

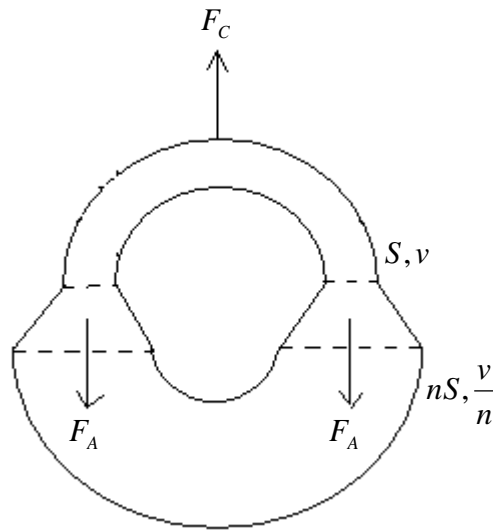
Autoreaction propulsion system

Antonio Saraiva
ajps137@gmail.com

(Vimana mercury engine)

It's possible to violate, locally, the linear momentum conservation principle. So, it's possible to move all the universe, but not its center of mass. For all the universe the principle remains valid.

The system:



There's mercury rotating inside the system. S – Area; v – Speed; ρ - Density

Vertical centrifuge force:

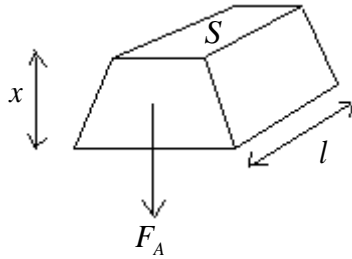
$$F_C = \rho.S.v^2 \left(1 - \frac{1}{n}\right)$$

Linear acceleration force:

$$F_A = \frac{1}{4} \rho.S.v^2 \frac{l}{x} \frac{n^2 - 1}{n^2} (n + 1)$$

Total force:

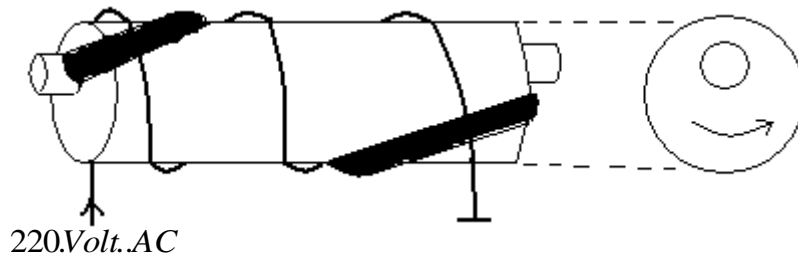
$$F_T = F_C - 2F_A = \rho.S.v^2 \frac{n-1}{n} \left(1 - \frac{l}{2x} \frac{(n+1)^2}{n}\right)$$



We must avoid turbulence in the fluid.

The real device:

In a real device the external cylinder is not circular, because the area increase must be linear to avoid turbulence.



The very low voltage is applied to the two metallic pipes and crosses the mercury. The high voltage generates a magnetic field. The Lorentz force makes the fluid to rotate. At the tops there are two insulators closing the mercury.

The autoreaction is the principle of generation of the forces – the electric force. That force can be positive or negative, always with n positive.

$$n = 10 \dots; \dots S = 0.2m^2 \dots; \dots \rho = 7600 \text{ kg} / m^3 \dots; \dots v = 10m / s \dots; \dots l = 1m \dots; \dots x = 0.3m$$

$$\Leftrightarrow \dots F_T = -281.5 \text{ Tons}$$

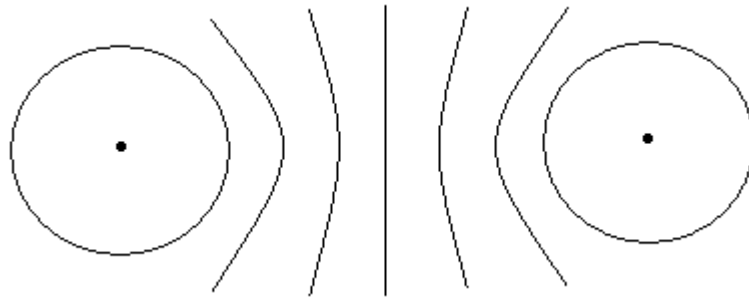
Electric force (Cooper pair):

$$g = \frac{Sc^2}{x_e^3} = 1.2 \times 10^{18} \text{ ms}^{-2} \dots; \dots m_e = 9.11 \times 10^{-31} \text{ kg}$$

$$F_{ee} = 2\pi \cdot g \cdot m_e = 6.87 \times 10^{-12} \text{ N}$$

$$F_T = \frac{Sc^2}{2\mu_0} (n-1) = 6.84 \times 10^{-12} (n-1) \text{ N} \quad ; \quad l \approx \sqrt{S} = 1.38 \times 10^{-17} \text{ m}$$

