

PHYSICAL REVIEW LETTERS
EDITORIAL POLICIES AND PRACTICES
(Revised July 2009)

Mission of the Journal

Physical Review Letters, published by the American Physical Society, affords prominent publication to short reports of important fundamental research in all fields of physics. The journal aims to provide its diverse readership with coverage of the major advances in all aspects of physics and of developments with significant consequences across subdisciplines. Letters should therefore be of broad interest.

Acceptance Criteria

Physical Review Letters publishes Letters of not more than four journal pages and Comments of not more than one journal page. Both must meet specific standards for substance and presentation, as judged by rigorous review by editors and referees. The *Physical Review* and *Physical Review Letters* publish new

physics. Thus, prior publication of the same results will preclude consideration of a later Letter. In addition, the findings must not be a marginal extension of previously published work; they must not be a repetition of prior results on a similar system, without additional physical insight.

Substance

Validity.— Work is valid if it is free of detectable error and is presented in sufficient detail that this may be determined. Papers that advance new theoretical views on fundamental principles or theories must contain convincing arguments that the new predictions and interpretations are distinct from existing knowledge and do not contradict experiment.

Importance.— Important results are those that substantially advance a field, open a significant new area of research or solve—or take a crucial step toward solving—a critical outstanding problem, and thus facilitate notable progress in an existing field. A new experimental or

theoretical method may be a suitable basis for a Letter, but only if it leads to the significant advances presented above. Mathematical and computational papers that do not have application to physics are generally not suitable. Papers that describe proposed experiments must provide compelling evidence that the proposal is novel and feasible, and that it will lead to valuable new research.

Broad Interest.— Work is of broad interest if it is a major advance in a field of physics or has significant implications across subfield boundaries. A manuscript may also be of broad interest if it is exceptionally pleasing science, aesthetically.

Presentation

The diversity of the readership of *Physical Review Letters* places special demands on style. A Letter must begin with an introduction that states the issues it addresses and its primary achievements in language understandable across physics subfields. Each Letter should present a complete discussion within the constraints of a short communication. Letters must be clearly written, devoid of unnecessary jargon, with symbols defined, figures well drawn, and tables and figures thoroughly captioned. When appropriate, a Letter should be followed by a more extensive report in the *Physical Review* or elsewhere.

In summary, the goal of *Physical Review Letters* is to keep a broad readership of physicists well informed of the essential current research in all subfields. To this end, there must be compelling reasons why a result should be published as a Letter, and not in a more specialized journal.

Comments.— A Comment must correct or criticize an important, central aspect of a specific Letter. The opening paragraph should clearly indicate both the Letter to which the Comment is directed and the criticism. Any submitted Comment or Reply must be cast in a collegial tone, free of polemics. The editors will not accept a Comment on a Letter by any of the authors of the Letter; the Comment format is not a vehicle for addenda. Neither are Comments intended as a means to establish priorities or to rectify bibliographic oversights. Papers which clarify or expand on a Letter without criticism or correction, or which present a general discussion of the topic, are also unsuitable. A corrective Comment will be deemed unnecessary if an Erratum would suffice. Comments and Replies are subject to the refereeing process, and acceptance of a Comment does not guarantee publication of an author's Reply.

Letters, Comments, and Replies must provide proper citations to pertinent earlier work and credit significant contributions by nonauthors. Readers benefit from complete referencing, which is necessary to place any work in the context of the current state of research. Authors should therefore make every effort to ensure that their citations of previously published work are comprehensive at the time of submission. This includes references to books and to published conference proceedings that contain more than abstracts. Authors should also add to the references any works published during the course of the review process.

It may also be necessary for authors to cite unpublished work, such as e-prints, preprints, internal reports, or results which have been reported only orally at meetings (even though an abstract may have been published). Unpublished work that appears during the review process may require citation as well.

