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COMMUNICATION FROM THE OBSERVATORY AT LEIDEN.

Positions of minor planets and the orbits of new minor planets, discovered by H. VAN GENT,
by G. Pels.

On the plates taken at Johannesburg with the 10-inch Franklin-Adams camera Dr. VAN GENT has identified the minor planets of which the positions are communicated in this note. The plates have been measured at Leiden in the new Schlesinger measuring machine and the reductions have been performed

according to COMRIE'S method (*J. B. A. A.* vol. 39, p. 203). The positions are the average of two, measured and reduced independently on plates taken after each other on the same night.

The magnitudes have been estimated by Dr. VAN GENT.

| Planet | Mag. | Date Gr. C. T. | α_{1900} | δ_{1900} | Comparison stars |
|--------|------------------------------|--|---|--|---|
| 5 | 10.5 | 1934 June 8.89924 | 16 ^h 43 ^m 28 ^s .23 | — 14° 18' 53"1 | Tacubaya 16 ^h 44 ^m , — 15°: 29, 30, 33 |
| 9 | 9 8.5 | Sept. 9.95419 ,, 29.88503 | 0 20 28.93 0 2 24.42 | — 8 2 1.0 — 9 47 25.9 | San Fern. 0 ^h 24 ^m , — 8°: 2, 6, 11 ,, 0 ^h 4 ^m , — 9°: 26, 32, 47 |
| 50 | 12.6 12.5 | May 11.02482 June 8.98685 | 17 23 58.25 16 59 57.48 | — 19 8 35.3 — 18 16 56.8 | Hyd. 17 ^h 24 ^m , — 19°: 46235, 46259, 46279 ,, 16 ^h 56 ^m , — 18°: 45236, 45243, 45257 |
| 69 | 10.5 11.0 | May 10.93756 June 8.89924 | 16 37 35.30 16 .15 7.80 | — 11 45 41.9 — 10 17 14.5 | Cambr. (Mass.) 5755, 5759, 5763 Wien 5673, 5674, Cambr. (Mass.) 5652 |
| 110 | 10.0 11.0 | May 11.02482 June 8.94270 | 17 7 47.61 16 42 22.56 | — 24 40 56.5 — 25 10 44.0 | Cordoba 17 ^h 8 ^m , — 25°: 32, 42, 50 ,, 16 ^h 44 ^m , — 25°: 39, 40, 994 |
| 139 | 11.5 11.5 11.5 12.0 | Sept. 9.91056 ,, 15.81280 ,, 29.79396 Oct. 26.76543 | 23 49 4.25 23 44 1.54 23 32 1.33 23 14 47.96 | — 3 53 14.1 — 4 10 41.7 — 4 49 11.2 — 5 23 20.0 | San Fern. 23 ^h 52 ^m , — 4°: 16, 17, 26 ,, 23 ^h 44 ^m , — 4°: 70, 76, 83 ,, 23 ^h 32 ^m , — 5°: 68, 78, 87 ,, 23 ^h 16 ^m , — 5°: 51, 53, 78 |
| 171 | 12.4 | June 8.98685 | 17 24 14.66 | — 21 53 34.0 | Hyd. 17 ^h 28 ^m , — 22°: 57546, 57570, 57610 |
| 175 | 12.2 | June 13.79210 | 15 54 48.68 | — 23 40 16.0 | Cordoba 15 ^h 52 ^m , — 24°: 592, 594, 607 |
| 207 | 12.0 12.0 12.0 | Sept. 9.95419 Oct. 12.83707 Nov. 6.82837 | 0 32 27.95 0 1 27.47 23 47 42.93 | — 0 4 13.1 — 2 25 0.6 — 2 54 10.1 | Algiers 0 ^h 32 ^m , 0°: 42, 134, 136 ,, 0 ^h 0 ^m , — 2°: 142, 145, 151 San Fern. 23 ^h 48 ^m , — 3°: 76, 98, 100 |
| 251 | 13.7 | Sept. 9.95419 | 0 4 17.12 | — 4 55 33.2 | San Fern. 0 ^h 4 ^m , — 5°: 90, 101, 113 |
| 252 | 13.3 | May 10.93756 | 16 36 17.29 | — 12 37 2.9 | Cambr. (Mass.) 5749, 5757, 5759 |
| 266 | 11.8 | May 10.98171 | 16 34 35.22 | — 19 21 16.4 | Hyd. 16 ^h 36 ^m , — 19°: 44489, 44495, 44496 |
| 384 | 13.9 13.8 | May 11.02482 June 8.94270 | 16 53 49.46 16 26 52.16 | — 25 16 28.4 — 25 12 46.0 | Cordoba 16 ^h 52 ^m , — 25°: 692, 724, 726 ,, 16 ^h 28 ^m , — 25°: 253, 258, 296 |
| 401 | 13.1 13.2 | Sept. 9.95419 ,, 9.99770 | 0 37 19.31 0 37 17.73 | — 1 25 53.5 — 1 26 4.2 | Algiers 0 ^h 36 ^m , — 1°: 28, 67, 75 id. |
| 425 | 13.0 13.2 | Sept. 9.95419 Nov. 6.82837 | 0 18 59.64 23 42 28.50 | — 3 46 26.5 — 6 34 14.0 | San Fern. 0 ^h 16 ^m , — 4°: 140, 141, 155 ,, 23 ^h 40 ^m , — 7°: 103, 107, 113 |

