Stellar black holes

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Stellar black holes are quantized.

Angular momentum constancy:

$$f_1 R_1^{\ 2} = f_2 R_2^{\ 2}$$

Star frequency and radius:

$$f_1 = \frac{1}{25D} = 4.63 \times 10^{-7} Hz......;......R_1 = 7 \times 10^8 m$$

Black hole radius:

$$R_2 = G^{-1/3} = 2.45 \times 10^3 m$$

$$f_2 = 3.75 \times 10^4 Hz.......;.. ...... f_2 / f_1 = 8.1 \times 10^{10}$$

Rotational speed:

$$v_2 = 2\pi . R_2 f_2 = 5.8 \times 10^8 m/s = 2c$$

Centrifuge acceleration:

$$g_2 = \frac{v_2^{\ 2}}{R_2} = 1.37 \times 10^{14} ms^{-2}$$

Gravitational acceleration:

$$g_G = \frac{GM}{R_2^{\ 2}} = 2.2 \times 10^{13} ms^{-2} ......;... ..... g_2 / g_G = 2\pi$$

Temperature:

$$T = g_G = 2.2 \times 10^{13} S$$

Electric charge:

$$T = Q_e g_G .... \Leftrightarrow .... Q_e = 1C$$

$$T = mf^2 ....;....k_B T = hf ....\Leftrightarrow ......m = \frac{h^2}{k_B^{\ 2} T} = 1.05 \times 10^{-34} kg$$

$$m_\nu = 2.2\times10^{-36}kg.......;..\ ......m_e = 9.11\times10^{-31}kg$$

$$m_\nu a + m_e(1-a) = 1.05\times10^{-34}.......\ \Leftrightarrow\ ....a = 0.9999$$

The black holes are made of neutrinos.

Number of electrons:

$$n_e q_e = Q_e.......\ \Leftrightarrow\ ....n_e = 6.24\times1018$$

Electric potential or voltage:

$$T = \frac{V_E^{\ 2}}{2} = MG^{5/3}........\ \Leftrightarrow\ ....V_E = 6.63\times10^6 Volt$$

Magnetic charge:

$$V_E = Q_m f_2.........\ \Leftrightarrow\ ....Q_m = 176.9Weber$$

Resistance:

$$R_E = \frac{Q_m}{Q_e} = 176.9\Omega$$

$$k_B T = hf........\ \Leftrightarrow\ ....\ f = 4.58\times10^{23}Hz = 2f_P$$

$$Q_m = n_\nu q_m........\ \Leftrightarrow\ ....n_\nu = 8.6\times10^{16}$$

Speed of the electrons:

$$v_e = \frac{V_E R_E}{2} = 5.86\times10^8 = 2c = v_2$$

$$V_E = \frac{Q_e}{4\pi\varepsilon_0 G^{-1/3}} = 3.7\times10^6 Volt$$

$$R_{VC} = \frac{q_m}{q_e} = 1.3\times10^4.......\ \Leftrightarrow\ ....\ \frac{R_{VC}}{R_E} = 10^4\alpha$$

Force:

$$F_E = \frac{V_E}{R_E^{\ 2}} = 10^4 N = \frac{Q_e^{\ 2}}{2\varepsilon_0 G^{-1/3}}$$

Magnetic field:

$$B_1 = \frac{Q_m}{G^{-2/3}} = 2.9\times10^{-5}T$$

$$B_2 = \frac{\mu_0 I_E}{2G^{-1/3}}.....;....I_E = Q_e f_2 = 3.75\times10^4 A$$

$$B_2 = 9.6\times10^{-6}T$$

$$E = \frac{V_E}{G^{-1/3}} = 2.7\times10^3 V/m$$

$$\frac{E}{B_2} = c$$

Stellar black holes II:

$$f_0 = \frac{1}{25D}.....;.....R_0 = 7\times10^8 m....;.....f_0 R_0^{\ 2} = 2fR^2....\Leftrightarrow ...M = 2M_0$$

$$f = \frac{c}{2\pi.G^{-1/3}} = 2\times10^4 Hz...;.....G^{-1/3} = \frac{\pi.f_0 R_0^{\ 2}}{c}.... \Leftrightarrow .....G = 7.444\times10^{-11} m^{-3}$$

$$T = \frac{g}{2\pi} = \frac{c^2}{2\pi.G^{-1/3}} = 6\times10^{12} S = \frac{V_E^{\ 2}}{2}..... \Leftrightarrow .....V_E = 3.47\times10^6 Volt$$

$$\frac{V_E R_E}{2} = c.......\Leftrightarrow ....R_E = 172.84\Omega$$

$$T = \frac{Q_e g}{2\pi}.......\Leftrightarrow ......Q_e = 1C.....;......v = 2\pi.G^{-1/3} f = c$$

$$I_E = Q_e f = 2\times10^4 A$$

$$V_E = Q_m f...... \Leftrightarrow ......Q_m = 173.5 Weber........(.\ Q_m = R_E.)$$

$$R_E = \frac{V_E}{I_E} = 172.6\Omega$$

$$B = \frac{\mu_0 I_E}{2G^{-1/3}} = 5.3\times10^{-6}T.....;.....E = cB = 1.58\times10^3 V/m$$