Interaction between two particles:



The fluid that rotates is the vacuum made of vacuons with the density:

$$\rho_0 = \frac{1}{\mu_0}$$

Newton's third law: for every action, there is an equal and opposite reaction....for all the universe. If a mass or a body moves by an autoreaction force, all the universe reacts in the opposite direction to keep the center of mass of the universe in the same position.

So, the linear momentum conservation principle is still valid for all the universe, but it's violated locally.

All the forces (the only one, the electric force) are generated by autoreaction, by the longitudinal waves that the particles emit, that are distorted, from the circular shape, by wave interference.

The word reactionless is wrong. Must be actionless or autoreaction. It's the action that doesn't exist.

The relativity theory can't be used to generate autoreaction because the force is a relativistic invariant.

Behavior of the autoreaction force:

$$F = \rho \cdot S \cdot v^2 \frac{n-1}{n} \left(1 - \frac{l}{2x} \frac{(n+1)^2}{n} \right) \dots \text{and } n \text{ greater than } 1$$

$$F = 0 \dots \Leftrightarrow \dots \frac{l}{2x} \frac{(n+1)^2}{n} = 1$$

$$l = \sqrt{S} \dots \Leftrightarrow \dots \sqrt{S} (n+1)^2 = 2xn$$

$$\Leftrightarrow \dots x \geq 2\sqrt{S} \dots \Rightarrow \dots x \approx 4\sqrt{S} \quad \Leftrightarrow \dots n = 3 \pm 2\sqrt{2}$$

$$n = 0.1716 \dots \text{or} \dots n = 5.83$$

SI constants values

$$q_e = 1.60217646 \times 10^{-19} \text{ C} \dots; \dots h = 6.62606891 \times 10^{-34} \text{ Js}$$

$$\mu_0 = 4\pi \cdot 10^{-7} (1 + 4.549 \times 10^{-8})$$

$$\alpha = 1/\sqrt{137^2 + \pi^2} \dots; \dots k_B' = \frac{\mu_0 q_e}{2\alpha} \dots; \dots k_B' = k_B \left(1 - \frac{\pi^3 \alpha^2}{2}\right)$$

$$c = \frac{2h\alpha}{\mu_0 q_e^2} \dots; \dots q_m = \frac{h}{2q_e}$$

$$\sqrt{S} = \frac{\alpha^3 h^2}{3q_e^3} \dots; \dots \epsilon_0 = \frac{q_e^4 \mu_0}{4\alpha^2 h^2}$$

Light frequency of a led with the voltage:

$$q_e V_E = hf \dots; \dots V_E = 2\text{Volt}$$

$$\Leftrightarrow \dots f = 4.84 \times 10^{14} \text{ Hz} \dots \Leftrightarrow \dots x = 619.4 \text{ nm}$$

Quantized black hole (electron neutrino B.H.):

$$R = G^{-1/3} = 2.465 \times 10^3 \text{ m} \dots; \dots M = \frac{c^2 G^{-4/3}}{2} = 1.66 \times 10^{30} \text{ kg}$$

Milky way B.H.

$$M = 8.2 \times 10^{36} \text{ kg} \dots \Leftrightarrow \dots R = 1.22 \times 10^{10} \text{ m} = \frac{2G^{-1/3}}{\alpha^3}$$

Electron neutrino B.H.

$$1.66 \times 10^{30} \text{ kg} \dots \dots 1.2 \text{ eV} \dots \dots 2.2 \times 10^{-36} \text{ kg}$$

Tau neutrino B.H.

$$8.2 \times 10^{36} \text{ kg} \dots \dots 9.1 \text{ MeV} \dots \dots 1.6 \times 10^{-29} \text{ kg}$$

Muon neutrino B.H.

$$7.7 \times 10^{34} \text{ kg} \dots \dots 85 \text{ KeV} \dots \dots 1.5 \times 10^{-31} \text{ kg}$$

Proton degeneracy pressure:

$$P_p = \frac{6\pi^2 m_p c^2}{x_p^3} = \frac{6\pi^2 hc}{x_p^4}$$

Central pressure of a B.H.:

$$P_G = \frac{GM^2}{\pi R^4} = \frac{c^8}{16\pi G^3 M^2} = \frac{c^4}{4\pi GR^2}$$

$$P_G \geq P_p \dots\dots\dots; \dots\dots M = \frac{c^4 x_p^2}{\sqrt{96\pi^3 G^3 hc}} = 10^{30} \text{ kg}$$

Glass and superconductor investigation:

Any material can be a superconductor if the molecules are black holes for the electrons.