Importance of Introductory Paragraphs

Physical Review Letters is unique in its commitment to keep broadly interested readers well informed on vital current research in all fields of physics. This is achieved with introductory paragraphs that state, for each article, the issues addressed and the primary achievements. It is essential that these paragraphs be clearly written and

unpublished work has not been fully vetted by the community, and considerable judgment on the part of the editors will be employed in determining the need to cite such work.

Authors may not present data and other results obtained by others as if they were their own. Nor may authors incorporate without attribution text from another work (by themselves or others), even when summarizing past results or background material. If a direct quotation is appropriate, the quotation should be clearly indicated as such and the original source should be properly cited. Papers that have been found to be in violation of this rule will be rejected. In such cases, resubmission of the manuscript, even with the plagiarized text removed, is not ordinarily allowed. However, the editors may allow exceptions to this policy if warranted by special circumstances.

comprehensible to nonexperts. To assure compliance, the referees are instructed to pay particular attention to the introductory section. In addition, the editors will make an independent evaluation of the adequacy and clarity of the introduction (see <http://prl.aps.org/edannounce/PRLv95i17.html>).

Submittal of Manuscripts

Authors are advised to familiarize themselves with journal criteria and standards before preparing a manuscript for submission. In particular, consultation of the journal's Advice to Referees and Manuscript Referral form is likely to be of assistance. In most cases, the manuscript itself, particularly its introduction, should make clear why the paper might meet the journal's special criteria of importance and broad interest; however, in some cases it may be helpful for authors to supplement this with a note directed at the editors and included with the initial submission.

When a manuscript has several authors, one of them, the corresponding author, should be designated to receive and respond to correspondence from the editors. This designation can be changed upon notification of the editors. It is the responsibility of the corresponding author to represent all those involved with the work reported.

By submitting the manuscript, the corresponding author certifies:

- The paper represents original work of the listed authors.
- The manuscript as represented accurately reflects the scientific results.
- All of the authors made significant contributions to the concept, design, execution, or interpretation of the research study.

- All those who made significant contributions were offered the opportunity to be listed as authors.
- All of the listed authors are aware of and agree to the submission of this manuscript.
- The manuscript has not been published, and is not now and will not be under consideration by another journal while it is considered here.
- As part of the submission, the authors have provided any relevant information to the editors (e.g., information about recent relevant unpublished manuscripts by the authors).
- The authors accept the established procedures for selecting manuscripts for publication.

Authors should state whether the paper they submit has been previously considered for publication in any of the APS journals (*Physical Review Letters*, other *Physical Review* journals, or *Reviews of Modern Physics*) and supply the code number assigned by that journal. They should also provide information about other recent relevant unpublished work of theirs (e.g., for a paper under consideration by an APS journal, supply the code number; for one submitted to another journal, provide the title; for a paper deposited on an e-print server, supply the e-print number).

Manuscripts may be submitted by conventional mail or by electronic channels (preferred). Submission of manuscripts by facsimile (fax) is not appropriate; in general, manuscript copies or replacement pages from our fax machines are *not* suitable for use in the composition process.

A conventional paper manuscript must be double spaced to allow space for copyediting in the event of publication, of reasonable type size to allow fast yet accurate viewing by keyboarders, and submitted with good quality figures. See “Information for Contributors” at <http://prl.aps.org/info/infoL.html> or at the beginning of the volume for more details.

For information about submission via e-print servers or direct Web upload, consult <http://authors.aps.org/ESUB/>. Electronic-mail submissions should be sent to prltex@aps.org. The computer file should be prepared in one of the acceptable formats; REVTeX (preferred), L^AT_EX, Harvmac, plain TeX, MS Word; PostScript figures (preferred). If the paper

is accepted for publication, the file may be converted to XML and used to produce the text of the journal.

For resubmissions, please note any revised figures and supply new versions.

The Author Status Inquiry System (ASIS) provides information to authors regarding the status of their manuscripts at <http://authors.aps.org/STATUS/>. If clarification of ASIS is needed, send an email message to prl@aps.org (with subject line, for example, Status LM12345 Jones).