$$M = c^2 G^{-4/3} = 2.87 \times 10^{30} kg$$

$$E = \frac{V_E}{G^{-1/3}} = 1.46 \times 10^3 V/m.....;.... ...E = \frac{Q_e}{4\pi\varepsilon_0 G^{-2/3}} = 1.59 \times 10^3 V/m$$

$$T = mf^2 .....;.....hf = k_B T.....\Leftrightarrow .....m = \frac{h^2}{k_B{}^2 T} = 3.8 \times 10^{-34} kg$$

$$m = 174.8 m_\nu$$

$$m_\nu .a + m_e (1-a) = m........ \Leftrightarrow .... a = 0.9996$$

$$q_e V_E = m_e V^2 ...... \Leftrightarrow ....V = 7.8 \times 10^8 m/s$$

$$H = 2\pi .c^3 G^{-5/3} = 1.3 \times 10^{43}$$

$$H_S = 4\pi^2 M_S f_S R_S{}^2 = 1.8 \times 10^{43}$$

$$C = \varepsilon_0 G^{-1/3} = 2.1 \times 10^{-8} F....;..... .L = \mu_0 G^{-1/3} = 3 \times 10^{-3} H$$

$$\Leftrightarrow .... f = \frac{1}{2\pi\sqrt{LC}} = 2 \times 10^4 Hz$$

Stellar black holes III

Rotational period of the sun:

$$t_0 = 24.47..Days........ \Leftrightarrow .... f_0 = 4.73026 \times 10^{-7} Hz$$

Angular momentum conservation:

$$f_0 R_0{}^2 = 2 fR^2 .... \Leftrightarrow ....G^{-1/3} = \frac{\pi . f_0 R_0{}^2}{c} ...... \Leftrightarrow .....G = 6.9786 \times 10^{-11} m^{-3}$$

Electric current and rotational frequency of a black hole:

$$I_E = f = \frac{c}{2\pi .G^{-1/3}} = 1.964 \times 10^4 Hz$$

Electric charge: $Q_e = 1C$

Temperature and electric potential:

$$T = \frac{c^2}{2\pi.G^{-1/3}} = \frac{g}{2\pi} = \frac{V_E^{\ 2}}{2}\ldots\ldots\Leftrightarrow\ldots\ldots V_E = \frac{c}{\sqrt{\pi.G^{-1/3}}} = 3.43\times10^6 Volt$$

$$T = cf = cI_E = 5.9\times10^{12} S$$

Electric resistance and magnetic charge:

$$R_E = 2\sqrt{\pi.G^{-1/3}} = Q_m = 174.7\Omega // weber$$

Mass and radius:

$$M = c^2G^{-4/3} = 3.13\times10^{30} kg......;...\ .....R = G^{-1/3} = 2.43\times10^3 m$$

Angular momentum:

$$H = c^3G^{-5/3} = 2.28\times10^{42}..(L^5V^3)$$

Magnetic and electric fields:

$$B = \frac{\mu_0 c}{4\pi.G^{-2/3}} = 5.1\times10^{-6}T\ldots..;\ldots...E = cB = 1.5\times10^3 V/m$$

$$E = \frac{Q_e}{4\pi\varepsilon_0 G^{-2/3}} = 1.5\times10^3 V/m.......;..\ .....T = \frac{Q_e g}{2\pi}$$

Surface rotational speed and electron speed:

$$v = 2\pi.R.f = c\ldots\ldots..;\ldots\ldots...v_e = \frac{V_E R_E}{2} = c$$

Electric force:

$$F_E = \frac{V_E}{R_E^{\ 2}} = \frac{c}{4\pi^{3/2}G^{-1/2}} = 112.4N = n_e m_e g_e = \frac{m_e}{q_e} g_e$$

Accelerations:

$$g_e = \frac{cq_e}{4\pi^{3/2}G^{-1/2}m_e} = 1.98\times10^{13} ms^{-2}$$

$$\frac{g}{g_e} = \frac{4\pi^{3/2}G^{-1/6}ck_B'}{x_e} = \sqrt{3.5}\ldots\ldots\Leftrightarrow\ldots\ldots G = 6.98394707\times10^{-11}m^{-3}$$

Mass of the thermal oscillators:

$$m = \frac{h^2}{k_B{}^2T} = 3.92\times10^{-34}kg$$

$$m_e a + m_\nu(1-a) = m\ldots\ldots.. \Leftrightarrow \ldots\ldots. a = \frac{m}{m_e} = 4.3\times10^{-4}$$

$$g_C = g_G \approx g_e$$

Density:

$$\rho = \frac{3c^2G^{-1/3}}{4\pi} = 5.2\times10^{19}kg/m^3$$

Force at the center of the black hole:

$$F_C = \frac{GM^2}{R^2} = \frac{c^4}{G} = 1.16\times10^{44}N\ldots\ldots;\ldots\ \ldots.F_C = HcG^{2/3}$$

Pressure at 1/8 of the radius:

$$P_S = \frac{F_C}{4\pi.G^{-2/3}}\times8^2 = \frac{c^4}{4\pi.G^{1/3}}\times8^2 = 10^{38}Pa$$

Neutron degeneracy pressure:

$$P_N = \frac{6\pi^2m_Nc^2}{x_N{}^3} = 3.9\times10^{36}Pa$$

$$\frac{h^2}{S^3} = 2\pi10^{34} = L^4V^6\ldots\ldots.;..\ \ldots\ldots\mu_0 = 4\pi10^{-7}$$

