Writing Style

Style = a difficult balance

original and catchy

clear, concise and factual

difficult balance

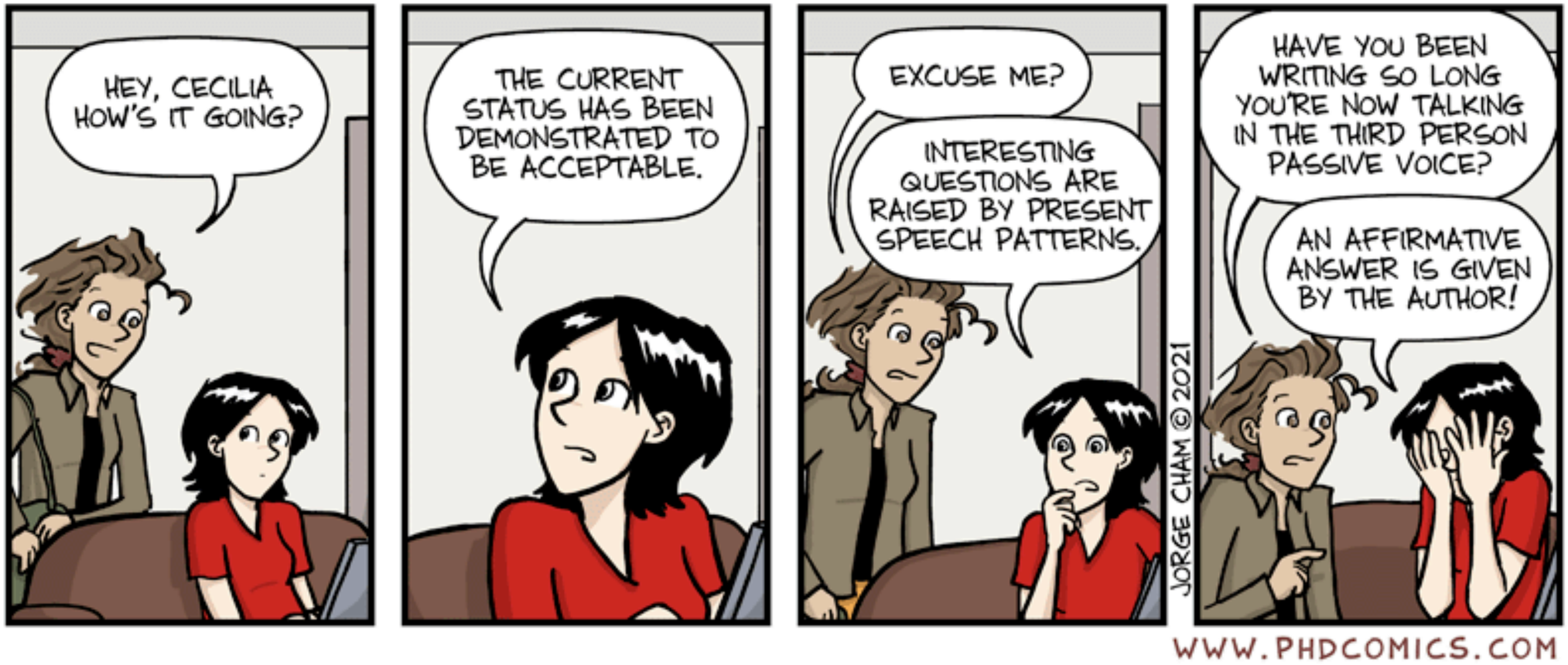
6 frequent problems

1. Passive vs active voice
2. Nominalizations
3. Time (past/present/future)
4. UK vs US English
5. Subjects
6. Flow

After “Scientific Writing: Clarity, Conciseness, and Cohesion” by Nathan Sheffield, Duke University (2011)

Problem 1 : Passive vs Active

Problem 1 : passive vs active



Problem 1 : passive vs active

The dog kicks the ball

Active

The ball is kicked by the dog

Passive

Problem 1 : passive vs active

- **Active** voice
  - The subject of the sentence performs the action
  - The subject acts
  - Example : *I stole the money*

- **Passive** voice
  - The subject of the sentence receives the action of the verb
  - The subject is acted upon
  - Example: *The money was stolen by me*

Problem 1 : passive vs active

- Active voice emphasizes the author responsibility

  ***We** did not attempt to perform this experiment because…*

- Active voice improves readability

  The hypothesis that higher pressure causes thinner silicon deposition was rejected by the manufacturer

  vs

  The manufacturer rejected the hypothesis that higher pressure causes thinner silicon deposition

Problem 1 : passive vs active

- Passive voice : Sounds more neutral and focuses more on the result than on the actor

  The team did not update the last table because…

  vs

  The last table was not updated because…

- Passive voice : Allows to eliminate the actor

  We did not attempt to perform this experiment because…

  vs

  No attempt was made to perform this experiment because…

Problem 1 : passive vs active

- Passive voice : emphasises what was found, NOT who did the finding

We determined that annealing the thin films at 700°C produced voids and increased surface roughness.

vs

Voids and increased surface roughness were observed in the thin films annealed at 700°C.

Problem 1 : passive vs active

- But passive voice has many **disadvantages**
  - It reverses the order of the sentence (A-B vs. B-A)
    I lit the candle <—> *The candle was lit by me*
  - It can eliminate the actor (causing ambiguity)
    e.g. *No attempt was made to bypass the pressure valve*
  - It often increases length

Problem 1 : passive vs active

Journal editors encourage the use of active voice

keep 10-30% in passive voice

Exercise

Correct this

"The substrate surface was mapped using an Atomic Force Microscope"

Exercise

Correct this

“The substrate surface was mapped using an Atomic Force Microscope”

Solutions

“We mapped the substrate surface using an Atomic Force Microscope.”

“We used an Atomic Force Microscope to map the substrate surface.”

I or We ?

- Am I allowed to use “I” or “We” ?
- If I’m the only author, should I use “I” or “We” ?

Problem 1 : passive vs active

- It is ok to start some sentences with ***I*** or ***We***
- But don't use them excessively

"After all, human agents are responsible for designing experiments, and they are present in the laboratory; writing awkward phrases to avoid admitting their responsibility and their presence is an odd way of being objective."—
Jane J. Robinson, *Science* 7 June 1957: 1160.

Problem 1 : passive vs active

Passive voice can still lead to the Nobel prize...

PHYSICAL REVIEW VOLUME 108, NUMBER 5 DECEMBER 1, 1957

Theory of Superconductivity*

J. BARDEEN, L. N. COOPER,† AND J. R. SCHRIEFFER‡
Department of Physics, University of Illinois, Urbana, Illinois
(Received July 8, 1957)

A theory of superconductivity is presented, based on the fact that the interaction between electrons resulting from virtual exchange of phonons is attractive when the energy difference between the electrons states involved is less than the phonon energy, $\hbar\omega$. It is favorable to form a superconducting phase when this attractive interaction dominates the repulsive screened Coulomb interaction. The normal phase is described by the Bloch individual-particle model. The ground state of a superconductor, formed from a linear combination of normal state configurations in which electrons are virtually excited in pairs of opposite spin and momentum, is lower in energy than the normal state by amount proportional to an average $(\hbar\omega)^2$, consistent with the isotope effect. A mutually orthogonal set of excited states in one-to-one correspondence with those of the normal phase is obtained by specifying occupation of certain Bloch states and by using the rest to form a linear combination of virtual pair configurations. The theory yields a second-order phase transition and a Meissner effect in the form suggested by Pippard. Calculated values of specific heats and penetration depths and their temperature variation are in good agreement with experiment. There is an energy gap for individual-particle excitations which decreases from about $3.5kT_c$ at $T=0°K$ to zero at T_c. Tables of matrix elements of single-particle operators between the excited-state superconducting wave functions, useful for perturbation expansions and calculations of transition probabilities, are given.

Problem 2 : Nominalisations

Problem 2 : Nominalisations

Problem : overabundance of nominalisations

e.g. *division* versus *to divide*

- English readers expect actions to be in verbs.
- Nominalizations are actions that appear in parts of a sentence other than a verb (e.g. in nouns or adjectives)

Exercise

Correct this

"The assumption that all RNAs are poly-adenylated is an oversimplification of the transcription process."

Exercise

Correct this

"The assumption that all RNAs are poly-adenylated is an oversimplification of the transcription process."

Solution

"The model oversimplifies the transcription process because it assumes that all RNAs are polyadenylated."

Put action in verbs = avoid nominalisations

Problem 3 : xxx

Exercise

- What is wrong in this text ?

  Using a Beer-Lambert approach, we compute the primary production of excited and ionized states due to photoabsorption, neglecting the secondary production that is due to photoelectron impacts as well as to precipitated suprathermal electrons. Ions sputtered from the surface were also neglected. Computations are performed at the equator and close to the pole, in the same conditions as during the Galileo flyby. From the excitations, we are computing the radiative relaxation leading to the atmospheric emissions. We also proposed a simple chemical model to retrieve the stationary electron density. There are two main results…

Problem 3 : Tenses

Exercise

- What is wrong in this text ?

  Using a Beer-Lambert approach, we **compute** the primary production of excited and ionized states due to photoabsorption, neglecting the secondary production that **is** due to photoelectron impacts as well as to precipitated suprathermal electrons. Ions sputtered from the surface **were** also neglected. Computations **are performed** at the equator and close to the pole, in the same conditions as during the Galileo flyby. From the excitations, we **are computing** the radiative relaxation leading to the atmospheric emissions. We also **proposed** a simple chemical model to retrieve the stationary electron density. There **are** two main results…

Exercise

- What is wrong in this text ?

  Using a Beer-Lambert approach, we compute the primary production of excited and ionized states due to photoabsorption, neglecting the secondary production that is due to photoelectron impacts as well as to precipitated suprathermal electrons. Ions sputtered from the surface ~~were~~ **are** also neglected. Computations are performed at the equator and close to the pole, in the same conditions as during the Galileo flyby. From the excitations, we ~~are computing~~ **compute** the radiative relaxation leading to the atmospheric emissions. We also ~~proposed~~ **propose** a simple chemical model to retrieve the stationary electron density. There are two main results…

Problem 4 : UK or US English ?

