

Preparation of Papers for AIAA Technical Conferences

First A. Author* and Second B. Author, Jr.†
Business or Academic Affiliation 1, City, State, Zip Code

Third Author‡
Business or Academic Affiliation 2, City, Province, Zip Code, Country

and

Fourth C. Author§
Business or Academic Affiliation 2, City, State, Zip Code

These instructions give you guidelines for preparing papers for AIAA Technical Conferences. Use this document as a template if you are using Microsoft Word 6.0 or later. Otherwise, use this document as an instruction set. Should this submission be for a non-electronic meeting, the electronic file of your paper will be formatted further at AIAA. Define all symbols used in the abstract. Do not cite references in the abstract. The footnote on the first page should list the Job Title and AIAA Member Grade for each author.

Nomenclature

A	=	amplitude of oscillation
a	=	cylinder diameter
C_p	=	pressure coefficient
C_x	=	force coefficient in the x direction
C_y	=	force coefficient in the y direction
c	=	chord
dt	=	time step
F_x	=	X component of the resultant pressure force acting on the vehicle
F_y	=	Y component of the resultant pressure force acting on the vehicle
f, g	=	generic functions
h	=	height
i	=	time index during navigation
j	=	waypoint index
K	=	trailing-edge (TE) nondimensional angular deflection rate

I. Introduction

THIS document is a template for Microsoft Word versions ME-XP or later, or Word for Mac OS. If you are reading a hardcopy or PDF version of this document, please download the electronic template file, Papers_Template.dot, from the AIAA [Meeting Papers Information Page](#) (“Publications: Meeting Papers” from the AIAA Web site) so you can use it to prepare your manuscript.

Authors using Microsoft Word will first need to save the Papers_Template.dot file in the “Templates” directory of their hard drive. To do so, simply open the Papers_Template.dot file and then click “File>Save As:” to save the template. (Note: Windows users will need to indicate “Save as Type>Document Template (*.dot)” when asked in the dialogue box; Mac users should save the file in the “My Templates” directory.) To create a new document using this template, use the command “File>New>From Template” (Windows) or “File>Project Gallery>My Templates”

* Insert Job Title, Department Name, Address/Mail Stop, and AIAA Member Grade for first author.

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(Mac). The new document that opens will be titled "Papers_Template.doc." To create your formatted manuscript, type your own text over sections of Papers_Template.doc, or cut and paste from another document and then use the available markup styles. The pull-down menu is at the left of the Formatting Toolbar at the top of your Word window (for example, the style at this point in the document is "Text"). Highlight a section that you want to designate with a certain style, then select the appropriate style name from the pull-down style menu. The style will automatically adjust your fonts and line spacing. *Do not change the font sizes, line spacing, or margins.* Use italics for emphasis; do not underline.

II. Procedure for Paper Submission

All manuscripts are to be submitted electronically via the AIAA Web site at <http://www.aiaa.org/>. To upload your paper, click the "Submit a Paper" tab at the top of the page. Select the "Submit a Paper to an AIAA Conference" link, then click the "Edit Old" button. When you submitted your abstract for review, you should have received a tracking number for your paper. Use this tracking number, along with the last name of the corresponding author, to gain access to the AIAA Author Status Page. This site will allow you to track your paper's status and submission deadlines, update author information, select a copyright statement, and upload your final manuscript.

Before you can upload your manuscript, you will need to select a copyright statement to appear on your paper. This can be achieved by clicking the "Copyright Information" link on the Author Status Page. Be sure to read the instructions and specific statements carefully before selecting a statement for your manuscript.

Once you have selected a copyright statement, you can use the "Upload Manuscript" feature of the Author Status Page to upload your paper. All accepted authors will be notified by AIAA of the relevant submission deadlines, and these deadlines will also appear directly under the conference title on the Author Status Page. Please pay special attention to these deadlines, as they are now strictly enforced.

