

# Insight into the black box of Physical Review/Physical Review Letters

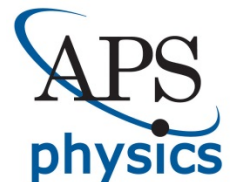
Frank A. Narducci

Associate Editor, Physical Review A

Adjunct Associate Editor, Physical Review Letters

APS Editorial Office, Ridge, NY (sort of)

...with thanks to T. Pattard, D. van Heijnsbergen,  
M. Antonoyiannakis and J. Mimih



April 20, 1993

## Physicists Celebrate Unintelligible Journal

By MALCOLM W. BROWNE

IT may be the most impenetrable periodical in the English language, and yet hopeful authors sent it 39,475 manuscripts last year, and its 6,000-odd subscribers paid up to \$1,000 each to read it. It is The Physical Review, now celebrating its 100th anniversary.

At a national meeting of the American Physical Society here on April 13, a crowd of prominent physicists from around the world packed a banquet hall to hear "Songs of the Physical Revue," a collection of science parodies written during his student days at Harvard University by the mathematician-turned-satirist Tom Lehrer.

Not always appealing to nonscientists, the Lehrer songs included numbers like "The Derivative," a sprightly ditty based on differential calculus. Other Lehrer songs on the bill were "The Slide Rule Song," which explains to students how to hide examination crib notes in a slide rule, and "Physicist's Love Song," which begins with the line "I love you, a liter and a gram."

The journal celebrated in the centennial observance rarely offers anything comprehensible to outsiders, however, much less anything to laugh about. It consists of pure, unrelenting science of the highest order.

Generally speaking, physicists do not much care whether outsiders understand what they write, but The Physical Review has plumbed new depths of unintelligibility, and its prose has become so opaque that the publishers recently felt obliged to impose new writing rules on some authors.

The rules are not uniformly applied. So many physics papers are published each week that The Physical Review comes out in six volumes, each one specializing in a field. (Physical Review A is devoted to atomic physics, optics and related matters; Physical Review B publishes papers on solid-state physics; Physical Review C covers nuclear physics; Physical Review D has to do with astrophysics and relativity, and Physical Review E covers plasma, chaos and complexity.)

None of these volumes is affected by the new intelligibility rule. But another section of the publication, called Physical Review Letters, now demands a slightly less obscure style of prose. Dr. Benjamin Bederson, chief editor of the American

# Outline

- The journals in general
- Meet the editors
  - PRA
  - PRL
- The editorial process
- Peer review
- Your involvement
- New innovations from APS
- On a lighter note



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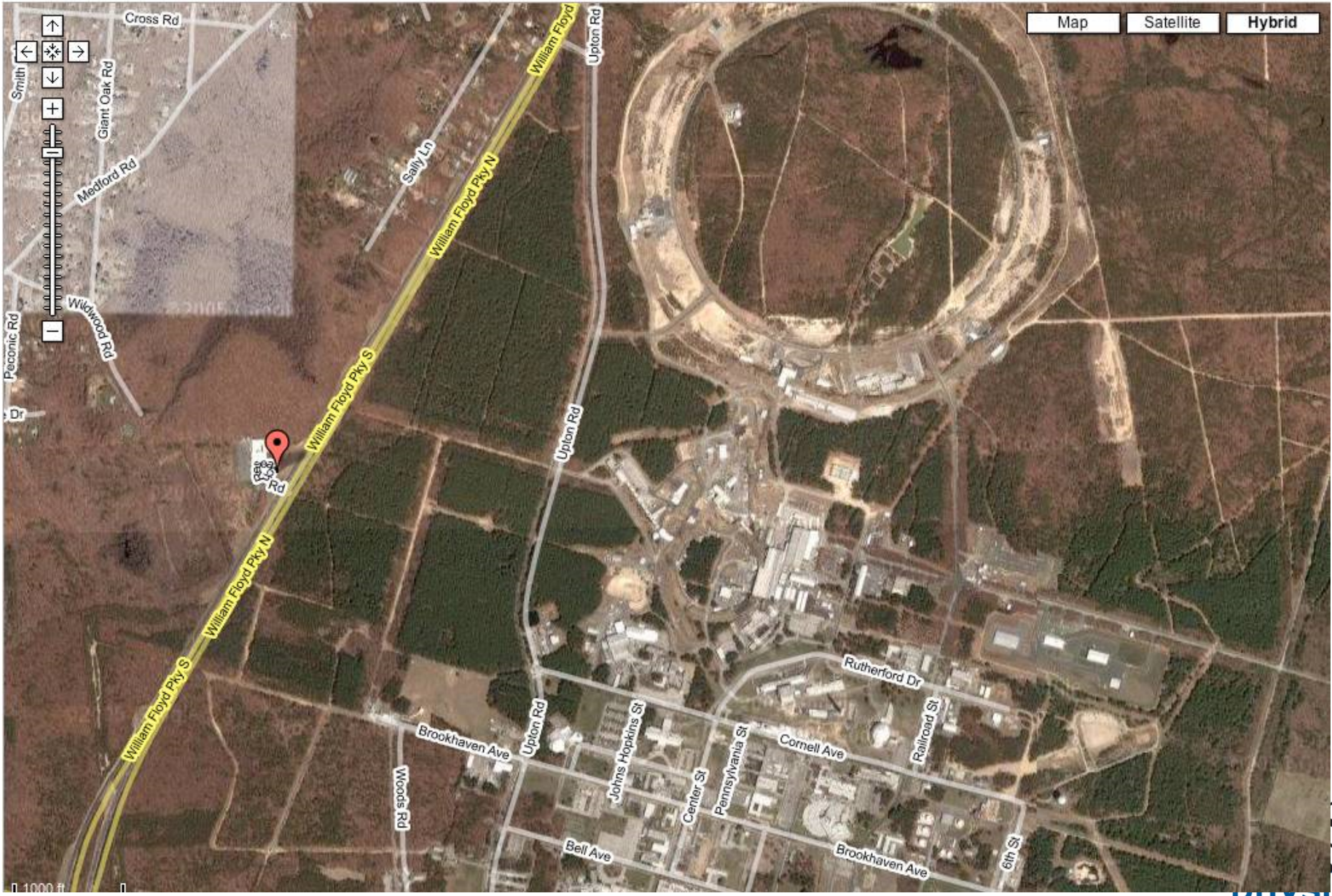
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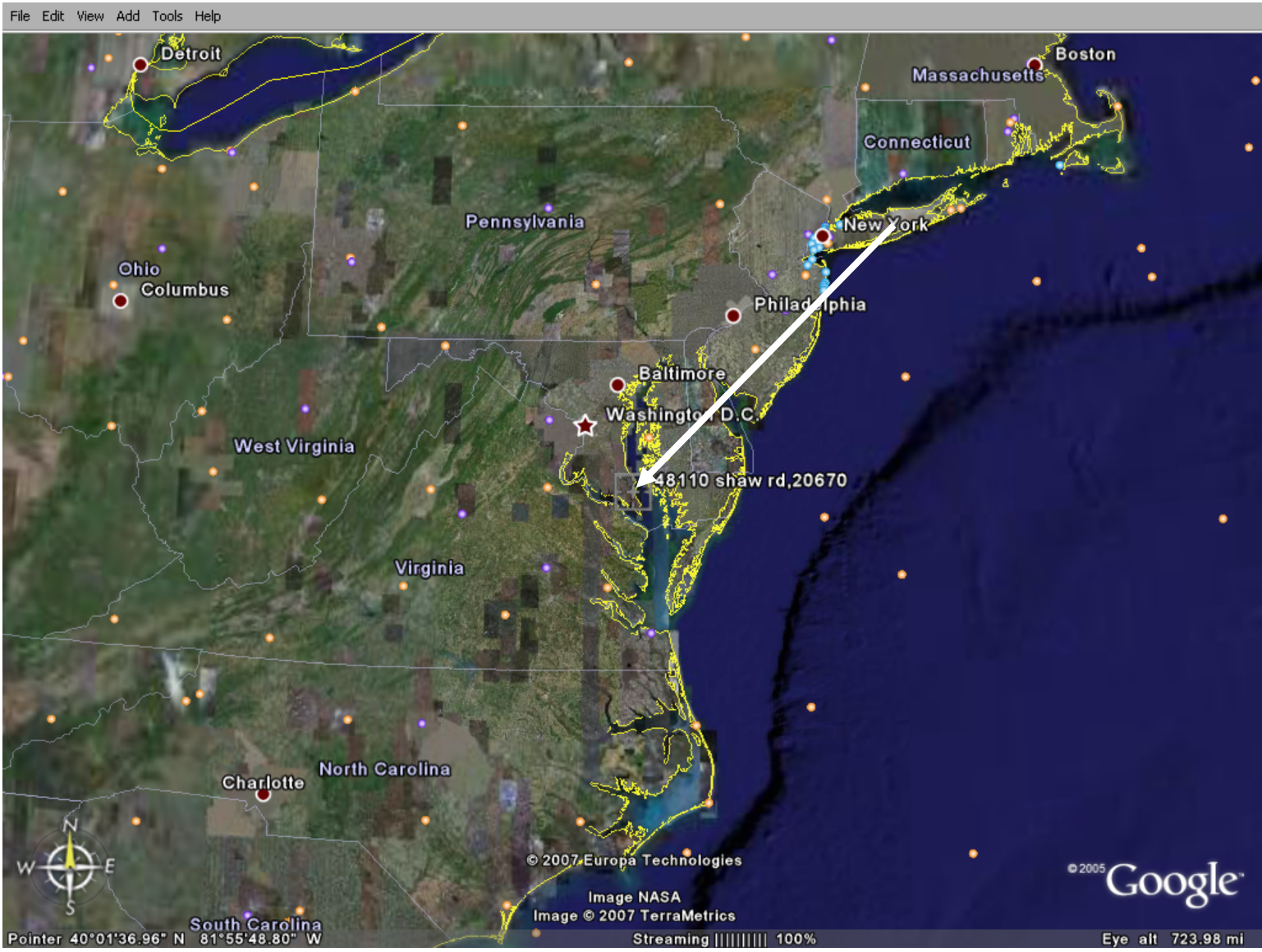




THE AMERICAN PHYSICAL SOCIETY  
EDITORIAL OFFICES

*...but not really*







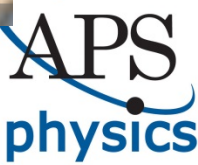
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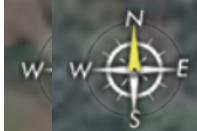
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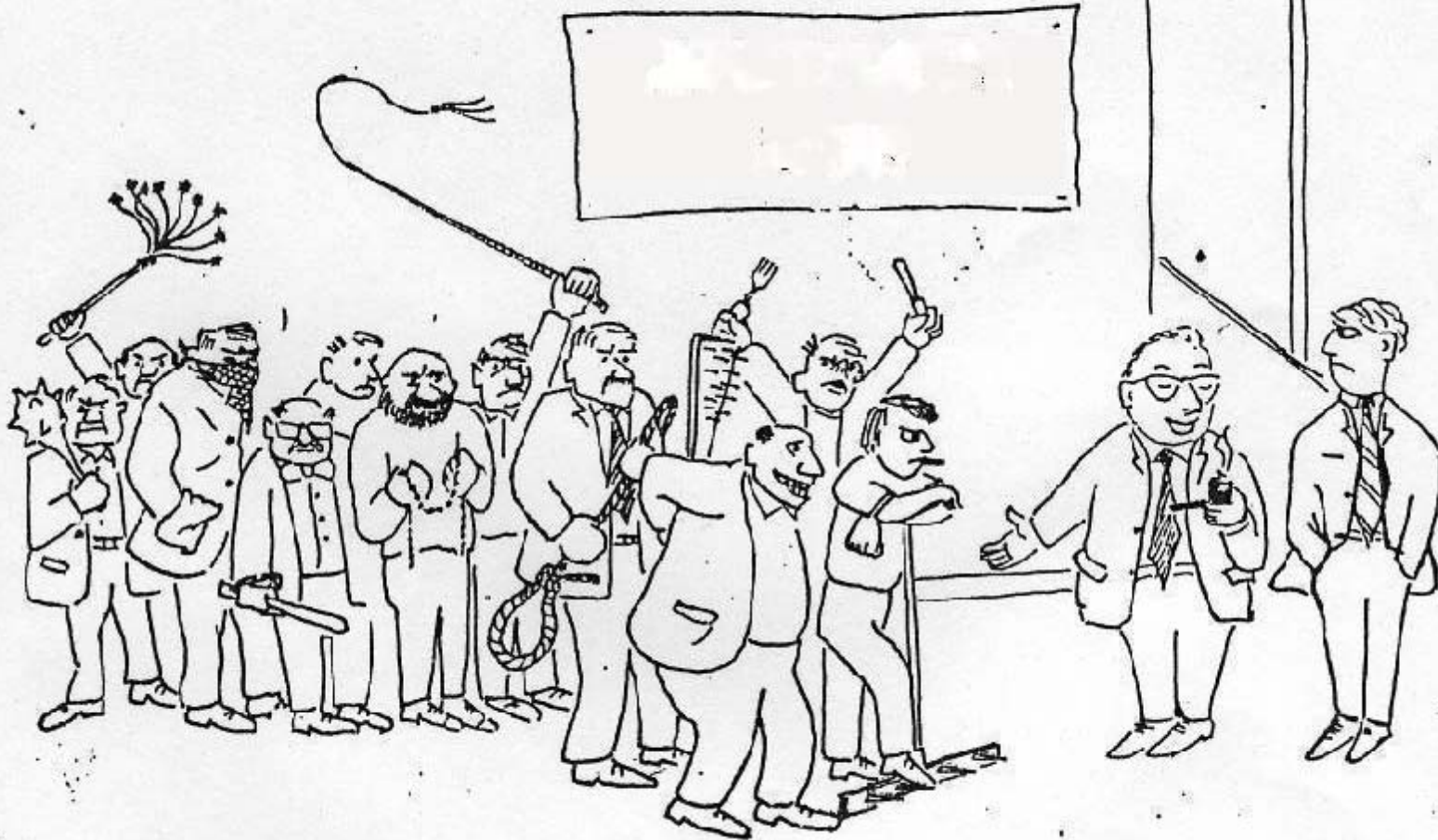
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BY THE WAY DR. Frank MAY I INTRODUCE YOU TO SOME PHYSICISTS WHO SEEM TO HAVE ADDITIONAL ARGUMENTS AS TO WHY THEIR RESULTS SHOULD HAVE BEEN PRINTED IN PHYSICAL REVIEW LETTERS.....

