

The Title Goes Here with Each Initial Letter Capitalized

Author's Name^{1, a)} and Author's Name^{2, 3, b)}

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²Replace this text with an author's affiliation

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Abstract. The AIP Proceedings article template has many predefined paragraph styles for you to use/apply as you write your paper. To format your abstract, use the Microsoft Word template style: *Abstract*. Each paper *must* include an abstract. Begin the abstract with the word "Abstract" followed by a period in bold font, and then continue with a normal 9 point font.

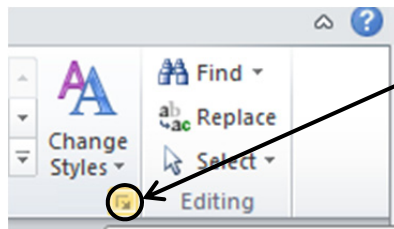
FIRST, SECOND, AND THIRD LEVEL HEADINGS

This document was prepared using the AIP Proceedings template for Microsoft Word. It provides a simple example of a paper and offers guidelines for preparing your article. Here we introduce the paragraph styles for Level 1, Level 2, and Level 3 headings. To format a paragraph, use the Microsoft Word template style: *Paragraph*.

Do not include any headers, footers, or page numbers in your document. They will be added to your article PDF by AIP Publishing, so please do not amend this template to add them to your paper.

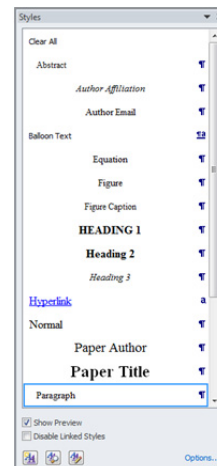
How to Apply the AIP Proceedings Template Paragraph Styles

Here is how to display a pop-up window from which to select and apply the AIP Proceedings template paragraph styles:



Click here to display the Styles window – making it easy to choose and apply the AIP Proceedings template styles.

To apply a style to a paragraph, click anywhere in the paragraph text then click on the appropriate style listed in the Styles window.



How to Use this Template

You can edit or delete the content provided in this template and replace it with the text and figures of your article. Please be sure you do not accidentally leave any of this text as part of your paper!

Heading with Each Initial Letter Capitalized

Apart from prepositions and articles, all words in second and third level headings should have their initial letters in uppercase. Prepositions are words like “for,” “from,” “with,” “in,” “off,” and articles include words such as “an,” “a,” “the.”

This is the paragraph spacing that occurs when you use the [ENTER] key.

Heading with Each Initial Letter Capitalized

As with first and second level headings, all words except prepositions and articles (see above) should appear with initial letters in uppercase.

This is the paragraph spacing that occurs when you use the [ENTER] key.

MATHEMATICS

Here we provide some basic advice for formatting your mathematics, but we do not attempt to define detailed styles or specifications for mathematical typesetting. You should use the standard styles, symbols, and conventions for the field/discipline you are writing about.

A Note on Microsoft Word’s Equation Editors

From Word 2007 onwards, Microsoft Word provides two “Equation Editors,” which, for ease of reference, we’ll call “Old Style Equations” and “New Style Equations.”

- **“New Style Equations”** (Word 2007 onwards): With Word 2007 Microsoft introduced a powerful new built-in Equation Editor that enables input of sophisticated mathematics typeset (usually) in the Cambria Math font. You access it from the Insert menu.
- **“Old Style Equations”** (Word 97–Word 2003): For versions of Microsoft Word between Word 97 and Word 2003, mathematical input was created by an add-in: Inserting and editing a “Microsoft Equation 3.0 object,” typically by *Insert* ⇒ *Object* and selecting “Microsoft Equation 3.0.”

Newer versions of Microsoft Word (Word 2007 and onwards) still support the original “Old Style Equations” method of creating mathematics by inserting an equation via *Insert* ⇒ *Object* and selecting “Microsoft Equation 3.0.”

Which Microsoft Word Equation Editor Should I Use?

Due to technical requirements of OpenType font technology, Microsoft Word’s “New Style” Equation Editor works only with fonts specially designed for mathematical typesetting. Unless you have obtained and configured new OpenType math fonts, it is highly likely that your installation of Word will use the Cambria Math font for all mathematics created with the “New Style” editor. Using the Cambria Math font for mathematics and Times Roman for your text will cause a mismatch in the visual appearance of your article, so, for consistency, we prefer authors to use the “Old Style” Equation Editor because it is straightforward to amend the size/style of the fonts it uses.

