

<i>Title:</i> NEON Technical Memorandum Series	<i>Author:</i> T. Kampe	<i>Date:</i> 05/25/2011
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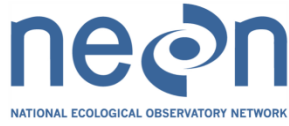
NEON Technical Memorandum Series

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1 DESCRIPTION

This document describes the National Ecological Observatory Network (NEON) Technical Memorandum Series and how it is implemented in the Observatory.

1.1 Purpose

The purpose of the NEON Technical Memo Series is to provide a dated archive of technical and scientific NEON research and serves as a means to disclose these publicly to NEON stakeholders and the scientific community. This Technical Memorandum Series is used for documentation and timely communication of interim reports, preliminary results and analyses, and similar information. Although the memoranda are not subject to formal peer review, they are expected to reflect sound professional work.

This document provides an overview of the Technical Memo Series, how it is structured, how memos are generated and reviewed, and how access to these memos will be facilitated via a dedicate web site.

1.2 Scope

The NEON Technical Memorandum Series is intended to communicate technical and scientific achievements by the technical staff at the NEON Observatory that include interim reports, preliminary results and analyses, and similar information, thus providing a snapshot of work in progress at the Observatory. The Technical Memorandum Series is hosted on a publically-accessible web server that provides a dated archive for NEON Observatory research. The series will employ internal scientific/technical review but not necessarily external review.

This document delineates the organization of the Technical Memorandum Series, memoranda submission and acceptance, and the format to be used for generating memoranda.

2 RELATED DOCUMENTS AND ACRONYMS

2.1 Applicable Documents

AD[01]	
AD[02]	
AD[03]	
AD[04]	

2.2 Reference Documents

RD[01]	NEON.NPR.000008	NEON Acronym List
RD[02]	NEON.NPR.000243	NEON Glossary of Terms
RD[03]		
RD[04]		

3 TECHNICAL MEMORADUM SERIES ORGANIZATION

The Technical Memorandum Series is archived on the NEON data system and accessible via a public web site (xxxxx@neoninc.org). This website serves as the portal for authors from the NEON Observatory to submit technical memoranda and as the portal for accessing and downloading technical memoranda.

4 MANUSCRIPT PREPARATION

4.1 Author Submittal Instructions

All technical memoranda are submitted to the Series electronically via the web server. The following steps outline the submittal process:

1. Complete an abstract page, using the abstract template on the website, and submit. A temporary identification number will be assigned (yymmdd_author initials_count)
2. Place the tracking number on the document. Make sure the issue date is on the title page as well.
3. Submit abstract and a copy of the memo manuscript in native format (e.g., .docx) to xxxxx@neoninc.org
4. Following submittal, the editor will conduct an editorial review and request internal NEON review as appropriate. An edited version of the memo in revision mode along with reviewer comments will be returned to the author within approximately 2 weeks. The author should revise the manuscript and address all reviewer comments in an attachment and resubmit the document.
5. On final acceptance a memo number will be assigned. The author shall place the memo number on the memo abstract and first page, convert the document to PDF format, and submit on the web site. The memo will then be archived and posted to the Technical Memorandum Series web site.

4.2 Abstract Page

The author shall submit a completed abstract page, which includes memo number, title, author(s), abstract, and key words. The abstract is important since it used in email messages that are sent out as notification of new memo postings. Abstracts should be a single paragraph not to exceed 500 words.

4.3 Keywords

The author of a technical memo should list up to 6 keywords on the abstract page for the document he/she is submitting. These keywords will be incorporated into the metadata associated with the memo and available to the web page search engine.

4.4 Memo Style

The NEON technical memoranda are meant to be a means to communicate the current status of activities within the Observatory. Their internal structure or style is not regulated. However, because of the wide distribution of the memos; care should be taken to ensure their legibility and coherence. The first page (following the abstract page) should clearly state the memo number, title, author(s), and the date of the memo. References and acknowledgements should be included as necessary.

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When possible, use traditional scientific manuscript organization for sections: “Introduction,” “Methods and Materials,” “Results,” “Discussion,” and/or “Conclusions,” “Acknowledgments,” and “References.” For convenience to authors, a memo template can be downloaded from the website. A memo template has been generated that meets these requirements and will be made available to potential authors via a link on the web site. The memo template is provided in Appendix A of this document.

4.5 Acknowledgements

It is mandatory that the authors of memos in this series acknowledge the support from the National Science Foundation. An appropriate acknowledgement is

“This material is based upon work supported by the National Science Foundation under Grant #DBI-0752017.”

The grant number referenced will depend on the development or operational phase of the Observatory that the memo is generated in. It is the responsibility of the author to obtain the appropriate grant number for his/her document.

4.6 Submittal of Revisions

There will be times when an author considers a revision to his or her own document to be warranted. Minor corrections may be submitted as a revision to the existing memo, while major revisions should be released with a new memo number.