Problem 4 : UK vs US

- Your text should be either in US English or UK English, not a mix of the two
- US English is more frequently used, especially outside of Europe

Exercise

Is this UK or US English ? Convert into the other one

The center of the 15-meter wide radiated zone revealed high ionization levels, leading to significant deviations from modeled air resistivity. At first, we though that this was a property of the local medium. However, further investigation revealed that this could have been an artifact of the sampling procedure, which was biased toward the central part of the zone. Consequently, the whole zone has to be reexamined and the possible role of sulfur-rich constituents has yet to be carefully evaluated.

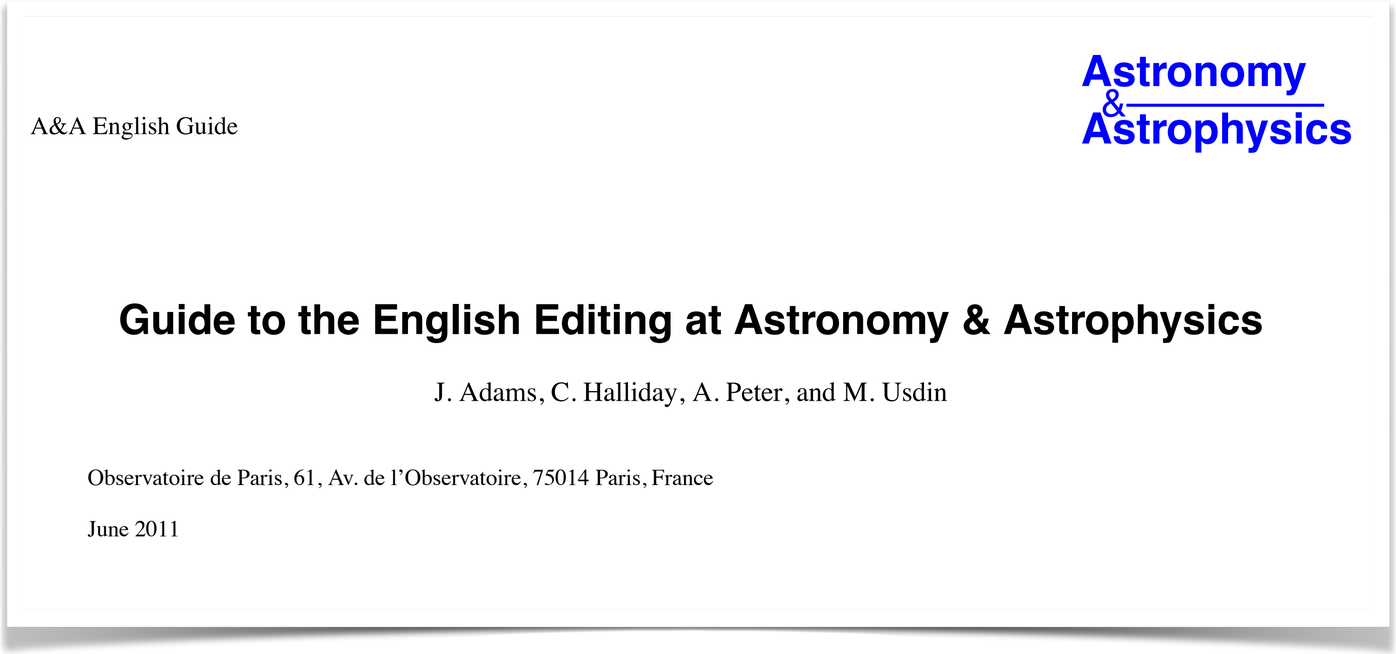
Exercise

Is this UK or US English ? Convert into the other one

The cent*re* of the 15-met*re* wide radiated zone revealed high ioni*s*ation levels, leading to significant deviations from mode*ll*ed air resistivity. At first, we though that this was a property of the local medium. However, further investigation revealed that this could have been an art*e*fact of the sampling procedure, which was biased toward*s* the central part of the zone. Consequently, the whole zone has to be reexamined and the possible role of sul*ph*ur-rich constituents has yet to be carefully evaluated.

Problem 4 : UK vs US

Much more information in this document (see on Celene)



A&A English Guide

Astronomy & Astrophysics

Guide to the English Editing at Astronomy & Astrophysics

J. Adams, C. Halliday, A. Peter, and M. Usdin

Observatoire de Paris, 61, Av. de l'Observatoire, 75014 Paris, France

June 2011

Problem 5 : Flow

Problem 3 : Flow

Problem : poor flow in the text (lack of cohesion)

- Put familiar/old ideas first and end with new ideas.
- Avoid disrupting the flow by:
  – Starting with unfamiliar ideas or words
  – Ending with backwards-linking ideas

Exercise

Identify familiar and new information

"Soil additives to adjust soil pH, such garden lime, or agricultural limestone, which are made from pulverized chalk, are usually preferred by farmers, who rely on soil additives to provide optimal growing conditions for crops. Clay, which is a naturally acidic soil type, often requires addition of agricultural lime."

Exercise

Identify familiar and new information

"Soil additives to adjust soil pH, such garden lime, or agricultural limestone, which are made from pulverized chalk, are usually preferred by farmers, who rely on soil additives to provide optimal growing conditions for crops. Clay, which is a naturally acidic soil type, often requires addition of agricultural lime."

Put familiar information first

Problem 6 : Subjects

Exercise

What is wrong with this text ?

"The assumptions that all sites evolve at one of two evolutionary rates (conserved and nonconserved), that these rates are uniform across the genome, that sites evolve independently conditional on whether they are in conserved or nonconserved regions, and that the phylogenetic models for conserved and nonconserved regions have the same branch-length proportions, base compositions, and substitution patterns, all represent oversimplications of the complex process of sequence evolution in eukaryotic genomes."

Exercise

What is wrong with this text ?

"**The assumptions** that all sites evolve at one of two evolutionary rates (conserved and nonconserved), that these rates are uniform across the genome, that sites evolve independently conditional on whether they are in conserved or nonconserved regions, and that the phylogenetic models for conserved and nonconserved regions have the same branch-length proportions, base compositions, and substitution patterns, all **represent** oversimplications of the complex process of sequence evolution in eukaryotic genomes."

Loooong distance between **subject** and **verb**

Exercise

What is wrong with this text ?

"The assumptions that all sites evolve at one of two evolutionary rates (conserved and nonconserved), that these rates are uniform across the genome, that sites evolve independently conditional on whether they are in conserved or nonconserved regions, and that the phylogenetic models for conserved and nonconserved regions have the same branch-length proportions, base compositions, and substitution patterns, all represent oversimplications of the complex process of sequence evolution in eukaryotic genomes."

Context comes after the **main ideas**

Exercise

What is wrong with this text ?

"The assumptions that all sites evolve at one of two evolutionary rates (conserved and nonconserved), that these rates are uniform across the genome, that sites evolve independently conditional on whether they are in conserved or nonconserved regions, and that the phylogenetic models for conserved and nonconserved regions have the same branch-length proportions, base compositions, and substitution patterns, all represent oversimplications of the complex process of sequence evolution in eukaryotic genomes."

Complex subject

Exercise

What is wrong with this text ?

"The assumptions that all sites evolve at one of two evolutionary rates (conserved and nonconserved), that these rates are uniform across the genome, that sites evolve independently conditional on whether they are in conserved or nonconserved regions, and that the phylogenetic models for conserved and nonconserved regions have the same branch-length proportions, base compositions, and substitution patterns, all represent oversimplications of the complex process of sequence evolution in eukaryotic genomes."

Implied **actions** versus **verbs**

Problem 6 : Subjects

Problem : subjects and verbs are often too far apart

- English readers expect doers to be near their actions
- Use concise sentences whenever possible

That or Which ?

One example: that or which ?

- Which is the correct formulation ?

1. Dogs which bark scare me.
2. Dogs that bark scare me.
3. Dogs, which bark, scare me.
4. Dogs, that bark scare me.

One example: that or which ?

- Simple rule (with some exceptions) : If removing the words that follow changes the meaning of the sentence, use "*that*" Otherwise, "*which*" is fine

  Dogs *that* bark scare me.
  Dogs, *which* make great pets, bark a lot.

- But the meaning can also be different

  Our house, *which* has two cellars, is located in Oslo.
  Our house *that* has two cellars is located in Oslo.

One example: that or which ?

- Important: “*which*" is always preceded by a comma;
  “*that*” is never preceded by a comma.

- In scientific journals, “*which*” is used only when the information following is added and is not essential to the main idea of a sentence (e.g. something you may have put into parenthesis)

There can be exceptions

Comparative Mobility of Halogens in Reactions of Dihalobenzenes with Potassium Amide in Ammonia

J. F. BUNNETT[1a] AND FRANCIS J. KEARLEY, JR.[1b]

Metcalf Chemical Laboratories, Brown University, Providence, Rhode Island 02912

Received June 22, 1970

Dihalobenzenes in which the two halogens are unlike release two different halide ions, generally in unequal amounts, on reaction with KNH_2. From *m*-dihalobenzenes, the relative yields of halide ion are in the order I > Br > Cl, but *o*- and *p*-dihalobenzenes give more complex patterns because either of two steps in the aryne-forming reaction may be rate limiting. Under reaction conditions, haloanilines furnish little halide ion. When potassium anilide is the base, the heavier halogen is in all cases released preferentially.

Reactions of potassium amide
With halobenzenes in ammonia
Via benzyne intermediates occur.[3,4]
Bergstrom and associates[5] did report,
Based on two-component competition runs,
Bromobenzene the fastest to react,
By iodobenzene closely followed,
The chloro compound lagging far behind,
And fluorobenzene to be quite inert
At reflux (−33°).
Reactions with *para*-dihalobenzenes,
In which the halogens were not the same,
The same order of mobility revealed,
But differences in reactivity
Were somewhat less in magnitude.
The irregular mobility rank
Explanation finds in the mechanism
Whereby arynes are formed.[3,4] There are two steps:
Is faster in the opposite order.
According to the evidence, for both
Iodine and bromine step 1 limits rate.[3]
But on the other hand, the setting free
Of halogen determines total rate
For chlorine and fluorine atoms on the ring.
We have repeated the experiments
With dihalobenzenes of Bergstrom's group.
They are extended to the isomers
Meta and ortho, and to the action
Of potassium anilide reagent.
Throughout, halide ions have been determined
By potentiometric titration
In which end points for diverse halide ions
Are discrete, and easy to recognize.
Nitrogenous products were not assayed.