Neutrino degeneracy pressure:

$$P_\nu = \frac{6\pi^2h^2}{q_eS^3} = 2.32\times10^{55}Pa$$

Power of the black hole:

$$P_W = 4\pi.R^2 T = 2c^2 G^{-1/3} = 4.37 \times 10^{20} W$$

Stellar black holes IV

$$G = 6.9786 \times 10^{-11} m^{-3}$$

Thermal frequency:

$$k_B T = hf_x ..... \Leftrightarrow ...... f_x = 1.23 \times 10^{23} Hz .....;.... ... f_P = 2.27 \times 10^{23} Hz$$

Power:

$$P_W = T 4\pi.G^{-2/3} = 4.37 \times 10^{20} W ......;... ....T = \frac{c^2}{2\pi.G^{-1/3}} = 5.9 \times 10^{12} S$$

Thermal resistance:

$$R_{TH} = \frac{T}{P_W} = 1.35 \times 10^{-8} L^{-1} V^{-1}$$

Entropy (entropy is a bosh):

$$E_{NT} = \pi.G^{-2/3} = 1.85 \times 10^7 m^2$$

Resistivity:

$$R_Y = R_E \frac{G^{-1/3}}{4} = 1.06 \times 10^5 \Omega m$$

Magnetic vector potential or circulation:

$$A = \frac{cG^{-1/3}}{2\pi} = 1.16 \times 10^{11} LV$$

Specific heat capacity:

$$C_{SH} = \frac{nk_B'}{m} ......;......m = \frac{h^2}{k_B'^2 T} = 3.9 \times 10^{-34} kg = \frac{2\pi.h^2 G^{-1/3}}{c^2 k_B'^2}$$

$$A = C_{SH} ....;. ......n = 3$$

Gravitational constant:

$$G = \left(\frac{h^2}{3ck_B'^3} \right)^{3/2} = 8.01849183 \times 10^{-11} m^{-3}$$

Old calculation:

$$G = \left(\frac{3x_N{}^4}{4\pi.\varepsilon_0 k_B'^2} \right)^3 = 8.03104552 \times 10^{-11} m^{-3}$$

Neutron Compton wavelength:

$$x_N{}^4 = \frac{4\pi.\varepsilon_0 h\sqrt{k_B'}}{3\sqrt{3c}} ......\Leftrightarrow .....x_N = 1.32082780 \times 10^{-15} m$$

$$E_Y = m_N c^2 = 1.50534946 \times 10^{-10} J$$

$$mwx = h.....\Leftrightarrow .....\frac{hc^2}{wx} = E_Y ....;.......w = \frac{xc}{\sqrt{S + x^2}}$$

$$x^2 = hc \frac{hc + \sqrt{h^2c^2 + 4E_Y{}^2 S}}{2E_Y{}^2}$$

$$x_N = 1.31966370 \times 10^{-15} m$$

Gravitational constant:

$$G = 8.02 \times 10^{-11} m^{-3}$$

Sun mass: $= 1.7 \times 10^{30} kg$

Black hole mass: $= 2.6 \times 10^{30} kg$

Stellar black holes V

Gravitational constant: $G = 8.02 \times 10^{-11} m^{-3}$

The gravitational constant is an inverse volume.

Radius: $R = G^{-1/3} = 2.32 \times 10^3 m$

Mass: $M = c^2 G^{-4/3} = 2.6 \times 10^{30} kg$

c – Light speed constant

A stellar black hole is quantized and rotates at light speed. The gravitational acceleration at the surface is equal to the centrifuge acceleration.

$$g_G = g_C$$

Temperature:

$$T = \frac{g}{2\pi} = \frac{c^2}{2\pi.G^{-1/3}} = 6.17 \times 10^{12} S.....;.... ..g = \frac{c^2}{G^{-1/3}} = 3.876 \times 10^{13} ms^{-2}$$

Electric charge:

$$T = Q_e \frac{g}{2\pi} ....\Leftrightarrow ......Q_e = 1C$$

Rotational frequency and electric current:

The rotational frequency is equal to the Schumann resonance.

$$f = \frac{c}{2\pi.G^{-1/3}} = 2.06 \times 10^4 Hz = I_E = 2.06 \times 10^4 A$$

Electric potential:

$$T = \frac{V_E^{\ 2}}{2} ......\Leftrightarrow .....V_E = 2.5 \times 10^6 Volt.....;.....\rho_0 = \frac{1}{\mu_0} = \frac{V_{E0}}{\pi}$$

Rotational speed and electron speed:

$$v = v_e = \frac{V_E R_E}{2} = 2\pi.G^{-1/3} f = c$$

Electric resistance:

$$R_E = \frac{2c}{V_E} = 2\sqrt{\pi.G^{-1/3}} = 170.7\Omega$$

$$R_E = \frac{Q_m}{Q_e} \ldots\ldots \Leftrightarrow \ldots\ldots Q_m = R_E = 170.7 Weber$$

Second electric potential:

$$V_{E2} = \frac{Q_e}{4\pi.\varepsilon_0 G^{-1/3}} = 3.876 \times 10^6 Volt$$

$$g = V_{E2} \times 10^7 = 2\pi.T \ldots\ldots \Leftrightarrow \ldots\ldots V_{E2} = \frac{\mu_0 T}{2}$$