*...meanwhile, back in the  
office...*

# The present office

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*Or even ...*



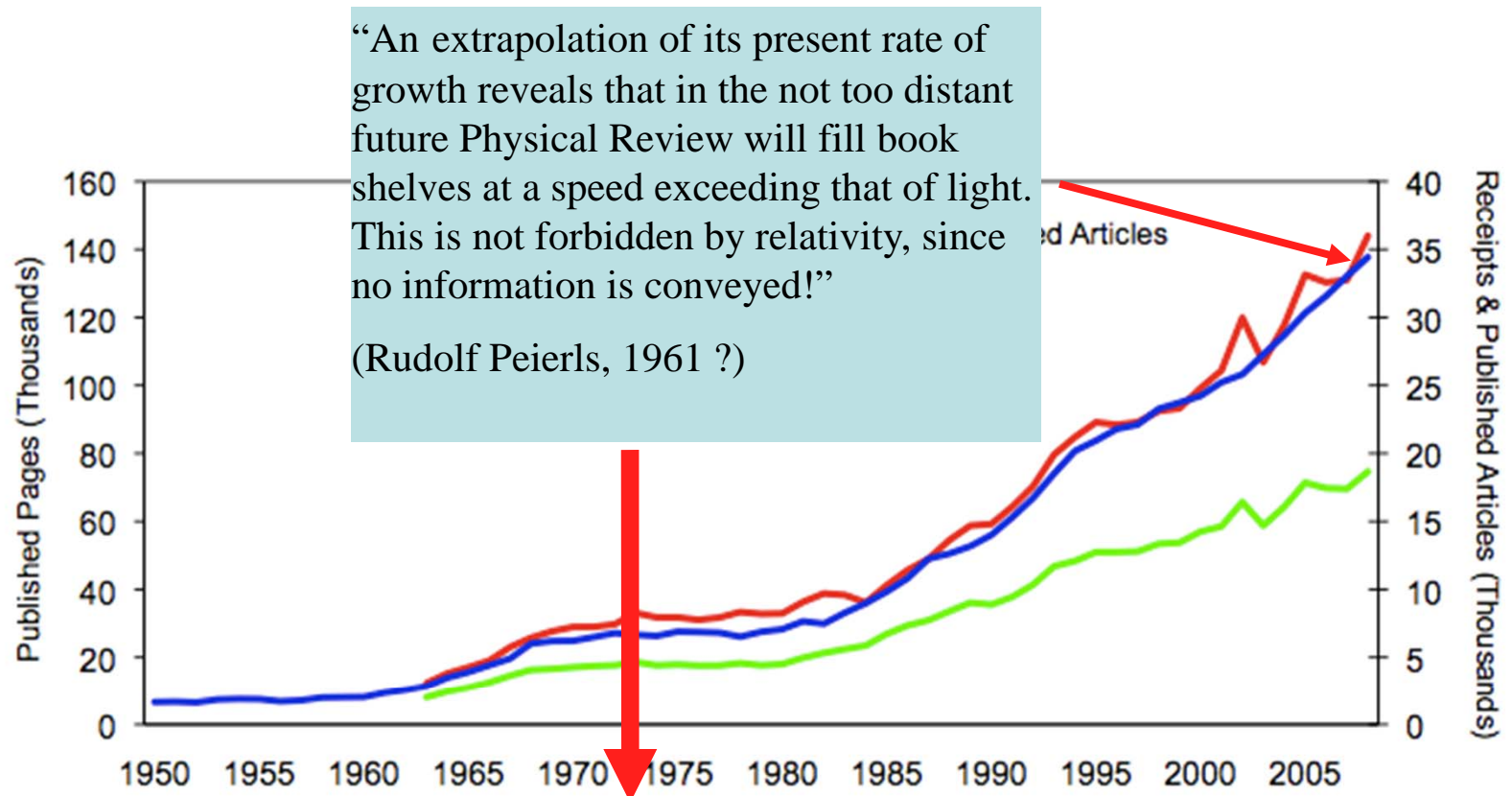
*Some statistics*

...but not too many



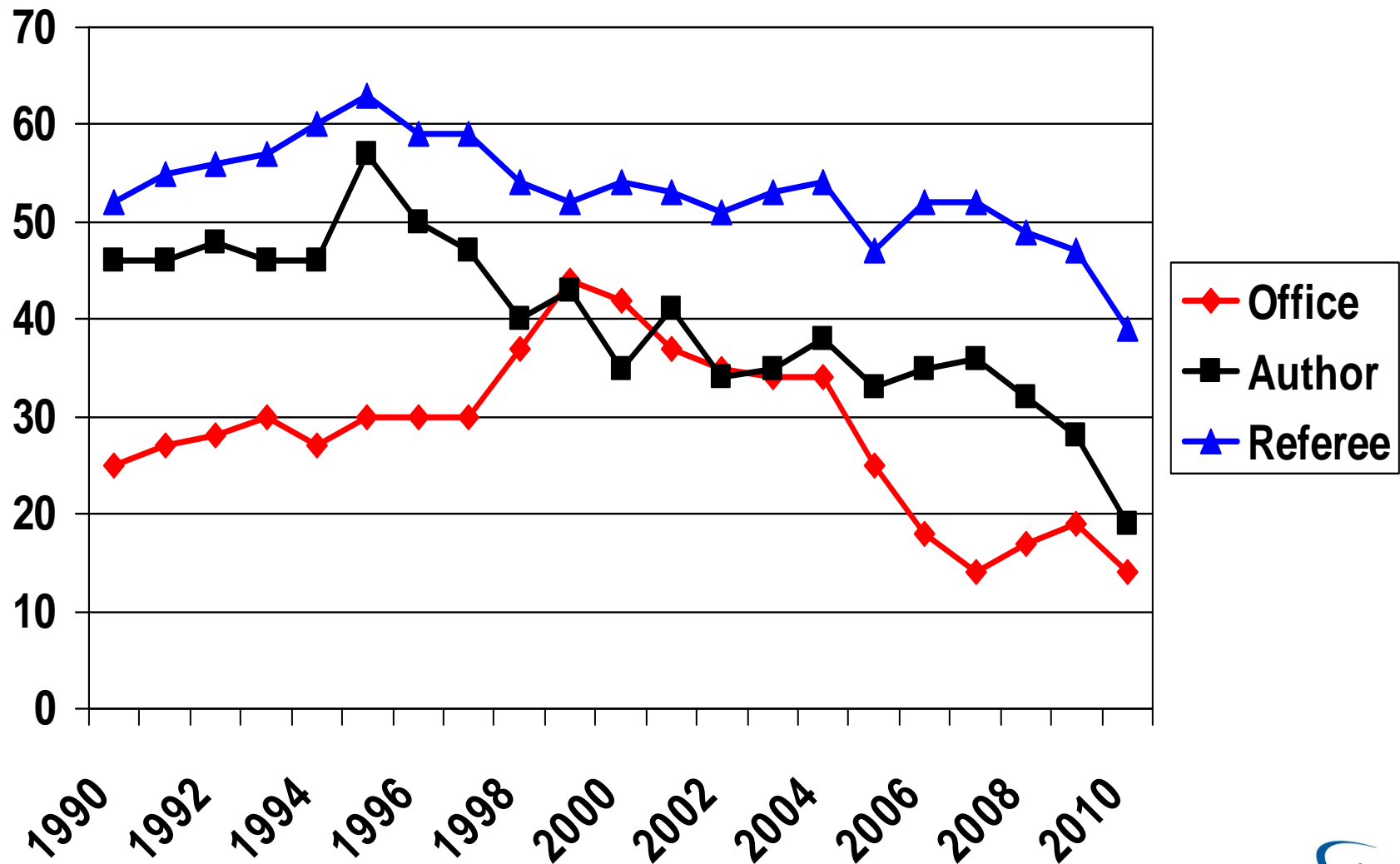
# Some statistics...