Results

There can be exceptions

Comparative Mobility of Halogens in Reactions of Dihalobenzenes with Potassium Amide in Ammonia

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(2) NOTE FROM EDITOR.—Although we are open to new styles and formats for scientific publication, we must admit to surprise upon receiving this paper. However, we find the paper to be novel in its chemistry, and readable in its verse. Because of the somewhat increased space requirements and possible difficulty to some of our nonpoetically inclined readers, manuscripts in this format face an uncertain future in this office. However, we take this opportunity to encourage readers and authors to examine carefully a new format represented by the articles on pages 3591–3646 and the *Editor's Notice* in the November 1970 issue of this journal.

Reacti
With hal
Via benz
Bergstro
Based on
Bromobe
By iodob
The chlo
And fluo
At reflux
Reaction
In which the halogens were not the same,
The same order of mobility revealed,
But differences in reactivity
Were somewhat less in magnitude.
The irregular mobility rank
Explanation finds in the mechanism
Whereby arynes are formed.[3,4] There are two steps:
Abstraction of the ortho proton
And then expulsion of the halogen
From the anion intermediate.
In Scheme I the mechanism is set forth.

Throughout, halide ions have been determined
By potentiometric titration
In which end points for diverse halide ions
Are discrete, and easy to recognize.
Nitrogenous products were not assayed.

Results

Data for reactions of all nine mixed
Dihalobenzenes (excluding fluorine)
With four equivalents of amide base
Are set forth in Table I. Reactions

One last thing

Say what you mean and mean what you say

Some of the best scientific articles turn the text into a narrative, as if you were telling a story.

Make your article attractive !

Formatting

Formatting

Your layout is your business card

Which font ?

1. A New Mini-Moon Was Found Orbiting Earth. There Will Be More. The object, a car-size asteroid called 2020 CD3, won't be here for long, and new telescopes will help us spot more of these objects.

2. A New Mini-Moon Was Found Orbiting Earth. There Will Be More. The object, a car-size asteroid called 2020 CD3, won't be here for long, and new telescopes will help us spot more of these objects.

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4. A New Mini-Moon Was Found Orbiting Earth. There Will Be More. The object, a car-size asteroid called 2020 CD3, won't be here for long, and new telescopes will help us spot more of these objects.

New York Times 2/2020

Fonts

Some elementary rules

- Fonts with serif (Times, Georgia, Bookman, …) are more confortable to read on the long term than fonts without serif (Helvetica, Calibri, Verdana, …)

- Avoid using more than 2 different fonts
- Avoid constantly changing font size/style/type
- Never write in capitals

Police

How to make a text more readable ?

By changing style, using different fonts *and alternating styles.* You can also use different font sizes, or vary colours. BUT THE READER WILL EVENTUALLY **get annoyed and upset.**


Ethics

Example

You joined Prof. Jones's lab at the beginning of a summer program, and you were instructed by him to follow experimental procedures from the lab notebook of last summer program's participant, Jane.

However, Jane's notebook was so badly written (e.g., missing important pieces of information, hard to read) that you were unable to use it. Upon showing the notebook to Prof. Jones at the beginning of the summer, you saw firsthand his surprise, disgust, and anger about the state of the notebook.

Prof. Jones explained how to re-do the work, and he put together a scientific paper based on your results at the end of the summer. He has just emailed you the first draft of this paper for your comments. You notice that his name is first and that Jane's name is not listed as an author on this paper.

What is unethical here ? What would you do ?

Cindy Palinkas

Ethics

- Peer review is today increasingly threatened by fraudulous behaviour
- There are different kinds of problems
  - misconduct
  - conflicts of interest
  - plagiarism
  - falsification
  - fraud
  - predatory journals
  - and more

see: https://publicationethics.org/

Misconduct accounts for the majority of retracted scientific publications

Ferric C. Fang[a,b,1], R. Grant Steen[c,1], and Arturo Casadevall[d,1,2]

Departments of [a]Laboratory Medicine and [b]Microbiology, University of Washington School of Medicine, Seattle, WA 98195; [c]MediCC! Medical Communications Consultants, Chapel Hill, NC 27517; and [d]Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY 10461

Edited by Thomas Shenk, Princeton University, Princeton, NJ, and approved September 6, 2012 (received for review July 18, 2012)

A detailed review of all 2,047 biomedical and life-science research articles indexed by PubMed as retracted on May 3, 2012 revealed that only 21.3% of retractions were attributable to error. In contrast, 67.4% of retractions were attributable to misconduct, including fraud or suspected fraud (43.4%), duplicate publication (14.2%), and plagiarism (9.8%). Incomplete, uninformative or misleading retrac-

published by the authors of a manuscript in the *Journal of Cell Biology* stated that "In follow-up experiments . . . we have shown that the lack of FOXO1a expression reported in figure 1 is not correct" (11). A subsequent report from the Office of Research Integrity states that the first author committed "research misconduct by knowingly and intentionally falsely reporting ... that

PNAS 109 (2012)

Ethics

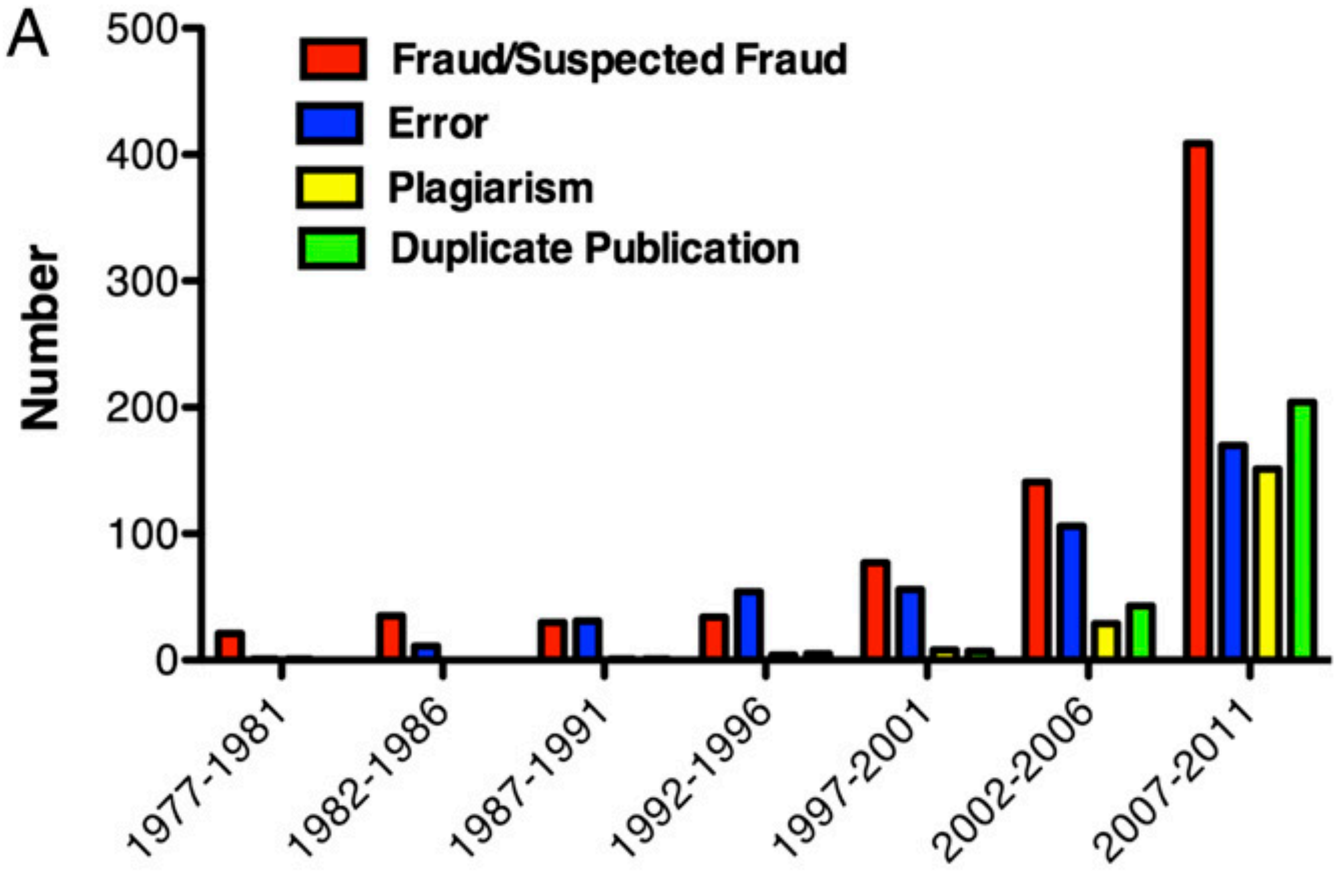
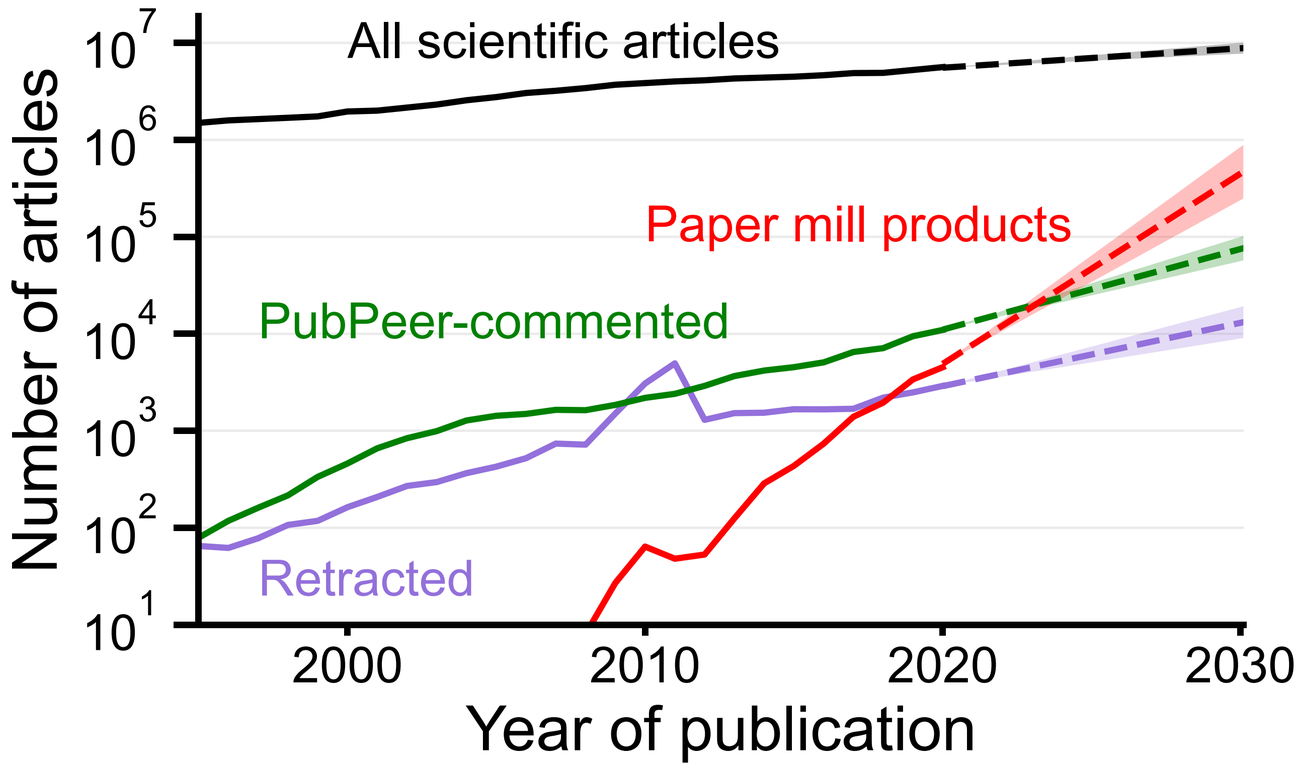


