MISSOURI S&T WRITING CENTER

Physical Review Documentation Style

This handout offers general information for completing academic course work based on the requirement of the *Physical Review*. More specific information is available in the Physical *Review Style and Notation Guide*, available online.

General Formatting

Manuscripts or other documents prepared in the *Physical Review* style should include the following elements:

A. *Title
B. *Author(s) Name(s)
C. *Author(s) Affiliation(s)
D. *Receipt Date
E. *Abstract
F. *PACS Indexing Codes
G. *Main Body
H. Acknowledgements
I. Appendix(es)
J. *Footnotes and Reference Citations
K. Tables
L. Figures
M. Equations

Those items marked with an asterisk (*) are required for publication. For academic course work, consult your instructor for specific requirements.

A. **Title:** Your title should be simple and concise, omitting unnecessary words at the beginning, such as "a," "the," "on," etc. The first word of the title should begin with a capital letter, then only proper names, trade names or chemical symbols should be capitalized. Do not use acronyms or non-standard abbreviations.

B. **Author Name(s):** For each author, indicate first and middle initials (if any), followed by a period, a space, and the full last name. Names should be separated by commas.

C. **Author Affiliation(s):** Supply the complete name and postal address of each institution, including post office box number or suite number if applicable, and zip code.

D. **Receipt Date:** This is the date the manuscript is received by the scientific editor. For course work, this date is usually omitted.

E. **Abstract:** The abstract should consist of a single, stand-alone paragraph. It should not contain references, equations ,or tables. Any abbreviations should be defined.

F. **Physics and Astronomy Classification Scheme (PACS) indexing codes:** These indexing codes are available on the American Institute of Physics (AIP) Publishing website. Choose four or fewer index number codes, with the primary code listed first.

G. **Main Body:** The body of the paper should be divided into sequential sections using headings and subheadings for ease of reading and citation. Equations, tables, figures, and references should likewise be organized sequentially.

H. **Acknowledgements:** This section follows the main body and precedes any appendixes. The section should not exceed one paragraph. Writers should be careful to differentiate between acknowledgements and dedications, which are not permitted in this context.

I. **Appendix(es):** Appendixes are located after the acknowledgements (if any), and before the reference list. Each appendix should be numbered, lettered, or titled. Equations in an appendix are numbered separately from those in the body of the paper (A1, A2, etc.).

J. **Footnotes and Reference Citations:** There are four categories of footnotes: (1) footnotes to introductory information [author and address], (2) footnotes for references cited in the text, (3) footnotes for short comments relevant to the text material, and (4) footnotes that are pertinent to a table or figure only.

(1). Introductory Footnotes use the following symbols, as superscripts, in the order listed: *, †, ‡, §, ‖, ¶, **, ††, ‡‡, §§, ‖‖, ¶¶. If the number of introductory footnotes exceeds twelve, use lowercase letters for the thirteenth and subesquent notes.

(2). Reference Citation Footnotes for *Physical Review B,* are denoted by numerals. Superscript numerals are preferable, but when they could result in confusion (i.e., Pb^4), on-line forms are appropriate [Pb (Ref. 4)]. For *Physical Review A, C, D, E,* and *Letters,* notes are indicated by on-line numerals in square brackets, as "Smith [3] reported." Reference citations are listed sequentially by their occurrence in the text. These citations correspond to entries on the reference list located at the end of the paper.

(3). Footnotes for short comments are used for *Physical Review A, C,* and *D.* These notes are designated by consecutive superscript numerals, separate from reference numbers.

(4). Footnotes applicable to a table or figure do not appear on the reference list. These notes can take two forms. The first is usually used for a figure:

FIG. 1, Theoretical data, denoted by ##, are from J.M. Smith, Phys. Rev. B **23**, 1 (1982).

OR

FIG. 1, Theoretical data, denoted by ## [J.M. Smith, Phys. Rev. B **23**, 1 (1982)].

A footnote can be included in a list immediately after a table:

[a]J.M. Smith, Phys. Rev. B **23**, 1 (1982).

K. **Tables** have very exacting specifications for their form and function. Refer to the *Physical Review Style and Notation Guide* for details.

L. **Figures**, too, have very precise formatting requirements. See the Physical Review Style and Notation Guide for details.

M. **Equations** are set off from the text (i.e., indented) and numbered sequentially. Use Arabic numerals in parentheses, and align them with the right margin.

Sections, Table Titles, and Figure Captions

Headings: Within the text of the document, major and minor sections are labeled with specifically formatted headings. The *Physical Review* designates four levels of headings:

Level 1: This heading level is centered, typed in all capital letters, and preceded by a Roman numeral and a period:

I. LEVEL ONE HEADING

Level 2: This heading level is centered and preceded by a capital letter and a period. The first letter of the first word is capitalized.

