

Information for Contributors

Send manuscripts to the Editors, *Physical Review*, Brookhaven National Laboratory, Upton, N. Y. 11973.

For general format and style consult recent issues of this journal and the current revised edition of the American Institute of Physics *Style Manual* (which may be obtained for \$1.00 from: American Institute of Physics, 335 East 45th Street, New York, N. Y. 10017). Specify section and index categories (see Phys. Rev. Index).

The **Manuscript**, including the abstract, references, and captions should be neatly typed in English, double spaced on good letter-size ($8\frac{1}{2} \times 11$ inch, 21×28 centimeter) white paper with ample margins to allow for editorial marking. It should be carefully proofread by the author for misspellings, grammatical errors, and missing symbols. Unclear or excessive handwritten insertions are not acceptable. A **duplicate** copy of the manuscript must be furnished.

The **title** should be concise but informative enough to facilitate information retrieval. The **abstract** should be self-contained for reprinting in Abstract Journals. 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). It should be about 5% of the length of the article but less than 500 words.

Equations should be neatly typed or written in ink, 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.

Notation should be chosen so as to be clear, compact, and consistent with standard usage. The prime requisite is that the copy be as clear as possible to the typesetter, who is neither a physicist nor a mathematician. To this end a certain amount of editorial copy-marking is necessary. All unusual symbols should be identified the first time they are used, and at subsequent times when confusion might arise. Boldface symbols should be marked by a wiggly black underline always. Handwritten symbols should be identified as capital or lower case. Handwritten Greek symbols should be identified in the margin the first time and underscored in red later if confusion is possible. (This is particularly important for those symbols such as χ or κ which may look, when handwritten, like italic symbols, x or k ; or for capital Σ and Π which can be confused with the summation or product symbols, themselves oversize special characters.) German, script, or sans-serif letters should be identified the first time in the margin and later underscored in green if they may be confused with other letters. Unusual symbols, even if available should not be used unless absolutely necessary.

The solidus should be used instead of built-up fractions to save vertical space where clarity would not be jeopardized. This is of particular importance in the running text. Also the "exp" notation should be used where complicated exponents exist.

Monotype Composition: (a) Superscripts *cannot* be set above subscripts; in general all superscripts will follow all subscripts. The author must call special attention to necessary exceptions. (b) Overbars and roofs of square-root signs cannot be set above groups of symbols (a subscript is a separate symbol). Use notations such as $\langle \rangle_{av}$ and $()^{1/2}$. (c) The symbols a , $\tilde{a}$, $\bar{a}$, $''$, $'''$ are each

separate symbols, which may or may not be available: consult the *Style Manual*.

Typewriter Composition: (a) In general superscripts will be set *above* subscripts to save horizontal space. The authors must call special attention to necessary exceptions. (b) Overbars *can* be set over an indexed symbol (e.g., over A or A^2 or A_b^2), but, for stylistic reasons, are not permitted over more than one mainline symbol at a time (e.g. not over AB or $A+B$). The square-root sign has no roof: do not use it unless what follows is unambiguous. (c) Diacritical marks such as tildes, carets, etc., *can* be put on any single symbol, including any index. (d) Bold-face symbols are *not* available. Vectors are printed roman with an arrow on top (mark copy with the arrow or with the usual pencilled wiggly underline). For second-rank tensors, and diadics, a double-headed arrow on top is available, if necessary.

References including comments must be numbered consecutively in order of first appearance in the text and should be given in a separate double-spaced list at the end of the text material. References to tables should be designated by lower case roman letters and given at the end of the table. The proper form for references will be found in the AIP *Style Manual* and in recent issues of this journal.

Numbered **tables** should be used for all but the simplest tabular material; they should have suitable captions which make the tables intelligible without reference to the text. The table structure should be clear, with simple column headings giving all units. The tables should be numbered in the order in which they are referred to in the text.

Figures should be planned for the 3-in. column width of the *Physical Review*. In some cases where the figures contain a great deal of detail, $1\frac{1}{2}$ or 2 columns may be used. The lettering and data points on the figures should be large and clear enough so that they will be legible after reduction (the final size should be no less than 2 millimeters). Waste space at the top and bottom should be avoided. Figures should be numbered in the order in which they are referred to in the text. A separate list of captions should be supplied. The figure itself should have properly labeled axes with correctly abbreviated units. [For unit abbreviations see AIP *Style Manual*.] Figures should be identified on the back by the number, the name of the first author, and the journal.

A maximum black-white contrast is necessary. We require original india-ink drawings or good, clear glossy prints. The latter are preferable to oversized originals. Avoid small open symbols which tend to fill in upon reduction, small dots which barely reproduce, and toned shading which fails to reproduce well. Photographs of apparatus are unacceptable and should be replaced by good schematic diagrams. For complete instructions on preparation of illustrations see AIP *Style Manual*.

After notification of acceptance, all correspondence regarding proofs, etc. should be addressed to: Supervisor, Editorial Department, American Institute of Physics, 335 East 45th Street, New York, N. Y. 10017. Reference *must* be made to journal, scheduled issue, title, and first author. Authors will be charged for alterations made in proof and, in the case of excessive alterations, the manuscript will be returned to the Editorial Office for reconsideration.