

**Photodiode oscillation**

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See the Unified Absolute Relativity Theory at:

- [www.wbabin.net/saraiva/saraiva305.pdf](http://www.wbabin.net/saraiva/saraiva305.pdf)
- [www.wbabin.net/saraiva/saraiva306.pdf](http://www.wbabin.net/saraiva/saraiva306.pdf)
- [www.wbabin.net/saraiva/saraiva307.pdf](http://www.wbabin.net/saraiva/saraiva307.pdf)
- [www.wbabin.net/saraiva/saraiva328.pdf](http://www.wbabin.net/saraiva/saraiva328.pdf)
- [www.wbabin.net/stham/saraiva347.pdf](http://www.wbabin.net/stham/saraiva347.pdf)
- [www.wbabin.net/stham/saraiva366.pdf](http://www.wbabin.net/stham/saraiva366.pdf)

Josephson junctions are like voltaic cells for neutrinos.  
Photodiodes oscillate like Josephson junctions.

$$f = \frac{I_M}{q_m} = 4.836 \times 10^{14} \text{ Hz} ; \quad f = \frac{I_E}{q_e} = 6.24 \times 10^{18} \text{ Hz}$$

$$I_M = V_E ; \quad n = 6.24 \times 10^{18} \text{ m}^{-2} \text{ s}^{-1} = 2.08 \times 10^{10} \text{ m}^{-3}$$

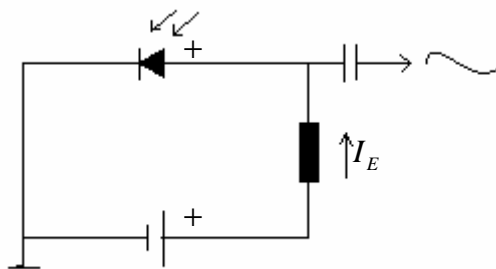
$f$  -- Frequency;  $I_M$  -- Magnetic current or electric voltage;  
 $I_E$  -- Electric current;  $q_m$  -- Magnetic charge;  $q_e$  -- Electric charge;  
 $n$  – Number of photons.

Superfluid frequency:

$$f = \frac{I_{MS}}{m_e} = 1.1 \times 10^{30} \text{ Hz} ; \quad I_{MS} = \frac{Nm_e}{t}$$

$m_e$  -- Electron mass;  $t$  – Time;  $I_{MS}$  -- Mass current.

Photodiode oscillation:



It's possible to make an ac current photovoltaic cell.  
 Light is a wave because of the Arago spot.  
 The photon spin can be zero.

Charges:

$$t_e \dots q_m \dots q_e \dots m_e$$

Time; Magnetic charge; Electric charge; Mass

Time frequency:

$$f = \frac{I_t}{t} ; \quad I_t \text{ -- Time current = number of things}$$

$$f = f_e = 1.236 \times 10^{20} \text{ Hz} ; \quad I_t = 1L^0V^0$$

Voltages:

$$V_E = \frac{k_B T}{q_e} ; \quad V_M = \frac{k_B T}{q_m} ; \quad V_{MS} = \frac{k_B T}{m_e}$$

$$k_B 300 = 25.84 \text{ meV}$$

$$V_E = 25.84 \text{ mV} ; \quad V_M = 2 \mu\text{A} ; \quad V_{MS} = 4.54 \times 10^9 \text{ m}^2 / \text{s}^2$$

Time voltage = Power:

$$V_t = \frac{k_B T}{t_e} = 0.512 \text{ Watt} ; \quad t_e = 1 / f_e$$

$f_e$  -- Electron Compton frequency.