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Black Hole Media Behaviour in Superconductivity

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As we know the macroscopic formula of a black hole is:

$$v = c = \sqrt{\frac{2MG}{R}}$$

That means the escape speed of a black hole is equal to "light speed" (R – radius; M – mass; G – gravitational constant; c – "light speed").

We think that the phenomena related to glass phase, super fluidity, and super conductivity, are all due to black hole conditions in the media. One particular case is the super fluidity of the vacuum, because the local escape speed of our universe is equal to the expansion speed of it, the true meaning of "light speed".

As we have seen earlier, for the electron: $\Delta v_e = 18.489 ms^{-1}$

If the medium behaves like a black hole:

$$v \approx -c \quad \Leftrightarrow \quad \Delta v_T = 2\Delta v_e - \Delta v_M = 0 \quad \Leftrightarrow$$

$$\Leftrightarrow \quad \Delta v_M = 36.978$$

$$v = \sqrt{\frac{m_0 G}{x_0}} \quad \text{and} \quad G = \frac{F x_0^{\ 2}}{m_0^{\ 2}} \quad \Leftrightarrow \quad v^2 = \frac{F x_0}{m_0}$$

$$\Leftrightarrow \quad v^2 = \frac{x_0}{m_0} \frac{kh\left(c^2 - v^2\right)^2 f_0^{\ 4}}{c^2\left(c^2 + v w_0\right)\left(w_0 + v\right)^3} \quad \text{and} \quad \frac{x_0}{m_0} = \frac{c^3}{h f_0^{\ 2}} \quad \text{and} \quad w_0 = c$$

$$\Leftrightarrow \quad c^2 = \frac{k f_0^{\ 2}\left(c^2 - v^2\right)^2}{\left(c + v\right)^4}$$

$$\frac{m}{x} = \frac{h f^2}{c^3} \quad ; \quad f_0 = \frac{c f \sqrt{c^2 - v^2}}{c^2 - v w_0} = f \frac{\sqrt{c^2 - v^2}}{c - v}$$

$$f_0 = f\,\frac{\sqrt{c^2 - v^2}}{2c} \qquad \Leftrightarrow \qquad c^2 = \frac{kf^2\left(c^2 - v^2\right)^3}{4c^2\left(c + v\right)^4}$$

$$v = -c + \Delta v \qquad \Leftrightarrow \qquad \Delta v_M = \frac{2kf^2}{c}$$

$$\Leftrightarrow \qquad f = 5.12641797 \times 10^{21}\,Hz \qquad \Leftrightarrow$$

$$\Leftrightarrow \qquad \underline{\frac{m}{x} = 6.46281747 \times 10^{-16}}$$

m = mass of the particle of the medium
x = lattice spacing of the medium

If m/x has this value the medium is a superconductor for electrons.