Length Contraction

A consequence of Time Dilation

$$v = \frac{d}{t}$$

if you agreed on the speed of 0.55c if v is constant and t is different then the d's also need to be different

A moving object must observe less distance compared to the stationary observer

$$\frac{L_{moving}}{L_{stationary}} = \sqrt{1 - \frac{v^2}{c^2}}$$

Length Contraction affects the way that moving objects are viewed, as objects move closer to the speed of light they appear to be shortened in the same direction as the motion.

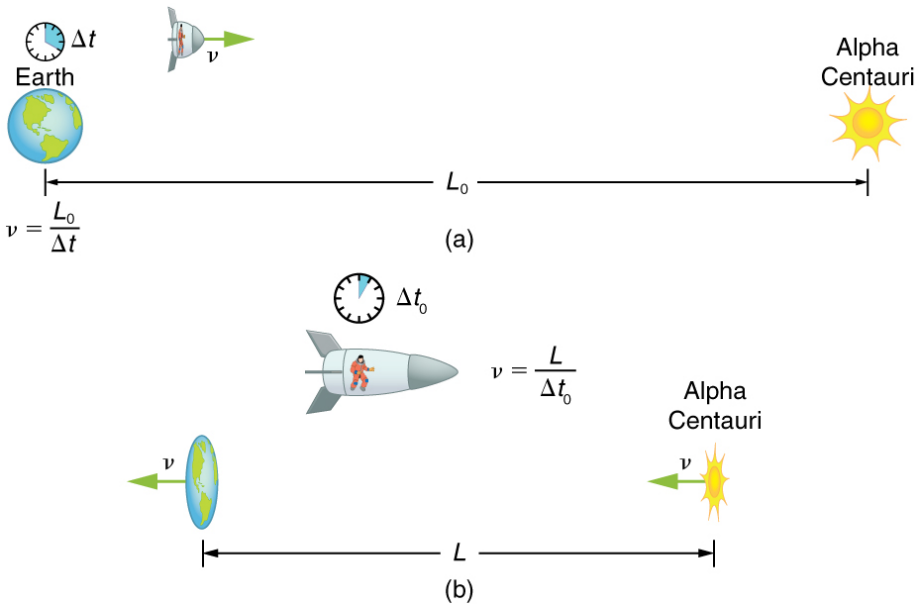

Figure 1: length contraction

the faster an object travels, the shorter the apparent distance they measure between objects