As with the submission of your abstract, be sure the name of the file you upload for processing is short and simple (i.e., "msc12345.doc") with no spaces, tildes, symbols, or other unusual characters. If the file being uploaded is in Microsoft Word, the document must be based on the "Normal.dot" template (the AIAA Papers Template is based on this template). Failure to meet these requirements could result in a processing error that would require you to re-upload your manuscript. If you run into difficulties with the upload and/or conversion of your manuscript, please contact AIAA Papers Tech Support for additional assistance at paper_tech_support@aiaa.org.

If you are uploading a PDF or postscript file, please do not include foreign (i.e., non-Roman alphabet) fonts.

III. General Guidelines

The following section outlines general (nonformatting) guidelines to follow, drawn from the original AIAA Manuscript Preparation Kit. These guidelines are applicable to all authors (except as noted), and include information on the policies and practices relevant to the publication of your manuscript.

A. Publication by AIAA

Your manuscript *cannot* be published by AIAA if:

- 1) It has been published previously or
- 2) An appropriate copyright statement has not yet been selected.

B. Paper Review and Visa Considerations

It is the responsibility of the author to obtain any required government or company reviews for their papers in advance of publication. Start early to determine if the reviews are required; this process can take several weeks.

If you plan to attend an AIAA technical conference or professional development course held in the United States and you require a visa for travel, it is incumbent upon you to apply for a visa with the U.S. embassy (consular division) or consulate with ample time for processing. To avoid bureaucratic problems, AIAA strongly suggests that you submit your formal application to U.S. authorities a minimum of 120 days in advance of the date of anticipated travel.

Prospective conference and course attendees requiring a visa to travel to the United States should first contact AIAA to request an official letter of invitation. This letter and a copy of the conference call for papers should be presented along with the required documentation to the U.S. consular officials as part of the formal application process. AIAA cannot directly intervene with the U.S. Department of State, consular offices, or embassies on behalf of individuals applying for visas. A letter of invitation can be requested at <http://www.aiaa.org/visa-info/> or you may contact AIAA Customer Service at custserv@aiaa.org for more information.

C. Tracking Number vs Paper Number

Your paper was assigned a tracking number at the time you submitted your abstract. That number plus the corresponding author's last name is used to access the AIAA Author Status Page. This number is also useful when contacting AIAA technical support regarding submission difficulties. The tracking number is not the final AIAA paper number. Once the abstract is accepted and assigned to the program, an AIAA paper number is created. The paper number, which appears in the format AIAA-200N-NNNN, will be used to refer to your paper in the program and in any publication format. Do not include a paper number anywhere on your paper, as this number will be stamped automatically in the top right corner of your paper at the time of processing.

D. Copyright

Before AIAA can print or publish any paper, the copyright information must be completed on our Web site. Failure to complete the form correctly could result in your paper not being published. The following fields must be completed:

- 1) Clearance Statement
- 2) Non-Infringement Statement
- 3) Publication Status Statement
- 4) One Copyright Assignment Statement (Select either A, B, C, or D)

Be sure to read the copyright statements carefully. If you are not sure which copyright statement to use, contact your legal department; AIAA cannot help you determine which statement to use. A hard copy of the form is found in the Author Kit for your reference. As you will be completing this form online, you do not need to fill out the hard-copy form. Do not include a copyright statement anywhere on your paper, and do not upload a copyright form with your paper. The correct statement will be stamped automatically at the time of processing.

E. Submission Deadlines

1. Meetings with Electronic Proceedings

Manuscripts will be accepted for upload to the system from the receipt of the acceptance letter to the beginning of the conference. You will be notified of the specific manuscript submission deadline in your acceptance letter, and the deadline will also be listed on the Author Status Page for your paper. We ask that authors not upload a draft version of their manuscript with the intent to upload a final version later. *Please upload only the final version of your manuscript!*

On-line conference proceedings will be made accessible to attendees who have registered for the "full conference" option two weeks prior to the conference. Please keep that date in mind when preparing and uploading the final manuscript.

To ensure conference quality, session chairs will enforce a "no paper, no podium" rule. This policy states that if your manuscript is not uploaded to the Web site prior to your presentation, you will not be allowed to present the paper at the conference. There are times when the organizers at the conference request an earlier deadline than the beginning of the conference. If such a situation arises, you will be notified in your Author Acceptance Letter.