Magnetic and electric fields:

$$B = \frac{\mu_0 I_E}{2G^{-1/3}} = \frac{\mu_0 c}{4\pi.G^{-2/3}} = 5.575 \times 10^{-6} T$$

$$E = Bc = 1.67 \times 10^3 V/m \ldots\ldots; \ldots \ldots E = \frac{Q_e}{4\pi\varepsilon_0 G^{-2/3}} = 1.67 \times 10^3 V/m$$

$$B_2 = \frac{Q_m}{2\pi.G^{-2/3}} = 5.05 \times 10^{-6} T$$

Magnetic vector potential or circulation:

$$A = \frac{cG^{-1/3}}{2\pi} = 1.106 \times 10^{11} LV$$

Specific heat capacity:

$$C_{SH} = \frac{3k_B'}{m} \ldots\ldots; \ldots\ldots m = \frac{h^2}{k_B'^2 T} = 3.74 \times 10^{-34} kg$$

$$C_{SH} = 1.106 \times 10^{11} L^{-2} V^{-2} \ldots\ldots \Leftrightarrow \ldots\ldots A = C_{SH}$$

Power:

$$P_W = 2c^2 G^{-1/3} = 4.17 \times 10^{20} W$$

Second current:

$$I_{E2} = \frac{Q_m}{3\mu_0 G^{-1/3}} = 1.95 \times 10^4 A$$

Second temperature:

$$T_2 = \frac{8}{\mu_0{}^2} = 5.07 \times 10^{12} S$$

Electric force:

$$F_E = \frac{V_E}{R_E{}^2} = \frac{c\sqrt{G}}{4\pi^{3/2}} = 120.54N$$

Acceleration of the electrons:

$$F_E = n_e m_e a....;.....\ .n_e = \frac{1}{q_e}$$

$$a = F_E \frac{q_e}{m_e} = 2.12 \times 10^{13} ms^{-2} ....;..\ ......\ g = 3.876 \times 10^{13} ms^{-2}$$

A special property of the Lorentz equations

Abstract – A special property of the Lorentz equations proves that the relativity theory is all wrong. Einstein's interpretation of the equations is wrong.

x and t are not space and time but wavelength and period of an electromagnetic wave. The Lorentz equations give the Doppler effect for transversal waves.

Spacetime doesn't exist.

Lorentz equations:

$$\begin{cases} x = \dfrac{x_0 - vt_0}{\sqrt{1 - v^2/c^2}} \\ t = \dfrac{t_0 - vx_0/c^2}{\sqrt{1 - v^2/c^2}} \end{cases} \Leftrightarrow \begin{cases} v^2(c^2 t_0{}^2 + x^2) - 2vx_0 t_0 c^2 + c^2(x_0{}^2 - x^2) = 0 \\ v^2(c^2 t^2 + x_0{}^2) - 2vx_0 t_0 c^2 + c^4(t_0{}^2 - t^2) = 0 \end{cases} \Leftrightarrow$$

$$\Leftrightarrow \quad c^2 t^2 - x^2 = c^2 t_0{}^2 - x_0{}^2$$

$x, x_0 - wavelength;..t, t_0 - period;..v - relative..speed;..c - light..speed$ constant

For n pairs of frames with n relative speeds:

$$c^2 t_1^{\ 2} - x_1^{\ 2} = c^2 t_2^{\ 2} - x_2^{\ 2} = \circ\circ\circ = c^2 t_n^{\ 2} - x_n^{\ 2} \ldots\ldots \Leftrightarrow$$

$$\Leftrightarrow \ldots\ldots c^2 t_n^{\ 2} - x_n^{\ 2} = S \rightarrow .Universal \text{ constant}$$

$$\sqrt{S} = \frac{q_e \mu_0 \alpha}{12\varepsilon_0} \qquad \Leftrightarrow \qquad S = 1.91210455 \times 10^{-34} m^2$$

q_e -- Electron charge; μ_0 -- Vacuum permeability; α -- Fine structure constant; ε_0 -- Vacuum permittivity.

Wave speed:

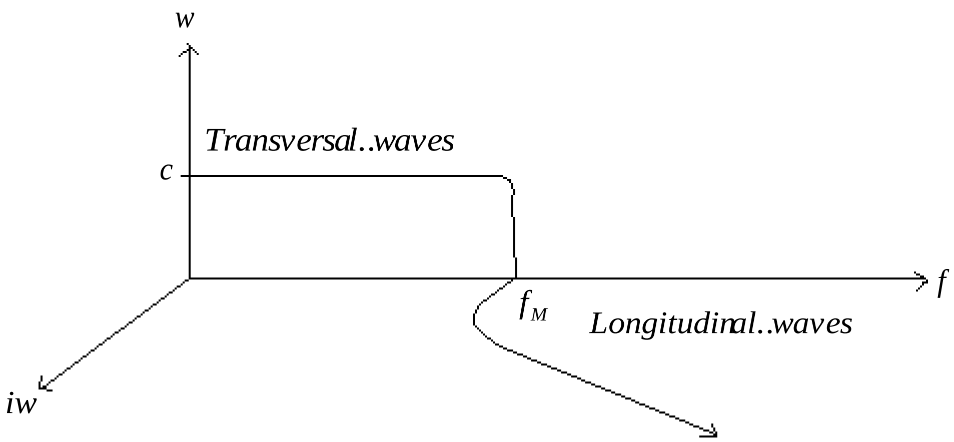
$$w = \frac{x}{t} \ ; \quad x = \sqrt{c^2 t^2 - S} \ ; \quad f = \frac{1}{t} \ ; \quad f \text{ -- Frequency}$$

$$\Leftrightarrow \ldots\ldots w = \sqrt{c^2 - Sf^2} \ ; \qquad \Delta w = c - w = \frac{Sf^2}{2c}$$

