meridian time. The diurnal variation progresses according to the hours of *local* mean time, and this fact, theoretically, ought to be taken into consideration in applying the diurnal variation as obtained in Washington to various parts of Maryland. However, the correction that would have to be made on this account is but a small fraction of a minute.[1] There are other errors, larger than this, committed in the application of the table. *It will suffice, therefore, for practical purposes to make all corrections of declination obtained in this state according to standard time.*

It will be seen from the bottom row of figures of Table I that the *range* between the extreme values of the declination is subject to an *annual* variation, being in mid-winter just about half of that in mid-summer, the mean value for the year being about 7′ for that particular year (1890) and for the latitude of Washington. This mean value is likewise subject to a fluctuation, being greater in years of maximum sun-spots and less in times of minimum sun-spots. The next table exhibits this. *R* stands for the relative number of sun-spots. Thus the year 1843 was a year of minimum number of sun-spots, and we find that the range of declination at Philadelphia reached its smallest value. The year 1883–84 was a time of maximum number of sun-spots, and we see that the range at Los Angeles, California, reached its maximum value at this period.

TABLE III.

Showing how the diurnal range of the declination varies during the sun-spot period.

PHILADELPHIA.			LOS ANGELES.		
Year.	Range.	R.	Year. (Oct. to Oct.)	Range.	R.
1840	9′.1	61.8	1882–'83	6′.5	60.7
1841	8.1	38.5	1883–'84	**7.1**	**68.2**
1842	7.8	23.0	1884–'85	6.9	53.7
1843	**7.5**	**13.1**	1885–'86	5.8	32.4
1844	7.5	19.3	1886–'87	5.4	14.3
1845	8.5	38.3	1887–'88	5.4	7.3
			1888–'89	5.1	7.4

[1] To be theoretically correct, the standard time of observation would have to be corrected as follows: For extreme eastern part of Maryland add 8 minutes; for extreme western part of Maryland subtract 9 minutes. The table would then be entered with the times thus corrected.