Problem 1 : Subjects

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."



What is wrong with this text ?

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Long distance between **subject** and **verb**

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

What is wrong with this text ?

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Implied actions versus verbs

Problem : subjects and verbs are often too far apart

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

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)



Correct this

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



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 : 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



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."

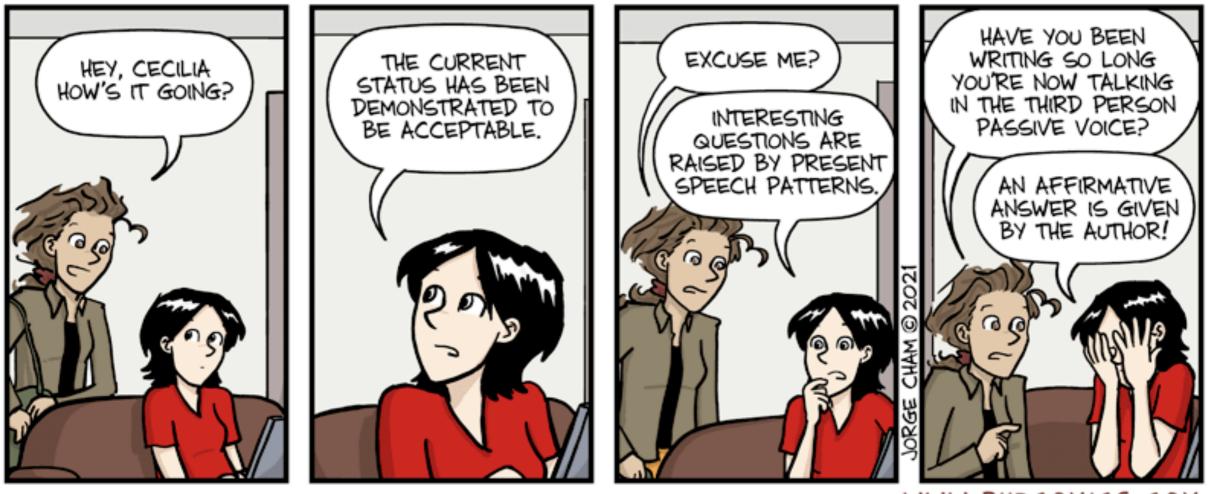


Identify familiar and new information

"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 4 : Passive vs Active



WWW.PHDCOMICS.COM

Problem 4 : passive vs active





The dog kicks the ball **Active**

The ball is kicked by the dog **Passive**

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 4 : 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 4 : 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... 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.

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

Journal editors encourage the use of active voice

keep 10-30% in passive voice



Correct this

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



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" ?

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 4 : 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 $T=0^{\circ}$ 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.



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...



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Problem 5 : Tenses

Problem : check for consistent times

- Avoid a mix of past/present/future tense
- Highlight verbs to check this

Problem 6 : UK or US English ?

- 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



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

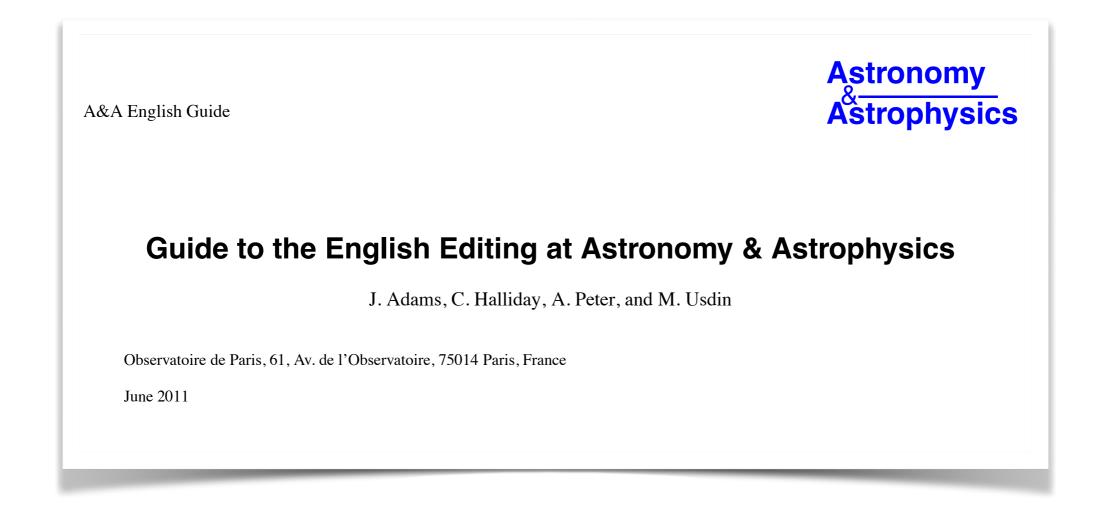
The center of the 15-meter wide radiated zone revealed high ionization levels, leading to significant deviations from modeled air resistivity. At first, we though that this was a property of the local medium. However, further investigation revealed that this could have been an artifact of the sampling 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.



