

$$\vec{F} = q (\vec{E} + \vec{v} \times \vec{B})$$

$$\vec{F}' = \gamma (\vec{E}' + \vec{u}' \times \vec{B}')$$

$$F_x' = q E_x'$$

$$F_x = q E_x$$

$$F_y' = q E_y'$$

$$F_y = q (E_y - v B_z)$$

$$F_z' = q E_z'$$

$$F_z = q (E_z + v B_y)$$

$$F_x = F_x', \quad F_y = \frac{F_y'}{\gamma}, \quad F_z = \frac{F_z'}{\gamma}$$

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$$F_x' = q (E_x' + u_0' B_z')$$

$$F_y' = q (E_y')$$

$$F_z' = q (E_z' - u_0' B_x')$$

$$F_x = q (E_x + \frac{u_0'}{\gamma} B_z)$$

$$F_y = q (E_y - v B_z)$$

$$F_z = q (E_z + v B_y - \frac{u_0'}{\gamma} B_x)$$

$$F_x = F_x' + \frac{v}{c^2} F_y' u_0', \quad F_y = \frac{F_y'}{\gamma}, \quad F_z = \frac{F_z'}{\gamma}$$

$$\vec{F}' \cdot \vec{u}' = F_x' u_x' + F_y' u_y' + F_z' u_z'$$