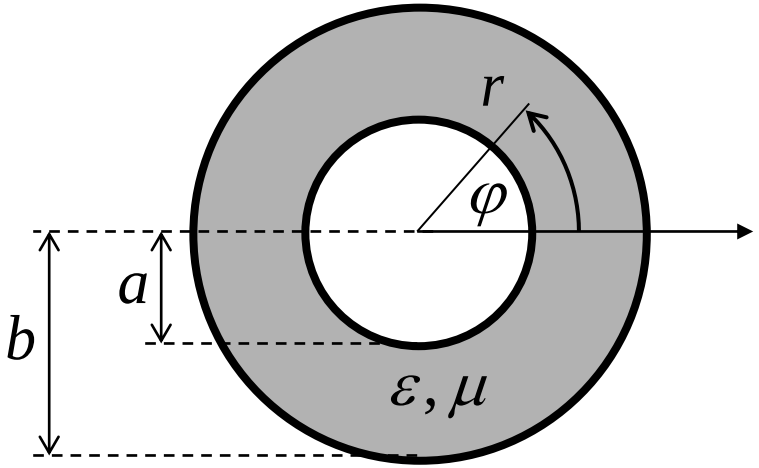
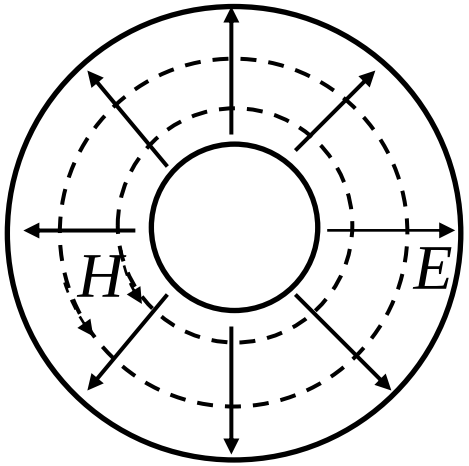


COAXIAL CABLE
CHARACTERISTIC IMPEDANCE

$$Z_0 = \frac{V}{I} = \frac{\eta}{2\pi}\ln\left(\frac{b}{a}\right)$$



E and H fields

$$E = \hat{r}\frac{1}{r}\frac{V_0}{\ln\left(\frac{b}{a}\right)}e^{-j\beta z}$$

$$H = \hat{\varphi}\frac{1}{r}\frac{I_0}{2\pi}e^{-j\beta z}$$