

Title here

Author One* and Author Two[†]

American Meteorological Society, Boston, Massachusetts

Extra Author

Affiliation, City, State/Province, Country

⁶ **Corresponding author:* Author name, email address

⁷ [†]Current affiliation: NCAR, Boulder, Colorado.

ABSTRACT

8 Enter the text of your abstract here. This is a sample American Meteorological Society (AMS)
9 \LaTeX template. This document provides authors with instructions on the use of the AMS \LaTeX
10 template. Authors should refer to the file `amspaper.tex` to review the actual \LaTeX code used to
11 create this document. The `template.tex` file should be modified by authors for their own manuscript.

12 **1. Introduction**

13 This document will provide authors with the basic American Meteorological Society (AMS)
14 formatting guidelines. This document was created using L^AT_EX and demonstrates how to use
15 the L^AT_EX template when submitting a manuscript to the AMS. The following sections will
16 outline the guidelines and formatting for text, math, figures, and tables while using L^AT_EX for
17 a submission to the AMS. An attempt to compile amspaper.tex should be made before using
18 the template. The files have been tested on Windows, Linux, and Mac OS using T_EX Live
19 2019 (available online at <http://www.tug.org/texlive/>). Feedback and questions should
20 be sent to latex@ametsoc.org. Additional information is available on the AMS L^AT_EX Submis-
21 sion Info web page ([http://www2.ametsoc.org/ams/index.cfm/publications/authors/
22 journal-and-bams-authors/author-resources/latex-author-info/](http://www2.ametsoc.org/ams/index.cfm/publications/authors/journal-and-bams-authors/author-resources/latex-author-info/)).

23 Authors should use the empty template.tex to begin their paper. A valuable source of L^AT_EX
24 information is the TeX Frequently Asked Questions page (available online at faq.tug.org).

25 **2. Formatting text and sections**

26 The text should be divided into sections, each with a separate heading and consecutive numbering.
27 Note, however, that single secondary, tertiary, and quaternary sections remain unnumbered. Each
28 section heading should be placed on a separate line using the appropriate L^AT_EX commands.

29 *Secondary headings*

30 Secondary headings labeled with letters are formatted using the `\subsection*{ }` for a single
31 subsection within a section or `\subsection{ }` for multiple subsections within one section.

32 TERTIARY HEADINGS

33 Tertiary headings are formatted using the `\subsubsection*{}` for single a subsubsection within a
34 subsection or `\subsubsection{}` for multiple subsubsections within a subsection.

35 *Quaternary headings* Quaternary headings are formatted using the `\paragraph*{}` for a single
36 paragraph within a subsubsection or `\paragraph{}` for multiple paragraphs within a subsection.

37 3. Citations

38 Citations to standard references in text should consist of the name of the author and the year
39 of publication, for example, Becker and Schmitz (2003) or (Becker and Schmitz 2003) using the
40 appropriate `\citete` or `\citep` commands, respectively. A variety of citation formats can be used
41 with the `natbib` package; however, the AMS prefers that authors use only the `\citete` and `\citep`
42 commands. References should be entered in the `references.bib` file. For a thorough discussion of
43 how to enter references into the `references.bib` database file following AMS style, please refer to
44 the **AMS_RefsV5.pdf** document included in this package.

45 4. Formatting math

46 The following sections will outline the basic formatting rules for mathematical symbols and
47 units. In addition, a review of the `amspaper.tex` file will show how this is done with the use of
48 \LaTeX commands. The AMS template provides the American Mathematical Society `math`, `font`,
49 `symbol`, and `boldface` packages for use in math mode.

50 a. Mathematical symbols

51 Symbols must be of the same font style both in text discussion and in displayed equations or
52 terms (and figures should be prepared to match). Scalar single-character symbols are set italic,