| Planet | Mag. | Date Gr. C. T. | α_{1900} | δ_{1900} | Comparison stars |
|--------|------|----------------|----------------------|-----------------|---|
| 431 | 13.2 | May 10.98171 | h m s 16 14 55.46 | — 18° 58' 34.0" | Hyd. 16 ^h 12 ^m , — 19°: 44021, 44022, 44024 |
| | 13.2 | June 13.79210 | 15 48 5.96 | — 17 52 58.6 | „ 15 ^h 52 ^m , — 18°: 43304, 43305, 43330 |
| 492 | 13.8 | May 10.98171 | 16 23 10.52 | — 22 13 22.2 | Hyd. 16 ^h 24 ^m , — 22°: 55329, 55330, 55335 |
| 526 | 13.6 | Sept. 9.95419 | 0 4 39.01 | — 1 34 5.5 | Algiers 0 ^h 8 ^m , — 2°: 1, 2, 3 |
| 534 | 13.2 | June 8.98685 | 17 13 26.77 | — 21 42 51.6 | Hyd. 17 ^h 12 ^m , — 22°: 56848, 56869, 56880 |
| 535 | 13.0 | Sept. 29.88503 | 23 58 8.46 | — 11 59 54.0 | Cambr. (Mass.) 8331, 8332, 8335 |
| 627 | 13.2 | Sept. 9.91056 | 23 52 32.61 | — 6 19 9.1 | San Fern. 23 ^h 52 ^m , — 6°: 45, 49, 64 |
| | 13.7 | „ 15.81280 | 23 48 17.63 | — 7 0 53.1 | „ 23 ^h 48 ^m , — 7°: 75, 81, 97 |
| | 12.8 | „ 29.79396 | 23 38 6.77 | — 8 31 37.9 | „ 23 ^h 40 ^m , — 9°: 27, 29, 47 |
| 660 | 12.8 | Sept. 9.95419 | 0 6 19.03 | — 7 35 13.9 | San Fern. 0 ^h 8 ^m , — 8°: 57, 69, 82 |
| 693 | 12.5 | Sept. 9.91056 | 23 26 22.07 | — 4 52 52.0 | San Fern. 23 ^h 24 ^m , — 5°: 103, 108, 109 |
| 734 | 13.4 | Sept. 9.95419 | 0 9 19.88 | — 0 11 38.4 | Algiers 0 ^h 8 ^m , 0°: 83, 91, 92 |
| 749 | 14.0 | Sept. 9.99770 | 0 55 47.35 | — 3 9 46.9 | San Fern. 1 ^h 0 ^m , — 3°: 1, 2, 5 |
| 764 | 14.0 | May 10.98171 | 16 22 35.94 | — 25 35 49.1 | Cordoba 16 ^h 24 ^m , — 26°: 795, 814, 816 |
| 767 | 13.0 | May 10.98171 | 16 21 41.94 | — 19 33 1.9 | Hyd. 16 ^h 20 ^m , — 19°: 44200, 44203, 44207 |
| 924 | 11.5 | Sept. 9.91056 | 23 49 18.55 | — 7 1 54.4 | San Fern. 23 ^h 48 ^m , — 7°: 109, 113, 114 |
| | 11.5 | „ 15.81280 | 23 45 23.11 | — 7 54 9.2 | „ 23 ^h 44 ^m , — 8°: 86, 88, 99 |
| 1059 | 13.3 | Oct. 12.92364 | 0 37 58.36 | + 6 6 11.7 | Toulouse 0 ^h 36 ^m , + 7°: 59, 63, 64 |
| 1074 | 13.5 | Sept. 9.95419 | 0 7 11.56 | — 0 11 51.1 | Algiers 0 ^h 8 ^m , 0°: 17, 76, 83 |
| 1249 | 13.8 | May 10.98171 | 16 13 30.46 | — 24 9 39.0 | Cordoba 16 ^h 16 ^m , — 24°: 523, 524, 527 |
| ? | 12.0 | May 10.98171 | 16 22 23.09 | — 24 28 21.0 | Cordoba 16 ^h 24 ^m , — 24°: 616, 617, 622 |
| ? | 13.9 | May 22.00102 | 16 35 37.84 | — 23 49 55.1 | Hyd. 16 ^h 36 ^m , — 23°: 63118, 63123, 63126 |

The following rough positions are of minor planets found on the plates of the var. stars programma 19^h, — 19°. The magnitudes have been estimated by Mr. UITTERDIJK.

| Planet | Mag. | Date Gr. C.T. | α_{1925} | δ_{1925} |
|------------|------|------------------|-----------------|-----------------|
| 103 | 12.4 | May 1934 8.04410 | h m 19 4.7 | — 16° 57' |
| | 12.5 | „ 11.09425 | 19 5.0 | — 16 56 |
| | 11.5 | June 9.07460 | 18 58.2 | — 16 58 |
| | 11.1 | „ 12.84504 | 18 55.6 | — 17 3 |
| 263 | 15.0 | July 1.75507 | 19 7.4 | — 20 45 |
| | 14.6 | „ 7.77365 | 19 2.0 | — 20 51 |
| | 14.7 | „ 10.99678 | 18 59.5 | — 20 55 |
| 441 | 13.7 | May 8.04410 | 19 0.6 | — 20 12 |
| | 14.0 | „ 11.09425 | 19 0.5 | — 20 6 |
| | 13.4 | June 9.07460 | 18 48.0 | — 19 0 |
| | 13.2 | „ 12.84504 | 18 45.3 | — 18 52 |
| 530 607 | 13.8 | June 9.07460 | 19 3.1 | — 15 35 |
| | 14.4 | July 14.83903 | 19 19.0 | — 21 9 |

The orbit computations were made by the method GAUSS-ENCKE as modified for the use of calculating machines by VEITHEN-MERTON. The elements of the new planets are:

| Provisional designation | <i>g</i> | <i>M</i> ₀ | ω | Ω | <i>i</i> | φ | μ | <i>a</i> |
|-------------------------|----------|-----------------------|-----------|-----------|----------|-----------|---------|------------|
| 1934 RV | 11°0 | 354°52650 | 159°81153 | 204°71587 | 0°01195 | 11°51280 | 657"516 | 3°076 5659 |
| 1930 QI | 11°7 | 344°19428 | 28°60023 | 351°83337 | 4°68124 | 10°27388 | 904°344 | 2°487 6110 |
| 1934 RW | 10°3 | 32°19473 | 223°80593 | 97°36228 | 3°19551 | 3°38186 | 736°725 | 2°851 8931 |
| 1928 OC | 9°7 | 153°02729 | 138°69551 | 63°00617 | 2°33543 | 3°63371 | 677°421 | 3°016 0000 |
| 1934 RO | 10°6 | 358°78450 | 213°93596 | 151°53242 | 2°40719 | 6°19279 | 725°985 | 2°879 9577 |
| 1934 RX | 11°0 | 314°69569 | 273°90629 | 153°16862 | 11°83079 | 10°57854 | 810°281 | 2°676 5765 |
| 1934 RY | 11°9 | 8°99975 | 238°42552 | 113°93368 | 7°76539 | 10°39351 | 869°567 | 2°553 5050 |
| 1934 RZ | 10°4 | 299°88678 | 17°43591 | 59°45044 | 10°55731 | 5°95014 | 717°925 | 2°901 4705 |
| 1934 TF | 9°4 | 320°78958 | 47°43105 | 10°70926 | 9°68912 | 5°34738 | 624°026 | 3°185 6634 |
| 1934 RA ₁ | 10°6 | 7°86282 | 199°20159 | 160°45335 | 17°99919 | 5°79693 | 714°870 | 2°909 7356 |
| 1934 SB | 12°3 | 355°05987 | 355°06573 | 13°28694 | 11°10246 | 14°92504 | 958°527 | 2°392 9583 |
| 1934 IM | 10°5 | 328°41391 | 225°21326 | 58°82508 | 11°28384 | 4°46116 | 678°690 | 3°012 2493 |

*M*₀ on Oct. 1°0 1934 Gr. C. T., except for 1934 I M, when it is May 27°0 1934 Gr. C. T. Mean equinox and ecliptic of 1925°0.

