3,1458848 | 2,8663143 . . . . . | fm = 735, 0 |
| p = 2545. 7 | | | p = 2439. 0 |
| SM = 1146, 5 | | | SM = 3174. 0 |
| SM' = 33'.24",5 . . | log. SM' = 3,3020145 | 3,7441122 . . . . . | SM' = 1h.32'.27"7 |

216.

Tempus $\delta$ incorrectum.

| | Initium. | Finis. |
|---|---|---|
| T = | 6h.10′.19″,37 | 7h.09′.29″,89 |
| SM′ = | — 33. 24, 50 | —1. 32. 27, 70 |
| $\delta$ = | 5h.36′.54″,87 | 5h.37′.02″,19 |

217.

Tempus $\delta$ correctum.

Ex init. = 5h.36′.54″,87 + 2,4211 d fn + 1,6748 d λ — 1,6780 d π
Ex fine — 5. 37. 02, 19 — 4,6020 d fn — 4,2572 d λ + 3,3139 d π
Acq. XVII. . . 7″,32 + 7,0231 d fn + 5,9320 d λ — 4,9919 d π

218.

Eclipsis solis a celeberr. Francisco Rodeseh Cracoviae observata, ex litteris ad me datis:

Initium = 6h.14′.06″,4
Finis = 7. 05. 18, 4 } temp. sol. vero.

219.

Diff. merid. Parisios inter et Cracoviam = + 10′.10′,26″ temp.
Elevatio poli = + 500.03′.37″,5

220.

Elementa e tabulis desumpta.

| | Initium. | Finis. |
|---|---|---|
| l = | 840.45′.58″,7 | 840.48′. 0′,8 |
| A = | 84. 15. 06, 8 | 84. 18. 13, 0 |
| L = | 85. 05. 20, 6 | 85. 36 41, 0 |
| λ = | + 17. 24. 9 | + 14. 31. 1 |
| π = | 177. 47. 42, 8 | 190. 37. 49, 0 |

221.

Correctio latitudinis.

| Initium. | | Finis. |
|---|---|---|
| $\beta = 490.53'.28'',3$ . . tg. $\beta = 0.0745121$ | | |

222.

Calculi anguli $\varphi$.

| | | |
|---|---|---|
| $\varphi = 10.51'.21'',8$ . . tg. $\varphi = 8.5106211$ | 9.1914154.n . . . . | $\varphi = -80.49'.56'',6$ |
| $\varphi + 1 = 25.\ 19.\ 14,\ 8$ | | $\varphi + 1 = 14.\ 37.\ 56,\ 4$ |

223.

Diff. parallaxium longit.

| | | |
|---|---|---|
| $L = 850.05'.20'',6$ | | $L = 850.36'.41'',0$ |
| $L' = 84.\ 24.\ 54,\ 1$ . . tg. $L' = 1.0097238$ | 1.0547286 . . . . . | $L' = 84.\ 57.\ 42,\ \bar{5}$ |
| $p = -2426'',5$ | | $p = -2338'',5$ |

224.

Latitudo lunae apparens.

| | | |
|---|---|---|
| $\lambda' = -1457'',4$ . . tg. $\lambda' = 7.8491304.n$ | 7.9495401.n . . . . | $\lambda' = 1836'',3$ |

225.

Semidiameter lunae geocentrica.

| | | |
|---|---|---|
| $\frac{1}{2}D' = 991''68$ . . sin. $\frac{1}{2}D' = 7.6819466$ | 7.6811554 . . . . | $\frac{1}{2}D' = 989'',9$ |

226.

Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| $\tau' - 16^h.48'.$ | $17^h.13'.$ |
| $\mu = \ldots 34'.19'',05$ | $\ldots 34.19''58$ |
| $\log. h' = 0.2426343$ | $0.2425243$ |

227.

Solutio trianguli SMN.

| Initium. | | | Finis. |
|---|---|---|---|
| fn = 1937,71 | | | fn = 1935,93 |
| mn = 1157,4 | | | mn = 1836,3 |
| fm = 1276, 9 . . . | log. fm = 3.1061878 | 2.7874941 . . . . . | fm = 613,05 |
| p = 2426.3 | | | p = 2338.5 |
| SM = 1149,4 | | | SM = 2951,55 |
| SM′ = 33′.29″,6 . . | log. SM′ = 3.3031055 | 3.7125743 . . . . . | SM′ = 1ʰ.25′.59″,1 |

228.

Tempus ☌ incorrectum.

| | |
|---|---|
| T′ = 6ʰ.14′.06″,4 | 7ʰ.05′.18″,4 |
| SM′ = — 33. 29, 6 | — 1. 25. 59, 1 |
| ☌ = 5ʰ.40′.36″,8 | 5ʰ.39′.19″,3 |

229.

Tempus ☌ correctum.

Ex init. = 5ʰ.40′.36″,8 + 2,6519 d fn + 1,9940 d λ — 1,8318 d π

230.

Eclipsis solis a celeberr. Dursaek Agriae Hungariae observata, ex litteris ad me datis:

Initium = 6ʰ.16′.30″4
Finis = 7. 13. 59, 8 } temp. sol. vero.

231.

Diff. merid. Parisios inter et Agriam = — 1ʰ.12′,10″
Elevatio poli = + 47°.53′.54″

232.

Tempus solare medium.

| Initium. | | Finis. |
|---|---|---|
| T′ = | 6h.16′.30″,40 | 7h.13′.59″,80 |
| ae = | . . . . 07, 38 | . . . 07, 89 |
| T Agriae = | 6. 16. 37, 38 | 7. 14. 07, 69 |
| δ = | — 1. 12. 10 | — 1. 12. 10 |
| τ = | 17h.04′.27″,38 | 18h.01′.57″,69 |

233.

Elementa e tabulis desumpta.

| | | |
|---|---|---|
| l = | 84°.45′.58″.9 | 84°.28′.17″,4 |
| A = | 84. 16. 08, 8 | 84. 18. 30, 5 |
| L = | 85. 05. 49, 3 | 85. 41. 01, 3 |
| λ = | + 17. 22, 3 | + 14. 07, 0 |
| α = | 178.25.29, 5 | 192. 50. 25, 85 |

234.

Correctio latitudinis.

$\beta = 47°.43'.38'',5$ . . tg. $\beta = 0.0414085$

235.

Calculi anguli φ

| | | | |
|---|---|---|---|
| φ = 10.25′.53″,1 . . tg.φ = 8.3977329 | 9.3054093.n | . . | φ = — 110.25′.17″,6 |
| φ + ε = 24. 53. 46, 1 | | | φ + ε — 12. 02. 35, 4 |

236.

Differentia parallaxium longit.

| | | | |
|---|---|---|---|
| L = 85°.05′.49″3 | | | L = 85°.41′.01″.3 |
| L′ = 84. 23. 45, 2 . . tg.L′ = 1,0082285 | 1.0593554 | . . . . . | L′ — 85. 0. 53. 8 |
| p = — 2524″,1 | | | p = — 2407″,5 |

237.

Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -1385'',9$ . . | tg. $\lambda' = 7.8273191.n$ | $7.9458487.n$ . . . . . | $\lambda' = -1820,8$ |

238.

Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 991,36$ . . | sin. $\frac{1}{2}D' = 7.6818019$ | $7.6808567$ . . . . . | $\frac{1}{2}D' = 989'',12$ |

239.

Logarith. pro reduct. spatii ad tempus.

| | | |
|---|---|---|
| $\tau' = 16^h.47'$ | $17^h.17'$ | |
| $\mu = 31.19'',03$ | . . $34.19''67$ | |
| log. $h' = 0.2426404$ | $0.2425053$ | |

240.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1937'',39$ | | | $fn = 1935,24$ |
| $mn = 1385,86$ | | | $mn = 1820,76$ |
| $fm = 1353,8$ . . . | log. $fm = 3.1315661$ | $2.8167276$ . . . . . | $fm = 655,7$ |
| $p = 2524,1$ | | | $p = 2107,5$ |
| $SM = 1170,3$ | | | $SM = 3563,2$ |
| $SM' = 34'.06'',1$ . . | log. $SM' = 3.3109376$ | $3.7286807$ . . . . . | $SM' = 1^h.29'.14'',0$ |

241.

Tempus ☌ incorrectum.

| | |
|---|---|
| $T = 6^h.16'.37'',38$ | $7^h.14'.07'',69$ |
| $SM = -34.06,10$ | $-1.29.14,00$ |
| ☌ $= 5^h.42.31'',28$ | $5^h.44'.53'',69$ |

242.

Tempus ☌ correctum.

Ex init. $= 5^h.42'.31'',28 + 2,5020\,dfn + 1,7897\,d\lambda - 1,7424\,d\pi$

243.

Eclipsis solis a celeberr. Lindener Suidnitii Silesiae observata, ex litteris ab illustr. Bode ad me datis:

Initium $= 5^h.57'.51''.9$
Finis $= 6.\ 56.\ 36,\ 6$ } temp. sol. medio.

244.

Diff. merid. Parisios inter et Suidnitium $= -56'.30'',9$ temp.
Elevatio Poli $= +50^o.50'.38'',7$

245.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 84^o.45'.53'',1$ | | $84^o.48'.13''2$ |
| $A = 84.\ 16.\ 01,\ 2$ | | $84.\ 18.\ 25,\ 8$ |
| $L = 85.\ 03.\ 55,\ 3$ | | $85.\ 39.\ 52,\ 8$ |
| $\lambda = +17.\ 32,\ 8$ | | $+14.\ 13,\ 3$ |
| $\varkappa = 173.43.\ 59,\ 7$ | | $188.\ 27.\ 34,\ 8$ |

246.

Correctio latitudinis.

$\beta = 50^o.40'.32'',6$ . . tg. $\beta = 0.0866111$

247.

Calculi anguli $\varphi$.

$\varphi = 50.06'.35'',6$ .. tg. $\varphi = 8.9514425$ | $9.0810406.n$ . . . $\varphi = -60.52'.18'',6$
$\varphi + \varepsilon = 28.\ 34.\ 28,\ 6$ | $\varphi + \varepsilon = 16.\ 35.\ 34,\ 4$

248.

Differentia parallaxium longit.

$L = 850.03'.55'',3$
$L' = 84.\ 24.\ 52,\ 0$ . . tg. $L' = 1.0086124$ | $1.0597329$ . . . . . $L = 850.39'.52'',8$
$p = -\ 2392''4$ | $L' = 85.\ 01.\ 09,\ 4$
$p = -\ 2323,4$

249.

Latitudo lunae apparens.

| Initium. | | Finis. |
|---|---|---|
| $\lambda' = -1415'',5$ . . | $tg.\lambda' = 7.8365011.n, 7.9520862.n$ . . . . . | $\lambda' = -1847'',1$ |

250.

Semidiameter lunae geocentrica.

| | | |
|---|---|---|
| $\frac{1}{2}D' = 992'',45$ . . | $\sin.\frac{1}{2}D' = 7.6822813, 7.6813652$ . . . . . | $\frac{1}{2}D' = 990'',35$ |

251.

