

Note: Sample for RSI

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(Received XXXXX; accepted XXXXX; published online XXXXX)
(Dates appearing here are provided by the Editorial Office)

This document gives formatting instructions for authors preparing a Note for publication in *Review of Scientific Instruments*. Authors must follow the instructions given in this document; it should be used as an instruction set. **Note: RSI Notes do not contain headings. The headings used in this sample are to be used as a navigational tool and aid in readability.** All files MUST be submitted through the online system at: <http://rsi.peerx-press.org>.

THE MANUSCRIPT

Manuscript submission

The submission of a Note for review should be in the format of a ‘camera ready’ MSWord file with the figures and tables embedded, as in this sample. Both the initial manuscript and also the final, revised manuscript should be in this format. All files MUST be submitted through the online system at: <http://rsi.peerx-press.org>. It is hoped this new ‘camera ready’ format for manuscripts will aid authors in accurately estimating the finished article length. Each version of the manuscript should be submitted with its own complete set of files: cover letter (including title, authors and the abstract’s program number assigned by the conference organizers), complete article file, and separate figure files (see section on FIGURES) and after being refereed a response/rebuttal letter (listing changes made addressing the Editor and Reviewer’s comments).

Preparation of manuscript

Please use this “sample manuscript” as a template for preparing your own manuscript. This will ensure that your submission will be in the required format. Please read all of the following manuscript preparation instructions carefully and in their entirety. The manuscript must be in good scientific American English; this is the author's responsibility. Papers should not be lengthened by unnecessary descriptions and repetitions, but neither should authors use a telegraphic style detrimental to the clarity and understanding of the paper.

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MANUSCRIPT LENGTH

Manuscripts cannot exceed the agreed upon journal page length for a Note (3 pages). An abstract limited to about 100 words is required. In addition to the title, abstract, and references, the three-page length permits about 2000 words of text, reduced, however, by allowances for equations, tables, and figures. DO NOT reduce the size of figures or the text font size in order to create more space for text.

TITLE

The title should be as concise as possible but informative enough to facilitate information retrieval. Only the most common acronyms and abbreviations are allowed in the title. They should be used with considerable moderation elsewhere and always defined at first use.

ABSTRACT

The abstract should be limited to about 100 words and should be self-contained (contain no footnotes or citations to references). It should be adequate as an index (giving all subjects, major and minor, about which new information is given), and as a summary (giving the conclusions and all results of general interest in the article). The abstract should be written as one paragraph and should not contain displayed mathematical equations or tabular material.

AUTHORS' NAMES AND ADDRESSES

Authors' names should preferably be written in a standard form for all publications to facilitate indexing and avoid ambiguities. Please provide complete address(es).

EQUATIONS

Equations should be punctuated and aligned to bring out their structure and numbered on the right. Mathematical operation signs indicating continuity of the expression should be placed at the left of the second and succeeding lines. Use (x) rather than a centered dot, except for scalar products of vectors. The solidus (/) should be used instead of built up fractions in running text, and in display wherever clarity would not be jeopardized. Use "exp" for complicated exponents.

$$B_i = \begin{pmatrix} 1 & 2 & \dots & N \\ B_i(1) & B_i(2) & \dots & B_i(N) \end{pmatrix}, \quad (1)$$

$$I_D(\theta) = \frac{a}{2} + \sum_{n=1}^2 (\cos 2n\theta + \sin 2n\theta). \quad (2)$$

NOTATION

Notation must be legible, clear, compact, and consistent with standard usage. All unusual symbols whose identity may not be obvious must be identified the first time they appear, and at all subsequent times when confusion might arise. Superscripts are normally set directly over subscripts; authors should note where readability or the meaning requires a special order.

TABLES

Separate tables (numbered with Roman numerals in the order of their appearance in the text) should be used for all but the simplest tabular material; they should have captions that make the tables intelligible without reference to the text. The structure should be clear, with simple column headings giving all units. Unaltered computer output and notation are generally unacceptable.