For the electron:

$$f = 1.2356 \times 10^{20} Hz \qquad \Leftrightarrow \qquad \Delta w = 4.87 \times 10^{-3} m/s$$

Wave speed:

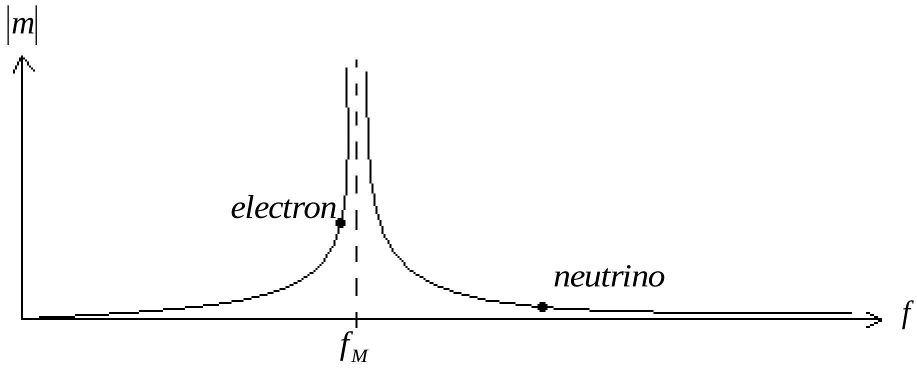


Matter frequency:

$$f_M = \frac{c}{\sqrt{S}} = 2.168 \times 10^{25} Hz$$

Mass of the waves-particles:

$$m = \frac{hf}{c^2 - Sf^2}$$



Mass of the neutrino:

$$m_\nu = q_e \sqrt{S} = 2.2 \times 10^{-36} kg = 1.243 eV$$

h – Planck constant;

International unified system of units

Abstract – There are only two fundamental units: speed and distance.

The padron we found:

Any value of the electron can be calculated only with the Compton wavelength and light speed:

c – Ligth speed;   x – Electron Compton wavelength.

Compton frequency: $f = xc^{-1}$

Permittivity: $\varepsilon_0 \approx x$

Boltzmann constant: $k_B \approx x^2$

Magnetic field: $B \approx c$

Magnetic vector potential: $A = xc$

Magnetic charge: $q_m \approx x^2 c$

Magnetic moment: $\mu \approx x^4 c^3$

Electric field: $E \approx c^2$

Inverse permeability: $\frac{1}{\mu_0} \approx xc^2$

Electric charge: $q_e \approx x^3 c^2$

Mass: $m = x^4 c^2$

Angular momentum: $h \approx x^5 c^3$

Energy: $E_Y \approx x^4 c^4$

L – Distance ; V -- Speed

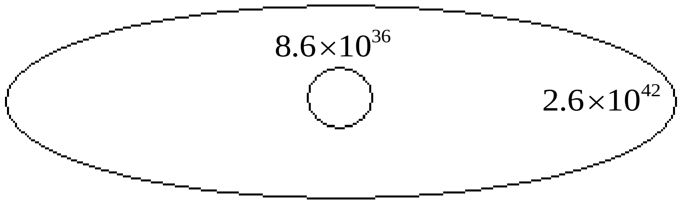
Table of the units

	L^{-1}	L^0	L	L^2	L^3	L^4	L^5
V^{-1}	Thermal and electric resistance	Resistivity; Mobility	Time; Inverse Frequency				
V^0	Ionizing Radiation; Curvature	Number; Time current	Distance; Permittivity; Capacitivity	Surface; Capacitance; Entropy; Boltzmann constant	Volume; Inverse Gravitational constant		
V	Frequency; Vorticity	Speed; Magnetic field	Magnetic Potential; Circulation; Conductance	Magnetic Charge; Magnetic flux	True Magnetic Dipole moment		
V^2	Acceleration; Magnetic current density	Electric Field; Inverse Inductance; Gravitational potential	Magnetic Current; Electric Potential; Inverse Permeability;	Electric Flux; Inverse Specific Heat capacity	Electric charge	Mass; Electric Dipole moment	Mass Dipole moment
V^3		Electric Current Density; Potential vorticity	Magnetic Field Strength; Magnetization	Magnetic Voltage; Electric Current; Viscosity	Mass current	Momentum; False Magnetic moment	Angular Momentum; Planck constant
V^4		Magnetic tension	Pressure; Energy density	Temperature Surface tension	Force	Energy; Torque	
V^5	Luminance	Spectral irradiance	Intensity; Irradiance		Power; Candela		

