

| Zonc. | Nr. | Größe. | AR. | Decl. | Zonc. | Nr. | Größe. | AR. | Decl. |
|-------|-----|--------|--|--|-------|-----|--------|--|--|
| 303 | 105 | 9 | 15 ^h 57 ^m 31 ^s 80 | -18 ^o 57' 48 ^u 0 | 303 | 107 | 7 | 15 ^h 59 ^m 28 ^s 97 | -17 ^o 49' 54 ^u 6 |
| 303 | 104 | 9 | 57 46,24 | 18 14 41,5 | 207 | 133 | 8 | 16 0 21,86 | 18 35 27,9 |
| 303 | 106 | 8 | 58 43,16 | 17 57 27,1 | 303 | 108 | 7.8 | 22,27 | 26,7 |
| 207 | 131 | 8 | 43,21 | 26,9 | 303 | 109 | 8 | 0 38,88 | 19 3 15,0 |
| 207 | 132 | 6.7 | 15 59 28,91 | -17 49 52,4 | 303 | 110 | 6.7 | 16 1 17,36 | -17 56 13,3 |

Fr. Argelander.

Elemente und Ephemeride des von Herrn Dr. *d'Arrest* 1851 Juni 27 entd. Cometen,
von Herrn *G. Rümker*.

Berlin 1851. Juli 26.

Elemente

berechnet aus der Leipziger Beobachtung von Juni 29 und den beiden Berliner Beobachtungen des Herrn *Luther* von Juli 5 und Juli 23.

| | | |
|----------------------|--------------------------------------|-------------------------|
| T | 1851 Juli 8,96106 m. Berl. Zt. | } Sch. Aequin. Juli 5,5 |
| π | 328 ^o 12' 48 ^u | |
| Ω | 153 29 21 | |
| i | 15 26 9 | |
| log. $q = 0,0942738$ | | |
| Bewegung direct. | | |

Diese Elemente stellen die mittlere Beobachtung dar: R. — B. +1' 30^u 2 in Länge
+0 0,8 in Breite.

Ephemeride für 12^h mittl. Berl. Zeit.

| 1851 | AR. in Zeit. | Decl. | log. Δ | 1851 | AR. in Zeit. | Decl. | log. Δ |
|----------|--|-----------------------|---------------|---------|--|-----------------------|---------------|
| Juli 27 | 2 ^h 32 ^m 11 ^s | +9 ^o 33' 8 | 9,93170 | Aug. 20 | 3 ^h 37 ^m 17 ^s | +5 ^o 40' 4 | 9,95728 |
| 28 | 35 33 | 26,5 | | 21 | 39 18 | 28,6 | |
| 29 | 38 52 | 19,0 | | 22 | 41 15 | 16,7 | |
| 30 | 42 7 | 11,2 | | 23 | 43 8 | 5 4,7 | |
| 31 | 45 19 | 9 3,1 | 9,93586 | 24 | 44 59 | 4 52,5 | 9,96152 |
| August 1 | 48 27 | 8 54,8 | | 25 | 46 46 | 40,3 | |
| 2 | 51 32 | 46,3 | | 26 | 48 29 | 27,9 | |
| 3 | 54 33 | 37,6 | | 27 | 50 10 | 15,5 | |
| 4 | 2 57 30 | 28,6 | 9,94005 | 28 | 51 47 | 4 3,0 | 9,96566 |
| 5 | 3 0 24 | 19,4 | | 29 | 53 20 | 3 50,4 | |
| 6 | 3 15 | 10,1 | | 30 | 54 50 | 37,8 | |
| 7 | 6 3 | 8 0,5 | | 31 | 56 18 | 25,1 | |
| 8 | 3 8 47 | +7 50,7 | 9,94428 | Sept. 1 | 3 57 42 | +3 12,3 | 9,96972 |

Vollmond.

G. Rümker.

Elements of Irene, by *Norman Pogson*, from the following observations.

| | Greenw. M. T. | AR. | N. P. D. | |
|-------------|--|---|--|------------------------|
| 1851 May 21 | 12 ^h 5 ^m 41 ^s 8 | 16 ^h 2 ^m 11 ^s 99 | 103 ^o 26' 28 ^u 5 | Cambridge Liverpool |
| 31 | 10 53 59,1 | 15 52 23,74 | 103 45 38,0 | |
| June 10 | 12 58 36,8 | 15 43 41,79 | 104 12 24,4 | |

Epoch June 1. 0^h Greenwich M. T.

| | | |
|--------------|----------------|--|
| Mean Anomaly | 48° 13' 33" 72 | } Mean Equinox June 1. 0 ^h |
| π | 178 37 41,88 | |
| Ω | 86 50 1,60 | |
| i | 9 6 22,08 | |
| Φ | 9 47 20,75 | |
| e | 0,1700220 | |
| Log. a | 0,4126288 | |
| Log. q | 0,3316958 | |
| Log. μ | 2,9310634 | |
| μ | 853"2248 | |

Sidereal period 1518,94345 days.