## Submissions Physical Review and Physical Review Letters



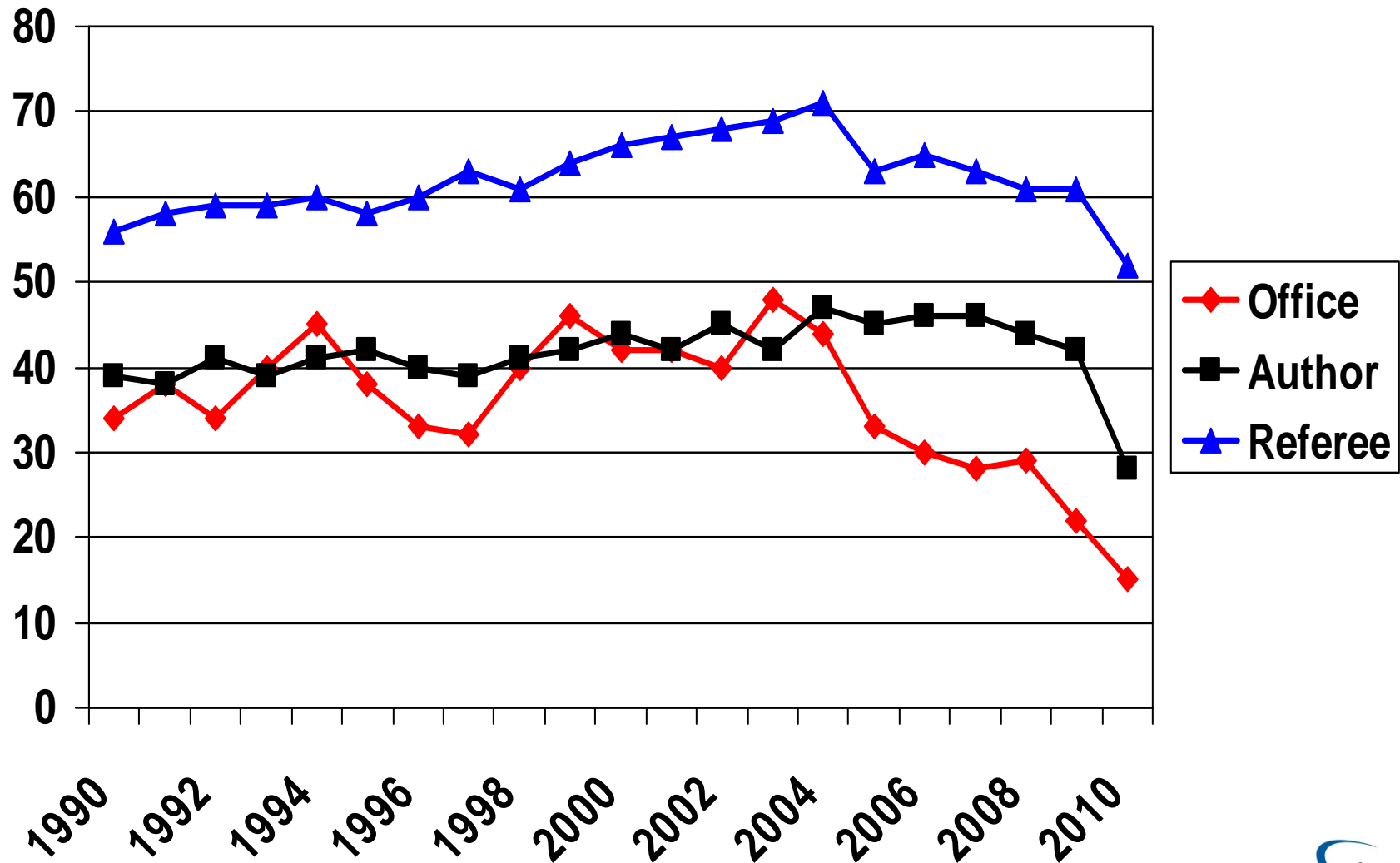
**Need for (rigorous) selection !**

# Calendar Days from Receipt to Acceptance Physical Review Letters

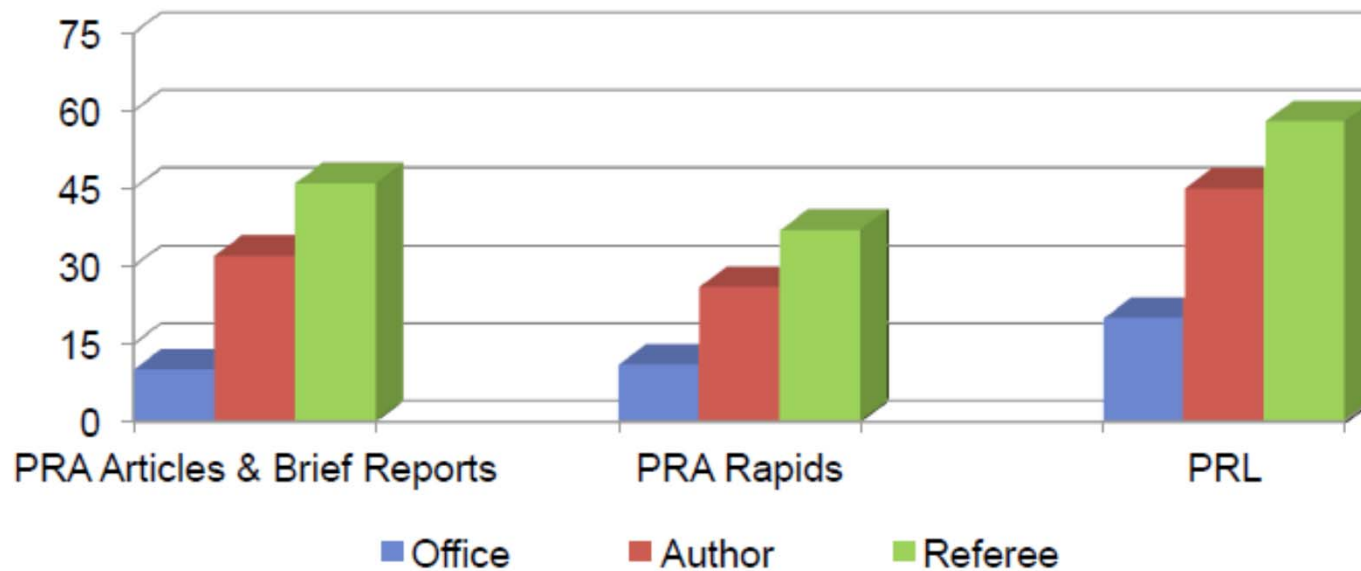


# Calendar Days from Receipt to Acceptance

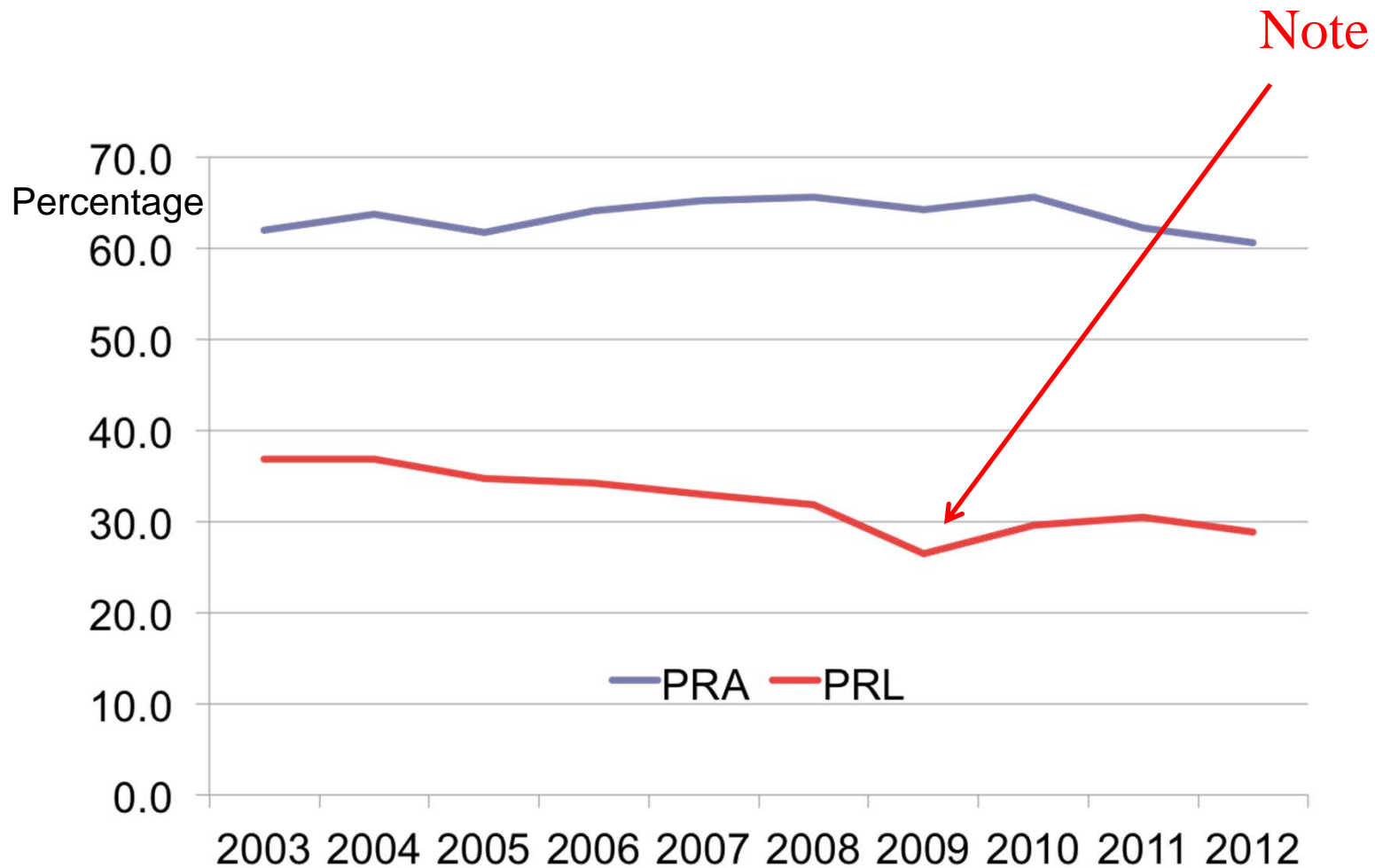
## Physical Review A



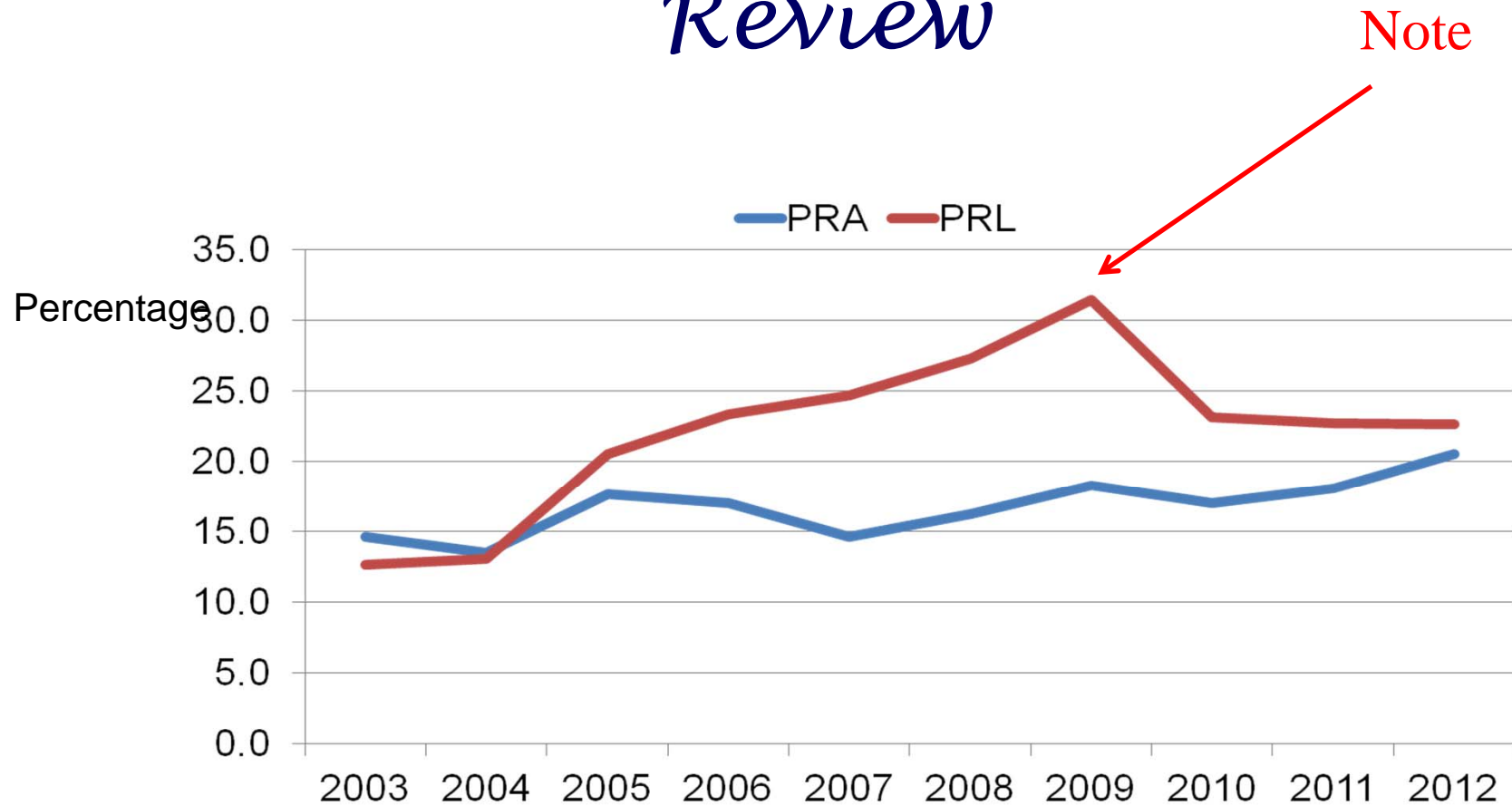
## Average Time from Receipt to Acceptance Published 2012 Direct Submissions



# Percentage Receipts Accepted for Publication



# Rejections without External Review



# Re-affirmation of Standards

Editorial: Improving PRL - Mozilla Firefox  
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http://prl.aps.org/edannounce/PhysRevLett.103.010001  
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Editorial: Improving PRL "Search Letters, Memos, Forms, and ...

## Physical Review Letters

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### Editorial: Improving PRL (June 29, 2009)

(Published 29 June 2009)

We at PRL work continuously to ensure that the journal fulfills its mission, to allow readers to "learn about all the latest significant developments in physics research" [1]. To accomplish this the journal must publish only the best papers, must not turn away suitable papers, and must act with reasonable promptness.

The present PRL could do better in these areas, and thus we must move toward a journal that is more selective and more efficient. To do this we will reinvigorate application of the criteria of importance and breadth of interest for published Letters. We intend a reaffirmation of the standards that have been in place [2], but which, for various reasons, have been applied with variable rigor over the years. As we do this we will aim, insofar as is feasible, to make editorial decisions quickly, to speed both publication of accepted Letters and the shift to other journals of papers not accepted. Finally, we expect that a renewed community focus on the basis for PRL criteria will lead to a better manuscript selection process.

This undertaking must include efforts by authors and referees, as well as by editors. Authors should submit only accounts of results that substantially advance a particular field, open a significant new area of research, or solve a critical outstanding problem thereby paving the way for notable progress in an existing field. Referees must judge breadth of interest based on the impact a result will have both in its field and across field boundaries, and, if they conclude that a paper meets PRL standards, they must explain why. We editors must be more stringent both in our own evaluation of manuscripts and in our interpretation of referee reports. In particular, we will require reports recommending publication to supply compelling reasons why a manuscript should be published as a Letter, and not in a more specialized journal. We note that the *Physical Review* is an excellent venue for high-quality results in all areas of physics, and an appropriately complete report will support more expeditious transfer to the appropriate journal.

To facilitate these efforts, we have revised our Policies and Practices and our Referee Response form. We have also, via this editorial and by other means, informed the physics community that PRL will be more discriminating in accepting manuscripts. The renewed criteria apply as of 1 July 2009, but naturally it will take some time for all authors, referees, and editors to adjust. When all parties adopt the reaffirmed PRL criteria, we imagine that it will result in a significant change in the number of the Letters we publish, though we will not apply any sort of numerical target to govern this reduction. We realize that these changes will lead to disappointment for some. We are convinced, however, that a more selective PRL will provide the best venue for accounts of the most crucial physics research.

