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Super Dense Black Holes

António Saraiva – 2010-03-16
ajps2@hotmail.com

See Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva305.pdf
www.wbabin.net/saraiva/saraiva306.pdf
www.wbabin.net/saraiva/saraiva307.pdf

Black holes can have any density. The idea that black holes must be very dense is wrong.
Black holes can exist without any gravitational collapse or degenerate matter.

Pressure at the centre of a black hole:

$$\frac{GM^2}{4\pi R^4} > P \qquad \Leftrightarrow \qquad \frac{M}{R^2} > \sqrt{\frac{4\pi P}{G}}$$

Acceleration:

$$\frac{GM}{R^2} > \sqrt{4\pi .GP}$$

Mass:

$$\frac{c^8}{4\pi .G^3 M^2} > P \qquad \Leftrightarrow \qquad M < \sqrt{\frac{c^8}{4\pi .G^3 P}}$$

Force at the centre:

$$F = Mg = \frac{c^4}{G} = 1.2 \times 10^{44} N$$

Any black hole must have this force in the centre.

For super dense black holes with neutron degenerate matter:

$$P = 3.9 \times 10^{36} Pa$$

$$\Leftrightarrow \qquad M < 2.12 \times 10^{30} kg \ ; \qquad g > 5.7 \times 10^{13} m/s^2$$

Super dense black holes must have initial low masses.

There's a mole of stars in the universe.

Density of a black hole:

$$\rho = \frac{3c^6}{4\pi .G^3 M^2}$$

For: $M = 8.2 \times 10^{36} kg \quad \Leftrightarrow \quad \rho = 8.7 \times 10^6 kg/m^3$

According to the Big Bang theory the older stars have the same age as the universe.
But, the existence of the heavy elements proves that there are death stars with a double age.
The universe is not expanding, it's rotating.

Neutrino degeneracy pressure:

$$P = \frac{mc^2 6\pi^2}{S^{3/2}} = 4.42 \times 10^{33} Pa$$

Radiation pressure at the centre of the sun:

$$P = \frac{T}{x} = \frac{1.5 \times 10^7}{6 \times 10^{-7}} = 2.5 \times 10^{13} Pa$$

T – Temperature; x – Wavelength.

The Stefan-Boltzmann law is wrong, another proof:

$$\sigma = 5.67 \times 10^{-8} ; \qquad \sigma = \frac{1}{x_e^7 c^{11}} = 1.15 \times 10^{-12}$$

x_e -- Electron Compton wavelength; c – Light speed.

The quantum of circulation, the conductance quantum and the magnetic vector potential have the same units.