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Electric and magnetic charges

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See the Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva305.pdf
www.wbabin.net/saraiva/saraiva306.pdf
www.wbabin.net/saraiva/saraiva307.pdf
www.wbabin.net/saraiva/saraiva328.pdf
www.wbabin.net/stham/saraiva347.pdf
www.wbabin.net/stham/saraiva366.pdf

The value of the magnetic charge quantum is due to the number of neutrinos (the magnetic monopoles) from the sun.

The value of the electric charge quantum is due to the number of photons from the cosmic microwave background.

In a Josephson superconductor-normal metal junction:

$$f = \frac{V_E}{q_m} = \frac{nq_m}{q_m t} = \frac{n}{t}$$

For $V_E = 1V ... and ... t = 1s$:

$$n_\nu = \frac{1}{q_m} = 4.836 \times 10^{14} m^{-2} s^{-1} = 1.613 \times 10^{6} m^{-3}$$

n_ν -- Number of neutrinos from the sun; q_m -- Magnetic charge; f – Frequency; V_E -- Electric voltage; t – Time; h – Planck constant; q_e -- Electric charge.

Dirac quantization: $2q_m q_e = h$

In a semiconductor n-p junction:

$$f = \frac{I_E}{q_e} = \frac{nq_e}{q_e t} = \frac{n}{t}$$

For $I_E = 1A...and...t = 1s$:

$$n_e = \frac{1}{q_e} = 6.24 \times 10^{18} m^{-2} s^{-1} = 2.1 \times 10^{10} m^{-3}$$

n_e -- Number of electrons from the CMB; I_E -- Electric current.

Number of photons from CMB: $n_f = n_e / 2 = 10^{10} m^{-3}$