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*Meet the editors...*



## *PRL Editorial Staff*

- 150 employees at Ridge
- 15 PRL editors full-time at Ridge
- 5 PRL editors part-time outside Ridge
- 900 papers / full-time editor each year

Each full-time editor receives about 5  
new papers every day

Each paper appears about 7 times on  
an editor's desk during its review

# PRL editorial staff (2007)



*Left to right, standing:* VL Miller, SE Hebboul, C Wesselborg, R Garisto, **SG Brown**, D van Heijnsbergen, J Sandweiss, G Basbas, J Throwe, **RB Schuhmann**, D Ucko, S Mitra, J Malenfant

*Left to right, seated:* J Ripka, L Miao, D Hall, Y Millev. *Insets:* SL Daffer, M Antonoyiannakis

*Not shown:* BM Johnson, T Duke, F Narducci

# *PRA Editorial Staff*

- 9 PRA editors “part-time” outside Ridge (Remotes)
- 2 PRA editors full-time **in** Ridge
- 8 Assistant Editors/Editorial Assistants (in Ridge)

# The 'A-Team'



Keith MacAdam, U Kentucky



Jihane Mimih, Ridge NY



Gordon Drake, U Windsor, Ca



Lee Collins, LANL



Mark Hillery, Hunter College



Mark Saffman, U Wisconsin



Julio Gea-Banacloche,  
U Arkansas



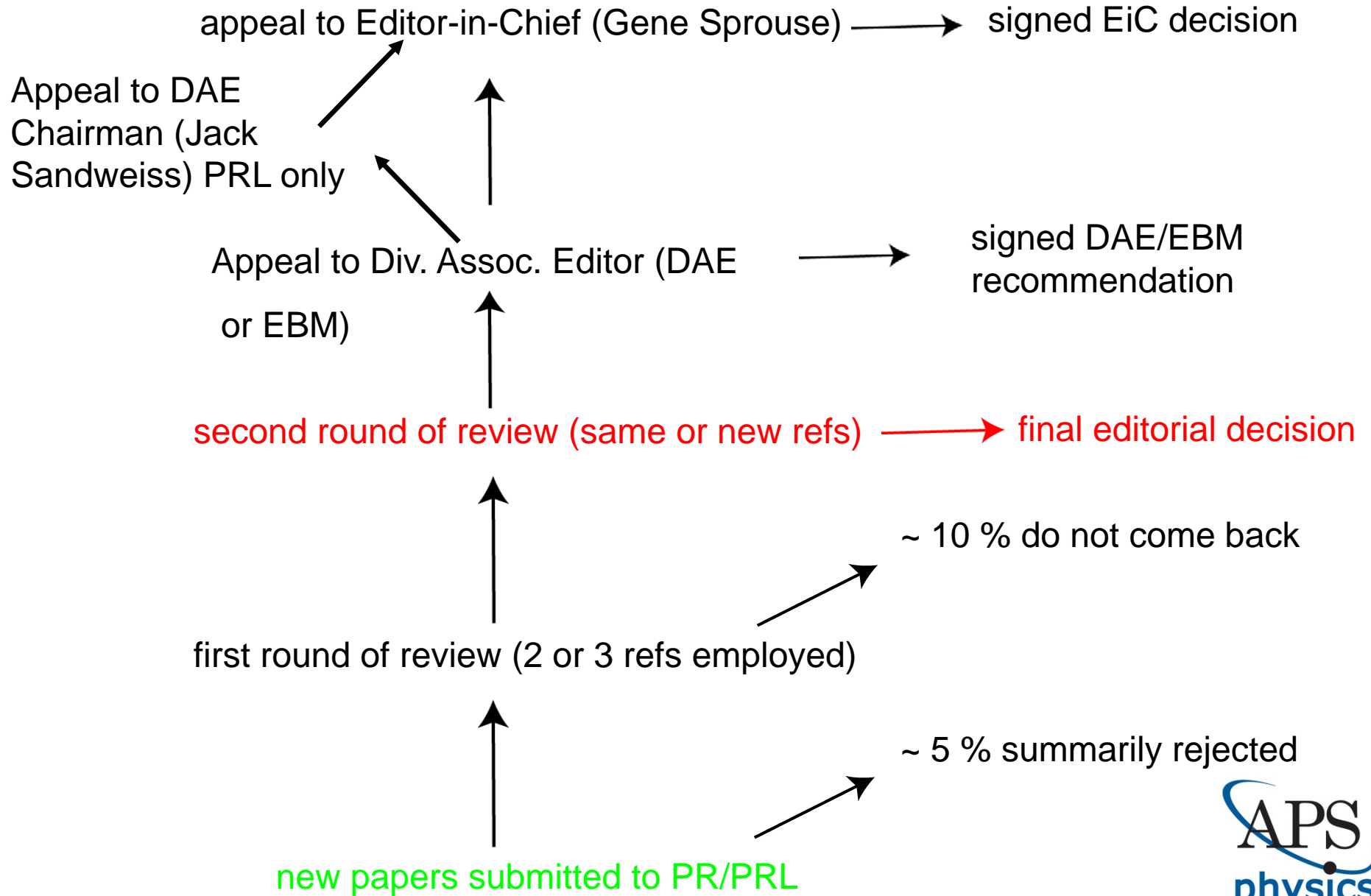
Frank Narducci,  
Naval Air Systems Command

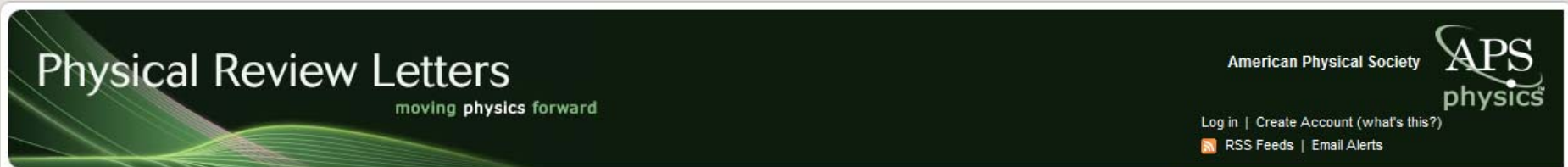


Franco Dalfovo, U Trento, Italy



# ROAD TO EDITORIAL DECISION





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## Editorial: Early Decisions by Editors (August 12, 2005)

Some manuscripts submitted to *Physical Review Letters* are returned to the authors before external peer review, on the basis of internal editorial assessment. Historically a small fraction of submitted manuscripts, 5% or less, have been judged by the Editors to be clearly incorrect. For the last five years an additional 5%-10% of submitted manuscripts have been returned to the authors because they appear not to meet our other criteria, such as importance and broad interest. Experience has shown that such manuscripts are almost always viewed unfavorably by referees.

Early decision saves the author unnecessary delay and so facilitates submission of the manuscript to a more appropriate journal. It also saves the referees the effort of peer review which would likely lead to rejection. Authors of manuscripts so processed are permitted to appeal the decision. In most cases revision of the manuscript is necessary prior to any appeal. When warranted, appeals are sent to a Divisional Associate Editor, who may either recommend that the manuscript be sent for external review, or not.

Now, based on our experience and on the recommendations of the PRL Evaluation Committee (available at <http://publish.aps.org/reports/PRLReportRev.pdf>), we are concluding more frequently that review is not indicated for some manuscripts. We set no quota, but note that the PRL Evaluation Committee suggests that it would not be unreasonable to return 20%-25% of submissions to authors at the outset.

We emphasize that in general an appeal must convince the Editor that the manuscript warrants consideration for publication as a Letter. The Editor may consult a Divisional Associate Editor to assist in the decision. To assist authors we mention here some general characteristics, other than validity, that lead the Editors to conclude that a manuscript is inappropriate for PRL. In brief, a manuscript may not be suitable because it is too specialized or of insufficient relevance to physics research. In some cases, the presentation of a paper is so poor that the message is obscured. In these cases, as noted above, the manuscript might be rewritten in a way that makes clear its potential interest for the broad readership of PRL.

In conclusion, *Physical Review Letters* is a very selective journal. Thus prior to initiating an appeal for a manuscript rejected without external review authors should consider carefully whether or not it would be better to submit to a more appropriate publication.

# *The Peer Review Process*

Why?

# *Einstein and Peer Review*

*Based on a paper by Daniel Kennefick  
<http://arXiv.org/gr-qc/9704002>*



In 1936 Einstein and Rosen submitted a paper to Physical Review titled:

“Do Gravitational Waves Exist?”,  
with the answer “NO”.

This was surprising, since gravitational waves were one of Einstein’s initial predictions of the general theory of relativity.

The editor of Physical Review, Professor John T. Tate, sent it out to a referee and the resulting, detailed, ten-page report (pointing out significant errors) was sent to Einstein asking for his response.

Dear Sir:

We (Mr. Rosen and I) had sent you our manuscript for publication and had not authorized you to show it to specialists before it is printed. I see no reason to address the - by the way erroneous - comments of your anonymous expert. On the basis of this incident I prefer to publish the work elsewhere.

Sincerely,

P.S. Mr. Rosen, who has left for Soviet-Russia, has authorized me to represent him in this matter.

The paper was submitted to the Journal of the Franklin Institute. Einstein's new assistant, L. Infeld, was surprised at the result but soon found a proof of his own.

H. P. Robertson of Princeton befriended Infeld and showed him an error in his proof. Robertson then spoke with Einstein, convinced him that his result was wrong, and that gravitational waves were in fact predicted by the theory.

The paper was modified in proof: the title was changed, and the conclusions modified, with a note by Einstein thanking Robertson.

where  $T$  is the interval of time over which the integral is taken. This does not vanish, in general. At distances  $x_1$  from  $x_1 = 0$  great compared with the wave-lengths, a progressive wave can be represented with good approximation in a domain containing many waves by

$$\beta = X_0 + a \sin \omega(x_2 - x_1),$$

where  $a$  is a constant (which, to be sure, is a substitute for a function depending weakly on  $x_1$ ). In this case  $X_1 = a \cos \omega x_1$ ,  $X_2 = -a \sin \omega x_1$ , so that the integral can be (approximately) represented by  $-\frac{1}{2}a\omega^2 T$ , and thus cannot vanish and always has the same sign. Progressive waves therefore produce a secular change in the metric.

This is related to the fact that the waves transport energy, which is bound up with a systematic change in time of a gravitating mass localized in the axis  $x = 0$ .

*Note.*—The second part of this paper was considerably altered by me after the departure of Mr. Rosen for Russia since we had originally interpreted our formula results erroneously. I wish to thank my colleague Professor Robertson for his friendly assistance in the clarification of the original error. I thank also Mr. Hoffmann for kind assistance in translation.

A. EINSTEIN.

The conclusions were in fact coinciding  
with those of the referee –  
Einstein was wrong and the referee  
correct!

The referee remained  
unidentified for sixty nine years.

Recently the logs of papers  
submitted in the thirties and  
forties turned up in one of our  
senior editors' basement! An  
eager perusal of these logs  
showed that the referee was.....

1936

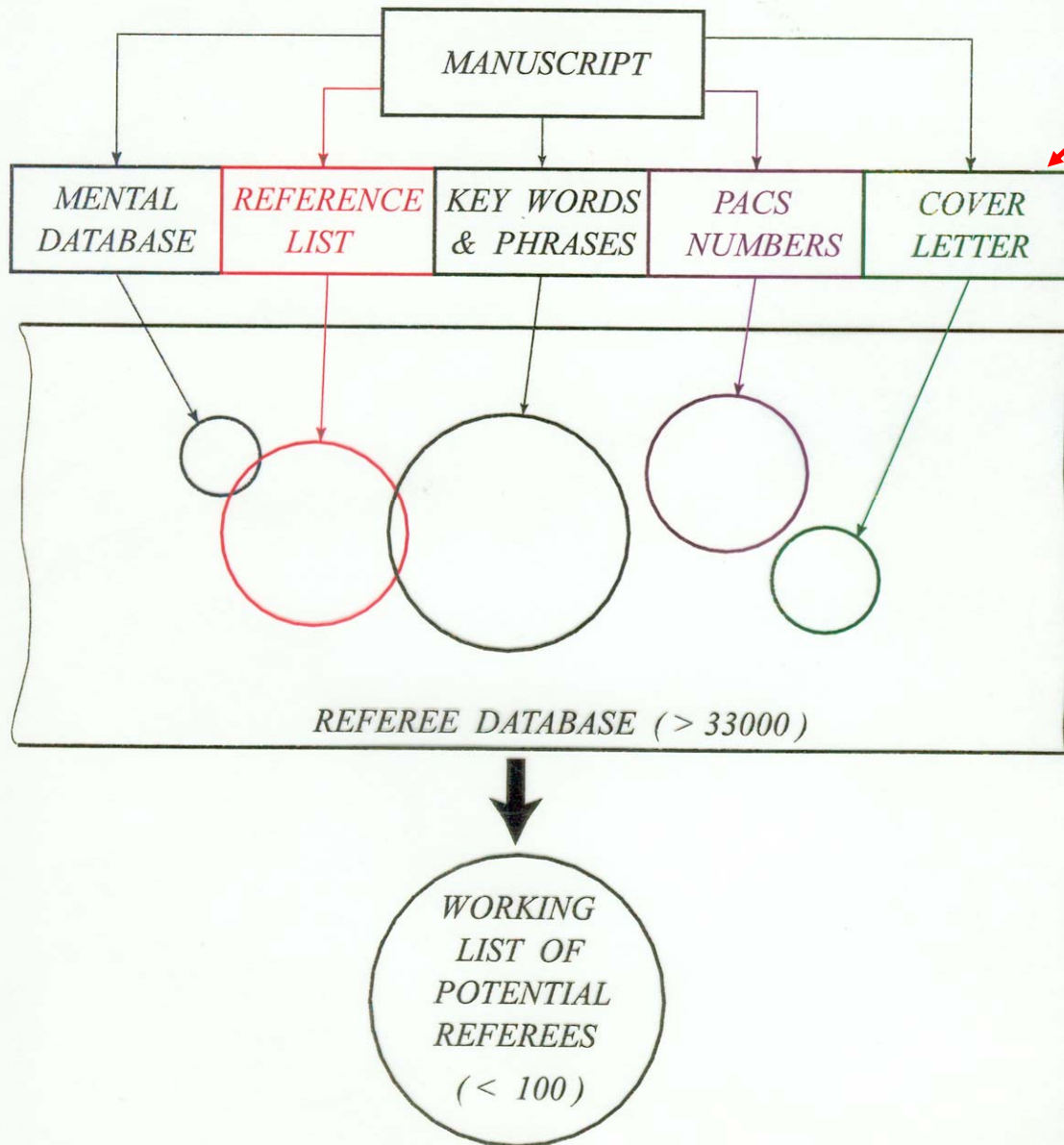
NAME	DATE IN	REFEREE	DATE IN	TO AUTHOR	TO N. Y.
Classey	5/24	Jacobsen 6/4	6/18		
Einstein & Rosen	6/1	Robertson 7/6	7/17	7/23	
.....	.....				4/14
Wasserman & Teller	3/28		4/16	4/8	4/17/36