Fig. 1. (*A*) Number of retracted articles for specific causes by year of retraction. (*B*) Percentage of published articles retracted for fraud or suspected fraud by year of publication.

Ethics



Global scientific activity for different types of journals

[Richardson et al., PNAS, 2025, https://doi.org/10.1073/pnas.2420092122]

Plagiarism

The top 4 reasons for retractions

- Mistakes
- Self-Plagiarism
- Plagiarism
- Fabrication or Falsification

Plagiarism: example

NDT & E International

Volume 38, Issue 6, September 2005, Pages 453-458

New matching pursuit-based algorithm for SNR improvement in ultrasonic NDT

N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, R. Mata-Campos, J.C. Cuevas-Martínez

Show more

https://doi.org/10.1016/j.ndteint.2004.12.001

Abstract

In this paper a fast and efficient matching pursuit-based algorithm is proposed for SNR improvement in ultrasonic NDT of highly scattering materials. The proposed algorithm utilizes time-shifted Morlet functions as dictionary elements because they are well matched with the ultrasonic pulse echoes obtained from the transducer used in the experiments. The proposed algorithm is fast enough to be used in the signal processing stage of real time inspection systems. Computer simulation has been performed to verify the SNR improvement for diverse ultrasonic waves embodied in high-level synthetic grain noise. This improvement is also experimentally verified using ultrasonic traces acquired from a carbon fibre reinforced plastic material. Numerical results show meaningful SNR improvements for low input SNR ratios (below 0 dB).

published in September 2005 in
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Plagiarism: example

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Get rights and content

Abstract

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published in September 2005 in NDT&E International

Signal Processing
Volume 86, Issue 5, May 2006, Pages 962-970

RETRACTED: Matching pursuit-based approach for ultrasonic flaw detection

N. Ruiz-Reyes [a], P. Vera-Candeas [a], J. Curpián-Alonso [a], J.C. Cuevas-Martinez [a], F. López-Ferreras [b]

Show more

https://doi.org/10.1016/j.sigpro.2005.07.019

Referred to by N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, J.C. Cuevas-Martinez, F. López-Ferreras

Retraction notice to: “Matching pursuit-based approach for ultrasonic flaw detection”
Signal Processing, Volume 87, Issue 5, May 2007, Pages 1172

Download PDF

This article has been retracted at the request of the Editor-in-Chief and Publisher. Please see http://www.elsevier.com/locate/withdrawalpolicy.

Reason: This article is virtually identical to the previously published article:“New matching pursuit-based algorithm for SNR improvement in ultrasonic NDT”, *Independent Nondestructive Testing and Evaluation International,* volume 38 (2005) 453–458 authored by N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, R. Mata-Campos and

published in May 2006 in Signal Processing, retracted in May 2007

Plagiarism: example

NDT & E International

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Abstract

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published in September 2005 in NDT&E International

published in May 2006 in Signal Processing, retracted in May 2007

Different forms of plagiarism

- Use graphic material that is not your own, with citing its sources
- Repeat someone else's words without using quotation marks
- Paraphrase someone else's ideas improperly
- Describe findings or ideas that are not your own

after: http://www.bio.davidson.edu/dept/plagiarism.html

Paraphrasing often leads to plagiarism

- Paraphrasing = repeat someone else's ideas while not copying verbatim.
- Typically
  - Use phrases from the original source without enclosing them in quotation marks
  - Emulate sentence structure even when using different wording
  - Emulate paragraph organization even when using different wording or sentence structure.

after: http://www.bio.davidson.edu/dept/plagiarism.html

Plagiarism : example

Original version

Few laboratory creatures have had such a spectacularly successful and productive history as Drosophila. It first entered laboratories about 1900, revealed its talent for experimental genetics to Thomas Hunt Morgan and his students at Columbia University in the early 1910s, and after some ups and downs in status is still going strong almost a century later.

(from Kohler, R.E. 1994. The Lords of the Fly. The University of Chicago Press, 321 pages.)

Paraphrased version

Despite some ups and downs in status, nearly a century after the fly revealed its talent to Thomas Hunt Morgan and his students, Drosophila genetics research continues its spectacularly successful history

(Kohler, 1994).

after: http://www.bio.davidson.edu/dept/plagiarism.html

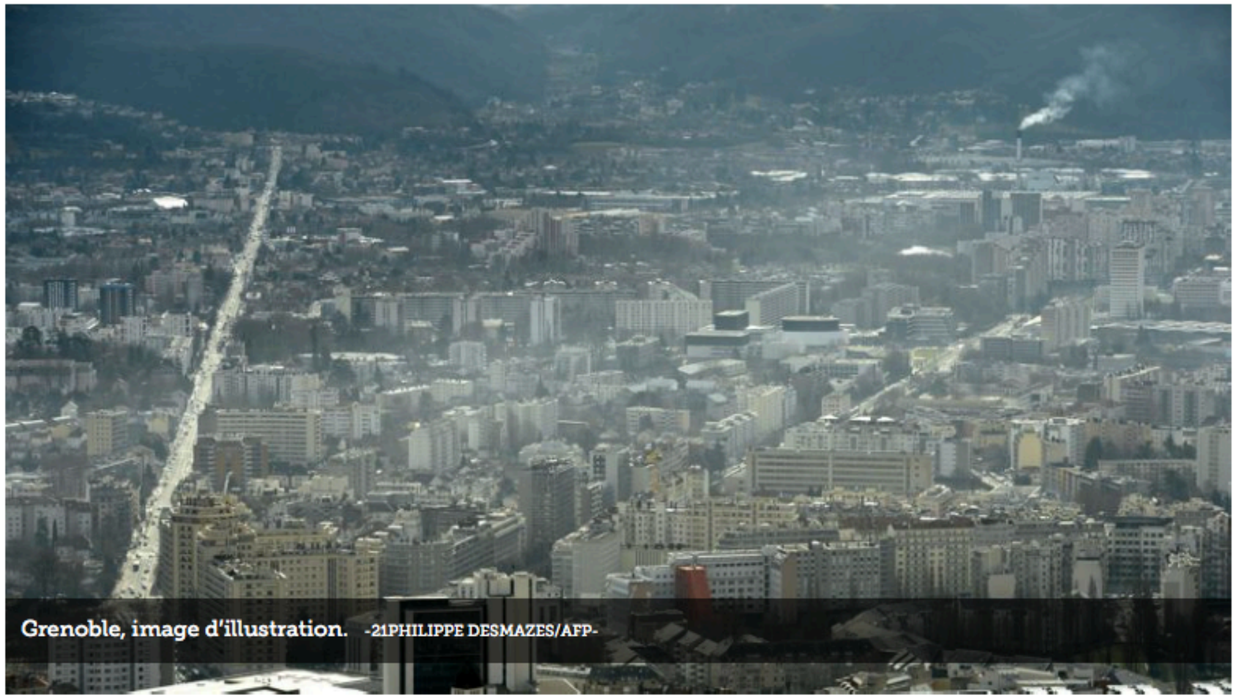
Plagiarism

Rosalind Franklin (1920-1958), English X-ray crystallographer, who co-discovered the DNA double helix structure together with Crick, Watson and Wilkins. She was never nominated for the Nobel prize

Plagiarism

Accusée de plagiat, la vice-présidente de l'université de Grenoble démissionne

Par Figaro Etudiant | Publié le 08/07/2014 à 10:49



Grenoble, image d'illustration. -21PHILIPPE DESMAZES/AFP-

Votre adresse e-mail RECEVOIR NOTRE NEWSLETTER

8 2 30 3

L'Etudiant 8/7/2014

Plagiarism

French physicist accused of plagiarism seems set to lose prestigious job

Science popularizer Étienne Klein declines to step down, says his scientific integrity is "absolute"

6 APR 2017 · BY MARTIN ENSERINK

Klein says any mistakes were due to "carelessness or negligence, not a conscious desire to plagiarize." LIONEL BONAVENTURE/AFP/GETTY IMAGE

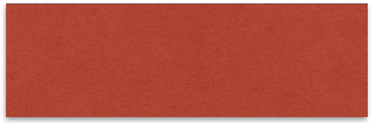
SHARE:

Étienne Klein, a celebrated French physicist and popularizer of science, seems set to lose his post as president of the Institute for Advanced Studies for Science and Technology (IHEST) in Paris after allegations that he plagiarized more than a dozen scientists, philosophers, and writers in books and

Science Insider 6/4/2017

Plagiarism

Humanoid Robot Localization and Navigation in Domestic Environment using RGBD Sensor



ABSTRACT

A growing number of research studies deal with object manipulation in everyday environments, to perform service tasks such as retrieving and delivering objects at home, or improving the lives of the elderly or disabled. However, to apply such a task, we need a precise localization of the humanoid robot in its environment which is a challenging issue due

physical disabilities to retrieve dropped objects [9, 11]. But robust and precise robot/object localization is a prerequisite for such task, and remains a challenging issue because of inaccurate foot step odometry and noisy onboard sensor observations especially during walking [7].

