Preparation of Papers for AIAA Technical Journals

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These instructions give you guidelines for preparing papers for AIAA Technical Journals using LaTeX. If you previously prepared an AIAA Conference Paper using the Meetings Papers Template, you may submit using the Meetings Papers Template so long as the text is double-spaced. Carefully follow the journal paper submission process in Sec. II of this document. Keep in mind that the electronic file you submit will be formatted further at AIAA. This first paragraph is formatted in the abstract style. Abstracts are required for regular, full-length papers and express articles. Be sure to define all symbols used in the abstract, and do not cite references in this section. The footnote on the first page should list the Job Title and AIAA Member Grade (if applicable) for each author.

Nomenclature

(Nomenclature entries should have the units identified)

A = amplitude of oscillation

a = cylinder diameter

C_p = pressure coefficient

Cx = force coefficient in the x direction

Cy = force coefficient in the y direction

c = chord

dt = time step

Fx = X component of the resultant pressure force acting on the vehicle

Fy = Y component of the resultant pressure force acting on the vehicle

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f, g = generic functions

h = height

i = time index during navigation

j = waypoint index

K = trailing-edge (TE) nondimensional angular deflection rate

Θ = boundary-layer momentum thickness

ρ = density

Subscripts

cg = center of gravity

G = generator body

iso = waypoint index

I. Introduction

This document is a LaTeX template for preparation of papers for AIAA Technical Journals. If you are reading a hard-copy or .pdf version of this document, download the electronic file, new-aiaa.cls, and use it to prepare your manuscript.

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The default font for the Template is Times New Roman, 10-point size. The first line of every paragraph should be indented, and all lines should be double-spaced. Default margins are 1 in. on all sides. In the electronic version of this template, all margins and other formatting are preset. There should be no additional (blank) lines between paragraphs.

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Format the title of your paper in bold, 18-point type, with capital and lower-case letters, and center it at the top of the page. The names of the authors, business or academic affiliation, city, and state/province follow on separate lines below the title. The names of authors with the same affiliation can be listed on the same line above their collective affiliation information. Author names are centered, and affiliations are centered and in italic type. The affiliation line for each author includes that author's city, state, and zip/postal code (or city, province, zip/postal code and country, as appropriate). The first footnote (bottom of first page) contains the job title and department name, and AIAA member grade for each author. Author email addresses may be included also.

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E. Biographies

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Line drawings must be clear and sharp. Make sure that all lines and graph points are dark and distinct and that

Table 1 Transitions selected for thermometry

Line	Transition v''		J''	Frequency, cm^{-1}	FJ, cm^{-1}	Gv, cm^{-1}
a	0	P_{12}	2.5	44069.416	73.58	948.66
b	1	R_2	2.5	42229.348	73.41	2824.76
c	2	R_{21}	805	40562.179	71.37	4672.68
d	0	R_2	23.5	42516.527	1045.85	948.76

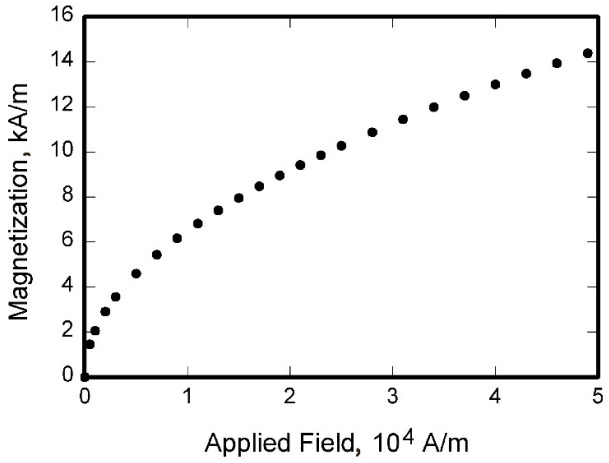

Fig. 1 Magnetization as a function of applied fields.

lettering is legible. Keep the lettering size and style uniform both within each figure and throughout all of your illustrations, no smaller than 8- to 10-point type for artwork that is sized to fit the column width (3 ¼ in.) or the full-page width (7 in.). Place figure captions below each figure, and limit main caption length to 20–25 words. If your figure has multiple parts, include the labels "a)," "b)," etc., below and to the left of each part, above the figure caption. Please verify that the figures and tables you mention in the text actually exist. When citing a figure in the text, use the abbreviation "Fig." except at the beginning of a sentence. Do not abbreviate "Table." Number each different type of illustration (i.e., figures and tables) sequentially with relation to other illustrations of the same type.

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H. Equations

Equations are numbered consecutively, with equation numbers in parentheses flush right, as in Eq. (1). Insert a blank line on either side of the equation. To insert an equation into the LaTeX document, use the `\begin{equation}...\end{equation}` command environment.

A sample equation is included here, formatted using the preceding instructions:

$$\int_0^{r_2} F(r,\varphi)\mathrm{d}r\,\mathrm{d}\varphi = [\sigma r_2/(2\mu_0)] \int_0^{\infty} \exp(-\lambda|z_j - z_i|)\lambda^{-1} J_1(\lambda r_2) J_0(\lambda r_i\,\lambda \mathrm{d}\lambda) \tag{1}$$

Be sure that symbols in your equation are defined in the Nomenclature or immediately following the equation. Also define abbreviations and acronyms the first time they are used in the main text. (Very common abbreviations such as AIAA and NASA, do not have to be defined.)

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Use only one space after periods or colons. Hyphenate complex modifiers: "zero-field-cooled magnetization." Insert a zero before decimal points: "0.25," not ".25." Use "cm^2" not "cc."

A parenthetical statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within parenthesis.) Use American, not English, spellings (e.g., "color," not "colour"). The serial comma is preferred: "A, B, and C" instead of "A, B and C."

Be aware of the different meanings of the homophones "affect" (usually a verb) and "effect" (usually a noun), "complement" and "compliment," "discreet" and "discrete," "principal" (e.g., "principal investigator") and "principle" (e.g., "principle of measurement"). Do not confuse "imply" and "infer."

V. Conclusion

Although a conclusion may review the main points of the paper, it must not replicate the abstract. A conclusion might elaborate on the importance of the work or suggest applications and extensions. Do not cite references in the conclusion. Note that the conclusion section is the last section of the paper to be numbered. The appendix (if present), funding information, other acknowledgments, and references are listed without numbers.

Appendix

An Appendix, if needed, appears **before** research funding information and other acknowledgments.

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Acknowledgments

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