Discrepancy of length contraction answer to

https://pengkuanonphysics.blogspot.com/2020/02/drawing-relativity.html

Discussion concerning « Length, distance and Michelson–Morley experiment »

16 February 2020

Object contraction is shown in figure 1. Frame O2 is the Spaceship P moving at v with respect to frame O1. Its length is L2. In frame O1 P is seen as P′. P is length contracted and its length is $L1=L2/\gamma$, shorter than L2. Time is t=0

Distance contraction is shown in figure 2. Frame O2 moves L1 in frame O1. Time is t=L1/v. The backend of the spaceship is at O1. In Frame O2, O1 moves $L1/\gamma$, shorter than L1. So, O1 in Frame O2 is at the position $O'1=-L1/\gamma=-L2/\gamma^2$

But because the backend of the spaceship is at O1, O1 should coincide with the backend of the spaceship in Frame O2. That is, at $O''1=-L2$

The question is, what is the position of O1 in Frame O2? Is it -L2? Or $-L2/\gamma^2$?

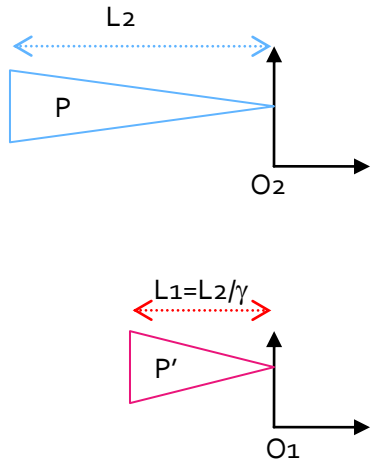

Figure 1 t=0

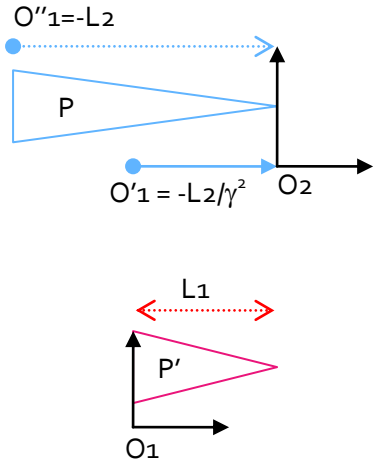

Figure 2 t=L1/v