Supplementary material associated with an article (e.g., data tables, color-image files, multimedia files) may be submitted electronically for joint review. If the article is published this material will be deposited in the electronic Physics Auxiliary Publication Service (EPAPS) of the American Institute of Physics. Information about EPAPS is available via the Authors, General Information subpage of prl.aps.org, in the Manuscript Preparation section.

Editorial Procedures

The following descriptions of ordinary editorial practices are not meant as an exposition of rigid rules - there are few rigid rules - but as an outline of usual practices, presented with the view that some understanding of these procedures may help authors and referees deal with the editors.

Upon receipt of a manuscript, the staff makes an estimate of the length required for publication. If the length is not excessive, the paper is given to the appropriate editor who chooses referees for the paper. (The editors divide responsibility among themselves for the different areas of physics.) If the paper is estimated to exceed 4 printed pages by more than 12% (an indication that necessary revisions might seriously alter the content), the paper is not sent for review, and a length estimate is sent to the authors. The authors may make suitable changes and resubmit the manuscript. Manuscripts which are too long by less than 12% are sent for review, but the authors are advised that a shorter version will be required if the paper is accepted for publication.

Letters.— For the majority of papers, the editors seek counsel of referees, who are selected as representatives of the informed readership that the paper addresses. However, if in the judgment of the editors a paper is unsuitable for *Physical Review Letters*, it will be rejected without external review (see <http://prl.aps.org/edannounce/PRLv95i7.html>). Authors of such papers have the same option to appeal as do other authors. If the editors determine that review is warranted, they most commonly consult two, but sometimes one or three, referees.

Physical Review Letters has an Editorial Board (Divisional Associate Editors), whose members are appointed for three-year

terms by the Editor in Chief upon recommendation of the editors after consultation with APS divisions where appropriate. Board members provide advice to the editors on editorial policy and on specific papers as requested, and participate in the formal appeals process (see section on Author Appeals).

Some Divisional Associate Editors, by individual arrangements with the appropriate editor, offer to the editor referee suggestions and other advice on newly submitted papers. In general, the editors frequently consult the DAEs and other senior physicists informally as needed, as well as by the formal review process.

Referees are requested to comment critically on the validity and importance of the paper, and they are asked their opinion concerning the degree of interest of the paper for the readers of *Physical Review Letters*. Referees submitting favorable reports are asked to provide positive reasons for recommending publication. The editors also appreciate any suggestions of the referees directed toward improvements in style, grammar, completeness of references, etc. Advice received from referees concerning the scientific merits of a paper are considered very seriously; ordinarily, no paper which receives important scientific criticism from a referee will be accepted without further review. Although advice from referees concerning the suitability of the paper for the journal in terms of importance, broad interest, and accessibility is solicited and is vital, the editors do not consider such counsel definitive and will weigh their own perceptions of the paper and of the journal, and their understanding of the opinions of the readers of the journal, in reaching their conclusions on these aspects of acceptability.

Authors are encouraged to submit a list of scientists who they

believe are especially suited to referee their papers. Particularly if the paper addresses an especially arcane or controversial subject or view, advice on the problems of referee selection and a list (not too short) of qualified reviewers is welcome. Of course, the editor is not obliged to select a name from that list. Accompanying the submittal by a description of the work and its potential interest and importance may also be useful.

Occasionally, conflicts of interest between referees and authors may be considered to color the advice of the referees. Although the editors attempt to avoid such conflicts in their choice of referees, they cannot always be aware of such problems. An author who believes that conflicts are possible may submit a list (not too long) of named physicists with the request that they be excluded as referees, and the editors will usually honor such a request. On occasion, the editors may feel it important that they obtain the views of an expert who does have a known conflict of interest. In such cases, they will take special steps to adjust for the possible bias.

We are no longer able to accede to requests from authors that we withhold their identities from the referees. Such “double-blind” reviewing has been discontinued.