Log. pro reductione spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.45'$ | $17^h.15'$ |
| $\mu = 34'.18'',98$ | . . $34'.19'',62$ |
| $\log.h' = 0.2426503$ | $0.2425159$ |

252.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1938'',48$ | | | $fn = 1936,38$ |
| $mn = 1415,46$ | | | $mn = 1847,06$ |
| $fm = 1324,4$ | . . . $\log.fm = 3.1220228$ | $2.7644178$ . . . . . | $fm = 531,32$ |
| $p = 2392,4$ | | | $p = 2323,4$ |
| $SM = 1068,0$ | | | $SM = 2904,72$ |
| $SM' = 31'.07''3$ . . | $\log.SM' = 3.2712216$ | $3.7056202$ . . . . . | $SM' = 1^h.24'.37'',2$ |

253.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T' = 5^h.57'.51'',9$ | $6^h.56'.36'',6$ |
| $SM' - - 31.07,3$ | $-1.24.37,2$ |
| $\delta = 5^h.26'.44'',6$ | $5^h.31'.59'',4$ |

167.

Tempus $\delta$ correctum.

Ex init. $= 5^h.26'.44'',6 + 2,0327\, d\,fn + 1,4843\, d\,\lambda - 1,6175\, d\,\pi$

255.

Eclipsis solis Hamburgi a celeberr. Eimbke observata, ex litteris ad me datis:

Initium = 5h.26'.25'',5 } temp. sol. med.
Finis = 6. 26. 28, 0 }

256.

Diff. merid. Parisios inter et Hamburgum = — 30'.32'',0 temp.
Elevatio poli = + 53°.54'.08''

257.

Elementa e tabulis desumpta.

| | Initium. | Finis. |
|---|---|---|
| l = | 84°.45'.40'',0 | 84°.48'.03'',3 |
| A = | 84. 15. 47, 7 | 84. 18. 15, 6 |
| L = | 85. 0. 35, 0 | 85. 37. 20, 0 |
| λ = | + 17. 51, 3 | + 14. 27, 4 |
| α = | 165.52. 10, 2 | 180. 55. 15, 6 |

258.

Correctio latitudinis.

β = 53°.44'.18'',5 . . . tg. β = 0,1345767

259.

Calculi anguli φ.

φ = 100.09'10'',4 . . tg. φ = 9,2530468 | 8,0715412.n . . . . φ = — 00.40'.31'',9
φ + ι = 33. 37. 03, 4 | φ + ι = 22.47. 21, 1

260.

Differentia parallaxium longitudinis.

L = 85°. 0'.35'',0 | L = 85°.37'.20'',0
L' = 84. 23. 35, 8 . . tg. L' = 1,0080227 | 1,0584248 . . . . . L' = 85. 0. 15, 5
p = 2219'',2 | p = — 2224'',5

261.

Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -1399'',5$ . . . | tg. $\lambda' = 7,8315289.n$ | $7,9466233.n$ . . . . . | $\lambda' = -1824'',0$ |

262.

Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 993'',97$ . . | sin. $\frac{1}{2}D' = 7.6829451$ | $7.6820701$ . . . . . | $\frac{1}{2}D' = 991'',74$ |

263.

Logarith. pro reduct. spatii ad tempus.

| | | |
|---|---|---|
| $\tau' =$ | $16^h.43'$ | $17^h.13'$ |
| $\mu =$ | $34.18'',96$ | . . $34.19'',58$ |
| log. $h' =$ | $0,2426571$ | $0.2425243$ |

264.

Solutio trianguli S m n.

| | | | |
|---|---|---|---|
| $fn = 1940,00$ | | | $fn = 1937,77$ |
| $mn = 1399,16$ | | | $mn = 1823,96$ |
| $fm = 1343.5$ . . . | log. $fm = 3.1282520$ | $2,8157840$ . . . . . | $fm = 654,3$ |
| $p = 2219,2$ | | | $p = 2224,5$ |
| $SM = 875,7$ | | | $SM = 2878,8$ |
| $SM' = 25.31''$ . . | log. $SM' = 3,1805124$ | $3,7017357$ . . . . | $SM' = 1^h.28'.51''$ |

265.

Tempus $\delta$ incorrectum.

| | | |
|---|---|---|
| $T =$ | $5^h.26'.25'',5$ | $6^h.26'.28'',0$ |
| $SM' =$ | $-25.31,1$ | $-1.23.51,9$ |
| $\delta =$ | $5^h.0'.54'',4$ | $5^h.02'.36'',1$ |

266.

Tempus $\delta$ correctum.

Ex init. $= 5^h.0'.54'',4 + 2,5258\, d\, fn + 1,8223\, d\, \lambda - 1,8292\, d\, \pi$

267.

Eclipsis solis Luconiae, Volhyniae, observata. Ex litteris ad me datis:

Initium = 6h.38′.46″,4 }
Finis = 7. 20. 06, 8 } temp. sol. medio.

268.

Diff. merid. Parisios inter et Luconiam = — 1h.31′.49″,5 temp.
Elevatio poli = + 500.58′.0″

269.

Elementa e tabulis desumpta.

| Initium. | Finis. |
|---|---|
| A = 840.16′.14″,9 | 840.17′.56″,1 |
| L = 85. 07. 20, 8 | 85. 32. 39, 4 |
| λ = + 17. 13. 9 | + 14. 53. 4 |
| α = 183.57. 50, 9 | 184.19. 88, 1 |

270.

Correctio latitudinis.

β = 500.47′.54″,4 . . . tg. β = 0.0885096

271.

Calculi anguli φ.

φ = — 30.13′.38″,2 tg. φ = 8.7511750.n | 9.3049951.n . . . φ = — 110.24′.39″,4
φ + ε = 20. 14. 14, 8 | φ + ε = 12. 03. 13, 6

272.

Differentia parallaxium longit.

L = 850.07′.20″,8 | L = 850.32′.39″,4
L′ = 84. 28. 03, 2 . . tg. L′ = 1.0138537 | 1.0509543 . . . . . L′ = 84. 55. 05, 1
p = — 2357″,6 | p = — 2254″,3

273.

Latitudo lunae apparens.

| Initium. | | Finis. |
|---|---|---|
| $\lambda' = -1599'',3$ . . . | tg. $\lambda = 7,8894872.n$ \| $7,9644767.n$ . . . . . | $\lambda' = -1900'',6$ |

274.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 990'',76$ . . . . sin. $\frac{1}{2} = 7,6815046$ \| $9,6809296$ . . . . . $\frac{1}{2}D' = 989'',37$

275.

Logarith. pro reductione spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.49''$ | $17^h.09'$ |
| $\mu = 34'.19'',07$ | $34.19'',5$ |
| log. $h' = 0.2426343$ | $0.2425432$ |

276.

Solutio trianguli Smn.

| | | |
|---|---|---|
| $fn = 1936'',70$ | | $fn = 1935'',40$ |
| $mn = 1599,26$ | | $mn = 1900.56$ |
| $fm = 1092,3$ . . . | log. $fm = 3,0383520$ \| $2,5629761$ . . . . . | $fm = 365.6$ |
| $p = 2357,6$ | | $p = 2254,3$ |
| $SM = 1265,3$ | | $SM = 2619,9$ |
| $SM' = 36'.52'',5$ . . . | log. $SM' = 3,3448278$ \| $3,6608279$ . . . . . | $SM' = 1^h.16'.19''.6$ |

277.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 6^h.38'.46'',4$ | $7^h.20'.06'',8$ |
| $SM' = -36.52,3$ | $-1.16.19,6$ |
| $\delta = 6^h.01'.54'',2$ | $6^h.03'.47'',2$ |

278.

Tempus $\delta$ correctum.

ex init. $= 6^h.01'.54'',2, = 3,0998\, d\, fn + 2,5597\, d\lambda - 2,1612\, d\pi$

279.

Eclipsis solis in Foro Sebusiano (Bourg en Bresse) observata, ex litteris ab illustribus Olbers et Bouvard ad me datis:

Initium = 5h. 6 .51'',0 }
Finis = 6. 27. 21, 0 } temp. solari medio.

280.

Diff. merid. Parisios inter et Forum Sebusianum = — 11'.34'' temp.
Elevatio poli = + 460.12'.26''

281.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| I = 840.45'.38'',6 | . . | 840.48'.50'',7 |
| A = 84. 15.46, 2 | . . | 84. 19.04, 5 |
| L = 85. 00.12, 6 | . . | 85. 49.29, 3 |
| λ = + 17.53, 5 | . . | + 13.20, 0 |
| α = 160.58.31, 2 | . . | 181. 09.19, 5 |

282.

Correctio latitudinis.

β = 460.02'.07'',9 . . . . . tg.β = 0.0157020

283.

Calculi anguli φ.

φ = 170.27'.11'',3 . . tg.φ = 9.4974829 | 8.2888849.n . . . . φ = 010.06'.51'',0
φ + ε = 40. 55.04, 3 | φ + ε = 22. 21.02

284.

Differentia parallaxium longit.

L = 850. 0'12'',6 | L = 850.49'.29'',3
L' = 84. 17.59, 5 . . tg.L' = 1.0063003.n | 1.0675302 . . . . . L' = 85. 06.28, 8
p = — 2533''1 | p = — 2580'',5

285.

Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -991'',5$ . . . | tg. $\lambda' = 7,6816718.n$ | $7.8921770.n$ . . . . . | $\lambda' = -1609'',1$ |

286.

Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 994''5$ . . . | sin. $\frac{1}{2}D' = 7.6831971$ | $7.6817409$ . . . . . | $\frac{1}{2}D' = 991'',1$ |

287.

Logarith. pro reductione spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.42$ | $17^h.23$ |
| $\mu = 34'.18'',88$ | $31'.19''.74$ |
| $\log.h' = 0,2426791$ | $0,2424901$ |

288.

Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1940'',53$ | | | $fn = 1937'',13$ |
| $mn = 991, 46$ | | | $mn = 1609, 06$ |
| $fm = 1668, 1$ . . | $\log. fm = 3.2222304$ | $3.0328614$ . . . . . | $fm = 1078, 6$ |
| $p = 2533, 1$ | | | $p = 2580, 5$ |
| $SM = 865, 1$ | | | $SM = 3659, 1$ |
| $SM' = 25'.12'',6$ . . | $\log. SM' = 3.1797454$ | $3.8058642$ . . . . . | $SM' = 1^h.46'.35''3$ |

289.

Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 5^h.06'.51'',0$ | $6^h.27'.21'',0$ |
| $SM' = -25. 12, 6$ | $-1. 46. 35, 3$ |
| $\delta = 4^h.41'.38''4$ | $4^h.40'.45'',7$ |

290.

Tempus $\delta$ correctum.

Ex init. $= 4^h.41'.38'',4 + 2,0340\, d fn + 1,0392\, d\lambda - 1,2655\, d\pi$

291.

Eclipsis solis in Insula Leon, prope Gades. Ex litteris ab Illustri, et mihi amicissimo Bouvard ad me datis:

Initium $= 4^h.18'.45''$ temp. solar. vero.

292.

Diff. merid. Parisios inter et Insulam Leon $= + 34'.09''$ temp.
Elevatio poli $= + 36^o.27'.45''$

293.

Tempus solare medium.

Initium.

$$T' = 4^h.18'.45'',00$$
$$ac = + 7,28$$
$$\text{Insula Leon } T = 4^h.18'.52'',28$$
$$\delta = + 34.09$$
$$\tau = 16^h.53'.01'',28$$

294.

Elementa e tabulis desumpta.

$$l = 84^o.45'.33'',1$$
$$A = 84.\ 15.\ 40,\ 6$$
$$L = 84.\ 58.\ 49,\ 6$$
$$\lambda = + 18.01,\ 1$$
$$\varkappa = 148.\ 59.\ 44,\ 8$$

295.

