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Total Lorentz force

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See the Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva305.pdf
www.wbabin.net/saraiva/saraiva306.pdf
www.wbabin.net/saraiva/saraiva307.pdf
www.wbabin.net/saraiva/saraiva328.pdf
www.wbabin.net/stham/saraiva347.pdf

Inside a superconductor electric charge has no electric charge.

Electric resistance and voltage:

$$R_E = 0 \quad \Leftrightarrow \quad V_E = R_E I_E = 0 \; ; \qquad I_E \text{ -- Electric current}$$

Electric field and charge:

$$E = \frac{V_E}{L} = 0 \quad \Leftrightarrow \quad q_e = EL^3 = 0 \; ; \qquad \text{L – Distance}$$

So, electric charges don't repeal each other.
Inside an insulator (air, vacuum) magnetic charge has no magnetic charge.

Electric and magnetic resistance and magnetic voltage:

$$R_E = \infty \quad \Leftrightarrow \quad R_M = 0 \quad \Leftrightarrow \quad V_M = 0$$

Magnetic field strength and magnetic charge:

$$H = \frac{V_M}{L} = 0 \quad \Leftrightarrow \quad B = \mu_0 H = 0 \quad \Leftrightarrow \quad q_m = BL^2 = 0$$

It's why we don't detect magnetic charges.

Total Lorentz force:

$$F = q_e E + q_e vB + q_m H + q_m vD$$

F – Force; q_e -- Electric charge; E – Electric field; v – Speed; B – Magnetic field; q_m -- Magnetic charge; H – Magnetic field strength; D – Electric displacement field.

$$E = vB \;; \qquad H = vD \;; \qquad B = H\mu_0 \;; \qquad D = E\varepsilon_0$$

Electric resistance:

$$R_E = \frac{q_m}{q_e} = \frac{E}{H} = \sqrt{\frac{\mu}{\varepsilon}}$$

Magnetic field and drift velocity:

$$\frac{1}{Mob} = v = B \qquad \Leftrightarrow \qquad \frac{I_E}{n_e q_e L^2} = \frac{\mu_0 I_E}{L}$$

$$n_e = \frac{2}{q_e \mu_0} = 10^{25} m^{-3} \;; \qquad n_e \approx n_0$$

Mob – Mobility; n_0 -- Loschmidt constant.

The magnetic field is a speed.