# *The Peer Review Process*

Editorial selection of a referee

*PHYSICAL REVIEW LETTERS: REFEREE SELECTION*

*STEP 1 of 2*



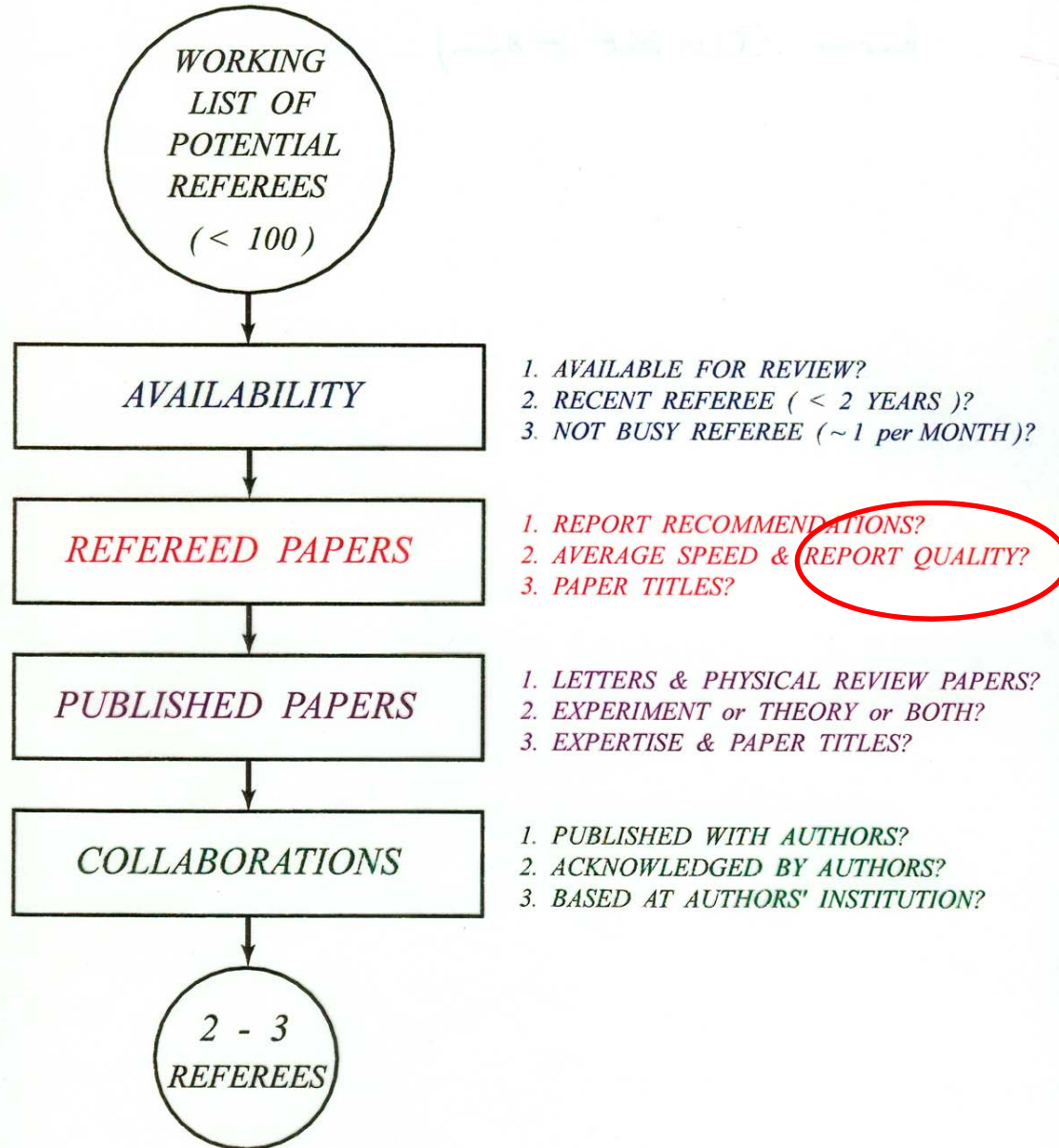
Suggest refs!

Not a colleague  
Not THE expert



# PHYSICAL REVIEW LETTERS: REFEREE SELECTION

## STEP 2 of 2



# *The Peer Review Process*

Writing a good report

# *What's an editor to do???*

Ref A:

This paper is correct, and I think it is interesting and important enough to appear in PRL.

Ref B:

This paper is correct, but lacks the necessary interest and import to appear in PRL.

# *The role of the Referee...*

## *Characteristics of a good report*

- **timely** (inform us if you cannot review)

I'm sorry, I have not sent the report on this manuscript yet. I have been very busy (much more than expected) with job stuff.

Sorry for the delay. I was on leave for the conference tour, but now I am back and hope to prepare the review during the next **decade**.

As far as I can tell, there are some quite boring talks that I could skip to write my report.

I cannot review since the author is basically my boss.

I would have been more than glad to act as a referee for the above manuscript, but after I carefully looked at the data I discovered that I should have been on the authors list.

# *The role of the Referee...*

## *Characteristics of a good report*

- **timely** (inform us if you cannot review)
- **give a clear recommendation** (structure your report)

but maybe not:

I recommend that this paper be recycled in an environmentally friendly way.

The manuscript is acceptable for PRL, but its publication is not pressing, because it provides little that the community in this field could use.

and juuust maybe...

This is a great paper which should be published in PRB. However, I should let you know that I am one of the authors.

# *The role of the Referee...*

## *Characteristics of a good report*

- **timely** (inform us if you cannot review)
- **give a clear recommendation** (structure your report)
- **substantiated arguments** (for or against)

This paper should be rejected for the following reasons:

1. No one cares about this anymore
2. Anyone who would referee it is probably dead
3. All who read it will wish they were

Though not really exciting, the results are worthy of publication in PRL.

# *The role of the Referee...*

## *Characteristics of a good report*

- **timely** (inform us if you cannot review)
- **give a clear recommendation** (structure your report)
- **substantiated arguments** (for or against)
- reasonable level of **detail**

# *The role of the Referee...*

## *Characteristics of a good report*

- **timely** (inform us if you cannot review)
- **give a clear recommendation** (structure your report)
- **substantiated arguments** (for or against)
- reasonable level of **detail**
- **no remarks** that are **personal, polemic, self-serving, etc.**

The only thing I really liked about the manuscript was the words “Copper pairs”. The man’s name is Cooper. Copper is a metal.

This manuscript is complete rubbish and should not be published anywhere. In addition to appearing quite stupid, the authors are unnecessarily impolite. I really find it difficult to deal with such morons.

Think about how **you** would react to such a report!



## *Editorial processing / evaluation of a report*

The editors may

- **edit a report for cause** (e.g. if too antagonizing)
- **withhold** a report (happens rarely)

The editors have access to all information pertinent to reports,  
i.e.

- experimentalist or theorist referee
  - how close is the referee's expertise to subject matter of paper reviewed
  - referee's experience
  - referee's record as an author
  - referee's record (easy/tough, often overruled,...)
  - etc
- => Editors assign different value/weight to each report (i.e. they **evaluate** reports)

# *The Peer Review Process*

Role of the author

# Resubmission...

## Number One Rule:

Once you get the report(s) on your manuscript, sleep over it! Try to get into your groundstate! (or as close to it as possible...)

No matter how unfair, biased or idiotic the report seems to you, a calm reply is **always** best!

**The referee** might see your response, insulting her/him will not help you.

**The editor** has chosen the referee, and has considered the report suitable for transmission to you. Questioning this as obviously wrong is also not helpful.

**An additional alternative referee** may read your response. (S)he might feel for the “fellow referee”, remembering own bad experiences from the past.

# *Letter from Author rejected without external review*

You probably will not be surprised if I admit that my first reaction to thy message was that of irritation yet, being a scientist and true to my vocation, I took a deep breath and let the issue aside for a few days. Upon returning to the paper I started to look at the issue with a cool head and things now looked quite different.



In the resubmitted letter both the abstract and the introduction are new. The discussion section was modified as well. The new introduction was written so that any theoretical physicist could not only appreciate the idea but also find it plausible. The following technical presentation is then intended to convince him that the plausible is also doable. As a matter of self-testing, I have asked three of my colleagues in the physics department to read the introduction and then gauged it by their reaction.

I'm thus grateful for your criticism. It forced me to rethink and improve the paper. My gratitude is indeed genuine and not just a lip service.

## Resubmission...

### *Characteristics of a good resubmission*

- **think** about the report first before you reply to them
- **give substantiated arguments** if you don't agree with some ref. suggestions
- **respond to all comments and criticisms**

Referee A, clearly an expert in the field of ..., recommends publication...

To save time to publication, we decided not to respond to the criticism of referee A.

We have revised our manuscript **ONLY** according to the comments of referee A. We have not taken into consideration the comments of referee B, who clearly completely missed the main points of our manuscript. It is unfortunate that referee C repeats this mistake.

*Finally....*

...on the lighter side

## Referee reports ...

“The paper fills a much needed gap and should be rejected”

“Not only is this paper wrong, I did it first”

“Reject without delay!!”

## Authors resubmitting....

... our paper has no conclusion,  
because we wanted to save space.

**This is an example of the fact that scientific progress usually proceeds incrementally, sometimes in unbearably small steps. We believe that our paper represents one of those steps.**

You asked for justification for a Rapid. We are pleased to tell you that all the authors agree that this should be a Rapid.

*Editor: As you revise, please enlist the assistance of a colleague who is fluent in English.*

*Author: The manuscript has been read and corrected by a Native American.*



*Not quite what we had in mind*



*Native Americans posing  
with Dr. and Mrs. Einstein  
in front of Hopi House  
1931*

# *Authors are sometimes collegial*

I was wondering if I could find out what the latest status of our manuscript is. I told my mother about my first submittal to Physical Review Letters, and she won't stop bothering me about it. She keeps calling to see if it's been accepted or not; I've tried telling her it's with the editors, and but she's getting tired of hearing that.

According to your automated author status inquiry system, one of the referees for our manuscript has not responded for 6 weeks. I wonder if I should be concerned about his well being. Please check to see if perhaps some harm has befallen him. If not, could something be arranged?

# *Innovations from PRL/PR*

- Suggestions
- Free-to-Read
- Physics
- Physical Review X

# Suggestions

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Gathered here for your convenience are articles that have been covered by a Viewpoint in *Physics*, selected as an Editors' Suggestion, featured as a story in *Phys. Rev. Focus*, or are of special interest for other reasons.