Correctio latitudinis.

$$\beta = 36^o.17'.54'',2 \ . \ . \ \text{tg.}\beta = 9.8660097$$

210.

Calculus anguli $\varphi$.

$$\text{tg.}\varphi = 9,8458832 \ . \ . \ . \ . \quad \varphi = 35^o.02'.26'',5$$
$$\varphi + \varepsilon = 58.\ 30.\ 19,\ 5$$

297.

Diff. parallaxium longit.

$L = 840.58'.49''.6$

$tg.L' = 0,9954403 \ldots\ldots L' = 84.\ 13.\ 46.\ 3$

$p = -2703'',3$

298.

Latitudo lunae apparens.

$tg.\lambda' = 7,1394560.n \ldots\ldots \lambda' = -\ 284'',4$

299.

Semidiameter lunae geocentrica.

$\sin.\frac{1}{2}D' = 7,6841048 \ldots\ldots\ldots \frac{1}{2}D' = 996'',4$

300.

Logarith. pro reduction. spatii ad tempus.

$\tau' = 16^h.41'$

$\mu = 34.\ 18,\ 90$

$\log.h' = 0.2426723$

301.

Solutio trianguli Smn.

$fn = 1942''.43$

$mn = 284,\ 06$

$fm = 3,2836412 \ldots\ldots fm = 1921,\ 5$

$p = 2703.\ 3$

$SM = 781,\ 8$

$\log.SM' = 3,1357680 \ldots\ldots SM' = 22'.47''0$

302.

Tempus ☌ incorrectum.

$T' = 4h.18'.45''$

$SM' = -\ 22.\ 47$

$☌ = 3^h.55'.58'',0$

303.

Tempus ☌ correctum.

ex init. $= 3^h.55'.58'',0 + 1,7675\, d\ln + 0,2588\, d\lambda - 1,0382\, d\pi$

304.

Eclipsis solis Montalbani a celeberr. Duc la Chapelle observata. Ex litteris ad me datis:

Initium $= 4^h.49'.46''$ temp. sol. medio.

305.

Differentia meridian. Parisios inter et Montalbanum $= +3'.57''$ temp.
Elevatio poli $= +44^o.0'.50''$

306.

Elementa e tabulis desumpta.

$l = 84^o.45'.34'',9$
$A = 84.\ 15.\ 42,\ 4$
$L = 84.\ 59.\ 15,\ 1$
$\lambda = +\ 17.\ 58,\ 8$
$\alpha = 156.42.\ 12,\ 4$

307.

Correctio latitudinis.

$\beta = 43^o.50'.31'',9 \ldots \text{tg.}\beta = 9,9824433$

308.

Calculus anguli $\varphi$.

$\text{tg.}\varphi = 9,6146926 \ldots\ \varphi = 220.22'.55'',7$
$\varphi + \varepsilon = 45.\ 50.48,\ 7$

309.

Differentia parallaxium longitudinis.

$L = 84^o.59'.15'',1$
$\text{tg.}L' = 0,9987621 \ldots\ L' = 84.\ 16.\ 23.\ 5$
$p = -2571'',6$

310.

Latitudo lunae apparens.

$$\text{tg.}\,\lambda' = 7{,}5943022.n \;\ldots\ldots\; \lambda' = -810'',4$$

311.

Semidiameter lunae geocentrica.

$$\text{tg.}\,\tfrac{1}{2}D = 7.6835252 \;\ldots\ldots\ldots\; \tfrac{1}{2}D' = 995'',3$$

312.

Logarith. pro reduct. spatii ad tempus.

$$\tau' = 16^h.42'$$
$$\mu = 34'.18'',92$$
$$\log.h' = 0{,}2426647$$

313.

Solutio trianguli Smn.

$$fn = 1941'',33$$
$$mn = 810,\ 36$$
$$\log.fm = 3{,}2465253 \;\ldots\; fm = 1764,\ 1$$
$$p = 2571,\ 6$$
$$SM = 807,\ 5$$

$$\log.fm = 3{,}1498072 \;\ldots\; SM' = 23'.31'',9$$

314.

Tempus $\delta$ incorrectum.

$$T' = 4^h.49'.46'',0$$
$$SM' = -\ 23.31,\ 9$$
$$\delta = 4^h.26'.14'',1$$

315.

Tempus $\delta$ correctum.

$$\text{Ex init.} = 4^h.26'.14'',1 + 1{,}9241\,d\,fn + 0{,}8032\,d\lambda - 1{,}1405\,d\pi$$

316.

Eclipsis solis Tolosae a celeberr. Vidal observata, ex litteris ad me datis:

Initium = 4h.50′.29″,0 temp. sol. vero.

317.

Diff. merid. Parisios inter et Tolosam = + 03′.35″ temp.

Elevatio Poli = + 43o.35′.46″

318.

Tempus solare medium.

T′ = 4h.50′.29″,0

ae = . . + 07, 29

T Tolosae = 4h.50′.36″,29

τ = 16. 54. 11, 29

319.

Elementa e tabulis desumpta.

l = 84o.45′.36″,0

A = 84. 15. 43, 6

L = 84. 59. 32, 4

λ = + 17. 57, 1

α = 156.54. 48, 1

320.

Correctio latitudinis.

β = 43o.25′.28″,3 . . tg. β = 9.9761043

321.

Calculus anguli φ.

tg. φ = 9.6173176 . . . φ = 22o.30′.15″,6

φ + ε = 45. 58. 08, 6

322.

Differentia parallaxium longit.

L = 84o.59′.32″,4

tg. L′ = 0.9987163 . . . L′ = 84. 16. 21, 4

P = — 2591″,0

323.

Latitudo lunae apparens.

$$\text{tg.}\,\lambda' = 7.5860190.n \;\ldots\ldots\; \lambda' = -790'',5$$

324.

Semidiameter lunae geocentrica.

$$\sin.\tfrac{1}{2}D' = 7.6835009 \;\ldots\ldots\; \tfrac{1}{2}D' = 995'',2$$

325.

Log. pro reductione spatii ad tempus.

$$\tau' = 16^h.44'$$
$$\mu = 34'.18'',96$$
$$\log.h' = 0.2426723$$

326.

Solutio trianguli Smn.

$$\begin{aligned} fn &= 1941'',23 \\ mn &= \underline{790,\ 46} \\ \log.fm = 3.2487100 \;\ldots\ldots\; fm &= 1773,\ 0 \\ p &= 2591,\ 0 \\ \hline SM &= 818,\ 0 \end{aligned}$$

$$\log.SM' = 3.1554256 \;\ldots\ldots\; SM' = 23'.50''3$$

327.

Tempus $\delta$ incorrectum.

$$\begin{aligned} T' &= 4^h.50'.36'',29 \\ SM' &= -\ 23.\ 50,\ 30 \\ \hline \delta &= 4^h.26'.45'',99 \end{aligned}$$

328.

Tempus $\delta$ correctum.

$$\text{Ex init.} = 4^h.26'.45'',99 + 1,9144\,d\,fn + 0,7795\,d\,\lambda - 1.1367\,d\,\pi$$

329.

Eclipsis solis a celeberr. Messier in sua specula astonom. Lutetiae Parisiorum observata in Diario physico (Journal de Physique) in lucem edita.

Initium = 4h.51'.43'' } temp. sol. med.
Ergo initium in specula Caesaris = 4. 51. 41 }

330.

Longitudo geographica speculae Caesaris Lutetiae Parisiorum = 0h.0'.0'',0
Elevatio poli = + 48o.51'.04''

331.

Elementa e tabulis desumpta.

$$l = 84o.45'.35'',1$$
$$A = 84.\ 15.\ 37,\ 4$$
$$L = 84.\ 57.\ 59,\ 9$$
$$\lambda = +18.\ 05,\ 5$$
$$\alpha = 157.11.\ 22,\ 4$$

332.

Correctio latitudinis.

$$\beta = 48o.40'.50'',8 \ldots \quad tg.\beta = 0,0559539$$

333.

Calculus anguli $\varphi$.

$$tg.\varphi = 9,5325237 \ldots \quad \varphi = 18o.49'12'',1$$
$$\varphi + \varepsilon = 23.\ 27.\ 53,\ 0$$

334.

Differentia parallaxium longitudinis.

$$L = 84o.57'.59'',9$$
$$tg.L' = 1,0013208 \ldots \quad L' = 84.\ 18.\ 23,\ 9$$
$$p = -237'',0$$

335.

Latitudo lunae apparens.

$$\text{tg.}\,\lambda' = 7.703035\,4.n \quad \ldots\ldots \quad \lambda' = -1041'',0$$

336.

Semidiameter lunae geocentrica.

$$\sin.\tfrac{1}{2}D' = 7.6837766 \quad \ldots\ldots \quad \tfrac{1}{2}D' = 995'',8$$

337.

Logarith. pro reduct. spatii ad tempus.

$$\begin{aligned} \tau' &= 16^h.42' \\ \mu &= 31.18'',92 \\ \log.h' &= 0.2426647 \end{aligned}$$

338.

Solutio trianguli S m n.

$$\begin{aligned} & & fn &= 1941'',83 \\ & & mn &= 1040,\ 96 \\ \log.fm &= 3.2146424 \quad \ldots\ldots & fm &= 1639,\ 2 \\ & & p &= 2376,\ 0 \\ \hline & & SM &= 736,\ 8 \end{aligned}$$

$$\log.SM' = 3.1100143 \quad \ldots\ldots \quad SM' = 21'.28'',3$$

339.

Tempus $\delta$ incorrectum.

$$\begin{aligned} T &= 4^h.51'.43'',0 \\ SM &= -21.28,\ 3 \\ \hline \delta &= 4^h.30'.14'',7 \end{aligned}$$

340.

Tempus $\delta$ correctum.

$$\text{Ex init.} = 4^h.30'.14'',7 + 2,0712\,d\,fn + 1,1103\,d\,\lambda - 1,2384\,d\,\pi$$

341.

Eclipsis solis ab Astronomo celeberr. David tubo achromatico 40—45ties augente Pragae observata, ex litteris ab ipso ad me datis:

Initium $= 5^h.48'.13''5$ temp. sol. vero.

342.

Diff. merid. Parisios inter et Pragam $= -48'.19''$
Elevatio poli $= +50^o.05'.19''$

343.

Tempus solare medium.

$$\begin{array}{rl} \mathbb{T}' = & 5^h.48'.13'',5 \\ ae = & \ldots + 07,34 \\ \hline T\,\text{Pragae} = & 5^h.48'.20'',84 \\ \delta = & -48.19.00 \\ \hline \tau = & 17^h.0'.01'',84 \end{array}$$

344.

Elementa e tabulis desumpta.

$l = 840.45'.49'',9$
$A = 84.15.57,9$
$L = 85.03.06,9$
$\lambda = +17.37,3$
$\alpha = 171.21.10,5$

345.

Correctio latitudinis.

$\beta = 490.55'.09'',9 \ldots tg.\beta = 0.0749463$

346.

Calculus anguli $\varphi$

$tg.\varphi = 9.1021507 \ldots\ldots \varphi = 70.12'.38'',2$
$\varphi + \varepsilon = 30.40.31,2$

347.

Differentia parallaxium longit.

