

# Review of: "Relativistic effects and photon-mirror interaction – energy absorption and time delay"

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**Potential competing interests:** No potential competing interests to declare.

This paper is rejected because the time delay calculation formula is incorrect. And it offers general definitions of Relativistic effects of photon-mirror interaction - energy absorption and time delay  
First calculation method

First calculation method,

$$\Delta E = h f_1 - h f_2$$

$$= h (f_1 - f_2)$$

$$= h \left( \frac{1}{T_1} - \frac{1}{T_2} \right)$$

$$= \frac{h (T_1 - T_2)}{T_1 \cdot T_2} = \frac{-h (T_2 - T_1)}{T_1 \cdot T_2}$$

$$= \frac{-h \Delta t}{T_1 \cdot T_2}$$

$$\Rightarrow \Delta t = \frac{\Delta E \cdot T_1 \cdot T_2}{h}$$

$$\boxed{\Delta t = \frac{\Delta E}{h f_1 f_2}}$$

## Second calculation method

Second calculation method.

$$\begin{aligned}\Delta t &= T_2 - T_1 = \left( \frac{1}{f_2} - \frac{1}{f_1} \right) \\ &= \frac{f_1 - f_2}{f_2 \cdot f_1} = - \frac{(f_2 - f_1)}{f_2 \cdot f_1} \\ &= - \frac{\Delta f}{f_2 \cdot f_1} \cdot \frac{h}{h} \\ &= - \frac{\Delta E}{h f_1 f_2}\end{aligned}$$