

| 1913 | T.m.di Mil. | $\Delta\alpha$ | $\Delta\delta$ | Cf. | Oss. | α app. | $\log p\Delta$ | δ app. | $\log p\Delta$ | Red. ad l. app. | * |
|---------|---|------------------------------------|----------------|-----|------|---|--------------------|---------------|----------------|---------------------------|----|
| Mag. 13 | 14 ^h 17 ^m 25 ^s | -0 ^m 48 ^s 81 | - 2' 7.8 | 10 | V | 20 ^h 27 ^m 5 ^s 04 | 9.453 _n | +16° 39' 27.7 | 0.667 | +1 ^s 25 - 13.3 | 3 |
| 23 | 10 13 16 | +0 14.57 | + 0 47.5 | 10 | V | 19 15 20.35 | 9.660 _n | +29 34 51.2 | 0.664 | +1.86 - 16.3 | 4 |
| 24 | 10 7 31 | +0 11.20 | + 2 25.6 | 6 | G | 19 4 55.63 | 9.601 _n | +30 59 27.6 | 0.643 | +1.94 - 16.3 | 5 |
| 25 | 10 9 23 | +0 22.48 | - 1 1.6 | 10 | V | 18 53 44.89 | 9.656 _n | +32 22 46.0 | 0.607 | +2.03 - 16.4 | 6 |
| 26 | 9 44 19 | +0 46.34 | -11 43.2 | 4 | G | 18 42 8.57 | 9.674 _n | +33 42 23.5 | 0.616 | +2.10 - 16.3 | 7 |
| 26 | 10 6 0 | +0 34.08 | -11 48.3 | 4 | G | 18 41 56.85 | 9.653 _n | +33 43 23.6 | 0.574 | +2.10 - 16.3 | 8 |
| 28 | 10 19 44 | +0 30.00 | + 1 52.3 | 10 | V | 18 16 9 | 9.612 _n | +36 14 | 0.455 | +2.30 - 15.9 | 9 |
| 29 | 10 4 44 | -0 41.94 | + 4 1.9 | 4 | G | 18 2 32.37 | 9.615 _n | +37 22 30.8 | 0.429 | +2.38 - 15.5 | 10 |
| 29 | 10 30 55 | -0 23.92 | - 3 54.9 | 4 | G | 18 2 18.98 | 9.572 _n | +37 23 42.3 | 0.371 | +2.39 - 15.5 | 11 |
| 31 | 10 24 24 | +1 52.15 | - 1 56.3 | 10 | V | 17 33 27.92 | 9.520 _n | +39 15 43.1 | 0.248 | +2.56 - 14.4 | 12 |
| Giug. 3 | 10 15 20 | -0 37.43 | + 0 30.4 | 4 | G | 16 48 32.98 | 9.388 _n | +41 4 22.1 | 0.013 | +2.75 - 12.2 | 13 |
| 3 | 10 33 7 | -0 49.48 | - 5 10.1 | 4 | G | 16 48 16.32 | 9.312 _n | +41 5 15.4 | 9.973 | +2.76 - 12.2 | 14 |
| 3 | 11 0 19 | +0 36.74 | - 5 50.0 | 4 | G | 16 47 59.14 | 9.255 _n | +41 5 50.8 | 9.893 | +2.76 - 12.1 | 15 |
| 7 | 9 56 17 | +0 47.15 | + 0 52.2 | 10 | V | 15 50 53.79 | 9.093 _n | +41 34 6.7 | 9.828 | +2.86 - 8.6 | 16 |
| 9 | 10 29 27 | +0 1.67 | + 7 17.6 | 2 | G | 15 24 48.24 | 8.561 | +41 6 50.0 | 9.811 | +2.84 - 7.1 | 17 |
| 10 | 10 15 2 | -0 2.04 | + 5 0.1 | 10 | V | 15 13 1.19 | 8.594 | +40 46 4.5 | 9.846 | +2.82 - 6.3 | 18 |

Posizioni medie delle stelle di paragone.