FIGURES

General guidelines for preparing illustrations

- Number figures in the order in which they appear in the text.
- Label all figure parts with (a), (b), etc. Avoid any large disparity in size of lettering and labels used within one illustration. Submit all parts of a figure as one file [e.g., Fig 2(a), 2 (b), and 2(c) in one file].
- Prepare illustrations in the final published size, not oversized. The maximum published width for a one-column illustration is 3-3/8 inch (8.5 cm).
- In cases where reduction is required, avoid small open symbols that tend to fill in and avoid small lettering; ensure that, in the final published illustration, there is a minimum of 8-point type size (2.8 mm high; 1/8 inch high)

TABLE I. Sample table.

Set point (V)	δ in air (V/rad)	δ for tilted mirror (V/rad)
-2	3.58×10^3	3.50×10^3
-1	3.60×10^3	3.53×10^3
0	3.52×10^3	3.61×10^3
1	3.57×10^3	3.53×10^3
2	3.58×10^3	3.56×10^3
3	3.54×10^3	3.56×10^3
Average	3.56×10^3	3.55×10^3
Sader k_ϕ (Nm/rad)	γ_{pivot}	δ (V/rad)
3.13×10^{-9}	9.82×10^{-13}	3.19×10^3
3.75×10^{-9}	1.02×10^{-13}	3.68×10^3
4.59×10^{-9}	1.29×10^{-13}	3.56×10^3
3.91×10^{-9}	1.07×10^{-13}	3.66×10^3
4.08×10^{-9}	1.02×10^{-13}	4.01×10^3
5.07×10^{-9}	1.27×10^{-13}	3.99×10^3
5.78×10^{-9}	1.33×10^{-13}	3.90×10^3

for lettering and 0.5-point width for lines.

- Ensure that lettering and lines are dark enough, and thick enough, to reproduce clearly. Remember that fine lines tend to disappear upon reduction.
- The figures may be imbedded in the manuscript in the approximate position and size you think is appropriate. **In addition separate figure files must be provided along with the manuscript as described below.**

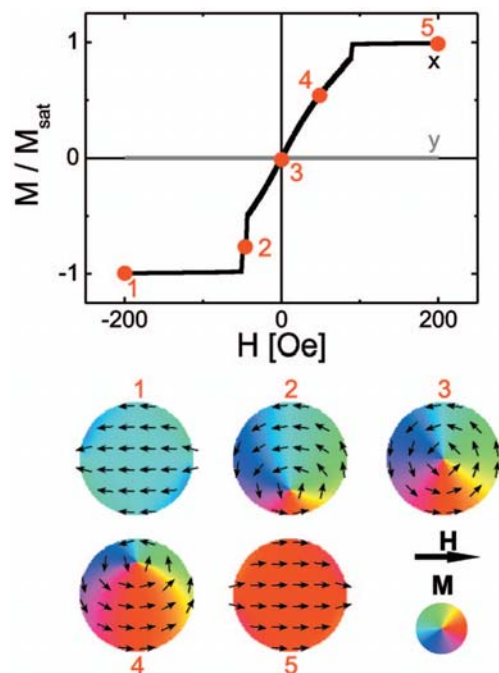


FIG. 1. (Color online). Sample of figure file.

Additional guidelines for preparation of electronic graphics files

- Acceptable formats for Figures: PostScript (.ps), Encapsulated PostScript (.eps, using either Arial or Times Roman fonts), Tagged Image File Format (.tif, lzw compressed), or high quality pdf. (See website for proper preparation of pdf files: http://ftp.aip.org/aipdocs/forms/pdf_figs.pdf.) Application files (e.g., Corel Draw, Microsoft Word) are not acceptable, nor are jpg format.
- Settings: Set the graphic for 600 dpi resolution for line art, 264 dpi for halftones, and 600 dpi for combinations (line art + halftone).
- Save line art as black/white bitmap, not grayscale.
- Save halftones and combinations as grayscale, not black/white bitmap.
- Submit color files at 300 dpi TIFF, PS, or EPS format. If selecting a file mode, use CMYK (cyan, magenta, yellow, black) or RGB (red, green, blue).
- Remember that although figures will be in color in the online version of the paper, the printed (journal) version of the paper will contain black-and-white figures unless the authors agree to the AIP color figure charges. Authors wishing to publish color figures in the printed journal will be charged a fixed rate of \$325 for each color figure (for multipart figures, a single charge will apply only if all parts are submitted as a single item of artwork). See <http://rsi.aip.org/rsi/pubchgs.jsp> Therefore, check carefully that no information is lost when the color figure is reproduced in black-and-white.