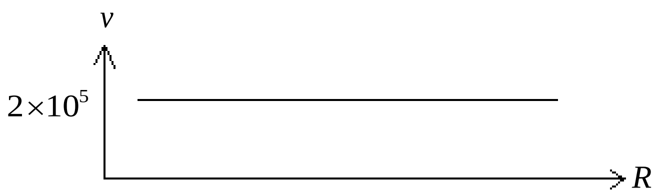
The dark matter error

$$M_{BH} = 8.6\times10^{36}\,kg....;.....\,..M_{MW} = 2.6\times10^{42}\,kg......;...\,...M_S = 2\times10^{30}\,kg$$

Milky way mass distribution:

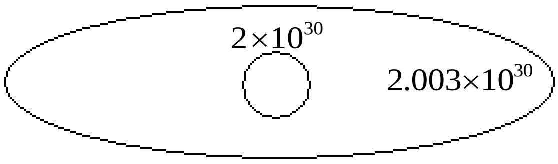


$$v = \sqrt{\frac{GM}{R}}$$

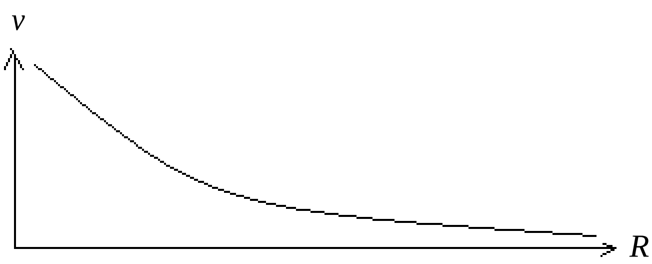


$$M = 4\times10^{10}R$$

Solar system mass distribution:



$$M = 2\times10^{30}$$



$$\frac{M_{MW}}{M_{BH}} = 3\times10^{5} = \frac{\pi^2}{\alpha^2}\,..........;..........M_G = \frac{\pi^2}{\alpha^2}M_{BH}$$

The local universe is a black hole and we live at its surface.

$$T = 2.728\,S.....;.... ..k_B T = hf_x .... \Leftrightarrow .... f_x = 5.68\times 10^{10}\,Hz$$

$$\frac{g}{2\pi} = \frac{c^2}{2\pi R_U} = 1.1\times 10^{-10}$$

$$T = \frac{V_E{}^2}{2} .... \Leftrightarrow ....V_E = 2.34\,Volt$$

$$V_E = \frac{Q_e}{4\pi\varepsilon_0 R_U} ..... \Leftrightarrow ......Q_e = 3.4\times 10^{16}\,C.....;.... ..n_e = \frac{Q_e}{q_e} = 2.1\times 10^{35}$$

$$f_U = \frac{c}{2\pi.R_U} = 3.67\times 10^{-19}\,Hz$$

$$I_E = Q_e f_U = 12.48\,mA........; :......R_E = \frac{V_E}{I_E} = 187.52\Omega$$

$$R_{E0} = \sqrt{\frac{\mu_0}{\varepsilon_0}}..........;........R_E = \frac{R_{E0}}{2}$$

$$v_e = \frac{V_E R_E}{2} = 219.4\,m/s$$; v = c

$$B = \frac{\mu_0 I_E}{2R_U} = 6\times 10^{-35}\,T.....;.... ...E = cB = 1.81\times 10^{-26}\,V/m$$

$$E = \frac{Q_e}{4\pi\varepsilon_0 R_U{}^2} = 1.81\times 10^{-26}\,V/m$$

$$R_E = \frac{Q_m}{Q_e} ...... \Leftrightarrow ....Q_m = 6.4\times 10^{18}\,Weber ...... \Leftrightarrow ....n_\nu = \frac{Q_m}{q_m} = 3.1\times 10^{16}$$

Stellar black holes

$$G = 8.02\times 10^{-11}\,m^{-3}$$

$$T = \frac{c^2}{2\pi.G^{-1/3}} = \frac{V_E{}^2}{2} .... \Leftrightarrow ....T = 6.17\times 10^{12}\,S.......;.. .....V_E = 3.5\times 10^{6}\,Volt$$

$$V_E = \frac{Q_e}{4\pi\varepsilon_0 G^{-1/3}} \text{........} \Leftrightarrow \text{........} Q_e = 0.906\,C$$

$$I_E = Q_e f = Q_e \frac{c}{2\pi.G^{-1/3}} = 1.864\times10^4 A.....;......f = \frac{c}{2\pi G^{-1/3}} = 2.06\times10^4 Hz$$

$$R_E = \frac{V_E}{I_E} = 187.75\Omega = \frac{R_{E0}}{2}$$

$$R_E = \frac{Q_m}{Q_e} \text{.........} \Leftrightarrow \text{.........} Q_m = 207.18 Weber$$

