USING THE AMS EXTENDED ABSTRACT LATEX CLASS AND TEMPLATE

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1. INTRODUCTION

The purpose of the `ametsocextabs` LaTeX class template is to assist presenters at American Meteorological Society (AMS) conferences prepare an extended abstract that follows the AMS Extended Abstract Instructions (AMS 2025a). While AMS no longer provides hard copies of the extended abstracts, the abstracts allow presenters to capture their presentation in greater detail.

Also, The Max A. Eaton Student Prize, awarded for an outstanding student paper presented at each conference on hurricanes and tropical meteorology, requires students to submit an extended abstract and evaluates the quality of both the extended abstract and presentation (AMS 2025d,e).

2. THE `ametsocextabs` LaTeX CLASS

2.1. Font Size

The AMS Extended Abstract Instructions permits font sizes of 9–10 pt in a sans-serif typeface such as Helvetica (AMS 2025a). To select a size, include one of the following options in the documentclass call:

- `9pt` for a 9 pt font size (the default), and
- `10pt` for a 10 pt font size.

As an example, using the 9 pt option would look like `\documentclass[9pt]{ametsocextabs}`.

2.2. Mathematical Formula Typeface

Mathematical Formulas should follow the AMS author guidelines (AMS 2025c). One difference between AMS journal articles and extended abstracts is the typeface in which the mathematical formulates are presented.

Here, by default, mathematical formulas render with a sans-serif typeface to stay consistent with the AMS guidelines shown by this example for the cosine function:

$$y = \cos(x), \tag{1}$$

where x is the independent variable and y is the dependent. Equations can be referenced in the usual way, as with (1).

However, users can add the `serif` class option to the documentclass call to change the mathematical formulas from a sans-serif typeface to a serifed typeface (e.g., `\documentclass[serif]{ametsocextabs}`). This option might be useful when symbols are not clear (e.g., a lowercase 'l' renders as *l* and an uppercase 'i' as *I*).

2.3. Citations and References

The `ametsocextabs` LaTeX class template includes the AMS BibTeX style file `ametsocV6`. With which, presenters can follow the citation instructions included in the documentation for the AMS LaTeX files AMS (2025b,f).

The AMS BibTeX style uses two basic citation macro commands:

i. `\citet` for textual citations →Eliassen (1951), and

ii. `\citep` for parenthetical citations →(Eliassen 1951).

You can add text to a parenthetical citation and multiple citations just as in the AMS LaTeX files (e.g., Eliassen 1951; AMS 2025b,f).

Store references in a `.bib` bibliography file such as the provides `references.bib` file. Entries should follow AMS's style with the appropriately populated fields (e.g., AMS does not use issue but BibTeX will still render it). See the "How to Use the American Meteorological Society Bibliographic Style File" PDF file included in the AMS LaTeX files AMS (2025b,f).

2.4. Sections

The class provides multilevel or nested sections that provide a section depth of four levels:

- `\section`,
- `\subsection`,
- `\subsubsection`, and
- `\paragraph`.

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Table 1: Values of y given x using the cosine function in (1).

x	y
0	1
$\pi/2$	0
π	-1

For tagged PDFs, make sure that the nesting is used in the appropriate order and not for stylistic display.

The class contains two additional, optional sections that should only appear once in the document:

- `\datastatement` — provides a place where presenters can note where readers will find the data used in the research, and
- `\acknowledgments` — provides a place where presenters can highlight funding sources and any disclaimers associated with the work.

The class also has the ability to add appendixes. See the Appendix for more information.

2.5. Tables and Figures

Nothing special here. Tables and figures can be added as one would normally do. As a reminder, AMS format is to have the caption above a table (see Table 1) and below a figure. Both can be one or two columns wide.

Data availability statement. The LaTeX class file used to generate this PDF issue available under a BSD 3-clause license at `https://github.com/CSlocumWX/ams_extended_abstract`.

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APPENDIX

An Appendix on Appendixes

This class uses the AMS format to allow for multiple appendixes. Whether one or more appendixes, each should have an appendix title that is added with the `\appendixtitle` command.

If more than one appendix, a letter should be added at the end of the appendix command (e.g., `\appendix[A]`, `\appendix[B]`). See the AMS (2025b) and AMS (2025f) for more information.

REFERENCES

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