in the southern hemisphere; its nights, at this time, are longer than its days, and winter prevails. On the 21st of December, all is changed; it is winter and dreary nights in the north, summer and long hours of splendour in the south.

The epochs of the 21st of June and the 21st of December are called, respectively, the *summer* and *winter solstices*, because the sun then appears to remain stationary for several days (*sol*, "sun," and *sto*,* "I stand"); it is then at its maximum distance from the north and south poles, and before resuming its celestial journey to regain the pole from which it has started, it seems to repose awhile.

[Winter, then, must be the shortest, and summer the longest of the four seasons; and the two other seasons of intermediate length, with spring the longer of the two. And such would be the case, even if the Earth travelled with equal velocity over every part of its orbit. But its rate of speed is really less during the summer season of the northern hemisphere than during the winter season, and the arcs travelled over are also unequal. The result is, that the mean duration of the seasons are as follows:—

Spring, 92.9 days.	Autumn, 89.7 days.
Summer, 93.6 days.	Winter, 89.0 days.

Spring, therefore, exceeds the autumn by 3 days, 4 hours, 48 min., and summer the winter by 4 days, 14 hours, 24 min.

But as the Sun is at its aphelion—that is, at its fullest distance from the Earth—in summer, the reader will wonder why our globe then enjoys the greatest amount of heat. One reason is, that the sun remains so much longer above the horizon of any place, and produces a consequently greater effect on the temperature. Another is, "the diurnal" arc described by the great Light-Giver rises higher and higher from the time of the spring equinox to the summer solstice, returning in inverse order from the summer solstice to the autumnal equinox. The rays that he sheds on the divers points of the northern hemisphere traverse the atmosphere less obliquely than in winter and autumn; and the intensity of the heat received is much greater when this obliquity is less, a circumstance easily explained by the inferior density of the atmospheric strata they traverse. Besides, if we leave the thickness of the atmosphere out of the question, the obliquity of which we speak is in itself a cause why the heat received should be less considerable.]

That the reader may the more readily comprehend the distribution of the seasons on our globe, we subjoin two diagrams representing

* [It would be more correct to say "June solstice" and "December solstice," since the winter and summer of *our* hemisphere correspond to the summer and winter of the opposite hemisphere.]