FINISHED LENGTH

The final Note must be no longer than three (3) pages. Overlength manuscripts will be returned for reduction in length.

As an aid to the author, we provide two guidelines for estimating the finished length of a Note. The first is very simple and approximate, and can be used for rough estimates. Usually this will suffice. The second is more complex and considerably better. Neither is guaranteed. Regardless of estimates, the final Note must be no longer than three pages.

(1) Rough Estimate: Disregard the title, authors' names and institutions, abstract, and list of references. Limit the remainder to 2000 words, or its equivalent. One "word" is 7 characters (spaces count as characters). This will produce a paper of 2 to 3 journal pages most of the time. The typical figure, with its caption, is reduced to the width of a single column, and displaces about 220 words of text. Reduce the 2000-word limit accordingly

If there are figures of unusual size, many authors from different institutions, a lengthy abstract or list of references, many equations, or several tables, etc., the author is advised to use guideline (2) below.

(2) Refined Estimate: All calculations are made in terms of single-column lines; 118 lines equal one page. Whenever a rule gives a line equivalent for a number of words, the phrase "or fraction thereof" is to be understood

Again, one "word" is 7 characters (where spaces count as characters).

- The **title** takes 3 lines for every 7 words.
- Each group of **authors** from a single institution, with its address, takes 5 lines. If there are more than 5 authors from one institution, add 2 lines; if an institutional name and address contain more than 85 characters, add another 2 lines.
- The **receipt date** takes 3 lines.
- The **abstract** takes 2 lines for every 14 words.
- The **text**, not counting displayed equations, takes one line for every 9 words
- A short **equation** (less than 40 characters) with no built-up fractions or matrices, etc., takes 3 lines. If it contains a built-up fraction, it takes 4 lines. If it contains a large matrix, it takes at least 2 lines per row of the matrix plus 2 lines. A long equation, typed across two columns, takes at least double these amounts; a very long complex equation may easily take 20 lines. Note that, when there are a number of two-column equations, intervening short equations will often also be given two-column space.
- Each **reference** or footnote takes one line for every 10 words.
- A **figure**, which can be reduced to one column width (8.5 cm) takes 24 lines per 10 cm of reduced height; if it requires more than one column width, it will take twice as many lines.
- Each **figure caption** takes one line for every 10 words. Also, there is one line between a figure and its caption, and 2 lines between captions or figures and text.
- Each line in a **table** and its caption become one line if the table fits into one column, and 2 lines if it is wider. Two lines separate a table from text. Large or complex tables should be calculated as if they were figures.

REFERENCES AND FOOTNOTES

References and footnotes are treated alike. They must be numbered consecutively in order of first appearance in the text and should be listed at the end of the text material. Reference should be made to the full list of authors, rather than to first author followed by an abbreviation such as *et al.* References within tables should be designated by lowercase Roman letter superscripts and given at the end of the table. For the proper reference format, see recent issues of this journal. Do not add titles of journal articles in references. Preprints of cited unpublished work by the authors should be sent with the manuscript. All references are to be superscript; not online [3]. See the free sample issue of RSI at: <http://rsi.aip.org/rsi/freesample.jsp>

¹Y. B. Acharya, Rev. Sci. Instrum. **71**, 2585 (2000).

²K. K. Ng, *Complete Guide to Devices* (McGraw-Hill, New York, 1995).

³Keithley Instruments, Inc., Model 617 Programmable Electrometer Instruction Manual, 1984.

⁴V. S. Voitsenya, K. Yu. Vukolov, and D. V. Orlinski, Proceedings of the 30th EPS Conference on Controlled Fusion and Plasma Physics, St. Petersburg, 7–11 July 2003 (unpublished), Vol. 27A, O-4.3D.

⁵M. Lipa, G. Frank, J. George, M. Farber, L. Carl, and D. French, Contract No. TWP2002-TW2_TPDS-Diadev-D2, 2004 (unpublished).