The observations and their comparison with the ephemeris computed according to the above elements are as follows:

1934 R V:

| Date Gr. C.T. | α_{1925} | δ_{1925} | mag. | <i>O-C</i> in α in δ | Comparison stars |
|--------------------|--|-----------------|------|---------------------------------------|---------------------------------------|
| 1934 Sept. 9°91056 | 23 ^h 34 ^m 16 ^s 69 | — 2° 46' 5" 2 | 14°0 | '00 "0 | San Fern. 23 32 , — 3 : 113, 115, 133 |
| " 15°81280 | 29 56' 35 | 3 14 3' 4 | 13°9 | '00 — 1°0 | " 23 32 , — 3 : 10, 15, 16 |
| " 30°84006 | 19 25' 05 | 4 21 28' 6 | 13°7 | '00 — '6 | " 23 20 , — 4 : 33, 34, 53 |
| Oct. 11°82041 | 13 38' 13 | 4 58 15°0 | 14°0 | '00 '0 | " 23 16 , — 5 : 2, 3, 14 |

1930 Q I:

| Date Gr. C.T. | α_{1925} | δ_{1925} | mag. | <i>O-C</i> in α in δ | Comparison stars |
|--------------------|--|-----------------|------|---------------------------------------|---------------------------------------|
| 1934 Sept. 9°91056 | 23 ^h 36 ^m 50 ^s 57 | — 2° 48' 0" 5 | 13°2 | + '01 + "1 | San Fern. 23 32 , — 3 : 201, 210, 213 |
| " 15°81280 | 31 23' 70 | 3 1 48' 7 | 13°7 | + '51 + '7 | " 23 32 , — 3 : 45, 56, 66 |
| " 30°84006 | 18 1' 99 | 3 33 40' 1 | 13°4 | + '01 '0 | " 23 20 , — 4 : 11, 19, 22 |
| Oct. 11°82041 | 10 47' 21 | 3 44 30' 1 | 13°8 | — '09 — 2'6 | " 23 12 , — 4 : 10, 14, 30 |
| " 26°76543 | 6 45' 08 | 3 30 52' 9 | 13°8 | + '01 + "1 | " 23 4 , — 4 : 183, 191, 206 |
| Nov. 5°79013 | 8 10' 94 | 3 1 34' 4 | 14°0 | + '16 + 6'8 | " 23 8 , — 3 : 67, 70, 75 |

The position on Nov. 5°79 has been found after the computation of the orbit with the aid of the ephemeris. The images were very faint.

According to an information by Prof. G. STRACKE

there are already elements of 1930, computed by S. BELJAWSKY, which agree better with the positions of 1934 than the above-mentioned do with the positions of 1930.

1934 R W:

| Date Gr. C.T. | α_{1925} | δ_{1925} | mag. | <i>O-C</i> in α in δ | Comparison stars |
|--------------------|--|-----------------|------|---------------------------------------|------------------------------------|
| 1934 Sept. 9°91056 | 23 ^h 52 ^m 58 ^s 10 | — 6° 5' 30" 7 | 13°9 | '00 "0 | San Fern. 23 52 , — 6 : 45, 49, 64 |
| " 15°81280 | 48 24' 88 | 6 38 3' 8 | 13°5 | + '15 + '7 | " 23 48 , — 7 : 54, 59, 81 |
| " 29°79396 | 37 34' 24 | 7 47 23' 8 | 13°2 | '00 + "1 | " 23 36 , — 8 : 69, 82, 83 |
| Oct. 11°86404 | 29 39' 57 | 8 29 25' 2 | 13°9 | + '01 + "1 | " 23 32 , — 9 : 17, 25, 46 |
| " 26°76543 | 23 41' 48 | 8 49 22' 4 | 14°0 | + '25 — '4 | " 23 24 , — 9 : 41, 49, 55 |
| Nov. 5°79013 | 22 33' 29 | 8 41 57' 1 | 14°0 | + '11 + 1'8 | " 23 24 , — 9 : 16, 25, 41 |

The positions on Oct. 26 en Nov. 5, found after-

wards with the aid of the ephemeris are very uncertain.

1928 O C:

| Date Gr. C.T. | α_{1925} | | | mag. | $O-C$ | | Comparison stars |
|---|-----------------|----|---------------------|-------------------|-------------|---------------------|------------------------------|
| | h | m | s | | in α | in δ | |
| 1928 Sept. 9 ^h 9 ^m 10 ^s 56 | 23 | 57 | 18 [°] 33' | 14 ^o | '00 | "0 | San Fern. 0 0 , -4 : 3, 4, 8 |
| " 15 ^h 8 ^m 12 ^s 80 | | 52 | 57 [°] 57' | 14 ^o | + '15 | + '7 | " 23 52 , -4 : 55, 64, 77 |
| " 29 ^h 7 ^m 9 ^s 396 | | 42 | 29 [°] 27' | 13 ^o 5 | '00 | '0 | " 23 40 , -5 : 97, 102, 103 |
| Oct. 11 ^h 8 ^m 6 ^s 404 | | 34 | 28 [°] 20' | 14 ^o | '00 | '0 | " 23 36 , -6 : 9, 22, 26 |
| Nov. 5 ^h 7 ^m 9 ^s 013 | | 25 | 16 [°] 50' | 14 ^o | - '47 | - '7 ^o 6 | " 23 24 , -7 : 49, 71, 75 |
| " 6 ^h 8 ^m 28 ^s 37 | | 25 | 9 [°] 81' | 14 ^o | - '20 | - '9 ^o 4 | " 23 24 , -7 : 49, 71, 75 |

Again the two last positions found afterwards, are very uncertain, at least not suitable to be used for a recomputation of the orbit. The elements re-

present sufficiently the observations of 1928; a correction is thus not necessary. It has obtained the definitive number 1305.

