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Vortex Particle Model
(Electromagnetism – Fluid Mechanics)

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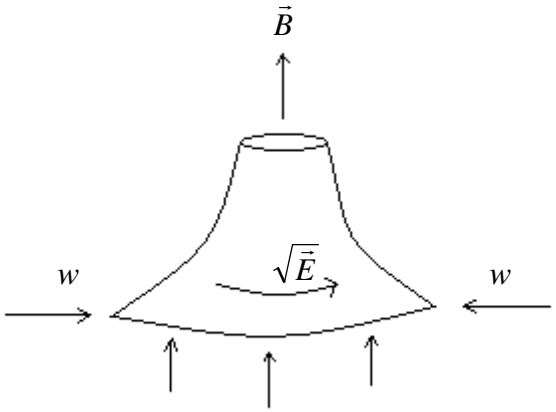
A true fundamental particle is a vortex of nothing, made of speed and distance.



The magnetic field $\vec{B}$ is a speed.
The electric field $\vec{E}$ is a squared speed.
Electric charge = $q_e = \vec{E} \times Volume$
Magnetic charge = $q_m = \vec{B} \times Area = Outflow$
Mass = $m = {q_m}^2$
Magnetic potential = A = Circulation = Γ

For the electron:

The reference length = $x_e = 2.4 \times 10^{-12}\, m$

$\vec{E}_e = -2.37 \times 10^{18}\, m^2 s^{-2}$
$\vec{B}_e = -1.4 \times 10^{10}\, m s^{-1}$
$w_e \approx c$
$A = c x_e = 7.2 \times 10^{-4}\, m^2 s^{-1}$

From fluid mechanics:

$$v_T = \frac{\Gamma}{2\pi R} \qquad \Leftrightarrow \qquad \sqrt{\vec{E}} = \frac{A}{nx_e}$$

$$n = 0.2 = Strouhal..Number = S_T$$

$$S_T = \frac{fL}{V}$$

Electron frequency = $f = 1.2 \times 10^{20} Hz$; $L = x_e$; $V = \sqrt{\vec{E}}$

Vorticity = $f = \frac{A}{x_e^{\,2}}$

Potential vorticity for the electron = $\vec{B}_e \vec{w}_e \sqrt{\vec{E}_e} = 6.46 \times 10^{27} m^3 s^{-3}$