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For disappearance at the bright limb the lag was found to be 0.33 and 0.32 sec., when the observing conditions were made favorable; in case of poor conditions involving excessive glare in the field the observations become correspondingly poor and precede or follow the actual time of disappearance by 2 or 3 seconds.

In all the above cases the disappearance was recorded on the chronograph with the usual observing key. The average deviation of individual observations from the mean values given above was 0.03 sec.

When a stop-watch was used the lag was found to be negative, that is the observed time of disappearance was about 0.25 sec. earlier than the actual time. Investigation showed that this was due not to a personal equation of the observer but to the action of the watch itself which besides having an error of eccentricity seemed to start more promptly than it stopped.

The above results depend on admittedly meagre experimental data, about 210 observations in all, and hence are presented as preliminary only; they are, however, considered as giving fairly accurate values for the lag involved in the use of a key and chronograph. The stop-watch results need much more extensive investigation.

PHOTOGRAPHS OF VENUS.

By Frank E. Ross.

During the past summer, 1927, the writer photographed Venus with the Mount Wilson 60-inch and 100-inch reflectors, through various filters from ultra-violet to infra-red. The ultra-violet pictures showed markings, both dark and bright, which varied from night to night. On June 26, a sharp wedge-shaped marking was photographed, which appeared to remain stationary over an interval of one hour, accordingly suggesting a slow rotation-period for the planet. In general the markings were dark bands perpendicular to the terminator, strongly suggestive of the belts of Jupiter, several sometimes appearing on one night. On June 6, an extended bright cloud covered the region around the south point. Both the south and north points appeared to be the region of bright clouds, the dark bands confining themselves to the central portions of the disc, extending from the terminator to the edge at times.

No markings were seen visually, although they were carefully searched for each night. This agrees with the photographs, for the negatives made through blue, red, and infra-red filters gave not a trace of the markings.

THE VAN VLECK OBSERVATORY EXPEDITION TO NORWAY FOR THE ECLIPSE OF JUNE 29, 1927.

By Frederick Slocum.

The path of totality of this eclipse crossed England, Norway, and Sweden. Weather records indicated that the probability for clear sky

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