1934 R O:

| Date Gr. C.T. | α_{1925} | | | mag. | $O-C$ | | Comparison stars |
|---|-----------------|----|---------------------|-------------------|-------------|---------------------|---------------------------------|
| | h | m | s | | in α | in δ | |
| 1934 Sept. 8 ^h 9 ^m 6 ^s 549 | 0 | 26 | 26 [°] 42' | 13 ^o 4 | - '04 | - 4 ^o 3 | Algiers 0 28 , + 1 : 84, 90, 94 |
| " 9 ^h 9 ^m 54 ^s 19 | 0 | 25 | 50 [°] 02' | 13 ^o 4 | - '29 | - '1 ^o 3 | " 0 24 , 0 : 1, 93, 98 |
| " 13 ^h 0 ^m 30 ^s 82 | 0 | 23 | 50 [°] 70' | 13 ^o 8 | - '63 | - 1 ^o 5 | " 0 12 , - 1 : 111, 120, 125 |
| " 14 ^h 04 ^m 15 ^s 8 | 0 | 22 | 32 [°] 64' | 13 ^o 2 | - '77 | - 3 ^o 8 | " 0 0 , - 2 : 135, 142, 145 |
| " 16 ^h 9 ^m 90 ^s 48 | 0 | 21 | 6 [°] 22' | 13 ^o 6 | - '69 | - 5 ^o 1 | |
| " 17 ^h 9 ^m 7 ^s 938 | 0 | 20 | 23 [°] 62' | 13 ^o 6 | '00 | '0 | |
| " 29 ^h 8 ^m 38 ^s 63 | 0 | 11 | 28 [°] 41' | 13 ^o 6 | - '23 | + 2 ^o 3 | |
| Oct. 3 ^h 9 ^m 25 ^s 68 | 0 | 8 | 23 [°] 65' | 13 ^o 2 | '00 | '0 | |
| " 12 ^h 8 ^m 37 ^s 07 | 0 | 2 | 9 [°] 93' | 13 ^o 2 | '00 | '0 | |

The positions of Sept. 8 and Sept. 17 are of Heidelberg, those of Sept. 13, 14 and Oct. 3 of Uccle.

1934 R X:

| Date Gr. C.T. | α_{1925} | | | mag. | $O-C$ | | Comparison stars |
|---|-----------------|----|---------------------|-------------------|---------------------|--------------------|-----------------------------------|
| | h | m | s | | in α | in δ | |
| 1934 Sept. 9 ^h 9 ^m 54 ^s 19 | 0 | 35 | 33 [°] 67' | 13 ^o 8 | '00 | "0 | San Fern. 0 36 , - 9 : 21, 35, 40 |
| " 16 ^h 9 ^m 90 ^s 48 | | 31 | 27 [°] 25' | 13 ^o 5 | - '19 | - 2 ^o 5 | " 0 28 , - 7 : 102, 103, 118 |
| " 29 ^h 8 ^m 85 ^s 03 | | 22 | 20 [°] 57' | 13 ^o 4 | '00 | '0 | " 0 20 , - 9 : 83, 86, 101 |
| Oct. 12 ^h 7 ^m 93 ^s 44 | | 13 | 0 [°] 37' | 13 ^o 8 | '00 | '0 | Cambr. (Mass.) 29, 43, 48 |
| Nov. 3 ^h 9 ^m 50 ^s 14 | | 2 | 52 [°] 84' | 14 ^o | - 1 ^o 04 | + 2 ^o 6 | " 6, 7, 13 |

The position of Nov. 3 is uncertain.

1934 R Y:

| Date Gr. C.T. | α_{1925} | | | mag. | $O-C$ | | Comparison stars |
|---|-----------------|----|---------------------|-------------------|---------------------|--------------------|-----------------------------------|
| | h | m | s | | in α | in δ | |
| 1934 Sept. 9 ^h 9 ^m 97 ^s 70 | 0 | 50 | 48 [°] 90' | 14 ^o | '00 | "0 | San Fern. 0 52 , - 9 : 21, 35, 40 |
| " 29 ^h 9 ^m 28 ^s 66 | | 37 | 17 [°] 61' | 13 ^o 6 | '00 | '0 | Cambr. (Mass.) 127, 128, 135 |
| Oct. 12 ^h 7 ^m 93 ^s 44 | | 27 | 20 [°] 99' | 13 ^o 8 | '00 | '0 | " 88, 104, 108 |
| Nov. 3 ^h 9 ^m 50 ^s 14 | | 16 | 44 [°] 00' | 14 ^o | - 2 ^o 48 | + 1 ^o 9 | " 49, 53, 58 |

The position of Nov. 3 is all the same too uncertain, to compute a new orbit.

1934 R Z:

| Date Gr. C.T. | α_{1925} | | | mag. | $O-C$ | | Comparison stars |
|---|-----------------|----|---------------------|-------------------|---------------------|--------------------|----------------------------------|
| | h | m | s | | in α | in δ | |
| 1934 Sept. 9 ^h 9 ^m 97 ^s 70 | 0 | 58 | 43 [°] 28' | 14 ^o | '00 | "0 | San Fern. 1 0 , - 9 : 13, 22, 26 |
| " 17 ^h 0 ^m 34 ^s 11 | | 54 | 2 [°] 30' | 14 ^o | - '06 | - 1 ^o 4 | " 0 52 , - 9 : 84, 87, 96 |
| " 29 ^h 9 ^m 28 ^s 66 | | 43 | 40 [°] 53' | 13 ^o 8 | '00 | '0 | " 0 44 , - 9 : 36, 45, 55 |
| Oct. 12 ^h 7 ^m 93 ^s 44 | | 32 | 35 [°] 07' | 13 ^o 8 | '00 | '0 | Cambr. (Mass.) 109, 112, 117 |
| Nov. 3 ^h 9 ^m 50 ^s 14 | | 17 | 29 [°] 17' | 14 ^o | - 1 ^o 07 | + 2 ^o 3 | " 55, 57, 61 |

The images on Nov. 3 are very faint.

