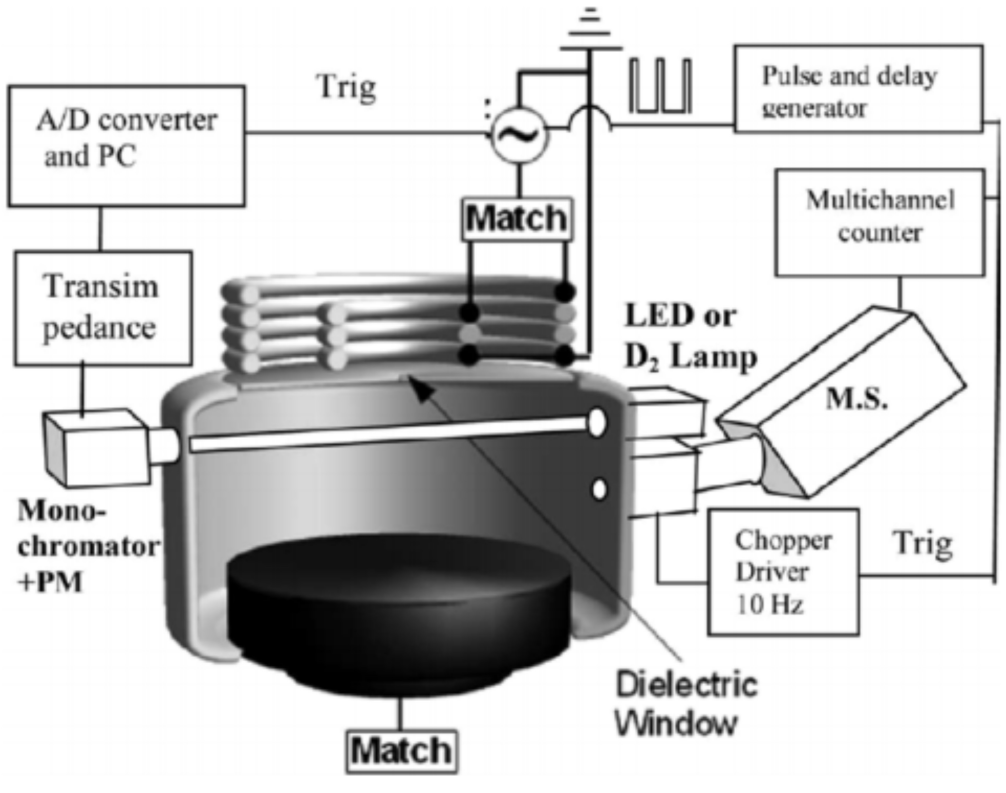
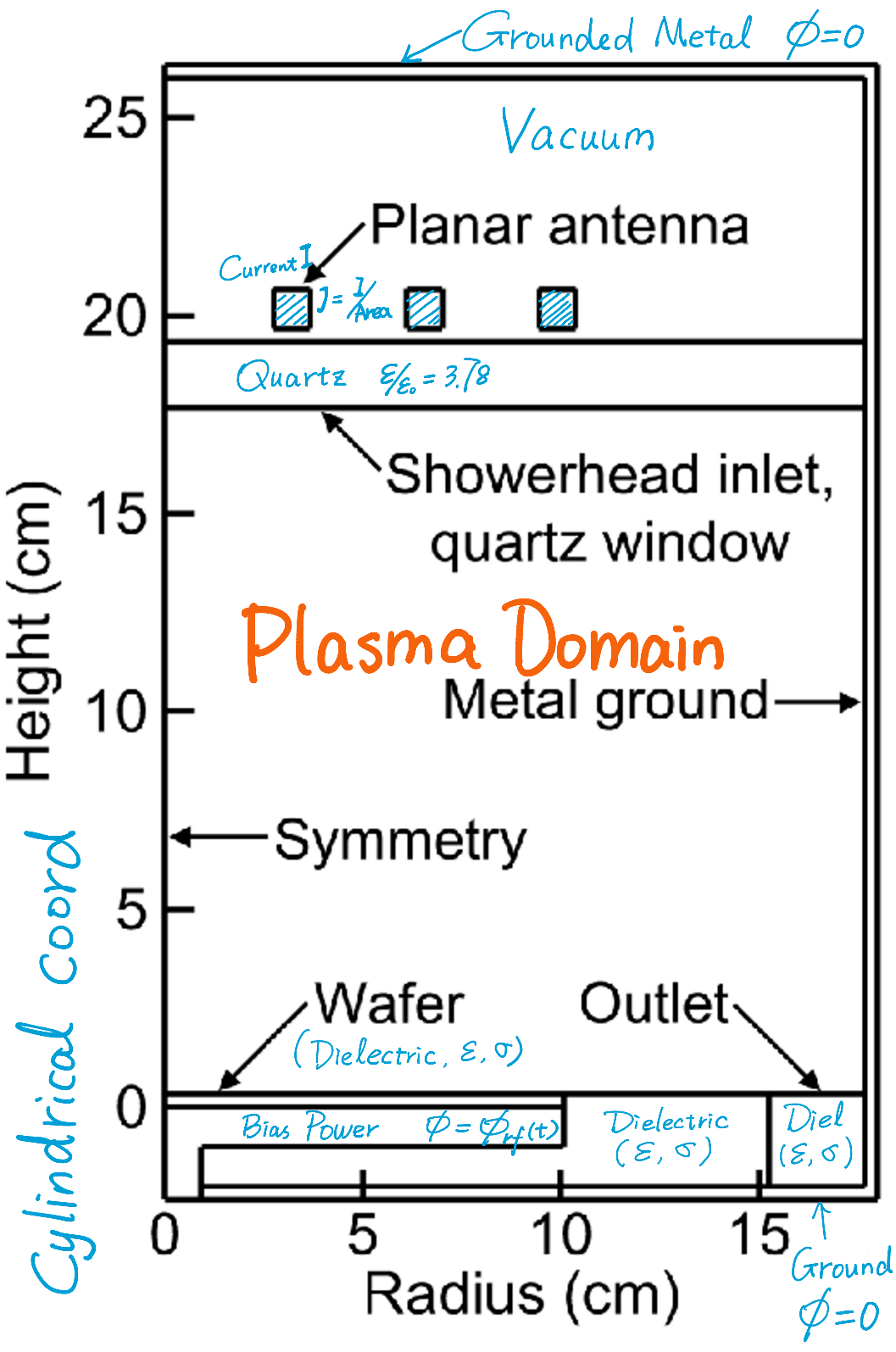
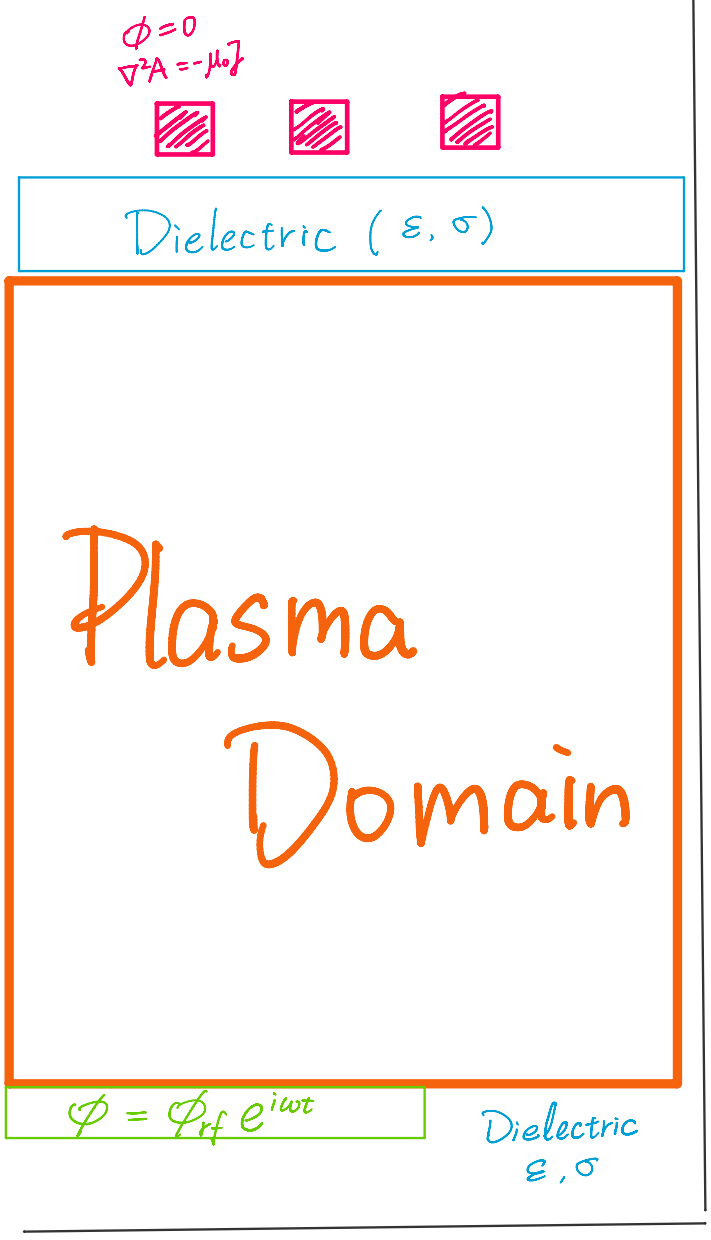
Boundary condition and geometry

Tuesday, September 22, 2020 9:37 AM







1. Poisson equation is solved in the whole domain.
   a. Ground metal, $\phi = 0$, for most boundaries
   b. Bias power, with assigned potential boundary, $\phi = \phi(t)$
   c. At $r = 0$, $\vec{E} = 0, \frac{\partial \phi}{\partial r} = 0$
2. Fluid equations are solved in the plasma domain.
   a. Lossy boundary at all surfaces. When particle

density get to the surfaces, $n_{e,i}$ is enforced to be 0.

b. $\text{At } r = 0$, $\frac{\partial n_{e,i}}{\partial r} = 0$.