The referee is requested to send a critique within a week of receipt. If a timely response is not received, a reminder message is sent; we ask the referee to let us know if further delay is expected. If no response is received within a suitable additional interval, the file is inspected by the editor. Often it is appropriate to make a decision on the basis of information already at hand. Editors are not required to obtain two referee reports—they make a decision when they judge they have sufficient information. However, the editor may find that additional advice is needed, or may decide (usually on the basis of contact with the referee) that further delay is acceptable. Of course, the editors stop using referees who are too often delinquent.

Upon receipt of the referees’ reports, the editor evaluates them and makes a decision concerning procedure. For a small proportion of papers, the reports are convincing and favorable without caveats and the papers are put into production immediately. Some papers are conditionally accepted upon consideration by the authors of changes suggested by the referees and endorsed by the editors. Most papers are not accepted at this stage; the authors are asked to respond to the criticisms of the referees. While the editors do not assume that the referees’ views take precedence over well considered arguments of the authors, and do not require authors to make every change suggested by the referees, they do consider that objections of referees constitute criticism by recognized scholars who belong to the special set of experts addressed by the paper, and they do demand that the author consider those criticisms seriously.

Referee reports are advisory to the editors, but are generally transmitted by the editors to the authors, and so should be written in a collegial manner. The editors may withhold or edit these reports for cause.

Any resubmittal should be accompanied by a summary of the changes made, and a brief response to all recommendations and criticisms. This material will normally be forwarded to reviewers, and so should be written in a collegial manner. Remarks that authors wish to address solely to the editors should be clearly identified and separated from the summary and response. Authors should not send a version of the manuscript marked to show the changes, as this can lead to confusion and delay in processing.

When the manuscript is resubmitted after the first round of referee reports, the editor may take any of a variety of actions. Of course, the editor may find the authors’ response and revisions persuasive and therefore approve publication.

Usually, the editor concludes that further review is necessary, perhaps by the prior referees, perhaps by different referees. In an effort to minimize the time between initial submittal of a manuscript and final disposition, the anonymous review process will usually end with the reports received following the authors’ first resubmittal of the manuscript. Thus the editor will inform the authors either that the manuscript will be published (possibly with minor revision) or that it is inappropriate for publication in this journal. If the editor’s negative decision is not accepted and the authors again resubmit the manuscript, the appeal process will begin.

Although no precise definition of acceptability can be constructed, in general the editor will accept only those papers for which there appears to be evidence that a strong majority of interested and competent readers conversant with the field of the paper would consider that the paper is free of detectable error, important, interesting, and, according to their lights, suitable for publication in *Physical Review Letters*. Note that rejection does not necessarily imply that the editors or their advisors have established that the paper is wrong, unimportant, or uninteresting. Instead, rejection implies that the authors have not established to the satisfaction of this jury that the paper is credible, important, and interesting according to the particular standards of *Physical Review Letters*.

Recently, fewer than 35% of submitted papers have been finally accepted for publication in *Physical Review Letters*. This is not an acceptance rate fixed by policy. It reflects a consensus view of the community of reviewers (not editors) of how much to publish.

In some circumstances information about a manuscript considered by *Physical Review Letters* and subsequently submitted to another journal may be provided to the editor of that journal. Such information might include the comments and identities of referees.

After acceptance of a manuscript, if further information that seems to warrant investigation is received by the editors, they will regard it as an obligation to reconsider their decision.

Comments and Replies.— Comment authors are encouraged, but not required, to send their Comment first to the authors of the object Letter for a direct response. The editors usually begin review of a Comment by seeking a reaction from those authors. Possible reactions include:

- (a) The Comment seems appropriate for publication without a Reply.
- (b) A Reply to the Comment is submitted for possible simultaneous publication. (Submission of the Reply later in the Comment review process may be reserved as a future option.)
- (c) The Comment does not seem sufficiently relevant to the Letter or does not appear to be scientifically valid; a detailed discussion is enclosed.

