

$$\theta_r+d\theta_r$$

$$\theta_t+d\theta_t$$

$$dx$$

$$R$$

$$\vec{\nabla}\cdot\vec{E}=4\pi\rho$$

$$\vec{\nabla}\cdot\vec{B}=0$$

$$\vec{\nabla}\times\vec{E}=-\frac{1}{c}\frac{\partial\vec{B}}{\partial t}$$

$$\vec{\nabla}\times\vec{B}=\frac{4\pi}{c}\vec{J}+\frac{1}{c}\frac{\partial\vec{E}}{\partial t}$$

$$\vec{E}(x,t)=\vec{E}(x)e^{-\kappa z}\cos(kx-\omega t)$$

$$\kappa=\frac{\omega}{c}\sqrt{(n_i\sin\theta_i)^2-n_t^2}$$

$$n_i>n_t$$