

The time arguments are given to the nearest half-minute; the occurrence of a period after the *minutes* of any of them indicates that its value is 0.5m. greater than printed, the table being so arranged to economize space.

The table will be used as follows: *Find the HOURS of the time argument in the column marked "Hours"; then, between the heavy lines which inclose the hours, find the MINUTES in the column marked at the top with the current year. On the same horizontal line with the MINUTES the azimuth will be found under the given latitude, which is marked at the top.* Thus, for 1897, time argument, 0h. 41m., latitude  $38^{\circ}$ , is the azimuth  $0^{\circ} 17'$ . For 1899, time argument 7h. 53m., latitude  $36^{\circ}$ , the azimuth is  $1^{\circ} 19'$ .

If the *exact* time argument is not found in the table the azimuth should be proportioned to the difference between the given and tabular values of said argument. Thus, if the time argument in the first of the above examples (for 1897) was 0h. 39m., instead of 0h. 41m., the azimuth would be the mean between  $0^{\circ} 15'$  and  $0^{\circ} 17'$  or  $0^{\circ} 16'$ . In a similar manner, if the *latitude* is nearer an *odd* than an *even* degree, the mean of the azimuths for the next greater and next less latitude will be used; thus in the above example for 1899, if the given latitude was  $37^{\circ}$ , the mean between  $1^{\circ} 19'$  and  $1^{\circ} 21'$ , or  $1^{\circ} 20'$ , would be corresponding azimuth. The table has been arranged to give the azimuths, as exemplified above, by simple inspection. No written arithmetical work is required, all being performed mentally. It will generally be sufficient to take the nearest *whole* degree of latitude and use it as above directed; for a few values near the bottom of the table, for example, the latitude may be taken to the nearest *half* degree.

The attention of the surveyor is directed to the fact that he should always use *one day of twenty-four hours* as the unit when he subtracts the time of *culmination* from the time of *observation*. *In any case when the time of upper culmination taken from Table XV, for the given date, would be numerically greater than the astronomical time of observation, the former time will be taken out for a date one day earlier than the date of observation.* The surveyor will decide