| * | α 1913.0 | δ 1913.0 | Autorità | * | α 1913.0 | δ 1913.0 | Autorità |
|---|--|-----------------|----------------|----|---|-----------------|----------------|
| 1 | 20 ^h 52 ^m 44 ^s 50 | +10° 38' 28.4 | Lpz I 8242 | 10 | 18 ^h 3 ^m 11 ^s 93 | +37° 18' 44.4 | Lu 7482 |
| 2 | 20 30 6.56 | +15 31 33.6 | Berl A 8257 | 11 | 18 2 40.51 | +37 27 52.7 | » 7479 |
| 3 | 20 27 52.60 | +16 41 48.8 | » 8231 | 12 | 17 31 33.21 | +39 17 53.8 | » 7190 |
| 4 | 19 15 3.92 | +29 34 20.0 | Cbr E. 9809 | 13 | 16 49 7.66 | +41 4 3.9 | Bo corr. 10779 |
| 5 | 19 4 42.49 | +30 57 18.3 | Lei 7117 | 14 | 16 49 3.04 | +41 10 37.7 | » 10778 |
| 6 | 18 53 20.38 | +32 24 4.0 | » 6986 | 15 | 16 47 19.64 | +41 11 52.9 | » 10764 |
| 7 | 18 41 20.13 | +33 54 23.0 | » 6833 | 16 | 15 50 3.78 | +41 33 23.1 | » 10203 |
| 8 | 18 41 20.67 | +33 55 28.2 | » 6834 | 17 | 15 24 43.73 | +40 59 39.5 | » 9968 |
| 9 | 18 15 37 | +36 12.6 | BD +36° 30' 88 | 18 | 15 13 0.41 | +40 41 10.7 | » 9866 |

Note.

1913 Maggio 7. La cometa presenta a tratti un punto più brillante della restante massa luminosa (G). — Magg. 12. Cielo splendido; splendore complessivo della cometa 11^m 0; osservazione difficile; astro diminuito rispetto al giorno 7 (G). — Magg. 23. Cielo splendido. Cometa d'aspetto nebuloso (con qualche concentrazione nebulosa?), di grandezza intorno a 10^m 5 (V). — Magg. 24. Piccola nebulosa di splendore complessivo 10^m 5 (G). — Magg. 25. Sereno, fuorchè all'orizzonte; pare intravedere un nucleo nella cometa stimata 10^m 5 (V). — Magg. 26. Splendore complessivo 10^m 5 circa (G). — Magg. 28. Sereno, grandezza stimata dell'astro 10^m

(V). — Magg. 29. Piccola nebulosa senza concentrazione centrale, difficile da puntare, splendore complessivo 10^m 5 (G). — Magg. 31. Sereno, grandezza complessiva della cometa tra 9^m 5 e 10^m, nucleo percettibile (V). — Giugno 3. Splendore complessivo tra 9^m 5 e 10^m. Massa luminosa biancastra senza contorno definito e senza parte centrale brillante. Piuttosto difficile da puntare (G). — Giugno 7. Splendore complessivo della cometa stimato intorno a 10^m 0; nucleo percettibile; tracce di coda verso SE (?) (V). — Giugno 10. Immagine dell'astro indebolita e come confusa; grandezza stimata 10^m 5; osservazione un po' difficile (V).

Milano, 1913 Settembre.

L. Gabba, L. Volta.

Beobachtungen von Kometen

am 189 mm-Äquatorial der Sternwarte in Stockholm von K. Bohlin und S. Cederstrand.

| 1913 | M.Z.Stockh. | $\Delta\alpha$ | $\Delta\delta$ | Vgl. | Bb. | α app. | $\log p\Delta$ | δ app. | $\log p\Delta$ | Red. ad l. app. | * |
|-------------------------|---|------------------------------------|----------------|------|-----|---|--------------------|---------------|--------------------|--------------------------|---|
| Komet 1913 b (Metcalf). | | | | | | | | | | | |
| Sept. 5 | 11 ^h 36 ^m 55 ^s | +1 ^m 48 ^s 58 | - 0' 23.2 | 7,4 | B | 6 ^h 45 ^m 29 ^s 77 | 9.684 _n | +58° 30' 39.0 | 0.779 | +2 ^s 77 - 3.4 | 1 |
| 6 | 10 23 40 | -6 40.26 | + 0 39.9 | 6,5 | C | 6 43 52.24 | 9.576 _n | +59 7 0.2 | 0.833 | +2.80 - 3.9 | 2 |
| 11 | 11 32 10 | +7 16.60 | - 1 6.4 | 4,5 | C | 6 31 24.69 | 9.778 _n | +62 48 28.9 | 0.707 | +3.43 - 4.3 | 3 |
| 25 | 12 10 57 | -0 59.34 | + 2 0.8 | 6,5 | C | 3 40 29.71 | 9.988 _n | +76 47 18.5 | 0.074 _n | +7.67 + 3.9 | 4 |
| 26 | 10 38 51 | -2 34.90 | - 6 33.5 | 6,6 | C | 3 6 47.28 | 0.089 _n | +77 18 32.9 | 9.647 _n | +7.95 + 6.6 | 5 |