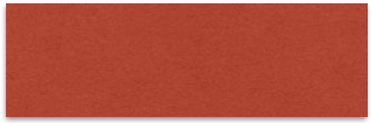
Since our humanoid is targeted to human-friendly indoor

submitted

article

Plagiarism

Humanoid Robot Localization and Navigation in Domestic Environment using RGBD Sensor



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Since our humanoid is targeted to human-friendly indoor

submitted article

First International Conference on Technology for Helping People with Special Needs

Humanoid Robot Localization and Navigation in Domestic Environment using RGBD Sensor

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Institut Pascal - Clermont Ferrand
France
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***Abstract*—A growing number of research studies deal with object manipulation in everyday environments, to perform service tasks such as retrieving and delivering objects at home, or improving the lives of the elderly or disabled. However, to apply such a task, we need a precise localization of the humanoid robot in its environment which is a challenging issue due to rough odometry estimation, noisy onboard sensing, and the**

network [5]. Various sensors could be used to control and monitor the entire living space: several are embedded in the robotic system (force sensors, inertial center, (omni) cameras, odometers ...) and others are attached to the robot's environment (laser sensors, external cameras ...).

One of the relatively new and powerful low-cost sensors is the Kinect which provides color and range images,

proceedings of the International Conference on Technology for Helping People with Special Needs (Riyadh, 2013)

Plagiarism

We did what? Authors retract paper after forgetting they'd published the same study elsewhere

"After online publication of this article, it was brought to our attention by the Journal that an overlapping article had been published by us almost simultaneously in another journal[1] and that there was no cross citation between the two articles."

Misconduct

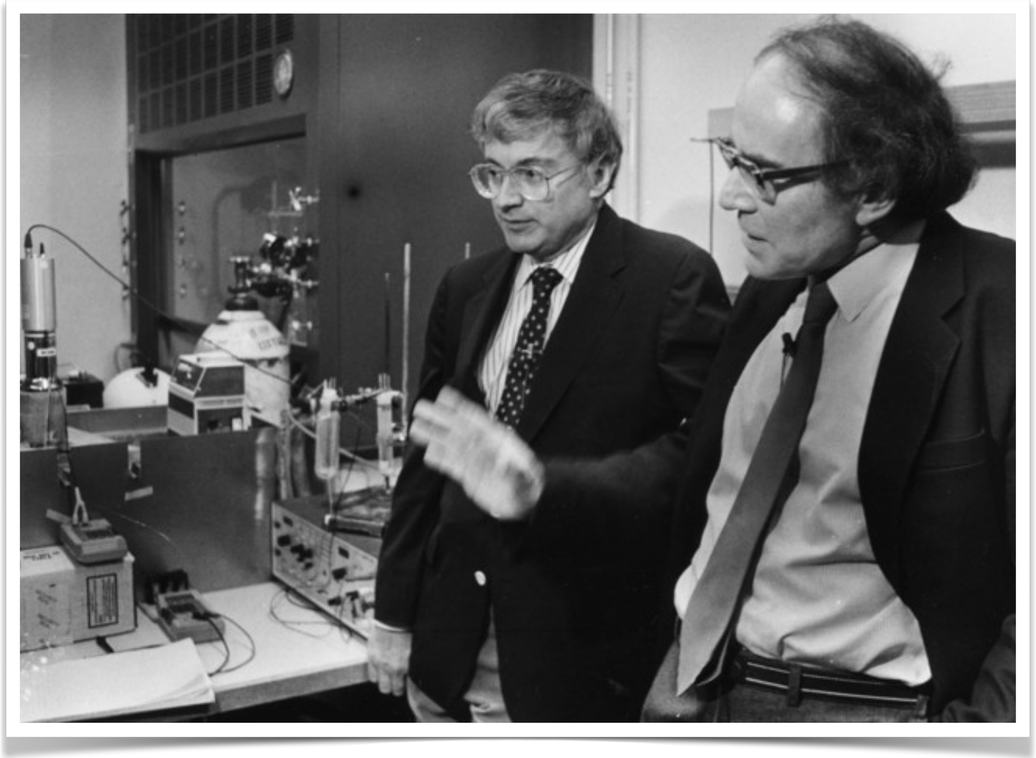
Geophysicists accused of breach of publishing ethics

Scientists at the Institute of Geophysics in Paris (IPGP) have been accused of acting as editors for dozens of papers by IPGP colleagues published from 1992 to 2008 in the journal *Earth and Planetary Science Letters* while they were members of the editorial board. The allegations follow a joint investigation by science journalists at the French newspapers *Le Monde* and *Libération*.

Nature, 2009

Non-reproducible research

- Cold fusion (1989)



Ethics expectations (1/3)

Main ethics expectations for authors of papers in AGU journals (by J. Liemohn)

- Give an accurate account of the research and its significance
- Give enough information for others to repeat the work
- Cite prior work that’s essential for understanding the investigation
- Be complete in documenting the methodology, including assumptions and uncertainties

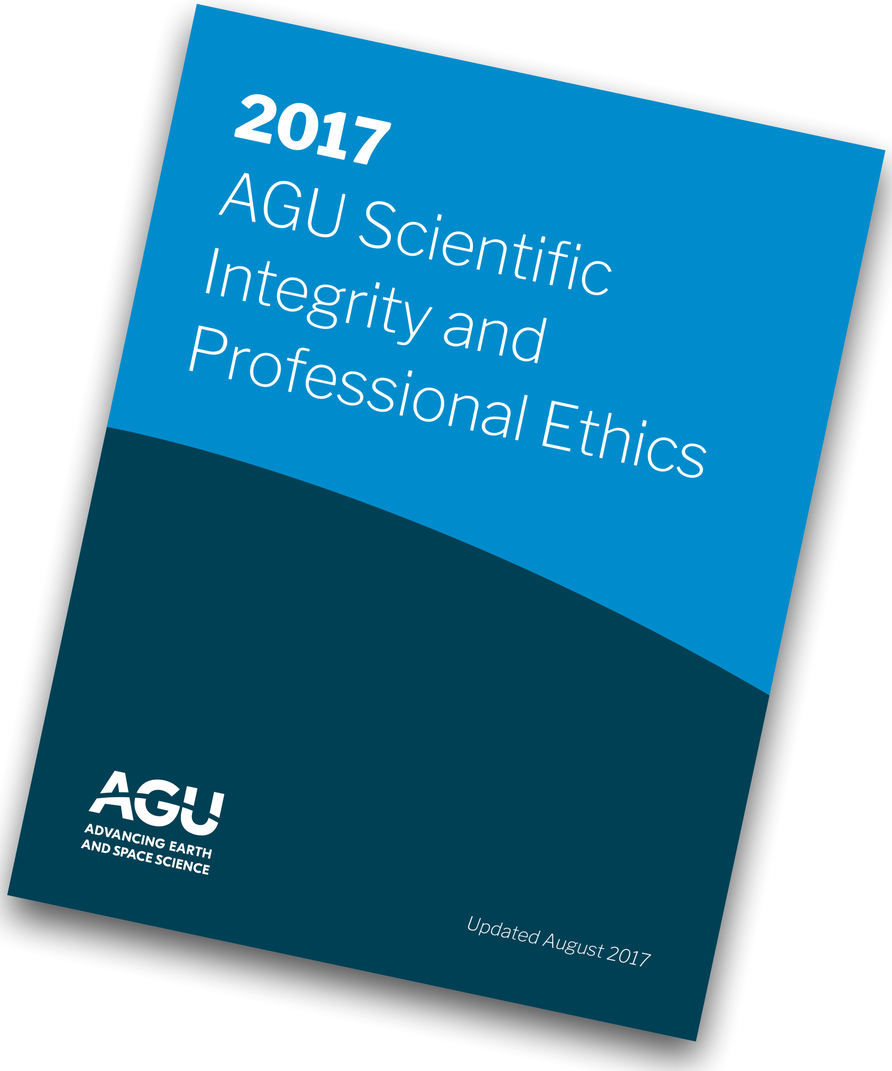
Ethics expectations (2/3)

- Follow the appropriate laws governing ethics of work with human or animal subjects
- Always provide appropriate citation instead of plagiarizing
- Personal criticism is unacceptable
- Report to the Editor any changes made after acceptance

Ethics expectations (3/3)

- The coauthor list should include everyone that contributed to the study, but only those that contributed; all coauthors share responsibility for the quality and integrity of the work
- Reveal to the Editor any potential conflicts of interest regarding authors and list all funding sources in the acknowledgments
- The corresponding author should ensure that all coauthors are aware of and approve of the submission (and revision submissions)

Ethics expectations



https://www.agu.org/Learn-About-AGU/About-AGU/Ethics

Article submission in practice

Check before writing

Check list before writing

- What **public** do I want to reach ?
  - readership of the journal: researchers, engineers, ... ?
  - which countries are mostly represented ?
    (especially, European vs American journals)
  - which scientific communities will read my article ?

- How does the journal **rank**?

- What is its **impact factor** ?

Check list before writing

- Does my article fit in the **scope** of the journal ?
  - appropriate level ?
  - appropriate kind of information : short letter vs long review
  - etc
- Does my article match the **format** of the journal ?
  - regular article / report / review
  - colour versus BW pictures
  - number of pages
  - etc

Check list before writing

- Are there **publication right** issues ?
  - Has some of the material (e.g. figures) already been used in other articles ?
  - Do all co-authors agree with this submission ? Many journals now inform all co-authors about the submission.

- **How long** will it take, on average, to publish an article in that journal ?
  - Regular journal, or one with open discussion ?

Check list before writing

- Is the file format of my article accepted by the journal ?
  - Word
  - pdf only
  - LaTeX

- Is this a dual submission ?
  - Has this article already been submitted before and rejected ?
  - **Never ever** submit simultaneously to other journals !
  - If this is a resubmission (after rejection by another journal), please tell the editor.

