

No  
Double Space  
the document.

Review Notes for Preparation of a Formal Paper  
D.R. Huffman, September 30, 1996

1. Make sure you look at and follow a representative article in **The American Journal of Physics**.
2. Draft your paper in time to lay it aside and come back afresh to revise it at least once.
3. Spelling errors are inexcusable. Use a spelling checker, but realize that the spell checker is not a fool-proof way to catch spelling errors. Follow up by carefully proofreading the document.

4. Make sure the paper has appropriate divisions, **Introduction, Theory,** etc.

I. INTRODUCTION

II. THEORY

1. Classical theory } use correct form

5. The first page should contain only the author's name, affiliation, and the abstract.

6. The abstract should be a concise summary of all the important parts of the paper. It is not an introduction. ~~It is not a summary.~~ It definitely should contain the experimental results. Remember that abstracts of papers are often published alone, apart from the rest of the paper. If the abstract is all a reader sees of your work, make sure the reader gets the most important information.

7. Algebraic equations may be set off on individual lines for clarity (with equation numbers in parenthesis to the right as desired), but they should be integrated into good English prose. Algebra is not an excuse for writing incorrect English. Test your text by reading it out loud to see if it reads smoothly.

8. Figures should be collected at the end of the paper with a page of **Figure Captions**. Figures should each be full page drawings, suitable for giving to a professional draftsman for final production. Everything desired should be placed on the figure in exactly the place and size chosen. Xerox copies from notebooks or handouts are normally not appropriate.

9. Tables should be placed at the end of the text. Each table should have a number and a title.

Use italics  
for symbols  
in equations.

~~Plug into the equation~~

10. Appendices are often poorly used as an easy way to keep from writing good English in the body of the paper. I do not advise the use of appendices for this reason, unless it is absolutely clear that the paper would suffer from the inclusion of the material in the text.

11. At the end of the text there should be a list of references, following exactly the style of **The American Journal of Physics**, including every appropriate comma and period.

12. The paper should contain everything necessary to present the experiment, its results and a discussion, but should be no longer than required to do this. Excessive length is detrimental!

13. An example of the arrangement of the paper might be, in this order: the title page including abstract, the text of the paper, references, tables with numbers and captions, figure captions, figures in numerical order, appendices (if necessary), acknowledgements (if used).

14. Read the text by Strunk and White and try to follow their suggestions on precise writing and correct English usage.

15. In general, numerical results for the experiment should be presented along with estimated uncertainties (suitably justified). Comparison with accepted values should be given. If systematic error is suggested by the results, possible sources of the systematic error should be presented, then analyzed quantitatively to see whether or not they might explain the deviation from the accepted value.

16. A good way to conclude any experimental paper is by suggesting what should be done next, or how the experiment could be improved. However, avoid ambiguous suggestions lacking in detail or suggestions that would be excessively costly.

17. Avoid statements involving non-objective feelings such as, "The experiment turned out well," or "I think this was a good experiment". Also avoid non-quantitative statements such as "the discrepancy was too high" in favor of quantitative statements like "the discrepancy was three standard deviations of estimated random error above the accepted value".

AVOID COMPUTERISE & PROGRAMMING  
 $3E+06$   
 $3 \times 10^6$   
 $(A+2a)(\sin(b))$   
 $(A+2a)\sin b$