$L = 85^{\circ}.03'.06''9$

$\text{tg.}\, L' = 1{,}0068694 \;\ldots\; L' = 84.\ 22.\ 42,\ 4$

$p = -\ 2424'',5$

348.

Latitudo lunae apparens.

$\text{tg.}\, \lambda' = 7.8138373.n \;\ldots\; \lambda' = -\ 1343'',5$

349.

Semidiameter lunae geocentrica.

$\sin.\, \tfrac{1}{2}D' = 7.6824468 \;\ldots\; \tfrac{1}{2}D' = 992'',8$

350.

Logarith. pro reduct. spatii ad tempus.

$\tau' = 16h.45'.$

$\mu = 34'.18''.98$

$\log.\, h' = 0.2426495$

351.

Solutio trianguli SMN.

$fn = 1938{,}83$

$mn = 1343{,}46$

$\log.\, fm = 3.1454819 \;\ldots\; fm = 1397{,}9$

$p = 2424{,}5$

$SM = 1026{,}6$

$\log.\, SM' = 3.2540508 \;\ldots\; SM' = 29'.55'',0$

352.

Tempus $\delta$ incorrectum.

$T' = 5^{h}.48'.20'',84$

$SM' = -\ 29.\ 55,\ 00$

$\delta = 5^{h}.18'.5'',84$

353.

Tempus ☌ correctum.

Ex init. $= 5^h.18'.25'',84 + 2,4253\, d\, fn + 1,6306\, d\, \lambda - 1,6283\, d\, \pi$

354.

Eclipsis solis ab Astronomo celeberr. Triesnecker in specula Vindobonae observata, ex litteris ab ipso ad me datis:

Initium $= 5^h.57'.55'',0$ temp. sol. med.

355.

Diff. merid. Parisios inter et Vindobonam $= +56'.10''$ temp.
Elevatio poli $= +48^o.12'.34''$

356.

Elementa e tabulis desumpta.

$l = 84^o.45'.54'',0$
$A = 84.\ 16.\ 02,\ 1$
$L = 85.\ 04.\ 10,\ 6$
$\lambda = +\ 17.\ 31,\ 4$
$\pi = 173.\ 44.\ 47,\ 1$

357.

Correctio latitudinis.

$\beta = 48^o.02'.21'',1$ . . $tg.\beta = 0.0461603$

358.

Calculus anguli $\varphi$.

$tg.\varphi = 8.9909838$ . . . . $\varphi = 5^o.35'.37'',6$
$\varphi + \epsilon = 29.\ 03.\ 30,\ 6$

359.

Diff. parallaxium longit.

$L = 85^o.04'.10'',6$
$tg.L' = 1.0062960$ . . . . $L' = 84.\ 22.\ 15,\ 8$
$p = -\ 2514'',8$

360.

Latitudo lunae apparens.

$$\text{tg.}\,\lambda' = 7{,}8034082.n \;\ldots\ldots\; \lambda' = -1311'',7$$

361.

Semidiameter lunae geocentrica.

$$\sin.\tfrac{1}{2}D' = 7{,}6823900 \;\ldots\ldots\ldots\; \tfrac{1}{2}D' = 992'',7$$

362.

Logarith. pro reduction. spatii ad tempus.

$$\tau' = 16^{\circ}.40'$$
$$\mu = 34.\ 19,\ 01$$
$$\log.\,h' = 0.2424521$$

363.

Solutio trianguli Smn.

$$\begin{aligned} fn &= 1938'',73 \\ mn &= 1311,\ 66 \\ fm = 3{,}1546257 \;\ldots\ldots\; fm &= 1427,\ 6 \\ p &= 2514,\ 8 \\ \hline SM &= 1087,\ 2 \end{aligned}$$

$$\log.\,SM' = 3{,}2787615 \;\ldots\ldots\; SM' = 31'.40''0$$

364.

Tempus $\delta$ incorrectum.

$$\begin{aligned} T' &= 5^{h}.57'.55'' \\ SM' &= -\ 31.\ 40 \\ \hline \delta &= 5^{h}.26'.15'' \end{aligned}$$

365.

Tempus $\delta$ correctum.

$$\text{ex init.} = 5^{h}.26'.15'',0 + 2{,}3743\,d\,fn + 1{,}6063\,d\lambda - 1{,}6203\,d\pi$$

366.

Eclipsis solis ab Astronomo celeberr. Bessel in specula astronomica celeberr. Schröter Lilienthalii observata, ex litteris ab Illustr. Olbers ad me datis:

Initium = 5h.21′.14″,1 temp. solar. med.

367.

Diff. merid. Parisios inter et Lilientalium = + 26′.16″. temp.
Elevatio poli = + 53°.08′.25″

368.

Elementa e tabulis desumpta.

$l = 84°.45'.37'',9$
$A = 84.\ 15.\ 45,\ 5$
$L = 84.\ 0.01,\ 0$
$\lambda = +\ 17.54.\ 4$
$\alpha = 164.\ 34.\ 17,\ 0$

369.

Correctio latitudinis.

$\beta = 52°.58'.30'',7$ . . $tg.\beta = 0.1224948$

370.

Calculus anguli $\varphi$.

$tg.\varphi = 9,3024485$ . . . . $\varphi = 110.20'.45'',5$
$\varphi + \varepsilon = 34.\ 48.\ 38,\ 5$

371.

Diff. parallaxium longit.

$L = 85°.\ 0'.01'',0$
$tg.L' = 1,0066572$ . . . . . $L' = 84.\ 22.\ 32,\ 5$
$p = -2248'',5$

372.

Latitudo lunae apparens.

$$\text{tg.}\,\lambda = 7{,}8150162 \quad \ldots\ldots \quad \lambda' = -1347'',2$$

373.

Semidiameter lunae geocentrica.

$$\sin.\tfrac{1}{2}D' = 7{,}6830292 \quad \ldots\ldots \quad \tfrac{1}{2}D' = 994'',3$$

374.

Logarith. pro reductione spatii ad tempus.

$$\tau' = 16^h.43''$$
$$\mu = 34'.\ 18''.94$$
$$\log.h' = 0.2426647$$

375.

Solutio trianguli Smn.

$$\begin{aligned} fn &= 1940'',13 \\ mn &= 1347,\ 16 \\ \log.fm = 3{,}144935 \quad \ldots\ldots \quad fm &= 1396,\ 1 \\ p &= 2248,\ 5 \\ \hline SM &= 852,\ 4 \end{aligned}$$

$$\log.SM' = 3{,}1733081 \quad \ldots\ldots \quad SM' = 24'.50'',4$$

376.

Tempus $\delta$ incorrectum.

$$\begin{aligned} T &= 5^h.21'.14'',1 \\ SM' &= -24.\ 50.\ 4 \\ \hline \delta &= 4^h.56'.23'',7 \end{aligned}$$

377.

Tempus $\delta$ correctum.

$$\text{ex init.} = 4^h.56'.23'',7 + 2{,}4297\,d\,fn + 1{,}6871\,d\,\lambda - 1{,}5550\,d\,\pi$$

378.

Eclipsis solis Reikevici Islandiae a celeberr. Wetlesen, Discipulo celeberrimi Astronomi Bugge observata, ex litteris ab illustri Collega et Amico Bugge ad me datis:

Finis = 4h.02.39,7 temp. sol. vero.

379.

Diff. merid. Parisios inter et Reikevicum = + 1h.36'.56'' temp.
Elevatio poli = + 64°.08'.23'',8

380.

Tempus solare medium.

T' = 4h.02'.39'',7
ae = + 07, 56
Reikev. T = 4h.02'.47'',26
δ = + 1. 36. 56,0
τ = 17h.39'.43'',3

381.

Elementa e tabulis desumpta.

A = 84°.17'.35'',7
L = 85. 37. 24. 8
λ = + 15. 22, 6
α = 144.59. 25, 2

382.

Correctio latitudinis.

β = 64°.0'.17'',4 . . . tg. β = 0.3119113

383.

Calculi anguli φ.

tg. φ = 9.4467848 . . . . φ = 15°.3-'.46'',0
φ + ε = 39. 05. 39, 0

384.

Differentia parallaxium longit.

$$L = 85^{\circ}.12'.56'',7$$
$$tg.L' = 1.0772997 \quad \ldots \quad L' = 85.\ 37.\ 24,\ 8$$
$$p = -\ 1468'',1$$

385.

Latitudo lunae apparens.

$$tg.\lambda' = 7,0189596. \quad \ldots \quad \lambda' = -1707'',9$$

386.

Semidiameter lunae geocentrica.

$$sin.\ \tfrac{1}{2}D' = 7.6843317 \quad \ldots \quad \tfrac{1}{2}D' = 997'',1$$

387.

Logarith. pro reductione spatii ad tempus.

$$\tau' = 17'.06$$
$$\mu = 34'.19'',43$$
$$log.h' = 0,2425584$$

388.

Solutio trianguli Smn.

$$fn = 1943'',13$$
$$mn = 1707,\ 86$$
$$log.fm = 2.9669886 \quad \ldots \quad fm = 926,\ 8$$
$$p = 1467,\ 9$$
$$SM = 2394,7$$
$$log.SM' = 3.6218095 \quad \ldots \quad SM' = 1^{h}.09'.46'',1$$

389.

Tempus $\delta$ incorrectum.

$$T = 4^{h}.02'.47'',26$$
$$SM' = -1.09'.46,\ 10$$
$$\delta = 2^{h}.53'.01'',20$$

390.

Tempus ☌ correctum.

Ex fine $= 2h.53'.01'',20 - 3,6649\, d\, \ln - 3,2211\, d\lambda + 2,6244\, d\pi$

391.

Eclipsis solis Gottingae observata.

Finis obs. a celeberrimis: Mayer $= 6h.31'.28'',83$
— — — Thibaut $= - - 17, 33$
— — — Harting $= - - 14, 84$ quae infra supputatur, ex litteris ad me datis.

392.

Diff. merid. Parisios inter et Gottingam $= -30'.21''.0$ temp. ex observationibus olim a me habitis definita.
Elevatio poli $= 51^{0}.32'.05'',0$

393.

Elementa e tabulis desumpta.

Finis.

$l = 840.48'.15'',2$
$A = 84.\ 18.\ 27,\ 8$
$L = 85.\ 40.\ 21,\ 1$
$\lambda = +\ 14.\ 10,\ 6$
$\alpha = 182.07.09,\ 4$

394.

Correctio latitudinis.

$\beta = 51^{0}.32'.02'',1 \ldots \operatorname{tg}.\beta = 0,0973305$

395.

Calculus anguli $\varphi$.

$\varphi = -10.41'.34'',4 \ldots\ldots \operatorname{tg}.\varphi = 8,4706357.^{n}$
$\varphi + \varepsilon = 21.\ 46.\ 18,\ 6$

396.

Differentia parallaxium longitudinis.

Finis.

L = 850.40'.21'',1

L' = 85. 01. 27. 4 . . . . tg. L' = 1,0601734

p = — 38. 53, 7

397.

Latitudo lunae geocentrica.

λ' = 1776'',1 . . . . tg. λ' — 5,9350437

398.

Semidiameter lunae apparens.

½D' = 991'' 5 . . . . sin ½D' = 7,6818832

399.

Logarith. pro reductione spatii ad tempus.

τ' = 17h. 46'

μ = 34'.20''.27

log. h = 0.2423838

400.