A. First subheading

Level 3: This heading level is centered and preceded by an Arabic numeral and a period. The first letter of the first word is capitalized, and the whole heading is italicized.

1. Second subheading

Level 4: This heading level is indented and preceded by a lowercase letter or number in parentheses. The heading is italicized, and the first letter of the first word is capitalized.

(a) Third subheading.

Tables: Tables are numbered using Roman numerals (I, II, III, IV, etc).

Figures: Figures are numbered using Arabic numerals (1, 2, 3, etc). When parts of figures are referenced, these parts are designated by letters in parentheses (1(a), 1(b), 1(c), etc).

Reference List

The reference list is located at the end of the text, following any acknowledgements or appendixes. References and footnotes are combined into a single list and numbered consecutively by order of appearance within the text. Reference numbers in the text are designated by Arabic numerals enclosed in square brackets [4]. However, at the author's option, footnotes may be kept separate from the reference list, appearing instead at the bottom of the page on which they appear. In this case, they are designated by superscript Arabic numerals, numbered consecutively. The reference list is double-spaced within and between entries. Citations begin at the left margin with the appropriate Arabic numeral, followed by a period and two spaces. The reference text begins with the name of the author(s), the source title (abbreviated), volume number (in boldface type), the page number, and the year of publication (in parentheses). Examples of commonly referenced materials follow.

Basic Format:

#. F. M. Name, Referenced Source, **##**, # (Year).

Journal Articles

One author:

1. J. Miner, Phys Rev. B **25,** 8 (2001).

Two authors:

1. J. Miner and G. W. Bush, Phys. Rev. B **37**, 285 (2006).

Three or four authors:

9. J. Miner, R. J. Reynolds, C. W. Post, and G. W. Bush, Phys. Rev. B **40**, 781(C) (1998).

More than four authors, length constrained:

7. J. Miner et al. Phys Rev. B **46**, 8 (2000).

Multiple authors working in a named group:

10. J. Miner et al. (Name Collaboration), Phys. Rev. D **12**, 312 (1987).

One author with publication in two sources:

5. J. Miner, Phys. Rev. B **40**, 781(C) (1998); Nucl. Phys. **A195**, 1 (1982).

One author with publications in three (or more) sources:

9. J. Miner, Phys. Rev. B **40**, 781(C) (1998); Nucl. Phys. **A195**, 1 (1982); Phys. Lett. **16A**, 1 (1982).

Note : **Use semicolons between sources.**

One author with publications in multiple volumes of the same source:

8. J. Miner, Phys. Rev. B **40**, 781(C) (1998); **47**, 1 (2002).

One author with multiple publications in one volume of a single source:

12. J. Miner, Phys. Rev. B **40**, 781(C) (1998); **40**, 15 (1998).

Multiple authors, publishing in a single source:

5. J. Miner, Phys. Rev. B **40**, 781(C) (1998); R. J. Reynolds, *ibid.*

39, 1 (1997); G. W. Bush, *ibid.* **42**, 73 (1999).

Note: **Do not repeat the journal title; use of *ibid.* instead**

Journal article accepted for publication, but not yet published:

5. J. Miner, Phys. Rev. B (to be published).

Translation in English-language journal of article originally published in foreign journal:

5. J. M. Smith, Zh. Eksp. Teor. Fiz. **51**, 165 (1966) [Sov. Phys. JETP **24,** 11 (1967)].

Books

Monograph:

6. J. Miner, *Really Big Book* (University of Missouri Press, Columbia, 1980), Vol 2, p. 37.

Edited volume:

6. J. Miner, in *Really Big Book,* edited by R. J. Reynolds (University of Missouri Press, Columbia, 1980), Vol 2, p. 37.

Conference Proceedings

Published conference proceedings:

8. B. B. Thornton, in *Proceedings of the International Conference on Low Temperature Physics, Columbia, 1998,* edited by J. Miner (University of Missouri, Columbia, 1998), p. 100.

Unpublished conference proceedings:

8. B. B. Thornton, in Proceedings of the International Conference on Low Temperature Physics, Columbia, 1998, edited by J. Miner (unpublished).

Note: **Title is not italicized in unpublished version.**

Miscellaneous

Reports:

8. B. B. Thornton, Rolla regional Laboratory Report No. 5, 1998

(unpublished).

Note: **Reports are normally unpublished. If published, omit "unpublished" at the end of the reference.**

Theses:

8. B. B. Thornton, PhD thesis, University of Missouri, 2008.

Private communications:

9. J. Miner (private communication).

Paper cited in another paper:

10. J. Miner as discussed in B. B. Thornton, Phys Rev. B **25,** 8 (2001).

Computer program:

12. J. Miner, computer code MINEX, Computer Science Laboratory,

Missouri University of Science and Technology, Rolla, MO, 2008.