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

The cent**re** of the 15-met**re** wide radiated zone revealed high ionisation levels, leading to significant deviations from modelled 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 artefact of the sampling procedure, which was biased towards the central part of the zone. Consequently, the whole zone has to be reexamined and the possible role of sulphur-rich constituents has yet to be carefully evaluated.

Much more information in this document (see on Celene)



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.

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.

- 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)







Improve this sentence (1)

This component chiefly involves a description and quantitative analysis of the study's data collection process.



Improve this sentence (1)

This component chiefly involves a description and quantitative analysis of the study's data collection process.

This component describes and quantitatively analyzes the data collection process.



Improve this sentence (2)

Detailed analyses of the evolutionary features of different types of regulatory elements are an important area for future research.



Improve this sentence (2)

Detailed analyses of the evolutionary features of different types of regulatory elements are an important area for future research.

Future research should analyze the evolutionary features of different types of regulatory elements.



Improve this sentence (3)

Improvements are expected in the predictive power of all the scores being computed on multispecies alignments.



Improve this sentence (3)

Improvements are expected in the predictive power of all the scores being computed on multispecies alignments.

We expect to improve the predictive power of our multispecies alignment scores.



Improve this sentence (4)

Some astonishing questions about the nature of the universe have been raised by scientists studying the nature of black holes in space. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole.



Improve this sentence

Some astonishing questions about the nature of the universe have been raised by scientists studying the nature of black holes in space. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole.

Scientists studying black holes have raised some astonishing questions about the universe. A black hole is created by the collapse of a dead star into a point perhaps no larger than a marble.



Improve this sentence (5)

We identified genes that are differentially expressed between species. A phylogenetic tree based on the number of differentially expressed genes between species recapitulates their known phylogeny.



Improve this sentence (5)

We identified genes that are differentially expressed between species. A phylogenetic tree based on the number of differentially expressed genes between species recapitulates their known phylogeny.

We identified genes that are differentially expressed between species. The number of differentially expressed genes can be used to build a phylogenetic tree that recapitulates the known phylogeny. KISS always !

- Omit unnecessary words
- Put actions in verbs: find nominalizations and see if they should be converted to verbs.
- Place verbs near subjects: highlight subjects and verbs and check for subject-verb distance
- Put familiar information first: check each sentence for old and new information.

184 J. Org. Chem., Vol. 36, No. 1, 1971

BUNNETT AND KEARLEY

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

J. F. BUNNETT¹⁸ 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 associates⁵ 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: Abstraction of the ortho proton And then expulsion of the halogen From the anion intermediate. In Scheme I the mechanism is set forth.

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

Data for reactions of all nine mixed Dihalobenzenes (excluding fluorine) With four equivalents of amide base Are set forth in Table I. Reactions 184 J. Org. Chem., Vol. 36, No. 1, 1971

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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.

