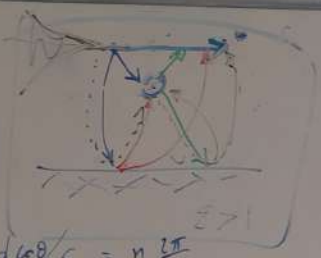
→ Sensing
→ into
→ energy

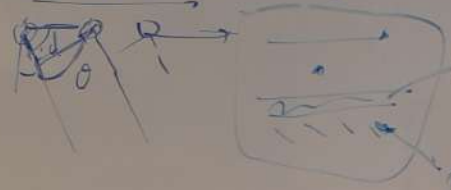
PLASMON
S.S
EFFECT?



$\varepsilon > 1$

$v < \frac{c}{\sqrt{\varepsilon}}$

$d/v + d\cos\theta/c = n\frac{2\pi}{\omega}$



$\varepsilon > 1$

PEC

$\omega = K_1 c$

$\omega = K_1 c/\sqrt{\varepsilon}$

K_1

$$\frac{A}{\omega_0 - \omega - i\gamma/2 - A\,G}$$

$$\mathrm{Im}\left\{\frac{-1}{\alpha}\right\} = \frac{2k^3}{3}$$

$\gamma > \gamma_r$

$$\Gamma_{dip,\alpha}(\omega) = G(b,\omega)\,\mathrm{Im}\{\alpha(\omega)\}$$

$$\frac{A}{\omega_0 - \omega - i\gamma/2} \quad \mathcal{P}\left(\frac{A}{\omega_0 - \omega}\right) - i\pi A\,\delta(\omega - \omega_0)$$

$$\alpha_{eff} = \frac{1}{\gamma/2 - G}$$

$$\int d\omega\, \Gamma_{EELS}(\omega) \approx C(b,\omega_0)\,\Gamma$$

$$\Gamma_{EELS} = \Gamma_{//} + \Gamma_{dip,\,\alpha_{eff}} + \Gamma_{refl}$$

$$\vec{P} = \alpha_{eff}\left(\vec{E}_{direct} + \vec{E}_{refl}\right)$$