2. Loose Papers Meetings

The manuscript submission deadline for loose papers meetings is generally six to eight weeks in advance of the event; you will be notified of the specific deadline in your acceptance letter, and the date will also appear on the Author Status Page for your paper. Papers uploaded before the deadline will be reproduced and shipped to the conference by AIAA at no charge.

Authors who miss the electronic submission deadline will be expected to hand-carry 100 copies of their paper to the meeting, and must still upload their final manuscript to the AIAA Web site before the start of the conference for their paper to be published. A general No paper, no podium rule is in effect for all AIAA conferences. If your paper is not submitted to AIAA prior to your presentation, you will not be allowed to present. If you miss the initial deadline, contact your session chair or the conference Technical Chair for further instructions.

F. Oversize Papers and Color Illustrations

Paper length restrictions now apply only to those papers submitted to loose-papers conferences. For further instructions, please refer to the online Conference Author Kit.

Papers published electronically (online or on CD-ROMs) will be reproduced in color automatically. If your paper is submitted to a loose papers meeting (as specified in the author acceptance letter), color printing can be arranged for an additional charge. Please contact the technical papers specialist for details at bettyg@aiaa.org.

IV. Detailed Formatting Instructions

The styles and formats for the AIAA Papers Template have been incorporated into the structure of this document. If you are using Microsoft Word 6.0 or later, please use this template to prepare your manuscript. If you are reading a hardcopy or PDF version of this document, please download the electronic template file, Papers_Template.dot, from the AIAA [Meeting Papers Information Page](#) (“Publications: Meeting Papers” from the AIAA Web site). A LaTeX style and sample files are also available from the same Web page if you prefer to use LaTeX. Regardless of which program you use to prepare your manuscript, please use the formatting instructions contained in this document as a guide.

If you are using the Papers_Template.dot file to prepare your manuscript, you can simply type your own text over sections of this document, or cut and paste from another document and use the available markup styles. The pull-down menu on the left-hand side of the Formatting Toolbar at the top of your Word window contains all the styles you will need to format your document. Highlight a section that you want to designate with a certain style and select the appropriate style name from the pull-down style menu. The style will automatically adjust your fonts, tabs, and line spacing as appropriate. *Do not change the font sizes, line spacing, or margins to squeeze more text into a limited number of pages.* Use italics for emphasis; do not underline. Use the “Page Layout” feature from the “View” menu bar (View>Page Layout) to see the most accurate representation of how your final paper will appear.

A. Document Text

The default font for AIAA papers is Times New Roman, 10-point size. In the electronic template, use the “Text” style from the pull-down menu to format all primary text for your manuscript. The first line of every paragraph should be indented, and all lines should be single-spaced. Default margins are 1” on all sides. In the electronic version of this template, all margins and other formatting is preset. There should be no additional lines between paragraphs.

Extended quotes, such as this example, are to be used when material being cited is longer than a few sentences, or the standard quotation format is not practical. In this Word template, the appropriate style is “Extended Quote” from the drop-down menu. Extended quotes are to be in Times New Roman, 9-point font, indented 0.4” and full justified.

NOTE: If you are using the electronic template (Papers_Template.dot) to format your manuscript, the required spacing and formatting will be applied automatically, simply by using the appropriate style designation from the pull-down menu.

B. Headings

The title of your paper should be typed in bold, 18-point type, with capital and lower-case letters, and centered at the top of the page. The names of the authors, business or academic affiliation, city, and state/province should 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 is to include that author’s city, state, and zip/postal code (or city, province, zip/postal code and country, as appropriate). The first footnote (lower left-hand side) is to contain the job title and department name, street address/mail stop, and AIAA member grade for each author.

Major headings (“Heading 1” in the template style list) are bold 11-point font, centered, and numbered with Roman numerals.

Subheadings (“Heading 2” in the template style list) are bold, flush left, and numbered with capital letters.

Sub-Subheadings (“Heading 3” in the template style list) are italic, flush left, and numbered (1. 2. 3. etc.)

