

| No. | Designation | Date U.T. | α | δ | O-C | Mag. | Rem. |
|---------|-------------|---------------|-------------|-------------|--------|------|------|
| | | 1934 | h m s | ° ' " | m / | | |
| | 1934 EA | June 14.14287 | 11 44 40.27 | +22 49 46.2 | | 17 | .. |
| | | June 17.16544 | 11 47 41.22 | 22 33 59.6 | | 17 | .. |
| | | June 17.18002 | 11 47 41.86 | 22 33 52.7 | | 17 | .. |
| Y.O. 66 | 1934 FF | Mar. 10.23692 | 10 1 8.41 | 3 35 7.7 | | 15 | .. |
| | | Mar. 14.26125 | 9 58 45.49 | 4 18 38.6 | | 15 | .. |
| | | Mar. 16.21811 | 9 57 43.47 | 4 39 15.7 | | 15.5 | .. |
| | | Mar. 19.16709 | 9 56 19.90 | 5 9 24.0 | | 15.5 | .. |
| Y.O. 67 | 1934 FH | Mar. 16.21811 | 9 59 39.19 | 3 53 5.2 | | 16.5 | .. |
| | | Mar. 16.23238 | 9 59 37.86 | + 3 53 5.7 | | 16.5 | .. |

Asteroids not found near the ephemeris-positions. The dates refer to 1933 unless stated otherwise.

| Designation | Date | Designation | Date | Designation | Date |
|-------------|----------------|-------------|---------------------|-----------------|------------|
| 319 | June 14 | 1156 | Oct. 23 | 1932 CB | May 25 |
| 408 | June 14 | 1169 | June 26 | 1932 DC | June 18 |
| 588 | June 15 | 1176 | June 18 | 1933 BO | Mar. 1 |
| 659 | June 14 | 1181 | June 18 | BW | April 27 |
| 699 | Mar. 10 (1934) | 1190 | June 21 | DE | June 21 |
| 946 | April 24 | 1219 | June 21 | FF | June 18 |
| 958 | May 25 | 1220 | April 23 | FG | May 25 |
| 962 | Mar. 1 | 1229 | Mar. 19 (1934) | FN | May 25 |
| 1012 | June 1-15 | 1925 VP | Oct. 25 | FT ₁ | June 20-26 |
| 1038 | Feb. 15 (1934) | 1929 XA | July 27 and Aug. 19 | OB | Oct. 14 |
| 1053 | Aug. 24 | 1932 BK | June 26 | OD | Oct. 17 |
| 1138 | June 20 and 26 | 1932 CA | July 13 | OE | Oct. 17 |

REMARKS

1. Uncertainty in the time which might be 0^d.00160 later.
2. Plate exposed by J. HALPERN.
3. On edge of plate.
4. R. I. 895.
5. Plate exposed by P. KEENAN. Time uncertain by \approx 5 sec.
6. R. I. 930.
7. R. I. 720.
8. R. I. 792.
9. R. I. 745.
10. R. I. 777.
11. R. I. 748.
12. R. I. 776.
13. Planet located by means of a preliminary orbit by MRS. M. MACKEMSON.
14. R. I. 834.
15. Daily motion October 17-18: $-4^{\circ}.0$, $-1'.2$.
16. R. I. 944.

*Williams Bay, Wis.,
May 25, 1934.*

NOTE ON THE ECLIPSING VARIABLE ζ AURIGÆ

By P. VAN DE KAMP

ζ Aurigae (1900: $\alpha = 4^{\text{h}}55^{\text{m}}.6$, $\delta = +40^{\circ}56'$) is an eclipsing variable¹ with a minimum lasting over | a month. At present the period² is 973 days; according to MÜLLER³ a yearly increase of 0^d.5 is taking place.

The star was photographed here for parallax during the years 1921-24. On four of the plates a neutral absorbing screen reducing five magnitudes and the rotating sector with opening 180° were used. Two of these plates were taken during the minimum, which according to the data of GUTHNICK and SCHNELLER⁴ has the middle epoch 1924, January 17. In view of the approaching minimum in September, these plates were measured with the microphotometer. The following comparison stars were used:

| | |
|-------------|--------------------|
| BD +41°1031 | 9 ^m .44 |
| BD +40 1135 | 9 .57 |
| BD +40 1149 | 10 .30 |
| BD +40 1151 | 10 .35 |

These magnitudes were derived from a comparison with the North Polar sequence through the intermediacy of an overlapping plate centered on η Aurigae.

Allowing for the reduction of 5.75 mag., effected by the filter-sector combination, the following values are obtained for the photovisual magnitude of ζ Aurigae on the International system:

| Plate No. | Image | Date | Pv. Mag. | |
|-----------|-------|---------------|----------|----------------|
| 15074 | a | 1923 Sept. 30 | 3.81 | } mean 3.84 |
| | b | Sept. 30 | 3.80 | |
| 15075 | a | Sept. 30 | 3.85 | |
| | b | Sept. 30 | 3.89 | |
| 16024 | a | 1924 Jan. 14 | 4.18 | } mean 4.19 |
| | b | Jan. 14 | 4.13 | |
| 16025 | a | Jan. 14 | 4.23 | |
| | b | Jan. 14 | 4.22 | |

The minimum is clearly indicated. The amplitude of 0^m.35 should be sensibly free from systematic errors; the effect of scale error in this quantity can hardly exceed 0^m.05. The depth of the minimum is larger than the visual amplitude given by GUTHNICK and SCHNELLER; it is equal to that measured by HOPMANN and SANDIG.⁵

REFERENCES

1. BOTTLINGER, *Astronomische Nachrichten* **226**, 239, 1926.
2. HARPER, *Publ. Dom. Astrophys. Obs., Victoria*, Vol. III, No. 3, 1924.
3. *Astronomische Nachrichten* **245**, 393, 1932.
4. *Sitz. der Preuss. Akad. der Wiss., Phys.-Math. Klasse*, X, 1932.
5. *Astronomische Nachrichten* **245**, 9, 1932.

Leander McCormick Observatory,
University, Va.,
June 13, 1934.

EDITORIAL

This number completes Volume XLIII of the *Astronomical Journal*. The title page, contents and index to this volume will be issued as soon as they can be

prepared. Subscriptions to Volume XLIV are payable in advance. The price is \$5.00 per volume.

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