Check list before writing

- **How much will it cost ?**
  - Is the journal run by a **commercial company** (Elsevier, Springer), by a **society** (EPS, APS, AGU, EGU, …), or is it **community-driven ?**
  - publication charges
  - cost to make it open access ?
  - is the journal available on bibCNRS ?

Check before submitting

Most common errors

1. **Mismatch** between type of article and scope of journal
   ➟ immediate rejection by editors

2. **Sloppy English**
   ➟ read the guide to English editing

3. **Incorrect citations** or citations that are not up to date
   ➟ sloppy citations = sloppy science

4. Ignoring **technical guidelines**
   ➟ no excuse for this !

Common errors

- Additional common technical errors
  - acronyms are not spelled out
  - section headers are missing
  - insufficient resolution for graphics
  - insufficient contrast for plots
  - math conventions are not respected
  - style is not respected : e.g. Fig. 3 instead of figure 3
  - citations have errors

Check before submitting

- After having checked all this
  - **mute your phone**
  - **close your door and isolate yourself**
  - **take a deep breath**
  - **read your article entirely and most carefully, checking each sentence**
  - **NEVER EVER do this in a hurry !**

Check before submitting

and then click 

Check before submitting

A lousy article with a badly written text will leave a lasting impression on the referees and on the editors.... who are likely to be your peers

How to reply to the referees

When the review comes in…

Referee or Reviewer ?

- Do referee and reviewer have the same meaning ?

Referee or Reviewer ?

- Do referee and reviewer have the same meaning ?

  For many people they do. However...

  A **referee** anonymously reviews a manuscript and sends a report to the editor, allowing him to take a decision.

  A **reviewer** provides information on articles and books that have already been published.

A common type of response

Dear xxxxx

I have received the referee's report on your above submission to The Astrophysical Journal Supplement Series, and appended it below. As you will see, the referee thinks that your manuscript is interesting and that it will merit publication once you have addressed the issues raised in the report.

When you resubmit the manuscript, please include a detailed cover letter containing the (mandatory) listing of the changes you've made to the text and your responses to the report. You may upload the list of changes as a file or add it to the text box…

When the review comes in

Most referees are **like you**

- they want to help
- they don’t like articles that are poorly written
- they don’t like manuscripts that are hard to understand
- sometimes they are in a good mood, sometimes in a not so good mood…

After submitting

When the **referee reports** come in

- **keep calm**, read the reports carefully and wait for a few days
- never reply in an aggressive tone, even if the reports may be unpleasant
- if a referee is unfair, state clearly how and why he/she is, and explain your position
- don’t take any criticisms personally

After submitting

In practice

- Start your sentences by **thanking** the referee (stroke him, but don’t exaggerate…)
  - We agree with the referee that this solution ... However, our results rather support that ...
- Next, bring forward your arguments, and explain **factually** why you think differently.
- Be **positive** in your replies !
- In any case, avoid emotional replies and harsh comments. Be polite and constructive.

Examples of bad answers

- *The fact that the referee does not understand this test is not our fault…*
- *If the referee were familiar with the literature then he would already know that…*
- *The referee obviously did not read the paper which we submitted.*
- *It is difficult to understand how the referee became so confused about this.*
- *Now, the fact is that we again have two referees' reports that contradict each other on the same issue. Referee #3 advises a rejection while referee #5 advises an acceptance after a very minor revision. The editor again failed to provide a motivation why referee #3 should be trusted more than referee #5.*
- *The truth is that referee #3 does not have any clue regarding how analysis of time series must be performed and repeats a nonsense. Either referee #3 is a liar or, more probably, he did not even read our paper.*

Example of a good reply

Our thanks to the referees and the editor for thoughtful critiques of our manuscript.

We have adopted all of the suggestions, including clarifying the relationship between our study and the broader literature on the enemy release hypothesis. We think that the manuscript has been greatly improved by these revisions and we hope that you will now find it suitable for publication in xxx. Our point-by-point responses to comments are detailed on the following pages.

(M. Ayres)

Example of a good reply (2)

We thank the editorial staff for continued interest in our manuscript and their time spent reviewing it.

In this new revision we explicitly address Referee C's comments. As Referee B has expressed no new concerns, we briefly summarize their previous concerns and summarize our response to them. We appreciate Referee A's interest in our work and note that they recommend publication. We thank the Editors in Chief for their informal comments and have amended our discussion to specifically address their points.

(T. Bowen)

Example of a good reply (detailed point)

XX asked how much annual variation occurred in degree-day accumulation at the start of your sampling. ... Can you prepare a figure that shows how many degree days were accumulated by June 1 and July 1 by year during your study period of 1986-2005? Is there any relationship between caterpillar biomass and heat sums as of June 1?

This is a good idea. Thermal sums at all dates look about like Fig. 3, but the slopes of the warming trend increase steadily (reflecting contributions to the warming trend from spring through autumn). We added the following to the legend of Fig. 3:

"This has involved a warming trend throughout the spring, summer, and fall. For an intermediate elevation of 496 m above sea level, estimated mean thermal sums…

(M. Ayres)

Your reply

- Many referees have an implicit desire to
  - be recognised as experts on the topic
  - show that they know the topic better than you
  - be comforted in their vision of the topic

Elementary psychology : it is much easier to make someone change his mind by first starting to establish a positive connection (i.e. not contradicting him/her from the outset)

Your reply

- **Make his job easier** : Many journals ask for a copy of the article with **highlighted changes**. These are always welcome !

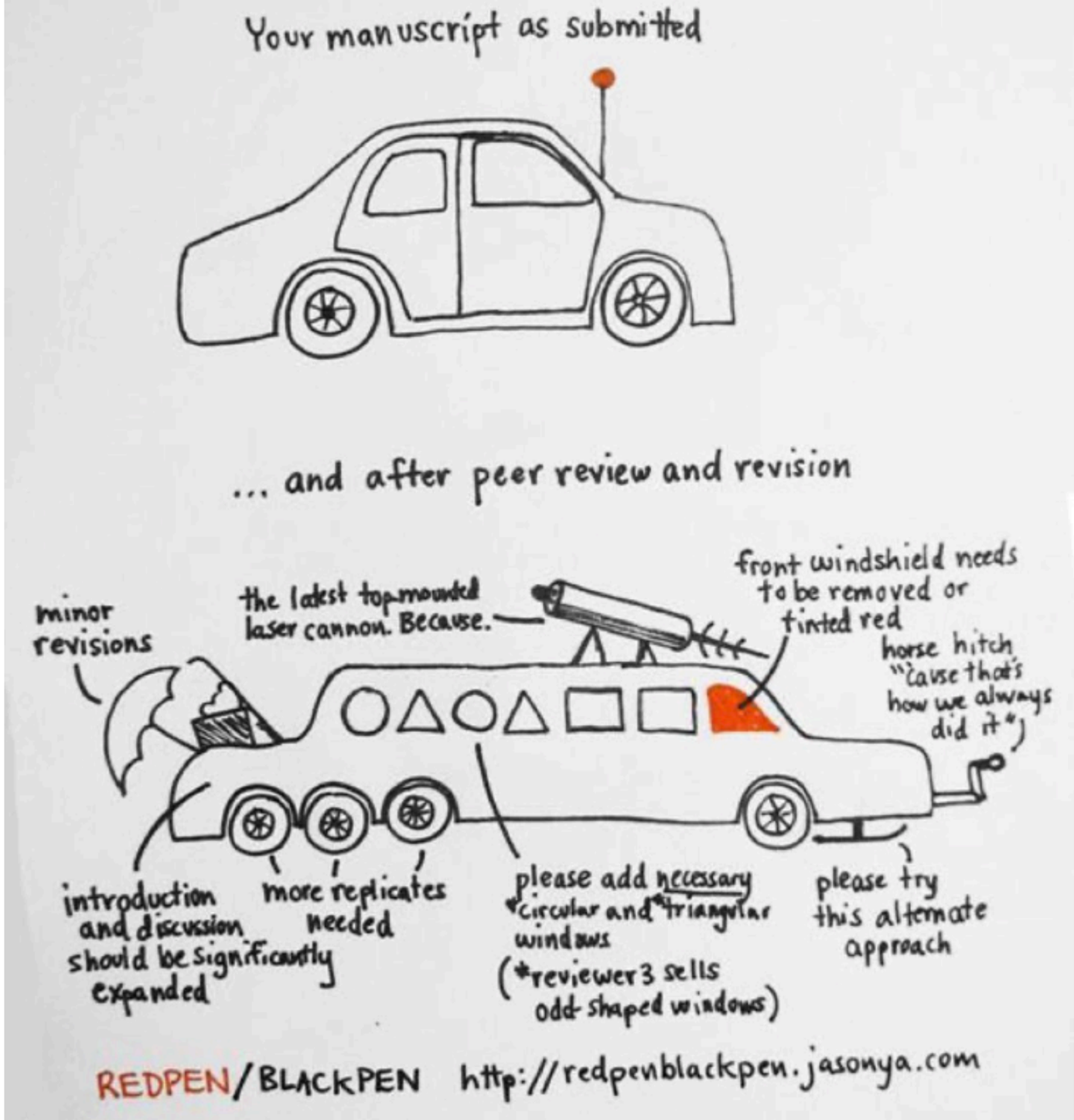
In the following, we concentrate on 5 spectral bands that are considered to be important for aeronomy [***Lilensten et al.*, 2008; *Tobiska et al.*, 2008**], see Fig. 1. We shall call them XUV (0.5–10 nm), EUV (20–60 nm), Lyman-α (121–122 nm), FUV (130–170 nm) and MUV (220–270 nm). **Note that these definitions differ from the ISO 21348:200 standard that was used in Sec. 1.** The proxies are:

1. *ISN*, the international sunspot number (from SIDC, Brussels), which is not really a UV proxy but remains the most widely used gauge of solar activity.

Your reply

- Most referees can easily be convinced if you come up with clear facts and a careful explanation
- Provide an answer to every point even if you don’t bring in changes
- Stick to the deadline. If you dont’t have time, ask the editor **immediately** for an extension.

Don’t be disappointed if there are numerous comments



When you are the referee

Dear Prof. xxx,

TITLE: xxx

AUTHORS: xxx

This manuscript has been submitted for publication in The Astrophysical Journal. Would you be willing to review it for us? For your convenience I have included a copy of the abstract.