Neutrino:

$$m_\nu = q_e\sqrt{S} = V_E L^3 \text{........;.......} V_E = 1.243 Volt$$

$$L = \frac{x_e}{2}$$

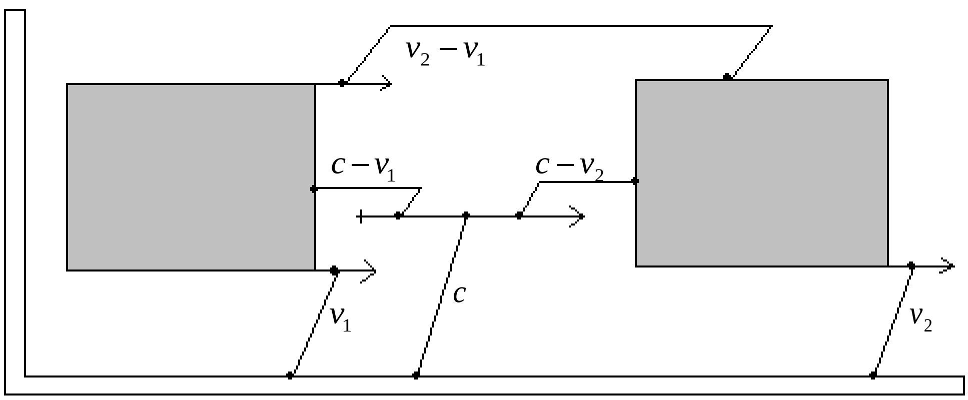
Light has relative speed

Light constancy is a bosh.

Light speed is not constant or absolute, it’s relative like all other waves.

As light speed is allways relative, we must define the speed vector and the reference frame.

The frames have an infinite number of speeds.



If light has no relative speed, there’s no Doppler effect for light.

My SI constants:

$$h = 6.62606876 \times 10^{-34} .... ;......... ...q_e = 1.60217642 \times 10^{-19}$$

$$\alpha = 1/\sqrt{137^2 + \pi^2} ....;..........\mu_0 = 4\pi.10^{-7}$$

$$k_B' = \frac{\mu_0 q_e}{2\alpha} ....;..........k_B' = k_B\left(1 - \frac{\pi^3\alpha^2}{2}\right)$$

$$R\infty = 1.09737316 \times 10^7 ....;........ .....x_e = \frac{\alpha^2}{2R\infty}$$

$$c = \frac{h}{q_e k_B'} ....;.... ....\varepsilon_0 = \frac{1}{c^2\mu_0}$$

$$\sqrt{S} = \frac{q_e\mu_0\alpha}{12\varepsilon_0}$$

$$m_e = \frac{h}{cx_e} ....;: ....m_\nu = q_e\sqrt{S}$$

$$h = 2\alpha\varepsilon_0 k_B'^2 c^3 ....;....... ....q_e = 2\alpha\varepsilon_0 k_B' c^2$$

Microwave background radiation:

$$T = 2.725S.....;.... ..k_B T = hf ...... \Leftrightarrow .... f = 5.673 \times 10^{10} Hz$$

$$f_{MX} = 2\sqrt{2}\frac{k_B T}{h} = 1.6 \times 10^{11} Hz$$

Milky way: $M = 6 \times 10^{20} R$

Supermassive black holes are made of tau neutrinos.
Tau neutrino mass:

$$M = 8.6 \times 10^{36} kg.......\Leftrightarrow ....R = \frac{GM}{c^2} = 6.4 \times 10^9 m$$

$$T = \frac{c^2}{2\pi.R} = 2.2 \times 10^6 S......;......m = \frac{h^2}{k_B{}^2 T} = 10^{-27} kg$$

$$m_\tau = 3.2 \times 10^{-27} kg$$

$$m = am_{\tau} + (1-a)m_{\nu\tau} = 10^{-27}$$

$$a = 4.3\times10^{-4} \ldots\ldots\ldots \Leftrightarrow \ldots\ldots\ldots\ldots m_{\nu\tau} = 10^{-27}\,kg = 560\,MeV$$

Muon neutrino approximation:

$$\begin{array}{l} E_{Y} \rightarrow 1.243\,eV \rightarrow \ldots\ldots \rightarrow 560\,MeV \\ \log \rightarrow 0.22 \rightarrow 10.2 \rightarrow 20.0 \end{array}$$

$$m_{\nu\mu} = 27KeV = 4.8\times10^{-32}\,kg$$

$$m_{\nu e} = 2.2\times10^{-36}\,kg\ldots..;\ldots\ldots m_{\nu\mu} = 4.8\times10^{-32}\,kg\ldots..;\ldots\ldots m_{\nu\tau} = 10^{-27}\,kg$$

Intermediate mass black holes are made of muon neutrinos:

$$m_{\nu\mu} = 4.8\times10^{-32}\,kg\ldots\ldots..;\ldots\ldots a = 4.3\times10^{-4}$$

$$m = m_{\mu}a + m_{\nu\mu}(1-a) \quad ; \qquad m_{\mu} = 105.7MeV = 1.9\times10^{-28}\,kg$$

$$\Leftrightarrow \ldots\ldots\ldots m = 1.3\times10^{-31}\,kg$$

$$T = \frac{h^{2}}{{k_{B}}^{2}m} = 1.8\times10^{10}\,S$$

$$R = \frac{c^{2}}{2\pi.T} = 8\times10^{5}\,m\ldots\ldots\ldots \Leftrightarrow \ldots\ldots\ldots\ldots M = 1.1\times10^{33}\,kg$$

Mass of the intermediate mass black hole.