Solutio trianguli S m n.

fn = 1937'',53

mn = 1776, 06

fm = 7[illegible], 3 . . . . log. fm = 2,8889428

p = 2333, 7

SM = 3103, 0

SM' = 1h.30'.30'',8 . . . . log. SM' = 3.7348648

401.

Tempus σ incorrectum.

T = 6h.31'.14'',84

SM' = — 1. 30. 30, 8

σ = 5h.00 .44'',04

402.

Eclipsis selis Neapolis observata, ex litteris ad me datis:

Initium $= 5^h.51'.18'',6$ temp. sol. medio.

403.

Diff. merid. Parisios inter et Neapolim $= -47'.26'',0$ temp.

Elevatio poli $= 400.50'.15''$

404.

Elementa e tabulis desumpta.

Initium.

$l = 840.45'.59'',1$
$A = 84.\ 16.\ 07,\ 4$
$L = 85.\ 05.\ 28,\ 7$
$\lambda = +\ 17.\ 24,\ 2$
$\alpha = 172.05.\ 46,\ 4$

405.

Correctio latitudinis.

$\beta = 400.0'.03'',2$ . . . . $tg.\beta = 9.9340698$

406.

Calculus anguli $\varphi$.

$\phi = 90.05'.35'',7$ . . . . $tg.\varphi = 9,2042643$
$\varphi + \varepsilon = 32.\ 33.\ 28,\ 7$

407.

Differ. parallaxium longit.

$L = 850.05'.28'',7$
$L' = 84.\ 18.\ 24,\ 4$ . . . . $tg.L' = 1,0013320$
$p = -\ 28'.24'',3$

408.

Latitudo lunae apparens.

$\lambda' = -967'',4$ . . . . . $tg.\lambda' = 7,6711706.n$

409.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 991'',9$ . . . . . $tg.\frac{1}{2}D' = 7.6820773$

410.

Logarith. pro reduct. spatii ad tempus.

$\tau' = 17^h.33'$
$\mu = 34'.20'',0$
$\log.h' = 0,2424370$

411.

Solutio trianguli Smn.

$fn = 1937'',93$
$mn = 967,36$
$fm = 1679,2$ . . . : $\log.fm = 3,2251082$
$p = 2824,3$
$SM = 1145,1$

$SM' = 33'.21'',6$ . . . . $\log.fm = 3,3012804$

412.

Tempus $\delta$ incorrectum.

$T' = 5^h.51'.18'',6$
$SM' = -33.21,6$
$\delta = 5^h.17'.57'',5$

413.

Eclipsis solis Brinae observata ex litteris ad me datis:

Finis = 6h.58′.06″.3 temp. sol. med.

414.

Diff. merid. Parisios inter et Brinam = — 57o.05′.2″ temp.

Elevatio poli = + 49o.11′.28″

415.

Elementa e tabulis desumpta.

l = 84o.48′.15″,6
A = 84. 18. 28, 3
L = 85. 40. 29, 9
λ = — 14. 09, 9
α = 188.5o. 02, 8

416.

Correctio latitudinis.

β = 49o.01′.15″,8 . . . tg. β = 0,0611594

417.

Calculus anguli φ.

φ = 7o.35′54″,4 . . . . tg. φ = 9,1251591
φ + ε = 13. 51. 58, 6

418.

Differentia parallaxium longitudinis.

L = 85o.40′.29″,9
L′ = 85. o. 34, 6 . . . . tg. L′ = 1,0588890
p = — 2395″,0

419.

Latitudo lunae apparens.

$\lambda' = -1799'',1$ . . . . tg. $\lambda' = 7.9406228.n$

420.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 990'',10$ . . . . sin. $\frac{1}{2}D' = 7.6812466$

421.

Logarith. pro reduct. spatii ad tempus.

$\tau' = 18^h.12'$
$\mu = 34'.21''$
log. $h' = 0.2422245$

422.

Solutio trianguli Smn.

$fn = 1936'',13$
$mn = 1799,\ 06$
$fm = 715,\ 5$ . . . . log. $fm = 3.8546275$
$p = 2395,\ 3$
$SM = 3110,\ 8$

$SM' = 1^h.30'.33'',7$ . . . . log. $SM' = 3.7350966$

423.

Tempus $\delta$ incorrectum.

$T = 6^h.58'.06'',3$
$SM = -1.30.33,\ 7$
$\delta = 5^h.27'.32'',6$

## 424.

Eclipsis solis Berolini observata ab illustr. et mihi amicissimo Bode mecum communicata:

Finis observ. a celeberr. Bode $= 6^h.39'.40'',5$
- - - - Humbold $= 6.\ 39.\ 40,\ 8$ } temp. sol. med.
- - - - Tralles $= 6.\ 39.\ 45,\ 0$

Locus observationis de Humbold fuit $= +1'',2$ tempore occidentalior
- - - - Tralles vero $= -1'',5$ temp. orientalior spec. Regis.

## 425.

Diff. merid. Parisios inter et Berolinum $= -44'.10'',0$ temp.
Elevatio poli $= 49^o.0'.57''$

## 426.

### Elementa e tabulis desumpta.

$l = 840.48'.02''.4$
$A = 84.\ 18.\ 14,\ 6$
$L = 85.\ 37.\ 05,\ 3$
$\lambda = -\ 14.\ 28,\ 8$
$\alpha = 184.\ 13.\ 44,\ 6$

## 427.

### Correctio latitudinis.

$\beta = 52^o.21'.32'',2$ . . $tg.\beta = 0.1128073$

## 428.

### Calculus anguli $\varphi$.

$\varphi = 30.15'.18'',6$ . . . . $tg.\varphi = 8.7549190$
$\varphi + \varepsilon = 20.\ 12.\ 34,\ 4$

## 429.

### Diff. parallaxium longit.

$L = 85^o.37'.05'',3$
$L' = 84.\ 59.\ 09,\ 2$ . . . . $tg.L' = 1.0568163$
$p = -\ 2276'',1$

430.

Latitudo lunae apparens.

$\lambda' = -1824'',5$ . . . . $\text{tg.}\,\lambda' = 7.9467367.n$

431.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 991'',2$ . . . . $\sin.\,\frac{1}{2}D' = 7.6817644$

432.

Logarith. pro reduct. spatii ad tempus.

$\tau' = 17h.14'.$
$\mu = 34'.19'',60$
$\log.\,h' = 0.2425205$

433.

Solutio trianguli SMN.

$fn = 1937,23$
$mn = 1824.46$
$fm = 651,31$ . . . . $\log.\,fm = 2.8137883$
$p = 2276,10$
$SM = 2927,41$

$SM' = 1^h.25'.16'',9$ . . . . $\log.\,SM' = 3.7090041$

434.

Tempus $\delta$ incorrectum.

$T' = 6^h.39'.42'',0$
$SM' = -1.\ 25.\ 16,\ 9$
$\delta = 5^h.14'.25'',1$

## 435.

Eclipsis solis Ratisbonae a celeberr. Heinrich observata, ex litteris ad me datis:

Finis = 6h.44′.37″,00 temp. solar. med.

## 436.

Diff. merid. Parisios inter et Ratisbonam = — 39′.11″.,4 temp.
Elevatio poli = 49°.0′.57″

## 437.

### Elementa e tabulis desumpta.

$l = 84°.48'.26'',0$
$A = 84.\ 18.\ 39,\ 0$
$L = 85.\ 43.\ 08,\ 6$
$\lambda = +\ 13.55,\ 2$
$\alpha = 185.\ 27.\ 54,\ 0$

## 438.

### Correctio latitudinis.

$\beta = 48°.50'.44''$ . . $\text{tg.}\beta = 0.0584747$

## 439.

### Calculus anguli $\varphi$.

$\varphi = -40.45'.30'',0$ . . . . $\text{tg.}\varphi = 8{,}9203341.n$
$\varphi + \epsilon = 18.\ 42.\ 23,\ 0$

## 440.

### Differentia parallaxium longitudinis.

$L = 85°.43'.08'',6$
$L' = 85.\ 02.\ 37.\ 5$ . . . . $\text{tg.}L' = 1{,}0618847$
$p = -\ 2431,\ 1$

## 441.

Latitudo lunae apparens.

$\lambda' = -1753'',3$ .... $tg.\lambda' - 7,9294472.n$

## 442.

Semidiameter lunae geocentrica.

$\frac{1}{2}D' = 990'' 6$ .... $\sin \frac{1}{2}D' = 7,6815048$

## 443.

Logarith. pro reductione spatii ad tempus.

$\tau' = 17h.18'$
$\mu = 34'.19'',68$
$\log.h = 0.2425053$

## 444.

Solutio trianguli Smn.

$fn = 1936'',63$
$mn = 1754, 26$
$fm = 822, 56$ .... $\log.fm = 2,9151708$
$p = 2431, 10$
$SM = 3253, 66$

$SM' = 1h.34'.47'',1$ .... $\log.SM' = 3.7548975$

## 445.

Tempus $\delta$ incorrectum.

$T = 6h.44'.37'',0$
$SM' = -1. 34. 47, 1$
$\delta = 5h.09'.49'',9$

## 446.

Eclipsis solis Cremifani a celeb. Astsonomn Dörflinger observata, ex litteris ad me datis:

$$\left.\begin{array}{l}\text{Initium} = 5^h.48'.33'',7 \\ \text{Finis} \;\; = 6.\ 35.\ 02,\ 2\end{array}\right\}\ \text{temp. solari medio.}$$

## 447.

Diff. merid. Parisios inter et Cremtfanum $= -'47.12'',0$ temp.
Elevatio poli $= +48^o.03'.36''$

## 448.

Elementa e tabulis desumpta.

| Initium. | | Finis. |
|---|---|---|
| $l = 84^o.45'.53'',1$ | . . | $84^o.52'.19'',1$ |
| $A = 84.\ 16.01,\ 3$ | . . | $84.\ 22.39,\ 9$ |
| $L = 85.\ 03.55,\ 8$ | . . | $85.\ 43.23,\ 6$ |
| $\lambda = -\ 17.32,\ 8$ | . . | $-\ 13.53,\ 8$ |
| $\varkappa = 171.24.26,\ 8$ | . . | $187.\ 34.12,\ 9$ |

## 449.

Correctio latitudinis.

$\beta = 47^o.53'.20'',9$ . . . . . $tg.\beta = 0.0438729$

## 450.

Calculi anguli $\varphi$.

$\varphi \equiv 70.41'.28'',7$ . . $tg.\varphi = 9.1304971$ | $9.0758497$ . . . . $\varphi = 60.47'.27'',5$
$\varphi + \varepsilon = 31.\ 09.21,\ 7$ | $\varphi + \varepsilon = 16.\ 40.25,\ 5$

## 451.

Differentia parallaxium longit.

