

| No. | Star | Mag. | T | Ph | Lb | Windsor M. T. | No. | Star | Mag. | T | Ph | Lb | Windsor M. T. |
|-----|--------------|------|---|----|----|--|-----|-------------|------|----|----|----|---|
| 39 | 60 Piscium | — | 8 | D | Dk | Nov. 10 ^d 7 ^h 3 ^m 13 ^s 1 | 44 | Lamont 3885 | 9 | 4½ | D | Dk | Dec. 4 ^d 10 ^h 22 ^m 38 ^s 0 |
| 40 | 42 Aquarii | — | 8 | D | Dk | Dec. 4 7 16 12.8 | 45 | 81 Aquarii | — | 8 | D | Dk | » 5 8 6 17.9 |
| 41 | 42 Aquarii | — | 8 | R | Bt | » 4 8 20 5.4 | 46 | ι Geminorum | — | 4½ | D | Bt | » 14 12 0 27.1 |
| 42 | Lal. 43560-1 | 8 | 8 | D | Dk | » 4 9 54 10.4 | 47 | 59 Geminor. | — | 4½ | R | Dk | » 14 12 38 56.4 |
| 43 | Lamont 3882 | 8½ | 8 | D | Dk | » 4 10 1 22.2 | 48 | ι Geminorum | — | 4½ | R | Dk | » 14 13 4 26.9 |

Remarks.

1, 2, 4, 5, 6, 8, 13, 16, 18, 19, 21, 25, 28, 31, 32, 37, 38, 39, 42, 45, 47, 48: Phase instantaneous. — 9, 17, 36, 40, 43: Phase not quite instantaneous. — 1, 4, 5, 6, 8, 9, 13, 16, 17, 18, 19, 21, 25, 28, 31, 32, 33, 37, 38, 39, 40, 42, 43, 48: Good observations. — 2, 3, 45: Seen through cloud. — 4: Disappearance about 130° from N. cusp; a faint companion south following could not be observed. — 8, 9, 26, 27, 33, 39, 40: Observations in twilight. — 10, 11, 12, 41: Time probably a second late. — 13, 47, 48: Observations within a few seconds of the terminator. — 14: Star reappeared as a minute round disc partly hidden by the micrometer thread; limb steady and well defined. — 15: Star lost just before contact owing to the brilliancy of the limb; time probably a second or two early. — 19, 20, 34: Star faint. — 3, 29, 30: Uncertain to a second. — 23: Lost on making contact

with terminator. — 24: Limb unsteady. — 29, 30, 44: Stars excessively faint, 30 being slightly N. of 29, and both on N. quadrant. — 32: Disappearance in strong sunlight. — 34: Disappearance about 75° from N. cusp and uncertain to half a second. — 35: Star disappeared about five minutes before the predicted time and just as I placed my eye to the telescope for a preliminary survey; I commenced counting the chronometer beats at the first after the disappearance and carried the counting up to the next full minute. — 36: Star hung a long time on the limb, and disappeared about 120° from N. cusp. — 44: Time very uncertain. — 46: Limb steady and well defined and star in contact four seconds before recorded time. It then appeared as a protuberance gradually shortening till it finally vanished at the recorded time.

Private Observatory, The Peninsula, Windsor, N. S. Wales, 1895 Jan. 16.

John Tebbutt.

A comparison between the Radcliffe Catalogue for 1890 and the Cincinnati Catalogue for 1890.

Since the Radcliffe Catalogue for 1890 and the Cincinnati Catalogue for the same epoch contain a considerable number of stars in common, I have thought that a comparison of the two might be of some value. Mr. Phillips Isham, at my request, has made this comparison with the results exhibited below.

| No. of stars | | Cinc. minus Radcl. $\Delta\alpha \cos \delta$ $\Delta\delta$ | | No. of stars | | Cinc. minus Radcl. $\Delta\alpha$ $\Delta\delta$ | |
|----------------------------------|-----|---|-------|--------------|-----|---|-------|
| 0 ^h to 6 ^h | 119 | +0.051 | -0.41 | +20° to +10° | 36 | -0.037 | -0.54 |
| 6 » 12 | 68 | +0.093 | -0.91 | +10 » 0 | 13 | +0.002 | -0.96 |
| 12 » 18 | 80 | +0.070 | -1.06 | 0 » -10 | 128 | +0.058 | -0.74 |
| 18 » 24 | 114 | +0.083 | -0.48 | -10 » -20 | 118 | +0.107 | -0.71 |
| 0 to 24 | 381 | +0.072 | -0.70 | -20 » -30 | 65 | +0.129 | -0.72 |

The mean declination of the stars used in this comparison is not far from -10°. At this declination the difference between the system of the Berliner Jahrbuch and the so-called mean system is -0.7. The Cincinnati positions being based on the former, it appears that the Radcliffe declinations come very close to the mean system.

The right ascensions of the Radcliffe Catalogue are based upon the Greenwich clock stars. But this system does not deviate from that of the Berliner Jahrbuch by

more than 0.03. Hence there is considerable residual difference, which also changes quite rapidly with the declination. That the right ascensions of the Cincinnati Catalogue are very nearly in accord with the Berliner Jahrbuch system is, I think, conclusively shown by the comparisons which will be found in the preface of that catalogue.

I may remark that the results of this comparison agree practically with those which Mr. Stone has published in Monthly Notices Vol. LV, No. 5.

Cincinnati 1895 April.

J. G. Porter.

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