Pressure at the center of the sun:

$$P_{S} = \frac{GM^{2}}{4\pi.R^{4}} = 8.8\times10^{13}\,Pa$$

Neutron degeneracy pressure:

$$P_{N} = \frac{6\pi^{2}m_{N}c^{2}}{{x_{N}}^{3}} = 4.1\times10^{36}\,Pa$$

Electron degeneracy pressure:

$$P_e = \frac{6\pi^2 m_e c^2}{x_e{}^3} = 3.4\times10^{23}\,Pa$$

Radius of a neutron star:

$$P_S = \frac{1}{2}\rho.v^2 \ldots\ldots;\ldots\ldots For..the..sun:\ldots v = 2.6\times10^5\,m/s$$

$$\begin{cases} \rho = \dfrac{2P_S}{v^2} \\ P_S = \dfrac{GM^2}{4\pi.R^4} \end{cases} \Leftrightarrow \ldots\ldots\ldots \rho = \frac{GM^2}{2\pi.R^4 v^2}$$

$$\frac{GM^2}{4\pi.R^4} = P_{Se}\ldots\ldots\ldots;.\ \ldots\ldots\ldots P_{Se} = 3.4\times10^{23}\,Pa$$

$$\rho = \frac{3M}{4\pi.R^3} = \frac{GM^2}{2\pi.R^4 v^2}\ldots\ldots\ldots \Leftrightarrow \ldots\ldots\ldots M = \frac{3Rv^2}{2G}$$

$$\begin{cases} M = \dfrac{3Rv^2}{2G} \\ \dfrac{GM^2}{4\pi.R^4} = P_{Se} \end{cases} \ldots\ldots\ldots \Leftrightarrow \ldots\ldots\ldots R^2 = \frac{9v^4}{16\pi.GP_{Se}}$$

$$\Leftrightarrow \ldots\ldots R = 1.2\times10^4\,m$$

Radius of a stellar black hole:

$$P_S = P_N = 4.1\times10^{36}\,Pa\ldots\ldots\ldots;..\ \ldots\ldots v = c$$

$$R^2 = \frac{9c^4}{16\pi.GP_N}\ldots\ldots\ldots \Leftrightarrow \ldots\ldots\ldots R = 2.3\times10^3\,m$$

Gravitational constant

$$G^{-2/3} = \frac{3k_B'^3 c}{h^2}\left(1 - \frac{k_B'\alpha^2}{x_e^2}\right) \ldots\ldots \Leftrightarrow \ldots\ldots G = 8.02 \times 10^{-11} m^{-3}$$

Stellar black hole radius and mass:

$$R_{BH} = G^{-1/3} = 2.32 \times 10^3 m \ldots\ldots \Leftrightarrow \ldots\ldots M_{BH} = \frac{c^2 R_{BH}}{G} = 2.6 \times 10^{30} kg$$

Sun mass: $6.673 \times 10^{-11} \times 2 \times 10^{30} = 8.02 \times 10^{-11} M_S \ldots \Leftrightarrow \ldots M_S = 1.664 \times 10^{30} kg$

Earth mass: $M_E = 5 \times 10^{24} kg$

$$x_P = 1.32141812 \times 10^{-15} m$$

$$G = \left(\frac{3x_P^4}{4\pi\varepsilon_0 k_B'^2}\right)^3 \left(1 - \frac{\alpha}{\sqrt{2}}\right) = 8.02 \times 10^{-11} m^{-3}$$

Power radiated by a stellar black hole:

$$P_W = 2c^2 G^{-1/3} = 4.17 \times 10^{20} W$$

$$V_E = 3.5 \times 10^6 Volt \ldots ; \ldots I_E = 1.86 \times 10^4 A \ldots ; \ldots Q_e = 0.90624\, C$$

$$B = \frac{\mu_0 I_E}{2G^{-1/3}} = 5.05 \times 10^{-6} T \ldots ; \ldots E = Bc = 1.515 \times 10^3 V/m$$

$$E = \frac{Q_e}{4\pi\varepsilon_0 G^{-2/3}} = 1.515 \times 10^3 V/m$$

Thermal resistance: $R_{TH} = \dfrac{1}{4\pi.G^{-2/3}} = 1.48 \times 10^{-8} \Omega$

$$R_E = \frac{1}{2}\sqrt{\frac{\mu_0}{\varepsilon_0}} \ldots ; \ldots R_Y = \pi.G^{-1/3}\sqrt{\frac{\mu_0}{\varepsilon_0}} = 2.74 \times 10^6 \Omega m$$

Entropy: $E_{NT} = \pi.G^{-2/3} = 1.69 \times 10^7 m^2$

True mag. dipole moment: $M_{DM} = Q_m 2G^{-1/3} = 7.92 \times 10^5 Weber.meter$

Average density: $\rho = \dfrac{3MG}{4\pi} = 4.98 \times 10^{19}$

Viscosity: $V_{ISC} = c^3 G^{-2/3} = 1.45 \times 10^{32}$

Angular momentum: $H = c^3 G^{-5/3} = 1.81 \times 10^{42}$

$$P_{SC} = \frac{c^4 G^{-1/3}}{4\pi} = 1.5 \times 10^{36}\, Pa$$

$$P_N = \frac{6\pi^2 m_N c^2}{x_N{}^3} = 3.87 \times 10^{36}\, Pa$$

Electron neutrino pressure:

$$P\nu = \frac{6\pi^2 q_e \sqrt{S} w_\nu{}^2}{S^{3/2}} = 2.32 \times 10^{55}\, Pa$$