53 Greek, or script. Examples are u , L [note that ν (Greek upsilon) is used instead of ν (italic “vee”)
 54 to avoid confusion with ν (Greek nu) often used for viscosity; this is handled automatically when
 55 in L^AT_EX math mode], w , x , y , z , f , g , r , indices such as i or j , and constants such as C_D , k , or
 56 K . Multiple-character scalar variables, abbreviations, nondimensional numbers, and acronyms for
 57 variables are set regular nonitalic: LWC, Re, Ro, BT, abs, obs, max, min, Re/Im (real/imaginary),
 58 etc. For vectors, use boldface nonitalic Times Roman as in \mathbf{V} , \mathbf{v} , or \mathbf{x} , and \mathbf{i} , \mathbf{j} , and \mathbf{k} unit vectors.
 59 Do not use the L^AT_EX `\vec` command to denote vectors. For matrix notation, use nonitalic boldface
 60 Arial (or sans serif) font as in \mathbf{A} , \mathbf{B} , or \mathbf{M} . All mathematical operator abbreviations/acronyms are
 61 set lowercase regular Roman font, except O (on the order of): sin, cos, tan, tanh, cov, Pr (for
 62 probability; note same as Prandtl number), const (for constant), c.c. (complex conjugate).

63 *b. Units*

64 Units are always set on a single line with a space separating the denominator, which is set with a
 65 superscript -1 , -2 , and so on, rather than using a slash for “per.” Examples are g kg^{-1} , $\text{m}^2 \text{s}^{-1}$, W
 66 m^{-2} , g m^{-3} , and m s^{-1} (note that ms^{-1} is the unit for “per millisecond”).

67 *c. Equations*

68 Brief equations or terms set inline in text must be set as a single-line expression because page
 69 proofs are not double spaced, for example, $\rho^{-1}p/x$ or $(1/\rho)p/x$ or $(a-b)/(c+d)$; that is, use a
 70 superscript -1 for the denominator. In case of a more complicated term or equation, it should be
 71 set as an unnumbered display equation, such as

$$x = \frac{2b \pm \sqrt{b^2 - 4ac}}{2c}.$$

72 Otherwise, numbered display equations can be entered using the appropriate equation command,
73 such as

$$x = \frac{2b \pm \sqrt{b^2 - 4ac}}{2c}. \quad (1)$$

74 Lists of equations are punctuated as written English, and commas, semicolons, and periods are
75 placed where appropriate. Conjunctions such as “and,” “while,” “when,” or “for” are also typically
76 placed before the final element in a mathematical phrase, as befits the intended mathematical
77 meaning.

78 **5. Figures and tables**

79 The AMS prefers that all figures and tables are placed **at the end of the document** prior to
80 submission. A list of tables and a list of figures will appear near the end of the PDF file, before the
81 actual tables and figures. These lists are necessary for submission.

82 For appendix figures and tables, special commands are needed to manually change the numbering
83 to ensure that each appendix figure or table is numbered as part of the respective appendix and
84 not as a continuation of the main paper. Use the command `\appendcaption{ }` instead of the usual
85 `\caption{ }` to adjust the numbering; for example, for Table A1, you would use the command
86 `\appendcaption{A1}`.

87 Note that the normal `\ref{ }` command cannot be used to cite appendix figures and tables as the
88 numbering will be incorrect. Callouts for appendix figures and tables in the text will need to be
89 written out as plain text, for example, Fig. A1 and Table A1.

90 *a. Figures*

91 The insertion of a sample figure (Fig. 1) and caption is given below (in the .tex document) and at
92 the end of the document. Standard figure sizes are 19 (one column), 27, 33, and 39 (two columns)
93 picas.

94 *b. Tables*

95 Each table must be numbered, provided with a caption, and mentioned specifically in the text.
96 See below (in the .tex document) and at the end of the document for the formatting of a sample
97 table (Table 1).

98 *Acknowledgments.* Keep acknowledgments (note correct spelling: no “e” between the “g” and
99 “m”) as brief as possible. In general, acknowledge only direct help in writing or research. Financial
100 support (e.g., grant numbers) for the work done, for an author, or for the laboratory where the work
101 was performed is best acknowledged here rather than as footnotes to the title or to an author’s name.
102 Contribution numbers (if the work has been published by the author’s institution or organization)
103 should be included as footnotes on the title page, not in the acknowledgments.

104 *Data availability statement.* The data availability statement is where authors should describe how
105 the data underlying the findings within the article can be accessed and reused. Authors should
106 attempt to provide unrestricted access to all data and materials underlying reported findings. If
107 data access is restricted, authors must mention this in the statement.

