

Lab Report Checklist: Physics 8 Fall 2007

Abstract:

- What was measured and how (one- or two-sentence summary, few or no details) _____
- Central results (be quantitative) _____
- Core interpretation of results (agree/disagree with theory or prior experiments?) _____

Introduction:

- **General** description of concept being investigated _____
- **General** description of measurement to be made _____
- Context/relevance of topic (to course, can discuss wider relevance if you like) _____
- Organization of paper (optional though traditional) _____

Theory:

- Explain physical concept(s) (in more detail than intro) _____
- Derivations that will be used to analyze/interpret data _____
- Diagrams where appropriate (i.e. circuit diagrams) _____

Experimental:

- Description and diagram of apparatus _____
- Experimental procedure followed _____
- Purpose of each step in procedure (should be interleaved with description of each step) _____

Results :

- Raw data in tabular OR graphical format (if data require extensively analysis, a representative set of data can be included in the main report and the rest in appendices) _____
- If data are reduced with minimal analysis, summary of reduced data (distinguishing whether this belongs in results or discussion is somewhat subtle) _____
- Descriptions of key features of the raw data _____
- Discussion of uncertainties in data _____

Discussion:

- Quantitative analysis of data (based on theory section) _____
- Discussion of agreement with expected result (does it agree within uncertainty?) _____
- Possible explanations of discrepancies _____
- Improvements to methods to address shortcomings _____

Conclusion: (this will overlap a lot with the abstract)

- What was measured? _____
- Final result (and uncertainty) _____
- General conclusions _____

References:

- All sources with complete bibliographic info _____
- Citations in paper _____