

**The two universes Cooper pair**

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See the Unified Absolute Relativity Theory at:

- [www.wbabin.net/saraiva/saraiva305.pdf](http://www.wbabin.net/saraiva/saraiva305.pdf)
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- [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)

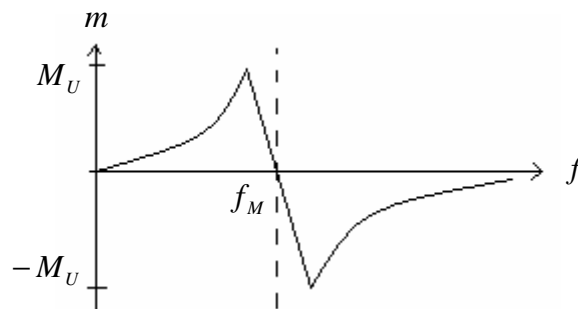
Our universe has a symmetric partner with negative mass. SI units.

Mass of the wave particles:

$$m = \frac{hf}{w^2} ; \quad w = \sqrt{c^2 - Sf^2}$$

Natural equation:

$$m = hf \frac{c^2 - Sf^2}{(c^2 - Sf^2)^2 + a}$$



$m$  – Mass;  $h$  – Planck constant;  $f$  – Frequency;  $w$  – Wave speed;  $c$  – Light speed;  
 $S = 1.9 \times 10^{-34}$ ;  $f_M = c/\sqrt{S}$  - Matter frequency;  $M_U$  -- Universe mass.

$$\frac{dm}{df} = 0 \quad \Leftrightarrow \quad c^2 - Sf^2 = \sqrt{a}$$

$$f = f_M - \Delta f \quad \Leftrightarrow \quad \Delta f = \frac{\sqrt{a}}{2\sqrt{S}}$$

$$\sqrt{a} = \frac{hc}{2\sqrt{SM_U}} = 7.2 \times 10^{-62} ; \quad \Delta f = 2.6 \times 10^{-45}$$

$$w_U = \sqrt{c^2 - Sf^2} = \sqrt[4]{a} = 2.68 \times 10^{-31} ; \quad x_U = \frac{w_U}{f_M} = 1.24 \times 10^{-56}$$

For the electron:

$$m_e c x_e = h$$

For the universe:

$$M_U w_U x_U = \frac{h}{2}$$

$m_e$  -- Electron mass;  $x_e$  -- Electron wavelength;  $w_U$  -- Universe wave speed;  
 $x_U$  -- Universe wavelength.

Angular speed of rotation of the universe:

$$\omega = 7.3 \times 10^{-11} \text{ rad / year} \quad \Leftrightarrow \quad v = c$$