

$$E_{ext} = E_0 \sin(\omega t)$$

 $x_1(t)$ 

## plasma

$$x_l(t)$$

$$E(x=0,t) = E_{ext} + \frac{1}{\varepsilon_0} \int_{x_1(t)}^{x_l(t)} \rho_e dx = 0$$

t