After a major revision, the original memo will remain unchanged and accessible. Any new revisions will be sequentially numbered with additional decimal suffixes. For example, the first revision to a memo number 100 would be 100.1, and the second revision would be 100.2. All versions of the memo must remain accessible and clearly cross referenced on the appropriate memo web pages. Notification of new versions of existing memos will be sent out via email to the memo distribution list.

5 MEOMRANDUM REVIEW AND ACCEPTANCE

All submitted memos will be subject to internal editorial review. It shall be at the editor’s discretion whether memos will require scientific or technical review. Typically, this review process will be conducted by NEON staff, although in some instances, external review may be deemed appropriate. Since it is the goal of the Technical Memorandum Series to rapidly disseminate information, review will be prioritized, which will require timely revision to documents per the recommendations of the editor and reviewers. The basic review process is outlined as follows:

- a) Following submittal of a memo manuscript, an editorial review will be conducted by the editor.
- b) Internal NEON review of technical and/or scientific content may be requested as deemed appropriate.
- c) An edited version of the memo in revision mode along with reviewer comments will be returned to the author within approximately 2 weeks. External review may require additional time.
- d) The author shall revise the manuscript, address all reviewer comments in a separate document, and resubmit the document to the editor.
- e) The manuscript will be subject to a final review.
- f) When accepted, a memo number will be assigned. The memo will then be archived and posted to the Technical Memorandum Series web site in .PDF format.

- g) Notification of the release of the memo will be sent out electronically via the memo distribution list.

6 TECHNICAL MEMORANDUM SERIES WEBSITES

6.1 Main Technical Memorandum Series Web Site

The web site for the NEON Technical Memorandum Series serves as the publically accessible portal for accessing memos and as the site for authors to submit memos to the Technical Memorandum Series. A representative example of the web site format is the ALMA Technical Memo web page (https://science.nrao.edu/facilities/alma/aboutALMA/Technology/ALMA_Memo_Series). The main web site shall have the following features:

- a) A hyperlink to the Technical Memoranda Series web page shall be accessible from the main NEON web site.
- b) A searchable table of released memos listing memo number, title, author, release date, and revision number. The title shall be a hyperlink to individual memo web pages from which a .PDF version of the memo can be downloaded.
- c) A search function should be provided allowing readers to search the memo series by metadata (author last name, title, keywords, release date, etc.)
- d) A link shall be provided to the abstract web page. This site provides a listing of the memo submission guidelines and will be used as the interface for submission of memos to the series.
- e) There shall be a link for readers to subscribe to the Technical Memorandum Series mailing list. The mailing list is used to notify interested parties of the release of technical memoranda and appropriate news items.

6.2 Abstract Web Page

The Abstract web page shall have the following features:

- a) Author submittal instructions.
- b) A section listing requirements for the Abstract page.
- c) A section discussing requirements for memos (i.e., allowable styles, formats, etc.).
- d) A link to the [technical memo template](#).
- e) A feature to allow the author to submit the abstract and draft memo (in WORD .docx format).
- f) A section discussing requirements for submitting revisions to memos.
- g) The upload tool shall allow authors to upload revisions to memos as required in the review process.

6.3 Individual Memo Web Pages

Each individual memo shall have a web page associated with it. This web page shall have the following features:

- a) NEON Technical Memorandum number;
- b) Memo title;
- c) Author name(s)

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- d) Abstract
- e) Link to PDF of memo

6.4 Mailing List

People accessing the Technical Memo Series web site shall have the option to subscribing to a mailing list by submitting their email address on the site. The intent of the mailing list is to provide a mechanism for alerting interested parties of the release of memos and other pertinent information with respect to the memo series. All information would be provided via a mass mailing to subscriber's emails.

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APPENDIX A: TECHNICAL MEMO TEMPLATE

Subject NEON Technical Memo manuscript sample (U.S. letter size)

[Author(s)] S. John Smith^a, Paul A. B. Jones^b, Kenneth M. Ball^c

^aNational Ecological Observatory Network, 1685 38th St., Suite 100, Boulder, CO 0301

^bNational Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230;

^cNational Aeronautics and Space Administration, 300 E. Street SW, Washington DC 20546

ABSTRACT

The Abstract and Keywords are below the author's affiliations. Begin the abstract two lines below author names and addresses. The abstract summarizes key findings in the paper. It is a paragraph of 500 words or less. For the **keywords**, select up to 6 key terms for a search on your manuscript's subject and list below.

Keywords: Times Roman, ecology, remote sensing, vegetation

7 INTRODUCTION

Begin the Introduction two lines below the keywords. This template is for a one-column format. References are noted sequentially in the text¹ using a superscript and cited in a separate section at the end of the paper.

7.1 Fonts

Table 1 shows the font sizes and highlighting in a typical manuscript. These font "styles" are contained with this sample manuscript and Section 4 below explains how to use them. Use Times Roman or another standard font to avoid font errors.