1934 T F:

| Date Gr. C.T. | α_{1925} | | | δ_{1925} | | | mag. | O-C | | Comparison stars |
|--|-----------------|-------------|---------------------------------|-----------------|-------------|--------------------------------|-------------------|-----------------|----------------|---|
| | in α | in δ | | in α | in δ | | | in α | in δ | |
| 1934 Sept. 10 ^o 04 ^m 14 ^s 5 | 1 | 5 | 28 ^m 87 ^s | + 6 | 5 | 57 ^m 0 ^s | 13 ^m 5 | ^s 00 | ^m 0 | Toulouse ^h 1 ^m 0, + 7 ^o :95; ^h 18 ^m , + 5 ^o :1, 5 |
| „ 17 ^o 07 ^m 84 ^s 3 | 1 | 1 | 8 ^m 45 ^s | 6 | 0 | 15 ^m 5 | 13 ^m 5 | + 18 | + 4 | „ 1 0, + 5 ^o :9, 27, 29 |
| Oct. 1 ^o 89 ^m 50 ^s 4 | 0 | 49 | 47 ^m 72 ^s | 5 | 37 | 3 ^m 0 | 13 ^m 0 | ^s 00 | ^m 0 | „ 0 52, + 5 ^o :2, 5, 7 |
| „ 12 ^o 23 ^m 64 ^s | 0 | 40 | 35 ^m 18 ^s | 5 | 14 | 59 ^m 3 | 13 ^m 3 | ^s 00 | ^m 0 | „ 0 36, + 5 ^o :97, 189, 199 |

According to a letter from Prof. G. STRACKE there are not yet measured positions of this planet on Oct. 5 and Nov. 7 with which it would be possible to compute an improved orbit.

1934 R A₁

| Date Gr. C.T. | α_{1925} | | | δ_{1925} | | | mag. | O-C | | Comparison stars |
|---|-----------------|-------------|---------------------------------|-----------------|-------------|---------------------------------|-------------------|-------------|--------------------|---|
| | in α | in δ | | in α | in δ | | | in α | in δ | |
| 1934 Sept. 9 ^o 99 ^m 77 ^s 0 | 1 | 5 | 52 ^m 54 ^s | - 5 | 1 | 35 ^m 11 ^s | 14 ^m 0 | + 02 | ^m 0 | San Fern. ^h 1 ^m 8, - 5 ^o :1, 4, 16 |
| „ 17 ^o 03 ^m 41 ^s 1 | 1 | 2 | 44 ^m 65 ^s | 6 | 25 | 40 ^m 8 | 13 ^m 8 | - 07 | + 3 ^m 0 | „ 1 4, - 6 ^o :12, 15, 30 |
| „ 29 ^o 28 ^m 66 ^s | 0 | 55 | 4 ^m 13 ^s | 8 | 59 | 6 ^m 1 | 13 ^m 6 | + 28 | + 4 | „ 0 52, - 9 ^o :96, 108, 110 |
| Oct. 12 ^o 96 ^m 01 ^s 7 | 0 | 46 | 14 ^m 88 ^s | 11 | 14 | 25 ^m 5 | 13 ^m 8 | + 02 | + 1 | Cambr. (Mass.) 156, 159, 167 |
| Nov. 3 ^o 95 ^m 01 ^s 4 | 0 | 34 | 35 ^m 20 ^s | 13 | 31 | 30 ^m 3 | 14 ^m 0 | + 02 | ^m 0 | Tacub. ^h 0 ^m 32 ^s , - 14 ^o :117, 134, 150 |

1934 S B:

| Date Gr. C.T. | α_{1925} | | | δ_{1925} | | | mag. | O-C | | Comparison stars |
|--|-----------------|-------------|---------------------------------|-----------------|-------------|-------------------|-------------------|-----------------|----------------|---|
| | in α | in δ | | in α | in δ | | | in α | in δ | |
| 1934 Sept. 29 ^o 79 ^m 39 ^s 6 | 23 | 37 | 37 ^m 08 ^s | - 8 | 59 | 58 ^m 0 | 12 ^m 8 | ^s 00 | ^m 0 | San Fern. ^h 23 ^m 40, - 9 ^o :1, 5, 10 |
| Oct. 11 ^o 84 ^m 22 ^s 2 | | 27 | 5 ^m 28 ^s | 7 | 20 | 47 ^m 0 | 13 ^m 0 | ^s 00 | - 1 | „ 23 24, - 7 ^o :83, 104, 107 |
| „ 26 ^o 76 ^m 54 ^s 3 | | 21 | 8 ^m 58 ^s | 4 | 49 | 14 ^m 1 | 13 ^m 5 | + 47 | + 9 | „ 23 16, - 5 ^o :145, 157, 161 |
| Nov. 5 ^o 79 ^m 01 ^s 3 | | 22 | 6 ^m 00 ^s | 2 | 55 | 8 ^m 1 | 13 ^m 9 | ^s 00 | ^m 0 | „ 23 24, - 3 ^o :23, 25, 36 |

1934 I M:

| Date Gr. C.T. | α_{1925} | | | δ_{1925} | | | mag. | O-C | | Comparison stars |
|--|-----------------|-------------|---------------------------------|-----------------|-------------|-------------------|-------------------|-----------------|----------------|--|
| | in α | in δ | | in α | in δ | | | in α | in δ | |
| 1934 May 10 ^o 98 ^m 17 ^s 1 | 16 | 39 | 14 ^m 97 ^s | - 23 | 40 | 51 ^m 5 | 14 ^m 2 | ^s 00 | ^m 0 | Hyd. ^h 16 ^m 36, - 23 ^o :63106, 63110, 63125 |
| „ 22 ^o 00 ^m 10 ^s 2 | 16 | 29 | 56 ^m 42 ^s | 24 | 7 | 31 ^m 3 | 14 ^m 0 | - 05 | + 18 | Cordoba 16 32, - 24 ^o :781, 787, 794 |
| June 2 ^o 74 ^m 73 ^s 3 | 16 | 18 | 51 ^m 53 ^s | 24 | 29 | 54 ^m 7 | 14 ^m 2 | ^s 00 | ^m 0 | „ 16 16, - 24 ^o :509, 522, 525 |
| „ 13 ^o 79 ^m 21 ^s 0 | 16 | 8 | 46 ^m 78 ^s | 24 | 45 | 33 ^m 8 | 14 ^m 2 | - 01 | ^m 0 | „ 16 4, - 25 ^o :680, 714, 717 |

The ephemerides for the next opposition are:

1934 R V:

| | α_{1925} | | | δ_{1925} | | |
|--------------|-----------------|--------------------------------|--------------------|-----------------|----|------|
| 1935 Dec. 16 | 7 | 32 ^m 8 ^s | - 6 ^m 1 | + 21 | 43 | + 13 |
| 24 | 7 | 26 ^m 7 ^s | 7 ^m 0 | 21 | 56 | 14 |
| 1936 Jan. 1 | 7 | 19 ^m 7 ^s | 7 ^m 4 | 22 | 10 | 13 |
| 9 | 7 | 12 ^m 3 ^s | 7 ^m 2 | 22 | 23 | 12 |
| 17 | 7 | 5 ^m 1 ^s | 6 ^m 6 | 22 | 35 | 10 |
| 25 | 6 | 58 ^m 5 ^s | | 22 | 45 | |

Oppos. Jan. 8 Mag. 15^m1

1928 O C:

| | α_{1925} | | | δ_{1925} | | |
|--------------|-----------------|--------------------------------|--------------------|-----------------|----|-----|
| 1935 Nov. 14 | 4 | 48 ^m 0 ^s | - 6 ^m 4 | + 22 | 37 | - 6 |
| 22 | 4 | 41 ^m 6 ^s | 7 ^m 1 | 22 | 31 | 9 |
| Dec. 30 | 4 | 34 ^m 5 ^s | 7 ^m 3 | 22 | 22 | 11 |
| 8 | 4 | 27 ^m 2 ^s | 6 ^m 9 | 22 | 11 | 11 |
| 16 | 4 | 20 ^m 3 ^s | 6 ^m 2 | 22 | 0 | 11 |
| 24 | 4 | 14 ^m 1 ^s | | 21 | 49 | |

Oppos. Dec. 2 Mag. 13^m8

1934 R W:

| | α_{1925} | | | δ_{1925} | | |
|--------------|-----------------|--------------------------------|--------------------|-----------------|----|------|
| 1935 Nov. 30 | 6 | 22 ^m 8 ^s | - 6 ^m 2 | + 22 | 26 | + 10 |
| Dec. 8 | 6 | 16 ^m 6 ^s | 7 ^m 2 | 22 | 36 | 9 |
| 16 | 6 | 9 ^m 4 ^s | 7 ^m 7 | 22 | 45 | 8 |
| 24 | 6 | 1 ^m 7 ^s | 7 ^m 6 | 22 | 53 | 8 |
| 1936 Jan. 1 | 5 | 54 ^m 1 ^s | 7 ^m 1 | 23 | 1 | 6 |
| 9 | 5 | 47 ^m 0 ^s | | 23 | 7 | |

Oppos. Dec. 23 Mag. 14^m1

1934 R O:

| | α_{1925} | | | δ_{1925} | | |
|--------------|-----------------|--------------------------------|--------------------|-----------------|----|------|
| 1935 Dec. 24 | 7 | 45 ^m 8 ^s | - 6 ^m 5 | + 18 | 43 | + 18 |
| 1936 Jan. 1 | 7 | 39 ^m 3 ^s | 7 ^m 2 | 19 | 1 | 20 |
| 9 | 7 | 32 ^m 1 ^s | 7 ^m 5 | 19 | 21 | 20 |
| 17 | 7 | 24 ^m 6 ^s | 7 ^m 0 | 19 | 41 | 20 |
| 25 | 7 | 17 ^m 6 ^s | 6 ^m 3 | 20 | 1 | 20 |
| Feb. 2 | 7 | 11 ^m 3 ^s | | 20 | 20 | 19 |

Oppos. Jan. 12 Mag. 14^m4

1934 R X:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1936 Feb. | 10 | h | m | m | + | ° | ' |
| | 18 | 10 | 58'2 | — 5'6 | 7 | 1 | 76 |
| | 26 | 10 | 52'6 | 6'4 | 8 | 17 | 80 |
| March | 5 | 10 | 46'2 | 6'4 | 9 | 37 | 78 |
| | 13 | 10 | 39'8 | 6'1 | 10 | 55 | 72 |
| | 21 | 10 | 33'7 | 5'2 | 12 | 7 | 62 |
| Oppos. Feb. | 29 | 10 | 28'5 | | 13 | 9 | |
| | | | | Mag. 14'1 | | | |

1934 R Z:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1936 Jan. | 1 | h | m | m | + | ° | ' |
| | 9 | 8 | 35'0 | — 5'8 | 32 | 26 | 53 |
| | 17 | 8 | 29'2 | 7'6 | 33 | 19 | 49 |
| | 25 | 8 | 21'6 | 8'1 | 34 | 8 | 39 |
| Feb. | 2 | 8 | 13'5 | 7'9 | 34 | 47 | 26 |
| | 10 | 8 | 5'6 | 7'0 | 35 | 13 | 14 |
| | | 7 | 58'6 | | 35 | 27 | |
| Oppos. Feb. | 22 | | | | | | |
| | | | | Mag. 13'7 | | | |

1934 R A₁:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1935 Dec. | 24 | h | m | m | + | ° | ' |
| 1936 Jan. | 1 | 7 | 45'5 | — 5'8 | 0 | 36 | 19 |
| | 9 | 7 | 39'7 | 6'6 | 0 | 55 | 31 |
| | 17 | 7 | 33'1 | 6'7 | 1 | 26 | 43 |
| | 25 | 7 | 26'4 | 6'5 | 2 | 9 | 52 |
| Feb. | 2 | 7 | 19'9 | 5'7 | 3 | 1 | 59 |
| | | 7 | 14'2 | | 4 | 0 | |
| Oppos. Jan. | 12 | | | | | | |
| | | | | Mag. 14'5 | | | |

1934 I M:

| | | α_{1925} | | | δ_{1925} | | |
|--------------|----|-----------------|------|-----------|-----------------|----|----|
| 1935 Aug. | 26 | h | m | m | — | ° | ' |
| Sept. | 3 | 0 | 5'2 | — 5'4 | 16 | 58 | 41 |
| | 11 | 23 | 59'8 | 6'2 | 17 | 39 | 36 |
| | 19 | 23 | 53'6 | 6'7 | 18 | 15 | 28 |
| | 27 | 23 | 46'9 | 6'6 | 18 | 43 | 18 |
| Oct. | 5 | 23 | 40'3 | 5'5 | 19 | 1 | 2 |
| | | 23 | 34'8 | | 19 | 3 | |
| Oppos. Sept. | 20 | | | | | | |
| | | | | Mag. 14'3 | | | |

