(6) $v = 0.995c$, track in over flame $= 1.25$ mm

$$1.25\text{ mm} = v\,\Delta t_{lab}$$

$$\frac{1.25\text{ mm}}{0.995c} = \Delta t_{lab}$$

~~$\Delta t_{proper} =$~~ ~~$\frac{\Delta t_{lab}}{\sqrt{1 - v^2/c^2}}$~~ ~~$\Delta t_1$~~

$$\Delta t_{lab} = \frac{\Delta t_{proper}}{\sqrt{1 - v^2/c^2}}$$

$$= \frac{\Delta t_{proper}}{\sqrt{1 - 0.995^2}}$$

$$\Delta t_{proper} = \sqrt{1 - 0.995^2}\,\Delta t_{lab} = \sqrt{1 - 0.995^2}\,\frac{1.25 \times 10^{-3}\text{ m}}{0.995c}$$

$=$