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Table 1. Manuscript font sizes and formatting. This Microsoft Word template includes these formats as automated "styles", which can be selected in the Format menu -- Styles and Formatting. (9pt)

1.1	Preformatted NEON Template Styles	
<i>1.2</i>	<i>Manuscript component</i>	<i>Description</i>
1.3	Memo title 16 pt. bold, left justify	
1.3.1	ABSTRACT TITLE	11 PT. BOLD, center
	NEON abstract body text	10 pt., justify
	Keywords: *Keywords*	10 pt., left justify
1.4	Authors/affiliations 12 pt., left justify	
1.4.1	NEON SECTION HEADING	11 pt. BOLD, center, whole numbers
1.1	Heading 2, NEON subsection heading 10 pt. bold, left justify, subsection numbers	

8 FORMATTING OF MANUSCRIPT COMPONENTS

8.1 Title

Enter the paper title at the top of the page in 16-pt. bold. Only the first word, proper nouns, and acronyms are capitalized. Keep titles brief and descriptive. Spell out acronyms unless they are widely known. Avoid starting with articles or prepositions, e.g., "The study of ...," or, "On the"

8.2 Author and affiliations

The author list is in 12-pt. regular, centered, with superscripted letters denoting author affiliations. Omit titles and degrees such as Dr., Prof., Ph.D., etc. The list of affiliations follows in a separate list below the authors. The institutional address of each author's affiliation should be clearly noted.

8.3 Section headings

Section headings are 11-pt. bold capitals, left-justified. Sections numbers have whole numbers, e.g., 1, 2, 3... Don't number the "Acknowledgements" and "References." Headings often used are: 1. Introduction, 2. Methodology, 3. Data, 4. Results, and 5. Conclusions.

8.4 Subsection heading

Subsection headings are left-justified, 10-pt. bold. Capitalize the first word, acronyms, and proper nouns.

8.5 Paragraphs

Add a blank line above and below section headings and between paragraphs. Avoid headings or one-line paragraphs at the top or bottom of a page by using page breaks or extra blank lines. One method to preserve page breaks is to make the bottom margin a little larger than the specifications. Indentation is optional. This spacing is automatic if you are using the NEON "section" styles in Word.

8.6 Text

Text is 10 point and justified. Each sentence ends with a period and a single space before the next sentence.

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8.7 Figures and captions

Figures are centered. Use or insert .jpg, .tiff, or .gif illustrations instead of PowerPoint or graphic constructions. Captions go below figures. Either center or indent 5 spaces from left margin and justify.



Figure 1. Figure captions are indented 5 spaces and justified. If you are familiar with Word styles, you can insert a field code called Seq figure which automatically numbers your figures.

8.8 Tables and captions

Tables are centered. The caption goes above the table. The caption text should indent 5 spaces from left margin and justify. Table examples are on page 1 and 2 and below.

9 MATHEMATICAL EQUATIONS

Use common fonts like Times Roman in your math equations. A math reference in a paragraph sentence such as $\alpha \theta \frac{\rho}{s}$ is not numbered. The steps of a mathematical argument can be numbered using a right-aligned tab for clarity, for example

$$\alpha = \frac{-b \pm \sqrt{b^2 - 2ac}}{2o} \tag{1}$$

and

$$\rho = \sum (x - x')^2 \tag{2}$$

10 USING THIS TEMPLATE AND ITS AUTOMATIC FORMATTING

10.1 View the pre-formatted styles

To see the formats available with this manuscript, go to the Format menu and choose "Styles and Formatting". To view which style is being used in any part of this document, place your cursor on the line and look in the Styles and Formatting display.

10.2 Using NEON styles

To use this template in Microsoft Word: open this file and save it to a new file name. You can type over existing text when generating your paper. Alternately, you can delete all text, and select the NEON style for each paragraph from the Styles and Formatting menu.

10.3 Notes on NEON styles

The styles listed in Table 2 automatically add extra spacing before and/or after paragraphs: NEON title, NEON authors-affiliations, NEON section heading, NEON subsection heading, and NEON body text. The 1.1 Heading 2 style automatically goes into the body text style after one paragraph return.

10.4 References

Number references sequentially using superscripted numbers (i.e., ...exceeding the dark current¹).

ACKNOWLEDGEMENTS

All memos must acknowledge support by NSF. An appropriate statement is:

“This material is based upon work supported by the National Science Foundation under Grant #XXXXXXXXXX.”

REFERENCES

- Booth, N. and Smith, A. S., [Infrared Detectors], Goodwin House Publishers, New York & Boston, 241-248 (1997).
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Van Derlofske, J. F., "Computer modeling of LED light pipe systems for uniform display illumination," Proc. SPIE 4445, 119-129 (2001).
C. Jones, Director, Miscellaneous Optics Corporation, interview, Sept. 23, 2008.
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