C. Abstract

The abstract should appear at the beginning of your paper. It should be one paragraph long (not an introduction) and complete in itself (no reference numbers). It should indicate subjects dealt with in the paper and state the objectives of the investigation. Newly observed facts and conclusions of the experiment or argument discussed in the paper must be stated in summary form; readers should not have to read the paper to understand the abstract. The abstract should be bold, indented 3 picas (1/2”) on each side, and separated from the rest of the document by two blank lines.

D. Footnotes and References

Footnotes, where they appear, should be placed above the 1” margin at the bottom of the page. To insert footnotes into the template, use the Insert>Footnote feature from the main menu as necessary. Footnotes are formatted automatically in the template, but if another medium is used, should appear in superscript as symbols in the sequence, *, †, ‡, §, ¶, #, **. ††, ‡‡, §§, etc.

List and number all bibliographical references at the end of the paper. Corresponding superscript numbers are used to cite references in the text,¹ unless the citation is an integral part of the sentence (e.g., “It is shown in Ref. 2 that...”) or follows a mathematical expression: “ $A^2 + B = C$ (Ref. 3).” For multiple citations, separate reference numbers with commas,^{4,5} or use a dash to show a range.⁶⁻⁸ Reference citations in the text should be in numerical order.

In the reference list, give all authors’ names; do not use “et al.” unless there are six authors or more. Papers that have not been published should be cited as “unpublished”; papers that have been submitted or accepted for publication should be cited as “submitted for publication.” Private communications and personal Web sites should appear as footnotes rather than in the reference list.

References should be cited according to the standard publication reference style (for examples, see the “References” section of this template). As a rule, all words are capitalized except for articles, conjunctions, and prepositions of four letters or fewer. Names and locations of publishers should be listed; month and year should be included for reports and papers. For papers published in translation journals, please give the English citation first, followed by the original foreign language citation.

E. Images, Figures, and Tables

All artwork, captions, figures, graphs, and tables will be reproduced exactly as submitted. Be sure to position any figures, tables, graphs, or pictures as you want them printed. AIAA will not be responsible for incorporating your figures, tables, etc. (Company logos and identification numbers are not permitted on your illustrations.)

Tables and figures of all types should be inserted into text boxes (or frames, if text boxes are not practical) as illustrated here. Text boxes should have no background and no outlines. Both the illustration itself and the caption should be included in the same box. In the electronic template, use the “Figure” style from the pull-down formatting menu to type caption text. Captions are bold and justified, with a period and a single tab (no hyphen or other character) between the figure number and figure description.

Place figure captions below all figures; place table titles above the tables. 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. *Please do not include captions as part of the figures, and do not put captions in separate text boxes linked to the figures.* 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, tables, images) sequentially with relation to other illustrations of the same type.

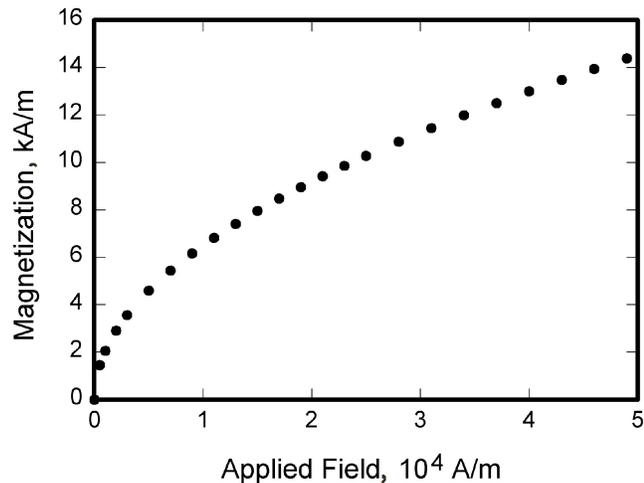


Figure 1. Magnetization as a function of applied field. *Figure captions should be bold and justified, with a period and a single tab (no hyphen or other character) between the figure number and the figure description.*

Figure axis labels are often a source of confusion. Use words rather than symbols. As in the example to the right, write the quantity “Magnetization” rather than just “M.” Do not enclose units in parenthesis, but rather separate them from the preceding text by commas. Do not label axes only with units. As in Fig. 1, for example, write “Magnetization, A/m” or “Magnetization, $A \cdot m^{-1}$,” not just “A/m.” Do not label axes with a ratio of quantities and units. For example, write “Temperature, K,” not “Temperature/K.”