In which the halogens were not the same,	I hroughout, hallde lons have been determined
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T-CNRS on January 29, 2023 at 15:52:53 (UTC). flines for options on how to legitimately share published articles. Reacti

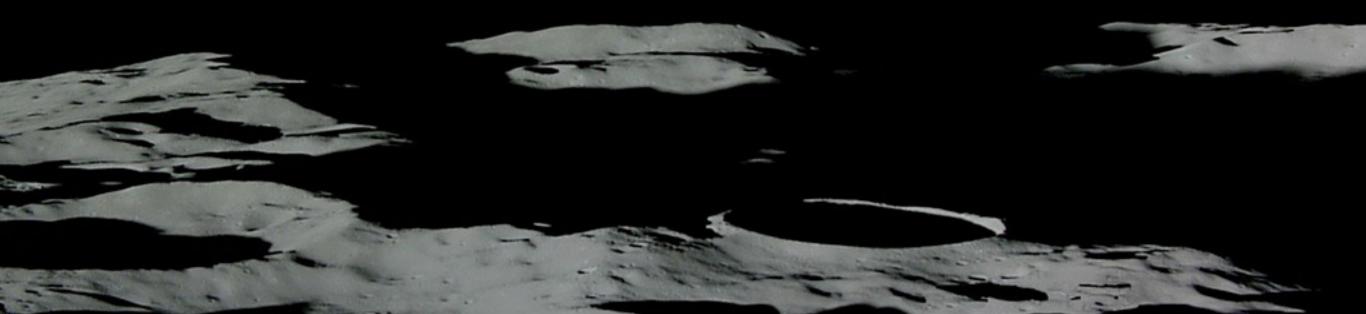
Say what you mean and mean what you say

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

Make your article attractive !

Article submission in practice





Check 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 ?

Does my article fit in the **scope** of the journal ?

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

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 ?

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 communitydriven ?
- publication charges
- cost to make it open access ?
- is the journal available on bibCNRS ?

Check before submitting



- 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
 im→ no excuse for this !

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

What if there is a page limit ?

- Some journals (e.g. Physical Review Letters) impose a maximum number of pages or words
- Do NOT try to reduce the number of pages by shrinking graphics beyond reason: the editorial office will most likely enlarge them



- 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 "submit "



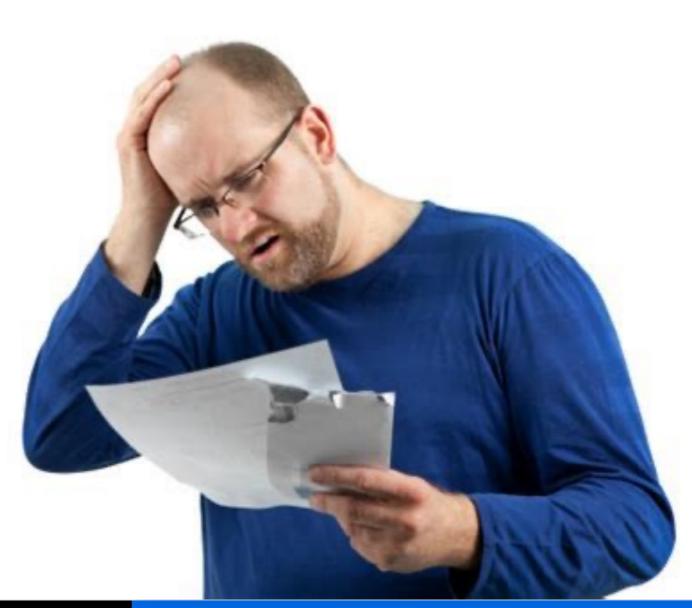
A lousy article with a badly written text will leave a lasting impression on the referees and on the editors... who are likely to be your peers

How to reply to the referees



When the report comes in...

KEEP CALM AND CARRY ON



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...

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...

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

In practice

- Start your sentences by thanking the referee and stroking 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.

Our thanks to the reviewers and the subject 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)

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.



