

The **equation of time** describes the discrepancy between two kinds of [solar time](#). The word equation is used in the medieval sense of *reconcile a difference*. The two times that differ are the *apparent solar time*, which directly tracks the motion of the sun, and *mean solar time*, which tracks a theoretical "mean" sun with noons 24 hours apart. Apparent (or true) solar time can be obtained by measurement of the current position ([hour angle](#)) of the Sun, as indicated (with limited accuracy) by a [sundial](#). *Mean* solar time, for the same place, would be the time indicated by a steady clock set so that over the year its differences from apparent solar time would resolve to zero.^[1] The equation of time is the east or west component of the [analemma](#), a curve representing the angular offset of the Sun from its mean position on the celestial sphere as viewed from Earth. The equation of time values for each day of the year, compiled by astronomical [observatories](#), were widely listed in [almanacs](#) and [ephemerides](#).^{[2][3]}