Multipliers can be especially confusing. Write “Magnetization, kA/m” or “Magnetization, 10^3 A/m.” Do not write “Magnetization (A/m) \times 1000” because the reader would not then know whether the top axis label in Fig. 1 meant 16000 A/m or 0.016 A/m. Figure labels must be legible, approximately 8-12 point type.

F. Equations, Numbers, Symbols, and Abbreviations

Equations are centered and numbered consecutively, with equation numbers in parentheses flush right, as in Eq. (1). Insert a blank line on either side of the equation. First use the equation editor to create the equation. If you are using Microsoft Word, use either the Microsoft Equation Editor or the MathType add-on (<http://www.mathtype.com>) for equations in your paper, use the function (Insert>Object>Create New>Microsoft

Equation or MathType Equation) to insert it into the document. Please note that “Float over text” should *not* be selected. To insert the equation into the document:

- 1) Select the “Equation” style from the pull-down formatting menu and hit “tab” once.
- 2) Insert the equation, hit “tab” again,
- 3) Enter the equation number in parentheses.

A sample equation is included here, formatted using the preceding instructions. To make your equation more compact, you can use the solidus (/), the exp function, or appropriate exponents. Use parentheses to avoid ambiguities in denominators.

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

Be sure that the symbols in your equation are defined before the equation appears, or immediately following. Italicize symbols (T might refer to temperature, but T is the unit tesla). Refer to “Eq. (1),” not “(1)” or “equation (1)” except at the beginning of a sentence: “Equation (1) is...” Equations can be labeled other than “Eq.” should they represent inequalities, matrices, or boundary conditions. If what is represented is really more than one equation, the abbreviation “Eqs.” can be used.

- ✗ Define abbreviations and acronyms the first time they are used in the text, even after they have already been defined in the abstract. Very common abbreviations such as AIAA, SI, ac, and dc do not have to be defined. Abbreviations that incorporate periods should not have spaces: write “P.R.,” not “P. R.” Delete periods between initials if the abbreviation has three or more initials; e.g., U.N. but ESA. Do not use abbreviations in the title unless they are unavoidable (for instance, “AIAA” in the title of this article).

G. General Grammar and Preferred Usage

Use only one space after periods or colons. Hyphenate complex modifiers: “zero-field-cooled magnetization.” Avoid dangling participles, such as, “Using Eq. (1), the potential was calculated.” [It is not clear who or what used Eq. (1).] Write instead “The potential was calculated using Eq. (1),” or “Using Eq. (1), we calculated the potential.”

Use a zero before decimal points: “0.25,” not “.25.” Use “cm²,” not “cc.” Indicate sample dimensions as “0.1 cm x 0.2 cm,” not “0.1 x 0.2 cm².” The preferred abbreviation for “seconds” is “s,” not “sec.” Do not mix complete spellings and abbreviations of units: use “Wb/m²” or “webers per square meter,” not “webers/m².” When expressing a range of values, write “7 to 9” or “7-9,” not “7~9.”

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.) In American English, periods and commas are placed within quotation marks, like “this period.” Other punctuation is “outside”! Avoid contractions; for example, write “do not” instead of “don’t.” The serial comma is preferred: “A, B, and C” instead of “A, B and C.”

If you wish, you may write in the first person singular or plural and use the active voice (“I observed that...” or “We observed that...” instead of “It was observed that...”). Remember to check spelling. If your native language is not English, please ask a native English-speaking colleague to proofread your paper.