| 1913 | M. Z. Stockh. | $\Delta\alpha$ | $\Delta\delta$ | Vgl. | Bb. | α app. | $\log p\Delta$ | δ app. | $\log p\Delta$ | Red. ad l. app. | * |
|--------|--|------------------------------------|----------------|------|-----|---|----------------|----------------|--------------------|--------------------|---|
| Okt. 1 | 11 ^h 10 ^m 5 ^s | -5 ^m 34 ^s 88 | — | 4,7 | C | 23 ^h 45 ^m 4 ^s 55 | 8.383 | — | — | +4 ^s 48 | 6 |
| 6 | 10 35 18 | +1 33.80 | -11' 57".2 | 6,5 | C | 22 4 4.10 | 9.388 | +61° 39' 50".9 | 8.875 _n | +2.36 +24".3 | 7 |

Kern anfangs deutlich und sternähnlich, später allmählich undeutlicher, Okt. 6 nicht mehr zu erkennen. Kurzer Schweif, der sich Ende September erweiterte und im Oktober wieder sehr zurückgegangen war.

Westphalscher Komet 1913d.

| | | | | | | | | | | | |
|--------|---------|----------|----------|------|---|-------------|--------------------|-------------|-------|-------------|---|
| Okt. 2 | 7 48 14 | -2 41.96 | + 0 2.1 | 10,6 | B | 21 36 20.22 | 8.922 _n | + 2 16 46.7 | 0.867 | +3.24 +15.9 | 8 |
| 25 | 8 32 10 | -0 57.70 | + 0 10.7 | 9,6 | B | 20 45 50.61 | 9.205 | +20 9 31.0 | 0.759 | +2.29 +17.2 | 9 |

Giacobinischer Komet 1913e.

| | | | | | | | | | | | |
|---------|---------|----------|----------|-----|---|------------|-------|------------|-------|-------------|----|
| Okt. 26 | 7 23 24 | +0 31.50 | -13 24.6 | 9,6 | B | 18 55 5.39 | 9.302 | - 7 11 3.9 | 0.898 | +2.26 - 0.4 | 10 |
|---------|---------|----------|----------|-----|---|------------|-------|------------|-------|-------------|----|

Mittlere Örter der Vergleichsterne.

| * | α 1913.0 | δ 1913.0 | Autorität | * | α 1913.0 | δ 1913.0 | Autorität |
|---|---|-----------------|-------------|----|---|-----------------|---|
| 1 | 6 ^h 43 ^m 38 ^s 42 | +58° 31' 5".6 | Hels 4738 | 7 | 22 ^h 2 ^m 27 ^s 94 | +61° 51' 23".8 | Hels 12815 |
| 2 | 6 50 29.70 | +59 6 24.2 | Hels 4805 | 8 | 21 38 58.94 | + 2 16 28.7 | BD +2°4399, v. m. |
| 3 | 6 24 4.66 | +62 49 39.6 | Hels 4541 | | | | Alb 7588; M ₁ , Kü ¹⁾ |
| 4 | 3 41 21.38 | +76 45 13.8 | Kas 561 | 9 | 20 46 46.02 | +20 9 3.1 | Berl A 8428 |
| 5 | 3 9 14.23 | +77 24 59.8 | B. J. | 10 | 18 54 31.63 | - 6 57 38.9 | Ott 6488 |
| 6 | 23 50 34.95 | +73 55 34.2 | Berl C 3430 | | | | |

¹⁾ Der Stern BD +2°4399 scheint eine merkbare Eigenbewegung zu haben: $\Delta\alpha = -0^{\circ}0030$, $\Delta\delta = -0^{\circ}116$. Der Anschluß an Albany 7588 ergibt: α 1913.0 = 21^h 38^m 59^s 00, δ 1913.0 = +2° 16' 26".0; Ep. = 1913.75.