The glass is a superconductor for visible photons:

$$f_0 = 5 \times 10^{14} \text{ Hz} \dots\dots \Leftrightarrow \dots\dots f = \frac{c}{\sqrt{S}} \sqrt{1 - \frac{1}{n^2}} = 1.616 \times 10^{25} \text{ Hz}$$

The superconductors are superconductors for the electrons:

$$v^2 = c^2 = \frac{2Gm}{R} \dots\dots; \dots\dots f_0 = \frac{c}{x_e} = 1.2356 \times 10^{20} \text{ Hz}$$

$$\Delta v = \frac{n+1}{n-1} \Delta w_0 \dots\dots; \dots\dots \Delta w_0 = \frac{Sf_0^2}{2c} = 4.87 \times 10^{-3} \text{ m/s}$$

$$m = 2 \times 10^{-25} \text{ kg} \dots\dots; \dots\dots R = 2 \times 10^{-10} \text{ m} \dots\dots \Leftrightarrow \dots\dots G = 4.5 \times 10^{31} \text{ m}^{-3}$$

$$\Delta v = \frac{c}{2} \frac{\Delta R}{R} \dots\dots \text{and} \dots\dots \Delta R = 5.32 \times 10^{-31} \text{ m}$$

$$\Delta v = 4 \times 10^{-13} = \frac{n+1}{n-1} 4.87 \times 10^{-3} \dots\dots \Leftrightarrow \dots\dots n = -(1 + \Delta n)$$

$$n = -(1 + 1.64 \times 10^{-10})$$

$$n = \frac{c}{w} \dots\dots \Leftrightarrow \dots\dots w = -(c - \Delta w) \approx -c$$

$$\Delta w = c \Delta n = 4.91 \times 10^{-2} \text{ m/s}$$

$$f = \frac{c}{\sqrt{S}} \sqrt{1 - \frac{1}{n^2}} \dots \Leftrightarrow \dots f = -4 \times 10^{20} \text{ Hz} = -3.2 f_0$$

Or:

$$k = \frac{n+1}{n-1} f_0^2 = 1.25 \times 10^{30} \dots \dots \dots \hbar = 1.5 \dots \dots \dots f_0 = 5 \times 10^{14} \text{ Hz}$$

$$n = \frac{k + f_0^2}{k - f_0^2} = -1 - \Delta n \dots \dots \Leftrightarrow \dots \Delta n = 1.64 \times 10^{-10}$$

So, v and Δv are constants of the material.

$$\Delta v = \frac{c}{2} \frac{\Delta R}{R}$$

$$v = \frac{c}{2} \log R + Q = c \dots \dots \Leftrightarrow \dots Q = 3.6474 \times 10^9 \text{ m/s}$$

$$B_e = \frac{4\pi q_m}{x_e^2} = 4.414 \times 10^9 \text{ T} \dots \text{or} \dots \text{m/s} \dots \text{Magnetic field of the electron}$$

$$Q = \frac{5}{6} B_e$$

$$\frac{c}{2} \log R + \frac{5}{6} B_e = c \dots \dots \Leftrightarrow \dots R = 1.627 \times 10^{-10} \text{ m}$$

$$\frac{c}{2} \log R + B_e = c \dots \dots \Leftrightarrow \dots R = 1.202 \times 10^{-12} \text{ m}$$

The magnetic induction is a speed.

The value of the Δv is the condition to be a glass or a black hole or any other thing.

$$\frac{2Gm}{R} \geq c^2 \dots \dots \dots G = 4.5 \times 10^{31} \text{ m}^{-3}$$

$$G^{1/3} = \frac{3d^4}{4\pi \epsilon_0 k_B'^2}$$

$$G^{-1/3} = 2.8 \times 10^{-11} \text{ m} \dots \dots \dots d = 4 \times 10^{-12} \text{ m}$$

