## SPECIMEN COPY OF COMPUTATION OF ONE DAY'S

*Computation of Longitude*

*At Kashghar (Yangi-Shahr) Station, on*

Moon { West of Meridian. / Lower Limb observed. } | Lat. N. = $\phi$ = 39° 24′ 32″ | Assu med

| Ref. No. | No. of observation (Mean of F. L. and F. R.) | | | | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| (46) | (43) + (44) + (45) = Log. sin $q$ | ... | ... | | I·8551 | I·8588 | I·8625 |
| (47) | Log. tan $q$ from (46) | ... | ... | | 0·0114 | 0·0190 | 0·0269 |
| (48) | Log. cos $\delta_1$ (see (28) ) | ... | ... | | I·9905 | I·9904 | I·9904 |
| (49) | Log. $\lambda$ (see (41) ) | ... | ... | | 0·3334 | 0·3334 | 0·3336 |
| (50) | Log. 15 | ... ... | ... | | 1·1761 | 1·1761 | 1·1761 |
| (51) | Log. sum = (47) + (48) + (49) + (50) | | ... | | 1·5114 | 1·5189 | 1·5270 |
| (52) | Log. $\beta$ | ... ... | ... | | 1·1650 | 1·1648 | 1·1646 |
| (53) | (52) − (51) = log. $a$ (see Table IV.) | | ... | + | I·6536 | I·6459 | I·6376 |
| (54) | $1 + a$ | | ... | | 1·450 | 1·442 | 1·434 |
| (55) | $\frac{L_2 - L_1}{1 + a} = \Delta L_1$ | | ... | + | 18*s*. | 26*s*. | 32*s*. |
| (56) | $L = L_1 + \Delta L_1$ | | ... | − | 5*h*. 4*m*. 42*s*. | 4*m*. 34*s*. | 4*m*. 28*s*. |

*Explanation of Symbols adopted.*

Ast. D. stands for Astronomical Date.
Gr: do. Greenwich.
S. T. do. Sidereal Time.
N. A. do. Nautical Almanac.
Approx: do. Approximate.

*Rules for Computation.*

Compute $\delta$ for each observation, *i.e.*, for Nos. 1, 2, 3 ... 8.

Do. $\Delta\delta$ / Do. $S$ / Do. $\Delta\pi$ } for middle observation, and adopt this value as constant for all the other observations.

Do. $\pi$ and $\Delta S$ for No. 1 and No. 8, and interpolate for Nos. 2 to 6 with change in Gr. Mean Time for argument.

NOTE.—$S$ and $\Delta S$ have the same sign and are both $\pm$ when $\frac{\text{upper}}{\text{lower}}$ limb of ☾ is observed; $\Delta\delta$ is + in N. Latitude; $t$ is $\pm$ if ☾ is $\frac{\text{W}}{\text{E}}$ of Meridian; $\lambda$ is always +; $\beta$ is $\pm$ when ☾ is moving in Declination from $\frac{\text{S. to N.}}{\text{N. to S.}}$: sign of $a$ = sign of $\beta$ × sign of $t$.