The middle observation is represented in longitude within +0"42, and in latitude within -0"08; observed — computed place. — The accompanying ephemeris is for Greenwich mean midnight, and by an observation of Mr. *Hartnup's*, at Liverpool, with which he kindly favored me, on July 16, the Right Ascension was 2' of time too large, the N. P. D. exact; it will therefore I trust be sufficient to find the planet during the remainder of its apparition.

| 1851 | AR. | N. P. D. | 497'8 \times Δ | Hor. Par. |
|---------|---|------------|----------------------------------|-----------|
| July 14 | 15 ^h 33 ^m 19 ^s | 106° 35' 8 | 14 ^m 9 ^s 9 | 5"03 |
| 15 | 33 31 | 41,1 | | |
| 16 | 33 44 | 46,4 | | |
| 17 | 33 59 | 51,7 | | |
| 18 | 34 16 | 106 57,1 | 14 34,1 | 4,89 |
| 19 | 34 34 | 107 2,5 | | |
| 20 | 34 54 | 8,0 | | |
| 21 | 35 15 | 13,5 | | |
| 22 | 35 38 | 19,0 | 14 59,2 | 4,75 |
| 23 | 36 2 | 24,5 | | |
| 24 | 36 28 | 30,1 | | |
| 25 | 36 55 | 35,8 | | |
| 26 | 15 37 24 | 107 41,5 | 15 24,9 | 4,62 |

| 1851 | AR. | N. P. D. | 497'8 \times Δ | Hor. Par. |
|---------|---|------------|-----------------------------------|-----------|
| July 27 | 15 ^h 37 ^m 54 ^s | 107° 47' 2 | | |
| 28 | 38 26 | 52,9 | | |
| 29 | 38 59 | 107 58,6 | | |
| 30 | 39 34 | 108 4,3 | 15 ^m 51 ^s 2 | 4"49 |
| 31 | 40 10 | 10,0 | | |
| Aug. 1 | 40 47 | 15,8 | | |
| 2 | 41 25 | 21,6 | | |
| 3 | 42 5 | 27,4 | 16 18,1 | 4,37 |
| 4 | 42 46 | 33,2 | | |
| 5 | 43 28 | 39,1 | | |
| 6 | 44 12 | 44,9 | | |
| 7 | 44 58 | 50,8 | 16 45,5 | 4,25 |
| 8 | 45 45 | 108 56,7 | | |
| 9 | 46 32 | 109 2,6 | | |
| 10 | 47 21 | 8,5 | | |
| 11 | 48 11 | 14,4 | 17 13,2 | 4,14 |
| 12 | 49 2 | 20,3 | | |
| 13 | 49 54 | 26,2 | | |
| 14 | 50 48 | 32,1 | | |
| 15 | 51 43 | 38,0 | 17 41,2 | 4,03 |
| 16 | 52 39 | 43,9 | | |
| 17 | 53 36 | 49,8 | | |
| 18 | 54 34 | 109 55,6 | | |
| 19 | 55 34 | 110 1,4 | 18 9,4 | 3,93 |
| 20 | 56 35 | 7,2 | | |
| 21 | 57 36 | 13,1 | | |
| 22 | 58 38 | 18,9 | | |
| 23 | 15 59 41 | 24,7 | 18 37,9 | 3,83 |
| 24 | 16 0 46 | 30,5 | | |
| 25 | 1 51 | 36,3 | | |
| 26 | 2 57 | 42,1 | | |
| 27 | 4 4 | 47,9 | 19 6,5 | 3,73 |
| 28 | 5 12 | 53,7 | | |
| 29 | 6 21 | 110 59,5 | | |
| 30 | 7 31 | 111 5,2 | | |
| 31 | 16 8 42 | 111 10,9 | 19 35,3 | 3,64 |

Beobachtungen der Irene und Hebe am Fraunhofer'schen Equatoreal der Durhamer Sternwarte, von Herrn R. C. Carrington. (Fortsetzung von Nr. 764 p. 323).

| Set. | 1851 | Greenw. M. T. | App. R. A. | Log. $\frac{P}{p}$ | App. N. P. D. | Log. $\frac{q}{p}$ | No. of Comps. in | |
|------|---------|---|--|--------------------|----------------|--------------------|------------------|----------|
| | | | | | | | R. A. | N. P. D. |
| 11 | June 10 | 12 ^h 11 ^m 41 ^s 1 | 15 ^h 43 ^m 43 ^s 32 | +8,210 | 104° 12' 13" 3 | -9,9628 | 24 | 8 |
| 12 | 12 | 12 10 4,4 | 42 14,37 | 8,240 | 18 31,7 | 9,9624 | 12 | 4 |
| 13 | 15 | 11 11 19,7 | 40 13,14 | 8,005 | 28 18,5 | 9,9672 | 7 | 7 |
| 14 | 15 | 12 16 44,9 | 40 11,33 | 8,315 | 28 23,6 | 9,9594 | 18 | 6 |
| 15 | 16 | 11 25 10,6 | 39 34,53 | 8,123 | 31 42,9 | 9,9656 | 24 | 8 |
| 16 | 17 | 11 51 12,0 | 38 57,35 | 8,258 | 104 35 18,0 | 9,9622 | 12 | 4 |
| 17 | 26 | 11 41 29,8 | 34 43,54 | 8,354 | 105 10 16,4 | 9,9588 | 24 | 8 |
| 18 | 26 | 12 6 5,9 | 34 42,86 | 8,415 | 10 18,6 | 9,9540 | 23 | 8 |
| 19 | 28 | 11 42 53,3 | 34 5,63 | 8,382 | 18 46,6 | 9,9573 | 8 | 4 |
| 20 | 29 | 11 20 51,8 | 33 49,46 | 8,332 | 23 5,3 | 9,9607 | 20 | 7 |
| 21 | 29 | 11 48 24,3 | 33 49,32 | 8,405 | 23 12,2 | 9,9554 | 12 | 6 |
| 22 | 30 | 11 19 46,9 | 33 35,04 | 8,843 | 27 31,5 | 9,9601 | 23 | 8 |
| 23 | July 4 | 11 22 0,8 | 15 32 54,97 | +8,393 | 105 45 56,4 | -9,9573 | 17 | 6 |

P is the Equ. Hor. Parallax in seconds of arc: *p* and *q* are the required corrections in time and arc respectively.