 **Optical Flux Lattices for Ultracold Atomic Gases**  
N. R. Cooper  
Published 25 April 2011 (4 pages)  
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See accompanying Viewpoint: *Physics*

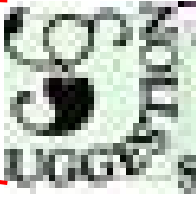
 **Forces and Currents in Carbon Nanostructures: Are we Imaging Atoms?**  
Martin Ondráček, Pablo Pou, Vít Rozsival, Cesar González, Pavel Jelínek, and Rubén Pérez  
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Thomas Szkopek, Vwani P. Roychowdhury, Dimitri A. Antoniadis, and John N. Damoulakis  
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 **Padding Mode of Forward Flight in Insects**  
Leif Ristroph, Attila J. Bergou, John Guckenheimer, Z. Jane Wang, and Itai Cohen  
Published 26 April 2011 (4 pages)  
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See accompanying *Physics Synopsis*

 **Insulator-to-Metal Transition in Sulfur-Doped Silicon**  
Mark T. Winkler, Daniel Recht, Meng-Ju Sher, Aurore J. Said, Eric Mazur, and Michael J. Aziz  
Published 25 April 2011 (4 pages)



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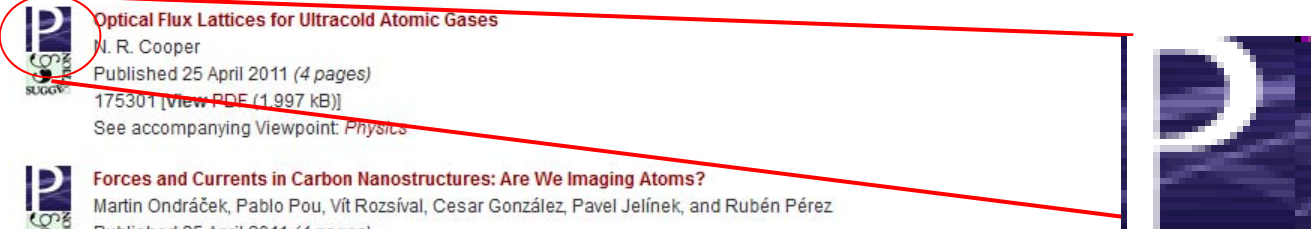
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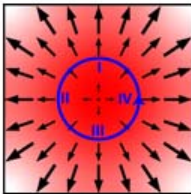
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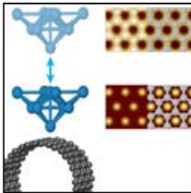
## Viewpoints

### An optical lattice of flux



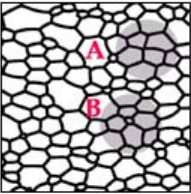
Ian Spielman, April 25, 2011  
A suitable optical lattice for cold atoms could produce a large effective magnetic field in which the atoms would realize analogs to quantum Hall states. [Read More »](#)

### Proper carbon ID required



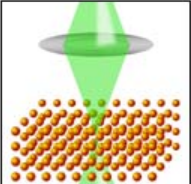
Eric I. Altman, April 25, 2011  
Simulations provide a guide to identifying atoms in high-resolution images of carbon nanomaterials. [Read More »](#)

### Irreversibility and the statistics of grain boundaries



Robert V. Kohn, April 18, 2011  
Thermodynamic arguments and a one-dimensional model help explain why the grain boundaries in an annealed polycrystalline material have an unexpectedly simple statistical distribution. [Read More »](#)

### Making the probe the center of the experiment



Rolf Erni, April 18, 2011  
To better interpret the information in images, electron microscopists are looking more closely at how an electron beam scatters inside of a specimen. [Read More »](#)

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### Coming Soon in Physics

- New materials: Topological semimetals

### News and Features

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### Now in Focus

#### Laser from Atomic Nuclei

April 22, 2011

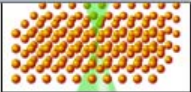
A laser that emits visible light using atomic nuclei, rather than electrons, could be made from a thorium alloy. It could be a first step toward a gamma-ray laser.

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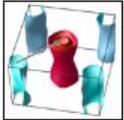


beam scatters inside of a specimen. [Read More »](#)  
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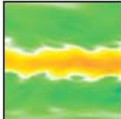
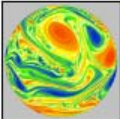

## Trends

### Iron superconductivity weathers another storm



**Igor Mazin, March 28, 2011**  
A new class of high-temperature iron-based superconductors lacks features in its electronic band structure that, based on current theoretical understanding, were considered essential. In a field that has produced quite a few surprises, this is the biggest yet. [Read More »](#)  
[More Trends »](#)

### Looking for new problems to solve? Consider the climate




**Brad Marston, March 7, 2011**  
Even though global warming remains a heated political topic, physicists should not ignore the intellectual challenge of trying to model climate change. [Read More »](#)  
[More Trends »](#)

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## Synopses

### Binding baryons on the lattice



**April 26, 2011**  
[Synopsis on Phys. Rev. Lett. **106**, 162001 and Phys. Rev. Lett. **106**, 162002 (2011)]

### Preventive circuitry



**April 25, 2011** [Synopsis on Phys. Rev. Lett. **106**, 176801 (2011)]  
• [Quantum Information](#) • [Semiconductor Physics](#)  
• [Nanophysics](#)

be a first step toward a gamma-ray laser.  
//////////  
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Papers the editors and referees find of particular interest, importance, or clarity.  
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[Physical Review B](#)  
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#### Editorial Board


**March 17, 2011**

The American Physical Society is proud to present the current Editorial Board for *Physical Review X*. The Editorial Board will assist in setting the standards of the journal and advise the editors regarding its direction and development. Members of the Board will also handle appeals in the tradition of the *Physical Review* journals. *Physical Review X* is fortunate to have the support and



**Jorge Pullin, Editor**  
*Louisiana State University, Baton Rouge, LA, USA*

Presently Horace Hearne Chair in Theoretical Physics at LSU, Pullin received his Ph.D. from the Instituto Balseiro and has research interests in many aspects of gravitational physics, both classical and quantum mechanical. He is a fellow of the APS and AAAS, a member of APS Council, and has served on the editorial boards of a number of journals, including *Living Reviews in Relativity* and *New Journal of Physics*.

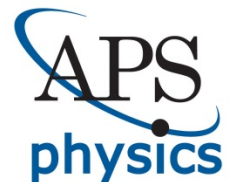




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Feedback very welcome

# *Backups*

THE PHYSICAL REVIEW  
REVIEWS OF MODERN PHYSICS  
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Conducted by  
THE AMERICAN PHYSICAL SOCIETY  
JOHN T. TATE, *Managing Editor*

*University of Minnesota, Minneapolis, Minn., U. S. A.*

July 30, 1936

Dr. A. Einstein  
Glenwood  
Saranac Lake, New York

Dear Dr. Einstein:

I regret the circumstances which led to your decision to publish elsewhere the paper by yourself and Dr. Rosen.

Perhaps I was personally at fault in that I assumed you were familiar with the publication policies of the American Physical Society and that you would receive the comments of our Editorial Board in the spirit in which they were written.

All papers submitted for publication in THE PHYSICAL REVIEW are subject to editorial supervision by a Board of Editors elected by the American Physical Society. I could not accept for publication in THE PHYSICAL REVIEW a paper which the author was unwilling I should show to our Editorial Board before publication. I assumed that you knew this or I would have returned your paper to you at once.

I regret that you found the editorial comments on your paper erroneous and unworthy of reply.

Sincerely yours,

*John T. Tate*  
John T. Tate,  
Editor

JTT:B

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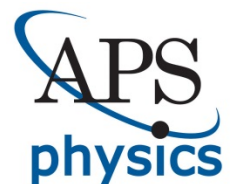
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THE PHYSICAL REVIEW  
REVIEWS OF MODERN PHYSICS  
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Conducted by  
THE AMERICAN PHYSICAL SOCIETY

JOHN T. TATE, *Managing Editor*

*University of Minnesota, Minneapolis, Minn., U. S. A.*

July 23, 1936

Professor A. Einstein  
Saranac Lake, New York

Dear Professor Einstein:

I am taking the liberty of returning to you the paper by yourself and Dr. Rosen on gravitational waves together with some comments by the referee. Before publishing your paper I would be glad to have your reaction to the various comments and criticisms the referee has made.

Sincerely yours,

*John T. Tate*

John T. Tate,  
Editor

JTT:B  
Enc.

Comments of Referee

Author: A. Einstein and N. Rosen.

Title: Do Gravitational Waves Exist?

(a) P. 2, eq. (3):  $\bar{\gamma}_{\alpha\alpha, \mu\nu}$  should be replaced by  $\delta_{\mu\nu} \bar{\gamma}_{\alpha\beta, \alpha\beta}$

(b) P. 2, eq. (6): Replace + signs by - signs, to accord with the + sign in eq. (4).

(c) Pp. 3-5: That pure longitudinal and longitudinal-transverse waves are spurious has been shown by A. S. Eddington, The Propagation of Gravitational Waves, Proc. Roy. Soc. 102A, p. 268, 1923, to which no reference is made. Present work goes somewhat further than Eddington's in showing explicitly how to set up the infinitesimal transformation which removes them. It is to be noted that there exists a (rather trivial) class of spurious waves of type (c) for which the authors' condition  $\bar{\gamma}_{11} = \bar{\gamma}_{33}$  is not fulfilled - see (xii) below.

(d) Pp. 8-15. In Part II the authors seek a field

$$(1) \quad ds^2 = A(dx_4^2 - dx_1^2) - Bdx_2^2 - Cdx_3^2$$

which is to be the rigorous solution of the problem of plane waves, in which the coordinates  $x_\mu$  are to correspond to the Cartesian coordinates employed in the derivation of the results of Part I. Now we should expect this to imply that (1) should contain, as that special field in which the tensor  $T_{\mu\nu}$  vanishes everywhere, the solution

Glenwood, Saranac Lake N.Y.  
den 27. Juli 1936

Herrn John T. Tate  
Editor The Physical Review  
University of Minnesota  
Minneapolis, Minn.

Sehr geehrter Herr:

Wir (Herr Rosen und ich) hatten Ihnen  
unser Manuskript zur Publikation gesandt und Sie nicht  
autorisiert, dasselbe Fachleuten zu zeigen, bevor es  
gedruckt ist. Auf die - übrigens irrtümlichen - Ausführun-  
gen Ihres anonymen Gewährsmannes einzugehen sehe ich  
keine Veranlassung. Auf Grund des Vorkommnisses ziehe ich  
es vor, die Arbeit anderweitig zu publizieren.

Mit vorzüglicher Hochachtung

P.S. Herr Rosen, der nach Sowjet-Russland abgereist ist,  
hat mich autorisiert, ihn in dieser Sache zu vertreten.