The word “data” is plural, not singular (i.e., “data are,” not “data is”). The subscript for the permeability of vacuum μ_0 is zero, not a lowercase letter “o.” The term for residual magnetization is “remanence”; the adjective is “remanent”; do not write “remnance” or “remnant.” The word “micrometer” is preferred over “micron” when spelling out this unit of measure. A graph within a graph is an “inset,” not an “insert.” The word “alternatively” is preferred to the word “alternately” (unless you really mean something that alternates). Use the word “whereas” instead of “while” (unless you are referring to simultaneous events). Do not use the word “essentially” to mean “approximately” or “effectively.” Do not use the word “issue” as a euphemism for “problem.” When compositions are not specified, separate chemical symbols by en-dashes; for example, “NiMn” indicates the intermetallic compound Ni_{0.5}Mn_{0.5} whereas “Ni–Mn” indicates an alloy of some composition Ni_xMn_{1-x}.

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.”

Prefixes such as “non,” “sub,” “micro,” “multi,” and “ultra” are not independent words; they should be joined to the words they modify, usually without a hyphen. There is no period after the “et” in the abbreviation “et al.” The abbreviation “i.e.,” means “that is,” and the abbreviation “e.g.,” means “for example” (these abbreviations are not

italicized). If desired, more detailed style and formatting instructions can be found in the AIAA style guide, *AIAA Style* (available from AIAA upon request).

V. Conclusion

A conclusion section is not required, though it is preferred. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions. *Note that the conclusion section is the last section of the paper that should be numbered. The appendix (if present), acknowledgment, and references should be listed without numbers.*

Appendix

An appendix, if needed, should appear before the acknowledgements.

Acknowledgments

The preferred spelling of the word “acknowledgment” in American English is without the “e” after the “g.” Avoid expressions such as “One of us (S.B.A.) would like to thank...” Instead, write “F. A. Author thanks...” *Sponsor and financial support acknowledgments are also to be listed in the “acknowledgments” section.*

References

The following pages are intended to provide examples of the different reference types, as used in the AIAA Style Guide. When using the Word version of this template to enter references, select the “references” style from the drop-down style menu to automatically format your references. If you are using a print or PDF version of this document, all references should be in 9-point font, with reference numbers inserted in superscript immediately before the corresponding reference. You are not required to indicate the type of reference; different types are shown here for illustrative purposes only.

Periodicals

¹Vatistas, G. H., Lin, S., and Kwok, C. K., “Reverse Flow Radius in Vortex Chambers,” *AIAA Journal*, Vol. 24, No. 11, 1986, pp. 1872, 1873.

²Dornheim, M. A., “Planetary Flight Surge Faces Budget Realities,” *Aviation Week and Space Technology*, Vol. 145, No. 24, 9 Dec. 1996, pp. 44-46.

³Terster, W., “NASA Considers Switch to Delta 2,” *Space News*, Vol. 8, No. 2, 13-19 Jan. 1997, pp., 1, 18.

All of the preceding information is required. The journal issue number (“No. 11” in Ref. 1) is preferred, but the month (Nov.) can be substituted if the issue number is not available. Use the complete date for daily and weekly publications. Transactions follow the same style as other journals; if punctuation is necessary, use a colon to separate the transactions title from the journal title.

Books

⁴Peyret, R., and Taylor, T. D., *Computational Methods in Fluid Flow*, 2nd ed., Springer-Verlag, New York, 1983, Chaps. 7, 14.

⁵Oates, G. C. (ed.), *Aerothermodynamics of Gas Turbine and Rocket Propulsion*, AIAA Education Series, AIAA, New York, 1984, pp. 19, 136.

⁶Volpe, R., “Techniques for Collision Prevention, Impact Stability, and Force Control by Space Manipulators,” *Teleoperation and Robotics in Space*, edited by S. B. Skaar and C. F. Ruoff, Progress in Astronautics and Aeronautics, AIAA, Washington, DC, 1994, pp. 175-212.

Publisher, place, and date of publication are required for all books. No state or country is required for major cities: New York, London, Moscow, etc. A differentiation must always be made between Cambridge, MA, and Cambridge, England, UK. Note that series titles are in roman type.

