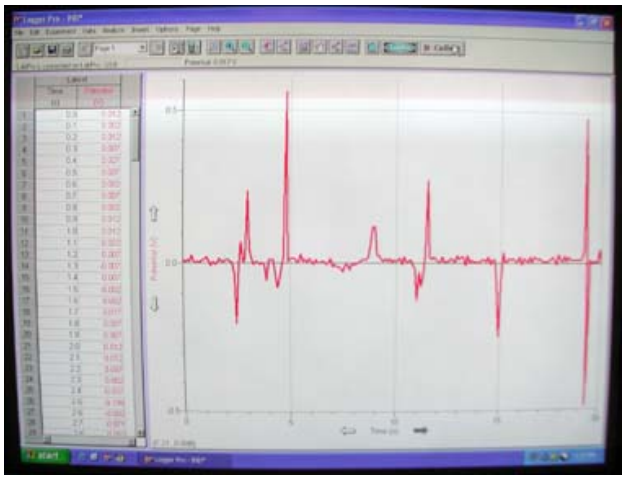
Lab #5B - IND

Lab #5A, *Magnetic Fields*, is set up in Rockefeller 402 while Lab #5B, *Magnetic Induction*, is set up in Rockefeller 403. Classes in one room at the beginning of the lab period will shift to the other room halfway through the period.

For Lab #5B you need to complete a worksheet. No report is required.

D.1. Changing Magnetic Field

You should expect to see something on your screen similar to the illustration below.



D.2.1. Voltage Offset

When you use the mouse to mark a region for statistical analysis or integration, you need to hold down the left mouse button as you use the mouse to mark the '*region of interest*.'

D.2.2. Measurements

The magnet referred to in this section is the large rectangular magnet mounted beneath a sheet of plastic in an oak board. Keep this magnet away from your monitor as it may permanently change the monitor's color balance.

The 40 cm spacing referred to several times in this section is not critical, an error of a few cm will have a negligible effect on your results, as you will confirm in part I. It doesn't really matter, but you can assume that we mean 40 cm from the center of the magnet to the center of the rectangular coil.

Section D.3. Rotating a Coil

Paragraph 4 instructs you to give the coil four 180° flips, two forward and two back. It's easier to do this by alternating the forward and reverse flips rather than doing two forward followed by two reverse flips, but this is not critical. However, try to do each flip at a different speed.

Section D.4. Coupled Circuits

The circuit is completely wired for you, all you need to do is turn on the power to the DMM and the amplifiers. You *will* have to switch the wires between the three coils you will be using. Don't disconnect any wires when you finish.