108 APPENDIX A

109 **Title of Appendix**

110 *Appendix section*

111 The AMS template allows authors to format an unlimited number of appendixes. To format a
112 single appendix, use the `\appendix` command with no additional argument. Otherwise, add the
113 appropriate one-letter argument to the `\appendix` command (e.g. `\appendix[A]`, `\appendix[B]`,
114 `\appendix[C]`, etc.) corresponding to the appropriate appendix.

115 The title of the appendix can be formatted using the `\appendixtitle{ }` command. The `\subsection`,
116 `\subsubsection`, and `\paragraph` commands are used to create sections within the appendix. (Note
117 that the appendix title takes the place of `\section` in the appendix, so the first section should begin
118 with `\subsection` instead of `\section`.) Equations are automatically numbered appropriately for
119 each appendix. Here is an example of the first equation in appendix A, automatically labeled (A1):

$$x = \frac{2b \pm \sqrt{b^2 - 4ac}}{2c}. \quad (\text{A1})$$

120 For appendix figures and tables, special commands are needed to manually change the numbering
121 to ensure that each appendix figure or table is numbered as part of the appendix and not as
122 a continuation of the main paper. Use the command `\appendcaption{ }` instead of the usual
123 `\caption{ }` to adjust the numbering; for example, for Table A1, you would use the command
124 `\appendcaption{A1}`. In-text callouts for each appendix figure and table will need to be written
125 as plain text; the usual `\ref{ }` command cannot be used.

126 APPENDIX B

127 **File Structure of the AMS L^AT_EX Package**

128 *a. AMS L^AT_EX files*

129 You will be provided with a tarred, zipped L^AT_EX package containing 17 files. These files are

130 **Basic style file:** ametsocV5.cls.

131 The file ametsocV5.cls is the manuscript style file.

- 132 • Using `\documentclass{ametsocV5}` for your .tex document will generate a PDF that
133 follows all AMS guidelines for submission and peer review.
- 134 • Using `\documentclass[twocol]{ametsocV5}` for your .tex document can be used to
135 generate a PDF that closely follows the layout of an AMS journal page, including single
136 spacing and two columns. This journal style PDF is only for the author's personal use,
137 and any papers submitted in this style will not be accepted.

138 Always use `\documentclass{ametsocV5}` when generating a PDF for submission to the
139 AMS.

140 **Template:** templateV5.tex, for the author to use when making his/her paper. The file provides a
141 basic blank template with some section headings for authors to easily enter their manuscript.

142 **Sample .tex and .pdf files:** The file amspapeV5r.tex contains the \LaTeX code for the sample file.
143 The resulting PDF can be seen in amspaper.pdf (this file).

144 **Sample article:** article formatted in draft and two-column mode.

- 145 • AMSSamp1V5.tex, AMSSamp1V5.pdf
146 Formal paper done in draft mode and the resulting .pdf.
- 147 • AMSSamp2V5.tex, AMSSamp2V5.pdf
148 The same paper using the `[twocol]` option and the resulting .pdf.
- 149 • FigOne.pdf, FigTwo.pdf, and figure01.pdf are sample figures.

150 **Bibliography Files:** ametsoc2014.bst, database2020.bib, and references.bib.

- ametsoc2014.bst is the bibliography style file.
- database2020.bib is an example of a bibliographic database file.
- references.bib should be altered with your own bibliography information.

Documentation: found in AMSDocsV5.pdf. Additional information found in readme.txt, which contains a list of the files and how they are used.

b. Help for Authors

Questions and feedback concerning the use of the AMS \LaTeX files should be directed to latex@ametsoc.org. Additional information is available on the AMS \LaTeX Submission Info web page (<http://www2.ametsoc.org/ams/index.cfm/publications/authors/journal-and-bams-authors/author-resources/latex-author-info/>).

APPENDIX C

Building a PDF and Submitting Your \LaTeX Manuscript Files to the AMS

a. Building your own PDF

There are a variety of different methods and programs that will create a final PDF from your \LaTeX files. The easiest method is to download one of the freely available text editors/compilers such as TexWorks or TeXnicCenter. TexWorks is installed with the TeXLive distribution and provides both a text editor and the ability to compile your files into a PDF.

b. Submitting your files to the AMS for peer review

The AMS uses the Editorial Manager system for all author submissions for peer review. Editorial Manager uses the freely available T_EX Live 2018 distribution. This system will automatically generate a PDF from your submitted L^AT_EX files and figures.

