

ATMO 489 RADAR METEOROLOGY

Project Paper Guidelines

November 17, 2006

(compiled by Dr. Larry Carey and Dr. Courtney Schumacher)

DUE DATE

- Friday, December 8, 2006, 5:00 PM.
- No late papers will be accepted.
- Please turn in your paper to Dr. Larry Carey on the 8th. If you want to hand it in before the 8th, please hand it in to Kaycee Frederick.
- Each team member should contribute to the project data analysis and the writing of the project paper. This is a team effort.

Science

- Your paper needs to demonstrate core competency in knowledge and skills developed during lecture and lab. However, the paper must go beyond class material. Your paper should show that you know how to read a few scientific papers on advanced topics and that you understand and are able to synthesize that knowledge.
- Paraphrase or summarize instead of using quotations. Use quotations sparingly, i.e., when you want to emphasize something very particular or for specific semantic purposes. Be sure to reference your sources when you summarize or paraphrase the knowledge that you have gleaned from them.
- Don't include references of references; use the original reference whenever possible. There is no upper limit on references. Three references is the absolute minimum but stronger papers have more.
- How do I find good references? Background research for your paper can be accomplished at a number of [journal search engine sites available through the TAMU library](#), including
 - American Meteorological Society (AMS) Online Journal Advanced Search: <http://ams.allenpress.com/perlserv/?request=search-simple>
 - [Meteorological & Geostrophysical Abstracts](#) (MGA)
 - [Science Citation Index](#) (Web of Knowledge)
- Define concepts if they are not common or could have a different meaning in other contexts. In addition, flesh out physical descriptions and describe details such as what model the study you're referencing is using.
- Know your source. Your references should preferably be taken from peer-reviewed journals (e.g., *Monthly Weather Review* and *Weather and Forecasting*), advanced undergraduate or graduate level textbooks (e.g., *Cloud Dynamics* by Houze (1993)) or monographs (e.g., chapters from *Severe Convective Storms* by Doswell (2001)). If you reference an Internet site for scientific knowledge, then it should be from a reputable and well-known source (e.g., NOAA NWS SPC, NOAA NCDC, and *not* 'Scientific Advances from my First Year of Chasing' on Steve Jone's Super Storm Chase Page).

Format

- The paper should be roughly 7-10 pages of text (double spaced, 12-point Times New Roman font, 1" margins) **NOT** including title page, references, or tables and figures. If it is much less than 7 pages, then points will be deducted. I will not read or grade past 10 pages of text.
- Use numbered headings in bold font. Leave a space before each heading (and between each paragraph) for readability.
- The introduction should provide background and set-up the project you are going to address. End the introduction with a statement about the aim/hypothesis of your paper.
- References within the paper should be - single author: Author (year), two authors: Author A and Author B (year), multiple authors: Author et al. (year). Internet websites are normally referenced within the text and shouldn't be listed with the peer-reviewed articles at the end of the paper. Class notes aren't appropriate to reference, so find another source to reference.
- Figures and tables: They should be carefully created or chosen to support your written discussion. Be selective. Please do not include figures or tables that are not central to your main hypothesis. Also, they should be legible (not fuzzy) and be sure to write new captions and add the source, e.g., Adapted from Smith 1999. Finally, both figures and tables should be *at the end* of the paper, after the references (put tables first, then figures).
- In general, we are following the referencing, structure, and style guidelines set forth by the American Meteorological Society (AMS) for scientific manuscripts. For more information, please reference the AMS's abbreviated guide to authors at http://www.ametsoc.org/pubs/authorsguide/pdf_vs/agbrf2002.pdf. (Note: We are **NOT** using a 2-column format for this term paper).
- You can find a full-length formatted journal article for Monthly Weather Review at: http://www.met.tamu.edu/people/faculty/carey/carey_buffalo_mwr1815_2006_ver2.pdf Obviously, your paper will be shorter but the format and referencing style is the same.

Grammar

- Prepositional phrases at the beginning of sentences should end with a comma. *During the 1990's, we.*
- *Which* always follows a comma (and a pause), but *that* never does. *This study, which cost \$10,000, was a success. The study that cost \$10,000 was a success.*
- Hyphenation is not necessary if the first word is an adverb or comparative adjective. *widely used text, high-level observations vs higher level observations.*
- A paragraph must consist of more than one sentence.
- Affect or effect? *Temperature affected the outcome. There was an effect on outcome.*
- that is (i.e.), for example (e.g.), so on (etc.), namely (viz.), compare (cf.)
- Singular and plural forms: criterion, criteria; datum, data; phenomenon, phenomena.
- Define acronyms first time.
- Don't use an apostrophe in plurals of acronyms [TCs].
- Use common abbreviations. *mb* instead of *millibars*.
- Be consistent. *Rain rate vs rainrate, Houze 1997 vs Houze, 1997.*

- Spell out 1-9. Spell out numbers that start off sentences.

Style

- The first sentence of a paragraph usually sets the topic for that paragraph. Don't have any unlinked ideas in the same paragraph. Also, try to make the ideas within each section flow together. Transitional statements are useful.
- *This* on its own is known as an *ambiguous antecedent*. Use instead *this test* or *this problem*.
- Avoid colloquialisms and casual phrasing, such as ~~steer clear of~~.
- Aim for economy: *because* instead of ~~based on the fact that~~; *for* or *to* instead of ~~for the purpose of~~. Similarly: ~~there were several subjects who completed...~~; ~~it is suggested that a relationship may exist...~~; ~~both~~ alike; ~~one and~~ the same; ~~a total of n~~ subjects; ~~four different~~ groups; ~~absolutely~~ essential; found ~~previously~~; small ~~in size~~; in ~~close~~ proximity; ~~very~~ close to zero; ~~much~~ better; ~~period of~~ time; summarize ~~briefly~~; the reason is ~~because~~; ~~also~~ included; ~~in order to~~; ~~except for~~.
- Avoid hype (hyperbole). Words like *very* and *extremely* are usually unnecessary.
- Use the active voice (*Smith reported*) rather than the passive voice (~~reported by Smith~~).
- Use double quotation marks the first time you introduce a newly coined or slang term; do not use quotation marks thereafter.
- Use the past tense to report results (yours or others'). Use the present tense to discuss them. *We have found that...*; *Smith (1989) reported a similar result. A simple explanation of these findings is that...*
- Avoid misplaced modifiers.