

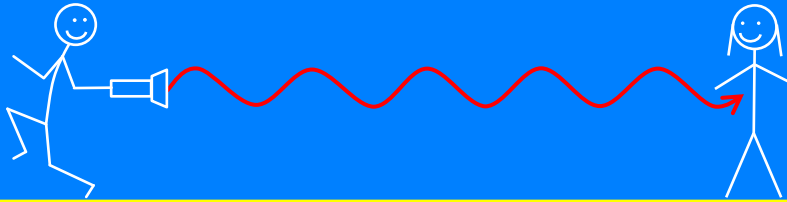
$$x' = \gamma_v(x - vt)$$

$$t' = \gamma_v\left(t - \frac{v}{c^2}x\right)$$

$$y' = y$$

$$z' = z$$

$$\gamma_v = \frac{1}{\sqrt{1 - (v^2/c^2)}}$$



$^{137}_{55}\text{Cs}$ (30.08 years)

β^- (0.512 MeV)

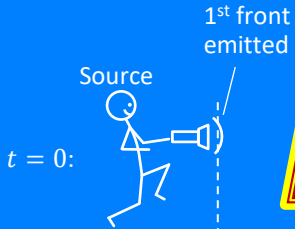
$^{137\text{m}}_{56}\text{Ba}$ (2.552 minutes)

γ (0.662 MeV)

$^{137}_{56}\text{Ba}$ (stable)

Relativity For Doing!

Activities for Space, Time, and Relativity
Spring 2024



1st front emitted

$t = T$:

Source

2nd front emitted

1st front, traveled forward

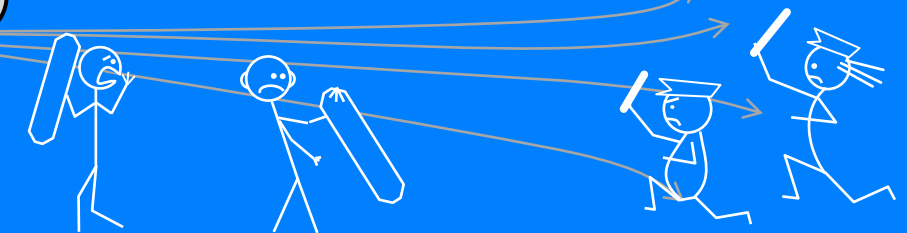
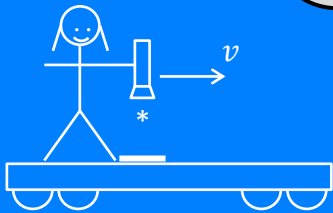
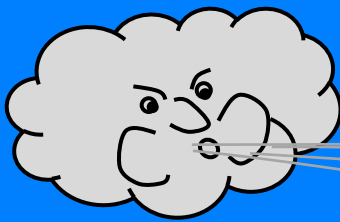
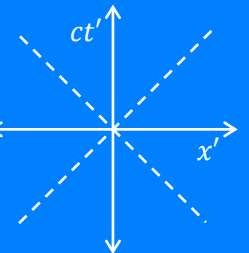
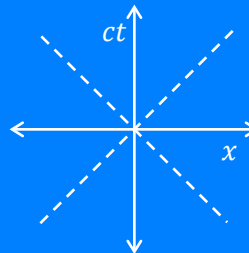
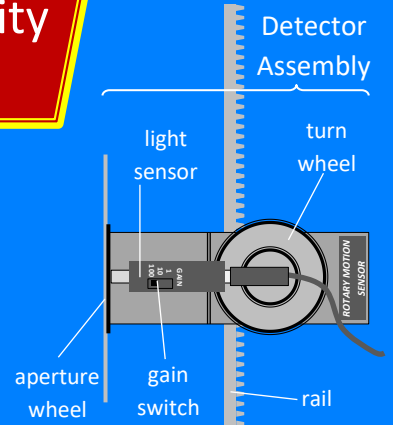
$a = g$
 $= 9.8 \text{ m/s}^2$

$u = +0.8c$

Frame S

Frame S'

Lorentz



```
ListPlot[{lorentz[1, 2, v], lorentz[1, 5, v]}, ...]
ListPlot[{galilean[1, 2, v], galilean[1, 5, v]}, ...]
```