Stockholm, 1913 Oktober 27.

K. Bohlin.

Ephemeride des Kometen 1913c (Neujmin).

Nach einer Mitteilung von Prof. R. Schorr wurde am 31. Dez. 1913 in Bergedorf noch eine Spiegel-Aufnahme des Kometen *Neujmin* erhalten. Die Helligkeit war etwa 15^m. Ich habe deshalb mit den Elementen des Lick B. 245 eine Fortsetzung der Ephemeride, gültig für 12^h m. Z. Berlin, gerechnet. Am 31. Dez. betrug die Ephemeriden-Korrektion nach der Bergedorfer Aufnahme +1^s 6 +4".

| 1914 | α vera | δ vera | $\log r$ | $\log \Delta$ | Gr. | 1914 | α vera | δ vera | $\log r$ | $\log \Delta$ | Gr. |
|---------|---|---------------|----------|---------------|-------------------|---------|--|---------------|----------|---------------|-------------------|
| Jan. 12 | 1 ^h 5 ^m 42 ^s | +23° 7' 3" | 0.3627 | 0.3116 | 15 ^m 3 | Febr. 1 | 1 ^h 38 ^m 15 ^s | +25° 14' 3" | | | |
| 13 | 7 17 | 23 13.6 | | | | 2 | 39 55 | 25 20.6 | | | |
| 14 | 8 53 | 23 19.9 | | | | 3 | 41 35 | 25 26.9 | | | |
| 15 | 10 29 | 23 26.2 | | | | 4 | 43 15 | 25 33.2 | | | |
| 16 | 12 5 | 23 32.5 | | | | 5 | 44 55 | 25 39.5 | 0.3974 | 0.4004 | 16 ^m 0 |
| 17 | 13 41 | 23 38.8 | | | | 6 | 46 35 | 25 45.8 | | | |
| 18 | 15 18 | 23 45.2 | | | | 7 | 48 16 | 25 52.1 | | | |
| 19 | 16 55 | 23 51.6 | | | | 8 | 49 57 | 25 58.4 | | | |
| 20 | 18 32 | 23 57.9 | 0.3745 | 0.3428 | 15.6 | 9 | 51 38 | 26 4.6 | | | |
| 21 | 20 9 | 24 4.2 | | | | 10 | 53 18 | 26 10.8 | | | |
| 22 | 21 47 | 24 10.6 | | | | 11 | 54 59 | 26 17.1 | | | |
| 23 | 23 25 | 24 17.0 | | | | 12 | 56 40 | 26 23.3 | | | |
| 24 | 25 3 | 24 23.4 | | | | 13 | 1 58 21 | 26 29.5 | 0.4084 | 0.4267 | 16.2 |
| 25 | 26 41 | 24 29.8 | | | | 14 | 2 0 2 | 26 35.6 | | | |
| 26 | 28 20 | 24 36.2 | | | | 15 | 1 44 | 26 41.8 | | | |
| 27 | 29 59 | 24 42.6 | | | | 16 | 3 25 | 26 48.0 | | | |
| 28 | 31 38 | 24 49.0 | 0.3860 | 0.3724 | 15.8 | 17 | 5 7 | 26 54.1 | | | |
| 29 | 33 17 | 24 55.4 | | | | 18 | 6 49 | 27 0.2 | | | |
| 30 | 34 56 | 25 1.7 | | | | 19 | 8 31 | 27 6.2 | | | |
| 31 | 36 35 | 25 8.0 | | | | 20 | 10 13 | 27 12.2 | | | |
| Febr. 1 | 1 38 15 | +25 14.3 | | | | 21 | 2 11 56 | +27 18.3 | 0.4193 | 0.4515 | 16.3 |

Kiel, Bureau der Astr. Nachr., 1914 Jan. 11.

M. Ebell.

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Mit Tafel 2. Geschlossen 1913 Jan. 19. Herausgeber: H. Kobold. Druck von C. Schaidt. Expedition: Kiel, Moltkestr. 80.