

3. Consider shielding of a uniform oscillating magnetic field $B = B_0 \cos(\omega t)$ by a long open metal cylinder with its axis parallel to the field. The cylinder has electrical conductivity σ , radius a , height h , and wall thickness t , with $t \ll a$. Find the amplitude of the oscillating magnetic field inside the cylinder. Ignore edge effects and assume $\omega \ll h/c$.