Formatting and Inserting Equations

Equations should be centered with equation numbers on the right-hand side (flush right). Achieving a pleasing layout of equations can be tricky in Microsoft Word, so here are some tips. You can either:

1. Copy, paste, and edit the sample equation provided (recommended), or
2. Manually insert an equation and equation number


Copy, Paste, and Edit a Sample Equation

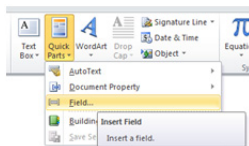
To use this “Old Style Equation” as a “template,” highlight the entire line, then use cut and paste to the new location. Note that the equation number will automatically update (increment).

$$\frac{d[F_1]}{d\omega_2} = SAM_2 \cos \omega, \quad \frac{d[F_1]}{d\omega_3} = SAM_2 \cos \omega \quad (1)$$

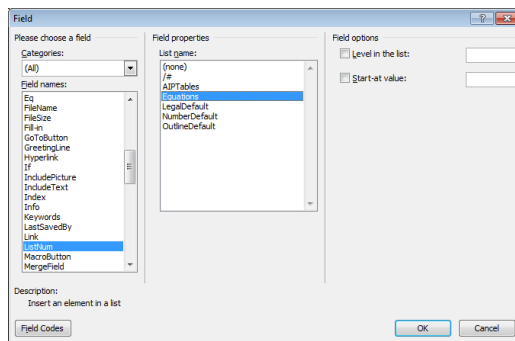
Manually Inserting an Equation and Equation Number

If you prefer to manually insert and number equations, follow this step-by-step guide:

1. Make sure you can see “hidden characters” by switching on “show invisibles” from the Home menu (it looks like this: ). This allows you to see paragraph markers (¶) and tab characters (→), which are usually hidden from view.
2. Create a blank paragraph by pressing [ENTER].
3. Format your new blank paragraph by applying the Microsoft Word template style: *Equation*. The *Equation* paragraph style sets up the tabs so that you can center the equation and have an equation number appear at the right.
4. Place your cursor at the start of your new paragraph and press the [TAB] key twice.
5. Place your cursor between the tab characters (→) and insert your equation using *Insert* ⇒ *Object* ⇒ *Microsoft Equation 3.0*.
6. To add an equation number, place your cursor at the end of the paragraph (just before the paragraph markers (¶)) and after the second tab character (→)).
7. On the *Insert* tab, in the *Text* group, click *Quick Parts* and then click *Field*:



8. A dialog box should appear:



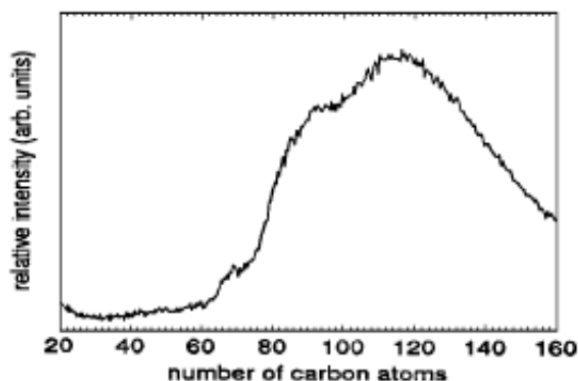
9. From the list of *Field Names* on the left of the dialog box, select *ListNum*.
10. From the list of *Field properties* on the right, select the “Equations” *List name* and click OK. You should now see an equation number in parentheses: e.g., (3).

OTHER SPECIFICATIONS

Figures, tables, and equations must be inserted in the text and may not be grouped at the end of the paper. Important: A miscount of figures, tables, or equations may result from revisions. Please double check the numbering of these elements before you submit your paper to your proceedings editor.

Figures

If you need to arrange a number of figures, a good tip is to place them in a table, which gives you additional control of the layout. Leave a line space between your figure and any text above it, like this one:



(a)



(b)

FIGURE 1. To format a figure caption use the Microsoft Word template style: *Figure Caption*. The text “**FIGURE 1,**” which labels the caption, should be bold and in upper case. If figures have more than one part, each part should be labeled (a), (b), etc. Using a table, as in the above example, helps you control the layout

Cite all figures in the text consecutively. The word “Figure” should be spelled out if it is the first word of the sentence and abbreviated as “Fig.” elsewhere in the text. Place the figures as close as possible to their first mention in the text at the top or bottom of the page with the figure caption positioned below, all centered. Figures must be inserted in the text and may not follow the Reference section. Set figure captions in 9 point size, Times Roman font. Type the word “**FIGURE 1.**” in bold uppercase, followed by a period.