$L = 85^o.03'55'',8$ | $L = 85^o.43'.23'',6$
$L = 84.\ 21.57,\ 9$ . . . $tg.L' = 1.0059112$ | $1.0616184$ . . . . . $L' = 85.\ 02.26,\ 6$
$p = \ \ 2517''9$ | $p = -2457'',0$

## 452.

### Latitudo lunae apparens.

| Initium. | | | Finis. |
|---|---|---|---|
| $\lambda' = -1265'',5$ . . . | tg. $\lambda' = 7,7878406.n$ | $7,9296239.n$ . . . . . | $\lambda' = -1754'',0$ |

## 453.

### Semidiameter lunae geocentrica.

| | | | |
|---|---|---|---|
| $\frac{1}{2}D' = 992'',69$ . . | sin. $\frac{1}{2}D' = 7.6823863$ | $7.6812869$ . . . . . | $\frac{1}{2}D' = 990'',17$ |

## 454.

### Logarith. pro reduct. spatii ad tempus.

| | |
|---|---|
| $\tau' = 16^h.46'$ | $17^h.18'$ |
| $\mu = 34.19'',01$ | . . 34. 19'',68 |
| log. $h' = 0,2426442$ | 0.2425030 |

## 455.

### Solutio trianguli Smn.

| | | | |
|---|---|---|---|
| $fn = 1938,72$ | | | $fn = 1936,20$ |
| $mn = 1265,46$ | | | $mn = 1753,96$ |
| $fm = 1468,7$ . . . | log. $fm = 3.1669499$ | $2,9138444$ . . . . . | $fm = 820,0$ |
| $p = 2517,9$ | | | $p = 2457,0$ |
| $SM = 1049,2$ | | | $SM = 3277,0$ |
| $SM' = 30'.34'',4$ . . | log. $SM' = 3,2635025$ | $3,7579794$ . . . . | $SM' = 1^h.35'.27'',4$ |

## 456.

### Tempus $\delta$ incorrectum.

| | |
|---|---|
| $T = 5^h.48'.33'',7$ | $6^h.53'.02'',2$ |
| $SM' = -30.34,4$ | $-1.35.27,4$ |
| $\delta = 5^h.17'.59'',3$ | $5^h.17'.34'',8$ |

Ex quibus conjunctionum calculis, illa methodo, errores tabularum lunarium eliminandi cum cautione atque provisione adhibita, hae quidem mihi prodierunt correctionum aequationes:

| | | |
|---|---|---|
| Monachii | I. | $12{,}23 + 6{,}1031\, d\,\mathfrak{f}n + 4{,}8430\, d\lambda - 3{,}7727\, d\pi = 0$ |
| Romae | II. | $3{,}79 - 5{,}1281\, d\,\mathfrak{f}n - 3{,}5814\, d\lambda + 2{,}5991\, d\pi = 0$ |
| Romae | III. | $7{,}51 + 5{,}1293\, d\,\mathfrak{f}n + 3{,}5839\, d\lambda - 2{,}6017\, d\pi = 0$ |
| Pataviae | IV. | $9{,}26 + 5{,}6066\, d\,\mathfrak{f}n + 4{,}2206\, d\lambda - 3{,}1834\, d\pi = 0$ |
| Mediolani | V. | $11{,}60 + 5{,}3866\, d\,\mathfrak{f}n + 3{,}9321\, d\lambda - 2{,}8943\, d\pi = 0$ |
| Madriti | VI. | $3{,}42 + 4{,}2364\, d\,\mathfrak{f}n + 2{,}1690\, d\lambda - 1{,}2447\, d\pi = 0$ |
| Aranjuctii | VII. | $9{,}58 + 4{,}2158\, d\,\mathfrak{f}n + 2{,}1294\, d\lambda - 1{,}2141\, d\pi = 0$ |
| Pampelonae | VIII. | $10{,}20 + 4{,}4778\, d\,\mathfrak{f}n + 2{,}5993\, d\lambda - 1{,}6209\, d\pi = 0$ |
| Kinderhookii | IX. | $12{,}35 + 3{,}5118\, d\,\mathfrak{f}n + 0{,}0981\, d\lambda + 0{,}8367\, d\pi = 0$ |
| Fort Orange | X. | $53{,}27 + 3{,}5140\, d\,\mathfrak{f}n + 0{,}1536\, d\lambda - 0{,}1591\, d\pi = 0$ |
| Amstelodami | XI. | $13{,}02 + 6{,}2407\, d\,\mathfrak{f}n - 5{,}0123\, d\lambda + 3{,}9087\, d\pi = 0$ |
| Trajecti ad Rhenum | XII. | $16{,}2 - 6{,}2065\, d\,\mathfrak{f}n - 4{,}9722\, d\lambda + 3{,}8688\, d\pi = 0$ |
| Turigi | XIII. | $10{,}2 + 5{,}6384\, d\,\mathfrak{f}n + 4{,}2613\, d\lambda - 1{,}2924\, d\pi = 0$ |
| Oehsenhusii | XIV. | $12{,}4 + 5{,}9038\, d\,\mathfrak{f}n + 4{,}5973\, d\lambda - 3{,}5300\, d\pi = 0$ |
| Lipsiae | XV. | $0{,}8 - 7{,}0975\, d\,\mathfrak{f}n - 6{,}0173\, d\lambda + 4{,}9138\, d\pi = 0$ |
| Vratislaviae | XVI. | $9{,}31 + 8{,}0037\, d\,\mathfrak{f}n + 7{,}0379\, d\lambda - 5{,}8340\, d\pi = 0$ |
| Budae | XVII. | $7{,}32 - 7{,}0231\, d\,\mathfrak{f}n - 5{,}9320\, d\lambda + 4{,}9919\, d\pi = 0$ |

Et methodum cum cautione, et omnium aequationum momenta diligentissime perpendenti mihi providentius videbatur, sequentes tantum inferre conclusiones ex conjunctionibus:

I. . . . . $d\pi = 3{,}2417 + 1{,}6177\, d\,\mathfrak{f}n + 1{,}2837\, d\lambda$
V. . . . . $d\pi = 4{,}0078 + 1{,}8611\, d\,\mathfrak{f}n + 1{,}3585\, d\lambda$
IX. . . . $d\pi = -99{,}8384 - 28{,}3898\, d\,\mathfrak{f}n - 0{,}7930\, d\lambda$

I et V. . . . $0 = 0{,}7661 + 0{,}2434\, d\,\mathfrak{f}n + 0{,}0748\, d\lambda$ . . . A
I et IX. . . . $0 = 103{,}0801 + 30{,}0075\, d\,\mathfrak{f}n + 2{,}0767\, d\lambda$ . . . B

A. . . . $d\lambda = -10{,}2419 - 3{,}2540\, d\,\mathfrak{f}n$
B. . . . $d\lambda = -49{,}6365 - 14{,}4496\, d\,\mathfrak{f}n$

A et B. . $0 = 39{,}3946 + 11{,}1956\, d\,\mathfrak{f}n$ . . . . C

C. . . . . $d\,\mathfrak{f}n = -3{,}5184$

A seu B. . . $d\lambda = +1{,}2081$
Denique . . $d\pi = -0{,}8998$

Ex cognito igitur errore latitudinis lunae $d\lambda = +1,1081$ (quem quidem celeberrimus et mihi amicissimus Humbold, Voyage etc. tantum 0'',04 majorem ex occultationibus Madriti et Ultrajecti habitis statuit) atque ad calculos omnium revocato colligitur:

| | |
|---|---|
| I. | $18,08 + 6,1031\, d\,fn - 3,7727\, d\pi = 0$ |
| II. | $-0,53 - 5,1281\, d\,fn + 2,5991\, d\pi = 0$ |
| III. | $11,84 + 5,1293\, d\,fn - 2,6017\, d\pi = 0$ |
| IV. | $14,36 + 5,6066\, d\,fn - 3,1834\, d\pi = 0$ |
| V. | $16,35 + 5,3866\, d\,fn - 2,8943\, d\pi = 0$ |
| VI. | $6,04 + 4,2364\, d\,fn - 1,2447\, d\pi = 0$ |
| VII. | $12,15 + 4,2158\, d\,fn - 1,2141\, d\pi = 0$ |
| VIII. | $13,34 + 4,4778\, d\,fn - 1,6209\, d\pi = 0$ |
| IX. | $12,47 + 3,5118\, d\,fn - 0,8367\, d\pi = 0$ |
| X. | $53,45 + 3,5140\, d\,fn - 0,1591\, d\pi = 0$ |
| XI. | $7,00 - 6,2407\, d\,fn + 3,9807\, d\pi = 0$ |
| XII. | $10,19 - 6,2065\, d\,fn + 3,8688\, d\pi = 0$ |
| XIII. | $15,36 + 5,6384\, d\,fn - 3,2036\, d\pi = 0$ |
| XIV. | $17,96 + 5,9038\, d\,fn - 4,5973\, d\pi = 0$ |
| XV. | $-6,47 - 7,0975\, d\,fn + 4,9138\, d\pi = 0$ |
| XVI. | $17,82 + 8,0037\, d\,fn - 5,8340\, d\pi = 0$ |
| XVII. | $0,15 - 7,0231\, d\,fn + 4,9919\, d\pi = 0$ |

Ex conjunctionibus tandem:

| | | | |
|---|---|---|---|
| I et VII | sequitur $d\,fn = -2,8288$ | . . . | $d\pi = +0,1419$ |
| VII et XIV | . . . . $d\,fn = -2,7199$ | . . . | $d\pi = +0,5215$ |
| IV et VI | . . . . . $d\,fn = -2.6903$ | . . . | $d\pi = +0,6246$ |
| Omnium medium | $d\,fn = -2,746$ | | $d\pi = +0,429$ |

Substitutis denique valoribus

$$d\lambda = +1,2081$$
$$d\,fn = -2,746$$
$$d\pi = +0,429$$

correcta conjunctionis tempora prodeunt:

| | | | | |
|---|---|---|---|---|
| I. | Monachii . . . | 5h.07'.07'',57 + 1',2 = 5h.07',08'',8 | | medium. |
| II. | Romae Coll. . | 5. 10. 48, 86 — 4,8 = 5. 10. 44, 1 | | eclipsis initium. |
| III. | — — . . . | 5. 10. 52, 65 + 5,8 = 5. 10. 58, 4 | | defectionis finis. |
| IV. | Patavii . . . . | 5. 08. 22, 5 + 0,7 = 5. 08. 23, 2 | | medium. |
| V. | Mediolani . . | 4. 57. 30, 1 + 0,6 = 4. 57. 30, 7 | - | - |
| VI. | Madriti . . . | 4. 06. 05, 5 + 0,0 = 4. 06. 05, 5 | - | - |
| VII. | Aranjuctii . . | 4. 06. 25, 1 + 0,0 = 4. 06. 25, 1 | - | - |
| VIII. | Pampelonae . | 4. 14. 15, 8 + 0,2 = 4. 14. 16, 0 | - | - |
| IX. | Kinderhookii | 11. 25. 28, 5 — 2,8 = 11. 25. 31, 3 | - | - |
| X. | Fort Orange | 11. 25. 45, 9 — 0,1 = 11. 25. 45, 8 | - | - |
| XI. | Amstelodami | 4. 40. 22, 3 — 5,0 = 4. 40. 17, 3 | | initium. |
| | | 4. 40. 35, 3 + 7,5 = 4. 40. 42, 8 | | finis. |
| XII. | Ultrajecti . . | 4. 41. 14, 0 — 5,0 = 4. 41. 09, 0 | | initium. |
| | | 4. 41. 30, 2 + 7,6 = 4. 41. 37, 8 | | finis. |
| XIII. | Turigi . . . . | 4. 55. 09, 1 + 0,9 = 4. 55. 01, 0 | | medium. |
| XIV. | Ochsenhusii | 5. 0. 36, 8 + 0,8 = 5. 0. 37, 6 | | medium. |
| XV. | Lipsiae . . . | 5. 10. 23, 4 — 5,0 = 5. 10. 18, 4 | | initium. |
| | | 5. 10. 24, 2 + 9,0 = 5. 10. 33, 2 | | finis. |
| XVI. | Vratislaviae | 5. 28. 42, 5 + 2,9 = 5. 28. 45, 4 | | medium. |
| XVII. | Budae . . . | 5. 36. 54, 9 — 5,3 = 5. 36. 49, 6 | | initium. |
| | | 5. 37. 02, 2 + 8,9 = 5. 37. 11, 1 | | finis. |
| XVIII. | Cracoviae . . | 5. 40. 37, 7 — 6,0 = 5. 40. 31, 1 | | initium. |
| XIX. | Agriae . . . | 5. 42. 31, 3 — 5,5 = 5. 42. 25, 8 | - | - |
| XX. | Snidnitii . . | 5. 26. 44, 6 — 4,4 = 5. 26. 40, 2 | - | - |
| XXI. | Hamburgi . | 5. 0. 44, 4 — 5,4 = 5. 0. 39, 0 | - | - |
| XXII. | Luconiae . . | 6. 01. 54, 2 — 6,2 = 6. 01. 48, 0 | - | - |
| XXIII. | Burgi . . . | 4. 41. 38, 4 — 4,9 = 4. 41. 33, 5 | - | - |
| XXIV. | In insula Leon | 3. 55. 58, 0 — 5,0 = 3. 55. 53, 0 | - | - |
| XXV. | Montalbani | 4. 26. 14, 1 — 3,5 = 4. 26, 10, 6 | - | - |
| XXVI. | Tolosae . . | 4. 26. 46, 0 — 4,6 = 4. 26. 41, 4 | - | - |
| XXVII. | Lutet. Paris. | 4. 30. 14, 7 — 4,9 = 4. 30. 09, 8 | - | - |
| XXVIII. | Pragae . . | 5. 18. 26, 8 — 5,2 = 5. 18. 21, 6 | - | - |
| XXIX. | Vindobonae | 5. 26. 15, 0 — 4,9 = 5. 26. 10, 1 | - | - |
| XXX. | Lilienthalii | 4. 56. 23, 7 — 5,0 = 4, 56. 18, 7 | - | - |
| XXXI. | Reikevici | 2. 53. 01, 2 + 7,3 = 2. 53. 08, 5 | | finis. |

Comparatis caute tantum iis conjunctionibus cum nostra, quas ex observationibus eorum locorum, quorum positio geographica jam pridem certius fuerat definita, effecimus, differentiam meridianorum speculae Caesaris astronomi-

cae Lutetiae Parisiorum et speculae Regis astronomicae Monachii constitueris ex observationibus habitis :

| | | | |
|---|---|---|---|
| Romae (collegio romanorum) | = . . . | — 37′.02″7 | medium. |
| Mediolani | = . . . . . | , 03, 1 | - - |
| Ochsenhusii | = , . . . . . | 03, 2 | - . |
| Vratislaviae | = . . . . . | 12, 4 | - - |
| Vindobonae | = . . . . . | 08, 8 | initium |
| Lilienthalii | = . . . . . | 37.06, 1 | - - |
| Burgi | = . . . . . | 09, 3 | - - |
| Amstelodami | = . . . . . | 02, 3 | - - |
| Ultrajecti | = . . . . . | 06, 9 | - - |
| Suidnitii | = . . . . . | 07, 8 | - - |
| Budae | = . . . . . | 06, 2 | - - |
| Pragae | = . . . . . | 07, 6 | - - |
| In insula Leon | = . . . . . | 06, 8 | - - |
| Cracoviae | = . . . . . | 0, 5 | - - |
| Patavii | = . . . . . | 36. 55, 6 | medium |
| Montalbani | = . . . . . | 37.01, 2 | initium |

Quorum omnium medium efficitur = 37.′05″,0 totque observationum una Patavina neglecta redit = — 37.′05,6 tempore, specula quidem Regis, quae Monachii est, a Parisiorum specula Caesaris, versus orientem distante. Ex nostris igitur defectionibus solis revolveris eodem; meridianorum enim differentia conficitur ipsa, quae in priori commentatione (Denkschriften der königl. Akademie für 1808 p. 374) ex occultationibus siderum inerrantium ad calculos revocatis fuit definita, in qua denique standum putamus. Quam quidem longitudinem Monachii tandem et nunc primum a nobis definitam tanto majoris operae pretii esse confidimus, cum ab illa totius regni Bojariae, quod mensi sumus, delineatio proximo semestri ab instituto regio statistico topographico impensis augustissimi Regis in lucem edenda, totius baseos 21653,5 metrorum, triangulorumque omnium aeque ac $\tau_0$ Azimuth Schäftlariensis, super quo commentationem huic ipsi volumini paratam habuimus, quam vero in proximo Academiae volumine legeris, directio, atque situs unice pendeant. Observationes Lutetiae Parisiorum, Lipsiae, Madriti, Tolosae et Aranjuetii habitas, quamvis inde, si momentum et indolem, certitudinisque gradus observationum solis deficientis spectas, haud adeo abludens differentia meridianorum 37′.02″,7 prodiret, in complexionem non inferre religioni habui. Observationis enim Parisinae tempus, isto modo ut fuit, forsan per scripturae mendum editum, uno minuto primo in calculis nostris ex ingenio correximus positiones vero Madriti, Tolosae, Aranjuetii jamjam stabilitas esse confidentius haud statuerim.

Efficitur igitur ex conjunctionibus, si differentiam meridianorum tempore spectas:

I. Monachium, specula Regis astronomica $= -37'.05'',6$

II. Madritum $= +24'.\ 0'',6$
de Humboldt $= +24.04,\ 5$
Triesnecker $= +24.08,\ 9$

Quae quidem positiones quod inter se $9''$ differant, haud mirere, cum viri illustres et alias solis lunaeque tabulas adhibuerint, aliasque conjunctiones conjugaverint; conjunctionis enim tempora prodierunt

mihi $= 4^h.06'.05'',4$
de Humboldt $= 4.\ 06.\ 12,\ 0$
Triesnecker $= 4.\ 06.\ 02,\ 4$

Ceterum, et quod capnt est, Madriti positio etiam nunc vacillare mihi videtur, cum ipsae de Homboldtii conclusiones inter se discrepant, ut videre est in libro celeberrimo: Voyage d'Alexandre de Humboldt etc. quatrième part Astronomie etc.

III. Aranjuctium ad meos calculos $= +23'.38'',1$
de Humboldt ex eadem eclipsi solis $= +23.\ 46,\ 3$
ex observationibus chronometri $= +23.\ 20,\ 6$

Ex eadem eclipsi solis prodit differentia meridianorum Madritum (Plaza-Major) inter et Aranjuctium ad meos calculos $= 22'',6$
secundum de Humboldt $= 18,\ 3$

IV. Kinderhookium $= +5^h.04',37''.7$
collegit conjunctionem Lalande ex eadem observatione $4'',6$ serius, ergo differentiam meridianorum $= +5^h.04'.33''.1$

V. Fort Orange mihi prodit $= +5^h.04'.20'',3$
Simeoni de Witt ex aliis observationibus $= +5.\ 04.\ 29,\ 0$

VI. Amstelodamum $= -10'.11''2$
Triesnecker collegit ex aliis observationibus $= -10.\ 09,\ 5$

VII. Trajectum ad Rhenum ad meos calculos $= -11'.03'',9$
secundum Triesnecker $= -11.\ 12.\ 5$
ex litteris celeb. Van Beek ad me datis $= -11.\ 06,\ 5$

Celeb. Van Beck Calkoen ex eadem defectionis observatione ad calculos revocata (in connaissance des tems 1811 p. 428) longitudinis differentiam efficit $+11'.06'',4$. Tempora conjunctionis a nostris calculis discrepare, haud mirêre, si celeb. Calkoen, quamvis acutum alias astronomum, locum lunae ex connaissance des tems collegisse, quintum adeo terminum aequationum correctionis

neglexisse, et quod caput est, ex quinque tantum comparationibus observationum tantum quatuor locorum suam effecisse longitudinem perspexeris, cum quidem nostra, quam effecimus, Ultrajecti longitudo ex omnibus certissimisque observationibus fuit definita. Equidem, quod terminum quintum in correctionis aequationem haud invexerit astronomus, tantos errores tabb. lunae, quos invenit, longitudinis — 27″, latitudinis + 6″, (qui quidem ex nostris calculis multo minores — 7″8 et + 1″2 prodierunt) haud temere attribuerim.

VIII. Vratislavia = — 58′.38″,6
= — 58. 51, 0 Connoissance de tems 1809.
= — 58. 48, 3 ex litteris a celeb. Jungnitz ad me datis.

IX. Luconia ex initio = 1h.31′.41″,9
Triesnecker = 1. 31. 49, 5

X. Insula Leon = + 34′.10″,0
= + 34. 08, 5 secundum Triesnecker ex eadem solis defectione.
= + 34. 09, 0 de Humboldt ex aliis observationibus.

XI. Montalbanum = + 3′.55″,5
= + 3. 57, 0 Connoissance de temps 1809.
= + 3. 45, 7 Triesnecker ex eadem solis defect.

XII. Tolosa = + 3′.25″,2
= + 3. 35, 0 Connoissance de tems 1809 &.
= + 3. 22, 8 Triesnecker ex eadem solis defectione.

XIII. Lunae incursionem Amstelodami, Romae in collegio romano, Lipsiae, Ultrajecti, Budae et Burgi; excursionem vero Vratislaviae, Romae in specula Cactani, et in America in munimento Fort Orange nuncupato accuratius fuisse observatam ex meridianorum differentiis aliunde cognitis conjecerim, neque dicere fugerim, observationes Parisiis (unum minutum primum deduximus), Suidnitii, Luconiae et Hamburgi habitas in finis notatione aliquid scripturae mendi passas esse, neque fere idem alienum putaverim ab observationum Gottingae et Gabromagi habitarum notatione, cum hujus meridiani differentia aliunde illiusque positio olim a me occultationibus siderum inerrantium (= 30′.21″ Parisiis orientalior) satis accurate fuit definita; observationes Mediolani, Ochsenhusii habitas cum nostra apprime consentire patet. Differentiam meridianorum Ochsenhusium et Monachium inter mihi olim contigit constituere per duo, ab Augustissimi Regis munificentia accepta chronometra anglica, per Arnoldinum in capsa

argentea + 6′.31″,9, per Emeryanum in thecula aurea + 6′.32″,5 concentus admirabilis, at ex machinarum praestantia intellectu proclivis.

Haec fere habui dicere de natura et observationum et calculorum. Longitudinem denique lunae, cum latitudo supra sit excussa, ex tabulis effeci = 84°.44′.46″,4, tempore quidem 5ʰ.07′.08″,8 Monachii; at ex eclipsi id temporis eandem collegi = 84°.44′.38″,6. Ergo error longitudinis tabularum conficitur = — 07″,8.