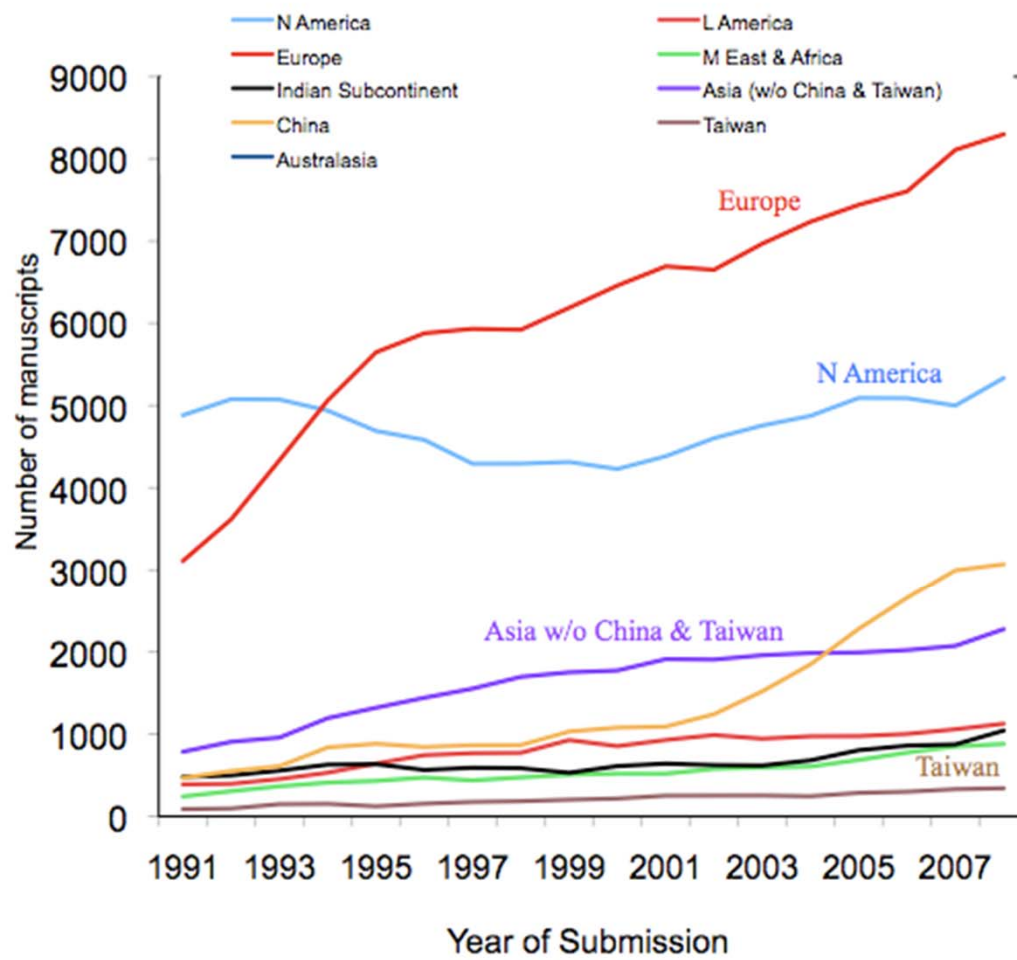


*Quotes I find along the  
line...*

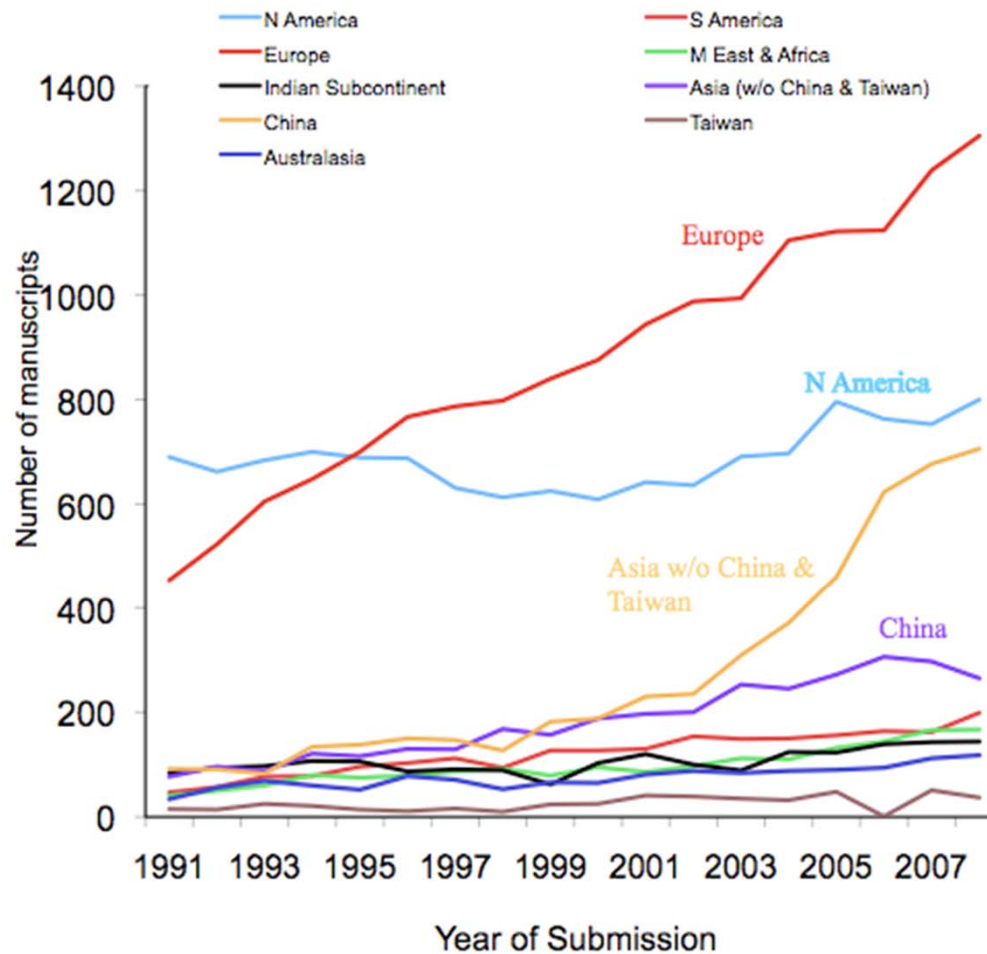
# *Cover Letters*

We feel our paper should be published in Physical Review A because, frankly, this is the best invention since sliced bread, and as well the results we have derived apply directly to the fields of ....

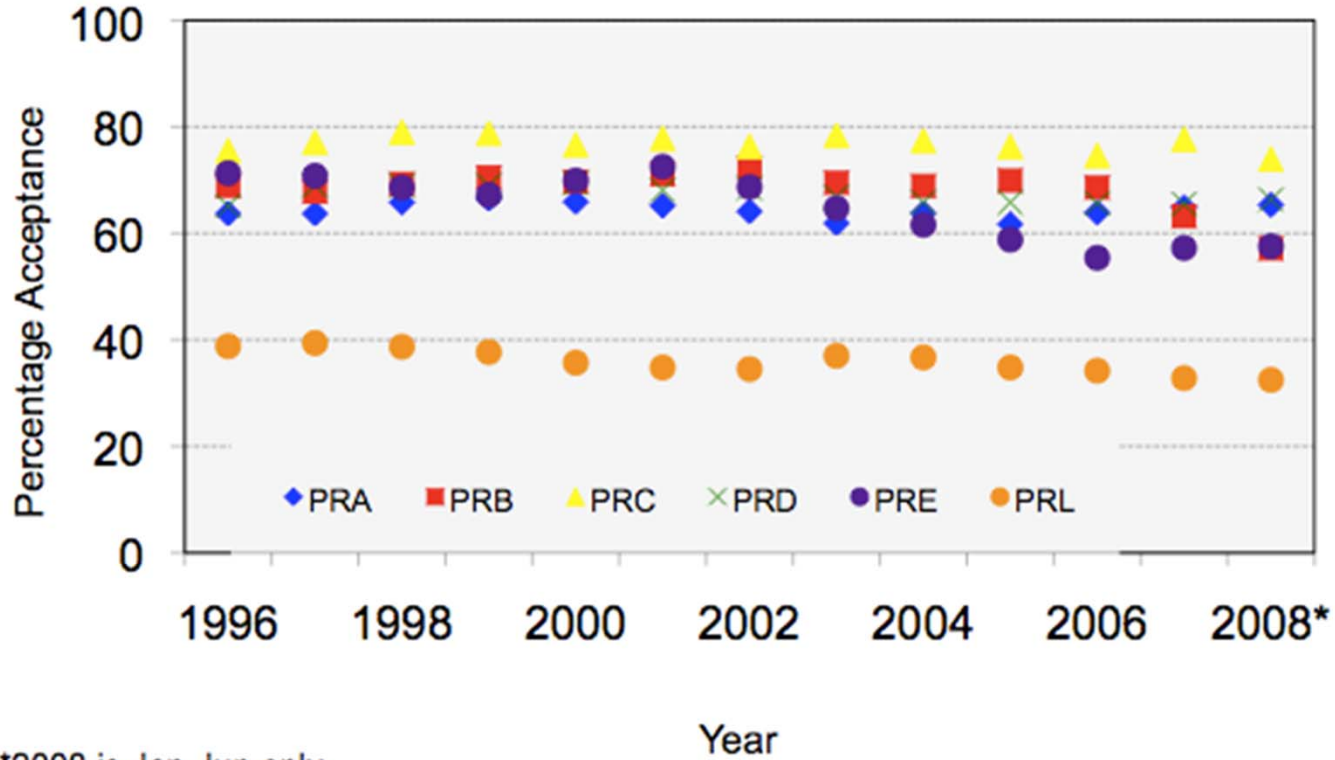
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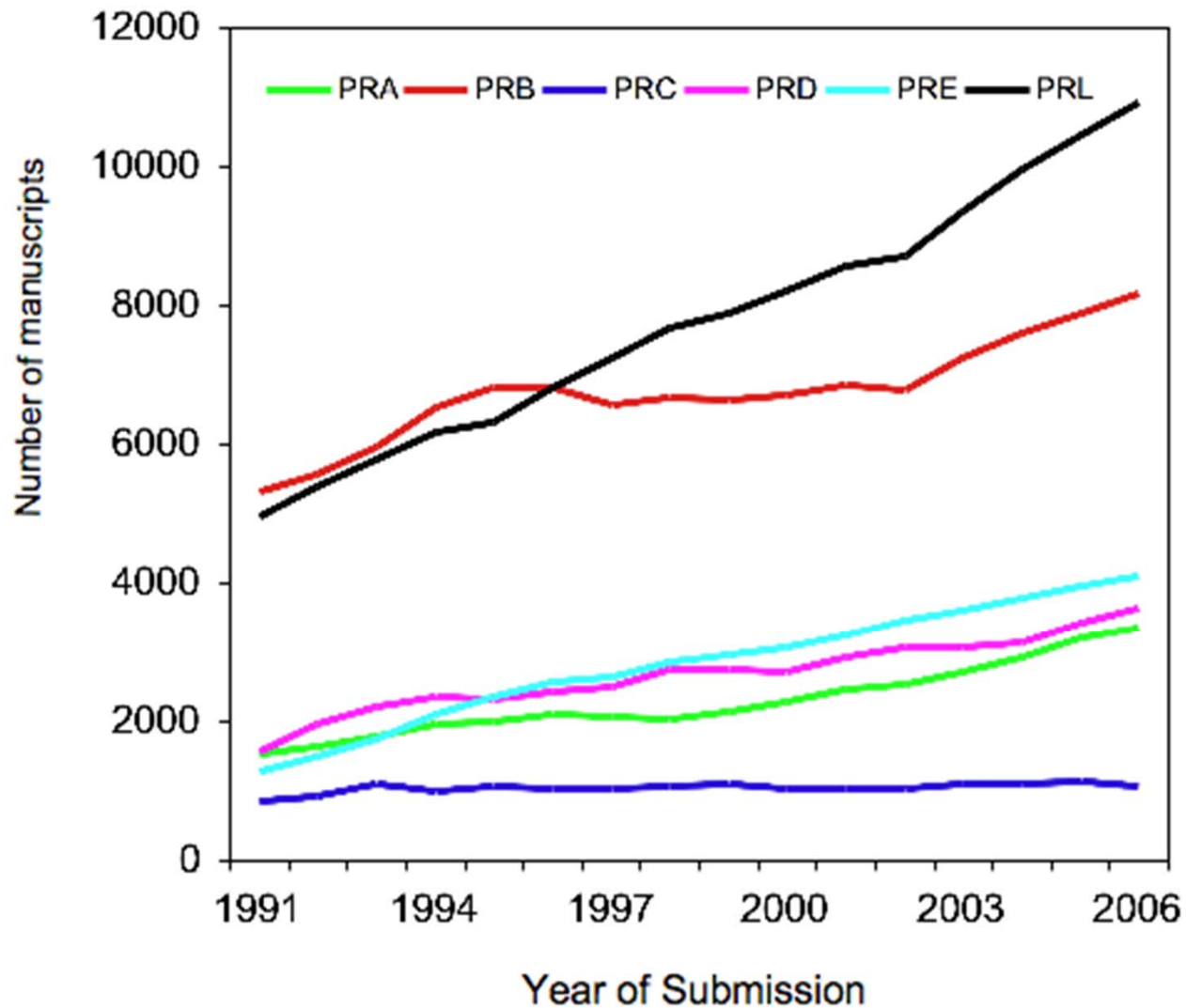


