On the electrodynamics of moving bodies

Albert Einstein

Take an observer in a frame of reference moving at a speed v close to that of light c and measuring an interval Δt for the time between two events. Now consider a second observer at rest relative to the first and measuring a time $\Delta t'$ between the same events. The relationship between those two time intervals is¹:

$$\Delta t' = \gamma \Delta t = \frac{1}{\sqrt{1 - v^2/c^2}} \Delta t$$

1. Einstein, A. On the electrodynamics of moving bodies. (1905).