Postremo de tabula, quae ad calcem cum decursum sit, omnium calculorum ἐπιχειρήματα ante oculos statuat, monuerim, lunae longitudinem errore, quem supra detexi — 7″,8 fuisse correctam, atque in calculos latitudinis lunae ad tempora conjunctionis subductos errorem + 1″,2 itidem fuisse invectum. Quae quidem latitudo, cum ex observationibus Mediolani, Ochsenhusii, Monachii habitis omnino eadem eruatur, phasium eclipsis intervallum accurate observatum fuisse intelligitur.

| | Phases observatae. | Conjunctio. | Longitudo lunae tempore conjunct. | Latitudo lunae tempore conjunct. | Differentia merid. ex eclipsi. | Differentia merid. ex aliis observ. |
|---|---|---|---|---|---|---|
| *Monachii* | I. 5h.35'.58",69 | 5 .07'.08",84 | = 8104'.38",6 | +19'.19",5 | 0h.0'.0",0 | |
| Seyffer. | F. 6. 44. 29. 76 | 5. 07. 08, 84 | | | | |
| *Romae* | 5. 42. 49, 26 | 5. 10. 44, 1 | | 19. 19, 6 | − 3. 35, 3 | −3'.32",4 |
| Conti et Calandrelli. | 7. 01. 0, 95 | 5. 10. 58, 4 | | | − 3. 49, 6 | |
| *Romae* | 5. 43. 02, 36 | 5. 11. 03, 5 | | 19. 19, 0 | − 3. 54, 7 | −3. 31, 9 |
| Scarpellini. | 7. 01. 0, 55 | 5. 10. 47, 3 | | | − 3. 38, 5 | |
| *Patavii* | 5. 38. 34, 15 | 5. 08. 22, 1 | | 19. 19, 6 | − 1. 13, 3 | −1. 04, 4 |
| Chiminello. | 6. 51. 38, 89 | 5. 08. 24, 3 | | | − 1. 15, 5 | |
| *Mediolani* | 5. 25. 58, 6 | 4. 57. 30, 9 | | 19. 19, 7 | + 9. 37, 9 | +9. 40, 6 |
| Oriani. | 6. 42. 41, 7 | 4. 57. 30, 5 | | | + 9. 38, 3 | |
| *Madriti* Don | 4. 27. 56, 29 | 4. 06. 08, 5 | | 19. 19, 9 | +1. 1. 0, 3 | +1. 1. 12, 9 |
| Felipe Bauza. | 6. 09. 16, 67 | 4. 06. 02, 5 | | | +1. 1. 06, 3 | |
| *Aranjuetii* | 4. 28. 40, 88 | 4. 06. 24, 7 | | 19. 19, 4 | +1. 0. 44, 1 | +1. 0. 54, 4 |
| Mégnié et Don Pedro Giraldo. | 6. 10. 14, 78 | 4. 06. 25, 5 | | | +1. 0. 43, 3 | |
| *Pampelonae.* | 4. 36. 14, 2 | 4. 14. 16, 1 | | 19. 18, 8 | +52. 52, 7 | +53. 16, 6 ad Vegae tabb. log. vol. II. |
| | 6. 11. 39, 12 | 4. 14. 15, 9 | | | +52. 52, 9 | |
| *In America,* Kinderhookii | 9. 49. 36, 73 | 23. 25. 32, 9 | | 19. 18, 3 | +5. 41. 35, 9 | |
| de Ferrer. | 0. 33. 46, 18 | 23. 25. 29, 7 | | | +5. 41. 39, 1 | |
| *In America,* Fort-Orange | 9. 50. 18, 24 | 23. 26. 07, 8 | | 19. 19, 4 | +5. 41. 01, 0 | +5. 41. 34, 6 ad Simeonis de Witt alias observation. |
| Simeon de Witt. | 0. 33. 15, 67 | 23. 25. 23, 9 | | | +5. 41. 34, 9 | |
| *Amstelodami* | 5. 02. 14, 27 | 4. 40. 17, 3 | | 19. 18, 9 | +26. 51, 5 | +26. 56, 1 |
| | 6. 12. 38, 89 | 4. 40. 42, 8 | | | +26. 26, 0 | |

| | Phases observatae. | Conjunctio. | Longitudo lunae tempore conjunct. | Latitudo lunae tempore conjunct. | Differentia merid. ex eclipsi. | Differentia merid. ex aliis observat. |
|---|---|---|---|---|---|---|
| *Ultrajecti* | | | | | | |
| van Beck Calkoen. | I. 5h.03′.26 | 4h.41′.09″,0 | | 19′.19″2 | +25′.59″,8 | +25′.59″,0 |
| van Beck Calkoen, de Utenhoven, Riemsdyk, Merkus. | F. 6. 14. 06 | 4. 41. 37, 8 | | | +25. 31. 0 | |
| *Turigi* | 5. 22. 06, 5 | 4. 55. 0, 2 | | 19. 19, 4 | +12. 08, 6 | +12. 15, 6 |
| Feer. | 6. 36. 24, 2 | 4. 55. 01, 8 | | | +12. 07, 0 | |
| *Ochsenhusii* | 5. 28. 24 | 5. 0. 38, 0 | | 19. 19, 6 | + 6. 30, 8 | + 6. 33, 9 |
| Kyene. | 6. 39. 24 | 5. 0. 37, 3 | | | + 6, 31, 5 | |
| *Lipsiae* | 5. 38. 30″,6 | 5. 10. 18, 4 | | 19. 19, 2 | — 3. 09, 6 | — 3. 02, 4 |
| Rüdiger. | 6. 39. 30, 9 | 5. 10. 33, 2 | | | — 3. 24, 4 | |
| *Vratislaviae* | 6. 0. 11, 35 | 5. 28. 42, 1 | | 19. 19, 9 | —21. 33, 3 | +21. 42, 7 |
| Jungnitz. | 6. 54. 22, 83 | 5. 28. 48, 8 | | | —21. 40, 0 | |
| *Budae* | 6. 10. 19, 37 | 5. 36. 49, 6 | | 19. 19, 2 | —29. 40, 8 | —29. 40, 4 |
| Taucher. | 7. 09. 29, 89 | 5. 37. 11, 1 | | | —30. 09, 6 | |
| *Cracoviae* | 6. 14. 06, 4 | 5. 40. 31, 1 | | 19. 18, 9 | —33. 22, 3 | —33. 20, 4 |
| Kodeseh. | 7. 05. 18, 4 | 5. 39. 19, 3 | | 19. 24. 6 | —32. 18, 2 | |
| *Agriae* | 6. 16. 37, 38 | 5. 42. 25, 8 | | 19. 18, 4 | —35. 17, 0 | —35. 04, 4 |
| in specula Lycei. Dursack. | 7. 14. 07, 69 | 5. 44. 53, 69 | | 19. 21, 5 | —37. 52, 2 | |
| *Suldnitii Silesiae* de Lindener, de Forell. | 5. 57. 51, 9 | 5. 26. 40, 2 | | 19. 18, 8 | —19. 31, 4 | —19. 25, 3 |
| | 6. 56. 36, 6 | 5. 31. 59, 4 | | 19. 02, 2 | —24. 57, 9 | |
| *Hamburgi* | 5. 26. 25, 5 | 5. 0. 39, 0 | | 19. 19, 1 | + 6. 29, 8 | + 6. 33, 6 |
| Eimbke. | 6. 26. 28, 0 | 5. 02. 36, 1 | | 19. 13, 7 | + 4. 25, 4 | |
| *Luconiae.* | 6. 38. 46, 4 | 6. 01. 48, 0 | | 19. 19, 3 | —54. 39, 2 | —54. 43, 9 |
| | 7. 20. 06, 8 | 6. 03. 47, 2 | | 19. 13, 3 | —56. 45, 7 | |

| | Phases observatae. | Conjunctio. | Longitudo lunae tempore conjunct. | Latitudo lunae tempore conjunct. | Differentia merid. ex eclipsi. | Differentia merid. ex aliis observat. |
|---|---|---|---|---|---|---|
| *In Foro Sebusiuno* | I. 5h.06'.51'',0 | 4h.41'.33'',5 | | 19'.19'',7 | +25'.35'',3 | +25'.31'',6 |
| Michalet. | F. 6. 27. 21, 0 | 4. 40. 45, 7 | | 19. 23, 5 | +26. 15, 8 | |
| In specula regia *Insulae Leon* | 4. 18. 45 | 3. 55. 53, 0 | | 19.19, 1 | +1.11.15,8 | +1.11.14, 6 |
| Julian Canelas. | — | — | | — | — | |
| *Montalbani* | 4. 49. 46 | 4. 26. 10, 6 | | 19.19, 2 | + 40.58, 2 | + 41.02, 6 |
| Duc - la - Chapelle. | — | — | | — | — | |
| *Tolosae* | 4. 50. 29 | 4. 26. 41, 4 | | 19.18, 2 | + 40.27, 6 | + 40.40, 6 |
| Vidal. | — | — | | — | — | |
| *Lutetiae Parisiorum* | 4. 51. 41 | 4. 30. 09, 8 | | 19.19, 0 | + 36.59, 0 | + 37.05, 6 |
| Messier. | — | — | | — | — | |
| *Pragae* | 5. 48. 20, 84 | 5. 18. 21, 6 | | 19.19, 2 | — 11.12, 8 | — 11.13, 4 |
| David. | — | — | | — | — | |
| *Vindobonae* | 5. 57. 55, 0 | 5. 26. 10, 1 | | 19.19, 7 | — 19.01, 3 | — 19.04, 4 |
| Triesnecker. | — | — | | — | — | |
| *Lilienthalii* | 5. 21. 14, 1 | 4. 56. 18. 7 | | 19.19, 3 | + 10.50, 1 | + 10.55, 6 |
| Bessel. | — | — | | — | — | |
| *Reikevici* | — | — | | — | — | — |
| Wetlesen. | 4. 02. 47, 26 | 2. 53. 08, 5 | | 19.20, 5 | —2.14. 0, 3 | |
| *Gottingae* | — | — | | — | — | — |
| Mayer, Thiebaud, et Harding. | 6. 31. 14, 84 | 5. 0. 44, 0 | | 19.19, 4 | + 6.17, 5 | + 6.44, 6 |
| *Neapolis* | 5. 51. 18, 6 | 5. 17. 57, 5 | | 19.17, 4 | — 10.43, 8 | — 10.20, 4 |
| Cassela. | — | — | | — | — | |

| | Phases observatae. | Conjunctio. | Longitudo lunae tempore conjunct. | Latitudo lunae tempore conjunct. | Differentia merid. ex eclipsi. | Differentia merid. ex aliis observat. |
|---|---|---|---|---|---|---|
| *Brinae* | —— | —— | | —— | —— | —— |
| Dr. Schindler, et Knittelmayer. | 6h.58′.06″,3 | 5h.27′.32″,6 | | 19′,19″,0 | —20′.31″,1 | —19′.59″,6 |
| *Berolini* | —— | —— | | —— | —— | —— |
| Bode, Olbers, de Humboldt, Tralles. | 6. 39. 40, 5 | 5. 14. 25, 1 | | 19. 19, 9 | —07. 11, 4 | —07. 04, 4 |
| *Ratisbonae* | —— | —— | | —— | —— | —— |
| Placid. Heinrich | 6. 44. 37, 0 | 5. 09. 49, 9 | | 19. 18, 6 | — 2. 36, 2 | — 2. 05, 8 |
| *Gabromagi* | 5. 48. 33, 7 | 5. 17. 59,3 | | 19.18,0 | —10. 46, 2 | —10. 06, 4 |
| Derflinger. | 6. 53. 02, 2 | 5. 17. 34,8 | | | —10. 33, 2 | |