rate may be duly ascertained and allowed for. The effect of instrumental errors will be materially reduced when the stars and the moon are on the same side of the meridian and at nearly the same zenith distance; if time permits, observations should be taken both east and west of the meridian, and both before and after full moon. In north latitudes, when the moon is going from south to north in declination on any day, she is most favorably situated for observing when west of the meridian; if moving in declination from north to south, she should be observed east of the meridian. The best time for observation is *when the direction of the proper motion* of the moon is towards the zenith of the observer. The sidereal time when this occurs may be readily found, graphically, by drawing on a chart of the heavens a tangent to the moon's orbit, at some point near the mean position of the moon on the day of observing, and producing it to cut the declination circle passing through the observer's zenith; then the hour circle passing through the point of intersection gives the sidereal time of observation. For practical purposes it will suffice to drop a perpendicular from the point indicating the moon's mean position on to the ecliptic, and drawing through that point a line at right angles with the perpendicular, and prolonging it to cut the declination circle. It will be found that the most favorable times occur when the moon is on the observer's prime vertical, and the least favorable when she is on the meridian. Whenever possible a few observations should be taken daily on several days rather than a large number on a single day."

An examination of the results of the observations now published shows, at a glance, that those at Kashghar are both much more complete and satisfactory in every way than those taken at Yarkand and elsewhere. This is easily accounted for by several reasons:—

My stay at Yarkand was limited to twenty days in all, many of which were cloudy and unfavorable for observing; whereas I was at Kashghar on and off for more than two months, during which time I was enabled to select the most favorable days for observing; I was at Yarkand during the early portion of our stay in the country, and not knowing what opportunities I should have, if any, for further observations, there or elsewhere, I observed the moon whenever I could get an opportunity quite irrespective of its position being favourable or otherwise. The observations were taken in a small court-yard, where the paved flooring gave anything but a stable footing to the instrument and caused great difficulty with the levels. The noise in the small court of people moving about during the operation was, it may well be imagined, highly detrimental to such delicate work as observations for longitude, particularly where a pocket chronometer had to be used.

At Kashghar, on the other hand, the court-yard was much larger and quieter and the ground more stable, and altogether the surroundings were very much more favorable.

These circumstances, combined with the results obtained from the computations, have induced me to employ the longitude of *Kashghar* as the origin for all my positions in Turkestan.

I have merely employed the other observed longitudes as checks upon the general accuracy of the positions of those points as determined by other methods, for which *vide* the details on the construction of the map which are given in the body of the report.

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