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)

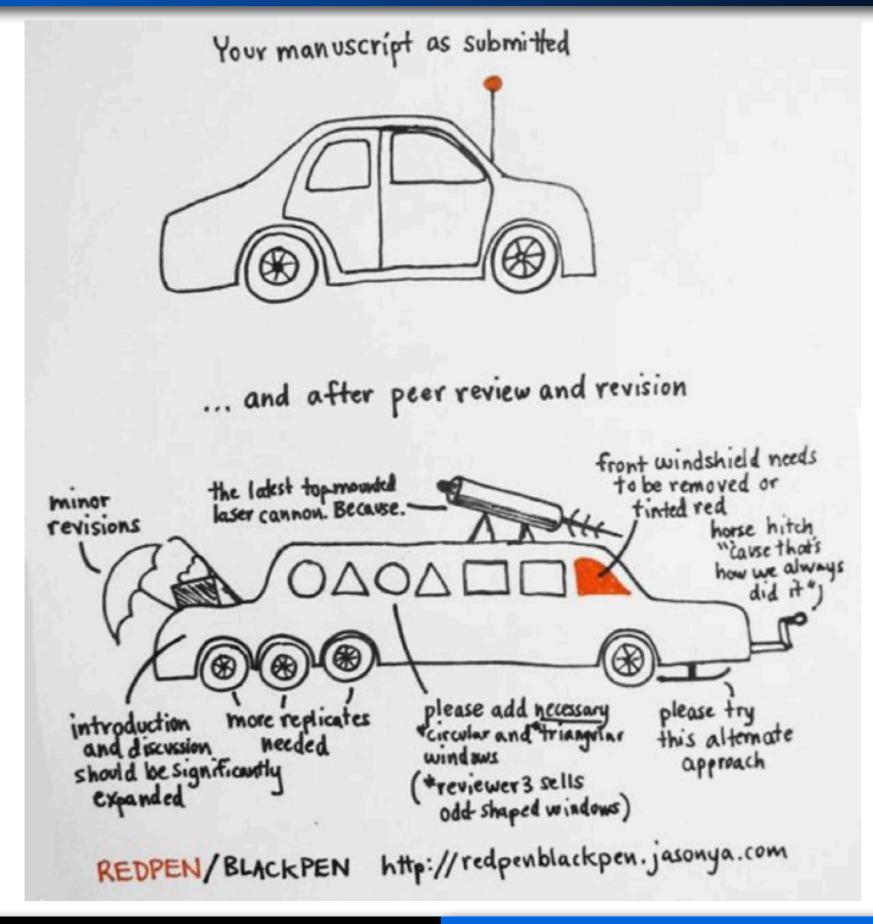
- Many referees have an implicit desire to
 - be recognised as experts on the topic
 - show that they know the topic better than you
 - be comforted in their vision of the topic

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) Make work easier : Many journals ask for a copy of the article with highlighted changes. These are always welcome !

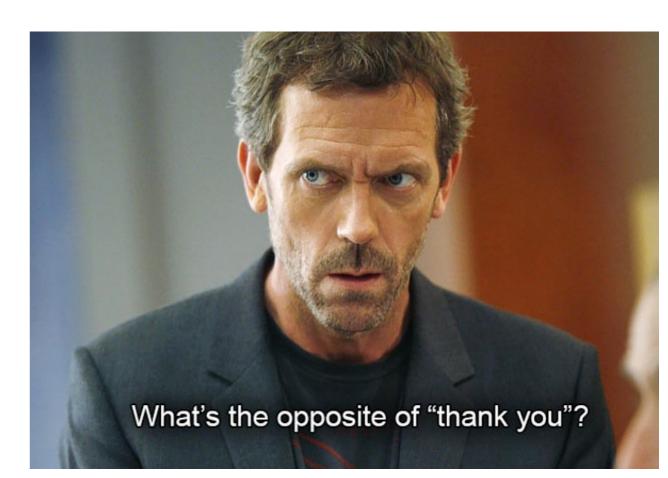
- ⁷⁰ In the following, we concentrate on 5 spectral bands that are considered to be important
- n for aeronomy [Lilensten et al., 2008; Tobiska et al., 2008], see Fig. 1. We shall
- ⁷² call them XUV (0.5–10 nm), EUV (20–60 nm), Lyman-α (121–122 nm), FUV (130–170
- m nm) and MUV (220-270 nm). Note that these definitions differ from the ISO
- ¹⁴ 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
- ⁷⁶ UV proxy but remains the most widely used gauge of solar activity.

- 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



Anger and contempt never help



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.

Reviewers 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 reviewers.

- 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)



Editors love reviewers 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



Editors hate reviewers 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 reviewer 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?

- 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 reviewer 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.

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 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

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 ?