

**Neutrino voltaic cells**

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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)

The Josephson junctions are like photovoltaic cells for neutrinos.  
They detect the sun neutrinos and generate electricity.  
The current is not a supercurrent because it has voltage.

$$V_C = I_C R_N ; \quad P = V_C I_C$$

$$f = \frac{2q_e}{h} V ; \quad \frac{h}{2q_e} = \frac{1}{K_{J-90}} = \Phi_0 ; \quad K_{J-90} = 4.836 \times 10^{14} \text{ Hz/V}$$

$V_C$  -- Voltage of the junction;  $I_C$  -- Current of the junction;  $R_N$  -- Resistance;  
P – Power; f – Frequency;  $q_e$  -- Electron charge; h – Planck constant;  
V – Voltage;  $\Phi_0$  -- Magnetic flux quantum.

$$f = \frac{V}{\Phi_0} ; \quad V = \frac{n\Phi_0}{t}$$

$$\Leftrightarrow f = \frac{n}{t} \quad \Leftrightarrow n = 4.836 \times 10^{14}$$

Number of detected neutrinos from the sun:

$$n_\nu = 2.418 \times 10^{14} \text{ m}^{-2} \text{ s}^{-1} \quad \Leftrightarrow n/n_\nu = 2$$

Power:

$$\text{For Area} = 1 \text{ m}^2 \quad \Leftrightarrow P = 2 \text{ MW constant all day and night}$$

$$\text{Photovoltaics } 1 \text{ m}^2 \quad \Leftrightarrow P = 170 \text{ W}$$