General Comments on Lab Reports

Here are a few helpful comments along with a few specifics of what we will be looking for in your notebooks in the future.

- **Must include.**
  - Date all entries and write in **ink**. Example:
    - On day one you take your data; enter the date.
    - On day two you start your analysis; enter the date.
    - On day three you continue your analysis; enter the date.
    - You break for dinner and then continue later that evening on your analysis; enter the time.
  - Some researchers like to put a date and time on every page. This is usually not necessary but you can do this if you like.
  - Notes and raw data taken during the lab. Do not take notes on scratch paper and then and then copy them into your notebook. Pasting in pages will be accepted but is must less desirable as you could loose pages.
  - All raw data. In the case of computer obtained data, the name of the file must be given.

- **Statements in the lab notebooks need to be specific, not general.**
  - You are writing a science report so you must be very specific. Often, entries are way too general and nebulous. Comments like “when I changed the power the signal got better” are not very helpful. You need to qualify what you mean. You could say “the signal scaled with the power, i.e., when the power was doubled the signal was twice as large.”
  - Include specific numbers for your experiments, not generalities about how things were done.
  - Give specifics about how you did the experiment, not what the lab manual asked you to do. Any deviations or modifications must be noted.

- **Include details about numerical calculations.**
  - In Lab 1 you needed to determine the order, \( n \), for the various resonances. That determination required a calculation and symbolic manipulation. Those calculations must be in your notebook.
  - All derivations and manipulations of equation should be in the book. Do not just write down the final result. Include the intermediate steps so you can check your result.
  - All the small scratch calculations need to be in the notebook. I was not looking for a printout of your *Mathematica* calculation. However, if *Mathematica* were used, some notation of the file name should have been included.
• Let your notebook help you.
  
  – Your notebook is an extension of your brain. Write everything down. You can never write too much
  
  – Do not try to remember what you have done, how you did it and what the results are, write them down.
  
  – With your new found freedom, you can ponder and concern yourself with more interesting thinks like if Napster will still be around when its time to put together music for your end-of-the year party.