Color Figures

Authors are welcome to use color figures within their article. For online publication, there are no costs added for color figures. However, for *printed proceedings* (if requested by your conference organizer), there is an additional cost. Please consult directly with your conference organizer. If your conference organizer has asked AIP Publishing to produce printed copies (many ask AIP Publishing for online-only publication), then all figures will be printed in black-and-white unless you make specific arrangements with your organizer(s) to include color figures in your article and pay to them the associated fee(s) they request. We advise that many color figures can be printed in black-and-white with no loss of information; however, some figures do lose information when reproduced in black-and-white. Check your figure legends carefully and, if your figures are to be printed in black-and-white, remove from your text/descriptions any references to color.

Tables

Due to the wide range and complexity of tables, we simply offer an example for guidance. Please follow the style for table (and figure) captions.

TABLE 1. To format a table caption, use the Word template style: *Table Caption*. The text “**TABLE 1,**” which labels the caption, should be bold and all letters capitalized. Center this text above the Table. Tables should have top and bottom rules, and a rule separating the column heads from the rest of the table only.

Column Header Goes Here	Column Header Goes Here	Column Header Goes Here
Row Name Here	x	x
Row Name Here	x	x
Row Name Here	x	x

FINAL KEY POINTS TO CONSIDER

Here are the main points you need to follow (the AIP author template packages contain comprehensive guidance):

- Write and prepare your article using the AIP template.
- Create a PDF file of your paper (making sure to embed all fonts).
- Send the following items to your conference organizer:
 - PDF file of your paper
 - Signed Copyright Transfer Agreement
 - (If it applies) Copies of any permissions to re-use copyrighted materials in your article (e.g., figures from books/journals)

Font Embedding

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Why Should I Care About Font Embedding?

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2. To ensure that your online article PDF file displays and prints correctly for everyone who wants to read your work.

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Summary: Points to Consider when Preparing Your Paper

Well prepared papers enable rapid publication and reduce unnecessary work for your proceedings editor(s). The following points summarize the key issues you need to comply with when preparing your paper for AIP Proceedings.

- **Check your article PDF file!** It is not uncommon for errors to appear in PDFs generated from Microsoft Word – corrupted math, figures reflowing, etc. It is absolutely essential to very carefully check your article PDF file before sending it to the proceedings editor(s).
- **Do not add page numbers or headers/footers.** Our article templates deliberately do not include these, so please do not add them.

- **Do not alter the margins of our templates.** They are carefully designed for AIP’s production process: Altering them can cause significant delays.
- **Prepare and format references with care.** Please prepare and format your references in accordance with the examples supplied with the author templates and documentation.
- **Embed all fonts into your article PDF.** The importance of font embedding is discussed in the section *Font Embedding* (above). PDFs supplied without embedded fonts are often completely unusable for printing or publication purposes. In such cases, we have to return those PDFs to the proceedings editors for font embedding. Failure to embed fonts can cause unnecessary inconvenience to your proceedings editor(s) and publication delays for other authors. Failure to provide a replacement paper in a timely fashion may result in an article being removed from the proceedings.
- **Use clear, legible graphics and diagrams.** Readers of your paper will be grateful. If they cannot read it, they are unlikely to cite it.
- **Do not use copyrighted material without permission.** Papers using copyrighted material without appropriate permission and acknowledgment will be excluded from the proceedings.
- **No 1-page papers please.** 1-page, abstract-only contributions are not acceptable and will be excluded from the proceedings.
- **Avoid large PDF files (10 MB maximum, ideally).** For the benefit of your readers, we recommend keeping your article PDF file below 10 MB. This is a recommendation, not a requirement.

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- For conference organizers: <http://proceedings.aip.org/organizers>

ACKNOWLEDGMENTS

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The reference section will follow the “Acknowledgment” section. References should be numbered using Arabic numerals followed by a period (.) as shown below, and should follow the format in the below examples.

REFERENCES

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