

A575 HW #8

Handed out: March 23, 2009

Due (at the beginning of class): April 1, 2009

1. [50 pts] Your assignment this week is to write a referee's report for the attached paper. Normally, the editor will contact you to see if you can referee the paper "in a timely manner" (meaning 2-3 weeks); here, you will have one and a half weeks for the refereeing process. The papers have been selected from the recent literature; most have been submitted to a peer-reviewed journal. You have been identified as a referee based on your "expertise" - the research area of your class project.

As a referee, the editor will ask you to pay attention to certain specific issues. Here is a copy of a recent request from ApJ:

It will be particularly useful if your report includes answers to the following questions where appropriate:

1. Does the article contain significant new results or theories and does it reflect sufficiently high scientific standards to warrant its publication in The Astrophysical Journal?
2. Is the paper written with the maximum conciseness compatible with accuracy and clarity?
3. Could the order or presentation or English be improved? Editing of English and typographic errors will be corrected by the Journal copyediting staff and you do not need to specify these in your report. But if there are more general problems with presentation or English please cite this in your report.
4. Would the article be more appropriate for the Supplement Series? That series is recommended for long papers, for compilations of relatively uninterpreted data or models, and for papers with a very restricted readership.
5. Do you have any comments or criticisms that may be helpful to the authors to improve or correct the paper? In cases that may be ambiguous, please specify whether you consider the suggested changes to be mandatory for publication or advisory.
6. Do you think that it is necessary for you to see the revised version of the manuscript?
7. If qualified historians wish to use your report, we will ask you or your heirs. If you wish us to destroy your report, then please inform us.

Your report should start with a listing of the authors and paper title (this is to help the editors keep track), followed by a brief summary of the paper and your recommendation as to whether the paper should be accepted for publication. For example, a good paper may earn the following statement: "The paper is well written and the results are clearly and concisely presented. I therefore recommend this paper for publication in Journal YY." A mediocre paper with some good ideas might earn the following: "This paper encapsulates several interesting ideas, and thus is worthy of publication in Journal YY. However, I have several comments on the presentation and organization of the material." Finally, a particularly bad paper may earn the following statement: "While the paper presents some interesting concepts, I cannot recommend it for publication in Journal YY because of the numerous scientific problems that I delineate below."

Regardless of your recommendation, the next part of the referee's report is a detailed discussion of major difficulties in the paper. This ranges from poor observing strategy, to incorrect analysis, to random, far-reaching conclusions that may not be supported by the paper. It is very important that you, the referee, explain clearly to both the editor and the author the problems that you see with the paper. Note that it is not the referee's job to provide positive feedback on a paper - the focus is usually on what needs to be improved to make the paper worthy of publication.

Finally, after you have commented on the major scientific issues, you may wish to comment on specific details. This is usually where you recommend corrections of figures, major typographical or stylistic problems, and other details that don't necessarily affect the scientific merit of the paper.