The author of the Letter is not asked to review the Comment as an anonymous referee. In most cases, the editors will consult at least one independent, anonymous referee regarding the suitability for publication of a Comment (and Reply, if any). As with Letters, the editors may be selective in deciding what material is forwarded for consideration.

To be publishable, Comments and Replies must be of interest to our readers and free of detectable errors. If a Comment meets our criteria it will be published whether a Reply is published or not. The editors will not excessively delay the publication of a suitable Comment due to the lack of an adequate Reply. If both are published, the Comment and Reply must appear together, in the same issue. On occasion, a Letter will generate several similar Comments. In these cases, the editors may decide to publish only a subset of the Comments received. Just as Letters are restricted in length, Comments and Replies are restricted to one journal page each.

The Reply is shown to the authors of a Comment prior to publication or as necessary. Substantial revision of a Comment in response to the Reply may be interpreted by the editors as a sign that the Comment was misconceived, and might be cause for rejection. The editors may choose to restrict further modifications of a Comment or Reply at any stage of the review process, taking the version at hand as final.

Appeals

Authors may appeal a rejection of their paper by the editors. In the case of a formal appeal, the paper and all relevant information, including the identities of the referees, will be sent to a Divisional Associate Editor (DAE). The DAE may review the case on the existing record or may seek additional expert opinion. The DAE will present an advisory opinion to the editors, which will be sent to authors and/or referees with the DAE's name.

If a DAE has provided a referee report on a paper prior to appeal, another DAE, or the Chairman of the DAEs, must review

Errata.— The Errata section contains notices regarding errors or omissions in papers previously published. Besides the standard Erratum, several special categories of documents may appear in this section. In the online journal, each of these documents involve bidirectional links between the original article and the document in the Errata section. The category of the corrective document is indicated in its title and in the link from the original article.

The standard Erratum is a statement by the authors of the original paper that briefly describes the correction(s) and, where appropriate, any effects on the conclusions of the paper.

An Editorial Note is a statement by the journal about the paper that the editors feel should be brought to the attention of readers of the article.

A Publisher's Note is a notice that the article has been corrected subsequent to publication. Such corrections are made to correct typographical or production errors that involve significant metadata (such as title or byline) or have a significant impact on the reader's ability to understand the article. Such corrections are normally made only shortly after publication, with approval of APS management, and are not made for scientific errors or omissions. The Publisher's Note indicates the correction and when it was made.

A Retraction is a notice that the paper should not be regarded as part of the scientific literature. Possible reasons for this include, among others, presentation of invalid results and inclusion of results that were published previously by the same authors in substantially similar form. (In the latter case, the prior publication, not the Retracted article, should be regarded as the source of the information.) To protect the integrity of the record, the retracted article is **not** removed from the online journal, but notice of Retraction is given. Retractions are sometimes published by the authors when they have discovered substantial scientific errors; in other cases, the editors conclude that Retraction is appropriate. In all cases, the Retraction indicates the reason for the action and who is responsible for the decision. If a Retraction is made without the unanimous agreement of the authors, the approval of the Editor in Chief of APS is required.

the paper on appeal. Authors may suggest those DAEs they feel are appropriate (or not appropriate) to conduct the review, but the editors are not bound by such suggestions. If there is no suitable DAE available, the editors may appoint an appropriate scientist to consider a paper under appeal as an *ad hoc* DAE.

The author of a paper that has been rejected subsequent to a DAE review may request that the case be reviewed by the Editor in Chief of the American Physical Society. This request should be addressed to the Chairman of the DAEs who will review the file and, if appropriate, forward the entire file to the

Editor in Chief. Such appeals must be based on the fairness of the review process, and must not be a request for another scientific review. The questions to be answered in this review are:

Were our procedures followed appropriately and did the paper receive a fair hearing? A decision by the Editor in Chief is the final level of review.