

## Black hole electric charge

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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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$$\frac{Mc}{2} = I\pi R^2 \quad \text{and} \quad R = \frac{GM}{c^2}$$

$$I = \frac{c^5}{2\pi G^2 M} \quad \text{and} \quad I = Qf = \frac{Qc^3}{2\pi GM}$$

$$\Leftrightarrow \quad Q = \frac{c^2}{G} = \frac{M}{R} = 1.35 \times 10^{27} \text{ C}$$

The mass is the electric dipole moment.  
The black holes have a constant charge.

Black hole magnetic field:

$$B = \frac{\mu_0 I}{R} = \frac{\mu_0 c^7}{2\pi G^3 M^2}$$

The magnetic field is a speed:

$$B = c \quad \Leftrightarrow \quad M = 2.21 \times 10^{37} \text{ kg}$$

Black hole entropy:

$$S = \pi R^2 = \frac{\pi G^2 M^2}{c^4}$$

The entropy is an area or surface.

## Electron classical radius

The classical radius is an error.

Energy:

$$E = \frac{q_e^2}{4\pi\epsilon_0 R_{CL}} ; \quad R_{CL} = \frac{x_e}{2\pi 137}$$

Correct energy formula:

$$E = \frac{q_e q_m c}{\pi R_e} ; \quad R_e = \frac{x_e}{2\pi} ; \quad q_m = \frac{h}{2q_e}$$

The electron has two magnetic charges in the center, and a rotating electric charge.  
The electron is a rotating wave.

Electron magnetic field (superluminal speed):

$$q_m = B\pi R_e^2 = B \frac{x_e^2}{4\pi}$$

$$B = 4.415 \times 10^9 = c \frac{137}{2.96\pi} ; \quad 2.96\pi = \frac{c^2 x_e^2 \epsilon_0}{\pi q_e}$$

$$B = \frac{137\pi q_e}{c x_e^2 \epsilon_0}$$

$$B = \frac{\mu_0 q_e f_e}{L} ; \quad L = \frac{x_e}{137\pi}$$

$$\Leftrightarrow B = \frac{137\pi\mu_0 q_e c}{x_e^2}$$

Electron magnetic field in hydrogen atom:

$$q_m = B\pi R^2 ; \quad R = \frac{137x_e}{2\pi}$$

$$B = \frac{2\pi h}{q_e 137^2 x_e^2} = 2.35 \times 10^5 T ; \quad B = \frac{\mu_0 q_e c \pi}{137 x_e^2}$$

**Momentum of the electron**  
(false magnetic moment)

$$MM_1 = q_e f_e \frac{x_e^2}{4\pi} = \frac{q_e c x_e}{4\pi} = 9.274 \times 10^{-24} \text{ kg.m/s}$$

$$MM_2 = \frac{m_e c}{4\pi} \frac{x_e^2}{k_B} = 9.2664 \times 10^{-24}$$

$$\frac{MM_1}{MM_2} = 1 + \frac{\pi^3 \alpha^2}{2}$$

Exact value:

$$MM = \mu_e = 9.28476 \times 10^{-24}$$

$$\frac{MM}{MM_1} = 1 + \frac{\alpha}{2\pi}$$

True magnetic dipole moment of the electron:

$$\mu = q_m \frac{k_B}{x_e} = \frac{h k_B}{2 q_e x_e} = 1.176 \times 10^{-26} \text{ Weber.meter}$$