

$$\mathbf{B}(r) = \frac{\mu_0 j}{4\pi} \int_{-b/2}^{b/2} \int_0^{2\pi} \int_R^{R+\Delta R} \frac{\begin{pmatrix} \cos(\phi) \cdot (z-w) \\ \sin(\phi) \cdot (z-w) \\ r - (y \sin(\phi) + x \cos(\phi)) \end{pmatrix} r dr d\phi dw}{\sqrt{(x - r \cos(\phi))^2 + (y - r \sin(\phi))^2 + (z-w)^2}^3}$$

$\Delta R$  = Dicke der Spule

$b$  = Breite der Spule