You should not upload your own PDF into the system. If the system does not build the PDF from your files correctly, refer to the AMS L^AT_EX FAQ page first for possible solutions. If your PDF still does not build correctly after trying the solutions on the FAQ page, email latex@ametsoc.org for help.

c. Other software

As mentioned above, there is a variety of software that can be used to edit .tex files and build a PDF. The AMS does not support L^AT_EX-related WYSIWYG software, such as Scientific Workplace, or WYSIWYM software, such as LyX. T_EX Live (available online at <http://www.tug.org/texlive/>) is recommended for users needing an up-to-date L^AT_EX distribution with software that includes an editor and the ability to automatically generate a PDF.

This shows how to enter the commands for making a bibliography using BibT_EX. It uses `references.bib` and the `ametsoc2014.bst` file for the style.

References

Becker, E., and G. Schmitz, 2003: Climatological effects of orography and land–sea heating contrasts on the gravity wave–driven circulation of the mesosphere. *J. Atmos. Sci.*, **60**, 103–118, doi:10.1175/1520-0469(2003)060<0103:CEOOAL>2.0.CO;2.

Knutti, R., and Coauthors, 2008: A review of uncertainties in global temperature projections over the twenty-first century. *J. Climate*, **21**, 2651–2663, doi:10.1175/2007JCLI2119.1.

190 **LIST OF TABLES**

191 **Table 1.** This is a sample table caption and table layout. 13

192 **Table A1.** Here is the appendix table caption. 14

TABLE 1. This is a sample table caption and table layout.

N	X	Y	Z
0000	0000	0010	0000
0005	0004	0012	0000
0010	0009	0020	0000
0015	0016	0036	0002
0020	0030	0066	0007
0025	0054	0115	0024

Table A1. Here is the appendix table caption.

1	2	3
a	b	c
d	e	f

193	LIST OF FIGURES	
194	Fig. 1. Enter the caption for your figure here. Repeat as necessary for each of your figures. Figure	
195	from Knutti et al. (2008).	16
196	Fig. A1. Here is the appendix figure caption.	17
197	Fig. B1. Here is the appendix figure caption.	18

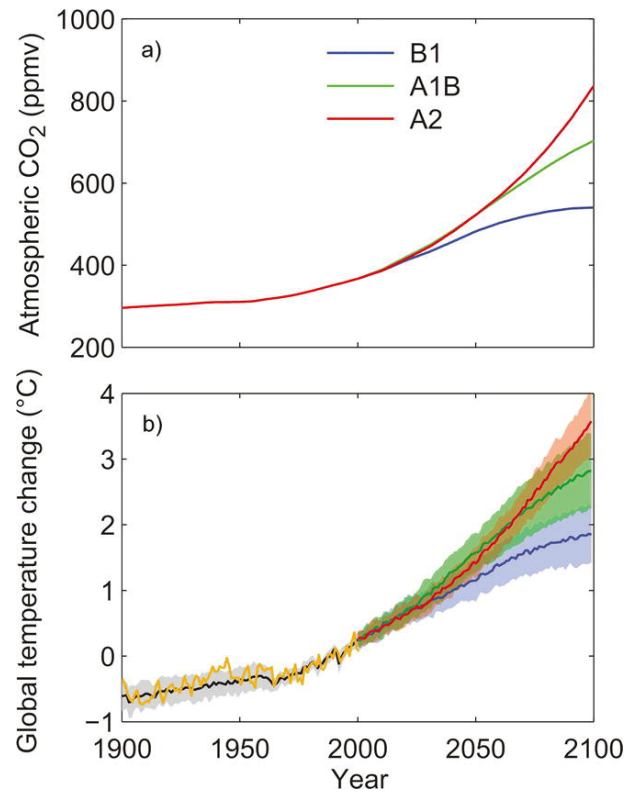


FIG. 1. Enter the caption for your figure here. Repeat as necessary for each of your figures. Figure from Knutti et al. (2008).

(illustration here)

Fig. A1. Here is the appendix figure caption.

(illustration here)

Fig. B1. Here is the appendix figure caption.