Proceedings

⁷Thompson, C. M., “Spacecraft Thermal Control, Design, and Operation,” *AIAA Guidance, Navigation, and Control Conference*, CP849, Vol. 1, AIAA, Washington, DC, 1989, pp. 103-115

⁸Chi, Y., (ed.), *Fluid Mechanics Proceedings*, SP-255, NASA, 1993.

⁹Morris, J. D. “Convective Heat Transfer in Radially Rotating Ducts,” *Proceedings of the Annual Heat Transfer Conference*, edited by B. Corbell, Vol. 1, Inst. Of Mechanical Engineering, New York, 1992, pp. 227-234.

At a minimum, proceedings must have the same information as other book references: paper (chapter) and volume title, name and location of publisher, editor (if applicable), and pages or chapters cited. Do not include paper numbers in proceedings

references, and delete the conference location so that it is not confused with the publisher's location (which is mandatory, except for government agencies). Frequently, CP or SP numbers (Conference Proceedings or Symposium Proceedings numbers) are also given. These elements are not necessary, but when provided, their places should be as shown in the preceding examples.

Reports, Theses, and Individual Papers

¹⁰Chapman, G. T., and Tobak, M., "Nonlinear Problems in Flight Dynamics," NASA TM-85940, 1984.

¹¹Steger, J. L., Jr., Nietubicz, C. J., and Heavey, J. E., "A General Curvilinear Grid Generation Program for Projectile Configurations," U.S. Army Ballistic Research Lab., Rept. ARBRL-MR03142, Aberdeen Proving Ground, MD, Oct. 1981.

¹²Tseng, K., "Nonlinear Green's Function Method for Transonic Potential Flow," Ph.D. Dissertation, Aeronautics and Astronautics Dept., Boston Univ., Cambridge, MA, 1983.

Government agency reports do not require locations. For reports such as NASA TM-85940, neither insert nor delete dashes; leave them as provided by the author. Place of publication *should* be given, although it is not mandatory, for military and company reports. Always include a city and state for universities. Papers need only the name of the sponsor; neither the sponsor's location nor the conference name and location are required. *Do not confuse proceedings references with conference papers.*

Electronic Publications

CD-ROM publications and regularly issued, dated electronic journals are permitted as references. Archived data sets also may be referenced as long as the material is openly accessible and the repository is committed to archiving the data indefinitely. References to electronic data available only from personal Web sites or commercial, academic, or government ones where there is no commitment to archiving the data are not permitted (see Private Communications and Web sites).

¹³Richard, J. C., and Fralick, G. C., "Use of Drag Probe in Supersonic Flow," *AIAA Meeting Papers on Disc* [CD-ROM], Vol. 1, No. 2, AIAA, Reston, VA, 1996.

¹⁴Atkins, C. P., and Scantelbury, J. D., "The Activity Coefficient of Sodium Chloride in a Simulated Pore Solution Environment," *Journal of Corrosion Science and Engineering* [online journal], Vol. 1, No. 1, Paper 2, URL: <http://www.cp.umist.ac.uk/JCSE/vol1/vol1.html> [cited 13 April 1998].

¹⁵Vickers, A., "10-110 mm/hr Hypodermic Gravity Design A," *Rainfall Simulation Database* [online database], URL: <http://www.geog.le.ac.uk/bgrg/lab.htm> [cited 15 March 1998].

Always include the citation date for online references. Break Web site addresses after punctuation, and do not hyphenate at line breaks.

Computer Software

¹⁶TAPP, Thermochemical and Physical Properties, Software Package, Ver. 1.0, E. S. Microware, Hamilton, OH, 1992.

Include a version number and the company name and location of software packages.

Patents

Patents appear infrequently. Be sure to include the patent number and date.

¹⁷Scherrer, R., Overholster, D., and Watson, K., Lockheed Corp., Burbank, CA, U.S. Patent Application for a "Vehicle," Docket No. P-01-1532, filed 11 Feb. 1979.

Private Communications and Web Sites

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²⁰Doe, J., "Title of Work," Name of Archive, Univ. (or organization) Name, City, State, Year (unpublished).

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