

Intro:

This week we study torque on a current loop and start on our study of the dynamics of electric and magnetic fields, beginning with electromagnetic induction and Faraday's law. On Wednesday I motivated the form of the law based on a few demos. By the end of the week we'll have Faraday's law and be able to discuss applications.

These problems are now due April 26.

Reading:

- Chapter 7

A look ahead:

- PM Chapter 9 (We'll return to 8 later)

Problems:

- (1) 5.29 You can use the result for " γ_w " we had in class for this one.
- (2) 6.34 Feel free to use the method discussed in the problem or what we (will do in class)
- (3) 6.33
- (4) 7.2
- (5) 7.24 If you play with the demos in the north atrium you will notice that the rings come to terminal velocity essentially immediately. Assume this in your solution. Resistivity ρ is related to resistance R by $R = \rho L/A$. See Section 4.3 in PM.
- (6) 7.26