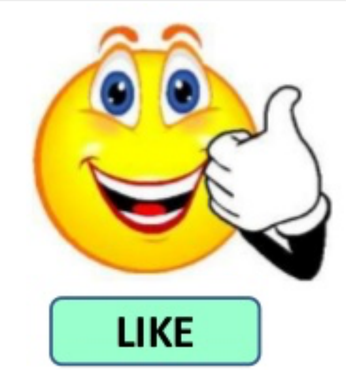
Referees should consider whether or not they have a conflict of interest before agreeing to review a manuscript (for a general statement see section 4 of http://journals.aas.org/policy/ethics.html).

Please let me know as soon as possible whether you can review this manuscript. If for some reason you are unable to review it, or if you do not believe you can provide a report within 3 weeks, I would very much appreciate your suggestions for other potential referees.

Confidentiality

- Do **not** mention to anyone that you are reviewing that manuscript
- You may be allowed to disclose yourself and contact the authors (this is not recommended)
- Do **not** use AI to check the manuscript. This is strictly forbidden

Good review



Editors love referees who

- remains factual, constructive and neutral
- provide well structured reports in 3 parts
  - evaluation of the the overall quality of the paper, including the positive aspects
  - individual scientific questions/issues ("specific comments"),
  - purely technical corrections ("technical corrections”)
- highlight
  - what corrections should be made for the manuscript to become acceptable for publication
  - OR, for what reasons it should be rejected

Bad review

Editors hate referees who

- do not respond immediately when invited to review
- are unfair or emotional in their criticisms
- or too indulgent
- send in their report *after* the deadline

What should be addressed in a good review

Example of points the referee is asked to look at (ACP)

- Does the paper address relevant scientific questions within the scope of ACP?
- Does the paper present novel concepts, ideas, tools, or data?
- Are substantial conclusions reached?
- Are the scientific methods and assumptions valid and clearly outlined?
- Are the results sufficient to support the interpretations and conclusions?
- Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)?
- Do the authors give proper credit to related work and clearly indicate their own new/original contribution?
- Does the title clearly reflect the contents of the paper?
- Does the abstract provide a concise and complete summary?
- Is the overall presentation well structured and clear?
- Is the language fluent and precise?
- Are mathematical formulae, symbols, abbreviations, and units correctly defined and used?
- Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated?
- Are the number and quality of references appropriate?
- Is the amount and quality of supplementary material appropriate?

Examples of bad comments

- *Lots of hand waving in this Discussion*
- *The writer of the manuscript is utterly ridiculous and appears to believe they will solve poverty through radio astronomy.*
- *N/A (this was the only text in the review)*
- *Fig 3e is fanciful, verging on silly*
- *The paper descends into nonsense, never to return, on line 44.*
- *They have addressed most of the referee's comments, although their responses to a few of them remind me of Donald Trump.*
- *The truth is that referee #3 does not have any clue regarding how analysis of time series must be performed and repeats a nonsense. Either referee #3 is a lair or, more probably, he did not even read our paper.*

Example of a correct review

In this study the author uses a variant of Fourier filtering to separate xxx into a periodic (deterministic) and an aperiodic (stochastic) components. Removing the latter leads to a denoised record that should be better suited for physical interpretation. The same approach is claimed to provide long-term forecasts up two 160 years ahead.

***My recommendation is to reject this manuscript**, for several reasons:*

1) It does not match the scope of the journal: although the author focuses on xxx (which is definitely of interest for this journal) this record is mostly considered as a technical object of interest. Some of its key properties are ignored and there is little consideration for the practical uses of the proposed filtering. Below are some examples:

- the proposed filter removes all but periodic components, and essentially eliminates the high frequency spectral content. However, the word "noise" is never defined and what is considered as noise actually contains a considerable amount of physically relevant information. One example

How to review

- Read the article a first time to have a global idea
  - don’t try to understand every point that may be unclear
- Read the article again, but with a more critical look
  - take notes, write down every question/concern/idea
- Conduct extra research to put the article in perspective
  - does it give proper credit to other work ?
- Write an outline of your report.
  - important: let it mature for a few days to let your emotions fade away

To conclude

Dont’ forget

- The referee gives **recommendations** to the editor.

  But the editor is king = **he/she takes the decision**

- The editor may therefore override your recommandation

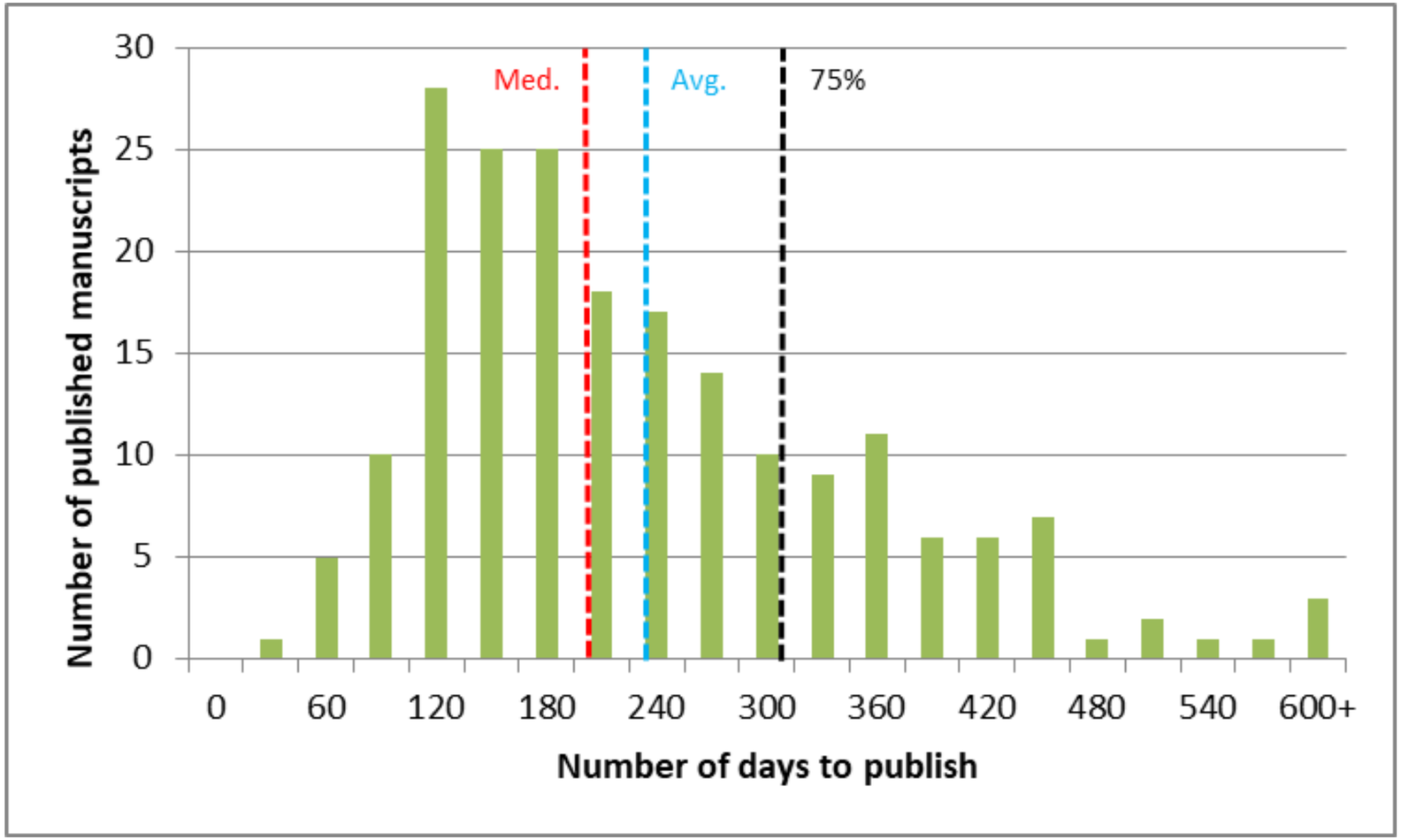
“Golden rule”

Behave with the author the way you would like referees to behave with you

Peer review process:
what happens behind the scenes

Why does it take so long to publish an article ?

