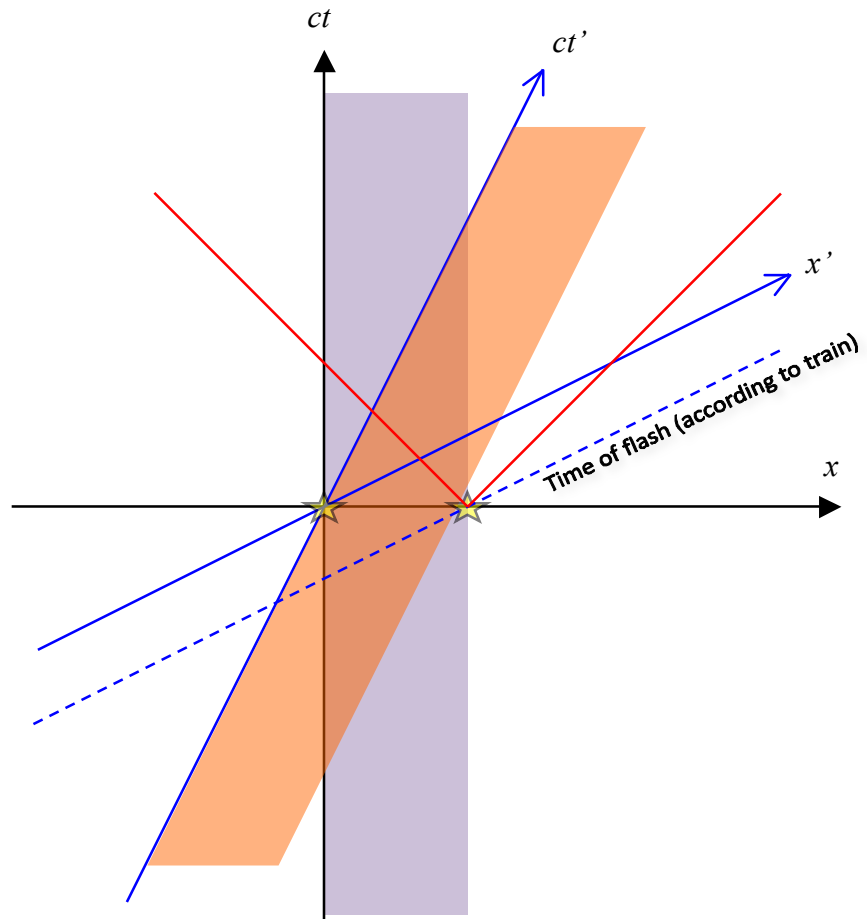


Purple is the tunnel, orange is the train.

With the ground frame axes perpendicular:



With the train frame axes perpendicular:

