

The Galilean transformation, for two frames, with the B frame moving in a positive x direction at velocity v in relation to the A frame:

$$x_B = x_A - vt$$

$$y_B = y_A$$

$$z_B = z_A$$

$$t_B = t_A$$

For a signal moving parallel to the x axes in the positive x direction:

$$V_B = V_A - v$$

The relativistic (Lorentzian) equation for the same signal:

$$V_B = \frac{V_A - v}{1 - \frac{V_A v}{c^2}}$$



