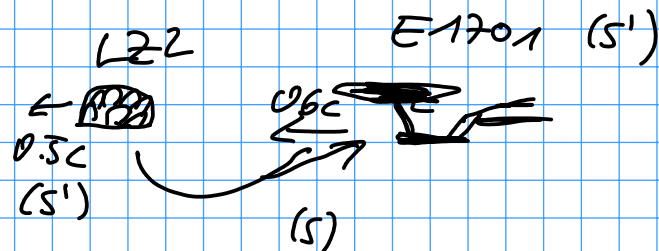
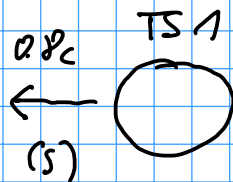
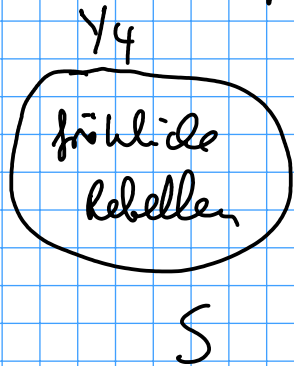


## Addition von Geschwindigkeiten

$$u' = \frac{dx'}{dt'}$$

$$u = \frac{dx}{dt} = \frac{\gamma(dx' + vdt')}{\gamma(dt' + \frac{v}{c^2}dx')} \stackrel{:\frac{dx'}{dt'}}{=} \frac{u' + v}{1 + \frac{vu'}{c^2}}$$

## Praktisches Beispiel



$$u = \frac{0.6c + 0.5c}{1 + 0.6 * 0.5} = 0.8462 c$$

Bsp 2:  $u' = c \Rightarrow u = \frac{c+v}{1 + \frac{v}{c}} = c \frac{c+v}{c+v} = c$