1934 R Y:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1936 Jan. | 17 | h | m | m | + | ° | ' |
| | 25 | 9 | 27'4 | — 6'6 | 18 | 31 | 53 |
| Feb. | 2 | 9 | 20'8 | 7'5 | 19 | 24 | 53 |
| | 10 | 9 | 13'3 | 7'6 | 20 | 17 | 50 |
| | 18 | 9 | 5'7 | 7'3 | 21 | 7 | 44 |
| | 26 | 8 | 58'4 | 6'5 | 21 | 51 | 36 |
| | | 8 | 51'9 | | 22 | 27 | |
| Oppos. Feb. | 5 | | | | | | |
| | | | | Mag. 15'6 | | | |

1934 T F:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1935 Dec. | 16 | h | m | m | + | ° | ' |
| 1936 Jan. | 24 | 7 | 45'4 | — 6'1 | 35 | 20 | 30 |
| | 1 | 7 | 39'3 | 7'3 | 35 | 50 | 24 |
| | 9 | 7 | 32'0 | 7'9 | 36 | 14 | 16 |
| | 17 | 7 | 24'1 | 8'1 | 36 | 30 | 6 |
| | 25 | 7 | 16'0 | 7'6 | 36 | 36 | 4 |
| | | 7 | 8'4 | | 36 | 32 | |
| Oppos. Jan. | 10 | | | | | | |
| | | | | Mag. 13'3 | | | |

1934 S B:

| | | α_{1925} | | | δ_{1925} | | |
|--------------|----|-----------------|------|-----------|-----------------|----|----|
| 1936 Feb. | 10 | h | m | m | + | ° | ' |
| | 18 | 11 | 15'5 | — 7'3 | 15 | 50 | 36 |
| | 26 | 11 | 8'2 | 8'3 | 16 | 26 | 33 |
| March | 5 | 10 | 59'9 | 8'5 | 16 | 59 | 27 |
| | 13 | 10 | 51'4 | 8'2 | 17 | 26 | 19 |
| | 21 | 10 | 43'2 | 7'6 | 17 | 45 | 10 |
| | | 10 | 35'6 | | 17 | 55 | |
| Oppos. March | 2 | | | | | | |
| | | | | Mag. 16'0 | | | |

1930 Q I:

| | | α_{1925} | | | δ_{1925} | | |
|-------------|----|-----------------|------|-----------|-----------------|----|----|
| 1936 Jan. | 25 | h | m | m | + | ° | ' |
| Feb. | 2 | 10 | 31'9 | — 6'1 | 12 | 47 | 29 |
| | 10 | 10 | 25'8 | 7'3 | 13 | 16 | 32 |
| | 18 | 10 | 18'5 | 8'0 | 13 | 48 | 33 |
| | 26 | 10 | 10'5 | 8'0 | 14 | 21 | 30 |
| March | 5 | 10 | 2'5 | 7'5 | 14 | 51 | 25 |
| | | 9 | 55'0 | | 15 | 16 | |
| Oppos. Feb. | 19 | | | | | | |
| | | | | Mag. 15'0 | | | |

Moreover the following new planets (with only one or more positions) have been found:

| Planet | Mag. | Date Gr. C. T. | α_{1925} | δ_{1925} | Comparison stars |
|----------------------|------|------------------|-----------------|-----------------|--|
| 1934 IK | 14'8 | 1934 May 8'04410 | h m s | ° ' " | Tacubaya 19 ^h 8 ^m , — 15°: 253, 284, 306 |
| | 14'5 | " 11'09425 | 19 8 2'72 | — 15 21 17'7 | " 19 ^h 8 ^m , — 15°: 345, 385, 406 |
| 1934 IL | 14'6 | May 8'04410 | 19 3 24'79 | — 22 25 42'6 | Hyd. 19 ^h 0 ^m , — 23°: 76642, 76674, 76696 |
| | 14'4 | " 11'09425 | 19 3 32'43 | — 22 41 30'0 | " 19 ^h 0 ^m , — 23°: 76730, 76776, 76777 |
| 1934 ND ₁ | 15'5 | July 1'75507 | 19 8 48'45 | — 20 42 24'6 | Hyd. 19 ^h 8 ^m , — 21°: 77366, 77408, 77412 |
| 1934 NE ₁ | 13'5 | July 1'75507 | 18 47 33'96 | — 16 31 58'9 | Tacubaya 18 ^h 48 ^m , — 16°: 285, 292, 321 |
| | 13'2 | " 2'79943 | 18 46 44'41 | — 16 35 35'5 | " 18 ^h 48 ^m , — 16°: 148, 162, 207 |

| Planet | Mag. | Date Gr. C. T. | α_{1925} | δ_{1925} | Comparison stars |
|----------------------|------|-------------------------------|--|-----------------|---|
| 1934 KA | 13.2 | 1934 May 10 ⁹ 3756 | ^h 16 ^m 20 ^s 59.38 | — 15 ° 0' 21.2" | Tacubaya 16 ^h 20 ^m , — 15°: 104, 130, 132 |
| 1934 IG | 13.3 | May 22 ⁰⁰ 102 | 16 44 47.35 | — 18 53 58.6 | Hyd. 16 ^h 44 ^m , — 19°: 44647, 44654, 44678 |
| | 13.5 | June 2 ⁷⁴ 733 | 16 32 29.17 | — 20 36 6.7 | „ 16 ^h 32 ^m , — 20°: 52545, 52574, 52575 |
| | 13.5 | „ 8 ⁹⁴ 270 | 16 25 43.59 | — 21 30 35.4 | „ 16 ^h 28 ^m , — 21°: 64343, 64350, 64351 |
| 1934 LF | 13.8 | June 8 ⁹⁸ 685 | 17 5 15.32 | — 20 23 33.9 | Hyd. 17 ^h 4 ^m , — 20°: 53884, 53889, 53941 |
| 1934 RB ₁ | 14.0 | Sept. 9 ⁹¹ 056 | 23 45 24.27 | — 5 0 7.4 | San Fern. 23 ^h 48 ^m , — 5°: 7, 160, 168 |
| 1934 SC | 13.9 | Sept. 29 ⁸⁸ 503 | 0 23 51.95 | — 11 2 52.7 | Cambr. (Mass.) 71, 86, 87 |
| | 14.0 | Oct. 12 ⁷⁹ 344 | 0 12 31.58 | — 11 25 59.3 | „ 29, 43, 48 |
| 1934 SD | 13.2 | Sept. 29 ⁹² 866 | 1 11 29.18 | — 9 18 15.6 | San Fern. 1 ^h 8 ^m , — 9°: 97, 106, 110 |
| 1934 TN | 13.1 | Oct. 12 ⁹⁶ 017 | 1 0 39.68 | — 9 42 32.3 | San Fern. 1 ^h 0 ^m , — 9°: 41, 42, 51 |
| 1934 VX | 13.9 | Nov. 3 ⁹⁹ 446 | 0 54 2.89 | — 10 20 10.2 | Cambr. (Mass.) 184, 189, 197 |
| 1934 VW | 13.9 | Nov. 3 ⁹⁵ 014 | 0 19 28.61 | — 10 9 2.8 | Cambr. (Mass.) 55, 57, 75 |
| 1934 VY | 13.8 | Nov. 3 ⁹⁵ 014 | 0 8 32.17 | — 12 57 46.5 | Cambr. (Mass.) 13, 23, 38 |

Prof. G. STRACKE informed me about these:
 1934 L F has been discovered also by C. JACKSON on Juni 9 1934. Very probably it is identical with 710, Gertrud, discovered in 1911 and since lost.
 1934 I G has been observed by C. JACKSON from May 13 till June 13 1934.
 1934 K A has been observed by G. NEUJMIN on May 14 and S. AREND on May 17 1934.
 The circular elements, computed by the method of Veithen, of three of these are:

| Prov. designation | <i>u</i> | Ω | <i>i</i> | μ | <i>a</i> |
|----------------------|--|---------------------|--------------------|---------------------|--------------------|
| 1934 IK | 1934 May 10 ⁰ 138 ⁰ 68 | 142 ⁰ 66 | 7 ⁰ 83 | 0 ⁰ 2527 | 2 ⁰ 478 |
| 1934 IL | May 10 ⁰ 179 ⁰ 90 | 87 ⁰ 62 | 18 ⁰ 90 | 0 ⁰ 2049 | 2 ⁰ 849 |
| 1934 NE ₁ | July 2 ⁰ 155 ⁰ 96 | 124 ⁰ 46 | 10 ⁰ 86 | 0 ⁰ 1716 | 3 ⁰ 207 |

Mean equinox and ecliptic 1925°0

Finally I have still computed the elements of the following two planets which appeared not to be new:

222 Lucia 961 Gunnie

| | ^m 9.0 | ^m 10.6 | |
|-----------|-------------------------|-------------------------|-------------------------------------|
| M_0 | 84 ⁰ 67448 | 44 ⁰ 51695 | on Oct. 1 ⁰ 1934 Gr.C.T. |
| ω | 177 ⁰ 78028 | 284 ⁰ 47403 | |
| Ω | 80 ⁰ 23937 | 26 ⁰ 79297 | |
| <i>i</i> | 2 ⁰ 16636 | 10 ⁰ 99665 | |
| φ | 7 ⁰ 29812 | 5 ⁰ 21698 | |
| μ | 636 ⁰ 551 | 802 ⁰ 836 | } 1925°0 |
| <i>a</i> | 3 ⁰ 143 7507 | 2 ⁰ 693 1030 | |

The comparison of the positions, computed with these elements, with the observations is as follows:

222:

| Date Gr.C.T. | α_{1925} | δ_{1925} | mag. | O—C | | Comparison stars |
|---------------------------|--|-----------------|------|-----------------------|-------------|--|
| | | | | in α | in δ | |
| Sept. 9 ⁹¹ 056 | ^h 23 ^m 53 ^s 46.47 | — 4 ° 7' 47.5" | 13.2 | ^s .00 + .1 | | San Fern. ^h 23 ^m 52 , — 4 ° : 77, 84, 85 |
| „ 15 ⁸¹ 280 | 23 49 28.35 | 4 36 5.6 | 13.4 | + .14 — .4 | | „ 23 48 , — 5 : 47, 56, 81 |
| „ 29 ⁷⁹ 396 | 23 39 16.61 | 5 38 48.3 | 12.8 | .00 .0 | | „ 23 36 , — 6 : 70, 85, 88 |
| Oct. 11 ⁸⁶ 404 | 23 31 40.41 | 6 20 48.1 | 13.5 | — .19 — .3 | | „ 23 28 , — 6 : 107, 109, 118 |
| „ 26 ⁷⁶ 543 | 23 25 24.71 | 6 48 39.9 | 13.4 | .00 .0 | | „ 23 24 , — 7 : 51, 80, 81 |
| Nov. 5 ⁷⁹ 013 | 23 23 36.14 | 6 50 48.9 | 13.4 | — .16 — .1 | | „ 23 24 , — 7 : 21, 30, 45 |

961:

| Date Gr.C.T. | α_{1925} | δ_{1925} | mag. | O—C | | Comparison stars |
|---------------------------|---|-----------------|------|---------------------|-------------|--|
| | | | | in α | in δ | |
| Sept. 9 ⁹⁷ 594 | ^h 0 ^m 38 ^s 44.23 | — 5 ° 1' 8.0" | 13.9 | ^s .00 .0 | | San Fern. ^h 0 ^m 36 , — 5 ° : 74, 97, 107 |
| „ 16 ⁹⁹ 048 | 0 32 42.75 | 5 15 15.1 | 13.5 | — .31 — .4 | | „ 0 28 , — 5 : 120, 124, 129 |
| „ 29 ⁸³ 863 | 0 20 24.55 | 5 36 13.4 | 13.6 | + .06 + 2.8 | | „ 0 16 , — 6 : 107, 119, 123 |
| Oct. 12 ⁸³ 707 | 0 8 19.42 | 5 42 10.6 | 13.5 | .00 .0 | | „ 0 8 , — 6 : 36, 44, 50 |
| Nov. 6 ⁸² 837 | 23 53 48.28 | 4 47 58.9 | 14.0 | .00 .0 | | „ 23 56 , — 5 : 10, 22, 23 |

The following planets have been looked for in vain on these plates by Dr. VAN GENT: 228, 266, 294, 459, 548, 640, 710, 728, 810, 813, 961, 1003, 1004, 1008, 1012, 1029, 1052, 1120 and 1171.