

Using the results leading up to equation (15.7)

$$\left(\frac{[\]^2 + (x^2)^2}{\{ \gamma^2 [\]^2 + (x^2)^2 \}^3} \right)^{1/2} = \left(\frac{R^2}{\{ \gamma^2 R^2 \cos^2 \Theta + R^2 \sin^2 \Theta \}^3} \right)^{1/2}$$

$$= \frac{R}{(\gamma^2 R^2)^{3/2}} \left(\frac{1}{1 - \sin^2 \Theta + (1 - \beta^2) \sin^2 \Theta} \right)^{3/2}$$

$$= \frac{1}{\gamma^3 R^2} \left(\frac{1}{1 - \beta^2 \sin^2 \Theta} \right)^{3/2},$$

which gives (15.7) when substituted into the expression for $|E|$