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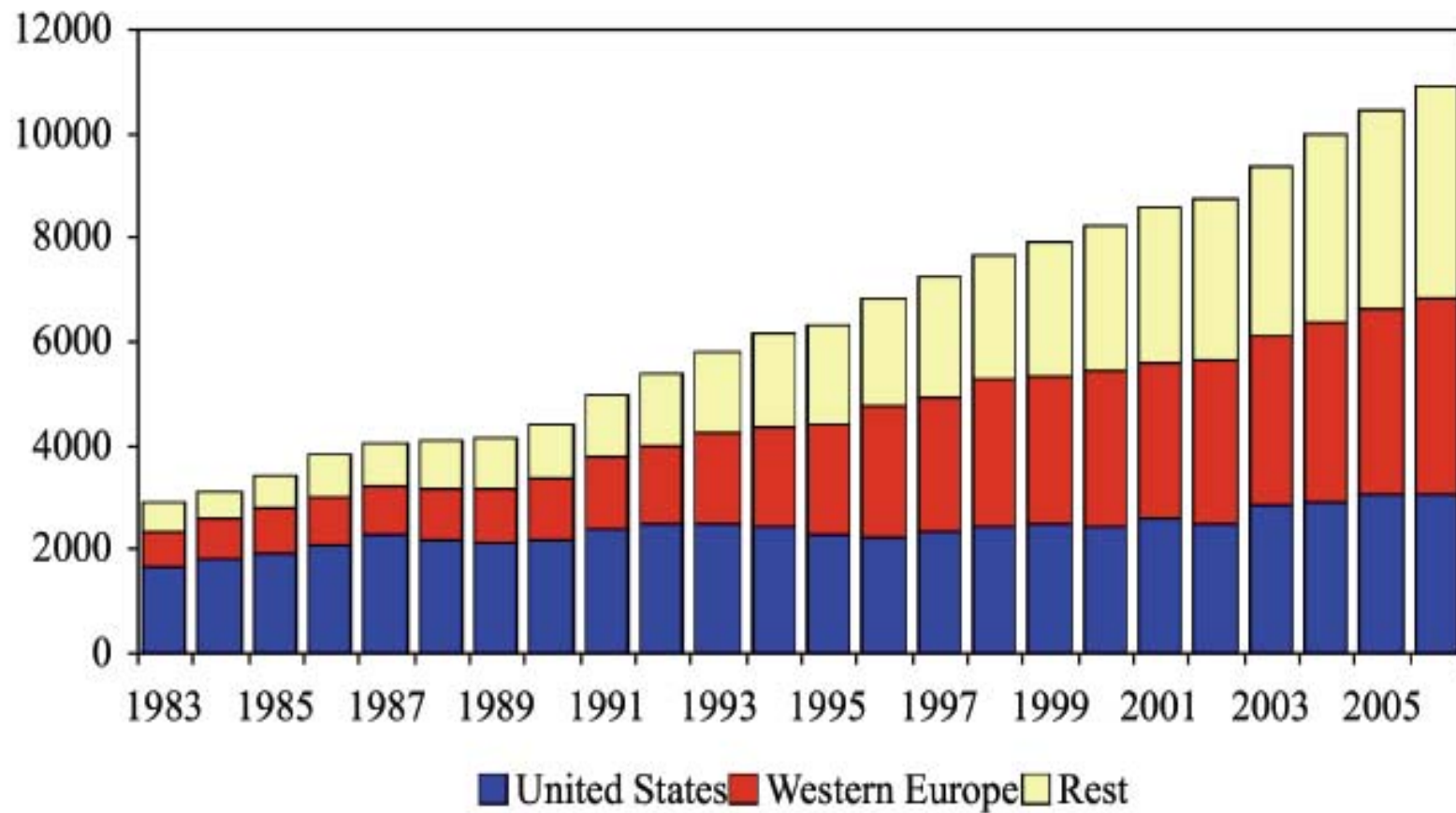
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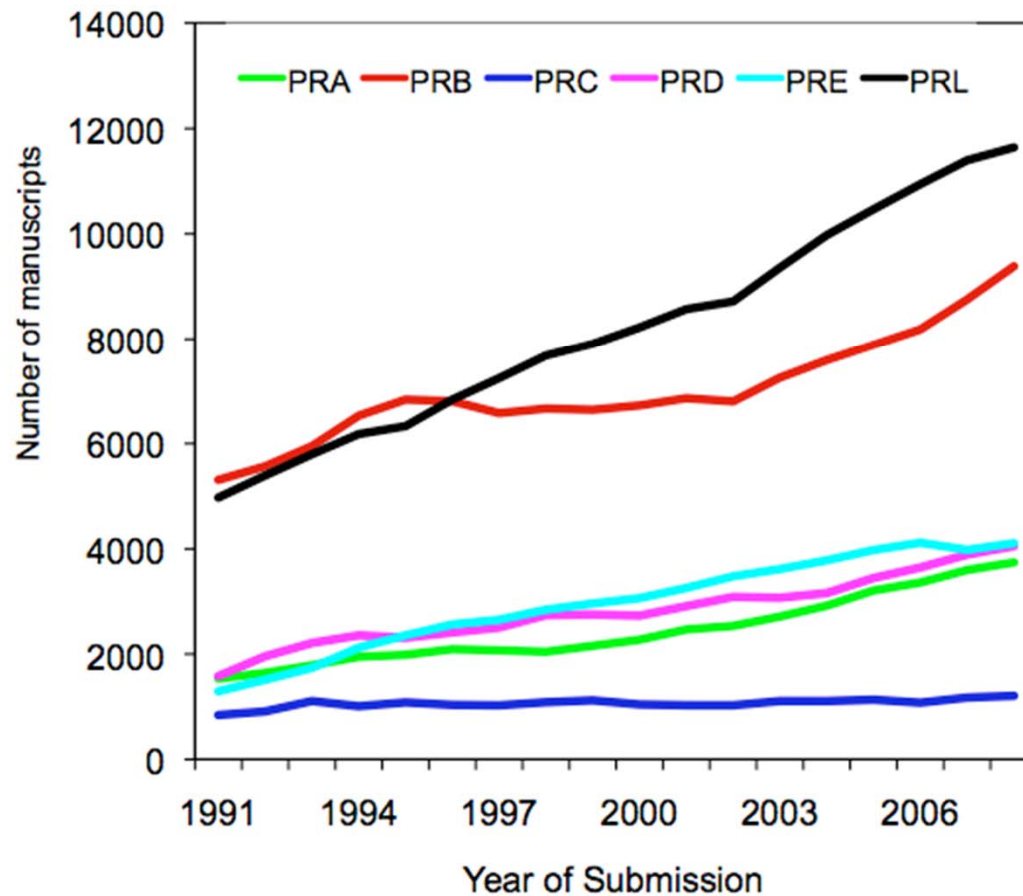
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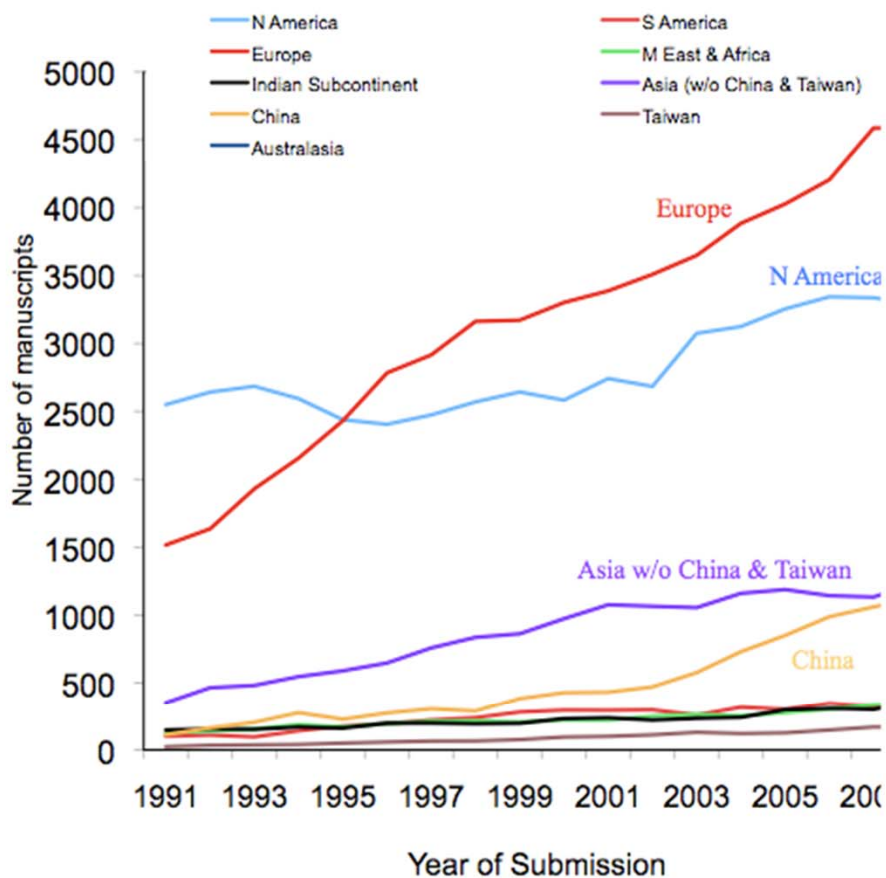
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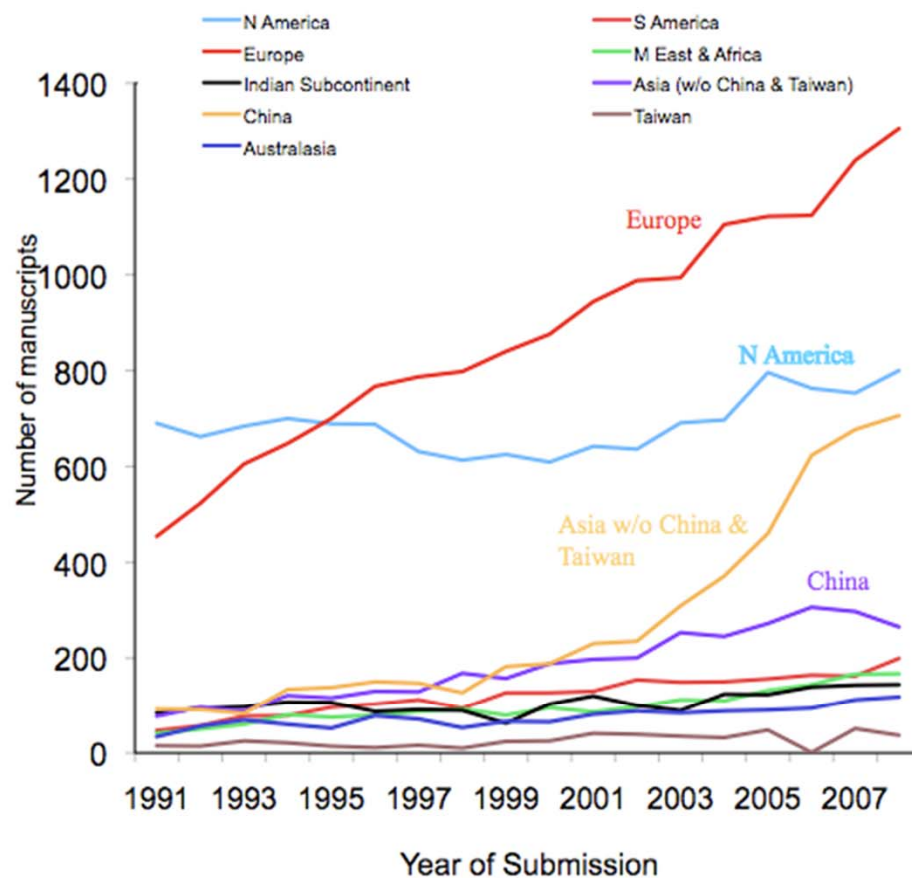




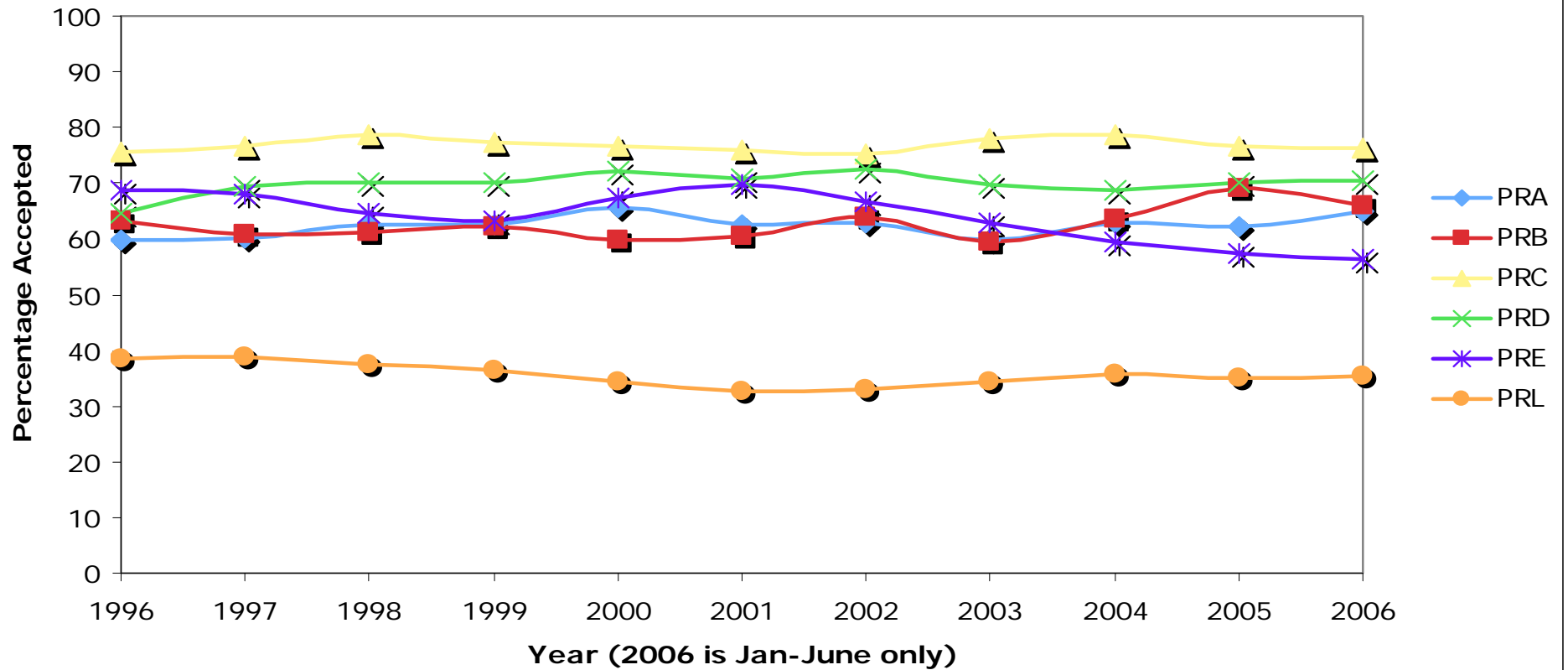
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# *Recent move to paperless office*

- Web-based manuscript/referee viewing software (PRISM) launched on November 18, 2003.
- Web-based task tracking system (Qtrack) launched on October 13, 2004.
- PRA retired folder-based workflow on April 12, 2005.
- Whole office is “folderfree” on November 18, 2005