

# Time Travel & Engineering the Time Machine

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## Abstract

Following the Quantum Gravity and Quantum Frictional Red Shift (QFRS) article, I came up with an equation for the wavelength Red Shift, based on that equation, I could derive an equation for time shift and simplify it to obtain Time Travel and the required time machine would be an oscillator with special wavelength.

Keywords: Time Travel, Time Machine, Oscillator

## 1-Introduction

Based on the former article DOI:10.24214/jcbps.C.14.1.01825., I came up with the wavelength shift equation in QFRS, which is:

$$\lambda_2 = \frac{hc \lambda_1}{hc - Re} \quad (1)$$

$$\lambda_2 = \frac{\lambda_1}{1 - \frac{Re}{hc}} \quad (2)$$

Let  $\lambda_2 = ct_2$  and  $\lambda_1 = ct_1$ , also

$$e = \frac{hc}{\lambda'} \quad (3)$$

$$ct_2 = \frac{ct_1}{1 - \frac{R}{\lambda'}} \quad (4)$$

## 2- Time Shift

Let  $\lambda' = R + \lambda$

$$t_2 = \frac{t_1}{1 - \frac{R}{R + \lambda}} \rightarrow t_2 = \pm \frac{t_1 R}{\lambda} \quad (5)$$

The above equation is a time shift, hence a time travel equation achieved by an oscillator with wavelength “ $\lambda$ ” in meters at the surface of planet with radius “ $R$ ” in meters.  $t_1$  is duration of exposure to radiation in seconds and  $t_2$  is the amount of time shift or time travel to the past or future in seconds.

I could rewrite equation 5 so that  $t_1$  would be in minutes,  $t_2$  would be in years and  $R$  would be in kilometers.

$$t_2 = \frac{t_1 R}{525.6 \lambda} \quad (6)$$

$t_1$  = duration of radiation in minutes

$t_2$  = amount of time travel in years

$\lambda$  = wave length of oscillator in meters

$R$  = radius of Earth in kilometers

Example: How far to the past could an oscillator time machine send us if the exposure time is 10 minutes, and the wavelength is 10 meters. (30 MHz Oscillator)?

$t_1 = 10$  minutes

$\lambda = 10$  meters

$R = 6370$  Km

$\rightarrow t_2 = 12.11$  years to the past.

Time Travel to the future is not feasible as the future has not happened yet.

## 3- Time Machine Structure

Time Machine Structure is mainly an oscillator with a specific wavelength as was calculated in the previous section. The power of the time machine depends on the time travelers’ mass and volume and the duration of radiation and the amount of time we want to travel.

The power wattage that I have found by dimensional analysis is the following equation:

$$P = \frac{76.7376 \Omega m c V t_2^2}{t_1^4 R^2} \quad (7)$$

P = Time machine power in Watts  
 m = Time travelers' mass in kilograms  
 c = Speed of light (299792458 meters/second)  
 V = Volume of time traveler in cubic meter  
 t<sub>2</sub> = amount of time travel in years  
 t<sub>1</sub> = duration of radiation in minutes  
 R = Earth Radius in kilometers: 6370 km  
 Ω = Unknown Factor

Example: If I want to send a 175-gram mobile phone with a geometric volume of 85 cubic-centimeter and an exposure of 10 minutes to 12 years to the past with a wavelength of 10 meters (30 MHz Oscillator), how much power should the time machine oscillator have?

$$P = \frac{76.7376 \Omega \cdot (0.175) \cdot (299792458) \cdot (85 \cdot 10^{-6}) \cdot (12)^2}{(10)^4 \cdot (6370)^2} = 0.121 \cdot \Omega \text{ milliwatts}$$

If Ω = 10000 then 1.21 watts is required to transfer a mobile phone (cell phone) to 12 years in the past, As I mentioned Omega is unknown. I kindly request any interested reader to determine Omega with experiment.