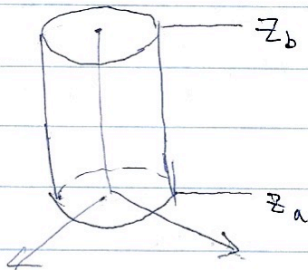


Jackson

1.3. (a).  $\frac{Q}{4\pi R^2} f(r-R) = \rho(r, \theta, \phi).$

(b)  $\rho(r, \theta, z) = \frac{\lambda}{2\pi b} f(r-b) \int_{z_a}^{z_b} f(z-z') dz'$



(c). Let the disc be placed at  $z = z^*$

$$\rho(r, \theta, z) = \frac{Q}{\pi R^2} \left[ \int_0^R f(r-r') dr' \right] f(z-z^*).$$

(d)  $\rho(r, \theta, \phi) = \frac{Q}{\pi R^2} f(\theta - \frac{\pi}{2}) \int_0^R f(r-r') dr'$

Davidson Cherry

12.24.2023.