

Paper Writing in Astronomy

H. Thankful Cromartie

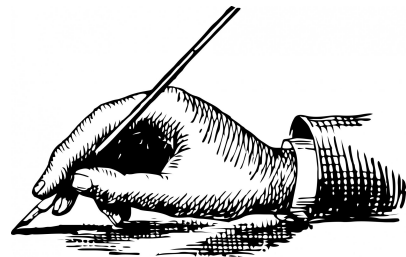
ASTR 8500 Final Presentation

May 2016

1. Tools to Use & Where to Start

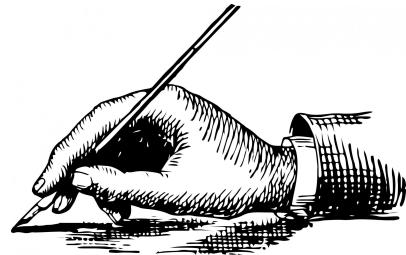
Tools & Prep (1/2)

- **Don't wait** until the project is over to begin writing
- Learn **LaTeX** and pick an editor (e.g. www.sharelatex.com)
- Organize your references using a package like **bibtex** (with a separate database file)
- Get your hands on **Strunk & White** (general writing)



Tools & Prep (2/2)

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- Make an **outline**, while asking yourself some **important questions** (to be discussed)
 - When you decide on a journal, **read their requirements** for usage and format! (e.g. <http://journals.aas.org/authors/manuscript.html>)



Ask yourself these questions before writing

1. What are my **motivation** and **purpose** for writing this paper?
2. Who is my **audience**?
3. What is the **potential impact** of my work, and how aggressively do I want to share my research?
4. Am I **allowed** to publish this work? Am I **crediting** the necessary parties?



Outline & Structure of a Manuscript

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1. Title

2. Abstract

3. Keywords, sources

4. Introduction

5. Methods

6. Results

7. Discussion

8. Conclusions

9. Acknowledgments, facilities

10. References

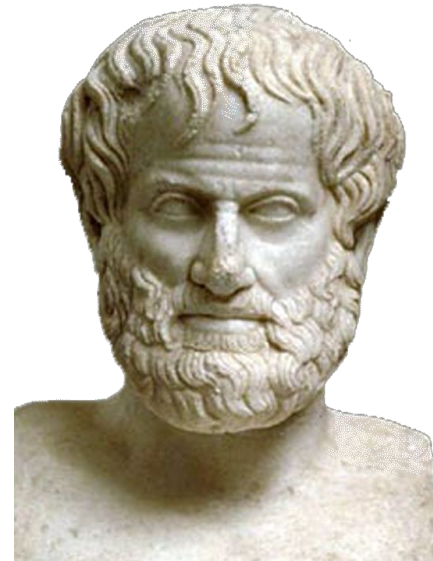
11. Appendices

This format can be modified, and you shouldn't write them in order!

2. Actually Writing

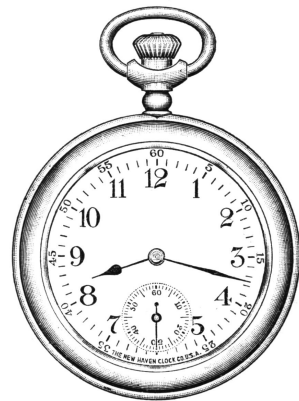
Writing a paper

- **Persuasiveness** is important. Put main point at the beginning and emphasize it again at the end.
- Every word serves a purpose
- Active and passive voice
- Usage & spelling
- **Ethos, pathos, logos**

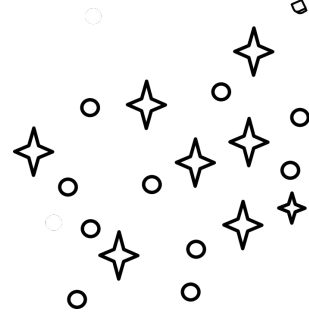


Practical Considerations

- It will take **longer than you expect** to write and edit your paper
- Be very, very careful about journal requirements
- It will take ~months from submission to publication
- Be aware that if you are in a **collaboration**, you may need to go through an internal vetting of your paper



Your Responsibility



- There is a difference between being persuasive and bending the truth.
- Be extremely thorough about your **references**. Messing this up is a good way to make people angry.
- Again, be sure to stay in contact with **all parties involved** in your research.
- Don't ever, ever, ever plagiarize the work of others **OR YOUR OWN WORK!**

3. Questions & Discussion (Resources Follow)

Resources & References

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<http://physics.illinois.edu/people/Celia/SciWrite.pdf>

ApJ manuscript prep: <http://journals.aas.org/authors/manuscript.html>

Interesting article with details about usage and sentence structure in science: <http://www.americanscientist.org/issues/feature/the-science-of-scientific-writing/1>

Nice summary specific to Astronomy: <http://www.phy.ohiou.edu/~tss/ASTR410/writing.html>

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