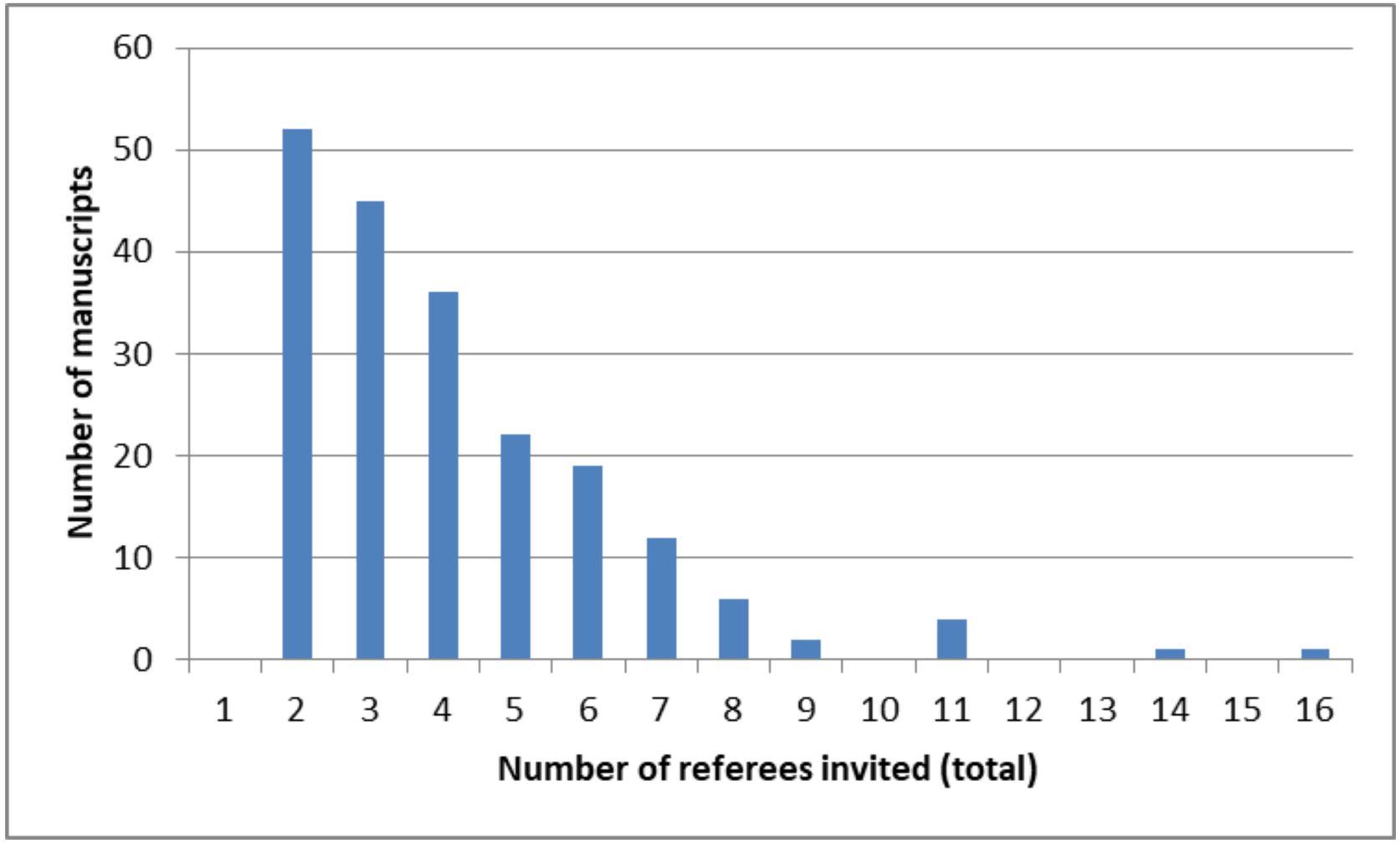
Average handling time



from J. Janssen (2017)

for J. Space Weather and Space Climate

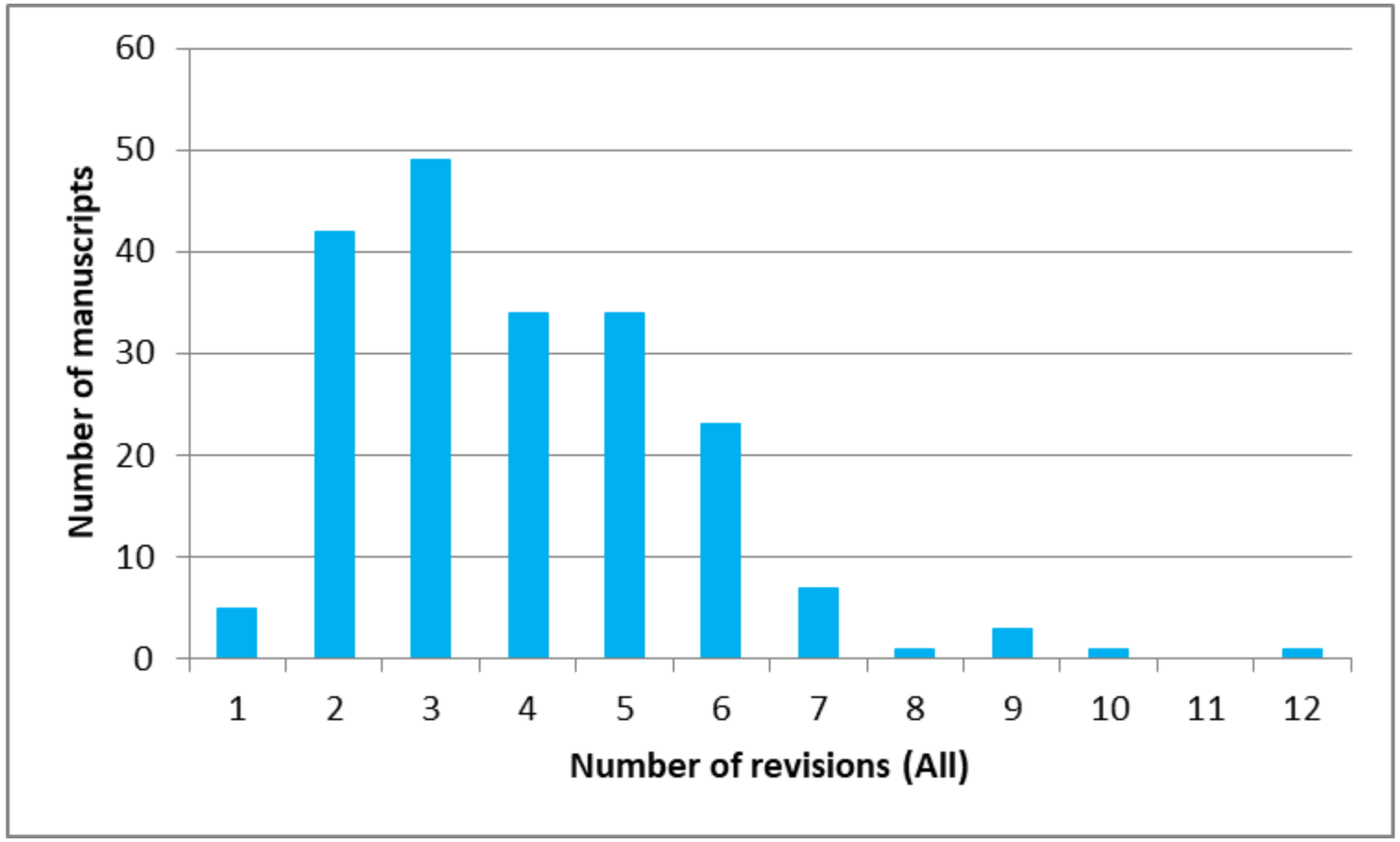
Number of referees contacted



from J. Janssen (2017)

for J. Space Weather and Space Climate

Number of revisions needed before acceptance



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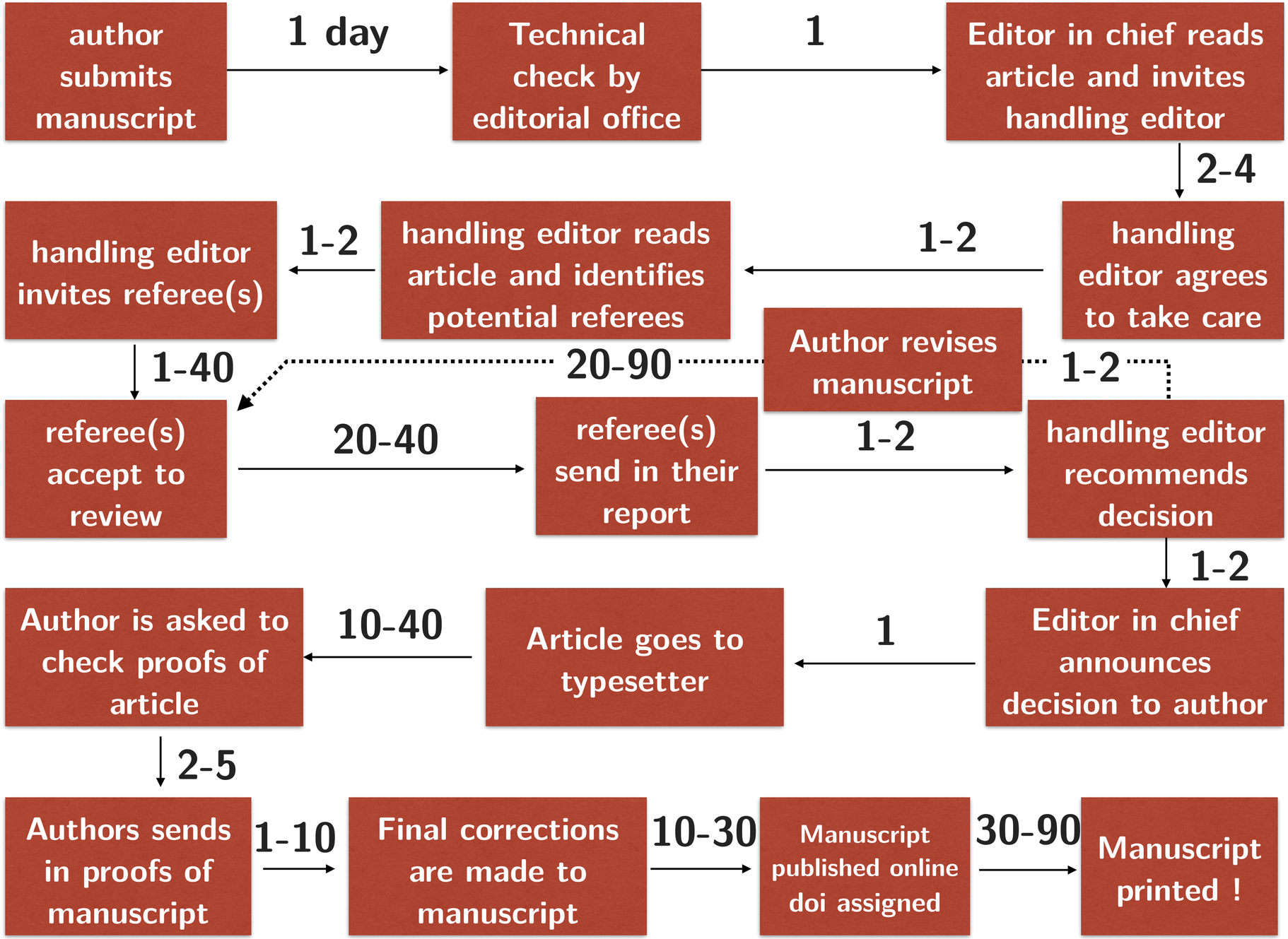
for J. Space Weather and Space Climate


author submits manuscript
1 day
Technical check by editorial office
1
Editor in chief reads article and invites handling editor
2-4
handling editor agrees to take care
1-2
handling editor reads article and identifies potential referees
1-2
handling editor invites referee(s)
1-40
referee(s) accept to review
20-40
referee(s) send in their report
1-2
handling editor recommends decision
1-2
Editor in chief announces decision to author
1
Article goes to typesetter
10-40
Author is asked to check proofs of article
2-5
Authors sends in proofs of manuscript
1-10
Final corrections are made to manuscript
10-30
Manuscript published online doi assigned
30-90
Manuscript printed !
Author revises manuscript
20-90
1-2